

11/5/2012 Monday

Wx: Partly Cloudy Air Temperature 65F

Winds: NNE 15-25 mph; Waves 4-6' @ 6 seconds

Entrance Channel 1/2

Completed 2 CHIRP lines down center as best R/V Cape Fear could steer in strong crosswinds/chop.

Completed 15/21 mag/sidescan @ 20 m spacing as best R/V Cape Fear Could steer in strong crosswinds/chop/darkness.

Mapped from noon to 4:00 a.m.

11/6/2012 Tuesday

Wx: Overcast/Rainy Air Temperature: 50F

Winds NNE 15-25 mph, Waves 4-6' @ 6 seconds

No work completed during day - conditions poor for data collection. Remated sidescan towfish - cable connection, backed up data, organized survey plan for following period.

11/7/2012 Wednesday

Wx: Partly Cloudy 60F

Winds: Winds NNW 15-25 knots; Waves 2-5' (increasing offshore) at 6 seconds

Completed Entrance Channel 1/2 all sidescan/mag work.

Completed Extension Channel 1 EXCEPT Line 8 sidescan/mag work.

Winds and waves decreased throughout the day, before increasing again overnight to 22 knots in the Extension Channel areas. Could not risk sidescan/magnetometer going down again.

Suspended survey at 1:30 a.m. and pulled gear.

11/8/2012 Thursday

Wx: Partly Cloudy 63F

Winds: NW 12-20 knots, Waves 2-4' (increasing offshore) @ 6 seconds

Completed CHIRP Entrance Channel centerline through Entrance Channel Areas 1/2.

Completed CHIRP single line through survey grid in Channel Extension Area 1

Completed CHIRP six (6) 100 meter spacing lines in Channel Extension Area 3;

Need to complete three tie lines in Extension Channel Area 3

Completed CHIRP single line through survey grid in Channel Extension Area 2

Poor sea conditions made it difficult for R/V Cape Fear to maintain steady course on planned lines. Did not completed lower priority tielines.

Moved inshore and out of channel to ODMS where conditions improved

Completed ODMS Hardbottom Area #1

Need to complete centerline through Channel Extension Areas 1/2

Need to complete Line 8 in Channel Extension Area 1

Need to complete sidescan/mag/single beam in Channel Extension Area 3

11/9/2012 Friday

Wx: Sunny/Clear 45 - 70F

Winds NW 15-20 knots early; dropped to light and variable by early afternoon and continued through overnight period..

Waves: 1-3'

Completed ODMS Hardbottom Area #2

Completed ODMS Hardbottom Area #3

Note: Although conditions are ideal, sidescan data display is showing intermittent data dropouts across all four channels. Data drops are causing bottom track and overall backscatter retrace display to degrade as well. Possible problem with cable? Problem is variable and does not readily coincide with any quick heave, pitch, roll motions. Fish has been running for 30 plus hours consecutively. Also, topside unit and/or TPU has frozen at least twice during this period and required a reboot of either or both units.

Wait and see - check connection at daybreak. Possibly run sidescan off wire rope through A-frame to release pressure. Also, remove depressor wing if easily removed.

11/10/2012 Saturday

Wx: Sunny/Clear Temperature 50-70F

Winds: Light and variable; waves 1-2'

Completed ODMS Hardbottom Area #3. Sidescan having power/connection issues. Possible data cable or pigtail problem? Continuing to run with intermittent data drops. Data still coming through, but not bottom tracking well still and overall data quality is poor, but believe it to still be usable. Pulled CHIRP/Sidescan for transit to Extension Channel #2.

Re-deployed CHIRP. Collected subbottom data in Extension Channel #2. While on deck, re-stabilized wet connection at sidescan towfish data cable interface to improve data quality.

Pulled CHIRP and re-deployed sidescan and magnetometer in Extension Area #3 to conduct magnetometer/sidescan/single beam data collection. When attempted to powerup sidescan, the TPU amber lights did not go out, indicating an error in the start-up process. After several hours of troubleshooting, found sidescan cable to have short at approximately 1200 (1700 GMT) causing it to become non operational. Required suspending operations for three hours while a fix was achieved. Sidescan repaired and running again at 6:00 (2300 GMT). Lost several hours of prime survey weather.

11/11/2012 Sunday

Wx: Sunny/Partly Cloudy Temp 50-72F

Winds ENE 7-12 kts; waves 2-3' early then 3-5' late.

Completed Extension Channel #3 magnetometer/sidescan

Note: Could not maintain cell link with virtual base station. All singlebeam data are acquired with DGPS with a standing tide already applied. This will need to be re-applied with NOAA tide gauge data in post processing. Also, attempted to log raw GPS data to be used in post-processing. Data cards filled quickly and may or may not work. Also attempted to record directly to PC via serial port.

Completed Extension Channel #2 magnetometer/sidescan. Transited to ODMS to being Cultural Resources Area #1

11/12/2012 Monday

Wx: Sunny/Partly Cloudy Temp 50-72F

Winds East 10-15 knots early then southeast 7-12 kts; waves 4-5' early then 4-6' late.

1900 Restarted survey after refueling and swapping out captains. Conditions remain poor for surveying 4-6' short period seas with SE winds 7-12 knots.

Completed ODMS Cultural Resources Area #1. Poor sea conditions made it difficult for R/V

Cape Fear to maintain steady course on planned lines.

2:30 1930 (GMT) Restarted survey after refueling and swapping out captains. Conditions remain poor for surveying 4-6' short period seas with SE winds 7-12 knots.

5:30 (22:30 GMT) Completed ODMDS Cultrual Resources Area #1 Started ODMDS Cultural Resources Area #2
Seas 4-6' with with winds SE 7-12 knots diminishing to light and variable overnight. Swells dropped to 3-4.

11/13/2012 Tuesday

Wx: Sunny/Partly Cloudy Temp 50-72F

Winds ENE 7-12 kts; waves 2-3' early then 3-5' late.

Completed:

ODMDS Cultural Resources #2

ODMDS Cultural Resources #3

Notes: No CHIRP Tie Lines...weather window closing. Light winds early, then frontal boundary passage. Winds turned NNE 15-25 knots.
Not redeploying CHIRP at this time.

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-5-12	19:14		5 knots	10m	SOL 1 "high HYPACK lined" RANGE = 37 Entrance Channel 1
	19:20				Green Bow 17 starboard off line
	19:25				Green 15 starboard off line
	19:59				"HYPACK line 10" Entrance channel 2
	20:17				EOL 20:21 Port Channel in High Frequency is blurred - ??? Possibly due to fish altitude and deeper channels? Also not tracking bottom correctly in that channel?
	20:42				SOL, Hypack line 1 Entrance Channel 1 Port channel looking better; some roll due to side/cross chop seas
	21:15				EOL
	21:21				SOL, hypack line 6, entrance channel 2
	22:04				EOL
	22:13				SOL, hypack line 3, Entrance Channel 1
	22:40				SOL, hypack line 8, entrance channel 2
	22:55				GPS Hiccup → 5-10 sec data gap
	23:13				SOL, hypack line 4, entrance #1

* All sidescan data has 4m of cable out *

Date	Time (GMT)	CMG	SOG	Depth	Comments
10/10					
11/6/2012	00:30				CONTAINER SKIP PORT - OFFLINE
11/6/2012	00:44				SOL; Hypack #10, entrance channel 2
	00:55				CONTAINER SKIP - breaking off line
	01:01				CONTAINER SKIP TO PORT
	01:24				SOL; Hypack #3; entrance channel 1
	02:16				SOL; Hypack #8; entrance channel #2
	02:58				SOL; Hypack #2; entrance channel #1
	03:01				Port Channel High Frequency display is funky ?? Low Frequency is fine
	03:06				Improving ...
	03:49				SOL; Hypack #6; entrance channel 2
	04:31				SOL; Hypack #1; entrance channel 1
	05:20				SOL; Hypack #5; entrance channel 2
	06:05				SOL; Hypack #5; entrance channel 1
	06:55				SOL; Hypack #4; entrance channel 2

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-6-2012	07:40				SOL, HYPACK AG, ENTRAND Channel #1
	08:37				SOL, Hy pack #3, Entrand Channel #2
	08:58				SA DISPLAY VERY JUMBLED - POSSIBLE CABLE ? STOPPED PINGING - STARTED - SAME
					TURNUED OFF TPU - TARGET C 1901
	09:20				END SURVEY - ROUGH SEAS / SIDESCAN NOT OPERATING CORRECTLY
	09:50 10:40				PULLED SIDESCAN / MAG INSIDE JETTES @ NO VISIBLE DAMAGE TO CABLE
					Headed to Harbor
	01250				Checked gear - sidescan wet connection gaskethead
					Repaired connection.
					Lay day @ dock

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-7-2012	13:16			15.9 m	SOL; Hypack # 3, Entrance Channel 1
	13:28				CONTAINER SHIP PORT - LARGE WAKE, striping in data
	13:39			7.9 m	SOL; Hypack # 1, Entrance Channel 2
	14:01				EOL
	14:05			10 m	SOL; Hypack # 6, Entrance Channel 1
	14:20				Yacht to Port - Striping in data
	14:32			9 m	SOL; Hypack # 4, Entrance Channel 2
	15:04			9 m	SOL; Hypack # 8, Entrance Channel 1
	15:10				wake - late of roll
	15:24				EOL
	15:35			10	SOL; Hypack # 5, Entrance channel 2
	15:59			9	SOL; Hypack # 7, Entrance Channel # 1
	16:32				increasing seas outside jetties - increasing roll/stripping in sidescan data display
	17:19			13	SOL; Hypack # 2, Entrance Channel # 2
	17:35				offline, slow down for mag
	18:19				wake - port roll
	18:20				wake - Port - boat roll
	18:43			9 m	SOL Hypack # 3, Entrance Channel # 2
	19:22				wake - boat roll
	19:26				wake - Starboard - boat roll
	19:35				wake

