

H12762

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Ocean Survey

**DESCRIPTIVE REPORT**

Type of Survey: Basic Hydrographic Survey

Registry Number: H12762

**LOCALITY**

State(s): Texas

General Locality: Port Mansfield, TX

Sub-locality: SW Approach to Port Mansfield

**2015**

CHIEF OF PARTY  
David Neff, ACSM C.H.

LIBRARY & ARCHIVES

Date:

**HYDROGRAPHIC TITLE SHEET**

**H12762**

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

State(s): **Texas**

General Locality: **Port Mansfield, TX**

Sub-Locality: **SW Approach to Port Mansfield**

Scale: **40000**

Dates of Survey: **06/05/2015 to 08/11/2015**

Instructions Dated: **06/23/2015**

Project Number: **OPR-K370-KR-15**

Field Unit: **eTrac Inc.**

Chief of Party: **David Neff, ACSM C.H.**

Soundings by: **Multibeam Echo Sounder**

Imagery by: **Multibeam Echo Sounder Backscatter**

Verification by: **Atlantic Hydrographic Branch**

Soundings Acquired in: **meters at Mean Lower Low Water**

**Remarks:**

All times are UTC. The purpose of this survey is to update existing NOS nautical charts. H12762 will cover approximately 56 square nautical miles of survey area in the SW Approach to Port Mansfield as designated in NOAA Hydrographic Survey Priorities, 2012 edition. SUBCONSULTANT: Geodynamics LLC, 310A Greenfield Dr., Newport, NC 98570 SUBCONSULTANT: Theory Marine, 777 Viewcrest Dr., Ventura, CA 93003 Projection: UTM 14N, NAD83

*The purpose of this survey is to provide contemporary surveys to update National Ocean Service (NOS) nautical charts. All separates are filed with the hydrographic data. Any revisions to the Descriptive Report (DR) generated during office processing are shown in bold red italic text. The processing branch maintains the DR as a field unit product, therefore, all information and recommendations within the body of the DR are considered preliminary unless otherwise noted. The final disposition of surveyed features is represented in the OCS nautical chart update products. All pertinent records for this survey, including the DR, are archived at the National Centers for Environmental Information (NCEI) and can be retrieved via <https://www.ncei.noaa.gov/>.*

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## Descriptive Report to Accompany Survey H12762

Project: OPR-K370-KR-15

Locality: Port Mansfield, TX

Sublocality: SW Approach to Port Mansfield

Scale: 1:40000

June 2015 - August 2015

**eTrac Inc.**

Chief of Party: David Neff, ACSM C.H.

### A. Area Surveyed

eTrac Inc. conducted hydrographic survey operations in the vicinity of Port Mansfield, TX. H12762 covers approximately 56 square nautical miles of survey area. H12762 is generally rectangular in geometry, and is approximately 6 nautical miles wide (E-W) by 10 nautical miles long (N-S).

Survey was conducted within these limits between June 5, 2015 (DN156) and August 11, 2015 (DN223).

#### A.1 Survey Limits

Data were acquired within the following survey limits:

Northwest Limit	Southeast Limit
26° 40' 29.61" N 97° 9' 6.12" W	26° 31' 5.98" N 97° 0' 54.12" W

*Table 1: Survey Limits*

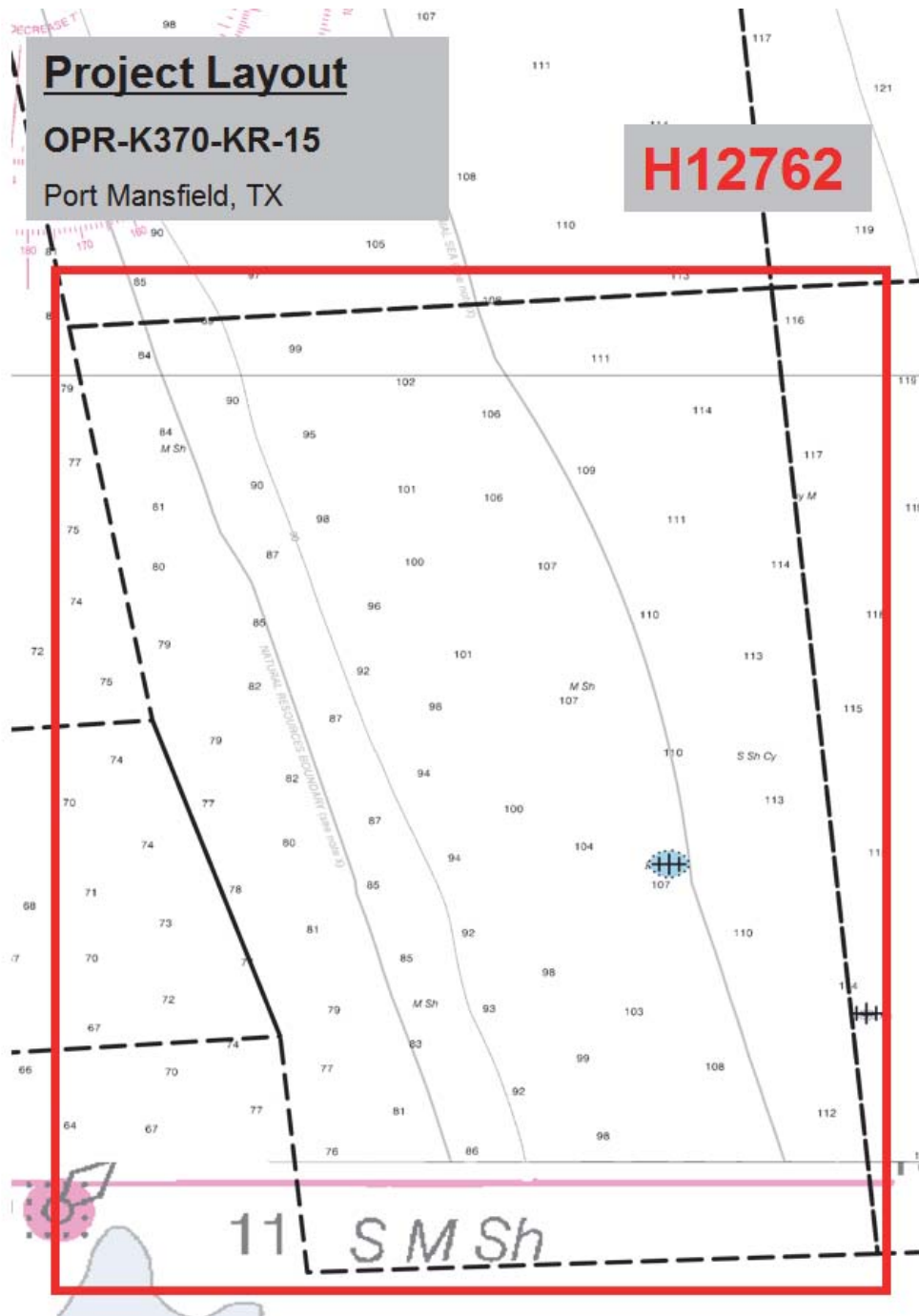


Figure 1: Survey Limits (Black dashed line)

All data were acquired in accordance with the requirements in the Project Instructions and specifications set forth in the Hydrographic Survey Specifications and Deliverables 2015 Edition (HSSD 2015).



## **A.2 Survey Purpose**

The purpose of this survey is to update existing NOS nautical charts. H12762 covers approximately 56 square nautical miles of survey area in Port Mansfield, TX as designated in NOAA Hydrographic Survey Priorities, 2012 edition.

## **A.3 Survey Quality**

The entire survey is adequate to supersede previous data.

Survey H12762 is accurate to IHO Order 1a as required per the HSSD 2015.

## **A.4 Survey Coverage**

Survey Coverage was in accordance with the requirements in the Project Instructions and HSSD 2015. Depths in H12762 range from 21 to 38meters. H12762 was surveyed to Complete MBES with backscatter standards set forth in the HSSD 2015.

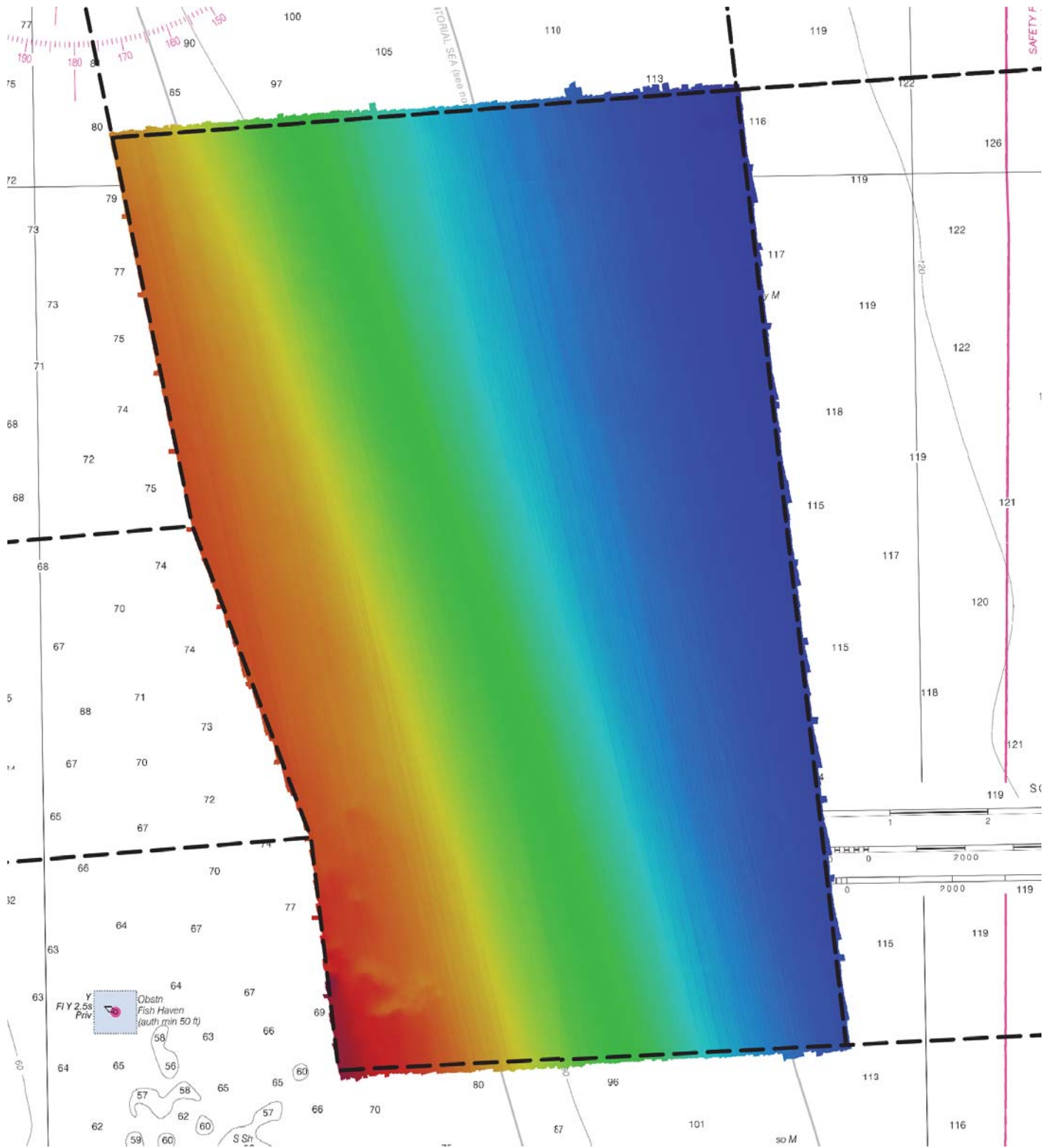


Figure 2: Survey Coverage

## A.5 Survey Statistics

The following table lists the mainscheme and crossline acquisition mileage for this survey:

	<b>HULL ID</b>	<i>JAB</i>	<i>Benthos</i>	<i>Taku</i>	<i>Total</i>
<b>LNM</b>	<b>SBES Mainscheme</b>	0	0	0	0
	<b>MBES Mainscheme</b>	299	582	480	1361
	<b>Lidar Mainscheme</b>	0	0	0	0
	<b>SSS Mainscheme</b>	0	0	0	0
	<b>SBES/SSS Mainscheme</b>	0	0	0	0
	<b>MBES/SSS Mainscheme</b>	0	0	0	0
	<b>SBES/MBES Crosslines</b>	0	0	66	66
	<b>Lidar Crosslines</b>	0	0	0	0
<b>Number of Bottom Samples</b>					8
<b>Number of AWOIS Items Investigated</b>					0
<b>Number Maritime Boundary Points Investigated</b>					0
<b>Number of DPs</b>					0
<b>Number of Items Investigated by Dive Ops</b>					0
<b>Total SNM</b>					56

Table 2: Hydrographic Survey Statistics

The following table lists the specific dates of data acquisition for this survey:

<b>Survey Dates</b>	<b>Day of the Year</b>
06/06/2015	157
06/06/2015	157
06/12/2015	163
06/13/2015	164
06/16/2015	167
06/19/2015	170
06/20/2015	171
06/21/2015	172
06/22/2015	173
06/23/2015	174
06/24/2015	175
06/28/2015	179
07/01/2015	182
07/03/2015	184
07/04/2015	185
07/05/2015	186
07/06/2015	187
07/08/2015	189
07/10/2015	191
07/13/2015	194
07/14/2015	195
07/20/2015	201
08/03/2015	215
08/04/2015	216
08/06/2015	218
08/07/2015	219
08/09/2015	221
08/10/2015	222
08/11/2015	223

*Table 3: Dates of Hydrography*

## B. Data Acquisition and Processing

### B.1 Equipment and Vessels

Refer to the Data Acquisition and Processing Report (DAPR) for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data are discussed in the following sections.

#### B.1.1 Vessels

The following vessels were used for data acquisition during this survey:

<b>Hull ID</b>	<b><i>M/V Jab</i></b>	<b><i>R/V Benthos</i></b>	<b><i>R/V Taku</i></b>
<b>LOA</b>	13 meters	10 meters	10 meters
<b>Draft</b>	0.75 meters	0.6 meters	0.6 meters

*Table 4: Vessels Used*

The M/V Jab is a 13 meter aluminum catamaran equipped with a multibeam moonpool and an A-frame for towed body operations.

The R/V Benthos is a 10 meter aluminum catamaran equipped with a custom over-the-side (port) multibeam hydraulic pole mount, as well as an A-Frame for towed body operations.

The R/V Taku is a 10 meter aluminum catamaran equipped with an Universal Sonar Mount (USM) over-the-side (starboard) multibeam mount, as well as an A-Frame for towed body operations.

## B.1.2 Equipment

The following major systems were used for data acquisition during this survey:

<b>Manufacturer</b>	<b>Model</b>	<b>Type</b>
R2Sonic	2024	MBES
Applanix	POSMV 320 V5	Positioning and Attitude System
AML	Base.X	Sound Speed System
AML	Minos.X	Sound Speed System
Trimble	SPS461	Positioning System
Trimble	DSM232	Positioning System

*Table 5: Major Systems Used*

Note: The major systems listed above were used on each vessel. The AML Minos.X, AML Base.X and Trimble DSM232 were utilized on the M/V Jab. R/V Benthos utilized an AML Base.X and Trimble SPS351. R/V Taku utilized an AML Base.X and Trimble DSM232.

## B.2 Quality Control

### B.2.1 Crosslines

Crosslines acquired for this survey totaled 5% of mainscheme acquisition.

A comparison of crossline mileage to mainscheme mileage yields a cross line percentage of 4.83%, and is noted to be above the required 4%.

A beam-by-beam statistical analysis was performed using the Line QC reporting tool in Caris HIPS and SIPS 9.0. A 2 meter CUBE weighted BASE surface was created incorporating only the mainscheme lines and excluded crosslines. Note: this surface was created for QC only and is not submitted as a surface deliverable. The Line QC reporting tool was used to perform the beam-by-beam comparison of the crossline data to the mainscheme surface. Comparisons showed excellent agreement well above 95% of the allowable TVU. Note: the statistical analysis excluded the outer 5 beams (beams 1-5 and beams 252-256), as these beams were excluded from both mainsheme and crossline data across the entire project.

