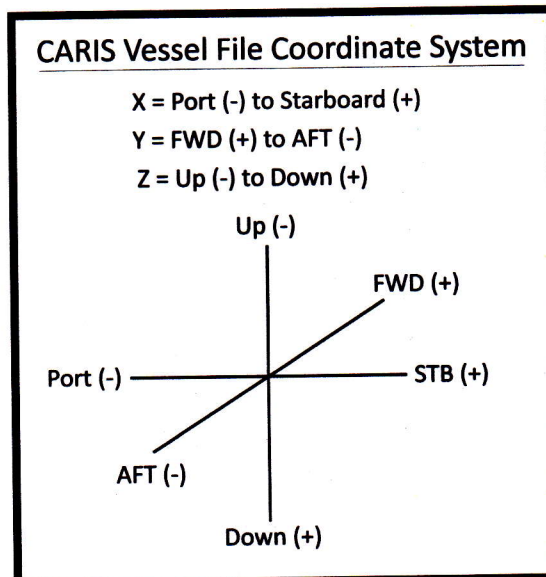
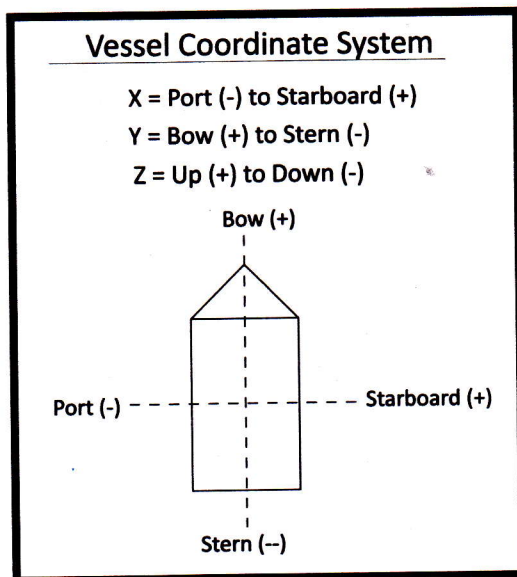


2015-317-FA
15B1M02

USGS SPCMSC - RV *Jabba Jaw* Offsets - 2014

Vessel Diagram for Single Beam Instrument Offsets

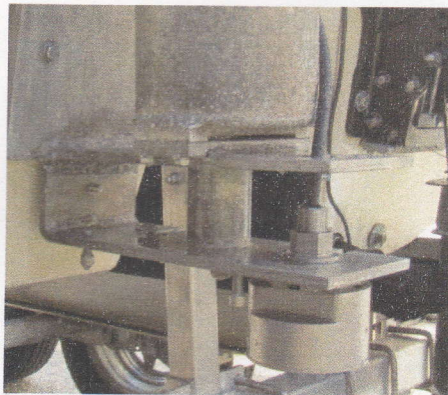
These offsets can be used in HYPACK, the CARIS vessel file and the CARIS TPU offsets within the vessel file. Refer to the diagrams for CARIS program orientation and the last page for CARIS TPU values.



