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COASTAL SURVEYS (1981)

ALONG

MAINLAND NOVA SCOTIA

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Geological Survey of Canada

Open File 976

1985



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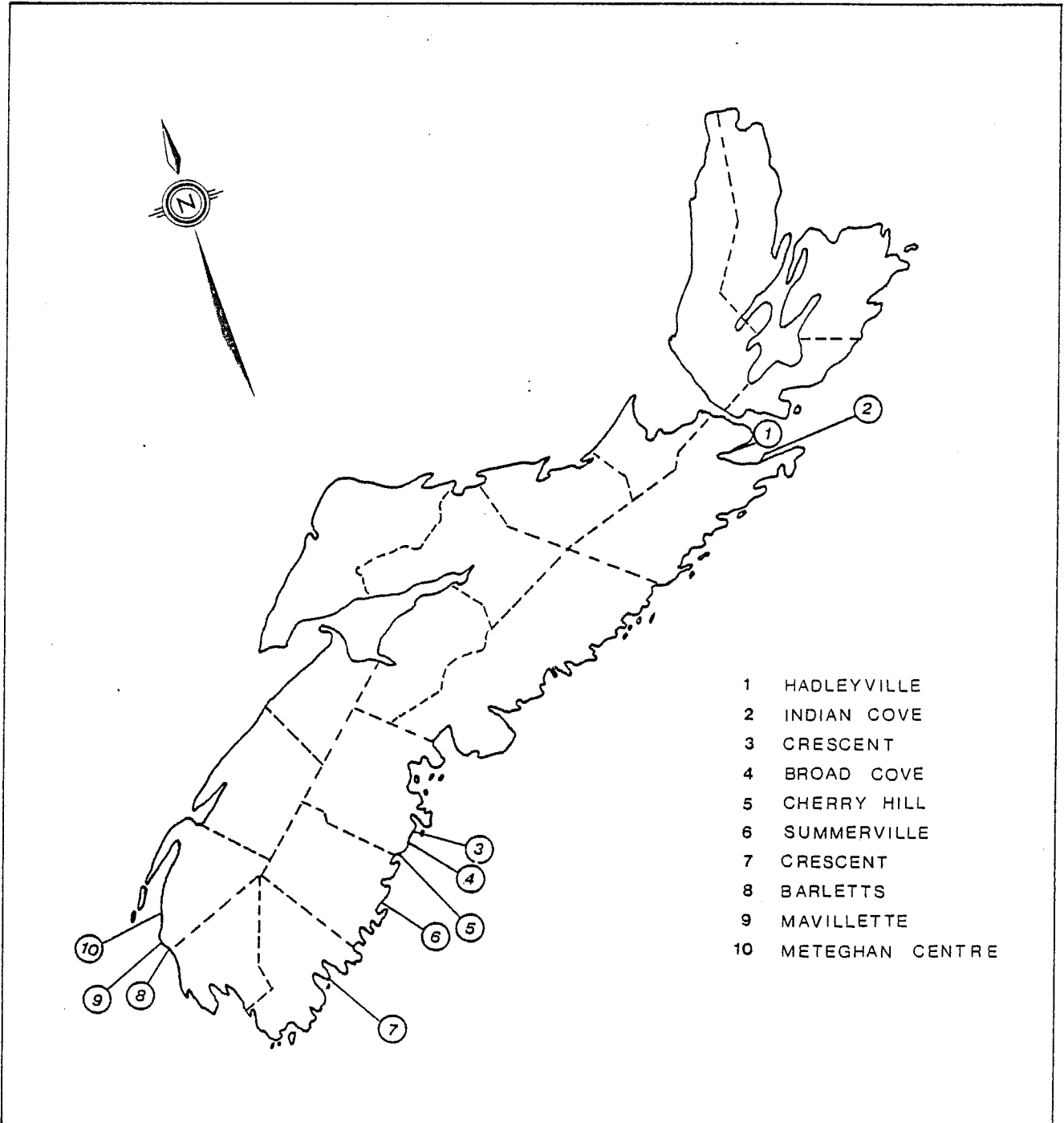
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Introduction

In 1981, under the auspices of the federal government Summer Canada Student Employment Program, a network of shoreline survey stations was established at 16 shore bluff sites and 17 beaches along the mainland coast of Nova Scotia. This open file is designed to be used in the field by future researchers. It provides the information necessary to relocate and accurately resurvey the shore stations established in 1981. The open file complements Geological Survey of Canada Paper 85-12 (Taylor et al., 1985) which presents the results of the 1981 surveys.

This open file includes: (1) access information and location maps for all the beach and shore bluff stations examined in 1981; (2) the actual field survey data; and (3) a brief physical description of the shore bluffs where shoreline recession was measured. The beach survey stations are divided into two groups: those that were established before 1981, and those that were established in 1981 at the detailed study sites. Unless otherwise stated, the benchmarks for the beach stations are metal T-bars. Usually two T-bars, i.e. a BM and TBM, were established in a line perpendicular to the orientation of the shoreline in the backshore beyond the reach of waves. The surveys were completed from the landward marker to just beyond low tide level using conventional survey techniques (usually with 2 range poles, a hand level and tape measure). Where only one benchmark was established, a compass bearing (uncorrected for declination) is provided. Detailed survey information listed on pages 26-41 may assist in the identification of 1981 survey lines if one of the benchmarks is missing.

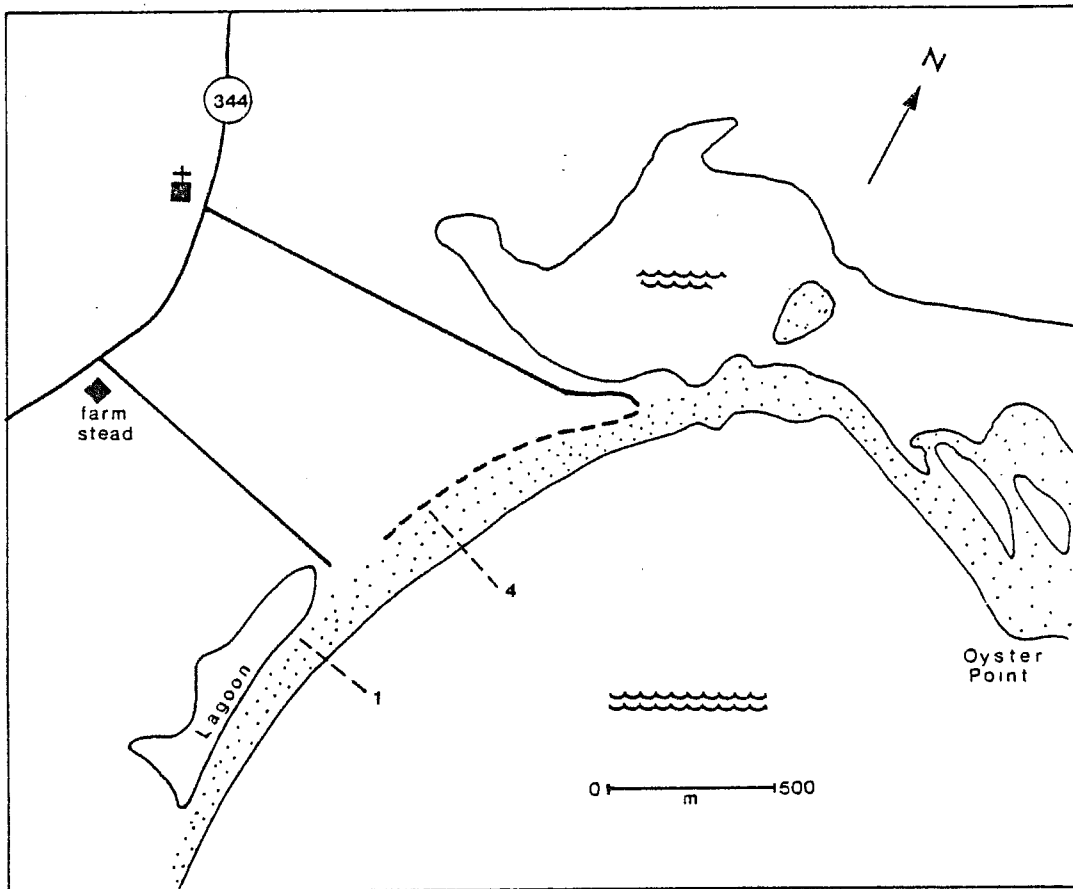
BEACH SURVEY STATIONS ALONG MAINLAND NOVA SCOTIA



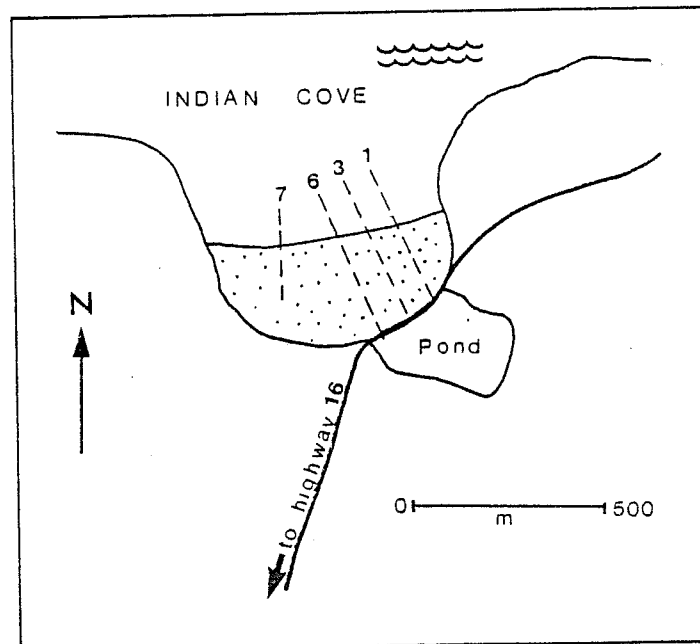
Location of Beaches Resurveyed Along Mainland Nova Scotia in 1981

(A) BEACH RESURVEY SITES

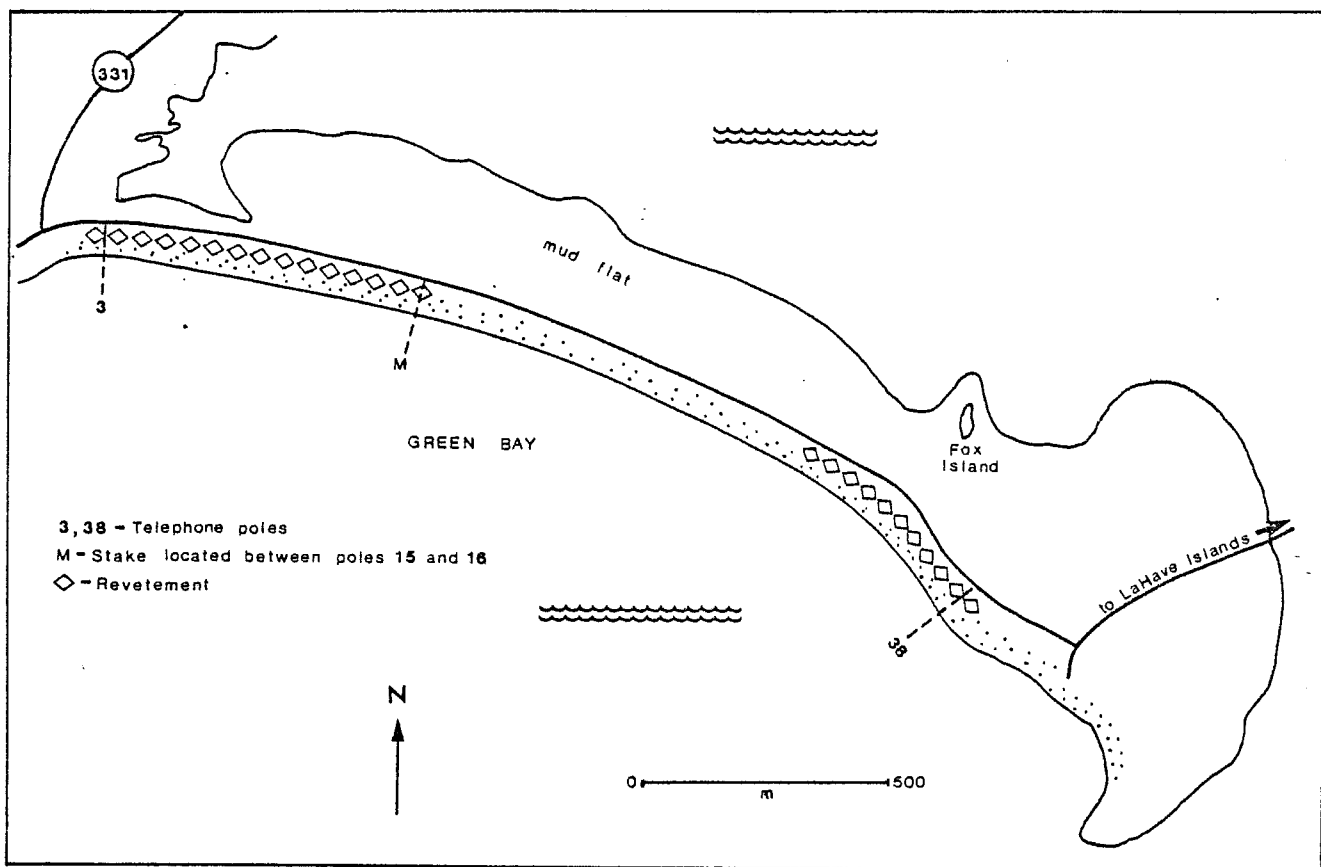
(1) Hadleyville Beach, Guysborough County, is situated on Provincial Highway #344. At the Town of Boylston, take Highway 344 towards Mulgrave. Proceed to the community of Hadleyville. The access to the beach is not marked. A small church is situated opposite the access road. The private drive is tree-lined and leads to the beach. The first profile is situated at the end of the cart track running along the backshore. It is a fence post designated BIO #4. The other profile cannot be reached by vehicle unless the road to the beach, which is situated 650 m south of the tree-lined drive, is used. It is also a private drive through a field. The farmhouse is at the beginning of the roadway and permission to use the road MUST be obtained. Profile 1 is situated to the west of this road, in front of a large lagoon. The back stake height is 64 cm, the front 72 cm. The transect was shot on a 164° bearing.



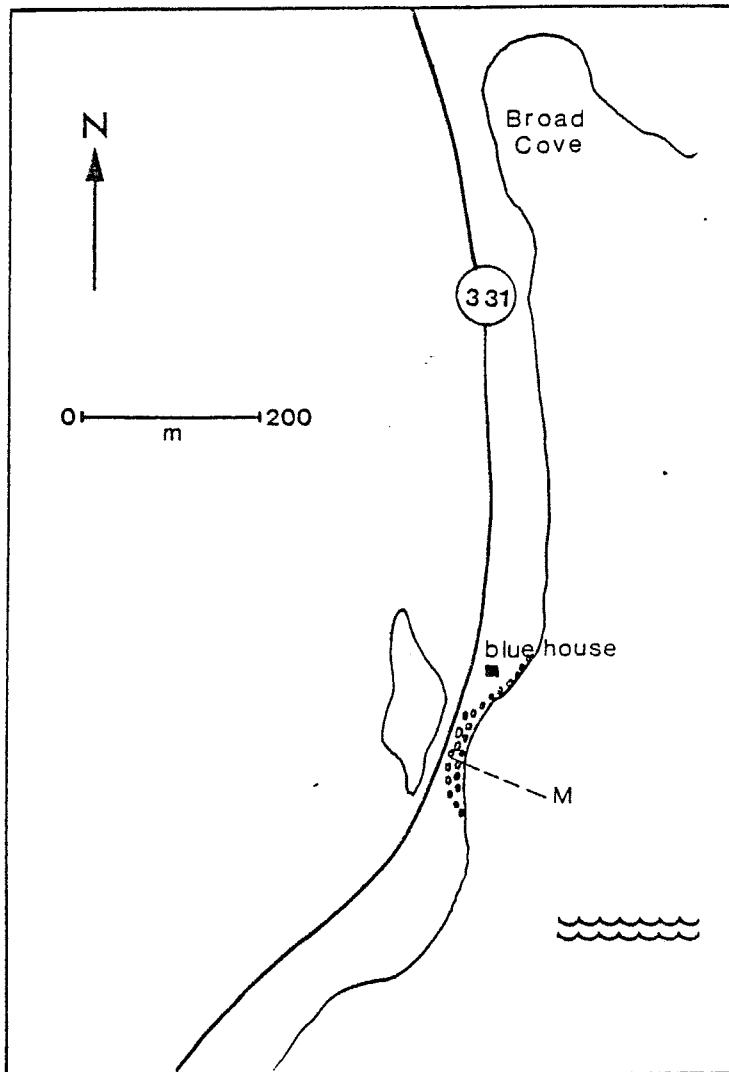
(2) Indian Cove, Guysborough County, is situated on Provincial Highway #16. Beach is situated in the community of Indian Cove at Fox Bay. Proceed southeast along Highway #16 from Guysborough approximately 40 miles. Turn left at provincial sign for Indian Cove. Continue on road to water's edge. Profiles are located at telephone poles seaward of small lagoon, along dirt road. Poles are designated BIO #1, #3, #6. Transects are run on silva bearings of #1 - 335°, #3 - 327°, #6 - 352°, #7-7°. Profile 7 is situated to northwest of road behind the provincial Land and Forests 'Beach Protection Sign.' Marker is 6 m to rear of sign in vegetation 28 cm in height.



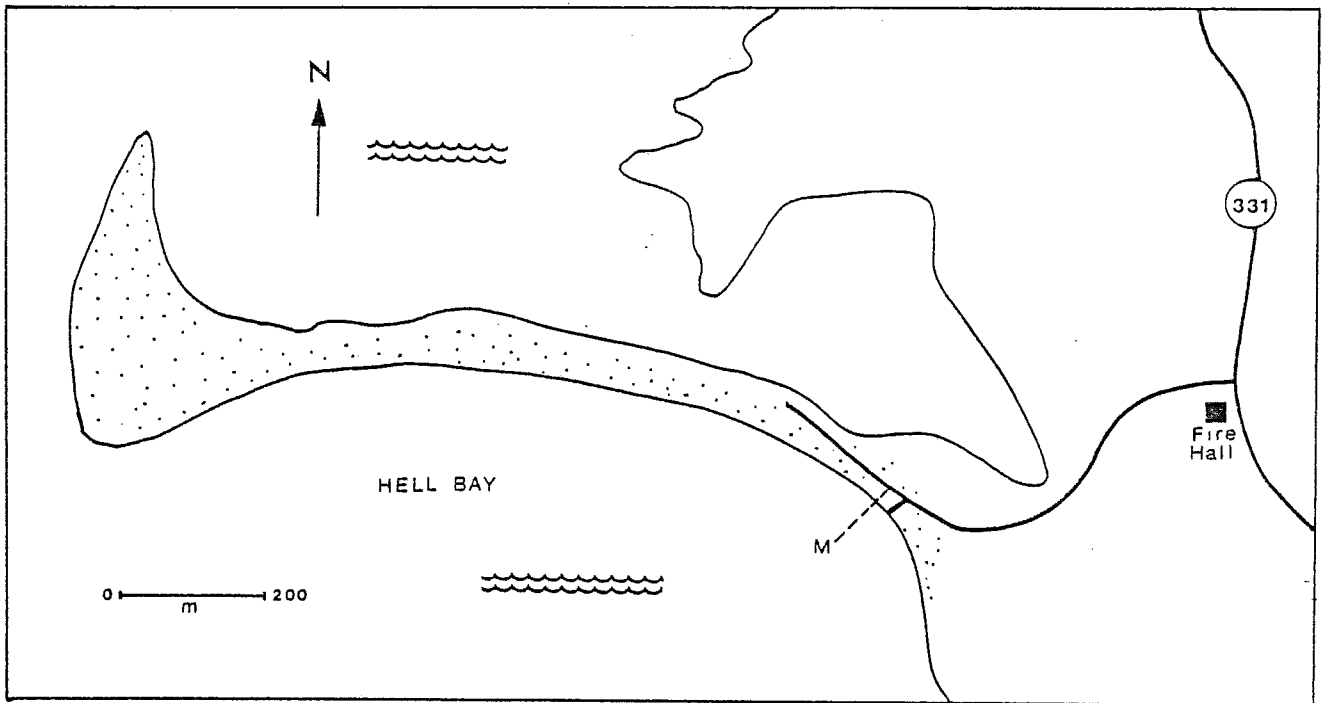
(3) Crescent Beach, Lunenburg County, is situated on Provincial Highway #331. Take Exit 15 on Highway 103 to Petite Rivière, turn left at intersection and proceed two miles until a provincial sign designates Crescent Beach and the LaHave Islands. Turn right at the intersection. Profiles are located at: (1) the third telephone pole along back of dune system. This pole will have a small square of white wood on eastern side, at eye level. Transect run on a 205° bearing from edge of road. (2) Munroe reprofile situated between the 15th and 16th poles. Small stake situated north of road in marsh. Front marker situated on backslope of dune. (3) Final profile at Pole #38 at far eastern end of system - third last pole from end of revetment in that location. Transect run on a 260° bearing from edge of road.



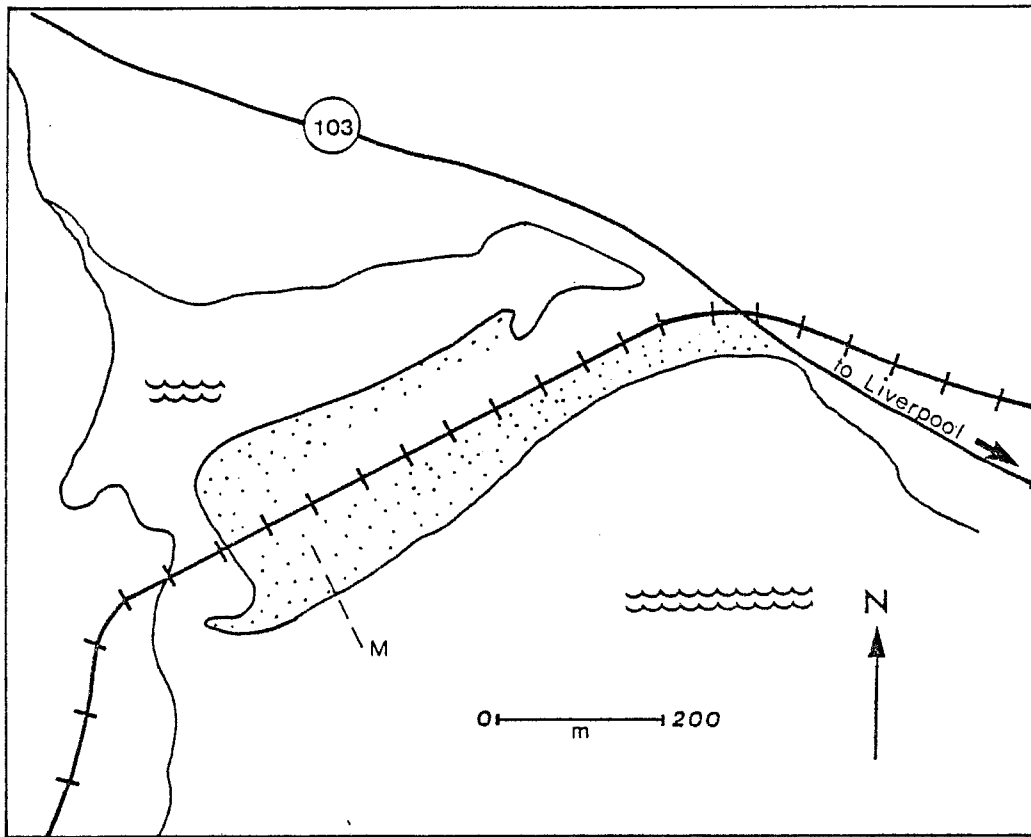
(4) Broad Cove, Lunenburg County, is situated on Provincial Highway #331. Take Exit 15 on Highway 103 to Petite Rivière. Turn right at Highway 331 and proceed until the Village of Broad Cove. Bear left as you enter the village; drive 1.9 km beyond the school. A large blue house on the seaward side of the road is just before the beach. There is a pond on the landward side of the road. The front T-bar is on the seaward side of the road where the old roadbed used to be. It is 94 cm high. The back marker is 96 cm high and is located between the pond and the road.



(5) Cherry Hill Beach, Lunenburg County, is situated on Provincial Highway 331, approximately 3 miles west of Broad Cove Beach. Upon entering the community of Cherry Hill look for the 'United Communities Fire Hall.' A small provincial sign is situated just past the Fire Hall on seaward side of road. Turn left onto the dirt road to backshore of beach. Road runs along dunes. Profile marker is situated west (approximately 250 m) of access road that crosses dunes to beach face. Stake is 90 cm in height. This is Munroe's TBM. The BM has been removed. Transect is run on 213° bearing (silva).

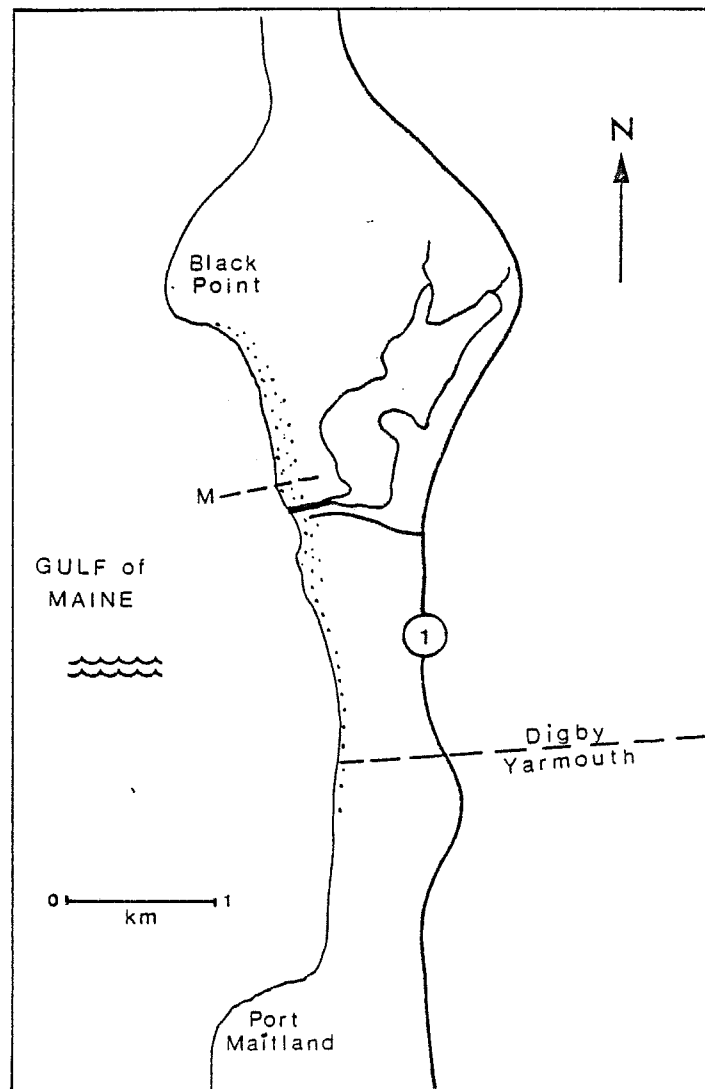


(6) Summerville Beach, Queens County, is situated on Highway #3. Proceed west on Highway #3 through the Town of Liverpool and the communities of Hunts Point and Summerville. The beach is designated by a provincial road sign as a picnic and camping park. Turn left off Highway #3 to the dirt road that runs the length of the spit. Profile is located at far western end of the system, just east of railroad bridge. Markers are situated just behind the most seaward dune ridge. The BM is bent and hard to locate but is 15 m from TBM. Stake height (TBM) is 80 cm.

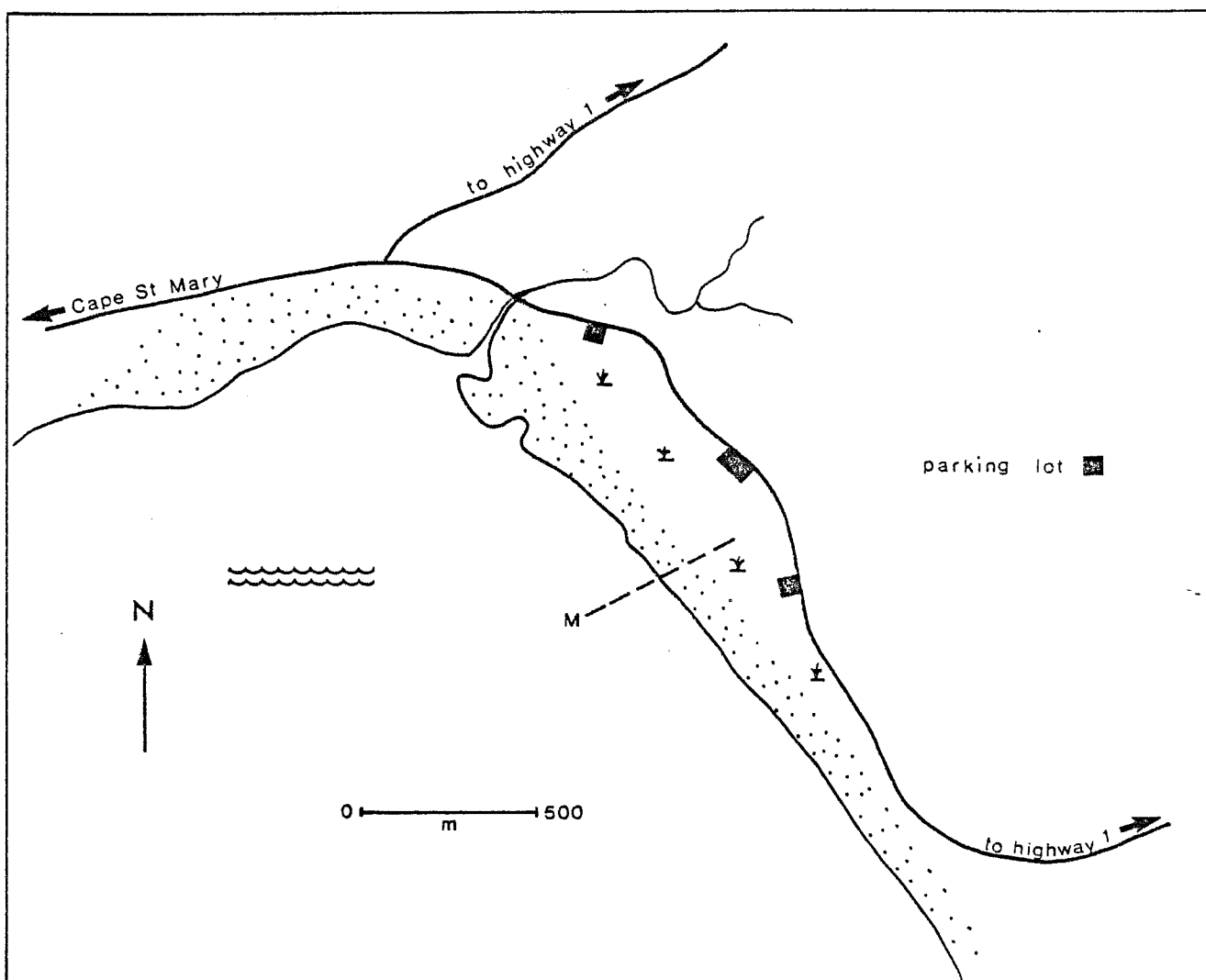


(7) Crescent Beach, Shelburne County. A profile established in 1978 (Munroe, 1980) was resurveyed as part of a series of new lines established in 1981. See detailed study sites for further information.

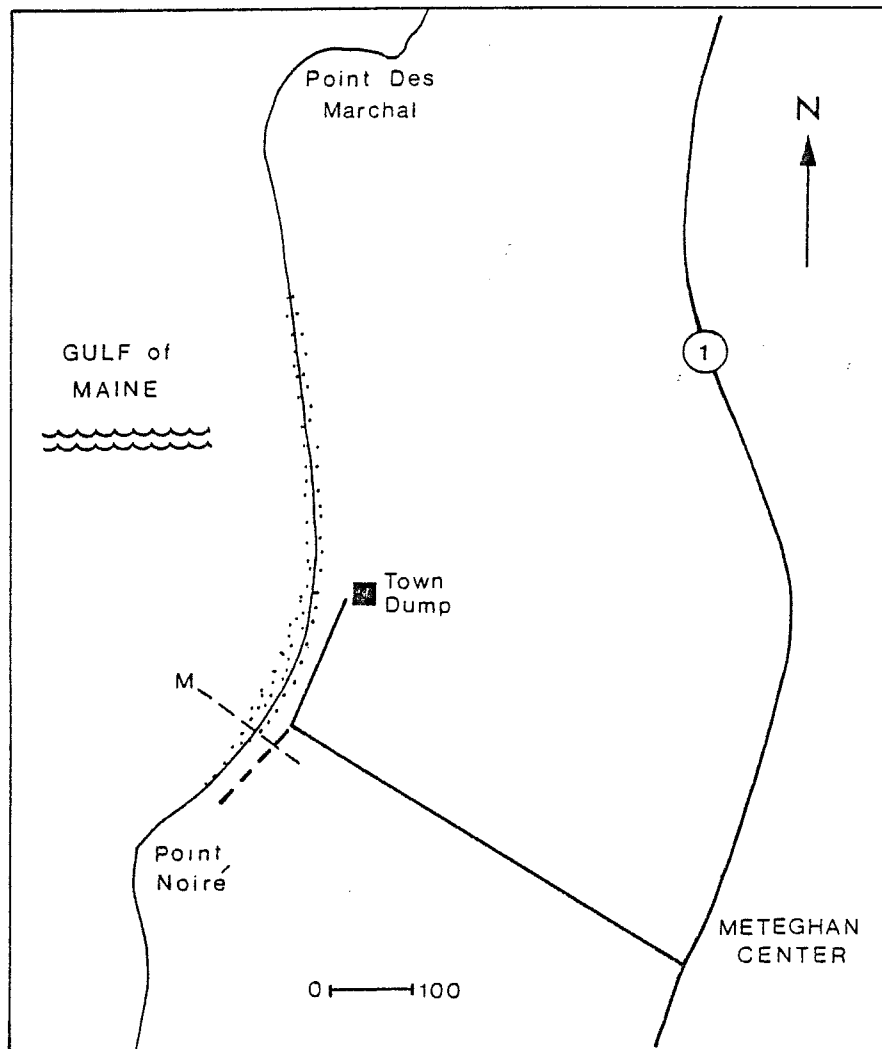
(8) Bartletts Beach, Digby County, is situated on Provincial Highway #1. Proceed north on Provincial Highway #1 to county line. Provincial sign is posted on seaward side of road approximately 2 miles past the line. Turn left onto dirt road until backshore is attained. Profile is located 300 m north of tidal inlet on second dune ridge. Markers are placed 15 m apart. Back marker is 96 cm in height and front marker is 91 cm in height.



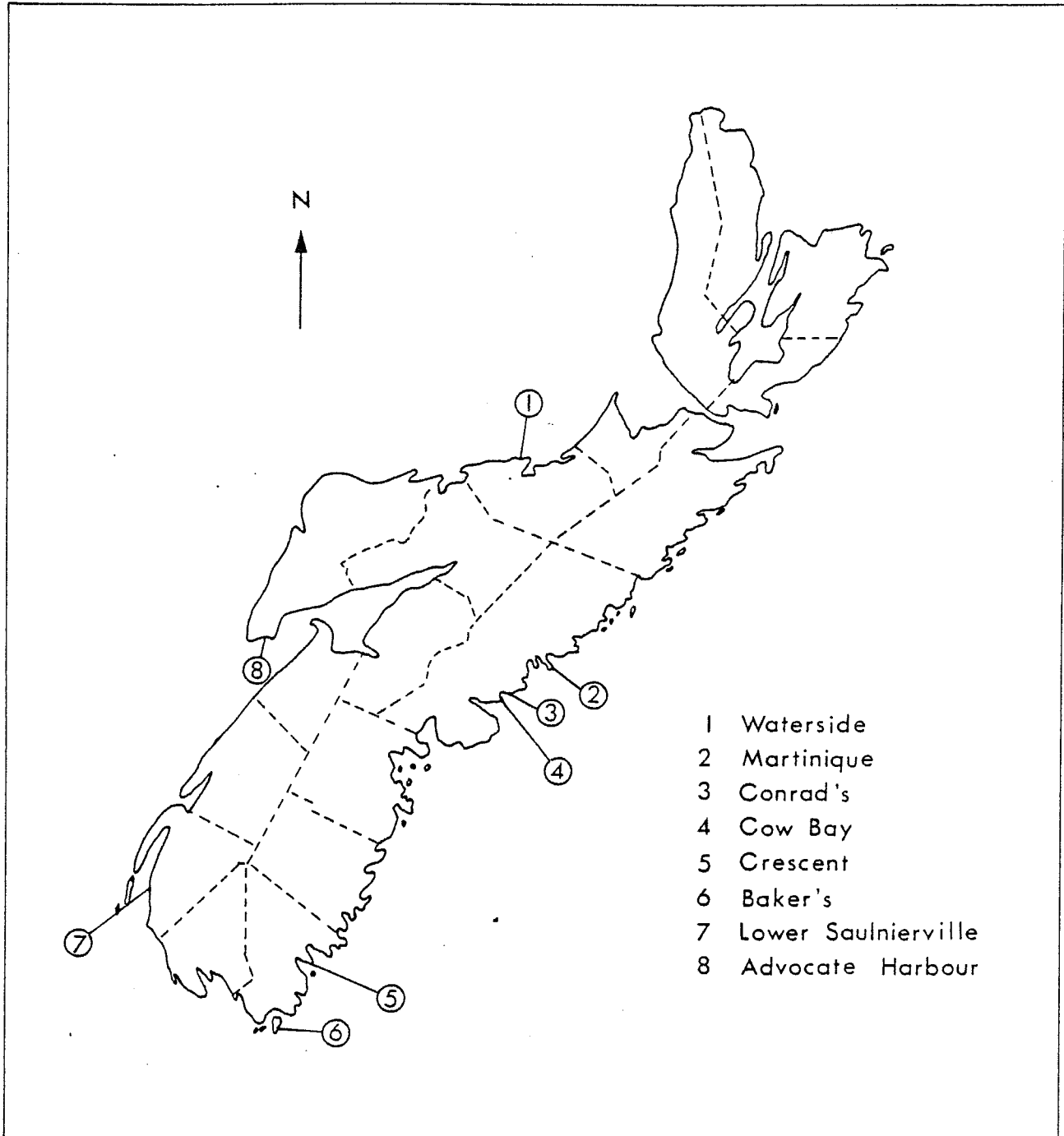
(9) Mavillette Beach, Digby, County, is situated on provincial Highway #1. Follow highway 1 northward to the Mavillette Beach Provincial Campsite (turn left about 3.6 km north of the Salmon River Bridge and follow paved road to beach). The Munroe 1978 profile is almost midway along the beach. It is marked by two T-bars 10 m apart in the dunes. The BM is 98 cm and the TBM is 86 cm high. The TBM is approx 12 m landward of edge of dune vegetation. The Dalhousie University profile is marked by four green posts situated in a line adjacent to a Provincial Park sign at the end of the paved access road. The post closest the road is the BM. The original Dalhousie BM's were gone.



(10) Meteghan Centre, Digby County, is situated on Provincial Highway #1. In the village of Meteghan Centre drive approximately 200 m north of the Post Office and turn left to water's edge. At end of the road a small cart track runs southward behind beach ridge. Markers are located approximately 100 m up the road to the landward side approximately 25 m. Front marker is 100 cm in height, back marker is 100.5 cm in height.



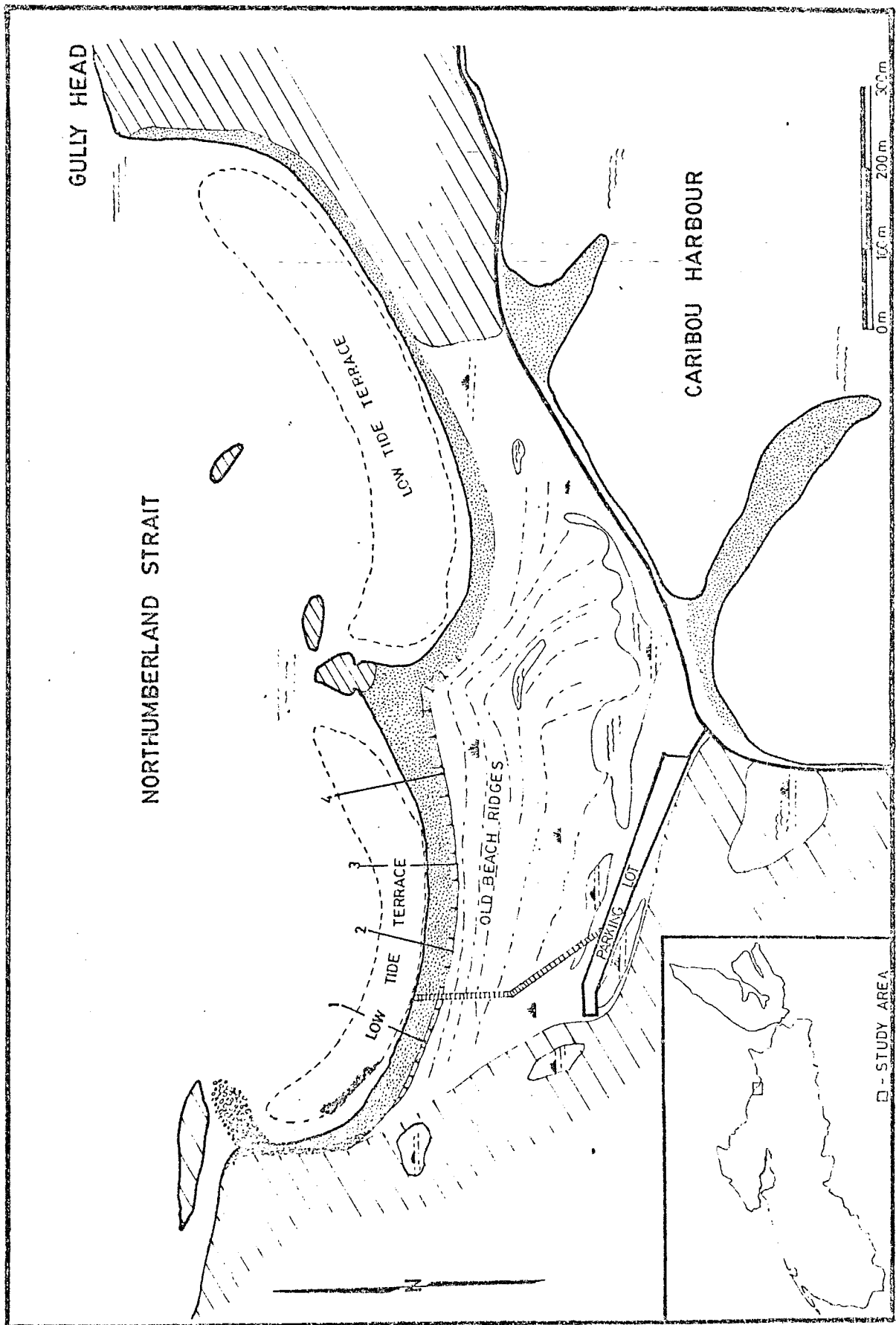


(B) DETAILED BEACH STUDY SITES

Location of Beaches Where Detailed Surveys Were Made in 1981

(1) Waterside Beach, Pictou County, is part of Waterside Provincial Park situated on Northumberland Strait. Follow highway #6 north from the Pictou rotary for approximately 11 km to a dirt road that leads to the village of Waterside. At Waterside, turn left at the main intersection and go toward Caribou Island. Waterside Park is on the north side of the causeway to Caribou Island. In the Park, a boardwalk extends from the parking lot to the beach. Profile 1 is to the left of the boardwalk and profiles 2 to 4 are to the right. The profiles are 100 m apart and all bench marks are metal T-bars.

Profile No.	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass
		BM	TBM	
1	5.0	1.10	1.00	-
2	5.0	0.99	0.92	-
3	5.0	0.92	0.97	-
4	5.0	1.10	1.02	-

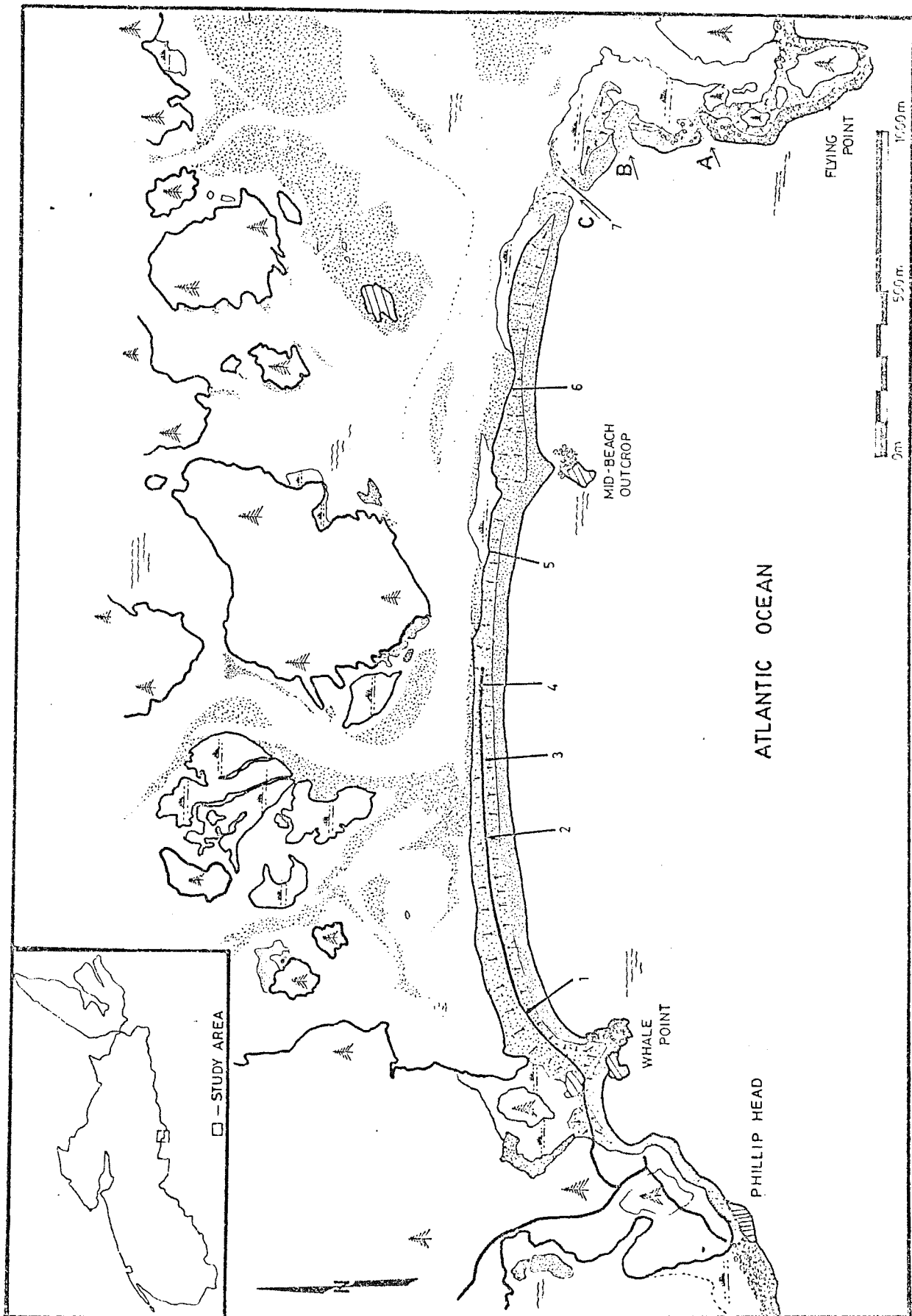


1. Location of Beach Profiles, Waterside Beach, Pictou County.

(2) Martinique Beach, Halifax County, is located along the Eastern Shore of Nova Scotia. From Dartmouth follow highway #107 and #7 east to the town of Musquodoboit Harbour, turn right at the Martinique beach sign and follow this road until it reaches the entrance of Martinique beach park.. Turn left and follow the dirt road along the back of the beach. Profiles 1 to 5 are located east of Whale Point, profiles 6 and 7 are east of a small headland and rock outcrop. Profile 7 crosses a large washover channel, where snow fences have been established to trap sand. All bench marks are located just landward of the dune ridge. The seven profiles surveyed in 1981 have been designated by various numbers in the past; they are listed below. Note: The field survey data provided in this Open File uses the 1976 profile numbers. (see pgs 36-38).

Year	Profile Number -- Martinique Beach						
1981	1	2	3	4	5	6	7
1976 (Frobel, <i>pers. comm</i>)	12A	1	6	11	13	14	15
1974 (Keeley, 1975)	32	23	-	18	12	7	2

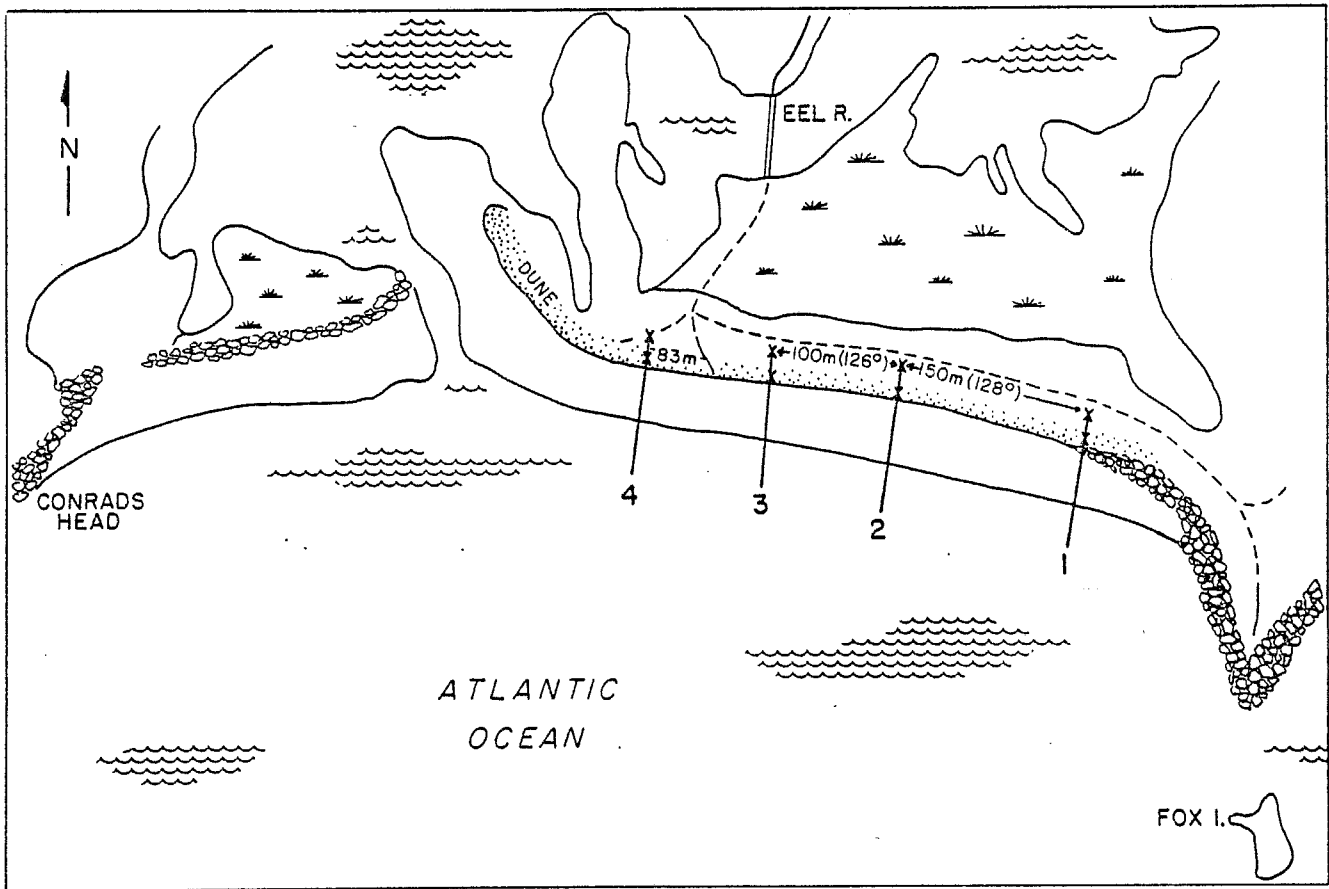
Profile No. (1981)	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass	Remarks
		BM	TBM		
1	8.0	0.34	0.48	220	BMS-T-bars
2	16.0	0.32	0.30	270	BMS - Wood
3	9.0	0.30	0.30	-	-
4	13.5	0.36	0.37	-	BMS - Wood TBM-T-bar
5	11.5	0.34	0.33	220	-
6	10.5	0.34	0.42	-	BM - Wood TBM-T-bar
7	6.0	0.58	0.30	-	BM-T-bar



2. Location of Beach Profiles, Martinique Beach, Halifax County.

(3) Conrads Beach, Halifax County, is located along the Eastern shore of Nova Scotia. Follow highway #207 east from Dartmouth to the community centre in West Lawrencetown. Turn right onto the paved road opposite the centre and follow it until reaching Conrads Beach. Follow the main footpath to the beach - Profile 4 is located to the right - 287° from the intersection of the main footpath and an old cart track. Profiles 3 to 1 are to the east of the footpath. All bench marks are metal T-bars which are located within the dune system.

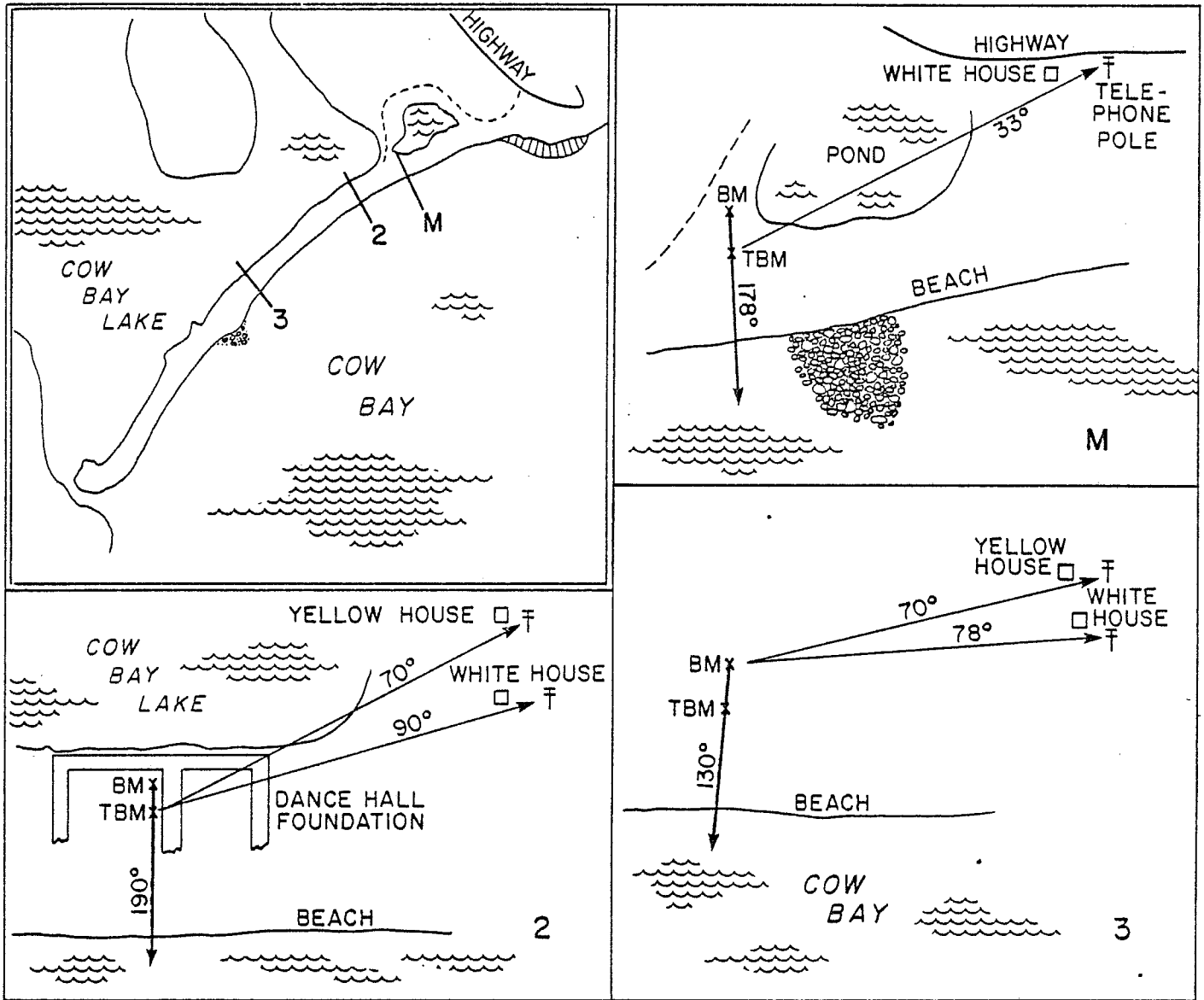
Profile No.	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass
		BM	TBM	
1	10.0	1.18	1.26	231
2	-	1.23	1.12	211
3	9.5	1.12	1.12	210
4	10.0	1.51	1.18	227



3. Location of Beach Profiles, Conrads Beach, Halifax County.

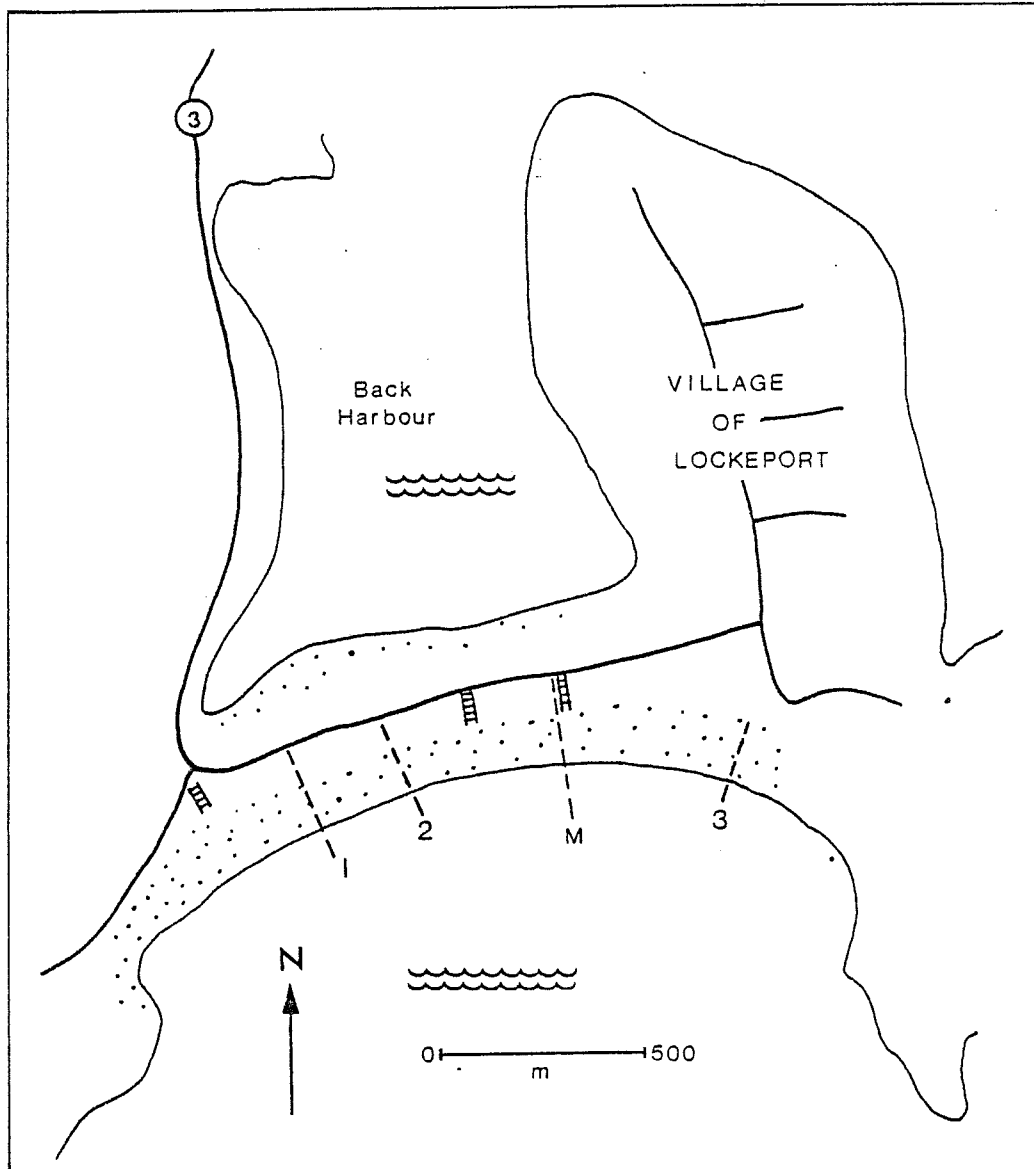
(4) Cow Bay (Silver Sands) Beach, Halifax County, is situated in Cow Bay, between Osborne Head and Hartlen Point, Nova Scotia. Follow highway #322 southeast out of Dartmouth to the Village of Cow Bay. Park at the large statue of a moose which is at the eastern end of the beach. Profile 1 is approximately 200 m to the west, adjacent to a dirt road at the west end of a small pond. Profile 2 is located along the central wall of the foundation of a former dance hall and Profile 3 is approximately 300 m farther west (Fig. 4). The bench marks are all metal T-bars and they are located on the landward side of the main cobble storm ridge.

Profile No. (1981)	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass	Remarks
		BM	TBM		
1	11.2	0.78	0.53	178°	BM #1 is along dirt road
2	3.0	0.62	0.58	190°	BM #2 =1.6 m south of foundation wall.
3	2.8	0.63	0.74	130°	BM #3 in hollow at back of storm ridge



4. Location of Beach Profiles, Cow Bay Beach, Halifax County.

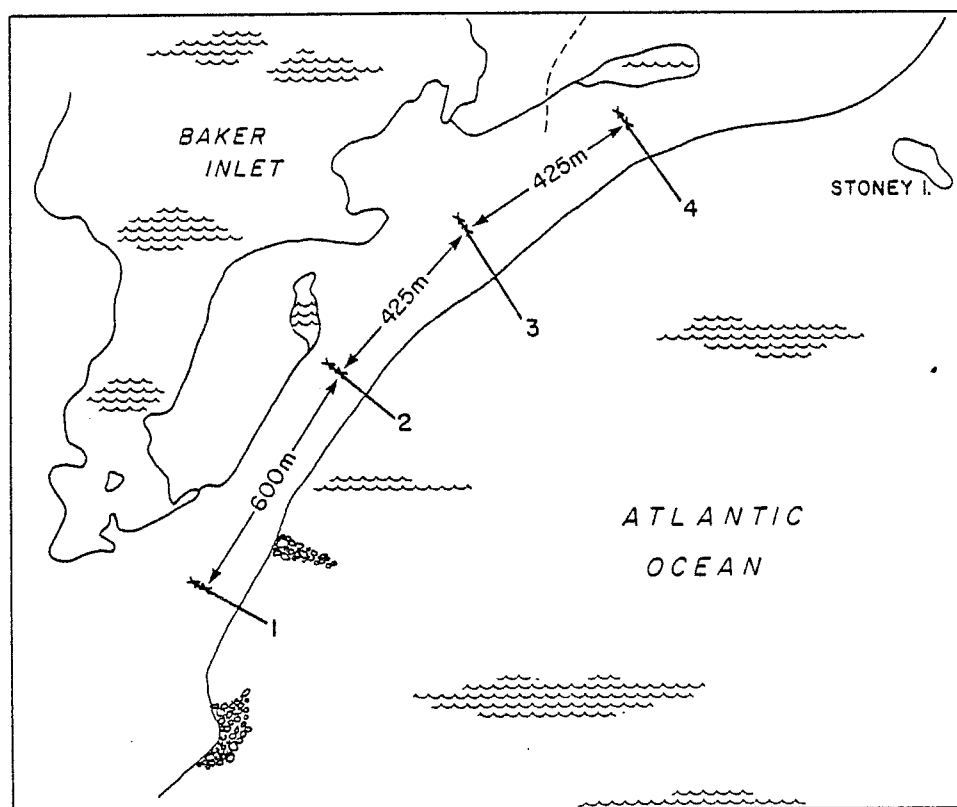
(5) Crescent Beach, Shelburne County, is located off Provincial highway #3. Take highway #103 from Halifax to exit 23, then follow #3 to the road which leads to the town of Lockeport. This road extends along the back of Crescent beach. Profile 1 is at the second telephone pole east of the intersection at highway #3. Profile 2 is at the seventh telephone pole from the intersection and profile 3 is at the far eastern end of the beach. BM #3 is a fence post located at the landward side of a low dune ridge. The BM's of the three profiles are marked BIO #1, #2, #3 respectively. A fourth profile established by Munroe (1980) in 1978 was used as a reprofile site. It is situated 519 m east of the intersection just to the west of the last set of wooden stairs which cross the dune system. The bearings of profiles 1 to 3 are 172° , 180° and 212° respectively. There is no bearing available for profile M, however a TBM and BM are present 6 metres apart. The back T-bar is 90 cm in height and the front T-bar is badly twisted and bent but can still be used for survey alignment.



5. Location of Beach Profiles, Crescent Beach, Shelburne County.

(6) Bakers Beach, Shelburne County, is located on Cape Sable Island, just off highway #330. From Halifax follow highway #103 and #3 to exit 29, then proceed to the town of Barrington Passage where you turn left (south) onto highway #330. After crossing the causeway to Cape Sable Island, turn left at the first intersection and proceed to the village of Stoney Island. Turn left at a dirt road just before the village cemetery. It leads to Bakers Beach and crosses the dune system between profiles 3 and 4. Profiles 1 and 2 are farther to the southeast along the beach. All bench marks are metal T-bars and they are located on the backslope of the main dune ridge.

Profile No.	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass
		BM	TBM	
1	10	1.14	1.40	148
2	10	1.44	1.26	157
3	10	1.37	1.26	155
4	10	1.37	1.02	154

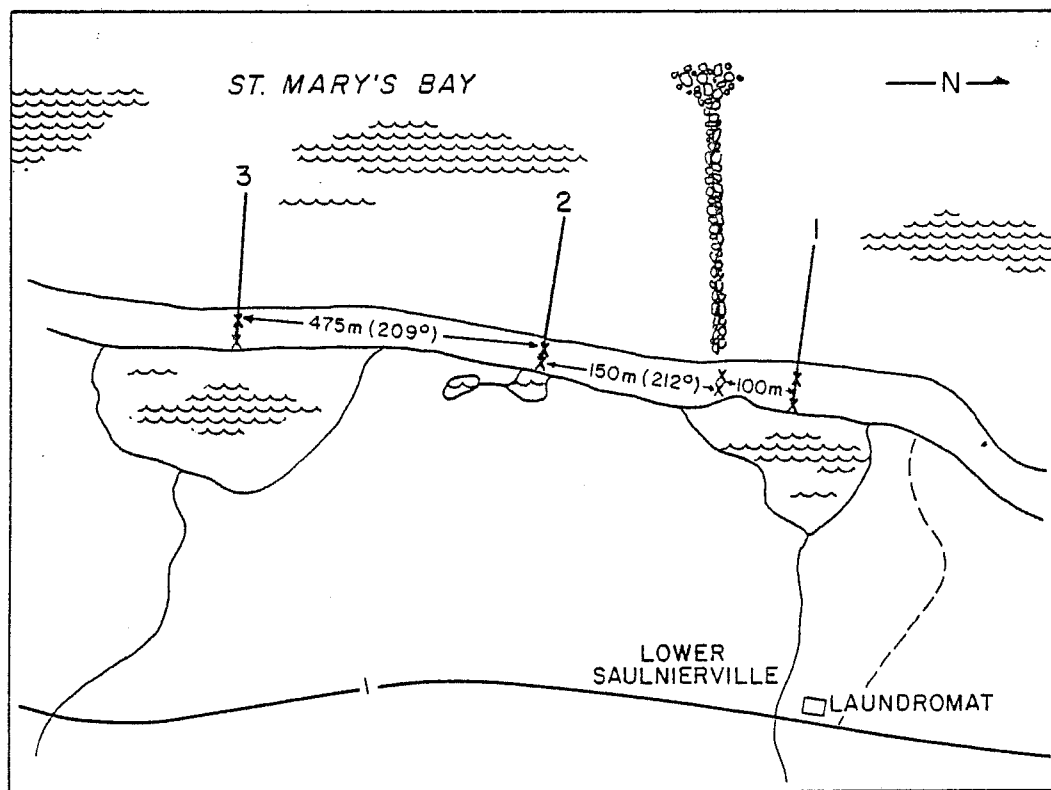


6. Location of Beach Profiles, Bakers Beach, Shelburne County.



(7) Lower Saulnierville, Digby County, follow route #1 north from Yarmouth to the Village of Lower Saulnierville. Turn left onto the private road at the north side of the village laundromat and proceed along this road to the coast. All of the profiles are south of the road and are marked by metal T-bars. Profile 1 is at the edge of a pond, and 100 m south of it are two stakes which mark the location of a long, transverse coastal ridge that extends offshore. Profile 2 is a further 150 m to the south and is located by a pond, as is profile 3 which is approximately 475 m south of profile 2.

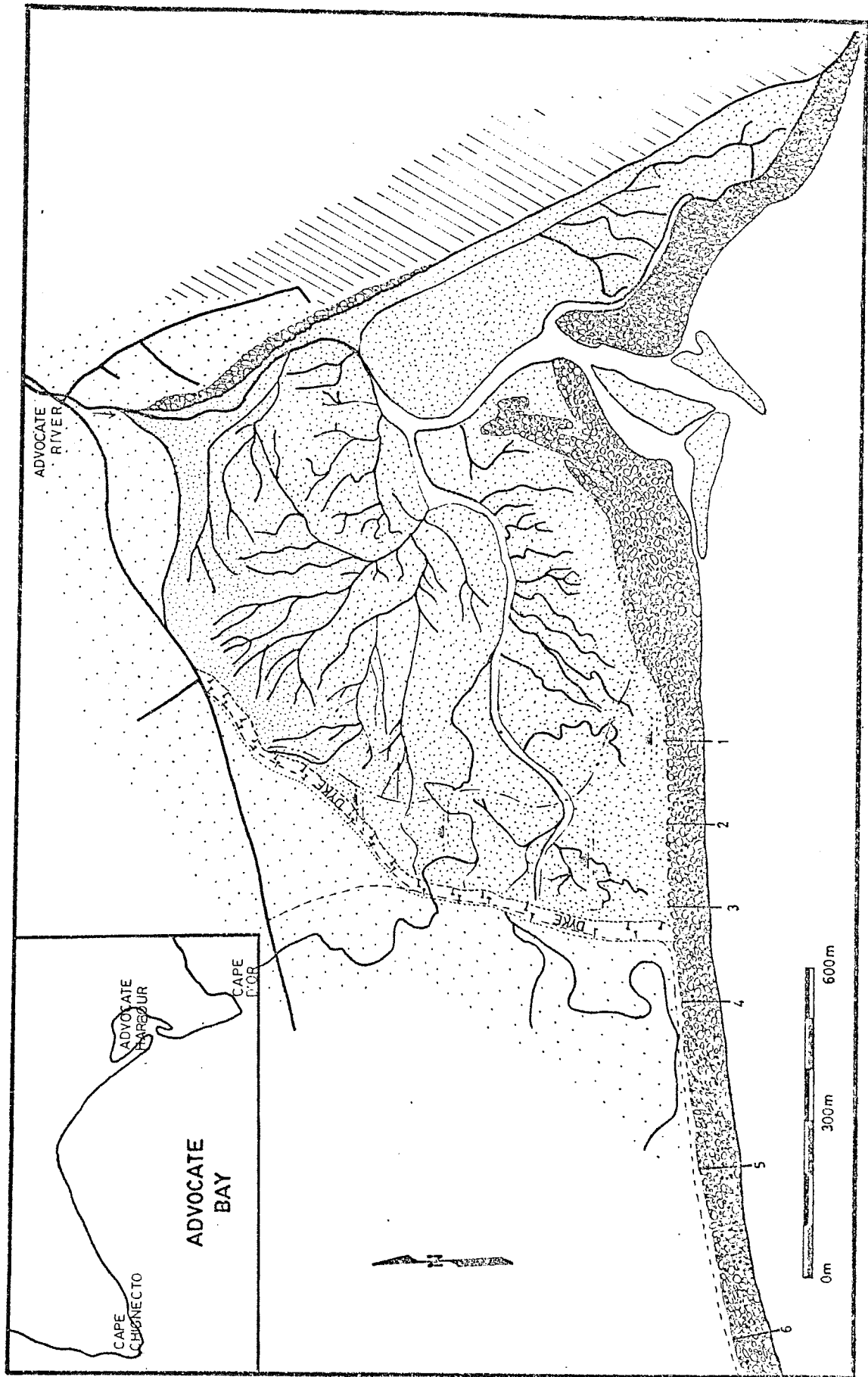
Profile No.	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass
		BM	TBM	
1	10.5	0.97	0.91	-
2	7.0	0.62	0.58	-
3	9.5	0.98	1.12	-



7. Location of Beach Profiles, Lower Saulnierville Beach, Digby County.

(8) Advocate Harbour Beach, Cumberland County, is located between Capes D'Or and Chignecto at the eastern end of the Bay of Fundy. Follow highway #209 north from Parrsboro to the Village of Advocate Harbour. Proceed approximately 2 km past the village and turn left at the sign for West Advocate; then travel 0.7 km and turn left onto a dirt road which leads to a parking area at Advocate Harbour Beach. Follow the dirt road along the back of the beach; Profile 6 is the first profile that you come across. It is located just beyond the end of a fence that runs along the left side of the road. Profiles 5 and 4 are spaced approximately 500 m apart and are situated before the dyke. Profiles 3 to 1 are 250 m apart and are east of the dyke. All of the bench marks are metal T-bars located at the landward extent of overwash (#1 to #3) or landward of the road that runs along the back of the beach (#4 to #6).

Profile No.	Distance (m) BM - TBM	Height (m)		Bearing (°) Silva Compass
		BM	TBM	
1	5.0	0.98	0.94	253
2	5.5	1.14	1.16	273
3	5.5	1.00	0.94	-
4	5.0	1.02	1.02	253
5	5.0	1.24	1.28	250
6	4.0	1.14	1.24	248



8. Location of Beach Profiles, Advocate Beach, Cumberland County.

BEACH PROFILE DATA - FIELD SURVEYSIntroduction

A computer printout of field survey data is provided for all the beach profiles surveyed in 1981. The survey data is listed alphabetically by beach name, profile number, and year of survey. An explanation of how the information is listed is provided below.

Example of Computer Printout

```

_1200                                (A)
_ADVOCA TE _BEACH                    (B)
AD-28/07/81  _ _ 68  _ _ _ .98  _ _ 1  _ 39  _ 64
      (C)      (D) (E)   (F)   (G)   (H) (I)

-30----14-20----4-30 ----8 ... -30---12
(J) (K) (J) (K) (J) (K)... (J) (K)

```

(A) - Col. 1-5, -An arbitrary elevation used to initiate the first survey point high enough that the beach profile is not plotted below the x-axis.

(B) -Col. 1-20, -Beach Name

(C) -Col. 1-12, -Code for Beach Name and Date of Survey (dd/mo/yr)

(D) -Col. 13-15, -Number of paired survey points (J,K) listed for each beach profile.

- (E) -Col. 16-20 -Water level
- (F) -Col. 21-25 -Height (in m) of Bench Mark - *relative to ground surface.*
- (G) -Col. 26-30, -Beach Profile Number
- (H) -Col. 31-33, -The n^{th} paired survey points where high tide limit existed at the time of the survey.
- (I) -Col. 34-36 -The n^{th} paired survey points where low tide limit existed at the time of the survey.
- (J) -Repeater -Distance (in decimetres) between the given survey point and the previous survey point
- (K) -repeater -Difference in elevation (in centimetres) between the given survey point and the previous survey point.

NOTE: the first survey point (0,0) of each beach profile is not listed, the data begin at the second survey point.

1200

ADVOCATE BEACH

AD-28/7/81	68	0.00	.98	1	39	64				
30	14	20	4	30	8	30	18	30	8	30
30	10	30	12	30	7	30	7	30	0	30
30	5	30	6	30	8	30	7	30	7	30
30	6	30	12	20	-4	30	-3	30	-10	30
30	-20	30	19	30	-11	30	-33	30	-24	30
30	-32	30	-35	30	-32	30	-31	30	-34	30
30	-28	30	-25	30	-21	30	-25	30	-24	30
30	-25	30	-26	30	-29	30	-29	30	-30	30
30	-25	30	-28	30	-26	30	-33			

1200

ADVOCATE BEACH

AD-28/7/81	53	0.00	1.14	2	29	48				
30	2	25	10	30	9	30	13	30	12	30
30	20	30	11	30	4	30	6	30	17	30
30	20	15	-3	30	-60	30	-4	30	-3	30
30	28	30	-46	30	-30	30	-36	30	-36	30
30	-34	30	-33	30	-31	30	-34	30	-35	30
30	-28	30	-31	30	-31	30	-31	30	-32	30
30	-30	30	-30	30	-29	30	-32	30	-34	

1200

ADVOCATE BEACH

AD-29/7/81	51	0.00	1.00	3	29	48				
30	4	25	5	30	12	30	12	30	2	30
30	23	30	19	30	19	30	18	30	23	30
30	4	30	64	20	2	30	-93	30	18	30
5	2	5	-23	5	-2	10	-40	30	-51	30
30	-36	30	-31	30	-33	30	-34	30	-34	30
30	-32	30	-29	30	-30	30	-32	30	-31	30
30	-31	30	-29	10	-21					

1200

ADVOCATE BEACH

AD-29/7/81	53	0.00	1.02	4	30	49				
30	12	20	-14	30	15	30	14	30	6	30
30	6	30	38	30	42	30	42	30	45	30
30	59	25	-9	30	-18	20	-59	30	5	15
15	-41	30	-14	20	-59	30	-52	30	-52	30
30	-34	30	-37	30	-36	30	-38	30	-35	30
30	-33	30	-31	30	-32	30	-36	30	-33	30
30	-32	30	-35	30	-33	30	-30	10	-15	

1200

ADVOCATE BEACH

AD-29/7/81	51	0.00	1.24	5	24	47				
30	4	20	4	30	-5	30	-11	30	8	30
30	41	30	47	30	47	30	79	30	85	20
25	-98	30	-5	5	-18	20	-60	30	-5	30
25	-46	30	-39	30	-40	30	-34	30	-35	30
30	-34	30	-36	30	-34	30	-35	30	-32	30
30	-36	30	-34	30	-34	30	-32	30	-29	30
30	-33	30	-33	15	-20					

1200

ADVOCATE BEACH

AD-29/7/81	53	0.00	1.14	6	25	50									
30	3	10	-10	15	15	30	-5	30	22	30	24	30	51	30	84
30	110	20	29	20	-82	25	-27	30	-39	30	-22	25	63	30	-68
30	-21	15	-13	15	-24	25	-10	20	-46	30	7	25	-62	30	-43
30	-41	30	-35	30	-37	30	-36	30	-34	30	-35	30	-36	30	-35
30	-37	30	-37	30	-35	30	-37	30	-36	30	-34	30	-33	30	-34
30	-34	30	-32	30	-34	30	-33	30	-32	30	-34	30	-32	30	-32
30	-34	15	-15	30	-31	30	-31	30	-36						

1200

BARTLETTS BEACH

BA-30/8/78	66	0.00	1.00	M	0	55									
30	-29	30	-36	30	-22	30	-68	30	-82	30	-8	30	9	30	-46
30	99	30	-4	30	-6	10	-14	30	-38	30	-52	26	-66	6	-28
30	-40	30	-28	30	-26	30	-24	30	-20	30	-21	30	-18	30	-15
30	-15	30	-11	30	-9	30	-8	30	-9	30	-11	30	-13	30	-19
30	-7	30	0	30	-4	30	-10	30	8	30	3	30	-3	30	-5
30	-7	30	-8	30	-9	30	-11	30	-9	30	-8	30	-2	30	-5
30	-2	30	-2	30	-2	30	-3	30	2	30	-2	30	6	30	7
30	5	30	5	30	3	30	2	30	-1	18	-1	30	-6	30	-9
30	-6	30	-7												

1200

BARTLETTS BEACH

BA-17/7/81	88	0.00	.96	M	20	67									
30	-36	30	-34	30	-23	30	-71	30	-78	25	-21	25	32	30	-47
10	-13	30	46	10	25	30	-40	30	-4	20	-18	30	-83	30	-78
30	-36	30	-39	30	-39	30	-29	30	-19	30	-18	30	-13	30	-12
30	-9	30	-8	30	-9	30	-13	30	-16	30	-17	15	-9	15	5
30	-9	30	-8	30	-6	30	-10	30	-11	30	-2	30	-7	30	-6
30	-2	30	0	30	-4	30	-3	30	-10	30	0	30	1	30	4
30	1	30	1	30	-2	30	-3	30	-4	30	-4	30	-4	30	-4
30	-4	30	-5	30	-6	30	-5	30	-5	30	-6	30	-6	30	-6
30	-6	30	-4	30	-5	30	-6	30	-6	30	-8	30	-14	30	-19
30	-8	30	4	30	8	30	-3	30	-8	30	-11	30	-4	30	0
30	-5	30	-3	30	-4	30	-6	30	-1	30	2	30	-2	30	-3

1200

BROAD COVE BEACH

BC-23/7/81	19	0.00	1.04	M	0	18									
30	8	30	37	30	57	30	45	15	9	15	-47	30	-8	10	21
20	-67	20	-69	10	0	10	-35	15	-79	5	-23	30	-79	30	-45
30	-38	30	-33	30	-43										

1200

BROAD COVE BEACH

BC-12/8/78	14	0.00	.96	M	0	20									
29	13	30	30	30	8	30	49	10	23	30	-113	30	-50	25	17
20	-86	30	-58	30	-91	30	-72	5	3	30	-58				

1200

CAPE SABLE ISLAND ,BAKERS BEACH

CS-19/7/81 58 0.00 1.14 1 22 40

30	4 30	4 10	4 30	4 30	8 30	22 15	-8 20	-52
25	-12 30	-22 30	-12 30	-14 30	-2 30	-7 30	-6 30	-5
30	-6 30	-12 30	-11 30	-12 30	-13 30	-13 30	-10 30	-8
30	-7 30	-5 30	-5 30	-5 30	-5 30	-5 30	-7 30	-8
30	-10 30	-9 30	-8 30	-7 30	-8 30	-10 30	-8 30	-11
30	-10 30	-6 30	-3 30	-6 30	-5 30	-5 30	-2 30	-5
30	0 30	0 30	0 30	-2 30	-1 30	0 30	-3 30	-2
30	0 30	-6						

1200

CAPE SABLE ISLAND ,BAKERS BEACH

CS-19/7/81 60 0.00 1.44 2 18 44

30	11 30	7 30	4 10	-9 20	0 30	-15 20	-11 30	-15
30	-40 30	-48 10	-12 30	-16 30	-6 30	-9 30	-13 30	-14
30	-13 30	-11 30	-12 30	-12 30	-11 30	-10 30	-8 30	-5
30	-2 30	-2 30	-2 30	-3 30	-5 30	-6 30	-5 30	-5
30	-6 30	-5 30	-6 30	-6 30	-7 30	-6 30	-7 30	-8
30	-7 30	-6 30	-4 30	-7 30	-5 30	-5 30	-5 30	-3
30	-5 30	-2 30	-4 30	-4 30	-4 30	-2 30	0 30	-4
30	-4 30	-3 30	-8 30	-8				

1200

CAPE SABLE ISLAND,BAKERS BEACH

CS-19/7/81 54 0.00 1.37 3 16 42

30	16 30	22 30	34 30	18 10	3 30	48 30	-62 30	-63
30	-29 30	-24 30	-14 30	-10 30	-6 30	-8 30	-17 30	-16
30	-16 30	-19 30	-17 30	-17 30	-11 30	0 30	2 30	0
30	-2 30	-3 30	-4 30	-5 30	-5 30	-4 30	-4 30	-5
30	-5 20	-3 30	-7 30	-8 30	-6 30	-7 30	-8 30	-8
30	-8 30	-7 30	-7 30	-9 30	-7 30	-8 30	-6 30	-9
30	-7 30	-3 30	-9 30	-5 30	-4 30	-4		

1200

CAPE SABLE ISLAND,BAKERS BEACH

CS-19/7/81 53 0.00 1.37 4 17 42

30	17 30	45 30	72 10	8 30	36 15	31 15	-74 30	-100
30	-41 30	-12 30	-30 30	-11 30	-5 30	-5 30	-13 30	-18
30	-14 30	-13 30	-15 30	-14 20	-7 30	-9 30	-4 30	-5
30	-3 30	-3 30	-4 30	-4 30	-3 30	-3 30	-2 30	-1
30	-4 30	-5 30	-6 30	-8 30	-8 30	-9 30	-9 30	-10
30	-10 30	-9 30	-6 30	-9 30	-7 30	-5 30	-7 30	-10
30	-10 30	-7 30	-7 30	-9 30	-13			

1200

CHERRY HILL BEACH

CH-12/8/78 31 0.00 .90 M 0 33

20	25 30	-24 30	-37 30	-11 30	24 30	11 30	-40 30	-30
20	-7 30	-69 30	-16 30	-17 30	-9 30	-12 30	-3 30	-10
30	-16 20	-15 30	-17 30	-19 30	-18 30	-16 30	-10 30	-6
30	-7 30	-7 30	-9 30	-9 30	-8 30	-10 30	-9	

1200
 CHERRY HILL BEACH
 CH-22/7/81 43 0.00 .90 M 14 26

30	-27 30	-32 30	-6 30	7 30	24 30	-16 30	-23 20	-38
10	-25 30	-42 5	-6 25	-9 30	-12 15	-10 15	-11 30	-18
30	-17 30	-13 30	-10 30	-8 30	-8 30	-7 30	-7 30	-7
30	-6 30	-5 30	-6 30	-6 30	-4 30	-4 30	-4 30	-3
30	-4 30	-5 30	-3 30	-3 30	-4 30	-3 30	-4 30	-5
30	-5 30	-3 30	-1					

1200
 CONRADS BEACH
 CO-26/7/81 55 0.00 1.18 1 24 38

30	6 30	2 30	-20 10	-6 20	6 30	12 30	32 20	45
10	-30 20	-32 30	-20 30	-10 30	-8 30	-12 30	-30 30	-7
30	-8 30	-10 30	-14 30	-14 30	-14 30	-14 30	-12 30	-8
30	-6 30	-8 30	-4 30	-6 30	-4 30	-4 30	-4 30	-6
30	-4 30	-6 30	-4 30	-6 30	-6 30	-6 30	-4 30	-4
30	-3 30	-4 30	-4 30	-4 30	-4 30	-4 30	-4 30	-6
30	-6 30	-6 30	-6 30	-8 30	-8 30	-8 30	-10	

1200
 CONRADS BEACH
 CO-26/7/81 55 0.00 1.23 2 28 42

30	10 30	56 30	16 15	-6 30	12 30	32 10	6 30	-52
30	-38 30	-6 30	-58 30	-20 30	-20 30	-10 30	-8 30	-10
30	-6 30	-8 30	6 30	2 30	-2 30	-14 30	-14 30	-14
30	-12 30	-22 5	-2 20	-10 10	-4 30	-14 30	-8 30	-4
30	-6 30	-4 30	-4 30	-6 30	-4 30	-4 30	-4 30	-5
30	-4 30	-6 30	-4 30	-4 30	-4 30	-4 30	-4 30	-4
30	-4 30	-4 30	-6 30	-6 30	-8 30	-6 30	-6	

1200
 CONRADS BEACH
 CO-26/7/81 53 0.00 1.12 3 30 38

30	40 30	22 30	10 5	2 30	40 30	60 30	64 30	-2
15	-44 15	20 25	-60 30	-40 30	-48 30	-28 30	-18 30	-16
30	-14 30	-6 30	-9 30	2 30	-6 30	4 30	0 30	4
30	-8 30	-14 30	-10 30	-12 30	-16 30	-12 30	-14 30	-10
30	-6 30	-4 30	-6 30	-4 30	-6 30	-6 30	-4 30	-6
30	-4 30	-6 30	-4 30	-6 30	-8 30	-8 30	-6 30	-8
30	-8 30	-7 30	-12 30	-12 30	-12			

1200

CONRAD'S BEACH

CO-26/7/81	65	0.00	1.18	4	36	53									
30	24	30	46	30	58	10	10	20	22	15	22	15	66	15	60
15	72	15	-39	15	-43	30	-76	30	-37	30	-40	30	-25	30	-18
30	-14	30	-12	30	-8	30	-6	30	-10	30	-9	30	-12	30	-2
30	-7	30	-4	30	6	30	6	30	12	30	8	30	8	15	4
15	-15	30	-34	15	-15	15	-9	30	-24	30	-17	30	-12	30	-10
30	-4	30	-2	30	-4	30	-4	30	-2	30	-2	30	-3	30	-2
30	-2	30	-5	30	-5	30	-10	30	-9	30	-4	30	-4	30	-5
30	-6	30	-2	30	-4	30	-14	30	-14	30	-16	30	-16	30	-12
30	-14														

1200

COW BAY, BEACH

CB-3/7/81	49	0.00	.78	M	19	31									
30	2	30	4	30	12	25	4	30	18	30	8	30	10	30	20
30	18	30	22	30	20	30	26	30	30	30	16	5	2	30	-31
10	-19	20	-24	30	-40	30	-28	30	-34	30	-25	30	-22	15	-10
15	-12	30	-24	30	-13	30	-8	30	-9	30	-8	30	-8	30	-10
30	-8	30	-10	30	-6	30	-2	30	-2	30	-2	30	-5	30	-5
30	-6	30	-4	30	-7	30	-9	30	-4	30	-8	30	-5	30	-8
30	-6														

1200

COW BAY BEACH

CB-3/7/81	38	0.00	.62	2	15	25									
30	32	30	24	30	20	30	58	30	54	30	8	18	-4	12	-40
30	-40	30	-49	15	-4	15	-31	30	-44	30	-50	30	-34	30	-8
30	-8	30	-8	30	-12	30	-10	30	-10	30	-10	30	-10	30	-10
30	-9	30	-5	30	-12	30	2	30	0	30	-6	30	-4	30	-2
30	-5	30	-8	30	-10	30	-12	30	-10	30	-21				

1200

COW BAY BEACH

CB-3/7/81	33	0.00	.63	3	11	19									
30	40	30	8	30	46	30	84	20	28	10	-32	30	-112	30	-50
30	-42	30	-52	30	-22	30	-19	30	-16	30	-16	30	-10	30	-8
30	-10	30	-8	30	-7	30	-4	30	-5	30	-5	30	-2	30	-2
30	-5	30	-3	30	-4	30	-6	30	-6	30	-12	30	-10	30	-15
30	-22														

1200

COW BAY BEACH

CB-29/7/78	24	0.00	.88	M	0	20									
30	-16	30	-16	30	-18	30	-8	30	48	5	25	30	44	30	22
30	0	30	16	30	11	30	-17	30	-37	30	-19	20	-6	30	-48
30	-34	30	-24	30	-30	30	-20	30	-29	30	-16	5	5	30	-18

1200

CRESCENT BEACH LUNENBURG CO.

