NOAA *Okeanos Explorer* Program

MAPPING DATA ACQUISITION AND PROCESSING REPORT

CRUISE EX1205 Leg 1

Exploration: Blake Plateau

July 5 - 24, 2012

Report Contributors:
Elizabeth Lobecker, Adam Skarke, LT Megan Nadeau, Laura Brothers, Brian Bingham, Lillian Stuart, Jessica Sheehan, Dominique Paxton

November 6, 2012

NOAA Office of Ocean Exploration and Research
1315 East-West Hwy, SSMC3, #10210
Silver Spring, MD 20910

1. Introduction

The *Okeanos Explorer* Program

Commissioned in August 2008, the NOAA Ship *Okeanos Explorer* is the nation's only federal vessel dedicated to ocean exploration. With 95% of the world's oceans left unexplored, the ship's combination of scientific and technological tools uniquely positions it to systematically explore new areas of our largely unknown ocean. These exploration cruises are explicitly designed to generate hypotheses and lead to further investigations by the wider scientific community.

Using a high-resolution multibeam sonar with water column capabilities, a deep water remotely operated vehicle, and telepresence technology, *Okeanos Explorer* provides NOAA the ability to foster scientific discoveries by identifying new targets in real time, diving on those targets shortly after initial detection, and then sending this information back to shore for immediate near-real-time collaboration with scientists and experts at Exploration Command Centers around the world. The subsequent transparent and rapid dissemination of information-rich products to the scientific community ensures that discoveries are immediately available to experts in relevant disciplines for research and analysis.

Through the *Okeanos Explorer* Program, NOAA's Office of Ocean Exploration and Research (OER) provides the nation with unparalleled capacity to discover and investigate new oceanic regions and phenomena, conduct the basic research required to document discoveries, and seamlessly disseminate data and information-rich products to a multitude of users. The program strives to develop technological solutions and innovative applications to critical problems in undersea exploration and to provide resources for developing, testing, and transitioning solutions to meet these needs.

Okeanos Explorer Management – a unique partnership within NOAA

The *Okeanos Explorer* Program combines the capabilities of the NOAA Ship *Okeanos Explorer* with shore-based high speed networks and infrastructure for systematic telepresence-enabled exploration of the world ocean. The ship is operated, managed and maintained by NOAA's Office of Marine and Aviation Operations, which includes commissioned officers of the NOAA Corps and civilian wage mariners. OER owns and is responsible for operating and managing the cutting-edge ocean exploration systems on the vessel (ROV, mapping and telepresence) and ashore including Exploration Command Centers and terrestrial high speed networks. The ship and shore-based infrastructure combine to be the only federal program dedicated to systematic telepresence-enabled exploration of the planet's largely unknown ocean.

Table of Contents

2. Report Purpose

The purpose of this report is to briefly describe the mapping data collection and processing methods, and to report the results of the cruise. For a detailed description of the *Okeanos Explorer* mapping capabilities, see appendix D and the ship's readiness report, which can be obtained by contacting the ships operations officer (ops.explorer@noaa.gov).

3. Cruise Objectives

The EX-12-05 Leg 1 *Sentry* AUV cruise represents a partnership between NOAA *Okeanos Explorer* Program, National Science Foundation (NSF) and Woods Hole Oceanographic Institution (WHOI) - with each partner bringing different but complementary objectives to the table. NOAA's Office of Ocean Exploration and Research (OER) primary focus during EX-12-05 Leg 1 is to test the use of an AUV operated from *Okeanos Explorer* while the ship is outfitted for "full" exploration mode (with joint ROV operations), to explore what it will take to integrate an AUV into telepresenceenabled exploration. NSF and WHOI objectives for this cruise include a series of engineering trials and experiments of the *Sentry* AUV capabilities. NSF objectives for this cruise also include survey data collection using the *Sentry* AUV and *Okeanos Explorer* systems that will support a follow-on NSF-funded project at Blake Ridge in 2013 with Principle Investigator, Cindy Van Dover.

Specific objectives of the mapping team included:
• Conduct training of new mapping interns and watchstanders.
• Collect multibeam, singlebeam and sub-bottom data during transit
• Collect single beam and sub-bottom profiler data of the Hatteras Transverse Canyon and surrounding area
• Test the ability to conduct EM302 multibeam mapping operations while the *Sentry* AUV is on the seafloor
• Add to pre-existing Law of the Sea and *Okeanos Explorer* bathymetric data coverage in the region if possible
• Develop joint mapping products with the *Sentry* AUV team
• Assess the Reson 7125 multibeam system for potential integration on the Pheonix ROV or another future OER vehicle

4. Participating Mapping Personnel

NAME	ROLE	AFFILIATION
CDR Robert Kamphaus	Commanding Officer	NOAA Corps
LT Megan Nadeau	Field Operations Officer	NOAA Corps
Adam Skarke	Mapping Team Lead	NOAA OER (ERT Inc.)
Elizabeth "Meme" Lobecker	Mapping Team Lead	NOAA OER (ERT Inc.)
Lillian Stuart	Augmenting Senior Survey Technician	NOAA OMAO
Jessica "Jay" Sheehan	Mapping Watch Lead	NOAA OER / UCAR
Dominique "Domi" Paxton	Mapping Intern / Watchstander	NOAA OER / UCAR

5. Summary of Major Findings

Cruise Map

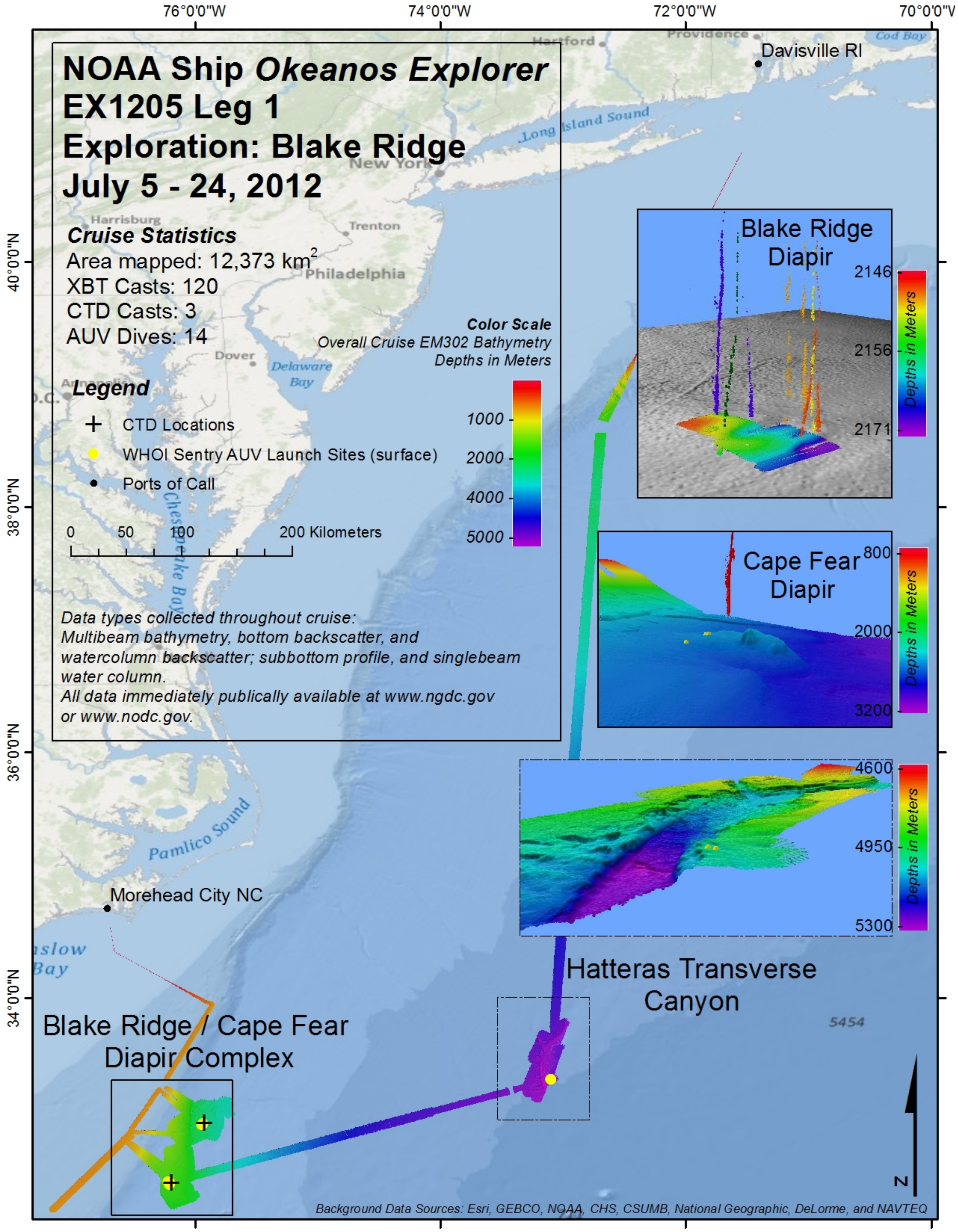

Figure 1. Cruise map made in ArcMap 10 showing overall cruise track and key operational areas.

Features of Interest

Hatteras Transverse Canyon

The Hatteras Transverse Canyon is one of the least studied submarine canyons along the US Atlantic Margin. Prior to EX1205L1, only two research efforts had characterized the canyon: the national sidescan sonar effort GLORIA (Geological LOng-Range Inclined Asdic, 1984), and the 2006 multibeam survey conducted as part of the Extended Continental Shelf (ECS) work partially funded by OER. From July 7-9th three *Sentry* engineering dives were conducted at the canyon. These dives were interspersed with shipboard mapping efforts, which resulted in the highest resolution multibeam map to date of the central thalweg and the first subseabed data collected in the canyon in nearly thirty years. Multibeam data were collected with the same trackline orientation as the 2006 ECS data to facilitate future quantitative comparisons and difference analyses of the two datasets. Further analysis of the new *Sentry* and *Okeanos Explorer* datasets will result in a better understanding of the Hatteras Transverse Canyon's role in continental slope sedimentary transport pathways.

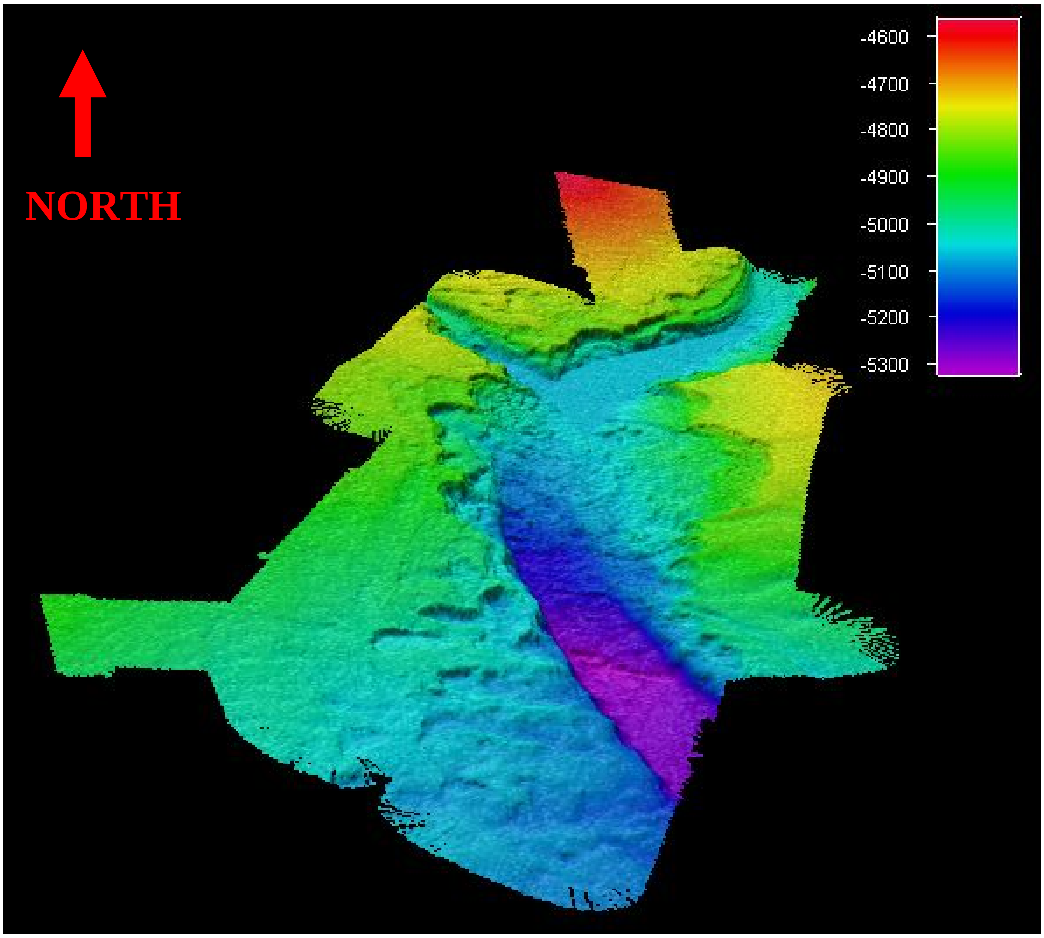

Figure 2. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Hatteras Transverse Canyon. Grid cell size 30 meters. Depth values range from -4600 to -5300 meters. Vertical exaggeration of six applied.

Blake Ridge and Cape Fear Diapir Complex, Adjacent 800-900 Meter Contour Line Development

The abundance and global distribution of cold seeps are unknown. Similarly, the diversity, frequency and distribution of associated chemosynthetic ecosystems have yet to be determined. EX1205 Leg 1 combined the complementary data collection capabilities of *Okeanos Explorer* and *Sentry* to identify and characterize cold seeps at the Blake Ridge and Cape Fear Diapirs. Data types collected by the ship included multibeam bathymetry, bottom backscatter and water column backscatter; 3.5 kHz subbottom profiler; EK 60 singlebeam echosounder; and CTD data. Data types collected by the AUV included multibeam bathymetry (including water column), side scan sonar, chirp subbottom, reduction potential, optical backscatter, and photographic images.

The combination of *Okeanos Explorer's* shipboard systems and *Sentry's* data collection capabilities resulted in the successful reoccupation of the known Blake Ridge Diapir seep and the identification of two new seep communities located 1.5 kilometers north of the known seep and another at the Cape Fear Diapir. New sites for seep investigation were initially determined based on water column anomalies, interpreted as bubble plumes, and identified in the ship's multibeam and echosounder data. Subsequent dives by *Sentry* resolved coincident zones of high backscatter, micro-topographic relief, and acoustic and geochemical water column anomalies. These observations were "ground truthed" as seabed seeps with *Sentry*-collected photos of extensive chemosynthetic communities. Co-located subbottom data indicate subsurface conduits associated with the seeps. With this methodology cruise EX1205L1 resolved gas migration from 40 m below the seabed up to 1330 meters above the seabed, mapped in high resolution the spatial distribution of chemosynthetic communities along the Blake Ridge and Cape Fear Diapirs, and tripled the number of known seep communities along the US Atlantic margin. These findings lay the groundwork for further scientific exploration and sampling.

Maps of all Sentry dive tracks are provided in the appendices of this report.

Table 1. Table of seeps detected during cruise.

Seep ID	General Location	Longitude	Latitude	Depth (meters)	Maximum Observed Height (meters)
1	Blake Ridge Diapir	76 11.4148248	32 29.61345	2226	1330
2	Blake Ridge Diapir	76 11.748054	32 30.360744	2154	1104
3	Blake Ridge Diapir	76 11.4969372	32 29.7349284	2165	Not determined
4	Blake Ridge Diapir	76 11.5579248	32 29.380578	2173	1148
5	Blake Ridge Diapir	76 11.4067452	32 29.7537162	2166	1147
6	Blake Ridge Diapir	76 11.8522608	32 30.2640894	2155	1060
7	Blake Ridge Diapir	76 11.7156462	32 30.27021	2156	1045

8	Blake Ridge Diapir	76 11.9095482	32 29.6796246	2159	Not determined
9	Blake Ridge Diapir	76 11.316267	32 30.3231726	2162	Not determined, seep may be a nadir data artifact
10	Cape Fear Diapir	75 55.5836292	32 58.8205692	2579	1163

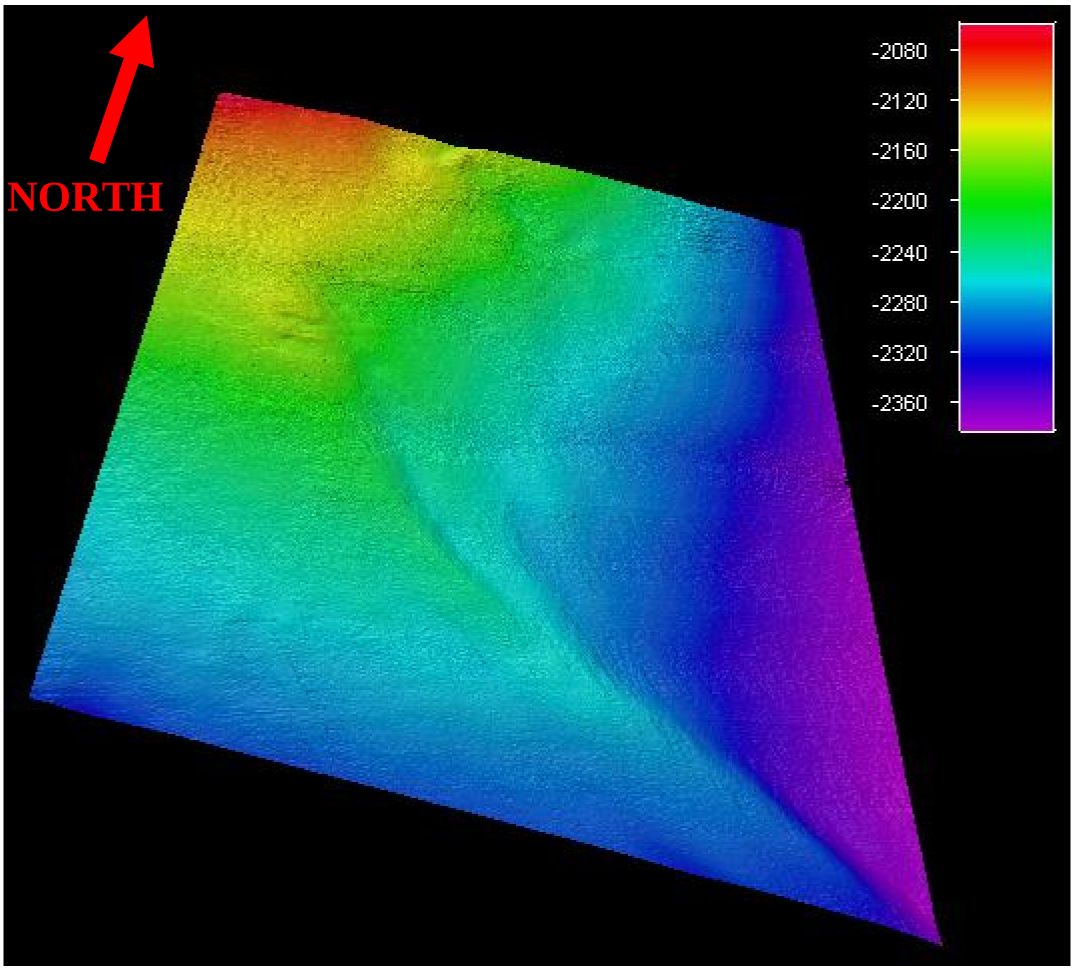

Figure 3. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Blake Ridge Diapir. Multibeam bathymetry grid cell size 30 meters. Numerical depth values displayed range from -2080 to -2360 meters. Vertical exaggeration of six applied.

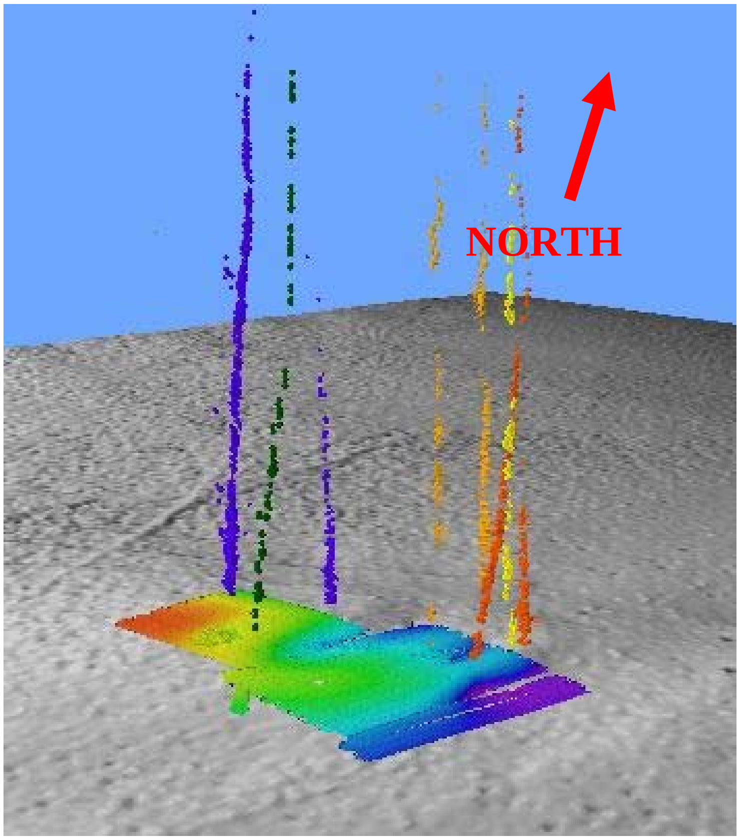

Figure 4. Screen grab taken in Fledermaus of gridded EM 302 data, gridded Reson 7125 data, and vents detected at Blake Ridge Diapir using *Okeanos Explorer's* EM 302 multibeam water column data.

The Reson 7125 s7k format files collected by *Sentry* were not embedded with navigation data. During the cruise, the mapping department worked with shore based Fledermaus software developers to utilize a new Fledermaus Midwater plug-in that is designed to import and apply ASCII navigation files to raw water column files. It was discovered that the plug-in required additional development before it would work, and at the time of writing this report, was still under development.

However, the ship based data processing team was able to import several key files into Fledermaus Midwater in order to investigate the Reson 7125's ability to detect the same seep activity as the EM 302. The results, as demonstrated in the figures below, were that the system was able to detect seep activity while *Sentry* was flying at 30 meters altitude. The seep activity appears as the green "cloud" in the surrounding blue water mass.

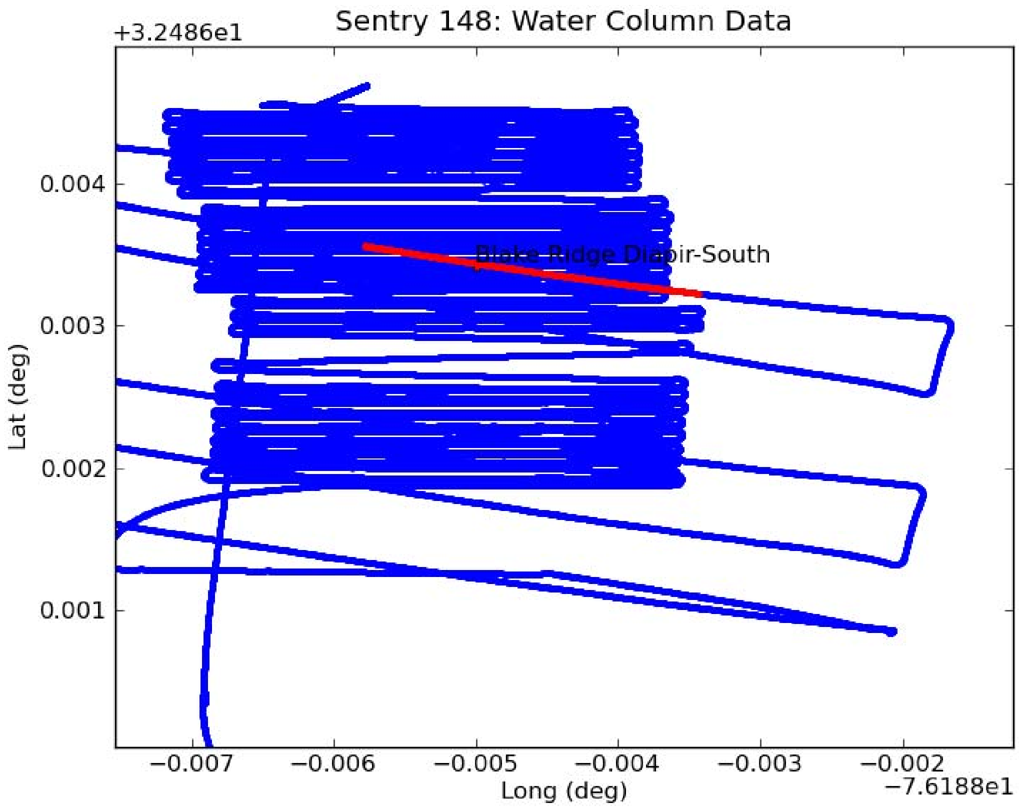

Figure 5. *Sentry* AUV Dive 148 tracklines over Blake Ridge Diapir. Red line indicates section of Reson 7125 multibeam water column seen in figure below.

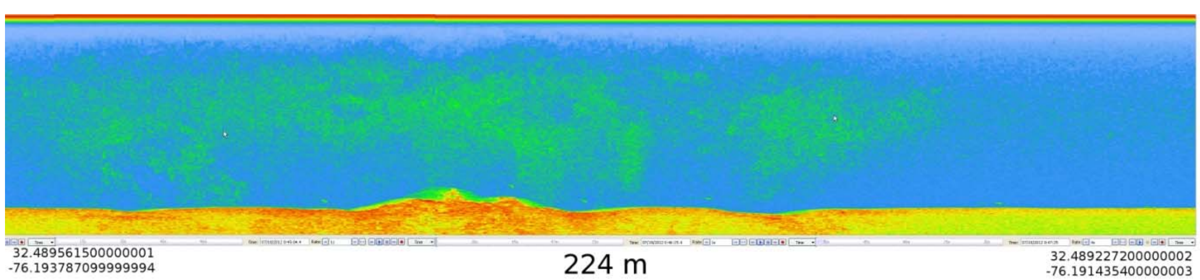

Figure 6. *Sentry* AUV Dive 148 multibeam water column backscatter data collected over Blake Ridge Diapir, clearly showing evidence of seep activity (green returns) in the water column. 224 m indicates displayed horizontal image length.

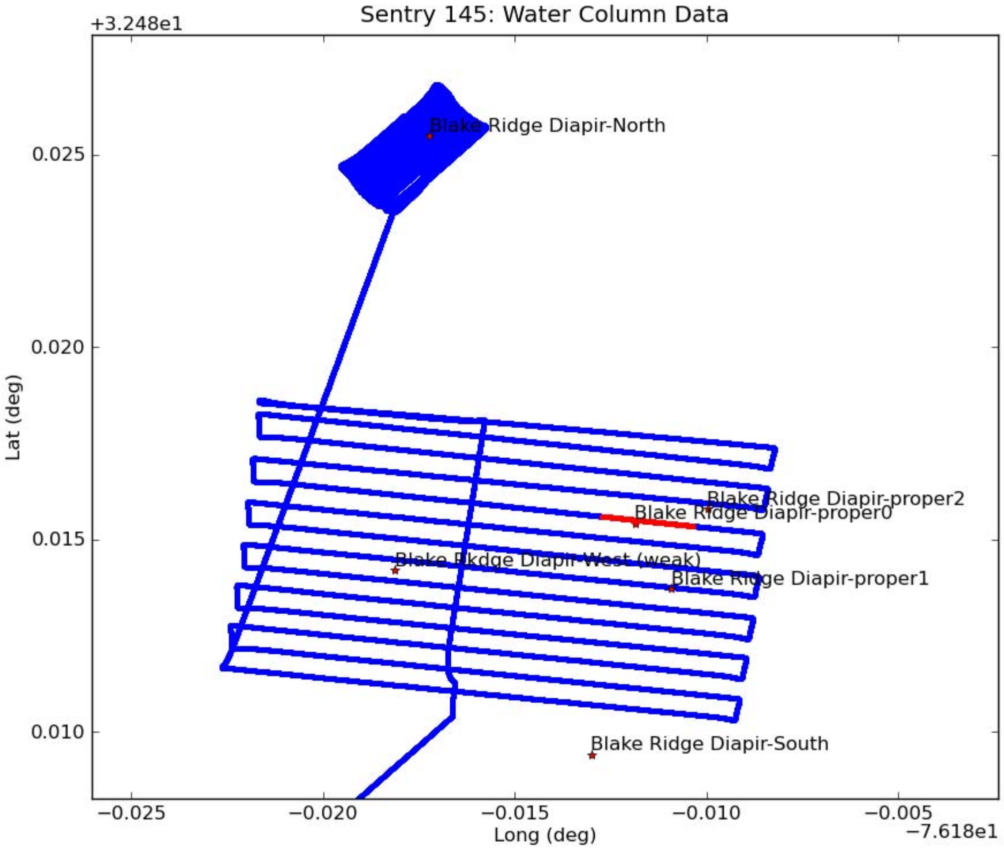

Figure 7. ***Sentry*** **AUV Dive 145 tracklines over Blake Ridge Diapir. Red line indicates section of Reson 7125 multibeam water column seen in figure below.**

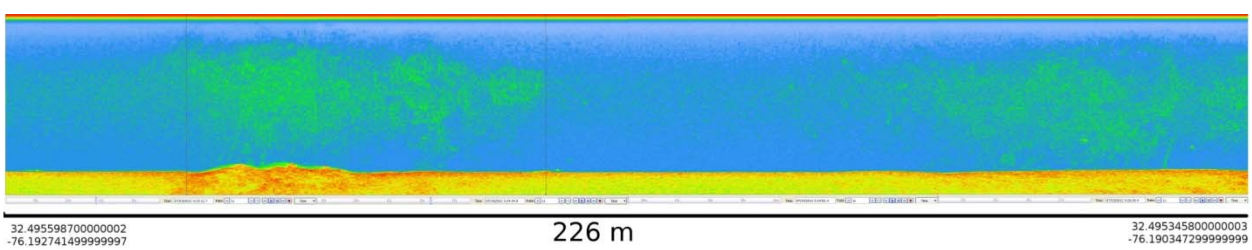

Figure 8. Sentry AUV Dive 145 multibeam water column backscatter data collected over Blake Ridge Diapir, clearly showing evidence of seep activity (green returns) in the water column. 226 m indicates displayed horizontal image length.

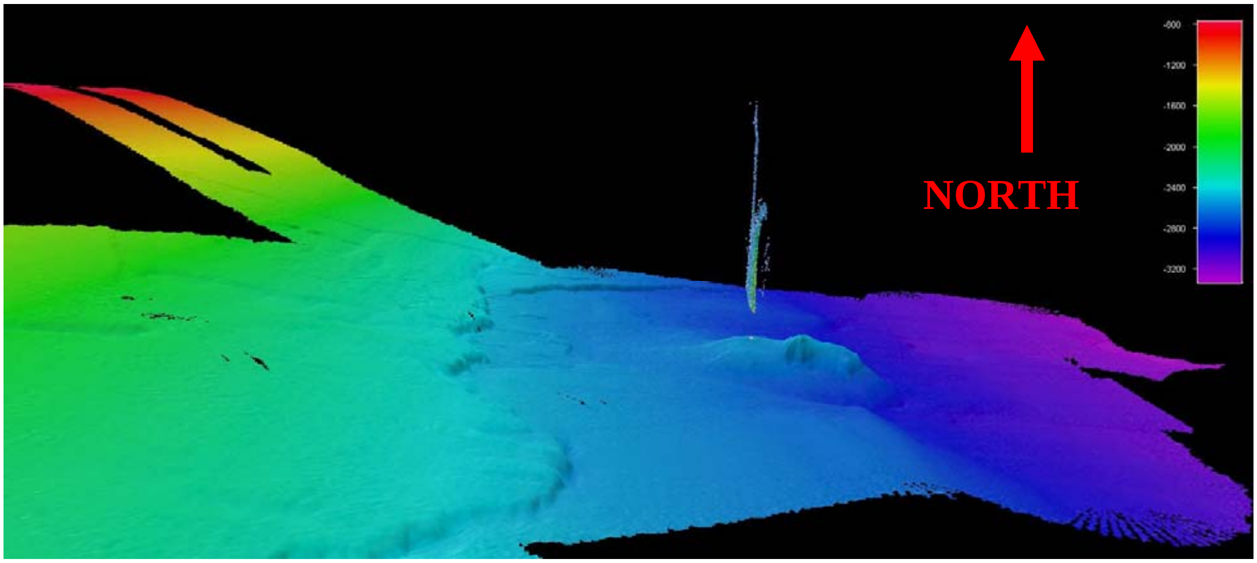

Figure 9. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Cape Fear Ridge Diapir and observed 1163 meter high seep. Multibeam bathymetry grid cell size 30 meters. Numerical depth values displayed range from -800 to -3200 meters. Vertical exaggeration of six applied.

Okeanos Explorer also conducted reconnaissance at the 800-900 meter isobaths to test the hypothesis that the seafloor in those zones is currently degassing as a result of hydrate dissociation. No seeps were detected during this effort.

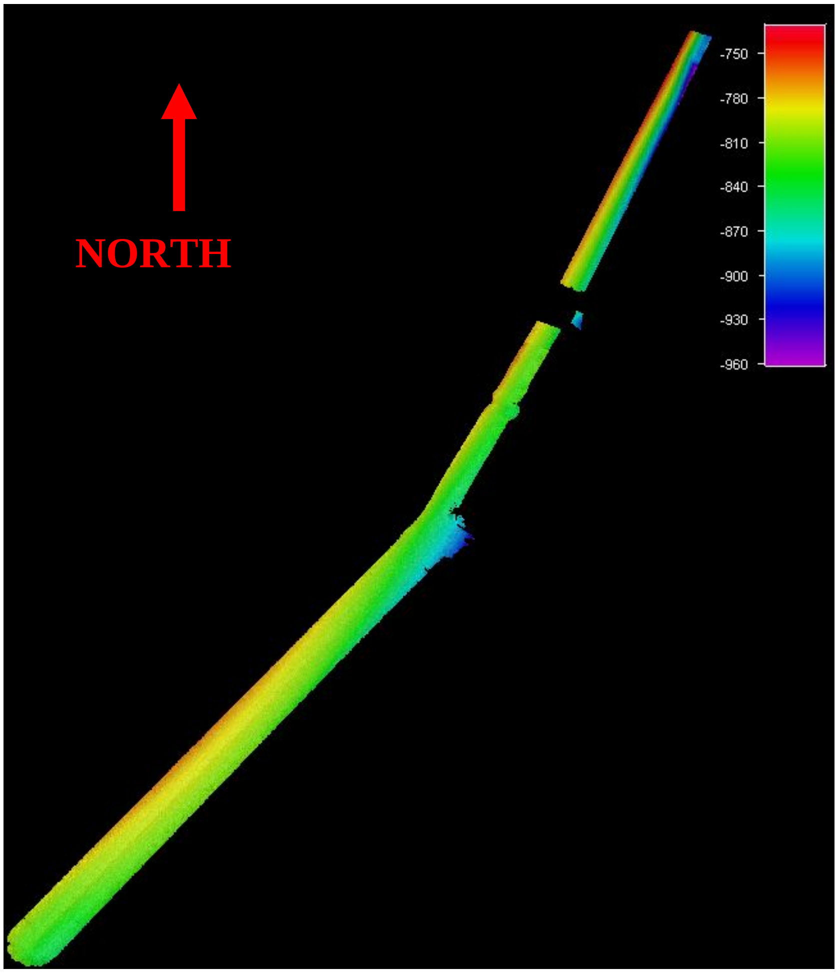

Figure 10. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over the 800 meter isobath adjacent to the Blake Ridge Cape Fear Ridge Diapir Complex. Grid cell size 30 meters. Numerical depth values displayed range from -750 to -960 meters. Vertical exaggeration of six applied.

6. Mapping Statistics

Dates	July 5 - 24, 2012
Weather delays	0 days
Total mapping days	1 24-hr day,19 partial days
Total non-mapping days	0 days
Line kilometers of survey	3193.13
Square kilometers mapped	12,373.455
Number / Data Volume of EM 302 raw bathymetric / bottom backscatter multibeam files	238 files / 24 gigabytes
Number / Data Volume of EM 302 water column multibeam files	238 files / 71 gigabytes
Number / Data Volume of EK 60 water column	606 files / 3.57 gigabytes

singlebeam files	
Number / Data Volume of subbottom sonar files	434 files / 752 megabytes
Number of XBT casts	120
Number of CTD casts	3
Beginning draft	Fwd: 14'4" Aft: 14'9"
Ending draft	Fwd: 14' 4" Aft: 14' 4"
Average ship speed for survey	7.34 knots

7. Mapping Sonar Setup

The NOAA Ship *Okeanos Explorer* is equipped with a 30 kHz Kongsberg EM 302 multibeam sonar capable of mapping the seafloor in 0 to 8000 meters of water. The system generates a 150° beam fan containing up to 432 soundings per ping in waters deeper than 3000 meters. In waters less than 3000 meters, the system is operated in multiping, or dual swath mode, and obtains up to 864 soundings per ping, by generating two swaths per ping cycle. Appendix D contains a detailed description of sonar system functionality and technical specifications, including crosstrack and alongtrack data resolutions.

The ship is also equipped with a Kongsberg EK 60 singlebeam fisheries sonar. The transducer operates at 18 kHz and transmits a 7° beam fan.

Additionally the ship is equipped with a Knudsen 3260 subbottom profiler. The transducers produce a 3.5 kHz chirp signal.

8. Data Acquisition Summary

EX1205 Leg 1 operations included EM 302 multibeam, EK 60 singlebeam, and Knudsen subbottom profile data collection. The schedule of operations during transits included continuous 24 hour per day multibeam and singlebeam data collection, and subbottom data collection from 1000 – 1800 (local). On all other days, mapping operations occurred during daylight hours when the *Sentry* AUV was secured on deck.

Expendable bathythermographs were collected every two to four hours to correct multibeam data for changes in sound speed in the water column, and were applied in real time using Seafloor Information Software (SIS). A Reson SVP-70 probe mounted on the hull at the EM 302 transducers was used to determine sound speed at the sonar head and was applied in realtime using SIS.

Background data used for exploration mapping included multibeam data collected by the Extended Continental Shelf project and Sandwell and Smith satellite altimetry bathymetric data.

The combination of *Okeanos Explorer's* shipboard systems and *Sentry's* data collection capabilities resulted in the successful reoccupation of the known Blake Ridge Diapir seep and the identification of two new seep communities located 1.5 km north of the known seep and another at the Cape Fear Diapir. New sites for seep investigation were initially determined based on water column anomalies, interpreted as bubble plumes, and identified in the ship's multibeam and echosounder data. Subsequent dives by *Sentry* resolved coincident zones of high backscatter, micro-topographic relief, and acoustic and geochemical water column anomalies. These observations were "ground truthed" as seabed seeps with *Sentry*-collected photos of extensive chemosynthetic communities. Co-located subbottom data indicate subsurface conduits associated with the seeps. With this methodology cruise EX1205L1 resolved gas migration from 40 m below the seabed up to 900 m above the seabed, mapped in high resolution the spatial distribution of chemosynthetic communities along the Blake Ridge and Cape Fear Diapirs, and tripled the number of known seep communities along the US Atlantic margin. These findings lay the groundwork for further scientific exploration and sampling.

In addition, EX1205 Leg 1 collected subbottom data with the same instrumentation and acquisition parameters as a 2003 survey described in Hornbach et al., 2007. The co-located surveys are the first 4-dimensional, high-resolution subbottom dataset collected at a major gas hydrate province and will give insight into the temporal evolution of subsurface migration pathways. The datasets will be compared by Dr. Laura Brothers to look for potential subsurface change in the diaper over time.

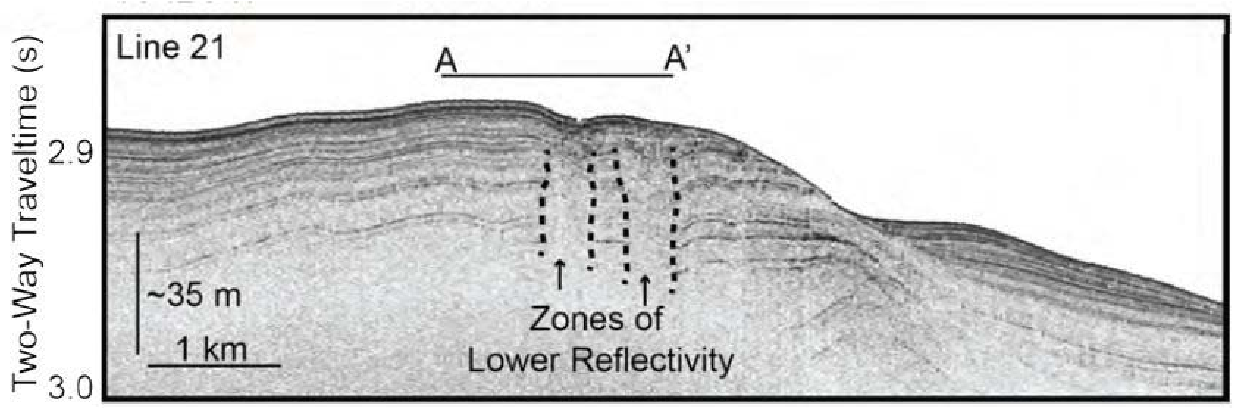

Figure 11. Screenshot showing Knudsen 3260 subbottom line #21 showing evidence of presence of subsurface gas near detected water column seep in vicinity of Blake Ridge Diapir. Figure courtesy of Dr. Laura Brothers (USGS).

