

# 9388

Diag. Cht. No. 8551-3.

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ..... Hydrographic .....

Field No. .... DA-20-4-73 .....

Office No. .... H-9388 .....

### LOCALITY

State ..... Alaska .....

General Locality Prince William Sound .....

Locality Lower Portion of Valdez Arm .....

19 73

CHIEF OF PARTY  
M. H. Fleming

### LIBRARY & ARCHIVES

DATE ..... 1-23-74 .....

9388

HYDROGRAPHIC TITLE SHEET

H-9388

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

FIELD NO.

DA-20-4-73

State ALASKA

General locality Prince William Sound

Locality Lower Portion of Entrance to Valdez Arm

Scale 1:20,000

Date of survey 7 August - 16 August 1973

Instructions dated 14 February 1973

Project No. OPR-999

Vessel NOAA Ship DAVIDSON GSS-31 Launch DA-1 & DA-2

Chief of party Michael H. Fleming, Cdr., NOAA

Surveyed by Ship's Commissioned Officers (see below)

Soundings taken by echo sounder, ~~hand held, pot~~ Ross Fine Line Model 5000, #1048 Raytheon DE-723, #926, #1284, #214

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Positions Verified

~~Reviewed~~ by Felipe L. Rosario

Automated plot by PMC - Corber Digital Plotter

Soundings ~~checked~~ <sup>verified</sup> by Felipe L. Rosario

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

REMARKS: Surveyed by: L. Reinke, R.C. Crozier, R.H. West, K.X. Gores, J.J. Kaplan, J.L. Oswald, R.W. Mercer.

Area 6

Chart

8551  
8519

Applied to stid 1-28-74  
CAB

ADP

DESCRIPTIVE REPORT

DA-20-4-73

H-9388

VALDEZ ARM - ENTRANCE

*The smooth sheet  
of this survey was  
replotted after  
discovery of erroneous  
tide correctors during  
review.*

A. PROJECT

This survey was completed in accordance with Project Instructions OPR-999-DA-73, Corridor Survey, Prince William Sound, Alaska, dated 14 February 1973. Change #1 Amendment to Instructions, (2 March 1973), Change #1 Supplement to Instructions (26 April 1973), Change #2: Supplement to Instructions (11 May 1973), and change #3 Supplement to Instructions (20 April 1973). ✓

B. AREA SURVEYED

Hydrographic surveying began on <sup>7</sup> July 1973 and was terminated on ~~12~~ August 1973. ✓  
<sub>16</sub>

C. SOUNDING VESSELS

The following vessels were used to obtain data on this survey: ✓

<u>VESSEL</u>	<u>POSITION</u>	<u>NUMBER</u>	<u>COLOR</u>
Launch DA-1			Orange
Launch DA-2			Blue
DAVIDSON			Brown

Bottom samples are shown in the color of the vessel used.

See Appendix for an abstract of tapes, volumes and positions. ✓

D. SOUNDING EQUIPMENT

The DAVIDSON used a Raytheon DE-723, #1284. DA-1 used a Raytheon DE-723 #1284 from 7-9 August 1973, and a DE-723 #926 for the remainder of the survey period. Launch DA-2 used the Ross Fine Line model ✓

D. SOUNDING EQUIPMENT (Cont.)

*Stamp shows #1247*  
5000 ~~#1048~~ for the day of 8 August 1973 and a Raytheon DE-723 #214 for the remainder of the survey period. The digitized depths of the Ross Fineline 5000 were assumed to have no phase or initial error. The DE-723 fathometers were well calibrated and except for initial error were assumed to have no other error. The instrument error found by subtracting velocity and draft corrections from the bar check correction curve was not significant and only draft and initial error was logged in the TC/TI tape.

The Ship DAVIDSON'S fathometer was initialed at two fathoms. No draft correction was applied to the ship's TRA corrections.

Velocity corrections were computed from data obtained during a Martek cast taken on the 17 of August. The runoff in Valdez Arm is such that the surface layer was of extremely low salinity and varies in the thickness depending upon the tidal situation. Any velocity errors introduced by this fresh water surface layer were ignored in this survey as the ship had neither the equipment nor the time to monitor this layering phenomenon.

All soundings are in fathoms referenced to MLLW using predicted tides for Ellamar. Times are all within the 135°W time meridian.

See Appendix for the Tide note, and Corrections to Echo Soundings. ✓

E. SMOOTH SHEET

The smooth sheet ~~will~~ <sup>was</sup> be constructed and plotted by the Processing Division, Pacific Marine Center. ✓

F. CONTROL (Raydist) *The control is based upon unadjusted triangulation conducted in 1972 and 1973.* ✓

The Hastings-Raydist, DRS Range-Range electronic positioning system operating on a frequency of 3300.4 KHZ was used for control for two launch hydro and two ship hydro days. It was also used as a steering aid for the visual hydro launch on this sheet.

