

NOAA *Okeanos Explorer* Program

MAPPING DATA ACQUISITION AND PROCESSING REPORT

CRUISE EX1205 Leg 1

Exploration: Blake Plateau

July 5 - 24, 2012

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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.

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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

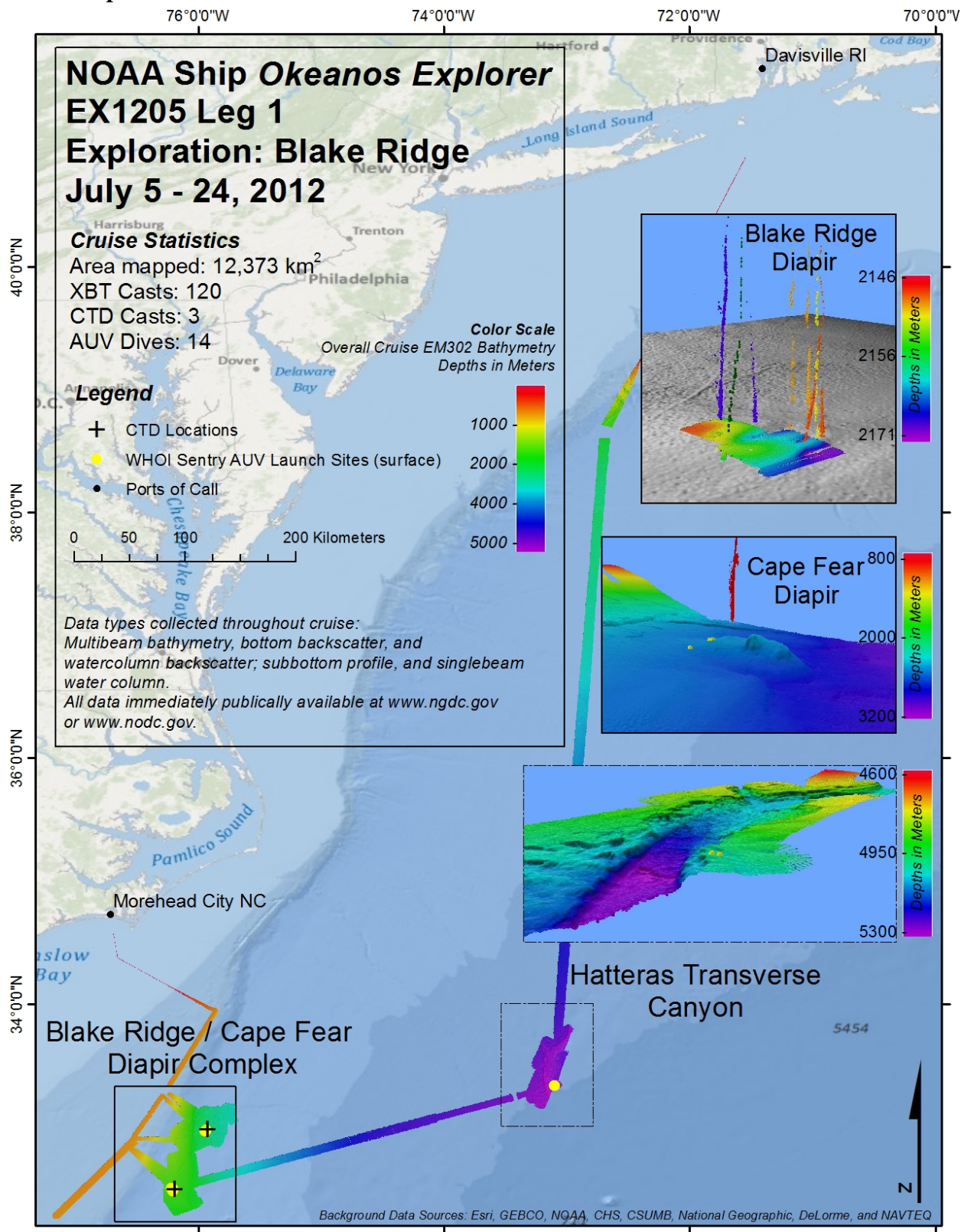


Figure 1. Cruise map made in ArcMap 10 showing overall cruise track and key operational areas.

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.

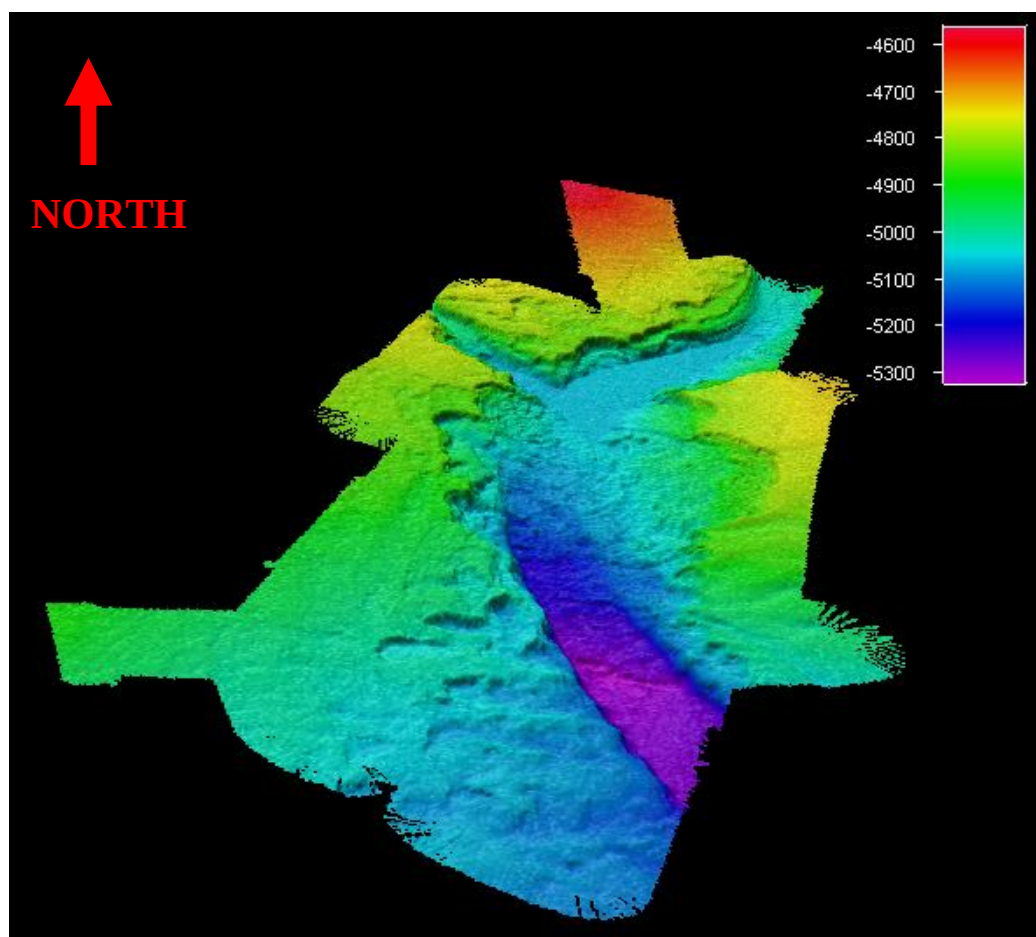


Figure 2. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Hatteras Transverse Canyon. Grid cell size 30 meters. Depth values range from -4600 to -5300 meters. Vertical exaggeration of six applied.

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

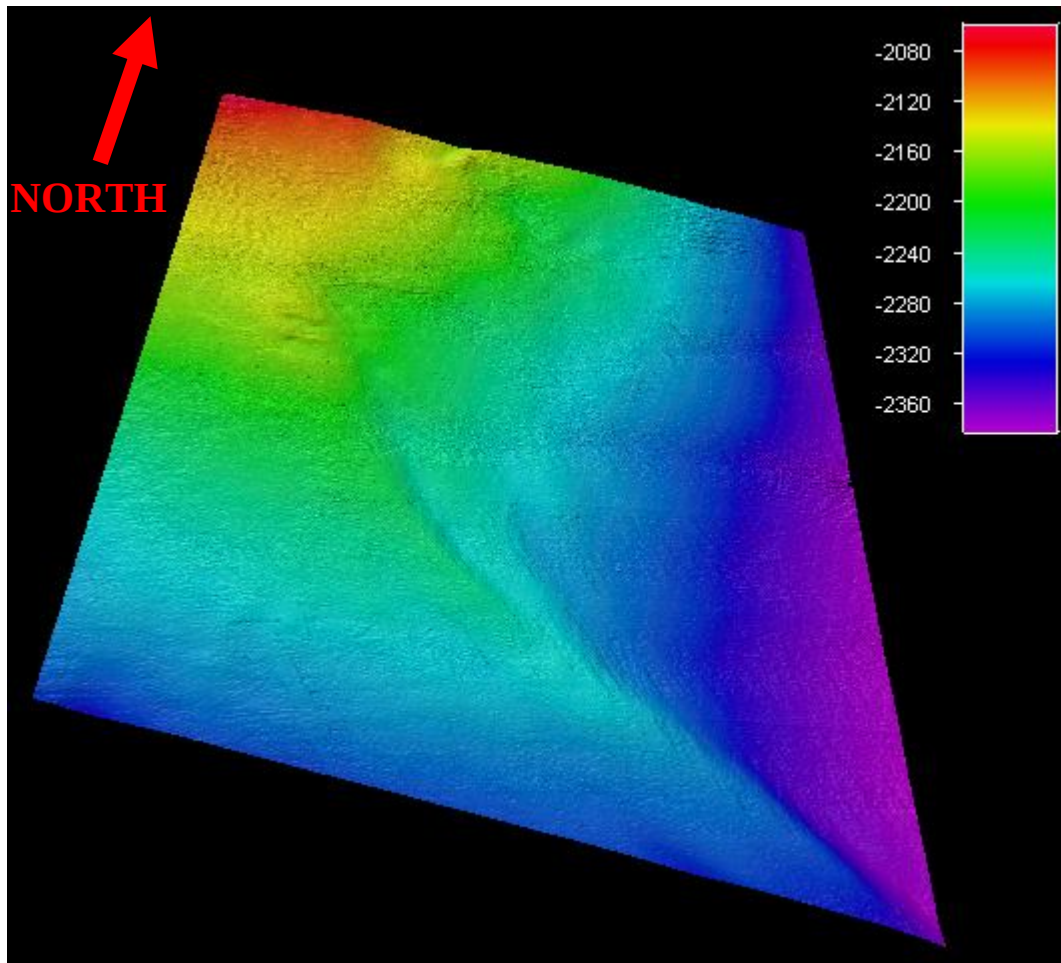


Figure 3. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Blake Ridge Diapir. Multibeam bathymetry grid cell size 30 meters. Numerical depth values displayed range from -2080 to -2360 meters. Vertical exaggeration of six applied.

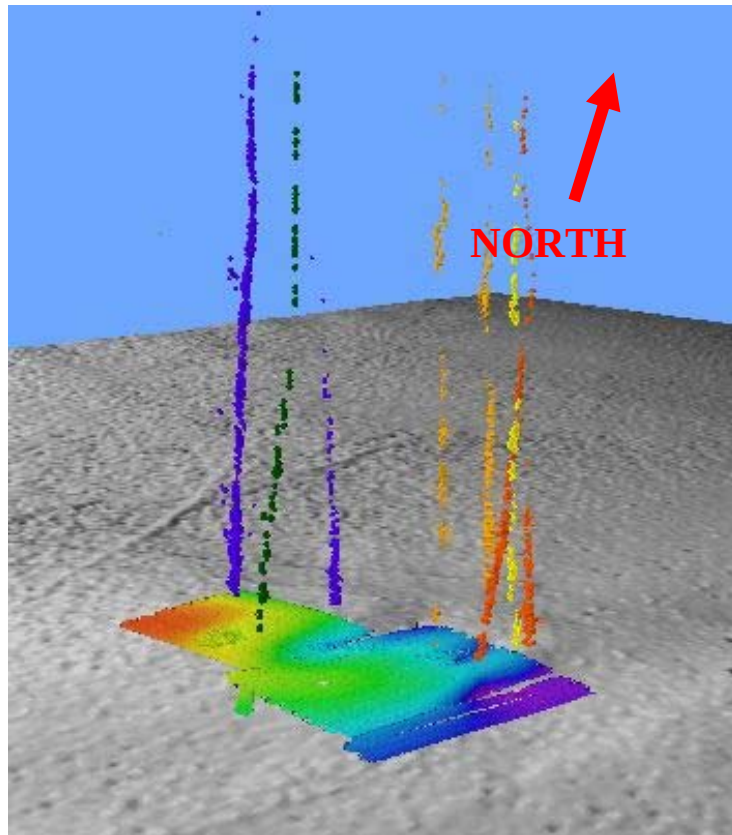


Figure 4. Screen grab taken in Fledermaus of gridded EM 302 data, gridded Reson 7125 data, and vents detected at Blake Ridge Diapir using *Okeanos Explorer's* EM 302 multibeam water column data.

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.

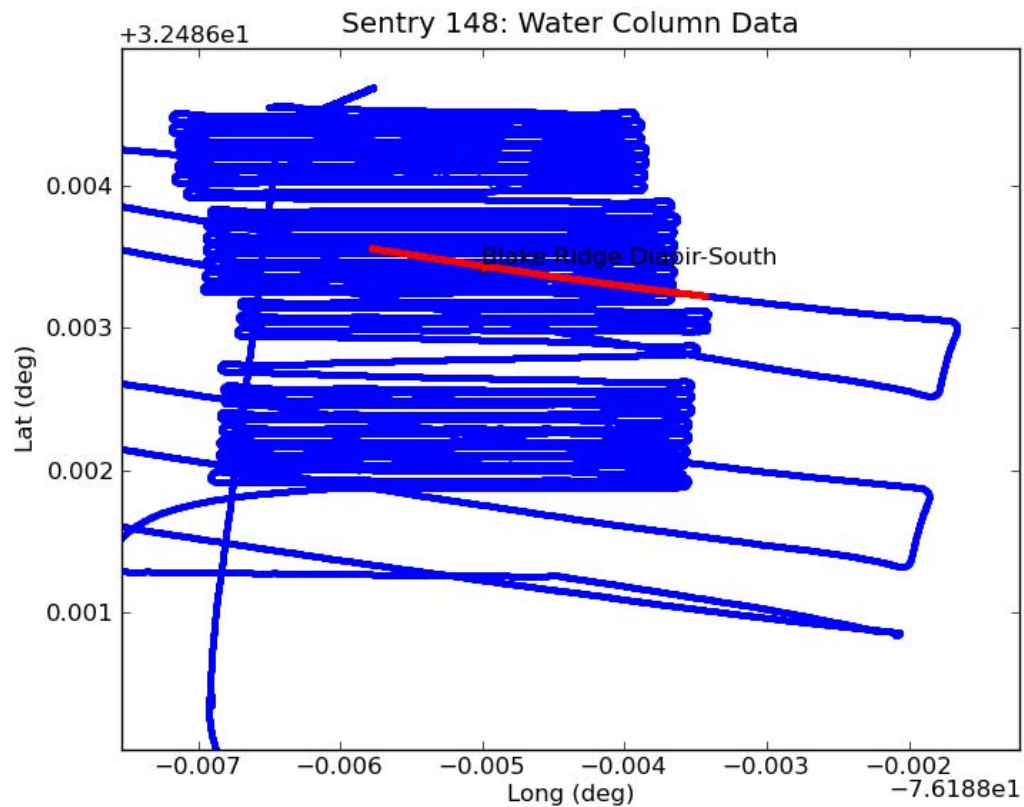


Figure 5. *Sentry* AUV Dive 148 tracklines over Blake Ridge Diapir. Red line indicates section of Reson 7125 multibeam water column seen in figure below.

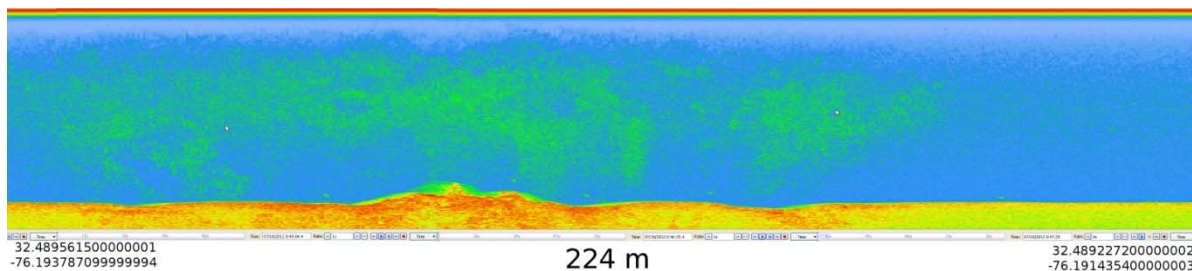


Figure 6. *Sentry* AUV Dive 148 multibeam water column backscatter data collected over Blake Ridge Diapir, clearly showing evidence of seep activity (green returns) in the water column. 224 m indicates displayed horizontal image length.

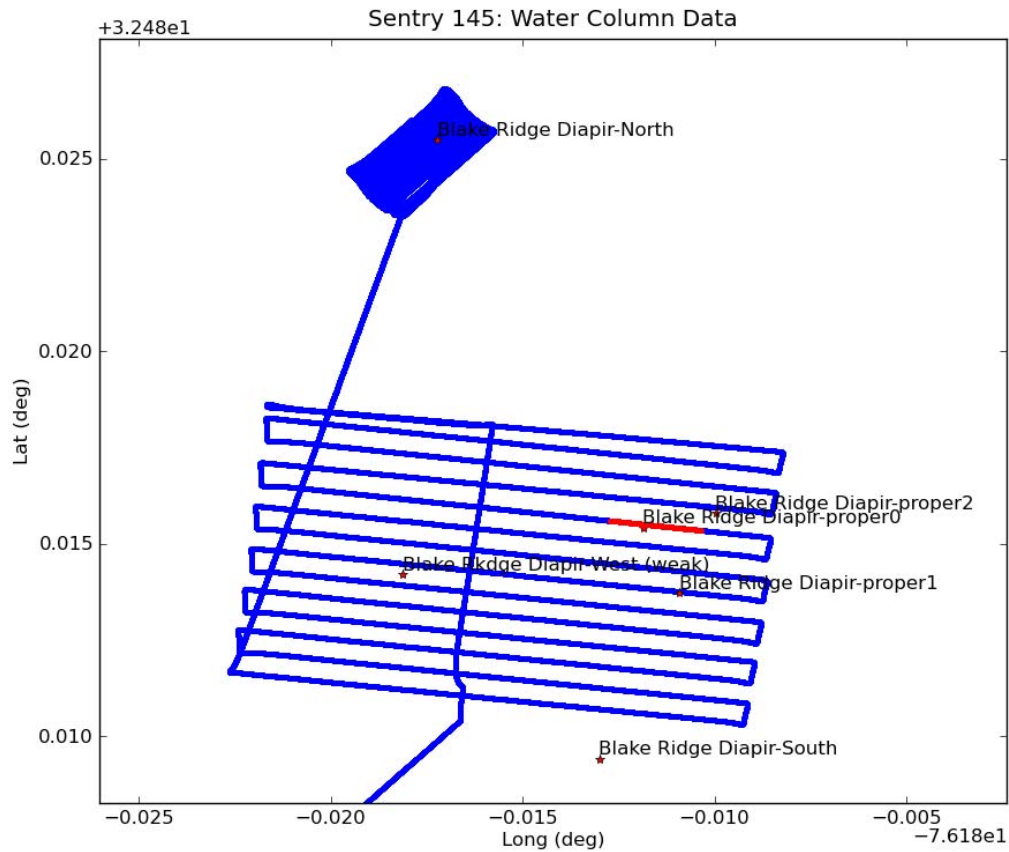


Figure 7. Sentry AUV Dive 145 tracklines over Blake Ridge Diapir. Red line indicates section of Reson 7125 multibeam water column seen in figure below.

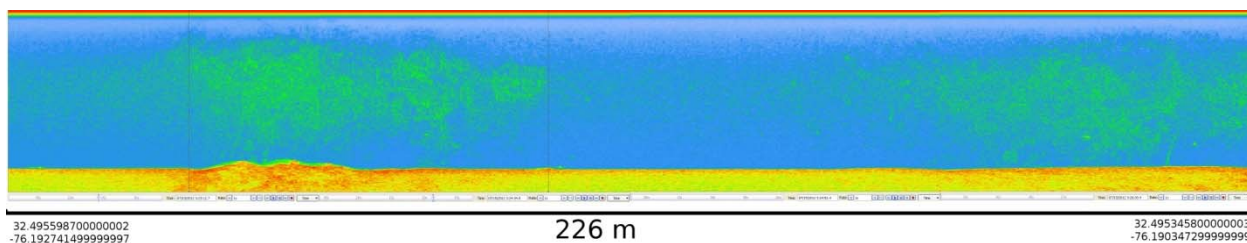


Figure 8. Sentry AUV Dive 145 multibeam water column backscatter data collected over Blake Ridge Diapir, clearly showing evidence of seep activity (green returns) in the water column. 226 m indicates displayed horizontal image length.

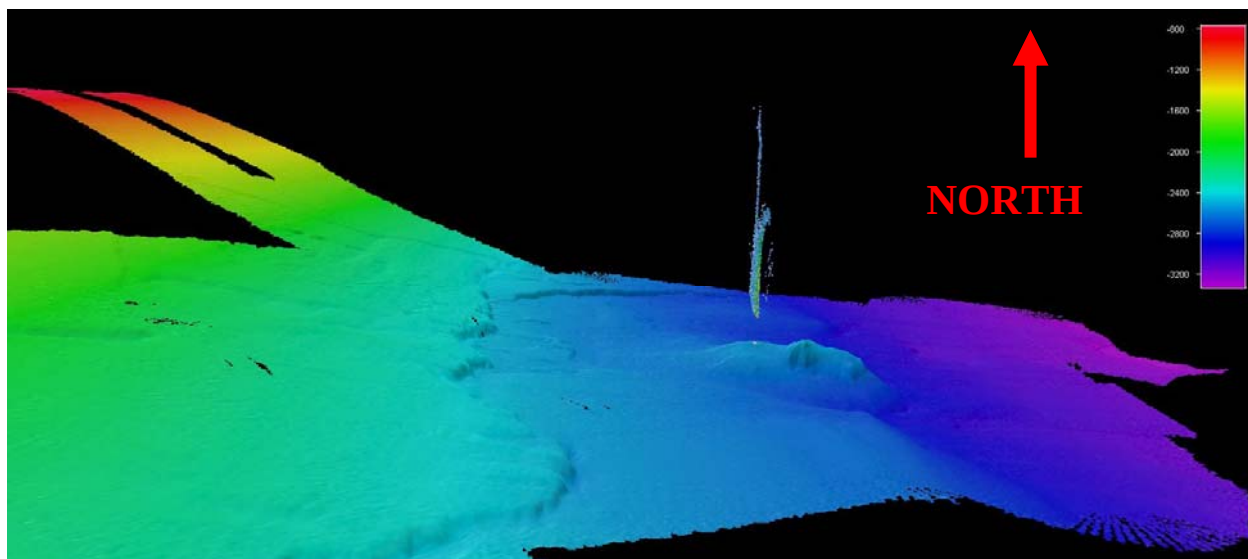


Figure 9. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over Cape Fear Ridge Diapir and observed 1163 meter high seep. Multibeam bathymetry grid cell size 30 meters. Numerical depth values displayed range from -800 to -3200 meters. Vertical exaggeration of six applied.

