

11228
11230

11229
11231

11229
11231

11228
11230

Diag. Cht. No. 6380.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)

Field No. Ph-98 Office No. T-11228 thru T-11231

LOCALITY

State Washington

General locality Fidalgo Island

Locality Anacortes

19 52-53

CHIEF OF PARTY

F. Natella, Chief of Party

F. Natella, Portland Photo. Office

LIBRARY & ARCHIVES

DATE June 10, 1958

T-11228

SHAN, 1940

48°	30'	33.241"	1026.8 (826.5)
122°	40'	55.074"	1130.4 (101.1)

T-11229

POINT, 1927

48°	31'	44.963"	1388.9 (464.4)
122°	34'	25.547"	524.1 (706.9)

T-11230

ERIE, 1939

48°	27'	43.317"	1338.0 (515.3)
122°	39'	19.036"	391.1 (841.5)

T-11231

PEW, 1939

48°	28'	25.271"	780.6 (1072.7)
122°	32'	27.746"	569.9 (662.4)

Areas contoured by various personnel
(Show name within area)
(II) (III)

4.

DATA RECORD

Field Inspection by (II): **John H. Winniford** Date: **Sept. - Nov. 1953**
William R. Kachel

Planetable contouring by (II): Date: -
 -
 -

Completion Surveys by (II): Date:

Mean High Water Location (III) (State date and method of location): **Spot located on field photographs during Sept. Nov. 1953. Located on office photographs by stereoscopic study and then detailed on map manuscripts**

Projection and Grids ruled by (IV): Date:

Projection and Grids checked by (IV): Date:

Control plotted by (III): **William R. Kachel** Date: **March 1954**

Control checked by (III): **J. E. Deal, J. L. Harris, & V. E. Serena** Date: **March 1954**

Radial Plot or Stereoscopic Control extension by (III): **J. L. Harris & J. E. Deal** Date: **May 14, 1954**

Stereoscopic Instrument compilation (III): *Planimetry* Date:
Contours Date:

Manuscript delineated by (III): **See reverse side this page** Date:

Photogrammetric Office Review by (III): **See reverse side this page** Date:

Elevations on Manuscript checked by (II) (III): **None** Date:

	Delineation	Date	Office Review	Date
T-11228	D. N. Williams	6/30/54	J. L. Harris	8/5/54
T-11229	D. N. Williams	9/15/54	J. E. Deal	9/28/54
T-11230	C. C. Wiebe	7/6/54	J. L. Harris	8/3/54
T-11231	C. C. Wiebe	10/1/54	J. E. Deal	10/8/54

Camera (kind or source) (III): U.S.C. & G.S. - 9 lens - Focal length 8.25 in.

PHOTOGRAPHS (III)						
Number	Date	Time	Scale	Stage of Tide		
36352 thru 36360	5/12/52	10:26	1:10,000	0.2 ft. below M.L.L.W. -1.7		
36362 thru 36368	5/12/52	10:33	1:10,000	0.2 ft. below M.L.L.W. 1.75		
36377 thru 36380	5/12/52	10:42	1:10,000	0.2 ft. below M.L.L.W. 1.9		
36422 thru 36429	5/12/52	11:44	1:10,000	0.3 ft. below M.L.L.W. -2.5		
36485 thru 36492	5/12/52	12:39	1:10,000	0.3 ft. below M.L.L.W. -2.0		
36538 thru 36541	5/12/52	13:35	1:10,000	0.2 ft. below M.L.L.W.		
36568 thru 36569	5/12/52	13:52	1:10,000	0.2 ft. below M.L.L.W. -1.7		

5-12-52 hi. @ 2:44 = 7.2 Anacortes
 lo @ 12:09 = -2.52

Tide (III)

Reference Station: Port Townsend, Washington
 Subordinate Station: Anacortes, Guemes Channel
 Subordinate Station:

MHW	MHW	Ratio of Ranges	Mean Range	Diurnal
				Spring Range
8.20	7.96		5.1	8.3
	7.40	0.9	4.8	8.2 + 0.30

- Washington Office Review by (IV): _____ Date: _____
- Final Drafting by (IV): _____ Date: _____
- Drafting verified for reproduction by (IV): _____ Date: _____
- Proof Edit by (IV): _____ Date: _____

Land Area (Sq. Statute Miles) (III): 40
 Shoreline (More than 200 meters to opposite shore) (III): 78
 Shoreline (Less than 200 meters to opposite shore) (III): 8
 Control Leveling - Miles (II):
 Number of Triangulation Stations searched for (II): 106
 Number of BMs searched for (II): 29
 Number of Recoverable Photo Stations established (III):
 Number of Temporary Photo Hydro Stations established (III):

Recovered: 72 Identified: 34
 Recovered: 29 Identified: *

Remarks: * B. M. locations were spotted on photographs

FIELD INSPECTION REPORT

FOR

QUARDANGLES T-11228, T-11229, and T-11230, and T-11231

Project Ph-98

1. Area Covered:

This report covers the entire area within the project limits and includes all or part of the following land areas:

1.	Allan Island	T-11130
2.	Burrows Island	T-11130
3.	Cypress Island	T-11228
4.	Dot Island	T-11229
5.	Fidalgo Island	T-11228-4-30-21
6.	Guemes Island	T-1122849
7.	Hat Island	T-11229
8.	Huckleberry Island	"
9.	Saddlebag Island	"
10.	Strawberry Island	T-11228
11.	Williamson Rocks	T-11130
12.	Young Island	T-11130

2. Areal Field Inspection:(a) General description of the area.

All of the land covered by this report is surrounded by tidewater. In general the topography is quite rugged. The bulk of the area is covered by coniferous timber which gives way to numerous outcrops of bedrock here and there, adjacent to which a thin mantle of grass has established itself. The rock outcrops are rounded and scoured by glaciation. There is some cultivation in the flatter areas which have a deeper soil base.

Allan Island - See photographs 36358, 36359, and 36363.

In general the mean high water line fronts on a wave cut bluff of varying height. Above the bluffs rise slopes of moderate to very steep grades. At extreme low tides a rock ledge which parallels the rocky areas is exposed. There are occasional coves with beaches of sand and gravel.

Burrows Island - See photographs 36357, 36359, 36364, and 36365

For general description see Allan Island. On the most westerly part of Burrows Island is a small Coast Guard base for the maintenance of Burrows Island Lighthouse. In a cove off the eastern shore of the island is a group of dolphins which have been used to moor logging rafts for small logging operations.

Cypress Island - See photographs 36367 and 36379

On the southeast side of this island, extending from Reef Point to triangulation station SPUR, the mean high water line fronts on a beach of sand, gravel, and boulders. This beach is about 30 feet wide and fronts on a steep wave cut bluff. In the offshore areas there are numerous rocks. These were indicated on the photographs when they could be identified. Numerous reference ties to the mean high water line were established by pacing. On the southwest side of the island, from Reef Point to Strawberry Bay, the mean high water line fronts on a narrow beach, 25 to 35 feet wide, consisting of boulders and gravel which in turn fronts on a steep wave cut bluff. Few rocks were observed in the offshore areas. The above also describes the shoreline of the remainder of the island except Secret Harbor. Here the banks are low, narrow beaches are of sand and gravel and the bay is shallow. There is a small settlement at the head of the bay which consists mostly of "Boys Home", a private school for wayward boys. There is considerable logging being done on this island.

Fidalgo Island

The interior areas with the exception of the City of Anacortes are generally hilly and covered by coniferous timber. Some of the area in the less rugged sections has been cleared and is being farmed. The peninsula, marked by March Point at its northern extremity, is mainly farm land with some wooded covering in the north and central portions. 7-11-29

The western shore is rugged with shore line along the base of near-vertical bluffs in many places. Numerous outcrops of bed rock extend into the water with occasional narrow sand and boulder beaches exposed at low tides. There are numerous rocks and as many of these as could be identified have been indicated on the photographs.

The city of Anacortes is built up along the shore with piers, canneries, and warehouses. On the eastern side of the city there is a large pulp mill, plywood plant and lumber mill with their accompanying log pens extending far out into Fidalgo Bay. These log pens are made up of rows of piles and dolphins with logs chained

- between to form pens.

Capsante is a high, rugged, rock outcrop with sheer cliffs extending to the water surface. The lower end of Fidalgo Bay is an extensive mud flat that bares at low tide. The eastern portion of the project has mud flats that bare at low tide and several low sand and mud islets made up of spoil from the dredging of the channel to Swinomish Slough. These islets are constantly changing in size and shape due to the action of the elements and continual dredging operations.

