Seq# 001

Line Name: MGL1407MCS01 **Line Brg :** 141.239 °

NAVIGATION LINE LOGS

DATE: 2014-08-23 **JULIAN DAY:** 235

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS **SURVEY:** ECS 2D Seismic Mission **AREA:** Eastern North America Margin between lat's 31N-40N

DC SOL :	1.9 m	DEPTH SOL :	1667.7 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	135.4 m	DEPTH EOL :	4241.1 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.6 kts	FEATHER SOL:	02.0 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.0 kts	FEATHER EOL:	-29.7 °	GRAVITY METER:	BMG-II: used, SN210
WEATHER		MAX FEATHER:	-72.7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	19 kts				
WIND EOL:	25 kts				
SEAS SOL:	1.5 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
546	14:07	SOL	start of 2D acquisition 25m shot spacing, 6km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Compass 25 offline from SOL KO in spectra
942	15:21	Bathy	EM122 depth tracking false bottom SOL – SP 942
1110	15:51	multibeam	restart HDDS EM122
1177	16:04	sonabuoy	launch seq1
1369	16:39	XBT	launch seq4
1650	17:31	rgps2	gun string2 gps now working
1902	18:18	XBT	launch seq5
2046	18:44	tow config	Move streamer to work on strain on tow point
2201	18:36	rgps2	lost data sp's 2201 to 2250.
2672	20:41	rgps3	lost data sp's 2672to 2777. (more outages after)
3107	22:01	XBT	launch seq6
3715	23:57	XBT	launch seq7
3729	23:59	midnight SP	last sp of day
4318	01:51	XBT	launch seq8
4414	02:09	tension	reduce vessel speed to 3.8kts – streamer tension up to 5000psi.
4418	02:10	rgps4	gun string4 gps not working. - bracket has fallen over
4880	03:45	rgps2	gun string2 gps not working
4905	03:50	XBT	launch seq9
5500	05:45	XBT	launch seq10
6100	07:42	XBT	launch seq11
6645	09:29	Gun	220cubic inch gun 2-9 turned off (timing), turn on 180cubic inch gun 1-5 - new volume 6560
6744	09:50	XBT	launch seq12
7300	11:42	XBT	launch seq13
7764	13:09	Sonabuoy	Launch seq2
7900	13:35	XBT	Launch Seq14
7903	13:35	Vessel	Autopilot unable to hold offset d/t strong currents. Being pushed offline due to Gulf Stream currents
8461	15:30	feather	streamer totally straight with 60deg feather/crab to line heading.
8500	15:39	XBT	launch Seq15
9009	17:32	strm depth	Change streamer depth to 12m, was 9m.
9071	17:46	strm depth	change streamer depth to 13m
9140	18:00	feather	Both feather and crab angle starting to reduce intensity
10185	21:26	strm depth	change streamer depth to 11m, was 13m
10967	23:59	midnight SP	last sp of day
11415	01:29	EOL	End of line
		EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	546	39° 13' 28.728"	-072° 12' 37.815"
LSP	11415	37° 18' 01.554"	-070° 17' 27.613"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	214.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	intermittent
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	intermittent

acoustics
OPERATIONAL

MGL1407.LMN mgl2010.RTCN

SP spacing: 25.0m

line status: Complete

Seq# 002

Line Name: MGL1407MCS02 **Line Brg :** 148.76 °

NAVIGATION LINE LOGS

DATE: 2014-08-25 **JULIAN DAY:** 237

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS **SURVEY:** ECS 2D Seismic Mission **AREA:** Eastern North America Margin between lat's 31N-40N

