

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	1	3
SP #	601	2943

Line	MGL1701MC01
Sequence	01
Direction	106.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	15s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	601	2943
Date MM/DD/YY	01/13/2017	01/13/17
Time UTC	0:10	12:40
Volume (cu in.)	6600in3	6480in3
Wind (kts)	S20kts	0kts
Sea State (m)	1m	1m
Water Depth (m)	5200m	1356.8m
		6

Cable	Dead Channels
1	
2	
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 signal at start
Swell noise throughout line
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
00:06	1	601	1	SOL MGL1701MC01 - S1G5,S2G5,S3G5,S4G5 spares - Volume = 6600in3
02:22:35	425	1025	1	Delta error S4G2
03:36:18	633	1233	1	Delta error S4G2
03:48:21	680	1280	1	Delta error S4G2
04:30:42	830	1430	1	Delta error S4G2
05:39:51	1001	1601	2	Start tape 2
05:43:07	1011	1611	2	Delta error S4G2
06:19:47	1119	1719	2	Delta error S3G1
07:05:53	1258	1858	2	Delta error S3G1
07:55:15	1406	2006	2	Delta error S3G1
08:49:22	1576	2176	2	Delta error S2G7
08:51:33	1583	2183	2	Delta error S2G7
09:14:09	1654	2254	2	Delta error S3G1
09:41:44	1744	2344	2	Delta error S2G7
09:45:59	1758	2358	2	Delta error S2G7
10:26:35	1894	2494	2	Delta error S2G7
10:53:50	1989	2589	2	Delta error S3G1
10:57:43	2001	2601	2	Start tape 3
11:04:35	2025	2625	2	Delta error
11:17:06	2067	2667	3	Delta error
11:19:04	2074	2674	3	Delta error
11:19:21	2075	2675	3	Delta error
11:27:32	2104	2704	3	Delta error
11:28:06	2106	2706	3	Delta error
11:29:16	2110	2710	3	Delta error S3G1
11:30:49	2115	2715	3	S2G7 disabled due to bad pulse. Volume 6480 in3
12:40:07	2343	2943	3	EOL MGL1701MC01 - S1G5,S2G5,S3G5,S4G5 spares, S2G7 disabled - Volume = 6480in3

<p style="text-align: center;">Observers Log</p>

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	4	5
SP #	763	2192

Line	MGL1701MC02
Sequence	02
Direction	4.3

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	763	2192
Date MM/DD/YY	01/13/17	01/14/17
Time UTC	19:44	02:46
Volume (cu in.)	6600in3	6480in3
Wind (kts)	S5ktskts	S18kts
Sea State (m)	1m	1m
Water Depth (m)	1990m	1570m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
19:44	2344	763	4	SOL MGL1701MC02 -S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3
20:25:07	2466	885	4	String03-Gun001 Delta timing error -2.3ms
20:30:08	2481	900	4	String04-Gun002 Delta timing error -2.1ms
20:34:47	2494	913	4	String04-Gun002 Delta timing error -2.1ms
21:08	2598	1017	4	S2G7 spared for 3 shots while investigating echo - vol = 6480 in3
21:09	2601	1020	4	back to full volume
21:12:04	2609	1028	4	String02-Gun007 Delta timing error 2.1ms
21:34:01	2677	1096	4	String03-Gun001 Delta timing error 2.1ms
21:48:38	2722	1141	4	String02-Gun007 Delta timing error 3.2ms
22:12:32	2801	1220	4	String02-Gun007 Delta timing error 2.9ms
22:14:39	2807	1226	4	String02-Gun007 Delta timing error 2.1ms
22:18:13	2820	1239	4	String02-Gun007 Delta timing error 2.3ms
22:18:31	2821	1240	4	String02-Gun007 Delta timing error -2.2ms
22:54:12	2942	1361	4	String02-Gun007 Delta timing error 2.9ms
22:54:29	2943	1362	4	String02-Gun007 Delta timing error -2.5ms
23:17:40	3023	1442	4	String02-Gun007 Delta timing error 3.2ms
23:17:57	3024	1443	4	String02-Gun007 Delta timing error -2.1ms
23:21:04	3036	1455	4	String02-Gun007 Delta timing error 2.1ms
23:47:45	3131	1550	4	String02-Gun007 Delta timing error 2.9ms
23:56:45	3164	1583	4	String02-Gun007 Delta timing error -2.5ms
0:09:20	3210	1629	4	String02-Gun007 Delta timing error -2.6ms
0:09:37	3211	1630	4	String02-Gun007 Delta timing error 2.7ms
0:20:40	3249	1668	4	String02-Gun007 Delta timing error -2.3ms
0:34:37	3299	1718	4	String02-Gun007 Delta timing error -2.7ms
0:36:01	3305	1724	4	String02-Gun007 Delta timing error 3.5ms
0:36:35	3306	1725	4	String02-Gun007 Delta timing error 2.6ms
0:37:09	3308	1727	4	String02-Gun007 Delta timing error
00:38	3314	1733	4	S2G7 spared - Vol = 6480 in3
00:46	3343	1762	4	EOT #4
00:47	3344	1763	5	Start of tape #5
02:46	3773	2192	5	EOL MGL1701MC02 - S1-4G5 spares, S2G7 spare, Volume = 6480 in3

