

FE186

Diagram No. 6380-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... Field Examination.....
Field No. B0-5-1-62.....
Office No..... FE-186.....

LOCALITY

State Washington.....
General Locality Fidalgo Island.....
Locality Flounder Bay.....

1962

CHIEF OF PARTY
F.X. Popper

LIBRARY & ARCHIVES

DATE December 14, 1962.....

☆ U.S. GOV. PRINTING OFFICE: 1978-666-172

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as;

FE No.5 1962

FE186

F E No. 5
1962

FE 185

Diag. Cht. No. 6380-2.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. B0-5-1-62 Office No. F.E.No.5
(1962)

LOCALITY

State Washington

General locality Fidalgo Island
~~Burrows Island~~

Locality Flounder Bay

1962

CHIEF OF PARTY

F. X. Popper

LIBRARY & ARCHIVES

DATE

DEC 14 1962

DEC 14 1962

USCOMM-DC 5087

F E No. 5
1962

*Revision - attach
D E of GC sheet*

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

REGISTER No.

Field No. BO-5-1-62

State WASHINGTON

General locality Fidalgo
BIBBOWS ISLAND

Locality FLOUNDER BAY

Scale 1:5000 Date of survey 8/31/62--9/6/62

Instructions dated DEPUTY DIRECTOR'S LETTER DATED APRIL 12, 1962

Vessel USC&GS SHIP BOWIE

Chief of party F. X. POPPER

Surveyed by L. S. BROWN

Soundings taken by ~~Automatic~~ graphic recorder, hand lead, ~~wire~~ SOUNDING POLE

Fathograms scaled by R. L. BEASLEY

Fathograms checked by L. S. BROWN

Protracted by A. W. CECIL

Soundings penciled by A. W. CECIL

Soundings in ~~fathoms~~ feet at ~~MEAN~~ MLLW

REMARKS:

.....
.....
.....
.....
.....

DESCRIPTIVE REPORT

TO ACCOMPANY

BO-5-1-62, HYDROGRAPHIC SURVEY

FLOUNDER BAY, WASHINGTON

A. PROJECT:

This was a special project authorized by the Deputy Director's letter dated 12 April 1962. Reference 211/pt, Hydrographic Survey, Flounders Bay, Washington.

B. AREA SURVEYED:

This survey covers the area in and near Flounder Bay, Washington near Burrows Island. The limits of the survey are between Latitudes $48^{\circ}29'15''N$ and $48^{\circ}29'40''N$ and Longitudes $122^{\circ}40'30''W$ and $122^{\circ}41'00''W$. No junctions were made with prior or contemporary surveys.

C. SOUNDING VESSEL:

Launch #195 (called ~~skiff~~ ^{ZEVO} in the sounding volumes) was used for one day's hydrography and a 16' plastic skiff was used for the other. Purple lower case letter were used to designate the work done by Launch #195 and blue lower case letter were used for work done by the skiff.

D. SOUNDING EQUIPMENT:

A portable 808-J type fathometer, serial number 57-28 was used for the work done by the launch and a sounding pole graduated in feet up to 12 feet was used when fathometer soundings came into the initial. The sounding pole was used exclusively for the work done by the skiff.

Corrections to fathometer readings were obtained by taking simultaneous comparisons with a sounding pole over the depths covered. An abstract of comparisons is attached at the end of this report.

E. SMOOTH SHEET:

The smooth sheet was constructed by Officers of the BOWIE using standard methods of constructing a polyconic projection.

F. CONTROL:

Visual control was used for the hydrography on this sheet. The control was established by planetable from Topographic Sheet "A" surveyed by personnel of the BOWIE and by sextant cuts. A complete list of the signals used is attached to the end of this report.

subsequently destroyed

G. SHORELINE:

The shoreline for this sheet was taken from Topographic Sheet "A" mentioned in section F, a separate report covering this survey will be forwarded to the Washington Office. ✓

H. CROSSLINES:

Approximately 5% crosslines were run with good crossings. ✓

I. COMPARISON WITH CHART:

Comparison was made with Chart 6376, Scale 1:25,000, revised 6/17/61. There are no soundings on the chart inside of or immediately surrounding Flounders Bay itself. A sounding of 2.6 feet was found approximately 20 meters Northeast of the most southeast piling outside the spit, marking the entrance to the bay in Latitude 48°29.35N, Longitude 122°40.00W, just to the east of the entrance channel. A sounding of 5.0' was found 40 meters north-northeast of the second most southerly piling on the east side of the channel at Latitude 48°29.39N, Longitude 122°39.95W. This area is shown in dotted lines on Chart 6376. ✓