Guemes Island - See photographs 36353, 36354, 36422, and 36423.

This island is much lower and flatter than the rest of the islands in this project. A considerable portion of it has been turned into fertile farms. It is covered by a well maintained road system. In the northeast and northwest portions of the island adjacent to the project limits, the mean high water line fronts on sandy beaches, and there are no high bluffs inshore. There are a number of tourist cabins throughout this area. On the southwest side of the island the mean high water line fronts on a beach which is variously sand, gravel, and boulders. The beach in turn fronts on a pronounced sandstone bluff. There are occasional rocks in the offshore areas. From the southwest corner of the island to Guemes ferry landing the beach is mostly sand and there are no high banks inshore. The occasional piling in the offshore areas were located from photo sub points using triangulation for azimuth and stadia for distance. ^{see back photo 36423} From a point about 300 meters east of Guemes ferry landing to the southeast point of the island, bluffs of varying height face the water. Beaches of gravel or boulders, are narrow or nonexistent at high tide. There are numerous rocks offshore; as many as possible were identified. The occasional piling in the area were located by azimuth and stadia distances from either photo sub points or triangulation stations. On the northeast side of the island save for the extreme northern part of the project, and except for occasional coves, the mean high water line fronts on a wave cut bluff, and at mean high water beaches are virtually non-existent. A rugged, near vertical, bluff fronts the water immediately northwest of Ship Harbor.

Hat Island, Dot Island, Huckleberry Island, and Saddlebag Island -
See photograph 36490

On all of these islands the mean high water line fronts on a wave cut bluff and at extreme low tides a wave cut rock ledge is exposed. On the south side of Huckleberry Island, low tide exposes a beach of large boulders.

Strawberry Island - See photograph 36379. 7-11 224

On the west side of this small islet the mean high water line fronts on a near vertical rock bluff; the same holds true for the east side of the island and a rock ledge extends out from the mean high water line at low tide; a rock ledge extends well out from the south end of the island

Williamson Rocks - See photograph 36363. 7-11 230

A group of bare rocks connected at low tide by boulder beaches.

Young Island - See photograph 36359. 7-11 230

This island has a thin mantle of trees and brush. There is one cabin on the island. The mean highwater line fronts on a wave cut bluff with the associated rock ledge exposed at low tide. Rock ledges extend well out from both ends of the island.

(b) General notes on field inspection:

Field inspection was done in accordance with the project instructions and the topographic manual.

The photographs for this project were taken at an extremely low stage of the tide. Therefore, numerous rock ledges and reefs which would otherwise not be visible are shown on the photographs. However, at the time of field inspection, the tides remained quite high, generally, which made adequate field inspection of all features quite difficult. In many cases rocks were found by going into the area with a boat and using an oar for a sounding rod to locate and get the approximate height of the rock. -2.5

A few offlying rocks shown on USC&GS Naut. Chart #6376 could not be verified due to the high tides during daylight hours during the period of field inspection. These should be investigated by the hydrographer. A copy of USC&GS Naut. Chart #6376 with the rocks marked that could not be verified is enclosed with the field records for the project. (These notes were transferred to letter-size sections of the chart and attached to "Notes for the Hydrographer" for the 1955 season.) 4/5

The shoreline was first field inspected then the field work checked with a stereoscope, and a second inspection trip was made to clarify details and doubtful points. In the areas where the mean high water line fronts on sandy beaches or gravel, numerous paced or taped reference ties have been made. Where the shoreline fronts on vertical rock bluffs and paced distances were impossible, the mean high water line can usually be distinguished on the photo by a faint

dark line with lighter areas both above and below it. The mean high water line has been delineated in red on the photos.

At the northern entrance to Swinomish Slough (see photo 36539) there are several small sand islands. These islands are formed by dredging operations along the channel. The mean high water line on these islands is subject to considerable change throughout the year. Numerous pilings and dolphins in this area were located by sextant fixes. The data for these fixes is recorded on the back of photo 36569.

The details on the photo were clear and the coverage adequate.

3. Horizontal Control

No supplemental control was needed and none was established. A systematic recovery of all triangulation in the project area was made but only those stations necessary for control of the plot were identified.

One station, BLAKE 1939, ^{west of T-11224} has been submitted with a doubtful identification. This station was set on a rock shelf on the side of a steeply sloping bluff. All ground details that could be seen checked the identification. However, a complete check of ground detail would not be possible without climbing gear.

4. Vertical Control:

Vertical control was not required for this project. However, most of the vertical control within the project limits, when easily recoverable, was spotted on the photographs to aid in later recovery. No attempt was made to identify the B.M.'s more accurately.

5. Contours and Drainage:

No contouring is being done. The very few drains noted have been shown on the photographs in blue.

6. Woodland Cover:

The bulk of the woodland is coniferous and is moderately heavy.

7. Shoreline and Alongshore Features:

(a) The mean high water line: See paragraph 2, section b of this report.

(b) The low water line: The low water line was not defined. There is some confusion by field inspectors between the symbolization of apparent shoreline and the low water line, and the short dash in the apparent shoreline symbol has dwindled to a dot in many cases. However, no low water line was delineated on this project and all such symbolization is apparent shoreline.

(c) The Foreshore: Numerous rock ledges show on the photographs that are usually covered due to the fact the photos were taken at a minus ^{-1.5} tide. All prominent rocks that were visible at time of field inspection were noted on the photos along with time, date, and height. Where the boulders and rocks were too numerous to note individually a generalized note was made.

(d) Bluffs and Cliffs: In most cases where bluffs or cliffs extend to the waters edge the mean high water line is at the base of the bluff except where noted otherwise.

(e) Docks, Wharves, Piers, Landings, Etc.: In the city of Anacortes there are many piers and buildings alongshore and the mean high water line could not be shown. The outline of the piers were accentuated in red where it was not clear on the photographs. Notes were made on the photos on any items under this heading. Excepting Guemes Island and Fidalgo Island, there is very little development and consequently very few of the above features. There is a small pier in Secret Harbor on Cypress Island and the Guemes Island - Anacortes ^{1.11229} Ferry Slip is on Guemes Island. Guemes Island is the only one which is connected to the mainland with regularly scheduled ferry runs.

(f) Submarine Cables: There are four submarine cables in the area covered by this report. One leads west from Sunset Beach to the San ^{7.11228} Juan Islands, two connect the City of Anacortes with Guemes Island to the north and the fourth crosses the Swinomish Slough just south of the vertical lift bridge on State Highway No. 1

(g) Other Shoreline Structures: Several of the piers and buildings shown on USC&GS Naut. Chart No. 6376 along the northern edge of Fidalgo Island west of Anacortes have fallen to ruin and in many cases only a few pile ruins remain to mark the area. Notes were made on the photographs where applicable.

8. Offshore Features:

See section No. 2, part b.

9. Land marks and Aids:

List of landmarks will be submitted on form No. 567. Fixed navigation aids are reported on form No. 567. Floating aids were not located. (attached)

10. Boundaries, Monuments and Lines:

Not applicable.

11. Other Control:

All recoverable topographic stations within the project limits were searched for. Station Rel was not recovered. Stations Sine, Tik, U.S.E. B3+20.8, and Wep were considered lost. The following were recovered and all except U.S.E. B62+38.8 were identified on the photographs to be located in the new plot: Swit, U.S.E. B53+03.6, U.S.E. B62+38.8, Ram, Gret, Nor, Spart, and Pont. The following new topographic stations were established by the party: Capsante Range Rear Light, Capsante Range Front Light, Tank, and Stack.

7-11-24

7-11-24

12. Other Interior Features:

The few roads in the area were classified as either double dash lines or double solid lines.

Buildings were noted on the photographs in the immediate vicinity of the shoreline. Outbuildings and others not to be compiled were deleted with green ink.

The cable crossing areas were noted on the photos.

A new Railroad swing bridge has been constructed over the entrance to the Swinomish Slough by the Great Northern Railway. This bridge was constructed since the photos were taken and is in the same general area as the bridge shown on the photo but is longer than the old bridge. New vertical and horizontal clearances were noted on photograph No. 36569 along with the position and length of the new swing span.

Clearances were measured and noted on photograph No. 36569 for the vertical lift highway bridge over the mouth of the Swinomish Slough. Channel (see Geog. Names)

13. Geographic Names:

Not applicable.

14. Special Reports and Supplemental Data:

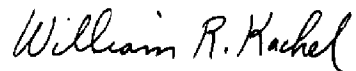
Single copies only of recovery notes for Triangulation and Topographic Stations were prepared. No recovery cards were submitted for the Bench Marks as these were only spotted on the photographs as an aid in finding them at a later date. The descriptions of the B.M.'s were checked for errors or changes but since most of these were written in 1952 no changes or additions were found necessary.