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-7-2012					
	19:39				Wave
	19:47				Wave
	20:09			13	SOL Hypack #12 Entrance Channel #2
	20:12				Booy starboard - off line
	21:30			12	SOL Hypack #1; Extension Channel #1
	21:42				SOL Hypack #2; Extension Channel #1 part
	22:14				SOL Hypack #3; Extension Channel #1 part
	22:25			13	SOL Hypack #4; Extension Channel #1 part
	22:58			13	SOL Hypack #10; Extension Channel #1
	23:15				Sidescan data stopped - rebooting TPU / Sonar Pro
	23:19				EOL ↳ no comms
					Rebooted Sidescan → now pinging !!
	23:29			13	SOL Hypack #5 Extension Channel #1
11-8-12	00:56			13	SOL hypack #6 extension channel #1
	02:14				SOL hypack #7 extension channel #11
	02:20				Wind has picked up out of No. 11 to 20 kts Rough conditions causing poor data quality in sidescan

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	0410				SOL, Hypack #19 ODMDS #1
	0506				SOL, hypack #22 ODMDS #1
	0606				SOL, hypack #19 ODMDS #1
	0621				sidescan reboot
	0706				SOL, hypack #21 ODMDS #1
	0802				SOL, hypack #18 ODMDS #1
	0902				SOL, HYPACK #20 ODMDS #1
	0920				Dumped Recycle Bin / Remould previously backed up data - drive becomes full
	0925				Message on Display "TPU Requests data page is no longer available." Reseting requested data page
					(Hit OK r no. "X" out of it = nothing happened)
					Created gap in coverage during time this window was up.
	0930				Lag window - now red and number increasing
	0931				Lag now back to green
	0950				CHANGE GPS RECEIVER BATTERY

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	0954				SOL HYPACK #17 ODMS #1
	1057				SOL HYPACK #14 ODMS #1 HARD BOTTOM
	1155				SOL HYPACK #16 ODMS #1 HARD BOTTOM
	1252			10 m	SOL, HYPACK #13 ODMS #1 (HARD BOTTOM)
	1301 1308				SOL, hypack #7 ODMS #1
	1310 1325				SOL, hypack #3 ODMS #1
	1341 1341				SOL, hypack #9 ODMS #1 HARD BOTTOM
	1359 1359				SOL, hypack #1 ODMS #1
	1418 1418				SOL, hypack #5 ODMS #1
	1434 1434				SOL, hypack #11 ODMS HB #1
	1511 1511			9 m	SOL, hypack #15 ODMS HB #1
	1604 1604				SOL hypack #12 ODMS HB #1
	1620 1620				SOL HYPACK #6 ODMS HB #1
	1635 1635				SOL HYPACK #2 ODMS HB #1

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	1641				SOL HYPACK #8 ODMDS #1 HB
	1655				SOL HYPACK #4 ODMDS #1 HB
	1706				SOL HYPACK #10 ODMDS #1 HB
	1718				let 1m cable out
	1720				bet another 2m cable out
	1723				SOL HYPACK #2 ODMDS #2 HB
	1759				Changed layback of cable - 1m increased by 1m
	1840				SOL Hypack #4 ODMDS #2 HB
	1921				SOL HYPACK #6 ODMDS #2 HB
	2001				SOL Hypack #3 ODMDS #2 Hard bottom
	2041				SOL HYPACK #5 ODMDS #2 HB
	2123				SOL Hypack #7 ODMDS #2 HB
	2202				SOL Hypack #8 ODMDS #2 HB
	2234				SOL HYPACK #11 ODMDS #2 HB
	2310				SOL hypack #12 ODMDS #2 HB
					SOL HYPACK #9 ODMDS #9 HB

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-12	2348				SOL hypack #10 ODMDS HB #2
0700 11-10-12	0023				SOL HYPACK #1 ODMDS HB #2
	0700				
11-10-12	0100				Sidescan display showing quick data drops across all channels. Losing bottom track as well ↳ calm conditions / little wave action 977
	0120				SOL Hypack #1 ODMDS #3 Hard bottom Starting new box
					TPU lights flickering (amber) periodically
	0206				SOL HYPACK #5 ODMDS HB #3
	0241				Error lights on TPU continue to flash periodically - every 5-10 seconds
					Turned off "Altitude Line" in display ↳ improve water column display
					Still seeing intermittent data drops

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-10-12	0851				SOL HYPACK #2 ODMS HB#3
	0334				EOL
	0334				Still having same probs w/ sidescan - poor data quality - great or sea conditions
					Rebooting AM
	0341				Sidescan rebooted/pinging - similar issues
					SOL Hypack #6; ODMS HB#3
	0430				SOL Hypack #03; ODMS
	0507				EOL
	0514				SOL Hypack Line #27 ODMS HB#3
	0600				SOL hypack line #4 ODMS #3 HB
	0640				- similar issues as before, possible cable issue
	0645				- swapped battery in hypack GPS recover
	0728				EOL
	0814 0728				SOL hypack line #8 ODMS #3 HB
	0814				EOL
	0819				SOL hypack line #13 ODMS #3 HB
	0900				EOL
	0904				SOL hypack line #9 ODMS #3 HB
	0945				SOL HYPACK line #12 ODMS #3 HB
	0951				EOL
	1030				SOL HYPACK Line #10 ODMS #3 HB
	1039				EOL
					SOL HYPACK #14 ODMS #3 HB

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-10-2012	1121		5.5	13	SOL Hypack #11 ODMDS #3 HB
	1203		6	13	SOL Hypack #15 ODMDS #3 HB
	1250		6	13	SOL hypack #19 ODMDS #3 HB
	1305		6	11	SOL Hypack #16 ODMDS #3 HB
	1319		6	11	SOL HYPACK #20 ODMDS #3 HB
	1335		6	11	SOL Hypack #17 ODMDS #3 HB
	1356		5	10	SOL hypack #22 ODMDS #3 HB
	1412		6	10	SOL hypack #18 ODMDS #3 HB
	1430		6	10	SOL hypack #23 ODMDS #3 HB
	1444		6	10	SOL hypack #21 ODMDS #3 HB
	1506		6	10	SOL hypack #24 ODMDS #3 HB
11-11-2012	0050		5	17	SOL HYPACK # 24 EXTENSION #5 Range changed from 75 m to 37 m
	0127		5	17	SOL HYPACK #5 EXTENSION #5
	0202		5	18	SOL HYPACK #9 EXTENSION #3

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-11-2012					
	0239		6	17	SOL HYPACK # 4 EXTENSION #3
	0314		5.5	16	SOL HYPACK #10 EXTENSION #3
	0351		5.8	16	SOL Hypack #7 Extension #3
	0425		5.8	17	SOL Hypack #12 Extension #3
	0540		5.7	15	SOL Hypack #6 Extension #3
	0538		5.7	18	SOL hypack #11 extension #3
	0611		5.8	18	changed GPS batteries SOL hypack #3 extension #3
	0855		5.8	17	SOL hypack #8 extension #3
	0714				OFFLINE - A container ship
	0712				Continue line
	0734		5.8	18	SOL hypack line #13 extension #3
	0813		5.6	19	SOL hypack #17 extension #3
	0848		5.7	19	SOL hypack #14 extension #3
	0926		5.1	19	SOL HYPACK #18 Extension #3
	1001		5.7	19	SOL HYPACK #15 EXTENSION #3

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-11-2012					
	1041		5.7	18	SOL HYPACK #19 EXTENSION #3
	11:29		6.0		SOL HYPACK #16 EXTENSION #3
	1153		5.8	17	SOL HYPACK #23 EXTENSION #3
	12:39		6	17	SOL HYPACK #21 EXTENSION #3 AREA
	12:42		6	17	Dolphin in record
	13:07		6	17	SOL hypack #25 EXTENSION #3 area
	13:46		5.7	18	SOL hypack #22 EXTENSION #3
	14:20		5.8	19	SOL hypack #24 EXTENSION #3 ship traffic on line
	1754		5.7	17	SOL hypack #3 EXTENSION #2
	1719			14	SOL hypack #6 EXTENSION #2 begin extension #2 box
					Waves 1-2-4' @ 4-6 seconds - very choppy/roll
	1823		5.6	17	SOL hypack #2 EXTENSION #2 Data quality still satisfactory
	1913				BATTERIES CHANGED IN GPS #13
	1915		5.6	15	SOL HYPACK #5 EXTENSION #2
	2020		5.6	17	SOL hypack #4 EXTENSION #2
	2058				large container ship

Date	Time (GMT)	CMG	SOG	Depth	Comments
11/11/12					
	2114		5.6	15	SOL #1 hypack transmission #2
	2229				EOL, END of Box Transition to ODMDS CR #1
					Roll'd Mag / Sidescan for Trans.
2303	2303		5.6	13	SOL, Hypack #30 ODMDS CR #1
	0007		5.6	14	SOL hypack #31 ODMDS CR #1
	0040		5.6	13	SOL hypack #21 ODMDS CR #1
0111	0111		5.4	13	SOL hypack #29 ODMDS CR #1
	0146		6	12	SOL HYPACK #20 ODMDS CR #1
	0217		5.5	13	SOL HYPACK #28 ODMDS CR #1
	0251		5.7	11	SOL HYPACK #19 ODMDS CR #1
	0300		5.7	11	REDO HYPACK #19 ODMDS CR #1
	0302		5.5	9	SOL Hypack #17 ODMDS CR #1
	0303				
					Very patchy cally heading offshore - sidescan
					3 1/4' chop
	0332		5.5	11	SOL Hypack #17 ODMDS CR #1 data quality holding
	0404		5.6	11	SOL Hypack #16

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-12-12	0404			11	
	0438			12	SOL Hypack #26, ODMS CR CR #1
	0510			12	SOL hypack #15 ODMS CR#1
	0545			13	SOL hypack #25 ODMS CR#1
	0614			13	SOL hypack #14 ODMS CR#1
	0650			13	SOL hypack #24 ODMS CR #1 SEA's building 3-4
	0721			11	SOL hypack #13 ODMS CR#1
	0757			13	SOL hypack #23 ODMS CR#1
	0826			13	SOL hypack #12 ODMS CR#1
	0903			14	SOL hypack #19 ODMS CR #1
	0935			13	SOL HYPACK #11 ODMS CR#2
	1009 1015			14	SOL HYPACK #18 ODMS CR#4 BRAKE LINE - Redo later
	1027			12	SOL HYPACK #2 ODMS CR#4
	1058				SOL HYPACK #13 ODMS CR#4

