

MAR 18 1942

6847 a&b

6847 a&b

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE, U. S. COAST AND GEODETIC SURVEY W. L. G. W. G. DIRECTOR L. O. Colbert	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. T6847 a+b
State <u>Maine</u>	
LOCALITY	
<u>Casco Bay</u>	
<u>Jacks Sound and Vicinity; Outer</u>	
<u>Part of Portland Harbor</u>	
<u>193/ 41</u>	
CHIEF OF PARTY	
<u>Fred L. Peacock</u>	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

REG. NO. T6847a

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. E

REGISTER NO. 6847a

State Maine

General locality Casco Bay

Locality Luckse Sound and Vicinity

Scale 1 : 10,000 Date of survey May, 1941

Vessel S hip OCEANOGRAPHER

Chief of party Fred. L. Peacock

Surveyed by Charles A. Schanck

Inked by Charles A. Schanck

Heights in feet above --- to ground to tops of trees

Contour, Approximate contour, Form line interval --- feet

Instructions dated May 7, 1941, 19

Remarks:

DESCRIPTIVE REPORT

to accompany

GRAPHIC CONTROL SHEET NO. E (FIELD)

7-6847a

CASCO BAY

INSTRUCTIONS:

The work covered by this sheet was performed in accordance with Paragraph 8, Instructions, Project C.S.-265, dated May 7, 1941, referenced 22 mjc - 1995 OC 1.

PURPOSE AND SCOPE OF WORK:

The primary purpose of this graphic control survey was to locate signals for control of hydrographic and wire drag surveys in the area. Since air photographic surveys for this area are contemplated in the near future no detailed topography was surveyed except the location of the wharf of the Casco Bay Line in Latitude $43^{\circ} 41.7'$, Longitude $70^{\circ} 06.7'$. This is the only commercial wharf in the area not shown on current local charts. The omission of other topographic detail is in accordance with the instructions.

LIMITS:

The work on this sheet includes the location of signals around Jewel, Crotch, West Brown Cow, Hope, Inner Green, Stepping Stones, and Marsh Islands; and signals along the eastern shore of Long Island and the southeastern shore of Great Chebeag Island, in Casco Bay.

There is a satisfactory junction between this sheet and Sheet D (field) to the southwest, Sheets A (field) and B (field) to the west and northwest, and Sheet G (field) to the northeast.

Vain I (1941)

7-6848 (1941)

7-6844 (1941)

7-6849 (1941)

METHODS:

The work on this sheet was done in accordance with standard practice on graphic control surveys. Most of the signals were located by three or more cuts from triangulation stations or previously located graphic control stations. In a few cases where a good angle of intersection could not be obtained or only two cuts could be taken on a signal, the position thus obtained was verified by a rod reading from an adjacent signal.

Signals on the outer shore of Jewel Island could not be located by intersection. Signal Dog was located by graphic control methods on the northern tip of the island and a traverse was run from this station to triangulation station Jewel on the south end of the island to locate Signals Cat, Boy, Ace, and Zoo. This traverse closed with an error of about two meters and was verified at each signal by single outs taken from Triangulation Station Brown Cow.

GEOGRAPHIC NAMES:

No investigation of the geographic names in this area was made. It was observed, however, that the island in this area charted as Crotch Island is known locally as Cliff Island. The landing of the Casco Bay Line on this island (Hydrographic Signal Que) is marked "Cliff Island." A number of small fishing and pleasure boats that base on the island show "Cliff Island" as their home port.

Noted
L.H.

RECOMMENDATIONS FOR ADDITIONAL WORK:

A new detailed topographic survey of this area is recommended.

STATISTICS:

Ninety-four (94) signals were located by graphic control methods on this sheet.

LANDMARKS:

Landmarks recommended for charting in this area have been made the subject of a separate report.

Respectfully submitted,

October 8, 1941

Charles A. Schanck
Charles A. Schanck, Lt.(j.g.), C&GS,
U.S.C. & G.S.S. OCEANOGRAPHER.