The beam-to-beam crossline comparison report generated through the Caris Line QC reporting tool is included in Separate II.

Below is a graph of crossline comparison statistics showing IHO Special Order and Order 1a compliance per beam.

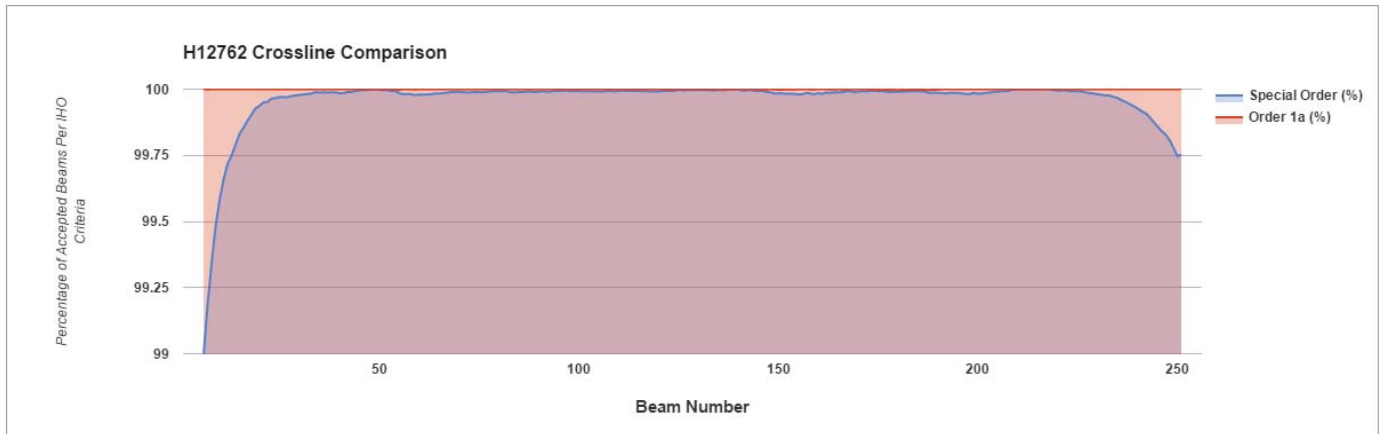


Figure 3: H12762 Crossline Comparison

**B.2.2 Uncertainty**

The following survey specific parameters were used for this survey:

<b>Measured</b>	<b>Zoning</b>
0.22 meters	0 meters

Table 6: Survey Specific Tide TPU Values

Hull ID	Measured - CTD	Measured - MVP	Surface
M/V Jab	4 meters/second	0 meters/second	2 meters/second
R/V Benthos	4 meters/second	0 meters/second	2 meters/second
R/V Taku	4 meters/second	0 meters/second	2 meters/second

Table 7: Survey Specific Sound Speed TPU Values

Note: Tide TPU value given as 2 sigma.

Standard deviation and uncertainty BASE surfaces were utilized during data processing to search for features, water column noise, and systematic errors.

A custom layer is created within the BASE surface utilizing the Deep and Shoal layers in the following configuration:

$$\text{Custom Layer} = (\text{Deep} - \text{Shoal})^2$$

By viewing the custom layer, seafloor features, water column noise, and systematic errors are graphically exaggerated and can easily be identified for further examination.

A TVU QC layer was created within the BASE surface utilizing the Uncertainty and Depth layers in the following configuration:

$$-\text{Uncertainty}/((0.5^2 + ((\text{Depth} * 0.013)^2))^0.5)$$

By viewing the TVU QC layer, nodes that exceed the IHO Order 1a uncertainty standards can be identified and further analyzed.

Standard deviation and uncertainty were quantified using the QC Reporting tool within Caris HIPS and SIPS 9.0. The option "Greater of the two" was selected in the reporting tool in order to generate statistics quantifying the maximum error occurring within the data. IHO Order 1a uncertainty specification was met by 100% of the nodes.

### B.2.3 Junctions

The following junctions were made with this survey:

Registry Number	Scale	Year	Field Unit	Relative Location
H12761	1:40000	2015	eTrac Inc.	W
H12763	1:40000	2015	eTrac Inc.	E
H12764	1:40000	2015	eTrac Inc.	N

*Table 8: Junctioning Surveys*

#### H12761

H12762 junctions with H12761 to the west. The junction comparison was performed using approximately 250m of overlapping data between H12762 and H12761. Depths were compared in Caris HIPS and SIPS 9.0 by creating a 2 meter difference surface between the junctioning datasets. Note: the 2 meter difference surface was created for comparison efforts only and is not submitted as a surface deliverable. The comparison showed excellent agreement between H12762 and H12761. Depth differences generally were within 30cm or less, with the majority of depth differences being less than 10cm. Junction comparison statistics are included in Separate II.



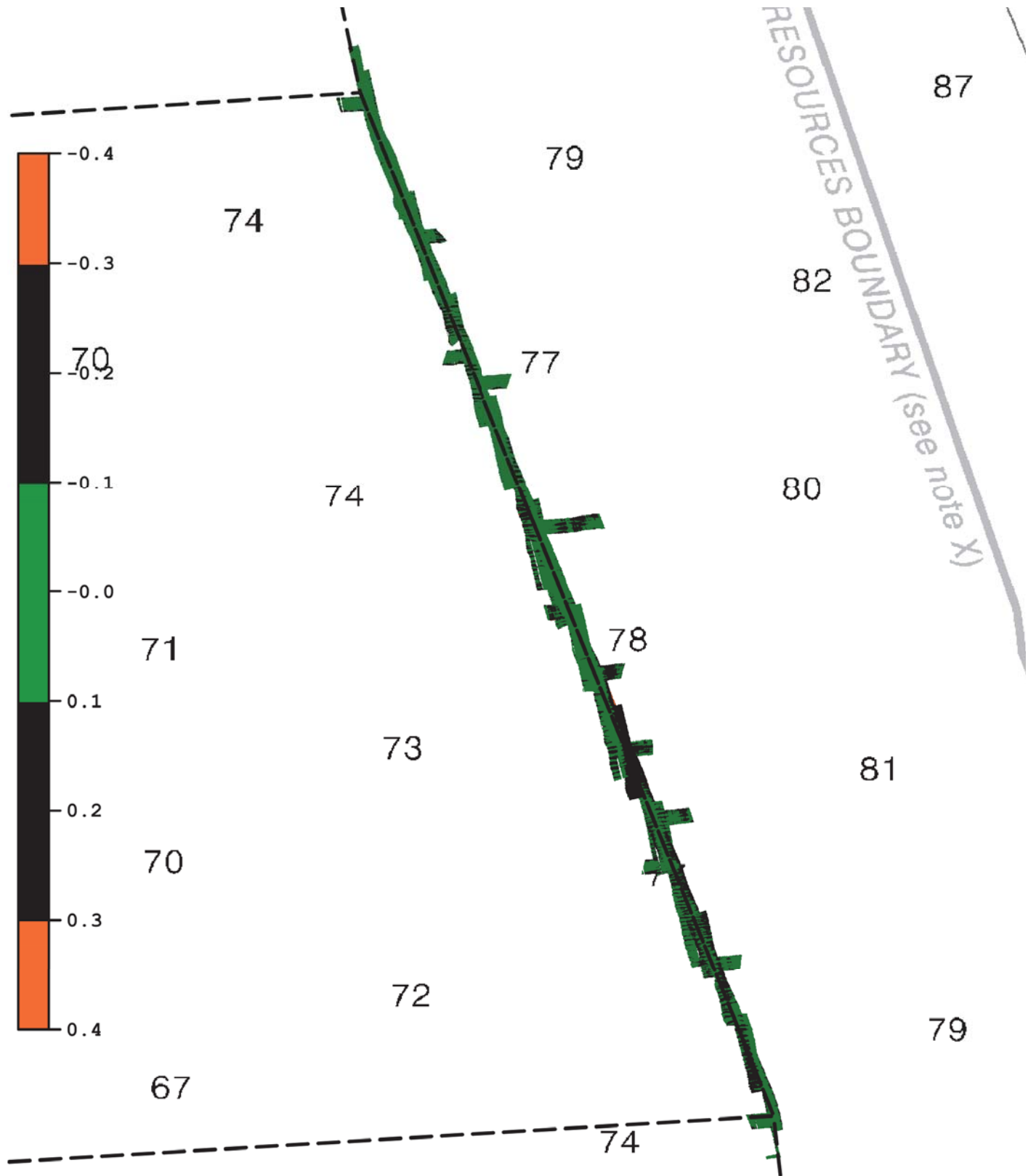


Figure 4: Junction Comparison (H12762 to H12761)

H12763

H12762 junctions with H12763 to the east. The junction comparison was performed using approximately 250m of overlapping data between H12762 and H12763. Depths were compared in Caris HIPS and SIPS 9.0 by creating a 2 meter difference surface between the junctioning datasets. Note: the 2 meter difference was created for comparison efforts only and is not submitted as a surface deliverable. The comparison showed excellent agreement between H12762 and H12763. Depth differences generally were within 30cm or less, with the majority of depth differences being less than 10cm. Junction comparison statistics are included in Separate II.

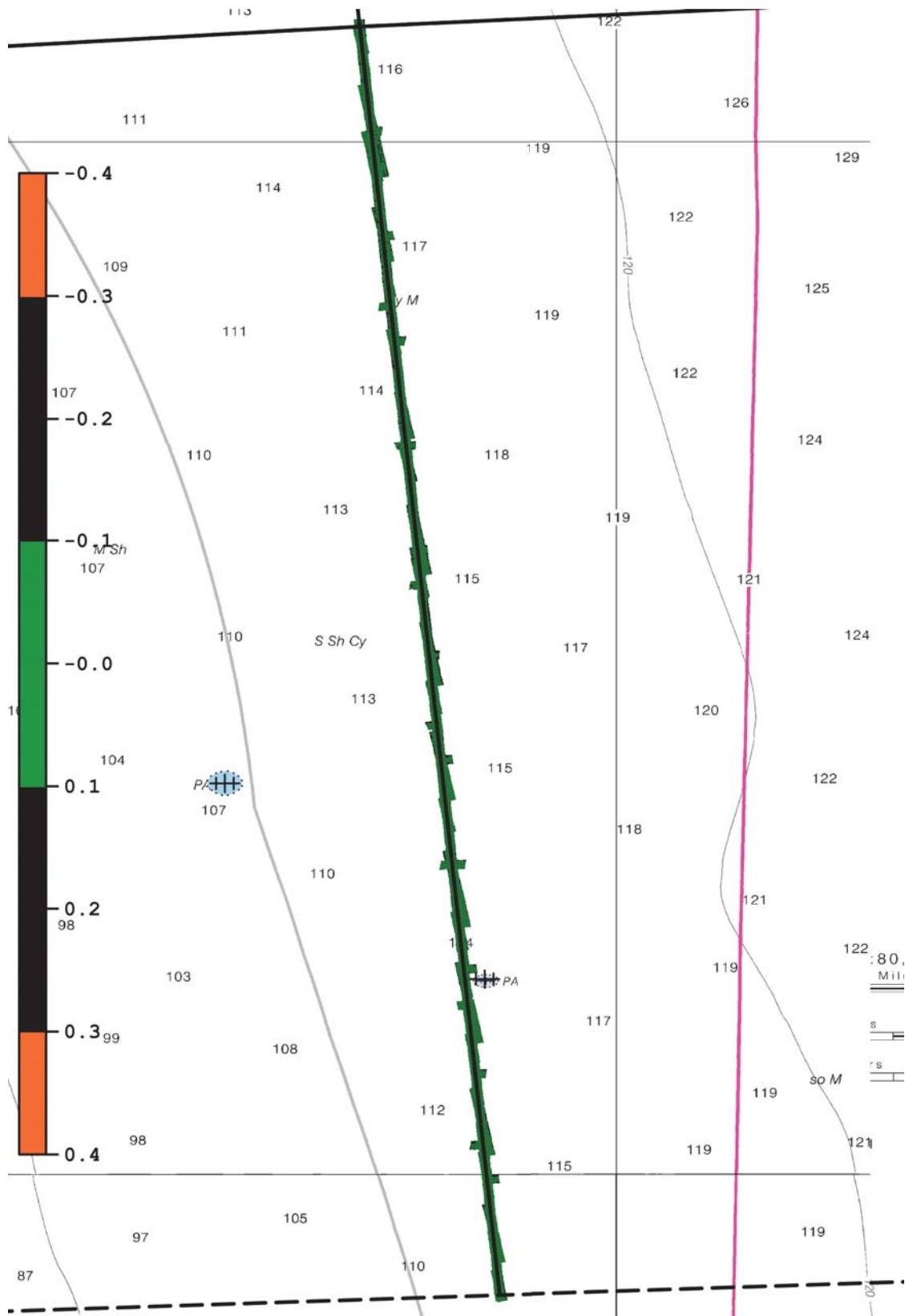


Figure 5: Junction Comparison (H12762 to H12763)

## H12764

H12762 junctions with H12764 to the north. The junction comparison was performed using approximately 250m of overlapping data between H12762 and H12764. Depths were compared in Caris HIPS and SIPS 9.0 by creating a 2 meter difference surface between the junctioning datasets. Note: the 2 meter difference surface was created for comparison efforts only and is not submitted as a surface deliverable. The comparison showed excellent agreement between H12762 and H12764. Depth differences generally were within 30cm or less, with the majority of depth differences being less than 10cm. Junction comparison statistics are included in Separate II.

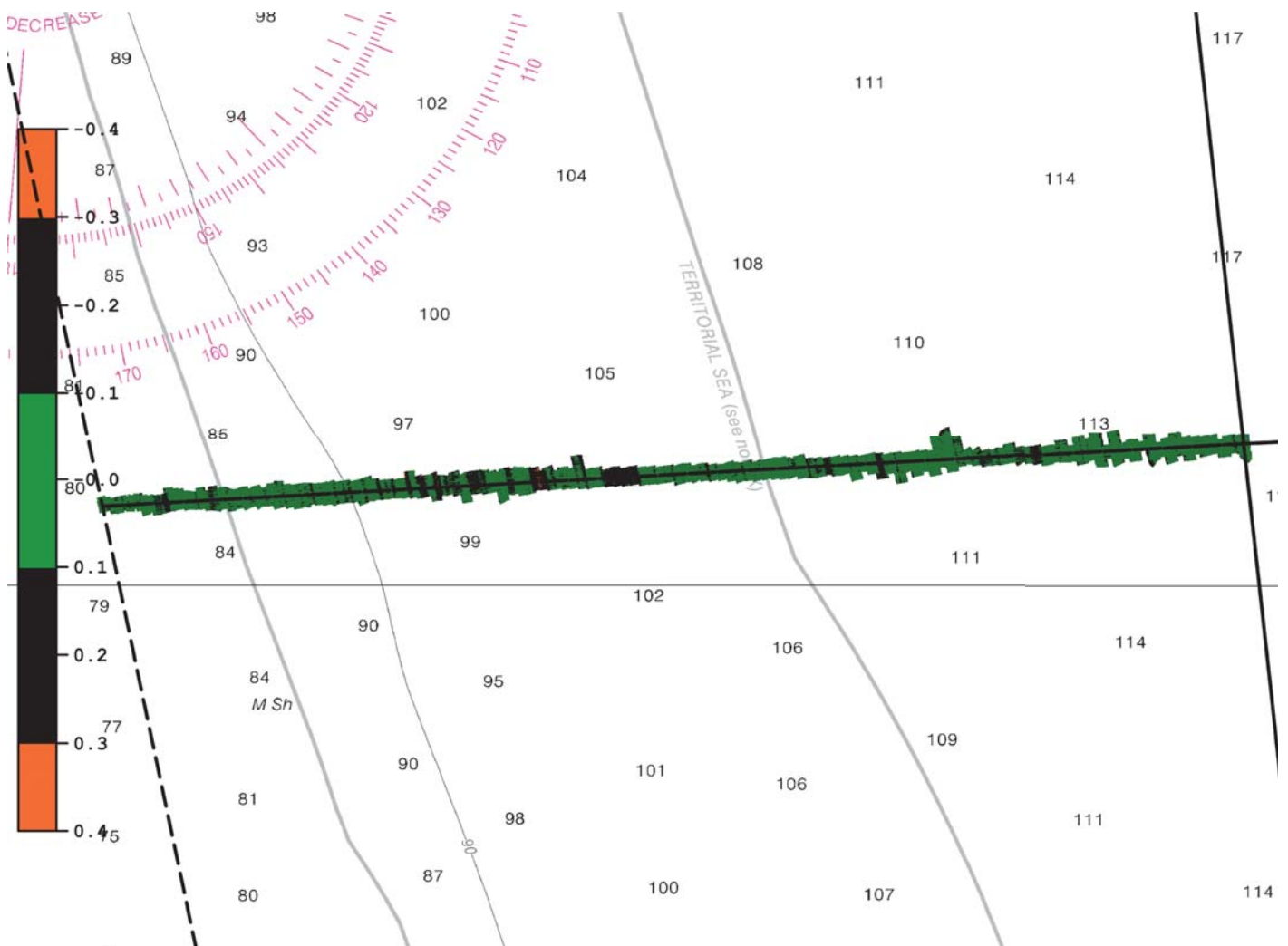


Figure 6: Junction Comparison (H12762 to H12764)

### B.2.4 Sonar QC Checks

Sonar system quality control checks were conducted as detailed in the quality control section of the DAPR.

