

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Page 1

DATE: 2013-06-08
JULIAN DAY: 159

[illegible]

[illegible]

Page 1

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DATE:	2013-06-13	Lamont-Doherty Earth Observatory	
JULIAN DAY:	164	COLUMBIA UNIVERSITY EARTH INSTITUTE	
AREA: West of North Spain			
NAVIGATION SYSTEM USED: C-Nav3050 - Primary			
NAVIGATION SYSTEM USED: SeaPath 200			
NAVIGATION SYSTEM USED: POSMV			
GRAVITY METER: BMG-II: used, SN210			
MAGNETOMETER: GeoMetrics: used			
watch personnel Brian J, Luke H James, Sarah			
VESSEL POSITION			
	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	6842	42° 01' 11.246"	-12° 06' 27.692"
LSP	4934	42° 00' 23.421"	-13° 00' 59.340"
NAVIGATION OFFSET APPLIED			
	NRP - Stern	29.5m	
	NRP - COS	270.0m	
	NRP - CNG	479.50m	
	COS - CNG	209.50m	
	NRP - CMP	374.75m	
MGL1307.LMN			
mg12010.RTCN			
SP spacing: 37.5m			
line status:		complete	

[illegible]

[illegible]

[illegible]

[illegible]

Page 1

[illegible]

Page 1

[illegible]

[illegible]

DATE: 2013-06-16 JULIAN DAY: 167

[illegible]

Seq# 031		Line Name: MGL1307ARC2		NAVIGATION		DATE: 2013-06-19		 																									
		Line Brg : ARC °		LINE LOGS		JULIAN DAY: 170																											
CLIENT: Dale Sawyer				SURVEY: 3D - Galicia				AREA: West of Norh Spain																									
DC SOL : 104.5m		DEPTH SOL : 5322.7m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary																													
DC EOL : 536.5m		DEPTH EOL : 5323.9m		NAVIGATION SYSTEM USED: SeaPath 200																													
BSP SOL: 4.9 knots		FEATHER SOL: 20.2 °		NAVIGATION SYSTEM USED: POSMV																													
BSP EOL: 5.0 knots		FEATHER EOL: 80.5 °		GRAVITY METER: BMG-II: used, SN210 MAGNETOMETER: GeoMetrics: used																													
WEATHER		MAX FEATHER: 80.5 °																															
WIND SOL: NNW 15 knots																																	
WIND EOL: NNW 21 knots																																	
SEAS SOL: 2.0m		22:00 – 10:00 utc => M. Grey		10:00 – 16:00 utc >		Tobias M, Miguel A		22:00 – 04:00 utc > Brian J, Luke H																									
SEAS EOL: 3.0m		10:00 – 22:00 utc => M. Martello		16:00 – 22:00 utc >		Mari T, Raj		04:00 – 10:00 utc > James, Sarah																									
SP		UTC		EVENT		COMMENTS																											
5005		1723		SOL																													
				start of 3D acquisition		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3">VESSEL POSITION</th> </tr> <tr> <th>Shotpoints</th> <th>Latitude (N / +)</th> <th>Longitude (W / -)</th> </tr> <tr> <td>5005</td> <td>42° 02' 27.810"</td> <td>-13° 01' 33.264"</td> </tr> <tr> <td>5058</td> <td>42° 05' 14.499"</td> <td>-13° 01' 10.872"</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">NAVIGATION OFFSET APPLIED</th> </tr> <tr> <td>NRP - Stern</td> <td>29.5m</td> </tr> <tr> <td>NRP - COS</td> <td>270.0m</td> </tr> <tr> <td>NRP - CNG</td> <td>479.50m</td> </tr> <tr> <td>COS - CNG</td> <td>209.50m</td> </tr> <tr> <td>NRP - CMP</td> <td>374.75m</td> </tr> </table>				VESSEL POSITION			Shotpoints	Latitude (N / +)	Longitude (W / -)	5005	42° 02' 27.810"	-13° 01' 33.264"	5058	42° 05' 14.499"	-13° 01' 10.872"	NAVIGATION OFFSET APPLIED		NRP - Stern	29.5m	NRP - COS	270.0m	NRP - CNG	479.50m	COS - CNG	209.50m	NRP - CMP	374.75m
VESSEL POSITION																																	
Shotpoints	Latitude (N / +)	Longitude (W / -)																															
5005	42° 02' 27.810"	-13° 01' 33.264"																															
5058	42° 05' 14.499"	-13° 01' 10.872"																															
NAVIGATION OFFSET APPLIED																																	
NRP - Stern	29.5m																																
NRP - COS	270.0m																																
NRP - CNG	479.50m																																
COS - CNG	209.50m																																
NRP - CMP	374.75m																																
5058		1811		EOL		END OF LINE																											
Posnet locations & remarks: good - none - intermittent				acoustics						MGL1307.LMN mgl2010.RTCN																							
Tailbuoy #1		GOOD		Gun string #1		none		OPERATIONAL																									
Tailbuoy #2		none		Gun string #2		GOOD																											
Tailbuoy #3		GOOD		Gun string #3		none																											
Tailbuoy #4		GOOD		Gun string #4		none																											
						SP spacing: 150.0m		COMPLETE																									
						line status:																											