DC SOL :	1.8 m	DEPTH SOL :	4241.8 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	26.4 m	DEPTH EOL :	4468.0 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.3 kts	FEATHER SOL:	-24.1 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	3.7 kts	FEATHER EOL:	07.1 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-26.9 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	NE 25 kts				
WIND EOL:	26.4 kts				
SEAS SOL:	2.0 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
20040	01:36	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Compass 25 offline from SOL KO in spectra
20165	02:25	sonabuoy	Launch seq3
20169	02:27	XBT	Launch seq16
20332	03:32	sonabuoy	launch seq4
20332	03:33	XBT	launch seq17
20523	04:51	Feather	Feather < 20°
20597	05:24	XBT	Launch Seq18
21042	08:38	XBT	Launch Seq19
21042	08:38	Feather	Feather < 15°
21332	10:30	Feather	Feather < 10°
21442	11:11	XBT	Launch Seq20
21564	11:58	Sonabuoy	Launch Seq5
21587	12:07	XBT	Launch Seq21
21839	13:46	XBT	Launch Seq22
21995	14:49	EOL	
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	20040	37° 17' 36.521"	-070° 17' 09.251"
LSP	21995	36° 32' 19.790"	-069° 43' 12.665"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	214.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	none

acoustics
OPERATIONAL

MGL1407.LMN mgl2010.RTCN

SP spacing: 50.0m

line status: Complete

Seq# 003

Line Name: MGL1407MCS03 **Line Brg :** 128.903 °

NAVIGATION LINE LOGS

DATE: 2014-08-25 **JULIAN DAY:** 237

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS **SURVEY:** ECS 2D Seismic Mission **AREA:** Eastern North America Margin between lat's 31N-40N

DC SOL :	-72.7 m	DEPTH SOL :	4468.0 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-772.4 m	DEPTH EOL :	4652.6 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.7 kts	FEATHER SOL:	-13.0 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	3.9 kts	FEATHER EOL:	10.2 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-13.2 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	NE 26.4 kts				
WIND EOL:	NE 20 kts				
SEAS SOL:	2.0 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
24991	14:42	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Compass 25 offline from SOL KO in spectra
25209	16:25	sonabuoy	launch seq7
25463	18:21	sonabuoy	launch seq8
25478	18:28	XBT	launch seq23
26014	22:24	sonabuoy	launch seq9
26229	23:59	midnight	last sp of day
26511	01:59	XBT	launch seq24
	02:33	turn	Start port turn to next line
26628	02:52	EEOL	Early end of line due to change in weather forecast.

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	24991	36° 32' 09.672"	-069° 43' 04.610"
LSP	26628	36° 04' 32.087"	-069° 00' 21.377"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	214.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	none

acoustics
OPERATIONAL

MGL1407.LMN mgl2010.RTCN

SP spacing: 50.0m

line status: Incomplete

Seq# 004

Line Name: MGL1407MCS06
Line Brg : 052.7 °

NAVIGATION LINE LOGS

DATE: 2014-08-26
JULIAN DAY: 238

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	-88.1 m	DEPTH SOL :	4639.5 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	16.0 m	DEPTH EOL :	4941.6 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.8 kts	FEATHER SOL:	-63.6 turn	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.5 kts	FEATHER EOL:	05.8 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	16.5 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	NE 20 kts				
WIND EOL:	E 12 kts				
SEAS SOL:	2.0 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
30023	02:59	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Compass 25 offline from SOL KO in spectra
30048	03:10	Turn	completed turn on line
30118	03:42	Sonabuoy	Sonabuoy Launch Seq10
30122	03:44	XBT	XBT Launch Seq25
30478	07:00	Sonabuoy	Sonabuoy Launch Seq11
30481	07:01	XBT	XBT Launch Seq26
30774	09:39	XBT	XBT Launch Seq27
30799	09:51	Sonabuoy	Sonabuoy Launch Seq12
31250	13:02	XBT	XBT Launch Seq28
31339	13:37	Sonabuoy	Sonabuoy Launch Seq13
31866	16:56	Sonabuoy	Sonabuoy Launch Seq14
31875	16:59	XBT	XBT Launch Seq29
32296	19:41	Sonabuoy	sonabuoy Launch Seq15
32309	19:46	XBT	XBT Launch Seq30
32623	21:45	Maggie	Start picking up Maggie
-	21:54	Maggie	Maggie on board
32650	21:55	EEOL	Early end of line due to approaching storm
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	30023	36° 04' 37.199"	-068° 59' 52.003"
LSP	32650	36° 49' 05.565"	-067° 51' 19.628"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	214.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	none

