Seq# 001

Line Name: MGL14052860OL

Line Brg : 122.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-03

JULIAN DAY: 184

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain

SURVEY: 3D - reflection survey

AREA: New Jersey

DC SOL :	-2.7 m	DEPTH SOL :	29.4 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	7.4 m	DEPTH EOL :	55.7 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.0 kts	FEATHER SOL:	04.0 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.3 kts	FEATHER EOL:	-01.9 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	04.0 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	S10-15 kts				
WIND EOL:	S10-12 kts				
SEAS SOL:	1-2m				
SEAS EOL:	1-2m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel		
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P. Arnaud	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P. Arnaud	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
4341	11:13	SOL	Streamer1 and 2 towing off stern (not paravane) – no P-Cable deployed
			Streamer 1 set to 4.5m, Streamer 2 set to 7.0m
			Shot numbering incorrect – does not match preplot numbering
			Multiple changes made to recording system
2559	13:57	MMO	Shut down d/t MMO sighting.
2518	14:01	MMO	Cleared first shot @ full volume
1001	16:22	EOL	end of line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	4341	39° 38' 44.250"	-73° 31' 36.258"
LSP	1001	39° 26' 11.201"	-73° 07' 34.663"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics: OPERATIONAL

MGL1405.LMN

Mgl1307.RTCN

SP spacing: 12.5m

line status: INCOMPLETE

Seq# 002

Line Name: MGL14051948OL
Line Brg : 302.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-03
JULIAN DAY: 184

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	-6.4 m	DEPTH SOL :	53.3 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	17.2 m	DEPTH EOL :	22.2 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.3 kts	FEATHER SOL:	16.7 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.4 kts	FEATHER EOL:	-00.6 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	16.7 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	WSW 12.5 kts				
WIND EOL:	W 29 kts kts				
SEAS SOL:	1-2 m				
SEAS EOL:	1-2m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P. Arnaud	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P. Arnaud	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
861	17:23		First approach shot point
1001	17:35	SOL	Streamer1 and 2 towing off stern (not paravane) – no P-Cable deployed
			Streamer 1 set to 4.5m, Streamer 2 set to 7.0m
1673	18:39	MMO	Shutdown due to PSO sighting
1724	18:43	MMO	Cleared restart – Full volume
4954	00:00	MIDNIGHT	
5141	00:17	EOL	

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	1001	39° 24' 11.955"	-73° 10' 52.582"
LSP	5141	39° 39' 49.263"	-73° 40' 50.409"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: INCOMPLETE

Seq# 003

Line Name: MGL14051012OL
Line Brg : 122.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-04
JULIAN DAY: 185

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	192.8 m	DEPTH SOL :	28.9 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-7.1 m	DEPTH EOL :	55.4 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.4 kts	FEATHER SOL:	-18.2 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.4 kts	FEATHER EOL:	01.7 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	28.0 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	W 21 kts kts				
WIND EOL:	E 4.6 kts				
SEAS SOL:	1-2m				
SEAS EOL:	1-2m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P. Arnaud	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P. Arnaud	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
5140	01:27	FSP	First approach sp
5108	01:30	Maneuvering	Deviating course on approach to line 1012 to avoid vessel adrift
5001	01:40	SOL	Vessel steering to avoid another vessel
4104	03:07	Maneuvering	Returning to line max dc 4508.7
3286	04:28	Maneuvering	Vessel returns to within 25m of pre-computed line
1819	06:42	Adjustment	Multibeam adjusted maximum depth from 50 m to 100 m – Suspect center beam data from 06:38 to 06:42
5141	08:11	EOL	

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	5001	39° 36' 32.390"	-73° 42' 06.895"
LSP	862	39° 21' 01.637"	-73° 12' 05.321"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: INCOMPLETE

Seq# 004

Line Name: MGL14051972OL
Line Brg : 302.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-04
JULIAN DAY: 185