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-12-12	1131		5.7	15	SOL Hypack # 6, ODMS # 1 CR Area
	1205		5.7	11	SOL Hypack # 10, ODMS # 1 CR Area Seas 3-4' in on caskety swell
	1208				Making data collection heady - rest difficult Fish rolling / pitchy / waving
	1237		5	13	SOL Hypack # 1 ODMS CR # 1
	1311		6	12	SOL hypack # 9 ODMS CR # 1
	1340		6	13	SOL hypack # 3 ODMS CR # 1
	1400				Suspended survey to reRoll
	1443		6	12	Restart survey SOL Hypack # 5 ODMS # 1 CR Seas 3-5' w/ some 6' - lots of roll Data quality somewhat degraded - especially high frequency.
	2014		5.8	12	SOL Hypack # 8, ODMS # 1 CR AREA
	2046		5.9	11	SOL Hypack # 4, ODMS # 1 CR Area
	2111		5.9	13	SOL hypack # 7, ODMS # 1 CR

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-12-12					Start of ODMS CR#2
					Seas still 4ft
	2159		5.8	13	SOL hypack #44 ODMS CR#2
	2222		5.7	15	SOL hypack #37 ODMS CR#2
	2250		5.8	14	SOL hypack #43 ODMS CR#2
11-12-12	2317		5.8	13	SOL hypack #30 ODMS CR#2
	2350		5.7	13	SOL hypack #42 ODMS CR#2
1-13-2012	0016		5.8	14	SOL hypack #32 ODMS CR#2
					changed GPS Batteries
	0042		5.8-6	14	SOL HYPACK #41 ODMS CR#2
	6107		5.6	15	SOL HYPACK #33 ODMS CR#2
	0137		C	13	SOL HYPACK #40 ODMS CR#2
1-13-2012	0204		5.8	14	SOL HYPACK #31 ODMS CR#2
	0235		6	13	SOL HYPACK #39 ODMS CR#2
	0243		6	13	REDO HYPACK #39 ODMS CR#2
	0307		6	14	SOL Hypack #29

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-13-12	0338		6	12	SOL Hypack # 38, ODMDS CR Area #2
					OFFLINE - BOAT on trackline
	0403		6	13	SOL Hypack # 24 ODMDS CR #2 Area
	0435		5.8	11	SOL Hypack # 36 ODMDS CR #2 Area
	0503		5.7	13	SOL hypack #26 ODMDS CR#2
	0537		5.8	12	SOL hypack #35 ODMDS CR#2
	0600		5.7	12	SOL hypack # 23 ODMDS CR#2
	0628		5.5	13	SOL hypack # 34 ODMDS CR#2
	0656		5.7	15	SOL hypack #22 ODMDS CR#2
11-13-12	0720		6	13	SOL HYPACK #29 ODMDS CR#2
	0750		6	13	SOL HYPACK #19 ODMDS CR#2
	0816		6	13	SOL HYPACK #27 ODMDS SR#2
	0846		6	14	SOL HYPACK #18 ODMDS SR#2
					GPS BATTERY CHANGE
	0913		6	14	SOL HYPACK #25 ODMDS SR#2

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-13-2012	0943		6	15	SOL Hypack #17 ODMDS RC#2
	1011		6.1	14	SOL Hypack #21 ODMDS RC#2
	1010 1040		5.8	15	SOL Hypack #8 ODMDS RC#2
	1108		5.7	14	SOL Hypack #16 ODMDS CR#2
	1136		6	16	SOL Hypack #8 ODMDS CR#2
	1205		5.5	13	SOL Hypack #15 ODMDS CR#2
	1232		5.8	16	SOL Hypack #6
	1302		5.7	14	SOL Hypack #14 ODMDS CR#2
	1328		6 0	15	SOL Hypack #5 ODMDS CR#2
	1359		6.1	13	SOL Hypack #13 ODMDS CR#2
	1427		7	15	SOL Hypack #4 ODMDS CR#2
	1457		6.2	14	SOL Hypack #12 ODMDS CR#2
	1526		6.6	15	SOL Hypack #3 ODMDS CR#2
	1555		6.6	12	SOL Hypack #11 ODMDS CR#2

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-13-12	1621		6.5	13	SOL hypack #2 ODMDS CR #2
	1652		7.0	12	SOL Hypack #10 ODMDS CR #2
	1718		5.5		SOL Hypack #1 ODMDS CR #2
	1744		7	11	SOL Hypack #2 ODMDS CR #2
	1745				North winds increasing - frontal boundary approaching about to change conditions
					ODMDS CR #2 completed; starting ODMDS #3
					C
	1813		6.5	14	SOL HYPACK #1 ODMDS #3
	1821		6.5	13	SOL HYPACK #1/2 ODMDS #3 shift to line 2
	1827		6.5	14	SOL HYPACK #2 ODMDS #3
	1827				
	1834		6.7	14	SOL HYPACK #2 ODMDS #3
	1841		6.7	14	SOL HYPACK 2/3 ODMDS #3 shift to HYPACK #3
	1846		6.7-7	14	SOL HYPACK 9 ODMDS #3
	1854		7	14	SOL HYPACK 3 ODMDS #3
	1907		7	15	SOL HYPACK 10 ODMDS #3

Date	Time (GMT)	CMG	SOG	Depth	Comments
11/8/2012	13:15		5knts	17m	Deployed CHIRP @ Fort Sumter - collecting centerline channel data through Entrance Channel
					Layback = ~ 8m (not put in software)
					Using 0.5-8 kHz 5 ms setup
	15:59		5knts	17m	Start line 1
	16:15				
	16:22				moving out of channel to avoid container ship
					large container ship to port/wake/churned up bottom
	16:30				entrance
					moving back into channel centerline
	16:02		5knts	17m	SOL @ Extension Channel #1 Area
	18:16				EOL
	18:17		5knts	17m	SOL Extension Channel Area #3
	18:55				
	18:55		5knts	17m	SOL Extension Channel AREA #3
	19:24				EOL
	19:29		5knts	17m	SOL Extension Channel #3, hypack #13
	20:00				EOL
	20:04		5knts	17m	SOL Extension Channel #3, hypack #18
	20:39				EOL
	20:43		5knts	17m	SOL Extension Channel #3, hypack #25
	21:14				EOL
	21:18		5knts	17m	SOL Extension Channel #3, hypack #22

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-8-2012	23:15			11	SOL; Hypack #28 ODMS Area #1 HARD BOTTOM
					Running CHIRP/ SIBESCAN SIMULTANEOUS
	23:57				SOL; Hypack #27 ODMS Area #1 Hardbottom
11-9-2012	0102				SOL Hypack #24 ODMS Area #1 Hardbottom
	0202				SOL; HYPACK #26 ODMS AREA #1
	0300				SOL; HYPACK #23 ODMS AREA #1
	0410				SOL, Hypack #25 ODMS #1
	0506				SOL, hypack #22 ODMS #1
	0606				SOL, hypack #19 ODMS #1
	0706				SOL, hypack #21 ODMS #1
	0802				SOL, hypack #18 ODMS #1
	0902				SOL, hypack #20 ODMS #1
	0954				SOL; HYPACK #17 ODMS #1

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	1057			10 m	SOL, Hypack Line #14, ODMS Area #1 (Hardbottom)
	1155			12 m	SOL, Hypack Line #16, ODMS Area #1
	1202				Sidescan display freeze - no data coming in
	1208				Rebooted TPU and Topside units
	1252			9 m	Sidescan back running - ?
	0108 1308				SOL, Hypack Line #13, ODMS Area #1 (Hardbottom)
	0125 1325				SOL, hypack line #7, ODMS #1
	0141 1341			9 m	SOL, hypack line #3, ODMS #1
	0154 1359				SOL, hypack line #9, ODMS #1
	0218 1418				SOL, hypack #1, ODMS #1
	0234 1439				SOL, hypack #5, ODMS HB #1
	0311 1511			8M	SOL, hypack #11 ODMS HB #1
	0409 1609			9 m	SOL Hypack #15, ODMS HB #1
	0420 1620				SOL, Hypack #12 ODMS HB #1
					SOL, hypack #6 ODMS HB #1

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	0433				SOL hypack #2 ODMS HB #1
	1633				
	0444				SOL hypack #8 ODMS HB #1
	1641				
	0453				SOL hypack #4 ODMS HB #1
	1653				
	1504				SOL hypack #10 ODMS HB #1
	1704				
	1720				SOL HYPACK #2 ODMS HB #2
	1759				SOL HYPACK #4 ODMS HB #2
	1840				SOL HYPACK #6 ODMS HB #2
	1921				SOL Hypack #3 ODMS HARDBOTTOM #2
	2001				SOL Hypack #5 ODMS HB #2
	2041				SOL Hypack #7 ODMS HB #2
	2123				SOL Hypack #8 ODMS HB #2
	2201				SOL hypack #11 ODMS HB #2
	2234				SOL HYPACK #12 ODMS HB #2
	2258				CLEANED SENSORS W/ DAWN
	2310				SOL HYPACK #9 ODMS HB #2

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-9-2012	2348				SOL HYPACK #10 ODMDS #2 HB
11-10-2012	0023				SOL Hypack #11 ODMDS #2 HB
	0120				SOL hypack #11 ODMDS #3 HB start of acid #3
	0206				SOL HYPACK #3 ODMDS #3 HB
	0251				SOL HYPACK #2 ODMDS #3 HB
	0340				SOL Hypack #6 ODMDS #3 HB
	0427				SOL Hypack Line #3 ODMDS #3 HB EOL
	0510				SOL Hypack Line #7 ODMDS #3 HB EOL
	0514				SOL hypack line #4 ODMDS #3 HB EOL
	0600				SOL hypack line #8 ODMDS #3 HB EOL
	0640				SOL hypack line #8 ODMDS #3 HB EOL
	0645				SOL hypack line #13 ODMDS #3 HB EOL
	0714				SOL hypack line #9 ODMDS #3 HB EOL
	0822				SOL HYPACK line #12 ODMDS #3 HB EOL
	0904				SOL HYPACK LINE #10 ODMDS #3 HB
	0945				
	0951				
	1020				