L. ADEQUACY OF SURVEY:

This survey is deemed adequate for charting purposes. ✓

M. AIDS TO NAVIGATION:

A number of privately maintained pilings and channel markers marking the outside entrance to the channel and marking the small boat channel in the bay itself, exist within the limits of this survey. Some of the markers were located topographically and some were located by sextant fixes. The following is a list of the pilings and channel markers and their source: ✓

Launch Position No.	Latitude	Longitude	Source
7	48°29'34.2"	122°40'55.4"	Sextant Cuts
68	29'20.5"	40'30.9"	" "
69	29'24.2"	40'33.9"	" "
95	29'34.7"	40'52.3"	" "
96	29'34.2"	40'50.0"	" "
97	29'33.9"	40'46.7"	" "
98	29'33.2"	40'42.5"	" "
99	29'32.5"	40'40.0"	" "
100	29'32.1"	40'37.0"	" "
101	29'31.8"	40'34.8"	" "
102	29'31.1"	40'32.5"	" "
103	29 30.2"	40'31.0"	" "
104	29'28.8"	40'29.5"	" "

M. AIDS TO NAVIGATION: (continued)

<u>Launch Position No.</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Source</u>
105	48°29'32.0"	122°40'36.2"	Sextant cuts
106	28.4"	29.5"	" "
132	23.2"	32.7"	" "
133	28.4"	31.8"	" "
135	31.6"	39.9"	" "
136.	32.5"	45.1"	" "

<u>Skiff Position No.</u>			
75	24.3"	32.0"	Sextant cuts
76	23.6"	30.2"	" "
	25.5"	30.0"	Topographic
	25.7"	31.7"	"
	20.5"	31.0"	"
	21.7"	31.7"	"
	22.0"	30.3"	"

N. STATISTICS:

Launch #195 accomplished 6.3 Nautical miles of sounding lines and 147 positions. The skiff accomplished 3.9 Nautical miles of soundings lines and 80 positions. There is one tide station at the Western edge of Flounders Bay.

Lawrence S. Brown
 Lawrence S. Brown
 LT., C&GS
 Cmdg., Ship Bowie

LIST OF HYDROGRAPHIC SIGNALS

The following signals were used as control:

<u>NAME</u>	<u>SOURCE</u>
Abe	Topography Sheet BO ⁵ A -62
Boy	" " "
Cat	" " "
Deb	" " "
Eed	Hydrographic " "
Ell	" " "
Eva	" " "
FLOUNDER	Triangulation
Fun	Topography Sheet BO ⁵ A -62
Gin	" " "
Hag	" " "
Ivy	" " "
Lee	Hydrographic ^{OK.} " "
Liz	Topography Sheet BO ⁵ A -62
Mop	" " "
Nut	" " "
Rat	" " "
She	Hydrographic " ^{5'} "
Sue	Topography Sheet BO ⁵ A -62

destroyed
↓

ABSTRACT OF POLE COMPARISONS WITH FATHOMETER #57-28

"a" day Launch No. 195

<u>FATHOMETER (feet)</u>	<u>SOUNDING POLE (feet)</u>	<u>CORRECTION (feet)</u>
9.6✓	10.8✓	✓ 1.2✓
10.0	11.6	1.6✓
9.5✓	11.0✓	1.5✓
10.2✓	11.6✓	1.4✓
8.8✓	9.8✓	1.0✓
10.0✓	11.6✓	1.6✓
9.0✓	10.6✓	1.6✓
8.0✓	9.4✓	1.4✓
6.1✓	7.2✓	1.1✓
6.4✓	7.4✓	1.0✓
6.0✓	7.0✓	1.0✓
7.0✓	8.0✓	1.0✓
7.8✓	9.2✓	1.4✓
8.8✓	10.0✓	1.2✓
7.4	8.6	1.2✓
8.4✓	10.2✓	1.8✓
7.2✓	9.0✓	1.8✓

Mean Correction - ✓ 1.4 feet

TIDE NOTE

A portable tide staff, Latitude $48^{\circ}29.57'N$ Longitude $122^{\circ}40.94'W$, was used for the reduction of soundings on this survey. The height of MLLW was 4.4 feet on the staff. An observer was stationed at the staff throughout hydrographic operations and hourly heights were derived from fifteen minute observations on the staff. The 105° time meridian was used for all observations.