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.

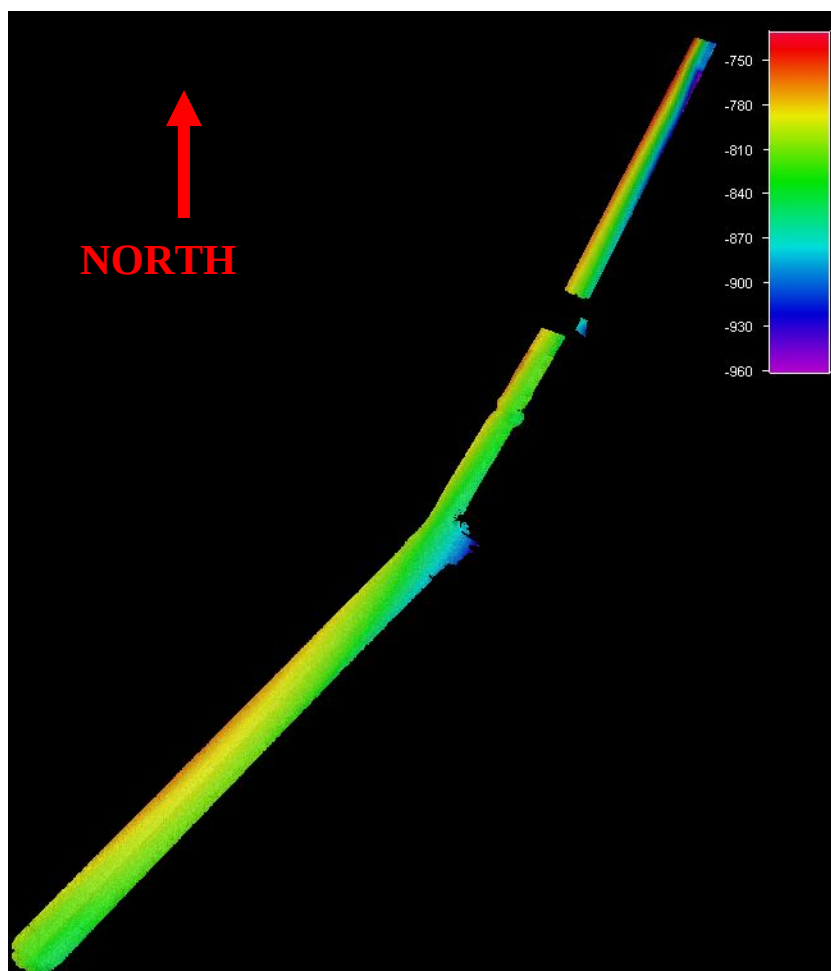


Figure 10. Screen grab taken in Fledermaus of gridded EM 302 multibeam data collected over the 800 meter isobath adjacent to the Blake Ridge Cape Fear Ridge Diapir Complex. Grid cell size 30 meters. Numerical depth values displayed range from -750 to -960 meters. Vertical exaggeration of six applied.

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 diapir over time.

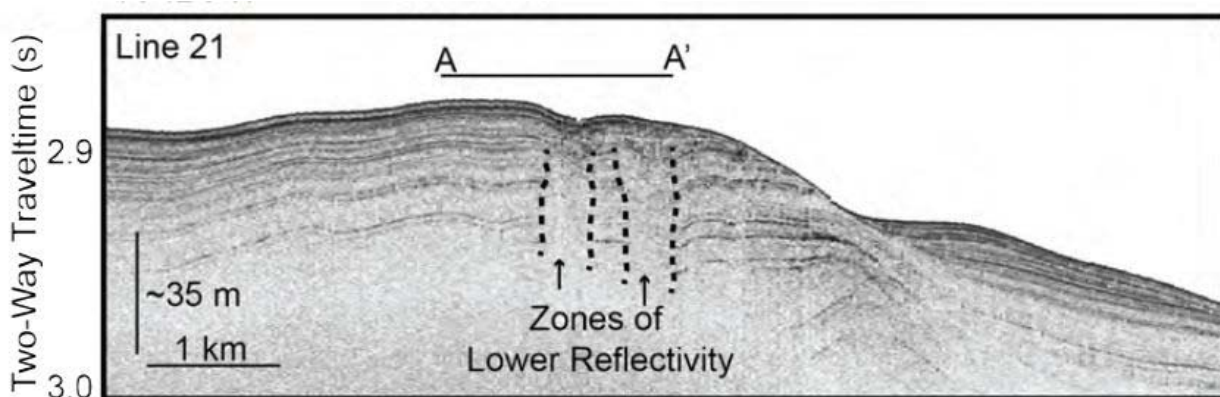


Figure 11. Screenshot showing Knudsen 3260 subbottom line #21 showing evidence of presence of subsurface gas near detected water column seep in vicinity of Blake Ridge Diapir. Figure courtesy of Dr. Laura Brothers (USGS).

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.

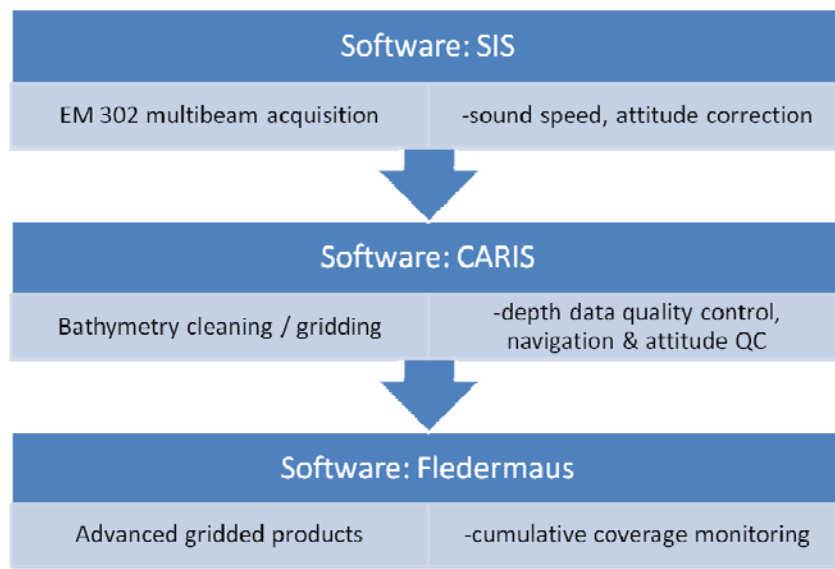


Figure 12. Shipboard multibeam data flow.

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.

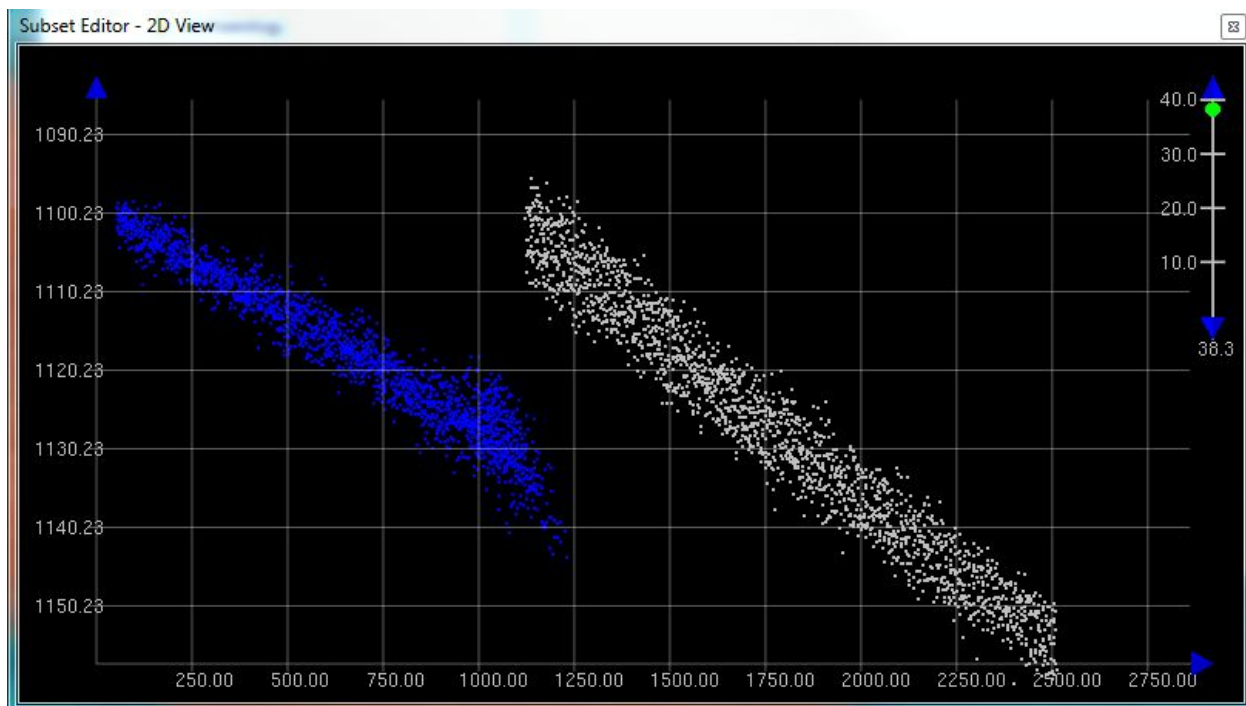


Figure 13. Screen grab taken in CARIS Subset Editor, showing sound velocity artifact and resulting depth disparity between EM 302 multibeam files 0178_20120718_202710_EX1205L1_MB.all (blue) and 0223_20120722_135848_EX1205L1_MB.all (grey).

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.

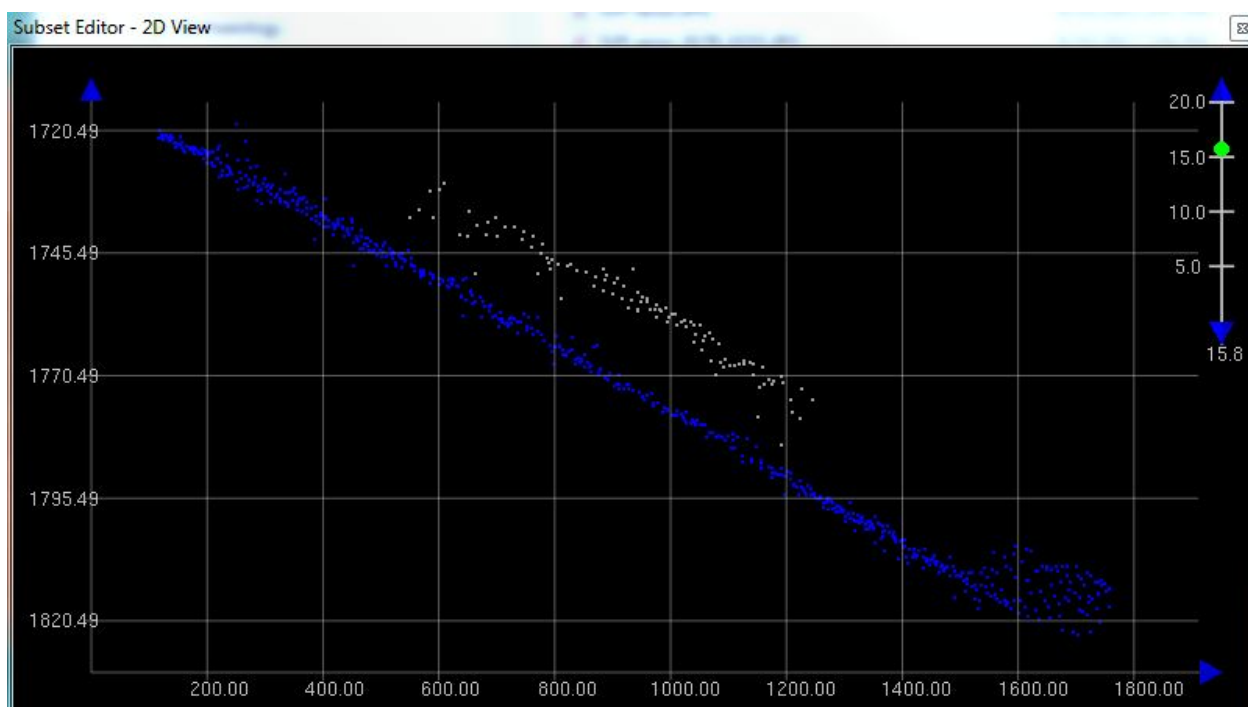


Figure 14. Screen grab taken in CARIS Subset Editor showing nadir artifact observed in EM 302 multibeam line 0178_20120718_202710_EX1205L1_MB.all. View is looking at a 90° across track angle.

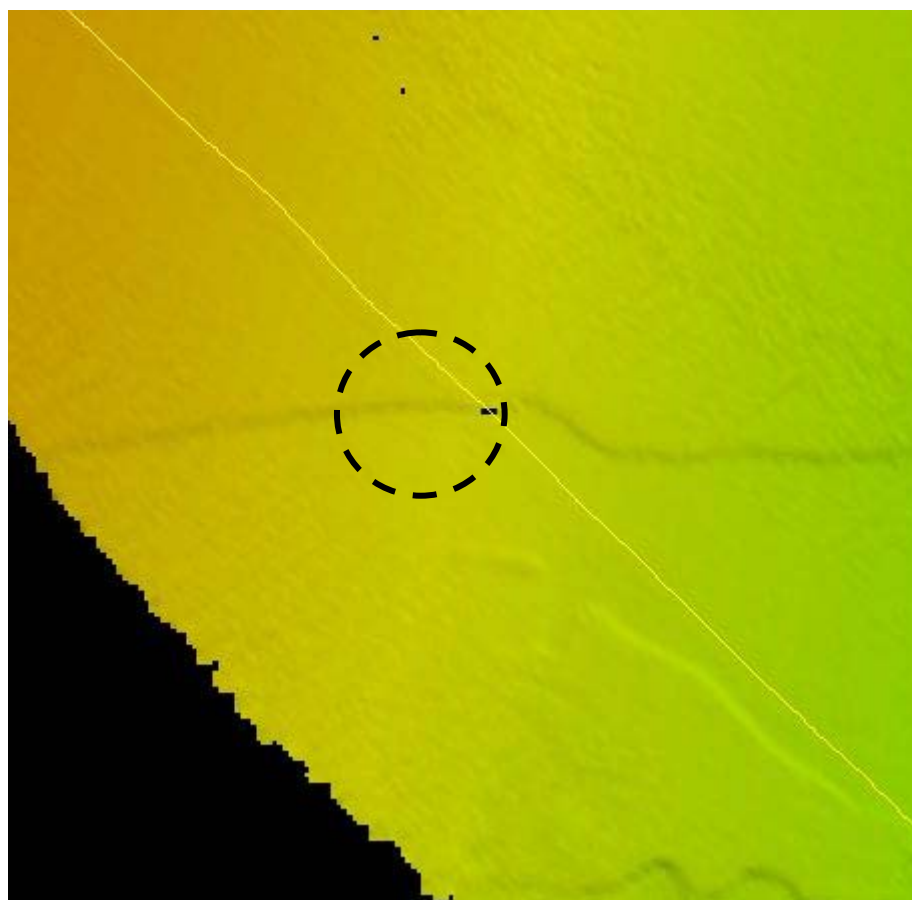


Figure 15. Screen grab taken in CARIS showing gridded EM 302 data and slight ledge where nadir artifact occurred. Image is north up, yellow line indicates ship track, running at a heading of 133°. The dashed circle indicates the location of the artifact.

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.

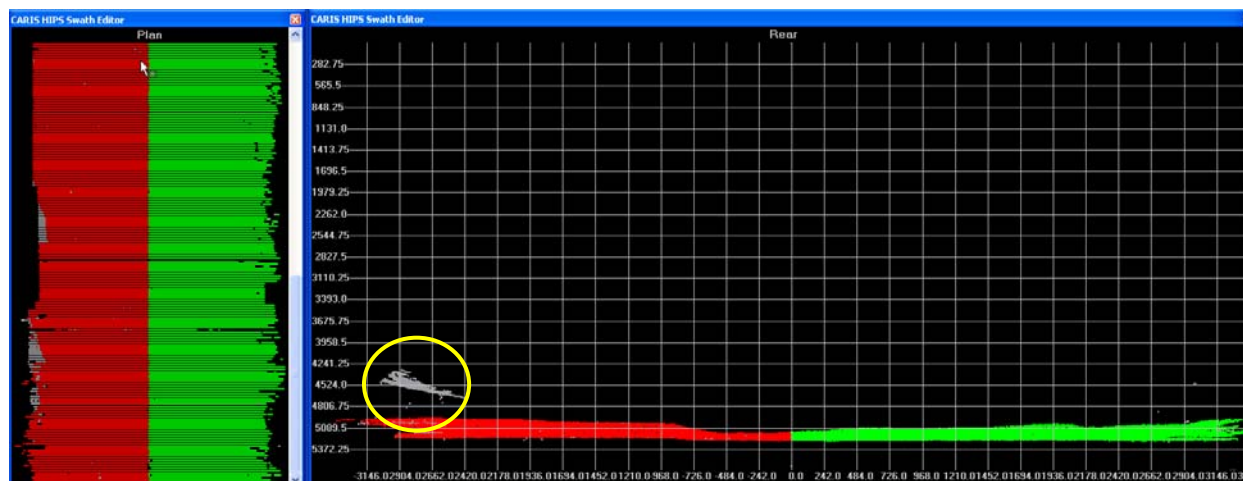


Figure 16. Screen grab taken in CARIS Swath Editor showing outer beam artifact in 5000 meters of water. Multibeam line 0028_20120708_225908_EX1205L1_MB.all. View is looking along track.

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.

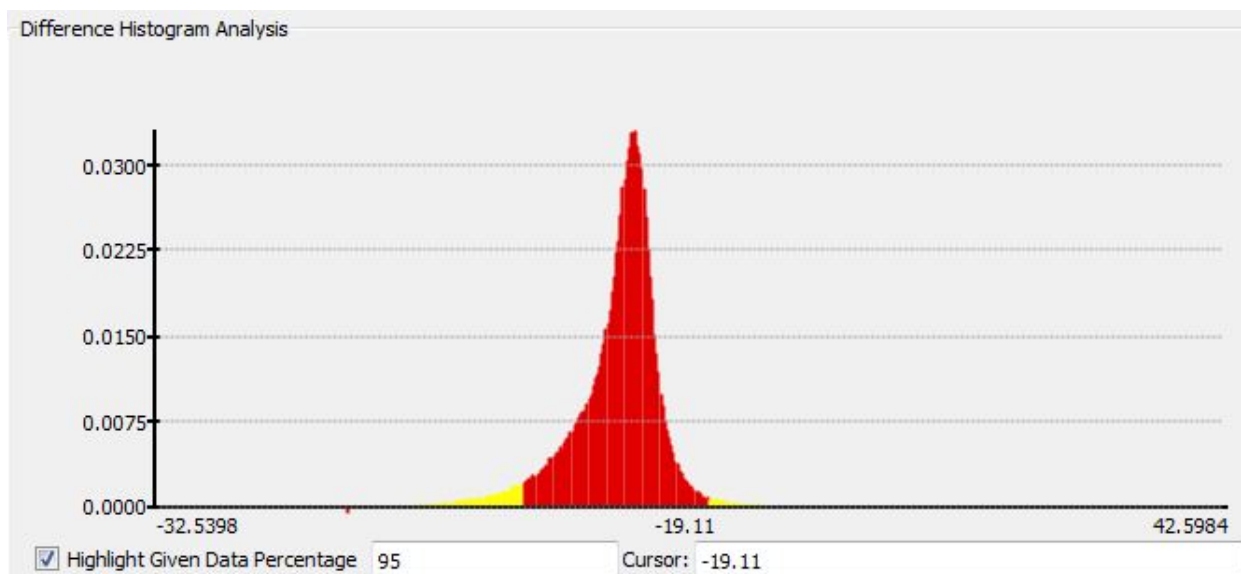


Figure 17. Histogram showing crossline analysis results for Blake Ridge Diapir crossline.

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°).

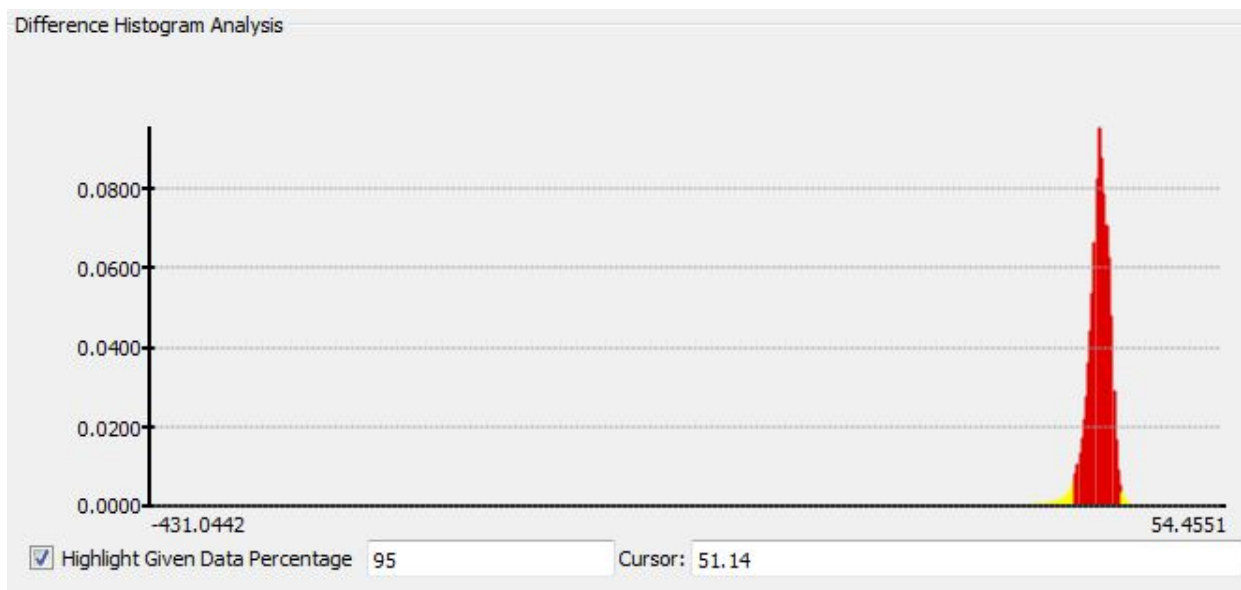


Figure 18. Histogram showing crossline analysis results for Cape Fear Diapir crossline.

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.

