

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus	
Science Officer		
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00

	SOL	EOL
Tape #	001	003
SP #	970	2983

Line	MGL1408OBS01
Sequence	01
Direction	300

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	996	2983
Date MM/DD/YY	09/18/14	09/20/14
Time UTC	05:35	14:57
Volume (cu in.)	6600in3	6600in3
Wind (kts)	WNW 4.8kts	NE 21.5kts
Sea State (m)	1-2m	1-2m
Water Depth (m)	5312.53m	17.3m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments		
Water depth not corrected. Measurement at keel, not water line.		
SOL NOISY CHANNELS		
EOL NOISY CHANNELS		

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
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Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	004	013
SP #	1029	9598

Line	MGL1408MCS02
Sequence	02
Direction	118

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1041	9598
Date MM/DD/YY	09/20/14	09/23/14
Time UTC	17:30	00:36
Volume (cu in.)	6600in3	6600in3
Wind (kts)	E-NE 15-20kts	SW 5-10 kntskts
Sea State (m)	1-2m	0.5-1 mm
Water Depth (m)	17m	5270m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
17:30	1	1041	4	SOL MGL1408MCS02 6600in3 (Guns 1-5, 2-5, 3-5, 4-5 spare out, All others IN)
17:30	1	1041	4	No fire S2G1 - Turn noise observed on cable
17:31	2	1042	4	Delta timing error (-8.3 ms) S2G1
17:31	3	1043	4	No fire S2G1
17:31	4	1044	4	Delta timing error (11.9 ms) S2G1
17:32	5	1045	4	Delta timing error (-2.3 ms) S2G1
18:02	85	1125	4	No fire error S2G1
18:02	86	1126	4	Delta timing error (-12.3 ms) S2G1
18:02	87	1127	4	No fire error S2G1
18:03	88	1128	4	Delta timing error (-10.6 ms) S2G1
18:03	89	1129	4	Delta timing error (-9.4 ms) S2G1
18:05	95	1135	4	End of turn noise
18:19	130	1170	4	No fire error S2G1
18:19	132	1172	4	No fire error S2G1
18:20	133	1173	4	Delta timing error (-2.4 ms) S2G1
18:22	139	1179	4	No fire error S2G1
18:34	172	1212	4	No fire error S2G1
18:44	198	1238	4	No fire error S2G1
18:48	210	1250	4	No fire error S2G1
18:49	211	1251	4	Delta timing error (-2.3 ms) S2G1
18:55	229	1269	4	No fire error S2G1
19:13	276	1316	4	No fire error S2G1
19:24	306	1346	4	No fire error S2G1
19:35	337	1377	4	No fire error S2G1
19:35	338	1378	4	No fire error S2G1
19:36	339	1379	4	Delta timing error (3.1 ms) S2G1
19:38	345	1385	4	No fire error S2G1
19:38	346	1386	4	Delta timing error (3.1 ms) S2G1
19:39	348	1388	4	No fire error S2G1
19:42	355	1395	4	No fire error S2G1
19:42	356	1396	4	No fire error S2G1
19:42	357	1397	4	Delta timing error (2.1 ms) S1G4
19:42	357	1397	4	Delta timing error (-12.6 ms) S2G1
19:43	358	1398	4	No fire error S2G1
19:43	359	1399	4	Delta timing error (-10.2 ms) S2G1
19:43	360	1400	4	No fire error S2G1
19:47	371	1411	4	No fire error S2G1
19:56	394	1434	4	No fire error S2G1
20:00	405	1445	4	No fire error S2G1 - turned S2G1 off - changed S2G5 to auto
20:01	408	1448	4	Delta timing error (4.1 ms) S2G5
20:01	409	1449	4	Delta timing error (-3.4 ms) S2G5
21:12	598	1638	4	Delta timing error (-2.3 ms) S1G4
22:47	859	1899	4	EOT
22:48	860	1900	5	BOT
01:30	1305	2345	5	Start seeing swell noise in data
04:12	1691	2731	5	Delta timing error (2.3 ms) S1G4
04:25	1718	2758	5	EOT
04:25	1719	2759	6	BOT
05:05	1801	2841	6	Delta timing error (2.2 ms) S4G2
05:35		2899	6	Missed Shot Due to Nav / Weather
06:12	1924	2965	6	Noise on Streamer due to Surfacing of Cable (Start)
07:38	2052	3093	6	Noise on Streamer due to Surfacing of Cable (Stop) Cable Depth changed to 11m
07:38	2053	3094	6	Delta timing error (2.1 ms) S4G2
10:06	2284	3325	6	Adjusted Streamer depth to 10m
11:42	2445	3486	6	Streamer Depth set back to original 9m depth
12:41	2556	3597	6	Delta timing error (2.7 ms) S4G2
12:51	2577	3618	6	EOT
12:52	2578	3619	7	BOT
16:05	3032	4073	7	Delta timing error (-2.1 ms) S1G4
16:08	3040	4081	7	Delta timing error (-2.1 ms) S1G4
16:20	3070	4111	7	Delta timing error (-2.2 ms) S1G4
17:05	3192	4233	7	Delta timing error (2.6 ms) S4G2



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Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	014	015
SP #	992	2625

Line	MGL1408OBS03
Sequence	03
Direction	023

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	997	2625
Date MM/DD/YY	09/23/2014	09/25/2014
Time UTC	15:20	10:10
Volume (cu in.)	5490in3	6600in3
Wind (kts)	NNW 5-10kts	S 19.4kts
Sea State (m)	1m	2m
Water Depth (m)	4891m	4036.3m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