Other scientific benefits of EX1205 Leg 1 include the collection of multibeam data in previously unmapped areas of the continental shelf, an examination of the effects of sea state on the resolution of water column anomalies, and further geophysical characterization of the Cape Fear fault and slide complex.

Tables listing all sonar files collected and products created during the cruise are provided in the appendices of this report. Tables listing all sound velocity files collected during the cruise are also provided.

9. Sonar Data Quality Assessment and Data Processing

EM 302 Multibeam Bathymetry Data

Okeanos Explorer's annual multibeam patch test was conducted during the 2012 shakedown cruise (EX1201). The full results of the patch test can be found in the EX1201 mapping data report and in the ship's readiness report.

Multibeam data quality was monitored in realtime by acquisition watchstanders. Expendable bathythermographs (XBTs) were conducted every two to four hours as necessary to maintain data quality. Ship speed was adjusted to maintain data quality as necessary. Line spacing was planned to ensure ¼ to ½ overlap between lines at all times. Cutoff angles in SIS were generally set to 70° on both the port and starboard sides.

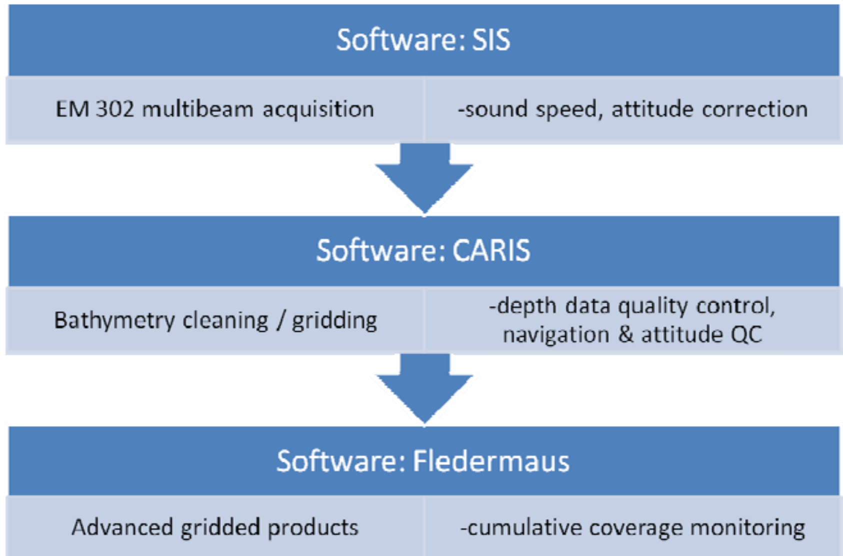

Figure 12. Shipboard multibeam data flow.

Raw multibeam bathymetry data files were acquired by SIS, and were imported into CARIS. In CARIS, attitude and navigation data stored in each file were checked, and erroneous soundings were removed using CARIS Swath Editor and Subset Editor. Once per day, cleaned, gridded bathymetric data were exported to ASCII text files (y,x,z) at 50 meter cell size in WGS84 datum. The ASCII files were then used to create Fledermaus SD objects. These SD objects were then exported to geotiff and Google Earth KMZ, which were copied to the shoreside FTP on a daily basis for shoreside scientist participation.

EM 302 Multibeam Water Column Backscatter Data Processing

All water column backscatter data files collected by the EM 302 multibeam sonar were reviewed daily for the presence of seeps using Fledermaus Midwater. Detected seeps were converted to point SD files and viewed in Fledermaus along with other datasets, including bathymetry, bottom backscatter, and oxidation reduction potential data. A table detailing all water column data processing is provided in the appendices section of this report.

EM 302 Multibeam Bottom Backscatter Data Processing

On an as needed basis, multibeam bottom backscatter data were imported into Fledermaus FMGT, and mosaics were generated. These mosaics aided determining AUV dive target location based on relative acoustic backscatter reflective strength of the seabed.

EM 302 Multibeam Data – Sound Velocity Artifacts

Multibeam bathymetry files 0178_20120718_202710_EX1205L1_MB.all and 0223_20120722_135848_EX1205L1_MB.all were run perpendicular to the continental slope. Severe sound velocity artifacts of greater than 2% of water depth, shown in the figure below, were observed in the overlap between these lines. As a result, the outer beams of each swath were rejected and are not present in Level 01 and Level 02 multibeam products. They are available in the raw multibeam files. The sound velocity artifacts are due to operating in the Gulf Stream and spatially and temporally inadequate collection of XBT casts while transiting toward shore up the continental slope.

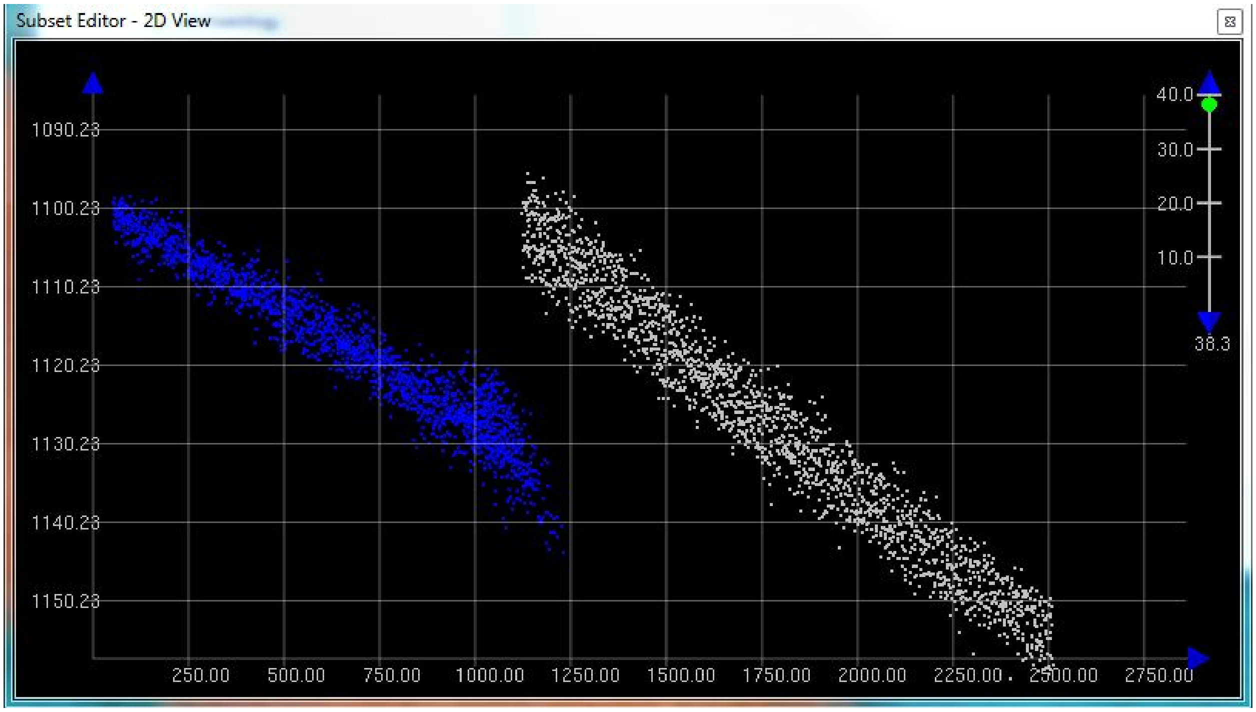

Figure 13. Screen grab taken in CARIS Subset Editor, showing sound velocity artifact and resulting depth disparity between EM 302 multibeam files 0178_20120718_202710_EX1205L1_MB.all (blue) and 0223_20120722_135848_EX1205L1_MB.all (grey).

EM 302 Nadir Artifact

A nadir data artifact was observed in EM 302 multibeam line 0178_20120718_202710_EX1205L1_MB.all, and is shown in the two figures below. As the ship transited offshore on a line with a heading 133°, the sonar tracked the bottom well while heading down the continental slope. However, as the ship transited over a small 15 meter high ledge, indicated with the dashed black circle in the figure below, the sonar lost bottom tracking at nadir for approximately fifteen pings. These soundings appear in gridded data as a 20 meter high feature, and were removed from the Level 01 and Level 02 products, but are still available in the raw files. It is hypothesized the artifact was due to side lobe detection by the sonar.

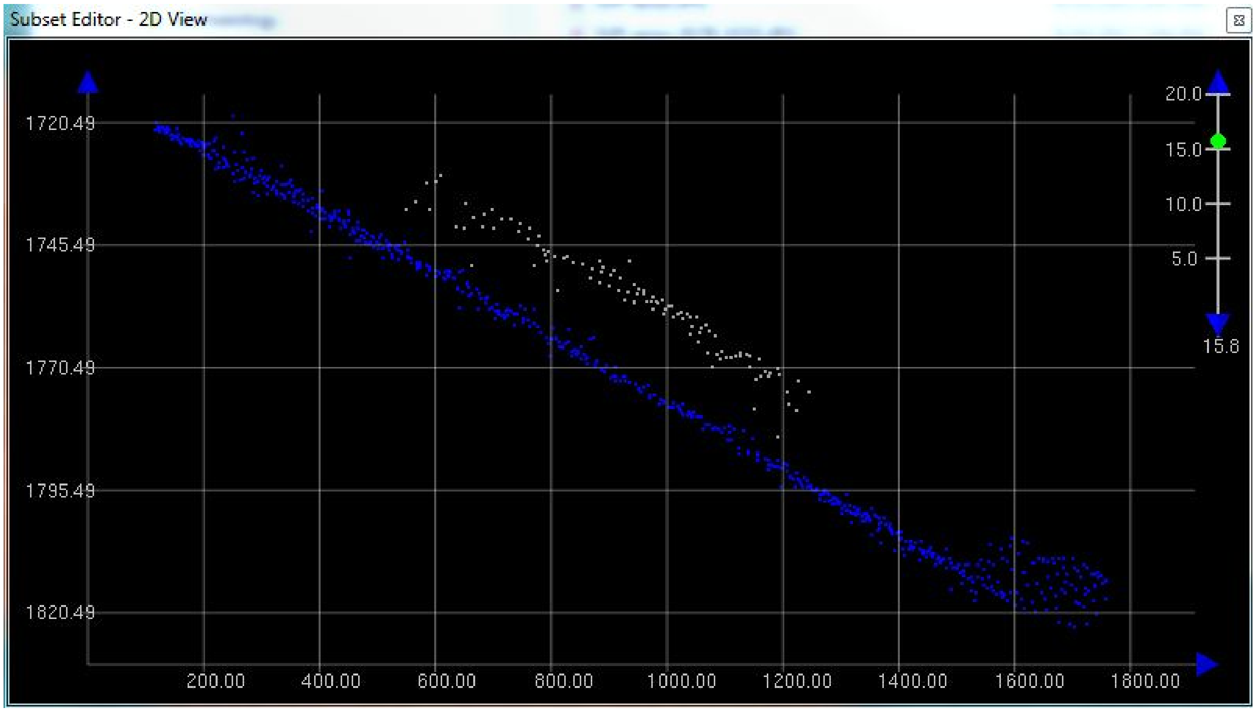

Figure 14. Screen grab taken in CARIS Subset Editor showing nadir artifact observed in EM 302 multibeam line 0178_20120718_202710_EX1205L1_MB.all. View is looking at a 90° across track angle.

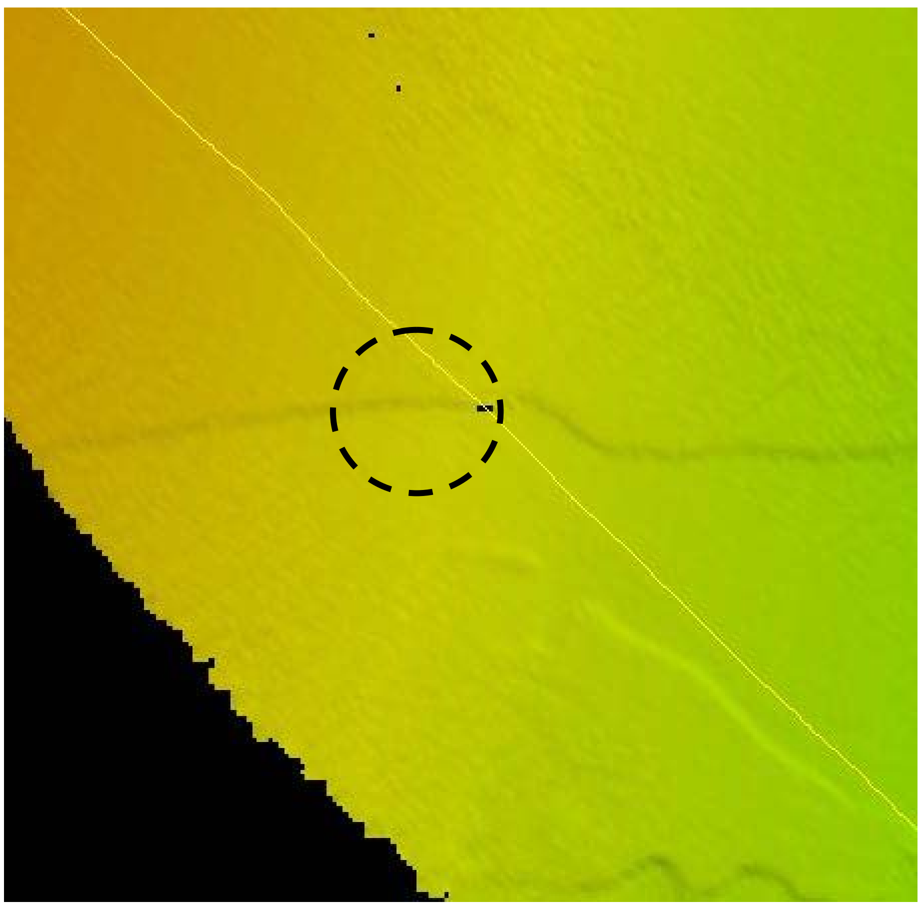

Figure 15. Screen grab taken in CARIS showing gridded EM 302 data and slight ledge where nadir artifact occurred. Image is north up, yellow line indicates ship track, running at a heading of 133°. The dashed circle indicates the location of the artifact.

EM 302 Outer Beam Artifact in Deep Water

As the ship surveyed Hatteras Transverse Canyon, outer beam artifacts were observed in the multibeam bathymetry data, as shown in the figure below. The cause of the artifacts is unknown at the time of writing this report. The erroneous soundings were removed from the Level 01 and 02 products, but are available in the raw data. Reducing the coverage angles by one to three degrees during data collection aided in reducing occurrence of the artifact.

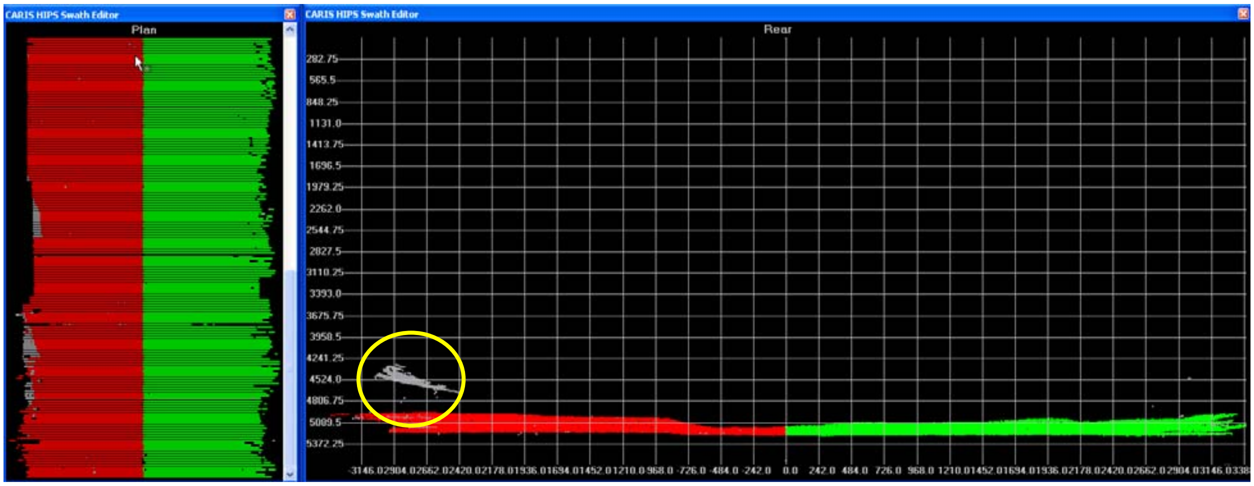

Figure 16. Screen grab taken in CARIS Swath Editor showing outer beam artifact in 5000 meters of water. Multibeam line 0028_20120708_225908_EX1205L1_MB.all. View is looking along track.

EM 302 / Sentry AUV Joint Operations Test

On July 9, a test was conducted during *Sentry*'s ascent to observe the effects of the EM 302 sonar on *Sentry*'s USBL navigation. The *Sentry* team reported *Sentry* was not affected by the EM 302. The EM 302, however, showed significant interference from both *Sentry* USBL pings and from the ship's bow and stern thrusters. The ship ceased thrusters for three minutes, and the interference was lessened but still present, leading to the conclusion that *Sentry*'s USBL does cause significant interference with the EM 302. If joint operations are to occur with *Sentry* in the water, the next step is to explore synchronizing the USBL transducer with the EM 302, in a similar manner that the EM 302 has been synchronized with the ship's EK 60 and subbottom profiler. The effects of the USBL transducer on the EK 60 and subbottom profiler were not tested.

EM 302 Built In System Tests

Six built in system tests (BIST) were run during the cruise to monitor the performance of the EM 302 sonar electronics. In all cases, the sonar appeared to be performing well. A summary table of BIST results and a sample full BIST result is provided in the appendices of this report.

EM 302 Multibeam Crossline Analysis

Crosslines were run in the vicinity of Blake Ridge Diapir and Cape Fear Diapir. Gridded mainscheme lines were imported into Fledermaus Crosscheck and converted to an SD surface. The Crosscheck analysis routine was utilized to compare gridded mainscheme data to the raw crossline file, and the results for each comparison are shown below.

At Blake Ridge Diapir, two crosslines were run perpendicular to twenty five tightly spaced (40 meter) mainscheme lines (90°). The crosslines were lines 0068_20120712_113420_EX1205L1_MB.all (180°) and 0070_20120712_121749_EX1205L1_MB.all (0°). For this crossline analysis exercise, these lines were compared to mainscheme line 0061_20120711_152011_EX1205L1_MB.all.

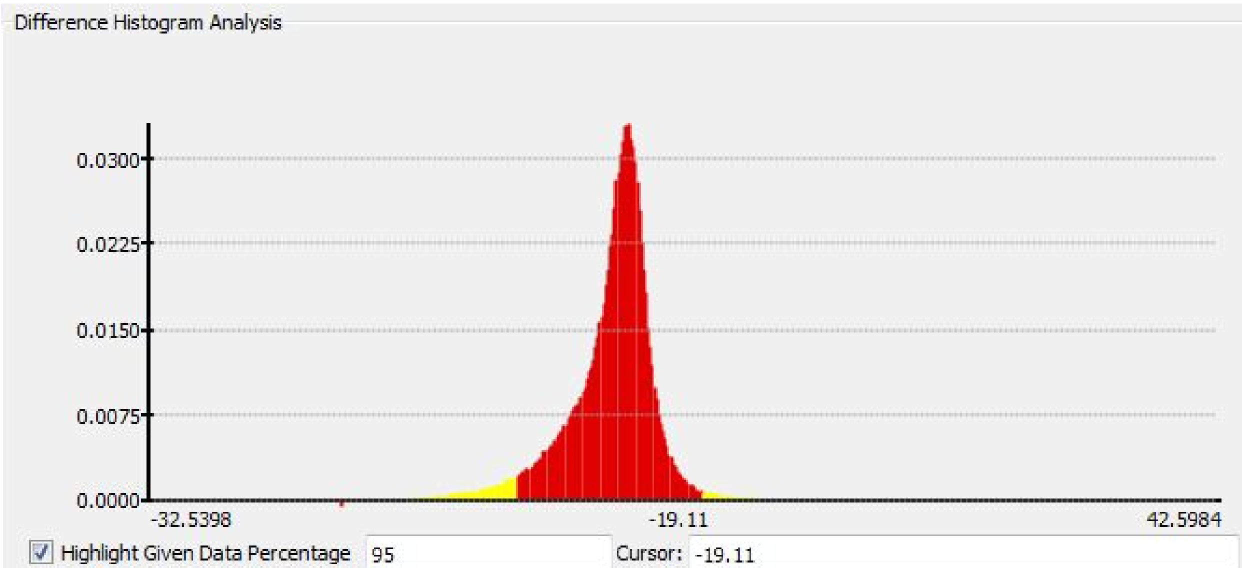

Figure 17. Histogram showing crossline analysis results for Blake Ridge Diapir crossline.

311680 # Number of Points of Comparison
-2182.361131 # Data Mean
-2182.277026 # Reference Mean
-0.084106 # Mean
0.536030 # Median
3.149800 # Std. Deviation
-2246.72 -2140.00 # Data Z - Range
-2237.42 -2154.46 # Ref. Z - Range
-32.54 42.60 # Diff Z - Range
6.383753 # Mean + 2*stddev
6.835676 # Median + 2*stddev

One crossline was run at Cape Fear Diapir. Crossline 0224_20120722_154410_EX1205L1_MB.all (95°) was run nearly perpendicular to lines 0141_20120715_201745_EX1205L1_MB.all (10°), 0154_20120716_161530_EX1205L1_MB.all, and 0228_20120722_210550_EX1205L1_MB.all (190°).

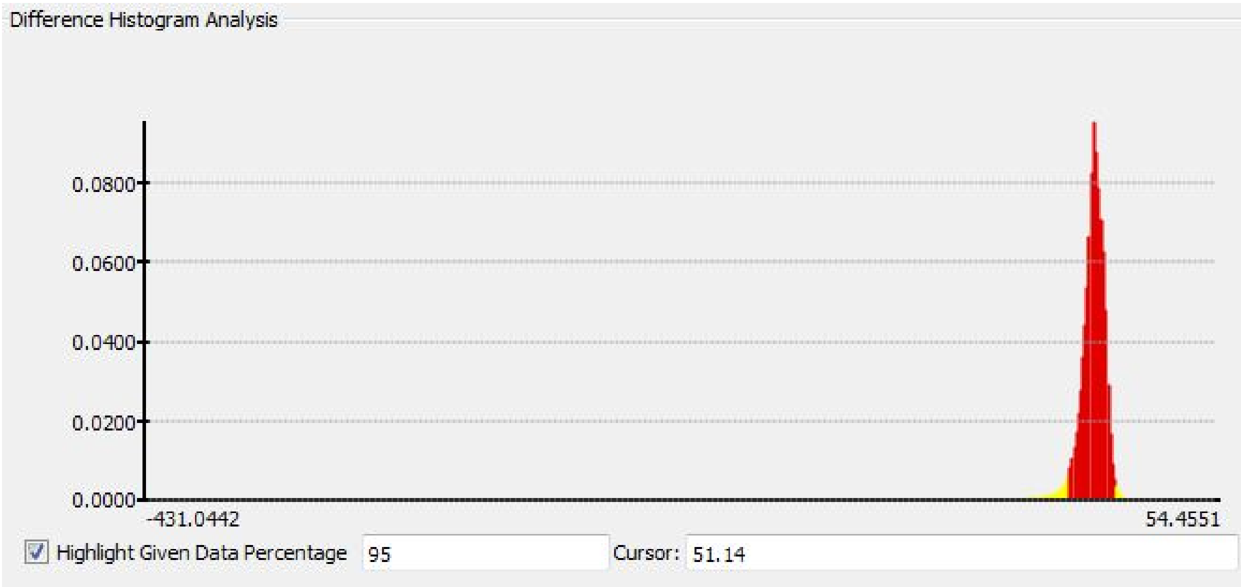

Figure 18. Histogram showing crossline analysis results for Cape Fear Diapir crossline.

265291	# Number of Points of Comparison
-2941.890736	# Data Mean
-2940.369993	# Reference Mean
-1.520700	# Mean
-0.794720	# Median
7.046600	# Std. Deviation
-3417.02 -2513.99	# Data Z - Range
-3105.68 -2518.25	# Ref. Z - Range
-431.04 54.46	# Diff Z - Range
15.613976	# Mean + 2*stddev
14.887954	# Median + 2*stddev

EM 302 Multibeam Water Column Data Testing

EX1205 Leg 1 presented two opportunities to further knowledge of the EM 302 multibeam sonar's ability to detect seeps in the water column. The first opportunity was a series of 25 lines run across Blake Ridge Diapir at 40 meter line spacing, from July 11 to 14. The lines were run with the intent of defining subseabed gas conduits, and were a 'reoccupation' of data collected by Hornbach et al. in 2007. EM 302 water column data collection occurred throughout the survey, resulting in capturing multiple passes of each vent in different sectors of the EM 302 beam fan. At the time of writing this report, the results were still under analysis.

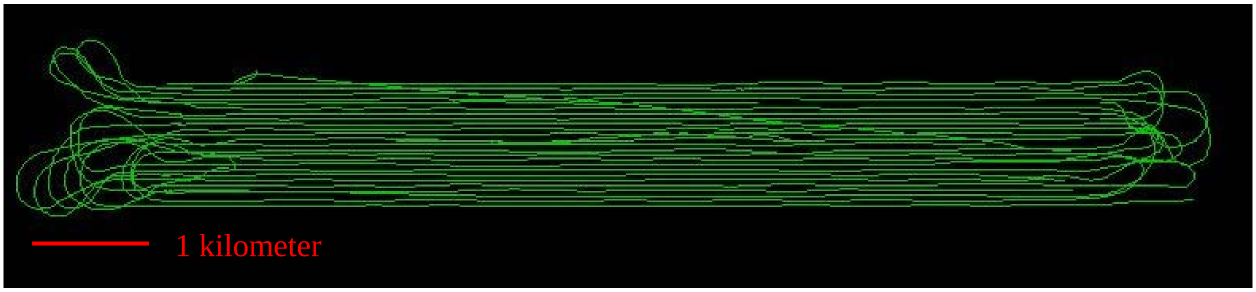

Figure 19. Screen shot taken in CARIS of actual tracklines run during 40 meter line spacing subbottom survey over Blake Ridge Diapir. Image is north up. A one kilometer line is drawn for scale.

The second opportunity was on July 20, when two lines at BRD were run in poor weather conditions over seeps detected earlier in the cruise. The waves were 5 to 7 feet, with wind gusts up to 40 knots from 210°. The two lines were planned to run directly over three seeps previously detected. The northern-most seep was very clearly observed in the data. The main BRD seep area was determined to actually have four separate seep sources. The weaker known seep to the west of the main BRD seep was not detected in the adverse weather conditions. Despite numerous bubble sweep down events preventing the detection of return signals, all seeps except one relatively weaker seep were detected. Line were run with SIS acquisition software set in Very Deep mode with coverage angles set to 50 degrees on port and starboard.

Line 0204_20120720_161808_EX1205L1_MB.wcd was run at a heading of 149°.

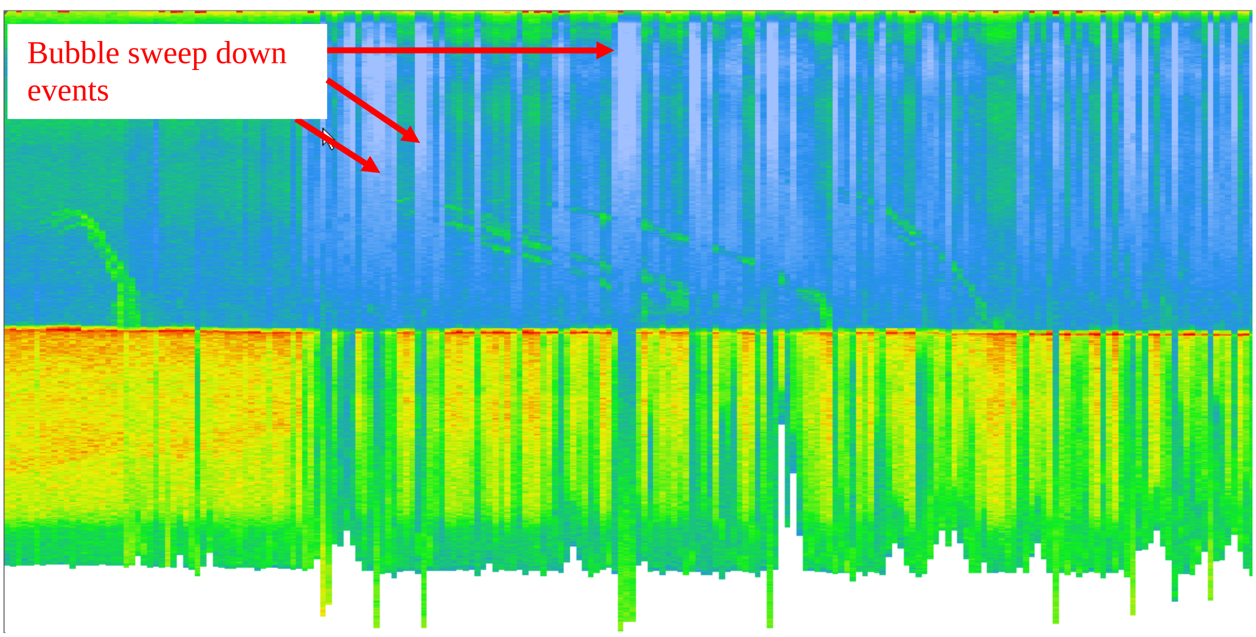

Figure 20. EM 302 multibeam water column backscatter line 0204_20120720_161808_EX1205L1_MB.wcd displayed in Fledermaus Midwater with no filters applied. Strong northern seep seen on left side of image. Group of seeps at BRD main seep site seen on left side of image.

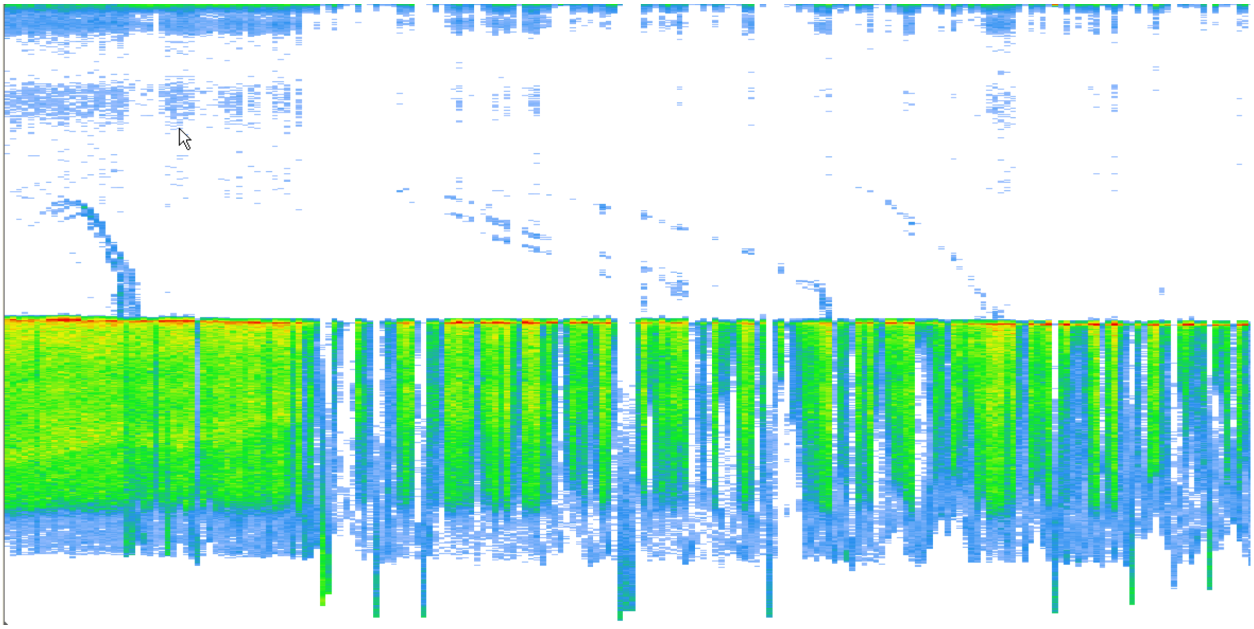

Figure 21. EM 302 multibeam water column backscatter line 0204_20120720_161808_EX1205L1_MB.wcd displayed in Fledermaus Midwater with signal amplitude filter applied.

Line 0206_20120720_165135_EX1205L1_MB.wcd was run at a heading of 270°.

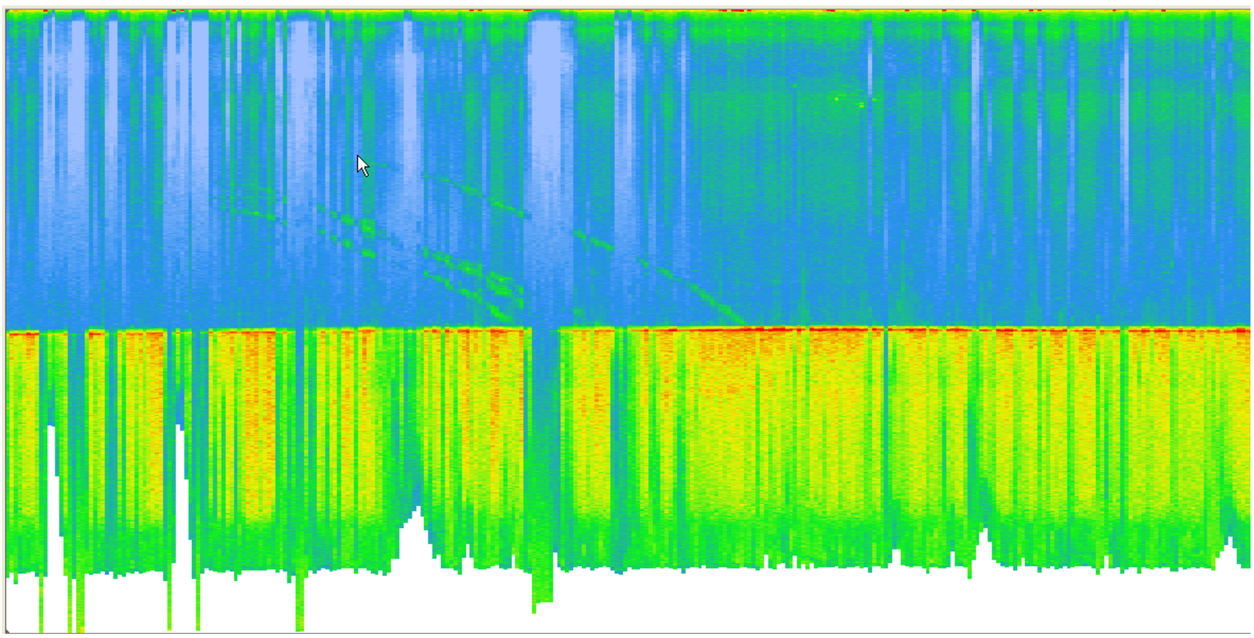

Figure 22. EM 302 water column backscatter line 0206_20120720_165135_EX1205L1_MB.wcd displayed in Fledermaus MidWater with no filters applied. Group of seeps at BRD main seep site seen in center of image.

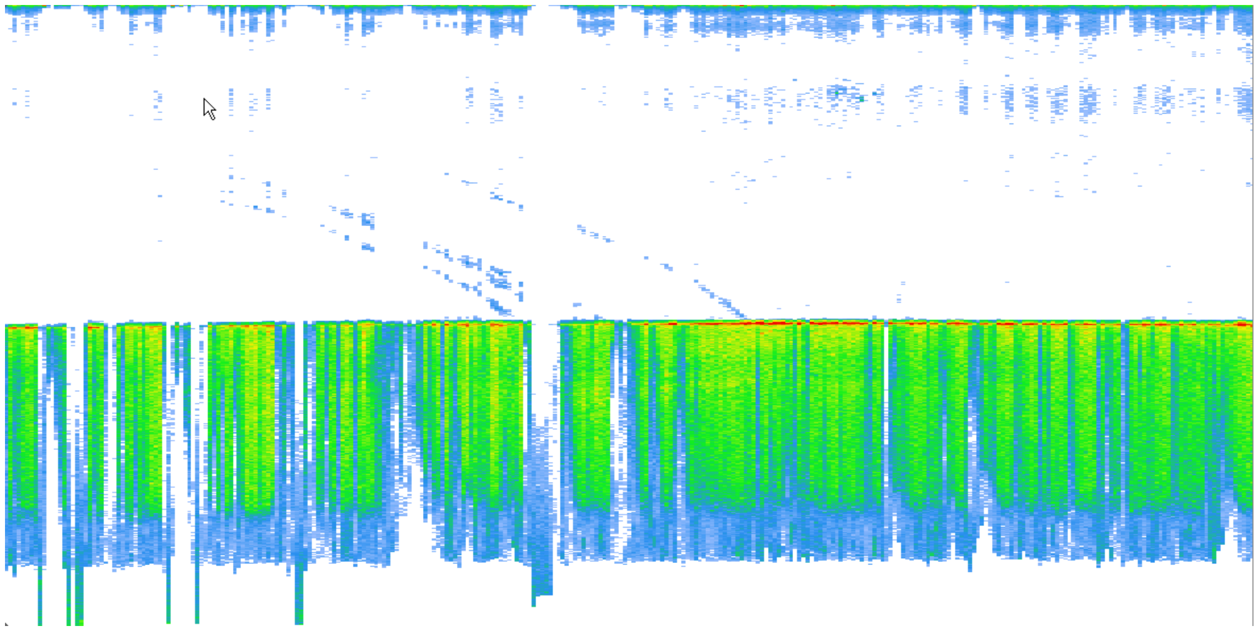

Figure 23. EM 302 water column backscatter line 0206_20120720_165135_EX1205L1_MB.wcd displayed in Fledermaus MidWater with signal amplitude filter applied.

EK 60 Singlebeam Sonar Data

EK 60 data was collected at all times during mapping operations and was valuable in confirming the location of seeps. Data were monitored in realtime for the presence of seeps but were not processed. All instances of seeps observed in EK 60 data were also observed in EM 302 water column data.

Knudsen 3260 **Subbottom** *Profiler Data*

Knudsen 3260 subbottom profiler data were monitored in realtime for data quality and for the presence of gas pockets and intrusions under the seabed. The subbottom profiler was run from 0900 to 2000 each day. At the Blake Ridge Diapir site, approximately 40 meter penetration below the seabed was achieved. At the Cape Fear Diapir site, less than 5 meter penetration was achieved.

Subbottom profiler data were processed using Chesapeake Technology Inc.'s Sonar Wiz, and vertical curtains were exported to Fledermaus SD objects. A table detailing all subbottom profiler data processing is provided in the appendices section of this report.

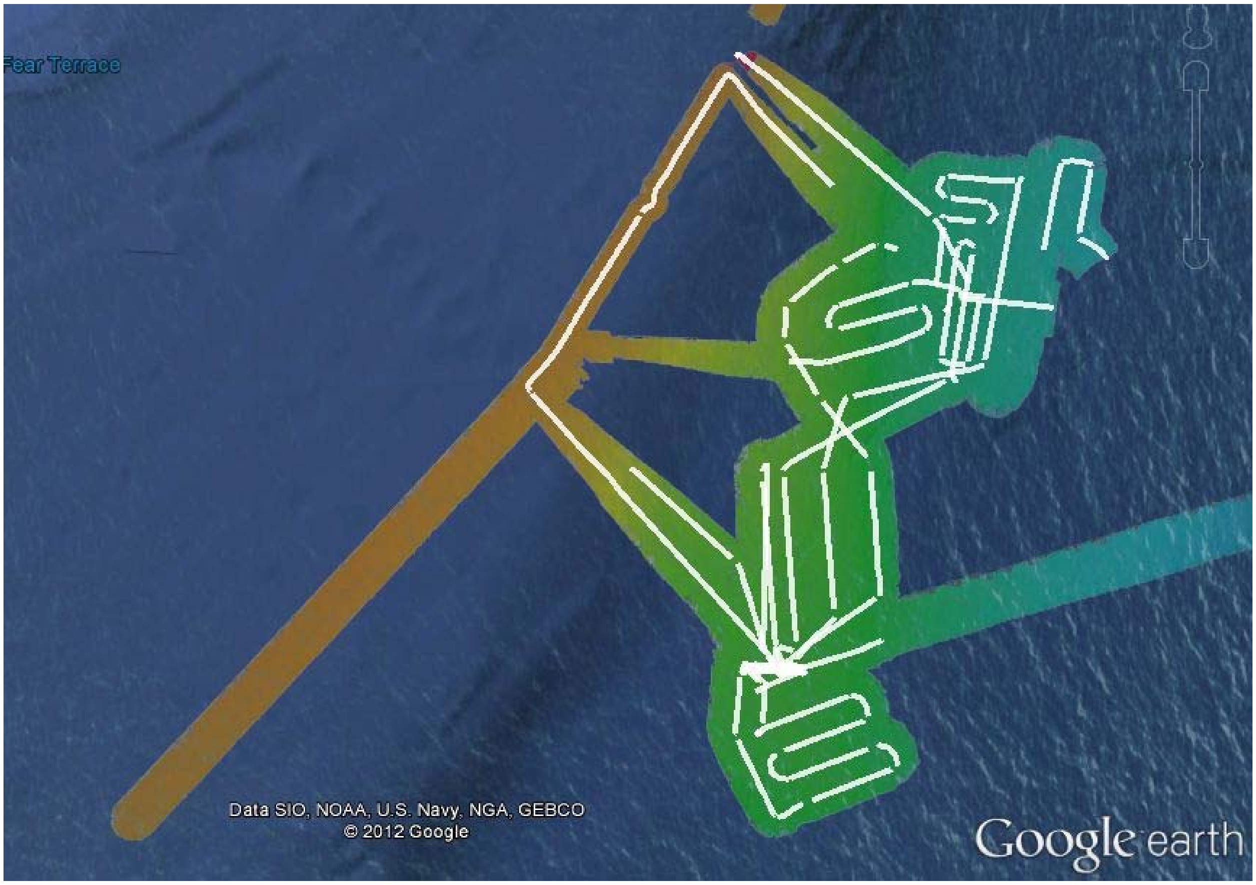

Figure 24. Screenshot taken in Google Earth showing subbottom tracklines collected in vicinity of the Blake Ridge Diapir Complex, with gridded EM 302 multibeam data shown in background.