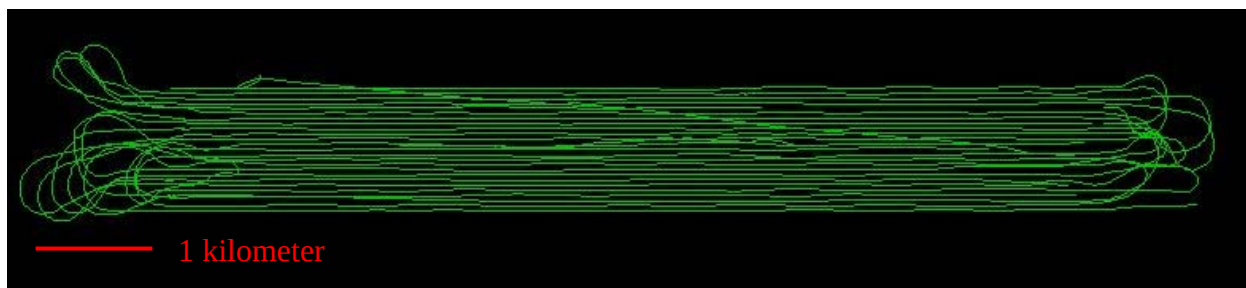


Figure 19. Screen shot taken in CARIS of actual tracklines run during 40 meter line spacing subbottom survey over Blake Ridge Diapir. Image is north up. A one kilometer line is drawn for scale.

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°.

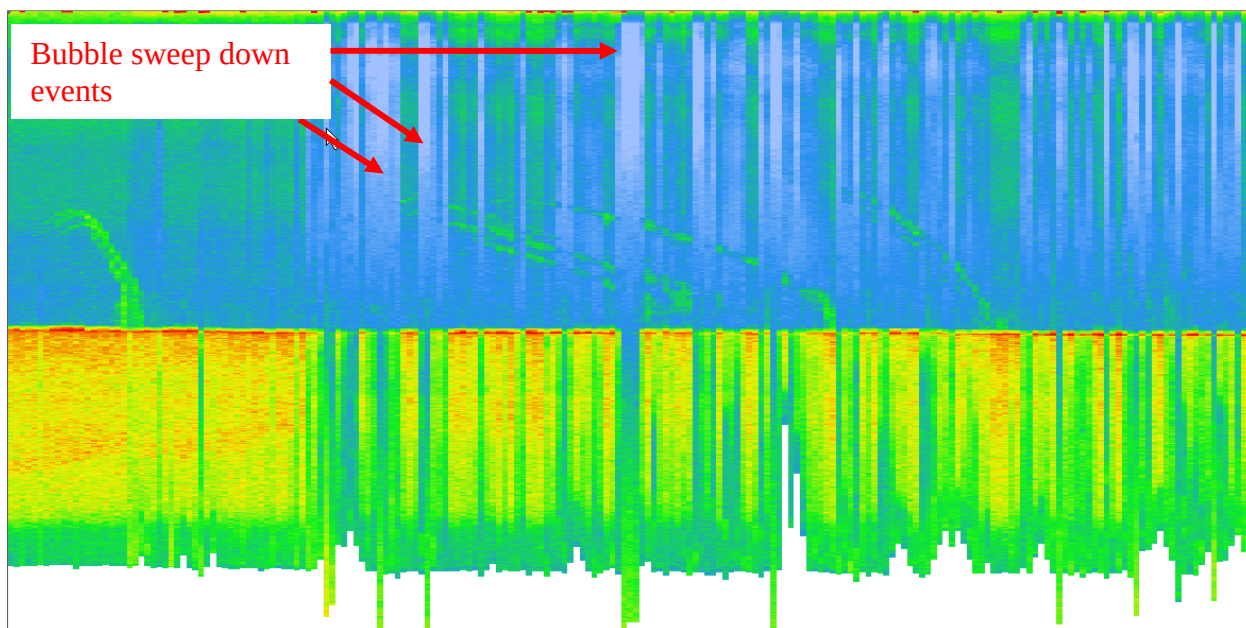


Figure 20. EM 302 multibeam water column backscatter line 0204_20120720_161808_EX1205L1_MB.wcd displayed in Fledermaus Midwater with no filters applied. Strong northern seep seen on left side of image. Group of seeps at BRD main seep site seen on right side of image.

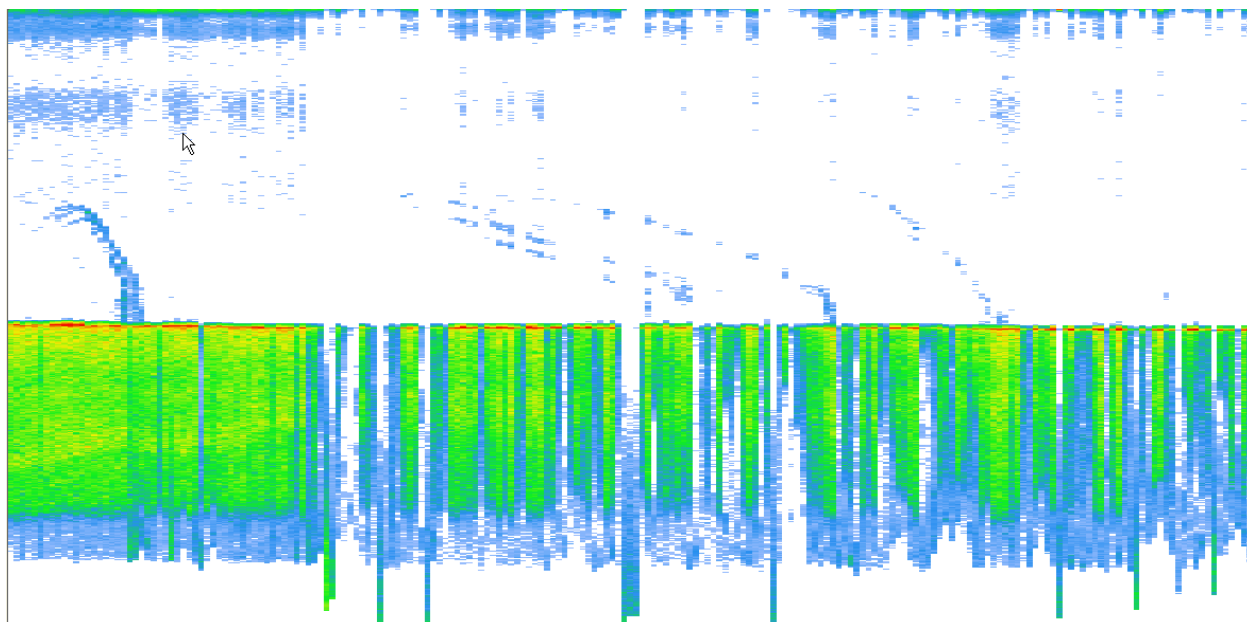


Figure 21. EM 302 multibeam water column backscatter line 0204_20120720_161808_EX1205L1_MB.wcd displayed in Fledermaus Midwater with signal amplitude filter applied.

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

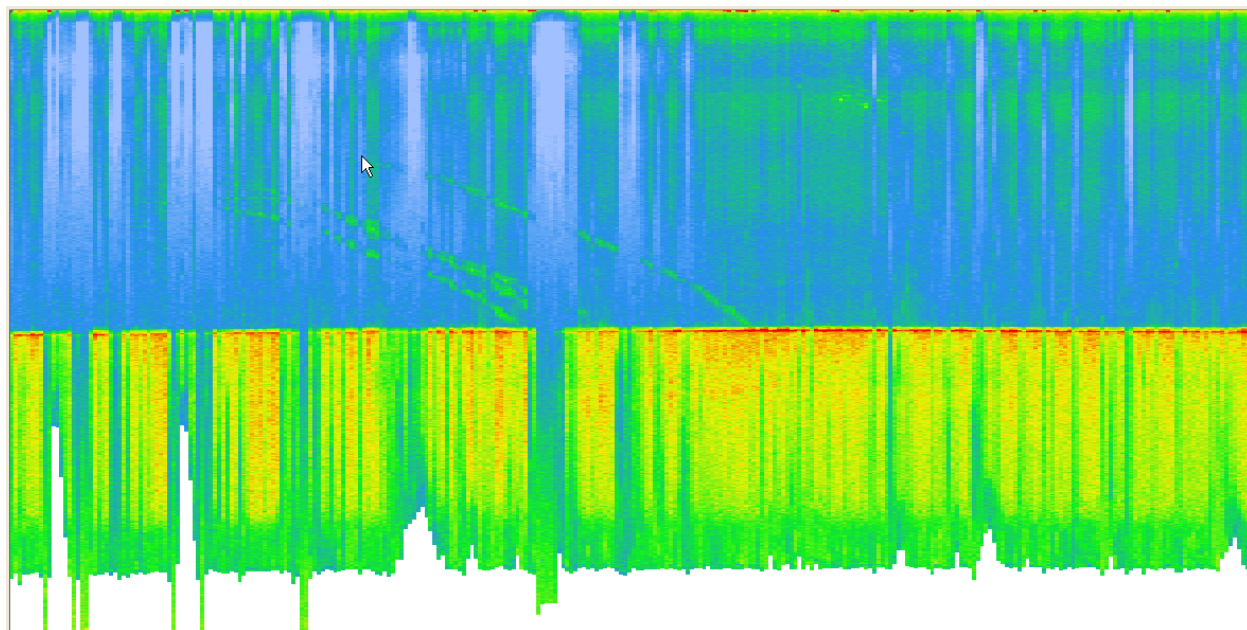


Figure 22. EM 302 water column backscatter line 0206_20120720_165135_EX1205L1_MB.wcd displayed in Fledermaus MidWater with no filters applied. Group of seeps at BRD main seep site seen in center of image.

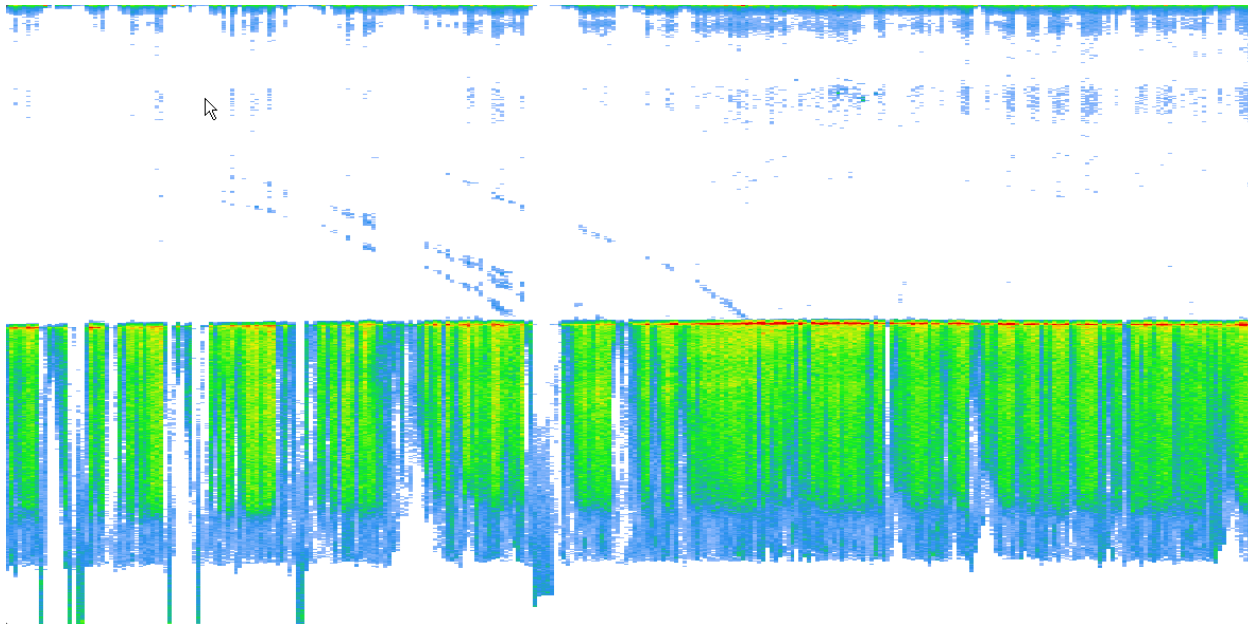


Figure 23. EM 302 water column backscatter line 0206_20120720_165135_EX1205L1_MB.wcd displayed in Fledermaus MidWater with signal amplitude filter applied.

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.

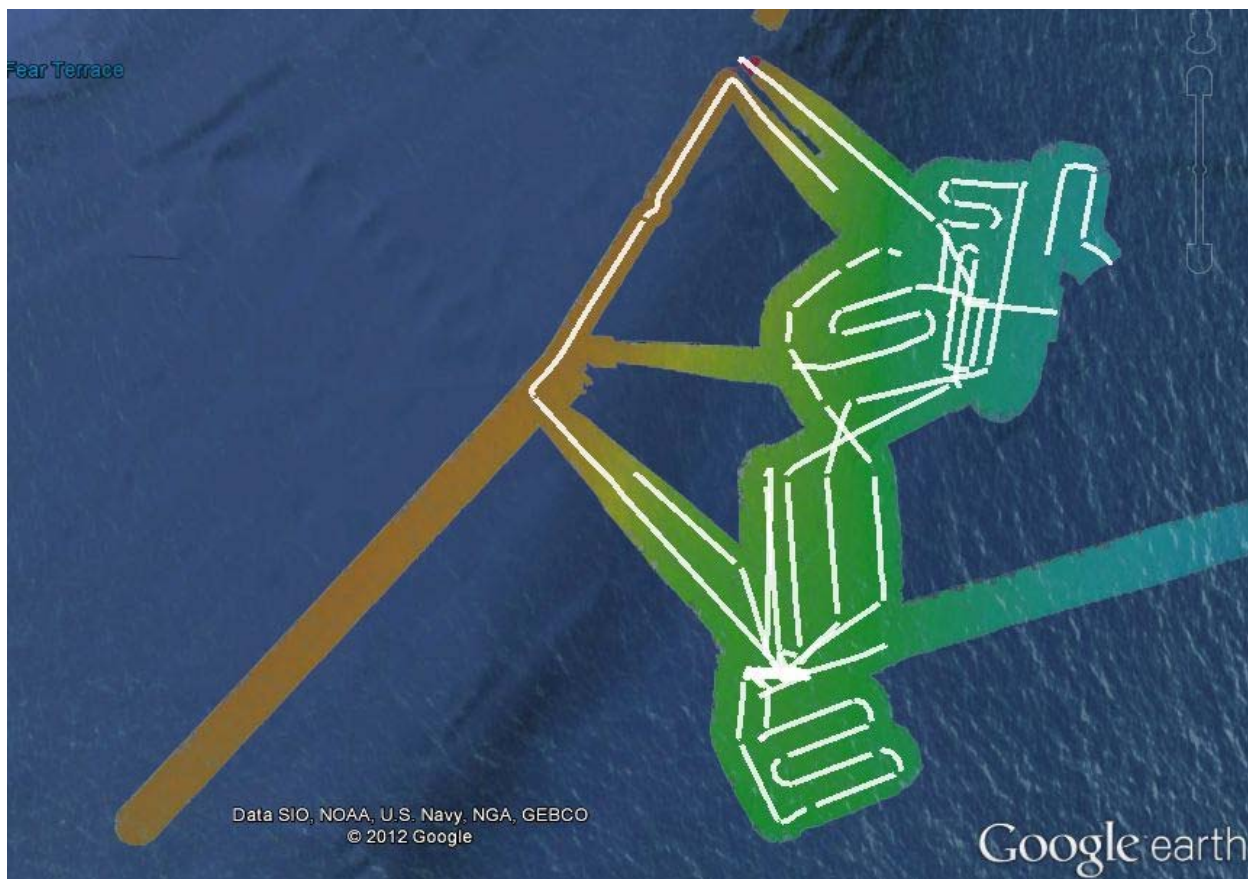


Figure 24. Screenshot taken in Google Earth showing subbottom tracklines collected in vicinity of the Blake Ridge Diapir Complex, with gridded EM 302 multibeam data shown in background.



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.

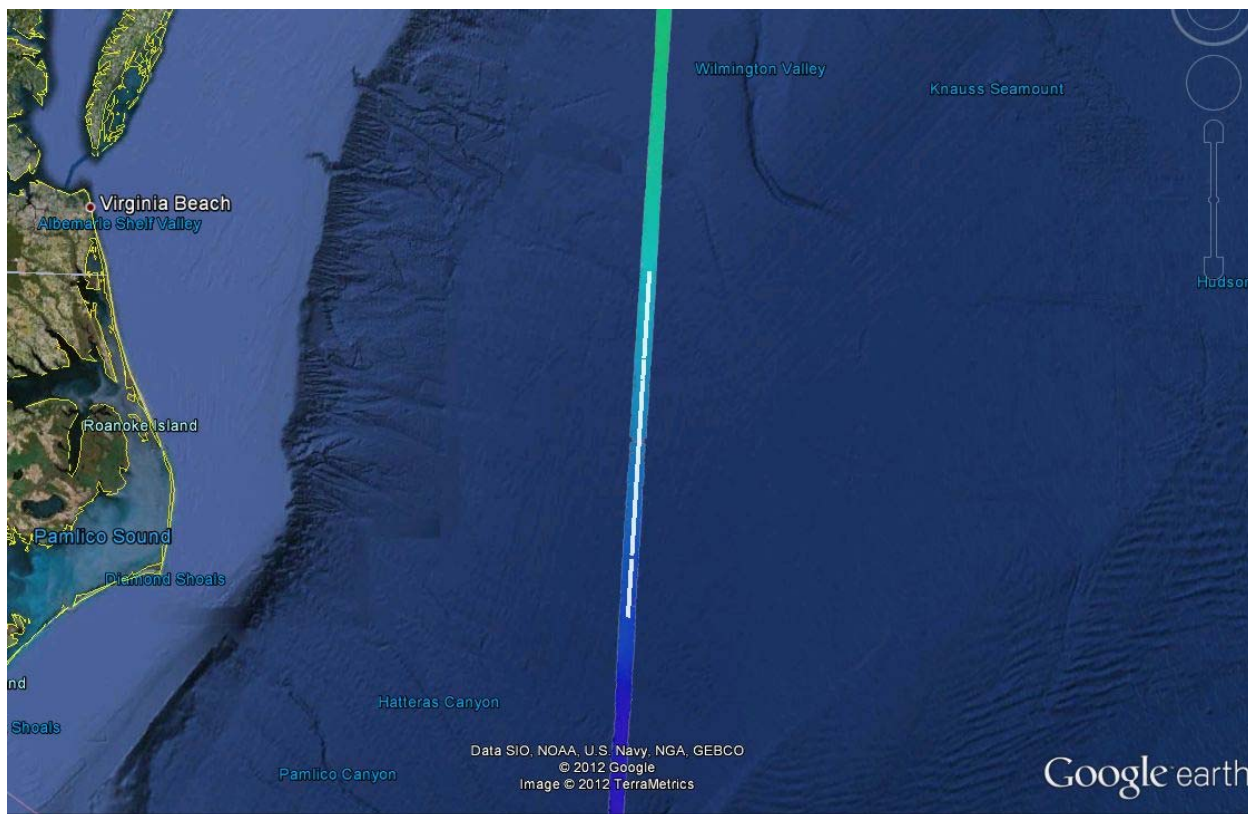


Figure 26. Screenshot taken in Google Earth showing subbottom tracklines collected during transit offshore Cape Hatteras, with gridded EM 302 multibeam data displayed in background.

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:
 - o Eh – oxidation reduction potential data
 - o 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 then 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 Ridge 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

Appendix A: Field Products Generated During Cruise

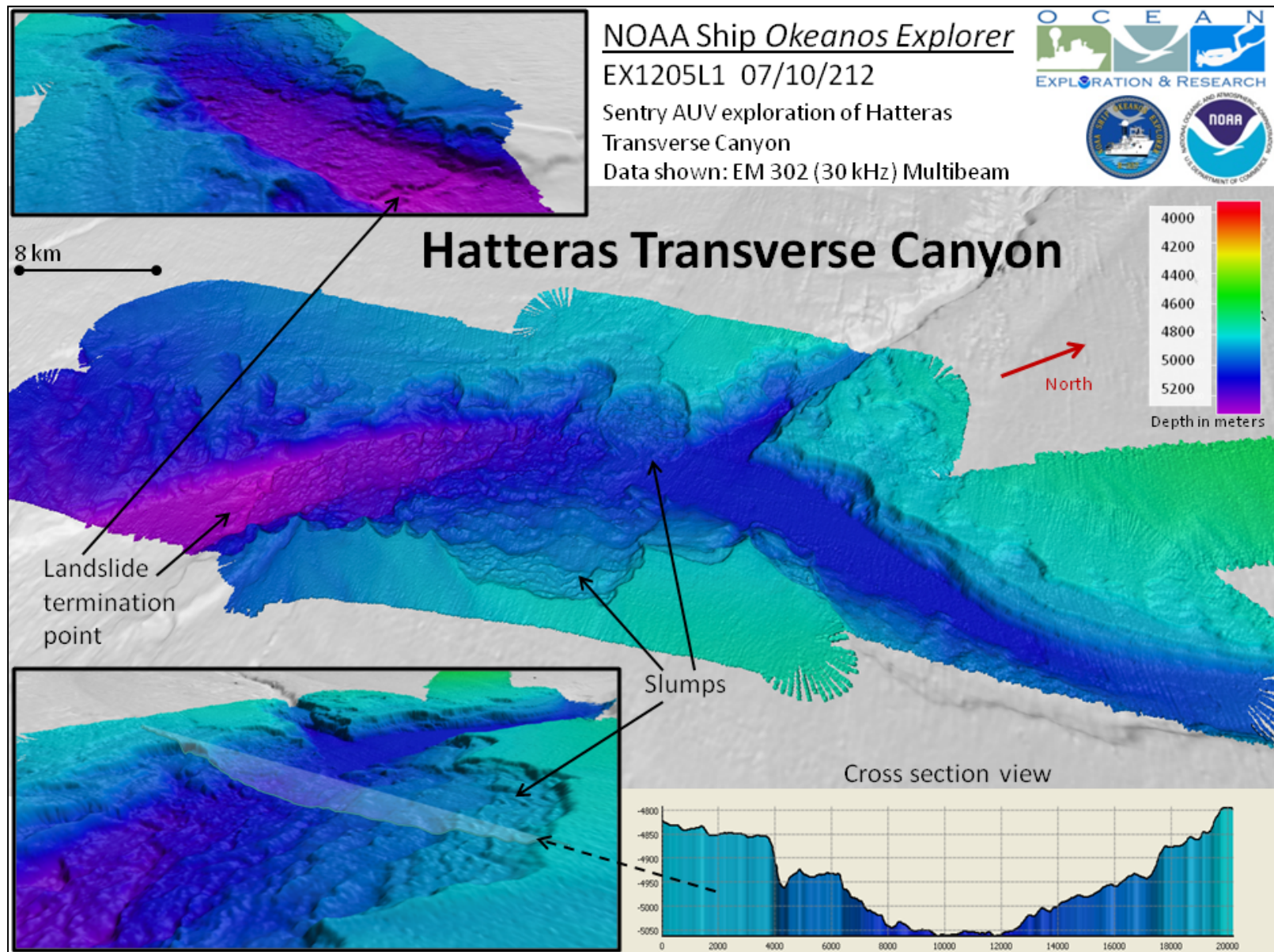


Figure 27. Map of Hatteras Transverse Canyon, created by mapping intern Dominique Paxton.