15B1M02

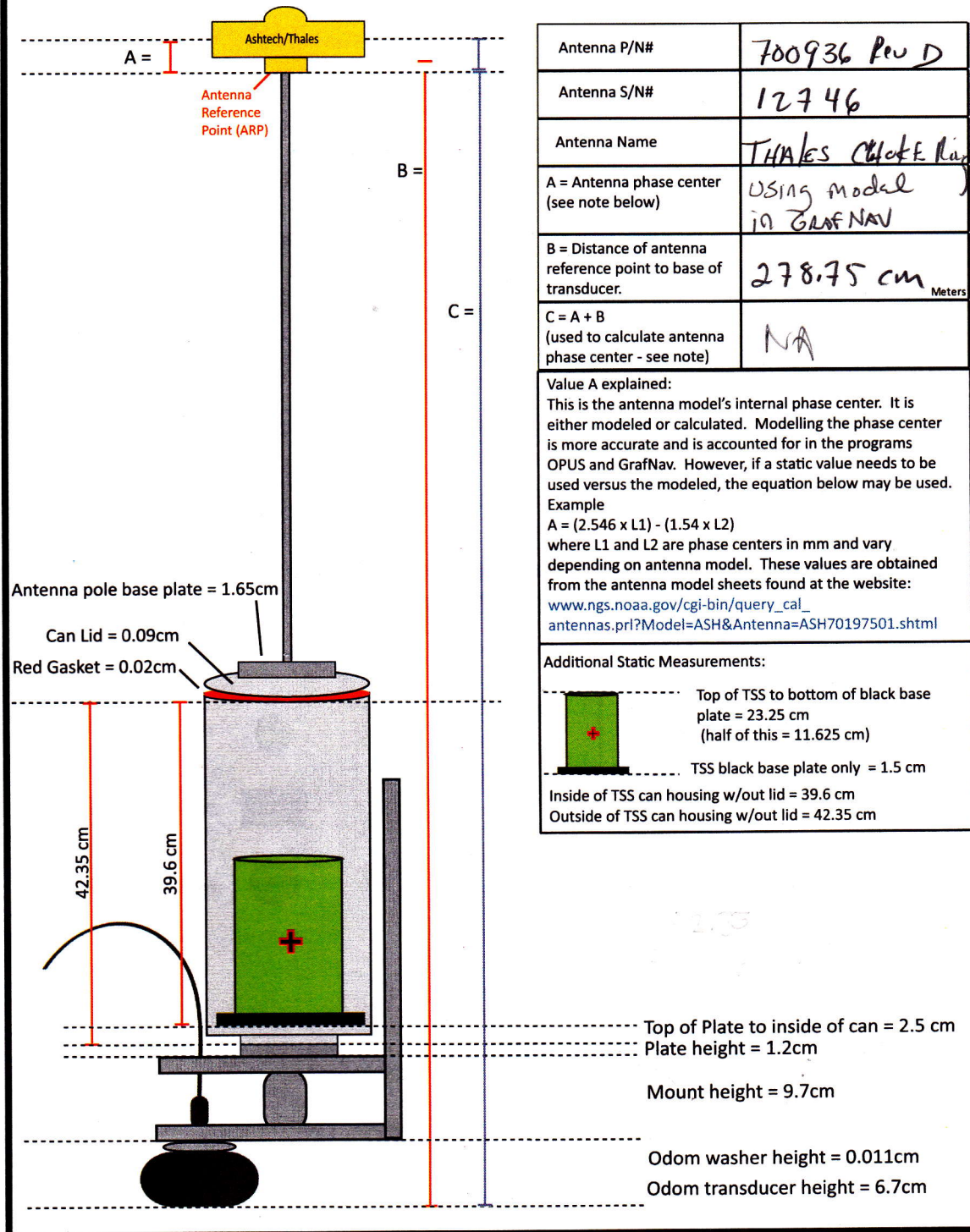
SOP - 2014 - RV Jabba Jaw Offsets

Digital Photographs *R/V Jabba Jaw* with Odom Mount



15BIM02

Z Offset for the Ashtech Antenna - Odom Mount



15BMOZ

X Offsets = Port to Starboard

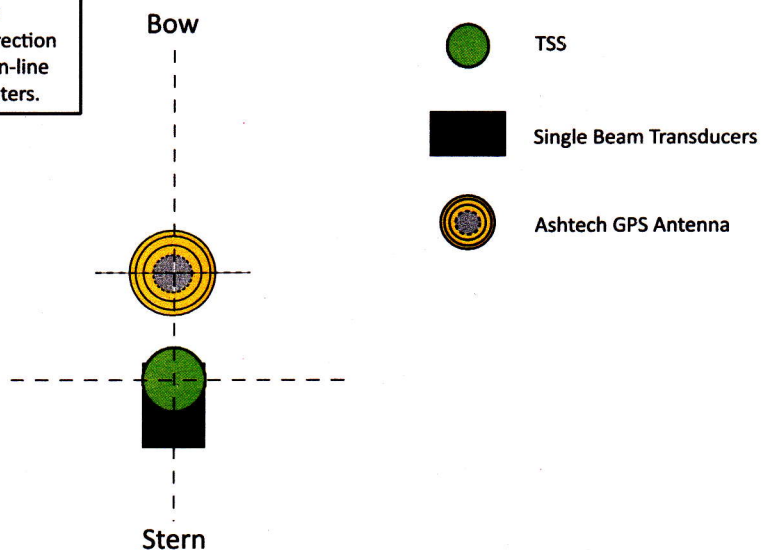
As of 07/2014 the *RV Jabba Jaw* offsets have not been surveyed in with the geodimeter. The offsets in the X direction are considered negligible with the in-line sensor configuration. Use 0.000 meters.



