

<b>Seq# 001</b>		Line Name: <b>MGL1111_MCS01</b>		<b>NAVIGATION</b>	DATE: <b>2011-08-11</b>	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE
		Line Brg : <b>312.493 °</b>		<b>LINE LOGS</b>	JULIAN DAY: <b>222</b>	
		CLIENT: <b>USGS/Barth</b>		SURVEY: <b>USGS2</b>		<b>MGL1111</b>
DC SOL : 141.8m		DEPTH SOL : 3762.3m		NAVIGATION SYSTEM USED: <b>C-Nav3050 - Primary</b>		
DC EOL : -7.6m		DEPTH EOL : 3780.1m		NAVIGATION SYSTEM USED: <b>SeaPath 200</b>		
SMG SOL: 4.8 knots		FEATHER SOL: -9.9 °		NAVIGATION SYSTEM USED: <b>Pos MV v3</b>		
SMG EOL: 4.3 knots		FEATHER EOL: -13.2 °		GRAVITY METER: <b>BMG-II: used, SN210</b>		
<b>WEATHER</b>		MAX FEATHER: -17.8 °		MAGNETOMETER: <b>GeoMetrics: used</b>		
WIND SOL: 5.7 SW knots				MAG DEC USED: <b>?????</b>		
WIND EOL: 11.2 knots		00:00 – 04:00 utc =>	David Ng	12:00 – 16:00 utc =>	David Martinson	
SEAS SOL: 0-1m		04:00 – 08:00 utc =>	David Ng	16:00 – 20:00 utc =>	David Martinson	
SEAS EOL: 29/07/07		08:00 – 12:00 utc =>	David Martinson	20:00 – 00:00 utc =>	David Ng	
SP	TIME(UTC)	EVENT	<b>COMMENTS</b>			
719	00:00	FSP;FGSP	First shot point; First good shot point			
802	00:29	Ramp-up	full volume 6600cu in			
	00:35	Pam	deployed			
	01:36	XBT-T5	launch seq 05			
	01:38	XBT-T5	launch seq 06			
	02:53	STU	streamer tension unit not updating regularly			
	03:15	STU	now updating normal			
	03:57	XBT-T5	launch seq 07			
	06:23	XBT-T5	launch seq 08			
	08:30	PCO2	Shutdown not working			
2289	08:48	Sonar Buoy	Sonar buoy launched			
2291	08:49	Sonar Buoy	Have comms with buoy			
2293	08:50	Sonar Buoy	Sonar buoy at source			
2314	08:57	XBT-T5	launch seq 09			
2323	09:00	XBT-T5	launch seq 10			
11:30	2767	XBT-T5	launch seq 11			
	11:40	STU	streamer tension not working			
2908	12:28	Sonar Buoy	lost communication with buoy			
3029	13:11	XBT-T5	launch seq 12			
3042	13:15	XBT-T5	launch seq 13			
3505	16:08	EOL	End of line			
		LSP/LGSP	Last shot point			
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN      2D_1x8.SCN(001)      mgl2010.RTCN		
Tailbuoy #1	n/a	Gun string #1	good	SP spacing: 50m		
Tailbuoy #2	n/a	Gun string #2	good	<b>line status:      Line complete</b>		
Tailbuoy #3	n/a	Gun string #3	good			
Tailbuoy #4	good	Gun string #4	good			

VESSEL POSITION			
		Latitude (N)	Longitude (W/E) (-/+)
FGSP	719	55° 09' 51.681"	-176° 51' 19.658"
LGSP	3505	55° 59' 54.200"	-178° 29' 54.483"
NAVIGATION OFFSET APPLIED			
NRP - Stern	_____		
NRP - COS	_____		
NRP - CNG (na)	_____		
COS - CNG (na)	_____		
NRP - CMP (na)	_____		

Note: LMN line parameter set to great circle line

P1                      P2  
MGL1111MCS01.0.p190    MGL1111MCS01.0.p294

<b>Seq# 002</b>		Line Name: MGL1111_MCS01A		<b>NAVIGATION</b>	DATE: 2011-08-11	Lamont-Doherty Earth Observa COLUMBIA UNIVERSITY   EARTH INSTI
		Line Brg : 300.6 °		<b>LINE LOGS</b>	JULIAN DAY: 223	
CLIENT: USGS/Barth		SURVEY: USGS2		MGL1111		
DC SOL : 1.6m	DEPTH SOL : 3771.5m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary				
DC EOL : -5.1m	DEPTH EOL : 3802.1m	NAVIGATION SYSTEM USED: SeaPath 200				
SMG SOL: 4.3 knots	FEATHER SOL: -23.8 °	NAVIGATION SYSTEM USED: Pos MV v3				
SMG EOL: -5.1 knots	FEATHER EOL: -17.9 °	GRAVITY METER: BMG-II: used, SN210				
<u>WEATHER</u>	MAX FEATHER: -36.9 °	MAGNETOMETER: GeoMetrics: used				
WIND SOL: 16.6 knots		MAG DEC USED : ????'				
WIND EOL: 15 knots	00:00 – 04:00 utc => David Ng	12:00 – 16:00 utc =>	David Martinson			
SEAS SOL: 2.0m	04:00 – 08:00 utc => David Ng	16:00 – 20:00 utc =>	David Martinson			
SEAS EOL: 2.00m	08:00 – 12:00 utc => David Martinson	20:00 – 00:00 utc =>	David Ng			
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>			
1007	16:08	SOL	Start line after a 12degree turn onto it			
	17:20	Pam	power down to check tow Pam wrapped around string 4.			
1255	17:40	source	new volume 3120 with strings 3 & 4 off.			
1472	19:11	source	new volume 3260 in3			
1546	19:46	source	enabled all guns – missed shot point			
1549	19:47	FGSP	new volume 6560 in3			
1590	20:02	DC	DC of 3983.6 (max) d/t sea state			
1881	21:50	DC	back on line DC 18.9m			
3006	04:53	EOL	Last shot point; LGSP			
			<b>VESEL POSITION</b>			
			Latitude (N) Longitude (W/E) (-/+)			
			FGSP	1007	56° 00' 04.994"	-178° 30' 14.913"
			LGSP	3006	56° 26' 59.758"	-179° 53' 59.830"
			<b>NAVIGATION OFFSET APPLIED</b>			
			NRP - Stern _____			
			NRP - COS _____			
			NRP - CNG (na) _____			
			COS - CNG (na) _____			
			NRP - CMP (na) _____			
			Note: LMN line parameter set to great circle line			
			<div style="display: flex; justify-content: space-around;"> <span>P1</span> <span>P2</span> </div> <small>MGL1111MCS01A.0.p19 MGL1111MCS01A.0.p294</small>			
Posnet locations & remarks: good - none - intermittent		Acoustic remarks: S1T2 intermittent		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN		
Tailbuoy #1	n/a	Gun string #1	good	SP spacing: 50m		
Tailbuoy #2	n/a	Gun string #2	good			
Tailbuoy #3	n/a	Gun string #3	good			
Tailbuoy #4	good	Gun string #4	good			
				<b>line status: Complete</b>		