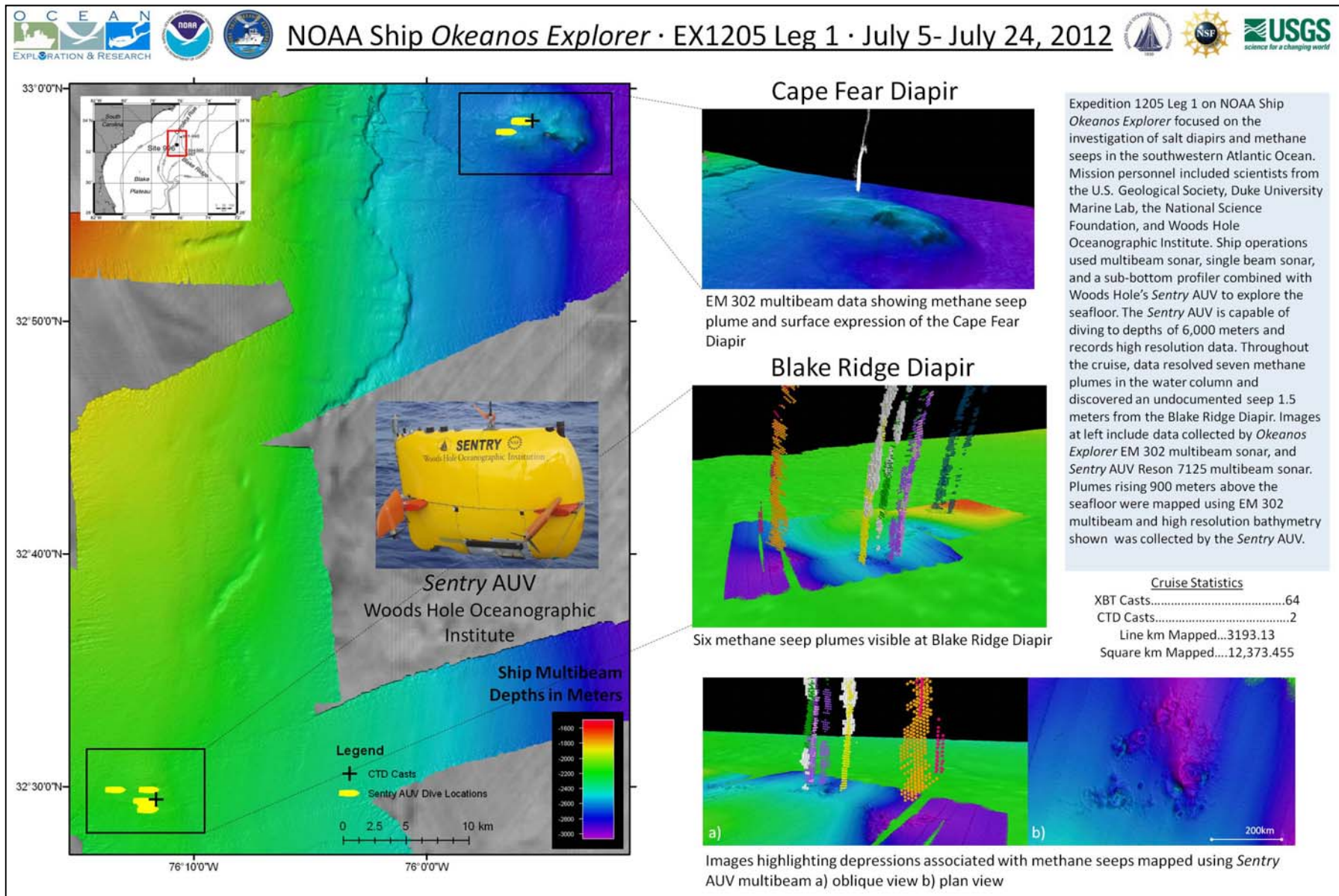


Figure 28. Map of the Cape Fear Diapir Complex, created by mapping intern Dominique Paxton.

Appendix B: Sentry AUV Dive Tracks

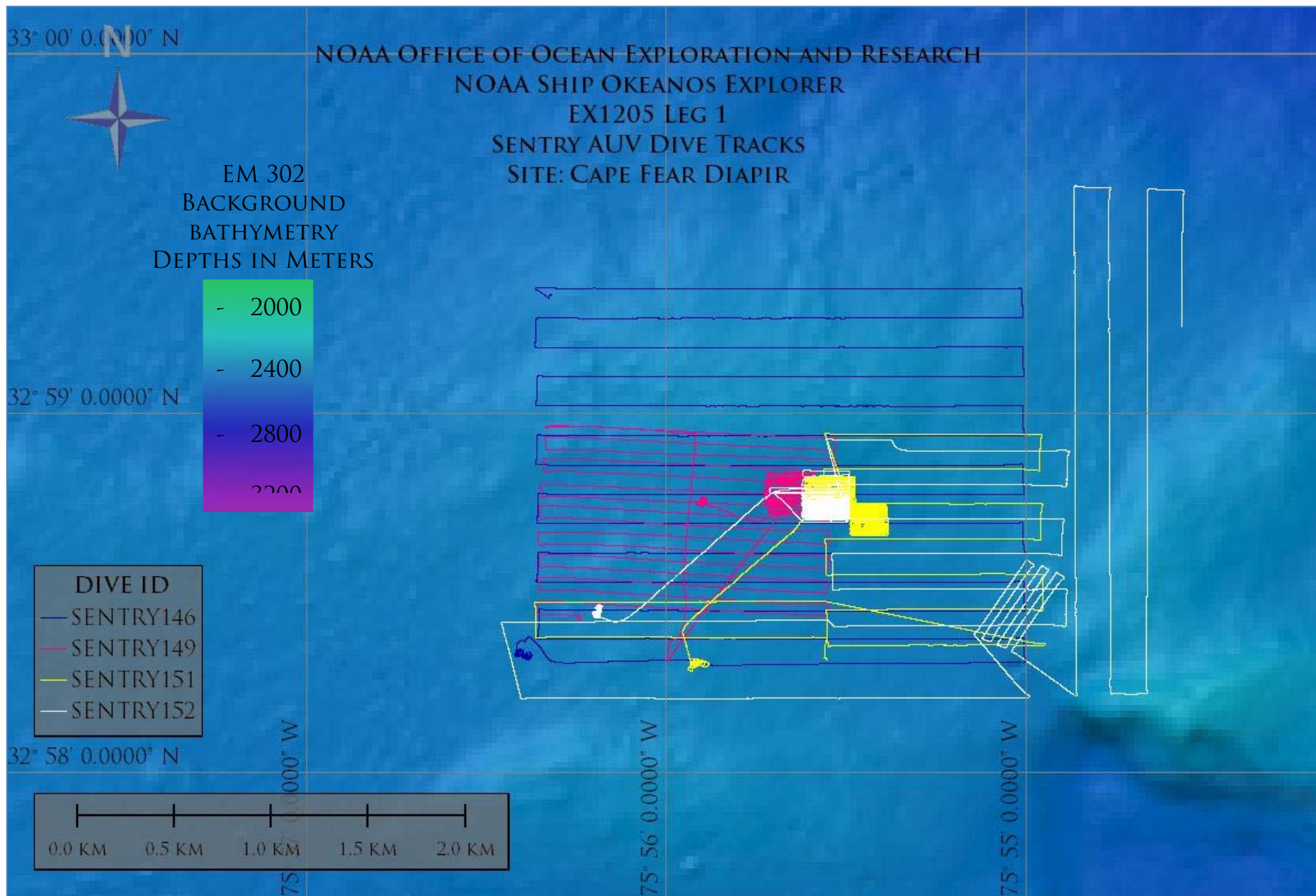


Figure 29. Map showing Sentry AUV dives at Cape Fear Diapir, created in Global Mapper 13.

EX1205 Leg 1 Mapping Data Report

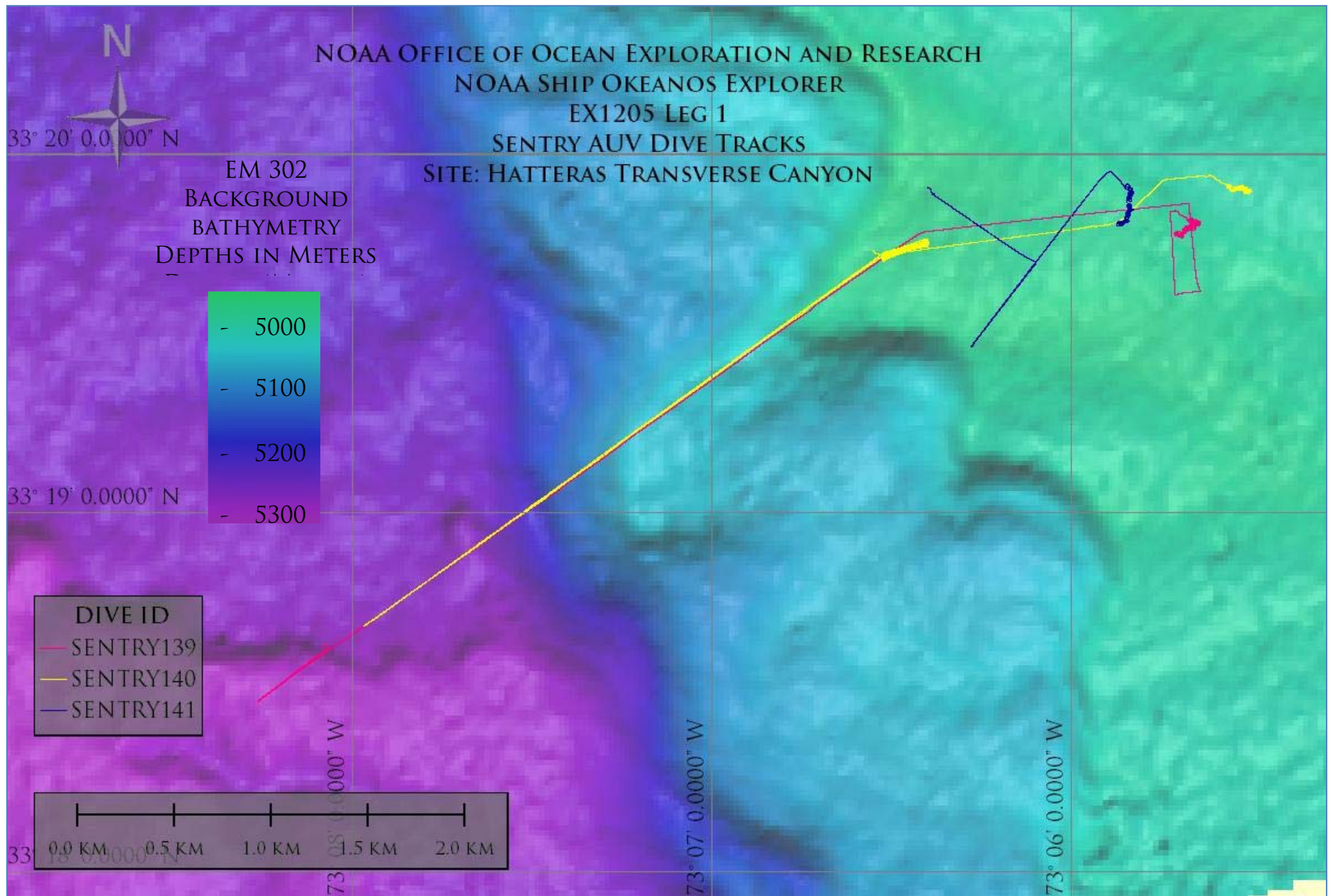


Figure 30. Map showing Sentry AUV dives at Hatteras Transverse Canyon, created in Global Mapper 13.

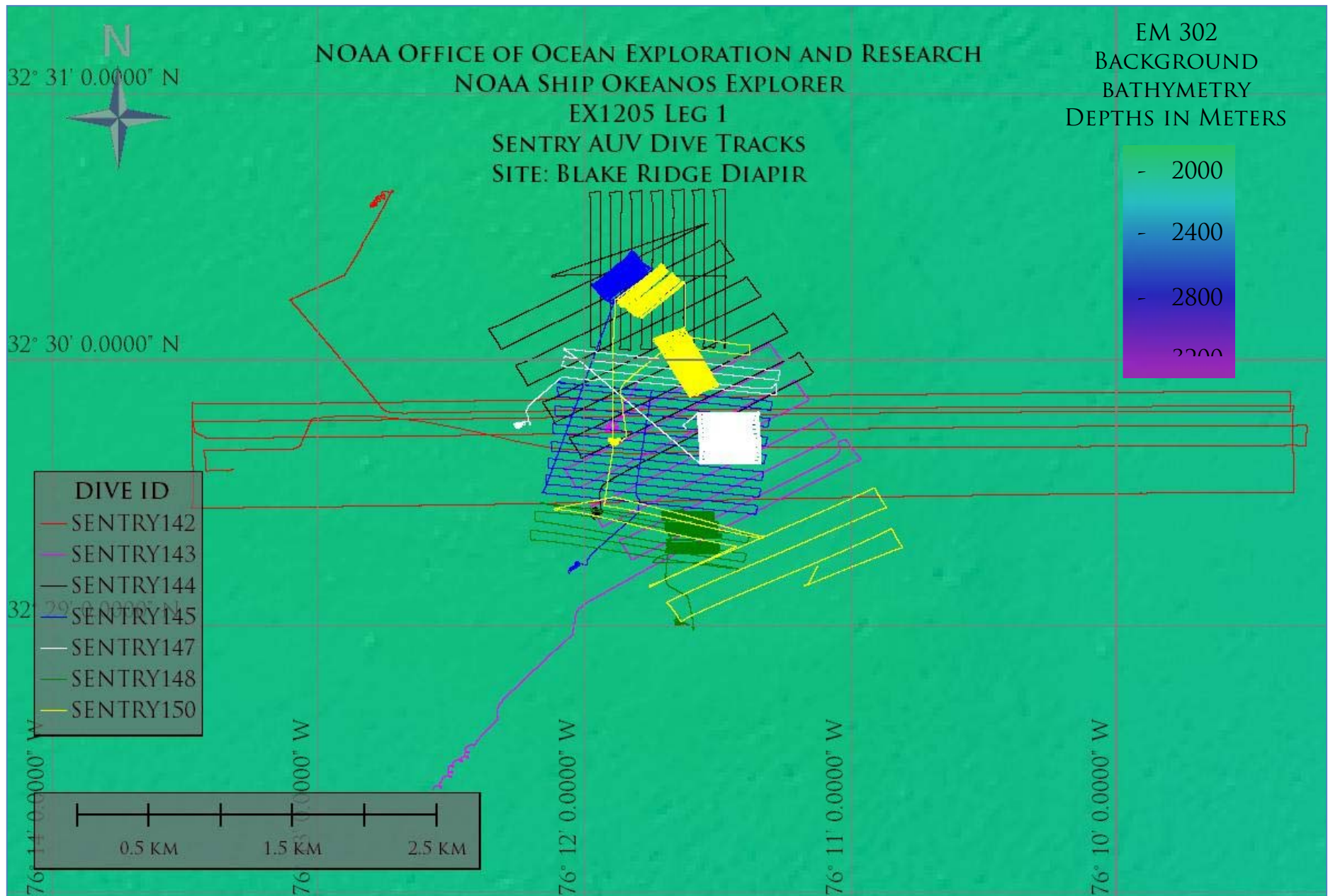


Figure 31. Map showing Sentry AUV dives at Blake Ridge Diapir, created in Global Mapper 13.

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 (GM T)	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_201 20705_22 5323_EX 1205L1_ MB.all	EX1205L1_XBT01_12 0705.asvp	7/5/1 2	9.5	199	071- 33.7 0905 3W	40- 50.2 0125 9N	071- 32.0 9938 7W	40- 52.9 9406 0N	7/5/2 012 10:53 :24 PM	7/5/2 012 23:10 :28.6 66	EX1205L1_EX0319 2012_2012- 187_0000_2012070 5_225323_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0001_201 20705_23 1029_EX 1205L1	EX1205L1_XBT03_12 0706.asvp	07/0 6/20 12	10.5	202	071- 42.3 5722 8W	40- 33.7 2027 8N	071- 33.5 8685 2W	40- 50.2 3158 6N	7/5/2 012 11:10 :30	7/6/2 012 12:51 :57	EX1205L1_EX0319 2012_2012- 187_0001_2012070 5_231029_EX1205	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M

MB.all									PM	AM	L1_MB.txt		
0002_201 20706_00 5155_EX 1205L1_ MB.all	EX1205L1_XBT03_12 0706.asvp, EX1205L1_XBT05_12 0706.asvp	07/0 6/20 12	10.5	203	071- 42.2 2056 0W	40- 14.2 1381 2N	071- 52.5 4899 2W	40- 33.7 6252 4N	7/6/2 012 12:51 :56 AM	7/6/2 012 02:51 :55.2 21	EX1205L1_EX0319 2012_2012- 188_0002_2012070 6_005155_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0003_201 20706_02 5155_EX 1205L1_ MB.all	EX1205L1_XBT05_12 0706.asvp	07/0 6/20 12	11.2	204	072- 03.4 1833 9W	39- 53.3 2782 9N	071- 52.4 0314 2W	40- 14.2 6474 2N	7/6/2 012 2:51: 46 AM	7/6/2 012 04:52 :05.2 51	EX1205L1_EX0319 2012_2012- 188_0003_2012070 6_025155_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0004_201 20706_04 5155_EX 1205L1_ MB.all	EX1205L1_XBT05_12 0706.asvp	07/0 6/20 12	11.4	204	072- 14.3 6917 5W	39- 32.0 4693 6N	072- 03.2 3754 8W	39- 53.3 8687 3N	7/6/2 012 04:51 :46.2 51	7/6/2 012 06:52 :05.2 81	EX1205L1_EX0319 2012_2012- 188_0004_2012070 6_045155_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0005_201 20706_06 5156_EX 1205L1_ MB.all	EX1205L1_XBT05_12 0706.asvp, EX1205L1_XBT06_12 0706.asvp	07/0 6/20 12	11.0	204	072- 25.6 5925 8W	39- 11.0 3230 3N	072- 14.0 6006 0W	39- 32.1 0238 3N	7/6/2 012 06:51 :46.7 78	7/6/2 012 08:52 :06.3 10	EX1205L1_EX0319 2012_2012- 188_0005_2012070 6_065156_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0006_201 20706_08 5156_EX 1205L1_ MB.all	EX1205L1_XBT06_12 0706.asvp, EX1205L1_XBT07_12 0706.asvp	07/0 6/20 12	11.0	204	072- 37.7 9079 1W	38- 49.8 4379 8N	072- 24.3 4195 1W	39- 11.2 9311 8N	7/6/2 012 08:51 :47.3 08	7/6/2 012 10:52 :10.3 37	EX1205L1_EX0319 2012_2012- 188_0006_2012070 6_085156_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0007_201 20706_10 5200_EX 1205L1_ MB.all	EX1205L1_XBT07_12 0706.asvp	07/0 6/20 12	11.0	204	072- 42.6 5667 1W	38- 41.2 8251 0N	072- 33.3 6118 9W	38- 51.0 5167 1N	7/6/2 012 10:51 :51.3 37	7/6/2 012 11:41 :51.3 49	EX1205L1_EX0319 2012_2012- 188_0007_2012070 6_105200_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0008_201 20707_00 0349_EX 1205L1_ MB.all	EX1205L1_XBT08_12 0706.asvp	07/0 7/20 12	10.4	183	072- 45.3 0923 3W	38- 14.3 3929 0N	072- 38.4 4120 3W	38- 36.0 7360 5N	2012- 07-07 00:03 :49.5 05	2012- 07-07 02:03 :48.0 35	EX1205L1_EX0319 2012_2012- 189_0008_2012070 7_000349_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0009_201 20707_02 0348_EX 1205L1_ MB.all	EX1205L1_XBT08_12 0706.asvp	07/0 7/20 12	11.1	186	072- 47.1 9448 3W	37- 52.0 5034 5N	072- 40.3 3347 3W	38- 14.4 1587 9N	2012- 07-07 02:03 :38.5 36	2012- 07-07 04:03 :47.0 67	EX1205L1_EX0319 2012_2012- 189_0009_2012070 7_020348_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0010_201 20707_04	EX1205L1_XBT08_12 0706.asvp,	07/0 7/20	10.1	186	072- 48.5	37- 31.3	072- 42.1	37- 52.4	2012- 07-07	2012- 07-07	EX1205L1_EX0319 2012_2012-	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M

0347_EX 1205L1_ MB.all	EX1205L1_XBT09_12 0707.asvp, EX1205L1_XBT10_12 0707.asvp	12			4245 8W	3079 1N	9794 1W	2670 7N	04:03 :37.5 66	06:03 :48.0 97	189_0010_2012070 7_040347_EX1205 L1_MB.txt		
0011_201 20707_06 0348_EX 1205L1_ MB.all	EX1205L1_XBT09_12 0707.asvp, EX1205L1_XBT10_12 0707.asvp	07/0 7/20 12	8.0	186	072- 50.1 1885 4W	37- 15.6 0674 0N	072- 44.1 6469 7W	37- 33.0 4552 9N	2012- 07-07 06:03 :38.5 97	2012- 07-07 08:03 :42.6 27	EX1205L1_EX0319 2012_2012- 189_0011_2012070 7_060348_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0012_201 20707_08 0343_EX 1205L1_ MB.all	EX1205L1_XBT09_12 0707.asvp, EX1205L1_XBT10_12 0707.asvp	07/0 7/20 12	10.0	186	072- 51.5 2467 9W	36- 58.0 1990 5N	072- 45.3 3028 2W	37- 16.8 7590 2N	2012- 07-07 08:03 :33.1 43	2012- 07-07 10:03 :45.6 58	EX1205L1_EX0319 2012_2012- 189_0012_2012070 7_080343_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0013_201 20707_10 0345_EX 1205L1_ MB.all	EX1205L1_XBT12_12 9707.asvp	07/0 7/20 12	10.0	186	072- 53.3 2584 2W	36- 38.8 9557 5N	072- 46.4 9883 8W	36- 58.4 4070 6N	7/7/2 012 10:03 :36 AM	2012- 07-07 12:03 :47.1 88	EX1205L1_EX0319 2012_2012- 189_0013_2012070 7_100345_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0014_201 20707_12 0347_EX 1205L1_ MB.all	EX1205L1_XBT12_12 9707.asvp	07/0 7/20 12	10.0	186	072- 55.0 0578 9W	36- 18.4 4080 0N	072- 47.9 7911 1W	36- 39.0 5432 4N	7/7/2 012 12:03 :38 PM	7/7/2 012 2:03: 46 PM	EX1205L1_EX0319 2012_2012- 189_0014_2012070 7_120347_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0015_201 20707_14 0346_EX 1205L1_ MB.all	EX1205L1_XBT12_12 9707.asvp	07/0 7/20 12	10.0	186	072- 56.6 8673 4W	35- 57.9 3077 0N	072- 49.5 9594 1W	36- 18.7 7143 2N	7/7/2 012 2:03: 36 PM	2012- 07-07 16:03 :51.2 52	EX1205L1_EX0319 2012_2012- 189_0015_2012070 7_140346_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0016_201 20707_16 0351_EX 1205L1_ MB.all	EX1205L1_XBT13_12 9707.asvp	07/0 7/20 12	9.0	186	072- 58.1 9111 3W	35- 38.5 8650 3N	072- 51.3 1021 5W	35- 58.1 1710 6N	2012- 07-07 16:03 :41.7 51	2012- 07-07 18:03 :49.7 82	EX1205L1_EX0319 2012_2012- 189_0016_2012070 7_160351_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0017_201 20707_18 0350_EX 1205L1_ MB.all	EX1205L1_XBT13_12 9707.asvp	07/0 7/20 12	10.0	181	072- 59.5 3904 6W	35- 19.8 9487 2N	072- 53.0 7224 9W	35- 38.7 9001 1N	7/7/2 012 6:03: 40 PM	2012- 07-07 20:03 :46.8 14	EX1205L1_EX0319 2012_2012- 189_0017_2012070 7_180350_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0018_201 20707_20 0346_EX 1205L1_ MB.all	EX1205L1_XBT14_12 9707.asvp	07/0 7/20 12	8.5	185	073- 00.8 1406 5W	35- 02.6 8653 0N	072- 54.4 0689 6W	35- 20.2 9320 1N	7/7/2 012 8:03: 37	2012- 07-07 22:03 :49.3	EX1205L1_EX0319 2012_2012- 189_0018_2012070 7_200346_EX1205	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M

