

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	01	5
SP #	806	3372

Line	MGL1506MCS01
Sequence	01
Direction	051

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	318.5			
Group Interval: (m)	12.5			
Number of channels	480			
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	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

Description	SOL/FGSP	EOL/LGSP
SP	806	3372
Date MM/DD/YY	04/12/15	04/13/15
Time UTC	12:09	04:04
Volume (cu in.)	6600in3	6600in3
Wind (kts)	E 22kts	SE 14kts
Sea State (m)	2m	1m
Water Depth (m)	4218m	4760m

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
some channels consistently noisy because of swell
systematic error messages from S2G6 - no apparent impact on signature
8km streamer electronically shortened to 6 km
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
12:09	1	806	1	SOL MGL1506MCS01 6600in3 (Guns 1-5, 2-5, 3-5, 4-5 out, All others IN)
12:09	1	806	1	Start no compass data recorded
12:50	95	900	1	Start no shotpoint numbers recorded
12:55	106	911	1	End no shotpoint numbers recorded
13:20	167	972	1	Start no shotpoint numbers recorded
		1001	1	Missed Shot
		1002	1	Missed Shot
		1003	1	Missed Shot
		1004	1	Missed Shot
		1005	1	Missed Shot
		1006	1	Missed Shot
		1007	1	Missed Shot, End no shotpoint numbers or compass data recorded
13:36	193	1008	1	First good shot with compass data
16:02	569	1384	1	EOT #1
16:03	570	1385	2	BOT #2
17:13		1584	2	missed shot - SOG > 5 kts
17:13		1586	2	missed shot - SOG > 5 kts
17:17		1597	2	missed shot - SOG > 5 kts
17:18		1599	2	missed shot - SOG > 5 kts
17:19		1603	2	missed shot - SOG > 5 kts
17:20		1605	2	missed shot - SOG > 5 kts
17:51		1693	2	missed shot
19:24	1138	1960	2	EOT #2
19:25	1139	1961	3	BOT #3
20:26		2136	3	missed shot
22:27	1660	2483	3	SIG10 starting to show delta timing errors
22:43	1707	2530	3	EOT #3
22:43	1708	2531	4	BOT #4
02:06	2276	3099	4	EOT #4
02:07	2277	3100	5	BOT #5
02:12	2288	3111	5	disabled S2G6 & S3G6 (2x 90in3) - enabled S3G5 (180in3) - total volume still 6600in3
03:44	2507	3330	5	starting turn to MGL1506MCS02
04:04	2549	3372	5	EOL MGL1506MCS01 6600in3 (Guns 1-5, 2-5, 2-6, 3-6, 4-5 out, All others IN)

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

	SOL	EOL
Tape #	06	14
SP #	3530	8488

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FGSP	EOL/LGSP
SP	3530	8488
Date MM/DD/YY	04/13/15	04/14/15
Time UTC	04:08	10:43
Volume (cu in.)	6600in3	6530in3
Wind (kts)	SE 14kts	SE 9kts
Sea State (m)	1m	1m
Water Depth (m)	4760m	5367m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

General / Line Comments
some channels consistently noisy because of swell
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

Line	MGL1506MCS02
Sequence	02
Direction	155

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	1.0ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 1

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

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
04:08	1	3530	6	SOL MGL1506MCS02 6600in3 (Guns 1-5, 2-5, 2-6, 3-6, 4-5 out, All others IN)
07:29	569	4098	6	EOT #6
07:29	570	4099	7	BOT #7
10:49	1138	4667	7	EOT #7
10:49	1139	4668	8	BOT #8
11:31		4788	8	Missed Shot
14:08	1707	5237	8	EOT #8
14:08	1708	5238	9	BOT #9
15:09	1882	5412	9	Gun 4-7 disabled d/t timing errors, gun 3-6 enabled. New volume 6570 in3, 35 guns.
17:30	2276	5806	9	EOT #9
17:31	2277	5807	10	BOT #10
20:15	2741	6271	10	Gun 2-9 (220 in3) disabled (timing errors), gun 2-5 (180in3) enabled. New volume 6530 in3, 35 guns.
20:53	2845	6375	10	EOT #10
20:54	2846	6376	11	BOT #11
00:42	3414	6944	11	EOT #11
00:42	3415	6945	12	BOT #12
04:35	3983	7513	12	EOT #12
04:36	3984	7514	13	BOT #13
08:19	4552	8082	13	EOT #13
08:20	4553	8083	14	BOT #14
10:43	4958	8488	14	EOL MGL1506MCS02 6530 in3 (Guns 1-5, 2-6, 2-9, 4-5, 4-7 out, All others IN)