## B.2.5 Equipment Effectiveness

There were no conditions or deficiencies that affected equipment operational effectiveness.

## B.2.6 Factors Affecting Soundings

There were no other factors that affected corrections to soundings.

## B.2.7 Sound Speed Methods

Sound Speed Cast Frequency: SVP casts were generally taken every 2 hours. Occasionally casts would exceed a 2 hour frequency, however would never exceed a 4 hour frequency. Casts were applied in QPS QINSy acquisition software at the time of the cast. Surface SVP measured at 1Hz was compared to surface speed from the current profile in realtime. If the surface velocity comparison was in excess of 2m/s at any time during survey operations, a new cast was taken.

SVP surface velocities were compared in realtime and profile to profile for each cast on the vessel. Additionally, profiles were compared day-to-day in the field office using the SVPTrac program, developed in-house by eTrac Inc., to better understand trends for efficient acquisition planning.

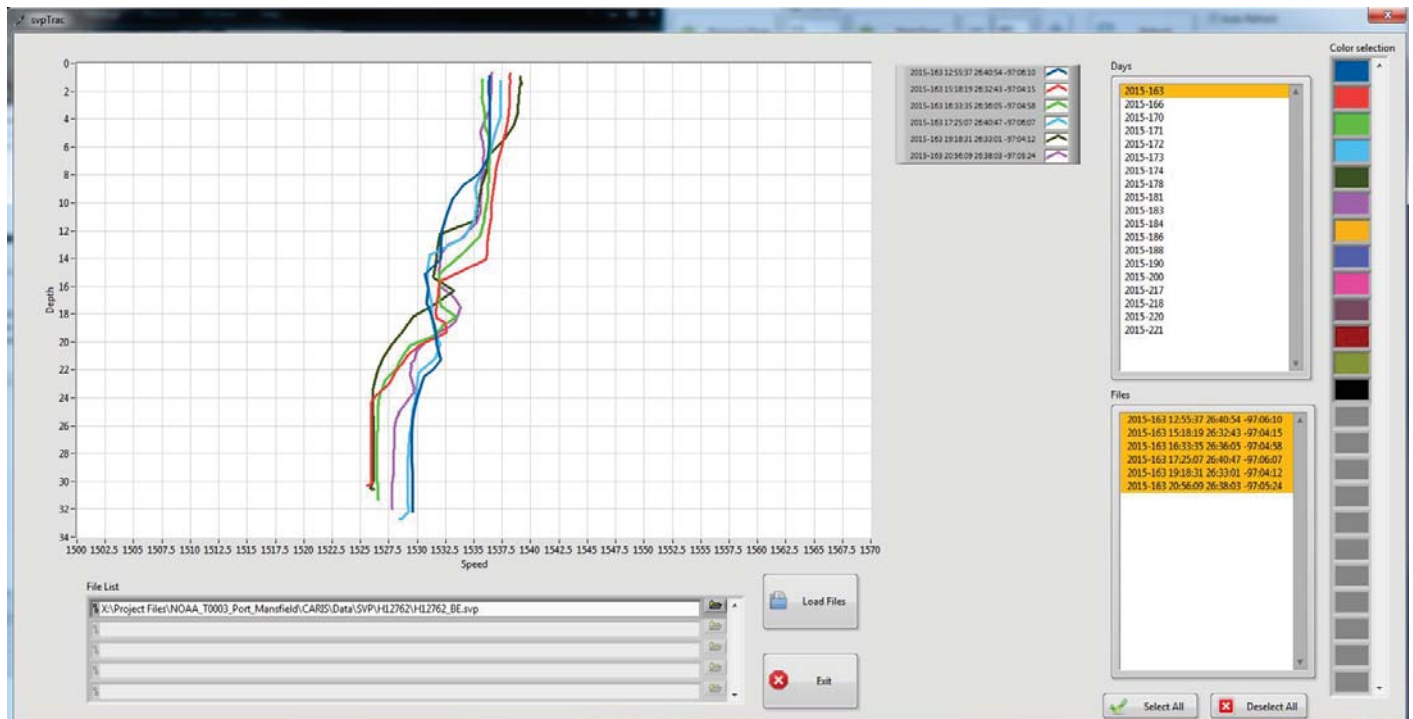


Figure 7: Example of Daily SVP Data Plot (DN163)

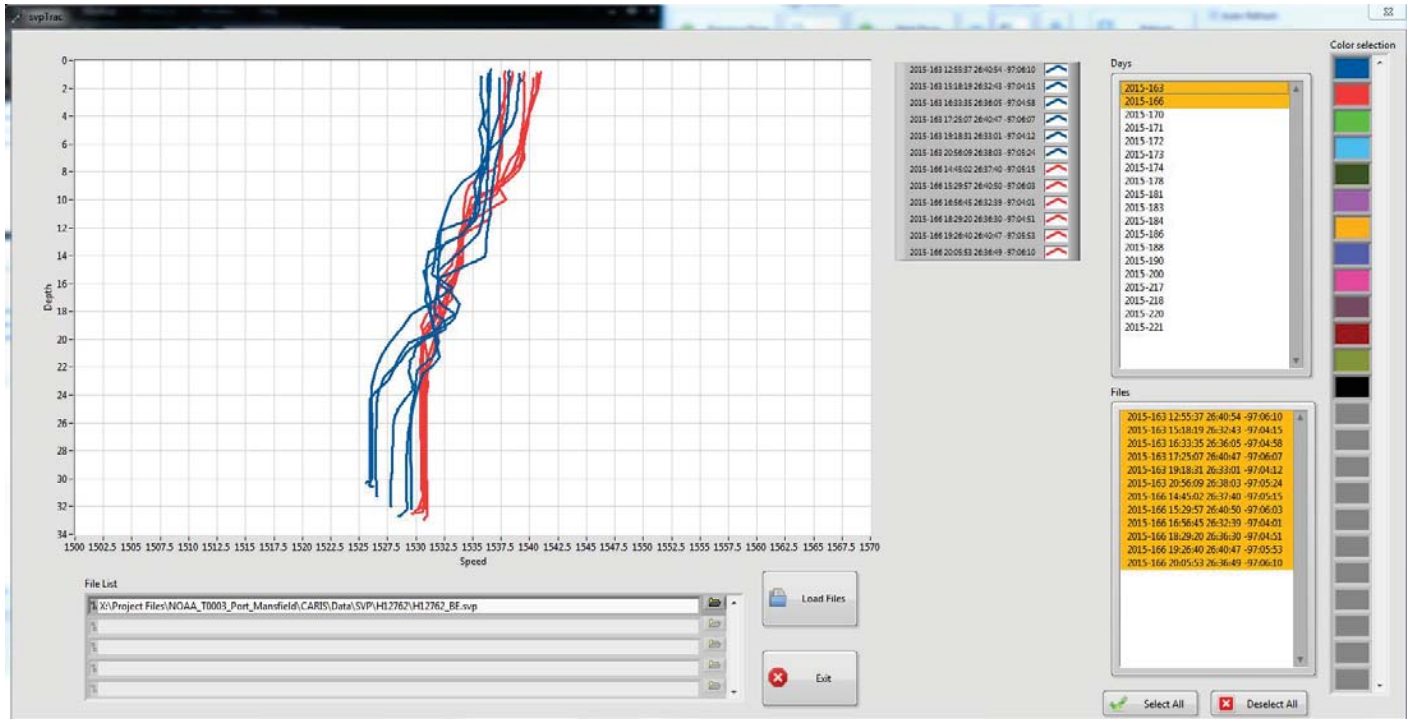


Figure 8: Example of Day to Day SVP Comparison (DN163 and DN166)

## B.2.8 Coverage Equipment and Methods

All equipment and survey methods were used as detailed in the DAPR.

## B.2.9 Data Density Evaluation

In order to determine if the density of the data met the specified 5 soundings per node, data density was evaluated using the DensityTrac program, developed in-house by eTrac Inc. Each BASE surface's nodes were exported to an ASCII CSV file where the fields were (Easting, Northing, Density) for each node. The CSV file was then loaded into the DensityTrac program and density statistics were computed. For H12762 the following percentage represent the results of the density testing:

Complete Coverage MBES (2m CUBE weighted BASE surface) = 99.94% of all nodes are composed from at least 5 soundings.

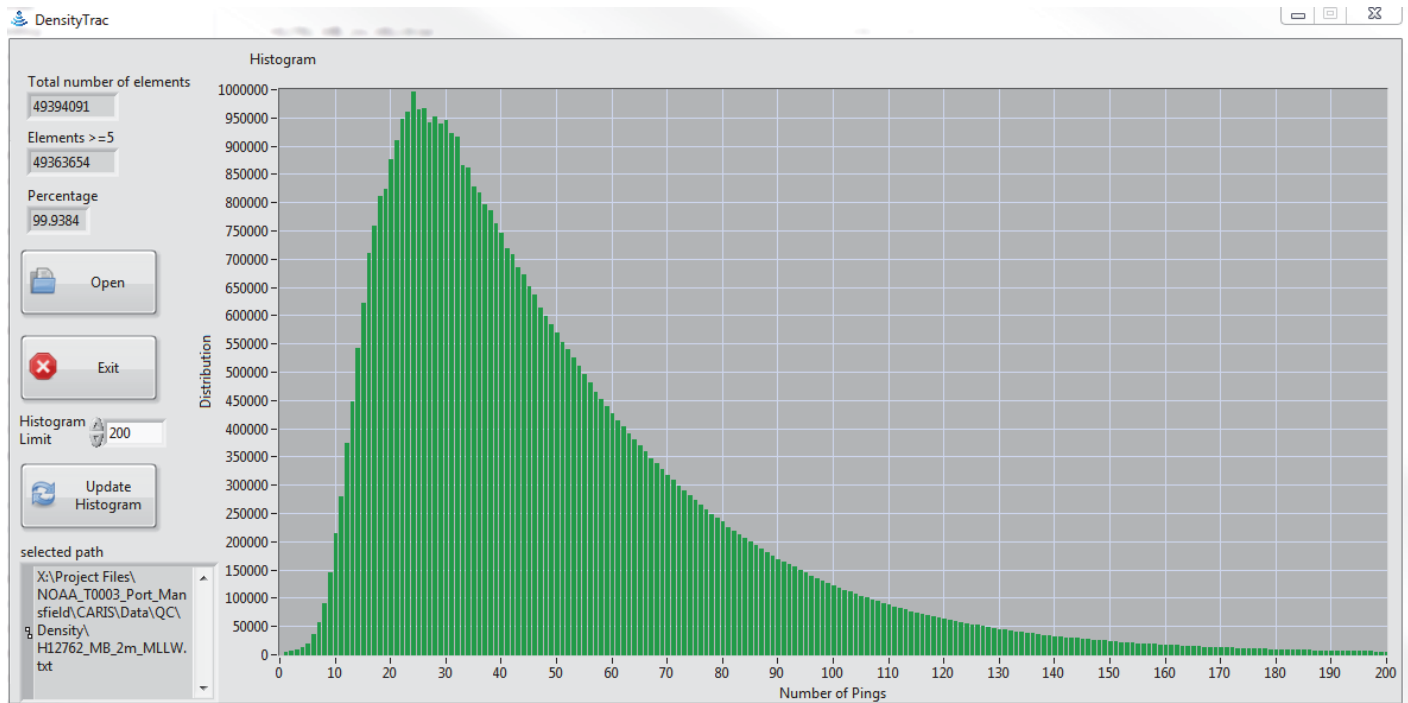


Figure 9: H12762 2m Complete Coverage MBES Density Distribution Statistics

## B.3 Echo Sounding Corrections

### B.3.1 Corrections to Echo Soundings

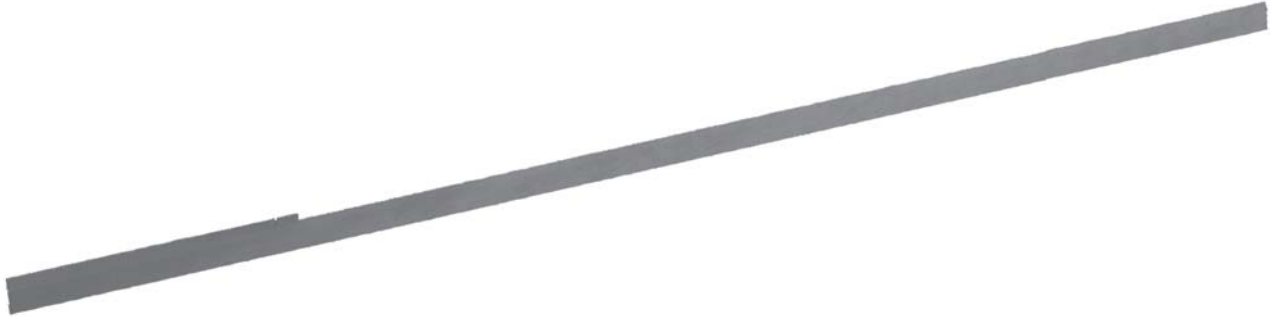
All data reduction procedures conform to those detailed in the DAPR.

### B.3.2 Calibrations

All sounding systems were calibrated as detailed in the DAPR.

## B.4 Backscatter

Backscatter data were collected throughout the survey and are retained in the raw XTF files. Every effort was made in the field to collect quality backscatter data while maintaining the primary mandate of high quality bathymetric data. While no processing or analysis of backscatter was required, eTrac Inc. engaged in a minimal effort to verify coverage and general quality of the backscatter data collected. Raw backscatter data were viewed in Caris HIPS and SIPS 9.0 to ensure collection criteria had been met. Shown below is an example of the unprocessed backscatter mosaic from H12762 DN170 and DN171.



*Figure 10: Raw Backscatter From R/V Benthos (DN170 and DN171)*

## B.5 Data Processing

### B.5.1 Software Updates

There were no software configuration changes after the DAPR was submitted.