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: Incomplete

Seq# 005

Line Name: MGL1407MCS03A
Line Brg : 129.292 °

NAVIGATION LINE LOGS

DATE: 2014-08-29
JULIAN DAY: 241

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	-14935.8 m	DEPTH SOL :	4997.2 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-6060.5 m	DEPTH EOL :	4562.7 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.0 kts	FEATHER SOL:	-21.8 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	3.5 kts	FEATHER EOL:	-06.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-21.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	N 10 kts				
WIND EOL:	N 11.1 kts				
SEAS SOL:	1.5 m				
SEAS EOL:	1.5 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
34518	12:11	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Early start of line – large DC
34801	14:37	EEOL	Line aborted
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	34518	36° 22' 46.531"	-069° 12' 59.278"
LSP	34801	36° 14' 13.096"	-069° 09' 25.132"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	214.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: Incomplete

Seq# 006	Line Name:	MGL1407MCS03B	**NAVIGATION**	DATE: 2014-08-31	Lamont-Doherty Earth Observatory
	Line Brg :	129.292 °	**LINE LOGS**	JULIAN DAY: 243	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	11820.1 m	DEPTH SOL :	4521.7 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-746.5 m	DEPTH EOL :	4932.5 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.4 kts	FEATHER SOL:	25.8 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	3.7 kts	FEATHER EOL:	02.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	25.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	S 10.5 kts				
WIND EOL:	SSW 13 kts				
SEAS SOL:	0.5 m				
SEAS EOL:	0.5 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
35480	11:15	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up
			Assigned gun numbering incorrect in Spectra for gunstring 4
			Early start of line – large DC d/t approaching from far offline
35996	15:52	distance off	Now within 50m of precomputed line
36000	15:54	FSP	Actual start of line
36000	15:54	sonabuoy	Launch seq16
36053	16:22	XBT	Launch seq 38
36460	19:55	sonabuoy	Launch seq 17
36711	22:07	XBT	launch seq 39
36932	23:59	midnight	last sp of day
37367	00:07	sonabuoy	Launch Seq 18
	03:30	EOL	end of line
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	35480	36° 12' 12.497"	-069° 25' 15.568"
LSP	37367	35° 45' 05.695"	-068° 31' 26.209"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
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SP spacing: 50.0m

line status: complete

Seq# 007	Line Name:	MGL1407MCS07	**NAVIGATION**	DATE: 2014-09-01	Lamont-Doherty Earth Observatory
	Line Brg :	48.033 °	**LINE LOGS**	JULIAN DAY: 244	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	-245.7 m	DEPTH SOL :	4938.4 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-692.4 m	DEPTH EOL :	4917.3 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.8 kts	FEATHER SOL:	-76.3 (turn)	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.4 kts	FEATHER EOL:	06.6 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	10.0 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	SSW 13 kts				
WIND EOL:	WSW 20 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
40019	03:35	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6520
40399	06:04	XBT	XBT Seq040
40807	08:59	XBT	XBT Seq041
41070	10:52	RGPS	RGPS gun strings 3 and jumped approx. SP 41070-41180
41202	11:47	XBT	XBT Seq042
41609	14:28	XBT	XBT Seq043
42046	17:14	XBT	XBT Seq044
42405	19::26	XBT	XBT Seq045
42817	21:58	XBT	XBT Seq046
43148	23:59	MIDNIGHT	Last sp of day
43206	00:22	XBT	XBT Seq047
43608	02:55	XBT	XBT Seq048
43690	03:27	RGPS	RGPS gun string 3 jumped approx. SP 43690-43800
44006	05:36	XBT	XBT Seq049
44400	08:28	XBT	XBT Seq050
44801	10:55	XBT	XBT Seq051
44801	10:55	RGPS	RGPS gun string 3 jumped approx. SP 44790-44850 & 45020-45060
45200	13:26	XBT	XBT Seq052
45610	16:04	XBT	XBT Seq053
46004	18:36	XBT	XBT Seq054
46515	21:49	turn	start turn port to next line
46548	22:02	EOL	end of line
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	40019	35° 45' 09.549"	-068° 31' 04.458"
LSP	46548	37° 41' 29.470"	-065° 46' 09.193"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
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SP spacing: 50.0m