Figure 25. Screenshot taken in Google Earth showing subbottom tracklines collected in vicinity of Hatteras Transverse Canyon, with gridded EM 302 multibeam data displayed in background.

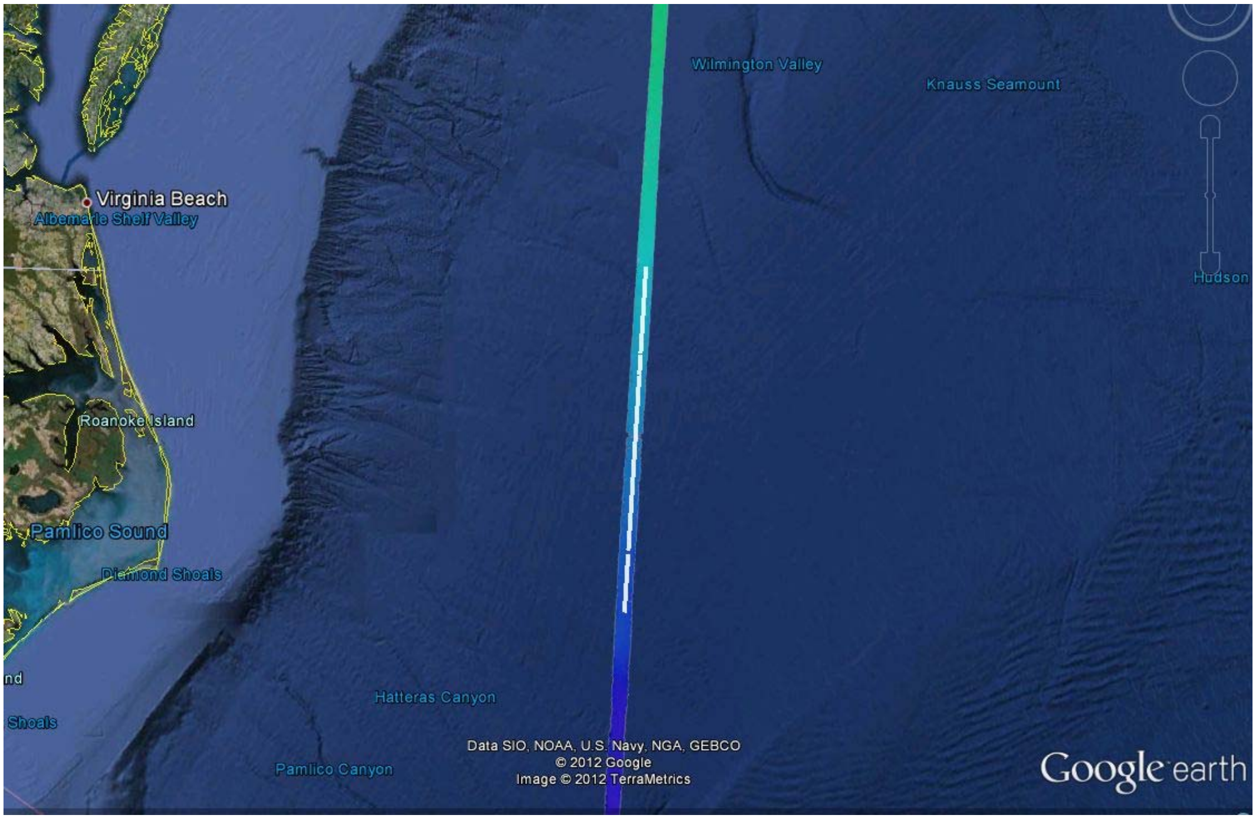

Figure 26. Screenshot taken in Google Earth showing subbottom tracklines collected during transit offshore Cape Hatteras, with gridded EM 302 multibeam data displayed in background.

AUV Sentry Data Integration

A subset of the datasets collected by the *Sentry* AUV was integrated into exploration operational planning projects by the mapping department for collaboration with shore-based scientists. Tracklines of all sentry dives are provided in the appendices of this report.

On an as-needed daily basis, these data were integrated into a Fledermaus scene file for exploration operational planning meetings with shore-based scientists. These datasets included:

- Reson 7125 gridded multibeam bathymetry data. Raw data were processed by the *Sentry* team and made available to the Okeanos Explorer team in GMT grid format. These files were imported into Fledermaus DMagic and converted to SD files.
- Selected data extracted from *Sentry*'s standard output "NAV_SCI" (*.scc) file, which contains all data from the AUV's scientific sensors. Individual ASCII text files were created for selected data strings, and were imported into Fledermaus for use in exploration planning. Specifically, the following data types were converted to Fledermaus SD files:
    - Eh – oxidation reduction potential data
    - Obs – optical backscatter data

It was determined that the Reson 7125 data provided an excellent complement to the ship's EM 302 multibeam data. Integrating this sonar into the Phoenix vehicle is a viable choice from an exploration data standpoint, however at the time of writing this report, other comparable systems had not been analyzed.

Realtime Sentry Monitoring

USBL tracking data for the Sentry AUV and CTD were converted in to a format compatible with mapping department software so that the location of the AUV relative to the seafloor, CTD, and the EX could be tracked in real time during missions. The USBL generated tracking solution for the Sentry AUV or CDT was first converted from a ship-relative to a geographic coordinate system. It was them formatted into generic NMEA convention navigation strings which were broadcast across the EX network as TCP packets. The generic NMEA strings were captured and further reformatted on the mapping department's computers to match the specific input requirements of Hypack and Fledermaus software. Finally, the software was configured to provide real-time two dimensional (Hypack) and three dimensional (Fledermaus) visual representations of the relative locations of the EX, Sentry AUV, CTD, and mapped seafloor.

Sentry Operational Planning Integration

Planned Sentry AUV dive tracklines were converted into the ECDIS format for input into the EX dynamic positioning system. The planned tracklines were made available to the Okeanos Explorer team in a generic XYZ geographical coordinate format. These were converted to ECDIS (DP) format using a python shell script and loaded onto the bridge's ECDIS navigation computer for the situational awareness of bridge officers and watchstanders. Additionally the trackline was converted into appropriate formats for display in Hypack and Fledermaus mapping software for the situational awareness for mission personnel.

10. Data Archival Procedures

All mapping data collected by *Okeanos Explorer* are archived and publically available within 90 days of the end of each cruise via the National Geophysical Data Center's (NGDC) online archives. Data can be accessed via the following websites (last accessed 09/17/12):

- the NGDC Bathymetry Data Viewer at http://maps.ngdc.noaa.gov/viewers/bathymetry/
- the NGDC Multibeam Survey List at http://www.ngdc.noaa.gov/nndc/struts/results?op_0=l&v_0=&op_1=l&v_1=&t=101378&s=300&d=21&d=411&d=79

The complete EX1205 Leg 1 *Okeanos Explorer* data management plan is provided in the appendices of this report.

11. Cruise Calendar.

All times listed are in UTC. Local ship time was -4 hours from UTC.

July 2012						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
		3 Mission personnel arrive to the ship in Davisville, RI	4 Mapping watchstanders training in port	5 Depart dock at 1750. Commence mapping at Narragansett Bay	6 Continued mapping operations until 1145. Conduct	7 Continuous transit mapping from 0000-2349.

				sea buoy.	AUV USBL calibration. Overnight transit mapping to HTC.	
8 Continue transit mapping until 1102. AUV engineering dive 1. Resume evening mapping operations over HTC at 2215.	9 Continue mapping until 1113. AUV engineering dive 02. Resume mapping at 2342 and continue overnight mapping of HTC walls.	10 Continue mapping until 1125. AUV engineering dive 03. Commence evening transit to BRD working grounds at 1915. Conduct EM 302 / AUV joint operations test.	11 Continue mapping of BRD until 1729. AUV dive 04 over BRD in the evening.	12 Commence daytime mapping of BRD at 1133 and end at 2150 for AUV dive 05 evening launch.	13 Commence daytime mapping of BRD at 1155 and end at 2140 for AUV dive 06 evening launch.	14 Commence daytime mapping of BRD at 1313 and transit to CFD. Mapping ends at 2241 for AUV dive 07 evening launch.
15 Commence daytime mapping of BRD at 1347, and transit mapping to CFD. End mapping at 2146 for AUV dive 08 evening launch.	16 Commence daytime mapping at 1243 returning to BRD from CFD. End mapping at 2154 for AUV dive 09 evening launch.	17 Commence daytime mapping at 1300, developing area south of BRD. End mapping at 2204 for AUV dive 10 evening launch.	18 Commence daytime mapping at 1343, developing 800 meter isobaths west of BRD and CFD. End mapping at 2339 for AUV dive 11 launch.	19 Commence mapping operations at 1653 and continue overnight. 800 meter isobath definition.	20 Mapping operations continued through the morning, and ceased at 1734 for AUV dive 12 launch. Test lines collected over known seeps at BRD in degraded weather.	21 Commence mapping operations at 1600. Mapping ends at 0000 for AUV dive 13 evening launch.
22 Commence daytime mapping at 1257, and end at 0024 for AUV dive 14 evening launch.	23 Commence daytime mapping at 1859, and continue through the evening.	24 Continue mapping through the morning until reaching Moorehead City, NC sea buoy at 1043.	25 In port, Morehead City, NC. Mapping compliment disembarks the ship.			

12. Daily Cruise Log

***All times listed are in UTC. Local ship time was -4 hours from UTC*.**

July 3, 2012
Mapping mission personnel arrive to the ship in Davisville, RI, including Lobecker, Skarke, and Paxton.

July 4, 2012
Mapping personnel training commenced. Mapping personnel Sheehan arrived to the ship.

July 5, 2012
The ship departed the dock at 1750. An EM 302 built in system test (BIST) was run and all test passed. Mapping using EM 302 and EK 60 sonars commenced after passing the Narragansett Bay sea buoy, and continued for the remainder of the day.

July 6, 2012
The AUV USBL calibration site was reached at 1140 and mapping sonars were secured. The mapping department collaborated with the AUV team and the ship on USBL line planning. The USBL calibration

was completed at 2320. The ET department reset the mission UPS after the USBL calibration was complete, which caused a power failure and cold shut down of all mapping equipment. Equipment was restarted and overnight transit mapping exploration commenced at 2352.

July 7, 2012
Transit mapping exploration continued throughout the day. Knudsen subbottom profiler data collection occurred from 1400-2200. At ~1646, needle gunning and grinding operations conducted by the engineering and deck departments began to negatively affect EM 302 and EK 60 data quality. At the request of survey, these operations ceased, and data quality improved. At 1730, weather began to degrade and data quality again deteriorated. At this time, needle gunning had resumed, and was then immediately ceased, again upon request of survey. It is hypothesized that deteriorating weather conditions reduce the sonar's' tolerances for noise introduction from ship's crew activities.

July 8, 2012
EM 302 and EK 60 survey operations continued in the morning until *Sentry* AUV dive site 01 was reached at 0740. All sonars were secured including the Reson SVP 70 mini-pinger. Data quality was high in 5000 meters of water. Maximum coverage angles were reduced by 1-3 degrees at times to eliminate outer beam artifacts in 5000m water along canyon edges. Survey operations resumed at 1815. Overnight operations focused on redefining the edges of Hatteras Transverse Canyon to compare to slumps seen in existing Law of the Sea data collected in 2008. AUV dives sites 01, 02, and 03 will also be mapped before the ship departs the area.

July 9, 2012
EM 302 ping test with *Sentry* and USBL pole in the water during end of dive ascent. Interference observed in EM 302 is suspected from combination of USBL and ship's stern and bow thrusters holding while holding station.

July 10, 2012
Repeated EM 302 ping test with *Sentry* and USBL pole in the water during end of dive ascent. Ship's stern and bow thrusters were disabled for two minutes during the test and interference was reduced, although still present. A Knudsen subbottom profiler line was collected over Hatteras Transverse Canyon as the ship began transit to the Blake Ridge Diapir working grounds. The line was of interest to participating scientists as it crossed slumps and the termination end of a suspected landslide flow.

Minor outer beam artifacts on the port side have been seen in 4000-5000 meters of water for two days. A BIST was run (EX1205L1_3.txt) and all tests passed. A hull dive was conducted in RI a few days prior to departure, and the transducers were reported to be free of significant marine fouling, with only minor algal growth noted, and as a result algal growth is not suspected to be the cause of the artifact.

July 11, 2012
The ship conducted transit mapping operations until arriving on site at the Blake Ridge Diapir operating in the late morning, at which time the ship commenced a subbottom profiler-focused survey to re-occupy a previous survey of the area. The EM 302 and EK 60 sonars detected the Blake Ridge Diapir seep in the water column backscatter data.

July 12, 2012
The AUV was recovered earlier than planned this morning. A water column survey was planned and executed that extended water column coverage to the north and south of the existing survey area, resulting

in the detection of at least one new seep in the area. Subbottom operations to reoccupy Black Ridge Diapir commenced at 1000.

Having two mapping leads onboard and able to assist as-needed with operations, in addition to standing watches as necessary, means new operations are running much more efficiently and effectively. The mapping department was able to pull the real-time USBL data into Fledermaus or Hypack displays to show the real-time location of the ship, CTD rosette and AUV during, e.g. CTD operations to facilitate operational modifications in real-time. The mapping department was also spent time developing value-added products of the latest EM 302 water column data in Fledermaus, and determined that the ship imaged not one, but at least two seeps at the Blake Ridge Diapir area.

Permission was granted by the ship today to begin subbottom operations at 0900 during EX1205L1 to accommodate priority data acquisition desired by science.

July 13, 2012

The ship conducted brief transit mapping operations between the time of AUV recovery and 0900 north of the Blake Ridge Diapir. At 0900 subbottom operations commenced and focused survey mapping operations over the Blake Ride Diapir with a line spacing of 40 meters. Survey mapping was curtailed at approximately 1700 in preparation for AUV deployment.

July 14, 2012

EX resumed focused subbottom survey mapping operations over the Blake Ridge Diapir at approximately 0900 immediately after the recovery of the AUV. The focused subbottom survey line plan was completed at approximately 1400 and the ship began a survey to the north and east of the Blake Ridge Diapir in an area of high backscatter variability. The survey was suspended at approximately 1630 in order to return to the AUV deployment site. Analysis of the EM 302 data here has revealed at least three seep sources at the Blake Ridge Diapir seep site.

All mapping systems are fully operational and data quality is high. Focused subbottom survey lines were run at a nominal speed of 6 knots and all other survey lines were run at a nominal speed of 8.5 knots. Daily mapping products are being delivered to shore via the EX FTP site.

In addition to the production of standard EX mapping data products the mapping team is regularly producing value added products including water column objects (Fledermaus SD) and draped seafloor backscatter (Fledermaus SD). Additionally, the mapping team has established processing and production pipelines for a number of *Sentry* AUV data packages.

July 15, 2012

The EX commenced survey mapping operations to the north and east of Blake Ridge Diapir at approximately 0945 immediately after the recovery of the AUV. Because of engineering challenges encountered in *Sentry* AUV dive 145 the mapping survey plan was modified to conclude at the Cape Fear Diapir complex rather than the Blake Ridge Diapir complex. While survey mapping in the vicinity of the Cape Fear Diapir, a large gaseous plume was detected with the EM 302 multibeam and EK 60 singlebeam sonars.

July 16, 2012

The EX commenced survey mapping operations to the north of the Cape Fear Diapir at approximately 0845 immediately after the recovery of the *Sentry* AUV. Subsequent mapping to the south built on existing EX multibeam coverage while the ship transited to the Blake Ridge Diapir. While transit mapping the ship collected subbottom profile data across a suspected fault line. All mapping systems are fully operational and data quality is high. Survey lines were run at a nominal speed of 8.5 knots. Multibeam bathymetry data collected with the AUV were delivered to the mapping team and integrated into mission planning maps.

July 17, 2012
The EX commenced survey mapping operations to the south of the Blake Ridge Diapir at approximately 0845 immediately after the recovery of the *Sentry* AUV. Mapping coverage was built to the south throughout the day and concluded with a return to the Blake Ridge Diapir complex. Line spacing was designed to maximize detection of water column anomalies.

A telepresence event was conducted with NOAA personnel at the Pacific Environmental Marine Laboratory. Deputy Undersecretary for Operations Dr. David Titley participated in the event from shore.

July 18, 2012
The EX commenced transit mapping operations to the west of the Blake Ridge Diapir at approximately 0945 immediately after the recovery of the *Sentry* AUV. The ship transited to the northwest until its track intersected the 850m isobath contour. At that point the ship followed the isobath contour to the northeast until approximately 1600 at which time it proceeded eastward toward the Cape Fear Diapir. Mapping operations were curtailed at approximately 2000. Acoustic penetration by the subbottom profile was moderate to poor, which is likely attributable to a harder sandy substrate in the mapped area.

July 19, 2012
Daytime mapping operations occurred from 1653 through the end of the day. Deteriorating weather conditions caused decreased sonar data quality. Effects were observed in <data types>. The evening launch of the AUV was cancelled due to weather. Mapping transit to the 800 meter isobath occurred. Lines were run to complement existing Extended Continental Shelf project data.

July 20, 2012
Overnight ship survey mapping operations built multibeam bathymetry coverage between the 800 meter and 1000 meter isobath contour to the west of the Blake Ridge Diapir. At approximately 0800 survey mapping was suspended and the ship conducted transit mapping to the Blake Ridge Diapir. At the Blake Ridge Diapir multiple passes over previously detected seeps were made to assess the capacity of the multibeam sonar to detect such gaseous water column anomalies in high sea states. Initial results indicate that the system was successful in detecting seeps in a high sea state suggesting that it is a robust seep detection tool. At approximately 1330 all mapping was curtailed in preparation for a *Sentry* AUV dive.

July 21, 2012
Survey operations commenced at 1559 with the AUV secure on the fantail. Mapping efforts focused on building on coverage between BRD and CFD during transit for the evening AUV launch at CFD. Mapping systems were secured at 0000 (July 22).

July 22, 2012
Survey operations commenced at 1257 and were focused in the vicinity of Cape Fear Diapir. Mapping systems were secured at 1124 (July 23).

July 23, 2012
Mapping operations commenced at 1500 as the ship transited out of the Cape Fear Diapir working grounds for Morehead City, North Carolina. Mapping transit lines focused on completing a section of the mapping coverage over the CFD working grounds, adding to the 800 meter contour definition, and adding to previous transit covered collected by *Okeanos Explorer* during EX1106 and EX1202 Leg 1. These datasets seamlessly connect to Extended Continental Shelf data in the area.

July 24, 2012
Mapping operations continued through the early morning, and were suspended at approximately 0700 on 07/24 at the Beaufort Inlet sea buoy.

July 25, 2012
The following mapping personnel departed the ship: Lobecker, Paxton, Sheehan, and Brothers. Skarke remained in North Carolina to lead upcoming mapping cruise EX1205 Leg 2, to Rhode Island.

13. References

The 2012 Survey Readiness Report can be obtained by contacting NOAA Ship *Okeanos Explorer* at ops.explorer@noaa.gov.

EX1205 Leg 1 Cruise Instructions can be obtained by contacting NOAA Ship *Okeanos Explorer* at ops.explorer@noaa.gov.

Kaiser, C., Yoerger, D., Kinsey, J., Billings, A., Duester, A., Fujii, J. (2012), *Sentry* Operations Report for the EX1205 Cruise, available by contacting oar.oer.exmapping@noaa.gov.

Hornbach, M.J., Ruppel, C., and Van Dover, C.L. (2007, Three-dimensional structure of fluid conduits sustaining an active deep marine cold seep, *Geophys. Res. Lett, 34,* L05601, doi:10.1029/2006GL028859.

14. Appendices

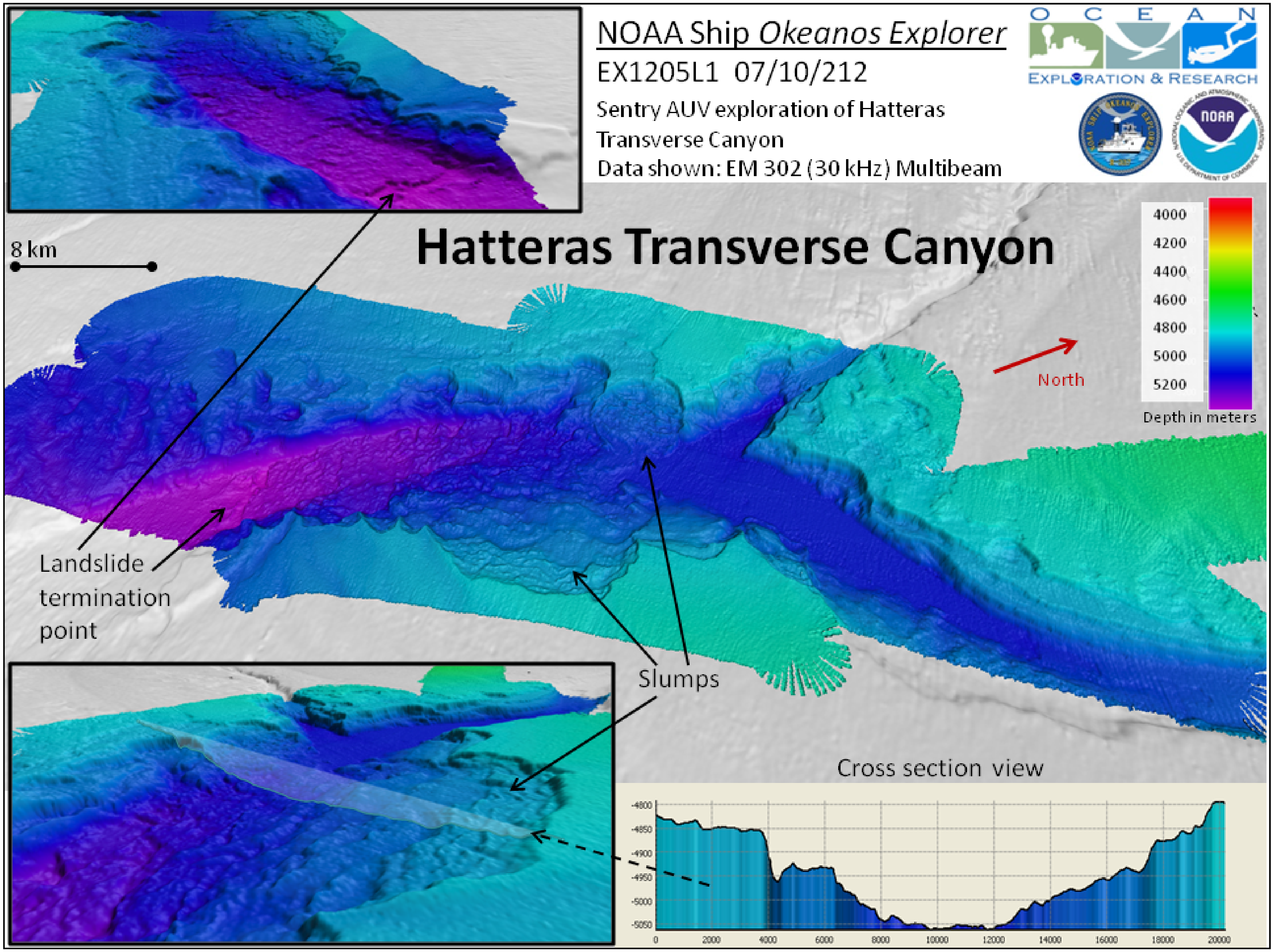

Figure 27. Map of Hatteras Transverse Canyon, created by mapping intern Dominique Paxton.

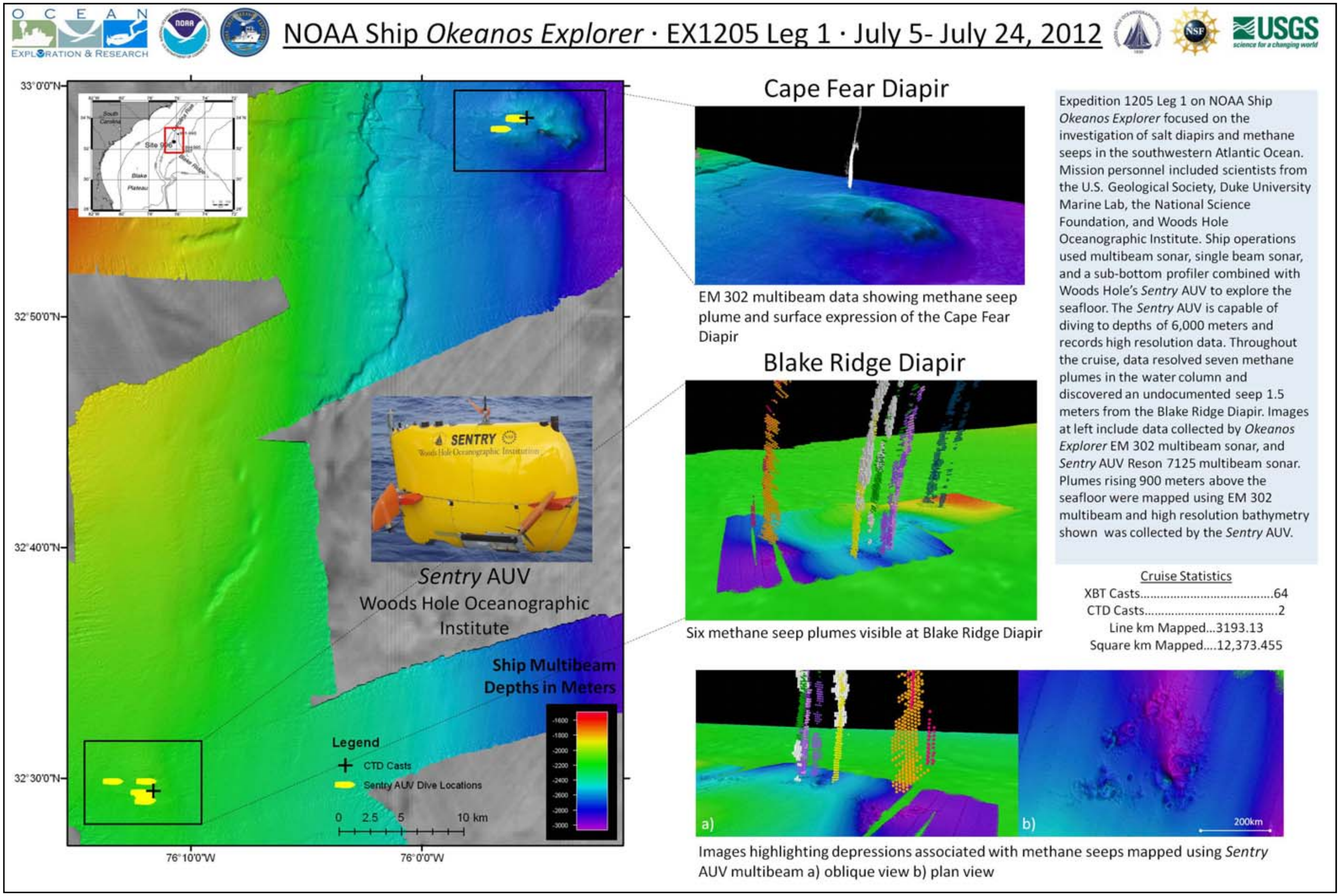

Figure 28. Map of the Cape Fear Diapir Complex, created by mapping intern Dominique Paxton.

Appendix B: Sentry AUV Dive Tracks

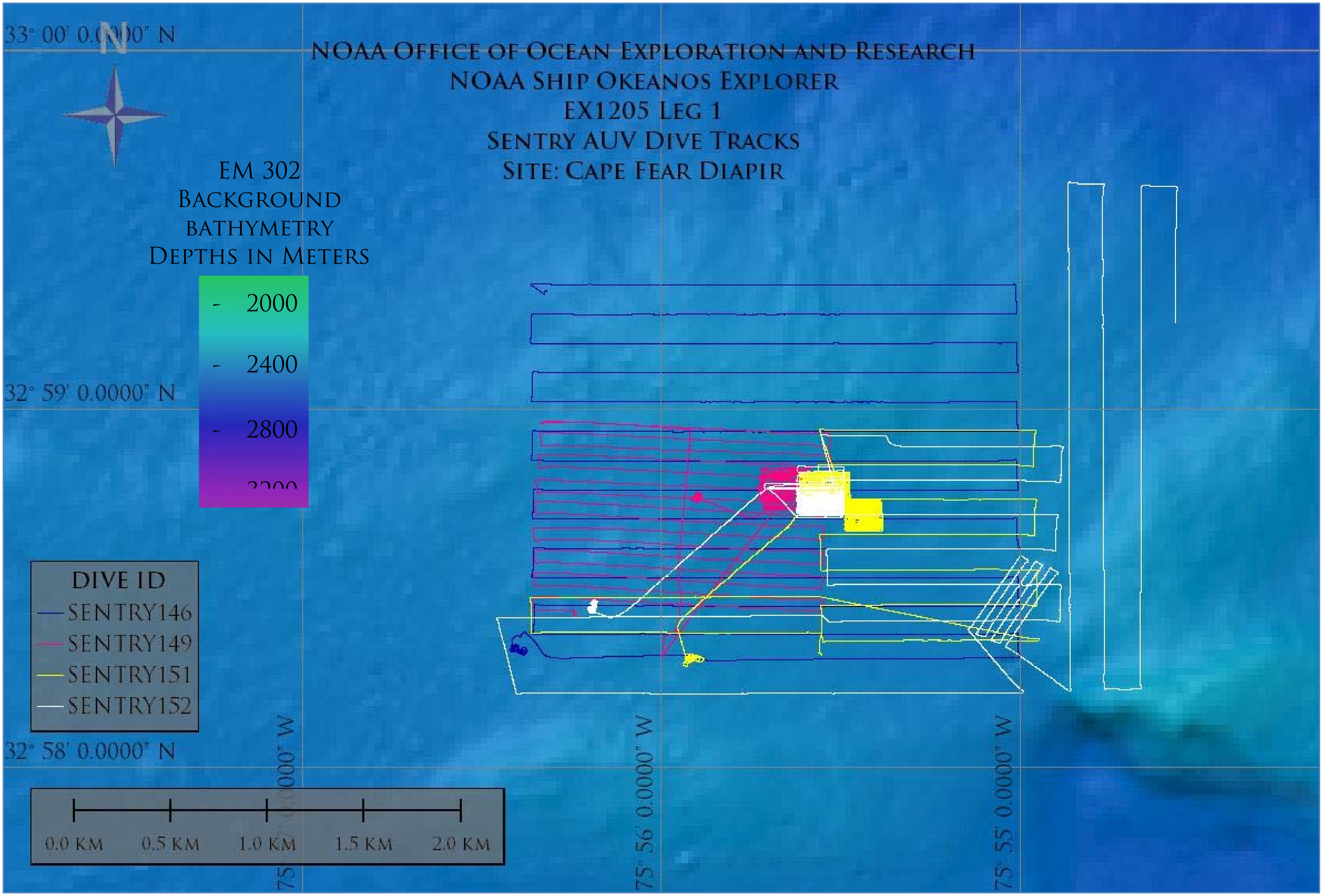

Figure 29. Map showing Sentry AUV dives at Cape Fear Diapir, created in Global Mapper 13.

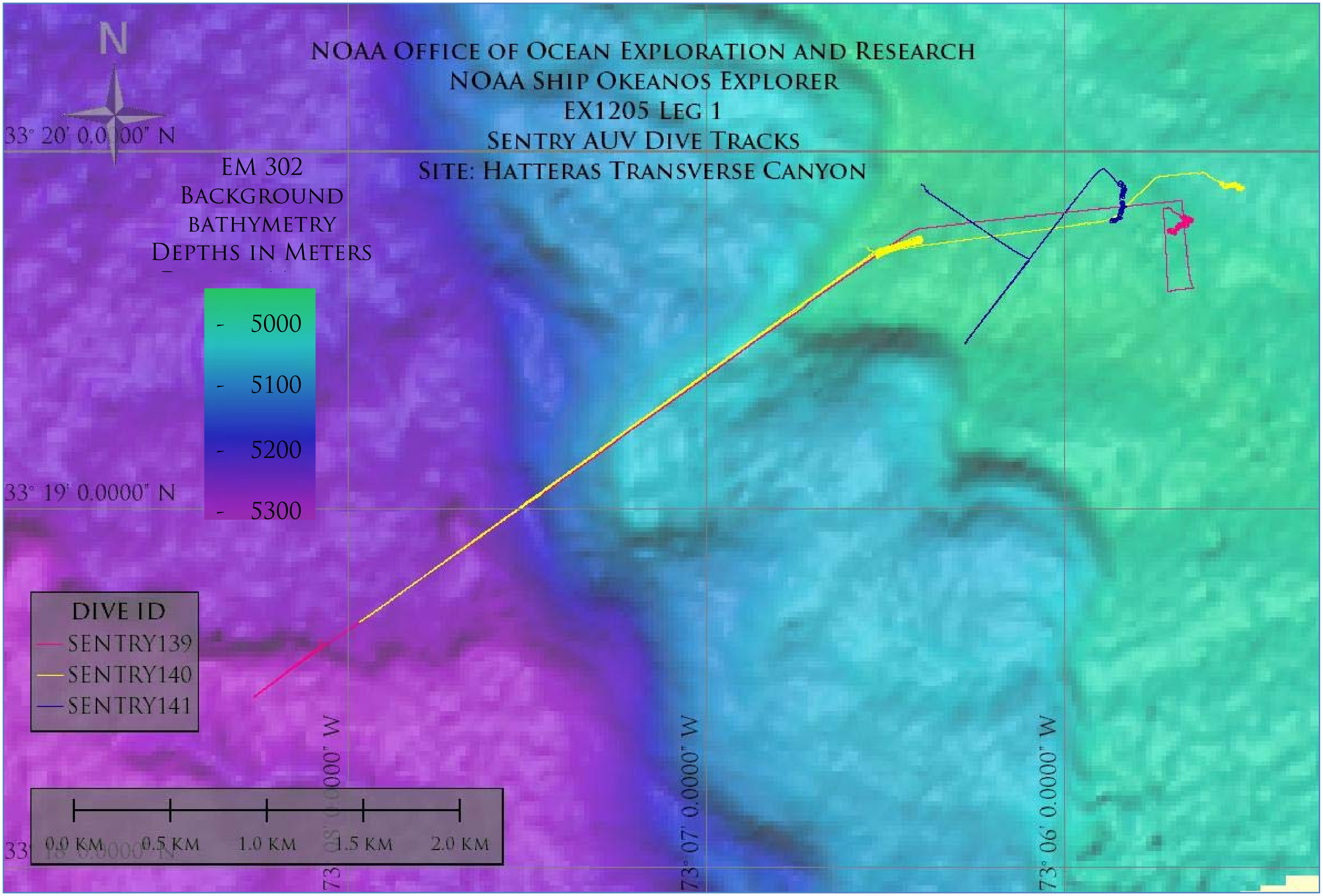

Figure 30. Map showing Sentry AUV dives at Hatteras Transverse Canyon, created in Global Mapper 13.

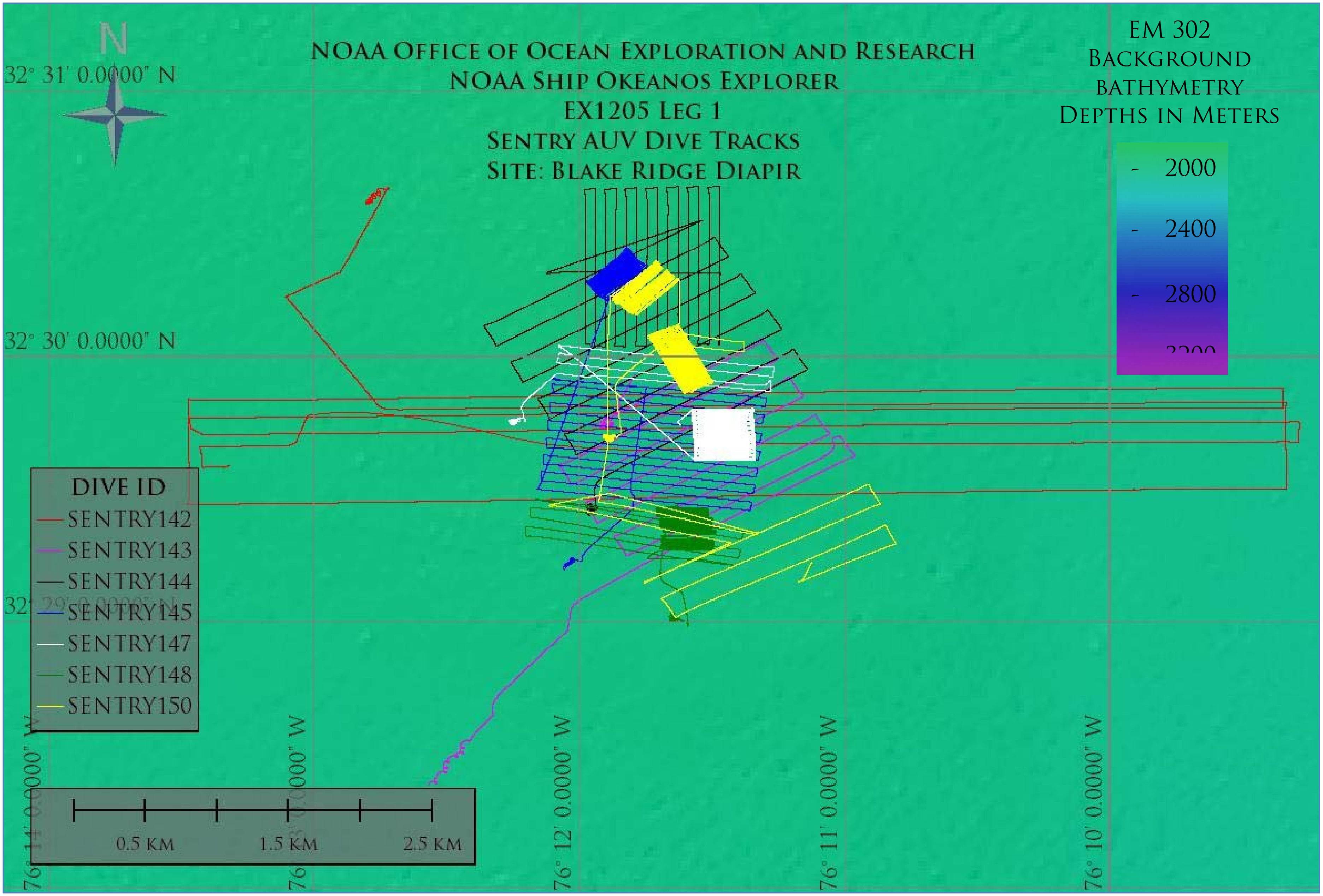

Figure 31. Map showing Sentry AUV dives at Blake Ridge Diapir, created in Global Mapper 13.