CHIRP DATA very noisy - trouble tracking bottom in water column

Date	Time (GMT)	CMG	SOG	Depth	Comments
11-10-12	1025		5.5	13-15 m	Water column Water column cleared - now tracking bottom
	1030				EOL
	1034				SOL HYPACK #14 ODMDS #3 HB
					EOL
	1121		5.5	13-15	SOL Hypack #11 ODMDS #3 HB
	1203		6	13	SOL Hypack #15 ODMDS #3 HB
	1250		6	13	SOL Hypack #19 ODMDS #3 HB
	1305		6	11	SOL Hypack #16 ODMDS #3 HB
	1319		6	11	SOL Hypack #20 ODMDS #3 HB
	1335		6	11	SOL HYPACK #17 ODMDS #3 HB
	1350		6	10	SOL hypack #22 ODMDS #3 HB
	1412		6	10	SOL hypack #18 ODMDS #3 HB
	1430		6	10	SOL hypack #23 ODMDS #3 HB
	1444		6	10	SOL hypack #21 ODMDS #3 HB
	1500		6	10	SOL hypack #24 ODMDS #3 HB

Projects (continued)

12/19/12 Post 45 video tower
time hypack line video line
14:47:20 2A 1
video indicates mostly sand

14:51 outcrop / hard bottom

14:52 sand

14:53 hard bottom

line direction is onshore (350°)

14:59:37 FOL

15:10:58 1A SOL Z

15:11 SAND RIPPLES

15:15 outcrops / Shell Haul

15:16 sponges / sheephead

15:18 larger ripples w/ shell haul

12/19/2012 Wednesday Post 45

Wx: 65°

Wind: NW 5-15 kts

Waves: 1-3'