**General / Line Comments**  
 Water depth not corrected. Measurement at keel, not water line.

Swell noise intermittent

SOL NOISY CHANNELS

EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
15:20	1	997	14	SOL MGL1408OBS03 5490in3 String #2 on deck for maintenance
16:26	36	1032	14	Bad shot after redeploying string 2 - back to full volume (6600in3) Guns 1-5,2-5,3-5,4-5
16:28	37	1033	14	First good shot point with full volume
17:48	88	1084	14	Power down for turtle
17:49	89	1085	14	SP 1084-1085 missed while shutting down
18:19	106	1102	14	First shot at full power - Delta timing error S2G4 (2.4ms), S4G4 (2.8 ms)
22:53	283	1279	14	Delta Timing Error S2G4 (2.2 ms)
23:13	296	1292	14	Delta Timing Error S2G4 (-2.1 ms)
23:29	306	1302	14	Delta Timing Error S4G4 (-2.6 ms)
00:22	341	1337	14	Delta Timing Error S2G4 (2.1 ms)
01:07	370	1366	14	Delta Timing Error S2G4 (-2.3 ms)
01:50	399	1395	14	Delta Timing Error S2G4 (-2.2 ms)
02:00	405	1401	14	Delta Timing Error S2G4 (2.4 ms)
02:31	426	1422	14	Delta Timing Error S2G4 (2.1 ms)
02:37	430	1426	14	Delta Timing Error S2G4 (2.2 ms)
02:53	441	1437	14	Delta Timing Error S4G4 (2.3 ms)
02:59	445	1441	14	Delta Timing Error S2G4 (-2.1 ms)
03:35	470	1466	14	Delta Timing Error S2G4 (2.3 ms)
04:22	501	1497	14	Delta Timing Error S2G4 (2.2 ms)
04:34	509	1505	14	Delta Timing Error S2G4 (-2.4 ms)
05:13	535	1531	14	Delta Timing Error S2G4 (-2.3 ms)
05:54	561	1557	14	Delta Timing Error S2G4 (-2.1 ms)
06:13	574	1570	14	Delta Timing Error S2G4 (2.7 ms)
06:42	593	1589	14	Delta Timing Error S2G4 (-2.2 ms)
06:43	594	1590	14	Delta Timing Error S2G4 (2.4 ms)
07:59	645	1641	14	Delta Timing Error S2G4 (2.7 ms)
08:26	663	1659	14	Delta Timing Error S2G4 (-2.2 ms)
08:37	670	1666	14	Delta Timing Error S2G4 (2.1 ms)
08:45	675	1671	14	Delta Timing Error S2G4 (2.9 ms)
08:51	679	1675	14	Delta Timing Error S2G4 (2.2 ms)
08:57	683	1679	14	Delta Timing Error S2G4 (-2.3 ms)
09:03	687	1683	14	Delta Timing Error S2G4 (2.2 ms)
10:37	749	1745	14	Delta Timing Error S2G4 (3.0 ms)
11:27	782	1778	14	Delta Timing Error S2G4 (-2.6 ms)
11:30	784	1780	14	Delta Timing Error S2G4 (2.1 ms)
11:39	790	1786	14	Delta Timing Error S2G4 (2.2 ms)
12:27	821	1817	14	Delta Timing Error S2G4 (-2.3 ms)
12:50	837	1833	14	Delta Timing Error S2G4 (-2.8 ms)
12:54	840	1836	14	Delta Timing Error S2G4 (2.3 ms)
13:17	855	1851	14	Delta Timing Error S2G4 (2.2 ms)
13:25	860	1856	14	Delta Timing Error S2G4 (2.5 ms)
13:23	859	1855	14	EOT
13:25	860	1856	15	BOT
14:26	900	1896	15	Delta Timing Error S2G4 (-2.3 ms)
14:29	902	1898	15	Delta Timing Error S2G4 (2.2 ms)
16:17	971	1967	15	Delta Timing Error S2G4 (2.3 ms)
16:20	973	1969	15	Delta Timing Error S2G4 (2.2 ms)
16:30	979	1975	15	Delta Timing Error S2G4 (-2.4 ms)
16:41	986	1982	15	Delta Timing Error S2G4 (2.1 ms)
17:01	998	1994	15	Delta Timing Error S2G4 (-2.7 ms)
17:25	1013	2009	15	Delta Timing Error S2G4 (2.3 ms)
18:09	1039	2035	15	Delta Timing Error S4G4 (-2.1 ms)
18:26	1049	2045	15	Delta Timing Error S2G4 (-2.4 ms)





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Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>016</b>	<b>024</b>
<b>SP #</b>	<b>970</b>	<b>8395</b>

<b>Line</b>	<b>MGL1408MCS03</b>
<b>Sequence</b>	<b>04</b>
<b>Direction</b>	<b>204</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	994	3895
Date MM/DD/YY	09/25/2014	09/27/2014
Time UTC	13:08	11:21
Volume (cu in.)	6600in3	6560in3
Wind (kts)	MGL1408MC	NW 9.8kts
Sea State (m)	2m	1m
Water Depth (m)	4036.2m	4892.8m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
Changed from 225m spacing on OBS line to 50m spacing on MCS shoot of same line.	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>025</b>	<b>026</b>
<b>SP #</b>	<b>1256</b>	<b>2138</b>

<b>Line</b>	<b>MGL1408MCS031</b>
<b>Sequence</b>	<b>05</b>
<b>Direction</b>	<b>202</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1265	2138
Date MM/DD/YY	09/27/2014	09/27/2014
Time UTC	12:41	17:42
Volume (cu in.)	3300in3	3300in3in3
Wind (kts)	E 12.7kts	NE 7.5kts
Sea State (m)	1m	1m
Water Depth (m)	4946.6m	4930m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
50m spacing on MCS shoot	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



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Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	027	030
SP #	1111	4045

Line	MGL1408MCS032
Sequence	06
Direction	293

Streamer Parameters				
	BOT	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1112	4045
Date MM/DD/YY	09/27/2014	09/28/2014
Time UTC	18:25	11:19
Volume (cu in.)	3300in3	3300in3in3
Wind (kts)	E 10-15kts	NE 13.4kts
Sea State (m)	1m	1m
Water Depth (m)	4887m	3491.5m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
50m spacing on MCS shoot	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>031</b>	<b>32</b>
<b>SP #</b>	<b>1022</b>	<b>2817</b>