Observers Log

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Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	15	17
SP #	8513	11025

Line	MGL1506MCS03
Sequence	03
Direction	128

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	8513	11025
Date MM/DD/YY	04/14/15	04/15/15
Time UTC	10:48	01:45
Volume (cu in.)	6530in3	6530in3
Wind (kts)	SE 9kts	SE14kts
Sea State (m)	1m	1m
Water Depth (m)	5371m	5400m

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
some channels consistently noisy because of swell
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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	18	20
SP #	11173	13353

Line	MGL1506MCS04
Sequence	04
Direction	067

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	11173	13353
Date MM/DD/YY	04/15/15	04/15/15
Time UTC	02:07	14:24
Volume (cu in.)	5060in3	6530in3
Wind (kts)	S14kts	S 5kts
Sea State (m)	1m	1m
Water Depth (m)	5404m	5421m

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
Gun string 3 was recovered at beginning of line for maintenance. Initial volume = 5060 in3
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
02:07	1	11173	18	SOL MGL1506MCS04 5060in3 (String 3 out for maintenance;Guns 2-6, 2-9, 4-7 out; All others in)
03:51	301	11473	18	Guns 1-5 and 4-5 disabled; String 3 restored; total volume = 6530 in3; 35 guns
17:04	859	12031	18	EOT#18
17:04	860	12032	19	BOT#19
08:04		12211	19	Missed Shot due to Speed Over Ground
08:05		12215	19	Missed Shot due to Speed Over Ground
08:07		12220	19	Missed Shot due to Speed Over Ground
08:09		12226	19	Missed Shot due to Speed Over Ground
08:34		12304	19	Missed Shot due to Speed Over Ground
08:56		12370	19	Missed Shot due to Speed Over Ground
09:38		12498	19	Missed Shot due to Speed Over Ground
09:56		12551	19	Missed Shot due to Speed Over Ground
10:14		12605	19	Missed Shot due to Speed Over Ground
10:14		12608	19	Missed Shot due to Speed Over Ground
10:17		12615	19	Missed Shot due to Speed Over Ground
10:17		12617	19	Missed Shot due to Speed Over Ground
10:37		12677	19	Missed Shot due to Speed Over Ground
11:07		12766	19	Missed Shot due to Speed Over Ground
11:10		12777	19	Missed Shot due to Speed Over Ground
11:54	1718	12905	19	EOT#19
11:54	1719	12906	20	BOT#20
13:32		13201	20	Missed Shot due to Speed Over Ground
13:33		13203	20	Missed Shot due to Speed Over Ground
14:24	2164	13353	20	EOL MGL1506MCS04 6530in3 (Guns 1-5, 2-6, 2-9, 4-5, 4-7 out; All others in)

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	23	28
SP #	14914	19340

Line	MGL1506MCS06
Sequence	06
Direction	304

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	14914	19340
Date MM/DD/YY	04/15/15	04/17/15
Time UTC	22:08	02:17
Volume (cu in.)	5010in3	6600in3
Wind (kts)	W14kts	SE25kts
Sea State (m)	1m	1.5m
Water Depth (m)	5415m	5310m

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
String 2 taken out for maintenance at beginning of line. Total volume = 4950 in3
noisy signal at beginning while finishing turn
birds ~18-29 acting up early on
after birds went to the surface, streamer depth was st to 12m instead of 9m (after shot 18060)
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
22:08	1	14914	23	SOL MGL1506MCS06 5010 in3 (String 2 out for maintenance; Guns 1-5, 4-5, 4-7 out; All others in)
23:38	247	15160	23	String 2 deployed - starting enabling guns and adjusting timings
23:45	267	15180	23	Guns 1-5, 4-7, 4-9 and 4-10 out; all others in - 36 guns - total volume 6580 in3
0:10		15244	23	missed shot
03:21	859	15773	23	EOT #23
03:21	860	15774	24	BOT #24
06:55	1457	16371	24	Air Pressure down to 1700, air leak on string 4
07:07	1491	16405	24	Strings 3 & 4 secured, 20 guns - total volume 3840 in3
07:16	1517	16431	24	String 3 back on, 30 guns - total volume 5310 in3
08:28	1718	16632	24	EOT #24
08:28	1719	16633	25	BOT #25
09:06	1826	16740	25	Strings 3 & 4 secured, 20 guns - total volume 3840 in3
09:10	1836	16750	25	Shot number shows zero, record was taken
09:10	1837	16751	25	All strings out, 36 guns - total volume 6600 in3
10:24		16956	25	Missed Shot d/t tail buoy power on/off
10:34		16983	25	Missed Shot d/t tail buoy power on/off
11:16	2184	17100	25	Start of swell noise from the starboard quarter visible on the shot record.
12:49		17366	25	Missed Shot
13:33	2577	17494	25	EOT #25
13:33	2578	17495	26	BOT #26
15:55	2968	17885	26	Noise level in middle section of streamer very high - birds ~12-20 near surface
16:30	3044	17961	26	noise moved to back of streamer - birds 4-13 between 10 and 18 m - birds 16-26 near surface
17:11	3143	18060	26	End of noise from swell and birds on surface - most birds back below ~12m - set to 12m
17:35		18124	26	missed shot
19:03	3436	18354	26	EOT #26
19:03	3437	18355	27	BOT #27
01:21	4295	19213	27	EOT #27
01:21	4296	19214	28	BOT #28
02:00	4388	19306	28	Starting turn towards line MGL1506MCS07
02:17	4422	19340	28	EOL MGL1506MCS06 (Guns 1-5, 2-5, 3-5, 4-5 out; All others in) 6600 in3 - 36 guns