CW-25/8/81	9	0.00	0.00		M	0	0						
30	86	60	-9	50	151	90	-153	25	-64105	-14	96	-90264	-32
100	-99												

1200

CRESCENT BEACH LUNENBURG CO.

CW-19/10/80	11	0.00	0.00			38	0	0							
76	10	26	40	13	-20	13	-40	15	5	40	-45	20	-10	21	0
40	5115	-70165	-50												

1200

CRESCENT BEACH-LUNENBURG CO.

CW-23/7/81	35	0.00	0.00			3	9	23							
60	123	30	-91	30	-74	15	-27	30	-6	30	-15	10	-8	30	-21
30	-18	30	-12	30	-8	30	-8	30	-7	30	-5	30	-5	30	-8
30	-7	30	-8	30	-8	30	-9	30	-4	30	-5	30	-6	30	-6
30	-5	30	-5	30	-6	30	-2	30	-2	30	-6	30	-7	30	-12
30	-11	30	-9	30	-9										

1200

CRESCENT-LUNENBURG

CW-19/10/80	9	0.00	0.00			3	0	0							
25	0	80	140	10	-65	13	-10	65	-100	13	-50	30	-35160	-60	
210	-64														

1200

HADLEYVILLE BEACH

HA-3/8/81	41	0.00	.64			1	26	31							
30	4	25	4	30	2	30	0	30	2	30	12	30	38	30	25
30	18	30	12	30	11	30	16	30	6	30	6	30	15	30	1
30	24	30	41	15	4	25	-102	30	-26	15	-42	30	-37	30	-21
20	-28	30	-28	30	-21	30	-21	30	-27	15	-19	20	-24	30	-31
30	-13	30	-2	30	-4	30	-8	30	2	30	-4	30	-10	30	0
30	-4														

1200

HADLEYVILLE BEACH

HA-3/8/81	48	0.00	1.28			4	28	34							
30	4	30	-30	30	-62	30	-21	30	6	30	0	30	2	30	11
30	2	30	5	30	6	30	-9	30	-7	30	-11	20	38	30	70
30	90	30	86	30	28	30	21	15	-1	25	-38	30	-38	30	-15
30	-32	30	-12	10	-10	20	-28	30	-34	30	-22	30	-21	30	-25
30	-24	25	-18	5	-19	25	-21	25	-9	25	-8	25	0	25	1
25	0	25	2	25	-2	30	-4	30	2	30	2	30	0	30	0

1200

INDIAN COVE

IC-4/8/81	30	0.00	0.00			7	22	24							
30	18	30	14	30	2	30	10	30	6	30	6	30	-8	30	-30
25	-9	30	-13	30	-24	30	-22	30	-17	30	-19	30	-36	30	-18
30	0	15	-12	5	6	5	-16	5	2	30	-50	30	-30	30	-20
30	-20	30	-24	30	-22	5	-3	5	-18	25	-36				

1200
INDIAN COVE
IC-4/8/81 46 0.00 0.00 6 39 41
30 20 10 -4 30 6 10 6 30 2 10 0 30 8 30 4
30 -8 10 -4 30 -10 30 -12 25 -10 20 -62 30 -18 15 4
30 48 30 40 30 30 30 22 30 10 30 -6 30 -10 30 30
30 -8 30 -2 20 9 20 -24 30 -44 30 -54 30 -20 30 -28
30 -8 30 2 25 -9 10 10 5 -14 5 4 30 -56 30 -30
25 -18 30 -24 30 -28 25 -30 5 -18 30 -38

1200
INDIAN COVE
IC-4/8/81 36 0.00 0.00 3 20 31
10 -10 30 -6 30 -8 15 -3 30 -42 30 -22 30 40 30 36
30 36 30 24 30 10 30 8 15 -21 30 16 30 16 10 -2
30 -54 30 -43 30 -22 30 -22 30 -16 30 4 30 -8 25 -6
10 8 5 -6 5 2 30 -56 30 -30 10 -7 30 -24 30 -30
30 -26 5 -10 30 -36 30 -30

1200
INDIAN COVE
IC-4/8/81 27 0.00 0.00 1 16 23
30 30 30 50 30 6 30 -2 15 0 15 -46 10 30 20 -96
30 14 30 22 30 6 30 -18 30 -29 30 -6 30 -24 25 -9
20 2 5 -17 30 -44 30 -30 30 -20 10 -8 30 -24 30 -30
5 -10 30 -36 5 -4

1200
LOWER SAULNIERVILLE BEACH
SV-15/7/81 57 0.00 .97 1 13 43
30 46 30 14 30 18 15 -8 15 -16 30 -4 25 -28 20 -26
30 -4 5 5 5 -29 5 -12 15 -24 30 -31 15 -10 15 -12
30 -24 30 -18 30 -19 30 -17 30 -14 30 -14 30 -9 30 -14
30 -15 30 -3 30 -14 30 -9 30 -6 30 -12 30 0 30 0
30 -8 30 -11 30 -13 30 -3 30 -8 30 1 15 2 30 6
15 -12 30 -9 60 0 30 -18 30 -12 30 -8 30 -9 60 13
30 14 30 -12 30 -12 30 -21 30 -54 30 16 30 6 30 -18
30 -19

1200
LOWER SAULNIERVILLE BEACH
SV-15/7/81 48 0.00 .62 2 11 40
30 50 30 12 10 0 20 -50 20 -10 10 -17 30 -28 10 -11
20 -36 30 -24 30 -27 30 -33 30 -23 30 -26 30 -22 30 -12
30 -16 30 -14 30 -14 30 10 30 -9 30 -11 30 -1 30 2
25 -6 30 -18 30 -16 30 -12 30 8 30 -2 30 -13 30 -12
30 -4 25 -9 30 -33 30 -16 30 -20 30 -4 12 -43 30 -13
30 -21 30 -14 30 -34 30 -26 30 -17 30 10 30 8 30 -12

1200
LOWER SAULNIERVILLE BEACH
SV-15/7/81 67 0.00 .98 3 12 42
30 32 30 22 30 10 5 -3 15 -6 10 -33 30 -33 30 16
10 -34 30 -46 10 -32 30 -34 30 -30 30 -35 30 -24 30 -24
30 -28 30 -24 30 -24 30 -22 30 -16 30 -6 30 -6 30 -6
30 -6 30 -6 30 -6 30 -6 30 -6 30 0 30 -2 30 -6
30 -8 30 -10 30 -12 30 -12 30 -15 30 -14 30 -12 30 -12
30 -14 30 -18 30 -17 30 -6 30 -6 30 -2 30 2 30 2
30 0 30 -2 30 -2 30 -2 30 -2 30 -2 30 0 30 -2
30 -2 30 -4 30 2 30 0 30 0 30 -1 30 -4 30 -4
30 -3 30 -2 30 0

1200
MARTINIQUE BEACH
MT-19/8/81 64 0.00 .32 1 17 39

30	12 30	20 30	28 30	40 30	52 30	40 10	12 30	4
30	4 30	-34 10	-4 25	-94 30	-38 30	-28 30	-28 30	-12
30	-46 30	-34 30	-24 30	-24 30	-18 30	-14 30	-8 30	-8
30	-8 30	-6 30	-6 30	-6 30	-8 30	-4 30	-5 30	-4
30	-2 30	-4 30	-4 30	-4 30	-4 30	-2 25	-4 30	-4
30	-4 30	-4 30	-5 30	-4 30	-6 30	-4 30	-3 30	-1
5	-4 25	-6 30	-4 30	2 30	2 30	1 30	-2 30	-3
30	-6 30	-8 30	-4 30	-4 30	-6 30	-8 30	-7 30	-6

1200
MARTINIQUE BEACH
MT-19/8/81 56 0.00 .30 6 13 35

30	36 30	36 30	56 30	32 20	3 30	-28 20	-96 30	-38
30	-38 30	-32 30	-30 30	-16 15	-6 30	-38 30	-28 30	-26
30	-18 30	-14 30	-8 30	-8 30	-10 30	-4 30	-6 30	-6
30	-4 30	-4 30	-6 30	-4 30	-4 30	-4 30	-2 30	-6
30	-6 5	0 30	-4 30	-2 30	-4 30	-4 30	-2 30	-4
30	-2 30	0 30	-2 30	-2 30	-3 30	-3 30	-4 30	-6
30	-6 30	-6 30	-6 30	-4 30	-2 30	-4 30	-2 30	-1

1200
MARTINIQUE BEACH
MT-19/8/81 59 0.00 .36 11 16 37

30	20 30	26 30	26 30	32 15	30 30	46 25	62 30	-52
30	-56 25	-2 20	-46 30	-40 30	-36 30	-28 30	-26 15	-4
30	-36 30	-24 30	-28 30	-26 30	-16 30	-12 30	-10 30	-10
30	-8 30	-6 30	-8 30	-6 30	-6 30	-6 30	-4 30	-4
30	-4 30	-6 30	-4 20	-2 30	-4 30	-4 30	-4 30	-4
30	-3 30	-3 30	-4 30	-2 30	-4 30	-4 30	-4 30	-3
30	-6 30	-4 30	-2 30	-6 30	-3 30	-2 30	0 30	-1
30	-10 30	-10 30	-2					

1200
MARTINIQUE BEACH
MT-19/8/81 54 0.00 .34 12 14 35

30	12 30	4 20	8 30	-13 10	21 10	-106 15	-20 20	-8
30	-20 30	-12 30	-8 30	0 10	-2 15	-20 30	-18 30	-20
30	-20 30	-16 30	-10 30	-10 30	-8 30	-6 30	-6 30	-6
30	-6 30	-6 30	-8 30	-5 30	-6 30	-4 30	-6 30	-6
30	-6 30	-6 30	-4 30	-6 30	-4 30	-3 30	-6 30	-6
30	-4 30	-3 30	-3 30	-6 30	-8 30	-6 30	-10 30	-4
30	-6 30	-4 30	-8 30	-10 30	-10 30	-8		

1200
MARTINIQUE BEACH
MT-18/8/81 56 0.00 .34 13 16 37
30 30 30 13 30 9 30 54 25 94 15 44 15 -83 15 -55
30 -26 30 -31 30 -35 30 -32 30 -11 5 -1 30 -29 30 -22
30 -18 30 -15 30 -15 30 -13 30 -10 30 -9 30 -8 30 -7
30 -8 30 -7 30 -6 30 -6 30 -5 30 -5 30 -6 30 -6
30 -6 30 -5 30 -5 30 -4 30 -5 30 -3 30 -2 30 -3
30 -2 30 -2 30 -1 30 -4 30 -2 30 -3 30 -3 30 -3
30 -2 30 -4 30 -4 30 -4 30 -6 30 -8 30 -6 30 -8

1200
MARTINIQUE BEACH
MT-18/8/81 62 0.00 .34 14 16 42
30 23 30 15 30 27 15 28 25 66 5 -9 5 -68 25 -65
30 -30 30 -10 30 -1 30 -2 30 -1 30 -5 30 -23 30 -16
30 -14 30 -13 30 -12 30 -9 30 -10 30 -8 30 -8 30 -8
30 -7 30 -6 30 -5 30 -4 30 -4 30 -3 30 -4 30 -3
30 -4 30 -2 30 -4 30 -4 30 -3 30 -4 30 -4 30 -4
30 -4 30 -5 30 -3 30 -3 30 0 30 -4 30 0 30 -2
30 -5 30 -4 30 -4 30 -4 30 -2 30 -2 30 -5 30 -2
30 -2 30 0 30 0 30 -2 30 -3 30 -4

1200
MARTINIQUE BEACH
MT-18/8/81 71 0.00 .58 15 32 51
30 9 30 5 30 4 30 3 30 1 30 2 30 9 20 30
15 52 25 -16 30 19 30 8 30 19 30 18 30 -18 30 35
30 -64 30 -21 30 -9 30 -13 30 -6 30 0 30 -4 30 -6
30 3 30 2 30 2 30 2 30 2 10 -2 30 -27 30 -20
30 -16 30 -15 30 -12 30 -11 30 -9 30 -9 30 -7 30 -7
30 -7 30 -5 30 -6 30 -6 30 -5 30 -6 30 -4 30 -5
30 -3 30 -4 30 -3 30 -1 30 -1 30 -1 30 -3 30 -3
30 -4 30 -3 30 -3 30 -2 30 -5 30 -5 30 -2 30 -4
30 -6 30 -5 30 -7 20 -3 30 -7 30 -5 30 -4

1200
MARTINIQUE BEACH
MT-19/8/76 48 0.00 .19 1 0 23
30 30 30 45 30 39 30 42 30 6 30 0 30 -31 30 -43
30 -39 30 -17 30 -35 30 -31 30 -27 30 -27 30 -23 30 -17
30 -25 30 -18 30 -17 30 -16 30 -13 30 -8 30 -7 30 -8
30 -11 30 -11 30 -7 20 -9 5 -11 5 6 30 -3 30 7
30 -1 30 -3 30 -5 30 -2 30 -3 30 -4 30 -7 30 -6
30 -6 30 -9 30 -9 30 -7 30 -5 30 -5 30 -3 30 -4

1200
MARTINIQUE BEACH
MT-19/8/76 44 0.00 .17 6 0 21
30 0 15 0 15 -35 30 -43 30 -69 30 -31 30 -40 30 -40
30 -29 30 -20 30 -15 30 -20 30 -13 30 -17 30 -9 30 -16
30 -13 30 -13 30 -10 30 -7 30 -6 30 -3 30 -5 30 -4
30 -3 30 -3 30 -5 30 -3 30 -3 30 -2 30 -3 30 -3
30 -7 30 -5 30 -3 30 3 30 5 30 1 30 0 30 -5
30 -7 30 -7 30 -6 30 -7

1200
MARTINIQUE BEACH
MT-19/8/76 46 0.00 .20 11 0 31
30 33 30 31 30 39 30 76 30 -76 30 -69 30 -45 30 -29
30 -22 30 -31 30 -18 30 -18 30 -13 30 -7 30 -11 30 -15
30 -13 30 -16 30 -17 30 -17 30 -19 30 -1 30 0 30 -3
30 -4 30 -7 30 -4 30 -1 30 -3 30 -1 30 -7 30 -10
30 4 30 2 30 0 30 -1 30 -3 30 -2 30 1 30 2
30 2 30 -4 30 -3 30 -3 30 -8 30 -9

1200
MARTINIQUE BEACH
MT-19/8/76 27 0.00 .19 12 0 14
30 -26 30 -45 30 -39 30 -9 30 -33 30 -30 30 -26 30 -22
30 -12 30 -19 30 -20 30 -15 30 -11 30 -9 30 -9 30 -10
30 -6 30 -6 30 -3 30 -3 30 -9 30 -3 30 -3 30 -5
30 -4 30 -4 30 -3

1200
MARTINIQUE BEACH
MT-19/8/76 44 0.00 .20 13 0 19
30 143 10 16 20 79 30 -97 10 -15 5 -33 15 -31 30 -37
30 -17 30 -21 30 -11 30 -11 30 -1 30 2 30 -5 30 -2
30 -3 30 -9 30 -10 30 -16 30 -13 30 -12 30 -11 30 -12
30 -9 30 -9 30 -8 30 -6 30 -5 30 -7 30 -1 30 -3
30 -3 30 -5 30 -3 30 -3 30 -6 30 -3 30 -5 30 -5
30 -3 30 -3 30 -2 30 -3

1200
MARTINIQUE BEACH
MT-19/8/76 35 0.00 .17 14 0 22
30 59 30 -2 30 -42 30 -39 30 -43 30 -21 30 -15 30 -10
30 -6 30 -8 30 -11 30 -13 30 -12 30 -11 30 -15 30 -13
30 -10 30 -12 30 -8 30 -1 30 -2 30 -4 30 -3 30 -5
30 -5 30 -5 30 -4 30 -5 30 -3 30 -3 30 -2 30 -5
30 -5 30 -3 30 -3

1200
MARTINIQUE BEACH
MT-19/8/76 36 0.00 .23 15 0 23
30 37 30 3 30 -3 30 21 30 0 30 -51 30 -29 30 -23
30 -25 30 -12 30 -15 30 -15 30 -11 30 -10 30 -17 30 -18
30 -13 30 -25 30 1 30 1 30 -3 30 -6 30 -3 30 -4
30 -5 30 -3 30 -4 30 -5 30 -2 30 -3 30 -3 30 -3
30 -3 30 -3 30 -4 30 -2

1200

MAVILETTE BEACH

MB-16/7/81	85	0.00	1.00	D	13	73									
30	26	15	26	5	-12	0	-81	30	-36	30	-24	30	-20	30	-24
30	-26	30	-22	30	-15	30	-18	30	-12	30	-15	30	-18	30	-16
30	-17	30	-18	30	-16	30	-13	30	-12	30	-8	30	-9	30	-7
30	-8	30	-4	30	-4	30	-3	30	-2	30	-3	30	-3	30	-4
30	-4	30	-6	30	-4	30	-6	30	-6	30	-6	30	-8	30	-8
30	-6	30	-4	30	-8	30	-7	30	-6	30	-4	30	-6	30	-6
30	-7	30	-6	30	-6	30	-6	30	-6	30	-4	30	-2	30	-4
30	-4	30	-3	30	-4	30	-4	30	-3	30	-5	30	-4	30	-4
30	-4	30	-5	30	-4	30	-4	30	-4	30	-4	30	-4	30	-4
30	-2	30	-4	30	-2	30	-4	30	-2	30	-4	30	-4	30	-4
30	-6	30	-5	30	-4	30	-4	30	-4						

1200

MAVILETTE BEACH

MB-16/7/81	142	0.00	.98	M	18	98									
30	68	30	50	30	38	30	22	30	70	30	-71	30	-62	30	-52
30	-39	30	0	30	1	5	-3	15	-108	15	-71	25	-56	30	-36
30	-25	30	-30	30	-25	30	-19	30	-17	30	-16	30	-13	30	-9
30	-10	30	-9	30	-5	30	-6	30	-6	30	-6	30	-6	30	-7
30	-7	30	-8	30	-7	30	-5	30	-6	30	-5	30	-5	30	-4
30	-4	30	-4	30	-5	30	-4	30	-5	30	-5	30	-6	30	-6
30	-6	30	-6	30	-6	30	-6	30	-6	30	-7	30	-7	30	-8
30	-7	30	-8	30	-8	30	-8	30	-2	30	-2	30	0	30	0
30	0	30	0	30	0	30	0	30	1	30	1	30	0	30	0
30	2	30	0	30	2	30	1	30	0	30	3	30	2	30	2
30	2	30	2	30	2	30	4	30	4	30	4	30	5	30	4
30	4	30	4	30	4	30	4	30	4	30	3	30	4	30	3
30	2	30	2	30	1	30	2	30	1	30	1	30	0	30	0
30	0	30	1	30	5	30	1	30	2	30	2	30	0	30	2
30	2	30	2	30	0	30	2	30	2	30	6	30	8	30	8
30	4	30	6	30	4	30	0	30	1	30	3	30	0	30	0
30	2	30	2	30	2	30	2	30	1	30	0	30	-2	30	-2
30	-6	30	-2	30	-2	30	-5	30	-8	30	-7				

1200

MAVILETTE BEACH

MB-1/9/78	69	0.00	1.00	M	0	79									
30	-35	30	-10	30	8	30	0	10	-99	10	-44	20	-60	30	-45
30	-44	30	-41	30	-22	30	-22	30	-23	30	-20	30	-18	30	-15
30	-12	30	-9	30	-7	30	-8	30	-7	30	-6	30	-4	30	-2
30	-2	60	-3	60	-4	60	-6	60	-7	60	-6	60	-6	60	-8
60	-6	60	-8	60	-8	60	-11	60	-11	60	-10	60	-9	60	-9
60	-6	60	-6	60	-7	60	-7	60	-8	60	-8	60	-9	30	-2
30	-3	30	-4	30	-4	30	-2	30	-2	30	-3	30	-3	30	-3
30	-3	30	-4	30	-5	30	-7	30	-6	30	-7	30	-8	10	-3
30	-8	30	-8	30	-8	30	-9	30	-8						

1200

METEGHAN CENTER BEACH

MC-14/7/81	46	0.00	1.00	M 22 43						
30	-15 30	4 30	-12 30	-18 30	-4 30	8 30	18 30	15		
30	19 20	4 30	-8 15	10 10	-54 30	-44 30	-12 30	-20		
15	-8 30	-8 30	-36 30	-32 15	-24 15	-8 30	-36 30	-28		
30	-28 30	-30 30	-28 30	-26 30	-28 30	-31 30	-38 30	-20		
30	-4 30	-7 30	-4 30	-3 30	-2 30	-3 30	-16 30	-4		
30	-14 30	-12 30	1 30	-2 30	-8 30	-8				

1200

METEGHAN CENTER BEACH

MC-31/8/78	24	0.00	1.02	M 0 20						
30	-17 30	1 30	-12 30	-14 30	-2 30	10 30	20 30	14		
30	12 20	18 30	-6 30	-41 30	-40 30	-32 30	-23 30	1		
30	-25 30	-22 30	-37 30	-28 20	-25 30	-40 20	-34 30	-26		

1200

SUMMERVILLE BEACH

SU-23/7/81	91	0.00	0.00	M 30 58						
30	13 30	15 30	39 30	-26 30	-11 5	-4 25	3 30	20		
30	11 30	-66 30	-44 30	-31 30	-16 30	-9 30	-13 30	10		
30	-11 30	-5 30	-3 30	0 30	-8 30	-15 30	-7 30	1		
30	-3 30	-1 10	-3 20	-14 30	-33 30	-7 30	2 30	2		
30	2 30	2 30	2 30	1 30	1 30	1 30	0 30	0		
30	-1 30	-1 30	-3 30	-3 30	-4 30	-4 30	-4 30	-5		
30	-6 30	-7 30	-9 30	-11 30	-14 30	-18 30	-18 30	-5		
30	-4 30	-4 30	-4 30	-2 30	-2 30	-3 30	-3 30	-2		
30	10 30	18 30	7 30	2 30	2 30	0 30	-2 30	-2		
30	-3 30	-3 30	-3 30	0 30	-4 30	-4 30	-5 30	-4		
30	-4 30	-2 30	-6 30	-4 30	-4 30	-3 30	-4 30	-3		
30	-4 30	-3 30	-4							

1200

SUMMERVILLE BEACH

SU-14/8/78	83	0.00	.75	M 0 45						
30	12 30	15 30	39 30	-32 30	-18 30	5 30	-15 30	-54		
30	-33 30	-8 30	-12 30	-8 30	-6 30	0 30	0 30	-6		
30	-5 30	-6 30	-6 30	-6 30	-6 30	-4 30	-9 30	3		
30	-1 30	0 30	6 30	5 30	-7 30	-42 20	-21 30	-31		
30	-9 30	1 30	-3 30	-6 30	-2 30	-2 30	-2 30	-2		
30	-3 30	0 30	0 30	-1 30	-1 30	-2 30	0 30	0		
30	0 30	1 30	1 30	0 30	0 30	-4 30	-4 30	-3		
30	1 30	2 30	6 30	3 30	2 30	0 30	2 30	-2		
30	4 30	4 30	-1 30	0 30	0 30	-1 30	-3 30	-2		
30	-3 30	-5 30	-5 30	-6 30	-9 30	-3 30	-4 10	-2		
30	-4 30	-5 30	-5							

1200
WATERSIDE BEACH
WS-1/8/81 73 0.00 1.10 1 22 45

30	-6 25	1 30	4 30	41 25	46 10	9 30	-74 30	-42
30	-10 30	-3 30	-22 30	-13 30	-10 30	-14 30	-3 30	-1
30	4 30	8 30	-8 30	-22 30	-19 30	-22 30	-36 30	-30
10	-12 10	-11 30	-6 30	11 30	6 30	1 30	-2 30	-6
30	-4 30	-4 30	-6 30	-6 30	-6 30	-9 30	-6 30	-6
30	-6 30	-6 30	-4 30	-4 30	-5 30	-4 30	-4 30	-8
30	-6 30	-5 30	-5 30	-6 30	-4 30	-5 30	-3 30	-4
30	-4 30	-1 30	-1 30	-3 30	-3 30	-4 30	-4 30	-6
30	-12 30	-13 30	-10 30	2 30	3 30	2 30	-4 30	-4
30	-6							

1200
WATERSIDE BEACH
WS-1/8/81 83 0.00 .99 2 17 45

30	8 25	-1 30	-31 30	1 30	16 30	50 30	79 30	-92
30	-82 30	-14 30	-12 30	-12 30	-2 30	1 30	0 30	-4
30	-5 30	-24 30	-30 30	-33 30	-32 30	-18 30	6 30	7
30	-1 30	-2 30	-4 30	-3 30	-4 30	-2 30	-4 30	-3
30	-4 30	-3 30	-2 30	-4 30	-8 30	-8 30	-8 30	-10
30	-9 30	-8 30	-8 30	-5 30	-5 30	-3 5	-1 30	-2
30	-4 30	-4 30	-4 30	-4 30	-5 30	-6 30	-5 30	-4
30	-4 30	-4 30	-2 30	-2 30	-1 30	1 30	1 30	1
30	-2 30	-1 30	-4 30	-1 30	-2 30	-4 30	-4 30	-3
30	-6 30	-5 30	-3 30	-4 30	-6 30	-6 30	-6 30	-6
30	-6 30	-6 0	0					

1200
WATERSIDE BEACH
WS-1/8/81 75 0.00 .92 3 20 45

30	2 20	14 30	16 30	6 30	3 30	28 30	46 30	19
30	6 30	-56 30	-30 30	-20 30	-25 30	-12 30	-5 30	-5
30	-13 30	-27 15	18 30	-3 30	-28 30	-28 30	-26 30	-14
30	-6 30	-2 30	4 30	5 30	0 30	3 30	-2 30	-2
30	-4 30	-3 30	-4 30	-2 30	-3 30	-3 30	-6 30	-5
30	-8 30	-4 30	-8 30	-9 30	-2 30	-6 30	-4 30	-6
30	-6 30	-9 30	-6 30	-4 30	-3 30	-4 30	-3 30	-1
30	-4 30	-2 30	-2 30	-1 30	-1 30	-2 30	2 30	1
30	2 30	0 30	0 30	1 30	1 30	0 30	-2 30	-1
30	-2 30	-12 30	-18					

1200
WATERSIDE BEACH
WS-1/8/81 86 0.00 1.10 4 21 52

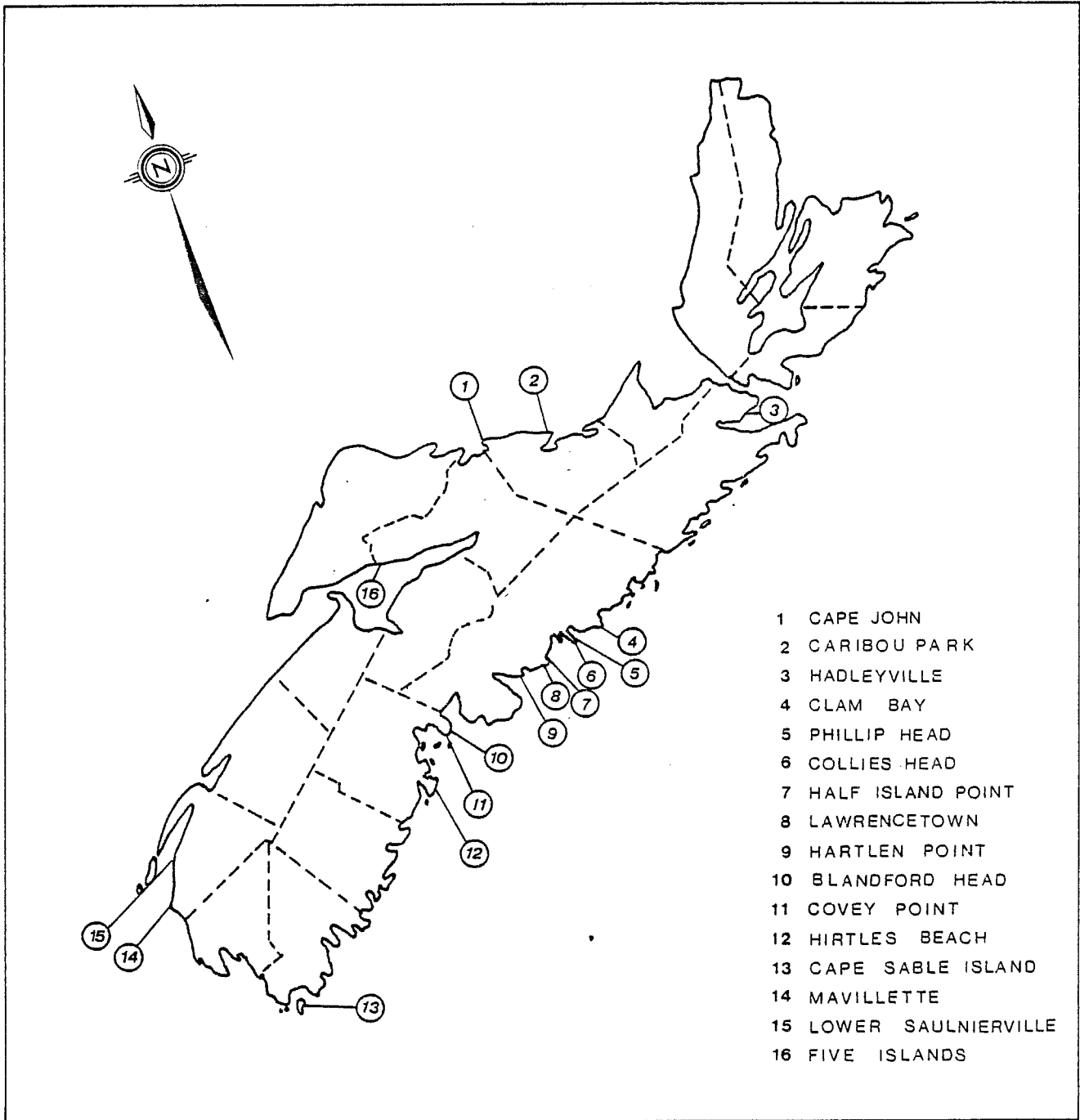
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30	22 30	22 30	12 30	-16 30	-34 30	-14 30	-25 30	-28
30	-7 30	-4 30	-6 30	-7 30	-22 30	-22 30	-34 30	-30
30	-22 30	-20 30	-6 30	-5 30	-4 30	-4 30	-6 30	-4
30	-2 30	-1 30	-8 30	-18 30	-14 30	-9 30	3 30	1
30	0 30	-4 30	-4 30	-5 30	-6 30	-5 30	-5 30	-6
30	-6 30	-6 30	-6 30	-6 30	-6 30	-6 30	-8 30	-8
30	-8 30	-7 30	-4 30	-6 30	-7 30	-4 30	-4 30	-4
30	-3 30	-3 30	-3 30	-3 30	-2 30	-1 30	6 30	1
30	0 30	4 30	1 30	0 30	1 30	-1 30	-3 30	-3
30	-2 30	-2 30	-4 30	-4 30	-5 30	-5		

COASTAL BLUFF RECESSION SURVEY SITESIntroduction

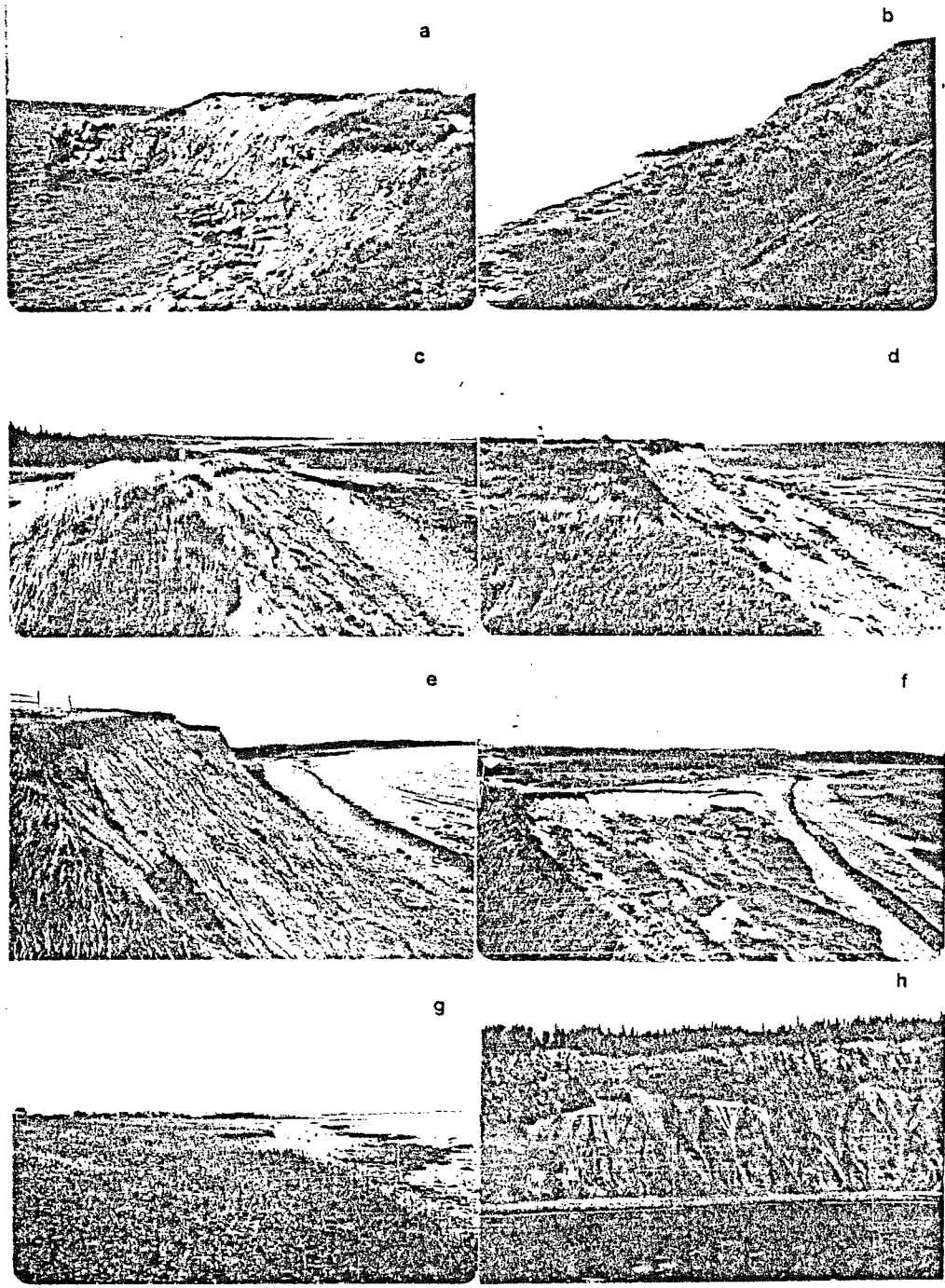
In 1981 a network of permanent markers was established at representative shore bluff sites along mainland Nova Scotia. The network of markers will facilitate the evaluation of shore erosion at different sites around the province. In 1981, 16 locations were visited, of which 8 (Sites 5 to 12, Fig. A) had been previously surveyed by D.J.W. Piper and J. Easton (pers. comm.) from Dalhousie University. All of the pertinent field information that is required to repeat the surveys is provided.

In 1981 measurements to the shore bluff edge were taken with a metric tape measure, which was run along a compass bearing marked by a benchmark (BM) and temporary benchmark (TBM). Unless otherwise stated, the BM and TBM were short (0.5 m) wooden stakes and the TBM was always established between the BM and the edge of the shore bluff. Compass bearings were generally taken with a Silva compass (uncorrected for declination); however, at sites where previous measurements were made with a Brunton compass, this compass type was also used in 1981. All distance measurements from the BM or TBM were made to the vertical edge of the bluff. Where sod hung over the bluff edge, then measurements were taken to the break point of the bluff, not to the seaward edge of the sod.

Note: By 1984 many of the wooden benchmarks had been replaced by metal rods.



Location of Sites Where Coastal Bluff Recession Stakes were Established and Measured in 1981 Along Mainland Nova Scotia



Examples of coastal bluff morphology and composition at sites measured in 1981: (a) Cape John (glacial till over Carboniferous Sandstone), (b) Caribou Park (glacial till), (c) Philip Head (glacial till), (d) Collies Head (glacial till), (e,f) Hirtles Beach (glacial till), (g) Lower Saulnierville (glacial till) and (h) Five Islands Park (glacial till over basalt and siltstone).

Coastal Bluff Survey Sites(1) Cape John, Pictou County

(a) Access - From Pictou travel west on Highway Route 6 along Northumberland Strait. Turn toward Cape John at the road just before the Village of River John (Fig. 1). Proceed to the end of the road to the abandoned fish store and wharf (Fig. 1A). The benchmarks are located behind the abandoned building, with the first marker being approximately 500 m along the path (following the bluff) from the building. The three BM stakes are located 20 m apart and were established on July 31, 1981 (Table 1). All BM and TBM markers are wooden stakes except for BM #1 which is a marked fence post. The compass bearing from the telephone pole (Fig. 1B) to TBM #1 was 8° (188° back bearing) and to TBM #3 it was 13° (193° back bearing).

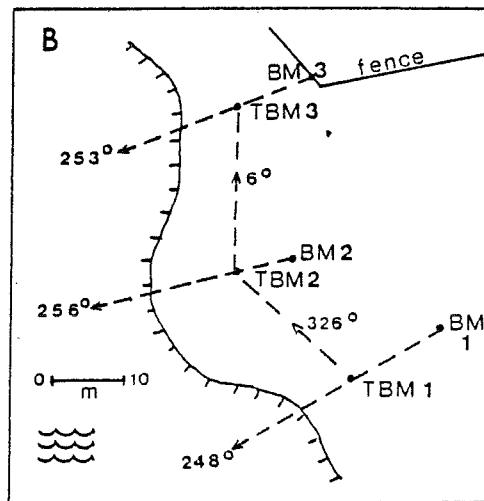
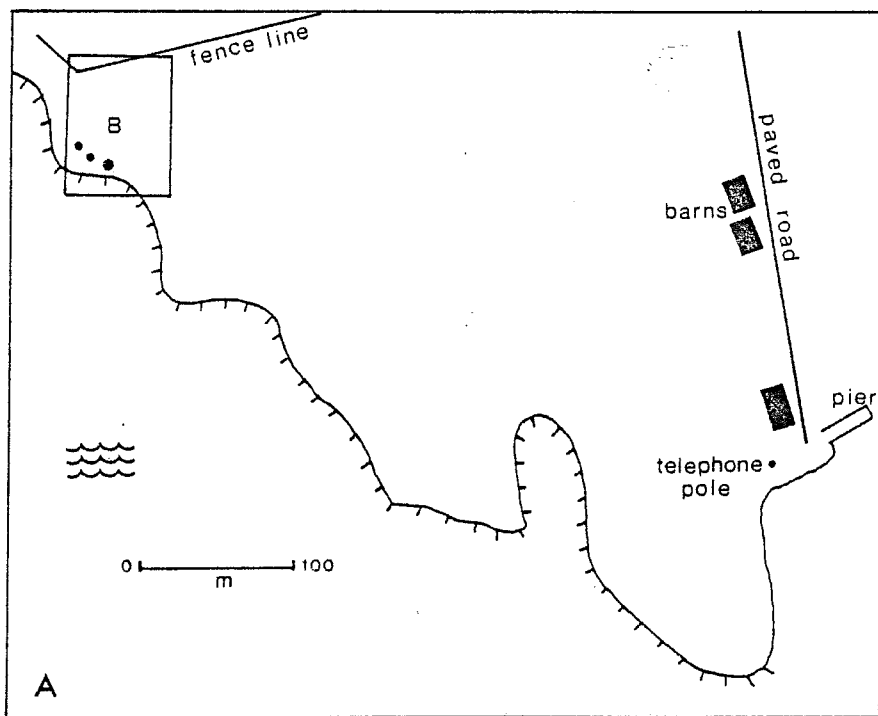
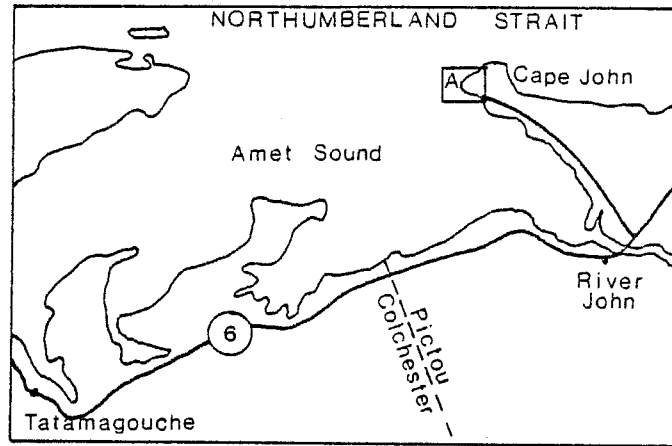
(b) Bluff Description - The 15-m high shore bluffs at Cape John consist of unconsolidated material over top of sandstone, siltstone, and shale conglomerate outcrops. Exposures of sandstone are also observed in the nearshore. Gullying and slumping due to groundwater flow are active on the upper slope. Slope deposits of broken bedrock protect the lower slope from erosion and undercutting by waves; however, large concentrations of suspended sediment observed in the nearshore suggest that there is active transport of fine materials.

Table 1. Bluff Recession Survey July 1981, at Cape John, Pictou County.

Survey Line	Compass (silva) Bearing ($^\circ$) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
1	248	13.0	8.00
2	256	5.0	11.83
3	253	9.1	4.60

Note: Silva compass bearings are not corrected for declination.

1



(2) Caribou Provincial Picnic Park, Pictou County

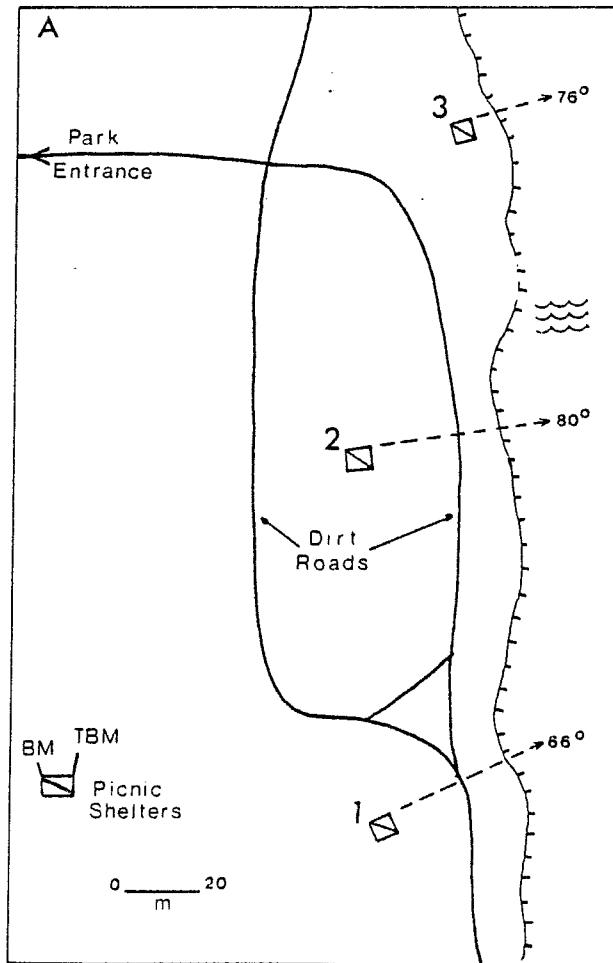
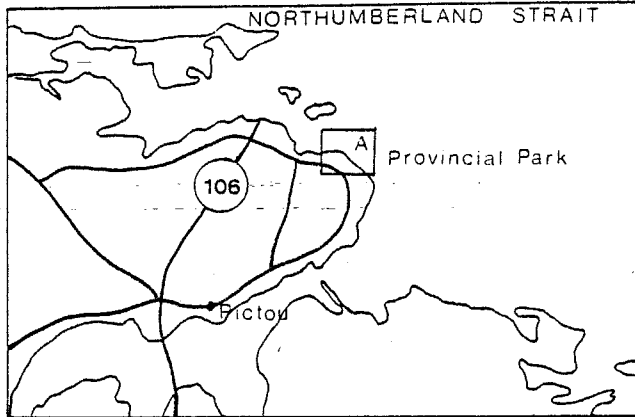
(a) Access - From Pictou follow the old highway route to the Pictou ferry and turn at Caribou Provincial Picnic Park OR follow Route 106 from Pictou, turn right just before reaching the ferry terminal and then turn left at Caribou Provincial picnic site (Fig. 2). Because the park is widely used by the public, marker stakes were not used as benchmarks. Instead, permanent picnic table shelters were utilized (Fig. 2A). Distance to the bluff edge was measured from the landward northeast corner of each shelter. The TBM was the seaward corner post of the shelter, 1.99 m from the BM in every case. The 1981 survey was completed on July 31.

(b) Bluff Description - A shore bluff of estimated 5 m height fringes Simpsons Provincial Park. It is composed of unsorted muds, cobbles, and boulders. The top of the bluff is covered by vegetation (grass) and the face of the bluff is experiencing slumping and active rill wash erosion. A narrow coarse sand and shingle beach fringes the bluff but active wave erosion of the bluff, particularly at the central portion of the study area, still occurs. Where wave erosion is less active the back of the beach is covered by unconsolidated slope deposits.

Table 2. Bluff Recession Survey July 1981, at Simpsons Provincial Park Picnic Site, Pictou County.

Survey Line	Compass (Silva)	Distances (m)
	Bearing (°) BM to Bluff Edge	TBM to Bluff Edge
1	66	26.80
2	80	29.96
3	76	4.25

2



(3) Hadleyville, Guysborough County

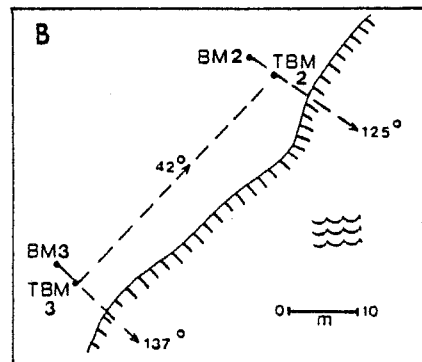
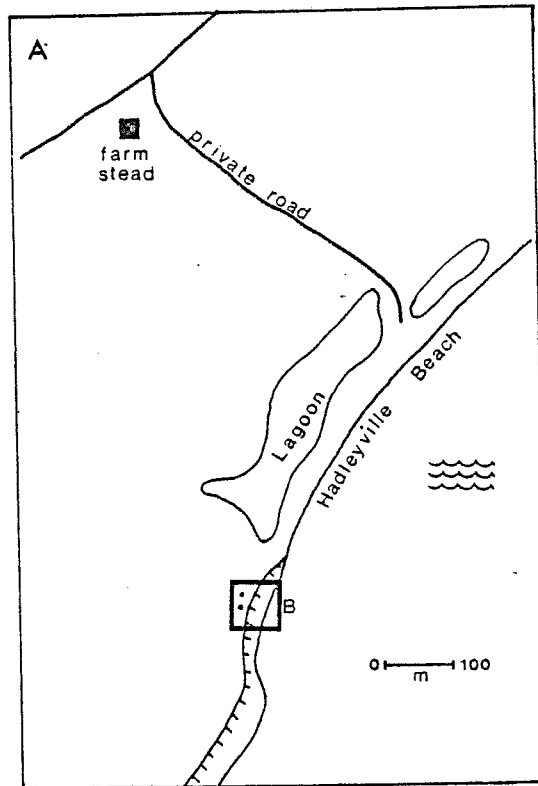
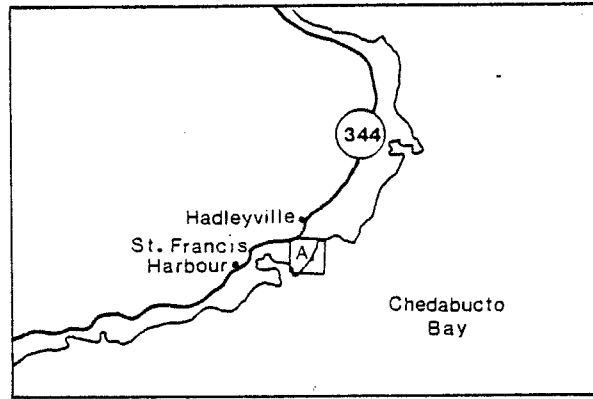
(a) Access - Travelling from Boylston follow Highway 344 east to Hadleyville (Fig. 3). The study area can be reached two ways: either turn toward the coast down a small tree-lined lane opposite the small church in Hadleyville, then walk 1 km south along the beach to the bluff; or, alternatively, take the first private lane 650 m south of the lane by the church. Permission is required by the owner before proceeding to the coast. The northern edge of the shore bluff is 400 m from the end of this road. Only two survey lines were established on August 4, 1981. The stakes are wooden and situated in a dense bush and shrub cover. BM 2 and BM 3 are an estimated 30 m apart.

(b) Bluff Description - The shore bluff at the south end of Hadleyville Beach is an estimated 12 to 15 m in height and composed of unconsolidated, unsorted glacial material. The top of the bluff is covered by a dense shrub and bush growth, which is underlain by a well developed soil horizon. The slope of the bluff is experiencing some slumping, rill wash, and gullyng. A cobble-shingle beach fringes the bluff and a boulder lag deposit is observed on the lower foreshore and nearshore. These boulders are thought to be the remnant lag deposit of a former extension of the present shore bluff.

Table 3. Bluff Recession Survey August 1981, at Hadleyville, Guysborough County.

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
2	125	3.0	5.0
3	137	3.0	5.0

3



(4) Clam Bay, Halifax County

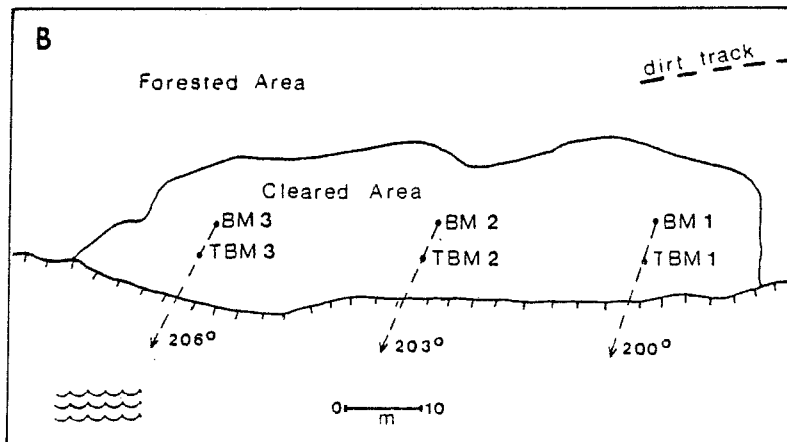
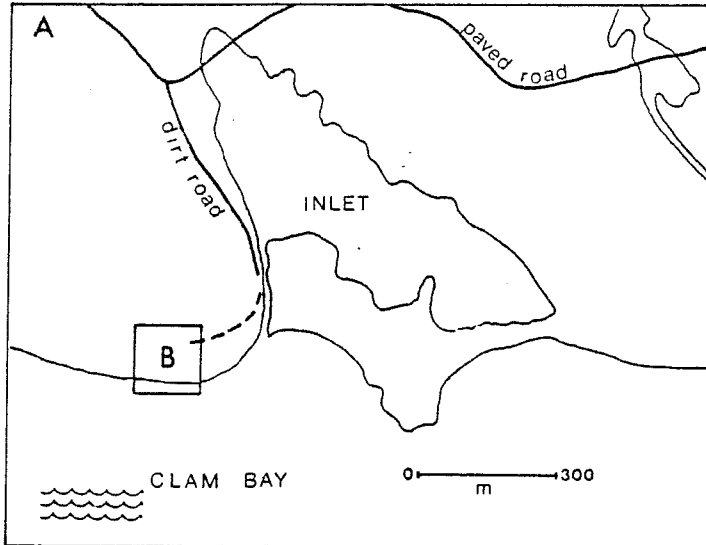
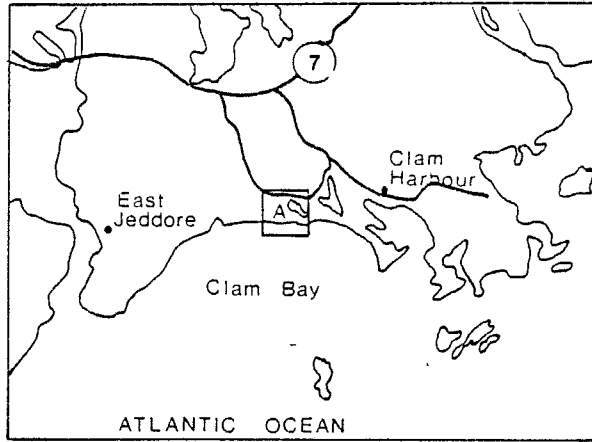
(a) Access - From Haliar travel east along Highway Route 7 to the Village of Lake Charlotte where you turn left toward Clam Bay (Fig. 4). At the cusp-shaped barrier beach just before the harbour at Clam Bay, turn right onto a dirt road. At the end of this road is another old roadway surrounded by woods. This roadway or trail goes up the hill to the top of the bluff. Follow this road until the clearing along the face of the bluff (Fig. 4A). The benchmarks established on August 18, 1981, are wooden stakes and are 30 m apart.

(b) Bluff Description - The bluff is an estimated 30 m in elevation, consisting of unsorted, unconsolidated glacial till. The bluff face is actively eroding by groundwater flow but is not experiencing slumping. Small spruce trees and shub vegetation eroded from the top of the bluff are found across the face of the bluff. At water level there is a narrow shingle beach, with no evidence of exposed bedrock.

Table 4. Bluff Recession Survey August 1981, at Clam Bay, Halifax County.

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
1	200	5.0	5.0
2	203	5.0	5.0
3	206	5.0	4.0

4



- (5) Philip Head, and
- (6) Collies Head, Halifax County

(a) Access - From Halifax follow Highway 107 east until the Town of Musquodoboit Harbour, turn right at the Martinique Beach sign and follow the highway until it ends abruptly at the Atlantic coast. There is a beach to the left and a dirt road to the right. Follow the dirt road to the clearing at the top of the drumlin. Three metal TBM stakes (101, 102, 103) are located at the apex of the drumlin (Fig. 5B). Wooden BM stakes were established landward of TBM stakes 101 and 103 and the telephone pole with the transformer is the BM for line 102. Also, near TBM 102 there is a Nova Scotia control survey marker. The compass bearing from TBM 102 to the telephone pole (BM 102) is 356° . The metal TBM stakes were established in July 1980 by J. Easton of Dalhousie University; however, difficulties arose when trying to reproduce the surveys in 1981 so a new set of compass bearings (TBM to bluff edge) were obtained in addition to measurements using the 1980 azimuth angles.

Collies Head lies southwest of Philip Head. There is no roadway but a footpath leads west from the drumlin along the top of a shingle barrier beach past one headland, and then along the top of another shingle beach to Collies Head. Three survey lines were established on July 6, 1981, on the clearing at the top of Collies Head (Fig. 6C). In order to position the survey lines, the remains of an old stone fence were utilized. The remnant pile of stones extended about 20 m in a direction normal to the coast and it was about 1 m high. BM 106 was established directly in front of the stone fence, and TBM 105 and 104 were set up along a 68° bearing (silva compass) from BM 106. TBM 105 was located near a lone spruce tree 51 m east of BM 106 and TBM 104 was 50 m farther east (Fig. 6C). The 1980 survey stakes were not found in 1981.

(b) Bluff Description - Philip head is 5 to 7 m in height and has been eroded landward by the sea leaving a boulder lag shoal in the near-shore. A narrow pebble-cobble beach lines the foot of the drumlin. The bluff, which is composed of unconsolidated, poorly sorted glacial debris, overlies bedrock of the Goldenville Formation. Bedrock was exposed at the base of the bluff beneath Stake 103 in 1981. Between 1980 and 1981 slope processes, e.g., rill wash and waves, had reworked the face of the bluff but it was not sufficient to register any change at the top of the bluff (Table 5A).

Collies Head bluff is similar in composition but with a height of 10 m it is higher than the Philip Head drumlin. There is a lag deposit of boulders at the base of the bluff and a well developed pebble beach occurs at the east end of the bluff. Offshore bedrock shoals are nearly exposed at low tide. The shore bluff is composed of poorly sorted glacial deposits ranging from clay to boulder size. The top of Collies Head was cleared at one time but probably not used for much because of the poor drainage. Near Stake 104 the ground is very wet. Slope and marine processes are actively eroding the face of the bluff.

Table 5. Bluff Recession Surveys at (A,B) Philip Head (1980, 1981) and Collies Head (1981), Halifax County.

(A) Using Brunton Compass 1981

Survey Line	Azimuth (°) BM to Bluff Edge	Distances (m) TBM to Bluff Edge	
		July 1980	July 1981
101	141	2.65	2.66
102	138	5.10	5.10
103	159	3.81	3.80

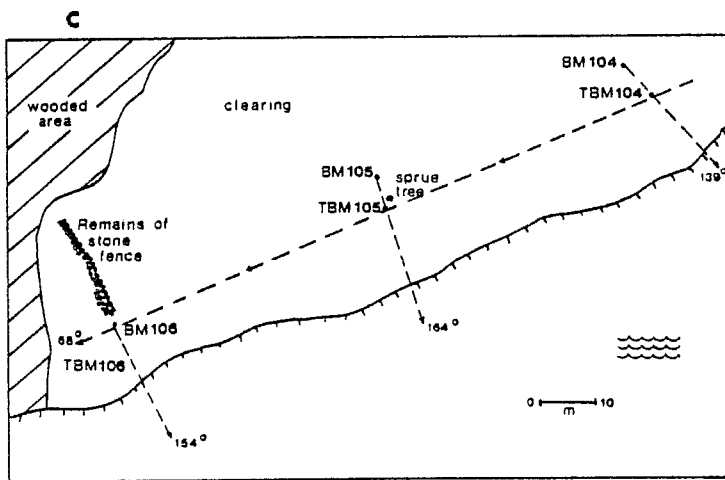
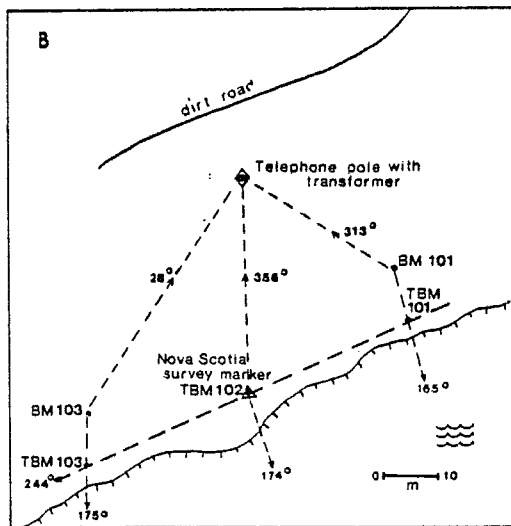
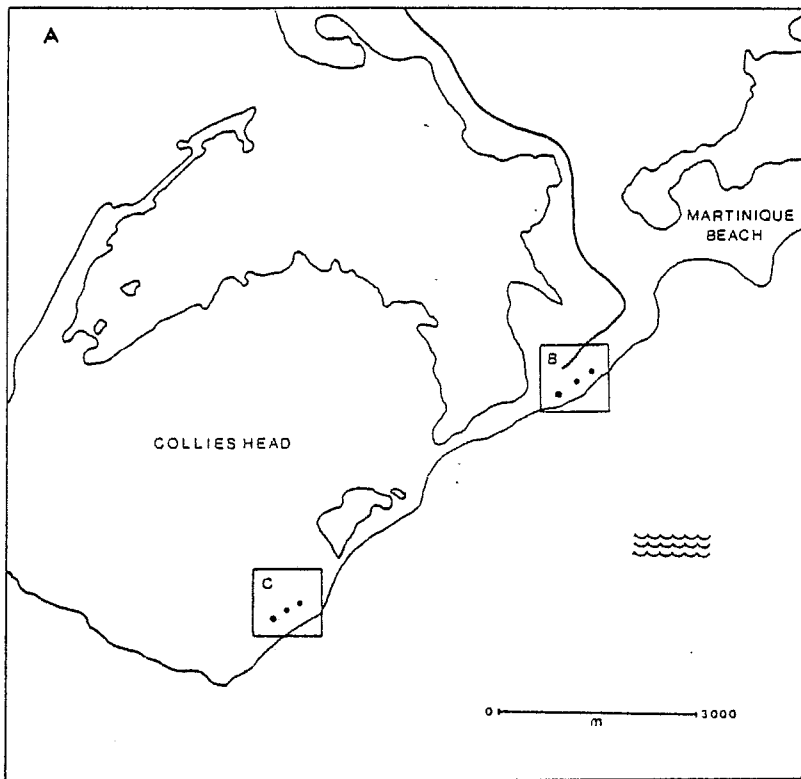
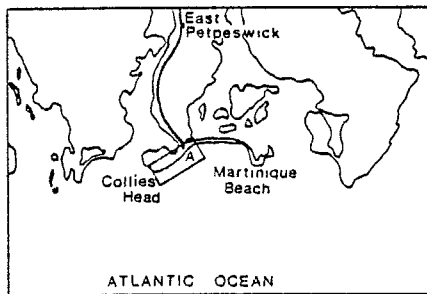
(B) Using Silva Compass (1981)

Survey Line	Compass Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
101	165	9.23	2.66
102	174	37.10	4.75
103	175	10.00	3.90

(C)

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
104	139	5.45	14.00
105	164	5.82	14.50
106	154	6.21	4.85

5, 6



(7) Half Island Point, Halifax County

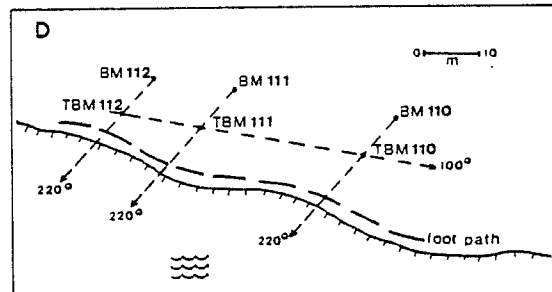
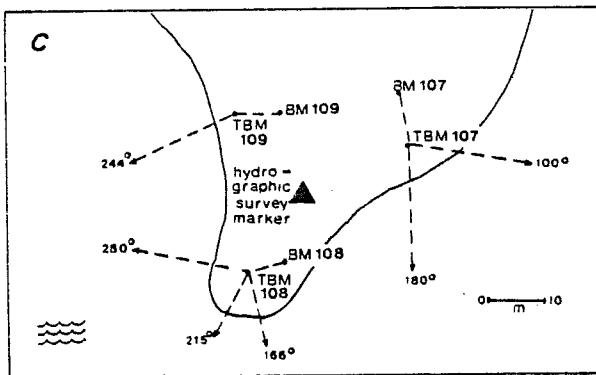
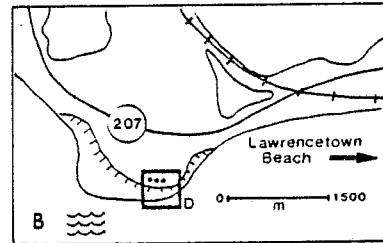
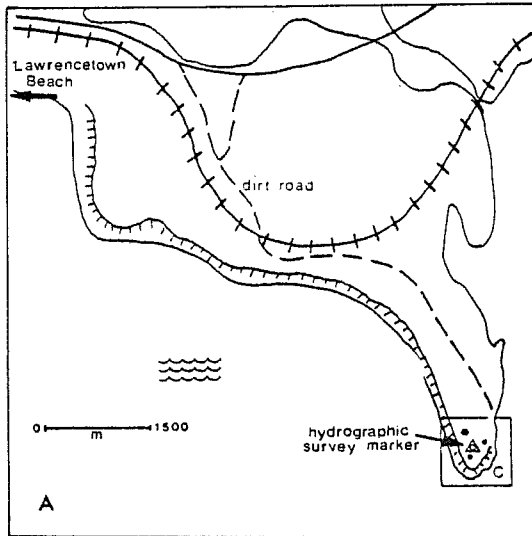
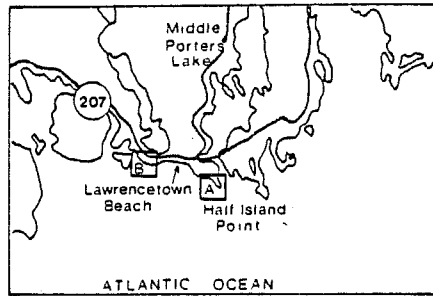
(a) Access - Half Island Point is located at the extreme easterly end of Terminal Beach, which is the eastern extension of Lawrencetown Beach (Fig. 7). From Dartmouth follow Highway Route 207 to the east of Lawrence-town Beach. Just past the road to Middle Porters Lake, turn right onto a gravel road and follow it to a railway track. Seaward of the tracks keep to the left. track and follow it to the end of the point (Fig. 7A). Three metal TBM stakes established by Easton in 1980 and three wooden BM stakes established in 1981 are located up over the hill (Fig. 7C). A hydrographic survey marker (#876, 195715) is situated behind BM 108, but by 1984, marker 108 was gone.

(b) Bluff Description - Half Island Point is composed of an estimated 15 to 20 m thickness of unconsolidated glacial sediment. There is no bed-rock evident on the face of the bluff. A lag deposit of large boulders partially protects the foot of the bluff but waves and groundwater still actively modify it.

Table 6. Bluff Recession Surveys (1980, 1981) at Half Island Point, Halifax County.

Survey Line	Azimuth (°) M.N.		Distances (m)		
	TBM to BM (1981)	TBM to Bluff Edge (1980 and 1981)	BM to TBM (1981)	TBM to Bluff Edge July 1980	July 1981
107a	350	100	9.30	8.26	-
107b	-	180	-	11.05	7.74
108a	80	215	7.84	10.13	8.54
108b	-	166	-	9.93	8.83
108c	-	280	-	6.03	6.28
109	90	244	7.76	2.44	2.44

7, 8



(8) Lawrencetown Beach West, Halifax County

(a) Access - From Dartmouth follow Route 207, which passes over the drumlin at the west end of Lawrencetown Beach (Fig. 7). At the western end of the beach there is a path along the seaward edge of the drumlin. The recession stakes are located approximately 50 m past a grove of trees and a bog area (Fig. 7B). Three metal TBM stakes established by Easton in 1980 are 15 m apart and lie on an azimuth of 100° . Three wooden stakes were established in 1981 as BM markers. Stake 112 (TBM) is on a bearing of 146° from the centre chimney at MacDonald House at the crest of the drumlin. Problems were encountered in 1981 when attempts were made to repeat the 1980 surveys, so new compass bearings were used.

(b) Bluff Description - The 20 m high drumlin is composed of unconsolidated glacial till. There is no exposed bedrock and the base of the slope is fringed by a narrow shingle beach. The bluff face is experiencing erosion by groundwater and there is evidence of slumping.

Table 7. Bluff Recession Site (1980, 1981) at Lawrencetown Beach West, Halifax County.

Survey Line	Compass (Silva) Bearing ($^\circ$) TBM to Bluff Edge (1981)	Distance (m) (1981)		1980	
		BM to TBM	TBM to Bluff Edge	Azimuth ($^\circ$) TBM to Bluff Edge	Distance (m) TBM to Bluff Edge
110	220	6.57	9.55	180	9.63
111	220	6.68	8.92	188	8.80
112	220	5.98	4.85	180	5.42

(9) Hartlen Point, Halifax County

(a) Access - Hartlen Point is the eastern headland of Halifax Harbour (Fig. 9). Take Route 322 out of Dartmouth and through Eastern Passage to a fork in the road, then bear right and follow a gravel road to Hartlen Point golf course. Travel past the golf course and turn left at the first fork. Bear right and continue to the end of the road where there is a concrete floor from a former building (Fig. 9C). Two sets of survey lines were measured in 1981: Hartlen Point north with four lines, and Hartlen Point south where there were three survey lines. At Hartlen Point north (Fig. 9C), the four telephone poles running east from the dirt road (by the concrete floor) were established as BM markers. Wooden TBM stakes were also positioned seaward of the telephone poles on June 29, 1981 (Table 8). Metal survey pins were placed beside the TBM markers.

At Hartlen Point south (Fig. 9B) three metal stakes had been established by Easton on July 15, 1980. Stakes 114 and 115 were still in place but Stake 113 was missing and replaced in 1981 by a wooden stake. The 1981 survey was completed on July 10. The stakes are located along the bluff face approximately 500 m south of the concrete floor. The three BMs are aligned with the lighthouse on Devils Island and the point of Osborne Head, along an azimuth from true north of 215° . All stakes are 30 m apart. No TBM stakes were established.

(b) Bluff Description - A 9 to 10 m thick exposure of glacial till is observed at Hartlen Point. There is an upper red clay till 7.5 m thick, which was transported from the Bay of Fundy region by glaciers. The red till overlies a grey basal till which is thought to represent the earliest phase of glacial deposition during Wisconsinian time (Nielsen 1976). There is no bedrock exposed but metaquartzite and slate lie 1 to 3 m beneath the lower till. At the base of the bluff there is a lag deposit of large cobbles and shingle similar to that found on adjacent foreshore. The bluff face is subject to active groundwater erosion, which has resulted in gullying and slumping.

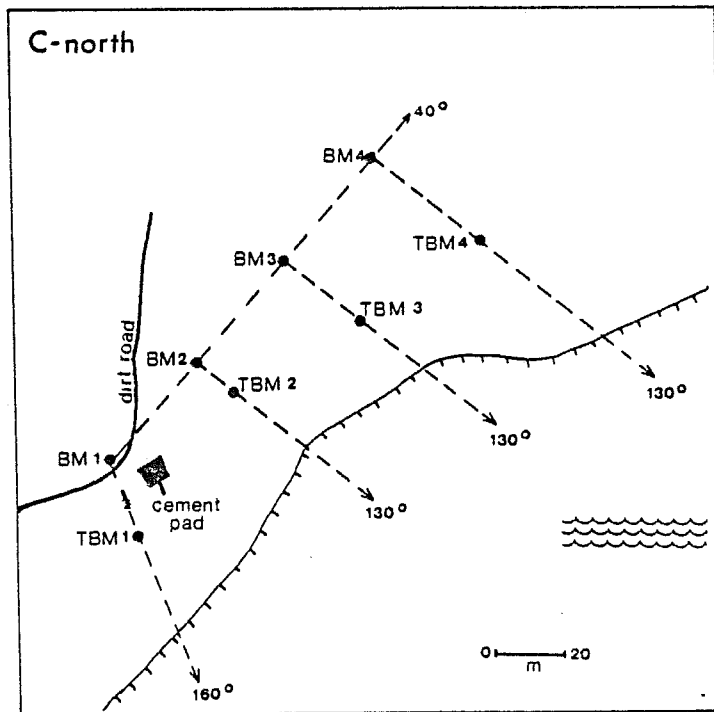
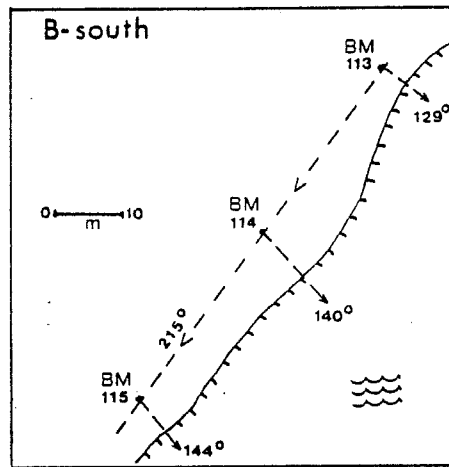
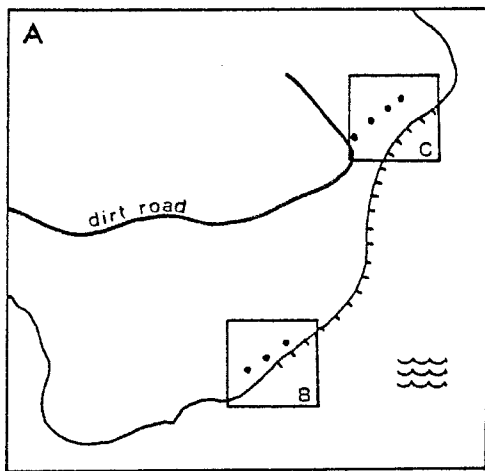
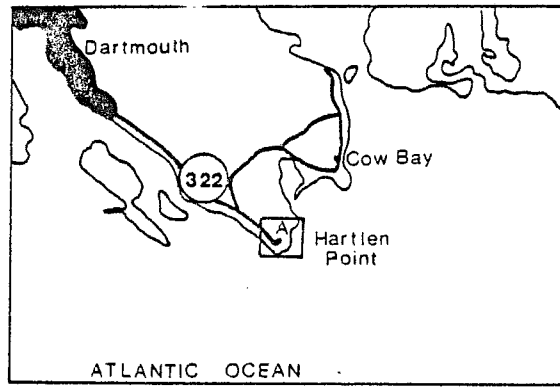
Table 8. Bluff Recession Survey June 1981, at Hartlen Point North, Halifax County.

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
1	160	31.0	23.9
2	130	13.0	28.7
3	130	-	27.5
4	130	42.0	38.2

Table 9. Bluff Recession Survey (1980, 1981) at Hartlen Point South, Halifax County.

Survey Line	Azimuth (°) M.N. BM to Bluff Edge	Distances (m) BM to Bluff Edge	
		July 1980	July 1981
113	129	5.55	2.54
114	140	9.48	8.87
115	144	5.91	5.31

9



(10) Blandford Head, Lunenburg County

(a) Access - Follow Highway 103 west from Halifax until Exit 7 at East River. Take Route 329 along the Aspotogan Peninsula to the Village of Blandford (Fig. 10). Park at the fish plant in Blandford and walk northwest across a field to the coast. There are two sets of bluff recession stakes - Station A is at the western tip of Blandford Head while Station B is along the north coast of the Head, facing Shoal Cove.

At Station A measurements were made from a fence line along the top of the shore bluff. The first survey line was from the fence post behind the lone spruce tree, the last survey line was just beyond the edge of the fence line (Fig. 10A). Measurements to the bluff edge were taken every 10 m alongshore and normal to the coast.

Measurements at Station B were taken from along a new fence and the remainder of an old fence that was used in 1976 and 1978 shore recession surveys by D.J.W. Piper of Dalhousie University. Measurements were collected every 10 m and normal to the coast along the new fence, and then from the same location sites used in 1978 along the old fence. BM 1 is a fence post with an engraved 'X' and BM 8 has a 'Y' engraved on its seaward side.

(b) Bluff Description - At Station A the 9 m high shore bluff is composed of unconsolidated, poorly sorted glacial till ranging from mud to boulder clast size. The bluff face is covered by shrubs and spruce seedlings and to the south of the survey area a stand of spruce trees covers the slope. There is little evidence of active erosion taking place.

At Station B the shore bluff is less than 8 m in elevation and is composed of similar material to that found at Station A. At the base of the slope there is a lag deposit of granitic boulders and much of the bluff face is covered by vegetation. Although the old fence line used by Dalhousie University in 1978 was eroded away, only minor slope erosion is now occurring.

Table 10. Shore Bluff Recession Surveys 1976-1981 at Blandford Head,
Lunenburg County.

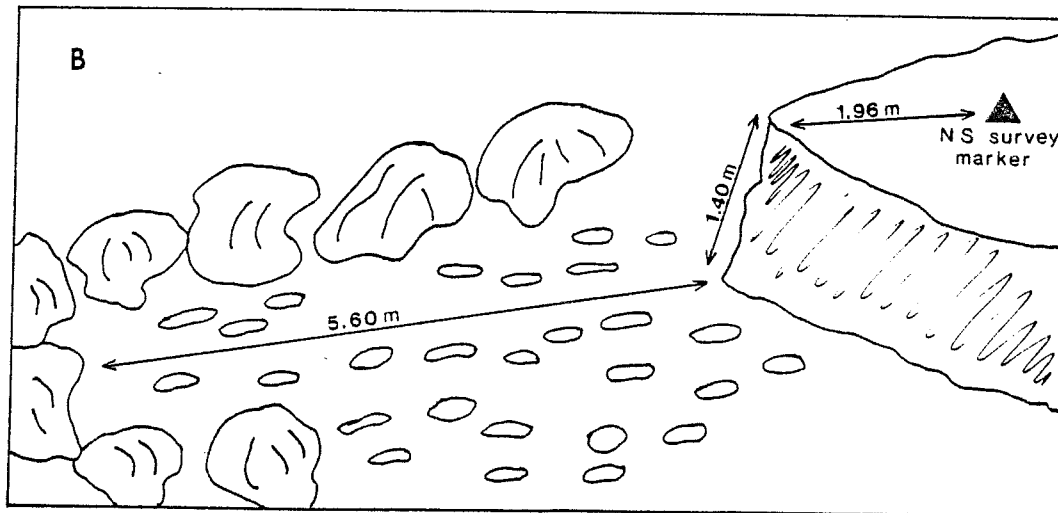
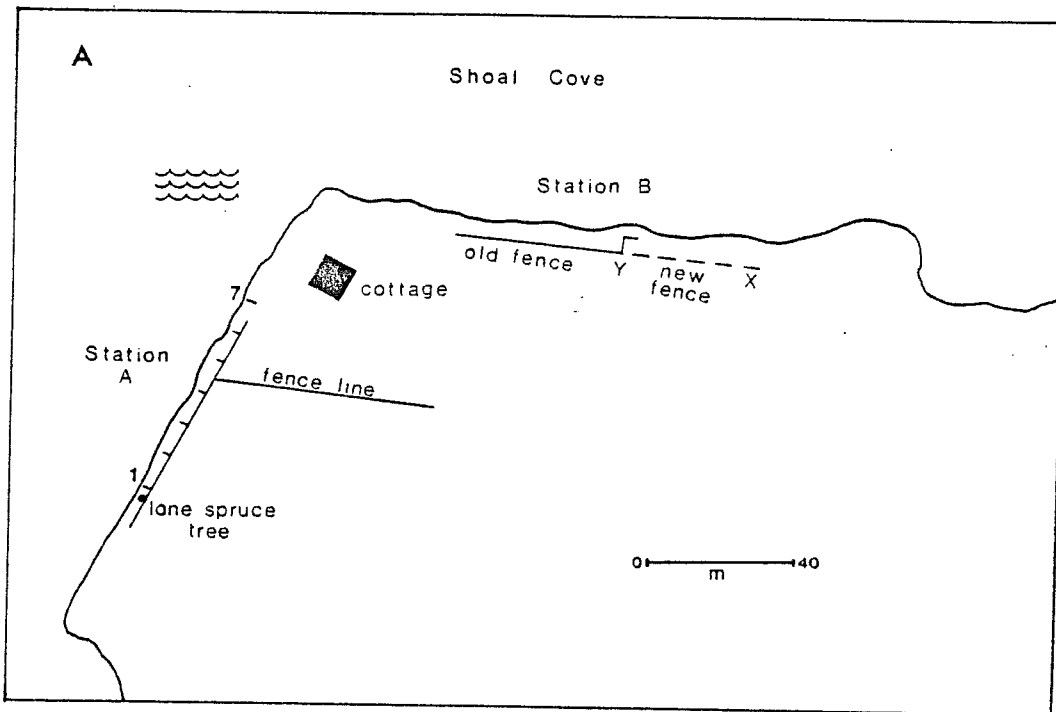
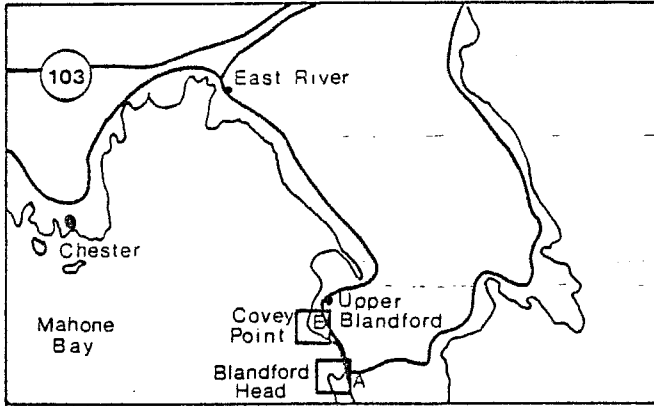
(A) Station A (1981)

Survey Line	Cumulative Distance (m) Alongshore	Distance (m) BM to Bluff Edge
1	0	3.0
2	10	1.8 to 2.6
3	20	4.62
4	30	5.55
5	40	6.57
6	50	6.40
7	60	4.80

(B) Station B 1981

Survey Line	Cumulative Distance (m) Alongshore	Distance (m) BM to Bluff Edge		
		1976	1978	1981
New Fence 'X'	0	-	-	4.5
1	10	-	-	3.2
2	20	-	-	2.0
3	30	-	-	4.2
4	40	-	-	4.3
5	50	-	-	4.0
6	60	-	-	3.2
Old Fence 'Y'	0	5.8	4.90	3.9
1	3.9	4.5	5.00	4.0
2	6.5	5.2	5.00	4.2
3	8.7	4.5	4.50	4.4
4	11.4	3.4 to 4.7	3.5 to 4.4	3.0
5	15.4	3.1	3.25	2.8
6	19.3	3.0	2.90	2.9
7	24.8	5.0 to 5.5	4.80	4.4
8	30.8	5.2	5.10	4.0
9	36.8	4.5	4.80	4.2
10	39.3	4.5	4.50	4.3

10, 11



(11) Covey Point, Lunenburg County

(a) Access - Take Highway 103 west from Halifax to Exit 7 at East River. Follow Highway 329 south past Upper Blandford to the northern tip of Shoal Cove (Fig. 11). Only one survey line was established, from a Nova Scotia Control Survey marker, normal to the coast (Fig. 11). Surveys were made by D.J.W. Piper in 1976 and 1978, and on July 7, 1981.

(b) Bluff Description - The shore bank, only 1.4 m in elevation, is composed of unsorted, unconsolidated till material with slaty chips and cobbles. Fronting the bank is a shingle foreshore 5.6 m wide, which in turn is fringed by a barrier of large granitic boulders (Fig. 11). It appears that the boulders have been put in front of the shore to protect it from wave erosion.

Table 11. Bluff Recession Survey (1976-1981) at Covey Point, Lunenburg County.

Survey Line	Compass Bearing (°) BM to Bluff Edge	Distances (m) (BM to Bluff Edge)		
		January 1976	August 1978	July 1981
1 Nova Scotia Survey Marker	90	2.82	2.13	1.96

(12) Hirtles Beach, Lunenburg County

(a) Access - From Halifax follow Highway 103 west to Exit 10 to Lunenburg. At Lunenburg take Route 332 until the Village of Rose Bay, turn left at the road to Kings Bay. Follow the ^{road} to Lower Kingsburg and at the end of the road turn right at the sign pointing to Hirtles Beach. The road ends at Hirtles Beach and the shore recession survey site is on the bluff at the eastern end of Hirtles Beach (Fig. 12). Metal stakes (116-126) were established in August 1980 by Easton and were resurveyed July 10, 1981. In 1981 a wooden stake was established 5 m landward of TBM 119 and Stake 118 was re-established using a wooden stake. Two wooden stakes were also positioned along survey line 116 (Fig. 12A,B). Stakes are 30 m apart with the exception of #119 to #120 (approximately 60 m). Stakes 122 to 125 do not exist.

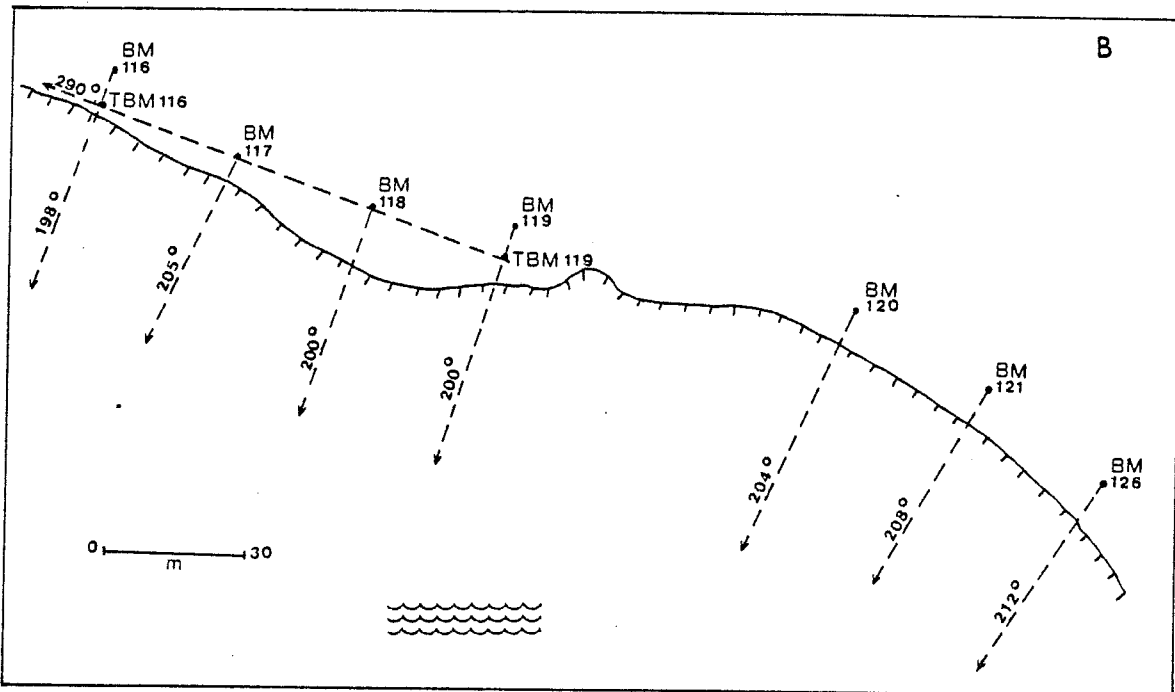
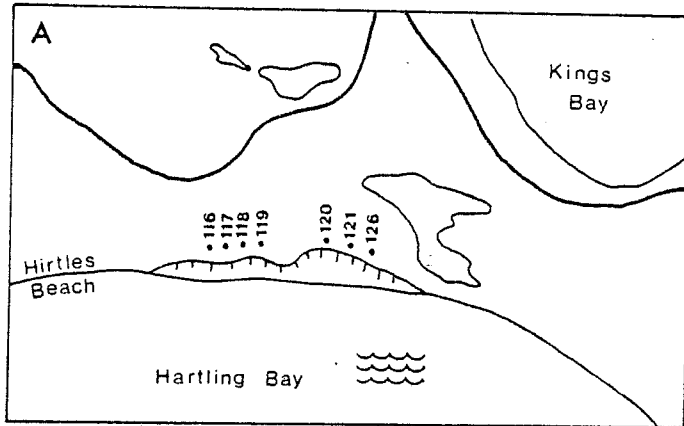
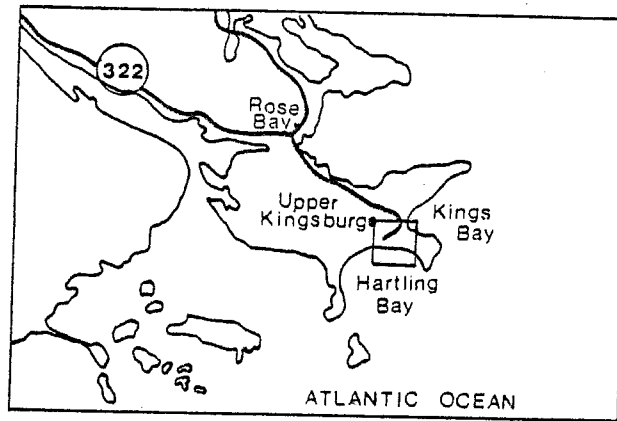
(b) Bluff Description - The bluff, an estimated 15 m in elevation, is composed of unsorted, unconsolidated glacial till overlain by a vegetated soil horizon. There is a boulder lag deposit at the base of the slope but no exposures of bedrock. The beach fringing the bluff has a pebble-cobble upper slope while the foreshore slope is sand. Slope erosion is predominantly by groundwater, which has resulted in rivulets, gullying, and severe slumping, particularly just east of Stake 126. In some places there is still vegetation covering the slope, which protects it from rapid erosion. In other places large amounts of bluff sediment have slipped down-slope forming massive lobes - like solifluction lobes - near the base of the slope.

Table 12. Bluff Recession Surveys (1980, 1981) Adjacent to Hirtles Beach, Lunenburg County.

Survey Line	Azimuth (°) M.N. BM to Bluff Edge	Distances (m)	
		August 1980	July 1981
116	198	3.45	2.21*
117	205	6.19	5.43
118	200	9.15	12.40*
119	200	3.09	2.60
120	204	5.07	4.80
121	208	5.86	5.80
126	212	10.88	10.65

* Re-established BM markers

12



(13) Cape Sable Island, Shelburne County

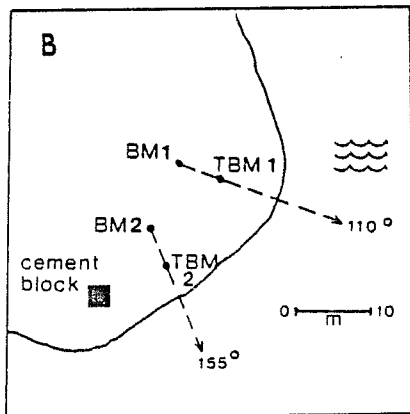
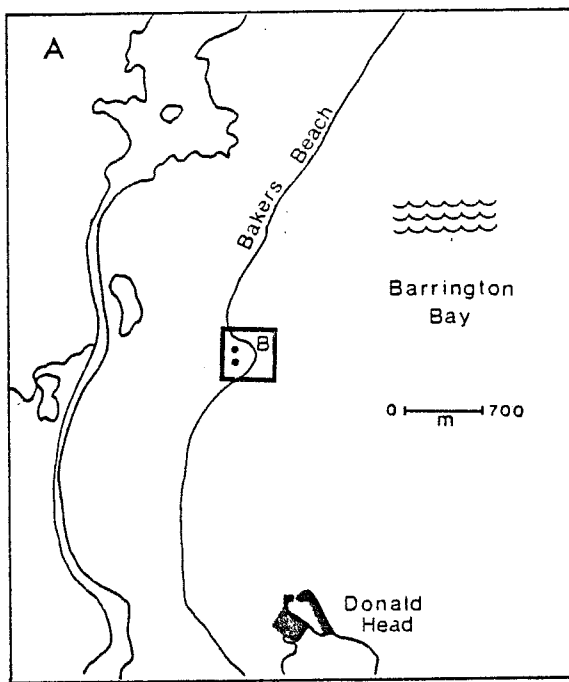
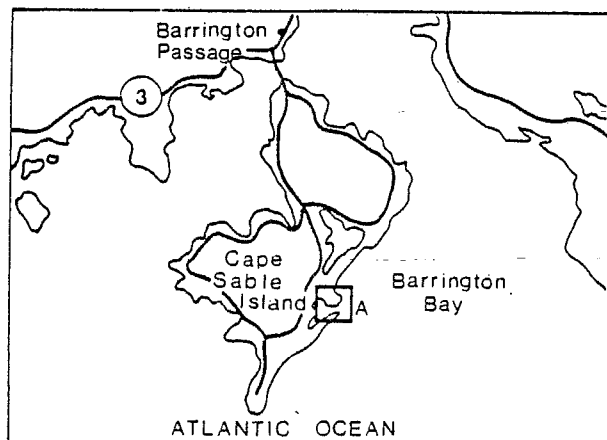
(a) Access - From Halifax follow Routes 103 and 3 west to Barrington Passage or from Yarmouth follow Route 3 east to Barrington Passage. Cross the causeway to Cape Sable Island then bear left on Highway 330 to the Village of Stoney Island. Travel through Stoney Island, bearing left at fork in the road past the cemetery to the dunes of Bakers Beach. The recession stakes are on a small unnamed headland at the southernmost point of beach (Fig. 13). Two survey lines were established 10 m apart using wooden stakes on July 19, 1981. The compass (silva) bearings from the cement post on the headland to BM 1 and BM 2 were 22° and 15°, respectively.