<b>Seq# 003</b>		<b>Line Name: MGL1111_MCS02</b>		<b>NAVIGATION</b>		<b>DATE: 2011-08-12</b>		<b>Lamont-Doherty Earth Observatory</b> COLUMBIA UNIVERSITY   EARTH INSTITUTE													
		<b>Line Brg : 320.666 °</b>		<b>LINE LOGS</b>		<b>JULIAN DAY: 224</b>															
<b>CLIENT: USGS/Barth</b>				<b>SURVEY: USGS2</b>			<b>MGL1111</b>														
DC SOL : -199.5m		DEPTH SOL : 3802.5m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary																	
DC EOL : 42.6m		DEPTH EOL : 3796.0m		NAVIGATION SYSTEM USED: SeaPath 200																	
SMG SOL: 4.4 knots		FEATHER SOL: 3.8 °		NAVIGATION SYSTEM USED: Pos MV v3																	
SMG EOL: 4.7 knots		FEATHER EOL: -14.2 °		GRAVITY METER: BMG-II: used, SN210																	
<b>WEATHER</b>		MAX FEATHER: -22.2 °		MAGNETOMETER: GeoMetrics: used																	
WIND SOL: 15.2 knots				MAG DEC USED : 6°																	
WIND EOL: 10 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc =>		David Martinson															
SEAS SOL: 2.0m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc =>		David Martinson															
SEAS EOL: 2.00m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc =>		David Ng															
<b>SP TIME(UTC) EVENT</b>			<b>COMMENTS</b>																		
1009	04:56	SOL	First shot point (off the line due to incorrect coordinates)																		
1010	04:57	FGSP	First good shot point																		
1421	07:33	DC	back on line (<20m)																		
1623	08:49	XBT	Seq 16 drop: update EM122 svp																		
2696	15:26	XBT	Seq 17 drop: update EM122 svp																		
2735	15:39	XCDT-2	Seq 18 drop																		
3139	17:57	EOL																			
			<table border="1"> <thead> <tr> <th colspan="3">VESSEL POSITION</th> </tr> <tr> <th></th> <th>Latitude (N)</th> <th>Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>1010 562706.663</td> <td>-1795426.813</td> </tr> <tr> <td>LGSP</td> <td>3139 571116.027</td> <td>1785847.678</td> </tr> </tbody> </table>							VESSEL POSITION				Latitude (N)	Longitude (W/E) (-/+)	FGSP	1010 562706.663	-1795426.813	LGSP	3139 571116.027	1785847.678
VESSEL POSITION																					
	Latitude (N)	Longitude (W/E) (-/+)																			
FGSP	1010 562706.663	-1795426.813																			
LGSP	3139 571116.027	1785847.678																			
			<b>NAVIGATION OFFSET APPLIED</b> NRP - Stern _____ NRP - COS _____ NRP - CNG (na) _____ COS - CNG (na) _____ NRP - CMP (na) _____																		
			Note: LMN line parameter set to great circle line.																		
			<table border="1"> <thead> <tr> <th>P1</th> <th>P2</th> </tr> </thead> <tbody> <tr> <td>MGL1111MCS02.0.p190</td> <td>MGL1111MCS02.0.p294</td> </tr> </tbody> </table>							P1	P2	MGL1111MCS02.0.p190	MGL1111MCS02.0.p294								
P1	P2																				
MGL1111MCS02.0.p190	MGL1111MCS02.0.p294																				
<b>Posnet locations &amp; remarks: good - none - intermittent</b>			<b>Acoustic remarks:</b>		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN																
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent	SP spacing: 50m																
Tailbuoy #2	n/a	Gun string #2	good																		
Tailbuoy #3	n/a	Gun string #3	good																		
Tailbuoy #4	good	Gun string #4	good																		
					<b>line status:</b>	<b>Line Complete</b>															

<b>Seq# 004</b>		Line Name: <b>MGL1111_MCS03</b>		<b>NAVIGATION</b>	DATE: 2011-08-12	<small>Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE</small>
		Line Brg : <b>220.179 °</b>		<b>LINE LOGS</b>	JULIAN DAY: <b>224</b>	
		CLIENT: USGS/Barth		SURVEY: USGS2		MGL1111
DC SOL : 556.0m		DEPTH SOL : 3795.7m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary		
DC EOL : 790.4m		DEPTH EOL : 3829.9m		NAVIGATION SYSTEM USED: SeaPath 200		
SMG SOL: 4.7 knots		FEATHER SOL: 90.6 in turn °		NAVIGATION SYSTEM USED: Pos MV v3		
SMG EOL: 4.5 knots		FEATHER EOL: -21.3 °		GRAVITY METER: BMG-II: used, SN210		
<u>WEATHER</u>		MAX FEATHER: 19 °		MAGNETOMETER: GeoMetrics: used		
WIND SOL: 25.1 knots				MAG DEC USED : 6°		
WIND EOL: 10 knots		00:00 – 04:00 utc =>	David Ng	12:00 – 16:00 utc =>	David Martinson	
SEAS SOL: 1-2m		04:00 – 08:00 utc =>	David Ng	16:00 – 20:00 utc =>	David Martinson	
SEAS EOL: 1-2m		08:00 – 12:00 utc =>	David Martinson	20:00 – 00:00 utc =>	David Ng	
SP	TIME(UTC)	EVENT	COMMENTS			
687	20:48	SOL	Start of line; first shot point			
1196	23:59	midnight sp	last sp of day			
2867	10:18	navigation	nav jump d/t poor geometry			
2899	10:23	navigation	nav jump d/t poor geometry			
3190	12:22	navigation	estimate position d/t poor geometry (nav drifting)			
3233	12:40	navigation	estimate position d/t poor geometry (nav drifting)			
3241	12:43	XBT	T-5 launch seq032 term depth 620m			
3401	13:44	source	new volume 5880			
3404	13:46	source	new volume 6240			
3479	14:13	navigation	estimate position d/t poor geometry (nav drifting)			
3562	14:45	EOL	end of line			
			VESSEL POSITION			
			Latitude (N) Longitude (W/E) (-/+)			
			FGSP	687		
			LGSP	3562	561638.187	1774051.561
			NAVIGATION OFFSET APPLIED			
			NRP - Stern _____			
			NRP - COS _____			
			NRP - CNG (na) _____			
			COS - CNG (na) _____			
			NRP - CMP (na) _____			
			Note: LMN line parameter set to great circle line			
			P1 P2 MGL1111MCS03.0.p19f MGL1111MCS03.0.p294			
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN		
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		
Tailbuoy #2	n/a	Gun string #2	good			
Tailbuoy #3	n/a	Gun string #3	good			
Tailbuoy #4	good	Gun string #4	good			
				SP spacing:	50m	
				line status:	Complete	

<b>Seq# 005</b>		Line Name: <b>MGL1111_MCS04</b>		<b>NAVIGATION</b>	DATE: <b>2011-08-13</b>	<b>Lamont-Doherty Earth Observatory</b> <small>COLUMBIA UNIVERSITY   EARTH INSTITUTE</small>
		Line Brg : <b>5.7 °</b>		<b>LINE LOGS</b>	JULIAN DAY: <b>225</b>	
<b>CLIENT: USGS/Barth</b>		<b>SURVEY: USGS2</b>		<b>MGL1111</b>		
DC SOL : -4803.0m		DEPTH SOL : 3831.7m		NAVIGATION SYSTEM USED: <b>C-Nav3050 - Primary</b>		
DC EOL : 4.3m		DEPTH EOL : 3811.5m		NAVIGATION SYSTEM USED: <b>SeaPath 200</b>		
SMG SOL: 5.0 knots		FEATHER SOL: 3.7 in turn °		NAVIGATION SYSTEM USED: <b>Pos MV v3</b>		
SMG EOL: 4.9 knots		FEATHER EOL: -18.1 °		GRAVITY METER: <b>BMG-II: used, SN210</b>		
<b>WEATHER</b>		MAX FEATHER: -34.6 °		MAGNETOMETER: <b>GeoMetrics: used</b>		
WIND SOL: 16.2 knots				MAG DEC USED : <b>6°</b>		
WIND EOL: 12.9 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson		
SEAS SOL: 2.0m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson		
SEAS EOL: 1m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng		
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>			
1089	15:49	SOL	Start of line; first shot point – Will reduce line offset (4803m) slowly in order to acquire data enroute to line heading			
1332	17:17	source	volume now 6120 cu in			
1336	17:19	source	volume now 6300 cu in			
1450	18:00	off-line distance	<25m off line now			
1575	18:46	mitigation	power down for seal			
1601	19:55	speed	slow vessel while in mitigation			
2589	00:26	EOL	End of line			
			<b>VESEL POSITION</b>			
			Latitude (N)      Longitude (W/E) (+/-)			
			FGSP	1089	562032.657	1773931.174
			LGSP	2589	570029.722	1775131.962
			<b>NAVIGATION OFFSET APPLIED</b>			
			NRP - Stern _____			
			NRP - COS _____			
			NRP - CNG (na) _____			
			COS - CNG (na) _____			
			NRP - CMP (na) _____			
			Note: LMN line parameter set to great circle line			
			<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>P1</b>  <small>MGL1111MCS04.0.p190</small> </div> <div style="text-align: center;"> <b>P2</b>  <small>MGL1111MCS04.0.p294</small> </div> </div>			
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			MGL1111.LMN      2D_1x8.SCN(001)      mgl2010.RTCN
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		SP spacing: 50m
Tailbuoy #2	n/a	Gun string #2	good			<b>line status: Complete</b>
Tailbuoy #3	n/a	Gun string #3	good			
Tailbuoy #4	good	Gun string #4	good			