Appendix C: Informational Tables

EX1205 Leg 1 Sentry AUV Launch Locations		
Dive #	Latitude	Longitude
139	33 19.798'N	073 05.800'W
140	33 19.798'N	073 05.800'W
141	33 19.813'N	073 06.199'W
142	32 29.869'N	076 13.334'W
143	32 28.197'N	076 12.577'W
144	32 29.383'N	076 12.147'W
145	32 28.767'N	076 12.347'W
146	32 57.606'N	075 56.936'W
147	32 29.256'N	076 12.652'W
148	32 28.509'N	076 12.305'W
149	32 58.029'N	075 56.284'W
150	32 58.024'N	075 56.165'W
151	32 58.024'N	075 56.165'W
152	32 58.094'N	075 56.261'W

EX1205L1 Weather Log								
Local Date	Local Time	UTC Time	UTC Date	Wind Direction (deg)	Wind Speed (kts)	Wave Height (ft)	Swell Direction (deg)	Swell Height (ft)
7/5/2012	2008	0008	7/6/2012	21	10.5	1-2	180	1-2
7/5/2012	2300	0300	7/6/2012	115	11	1-2	240	2-3
7/6/2012	0200	0600	7/6/2012	120	12	1-2	210	3-4
7/6/2012	0500	0900	7/6/2012	100	13	1-2	200	2-4
7/6/2012	0800	1200	7/6/2012	90	6	1-2	190	2-3
7/6/2012	1100	1500	7/6/2012	50	8	1-2	180	2-3
7/6/2012	1400	1800	7/6/2012	70	7	1-2	180	2-3
7/6/2012	1700	2100	7/6/2012	30	5	1	150	2-3

7/6/2012	2000	0000	7/7/2012	70	7	1-2	170	2-3
7/6/2012	2300	0300	7/7/2012	LT	VAR	0-1		
7/7/2012	0100	0600	7/7/2012	270	7	0-1		
7/7/2012	0400	0900	7/7/2012	250	9	0-1	180	2-3
7/7/2012	0700	1200	7/7/2012	255	10	1-2	220	3-4
7/7/2012	1000	1400	7/7/2012	250	10	1-2	220	3-4
7/7/2012	1300	1700	7/7/2012	230	12	1-2	220	4-5
7/7/2012	1600	2000	7/7/2012	250	14	1-2	235	5-6
7/7/2012	1900	2300	7/7/2012	225	18	1-2	220	5-6
7/7/2012	2200	0200	7/8/2012	230	20	1-2	220	5-6
7/8/2012	0100	0500	7/8/2012	240	22	1-2	220	5-6
7/8/2012	0400	0800	7/8/2012	245	25	1-2	220	5-6
7/8/2012	0700	1100	7/8/2012	230	21	1-2	220	5-6
7/8/2012	1000	1400	7/8/2012	230	19	1-2	220	5-6
7/8/2012	1300	1700	7/8/2012	220	19	1-2	220	4-5
7/8/2012	1600	2000	7/8/2012	225	20	1-2	220	4-5
7/8/2012	1900	2300	7/8/2012	220	16	1-2	220	4-5
7/8/2012	2200	0200	7/9/2012	220	16	1-2	220	4-5
7/9/2012	0100	0500	7/9/2012	220	22	1-2	combined	4-6
7/9/2012	0400	0800	7/9/2012	225	23	1-2	combined	4-6
7/9/2012	0700	1100	7/9/2012	225	20	1-2	combined	4-6
7/9/2012	1000	1400	7/9/2012	210	21	1-2	combined	4-6
7/9/2012	1300	1700	7/9/2012	210	20	1-2	combined	4-5
7/9/2012	1600	2000	7/9/2012	215	22	1-2	combined	4-5
7/9/2012	1900	2300	7/9/2012	210	21	2-3	combined	5-6
7/9/2012	2200	0200	7/10/2012	220	20	1-2	combined	4-5
7/10/2012	0100	0500	7/10/2012	230	20	4-5	combined	
7/10/2012	0400	0800	7/10/2012	230	17	4-5	combined	
7/10/2012	0700	1100	7/10/2012	215	20	5-6	combined	
7/10/2012	1000	1400	7/10/2012	215	20	4-5	combined	
7/10/2012	1300	1700	7/10/2012	200	20	4-5	combined	
7/10/2012	1600	2000	7/10/2012	210	19	4-5	combined	

7/10/2012	1900	2300	7/10/2012	210	19	4-5	combined	
7/10/2012	2200	0200	7/11/2012	190	23	n/a	n/a	
7/11/2012	0100	0500	7/11/2012	200	25	n/a	n/a	n/a
7/11/2012	0400	0800	7/11/2012	205	17	4-5	n/a	n/a
7/11/2012	0700	1100	7/11/2012	215	16	2-3	240	2
7/11/2012	1000	1400	7/11/2012	20	13	2-3	230	2-3
7/11/2012	1300	1700	7/11/2012	200	10	1-2	230	2-3
7/11/2012	1600	2000	7/11/2012	200	12	1-2	240	2-3
7/11/2012	1900	2300	7/11/2012	200	12	1-2	240	2-3
7/11/2012	2200	0200	7/12/2012	110	8	1-2	240	2-3
7/12/2012	0100	0500	7/12/2012	180	10	n/a	n/a	n/a
7/12/2012	0400	0800	7/12/2012	160	5	n/a	n/a	n/a
7/12/2012	0700	1100	7/12/2012	110	6	0-1	240	1-2
7/12/2012	1000	1400	7/12/2012	125	14	1	140	1-2
7/12/2012	1300	1700	7/12/2012	150	16	1-2	n/a	n/a
7/12/2012	1600	2000	7/12/2012	160	11	1-2	n/a	2-3
7/12/2012	1900	2300	7/12/2012	155	11	1-2	140	2-3
7/12/2012	2200	0200	7/13/2012	130	13	1-2	n/a	n/a
7/13/2012	0100	0500	7/13/2012	130	10	1-2	n/a	n/a
7/13/2012	0400	0800	7/13/2012	115	5	1-2	n/a	n/a
7/13/2012	0700	1100	7/13/2012	110	5	1-2	120	2-3
7/13/2012	1000	1400	7/13/2012	130	15	1-2	120	2-3
7/13/2012	1300	1700	7/13/2012	130	11	1-2	140	2-3
7/13/2012	1600	2000	7/13/2012	130	10	1-2	160	2-3
7/13/2012	1900	2300	7/13/2012	125	9	0-1	140	12
7/13/2012	2200	0200	7/14/2012	110	10	n/a	n/a	n/a
7/14/2012	0100	0500	7/14/2012	130	15	n/a	n/a	n/a
7/14/2012	0400	0800	7/14/2012	100	10	1-2	n/a	n/a
7/14/2012	0700	1100	7/14/2012	90	6	2-3	combined	
7/14/2012	1000	1400	7/14/2012	100	10	2-3	combined	
7/14/2012	1300	1700	7/14/2012	100	13	2-3	combined	
7/14/2012	1600	2000	7/14/2012	125	12	1-2	combined	

7/14/2012	1900	2300	7/14/2012	120	12	2-3	combined	
7/14/2012	2200	0200	7/15/2012	135	15	2-3	n/a	n/a
7/15/2012	0100	0500	7/15/2012	140	9	n/a	n/a	n/a
7/15/2012	0400	0800	7/15/2012	130	9	n/a	n/a	n/a
7/15/2012	0700	1100	7/15/2012	125	8	0-1	100	3-4
7/15/2012	1000	1400	7/15/2012	130	12	1-2	110	3-4
7/15/2012	1300	1700	7/15/2012	160	11	1-2	110	3-4
7/15/2012	1600	2000	7/15/2012	170	8	1-2	090	4-5
7/15/2012	1900	2300	7/15/2012	185	8	0-1	100	4-5
7/15/2012	2200	0200	7/16/2012	200	12	1-2	100	4-5
7/16/2012	0100	0500	7/16/2012	190	7	1-2	110	3-4
7/16/2012	0400	0800	7/16/2012	190	11	n/a	n/a	n/a
7/16/2012	0700	1100	7/16/2012	200	10	0-1	070/130	3-4/2-3
7/16/2012	1000	1400	7/16/2012	210	10	1-2	100/190	3-4/2-3
7/16/2012	1300	1700	7/16/2012	240	11	1-2	110/190	3-4/2-3
7/16/2012	1600	2000	7/16/2012	20	11	1-2	100	3-4
7/16/2012	1900	2300	7/16/2012	220	10	1-2	160/100	3-4
7/16/2012	2200	0200	7/17/2012	260	13	1-2	100	3-4
7/17/2012	0100	0500	7/17/2012	210	13	1-2	n/a	n/a
7/17/2012	0400	0800	7/17/2012	220	13	1-2	n/a	n/a
7/17/2012	0700	1100	7/17/2012	200	16	1-2	070/210	2-3
7/17/2012	1000	1400	7/17/2012	230	13	1-2	220/080	2-3/1-2
7/17/2012	1300	1700	7/17/2012	260	7	1-2	210	2-3
7/17/2012	1600	2000	7/17/2012	235	10	1-2	210	2-2
7/17/2012	1900	2300	7/17/2012	200	12	1-2	210	2-3
7/17/2012	2200	0200	7/18/2012	220	18	2-3	combined	
7/18/2012	0100	0500	7/18/2012	230	19	3-4	n/a	n/a
7/18/2012	0400	0800	7/18/2012	215	13	3-4	n/a	n/a
7/18/2012	0700	1100	7/18/2012	230	9	2-3	120	2-3
7/18/2012	1000	1400	7/18/2012	230	21	3-4	combined	
7/18/2012	1300	1700	7/18/2012	220	19	3-4	combined	
7/18/2012	1600	2000	7/18/2012	225	18	3-4	combined	

7/18/2012	1900	2300	7/18/2018	215	27	4-5	combined	
7/18/2012	2200	0200	7/19/2012	205	22	4-5	combined	
7/19/2012	0100	0500	7/19/2012	230	20	4-5	n/a	n/a
7/19/2012	0400	0800	7/19/2012	230	26	4-5	n/a	n/a
7/19/2012	0700	1100	7/19/2012	225	24	5-6	n/a	n/a
7/19/2012	1000	1400	7/19/2012	240	24	5-6	n/a	n/a
7/19/2012	1300	1700	7/19/2012	240	22	5-7	n/a	n/a
7/19/2012	1600	2000	7/19/2012	230	22	5-7	n/a	n/a
7/19/2012	1900	2300	7/19/2012	210	28	5-7	n/a	n/a
7/19/2012	2200	0200	7/20/2012	220	23	5-7	n/a	n/a
7/20/2012	0100	0500	7/20/2012	220	20	5-7	n/a	n/a
7/20/2012	0400	0800	7/20/2012	225	24	5-7	n/a	n/a
7/20/2012	0700	1100	7/20/2012	260	19	6-8	combined	
7/20/2012	1000	1400	7/20/2012	220	24	6-8	combined	
7/20/2012	1300	1700	7/20/2012	220	23	5-7	combined	
7/20/2012	1600	2000	7/20/2012	230	19	5-7	combined	
7/20/2012	1900	2300	7/20/2012	215	23	5-7	combined	
7/20/2012	2200	0200	7/21/2012	210	25	5-7	combined	
7/21/2012	0100	0500	7/21/2012	220	21	5-7	n/a	n/a
7/21/2012	0400	0800	7/21/2012	230	21	5-7	n/a	n/a
7/21/2012	0700	1100	7/21/2012	230	22	5-6	combined	
7/21/2012	1000	1400	7/21/2012	215	20	5-6	combined	
7/21/2012	1300	1700	7/21/2012	230	15	5-6	combined	
7/21/2012	1600	2000	7/21/2012	230	18	5-6	combined	
7/21/2012	1900	2300	7/21/2012	240	15	4-5	combined	
7/21/2012	2200	0200	7/22/2012	230	15	4-5	combined	
7/22/2012	0100	0500	7/22/2012	230	16	4-5		
7/22/2012	0400	0800	7/22/2012	225	18	3-5		
7/22/2012	0700	1100	7/22/2012	250	12	2-3	combined	
7/22/2012	1000	1400	7/22/2012	240	12	2-3	combined	
7/22/2012	1300	1700	7/22/2012	245	11	1-2	200	2-3
7/22/2012	1600	2000	7/22/2012	215	14	1-2	190/230	2-3

7/22/2012	1900	2300	7/22/2012	210	8	1-2	140/230	2-3
7/22/2012	2200	0200	7/23/2012	215	11	1-2	140	2-3
7/23/2012	0100	0500	7/23/2012	240	12	1-2	n/a	n/a
7/23/2012	0400	0800	7/23/2012	230	15	1-2	n/a	n/a
7/23/2012	0700	1100	7/23/2012	250	14	1-2	150/210	2-3
7/23/2012	1000	1400	7/23/2012	270	13	1-2	150/230	2-3
7/23/2012	1300	1700	7/23/2012	280	8	1-2	150/250	2-3
7/23/2012	1600	2000	7/23/2012	220	11	1-2	270	1-2
7/23/2012	1900	2300	7/23/2012	215	19	1-2	150	2-3
7/23/2012	2200	0200	7/24/2012	225	24	1-2	230	2-3
7/24/2012	0100	0500	7/24/2012	330	16	2-3	n/a	n/a
7/24/2012	0400	0800	7/24/2012	280	15	3-4	n/a	n/a

Appendix D: Tables of Data Files Collected

EX1205L1 SVP LOG						
DATE (GMT)	TIME (GMT)	XBT/CTD FILE NAME	LAT (WGS84)	LONG (WGS84)	XBT Probe Type	NOTES
7/5/2012	2236	EX1205L1_XBT01_120705.asvp	40.930176	-71.511857	Deep Blue	
7/6/2012	0156	EX1205L1_XBT02_120706.asvp			Deep Blue	Bad Cast
7/6/2012	0159	EX1205L1_XBT03_120706.asvp	40.379529	-71.800496	Deep Blue	
7/6/2012	0359	EX1205L1_XBT04_120706.asvp			Deep Blue	Bad Cast
7/6/2012	0403	EX1205L1_XBT05_120706.asvp	40.033423	-71.980729	Deep Blue	
7/6/2012	0730	EX1205L1_XBT06_120706.asvp	39.466903	-72.259058	Deep Blue	
7/6/2012	0957	EX1205L1_XBT07_120706.asvp	38.998711	-72.514103	Deep Blue	
7/6/2012	2352	EX1205L1_XBT08_120706.asvp	38.633777	-72.681063	Deep Blue	
7/7/2012	0420	EX1205L1_XBT09_120707.asvp	37.819426	-72.748218	Deep Blue	
7/7/2012	0619	EX1205L1_XBT10_120707.asvp	37.502604	-72.774105	Deep Blue	
7/7/2012	0943	EX1205L1_XBT11_120707.asvp	37.025289	-72.814054	Deep Blue	
7/7/2012	1305	EX1205L1_XBT12_120707.asvp	36.474707	-72.858024	Deep Blue	

7/7/2012	1621	EX1205L1_XBT13_120707.asvp	35.919889	-72.902938	Deep Blue	
7/7/2012	1938	EX1205L1_XBT14_120707.asvp	35.402132	-72.94432	Deep Blue	
7/7/2012	2343	EX1205L1_XBT15_120707.asvp	34.812016	-72.986043	Deep Blue	
7/8/2012	0412	EX1205L1_XBT17_120708.asvp	34.189099	-73.031136	Deep Blue	
7/8/2012	0732	EX1205L1_XBT18_120708.asvp	33.729993	-73.066138	Deep Blue	
7/8/2012	1053	EX1205L1_XBT20_120708.asvp	33.330127	-73.09248	Deep Blue	
7/8/2012	2226	EX1205L1_XBT21_120708.asvp	33.315804	-73.130632	Deep Blue	
7/9/2012	0258	EX1205L1_XBT22_120709.asvp	33.752316	-73.04104	Deep Blue	
7/9/2012	0719	EX1205L1_XBT23_120709.asvp	33.295988	-73.237150	Deep Blue	
7/9/2012	2350	EX1205L1_XBT24_120709.asvp	33.335913	-73.095906	Deep Blue	
7/10/2012	0416	EX1205L1_XBT25_120710.asvp	33.485177	-73.207821	Deep Blue	
7/10/2012	0933	EX1205L1_XBT26_120710.asvp	33.568835	-73.023706	Deep Blue	
7/10/2012	2047	EX1205L1_XBT27_120710.asvp	33.335742	-73.097493	Deep Blue	
7/11/2012	0111	EX1205L1_XBT28_120711.asvp	33.187174	-73.608903	Deep Blue	
7/11/2012	0701	EX1205L1_XBT29_120711.asvp	32.899321	-74.683065	Deep Blue	
7/11/2012	1105	EX1205L1_XBT30_120711.asvp	32.699699	-75.425944	Deep Blue	
7/11/2012	1519	EX1205L1_XBT31_120711.asvp	32.494206	-76.160262	Deep Blue	
7/12/2012	1221	EX1205L1_XBT32_120712.asvp	32.484176	-76.192545	Deep Blue	
7/12/2012	1558	EX1205L1_XBT33_120712.asvp	32.490010	-76.175781	Deep Blue	
7/12/2012	2025	EX1205L1_XBT34_120712.asvp	32.493095	-76.215625	Deep Blue	
7/13/2012	1239	EX1205L1_XBT35_120713.asvp	32.551453	-76.200440	Deep Blue	
7/13/2012	1628	EX1205L1_XBT36_120713.asvp	32.494365	-76.212166	Deep Blue	
7/14/2012	1322	EX1205L1_XBT37_120714.asvp	32.521020	-76.189168	Deep Blue	
7/14/2012	1653	EX1205L1_XBT38_120714.asvp	32.496000	-76.190788	Deep Blue	
7/14/2012	2107	EX1205L1_XBT39_120714.asvp	32.692924	-76.209302	Deep Blue	
7/15/2012	1421	EX1205L1_XBT40_120715.asvp	32.574565	-76.164608	Deep Blue	
7/15/2012	1908	EX1205L1_XBT41_120715.asvp	33.018929	-75.931885	Deep Blue	
7/16/2012	1308	EX1205L1_XBT42_120716.asvp	32.982568	-75.955688	Deep Blue	
7/16/2012	1724	EX1205L1_XBT43_120716.asvp	32.964954	-75.869133	Deep Blue	
7/17/2012	1320	EX1205L1_XBT44_120717.asvp	32.494287	-76.184522	Deep Blue	

7/17/2012	1740	EX1205L1_XBT45_120717.asvp	32.371102	-76.110230	Deep Blue	
7/17/2012	2025	EX1205L1_XBT46_120717.asvp	32.333207	-76.200667	Deep Blue	
7/18/2012	1359	EX1205L1_XBT47_120718.asvp	32.511373	-76.199919	Deep Blue	
7/18/2012	1632	EX1205L1_XBT48_120718.asvp	32.772424	-76.498812	Deep Blue	
7/18/2012	2001	EX1205L1_XBT49_120718.asvp	33.190308	-76.331974	Deep Blue	
7/19/2012	1700	EX1205L1_XBT50_120719.asvp	32.987036	-75.918555	Deep Blue	
7/19/2012	2111	EX1205L1_XBT51_120719.asvp	32.898271	-76.084033	Deep Blue	
7/20/2012	0104	EX1205L1_XBT52_120720.asvp	32.816227	-76.608895	Deep Blue	
7/20/2012	0718	EX1205L1_XBT54_120720.asvp	32.306653	-77.103508	Deep Blue	
7/20/2012	0923	EX1205L1_XBT55_120720.asvp	32.540483	-76.862386	Deep Blue	
7/20/2012	1255	EX1205L1_XBT56_120720.asvp	32.848116	-76.514746	Deep Blue	
7/21/2012	1608	EX1205L1_XBT57_120721.asvp	32.495805	-76.164510	Deep Blue	
7/21/2012	2051	EX1205L1_XBT58_120721.asvp	32.976017	-76.165283	Deep Blue	
7/22/2012	1538	EX1205L1_XBT59_120722.asvp	32.974418	-75.917668	Deep Blue	
7/22/2012	1959	EX1205L1_XBT60_120722.asvp	33.052002	-75.735189	Deep Blue	
7/23/2012	1903	EX1205L1_XBT61_120723.asvp	33.008753	-75.920003	Deep Blue	
7/23/2012	2216	EX1205L1_XBT62_120723.asvp	33.313611	-76.245353	Deep Blue	
7/24/2012	0135	EX1205L1_XBT63_120724.asvp	33.729627	-75.986971	Deep Blue	
7/24/2012	0344	EX1205L1_XBT64_120724.asvp	33.965666	-75.919385	Deep Blue	

EX1205 LEG 1 MULTIBEAM BATHYMETRY LOG													
MB Line Filename	Sound Speed Profile	Date (GMT)	SOG (KTS)	Hdg	Min Lon (dm)	Min Lat (dm)	Max Lon (dm)	Max Lat (dm)	Min Time	Max Time	Level 01 Product (WGS84)	Other Comments	Level 02 Products (WGS84) (Google Earth KMZ, Geotiff, Fledermaus SD, ASCII XYZ)
0000_20120705_225323_EX1205L1_MB.all	EX1205L1_XBT01_120705.asvp	7/5/12	9.5	199	071-33.70905 3W	40-50.20125 9N	071-32.09938 7W	40-52.99406 0N	7/5/2012 10:53:24 PM	7/5/2012 23:10:28.666	EX1205L1_EX03192012_2012-187_0000_20120705_225323_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0001_20120705_231029_EX1205L1_	EX1205L1_XBT03_120706.asvp	07/06/2012	10.5	202	071-42.35722 8W	40-33.72027 8N	071-33.58685 2W	40-50.23158 6N	7/5/2012 11:10:30	7/6/2012 12:51:57	EX1205L1_EX03192012_2012-187_0001_20120705_231029_EX1205	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M

MB.all									PM	AM	L1_MB.txt		
0002_20120706_005155_EX1205L1_MB.all	EX1205L1_XBT03_120706.asvp, EX1205L1_XBT05_120706.asvp	07/06/2012	10.5	203	071-42.220560W	40-14.213812N	071-52.548992W	40-33.762524N	7/6/2012 12:51:56 AM	7/6/2012 02:51:55.221	EX1205L1_EX03192012_2012-188_0002_20120706_005155_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0003_20120706_025155_EX1205L1_MB.all	EX1205L1_XBT05_120706.asvp	07/06/2012	11.2	204	072-03.418339W	39-53.327829N	071-52.403142W	40-14.264742N	7/6/2012 2:51:46 AM	7/6/2012 04:52:05.251	EX1205L1_EX03192012_2012-188_0003_20120706_025155_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0004_20120706_045155_EX1205L1_MB.all	EX1205L1_XBT05_120706.asvp	07/06/2012	11.4	204	072-14.369175W	39-32.046936N	072-03.237548W	39-53.386873N	7/6/2012 04:51:46.251	7/6/2012 06:52:05.281	EX1205L1_EX03192012_2012-188_0004_20120706_045155_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0005_20120706_065156_EX1205L1_MB.all	EX1205L1_XBT05_120706.asvp, EX1205L1_XBT06_120706.asvp	07/06/2012	11.0	204	072-25.659258W	39-11.032303N	072-14.060060W	39-32.102383N	7/6/2012 06:51:46.778	7/6/2012 08:52:06.310	EX1205L1_EX03192012_2012-188_0005_20120706_065156_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0006_20120706_085156_EX1205L1_MB.all	EX1205L1_XBT06_120706.asvp, EX1205L1_XBT07_120706.asvp	07/06/2012	11.0	204	072-37.790791W	38-49.843798N	072-24.341951W	39-11.293118N	7/6/2012 08:51:47.308	7/6/2012 10:52:10.337	EX1205L1_EX03192012_2012-188_0006_20120706_085156_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0007_20120706_105200_EX1205L1_MB.all	EX1205L1_XBT07_120706.asvp	07/06/2012	11.0	204	072-42.656671W	38-41.282510N	072-33.361189W	38-51.051671N	7/6/2012 10:51:51.337	7/6/2012 11:41:51.349	EX1205L1_EX03192012_2012-188_0007_20120706_105200_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0008_20120707_000349_EX1205L1_MB.all	EX1205L1_XBT08_120706.asvp	07/07/2012	10.4	183	072-45.309233W	38-14.339290N	072-38.441203W	38-36.073605N	2012-07-07 00:03:49.505	2012-07-07 02:03:48.035	EX1205L1_EX03192012_2012-189_0008_20120707_000349_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0009_20120707_020348_EX1205L1_MB.all	EX1205L1_XBT08_120706.asvp	07/07/2012	11.1	186	072-47.194483W	37-52.050345N	072-40.333473W	38-14.415879N	2012-07-07 02:03:38.536	2012-07-07 04:03:47.067	EX1205L1_EX03192012_2012-189_0009_20120707_020348_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0010_20120707_04	EX1205L1_XBT08_120706.asvp,	07/07/20	10.1	186	072-48.5	37-31.3	072-42.1	37-52.4	2012-07-07	2012-07-07	EX1205L1_EX03192012_2012-	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M

0347_EX1205L1_MB.all	EX1205L1_XBT09_120707.asvp, EX1205L1_XBT10_120707.asvp	12			42458W	30791N	97941W	26707N	04:03:37.566	06:03:48.097	189_0010_20120707_040347_EX1205L1_MB.txt		
0011_20120707_060348_EX1205L1_MB.all	EX1205L1_XBT09_120707.asvp, EX1205L1_XBT10_120707.asvp	07/07/2012	8.0	186	072-50.18854W	37-15.60674 0N	072-44.16469 7W	37-33.04552 9N	2012-07-07 06:03:38.597	2012-07-07 08:03:42.627	EX1205L1_EX03192012_2012-189_0011_20120707_060348_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0012_20120707_080343_EX1205L1_MB.all	EX1205L1_XBT09_120707.asvp, EX1205L1_XBT10_120707.asvp	07/07/2012	10.0	186	072-51.52467 9W	36-58.01990 5N	072-45.33028 2W	37-16.87590 2N	2012-07-07 08:03:33.143	2012-07-07 10:03:45.658	EX1205L1_EX03192012_2012-189_0012_20120707_080343_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0013_20120707_100345_EX1205L1_MB.all	EX1205L1_XBT12_129707.asvp	07/07/2012	10.0	186	072-53.32584 2W	36-38.89557 5N	072-46.49883 8W	36-58.44070 6N	7/7/2012 10:03:36 AM	2012-07-07 12:03:47.188	EX1205L1_EX03192012_2012-189_0013_20120707_100345_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0014_20120707_120347_EX1205L1_MB.all	EX1205L1_XBT12_129707.asvp	07/07/2012	10.0	186	072-55.00578 9W	36-18.44080 0N	072-47.97911 1W	36-39.05432 4N	7/7/2012 12:03:38 PM	7/7/2012 2:03:46 PM	EX1205L1_EX03192012_2012-189_0014_20120707_120347_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0015_20120707_140346_EX1205L1_MB.all	EX1205L1_XBT12_129707.asvp	07/07/2012	10.0	186	072-56.68673 4W	35-57.93077 0N	072-49.59594 1W	36-18.77143 2N	7/7/2012 2:03:36 PM	2012-07-07 16:03:51.252	EX1205L1_EX03192012_2012-189_0015_20120707_140346_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0016_20120707_160351_EX1205L1_MB.all	EX1205L1_XBT13_129707.asvp	07/07/2012	9.0	186	072-58.19111 3W	35-38.58650 3N	072-51.31021 5W	35-58.11710 6N	2012-07-07 16:03:41.751	2012-07-07 18:03:49.782	EX1205L1_EX03192012_2012-189_0016_20120707_160351_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0017_20120707_180350_EX1205L1_MB.all	EX1205L1_XBT13_129707.asvp	07/07/2012	10.0	181	072-59.53904 6W	35-19.89487 2N	072-53.07224 9W	35-38.79001 1N	7/7/2012 6:03:40 PM	2012-07-07 20:03:46.814	EX1205L1_EX03192012_2012-189_0017_20120707_180350_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0018_20120707_200346_EX1205L1_	EX1205L1_XBT14_129707.asvp	07/07/2012	8.5	185	073-00.81406 5W	35-02.68653 0N	072-54.40689 6W	35-20.29320 1N	7/7/2012 8:03:37	2012-07-07 22:03:49.3	EX1205L1_EX03192012_2012-189_0018_20120707_200346_EX1205	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M

MB.all									PM	48	L1_MB.txt		
0019_20120707_220349_EX1205L1_MB.all	EX1205L1_XBT15_129707.asvp	07/07/2012	8.5	185	073-02.072236W	34-46.259762N	072-55.476610W	35-02.869559N	7/7/2012 10:03:40 PM	2012-07-08 00:00:07.378	EX1205L1_EX03192012_2012-189_0019_20120707_220349_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0020_20120708_000007_EX1205L1_MB.all	EX1205L1_XBT15_129707.asvp	07/08/2012	8.2	186	073-03.117713W	34-29.917113N	072-56.580085W	34-46.326857N	2012-07-08 00:00:07.880	2012-07-08 02:00:13.412	EX1205L1_EX03192012_2012-190_0020_20120708_000007_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0021_20120708_020003_EX1205L1_MB.all	EX1205L1_XBT15_129707.asvp	07/08/2012	8.5	186	073-04.469473W	34-12.856431N	072-57.953183W	34-29.935501N	2012-07-08 01:59:53.911	2012-07-08 04:00:06.941	EX1205L1_EX03192012_2012-190_0021_20120708_020003_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0022_20120708_040007_EX1205L1_MB.all	EX1205L1_XBT17_129708.asvp	07/08/2012	8.4	186	073-05.522510W	33-55.700652N	072-59.229828W	34-13.174973N	2012-07-08 03:59:57.442	2012-07-08 06:00:01.973	EX1205L1_EX03192012_2012-190_0022_20120708_040007_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0023_20120708_060002_EX1205L1_MB.all	EX1205L1_XBT17_129708.asvp, EX1205L1_XBT18_129708.asvp	07/08/2012	8.0	185	073-06.195679W	33-39.555137N	073-00.678147W	33-56.750880N	2012-07-08 05:59:52.971	2012-07-08 08:00:02.005	EX1205L1_EX03192012_2012-190_0023_20120708_060002_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0024_20120708_080002_EX1205L1_MB.all	EX1205L1_XBT20_120708.asvp	07/08/2012	7.3	186	073-07.405147W	33-25.419689N	073-02.546511W	33-40.988048N	2012-07-08 07:59:53.001	2012-07-08 10:00:01.031	EX1205L1_EX03192012_2012-190_0024_20120708_080002_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0025_20120708_100001_EX1205L1_MB.all	EX1205L1_XBT20_120708.asvp	07/08/2012	6.7	184	073-07.782959W	33-18.764287N	073-03.635613W	33-26.192264N	7/8/2012 9:59:52 AM	2012-07-08 10:52:44.045	EX1205L1_EX03192012_2012-190_0025_20120708_100001_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0026_20120708_105234_EX1205L1_MB.all	EX1205L1_XBT20_120708.asvp	07/08/2012	1.8	111	073-07.294466W	33-18.683112N	073-03.527541W	33-21.087382N	7/8/2012 10:52:25 AM	2012-07-08 11:01:10.051	EX1205L1_EX03192012_2012-190_0026_20120708_105234_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0027_20120708_22	EX1205L1_XBT21_120708.asvp	07/08/20	5.9	310	073-12.4	33-17.5	073-08.1	33-21.0	7/8/2012	7/8/2012	EX1205L1_EX03192012_2012-	Hatteras Transverse	EX1205L1_MB_FNL_ALL_WGS84_50M,

3431_EX1205L1_MB.all		12			33784W	45723N	96867W	16809N	10:34:31 PM	10:59:18 PM	190_0027_20120708_223431_EX1205L1_MB.txt	Canyon	EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0028_20120708_225908_EX1205L1_MB.all	EX1205L1_XBT21_120708.asvp	07/08/2012	8.9	022	073-12.145247W	33-19.806272N	073-04.502201W	33-29.257528N	7/8/2012 10:58:59 PM	2012-07-09 00:01:23.248	EX1205L1_EX03192012_2012-190_0028_20120708_225908_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0029_20120709_000123_EX1205L1_MB.all	EX1205L1_XBT21_120708.asvp	07/09/2012	9.7	21	073-08.211942W	33-28.459276N	072-56.563453W	33-47.205876N	2012-07-09 00:01:23.747	2012-07-09 02:01:27.273	EX1205L1_EX03192012_2012-191_0029_20120709_000123_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0030_20120709_020127_EX1205L1_MB.all	EX1205L1_XBT21_120708.asvp	07/09/2012	5.9	249	073-03.898082W	33-44.828970N	072-56.257047W	33-49.608318N	7/9/2012 2:01:18 AM	2012-07-09 02:50:59.290	EX1205L1_EX03192012_2012-191_0030_20120709_020127_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0031_20120709_025059_EX1205L1_MB.all	EX1205L1_XBT21_120708.asvp, EX1205L1_XBT22_120708.asvp	07/09/2012	6.2	202	073-08.776334W	33-33.521076N	073-00.640205W	33-46.709517N	2012-07-09 02:50:50.293	2012-07-09 04:51:00.821	EX1205L1_EX03192012_2012-191_0031_20120709_025059_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0032_20120709_045101_EX1205L1_MB.all	EX1205L1_XBT22_120708.asvp	07/09/2012	7.0	202	073-14.260551W	073-05.937446W	33-20.339841N	33-34.974889N	2012-07-09 04:50:51.323	2012-07-09 06:50:58.851	EX1205L1_EX03192012_2012-191_0032_20120709_045101_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0033_20120709_065058_EX1205L1_MB.all	EX1205L1_XBT22_120708.asvp	07/09/2012	7.5	205	073-17.956544W	33-10.986237N	073-11.252564W	33-21.954750N	2012-07-09 06:50:49.352	2012-07-09 08:08:07.871	EX1205L1_EX03192012_2012-191_0033_20120709_065058_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0034_20120709_080808_EX1205L1_MB.all	EX1205L1_XBT22_120708.asvp, EX1205L1_XBT23_120708.asvp	07/09/2012	7.7	22	073-19.804973W	33-11.323463N	073-10.833399W	33-26.737859N	2012-07-09 08:07:58.868	2012-07-09 10:08:04.399	EX1205L1_EX03192012_2012-191_0034_20120709_080808_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0035_20120709_100804_EX1205L1_MB.all	EX1205L1_XBT23_120708.asvp	07/09/2012	6.6	130	073-13.499678W	33-19.021482N	073-03.947066W	33-25.231648N	7/9/2012 10:07:55 AM	2012-07-09 11:12:51.417	EX1205L1_EX03192012_2012-191_0035_20120709_100804_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M

0036_20120710_000006_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	7.5	27	073-07.91781 5W	33-20.50099 2N	073-04.24969 1W	33-23.17677 9N	7/10/2012 12:00:07 AM	2012-07-10 00:09:52.611	EX1205L1_EX03192012_2012-192_0036_20120710_000006_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0037_20120710_000942_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	8.7	201	073-13.05969 4W	33-09.40668 2N	073-05.26385 7W	33-22.34778 1N	7/10/2012 12:09:33 AM	2012-07-10 01:33:42.633	EX1205L1_EX03192012_2012-192_0037_20120710_000942_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0038_20120710_013342_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	8.2	293	073-15.48687 7W	33-08.40523 5N	073-10.02036 9W	33-11.75874 4N	7/10/2012 1:33:34 AM	2012-07-10 01:53:14.635	EX1205L1_EX03192012_2012-192_0038_20120710_013342_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0039_20120710_015305_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	9.1	20	073-15.32795 7W	33-10.34790 9N	073-08.19410 7W	33-20.90274 8N	7/10/2012 1:52:55 AM	2012-07-10 03:01:40.155	EX1205L1_EX03192012_2012-192_0039_20120710_015305_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0040_20120710_030140_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	7.3	324	073-11.85606 3W	33-19.86386 8N	073-08.08420 5W	33-22.36561 6N	7/10/2012 3:01:31 AM	2012-07-10 03:06:29.158	EX1205L1_EX03192012_2012-192_0040_20120710_030140_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0041_20120710_030619_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	8.0	318	073-15.21712 1W	33-20.10168 1N	073-09.33288 4W	33-25.58508 9N	7/10/2012 3:06:10 AM	2012-07-10 03:41:27.167	EX1205L1_EX03192012_2012-192_0041_20120710_030619_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0042_20120710_034127_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp	07/10/2012	9.0	3.6	073-15.89851 7W	33-23.54037 6N	073-12.56043 0W	33-25.58797 0N	2012-07-10 03:41:17.666	2012-07-10 03:45:21.168	EX1205L1_EX03192012_2012-192_0042_20120710_034127_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0043_20120710_034511_EX1205L1_MB.all	EX1205L1_XBT24_120709.asvp, EX1205L1_XBT25_120710.asvp	07/10/2012	8.6	21	073-15.71819 0W	33-24.58849 4N	073-05.65228 8W	33-41.96628 6N	2012-07-10 03:45:01.666	2012-07-10 05:45:13.198	EX1205L1_EX03192012_2012-192_0043_20120710_034511_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0044_20120710_054513_EX	EX1205L1_XBT25_120710.asvp	07/10/2012	7.8	216	073-15.26152	33-31.96028	073-06.07070	33-43.93882	7/10/2012 5:45:	2012-07-10 07:20	EX1205L1_EX03192012_2012-192_0044_2012071	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_T

1205L1_MB.all					6W	4N	7W	1N	04 AM	:34.724	0_054513_EX1205L1_MB.txt		RANSVERSE_CANYON_WGS84_30M
0045_20120710_074516_EX1205L1_MB.all	EX1205L1_XBT25_120710.asvp	07/10/2012	8.9	77	073-16.555559W	33-27.930293N	072-58.653593W	33-37.213863N	2012-07-10 07:45:17.232	2012-07-10 09:45:16.257	EX1205L1_EX03192012_2012-192_0045_20120710_074516_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0046_20120710_094516_EX1205L1_MB.all	EX1205L1_XBT26_120710.asvp	07/10/2012	8.1	198	073-07.739606W	33-18.387218N	073-00.634254W	33-33.190207N	2012-07-10 09:45:06.758	2012-07-10 11:22:08.780	EX1205L1_EX03192012_2012-192_0046_20120710_094516_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0047_20120710_191741_EX1205L1_MB.all	Do not process. EM 302 / USBL / ship thruster testing.	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP
0048_20120710_211001_EX1205L1_MB.all	EX1205L1_XBT27_120710.asvp	07/10/2012	10.0	104	073-05.489325W	33-18.923740N	073-02.572951W	33-21.995790N	7/10/2012 9:10:02 PM	2012-07-10 21:17:57.429	EX1205L1_EX03192012_2012-192_0048_20120710_211001_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0049_20120710_211747_EX1205L1_MB.all	EX1205L1_XBT27_120710.asvp	07/10/2012	7.9	254	073-05.469641W	33-18.365608N	073-01.769996W	33-21.390248N	7/10/2012 9:17:38 PM	2012-07-10 21:26:19.928	EX1205L1_EX03192012_2012-192_0049_20120710_211747_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0050_20120710_212620_EX1205L1_MB.all	EX1205L1_XBT27_120710.asvp	07/10/2012	6.1	254	073-18.819835W	33-14.742653N	073-04.115777W	33-21.256471N	2012-07-10 21:26:10.430	2012-07-10 23:26:27.456	EX1205L1_EX03192012_2012-192_0050_20120710_212620_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0051_20120710_232617_EX1205L1_MB.all	EX1205L1_XBT27_120710.asvp	07/10/2012	5.8	253	073-18.919378W	33-14.721084N	073-18.143200W	33-17.486308N	7/10/2012 11:26:18 PM	2012-07-10 23:27:13.458	EX1205L1_EX03192012_2012-192_0051_20120710_232617_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0052_20120710_232704_EX1205L1_MB.all	EX1205L1_XBT27_120710.asvp	07/10/2012	8.6	255	073-24.358970W	33-13.008000N	073-18.183343W	33-17.486886N	2012-07-10 23:26:53.959	2012-07-11 00:00:04.465	EX1205L1_EX03192012_2012-192_0052_20120710_232704_EX1205L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_HATTERAS_TRANSVERSE_CANYON_WGS84_30M
0053_201	EX1205L1_XBT27_12	07/1	9.5	255	073-	33-	073-	33-	2012-	2012-	EX1205L1_EX0319	Transit	EX1205L1_MB_FNL_ALL_WGS84_5