line status: complete

Seq# 008	Line Name:	MGL1407MCS08	**NAVIGATION**	DATE: 2014-09-02	Lamont-Doherty Earth Observatory
	Line Brg :	308.03 °	**LINE LOGS**	JULIAN DAY: 245	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	-434.4 m	DEPTH SOL :	4907.1 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-332.8 m	DEPTH EOL :	4862.9 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.2 kts	FEATHER SOL:	-89.2 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	2.4 kts	FEATHER EOL:	23.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-89.2 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	WSW 20 kts				
WIND EOL:	SW 25 kts				
SEAS SOL:	2.0 m				
SEAS EOL:	1-2 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
47026	22:08	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6520 rec length 18 second
47271	23:59	midnight	end of day
47394	00:57	XBT	XBT seq 55
	03:39	turn	start turn to port for seq 09
47756	04:01	EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	47026	37° 41' 56.989"	-065° 46' 12.720"
LSP	47756	37° 54' 02.217"	-066° 05' 51.934"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN | mgl2010.RTCN

SP spacing: 50.0m

line status: complete

Seq# 009

Line Name: MGL1407MCS06A

Line Brg : 232.8 °

NAVIGATION LINE LOGS

DATE: 2014-09-03

JULIAN DAY: 246

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Deborah Hutchinson - USGS

SURVEY: ECS 2D Seismic Mission

AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	-332.8 m	DEPTH SOL :	4865.5 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	127.7 m	DEPTH EOL :	4938.7 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	2.4 kts	FEATHER SOL:	-50.2 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.6 kts	FEATHER EOL:	-02.2 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-50.2 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	SW 25 kts				
WIND EOL:	W 17 kts				
SEAS SOL:	1.5 m				
SEAS EOL:	2.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
55008	04:03	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6520 – record length 18 second
			Streamer in turn at SOL
55031	04:19	Turn	End of turn onto line
55201	06:08	XBT	XBT – Seq056
55498	09:01	XCTD	XCTD – Seq057
55679	10:39	Sonabuoy	Sonabuoy Seq019
55798	11:38	XBT	XBT Seq058
55847	12:03	RGPS	power cycled gunstring 3 RGPS
56035	13:36	Sonabuoy	Sonabuoy Seq020
56120	14:17	XBT	XBT Seq059
56159	14:37	Sonabuoy	Sonabuoy Seq021
56393	16:41	XBT	XBT Seq060
56643	18:54	Sonabuoy	Sonabuoy Seq022
56703	19:24	XBT	XBT Seq061
57003	21:53	XBT	XBT Seq062
57038	22:11	Sonabuoy	Sonabuoy Seq023
57111	22:47	Sonabuoy	Sonabuoy Seq024
57260	23:59	midnight	Last sp of day
57303	00:21	Sonabuoy	Sonabuoy Seq025
57329	00:33	XBT	XBT Seq063
57616	02:39	XBT	XBT Seq064
57898	04:32	XBT	XBT Seq065
57982	05:06	Sonabuoy	Sonabuoy Seq026
58204	06:32	XBT	XBT Seq066
58251	06:50	Sonabuy	Sonabuoy Seq027
58500	08:24	XBT	XBT Seq067
55888	08:57	Sonabuoy	Sonabuoy Seq028
58801	10:15	Sonabuoy	Sonabuoy Seq029
58809	10:18	XBT	XBT Seq068
58851	10:34	Sonabuoy	Sonabuoy Seq030
59029	11:37	XCTD	XCTD Seq069
59073	11:52	EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	55008	37° 54' 01.438"	-066° 06' 00.860"
LSP	59073	36° 46' 52.192"	-067° 54' 57.026"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics: OPERATIONAL

MGL1407.LMN

mgl2010.RTCN

SP spacing: 50.0m

line status: complete

Seq# 010

Line Name: MGL1407MCS09 **Line Brg :** 258.915 °

NAVIGATION LINE LOGS

DATE: 2014-09-04 **JULIAN DAY:** 247

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS **SURVEY:** ECS 2D Seismic Mission **AREA:** Eastern North America Margin between lat's 31N-40N