Approved and forwarded:

Fred. L. Peacock
Fred. L. Peacock,
Chief of Party, C&GS.

Review for this sheet considered
unnecessary
R.H. Cardenas

Completed in Norfolk Processing Office on March 2, 1942.
Geographic Names shown in pencil are from Chart Number 315.
3/9/42
Norfolk Processing Office, Norfolk, Virginia.
Don A. Jones,
Aid, C. & G. S.

APPENDIX

to

REPORT for TOPOGRAPHIC SURVEY

E(FIELD)

MARKED GRAPHIC CONTROL STATIONS

In accordance with instructions in the Director's letter No. 22, MJC 1995 OC.4, dated August 24, 1941, three graphic control stations in the area of this survey were permanently marked with hydrographic station marks. The field work on this survey had been completed when the instructions were received so two of them were set eccentric to the located signals, tied in by distance and direction, and then plotted on the sheet.

The marks were se as follows:

BAND (Inner Green Island)

Mark set 7.04 meters from signal BAN and $116^{\circ} 50'$ to left of line from signal BAN to signal TOW (Jewell Island)

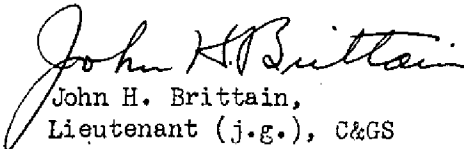
CROT (south end of Crotch Island)

Mark is set 11.95 meters (39.2 ft.) from signal ROT and on line between signal ROT and signal TOW (Jewell Island)

ELM (Sand Island)

Same position as signal ELM. This mark also shown on Survey G(field).

The descriptions and positions of these marks were forwarded with Special Report, Anchorage Stations for Chart No. 201, on October 15, 1941.


John H. Brittain,
Lieutenant (j.g.), C&GS

Remarks

Decisions

1	See #10, below	
2		437701
3	Pending with U.S.G.B	436701
4	Pending with U.S.G.B: leave space for 2 letters after cheberg, incase chebeague is approved	437701
5		437701
6		436701
7		436700
8		436701
9		"
10		"
11		436701
12		"
13		437701
14		436701 U.S.G.B
15	For title	436700 "
16		436701
17		426700
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GEOGRAPHIC NAMES

Survey No.

1684. a

GEOGRAPHIC NAMES											
Survey No. 16847a											
Name on Survey											
	A.	B.	C.	D.	E.	F.	G.	H.	K.		
Beda Rock											1
<u>Chandler Cove</u> ✓											2
<u>Cliff Island</u>											3
<u>Great Chebeag Island</u>											4
<u>Hope Island</u> ✓											5
<u>Inner Green Island</u> ✓											6
<u>Jewell Island</u> ✓											7
<u>Long Island</u>											8
<u>Luckse Sound</u>											9
<u>Obeds Rock</u> ✓											10
<u>Overset Island</u> ✓											11
<u>Outer Green Island</u> ✓											12
<u>Sand Island</u> ✓											13
<u>Vaill Island</u> ✓											14
<u>Casco Bay</u>											15
<u>Stepping Stones</u> ✓											16
<u>West Brown cow</u> ✓											17
											18
											19
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											25
											26
											27

Names underlined in red approved

by L. Heck on 4/25/42

M 234

Names underlined in red approved

by L. Heck on 4/25/42

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. T6847 b

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. M

REGISTER NO. 6847 b

State Maine

General locality Casco Bay

Locality Outer Part of Portland Harbor

Scale 1:5000 Date of survey July-October, 1941

Vessel Ship OCEA NOGRAPHER

Chief of party Fred. L. Peacock

Surveyed by Dale E. Sturmer

Inked by D.E. Sturmer and Norfolk Processing Office

Heights in feet above -- to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated May 7, 1941, 19

Remarks: Project C.S. - 265

DESCRIPTIVE REPORT

to accompany

TOPOGRAPHIC SURVEY - REGISTER NO. 6847b

Casco Bay, Maine

Outer Part of Portland Harbor

INSTRUCTIONS:

This survey was executed in accordance with the Director's Instructions to the Commanding Officer, Ship OCEANOGRAPHER, dated May 7, 1941, Project C.S. - 265.