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	29	30
SP #	19439	20693

Line	MGL1506MCS07
Sequence	07
Direction	066

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	19439	20693
Date MM/DD/YY	04/17/15	04/17/15
Time UTC	02:21	10:40
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 25kts	SSE 17kts
Sea State (m)	1.5m	2m
Water Depth (m)	5310m	5353m

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
Swell noise from following seas of 3 to 4 meters from start of line.
Streamer at 12 meters to keep streamer control from start of line.
Noisy channels at beginning while finishing turn
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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

	SOL	EOL
Tape #	31	35
SP #	21003	24558

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Description	SOL/FGSP	EOL/LGSP
SP	21003	24558
Date MM/DD/YY	04/17/15	04/18/15
Time UTC	10:43	12:10
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSE 17kts	SW 7kts
Sea State (m)	2m	1m
Water Depth (m)	5354m	5416m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

General / Line Comments
Swell noise from following seas of 3 to 4 meters from start of line.
Streamer at 12 meters to keep streamer control from start of line.
Noisy channels at beginning while finishing turn
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

Line	MGL1506MCS08
Sequence	08
Direction	113

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

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

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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	37	45
SP #	30099	35925

Line	MGL1506MCS09
Sequence	09
Direction	336

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	30099	35925
Date MM/DD/YY	04/18/15	04/20/15
Time UTC	14:14	04:54
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW 4kts	SSE 20kts
Sea State (m)	calm	2m
Water Depth (m)	5661m	4505m

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
Tape 36 was recorded during navigation systems failure, no navigation data available for these files
Tape 37 - files 1-51 have incomplete headers. SP 30100 (file 52) is first valid shot point
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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	46	49
SP #	37028	39953

Line	MGL1506MCS10
Sequence	010
Direction	085

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	37028	39953
Date MM/DD/YY	04/20/15	04/20/15
Time UTC	05:00	22:06
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSE 20kts	SSW6kts
Sea State (m)	2m	2m
Water Depth (m)	4506m	5225m

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
Record length changed to 17 seconds at SP 38171
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
05:00	1	37028	46	SOL MGL1506MCS10 (Guns 1-5, 2-5, 3-5, 4-5, All others in) 6600 in3 - 36 guns
05:02			46	During the tight inside turn, birds 20 - 26 came to the surface
05:03			46	Increased speed, sent birds 14 - 28 to 14 meters
05:05			46	Turn noise on streamer
05:11		37054	46	Missed shot d/t speed
		37056	46	Missed shot d/t speed
		37058	46	Missed shot d/t speed
		37060	46	Missed shot d/t speed
		37062	46	Missed shot d/t speed
		37064	46	Missed shot d/t speed
		37066	46	Missed shot d/t speed
		37068	46	Missed shot d/t speed
		37070	46	Missed shot d/t speed
		37072	46	Missed shot d/t speed
		37074	46	Missed shot d/t speed
		37076	46	Missed shot d/t speed
		37078	46	Missed shot d/t speed
		37080	46	Missed shot d/t speed
		37082	46	Missed shot d/t speed
		37084	46	Missed shot d/t speed
		37086	46	Missed shot d/t speed
		37088	46	Missed shot d/t speed
		37090	46	Missed shot d/t speed
		37092	46	Missed shot d/t speed
		37094	46	Missed shot d/t speed
		37096	46	Missed shot d/t speed
05:25		37098	46	Missed shot d/t speed
05:25	50	37100	46	Birds 15 - 28 now at 14 meters, slowed down to keep tension at 3400
05:32	70	37120	46	Birds 15 - 20 floating up, sent birds 4 - 14 to 14 meters
05:34		37124	46	Missed shot d/t speed
05:34		37126	46	Missed shot d/t speed
06:03		37205	46	Missed shot d/t speed
06:03		37207	46	Missed shot d/t speed
06:07	166	37220	46	All birds set to 9 meters, streamer stable.
06:07	166	37220	46	Swell noise visable on streamer data.