Approved and forwarded:



Fred Natella
Comdr., USC&GS
Chief of Party

Respectfully submitted:



William R. Kachel
Lt. (j.g.), USC&GS

PHOTOGRAMMETRIC PLOT REPORT

Map Manuscripts No. T-11228 thru T-11231

Project Ph-98

21. Area Covered:

This radial plot embraces an area in the vicinity of Anacortes, Washington between latitudes $48^{\circ} 28' 15''$ to $48^{\circ} 33' 45''$ and between longitudes $122^{\circ} 30'$ to $122^{\circ} 45'$. It covers the shorelines and adjacent planimetry within the neat lines of map manuscripts T-11228 thru T-11231.

Nine lens photographs taken in May 1952 were used. Corrections to radials for paper distortion and transforming errors were made by use of Master Templet No. 36269 during the process of drawing the templets. The templets were oriented directly on the four map manuscripts which had been joined together by matching neat lines and then fastened with cellophane tape.

No difficulties were encountered in orienting the templets to the identified horizontal control stations and in the final radial plot result good intersections of radials were obtained.

The assembled plot was turned face down and the locations of photogrammetric points were pricked and circled on the reverse sides of the four map manuscripts.

23. Adequacy of Control:

An adequate number of horizontal control stations was identified by the field inspection party and these were transferred to the office photographs without difficulty.

24. Supplemental data:

There was no supplemental data.

25. Photography:

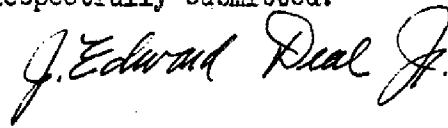
The photography was adequate for the compilation of shoreline map manuscripts and the required planimetry for the city of Anacortes, Washington.

Approved and forwarded:

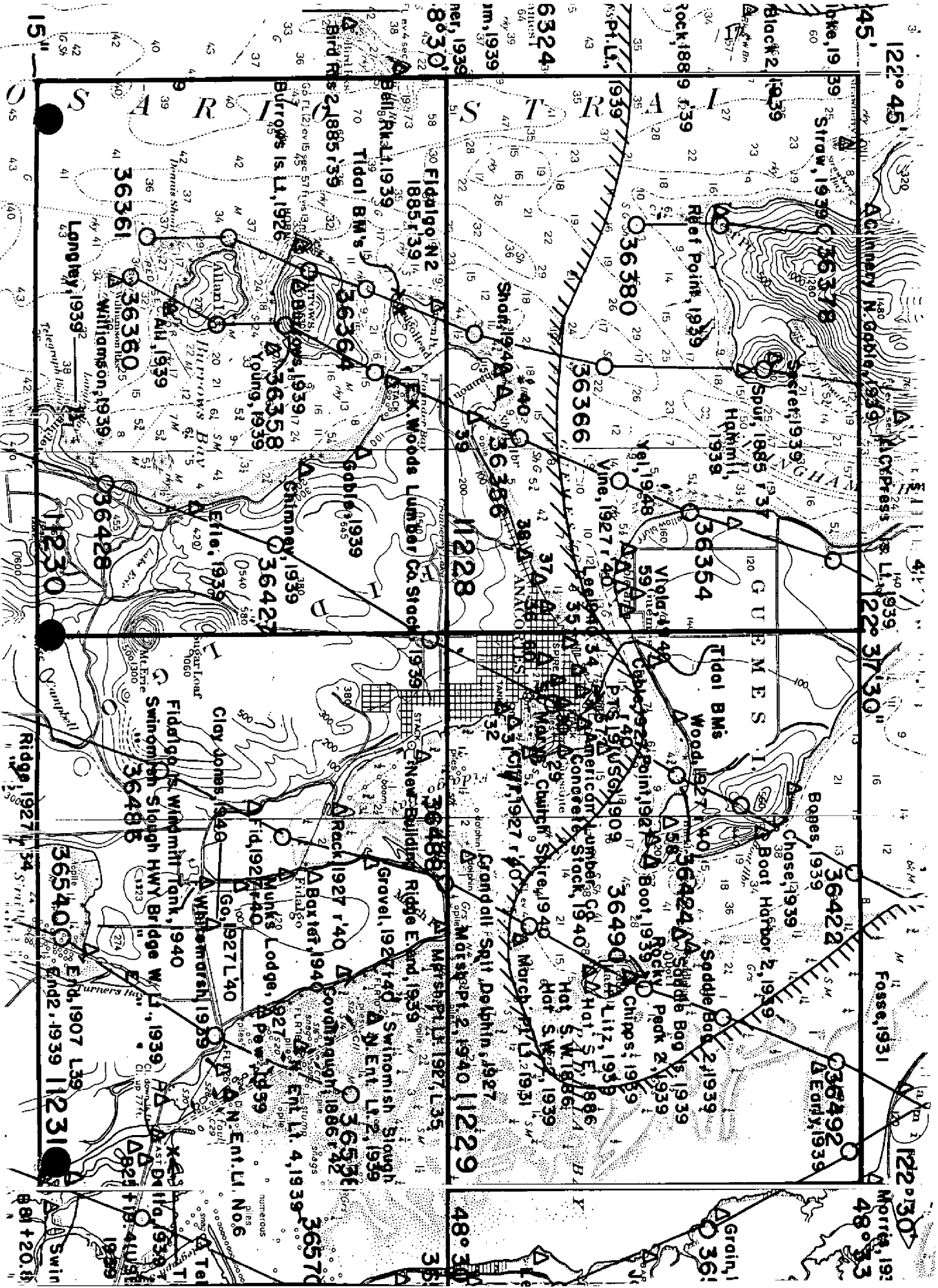


Fred Natella
Comdr., USC&G Survey
Officer-in-Charge

Respectfully submitted:



J. Edward Deal, Jr.
Cartographer



122° 45'

45'

122° 37' 30"

48° 30'

48° 33'

122° 30'

48° 33'

Black 2, 1939

Rock 1889, 1939

Straw, 1939

36378

36380

36366

36354

36358

36356

36354

36422

36424

36490

36488

36485

36485

36485

36485

36485

36485

36485

36485

36485

36485

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

122° 30'

48° 33'

48° 33'

MAP T-11228

PROJECT NO. Ph-98

SCALE OF MAP 1:10,000

SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR χ -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
			FORWARD	(BACK)			FORWARD	(BACK)	
BLAKE, 1939	G 5455	N.A.	48	33	41.408		1279.0	(574.3)	West of T-11228
	P. 606	1927	122	46	09.912		203.2	(1027.0)	
Cypress Island Light, 1939	G 5605	"	48	33	58.959		1821.2	(32.1)	North of T-11228
	P. 668	"	122	40	01.090		22.3	(1207.8)	
HAMMIL, 1939	G 5605	"	48	32	38.996		1204.5	(648.8)	
	P. 665	"	122	39	08.778		180.0	(1050.6)	
NICK, 1940	G 5665	"	48	30	49.924		1542.1	(311.2)	
	P. 712	"	122	38	03.034		62.3	(1169.1)	
REEF POINT 1939	G 5455	"	48	32	27.874		861.0	(992.3)	
	P. 606	"	122	43	15.653		321.1	(909.6)	
SECRET, 1939	G 5605	"	48	32	59.477		1837.2	(16.1)	
	P. 665	"	122	41	13.292		272.6	(957.9)	
SHAN, 1940	G 5665	"	48	30	33.241		1026.8	(826.5)	
	P. 712	"	122	40	55.074		1130.4	(101.1)	
SPUR, 1885	G 5665	"	48	32	36.570		1129.6	(723.7)	
	P. 712	"	122	41	07.112		145.9	(1084.8)	
STRAW, 1939	G 5455	"	48	33	35.917		1109.4	(743.9)	
	P. 606	"	122	44	06.255		128.3	(1102.0)	
VINE, 1927	G 5665	"	48	31	36.531		1128.4	(724.9)	
	P. 715	"	122	38	33.405		685.4	(545.7)	
VIOLA, 1940	G-5665	"	48	31	35.522		1097.2	(756.1)	
	P. 712	"	122	38	24.919		511.3	(719.8)	

1 FT. = 3048006 METER

COMPUTED BY: W.R.K.

DATE 1/26/54

CHECKED BY: J.E.D.