SCALE:

The scale of this survey is 1:5000.

LIMITS:

This is a detailed topographic survey of the shoreline, and waterfront improvements with some detail back of the high water line of the outer part of the Portland Harbor. It covers the South Portland waterfront from Fort Preble to one mile to the westward. On the Portland waterfront it covers from the Grand Trunk Railway docks on the west extending eastward and northwestward to the Grand Trunk Railway bridge across the entrance to Back Cove. It also includes Pomroy's Rock, Fort Gorges and the eastern shore of Little Diamond Island.

This survey joins the following topographic surveys: on the south Register No. 6853a, ⁽¹⁹³⁸⁾ on the west Register No. 6852a, ⁽¹⁹⁴⁰⁾ on the north Register No. 6849b, ⁽¹⁹⁴⁰⁾ and on Little Diamond Island Register No. 6844. ⁽¹⁹⁴⁰⁾ All these surveys were executed by the Personnel of the Ship OCEANOGRAPHER during the 1941 season.

CONTROL:

Control consisted of triangulation of second and third order accuracy located by C.M. Durgin in 1935, except Spring Point Ledge Lighthouse which had been previously located. The 1941 stations shown on the sheet were located by P.L. Bernstein after the greater part of the survey had been completed. Spring Point Ledge Lighthouse was on the North American datum and was converted to N. A. 1927 by using the "Datum Difference" for this area.

SURVEY METHODS:

Standard planetable methods were used throughout. The signals were first cut in from the triangulation stations and these were used as additional control points. A short traverse was run in back of the Grand Trunk Railway docks to locate the railroads in that area. It was tied into one of the stacks in that vicinity.

DESCRIPTION:

(Triangulation stations are called "stations" and topographic signals "signals")

From station PREBLE to across the wharf from signal JOE is a stone and concrete seawall from 5 to 15 feet high. North of signal JOE is a wooden dock in good condition which is used by ferries and boats servicing Fort Preble. Signal JOE is on a small boat house set on pilings. From signal JOE southward to the dashed line is a continuation of the seawall surrounding Fort Preble. (From the dashed line to Cushing Point see the paragraph on "New Construction") The area around Cushing Point is an earth and refuse bluff which at one time was used as a dumping ground. The shoreline to the westward is wooden retaining walls, although much of this will be filled in in the construction of the new shipyard.

The breakwater from PORTLAND BREAKWATER LIGHT to signal ROY has a center section of set stone about 3 meters wide with broken stone extending to the low water line. The inner end of the breakwater is being torn down for the new shipyard under construction in this area. (Par. "New Construction") The dock that signals SIX and ALL are on will probably be razed in the near future to make way for the new shipyard or oil wharf in this vicinity.

From signal TEN to signal UNA the sheet is self explanatory. The marine railways appear to be in good condition and are used by the boatyards there. South of signal UNA is a small boat basin surrounded by rickety docks. At the time of the survey the boat basin did not seem to be used very much. The area west of the mud flats, 200 meters south of signal UNA is an assorted junk pile of old pilings, booms, concrete counterweights, etc. The shoreline to the southeast of the mud flats has been used as dumping ground in the past and may be subject to change.

On the northern side of the harbor and the western edge of the survey are the Grand Trunk Railway docks. These are of wooden construction, large and strong enough to accomodate large ships, and appear to be in fair state of repair. The sheds on the docks are of wooden construction and are one story high. Railroad tracks run down the center of the docks but not inside the sheds.

Northwest of the ^{above}docks are two large, tall grain elevators which appear to be in good condition.

The main waterfront railroad yard in Portland of the Grand Trunk Railway is northwest of the above docks. Not all ^{of} the tracks are shown but only those that are of importance to the waterfront. The main line Grand ^{Trunk} tracks extend to the northeastward and past station CN, U.S.E.