<u>Time</u>	<u>Hypack Line</u>	<u>Comments</u>
* 18:57:08 New Disc #3	20a-raw	SOL
18:58	fine sand/rippled some shell hash	
19:00	increased shell hash	
19:03	fine/med sands w/ shell hash irregular ripples	
19:07	fine/med sands w/ shell hash irregular ripples	
~~~~~		
19:21:00	22a-raw	SOL
19:24	large ripples w/ shell hash	
19:31	large ripples w/ shell hash	
19:31	fine/med rippled sands	
19:32	fine/med sands / large ripples w/ shell hash	

Time

Hypack Line #

Comments

Time	hypack line
16:24:28	med ripples / shell hash
16:28:37	low relief / consolidated?
16:30:15	low relief / buried hard ground
16:32:30	med ripples / coarse shell
16:36:25	small ripples / shell hash
16:39:26	low relief
16:40:45	low relief
16:42:00	hard bottom test
16:51:38	med ripples / shell Delphinus
16:52:45	low relief / ledge

Time	Hypack Line #	Comment
	Line 29a	continued
15:26		finer irregular rippled sands less shell hash
15:31		same as above
15:37:12	Line 28a	raw SOL
15:40:00		small ripples / possible consolidated material
15:45:20		small ripples / " " "
15:48:09		med ripples / shell hash
15:51:46		small ripples
15:56:24		small ripples
16:14:34	27A	
16:16:10		small ripples / shell hash
16:21:11		small ripples / shell hash

Time	Hypack Line #	Comments
15:04:27	30a, row	low relief / consolidated
15:06:00		med ripples / coarse shell
* 15:12:25	29A	(extension area) depth change
New Disc #2		
15:13:51		small ripples possible the veneer of sand over consolidated material
15:16:28		periodic "white" singular stalks
15:17		rippled fine sands
15:20		less ripples for short period
15:21:30		larger amplitude ripples for short time
15:22:00		shorter amplitude irregular ripples
15:23:20		larger ripples / shell hash (coarse) in troughs

Time	Hypack Line #	Comments
14:18:33	30a, row	
14:19:19		small symmetric ripples
14:22:13		med ripples / shell hash
14:26:10		med ripples / worm casings
14:28:30		shell hash
14:35:26		med ripples / shell hash (coarse)
14:40:59		med ripples / coarse shell hash
14:46:18		// coarse shell //
14:56:56	16A	
14:58:43		med ripples / coarse shell hash
15:00:33		worm casings buried hard bottom?
15:02:29		low relief / consolidated

13:41 Buoy #3 to port  
no evidence in video

13:41.45 medium sands / shell hash

13:43 fine sands

13:47 FOL

Time	Hyack line #	Comments
13:55:35	33a	SOL
13:56		med sands / shell hash symmetric ripples
13:59		shell hash / worm casings
14:01:10		single stalk
14:02		low amplitude ripples

Time	Hyack line #	Comments
14:03:45		increased shell hash higher amplitude ripples
		difficult maintain speed in channel
14:06		fine / med sands w/ coarse shell hash
14:06:45		" coarse shell hash "
14:08		" coarse shell hash "
14:09		fine / med sands w/ shell hash
14:11		a symmetrical ripples w/ coarse shell hash

2013

1-6-2012 Sunday

Charleston

Post 45

Video Tows

WX: SS F Partly Cloudy

Winds N 5-10 kts

Waves 1-3'

Visibility (bottom)

Time	Hyack Line	Comments
13.18	17A	SOL
13.19	patchy	hard bottom
13.20	patchy	hard bottom
13.20:50	medium ledge	

13.18

17A

SOL

New Disc #1

13.19

patchy

hard bottom

13.20

patchy

hard bottom

13.20:50

medium ledge

11

Hyack line

Comments

13:28

34a. raw

SOL

13:29

fine/med rippled sands

13:37

periodic single "white" stalks

13:35

flying

13:36

fine/med rippled sands

13:36:30

shell hash / larger ripples

13:37

shell hash / worm casts / casings

13:39

fine / med sand w / worm casts / casings

13:39

rippled sands / shell hash in troughs



Line 149 cont.

- 16:36 coarse material / outcrop (low)  
of hardbottom
- 16:56:30 patchy fine sands
- 16:41:45 SOL 11A
- 16:45:20 small ripples
- 16:49:40 med ripples / shell hash
- 16:52:53 low relief
- 17:03:23 SOL 10A
- 17:04:05 small ripples
- 17:06:53 med ripples / shell
- 17:08:08 low relief
- 17:11:45 low relief

<u>Time</u>	<u>Hypack Line</u>	<u>Comments</u>	<u>Time</u>	<u>Hypack Line</u>	<u>Comments</u>
16:03:04	139. raw	SOL 139	16:23:17	149. raw	SOL
16:03	fine sand / ripples		16:25	coarse material - shell hash	
16:04	coarser material / worm casings		16:26	low relief <del>hard</del> patchy coarse material	
16:06	worm casings / coarse material / shell hash low relief bottom		16:27	patchy coarse material	
16:08	worm casings / shell hash / coarse material		16:28	fine / medium rippled sands	
16:13	better sorted fine / med sand		16:28:30	coarse patch	
16:15:03	FOL		16:29	fine / med rippled sands	
<hr/>					
			16:30	rippled sands	
			16:32	coarser / shell hash rippled sands	
			16:33:50	patchy coarse material	
			16:35	TI coarse	

Time	Location / Observation	Time	Location / Observation
14:15	19a-32a cont	14:50:41	<u>Hypack line</u> SOL 31A
14:15	ray / skate offline 60m	14:56:30	small ripples
14:15:55	ledge / bottom blackfish	15:00:20	patchy low relief
14:17:35	fire ? patchy outcrop	15:44:50	SOL 12A
14:18	small ledge outcrop	15:52	Coarse Sand / Shell Mast
14:20	30m off line	15:53	Worm casings / shell hash possible low relief headbank
14:21	fine sand / shell hash	15:54	coarse shell hash / ripples
14:24	symmetric ripples / shell hash in troughs	15:55	low relief headbank worm casings
14:26	10m offline sand / shell hash	15:56	shell hash / worm casings
14:28	fine sand / shell hash	15:58	coarse material / worm casings
		15:59	worm casings / coarse material

1-4-2012 Sediment Grabs

06-1912

06-1925

1-5-2012 Saturday Charleston  
Post 45

Video Tows

WX: Sunny SS-60°F  
Winds NE 10-15 kts Waves 3'

Time  
13:27:00

New Disc #1

13:28:00

Hard bottom

13:30:40

Hard Bottom / Med relief

13:34:07

ledge / Med

13:40:30

sponges

13:52:40

small ripples

13:53:20

small relief

13:54:18

med relief

14:13

SOL 19A-329

14:14

14:11:40

time	hyperack line
17:26:50	SOL 8a
17:30:36	small ripples
17:32:48	patchy low relief
17:34:45	patchy low relief
17:40:20	shell hash / large ripples
17:45:40	SOL 9A
17:47:15	patchy low relief
17:51:00	shell hash
17:59:11	patchy low relief
18:13:15	SOL 7A
18:18:10	patchy low relief
18:27:10	shell hash

time	hyperack line
18:49:32	SOL 6A
18:43:05	patchy low relief
18:46:45	patchy low relief
18:53:20	shell hash
18:59:15	ripples
14:	

1-4-2012 Friday Charleston Harbor  
Post 45  
Video Tows

WX: Sunny 60°F  
Winds N 7-12 kts  
Waves 2-3'  
Visibility: Poor

Time Hypack Line Video Line

16:09:27 25a raw 1  
mostly fine sand  
visibility poor to marginal  
travelling NE to SW

16:41:42 23c raw 2  
sand bottom / ripples  
sand / some shell hash

16:51  
shell hash in troughs  
of fine sand ripples

Time Hypack Line

16:59:15 23b raw 3  
fine sand / shell hash

17:02  
asymmetrical ripples  
shell hash

17:04  
short wavelength  
ripples, flattened out

---

17:09:18 23a raw 4

17:13  
symmetric ripples

17:17  
shell hash  
in troughs of ripples

17:17:45  
large ripples

17:18  
patal low relief  
hard bottom

17:18:45  
more patal low relief  
hard bottom

17:20  
small ripples

02-1934

fine sand  
multiple times

02-2-1941

fine sand

01-1922

fine sand

01-2-1929

shell ~~frag~~ hark  
fragments

time	hyack line	Video lines	Grab Samples
17:13:18	sand		24-1803 slightly offline fine sand/mud
17:21:25	sand/ripples		242-1813 coarse/shell hash little material
17:23:52	EOL		26-1821 coarse/shell hash
<hr/>			
17:26:22	<del>24A</del> 24A	7	26-2-1826 minimal material hash/shells
17:29:40	sand/shell hash		05-1838 shell hash/fine sand small amt
17:35:18	sand		05-2- <del>1840</del> ¹⁸⁴² shell hash/fine sand small amt
17:44:23	sand/ripples		04-1849 fine sand/small amt
17:51:04	EOL		04-2-1855 fine sand/shell hash
			03-1906 fine sand/shell frags ... / hash



Line 1A continued  
 15:21 mottled bottom / coarse material  
 15:26:45 mostly sand / ripples  
 15:32 EOL

---

Time Hypack line Video line  
 15:50:00 3a 3

15:56 sand ripples / shell hash  
 15:57 coarse material overlying  
 sand / thin veneer of  
 sand -

15:58 sand / ripples  
 16:02 offline  
 16:05:30 EOL

~~16:07:40~~

Time Hypack Line Video Line

16:20:41 4A 4  
 16:22 sand / ripples

16:23:23 starfish  
 16:27 sand / small ripples  
 16:28 sand / shell hash between ripples

16:38:40 EOL

---

16:40:05 5a 5  
 16:43:08 sand / ripples

16:47:34 sand / ripples  
 16:54:24 EOL

17:07:12 26A 6

17:08:11 small sandbars



Speed = 5 kts (w/ current)  
2.5 kts (against current)

Maj Intensity ~ 48850 nt ✓

Signal ~ 1300 to 1500 ✓

Fish Depth ~ 2-7 m ✓

Fish Altitude ~ 1 m to 7 m ✓  
(varies w/ depth)

Completed Wanda 2

Notes: Hypack lines 2-7 incomplete  
near Port of Charleston docks.

Water shallowed to less than  
5 m — dangerous for fanned  
instruments.

Wanda Terminal (?)

3:20 EDT (1930 GMT) 10/2/2012

Start Wanda River Area

Hypack Line # 045 start 19:37

Maj Line # 9

Hypack Line # 046

Maj Line # 10 start 19:52

Hypack Line # 048

Maj Line # 11/12 start 20:10

12 start 20:13

Anomaly? Geometry # 8 20:21

Channel Marker # 44 20:22

# 44 Starboard

Hypack Line # 037 start 20:24

Maj Line # 13

# 44 Starboard 20:24

Anomaly? Geometry # 9 20:26

Side Scan Hiccup 20:55

Continued Hypack # 037 20:52

Maj Line # 14

8:00 A.M EDT (1200 GMT) 10/4/2012 Thursday  
Remleys Pt  
Mount Pleasant, SC

Continue Wando River Area

Hypack Line # Mag Line # Time  
033 0 12:04 GMT

B Survey name Charleston Wando 10/4/2012  
All parameters from previous day  
set the same excluding layback

Layback = 6 m

Wx. Clear / 80°F Winds N 5-10 mph  
Waves 0.1' (Merbo)

Speed = 2.5 - 5 KTS

Anomaly (Port) Geomys #1 12:12 GMT

031 1 12:25 GMT

Large Shipping Freighter  
TSM on Port Side

Geomys #2

Mag Line # 14  
Anomaly # 11 20:50  
Anomaly # 12 21:02

Hypack line #40 start 21:03