DATE 2/4/54

MAP T. 11229 PROJECT NO. Ph-98 SCALE OF MAP 1:10,000 SCALE FACTOR None

Fig. 1 of 3

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y-COORDINATE LONGITUDE OR X-COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
					FORWARD	(BACK)		FORWARD	(BACK)	
Anacortes, American Lumber & Box Co.	G 5665	N.A.	48	31	14.100			435.5	(1417.8)	
Concrete Stack, 1940	p. 716	1927	122	36	17.216			353.3	(877.9)	
Anacortes, Morrison Mill Company,	G 5665	"	48	30	35.883			1108.4	(744.9)	
Brick Stack, 1940	p. 717	"	122	36	18.079			371.1	(860.4)	
Anacortes, Morrison Mill Co., Elevated Steel Tank, 1940	G 5665	"	48	30	29.068			897.9	(955.4)	
	p. 716	"	122	36	28.458			584.1	(647.4)	
Anacortes, St. Mary's Church, Spire, 1940	G 5665	"	48	31	01.154			35.7	(1817.7)	
	p. 716	"	122	36	52.893			1085.5	(145.8)	
BOAT HARBOR 2, 1939	G-5605	"	48	32	54.557			1685.2	(168.1)	
	p. 663	"	122	34	40.843			837.7	(392.9)	
BONES, 1939	G 5605	"	48	33	13.818			426.8	(1426.5)	
	p. 669	"	122	35	29.441			603.7	(626.7)	
BOAT, 1939	G 5665	"	48	31	51.842			1601.3	(252.0)	
	p. 716	"	122	34	17.221			353.3	(877.7)	
CABLE R.M. 1, 1927	G 5665	"	48	31				1495.5	(447.8)	
	p. 713	"	122	37				275.2	(955.9)	
CHIPS, 1939	G 5665	"	48	31	43.093			1331.1	(522.2)	
	p. 716	"	122	32	54.313			1114.3	(116.7)	
CLIFF, 1927	G 5665	"	48	30	51.350			1586.1	(267.2)	
	p. 714	"	122	35	48.302			991.3	(240.1)	
HAT SOUTHEAST, 1886	G 5605	"	48	31	14.598			450.9	(1402.4)	
	p. 669	"	122	32	37.786			775.4	(455.8)	
HAT SOUTHWEST, 1939	G 5665	"	48	31	18.580			573.9	(1279.4)	
	p. 715	"	122	32	58.168			1193.6	(37.6)	

1 FT. = 3048008 METER

COMPUTED BY: W.R.K. DATE 1/25/54 CHECKED BY: J.E.D. DATE 2/5/54 M-2388-12

MAP T.11229

PROJECT NO. Ph-98

SCALE OF MAP 1:10,000

SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR ψ -COORDINATE LONGITUDE OR X-COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
					FORWARD	(BACK)		FORWARD	(BACK)	
HUMP, 1940	G 5665	N.A.	48	31	04.270			131.9	(1721.4)	
	P. 712	1927	122	37	26.446			542.7	(688.6)	
JACK 2, 1939	G 5605	"	48	34	56.700			1751.4	(101.9)	
	P. 662	"	122	36	33.203			680.5	(549.2)	
LITZ, 1939	G 5605	"	48	31	32.771			1012.3	(841.0)	
	P. 669	"	122	32	35.766			733.9	(497.2)	
MARCH POINT 2, 1939	G 5605	"	48	30	01.312			40.5	(1812.8)	
	P. 663	"	122	33	22.986			471.9	(759.8)	
March Point Light, 1950	Field	"	48	30	39.090			1207.4	(645.9)	
	Camp.	"	122	33	21.848			448.4	(783.0)	
O'BRIEN, 1886	G 5665	"	48	31	57.322			1770.6	(82.7)	
	P. 713	"	122	34	59.962			1230.1	(0.8)	
POINT, 1927	G 5665	"	48	31	44.963			1388.9	(464.4)	
	P. 713	"	122	34	25.547			524.1	(706.9)	
ROCKY PEAK 2, 1939	G 5665	"	48	32	07.457			230.3	(1623.0)	
	P. 715	"	122	33	27.566			565.5	(665.4)	
SADDLE BAG 2, 1939	G 5605	"	48	32	14.044			433.8	(1419.5)	
	P. 669	"	122	33	11.887			243.8	(987.0)	
SADDLE BAG ISLAND, 1939	G 5605	"	48	32	10.096			311.8	(1541.5)	
	P. 663	"	122	33	12.686			260.2	(970.6)	
TIDE POINT, 1886	G 5665	"	48	31	16.122			498.0	(1355.3)	
	P. 713	"	122	35	55.978			1148.7	(82.5)	
WARE, 1940	G 5665	"	48	31	16.615			513.2	(1340.1)	
	P. 713	"	122	36	43.952			908.9	(329.3)	

1 FT. = 3048006 METER

COMPUTED BY: W.R.K.

DATE 1/26/54

CHECKED BY: J.E.D.

DATE 2/5/54

MAP T. 11230 PROJECT NO. Ph-98 SCALE OF MAP 1:10,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y-COORDINATE LONGITUDE OR X-COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
					FORWARD	(BACK)		FORWARD	(BACK)	
ALL, 1939	G 5455	N.A.	48	27	30.74			949.5	(903.8)	
	p. 609	1927	122	41	53.38			1096.7	(136.0)	
Belle Rock	G 5455	"	48	29	35.366			1092.4	(760.9)	
Light, 1939	p. 610	"	122	45	05.087			104.4	(1127.5)	
BIRD ROCKS 2, 1885	G 5455	"	48	29	05.928			183.1	(1670.2)	
	p. 605	"	122	45	40.312			827.8	(404.3)	
BRIDGE, 1939	G 5678	"	48	24	30.547			943.5	(909.8)	
	p. 727	"	122	38	37.041			761.7	(472.2)	
BURROWS, 1939	G 5455	"	48	28	38.802			1198.6	(654.7)	
	p. 605	"	122	42	12.142			249.3	(982.9)	
Burrows Island	G 5455	"	48	28	41.197			1272.5	(580.8)	
Light, 1926	p. 610	"	122	42	44.175			907.2	(325.0)	
Chimney, 1939	G 5455	"	48	28	42.47			1311.9	(541.4)	
	p. 610	"	122	39	47.61			977.8	(254.4)	
E. K. Woods Lumber	G 5455	"	48	29	30.716			948.8	(904.5)	
Co. k Stack, 1939	p. 609	"	122	40	55.632			1142.2	(89.7)	
ERIE, 1939	G 5455	"	48	27	43.317			1338.0	(515.3)	
	p. 608	"	122	39	19.036			391.1	(841.5)	
FIDALGO N2, 1885	G 5455	"	48	29	56.079			1732.2	(121.1)	
	p. 605	"	122	42	00.008			0.2	(1231.5)	
LANGLEY, 1939	G-5455	"	48	26	37.761			1166.4	(686.9)	
	p. 608	"	122	40	33.756			693.8	(538.3)	
WILLIAMSON, 1939	G 5455	"	48	26	58.673			1812.3	(41.0)	
	p. 608	"	122	42	15.740			323.4	(41.0)	

1 FT. = 3048006 METER COMPUTED BY: W.R.K. DATE 1/26/54 CHECKED BY: J.E.D. DATE 2/5/54 N. 2388-12

24

MAP T-11231 PROJECT NO. Ph-98 SCALE OF MAP 1:10,000 SCALE FACTOR None

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR λ -COORDINATE LONGITUDE OR ϕ -COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
							FORWARD	(BACK)	
BAYVIEW, 1939	G 5605 p. 663	N.A. 1927	48	29	32.741		1011.3	(842.0)	East of T-11231
CAVANAUGH, 1886	G 5605 p. 663	"	48	29	08.910		1108.7	(123.2)	
CLAY JONES, 1940	G 5665 p. 714	"	48	27	56.083		275.2	(1578.1)	
DELLA, 1939	G 5605 p. 663	"	122	32	48.953		1005.2	(226.9)	
END, 2, 1939	G 5665 p. 729	"	48	27	46.955		1732.3	(121.0)	
FID, 1927	G 5605 p. 714	"	48	27	17.856		964.5	(268.0)	
GIB, 1907	G 5678 p. 729	"	122	30	27.854		551.5	(1301.8)	
GRAVEL, 1927	G 5665 p. 714	"	48	26	43.759		572.3	(660.5)	
PEW, 1939	unknown p. 673	"	122	33	12.172		1351.6	(501.7)	
ROCK, 1927	G 5665 p. 714	"	48	28	15.220		250.1	(982.9)	
Swinomish Slough Beacon No. 16, 1939	unknown p. 675	"	122	35	04.877		470.1	(1383.2)	
Swinomish Slough, Hwy. unknown	unknown	"	48	26	03.843		100.2	(1132.2)	South of T-11231
Bridge, East Lt., 1939	unknown	"	122	34	37.320		118.7	(1734.6)	
		"	48	29	16.178		767.1	(466.2)	
		"	122	34	36.222		499.7	(1353.6)	
		"	48	28	25.271		743.8	(488.2)	
		"	122	32	27.746		780.6	(1072.7)	
		"	48	28	55.005		569.9	(662.4)	
		"	122	35	06.190		1699.0	(154.3)	
		"	48	26	34.030		127.1	(1105.0)	
		"	122	30	16.660		1051.1	(802.2)	
		"	48	27	20.450		342.4	(890.7)	
		"	122	30	46.936		631.7	(1221.6)	