<b>Line</b>	<b>MGL1408MCS033</b>
<b>Sequence</b>	<b>07</b>
<b>Direction</b>	<b>293</b>

Streamer Parameters				
	BOT	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1022	2817
Date MM/DD/YY	09/28/2014	09/28/2014
Time UTC	11:24	17:34
Volume (cu in.)	3300in3	3300in3in3
Wind (kts)	NE 13.7kts	NE 10 kntskts
Sea State (m)	1m	1m
Water Depth (m)	4887m	2660 mm

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
25 m spacing on MCS shoot	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	





# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>033</b>	<b>035</b>
<b>SP #</b>	<b>1020</b>	<b>4430</b>

<b>Line</b>	<b>MGL1408MCS034</b>
<b>Sequence</b>	<b>08</b>
<b>Direction</b>	<b>289</b>

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1020	4430
Date MM/DD/YY	09/28/2014	09/29/2014
Time UTC	17:38	14:02
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 10kts	NE 10.2kts
Sea State (m)	1m	1m
Water Depth (m)	2660m	387.7m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
25 m spacing	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	036	37
SP #	1154	2706

Line	MGL1408MCS035
Sequence	09
Direction	088

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1247	2706
Date MM/DD/YY	9/29/2014	9/29/2014
Time UTC	15:20	20:03
Volume (cu in.)	3300in3	3300in3in3
Wind (kts)	NE 15.6kts	NE 12.5 ktskts
Sea State (m)	1m	1mm
Water Depth (m)	454.4m	1390m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
Changed from 25m to 37.5 m spacing after turn onto line MCS035	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>38</b>	<b>39</b>
<b>SP #</b>	<b>992</b>	<b>2220</b>

<b>Line</b>	<b>MGL1408OBS04A</b>
<b>Sequence</b>	<b>010</b>
<b>Direction</b>	<b>028</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	994	2220
Date MM/DD/YY	09/29/2014	09/30/2014
Time UTC	22:16	19:58
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NE 4kts	NE 16 ktskts
Sea State (m)	1mm	1m
Water Depth (m)	2790m	2410m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

**General / Line Comments**  
 Water depth not corrected. Measurement at keel, not water line.

OBS line - 225 m between shots

SOL NOISY CHANNELS

EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>040</b>	<b>041</b>
<b>SP #</b>	<b>1111</b>	<b>2200</b>

<b>Line</b>	<b>MGL1408MCS041</b>
<b>Sequence</b>	<b>011</b>
<b>Direction</b>	<b>119</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1111	2200
Date MM/DD/YY	09/30/2014	10/01/2014
Time UTC	20:55	04:36
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 12kts	NNE 7.8kts
Sea State (m)	0.5-1m	1m
Water Depth (m)	2548m	3353.3m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
MCS line - 50 m between shots	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	





# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	042	44
SP #	1102	3618

Line	MGL1408MCS042
Sequence	012
Direction	210

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1102	3618
Date MM/DD/YY	10/01/2014	10/01/2014
Time UTC	05:23	21:39
Volume (cu in.)	3300in3	3300in3
Wind (kts)	N 12.7kts	N 14kts
Sea State (m)	1m	1m
Water Depth (m)	3350.0m	3600m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
MCS line - 50 m between shots	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	45	46
SP #	1024	2022

Line	MGL1408OBS04B
Sequence	013
Direction	08

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6560 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1024	2022
Date MM/DD/YY	10/02/2014	10/02/2014
Time UTC	01:26	20:58
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 16kts	N 15kts
Sea State (m)	1m	1.5m
Water Depth (m)	3300m	1975m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

**General / Line Comments**  
 Water depth not corrected. Measurement at keel, not water line.

OBS line - 225 m between shots

SOL NOISY CHANNELS

EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>047</b>	<b>48</b>
<b>SP #</b>	<b>1014</b>	<b>2057</b>

<b>Line</b>	<b>MGL1408OBS01A</b>
<b>Sequence</b>	<b>014</b>
<b>Direction</b>	<b>115</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1036	2044
Date MM/DD/YY	10/03/2014	10/04/2014
Time UTC	06:31	09:06
Volume (cu in.)	6600in3	4950in3
Wind (kts)	N 8.8kts	SW 10kts
Sea State (m)	1m	2mm
Water Depth (m)	24.2m	4263.4m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
OBS line - 225 m between shots	
Early EOL due to Sub-Array #2 Comm Failure LGSP 2044	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
06:03	1	1014	47	SOL MGL1408OBS01A 6600in3 (GUNS 1-5, 2-5, 3-5,4-5 OUT, All others IN)
06:04	2	1015	47	Noise Due to Turn on Streamer (START)
06:31	23	1036	47	MCS FGSP # 1036
06:52	38	1051	47	Noise Due to Turn on Streamer (END)
08:21	100	1113	47	Streamer Cable down to max ~20m in first 3rd of cable due to sea temp (Ended)
10:41	205	1218	47	Source SHUTDOWN - Marine Mammal Sighting (15min START)
10:56	215	1228	47	Ramp-up Started after Marine Mammal Sighting (START)
11:01	219	1232	47	Bad Shot (No SP recorded on File)
11:11	226	1239	47	Bad Shot (No SP recorded on File)
11:20	232	1245	47	Bad Shot (No SP recorded on File)
11:27	237	1250	47	Bad Shot (No SP recorded on File)
11:31	240	1253	47	Bad Shot (No SP recorded on File)
11:34	242	1255	47	Ramp-up Completed after Marine Mammal Sighting (END) - @ Full Volume 6600in3
12:22	276	1289	47	Start Turning to Port offline due to Boat (Longliner) ahead of vessel RVMGL - ~
12:23	277	1290	47	Noise Due to Turn on Streamer (START)
13:17	314	1327	47	Power Down (START)- Mitigation Gun ON
13:26	320	1333	47	Full Power - Power Down (END)
15:19	372	1385	47	Power Down (START)- Mitigation Gun ON
15:48	380	1393	47	Full Power - Power Down (END)
16:45	396	1409	47	Delta Timing Error @ S4G4 (2.4 ms)
16:49	397	1410	47	Turning back into the line - streamer lowered down to 11 m
17:28	417	1430	47	Delta Timing Error @ S2G4 (-2.3 ms)
17:44	427	1440	47	Delta Timing Error @ S4G4 (-2.1 ms)
18:10	442	1455	47	Delta Timing Error @ S2G4 (-2.2 ms)
19:11	481	1494	47	Delta Timing Error @ S2G4 (2.3 ms)
20:25	530	1543	47	Delta Timing Error @ S2G4 (-2.3 ms)
23:19	650	1663	47	Streamer brought back to 9 m
01:34	735	1748	47	Delta Timing Error @ S4G2 (2.5 ms)
01:45	742	1755	47	Streamer down to ~20m in first 3rd of cable
02:50	785	1798	47	Most birds back to expected depth (9m)
04:44	859	1872	47	EOT
04:45	860	1873	48	BOT
09:06	1031	2044	48	COMM Error S2G3-10 - Volume down to 5670in3 (START of Issue)
09:25	1044	2057	48	Early EOL due to S2 Comm Failure 4950in3