DC SOL :	-16.9 m	DEPTH SOL :	4940.1 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-247.9 m	DEPTH EOL :	4487.1 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.4 kts	FEATHER SOL:	24.6 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.0 kts	FEATHER EOL:	09.2 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	09.9 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	W 17 kts				
WIND EOL:	NW 11.5 kts				
SEAS SOL:	2.0 m				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
60007	11:54	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
60472	16:36	Maggie	Maggie powered down to recover, noisy data
60511	14:49	XBT	XBT Seq70
60560	15:05	Maggie	Maggie cleaned off connections and redeployed
61517	20:29	XBT	XBT Seq71
62129	23:59	Midnight	Last sp of day
	01:58	turn	Start turn to port to seq 11 early at PI request
62472	02:05	EEOL	Early end of line – add more lines to survey during line change.
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	60007	36° 46' 49.453"	-067° 55' 08.862"
LSP	62472	36° 33' 25.489"	-069° 16' 10.836"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN mgl2010.RTCN

SP spacing: 50.0m

line status: complete

Seq# 011

Line Name: MGL1407MCS10A
Line Brg : 223.0 °

NAVIGATION LINE LOGS

DATE: 2014-09-05
JULIAN DAY: 248

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	27.4 m	DEPTH SOL :	4490.5 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-308.5 m	DEPTH EOL :	4503.2 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.7 kts	FEATHER SOL:	18.8 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.7 kts	FEATHER EOL:	03.4 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	17.0 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	NW 11.5 kts				
WIND EOL:	WSW 2.7 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	calm				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
65032	02:18	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
65048	02:30	sonabuoy	Seq 31
65386	04:55	sonabuoy	Seq 32
65417	05:09	Waypoint	Vessel passing site 106B – CPA 179.7m
65421	05:10	Waypoint	Center of source passing site 106B – CPA 135.7m
65792	07:57	sonabuoy	Seq 33
65937	09:05	sonabuoy	Seq 34
66007	09:38	XBT	Seq 72
	16:40	turn	start port turn to seq 12
67111	16:49	EOL	End of line
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	65032	36° 32' 50.052"	-069° 16' 53.967"
LSP	67111	35° 51' 25.632"	-070° 03' 47.971"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: complete

Seq# 012

Line Name: MGL1407MCS10B
Line Brg : 174.850 °

NAVIGATION LINE LOGS

DATE: 2014-09-05
JULIAN DAY: 248

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	25.0 m	DEPTH SOL :	4500.1 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	123.8 m	DEPTH EOL :	4933.5 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.8 kts	FEATHER SOL:	-41.9 (turn)	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.8 kts	FEATHER EOL:	01.1 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	04.6 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	WSW 2.8 kts				
WIND EOL:	N 4.4 kts				
SEAS SOL:	calm				
SEAS EOL:	<1.0				

	shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
	16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
	04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
68017	16:54	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
68663	20:35	XBT	XBT t5 seq73
68801	21:22	603F	vessel cpa to well 140m
68805	21:23	603F	source cpa to well 180m
69267	23:59	Midnight	last sp of day
69515	01:23	EOL	end of line
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	68017	35° 51' 01.034"	-070° 03' 50.703"
LSP	69515	35° 10' 40.196"	-069° 59' 28.923"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: complete