[illegible]

[illegible]

[illegible]

[illegible]

DATE:	2013-06-21	 Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY EARTH INSTITUTE
JULIAN DAY:	172	
AREA: West of North Spain		
NAVIGATION SYSTEM USED: C-Nav3050 - Primary NAVIGATION SYSTEM USED: SeaPath 200 NAVIGATION SYSTEM USED: POSMV GRAVITY METER: BMG-II: used, SN210 MAGNETOMETER: GeoMetrics: used		
watch personnel Brian J, Luke H James, Sarah		
VESSEL POSITION		
	Shotpoints	Latitude (N / +)
FSP	5008	42° 02' 56.571"
LSP	5061	42° 06' 01.436"
		Longitude (W / -)
		-13° 01' 55.751"
		-13° 00' 57.755"
NAVIGATION OFFSET APPLIED		
	NRP - Stern	29.5m
	NRP - COS	270.0m
	NRP - CNG	479.50m
	COS - CNG	209.50m
	NRP - CMP	374.75m
MGL1307.LMN		mgl2010.RTCN
SP spacing: 150.0m		
line status:	completed	

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DATE: 2013-07-17 JULIAN DAY: 198

Page 1

[illegible]

[illegible]

[illegible]

DATE: 2013-07-18
JULIAN DAY: 199

[illegible]

[illegible]

Line Name: MGL1307ARC13						<u>NAVIGATION</u>						DATE: 2013-07-19						Lamont-Doherty Earth Observatory																																			
Seq# 055						Line Brg : ARC °						<u>LINE LOGS</u>						JULIAN DAY: 200						COLUMBIA UNIVERSITY EARTH INSTITUTE																													
CLIENT: Dale Sawyer												SURVEY: 3D - Galicia												AREA: West of North Spain																													
DC SOL : -209.0 m																		DEPTH SOL : 5321.8 m																		NAVIGATION SYSTEM USED: C-Nav3050 - Primary																	
DC EOL : -236.3 m																		DEPTH EOL : 5319.2 m																		NAVIGATION SYSTEM USED: SeaPath 200																	
BSP SOL: 4.4 kts																		FEATHER SOL: n/a																		NAVIGATION SYSTEM USED: POSMV																	
BSP EOL: 4.6 kts																		FEATHER EOL: n/a																		GRAVITY METER: BMG-II: used, SN210																	
WEATHER																		MAX FEATHER: n/a																		MAGNETOMETER: GeoMetrics: used																	
WIND SOL: NNW9 kts																																																					
WIND EOL: NW11 kts																		shift hours shift leaders shift hours watch personnel shift hours watch personnel																																			
SEAS SOL: 0.5 m																		22:00 – 10:00 utc => M. Grey 22:00 – 04:00 utc >																		Sarah ; Katherine 04:00 – 10:00 utc > James ; Natalie																	
SEAS EOL: 0.6 m																		10:00 – 22:00 utc => M. Martello 10:00 – 16:00 utc >																		Joao ; Gaye 16:00 – 22:00 utc > Raj ; Tess																	
SP	UTC	EVENT	COMMENTS																		VESSEL POSITION																																
5001	13:56	SOL	Beginning shooting on ARC13, turn portside																		FSP	Shotpoints	Latitude (N / +)	Longitude (W / -)																													
5050	14:45	EOL	end of line ARC 13																		LSP	5001	42° 09' 09.990"	-13° 01' 10.624"																													
																						5050	42° 06' 46.888"	-13° 00' 18.106"																													
																					NAVIGATION OFFSET APPLIED																																
																					NRP - Stern	29.5m																															
																					NRP – COS	270.0m																															
																					NRP – CNG	479.50m																															
																					COS – CNG	209.50m																															
																					NRP – CMP	374.75m																															
																					Compasses KO'ed: S4C17, S3C1																																
Posnet locations & remarks: good - none - intermittent																						acoustics				MGL1307.LMN mgl2010.RTCN																											
Tailbuoy #1	GOOD	Gun string #1	GOOD	OPERATIONAL																		SP spacing: 60sec																															
Tailbuoy #2	none	Gun string #2	none	G2T1 not operational																		line status: Complete																															
Tailbuoy #3	GOOD	Gun string #3	none	S3T3																																																	
Tailbuoy #4	GOOD	Gun string #4	GOOD	S2T3																																																	