07:52		37499	46	Missed shot d/t compressor problems
		37500	46	Missed shot d/t compressor problems
		37501	46	Missed shot d/t compressor problems
		37502	46	Missed shot d/t compressor problems
		37503	46	Missed shot d/t compressor problems
		37504	46	Missed shot d/t compressor problems
		37505	46	Missed shot d/t compressor problems
		37506	46	Missed shot d/t compressor problems
		37507	46	Missed shot d/t compressor problems
		37508	46	Missed shot d/t compressor problems
		37509	46	Missed shot d/t compressor problems
		37510	46	Missed shot d/t compressor problems
		37511	46	Missed shot d/t compressor problems
07:57		37512	46	Missed shot d/t compressor problems
08:34		37615	46	Missed shot d/t/ speed
08:49		37660	46	Missed shot d/t/ speed
09:10		37717	46	Missed shot d/t/ speed
09:54		37842	46	Missed shot d/t/ speed
10:17		37908	46	Missed shot d/t/ speed
10:20	859	37918	46	EOT 46
10:21	860	37919	47	BOT 47
10:35		37959	47	Missed shot d/t speed
10:39		37971	47	Missed shot d/t speed
10:45		37988	47	Missed shot d/t speed
10:50		38002	47	Missed shot d/t speed
10:52		38009	47	Missed shot d/t speed
10:53		38011	47	Missed shot d/t speed
11:16		38076	47	Missed shot d/t speed
11:21		38089	47	Missed shot d/t speed
11:32		38118	47	Missed shot d/t speed
11:33		38120	47	Missed shot d/t speed
11:33		38122	47	Missed shot d/t speed
11:40		38142	47	Missed shot d/t speed
11:50		38168	47	EOT 47
		38169		Missed shot d/t changing the record length to 17 sec. in Syntrak
		38170		Missed shot d/t changing the record length to 17 sec. in Syntrak
11:50	1	38171	48	BOT 48

11:54		38182	48	Missed shot d/t speed
12:15		38245	48	Missed shot d/t speed
12:20		38259	48	Missed shot d/t speed
12:21		38263	48	Missed shot d/t speed
12:38		38312	48	Missed shot d/t speed
12:38		38314	48	Missed shot d/t speed
12:50	176	38352	48	Birds set to 10 meters for control
12:59		38376	48	Missed shot d/t speed
13:22		38442	48	Missed shot d/t speed
13:30		38466	48	Missed shot d/t speed
13:37	311	38490	48	Birds set to 12 meters for control
13:39		38494	48	Missed shot d/t speed
13:47		38517	48	Missed shot d/t speed
13:47		38519	48	Missed shot d/t speed
13:48		38521	48	Missed shot d/t speed
13:50		38528	48	Missed shot d/t speed
13:53		38538	48	Missed shot d/t speed
14:01		38560	48	Missed shot d/t speed
14:06		38575	48	Missed shot d/t speed
14:10		38588	48	Missed shot d/t speed
14:13		38596	48	Missed shot d/t speed
14:14		38599	48	Missed shot d/t speed
14:14		38600	48	Missed shot d/t speed
14:46		38695	48	Missed shot d/t speed
14:54		38720	48	Missed shot d/t speed
15:50		38879	48	Missed shot d/t speed
15:52		38885	48	Missed shot d/t speed
15:56		38897	48	Missed shot d/t speed
15:57		38901	48	Missed shot d/t speed
15:58		38905	48	Missed shot d/t speed
16:00		38910	48	Missed shot d/t speed
16:02		38918	48	Missed shot d/t speed
16:18		38964	48	Missed shot d/t speed
16:42		39033	48	Missed shot d/t speed
16:54		39068	48	Missed shot d/t speed
16:54		39070	48	Missed shot d/t speed
17:06		39106	48	Missed shot d/t speed

17:09	909	39114	48	EOT #48
17:09	910	39115	49	BOT #49
17:13		39127	49	Missed shot d/t speed
17:14		39129	49	Missed shot d/t speed
17:15		39131	49	Missed shot d/t speed
17:15		39133	49	Missed shot d/t speed
17:40		39206	49	Missed shot d/t speed
18:30		39346	49	Missed shot d/t speed
19:06		39446	49	Missed shot d/t speed
21:56		39925	49	Missed shot d/t speed
22:06	1740	39953	49	EOL MGL1506MCS10 (Guns 1-5, 2-5, 3-5, 4-5, All others in) 6600 in3 - 36 guns