Y Offsets = Bow Stern

Note: This illustration is greatly exaggerated for visual clarification

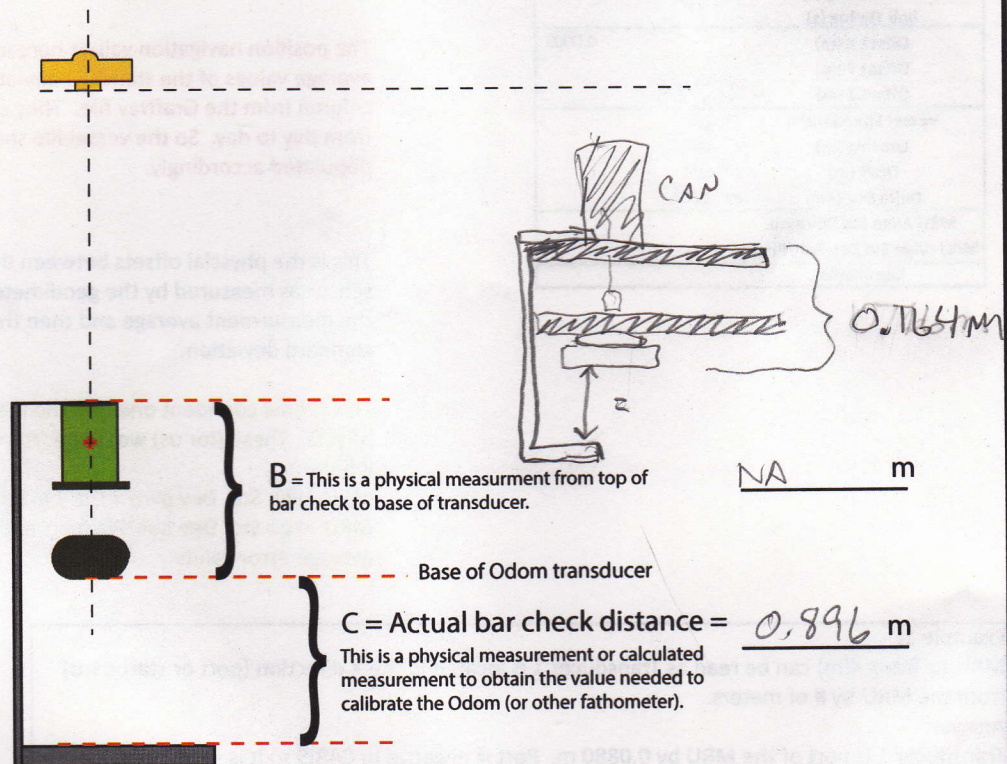
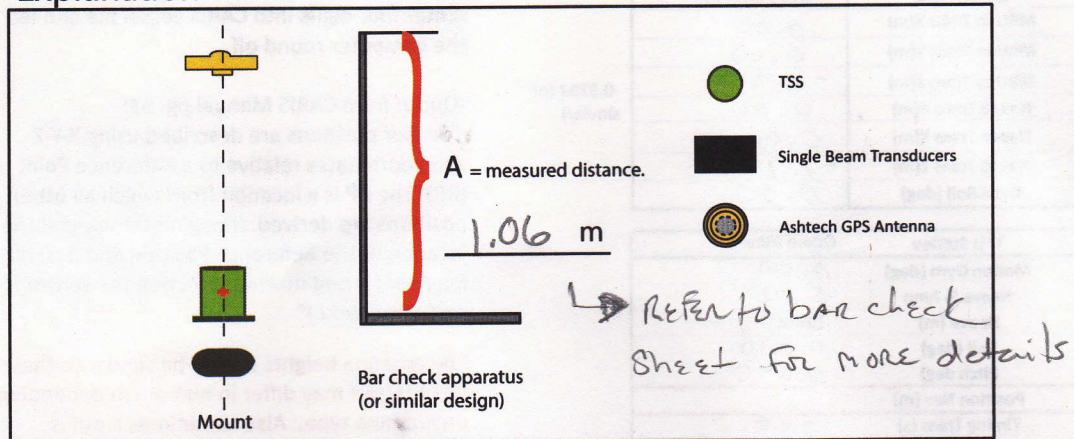
As of 07/2014 the *RV Jabba Jaw* offsets have not been surveyed in with the geodimeter. The offsets in the Y direction are considered negligible with the in-line sensor configuration. Use 0.000 meters.