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Line Name: MGL1307ARC16						DATE: 2013-07-20		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY EARTH INSTITUTE	
Seq# 061						LINE LOGS			
CLIENT: Dale Sawyer						SURVEY: 3D - Galicia		AREA: West of North Spain	
DC SOL : 43.9 m		DEPTH SOL : 3957.7 m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary					
DC EOL : -4673.0 m		DEPTH EOL : 4173.9 m		NAVIGATION SYSTEM USED: SeaPath 200					
BSP SOL: 4.5 kts		FEATHER SOL: turn		NAVIGATION SYSTEM USED: POSMV					
BSP EOL: 4.0 kts		FEATHER EOL: turn		GRAVITY METER: BMG-II: used, SN210					
WEATHER		MAX FEATHER: turn		MAGNETOMETER: GeoMetrics: not used					
WIND SOL: W5 kts		shift hours shift leaders shift hours watch personnel shift hours watch personnel							
WIND EOL: WNW6 kts		22:00 – 10:00 utc => M. Grey 22:00 – 04:00 utc >		Sarah ; Katherine 04:00 – 10:00 utc >		James ; Natalie			
SEAS SOL: 0.5 m		10:00 – 22:00 utc => M. Martello 10:00 – 16:00 utc >		Joao ; Gaye 16:00 – 22:00 utc >		Raj ; Tess			
SEAS EOL: 0.5 m									
SP UTC EVENT COMMENTS									
5001 18:45 SOL Beginning shooting on ARC16, turn portside									
5120 19:45 EOL end of line ARC 16									
NOTE: sp interval 30seconds. Fire even shots only. Data for even shots only.									
VESSEL POSITION									
FSP	LSP	Shotpoints	Latitude (N / +)	Longitude (W / -)					
		5001	42° 07' 52.112"	-12° 05' 52.844"					
		5120	42° 10' 25.524"	-12° 06' 56.990"					
NAVIGATION OFFSET APPLIED									
		NRP - Stern	29.5m						
		NRP – COS	270.0m						
		NRP – CNG	479.50m						
		COS – CNG	209.50m						
		NRP – CMP	374.75m						
Posnet locations & remarks: good - none - intermittent acoustics									
Tailbuoy #1	GOOD	Gun string #1	GOOD	OPERATIONAL					
Tailbuoy #2	none	Gun string #2	none	G2T1 not operational					
Tailbuoy #3	GOOD	Gun string #3	none	S3T3					
Tailbuoy #4	GOOD	Gun string #4	GOOD	S2T3					
line status:				complete					

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Line Name: MGL1307ARC29						DATE: 2013-07-29		Lamont-Doherty Earth Observatory COLUMBIA UNIVERSITY EARTH INSTITUTE			
Seq# 095						Line Brg : ARC °		NAVIGATION LINE LOGS		JULIAN DAY: 210	
CLIENT: Dale Sawyer				SURVEY: 3D - Galicia				AREA: West of North Spain			
DC SOL : 2855.8 m		DEPTH SOL : 3928.5 m		NAVIGATION SYSTEM USED: C-Nav3050 - Primary							
DC EOL : -1426.0 m		DEPTH EOL : 3962.3 m		NAVIGATION SYSTEM USED: SeaPath 200							
BSP SOL: 4.4 kts		FEATHER SOL: n/a		NAVIGATION SYSTEM USED: POSMV							
BSP EOL: 4.0 kts		FEATHER EOL: n/a		GRAVITY METER: BMG-II: used, SN210							
WEATHER		MAX FEATHER: n/a		MAGNETOMETER: GeoMetrics: not used							
WIND SOL: SW14 kts											
WIND EOL: WSW17 kts		shift hours shift leaders		shift hours watch personnel		shift hours watch personnel					
SEAS SOL: 2.0 m		22:00 – 10:00 utc => M. Grey		22:00 – 04:00 utc >		Sarah ; Katherine		04:00 – 10:00 utc >		James ; Natalie	
SEAS EOL: 2.0 m		10:00 – 22:00 utc => M. Martello		10:00 – 16:00 utc >		Joao ; Gaye		16:00 – 22:00 utc >		Raj ; Tess	
COMMENTS											
SP UTC EVENT		VESSEL POSITION									
5001 08:52 SOL		Shotpoints Latitude (N / +) Longitude (W / -)									
		FSP 5001 42° 08' 05.867" -12° 05' 53.457"									
5086 13:04 EOL		LSP 5086 42° 10' 18.302" -12° 05' 14.433"									
NAVIGATION OFFSET APPLIED											
NRP - Stern 29.5m											
NRP – COS 270.0m											
NRP – CNG 479.50m											
COS – CNG 209.50m											
NRP – CMP 374.75m											
Posnet locations & remarks: good - none - intermittent											
acoustics				MGL1307.LMN mgI2010.RTCN							
Tailbuoy #1 NONE Gun string #1 NONE GS #1 not operational				SP spacing: 60s							
Tailbuoy #2 none Gun string #2 OPERATIONAL				line status: Complete							
Tailbuoy #3 GOOD Gun string #3 S3T3											
Tailbuoy #4 GOOD Gun string #4 S2T3											

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]