Observers Log

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Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	6	7
SP #	998	2990

Line	MGL1701MC03
Sequence	03
Direction	269.8

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	998	2990
Date MM/DD/YY	01/14/17	01/14/17
Time UTC	7:42	18:14
Volume (cu in.)	6600in3	6480in3
Wind (kts)	S 11kts	S19kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	1305m	5767m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
07:42:58	3774	998	6	SOL MGL1701MC03 -S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3
07:44:26	3779	1003	6	Delta error S3G1 -2.4 ms
07:48:38	3794	1018	6	Delta error S3G1 -2.2 ms
07:51:25	3803	1027	6	Delta error S2G7 2.8 ms
07:51:43	3804	1028	6	Delta error S2G7 -3.1 ms
07:52:00	3805	1029	6	Delta error S2G7 -2.7 ms
07:52:15	3805	1029	6	S2G7 disabled - Total volume 6480 in3
08:12:40	3877	1101	6	Delta error S3G1 -2.3 ms
08:24:20	3918	1142	6	Delta error S3G1 -2.1 ms
08:48:10	4001	1225	6	Delta error S3G1 -2.1ms
09:09:02	4073	1297	6	Delta error S3G1 -2.2 ms
09:11:59	4083	1307	6	Delta error S3G1 -2.6 ms
09:40:21	4182	1406	6	Delta error S3G1 2.4 ms
09:41:47	4187	1411	6	Delta error S3G1 2.3 ms
10:38:26	4383	1607	6	Delta error S3G1 -2.4 ms
10:39:38	4387	1611	6	Delta error S3G1 2.2 ms
10:44:35	4404	1628	6	Delta error S3G1 2.1 ms
12:01:06	4663	1887	6	Delta error S3G1 -2.1 ms
12:04:05	4673	1897	6	Delta error S3G1 2.2 ms
12:04:43	4675	1899	6	Delta error S3G1 -2.1 ms
12:09:56	4692	1916	6	Delta error S3G1 -2.1 ms
12:21:37	4731	1955	6	Delta error S3G1 -2.2 ms
12:29:26	4755	1979	6	Delta error S3G1 -2.2 ms
12:35:31	4774	1998	7	Start of tape #7
13:00:02	4853	2077	7	Delta error S3G1 2.2 ms
14:21:17	5104	2328	7	Delta error S3G1 -2.2 ms
14:43:00	5168	2392	7	Delta error S3G1 2.8 ms
14:43:20	5169	2393	7	Delta error S3G1 -2.7 ms
15:17:05	5269	2493	7	Delta error S3G1 -2.3 ms
15:32::00	5312	2536	7	Delta error S3G1 2.1 ms
15:35:17	5322	2546	7	Delta error S3G1 -2.1 ms
15:36:20	5325	2549	7	Switched S3G1 into Manual mode (Delay 16ms)
18:02:34	5733	2957	7	S3G5 Auto Fire at 360.4 ms
18:07:24	5746	2970	7	S3G5 Auto Fire at 293.0 ms
18:07:46	5747	2971	7	S3G5 Auto Fire at 324.6 ms
18:09:58	5753	2977	7	S3G1 Delta Timing at 2.3 ms
18:11:53	5758	2982	7	S4G4 Delta Timing at 2.2 ms
18:14	5766	2990	7	EOL MGL1701MC03 - S1-4G5 and S2G7 spares, Volume = 6480 in3