MB.all									PM	48	L1_MB.txt		
0019_201 20707_22 0349_EX 1205L1_ MB.all	EX1205L1_XBT15_12 9707.asvp	07/0 7/20 12	8.5	185	073- 02.0 7223 6W	34- 46.2 5976 2N	072- 55.4 7661 0W	35- 02.8 6955 9N	7/7/2 012 10:03 :40 PM	2012- 07-08 00:00 :07.3 78	EX1205L1_EX0319 2012_2012- 189_0019_2012070 7_220349_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0020_201 20708_00 0007_EX 1205L1_ MB.all	EX1205L1_XBT15_12 9707.asvp	07/0 8/20 12	8.2	186	073- 03.1 1771 3W	34- 29.9 1711 3N	072- 56.5 8008 5W	34- 46.3 2685 7N	2012- 07-08 00:00 :07.8 80	2012- 07-08 02:00 :13.4 12	EX1205L1_EX0319 2012_2012- 190_0020_2012070 8_000007_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0021_201 20708_02 0003_EX 1205L1_ MB.all	EX1205L1_XBT15_12 9707.asvp	07/0 8/20 12	8.5	186	073- 04.4 6947 3W	34- 12.8 5643 1N	072- 57.9 5318 3W	34- 29.9 3550 1N	2012- 07-08 01:59 :53.9 11	2012- 07-08 04:00 :06.9 41	EX1205L1_EX0319 2012_2012- 190_0021_2012070 8_020003_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0022_201 20708_04 0007_EX 1205L1_ MB.all	EX1205L1_XBT17_12 9708.asvp	07/0 8/20 12	8.4	186	073- 05.5 2251 0W	33- 55.7 0065 2N	072- 59.2 2982 8W	34- 13.1 7497 3N	2012- 07-08 03:59 :57.4 42	2012- 07-08 06:00 :01.9 73	EX1205L1_EX0319 2012_2012- 190_0022_2012070 8_040007_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0023_201 20708_06 0002_EX 1205L1_ MB.all	EX1205L1_XBT17_12 9708.asvp, EX1205L1_XBT18_12 9708.asvp	07/0 8/20 12	8.0	185	073- 06.1 9567 9W	33- 39.5 5513 7N	073- 00.6 7814 7W	33- 56.7 5088 0N	2012- 07-08 05:59 :52.9 71	2012- 07-08 08:00 :02.0 05	EX1205L1_EX0319 2012_2012- 190_0023_2012070 8_060002_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0024_201 20708_08 0002_EX 1205L1_ MB.all	EX1205L1_XBT20_12 0708.asvp	07/0 8/20 12	7.3	186	073- 07.4 0514 7W	33- 25.4 1968 9N	073- 02.5 4651 1W	33- 40.9 8804 8N	2012- 07-08 07:59 :53.0 01	2012- 07-08 10:00 :01.0 31	EX1205L1_EX0319 2012_2012- 190_0024_2012070 8_080002_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0025_201 20708_10 0001_EX 1205L1_ MB.all	EX1205L1_XBT20_12 0708.asvp	07/0 8/20 12	6.7	184	073- 07.7 8295 9W	33- 18.7 6428 7N	073- 03.6 3561 3W	33- 26.1 9226 4N	7/8/2 012 9:59: 52 AM	2012- 07-08 10:52 :44.0 45	EX1205L1_EX0319 2012_2012- 190_0025_2012070 8_100001_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0026_201 20708_10 5234_EX 1205L1_ MB.all	EX1205L1_XBT20_12 0708.asvp	07/0 8/20 12	1.8	111	073- 07.2 9446 6W	33- 18.6 8311 2N	073- 03.5 2754 1W	33- 21.0 8738 2N	7/8/2 012 10:52 :25 AM	2012- 07-08 11:01 :10.0 51	EX1205L1_EX0319 2012_2012- 190_0026_2012070 8_105234_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0027_201 20708_22	EX1205L1_XBT21_12 0708.asvp	07/0 8/20	5.9	310	073- 12.4	33- 17.5	073- 08.1	33- 21.0	7/8/2 012	7/8/2 012	EX1205L1_EX0319 2012_2012-	Hatteras Transverse	EX1205L1_MB_FNL_ALL_WGS84_5 0M,

3431_EX 1205L1_ MB.all		12			3378 4W	4572 3N	9686 7W	1680 9N	10:34 :31 PM	10:59 :18 PM	190_0027_2012070 8_223431_EX1205 L1_MB.txt	Canyon	EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0028_201 20708_22 5908_EX 1205L1_ MB.all	EX1205L1_XBT21_12 0708.asvp	07/0 8/20 12	8.9	022	073- 12.1 4524 7W	33- 19.8 0627 2N	073- 04.5 0220 1W	33- 29.2 5752 8N	7/8/2 012 10:58 :59 PM	2012- 07-09 00:01 :23.2 48	EX1205L1_EX0319 2012_2012- 190_0028_2012070 8_225908_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0029_201 20709_00 0123_EX 1205L1_ MB.all	EX1205L1_XBT21_12 0708.asvp	07/0 9/20 12	9.7	21	073- 08.2 1194 2W	33- 28.4 5927 6N	072- 56.5 6345 3W	33- 47.2 0587 6N	2012- 07-09 00:01 :23.7 47	2012- 07-09 02:01 :27.2 73	EX1205L1_EX0319 2012_2012- 191_0029_2012070 9_000123_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0030_201 20709_02 0127_EX 1205L1_ MB.all	EX1205L1_XBT21_12 0708.asvp	07/0 9/20 12	5.9	249	073- 03.8 9808 2W	33- 44.8 2897 0N	072- 56.2 5704 7W	33- 49.6 0831 8N	7/9/2 012 2:01: 18 AM	2012- 07-09 02:50 :59.2 90	EX1205L1_EX0319 2012_2012- 191_0030_2012070 9_020127_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0031_201 20709_02 5059_EX 1205L1_ MB.all	EX1205L1_XBT21_12 0708.asvp, EX1205L1_XBT22_12 0708.asvp	07/0 9/20 12	6.2	202	073- 08.7 7633 4W	33- 33.5 2107 6N	073- 00.6 4020 5W	33- 46.7 0951 7N	2012- 07-09 02:50 :50.2 93	2012- 07-09 04:51 :00.8 21	EX1205L1_EX0319 2012_2012- 191_0031_2012070 9_025059_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0032_201 20709_04 5101_EX 1205L1_ MB.all	EX1205L1_XBT22_12 0708.asvp	07/0 9/20 12	7.0	202	073- 14.2 6055 1W	073- 05.9 3744 6W	33- 20.3 3984 1N	33- 34.9 7488 9N	2012- 07-09 04:50 :51.3 23	2012- 07-09 06:50 :58.8 51	EX1205L1_EX0319 2012_2012- 191_0032_2012070 9_045101_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0033_201 20709_06 5058_EX 1205L1_ MB.all	EX1205L1_XBT22_12 0708.asvp	07/0 9/20 12	7.5	205	073- 17.9 5654 4W	33- 10.9 8623 7N	073- 11.2 5256 4W	33- 21.9 5475 0N	2012- 07-09 06:50 :49.3 52	2012- 07-09 08:08 :07.8 71	EX1205L1_EX0319 2012_2012- 191_0033_2012070 9_065058_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0034_201 20709_08 0808_EX 1205L1_ MB.all	EX1205L1_XBT22_12 0708.asvp, EX1205L1_XBT23_12 0708.asvp	07/0 9/20 12	7.7	22	073- 19.8 0497 3W	33- 11.3 2346 3N	073- 10.8 3339 9W	33- 26.7 3785 9N	2012- 07-09 08:07 :58.8 68	2012- 07-09 10:08 :04.3 99	EX1205L1_EX0319 2012_2012- 191_0034_2012070 9_080808_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0035_201 20709_10 0804_EX 1205L1_ MB.all	EX1205L1_XBT23_12 0708.asvp	07/0 9/20 12	6.6	130	073- 13.4 9967 8W	33- 19.0 2148 2N	073- 03.9 4706 6W	33- 25.2 3164 8N	7/9/2 012 10:07 :55 AM	2012- 07-09 11:12 :51.4 17	EX1205L1_EX0319 2012_2012- 191_0035_2012070 9_100804_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M

0036_201 20710_00 0006_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	7.5	27	073- 07.9 1781 5W	33- 20.5 0099 2N	073- 04.2 4969 1W	33- 23.1 7677 9N	7/10/ 2012 12:00 :07 AM	2012- 07-10 00:09 :52.6 11	EX1205L1_EX0319 2012_2012- 192_0036_2012071 0_000006_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0037_201 20710_00 0942_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	8.7	201	073- 13.0 5969 4W	33- 09.4 0668 2N	073- 05.2 6385 7W	33- 22.3 4778 1N	7/10/ 2012 12:09 :33 AM	2012- 07-10 01:33 :42.6 33	EX1205L1_EX0319 2012_2012- 192_0037_2012071 0_000942_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0038_201 20710_01 3342_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	8.2	293	073- 15.4 8687 7W	33- 08.4 0523 5N	073- 10.0 2036 9W	33- 11.7 5874 4N	7/10/ 2012 1:33: 34 AM	2012- 07-10 01:53 :14.6 35	EX1205L1_EX0319 2012_2012- 192_0038_2012071 0_013342_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0039_201 20710_01 5305_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	9.1	20	073- 15.3 2795 7W	33- 10.3 4790 9N	073- 08.1 9410 7W	33- 20.9 0274 8N	7/10/ 2012 1:52: 55 AM	2012- 07-10 03:01 :40.1 55	EX1205L1_EX0319 2012_2012- 192_0039_2012071 0_015305_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0040_201 20710_03 0140_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	7.3	324	073- 11.8 5606 3W	33- 19.8 6386 8N	073- 08.0 8420 5W	33- 22.3 6561 6N	7/10/ 2012 3:01: 31 AM	2012- 07-10 03:06 :29.1 58	EX1205L1_EX0319 2012_2012- 192_0040_2012071 0_030140_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0041_201 20710_03 0619_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	8.0	318	073- 15.2 1712 1W	33- 20.1 0168 1N	073- 09.3 3288 4W	33- 25.5 8508 9N	7/10/ 2012 3:06: 10 AM	2012- 07-10 03:41 :27.1 67	EX1205L1_EX0319 2012_2012- 192_0041_2012071 0_030619_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0042_201 20710_03 4127_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp	07/1 0/20 12	9.0	3.6	073- 15.8 9851 7W	33- 23.5 4037 6N	073- 12.5 6043 0W	33- 25.5 8797 0N	2012- 07-10 03:41 :17.6 66	2012- 07-10 03:45 :21.1 68	EX1205L1_EX0319 2012_2012- 192_0042_2012071 0_034127_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0043_201 20710_03 4511_EX 1205L1_ MB.all	EX1205L1_XBT24_12 0709.asvp, EX1205L1_XBT25_12 0710.asvp	07/1 0/20 12	8.6	21	073- 15.7 1819 0W	33- 24.5 8849 4N	073- 05.6 5228 8W	33- 41.9 6628 6N	2012- 07-10 03:45 :01.6 66	2012- 07-10 05:45 :13.1 98	EX1205L1_EX0319 2012_2012- 192_0043_2012071 0_034511_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0044_201 20710_05 4513_EX	EX1205L1_XBT25_12 0710.asvp	07/1 0/20 12	7.8	216	073- 15.2 6152	33- 31.9 6028	073- 06.0 7070	33- 43.9 3882	7/10/ 2012 5:45:	2012- 07-10 07:20	EX1205L1_EX0319 2012_2012- 192_0044_2012071	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS T

1205L1_MB.all					6W	4N	7W	1N	04 AM	:34.7 24	0_054513_EX1205 L1_MB.txt		RANSVERSE_CANYON_WGS84_30 M
0045_201 20710_07 4516_EX 1205L1_MB.all	EX1205L1_XBT25_12 0710.asvp	07/1 0/20 12	8.9	77	073- 16.5 5555 9W	33- 27.9 3029 3N	072- 58.6 5359 3W	33- 37.2 1386 3N	2012- 07-10 07:45 :17.2 32	2012- 07-10 09:45 :16.2 57	EX1205L1_EX0319 2012_2012- 192_0045_2012071 0_074516_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0046_201 20710_09 4516_EX 1205L1_MB.all	EX1205L1_XBT26_12 0710.asvp	07/1 0/20 12	8.1	198	073- 07.7 3960 6W	33- 18.3 8721 8N	073- 00.6 3425 4W	33- 33.1 9020 7N	2012- 07-10 09:45 :06.7 58	2012- 07-10 11:22 :08.7 80	EX1205L1_EX0319 2012_2012- 192_0046_2012071 0_094516_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0047_201 20710_19 1741_EX 1205L1_MB.all	Do not process. EM 302 / USBL / ship thruster testing.	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP	DNP
0048_201 20710_21 1001_EX 1205L1_MB.all	EX1205L1_XBT27_12 0710.asvp	07/1 0/20 12	10.0	104	073- 05.4 8932 5W	33- 18.9 2374 0N	073- 02.5 7295 1W	33- 21.9 9579 0N	7/10/ 2012 9:10: 02 PM	2012- 07-10 21:17 :57.4 29	EX1205L1_EX0319 2012_2012- 192_0048_2012071 0_211001_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0049_201 20710_21 1747_EX 1205L1_MB.all	EX1205L1_XBT27_12 0710.asvp	07/1 0/20 12	7.9	254	073- 05.4 6964 1W	33- 18.3 6560 8N	073- 01.7 6999 6W	33- 21.3 9024 8N	7/10/ 2012 9:17: 38 PM	2012- 07-10 21:26 :19.9 28	EX1205L1_EX0319 2012_2012- 192_0049_2012071 0_211747_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0050_201 20710_21 2620_EX 1205L1_MB.all	EX1205L1_XBT27_12 0710.asvp	07/1 0/20 12	6.1	254	073- 18.8 1983 5W	33- 14.7 4265 3N	073- 04.1 1577 7W	33- 21.2 5647 1N	2012- 07-10 21:26 :10.4 30	2012- 07-10 23:26 :27.4 56	EX1205L1_EX0319 2012_2012- 192_0050_2012071 0_212620_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0051_201 20710_23 2617_EX 1205L1_MB.all	EX1205L1_XBT27_12 0710.asvp	07/1 0/20 12	5.8	253	073- 18.9 1937 8W	33- 14.7 2108 4N	073- 18.1 4320 0W	33- 17.4 8630 8N	7/10/ 2012 11:26 :18 PM	2012- 07-10 23:27 :13.4 58	EX1205L1_EX0319 2012_2012- 192_0051_2012071 0_232617_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
0052_201 20710_23 2704_EX 1205L1_MB.all	EX1205L1_XBT27_12 0710.asvp	07/1 0/20 12	8.6	255	073- 24.3 5897 0W	33- 13.0 0800 0N	073- 18.1 8334 3W	33- 17.4 8688 6N	2012- 07-10 23:26 :53.9 59	2012- 07-11 00:00 :04.4 65	EX1205L1_EX0319 2012_2012- 192_0052_2012071 0_232704_EX1205 L1_MB.txt	Hatteras Transverse Canyon	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_HATTERAS_T RANSVERSE_CANYON_WGS84_30 M
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_00 1126_EX 1205L1_ MB.all	0710.asvp, EX1205L1_XBT28_12 0711.asvp	1/20 12			48.0 3337 4W	06.7 4885 3N	25.5 0397 3W	15.7 1770 1N	07-11 00:11 :26.9 68	07-11 02:11 :34.5 00	2012_2012- 193_0053_2012071 1_001126_EX1205 L1_MB.txt		0M
0054_201 20711_02 1125_EX 1205L1_ MB.all	EX1205L1_XBT28_12 0711.asvp	07/1 1/20 12	9.8	255	074- 10.8 4100 5W	33- 00.2 8225 6N	073- 46.8 7817 4W	33- 09.8 6203 9N	2012- 07-11 02:11 :15.9 97	2012- 07-11 04:11 :36.0 30	EX1205L1_EX0319 2012_2012- 193_0054_2012071 1_021125_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0055_201 20711_04 1126_EX 1205L1_ MB.all	EX1205L1_XBT28_12 0711.asvp	07/1 1/20 12	9.8	255	074- 33.0 2691 3W	32- 54.1 2386 2N	074- 08.8 5195 9W	33- 04.3 0804 6N	2012- 07-11 04:11 :17.0 31	2012- 07-11 06:11 :25.0 57	EX1205L1_EX0319 2012_2012- 193_0055_2012071 1_041126_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0056_201 20711_06 1125_EX 1205L1_ MB.all	EX1205L1_XBT29_12 0711.asvp	07/1 1/20 12			074- 55.0 4079 6W	32- 48.3 4365 6N	074- 31.1 9381 7W	32- 58.1 9918 4N	2012- 07-11 06:11 :15.5 58	7/11/ 2012 8:11: 42 AM	EX1205L1_EX0319 2012_2012- 193_0056_2012071 1_061125_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0057_201 20711_08 1132_EX 1205L1_ MB.all	EX1205L1_XBT29_12 0711.asvp	07/1 1/20 12			075- 16.5 0009 5W	32- 42.6 3404 3N	074- 53.4 8071 5W	32- 52.3 3442 2N	2012- 07-11 08:11 :23.5 92	7/11/ 2012 10:11 :36 AM	EX1205L1_EX0319 2012_2012- 193_0057_2012071 1_081132_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0058_201 20711_10 1125_EX 1205L1_ MB.all	EX1205L1_XBT30_12 0711.asvp	07/1 1/20 12			075- 38.0 6498 1W	32- 36.7 4411 4N	075- 15.1 0209 7W	32- 46.6 0614 6N	2012- 07-11 10:11 :16.1 44	7/11/ 2012 12:11 :32 PM	EX1205L1_EX0319 2012_2012- 193_0058_2012071 1_101125_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0059_201 20711_12 1131_EX 1205L1_ MB.all	EX1205L1_XBT30_12 0711.asvp	07/1 1/20 12			075- 59.3 9203 6W	32- 31.2 6596 8N	075- 36.7 5457 7W	32- 40.8 3818 5N	2012- 07-11 12:11 :22.6 47	7/11/ 2012 2:11: 25 PM	EX1205L1_EX0319 2012_2012- 193_0059_2012071 1_121131_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M
0060_201 20711_14 1125_EX 1205L1_ MB.all	EX1205L1_XBT30_12 0711.asvp	07/1 1/20 12	8.8	254	076- 10.2 6624 8W	32- 27.6 9985 6N	075- 57.7 9740 0W	32- 35.0 0862 9N	7/11/ 2012 2:11: 16 PM	7/11/ 2012 3:20: 21 PM	EX1205L1_EX0319 2012_2012- 193_0060_2012071 1_141125_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
0061_201 20711_15 2011_EX 1205L1	EX1205L1_XBT30_12 0711.asvp,EX1205L1 XBT31_120711.asvp	07/1 1/20 12	6.0	274	076- 14.3 4207 8W	32- 27.5 8589 4N	076- 09.0 5131 4W	32- 31.7 5169 0N	7/11/ 2012 3:20: 02	7/11/ 2012 3:55: 41	EX1205L1_EX0319 2012_2012- 193_0061_2012071 1_152011_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	PM	L1_MB.txt	Diapir	M
0062_201 20711_15 5530_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	07/1 1/20 12	7.0	turn	076- 16.4 8470 2W	32- 27.4 8931 8N	076- 11.9 7169 7W	32- 31.5 8702 2N	7/11/ 2012 3:55: 21 PM	7/11/ 2012 4:06: 05 PM	EX1205L1_EX0319 2012_2012- 193_0062_2012071 1_155530_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0063_201 20711_16 0555_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	07/1 1/20 12	6.0	93	076- 14.3 7115 5W	32- 27.3 8721 3N	076- 08.5 4409 2W	32- 31.4 4722 6N	7/11/ 2012 4:05: 46 PM	7/11/ 2012 4:43: 53 PM	EX1205L1_EX0319 2012_2012- 193_0063_2012071 1_160555_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0064_201 20711_16 4342_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	07/1 1/20 12	6.0	turn	076- 10.9 9590 3W	32- 27.3 0919 7N	076- 06.7 3484 0W	32- 31.6 1904 2N	7/11/ 2012 4:43: 33 PM	7/11/ 2012 4:52: 10 PM	EX1205L1_EX0319 2012_2012- 193_0064_2012071 1_164342_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0065_201 20711_16 5200_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	07/1 1/20 12	7.0	279	076- 10.4 8534 9W	32- 27.5 5096 7N	076- 08.5 1087 3W	32- 31.7 4953 2N	7/11/ 2012 4:51: 51 PM	7/11/ 2012 4:59: 02 PM	EX1205L1_EX0319 2012_2012- 193_0065_2012071 1_165200_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0066_201 20711_16 5902_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	07/1 1/20 12	5.6	279	076- 15.5 9673 2W	32- 27.5 9298 6N	076- 09.9 8457 3W	32- 31.9 9008 8N	7/11/ 2012 4:58: 52 PM	7/11/ 2012 5:29: 25 PM	EX1205L1_EX0319 2012_2012- 193_0066_2012071 1_165902_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
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_201 20712_11 3420_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp	7/12/ 12	5.4	332	076- 13.7 2945 8W	32- 26.4 3856 0N	076- 09.2 1170 2W	32- 30.1 1522 3N	2012- 07-12 12:09 :13.4 98	2012- 07-12 12:17 :48.9 99	EX1205L1_EX0319 2012_2012- 194_0068_2012071 2_113420_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0069_201 20712_12 0922_EX 1205L1_ MB.all	EX1205L1_XBT31_12 0711.asvp/EX1205L1 XBT32_120711.asvp	7/12/ 12	5.4	turn	076- 13.6 0199 7W	32- 27.8 8170 9N	076- 08.5 7062 4W	32- 32.4 0044 1N	2012- 07-12 11:34 :20.9 85	2012- 07-12 12:09 :32.0 00	EX1205L1_EX0319 2012_2012- 194_0069_2012071 2_120922_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0070_201 20712_12 1749_EX 1205L1	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	5.0	6	076- 13.7 2173 4W	32- 28.2 2634 0N	076- 09.0 8855 2W	32- 30.8 3465 1N	2012- 07-12 12:17 :39.5	2012- 07-12 12:36 :06.5	EX1205L1_EX0319 2012_2012- 194_0070_2012071 2_121749_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									01	03	L1_MB.txt	Diapir	M
0071_201 20712_12 3556_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	6.0	3	076- 16.7 6516 4W	32- 26.9 3157 4N	076- 08.3 4895 8W	32- 32.3 2690 5N	2012- 07-12 12:35 :47.0 05	2012- 07-12 14:05 :40.0 23	EX1205L1_EX0319 2012_2012- 194_0071_2012071 2_123556_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0072_201 20712_14 0530_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	7.0	TUR N	076- 10.6 0120 1W	32- 27.1 5909 1N	076- 06.2 0447 8W	32- 31.3 6997 3N	2012- 07-12 14:05 :20.5 25	2012- 07-12 14:11 :04.0 27	EX1205L1_EX0319 2012_2012- 194_0072_2012071 2_140530_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0073_201 20712_14 1104_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	6.0	279	076- 14.2 8736 0W	32- 27.3 2835 2N	076- 07.8 9229 1W	32- 31.6 2888 7N			EX1205L1_EX0319 2012_2012- 194_0073_2012071 2_141104_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0074_201 20712_14 5349_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 16.1 5337 9W	32- 27.4 4939 9N	076- 12.0 2222 2W	32- 31.3 7497 2N			EX1205L1_EX0319 2012_2012- 194_0074_2012071 2_145349_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0075_201 20712_15 0242_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	6.0	93	076- 14.3 6305 5W	32- 27.4 6521 6N	076- 08.5 2425 9W	32- 31.5 7093 4N	7/12/ 2012 3:02: 33 PM	2012- 07-12 15:39 :47.0 49	EX1205L1_EX0319 2012_2012- 194_0075_2012071 2_150242_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0076_201 20712_15 3937_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 11.1 4168 1W	32- 27.4 1556 8N	076- 06.8 9901 6W	32- 31.5 4357 6N	7/12/ 2012 3:39: 28 PM	2012- 07-12 15:48 :12.0 53	EX1205L1_EX0319 2012_2012- 194_0076_2012071 2_153937_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0077_201 20712_15 4803_EX 1205L1_ MB.all	EX1205L1_XBT32_12 0711.asvp, EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	273	076- 14.2 4916 0W	32- 27.3 1067 9N	076- 08.6 2904 2W	32- 31.5 9060 1N	7/12/ 2012 3:47: 54 PM	2012- 07-12 16:26 :38.5 58	EX1205L1_EX0319 2012_2012- 194_0077_2012071 2_154803_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0078_201 20712_16 2629_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 15.8 9761 8W	32- 27.4 8698 7N	076- 11.7 2939 1W	32- 31.4 1133 6N	7/12/ 2012 4:26: 20 PM	2012- 07-12 16:33 :16.0 63	EX1205L1_EX0319 2012_2012- 194_0078_2012071 2_162629_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0079_201 20712_16	EX1205L1_XBT33_12 0711.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_EX0319 2012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_5 OM,