20711_001126_EX1205L1_MB.all	0710.asvp, EX1205L1_XBT28_120711.asvp	1/2012			48.033374W	06.748853N	25.503973W	15.717701N	07-11 00:11:26.968	07-11 02:11:34.500	2012_2012-193_0053_20120711_001126_EX1205L1_MB.txt		0M
0054_20120711_021125_EX1205L1_MB.all	EX1205L1_XBT28_120711.asvp	07/11/2012	9.8	255	074-10.841005W	33-00.282256N	073-46.878174W	33-09.862039N	2012-07-11 02:11:15.997	2012-07-11 04:11:36.030	EX1205L1_EX03192012_2012-193_0054_20120711_021125_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0055_20120711_041126_EX1205L1_MB.all	EX1205L1_XBT28_120711.asvp	07/11/2012	9.8	255	074-33.026913W	32-54.123862N	074-08.851959W	33-04.308046N	2012-07-11 04:11:17.031	2012-07-11 06:11:25.057	EX1205L1_EX03192012_2012-193_0055_20120711_041126_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0056_20120711_061125_EX1205L1_MB.all	EX1205L1_XBT29_120711.asvp	07/11/2012			074-55.040796W	32-48.343656N	074-31.193817W	32-58.199184N	2012-07-11 06:11:15.558	7/11/2012 8:11:42 AM	EX1205L1_EX03192012_2012-193_0056_20120711_061125_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0057_20120711_081132_EX1205L1_MB.all	EX1205L1_XBT29_120711.asvp	07/11/2012			075-16.500095W	32-42.634043N	074-53.480715W	32-52.334422N	2012-07-11 08:11:23.592	7/11/2012 10:11:36 AM	EX1205L1_EX03192012_2012-193_0057_20120711_081132_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0058_20120711_101125_EX1205L1_MB.all	EX1205L1_XBT30_120711.asvp	07/11/2012			075-38.064981W	32-36.744114N	075-15.102097W	32-46.606146N	2012-07-11 10:11:16.144	7/11/2012 12:11:32 PM	EX1205L1_EX03192012_2012-193_0058_20120711_101125_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0059_20120711_121131_EX1205L1_MB.all	EX1205L1_XBT30_120711.asvp	07/11/2012			075-59.392036W	32-31.265968N	075-36.754577W	32-40.838185N	2012-07-11 12:11:22.647	7/11/2012 2:11:25 PM	EX1205L1_EX03192012_2012-193_0059_20120711_121131_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M
0060_20120711_141125_EX1205L1_MB.all	EX1205L1_XBT30_120711.asvp	07/11/2012	8.8	254	076-10.266248W	32-27.699856N	075-57.797400W	32-35.008629N	7/11/2012 2:11:16 PM	7/11/2012 3:20:21 PM	EX1205L1_EX03192012_2012-193_0060_20120711_141125_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0061_20120711_152011_EX1205L1_	EX1205L1_XBT30_120711.asvp,EX1205L1_XBT31_120711.asvp	07/11/2012	6.0	274	076-14.342078W	32-27.585894N	076-09.051314W	32-31.751690N	7/11/2012 3:20:02	7/11/2012 3:55:41	EX1205L1_EX03192012_2012-193_0061_20120711_152011_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	PM	L1_MB.txt	Diapir	M
0062_20120711_155530_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	07/11/2012	7.0	turn	076-16.484702W	32-27.489318N	076-11.971697W	32-31.587022N	7/11/2012 3:55:21 PM	7/11/2012 4:06:05 PM	EX1205L1_EX03192012_2012-193_0062_20120711_155530_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0063_20120711_160555_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	07/11/2012	6.0	93	076-14.371155W	32-27.387213N	076-08.544092W	32-31.447226N	7/11/2012 4:05:46 PM	7/11/2012 4:43:53 PM	EX1205L1_EX03192012_2012-193_0063_20120711_160555_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0064_20120711_164342_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	07/11/2012	6.0	turn	076-10.995903W	32-27.309197N	076-06.734840W	32-31.619042N	7/11/2012 4:43:33 PM	7/11/2012 4:52:10 PM	EX1205L1_EX03192012_2012-193_0064_20120711_164342_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0065_20120711_165200_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	07/11/2012	7.0	279	076-10.485349W	32-27.550967N	076-08.510873W	32-31.749532N	7/11/2012 4:51:51 PM	7/11/2012 4:59:02 PM	EX1205L1_EX03192012_2012-193_0065_20120711_165200_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0066_20120711_165902_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	07/11/2012	5.6	279	076-15.596732W	32-27.592986N	076-09.984573W	32-31.990088N	7/11/2012 4:58:52 PM	7/11/2012 5:29:25 PM	EX1205L1_EX03192012_2012-193_0066_20120711_165902_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067	NO LINE 0067
0068_20120712_113420_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp	7/12/12	5.4	332	076-13.729458W	32-26.438560N	076-09.211702W	32-30.115223N	2012-07-12 12:09:13.498	2012-07-12 12:17:48.999	EX1205L1_EX03192012_2012-194_0068_20120712_113420_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0069_20120712_120922_EX1205L1_MB.all	EX1205L1_XBT31_120711.asvp/EX1205L1_XBT32_120711.asvp	7/12/12	5.4	turn	076-13.601997W	32-27.881709N	076-08.570624W	32-32.400441N	2012-07-12 11:34:20.985	2012-07-12 12:09:32.000	EX1205L1_EX03192012_2012-194_0069_20120712_120922_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0070_20120712_121749_EX1205L1_	EX1205L1_XBT32_120711.asvp	7/12/12	5.0	6	076-13.721734W	32-28.226340N	076-09.088552W	32-30.834651N	2012-07-12 12:17:39.5	2012-07-12 12:36:06.5	EX1205L1_EX03192012_2012-194_0070_20120712_121749_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									01	03	L1_MB.txt	Diapir	M
0071_20120712_123556_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	6.0	3	076-16.765164W	32-26.931574N	076-08.348958W	32-32.326905N	2012-07-12 12:35:47.005	2012-07-12 14:05:40.023	EX1205L1_EX03192012_2012-194_0071_20120712_123556_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0072_20120712_140530_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	7.0	TURN	076-10.601201W	32-27.159091N	076-06.204478W	32-31.369973N	2012-07-12 14:05:20.525	2012-07-12 14:11:04.027	EX1205L1_EX03192012_2012-194_0072_20120712_140530_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0073_20120712_141104_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	6.0	279	076-14.287360W	32-27.328352N	076-07.892291W	32-31.628887N			EX1205L1_EX03192012_2012-194_0073_20120712_141104_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0074_20120712_145349_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	6.0	TURN	076-16.153379W	32-27.449399N	076-12.022222W	32-31.374972N			EX1205L1_EX03192012_2012-194_0074_20120712_145349_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0075_20120712_150242_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	6.0	93	076-14.363055W	32-27.465216N	076-08.524259W	32-31.570934N	7/12/2012 3:02:33 PM	2012-07-12 15:39:47.049	EX1205L1_EX03192012_2012-194_0075_20120712_150242_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0076_20120712_153937_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp	7/12/12	6.0	TURN	076-11.141681W	32-27.415568N	076-06.899016W	32-31.543576N	7/12/2012 3:39:28 PM	2012-07-12 15:48:12.053	EX1205L1_EX03192012_2012-194_0076_20120712_153937_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0077_20120712_154803_EX1205L1_MB.all	EX1205L1_XBT32_120711.asvp, EX1205L1_XBT33_120711.asvp	7/12/12	6.0	273	076-14.249160W	32-27.310679N	076-08.629042W	32-31.590601N	7/12/2012 3:47:54 PM	2012-07-12 16:26:38.558	EX1205L1_EX03192012_2012-194_0077_20120712_154803_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0078_20120712_162629_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	TURN	076-15.897618W	32-27.486987N	076-11.729391W	32-31.411336N	7/12/2012 4:26:20 PM	2012-07-12 16:33:16.063	EX1205L1_EX03192012_2012-194_0078_20120712_162629_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0079_20120712_16	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	92	076-13.9	32-27.5	076-08.5	32-31.6	7/12/2012	2012-07-12	EX1205L1_EX03192012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_50M,

3316_EX1205L1_MB.all					06485W	13822N	82790W	52175N	4:33:07 PM	17:08:54.571	194_0079_20120712_163316_EX1205L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0080_20120712_170845_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	TURN	076-11.727029W	32-27.128145N	076-06.277857W	32-31.536549N	7/12/2012 5:08:36 PM	2012-07-12 17:38:28.078	EX1205L1_EX03192012_2012-194_0080_20120712_170845_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0081_20120712_173828_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	273	076-14.234002W	32-27.349872N	076-08.771609W	32-31.650717N	7/12/2012 5:38:19 PM	2012-07-12 18:17:50.086	EX1205L1_EX03192012_2012-194_0081_20120712_173828_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0082_20120712_181740_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	TURN	076-16.270448W	32-27.492542N	076-12.174462W	32-31.399167N	7/12/2012 6:17:31 PM	2012-07-12 18:29:50.592	EX1205L1_EX03192012_2012-194_0082_20120712_181740_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0083_20120712_182941_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	93	076-14.907605W	32-27.512849N	076-08.443424W	32-31.517470N	7/12/2012 6:29:32 PM	2012-07-12 19:08:18.102	EX1205L1_EX03192012_2012-194_0083_20120712_182941_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0084_20120712_190808_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	TURN	076-10.897250W	32-27.381998N	076-06.538651W	32-31.50139N	7/12/2012 7:07:59 PM	2012-07-12 19:21:12.601	EX1205L1_EX03192012_2012-194_0084_20120712_190808_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0085_20120712_192113_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	273	076-14.273072W	32-27.336334N	076-08.887632W	32-31.610444N			EX1205L1_EX03192012_2012-194_0085_20120712_192113_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0086_20120712_195835_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp	7/12/12	6.0	TURN	076-16.037713W	32-27.560359N	076-11.214850W	32-31.341749N			EX1205L1_EX03192012_2012-194_0086_20120712_195835_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0087_20120712_201941_EX1205L1_MB.all	EX1205L1_XBT33_120711.asvp/EX1205L1_XBT334_120711.asvp	7/12/12	6.0		076-14.548646W	32-27.441220N	076-08.618546W	32-31.703125N			EX1205L1_EX03192012_2012-194_0087_20120712_201941_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M

0088_20120712_205544_EX1205L1_MB.all	EX1205L1_XBT34_120711.asvp	7/12/12	8.5		076-15.391041W	32-26.198234N	076-07.788420W	32-31.223532N			EX1205L1_EX03192012_2012-194_0088_20120712_205544_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0089_20120713_115340_EX1205L1_MB.all	EX1205L1_XBT34_120711.asvp	7/13/2012	9.0	271	076-15.327326W	32-30.201610N	076-10.694749W	32-34.380061N	2012-07-13 11:53:40.347	2012-07-13 12:16:37.354	EX1205L1_EX03192012_2012-195_0089_20120713_115340_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0090_20120713_121627_EX1205L1_MB.all	EX1205L1_XBT34_120711.asvp	7/13/2012	9.0	TURN	076-17.314368W	32-30.401392N	076-12.962356W	32-34.94624N	2012-07-13 12:16:17.856	2012-07-13 12:25:25.857	EX1205L1_EX03192012_2012-195_0090_20120713_121627_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0091_20120713_122526_EX1205L1_MB.all	EX1205L1_XBT34_120711.asvp, EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	86	076-14.768950W	32-30.850681N	076-06.947303W	32-35.747115N	2012-07-13 12:25:16.359	2012-07-13 13:08:01.865	EX1205L1_EX03192012_2012-195_0091_20120713_122526_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0092_20120713_130752_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0		076-10.329747W	32-27.573071N	076-04.850972W	32-35.740010N	7/13/2012 1:07:42 PM	2012-07-13 13:47:18.875	EX1205L1_EX03192012_2012-195_0092_20120713_130752_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0093_20120713_134719_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	273	076-14.261013W	32-27.336847N	076-08.665767W	32-31.736743N	7/13/2012 1:47:10 PM	2012-07-13 14:26:12.386	EX1205L1_EX03192012_2012-195_0093_20120713_134719_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0094_20120713_142603_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	TURN	076-16.365505W	32-27.483006N	076-12.162282W	32-31.621341N	7/13/2012 2:25:53 PM	2012-07-13 14:40:55.389	EX1205L1_EX03192012_2012-195_0094_20120713_142603_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0095_20120713_144046_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	93	076-14.217876W	32-27.624404N	076-12.306025W	32-31.602296N	7/13/2012 2:40:37 PM	2012-07-13 14:48:58.889	EX1205L1_EX03192012_2012-195_0095_20120713_144046_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0096_20120713_144849_EX	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	93	076-13.15638	32-27.43561	076-08.77245	32-31.80492	7/13/2012 2:48:	2012-07-13 15:18	EX1205L1_EX03192012_2012-195_0096_2012071	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_MB.all					6W	3N	4W	1N	39 PM	:52.896	3_144849_EX1205L1_MB.txt	Cape Fear Diapir	LAKE_RIDGE_DIAPIRS_WGS84_30M
0097_20120713_151843_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	TURN	076-11.049690W	32-27.47058 9N	076-06.67325 9W	32-31.76993 8N	7/13/2012 3:18:33 PM	2012-07-13 15:28:31.899	EX1205L1_EX03192012_2012-195_0097_20120713_151843_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0098_20120713_152822_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	273	076-14.15459 7W	32-27.38141 4N	076-09.06698 7W	32-31.72719 3N	7/13/2012 3:28:13 PM	2012-07-13 16:04:33.407	EX1205L1_EX03192012_2012-195_0098_20120713_152822_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0099_20120713_160423_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	TURN	076-16.57378 5W	32-27.50321 0N	076-12.31004 7W	32-31.61301 9N	7/13/2012 4:04:14 PM	2012-07-13 16:19:41.914	EX1205L1_EX03192012_2012-195_0099_20120713_160423_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0100_20120713_161942_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp, EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	93	076-14.15288 9W	32-27.43663 4N	076-08.79976 0W	32-31.77269 9N	7/13/2012 4:19:32 PM	2012-07-13 16:59:12.922	EX1205L1_EX03192012_2012-195_0100_20120713_161942_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0101_20120713_165903_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TURN	076-10.95569 8W	32-27.52560 3N	076-06.57147 8W	32-31.65574 0N	7/13/2012 4:58:53 PM	2012-07-13 17:10:25.923	EX1205L1_EX03192012_2012-195_0101_20120713_165903_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0102_20120713_171026_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	273	076-14.29496 4W	32-27.41566 7N	076-08.58930 8W	32-31.78607 1N	7/13/2012 5:10:16 PM	2012-07-13 17:49:36.935	EX1205L1_EX03192012_2012-195_0102_20120713_171026_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0103_20120713_174937_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TURN	076-16.40869 4W	32-27.58628 6N	076-12.04898 4W	32-31.60519 8N	7/13/2012 5:49:27 PM	2012-07-13 18:03:16.940	EX1205L1_EX03192012_2012-195_0103_20120713_174937_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0104_20120713_180317_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	93	076-14.12310 8W	32-27.50674 7N	076-08.69750 8W	32-31.81927 3N	7/13/2012 6:03:07 PM	2012-07-13 18:41:40.952	EX1205L1_EX03192012_2012-195_0104_20120713_180317_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0105_201	EX1205L1_XBT36_12	7/13/	6.0	TUR	076-	32-	076-	32-	7/13/	2012-	EX1205L1_EX0319	Blake	EX1205L1_MB_FNL_ALL_WGS84_5

20713_184131_EX1205L1_MB.all	0711.asvp	2012		N	11.099338W	27.502199N	06.679238W	31.737410N	2012 6:41:22 PM	07-13 18:50:24.952	2012_2012-195_0105_20120713_184131_EX1205L1_MB.txt	Ridge Diapir & Cape Fear Diapir	0M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0106_20120713_185025_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	273	076-14.250198W	32-27.468896N	076-08.36641W	32-31.78983N	7/13/2012 6:50:16 PM	2012-07-13 19:28:29.462	EX1205L1_EX03192012_2012-195_0106_20120713_185025_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0107_20120713_192820_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TURN	076-16.354013W	32-27.60167 0N	076-11.782397W	32-31.578081N	7/13/2012 7:28:11 PM	2012-07-13 19:39:38.465	EX1205L1_EX03192012_2012-195_0107_20120713_192820_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0108_20120713_193938_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	93	076-14.404250W	32-27.550217N	076-08.677572W	32-31.820868N	7/13/2012 7:39:29 PM	2012-07-13 20:18:28.973	EX1205L1_EX03192012_2012-195_0108_20120713_193938_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0109_20120713_201856_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	94	076-09.526906W	32-27.594929N	076-08.549344W	32-31.622297N	7/13/2012 8:18:56 PM	2012-07-13 20:19:53.474	EX1205L1_EX03192012_2012-195_0109_20120713_201856_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0110_20120713_201943_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TURN	076-10.913596W	32-27.512347N	076-06.671333W	32-31.884374N	7/13/2012 8:19:34 PM	2012-07-13 20:28:24.475	EX1205L1_EX03192012_2012-195_0110_20120713_201943_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0111_20120713_202824_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	273	076-14.269807W	32-27.808416N	076-08.622709W	32-32.076045N	7/13/2012 8:28:15 PM	2012-07-13 21:06:16.986	EX1205L1_EX03192012_2012-195_0111_20120713_202824_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0112_20120713_210607_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TURN	076-16.158859W	32-27.021609N	076-10.458507W	32-31.820359N	7/13/2012 9:05:58 PM	2012-07-13 21:40:05.498	EX1205L1_EX03192012_2012-195_0112_20120713_210607_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0113_20120714_131507_EX1205L1_	EX1205L1_XBT36_120711.asvp, EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	130	076-13.779639W	32-27.559908N	076-08.731940W	32-32.500683N	7/14/2012 1:15:08	2012-07-14 13:52:23.7	EX1205L1_EX03192012_2012-196_0113_20120714_131507_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	33	L1_MB.txt	Diapir	M
0114_20120714_135224_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	TURN	076-11.299298W	32-27.760845N	076-06.614911W	32-31.880874N	7/14/2012 1:52:14 PM	2012-07-14 14:02:43.738	EX1205L1_EX03192012_2012-196_0114_20120714_135224_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0115_20120714_140243_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	273	076-14.102082W	32-27.750662N	076-08.613885W	32-32.098566N	7/14/2012 2:02:34 PM	2012-07-14 14:40:26.749	EX1205L1_EX03192012_2012-196_0115_20120714_140243_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0116_20120714_144027_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	TURN	076-16.302024W	32-27.851233N	076-11.990594W	32-31.882621N	7/14/2012 2:40:17 PM	2012-07-14 14:52:51.250	EX1205L1_EX03192012_2012-196_0116_20120714_144027_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0117_20120714_145241_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	93	076-14.474662W	32-27.546525N	076-08.237297W	32-31.974558N	7/14/2012 2:52:32 PM	2012-07-14 15:32:31.761	EX1205L1_EX03192012_2012-196_0117_20120714_145241_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0118_20120714_153222_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	TURN	076-11.068546W	32-27.703355N	076-06.392942W	32-31.941238N	7/14/2012 3:32:13 PM	2012-07-14 15:44:24.260	EX1205L1_EX03192012_2012-196_0118_20120714_153222_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0119_20120714_154414_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	273	076-14.067055W	32-27.721008N	076-08.826956W	32-32.074849N	7/14/2012 3:44:05 PM	2012-07-14 16:21:44.772	EX1205L1_EX03192012_2012-196_0119_20120714_154414_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0120_20120714_162135_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp	7/14/2012	6.0	TURN	076-16.359840W	32-27.715164N	076-12.192503W	32-31.820091N	7/14/2012 4:21:26 PM	2012-07-14 16:35:12.278	EX1205L1_EX03192012_2012-196_0120_20120714_162135_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0121_20120714_163512_EX1205L1_MB.all	EX1205L1_XBT37_120714.asvp, EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	93	076-14.367384W	32-27.568479N	076-08.439199W	32-31.877419N	7/14/2012 4:35:03 PM	2012-07-14 17:14:39.285	EX1205L1_EX03192012_2012-196_0121_20120714_163512_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0122_20120714_17	EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	TURN	076-10.9	32-27.6	076-06.3	32-32.0	7/14/2012	2012-07-14	EX1205L1_EX03192012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_50M,

1429_EX1205L1_MB.all					71564W	66114N	93681W	61222N	5:14:20 PM	17:27:31.288	196_0122_20120714_171429_EX1205L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0123_20120714_172731_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	273	076-14.12909 6W	32-27.67706 7N	076-08.86849 5W	32-32.08712 5N	7/14/2012 5:27:22 PM	2012-07-14 18:05:40.799	EX1205L1_EX03192012_2012-196_0123_20120714_172731_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0124_20120714_180541_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	TURN	076-16.37115 3W	32-27.68313 8N	076-12.23555 1W	32-31.82920 5N	7/14/2012 6:05:32 PM	2012-07-14 18:18:58.802	EX1205L1_EX03192012_2012-196_0124_20120714_180541_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0125_20120714_181858_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	93	076-14.18954 9W	32-27.73659 8N	076-10.40427 0W	32-31.92627 3N	7/14/2012 6:18:49 PM	2012-07-14 18:42:43.808	EX1205L1_EX03192012_2012-196_0125_20120714_181858_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0126_20120714_184234_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp	7/14/2012	6.0	TURN	076-13.49829 4W	32-27.79344 8N	076-08.41483 6W	32-32.06304 4N	7/14/2012 6:42:25 PM	2012-07-14 18:56:41.310	EX1205L1_EX03192012_2012-196_0126_20120714_184234_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0127_20120714_185641_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp	7/14/2012	9.5	358	076-15.23229 3W	32-30.87656 4N	076-08.86159 5W	32-44.91254 4N	7/14/2012 6:56:32 PM	7/14/2012 8:20:42 PM	EX1205L1_EX03192012_2012-196_0127_20120714_185641_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0128_20120714_202032_EX1205L1_MB.all	EX1205L1_XBT38_120714.asvp, EX1205L1_XBT39_120714.asvp	7/14/2012	7.6	182	076-15.28400 7W	32-31.25196 2N	076-10.04422 1W	32-47.16030 4N	7/14/2012 8:20:23 PM	7/14/2012 10:20:45 PM	EX1205L1_EX03192012_2012-196_0128_20120714_202032_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0129_20120714_222035_EX1205L1_MB.all	EX1205L1_XBT39_120714.asvp	7/14/2012	7.4	181	076-14.91408 8W	32-28.46321 1N	076-09.88571 0W	32-31.30586 6N	7/14/2012 10:20:26 PM	7/14/2012 10:41:34 PM	EX1205L1_EX03192012_2012-196_0129_20120714_222035_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0130 DOES NOT EXIST	0130 DOES NOT EXIST	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIS	130 DOES NOT EXIST	130 DOES NOT EXIST	130 DOES NOT EXIST

		T	T	T	T	T	T	T	T	T			
0131_20120715_134924_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	9.0	114	076-11.801020W	32-29.722303N	076-09.948497W	32-32.683138N	2012-07-15 13:49:24.590	2012-07-15 13:50:41.591	EX1205L1_EX03192012_2012-197_0131_20120715_134924_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOES NOT EXIST	132 DOES NOT EXIST	132 DOES NOT EXIST
0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOES NOT EXIST	133 DOES NOT EXIST	133 DOES NOT EXIST
0134_20120715_140357_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	8.7	358	076-13.328878W	32-31.684397N	076-07.038293W	32-45.320986N	7/15/2012 2:03:57 PM	2012-07-15 15:34:40.140	EX1205L1_EX03192012_2012-197_0134_20120715_140357_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0135_20120715_153440_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	8.6	64	076-13.318183W	32-43.562427N	075-55.056659W	32-54.288524N	7/15/2012 3:34:31 PM	7/15/2012 5:19:43 PM	EX1205L1_EX03192012_2012-197_0135_20120715_153440_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0136_20120715_171933_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	7.2	turn	075-58.136867W	32-50.087576N	075-53.083451W	32-54.235727N	7/15/2012 5:19:24 PM	7/15/2012 5:31:42 PM	EX1205L1_EX03192012_2012-197_0136_20120715_171933_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0137_20120715_173132_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	8.6	12	075-58.417731W	32-52.110023N	075-51.580537W	33-02.615066N	7/15/2012 5:31:23 PM	7/15/2012 6:43:13 PM	EX1205L1_EX03192012_2012-197_0137_20120715_173132_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0138_20120715_184303_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp	7/15/2012	6.8	turn	075-58.243059W	33-00.649077N	075-51.736996W	33-05.165657N	7/15/2012 6:42:54 PM	7/15/2012 6:58:48 PM	EX1205L1_EX03192012_2012-197_0138_20120715_184303_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M

0139_20120715_185838_EX1205L1_MB.all	EX1205L1_XBT40_120715.asvp,EX1205L1_XBT41_120715.asvp	7/15/2012	8.4	191	075-59.479932W	32-53.39685N	075-53.25045 0W	33-03.09564 9N	7/15/2012 6:58:29 PM	7/15/2012 8:02:17 PM	EX1205L1_EX03192012_2012-197_0139_20120715_185838_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0140_20120715_200208_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp	7/15/2012	9.5	turn	075-59.39436 4W	32-51.23040 7N	075-52.42165 7W	32-55.40497 6N	7/15/2012 8:01:59 PM	7/15/2012 8:17:54 PM	EX1205L1_EX03192012_2012-197_0140_20120715_200208_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0141_20120715_201745_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp	7/15/2012	8.4	13	075-56.93185 0W	32-53.21466 8N	075-51.11507 0W	32-58.87908 8N	7/15/2012 8:17:36 PM	7/15/2012 8:54:24 PM	EX1205L1_EX03192012_2012-197_0141_20120715_201745_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0142_20120715_205413_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp	7/15/2012	7.0	turn	075-55.96468 5W	32-56.70594 7N	075-50.72127 9W	33-00.96475 2N	7/15/2012 8:54:04 PM	7/15/2012 9:04:21 PM	EX1205L1_EX03192012_2012-197_0142_20120715_205413_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0143_20120715_210412_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp	7/15/2012	7.3	278	075-56.65283 3W	32-56.55569 7N	075-53.11206 7W	33-00.98472 5N	7/15/2012 9:04:03 PM	7/15/2012 9:24:17 PM	EX1205L1_EX03192012_2012-197_0143_20120715_210412_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0144_20120715_212408_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp	7/15/2012	4.3	turn	075-59.12762 2W	32-56.16507 6N	075-53.79744 4W	33-00.53824 7N	7/15/2012 9:23:58 PM	7/15/2012 9:46:26 PM	EX1205L1_EX03192012_2012-197_0144_20120715_212408_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0145_20120716_124446_EX1205L1_MB.all	EX1205L1_XBT41_120715.asvp, EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	241	076-00.25898 4W	32-59.05062 8N	075-54.28381 9W	33-04.61776 7N	7/16/2012 1:12:01 PM	2012-07-16 13:49:16.440	EX1205L1_EX03192012_2012-198_0145_20120716_124446_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0146_20120716_131210_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	9.5	075-59.91626 8W	33-02.30904 5N	075-54.21320 8W	33-07.20515 2N	7/16/2012 1:48:57 PM	2012-07-16 14:01:37.944	EX1205L1_EX03192012_2012-198_0146_20120716_131210_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0147_20120716_134906_EX	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	115	075-57.31816	33-01.97835	075-49.66867	33-08.08179	7/16/2012 2:01:	2012-07-16 14:41	EX1205L1_EX03192012_2012-198_0147_2012071	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_MB.all					7W	7N	5W	8N	19 PM	:49.451	6_134906_EX1205L1_MB.txt	Cape Fear Diapir	LAKE_RIDGE_DIAPIRS_WGS84_30M
0148_20120716_140128_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	69	075-53.482178W	33-03.696805N	075-53.042762W	33-08.138690N	7/16/2012 2:41:30 PM	2012-07-16 14:43:16.950	EX1205L1_EX03192012_2012-198_0148_20120716_140128_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0149_20120716_144139_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	278	075-57.090558W	33-03.721549N	075-53.294082W	33-08.560580N	7/16/2012 2:42:57 PM	2012-07-16 15:08:09.460	EX1205L1_EX03192012_2012-198_0149_20120716_144139_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0150_20120716_144307_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	278	076-00.02398W	32-56.952602N	075-53.503372W	33-01.626164N	7/16/2012 12:44:46 PM	2012-07-16 13:12:20.429	EX1205L1_EX03192012_2012-198_0150_20120716_144307_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0151_20120716_150809_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	10.1	076-00.352041W	33-04.009622N	075-55.182206W	33-09.824176N	7/16/2012 3:08:00 PM	2012-07-16 15:25:17.462	EX1205L1_EX03192012_2012-198_0151_20120716_150809_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0152_20120716_152507_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	96.3	075-57.199383W	33-05.344871N	075-49.828135W	33-09.798619N	7/16/2012 3:24:58 PM	2012-07-16 16:03:58.473	EX1205L1_EX03192012_2012-198_0152_20120716_152507_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0153_20120716_160348_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp	7/16/2012	8.5	turn	075-52.584706W	33-05.370011N	075-47.376826W	33-09.802263N	7/16/2012 4:03:39 PM	2012-07-16 16:15:29.973	EX1205L1_EX03192012_2012-198_0153_20120716_160348_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0154_20120716_161530_EX1205L1_MB.all	EX1205L1_XBT42_120716.asvp, EX1205L1_XBT43_120716.asvp	7/16/2012	8.5	193	075-55.536314W	32-52.743724N	075-47.828460W	33-08.372883N	7/16/2012 4:15:20 PM	2012-07-16 17:56:01.000	EX1205L1_EX03192012_2012-198_0154_20120716_161530_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0155_20120716_175601_EX1205L1_MB.all	EX1205L1_XBT43_120716.asvp	7/16/2012	8.5	259	076-06.404397W	32-48.599022N	075-50.832700W	32-55.316039N	7/16/2012 5:55:52 PM	2012-07-16 19:11:38.019	EX1205L1_EX03192012_2012-198_0155_20120716_175601_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0156_201	EX1205L1_XBT43_12	7/16/	8.8	199	076-	32-	076-	32-	7/16/	7/16/	EX1205L1_EX0319	Blake	EX1205L1_MB_FNL_ALL_WGS84_5

20716_191138_EX1205L1_MB.all	0716.asvp	2012			09.886453W	44.256835N	03.632253W	52.484645N	2012 7:11:29 PM	2012 7:53:50 PM	2012_2012-198_0156_20120716_191138_EX1205L1_MB.txt	Ridge Diapir & Cape Fear Diapir	0M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0157_20120716_195415_EX1205L1_MB.all	EX1205L1_XBT43_120716.asvp	7/16/2012	9.4	178	076-09.889498W	32-33.670214N	076-03.741092W	32-44.667058N	7/16/2012 7:54:16 PM	7/16/2012 9:05:23 PM	EX1205L1_EX03192012_2012-198_0157_20120716_195415_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0158_20120716_210522_EX1205L1_MB.all	EX1205L1_XBT43_120716.asvp	7/16/2012	8.5	235	076-13.792066W	32-27.667228N	076-03.722786W	32-34.69811N	7/16/2012 9:05:14 PM	7/16/2012 9:55:59 PM	EX1205L1_EX03192012_2012-198_0158_20120716_210522_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0159_20120717_125741_EX1205L1_MB.all	EX1205L1_XBT43_120716.asvp, EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	155	076-14.547714W	32-27.582274N	076-07.944157W	32-32.159393N	7/17/2012 12:57:42 PM	2012-07-17 13:32:21.787	EX1205L1_EX03192012_2012-199_0159_20120717_125741_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0160_20120717_133212_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	71	076-14.823782W	32-24.598355N	076-09.660132W	32-29.010641N	7/17/2012 1:32:03 PM	2012-07-17 14:05:04.296	EX1205L1_EX03192012_2012-199_0160_20120717_133212_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0161_20120717_140454_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	352	076-15.107775W	32-22.480785N	076-10.007650W	32-26.509574N	7/17/2012 2:04:45 PM	2012-07-17 14:19:07.298	EX1205L1_EX03192012_2012-199_0161_20120717_140454_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0162_20120717_141857_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	195	076-13.541334W	32-23.147870N	076-03.187443W	32-29.473437N	7/17/2012 2:18:48 PM	2012-07-17 15:21:52.813	EX1205L1_EX03192012_2012-199_0162_20120717_141857_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0163_20120717_152143_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	231	076-05.335388W	32-23.988079N	076-00.366943W	32-29.661812N	7/17/2012 3:21:34 PM	2012-07-17 15:46:43.821	EX1205L1_EX03192012_2012-199_0163_20120717_152143_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0164_20120717_154644_EX1205L1_	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	251	076-11.834830W	32-21.161701N	076-02.009124W	32-27.718880N	7/17/2012 3:46:34	2012-07-17 16:48:26.8	EX1205L1_EX03192012_2012-199_0164_20120717_154644_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	36	L1_MB.txt	Diapir	M
0165_20120717_164827_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp	7/17/2012	7.0	150	076-14.044483W	32-19.054892N	076-08.574268W	32-24.993747N	7/17/2012 4:48:17 PM	2012-07-17 17:16:39.842	EX1205L1_EX03192012_2012-199_0165_20120717_164827_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0166_20120717_171630_EX1205L1_MB.all	EX1205L1_XBT44_120717.asvp, EX1205L1_XBT45_120717.asvp,	7/17/2012	7.0	71	076-10.638549W	32-19.424044N	076-00.711165W	32-25.844318N	7/17/2012 5:16:21 PM	2012-07-17 18:18:00.857	EX1205L1_EX03192012_2012-199_0166_20120717_171630_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0167_20120717_181801_EX1205L1_MB.all	EX1205L1_XBT45_120717.asvp	7/17/2012	7.0	153	076-02.658377W	32-20.219040N	075-57.414115W	32-25.979714N	7/17/2012 6:17:52 PM	2012-07-17 18:44:31.362	EX1205L1_EX03192012_2012-199_0167_20120717_181801_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0168_20120717_184431_EX1205L1_MB.all	EX1205L1_XBT45_120717.asvp	7/17/2012	7.0	251	076-08.964576W	32-17.392095N	075-59.724305W	32-24.130251N	7/17/2012 6:44:22 PM	2012-07-17 19:46:05.376	EX1205L1_EX03192012_2012-199_0168_20120717_184431_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0169_20120717_194605_EX1205L1_MB.all	EX1205L1_XBT45_120717.asvp	7/17/2012	7.0	251	076-12.829573W	32-16.222116N	076-07.936391W	32-21.218960N	7/17/2012 7:45:56 PM	7/17/2012 8:09:23 PM	EX1205L1_EX03192012_2012-199_0169_20120717_194605_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0170_20120717_200913_EX1205L1_MB.all	EX1205L1_XBT45_120717.asvp, EX1205L1_XBT46_120717.asvp	7/17/2012	7.3	336	076-16.750966W	32-17.397853N	076-09.058781W	32-25.361449N	7/17/2012 8:09:04 PM	7/17/2012 9:06:17 PM	EX1205L1_EX03192012_2012-199_0170_20120717_200913_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0171_20120717_210607_EX1205L1_MB.all	EX1205L1_XBT46_120717.asvp	7/17/2012	8.0	007	076-17.049771W	32-23.620385N	076-12.108959W	32-29.323043N	7/17/2012 9:05:58 PM	7/17/2012 9:42:34 PM	EX1205L1_EX03192012_2012-199_0171_20120717_210607_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0172_20120717_214224_EX1205L1_MB.all	EX1205L1_XBT46_120717.asvp	7/17/2012	7.0	117	076-16.799638W	32-27.197907N	076-09.943670W	32-31.321704N	7/17/2012 9:42:14 PM	7/17/2012 10:02:43 PM	EX1205L1_EX03192012_2012-199_0172_20120717_214224_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0173_20120718_13	EX1205L1_XBT46_120717.asvp,	7/18/2012	9.0	323	076-14.0	32-27.7	076-09.1	32-32.7	7/18/2012	2012-07-18	EX1205L1_EX03192012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_50M,

4356_EX1205L1_MB.all	EX1205L1_XBT47_120718.asvp				67897W	34793N	93458W	56929N	1:43:56 PM	14:04:38.646	200_0173_20120718_134356_EX1205L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0174_20120718_140429_EX1205L1_MB.all	EX1205L1_XBT47_120718.asvp	7/18/2012	9.0	320	076-27.800214W	32-29.681765N	076-11.098944W	32-44.747136N	7/18/2012 2:04:20 PM	2012-07-18 16:04:42.174	EX1205L1_EX03192012_2012-200_0174_20120718_140429_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0175_20120718_160432_EX1205L1_MB.all	EX1205L1_XBT47_120718.asvp, EX1205L1_XBT48_120718.asvp	7/18/2012	9.0	319	076-35.190782W	32-42.327265N	076-25.253377W	32-51.251140N	7/18/2012 4:04:23 PM	2012-07-18 17:11:43.192	EX1205L1_EX03192012_2012-200_0175_20120718_160432_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0176_20120718_171134_EX1205L1_MB.all	EX1205L1_XBT48_120718.asvp	7/18/2012	9.0	34	076-35.943693W	32-49.447114N	076-23.560568W	33-04.721672N	7/18/2012 5:11:24 PM	2012-07-18 19:04:04.220	EX1205L1_EX03192012_2012-200_0176_20120718_171134_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir, 800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M, , EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0177_20120718_190404_EX1205L1_MB.all	EX1205L1_XBT48_120718.asvp, EX1205L1_XBT49_120718.asvp	7/18/2012	9.0	34	076-25.862233W	33-03.666325N	076-16.404902W	33-15.327152N	7/18/2012 7:03:55 PM	2012-07-18 20:27:10.237	EX1205L1_EX03192012_2012-200_0177_20120718_190404_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir, 800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M, , EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0178_20120718_202710_EX1205L1_MB.all	EX1205L1_XBT49_120718.asvp	7/18/202	9.0	37	076-18.550210W	33-03.177904N	076-01.945577W	33-16.086942N	7/18/2012 8:27:01 PM	2012-07-18 22:27:15.269	EX1205L1_EX03192012_2012-200_0178_20120718_202710_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0179_20120718_222715_EX1205L1_MB.all	EX1205L1_XBT49_120718.asvp	7/18/202	7.5	137	076-05.992916W	32-56.907836N	075-54.374098W	33-05.030846N	7/18/2012 10:27:06 PM	7/18/2012 11:39:32 PM	EX1205L1_EX03192012_2012-200_0179_20120718_222715_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0180_20120719_170513_EX1205L1_MB.all	EX1205L1_XBT49_120718.asvp, EX1205L1_XBT50_120719.asvp	7/19/2012	8.5	278	076-01.301577W	32-57.099583N	075-55.046099W	33-02.013794N	7/19/2012 5:05:14 PM	2012-07-19 17:46:07.051	EX1205L1_EX03192012_2012-201_0180_20120719_170513_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0181_201		7/19/	8.5	278	076-	32-	075-	33-	7/19/	2012-	EX1205L1_EX0319	Blake	EX1205L1_MB_FNL_ALL_WGS84_5

20719_174557_EX1205L1_MB.all	EX1205L1_XBT50_120719.asvp	2012			01.301577W	57.099583N	55.046099W	02.013794N	2012 5:05:14 PM	07-19 17:46:07.051	2012_2012-201_0181_20120719_174557_EX1205L1_MB.txt	Ridge Diapir & Cape Fear Diapir	0M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0182_20120719_184052_EX1205L1_MB.all	EX1205L1_XBT50_120719.asvp	7/19/2012	6.9	171	076-09.69950 8W	32-53.65473N	076-04.932051W	32-59.411041N	7/19/2012 6:40:44 PM	2012-07-19 19:05:53.069	EX1205L1_EX03192012_2012-201_0182_20120719_184052_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0183_20120719_190543_EX1205L1_MB.all	EX1205L1_XBT50_120719.asvp	7/19/2012	8.6	77	076-06.645833W	32-53.803389N	075-58.384477W	32-59.813003N	2012-07-19 19:05:33.570	2012-07-19 19:51:50.583	EX1205L1_EX03192012_2012-201_0183_20120719_190543_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0184_20120719_195141_EX1205L1_MB.all	EX1205L1_XBT50_120719.asvp	7/19/2012	8.3	77	075-59.277807W	32-55.810393N	075-58.379008W	32-59.634216N	2012-07-19 19:51:32.081	2012-07-19 19:51:59.080	EX1205L1_EX03192012_2012-201_0184_20120719_195141_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0185_20120719_195149_EX1205L1_MB.all	EX1205L1_XBT50_120719.asvp	7/19/2012	6.4	179	076-00.777225W	32-54.064008N	075-55.594289W	32-59.831584N	2012-07-19 19:51:40.582	2012-07-19 20:14:27.589	EX1205L1_EX03192012_2012-201_0185_20120719_195149_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0186_20120719_201427_EX1205L1_MB.all	EX1205L1_XBT51_120719.asvp	7/19/2012	6.1	254	076-08.179329W	32-51.787882N	075-57.467754W	32-57.842772N	7/19/2012 8:14:18 PM	2012-07-19 21:32:09.141	EX1205L1_EX03192012_2012-201_0186_20120719_201427_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0187_20120719_213209_EX1205L1_MB.all	EX1205L1_XBT51_120719.asvp	7/19/2012	7.5	276	076-25.386950W	32-51.653439N	076-06.531817W	32-54.788974N	7/19/2012 9:32:00 PM	2012-07-19 23:32:07.635	EX1205L1_EX03192012_2012-201_0187_20120719_213209_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0188_20120719_233207_EX1205L1_MB.all	EX1205L1_XBT51_120719.asvp	7/19/2012	7.7	275	076-29.662933W	32-52.724438N	076-25.117971W	32-55.117316N	7/19/2012 11:31:58 PM	2012-07-20 00:00:09.143	EX1205L1_EX03192012_2012-201_0188_20120719_233207_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0189_20120720_000009_EX1205L1_	EX1205L1_XBT51_120719.asvp	07/20/2012	7.7	268	076-32.369705W	32-52.848393N	076-29.320307W	32-55.115113N	2012-07-20 00:00:09.6	2012-07-20 00:13:50.1	EX1205L1_EX03192012_2012-202_0189_20120720_000009_EX1205	800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M