The following Feature Object Catalog was used: NOAA Profile V\_5\_3\_2

### B.5.2 Surfaces

The following surfaces and/or BAGs were submitted to the Processing Branch:

Surface Name	Surface Type	Resolution	Depth Range	Surface Parameter	Purpose
H12762_MB_2m_MLLW	CUBE	2 meters	21.45 meters - 37.45 meters	NOAA_2m	Complete MBES
H12762_MB_2m_Parent	CUBE	2 meters	21.45 meters - 37.45 meters	NOAA_2m	Complete MBES

*Table 9: Submitted Surfaces*



In areas shoaler than 40 meters, a 2 meter surface is provided meeting complete coverage MBES with backscatter specifications.

A 2 meter parent surface is provided, covering the entire survey area of H12762.

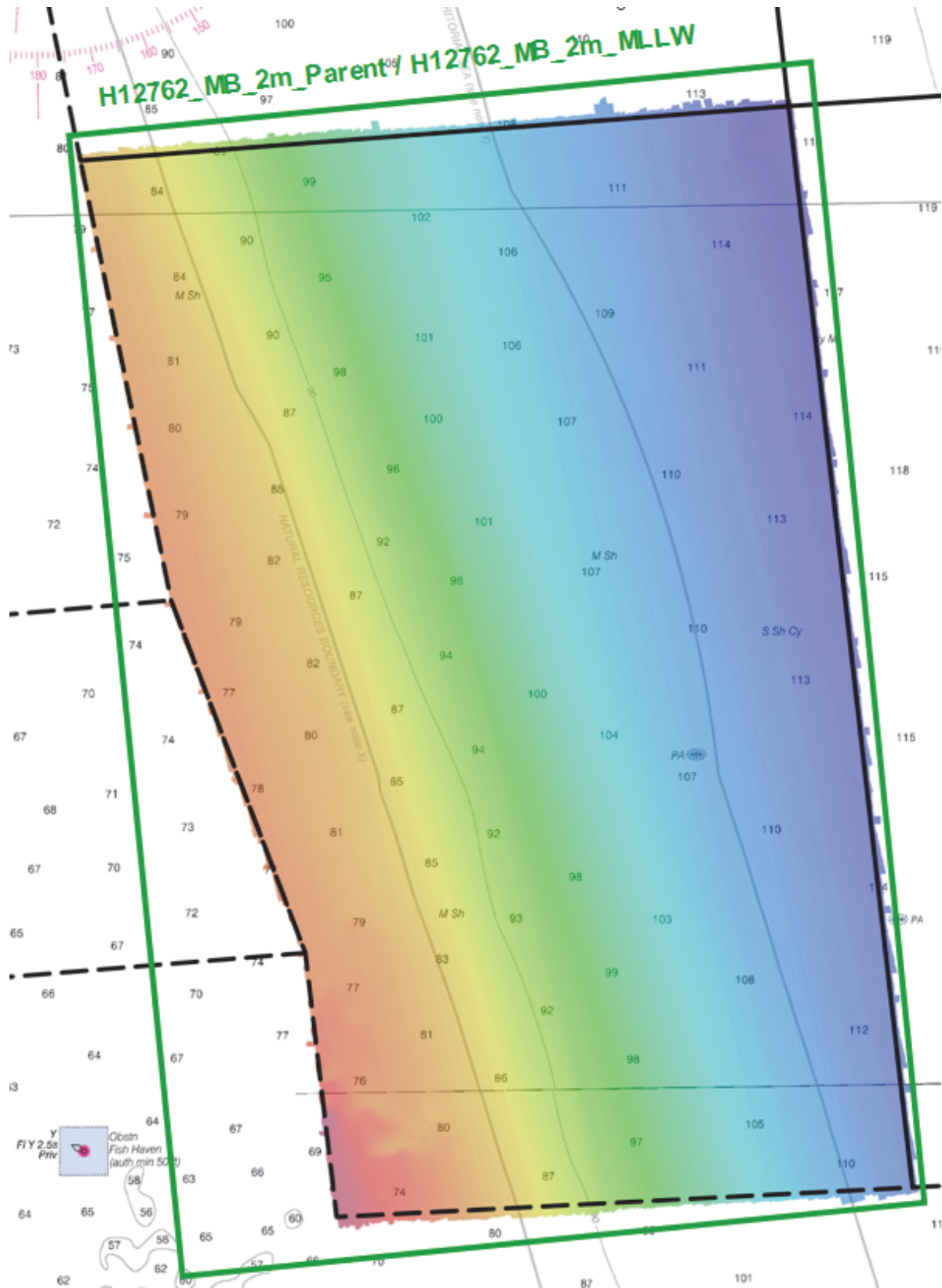


Figure 11: H12762 Delivered BASE Surface Coverage Graphic

## C. Vertical and Horizontal Control

### C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

#### Standard Vertical Control Methods Used:

Discrete Zoning

The following National Water Level Observation Network (NWLON) stations served as datum control for this survey:

Station Name	Station ID
Corpus Christi TX	877-5870

*Table 10: NWLON Tide Stations*

File Name	Status
8775870.tid	Verified Observed

*Table 11: Water Level Files (.tid)*

File Name	Status
K370KR2015CORP.zdf	Final

*Table 12: Tide Correctors (.zdf or .tc)*

### C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD83).

The projection used for this project is UTM Zone 14N.

DGPS correctors were monitored realtime during data collection for dropouts. No dropouts were witnessed during data collection. In addition to the realtime monitoring of DGPS corrections, position data were analyzed in the office during post-processing. The attitude editor within Caris HIPS and SIPS 9.0 was utilized to identify any position data that may be insufficient for final delivery.

The following DGPS Stations were used for horizontal control:

DGPS Stations
Aransas Pass, 304kHz, ID: 816

*Table 13: USCG DGPS Stations*

## D. Results and Recommendations

### D.1 Chart Comparison

A chart comparison was conducted for H12762 using Caris HIPS and SIPS 9.0. Contours, as well as soundings, were compared against the largest scale RNC 11304 and ENC US4TX15M to accomplish the chart comparison. RNC 11304 and ENC US4TX15M do not cover a small portion of the southern end of H12762, and therefore RNC 11301 and ENC US4TX11M were included to complete the chart comparison. The methods and results of the comparison are detailed below.

#### Contour Comparison Method:

Using the 2 meter CUBE weighted BASE surface, the 90 foot contour was generated and displayed against the charted contour. Additionally, the 2 meter CUBE weighted BASE surface was viewed by a custom color band range based on the contour intervals (12ft, 18ft, 30ft, 60ft, 90ft, 120ft, and 180ft). The results of the comparison are described below.

#### Sounding Comparison Method:

Using the same 2 meter CUBE weighted BASE surface used for the contour comparison, spot soundings were generated in Caris HIPS and SIPS 9.0 for H12762. Soundings were displayed against the charted soundings and a visual comparison was made. The results are described below.

### D.1.1 Raster Charts

The following are the largest scale raster charts, which cover the survey area:

<b>Chart</b>	<b>Scale</b>	<b>Edition</b>	<b>Edition Date</b>	<b>LNМ Date</b>	<b>NM Date</b>
11304	1:80000	14	04/2012	09/01/2015	09/12/2015
11301	1:80000	26	11/2013	09/01/2015	09/12/2015

*Table 14: Largest Scale Raster Charts*

#### 11304

##### Contour Comparison Results:

The 90 foot contour has receded shoreward, on average, approximately 400 meters from the charted contour.

##### Sounding Comparison Results:

With exception to the differences identified through the contour comparison, in general, the soundings are in excellent agreement, with no major discrepancies. Soundings are generally within 1 foot (0.3m) of each other. Occasionally soundings differ by 2 to 3 feet, however generally depth differences appear to be minimal. Depth differences are not biased in any particular direction to support a systematic error.

#### 11301

##### Contour Comparison Results:

The results of the 90 foot contour comparison with RNC 11301 match those of the RNC 11304 contour comparison.

##### Sounding Comparison Results:

Results of the sounding comparison with RNC 11301 match those of the RNC 11304 sounding comparison.

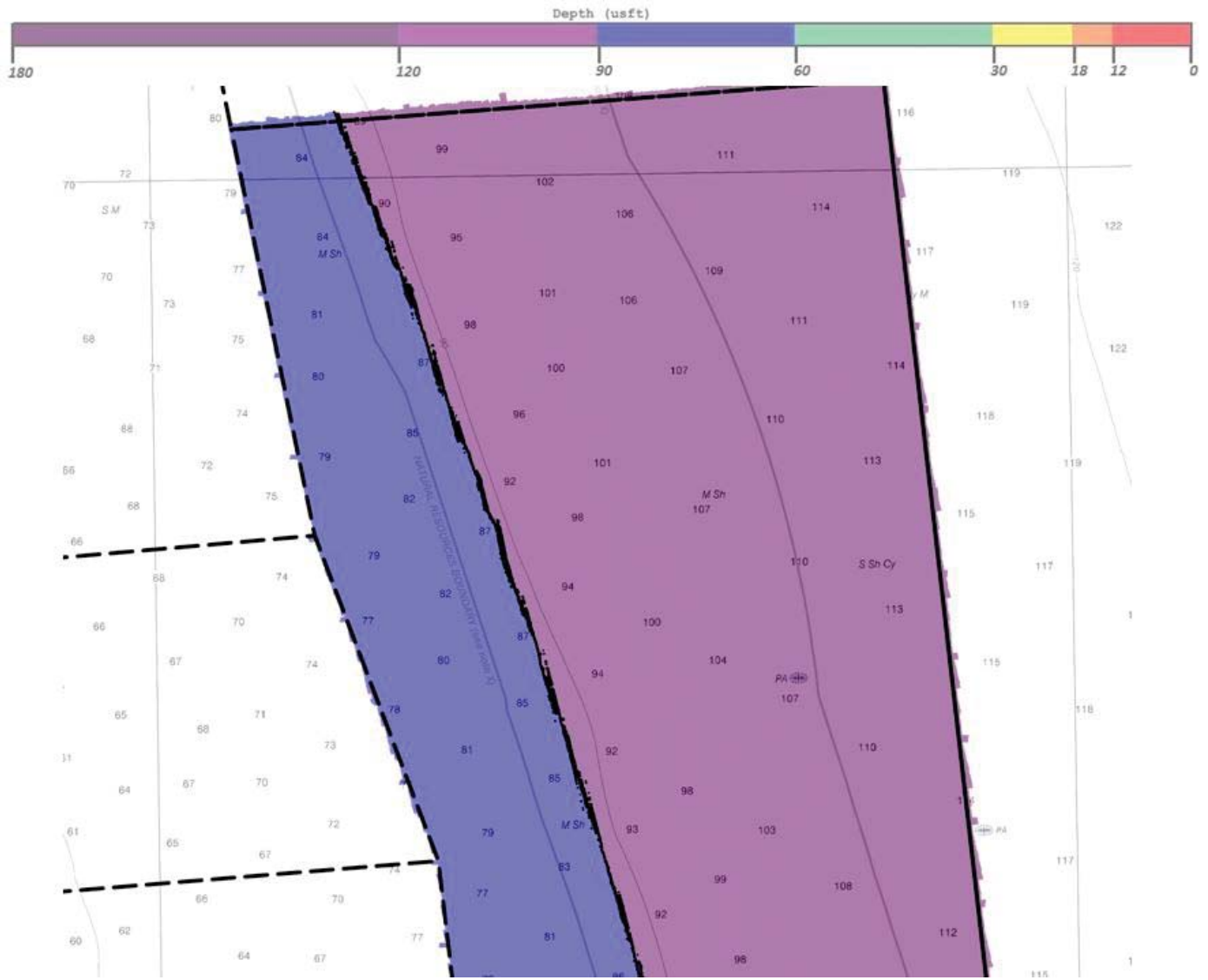


Figure 12: H12762 Contour Comparison with RNC 11304 (90ft Contour)

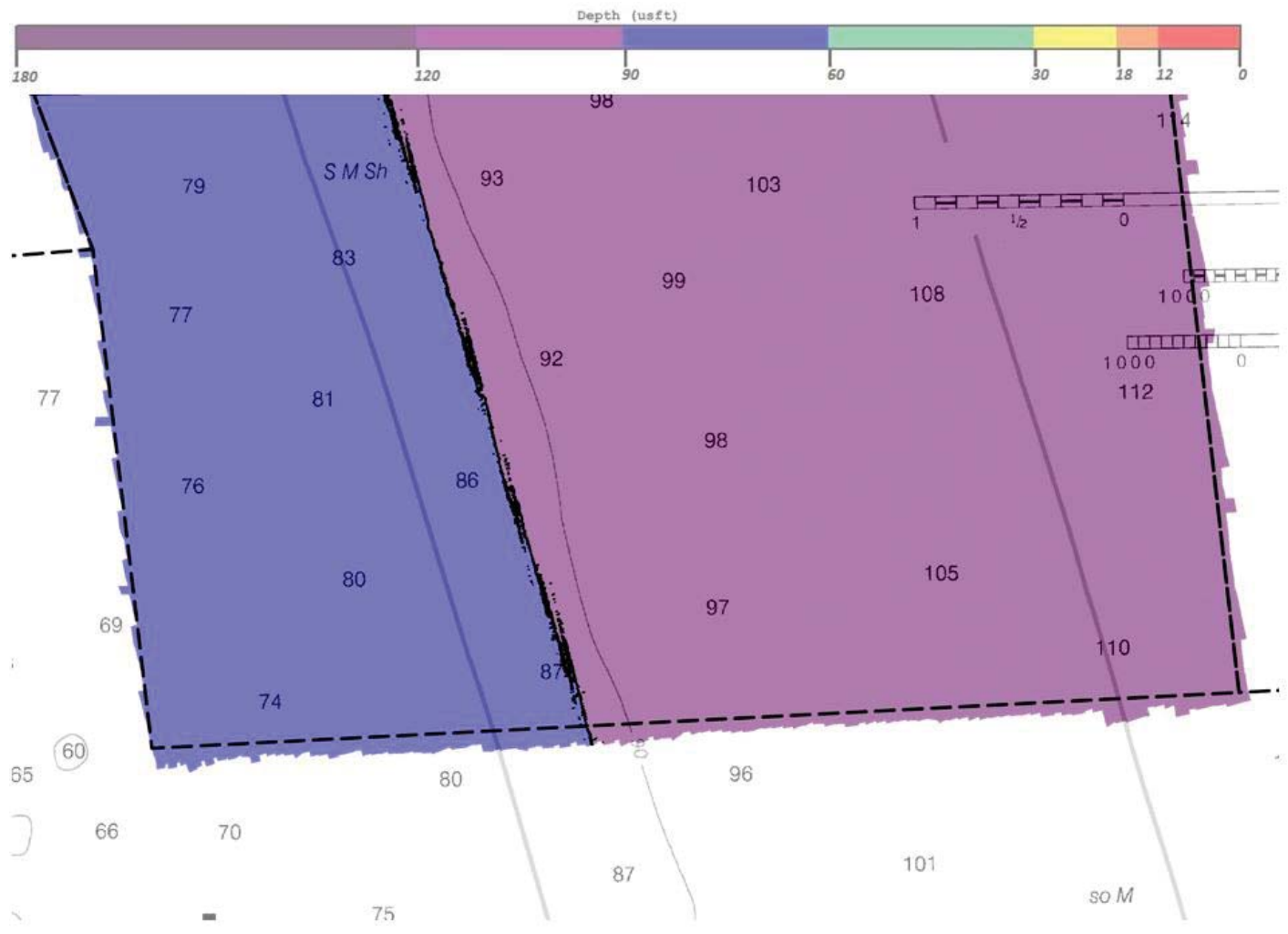


Figure 13: Contour Comparison with RNC 11301 (90ft Contour)