<b>Seq# 006</b>		Line Name: <b>MGL1111_TRN05</b>		<b>NAVIGATION</b>	DATE: <b>2011-08-14</b>	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		Line Brg : <b>84.33 °</b>		<b>LINE LOGS</b>	JULIAN DAY: <b>226</b>		
<b>CLIENT: USGS/Barth</b>		<b>SURVEY: USGS2</b>		<b>MGL1111</b>			
DC SOL : -1386.2m		DEPTH SOL : 3809.2m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary			
DC EOL : -229.9m		DEPTH EOL : 3811.3m		NAVIGATION SYSTEM USED: SeaPath 200			
SMG SOL: 4.9 knots		FEATHER SOL: 47.8 °		NAVIGATION SYSTEM USED: Pos MV v3			
SMG EOL: 4.8 knots		FEATHER EOL: -4.2 °		GRAVITY METER: BMG-II: used, SN210			
<b>WEATHER</b>		MAX FEATHER: 47.8 °		MAGNETOMETER: GeoMetrics: used			
WIND SOL: 16.6 knots				MAG DEC USED : 6°			
WIND EOL: 20.6 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson			
SEAS SOL: 1m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson			
SEAS EOL: 1m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng			
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>				
1053	00:51	SOL	Start of line; first shot point – Will reduce line offset (4803m) slowly in order to acquire data enroute to line heading – Vol 4950 in3				
1074-1082	00:58-01:01	Spectra	Restart spectra ncc and main networks				
1253	02:03	MMO	Power down Dal's porpoises				
1265	02:07	MMO	Back to vol 4950 in3				
1350	02:38	EOL	End of line				
			<b>VESEL POSITION</b>				
			Latitude (N)      Longitude (W/E) (-/+)				
			FGSP	1053	570157.222	1775341.917	
			LGSP	1350	570206.304	1780824.877	
			<b>NAVIGATION OFFSET APPLIED</b>				
			NRP - Stern _____				
			NRP - COS _____				
			NRP - CNG (na) _____				
			COS - CNG (na) _____				
			NRP - CMP (na) _____				
			Note: LMN line parameter set to great circle line				
			<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>P1</b>  <small>MGL1111TRN05.0.p190</small> </div> <div style="text-align: center;"> <b>P2</b>  <small>MGL1111TRN05.0.p204</small> </div> </div>				
<b>Posnet locations &amp; remarks:</b> good - none - intermittent			<b>Acoustic remarks:</b>		MGL1111.LMN      2D_1x8.SCN(001)      mgl2010.RTCN		
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent			
Tailbuoy #2	n/a	Gun string #2	good				
Tailbuoy #3	n/a	Gun string #3	good				
Tailbuoy #4	good	Gun string #4	good				
			SP spacing: 50m		<b>line status:</b> Complete		

Line Name:		MGL1111_MCS05		NAVIGATION		DATE: 2011-08-14		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE			
Seq# 007		Line Brg :		266.316 °		LINE LOGS		JULIAN DAY: 226			
CLIENT: USGS/Barth				SURVEY: USGS2				MGL1111			
DC SOL : 204.6m		DEPTH SOL : 3810.6m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary							
DC EOL : -1023.4m		DEPTH EOL : 3798.5m		NAVIGATION SYSTEM USED: SeaPath 200							
SMG SOL: 4.8 knots		FEATHER SOL: 90.7 °		NAVIGATION SYSTEM USED: Pos MV v3							
SMG EOL: 5.1 knots		FEATHER EOL: -3.2 °		GRAVITY METER: BMG-II: used, SN210							
WEATHER		MAX FEATHER: 90.7 °		MAGNETOMETER: GeoMetrics: used							
WIND SOL: 6.5 knots				MAG DEC USED : 6°							
WIND EOL: 10.5 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson							
SEAS SOL: 1m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson							
SEAS EOL: 1m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng							
SP	TIME(UTC)	EVENT	COMMENTS								
843	03:31	SOL	Start of line; first shot point								
	03:55	Pam	Deployed								
963	04:15	PSO	power down for whale								
1123	05:14	source	back to full volume								
1207	15:43	XBT	launch T-5 seq034 – update EM122								
1278	16:08	SonarBuoy	launch buoy stbd side								
1846	09:11	SonarBuoy	launch buoy stbd side								
1880	09:21	XCTD	launch xctd-1 seq035								
1995-2024	09:57-10:06	Spectra	DLN not logging, main lock-up, and P1 size not increasing. restart ncn main and dln node.								
2342	11:43	XBT	launch T-5 seq036 – update EM122								
2873	14:33	SonarBuoy	launch buoy stbd side								
2921	14:48	XBT	launch T-5 seq037 – update EM122								
3366	17:20	XBT	launch T-5 seq038 – update EM122								
3440	17:46	SonarBuoy	launch buoy stbd side seq09								
3706	19:21	XBT	launch T-5 seq039 – update EM122								
4058	21:33	XBT	launch T-5 seq040 – update EM122								
4510	00:07	XBT	launch T-5 seq041 – update EM122								
4950	02:35	XBT	launch T-5 seq042 – update EM122								
5295	04:11	EOL	End of line								
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN							
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent							
Tailbuoy #2	n/a	Gun string #2	good								
Tailbuoy #3	n/a	Gun string #3	good								
Tailbuoy #4	good	Gun string #4	good								
VESSEL POSITION											
		Latitude (N)	Longitude (WE) (-/+)								
FGSP	843	565857.447	1780645.346								
LGSP	5295	564738.089	1742835.411								
NAVIGATION OFFSET APPLIED											
NRP - Stern											
NRP - COS											
NRP - CNG (na)											
COS - CNG (na)											
NRP - CMP (na)											
Note: LMN line parameter set to great circle line											
P1		P2									
MGL1111MCS05.0.p190		MGL1111MCS05.0.p204									
SP spacing: 50m											
line status:				Complete							

Line Name: <b>MGL1111_MCS07</b>		<b>NAVIGATION</b>		DATE: 2011-08-15	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
Seq# <b>008</b>		Line Brg : <b>39.023 °</b>	<b>LINE LOGS</b>		JULIAN DAY: <b>227</b>	
CLIENT: USGS/Barth		SURVEY: USGS2		MGL1111		
DC SOL : -1006.7m	DEPTH SOL : 3807.0m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary				
DC EOL : -1255.7m	DEPTH EOL : 3721.5m	NAVIGATION SYSTEM USED: SeaPath 200				
SMG SOL: 3.8 knots	FEATHER SOL: -98.3 °	NAVIGATION SYSTEM USED: Pos MV v3				
SMG EOL: 5.0 knots	FEATHER EOL: 4.9 °	GRAVITY METER: BMG-II: used, SN210				
<b>WEATHER</b>	MAX FEATHER: -9.6 °	MAGNETOMETER: GeoMetrics: used				
WIND SOL: 13.9 knots		MAG DEC USED : 6°				
WIND EOL: 7.6 knots	00:00 – 04:00 utc => David Ng	12:00 – 16:00 utc => David Martinson				
SEAS SOL: 0-1m	04:00 – 08:00 utc => David Ng	16:00 – 20:00 utc => David Martinson				
SEAS EOL: 1.50m	08:00 – 12:00 utc => David Martinson	20:00 – 00:00 utc => David Ng				
SP	TIME(UTC)	EVENT	COMMENTS			
926	06:03	SOL	Start of line; first shot point – 3 strings (2,3,4) Vol 4670 in3			
960	06:18	Source	Volume 3020 in3			
965	06:21	Source	Volume 4670 in3			
983	06:25	Source	Enable string 1			
986	06:25	Source	Vol 5780 in3; S1G02 off			
990	06:30	Source	Volume 6140 in3; disable S1G01, enable S1G02			
1055	06:52	SonarBuoy	Launch seq10			
1056	06:53	Maggie	enabled			
1150	07:25	XBT	Launch seq043 – update EM122			
1540	09:33	Source	new volume 5920			
1545	09:34	Source	new volume 6100			
1619	09:58	Spectra	missed shot.			
1891	11:28	XBT	Launch seq044 – update EM122			
2522	15:17	XBT	Launch seq045 – update EM122			
3288	19:26	XBT	Launch seq046 – update EM122			
3313	19:34	XCTD	Launch seq047 – update EM122			
3679	21:24	Sonobuoy	Launch sonobuoy SB11			
3707	21:32	XBT	Launch seq049 – update EM122			
4285	00:36	Sonobuoy	Launch sonobuoy SB12			
4640	02:42	XBT	Launch seq049 – update EM122			
4674	02:54	MMO	Power down for Dall's			
4685	02:58	MMO	Back to vol 5920			
4707	03:05	XBT	Launch seq050 – update EM122			
4865	03:59	SonarBuoy	Launch sonobuoy SB13			
5401	06:48	XBT	Launch seq051 – update EM122			
5960	09:50	SonarBuoy	Launch sonobuoy SB14			
6218	11:16	XBT	Launch seq052 – update EM122			
6928	15:10	XBT	Launch seq053 – update EM122			
	15:35	Maggie	secured for gun retrieval			
	15:52	pam	secured for gun retrieval			
7057	15:53	Source	string 2 power secured – new volume 4450cu in.			
	16:00	Source	Start string 2 in.			
7098	16:10	EOL	end of line			
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent	MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN	
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent		
Tailbuoy #3	n/a	Gun string #3	good		SP spacing: 50m	
Tailbuoy #4	good	Gun string #4	good		<b>line status: complete</b>	