1 FT. = 3048006 METER

COMPUTED BY: W.R.K. DATE 1/26/54 CHECKED BY: J.E.D. DATE 2/8/54

M-288-12

MAP T. 11231 PROJECT NO. Ph-98 SCALE OF MAP 1:10,000 SCALE FACTOR none

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR U-COORDINATE LONGITUDE OR X-COORDINATE		DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
					FORWARD	(BACK)		FORWARD	(BACK)	
Swinomish Slough, Highway Bridge, West Light, 1939	unknown	N.A.	48	27	20.761			641.3	(1212.0)	
	P. 675	1927	122	30	48.658			999.8	(233.0)	
Swinomish Slough North Entrance	Field	"	48	29	18.697			577.5	(1275.8)	
	Comp.	"	122	32	17.189			352.9	(879.1)	
Light 10, 1950	Field	"	48	28	39.554			1221.8	(631.5)	
	Comp.	"	122	31	46.775			960.6	(271.6)	
Swinomish Slough North Entrance	Field	"	48	28	02.898			89.5	(1763.8)	
	Comp.	"	122	31	17.389			357.2	(875.3)	
WHITMARSH	unknown	"	48	27	54.210			1674.5	(178.8)	
	P. 673	"	122	31	47.728			980.4	(252.1)	
WHITNEY, 1939	unknown	"	48	26	55.589			1717.0	(136.3)	East of T-11231
	P. 671	"	122	28	21.557			443.0	(789.9)	
										25.

COMPILATION REPORT

Map Manuscripts No. T-11228 thru T-11231.

Project Ph-98

31. Delineation:

Graphic methods were used for the compilation of these map manuscripts.

In the city of Anacortes all streets have been compiled. All buildings along the waterfront have been detailed and in the interior of the city only public buildings have been shown. Planimetry throughout the remaining areas of the map manuscripts consists of a narrow strip of land adjacent to the mean high-water line and alongshore features.

The field inspection was satisfactory and the map manuscripts are believed to be complete shoreline surveys.

32. Control:

The horizontal control stations were adequate both as to identification and density.

33. Supplemental data:

Sextant fix locations were furnished by the field inspection party for numerous dolphins and piling. These were plotted on the map manuscripts according to data entered on the reverse side of several field inspection photographs.

34. Contours and Drainage:

Contours are not applicable. Drainage was shown as indicated by field inspection. Existing topographic maps of the area do not show any additional drainage.

35. Shoreline and Alongshore Details:

The location of the mean high-water line was satisfactorily indicated by field inspection. By stereoscopic examination a refinement of the field determined location was drawn on the office

photographs and then compiled. The line could be clearly seen because the photographs were taken at about mean lower low-water.

The alongshore features which bare at low-water were clearly visible on the photographs and they have been compiled. The low-water line shown at the offshore limits of mud or sand flats has been shown as an approximate low-water line but it should be quite accurate if the predicted tide at the time of photography was affirmed.

Rocks were thoroughly field inspected and appropriate data furnished to refer them to the proper vertical datum. Computation and verification of this data was made at the compilation office and entered on the map manuscripts.

36. Offshore Details:

There are no offshore features.

37. Landmarks and Aids:

Forms 567 have been submitted for landmarks and aids falling within these four map manuscripts.

38. Control for Future Surveys:

Forms 524 are submitted for eleven recoverable topographic stations listed under item 49.

39. Junctions:

Complete and satisfactory junctions have been made between these four map manuscripts.

40. Horizontal and Vertical Accuracy:

There are no areas on these map manuscripts that are considered to be of sub-normal horizontal accuracy.

41. Compliance With Paragraph 11 of Instructions:

These map manuscripts are being forwarded to the Washington Office because it is believed that changed conditions and assignments have voided the shipping requirements contained in Paragraph 11 of the instructions.

46. Comparison With Existing Maps

A visual comparison was made with the following:

U.S.G.S. 15 min. quadrangle, ANACORTES, WASHINGTON,
Scale 1:62,500, edition of 1943.

U.S.G.S. 15 min. quadrangle, DECEPTION PASS, WASHINGTON,
Scale 1:62,500, edition 1951.

47. Comparison With Nautical Charts:

Comparison was made with Nautical Charts as follows:

No. 6376, Scale 1:25,000, edition of May 1945, corrected
4/14/52

No. 6378, Scale 1:40,000, edition of June 1935, corrected
5/5/52

"Items to be Applied to Nautical Charts Immediately"

None

"Items to be Carried Forward"

None.

48. Geographic Names:

The geographic names shown on these four map manuscripts were obtained from the two nautical charts listed under Item 47.

Approved and Forwarded:

Fred Natella
Fred Natella
Comdr., USC&G Survey
Officer-in-Charge

Respectfully submitted:

J. Edward Deal, Jr.
J. Edward Deal, Jr.
Cartographer

49. Notes for the Hydrographer:

Forms 524, "Recoverable Topographic Station" are submitted for the following:

Area of Map Manuscript T-11228

TANK, 1953
STACK, 1953

Area of Map Manuscript T-11229

CAPSANTE RANGE FRONT LIGHT, 1953
CAPSANTE RANGE REAR LIGHT, 1953

Area of Map Manuscript T-11231

U.S.E. B 53/03.6, 1939
SWIT, 1939
SPARK, 1939
RAM, 1939
PONT, 1939
NOR, 1939
GRET, 1939

There are two landmarks listed on Form 567 for which Forms 524 are not submitted. These are of photo-hydro station accuracy and are shown on T-11231. They are:

STACK, Anacortes Plywood Co., black steel stack, easterly of two.

STACK, Anacortes Plywood Co., black steel stack, westerly of two.

Review Report T-11228 thru T-11231
Shoreline Maps
February, 1955

61. General:

The reference datum for rocks was changed in many instances during review, because the mean range of tide value (4.8 ft.) seems to have been used rather than the MHW level (7.4 ft. for sub-station Anacortes). The date, hour, and rock elevation had been recorded by the inspector and this information was used to reference the rocks to MLLW in most cases.

62. Comparison with Registered Surveys:

			<u>Manuscripts</u>
T-462	1:10,000	1854	T-11228
T-1667	"	1885	T-11230
T-1746	"	1886	T-11228, T-11229, T-11231
T-1746a	"	1913	" " "
T-1747	"	1886	T-11231
T-1748	"	"	T-11228
T-2111	1:4,800	1892	T-11231
T-2112	"	"	T-11228, T-11229
T-2113	"	"	T-11228, T-11230
T-4317	1:5,000	1927	T-11228, T-11230
T-4318	"	"	T-11229, T-11231
T-4319	"	"	T-11231
T-6690	"	1939	T-11231
T-6692	"	"	T-11231
T-6736	1:10,000	1940	T-11230
T-6802	"	1939-40	T-11228, T-11230

Differences in MHWL between the previous surveys and the manuscripts are not great because these islands have rock shores with few sand and gravel beaches subject to wave action. However, there are numerous cultural changes and a greater amount of off-shore information on the new surveys, so that, except for contours and the bluff symbol on the north shore of Fidalgo Island, the maps in this project supersede the older surveys for charting purposes.

63. Comparison with Maps of Other Agencies:

USGS Anacortes, Washington	1:62,500	1951
USGS Deception Pass, Washington	1:62,500	1951

So far as difference in scale permits comparison, there seems reasonable agreement between the quadrangles and the manuscripts.

64. Comparison with Contemporary Hydrographic Surveys:

Except for Field Examination No. 4, 1953, north of March Point (T-11229) 48° 30.25'-30.6'/122° 33.5'-34.2', H-4738, 1927 is the most recent survey.