Memorandum

6th. 21 - 210 29
83 **REQ FOR SURVEY**
4-62

TO : The Director
Coast and Geodetic Survey
Washington 25, D. C.

DATE: March 29, 1962

In reply refer to 570
FW/co

FROM : Seattle District Officer

SUBJECT: Request for hydrographic survey, Barrows Bay, Wash.

Enclosed is a letter received from Skyline Marine Corporation on Barrows Bay, Washington, requesting a hydrographic resurvey of the area. This is a large marina and resort which has replaced the old E. K. Woods lumber mill. In view of the drastic changes which have been made in the area, it is recommended that a hydrographic resurvey be made at the earliest practicable date.

Also enclosed are public notice and prints received from the Corps of Engineers regarding this project.

M. E. Weimer
M. E. Weimer

For your information.

Capt. Sheridan has experienced very strong currents in Barrows Bay.

Completed by Bowie - 1962
No project number assigned
BO-05-1-62

ORIGINALS to 83

LB-211

Seattle District Officer
Coast and Geodetic Survey

April 12, 1962

In reply refer to:
211/pt

Deputy Director

Your reference:
Your letter of March
29, 1962

Hydrographic survey, Flounders Bay, Washington

Your request for the resurvey of Flounders Bay, near Burrows Island, Washington, is approved.

You may proceed with this survey using base personnel, as authorized by Section 05202 A (1) (d) of CGS Regulations. If this arrangement is impracticable, you may assign the survey to the BOWIE to be conducted this summer at the time of the Smith Island wire drag survey.

Investigate the possibility of obtaining an after-dredging survey from the contractor to assist the hydrographic survey party.

} See
Review
par. 6

James C. Tison, Jr.

cc: 83
C.O. BOWIE

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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

REGISTER No.

Field No. ^A ~~80-5-2-62~~

State WASHINGTON

General locality BURROWS ISLAND

Locality FLOUNDER'S BAY

Scale 1:5000 Date of survey

Instructions dated DEPUTY DIRECTOR'S LETTER DATED APRIL 12, 1962

Vessel USCGS SHIP BOWIE

Chief of party F. X. POPPER

Surveyed by L. S. BROWN

Soundings taken by ~~FATHOMETER~~ GRAPHIC RECORDER, HAND LEAD, WIRE SOUNDING POLE

Fathograms scaled by B. L. BEASLEY

Fathograms checked by L. S. BROWN

Protracted by A. W. CECIL

Soundings penciled by A. W. CECIL

Soundings in ~~FATHOMS~~ feet at ~~MLW~~ MLLW

REMARKS:

The planetable sheet was subsequently destroyed after transfer of all information to EE 5 (1962)

REPORT TO ACCOMPANY
GRAPHIC CONTROL SHEET

B05A-62

AUTHORITY:

This work was accomplished in accordance with the Director's ✓
Letter dated April 24, 1962.

OPERATING PROCEDURE:

Most hydrographic signal on this project were located from ✓
cuts from triangulation stations and sub-stations of triangulation
stations. Standard planetable methods were used for the
whole project.

The shoreline was located by means of standard planetable
methods.

LIMITS:

This project extends from Latitude $48^{\circ}29'20''$ to $48^{\circ}29'50''$ N ✓
and Longitude $122^{\circ}40'28''$ W to $122^{\circ}41'07''$ W.

CONTROL:

Second order triangulation station FLOUNDER 1962 was ✓
established using LANGLEY 1939, YOUNG 1939, and ERIE 1939.
Then FLOUNDER 1962 was used as the primary control for the
topographic work.

SURVEY METHODS:

Aluminum backed sheet and standard survey methods were ✓
used.

GEOGRAPHIC NAMES:

No geographic name investigation was made in this area. ✓

LANDMARKS FOR CHARTS:

None within the area of this survey. ✓

SHORELINE:

The shoreline for the entire project area was rodded-in along with many of the physical features. ✓

AIDS TO NAVIGATION:

Most of the aids to navigation in this bay were located by means of the standard planetable method.