(b) Bluff Description - The 2 to 3 m high bluff is composed of an upper soil horizon overlying at least 0.9 m of sandy-pebbly till. Beneath the till is a lag deposit of boulders, which extends seaward of the bluff face. The base of the bluff is actively being undercut by waves.

Table 13. Bluff Recession Survey (July 1981) on Southeast Cape Sable Island, Shelburne County.

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
1	110	3.5	5.0
2	155	3.5	5.0

13



(14) Mavillette, Digby County

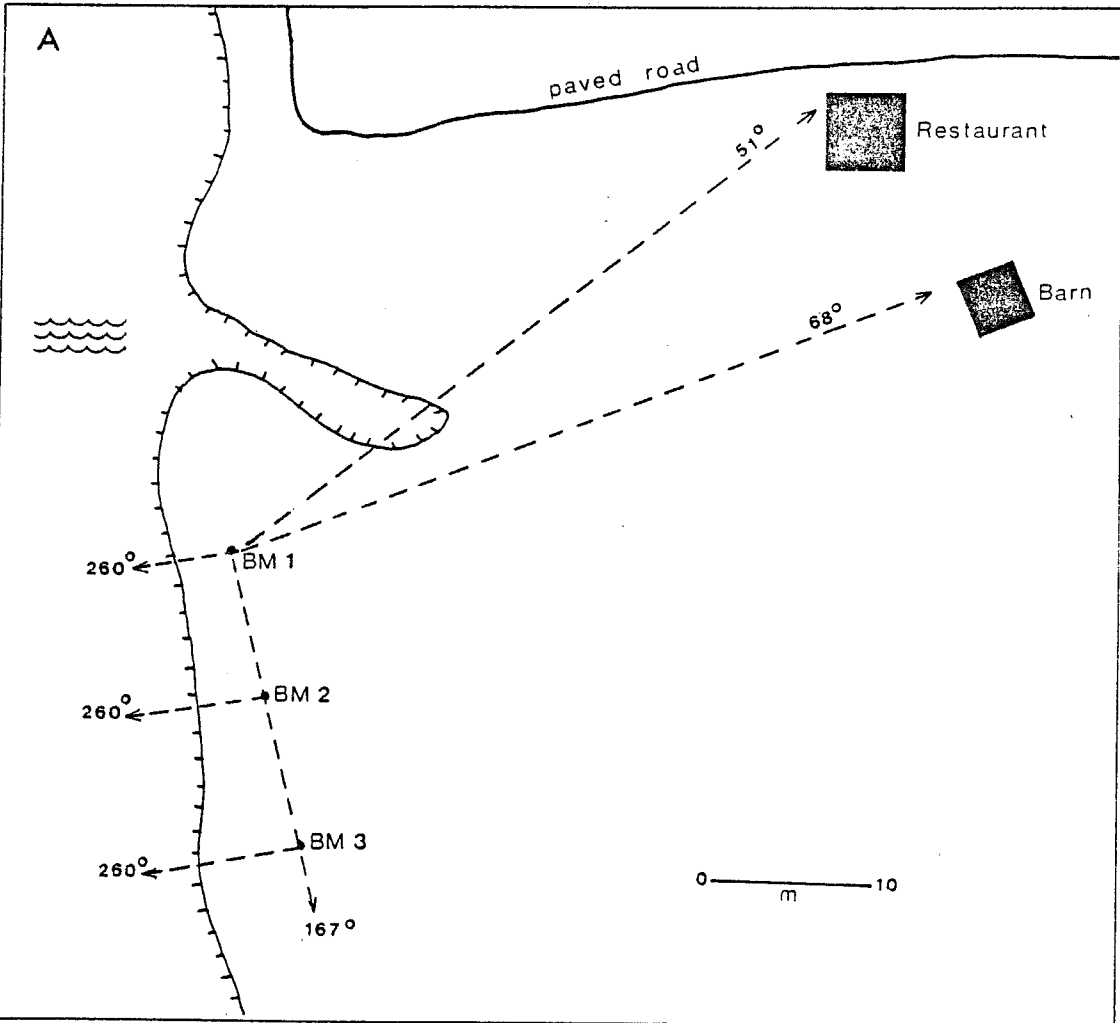
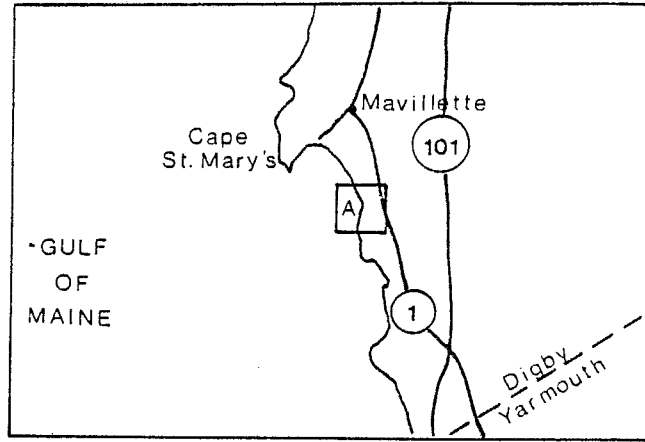
(a) Access - From Yarmouth follow Highway 1 north to Mavillette then turn toward Cape St. Mary and Mavillette Beach. The stakes are located on the bluff immediately south of Mavillette Beach (Fig. 14). Three wooden BM stakes were positioned 10 m apart along the edge of the shore bluff on July 17, 1981. The compass (silva) bearing from BM 1 to the northeast corner of the red dining hall is 51° , and to the corner of the red barn the bearing is 68° (Fig. 14A).

(b) Bluff Description - The shore bluff, which is approximately 125 m in elevation, has been described in detail by Grant (1976). To the marine limit of 13 m above high tide, the surface material is characterized by a marine gravel. Below that unit is an extensive deposit of iron-cemented rounded cobbles in a sand matrix. Involutions as if from cryoturbation are also present in this unit. At the base of the bluff a "brick red to reddish brown, compact, silty drift containing many fragments of marine shells" (Grant 1976) is found. The shells have been dated at greater than 38,000 years (G.S.C. 695). Small boulders line the base of the bluff, and a sandy beach foreshore fringes the bluff. No bedrock was observed exposed in the immediate area. There is no active undercutting of the bluff by waves but erosion by groundwater is modifying the upper bluff face.

Table 14. Bluff Recession Survey, July 1981, near Mavillette Beach, Digby County.

Survey Line	Compass (Silva) Bearing ($^\circ$) BM to Bluff Edge	Distances (m) BM to Bluff Edge
1	260	3.93
2	260	4.35
3	260	6.32

14



(15) Lower Saulnierville, Digby County

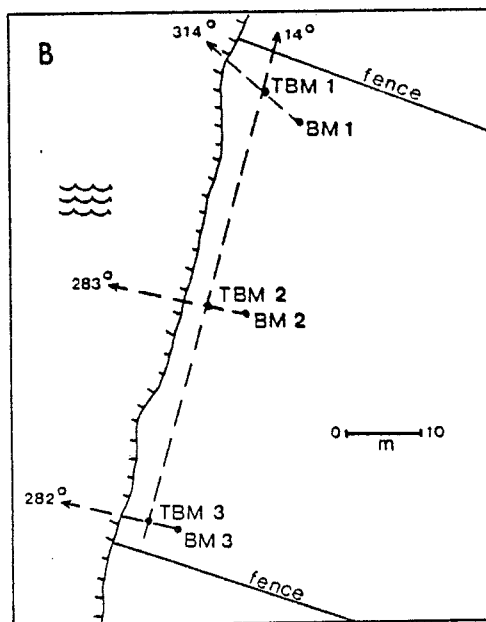
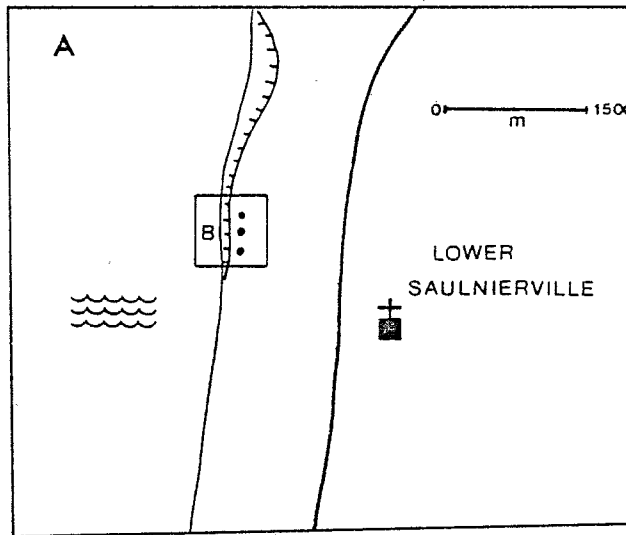
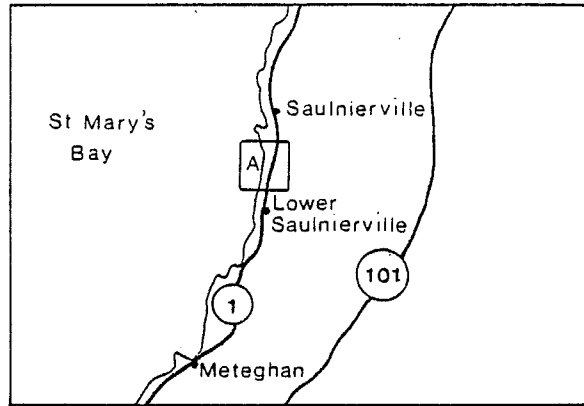
(a) Access - Follow Route 1 north from Yarmouth to the Village of Lower Saulnierville. In Lower Saulnierville, at the car wash and laundromat, take the private road beside the laundromat to the beach. Walk north along the beach to the bluff opposite the large church located on Highway #1. Three BM and three TBM wooden stakes are located halfway along the top of the bluff between two fences (Fig. 15B). The BM stakes are 30 m apart and were established on July 14, 1981.

(b) Bluff Description - Grant (1980) has described the deposits in the 13 m high shore bluff north of Lower Saulnierville Beach as primarily a very compact, dark grey, quartzitic basal till. The thickness of the unit is 10 m. A weathered marine gravel covers the basal till and a red shelly till exists at the base of the bluff exposure. Where the recession stakes are established the bluff is less than 4 m high. Cobbles have accumulated at the base of the slope as a result of bluff erosion, and a shingle storm ridge and shingle beach exist alongshore. A marine rock platform covered by boulder lag deposits occurs farther offshore. Groundwater and waves are the chief agents modifying this shore bluff.

Table 15. Bluff Recession Survey, July 1981, near Lower Saulnierville, Digby County.

Survey Line	Compass (Silva) Bearing (°) BM to Bluff Edge	Distances (m)	
		BM to TBM	TBM to Bluff Edge
1	314	5.0	5.0
2	283	3.0	3.0
3	282	3.0	3.0

15



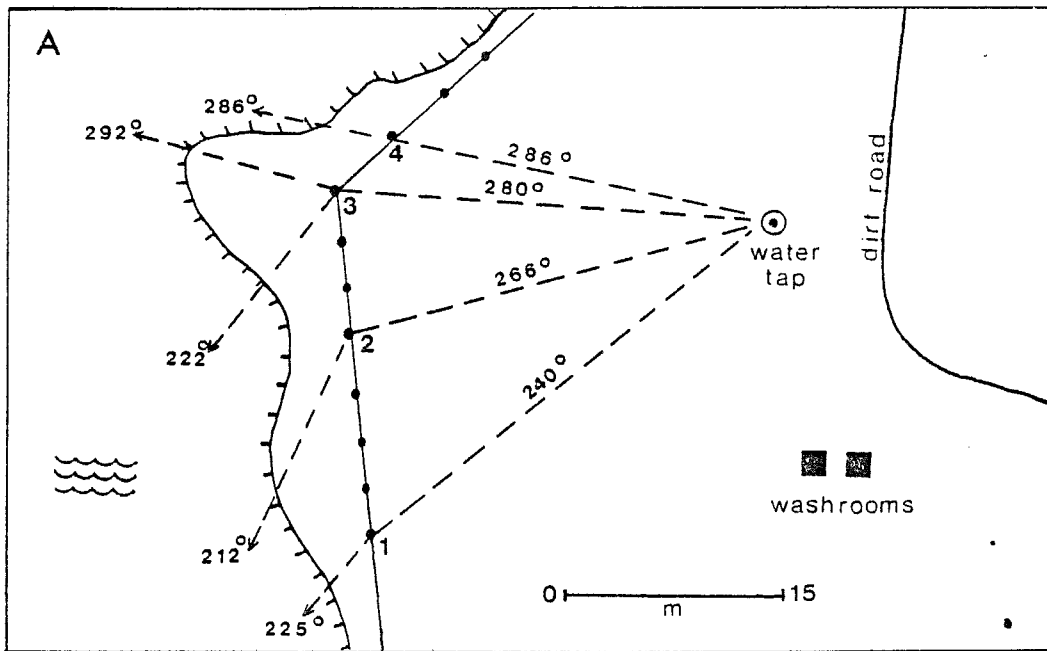
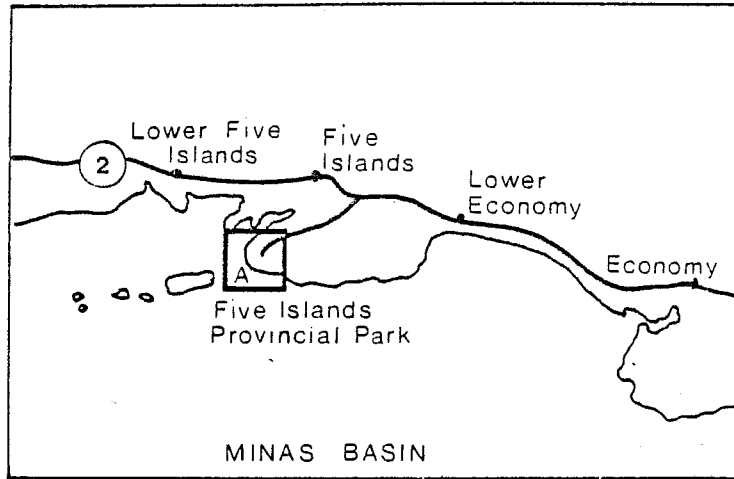
(16) Five Islands Provincial Park, Colchester County

(a) Access - Follow Highway Route 2 west from Truro along the north shore of Cobequid Bay to Five Islands Provincial Park. The survey markers are in the 'Campers Only' section of the park, near the washrooms and water tap (Fig. 16A). Four wooden stakes were established July 19, 1981, beside four fence posts of a wire fence that runs along the top of the bluff. All measurements were taken from the fence posts, not the wooden stakes.

(b) Bluff Description - The shore bluffs range from 30 to 60 m high and consist of unconsolidated glacial till over bedrock, mapped as McCoy Brook Formation (Keppie 1979, Bujak and Donohue 1980), which consists of red wacke and siltstone. Just to the east of the study site is a geologic contact zone where basalt of the North Mountain Formation is exposed. Severe undercutting, slumping, and gullyng are occurring along these shore bluffs. The glacial till consists of mud to cobble size clasts.

Table 16. Bluff Recession Survey, July 1981, at Five Islands Provincial Park, Colchester County.

Survey Line	Compass (silva) Bearing (°)	Distances (m)
	Fence Post to Bluff Edge	Fence Post to Bluff Edge
1	225	6.40
2	212	6.25
3a	292	6.00
3b	222	15.20
4	286	4.53



References**Bujak, J.P. and Donohoe, H.V., Jr.**

1980: Geological Highway Map of Nova Scotia; Atlantic Geoscience Society, Special Publication No. 1.

Grant, D.R.

1976: Reconnaissance of early and middle Wisconsinan deposits along the Yarmouth-Digby coast of Nova Scotia; Geological Survey of Canada Paper 76-1b, p. 363-369.

1980: Quaternary stratigraphy of southwestern Nova Scotia: Glacial events and sea-level changes; Field Trip Guidebook 9, Geological Association of Canada, 63 p.

Keeley, J.R.

1975: Observed and predicted longshore currents on Martinique beach: A comparison of driving terms; unpublished M.Sc. thesis, Dalhousie University, 106 p.

Keppie, J.D.

1979: Geological Map of Nova Scotia (1:500,000), Nova Scotia Department of Mines and Energy, Halifax, Nova Scotia.

Nielsen, E.

1976: The composition and origin of Wisconsinan till in mainland Nova Scotia; unpublished Ph.D. thesis, Dalhousie University, Halifax, Nova Scotia, 257 p.

Taylor, R.B., Wittmann, S.L., Milne, M.J., and Kober, S.M.

1985: Beach morphology and coastal changes at selected sites along mainland Nova Scotia, Geological Survey of Canada Paper 85-12.

map reference

PL-75

STATION IDENTIFICATION

DISTANCE BETWEEN
STATION MARKERS

15 m

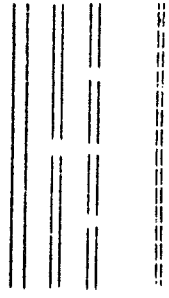
ROADS

hard surface, all weather

loose surface, all weather

loose surface, dry weather

woods road



POWER LINE



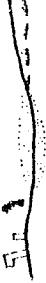
LIGHTHOUSE



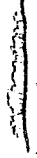
HORIZONTAL CONTROLS



WHARF; BREAKWATER; BEACH; CLIFF



ROCKY SHORE LINE; LEDGE



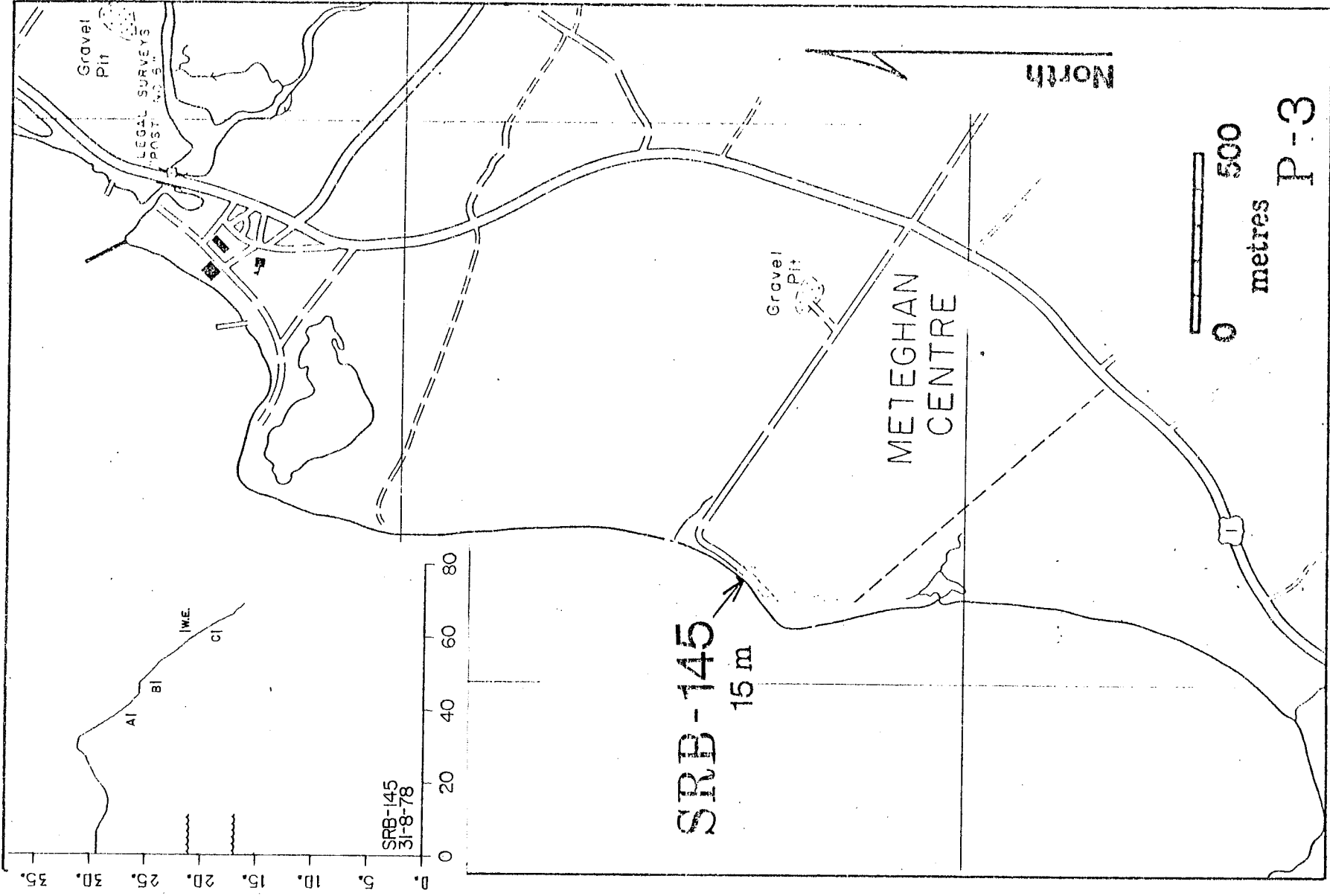
CHURCH; SCHOOL



NOVA SCOTIA DEPT. LANDS AND FOREST

BASE MAP IDENTIFICATION NUMBER

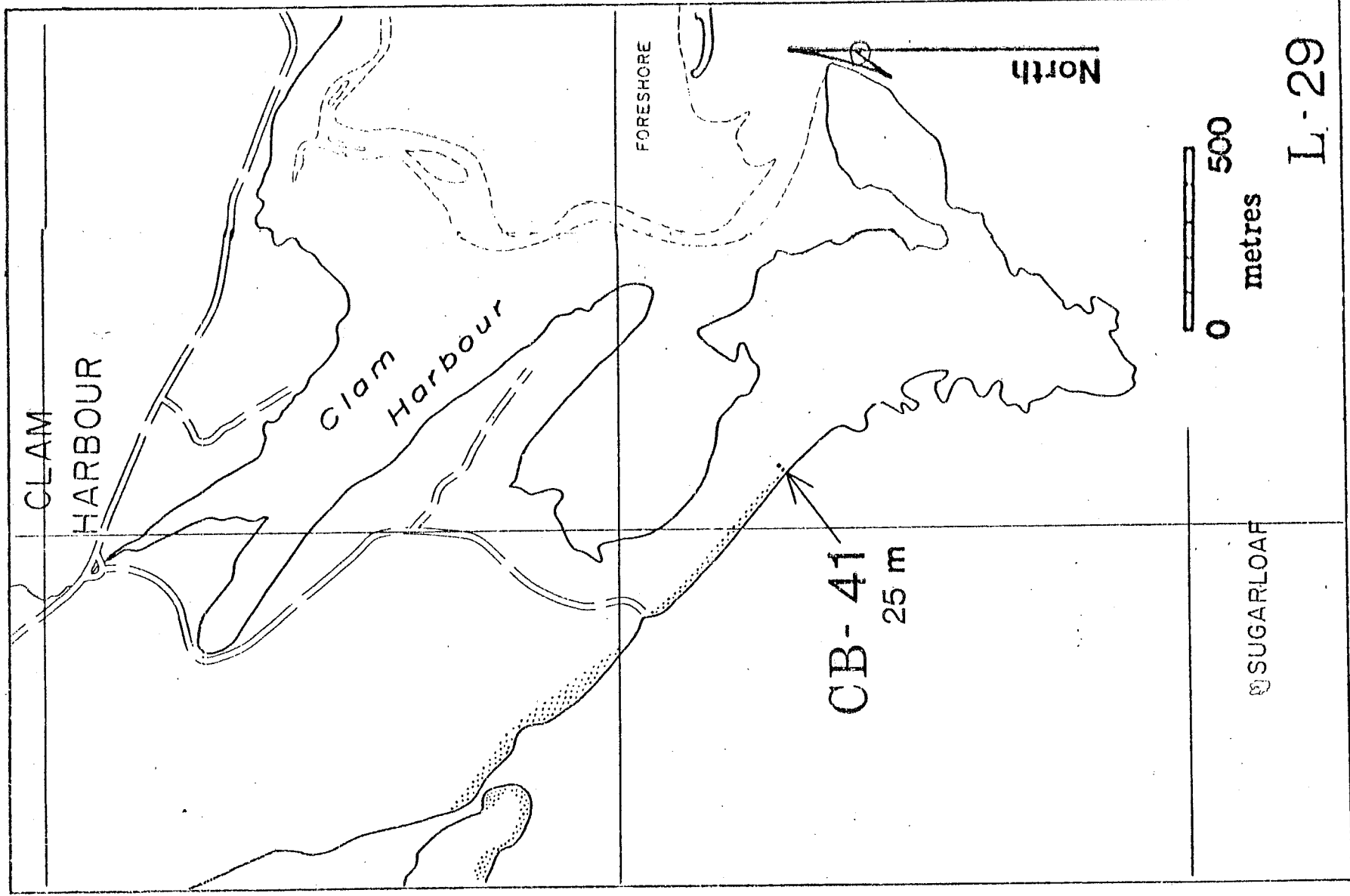
0-9



SRB 145

L'Anne des Marechal

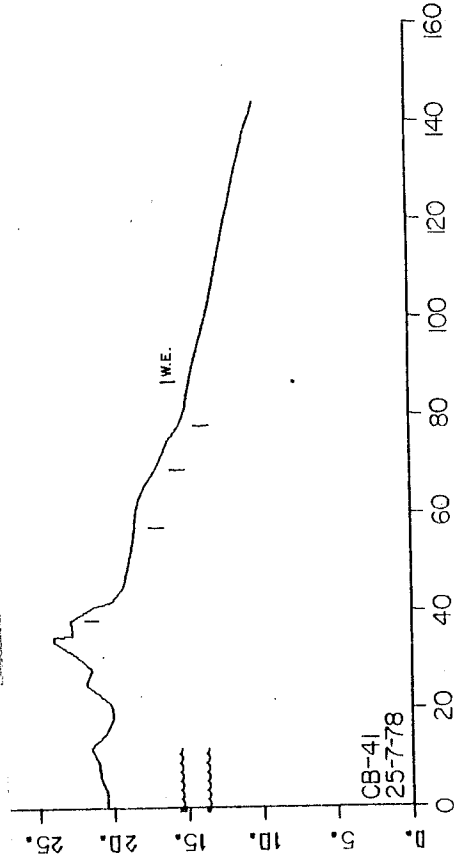
In Meteghan Center drive approx. 200m beyond the post office and turn left toward the water's edge. Drive 800m to the end of the road and turn left for a distance of about 500m. The profile line markers are 15m apart on either side of the cobble road. The back marker height is 102cm and the front is 104cm high.

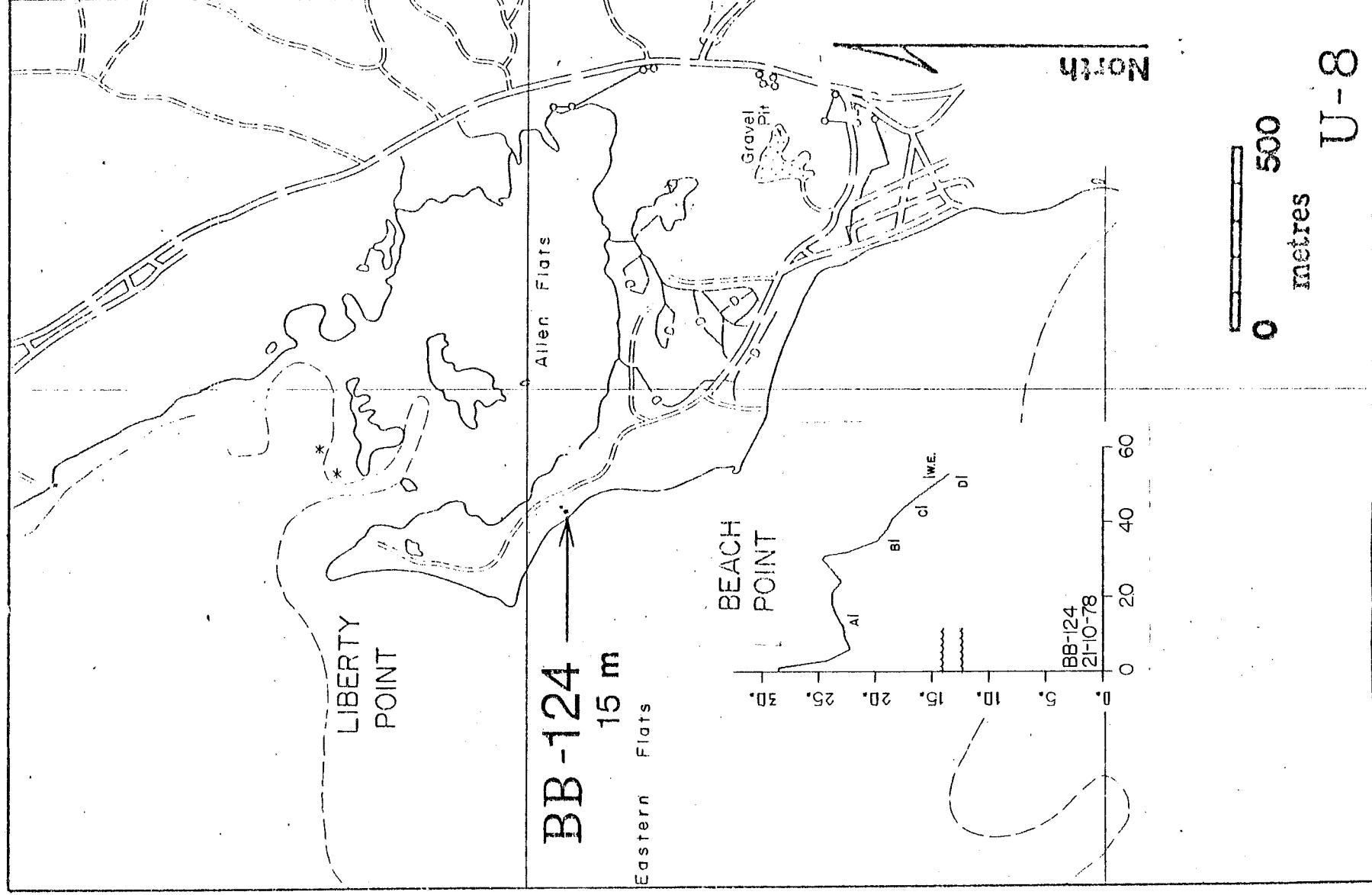


CB-41

Clam Bay Beach

From the walkway leading down to the beach, go southeast along the beach until you are within 250m of the first bedrock outcrop that appears on the beach. Profile line markers are located in the dunes 45m apart. The front marker is about 10m back into the dunes from the dune scarp. Rear marker is 80cm high and the front marker has a height of 75cm.



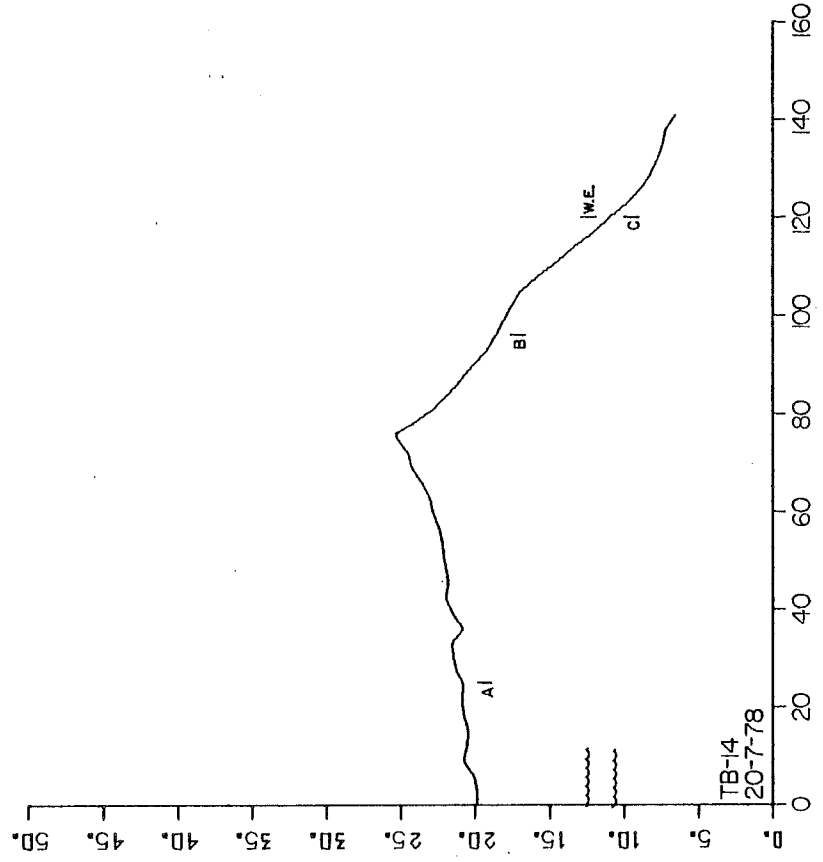


BB 124

Sevim Beach

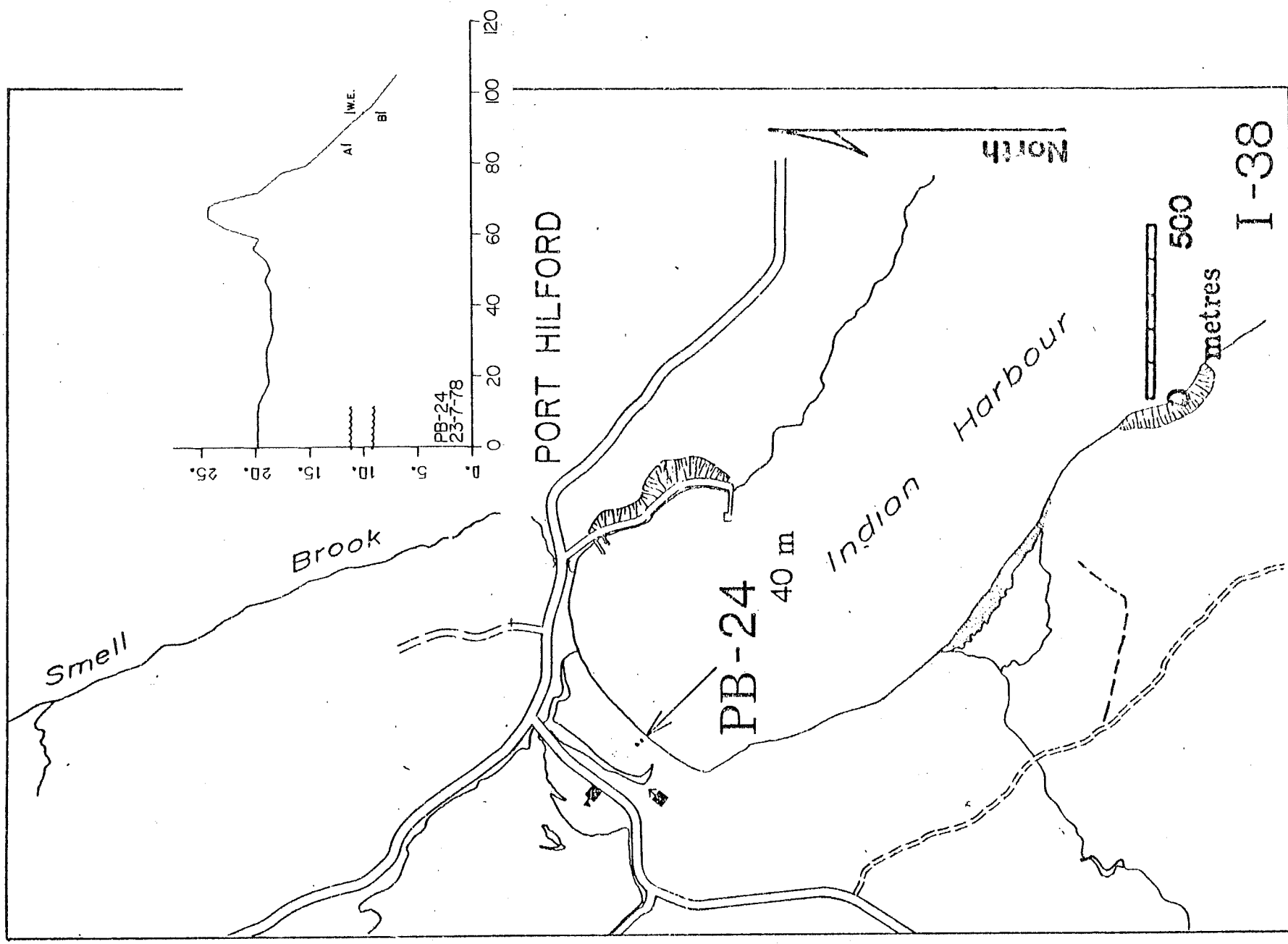
At Barrington exit off trunk 3 and drive south down the east side of Barrington Bay to Villagedale. At Villagedale drive toward the provincial picnic grounds, and stop at the point where the road enters the dunes of Sevim Beach. To your left there is a path through the dunes down to the water's edge. North of the path about 25m is the profile line marked by two markers 15m apart in the dunes. The back marker height is 91cm and the front marker is 102cm high.

U-8



TB-14

Continue west on trunk 316 from TB-13. Turn east off trunk 316 toward the village of Tor Bay and drive 3.5km to a provincial park. Profile markers are located in marram grass which vegetates a very wide back beach. Markers are 25m apart, back marker is 100cm high and the front 100cm high. Front marker is 51m landward of the edge of the marram grass.



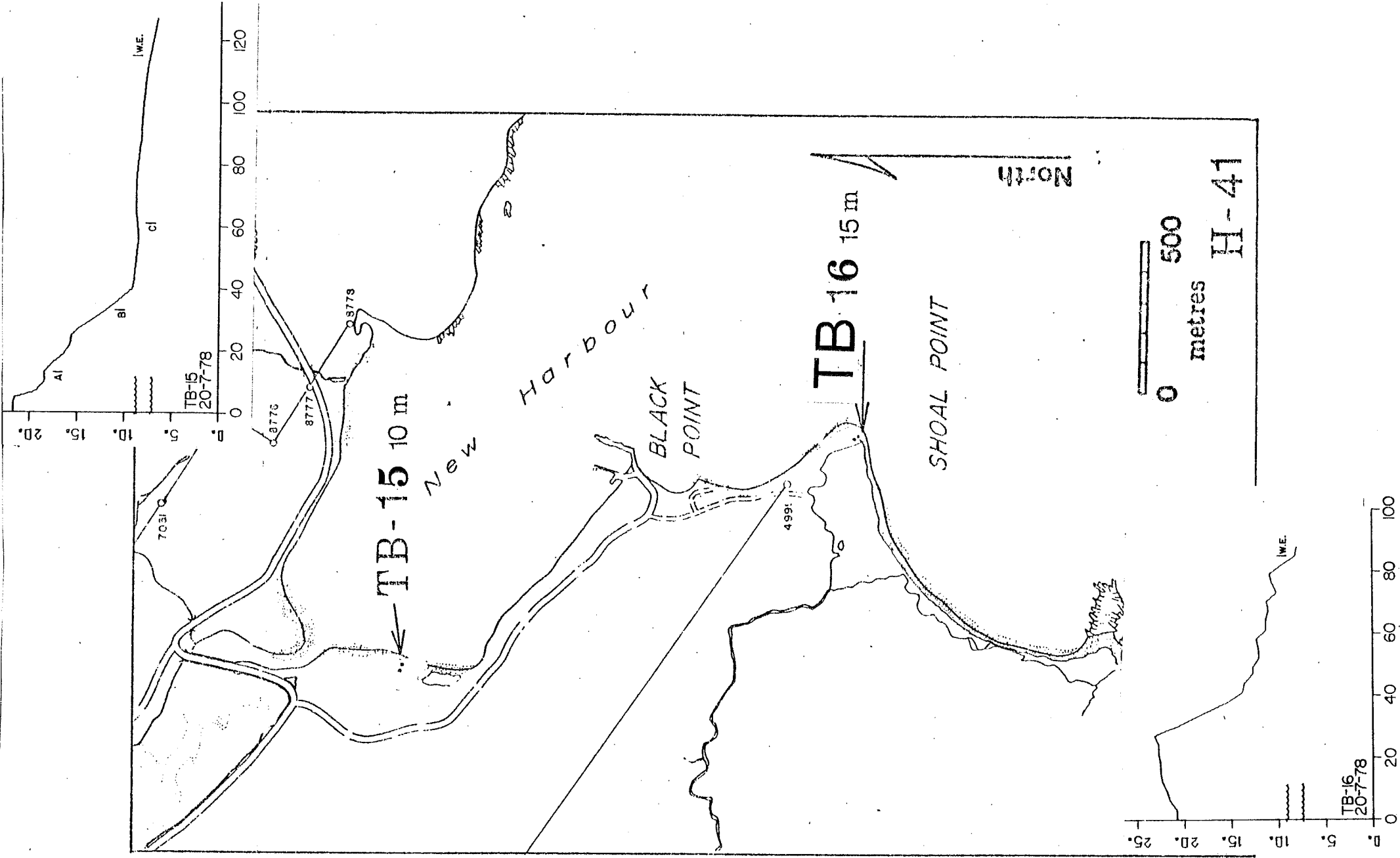
PB-24

A flat area behind the storm ridge is used for parking autos and trailers owned by the people using the beach for bathing. The profile markers are 40m apart, and are located near this parking area. The back marker is 98cm high and the front is 138cm high.

TB-15

New Harbour

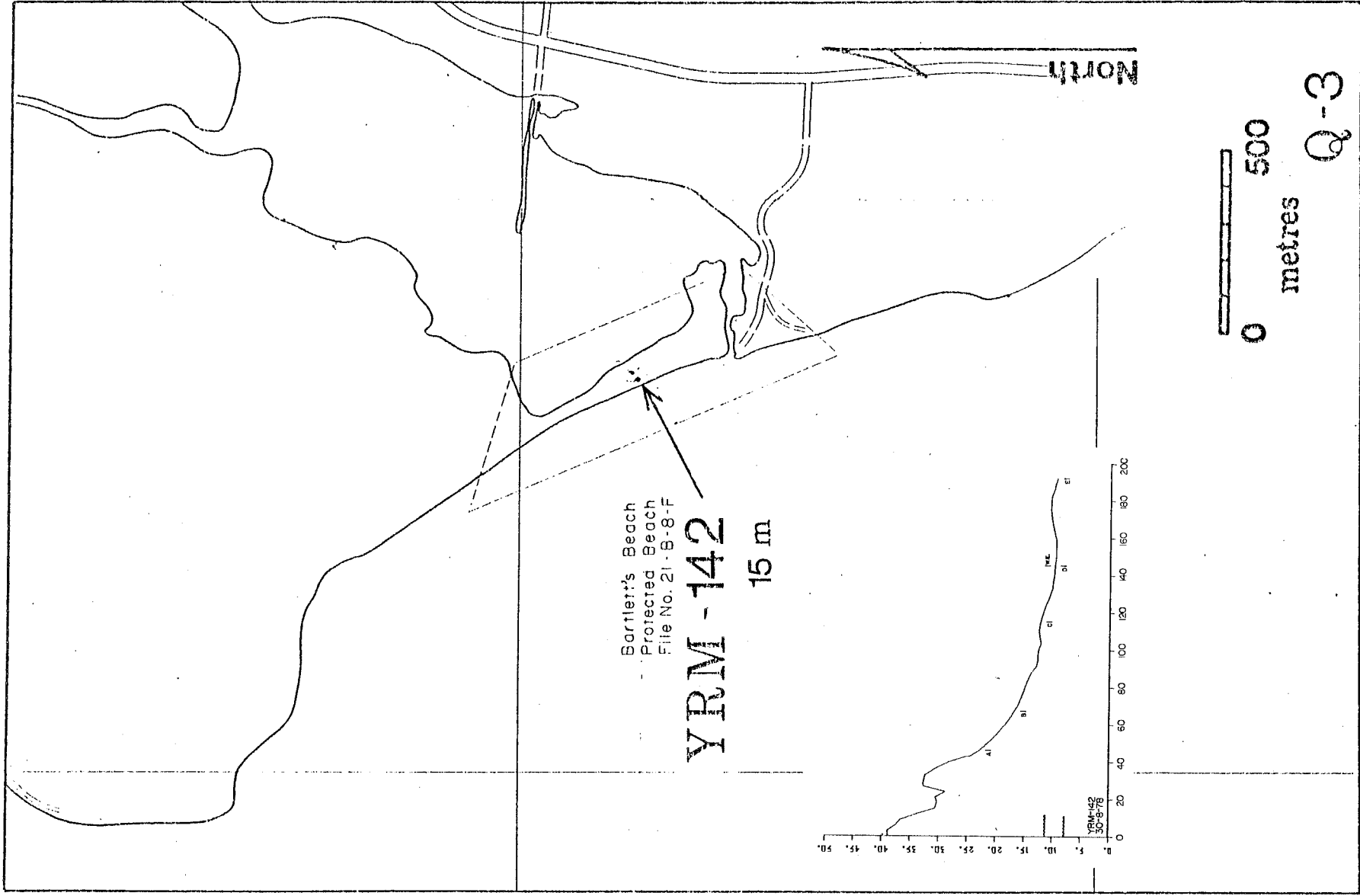
From the intersection of the Tor Bay road and trunk 316 drive west along 316 a distance of 7.5km and then turn south east toward the village of New Harbour. Drive 1.3km; walk down to the beach. Profile markers are located on back beach about 150m south of a small eroding till bluff; 10m apart. Front marker height is 117cm and rear marker height is 100cm. Marram grass vegetation may obscure markers.



TB-16

New Harbour

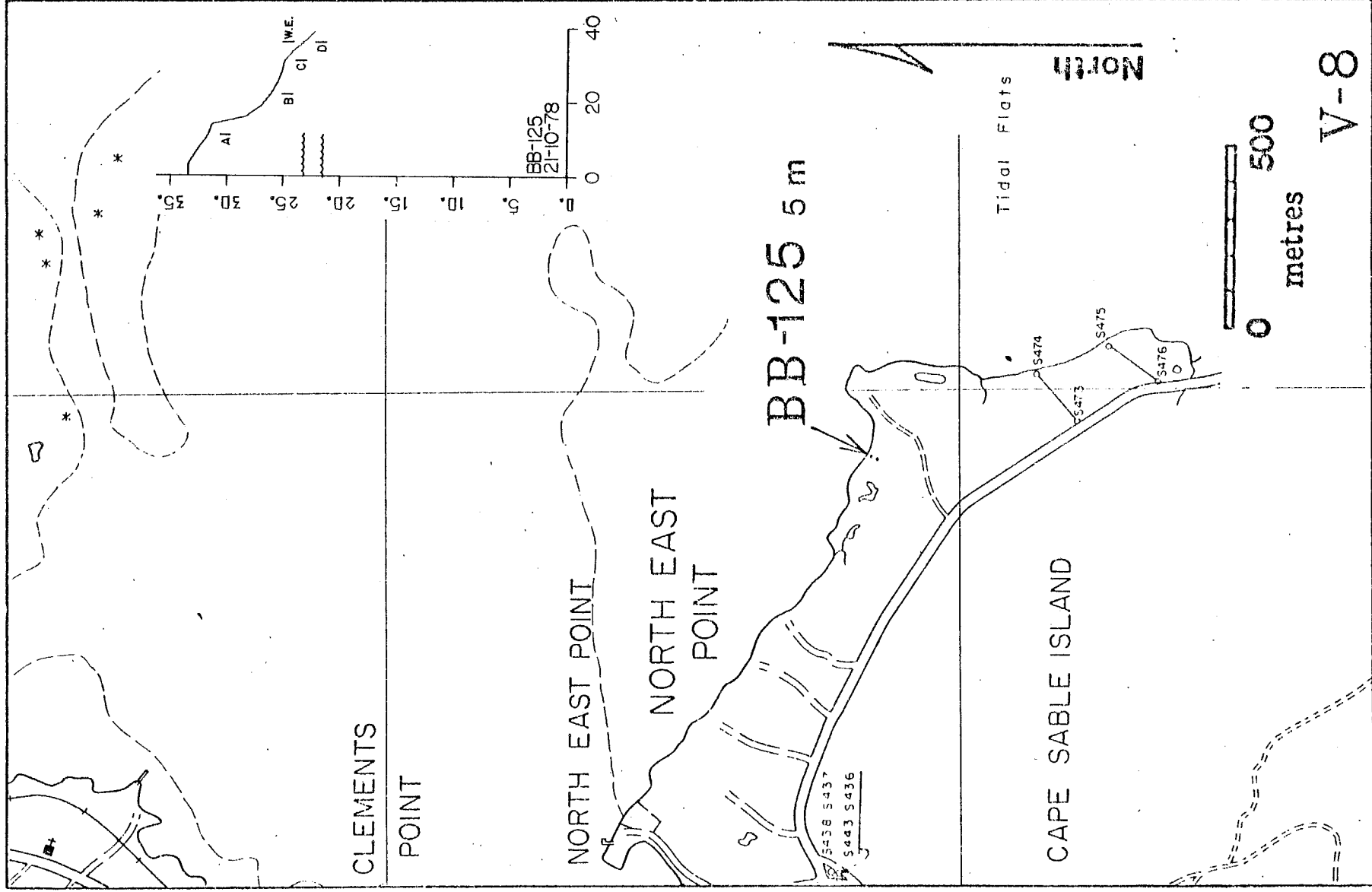
From TB-15 continue southeast along the New Harbour road to the wharf. Then proceed 600m along the cobble storm beach to Shoal Point. Profile markers are located 15m apart on the vegetated cobble back beach. Both markers are clearly visible front marker is 108cm high and the rear marker height is 123cm.



YRM 142

Bartlett's Beach

Proceed north along the coast from Yarmouth on trunk 1. On entering Digby County, turn left on a road that coincides with the boundary between Digby and Yarmouth Counties. At the end of the road walk north for approx. 300m on top of the foredune ridge. The front marker is 92cm high and is 15m landward of the foredune ridge. The back profile marker is 100cm high and is 15m behind the front.

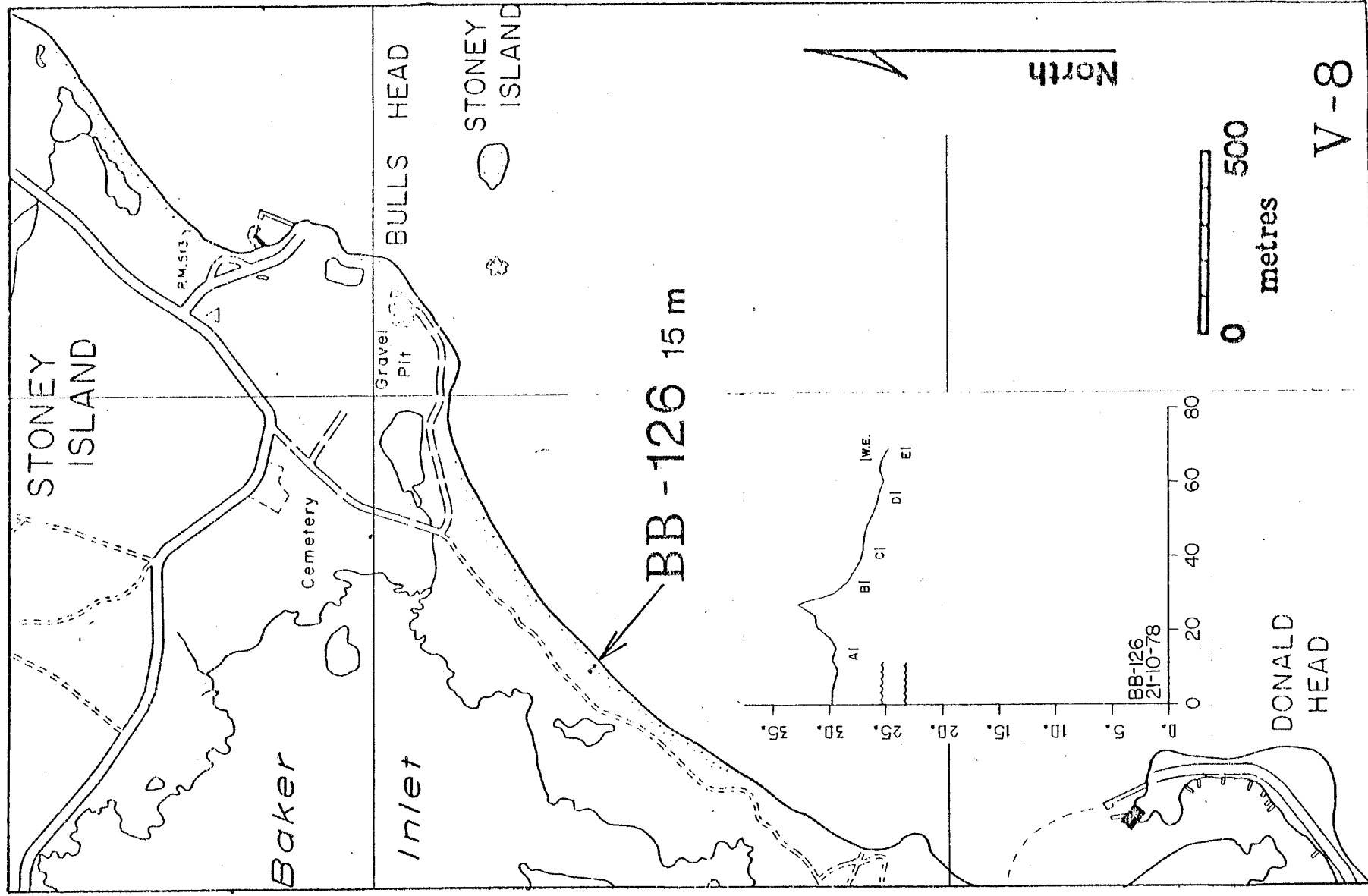


BB 125

MrCoys Point

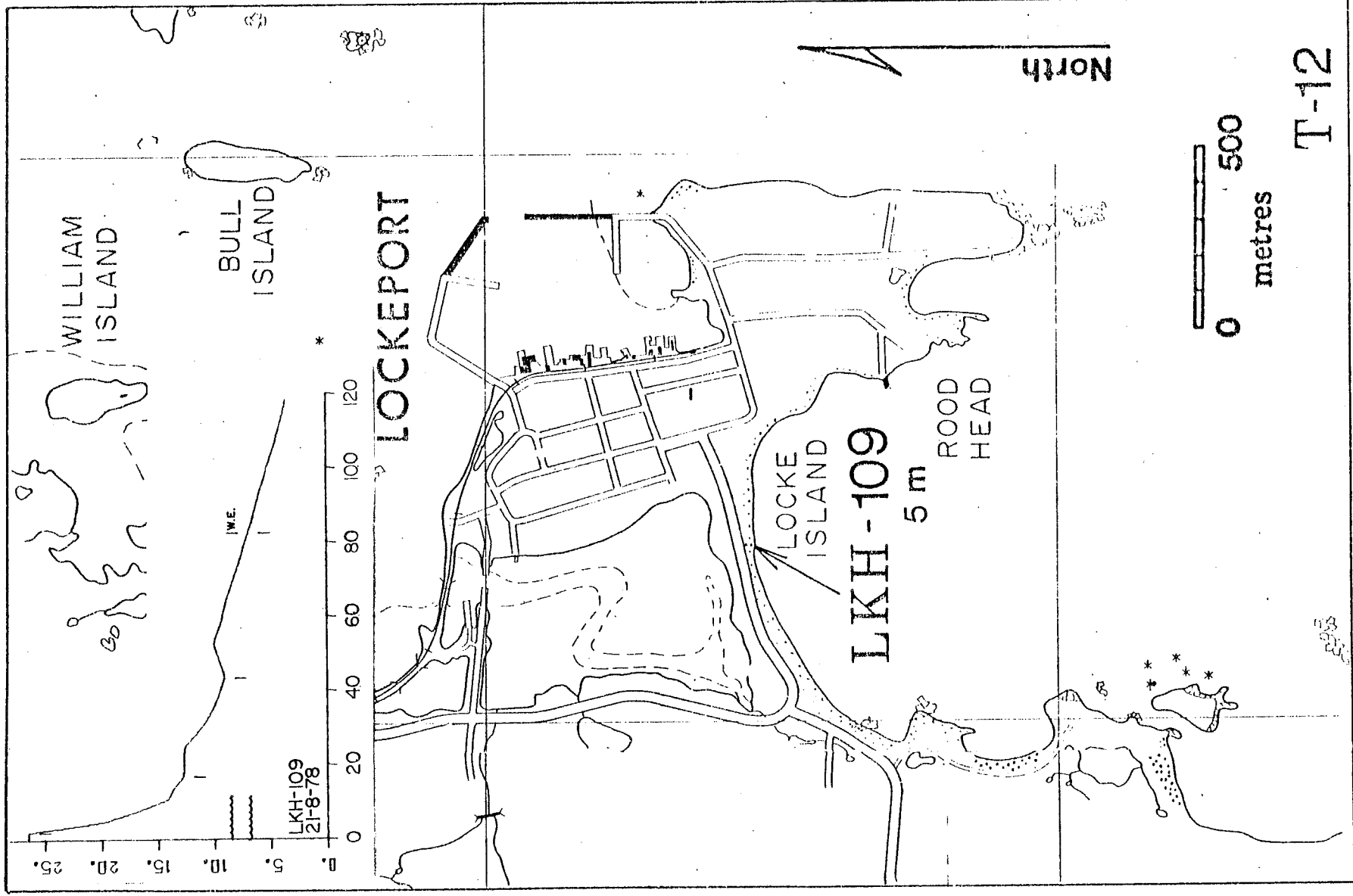
At Barring on Passage turn off trunk 3 onto the Cape Sable Island causeway. Bear left on trunk 330 and drive about 1km, turn left into a camper-trailer park. Proceed to the north side of McCoys Point. Walk across that part of the sand beach that is backed by poorly developed dunes, to a point where spruce trees are growing on a small elevated area landward of the back beach, about 30m. Profile markers are located on this elevated area 5m apart. Back marker height is 106cm and the front marker is 94cm high.

V-8



BB 126

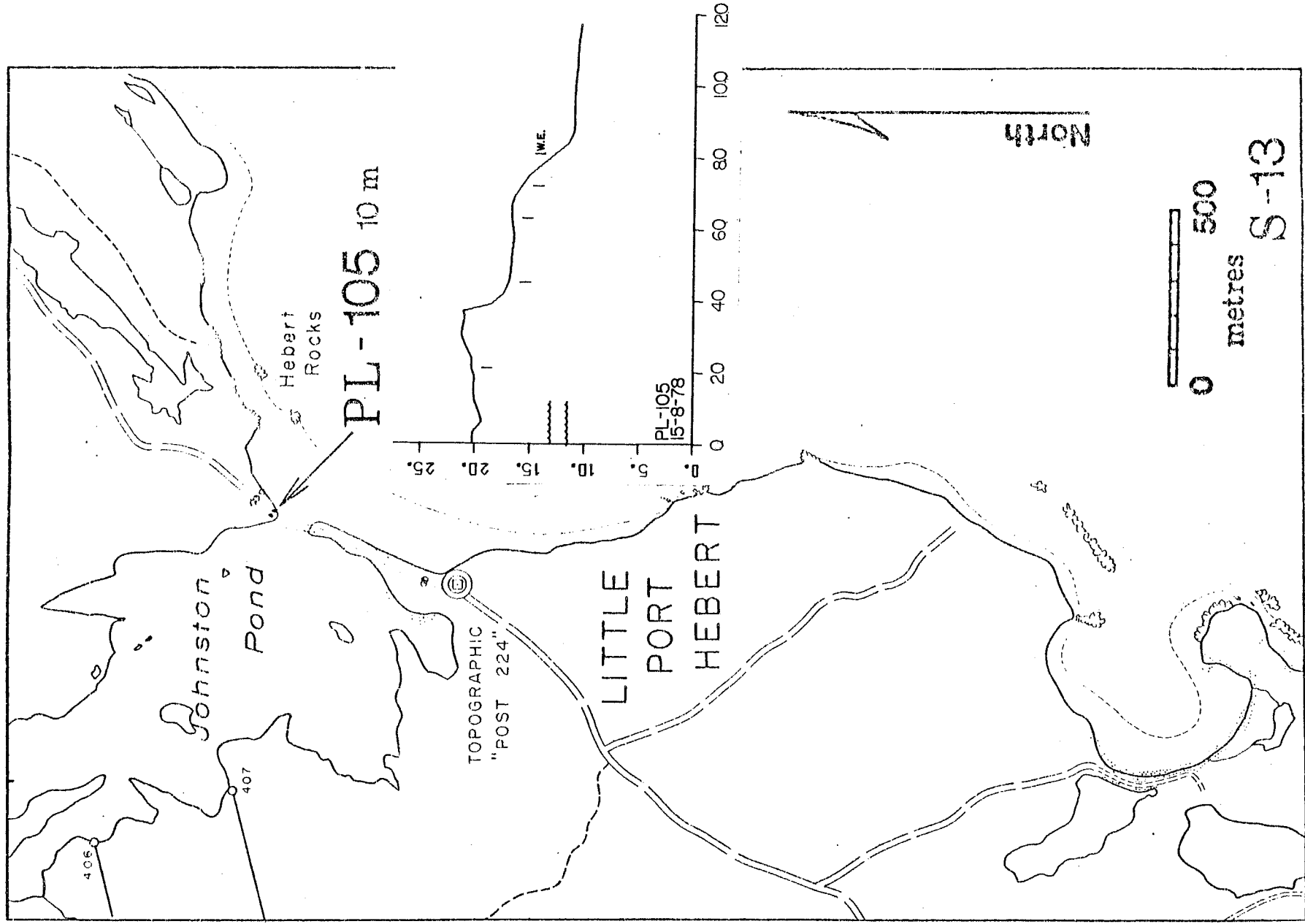
At the end of the Cape Sable Island causeway, bear left on trunk 330 to Stoney Island. Drive through Stoney Island and onto a road through the dunes to South Side. About 1.73km from the beginning of the road into the dunes, the profile markers can be clearly seen on the left (south). The markers are 15m apart and the heights of the back and front markers are 96 and 108cm respectively.



LKH 109

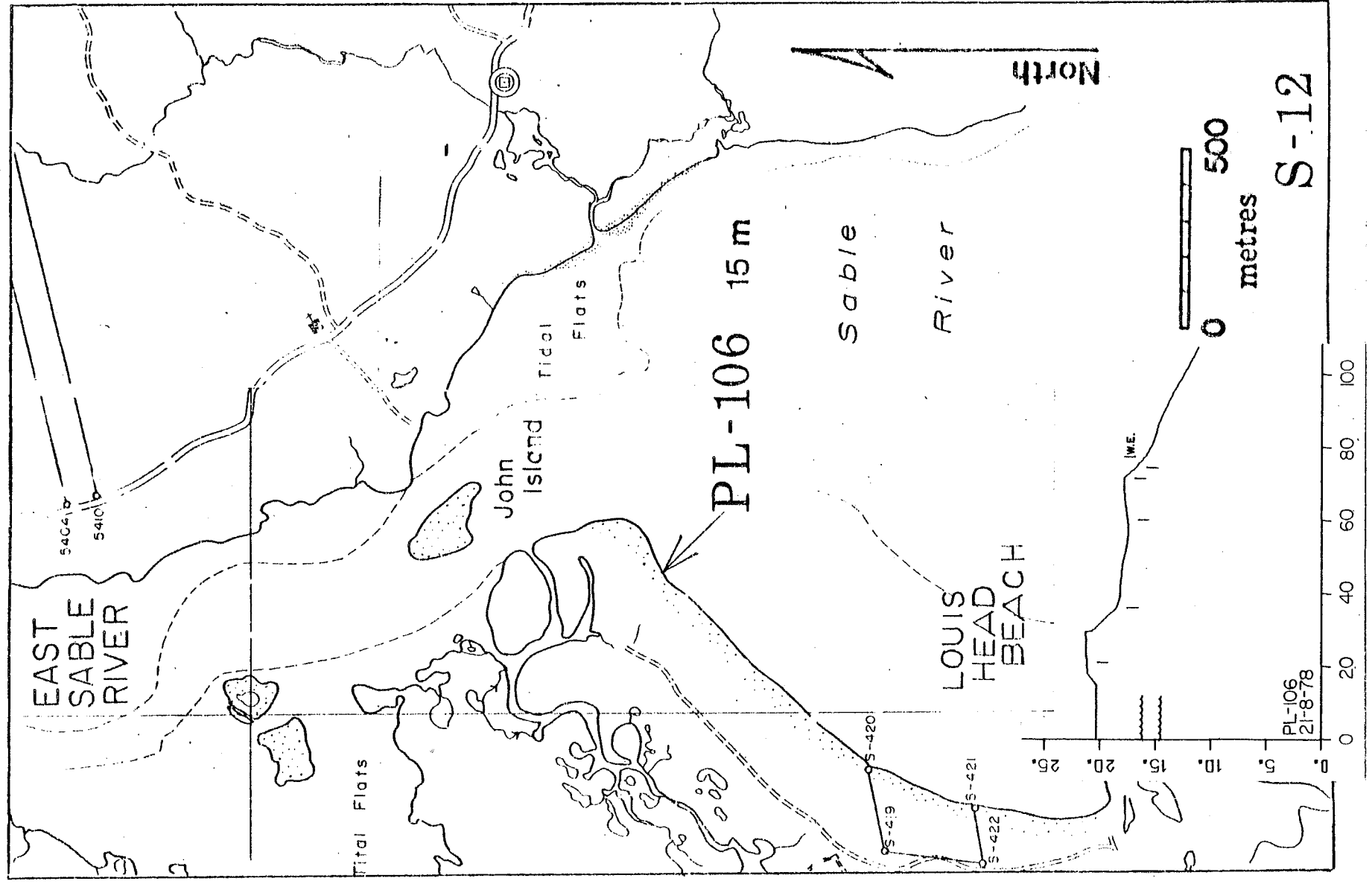
Crescent Beach

Driving west on hwy 103 in Shelburne County, cross Sable River Bridge and turn south on trunk 3 toward Lockeport. From the intersection where the road turns east across Crescent Beach to the town of Lockeport, proceed 519m and stop. Profile markers are 5m apart on an old dune ridge. Back marker height is 90cm and the front marker is 100cm high.



PL-105

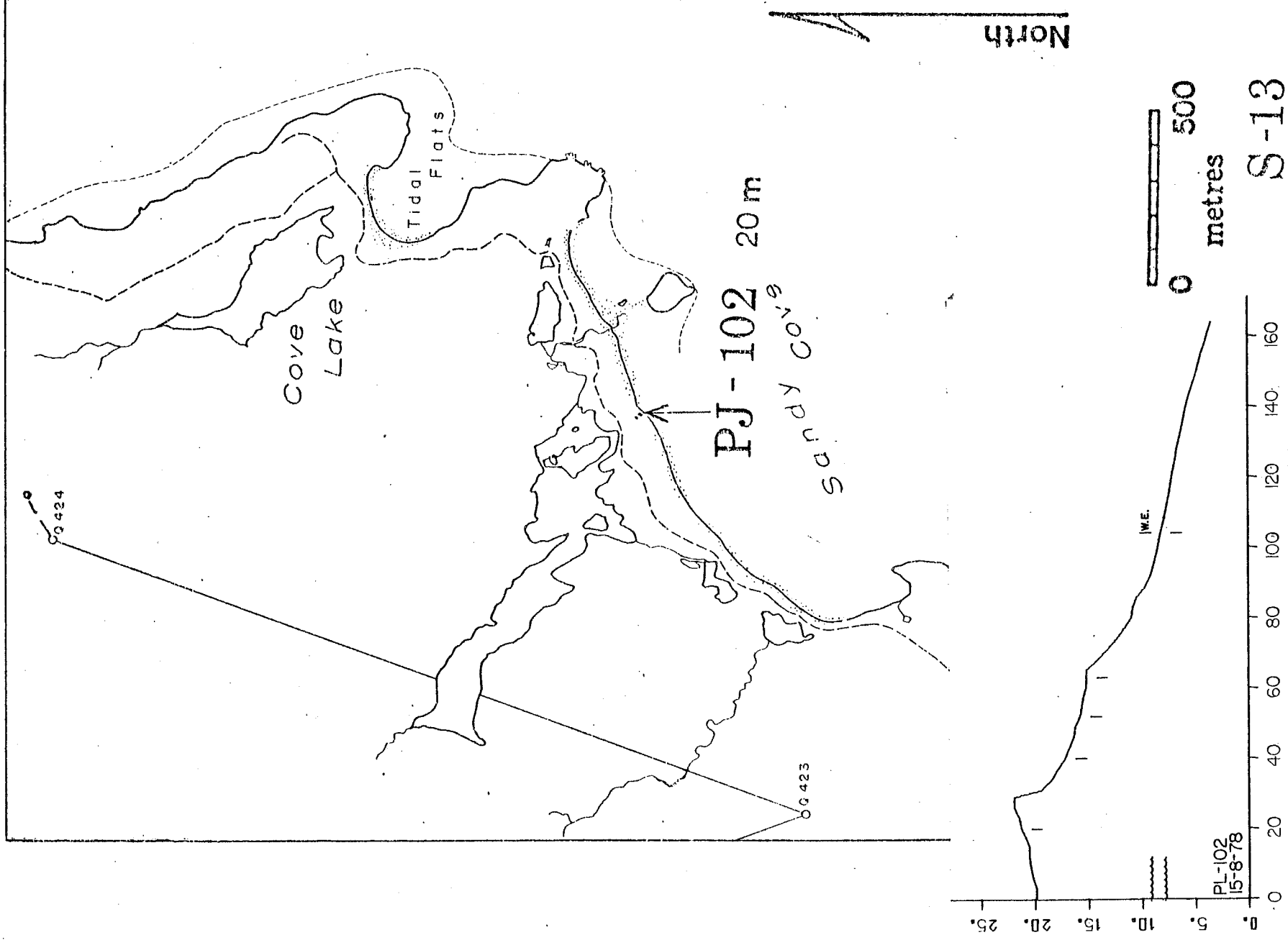
Driving west on hwy 103, entering the village of Sable River, turn south onto a loose surface road and proceed down the east side of the Sable River and turn left to Port L'Hebert. Continue through the village to Johnston's Beach. Profile markers are located in dunes near the end of the road at northeast end of the beach, 10m apart. Maps show the road continuing across the beach; incorrectly. The beach was cut by a tidal inlet and it is no longer possible to drive across the beach. Back marker height is 94cm and the front marker is also 94 cm.



PL 106

Louis Head Beach

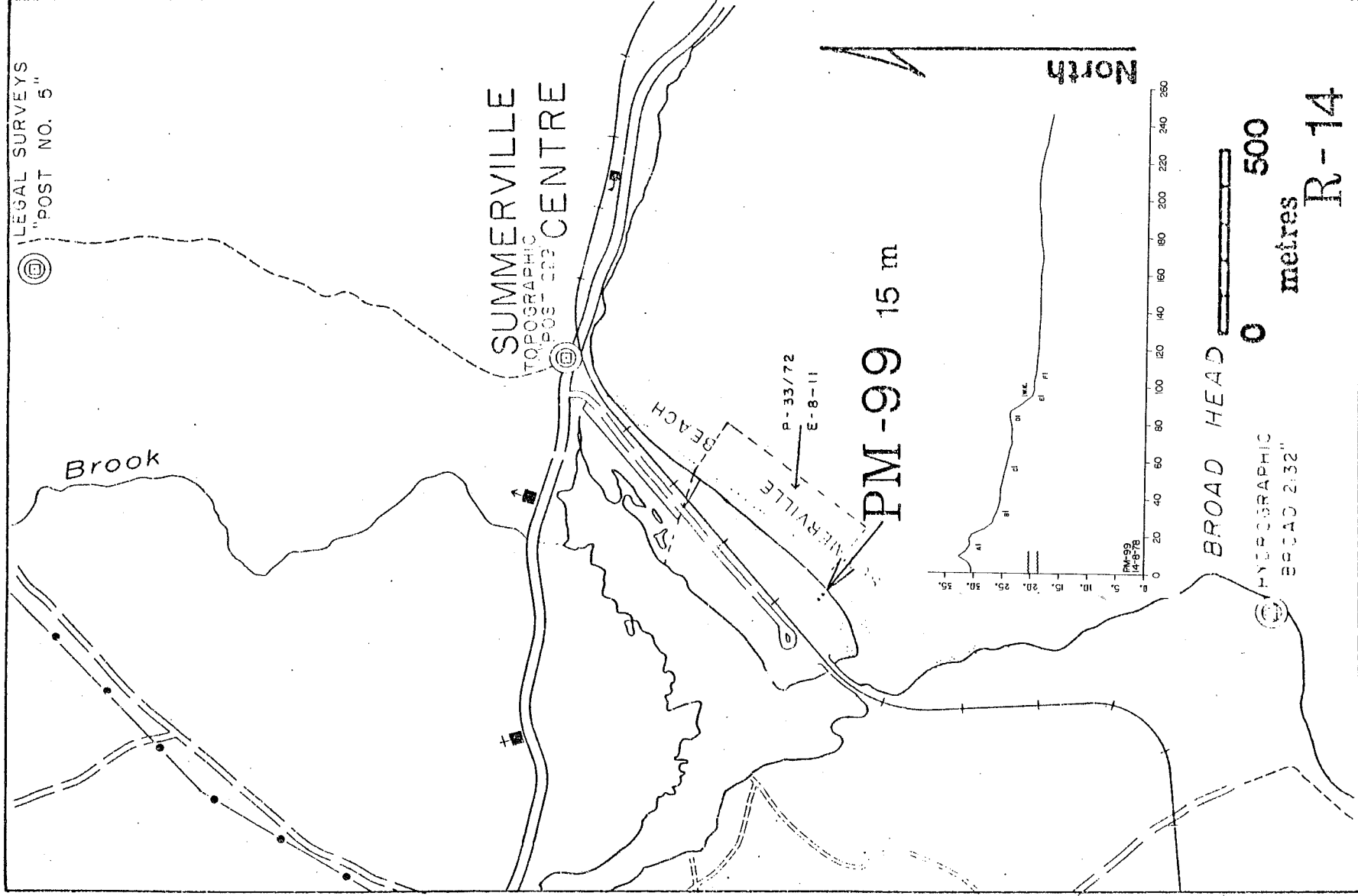
Driving west on hwy 103 cross the Sable River bridge and turn south onto trunk 3 for about 3.9km and bear left on a loose surface road and proceed for approx. 8.4km and turn left to Louis Head Beach. Drive on the road through the dunes to the north east end of the beach where the road leads out to the back beach. Walk from this point back(southwest) a distance of about 200m to find the profile markers located in the dunes 15m apart. Back marker height is 96cm and the front marker is 98cm high. The front profile marker was 17.5m landward of the dune scarp when the station was surveyed.



PJ 102

Sandy Bay Beach

Driving west on hwy 103 from Liverpool, turn south just beyond Douglas Brook; about 9.5km from the church in Port Mouton. Proceed for approx. 8km on this loose surface road and turn left. After 1.6km bear left onto an old road partially grown in with trees and drive to the dunes of Sandy Bay Beach. The profile markers are located about 860m southeast of a small island which is connected to the beach by a tombolo spit. The front marker is 11m landward of the foredune ridge and is 80cm high. The back profile marker is 20m landward of the front and has a height of 73cm.



PM 99

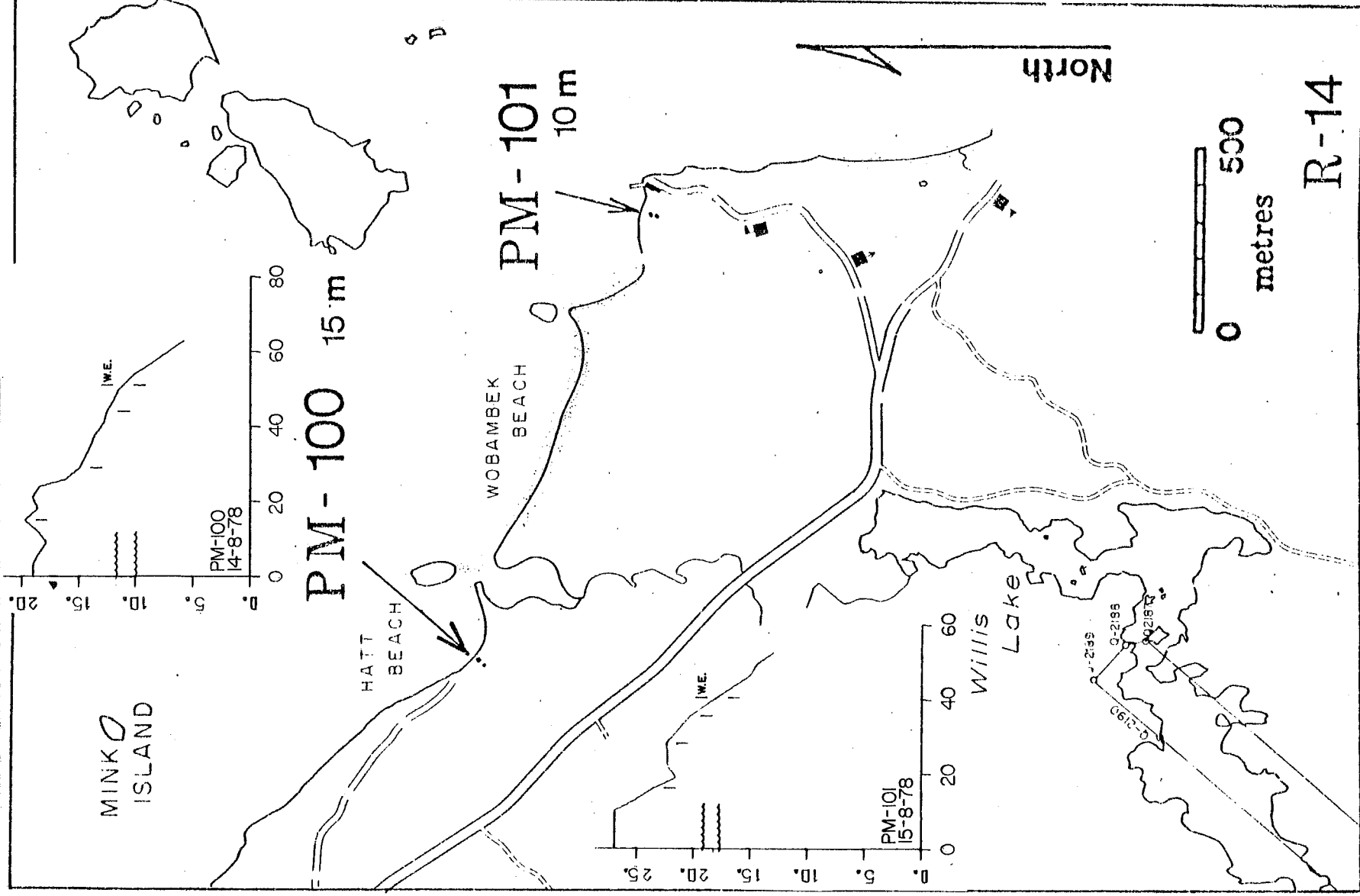
Summerville Beach

Leave Liverpool on trunk 3 and drive west 14.4km and turn left to Summerville Beach. Proceed to the end of the road behind the dunes and walk toward the water's edge. The front profile marker is on the foredune ridge and is 80cm high. The rear marker is 15m landward of the front and has a height of 75cm.

PM 100

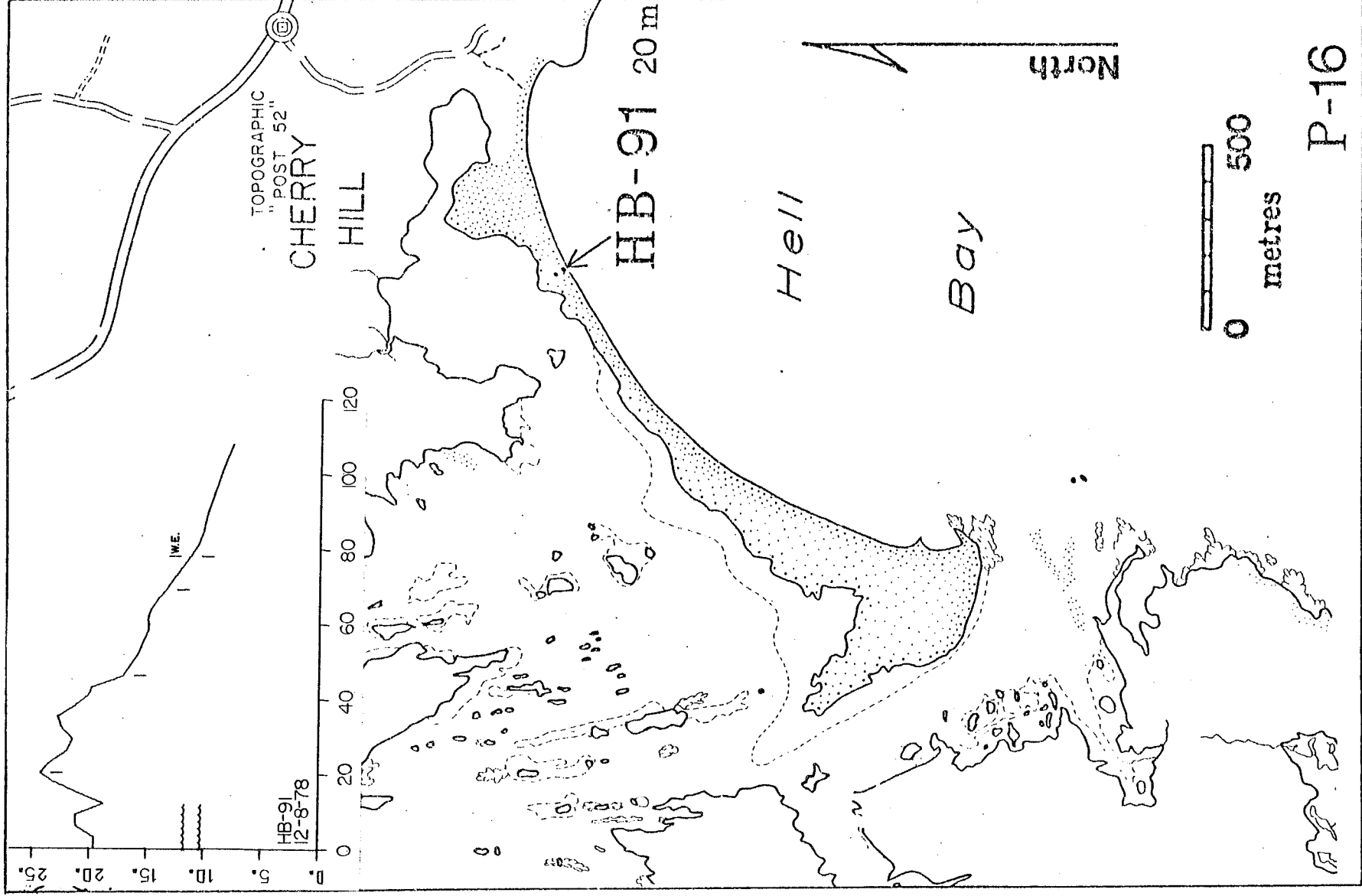
Carter's Beach

Drive west on trunk 3 out of Liverpool to Port Mouton, about 19km. Continue 460m past the church, bear left and proceed 2.45km, bear left and drive to the road's end, approx. 800m. Walk along the beach at the seaward edge of the dune vegetation, about 140m to find both profile markers located in the dunes 15m apart. Back marker height is 84cm and the front marker is 88cm high. The front marker is 12m landward of the foredune ridge.



PM 101

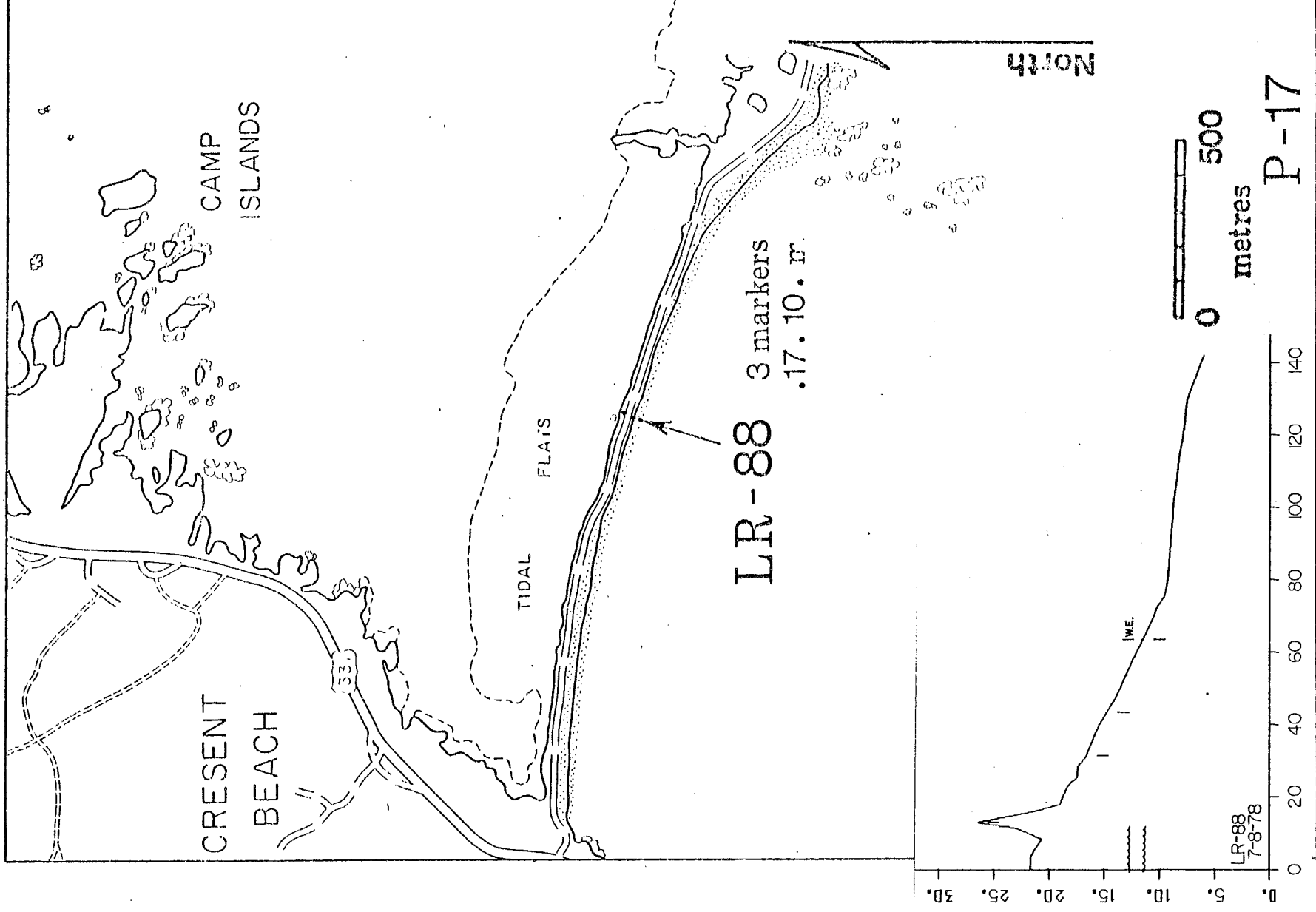
Drive west out of Liverpool on trunk 3 to Port Mouton, about 400m beyond the church, bear left and continue to South West Port Mouton. Turn left on a loose surface road and proceed to the road's end; at a wharf. Walk about 110m north from the wharf to find the profile markers 10m apart, in tall grass behind the back beach. Back marker height is 99cm and the front is 94cm high.



HB 91

Conrad Beach

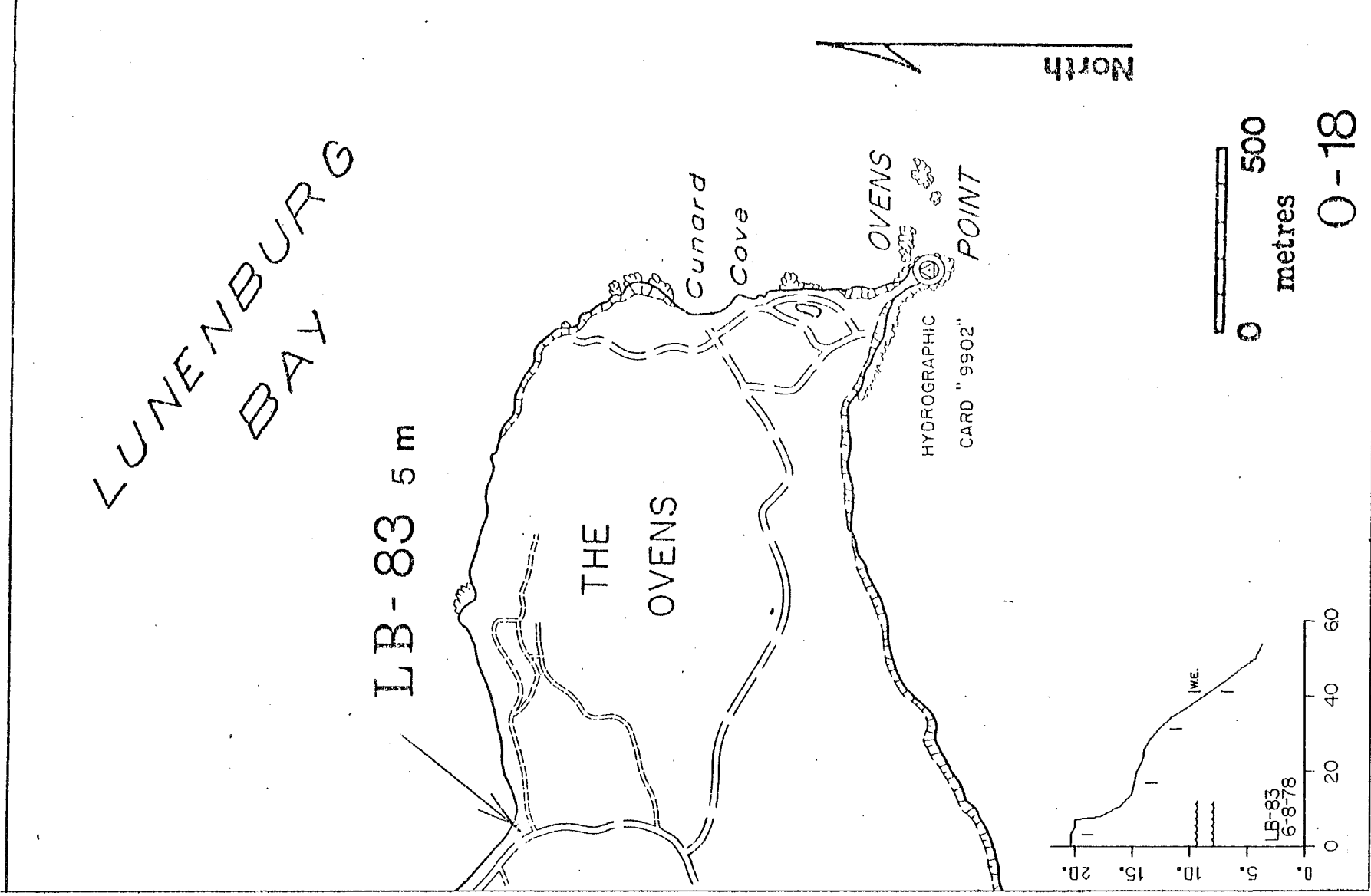
From LR 90 continue west along the coast on trunk 331. Entering the village of Cherry Hill bear left toward Conrad Beach and continue until the road ends in the dunes. Walk approx. 600m southwest along the beach. The front profile marker is located 8m back in the dunes and is 94cm high. The back marker is 90cm high and is 20m landward of the front.