15B1M02

Explanation

Bar Check



$A - B = C$ This value (or close) should be measured by the Odom.
 If not then adjustments should be made according to the manual.

$$\begin{array}{r} 1.06 \\ - .164 \\ \hline 0.896 \end{array}$$

15B1M02

SOP - 2014 - RV Jabba Jaw Offsets

CARIS Vessel File Offsets Signs for CARIS orientation	
TPU Offsets	Odom Mount
MRU to Trans X(m)	0.00
MRU to Trans Y(m)	0.00
MRU to Trans Z(m)	-0.317
Nav to Trans X(m)	0.00
Nav to Trans Y(m)	0.00
Nav to Trans Z(m)	-2.788
Trans Roll (deg)	0.00

-0.3282 (or similar)

TPU StdDev	Odom Mount
Motion Gyro (deg)	0.00
Heave % Amp	5.00
Heave (m)	0.05
Roll (deg)	0.040
Pitch deg)	0.040
Position Nav (m)	
Timing Trans (s)	0.00
Nav Timing (s)	
Gyro Timing (s)	
Heave Timing (s)	
Pitch Timing (s)	
Roll Timing (s)	
Offset X (m)	0.0000
Offset Y (m)	
Offset Z (m)	-2.788
Vessel Speed (m/s)	3.00
Loading (m)	0.00
Draft (m)	0.00
Delta Draft (m)	0.00
MRU Align Std Dev gyro	
MRU Align Std Dev Roll/Pitch	
Comments	

Notes:

-Enter four digits into CARIS vessel file and let the computer round off.

-Quote from CARIS Manual pg. 53:

"Sensor positions are described using X-Y-Z axis coordinates relative to a Reference Point (RP). The RP is a location from which all other positions are derived. (Imagine standing at the location of the Reference Position and describing how far and in what direction the sensor is away from you.)"

The antenna heights should be similar to these heights, but may differ in mm or cm depending on antenna type. Also sometimes a nut is needed to keep the antenna snug on the pole which may alter the final height.

The position navigation values here are the average values of the standard deviation column from the GrafNav file. They change from day to day. So the vessel file should be populated accordingly.

This is the physical offsets between the sensor as measured by the geodimeter. It is the measurement average and then the standard deviation.

This is how confident one is in the measured offsets. These (for us) would be from the F190 where:

MRU Align Std. Dev gyro = the Z error value
MRU Align Std. Dev Roll/Pitch = Y and X average error value.

Example 1:

MRU to Trans X(m) can be read as Transducer 1 is located in the X direction (port or starboard) from the MRU by # of meters.

Answer:

Transducer 1 is port of the MRU by 0.0880 m. Port is negative in CARIS so it is -0.0880 m.

Example 2:

MRU to Trans2 X(m) can be read as Transducer 2 is located in the X direction (port or starboard) from the MRU by # of meters.

Answer:

Transducer 2 is starboard of the MRU by 0.0880 m. Starboard is positive in CARIS so it is 0.0880 m.

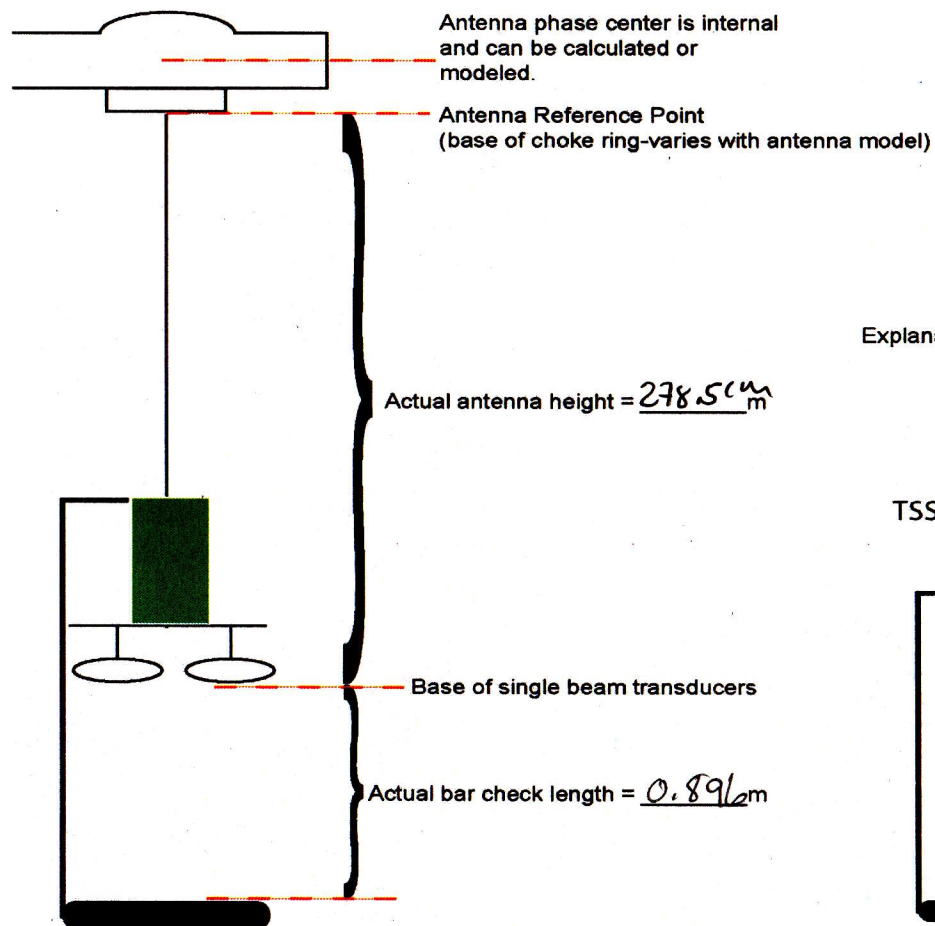
USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