VESSEL POSITION			
	Latitude (N)	Longitude (W/E) (-/+)	
FGSP	926	564125.242	1743502.125
LGSP	7098	584809.826	1775622.247

NAVIGATION OFFSET APPLIED	
NRP - Stern	_____
NRP - COS	_____
NRP - CNG (na)	_____
COS - CNG (na)	_____
NRP - CMP (na)	_____

Note: LMN line parameter set to great circle line

P1 P2  
MGL1111MCS07.0.p190 MGL1111MCS07.0.p294



Line Name: MGL1111_MCS08		NAVIGATION		DATE: 2011-08-16		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE		
Seq# 009		Line Brg : 233.5 °		LINE LOGS		JULIAN DAY: 228		
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111		
DC SOL : -504.9m		DEPTH SOL : 3722.3m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary				
DC EOL : -1027.8m		DEPTH EOL : 3732.1m		NAVIGATION SYSTEM USED: SeaPath 200				
SMG SOL: 5.0 knots		FEATHER SOL: -141.4 in turn °		NAVIGATION SYSTEM USED: Pos MV v3				
SMG EOL: 3.8 knots		FEATHER EOL: -0.6 °		GRAVITY METER: BMG-II: used, SN210				
<b>WEATHER</b>		MAX FEATHER: -7.1 °		MAGNETOMETER: GeoMetrics: used				
WIND SOL: 6.1 knots				MAG DEC USED : 6°				
WIND EOL: 23 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson				
SEAS SOL: 1.5m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson				
SEAS EOL: 3.50m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng				
SP	TIME(UTC)	EVENT	COMMENTS					
1464	16:29	Sol	Start of line with streamer in turn, vulume 4450cu in.					
	17:07	source	deployng string2					
	17:09	Turn	complete					
	17:19	source	Strings 3 & 4 off					
1601	17:20	source	new volume= 3300cu3					
	17:38	string4	on board for maintenance					
1640	17:40	source	new volume- 4950cu3					
	18:10	maggie	deployed and operational					
1777	18:31	xbt/sonarbuoy	seq 15 – no communication					
	18:54	speed	returning to normal tow speed					
1836	18:55	source	new volume- 6560cu3					
	19:17	Pam	operational					
1913	19:22	xbt/sonarbuoy	seq 16 good launch					
1983	19:46	xbt/sonarbuoy	launch T5 seq54					
2034	20:03	xbt	launch T5 seq55					
2117	20:33	source	Vol 6200 in3					
2120	20:36	source	Vol 6380 in3					
2121	20:36	source	Vol 6560 in3					
2122	20:37	source	Vol 6520 in3					
2413	22:12	xbt	launch T5 seq55					
2422	22:22	xbt	launch T5 seq56					
2825	00:37	xbt	launch T7 seq59					
2947	01:22	sonobuoy	Sonobuoy launch SB17					
3191	02:48	xbt	launch T7 seq60					
3201	02:52	xbt	launch T7 seq61					
3699	05:53	xbt	launch T7 seq62					
3704	05:54	source	new volume- 5880cu3					
4126	08:26	sonobuoy	Sonobuoy launch SB17					
4260	09:16	xctd	launch xctd-1 seq63					
	10:54	Pam	recover d/t 8m depth – check good					
	11:07	maggie	recover d/t weather					
4881	12:56	xbt	launch T7 seq64					
4991	13:37	EOL	EOL					
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN		
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent	SP spacing: 50m			
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent				
Tailbuoy #3	n/a	Gun string #3	good					
Tailbuoy #4	good	Gun string #4	good		<b>line status: Complete</b>			

VESSEL POSITION			
	Latitude (N)	Longitude (W/E) (-/+)	
FGSP	1464	584912.946	1775413.227
LGSP	4991	575047.727	1753146.313

NAVIGATION OFFSET APPLIED	
NRP - Stern	_____
NRP - COS	_____
NRP - CNG (na)	_____
COS - CNG (na)	_____
NRP - CMP (na)	_____

Note: LMN line parameter set to great circle line	
P1	P2
MGL1111MCS08.0.p190	MGL1111MCS08.0.p294
	MGL1111MCS08.1.p294

Seq# 010		Line Name: MGL1111_MCS09	NAVIGATION	DATE: 2011-08-17	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE
		Line Brg : 120.2 °	LINE LOGS	JULIAN DAY: 229	
CLIENT: USGS/Barth		SURVEY: USGS2		MGL1111	
DC SOL : -802.9m		DEPTH SOL : 3729.3m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary	
DC EOL : -21.6m		DEPTH EOL : 3807.5m		NAVIGATION SYSTEM USED: SeaPath 200	
SMG SOL: 4.7 knots		FEATHER SOL: -109.7 in turn °		NAVIGATION SYSTEM USED: Pos MV v3	
SMG EOL: 4.7 knots		FEATHER EOL: -9.1 °		GRAVITY METER: BMG-II: used, SN210	
WEATHER		MAX FEATHER: -109.8 °		MAGNETOMETER: GeoMetrics: used	
WIND SOL: 24 knots				MAG DEC USED : 6°	
WIND EOL: 0 knots		00:00 – 04:00 utc =>	David Ng	12:00 – 16:00 utc =>	David Martinson
SEAS SOL: 3.5m		04:00 – 08:00 utc =>	David Ng	16:00 – 20:00 utc =>	David Martinson
SEAS EOL: 0-1m		08:00 – 12:00 utc =>	David Martinson	20:00 – 00:00 utc =>	David Ng
SP	TIME(UTC)	EVENT	COMMENTS		
1036	13:40	SOL	SOL		
	13:56	turn	completed		
1230	14:50	source	new volume 2940 in3		
1234	14:51	sonarbuoy	Launch seq 19		
1275-1292	15:06-15:12	spectra	missed sp's.		
1627-1630	17:06	navigation	do 2 estimate positions d/t poor satellite coverage		
	17:18	airguns	start string4 out		
1693	17:30	string3	secured, internal time break, bad shot		
1694	17:30	string4	enabled volume now 4410in3		
1703	17:33	airguns	all strings enabled – volume now 6200in3		
1760	17:55	Pam	operational		
1770	17:55	sonobuoy	seq 19 terminated		
1793	18:02	maggie	operational		
1822	18:12	sonarbuoy	Launch seq 20 – lost comms – abort.		
1875	18:30	sonarbuoy	launch seq 21 – stbd side		
1909	18:41	xbt	launch T5 port side.		
2306	20:53	xbt	launch T5 seq67		
2694	23:07	xbt	launch T5 seq68		
3214	02:22	xbt	Launch T5 seq69		
3691	05:20	xbt	Launch T5 seq70		
3940	06:51	sonobuoy	Launch SB22		
3965	07:00	EOL	End of line		
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN	
Tailbuoy #1	n/a	Gun string #1	good	SP spacing: 50m	
Tailbuoy #2	n/a	Gun string #2	good	line status: Complete	
Tailbuoy #3	n/a	Gun string #3	good		
Tailbuoy #4	good	Gun string #4	good		

VESSEL POSITION			
	Latitude (N)	Longitude (W/E) (-/+)	
FGSP	1036	575035.266	1753148.013
LGSP	3965	570929.588	1773655.665

NAVIGATION OFFSET APPLIED

NRP - Stern	_____
NRP - COS	_____
NRP - CNG (na)	_____
COS - CNG (na)	_____
NRP - CMP (na)	_____