65. Comparison with Nautical Charts:

6376	1:25,000	ed. May 1945, corr. January 1947
6378	1:40,000	ed. June 1935, corr. September 1949

Differences between the charts and the manuscripts are, for the most part, due to cultural changes, piling and dolphin additions or deletions, and greater rock information along-shore on the manuscripts.

Notes to the Hydrographer, accompanying this report, lists items which need clarification or proof.

66. Accuracy:

These maps comply with project instructions and meet the National Standards of Accuracy.

Reviewed by:

Lena T. Stevens
Lena T. Stevens

APPROVED:

L. a. Landy
Chief, Review Section
Photogrammetry Division

Max Blackett
Chief, Nautical Chart Branch
Charts Division

Act. Bell
Chief, Photogrammetry Division

J. B. Green
Chief, Coastal Surveys Division

990

Summary to Accompany
T-11228 thru T-11231

Instructions for Ph-98 were issued 13 July 1953 for photogrammetric field surveys and graphic control surveys in the vicinity of Anacortes, Washington, in support of hydrographic surveys under project CS-241, San Juan, Archipelago and Georgia Strait.

The four 1:10,000-scale shoreline surveys in this project lie between latitude $48^{\circ} 26\frac{1}{4}' - 33\text{-}3/4'$, longitude $122^{\circ} 30' - 45'$. Field inspection consisted of location of shoreline, near-shore rocks, piling and dolphins; and along-shore culture.

No hydrography was accomplished in the area included in Ph-98, except for a small area north of March Point ($48^{\circ} 30.25' - 30.6' / 122^{\circ} 33.5' - 34.2'$). This survey is attached to its descriptive report and is filed under FE No. 4, 1953. Hydrographic work is to be resumed in 1955.

No new control was established in the area, except six recoverable topographic stations located by radial plot. These are listed in Section 49 of the Compilation Report.

After final review, a cloth-mounted copy of each map and the original Review Report will be registered and filed in the map Archives.

Notes for the Hydrographer

T-11228:

"City of Seattle Rocks" were not searched for by the 1953 field party.

4 Dolphins and a pile charted in Ship Harbor were not noted by the field inspector, nor were they visible on photo 36356, etc.

2 Rocks south of Reef Point labeled "awash MLLW" on the manuscript appear to be only two of several prominences on a probable sunken ledge, upon which kelp grows. The notation "awash MLLW" was retained during review because the rocks were visible on photographs taken at -1.9-ft. tide but they were not visible when inspection was made at 12:55, October 5, 1953, at 5.3-ft. tide.

Triangulation station Ship Harbor, 1887, r. 1939, is charted as a bare rock islet, but 1953 field inspection says it is 6 feet above MLLW (MHW Anacortes = 7.4 feet). The 1939 recovery note says it is "6 feet above the mean level of low water", which probably corroborates the 1953 information.

T-11229:

Rocks referred to High Tide by the field inspector have been changed to islets and referenced to H.W. on the manuscript because this inspector referred to other rocks in the immediate vicinity to MHW, indicating that there was a clear distinction in terms. In no case was an elevation given, so that it was not possible to translate them to MHW terms. Hydrography may be able to supply these elevations during the 1955 season.

The approximate LLWL added to the manuscript in the Capsante area is from photo 36425 which was taken at about -2.4-ft. tide.

T-11230 and T-11231:

Sections of chart 6373, with copy of notes made by the field inspector in 1953, are attached.

LTS Feb. 1955

Geographic Names:

T-11228

- ✓ Rosario Strait
- ✓ Strawberry Island
- ✓ Strawberry Bay
- ✓ Cypress Island
- ✓ Reef Point
- ✓ Secret Harbor
- ✓ Deepwater Bay
- ✓ Bellingham Channel
- ✓ Yellow Bluff
- ✓ Guemes Island
- ✓ Guemes Channel
- ✓ Anacortes
- ✓ Fidalgo Island
- ✓ Ship Harbor
- ✓ Bhannon Point
- ✓ Sunset Beach
- ✓ Great Northern Railway

Names approved 2-8-55
L. Heck

Geographic Names: T-11229

- ✓ Padilla Bay
- ✓ March Point
- ✓ Hat Island
- ✓ Dot Island
- ✓ Saddlebag Island
- ✓ Huckleberry Island
- ✓ Guemes Island
- ✓ Boat Harbor (this is a very old name, on earliest survey sheet.
USGS quad has Square Har/por, but use approved name
pending BGN action)
- ✓ Guemes
- ✓ Guemes Channel
- Anacortes
- ✓ Capsante
~~Capsante~~ (a section of Anacortes)
- ✓ Capsante
~~Capsante~~ Waterway
- ✓ Fidalgo Bay
- Fidalgo Island
- ✓ Great Northern Railway
- ✓ Anacortes G. School
- ✓ Anacortes High School
- ✓ Columbian Jr. High School
- ✓ Wash. No. 1

Names approved 2-8-55
L. Heck

Geographic Names:

T-11230

Fidalgo Island

Rosario Strait

Telegraph Bight

Langley Point

Langley Bay

Burrows Bay

Alexander Beach

ou

Flander Bay

Green Point

Washington Park

Fidalgo Head

Short Bay

Burrows Island

Young Island

Allan Island

Williamson Rocks

Great Northern Railway

Names approved 2-8-55.
L. Heck.

Geographic Names: T-11231.

- ✓ Swinomish Channel (BGN decision in 1954 over Slough)
- ✓ Padilla Bay
- ✓ Whitmarsh Junction
- ✓ Fidalgo Island
- ✓ March Point
- ✓ Fidalgo Bay
- ✓ Crandall Spit
- ✓ Weaverling Spit
- ✓ Fidalgo
- ✓ Deans Corner
- ✓ Anacortes
- ✓ S.S. Church of Christ
- ✓ Pilgrim Cong'l Church
- ✓ Similk Bay
- ✓ Similk Beach
- ✓ Turners Bay
- ✓ Great Northern Railway
- ✓ Wash. No. 1 (highway)

Names approved 2-8-55
L.Heck

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC REVIEW SECTION

98

NONFLOATING AIDS OR ~~LANDMARKS~~ FOR CHARTS

TO BE CHARTED

STRIKE OUT ONE

~~NONFLOATING AIDS OR LANDMARKS FOR CHARTS~~

Portland, Oregon January 1954

I recommend that the following objects which ~~have~~ (have not) been inspected from seaward to determine their value as landmarks be charted on ~~the charts~~ the charts indicated.

The positions given have been checked after listing by W. Glover

CHARTING NAME	STATE	DESCRIPTION	SIGNAL NAME	POSITION						METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	NEARBY CHART	OFFSHORE CHART	CHARTS AFFECTED
				LATITUDE *		LONGITUDE *		DATUM							
				D. M. METERS	"	D. P. METERS	"								
LIGHT	WASHINGTON	Capeante Range, Front Light	7-11224	48 30	1321.2	122 36	34.589	N.A.	Air Photo	1953				6376 6380	
LIGHT		Capeante Range, Rear Light	"	48 30	1325.0	122 36	40.275	"	Plot	1953				6376 6380	
LIGHT		Barrons Island Light, 1926		48 28	1272.5	122 42	44.175	N.A.	Triangulation	1926				6376 6380	
LIGHT		March Point Light, 1939 & 1950	7-11224	48 30	1207.5	122 33	21.848	N.A.	Triangulation	1939				6376 6380	
LIGHT		Swinomish Slough North Entrance Light 10 (Light 2, 1939), 1950	7-11231	48 29	577.5	122 32	353.0	1927	Triangulation	1939				6376 6380	
LIGHT		Swinomish Slough North Entrance Light 18, 1950	"	48 28	1221.8	122 31	46.775	N.A.	Triangulation	1950				6376 6380	
LIGHT		Swinomish Slough North Entrance Light 26, 1950	"	48 28	02.898	122 31	17.389	N.A.	Triangulation	1950				6376 6380	

Fred Natella
Chief of Party.

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

PHOTOGRAMMETRIC REVIEW SECTION

TO BE CHARTED

STRIKE OUT ONE

~~NON-NAVIGATIONAL~~ LANDMARKS FOR CHARTS

Portland, Oregon

January, 1954

I recommend that the following objects which ~~have~~ *have not* been inspected from seaward to determine their value as landmarks be charted on ~~charts~~ the charts indicated.

The positions given have been checked after listing by W. Glover

Chief of Party.