Seq# 013

Line Name: MGL1407MCS10C
Line Brg : 211.3 °

NAVIGATION LINE LOGS

DATE: 2014-09-06
JULIAN DAY: 249

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	-46.4 m	DEPTH SOL :	4932.4 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-261.8 m	DEPTH EOL :	5350.6 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.6 kts	FEATHER SOL:	35.8 TURN	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.7 kts	FEATHER EOL:	02.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-05.4 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	N 4.4 kts				
WIND EOL:	SSW 6.1 kts				
SEAS SOL:	< 1.0				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
70012	01:28	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
71577	10:24	XBT	XBT Seq 74
72591	16:04	gun string #3	removed from solution for repair – new volume sp 72592 is 5230 cu in's.
	16:08	streamer	move out of way of string 3 recovery
	16:19	gun volume	30 source units for 5490cu in's.
72645	16:22	Gun string #3	on board
	17:20	Gun string #3	Start string 3 out
72858	17:35	rgps s1g3	replacement pod 1322 now on string 3 and working
	17:36	Gun string #3	String 3 in place
72889	17:46	volume	new volume 6600cu in's.
	17:51	streamer	back at towpoint
	18:12	digishot	stopped shooting – reset digishot
	18:14	digishot	back on line after reboot
72998	18:24	gun volume	30 source units for 5490cu in's.
	18:32	gun string #3	start recovery of string and move steamer for recovery
	18:42	gun string #3	on board
	19:50	gun string #3	Start string 3 out
	20:04	gun string #3	String 3 in place
73312	20:10	volume	new volume 6560cu in's.
73893	23:27	EOL	End of line
		EOL	End of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	70012	35° 10' 18.939"	-069° 39' 59.397"
LSP	73893	33° 40' 16.940"	-071° 04' 45.592"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: complete

Seq# 014

Line Name: MGL1407MCS11A
Line Brg : 121.8 °

NAVIGATION LINE LOGS

DATE: 2014-09-06
JULIAN DAY: 249

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS
SURVEY: ECS 2D Seismic Mission
AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	26.7 m	DEPTH SOL :	5356.3 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	429.4 m	DEPTH EOL :	5404.6 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.6 kts	FEATHER SOL:	-73.0 TURN	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.3 kts	FEATHER EOL:	-01.8 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	06.3 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	SSW 5.5 kts				
WIND EOL:	SSW 10 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
74042	23:44	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
74086	23:59	Midnight	last sp of day
75441	07:49	XBT	Seq075
76880	16:14	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	74042	33° 38' 32.379"	-071° 02' 49.572"
LSP	76880	32° 58' 07.187"	-069° 46' 48.848"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN
mgl2010.RTCN
SP spacing: 50.0m

line status: complete

Seq# 015

Line Name: MGL1407MCS12A

Line Brg : 189.403 °

NAVIGATION LINE LOGS

DATE: 2014-09-07

JULIAN DAY: 250

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS

SURVEY: ECS 2D Seismic Mission

AREA: Eastern North America Margin between lat's 31N-40N

DC SOL :	89.6 m	DEPTH SOL :	5404.1 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	212.3 m	DEPTH EOL :	5422.1 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.3 kts	FEATHER SOL:	61.9 turn	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.9 kts	FEATHER EOL:	04.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	61.9 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	SSW 10 kts				
WIND EOL:	S 4 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	0.5 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
77014	16:19	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
78748	02:32	XBT	XBT – T5 seq76
80501	12:26	EOL	

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	77014	32° 57' 46.406"	-069° 46' 42.212"
LSP	80501	31° 24' 41.546"	-070° 04' 44.924"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics: OPERATIONAL

MGL1407.LMN

mgl2010.RTCN

SP spacing: 50.0m

line status: complete

Seq# 016	Line Name:	MGL1407MCS12B	**NAVIGATION**	DATE: 2014-09-08	Lamont-Doherty Earth Observatory
	Line Brg :	227.378 °	**LINE LOGS**	JULIAN DAY: 251	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	-33.1 m	DEPTH SOL :	5420.6 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	572.7 m	DEPTH EOL :	5423.3 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.7 kts	FEATHER SOL:	41.0 Turn	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.4 kts	FEATHER EOL:	-04.2 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	09.2 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	S 4 kts				
WIND EOL:	E 4.7 kts				
SEAS SOL:	0.5 m				
SEAS EOL:	< 1.0				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
81022	12:33	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
82206	19:16	XBT	XBT – T5 seq o77
83016	23:59	Midnight	Last sp of day
83408	02:22	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	81022	31° 24' 18.194"	-070° 05' 11.341"
LSP	83408	30° 40' 37.374"	-071° 00' 24.384"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

acoustics
OPERATIONAL

MGL1407.LMN | mgl2010.RTCN

SP spacing: 50.0m

line status: complete

Seq# 017

Line Name: MGL1407MCS13 **Line Brg :** 308.6 °

NAVIGATION LINE LOGS

DATE: 2014-09-09 **JULIAN DAY:** 252

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS **SURVEY:** ECS 2D Seismic Mission **AREA:** Eastern North America Margin between lat's 31N-40N