Mag Line # 15

Anomaly # 13 Port 21:06

Tag some port 21:30

#5 Channel Marker Port 21:09

Hypack line #043 start 21:13

Mag Line # 16

#5 Channel Marker Port 21:17

Tag starboard (TSM) 21:17

Hypack line #046 start 21:23

Mag Line # 17

Hypack line #055 start 21:32

Mag Line # 18

Anomaly # 14 21:36

Anomaly # 15 21:42

~~Anomaly # 16~~

Anomaly # 14 21:53

End survey 22:00

Hypack Line #    Mfg Line #    Time  
 027                    02                    13:01  
 025                    03                    13:14  
 022                    04                    13:19  
 Anomaly # 3 Starboard side 13:20

Crab pots in the grid/online 11:27  
 026                    05                    13:30

Crab pots online → 13:30  
 Shallow area - fish < 3 m off bottom

029                    06                    13:38  
 Double Terminal 200 m starboard 13:41  
 possible impacts on mag?

032                    07                    13:47  
 Channel Marker # 8 to port 13:51  
 034                    08                    13:59  
 Anomaly # 4 to Starboard 14:02

Hypack Line #    Mfg Line #    Time  
 036                    7                    14:09  
 crabpots online 14:09  
 Strong current pushing front 14:10  
 Anomaly # 5 14:13

038                    10                    14:18  
 040                    11                    14:26  
 021                    14                    14:52

019                    15                    15:10  
 Anomaly # 6 15:18  
 018                    16                    15:28

Anomaly # 7 15:33  
 Anomaly # 8 15:44  
 Anomaly # 9 15:51  
 016                    18                    15:52  
 Anomaly # 10

<u>Hypack Line</u>	<u>Mag Line #</u>	<u>Time</u>	<u>Hypack Line #</u>	<u>Mag Line #</u>	<u>Time</u>
Anomaly # 11 to starboard		15:56	010	024	17:00
Anomaly # 12 to starboard		15:58	Anomaly # 21 on starboard		17:03
15	019	16:03	009	025	17:07
14	020	16:12	Anomaly # 22		17:09
Anomaly # 14		16:25	Anomaly # 23		17:10
Anomaly # 15 submerged pipe on chart		16:26	008	026	17:17
13	021	16:30	Anomaly # 24	0	17:20
Anomaly # 16		16:31	007	027	17:24
Anomaly # 17		16:33	Completed Wanda Area 1		
14	022	16:42	w/ exception of shallow areas		
Anomaly # 19 on port		16:47	at the edge of the grids nearest		
Line 13 incomplete - shallow					
Line 11					
	013	16:50			
Anomaly # 20		16:54			

Myers Bend #2 Area 2:00 pm (18:00 GMT)

Hyack Line #	Mag Line #	Time
0001	028	18:13
0002	029	18:21
0003	030	18:25
Anomaly #25		18:32
004	031	18:35
Anomaly #26		18:36

Shallow < 5 m inshore of line #4  
will return to compute

Myers Bend #1 Area 2:40 pm (18:39 GMT)

Hyack Line #	Mag Line #	Time
002	032	18:47
Running adjacent to several rock/steel spalls/docks - may impact mag intensity 18:57		
Exiting pier/dock area 19:01		
001	033	19:02

Entering pier/dock area - impacting  
mag intensity? 19:02

003 034 19:15 gmt

Entering pier/dock area - impacting  
mag intensity?

004 035 19:24

Anomaly #27 19:32

Near steel pier/docks - mag intensity  
influenced? 19:34

Anomaly #28

Completed Myers Bend #1 3:58 (19:35)

Lower Harbor #1 Area 3:45 pm (19:45 cont)

line 15 040 21:26  
Anomaly # 32 21:27  
Bridge Debris ??

Hypack line # Mag line # Time  
012 036 19:53

Bridge impacting mag signal 20:02  
Anomaly # 29 20:02  
GPS dropout under bridge

10/5/2012 8:00 AM (12:00 cont)  
Continue Lower Harbor Area #1

~~Hypack~~

	<u>Comments</u>	<u>Hypack line #</u>	<u>Mag line #</u>	<u>Time</u>
013		037		20:11
014	Start survey	016	0	12:10
	Anomaly # 33/34			12:20
	Under Bridge			
	Anomaly 35			12:24
		018	1	12:31
	Anomaly 36			12:36
				21:27

Lower Harbor Area #1 Complete  
Small area not surveyed due to shallow



Begin - Charleston lower Harbor #2 10/15/12  
 WX Sunny/Clear 85°F  
 Light winds Waves 0-1' (harbor)

Comments Hypack line Mgy line Time  
 08 02 12:53

Approaching Cooper Bridge - impeding  
 magnetic intensity

010/007 03 13:14

007 05 13:37

Cooper River Bridge  
 GPS Drops / mag intensity ↑

13:41

Anomaly # 38

17:42

Container Ship 50 m port  
 ↳ Mgy file H/C

13:56

Comments Hypack Line Mgy Line Time  
 Anomaly # 39 06 17:58

Start line 04 07 14:14

start line 02 09 14:54

Completed Lower Harbor #2

Start Lower Harbor Area #3

Comments Hypack line Mgy line Time  
 Start line 031 011 15:38

15:40

Container Ship 50 m port  
 impeding mgy intensity

15:42

start line 029 014 15:46

start line 028 015 15:51

start line 020 017 16:01

Anomaly # 43

16:11

Comments	Hypack line	mag line	Time
Start line	023	019	16:12
Anomaly #40	021	020	16:19
	22	021	16:21
	020	020	16:32
Anomaly #46 (Submerged cable)	018	023	16:34
Anomaly #47	48/47		16:37
Anomaly #49	017	025	16:40
	011	32	16:43
Anomaly #50	1	33	16:44
			17:31
			17:33
			17:38

Notes: Need to complete Lower Harbor #3 shallow areas - edges along drum island where water shallow to less than 5m

Start Lower Harbor #4 Area

Comments	Hypack line	Mag line	Time
Start line	014	034	17:48
Anomaly #51		29/05	17:48
	013	036	<del>17:54</del> 18:03
	012	037	18:08
Anomaly #53	(5.8)		18:16
Start line	010	039	18:25
Anomaly #54	011	0	18:55
Anomaly #55			19:00
			19:04

10/01/15 Monday @ 1700GMT

Start lower harbor 5

Comments hypack line  
012  
Magline  
010  
Time  
1802

1816

Ferry on port side  
Cut short for gmt  
contaminated ship

1845

1721

started short at  
larger file due to swell  
lost GPS temporarily

1749

anomaly # 509

1806

line cut short  
due to swell

1854

beet on line

Comments Hypack line  
009  
anomaly #56  
anomaly #57

Magline

Time

1508  
1509  
1511

1515

1518

1521

anomaly #58

1523

1526

1528

1530

1533

notes: completed lower harbor 4

Comments 10/9/12 Tuesday @ 1204 GMT

Mag line 017 Time 1930

Keynote line 007

Weather: cloudy @ 54°F  
wind NW @ 13knts  
waves off (chicken)

anomaly #62

Mag line 018 Time 2006

006  
shallow grass on line  
anomaly #61

Start Cooper River 3

Comments hypack line Mag line Time

004 00 1302  
dredge pipes in area  
anomaly #62 1303  
anomaly #63 (dredge pipe) 1304  
anomaly #64 (dredge pipe) 1304

002 01 1306

anomaly #65 003 02/03 1310  
#66 1311  
1312

001 04 1319  
#67 (square object on side scan) !!  
1319

notes: dredge pipe line running directly  
underneath lines

Start Cooper River 2

Comments	Hypack line	Mag line	Time
	001	05/01	1341
anomaly #68 (busy on port side)			1350
	002	06/07	1359
	003	08/09	1405
anomaly #69			1405
	004	011	1416
crab pots on line			
anomaly #70			1424
#71			1428
#72			1430

anomaly #73 (pipes)  
006 012 1438  
012 1435

Comments	Hypack line	Mag line	Time
anomaly #74	005	013	1443
#75			1445
			1446
shallow survey area			
#76			1448
#77			1448
#78			1450

Comments	Hypack line	Mag line	Time
#79 anomaly			1452
anomaly #80		old pier steel side	1453
anomaly #81		same as above	1454
anomaly #82		" " "	1454
anomaly #83		drudge pipe	1456
anomaly #84			1457
anomaly #85			1501
#86			1502
#87			1503
#88			1504
#89			1505

lots of crab pots along with multiple pipelines and old concrete dock structures #90 1510

Start of Cooper River 1

Comments	Hypack line	Mag line	Time
anomaly #91	010	014	1520
		(S26 bridge)	
anomaly #92	011	015	1538
#93			1542
TAIL			1544
			1545

Comments	Hyperack line	Mag line	Time
anomaly #915			1546
anomaly #96	012	016	1549
#97			1552
#98			1553
#99 (S26 Bridge)			1556
			1609
anomaly #100	013	017	1618
#101 (S26 Bridge)			1622
#102			1624
#103			1629
			1641
rab pits on line	014	018	1645
anomaly #104			1647
#105			1649
#106			1651
#107			1701
#108 (S26 Bridge)			1705
#109			1707

Comments	Hyperack line	Mag line	Time
anomaly #110	017	019	1716
			1718
	018	020	1721
anomaly #111	015/016	021	1729
#112			1734
#113 (S2K non-techn)			1736
<del>#114</del>			1737
#115			1739
#116			1741
#117			1747
#118			1750
#119			1753
			1757
	009	022	1757
lines 7-1 near large ships at dock	007	023	1807
	006	024	1819
	005	025	1825

Comments	Hypack line	Mag line	Time
	004	026/27	1835
	003	028	1840
	002	029	1845
	001	036	1947
	021/020/010	035	1929
anomaly # 121/122			1930
# 123			1938
	008	037	1958

Cooper River

Comments	Hypack line	Mag line	Time
	043	030	1854
anomaly #120			1859
	042	031	1901
	041	032	1906
	040	033	1911

Comments	Hypack line	Mag line	Time
	039	034	1912

notes: mooring buoys and dark near lines. Also lines ran under I526 bridge and produced high mag readings.

10/10/2012 Charleston Post 45  
Magnetometer / Sidescan work

Weather: 50 - 80°F Clear  
Light North Winds  
Waves: 0 - 2' (harbor.)

Continue Lower Charleston Area PS  
near Harbor entrance / jetty's

Mag warning up 12:00 GMT  
Using same configuration as  
previous survey day - may check  
layback as needed

Survey Name: Charleston 1010_2012

Comments	Hypack Line #	Mag Line #	Time
start line	005	000	15:38
anomaly # 124			15:42
anomaly # 125			15:52
start line 4	004/003	001	16:20
anomaly # 126			16:37
anomaly # 127			16:41
shallow < 3 m - offline			16:47
containership port 50 m			16:48
anomaly # 128			16:49
large wake anomaly # 129			16:50
changed cable out to 11 m			17:00
changed layback in Intek2later			
start line	010	002	17:56
start line	001	003	18:16
start line	002	004	18:21
start line	003	005	
start line	005	006	18:42
start line	004	007	19:03
start line	007	008	19:13
start line	008	009	

Comments	Hypack Line #	Mag Line #	Time
start line	009	009	19:37

Lower Charleston Harbor #5 Complete

Start Entrance Channel

start line	013	010	19:47
start line	011	013	19:53
start line	009	014	
start line	007	015	20:11
start line	006	017	21:05

10/11/2012 Thursday  
 WX: 50-78°F Clear  
 Winds: 10-15 kts N/NE  