See descriptive report accompanying the hydrographic survey for the complete list of private aids to navigation in this area.

All aids are
piles, privately
maintained.
Dew

SIGNALS:

The following signals were located by topographic cuts from triangulation or sub-stations:

Abe	Deb	Fun	Ivy	Nut.
Boy	Ell	Gin	Liz	Rat ✓
Cat	Eva	Hag	Mop	Sue

MISCELLANEOUS:

The topographic work was hindered by continuous fog in the area during both days of the survey. ✓

In several cases only one end of a pier could be located by planetable methods. The other ends were located by sextant fixes and can be found in the sounding volumes for BO-5-1-62. ✓

FE 5 (1962)

Several of the aids to navigation in this bay were also located by sextant fixes. They can be found in the sounding volumes for BO-5-1-62. ✓

Horstas A. Uzpurvis
Horstas A. Uzpurvis
Ens., C&GS

L.S. Brown
L.S. Brown
LT., C&GS
Comm'd'g Officer
USC&GSS BOWIE

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 29 1963

Nautical Chart Division: R. H. Carstens

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET F.E.NO. 5 (1962)

Locality Flounder Bay, Washington

Chief of Party: F. X. Popper (1962)

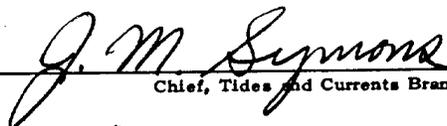
Plane of reference is mean lower low water reading

4.4 ft. on tide staff at Flounder Bay, Burrows Bay

15.1 ft. below B. M. 3 (1939)

Height of mean high water above plane of reference is: 7.1 ft.

Condition of records satisfactory except as noted below:


Chief, Tides and Currents Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E.No. 5-1962

Records accompanying survey: Smooth sheets ...¹...;
 boat sheets ...¹...; sounding vols. ...²...; wire drag vols.;
 Descriptive Reports ...¹...; graphic recorder envelopes ...¹...;
 special reports, etc.

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.....	227
Number of positions checked	.....	150
Number of positions revised	.....	5
Number of soundings revised (refers to depth only)	.....	13
Number of soundings erroneously spaced	.....	16
Number of signals erroneously plotted or transferred	.....	NONE
Topographic details	Time	3 hrs.
Junctions	Time	1 hr.
Verification of soundings from graphic record	Time	2 hrs.
Special adjustments	Time	2 hrs.

Verification by *Dale E. Westbrook* Total time *24 hrs.* Date *Oct. 1-3, 1963*

Reviewed by *Dale E. Westbrook* Time *6 hrs.* Date *Oct. 4, 1963.*

REVIEW OF FIELD EXAMINATION NO. 5, 1962
FLOUNDER BAY, WASHINGTON
USC&GS Ship BOWIE, F.X. Popper, Comdg.

1. This field examination was requested by the Skyline Marine Corporation through the Seattle District Officer and authorized by the Deputy Director's letter dated April 12, 1962 (ref. 211/pt). (See attached correspondence and CL-375/62.)
2. The purpose of the survey was to delineate the many changes which had taken place in the bay due to dredging, filling and the building of a marina, and to incorporate those changes onto Chart 6376 (1:25,000). Prior to this examination the bay was shown as being closed off on the chart by the low water line.
3. The shoreline and signals for this examination originated with Graphic Control Sheet BO-5-A-62 which is marked for destruction. The transfer of shoreline and signals to the smooth sheet has been satisfactorily accomplished.
4. Satisfactory junction can be made between this examination and H-6607, 1939-40 (1:10,000) except at the entrance to the bay where dredging has taken place and in the fill area immediately south of the spit. The reconnaissance line inside the bay on H-6607 can be considered superseded by this examination due to dredging.
5. Comparison with Chart 6376, 3d. Ed. Sept. 2, 1963 was made. The results of this survey have been applied to Chart 6376 prior to verification and review of the field examination. The charted shoreline and piers substantially agree with this survey except for the following:
 - A. The westerly of three piers located in lat. $48^{\circ}29.53'$, long. $122^{\circ}40.89'$ should be of approximately the same length as the other two. (See smooth sheet and Drwg. No. 16, Chart 6376)
 - B. The two piers charted in lat. $48^{\circ}29.54'$, long. $122^{\circ}40.91'$ were apparently missed on the present survey. There are instead three piers in that vicinity and they should be charted as shown on aerial photograph 62 W 5279, 7 June 1962.