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	50	52
SP #	40026	41892

Line	MGL1506MCS11
Sequence	011
Direction	342

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	17s
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	40026	41892
Date MM/DD/YY	04/20/15	04/21/15
Time UTC	22:08	08:03
Volume (cu in.)	6600in3	6560in3
Wind (kts)	SSW 6kts	SW 18kts
Sea State (m)	2m	2m
Water Depth (m)	5225m	4499m

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
Record length is 17 seconds until SP 41701, changed to 16 seconds at SP 41706 to increase speed to control streamer
Still Finishing turn at start of line - noisy signal
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
22:08	1	40026	50	SOL MGL1506MCS11 (Guns 1-5, 2-5, 3-5, 4-5, All others in) 6600 in3 - 36 guns
23:22		40245	50	missed shot ITB
23:42		40299	50	missed shot ITB
01:46		40681	50	missed shot ITB
02:19		40787	50	missed shot - speed
02:22		40795	50	missed shot - speed
02:23		40800	50	missed shot - speed
02:24		40802	50	missed shot - speed
02:25		40804	50	missed shot - speed
02:25		40806	50	missed shot - speed
02:41		40858	50	missed shot - speed
02:52		40895	50	missed shot - speed
02:55		40902	50	missed shot - speed
02:56		40905	50	missed shot - speed
03:08	909	40947	50	EOT #50
03:09	910	40948	51	BOT #51
03:28		41010	51	missed shot ITB
05:09	1290	41329	51	Streamer set at 12 meters
05:19	1321	41360	51	Gun 1-10 No Fire, disabled. Enabled gun 1-5. New volume 6560in3
05:51	1424	41463	51	Gun 1-5 had auto fires and timing errors, disabled. Enabled Gun 2-5. Same volume.
06:04		41501	51	missed shot - speed
06:04		41503	51	missed shot - speed
06:44		41631	51	missed shot - speed
06:45		41633	51	missed shot - speed
06:46		41635	51	missed shot - speed
06:46		41637	51	missed shot - speed
06:47		41641	51	missed shot - speed
06:48		41643	51	missed shot - speed
06:49		41646	51	missed shot - speed
06:49		41648	51	missed shot - speed
06:50		41650	51	missed shot - speed
07:06	1652	41702	51	EOT 51 to shorten record length
		41703		Missed shot while changing record length
		41704		Missed shot while changing record length
		41705		Missed shot while changing record length
07:07	1	41706	52	BOT 52, record length 16 seconds

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

	SOL	EOL
Tape #	053	56
SP #	43018	46037

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FGSP	EOL/LGSP
SP	43018	46037
Date MM/DD/YY	04/21/15	04/22/15
Time UTC	08:05	10:54
Volume (cu in.)	6560in3	6560in3
Wind (kts)	SW 18kts	N 13kts
Sea State (m)	2 m	1m
Water Depth (m)	4504m	4929m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

General / Line Comments
Record length is 16 seconds
Still Finishing turn at start of line - noisy signal
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

Line	MGL1506MCS12
Sequence	012
Direction	087

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	16s
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

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

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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	57	58
SP #	48007	49875

Line	MGL1506MCS13
Sequence	013
Direction	052

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	48007	49875
Date MM/DD/YY	04/22/15	04/23/15
Time UTC	10:56	00:55
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 13kts	S 15kts
Sea State (m)	1m	1.5m
Water Depth (m)	4933m	4803m

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
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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	59	61
SP #	49909	52650

Line	MGL1506MCS14
Sequence	014
Direction	336

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	49909	52650
Date MM/DD/YY	04/23/15	04/24/15
Time UTC	00:57	00:29
Volume (cu in.)	6560in3	6560in3
Wind (kts)	S 15kts	N 20kts
Sea State (m)	1.5m	2m
Water Depth (m)	4803m	4763m

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
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	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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	64
SP #	52752	54092

Line	MGL1506MCS15
Sequence	015
Direction	068

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	16s
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	52752	54092
Date MM/DD/YY	04/24/15	04/24/15
Time UTC	00:31	05:35
Volume (cu in.)	6560in3in3	6560in3
Wind (kts)	N 20 kts	NW 12kts
Sea State (m)	2 m	2m
Water Depth (m)	4763 m	4757m