From signal VIM to signal WEB is a stone retaining wall. Signal ~~SET~~ is on a wooden dock that is in poor condition. Continuing northeastward is a stone retaining wall as is the projection out into the bay at signal LAD. From about 100 meters northwestward of signal HUN to 150 meters to the northwestward of signal JIM (northerly of two) is a public bathing beach. There are small bath houses along this beach. Immediately in back of the bathing beach is a stone seawall.

The area to the southeast of signal BISO consists of an outer stone seawall which the sea has broken through in places and forming the actual high water line behind it. The seawall is all above high water except for small gaps and at the northern end. From station CS, USE to station CN, USE is a stone retaining wall about 8 feet high.

Fort Gorges is an abandoned fort and at the present time has no military importance. The main part of the fort (triangulation station FORT GORGES₂ is on it) is a six sided stone structure enclosing an open court. The walls are about 50 feet high and covered with earth. Except for its obsolescence the fort is in good state of repair. Immediately to the north of the main structure is a stone landing with about a six foot gap resembling a moat separating it from the fort.

The areas on Little Diamond Island and Pomroy's Rock are self explanatory on the sheet. There are a few houses along the beach on Little Diamond Island.

NEW CONSTRUCTION:

In South Portland new construction, which was not completed at the time of this survey is making many changes in the waterfront, and so can only be partially shown. Detail that has been completed is shown on the survey.

The new Todd-Bath Shipyard is immediately north of station TODD BATH TANK. The dashed line to the southeast of signal PUG is the proposed limits of a fill. The long pier extending out into the water is of steel and concrete construction with tracks for traveling cranes.

This pier is for the outfitting of ships after they are launched. The dashed shoreline just to the west of the above pier is subject to change by the removal of the remains of a coffer dam.

The South Portland Shipyard is under construction in the uninked area west of station CUSHING POINT. The area between the breakwater and Cushing Point is being filled and some of the breakwater shown on the survey will be demolished. A blue print of the proposed construction of the shipyard is being forwarded with this survey. Points 1 and 2 on the blueprint were located on the survey and these with PORTLAND BREAKWATER LIGHT should give sufficient control to correlate the blueprint to the survey.

For latest
blueprints of
area see
"55845-46"

Southwest of signal SIX is a new oil depot and wharf, which will be the Portland terminal of the new Portland-Montreal oil pipeline, is under construction. The offshore pier and the centerline of the inshore end of this oil wharf were located for orienting the wharf to this survey. These were the only two points available. A blueprint of the proposed construction of this wharf was forwarded to the Washington Office on July 5, 1941.

DELINEATION OF THE HIGH AND LOW WATER LINES:

Due to the large high water tidal range (4 feet) the exact determination of the mean high water line was often difficult.

The low water line was rodged in. Due to the short time that it is low water it was necessary to have the rodman wade out into depths as much as two feet to reach it. Northwest of station CS, USE the low water line is out in the mud flats and it was more feasible for the hydrographic party to obtain it.

JUNCTIONS:

Satisfactory junctions were made with adjoining surveys.

MAGNETIC MERIDIAN:

No magnetic meridian was taken on this survey. All triangulation stations are located in areas of probable local attraction (railroad, buildings, etc.) so that it would be of little value.

MISCELLANEOUS NOTES:

Signal REX (Lat. 43-39.9, Long. 70-14.2) was on a sunken barge which was being raised after the survey was completed, so no note was made on the survey sheet concerning it. It bared about 2 feet at low water, but a pole on it was visible at all stages of the tide.

The outline of the wreck at Lat. 43-40.2, Long. 70-13.2 was rodded and is shown with a dashed line, as it was considered too large to be shown with the conventional symbol.

The high water line on Little Diamond Island was surveyed by D.A. Jones and the low water line by D.E. Sturmer.

The railroad tracks shown on this survey may not be in the exact position shown, especially where they are in groups. Cars on the tracks made planetable work around them difficult. It was thought desirable to show the tracks because of the expanding defense activities in the Portland Harbor.

COMPARISON WITH PREVIOUS SURVEYS:

There have been so many changes in the waterfront that no comparison with previous surveys is made.