Note: LMN line parameter set to great circle line

**P1**                      **P2**  
MGL1111MCS09.0.p190    MGL1111MCS09.0.p294

<b>Seq# 011</b>		Line Name: <b>MGL1111_MCS09A</b>		<b>NAVIGATION</b>		DATE: 2011-08-18		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		Line Brg : 123.132 °		<b>LINE LOGS</b>		JULIAN DAY: 230			
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111			
DC SOL : -802.9m		DEPTH SOL : 3808.5m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : -1542.0m		DEPTH EOL : 3816.0m		NAVIGATION SYSTEM USED: SeaPath 200					
SMG SOL: 4.7 knots		FEATHER SOL: -7.6 °		NAVIGATION SYSTEM USED: Pos MV v3					
SMG EOL: 5.1 knots		FEATHER EOL: -1.0 °		GRAVITY METER: BMG-II: used, SN210					
<b>WEATHER</b>		MAX FEATHER: -4.9 °		MAGNETOMETER: GeoMetrics: used					
WIND SOL: 0 knots				MAG DEC USED : 6°					
WIND EOL: 14.5 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson					
SEAS SOL: 0-1m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson					
SEAS EOL: 0-1m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng					
				<b>COMMENTS</b>					
SP	TIME(UTC)	EVENT							
1012	07:04	SOL	SOL						
1013	07:04	FGSP	First good shot point						
2049	13:06	xbt	launch 73 t5						
2389	15:06	xbt	launch 74 t5						
2617	16:26	EOL							
				<b>VESEL POSITION</b>					
				Latitude (N)		Longitude (W/E) (-/+)			
				FGSP	1013	570919.145	1773722.666		
				LGSP	2617	564605.047	1784407.723		
				<b>NAVIGATION OFFSET APPLIED</b>					
				NRP - Stern _____					
				NRP - COS _____					
				NRP - CNG (na) _____					
				COS - CNG (na) _____					
				NRP - CMP (na) _____					
				Note: LMN line parameter set to great circle line					
				<div style="display: flex; justify-content: space-around;"> <span><b>P1</b></span> <span><b>P2</b></span> </div> <small>MGL1111MCS09A.0.p190 MGL1111MCS09A.0.p294</small>					
<b>Posnet locations &amp; remarks:</b> good - none - intermittent		<b>Acoustic remarks:</b>		MGL1111.LMN		2D_1x8.SCN(001)		mgl2010.RTCN	
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		SP spacing: 50m			
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent					
Tailbuoy #3	n/a	Gun string #3	good						
Tailbuoy #4	good	Gun string #4	good						
				<b>line status:</b>		<b>complete</b>			

<b>Seq# 012</b>		Line Name: <b>MGL1111_MCS10</b>		<b>NAVIGATION</b>		DATE: 2011-08-18		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		Line Brg : <b>304.3 °</b>		<b>LINE LOGS</b>		JULIAN DAY: <b>230</b>			
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111			
DC SOL : -8585.8m		DEPTH SOL : 3811.4m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : 44.2m		DEPTH EOL : 3810.6m		NAVIGATION SYSTEM USED: SeaPath 200					
SMG SOL: 5.4 knots		FEATHER SOL: -135.7 in turn °		NAVIGATION SYSTEM USED: Pos MV v3					
SMG EOL: 4.5 knots		FEATHER EOL: -6.4 °		GRAVITY METER: BMG-II: used, SN210					
<b>WEATHER</b>		MAX FEATHER: -135.7 °		MAGNETOMETER: GeoMetrics: used					
WIND SOL: 20.9 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson		MAG DEC USED : 6°			
WIND EOL: 17.7 knots		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson					
SEAS SOL: -2.0m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng					
SEAS EOL: 1-2m									
		<b>COMMENTS</b>							
SP	TIME(UTC)	EVENT							
905	16:51	SOL	Start line in transit to it, turn in cable						
	17:45	turn	Turning again to line						
	18:06	turn	Turning on line						
	18:24	sonobuoy	Launch seq 23						
1107	18:32	power down	down o mitigation gun for porpoise						
1161	18:53	ramp-up	Start ramp up						
2379	01:59	EOL	End of line						
				VESEL POSITION					
						Latitude (N)		Longitude (W/E) (-/+)	
				FGSP	905	564807.24		1784524.369	
				LGSP	2379	571406.631		1774942.398	
				NAVIGATION OFFSET APPLIED					
				NRP - Stern _____					
				NRP - COS _____					
				NRP - CNG (na) _____					
				COS - CNG (na) _____					
				NRP - CMP (na) _____					
				Note: LMN line parameter set to great circle line					
						P1		P2	
						MGL1111MCS10.0.p190		MGL1111MCS10.0.p294	
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN			
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		SP spacing: 50m			
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent		<b>line status: Complete</b>			
Tailbuoy #3	n/a	Gun string #3	good						
Tailbuoy #4	good	Gun string #4	good						

<b>Seq# 013</b>		Line Name: <b>MGL1111_TRN11</b>		<b>NAVIGATION</b>		DATE: 2011-08-19		<b>Lamont-Doherty Earth Observatory</b> COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		Line Brg : <b>108.194 °</b>		<b>LINE LOGS</b>		JULIAN DAY: <b>231</b>			
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111			
DC SOL : 32.5m		DEPTH SOL : 3801.9m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : -3225.0m		DEPTH EOL : 3808.2m		NAVIGATION SYSTEM USED: SeaPath 200					
SMG SOL: 4.8 knots		FEATHER SOL: 142.9 in turn °		NAVIGATION SYSTEM USED: Pos MV v3					
SMG EOL: 4.7 knots		FEATHER EOL: 0.6 °		GRAVITY METER: BMG-II: used, SN210					
<b>WEATHER</b>		MAX FEATHER: 7.9 °		MAGNETOMETER: GeoMetrics: used					
WIND SOL: 21.9 knots				MAG DEC USED : 6°					
WIND EOL: 12.0 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson					
SEAS SOL: 1-2m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson					
SEAS EOL: 1-2m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng					
				<b>COMMENTS</b>					
SP	TIME(UTC)	EVENT							
996	02:30	SOL	Start of line						
997	02:32	FGSP	First good shot point						
1394	04:57	XBT	launch T5 seq76						
1410	05:02	XBT	launch T5 seq77						
1426	05:08	XBT	launch T5 seq78						
1809	07:35	EOL	End of line						
				VESSEL POSITION					
						Latitude (N)		Longitude (W/E) (-/+)	
FGSP		997	571617.061		1774903.249				
LGSP		1809	571052.791		1782814.177				
				NAVIGATION OFFSET APPLIED					
				NRP - Stern _____					
				NRP - COS _____					
				NRP - CNG (na) _____					
				COS - CNG (na) _____					
				NRP - CMP (na) _____					
				Note: LMN line parameter set to great circle line					
						P1		P2	
						MGL1111TRN11.0.p190		MGL1111TRN11.0.p294	
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			MGL1111.LMN			
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		2D_1x8.SCN(001)		mgl2010.RTCN	
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent					
Tailbuoy #3	n/a	Gun string #3	good						
Tailbuoy #4	good	Gun string #4	good						
						SP spacing: 50m			
						<b>line status:</b>		<b>Complete</b>	

Line Name: <b>MGL1111_MCS11</b>		<b>NAVIGATION</b>		DATE: 2011-08-19		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE													
Seq# <b>014</b>		Line Brg : 266.5 °		<b>LINE LOGS</b>		JULIAN DAY: 231													
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111													
DC SOL : 1094.5m		DEPTH SOL : 3810.7m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary															
DC EOL : -475.5m		DEPTH EOL : 3821.4m		NAVIGATION SYSTEM USED: SeaPath 200															
SMG SOL: 4.7 knots		FEATHER SOL: 126.4 in turn °		NAVIGATION SYSTEM USED: Pos MV v3															
SMG EOL: 4.5 knots		FEATHER EOL: 4.6 °		GRAVITY METER: BMG-II: used, SN210															
<b>WEATHER</b>		MAX FEATHER: 126.4 °		MAGNETOMETER: GeoMetrics: used															
WIND SOL: 20 knots				MAG DEC USED : 6°															
WIND EOL: 6.5 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson															
SEAS SOL: 2.3m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson															
SEAS EOL: 1-2m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng															
SP	TIME(UTC)	EVENT	COMMENTS																
920	07:58	Sol	Start line, turn in cable																
1034	08:38	sonobuoy	launch seq024																
1132	09:11	streamer	change depth from 9m to 10m d/t weather/seas																
1211	09:39	XBT	Launch seq 079 T5																
1692	12:26	sonobuoy	launch seq025																
1717	12:35	XBT	Launch seq 080 T7																
2085	14:47	XBT	Launch seq 081 T7 – terminated early, readjust flume and try again.																
2097	14:51	XBT	Launch seq 082 T7																
2319	16:08	sonobuoy	launch seq026																
2523	17:18	XTCD	launch seq 083 XTCD – 1																
3075	20:32	XBT	launch seq084 T7																
3498	22:59	XBT	launch seq085 T7																
3513-3561	23:05-23:21	Spectra	Restart DN and NLN																
3626	23:45	EOL	End of line																
			<table border="1"> <thead> <tr> <th colspan="3">VESSEL POSITION</th> </tr> <tr> <th></th> <th>Latitude (N)</th> <th>Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>920</td> <td>570906.275</td> </tr> <tr> <td>LGSP</td> <td>3626</td> <td>570242.915</td> </tr> </tbody> </table>					VESSEL POSITION				Latitude (N)	Longitude (W/E) (-/+)	FGSP	920	570906.275	LGSP	3626	570242.915
VESSEL POSITION																			
	Latitude (N)	Longitude (W/E) (-/+)																	
FGSP	920	570906.275																	
LGSP	3626	570242.915																	
			<p>NAVIGATION OFFSET APPLIED</p> <p>NRP - Stern _____</p> <p>NRP - COS _____</p> <p>NRP - CNG (na) _____</p> <p>COS - CNG (na) _____</p> <p>NRP - CMP (na) _____</p>																
			<p>Note: LMN line parameter set to great circle line</p>																
			<table border="1"> <thead> <tr> <th>P1</th> <th>P2</th> </tr> </thead> <tbody> <tr> <td>MGL1111MCS11.0.p190</td> <td>MGL1111MCS11.0.p294</td> </tr> <tr> <td>MGL1111MCS11.1.p190</td> <td>MGL1111MCS11.1.p294</td> </tr> <tr> <td>MGL1111MCS11.2.p190</td> <td>MGL1111MCS11.2.p294</td> </tr> </tbody> </table>					P1	P2	MGL1111MCS11.0.p190	MGL1111MCS11.0.p294	MGL1111MCS11.1.p190	MGL1111MCS11.1.p294	MGL1111MCS11.2.p190	MGL1111MCS11.2.p294				
P1	P2																		
MGL1111MCS11.0.p190	MGL1111MCS11.0.p294																		
MGL1111MCS11.1.p190	MGL1111MCS11.1.p294																		
MGL1111MCS11.2.p190	MGL1111MCS11.2.p294																		
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:		MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN														
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent	SP spacing: 50m														
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent															
Tailbuoy #3	n/a	Gun string #3	good																
Tailbuoy #4	none	Gun string #4	good		<b>line status: Complete</b>														