The stations were located over triangulated marks as follows:

Pattern I (Red) - Raydist site Smith Is. (SMIT RM1)(1973)

Pattern II (Green) - Triangulation station ELF, 1947-72

Calibration was accomplished by three-point sextant fixes converted to lane count by the Wang Range-Range calibration program. ✓

F. CONTROL (Cont)

Calibration was accomplished each morning in the calibration area off Bligh Island, and was checked each evening. The calibration signals are as follows:

Left Object - REEF 1942-1972

Center Object - JOKE 1973

Right Object - OUT 1901-1972

See Appendix list of signals for geodetic positions.

See Raydist Report OPR-999 Prince William Sound (submitted separately) ✓

G. SHORELINE

*shoreline not shown on SS. As a <sup>navigable area</sup> summer survey shoreline investigation not required.*  
Shoreline was transferred from T- 13000, T- 12997, T-12998, T- 12994, T-12991, and TP - 00264. No field edit or verification was done. ✓  
*to the boat sheet.* See Verifier's Report

H. CROSSLINES

The percentage of crosslines to sounding lines was 10%. All crosslines were in good agreement except in areas of steep bottom topography where side echos may have interfered. ✓

I. JUNCTIONS

Junction was made with contemporary surveys H-9384, <sup>(DA 10-03-73)</sup> to the east and H-9382 to the south. Junctions were in good agreement. ✓  
*(DA 10-01-73) & H-8422 (DA 20-1-74) on the north* See Verifier's Report

J. COMPARISON WITH PRIOR SURVEY

*out of survey area*  
A comparison was made with prior surveys H-8900, 1966, H-8901 1966, and H-2628, 1902. Except for all soundings being generally shoaler than those of the previous surveys there was fairly good agreement between the present and past surveys. One area of shoal water that was indicated to have a depth of about forty fathoms on the pre-survey review was found to have much shallower depths with a minimum depth of ~~6.7~~ fathoms found at 60°57.20'N, 146°52.40'W. ✓  
~~7.0~~  
7.0 See Verifier's Report

J. COMPARISON WITH PRIOR SURVEY (Cont)

There were three circled "Prior Survey Review Items".

11. The shipwreck on Bligh Reef 60°50.3'N, 146°53.0'W was not visible at low tide. Davidson's divers made one unsuccessful attempt to locate this wreck. No further investigation was attempted in the limited time available. ✓

The shipwreck off Busby Island 60°53.6', 146°49.4'W was visible at low tide in the approximate charted position. No positions were taken for this wreck as it was outside of the corridor. ✓

12. The charted reef at this position was located at 60°57.55'N, 146°52.25'W with a least depth of ~~7.8~~ fathoms. Another shoal area was located nearby at 60°57.20'N, 146°52.40'W with a least depth of ~~8.7~~ fathoms with corrected tide datum *7.0* ✓

*See Verifiers Report*

K. COMPARISON WITH CHART

A comparison was made with chart 8519. The comparison showed generally shallower depths at present than were previously found. The comparison was good except for items covered in section J of this report. ✓

L. ADEQUACY FOR SURVEY

This survey is considered adequate within the area completed to supersede prior surveys. ✓

M. AIDS TO NAVIGATION

There were two Aids to Navigation in the area surveyed. ✓

These were the day beacon on Rocky Point 60°57'04.340"N, 146°45'57.994"W, and the light on Busby Island 1947, 60°53'45.208"N, 146°48'53.624"W. ✓

The Coast Guard vessel SORREL and the Ferry Bartlett were notified of the position of the shoal water found at 60°57.20'N, 146°52.40'W.

N. STATISTICS

<u>VESSEL</u>	<u>NO. OF POSITIONS</u>	<u>N.M. OF SOUNDING LINE</u>	<u>B.S.</u>
Launch DA-1	866	202.3	
Launch DA-2	188	66.3	
DAVIDSON	<del>440</del>	<del>124.9</del>	8

*total 1494*  
A total area of 31.8 square miles was covered by this survey.

O. MISCELLANEOUS

All data for this survey was logged in single indicator format in ASCII code on model 33 teletypes. All tapes are logged in 135° zone time. Depth curves are color coded as per Hydrographic Manual.

P. RECOMMENDATIONS

1. That the wind and currents in Valdez Arm might be hazardous to large vessels and some study of these effects be considered advisable.
2. That an aid to navigation (buoy) be used to mark the shoal water found at 60°57.20'N, 146°52.40'W.