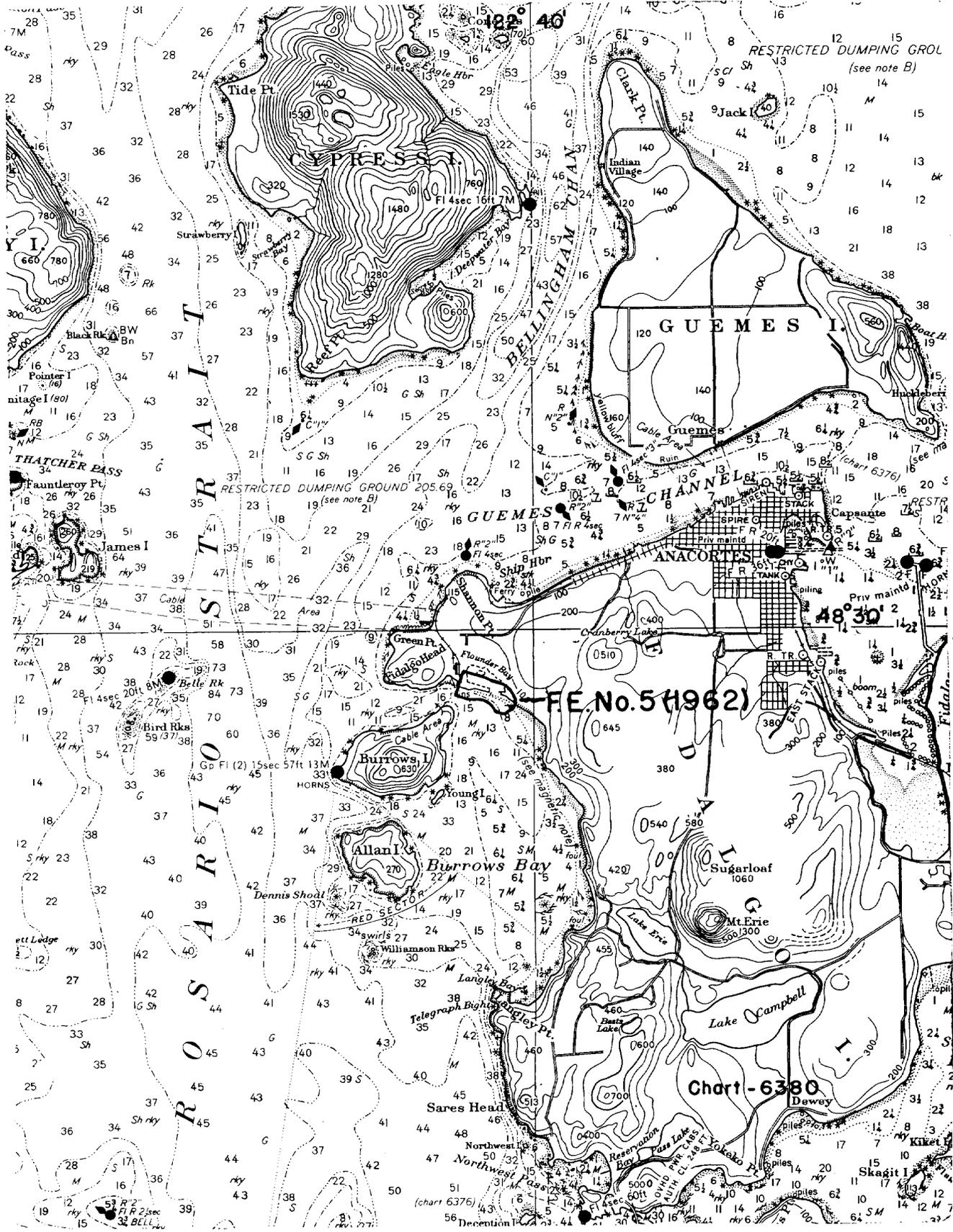
The charted information is adequate except as noted and no other revision to the chart is deemed necessary.

6. The descriptive report and attached correspondence adequately cover all matters pertaining to this field examination. No further discussion is considered necessary.