MB.all									43	47	L1_MB.txt		
0190_20120720_001350_EX1205L1_MB.all	EX1205L1_XBT51_120719.asvp, EX1205L1_XBT52_120720.asvp	07/20/2012	7.7	221	076-44.745487W	32-41.234938N	076-30.561983W	32-54.574128N	2012-07-20 00:13:40.651	2012-07-20 02:13:51.678	EX1205L1_EX03192012_2012-202_0190_20120720_001350_EX1205L1_MB.txt	801 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0191_20120720_021352_EX1205L1_MB.all	EX1205L1_XBT52_120720.asvp	07/20/2012	7.7	225	076-56.656733W	32-29.649230N	076-42.927782W	32-42.571369N	2012-07-20 02:13:42.177	2012-07-20 04:13:49.708	EX1205L1_EX03192012_2012-202_0191_20120720_021352_EX1205L1_MB.txt	802 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0192_20120720_041350_EX1205L1_MB.all	EX1205L1_XBT52_120720.asvp	07/20/2012	7.4	225	077-08.124636W	32-18.437865N	076-54.931733W	32-31.001182N	2012-07-20 04:13:40.707	2012-07-20 06:14:02.233	EX1205L1_EX03192012_2012-202_0192_20120720_041350_EX1205L1_MB.txt	803 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0193_20120720_061352_EX1205L1_MB.all	EX1205L1_XBT52_120720.asvp	07/20/2012	7.3	225	077-11.228901W	32-15.740612N	077-06.383868W	32-19.908808N	2012-07-20 06:13:43.236	2012-07-20 06:45:08.744	EX1205L1_EX03192012_2012-202_0193_20120720_061352_EX1205L1_MB.txt	804 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0194_20120720_064458_EX1205L1_MB.all	EX1205L1_XBT52_120720.asvp	07/20/2012	9.1	103	077-11.237114W	32-14.616445N	077-07.641468W	32-16.760633N	2012-07-20 06:44:49.742	2012-07-20 06:57:16.245	EX1205L1_EX03192012_2012-202_0194_20120720_064458_EX1205L1_MB.txt	805 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0195_20120720_065707_EX1205L1_MB.all	EX1205L1_XBT52_120720.asvp, EX1205L1_XBT54_120720.asvp	07/20/2012	8.8	45	077-09.524188W	32-15.354876N	076-53.944588W	32-29.985864N	2012-07-20 06:56:57.742	2012-07-20 08:57:18.278	EX1205L1_EX03192012_2012-202_0195_20120720_065707_EX1205L1_MB.txt	806 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0196_20120720_085709_EX1205L1_MB.all	EX1205L1_XBT54_120720.asvp, EX1205L1_XBT55_120720.asvp	07/20/2012	9.0	45	076-55.855741W	32-28.719639N	076-39.962209W	32-43.491493N	2012-07-20 08:56:59.274	2012-07-20 10:57:08.304	EX1205L1_EX03192012_2012-202_0196_20120720_085709_EX1205L1_MB.txt	807 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0197_20120720_105708_EX1205L1_MB.all	EX1205L1_XBT55_120720.asvp	07/20/2012	8.5	45	076-41.940866W	32-42.253749N	076-29.779957W	32-53.295716N	2012-07-20 10:56:58.804	2012-07-20 12:28:22.326	EX1205L1_EX03192012_2012-202_0197_20120720_105708_EX1205L1_MB.txt	808 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0198_20120720_12	EX1205L1_XBT55_120720.asvp	07/20	8.5	156	076-31.8	32-51.2	076-28.9	32-53.8	2012-07-20	2012-07-20	EX1205L1_EX03192012_2012-	809 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M,

2812_EX1205L1_MB.all		12			80373W	39005N	84064W	40791N	12:28:02.830	12:47:33.334	202_0198_20120720_122812_EX1205L1_MB.txt		EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0199_20120720_124723_EX1205L1_MB.all	EX1205L1_XBT55_120720.asvp, EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	219	076-32.646065W	32-49.430204N	076-29.184282W	32-51.953658N	2012-07-20 12:47:13.835	2012-07-20 13:12:44.841	EX1205L1_EX03192012_2012-202_0199_20120720_124723_EX1205L1_MB.txt	810 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_800M_ISOBATH_WGS84_30M
0200_20120720_131235_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	138	076-32.609763W	32-48.593848N	076-30.704639W	32-49.641212N	2012-07-20 13:12:25.840	2012-07-20 13:18:52.342	EX1205L1_EX03192012_2012-202_0200_20120720_131235_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0201_20120720_131852_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	133	076-31.763771W	32-37.204228N	076-14.372843W	32-49.290958N	2012-07-20 13:18:42.843	2012-07-20 15:19:05.370	EX1205L1_EX03192012_2012-202_0201_20120720_131852_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0202_20120720_151855_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	134	076-16.671121W	32-36.820483N	076-13.937899W	32-38.726886N	2012-07-20 15:18:45.872	2012-07-20 15:22:51.372	EX1205L1_EX03192012_2012-202_0202_20120720_151855_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0203_20120720_152242_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	164	076-16.295784W	32-30.110228N	076-10.586869W	32-38.422855N	2012-07-20 15:22:32.373	2012-07-20 16:18:08.386	EX1205L1_EX03192012_2012-202_0203_20120720_152242_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0204_20120720_161808_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	149	076-13.510941W	32-28.790842N	076-09.570135W	32-31.064409N	2012-07-20 16:17:58.886	2012-07-20 16:38:44.891	EX1205L1_EX03192012_2012-202_0204_20120720_161808_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0205_20120720_163835_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	30	076-12.340698W	32-27.613286N	076-08.658995W	32-30.982983N	2012-07-20 16:38:25.391	2012-07-20 16:51:44.898	EX1205L1_EX03192012_2012-202_0205_20120720_163835_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0206_20120720_165135_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	272	076-12.946195W	32-28.336918N	076-10.190099W	32-30.977792N	2012-07-20 16:51:25.894	2012-07-20 17:21:11.398	EX1205L1_EX03192012_2012-202_0206_20120720_165135_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M

0207_20120720_172101_EX1205L1_MB.all	EX1205L1_XBT56_120720.asvp	07/20/2012	8.5	169	076-14.234425W	32-28.280281N	076-10.953148W	32-30.931475N	2012-07-20 17:20:52.398	2012-07-20 17:34:31.904	EX1205L1_EX03192012_2012-202_0207_20120720_172101_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0208_20120721_161413_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	7.2	55	076-10.678551W	32-29.811780N	076-00.721251W	32-36.959581N	2012-07-21 16:14:13.237	2012-07-21 17:20:51.754	EX1205L1_EX03192012_2012-203_0208_20120721_161413_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0209_20120721_172052_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	5.7	10	076-04.161855W	32-33.934897N	075-59.652820W	32-37.004124N	2012-07-21 17:20:42.256	2012-07-21 17:27:38.759	EX1205L1_EX03192012_2012-203_0209_20120721_172052_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0210_20120721_172738_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	8.0	357	076-05.665615W	32-35.473481N	075-59.668744W	32-45.635708N	2012-07-21 17:27:29.259	2012-07-21 18:39:41.274	EX1205L1_EX03192012_2012-203_0210_20120721_172738_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0211_20120721_183941_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	7.5	334	076-05.542701W	32-44.619239N	076-00.895153W	32-47.328974N	2012-07-21 18:39:31.775	2012-07-21 18:46:06.275	EX1205L1_EX03192012_2012-203_0211_20120721_183941_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0212_20120721_184606_EX1205L1_MB.ALL	EX1205L1_XBT57_120721.asvp	7/21/2012	7.0	323	076-09.896054W	32-44.737858N	076-01.853195W	32-52.082009N	2012-07-21 18:45:56.779	2012-07-21 19:38:01.289	EX1205L1_EX03192012_2012-203_0212_20120721_184606_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0213_20120721_193751_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	7.2	331	076-12.959241W	32-49.338588N	076-06.515886W	32-56.103320N	2012-07-21 19:37:41.790	2012-07-21 20:18:31.797	EX1205L1_EX03192012_2012-203_0213_20120721_193751_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0214_20120721_201822_EX1205L1_MB.all	EX1205L1_XBT57_120721.asvp	7/21/2012	7.8	357	076-13.577527W	32-53.566421N	076-09.115442W	32-56.133366N	2012-07-21 20:18:12.799	2012-07-21 20:20:53.300	EX1205L1_EX03192012_2012-203_0214_20120721_201822_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0215_20120721_202044_EX	EX1205L1_XBT57_120721.asvp	7/21/2012	7.6	012	076-13.65605	32-54.93890	076-08.91299	32-59.19112	2012-07-21 20:20	2012-07-21 20:43	EX1205L1_EX03192012_2012-203_0215_2012072	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_MB.all					2W	4N	3W	2N	:34.798	:34.803	1_202044_EX1205L1_MB.txt	Cape Fear Diapir	LAKE_RIDGE_DIAPIRS_WGS84_30M
0216_20120721_204335_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	55	076-12.529626W	32-56.449649N	076-04.768816W	33-02.589891N	2012-07-21 20:43:25.304	2012-07-21 21:21:07.314	EX1205L1_EX03192012_2012-203_0216_20120721_204335_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0217_20120721_212057_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	65	076-07.511272W	32-59.231089N	076-01.923957W	33-04.246710N	2012-07-21 21:20:48.313	2012-07-21 21:42:52.318	EX1205L1_EX03192012_2012-203_0217_20120721_212057_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0218_20120721_214242_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	100	076-04.496956W	33-00.277484N	076-01.658371W	33-04.439561N	2012-07-21 21:42:32.815	2012-07-21 21:48:20.820	EX1205L1_EX03192012_2012-203_0218_20120721_214242_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0219_20120721_214810_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	108	076-03.18380 9W	32-57.574074N	075-49.260464W	33-04.418216N	2012-07-21 21:48:01.322	2012-07-21 23:05:16.842	EX1205L1_EX03192012_2012-203_0219_20120721_214810_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0220_20120721_230507_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	219	075-52.427759W	32-57.367803N	075-47.679619W	33-01.581580N	2012-07-21 23:04:57.840	2012-07-21 23:12:55.841	EX1205L1_EX03192012_2012-203_0220_20120721_230507_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0221_20120721_231256_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/21/2012	7.6	259	075-56.982657W	32-55.940626N	075-49.643157W	33-01.309664N	2012-07-21 23:12:46.841	2012-07-21 23:58:46.857	EX1205L1_EX03192012_2012-203_0221_20120721_231256_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0222_20120722_125954_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/22/2012	0.2	221	075-57.122333W	32-56.326929N	075-54.194933W	33-00.682148N	2012-07-22 12:59:55.045	2012-07-22 13:58:58.561	EX1205L1_EX03192012_2012-204_0222_20120722_125954_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0223_20120722_135848_EX1205L1_MB.all	EX1205L1_XBT58_120721.asvp	7/22/2012	1.1	98	075-58.292146W	32-56.239747N	075-53.784721W	33-00.737461N	2012-07-22 13:58:39.060	2012-07-22 15:44:20.085	EX1205L1_EX03192012_2012-204_0223_20120722_135848_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0224_201	EX1205L1_XBT59_12	7/22/	8.6	98	075-	32-	075-	33-	2012-	2012-	EX1205L1_EX0319	Blake	EX1205L1_MB_FNL_ALL_WGS84_5

20722_154410_EX1205L1_MB.all	0722.asvp	2012			54.502832W	55.766538N	45.361027W	00.676720N	07-22 15:44:01.085	07-22 16:35:47.597	2012_2012-204_0224_20120722_154410_EX1205L1_MB.txt	Ridge Diapir & Cape Fear Diapir	0M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0225_20120722_193905_EX1205L1_MB.all	EX1205L1_XBT59_120722.asvp	7/22/2012	7.6	316	075-47.06058W	33-00.276968N	075-39.901958W	33-05.207949N	2012-07-22 19:39:05.646	2012-07-22 20:04:52.646	EX1205L1_EX03192012_2012-204_0225_20120722_193905_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0226_20120722_200452_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	8.3	13	075-46.932875W	33-03.508677N	075-41.115312W	33-09.214539N	2012-07-22 20:04:43.645	2012-07-22 20:43:37.654	EX1205L1_EX03192012_2012-204_0226_20120722_200452_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0227_20120722_204327_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	7.4	275	075-48.511361W	33-07.042210N	075-41.119377W	33-11.319427N	2012-07-22 20:43:18.156	2012-07-22 21:05:50.167	EX1205L1_EX03192012_2012-204_0227_20120722_204327_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0228_20120722_210550_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	7.9	193	075-52.093191W	32-53.029060N	075-44.123748W	33-09.690028N	2012-07-22 21:05:41.167	2012-07-22 23:06:02.698	EX1205L1_EX03192012_2012-204_0228_20120722_210550_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0229_20120722_230553_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	7.6	196	075-52.238027W	32-51.873286N	075-47.207324W	32-53.673696N	2012-07-22 23:05:44.197	2012-07-22 23:12:02.699	EX1205L1_EX03192012_2012-204_0229_20120722_230553_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0230_20120722_231153_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	7.8	220	075-52.934456W	32-50.249786N	075-47.719985W	32-53.64927N	2012-07-22 23:11:43.698	2012-07-22 23:24:03.202	EX1205L1_EX03192012_2012-204_0230_20120722_231153_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0231_20120722_232403_EX1205L1_MB.all	EX1205L1_XBT60_120722.asvp	7/22/2012	8.5	329	075-58.470349W	32-49.287386N	075-48.944418W	32-59.298428N	2012-07-22 23:23:54.201	2012-07-23 00:23:38.715	EX1205L1_EX03192012_2012-204_0231_20120722_232403_EX1205L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30M
0232_20120723_190851_EX1205L1_	EX1205L1_XBT61_120723.asvp	7/23/2012	8.4	331	075-59.988396W	33-00.195673N	075-53.350351W	33-06.527119N	2012-07-23 19:08:51.9	2012-07-23 19:39:52.5	EX1205L1_EX03192012_2012-205_0232_20120723_190851_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_50M, EX1205L1_MB_FNL_CAPE_FEAR_BLAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									96	03	L1_MB.txt	Diapir	M
0233_201 20723_19 3942_EX 1205L1_ MB.all	EX1205L1_XBT61_12 0723.asvp	7/23/ 2012	8.5	312	076- 14.4 8395 4W	33- 03.0 2807 0N	075- 56.7 4871 1W	33- 16.4 8920 3N	2012- 07-23 19:39 :33.0 03	2012- 07-23 21:39 :52.5 35	EX1205L1_EX0319 2012_2012- 205_0233_2012072 3_193942_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0234_201 20723_21 3943_EX 1205L1_ MB.all	EX1205L1_XBT61_12 0723.asvp	7/23/ 2012	8.5	310	076- 16.6 1409 2W	33- 14.2 1414 4N	076- 13.7 9924 1W	33- 17.6 2975 8N	2012- 07-23 21:39 :33.5 34	2012- 07-23 21:55 :10.0 39	EX1205L1_EX0319 2012_2012- 205_0234_2012072 3_213943_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0235_201 20723_21 5500_EX 1205L1_ MB.all	EX1205L1_XBT61_12 0723.asvp	7/23/ 2012	8.5	TUR N	076- 17.7 0568 0W	33- 15.5 3333 1N	076- 14.5 0431 6W	33- 17.7 4635 3N	2012- 07-23 21:54 :50.5 38	2012- 07-23 22:05 :44.0 39	DNP - TURN	DNP - TURN	DNP - TURN
0236_201 20723_22 0544_EX 1205L1_ MB.all	EX1205L1_XBT61_12 0723.asvp, EX1205L1_XBT62_12 0723.asvp	7/23/ 2012	8.6	31	076- 16.9 6204 7W	33- 16.7 2336 9N	076- 05.3 2639 5W	33- 32.3 6773 3N	2012- 07-23 22:05 :34.5 42	2012- 07-24 00:02 :56.5 75	EX1205L1_EX0319 2012_2012- 205_0236_2012072 3_220544_EX1205 L1_MB.txt	800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0237_201 20724_00 0256_EX 1205L1_ MB.all	EX1205L1_XBT62_20 723.asvp, EX1205L1_XBT63_12 0724.asvp	7/24/ 2012	8.7	31	076- 07.6 2862 6W	33- 31.5 4661 0N	075- 55.7 0468 8W	33- 47.5 8737 4N	2012- 07-24 00:02 :57.0 75	2012- 07-24 02:02 :56.1 42	EX1205L1_EX0319 2012_2012- 206_0237_2012072 4_000256_EX1205 L1_MB.txt	801 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0238_201 20724_02 0256_EX 1205L1_ MB.all	EX1205L1_XBT63_12 0724.asvp, EX1205L1_XBT64_12 0724.asvp	7/24/ 2012	8.5	306	075- 58.1 1504 7W	33- 46.9 8430 0N	075- 50.2 1819 6W	33- 56.2 8737 2N	2012- 07-24 02:02 :46.6 08	2012- 07-24 03:13 :36.6 23	EX1205L1_EX0319 2012_2012- 206_0238_2012072 4_020256_EX1205 L1_MB.txt	802 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0239_201 20724_03 1336_EX 1205L1_ MB.all	EX1205L1_XBT63_12 0724.asvp	7/24/ 2012	8.4	31	076- 08.5 4443 9W	33- 55.6 2021 9N	075- 50.0 8694 6W	34- 05.4 3590 4N	2012- 07-24 03:13 :27.6 20	2012- 07-24 05:13 :36.6 57	EX1205L1_EX0319 2012_2012- 206_0239_2012072 4_031336_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0240_201 20724_05 1336_EX 1205L1_ MB.all	SVP Server in use	7/24/ 2012	8.5	304	076- 25.5 3445 7W	34- 05.0 7869 8N	076- 08.3 3265 6W	34- 14.6 6939 6N	2012- 07-24 05:13 :37.1 58	2012- 07-24 07:13 :36.1 92	EX1205L1_EX0319 2012_2012- 206_0240_2012072 4_051336_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0241_201 20724_07	SVP Server in use	7/24/ 2012	8.5	304	076- 39.1	34- 14.6	076- 25.4	34- 22.1	2012- 07-24	2012- 07-24	EX1205L1_EX0319 2012_2012-	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M

1336_EX1205L1_MB.all					76375W	10958N	94428W	33827N	07:13:36.692	08:48:18.218	206_0241_20120724_071336_EX1205L1_MB.txt		
0242_20120724_084818_EX1205L1_MB.all	SVP Server in use	7/24/2012	6.4	352	076-41.434665W	34-22.088074N	076-39.145614W	34-34.227676N	2012-07-24 08:48.18:718	2012-07-24 10:43:54.748	EX1205L1_EX03192012_2012-206_0242_20120724_084818_EX1205L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_50M

EX1205 Leg 1 Water Column Data Processing Log	
EM 302 Water Column Filename	Level 02 Products
0000_20120705_225323_EX1205L1_MB.wcd	
0001_20120705_231029_EX1205L1_MB.wcd	
0002_20120706_005155_EX1205L1_MB.wcd	
0003_20120706_025155_EX1205L1_MB.wcd	
0004_20120706_045155_EX1205L1_MB.wcd	
0005_20120706_065156_EX1205L1_MB.wcd	
0006_20120706_085156_EX1205L1_MB.wcd	
0007_20120706_105200_EX1205L1_MB.wcd	
0008_20120707_000349_EX1205L1_MB.wcd	
0009_20120707_020348_EX1205L1_MB.wcd	
0010_20120707_040347_EX1205L1_MB.wcd	
0011_20120707_060348_EX1205L1_MB.wcd	
0012_20120707_080343_EX1205L1_MB.wcd	
0013_20120707_100345_EX1205L1_MB.wcd	
0014_20120707_120347_EX1205L1_MB.wcd	
0015_20120707_140346_EX1205L1_MB.wcd	
0016_20120707_160351_EX1205L1_MB.wcd	
0017_20120707_180350_EX1205L1_MB.wcd	
0018_20120707_200346_EX1205L1_MB.wcd	
0019_20120707_220349_EX1205L1_MB.wcd	
0020_20120708_000007_EX1205L1_MB.wcd	
0021_20120708_020003_EX1205L1_MB.wcd	
0022_20120708_040007_EX1205L1_MB.wcd	

0023_20120708_060002_EX1205L1_MB.wcd	
0024_20120708_080002_EX1205L1_MB.wcd	
0025_20120708_100001_EX1205L1_MB.wcd	
0026_20120708_105234_EX1205L1_MB.wcd	
0027_20120708_223431_EX1205L1_MB.wcd	
0028_20120708_225908_EX1205L1_MB.wcd	
0029_20120709_000123_EX1205L1_MB.wcd	
0030_20120709_020127_EX1205L1_MB.wcd	
0031_20120709_025059_EX1205L1_MB.wcd	
0032_20120709_045101_EX1205L1_MB.wcd	
0033_20120709_065058_EX1205L1_MB.wcd	
0034_20120709_080808_EX1205L1_MB.wcd	
0035_20120709_100804_EX1205L1_MB.wcd	
0036_20120710_000006_EX1205L1_MB.wcd	
0037_20120710_000942_EX1205L1_MB.wcd	
0038_20120710_013342_EX1205L1_MB.wcd	
0039_20120710_015305_EX1205L1_MB.wcd	
0040_20120710_030140_EX1205L1_MB.wcd	
0041_20120710_030619_EX1205L1_MB.wcd	
0042_20120710_034127_EX1205L1_MB.wcd	
0043_20120710_034511_EX1205L1_MB.wcd	
0044_20120710_054513_EX1205L1_MB.wcd	
0045_20120710_074516_EX1205L1_MB.wcd	
0046_20120710_094516_EX1205L1_MB.wcd	
0047_20120710_191741_EX1205L1_MB.wcd	
0048_20120710_211001_EX1205L1_MB.wcd	
0049_20120710_211747_EX1205L1_MB.wcd	
0050_20120710_212620_EX1205L1_MB.wcd	
0051_20120710_232617_EX1205L1_MB.wcd	
0052_20120710_232704_EX1205L1_MB.wcd	
0053_20120711_001126_EX1205L1_MB.wcd	
0054_20120711_021125_EX1205L1_MB.wcd	

0055_20120711_041126_EX1205L1_MB.wcd	
0056_20120711_061125_EX1205L1_MB.wcd	
0057_20120711_081132_EX1205L1_MB.wcd	
0058_20120711_101125_EX1205L1_MB.wcd	
0059_20120711_121131_EX1205L1_MB.wcd	
0060_20120711_141125_EX1205L1_MB.wcd	
0061_20120711_152011_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0061_BlakeRidgeDiapir_WGS84.sd
0062_20120711_155530_EX1205L1_MB.wcd	
0063_20120711_160555_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0063_BlakeRidgeDiapir_WGS84.sd
0064_20120711_164342_EX1205L1_MB.wcd	
0065_20120711_165200_EX1205L1_MB.wcd	
0066_20120711_165902_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0066_BlakeRidgeDiapir_WGS84.sd
0068_20120712_113420_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0068_1_BlakeRidgeDiapir_WGS84.sd, EX1205L1_MB_WaterColumnDataPoints_Line0068_2_BlakeRidgeDiapir_WGS84.sd; EX1205L1_MB_WaterColumnDataPoints_Line0068_3_BlakeRidgeDiapir_WGS84.sd
0069_20120712_120922_EX1205L1_MB.wcd	
0070_20120712_121749_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0070_BlakeRidgeDiapir_WGS84.sd
0071_20120712_123556_EX1205L1_MB.wcd	
0072_20120712_140530_EX1205L1_MB.wcd	
0073_20120712_141104_EX1205L1_MB.wcd	
0074_20120712_145349_EX1205L1_MB.wcd	
0075_20120712_150242_EX1205L1_MB.wcd	
0076_20120712_153937_EX1205L1_MB.wcd	
0077_20120712_154803_EX1205L1_MB.wcd	
0078_20120712_162629_EX1205L1_MB.wcd	
0079_20120712_163316_EX1205L1_MB.wcd	
0080_20120712_170845_EX1205L1_MB.wcd	
0081_20120712_173828_EX1205L1_MB.wcd	
0082_20120712_181740_EX1205L1_MB.wcd	
0083_20120712_182941_EX1205L1_MB.wcd	
0084_20120712_190808_EX1205L1_MB.wcd	
0085_20120712_192113_EX1205L1_MB.wcd	
0086_20120712_195835_EX1205L1_MB.wcd	

0087_20120712_201941_EX1205L1_MB.wcd	
0088_20120712_205544_EX1205L1_MB.wcd	
0089_20120713_115340_EX1205L1_MB.wcd	
0090_20120713_121627_EX1205L1_MB.wcd	
0091_20120713_122526_EX1205L1_MB.wcd	
0092_20120713_130752_EX1205L1_MB.wcd	
0093_20120713_134719_EX1205L1_MB.wcd	
0094_20120713_142603_EX1205L1_MB.wcd	
0095_20120713_144046_EX1205L1_MB.wcd	
0096_20120713_144849_EX1205L1_MB.wcd	
0097_20120713_151843_EX1205L1_MB.wcd	
0098_20120713_152822_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0098_BlakeRidgeDiapir_WGS84.sd
0099_20120713_160423_EX1205L1_MB.wcd	
0100_20120713_161942_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0100_BlakeRidgeDiapir_WGS84.sd
0101_20120713_165903_EX1205L1_MB.wcd	
0102_20120713_171026_EX1205L1_MB.wcd	
0103_20120713_174937_EX1205L1_MB.wcd	
0104_20120713_180317_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0104_1_BlakeRidgeDiapir_WGS84.sd; EX1205L1_MB_WaterColumnDataPoints_Line0104_2_BlakeRidgeDiapir_WGS84.sd
0105_20120713_184131_EX1205L1_MB.wcd	
0106_20120713_185025_EX1205L1_MB.wcd	
0107_20120713_192820_EX1205L1_MB.wcd	
0108_20120713_193938_EX1205L1_MB.wcd	
0109_20120713_201856_EX1205L1_MB.wcd	
0110_20120713_201943_EX1205L1_MB.wcd	
0111_20120713_202824_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0111_BlakeRidgeDiapir_WGS84.sd
0112_20120713_210607_EX1205L1_MB.wcd	
0113_20120714_131507_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0113_1_BlakeRidgeDiapir_WGS84.sd; 'EX1205L1_MB_WaterColumnDataPoints_Line0113_2_BlakeRidgeDiapir_WGS84.sd
0114_20120714_135224_EX1205L1_MB.wcd	
0115_20120714_140243_EX1205L1_MB.wcd	
0116_20120714_144027_EX1205L1_MB.wcd	
0117_20120714_145241_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0117_BlakeRidgeDiapir_WGS84.sd

0118_20120714_153222_EX1205L1_MB.wcd	
0119_20120714_154414_EX1205L1_MB.wcd	
0120_20120714_162135_EX1205L1_MB.wcd	
0121_20120714_163512_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0121_BlakeRidgeDiapir_WGS84.sd
0122_20120714_171429_EX1205L1_MB.wcd	
0123_20120714_172731_EX1205L1_MB.wcd	
0124_20120714_180541_EX1205L1_MB.wcd	
0125_20120714_181858_EX1205L1_MB.wcd	
0126_20120714_184234_EX1205L1_MB.wcd	
0127_20120714_185641_EX1205L1_MB.wcd	
0128_20120714_202032_EX1205L1_MB.wcd	
0129_20120714_222035_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0129_BlakeRidgeDiapir_WGS84.sd
0131_20120715_134924_EX1205L1_MB.wcd	
0134_20120715_140357_EX1205L1_MB.wcd	
0135_20120715_153440_EX1205L1_MB.wcd	
0136_20120715_171933_EX1205L1_MB.wcd	
0137_20120715_173132_EX1205L1_MB.wcd	
0138_20120715_184303_EX1205L1_MB.wcd	
0139_20120715_185838_EX1205L1_MB.wcd	
0140_20120715_200208_EX1205L1_MB.wcd	
0141_20120715_201745_EX1205L1_MB.wcd	
0142_20120715_205413_EX1205L1_MB.wcd	
0143_20120715_210412_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0143_CapeFearDiapir_WGS84.sd
0144_20120715_212408_EX1205L1_MB.wcd	
0145_20120716_124446_EX1205L1_MB.wcd	
0146_20120716_131210_EX1205L1_MB.wcd	
0147_20120716_134906_EX1205L1_MB.wcd	
0148_20120716_140128_EX1205L1_MB.wcd	
0149_20120716_144139_EX1205L1_MB.wcd	
0150_20120716_144307_EX1205L1_MB.wcd	
0151_20120716_150809_EX1205L1_MB.wcd	
0152_20120716_152507_EX1205L1_MB.wcd	

0153_20120716_160348_EX1205L1_MB.wcd	
0154_20120716_161530_EX1205L1_MB.wcd	
0155_20120716_175601_EX1205L1_MB.wcd	
0156_20120716_191138_EX1205L1_MB.wcd	
0157_20120716_195415_EX1205L1_MB.wcd	
0158_20120716_210522_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0158_BlakeRidgeDiapir_WGS84.sd
0159_20120717_125741_EX1205L1_MB.wcd	
0160_20120717_133212_EX1205L1_MB.wcd	
0161_20120717_140454_EX1205L1_MB.wcd	
0162_20120717_141857_EX1205L1_MB.wcd	
0163_20120717_152143_EX1205L1_MB.wcd	
0164_20120717_154644_EX1205L1_MB.wcd	
0165_20120717_164827_EX1205L1_MB.wcd	
0166_20120717_171630_EX1205L1_MB.wcd	
0167_20120717_181801_EX1205L1_MB.wcd	
0168_20120717_184431_EX1205L1_MB.wcd	
0169_20120717_194605_EX1205L1_MB.wcd	
0170_20120717_200913_EX1205L1_MB.wcd	
0171_20120717_210607_EX1205L1_MB.wcd	
0172_20120717_214224_EX1205L1_MB.wcd	
0173_20120718_134356_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0173_1_BlakeRidgeDiapir_WGS84.sd, EX1205L1_MB_WaterColumnDataPoints_Line0173_2_BlakeRidgeDiapir_WGS84.sd; EX1205L1_MB_WaterColumnDataPoints_Line0173_3_BlakeRidgeDiapir_WGS84.sd
0174_20120718_140429_EX1205L1_MB.wcd	
0175_20120718_160432_EX1205L1_MB.wcd	
0176_20120718_171134_EX1205L1_MB.wcd	
0177_20120718_190404_EX1205L1_MB.wcd	
0178_20120718_202710_EX1205L1_MB.wcd	
0179_20120718_222715_EX1205L1_MB.wcd	
0180_20120719_170513_EX1205L1_MB.wcd	
0181_20120719_174557_EX1205L1_MB.wcd	
0182_20120719_184052_EX1205L1_MB.wcd	
0183_20120719_190543_EX1205L1_MB.wcd	

0184_20120719_195141_EX1205L1_MB.wcd	
0185_20120719_195149_EX1205L1_MB.wcd	
0186_20120719_201427_EX1205L1_MB.wcd	
0187_20120719_213209_EX1205L1_MB.wcd	
0188_20120719_233207_EX1205L1_MB.wcd	
0189_20120720_000009_EX1205L1_MB.wcd	
0190_20120720_001350_EX1205L1_MB.wcd	
0191_20120720_021352_EX1205L1_MB.wcd	
0192_20120720_041350_EX1205L1_MB.wcd	
0193_20120720_061352_EX1205L1_MB.wcd	
0194_20120720_064458_EX1205L1_MB.wcd	
0195_20120720_065707_EX1205L1_MB.wcd	
0196_20120720_085709_EX1205L1_MB.wcd	
0197_20120720_105708_EX1205L1_MB.wcd	
0198_20120720_122812_EX1205L1_MB.wcd	
0199_20120720_124723_EX1205L1_MB.wcd	
0200_20120720_131235_EX1205L1_MB.wcd	
0201_20120720_131852_EX1205L1_MB.wcd	
0202_20120720_151855_EX1205L1_MB.wcd	
0203_20120720_152242_EX1205L1_MB.wcd	
0204_20120720_161808_EX1205L1_MB.wcd	##
0205_20120720_163835_EX1205L1_MB.wcd	
0206_20120720_165135_EX1205L1_MB.wcd	EX1205L1_MB_WaterColumnDataPoints_Line0206_1_BlakeRidgeDiapir_WGS84.sd; EX1205L1_MB_WaterColumnDataPoints_Line0206_2_BlakeRidgeDiapir_WGS84.sd; EX1205L1_MB_WaterColumnDataPoints_Line0206_3_BlakeRidgeDiapir_WGS84.sd
0207_20120720_172101_EX1205L1_MB.wcd	
0208_20120721_161413_EX1205L1_MB.wcd	
0209_20120721_172052_EX1205L1_MB.wcd	
0210_20120721_172738_EX1205L1_MB.wcd	
0211_20120721_183941_EX1205L1_MB.wcd	
0212_20120721_184606_EX1205L1_MB.wcd	
0213_20120721_193751_EX1205L1_MB.wcd	
0214_20120721_201822_EX1205L1_MB.wcd	

0215_20120721_202044_EX1205L1_MB.wcd	
0216_20120721_204335_EX1205L1_MB.wcd	
0217_20120721_212057_EX1205L1_MB.wcd	
0218_20120721_214242_EX1205L1_MB.wcd	
0219_20120721_214810_EX1205L1_MB.wcd	
0220_20120721_230507_EX1205L1_MB.wcd	
0221_20120721_231256_EX1205L1_MB.wcd	
0222_20120722_125954_EX1205L1_MB.wcd	
0223_20120722_135848_EX1205L1_MB.wcd	
0224_20120722_154410_EX1205L1_MB.wcd	
0225_20120722_193905_EX1205L1_MB.wcd	
0226_20120722_200452_EX1205L1_MB.wcd	
0227_20120722_204327_EX1205L1_MB.wcd	
0228_20120722_210550_EX1205L1_MB.wcd	
0229_20120722_230553_EX1205L1_MB.wcd	
0230_20120722_231153_EX1205L1_MB.wcd	
0231_20120722_232403_EX1205L1_MB.wcd	
0232_20120723_190851_EX1205L1_MB.wcd	
0233_20120723_193942_EX1205L1_MB.wcd	
0234_20120723_213943_EX1205L1_MB.wcd	
0235_20120723_215500_EX1205L1_MB.wcd	
0236_20120723_220544_EX1205L1_MB.wcd	
0237_20120724_000256_EX1205L1_MB.wcd	
0238_20120724_020256_EX1205L1_MB.wcd	
0239_20120724_031336_EX1205L1_MB.wcd	
0240_20120724_051336_EX1205L1_MB.wcd	
0241_20120724_071336_EX1205L1_MB.wcd	
0242_20120724_084818_EX1205L1_MB.wcd	

EX1205 Leg 1 Knudsen 3.5 kHz Subbottom Profile Processing log

Raw Filename	Date (GMT)	SOG (KTS)	Level 02 Products: (SEG-Y Only) Fledermaus SD Object (WGS84); .jpg	Comments/Initial Interpretations
ABBREVIATIONS KEY:				
N/A - NOT APPLICALE				
BRD - BLAKE RIDGE DIAPIR				
CFD - CAPE FEAR DIAPIR				
CFL - CAPE FEAR LANDSLIDE				
HTC - HATTERAS TRANSVERSE CANYON				
EX1205L1_SBP_70870_3.5kHz_001.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_002.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_003.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_004.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_006.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_007.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_008.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_009.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_010.sgy	7/7/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_011.sgy	7/10/12	6	EX1205L1_SBP_70870_3.5kHz_011-CH1	Across HTC
EX1205L1_SBP_70870_3.5kHz_012.sgy	7/11/12	8	EX1205L1_SBP_70870_3.5kHz_012-CH1	leaving HTC for transit to diapirs
EX1205L1_SBP_70870_3.5kHz_014.sgy	7/11/12	6	EX1205L1_SBP_70870_3.5kHz_014-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_015.sgy	7/11/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_016.sgy	7/11/12	6	EX1205L1_SBP_70870_3.5kHz_017-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_017.sgy	7/11/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_018.sgy	7/11/12	6	EX1205L1_SBP_70870_3.5kHz_019-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_019.sgy	7/11/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_020.sgy	7/11/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_021.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_021-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_022.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_023.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_023-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_024.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_025.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_025-CH1	Subbottom focused BRD survey

EX1205L1_SBP_70870_3.5kHz_026.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_027.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_027-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_028.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_029.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_029-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_030.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_031.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_031-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_032.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_033.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_033-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_034.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_035.sgy	7/12/12	6	EX1205L1_SBP_70870_3.5kHz_035-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_036.sgy	7/12/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_037.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_037-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_038.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_039.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_039-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_040.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_041.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_041-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_042.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_043.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_043-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_044.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_045.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_045-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_046.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_047.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_047-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_048.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_049.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_049-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_050.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_051.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_051-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_052.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_053.sgy	7/13/12	6	EX1205L1_SBP_70870_3.5kHz_053-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_054.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_055.sgy	7/13/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_056.sgy	7/13/12		N/A	N/A

EX1205L1_SBP_70870_3.5kHz_057.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_057-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_058.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_059.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_059-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_060.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_062.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_063.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_063-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_064.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_065.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_065-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_066.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_067.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_067-CH1	Subbottom focused BRD survey
EX1205L1_SBP_70870_3.5kHz_068.sgy	7/14/12	6	EX1205L1_SBP_70870_3.5kHz_068-CH1	north of BRD normal faulting
EX1205L1_SBP_70870_3.5kHz_069.sgy	7/14/12	6	N/A	N-S transit South of BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_070.sgy	7/14/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_071.sgy	7/15/12	6	N/A	not high quality
EX1205L1_SBP_70870_3.5kHz_072.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_072-CH1	S-N transit to CFD
EX1205L1_SBP_70870_3.5kHz_073.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_073-CH1	S-N transit to CFD-cut across fault--ugh it's an ugly file
EX1205L1_SBP_70870_3.5kHz_074.sgy	7/15/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_075.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_075-CH1	CFD and Fault
EX1205L1_SBP_70870_3.5kHz_076.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_076-CH1	CFD turn
EX1205L1_SBP_70870_3.5kHz_077.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_077-CH1	CFD transit--nice
EX1205L1_SBP_70870_3.5kHz_078.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_078-CH1	Cross of fault
EX1205L1_SBP_70870_3.5kHz_079.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_079-CH1	Fault a bit o CFD
EX1205L1_SBP_70870_3.5kHz_080.sgy	7/15/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_081.sgy	7/15/12	6	EX1205L1_SBP_70870_3.5kHz_081-CH1	CFD cross line
EX1205L1_SBP_70870_3.5kHz_082.sgy	7/15/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_083.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_083-CH1	Cape Fear landslide
EX1205L1_SBP_70870_3.5kHz_084.sgy	7/16/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_085.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_085-CH1	CFD and slide deposit
EX1205L1_SBP_70870_3.5kHz_086.sgy	7/16/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_087.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_087-CH1	CFD flank
EX1205L1_SBP_70870_3.5kHz_088.sgy	7/16/12		N/A	N/A

EX1205L1_SBP_70870_3.5kHz_089.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_089-CH1	CFD cross line
EX1205L1_SBP_70870_3.5kHz_090.sgy	7/16/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_091.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_091-CH1	transit across CFD
EX1205L1_SBP_70870_3.5kHz_092.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_092-CH1	transit across fault--good transmission but problematic at fault
EX1205L1_SBP_70870_3.5kHz_093.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_093-CH1	Small "Unbreached" Diapir! High resolution
EX1205L1_SBP_70870_3.5kHz_094.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_094-CH1	seaward of fault but nice resolution
EX1205L1_SBP_70870_3.5kHz_095.sgy	7/16/12	6	EX1205L1_SBP_70870_3.5kHz_095-CH1	BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_096.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_096-CH1	BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_097.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_097-CH1	N-S transit Soulth of BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_098.sgy	7/17/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_099.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_099-CH1	E-W south of BRD good resolution
EX1205L1_SBP_70870_3.5kHz_100.sgy	7/17/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_101.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_101-CH1	E-W south of BRD good resolution
EX1205L1_SBP_70870_3.5kHz_102.sgy	7/17/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_103.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_103-CH1	E-W south of BRD good resolution
EX1205L1_SBP_70870_3.5kHz_104.sgy	7/17/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_105.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_105-CH1	E-W south of BRD good resolution resolving the fault well with respect to diapir
EX1205L1_SBP_70870_3.5kHz_106.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_106-CH1	short E-W south of BRD
EX1205L1_SBP_70870_3.5kHz_107.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_107-CH1	N-S transit Soulth of BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_108.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_108-CH1	N-S transit Soulth of BRD-good resolution
EX1205L1_SBP_70870_3.5kHz_109.sgy	7/17/12	6	EX1205L1_SBP_70870_3.5kHz_109-CH1	s-w BRD good res
EX1205L1_SBP_70870_3.5kHz_110.sgy	7/18/12	8.5	EX1205L1_SBP_70870_3.5kHz_110-CH1	transit from BRD--fault salt tectonics
EX1205L1_SBP_70870_3.5kHz_111.sgy	7/18/12	8.5	EX1205L1_SBP_70870_3.5kHz_111-CH1	Nice long line with good depth adjustment going up the slope
EX1205L1_SBP_70870_3.5kHz_112.sgy	7/18/12	8.5	EX1205L1_SBP_70870_3.5kHz_112-CH1	800 m isobath!
EX1205L1_SBP_70870_3.5kHz_113.sgy	7/18/12	8.5	EX1205L1_SBP_70870_3.5kHz_113-CH1	800 m isobath!
EX1205L1_SBP_70870_3.5kHz_114.sgy	7/18/12	8.5	EX1205L1_SBP_70870_3.5kHz_114-CH1	Nice long line with good depth adjustment going down the slope
EX1205L1_SBP_70870_3.5kHz_116.sgy	7/18/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_117.sgy	7/19/12	8.5	EX1205L1_SBP_70870_3.5kHz_116-CH1	landslide to diapir
EX1205L1_SBP_70870_3.5kHz_118.sgy	7/19/12	8.5	EX1205L1_SBP_70870_3.5kHz_117-CH1	Cape Fear landslide area
EX1205L1_SBP_70870_3.5kHz_119.sgy	7/19/12		N/A	N/A