MGL1408OBS01A

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>049</b>	<b>49</b>
<b>SP #</b>	<b>2030</b>	<b>2649</b>

<b>Line</b>	<b>MGL1408OBS01B</b>
<b>Sequence</b>	<b>015</b>
<b>Direction</b>	<b>115</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	225			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	2030	2649
Date MM/DD/YY	10/04/2014	10/05/2014
Time UTC	12:14	3:45
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW 18.3kts	SW 16.5kts
Sea State (m)	1m	1-2m
Water Depth (m)	4248.3m	4624m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

EOL MGL1408OBS01B 6600 in3

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
OBS line - 225 m between shots	
Picked up S2 Source for repairs, maked Port turn circling around to cont. MGL1408OBS01B	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
12:14	1	2030	49	SOL MGL1408OBS01B 6600in3 (GUNS 1-5, 2-5, 3-5,4-5 OUT, All others IN) Overlap Shot
12:14	1	2030	49	for Continuation of OBS01A. Noise on Streamer from Completing Turn
12:32	14	2043	49	Delta Timing Error (S4G4 @ 2.5 ms)
12:53	28	2057	49	ENAM - Harm Van Avendonk
12:55	29	2058	49	SP 2044 - 2057: Reshoot Shot points from OBS01A
13:23	47	2076	49	SP 2058 onward are PRIME SP
16:00	149	2178	49	Noise on Streamer Ended
16:23	164	2193	49	birds 7-10 sagging down to ~15 m
16:35	171	2200	49	Delta Timing Error (S2G4 @ -2.4 ms)
16:57	186	2215	49	All birds back to ~9m
17:23	202	2231	49	Delta Timing Error (S2G4 @ -2.1 ms)
18:53	259	2288	49	Delta Timing Error (S2G4 @ 2.3 ms)
21:31	361	2390	49	Delta Timing Error (S2G4 @ -2.2 ms)
21:34	363	2392	49	Delta Timing Error (S2G4 @ 2.2 ms)
23:37	445	2474	49	Delta Timing Error (S2G4 @ -2.2 ms)
00:18	473	2502	49	Delta Timing Error (S2G4 @ 2.1 ms)
00:20	474	2503	49	Delta Timing Error (S4G1 @ 3.0 ms)
00:46	492	2521	49	Delta Timing Error (S4G1 @ -2.3 ms)
00:59	501	2530	49	312
01:24	519	2548	49	Delta Timing Error (S2G4 @ 2.2 ms)
02:26	563	2592	49	Auto fire error S2G7 (6553.5 ms)
02:33	568	2597	49	Auto fire error S2G7 (5288.9 ms)
02:37	571	2600	49	Auto fire error S2G7 (6553.5 ms)
02:41	574	2603	49	Auto fire error S2G7 (6553.5 ms)
02:59	587	2616	49	Auto fire error S2G7 (6553.5 ms)
03:01	589	2618	49	Auto fire error S2G7 (6553.5 ms)
03:07	593	2622	49	Auto fire error S2G7 (3150.8 ms)
03:08	594	2623	49	Auto fire error S2G7 (6553.5 ms)
03:10	595	2624	49	Auto fire error S2G7 (6553.5 ms)
03:17	600	2629	49	Auto fire error S2G7 (6553.5 ms)
03:22	604	2633	49	Auto fire error S2G7 (6553.5 ms)
03:23	605	2634	49	Auto fire error S2G7 (6553.5 ms)
03:25	606	2635	49	Auto fire error S2G7 (6553.5 ms)
03:26	607	2636	49	Auto fire error S2G7 (6553.5 ms)
3:45	620	2649	49	EOL MGL1408OBS01B 6600 in3

MGL1408OBS01A



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>050</b>	<b>055</b>
<b>SP #</b>	<b>945</b>	<b>6087</b>