Q. REFERENCES TO REPORTS

Correction to Echo Sounding Report, OPR-999-1973 (latter part),  
Raydist Report, OPR-999-1973, Prince William Sound.

Respectfully Submitted

*Roger W. Mercer*

Roger W. Mercer  
Ensign, NOAA Corps

APPROVAL SHEET

HYDROGRAPHIC SURVEY

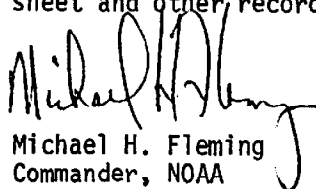
DA-20-4-73

H-9388

OPR-999

VALDEZ ARM, ALASKA

The field work on this survey was accomplished under my supervision.  
Frequent inspections were made of the boat sheet and other records.



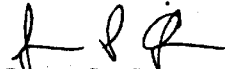
Michael H. Fleming  
Commander, NOAA  
Commanding Officer  
NOAA Ship DAVIDSON CSS-31



APPROVAL SHEET

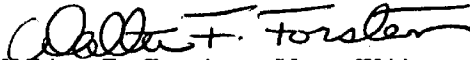
The smooth sheet has been inspected, is complete, and meets the requirements of the General Instructions for automated surveys and the Hydrographic Manual. (Note: All exceptions are listed in the Verifier's Report)

Examined and approved,



James S. Green  
Supervisory Cartographic Technician

Approved and forwarded,



Walter F. Forster, Cdr., NOAA  
Chief, Processing Division  
Pacific Marine Center

2nd Approval

9/11/74

~~W.F.~~ CAM/3

## TIDE NOTE

OPR-999

CORRIDOR SURVEY

PRINCE WILLIAM SOUND

ALASKA

SHEETS B, R, &amp; M

The reference tide gage for this project was the standard tide gage on the Cordova Municipal Dock in Cordova, Alaska. Field tide reductions of soundings was based on predicted tides for Ellamar, two miles north of the town of Tatitlek, Prince William Sound.

All gages operated on 135° W. time for the entirety of this project. A total of four (4) Bristol bubbler gages were installed in the project area. Location and dates of installation/operation were as follows:

<u>NAME</u>	<u>LOCATION</u>	<u>TIME PERIOD</u>	<u>TOTAL DAYS OF OPERATION</u>
CAPE HINCHINBROOK	N. 60°14.3' 146°38.9'W.	24 May - 13 July	51
Johnstone Point	N. 60°29.0' 146°36.7'W.	19 May - 14 August	93
ROCKY POINT	N. 60°56.8' 146°45.3'W.	12 July - 17 August	37
SMITH ISLAND	N. 60°31.9' 147°20.5'W.	17 May - 13 August	94

Tide marigrams were corrected for time and height variations wherever possible. However, the heavy surge and varying wave heights made verification of staff-gage relationships somewhat difficult at times. The high's and low's or mean values on the staff were recorded.

Cape Hinchinbrook S/N 62A91, 0-30 foot range; five benchmarks recovered and leveled on 24 May 1973. Gage replaced on 21 June by gage S/N 64A11028. Tide station was withdrawn on 1 August.

Orifice installation was very difficult and time consuming due to the very heavy surge (2-3 feet) in this area. The gage and tubing had to be replaced or repaired many times. Extreme caution is recommended in the surf zone. Marigram reading was set to read at various ranges above staff zero.

Johnstone Point

S/N 68A9338, 0-30 foot range. Five benchmarks were established and connected on 19 May 1973. Marigram reading is 10.0 feet above staff zero. Orifice installation hampered by thick beds of kelp.

Smith Island

S/N 64A11021, 0-30 foot range. Five benchmarks were established and connected on 17 May 1973. Marigram reading is 5.0' above staff zero. A heavy rock was used to anchor the orifice. This appears to be the least troublesome of all gages in the project area.

Rocky Point

S/N 68A9337, 0-30 foot range. Five benchmarks were established and connected on 12 July 1973. Marigram reading is 12.3' above staff zero. The orifice was anchored to a heavy rock in a relatively sheltered area. The tubing is anchored at several points to prevent movement due to winds or current.

May 3, 1974

TIDE NOTE

*(From Tides Branch)*

Subject: Datum Correction

The MLLW datum for Rocky Point, Prince William Sound, included on the tide note dated November 19, 1973, was computed 1.3 feet on the tide staff instead of 13.7 feet on the marigram.

To correctly reduce soundings for hydrographic sheets H-9382, H-9384, and H-9388, apply constant +12.4 feet.