EX1205L1_SBP_70870_3.5kHz_120.sgy	7/19/12	8.5	EX1205L1_SBP_70870_3.5kHz_119-CH1	lower CFL
EX1205L1_SBP_70870_3.5kHz_121.sgy	7/19/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_122.sgy	7/19/12	8.5	EX1205L1_SBP_70870_3.5kHz_121-CH1	slope of CFL?
EX1205L1_SBP_70870_3.5kHz_123.sgy	7/19/12	8.5	EX1205L1_SBP_70870_3.5kHz_122-CH1	slope of CFL?
EX1205L1_SBP_70870_3.5kHz_124.sgy	7/20/12	8.5	EX1205L1_SBP_70870_3.5kHz_123-CH1	going up slope
EX1205L1_SBP_70870_3.5kHz_125.sgy	7/20/12	8.5	EX1205L1_SBP_70870_3.5kHz_124-CH1	going up slope
EX1205L1_SBP_70870_3.5kHz_126.sgy	7/20/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_127.sgy	7/20/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_128.sgy	7/20/12	8.5	EX1205L1_SBP_70870_3.5kHz_127-CH1	BRD bad sea state
EX1205L1_SBP_70870_3.5kHz_129.sgy	7/20/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_130.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_129-CH1	west of BRD nicely resolved normal faulting
EX1205L1_SBP_70870_3.5kHz_131.sgy	7/21/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_132.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_131-CH1	diapirc structures a go go near cape fear
EX1205L1_SBP_70870_3.5kHz_133.sgy	7/21/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_134.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_133-CH1	fault!
EX1205L1_SBP_70870_3.5kHz_135.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_134-CH1	CFL scarp!
EX1205L1_SBP_70870_3.5kHz_136.sgy	7/21/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_137.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_136-CH1	CFL territory
EX1205L1_SBP_70870_3.5kHz_138.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_137-CH1	slope
EX1205L1_SBP_70870_3.5kHz_139.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_138-CH1	slope
EX1205L1_SBP_70870_3.5kHz_140.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_139-CH1	slope -short
EX1205L1_SBP_70870_3.5kHz_141.sgy	7/21/12	8.5	EX1205L1_SBP_70870_3.5kHz_140-CH1	slope -short
EX1205L1_SBP_70870_3.5kHz_142.sgy	7/22/12	8.5	EX1205L1_SBP_70870_3.5kHz_141-CH1	CFD across down slope
EX1205L1_SBP_70870_3.5kHz_143.sgy	7/22/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_144.sgy	7/22/12	8.5	EX1205L1_SBP_70870_3.5kHz_143-CH1	CFD across down slope
EX1205L1_SBP_70870_3.5kHz_145.sgy	7/22/12	8.5	EX1205L1_SBP_70870_3.5kHz_144-CH1	CFD N-S
EX1205L1_SBP_70870_3.5kHz_146.sgy	7/22/12	8.5	EX1205L1_SBP_70870_3.5kHz_145-CH1	CFD territory
EX1205L1_SBP_70870_3.5kHz_147.sgy	7/23/12	8.5	EX1205L1_SBP_70870_3.5kHz_146-CH1	CFD territory
EX1205L1_SBP_70870_3.5kHz_148.sgy	7/23/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_149.sgy	7/23/12		N/A	N/A
EX1205L1_SBP_70870_3.5kHz_150.sgy	7/23/12	8.5	EX1205L1_SBP_70870_3.5kHz_149-CH1	CFD territory

EX1205L1_SBP_70870_3.5kHz_151.sgy	7/23/12	8.5	EX1205L1_SBP_70870_3.5kHz_150-CH1	going up slope
EX1205L1_SBP_70870_3.5kHz_152.sgy	7/23/12	8.5	EX1205L1_SBP_70870_3.5kHz_151-CH1	slope-nice
KEA/KEB FILES - RAW ONLY				
EX1205L1_SBP_001.kea	7/7/12		N/A	N/A
EX1205L1_SBP_001.keb	7/7/12		N/A	N/A
EX1205L1_SBP_006.kea	7/7/12		N/A	N/A
EX1205L1_SBP_006.keb	7/7/12		N/A	N/A
EX1205L1_SBP_007.kea	7/7/12		N/A	N/A
EX1205L1_SBP_007.keb	7/7/12		N/A	N/A
EX1205L1_SBP_008.kea	7/7/12		N/A	N/A
EX1205L1_SBP_008.keb	7/7/12		N/A	N/A
EX1205L1_SBP_010.kea	7/10/12		N/A	N/A
EX1205L1_SBP_010.keb	7/10/12		N/A	N/A
EX1205L1_SBP_011.kea	7/10/12		N/A	N/A
EX1205L1_SBP_011.keb	7/10/12		N/A	N/A
EX1205L1_SBP_012.kea	7/10/12		N/A	N/A
EX1205L1_SBP_012.keb	7/10/12		N/A	N/A
EX1205L1_SBP_013.kea	7/11/12		N/A	N/A
EX1205L1_SBP_013.keb	7/11/12		N/A	N/A
EX1205L1_SBP_014.kea	7/11/12		N/A	N/A
EX1205L1_SBP_014.keb	7/11/12		N/A	N/A
EX1205L1_SBP_016.kea	7/11/12		N/A	N/A
EX1205L1_SBP_016.keb	7/11/12		N/A	N/A
EX1205L1_SBP_017.kea	7/11/12		N/A	N/A
EX1205L1_SBP_017.keb	7/11/12		N/A	N/A
EX1205L1_SBP_018.kea	7/11/12		N/A	N/A
EX1205L1_SBP_018.keb	7/11/12		N/A	N/A
EX1205L1_SBP_019.kea	7/11/12		N/A	N/A
EX1205L1_SBP_019.keb	7/11/12		N/A	N/A
EX1205L1_SBP_020.kea	7/11/12		N/A	N/A
EX1205L1_SBP_020.keb	7/11/12		N/A	N/A

EX1205L1_SBP_021.kea	7/12/12		N/A	N/A
EX1205L1_SBP_021.keb	7/12/12		N/A	N/A
EX1205L1_SBP_022.kea	7/12/12		N/A	N/A
EX1205L1_SBP_022.keb	7/12/12		N/A	N/A
EX1205L1_SBP_023.kea	7/12/12		N/A	N/A
EX1205L1_SBP_023.keb	7/12/12		N/A	N/A
EX1205L1_SBP_024.kea	7/12/12		N/A	N/A
EX1205L1_SBP_024.keb	7/12/12		N/A	N/A
EX1205L1_SBP_025.kea	7/12/12		N/A	N/A
EX1205L1_SBP_025.keb	7/12/12		N/A	N/A
EX1205L1_SBP_026.kea	7/12/12		N/A	N/A
EX1205L1_SBP_026.keb	7/12/12		N/A	N/A
EX1205L1_SBP_027.kea	7/12/12		N/A	N/A
EX1205L1_SBP_027.keb	7/12/12		N/A	N/A
EX1205L1_SBP_028.kea	7/12/12		N/A	N/A
EX1205L1_SBP_028.keb	7/12/12		N/A	N/A
EX1205L1_SBP_029.kea	7/12/12		N/A	N/A
EX1205L1_SBP_029.keb	7/12/12		N/A	N/A
EX1205L1_SBP_030.kea	7/12/12		N/A	N/A
EX1205L1_SBP_030.keb	7/12/12		N/A	N/A
EX1205L1_SBP_031.kea	7/12/12		N/A	N/A
EX1205L1_SBP_031.keb	7/12/12		N/A	N/A
EX1205L1_SBP_032.kea	7/12/12		N/A	N/A
EX1205L1_SBP_032.keb	7/12/12		N/A	N/A
EX1205L1_SBP_033.kea	7/12/12		N/A	N/A
EX1205L1_SBP_033.keb	7/12/12		N/A	N/A
EX1205L1_SBP_034.kea	7/12/12		N/A	N/A
EX1205L1_SBP_034.keb	7/12/12		N/A	N/A
EX1205L1_SBP_035.kea	7/12/12		N/A	N/A
EX1205L1_SBP_035.keb	7/12/12		N/A	N/A
EX1205L1_SBP_036.kea	7/12/12		N/A	N/A

EX1205L1_SBP_036.keb	7/12/12		N/A	N/A
EX1205L1_SBP_037.kea	7/13/12		N/A	N/A
EX1205L1_SBP_037.keb	7/13/12		N/A	N/A
EX1205L1_SBP_038.kea	7/13/12		N/A	N/A
EX1205L1_SBP_038.keb	7/13/12		N/A	N/A
EX1205L1_SBP_039.kea	7/13/12		N/A	N/A
EX1205L1_SBP_039.keb	7/13/12		N/A	N/A
EX1205L1_SBP_040.kea	7/13/12		N/A	N/A
EX1205L1_SBP_040.keb	7/13/12		N/A	N/A
EX1205L1_SBP_041.kea	7/13/12		N/A	N/A
EX1205L1_SBP_041.keb	7/13/12		N/A	N/A
EX1205L1_SBP_042.kea	7/13/12		N/A	N/A
EX1205L1_SBP_042.keb	7/13/12		N/A	N/A
EX1205L1_SBP_043.kea	7/13/12		N/A	N/A
EX1205L1_SBP_043.keb	7/13/12		N/A	N/A
EX1205L1_SBP_044.kea	7/13/12		N/A	N/A
EX1205L1_SBP_044.keb	7/13/12		N/A	N/A
EX1205L1_SBP_045.kea	7/13/12		N/A	N/A
EX1205L1_SBP_045.keb	7/13/12		N/A	N/A
EX1205L1_SBP_046.kea	7/13/12		N/A	N/A
EX1205L1_SBP_046.keb	7/13/12		N/A	N/A
EX1205L1_SBP_047.kea	7/13/12		N/A	N/A
EX1205L1_SBP_047.keb	7/13/12		N/A	N/A
EX1205L1_SBP_048.kea	7/13/12		N/A	N/A
EX1205L1_SBP_048.keb	7/13/12		N/A	N/A
EX1205L1_SBP_049.kea	7/13/12		N/A	N/A
EX1205L1_SBP_049.keb	7/13/12		N/A	N/A
EX1205L1_SBP_050.kea	7/13/12		N/A	N/A
EX1205L1_SBP_050.keb	7/13/12		N/A	N/A
EX1205L1_SBP_051.kea	7/13/12		N/A	N/A
EX1205L1_SBP_051.keb	7/13/12		N/A	N/A

EX1205L1_SBP_052.kea	7/13/12		N/A	N/A
EX1205L1_SBP_052.keb	7/13/12		N/A	N/A
EX1205L1_SBP_053.kea	7/13/12		N/A	N/A
EX1205L1_SBP_053.keb	7/13/12		N/A	N/A
EX1205L1_SBP_054.kea	7/13/12		N/A	N/A
EX1205L1_SBP_054.keb	7/13/12		N/A	N/A
EX1205L1_SBP_055.kea	7/14/12		N/A	N/A
EX1205L1_SBP_055.keb	7/14/12		N/A	N/A
EX1205L1_SBP_056.kea	7/14/12		N/A	N/A
EX1205L1_SBP_056.keb	7/14/12		N/A	N/A
EX1205L1_SBP_057.kea	7/14/12		N/A	N/A
EX1205L1_SBP_057.keb	7/14/12		N/A	N/A
EX1205L1_SBP_058.kea	7/14/12		N/A	N/A
EX1205L1_SBP_058.keb	7/14/12		N/A	N/A
EX1205L1_SBP_059.kea	7/14/12		N/A	N/A
EX1205L1_SBP_059.keb	7/14/12		N/A	N/A
EX1205L1_SBP_060.kea	7/14/12		N/A	N/A
EX1205L1_SBP_060.keb	7/14/12		N/A	N/A
EX1205L1_SBP_061.kea	7/14/12		N/A	N/A
EX1205L1_SBP_062.kea	7/14/12		N/A	N/A
EX1205L1_SBP_062.keb	7/14/12		N/A	N/A
EX1205L1_SBP_063.kea	7/14/12		N/A	N/A
EX1205L1_SBP_063.keb	7/14/12		N/A	N/A
EX1205L1_SBP_064.kea	7/14/12		N/A	N/A
EX1205L1_SBP_064.keb	7/14/12		N/A	N/A
EX1205L1_SBP_065.kea	7/14/12		N/A	N/A
EX1205L1_SBP_065.keb	7/14/12		N/A	N/A
EX1205L1_SBP_066.kea	7/14/12		N/A	N/A
EX1205L1_SBP_066.keb	7/14/12		N/A	N/A
EX1205L1_SBP_067.kea	7/14/12		N/A	N/A
EX1205L1_SBP_067.keb	7/14/12		N/A	N/A

EX1205L1_SBP_068.kea	7/14/12		N/A	N/A
EX1205L1_SBP_068.keb	7/14/12		N/A	N/A
EX1205L1_SBP_069.kea	7/14/12		N/A	N/A
EX1205L1_SBP_069.keb	7/14/12		N/A	N/A
EX1205L1_SBP_070.kea	7/14/12		N/A	N/A
EX1205L1_SBP_070.keb	7/14/12		N/A	N/A
EX1205L1_SBP_071.kea	7/15/12		N/A	N/A
EX1205L1_SBP_071.keb	7/15/12		N/A	N/A
EX1205L1_SBP_072.kea	7/15/12		N/A	N/A
EX1205L1_SBP_072.keb	7/15/12		N/A	N/A
EX1205L1_SBP_073.kea	7/15/12		N/A	N/A
EX1205L1_SBP_073.keb	7/15/12		N/A	N/A
EX1205L1_SBP_074.kea	7/15/12		N/A	N/A
EX1205L1_SBP_074.keb	7/15/12		N/A	N/A
EX1205L1_SBP_075.kea	7/15/12		N/A	N/A
EX1205L1_SBP_075.keb	7/15/12		N/A	N/A
EX1205L1_SBP_076.kea	7/15/12		N/A	N/A
EX1205L1_SBP_076.keb	7/15/12		N/A	N/A
EX1205L1_SBP_077.kea	7/15/12		N/A	N/A
EX1205L1_SBP_077.keb	7/15/12		N/A	N/A
EX1205L1_SBP_078.kea	7/15/12		N/A	N/A
EX1205L1_SBP_078.keb	7/15/12		N/A	N/A
EX1205L1_SBP_079.kea	7/15/12		N/A	N/A
EX1205L1_SBP_079.keb	7/15/12		N/A	N/A
EX1205L1_SBP_080.kea	7/15/12		N/A	N/A
EX1205L1_SBP_080.keb	7/15/12		N/A	N/A
EX1205L1_SBP_081.kea	7/15/12		N/A	N/A
EX1205L1_SBP_081.keb	7/15/12		N/A	N/A
EX1205L1_SBP_082.kea	7/15/12		N/A	N/A
EX1205L1_SBP_082.keb	7/15/12		N/A	N/A
EX1205L1_SBP_083.kea	7/16/12		N/A	N/A

EX1205L1_SBP_083.keb	7/16/12		N/A	N/A
EX1205L1_SBP_084.kea	7/16/12		N/A	N/A
EX1205L1_SBP_084.keb	7/16/12		N/A	N/A
EX1205L1_SBP_085.kea	7/16/12		N/A	N/A
EX1205L1_SBP_085.keb	7/16/12		N/A	N/A
EX1205L1_SBP_086.kea	7/16/12		N/A	N/A
EX1205L1_SBP_086.keb	7/16/12		N/A	N/A
EX1205L1_SBP_087.kea	7/16/12		N/A	N/A
EX1205L1_SBP_087.keb	7/16/12		N/A	N/A
EX1205L1_SBP_088.kea	7/16/12		N/A	N/A
EX1205L1_SBP_088.keb	7/16/12		N/A	N/A
EX1205L1_SBP_089.kea	7/16/12		N/A	N/A
EX1205L1_SBP_089.keb	7/16/12		N/A	N/A
EX1205L1_SBP_090.kea	7/16/12		N/A	N/A
EX1205L1_SBP_090.keb	7/16/12		N/A	N/A
EX1205L1_SBP_091.kea	7/16/12		N/A	N/A
EX1205L1_SBP_091.keb	7/16/12		N/A	N/A
EX1205L1_SBP_092.kea	7/16/12		N/A	N/A
EX1205L1_SBP_092.keb	7/16/12		N/A	N/A
EX1205L1_SBP_093.kea	7/16/12		N/A	N/A
EX1205L1_SBP_093.keb	7/16/12		N/A	N/A
EX1205L1_SBP_094.kea	7/16/12		N/A	N/A
EX1205L1_SBP_094.keb	7/16/12		N/A	N/A
EX1205L1_SBP_095.kea	7/16/12		N/A	N/A
EX1205L1_SBP_095.keb	7/16/12		N/A	N/A
EX1205L1_SBP_096.kea	7/17/12		N/A	N/A
EX1205L1_SBP_096.keb	7/17/12		N/A	N/A
EX1205L1_SBP_097.kea	7/17/12		N/A	N/A
EX1205L1_SBP_097.keb	7/17/12		N/A	N/A
EX1205L1_SBP_098.kea	7/17/12		N/A	N/A
EX1205L1_SBP_098.keb	7/17/12		N/A	N/A

EX1205L1_SBP_099.kea	7/17/12		N/A	N/A
EX1205L1_SBP_099.keb	7/17/12		N/A	N/A
EX1205L1_SBP_100.kea	7/17/12		N/A	N/A
EX1205L1_SBP_100.keb	7/17/12		N/A	N/A
EX1205L1_SBP_101.kea	7/17/12		N/A	N/A
EX1205L1_SBP_101.keb	7/17/12		N/A	N/A
EX1205L1_SBP_102.kea	7/17/12		N/A	N/A
EX1205L1_SBP_102.keb	7/17/12		N/A	N/A
EX1205L1_SBP_103.kea	7/17/12		N/A	N/A
EX1205L1_SBP_103.keb	7/17/12		N/A	N/A
EX1205L1_SBP_104.kea	7/17/12		N/A	N/A
EX1205L1_SBP_104.keb	7/17/12		N/A	N/A
EX1205L1_SBP_105.kea	7/17/12		N/A	N/A
EX1205L1_SBP_105.keb	7/17/12		N/A	N/A
EX1205L1_SBP_106.kea	7/17/12		N/A	N/A
EX1205L1_SBP_106.keb	7/17/12		N/A	N/A
EX1205L1_SBP_107.kea	7/17/12		N/A	N/A
EX1205L1_SBP_107.keb	7/17/12		N/A	N/A
EX1205L1_SBP_108.kea	7/17/12		N/A	N/A
EX1205L1_SBP_108.keb	7/17/12		N/A	N/A
EX1205L1_SBP_109.kea	7/17/12		N/A	N/A
EX1205L1_SBP_109.keb	7/17/12		N/A	N/A
EX1205L1_SBP_110.kea	7/18/12		N/A	N/A
EX1205L1_SBP_110.keb	7/18/12		N/A	N/A
EX1205L1_SBP_111.kea	7/18/12		N/A	N/A
EX1205L1_SBP_111.keb	7/18/12		N/A	N/A
EX1205L1_SBP_112.kea	7/18/12		N/A	N/A
EX1205L1_SBP_112.keb	7/18/12		N/A	N/A
EX1205L1_SBP_113.kea	7/18/12		N/A	N/A
EX1205L1_SBP_113.keb	7/18/12		N/A	N/A
EX1205L1_SBP_114.kea	7/18/12		N/A	N/A

EX1205L1_SBP_114.keb	7/18/12		N/A	N/A
EX1205L1_SBP_116.kea	7/19/12		N/A	N/A
EX1205L1_SBP_116.keb	7/19/12		N/A	N/A
EX1205L1_SBP_117.kea	7/19/12		N/A	N/A
EX1205L1_SBP_117.keb	7/19/12		N/A	N/A
EX1205L1_SBP_118.kea	7/19/12		N/A	N/A
EX1205L1_SBP_118.keb	7/19/12		N/A	N/A
EX1205L1_SBP_119.kea	7/19/12		N/A	N/A
EX1205L1_SBP_119.keb	7/19/12		N/A	N/A
EX1205L1_SBP_120.kea	7/19/12		N/A	N/A
EX1205L1_SBP_120.keb	7/19/12		N/A	N/A
EX1205L1_SBP_121.kea	7/19/12		N/A	N/A
EX1205L1_SBP_121.keb	7/19/12		N/A	N/A
EX1205L1_SBP_122.kea	7/19/12		N/A	N/A
EX1205L1_SBP_122.keb	7/19/12		N/A	N/A
EX1205L1_SBP_123.kea	7/20/12		N/A	N/A
EX1205L1_SBP_123.keb	7/20/12		N/A	N/A
EX1205L1_SBP_124.kea	7/20/12		N/A	N/A
EX1205L1_SBP_124.keb	7/20/12		N/A	N/A
EX1205L1_SBP_125.kea	7/20/12		N/A	N/A
EX1205L1_SBP_125.keb	7/20/12		N/A	N/A
EX1205L1_SBP_126.kea	7/20/12		N/A	N/A
EX1205L1_SBP_126.keb	7/20/12		N/A	N/A
EX1205L1_SBP_127.kea	7/20/12		N/A	N/A
EX1205L1_SBP_127.keb	7/20/12		N/A	N/A
EX1205L1_SBP_128.kea	7/20/12		N/A	N/A
EX1205L1_SBP_128.keb	7/20/12		N/A	N/A
EX1205L1_SBP_129.kea	7/21/12		N/A	N/A
EX1205L1_SBP_129.keb	7/21/12		N/A	N/A
EX1205L1_SBP_130.kea	7/21/12		N/A	N/A
EX1205L1_SBP_130.keb	7/21/12		N/A	N/A

EX1205L1_SBP_131.kea	7/21/12		N/A	N/A
EX1205L1_SBP_131.keb	7/21/12		N/A	N/A
EX1205L1_SBP_132.kea	7/21/12		N/A	N/A
EX1205L1_SBP_132.keb	7/21/12		N/A	N/A
EX1205L1_SBP_133.kea	7/21/12		N/A	N/A
EX1205L1_SBP_133.keb	7/21/12		N/A	N/A
EX1205L1_SBP_134.kea	7/21/12		N/A	N/A
EX1205L1_SBP_134.keb	7/21/12		N/A	N/A
EX1205L1_SBP_135.kea	7/21/12		N/A	N/A
EX1205L1_SBP_135.keb	7/21/12		N/A	N/A
EX1205L1_SBP_136.kea	7/21/12		N/A	N/A
EX1205L1_SBP_136.keb	7/21/12		N/A	N/A
EX1205L1_SBP_137.kea	7/21/12		N/A	N/A
EX1205L1_SBP_137.keb	7/21/12		N/A	N/A
EX1205L1_SBP_138.kea	7/21/12		N/A	N/A
EX1205L1_SBP_138.keb	7/21/12		N/A	N/A
EX1205L1_SBP_139.kea	7/21/12		N/A	N/A
EX1205L1_SBP_139.keb	7/21/12		N/A	N/A
EX1205L1_SBP_140.kea	7/21/12		N/A	N/A
EX1205L1_SBP_140.keb	7/21/12		N/A	N/A
EX1205L1_SBP_141.kea	7/22/12		N/A	N/A
EX1205L1_SBP_141.keb	7/22/12		N/A	N/A
EX1205L1_SBP_142.kea	7/22/12		N/A	N/A
EX1205L1_SBP_142.keb	7/22/12		N/A	N/A
EX1205L1_SBP_143.kea	7/22/12		N/A	N/A
EX1205L1_SBP_143.keb	7/22/12		N/A	N/A
EX1205L1_SBP_144.kea	7/22/12		N/A	N/A
EX1205L1_SBP_144.keb	7/22/12		N/A	N/A
EX1205L1_SBP_145.kea	7/22/12		N/A	N/A
EX1205L1_SBP_145.keb	7/22/12		N/A	N/A
EX1205L1_SBP_146.kea	7/22/12		N/A	N/A

EX1205L1_SBP_146.keb	7/22/12		N/A	N/A
EX1205L1_SBP_150.kea	7/23/12		N/A	N/A
EX1205L1_SBP_150.keb	7/23/12		N/A	N/A
EX1205L1_SBP_151.kea	7/23/12		N/A	N/A
EX1205L1_SBP_151.keb	7/23/12		N/A	N/A
EX1205L1_SBP_152.kea	7/23/12		N/A	N/A
EX1205L1_SBP_152.keb	7/23/12		N/A	N/A

Appendix E: List of acronyms

- ASCII – American Standard Code for Information Interchange
- AUV – autonomous underwater vehicle
- BIST – built in system test
- BRD – Blake Ridge Diapir
- CDR – Commander
- CFD – Cape Fear Diapir
- CO – Commanding Officer
- CTD – conductivity, temperature, depth
- CW – continuous wave
- DNP – do not process
- ECS – Extended Continental Shelf
- ERT – Earth Resources Technology Inc.
- ET – Electronics Technician
- EX – NOAA Ship *Okeanos Explorer*
- FM – frequency modulated / modulation
- FTP – file transfer protocol
- GMT – Generic Mapping Tools
- HTC – Hatteras Transverse Canyon
- kHz – kilohertz
- km – kilometer
- kts – knots
- LT – Lieutenant
- MB – multibeam sonar
- MB – megabytes
- NCDDC – National Coastal Data Development Center
- NGDC – National Geophysical Data Center
- NMEA – National Marine Electronics Association
- NOAA – National Oceanic and Atmospheric Administration
- NODC – National Oceanographic Data Center
- NOPP – National Ocean Partnership Program
- OER – NOAA Office of Ocean Exploration and Research
- OMAO – NOAA Office of Marine and Aviation Operations
- OPS – Operations Officer

- ROV – remotely operated vehicle
- SBP – subbottom profiler
- SCS – scientific computer system
- SIS – Seafloor Information System
- SVP – sound velocity profile
- TRU – transceiver unit
- UCAR – University Corporation for Atmospheric Research
- UPS – uninterruptable power supply
- USBL – ultrashort baseline
- USGS – United States Geological Survey
- XBT – expendable bathythermograph
- XO – Executive Officer
- WD – water depth
- WHOI – Woods Hole Oceanographic Institution

Appendix F: Kongsberg EM 302 Multibeam Sonar Description and Operational Specifications

Several features of the *Okeanos Explorer's* 30 kHz multibeam make it an excellent tool for ocean exploration. The following is a brief description of these features.

Depth Range

The system is designed to map the seafloor in water depths of 10 to 7000 meters. This leaves only the deepest parts of the deeper ocean trenches out of the EM 302's reach. In fact, when the ship transited over the Mariana Trench going to and from Indonesia in 2010, the system was able to detect the bottom at depths of up to 8000 meters.

High Density Data

In multibeam data, the denser the data, the finer resolution maps can be produced. In water deptsh 3000 meters and shallower, the system can operate in dual swath, or multiping mode, which results in increased along track data density. This is achieved by detecting two swaths per ping cycle, resulting in up to 864 beams per ping.

The *Okeanos Explorer* mapping team typically operates the multibeam in high density equidistant ping mode, which results in up to 864 evenly spaced soundings on the seafloor per ping.

Multiple Data Types Collected

The system collects seafloor backscatter data, which provides information about the character of the seafloor in terms of bottom type.

The system also collects water column backscatter data, which has the ability to detect gaseous plumes in the water column. The full value of this feature is still being realized.

FM chirp mode is utilized in water depths greater than 1000 meters, and allows for the detection of the bottom further out from nadir than with previous 30 kHz systems. This results in wider swath widths, giving a higher likelihood of new discoveries as well as efficiency of survey operations.

Multibeam Primer

The area of the seafloor covered, or ensonified, by a single beam within a pulse of sound, or ping, is called the beam footprint. This beam footprint is defined in terms of the across track and along track values. Both of these values are dependent on water depth and the beam width at which the sound pulse is transmitted and received. The across track beam width value is also dependent on the receive angle, or "listening" angle, of the system, and the angle from nadir which it is received. The transmit angle for the transmit transducer is 0.5°, which is the smallest possible angle currently available for the EM302 system. The further out from nadir a sounding occurs, the larger the footprint will be. The receive angle for the receive transducer is 1°. As an example, as seen in Table 1 below, in 2000 meters of water, a beam footprint will have a radius of 18 meters at nadir but 25 meters by the time it hits the seafloor at an angle 140 degrees out from nadir.

Calculated acrosstrack acoustic beam footprint in meters for EM 302
(high density ping mode, 432 soundings/profile)

Water depth (m)	Angle from nadir			
50	1 deg RX center	90 deg	120 deg	140 deg
100	1	0.5	1	1
200	2	1	2	3
400	4	2	3	5
1000	7	4	6	10
2000	18	9	16	25
4000	35	19	32	-
6000	70	37	-	-
7000	105	56	-	-

Table 2. Calculated across track EM 302 beam footprint. Reference: Kongsberg Product description, Kongsberg document 302675 Rev B, Date 14/06/06, p. 17.

Calculated acrosstrack sounding density for EM 302 (high density ping mode, 432 soundings/profile)			
Water depth (m)	**Swath Width**		
50	90 deg	120 deg	140 deg
100	0.2	0.4	0.9
200	0.5	0.8	1.7
400	0.9	1.6	3.5
1000	1.9	3.2	6.9
2000	4.6	8.1	17.4
4000	9.3	16.2	-

Table 3. Calculated across track EM 302 sounding density. Reference: Kongsberg Product description, Kongsberg document 302675 Rev B, Date 14/06/06, p. 17.

Acrosstrack sounding density describes the spacing between individual soundings on the seafloor in the acrosstrack direction. The maximum swath of the EM 302 is 150 degrees. At this swath, the sounding density will be the least dense, since the beams will be spread out over a larger horizontal distance over the seafloor. As the swath angle (width) is decreased, the sounding density will increase, as the same number of beams are now spread out over a smaller horizontal distance over the seafloor.

Calculated ping rate and alongtrack resolution for EM 302					
140 deg swath, one profile per ping					
			Alongtrack distance between profiles (m)		
Water depth (m)	Swath Width (m)	Ping Rate (pings/second)	@4 kts	@8 kts	@12 kts
50	275	3.2	0.7	1.2	1.9
100	550	1.8	1.1	2.2	3.3
200	1100	1	2.1	4.2	6.3
400	2200	0.5	4.1	8.2	12.2
1000	5500	0.2	10	20	30
2000	8000	0.1	15.2	30.5	45.7
4000	8000	0.06	19.2	38.5	57.7
6000	8000	0.04	24.5	49	73.4

Table 4. Calculated ping rate and along track EM 302 sounding density, one profile per ping. Reference: Kongsberg Product description, Kongsberg document 302675 Rev B, Date 14/06/06, p. 15.

Calculated ping rate and alongtrack resolution for EM 302					
140 deg swath, two profiles per ping					
			Alongtrack distance between profiles (m)		
Water depth (m)	Swath Width (m)	Ping Rate	@4 kts	@8 kts	@12 kts
50	275	3.2	0.3	0.6	0.9
100	550	1.8	0.6	1.1	1.7
200	1100	1	1.1	2.1	3.2
400	2200	0.5	2	4.1	6.1
1000	5500	0.2	5	10	15
2000	8000	0.1	7.6	15.2	22.8

Table 5. Calculated ping rate and along track EM 302 sounding density, two profiles per ping. Reference: Kongsberg Product description, Kongsberg document 302675 Rev B, Date 14/06/06, p. 15.

Reference: Kongsberg Product Description: EM 302 multibeam echosounder

Appendix G: EM 302 PU Parameters in use during cruise

```
#// Database Parameters

#// Seafloor Information System
#// Kongsberg Maritime AS
#// Saved:  2012.07.21 18:46:15

#// Build info:
#* SIS:            [Version: 3.8.3, Build: 89,
DBVersion 19.0 CD generated: Fri Mar 25
15:18:06 2011]
[Fox ver = 1.6.37]
[db ver = 19, proc = 19.0]
[OTL = 4.0.-95]
[ACE ver = 5.7.6]
[Coin ver = 2.5.0]
[Simage ver = 1.6.2a]
[Dime ver = DIME v0.9]
[STLPort ver = 8.0]
[FreeType ver = 2.3.7]
[TIFF ver = 3.9.2]
[GeoTIFF ver = 1250]
[GridEngine ver = 2.4.1]

#* Language          [3] #// Current language, 1-
Norwegian, 2-German,3-English, 4-Spanish

#* Type              [302]
#* Serial no.        [101]
#* Number of heads   [2]
#* System descriptor    [50331648] #// 03000000

#//
**********************************************************
************
#{ User comment #//


#} User comment

#//
**********************************************************
************

#//
**********************************************************
************
#// Installation parameters


#{ Input Setup #// All Input setup parameters

  #{ COM1 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #* Baud rate:        [9600]
      #* Data bits         [8]
      #* Stop bits:        [1]
      #* Parity:           [NONE]
    #} Com. settings

    #{ Position #// Position input settings.
      #* None              [1] [0]
      #* GGK               [1] [0]
      #* GGA               [1] [1]
      #* GGA_RTK           [1] [0]
      #* SIMRAD90          [1] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude          [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock         [1] [1]
      #* HDT Heading       [0] [0]
      #* SKR82 Heading     [0] [0]
      #* DBS Depth         [1] [0]
      #* DPT Depth         [1] [0]
      #* EA500 Depth       [0] [0]
      #* ROV. depth        [1] [0]
      #* Height, special purp [1] [0]
      #* Ethernet AttVel   [0] [0]
    #} Input Formats

  #} COM1

  #{ COM2 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #* Baud rate:        [19200]
      #* Data bits         [8]
      #* Stop bits:        [1]
      #* Parity:           [NONE]
    #} Com. settings

    #{ Position #// Position input settings.
      #* None              [0] [1]
      #* GGK               [0] [0]
      #* GGA               [0] [0]
      #* GGA_RTK           [0] [0]
      #* SIMRAD90          [0] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude          [1] [1]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock         [0] [0]
      #* HDT Heading       [0] [0]
      #* SKR82 Heading     [0] [0]
      #* DBS Depth         [0] [0]
      #* DPT Depth         [0] [0]
      #* EA500 Depth       [0] [0]
      #* ROV. depth        [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel   [0] [0]
    #} Input Formats

  #} COM2

  #{ COM3 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #* Baud rate:        [4800]
      #* Data bits         [8]
      #* Stop bits:        [1]
      #* Parity:           [NONE]
    #} Com. settings

    #{ Position #// Position input settings.
      #* None              [1] [1]
      #* GGK               [1] [0]
      #* GGA               [1] [0]
      #* GGA_RTK           [1] [0]
      #* SIMRAD90          [1] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude          [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock         [0] [0]
      #* HDT Heading       [1] [1]
      #* SKR82 Heading     [0] [0]
      #* DBS Depth         [1] [0]
      #* DPT Depth         [1] [0]
      #* EA500 Depth       [0] [0]
      #* ROV. depth        [1] [0]
      #* Height, special purp [1] [0]
      #* Ethernet AttVel   [0] [0]
    #} Input Formats

  #} COM3

  #{ COM4 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #* Baud rate:        [9600]
      #* Data bits         [8]
      #* Stop bits:        [1]
      #* Parity:           [NONE]
    #} Com. settings

    #{ Position #// Position input settings.
      #* None              [1] [1]
      #* GGK               [1] [0]
      #* GGA               [1] [0]
      #* GGA_RTK           [1] [0]
      #* SIMRAD90          [1] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude          [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock         [0] [0]
      #* HDT Heading       [0] [0]
      #* SKR82 Heading     [0] [0]
      #* DBS Depth         [1] [0]
      #* DPT Depth         [1] [0]
      #* EA500 Depth       [0] [0]
      #* ROV. depth        [1] [0]
      #* Height, special purp [1] [0]
      #* Ethernet AttVel   [0] [0]
    #} Input Formats

  #} COM4

  #{ UDP2 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None              [1] [1]
      #* GGK               [1] [0]
      #* GGA               [1] [0]
      #* GGA_RTK           [1] [0]
      #* SIMRAD90          [1] [0]
    #} Position
```

```
    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [0] [0]
      #* HDT Heading         [0] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [0] [0]
      #* DPT Depth           [0] [0]
      #* EA500 Depth         [1] [0]
      #* ROV. depth          [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel     [0] [0]
    #} Input Formats

  #} UDP2

  #{ UDP3 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [0] [1]
      #* GGK                 [0] [0]
      #* GGA                 [0] [0]
      #* GGA_RTK             [0] [0]
      #* SIMRAD90            [0] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [0] [0]
      #* HDT Heading         [1] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [1] [0]
      #* DPT Depth           [1] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [1] [0]
      #* Height, special purp [1] [0]
      #* Ethernet AttVel     [0] [0]
    #} Input Formats

  #} UDP3

  #{ UDP4 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [0] [1]
      #* GGK                 [0] [0]
      #* GGA                 [0] [0]
      #* GGA_RTK             [0] [0]
      #* SIMRAD90            [0] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [1] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [0] [0]
      #* HDT Heading         [1] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [1] [0]
      #* DPT Depth           [1] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [1] [0]
      #* Height, special purp [1] [0]
      #* Ethernet AttVel     [0] [0]
    #} Input Formats

  #} UDP4

  #{ UDP5 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [0] [0]
      #* GGK                 [0] [0]
      #* GGA                 [0] [0]
      #* GGA_RTK             [0] [0]
      #* SIMRAD90            [0] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [0] [0]
      #* HDT Heading         [0] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [0] [0]
      #* DPT Depth           [0] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel     [1] [1]
    #} Input Formats

    #{ Attitude Velocity settings #// Only relevant
for UDP5 on EM122, EM302, EM710, EM2040
currently
      #* Attitude 1          [1] [1]
      #* Attitude 2          [1] [0]
      #* Use Ethernet 2      [1] [1]
      #* Port:               [5602]
      #* IP addr.:           [192.168.2.20]
      #* Net mask:           [255.255.255.0]
    #} Attitude Velocity settings

  #} UDP5

  #{ MCAST1 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [1] [1]
      #* GGK                 [0] [0]
      #* GGA                 [0] [0]
      #* GGA_RTK             [0] [0]
      #* SIMRAD90            [0] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [1] [0]
      #* HDT Heading         [0] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [0] [0]
      #* DPT Depth           [0] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel     [1] [0]
    #} Input Formats

  #} MCAST1

  #{ MCAST2 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [1] [1]
      #* GGK                 [1] [0]
      #* GGA                 [1] [0]
      #* GGA_RTK             [1] [0]
      #* SIMRAD90            [1] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [1] [0]
      #* HDT Heading         [0] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [0] [0]
      #* DPT Depth           [0] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel     [1] [0]
    #} Input Formats

  #} MCAST2

  #{ MCAST3 #// Link settings.

    #{ Com. settings #// Serial line parameter
settings.
      #// N/A
    #} Com. settings

    #{ Position #// Position input settings.
      #* None                [1] [1]
      #* GGK                 [1] [0]
      #* GGA                 [1] [0]
      #* GGA_RTK             [1] [0]
      #* SIMRAD90            [1] [0]
    #} Position

    #{ Input Formats #// Format input settings.
      #* Attitude            [0] [0]
      #* MK39 Mod2 Attitude,  [0] [0]
      #* ZDA Clock           [1] [0]
      #* HDT Heading         [0] [0]
      #* SKR82 Heading       [0] [0]
      #* DBS Depth           [0] [0]
      #* DPT Depth           [0] [0]
      #* EA500 Depth         [0] [0]
      #* ROV. depth          [0] [0]
      #* Height, special purp [0] [0]
      #* Ethernet AttVel     [1] [0]
    #} Input Formats

  #} MCAST3
```

#{ MCAST4 #// Link settings.

#{ Com. settings #// Serial line parameter settings.
#// N/A
#} Com. settings

#{ Position #// Position input settings.
#* None [0] [1]
#* GGK [0] [0]
#* GGA [0] [0]
#* GGA_RTK [0] [0]
#* SIMRAD90 [0] [0]
#} Position

#{ Input Formats #// Format input settings.
#* Attitude [0] [0]
#* MK39 Mod2 Attitude, [0] [0]
#* ZDA Clock [1] [0]
#* HDT Heading [0] [0]
#* SKR82 Heading [0] [0]
#* DBS Depth [0] [0]
#* DPT Depth [0] [0]
#* EA500 Depth [0] [0]
#* ROV. depth [0] [0]
#* Height, special purp [0] [0]
#* Ethernet AttVel [1] [0]
#} Input Formats

#} MCAST4

#{ Misc. #// Misc. input settings.
#* External Trigger [1] [0]
#} Misc.