Reviewed by - Dale E. Westbrook

10-4-63

Inspected by - R. H. Carstens



29'45"

29'45"

CAT ○
(W'ly chimney of two)

○ DEB

EVA

○ FUN

○ GIN

← HAG

FLOUNDER BAY

Piles

○ LIZ

Piles

○ BOY
(SE cor roof
of large shed)

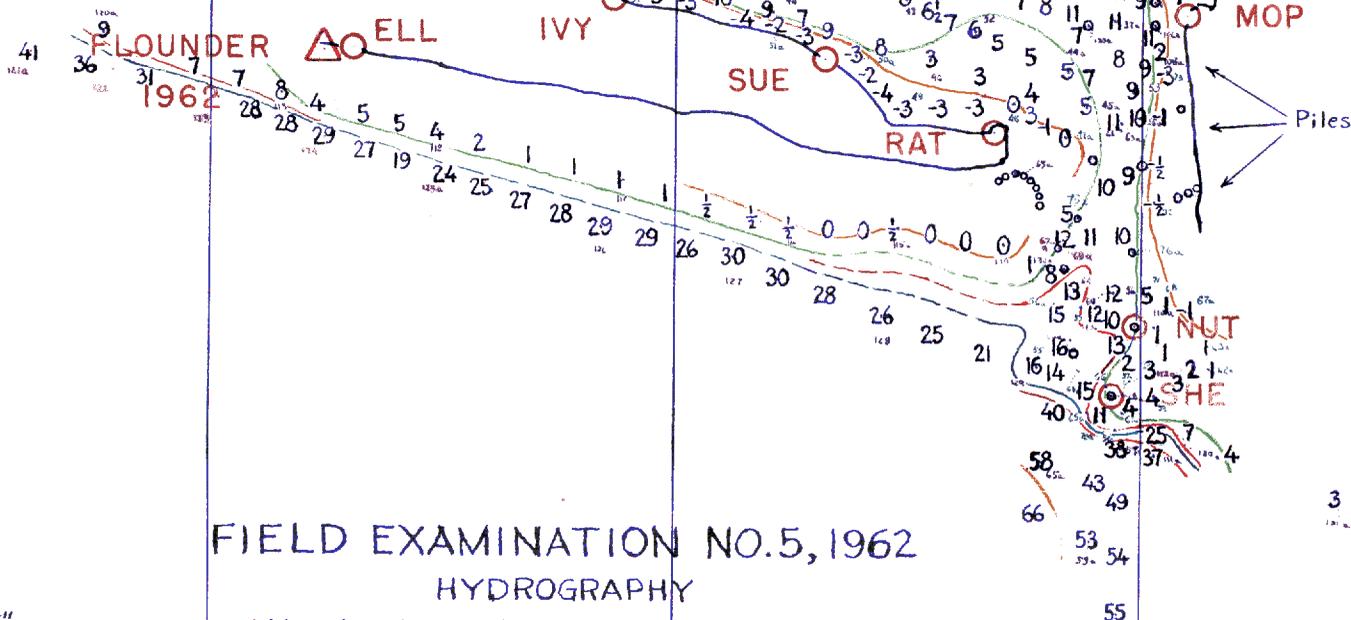
fuel
pierLEO
T.G.

ABE
(chimney on
bath house)

← EED

48°29'30"

48°29'30"



FIELD EXAMINATION NO. 5, 1962

HYDROGRAPHY

WASHINGTON - FIDALGO ISLAND

FLOUNDER BAY

Scale 1:5,000

31 Aug. - 6 Sept. 1962

F.X. Popper, Chief of Party

SOUNDINGS IN FEET AT MLLW

29'15"

29'15"

No. 42	HIGH WATER SURVEY
Field No.	B0:5:1:62 Reg. No.
Scale 1:	5000
Projection	Plotted: Verified
Tri. Sta.	HAU. AT
Topo. Sta.	HAU. LSB
Hydro. Sta.	HAU. LSB
Datum	NORTH AMERICAN 1927
Ad. Sta.	FLOUNDER 1962
Lat.	48°29' 860.160
Long.	122°40' 1156.254

122° 41'00"

40'45"

40'30"

122° 40'15"

Chart 6376 App'd hydro and Topo (B0-5-A-62 Graphic Control) before Ver. 9 Per
Helmer 2/1/63