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
Noisy at beginning during turn
Record length reduced to 9.5s because of strong following current
Record length changed to 14 seconds on SP 53982
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
00:31	1	52752	62	SOL MGL1506MCS15 (Guns 1-5 off, 1-10, 3-5, 4-5 out, All others in) 6560 in3 - 36 guns
00:31		52753	62	missed shot - speed
00:32		52755	62	missed shot - speed
00:32		52757	62	missed shot - speed
00:33		52759	62	missed shot - speed
00:33		52761	62	missed shot - speed
00:33		52763	62	missed shot - speed
00:34		52765	62	missed shot - speed
00:34		52767	62	missed shot - speed
00:35		52769	62	missed shot - speed
00:35		52771	62	missed shot - speed
00:36		52773	62	missed shot - speed
00:36		52775	62	missed shot - speed
00:36		52777	62	missed shot - speed
00:37		52779	62	missed shot - speed
00:37		52781	62	missed shot - speed
00:38		52783	62	missed shot - speed
00:38		52785	62	missed shot - speed
00:38		52787	62	missed shot - speed
00:39		52789	62	missed shot - speed
00:39		52791	62	missed shot - speed
00:40		52793	62	missed shot - speed
00:40		52795	62	missed shot - speed
00:40		52797	62	missed shot - speed
00:41		52799	62	missed shot - speed
00:41		52801	62	missed shot - speed
00:42		52803	62	missed shot - speed
00:42		52805	62	missed shot - speed
00:42		52807	62	missed shot - speed
00:43		52809	62	missed shot - speed
00:43		52811	62	missed shot - speed
00:44		52813	62	missed shot - speed
00:44		52815	62	missed shot - speed
00:44		52817	62	missed shot - speed
00:45		52819	62	missed shot - speed
00:45		52821	62	missed shot - speed

00:46		52823	62	missed shot - speed
00:46		52825	62	missed shot - speed
00:46		52827	62	missed shot - speed
00:47		52829	62	missed shot - speed

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

	SOL	EOL
Tape #	65	68
SP #	54212	57611

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FGSP	EOL/LGSP
SP	54212	57611
Date MM/DD/YY	04/24/15	04/25/15
Time UTC	05:38	04:37
Volume (cu in.)	6560in3in3	6520in3
Wind (kts)	NW 12kts	NNW 28kts
Sea State (m)	2m	3m
Water Depth (m)	4759m	4989m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

General / Line Comments
Noisy at beginning during turn
Consistently noisy because of high swell
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

Line	MGL1506MCS16
Sequence	016
Direction	161

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	16s
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

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

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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	69	70
SP #	58014	59109

Line	MGL1506MCS17
Sequence	017
Direction	072

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	58014	59109
Date MM/DD/YY	04/25/15	04/25/15
Time UTC	04:40	12:19
Volume (cu in.)	6520in3in3	6520in3
Wind (kts)	NNW 28kts	NW 30kts
Sea State (m)	3m	4m
Water Depth (m)	5001m	5293m

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
Birds 1 - 17 at 12 meters, birds 18 - 29 at 9 meters due to heavy seas
Noisy at beginning during turn
Swell noise visible on streamer data from SOL to EOL
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	71	74
SP #	60008	63865

Line	MGL1506MCS18
Sequence	018
Direction	328

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	60008	63865
Date MM/DD/YY	04/25/15	04/26/15
Time UTC	12:23	12:28
Volume (cu in.)	6520in3in3	6600in3
Wind (kts)	NW 30kts	E 15kts
Sea State (m)	4m	1m
Water Depth (m)	5049m	4807m

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
SOL Birds 1 - 17 at 16 meters, birds 18 - 29 at 9 meters due to heavy seas
Noisy at beginning during turn
Swell noise visible on streamer data from SOL to EOL
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	76	76
SP #	64100	64143

Line	MGL1506MCS18A
Sequence	019
Direction	328

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	64100	64143
Date MM/DD/YY	04/26/15	04/26/15
Time UTC	13:56	14:17
Volume (cu in.)	6600in3in3	6600in3
Wind (kts)	E 15kts	E 15 kts
Sea State (m)	1m	1 m
Water Depth (m)	4995m	4995m

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
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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	79
SP #	64542	66471

Line	MGL1506MCS19
Sequence	020
Direction	060

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	14s
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	64542	66471
Date MM/DD/YY	04/26/15	04/26/15
Time UTC	14:20	21:51
Volume (cu in.)	6600in3in3	6600in3
Wind (kts)	E 15kts	NW 15kts
Sea State (m)	1m	1m
Water Depth (m)	4738m	4911m