LR 88

Crescent Beach

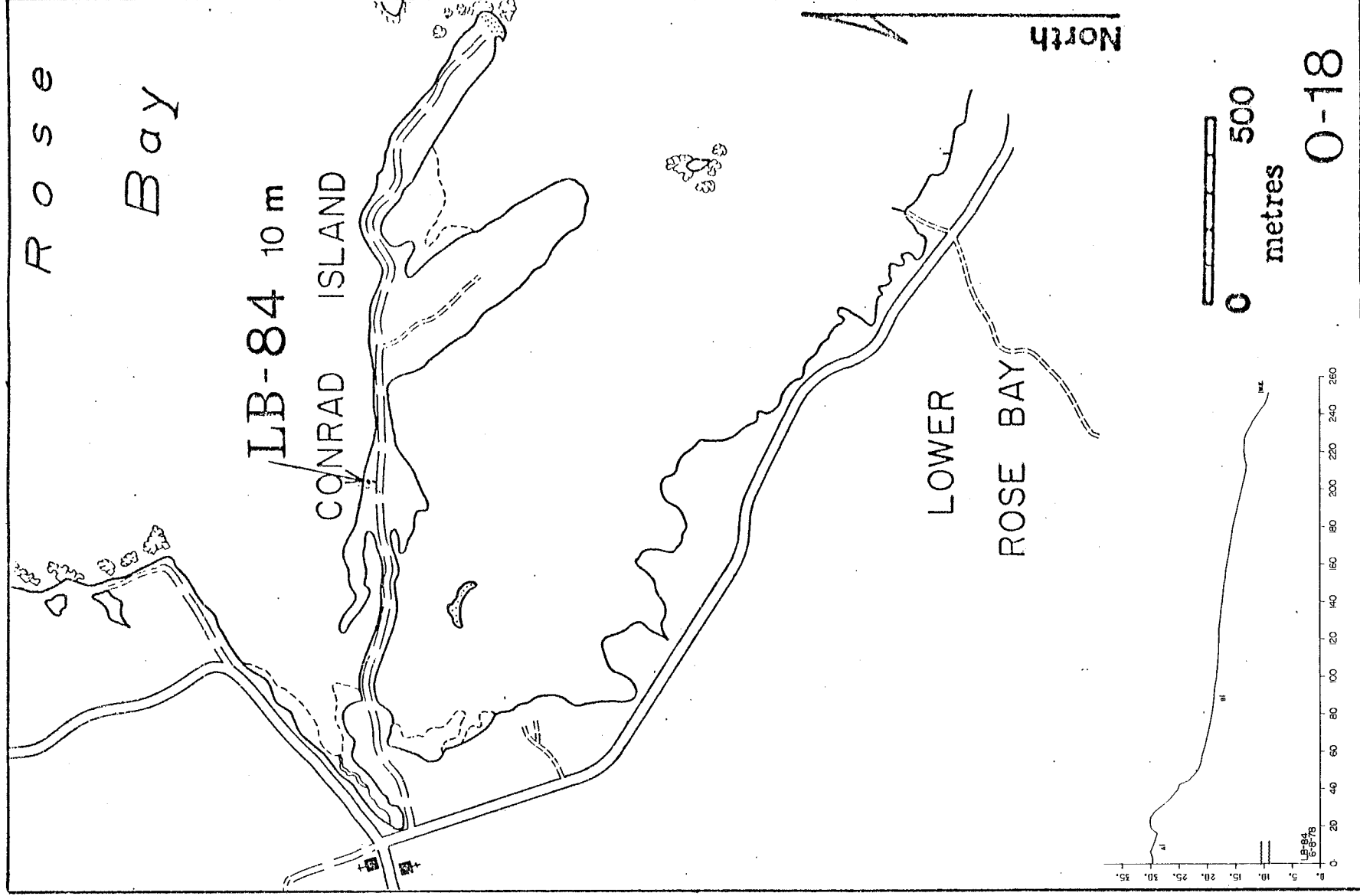
From station LR-87 continue west on trunk 331 approximately 6.6km and turn left onto the Crescent Beach road leading to the LaHave Islands. Drive approx. 1.4km and stop. This profile is located near the end of the wooden revetement on the back beach, and is marked by three markers. The back marker is on the north side of the road and extends 30cm above boulders at the edge of the road. The second marker is on the foredune ridge crest and is 73cm high. The third and most seaward marker is on the flat back beach landward of the wooden revetement and has a height of 84cm.



LB 83

Spindler Cove

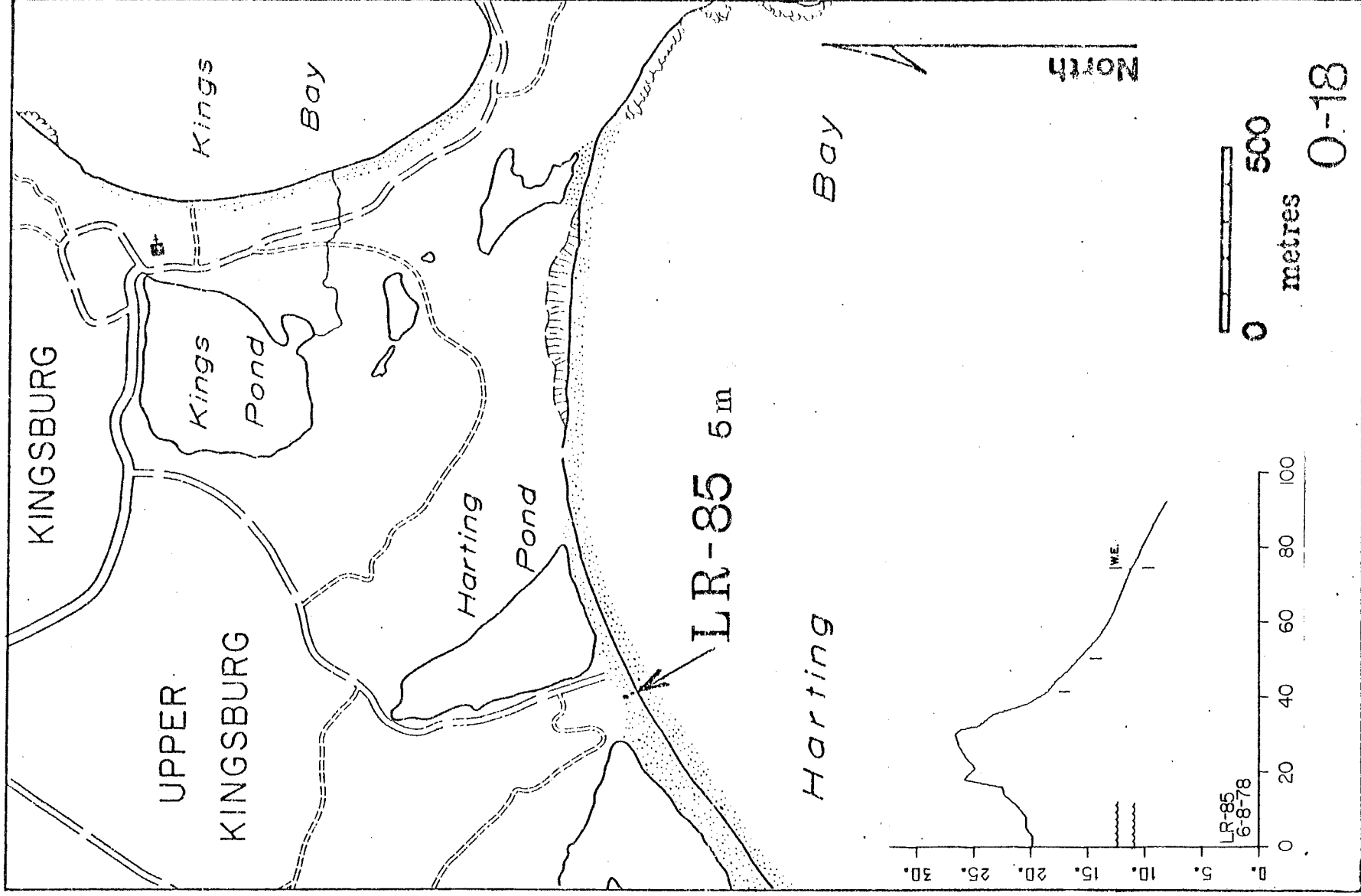
Leave hwy 103 at exit 12, and follow trunk 3 down the east side of the LaHave River to Upper LaHave. Drive on trunk 332 through Rose Bay toward Bayport and turn east toward The Ovens. Drive 2.85km to Spindler Cove and stop at the beginning of the sand beach. Profile markers are located 5m apart in marram grass growing on the back beach seaward of the road, at the southeast end of the beach. Back marker height is 102cm and the front marker is 100cm high.



LB 84

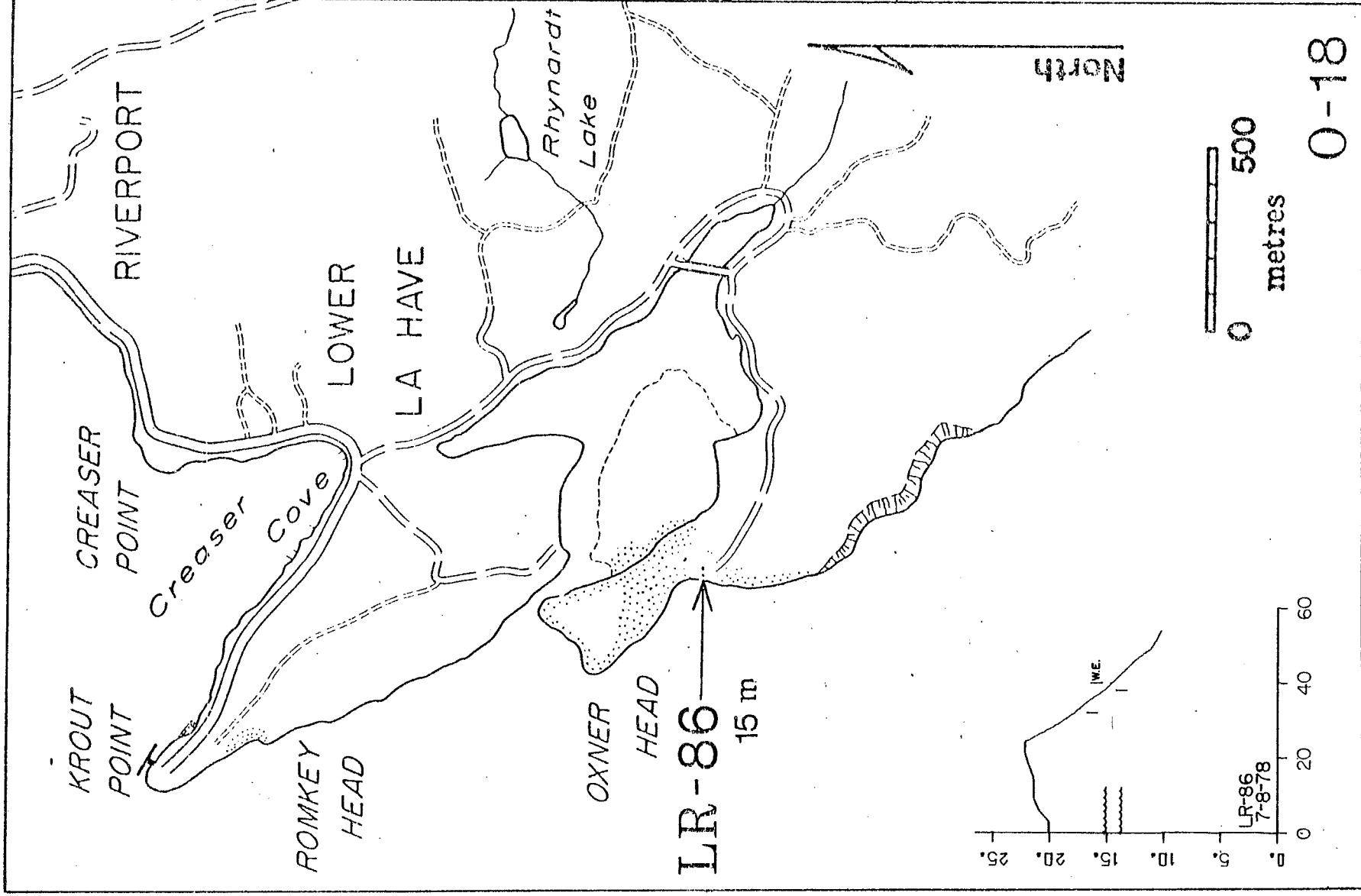
Rose Bay

Take exit 12 off hwy 103 onto trunk 3 and proceed down the east side of the LaHave River. At Upper LaHave continue on trunk 332 to Rose Bay. As you pass the third church in Rose Bay turn right and then turn left toward Conrad Island. Drive 1.01km and stop; profile markers are located on the north side of the road 10m apart. Back marker height is 88cm and the front marker height is 76cm.



LR 85

Take exit 12 off hwy 103 and proceed to Upper LaHave on trunk 3. At Upper LaHave take trunk 332 to Rose Bay and turn left toward Kingsburg. At Kingsburg turn right to Hirtles Beach and drive to a small canteen at the road's end. The profile line is about 110m west of the canteen. Markers are 5m apart and the back marker 21m landward of the storm berm top. Back marker height is 97cm and the front marker is 94cm high.

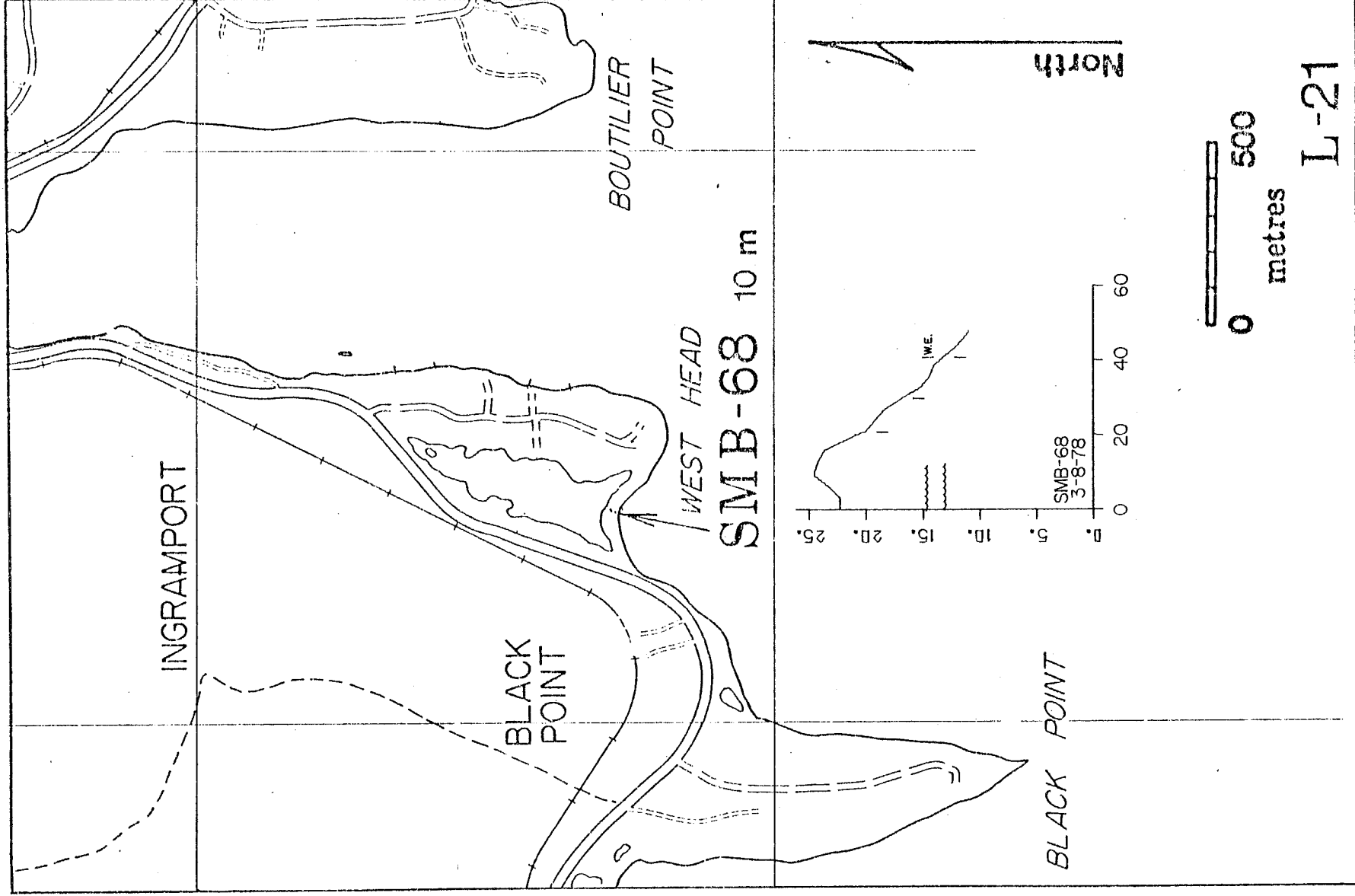


LR 86

Oxner's Beach

Exit at Bridgewater (#12) off hwy 103 and proceed on trunk 3 and 332 down the east side of the LaHave River to Lower LaHave and bear left on a loose surface road to Oxner's Head. At the end of the road walk north along the edge of the marram grass and the profile markers can be seen in the dunes about 50m north of the end of the road. Markers are 15m apart and the back and front marker heights are 94 and 90cm, respectively.

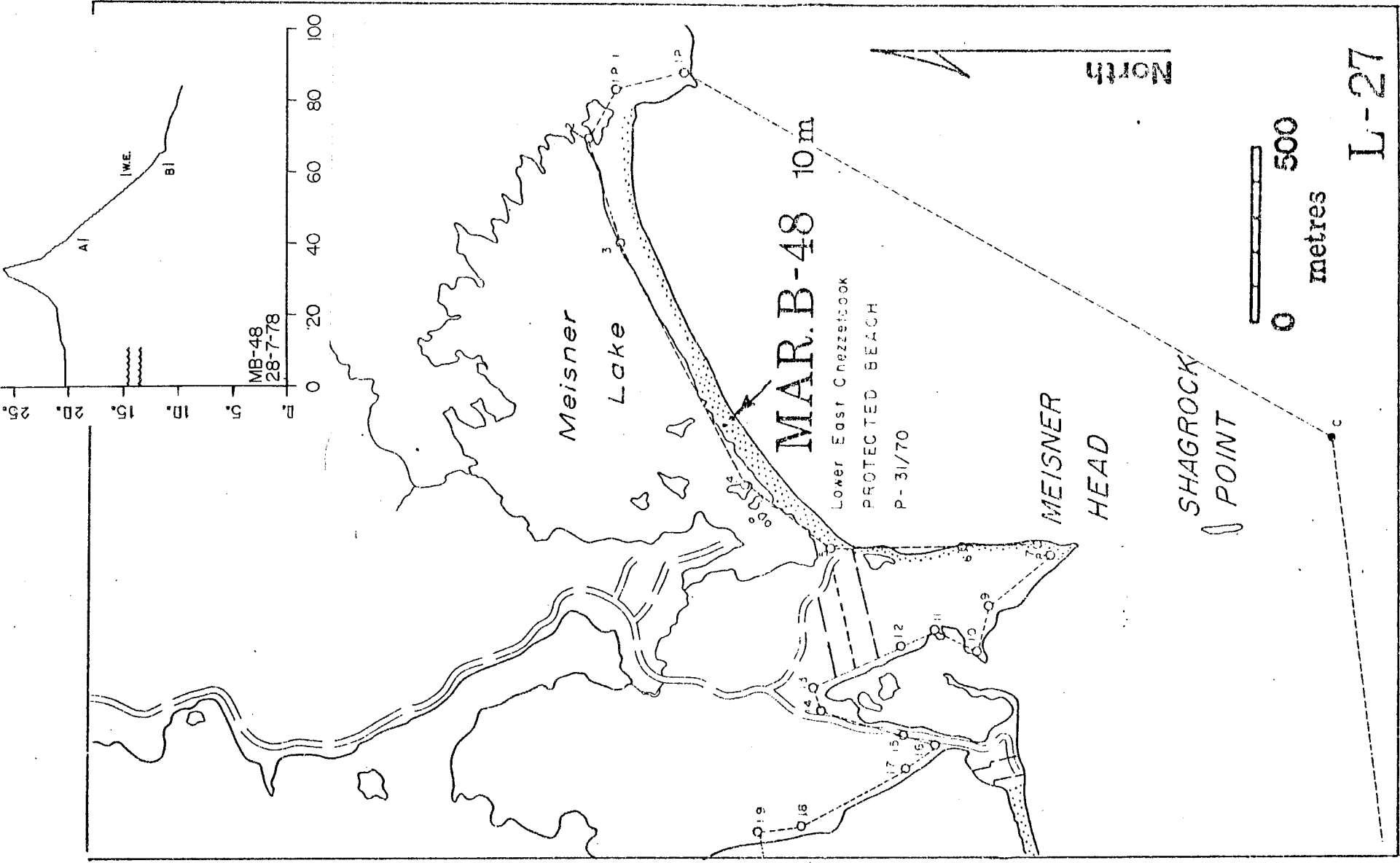
0-18



SMB 68

West Head

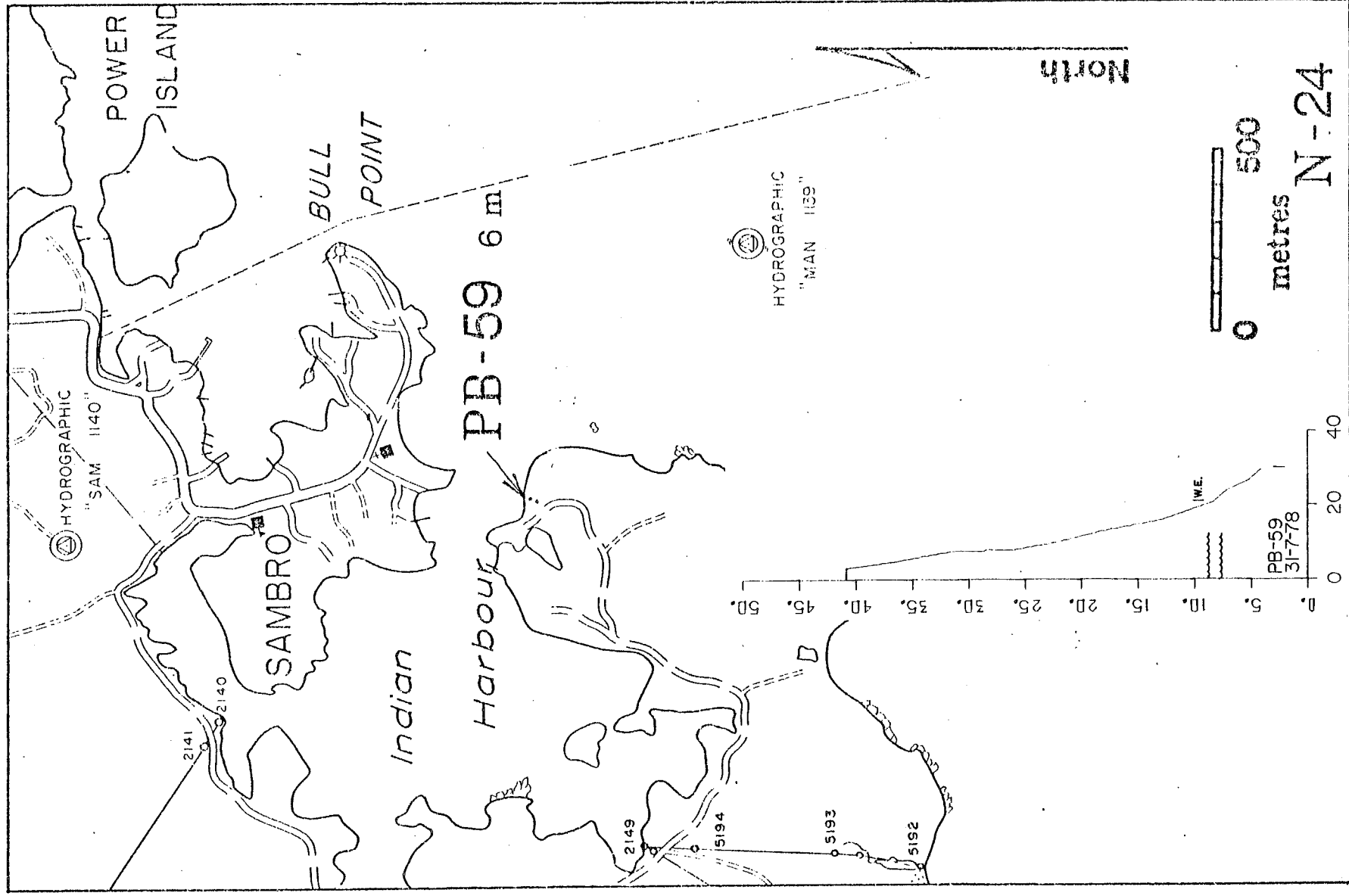
Drive west on hwy 103 and take exit 5 to trunk 3, and proceed west along the coast. From the first church in Boutilier's Point drive 2.85km and stop. To your left(southeast) there should be a barrier beach extending out to West Head and enclosing a small lagoon. Walk about 200m on this beach out toward West Head. Markers are located on the back berm and are 10m apart. Back marker height is 87cm and the front marker is 95cm.



Mar. B. 48

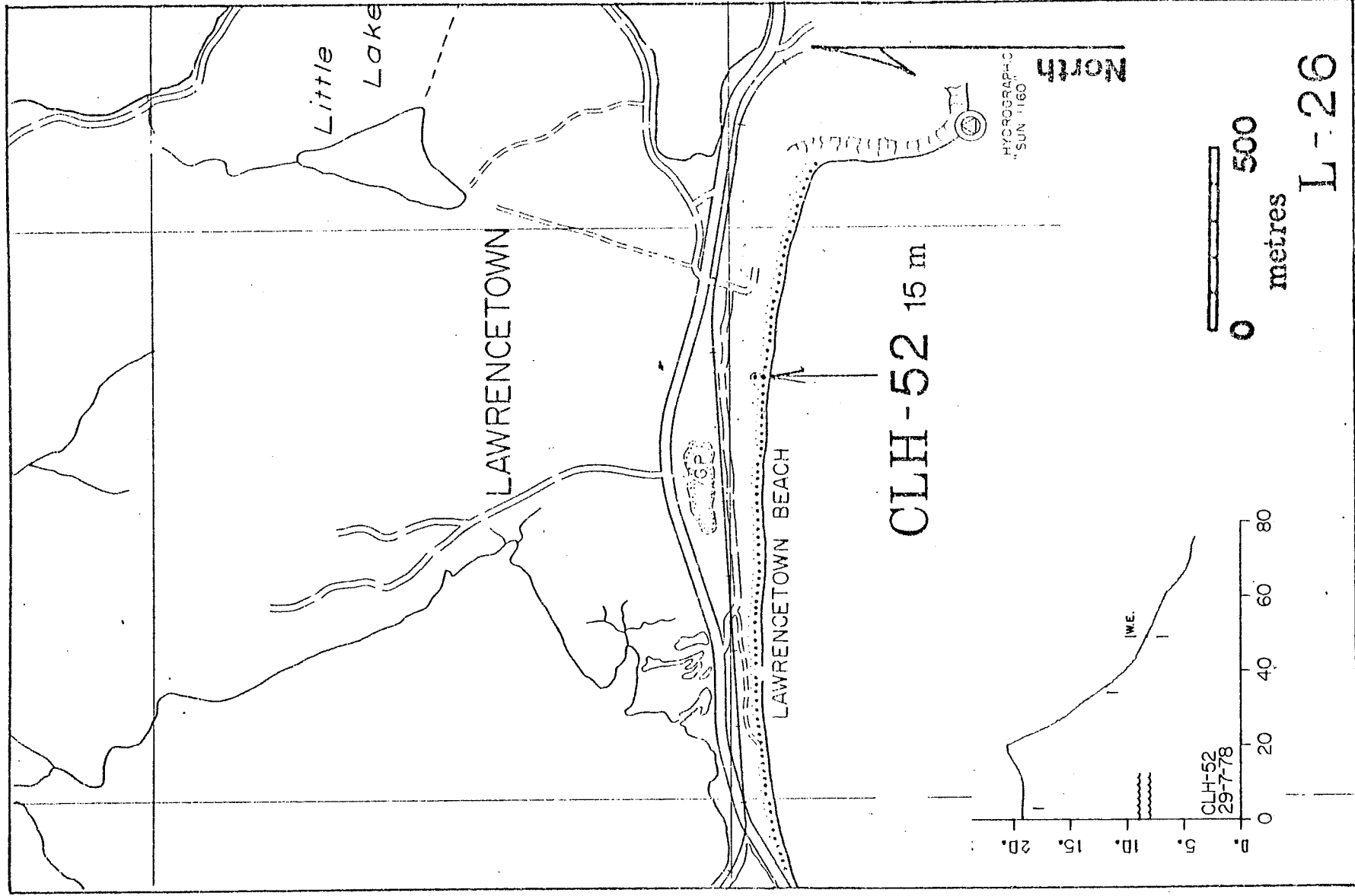
Meisner Lake

From trunk 7 drive down the east side of Chezzetcook Inlet to the end of the hard surface road and then turn left on a loose surface road leading out to Little Lake. Walk from the termination of this road to a point 500m east to find the profile line markers located 10m apart on the back beach. Rear marker height is 92cm and the front marker is 96cm high.



PB 59

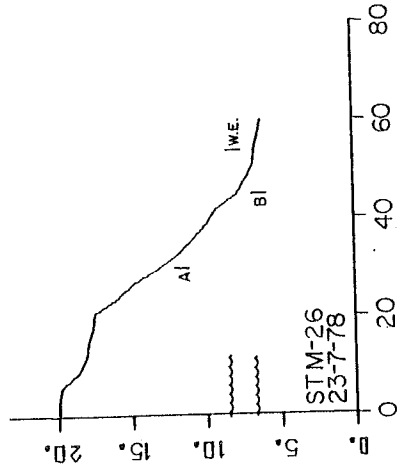
On trunk 349 drive west through the village of Sambro. Bear left at the first and following two intersections to Cook Point on the south side of the entrance to Indian Harbour. Continue to the most easterly house on Cook Point. Walk south to the edge of the yard around the house and then follow this edge (where the trees begin) down to the water's edge. The profile markers are 5m apart on a till bank sloping down to the back beach. Back marker height is 108cm and the front marker is 96cm high. The till bank is vegetated with grasses and bushes that may partially obscure the profile markers.



CLH 52

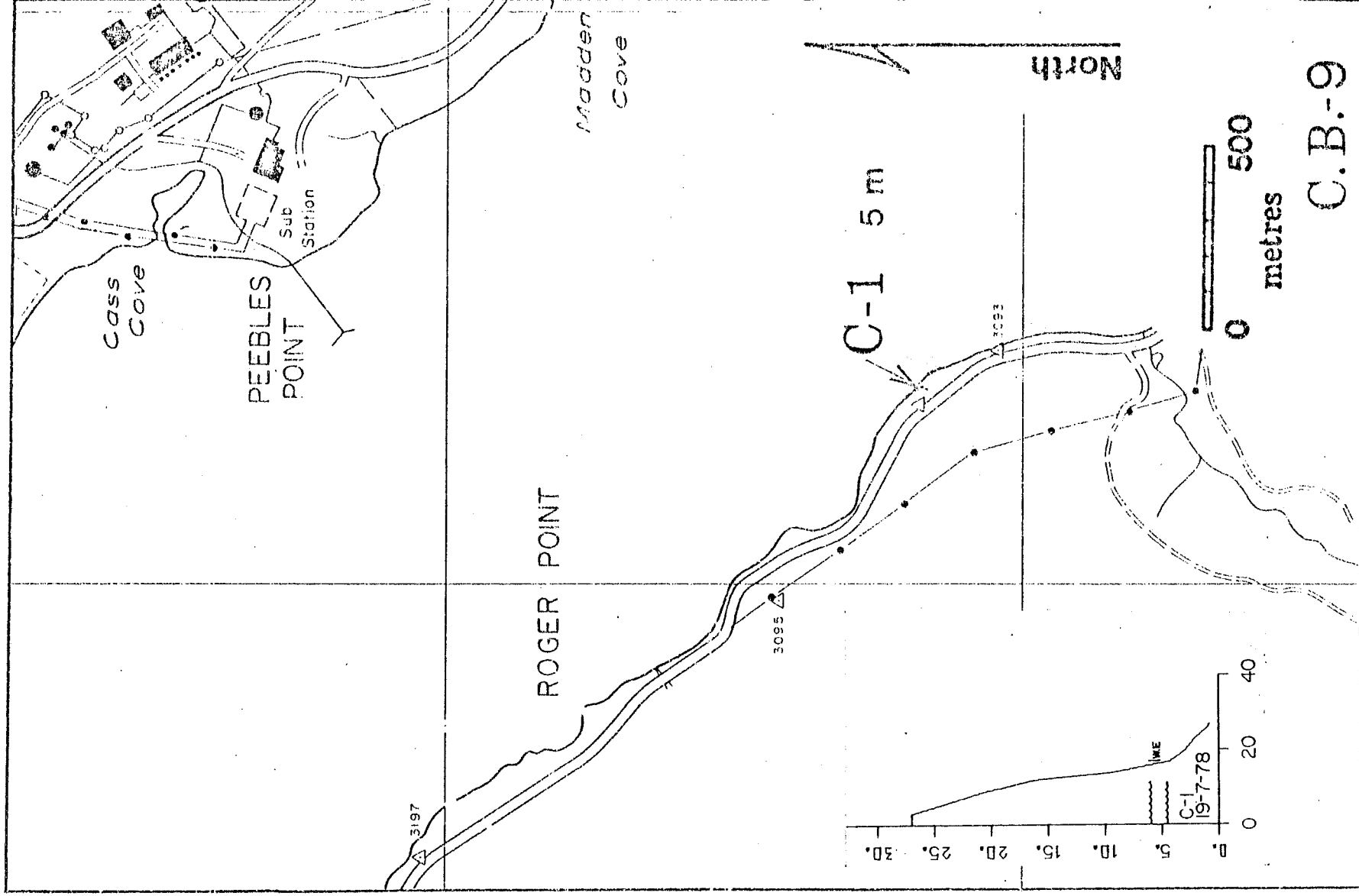
Lawrencetown Beach

Driving west on trunk 207 behind Lawrencetown Beach, turn south on a trail through the dunes just past the remains of some equipment clearly visible in the dunes. Drive over the railroad track and continue toward the water's edge. Bear left on the trail which will end in a large blow-out. Continue on foot in the same direction to find the front marker, 70cm high on the foredune ridge. The rear marker is 15m landward and is also 70cm high.



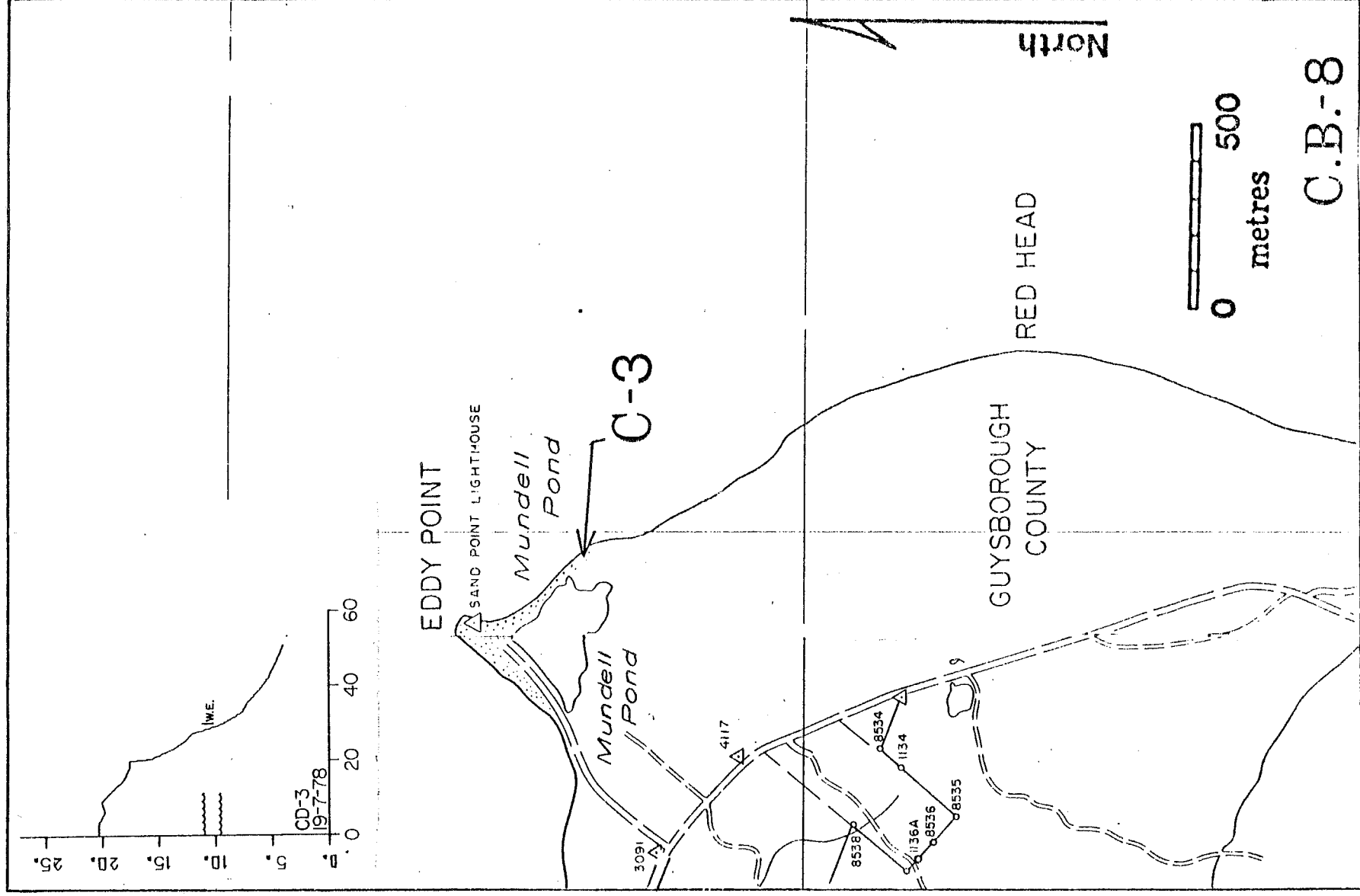
STM-26

Drive from Wine Harbour to Sonora. Entering the village of Sonora turn left on a loose surface road. Continue down to the river and turn right. At a distance of about 200m the profile markers are clearly visible 15m apart. Back marker height is 124cm and the front marker height is 104cm.



C-1

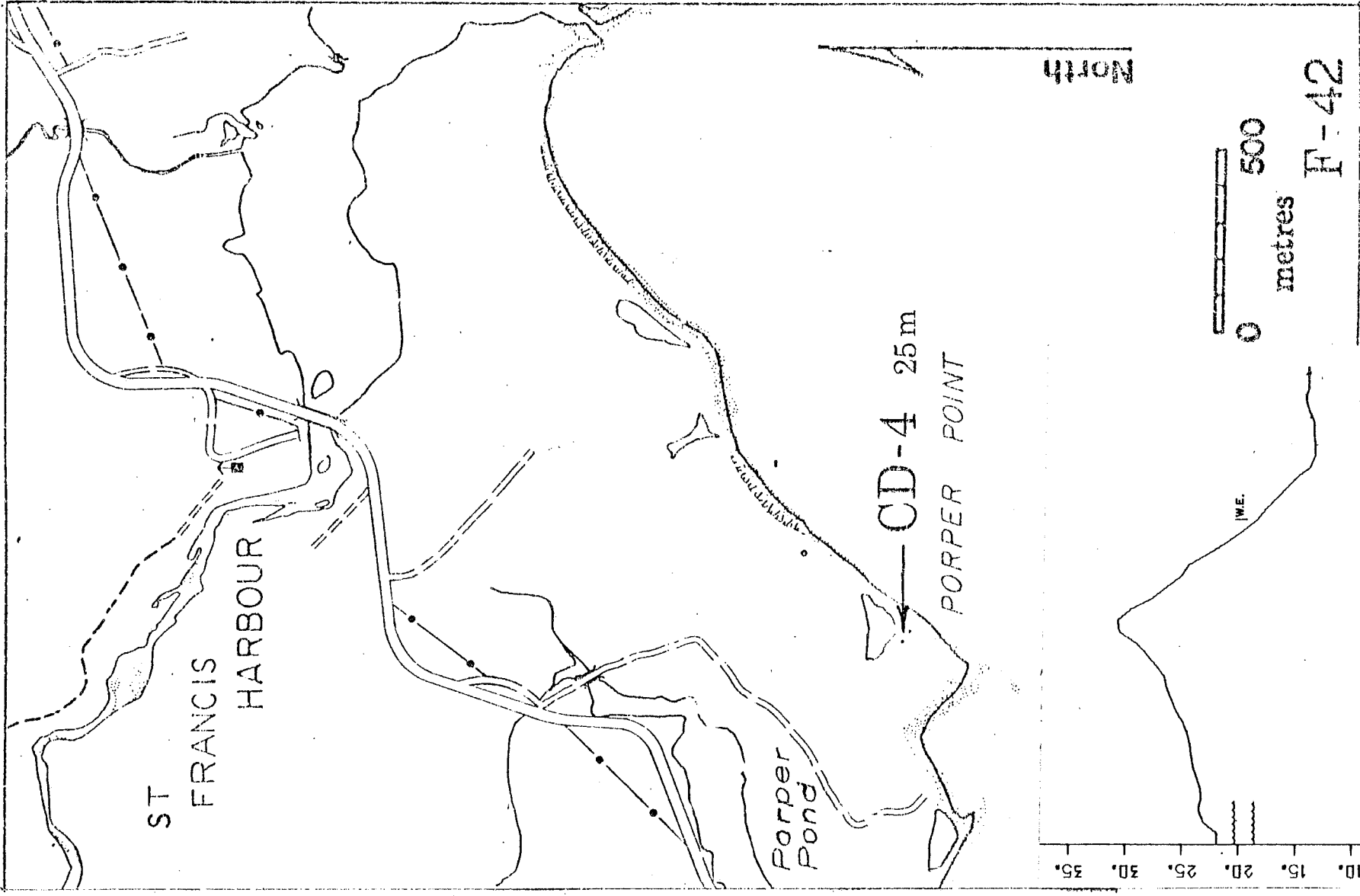
Approaching the Strait of Canso turn off trunk 104 onto trunk 344 and proceed in a southerly direction for 12.7km. You should be across the strait from Wright Pt., location of a large T-shape wharf for unloading oil tankers. Proceed down the bank on the east side of trunk 344 (approx. 45° slope). The back station marker is about one half of the way down the bank and has a height of 0.88m. Front stake is 12m down slope of the back stake and has a height of 1.0m. Profile line is approx. 15m north of a hydrographic navigation light tower.



C-3

Eddy Point

Proceed south along trunk 344, 6.03km from C-2 (22.79km from trunk 104) turn left onto a loose surface gravel road to Eddy Point lighthouse. Walk south along storm beach to the southern end of Mundell Pond (about 470m). Back marker is located in grassy area slightly N of an old concrete foundation which is partially grown over by bushes. Back marker is 96cm high. Front marker is 15m seaward of back marker and is 86cm high.

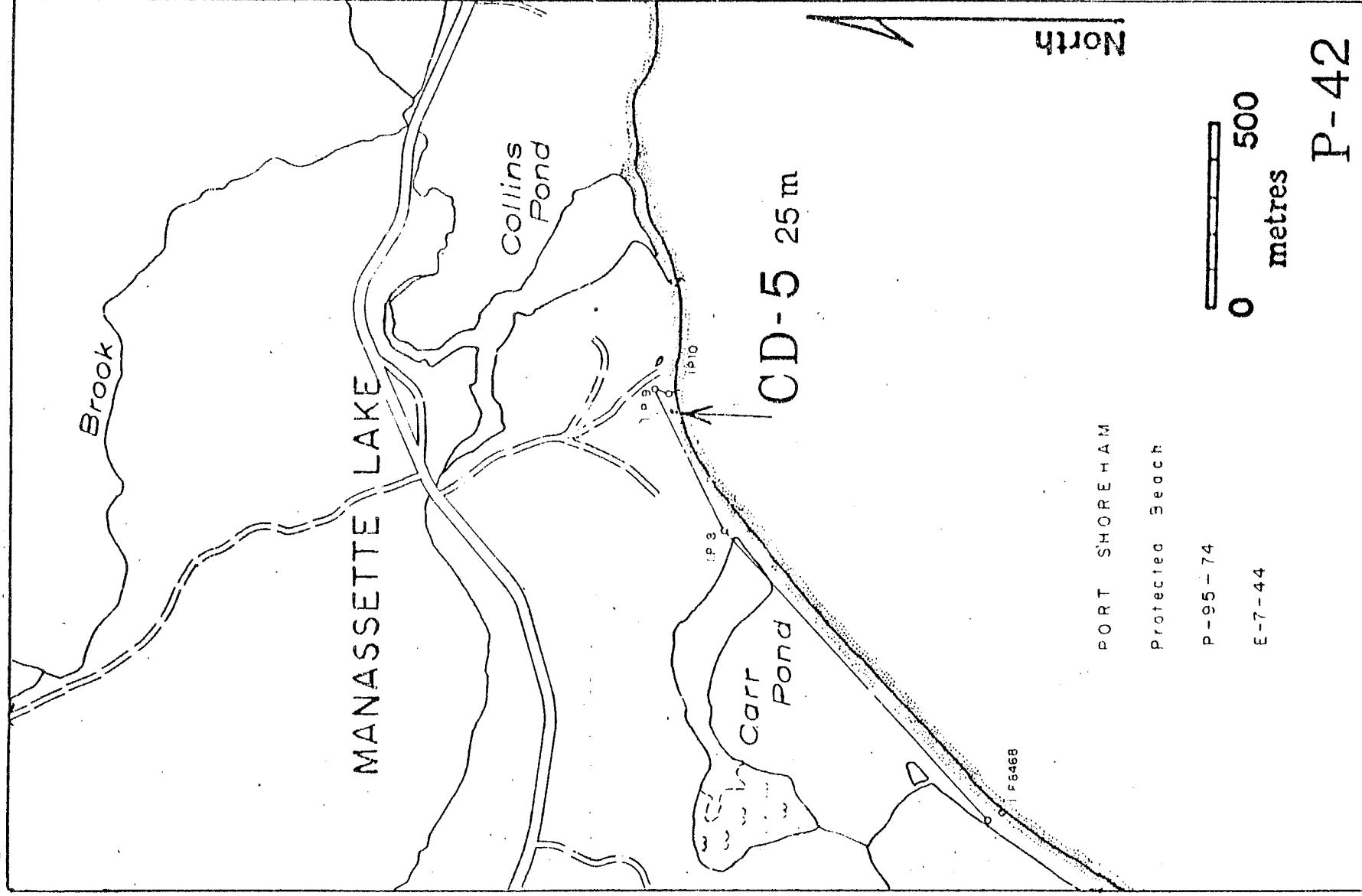
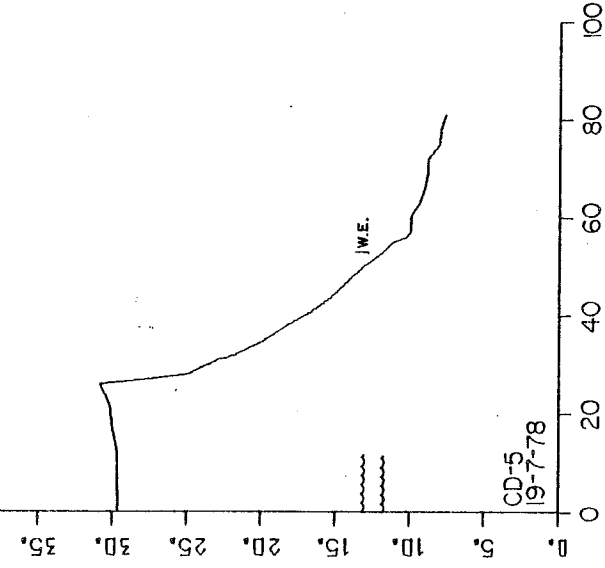


CD-4
19-7-78

CD-4

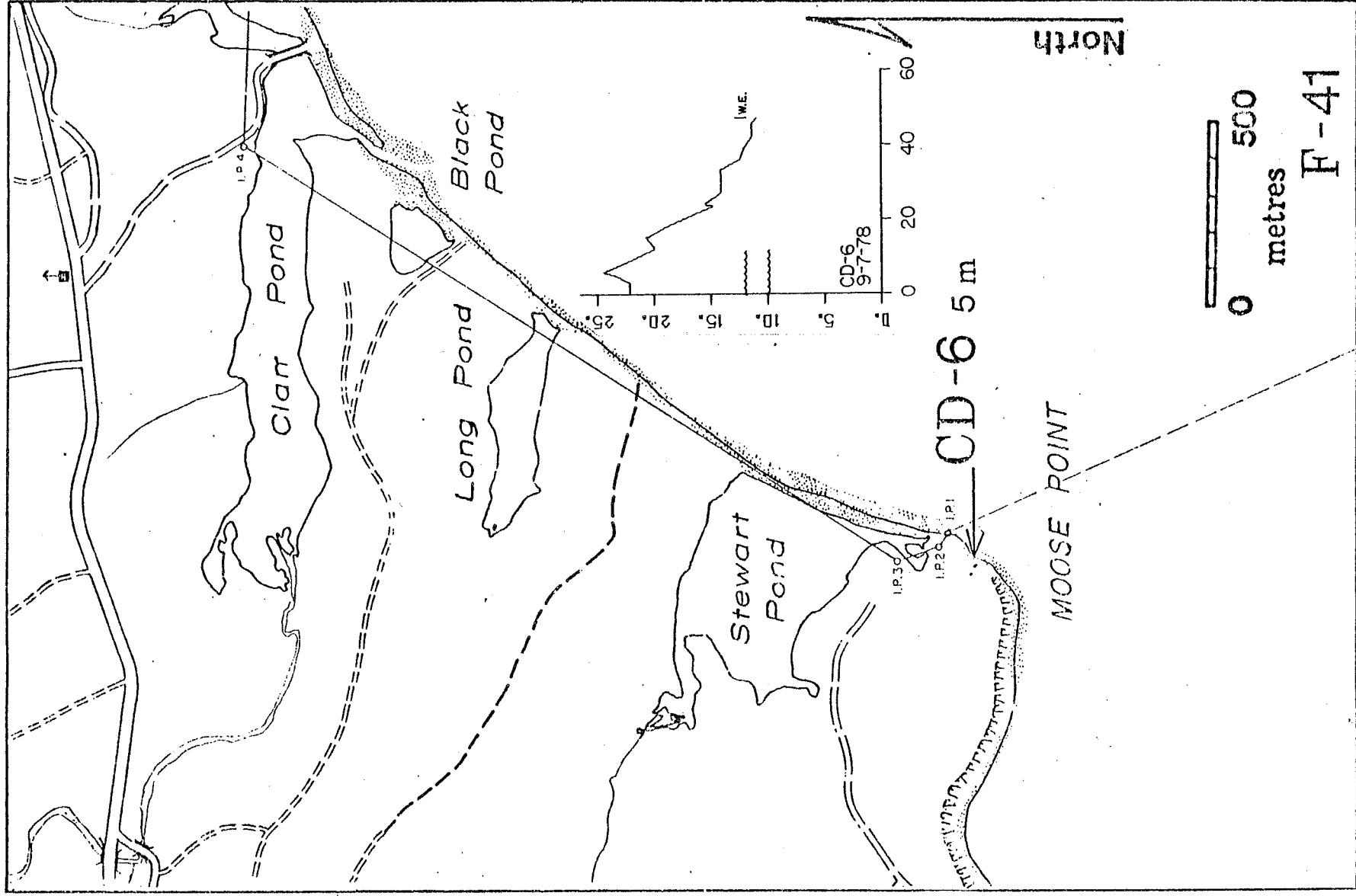
Porper Point

Proceed along trunk 344, 17.8km from C-3 (40.59km from trunk 104) turn left off trunk 344 onto a loose surface gravel road. Proceed over Porper Pond bridge continue on road and turn left (about 600m from trunk 344) and continue down to beach. Back marker is located at the southwestern tip of a small pond which is east of the mined back beach. Back marker height is 86cm and front marker is 25m seaward and has a height of 104 cm.



CD-5

Proceed along trunk 344 (southeast direction) 3.56 km from CD-4(44.15km from trunk 104) and turn left on loose surface road. Continue along road, bearing left at a fork, down to beach. Profile line is about 100m west of an old shanty. Back marker is 82cm high in an area vegetated by low bushes. Front marker is located 25m seaward and has a height of 88cm.



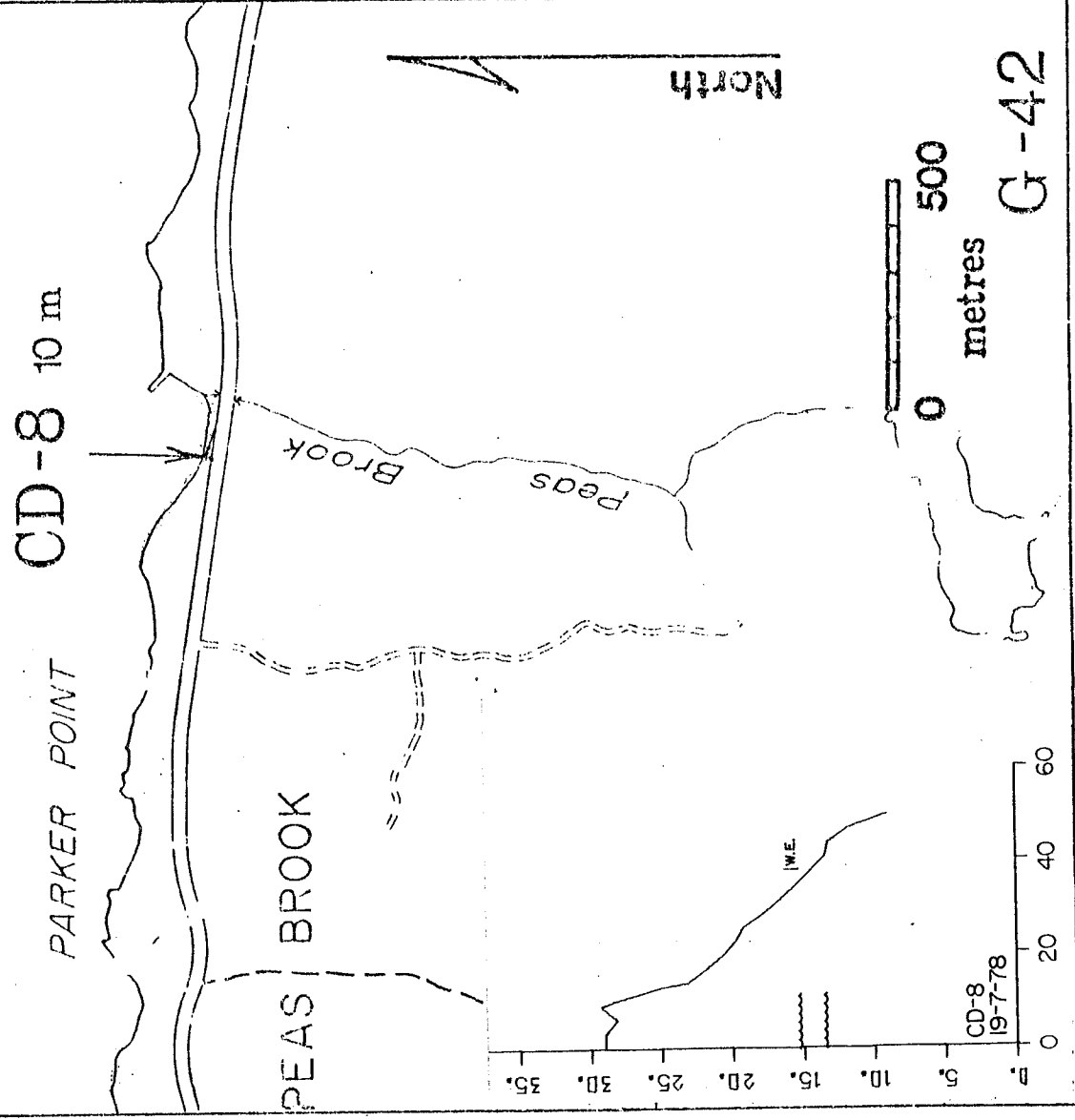
CD-6

Moose Point

At a distance of 9.04km from CD-5 (53.19km from trunk 104) turn left (about 135° corner) and proceed to the end of a loose surface road, near Stewart Pond. Walk from the end of the road along the west end of Stewart Pond to the top of an actively eroding drumlin. Profile markers are located on top of drumlin. Back marker is 128cm high and is 6.25m landward of eroding slope of drumlin. Front marker has a height of 129cm and is 5m seaward of back marker.

CHEDABUCTO

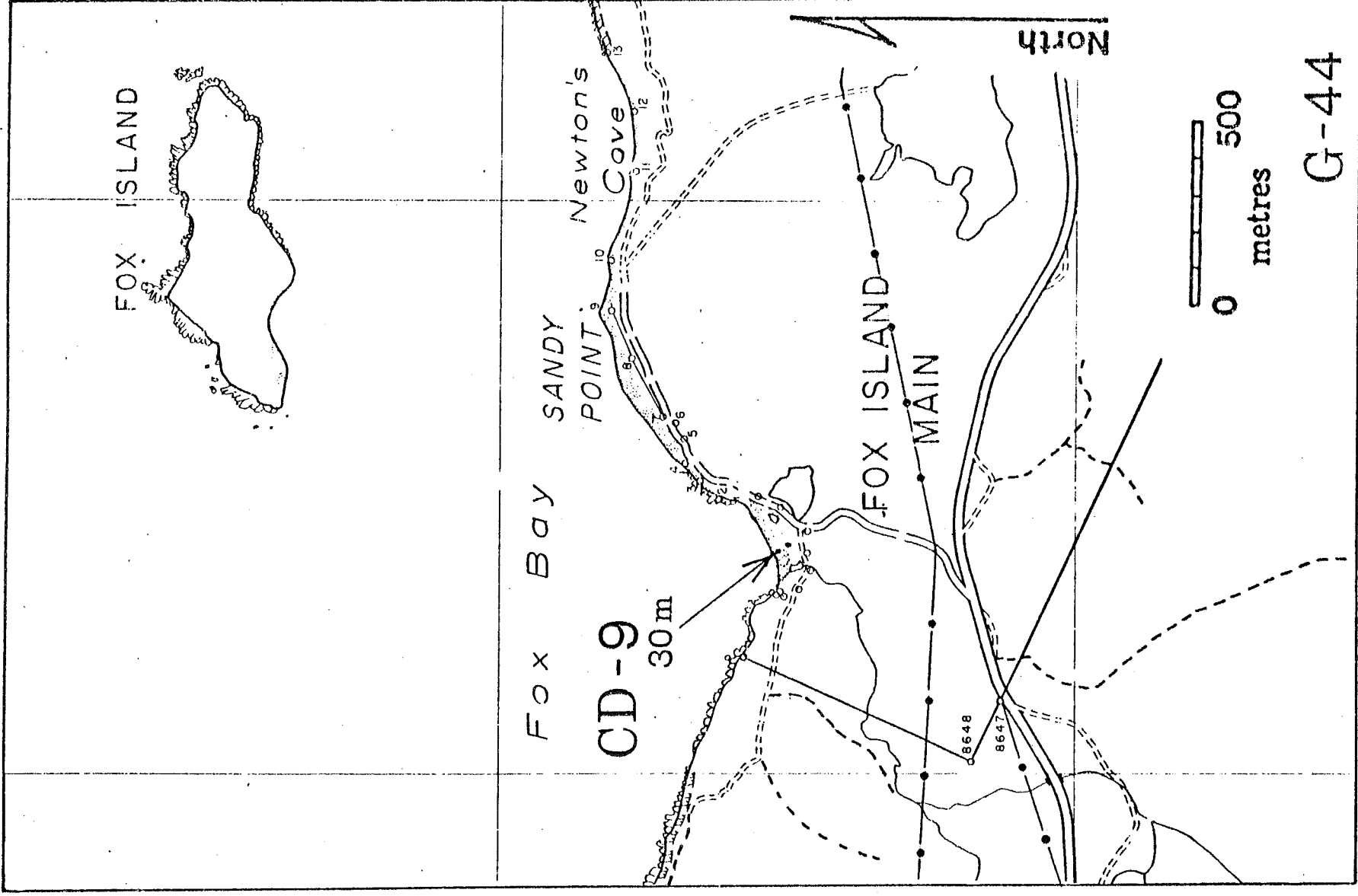
BAY



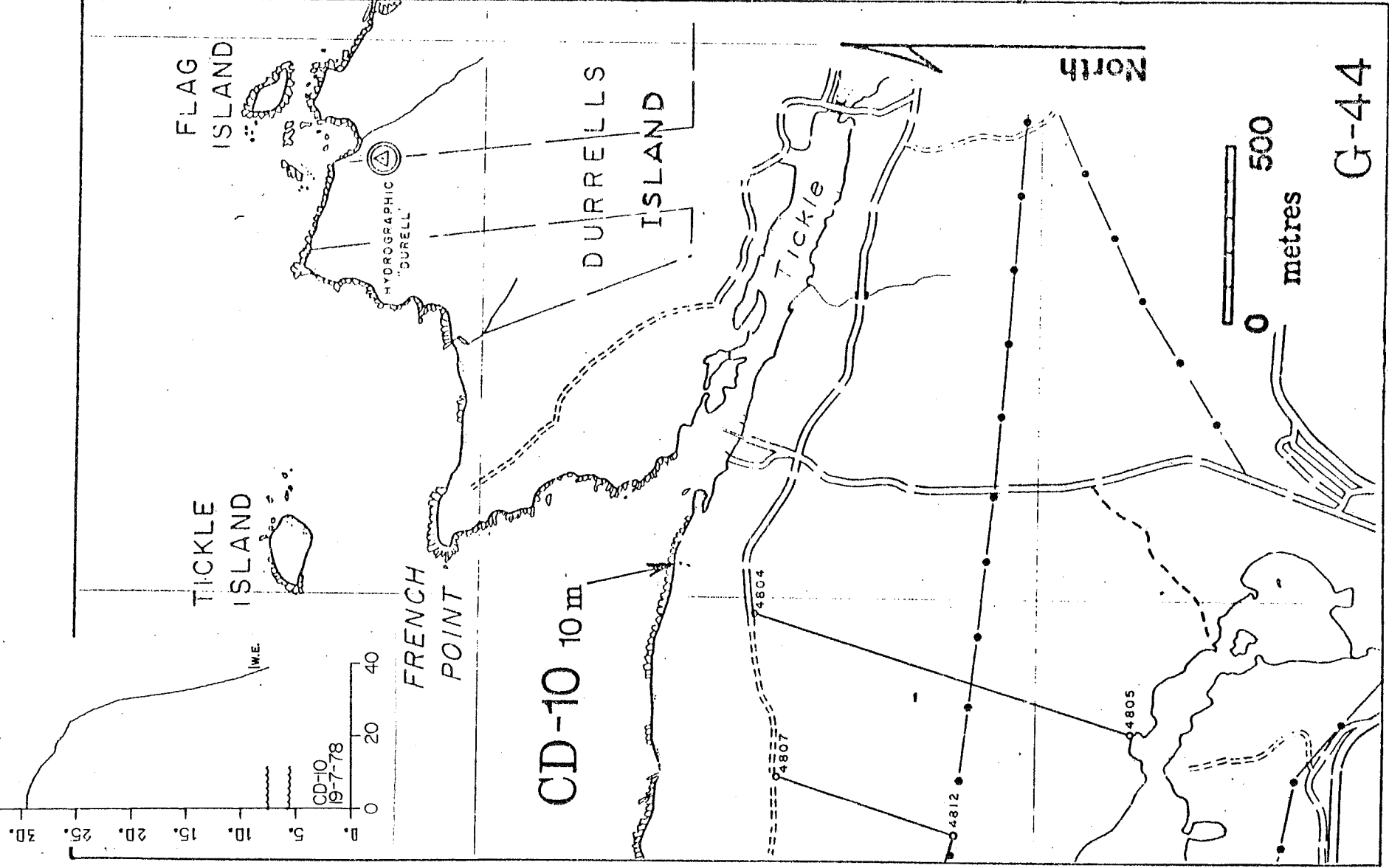
CD-8

Peas Brook

Approximately 16.5km east of Guysborough village on trunk 16, in Peas Brook. On the north seaward side of the road there are three fishing shanties (clearly visible) landward of a small pocket beach. At the western reach of the pocket beach in the vegetated back beach are located two profile markers 10m apart. Back marker is located at the most landward part of the back beach; vegetated with marram grass, near a dug well which has one concrete well crock clearly visible. Back marker height is 106cm and the front marker height is 68cm.



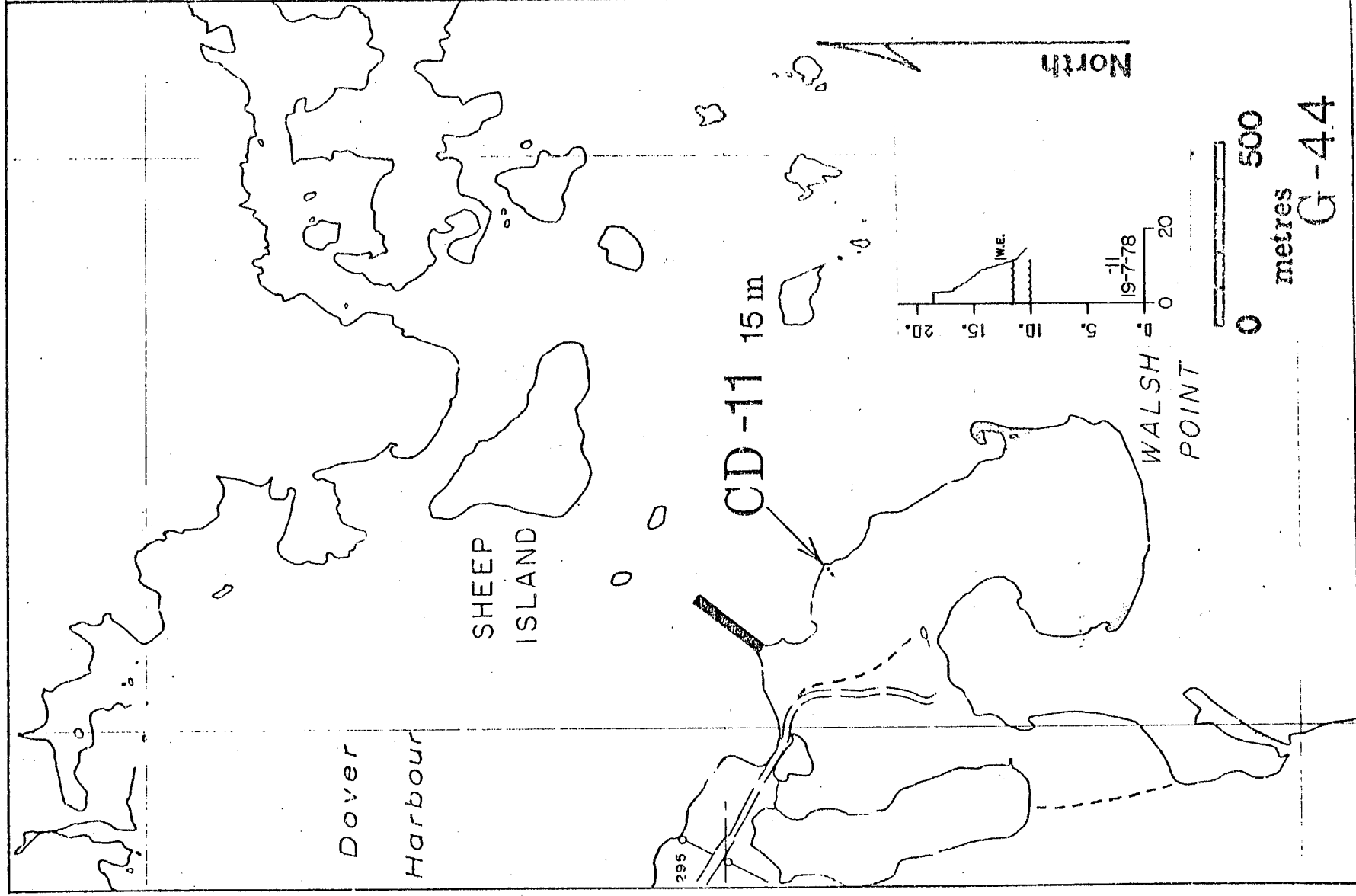
G-44



CD-10

Tickle Channel

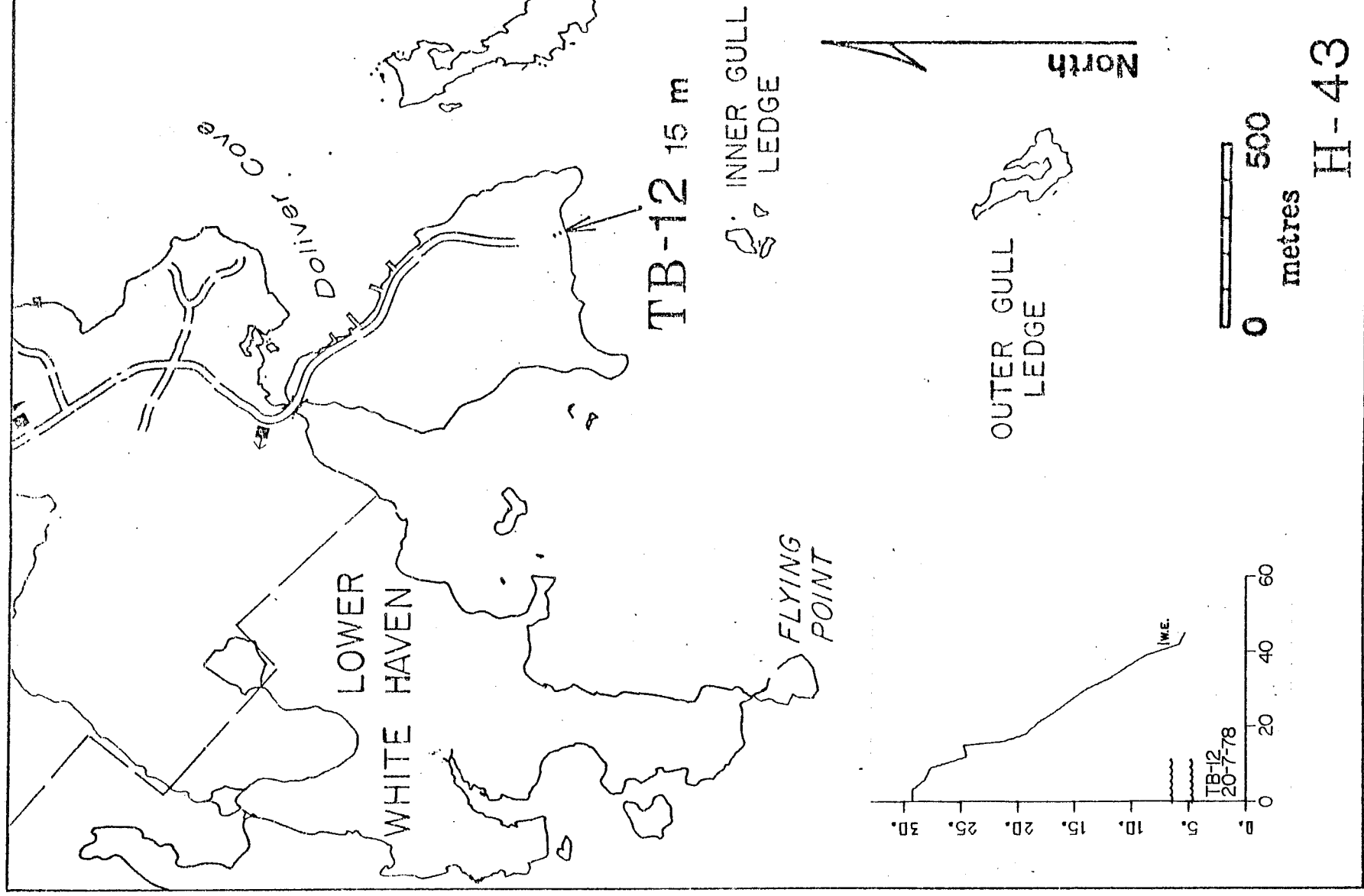
From the juncture of trunk 16 and the loose surface road at CD-9, drive 6.7km and turn left onto another paved road. Drive 2.9km and turn left 0.2km. From this point walk down to the Tickle Channel. The markers are in barren area vegetated by shrubs and blueberry bushes about 30cm maximum height. Back marker is 142cm high, the front marker is 15m seaward and has a height of 76cm.



CD-11

Dover

From CD-10 proceed back to trunk 16 (Hazel Hill), turn left and drive 0.5km, west. Again turn left toward Dover and drive 6.6km. This distance will put you slightly beyond the village, near a breakwater. Continue from the breakwater a distance of 0.2km along the shore. The front marker is located approx. 2m landward of the till bank, and extends 106cm above the ground surface. Back marker is 15m landward of the front and is partially obscured by bushes. Back marker height is 120cm.

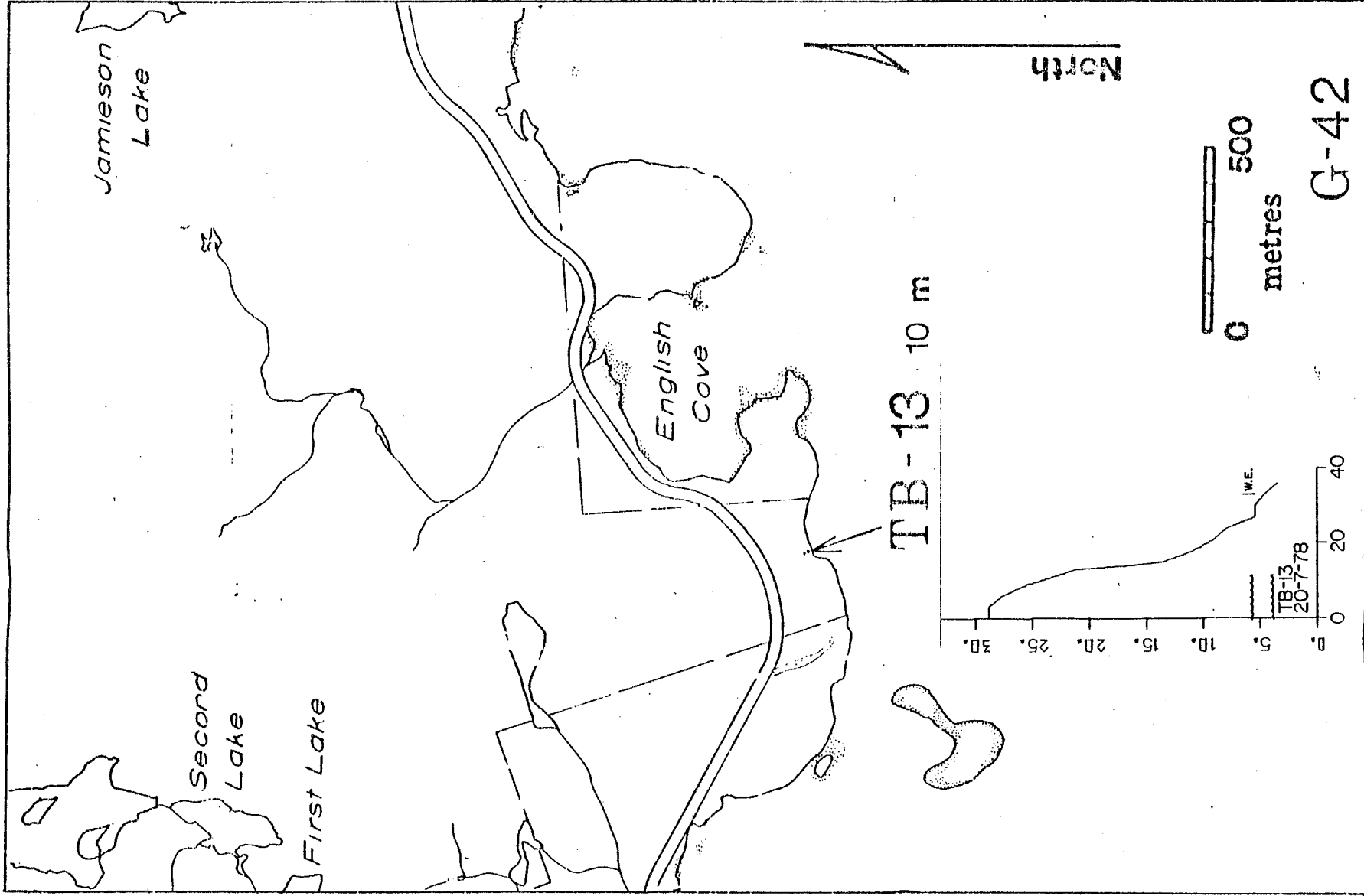


TB-12

Whitehaven

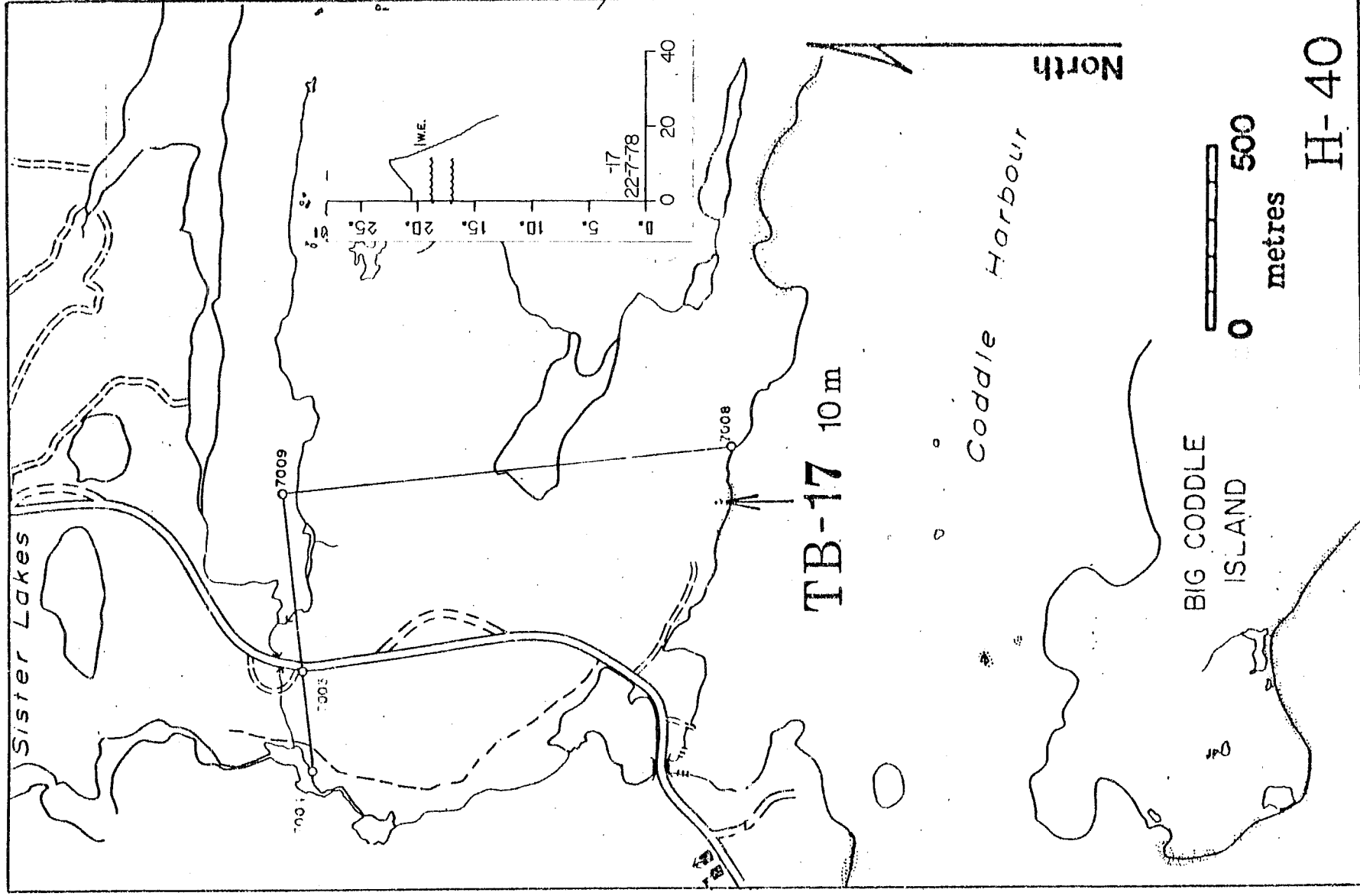
H-43

From Dover drive back to trunk 16 and turn left. Proceed west for 12.5km and turn left on trunk 316. Proceed south on trunk 316 for 14.5km to Deming Island. Enter the D.O.T. compound and proceed onward towards the water. Back marker height is 104cm and seaward 15m is the front marker which is 93cm. Both markers are clearly visible.



TB-13

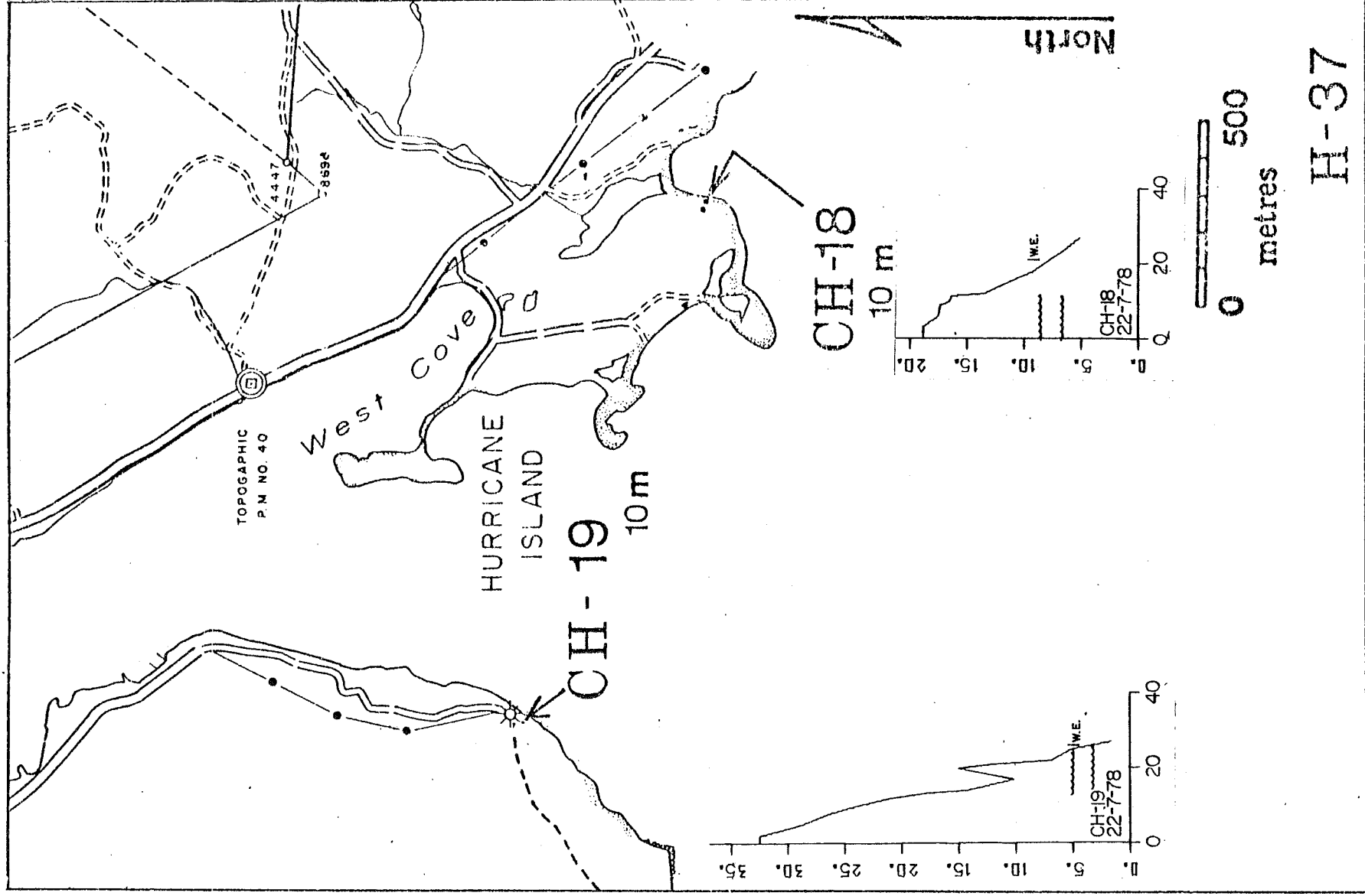
Midway between American Cove and English Cove in Tor Bay. From the intersection of trunk 316 and the Cole Harbour Road, drive 3.64km west to a historic monument (2-3m granite boulder with a plaque) on the north side of the road. Continue on 316 to another 1.6km and turn south along a partially grown in road that leads down to the beach. The station markers are located in a slight clearing near the ruins of an old house. Back profile marker is 143cm high and 10m landward of the front marker which has a height of 98cm. Front marker is 1m landward of a 120cm till bank.



TB-17

Coddles Harbour

From New Harbour continue southwest along trunk 316 to Coddles Harbour. As you enter the village turn left off of 316 and proceed southeast on a gravel surface road for a distance of 0.5km. (This road has the appearance of a private drive, but is marked on topographic sheet 11-F-4). At the end of the road continue on foot 150m and the profile markers, 10m apart, can be clearly seen. Front marker height is 126cm and rear marker height is 111cm.



CH-18

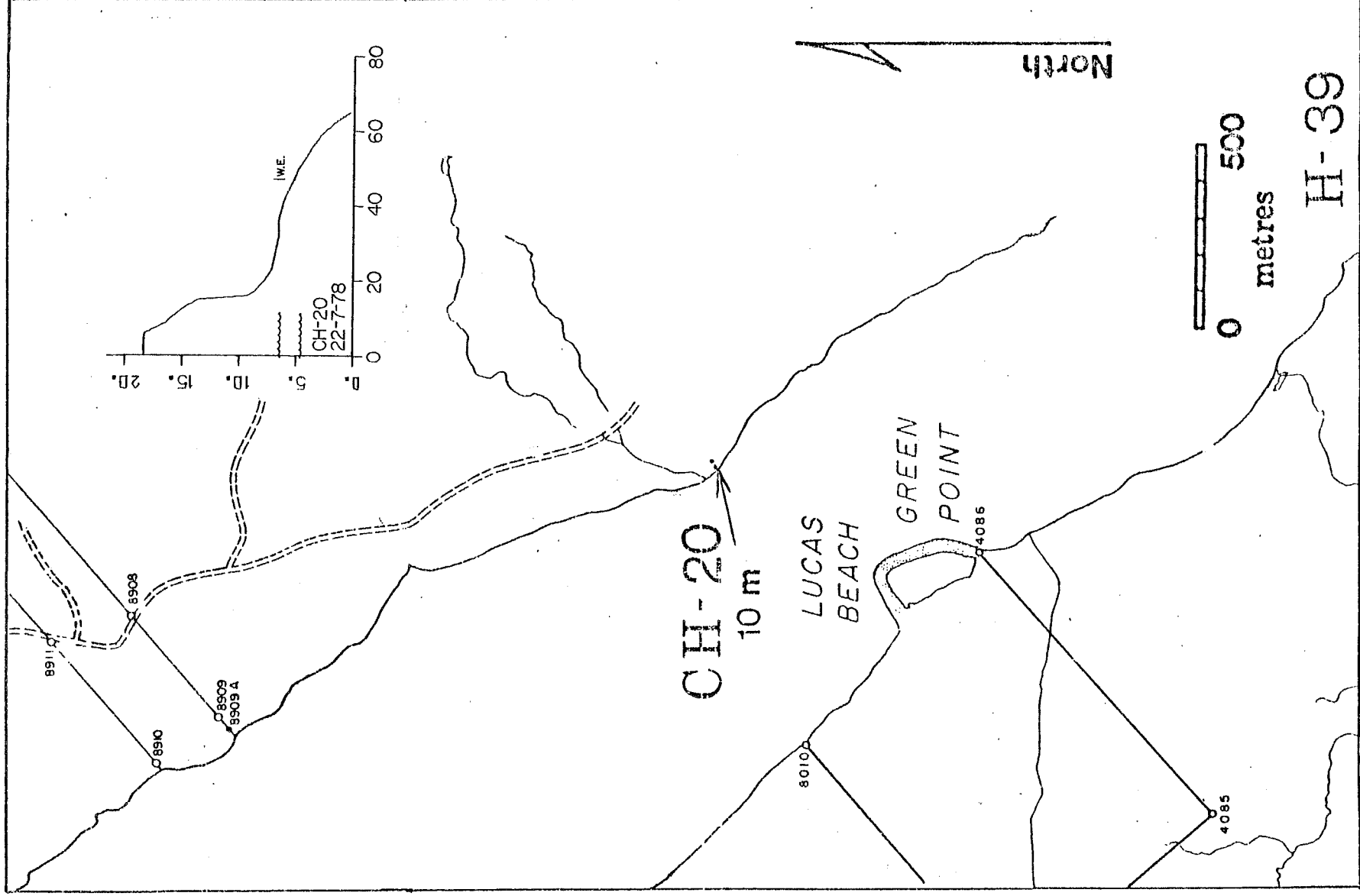
Dung Cove

Continue along trunk 316 to Seal Harbour. From the church in Seal Harbour drive approx. 4.5km and turn left on a trail leading down to Dung Cove. Profile markers are located at the SW end of a barrier beach enclosing a small lagoon. Markers are 10m apart. Rear marker height is 104cm, and the front marker height is 124cm.