RECOVERABLE HYDROGRAPHIC STATIONS:

ACK - Stack	Recoverable cards not received
ASH - Stack	
BUG - Stack	
DAY - Flagpole	
ELK - Peak of bandstand roof	
GALE - Flagstaff on house	

INKING:

The high water line, low water line, bluffs, beach symbols, buildings, railroads, the projection, rocks, and the notes pertaining thereto were inked by the Topographer. The names of triangulation stations, hydrographic signals, projection line numbers, projection data, etc. will be inked by the Norfolk Processing Office.

LANDMARKS FOR CHARTS:

The only landmark, in addition to those shown on Chart 325, recommended for charting is:

TANK, ELEVATED, Todd-Bath
Lat. 43-38 +1596, Long. 70-13 +1157

Located by triangulation by P.L. Bernstein, 1941.

T6847b

STATISTICS:

Number of statute miles of high water line	7.5
Number of statute miles of low water line	4.7
Number of statute miles of railroads	4.3
Number of hydrographic signal located	56

Respectfully submitted,

Dale E. Sturmer

Dale E. Sturmer, Ensign, C&GS,
U.S.C. & G.S.S. OCEANOGRAPHER

December 12, 1941

Approved and Forwarded:

Fred. L. Peacock
Fred. L. Peacock
Chief of Party, C&GS.

A D D E N D U M

to accompany

DESCRIPTIVE REPORT

T- 6847b

Outer Part of Portland Harbor

This survey was completed in Norfolk Processing Office, February 27, 1942. Geographic names shown on this survey in pencil were taken from Charts Nos. 315 and 325.

Signal GAB on Fish Point, Portland was named JIM on Hydrographic Survey Field No. 502 (H-6672), and is shown on this Topographic Survey as GAB (JIM).


Don A. Jones
Aid, C&GS

February 27, 1942
Norfolk Processing Office,
Norfolk, Va.

Remarks.

Decisions

1	Name O.K. but has been deleted from charts because of filing operations - see p. 4 near top.	436702
2		436702
3		"
4		436702
5		436702
6		"
7		"
8		436702 U.S.O.B.
9		436702
10		"
11		"
12		436702
13		"
14		"
15	For title	436702
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GEOGRAPHIC NAMES

Survey No. T6847 b

GEOGRAPHIC NAMES											
Survey No. T6847 b											
Name on Survey											
	A.	B.	C.	D.	E.	F.	G.	H.	K.		
<u>Cushing Point</u> ✓											1
<u>Diamond Island Roads</u>											2
<u>Diamond Island Ledge</u> ✓											3
<u>Fish Point</u> ✓											4
<u>Fore River</u>											5
<u>Fort George Gorges</u> ✓											6
<u>Fort Preble</u> ✓											7
<u>Little Diamond Island</u>											8
<u>Portland</u>											9
<u>Portland Breakwater</u> ✓											10
<u>Pomroy's Rock</u> ✓											11
<u>South Portland</u>											12
<u>Spring Point</u> ✓											13
<u>Spring Point Ledge</u> ✓											14
<u>Portland Harbor</u>											15
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											26
											27

Names underlined in red approved

by L. Heck on 4/25/42

M 234

Names underlined in red approved
by L. Heck on 4/25/42

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

~~No. 116847~~

No. **T6847** a & b

received March 19, 1942
registered March 24, 1942
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
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63			
82			
83			
88			
90			

RETURN TO

82	R. W. Knox
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RWC

82-AB

June 9, 1942.

To: Lieut. (jg) Dale E. Sturmer,
U.S.C. & G.S. Ship LYDONIA,
c/o Postmaster,
Bath, Maine.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Descriptions of hydrographic stations, request for.

No descriptions of recoverable hydrographic stations were furnished with topographic survey T-6847b, vicinity of Portland Harbor, Maine, although the descriptive report listed six such stations.

There are enclosed partially completed copies of Form 524 for these signals and a photostat of the sheet on a reduced scale. Please complete the forms by adding the necessary descriptions.