Fred Natella

STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION				METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	CHARTS AFFECTED		
				LATITUDE *		LONGITUDE *				HARBOR CHART	INSHORE CHART	OFFSHORE CHART
				° ' "	D. M. METERS	° ' "	D. P. METERS					
WASHINGTON	EAST LIGHT	Swinomish Slough Highway Bridge East Light, 1939	7-11-251	48 27	20.450	122 30	46.936	Triangulation	1939			6376
	WEST LIGHT	Swinomish Slough Highway Bridge West Light, 1939	"	48 27	20.761	122 30	48.658	Triangulation	1939			6380
	STACK	Anacortes Plywood Company, black steel stack, E'ly of two.	"	48 29	40.953	122 35	59.417	Air Photo	1953			6376
	STACK	Anacortes Plywood Company, black steel stack, W'ly of two.	"	48 29	41.070	122 35	00.823	Air Photo	1953			6380
	STACK	Anacortes, American Lumber and Box Co., concrete stack, 1940	7-11-229	48 31	435.5	122 36	17.216	Triangulation	1940			6376
	TANK	Anacortes, Morrison Mill Company, elevated steel tank, 1940	7-11-229	48 30	29.068	122 36	28.458	Triangulation	1940			6380
	SPIRE	Anacortes, St. Mary's Church, spire, 1940	7-11-229	48 31	01.154	122 36	58.1	Triangulation	1940			6376
	STACK	E. K. Woods Lumber Co., stack, 1939		48 29	30.716	122 36	1085.5	Triangulation	1940			6380
	CHY	Anacortes, Morrison Mill Company, brick stack, 1940	7-11-229	48 30	35.883	122 36	55.632	Triangulation	1940			6376
							1142.2	Triangulation	1939			6380
							18.079	Triangulation	1940			6376
							371.1	Triangulation	1940			6380

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

PHOTOGRAMMETRIC OFFICE REVIEW

T-11228 thru T-11231

1. Projection and grids 2. Title 3. Manuscript numbers 4. Manuscript size

4a. Classification label None

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) 7. Photo hydro stations None 8. Bench marks
 9. Plotting of sextant fixes 10. Photogrammetric plot report 11. Detail points

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline 13. Low-water line 14. Rocks, shoals, etc. 15. Bridges 16. Aids to navigation 17. Landmarks 18. Other alongshore physical features 19. Other along-shore cultural features

PHYSICAL FEATURES

20. Water features 21. Natural ground cover N 22. Planetable contours N 23. Stereoscopic instrument contours N 24. Contours in general N 25. Spot elevations N 26. Other physical features

CULTURAL FEATURES

27. Roads 28. Buildings 29. Railroads 30. Other cultural features

BOUNDARIES

31. Boundary lines N 32. Public land lines N

MISCELLANEOUS

33. Geographic names N 34. Junctions 35. Legibility of the manuscript 36. Discrepancy overlay N 37. Descriptive Report 38. Field inspection photographs 39. Forms

40. _____
 Reviewer

J. Edward Dial Jr.
 Supervisor, Review Section or Unit

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

 Compiler

 Supervisor

43. Remarks:

RT 6378) 39' Chart 6376 38' 37' 36' 50'' 40'' 30'' 20''

GUEMES ISLAND

*Copies of
The notes in blue are those made by W.R. Kachel in 1953.
The stage of tide (in red) was ascertained during review
at the Washington office*

MHW at sub-station Anacortes = 7.4 ft

GUEMES CHANNEL

*No rock at 0955 Oct. 1953
(3.7 ft)
Cable area
No rock @ 1005
(3.4 ft)
191953*

*No rock at
1015 Oct. 1953
tide = (4.1)*

ANACORTES



chart 6376

BURROWS I.

ALLAN I.

BURROWS BAY

Williamson Rocks

Langley Pt

Langley Bay

Alexander Beach

Hydro Invest

uncovered extreme low tides

Hydro

Hydro

Telegraph Bight

8° 28'

15 sec 57 ft 13 m
HORN

RED SECTOR

extreme low tides

Dennis Shoal

122° 42'

48° 26'