CH-19

Issac's Harbour Lighthouse

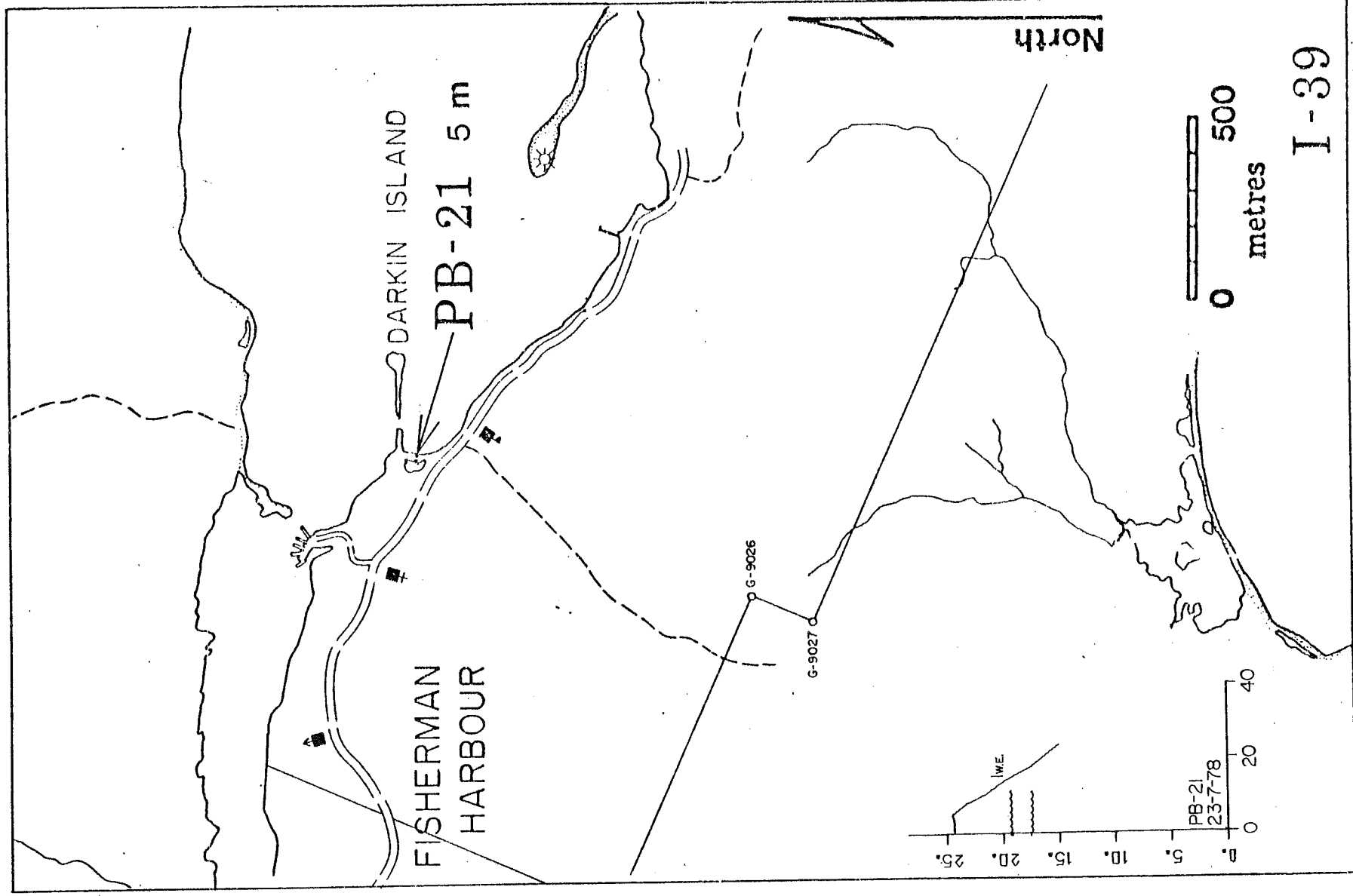
Turn south off trunk 316 and proceed through the village of Issac's Harbour to the lighthouse. Down slope seaward of the helicopter landing pad are located two station markers; 10m apart. Rear marker height is 107cm, front marker height is 129cm.



CH-20

Country Harbour

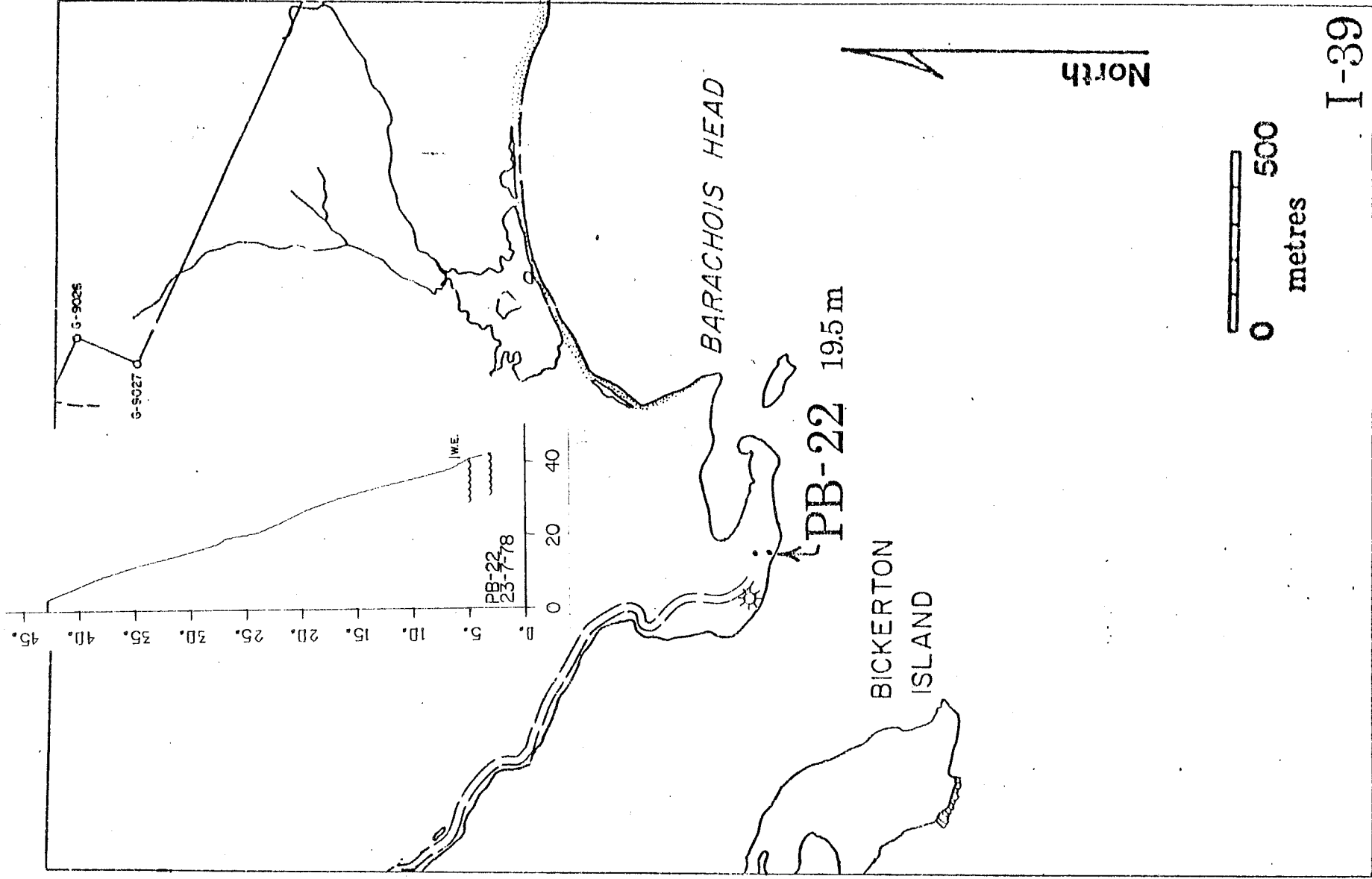
Proceed to the car ferry terminal at the east side of Country Harbour. From the ferry ramp walk south east along the beach for about 100m to a point where a small brook flows down off the bank onto the beach. Markers are 10m apart near the brook and are partially hidden by bush. The front marker is 5m landward of about a 1m till bank, at the base of which begins the back beach. Rear marker height is 131 cm and front marker height is 124cm.



PB-21

Fisherman's Harbour

In Port Bickerton turn north on a gravel surface road to Fisherman's Harbour. Approximately 0.5km beyond the church is Fisherman's Harbour billage.. Stop and walk along the beach toward Darkin Island. Profile markers are 5m apart clearly visible on a cobble storm beach. Rear marker is 114cm high and the front marker is 103cm.

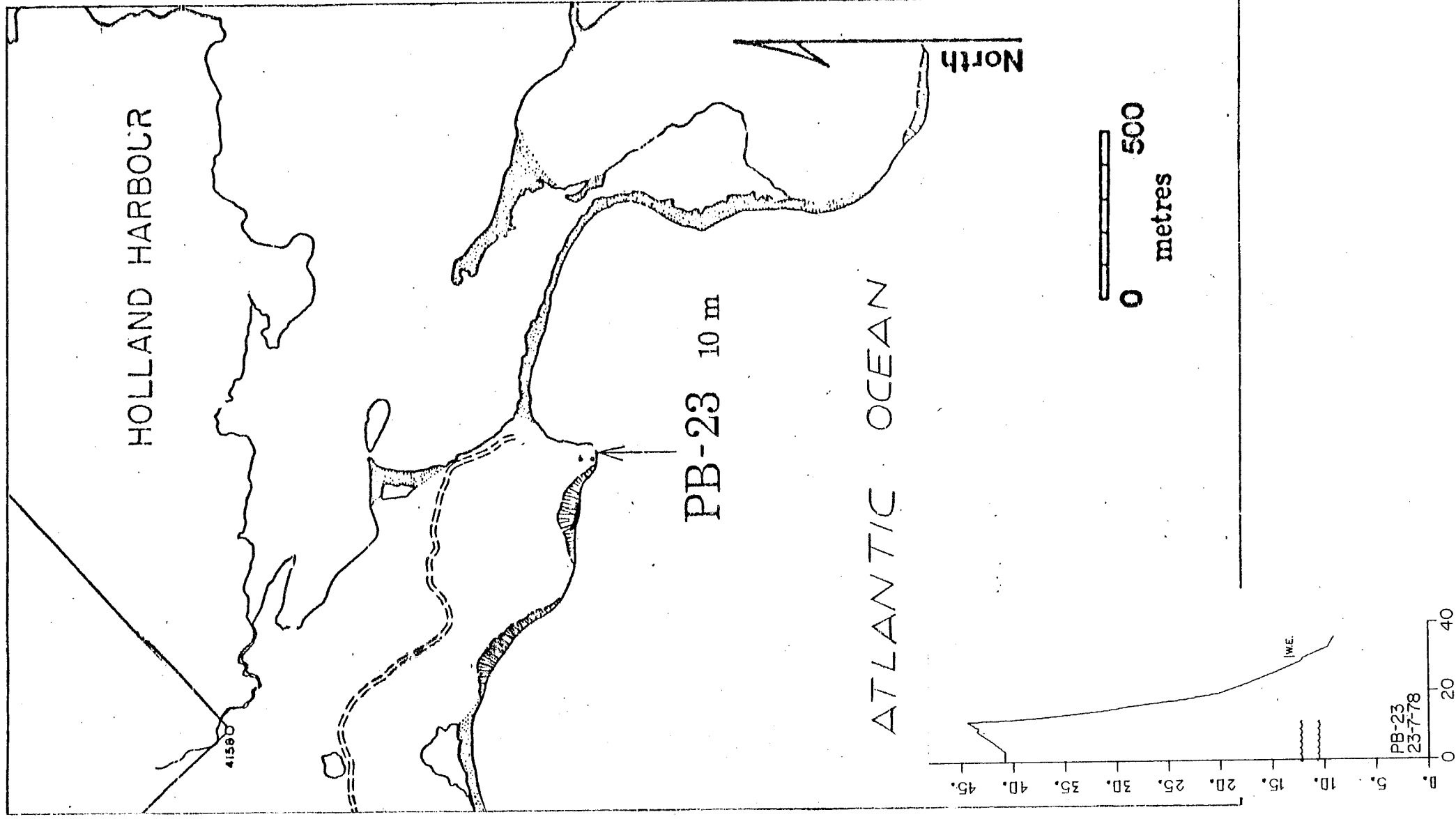


PB-22

Port Bickerton Lighthouse

I-39

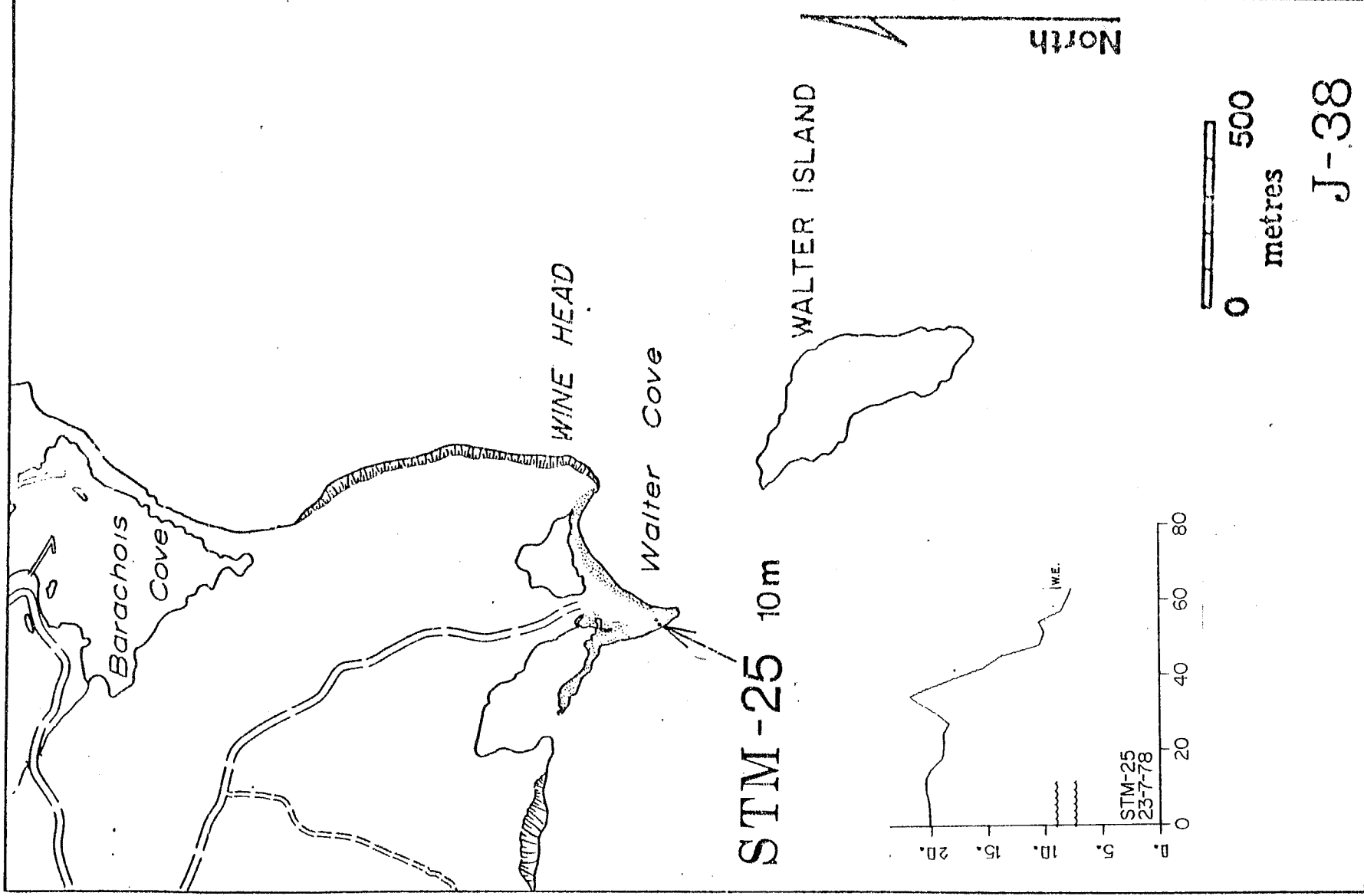
From PB-21 drive back to Port Bickerton and turn southeast toward the lighthouse. Approximately 200m east of the lighthouse the profile markers are located in clear sight on a steep grassy slope leading down to the water's edge. Markers are 20m apart on the slope. Rear marker height is 132cm and front marker height is 118cm.



PB-23

Holland Harbour

Proceed from PB-22 back through Port Bickerton and turn right onto a paved surface road leading through Bickerton West. From the school in Bickerton West drive 6.35 km and turn left on a loose surface road leading down to Holland Harbour. The profile line is between two eroding till bluffs. Markers are on top of a till bluff, about 6m high. Markers are 10m apart. Rear marker height is 132cm and front marker height is 134cm.

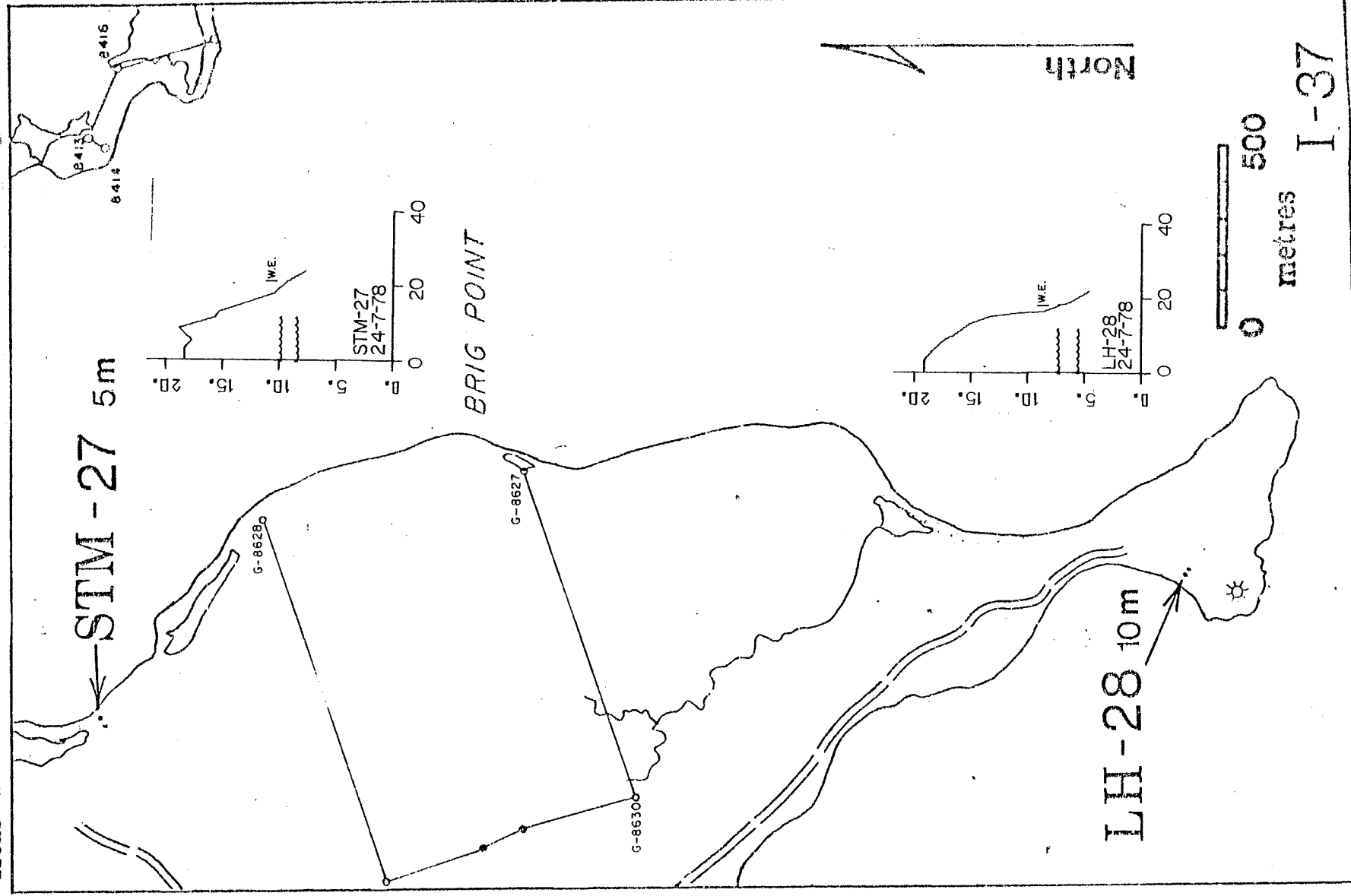


STM-25

Wine Harbour Bay

Drive through the village of Wine Harbour and approximately 0.7km beyond the church turn right. Continue down to beach to profile line markers located at the most southerly point of Wine Head. Back marker is 106cm high and the front is 134cm high. Distance between markers is 15m.

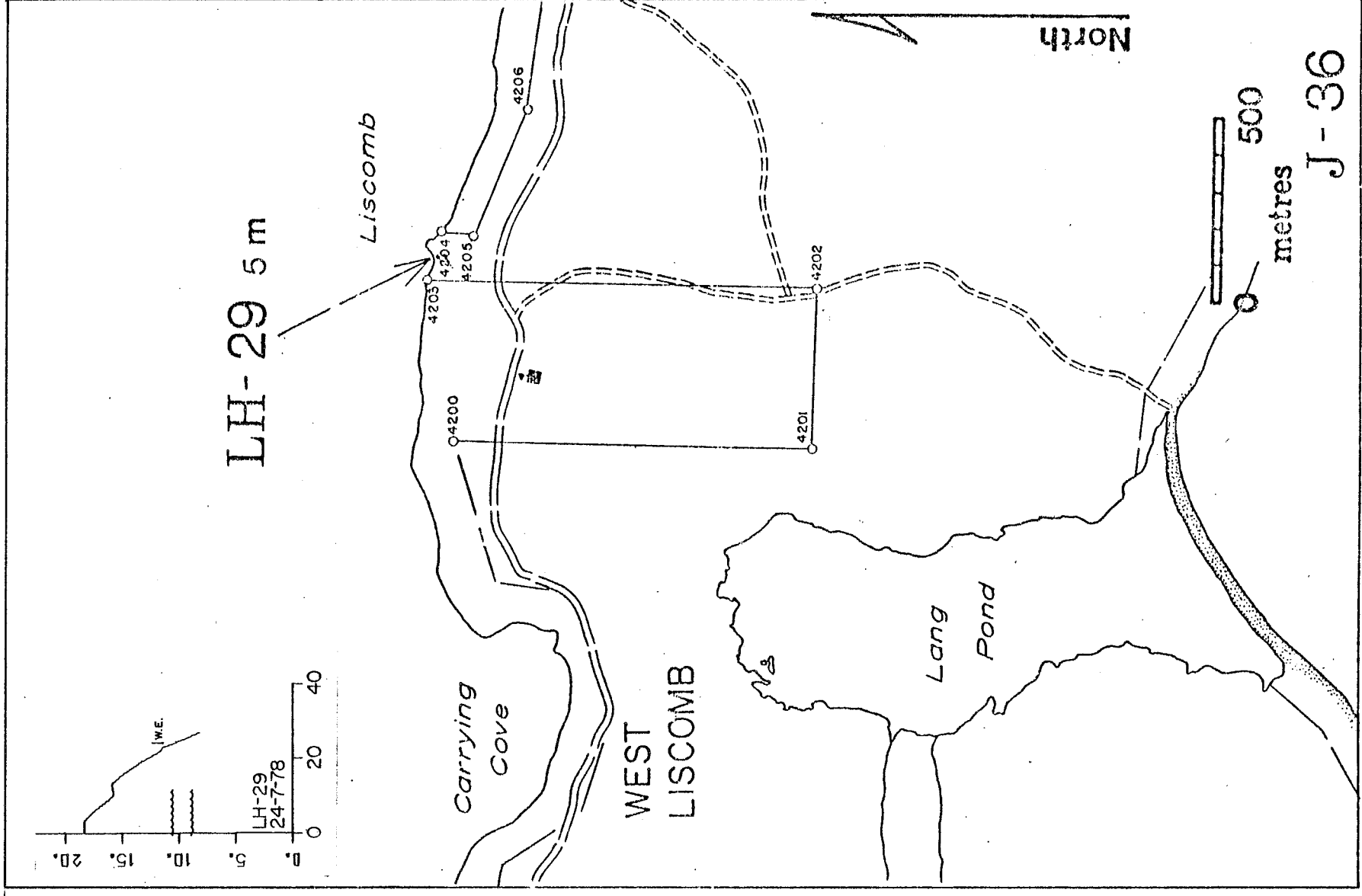
Turn off trunk 7 and proceed east toward Little Liscomb. At a distance of 2.5km from the highway proceed straight onto a little used grassy trail for a distance of 1.5km. From that point continue on foot down to the beach; the south end of a cobble barrier enclosing a small lagoon. The front profile marker is 99cm high and is located on the back beach, clearly visible. The back profile marker is 118cm high and is 5m landward of the front marker.



LH -28

Redman Head

Proceed in a southerly direction through Little Liscomb toward Redman Head. At the termination of the road the profile markers are located on the west shore of Redman Head. The rear marker is in a field and clearly visible with a height of 116cm. The front marker is 10m seaward of the rear at the edge of the field and is 110cm high.

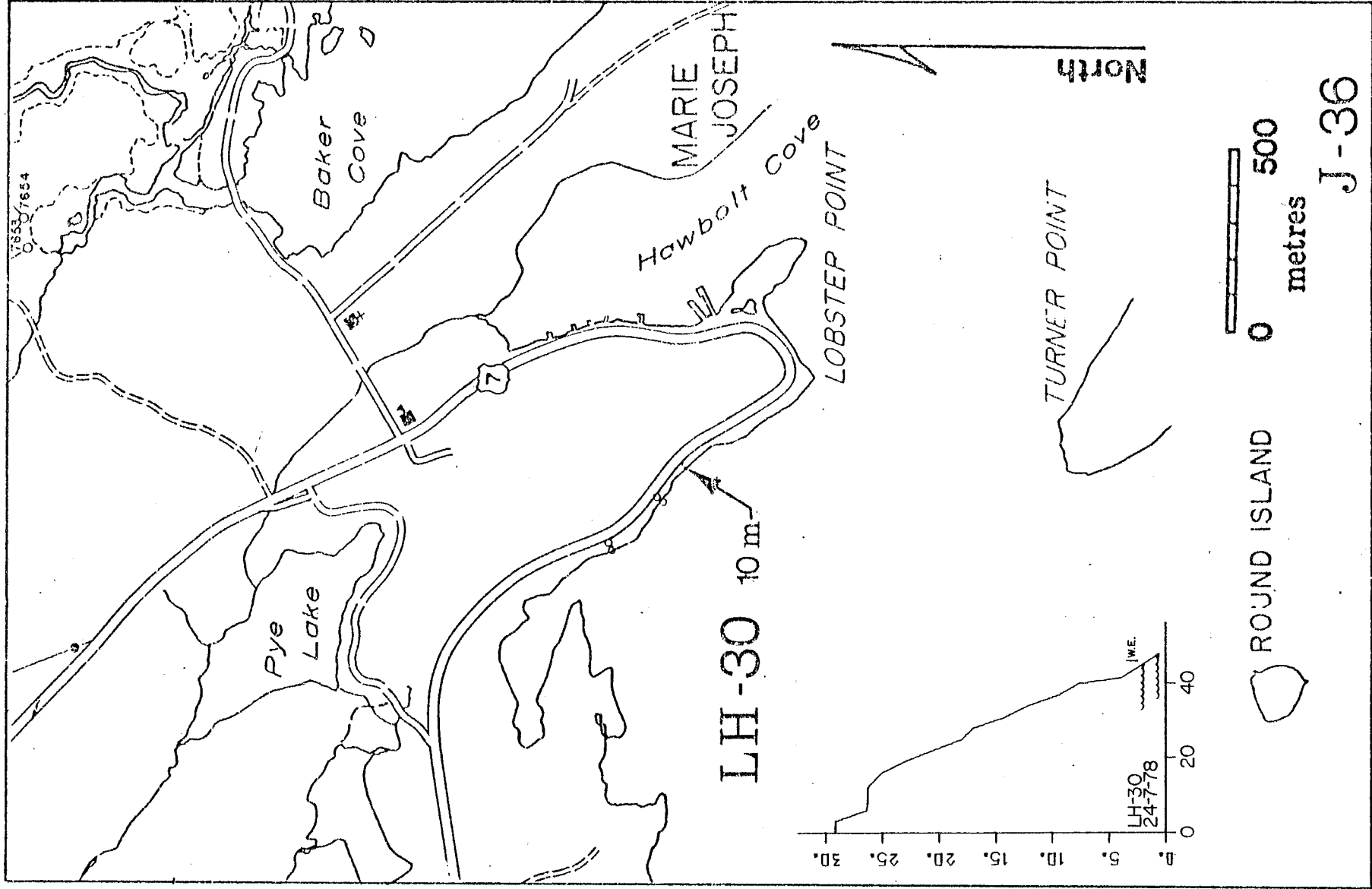


LH-29

Liscomb Harbour

From trunk 7 turn east along the south shore of Liscomb Harbour. 6.4km from trunk 7 turn north down a trail to the shore. The profile markers are located approximately 50m west of the end of the trail, near N.S. Dept. of Lands & Forests survey post #4204. Height of rear profile marker is 132cm and the height of the front is 101cm. Markers are 10m apart.

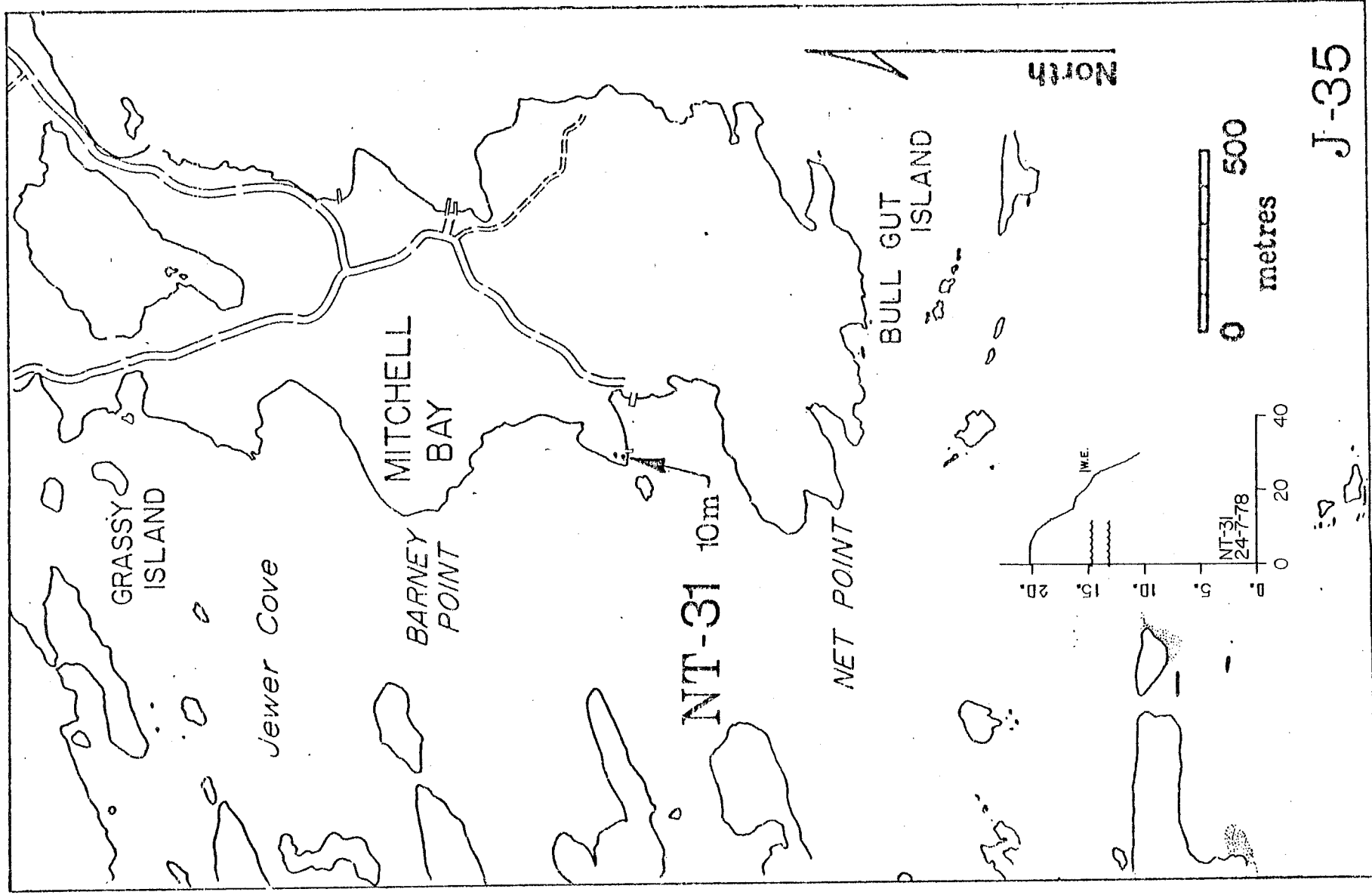
J-36



LH-30

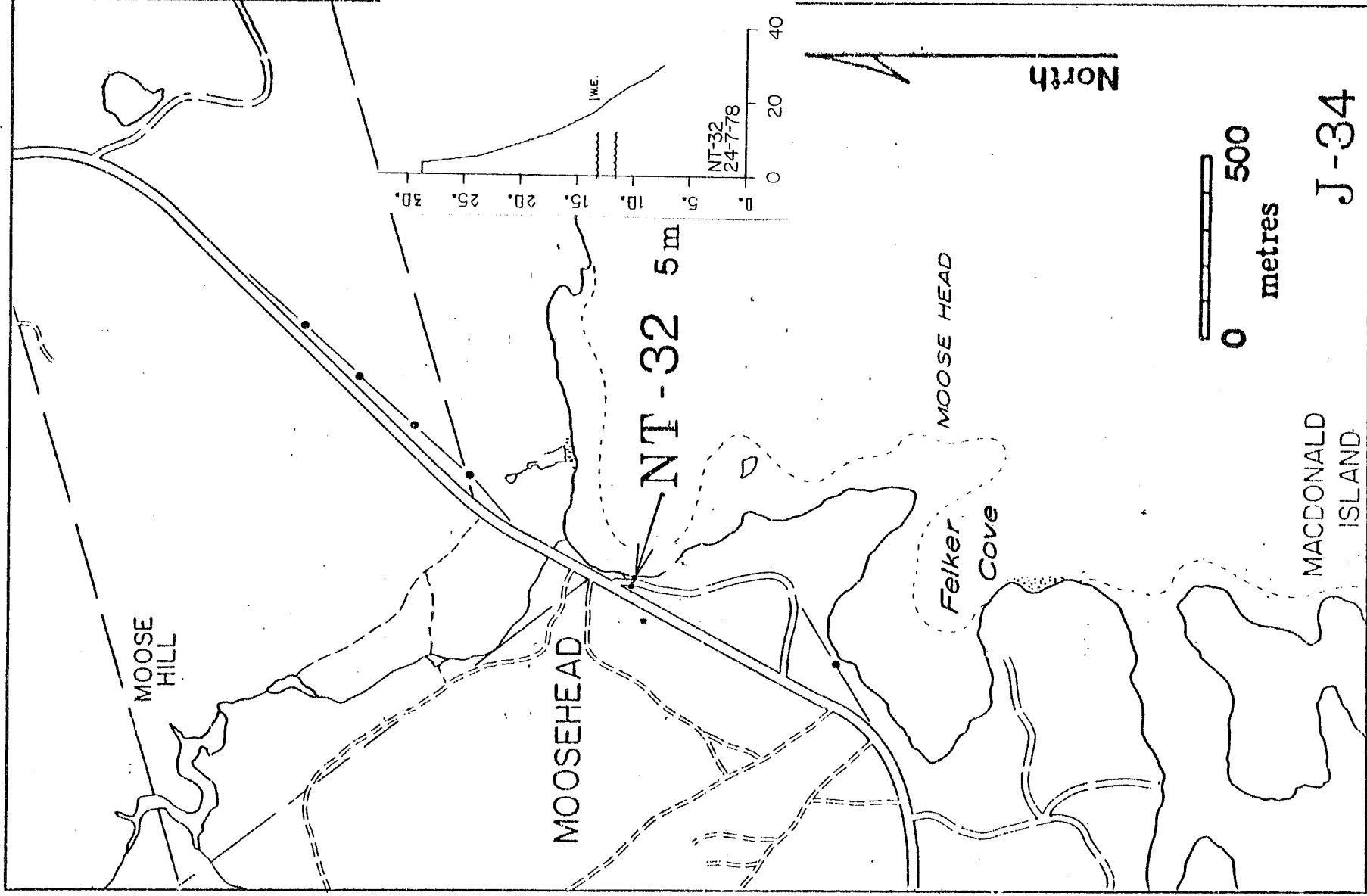
Marie Joseph

Proceed from the Marie Joseph School toward Ecum Secum 4.91km. At this point the profile markers should be visible on the west(seaward) side of trunk 7. The markers are 14m apart. Rear marker height is 124cm and the front marker height is 98cm.



NT-31

Proceeding west along trunk 7 cross the Ecum Secum River bridge and turn south. About 4.2km from trunk 7 turn south on a loose surface road and veer right at an intersection, and continue down to the water's edge. Markers are 10m apart; front marker is 153cm and the rear marker is 113cm.



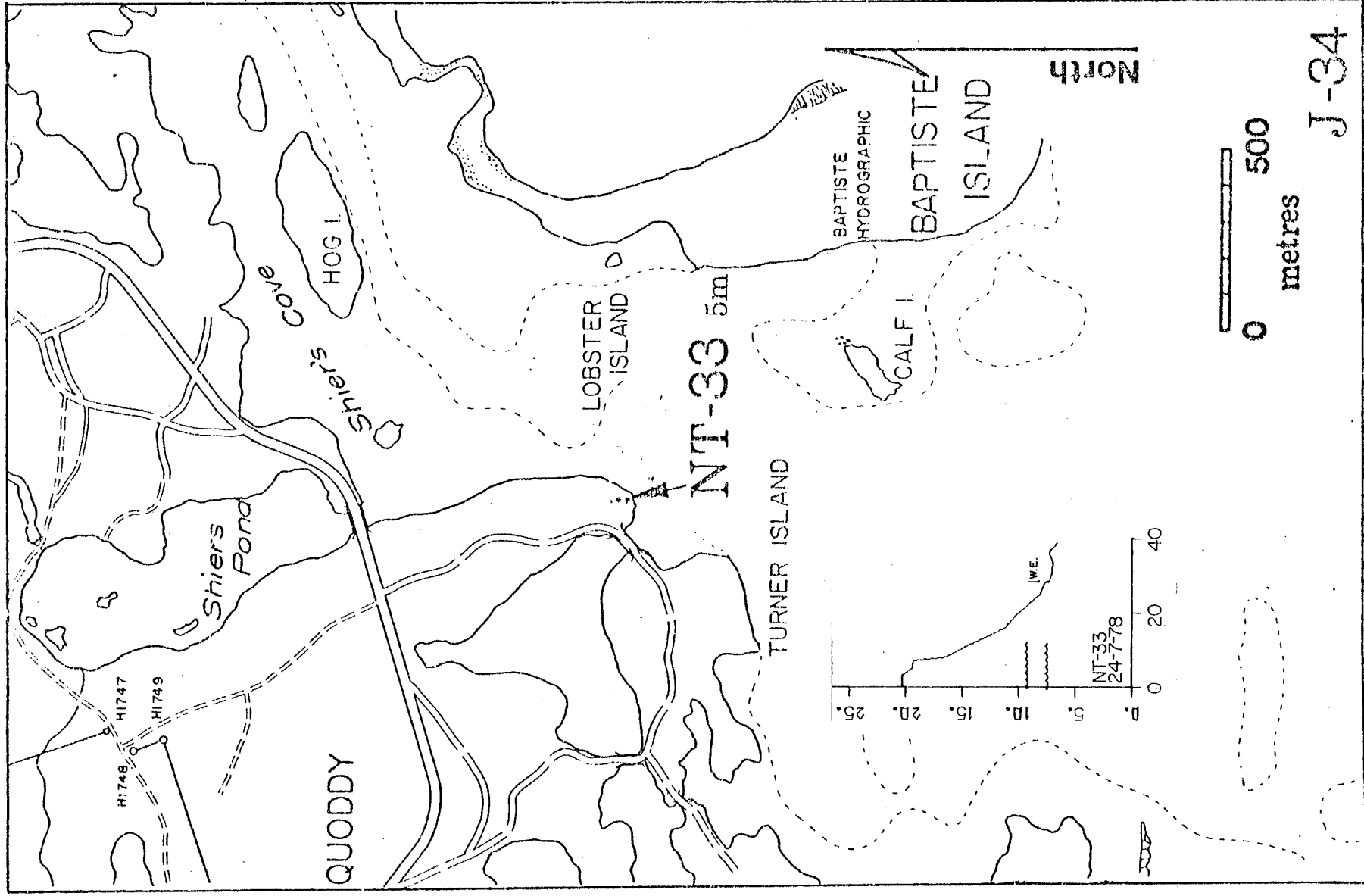
NT-32

White Island Bay

MACDONALD
ISLAND

J-34

From the churches in Moser River drive toward Sheet Harbour approximately 12.0km and bear left on a loose surface road and stop at a grass parking area on the right side of the road. Profile markers are 5m apart on slope leading down to the beach. Rear marker height is 86cm and the front marker height is 101cm. Both markers may be partially concealed by vegetation.

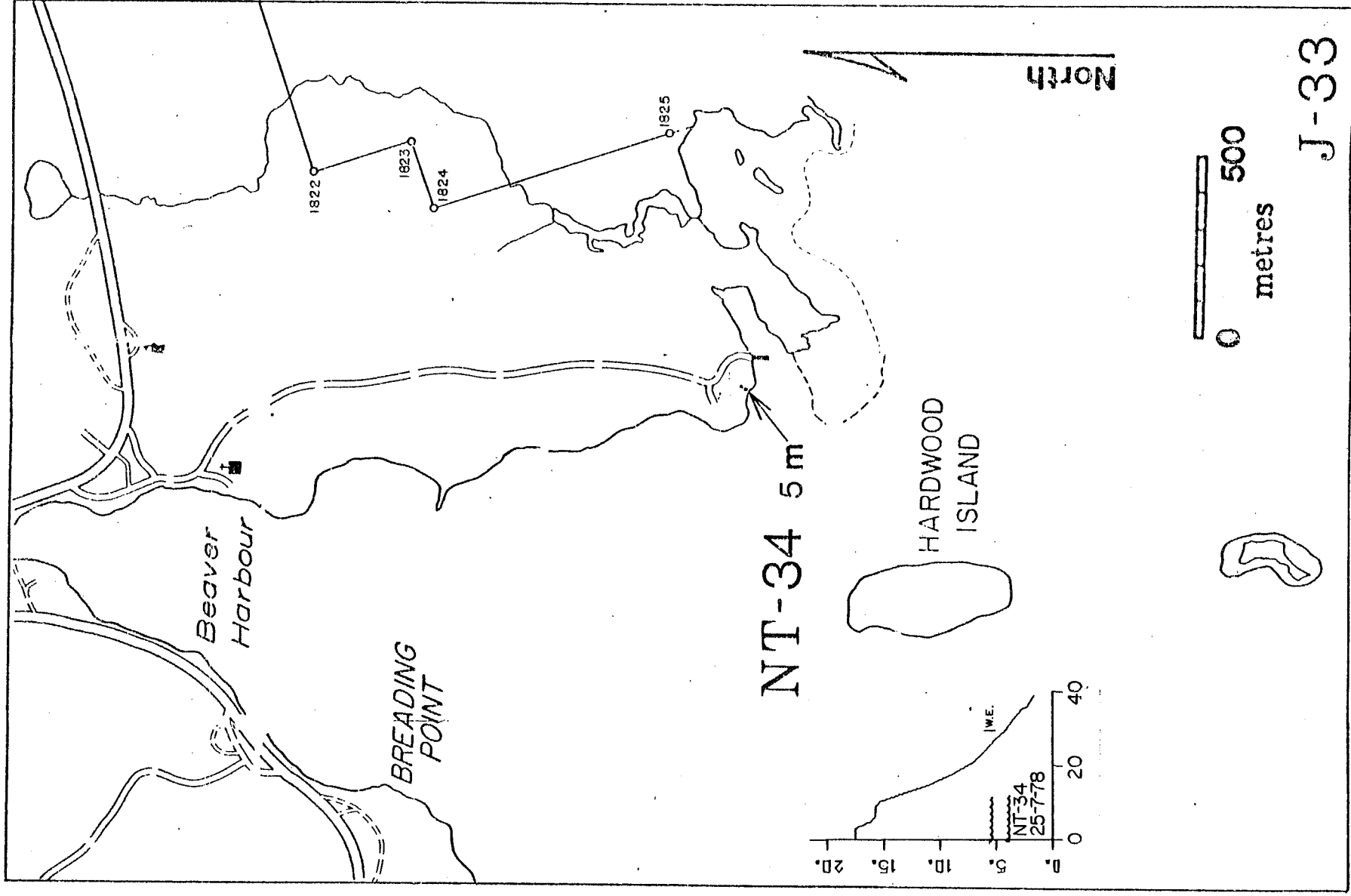


NT-33

East Quoddy

J-34

From the intersection of the dirt road leading to NT-32 and the trunk 7, drive 4.8km toward East Quoddy and turn south onto a loose surface road. Continue on this road until you approach a bridge and then stop. The profile line is about 200m east along the mainland coast. Profile markers are 5m apart and clearly visible. Rear marker height is 150cm and the front marker height is 118cm.

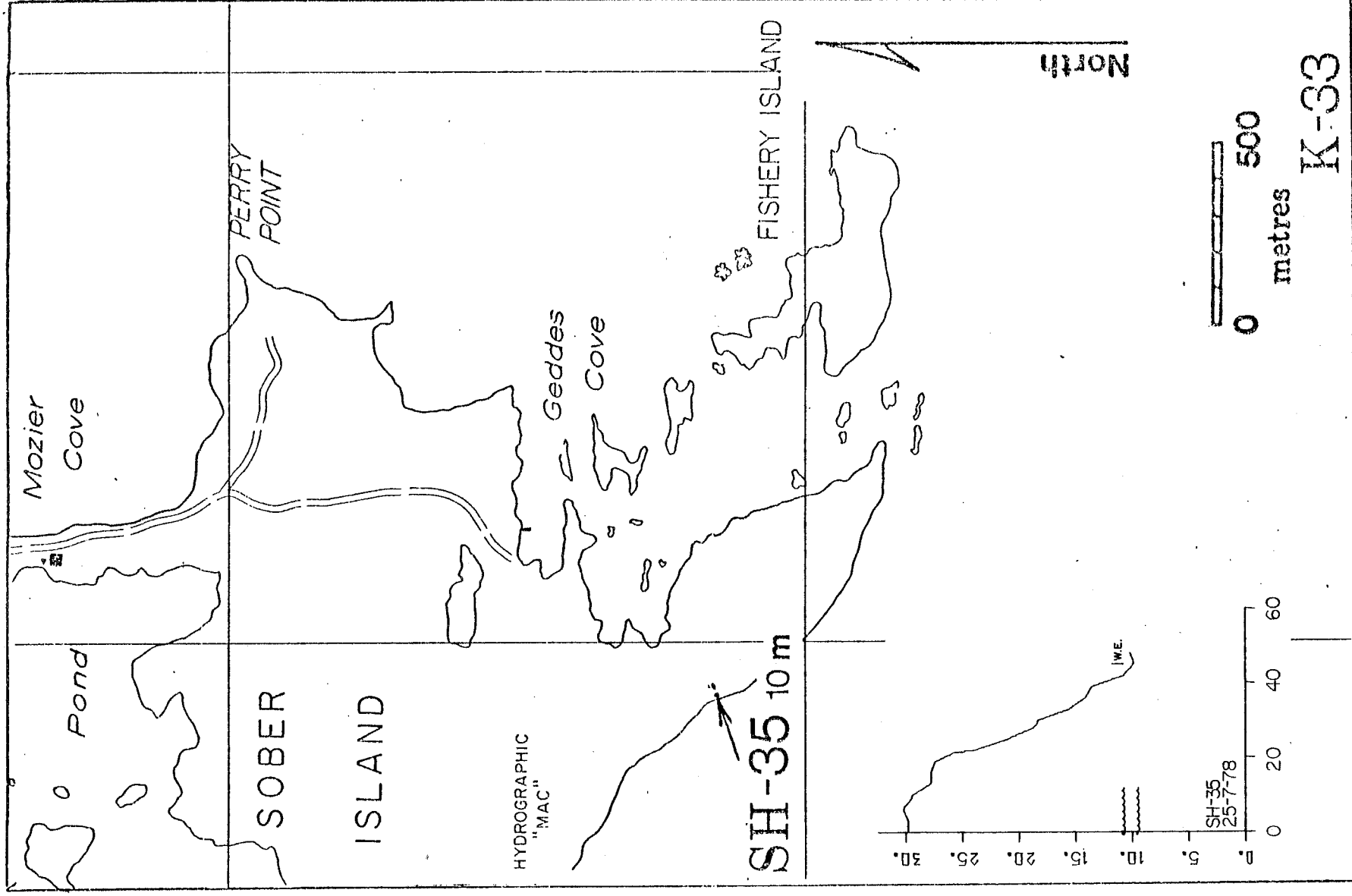


NT-34

Factory Cove

J-33

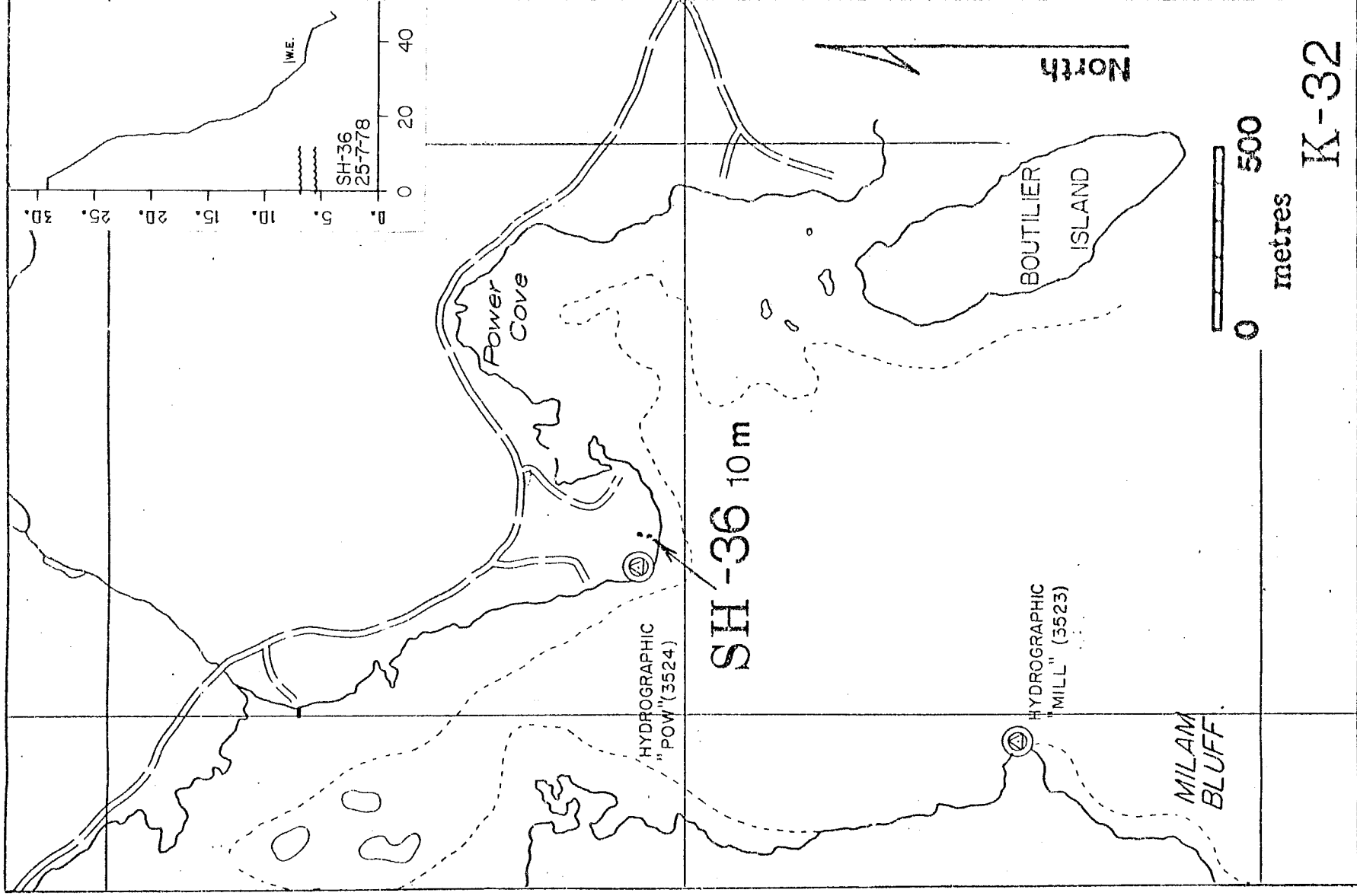
At Port Dufferin turn south off trunk 7 toward Smileys Point. Follow the road to its end at Factory Cove. The profile line is about 250m west of the wharf. The markers are 5m apart. Rear marker height is 112cm and the front marker is 137cm.



SH 35

Sober Island

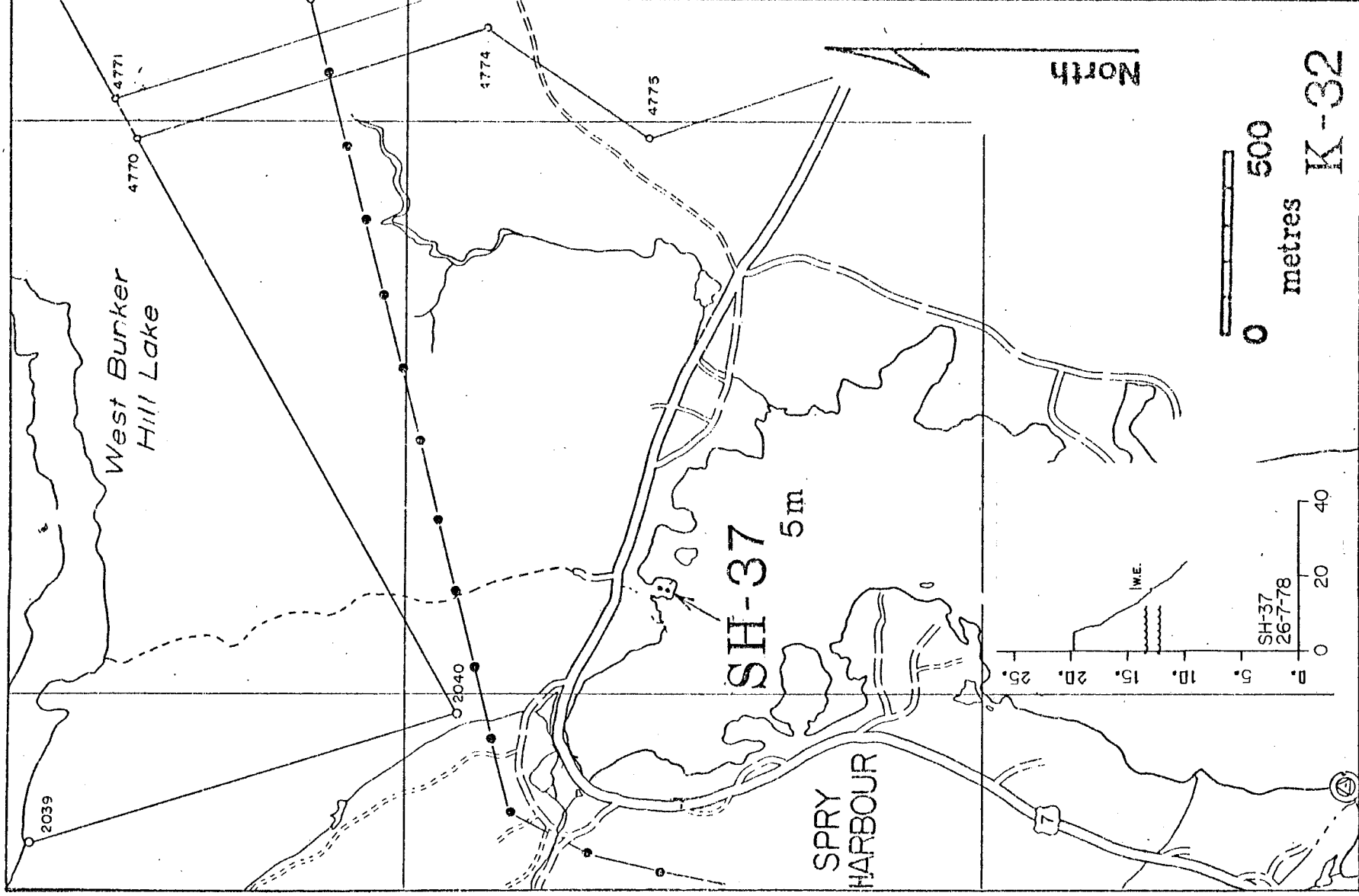
Turn south of #7 hwy and proceed to Sheet Harbour Passage. Continue to the southwest extremity of Sober Island. Near the end of the road the profile markers will be clearly visible one on either side of the road, 10m apart. Back marker height is 106cm and the front marker height is 92cm.



SH-36

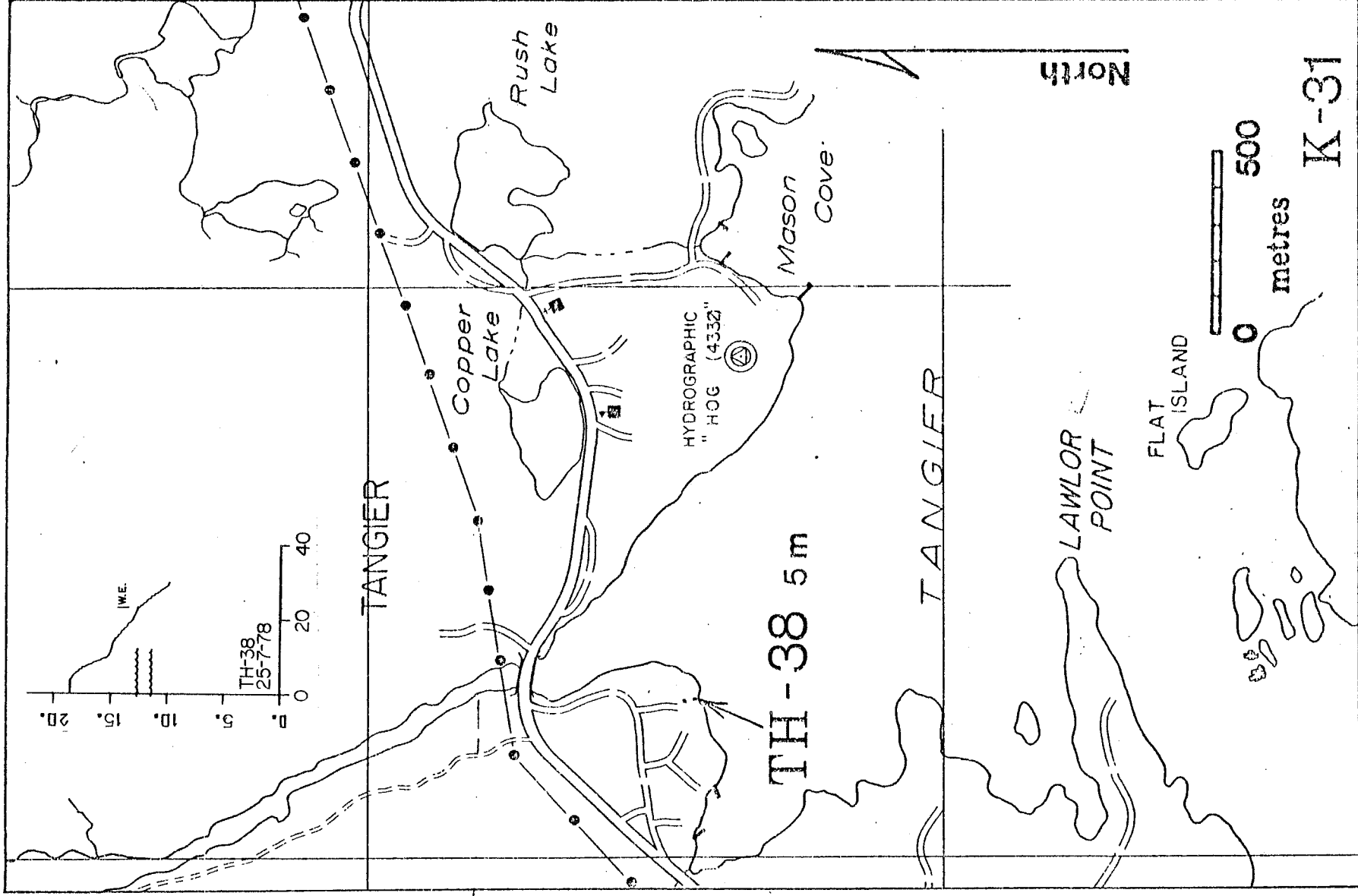
From trunk 7 turn southeast toward Mushaboom about 2.5km and then turn south and proceed to the water's edge. Profile markers are clearly visible in a field 10m apart. The rear marker is 104cm and the front is 104cm high.

K-32



SH-37

The profile line is about 300m west of a small island at the head of Taylor Bay. The area where the profile markers are located is vegetated with marine grasses. Markers are 5m apart. The rear marker height is 105cm and the front marker is 112cm high.

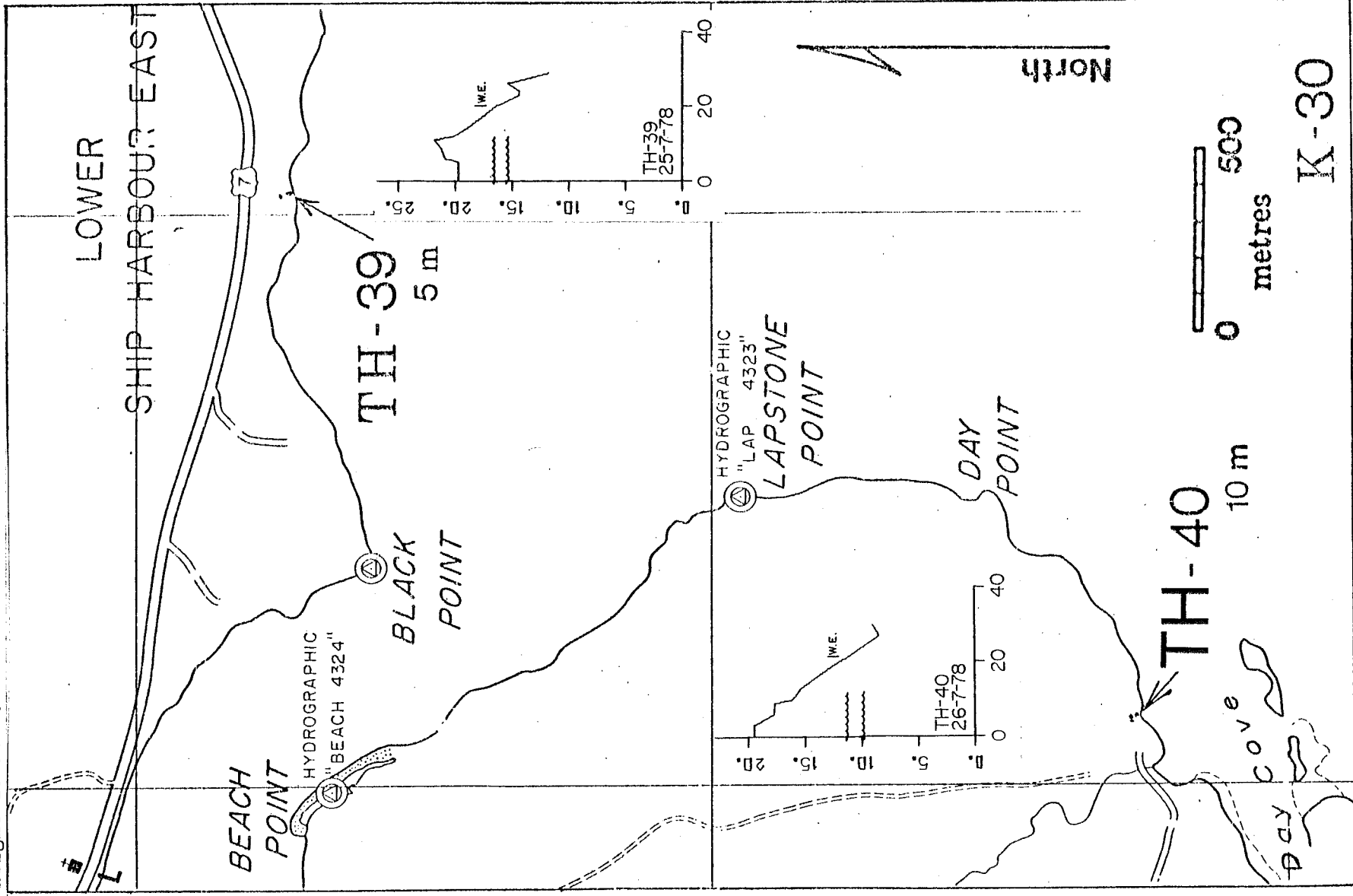


TH-38

At the west end of the Tangier River bridge turn south onto a loose surface road. Turn south into the first private drive, Profile markers are at the shoreline near a white house at the end of the drive. Markers are clearly visible and are 5m apart. Rear marker height is 123cm and the front marker height is 93cm.

TH-39

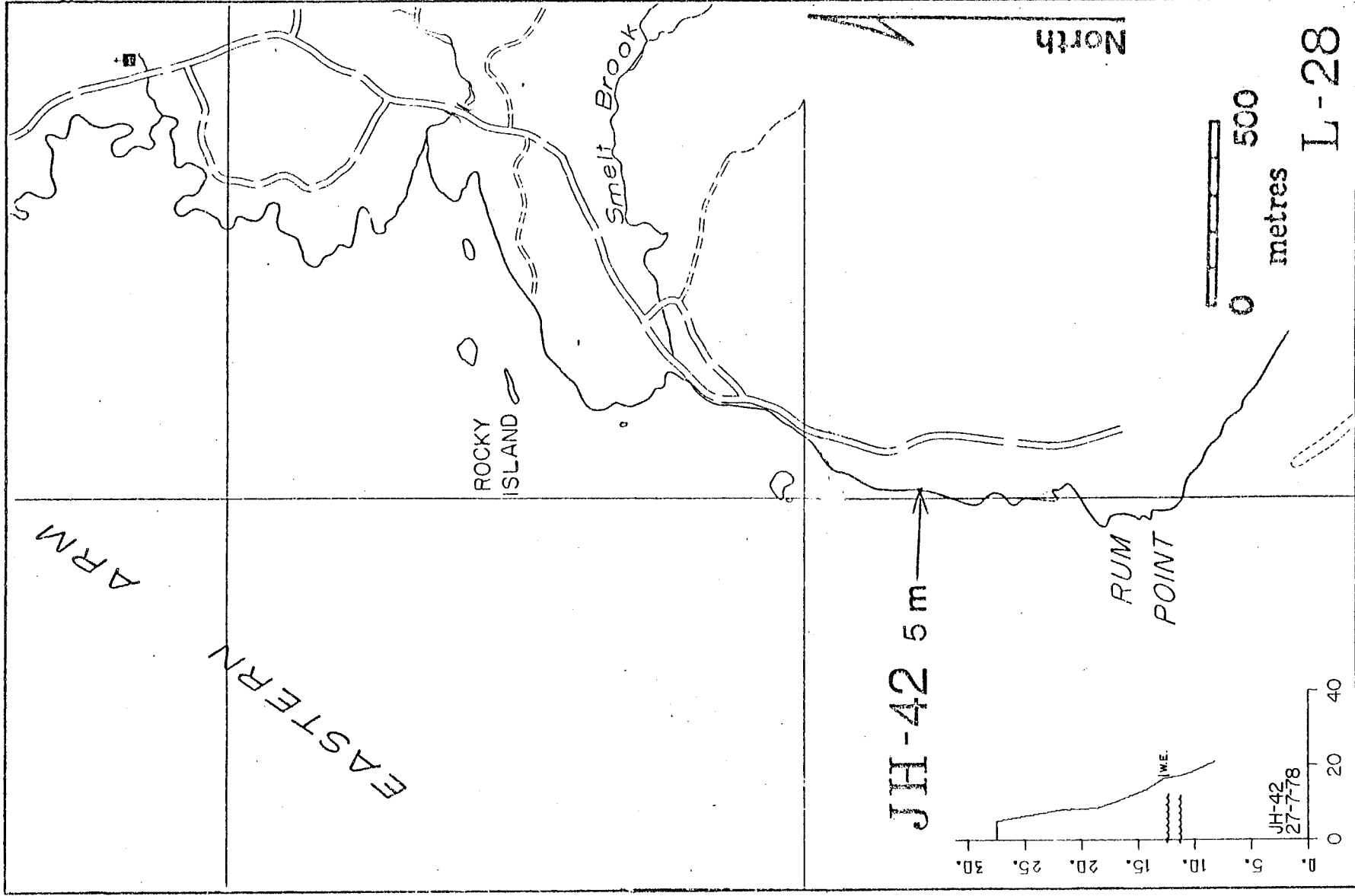
From the Murphy Cove church, drive 3.1km toward Ship Harbour and turn south on a loose surface lane leading down to the water's edge. Profile markers are to the west of the end of the land about 350m. The front marker is situated on the back of a cobble storm beach and is 114cm high. Rear marker is 5m landward of the front in a poorly drained small marsh, its height is 96cm.



TH-40

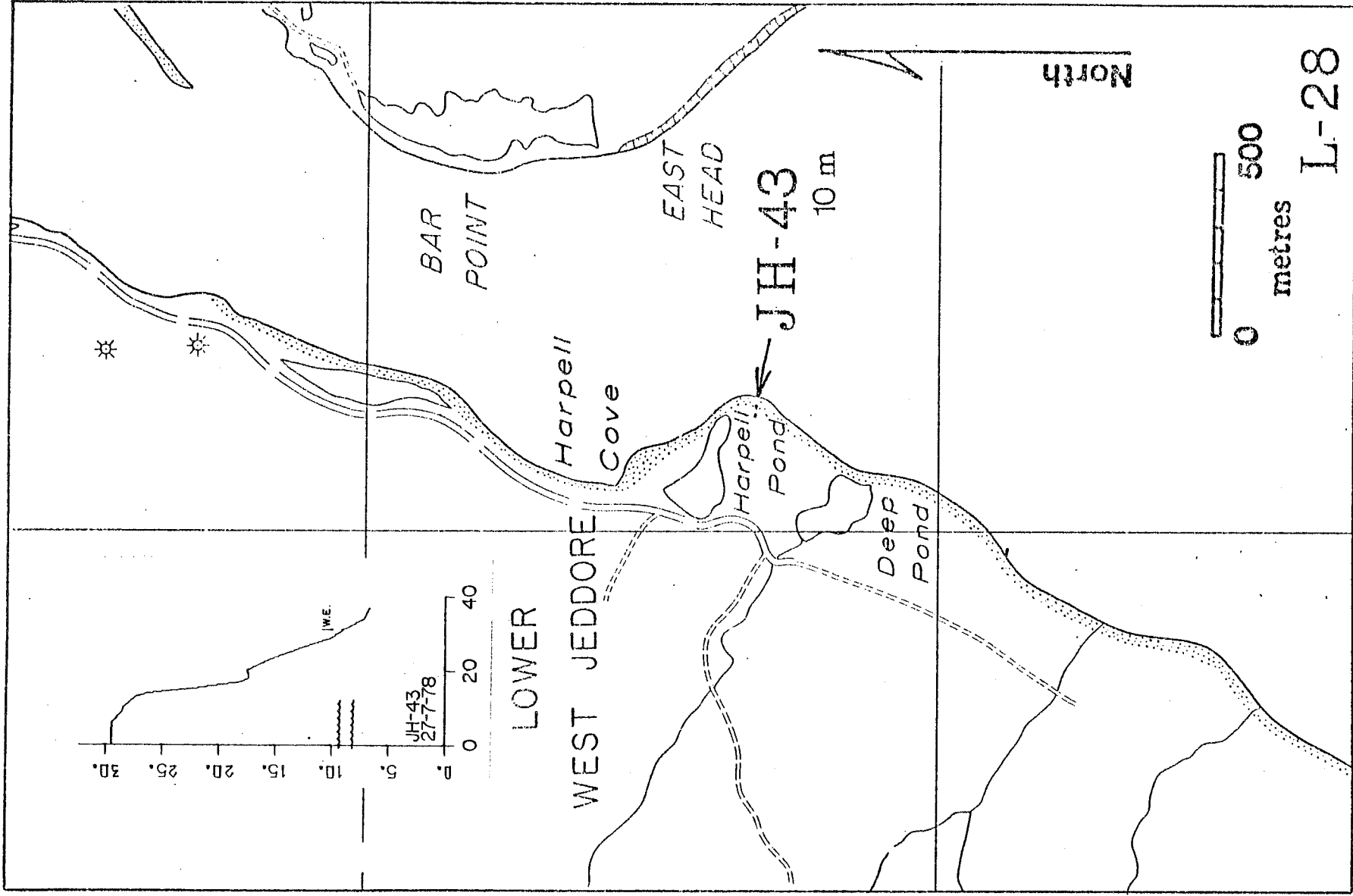
Day Cove

In the village of Ship Harbour turn southeast and drive down the west side of Ship Harbour through Lower Ship Harbour to the boat building shop at Day Cove. Walk from the boat shop along the beach toward Day Point for about 400m and the profile markers will be clearly visible 10m apart. The rear marker is about 20m landward of the water's edge, and 100cm high. The front marker is 116cm high.



JH-42

This profile line is located on the eastern side of Jeddore Harbour. From trunk 7 drive 4.3km down the paved road to East Jeddore. Walk through the trees and brush down to the water's edge. As you walk along the shore in either direction you should be able to see the front marker which is 84cm high. The back marker is 5m landward of the front and is 104cm. The back marker may be partially hidden by the vegetation.

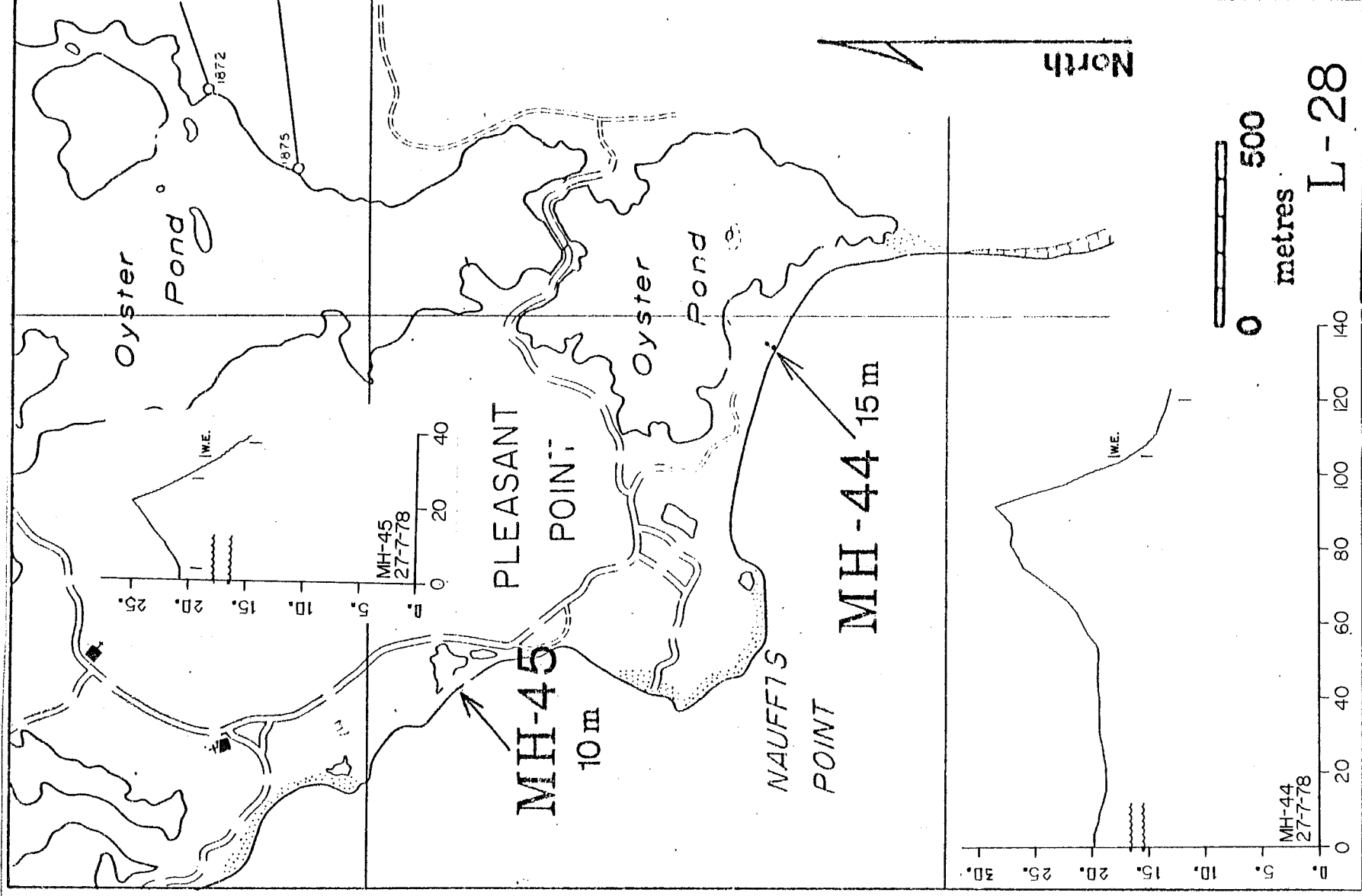


JH-43

West Head

From trunk 7 drive down the paved road to West Jeddore. At Harpell Cove continue along a cobble barrier beach to West Head. The profile markers are 10m apart on top of an eroding till bluff about 2m high. Back marker height is 116cm and the front marker is 102cm high. Both markers are clearly visible

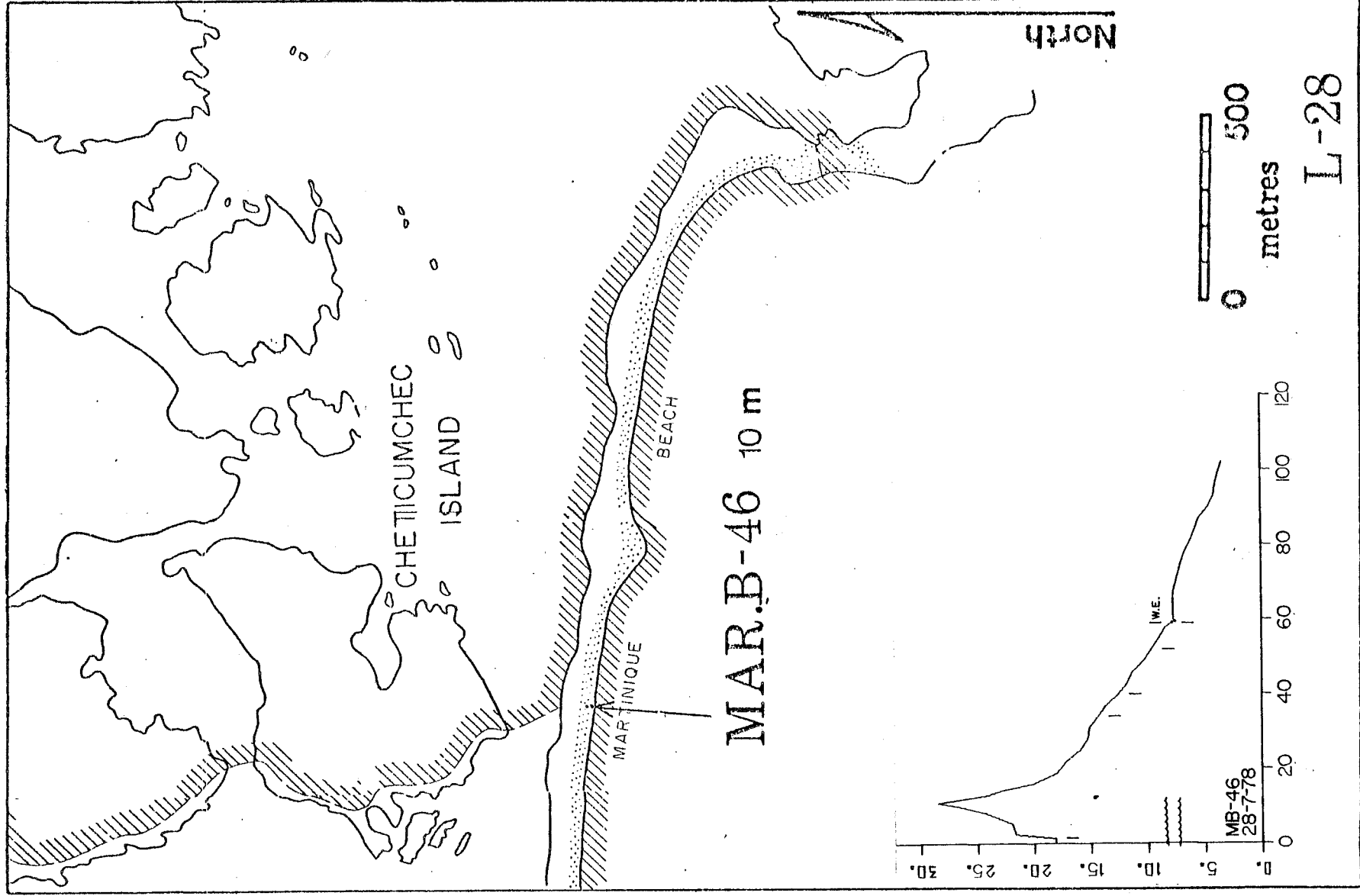
At Smith Settlement turn off trunk 7 and drive south on the Ostrea Lake Road and drive 12.9km. At this point the road will be directly adjacent to the beach. Walk along the beach to an area where the back beach becomes wider and is vegetated with marram grass; profile markers are clearly visible 10m apart. Back marker height is 72cm and the front marker is 91cm high.



Mus.H-44

Kent Island

At Smith Settlement turn off trunk 7 toward Ostrea Lake and drive about 15.5km to Kent Island. The profile line is located approximately midway down a cobble barrier beach that connects Kent Island to Jeddore Cape. Both markers are located on the cobble back beach and are clearly visible. Back marker height is 94cm and 15m seaward of the back marker, is the front marker, which is 87cm high.

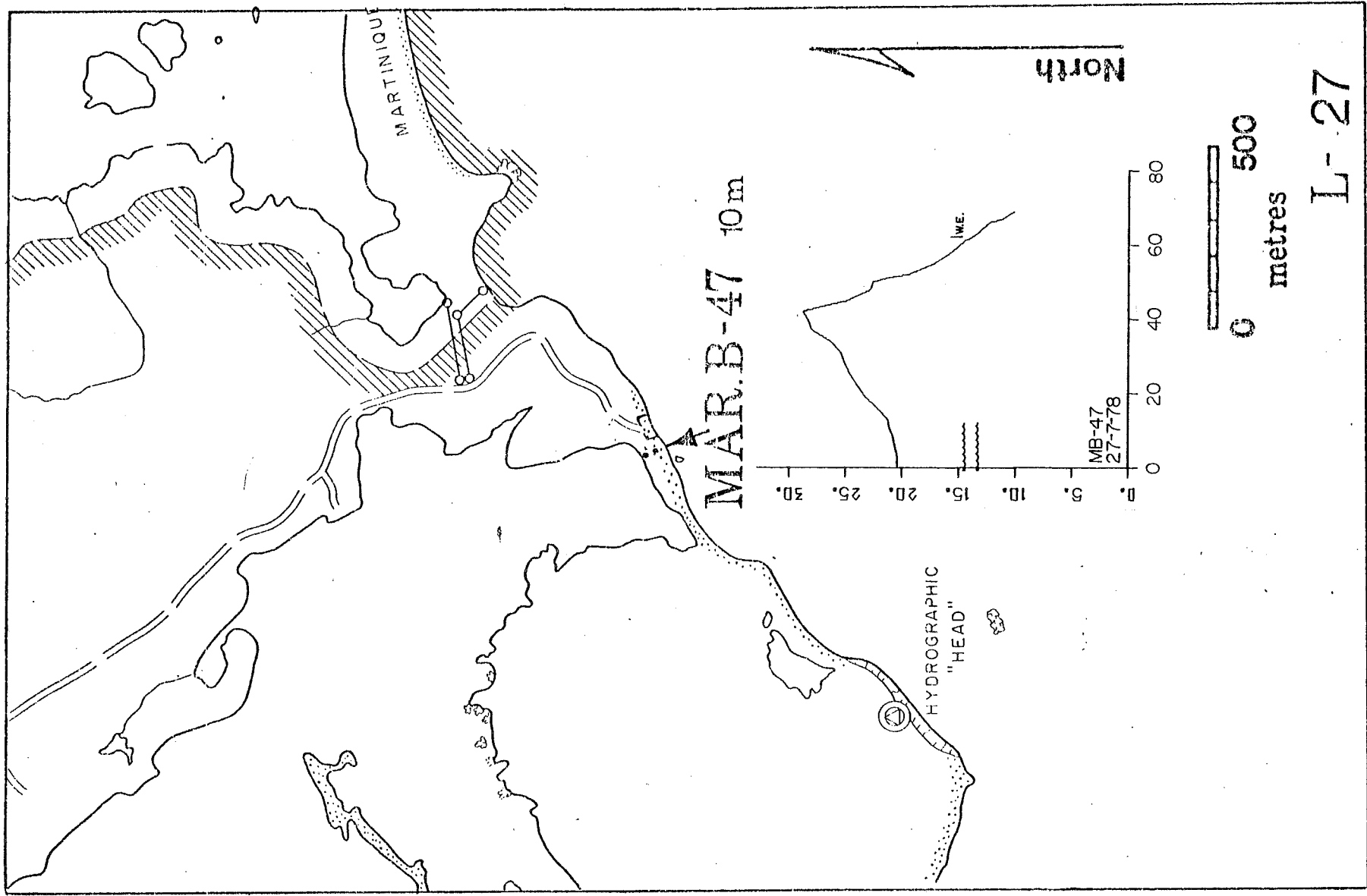


Mar. B. 46

Martinique Beach

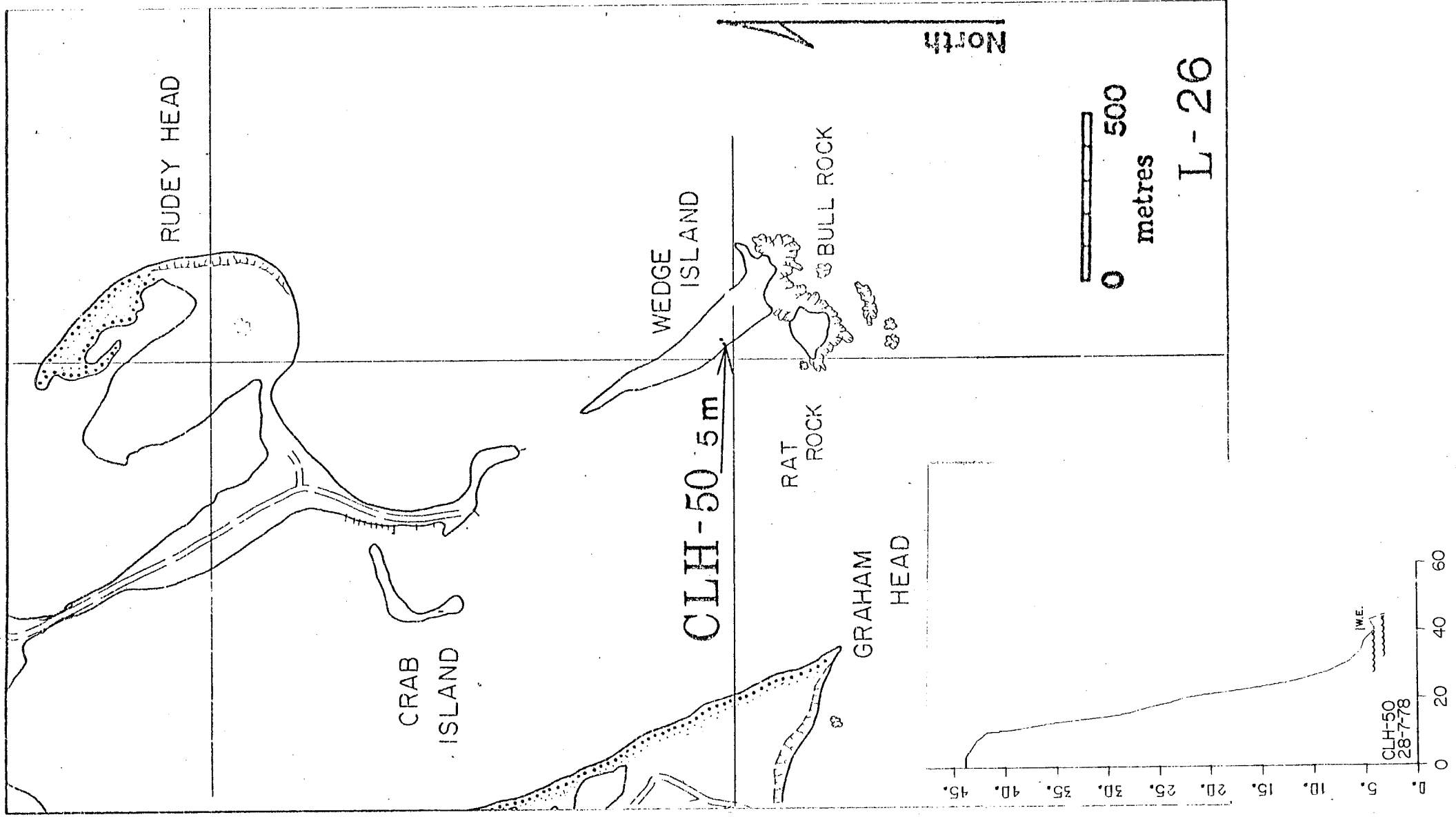
From Musquodoboit Harbour drive down the east side of Petpeswick Inlet to Martinique Beach. Drive through the dunes along the road to its end. Walk along the foredune ridge approximately 750m to find the front profile marker which is 85cm high. The back marker is 10m back into the dunes, near a small blow out, and is 90cm high.

L-28



Mar. B. 47

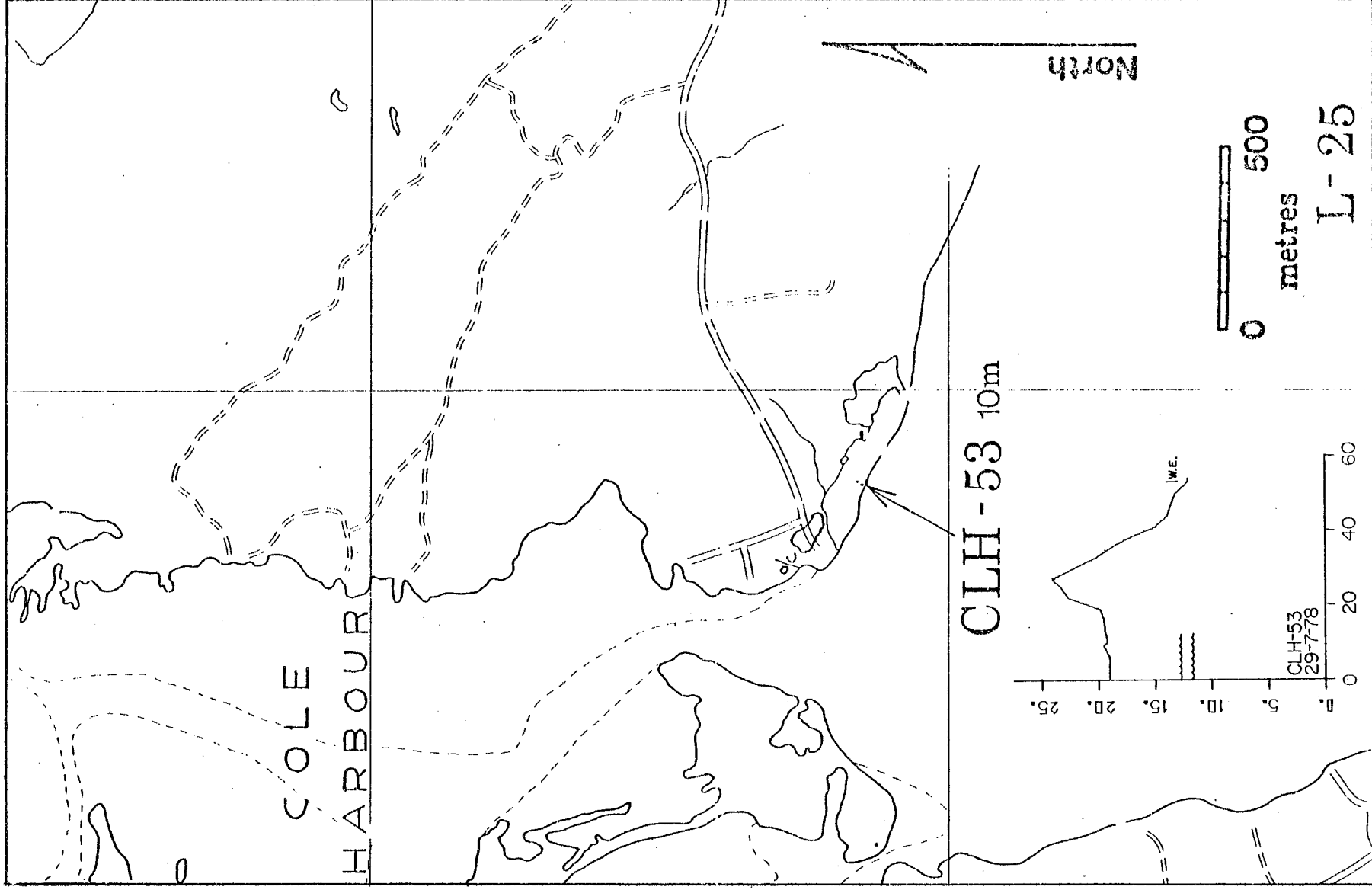
At Musquodoboit Harbour turn south and drive down the east side of Petpeswick Inlet. At the end of this road turn right toward Petpeswick Head. The profile markers are located on a pebble-cobble barrier beach that extends from Phillip Head to Petpeswick Head. The markers are 10m apart and are clearly visible. Back marker height is 82cm and the front marker is 78cm high.