3316_EX 1205L1_ MB.all					0648 5W	1382 2N	8279 0W	5217 5N	4:33: 07 PM	17:08 :54.5 71	194_0079_2012071 2_163316_EX1205 L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0080_201 20712_17 0845_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 11.7 2702 9W	32- 27.1 2814 5N	076- 06.2 7785 7W	32- 31.5 3654 9N	7/12/ 2012 5:08: 36 PM	2012- 07-12 17:38 :28.0 78	EX1205L1_EX0319 2012_2012- 194_0080_2012071 2_170845_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
0081_201 20712_17 3828_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	273	076- 14.2 3400 2W	32- 27.3 4987 2N	076- 08.7 7160 9W	32- 31.6 5071 7N	7/12/ 2012 5:38: 19 PM	2012- 07-12 18:17 :50.0 86	EX1205L1_EX0319 2012_2012- 194_0081_2012071 2_173828_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
0082_201 20712_18 1740_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 16.2 7044 8W	32- 27.4 9254 2N	076- 12.1 7446 2W	32- 31.3 9916 7N	7/12/ 2012 6:17: 31 PM	2012- 07-12 18:29 :50.5 92	EX1205L1_EX0319 2012_2012- 194_0082_2012071 2_181740_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
0083_201 20712_18 2941_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	93	076- 14.9 0760 5W	32- 27.5 1284 9N	076- 08.4 4342 4W	32- 31.5 1747 0N	7/12/ 2012 6:29: 32 PM	2012- 07-12 19:08 :18.1 02	EX1205L1_EX0319 2012_2012- 194_0083_2012071 2_182941_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
0084_201 20712_19 0808_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 10.8 9725 0W	32- 27.3 8199 8N	076- 06.5 3865 1W	32- 31.5 5013 9N	7/12/ 2012 7:07: 59 PM	2012- 07-12 19:21 :12.6 01	EX1205L1_EX0319 2012_2012- 194_0084_2012071 2_190808_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
0085_201 20712_19 2113_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	273	076- 14.2 7307 2W	32- 27.3 3633 4N	076- 08.8 8763 2W	32- 31.6 1044 4N			EX1205L1_EX0319 2012_2012- 194_0085_2012071 2_192113_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
0086_201 20712_19 5835_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp	7/12/ 12	6.0	TUR N	076- 16.0 3771 3W	32- 27.5 6035 9N	076- 11.2 1485 0W	32- 31.3 4174 9N			EX1205L1_EX0319 2012_2012- 194_0086_2012071 2_195835_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
0087_201 20712_20 1941_EX 1205L1_ MB.all	EX1205L1_XBT33_12 0711.asvp/EX1205L1 _XBT334_120711.asv p	7/12/ 12	6.0		076- 14.5 4864 6W	32- 27.4 4122 0N	076- 08.6 1854 6W	32- 31.7 0312 5N			EX1205L1_EX0319 2012_2012- 194_0087_2012071 2_201941_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

0088_201 20712_20 5544_EX 1205L1_ MB.all	EX1205L1_XBT34_12 0711.asvp	7/12/ 12	8.5		076- 15.3 9104 1W	32- 26.1 9823 4N	076- 07.7 8842 0W	32- 31.2 2353 2N			EX1205L1_EX0319 2012_2012- 194_0088_2012071 2_205544_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0089_201 20713_11 5340_EX 1205L1_ MB.all	EX1205L1_XBT34_12 0711.asvp	7/13/ 2012	9.0	271	076- 15.3 2732 6W	32- 30.2 0161 0N	076- 10.6 9474 9W	32- 34.3 8006 1N	2012- 07-13 11:53 :40.3 47	2012- 07-13 12:16 :37.3 54	EX1205L1_EX0319 2012_2012- 195_0089_2012071 3_115340_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0090_201 20713_12 1627_EX 1205L1_ MB.all	EX1205L1_XBT34_12 0711.asvp	7/13/ 2012	9.0	TUR N	076- 17.3 1436 8W	32- 30.4 0139 2N	076- 12.9 6235 6W	32- 34.9 9462 4N	2012- 07-13 12:16 :17.8 56	2012- 07-13 12:25 :25.8 57	EX1205L1_EX0319 2012_2012- 195_0090_2012071 3_121627_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0091_201 20713_12 2526_EX 1205L1_ MB.all	EX1205L1_XBT34_12 0711.asvp, EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0	86	076- 14.7 6895 0W	32- 30.8 5068 1N	076- 06.9 4730 3W	32- 35.7 4711 5N	2012- 07-13 12:25 :16.3 59	2012- 07-13 13:08 :01.8 65	EX1205L1_EX0319 2012_2012- 195_0091_2012071 3_122526_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0092_201 20713_13 0752_EX 1205L1_ MB.all	EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0		076- 10.3 2974 7W	32- 27.5 7307 1N	076- 04.8 5097 2W	32- 35.7 4001 0N	7/13/ 2012 1:07: 42 PM	2012- 07-13 13:47 :18.8 75	EX1205L1_EX0319 2012_2012- 195_0092_2012071 3_130752_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0093_201 20713_13 4719_EX 1205L1_ MB.all	EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0	273	076- 14.2 6101 3W	32- 27.3 3684 7N	076- 08.6 6576 7W	32- 31.7 3674 3N	7/13/ 2012 1:47: 10 PM	2012- 07-13 14:26 :12.3 86	EX1205L1_EX0319 2012_2012- 195_0093_2012071 3_134719_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0094_201 20713_14 2603_EX 1205L1_ MB.all	EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0	TUR N	076- 16.3 6550 5W	32- 27.4 8300 6N	076- 12.1 6228 2W	32- 31.6 2134 1N	7/13/ 2012 2:25: 53 PM	2012- 07-13 14:40 :55.3 89	EX1205L1_EX0319 2012_2012- 195_0094_2012071 3_142603_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0095_201 20713_14 4046_EX 1205L1_ MB.all	EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0	93	076- 14.2 1787 6W	32- 27.6 2440 4N	076- 12.3 0602 5W	32- 31.6 0229 6N	7/13/ 2012 2:40: 37 PM	2012- 07-13 14:48 :58.8 89	EX1205L1_EX0319 2012_2012- 195_0095_2012071 3_144046_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0096_201 20713_14 4849_EX	EX1205L1_XBT35_12 0711.asvp	7/13/ 2012	6.0	93	076- 13.1 5638	32- 27.4 3561	076- 08.7 7245	32- 31.8 0492	7/13/ 2012 2:48: 15:18	2012- 07-13 15:18	EX1205L1_EX0319 2012_2012- 195_0096_2012071	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_MB.all					6W	3N	4W	1N	39 PM	:52.8 96	3_144849_EX1205L1_MB.txt	Cape Fear Diapir	LAKE_RIDGE_DIAPIRS_WGS84_30 M
0097_20120713_151843_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	TUR N	076-11.0 4969 0W	32-27.4 7058 9N	076-06.6 7325 9W	32-31.7 6993 8N	7/13/2012 3:18:33 PM	2012-07-13 15:28:31.8 99	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0098_20120713_152822_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	273	076-14.1 5459 7W	32-27.3 8141 4N	076-09.0 6698 7W	32-31.7 2719 3N	7/13/2012 3:28:13 PM	2012-07-13 16:04:33.4 07	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0099_20120713_160423_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp	7/13/2012	6.0	TUR N	076-16.5 7378 5W	32-27.5 0321 0N	076-12.3 1004 7W	32-31.6 1301 9N	7/13/2012 4:04:14 PM	2012-07-13 16:19:41.9 14	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0100_20120713_161942_EX1205L1_MB.all	EX1205L1_XBT35_120711.asvp, EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	93	076-14.1 5288 9W	32-27.4 3663 4N	076-08.7 9976 0W	32-31.7 7269 9N	7/13/2012 4:19:32 PM	2012-07-13 16:59:12.9 22	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0101_20120713_165903_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TUR N	076-10.9 5569 8W	32-27.5 2560 3N	076-06.5 7147 8W	32-31.6 5574 0N	7/13/2012 4:58:53 PM	2012-07-13 17:10:25.9 23	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0102_20120713_171026_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	273	076-14.2 9496 4W	32-27.4 1566 7N	076-08.5 8930 8W	32-31.7 8607 1N	7/13/2012 5:10:16 PM	2012-07-13 17:49:36.9 35	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0103_20120713_174937_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	TUR N	076-16.4 0869 4W	32-27.5 8628 6N	076-12.0 4898 4W	32-31.6 0519 8N	7/13/2012 5:49:27 PM	2012-07-13 18:03:16.9 40	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0104_20120713_180317_EX1205L1_MB.all	EX1205L1_XBT36_120711.asvp	7/13/2012	6.0	93	076-14.1 2310 8W	32-27.5 0674 7N	076-08.6 9750 8W	32-31.8 1927 3N	7/13/2012 6:03:07 PM	2012-07-13 18:41:40.9 52	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_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
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_18 4131_EX 1205L1_ MB.all	0711.asvp	2012		N	11.0 9933 8W	27.5 0219 9N	06.6 7923 8W	31.7 3741 0N	2012 6:41: 22 PM	07-13 18:50 :24.9 52	2012_2012- 195_0105_2012071 3_184131_EX1205 L1_MB.txt	Ridge Diapir & Cape Fear Diapir	OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0106_201 20713_18 5025_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	273	076- 14.2 5019 8W	32- 27.4 4689 6N	076- 08.3 3664 1W	32- 31.7 7898 3N	7/13/ 2012 6:50: 16 PM	2012- 07-13 19:28 :29.4 62	EX1205L1_EX0319 2012_2012- 195_0106_2012071 3_185025_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0107_201 20713_19 2820_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	TUR N	076- 16.3 5401 3W	32- 27.6 0167 0N	076- 11.7 8239 7W	32- 31.5 7808 1N	7/13/ 2012 7:28: 11 PM	2012- 07-13 19:39 :38.4 65	EX1205L1_EX0319 2012_2012- 195_0107_2012071 3_192820_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0108_201 20713_19 3938_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	93	076- 14.4 0425 0W	32- 27.5 5021 7N	076- 08.6 7757 2W	32- 31.8 2086 8N	7/13/ 2012 7:39: 29 PM	2012- 07-13 20:18 :28.9 73	EX1205L1_EX0319 2012_2012- 195_0108_2012071 3_193938_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0109_201 20713_20 1856_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	94	076- 09.5 2690 6W	32- 27.5 9492 9N	076- 08.5 4934 4W	32- 31.6 2229 7N	7/13/ 2012 8:18: 56 PM	2012- 07-13 20:19 :53.4 74	EX1205L1_EX0319 2012_2012- 195_0109_2012071 3_201856_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0110_201 20713_20 1943_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	TUR N	076- 10.9 1359 6W	32- 27.5 1234 7N	076- 06.6 6713 3W	32- 31.8 8437 4N	7/13/ 2012 8:19: 34 PM	2012- 07-13 20:28 :24.4 75	EX1205L1_EX0319 2012_2012- 195_0110_2012071 3_201943_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0111_201 20713_20 2824_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	273	076- 14.2 6980 7W	32- 27.8 0841 6N	076- 08.6 2270 9W	32- 32.0 7604 5N	7/13/ 2012 8:28: 15 PM	2012- 07-13 21:06 :16.9 86	EX1205L1_EX0319 2012_2012- 195_0111_2012071 3_202824_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0112_201 20713_21 0607_EX 1205L1_ MB.all	EX1205L1_XBT36_12 0711.asvp	7/13/ 2012	6.0	TUR N	076- 16.1 5885 9W	32- 27.0 2160 9N	076- 10.4 5850 7W	32- 31.8 2035 9N	7/13/ 2012 9:05: 58 PM	2012- 07-13 21:40 :05.4 98	EX1205L1_EX0319 2012_2012- 195_0112_2012071 3_210607_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0113_201 20714_13 1507_EX 1205L1	EX1205L1_XBT36_12 0711.asvp, EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	130	076- 13.7 7963 9W	32- 27.5 5990 8N	076- 08.7 3194 0W	32- 32.5 0068 3N	7/14/ 2012 1:15: 08	2012- 07-14 13:52 :23.7	EX1205L1_EX0319 2012_2012- 196_0113_2012071 4_131507_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	33	L1_MB.txt	Diapir	M
0114_201 20714_13 5224_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 11.2 9929 8W	32- 27.7 6084 5N	076- 06.6 1491 1W	32- 31.8 8087 4N	7/14/ 2012 1:52: 14 PM	2012- 07-14 14:02 :43.7 38	EX1205L1_EX0319 2012_2012- 196_0114_2012071 4_135224_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0115_201 20714_14 0243_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	273	076- 14.1 0208 2W	32- 27.7 5066 2N	076- 08.6 1388 5W	32- 32.0 9856 6N	7/14/ 2012 2:02: 34 PM	2012- 07-14 14:40 :26.7 49	EX1205L1_EX0319 2012_2012- 196_0115_2012071 4_140243_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0116_201 20714_14 4027_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 16.3 0202 4W	32- 27.8 5123 3N	076- 11.9 9059 4W	32- 31.8 8262 1N	7/14/ 2012 2:40: 17 PM	2012- 07-14 14:52 :51.2 50	EX1205L1_EX0319 2012_2012- 196_0116_2012071 4_144027_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0117_201 20714_14 5241_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	93	076- 14.4 7466 2W	32- 27.5 4652 5N	076- 08.2 3729 7W	32- 31.8 9745 8N	7/14/ 2012 2:52: 32 PM	2012- 07-14 15:32 :31.7 61	EX1205L1_EX0319 2012_2012- 196_0117_2012071 4_145241_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0118_201 20714_15 3222_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 11.0 6854 6W	32- 27.7 0335 5N	076- 06.3 9294 2W	32- 31.9 4123 8N	7/14/ 2012 3:32: 13 PM	2012- 07-14 15:44 :24.2 60	EX1205L1_EX0319 2012_2012- 196_0118_2012071 4_153222_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0119_201 20714_15 4414_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	273	076- 14.0 6705 5W	32- 27.7 2100 8N	076- 08.8 2695 6W	32- 32.0 7484 9N	7/14/ 2012 3:44: 05 PM	2012- 07-14 16:21 :44.7 72	EX1205L1_EX0319 2012_2012- 196_0119_2012071 4_154414_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0120_201 20714_16 2135_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 16.3 5984 0W	32- 27.7 1516 4N	076- 12.1 9250 3W	32- 31.8 2009 1N	7/14/ 2012 4:21: 26 PM	2012- 07-14 16:35 :12.2 78	EX1205L1_EX0319 2012_2012- 196_0120_2012071 4_162135_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0121_201 20714_16 3512_EX 1205L1_ MB.all	EX1205L1_XBT37_12 0714.asvp, EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	93	076- 14.3 6738 4W	32- 27.5 6847 9N	076- 08.4 3919 9W	32- 31.8 7741 9N	7/14/ 2012 4:35: 03 PM	2012- 07-14 17:14 :39.2 85	EX1205L1_EX0319 2012_2012- 196_0121_2012071 4_163512_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0122_201 20714_17	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 10.9	32- 27.6	076- 06.3	32- 32.0	7/14/ 2012	2012- 07-14	EX1205L1_EX0319 2012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_5 OM,

1429_EX 1205L1_ MB.all					7156 4W	6611 4N	9368 1W	6122 2N	5:14: 20 PM	17:27 :31.2 88	196_0122_2012071 4_171429_EX1205 L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0123_201 20714_17 2731_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	273	076- 14.1 2909 6W	32- 27.6 7706 7N	076- 08.8 6849 5W	32- 32.0 8712 5N	7/14/ 2012 5:27: 22 PM	2012- 07-14 18:05 :40.7 99	EX1205L1_EX0319 2012_2012- 196_0123_2012071 4_172731_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
0124_201 20714_18 0541_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 16.3 7115 3W	32- 27.6 8313 8N	076- 12.2 3555 1W	32- 31.8 2920 5N	7/14/ 2012 6:05: 32 PM	2012- 07-14 18:18 :58.8 02	EX1205L1_EX0319 2012_2012- 196_0124_2012071 4_180541_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
0125_201 20714_18 1858_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	93	076- 14.1 8954 9W	32- 27.7 3659 8N	076- 10.4 0427 0W	32- 31.9 2627 3N	7/14/ 2012 6:18: 49 PM	2012- 07-14 18:42 :43.8 08	EX1205L1_EX0319 2012_2012- 196_0125_2012071 4_181858_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
0126_201 20714_18 4234_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	6.0	TUR N	076- 13.4 9829 4W	32- 27.7 9344 8N	076- 08.4 1483 6W	32- 32.0 6304 4N	7/14/ 2012 6:42: 25 PM	2012- 07-14 18:56 :41.3 10	EX1205L1_EX0319 2012_2012- 196_0126_2012071 4_184234_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
0127_201 20714_18 5641_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp	7/14/ 2012	9.5	358	076- 15.2 3229 3W	32- 30.8 7656 4N	076- 08.8 6159 5W	32- 44.9 1254 4N	7/14/ 2012 6:56: 32 PM	7/14/ 2012 8:20: 42 PM	EX1205L1_EX0319 2012_2012- 196_0127_2012071 4_185641_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
0128_201 20714_20 2032_EX 1205L1_ MB.all	EX1205L1_XBT38_12 0714.asvp, EX1205L1_XBT39_12 0714.asvp	7/14/ 2012	7.6	182	076- 15.2 8400 7W	32- 31.2 5196 2N	076- 10.0 4422 1W	32- 47.1 6030 4N	7/14/ 2012 8:20: 23 PM	7/14/ 2012 10:20 :45 PM	EX1205L1_EX0319 2012_2012- 196_0128_2012071 4_202032_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
0129_201 20714_22 2035_EX 1205L1_ MB.all	EX1205L1_XBT39_12 0714.asvp	7/14/ 2012	7.4	181	076- 14.9 1408 8W	32- 28.4 6321 1N	076- 09.8 8571 0W	32- 31.3 0586 6N	7/14/ 2012 10:20 :26 PM	7/14/ 2012 10:41 :34 PM	EX1205L1_EX0319 2012_2012- 196_0129_2012071 4_222035_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
0130 DOES NOT EXIST	0130 DOES NOT EXIST	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOE S NOT EXIS	130 DOES NOT EXIST	130 DOES NOT EXIST	130 DOES NOT EXIST

		T	T	T	T	T	T	T	T	T			
0131_201 20715_13 4924_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	9.0	114	076- 11.8 0102 OW	32- 29.7 2230 3N	076- 09.9 4849 7W	32- 32.6 8313 8N	2012- 07-15 13:49 :24.5 90	2012- 07-15 13:50 :41.5 91	EX1205L1_EX0319 2012_2012- 197_0131_2012071 5_134924_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0132 DOES NOT EXIST	0132 DOES NOT EXIST	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOE S NOT EXIS T	0132 DOES NOT EXIST	132 DOES NOT EXIST	132 DOES NOT EXIST
0133 DOES NOT EXIST	0133 DOES NOT EXIST	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOE S NOT EXIS T	0133 DOES NOT EXIST	133 DOES NOT EXIST	133 DOES NOT EXIST
0134_201 20715_14 0357_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	8.7	358	076- 13.3 2887 8W	32- 31.6 8439 7N	076- 07.0 3829 3W	32- 45.3 2098 6N	7/15/ 2012 2:03: 57 PM	2012- 07-15 15:34 :40.1 40	EX1205L1_EX0319 2012_2012- 197_0134_2012071 5_140357_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0135_201 20715_15 3440_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	8.6	64	076- 13.3 1818 3W	32- 43.5 6242 7N	075- 55.0 5665 9W	32- 54.2 8852 4N	7/15/ 2012 3:34: 31 PM	7/15/ 2012 5:19: 43 PM	EX1205L1_EX0319 2012_2012- 197_0135_2012071 5_153440_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0136_201 20715_17 1933_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	7.2	turn	075- 58.1 3686 7W	32- 50.0 8757 6N	075- 53.0 8345 1W	32- 54.2 3572 7N	7/15/ 2012 5:19: 24 PM	7/15/ 2012 5:31: 42 PM	EX1205L1_EX0319 2012_2012- 197_0136_2012071 5_171933_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0137_201 20715_17 3132_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	8.6	12	075- 58.4 1773 1W	32- 52.1 1002 3N	075- 51.5 8053 7W	33- 02.6 1506 6N	7/15/ 2012 5:31: 23 PM	7/15/ 2012 6:43: 13 PM	EX1205L1_EX0319 2012_2012- 197_0137_2012071 5_173132_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0138_201 20715_18 4303_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp	7/15/ 2012	6.8	turn	075- 58.2 4305 9W	33- 00.6 4907 7N	075- 51.7 3699 6W	33- 05.1 6565 7N	7/15/ 2012 6:42: 54 PM	7/15/ 2012 6:58: 48 PM	EX1205L1_EX0319 2012_2012- 197_0138_2012071 5_184303_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M