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
Turn noise on streamer data d/t turn
Record length changed to 9.5s at SP 64555
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
14:20	1	64542	77	SOL MGL1506MCS19 (Guns 1-5, 2-5, 3-5, 4-5 spared, All others in) 6600 in3 - 36 guns
14:21		64543	77	Missed Shot d/t speed
14:21		64545	77	Missed Shot d/t speed
14:22		64547	77	Missed Shot d/t speed
14:22		64549	77	Missed Shot d/t speed
14:22	5	64550	77	EOT 77
		64551		Missed shot d/t changing record length
		64552		Missed shot d/t changing record length
		64553		Missed shot d/t changing record length
		64554		Missed shot d/t changing record length
14:23	1	64555	78	BOT 78 New record length 9.5 s
18:01	968	65522	78	missed shot power down - dolphin seen
18:01	962	65523	78	missed shot power down
18:01	970	65524	78	First shot with mitigation gun 1-3
18:16	1030	65584	78	missed shot while restoring volume
18:16	1031	65585	78	missed shot while restoring volume
18:16	1032	65586	78	missed shot while restoring volume
18:17	1033	65587	78	Source volume restored to 6600 in3
20:40	1626	66180	78	EOT 78
20:40	1627	66181	79	BOT 79
21:27	1818	66372	79	Starting turn towards MGL1506MCS20
21:51	1917	66471	79	EOL MGL1506MCS19 (Guns 1-5, 2-5, 3-5, 4-5 spared, All others in) 6600 in3 - 36 guns

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	80	83
SP #	66662	69630

Line	MGL1506MCS20
Sequence	021
Direction	169

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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	16s
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	66662	69630
Date MM/DD/YY	04/26/15	04/27/15
Time UTC	21:55	13:56
Volume (cu in.)	6600in3	6600in3
Wind (kts)	NW 15kts	NNE 18kts
Sea State (m)	1m	1-2m
Water Depth (m)	4911m	5367m

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
Turn noise on streamer data d/t turn
Turn at beginning overshoot line because of current - missing every other shot at the beginning while getting back on track
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
21:55	4	66662	80	SOL MGL1506MCS20 (Guns 1-5, 2-5, 3-5, 4-5 spared, All others in) 6600 in3 - 36 guns
22:04		66688	80	missed shots while correcting track
22:04		66690	80	missed shot
22:05		66693	80	missed shot
22:06		66695	80	missed shot
22:06		66697	80	missed shot
22:07		66699	80	missed shot
22:07		66701	80	missed shot
22:08		66703	80	missed shot
22:08		66705	80	missed shot
22:09		66707	80	missed shot
22:09		66709	80	missed shot
22:10		66711	80	missed shot
22:10		66713	80	missed shot
22:11		66715	80	missed shot
22:12		66717	80	missed shot
22:12		66719	80	missed shot
22:13		66721	80	missed shot
22:13		66723	80	missed shot
22:14		66725	80	missed shot
22:14		66727	80	missed shot
22:15		66729	80	missed shot
22:15		66731	80	missed shot
22:16		66733	80	missed shot
22:16		66735	80	missed shot
22:17		66737	80	missed shot
22:17		66739	80	missed shot
22:18		66741	80	missed shot
22:18		66743	80	missed shot
22:19		66745	80	missed shot
22:20		66747	80	missed shot
22:20		66749	80	missed shot
22:21		66751	80	missed shot
22:21		66753	80	missed shot
22:22		66755	80	missed shot
22:22		66757	80	missed shot

22:23		66759	80	missed shot
22:23		66761	80	missed shot
22:24		66763	80	missed shot
03:33	966	67662	80	EOT 80
03:33	967	67663	81	BOT 81
08:35	1932	68628	81	EOT 81
08:35	1933	68629	82	BOT 82
10:25	2254	68950	82	Noise on streamer, starting at front end and working back d/t strong cross current
11:29	2454	69150	82	End noise from cross current, starting to see swell noise across streamer.
11:50		69220	82	Missed Shot d/t Speed
13:44	2898	69595	82	EOT 82
13:45	2899	69596	83	BOT 83
13:56	2933	69630	83	EOL MGL1506MCS20 (Guns 1-5, 2-5, 3-5, 4-5 spared, All others in) 6600 in3 - 36 guns

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	84	86
SP #	70000	72573

Line	MGL1506MCS21
Sequence	022
Direction	028

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	70000	72573
Date MM/DD/YY	04/27/15	04/28/15
Time UTC	16:22	17:58
Volume (cu in.)	6600in3	6600in3
Wind (kts)	N-NE10kts	N-NE 35kts
Sea State (m)	1m	2.5m
Water Depth (m)	5014m	4920m

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
strong currents forced to deviate from line at the end
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	87	88
SP #	72749	73406