DC SOL :	248.1 m	DEPTH SOL :	5420.2 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	4.1 m	DEPTH EOL :	5394.0 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.6 kts	FEATHER SOL:	73.5 turn	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.8 kts	FEATHER EOL:	-01.1 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	07.0 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	E 4.7 kts				
WIND EOL:	S 9.1 kts				
SEAS SOL:	< 1.0m				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
84017	02:27	SOL	start of 2D acquisition 50m shot spacing, 8km streamer powered up – volume 6600 – record length 18 second
			Streamer in turn at SOL
84309	04:10	RGPS	Gunstring 3 RGPS offline
85331	09:58	XBT	Seq078
85526	11:04	Spectra	Adjusting spectra SCN, offsets being changed, multiple p2's created
85736	12:16	Gun string	Air leak on gunstring 4
85744	12:19	Gun string	Strings 3 and 4 disabled – to pickup gun string 4
85760	12:24	Gun string	streamer moved to starboard for picking up gunstring 4
85827	12:46	Gun string	gun string 4 onboard
85891	13:08	Gun string	begin deploying gun string 4
	13:19	Gun string	gun string 4 in place
85942	13:25	Gun string	gun string 3 in place
85942	13:25	Streamer	Streamer returned to center
85947	13:27	Gun string	Missed shot – troubleshooting digishot, no CTB in Spectra
85956	13:30	Gun string	Double shot – troubleshooting digishot
85958	13:30	Gun string	Missed shot – troubleshooting digishot, no CTB in Spectra
85961	13:32	Gun string	Missed shot – troubleshooting digishot, no CTB in Spectra
85962	13:32	Gun string	Missed shot – troubleshooting digishot, no CTB in Spectra
85963	13:32	Gun string	Missed shot – troubleshooting digishot, no CTB in Spectra
85968	13:34	Guns	Volume 6560 36 guns firing
86349	15:42	center beam	occassionl depth spikes noted this line
86665	17:30	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	84017	30° 40' 39.289"	-071° 00' 50.601"
LSP	86665	31° 25' 00.883"	-072° 06' 11.705"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	GOOD
Tailbuoy #4	none	Gun string #4	GOOD

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SP spacing: 50.0m

line status: complete

Seq# 018	Line Name:	MGL1407MCS14	**NAVIGATION**	DATE: 2014-09-09	Lamont-Doherty Earth Observatory
	Line Brg :	308.854 °	**LINE LOGS**	JULIAN DAY: 252	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	1.0 m	DEPTH SOL :	5400.9 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-57.8 m	DEPTH EOL :	5082.1 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.7 kts	FEATHER SOL:	-00.7 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.4 kts	FEATHER EOL:	-03.0 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-05.7 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	S 9.1 kts				
WIND EOL:	SW 8 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	1.5 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
87023	17:37	SOL	start of 2D acquisition 50m shot spacing, 6km streamer powered up – volume 6560 – record length 18.0 second
87895	22:34	PSO	power down to 40 cu at this shotpoint – reduce speed while dolphins are near
87919	22:47	PSO	Source at full power – resume normal speed
88140	23:59	midnight	Last sp of day
88267	00:44	XBT	XBT – T5 seq79
88676	03:02	XBT	XBT – T5 seq80
89048	05:08	XBT	XBT – T5 seq81
89453	07:27	XBT	XBT – T5 seq82
89841	09:40	XBT	XBT – T5 seq83
90255	12:04	XBT	XBT – T5 Seq84
90654	14:30	XBT	XBT – T5 Seq85
90693	14:45	Turn	Begin turn to next line
90702	14:48	EOL	

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	87023	31° 25' 24.687"	-072° 06' 46.196"
LSP	90702	32° 27' 16.648"	-073° 38' 12.798"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	none
Tailbuoy #4	none	Gun string #4	GOOD