15BIM02 06/23/2015

SVP = 1534 m/s

174 = 000Y

SEAS WERE CALM

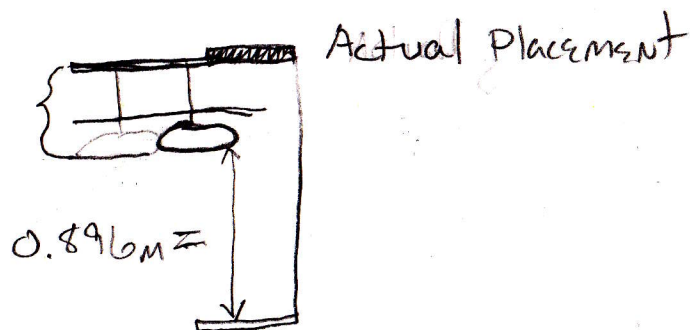
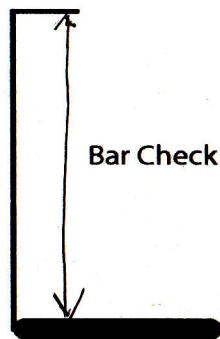


Explanation



= 0.445m

TSS Housing



P	G	OPOM Reading
2	149	1.06
9	206	0.21
4	180	1.04
10	180	1.04
12	150	1.06
8	255	0.91
4	226	0.92
10	255	0.60
10	153	0.18
10	155	1.04
11	211	0.92
10	226	0.91
4	224	0.92
8	230	0.92
4	230	0.92

31
29
31
30
168

LEXAN # 167 night + day MRK 3
LEXAN # 8 168 day on Jabba Jaw
CC1509004 = SN of CASTAWAY

SERVICED MRK 3 in morning - Bass ok overnight

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 R/V JABBA JAW							Page <u>1</u> of <u> </u>
DOY	UTC Time	COUNT Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
168	~ 14:53	103	103-1453				6/17/15 transit MRKS to 103
	15:09	123	103-1509	Hypack (.bin) eChart (.dso)	SVP1		SVP1 @ SOL 103 EOL 15:29
	ODOM topside #3 no readings @ SVP, swapped for jet ski spare ODOM 2						
	15:30	SVP			SVP 2		SVP2 @ EOL 103
	~ 15:33	102a	102a (did not record time)				transit to 102a EOL 15:41
	15:43	14a	102a-0001				EOL 16:08 includes alongshore to line 102
	gain 212 power 6 (settings since start survey)						
	16:08	102	102-1608				EOL 16:33
	16:33	101	101-1633				EOL 16:50
	16:58	SVP	-	-	SVP 003		L
	16:58	7	100-1658	*.bin & *.dso			SOL 16:58
168	- SUNNY; partly cloudy; Waves less than foot behind chand. Islands						
	- 4a using Line File = B10M inshore. INJ						
168	17:15	SVP			SVP-004		Middle of line EOL 17:24
	17:24	8	099-1724				1021 EOL 1749
	17:49	9	098-1749				EOL 1814
	1849	10	097-1814				EOL 1839
	18:39	11	096-1839		1850		EOL ~1850 -> depth
	CHANGE power = 1 gain = 173 173						
~	18:50	SVP			SVP-005		Error reading - not true depth