CLH 50

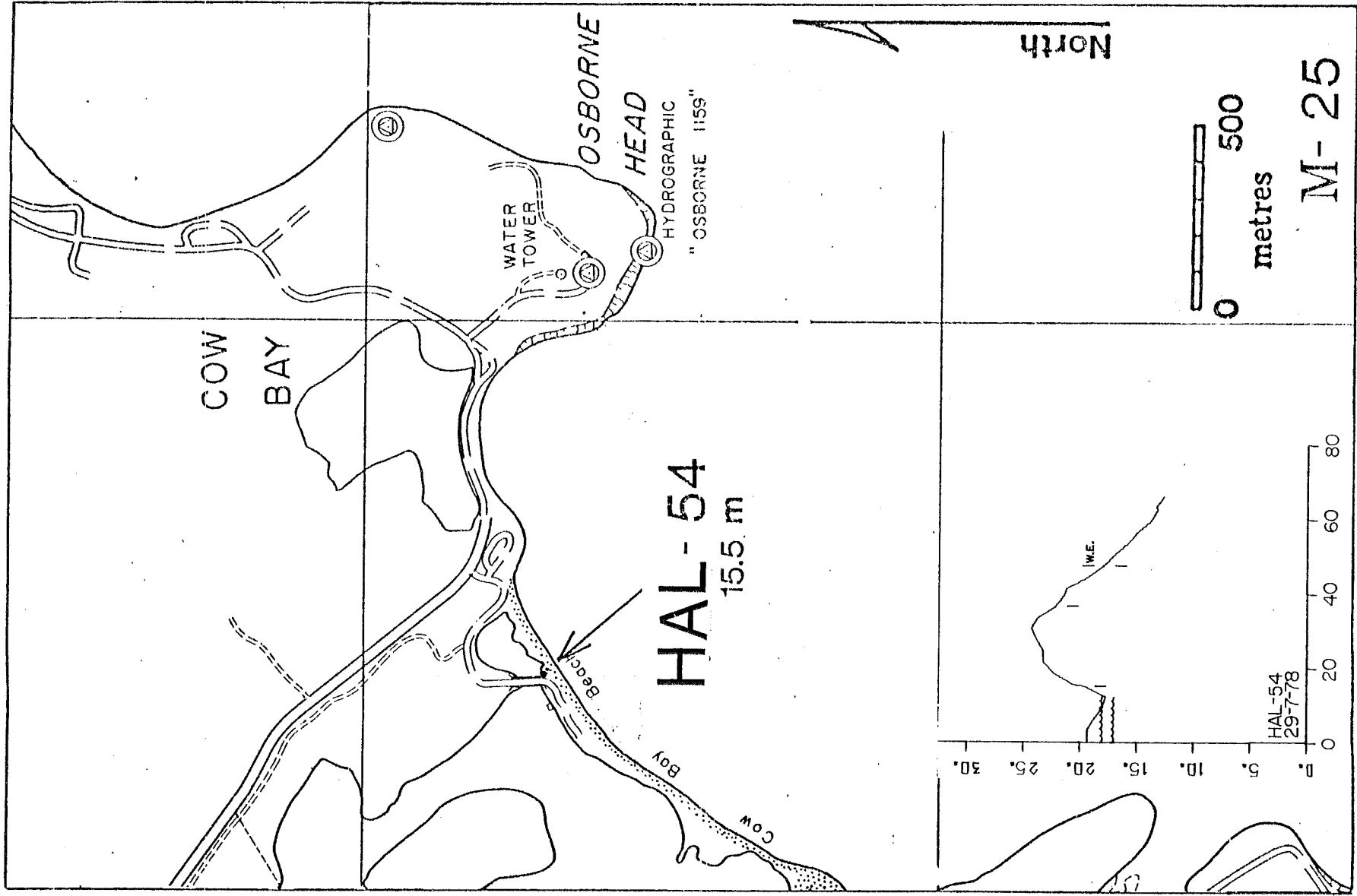
Wedge Island

At Head of Chezsetcook turn south off trunk 7 onto trunk 207 and proceed 11.8km to turn south onto a loose surface road along the east side of Three Fathom Harbour. At the end of this road continue on foot to Wedge Island. Profile markers are in full view on top of the till bluff. Markers are 5m apart. Back marker height is 98cm and the front marker is 103cm.



CLH 53

In West Lawrencetown turn south onto a loose surface road, continue to its end at the east side of the entrance to Cole Harbour. Then proceed on foot east along the beach a distance of 220m to the profile line. Markers are 10m apart on the back beach; clearly visible. Back marker height is 80cm and the front marker is 90cm high.

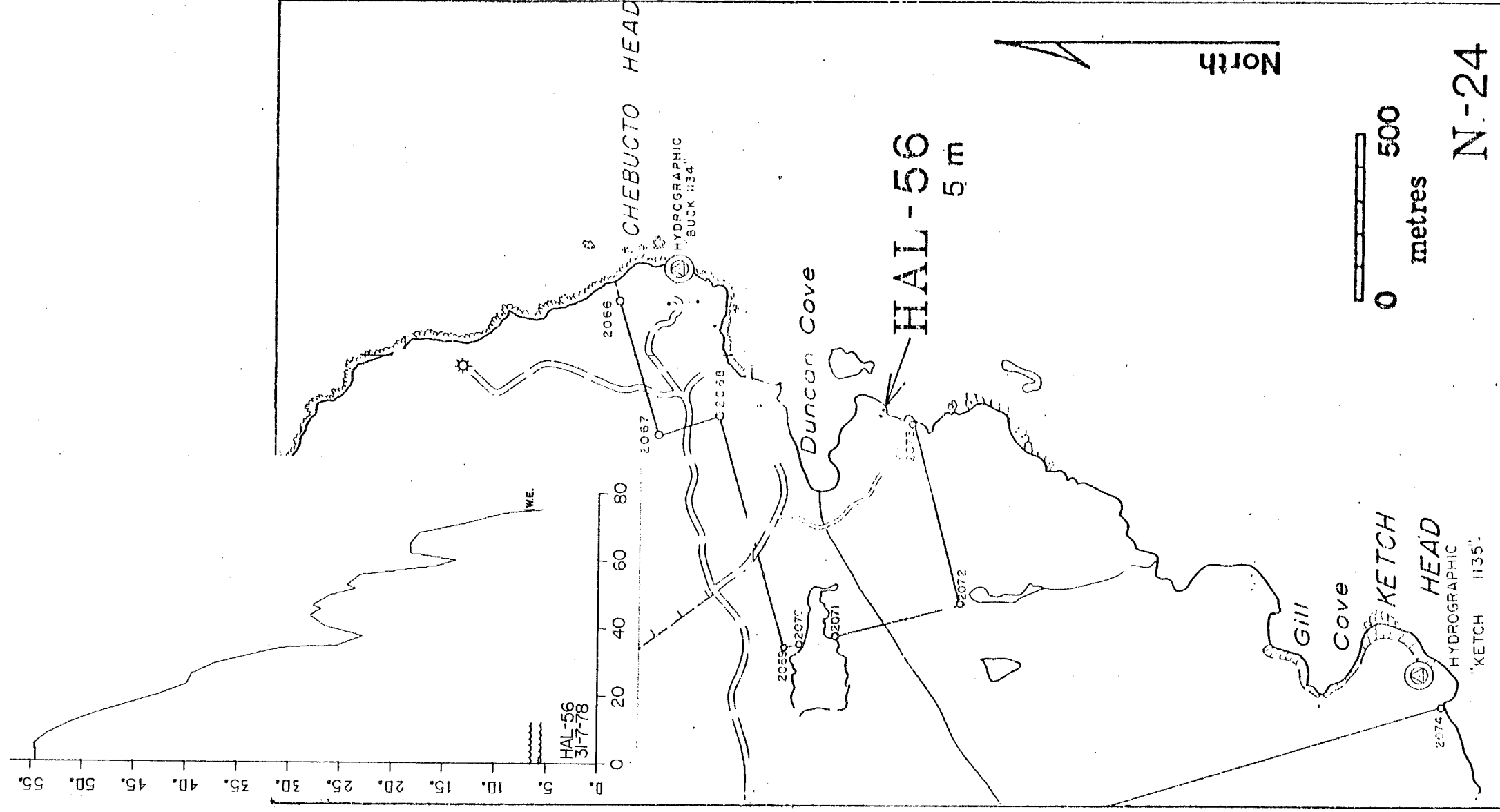


Hal 54

Cow Bay Beach

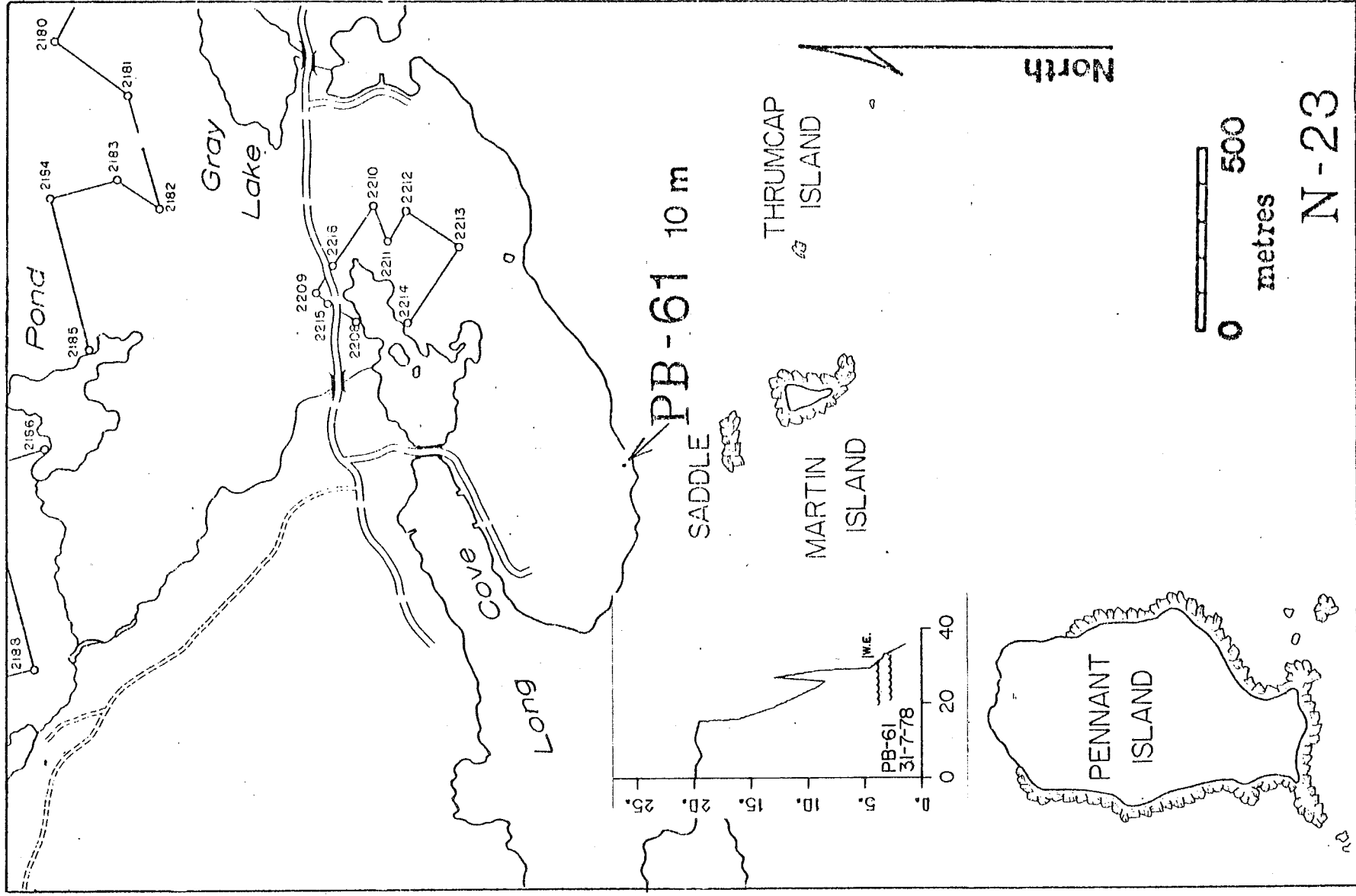
Driving east on trunk 207 turn south on a hard surface road at the church in Cole Harbour. Continue on this road through Cow Bay beyond Osborne Head, to turn left down to Cow Bay Beach. Follow the road to the beach in behind a small lagoon and back out to the back beach. The profile line is located between this road and the small lagoon. Markers are 15m apart. Back marker is 92cm high and the front marker is 87cm high. Both markers are in open view.

M-25



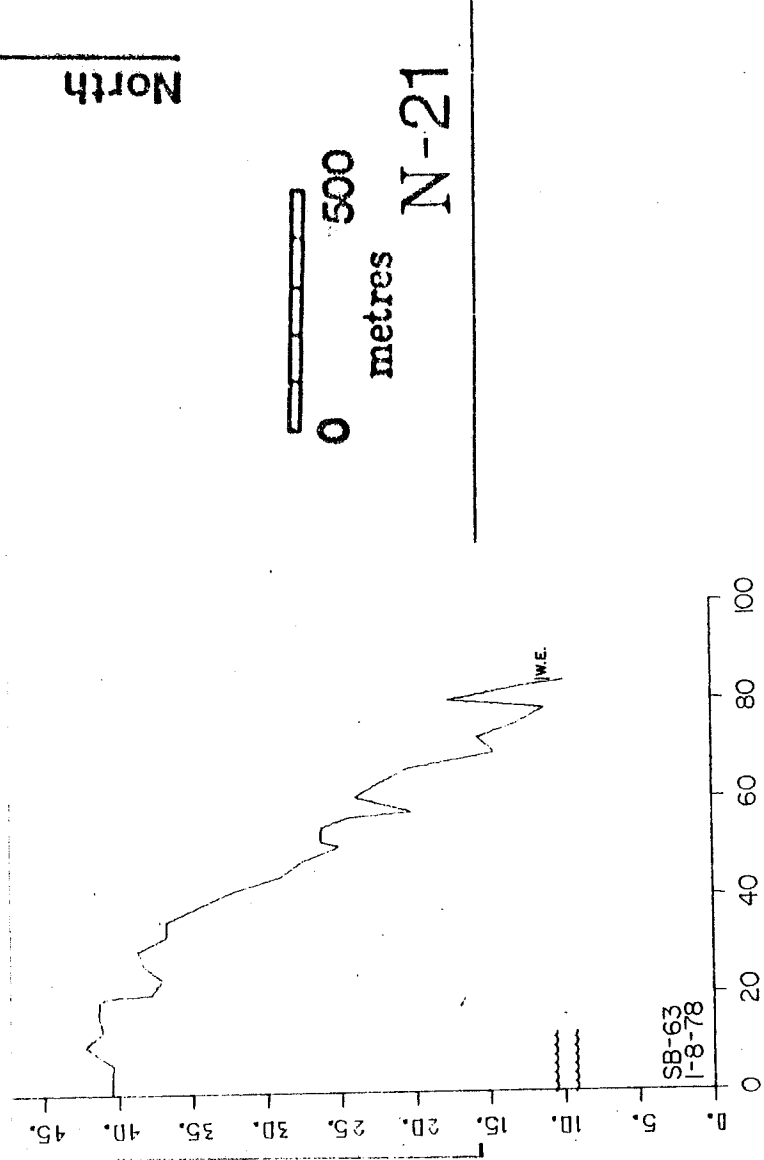
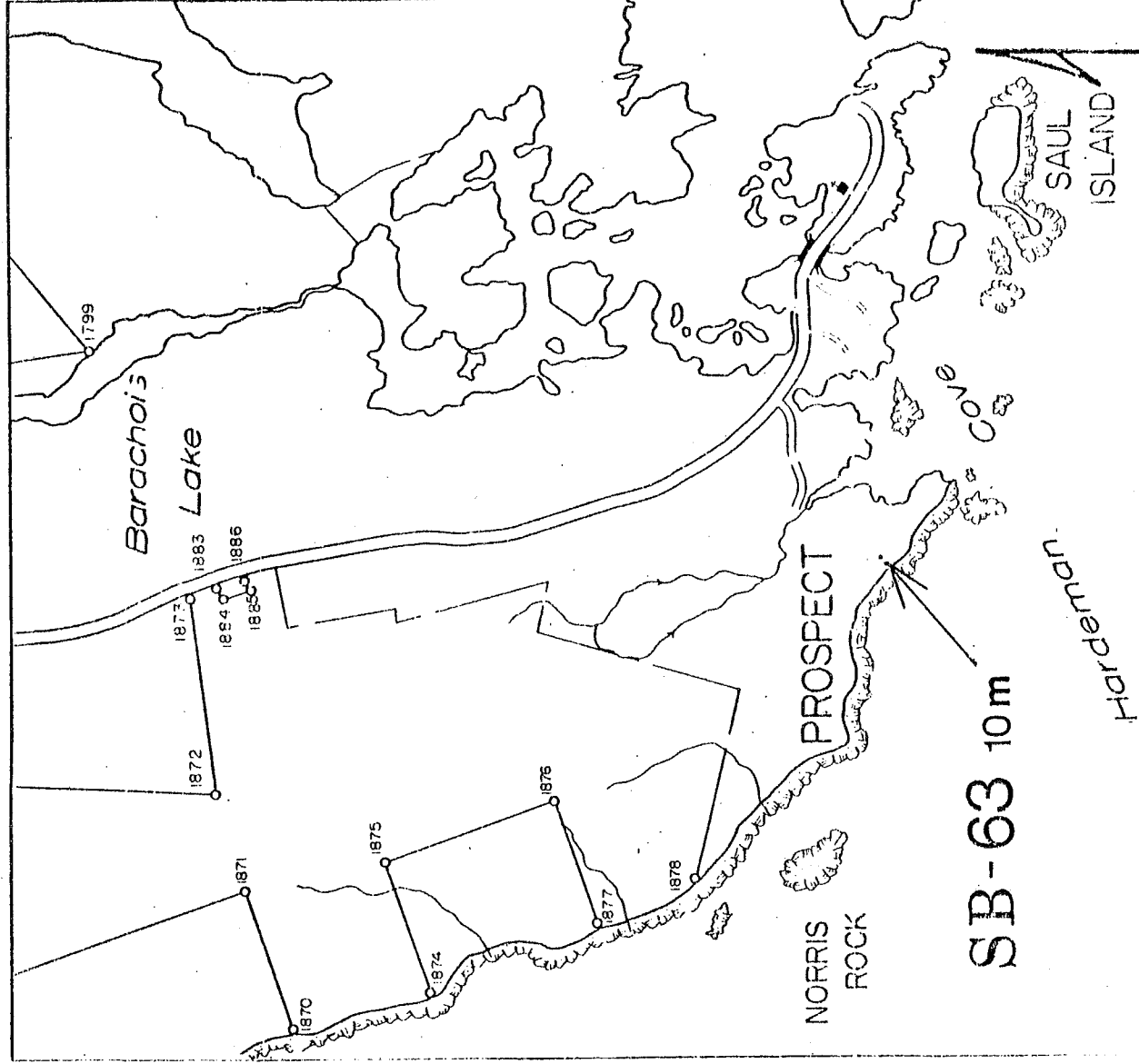
Hal 56

From Halifax take trunk 349 down the west side of Halifax Harbour and turn east to Duncan Cove. At the end of this road proceed on foot to the other side of the cove and continue walking along the shoreline to a point just south of a small island that partially blocks the entrance to Duncan Cove. Profile markers are 5m apart and the front marker is 18m landward of the edge of the overburden and is 155cm high. Back marker height is 129cm.



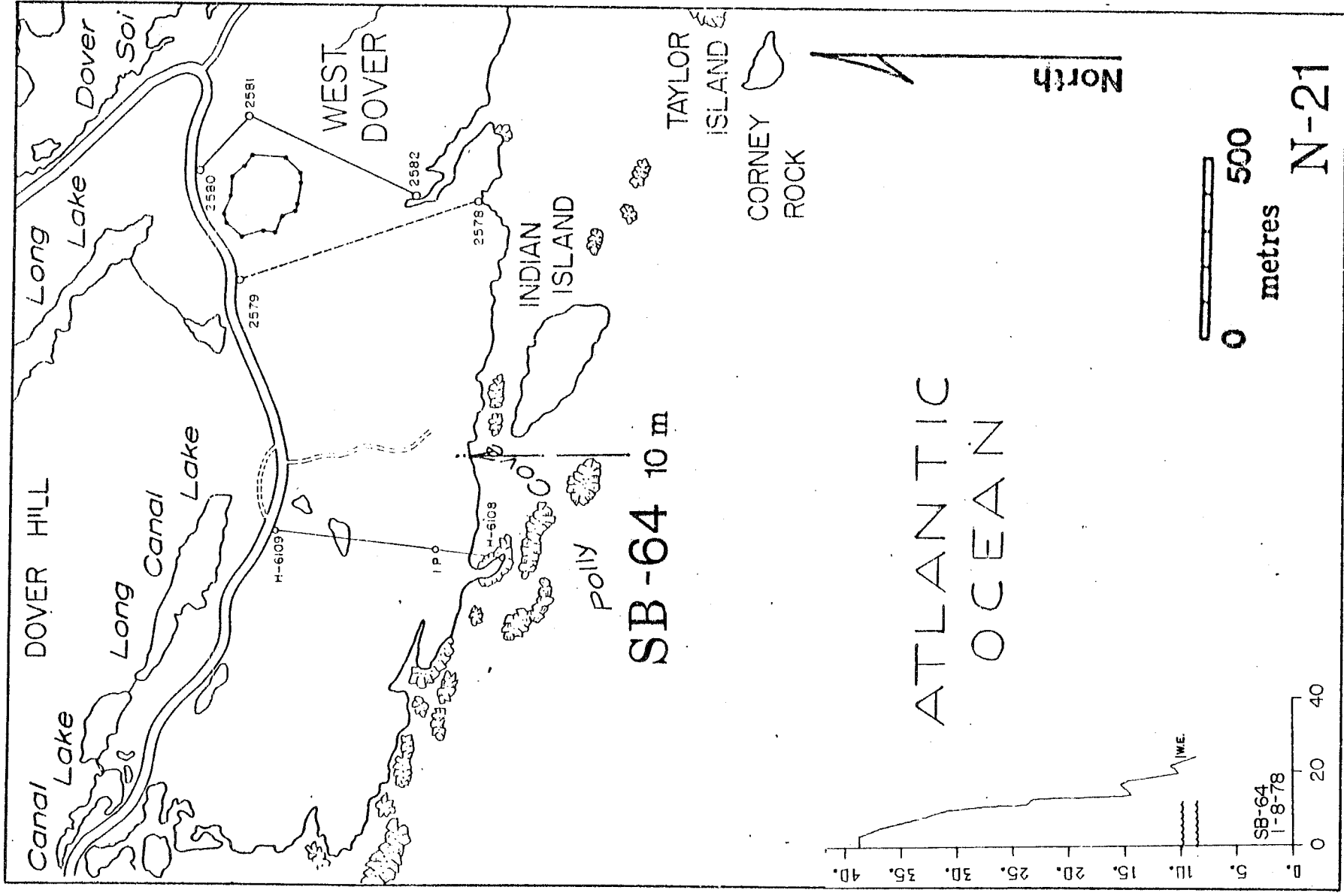
PB 61

On trunk 349 drive through the village of Sambro toward Pennant. Proceed through Pennant to the south side of Long Cove. At the end of the public road walk in a southerly direction up over the hill toward Saddle Island in Pennant Harbour. The line of the profile is to the south and just east of Saddle Island. Back marker height is 121cm and 10m seaward of that is the front marker which is 122cm high. Both markers are in open view.



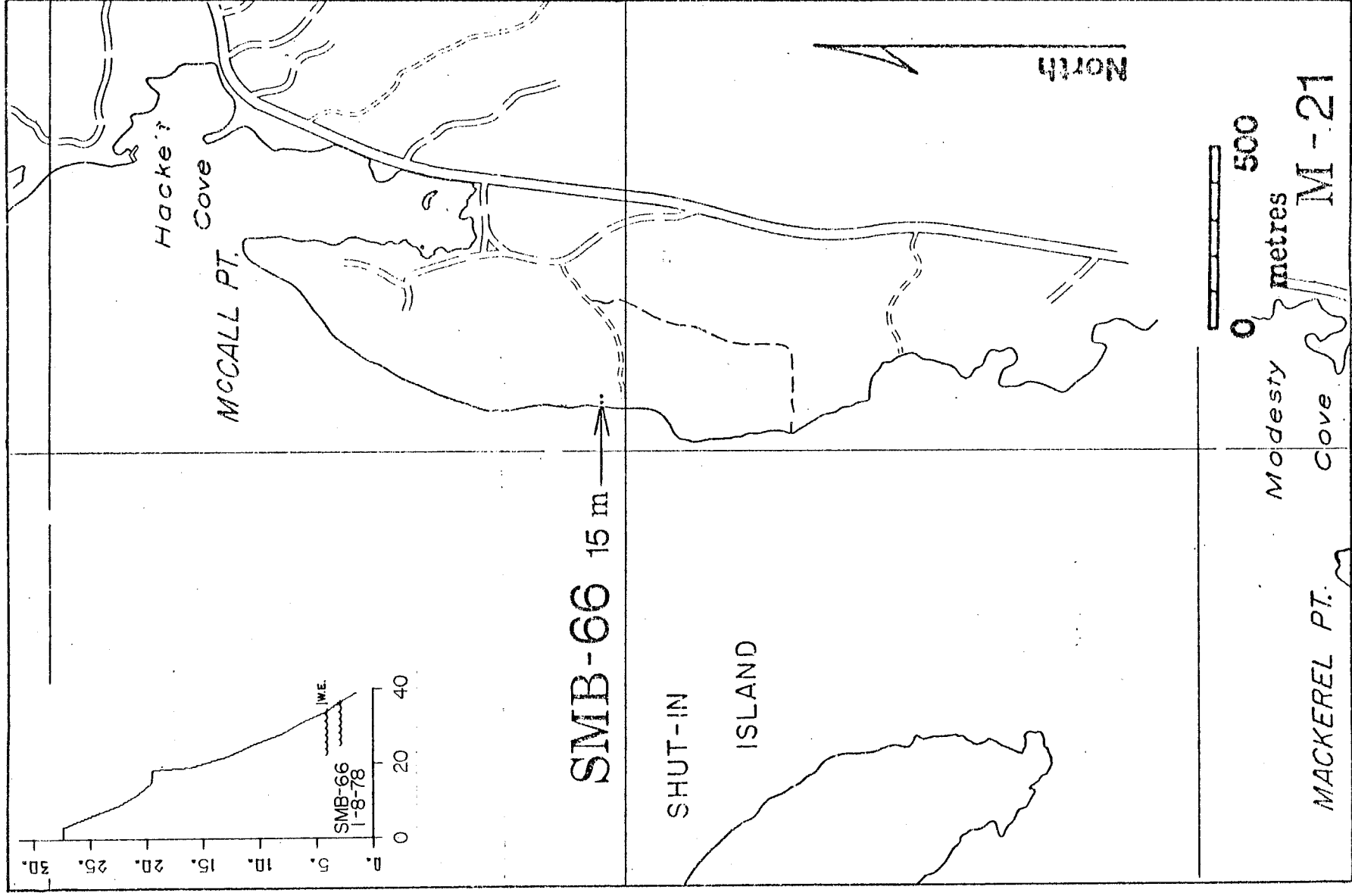
SH 63

From Halifax drive on trunk 333 and proceed towards Prospect village. When entering Prospect turn left on a drive leading out to the south tip of Hardeman Cove. From the tip of land on the south side of Hardeman Cove walk approximately 275m west along the shore to find the profile line. Markers are 10m apart. Back marker height is 116cm and the front marker is 96cm high.



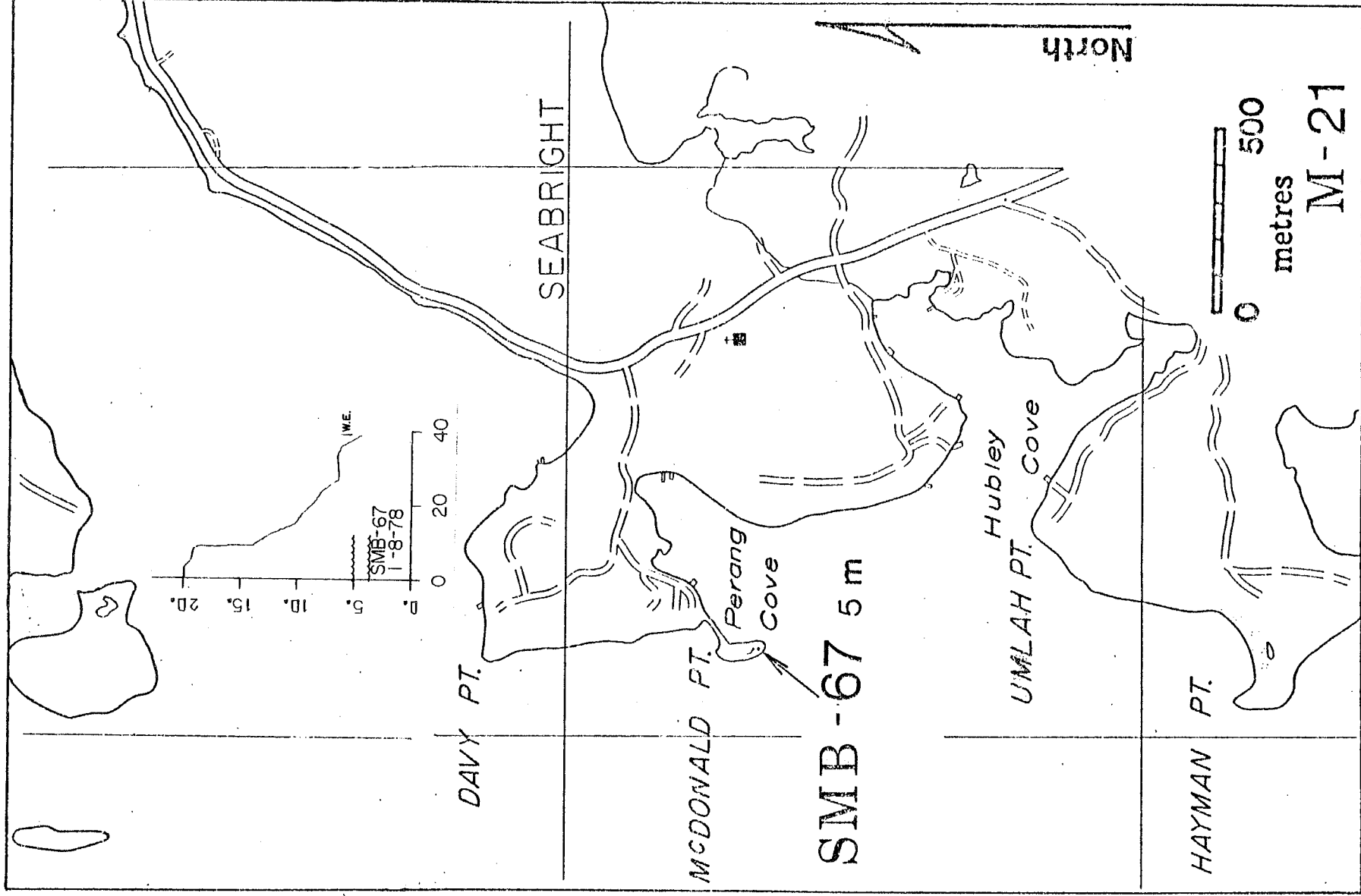
SH 64

Proceed on trunk 333 toward Peggy's Cove. From the intersection in West Dover continue toward Peggy's Cove for 1.24km and turn south to Polly Cove on a loose surface road. Drive to the end of this road and then on foot continue on in a southwest direction to the water's edge. The profile line is marked slightly west of Indian Island. Markers are clearly visible from the shore and are 5m apart. Back marker is 132cm high and the front is also 132cm above the overburden.



SMB 66

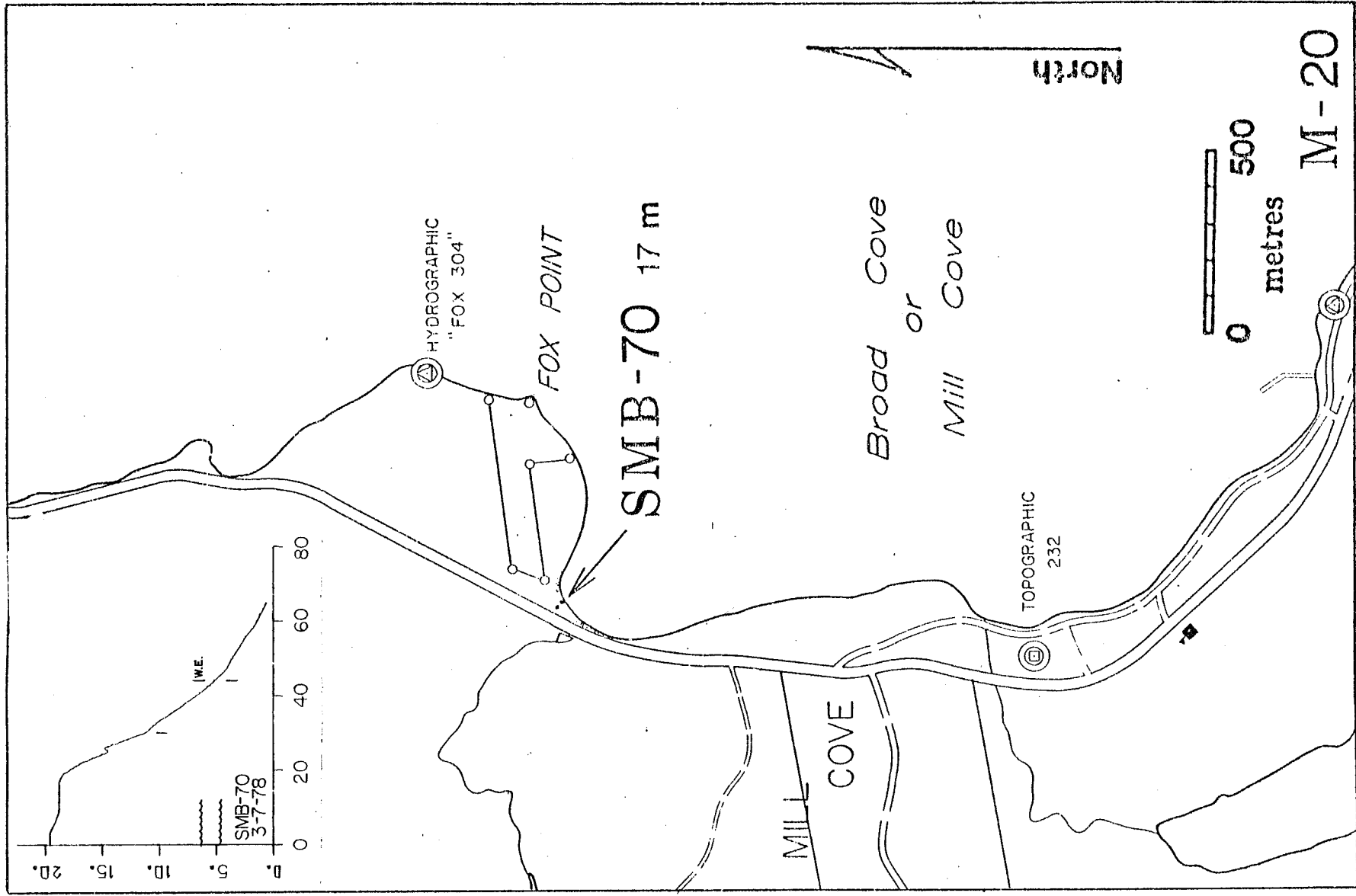
From the school in Indian Harbour drive north toward the Head of St. Margaret's Bay, a distance of 3.56km and bear left onto the old highway. Drive on this road for about 450m and turn left into a private drive leading down to an A-frame cottage. Walk along the edge of the back beach at the base of a low bank, in a northerly direction for about 300m and the markers will be visible in a field adjacent to the beach. The front marker is 3.5m landward of the low bank at the edge of the field, and has a height of 124cm. The back marker is 15m landward of the front and is 106cm high.



SMB 67

McDonald Point

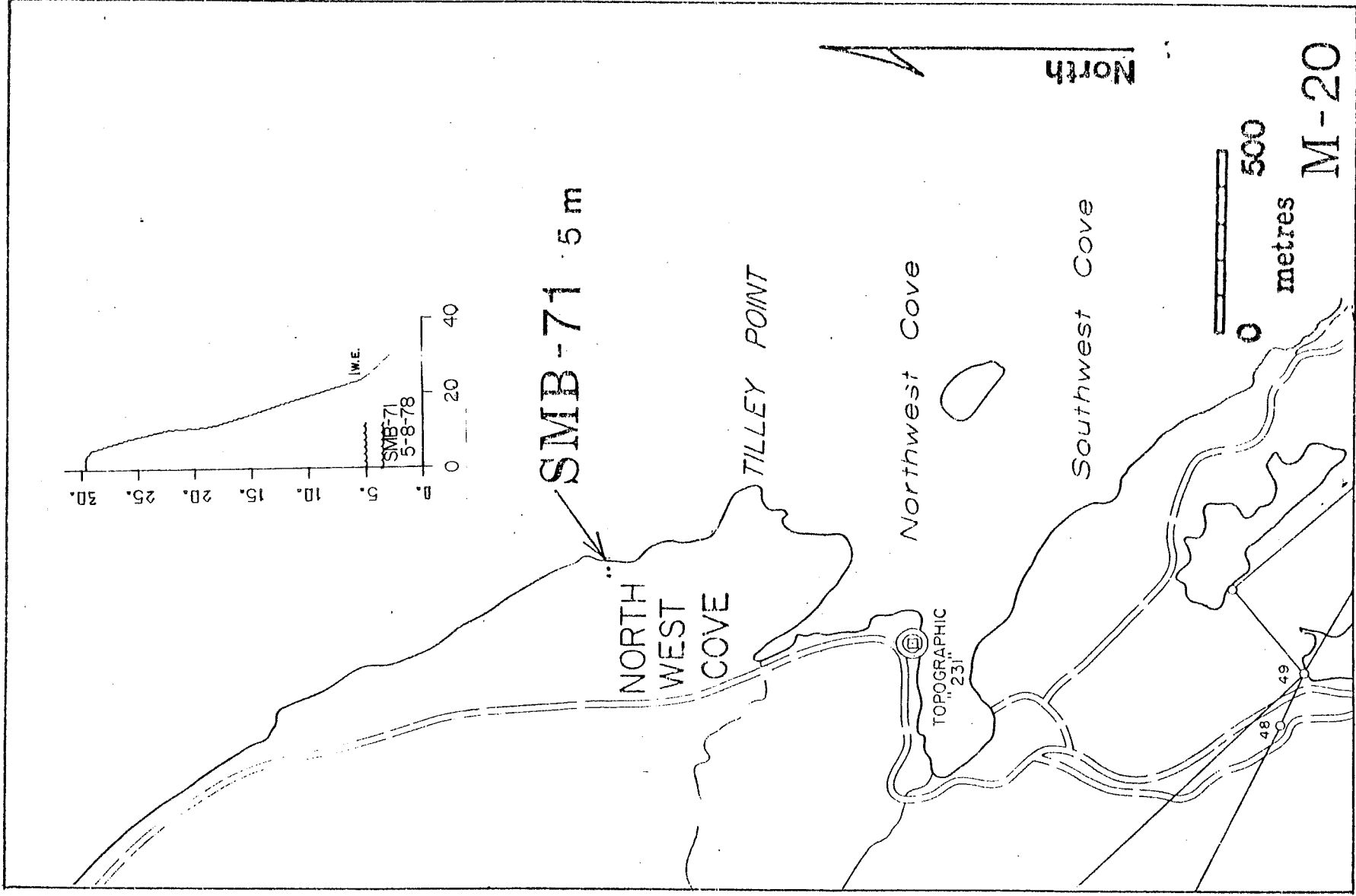
Driving north on trunk 333 toward Head of St. Margaret's Bay, enter the village of Seabright and turn west 310m beyond the church. Continue to the last (most southerly) house on McDonald Point. Profile SMB 67 is on private property and you must request permission to continue on. Profile markers are located on an island which is connected to McDonald Point by a tombolo spit. Markers are on the seaward tip of the island and are clearly visible. Back marker is 134cm high and 5m seaward of that is the front marker which is 126cm high.



SMB 70

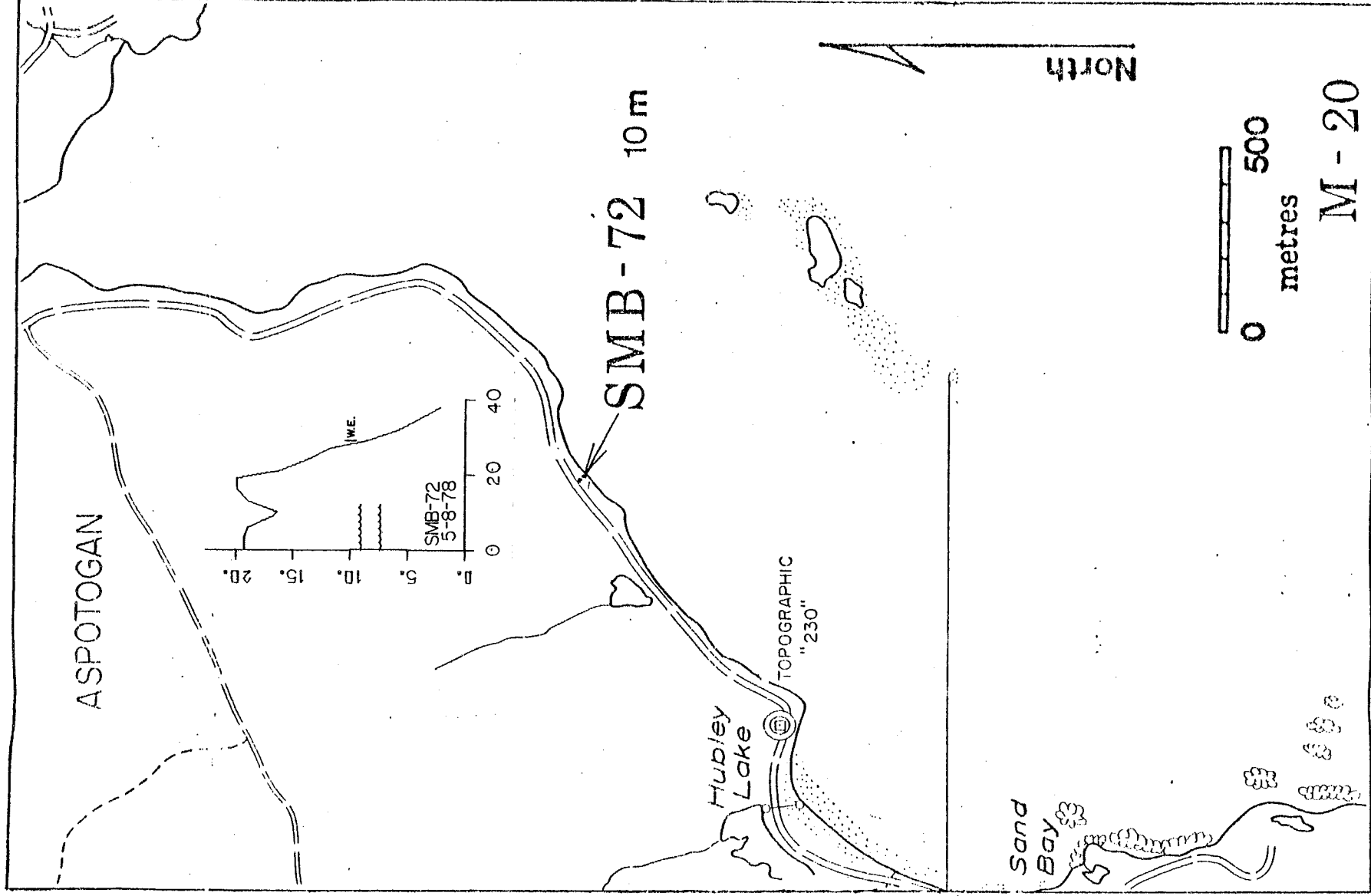
Fox Point Beach

At Hubbards turn south off trunk 3 onto 329, and drive 4.75km to Fox Point Beach (2.54km beyond Fox Point School). Turn east on a loose surface road at the beginning of the beach and stop. Back profile marker is at the landward edge of this road, and is 101cm high. The front marker is 17m seaward near an electrical power line pole and is 78cm high.



SMB 71

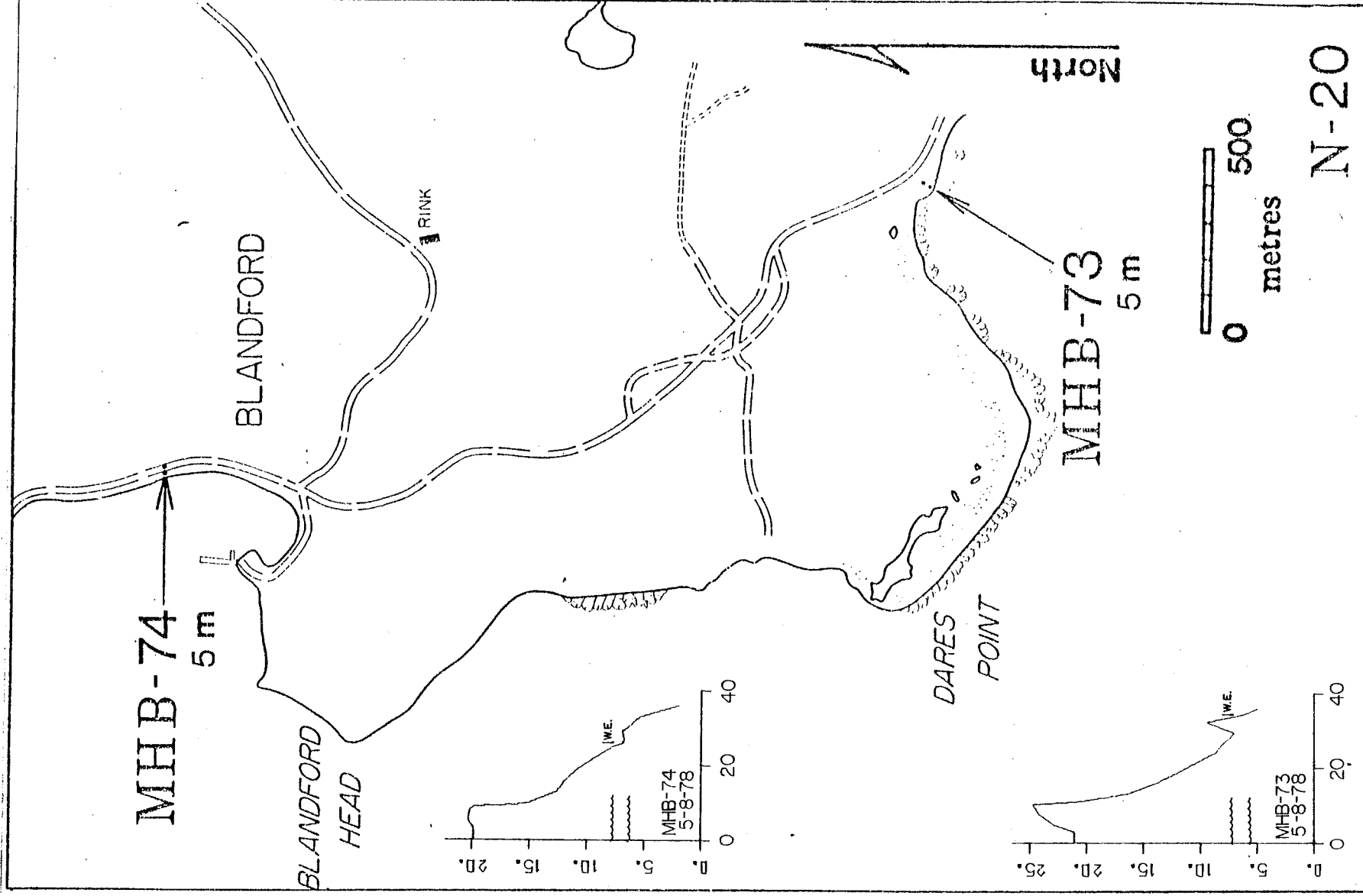
At Hubbards turn off trunk 3 onto 329 and drive south along the west side of St. Margaret's Bay. Entering Northwest Cove turn left on a loose surface road into an area being developed for residential housing. Continue to the first sharp turn to the right and stop. Walk northeast through the bush to the water's edge. The markers are 5m apart and are visible from the beach. Back markers height is 105cm and the front marker 102cm high.



SMB 72

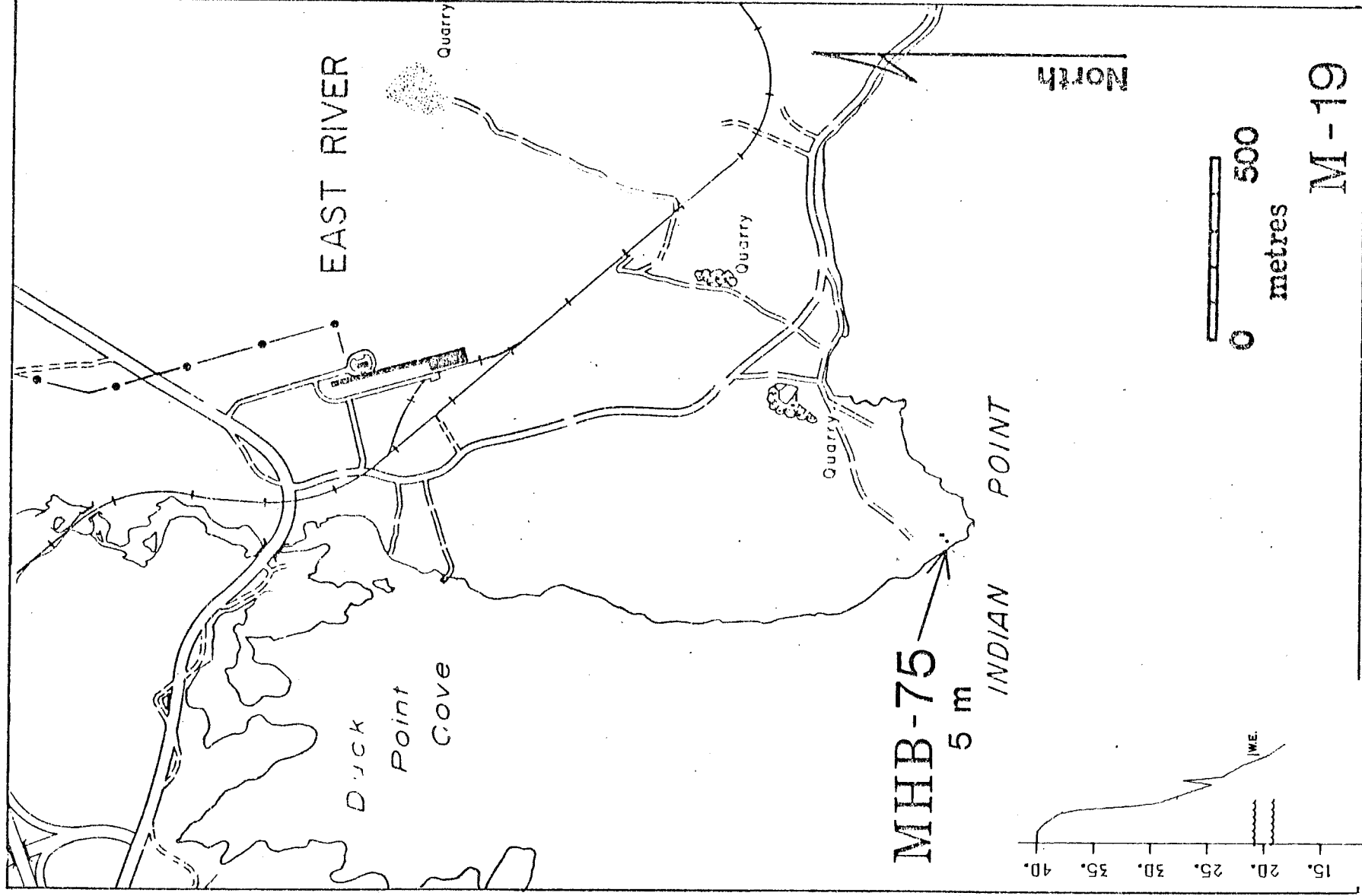
At Hubbards turn south off trunk 3 onto 329 and drive to the church in Northwest Cove. From the church drive another 5.1km and stop. The station is about 0.5km northeast of a black 2-storey house located between the road and the beach. Markers are 10m apart in clear view. Back marker is 97cm high and is located on the back berm. The front marker is 104cm high.

Driving west from Halifax, take exit 7 to trunk 3 and drive east to East River where you turn south onto trunk 329 and proceed to Upper Blandford and turn north on the first hard surface road, which is routed along the shoreline. About 300m along this road is the profile line. Profile markers are on the seaward side of the road 5m apart in clear view. Back marker height is 102cm and the front marker is 133cm high.



MHB 73

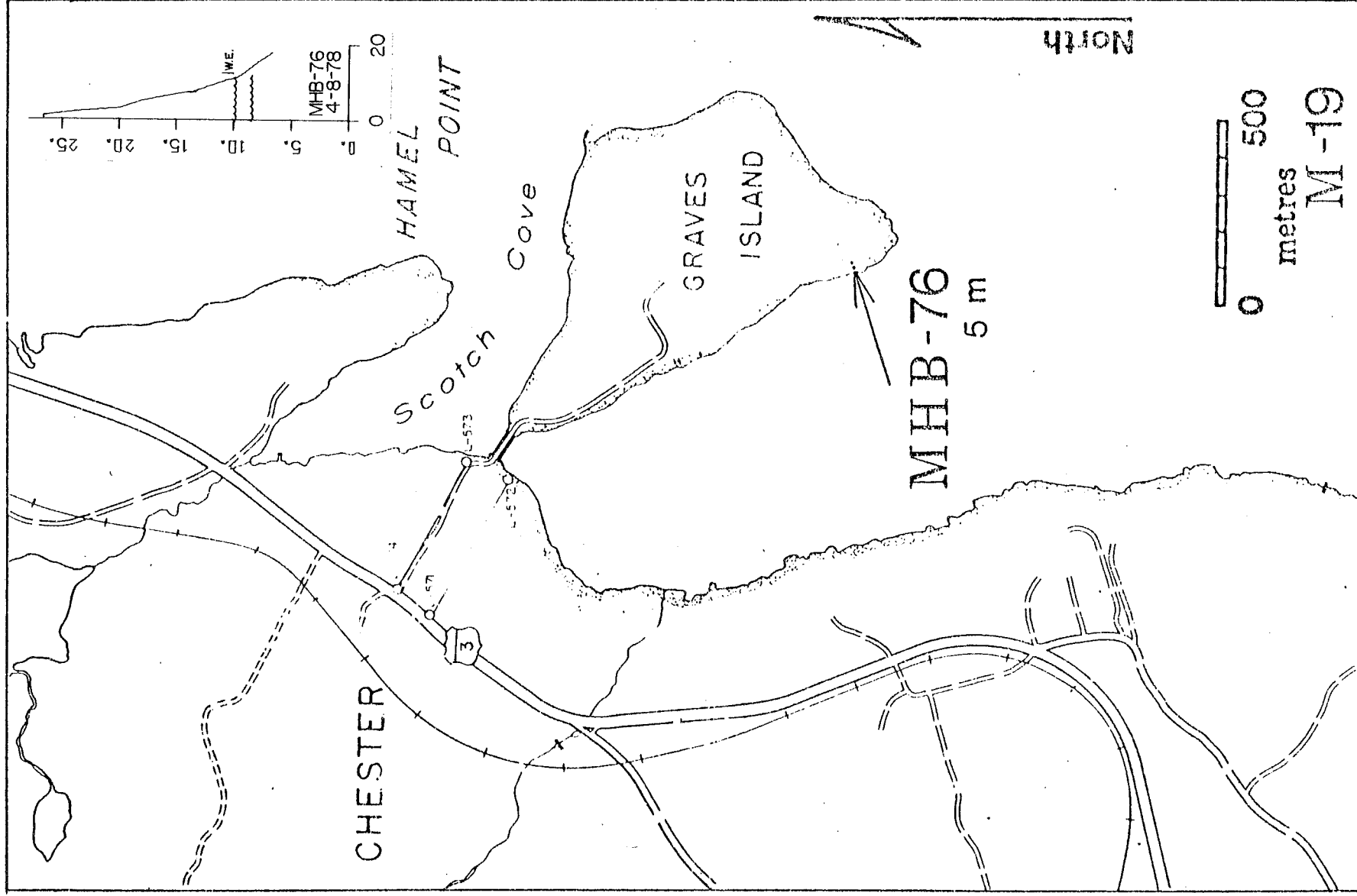
Driving west on hwy 103 from Halifax take exit 7 to trunk 3 and turn east. At East River turn south on trunk 329 and continue to Blandford. From the Blandford School drive 1.3km and stop. Profile markers are located 5m apart on the east slope of a drumlin that forms an eroding bluff down to the back beach. Back marker height is 98cm and the front marker is 100cm high.



MHB 75

Cook's Beach

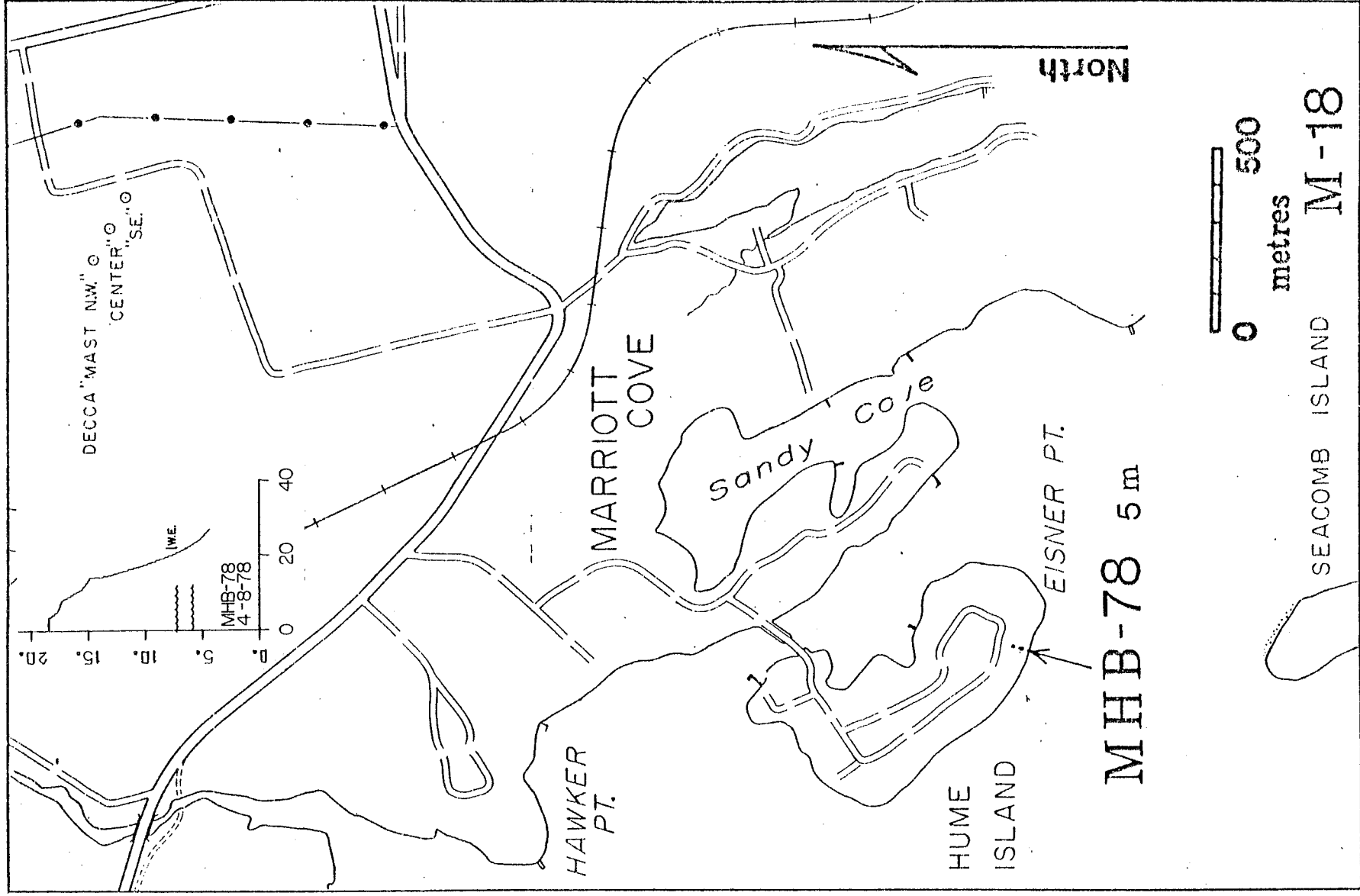
Take exit 7 off hwy 103 to trunk 3, turn east and proceed to East River and turn south on trunk 329. At the village of East River Point bear right on a loose surface road. Profile markers are located landward of Cook's Beach 5m apart. Back marker height is 101cm and the front marker is 104cm high.



MHB 76

Graves Island

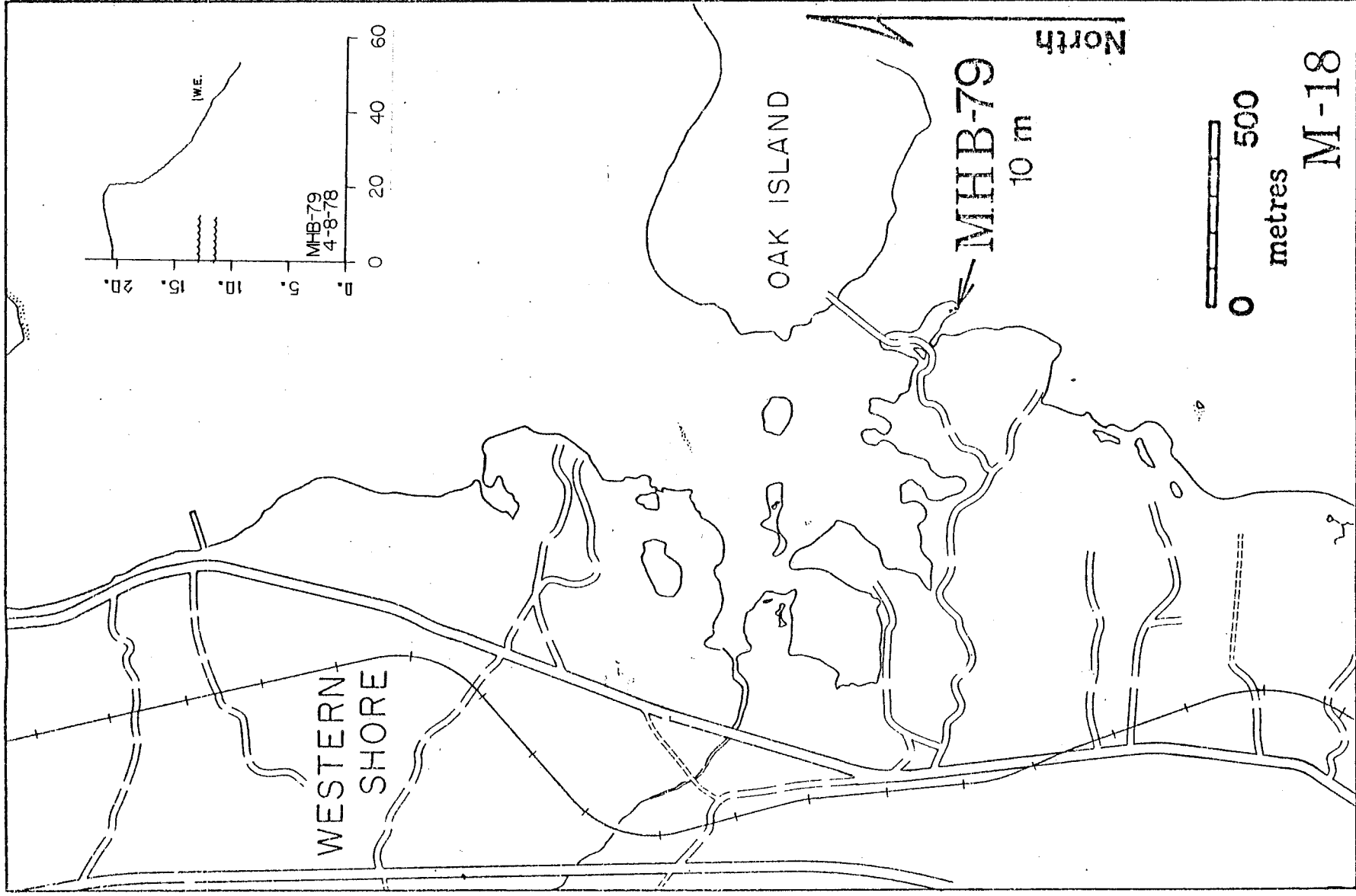
Drive to Graves Island Provincial Park about 0.5km east of East Chester School on trunk 3. Enter the park and drive to camp site #17. Profile markers are located on the slope leading from this site down to the water edge. Markers are 5m apart. Back marker height is 75cm and the front marker is 74cm high.



MHB 78

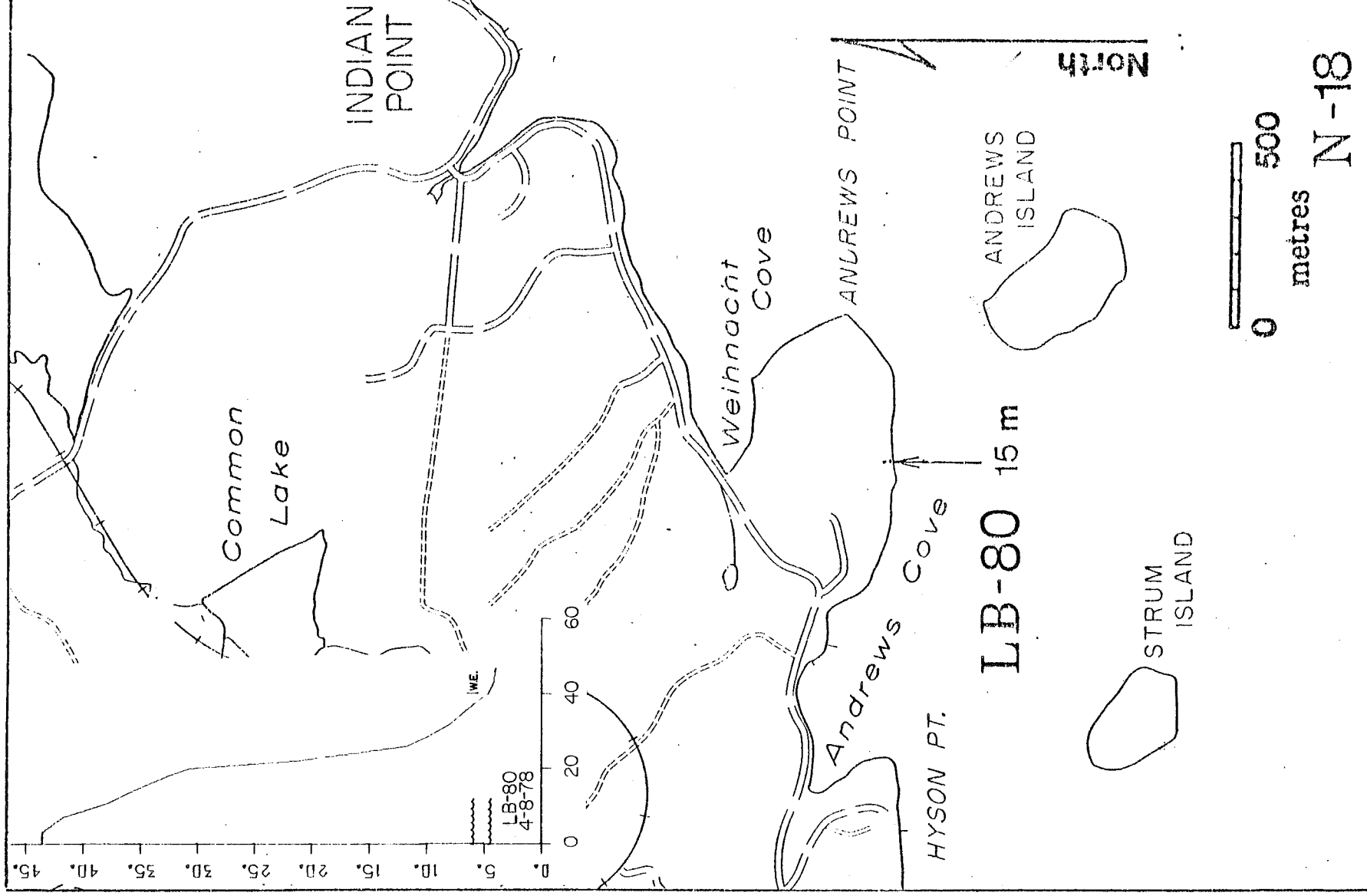
Shaw Island

From the Windjammer Motel drive west on trunk 3 a distance of 3.5km and turn left on a loose surface road to Shaw Island. Profile markers are located on the south shore of the island near the summer home guest house of Dr. McQuarrie. Markers are 5m apart. Back marker height is 110cm and the front marker is 106cm high.



MHB 79

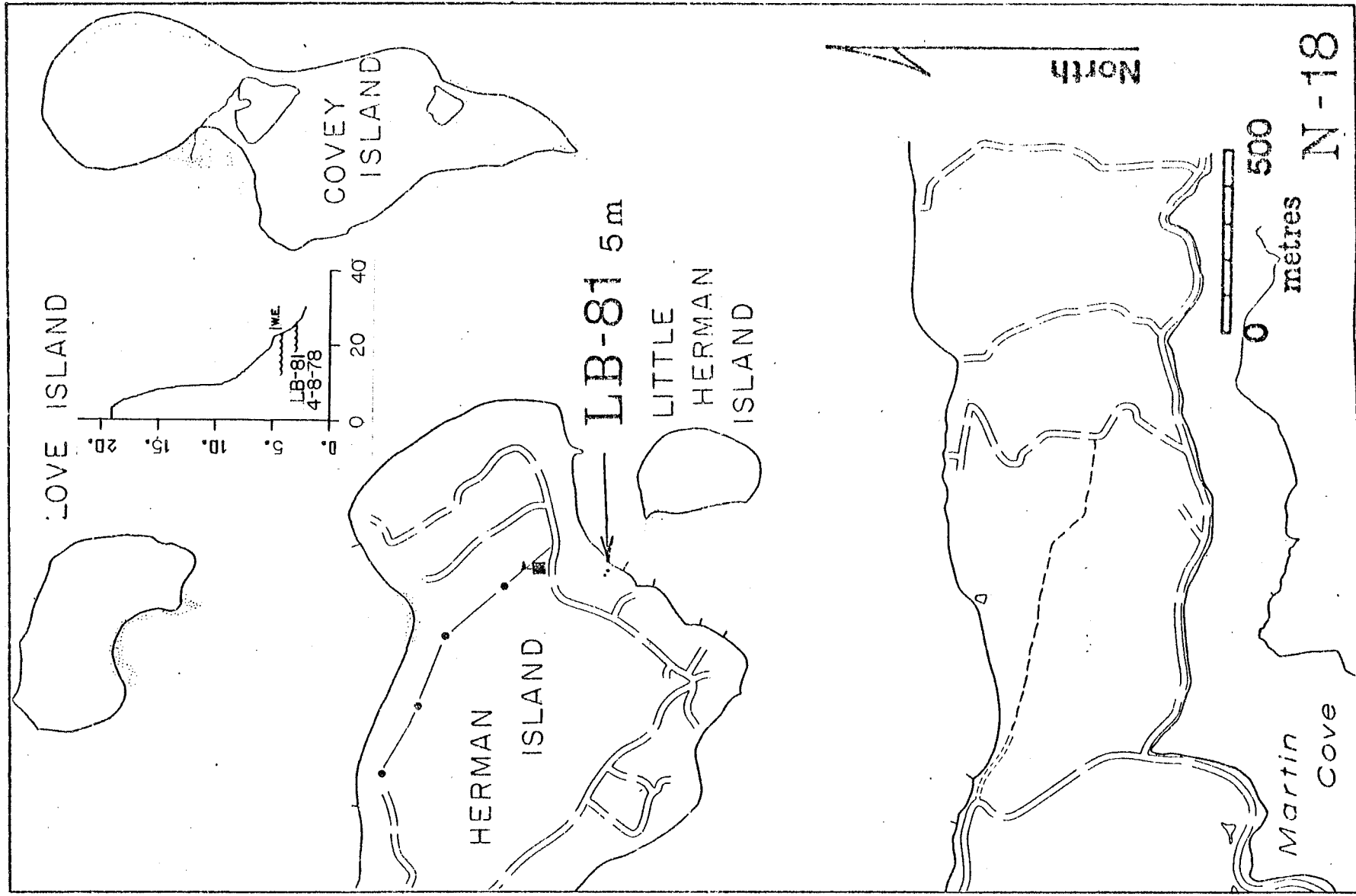
From the Western Shore post office drive south on trunk 3 for 2.0km and turn east toward Oak Island. Continue for about 1.5km and turn right to Grandall Point. Markers are located east of the small lagoon and are 11m apart. Back marker height is 115cm and the front is 128cm high.



LB 80

Andrew's Point

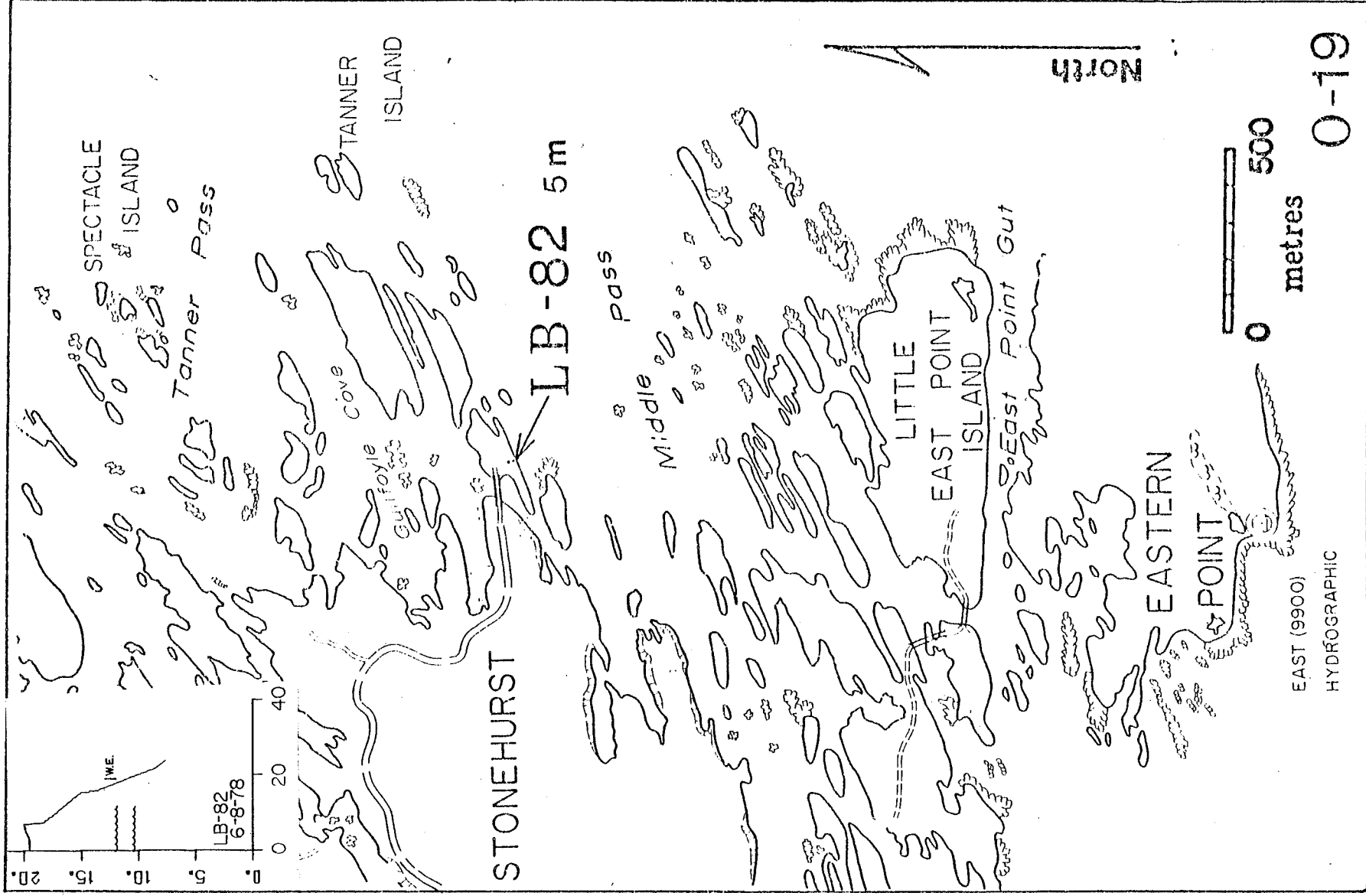
Take exit 10 from hwy 103 and turn left on trunk 3. Drive 2.5km and turn right on a loose surface road for about 0.87km and turn right. Continue to an intersection and turn right on the hard surface road. Continue for 1.6km and turn left on a lane leading to an abandoned farm house. Proceed past the farm house and barn to an old orchard. From there walk south to the water's edge. Profile markers are located 15m apart in brush on top of an eroding till bank about 5m high. Back marker height is 90cm and the front marker is 96cm high.



LB 81

Herman's Island

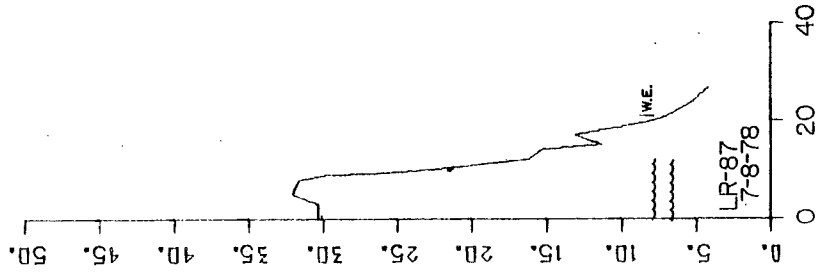
Take exit 10 off hwy 103 and turn right on trunk 3 toward Mahone Bay. Drive through Mahone Bay and turn left at Mader's Cove, about 6.4km. Continue for another 2.85km and turn left onto Herman's Island. The profile line extends from Herman's Island toward Little Herman Island. Profile markers are at a point where the distance between these two islands is the least. Markers are about 25m northeast of a boat launch and are 5m apart. The front marker is 120cm and is located in brush at the edge of the back beach. The back markers is 5m landward of the front and is 110cm high.



LB 82

Stonehurst East

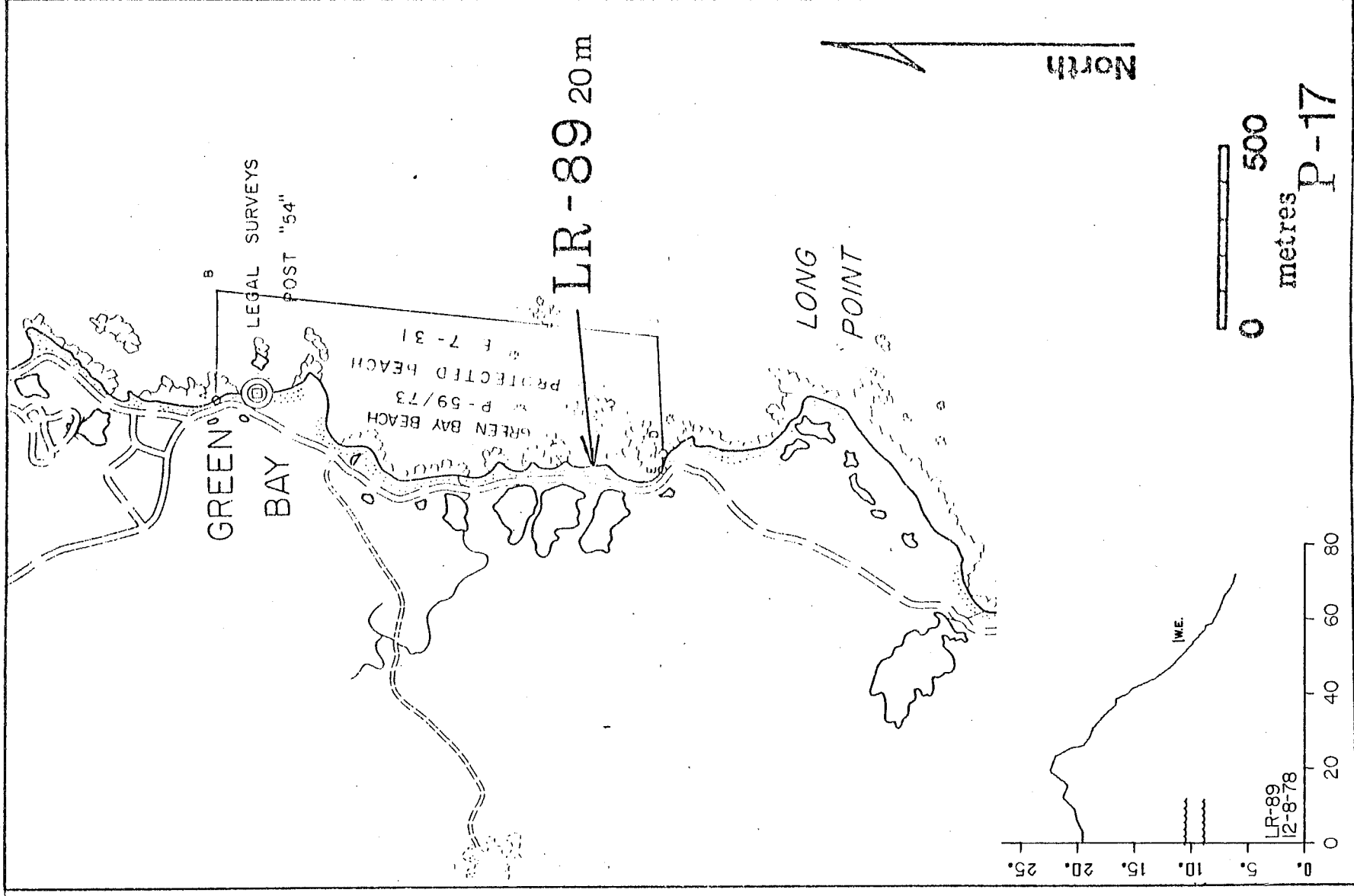
Take exit 11 off hwy 103 onto trunk 324 and proceed through Lunenburg to the village of Blue Rocks and then to the end of the road in Stonehurst East. Walk across the foot bridge to a small island. Profile markers are 5m apart on the south side of this island which is mostly outcrop. Back marker height is 119cm and the front marker is 146cm high.



LR 87

Dublin Shore

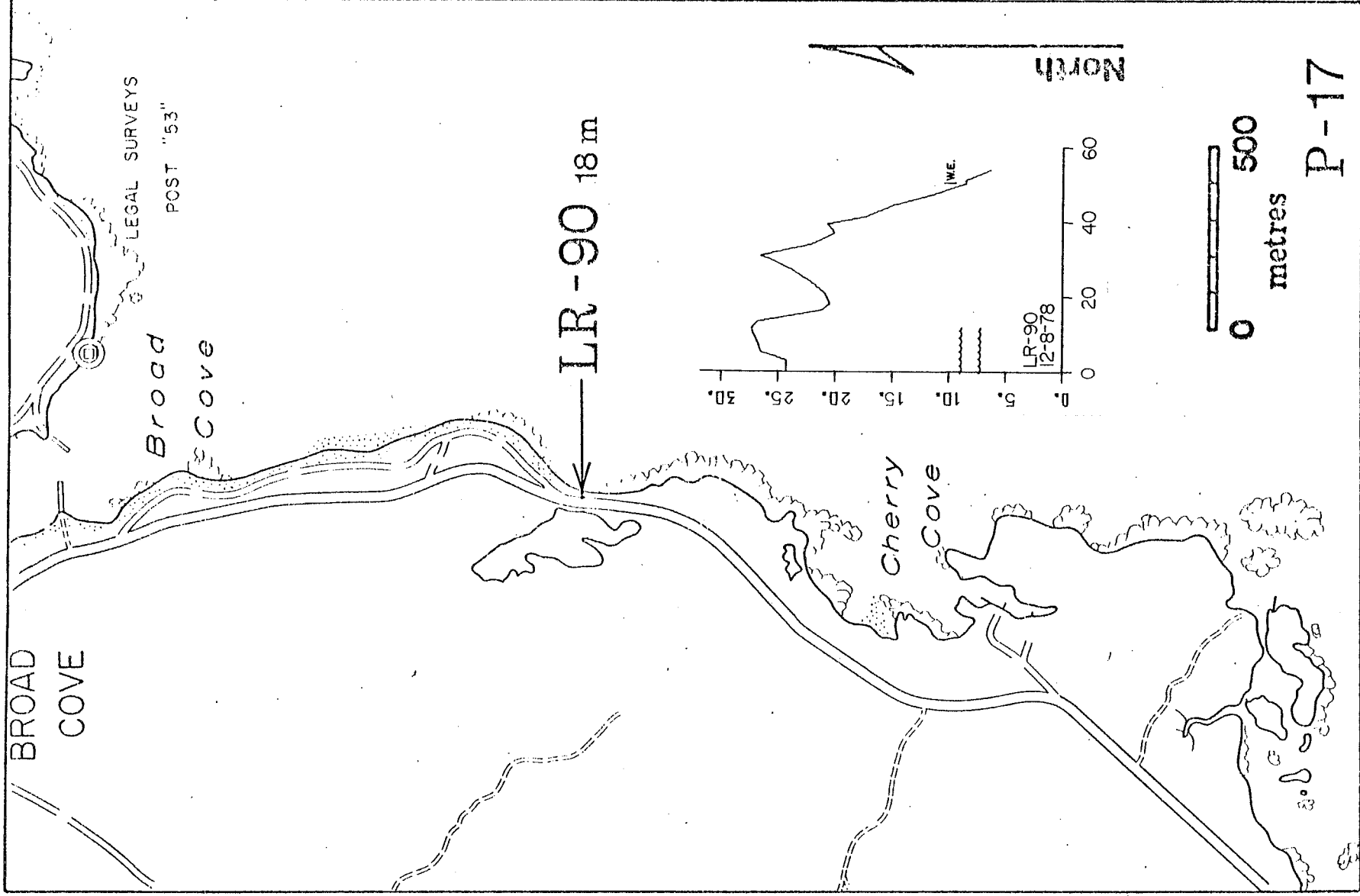
Take exit 13 and drive down the west side of the LaHave River on trunk 331. From the LaHave post office drive a further 2.13km and the profile markers are visible on the river side of the road, 5m apart. Back marker is 112cm high and the front has a height of 112cm.



LR 89

Green Bay Beach

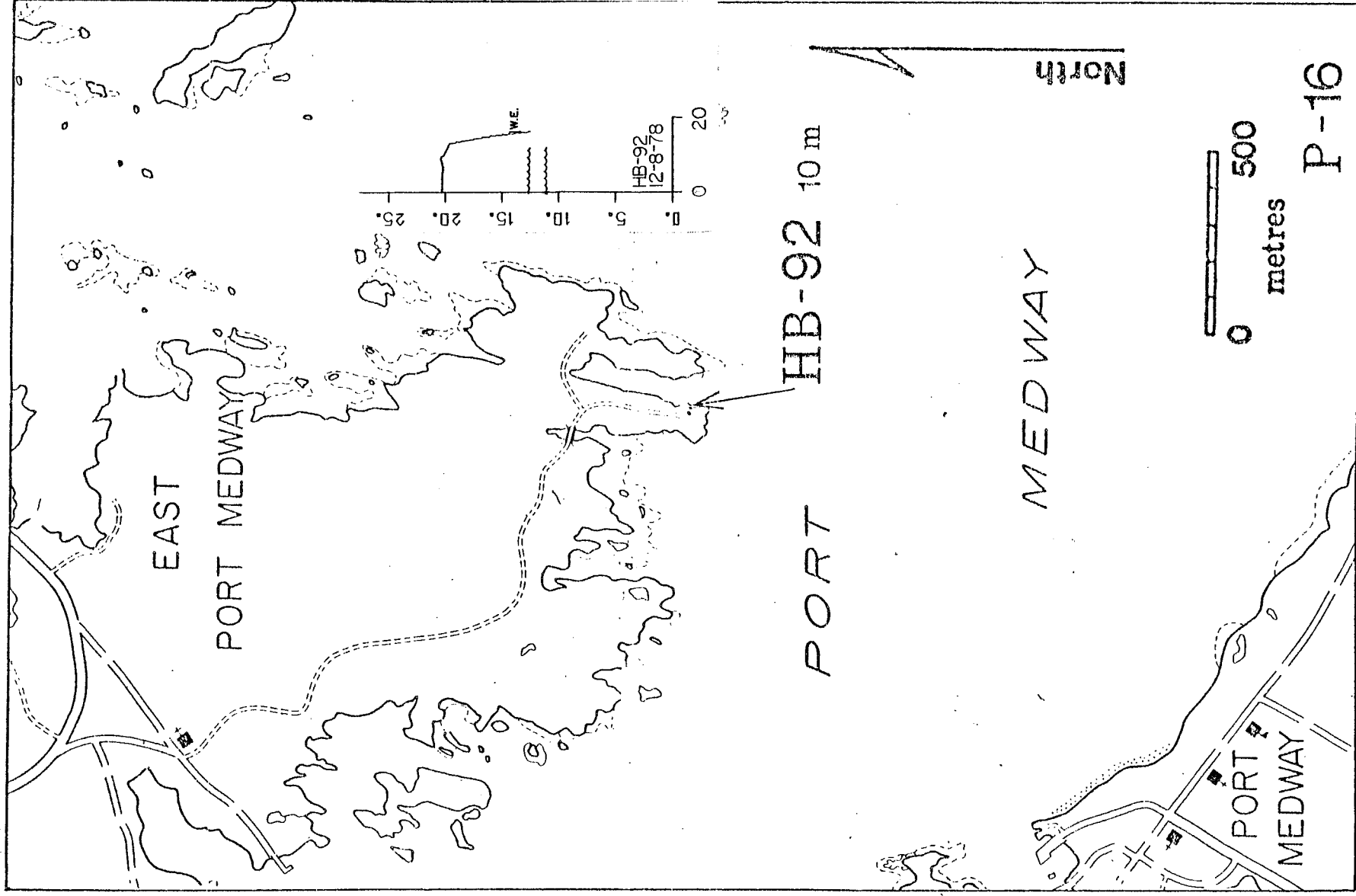
From Bridgewater drive on trunk 331 down the west side of the LaHave River. Cross the Petite Riviere bridge and immediately turn left. Continue on this road until you reach the Stage Ponds, west of the road, approx. 3.6km and stop. Profile markers are 20m apart and the front marker is located between the road and the back beach; height is 104cm. The back marker is 96cm high and was placed on the landward side of the road near some bushes.