<b>Seq# 015</b>		Line Name: <b>MGL1111_TRN12</b>		<b>NAVIGATION</b>		DATE: 2011-08-20		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE																	
		Line Brg : <b>96.846 °</b>		<b>LINE LOGS</b>		JULIAN DAY: <b>232</b>																			
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111																			
DC SOL : -687.4m		DEPTH SOL : 3825.6m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary																					
DC EOL : -571.3m		DEPTH EOL : 3824.4m		NAVIGATION SYSTEM USED: SeaPath 200																					
SMG SOL: 4.2 knots		FEATHER SOL: -110.7 °		NAVIGATION SYSTEM USED: Pos MV v3																					
SMG EOL: 4.9 knots		FEATHER EOL: -5.8 °		GRAVITY METER: BMG-II: used, SN210																					
<b>WEATHER</b>		MAX FEATHER: -110.7 °		MAGNETOMETER: GeoMetrics: used																					
WIND SOL: 14.1 knots				MAG DEC USED : 6°																					
WIND EOL: 16.6 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson																					
SEAS SOL: 1-2m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson																					
SEAS EOL: 1-2m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng																					
<b>SP</b>		<b>TIME(UTC)</b>		<b>EVENT</b>		<b>COMMENTS</b>																			
1011		00:31		SOL		Start of line																			
1239		01:52		XBT		launch T5 seq86																			
1377		02:41		EOL		End of line																			
						<table border="1"> <thead> <tr> <th colspan="4">VESSEL POSITION</th> </tr> <tr> <th></th> <th>Latitude (N)</th> <th colspan="2">Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>1011</td> <td>565934.155</td> <td>1761420.847</td> </tr> <tr> <td>LGSP</td> <td>1377</td> <td>565818.55</td> <td>1763215.472</td> </tr> </tbody> </table>				VESSEL POSITION					Latitude (N)	Longitude (W/E) (-/+)		FGSP	1011	565934.155	1761420.847	LGSP	1377	565818.55	1763215.472
VESSEL POSITION																									
	Latitude (N)	Longitude (W/E) (-/+)																							
FGSP	1011	565934.155	1761420.847																						
LGSP	1377	565818.55	1763215.472																						
						<b>NAVIGATION OFFSET APPLIED</b> NRP - Stern _____ NRP - COS _____ NRP - CNG (na) _____ COS - CNG (na) _____ NRP - CMP (na) _____																			
						Note: LMN line parameter set to great circle line																			
						<table border="0"> <tr> <td style="text-align: center;"><u>P1</u></td> <td style="text-align: center;"><u>P2</u></td> </tr> <tr> <td style="text-align: center;">MGL1111TRN12.0.p190</td> <td style="text-align: center;">MGL1111TRN12.0.p294</td> </tr> </table>				<u>P1</u>	<u>P2</u>	MGL1111TRN12.0.p190	MGL1111TRN12.0.p294												
<u>P1</u>	<u>P2</u>																								
MGL1111TRN12.0.p190	MGL1111TRN12.0.p294																								
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN		2D_1x8.SCN(001)		mgl2010.RTCN																	
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent																					
Tailbuoy #2	n/a	Gun string #2	good	G1T2 intermittent																					
Tailbuoy #3	n/a	Gun string #3	good																						
Tailbuoy #4	good	Gun string #4	good																						
				SP spacing: 50m		<b>line status:</b> Complete																			

<b>Seq# 016</b>		<b>Line Name:</b> MGL1111_MCS12	<b>NAVIGATION</b>	<b>DATE:</b> 2011-08-20	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE							
		<b>Line Brg :</b> 42.404 °	<b>LINE LOGS</b>	<b>JULIAN DAY:</b> 232								
<b>CLIENT:</b> USGS/Barth		<b>SURVEY:</b> USGS2		<b>MGL1111</b>								
DC SOL : -0.8m		DEPTH SOL : 3824.4m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary								
DC EOL : 1301.6m		DEPTH EOL : 3790.0m		NAVIGATION SYSTEM USED: SeaPath 200								
SMG SOL: 4.9 knots		FEATHER SOL: -57.3 in turn °		NAVIGATION SYSTEM USED: Pos MV v3								
SMG EOL: 4.8 knots		FEATHER EOL: -10.9 in turn °		GRAVITY METER: BMG-II: used, SN210								
<b>WEATHER</b>		MAX FEATHER: -2.2 °		MAGNETOMETER: GeoMetrics: used								
WIND SOL: 16.6 knots				MAG DEC USED : 6°								
WIND EOL: 0.5 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson								
SEAS SOL: 1-2m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson								
SEAS EOL: 1.00m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng								
		<b>COMMENTS</b>										
SP	TIME(UTC)	EVENT										
971	02:45	SOL	Start line, turn in cable									
1229	04:20	XBT	launch T5 seq87									
1953	08:36	sonobuoy	launch SB28									
1977	08:45	XBT	launch T5 seq88									
2429	11:23	XBT	launch T5 seq89									
2848	13:45	XTCD	Launch seq 90									
3154	15:27	XBT	Launch seq 91									
3313	16:25	EOL	end of line									
			<b>VESEL POSITION</b>									
			Latitude (N) Longitude (W/E) (-/+)									
FGSP	971	565830.469		1763241.644								
LGSP	3313	574412.412		1775311.176								
			<b>NAVIGATION OFFSET APPLIED</b>									
			NRP - Stern _____									
			NRP - COS _____									
			NRP - CNG (na) _____									
			COS - CNG (na) _____									
			NRP - CMP (na) _____									
			<b>Note: LMN line parameter set to great circle line</b>									
			<table border="0"> <tr> <td><b>P1</b></td> <td><b>P2</b></td> </tr> <tr> <td>MGL1111MCS12.0.p190</td> <td>MGL1111MCS12.0.p294</td> </tr> <tr> <td>MGL1111MCS12.1.p190</td> <td>MGL1111MCS12.1.p294</td> </tr> </table>				<b>P1</b>	<b>P2</b>	MGL1111MCS12.0.p190	MGL1111MCS12.0.p294	MGL1111MCS12.1.p190	MGL1111MCS12.1.p294
<b>P1</b>	<b>P2</b>											
MGL1111MCS12.0.p190	MGL1111MCS12.0.p294											
MGL1111MCS12.1.p190	MGL1111MCS12.1.p294											
<b>Posnet locations &amp; remarks:</b> good - none - intermittent			<b>Acoustic remarks:</b>			MGL1111.LMN						
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent	G1T2 intermittent	2D_1x8.SCN(001) mgl2010.RTCN						
Tailbuoy #2	n/a	Gun string #2	good			SP spacing: 50m						
Tailbuoy #3	n/a	Gun string #3	good			<b>line status:</b> complete						
Tailbuoy #4	good	Gun string #4	good									