19:05 12 096-1905

rerun/overlap w/ last line -
check depth error

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 R/V JABBA JAW							Page 2 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
168	19:23	SVP		*.dso *.bin	SVP-006		EOL 096-1905
	19:25	13	095-1925			~19:47	CHANGE gain 149 POWER 2 EOL 1949
	19:49	14	094-1949				EOL 20:14
	20:14	15	093-2014				EOL ~20:30
	20:32	16	092-2032				Falling tide, transit f. line shallow EOL 20:53
	20:53	17	091-2053				
	20:58	SVP		↓ ↓	SVP-007		~2.25 m. EOL 09L2053
	21:00	18	091-2100	*.dso *.bin			2nd segment 091 post cast
	21:15	19	090-2115				
	21:34	20	089-2134				EOL 2153 v. shallow @ EOL
	21:55	21	088-2155				short segment
168	21:58	22	088-2158 - EOL 22:28				No hypack time stamp
	FALLING tide	Most AFTERNOON...	Large flats	Preventing some	lines to be shorter than planned		
	2229	23	078-2229 - short line				Short segment - circle
168	2230	24	126-2230 - EOL 2249			TRANSIT →	Following parallel to 88
	2249	SVP			SVP-008		
	2253	25	126-2253				tie line EOL 2328 not tracking
	2328	26	126-2328	TS.31	SVP-009		Short segment 2x for SVP (line caught)
	2335	27	126-2335				EOL 23:46
	2350	SERVICE MKL3 - END OF DAY					

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 R/V JABBA JAW							Page 3 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
169	13:20	—	TMRK	BASE UP	—	—	Salvager collected SVP. no unit on vessel.
169	—	—	Start of Survey Day	14:30	—	—	4: 149 2
169	13:29	28	126-1329	*BIN *dsg	—	—	EOL H:17
	13:45	—	CHANGE gain 206 power 9 TGT GP	—	—	—	—
	14:32	—	HYPACK FRGE (transit to LTC line B9)	—	—	—	—
	~14:33	29	B9-RAW	*BIN *dso	—	—	LTC line - no time stamp? EOL 15:20
				! SYNC ERROR @ EOL very large	—	—	@ EOL, corrected itself?
				↓ (Fixed.)	—	—	—
	15:35	30	117-1535	—	—	—	SOL ☒ Good
	15:52	↓	↓	—	—	—	EOL
	15:52	31	116-1552	—	—	—	SOL - Good EOL 16:09
	16:09	32	115-1609	—	—	—	SOL EOL 16:26
	16:26	33	114-1626	—	—	—	SOL EOL 16:51
	16:51	34	113-1651	- storm cell to northwest -	—	—	EOL 17:18
	17:18	35	112-1718	—	—	—	EOL 17:42
			110-1742	short segment wrong line do not use	—	—	—
	17:43	36	111-1743	—	—	—	EOL 18:09
169	18:19	37	110-1819	—	—	—	SOL EOL 18:41
	18:32	—	—	Call from WK2,	Plan: Twin Vee - shore perpendicular WK2 - shore parallel (2)	—	—
	18:44	SVP	—	—	14BIM03 SVP-008	—	SVP from staff

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA #BIM02 R/V JABBA JAW							Page 4 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
1169	1855	38	109-1855	storms building in South West + South			SOL
1169	19:27	39	1084(108)	LTC BIER line			EOL-19:52
1169	19:58	40	107-1958	mis-read - exited out of Hypack			checked puck
1169	20:00	—	oddm	restarted + recovered.			
1169	20:08	40	107-2008				SOL EOL 20:31
1169	20:31	41	106-2031	*swell picking up ~ 2ft rollers out of south.			SOL EOL 20:57
	20:57	42	105-2057				EOL 21:24
	21:24	43	104-2124	*could not get to start of line behind island - extensive seagrass + shallow @ falling tide			stuck on shoal - short line fragment Do not USE EOL 21:29
	21:30	43	104-2130				EOL 21:50
	21:59	44	15BIM02-B6	LTC Bier BIER line			
				forgot to record echart when odom froze + restarted. No .oso files for lines 107 to 104 plus start B6			
	21:22	—	echart	mis-read, closed program restart			*recovered!
	22:31	45	B6-0001				EOL 22:41
	23:00		104 (2300)	*noise in surface water column.			SOL
	23:24	—	oddm	misread - not recovered.			
1169	23:28	—	End of Survey day				