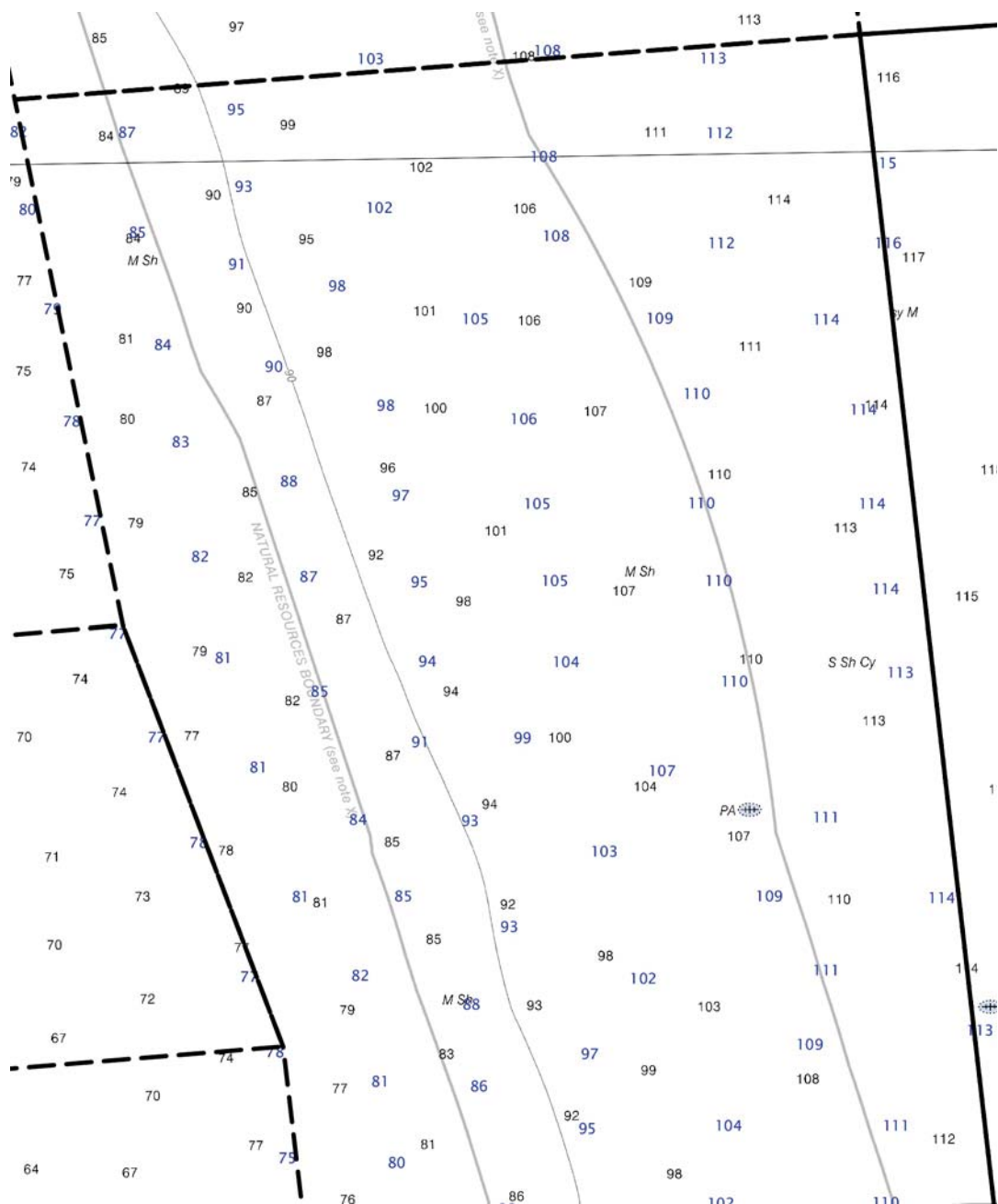


Figure 14: H12762 Sounding Comparison with RNC 11304



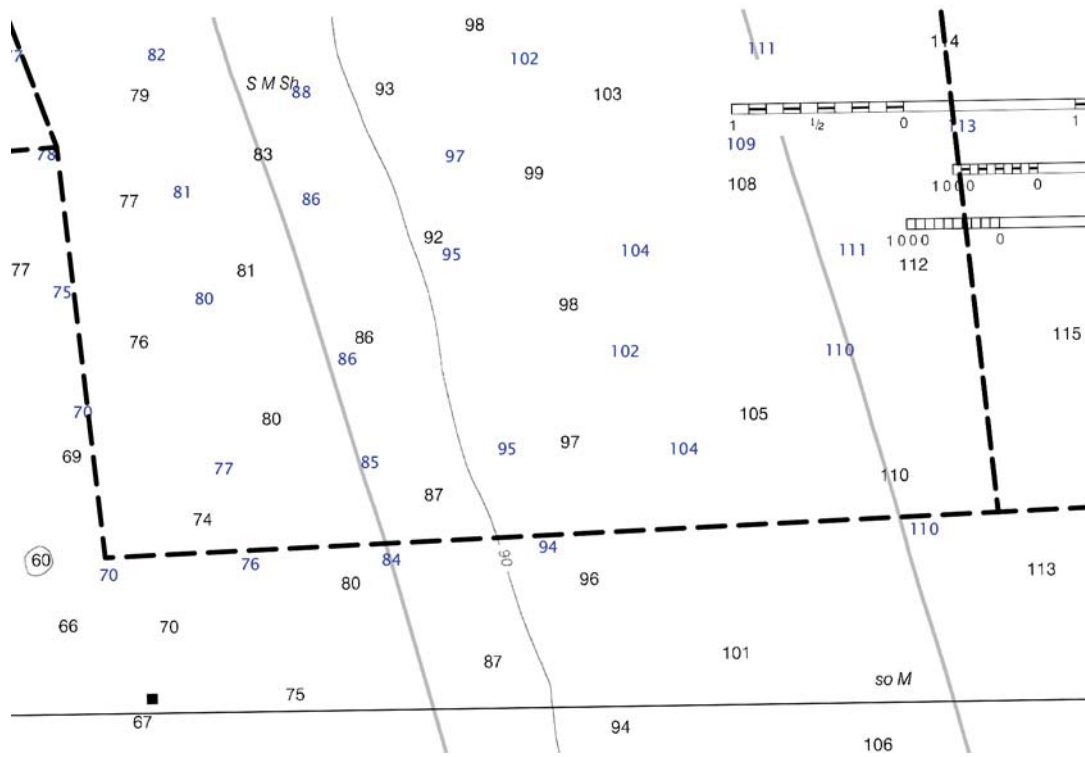


Figure 15: H12762 Sounding Comparison with RNC 11301

### D.1.2 Electronic Navigational Charts

The following are the largest scale ENC's, which cover the survey area:

ENC	Scale	Edition	Update Application Date	Issue Date	Preliminary?
US4TX15M	1:80000	10	02/07/2014	06/10/2015	NO
US4TX11M	1:80000	11	03/18/2014	09/02/2015	NO

Table 15: Largest Scale ENC's

#### US4TX15M

The results of the chart comparison with US4TX15M match those of the chart comparison with RNC1304.

#### US4TX11M

The results of the chart comparison with US4TX11M match those of the chart comparison with RNC1301.

**D.1.3 AWOIS Items**

No AWOIS Items were assigned for this survey.

**D.1.4 Maritime Boundary Points**

No Maritime Boundary Points were assigned for this survey.

**D.1.5 Charted Features**

There was 1 charted feature assigned to H12762. The assigned feature is retained in the Final Feature File (FFF). The feature in the FFF has been given a unique identifier in the "userid" field of the .000 S-57 file (format H12762\_XXX). Of the (1) assigned feature the following determination and recommendation was made:

DELETE: (1) assigned feature was not found. A DELETE action is recommended.

**D.1.6 Uncharted Features**

There were no uncharted features found in H12762.

**D.1.7 Dangers to Navigation**

There were no DTONs found in H12762.

**D.1.8 Shoal and Hazardous Features**

No shoals or potentially hazardous features exist for this survey.

**D.1.9 Channels**

No channels exist for this survey. There are no designated anchorages, precautionary areas, safety fairways, traffic separation schemes, pilot boarding areas, or channels and range lines within the survey limits.

**D.1.10 Bottom Samples**

8 bottom samples were obtained in accordance with sections 7.1 and 8.2 of the HSSD 2015 in areas designated by the feature object class springs (SPRING) in the Project Reference File (PRF). A brief description of the results is listed below.

H12762\_B001: soft grey mud with fine brown sand and broken shells  
H12762\_B002: soft grey mud with fine brown sand and broken shells  
H12762\_B003: soft grey mud with fine brown sand and broken shells  
H12762\_B004: soft grey mud with fine brown sand and broken shells  
H12762\_B005: soft grey mud with fine brown sand  
H12762\_B006: soft grey mud with fine brown sand and broken shells  
H12762\_B007: soft grey mud with fine brown sand  
H12762\_B008: soft grey mud with fine brown sand and broken shells

Detailed information and images of the bottom samples listed above are located in the Final Feature File (FFF). Each bottom sample has been given a unique identifier in the "userid" field of the .000 S-57 file (format H12762\_BXXX).

## **D.2 Additional Results**

### **D.2.1 Shoreline**

Shoreline was not assigned in the Hydrographic Survey Project Instructions or Statement of Work.

### **D.2.2 Prior Surveys**

No prior survey comparisons exist for this survey.

### **D.2.3 Aids to Navigation**

No Aids to navigation (ATONs) exist for this survey.

### **D.2.4 Overhead Features**

No overhead features exist for this survey.

### **D.2.5 Submarine Features**

No submarine features exist for this survey.

### **D.2.6 Ferry Routes and Terminals**

No ferry routes or terminals exist for this survey.

**D.2.7 Platforms**

No platforms exist for this survey.

**D.2.8 Significant Features**

No significant features exist for this survey.

**D.2.9 Construction and Dredging**

No present or planned construction or dredging exist within the survey limits.

**D.2.10 New Survey Recommendation**

No new surveys or further investigations are recommended for this area.

**D.2.11 Inset Recommendation**

No new insets are recommended for this area.

## E. Approval Sheet

As Chief of Party, field operations for this hydrographic survey were conducted under my direct supervision, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports.

All BASE surfaces, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to the Processing Branch.

The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, Letter Instructions, and all HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required with the exception of deficiencies noted in the Descriptive Report.

Approver Name	Approver Title	Approval Date	Signature
David R. Neff, C.H.	VP of Survey, eTrac Inc.	11/30/2015	  <p><small>PDF signed by David R. Neff DN: CN=D.R. Neff, E=david@etracinc.com, O=eTrac Inc., CN=David R. Neff Reason: I attest to the accuracy and integrity of this document Date: 2015.11.30 11:58:27-0500</small></p>

APPENDIX I  
TIDES AND WATER LEVELS



**OPR-K370-KR-15 Port Mansfield, TX**  
Abstract: times of Hydrography  
H12762

**eTrac Inc.**  
637 Lindero St., Suite 100  
San Rafael, CA 94901  
888-410-3890

Survey Date	Day of Year	Start Time	End Time
6/5/2015	156	17:20	21:42
6/6/2015	157	12:19	21:52
6/11/2015	162	14:44	20:43
6/12/2015	163	13:12	21:10
6/15/2015	166	14:16	20:33
6/18/2015	169	13:01	14:43
6/19/2015	170	12:20	21:18
6/20/2015	171	12:55	21:38
6/21/2015	172	13:21	17:51
6/22/2015	173	12:27	21:32
6/23/2015	174	12:30	21:34
6/27/2015	178	12:12	21:35
6/30/2015	181	13:30	13:53
7/2/2015	183	12:21	21:46
7/3/2015	184	12:26	21:40
7/4/2015	185	18:21	21:46
7/5/2015	186	12:29	20:48
7/7/2015	188	12:30	20:59
7/9/2015	190	12:37	21:11
7/12/2015	193	18:29	20:25
7/13/2015	194	18:14	21:31
7/19/2015	200	13:03	21:17
8/2/2015	214	19:04	21:45
8/3/2015	215	18:39	20:07
8/5/2015	217	13:35	21:15
8/6/2015	218	12:56	20:24
8/8/2015	220	13:46	21:46
8/9/2015	221	13:58	21:44
8/11/2015	223	15:07	16:21



Isadora Kratchman &lt;izzy@etracinc.com&gt;

---

**Fwd: OPR-K370-KR-15**

---

David Neff <david@etracinc.com>  
To: Isadora Kratchman <izzy@etracinc.com>

Fri, Sep 4, 2015 at 11:39 PM

----- Forwarded message -----

From: **Hua Yang - NOAA Affiliate** <hua.yang@noaa.gov>  
Date: Thu, Aug 13, 2015 at 10:08 AM  
Subject: Re: OPR-K370-KR-15  
To: David Neff <david@etracinc.com>  
Cc: David Wolcott - NOAA Federal <david.wolcott@noaa.gov>, Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov>, Megan Greenaway - NOAA Federal <megan.greenaway@noaa.gov>, "\_NOS. CO-OPS. HPT" <nos.coops.hpt@noaa.gov>, "\_NOS CO-OPS OET Team" <nos.coops.oetteam@noaa.gov>

Hi David,

The station has been marked as "Completed" and will be deleted from the Hydro Hot List in a week.

Thanks!

-Hua

Thanks,

Hua Yang

Hydrographic Planning Team  
NOAA/National Ocean Service  
Center for Operational Oceanographic Products and Services  
Station 7128  
1305 East West Highway, SSMC4  
Silver Spring, MD 20910  
Office: 301-713-2890 x210  
Email: [Hua.Yang@noaa.gov](mailto:Hua.Yang@noaa.gov)  
Web: <http://tidesandcurrents.noaa.gov/>

Hydro Hot List: <http://tidesandcurrents.noaa.gov/hydro.shtml>

On Thu, Aug 13, 2015 at 12:16 PM, David Neff &lt;david@etracinc.com&gt; wrote:

Hello David,

Our project in Port Mansfield was completed yesterday. The Corpus Christi gauge can be removed from the hotlist at this time.

Thank you  
Dave Neff



On Fri, Jul 10, 2015 at 11:38 AM, David Wolcott - NOAA Federal <[david.wolcott@noaa.gov](mailto:david.wolcott@noaa.gov)> wrote:  
Greetings David,

Corpus Christi was added to the Hot List in support of your survey. Just let us know when you have completed acquisition and we will pull it down.

Thanks,  
David

On Thu, Jul 9, 2015 at 3:45 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:  
eTrac Inc. has been officially awarded OPR-K370-KR-15 and is requesting that the station, Coprus Christi, TX (8775870) be added to the Hydro Hot List as soon as possible.

eTrac Inc. is currently conducting survey operations and intends to complete operations by September 1, 2015. I will inform you as the timeline progresses as to when the station can be removed from the HHL.

Regards,  
David Neff

On Mon, Jun 1, 2015 at 3:05 PM, Katrina Wyllie - NOAA Federal <[katrina.wyllie@noaa.gov](mailto:katrina.wyllie@noaa.gov)> wrote:  
CO-OPS,

FYI, this task order is in negotiations and has not been awarded.

Thank you,  
Katrina Wyllie

On Mon, Jun 1, 2015 at 5:20 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

Thank you,

I noticed I had mistyped the end date. We plan on ending survey operations approximately 8/15/15.

Regards,  
David

On Jun 1, 2015 3:40 PM, "Hua Yang - NOAA Affiliate" <[hua.yang@noaa.gov](mailto:hua.yang@noaa.gov)> wrote:  
Hi David,

The station, Coprus Christi, TX (8775870), was just added to the Hydro Hot List for the project.

Thank you for your timely notice.