0139_201 20715_18 5838_EX 1205L1_ MB.all	EX1205L1_XBT40_12 0715.asvp,EX1205L1 XBT41_120715.asvp	7/15/ 2012	8.4	191	075- 59.4 7993 2W	32- 53.3 3968 5N	075- 53.2 5045 0W	33- 03.0 9564 9N	7/15/ 2012 6:58: 29 PM	7/15/ 2012 8:02: 17 PM	EX1205L1_EX0319 2012_2012- 197_0139_2012071 5_185838_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0140_201 20715_20 0208_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp	7/15/ 2012	9.5	turn	075- 59.3 9436 4W	32- 51.2 3040 7N	075- 52.4 2165 7W	32- 55.4 0497 6N	7/15/ 2012 8:01: 59 PM	7/15/ 2012 8:17: 54 PM	EX1205L1_EX0319 2012_2012- 197_0140_2012071 5_200208_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0141_201 20715_20 1745_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp	7/15/ 2012	8.4	13	075- 56.9 3185 0W	32- 53.2 1466 8N	075- 51.1 1507 0W	32- 58.8 7908 8N	7/15/ 2012 8:17: 36 PM	7/15/ 2012 8:54: 24 PM	EX1205L1_EX0319 2012_2012- 197_0141_2012071 5_201745_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0142_201 20715_20 5413_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp	7/15/ 2012	7.0	turn	075- 55.9 6468 5W	32- 56.7 0594 7N	075- 50.7 2127 9W	33- 00.9 6475 2N	7/15/ 2012 8:54: 04 PM	7/15/ 2012 9:04: 21 PM	EX1205L1_EX0319 2012_2012- 197_0142_2012071 5_205413_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0143_201 20715_21 0412_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp	7/15/ 2012	7.3	278	075- 56.6 5283 3W	32- 56.5 5569 7N	075- 53.1 1206 7W	33- 00.9 8472 5N	7/15/ 2012 9:04: 03 PM	7/15/ 2012 9:24: 17 PM	EX1205L1_EX0319 2012_2012- 197_0143_2012071 5_210412_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0144_201 20715_21 2408_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp	7/15/ 2012	4.3	turn	075- 59.1 2762 2W	32- 56.1 6507 6N	075- 53.7 9744 4W	33- 00.5 3824 7N	7/15/ 2012 9:23: 58 PM	7/15/ 2012 9:46: 26 PM	EX1205L1_EX0319 2012_2012- 197_0144_2012071 5_212408_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0145_201 20716_12 4446_EX 1205L1_ MB.all	EX1205L1_XBT41_12 0715.asvp, EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	241	076- 00.2 5898 4W	32- 59.0 5062 8N	075- 54.2 8381 9W	33- 04.6 1776 7N	7/16/ 2012 1:12: 01 PM	2012- 07-16 13:49 :16.4 40	EX1205L1_EX0319 2012_2012- 198_0145_2012071 6_124446_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0146_201 20716_13 1210_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	9.5	075- 59.9 1626 8W	33- 02.3 0904 5N	075- 54.2 1320 8W	33- 07.2 0515 2N	7/16/ 2012 1:48: 57 PM	2012- 07-16 14:01 :37.9 44	EX1205L1_EX0319 2012_2012- 198_0146_2012071 6_131210_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0147_201 20716_13 4906_EX	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	115	075- 57.3 1816	33- 01.9 7835	075- 49.6 6867	33- 08.0 8179	7/16/ 2012 2:01: 14:41	2012- 07-16 14:41	EX1205L1_EX0319 2012_2012- 198_0147_2012071	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_ MB.all					7W	7N	5W	8N	19 PM	:49.4 51	6_134906_EX1205 L1 MB.txt	Cape Fear Diapir	LAKE_RIDGE_DIAPIRS_WGS84_30 M
0148_201 20716_14 0128_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	69	075- 53.4 8217 8W	33- 03.6 9680 5N	075- 53.0 4276 2W	33- 08.1 3869 0N	7/16/ 2012 2:41: 30 PM	2012- 07-16 14:43 :16.9 50	EX1205L1_EX0319 2012_2012- 198_0148_2012071 6_140128_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
0149_201 20716_14 4139_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	278	075- 57.0 9055 8W	33- 03.7 2154 9N	075- 53.2 9408 2W	33- 08.5 6058 0N	7/16/ 2012 2:42: 57 PM	2012- 07-16 15:08 :09.4 60	EX1205L1_EX0319 2012_2012- 198_0149_2012071 6_144139_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
0150_201 20716_14 4307_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	278	076- 00.0 0239 8W	32- 56.9 5260 2N	075- 53.5 0337 2W	33- 01.6 2616 4N	7/16/ 2012 12:44 :46 PM	2012- 07-16 13:12 :20.4 29	EX1205L1_EX0319 2012_2012- 198_0150_2012071 6_144307_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
0151_201 20716_15 0809_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	10.1	076- 00.3 5204 1W	33- 04.0 0962 2N	075- 55.1 8220 6W	33- 09.8 2417 6N	7/16/ 2012 3:08: 00 PM	2012- 07-16 15:25 :17.4 62	EX1205L1_EX0319 2012_2012- 198_0151_2012071 6_150809_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
0152_201 20716_15 2507_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	96.3	075- 57.1 9938 3W	33- 05.3 4487 1N	075- 49.8 2813 5W	33- 09.7 9861 9N	7/16/ 2012 3:24: 58 PM	2012- 07-16 16:03 :58.4 73	EX1205L1_EX0319 2012_2012- 198_0152_2012071 6_152507_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
0153_201 20716_16 0348_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp	7/16/ 2012	8.5	turn	075- 52.5 8470 6W	33- 05.3 7001 1N	075- 47.3 7682 6W	33- 09.8 0226 3N	7/16/ 2012 4:03: 39 PM	2012- 07-16 16:15 :29.9 73	EX1205L1_EX0319 2012_2012- 198_0153_2012071 6_160348_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
0154_201 20716_16 1530_EX 1205L1_ MB.all	EX1205L1_XBT42_12 0716.asvp, EX1205L1_XBT43_12 0716.asvp	7/16/ 2012	8.5	193	075- 55.5 3631 4W	32- 52.7 4372 4N	075- 47.8 2846 0W	33- 08.3 7288 3N	7/16/ 2012 4:15: 20 PM	2012- 07-16 17:56 :01.0 00	EX1205L1_EX0319 2012_2012- 198_0154_2012071 6_161530_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
0155_201 20716_17 5601_EX 1205L1_ MB.all	EX1205L1_XBT43_12 0716.asvp	7/16/ 2012	8.5	259	076- 06.4 0439 7W	32- 48.5 9902 2N	075- 50.8 3270 0W	32- 55.3 1603 9N	7/16/ 2012 5:55: 52 PM	2012- 07-16 19:11 :38.0 19	EX1205L1_EX0319 2012_2012- 198_0155_2012071 6_175601_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
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_19 1138_EX 1205L1_ MB.all	0716.asvp	2012			09.8 8645 3W	44.2 5683 5N	03.6 3225 3W	52.4 8464 5N	2012 7:11: 29 PM	2012 7:53: 50 PM	2012_2012- 198_0156_2012071 6_191138_EX1205 L1_MB.txt	Ridge Diapir & Cape Fear Diapir	OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0157_201 20716_19 5415_EX 1205L1_ MB.all	EX1205L1_XBT43_12 0716.asvp	7/16/ 2012	9.4	178	076- 09.8 8949 8W	32- 33.6 7021 4N	076- 03.7 4109 2W	32- 44.6 6705 8N	7/16/ 2012 7:54: 16 PM	7/16/ 2012 9:05: 23 PM	EX1205L1_EX0319 2012_2012- 198_0157_2012071 6_195415_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0158_201 20716_21 0522_EX 1205L1_ MB.all	EX1205L1_XBT43_12 0716.asvp	7/16/ 2012	8.5	235	076- 13.7 9206 6W	32- 27.6 6722 8N	076- 03.7 2278 6W	32- 34.6 6981 1N	7/16/ 2012 9:05: 14 PM	7/16/ 2012 9:55: 59 PM	EX1205L1_EX0319 2012_2012- 198_0158_2012071 6_210522_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0159_201 20717_12 5741_EX 1205L1_ MB.all	EX1205L1_XBT43_12 0716.asvp, EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	155	076- 14.5 4771 4W	32- 27.5 8227 4N	076- 07.9 4415 7W	32- 32.1 5939 3N	7/17/ 2012 12:57 :42 PM	2012- 07-17 13:32 :21.7 87	EX1205L1_EX0319 2012_2012- 199_0159_2012071 7_125741_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0160_201 20717_13 3212_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	71	076- 14.8 2378 2W	32- 24.5 9835 5N	076- 09.6 6013 2W	32- 29.0 1064 1N	7/17/ 2012 1:32: 03 PM	2012- 07-17 14:05 :04.2 96	EX1205L1_EX0319 2012_2012- 199_0160_2012071 7_133212_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0161_201 20717_14 0454_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	352	076- 15.1 0777 5W	32- 22.4 8078 5N	076- 10.0 0765 0W	32- 26.5 0957 4N	7/17/ 2012 2:04: 45 PM	2012- 07-17 14:19 :07.2 98	EX1205L1_EX0319 2012_2012- 199_0161_2012071 7_140454_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0162_201 20717_14 1857_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	195	076- 13.5 4133 4W	32- 23.1 4787 0N	076- 03.1 8744 3W	32- 29.4 7343 7N	7/17/ 2012 2:18: 48 PM	2012- 07-17 15:21 :52.8 13	EX1205L1_EX0319 2012_2012- 199_0162_2012071 7_141857_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0163_201 20717_15 2143_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	231	076- 05.3 3538 8W	32- 23.9 8807 9N	076- 00.3 6694 3W	32- 29.6 6181 2N	7/17/ 2012 3:21: 34 PM	2012- 07-17 15:46 :43.8 21	EX1205L1_EX0319 2012_2012- 199_0163_2012071 7_152143_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0164_201 20717_15 4644_EX 1205L1	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	251	076- 11.8 3483 0W	32- 21.1 6170 1N	076- 02.0 0912 4W	32- 27.7 1888 0N	7/17/ 2012 3:46: 34	2012- 07-17 16:48 :26.8	EX1205L1_EX0319 2012_2012- 199_0164_2012071 7_154644_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30

MB.all									PM	36	L1_MB.txt	Diapir	M
0165_201 20717_16 4827_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp	7/17/ 2012	7.0	150	076- 14.0 4448 3W	32- 19.0 5489 2N	076- 08.5 7426 8W	32- 24.9 9374 7N	7/17/ 2012 4:48: 17 PM	2012- 07-17 17:16 :39.8 42	EX1205L1_EX0319 2012_2012- 199_0165_2012071 7_164827_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0166_201 20717_17 1630_EX 1205L1_ MB.all	EX1205L1_XBT44_12 0717.asvp, EX1205L1_XBT45_12 0717.asvp,	7/17/ 2012	7.0	71	076- 10.6 3854 9W	32- 19.4 2404 4N	076- 00.7 1116 5W	32- 25.8 4431 8N	7/17/ 2012 5:16: 21 PM	2012- 07-17 18:18 :00.8 57	EX1205L1_EX0319 2012_2012- 199_0166_2012071 7_171630_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0167_201 20717_18 1801_EX 1205L1_ MB.all	EX1205L1_XBT45_12 0717.asvp	7/17/ 2012	7.0	153	076- 02.6 5837 7W	32- 20.2 1904 0N	075- 57.4 1411 5W	32- 25.9 7971 4N	7/17/ 2012 6:17: 52 PM	2012- 07-17 18:44 :31.3 62	EX1205L1_EX0319 2012_2012- 199_0167_2012071 7_181801_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0168_201 20717_18 4431_EX 1205L1_ MB.all	EX1205L1_XBT45_12 0717.asvp	7/17/ 2012	7.0	251	076- 08.9 6457 6W	32- 17.3 9209 5N	075- 59.7 2430 5W	32- 24.1 3025 1N	7/17/ 2012 6:44: 22 PM	2012- 07-17 19:46 :05.3 76	EX1205L1_EX0319 2012_2012- 199_0168_2012071 7_184431_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0169_201 20717_19 4605_EX 1205L1_ MB.all	EX1205L1_XBT45_12 0717.asvp	7/17/ 2012	7.0	251	076- 12.8 2957 3W	32- 16.2 2211 6N	076- 07.9 3639 1W	32- 21.2 1896 0N	7/17/ 2012 7:45: 56 PM	7/17/ 2012 8:09: 23 PM	EX1205L1_EX0319 2012_2012- 199_0169_2012071 7_194605_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0170_201 20717_20 0913_EX 1205L1_ MB.all	EX1205L1_XBT45_12 0717.asvp, EX1205L1_XBT46_12 0717.asvp	7/17/ 2012	7.3	336	076- 16.7 5096 6W	32- 17.3 9785 3N	076- 09.0 5878 1W	32- 25.3 6144 9N	7/17/ 2012 8:09: 04 PM	7/17/ 2012 9:06: 17 PM	EX1205L1_EX0319 2012_2012- 199_0170_2012071 7_200913_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0171_201 20717_21 0607_EX 1205L1_ MB.all	EX1205L1_XBT46_12 0717.asvp	7/17/ 2012	8.0	007	076- 17.0 4977 1W	32- 23.6 2038 5N	076- 12.1 0895 9W	32- 29.3 2304 3N	7/17/ 2012 9:05: 58 PM	7/17/ 2012 9:42: 34 PM	EX1205L1_EX0319 2012_2012- 199_0171_2012071 7_210607_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0172_201 20717_21 4224_EX 1205L1_ MB.all	EX1205L1_XBT46_12 0717.asvp	7/17/ 2012	7.0	117	076- 16.7 9963 8W	32- 27.1 9790 7N	076- 09.9 4367 0W	32- 31.3 2170 4N	7/17/ 2012 9:42: 14 PM	7/17/ 2012 10:02 :43 PM	EX1205L1_EX0319 2012_2012- 199_0172_2012071 7_214224_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0173_201 20718_13	EX1205L1_XBT46_12 0717.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_EX0319 2012_2012-	Blake Ridge	EX1205L1_MB_FNL_ALL_WGS84_5 OM,

4356_EX 1205L1_ MB.all	EX1205L1_XBT47_12 0718.asvp				6789 7W	3479 3N	9345 8W	5692 9N	1:43: 56 PM	14:04 :38.6 46	200_0173_2012071 8_134356_EX1205 L1_MB.txt	Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0174_201 20718_14 0429_EX 1205L1_ MB.all	EX1205L1_XBT47_12 0718.asvp	7/18/ 2012	9.0	320	076- 27.8 0021 4W	32- 29.6 8176 5N	076- 11.0 0989 4W	32- 44.7 4713 6N	7/18/ 2012 2:04: 20 PM	2012- 07-18 16:04 :42.1 74	EX1205L1_EX0319 2012_2012- 200_0174_2012071 8_140429_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
0175_201 20718_16 0432_EX 1205L1_ MB.all	EX1205L1_XBT47_12 0718.asvp, EX1205L1_XBT48_12 0718.asvp	7/18/ 2012	9.0	319	076- 35.1 9078 2W	32- 42.3 2726 5N	076- 25.2 5337 7W	32- 51.2 5114 0N	7/18/ 2012 4:04: 23 PM	2012- 07-18 17:11 :43.1 92	EX1205L1_EX0319 2012_2012- 200_0175_2012071 8_160432_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
0176_201 20718_17 1134_EX 1205L1_ MB.all	EX1205L1_XBT48_12 0718.asvp	7/18/ 2012	9.0	34	076- 35.9 4369 3W	32- 49.4 4711 4N	076- 23.5 6056 8W	33- 04.7 2167 2N	7/18/ 2012 5:11: 24 PM	2012- 07-18 19:04 :04.2 20	EX1205L1_EX0319 2012_2012- 200_0176_2012071 8_171134_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir, 800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M, , EX1205L1_MB_FNL_800M_ISOBAT H WGS84_30M
0177_201 20718_19 0404_EX 1205L1_ MB.all	EX1205L1_XBT48_12 0718.asvp, EX1205L1_XBT49_12 0718.asvp	7/18/ 2012	9.0	34	076- 25.8 6223 3W	33- 03.6 6632 5N	076- 16.4 0490 2W	33- 15.3 2715 2N	7/18/ 2012 7:03: 55 PM	2012- 07-18 20:27 :10.2 37	EX1205L1_EX0319 2012_2012- 200_0177_2012071 8_190404_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir, 800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M, , EX1205L1_MB_FNL_800M_ISOBAT H WGS84_30M
0178_201 20718_20 2710_EX 1205L1_ MB.all	EX1205L1_XBT49_12 0718.asvp	7/18/ 202	9.0	37	076- 18.5 5021 0W	33- 03.1 7790 4N	076- 01.9 4557 7W	33- 16.0 8694 2N	7/18/ 2012 8:27: 01 PM	2012- 07-18 22:27 :15.2 69	EX1205L1_EX0319 2012_2012- 200_0178_2012071 8_202710_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
0179_201 20718_22 2715_EX 1205L1_ MB.all	EX1205L1_XBT49_12 0718.asvp	7/18/ 202	7.5	137	076- 05.9 9291 6W	32- 56.9 0783 6N	075- 54.3 7409 8W	33- 05.0 3084 6N	7/18/ 2012 10:27 :06 PM	7/18/ 2012 11:39 :32 PM	EX1205L1_EX0319 2012_2012- 200_0179_2012071 8_222715_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
0180_201 20719_17 0513_EX 1205L1_ MB.all	EX1205L1_XBT49_12 0718.asvp, EX1205L1_XBT50_12 0719.asvp	7/19/ 2012	8.5	278	076- 01.3 0157 7W	32- 57.0 9958 3N	075- 55.0 4609 9W	33- 02.0 1379 4N	7/19/ 2012 5:05: 14 PM	2012- 07-19 17:46 :07.0 51	EX1205L1_EX0319 2012_2012- 201_0180_2012071 9_170513_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
0181_201		7/19/	8.5	278	076-	32-	075-	33-	7/19/	2012-	EX1205L1_EX0319	Blake	EX1205L1_MB_FNL_ALL_WGS84_5

20719_17 4557_EX 1205L1_ MB.all	EX1205L1_XBT50_12 0719.asvp	2012			01.3 0157 7W	57.0 9958 3N	55.0 4609 9W	02.0 1379 4N	2012 5:05: 14 PM	07-19 17:46 :07.0 51	2012_2012- 201_0181_2012071 9_174557_EX1205 L1_MB.txt	Ridge Diapir & Cape Fear Diapir	OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0182_201 20719_18 4052_EX 1205L1_ MB.all	EX1205L1_XBT50_12 0719.asvp	7/19/ 2012	6.9	171	076- 09.6 9950 8W	32- 53.6 6547 3N	076- 04.9 3205 1W	32- 59.4 1104 1N	7/19/ 2012 6:40: 44 PM	2012- 07-19 19:05 :53.0 69	EX1205L1_EX0319 2012_2012- 201_0182_2012071 9_184052_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0183_201 20719_19 0543_EX 1205L1_ MB.all	EX1205L1_XBT50_12 0719.asvp	7/19/ 2012	8.6	77	076- 06.6 4583 3W	32- 53.8 0338 9N	075- 58.3 8447 7W	32- 59.8 1300 3N	2012- 07-19 19:05 :33.5 70	2012- 07-19 19:51 :50.5 83	EX1205L1_EX0319 2012_2012- 201_0183_2012071 9_190543_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0184_201 20719_19 5141_EX 1205L1_ MB.all	EX1205L1_XBT50_12 0719.asvp	7/19/ 2012	8.3	77	075- 59.2 7780 7W	32- 55.8 1039 3N	075- 58.3 7900 8W	32- 59.6 3421 6N	2012- 07-19 19:51 :32.0 81	2012- 07-19 19:51 :59.0 80	EX1205L1_EX0319 2012_2012- 201_0184_2012071 9_195141_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0185_201 20719_19 5149_EX 1205L1_ MB.all	EX1205L1_XBT50_12 0719.asvp	7/19/ 2012	6.4	179	076- 00.7 7722 5W	32- 54.0 6400 8N	075- 55.5 9428 9W	32- 59.8 3158 4N	2012- 07-19 19:51 :40.5 82	2012- 07-19 20:14 :27.5 89	EX1205L1_EX0319 2012_2012- 201_0185_2012071 9_195149_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0186_201 20719_20 1427_EX 1205L1_ MB.all	EX1205L1_XBT51_12 0719.asvp	7/19/ 2012	6.1	254	076- 08.1 7932 9W	32- 51.7 8788 2N	075- 57.4 6775 4W	32- 57.8 4277 2N	7/19/ 2012 8:14: 18 PM	2012- 07-19 21:32 :09.1 41	EX1205L1_EX0319 2012_2012- 201_0186_2012071 9_201427_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0187_201 20719_21 3209_EX 1205L1_ MB.all	EX1205L1_XBT51_12 0719.asvp	7/19/ 2012	7.5	276	076- 25.3 8695 0W	32- 51.6 5343 9N	076- 06.5 3181 7W	32- 54.7 8897 4N	7/19/ 2012 9:32: 00 PM	2012- 07-19 23:32 :07.6 35	EX1205L1_EX0319 2012_2012- 201_0187_2012071 9_213209_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0188_201 20719_23 3207_EX 1205L1_ MB.all	EX1205L1_XBT51_12 0719.asvp	7/19/ 2012	7.7	275	076- 29.6 6293 3W	32- 52.7 2443 8N	076- 25.1 1797 1W	32- 55.1 1731 6N	7/19/ 2012 11:31 :58 PM	2012- 07-20 00:00 :09.1 43	EX1205L1_EX0319 2012_2012- 201_0188_2012071 9_233207_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0189_201 20720_00 0009_EX 1205L1	EX1205L1_XBT51_12 0719.asvp	07/2 0/20 12	7.7	268	076- 32.3 6970 5W	32- 52.8 4839 3N	076- 29.3 2030 7W	32- 55.1 1151 3N	2012- 07-20 00:00 :09.6	2012- 07-20 00:13 :50.1	EX1205L1_EX0319 2012_2012- 202_0189_2012072 0_000009_EX1205	800 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M