LR 90

Arties Cove

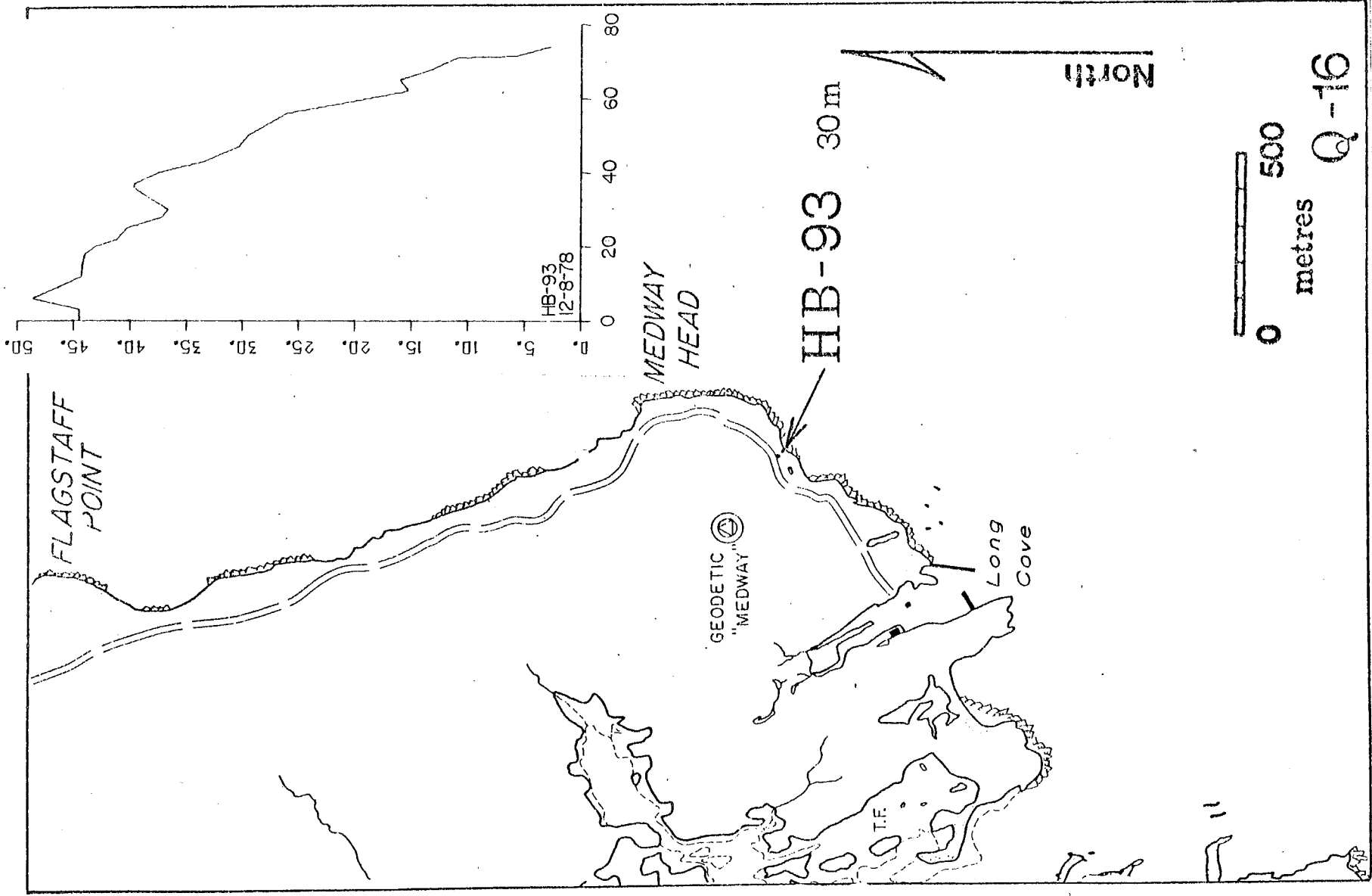
From the Petite Riviere bridge continue south on trunk 331 to Broad Cove. Bear left as you enter the village; drive 1.9km beyond the school and stop. The front profile marker is located on the seaward side of the paved road where the old road bed (still visible as a grassy trail) used to be. The front marker is 104cm high. Back profile marker is located 18m landward of the front on the other side of trunk 331, between the pond and the paved road. The back marker height is 96cm.



HB 92

Mosher's Cove

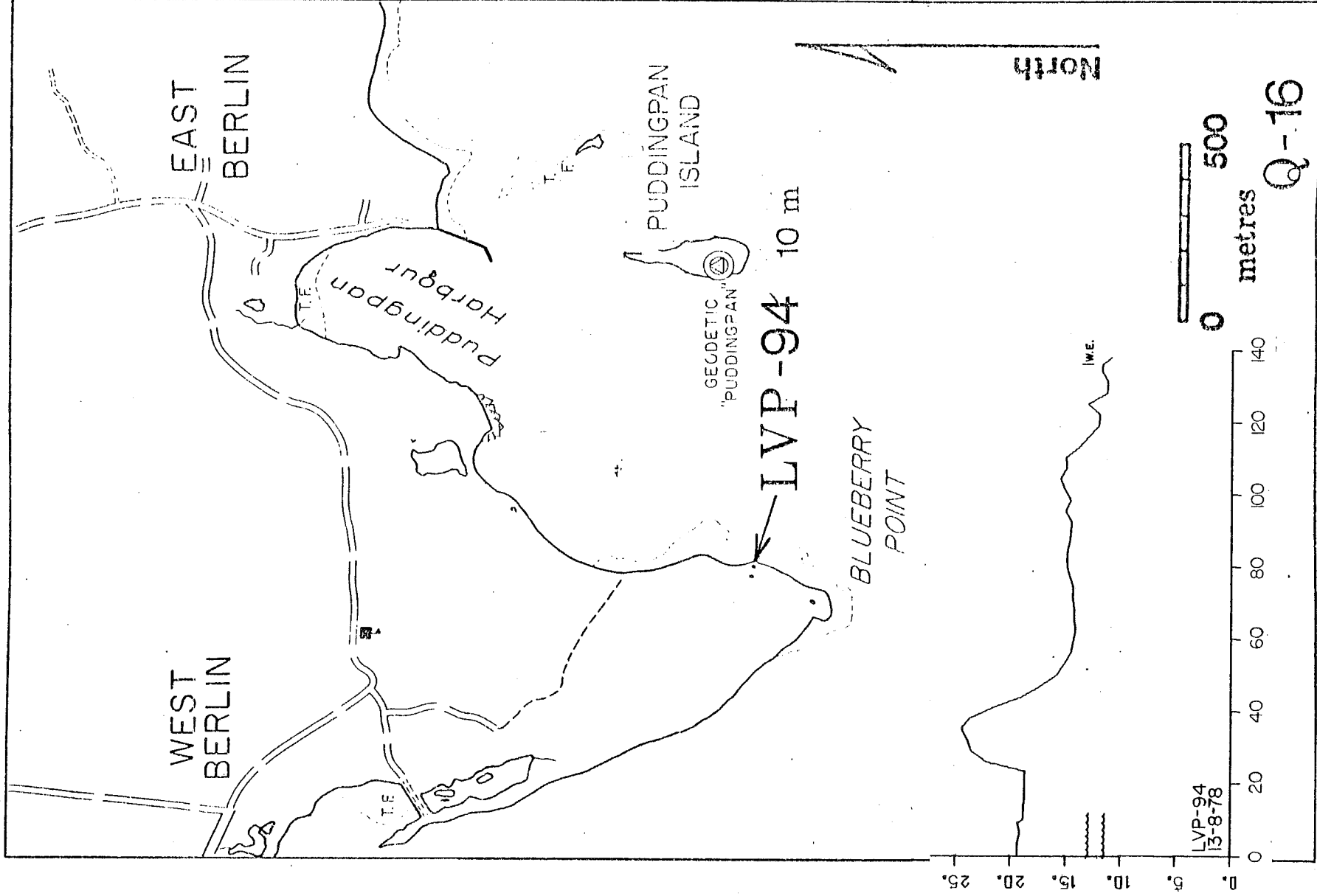
Continue on trunk 331 to East Port Medway, turn south at the church and continue to the end of the loose surface road. Walk on an old road, now grown in with bushes, south along the west side of Mosher's Cove until the road ends. Now walk toward the water's edge toward the cove, to find the profile markers 10m apart. The height of the back marker is 143cm and the front is 128cm high.



HB 93

Medway Head

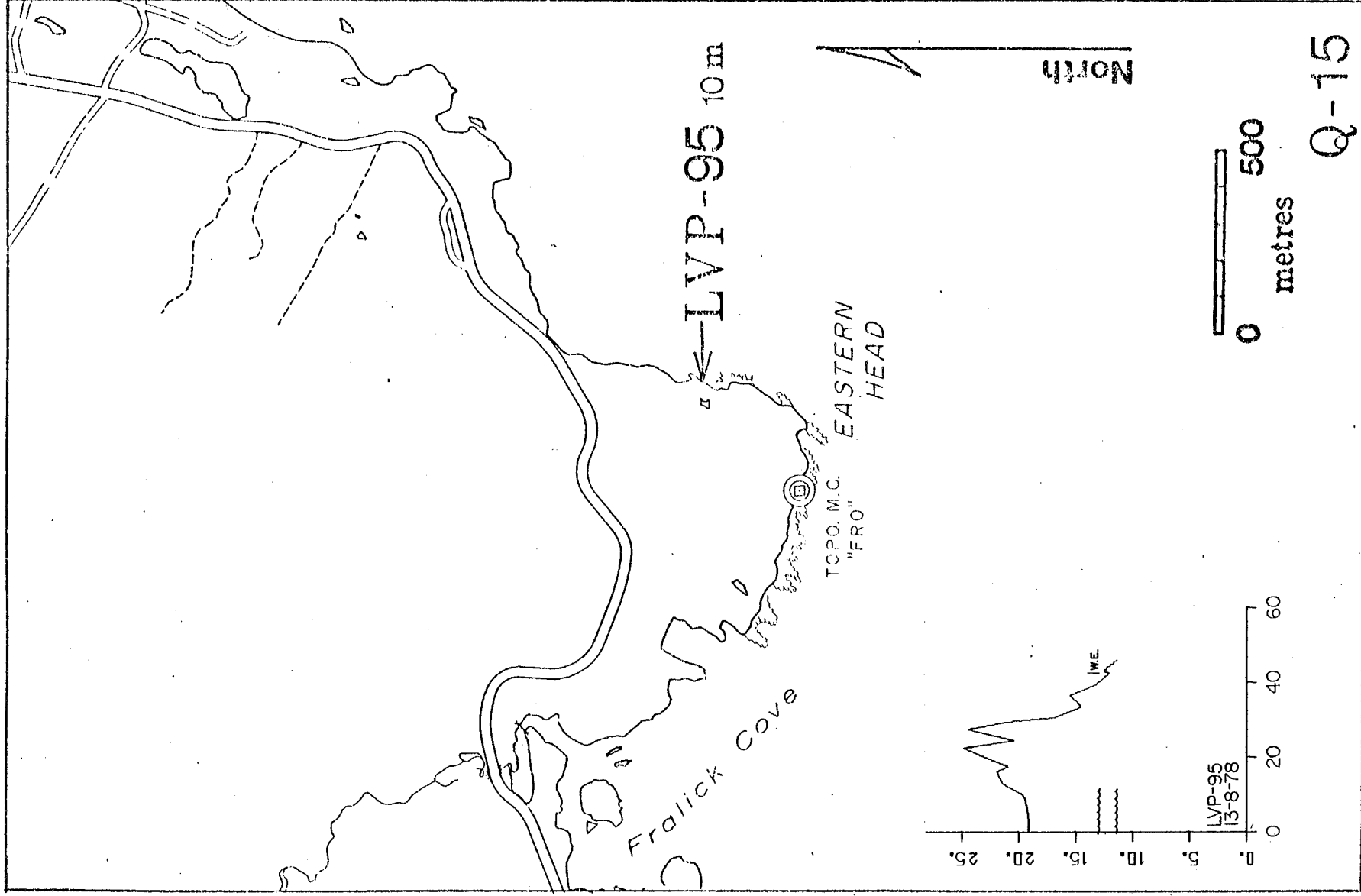
Driving southwest on hwy 103, enter Queen's County, and turn left toward Port Medway. In Port Medway turn right to Medway Head. About 60m beyond the lighthouse the profile markers are located one on either side of the road 30m apart. The back marker is 131cm high and the front marker has a height of 114cm.



LVP 94

Blueberry Point

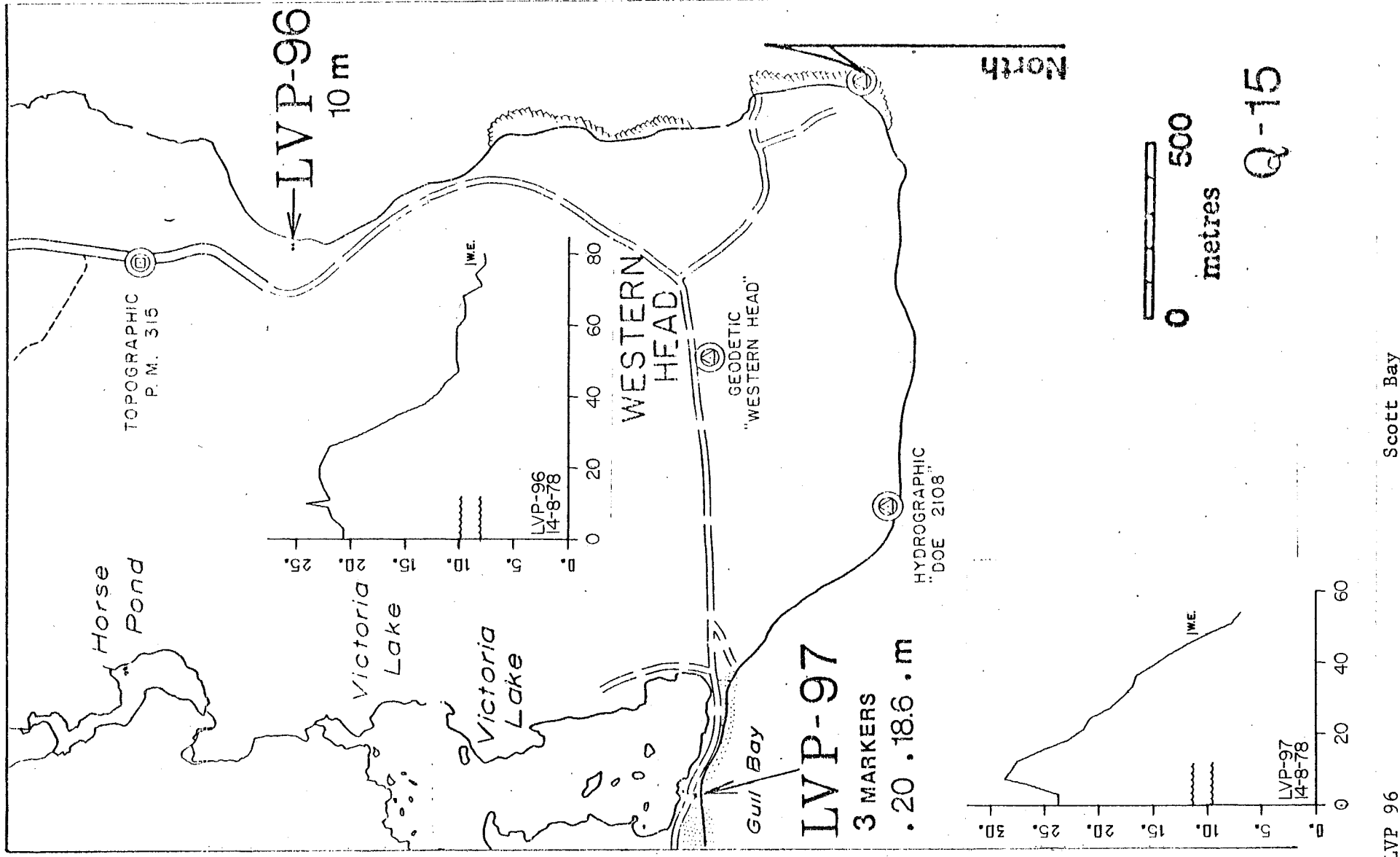
On hwy 103 cross the Medway River and turn southeast toward Port Medway; after 5km turn south toward West Berlin. In the village of West Berlin bear left toward the community hall and then take the first right. This is an old road which can be driven to the water's edge of East Berlin Bay. From the end of the road walk south along the shore approx. 400m to find the profile markers 10m apart, in a barren landward of the storm berm. Back marker height is 114cm and the front marker is 108cm high.



LVP 95

Eastern Head

Entering Brooklyn on hwy 103 cross the railroad tracks and drive straight on a loose surface road for 1.58km and turn left on hard surface road. Continue for 2.37km and stop; walk back(south) along the shore for a distance of 1.27km to find the profile markers located near the edge of the overburden 10m apart. Back marker height is 121cm and the front marker is 94cm high.



LVP 96

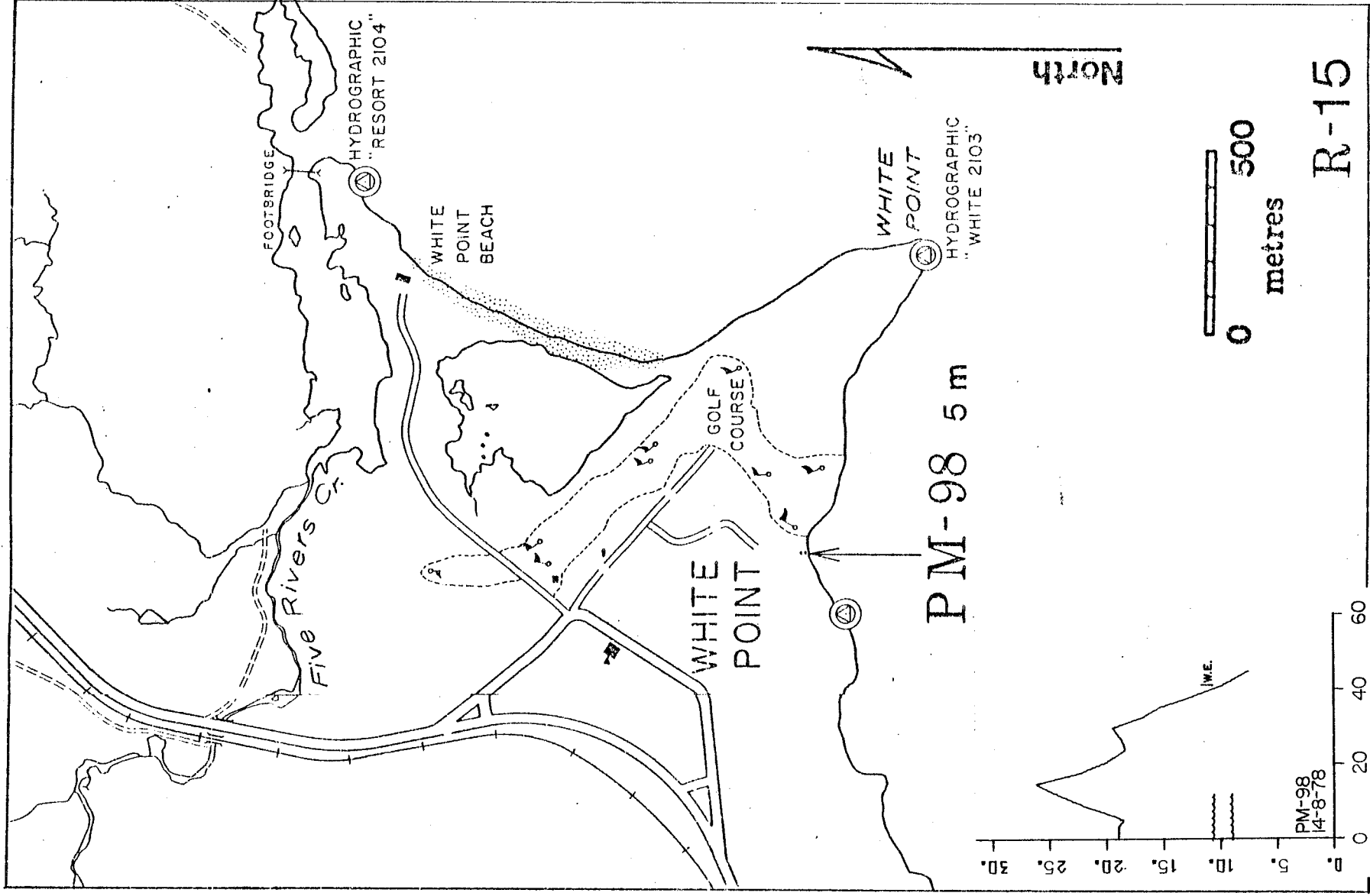
Scott Bay

From the hospital in Liverpool drive south east through Mount Pleasant for 5.4km to Scott Bay and stop. Walk across a poorly drained field to the water's edge. Profile markers are 10m apart in open view. Back marker height is 94cm and the front marker is 71cm high.

LVP 97

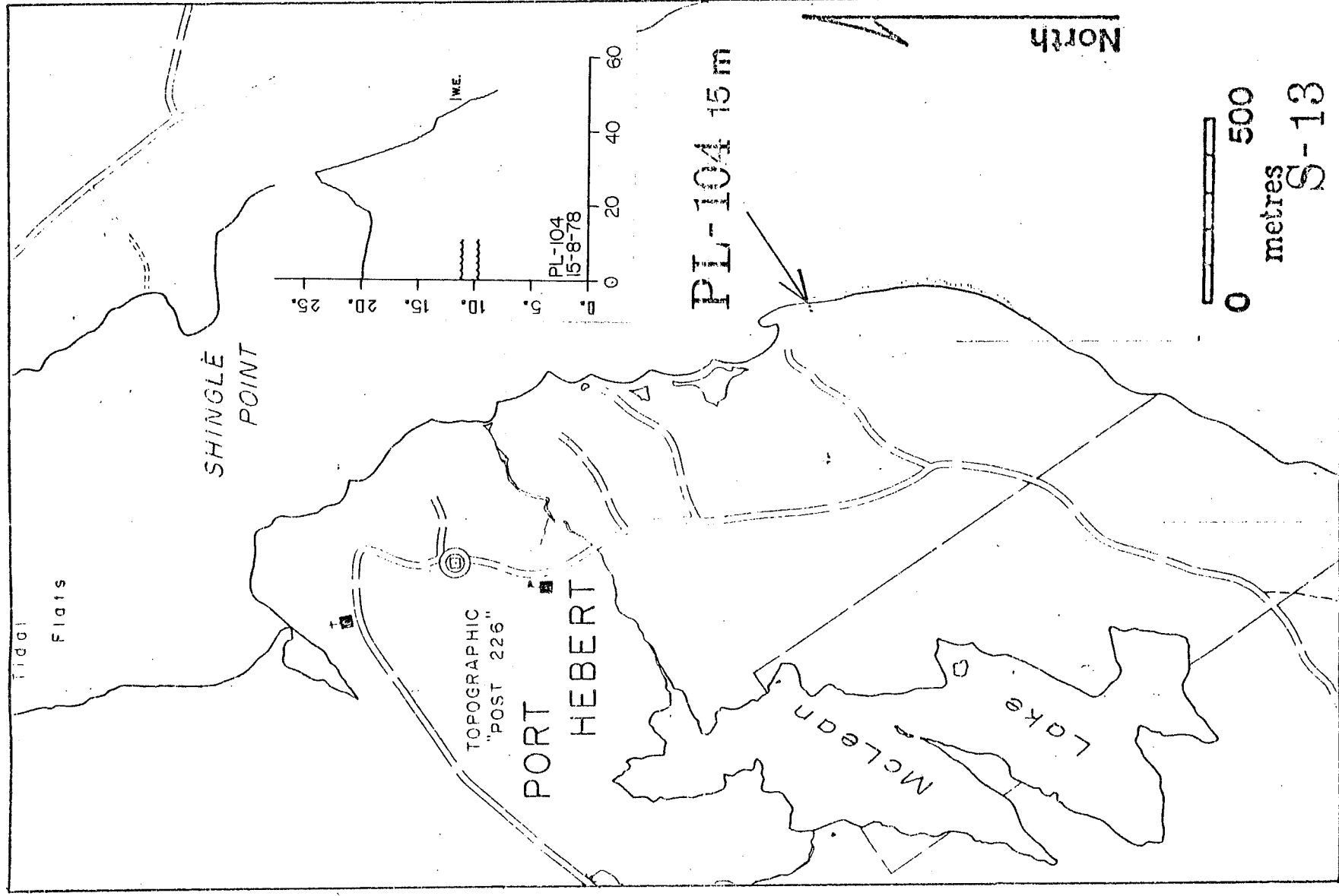
Western Head

Drive 8.1km southeast from the hospital in Liverpool through Mount Pleasant and Western Head to Gull Bay where the road is built behind a cobble barrier beach which encloses Victoria Lake. Approx. 1.0km from the east end of the beach three profile markers indicate the position of the line. The rear marker is located between the road the Lake Victoria and is 94cm high. The middle marker is just north of the road and is 102cm high. The front marker is south of the road and is 97cm high.



PM 98

Leave Liverpool on trunk 3 and turn left at the White Point golf course. On hole #9 walk down to the berm crest and walk west for approx. 0.5km to find the profile markers 5m apart. Back marker height is 98cm and the front marker is 102cm high. The front marker is clearly visible on the back berm.

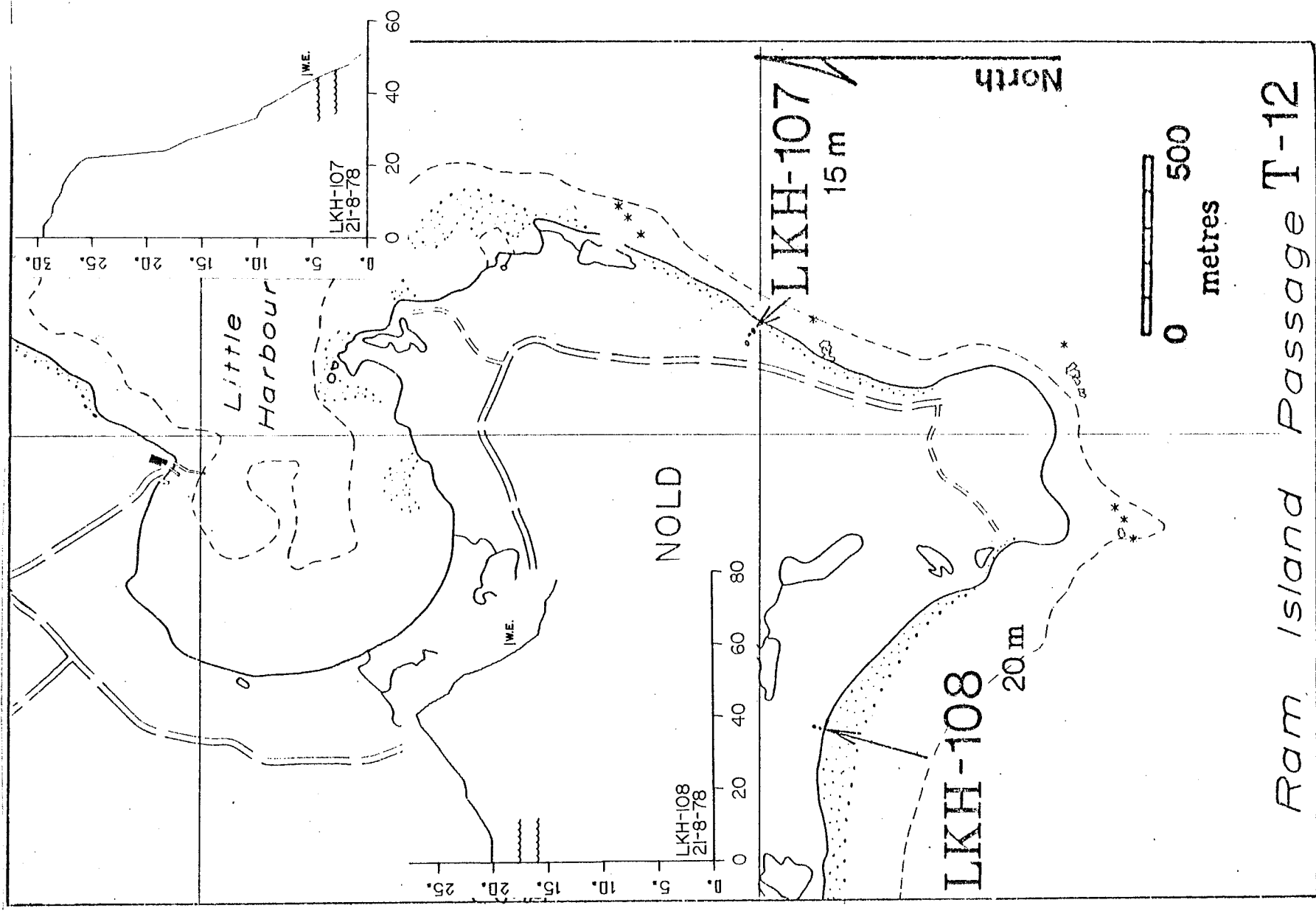


PL 104

From the point where hwy 103 intersects the boundary between Shelburne and Queen's County (Granite Village) proceed approx. 7.9km west and turn south onto a loose surface road near the village of Sable River. After covering 8.6km, turn east and drive about 7.62km to Port L'Hebert and turn left into a private drive which leads to a house near the shore, just north of Tilly's Head. Walk from the house directly to the water's edge and then walk about 200m south to find the two profile markers located 15m apart in relict dunes behind a cobble storm berm. Back marker height is 98cm and the front marker is 88cm high.

LKH 107

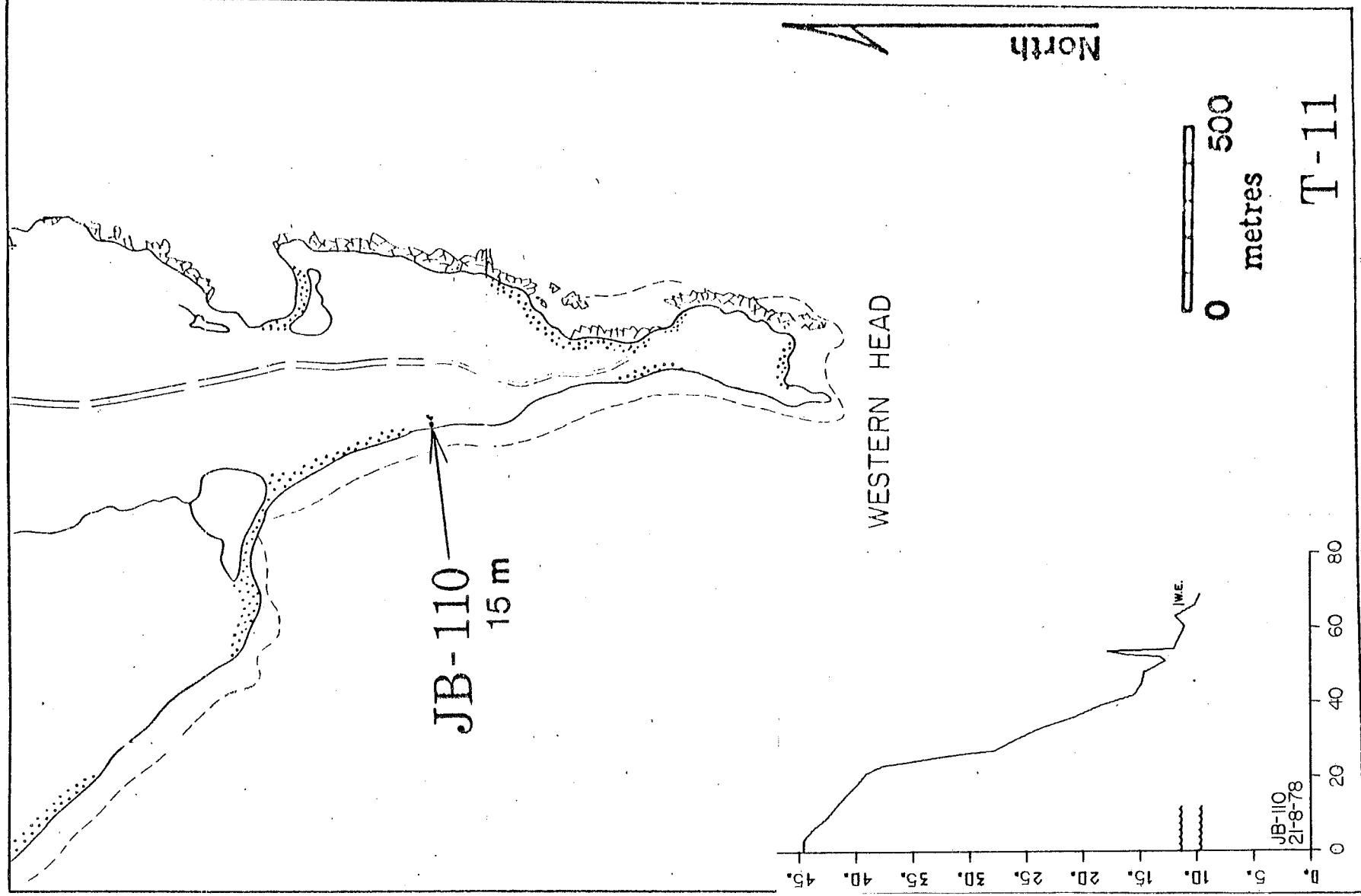
Driving west on hwy 103 in Shelburne County cross the Sable River Bridge and turn right onto trunk 3, and proceed 11.5km and turn southeast toward the village of Little Harbour. In Little Harbour turn right, drive 3.08km and stop. Walk to the water's edge. Profile markers are located in a grassy field and are 15m apart. The back marker is 110cm high and the front marker has a height of 95cm. The front marker is 10.1m away from a bank, 3.1m high, leading down to the back beach.



LKH 108

Black Point Beach

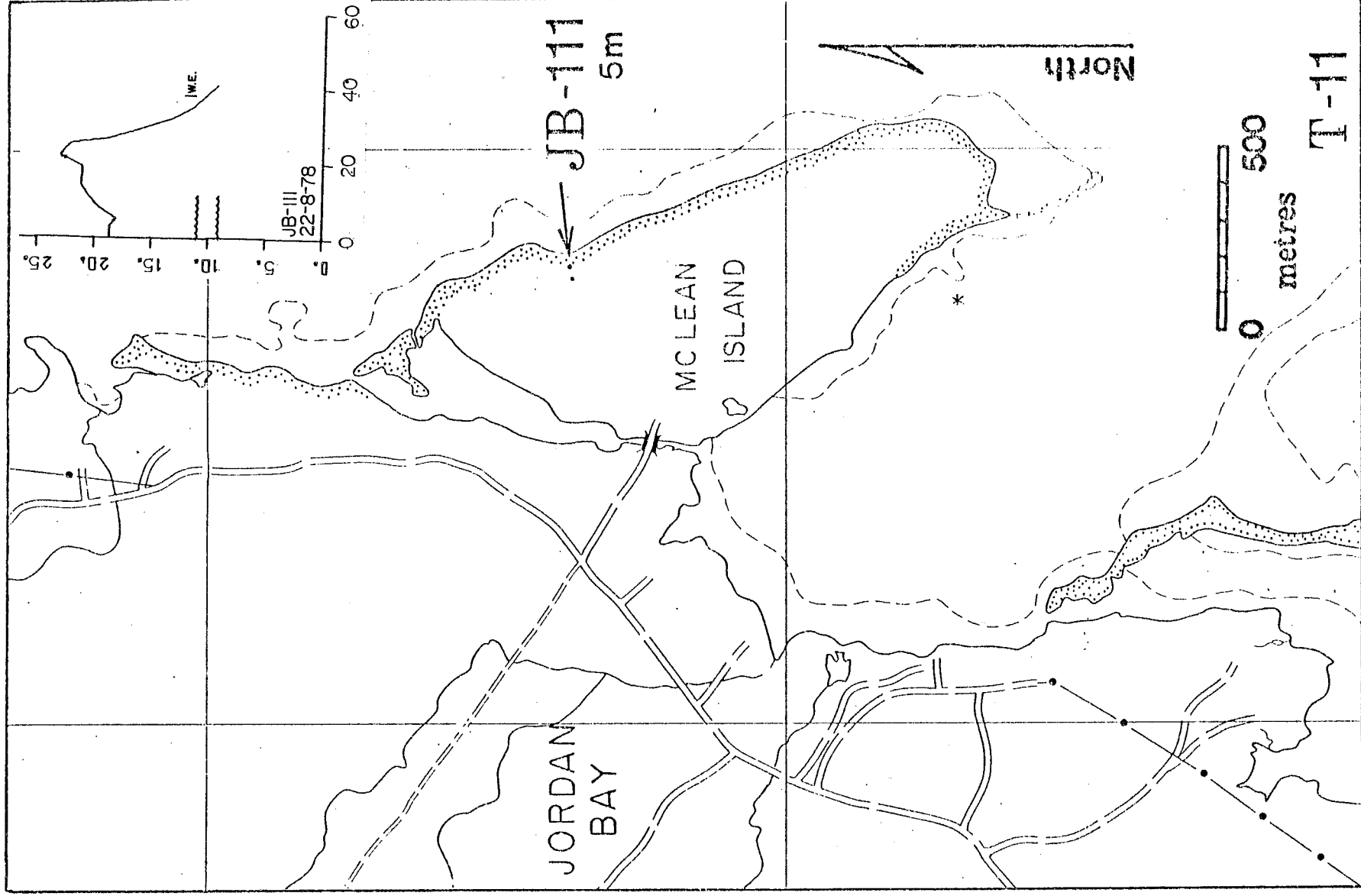
From LKH 107 continue on a trail along the coast to a cobble barrier beach known as Black Point Beach. At the east end of the beach there are two small ponds between which is the road; from the second pond continue another 600m to the area of the profile line. The profile markers are located on the back beach behind the storm berm; Back marker height is 112cm and the front marker is 20m seaward of the back, with a height of 92cm.



JB 110

Western Head

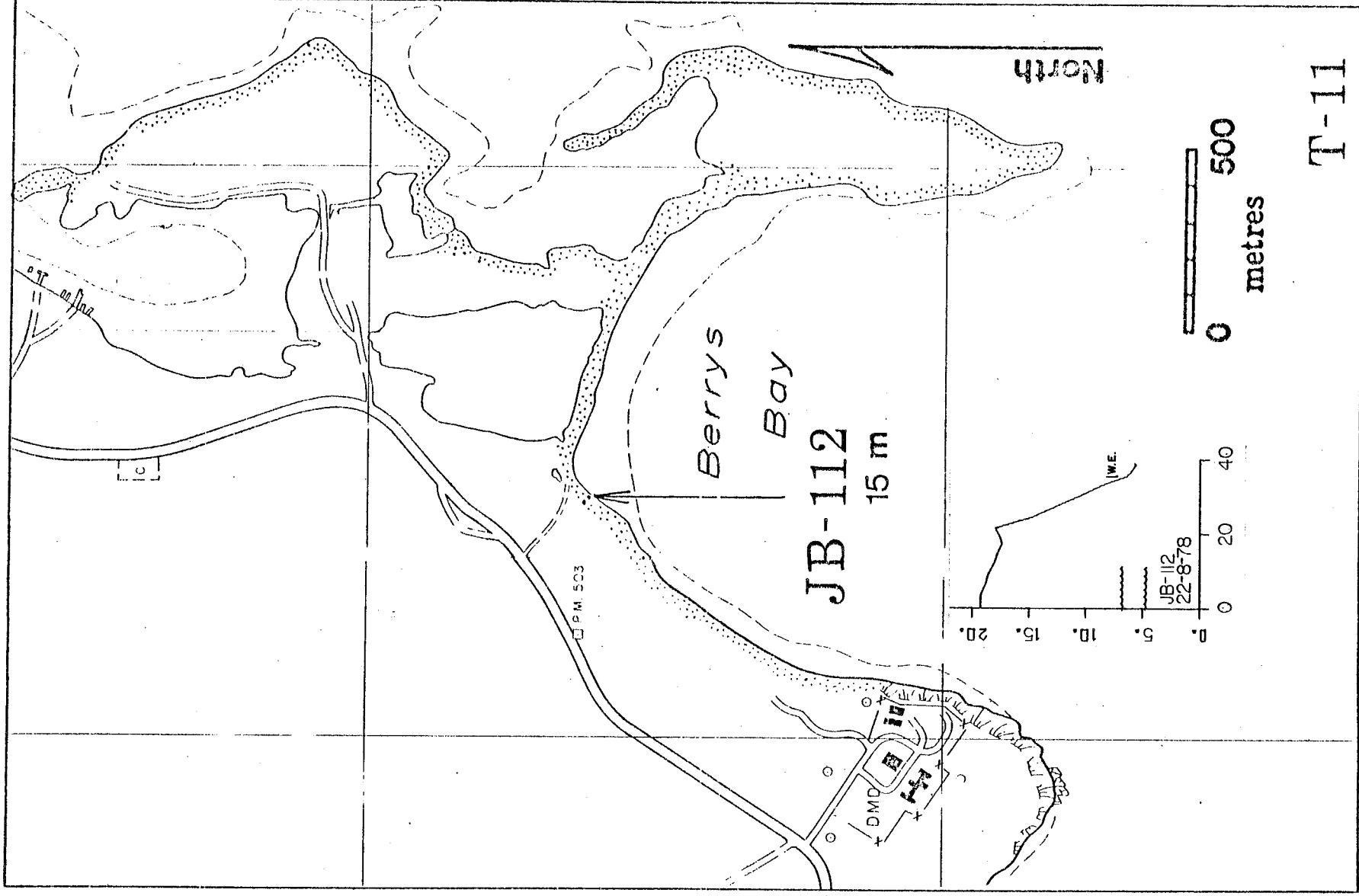
Driving west on hwy 103, cross the Sable River bridge in Shelburne County and immediately turn left on trunk 3. Proceed toward the town of Lockport and continue south to Western Head. The profile markers are located west of the radio tower, 15m apart. The front marker is 100cm high and is 8m away from a slope leading down to the back beach. Back marker height is 98cm. Both markers are clearly visible.



JB 111

McLean Island

Driving west on hwy 103, cross the Jordan River Bridge in Shelburne County, and 0.5km later turn south on a hard surface road. Continue on 4.4km and turn south toward Jordan Ferry. Proceed on this road 3.81km and turn left onto McLean Island, drive until the road ends and then walk down to the beach. The profile line is located about 25m south of where the road leads down to the beach. The markers are 5m apart, the back marker is 110cm high and partially concealed by vegetation. The front marker is readily visible at the edge of the back beach, and has a height of 98cm.

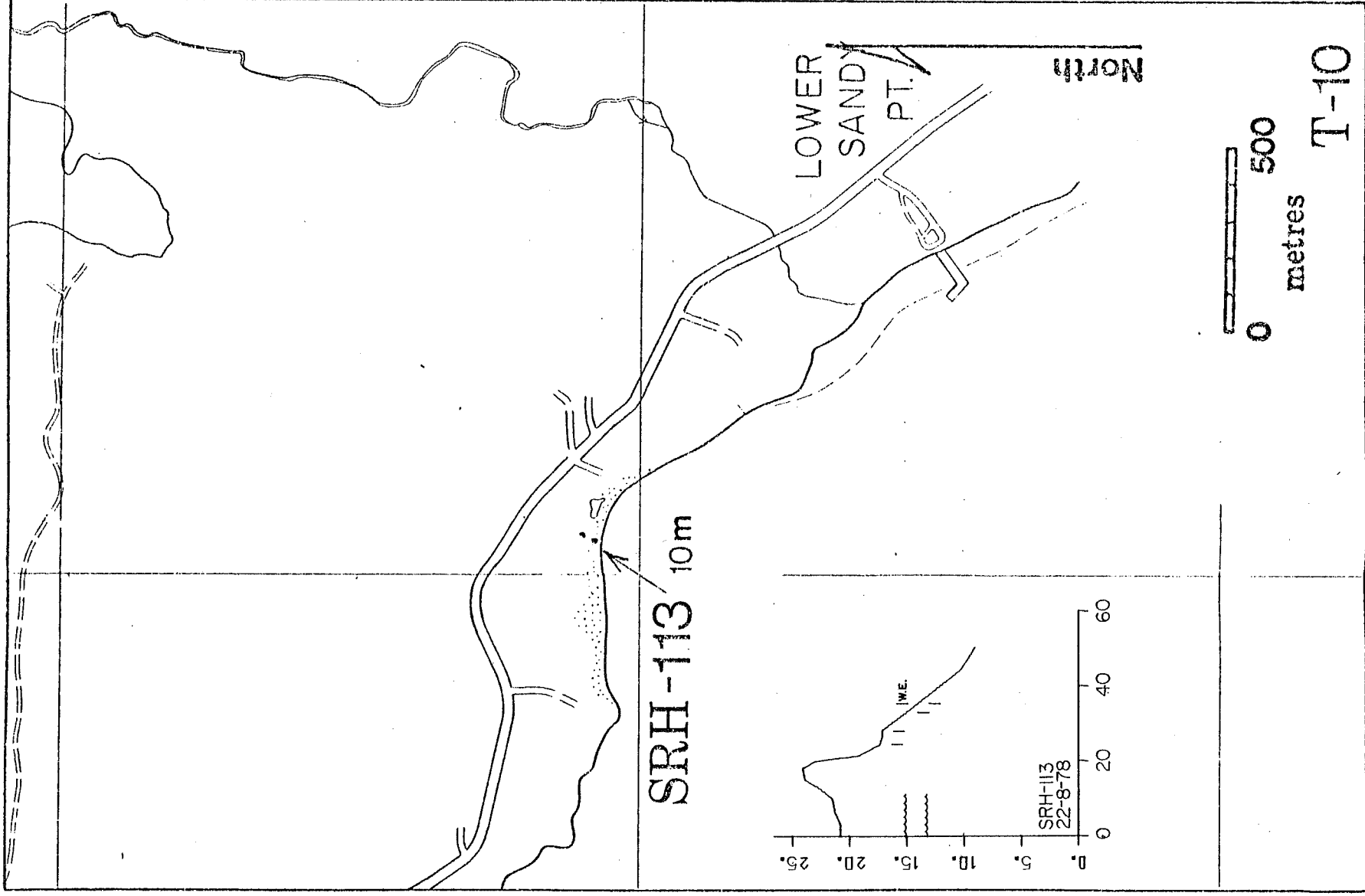


JB 112

Berry's Bay

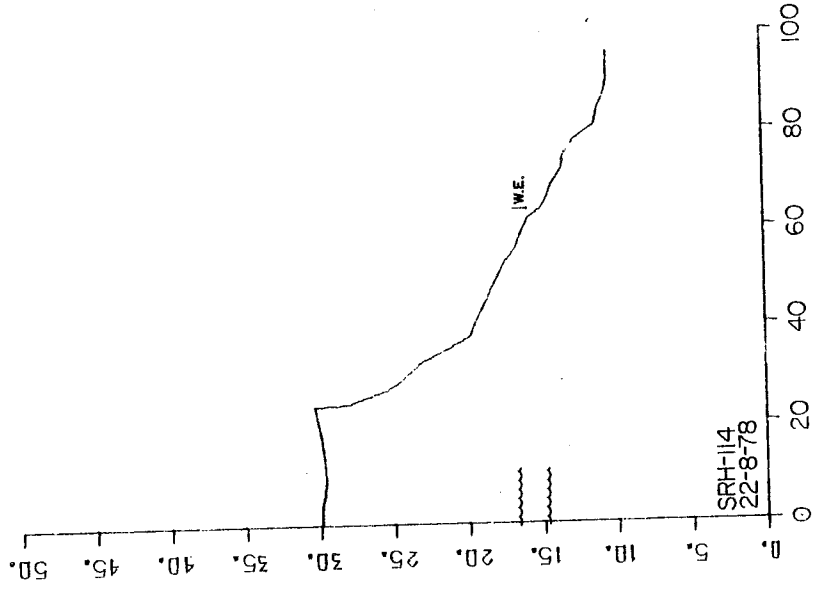
T-11

After crossing the Jordan River bridge turn south off hwy 103 onto trunk 3 and proceed to the village of Lower Jordan Bay. From the church in that village continue for another 1.7km and turn left on a loose surface road that stops near the beach by Fresh Pond. Profile markers are located between Fresh Pond and the water's edge. The back marker is on the north side of the road and is 100cm high. The front marker has a height of 99cm and is located on the south side of the road, 15m away from the back marker.



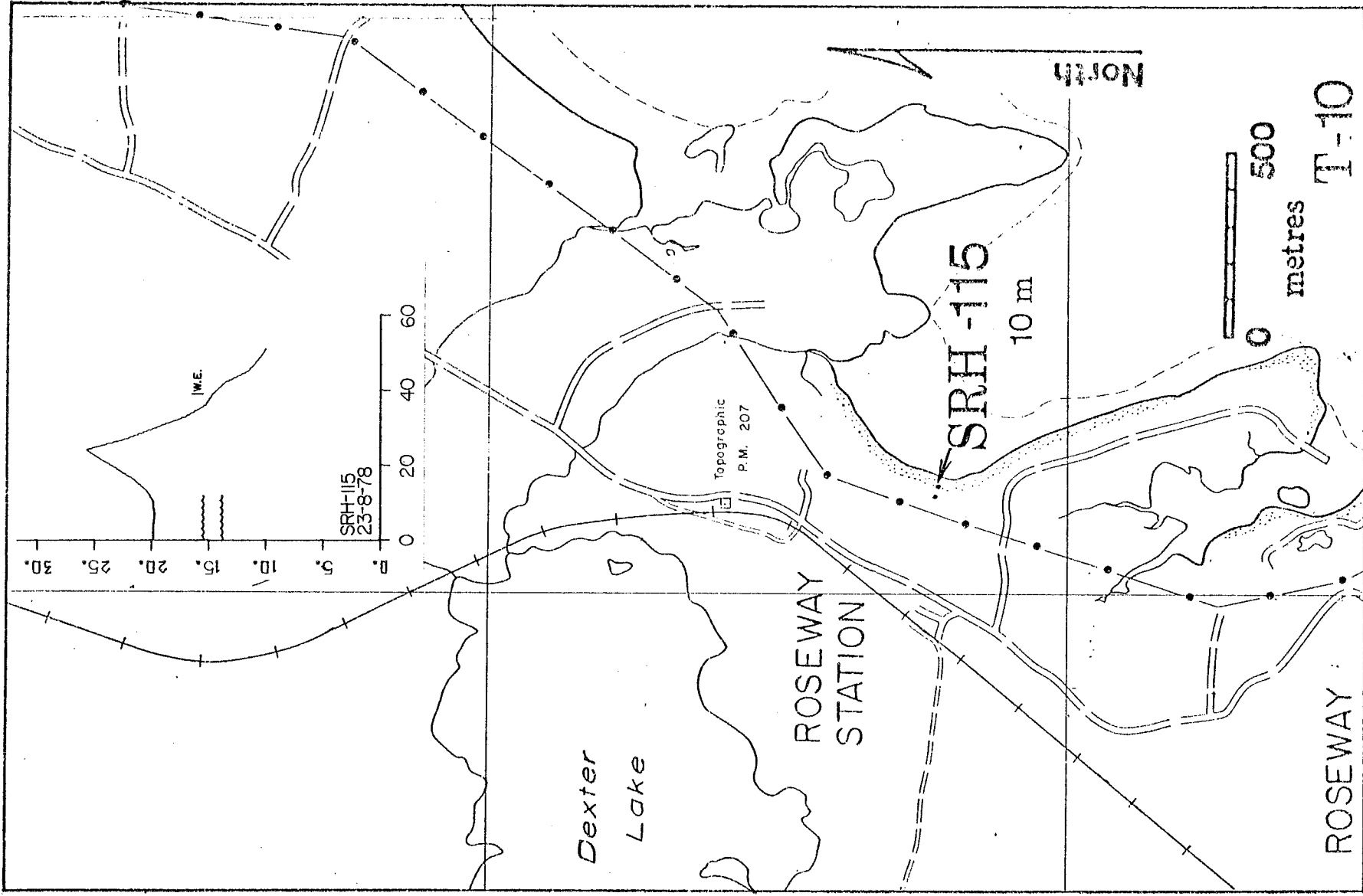
SRH 113

From the town of Shelburne proceed south along the east side of Shelburne Harbour to Sandy Point. Continue on to a point 3.64km beyond the churches of Sandy Point, and stop. There is an old road leading down to the water's edge. The profile line is about 630m northeast from where the road ends. The back marker is 95cm high and is located in dunes, sparsely vegetated with bushes. The front marker is seaward 10m and is 96cm high.



SRH 114

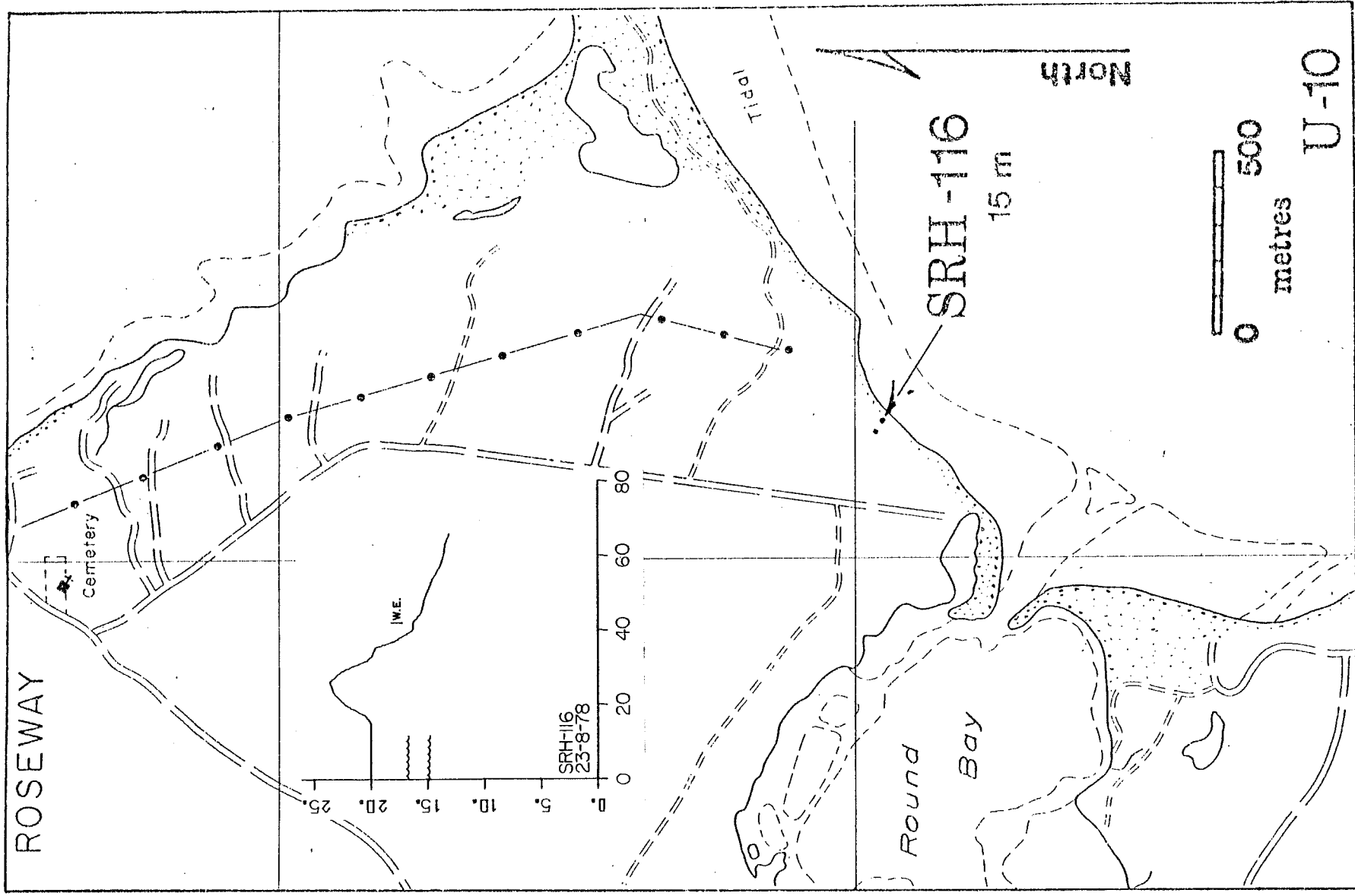
Proceed southwest out of Shelburne on trunk 3 and turn south 1.4km after crossing the Birchtown Brook bridge. Continue south and turn left on a partially grown in road 3.7km beyond the railroad crossing. Follow this road down to a field near the shore and the profile line is located at the far corner of the field. The markers are 15m apart and clearly visible. The back marker height is 110cm and the front marker is 103cm high.



SRH 115

Roseway Harbour

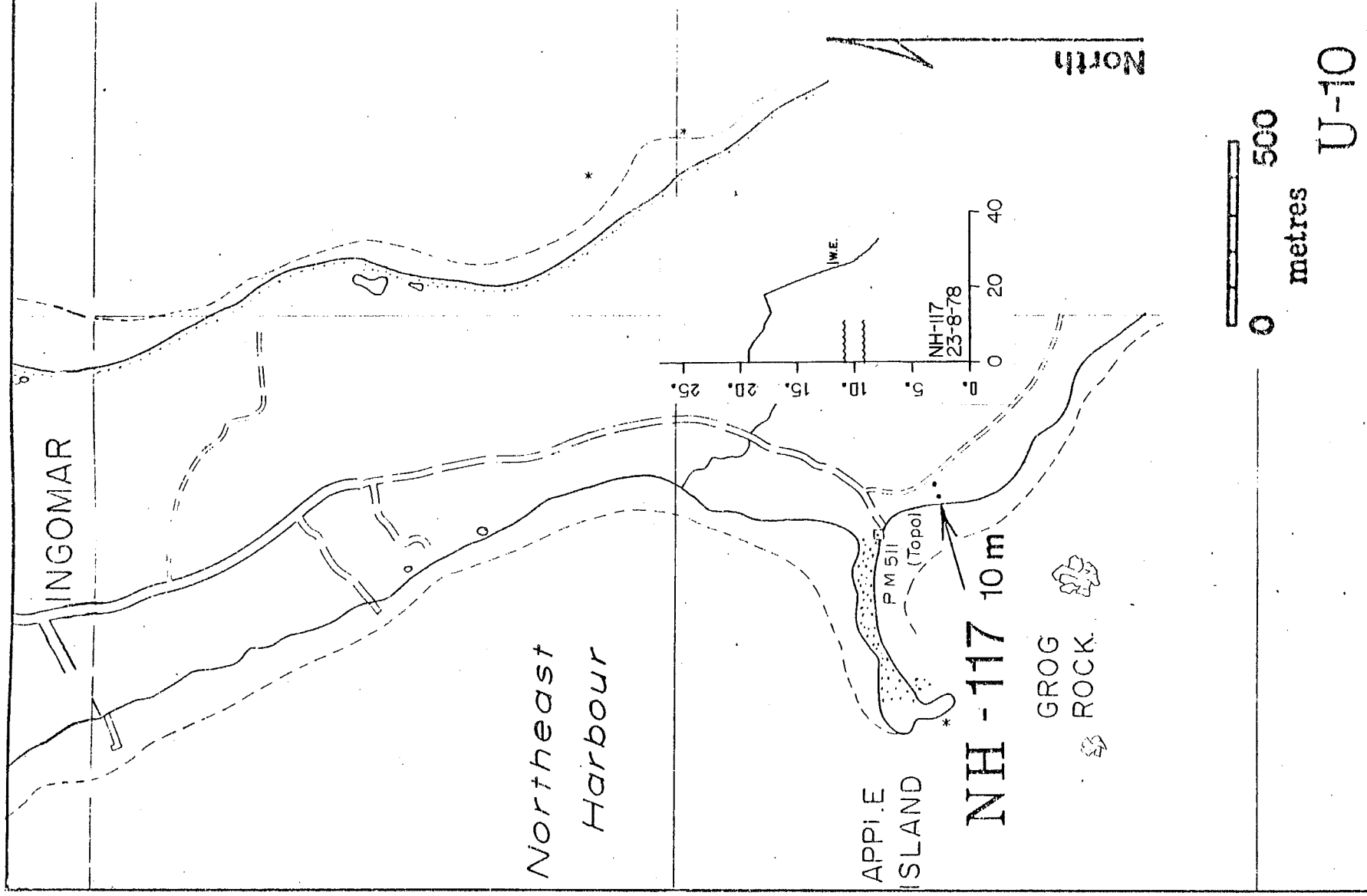
Leave Shelburne on trunk 3 and turn south 1.4km beyond the Birchtown Brook bridge. Continue to the end of the paved road, drive a further 1.8km and turn left toward Stoney Point. At the first sharp right turn in this road, stop and turn left down to the water's edge, on a partially grown in trail. Profile markers are located about 10m north of the end of this trail. The distance between the markers is 10m. Back and front marker heights are 102 and 100cm respectively.



SRH 116

Round Bay

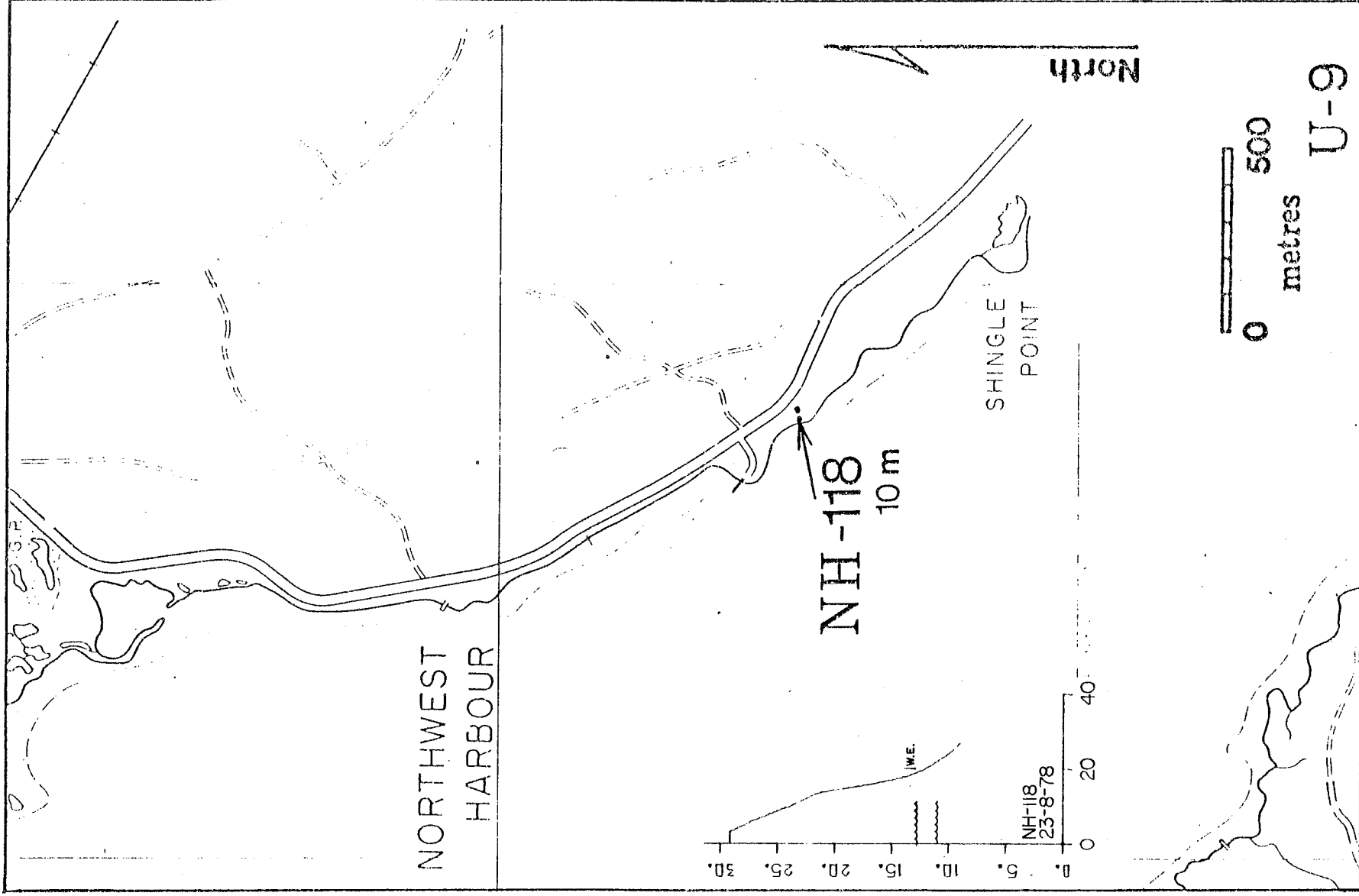
Proceeding southwest out of Shelburne on trunk 3, turn south 1.4km after crossing the Birchtown Brook bridge. Continue on to the church in the village of Roseway, and turn left 310m beyond the church. Continue to the end of the road and then walk northeast along the beach for approx. 330m, the front profile marker is located at the edge of the trees on the back beach. The back marker is 15m back into the brush and has a height of 106cm. Front marker height is 102cm.



NH 117

Apple Island

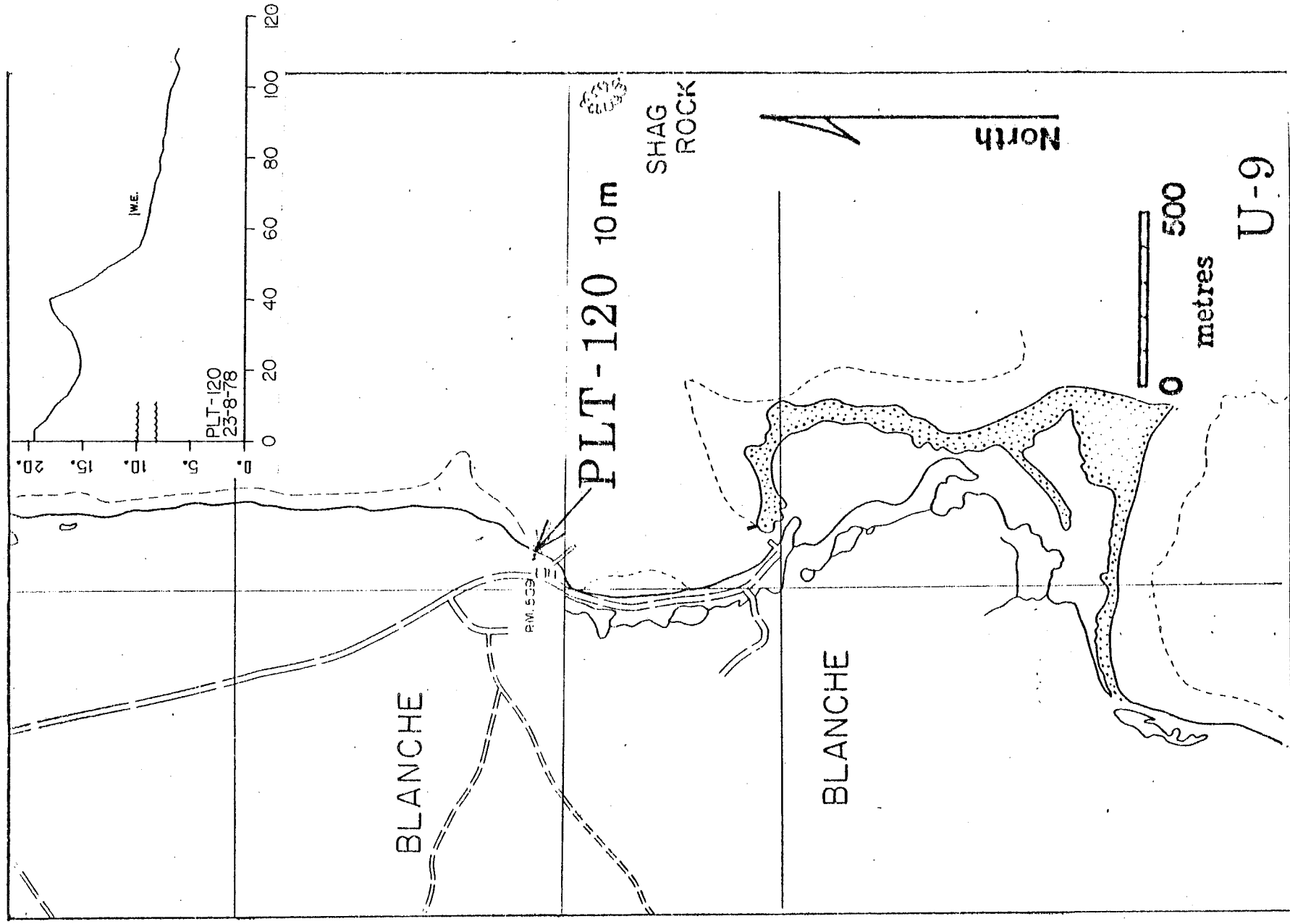
At the village of Clyde River turn south off trunk 3 and drive to Ingomar. Continue through the village of Ingomar to Apple Island. The profile markers are located about 200m south of the tombolo spit that attaches Apple Island to the mainland. Markers are 10m apart. The back and front marker heights are 128 and 112cm respectively.



NH 118

Negro Harbour

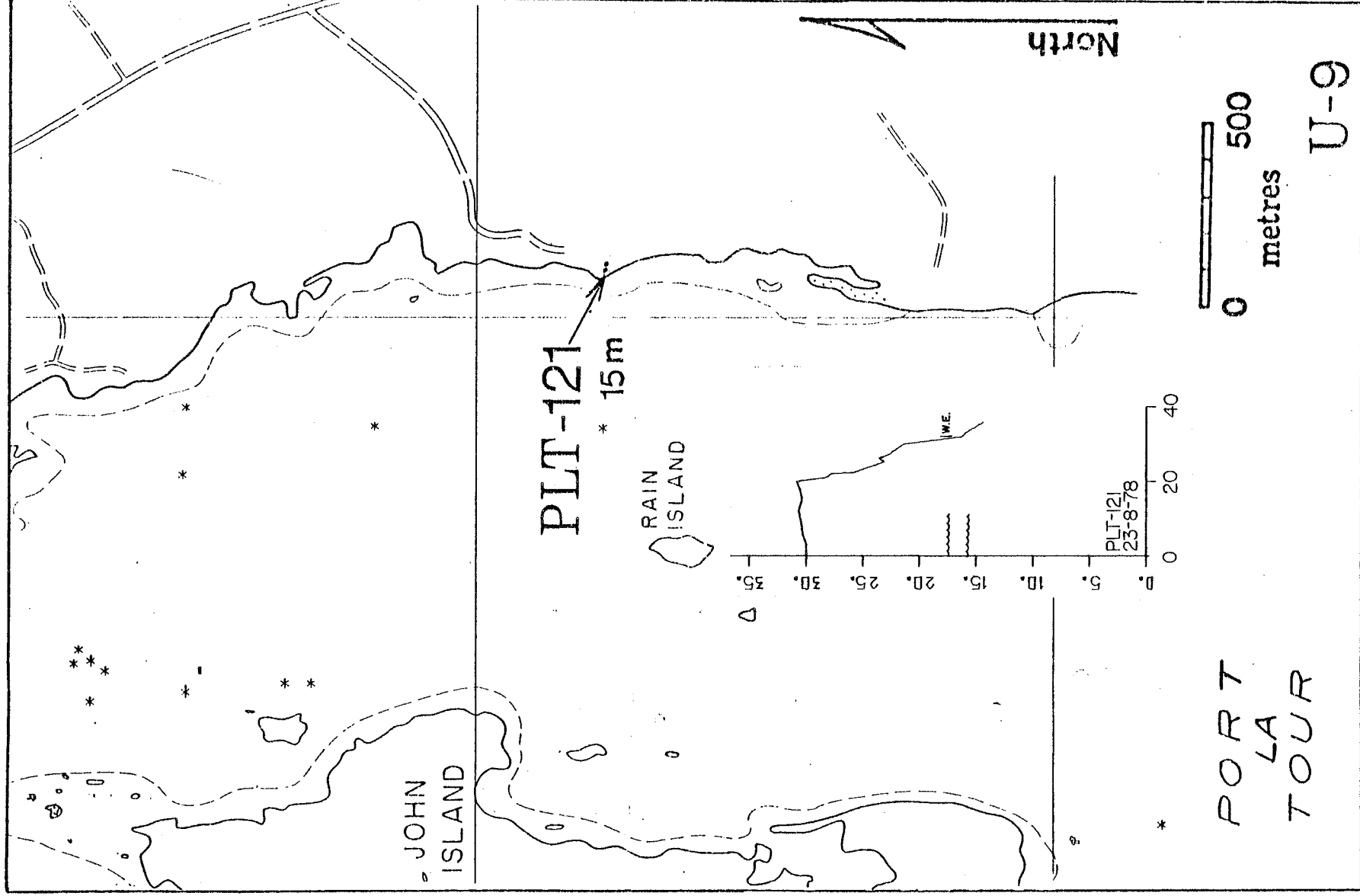
At the village of Clyde River turn south off trunk 3 and proceed to North West Harbour. Stop at the fish plant wharf and walk along the beach about 290m, to find the profile markers 10m apart on a grassy slope up from the beach. The back marker is 148cm high and the front marker height is 134cm.



PLT 120

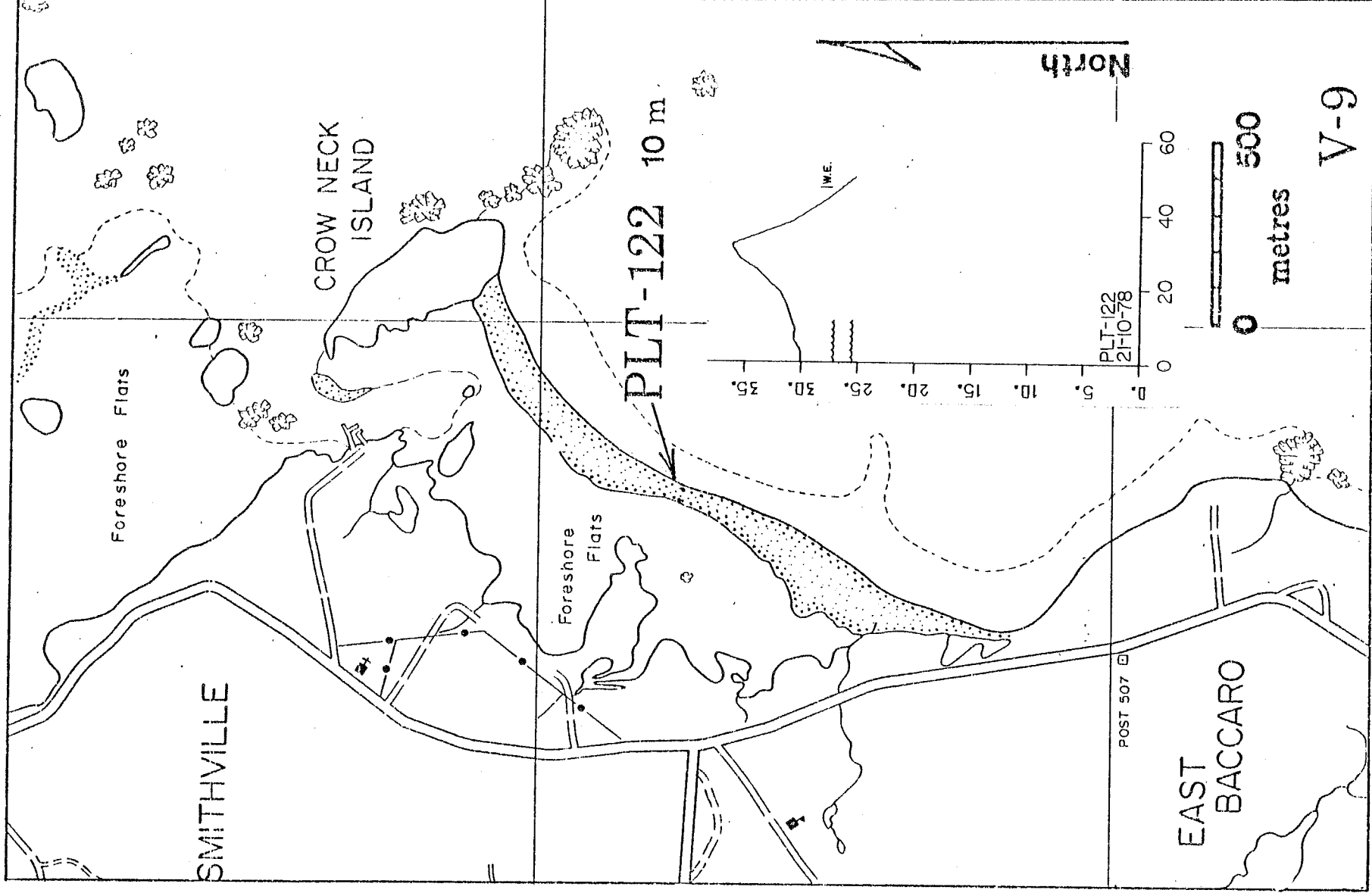
Blanche Cove

At the village of Clyde River turn south off trunk 3 and drive down the west side of Negro Harbour to the village of Blanche. Stop at the wharf and walk north along the shore from the wharf about 80m. Profile markers are located in a grassy field strewn with timbers deposited by storm swash. The markers are 10m apart and the back marker height is 129cm. The front marker is 120cm high.



PLT 121

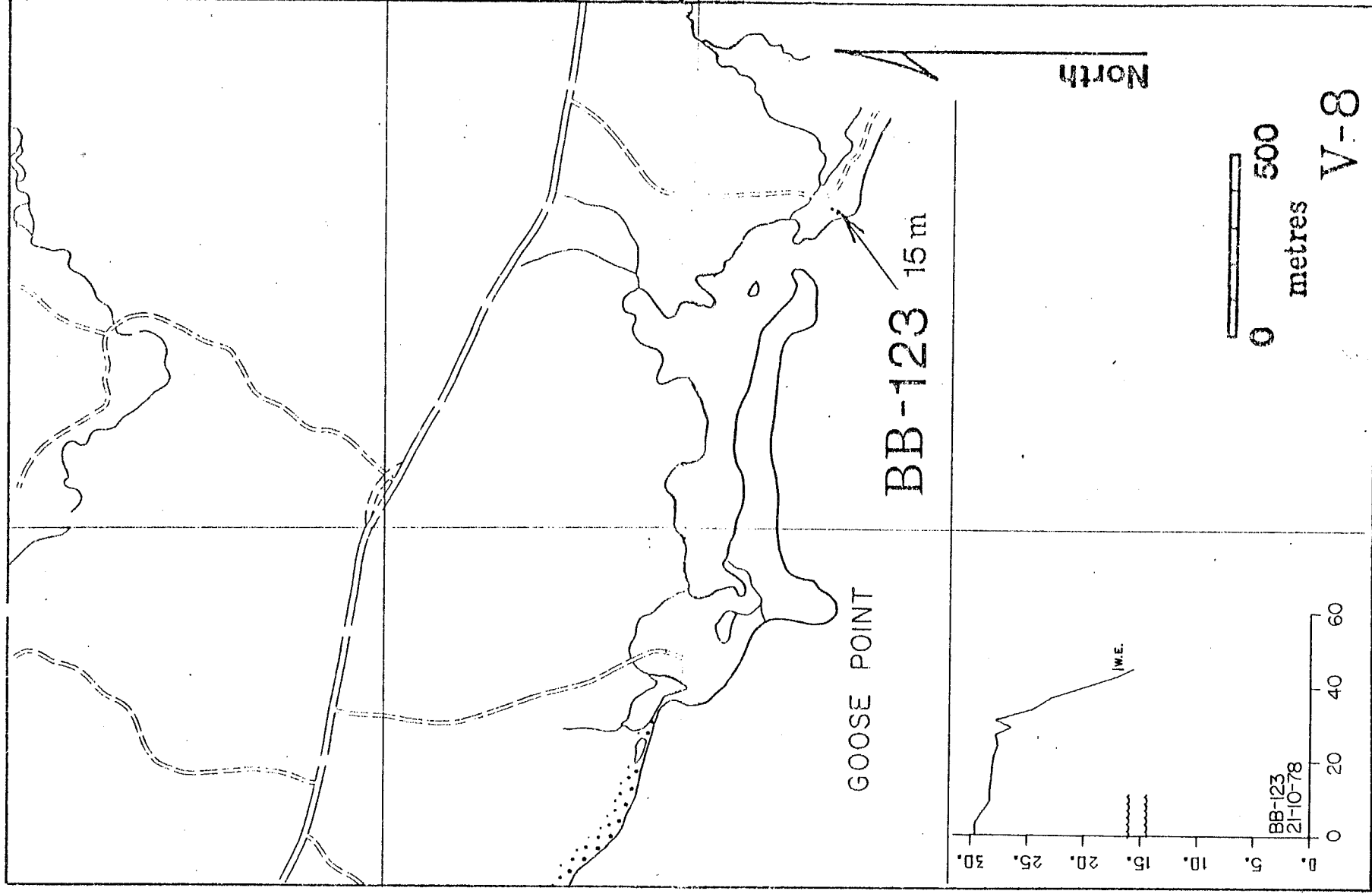
From the wharf in Blanche (see PLT 120) drive north 2.93km and turn left (southwest). Proceed to the end of this road. Walk across the yard of an abandoned house and continue on a footpath to the water's edge. Profile markers are located 15m apart in an area vegetated by bushes; the area itself is surrounded by trees on three sides. The back marker height is 106cm and the front marker is 117cm high.



PLT 122

Crow Neck

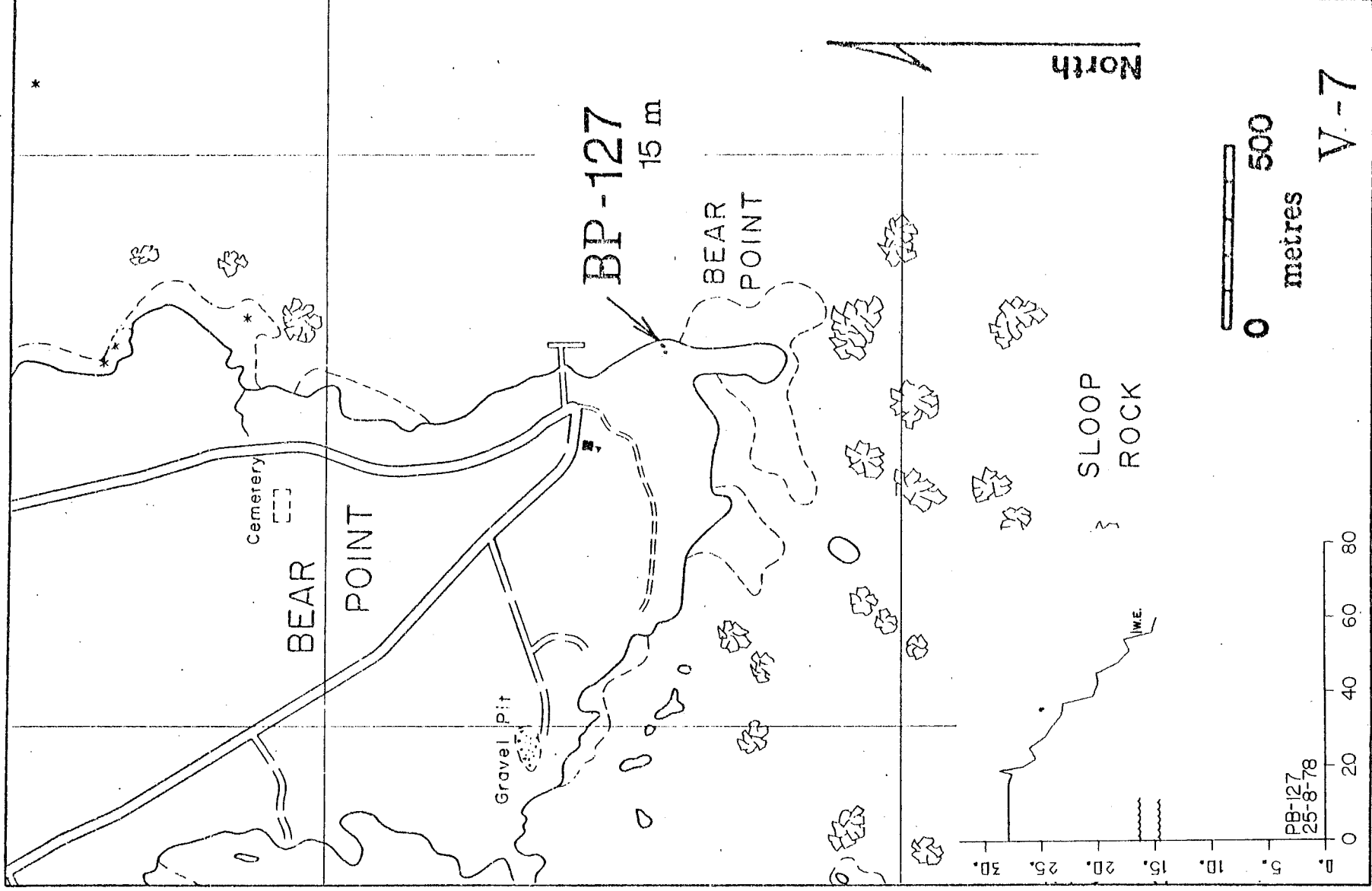
Turn south off trunk 3 at the village of Clyde River, bear left at Port Clyde and continue to Baccaro. Drive about 0.75km from the post office in Baccaro and turn left onto a short road leading out to the beach. Walk northeast on the beach for about 1km and the profile markers should come into view. The front marker is on the back berm and is 95cm high. The back marker is 10m landward of the front and has a height of 102cm. Both markers are clearly visible.



BB 123

Burks Point

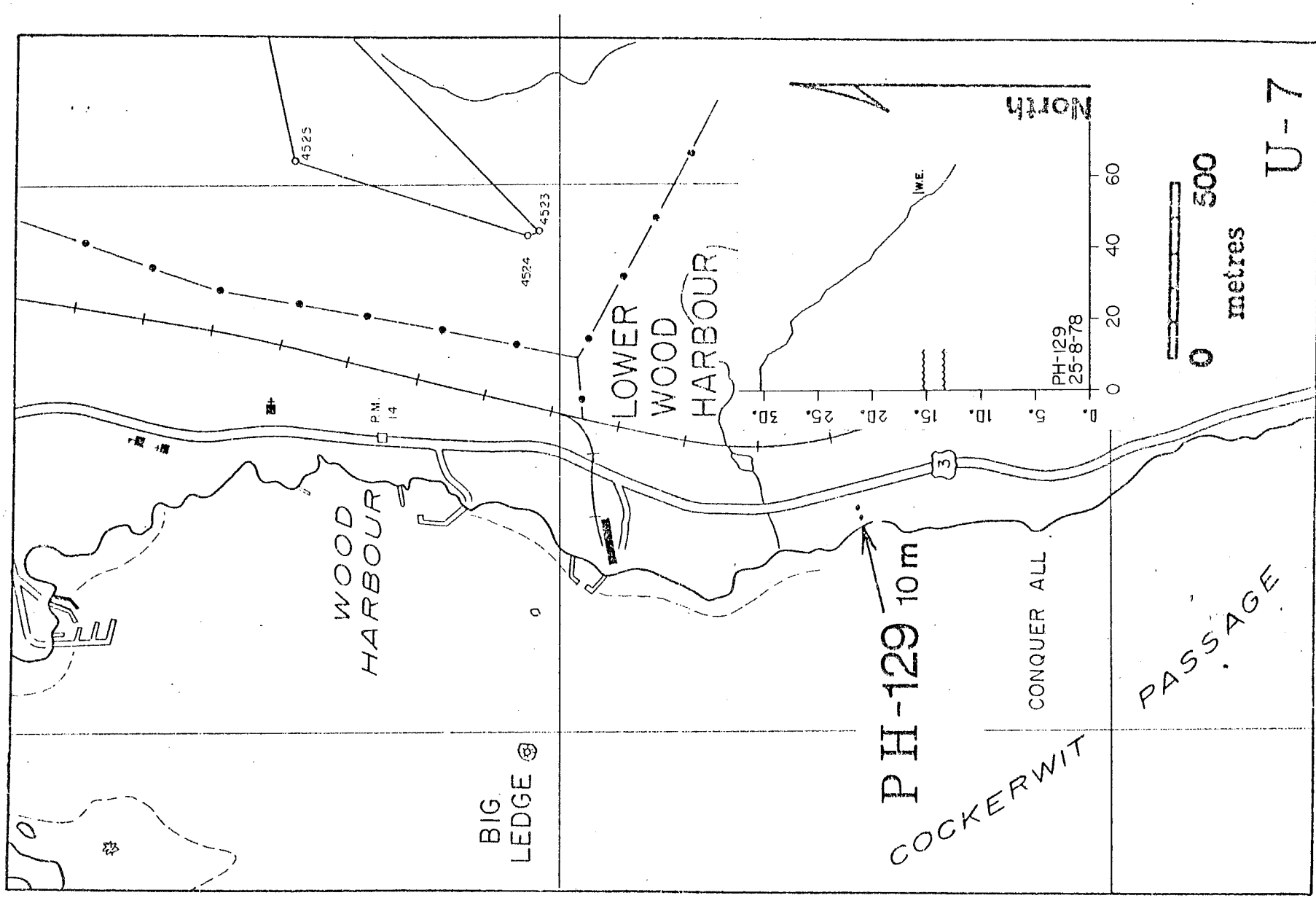
Entering the village of Barrington turn left off trunk 3 to Villagedale. About 4.6km beyond the church in Villagedale, turn right on a trail leading down to the shore. Stop at the sharp left curve where the road changes direction, and parallels the water's edge. Walk about 50m west to the profile markers located in a field. Distance between the markers is 15m; the front and back marker heights are 107 and 106cm respectively.