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SP spacing: 50.0m

line status: complete

Seq# 019

Line Name: MGL1407MCS15 **NAVIGATION**

Line Brg : 291.461 ° **LINE LOGS**

DATE: 2014-09-10 Lamont-Doherty Earth Observatory

JULIAN DAY: 253 COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Deborah Hutchinson - USGS **SURVEY: ECS 2D Seismic Mission** **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	-4.4 m	DEPTH SOL :	5082.2 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-140.5 m	DEPTH EOL :	2741.9 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.5 kts	FEATHER SOL:	-18.8 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.5 kts	FEATHER EOL:	03.0 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-15.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	SW 8 kts				
WIND EOL:	NW 8.3 kts				
SEAS SOL:	1.5 m				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
91010	14:52	SOL	start of 2D acquisition 50m shot spacing, 6km streamer powered up – volume 6560 – record length 18.0 second
91167	15:49	XBT	XBT – T5 Seq086
91568	18:10	XBT	XBT – T5 Seq087
91854	19:48	XBT	XBT – T5 Seq088
92241	22:00	XBT	XBT – T5 Seq089
92545	23:42	XBT	XBT – T5 Seq090
92596	23:59	midnight	last sp of day
92871	01:32	XBT	XBT – T5 Seq091
93234	03:34	XBT	XBT – T5 Seq092
93610	05:44	XBT	XBT – T5 Seq093
93889	07:23	XBT	XBT – T5 Seq094
94228	09:22	XBT	XBT – T5 Seq095
94574	11:20	XBT	XBT – T5 Seq096
94911	13:13	XBT	XBT – T5 Seq097
95246	15:07	XBT	XBT – T5 Seq098
95420	16:05	XCTD	xctd
	16:48	turn	Start of turn to seq 20 MCS16
95575	16:59	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	91010	32° 27' 22.625"	-073° 38' 31.197"
LSP	95575	33° 11' 06.162"	-075° 55' 41.084"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	none
Tailbuoy #4	none	Gun string #4	GOOD

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SP spacing: 50.0m

line status: complete

Seq# 020	Line Name:	MGL1407MCS16	**NAVIGATION**	DATE: 2014-09-11	Lamont-Doherty Earth Observatory
	Line Brg :	219.0 °	**LINE LOGS**	JULIAN DAY: 254	Columbia University | Earth Institute

CLIENT: Deborah Hutchinson - USGS | **SURVEY: ECS 2D Seismic Mission** | **AREA: Eastern North America Margin between lat's 31N-40N**

DC SOL :	-140.5 m	DEPTH SOL :	2728.5 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-5.1 m	DEPTH EOL :	2177.9 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.5 kts	FEATHER SOL:	-65.0 turn	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.2 kts	FEATHER EOL:	03.8 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	03.8 °	MAGNETOMETER:	GeoMetrics: used
WIND SOL:	NW 8.3 kts				
WIND EOL:	NW 6.3 kts				
SEAS SOL:	1.0 m				
SEAS EOL:	1.0 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	Alan Thompson	10:00 – 16:00 utc >	na	22:00 – 04:00 utc >	na
04:00 – 16:00 utc =>	Mike Martello	16:00 – 22:00 utc >	na	04:00 – 10:00 utc >	na

SP	UTC	EVENT	COMMENTS
96013	17:04	SOL	start of 2D acquisition 50m shot spacing, 6km streamer powered up – volume 6560 – record length 18.0 second
96098	17:36	XBT	XBT T5 seq 100
96402	19:33	XBT	XBT T5 seq 101
96405	19:34	POI	Cross X10 (obs location) with source
19:53	96455	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	96013	33° 10' 58.146"	-075° 55' 41.084"
LSP	96455	33° 01' 42.850"	-076° 04' 40.690"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	213.0m
NRP – CNG	385.00m
COS – CNG	184.00m
NRP – CMP	304.00m

Posnet locations & remarks: good - none - intermittent

Tailbuoy #1	GOOD	Gun string #1	GOOD
Tailbuoy #2	none	Gun string #2	none
Tailbuoy #3	none	Gun string #3	none
Tailbuoy #4	none	Gun string #4	GOOD

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SP spacing: 50.0m

line status: complete