MB.all									43	47	L1_MB.txt		
0190_201 20720_00 1350_EX 1205L1_ MB.all	EX1205L1_XBT51_12 0719.asvp, EX1205L1_XBT52_12 0720.asvp	07/2 0/20 12	7.7	221	076- 44.7 4548 7W	32- 41.2 3493 8N	076- 30.5 6198 3W	32- 54.5 7412 8N	2012- 07-20 00:13 :40.6 51	2012- 07-20 02:13 :51.6 78	EX1205L1_EX0319 2012_2012- 202_0190_2012072 0_001350_EX1205 L1_MB.txt	801 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0191_201 20720_02 1352_EX 1205L1_ MB.all	EX1205L1_XBT52_12 0720.asvp	07/2 0/20 12	7.7	225	076- 56.6 5673 3W	32- 29.6 4923 0N	076- 42.9 2778 2W	32- 42.5 7136 9N	2012- 07-20 02:13 :42.1 77	2012- 07-20 04:13 :49.7 08	EX1205L1_EX0319 2012_2012- 202_0191_2012072 0_021352_EX1205 L1_MB.txt	802 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0192_201 20720_04 1350_EX 1205L1_ MB.all	EX1205L1_XBT52_12 0720.asvp	07/2 0/20 12	7.4	225	077- 08.1 2463 6W	32- 18.4 3786 5N	076- 54.9 3173 3W	32- 31.0 0118 2N	2012- 07-20 04:13 :40.7 07	2012- 07-20 06:14 :02.2 33	EX1205L1_EX0319 2012_2012- 202_0192_2012072 0_041350_EX1205 L1_MB.txt	803 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0193_201 20720_06 1352_EX 1205L1_ MB.all	EX1205L1_XBT52_12 0720.asvp	07/2 0/20 12	7.3	225	077- 11.2 2890 1W	32- 15.7 4061 2N	077- 06.3 8386 8W	32- 19.9 0880 8N	2012- 07-20 06:13 :43.2 36	2012- 07-20 06:45 :08.7 44	EX1205L1_EX0319 2012_2012- 202_0193_2012072 0_061352_EX1205 L1_MB.txt	804 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0194_201 20720_06 4458_EX 1205L1_ MB.all	EX1205L1_XBT52_12 0720.asvp	07/2 0/20 12	9.1	103	077- 11.2 3711 4W	32- 14.6 1644 5N	077- 07.6 4146 8W	32- 16.7 6063 3N	2012- 07-20 06:44 :49.7 42	2012- 07-20 06:57 :16.2 45	EX1205L1_EX0319 2012_2012- 202_0194_2012072 0_064458_EX1205 L1_MB.txt	805 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0195_201 20720_06 5707_EX 1205L1_ MB.all	EX1205L1_XBT52_12 0720.asvp, EX1205L1_XBT54_12 0720.asvp	07/2 0/20 12	8.8	45	077- 09.5 2418 8W	32- 15.3 5487 6N	076- 53.9 4458 8W	32- 29.9 8586 4N	2012- 07-20 06:56 :57.7 42	2012- 07-20 08:57 :18.2 78	EX1205L1_EX0319 2012_2012- 202_0195_2012072 0_065707_EX1205 L1_MB.txt	806 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0196_201 20720_08 5709_EX 1205L1_ MB.all	EX1205L1_XBT54_12 0720.asvp, EX1205L1_XBT55_12 0720.asvp	07/2 0/20 12	9.0	45	076- 55.8 5574 1W	32- 28.7 1963 9N	076- 39.9 6220 9W	32- 43.4 9149 3N	2012- 07-20 08:56 :59.2 74	2012- 07-20 10:57 :08.3 04	EX1205L1_EX0319 2012_2012- 202_0196_2012072 0_085709_EX1205 L1_MB.txt	807 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0197_201 20720_10 5708_EX 1205L1_ MB.all	EX1205L1_XBT55_12 0720.asvp	07/2 0/20 12	8.5	45	076- 41.9 4086 6W	32- 42.2 5374 9N	076- 29.7 7995 7W	32- 53.2 9571 6N	2012- 07-20 10:56 :58.8 04	2012- 07-20 12:28 :22.3 26	EX1205L1_EX0319 2012_2012- 202_0197_2012072 0_105708_EX1205 L1_MB.txt	808 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0198_201 20720_12	EX1205L1_XBT55_12 0720.asvp	07/2 0/20	8.5	156	076- 31.8	32- 51.2	076- 28.9	32- 53.8	2012- 07-20	2012- 07-20	EX1205L1_EX0319 2012_2012-	809 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 OM,

2812_EX 1205L1_ MB.all		12			8037 3W	3900 5N	8406 4W	4079 1N	12:28 :02.8 30	12:47 :33.3 34	202_0198_2012072 0_122812_EX1205 L1_MB.txt		EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0199_201 20720_12 4723_EX 1205L1_ MB.all	EX1205L1_XBT55_12 0720.asvp, EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	219	076- 32.6 4606 5W	32- 49.4 3020 4N	076- 29.1 8428 2W	32- 51.9 5365 8N	2012- 07-20 12:47 :13.8 35	2012- 07-20 13:12 :44.8 41	EX1205L1_EX0319 2012_2012- 202_0199_2012072 0_124723_EX1205 L1_MB.txt	810 meter isobath	EX1205L1_MB_FNL_ALL_WGS84_5 0M, EX1205L1_MB_FNL_800M_ISOBAT H_WGS84_30M
0200_201 20720_13 1235_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	138	076- 32.6 0976 3W	32- 48.5 9384 8N	076- 30.7 0463 9W	32- 49.6 4121 2N	2012- 07-20 13:12 :25.8 40	2012- 07-20 13:18 :52.3 42	EX1205L1_EX0319 2012_2012- 202_0200_2012072 0_131235_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
0201_201 20720_13 1852_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	133	076- 31.7 6377 1W	32- 37.2 0422 8N	076- 14.3 7284 3W	32- 49.2 9095 8N	2012- 07-20 13:18 :42.8 43	2012- 07-20 15:19 :05.3 70	EX1205L1_EX0319 2012_2012- 202_0201_2012072 0_131852_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
0202_201 20720_15 1855_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	134	076- 16.6 7112 1W	32- 36.8 2048 3N	076- 13.9 3789 9W	32- 38.7 2688 6N	2012- 07-20 15:18 :45.8 72	2012- 07-20 15:22 :51.3 72	EX1205L1_EX0319 2012_2012- 202_0202_2012072 0_151855_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
0203_201 20720_15 2242_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	164	076- 16.2 9578 4W	32- 30.1 1022 8N	076- 10.5 8686 9W	32- 38.4 2285 5N	2012- 07-20 15:22 :32.3 73	2012- 07-20 16:18 :08.3 86	EX1205L1_EX0319 2012_2012- 202_0203_2012072 0_152242_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
0204_201 20720_16 1808_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	149	076- 13.5 1094 1W	32- 28.7 9084 2N	076- 09.5 7013 5W	32- 31.0 6440 9N	2012- 07-20 16:17 :58.8 86	2012- 07-20 16:38 :44.8 91	EX1205L1_EX0319 2012_2012- 202_0204_2012072 0_161808_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
0205_201 20720_16 3835_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	30	076- 12.3 4069 8W	32- 27.6 1328 6N	076- 08.6 5899 5W	32- 30.9 8298 3N	2012- 07-20 16:38 :25.3 91	2012- 07-20 16:51 :44.8 98	EX1205L1_EX0319 2012_2012- 202_0205_2012072 0_163835_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
0206_201 20720_16 5135_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	272	076- 12.9 4619 5W	32- 28.3 3691 8N	076- 10.1 9009 9W	32- 30.9 7779 2N	2012- 07-20 16:51 :25.8 94	2012- 07-20 17:21 :11.3 98	EX1205L1_EX0319 2012_2012- 202_0206_2012072 0_165135_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

0207_201 20720_17 2101_EX 1205L1_ MB.all	EX1205L1_XBT56_12 0720.asvp	07/2 0/20 12	8.5	169	076- 14.2 3442 5W	32- 28.2 8028 1N	076- 10.9 5314 8W	32- 30.9 3147 5N	2012- 07-20 17:20 :52.3 98	2012- 07-20 17:34 :31.9 04	EX1205L1_EX0319 2012_2012- 202_0207_2012072 0_172101_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0208_201 20721_16 1413_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.2	55	076- 10.6 7855 1W	32- 29.8 1178 0N	076- 00.7 2125 1W	32- 36.9 5958 1N	2012- 07-21 16:14 :13.2 37	2012- 07-21 17:20 :51.7 54	EX1205L1_EX0319 2012_2012- 203_0208_2012072 1_161413_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0209_201 20721_17 2052_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	5.7	10	076- 04.1 6185 5W	32- 33.9 3489 7N	075- 59.6 5282 0W	32- 37.0 0412 4N	2012- 07-21 17:20 :42.2 56	2012- 07-21 17:27 :38.7 59	EX1205L1_EX0319 2012_2012- 203_0209_2012072 1_172052_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0210_201 20721_17 2738_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	8.0	357	076- 05.6 6561 5W	32- 35.4 7348 1N	075- 59.6 6874 4W	32- 45.6 3570 8N	2012- 07-21 17:27 :29.2 59	2012- 07-21 18:39 :41.2 74	EX1205L1_EX0319 2012_2012- 203_0210_2012072 1_172738_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0211_201 20721_18 3941_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.5	334	076- 05.5 4270 1W	32- 44.6 1923 9N	076- 00.8 9515 3W	32- 47.3 2897 4N	2012- 07-21 18:39 :31.7 75	2012- 07-21 18:46 :06.2 75	EX1205L1_EX0319 2012_2012- 203_0211_2012072 1_183941_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0212_201 20721_18 4606_EX 1205L1_ MB.ALL	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.0	323	076- 09.8 9605 4W	32- 44.7 3785 8N	076- 01.8 5319 5W	32- 52.0 8200 9N	2012- 07-21 18:45 :56.7 79	2012- 07-21 19:38 :01.2 89	EX1205L1_EX0319 2012_2012- 203_0212_2012072 1_184606_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0213_201 20721_19 3751_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.2	331	076- 12.9 5924 1W	32- 49.3 3858 8N	076- 06.5 1588 6W	32- 56.1 0332 0N	2012- 07-21 19:37 :41.7 90	2012- 07-21 20:18 :31.7 97	EX1205L1_EX0319 2012_2012- 203_0213_2012072 1_193751_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0214_201 20721_20 1822_EX 1205L1_ MB.all	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.8	357	076- 13.5 7752 7W	32- 53.5 6642 1N	076- 09.1 1544 2W	32- 56.1 3336 6N	2012- 07-21 20:18 :12.7 99	2012- 07-21 20:20 :53.3 00	EX1205L1_EX0319 2012_2012- 203_0214_2012072 1_201822_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0215_201 20721_20 2044_EX	EX1205L1_XBT57_12 0721.asvp	7/21/ 2012	7.6	012	076- 13.6 5605	32- 54.9 3890	076- 08.9 1299	32- 59.1 9112	2012- 07-21 20:20	2012- 07-21 20:43	EX1205L1_EX0319 2012_2012- 203_0215_2012072	Blake Ridge Diapir &	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B

1205L1_ MB.all					2W	4N	3W	2N	:34.7 98	:34.8 03	1_202044_EX1205 L1 MB.txt	Cape Fear Diapir	LAKE RIDGE DIAPIRS_WGS84_30 M
0216_201 20721_20 4335_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	55	076- 12.5 2962 6W	32- 56.4 4964 9N	076- 04.7 6881 6W	33- 02.5 8989 1N	2012- 07-21 20:43 :25.3 04	2012- 07-21 21:21 :07.3 14	EX1205L1_EX0319 2012_2012- 203_0216_2012072 1_204335_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0217_201 20721_21 2057_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	65	076- 07.5 1127 2W	32- 59.2 3108 9N	076- 01.9 2395 7W	33- 04.2 4671 0N	2012- 07-21 21:20 :48.3 13	2012- 07-21 21:42 :52.3 18	EX1205L1_EX0319 2012_2012- 203_0217_2012072 1_212057_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0218_201 20721_21 4242_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	100	076- 04.4 9695 6W	33- 00.2 7748 4N	076- 01.6 5837 1W	33- 04.4 3956 1N	2012- 07-21 21:42 :32.8 15	2012- 07-21 21:48 :20.8 20	EX1205L1_EX0319 2012_2012- 203_0218_2012072 1_214242_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0219_201 20721_21 4810_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	108	076- 03.1 8380 9W	32- 57.5 7407 4N	075- 49.2 6046 4W	33- 04.4 1821 6N	2012- 07-21 21:48 :01.3 22	2012- 07-21 23:05 :16.8 42	EX1205L1_EX0319 2012_2012- 203_0219_2012072 1_214810_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0220_201 20721_23 0507_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	219	075- 52.4 2775 9W	32- 57.3 6780 3N	075- 47.6 7961 9W	33- 01.5 8158 0N	2012- 07-21 23:04 :57.8 40	2012- 07-21 23:12 :55.8 41	EX1205L1_EX0319 2012_2012- 203_0220_2012072 1_230507_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0221_201 20721_23 1256_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/21/ 2012	7.6	259	075- 56.9 8265 7W	32- 55.9 4062 6N	075- 49.6 4315 7W	33- 01.3 0966 4N	2012- 07-21 23:12 :46.8 41	2012- 07-21 23:58 :46.8 57	EX1205L1_EX0319 2012_2012- 203_0221_2012072 1_231256_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0222_201 20722_12 5954_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/22/ 2012	0.2	221	075- 57.1 2233 3W	32- 56.3 2692 9N	075- 54.1 9493 3W	33- 00.6 8214 8N	2012- 07-22 12:59 :55.0 45	2012- 07-22 13:58 :58.5 61	EX1205L1_EX0319 2012_2012- 204_0222_2012072 2_125954_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
0223_201 20722_13 5848_EX 1205L1_ MB.all	EX1205L1_XBT58_12 0721.asvp	7/22/ 2012	1.1	98	075- 58.2 9214 6W	32- 56.2 3974 7N	075- 53.7 8472 1W	33- 00.7 3746 1N	2012- 07-22 13:58 :39.0 60	2012- 07-22 15:44 :20.0 85	EX1205L1_EX0319 2012_2012- 204_0223_2012072 2_135848_EX1205 L1 MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE RIDGE DIAPIRS_WGS84_30 M
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_15 4410_EX 1205L1_ MB.all	0722.asvp	2012			54.5 0283 2W	55.7 6653 8N	45.3 6102 7W	00.6 7672 0N	07-22 15:44 :01.0 85	07-22 16:35 :47.5 97	2012_2012- 204_0224_2012072 2_154410_EX1205 L1_MB.txt	Ridge Diapir & Cape Fear Diapir	OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0225_201 20722_19 3905_EX 1205L1_ MB.all	EX1205L1_XBT59_12 0722.asvp	7/22/ 2012	7.6	316	075- 47.0 0605 8W	33- 00.2 7696 8N	075- 39.9 0195 8W	33- 05.2 0794 9N	2012- 07-22 19:39 :05.6 46	2012- 07-22 20:04 :52.6 46	EX1205L1_EX0319 2012_2012- 204_0225_2012072 2_193905_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0226_201 20722_20 0452_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	8.3	13	075- 46.9 3287 5W	33- 03.5 0867 7N	075- 41.1 1153 2W	33- 09.2 1453 9N	2012- 07-22 20:04 :43.6 45	2012- 07-22 20:43 :37.6 54	EX1205L1_EX0319 2012_2012- 204_0226_2012072 2_200452_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0227_201 20722_20 4327_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	7.4	275	075- 48.5 1136 1W	33- 07.0 4221 0N	075- 41.1 1937 7W	33- 11.3 1942 7N	2012- 07-22 20:43 :18.1 56	2012- 07-22 21:05 :50.1 67	EX1205L1_EX0319 2012_2012- 204_0227_2012072 2_204327_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0228_201 20722_21 0550_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	7.9	193	075- 52.0 9319 1W	32- 53.0 2906 0N	075- 44.1 2374 8W	33- 09.6 9002 8N	2012- 07-22 21:05 :41.1 67	2012- 07-22 23:06 :02.6 98	EX1205L1_EX0319 2012_2012- 204_0228_2012072 2_210550_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0229_201 20722_23 0553_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	7.6	196	075- 52.2 3802 7W	32- 51.8 7328 6N	075- 47.2 0732 4W	32- 53.6 7369 6N	2012- 07-22 23:05 :44.1 97	2012- 07-22 23:12 :02.6 99	EX1205L1_EX0319 2012_2012- 204_0229_2012072 2_230553_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0230_201 20722_23 1153_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	7.8	220	075- 52.9 3445 6W	32- 50.2 4978 6N	075- 47.7 1998 5W	32- 53.6 6492 7N	2012- 07-22 23:11 :43.6 98	2012- 07-22 23:24 :03.2 02	EX1205L1_EX0319 2012_2012- 204_0230_2012072 2_231153_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0231_201 20722_23 2403_EX 1205L1_ MB.all	EX1205L1_XBT60_12 0722.asvp	7/22/ 2012	8.5	329	075- 58.4 7034 9W	32- 49.2 8738 6N	075- 48.9 4441 8W	32- 59.2 9842 8N	2012- 07-22 23:23 :54.2 01	2012- 07-23 00:23 :38.7 15	EX1205L1_EX0319 2012_2012- 204_0231_2012072 2_232403_EX1205 L1_MB.txt	Blake Ridge Diapir & Cape Fear Diapir	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_RIDGE_DIAPIRS_WGS84_30 M
0232_201 20723_19 0851_EX 1205L1	EX1205L1_XBT61_12 0723.asvp	7/23/ 2012	8.4	331	075- 59.9 8839 6W	33- 00.1 9567 3N	075- 53.3 5035 1W	33- 06.5 2711 9N	2012- 07-23 19:08 :51.9	2012- 07-23 19:39 :52.5	EX1205L1_EX0319 2012_2012- 205_0232_2012072 3_190851_EX1205	Blake Ridge Diapir & Cape Fear	EX1205L1_MB_FNL_ALL_WGS84_5 OM, EX1205L1_MB_FNL_CAPE_FEAR_B LAKE_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 OM, 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 OM, 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 OM, 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 OM, 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 OM, 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 OM
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 OM
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 OM

1336_EX 1205L1_ MB.all					7637 5W	1095 8N	9442 8W	3382 7N	07:13 :36.6 92	08:48 :18.2 18	206_0241_2012072 4_071336_EX1205 L1_MB.txt		
0242_201 20724_08 4818_EX 1205L1_ MB.all	SVP Server in use	7/24/ 2012	6.4	352	076- 41.4 3466 5W	34- 22.0 8807 4N	076- 39.1 4561 4W	34- 34.2 2767 6N	2012- 07-24 08:48 .18:7 18	2012- 07-24 10:43 :54.7 48	EX1205L1_EX0319 2012_2012- 206_0242_2012072 4_084818_EX1205 L1_MB.txt	Transit	EX1205L1_MB_FNL_ALL_WGS84_5 0M

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 APPLICABLE				
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 South 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 South 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 South 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 depths 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 across-track 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 across track 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					
Water depth (m)	Swath Width (m)	Ping Rate (pings/second)	Alongtrack distance between profiles (m)		
			@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					
Water depth (m)	Swath Width (m)	Ping Rate	Alongtrack distance between profiles (m)		
			@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


```

#{ MCAST4 /// Link settings.

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

#{ Position /// Position input settings.
  ** None [0] [1]
  ** GKG [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] [0]
    ** Runtime Parameters [0] [0]
    ** Installation Paramet [0] [0]
    ** 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] [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]
  #} 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:

    #} Attitude 2, COM3:

#} 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	7-2 11.7		31: 823.3 818.6 840.3 843.7
0-6 121.7	7-3 11.7		32: 848.9 868.4 847.5 862.5
0-7 121.3	7-4 11.7		
0-8 121.3			Transducer impedance limits [250.0 2000.0] ohm
0-9 122.2			Board 1 2 3 4
0-10 122.2	Input voltage 6V	2012.07.19 13:13:31.316 101 5 OK	1: 329.5 344.2 347.2 353.9
0-11 121.7			2: 346.9 347.0 352.2 347.3
0-12 124.2	RX32 Spec: 5.0 - 7.0		3: 330.9 328.8 365.4 367.1
0-13 120.9	7-1 5.7		4: 336.5 348.0 376.1 354.4
0-14 122.6	7-2 5.7		5: 329.1 354.7 367.5 355.1
0-15 122.6	7-3 5.7	BSP 1 RXI TO RAW FIFO: ok	6: 318.7 338.5 346.4 359.4
0-16 122.2	7-4 5.7	BSP 2 RXI TO RAW FIFO: ok	7: 333.6 343.1 376.6 363.5
0-17 121.7			8: 327.4 334.9 356.1 395.2
0-18 122.2			9: 355.3 352.6 377.3 351.3
0-19 121.3	TRU power test passed		10: 347.8 346.0 370.1 345.8
0-20 121.7			11: 319.8 370.9 388.8 386.2
0-21 122.2			12: 332.2 358.4 361.1 383.3
0-22 122.6		2012.07.19 13:13:36.817 101 6 OK	13: 337.1 340.7 386.4 386.2
0-23 121.7			14: 357.1 344.9 399.6 373.8
0-24 121.7			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
Input voltage 12V	2012.07.19 13:10:55.457 101 4 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*	
TX36 Spec: 11.0 - 13.0			
0-1 11.9	EM 302 High Voltage Ramp Test		
0-2 11.9	Test Voltage:20.00 Measured Voltage: 18.00		
0-3 11.9	PASSED		
0-4 11.9	Test Voltage:40.00 Measured Voltage: 39.00		
0-5 11.9	PASSED		
0-6 11.9	Test Voltage:60.00 Measured Voltage: 59.00		
0-7 11.9	PASSED		
0-8 11.9	Test Voltage:80.00 Measured Voltage: 79.00		
0-9 11.9	PASSED		
0-10 11.9	Test Voltage:100.00 Measured Voltage: 100.00		
0-11 11.9	PASSED		
0-12 11.9	Test Voltage:120.00 Measured Voltage: 121.00		
0-13 11.9	PASSED		
0-14 11.9	Test Voltage:120.00 Measured Voltage: 121.00		
0-15 11.9	PASSED		
0-16 12.0	Test Voltage:100.00 Measured Voltage: 106.00		
0-17 11.9	PASSED		
0-18 11.9	Test Voltage:80.00 Measured Voltage: 85.00		
0-19 11.9	PASSED		
0-20 11.9	Test Voltage:60.00 Measured Voltage: 65.00		
0-21 11.9	PASSED		
0-22 11.9	Test Voltage:40.00 Measured Voltage: 45.00		
0-23 11.8	PASSED		
0-24 11.9			
	11 of 11 tests OK		
RX32 Spec: 11.0 - 13.0			
7-1 11.6			

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: 192.168.2.20:0xfffff00

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