<b>Seq# 017</b>		Line Name: <b>MGL1111_MCS13</b>		<b>NAVIGATION</b>		DATE: 2011-08-20		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		Line Brg : <b>182.9 °</b>		<b>LINE LOGS</b>		JULIAN DAY: <b>232</b>			
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111			
DC SOL : 1581.4m		DEPTH SOL : 3794.3m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : 16.7m		DEPTH EOL : 3814.7m		NAVIGATION SYSTEM USED: SeaPath 200					
SMG SOL: 4.8 knots		FEATHER SOL: 125.8 in turn °		NAVIGATION SYSTEM USED: Pos MV v3					
SMG EOL: 4.6 knots		FEATHER EOL: 3.8 °		GRAVITY METER: BMG-II: used, SN210					
<b>WEATHER</b>		MAX FEATHER: 125.8 °		MAGNETOMETER: GeoMetrics: used					
WIND SOL: 0.0 knots				MAG DEC USED : 6°					
WIND EOL: 12.6 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson					
SEAS SOL: 1.0m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson					
SEAS EOL: 1-2m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng					
				<b>COMMENTS</b>					
SP	TIME(UTC)	EVENT							
1089	16:27	Sol	start line with cable in turn						
1098	16:33	source	power down for whale						
1211	17:16	sonobuoy	launch seq 29						
1218-1225	1719-1721	Spectra	ncc locked up – reset ncc						
1268	17:38	XBT	Launch seq 92						
1294	17:48	source	at full volume						
1946	21:43	XBT	launch seq94 T5						
2347	23:55	XBT	Launch seq 95 T5						
2562	01:05	sonobuoy	launch sonobuoy SB30						
2985	03:23	EOL	End of line						
				VESEL POSITION					
						Latitude (N)		Longitude (W/E) (-/+)	
				FGSP	1089	574407.97	1775333.512		
				LGSP	2985	565305.007	1775020.732		
				NAVIGATION OFFSET APPLIED					
				NRP - Stern _____					
				NRP - COS _____					
				NRP - CNG (na) _____					
				COS - CNG (na) _____					
				NRP - CMP (na) _____					
				Note: LMN line parameter set to great circle line					
						P1		P2	
						MGL1111MCS13.0.p190		MGL1111MCS13.0.p294	
Posnet locations & remarks: good - none - intermittent			Acoustic remarks:			MGL1111.LMN 2D_1x8.SCN(001) mgl2010.RTCN			
Tailbuoy #1	n/a	Gun string #1	good	S1T2 intermittent		SP spacing: 50m			
Tailbuoy #2	n/a	Gun string #2	good	G1T2 none		<b>line status: Complete</b>			
Tailbuoy #3	n/a	Gun string #3	good						
Tailbuoy #4	good	Gun string #4	good						



<b>Seq# 019</b>		<b>Line Name: MGL1111_OBS01B</b>		<b>NAVIGATION</b>		<b>DATE: 2011-08-24</b>		<b>Lamont-Doherty Earth Observatory</b> COLUMBIA UNIVERSITY   EARTH INSTITUTE										
		<b>Line Brg : 39.562 °</b>		<b>LINE LOGS</b>		<b>JULIAN DAY: 236</b>												
<b>CLIENT: USGS/Barth</b>			<b>SURVEY: USGS2</b>			<b>MGL1111</b>												
DC SOL : 2057.9m		DEPTH SOL : 3785.3m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary														
DC EOL : -4.1m		DEPTH EOL : 3761.8m		NAVIGATION SYSTEM USED: SeaPath 200														
SMG SOL: 3.6 knots		FEATHER SOL: n/a °		NAVIGATION SYSTEM USED: Pos MV v3														
SMG EOL: 4.6 knots		FEATHER EOL: n/a °		GRAVITY METER: BMG-II: used, SN210														
<u>WEATHER</u>		MAX FEATHER: n/a °		MAGNETOMETER: GeoMetrics: used														
WIND SOL: 14.1 knots				MAG DEC USED : 6°														
WIND EOL: 17.3 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson														
SEAS SOL: 2-3m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson														
SEAS EOL: 1-2m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng														
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>															
1655	07:27	SOL	Start of line – vol 4950 in3															
1707	08:37	acquisition	first sp of sequence acquiring 'new' data															
	09:07-09:14	Maggie	deployment and operational at sp 1741															
	09:19-09:34	Pam	deployment and operational															
1748	09:22	OBS	OBS0 4 positioned closest to sp 1746 is even with source at sp1748															
1756-1771	09:30-09:46	spectra	no sp displayed on main display or on shot log															
1883	11:46	OBS	OBS0 5 positioned closest to sp1881 is even with source at sp1883															
2016	14:09	OBS	OBS0 6 positioned closest to sp2015 is even with source at sp2016															
2151	16:37	OBS	OBS0 7 positioned closest to sp2149 is even with source at sp2151															
2490	22:51	EOL	End of line															
			<p style="text-align: center;"><b>VESSEL POSITION</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Latitude (N)</th> <th>Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>1655 570738.902</td> <td>1752028.221</td> </tr> <tr> <td>LGSP</td> <td>2490 580003.143</td> <td>1763937.645</td> </tr> </tbody> </table> <p style="text-align: center;"><b>NAVIGATION OFFSET APPLIED</b></p> <p>NRP - Stern _____</p> <p>NRP - COS _____</p> <p>NRP - CNG (na) _____</p> <p>COS - CNG (na) _____</p> <p>NRP - CMP (na) _____</p> <p>Note: LMN line parameter set to great circle line</p> <p style="text-align: center;"><b>P1</b>                      <b>P2</b></p> <p style="text-align: center;">MGL1111OBS01B.0.p190      MGL1111OBS01B.0.p294</p>								Latitude (N)	Longitude (W/E) (-/+)	FGSP	1655 570738.902	1752028.221	LGSP	2490 580003.143	1763937.645
	Latitude (N)	Longitude (W/E) (-/+)																
FGSP	1655 570738.902	1752028.221																
LGSP	2490 580003.143	1763937.645																
<b>Posnet locations &amp; remarks: good - none - intermittent</b>			<b>Acoustic remarks:</b>			MGL1111.LMN                      Source.SCN(001)                      mgl2010.RTCN												
Tailbuoy #1	n/a	Gun string #1	good	G1T2 not operational		SP spacing: 150m												
Tailbuoy #2	n/a	Gun string #2	good			<b>line status: Complete</b>												
Tailbuoy #3	n/a	Gun string #3	good															
Tailbuoy #4	n/a	Gun string #4	good															

<b>Seq# 020</b>		Line Name: <b>MGL1111_OBS02A</b>		<b>NAVIGATION</b>		DATE: 2011-08-25		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE																									
		Line Brg : <b>260.418 °</b>		<b>LINE LOGS</b>		JULIAN DAY: <b>237</b>																											
CLIENT: USGS/Barth			SURVEY: USGS2			MGL1111																											
DC SOL : 236.9m		DEPTH SOL : 33764.6m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary																													
DC EOL : 3472.1m		DEPTH EOL : 3709.8m		NAVIGATION SYSTEM USED: SeaPath 200																													
SMG SOL: 4.5 knots		FEATHER SOL: n/a °		NAVIGATION SYSTEM USED: Pos MV v3																													
SMG EOL: 4.4 knots		FEATHER EOL: n/a °		GRAVITY METER: BMG-II: used, SN210																													
<u>WEATHER</u>		MAX FEATHER: n/a °		MAGNETOMETER: GeoMetrics: used																													
WIND SOL: 6.1 knots				MAG DEC USED : 6°																													
WIND EOL: 15 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson																													
SEAS SOL: 1-2m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson																													
SEAS EOL: 2-3m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng																													
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>																														
962	00:14	SOL	Start of line – string 1,2,4(g6-10) not firing – vol 2950 in3																														
975	00:30	FGSP	Vol 6430 in3																														
990	00:49	sonobuoy	launch seq 32																														
	01:01	source	volume change 6250in3																														
1250	05:48	sonobuoy	launch seq 33																														
1412	08:49	XBT	launch seq 99																														
	09:55	turn	start tun to stbd																														
	10:42	turn	turn to parallel line																														
	10:50	turn	start tun to next line																														
1524	11:12	EOL	End of line																														
			<table border="1"> <thead> <tr> <th colspan="4">VESSEL POSITION</th> </tr> <tr> <th></th> <th>Latitude (N)</th> <th colspan="2">Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>975</td> <td>580025.18</td> <td>1764330.376</td> </tr> <tr> <td>LGSP</td> <td>1524</td> <td>575426.497</td> <td>1752044.22</td> </tr> </tbody> </table>							VESSEL POSITION					Latitude (N)	Longitude (W/E) (-/+)		FGSP	975	580025.18	1764330.376	LGSP	1524	575426.497	1752044.22								
VESSEL POSITION																																	
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LGSP	1524	575426.497	1752044.22																														
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NAVIGATION OFFSET APPLIED																																	
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			<table border="1"> <thead> <tr> <th>P1</th> <th>P2</th> </tr> </thead> <tbody> <tr> <td>MGL1111OBS02A.0.p190</td> <td>MGL1111OBS02A.0.p294</td> </tr> </tbody> </table>							P1	P2	MGL1111OBS02A.0.p190	MGL1111OBS02A.0.p294																				
P1	P2																																
MGL1111OBS02A.0.p190	MGL1111OBS02A.0.p294																																
Posnet locations & remarks: good - none - intermittent		Acoustic remarks:		MGL1111.LMN Source.SCN(001) mgl2010.RTCN																													
Tailbuoy #1	n/a	Gun string #1	good	G1T2 not operational																													
Tailbuoy #2	n/a	Gun string #2	good																														
Tailbuoy #3	n/a	Gun string #3	good																														
Tailbuoy #4	n/a	Gun string #4	good																														
				SP spacing: 150m		line status: complete																											