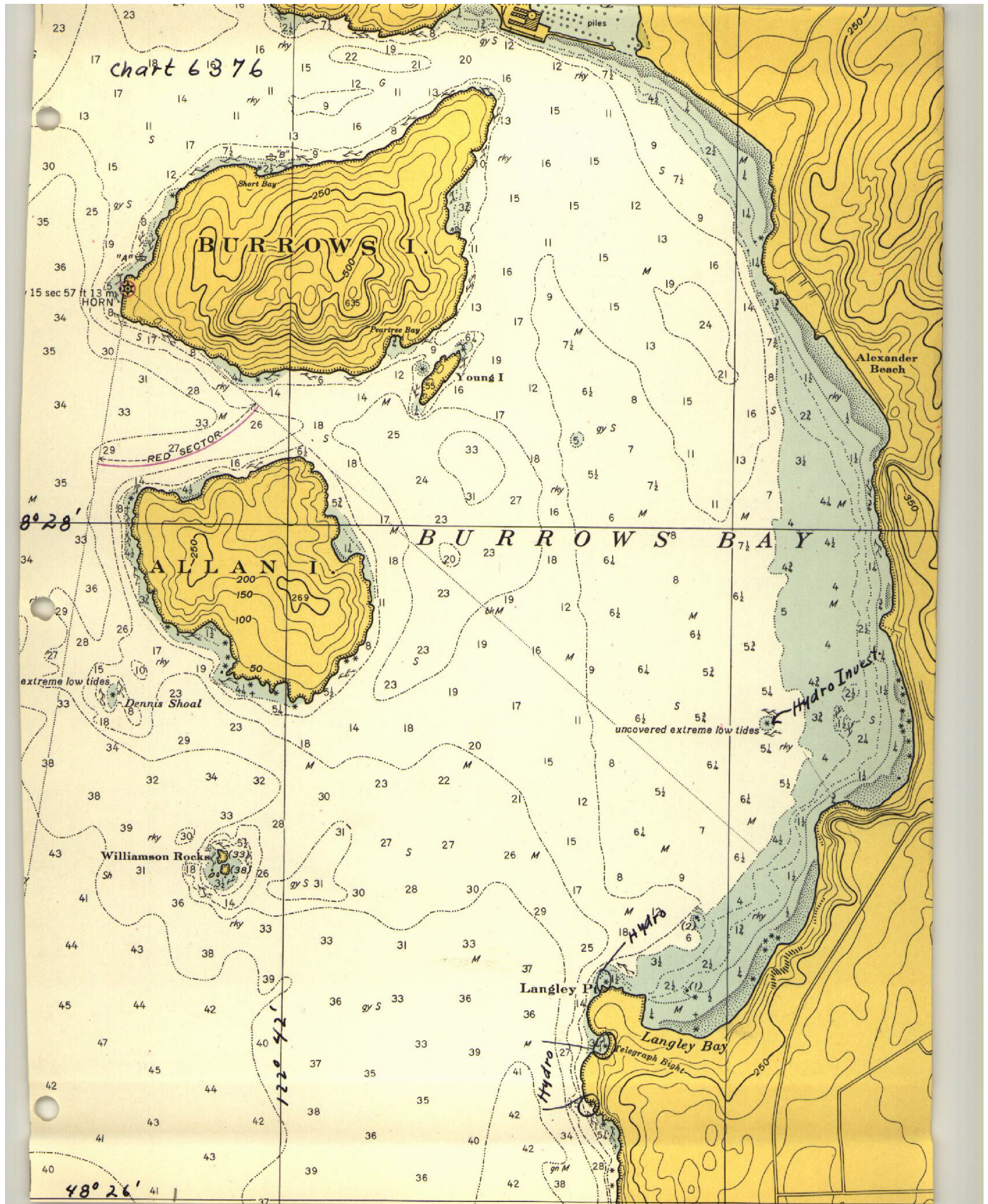
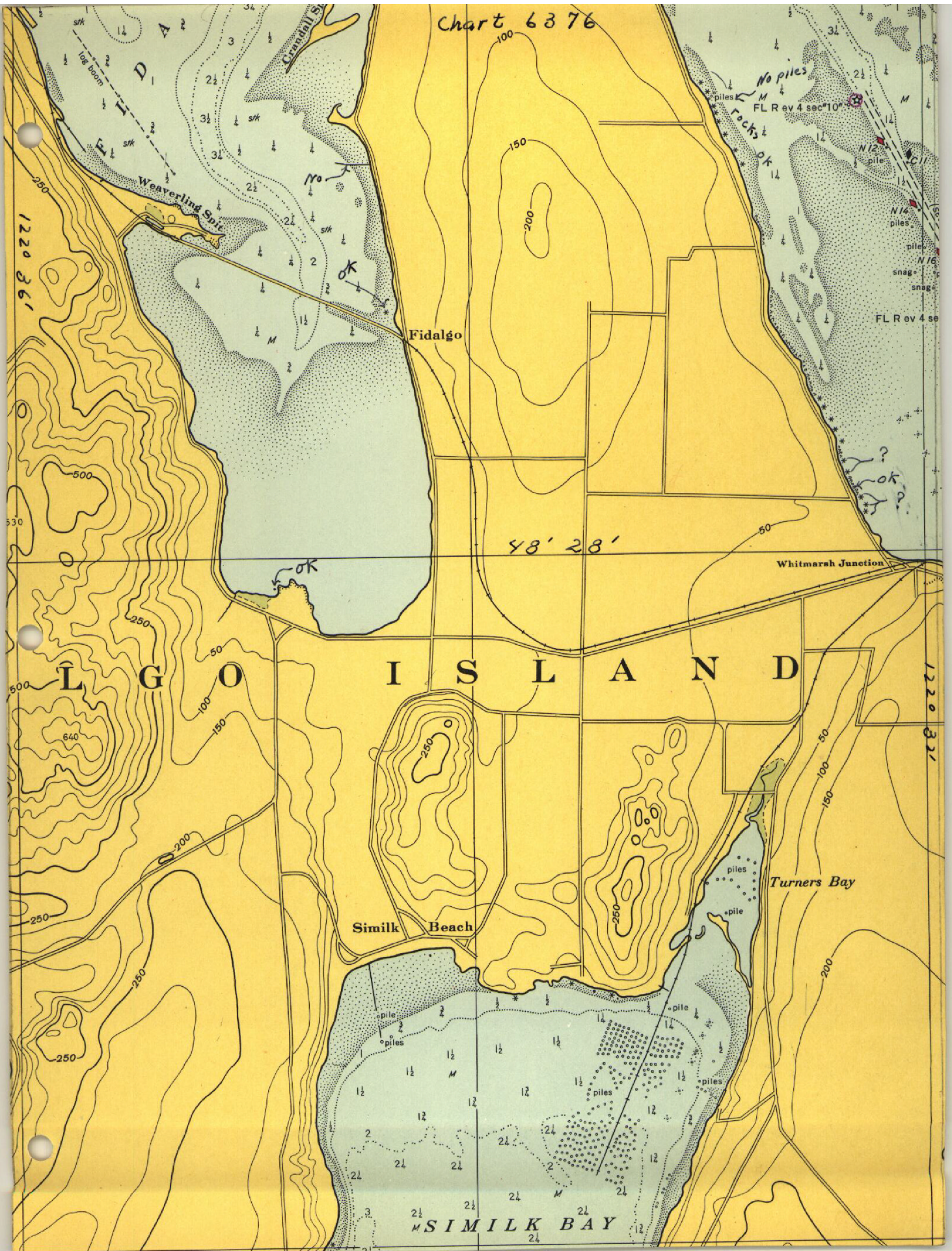
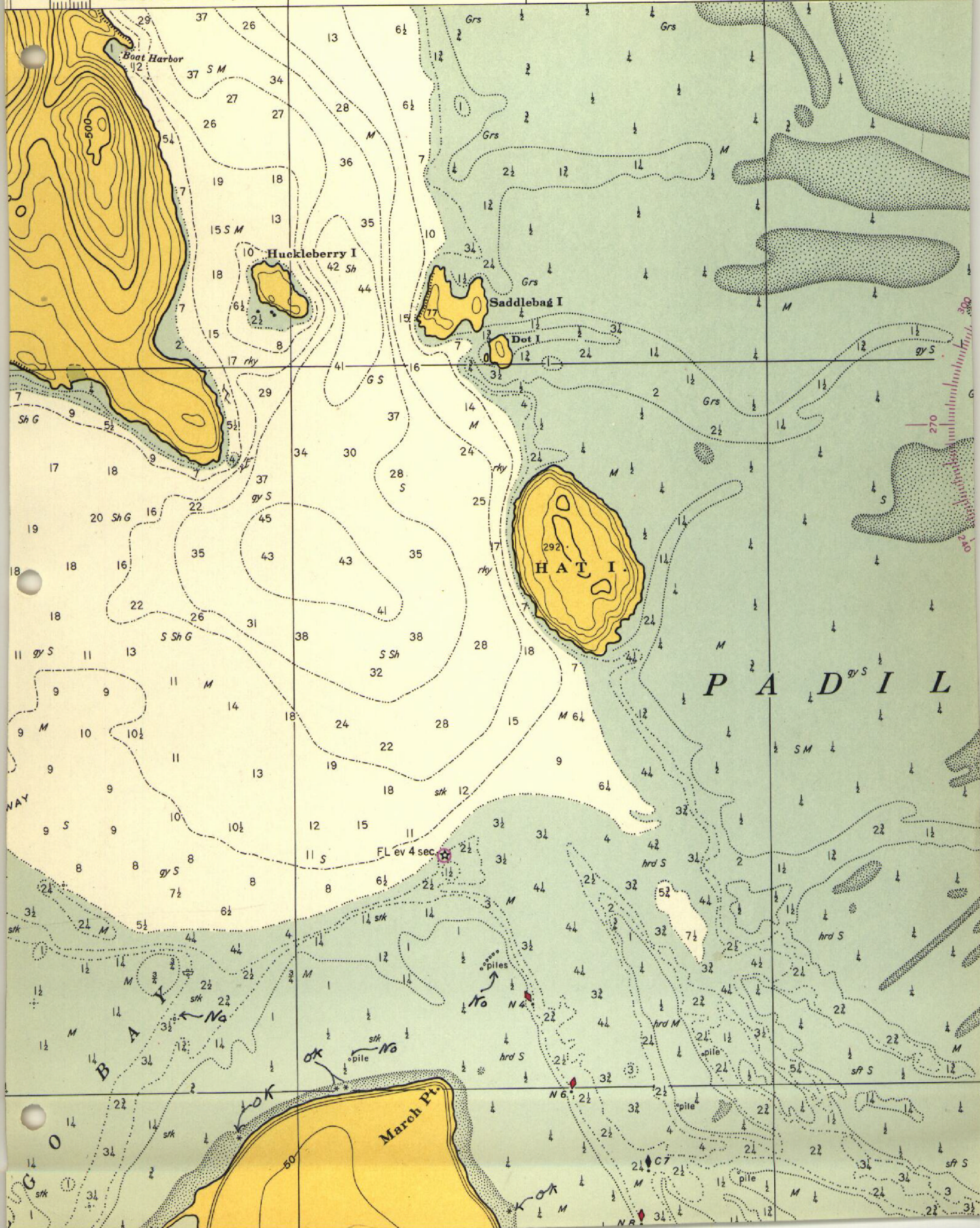


Chart 6376



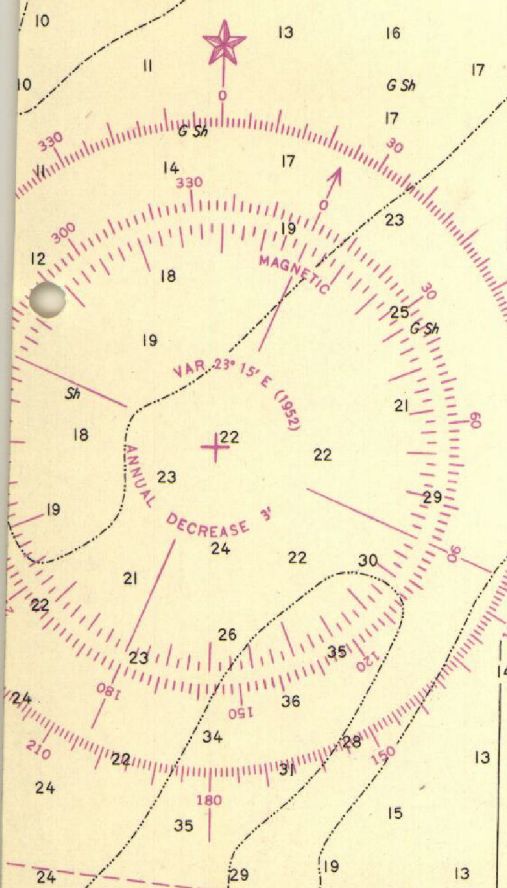


CYPRESS I.

Reef Pt.

BELLINGHAM CHANNEL

$48^{\circ}32'$



$48^{\circ}30'$

no back of 0840 Oct 1919

line = 25 ft

OK

FLW 2"

No pile

Green Pt.

Shannon Pt.

Sunset Beach

Ship Harbor

Vidalgo Head

G.N.R.R.

Flounder Ba