OFFICE OF MARINE SURVEYS AND MAPS  
MARINE CHART DIVISION  
HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-9388

FIELD NO. DA-20-4-73

Alaska, Prince William Sound, Lower Portion of Valdez Arm

SURVEYED: August 7 through August 16, 1973

PROJECT NO.: OPR-999

SCALE: 1:20,000

SOUNDINGS: Ross 5000 Digital Depth  
Recorder, Raytheon DE-723  
Depth Recorder

CONTROL: Raydist (Range-  
Range)

Chief of Party ..... M. H. Fleming  
Surveyed by ..... L. L. Reinke  
..... R. C. Crozier  
..... R. H. West  
..... K. X. Gores  
..... J. J. Kapler  
..... J. L. Oswald  
..... R. W. Mercer  
Automated Plot by ..... Gerber Digital Plotter-PMC  
Verified and Inked by ..... F. L. Rosario  
Reviewed by ..... D. J. Hill  
Date: Feb. 28, 1975  
Inspected by ..... F. B. Powers

1. Description of the Area

This survey covers the southern portion of Valdez Arm from Bligh Reef to Rocky Point.

The bottom slopes gradually to the center of the arm where a maximum depth of 210 fathoms occurs in the northern half of the survey. Four shoal areas are indicated, with Bligh Reef in the extreme southeast of the survey being the most extensive.

Bottom characteristics are typically mud.

## 2. Control and Shoreline

The source of the control is adequately covered in Section F of the Descriptive Report. Triangulation control stations are plotted from unadjusted field data of 1972-73.

As this is a navigable area survey no shoreline is shown. Complete shoreline manuscripts and inshore hydrography within the limits of this survey will be acquired with the resumption of Project OPR-452.

## 3. Hydrography

A. Soundings at crossings are in good agreement.

B. The usual depth curves were adequately delineated. Depth curves near Rocky Point Daybeacon, Busby Island Light, and the shoal area in the vicinity of lat.  $60^{\circ} 57.5'$ , long.  $146^{\circ} 52.5'$  should be better delineated with the inshore hydrography of OPR-452. Brown and dashed curves were added to delineate isolated features.

The development of the bottom configuration is considered adequate except for the failure to obtain the least depths with a handlead on the shoals located in lat.  $60^{\circ} 57.2'$ , long.  $146^{\circ} 52.5'$  and lat.  $60^{\circ} 57.6'$ , long.  $146^{\circ} 52.2'$ . These were sounded by fathometer at 7.2 fathoms and 2.2 fathoms, respectively.

## 4. Condition of the Survey

The survey records, automated plotting, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual supplemented by the Instruction Manual-Automated Hydrographic Surveys except as follows:

A. The smooth sheet was replotted after discovery of an error in the determination of tide correctors from the Rocky Point gage.

## 5. Junctions

Adequate junctions were effected with H-9384 (1973) on the east and southeast, with H-9382 (1973) on the south, and with H-9422 (1974) on the north.

6. Comparison with Prior Surveys

A. H-2628 (1902) 1:20,000

A comparison between H-2628 (1902) and the present survey reveals sounding differences of 1-8 fathoms with the shoaler soundings occurring on the present survey. The greatest differences are found in deeper water. These disagreements are attributed to the surveying methods on the prior survey that employed leadline and sounding machine to obtain soundings, especially under the adverse weather and sea conditions prevalent in this area, and to a lesser degree, to the bottom uplift of 2-4 feet resulting from the Prince William Sound Earthquake of 1964.

With the addition of several bottom samples from H-2628 (1902) the present survey is adequate to supersede the prior survey within the common area.

7. Comparison with Chart 8519, 12th Ed., May 11, 1974

A. Hydrography

The charted hydrography originates with the previously discussed prior survey which requires no further consideration and with other prior NOS sources supplemented by the partial application of depths from the verified smooth sheet of the present survey. Many of the soundings charted from the verified smooth sheet are 1 to 10 fathoms shoaler than the final smooth sheet values because of faulty tide correctors and faulty chart application.

Attention is directed to the following:

1. Several charted soundings originate with Chart Letters 469 (1947), 810 (1964), BP-66415, and BP-65972. Sounding correctors and horizontal control were not of acceptable quality for hydrographic surveys. The charted soundings from the above sources are superseded by the present survey within the common area.
-

2. The submerged wreck (Pre-Survey Review Item #11) charted in lat.  $60^{\circ}50.3'$ , long.  $146^{\circ}53.0'$  originates with Chart Letter 281 of 1914. This wreck falls in the junctional area with H-9384 (1973) and will be considered in the review of that survey.
3. The 3 fathom shoal (Pre-Survey Review Item #12) charted in lat.  $60^{\circ}57.63'$ , long.  $146^{\circ}52.5'$  originates with Chart Letter 469 (1947). A 2.2 fathom sounding on the present survey in lat.  $60^{\circ}57.55'$ , long.  $146^{\circ}52.2'$  supersedes the prior information.
4. The submerged wreck charted in lat.  $60^{\circ}53.6'$ , long.  $146^{\circ}49.4'$  (Busby Island) from Chart Letter 281 of 1914 was observed by the hydrographer as being visible at low tide and should be retained as charted.
5. The  $5\frac{1}{4}$  fathom sounding charted in lat.  $60^{\circ}57.2'$ , long.  $146^{\circ}52.4'$  from the present survey before review is in error and should be revised to a 7 fathom sounding in accordance with the final smooth sheet data.