 Waves: 10-3' (0 harbor)

Notes: filling in shallower water areas today; incoming tide, strong wind offshore

Layback: 2 m

Survey name: Charleston - 10.11-12a



Comments Hypack Line # Mig # Time

Wanda 1 Area 048 000 16:05

anomaly #10 16:11  
marking adjacent to wanda terminal 16:15  
may be impacting mag intensity

start line 049 001 16:20  
anomaly #11 16:23

start line 050 002 16:29  
crab pot online 16:29

start line 051 003 16:35  
anomaly #12 16:36

Wanda 2 Area 007 005

anomaly 14, 15, 16 16:55

anomaly 17 16:57

anomaly 18 16:57

Wanda 2 Area

Comments Hypack Line # Mig Line # Time  
filling in areas 002 006 17:02  
near terminal 17:03  
channel marker to port 17:06

start line 003 007 17:07  
channel marker starboard 17:07

start line 004 008 17:11  
start line 005 009 17:15

start line 006 010

start line 007 011 17:51  
centered ship to port 18:02

Wanda 1

start line 024 012 18:18  
crab pot on fish !!! 18:22

Myers Bend Area 2  
 filling in shallow areas

Comments Hypack Line # Mag Line  
 Start line 005 013  
 anomaly #20  
 anomaly #21  
 anomaly #22  
 Start line 006 014  
 anomaly #23

Lower Harbor #3  
 Comments Hypack Line Mag Line  
 Start line 017 016  
 anomaly #28  
 anomaly #29/30  
 old bike/pipeline

Infrastructure Consulting / Surveying  
 - surveying bridge - possible date 78

Lower Harbor #1  
 Start line 015  
 anomaly #25  
 anomaly #26  
 operating cooper river bridge  
 mag intensity Δing  
 anomaly #27  
 Cooper river bridge

Start line 000 017  
 (under bridge)  
 anomaly #31 008/016 018  
 anomaly #32/33/34  
 bridge remains  
 anomaly #35

Time  
 18:40  
 18:44  
 18:45  
 18:46  
 18:47  
 18:50  
 19:01  
 19:02  
 19:02  
 19:09  
 19:10  
 19:10

Time  
 19:24  
 19:30  
 19:31  
 19:35  
 19:38  
 19:39  
 19:43  
 19:48

Comments Hypack Line Mag Line Time  
 start line 015 019 19:58  
 anomaly # 36 20:03  
 shallow water - break off  
 start line 013 020 20:08  
 anomaly # 37 20:09  
 anomaly # 38 20:12

start line 011 021 20:15  
 end mapping 20:24

10/12/2012 Friday

Continue w/ Charleston Entrance Channel  
 WX. Cur 75'  
 Wind light out of north  
 Waves 0-2'

Comments Hypack Line # Mag Line # Time  
 start line 006 000 13:22  
 start line 005 001 14:20  
 channel marker 22 14:25  
 channel marker 20 14:35  
 anomaly # 40 14:40  
 start line 004 002 14:45  
 anomaly # 41 15:06

start entrance channel 1  
 start line 001 003 15:39  
 channel marker #17 starboard 16:08  
 start line 004 16:09  
 channel marker #17 16:10  
 channel marker #19 16:27  
 anomaly # 41

start line 002 005 16:48  
 channel marker #21 port 16:50  
 start line 005 006 17:22  
 anomaly # 43 17:24  
 start line 006 007 18:49

start  
 anomaly # 41 18:28

10-15-2012 Monday 9:30 A.M (13:30 GMT)

10x: Overcast / T-stems approaching  
Temp 75°F Winds: W/SW 5-10 kts  
Waves 1-2' Entrance Channel

Continue Entrance Channel  
Layback ~ 10.5 m (cable out)

Comments	Hypack Line	Mg Line	Time
Start line outside jetties	008	000	14:28
anomaly # 45			15:08
start line			15:42
anomaly # 46 / channel marker starboard			16:16
anomaly # 47 / channel marker starboard			16:30
anomaly # 49 LARGE CONTAINER SHIP PORT			17:38

Start line	008	002	18:02
Reduced layback due to shallow water			19:03

Line out = 7 m

Comments	Hypack Line	Mg Line	Time
Start line	003	003	19:15

anomaly # 50			19:18
anomaly # 51			19:19

19:30 End survey - increased winds (SW 10-15)  
and waves (3') in harbor entrance

10-16-2012 Tuesday 8:00 A.M  
Attempt survey of Entrance Channel

Winds NNE 15-20 gusty to 25  
NO SURVEY / ATTEMPT LATER

12:00 P.M (16:00 GMT)  
Winds subsided slightly - all empty &  
mark lines with channel entrance

Wind N/NE 15 mph			
Waves 2-3'			
First Layback (cable out) = 4.5 m			

↳ shallow areas  
to survey

10-17-2012 Wednesday Outside Jetties

Weather: Clear 60-75°F  
Winds Light E/NE  
Waves 1-3

Comments	Hydro Line #	Mag	Time
start line	003	008	16:18
anomaly #52			16:20

still very choppy - mag data pretty noisy  
due to seas/limited layback

anomaly #53			16:25
anomaly #54			16:25

target on starboard side scan

anomaly #55 (slight)			16:27
anomaly #56 (slight)			16:28
anomaly #57 (slight)			16:37

start line	002	001	16:43
anomaly #58			17:08
anomaly #59			17:10

strong current - crabby boat

start line	001	002	17:55
anomaly #64			18:10
anomaly #65			18:13

11-5-2012 Monday

Charleston Post 45 / RV Cape Fear

Wind N 15-20

Waves 4-5'

Comments    Hypack Line #    Mag #    Time

start line #0    #2    000    19:14  
entrance channel #1 area

start line 1    #10    001    19:59  
entrance channel 2 area

alternating between entrance channel 1/2  
easier for Captain to turn vessel

only working in inner half of  
entrance channel area due to  
high waves / winds

start line 2    #1    002    20:42  
entrance channel #1 area

Comments    Hypack Line    Mag Line    Time  
start line 3    #6    003    21:27  
entrance channel 2 area

start line 4    #3    004    22:13  
entrance channel 1 area

anomaly    #09    22:50

start line 5    #8    005    22:39

GPS hiccup    22:55

start line 6    #4    006    23:14  
entrance channel 1

anomaly #71    23:31

start line 7    #10    007    00:44  
outer portions of entrance channel

CONTAINER SHIP DETECT  
↳ MAG 

start line 8    #3    008    01:24

Comments	Hyack Mag	Time	11-7-2012	Charleston Post 45
anomaly #13		01:50	R/V Cape Fear	
start line	#8	02:16	Weather: Partly Cloudy 60°F	
Buoy to Port - off line			Winds NNW 12-17 kts	
			Waves 2-4'	
start line	#2	02:58	Hyack line	Mag Line Time
start line	#6	03:49	#5 / Entrance 1	000 13:10
start line	#1	04:31	Anomaly #77	Buoy to Port 13:15
			#17	
start line	#5	05:26	Container Ship Port	13:23
			Channel Entrance 2	
start line	#5	06:05	Container Ship Port	13:27
			Entrance Channel 1	
start line	#4	06:55	Anomaly #72	13:52
			start line	
start line	#6	07:40		
			entrance channel #1	
			start line	002 14:05
			start line	004 14:32
			anomaly #19	Buoy to 14:29

Comments	Work #	Mag #	Time	Comments	Page #	Mag #	Time
Assembly # 20			14:44	start line	01	8	2131
start line	008	004	15:04	start line	02	9	2142
Assembly # 81			15:17				
Assembly - Condenser Strip to Part			15:25	start line	03	9	2225
					04	9	2225
Assembly # 82		005	15:24	start line	10	10	2558
start line	007	006	15:57	start line	5	11	2329
Assembly # 83			16:12				
	2	007	17:00	use strip to part - mag data collected			0022
				start line	6	12	0056
			17:30	start line	7	13	0214
			17:30	start line	8	14	0341
				start line	9	15	0450
				start line	9	11	0001



Comments	Hydrant #	Mag #	Time	Location	Type of loss	Mag #	Line
Start Line	17			W.L.	2	7	2030
<del>Station # 3</del>	<del>17</del>				channel extension 2		
<del>Station # 3</del>	<del>17</del>						

11-10-2014	2				Channel Marker to port		2044
SOL	20	2	1853	SOL	Hydrant #5		
Extension #3					channel extension 2	8	
SOL	20	2	1853	SOL	18	10	1043
Extension #3					Extension 3		

Log Book on line 5 to 35 on 1901

SOL	20	3	1901	SOL	16	11	2315
Extension #3					extension #3		

Station #3

SOL	24	4	1936	Station #13 Sec Buoy			2315
Extension #3							

SOL	24	5	1945	SOL	14	12	2344
Extension #3					Extension #3		

SOL	19	6	1901	SOL	3	13	2517
Extension #3					Extension #3		

11/11/2004 survey

Comments	HYPAK	MAG	TIME	Comments	HYPAK	MAG	TIME
SOL EXTENSION #3	5	14	0530	SOL EXTENSION #3	13	26	0734
SOL EXTENSION #3	5	15	0128	SOL	17	27	0913
SOL EXTENSION #3	9	16	0202	SOL	14	28	0848
SOL EXTENSION #3	9	16	0202	SOL	13	29	0926
SOL EXTENSION #3	4	16	0239	SOL	15	30	1001
SOL EXTENSION #3	10	17	0314	SOL	19	31	1041
SOL	7	18	0351	SOL	16	32	1129
SOL	12	19	0425	SOL	23	33	1153
SOL	6	20	0459	SOL	21	34	1234
SOL	11	21	0538	SOL	25	35	1307
SOL	13	22	0611	SOL	22	36	1346
SOL	8	22	0655	SOL	24	37	1420

RAM LINE, NO ANOMALIES OBSERVED DATA

Change bookings in GPS

Comments	Bypack	May	Time	Comments	Bypack	May	Time
SOL	3	38	1454	moving to ADMDS CR#1	44	2031	
SOL	6	39	1719	SOL 30 ADMDS CR#1	44	2303	
SOL	2	40	1823	SOL 24 US 2335	47	2538	
SOL	5	41	1915	Anomaly #17			
SOL	4	42	2020	Anomaly #18			2346
LARGE CONTAINER SHIP TO SCARISBATH				Anomaly #19			2348
MAC ANOMALY				Anomaly #20			2552
Anomaly #15				Anomaly #21			2879
Minor light in sidescan as well				11-17-1012			
Changed May channel trace (can not scrub to 20x scaling (red area))				SEAS INCREASE 3 JN EMBELLY			
Anomaly #16 (very minor blip)				DETECT 206			
SOL	31		2152	SOL 31 46 0007			
				Anomaly #22			0034
				<del>SOL</del> SOL 21	47	0040	
				Anomaly #24			0104
				SOL 29	48	0111	
				SOL 29	50	0119	

Comments	Hypocenter	Mags	Time
Anomaly #14	20	57	0404
SOL	20	58	0437
Anomaly #15	20	59	0446
LOW G/N, ESE-NE CONTINUE LOGGING JOB	20	59	0510
SOL	20	60	0525
Slight anomaly #16	21	61	0614
SOL	21	62	0650
SOL	21	63	0721
Anomaly #17	21	64	0757
possible small height in section	21	65	0828
SOL	21	66	0903
Anomaly #18	21	67	0933

Comments	Hypack	Mag	Time	Comments	Hypack	Mag	Time
GPS stopped on mag			0945	SOL	9	75	1311
Rebooted MagLog software				* Anomaly # 27			1331
GPS back		68	0950	SOL	3	76	1341
SOL				<del>SOL</del> Anomaly # 28			1402
	18	69	1009	Suspended survey to refuel 1415			
<del>DATA</del> BRARE 6.0 NE			1015	new mag project 11-12			
	2	70	1027	SOL	# 5	0	1943
	18	71	1058	Anomaly # 29			1951
Anomaly 1124	18	71	1109	general area of low? intensity anomaly.			
* Anomaly # 25	71		1114	EOL			2010
SOL	6	72	1131	SOL	8	01	2014
	10	73	1205	Anomaly # 30			2029
	1	74	1237	(Low intensity)			
SOL				SOL	4	02	2040
				SOL	7	03	2111

standing CDMS cultural resource  
grid #2

Comments	hypack	Mag	Time
SOL	44	4	2155
SOL	37	5	2222