BP 127

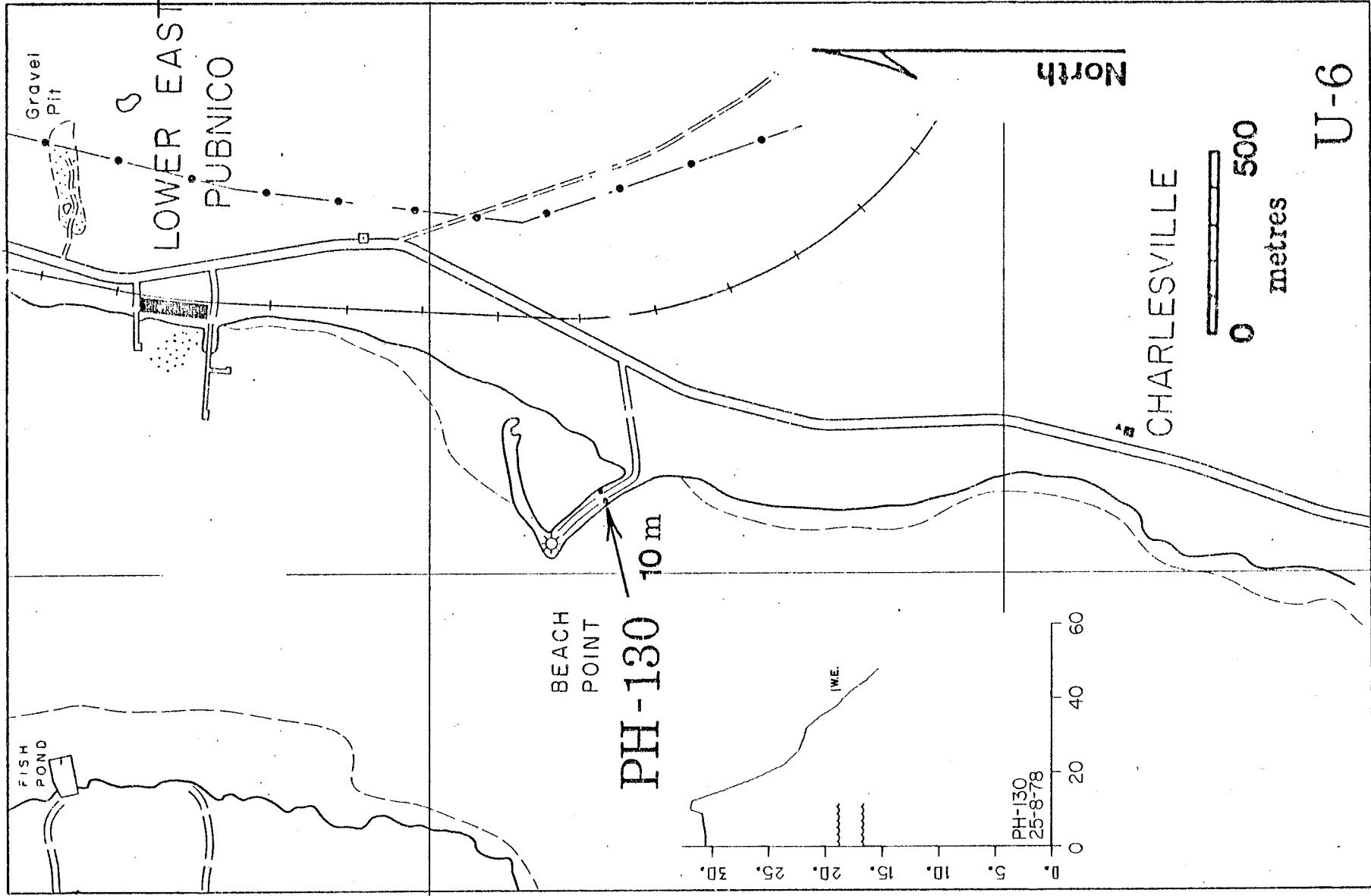
Bear Point

Travelling west on trunk 3 continue 5.7km beyond the Barrington Passage post office and turn left. Drive to the Bear Point fish plant and walk south along the water's edge a distance of 330m to find the front profile marker located in some low bushes landward of the back beach which is vegetated with tall salt tolerant grasses. The back profile marker is 131cm high and was placed 16m landward of the front which has a height of 118cm.



PH 129

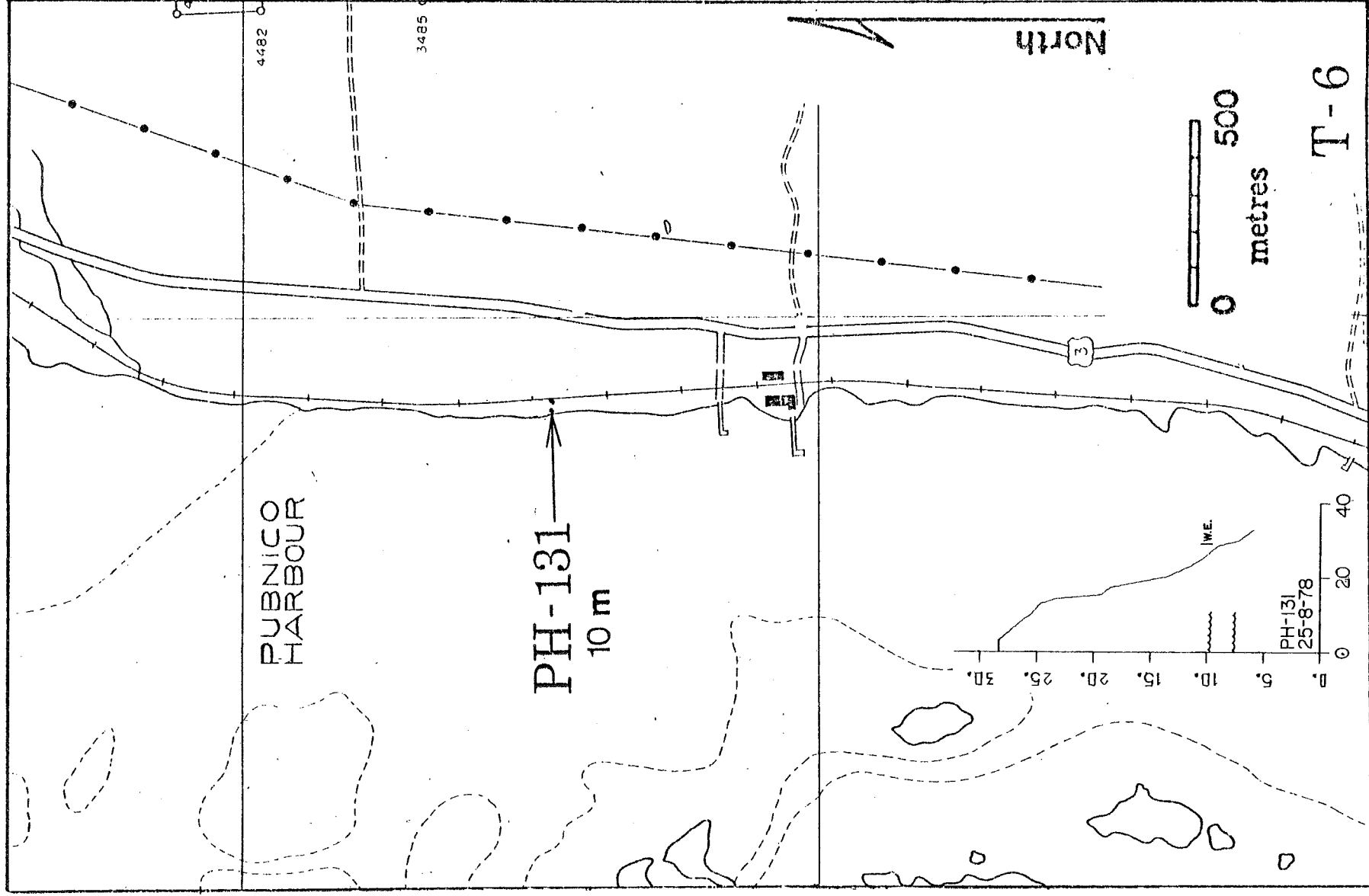
Proceeding west on trunk 3 drive 4.0km beyond the Shag Harbour post office (Shelburne Co.) and stop. The profile line is 275m south of Little Run Brook, directly behind a white house. Markers are located 10m apart; back marker height is 126cm and the front is 102cm high.



PH 130

Beach Point

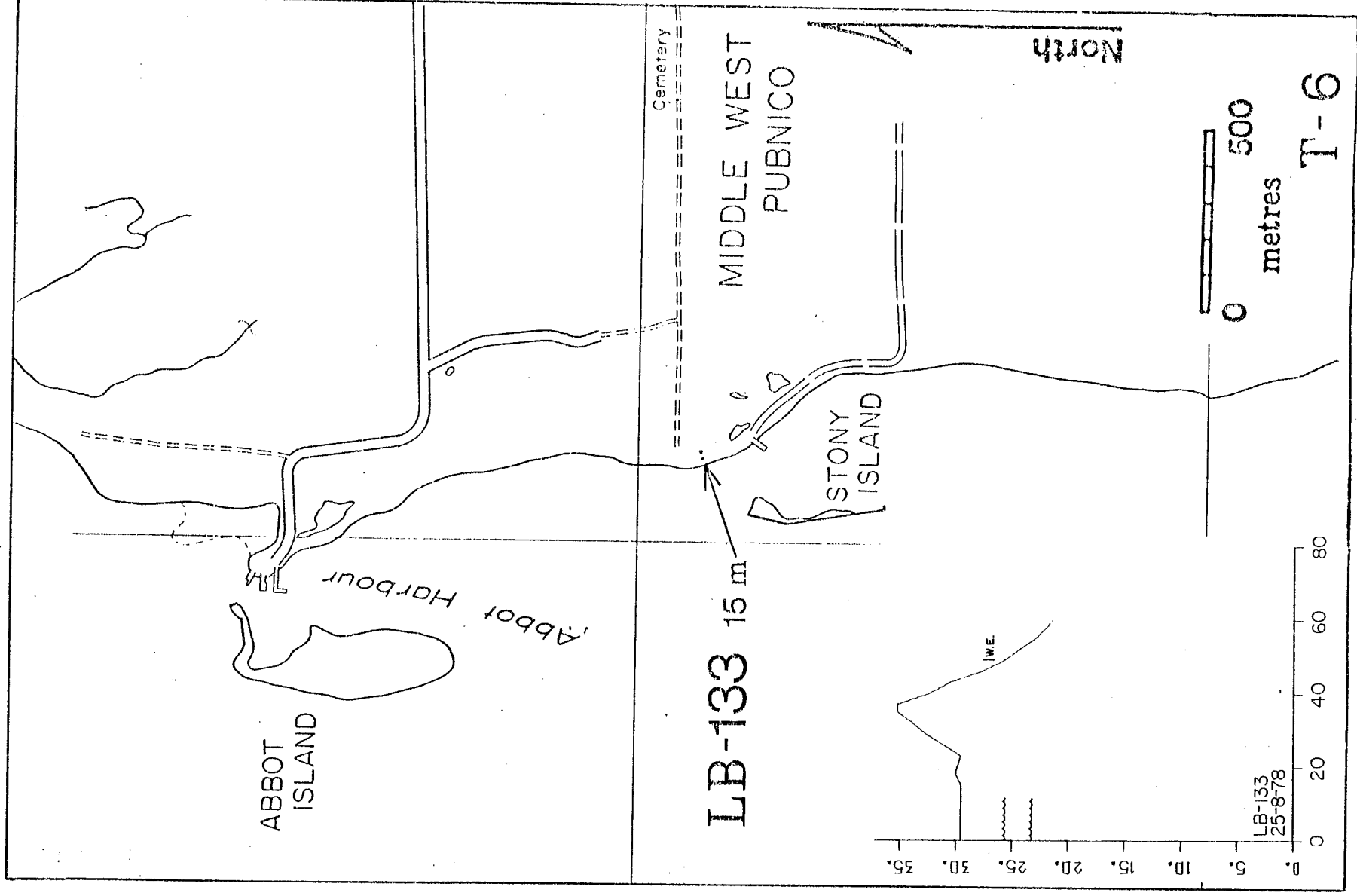
From the Charlesville church drive north 1.3km to the boundary between Shelburne and Yarmouth Counties. Turn left and proceed down to the water's edge on a loose surface road. Stop at the end of the road and walk about 110m toward the Beach Point navigation light. Profile markers are located 10m apart. The back marker is 100cm high and was placed about 13m behind the berm crest. The front marker height is 83cm. Both markers are clearly visible.



PH 131

Middle East Pubnico

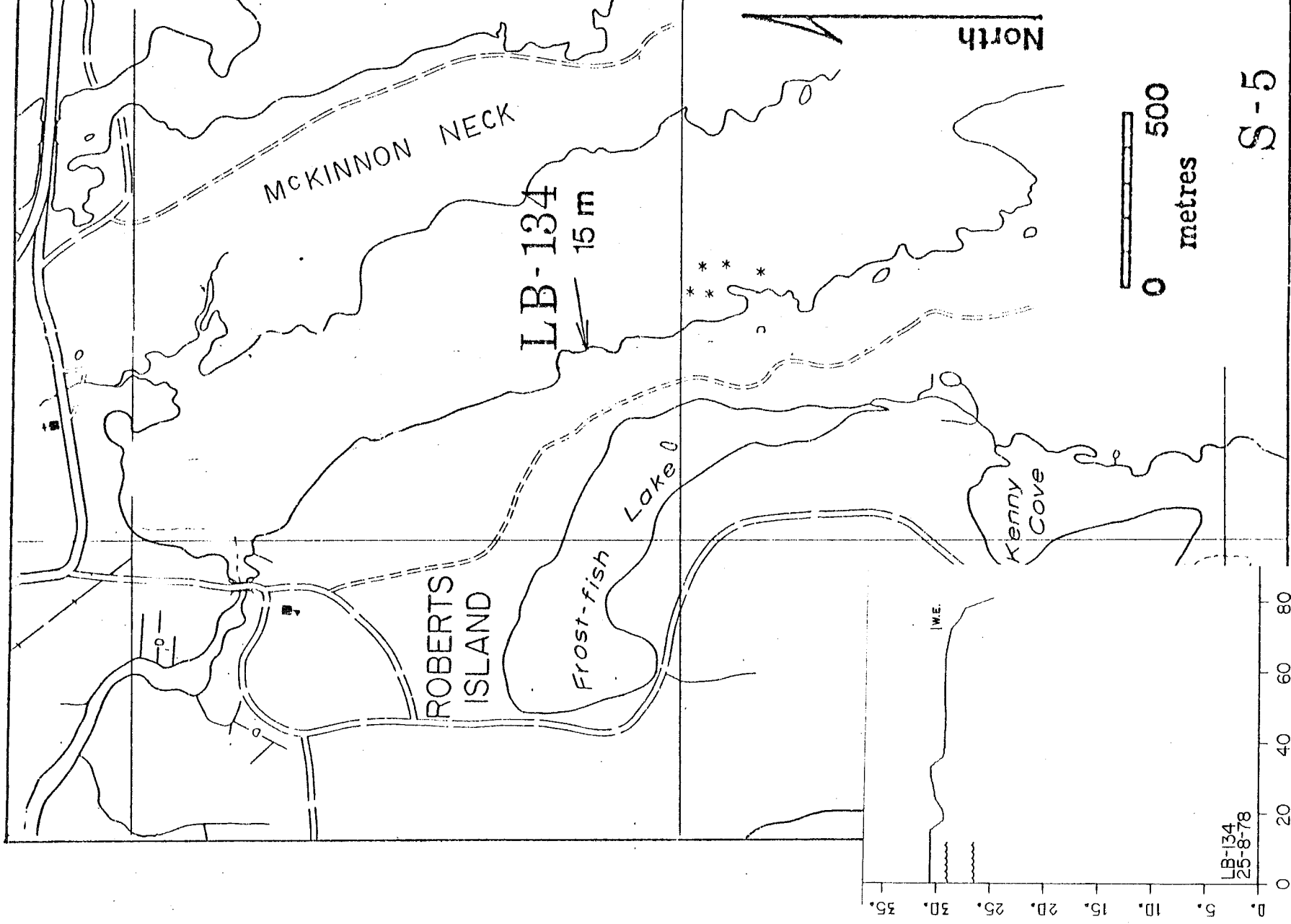
Drive 1.8km north beyond the Center East Pubnico School and turn left (west) on a loose surface road to the fish plant. Walk north along the shore about 1.4km to find the profile line markers located in a field, vegetated with grasses and some low bush, 10m apart. The back marker height is 112cm and the front marker is 106cm high. The front marker is 4.5m landward of a 1m bank at the edge of the field.



LB 133

Rams Ledge

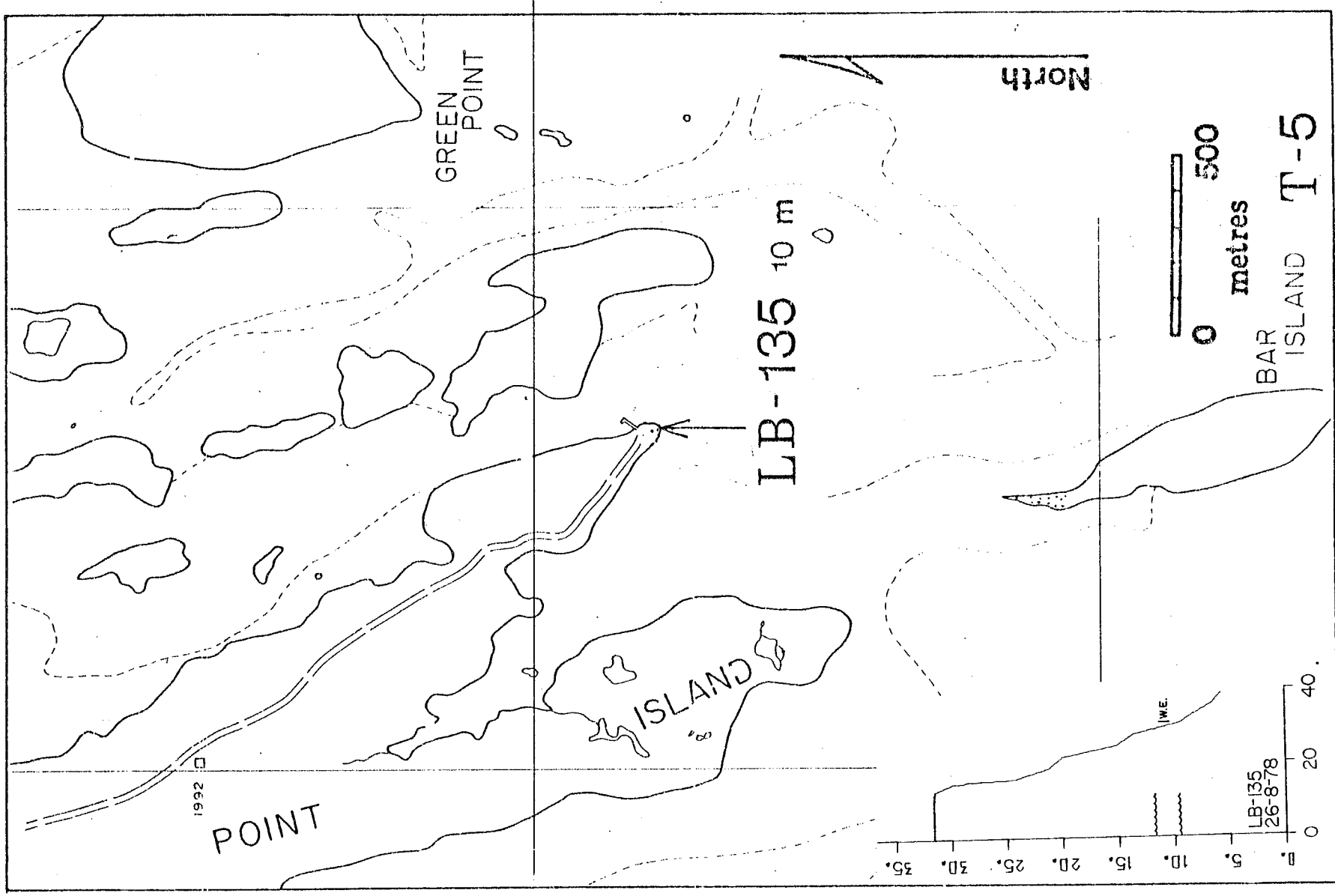
At the village of Pubnico take trunk 335 south to Middle West Pubnico and continue south 0.5km beyond the church and turn right (west). Drive to the end of this loose surface road and from the wharf walk north along the beach for a distance of 460m. Profile markers are 15m apart in a field. The front marker is 104cm high and is located 11m landward of the berm. The back marker height is 102cm.



LB 134

Roberts Island

From Argyle, Yarmouth County, drive west via trunk 3 to the village of Glenwood. After passing the post office in Glenwood turn left onto a loose surface road and drive until the road narrows into trail, about 780m from its beginning, continue on the trail for 1.0km and stop, after reaching the bottom of a low hill. At this point the native climax gives way to marsh vegetation. Walk east along the edge of the trees and continue walking in a straight line to the water's edge. The rear and front markers are 106 and 112cm high respectively, and are 15m apart. The front marker is about 18m landward of the wet marsh grasses, mainly spartina.

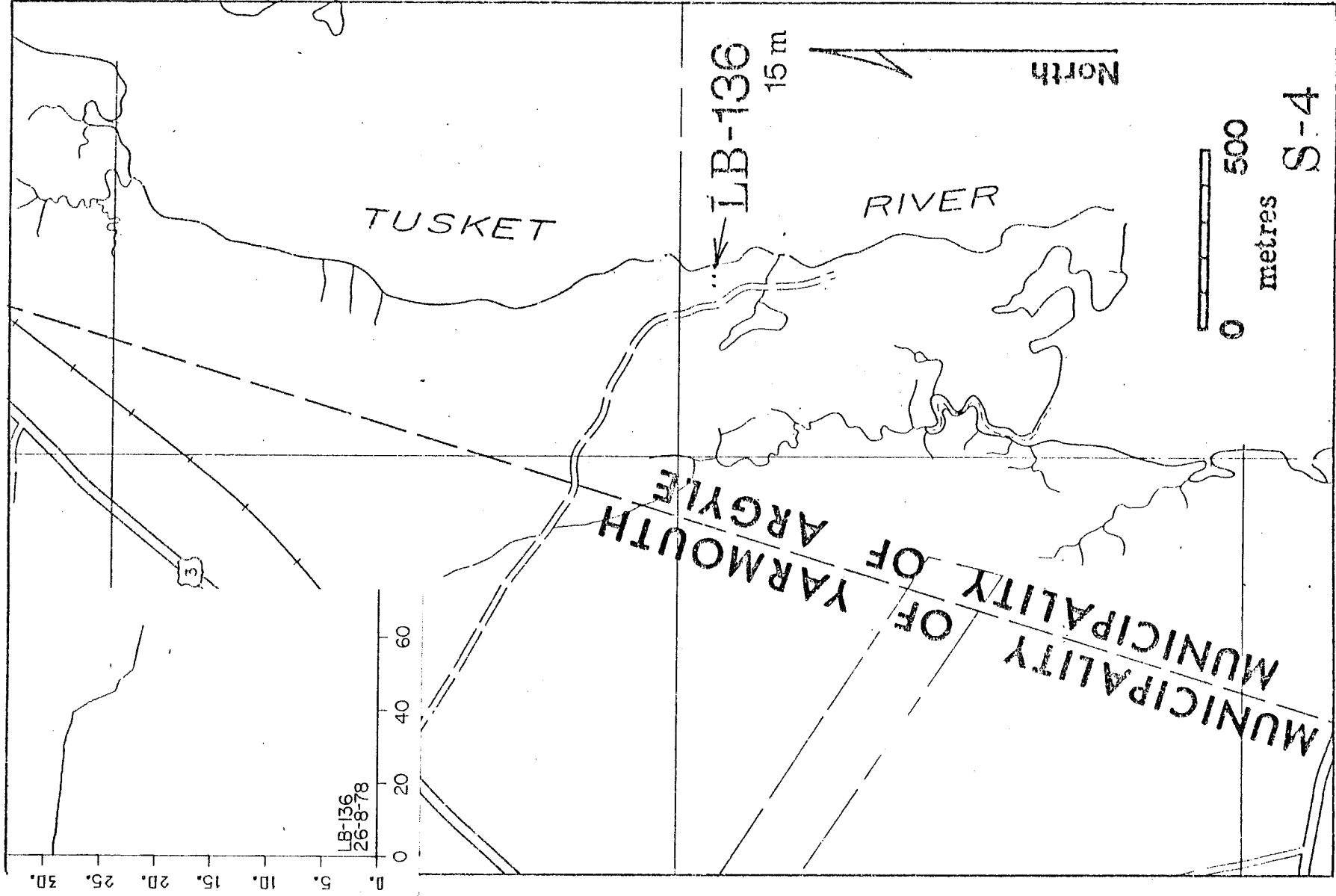


LB 135

Surettes Island

Exit off hwy 103 toward Tusket and proceed south from Tusket on trunk 3 to Surettes Island. Turn right a few metres beyond the

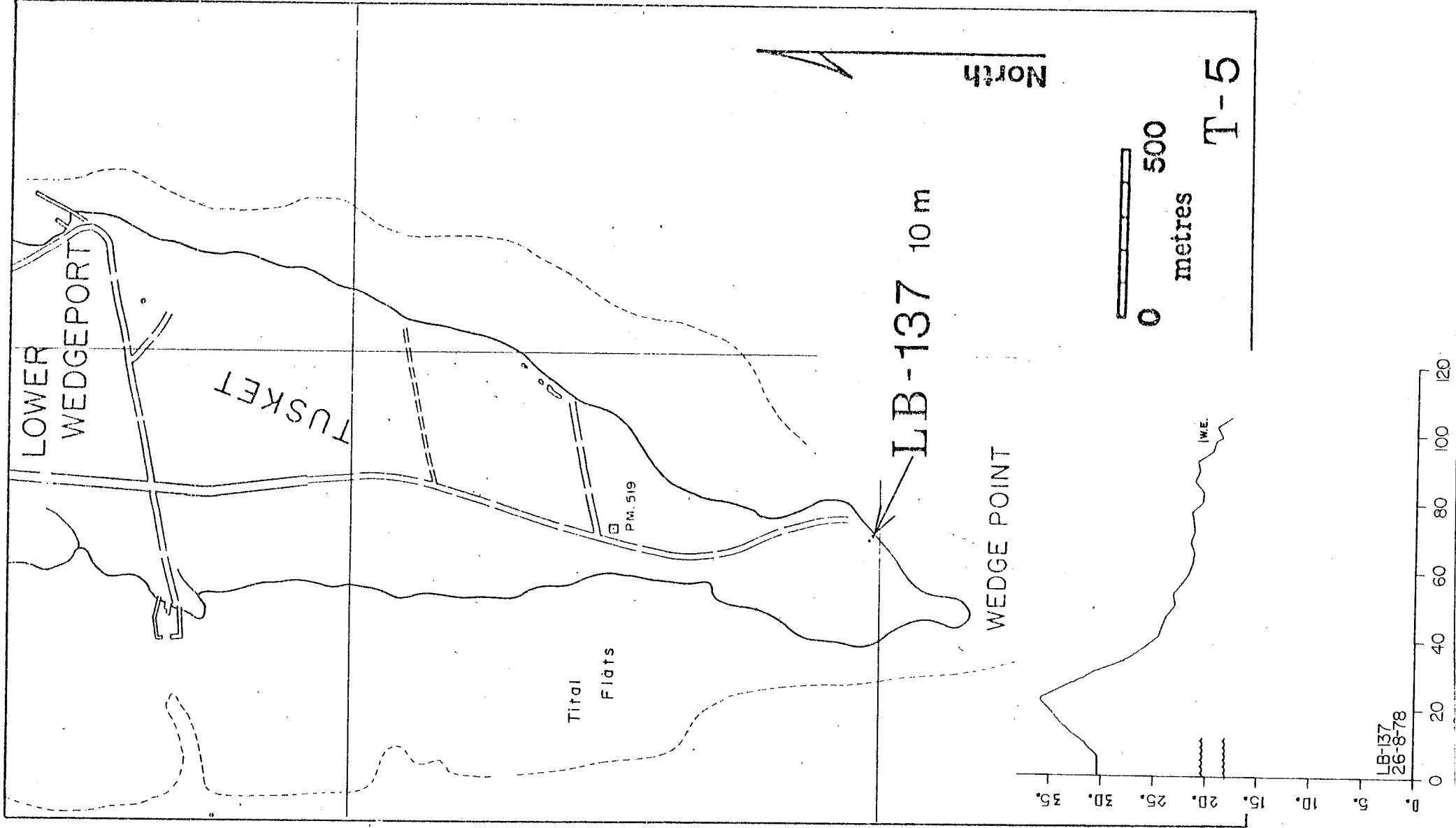
church and proceed to a wharf at the end of the loose surface road. From the wharf walk through bush around a fishing hut to the tip of this island about 80m. The profile markers are located 10m apart in the bushes. The front marker is 5m back from the top of a low bank leading down to the beach. Back and front marker heights are 132 and 99cm respectively.



LB 136

Tusket River

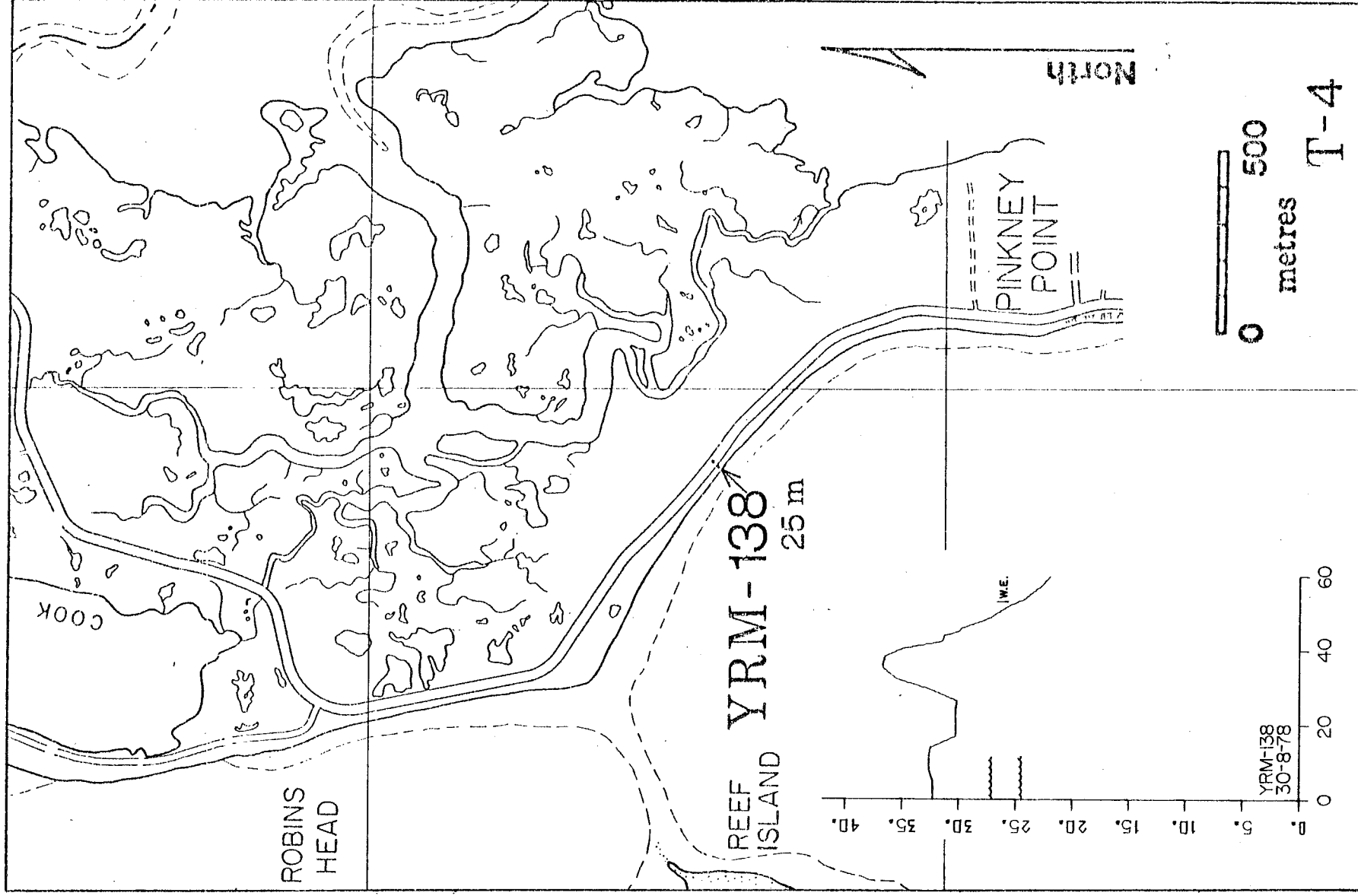
Exit off hwy 103 to the town of Tusket and proceed southwest on trunk 3, the "Lighthouse Route". From the south end of the Annis R. bridge in the village of Pleasant Lake drive 1.2km south and turn left (east). Proceed to the end of this road at the edge of a field. The profile markers are located 15m apart, about 150m southeast of termination of the road. Back and front marker heights are 108 and 68cm resp.



LB 137

Wedge Point

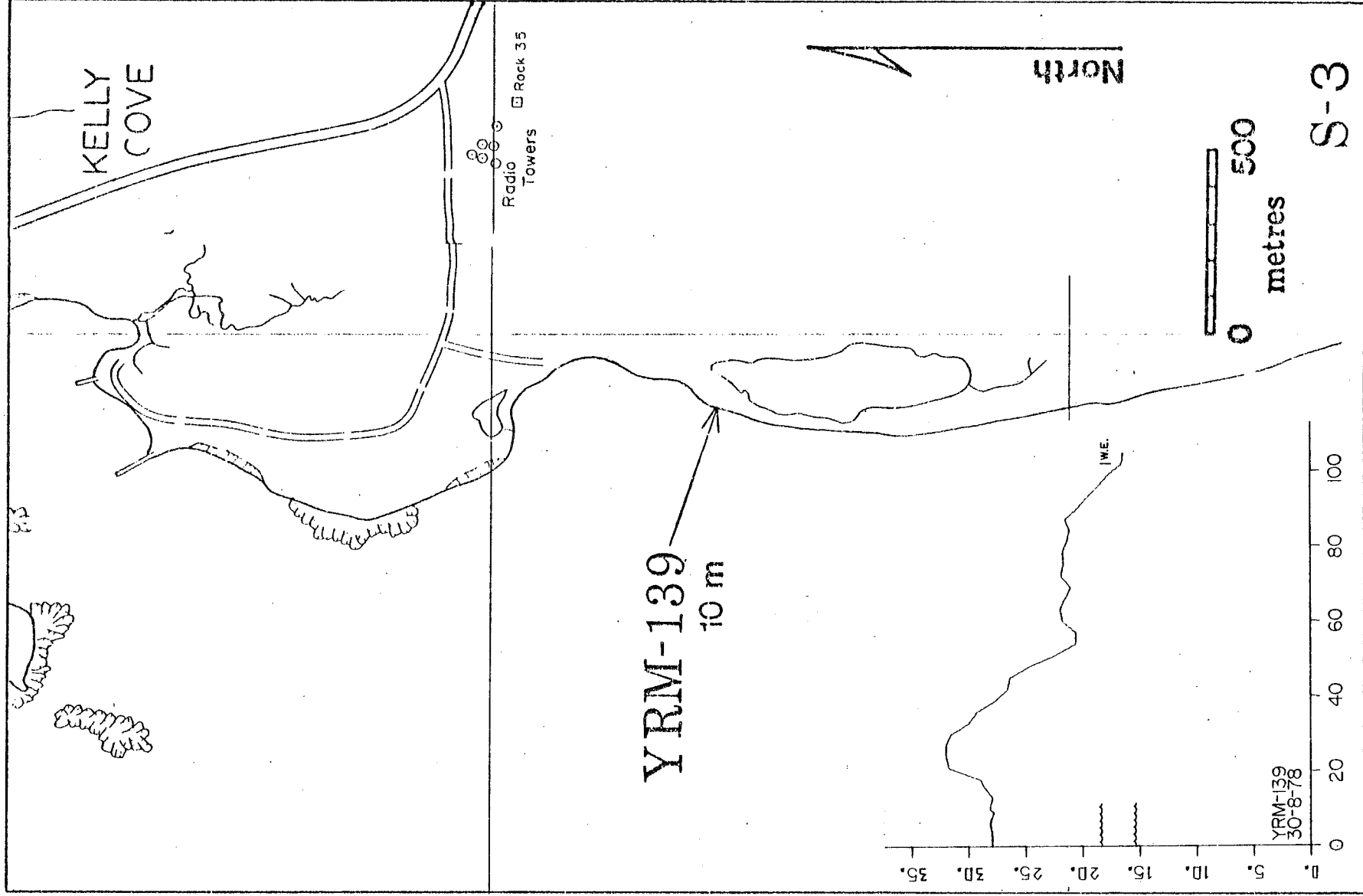
Proceed south from the post office in Lower Wedgeport, Yarmouth County, to Wedge Point; a distance of 3.2km. The profile line is approximately 100m SW of the road's end. Markers are 100cm high and 10m apart.



YRM 138

Pinkney's Point

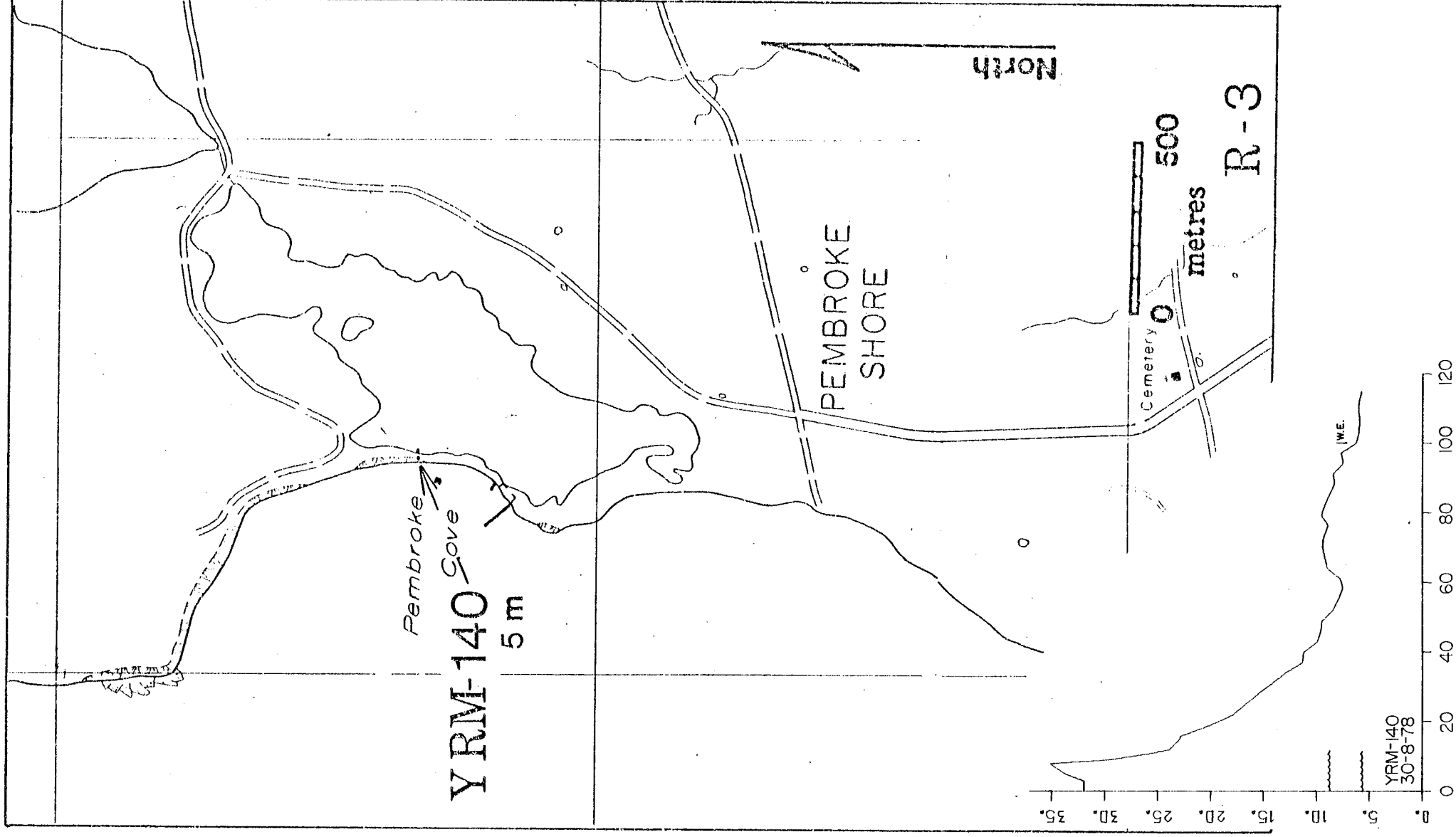
Drive southeast toward Arcadia on trunk 3 out of Yarmouth. A short distance (200m) past the Arcadia post office turn right (south) onto trunk 334, continue for approx. 1.0km and turn right. Follow this road to Melbourne and continue straight onto a loose surface road toward Pinkney's Point. From the end of the bridge over a tidal channel through the marsh, drive 2.6km to a point about midway across Pinkney's Beach. The profile markers are located on either side of the road 25m apart. The back marker is 98cm high and is located 3m landward of the edge of the pavement. The front marker has a height of 105cm and was placed at the edge of the back beach vegetation.



YRM 139

Kelp Hauler Shore

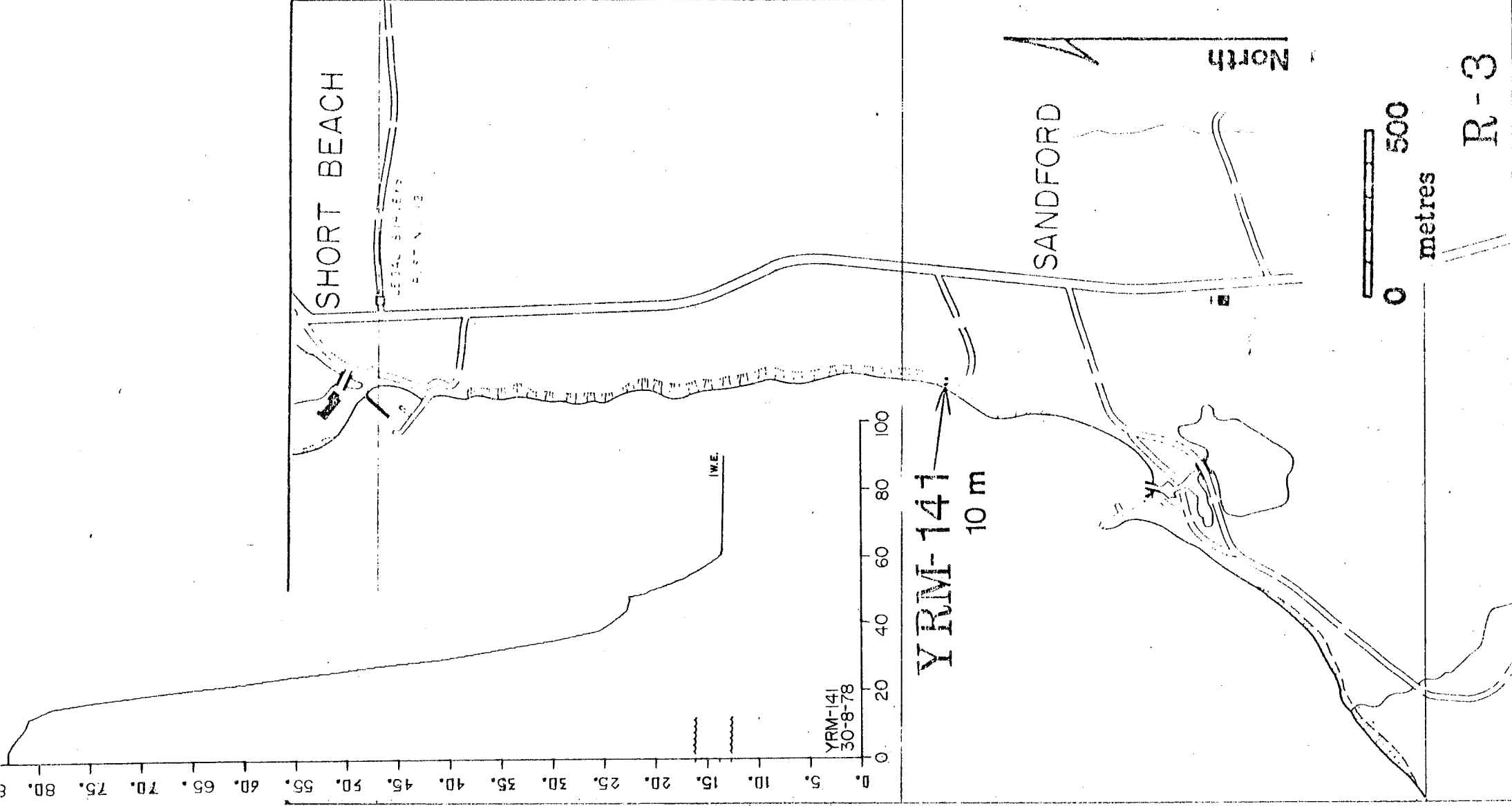
Drive south out of Yarmouth along the east side of Yarmouth Sound to the village of Kelly's Cove. In Kelly's Cove turn right toward clearly visible radio towers and then turn left on a trail which leads down to the water's edge in the vicinity of Big Pond. The profile line is located at the north end of Big Pond and is marked by two markers placed 10m away from each other. The back marker is 106cm high and the front marker has a height of 122cm. The front marker is 15m landward of the berm top.



YRM 140

Pembroke Cove

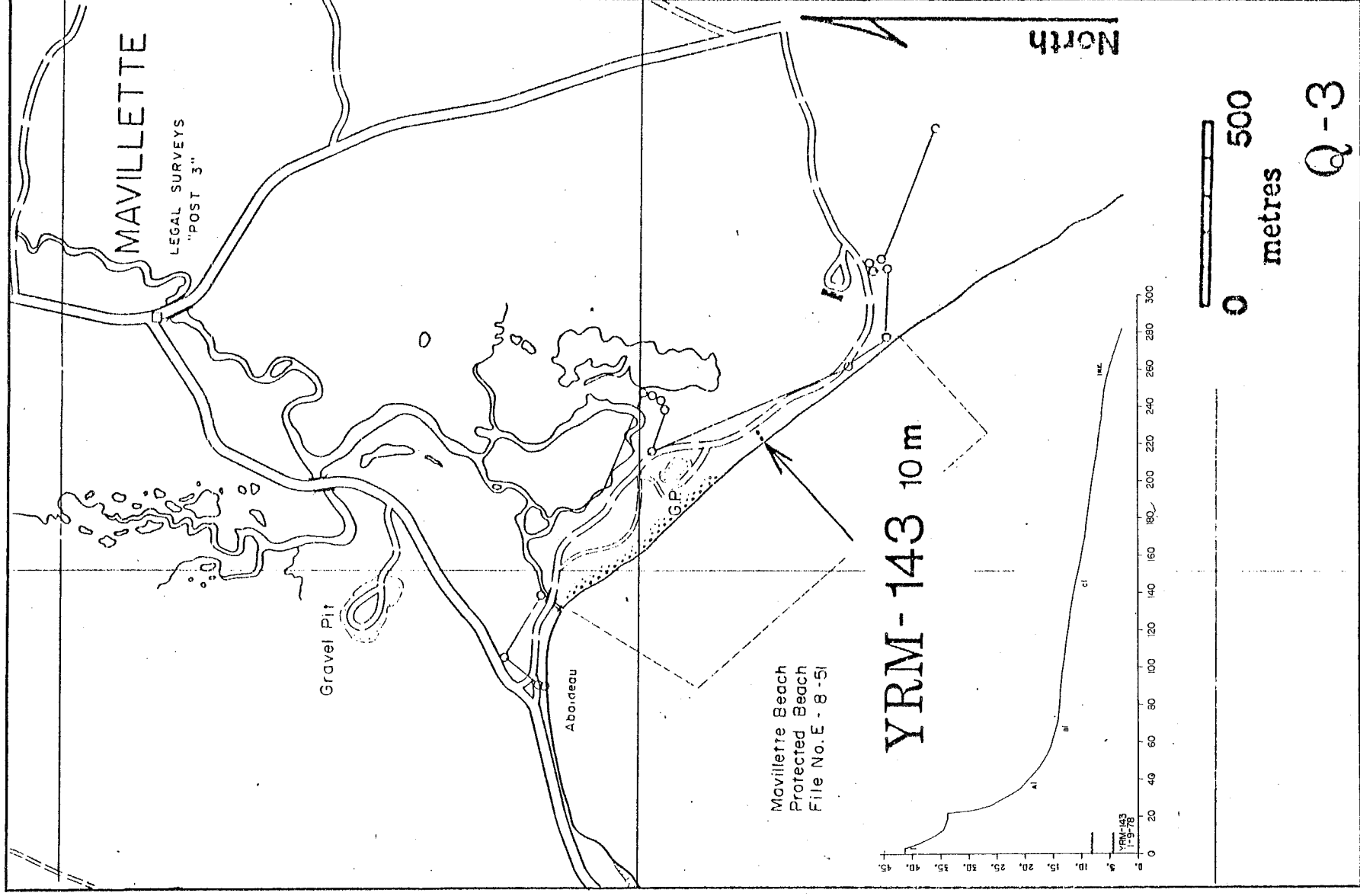
Proceed north on trunk 1 from Yarmouth to Dayton and then west to a bridge over the Chegoggin River. From the bridge drive approx. 800m and turn left (west) onto a loose surface road and proceed to the north side of a lagoon named Goose Flats. The road ends at Oceanview Farm; proceed on foot to an eroding drumlin on the north side of a tidal channel into Goose Flats. On the south flank of this drumlin are two profile markers 5m apart. The back marker height is 112cm and the front marker is 140cm high. The front marker is 3m landward of the top of the till bank.



YRM 141

Sandford

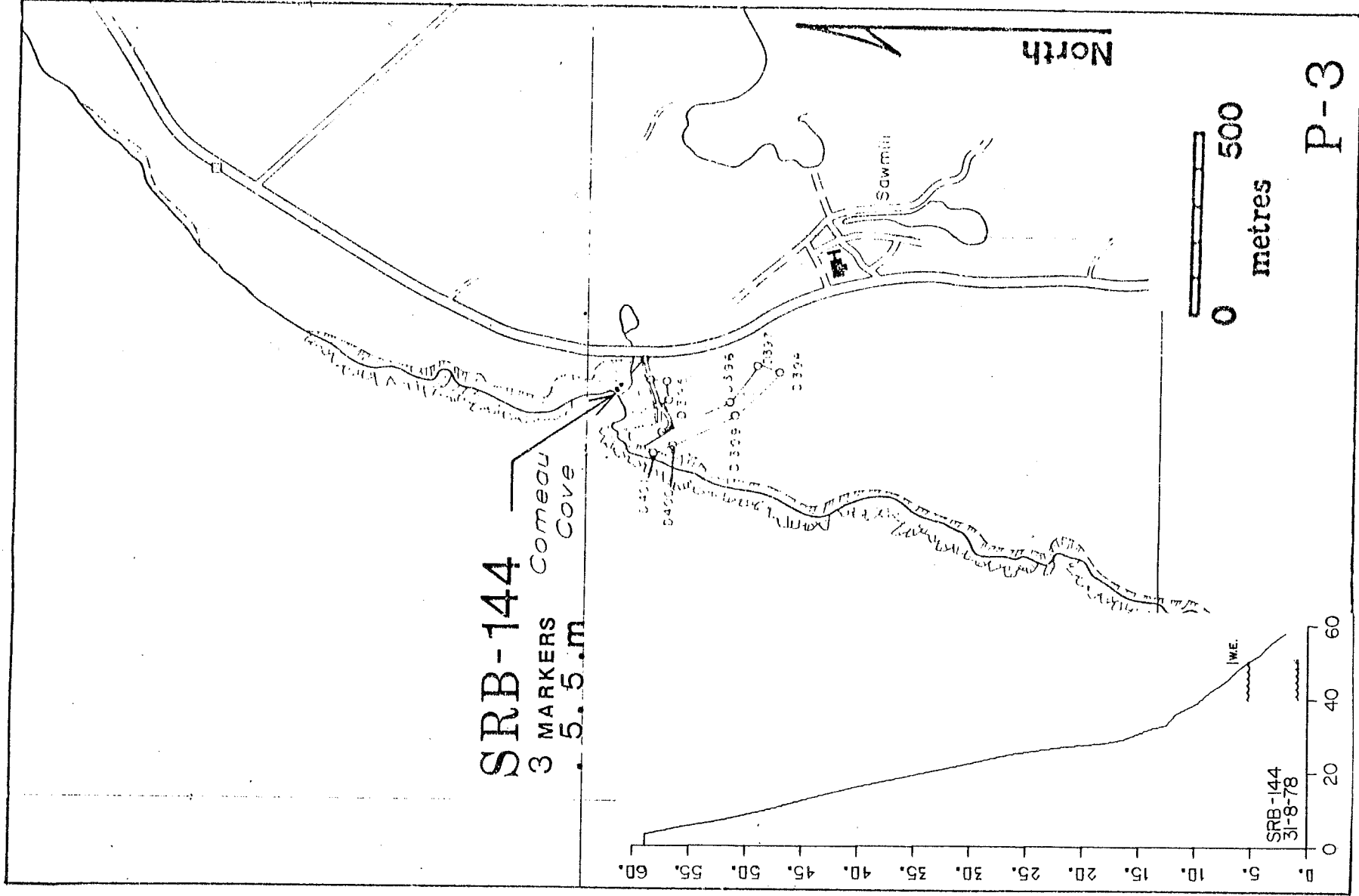
From Yarmouth proceed north along the coast to the village of Sandford. North 800m from the churches there is on the left an old road leading down to the beach. The road starts out as a private drive and continues behind the garage to end at the top of a 13m bank. The profile markers are located in a cleared field about 80m north of the road's end. The distance between the markers is 10m and the front marker is 6m back from the edge of the field. The back marker height is 112cm and the front marker is 122cm high.



YRM 143

Mavillette Beach

Follow trunk 1 from Yarmouth north along the coast into Digby Co. to the Mavillette Beach provincial campsite (turn left about 3.6km north of the Salmon River Bridge). The profile line is about midway along the beach and is marked by two markers 10m apart in the dunes. The back marker height is 100cm and the front marker is 86cm high. The front marker is 12m back from the edge of the dune vegetation marram grass.

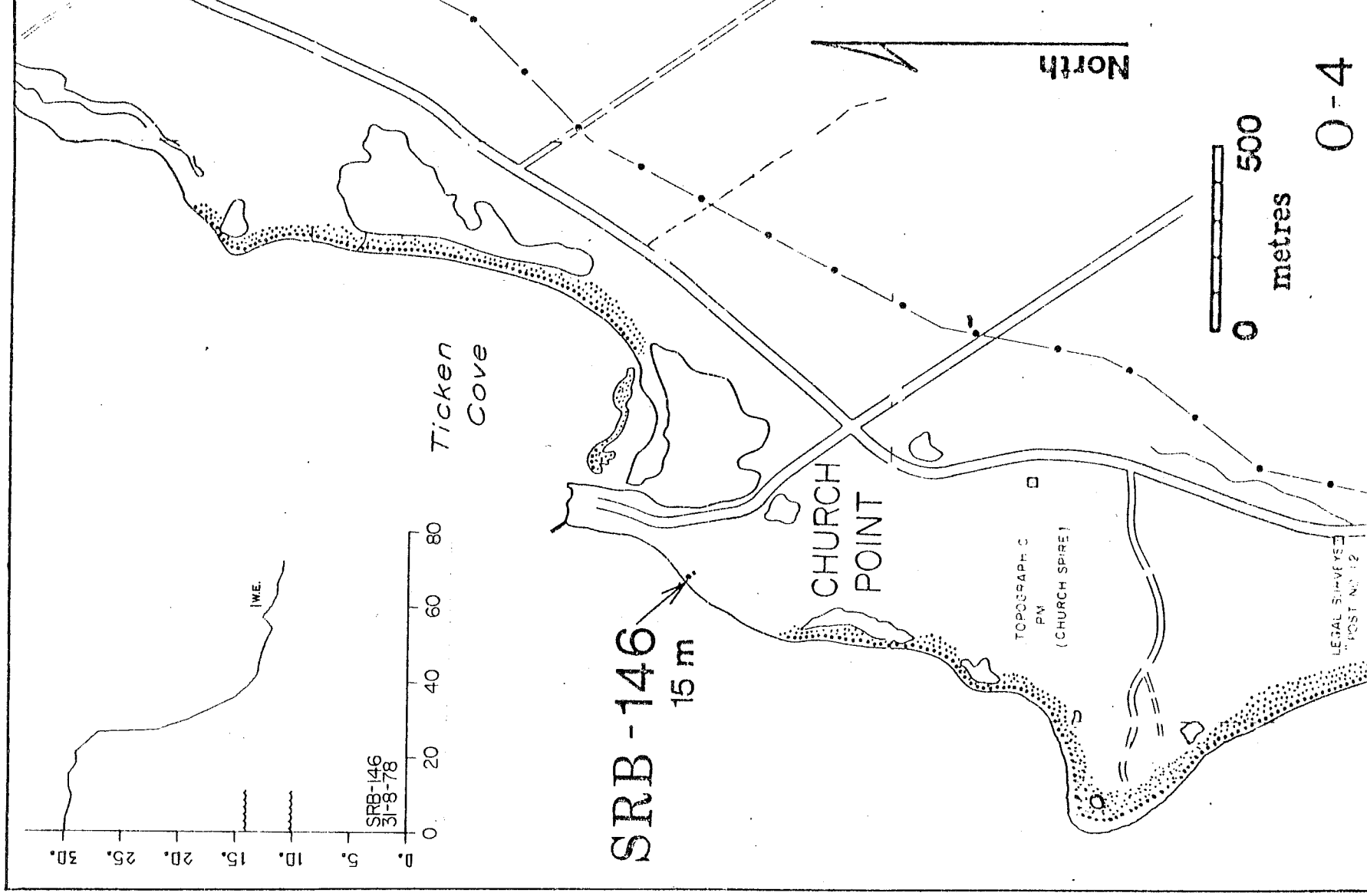


SRB 144

Comeau Cove

Driving north on trunk 1 from Yarmouth to Meteghan stop at a provincial picnic site on the west side of the road, about 8.1km north of the Ma illette post office. Approx. 100m north of the entrance to the picnic site, on a steep slope, vegetated with grass, a few low trees, etc. that leads down to a pocket beach, three profile markers will be found 5m apart from each other. The back, middle and front markers heights are 101, 94, and 104cm respectively.

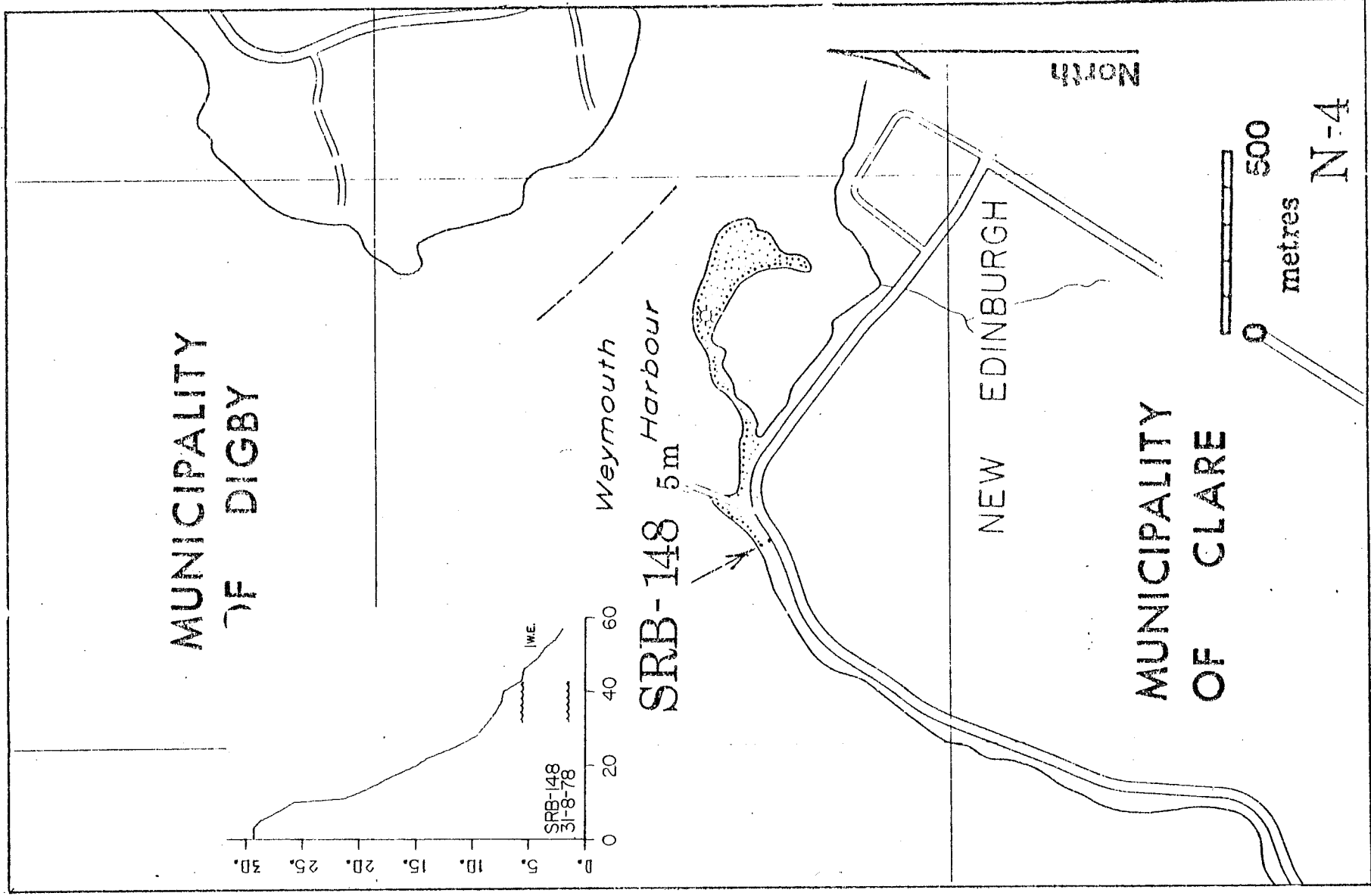
P-3



SRB 146

Church Point

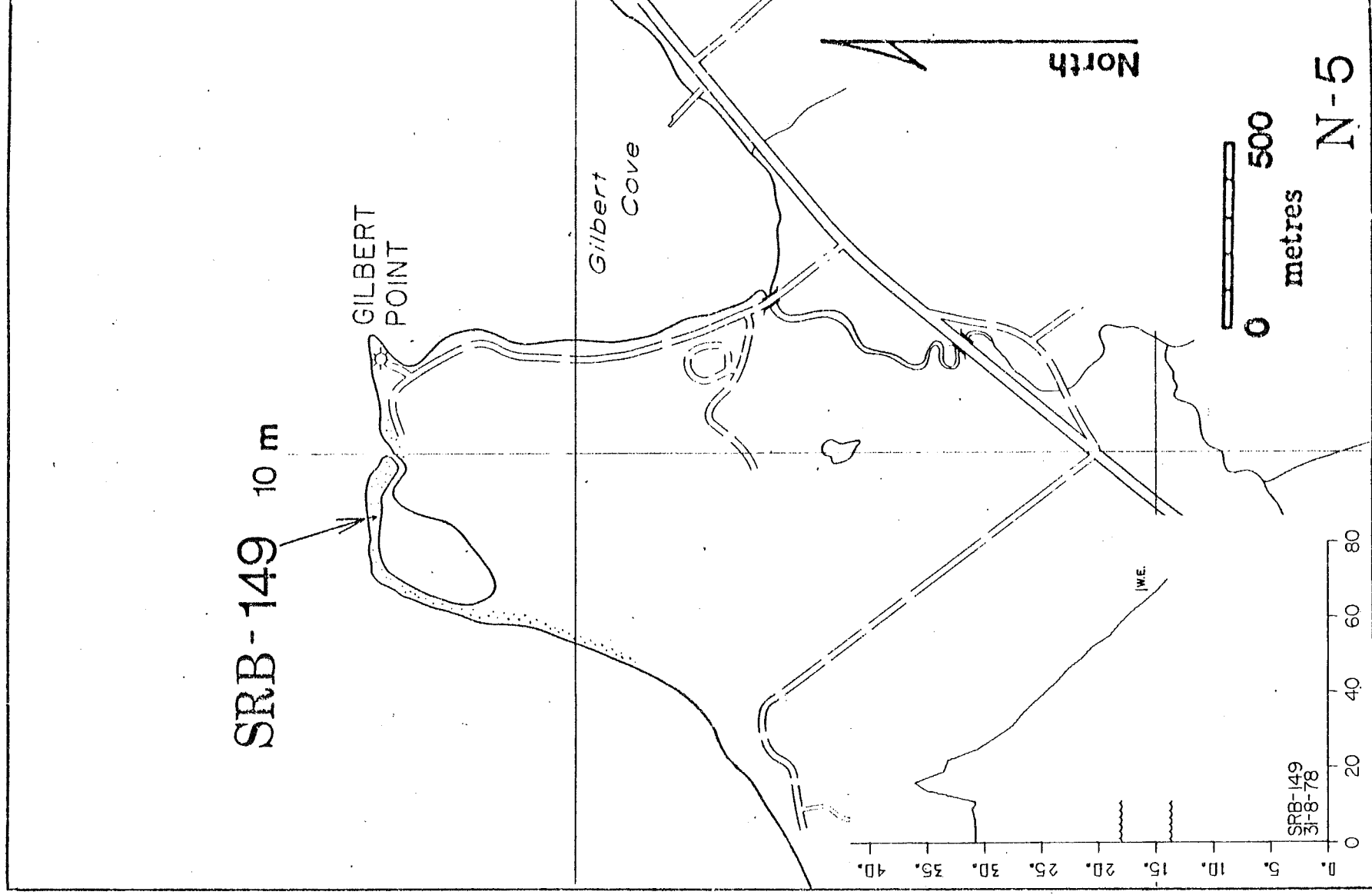
Proceed from Yarmouth north along the coast on trunk 1 to Church Point. Approx. 800m beyond the entrance to Ste. Annes College turn left on a hard surface road to the fish plant. Stop at the wharf and walk from the navigation light south along the coast for approx. 400m to find the profile markers located in a field vegetated with grasses and low bushes. The profile markers are 15m apart and the front marker is 11.5m away from the edge of the field, where a slope drops about 1.3m down to the back beach. The back marker height is 98cm and the front marker is 114cm high.



SRB 148

Lighthouse Beach

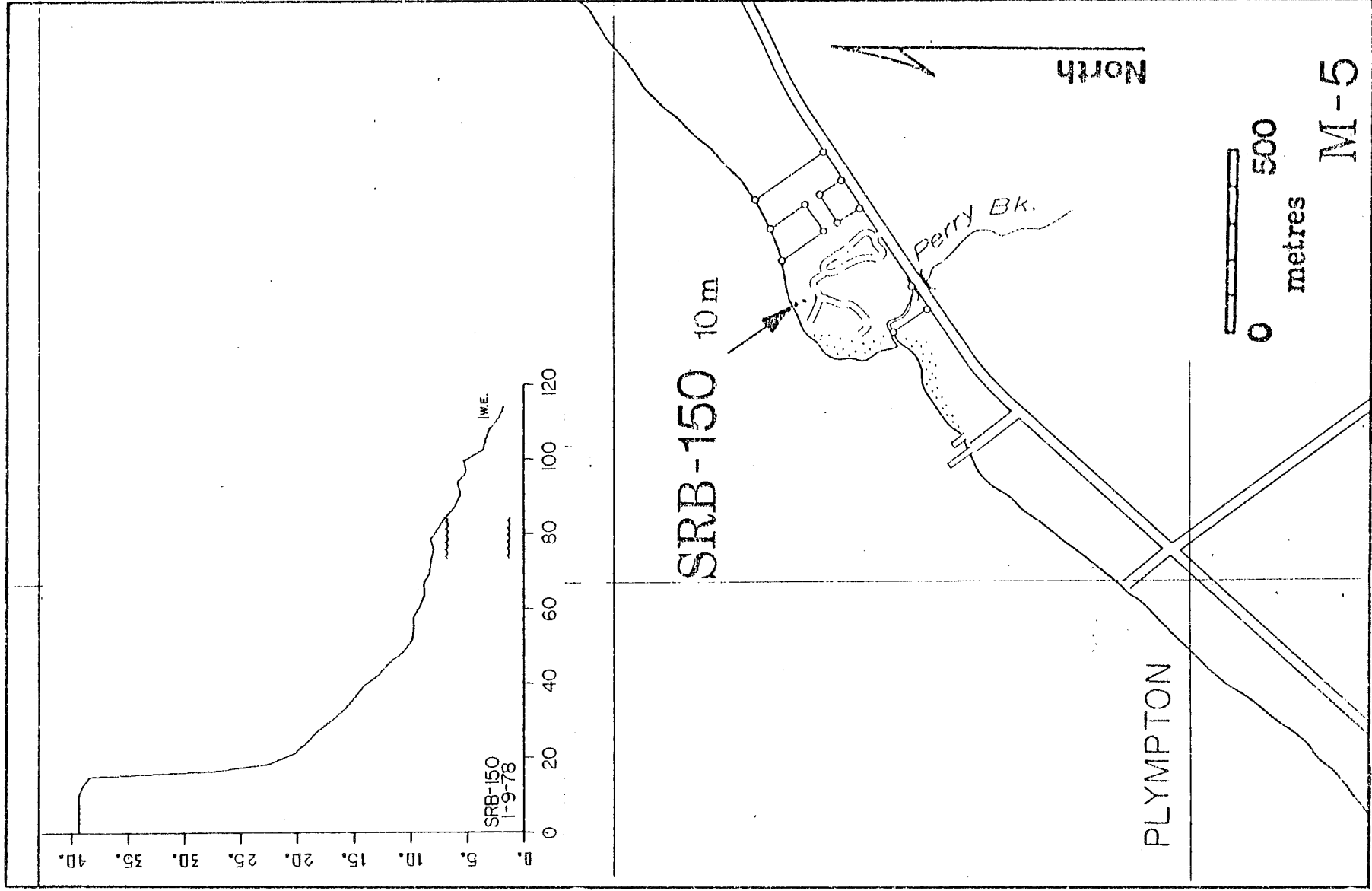
Drive north on trunk 1 from Yarmouth to St. Bernard. Upon entering St. Bernard, bear left toward New Edinburgh, at the end of the road turn left toward the government wharf. Walk about 80m from the wharf southwest along the seaward side of the road to find the profile markers 5m apart. The back marker height is 126cm and the front is 96cm high.



SRB 149

Gilbert Point

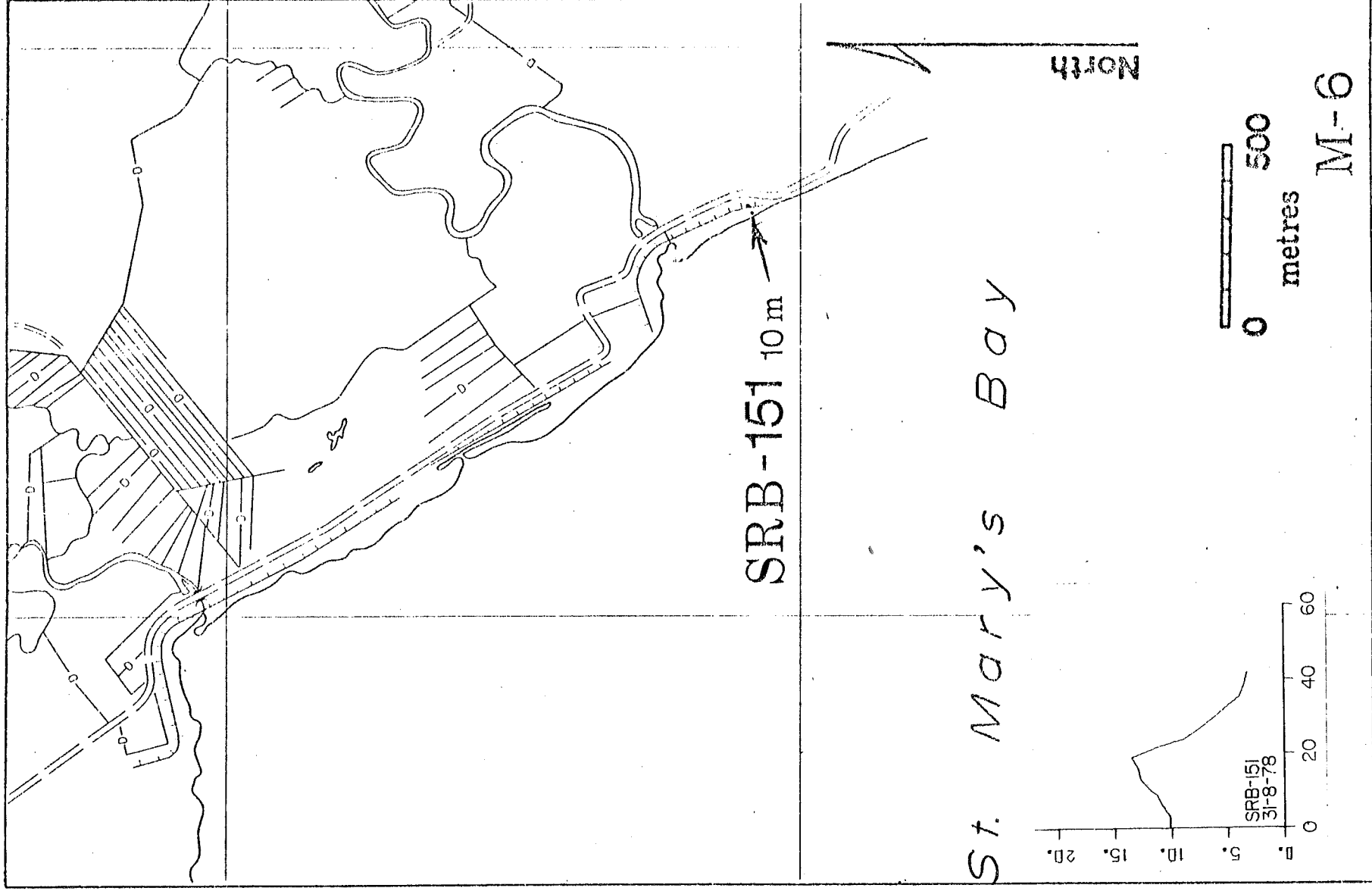
Drive north from the main intersection in Weymouth North along trunk 1 to the Kennedy Brook (The Creek) bridge; about 5.7km. Turn left toward Gilbert Point about 450m beyond the bridge. Drive to the Gilbert's Point Lighthouse and continue on foot about 130m to find the profile line on the west side of a small tidal channel into Duck Pond. The back marker height is 93cm and the front marker is 104cm high.



SRB 150

Plympton

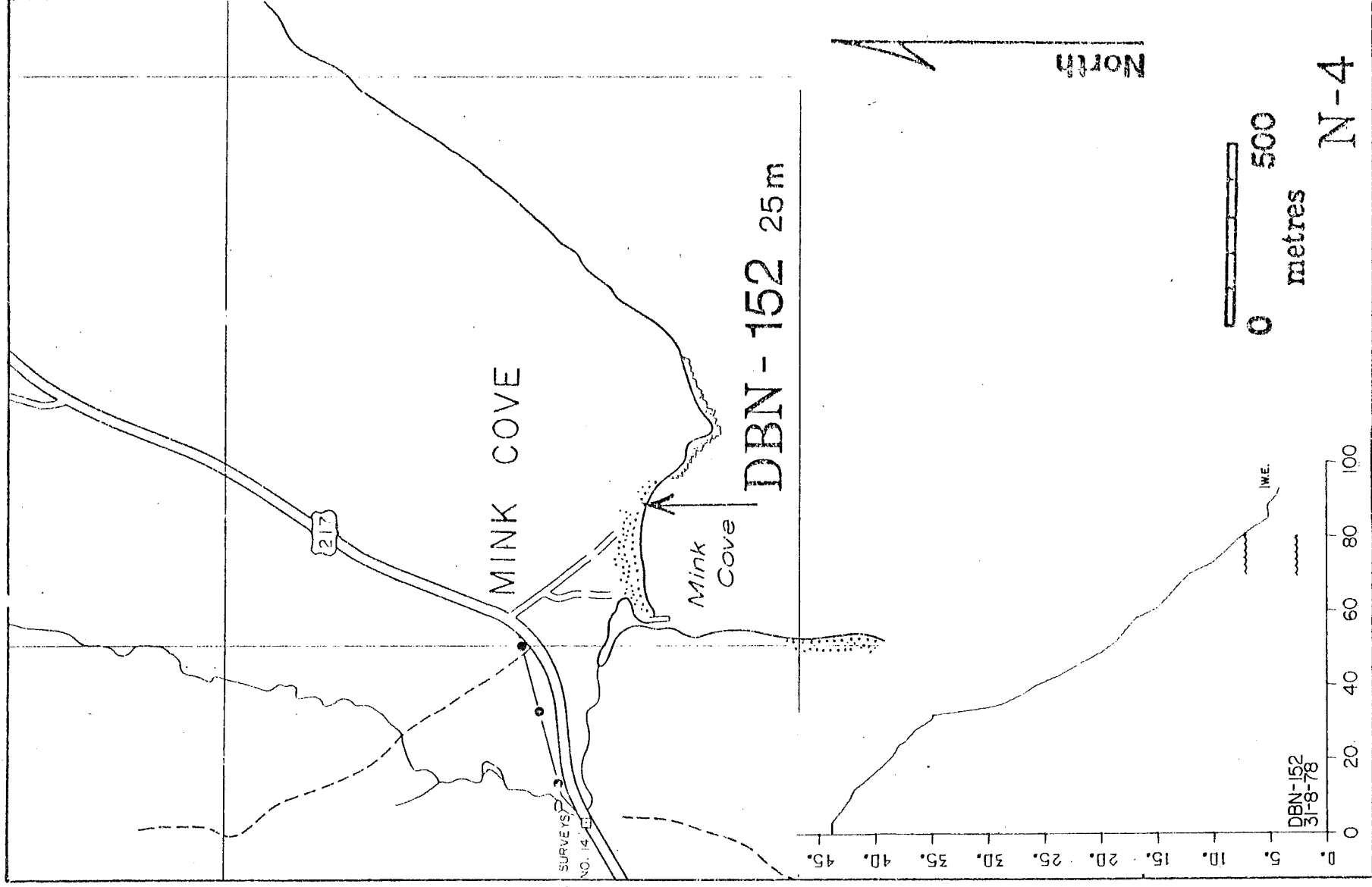
Driving north on trunk 1 from Plympton turn left 0.9km beyond the post office, into a provincial picnic site and proceed to the point where the road turns near the beach. The profile markers are located in a stand of birch trees on top of a bank that drops about 4m to the back beach. The back marker is 136cm high and the front marker height is 107cm.



SRB 151

Head of St. Mary's Bay

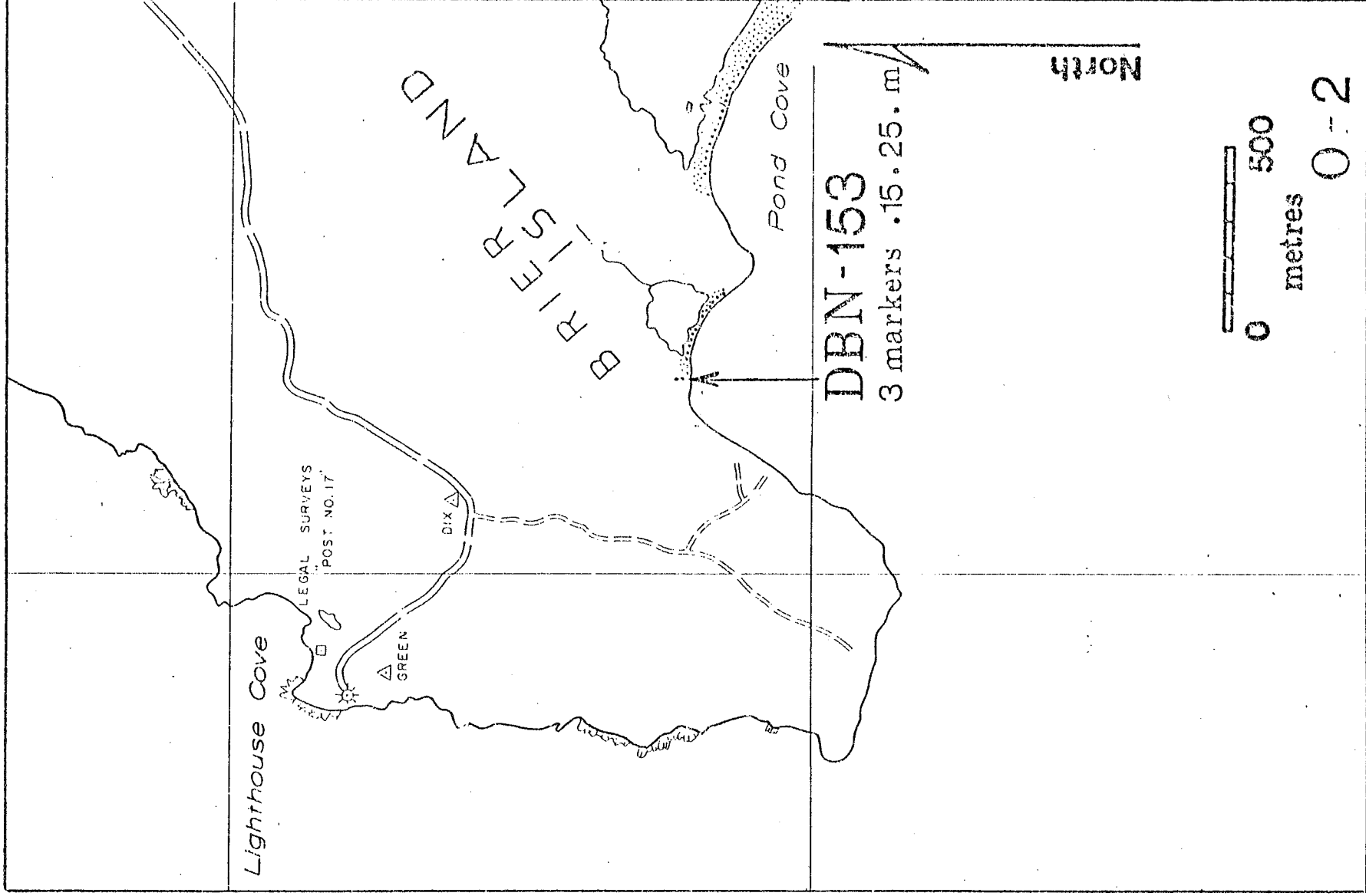
Turn left off trunk 1 at a point 3.1km north of the church in Brighton, on the east side of St. Mary's Bay, Digby Co. Drive on this loose surface road as far as possible; to a road block. Continue on foot for approx. 100m to find the profile markers 10m apart. The front marker is 7m seaward of a revetement wall that was built to protect that portion of the road which is now blocked off. The back marker height is 95cm and the front marker is 96cm high.



DBN 152

Mink Cove

Leave Digby on trunk 217 and proceed southwest (Digby Neck). Upon entering the village of Mink Cove, turn left toward the fish plant and drive to the end of the road. Near the south west side of a large abandoned green building the profile is marked by two markers 25m apart. The back marker is 106cm high and the front marker height is 130cm. The front marker is 7m landward of a 1.5m slope leading down to the back beach.



Lighthouse Cove

LEGAL SURVEYS
POST NO. 17

GREEN

DIX

BRIER ISLAND

Pond Cove

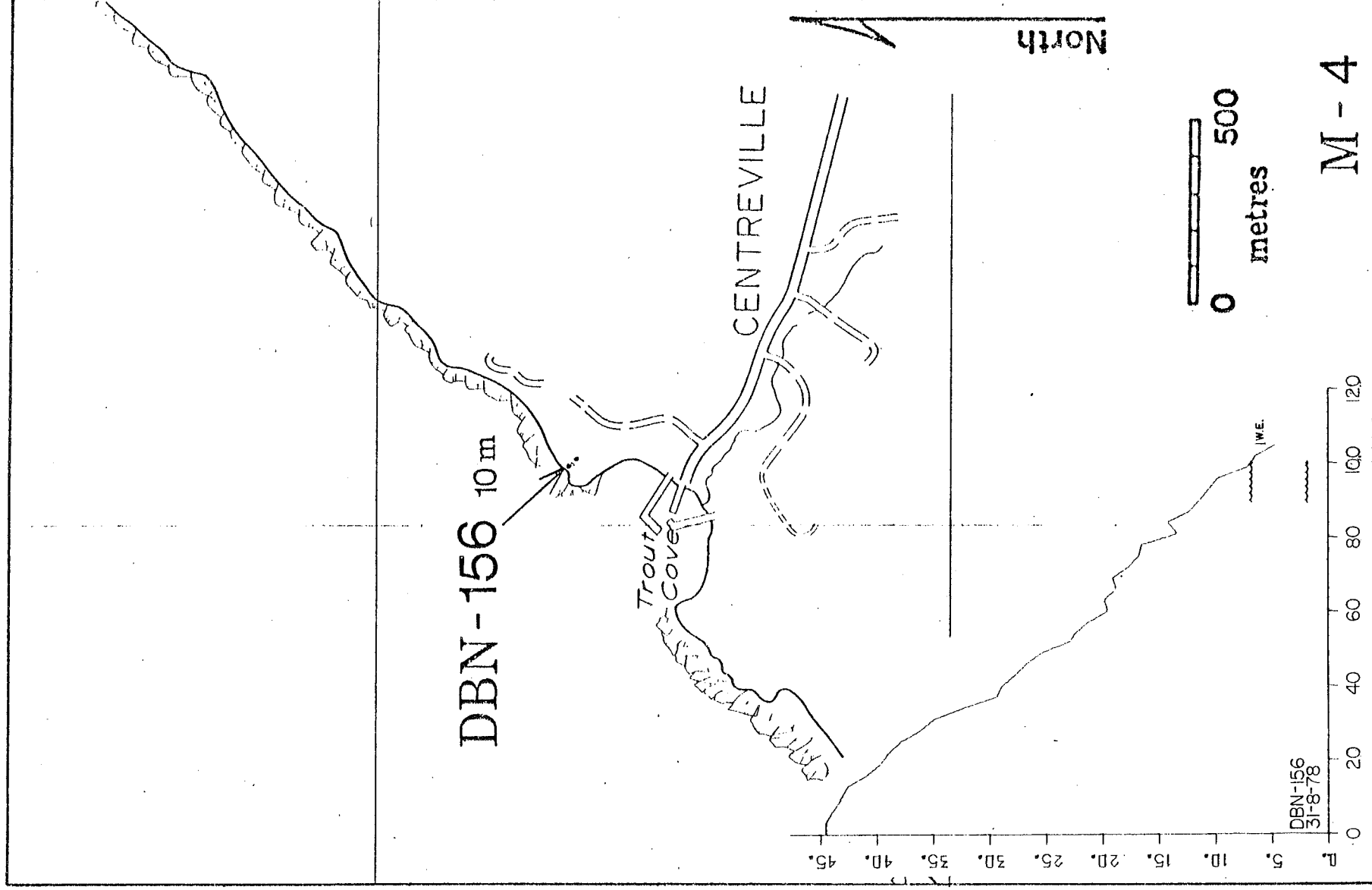
DBN-153

3 markers .15.25.m

North

0 500
metres

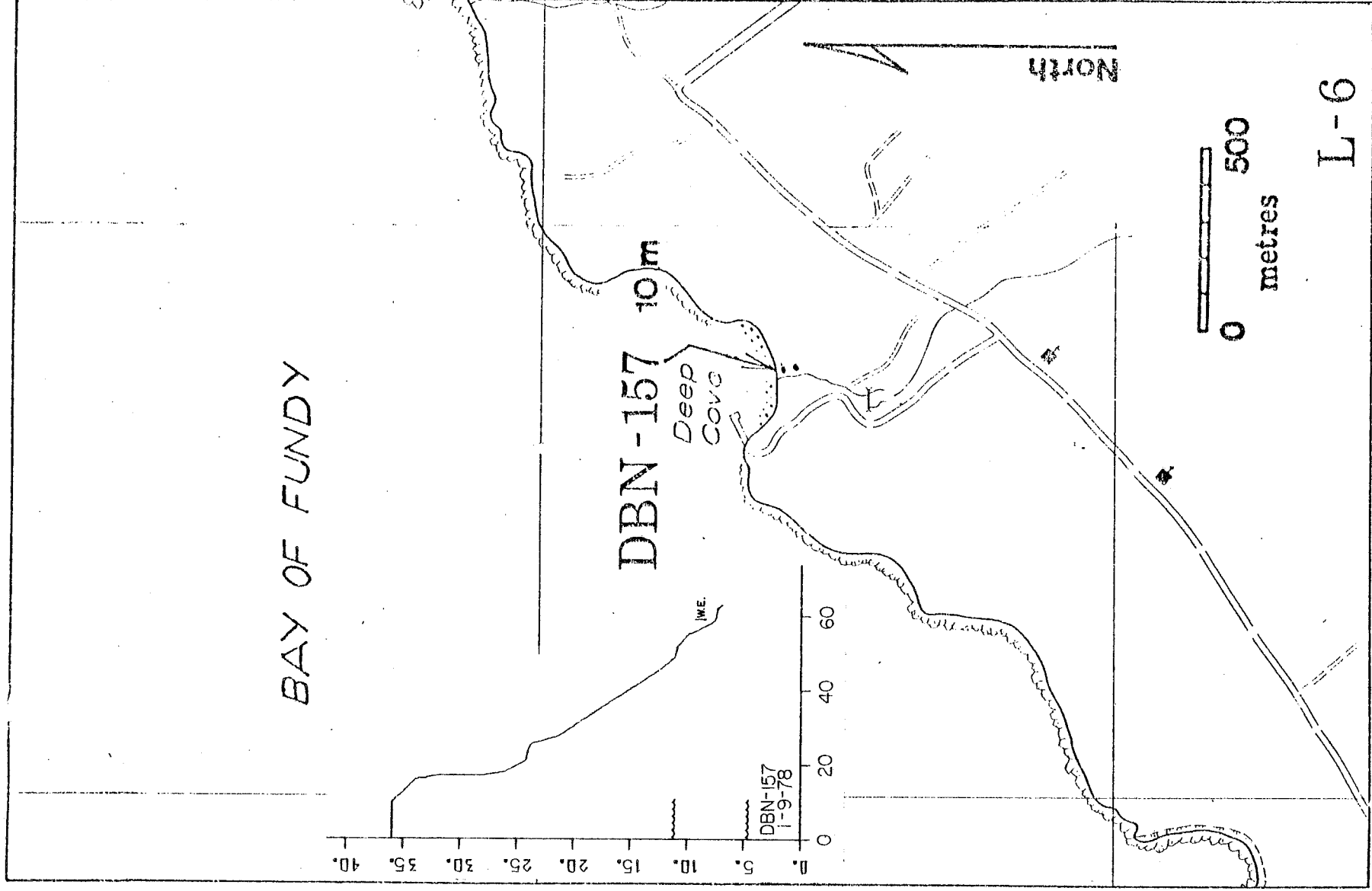
0-2



DBN 156

Trout Cove

Travelling south west on trunk 217 turn right in Centreville and continue on to Trout Cove. Walk northeast from the wharf about 340m. The profile markers are located in a clearing between the forest and the outcrop shore. The markers are 10m apart and the back marker height is 118cm high. The front marker height is 132cm and the front marker is about 18m away from the edge of the overburden.



DBN 157

Broad Cove

L-6

Drive northwest out of Digby toward Mount Pleasant. Turn left toward Culloden Cove, drive 1.1km and turn right on a loose surface road to Broad Cove. The profile markers are located 10m apart about 30m northeast of O'Connor Brook. The back marker height is 119cm and the front marker is 118cm high. The front marker is 7m landward of a till bank that slopes 1.5m down to the back beach.