Except as noted, the present survey is adequate to supersede the charted hydrography within the common area.

#### B. Aids to Navigation

The charted positions of Rocky Point Daybeacon and Busby Island Light agree with the present survey positions and adequately serve the purpose intended.


#### 8. Compliance with Instructions


This survey adequately complies with the Project Instructions.

#### 9. Additional Field Work

This is a good basic survey and no additional field work is recommended.

Inspected and Approved:

  
 Chief  
 Marine Chart Division

  
 Associate Director  
 Office of Marine Surveys and Maps



H-9388

INFORMATION FOR FUTURE PRE-SURVEY REVIEWS

This survey covers Valdez Arm between Blight Reef and Rocky Point. Adverse weather and sea conditions may hinder survey operations in this area.

With the city of Valdez as the southern terminus of the Trans-Alaskan Oil Pipeline, waterborne traffic should increase significantly in this area.

<u>Position</u>	<u>Index</u>	<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
605	1471	0	1	50 Years
605	1470	1	1	50 Years
605	1465	1	1	50 Years

4/25/74

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center

Hourly heights are approved for Form 362

Tide Station Used (NOAA form 77-12): Rocky Point

Period: July 12, 1973 - August 17, 1973

HYDROGRAPHIC SHEET: H9388, H9384

OPR: 999

Locality: Prince William Sound, SW Alaska

Plane of reference (mean lower low water): 13.7 ft.  
which is feet on tide staff.

Height of Mean High Water above Plane of Reference is 10.9 ft.

Remarks:

Zone directly with Rocky Point.

*C. J. Thurston*  
Chief, Tides Branch



H-9388

PARAMETER FOR DIGITAL COMPUTING  
PHONONIC PROJECTION

UNUAL 9 ALLOCATIONS

MAIN SHEET

(1) Project No. OPR-799 (4) Requested by \_\_\_\_\_

(2) H No. H-9387 (5) Ship or Office \_\_\_\_\_

(3) Field No. DA-20-4-73 (6) Date Required \_\_\_\_\_

(7) Visual  Pt.(0) or Fathoms (1)  (8) Electronic  (fill out form #3)

(10) XKN (SP 5) Distance from CHER to East Edge (NYX = 1) or West Edge (NYX = 0) (Origin) 10972.76 Meters

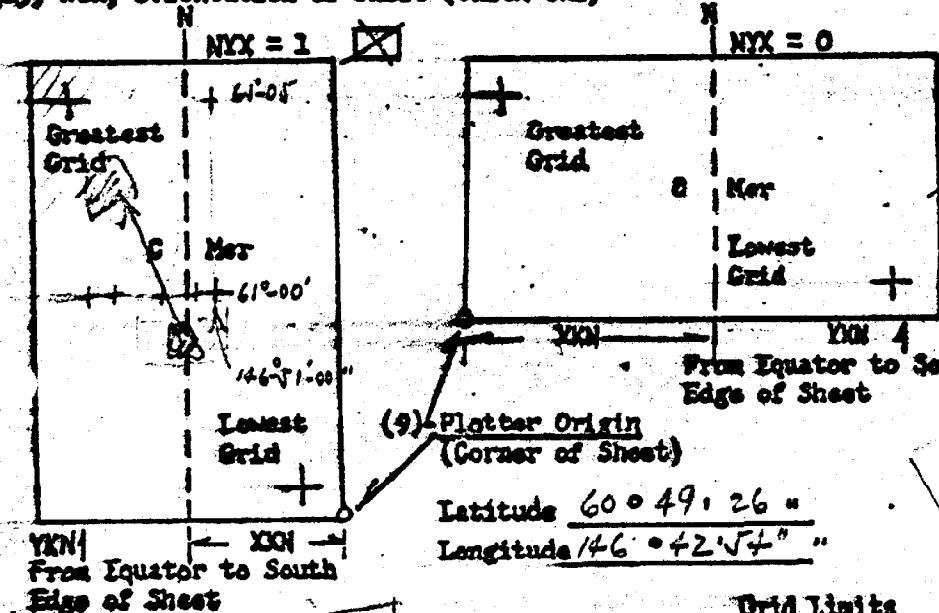
(11) YKN (SP 24) Distance from Equator to South Edge of Sheet. (Origin) 6745665.16 Meters