(Signed) J. H. HAWLEY

Acting Director

Enclosures

attached to report
for T-6847b
J. a. m.

708
POST-OFFICE ADDRESS: % Postmaster
Portland, Maine

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

JUN 21 1942
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Ship LYDONIA

June 15, 1942

To: The Director
U.S. Coast and Geodetic Survey
Washington, D.C.

From: Dale E. Sturmer
Lieut. (j.g.) C&GS.

Subject: Description of Recoverable Hydrographic Stations

Reference: Director's Letter dated June 9, 1942; File 82-AB.

Respectfully submitted herewith are the descriptions for the six (6) recoverable hydrographic stations of topographic Survey T-6847b, vicinity of Portland Harbor, Maine, sent to me for completion under the above reference.

Dale E. Sturmer
Dale E. Sturmer
Lieut. (j.g.) C&GS.

DIVISION OF CHARTS

SURVEYS SECTION

REVIEW OF TOPOGRAPHIC SURVEY

REGISTER NO. 6847b

Field No. M

Maine, Casco Bay, Outer Part of Portland Harbor
Surveyed July - October 1941, Scale 1:5,000
Instructions dated May 7, 1941

Plane Table Survey

Aluminum Mounted

Chief of Party - Fred L. Peacock
Surveyed by - D. E. Sturmer
Inked by - D. E. Sturmer and Norfolk Processing Office
Reviewed by - R. H. Carstens, June 6, 1942
Inspected by - H. R. Edmonston

1. Adjoining Surveys

This survey satisfactorily joins T-6849b on the northwest, T-6846 (1941) on the northeast, T-6853a (1941) on the southeast and T-6852a (1941) on the southwest. Topographic maps T-5957 and T-5958 of 1941 together cover the complete area of the present survey.

2. Comparison with Prior Surveys

T- 735 (1854-58) 1:10,000
T-1111 (1867) 1: 5,000
T-1140a(1868-69) 1: 1,200
T-1141a(1869) 1: 1,200

Except for sections of the seawall to the northeast of Portland and the high water line around Little Diamond Island, the shoreline and harbor front have been greatly changed since the earlier surveys were accomplished. Around Little Diamond Island the agreement in topography is good.

As noted on page 3 of the Descriptive Report, extensive construction work was being done along the waterfront of South Portland and the shoreline features in this section were therefore not located.

The earlier surveys should be superseded by the present survey in the common area.

3. Comparison with Chart 325 (Latest print date 1-26-42)

a. Topography

Within the limits of the present survey the charted topography originates with the previously mentioned surveys, together with blueprints of the U. S. Engineers and of shipping and manufacturing companies situated in Portland and South Portland. Blueprints 35845-46 and 29444-45 show the major topographic changes in this area. Blueprint 35845-46 is of more recent date than the present survey and should be used to supplement it. Agreement is good with the other blueprints and the present survey should supersede them in the common area.

The present survey shows numerous reefs and rocks awash which do not appear on the chart.

It would be desirable to verify by field examination, where possible, the existence of charted cable areas. This was not accomplished on the present survey.

b. Aids to Navigation

The fixed aids to navigation shown on this survey are in good agreement with those charted.

c. Magnetic Meridian

As noted on page 4 of the Descriptive Report no magnetic meridian was determined because of the probable local attraction at the triangulation stations.

4. Condition of Survey

Satisfactory except that no descriptive cards were sent in for recoverable hydrographic stations on T-6847b.

rectified; see correspondence Rusk.

5. Compliance with Instructions for the Project

Satisfactory.

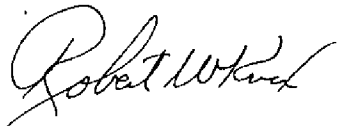
6. Additional Field Work Recommended

None.

7. Superseded Surveys

T- 735	(1854-58)	in part
T-1111	(1867)	" "
T-1140a	(1868-69)	" "
T-1141a	(1869)	" "

Examined and approved:



Chief, Surveys Section



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal
Surveys