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	41.2 m	DEPTH SOL :	54.1 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	-38.2 m	DEPTH EOL :	26.3 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.4 kts	FEATHER SOL:	-20.6 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.3 kts	FEATHER EOL:	01.6 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	05.3 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	S 5.5 kts				
WIND EOL:	ENE 10 kts				
SEAS SOL:	1-2 m				
SEAS EOL:	1-2 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P.A Desiage	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P.A Desiage	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
		FSP	First approach sp
	09:15	Equi. Prob.	Late SOL d/t compass lock-up – reset DMU
890	09:26	SOL	
992	09:36	MMO Sight	Shut down for turtle
1032	09:40	MMO Sight	Return to full power
1465	10:19	MMO sight	Shut down for turtle
1503	10:23	MMO Sight	guns return to full power
4546	15:03	Source	Pull in 2 meters on gun string
4562	15:04	EOL	Early EOL d/t picking up gun string 1 for weather
		EOL	Prepare for and waiting on weather

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	890	39° 23' 54.550"	-73° 10' 04.689"
LSP	4562	39° 37' 41.262"	-73° 36' 35.870"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: INCOMPLETE

Seq# 005

Line Name: MGL14051876OL
Line Brg : 302.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-07
JULIAN DAY: 188

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	4.3 m	DEPTH SOL :	52.5 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	559.7 m	DEPTH EOL :	22.0 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	3.9 kts	FEATHER SOL:	-04.4 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.5 kts	FEATHER EOL:	03.8 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-08.1 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	SW 25 kts				
WIND EOL:	SW 20 kts				
SEAS SOL:	1-2 m				
SEAS EOL:	1-2 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P.A Desiage	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P.A Desiage	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
827	23:15	FSP	Streamer set at 7 m depth
1001	23:33	FGSP	First good shot point
1243	00:00	MIDNIGHT	
2281	01:50	KO	KO Compass 4
2906	02:51	PASSING	Passing IODP Site 29
3615	03:57	PASSING	Passing IODP Site 28
4663	05:30	PASSING	Passing IODP Site 27
5141	06:12	EOL	End of Line

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	827	39° 23' 20.182"	-73° 09' 48.272"
LSP	5141	39° 39' 51.758"	-73° 40' 48.255"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: COMPLETE

Seq# 006

Line Name: MGL14052816OM
Line Brg : 122.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-08
JULIAN DAY: 189

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	0.0 m	DEPTH SOL :	27.9 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	35.9 m	DEPTH EOL :	55.3 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.5 kts	FEATHER SOL:	18.5 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.6 kts	FEATHER EOL:	-03.3 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	-04.7 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	SW 22 kts				
WIND EOL:	SW 17 kts kts				
SEAS SOL:	1-2 m				
SEAS EOL:	1-2 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P.A Desiage	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P.A Desiage	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
5064	7:22	SOL	SOL begins at SP 5064
4866	7:40	OFF LINE	Off line due to weather, line off 98.2 m left
3474	9:43	P-cable	No P-cable positioning – Re booting PC
1873	12:04	Multibeam	Change max depth of multibeam to 55 m
1147	13:08	Multibeam	Change max depth of multibeam to 60 m
924	13:27	Multibeam	Change max depth of multibeam to 100 m
861	13:32	EOL	EOL ends at SP 861

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	5064	39° 42' 02.925"	-73° 38' 00.341"
LSP	861	39° 26' 10.444"	-73° 07' 35.353"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: COMPLETE

Seq# 007

Line Name: MGL14051948OM

Line Brg : 302.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-08

JULIAN DAY: 189

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain

SURVEY: 3D - reflection survey

AREA: New Jersey

DC SOL :	78.6 m	DEPTH SOL :	51.6 m	NAVIGATION SYSTEM USED:	C-Nav3050 - Primary
DC EOL :	17.0 m	DEPTH EOL :	22.6 m	NAVIGATION SYSTEM USED:	SeaPath 200
BSP SOL:	4.0 kts	FEATHER SOL:	16.9 °	NAVIGATION SYSTEM USED:	POSMV
BSP EOL:	4.3 kts	FEATHER EOL:	05.5 °	GRAVITY METER:	BMG-II: used, SN223
WEATHER		MAX FEATHER:	16.9 °	MAGNETOMETER:	GeoMetrics: N/A
WIND SOL:	SSW 18 kts				
WIND EOL:	SW 17 kts				
SEAS SOL:	1-2 m				
SEAS EOL:	1-2 m				