<b>Line</b>	<b>MGL1408MCS01</b>
<b>Sequence</b>	<b>016</b>
<b>Direction</b>	<b>295</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	1009	6087
Date MM/DD/YY	10/05/2014	10/06/2014
Time UTC	06:43	12:13
Volume (cu in.)	6600in3	6600in3
Wind (kts)	W 21.4kts	NE 8.0kts
Sea State (m)	1-2m	<1m
Water Depth (m)	4656.1m	2985.2m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
MCS line - 50 m between shots	
Syntrack Name - 1408MC01	
06:18 - First nav shotpoint 945	
Early EOL due to Source - Air Leak	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
06:43	1	1008	50	SOL MGL1408MCS01 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)
06:43	2	1009	50	FGSP. Front half streamer Deep (21.5m) Noise on streamer due to turn onto line MCS01
07:21	108	1115	50	Noise from turn on MCS (ENDED)
07:58		1225	50	Missed Shot (Speed)
08:29	308	1316	50	Streamer in trim @ ~ 9m depth
09:07		1431	50	Missed Shot (Speed)
09:08		1434	50	Missed Shot (Speed)
09:14		1453	50	Missed Shot (Speed)
09:15		1455	50	Missed Shot (Speed)
10:37		1699	50	Missed Shot (Speed)
10:46		1727	50	Missed Shot (Speed)
10:47		1729	50	Missed Shot (Speed)
11:27		1847	50	Missed Shot (Speed)
11:27		1849	50	Missed Shot (Speed)
11:36	859	1876	50	EOT
11:37	860	1877	51	BOT
11:38		1882	51	Missed Shot (Speed)
11:44		1895	51	Missed Shot (Speed)
13:03		2117	51	Missed Shot (Speed)
13:03		2120	51	Missed Shot (Speed)
13:04		2122	51	Missed Shot (Speed)
13:05		2124	51	Missed Shot (Speed)
13:33	1177	2200	51	Sea Noise on MCS (START)
14:28		2340	51	Missed Shot (Speed)
14:29		2346	51	Missed Shot (Speed)
14:52		2410	51	Missed Shot (Speed)
15:08		2450	51	Missed Shot (Speed)
15:11		2459	51	Missed Shot (Speed)
15:16		2475	51	Missed Shot (Speed)
14:24		2497	51	Missed Shot (Speed)
15:32		2522	51	Missed Shot (Speed)
15:34		2526	51	Missed Shot (Speed)
15:36		2532	51	Missed Shot (Speed)
16:35		2695	51	Missed Shot (Speed)
16:41		2712	51	Missed Shot (Speed)
16:56	1718	2753	51	EOT
16:56	1719	2754	52	BOT
18:37	2000	3035	52	Streamer sagging - Birds 4-12 between 12 and 15 m
19:25	2140	3175	52	All birds back at 9 m
19:32		3198	52	Missed Shot (Speed)
19:50	2212	3248	52	Birds 7-10 sagging again to ~12m
20:24		3347	52	Missed Shot (Speed)
20:25		3350	52	Missed Shot (Speed)
21:54	2577	3615	52	EOT
21:55	2578	3616	53	BOT
2:55	3436	4474	53	EOT
2:55	3437	4475	54	BOT
08:01	4295	5333	54	EOT
08:01	4296	5334	55	BOT
09:24	4542	5580	55	Streamer dropping btw birds 3-10 down to depth of ~15 meters
12:13	5049	6087	55	EOL MGL1408MCS01 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
<b>Tape #</b>	<b>056</b>	<b>058</b>
<b>SP #</b>	<b>5910</b>	<b>7787</b>

<b>Line</b>	<b>MGL1408MCS01A</b>
<b>Sequence</b>	<b>017</b>
<b>Direction</b>	<b>295</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	5910	7787
Date MM/DD/YY	10/06/2014	10/07/2014
Time UTC	17:11	04:55
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S 6kts	SW 13.2kts
Sea State (m)	1m	1m
Water Depth (m)	3122m	82.3m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments	
Water depth not corrected. Measurement at keel, not water line.	
Continuation of MGL1408MCS01 -> Circle around for gun repair on S4 due to airleak	
Early EOL due to depth of streamer + 28m in shallow water.	
SOL NOISY CHANNELS	
EOL NOISY CHANNELS	

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	059	059
SP #	7666	8349

Line	MGL1408MCS01B
Sequence	018
Direction	295

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	7666	8349
Date MM/DD/YY	10/07/2014	10/07/2014
Time UTC	18:07	22:02
Volume (cu in.)	6600in3	6600in3
Wind (kts)	W 6kts	SE 1kts
Sea State (m)	0.2m	0.1m
Water Depth (m)	676m	25m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
Continuation of MGL1408MCS01A -> Circle around for streamer & gun repairs
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	62	064
SP #	956	3784