(12) Central Meridian 146° 55' 00"

(13) Survey Scale 1:20,000

(14) Size of Sheet (Check one)  4260  4260

(15) NYX, Orientation of sheet (Check one)



PULL ALC INTERACTIONS  
ALL TRANSLATIONS  
DON'T USE ORIGINAL  
TAPK IN AIR TRAY

FOR UNUAL JUST  
KEY RUN OR LATV & LONG  
SO A HQQ - NOT  
NECESSARILY - JUST  
DOUBLE CHECK LATV  
& LONG

WE HAVE TO LOG  
CORRECTION TAPK SEE  
APPENDIX REPORT

DESTROY GRID FROM 146-51  
WESTWARD (N.W. CORNER) FROM  
61-00 TO 61-05

BLOW UP AT 1:10000  
146-54, 60-57 TO 60-58  
AND RUN AND PLOT  
FOR THE SECOND TIME  
BLOW UP 2:10000 WITH 1000X GELL  
AND + 4800 Y GELL OFFSETS

Grid Limits	
(16) Greatest Latitude	<u>61° 05' 00"</u> (Projection Line Interval Page 4 Hydro Manual)
(17) Lowest Latitude	<u>60° 50' 00"</u>
(18) Difference	<u>15' 00"</u>
(19)	<u>100.</u>
(20)	<u>15 XSN</u>
(21) Greatest Longitude	<u>147° 05' 00"</u>
(22) Lowest Longitude	<u>146° 43' 00"</u>
(23) Difference	<u>22' 00"</u>
(24)	<u>1.00"</u>
(25)	<u>22 XSN</u>

WORK UNUAL FIXES ARE SWINGING - LOOK FOR NO PLOTV - THEY HAD  
ONE GOOD RATE FOR VIKERING - THEY WERE RIDING IN LAMES -  
X offset (1000 Gell)

COMPUTER PARAMETERS FOR ELECTRONICALLY CONTROLLED SURVEYS

(1) Project No. <sup>OPR-</sup> 999 (2) H. No. 9388 (3) Field No. DA-20-04-73

(4) Type of Control: SHORAN, RAYDIST, HI-FIX, RADAR  
 Frequency (for conversion of RAYDIST or HI-FIX lanes to meters) \_\_\_\_\_

(5) RANGE ONE (R1) \_\_\_\_\_  
 Station Name SMTT Latitude 60° 31' 51.375"  
 Longitude 117° 20' 27.914"

(6) RANGE TWO (R2) \_\_\_\_\_  
 Station Name ELF Latitude 60° 56' 38.519"  
 Longitude 117° 03' 11.717"

(7) Azimuth from R1 to R2 178° 37' 38.914"

(8) Baseline Length in Meters 48609.985 M.

(9) Location of survey with respect to Electronic Baseline: CHECK ONE  
 (To determine: imagine an observer standing at R1 and looking directly at R2 --- if the survey area is to the observer's LEFT then A is negative; if the survey area is to the observer's RIGHT then A is positive.)

\_\_\_\_\_ -A (minus)       +A (plus)

(10) if SHORAN corrections are applied by the equation,  $K(X) + C = D$ , where X is SHORAN distance and D is true distance, enter the Constant Coefficients of the equations here:

K(R1) \_\_\_\_\_ C(R1) \_\_\_\_\_ K(R2) \_\_\_\_\_ C(R2) \_\_\_\_\_

(11) Number of Velocity Tables to be used:

\_\_\_\_\_ None, \_\_\_\_\_ One, \_\_\_\_\_ More than one.

(12) \_\_\_\_\_ This form is submitted only as an aid in preparing a best sheet projection.

This form applies to all data on this survey.

\_\_\_\_\_ This form applies to part of the data on this survey -

Time and Date limitations: From \_\_\_\_\_ To \_\_\_\_\_

Position Number Limitations: From \_\_\_\_\_ To \_\_\_\_\_

This is Form #3 Sheet # \_\_\_\_\_ of \_\_\_\_\_ Sheets for this survey.