<del>SOL</del>			
SOL	43	6	2250
SOL	<u>30</u>	7	<u>2312</u>
anomaly possibly artificial signal level dropped for unexplained reason spotted on deck and redeployed			
SOL	42	8	2350
Anomaly #6 (low intensity) New Day			
SOL	32	9	0015

Comments	HyPark	Mag	Time
SOL	38	17	0337
SOL	24	18	0405
SOL	36	19	0435
SOL	26	20	0503
SOL	35	21	0531
SOL	23	22	0600
SOL	34	23	0628
SOL *	22	24	0656
SOL * ANOMALY #13	29	25	0720 0722
SOL	19	26	0750
SOL	27	27	0816
SOL	18	28	0846

Comments	HyPark	Mag	Time
SOL	41	10	0049
ANOMALY #7			0046
SOL	33	11	0107
SOL	10	12	0237
* SOL	31	13	0204
ANOMALY #8			0214
ANOMALY #9			0231
SOL	39	14	0235
REDO TIME			
SOL	37	15	0243
ANOMALY	10		0244
SOL	29	016	0307
ANOMALY #11 (minor intensity)			0309

Comments	HYPACK	MAG	TIME
LOST GPS			0842
SOL	19	29	0951
CHANGED GPS BATTERY			
SOL	25	30	0913
SOL	17	31	0943
SOL	21	32	1011
SOL	8	33	1040
SOL	16	34	1108
SOL	7	35	1136
Anomaly #14 (minor intensity)			1200
SOL	15	36	1205
SOL	6	37	1232
Lost GPS			1233
GPS back			1234

Comments	Hypack	MAG	TIME
SOL	14	39	1302
SOL	5	40	1328
SOL	13	41	1359
SOL	4	42	1427
SOL	12	43	1457
SOL	3	44	1525
SOL	11	45	1555
Anomaly #15/16 Possible drill mine remnants?			1557
SOL	2	46	1621
Anomaly #17 (minor intensity)			1632
SOL	10		1652
Anomaly #18			1701



Comments	Hypack	Maj	Time
SOL	1	48	1718
SOL	9	49	1749
Completed Sterling	ODMS UR #2 ODMS CR #3		
SOL	1	50	1813
-0-	1/1	51	1821
708	8	52	1827
702	2	53	1834
708	8/3	53	1841
708	9	54	1846
708	3	55	1854
708	10	56	1907
702	4	57	1914

Comments	47/FALL	MAG	TIME
SOL	11	58	1936
708	5	59	1931
708	10	60	1941
708	6	61	1948
708	13	62	1958
708	2	63	2003
708	2	63	2006

Final Summary

07-13 Monday

Myers Bend Sidescan (H1) - old naming  
Creek pots along centerline of polygon  
↳ may not be able to map

Wx 55°F Waves 1-2' to map  
Wind NE 10-20 KTS

Original gap due to obstruction/backward  
↳ correct map this area

10-10 Wx. on port side  
Sun CC vessel

16-16 Target on port side

18-20 Line 3 - overlap

may not be usable due to  
prop wash from very rearward  
ship to starboard

18-23 debris on starboard channel

log/pipe?

10-11 LHI holiday

10-12 Boat wake to port

Scalke Search L44/L45

- NE 15 kts / Waves 1-2'
  - all wire replot
  - depth 13 m
  - fish altitude 8.9 m
  - file 1805
  - 1812
  - 1816
- Mag Logbook  
Cable cut = 20-

Time	Hypack #	Mag. #	Comment
18:38	L4510	Line 0	SOL

Bucking Tide / Towfish 9.5 m off bottom

18:47 anomaly observed (H10) *

18:54 L4507 Line 91

18:57 anomaly observed (H11)

19:00 anomaly observed (H17)

19.02 LHS 98 02 SOL  
19.04 anomaly (#13)

19.14 LHS 97 03 SOL

19.17 anomaly observed (#16)

19.21 crab pot to starboard  
no anomaly

19.21 anomaly (#17)

19.26 anomaly (#18)

19.27 dedging crab pots

19.42 LHZ holidays SOL  
19.44 LHZ-08

19.45 anomaly observed (#19)

19.48 LHZ-07 SOL  
19.50 ~~KA~~ anomaly (#20)

19.53 LHI/LH3 Holidays SOL  
19.54 LHI-12 SOL  
19.56 007 SOL

19.57 LHI Test lines SOL  
20.00 LHI-16 008 SOL

20.01 slight anomaly (#22)

20.04 anomaly (#23) * major  
h.t.F

79.917 32.801

offering bridge - readings  
avoiding rocks to port  
may be impacted

20.07 major anomaly at base of  
caveal bridge (#24)

another major anomaly (#25)

~~20.10~~ 20.10 avoiding channel marker -  
20.11 back online

20.12 anomaly observed (#26)

Time: 11:00 AM  
 20-15 LHI-14

20-17 Channel marker to post  
 20-17 ~~no~~ more anomaly (< 50ft)

20-18 Channel marker to standard  
 more anomaly (< 50ft)

20-19 anomaly Repeat Budget  
 20-21 anomaly (H 20)  
 20-24 anomaly (P 25)  
 budget debris?

20-25 follow to avoid rocks/budget  
 20-25-40 entire/moving away from  
 budget

20-26 anomaly (H 20)  
 channel marker to post

20-27 anomaly (H 20)  
 channel marker to post

1-10-2013 Charlotte Offshore

Video Tows

Sediment Grabs

Magnetometer Holdings

Weather: Sunny 60-70° F  
 Winds S/SW 10-15  
 Seas 2-3'

Time	Mag #	Notes	Time	Mag #	Notes
181214	0	logging entrance channel #2 setting SPS in data 50 m cable out	190800	03	logging near channel marker # 6
181910		slowing boat to 55 kts	1913		end logging
182710	1	fish flying e 8-10 m	191718	04	logging
182752	2	bad line / ignore	192150		channel marker to port #4
182950		vessel to port (100m)	192220		channel marker anomaly #23
183610		small increase in signal no major hit	193755		channel marker #2 to starboard
1839		larger swell / chop			no anomaly mag display

225540

S

Loss

Entrance

Channel

South side

Channel marker

#13

minor anomaly

230415

34" waterline

to transducer

MRU = 0/0

GPS 50" to starboard

from MEU

GPS 132" forward of MRU

MRU 96" to water line

Post 45 Single Beam Notes

11/7/12

Notes	GPS Status	Hyperbolic line	time
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By Wake lost signal			1323
RTK Fix		5	1325

RTK Fixed	1	1339	
Entrance Channel 1		<del>13</del>	

RTK Fixed	6	1405	
Entrance Channel 1			

RTK Fixed	4	1432	
Entrance Channel 2			

RTK Fixed	8	1504	
Entrance Channel 1			

RTK Fixed	5	1535	
Entrance Channel 2			
STAND-ALONE		1540	

GPS STATUS HYPACK TIME  
Missing notes several times

STAND ALONE 14 2344  
EXTENSION #3

11-11-2012

STAND ALONE 8 0017  
EXTENSION #3

STAND ALONE 7 0050  
EXTENSION #3

STAND ALONE 5 0127  
EXTENSION #3

STAND ALONE 9 0202  
EXTENSION #3

STAND ALONE 4 0239  
EXTENSION #3

STAND ALONE 10 0314  
EXTENSION #3

Stand Alone 7 0351  
Extension #3

GPS STATUS Hypack Time  
- STAND Alone 7 1559

- STAND ALONE 2 1719  
(channel entrance)

- STAND ALONE 2 2141  
Channel Extension #1

- STAND ALONE 1  
Extension #1

11-10-2012  
STAND ALONE 25 1759  
Extension #3 1810

STAND ALONE 20 1853  
Extension #3

STAND ALONE 24 1926  
EXTENSION #3

STAND ALONE 19 2001  
EXTENSION #3



11-11-2012

Notes	STATUS	Hypack #	Time
SOL	standalone	12	0425
SOL	STANDALONE	6	0459
SOL	standalone	11	0538
SOL	standalone	3	0611
SOL	stand alone	8	0655
OFF line for container ship			0719
BACK online			0718
SOL	stand alone	13	0739
SOL	STANDALONE	17	0813
SOL	STAND ALONE	14	0848
SOL	STANDALONE	18	0926
SOL	STANDALONE	15	1001
SOL	STANDALONE	19	1041
SOL	STANDALONE	16	1129

11-11-2012 Sunday Continued

SOL	standalone	23	1153
SOL	standalone	21	1239
	Recording GPS Raw Data		
	standing @ 1200		
SOL	standalone	25	1307
SOL	standalone	22	1348
SOL	stand alone	24	1420
SOL			

Notes	Status	hypack	time
SOL	stand alone stand extension #3	3	1454
SOL	stand alone	6	1719
SOL	stand alone	2	1823
SOL	stand alone	5	1915
SOL	stand alone	4	2020
SOL	stand alone	1	2115

1-23-2013 Wednesday

Charleston Harbor Single Beam

Wx 45°F Wind N 7-12 KTS

Waves 1-2' @ harbor  
e Jetties

Base Station: SC Geodetic Virtual

QC @ Remyles Point

PID # DM3305

Northing: 3631195.91 m ✓

Easting: 602317.97 m ✓

Elevation ~~1.71~~ m ✓

1.71

SVI = 1497 m/s

Time	Lower Harbor Area	Time	Hypack Line	Comments
15:10	Hypack Line Start 10	1636	4	SOL/FIXED
15:18		1646		EOL
15:21	10	1651	5	SOL/FIXED
15:34		1717		EOL
15:35	switching to sample Virtual Point	1727	Lower Harbor 	SOL/FIXED
15:42	01	1738		EOL
16:00				switching to wendo/myers virtual base station
16:01	02	1743	9	SOL/FIXED
16:27		1747		EOL
16:29	03	1748	8	SOL/FIXED
16:33		1751		EOL

Time	Hyperick Line	Comments	Time	Hyperick Line	Comments
17:53	7	SOL/FIXED EOL	18:24	4	EOL/
17:58	6	SOL/FIXED	18:25	5	SOL/FIX
18:01		EOL/FIXED	18:24		lost fix
18:03	7	SOL/FIXED	18:29:50		Fixed
18:07		under bridge lost fix	18:30		under body lost fix
18:08		exiting bridge Fixed	18:32		exiting body / RTV fix
18:13		EOL	18:35	3	SOL/FIXED
18:16:35	7	SOL/FIX	18:36		EOL
18:18		under bridge lost fix avoiding bridge support	18:37	2	SOL/FIXED
18:20		Fixed	18:40		EOL
			18:41	1	SOL/FIXED
			18:45		

Bridy support online  
moving to port to avoid

<u>Time</u>	<u>Hypack Line #</u>	<u>Comments</u>	<u>Time</u>	<u>Hypack Line #</u>	<u>Comments</u>
1903	1	SOL/FIXED	2003		EOL
1913		EOL	2004	10	SOL/FIXED
1914	2	SOL/FIXED	2007	11	SOL/FIXED
1926		EOL	2009		EOL
1927	3	SOL/FIXED	2011	12	SOL/FIXED
1938	8	SOL/FIXED			DREOGE ONLINE - ABORTING
1944	4	SOL/FIXED	2015	13	SOL/FIXED
1946	7	SOL/FIXED			switched here to White / Myers Band
1949	5	SOL/FIXED			Myers Bend Polygon
1952	6	SOL/FIXED	2022	1	SOL/FIXED
1957	9	SOL/FIXED			Winds increased
2000		under bridge			seas 1' chop
2001		no fix			

<u>Time</u>	<u>Hypack Line #</u>	<u>Comments</u>
21:38	13	SOL/FIXED
21:43	14	SOL/FIXED
21:41	15	SOL/FIXED
21:47	11	SOL/FIXED
21:48	12	SOL/FIXED
21:53	16	SOL/FIXED
22:07	17	SOL/FIXED

22:20 End of Survey

<u>Time</u>	<u>Hypack Line #</u>	<u>Comments</u>
20:37	2	SOL/FIXED
20:41	3	SOL/FIXED
20:48	5	SOL/FIXED
20:50	4	SOL/FIXED
		<u>WANTS POLYGONS</u>
20:58	2	SOL/FIXED
21:00	3	SOL/FIXED
21:03	1	SOL/FIXED
21:07	5	SOL/FIXED
21:14	6	SOL/FIXED
21:16	7	SOL/FIXED
21:25	8	SOL/FIXED
21:30	9	SOL/FIXED
21:41	10	SOL/FIXED

# Post 45 survey Areas

## Old Block name

Entrance Channel 2  
Channel Extension 1  
Channel Extension 2  
Channel Extension 3  
Entrance Channel 1  
Lower Harbor 5  
Lower harbor 4  
Lower Harbor 1  
Lower Harbor 2  
Wando River 1  
Wando River 2  
Myers Bend 2  
Myers Bend 1  
Cooper River 3  
Cooper River 2  
Cooper River 1  
Cooper River

ODMDS Hardbottom  
ODMDS Hardbottom 2  
ODMDS Hardbottom 3  
ODMDS Survey 1  
ODMDS Survey 2

## New Block Name

Entrance Channel 1  
Entrance Channel 1  
Entrance Channel 1  
Entrance Channel 1  
Entrance Channel 2  
Lower Harbor 1  
Lower Harbor 2  
Lower Harbor 4  
Lower Harbor 5  
Wando River 1  
Wando River 2  
Myers Bend 1  
Myers Bend 2  
Cooper River 1  
Cooper River 2  
Cooper River 3  
Cooper River 3

ODMDS Hardbottom  
ODMDS Hardbottom 2  
ODMDS Hardbottom 3  
ODMDS Survey 1  
ODMDS Survey 2