<b>Seq# 021</b>		<b>Line Name: MGL1111_OBS02</b>		<b>NAVIGATION</b>		<b>DATE: 2011-08-25</b>		<b>Lamont-Doherty Earth Observatory</b> COLUMBIA UNIVERSITY   EARTH INSTITUTE	
		<b>Line Brg : 121.1 °</b>		<b>LINE LOGS</b>		<b>JULIAN DAY: 237</b>			
<b>CLIENT: USGS/Barth</b>			<b>SURVEY: USGS2</b>			<b>MGL1111</b>			
DC SOL : -494.5m		DEPTH SOL : 3709.9m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : -6.6m		DEPTH EOL : 3816.4m		NAVIGATION SYSTEM USED: SeaPath 200					
SMG SOL: 4.3 knots		FEATHER SOL: n/a °		NAVIGATION SYSTEM USED: Pos MV v3					
SMG EOL: 4.3 knots		FEATHER EOL: n/a °		GRAVITY METER: BMG-II: used, SN210					
<u>WEATHER</u>		MAX FEATHER: n/a °		MAGNETOMETER: GeoMetrics: used					
WIND SOL: 22 knots				MAG DEC USED : 6°					
WIND EOL: 12.8 knots		00:00 – 04:00 utc => David Ng		12:00 – 16:00 utc => David Martinson					
SEAS SOL: 2-3m		04:00 – 08:00 utc => David Ng		16:00 – 20:00 utc => David Martinson					
SEAS EOL: 1.0m		08:00 – 12:00 utc => David Martinson		20:00 – 00:00 utc => David Ng					
<b>SP</b>	<b>TIME(UTC)</b>	<b>EVENT</b>	<b>COMMENTS</b>						
978	11:18	SOL	seq number sould have been 21 not 22 in LMN.						
	17:30	Pam	Retrieve d/t weather conditions – riding shallow compared to narmal 20m depth						
1337	18:07	OBS	OBS 7 crossing at source						
1403	19:22	OBS	OBS 8 crossing at source						
1536	21:48	OBS	OBS 9 crossing at source						
1654	23:59	midnight	last sp of day						
1675	00:23	OBS	OBS 10 crossing at source						
1802	02:47	OBS	OBS 11 crossing at source						
1900	04:40	XBT	Launch T5 seq100						
1930	05:16	OBS	OBS 12 crossing at source						
2059	07:46	OBS	OBS 13 crossing at source						
2093	08:25	OBS	OBS 14 crossing at source						
2125	09:01	OBS	OBS 15 crossing at source						
2159	09:39	OBS	OBS 16 crossing at source						
2283	12:03	OBS	OBS 17 crossing at source						
2445	15:00	Maggie	Maggie disabled and retrieved						
2497	15:59	EOL	End of line						
				<b>VESSEL POSITION</b>					
						Latitude (N)		Longitude (W/E) (-/+)	
FGSP	978	575359.796			1752041.574				
LGSP	2497	564847.198			1783307.939				
				<b>NAVIGATION OFFSET APPLIED</b>					
				NRP - Stern _____					
				NRP - COS _____					
				NRP - CNG (na) _____					
				COS - CNG (na) _____					
				NRP - CMP (na) _____					
				Note: LMN line parameter set to great circle line					
				<b>P1</b>		<b>P2</b>			
				MGL1111OBS02.0.p190		MGL1111OBS02.0.p294			
<b>Posnet locations &amp; remarks: good - none - intermittent</b>		<b>Acoustic remarks:</b>		MGL1111.LMN Source.SCN(001) mgl2010.RTCN					
Tailbuoy #1	n/a	Gun string #1	good	G1T2 not operational					
Tailbuoy #2	n/a	Gun string #2	good						
Tailbuoy #3	n/a	Gun string #3	good						
Tailbuoy #4	n/a	Gun string #4	good						
				SP spacing: 150m					
				<b>line status:</b>		<b>complete</b>			

<b>Seq# 022</b>		Line Name: <b>MGL1111_MCS14</b>	<b>NAVIGATION</b>		DATE: 2011-08-30	Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY   EARTH INSTITUTE																
		Line Brg : <b>36.707 °</b>	<b>LINE LOGS</b>		JULIAN DAY: <b>242</b>																	
CLIENT: USGS/Barth		SURVEY: USGS2		MGL1111																		
DC SOL : -13.7m	DEPTH SOL : 1110.0m	NAVIGATION SYSTEM USED: C-Nav3050 - Primary																				
DC EOL : -0.5m	DEPTH EOL : 3835.0m	NAVIGATION SYSTEM USED: SeaPath 200																				
SMG SOL: 5.3 knots	FEATHER SOL: -86.9 in turn °	NAVIGATION SYSTEM USED: Pos MV v3																				
SMG EOL: 5.0 knots	FEATHER EOL: -4.4 °	GRAVITY METER: BMG-II: used, SN210																				
<b>WEATHER</b>	MAX FEATHER: -85.9 °	MAGNETOMETER: GeoMetrics: used																				
WIND SOL: 22.8 knots		MAG DEC USED : 6°																				
WIND EOL: 8.8 knots	00:00 – 04:00 utc => David Ng	12:00 – 16:00 utc => David Martinson																				
SEAS SOL: 2.0m	04:00 – 08:00 utc => David Ng	16:00 – 20:00 utc => David Martinson																				
SEAS EOL: 1-2m	08:00 – 12:00 utc => David Martinson	20:00 – 00:00 utc => David Ng																				
SP	TIME(UTC)	EVENT	COMMENTS																			
908	17:26	SOL	Start of line																			
1302-1313	19:44-19:48	Spectra	No 'main' display – reset main on status page																			
1876	22:59	EOL	End of line																			
				<table border="1"> <thead> <tr> <th colspan="4">VESSEL POSITION</th> </tr> <tr> <th></th> <th>Latitude (N)</th> <th colspan="2">Longitude (W/E) (-/+)</th> </tr> </thead> <tbody> <tr> <td>FGSP</td> <td>928</td> <td>550959.688</td> <td>1774522.376</td> </tr> <tr> <td>LGSP</td> <td>1876</td> <td>553051.687</td> <td>1781250.202</td> </tr> </tbody> </table>			VESSEL POSITION					Latitude (N)	Longitude (W/E) (-/+)		FGSP	928	550959.688	1774522.376	LGSP	1876	553051.687	1781250.202
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				<b>NAVIGATION OFFSET APPLIED</b> NRP - Stern _____ NRP - COS _____ NRP - CNG (na) _____ COS - CNG (na) _____ NRP - CMP (na) _____																		
				Note: LMN line parameter set to great circle line           <div style="text-align: center;"> <b>P1</b>                                      <b>P2</b>  <small>MGL1111MCS14.0.p190    MGL1111MCS14.0.p294</small> </div>																		
<b>Posnet locations &amp; remarks: good - none - intermittent</b>		<b>Acoustic remarks:</b>		MGL1111.LMN                                      2D_1x8.SCN(001)                                      mgl2010.RTCN																		
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Tailbuoy #2	n/a	Gun string #2	good																			
Tailbuoy #3	n/a	Gun string #3	good																			
Tailbuoy #4	good	Gun string #4	good																			
				SP spacing:	50m																	
				<b>line status:</b>	<b>Incomplete</b>																	