Best regards,

Hua Yang

Hydrographic Planning Team  
NOAA/National Ocean Service  
Center for Operational Oceanographic Products and Services  
Station 7128  
1305 East West Highway, SSMC4  
Silver Spring, MD 20910  
Office: [301-713-2890](tel:301-713-2890) x210  
Email: [Hua.Yang@noaa.gov](mailto:Hua.Yang@noaa.gov)  
Web: <http://tidesandcurrents.noaa.gov/>

Hydro Hot List: <http://tidesandcurrents.noaa.gov/hydro.shtml>

On Mon, Jun 1, 2015 at 3:14 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:  
eTrac Inc. will be commencing survey operations on OPR-K370-KR-15 in the vicinity of Port Mansfield, TX. Survey operations are scheduled as follows:

Survey Operations Begin: 06/04/15  
Survey Operations End: 06/15/15

Should the survey end date change, I will notify the same email addresses with the updated schedule. Please add Coprus Christi, TX (8775870)

--

David Neff, C.H.  
Mobile: (415)-517-0020  
[www.etracinc.com](http://www.etracinc.com)

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David Neff, C.H.  
Mobile: (415)-517-0020  
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--

David Wolcott  
Oceanographic Division  
Center for Operational Oceanographic Products and Services  
National Ocean Service  
National Oceanic and Atmospheric Administration

1305 East-West Highway, 7133  
Silver Spring, MD 20910  
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## APPENDIX II

# SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCE

## Castle Parker - NOAA Federal

---

**From:** Megan Greenaway - NOAA Federal  
**Sent:** Friday, July 17, 2015 8:52 AM  
**To:** David Neff  
**Cc:** Corey Allen - NOAA Federal; Katrina Wyllie - NOAA Federal; Michael Gonsalves - NOAA Federal; Castle Parker - NOAA Federal; Matthew Jaskoski  
**Subject:** Re: H12765 Designated Soundings

Dave,

I consulted with AHB and OPS and here is the guidance:

- Waters shoaler than 40 meters should have a 2 meter resolution surface (depth 18-40 = 2m). The examples you listed below were < 40 meters and therefore should be gridded at a 2 meter resolution.

Depth Range (m)	Resolution (m)
0-20	1
18-40	2
36-80	4
72-160	8
144-320	16

From 2015 HSSD page 92

- Waters deeper than 40 meters with numerous "pockets" and "ridges":
  - try creating a 2 meter (or even 1 meter - you will need to test) surface to see if the soundings are honored more accurately. If so, create a 2 meter and a 4 meter surface in those areas. Then, combine the surfaces. During the combine surface process the product will be a 4 meter surface (the coarser resolution) which will honor the 2 meter least depths.
  - For this particular situation HSD OPS will waive the density requirement for the 2 meter surface (depths greater than 40 meters where the pockets exist). However, the density requirement may be met after you combine the surfaces. You will have to test.
  - In addition to delivering the combined surface, please deliver the 2 meter and 4 meter surface.
- Include this email in the Project Correspondence folder so that the processing branch can see the changes when they are conducting their review.

Megan

On Wed, Jul 15, 2015 at 12:25 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

Hi Megan, thanks for the response and see mine inline. Seems like it may just be best to keep them all designated?

On Tue, Jul 14, 2015 at 9:30 AM, Megan Greenaway - NOAA Federal <[megan.greenaway@noaa.gov](mailto:megan.greenaway@noaa.gov)> wrote:

Dave,

I agree that survey H12765 has a lot of designated soundings so far. You are correct in reaching out to COR in this situation.

I also agree that the designated sounding examples you have below, would not become features based on the 5% rule. And, they do not appear to be navigationally significant based on the water depth of ~35 meters.

Here are a couple thoughts:

- The first image shows "designated soundings" for holes? Not for "peaks"? If so I will discuss with others but we may be able to relax the requirement for the "holes".

We have generalized these anomalies as "the holes" in the office. They are holes with distinct peaks on each side. All the designated soundings are on peaks next to what we have been calling "holes".

- The first example should not be designated because the difference between the gridded surface and the reliable shoaler sounding is less than the maximum allowable TVU at that depth. See "Feature Detection and Designated Soundings" section of 2015 HSSD page 89. Were you aware of this requirement/guidance? Will this reduce the # of designated soundings?

That is correct and it was a bad example. I am aware of the requirement/guidance through a detailed thread with Katrina during Panama City data processing. This will not reduce the vast number of soundings that are being designated. We work off of a designation threshold worksheet that spells out when a sounding should be designated. See screenshot below. The example posted in the email was a mistake.

The screenshot shows a Google Docs spreadsheet titled "Designate Threshold". The spreadsheet contains a table with columns for "Depth", "Designate if surface is off by", and "Designate if surface is off by". The table has 31 rows of data, with columns labeled "m", "ft", "m", "ft", "m", "ft", "m", "ft". The data is as follows:

Depth	Designate if surface is off by	Depth	Designate if surface is off by	Depth	Designate if surface is off by	Depth	Designate if surface is off by
m	ft	m	ft	m	ft	m	ft
1	3.28	0.25	0.82	36	118.11	0.68	2.23
2	6.56	0.25	0.82	37	121.29	0.69	2.26
3	9.84	0.25	0.82	38	124.67	0.70	2.31
4	13.12	0.25	0.82	39	127.95	0.71	2.34
5	16.40	0.25	0.83	40	131.23	0.72	2.37
6	19.69	0.25	0.83	41	134.51	0.73	2.40
7	22.97	0.25	0.83	42	137.80	0.74	2.43
8	26.25	0.26	0.84	43	141.08	0.75	2.46
9	29.53	0.26	0.84	44	144.36	0.76	2.49
10	32.81	0.26	0.85	45	147.64	0.77	2.52
11	36.09	0.26	0.85	46	150.92	0.78	2.56
12	39.37	0.26	0.86	47	154.20	0.79	2.59
13	42.65	0.26	0.87	48	157.48	0.80	2.62
14	45.93	0.27	0.87	49	160.76	0.81	2.66
15	49.21	0.27	0.88	50	164.04	0.82	2.69
16	52.49	0.27	0.89	51	167.32	0.83	2.72
17	55.77	0.27	0.90	52	170.60	0.84	2.76
18	59.05	0.28	0.91	53	173.88	0.85	2.79
19	62.34	0.28	0.91	54	177.17	0.86	2.83
20	65.62	0.28	0.92	55	180.45	0.87	2.86
21	68.90	0.57	1.87	56	183.73	0.88	2.90
22	72.18	0.58	1.89	57	187.01	0.89	2.93
23	75.46	0.58	1.91	58	190.29	0.90	2.97
24	78.74	0.59	1.93	59	193.57	0.91	3.00
25	82.02	0.60	1.96	60	196.85	0.93	3.04
26	85.30	0.60	1.98	61	200.13	0.94	3.08
27	88.58	0.61	2.00	62	203.41	0.95	3.11
28	91.86	0.62	2.03	63	206.69	0.96	3.15
29	95.14	0.63	2.06	64	209.97	0.97	3.18
30	98.43	0.63	2.08	65	213.25	0.98	3.22
31	101.71	0.64	2.11	66	216.54	0.99	3.26

- What is the horizontal distance between each "peak"? If less than 2mm at the scale of the survey then only the shoalest depth shall be designated. (also from page 89). What is the horizontal distance of the "Plan View of Surface"?

2mm at our survey scale of 40,000 is 80m. The designated soundings are farther apart than 80 meters. We are only selecting the shoaler of the two peaks that each hole creates.

- 
- What is your grid resolution? I am assuming your grid is 2m? What happens if you grid your data at 1m? Can you still meet the HSSD requirements or do you have holidays? The 1m grid may honor more of the shoal depths so that you would not need to designate so many soundings.

CUBE Surface is mostly 4m. A small corner of sheet 5 is at 2m resolution. Our density will not meet sep at 2m for the entire sheet.

Megan

On Mon, Jul 13, 2015 at 6:06 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

Hi Megan,

In conversations with Katrina while compiling the deliverables for Panama City, she mentioned if we ever get to a point where we are designating an extreme amount of soundings to make sure to speak up. I think we have that exact situation in H12765.

We started coming across these features in H12765 (the farthest offshore sheet) and have been designating them and moving on until we could get some direction. The best way I can describe them would be it looks like a hole that a dog would dig on a beach with 2 distinct piles of sediment on each side, one always larger than the other. Here are some screen captures.

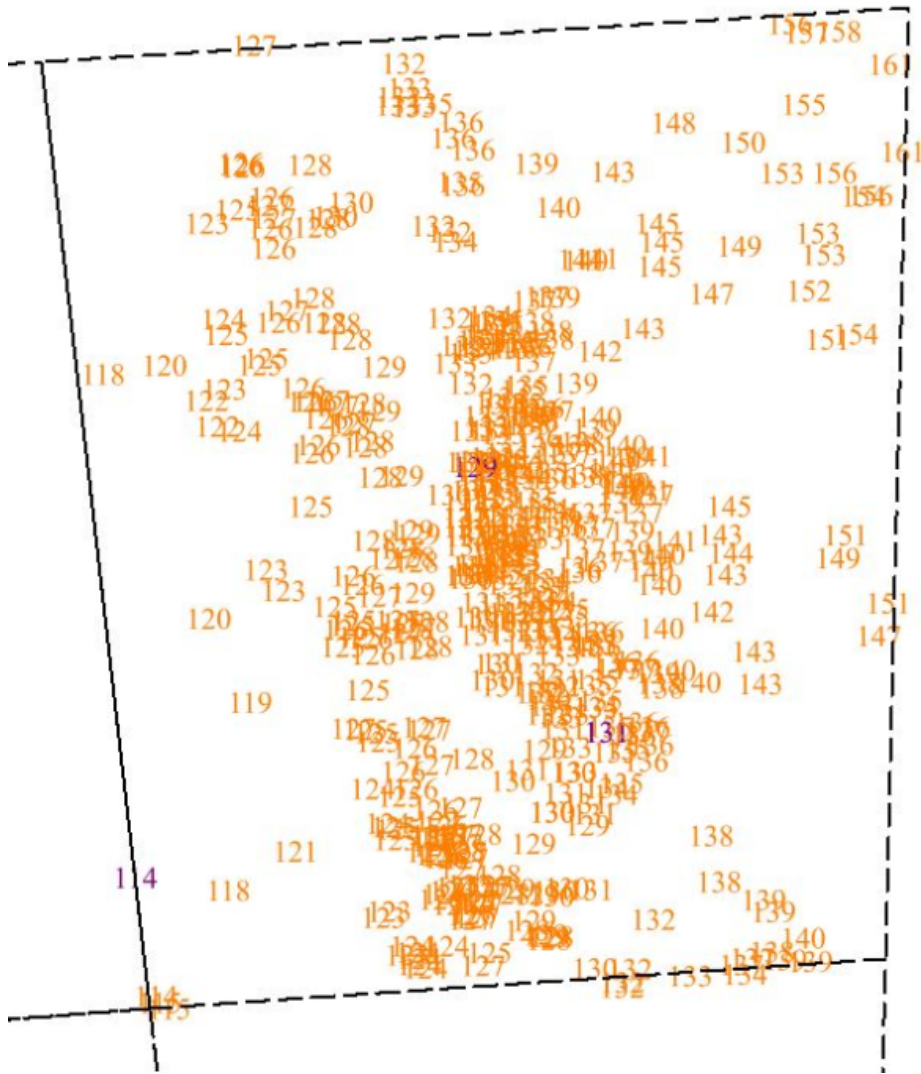
I believe most of these designated soundings would not become features based on the 5% rule, but they would remain designated per spec. I believe that whatever they are, they are not navigationally significant especially considering their water depth. Shall we continue to designate them, or would you suggest a different direction?

Here are a few of the guesses from our team (for fun).

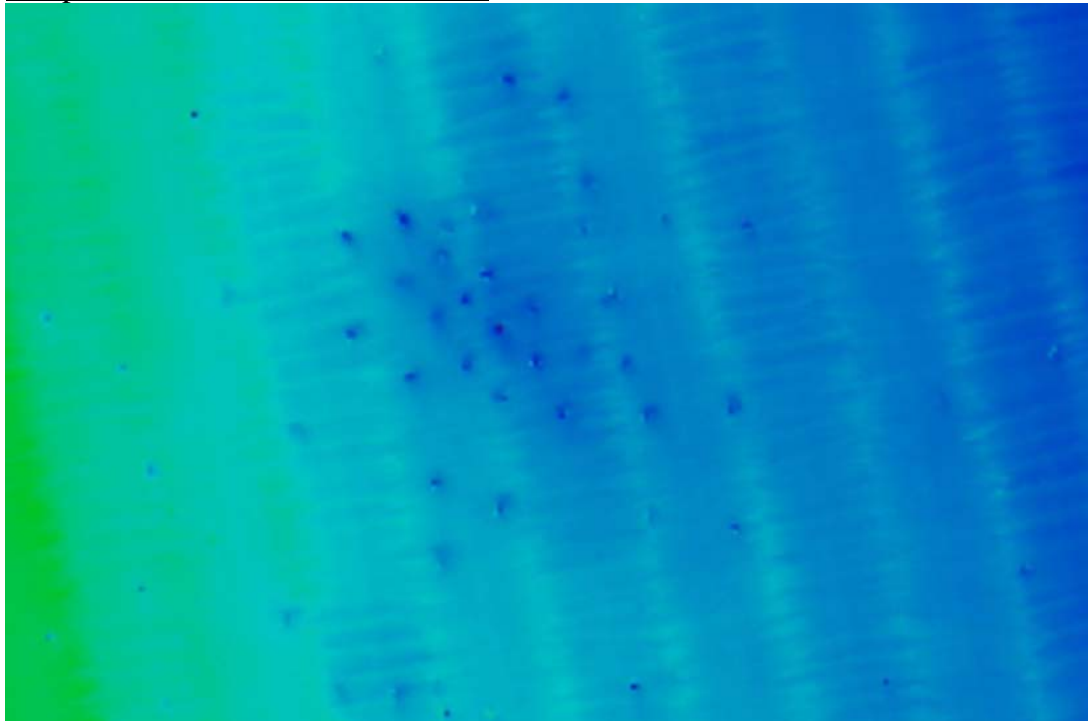
- Some sea creature building a home
- Gas bubbles seeping up
- Ordinance used for Oil and Gas seismic exploration.

We have not opened up H12763 (directly south of H12765) yet, but will be doing so in the next few days. We anticipate more of these and will keep you updated.