Line	MGL1506MCS22
Sequence	023
Direction	328

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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	72749	73406
Date MM/DD/YY	04/28/15	04/28/15
Time UTC	18:36	22:03
Volume (cu in.)	6600in3	3300in3
Wind (kts)	N-NE 35kts	N-NE 35kts
Sea State (m)	2.5m	5m
Water Depth (m)	4920m	4815m

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
First ~75 km at 2ms sampling rate
first 31 shots not recorded bc spectra was locked up from starting line off track
beginning of line - birds 10-17 close to surface because of seas - noisy signal
record length reduced to 15 s after SP 73081
Line ended because of safety concerns over the rough sea.
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Time UTC	FILE	SP	Tape	Description
18:36	32	72749	87	SOL MGL1506MCS22 (Guns 1-5, 2-5, 3-5, 4-5 spared, All others in) 6600 in3 - 36 guns
18:52	78	72795	87	Pressure drop - all guns off - going on mitigation gun1-3. Some safety trigger in compressor.
18:53	82	72799	87	first shot recorded with mitigation gun (40 in3)
18:59	99	72816	87	Back to full volume (6600 in3) after confirming that compressor was ok - missed SP72815
19:03		72829	87	missed shot
19:23		72890	87	missed shot
19:36		72931	87	missed shot
19:38		72938	87	missed shot
19:42	229	72950	87	Arrays 2 & 3 secured, volume - 3300in3 - 18 guns
19:43		72952	87	missed shot
19:47		72964	87	missed shot
19:47		72966	87	missed shot
19:48		72970	87	missed shot
19:51		72978	87	missed shot
19:52		72982	87	missed shot
20:01		73010	87	missed shot
20:04		73018	87	missed shot
20:04		73020	87	missed shot
20:05		73022	87	missed shot
20:05		73024	87	missed shot
20:12		73044	87	missed shot
20:14		73051	87	missed shot
20:16		73056	87	missed shot
20:17		73058	87	missed shot
20:19		73066	87	missed shot
20:20		73070	87	missed shot
20:21		73074	87	missed shot
20:22		73076	87	missed shot
20:23	341	73081	87	EOT 87 tape stopped to reduce record length
20:24	1	73086	88	BOT 88 - new record length = 15s
20:36		73120	88	missed shot
20:37		73125	88	missed shot
20:52		73171	88	missed shot
20:53		73174	88	missed shot
20:53		73176	88	missed shot
20:54		73178	88	missed shot
21:15		73248	88	missed shot
21:15		73250	88	missed shot
21:17		73255	88	missed shot
21:17		73257	88	missed shot
21:27		73288	88	missed shot
21:30		73296	88	missed shot
21:41		73332	88	missed shot
21:43		73337	88	missed shot
22:03	302	73406	88	EOL MGL1506MCS22 Strings 2&3 out, Guns 1-5,4-5 spared, all others in - 3300in3, 18 guns
				Line ended because of safety concerns over the rough sea. Strings 1 and 4 recovered

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 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 #	89	93
SP #		

Line	MGL1506MCS22XX
Sequence	N/A
Direction	328

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
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	16s
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		
Date MM/DD/YY	04/29/15	
Time UTC	02:55	
Volume (cu in.)	6600in3	
Wind (kts)	NNE 35kts	
Sea State (m)	5m	
Water Depth (m)		

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
Recording ambient noise while waiting for weather to clear.
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 - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	USGS - Hutchinson
Area	Extended Continental Shelf - North Carolina
Job Number	MGL1506

	SOL	EOL
Tape #	94	96
SP #	77284	78636

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	182			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Description	SOL/FGSP	EOL/LGSP
SP	77284	78636
Date MM/DD/YY	04/29/15	04/30/15
Time UTC	18:16	04:00
Volume (cu in.)	6600in3	6600in3
Wind (kts)	N 15kts	N 15kts
Sea State (m)	1m	1m
Water Depth (m)	4160m	2790m

Cable	Dead Channels
1	
1	
2	
3	
3	
4	

General / Line Comments
Soft start started at 17:39
at 18:02, with 12 minutes left in the ramp-up, Gun 3-6 started autofiring. Array 3 was recovered immediately after the end of ramp up, and the line was started with the three active arrays.
The line was terminated early to be able to transit to port safely
SOL NOISY CHANNELS
EOL NOISY CHANNELS

Chief Science Officer	David Martinson		
Science Officer			
Acquisition Leader	Klayton Curtis 00:00-12:00	Gilles Guerin 12:00-24:00	
Navigation Leader	Mike Martello 00:00-12:00	Alan Thompson 12:00-24:00	

Line	MGL1506MCS23
Sequence	024
Direction	328

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	16s
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

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

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