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15B1M02 RV JABBA JAW							Page 5 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
170	START OF SURVEY DAY —		Jim Flocks & Nancy DeWitt				Brise Serviced @ ~ 13:40
	13:48	SVP	CASTAWAY SN=CC1417004		SVP_010		NEWING PICKED UP FROM SVP 100 ^{DAY 168}
			B6	*DSO & *BIN			Short Line - sea grass st
			ODOM problems - got off flat & adjusted ODOM to				Pz4 G=180
	14:07		B6 again (can compare to B6 from Day 169)				EOL 1438
↓	14:38				SVP_014		
170	14:46		B4-0004 (compare w/B4 day 169)		SVP-012		EOL 1513
NOTE	* NOTE MARK3 base power was off when serviced this morning & internal battery was removed						
	* LEXAR #13 was removed & LEXAR #9 was put on for the day						
	* ProFlex 800 on RV JABBA JAW was changed to recording rate of 0.5s.						
170	15:26	SVP			SVP_013		
	15:27		B2-000				Longten Line
170	16:22	SVP			SVP-014		
	16:27		127-1627	*DSO & *BIN			Line 127 south to
	17:02		G-180 Pz 10 chop causing dropouts				Bumped up power to 10
	17:12	→	Turned off 127 to west & created line b/w 66 & 67				
170	17:12		067-1712	→ New Line b/w Line 66 & line 65 1-2' w/chop			↳ calling it line 66a
	17:17		066-1716	→ TRANSIT to line (66a)			
170	1730		065-1730	Line 65 heading west			
	17:52		064-1752				

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 RV Jabba JAW							Page 6 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
170	1810		063-1810	*.bin *.DSO			P21 @ 10
	1833		062-1833				P=10
	1849		061-1849				P=10 5
	1914	SVP			SVP-016		
	~19:17		060-				
	19:30		059-1930				Choppy
NOTE	* NOTE - ALL Lines		Above are very shallow close to island but can vary btw 0.4 → .50				
			is normal readings;				
170	1948		058-1948	Line btw 59 & 58 created.			Created Line to fill gap
	2001		058-2001				
170	2017		057-2017				Choppy
	2032		056-2032				can only make it into the shore parallel line closest to shore
170	2047		055-2047				waves broadside 1-2'
	2101		054-2101				
	2120		053-2120				Sea state 2'
	2133		052-2133				
	2149		051-2149				
	2201		050-2201				
	2209		127-2209				Starting on line 127 although file is 127

170

2253

End of Day SVP-017

line 127 e line 67

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15B1102					Page 7 of		
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
171	13:14		Set up MRB base SVP USB 12 → 13				
			J. Flocks + J. Bernier				
	14:01		128-1401	*dso *bin	*short file do		not use *
	14:08	SVP	128		SVP 18		SVP 18
	14:11		128-1411	*dso *BIN			EOL 1454
			Start of day odom settings from yesterday G=150 P=12				
	14:55		128-1455				EOL 15:20
			chop on water 2 ft				
	15:21		133-1521	transit to line 50			EOL 15:26
	15:30	SVP			SVP 19		
	15:33		50-1533	*dso *BIN			EOL 15:48
	15:48		49-1548				EOL 16:09
	16:09		48-1609				EOL 16:31 ^{bad} line *
	16:34	SVP			SVP 20		Moving to offshore lines
	16:51		040-1651	- EOL 17:21			Start offshore L "
	17:24				SVP 21 + 22		2X cast
	17:28		039-1728				EOL 18:07
	18:07		038-1807				EOL 18:38
	18:41		037-1841				EOL 19:09
	19:11	SVP			SVP 23		*

*lost power steering 2X line so very off-track; ~~again~~ again EOL 37

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 RJU JABFA JAW							Page 8 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
171	19:20		36-1920	XBIN XDSG			EOL 19:32 *DID NOT FINISH*
			*LOST STEERING top up + return to VI for hydraulic fluid.				
	21:57		36-2157	Finished line			EOL 22:09
	22:16		SVP 35-2216		SVP 24		EOL 22:52
	22:52		34-2252				EOL 23:24
171	23:25	SVP			SVP 24 + 25		2X cast current
172	1350			BICH 2015 OFF SHORE			Cast SVP 26
	1406						SVP 27
	1411		033-1411	NO	GPS		SOL heading in shore
	1449		033-1449	no motion			Ashtech power plug loose SOL
	1527						EOL 033-1449
	1539		032-1539	no motion			SOL EOL 1605
	1606		031-1606	no motion			SOL EOL 1642
	1643		030-1643	- no motion			SOL EOL 1709
	1810				Broke wire in relay box		TSS trouble shooting @ the VI
	2139		154-2139		SVP cast 28		tie line between lines 35-30
	2202						end of tie line @ X line 29
	2209		029-2209				heading offshore to tie line 141;
	2219		141-2219				heading north on tie line
	2241						EOL

File may have
no motion. TSS

JD 172 ~20:00

TSS

White → green

Red → blue

Out of TSS → red, blue, white

RS232 → orange, green, red

R232 - green → TSS - white

RS232 - Red → TSS - blue

RS232 - Orange → RE232 red

line 30 - no motion

line 33 - 40 - TEST (TSS post-trouble shoot).