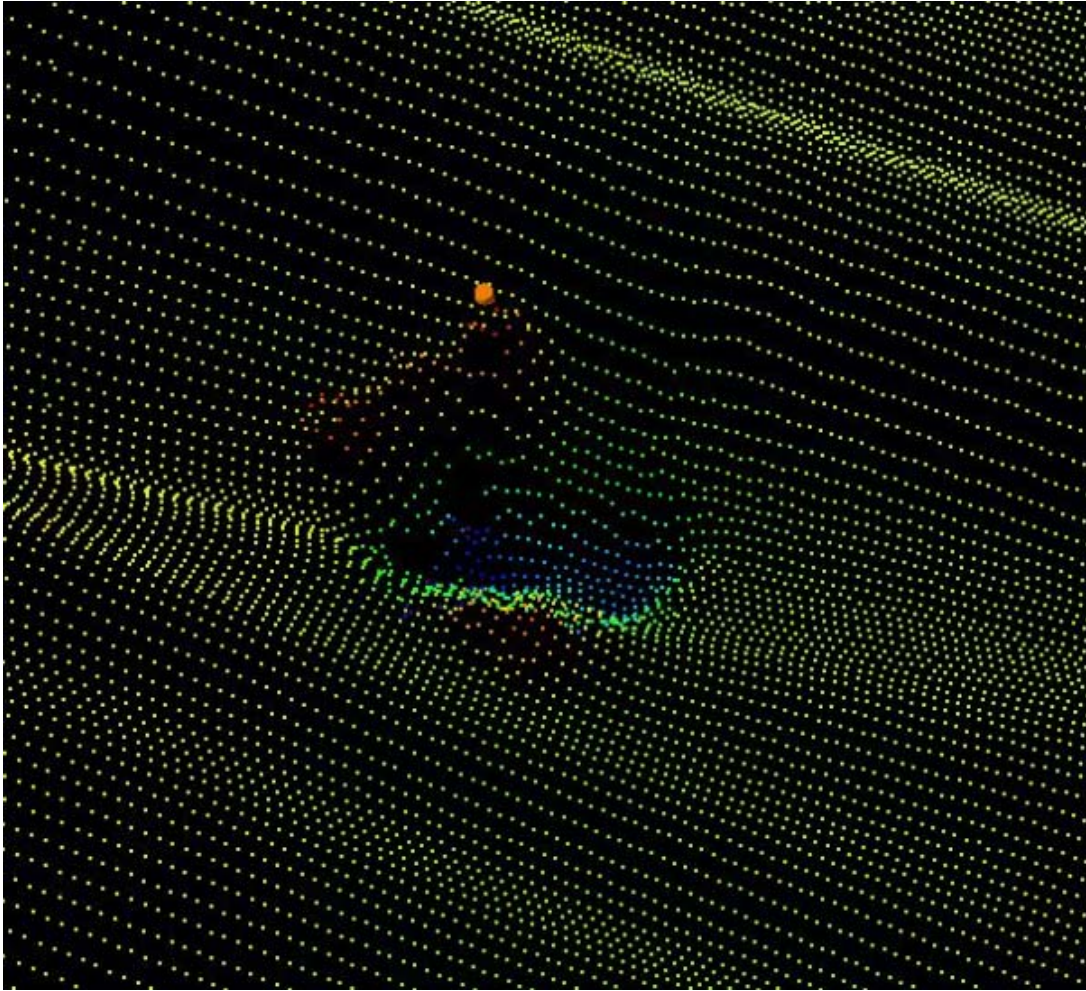
Number of these Holes Designated based on designation criteria



Sample Section Plan View of Surface

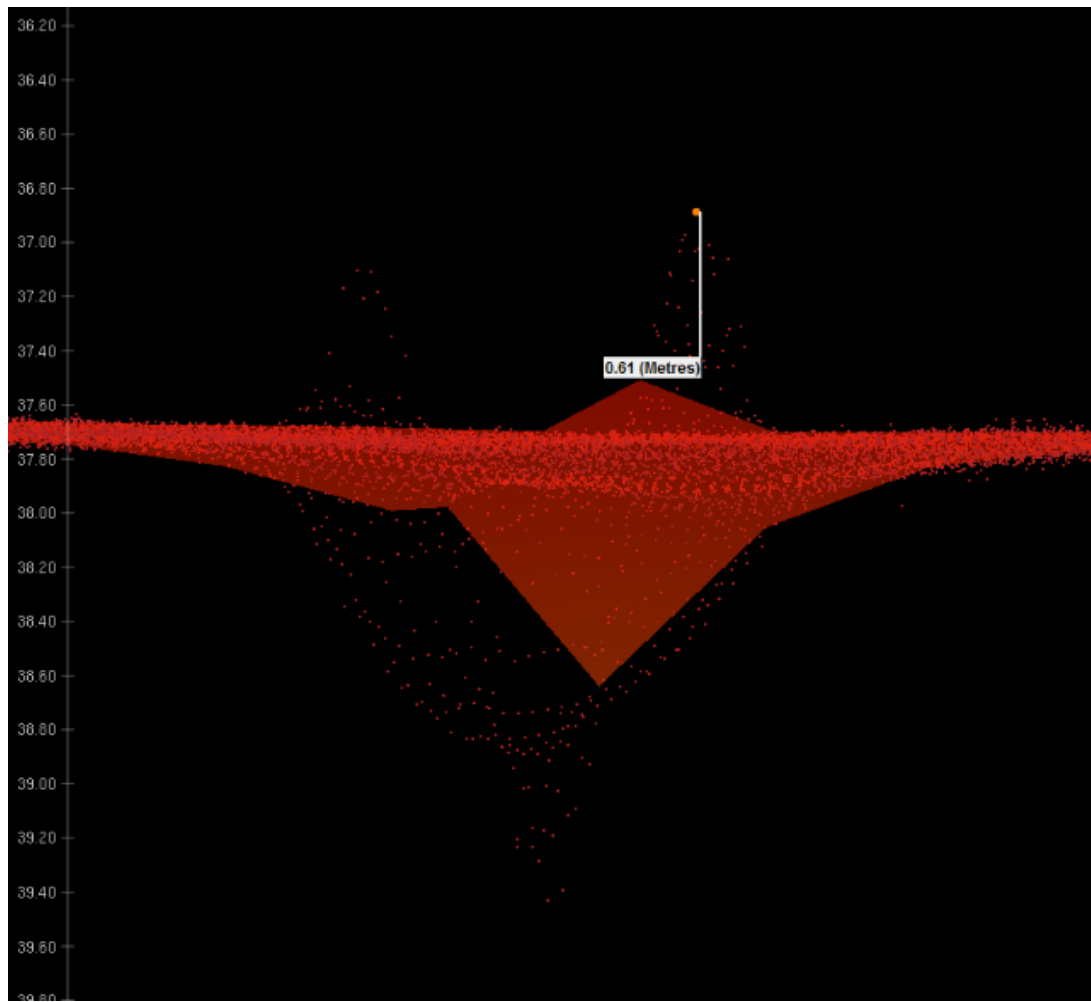


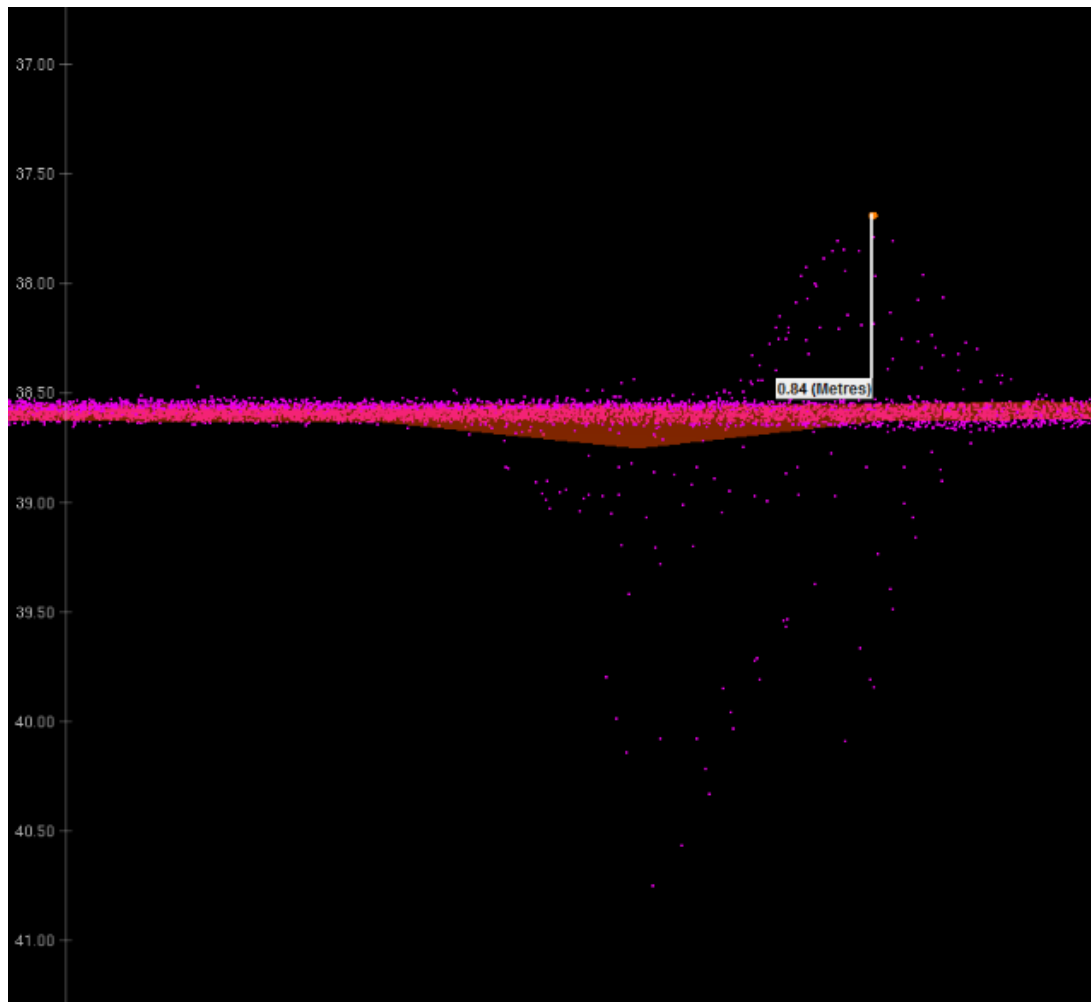
3D Subset

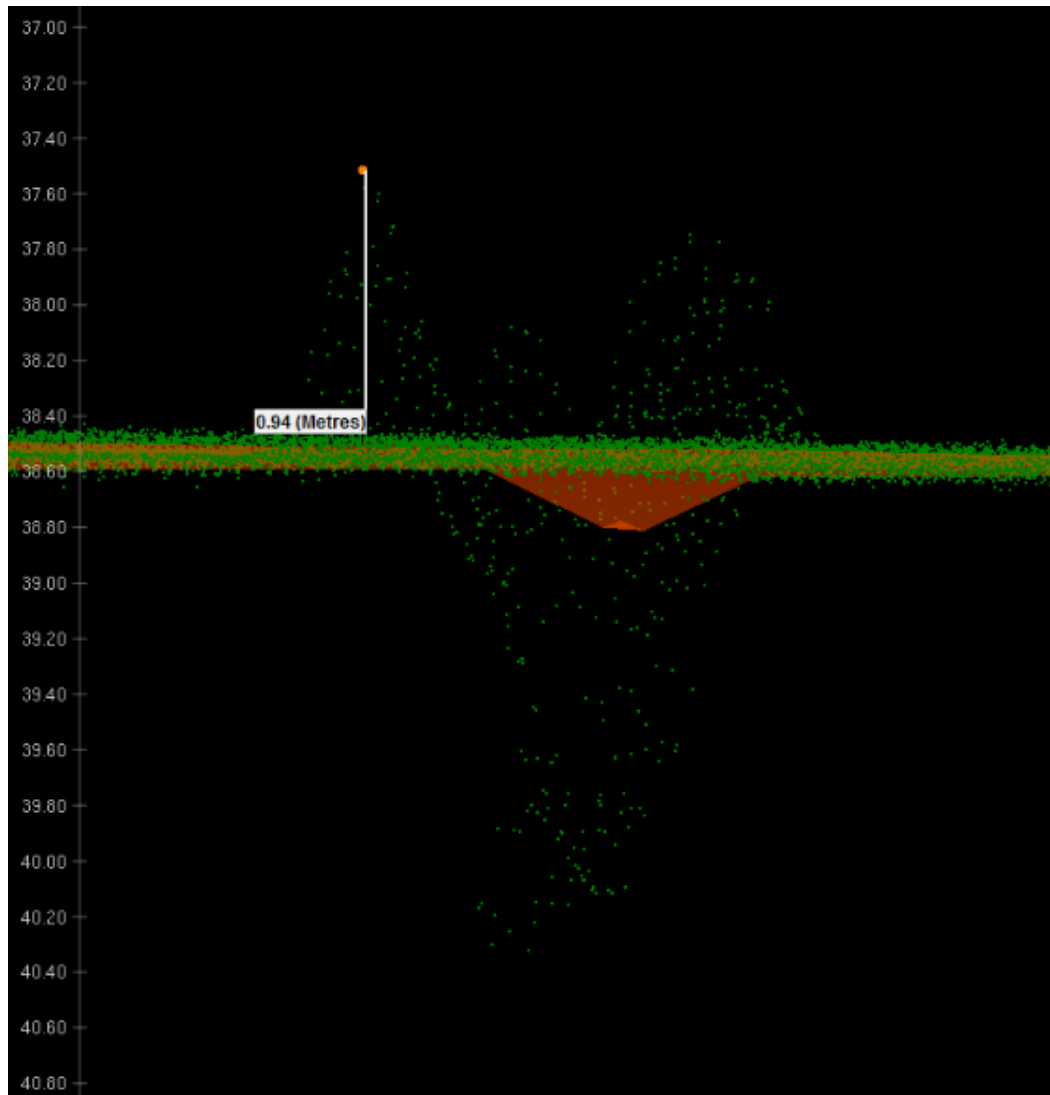


Designation Examples









--  
David Neff, C.H.  
Mobile: [\(415\)-517-0020](tel:(415)517-0020)  
[www.etracinc.com](http://www.etracinc.com)

--  
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[www.etracinc.com](http://www.etracinc.com)



David Neff &lt;david@etracinc.com&gt;

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## Squat/Settlement Test

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**Katrina Wyllie - NOAA Federal** <katrina.wyllie@noaa.gov>

Tue, May 19, 2015 at 8:04 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt;

Hi Dave,

Please find attached the draft CSF and PRF files associated with Port Mansfield.

Thank you,  
Katrina

On Mon, May 18, 2015 at 6:41 PM, David Neff &lt;david@etracinc.com&gt; wrote:

Thank you Megan,

Will you be sending the CSF and other associated files now that the draft instructions have officially been sent?

Dave

On Mon, May 18, 2015 at 7:26 PM, Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt; wrote:

Dave,

A new dynamic draft table is up to you. It is not required in the HSSD. If there were "any major changes to the loading or change to the vessel power plant" (HSSD 5.2.3.2) then it's required.

I'm responding for Katrina because she is on leave today. Keep sending your questions to Katrina and CC me.

Thanks,  
Megan

On Fri, May 15, 2015 at 7:50 PM, David Neff &lt;david@etracinc.com&gt; wrote:

Katrina,

We will be including the same 2 vessels we used in Panama City in our proposal for the TX project.

One question. Shall we be required to define a new dynamic draft table for the vessels as this was performed in January. **HSSD 5.2.3.2** under Dynamic Draft states that this must be performed once a year, but I wasn't sure if this was for meant for field units, contractors, or both.

Thanks, and enjoy the weekend.

--

David Neff, C.H.  
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**2 attachments**

 **OPR-K370-KR-15\_CSF\_draft.000**  
363K

 **OPR-K370-KR-15\_PRF\_draft.000**  
19K



David Neff &lt;david@etracinc.com&gt;

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## Updated CSF/PRF

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David Neff &lt;david@etracinc.com&gt;

Thu, May 21, 2015 at 8:44 AM

To: Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;

Cc: Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt;

Thank you for sending Katrina,

I've already sent the cost estimate based on the original version, but I don't see much change here, as you say we gain an obstruction and lose a wreck. The loss in SNM doesn't appear to warrant a review and resubmital of the cost estimate. All is good here.

Thanks  
Dave

On Thu, May 21, 2015 at 8:00 AM, Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov> wrote:

Hi Dave,

I attached a new version of the CSF/PRF files. I had not included the 40,000 ENC in the creation of the files I originally sent you (see image attached). This only affects sheet H12761: there is more shoreline detail so the sheet limit has been updated (SNM went down slightly because it no longer includes the piers), and one assigned wreck is no longer assigned but there is a new obstruction that is assigned. Please take a look and let me know if you have any questions or concerns.

Thank you,  
Katrina

—  
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David Neff &lt;david@etracinc.com&gt;

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## Phone Call 6/8/15

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**Katrina Wyllie - NOAA Federal** <katrina.wyllie@noaa.gov>

Tue, Jun 9, 2015 at 8:27 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt;

Hi Dave,

The marine mammal log referenced in 2015 HSSD is a fill-able pdf and is attached to this email. The procedure you describe of printing the log off and then scanning it to a digital copy is also acceptable. At the end of each project, those digital pdf forms and any associated digital photographs need to be submitted to [pop.information@noaa.gov](mailto:pop.information@noaa.gov) with a CC to your COR. There is not a sea turtle observation log referenced in 2015 HSSD, but an example log attached to this email can be used to record sea turtle sightings. The sea turtle observations are also submitted on a project by project timeline to the contact provided in Section 7.6 (also with a CC to the COR). A marine mammal DVD will be sent to all of the Contractors and NOAA ships shortly to reinforce marine mammal observation procedures.

Please let me know if you have additional questions on this new section of specs.