#} Input Setup

#{ Output Setup #// All Output setup parameters

#* PU broadcast enable [1] [1]
#* Log watercolumn to s [1] [1]

#{ Host UDP1 #// Host UDP1 Port: 16100

#{ Datagram subscription #//
#* Depth [0] [0]
#* Raw range and beam a [0] [0]
#* Seabed Image [0] [0]
#* Central Beams [0] [0]
#* Position [0] [0]
#* Attitude [0] [0]
#* Heading [0] [0]
#* Height [0] [0]
#* Clock [0] [0]
#* Single beam echosoun [0] [0]
#* Sound Speed Profile [0] [1]
#* Runtime Parameters [0] [1]
#* Installation Paramet [0] [1]
#* BIST Reply [0] [1]
#* Status parameters [0] [1]
#* PU Broadcast [0] [0]
#* Stave Display [0] [0]
#* Water Column [0] [0]
#* Internal, Range Data [0] [0]
#* Internal, Scope Data [0] [0]
#} Datagram subscription

#} Host UDP1

#{ Host UDP2 #// Host UDP2 Port: 16101

#{ Datagram subscription #//
#* Depth [1] [1]
#* Raw range and beam a [1] [1]
#* Seabed Image [1] [1]
#* Central Beams [1] [0]
#* Position [1] [1]
#* Attitude [1] [1]
#* Heading [1] [1]
#* Height [1] [1]
#* Clock [1] [1]
#* Single beam echosoun [1] [1]
#* Sound Speed Profile [0] [1]
#* Runtime Parameters [0] [1]
#* Installation Paramet [0] [1]
#* BIST Reply [1] [1]
#* Status parameters [0] [1]
#* PU Broadcast [1] [0]
#* Stave Display [0] [1]
#* Water Column [0] [1]
#* Internal, Range Data [1] [0]
#* Internal, Scope Data [1] [0]
#} Datagram subscription

#} Host UDP2

#{ Host UDP3 #// Host UDP3 Port: 16102

#{ Datagram subscription #//
#* Depth [0] [1]
#* Raw range and beam a [0] [0]
#* Seabed Image [0] [0]
#* Central Beams [0] [0]
#* Position [0] [0]
#* Attitude [0] [1]
#* Heading [0] [0]
#* Height [0] [1]
#* Clock [0] [0]
#* Single beam echosoun [0] [1]
#* Sound Speed Profile [0] [1]
#* Runtime Parameters [0] [0]
#* Installation Paramet [0] [1]
#* BIST Reply [0] [0]
#* Status parameters [0] [0]
#* PU Broadcast [0] [0]
#* Stave Display [0] [0]
#* Water Column [0] [0]
#* Internal, Range Data [0] [0]
#* Internal, Scope Data [0] [1]
#} Datagram subscription

#} Host UDP3

#{ Host UDP4 #// Host UDP4 Port 16103

#{ Datagram subscription #//
#* Depth [1] [1]
#* Raw range and beam a [1] [0]
#* Seabed Image [1] [0]
#* Central Beams [1] [0]
#* Position [1] [0]
#* Attitude [1] [0]
#* Heading [1] [0]
#* Height [1] [0]
#* Clock [1] [0]
#* Single beam echosoun [1] [0]
#* Sound Speed Profile [1] [0]
#* Runtime Parameters [1] [0]
#* Installation Paramet [1] [0]
#* BIST Reply [1] [0]
#* Status parameters [1] [0]
#* PU Broadcast [1] [0]
#* Stave Display [1] [0]
#* Water Column [1] [0]
#* Internal, Range Data [1] [0]
#* Internal, Scope Data [1] [0]
#} Datagram subscription

#} Host UDP4

#{ Watercolumn #// Host UDP4 Port 16103

#{ Datagram subscription #//
#* Depth [1] [0]
#* Raw range and beam a [1] [0]
#* Seabed Image [1] [0]
#* Central Beams [1] [0]
#* Position [1] [1]
#* Attitude [1] [1]
#* Heading [1] [1]
#* Height [1] [0]
#* Clock [1] [0]
#* Single beam echosoun [1] [0]
#* Sound Speed Profile [1] [1]
#* Runtime Parameters [1] [1]
#* Installation Paramet [1] [1]
#* BIST Reply [1] [0]
#* Status parameters [1] [0]
#* PU Broadcast [1] [0]
#* Stave Display [1] [0]
#* Water Column [1] [1]
#* Internal, Range Data [1] [0]
#* Internal, Scope Data [1] [0]
#} Datagram subscription

#} Watercolumn

#} Output Setup

#{ Clock Setup #// All Clock setup parameters

#{ Clock #// All clock settings.
#* Source: [1] #// External ZDA Clock
#* 1PPS Clock Synch. [1] [1]
#* Offset (sec.): [0]
#} Clock

#} Clock Setup

#{ Settings #// Sensor setup parameters

#{ Positioning System Settings #// Position related settings.

#{ COM1 #// Positioning System Ports:
#* P1S [1] #// Serial
#* P1T [0] #// System
#* P1M [0] #// Enable position motion correction
#* P1D [0.000] #// Position delay (sec.):
#* P1G [WGS84] #// Datum:
#* P1Q [1] #// Enable
#* Pos. qual. indicator [] #//
#} COM1

#} Positioning System Settings

#{ Motion Sensor Settings #// Motion related settings.

#{ COM2 #// Motion Sensor Ports:
#* MRP [RP] #// Rotation (POSMV/MRU)
#* MSD [0] #// Motion Delay (msec.):
#* MAS [1.00] #// Motion Sensor Roll Scaling:
#} COM2

#} Motion Sensor Settings

#{ Active Sensors #//
#* APS [0] [COM1] #// Position:
#* ARO [2] [COM2] #// Motion:
#* AHE [2] [COM2] #// Motion:
#* AHS [3] [COM3] #// Heading:
#} Active Sensors

#} Settings

#{ Locations #// All location parameters

#{ Location offset (m) #//

#{ Pos, COM1: #//
#* P1X [0.00] #// Forward (X)
#* P1Y [0.00] #// Starboard (Y)
#* P1Z [0.00] #// Downward (Z)
#} Pos, COM1:

#{ Pos, COM3: #//
#* P2X [0.00] #// Forward (X)
#* P2Y [0.00] #// Starboard (Y)
#* P2Z [0.00] #// Downward (Z)
#} Pos, COM3:

#{ Pos, COM4/UDP2: #//
#* P3X [0.00] #// Forward (X)
#* P3Y [0.00] #// Starboard (Y)
#* P3Z [0.00] #// Downward (Z)
#} Pos, COM4/UDP2:

#{ TX Transducer: #//
#* S1X [6.147] #// Forward (X)
#* S1Y [1.822] #// Starboard (Y)
#* S1Z [6.796] #// Downward (Z)
#} TX Transducer:

#{ RX Transducer: #//
#* S2X [2.497] #// Forward (X)
#* S2Y [2.481] #// Starboard (Y)
#* S2Z [6.790] #// Downward (Z)
#} RX Transducer:

#{ Attitude 1, COM2: #//
#* MSX [0.00] #// Forward (X)
#* MSY [0.00] #// Starboard (Y)
#* MSZ [0.00] #// Downward (Z)
#} Attitude 1, COM2:

#{ Attitude 2, COM3: #//
#* NSX [0.00] #// Forward (X)
#* NSY [0.00] #// Starboard (Y)
#* NSZ [0.00] #// Downward (Z)
#} Attitude 2, COM3:

#{ Waterline: #//
#* WLZ [1.838] #// Downward (Z)
#} Waterline:

#} Location offset (m)

#} Locations

#{ Angular Offsets #// All angular offset parameters

#{ Offset angles (deg.) #//

#{ TX Transducer: #//
#* S1R [0.00] #// Roll
#* S1P [0.00] #// Pitch
#* S1H [359.98] #// Heading
#} TX Transducer:

#{ RX Transducer: #//
#* S2R [0.00] #// Roll
#* S2P [0.00] #// Pitch
#* S2H [0.03] #// Heading
#} RX Transducer:

#{ Attitude 1, COM2: #//
#* MSR [0.00] #// Roll
#* MSP [-0.725] #// Pitch
#* MSG [0.00] #// Heading
#} Attitude 1, COM2:

#{ Attitude 2, COM3: #//
#* NSR [0.00] #// Roll
#* NSP [0.00] #// Pitch
#* NSG [0.00] #// Heading
#} Attitude 2, COM3:

#{ Stand-alone Heading: #//
#* GCG [0.00] #// Heading
#} Stand-alone Heading:

#} Offset angles (deg.)

#} Angular Offsets

#{ ROV. Specific #// All ROV specific parameters

#{ Depth/Pressure Sensor #//
#* DSF [1.00] #// Scaling:
#* DSO [0.00] #// Offset:
#* DSD [0.00] #// Delay (msec.):
#* DSH [NI] #// Disable Heave Sensor
#} Depth/Pressure Sensor

#} ROV. Specific

#{ System Parameters #// All system parameters

#{ System Gain Offset #//
#* GO1 [0.0] #// BS Offset (dB)
#} System Gain Offset

#{ Opening angles #//
#* S1S [0] #// TX Opening angle:
#* S2S [1] #// RX Opening angle:
#} Opening angles

#} System Parameters

#//
****

#// Runtime parameters

#{ Sounder Main #//

#{ Sector Coverage #//

#{ Max. angle (deg.): #//
#* MPA [75] #// Port
#* MSA [75] #// Starboard
#} Max. angle (deg.):

#{ Max. Coverage (m): #//
#* MPC [5000] #// Port
#* MSC [5000] #// Starboard
#} Max. Coverage (m):

#* ACM [1] #// Angular Coverage mode: AUTO
#* BSP [2] #// Beam Spacing: HIDENS EQDIST

#} Sector Coverage

#{ Depth Settings #//
#* FDE [2330] #// Force Depth (m):
#* MID [1500] #// Min. Depth (m):
#* MAD [3500] #// Max. Depth (m):
#* DSM [2] #// Dual swath mode: DYNAMIC
#* PMO [0] #// Ping Mode: AUTO
#* FME [1] #// FM disable
#} Depth Settings

#{ Stabilization #//
#// For EM122, EM302, EM710, EM2040 this block is now called Transmit Control in GUI.
#* YPS [1] #// Pitch stabilization
#* TXA [0] #// Along Direction (deg.):

#{ Yaw Stabilization #//
#* YSM [2] #// Mode: REL. MEAN HEADING
#* YMA [300] #// Heading:
#* HFI [1] #// Heading filter: MEDIUM
#} Yaw Stabilization

#} Stabilization
#} Sounder Main

#{ Sound Speed #//

#{ Sound Speed at Transducer #//
#* SHS [0] #// Source SENSOR
#* SST [15000] #// Sound Speed (dm/sec.):
#* Sensor Offset (m/sec [0] #//
#* Filter (sec.): [4] #//
#} Sound Speed at Transducer

#} Sound Speed

#{ Filter and Gains #//

#{ Filtering #//

```
    #* SFS            [2] #// Spike Filter Strength:
MEDIUM
    #* PEF            [0] #// Penetration Filter
Strength: OFF
    #* RGS            [1] #// Range Gate:
NORMAL
    #* PHR            [1] #// Phase ramp:
NORMAL
    #* SLF            [0] #// Slope
    #* AEF            [1] #// Aeration
    #* STF            [0] #// Sector Tracking
    #* IFF            [1] #// Interference
  #} Filtering

  #{ Absorption Coefficient #//
    #* Source:        [0] #// Salinity. Note: This is
not a PU parameter.
    #* ABC            [6.348] #// 31.5 kHz
  #} Absorption Coefficient

  #{ Normal incidence sector #//
    #* TCA            [5] #// Angle from nadir
(deg.):
  #} Normal incidence sector


  #{ Mammal protection #//
    #* TXP            [0] #// TX power level (dB):
Max.
    #* SSR            [5] #// Soft startup ramp
time (min.):
  #} Mammal protection

#} Filter and Gains

#{ Data Cleaning #//
  #* Active rule:      [AUTOMATIC1] #//
  #{ AUTOMATIC1 #//
    #* PingProc.maxPingCountRadius
[10]
    #* PingProc.radiusFactor
[0.050000]
    #* PingProc.medianFactor
[1.500000]
    #* PingProc.beamNumberRadius
[3]
    #* PingProc.sufficientPointCount
[40]
    #* PingProc.neighborhoodType
[Elliptical]
    #* PingProc.timeRule.use
[false]
    #* PingProc.overhangRule.use
[false]
    #* PingProc.medianRule.use
[false]
    #* PingProc.medianRule.depthFactor
[0.050000]
    #* PingProc.medianRule.minPointCount
[6]
    #* PingProc.quantileRule.use
[false]
    #* PingProc.quantileRule.quantile
[0.100000]
    #* PingProc.quantileRule.scaleFactor
[6.000000]
    #* PingProc.quantileRule.minPointCount
[40]
    #* GridProc.minPoints                    [8]
    #* GridProc.depthFactor
[0.200000]
    #* GridProc.removeTooFewPoints
[false]
    #* GridProc.surfaceFitting.surfaceDegree
[1]
    #* GridProc.surfaceFitting.tukeyConstant
[6.000000]
    #* GridProc.surfaceFitting.maxIteration
[10]
    #* GridProc.surfaceFitting.convCriterion
[0.010000]
    #* GridProc.surfaceDistanceDepthRule.use
[false]
    #*
GridProc.surfaceDistanceDepthRule.depthFactor
[0.050000]
    #* GridProc.surfaceDistancePointRule.use
[false]
    #*
GridProc.surfaceDistancePointRule.scaleFactor
[1.000000]
    #* GridProc.surfaceDistanceUnitRule.use
[false]
    #*
GridProc.surfaceDistanceUnitRule.scaleFactor
[1.000000]
    #* GridProc.surfaceDistanceStDevRule.use
[false]
    #*
GridProc.surfaceDistanceStDevRule.scaleFactor
[2.000000]
    #* GridProc.surfaceAngleRule.use
[false]
    #* GridProc.surfaceAngleRule.minAngle
[20.000000]
    #* SonarProc.use
[false]
    #* SonarProc.gridSizeFactor
[4]
    #* SonarProc.mergerType
[Average]
    #* SonarProc.interpolatorType
[TopHat]
    #* SonarProc.interpolatorRadius
[1]
    #* SonarProc.fillInOnly
[true]
  #} AUTOMATIC1

  #{ Seabed Image Processing #//
    #* Seabed Image Process [1] [0]
  #} Seabed Image Processing
#} Data Cleaning

#{ Advanced param. #//
#} Advanced param.
```

Appendix H: Software versions in use during cruise

SOFTWARE	VERSION	PURPOSE
Seafloor Information Systems (SIS)	3.8.3	Multibeam data acquisition
CARIS HIPS and SIPS	6.1	Multibeam bathymetry data processing
Fledermaus	7.3.2	Multibeam bathymetry, water column, and bottom backscatter data visualization and QC
Fledermaus MidWater	7.3.2	Multibeam and singlebeam water column data processing, seep identification
Fledermaus FMGT	7.3.2	Multibeam bottom backscatter data processing
FM DMagic	7.3.2	Multibeam bathymetry data processing, advanced multibeam data product creation
ArcMap	9.3	Cruise summary map production
GoogleEarthPro	6.1.0.5001	Situational awareness, advanced multibeam data product creation
Hypack	11.0.1.49	Survey line planning, realtime navigation monitoring

Applanix POSMV	4.0.2.0	POS/MV motion sensor control
Simrad ER60	2.2.1	EK 60 data acquisition
SounderSuite:EchoControlClient	2.06	Subbottom data acquisition
Scientific Computing System (SCS)	4.5.1.1063	Oceanographic sensor data collection
SonarWiz	5.1	Subbottom data processing

Appendix I: EM 302 Built In System Test (BIST) Results

EX1205 LEG 1 BIST LOG									
BIST FILE NAME	DATE (UTC)	TIME (UTC)	BIST TYPE	Max RX Noise (dB)/Board/Channel	Avg RX Noise Board 1 (dB)	Avg RX Noise Board 2 (dB)	Avg RX Noise Board 3 (dB)	Avg RX Noise Board 4 (dB)	NOTES
EX1205L1_1.txt	7/5/12	19:42:16	ALL	63.1/3/15	61.7	61.7	61.9	62.1	
EX1205L1_2.txt	7/6/12	23:51:15	ALL	61.7/4/29	45.5	45.6	46.2	50.3	
EX1205L1_3.txt	7/11/12	00:07:36	ALL	61.7/4/29	45.5	43.9	43.4	49	
EX1205L1_4.txt	7/19/12	13:20:28	ALL	61.7/4/29	41	42.2	43.2	49.2	
EX1205L1_5.txt	7/20/12	17:43:11	ALL	61.7/4/29	42.9	47.8	48.1	51.1	
EX1205L1_6.txt	7/24/12	13:16:46	ALL	75.6/4/31	72.3	72.8	73.4	73.5	BIST run at dock, high noise values

EX1205L1_4.txt BIST Full Results

Saved: 2012.07.19 13:20:28

Sounder Type: 302, Serial no.: 101

Date Time Ser. No. BIST Result

2012.07.19 13:10:41.173 101 0 OK

Number of BSP67B boards: 2
BSP 1 Master 2.3 090702 4.3 070913 4.3 070913
BSP 1 Slave 2.3 090702 6.0 080902
BSP 1 RXI FPGA 3.6 080821
BSP 1 DSP FPGA A 4.0 070531
BSP 1 DSP FPGA B 4.0 070531
BSP 1 DSP FPGA C 4.0 070531
BSP 1 DSP FPGA D 4.0 070531
BSP 1 PCI TO SLAVE A1 FIFO: ok
BSP 1 PCI TO SLAVE A2 FIFO: ok
BSP 1 PCI TO SLAVE A3 FIFO: ok
BSP 1 PCI TO SLAVE B1 FIFO: ok
BSP 1 PCI TO SLAVE B2 FIFO: ok
BSP 1 PCI TO SLAVE B3 FIFO: ok
BSP 1 PCI TO SLAVE C1 FIFO: ok
BSP 1 PCI TO SLAVE C2 FIFO: ok
BSP 1 PCI TO SLAVE C3 FIFO: ok
BSP 1 PCI TO SLAVE D1 FIFO: ok
BSP 1 PCI TO SLAVE D2 FIFO: ok
BSP 1 PCI TO SLAVE D3 FIFO: ok
BSP 1 PCI TO MASTER A HPI: ok
BSP 1 PCI TO MASTER B HPI: ok
BSP 1 PCI TO MASTER C HPI: ok
BSP 1 PCI TO MASTER D HPI: ok
BSP 1 PCI TO SLAVE A1 HPI: ok
BSP 1 PCI TO SLAVE A2 HPI: ok
BSP 1 PCI TO SLAVE A3 HPI: ok
BSP 1 PCI TO SLAVE B1 HPI: ok
BSP 1 PCI TO SLAVE B2 HPI: ok
BSP 1 PCI TO SLAVE B3 HPI: ok
BSP 1 PCI TO SLAVE C1 HPI: ok
BSP 1 PCI TO SLAVE C2 HPI: ok
BSP 1 PCI TO SLAVE C3 HPI: ok
BSP 1 PCI TO SLAVE D1 HPI: ok
BSP 1 PCI TO SLAVE D2 HPI: ok
BSP 1 PCI TO SLAVE D3 HPI: ok
BSP 2 Master 2.3 090702 4.3 070913 4.3 070913
BSP 2 Slave 2.3 090702 6.0 080902
BSP 2 RXI FPGA 3.6 080821

BSP 2 DSP FPGA A 4.0 070531
BSP 2 DSP FPGA B 4.0 070531
BSP 2 DSP FPGA C 4.0 070531
BSP 2 DSP FPGA D 4.0 070531
BSP 2 PCI TO SLAVE A1 FIFO: ok
BSP 2 PCI TO SLAVE A2 FIFO: ok
BSP 2 PCI TO SLAVE A3 FIFO: ok
BSP 2 PCI TO SLAVE B1 FIFO: ok
BSP 2 PCI TO SLAVE B2 FIFO: ok
BSP 2 PCI TO SLAVE B3 FIFO: ok
BSP 2 PCI TO SLAVE C1 FIFO: ok
BSP 2 PCI TO SLAVE C2 FIFO: ok
BSP 2 PCI TO SLAVE C3 FIFO: ok
BSP 2 PCI TO SLAVE D1 FIFO: ok
BSP 2 PCI TO SLAVE D2 FIFO: ok
BSP 2 PCI TO SLAVE D3 FIFO: ok
BSP 2 PCI TO MASTER A HPI: ok
BSP 2 PCI TO MASTER B HPI: ok
BSP 2 PCI TO MASTER C HPI: ok
BSP 2 PCI TO MASTER D HPI: ok
BSP 2 PCI TO SLAVE A1 HPI: ok
BSP 2 PCI TO SLAVE A2 HPI: ok
BSP 2 PCI TO SLAVE A3 HPI: ok
BSP 2 PCI TO SLAVE B1 HPI: ok
BSP 2 PCI TO SLAVE B2 HPI: ok
BSP 2 PCI TO SLAVE B3 HPI: ok
BSP 2 PCI TO SLAVE C1 HPI: ok
BSP 2 PCI TO SLAVE C2 HPI: ok
BSP 2 PCI TO SLAVE C3 HPI: ok
BSP 2 PCI TO SLAVE D1 HPI: ok
BSP 2 PCI TO SLAVE D2 HPI: ok
BSP 2 PCI TO SLAVE D3 HPI: ok

Summary:
BSP 1: OK
BSP 2: OK

2012.07.19 13:10:44.056 101 1 OK

High Voltage Br. 1

TX36 Spec: 90.0 - 145.0
0-1 122.6
0-2 122.1
0-3 122.1
0-4 122.1
0-5 122.1
0-6 121.3
0-7 122.1
0-8 120.9
0-9 122.1
0-10 122.6
0-11 122.6
0-12 120.9
0-13 122.6
0-14 121.7
0-15 123.0
0-16 122.6
0-17 121.7
0-18 122.6
0-19 121.7
0-20 122.1
0-21 121.7
0-22 122.6
0-23 121.3
0-24 122.1

High Voltage Br. 2

TX36 Spec: 90.0 - 145.0
0-1 122.2
0-2 122.2
0-3 121.7
0-4 121.3
0-5 121.3
0-6 121.7
0-7 121.3
0-8 121.3
0-9 122.2
0-10 122.2
0-11 121.7
0-12 124.2
0-13 120.9
0-14 122.6
0-15 122.6
0-16 122.2
0-17 121.7
0-18 122.2
0-19 121.3
0-20 121.7
0-21 122.2
0-22 122.6
0-23 121.7
0-24 121.7

Input voltage 12V

TX36 Spec: 11.0 - 13.0
0-1 11.9
0-2 11.9
0-3 11.9
0-4 11.9
0-5 11.9
0-6 11.9
0-7 11.9
0-8 11.9
0-9 11.9
0-10 11.9
0-11 11.9
0-12 11.9
0-13 11.9
0-14 11.9
0-15 11.9
0-16 12.0
0-17 11.9
0-18 11.9
0-19 11.9
0-20 11.9
0-21 11.9
0-22 11.9
0-23 11.8
0-24 11.9

Digital 3.3V

TX36 Spec: 2.8 - 3.5
0-1 3.3
0-2 3.3
0-3 3.3
0-4 3.3
0-5 3.3
0-6 3.3
0-7 3.3
0-8 3.3
0-9 3.3
0-10 3.3
0-11 3.3
0-12 3.3
0-13 3.3
0-14 3.3
0-15 3.3
0-16 3.3
0-17 3.3
0-18 3.3
0-19 3.3
0-20 3.3
0-21 3.3
0-22 3.3
0-23 3.3
0-24 3.3

Digital 2.5V

TX36 Spec: 2.4 - 2.6
0-1 2.5
0-2 2.5
0-3 2.5
0-4 2.5
0-5 2.5
0-6 2.5
0-7 2.5
0-8 2.5
0-9 2.5
0-10 2.5
0-11 2.5
0-12 2.5
0-13 2.5
0-14 2.5
0-15 2.5
0-16 2.5
0-17 2.5
0-18 2.5
0-19 2.5
0-20 2.5
0-21 2.5
0-22 2.5
0-23 2.5
0-24 2.5

Digital 1.5V

TX36 Spec: 1.4 - 1.6
0-1 1.5
0-2 1.5
0-3 1.5
0-4 1.5
0-5 1.5
0-6 1.5
0-7 1.5
0-8 1.5
0-9 1.5
0-10 1.5
0-11 1.5
0-12 1.5
0-13 1.5
0-14 1.5
0-15 1.5
0-16 1.5
0-17 1.5
0-18 1.5

0-19 1.5
0-20 1.5
0-21 1.5
0-22 1.5
0-23 1.5
0-24 1.5

Temperature

TX36 Spec: 15.0 - 75.0
0-1 33.6
0-2 34.0
0-3 34.4
0-4 34.0
0-5 34.4
0-6 34.8
0-7 35.6
0-8 35.6
0-9 35.2
0-10 32.8
0-11 32.8
0-12 32.8
0-13 34.0
0-14 35.6
0-15 34.0
0-16 34.8
0-17 35.2
0-18 35.6
0-19 34.8
0-20 35.2
0-21 35.2
0-22 34.8
0-23 34.8
0-24 34.4

Input Current 12V

TX36 Spec: 0.3 - 1.5
0-1 0.6
0-2 0.5
0-3 0.5
0-4 0.5
0-5 0.5
0-6 0.5
0-7 0.6
0-8 0.5
0-9 0.6
0-10 0.5
0-11 0.6
0-12 0.6
0-13 0.6
0-14 0.6
0-15 0.6
0-16 0.5
0-17 0.8
0-18 0.7
0-19 0.6
0-20 0.6
0-21 0.7
0-22 0.5
0-23 0.5
0-24 0.6

TX36 power test passed

IO TX MB Embedded PPC Embedded
PPC Download
2.11 One CPU1.13 Reduced Performance: 1 voice/Mar 5 2007/1.07 Jun 17 2008/1.11

TX36 unique firmware test OK

2012.07.19 13:10:55.140 101 2 OK

Input voltage 12V

RX32 Spec: 11.0 - 13.0
7-1 11.6
7-2 11.7
7-3 11.7
7-4 11.7

Input voltage 6V

RX32 Spec: 5.0 - 7.0
7-1 5.7
7-2 5.7
7-3 5.7
7-4 5.7

Digital 3.3V

RX32 Spec: 2.8 - 3.5
7-1 3.3
7-2 3.3
7-3 3.3
7-4 3.3

Digital 2.5V

RX32 Spec: 2.4 - 2.6
7-1 2.5
7-2 2.5
7-3 2.4
7-4 2.4

Digital 1.5V

RX32 Spec: 1.4 - 1.6
7-1 1.5
7-2 1.5
7-3 1.5
7-4 1.5

Temperature

RX32 Spec: 15.0 - 75.0
7-1 41.0
7-2 39.0
7-3 39.0
7-4 36.0

Input Current 12V

RX32 Spec: 0.4 - 1.5
7-1 0.9
7-2 0.7
7-3 0.7
7-4 0.7

Input Current 6V

RX32 Spec: 2.4 - 3.3
7-1 2.7
7-2 2.8
7-3 2.9
7-4 2.8

RX32 power test passed

IO RX MB Embedded PPC Embedded
PPC Download
1.12 Generic1.14 GenericMay 5 2006/1.06 May 5 2006/1.07 Feb 18 2010/1.11

RX32 unique firmware test OK

2012.07.19 13:10:55.274 101 3 OK

High Voltage Br. 1

TX36 Spec: 90.0 - 145.0
0-1 122.6
0-2 122.1
0-3 121.7
0-4 122.1
0-5 122.1
0-6 121.3
0-7 122.1
0-8 120.9
0-9 122.1
0-10 122.6
0-11 122.6
0-12 120.9
0-13 122.6
0-14 121.7
0-15 123.0
0-16 122.6
0-17 121.7
0-18 122.1
0-19 121.7
0-20 121.7
0-21 121.7
0-22 122.6
0-23 121.3
0-24 122.1

High Voltage Br. 2

TX36 Spec: 90.0 - 145.0
0-1 122.2
0-2 122.2
0-3 121.7
0-4 121.3

0-5   121.7
0-6 121.7
0-7 121.3
0-8 121.3
0-9 122.2
0-10   122.2
0-11 121.7
0-12 124.2
0-13 120.9
0-14 122.6
0-15 122.6
0-16 122.2
0-17 121.7
0-18 122.2
0-19 121.3
0-20 121.7
0-21 122.2
0-22 122.6
0-23 121.7
0-24 121.7

Input voltage 12V

TX36   Spec: 11.0 - 13.0
0-1   11.9
0-2   11.9
0-3   11.9
0-4   11.9
0-5   11.9
0-6   11.9
0-7   11.9
0-8   11.9
0-9   11.9
0-10   11.9
0-11   11.9
0-12   11.9
0-13   11.9
0-14   11.9
0-15   11.9
0-16   12.0
0-17   11.9
0-18   11.9
0-19   11.9
0-20   11.9
0-21   11.9
0-22   11.9
0-23   11.8
0-24   11.9

RX32   Spec: 11.0 - 13.0
7-1   11.6
7-2   11.7
7-3   11.7
7-4   11.7

Input voltage 6V

RX32   Spec: 5.0 - 7.0
7-1   5.7
7-2   5.7
7-3   5.7
7-4   5.7

TRU power test passed

2012.07.19 13:10:55.457 101   4   OK

EM 302 High Voltage Ramp Test
Test Voltage:20.00 Measured Voltage: 18.00
PASSED
Test Voltage:40.00 Measured Voltage: 39.00
PASSED
Test Voltage:60.00 Measured Voltage: 59.00
PASSED
Test Voltage:80.00 Measured Voltage: 79.00
PASSED
Test Voltage:100.00 Measured Voltage: 100.00
PASSED
Test Voltage:120.00 Measured Voltage: 121.00
PASSED
Test Voltage:120.00 Measured Voltage: 121.00
PASSED
Test Voltage:100.00 Measured Voltage: 106.00
PASSED
Test Voltage:80.00 Measured Voltage: 85.00
PASSED
Test Voltage:60.00 Measured Voltage: 65.00
PASSED
Test Voltage:40.00 Measured Voltage: 45.00
PASSED

11 of 11 tests OK

2012.07.19 13:13:31.316 101   5   OK

BSP 1 RXI TO RAW FIFO: ok
BSP 2 RXI TO RAW FIFO: ok

2012.07.19 13:13:36.817 101   6   OK

Receiver impedance limits [600.0 1000.0] ohm
Board 1   2   3   4
 1: 857.2 838.4 804.7 839.3
 2: 830.4 852.8 808.9 845.9
 3: 807.8 836.3 836.7 808.7
 4: 844.2 821.1 825.6 843.6
 5: 845.0 829.7 788.4 836.3
 6: 855.5 842.5 820.3 829.2
 7: 829.6 840.9 818.1 833.0
 8: 840.7 829.1 841.8 753.1
 9: 832.7 832.0 811.7 857.4
10: 814.6 849.7 771.4 823.7
11: 836.0 820.9 822.8 840.1
12: 844.6 815.2 838.9 845.1
13: 838.9 821.0 803.2 817.6
14: 821.1 824.5 843.2 832.3
15: 820.3 837.8 837.4 810.0
16: 847.6 813.7 838.9 871.3
17: 821.7 874.6 843.8 846.1
18: 845.5 828.8 845.6 814.7
19: 810.5 826.2 832.9 827.4
20: 823.9 863.6 835.5 839.9
21: 855.5 828.3 868.6 868.1
22: 873.5 839.4 819.8 828.7
23: 864.5 855.6 841.5 847.7
24: 879.1 878.6 860.8 844.2
25: 840.1 825.3 827.2 858.9
26: 839.3 815.6 838.6 840.0
27: 824.3 825.8 829.7 843.9
28: 807.9 825.9 803.1 825.8
29: 809.5 837.8 825.5 827.1
30: 851.2 816.1 836.6   0.0*
31: 823.3 818.6 840.3 843.7
32: 848.9 868.4 847.5 862.5

Transducer impedance limits [250.0 2000.0] ohm
Board 1   2   3   4
 1: 329.5 344.2 347.2 353.9
 2: 346.9 347.0 352.2 347.3
 3: 330.9 328.8 365.4 367.1
 4: 336.5 348.0 376.1 354.4
 5: 329.1 354.7 367.5 355.1
 6: 318.7 338.5 346.4 359.4
 7: 333.6 343.1 376.6 363.5
 8: 327.4 334.9 356.1 395.2
 9: 355.3 352.6 377.3 351.3
10: 347.8 346.0 370.1 345.8
11: 319.8 370.9 388.8 386.2
12: 332.2 358.4 361.1 383.3
13: 337.1 340.7 386.4 386.2
14: 357.1 344.9 399.6 373.8
15: 318.6 332.4 393.1 358.8
16: 318.9 344.8 395.0 383.6
17: 322.8 346.7 348.2 359.5
18: 337.8 343.4 360.2 371.8
19: 345.0 348.4 355.6 392.2
20: 343.4 337.5 356.4 365.3
21: 342.5 341.6 360.1 377.6
22: 359.4 352.3 380.4 374.4
23: 362.6 338.6 357.2 359.8
24: 360.6 356.3 350.4 339.7
25: 341.3 358.7 380.6 361.6
26: 343.9 363.8 362.4 367.4
27: 336.8 351.6 366.8 357.1
28: 355.3 359.7 368.4 364.9
29: 352.6 354.1 378.2 379.0
30: 321.0 343.0 345.3   0.0*
31: 337.4 369.8 351.9 373.3
32: 327.3 362.1 354.0 362.9

Receiver Phase limits [-50.0 20.0] deg
Board 1   2   3   4
 1: -2.3   2.3   4.8   -0.8
 2:   0.9   -4.8   3.8   -3.8
 3:   4.2   -1.7   -0.5   3.5
 4: -1.6   2.3   1.6   -3.7
 5: -1.2   1.4   4.8   0.8
 6: -3.9   -2.2   0.4   1.2
 7:   2.1   -0.4   3.6   0.0
 8: -1.7   0.8   -3.5   11.9
 9: -0.3   2.5   3.6   -2.4
10:   3.2   -3.4   7.3   -0.4
11: -2.2   2.6   -0.9   0.5
12: -1.2   1.9   -3.5   -1.9
13:   0.7   1.8   4.5   4.2

14: 2.5   0.5   -0.4   0.1
15: 1.0   -3.9   -1.4   3.5
16: -2.1   3.4   -1.7   -6.5
17: 0.7   -4.3   -3.1   0.2
18: -3.3   2.5   -2.9   3.5
19: 2.4   2.5   -3.7   2.3
20: 2.3   -3.8   -0.7   1.1
21: -0.4   3.1   -4.9   -2.8
22: -2.0   -1.5   1.8   0.4
23: 0.2   -3.4   -0.3   -0.5
24: -2.9   -4.5   -3.9   -1.8
25: -0.8   2.4   1.5   -3.9
26: -0.7   4.9   -3.2   -1.3
27: 1.6   -0.7   0.1   -3.7
28: 5.8   -0.8   2.2   1.3
29: 3.0   1.8   0.7   2.7
30: -2.6   1.8   -1.8 121.3*
31: 1.6   1.9   -1.6   1.5
32: -2.9   -4.7   -2.8   -5.1

Transducer Phase limits [-100.0 0.0] deg
Board 1   2   3   4
1: -35.7 -37.9 -36.2 -41.8
2: -36.4 -39.3 -32.5 -44.2
3: -31.0 -41.3 -34.8 -41.5
4: -38.6 -36.2 -38.3 -36.6
5: -37.7 -40.8 -39.6 -37.1
6: -36.9 -35.5 -36.5 -34.9
7: -33.4 -39.1 -37.1 -39.9
8: -36.6 -40.1 -42.9 -33.2
9: -38.4 -35.8 -36.2 -41.8
10: -41.5 -39.4 -29.2 -32.4
11: -38.5 -38.0 -45.1 -38.4
12: -35.1 -38.0 -47.1 -42.2
13: -35.9 -42.4 -34.7 -41.9
14: -35.9 -44.1 -36.3 -36.3
15: -30.2 -47.2 -38.2 -26.2
16: -37.8 -40.5 -37.1 -34.8
17: -29.8 -40.0 -42.5 -36.7
18: -33.5 -34.9 -39.0 -36.7
19: -35.5 -36.6 -36.9 -36.6
20: -32.4 -41.2 -43.4 -37.4
21: -32.7 -37.0 -36.2 -36.8
22: -36.6 -41.2 -33.2 -38.1
23: -35.6 -43.2 -35.3 -34.8
24: -37.5 -40.6 -40.8 -33.0
25: -29.4 -34.8 -36.1 -36.6
26: -41.1 -36.9 -36.2 -38.5
27: -31.4 -38.8 -35.0 -40.6
28: -36.4 -38.4 -34.1 -35.6
29: -37.6 -40.6 -37.1 -36.8
30: -34.4 -38.7 -38.8 -147.5*
31: -40.1 -40.3 -35.3 -30.3
32: -41.1 -42.2 -36.4 -42.6
Rx Channels test passed

2012.07.19 13:14:05.035 101   7   OK

Tx Channels test passed

2012.07.19 13:16:46.228 101   8   OK

RX NOISE LEVEL

Board No:	1	2	3	4	
0:	43.3	39.8	39.5	41.4	dB
1:	42.4	39.3	39.4	41.0	dB
2:	41.9	40.4	41.4	42.4	dB
3:	40.2	40.0	40.3	40.7	dB
4:	40.4	42.3	41.7	43.6	dB
5:	41.4	42.1	44.3	44.4	dB
6:	41.8	43.0	44.1	43.4	dB
7:	40.8	41.5	43.6	43.9	dB
8:	41.0	45.0	43.5	45.9	dB
9:	40.4	41.6	42.4	44.6	dB
10:	41.6	41.5	44.4	46.2	dB
11:	41.5	43.7	43.4	46.0	dB
12:	42.5	45.1	44.4	46.1	dB
13:	39.0	43.9	44.7	46.4	dB
14:	40.5	44.5	45.5	47.1	dB
15:	40.8	43.2	43.7	44.9	dB
16:	36.8	38.6	39.1	41.2	dB
17:	39.0	38.7	38.6	41.0	dB
18:	38.4	39.4	39.2	41.9	dB
19:	38.4	38.3	38.7	40.3	dB
20:	38.3	40.4	39.9	42.5	dB
21:	41.2	40.5	43.9	46.2	dB
22:	42.3	38.9	43.9	46.6	dB
23:	42.1	44.3	43.8	46.8	dB
24:	41.5	42.1	46.2	47.9	dB
25:	42.2	44.4	43.6	45.8	dB
26:	40.6	42.4	44.6	47.2	dB
27:	41.7	42.7	44.3	47.7	dB
28:	42.6	42.5	44.8	48.9	dB
29:	40.2	42.2	42.2	61.7	dB
30:	39.9	42.8	43.0	50.0	dB
31:	41.0	42.9	44.5	51.5	dB

Maximum noise at Board 4 Channel 29 Level: 61.7 dB

Broadband noise test

Average noise at Board 1   41.0 dB   OK
Average noise at Board 2   42.2 dB   OK
Average noise at Board 3   43.2 dB   OK
Average noise at Board 4   49.2 dB   OK

2012.07.19 13:16:53.095 101   9   OK

RX NOISE SPECTRUM

Board No:	1	2	3	4	
26.1 kHz:	44.5	44.0	43.7	62.7	dB
26.3 kHz:	42.9	42.2	42.4	45.2	dB
26.5 kHz:	42.1	41.7	41.7	44.4	dB
26.7 kHz:	43.1	42.3	42.2	45.3	dB
26.9 kHz:	42.4	42.4	41.7	44.6	dB
27.1 kHz:	44.0	44.8	44.7	47.5	dB
27.3 kHz:	45.9	48.0	48.7	50.8	dB
27.5 kHz:	45.2	46.6	47.9	49.8	dB
27.7 kHz:	44.1	45.0	46.4	47.9	dB
27.9 kHz:	43.8	44.4	45.6	48.2	dB
28.1 kHz:	43.4	44.4	45.7	48.3	dB
28.3 kHz:	43.0	44.3	45.0	47.8	dB
28.5 kHz:	43.0	43.4	43.8	46.5	dB
28.7 kHz:	43.3	43.9	44.6	48.0	dB
28.9 kHz:	43.1	43.6	44.9	48.6	dB
29.1 kHz:	44.0	44.7	45.6	49.3	dB
29.3 kHz:	49.2	51.6	52.9	54.5	dB
29.5 kHz:	44.1	45.7	46.9	48.9	dB
29.7 kHz:	45.2	46.0	47.4	49.5	dB
29.9 kHz:	43.7	43.9	45.2	47.2	dB
30.1 kHz:	42.9	43.0	43.6	45.9	dB
30.3 kHz:	41.5	40.9	41.6	44.8	dB
30.5 kHz:	42.7	42.2	42.9	46.1	dB
30.7 kHz:	41.0	41.2	41.7	44.3	dB
30.9 kHz:	41.8	41.4	42.7	45.1	dB
31.1 kHz:	41.2	41.1	42.2	45.2	dB
31.4 kHz:	41.3	41.5	42.3	45.1	dB
31.6 kHz:	41.5	41.7	42.2	44.4	dB
31.8 kHz:	42.0	41.3	42.7	45.1	dB
32.0 kHz:	42.3	42.1	42.9	45.6	dB
32.2 kHz:	41.7	41.1	41.9	44.6	dB
32.4 kHz:	42.8	42.7	43.6	47.3	dB
32.6 kHz:	47.3	47.3	47.9	51.7	dB
32.8 kHz:	49.7	50.1	49.8	53.7	dB
33.0 kHz:	51.4	51.0	50.2	54.5	dB
33.2 kHz:	50.2	48.9	48.2	52.9	dB
33.4 kHz:	46.5	45.3	44.3	48.5	dB
33.6 kHz:	40.8	40.8	40.8	43.8	dB
33.8 kHz:	42.7	42.2	42.0	44.9	dB
34.0 kHz:	42.7	42.5	42.4	45.6	dB

Maximum noise at Board 4 Frequency 26.1 kHz Level: 62.7 dB

Spectral noise test

Average noise at Board 1   44.8 dB   OK
Average noise at Board 2   45.1 dB   OK
Average noise at Board 3   45.7 dB   OK
Average noise at Board 4   50.7 dB   OK

2012.07.19 13:16:59.962 101   10   OK

CPU: KOM CP6011
Clock 1795 MHz
Die   36 oC (peak: 53 oC @ 2012-07-07 - 13:21:51)
Board 36 oC (peak: 47 oC @ 2012-07-07 - 14:06:15)
Core 1.34 V
3V3   3.28 V
12V   12.05 V
-12V -12.04 V
BATT 3.49 V
Primary network: 157.237.14.60:0xffff0000

Secondary network: 192.168.2.20:0xffffff00

2012.07.19 13:17:00.096 101 15 OK

EM 302

BSP67B Master: 2.2.3 090702
BSP67B Slave: 2.2.3 090702
CPU: 1.5.1 110322

DDS: 3.5.2 101013
RX32 version : Feb 18 2010 Rev 1.11
TX36 LC version : Jun 17 2008 Rev 1.11
VxWorks 5.5.1 Build 1.2/2-IX0100 May 16 2007, 11:31:17