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P.A Desiage	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P.A Desiage	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
868	14:47	SOL	SOL begins at SP
884	14:49	MMO	Shutdown for turtle
928	14:54	MMO	First full volume
1111	15:12	MMO	Shutdown for turtle
1164	15:17	MMO	First full volume
1228	15:23	MMO	Shutdown for turtle
1277	15:28	MMO	First full volume
3535	18:48	MMO	Shutdown for turtle
3594	18:53	MMO	First full volume
3800	19:11	MMO	Shutdown for turtle
3857	19:16	MMO	First full volume

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	868	39° 23' 44.056"	-73° 09' 33.101"
LSP	5141	39° 39' 49.261"	-73° 40' 50.417"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics: OPERATIONAL

MGL1405.LMN

mgl1307.RTCN

SP spacing: 12.5m

line status: COMPLETE

Seq# 008

Line Name: MGL14052836OL
Line Brg : 122.9 °

NAVIGATION LINE LOGS

DATE: 2014-07-08
JULIAN DAY: 189

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

CLIENT: Gregory Mountain
SURVEY: 3D - reflection survey
AREA: New Jersey

DC SOL :	-3.8 m	DEPTH SOL :	26.6 m
DC EOL :	-43.7 m	DEPTH EOL :	22.6 m
BSP SOL:	4.6 kts	FEATHER SOL:	47.6 °
BSP EOL:	4.5 kts	FEATHER EOL:	-05.9 °
WEATHER		MAX FEATHER:	47.6 °
WIND SOL:	SW 22 kts		
WIND EOL:	SW 25 kts		
SEAS SOL:	1-2 m		
SEAS EOL:	2-3 m		

NAVIGATION SYSTEM USED: C-Nav3050 - Primary
NAVIGATION SYSTEM USED: SeaPath 200
NAVIGATION SYSTEM USED: POSMV
GRAVITY METER: BMG-II: used, SN223
MAGNETOMETER: GeoMetrics: N/A

shift hours	shift leaders	shift hours	watch personnel	shift hours	watch personnel	shift hours	watch personnel
16:00 – 04:00 utc =>	A. Thompson	16:00 – 20:00 utc >	M. Liddell / J. Chen	20:00 – 0:00 utc >	K. Baldwin / P.A Desiage	0:00 – 4:00 utc >	A. Newton / A. Corbalan
04:00 – 16:00 utc =>	M. Martello	4:00 – 8:00 utc >	M. Liddell / J. Chen	8:00 –12:00 utc >	K. Baldwin / P.A Desiage	12:00 – 16:00 utc >	A. Newton / A. Corbalan

SP	UTC	EVENT	COMMENTS
5141	22:03	SOL	SOL begins at SP 5141
4739	22:38	EOL	EOL stop at SP 4739
			EEOL – Directed to stop seismic acquisition

VESSEL POSITION

	Shotpoints	Latitude (N / +)	Longitude (W / -)
FSP	5141	39° 42' 16.339"	-73° 38' 36.983"
LSP	4739	39° 40' 46.965"	-73° 35' 41.223"

NAVIGATION OFFSET APPLIED

NRP - Stern	29.5m
NRP – COS	56.0m
NRP – CNG	
COS – CNG	
NRP – CMP	

Posnet locations & remarks: good - none - intermittent

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

acoustics
OPERATIONAL

MGL1405.LMN
mgl1307.RTCN
SP spacing: 12.5m

line status: INCOMPLETE