Line	MGL1408MCS052
Sequence	019
Direction	098

Streamer Parameters				
	BOT	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	956	3784
Date MM/DD/YY	10/08/2014	10/08/2014
Time UTC	00:53	08:59
Volume (cu in.)	3300in3	3300in3
Wind (kts)	S 13kts	SW 25.8kts
Sea State (m)	0.5 m	1m
Water Depth (m)	49m	2405.8m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
25 m spacing on MCS shoot
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
00:50	-	-	60 / 61	First shots on tapes 60 and 61 were faulty because of bad record length
00:52	1	956	62	SOL MGL1408MCS052 3300in3 (GUNS Disabled 1-ALL, 4-All, 2-5, 3-5 OUT, All others IN)
01:32	229	1184	62	Comm Error S2G2
01:40		1234	62	Missed shot (speed)
01:41		1242	62	Missed shot (speed)
01:43		1249	62	Missed shot (speed)
01:44		1256	62	Missed shot (speed)
02:43		1612	62	Missed shot (speed)
02:49		1649	62	Missed shot (speed)
02:51		1661	62	Missed shot (speed)
02:54		1676	62	Missed shot (speed)
04:06	1138	2101	62	EOT
04:06	1139	2102	63	BOT
05:26		2572	63	Missed shot (speed)
05:27		2577	63	Missed shot (speed)
05:27		2579	63	Missed shot (speed)
05:28		2581	63	Missed shot (speed)
05:28		2583	63	Missed shot (speed)
05:29		2587	63	Missed shot (speed)
05:29		2589	63	Missed shot (speed)
05:29		2591	63	Missed shot (speed)
05:30		2593	63	Missed shot (speed)
05:30		2595	63	Missed shot (speed)
05:30		2597	63	Missed shot (speed)
05:31		2599	63	Missed shot (speed)
05:31		2602	63	Missed shot (speed)
05:32		2604	63	Missed shot (speed)
05:53		2728	63	Missed shot (speed)
05:54		2733	63	Missed shot (speed)
05:54		2735	63	Missed shot (speed)
05:55		2740	63	Missed shot (speed)
06:31	1961	2942	63	Delta Timing Error (S2G2 @ 2.1 ms)
06:33	1976	2957	63	Delta Timing Error (S2G7 @ -2.7 ms)
06:34	1977	2958	63	Delta Timing Error (S2G7 @ 2.1 ms)
06:36	1991	2972	63	Delta Timing Error (S2G7 @ 2.7 ms)
06:37	1998	2979	63	Delta Timing Error (S2G7 @ -7.9 ms)
06:38	2001	2982	63	Delta Timing Error (S2G7 @ 6.7 ms)
06:40	2011	2992	63	Delta Timing Error (S2G7 @ -6.1 ms)
06:40	2012	2993	63	Delta Timing Error (S2G7 @ 4.9 ms)
06:41	2016	2997	63	Delta Timing Error (S2G7 @ 2.2 ms)
06:42	2021	3002	63	Delta Timing Error (S2G7 @ -3.7 ms)
06:42	2022	3003	63	Delta Timing Error (S2G7 @ -2.4 ms)
06:42	2023	3004	63	Delta Timing Error (S2G7 @ -2.6 ms)
06:42	2026	3007	63	Delta Timing Error (S2G7 @ 7.2 ms)
06:43	2028	3009	63	Delta Timing Error (S2G7 @ -5.3 ms)
06:43	2031	3012	63	Delta Timing Error (S2G7 @ -3.4 ms)
06:44	2032	3013	63	Delta Timing Error (S2G7 @ 6.0 ms)
06:44	2033	3014	63	Spared Out S2G7 - Delta Timing Errors (Flatline) -Source Volume 3180 in3
07:27	2276	3257	63	EOT
07:27	2277	3258	64	BOT
08:44		3700	64	Missed shot (speed)
08:45		3703	64	Missed shot (speed)
08:45		3705	64	Missed shot (speed)
08:46		3708	64	Missed shot (speed)
08:57		3775	64	Missed shot (speed)
08:57		3777	64	Missed shot (speed)
08:58		3780	64	Missed shot (speed)
08:58		3782	64	Missed shot (speed)
08:59		3784	64	Missed shot (speed)
08:59	2792	3785	64	EOL MGL1408MCS052 3300in3 (GUNS Disabled 1-ALL, 4-All, 2-5, 2-7, 3-5 OUT, All others IN)
				Noise on streamer before EOL due to turn

MGL1408MCS032

6

293.347



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	065	65
SP #	900	1454

Line	MGL1408MCS053
Sequence	020
Direction	275

Streamer Parameters				
	BOT	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	900	1454
Date MM/DD/YY	10/08/2014	10/08/2014
Time UTC	12:18	15:00
Volume (cu in.)	3300in3	3300in3
Wind (kts)	WSW 24.5kts	Sw 22kts
Sea State (m)	1-2m	1-2mm
Water Depth (m)	2412.5m	2100m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
25 m spacing on MCS shoot
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP- First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

SOL MGL1408MCS057 3300in3 (GUNS Disabled 1-ALL, 4-All, 2-5, 3-5 OUT, All others IN)

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	066	067
SP #	4470	6535

Line	MGL1408MCS057
Sequence	021
Direction	269

Streamer Parameters				
	BOT	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	4470	6535
Date MM/DD/YY	10/08/2014	10/09/2014
Time UTC	18:50	00:54
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SW 15kts	W 14kts
Sea State (m)	0.5m	1 m
Water Depth (m)	1940m	30m
	EOL MGL1408MCS	

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
25 m spacing on MCS shoot
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP- First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
18:50	1	4470	66	SOL MGL1408MCS057 3300in3 (GUNS Disabled 1-ALL, 4-All, 2-5, 3-5 OUT, All others IN)
18:50	1	4470	66	Intermitent noise on streamer from currents changes throughout the line
22:16	1138	5607	66	EOT
22:16	1139	5608	67	BOT
23:26		6014	67	Missed shot (speed)
00:34	1940	6410	67	Noise on streamer - probably from other vessel
00:43		6460	67	Missed shot (speed increased over 5 knts while beginning turn)
00:43		6463	67	Missed shot (speed)
00:45		6470	67	Missed shot (speed)
00:45		6475	67	Missed shot (speed)
00:46		6478	67	Missed shot (speed)
00:47		6485	67	Missed shot (speed)
00:47		6487	67	Missed shot (speed)
00:48		6490	67	Missed shot (speed)
00:48		6494	67	Missed shot (speed)
00:49		6496	67	Missed shot (speed)
00:49		6500	67	Missed shot (speed)
00:50		6502	67	Missed shot (speed)
00:50		6505	312	Missed shot (speed)
00:50		6507	67	Missed shot (speed)
00:51		6510	67	Missed shot (speed)
00:51		6512	67	Missed shot (speed)
00:52		6514	67	Missed shot (speed)
00:52		6516	67	Missed shot (speed)
00:52		6518	67	Missed shot (speed)
00:53		6520	67	Missed shot (speed)
00:53		6522	67	Missed shot (speed)
00:53		6524	67	Missed shot (speed)
00:53		6526	67	Missed shot (speed)
00:54		6528	67	Missed shot (speed)
00:54		6530	67	Missed shot (speed)
00:54		6532	67	Missed shot (speed)
00:54		6534	67	Missed shot (speed)
00:54	2038	6535	67	EOL MGL1408MCS057

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	68	70
SP #	863	4154

Line	MGL1408MCS058
Sequence	022
Direction	089

Streamer Parameters				
	BOT	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	863	4152
Date MM/DD/YY	10/09/2014	10/10/2014
Time UTC	18:54	04:20
Volume (cu in.)	3300in3	3300in3
Wind (kts)	N 14kts	NE 3.9kts
Sea State (m)	0.5m	1m
Water Depth (m)	33m	2523.54m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
25 m spacing on MCS shoot
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	071	076
SP #	903	5768