(13) Other Remarks:

GEOETIC INVERSE COMPUTATION

PROGRAM NO. 700-002

STATION A: *SMT*

TO STATION B: *ELF*

LATITUDE	LONGITUDE	AZIMUTH	DISTANCE
60 31 51.38500	147 20 27.91400 F	198 37 38.91842	48609.9853
60 56 38.51900	147 3 16.71700 B	18 52 38.52991	



APPENDIX

~~A - Tide Note~~

B - Abstract of Positions

C - Abstract of Raydist Calibration

D - TRA/TC/TI

E - Form #1, #3  
- *Parameter Cards*

F - Sheet Layout

G - Approval Sheet



# Triangulation Profile

9.21.73

H-NO.		LATITUDE	LONGITUDE	X	Y	X
09388	001 ✓	73 60563852	147031672	09686	07032	
09388	002 off sheet limits	73 60315138	147202791	17992	29046	
09388	008 ✓	73 60504384	146503670	03672	01266	
09388	019 - Not used	73 60482273	146474709	02324	89753	
09388	031 ✓	73 50495114	146484792	02809	00411	
09388	040 ✓	73 60534521	146485362	02860	04214	
09388	041 ✓	73 60535306	146463252	01743	04344	
09388	043 - Not used	73 60570414	146455873	01483	07449	
09388	044 ✓	73 60585548	146433890	00383	09261	
09388	045 ✓	73 60570434	146455799	01477	07452	
09388	060 ✓	73 60565649	146544543	05645	07320	
09388	061 ✓	73 60574391	146524876	04723	08090	
09388	062 ✓	73 60594968	146504970	03785	10135	
09388	064 ✓	73 61013371	146475946	02445	11827	

596.10  
125.412.2571

001 **ELF**

002 **SMT**

019 - ~~used in calibration~~  
Signs / Check-points only

043 - ~~Not used~~  
Signs / and not needed

000000

001 1356.924(178.467) 554.5

ABSTRACT OF RAYDIST CALIBRATIONS H-9388

<u>DAY</u>	<u>TIME</u>	<u>RED CORRECTOR</u>	<u>GREEN CORRECTOR</u>	<u>POSITIONS</u>	<u>REMARKS</u>
222	0925 1550	<sup>0.0</sup> <del>+15.44</del>	<sup>0.0</sup> <del>+43.28*</del>	3054-3197	DA-1 (see below)
225	1310 1547	+0.14	-0.06	3198-3239	DA-1
227	0430 2015	-0.05	+0.16	6001-6361	DAVIDSON
228	0500 0930	-0.12	+0.06	6362-6441	DAVIDSON

\* The Wang morning calibration was in error. The complete days work was converted to reflect the correct average values of the calibrations.

H-9388 VELOCITY TABLE APPLIES TO LAUNCHES DA-1 & DA-2 *& Davidson*

000015 00 0000 0001 000 0 000000 000000

000072 00 0001

00155 00 0002

000375 00 0003

002<sup>5</sup>700 00 0000

H-9388

TC/TI for <sup>SHIP</sup> Davidson

Tape

045400 00 0000 0001 227 0 000000 000000

052300 00 0000 0001 228 0 000000 000000

H-9388 TC/TI TAPE LAUNCH DA-1

092130 00 0002 0001 219 0 000000 000000

093430 00 0002 0001 220 0 000000 000000

~~095130 00 0002 0001 221 0 000000 000000~~

085130 00 0005 0001 221 0 000000 000000

091500 00 0002

094500 00 0001

105700 00 0000

114800 00 0002

130600 00 0001

132600 00 0000

090800 00 0004 0001 222 0 000000 000000

092800 00 0002

085800 00 0002 0001 225 0 000000 000000

094145 00 0002 0001 227 0 000000 000000

092745 00 0002 0001 228 0 000000 000000

H-9388 TC/TI TAPE LAUNCH DA-2

135430 00 0002 0001 220 0 000000 000000

140300 00 0003 0001 225 0 000000 000000

POSITION NO.

FATHOMETER NO.

1-364

1284

365-866

926

~~3001-3053~~  
~~3015-3053~~

~~1048~~ 1248

3054-3239

214

8000-8027

~~926~~ DP'S

<sup>6111</sup>  
6001-~~6441~~  
6112 - 6441

~~1284~~ 1286  
1284

H-9388

DA-20-4-73

ABSTRACT OF POSITIONS

VOLUME	DAY	VESSEL	POSITION NO.	REMARKS
B-1	219	DA-1	1-129	
B-2	220	DA-1	130-242	<i>1 A-F Phase check ok</i>
B-3	221	DA-1	243-364	
B-4	222	DA-1	365-479	<i>1 A-F Phase check ok.</i>
B-5	225	DA-1	480-569	
B-6	227	DAVIDSON	6001-6361	
B-7	227	DA-1	570-676	
B-8	228	DA-1	675-866	Positions 675 & 676 are duplicated.
B-9	228	DAVIDSON	6362-6441	
B-10	220	DA-2	3015-3053	
B-11	222	DA-2	3054-3197	
B-12	225	DA-2	3197-3239	Position 3197 is duplicated.
B-13	TRA/TC/TI Tapes			
B-14	DAVIDSON Bottom Samples		4001-4008	
B-15	Detached Positions DA-1		8000-80027	
B-16	Signal Tape			