Thank you,  
Katrina

On Mon, Jun 8, 2015 at 10:04 PM, David Neff <david@etracinc.com> wrote:

Thank you Katrina,

In anticipation to receiving direction from AGO I wanted to clarify one topic in the 2015 specs. Compliance for observing marine mammals. We've performed this on many contracts before for other agencies. In these cases the observation of marine mammals is generally performed by the vessel captains and logged by the hydrographer in the digital log. Occasionally, a form will be provided such as the one in the 2015 specs and in that case the form will be filled out, brought to the office, scanned, and stored with the digital logsheets.

We would propose a similar program in order to operate within compliance on future Task Orders for NOAA. We would have a stack of observation logsheets printed and available on each vessel. In the event of a sighting, a log would be completed and a note would be logged in the digital line log as well. Observation logsheets would be transferred to the office at the end of the day, scanned to PDF and stored digitally with the daily logsheets.

Does this sound satisfactory?

Dave

On Mon, Jun 8, 2015 at 3:48 PM, Katrina Wyllie - NOAA Federal <katrina.wyllie@noaa.gov> wrote:

Hi Dave,

To follow up on the questions you asked on the phone today:

1. Yes, [2015 HSSD](#) have been published. Attached is a document that highlights some of the major changes from the 2014 version.

2. HSD cannot accept weekly reports for Port Mansfield until (and if) a signed task order exists.
3. HSD cannot provide a zoned tide file for Port Mansfield until (and if) a signed task order exists. Civilians can request a zoned tide file from CO-OPS, at their own cost.
4. When (and if) Port Mansfield has a task order, a site visit can be scheduled.

Thank you,  
Katrina

--  
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### 3 attachments



**POP Fillable PDF.pdf**  
915K



**POP Instruction (fillable PDF).pdf**  
93K



**Sea Turtle Observation Log.xls**  
34K





David Neff &lt;david@etracinc.com&gt;

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## Distribution of Weekly Reports

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David Neff &lt;david@etracinc.com&gt;

Wed, Jul 8, 2015 at 7:27 AM

To: Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;

Cc: Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt;

Understood Katrina. Thanks

On Jul 8, 2015 12:07 AM, "Katrina Wyllie - NOAA Federal" <katrina.wyllie@noaa.gov> wrote:

Hi Dave,

I am sending the following email text on behalf of my boss. I understand you will be hearing from contracting this week on the Port Mansfield project so hopefully this email is timely.

Thank you,  
Katrina

--

Greetings,

This message is with regard to the new weekly progress reporting described in Section 8.1.1 of the 2015 HSSD. First, let me relay my appreciation to those of you have commenced survey operations this year and have been preparing these weekly documents for us. As they say, a picture is worth a thousand soundings, and it has greatly facilitated our office's understanding of the progress of your respective projects.

Meanwhile, between a few recent personnel changes within our Operations Branch, along with a number of field deployments among our CORs; we've been having difficulty managing your collective reports via our CORs' inboxes. **To that end, I am requesting that the weekly reports are emailed to [progress.sketches@noaa.gov](mailto:progress.sketches@noaa.gov) in addition to your respective COR.** No changes are requested with respect to the monthly reports (still being uploaded to TOMIS).

Thank you very much for your time and consideration in this matter.

Very respectfully,  
~~ michael.gonsalves, LCDR/NOAA  
HSD Operations Branch, Chief



David Neff &lt;david@etracinc.com&gt;

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## Preliminary Zone File for Port Mansfield

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**Megan Greenaway - NOAA Federal** <megan.greenaway@noaa.gov>

Fri, Jul 10, 2015 at 11:25 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Corey Allen - NOAA Federal &lt;corey.allen@noaa.gov&gt;, Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;

Dave,

Please see attached entire final project package for OPR-K370-KR-15. Let me know if you have any questions.

Megan

[Quoted text hidden]

**OPR-K370-KR-15 Port Mansfield, TX.zip**

2819K



David Neff &lt;david@etracinc.com&gt;

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## SVP Casts

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**Megan Greenaway - NOAA Federal** <megan.greenaway@noaa.gov>

Wed, Jul 22, 2015 at 8:49 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;, Corey Allen - NOAA Federal &lt;corey.allen@noaa.gov&gt;

Dave,

The plan you have described below is acceptable. The important thing is that the data meets the specifications in the HSSD. You don't have to have an SV on each vessel (although that is usually the most accurate/efficient method of surveying).

Megan

On Wed, Jul 22, 2015 at 11:32 AM, David Neff &lt;david@etracinc.com&gt; wrote:

Hi Megan,

A situation came up today onsite regarding SV and I wanted to run my temporary solution by you to make sure it's ok.

We have 3 boats in TX, each with an SV profiler and 1 spare onsite. One of the vessels profilers stopped working and we brought it to the field office to troubleshoot while they switched to the spare on the vessel. I got a call on the Sat Phone this morning that the spare is now malfunctioning as well. I've sent yet another brand new profiler to the site overnight this morning, but it will not arrive until tomorrow and will not go into use until Friday.

Each of the vessels are working in their own areas which are all separated by substantial distance. For today and tomorrow, I've instructed the vessel with the failed SV to move to one of the other vessels areas and collect data next to them. The idea is to use only one vessels SV casts to correct 2 vessels worth of data for the next 2 days until we get a working unit back onsite. Is this acceptable, or is there some reason each vessel needs to have its own specific profiler?

Thanks

--

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[www.etracinc.com](http://www.etracinc.com)



David Neff &lt;david@etracinc.com&gt;

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**OPR-K370-KR-15**

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**Hua Yang - NOAA Affiliate** <hua.yang@noaa.gov>

Thu, Aug 13, 2015 at 10:08 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: David Wolcott - NOAA Federal &lt;david.wolcott@noaa.gov&gt;, Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;, Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt;, "\_NOS. CO-OPS. HPT" &lt;nos.coops.hpt@noaa.gov&gt;, "\_NOS CO-OPS OET Team" &lt;nos.coops.oetteam@noaa.gov&gt;

Hi David,

The station has been marked as "Completed" and will be deleted from the Hydro Hot List in a week.

Thanks!

-Hua

Thanks,

Hua Yang

Hydrographic Planning Team  
NOAA/National Ocean Service  
Center for Operational Oceanographic Products and Services  
Station 7128  
1305 East West Highway, SSMC4  
Silver Spring, MD 20910  
Office: 301-713-2890 x210  
Email: [Hua.Yang@noaa.gov](mailto:Hua.Yang@noaa.gov)  
Web: <http://tidesandcurrents.noaa.gov/>

Hydro Hot List: <http://tidesandcurrents.noaa.gov/hydro.shtml>

On Thu, Aug 13, 2015 at 12:16 PM, David Neff &lt;david@etracinc.com&gt; wrote:

Hello David,

Our project in Port Mansfield was completed yesterday. The Corpus Christi gauge can be removed from the hotlist at this time.

Thank you  
Dave Neff

On Fri, Jul 10, 2015 at 11:38 AM, David Wolcott - NOAA Federal &lt;david.wolcott@noaa.gov&gt; wrote:

Greetings David,

Corpus Christi was added to the Hot List in support of your survey. Just let us know when you have completed acquisition and we will pull it down.

Thanks,  
David

On Thu, Jul 9, 2015 at 3:45 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

eTrac Inc. has been officially awarded OPR-K370-KR-15 and is requesting that the station, Coprus Christi, TX (8775870) be added to the Hydro Hot List as soon as possible.

eTrac Inc. is currently conducting survey operations and intends to complete operations by September 1, 2015. I will inform you as the timeline progresses as to when the station can be removed from the HHL.

Regards,  
David Neff

On Mon, Jun 1, 2015 at 3:05 PM, Katrina Wyllie - NOAA Federal <[katrina.wyllie@noaa.gov](mailto:katrina.wyllie@noaa.gov)> wrote:  
CO-OPS,

FYI, this task order is in negotiations and has not been awarded.

Thank you,  
Katrina Wyllie

On Mon, Jun 1, 2015 at 5:20 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

Thank you,

I noticed I had mistyped the end date. We plan on ending survey operations approximately 8/15/15.

Regards,  
David

On Jun 1, 2015 3:40 PM, "Hua Yang - NOAA Affiliate" <[hua.yang@noaa.gov](mailto:hua.yang@noaa.gov)> wrote:  
Hi David,

The station, Coprus Christi, TX (8775870), was just added to the Hydro Hot List for the project.

Thank you for your timely notice.

Best regards,

Hua Yang

Hydrographic Planning Team  
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Center for Operational Oceanographic Products and Services  
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1305 East West Highway, SSMC4  
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Web: <http://tidesandcurrents.noaa.gov/>

Hydro Hot List: <http://tidesandcurrents.noaa.gov/hydro.shtml>

On Mon, Jun 1, 2015 at 3:14 PM, David Neff <[david@etracinc.com](mailto:david@etracinc.com)> wrote:

eTrac Inc. will be commencing survey operations on OPR-K370-KR-15 in the vicinity of Port Mansfield, TX. Survey operations are scheduled as follows:

Survey Operations Begin: 06/04/15  
Survey Operations End: 06/15/15

Should the survey end date change, I will notify the same email addresses with the pdated schedule. Please add Coprus Christi, TX (8775870)

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David Neff &lt;david@etracinc.com&gt;

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## Office Visit Follow Up

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**Megan Greenaway - NOAA Federal** <megan.greenaway@noaa.gov>

Mon, Oct 5, 2015 at 10:04 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;, Corey Allen &lt;corey.allen@noaa.gov&gt;, Michael Gonsalves - NOAA Federal &lt;Michael.Gonsalves@noaa.gov&gt;, Matthew Wilson - NOAA Federal &lt;matthew.wilson@noaa.gov&gt;

Dave,

Katrina found the same information as you have stated below. Thank you for the update.

Megan

On Mon, Oct 5, 2015 at 12:17 PM, David Neff &lt;david@etracinc.com&gt; wrote:

Happy Monday,

I wanted to follow up with the group here regarding tidal error. We have been doing quite a bit of research and working with Caris on how Tide error values from CO-OPS are entered when computing TPU. The take away from Caris is that all error values are entered at 1 sigma throughout the software (both in the HVF and during "compute TPU"). All uncertainty values are reported however at 2 sigma (95% CI). Therefore, since the tidal error value for the Port Mansfield project is given from CO-OPS as 0.22m at 2 sigma, we will be using a value of 0.11m for tidal error when we compute TPU.

Please let me know if you would like to discuss further.

Dave

On Fri, Sep 25, 2015 at 8:29 AM, Megan Greenaway - NOAA Federal &lt;megan.greenaway@noaa.gov&gt; wrote:

Dave,

Katrina has compiled answers to your questions from the office visit. Please see below. Note, she is still working on how to enter CO-OPS tide values into CARIS (i.e. one sigma or two).

Megan

Answers to Outstanding Items from Office Visit:

1. Feature disapprovals conducted with a second 100% of side scan sonar data within the assigned radius should be submitted as a separate mosaic from the 100% coverage mosaic. This guidance will be included in HSSD 2016.
2. If more than one survey is submitted on a drive, organize by project folder and then sheet:  
OPR-J357-KR-14  
H12717 (containing the Project Reports)  
H12717\_Checksums.MD5  
H12717\_Checksum\_Results.txt  
OPR-J357-KR-14  
H12718\_Checksums.MD5  
H12718\_Checksum\_Results.txt
3. For Junction Analysis, although the Project Instructions state no junctions are required in TX, the sheet on sheet junction analysis (as performed in Florida) is the best practice and should be included in the DR. If a survey is submitted before the junction survey is done processing, it is acceptable to state that in the DR and report on the junction comparison when the second survey is complete.
4. The fish haven VALSOU in H12718 was correctly changed by AHB to be the least depth within the area

object even though it was sourced from bathymetry instead of a feature.

5. There was a feature that was rejected outside of the survey boundary by mistake. The question was, will eTrac be held accountable for data outside the sheet limit and should they cut their data to the sheet limit? The answer is do not cut the data by the sheet limit and if there are concerns about a feature outside of the sheet boundary, contact the COR as they can be handled on a case-by-case basis.

6. For DtoNs found in non-NOAA contracted work, the best practice is to submit the chart discrepancy through this website: <http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx>. For NOAA contracted work, continue submitting DtoNs through AHB.

7. There was a question about a Florida sheet limit that did not extend far enough to junction with NRT 1 survey. We are investigating why this happened. If you ever see this again, please reach out immediately to COR.

8. One day of tides seemed to have a meteorological issue. After contacting COR and COOPS, COOPS said the day was fine. The day had to be re-run. Was there any kind of filter that could have been applied to the tidal data instead of re-acquiring a day of data? The answer is no, COOPS is our internal tidal experts and they provided the best guidance available.

9. Izzy had asked if she needed to report on marine mammals observed in the sonar record if they were not seen on the surface. The best guidance we have is no, only report on what is actually observed visually.

--

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David Neff &lt;david@etracinc.com&gt;

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## Port Mansfield Coast Pilot

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**Megan Greenaway - NOAA Federal** <megan.greenaway@noaa.gov>

Wed, Oct 14, 2015 at 9:27 AM

To: David Neff &lt;david@etracinc.com&gt;

Cc: Isadora Kratchman &lt;izzy@etracinc.com&gt;, Katrina Wyllie - NOAA Federal &lt;katrina.wyllie@noaa.gov&gt;

Correct.  
Megan

On Wed, Oct 14, 2015 at 12:08 PM, David Neff <david@etracinc.com> wrote:

That's how we understood it Megan. So we will be making changes to the latest downloaded coast pilot and not doing anything with the word document as we've found it contains exact excerpts from the full Coast Pilot document.

Dave

On Wed, Oct 14, 2015 at 8:59 AM, Megan Greenaway - NOAA Federal <megan.greenaway@noaa.gov> wrote:

Dave,  
I stand corrected. The 2015 HSSD requirements are to examine the HSD OPS provided Coast Pilot Word Document **and** to download the most recent Coast Pilot section from the Coast Pilot web site.

From 2015 HSSD, "The hydrographer shall first download the latest edition of Coast Pilot and compare against the information contained in the Coast Pilot Field Report. In the event of a conflict between the two sources, the review shall be completed using the information in the downloaded Coast Pilot."

Megan

On Wed, Oct 14, 2015 at 11:28 AM, Megan Greenaway - NOAA Federal <megan.greenaway@noaa.gov> wrote:

Dave,  
That's correct. We changed the procedure from 2014 HSSD to 2015 HSSD. In 2014 the hydrographer was responsible for downloading the appropriate Coast Pilot section.

However, in 2015 (for Port Mansfield) HSD OPS provides the Coast Pilot document to the hydrographer. The hydrographer should edit the provided Word Document which may or may not contain more specific (directed) questions. See section 7.5 Coast Pilot Data of 2015 HSSD.

Megan

On Tue, Oct 13, 2015 at 5:55 PM, David Neff <david@etracinc.com> wrote:

Hi Megan/Katrina,

In the Final PI package, we received an excerpt of the Coast Pilot in Word Doc format. For the FL project we downloaded the latest Coast Pilot and suggested changes to any relevant text. We've done the same for the TX project. Should we only be editing the provided Word Document and delivering that as the Coast Pilot review deliverable. What is the purpose of the Word Doc otherwise?

Thanks

Dave

--

10/26/2015

eTrac Inc Mail - Port Mansfield Coast Pilot

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APPROVAL PAGE

H12762

Data meet or exceed current specifications as certified by the OCS survey acceptance review process. Descriptive Report and survey data except where noted are adequate to supersede prior surveys and nautical charts in the common area.

The following products will be sent to NCEI for archive

- H12762\_DR.pdf
- Collection of depth varied resolution BAGS
- Processed survey data and records
- H12761\_H12762\_H12763\_H12764\_H12765\_GeoImage.pdf

The survey evaluation and verification has been conducted according current OCS Specifications, and the survey has been approved for dissemination and usage of updating NOAA's suite of nautical charts.

Approved: \_\_\_\_\_

**Lieutenant Commander Briana Welton, NOAA**  
Chief, Atlantic Hydrographic Branch