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 R/V TABBA JAW							Page 9 of
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
172	2247		001-2247				diagonal tie-line across lines 35-29
"	2330				SVP cast 29		EOL EOD
173			Start of Survey Day				
	8:30		BASE TMRK check/maintenance				Systems check - all systems go -
	9:00		transit to N survey location				Systems check - NO TSS MOTION
	11:30		no TSS recovery, transit back to the VI.				
	1913		152-1911	Lines ~100m off 152			Fixed TSS, offshore
	1930			}			Change gain to 255 power to 8
	1941		152-1941	}			SOL (no course change)
	2021						EOL SVP cast 30
	2024		152-2024				SOL 152 post cast
	2031			*odom complete dropout closed			changed gain - 226 pwr 4
			154-2031	restarted stopped and started			logging New SOL on 154
	2052						end logging
	2052		089-2052	ended line			SOL
	2114			*ended line BIER 65 line			Odom dropout
	2122		B5-2122				SOL
	2135		*Closely monitoring	Odom for			drop outs.
	2143		recharged	gain 225 pwr 10.			

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SPCMSC FAN # 2015-317-FA 15BIM02 R/V JABBA JAW

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DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
	2156		052-2157	x8:10 ³ D			SOL
	2226						EOL SVP cast 31
	2229		094-2229	D8:10 ⁵			SOL
	2246		*Odom drop	D8:10 ⁵			ODOM DROP!!
	2247		10ST STEERING	END OF DAY			SVP CAST 32
174	12:53		129-1253	g=211 p=11	start of day		SOL 129
			J. KINDINGER + J. BERNIER				
	13:13		lost odom	readings - tracking surface			
			reset gp	(tgt taken) working again			
	13:22		lost odom	tracking surface reset gp			226/10
	13:40	SVP			SVP 33		SVP + EOL 129
			-recharge steering fluid-				
174	1346		133-1346	*bin *dso			SOL 133
	1408		lost odom	tracking reset gp			*storm*
	1420		lost odom shallow	reset gp 201	4		
	14:31	SVP			SVP 34		SVP 34 + EOL 133
	14:32		132-1432				SOL 132 EOL 1505
	15:05		132-1505	(tried to swap line increments)			
	15:24		131-1524				EOL 132 SOL 131

15:42

GP power 6

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15 B1M02 R/V JARBA JAW							Page 11 of 2
DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
174	16:15	SVP			SVP 35		EOL 131 + SVP 35
	- top of steering fluid -						
	16:24		001-1624	*BIN *dso			SOL 1
	16:40		002-1640				EOL 1 + SOL 2
	16:52		003-1652				EOL 2 + SOL 3
	16:57		odm dropouts	g=230 p=8			tgt gp
	17:11	SVP			SVP 36		EOL 03 + SVP 36
	17:13		004-1713				SOL 04
	17:35		005-1735				EOL 04 + SOL 05
	17:50		006-1750				EOL 05 + SOL 06
	18:06	SVP			SVP 37		EOL 06 + SVP 37
	18:09		007-1809				SOL 07
	18:24		008-1824				SOL 08
	18:36		GP 224	6 some dropouts at beginning of line			
	18:42		009-1842				EOL 08 + SOL 09
	18:58		010-1858				EOL 09 + SOL 10
	19:15	SVP			SVP 38		EOL 10 + SVP 38
	- top up steering fluid -						
	19:24		011-1924				SOL 11
	19:39		012-1939				EOL 11 + SOL 12

USGS SPCMSC FACS Operations Log - Single Beam Bathymetry

SPCMSC FAN # 2015-317-FA 15BIM02 R/V JABBA JAW

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DOY	UTC Time	Line #	Hypack Line Name	Odom Waveform File	SOS Profile Name or Reading (m/s)	Bar Check (m)	Comments
174	19:15		013-1915	*BIN * L50			EOL 12 + SOL 13
	20:11		014-2011				EOL 13, SOL 14
	20:27		015-2027				EOL 14, SOL 15
	20:41	SVP			SVP 39		EOL 15 + SVP 39
	20:45		16-2045		SVP 39		EOL 15 + SVP 39 SOL 16
	21:04						EOL 16
	21:05		1302105	transit to cross line			SOL 130
	21:49		GP Power = 4				
	21:55						EOL 130
	21:57						SVP 40
	22:04		129-2204	from line 27 → 32			SOL 129
	22:25						EOL 129
	— END		OF DAY —				SVP 41
175	18:22				SVP 42		Redo offshore
	18:46		088-1846	G190 P5 → G235 P5			
	19:16		088-1916				
	19:36		087-1936				
	20:04		086-2004				
	20:22				SVP 43		
							headed in due to weather