Line	MGL1408MCS04B
Sequence	023
Direction	188

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	903	5768
Date MM/DD/YY	10/10/2014	10/12/2014
Time UTC	10:54	10:14
Volume (cu in.)	6600in3	6600in3
Wind (kts)	WSW 2.9kts	N 16.4kts
Sea State (m)	0.5m	1m
Water Depth (m)	1931.3m	3403.8m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
10:54	1	903	71	SOL MGL1408MCS04B 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)
11:50	167	1069	71	Power Down - START (Marine Mammal Sighting) Mit source 40in3
12:03	202	1104	71	Power Down - END (Dolphin) Full Power to 6600in3
12:24	261	1163	71	Power Down - START (Marine Mammal Sighting) Mit source 40in3
12:29	277	1179	71	Power Down - END (Dolphin) Full Power to 6600in3
17:15	859	1761	71	EOT
17:15	860	1762	72	BOT
18:28	995	1897	72	Power down for marine mammal sighting - mitigation source 40in3
18:33	1004	1906	72	Back to full source volume
19:33	1116	2018	72	Power down for marine mammal sighting - mitigation source 40in3
19:53	1151	2053	72	Back to full source volume
20:50	1249	2151	72	Power down for marine mammal sighting - mitigation source 40in3
21:06	1277	2179	72	Back to full source volume
01:28	1718	2620	72	EOT
01:28	1719	2621	73	BOT
10:59	2577	3479	73	EOT
10:59	2578	3480	74	BOT
17:11	3208	4110	74	some noise from ship in vicinity
19:33	3436	4338	74	EOT
19:34	3437	4339	75	BOT
04:10	4137	5039	75	Auto Fire Error (S2G6 @ 6553.5ms) - Adjusting gain
04:11	4138	5040	75	Auto Fire Error (S2G6 @ 6553.5ms) - Adjusting gain
05:43	4295	5197	75	EOT
05:44	4296	5198	76	BOT
10:14	4866	5768	76	EOL MGL1408MCS04B 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	77	80
SP #	882	4211

Line	MGL1408MCS062
Sequence	024
Direction	210

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	882	4211
Date MM/DD/YY	10/12/2014	10/13/2014
Time UTC	15:28	11:01
Volume (cu in.)	3300in3	3300in3
Wind (kts)	N 15.5kts	ESE 16.3kts
Sea State (m)	1m	1m
Water Depth (m)	3535.3m	3743.9m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	81	82
SP #	893	2292

Line	MGL1408MCS063
Sequence	025
Direction	289

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	893	2292
Date MM/DD/YY	10/13/2014	10/13/2014
Time UTC	13:44	21:40
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SSE 13.0kts	SE 13kts
Sea State (m)	1-2m	1-2m
Water Depth (m)	3842m	2400m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	083	084
SP #	3618	5805

Line	MGL1408MCS063A
Sequence	026
Direction	289

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, $\mu$ B				
EOL Cable Noise, $\mu$ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	3618	5805
Date MM/DD/YY	10/13/2013	10/14/2014
Time UTC	21:46	04:29
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 13kts	SE 18.4kts
Sea State (m)	1m	1m
Water Depth (m)	2250m	453.6m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	085	086
SP #	756	2392

Line	MGL1408MCS064
Sequence	027
Direction	202

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	25			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	6.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	9.0s
Total recording delay	0
Sample Rate	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	412Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	756	2392
Date MM/DD/YY	10/14/2014	10/14/2014
Time UTC	07:18	15:29
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 23.3kts	SSE 21.3kts
Sea State (m)	1.5m	1-2m
Water Depth (m)	513.6m	619.2m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	





# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	087	089
SP #	928	3339

Line	MGL1408MCS04A
Sequence	028
Direction	028

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	62.5			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	928	3339
Date MM/DD/YY	10/14/2014	10/15/2014
Time UTC	22:17	12:00
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSE 15kts	SSE 22.4kts
Sea State (m)	1-2m	2-3m
Water Depth (m)	2745m	2955.5m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
22:17	1	928	87	EOL MGL1408MCS04A 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)
22:17	2	929	87	Delta timing error (S4G4 @ -2.4 ms)
22:54	109	1036	87	Comm error @ S4G8
03:15	859	1786	87	EOT
03:15	860	1787	88	BOT
04:53	1139	2066	88	Delta Timing Error (S4G2 @ 2.1 ms)
06:41	1459	2386	88	Delta Timing Error (S4G2 @ 2.5 ms)
07:00	1516	2443	88	Delta Timing Error (S4G2 @ 2.3 ms)
07:06	1535	2462	88	Delta Timing Error (S4G2 @ 2.6 ms)
08:09	1718	2645	88	EOT
08:09	1719	2646	89	BOT
09:20		2857	89	Missed Shot due to speed
09:21		2859	89	Missed Shot due to speed
10:05		2992	89	Missed Shot due to speed
10:33	2146	3075	89	Sea Noise on streamer due to seastate
10:43		3106	89	Missed Shot due to speed
10:57		3151	89	Missed Shot due to speed
11:04		3173	89	Missed Shot due to speed
11:06		3176	89	Missed Shot due to speed
11:20	2285	3219	89	Comm error @ S3G5
12:00	2405	3339	89	EOL MGL1408MCS04A 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)
				EOL early due to change in Shot spacing interval starting MCS04AA