*All GPs unadjusted*

RAYDIST STATIONS

Elf 1947 r. 1972— 0\*001

POSITION

60°56'38.519"N  
147°03'16.717"W

Smith RM-1, 1973 (*off of sheet limits*)

60°31'51.385"N  
147°20'27.914"W

VISUAL CONTROL SIGNALS

SIGNAL NUMBER

NAME

POSITION

008

Reef 1942 r. 1972

60°50'43.836"N  
146°50'36.696"W

~~019~~— *Not used*

Out 1901 r. 1972

60°48'22.730"N  
146°47'47.091"W

031

Joke 1973

60°49'51.135"N  
146°48'47.925"W

040

Busby Is. Lt. 1947  
r. 1972

60°53'45.208"N  
146°48'53.624"W

041

Preston 1901 r. 1972

60°53'53.058"N  
146°46'32.515"W

~~043~~— *Not used*

Rock 2 1973

60°57'04.140"N  
146°45'58.734"W

044

Side 1901 r. 1973

60°58'55.484"N  
146°43'38.896"W

045

Rocky Pt. Beacon  
1947 r. 1972

60°57'04.340"N  
146°45'57.994"W

060

Fram 1972

60°56'56.489"N  
146°54'45.427"W

061

Flow 1901 r. 1972

60°57'43.909"N  
146°52'48.765"W

062

Snag 1973

60°59'49.683"N  
146°50'49.699"W

064

Devish 1965 r. 1972

61°01'33.708"N  
146°47'59.459"W



AREA SURVEYED

The survey includes the approximate area within the quadrilateral cornered by following geographic points:

60°59.<sup>3</sup>0'N 146°51.0'W

60°57.7'N 146°<sup>45.6</sup>46.0'W

60°50.2'N 146°<sup>52.0</sup>53.0'W

60°<sup>52</sup>51.5'N 147°03.0'W



Reg. No. H-9388

The Computer and Excess Sounding Cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

Reg. No. H-9388

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE \_\_\_\_\_ TIME REQ'D \_\_\_\_\_ INITIALS \_\_\_\_\_

REMARKS:

GEOGRAPHIC NAMES

Survey No. H-9388

On Chart No. 8551  
 On previous survey No.  
 On U. S. quadrangle Maps  
 From local information  
 On local Maps  
 P. O. Guide or Map  
 Rand McNally Atlas  
 U. S. Light List

Name on Survey

	A	B	C	D	E	F	G	H	K	
BLIGH ISLAND ✓										1
BUSBY ISLAND ✓										2
<del>Pt. FREEMANTLE</del>										3
REEF ISLAND ✓										4
ROCKY POINT ✓										5
SAWMILL BAY -										6
VALDEZ ARM ✓										7
BLIGH REEF ✓										8
Pt. Freemanthe ✓										9
Tatitlek Narrows										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

RAY

Approved by:  
 Chan G. Harrington  
 Staff Geographer  
 Feb 28, 1974

**HYDROGRAPHIC SURVEY STATISTICS**  
 HYDROGRAPHIC SURVEY NO. H-9388

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET & PNO		1	BOAT SHEETS		2	
DESCRIPTIVE REPORT		1	OVERLAYS		4+2	
DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES			1			
CAHIERS	1					
VOLUMES	21					
BOXES			1 & Sawtooth Rec.			

T-SHEET PRINTS (List)

SPECIAL REPORTS (List)

*Raydist & Second-Order Traverses (filed with P/O.)*

**OFFICE PROCESSING ACTIVITIES**

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1585
POSITIONS CHECKED		1535 <del>1558</del>	25	1560
POSITIONS REVISED		57	0	57
DEPTH SOUNDINGS REVISED		103	2	105
DEPTH SOUNDINGS ERRONEOUSLY SPACED		12	0	12
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		----	0	0
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS		125	0	15
JUNCTIONS		129	10	37
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		33	12	45
SPECIAL ADJUSTMENTS		15	10	26
ALL OTHER WORK		82	35	117
<b>TOTALS</b>		122	73	195
PRE-VERIFICATION BY	BEGINNING DATE		ENDING DATE	
VERIFICATION BY Felipe L. Rosario <i>Felipe L. Rosario</i>	17 October 1973		14 January 1974	
REVIEW BY <i>Vernia Hill</i>	3 Jan 1975		28 Feb 1975	

*Imp. Fannie B. Powers 3-13-75 38 hrs. Cases* U.S. G.P.O. 1972-769-562/439 REG.#6

Myriad 1/10/74