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	090	92
SP #	2954	4725

Line	MGL1408MCSA4A
Sequence	029
Direction	028

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	75.0			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	2954	4725
Date MM/DD/YY	10/15/2014	10/15/2014
Time UTC	12:02	22:07
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSE 22.4kts	S 18kts
Sea State (m)	2-3m	2-3m
Water Depth (m)	2955.9m	2460m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
Changed Shot interval from 62m to 75 m and SOL MGL1408MCS0A4A
MCS streamer depth changed at SP3050 to 11 meters
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargable SP
FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
12:02	1	2954	90	SOL MGL1408MCS0A4A 6600in3 (GUNS 1-5, 2-5, 3-5, 4-5 OUT, All others IN)
12:02	1	2954	90	Delta Timing Error (S4G4 @ 2.7 ms)
12:02	1	2954	90	Sea Noise on streamer due to weather / seastate
12:19	47	3000	90	Birds #10-14 @ 4 meters depth (Noise on streamer)
12:30	81	3034	90	Birds #14 at the sea surface (Noise)
12:34		3043	90	Missed shot due to speed
12:34		3045	90	Missed shot due to speed
12:35	95	3050	90	MCS streamer depth set to 11 meters
12:38		3059	90	Missed shot due to speed
12:48	132	3088	90	Cable now at depth 11 meters
12:54	150	3106	90	Noise on cable ended
15:51	669	3625	90	Power Down Source - Mitigation Gun 40 in3 firing (Turtle)
16:21	744	3700	90	Back to full source volume (6600 in3)
16:21	744	3700	90	Delta timing error @ S4G4 (3.5 ms)
16:21	745	3701	90	Delta timing error @ S4G4 (-2.6 ms)
17:02	859	3815	90	EOT
17:02	860	3816	91	BOT
18:05	1037	3993	91	Delta timing error @ S4G2 (-2.1 ms)
18:08	1047	4003	91	312
20:45		4475	91	Missed shot due to speed
20:46		4478	91	Missed shot due to speed
20:47		4480	91	Missed shot due to speed
20:48		4484	91	Missed shot due to speed
21:04		4532	91	Missed shot due to speed
21:52	1718	4679	91	EOT
21:52	1719	4680	92	BOT
22:07	1764	4725	92	EOL MGL1408MCS0A4A 6600in3

# Observers Log

Vessel	Marcus G. Langseth
Client	ENAM - Harm Van Avendonk
Area	Eastern North American Margin (ENAM)
Job Number	MGL1408

Chief Science Officer	Robert Steinhaus		
Science Officer			
Acquisition Leader	Robert Koprowski 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

	SOL	EOL
Tape #	93	96
SP #	971	3899

Line	MGL1408MCS071
Sequence	030
Direction	119

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	312			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	6 - 8 - 10m			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3220
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	6.0
Sub-array Separation	8 m
COS to COS	Single Source

Recording Parameters	
Record Length	18s
Total recording delay	0
Sample Rate	2.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	971	3899
Date MM/DD/YY	10/16/2014	10/17/2014
Time UTC	14:49	08:00
Volume (cu in.)	3220in3	3220in3
Wind (kts)	W 7.9kts	WNW 10-15kts
Sea State (m)	1-2m	2-3m
Water Depth (m)	83.8m	3944m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

Auxiliaries	
Aux. 1-8	Empty
Aux. 13-16	Empty
Aux 9 Gun hydrophone	Empty
Aux 10 Gun hydrophone	Empty
Aux 11 Gun hydrophone	Empty
Aux 12 Gun hydrophone	Empty

General / Line Comments
Water depth not corrected. Measurement at keel, not water line.
S2G9 and S2G10 failed after deployment - S2G5 and S3G5 used instead - total volume = 3220 in3
Streamer set to 8 m after SP 1188 then to 10 m after SP 1207 to try to decrease noise from swell
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
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FCSP - First Chargable SP	LFFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
14:49	1	971	93	SOL MGL1408MCS071 3220in3 (GUNS S1-All, S4-All, 2-9. 2-10 OUT, All others IN)
14:49	1	971	93	Noise on MCS Streamer due to turn SOL
14:50		975	93	Missed Shot due to speed
15:11		1036	93	Missed Shot due to speed
15:18		1057	93	Missed Shot due to speed
15:55		1167	93	Missed Shot due to speed
16:02	214	1188	93	Still noisy after end of turn. Bringing streamer down to 8 m
16:09	233	1207	93	Still noisy - setting streamer to 10 m
16:50	350	1324	93	Delta timing error @ S2G1 (2.7 ms)
17:06		1369	93	Missed Shot due to speed
17:43	500	1475	93	Power down for turtle - 40in3 mitigation gun on. Not seen leaving > down for 30 minutes
17:45		1480	93	Missed Shot due to speed
17:45		1482	93	Missed Shot due to speed
18:12	582	1559	93	Back to full volume (3220 in3) - Delta timing error @ S2G5 (3.9 ms)
19:54	859	1836	93	EOT
19:54	860	1837	94	BOT
20:53		1997	94	Missed Shot due to speed
20:54		1999	94	Missed Shot due to speed
01:05	1718	2697	94	EOT
01:05	1719	2698	95	BOT
02:04		2868	95	Missed Shot due to speed
02:05		2870	95	Missed Shot due to speed
02:05		2872	95	Missed Shot due to speed
02:06		2874	95	Missed Shot due to speed
02:16		2903	95	Missed Shot due to speed
02:17		2907	95	Missed Shot due to speed
06:02	2575	3561	95	Delta timing error @ S2G1 (11.6 ms)
06:02	2576	3561	95	Delta timing error @ S2G1 (11.8 ms)
06:03	2577	3562	95	EOT
06:03	2578	3563	96	BOT
06:03	2578	3563	96	Delta timing error @ S2G1 (3.2 ms)
06:03	2579	3564	96	Delta timing error @ S2G1 (10.9 ms)
06:03	2580	3565	96	Delta timing error @ S2G1 (11.8 ms)
06:04	2581	3566	96	Delta timing error @ S2G1 (2.8 ms)
06:08	2594	3579	96	Delta timing error @ S2G1 (11.3 ms)
06:09	2595	3580	96	Delta timing error @ S2G1 (-3.6 ms)
06:09	2596	3581	96	Delta timing error @ S2G1 (-2.1 ms)
06:11	2602	3587	96	Delta timing error @ S2G1 (11.6 ms)
06:11	2603	3588	96	Delta timing error @ S2G1 (12.0 ms)
06:12	2604	3589	96	Delta timing error @ S2G1 (2.8 ms)
06:12	2605	3590	96	Volume decreased due to gun failure [S2G1 -360in3] - New Volume 2860in3
08:00	2914	3899	96	EOL