Observers Log

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Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	8	10
SP #	914	3772

Line	MGL1701MC04
Sequence	04
Direction	3.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0, 9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	914	3772
Date MM/DD/YY	01/14/17	1/15/17
Time UTC	23:10	11:33
Volume (cu in.)	6600in3	6480in3
Wind (kts)	S26kts	S19kts
Sea State (m)	1.5m	2.5m
Water Depth (m)	6261m	6192m

Cable	Dead Channels
1	
2	
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
Very noisy at start while finishing turn
very strong swell at beginning
streamer depth increased to 9m after SP ~1100 because of swell
auto fire alarms likely due to leakage - no actual auto fire
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
23:09	5767	914	8	SOL MGL1701MC04 -S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3
00:00	5945	1092	8	Midnight shot
00:02	5952	1099	8	Power down for pinniped - last full SP: 1099
00:02		1100	8	missed SP 1100 while powering down
00:18		1155	8	missed SP 1155 while powering down
00:18	6007	1156	8	Back to full volume - first good SP
0:22:24	6022	1171	8	S3G1 Delta Timing at 2.2 ms
0:33:47	6063	1212	8	S3G1 Delta Timing at -2.2 ms
01:11:34	6201	1350	8	S4G4 Delta Timing at 2.2 ms
01:24:04	6246	1395	8	S3G1 Delta Timing at -2.5 ms
1:27:42	6259	1408	8	S3G1 Delta Timing at -2.1 ms
1:27:58	6260	1409	8	S3G1 Delta Timing at -2.3 ms
1:28:49	6263	1412	8	S3G1 Delta Timing at -2.3 ms
1:29:06	6264	1413	8	S3G1 Delta Timing at -2.1 ms
1:31:21	6272	1421	8	S3G1 Delta Timing at -2.1 ms
1:32:46	6277	1426	8	S3G1 Delta Timing at -2.3 ms
1:33:53	6281	1430	8	S3G1 Delta Timing at -3.0 ms
01:37:15	6293	1442	8	S3G1 Delta Timing at -2.2 ms
1:49:59	6338	1487	8	S3G1 Delta Timing at 2.1 ms
1:52:53	6348	1497	8	S3G1 Delta Timing at -2.1 ms
2:00:35	6375	1524	8	S3G1 Delta Timing at -2.4 ms
02:27:40	6473	1622	8	S3G1 Delta Timing at 2.9 ms
2:29:04	6478	1627	8	S3G1 Delta Timing at 2.1 ms
2:31:53	6488	1637	8	S3G1 Delta Timing at -2.1 ms
2:33:33	6494	1643	8	S3G1 Delta Timing at 2.4 ms
03:00:25	6590	1739	8	S3G1 Delta Timing at 2.1 ms
3:00:42	6591	1740	8	S3G1 Delta Timing at -2.8 ms
3:16:46	6648	1797	8	S3G1 Delta Timing at 2.4 ms
3:42:22	6736	1885	8	S3G1 Delta Timing at -2.3 ms
3:51:13	6767	1916	9	Start Tape #9
3:52:59	6773	1922	9	S4G2 Delta Timing at 2.2 ms
04:26:19	6887	2036	9	S3G1 Delta Timing at -2.5 ms
04:33:49	6912	2061	9	S3G1 Delta Timing at -2.3 ms
04:34:26	6914	2063	9	S3G1 Delta Timing at 2.4 ms
04:44:39	6948	2097	9	S4G2 Delta Timing at 2.2 ms
04:52:50	6975	2124	9	S3G1 Delta Timing at -2.2 ms
04:57:38	6991	2140	9	S2G1 Delta Timing at 2.1 ms
05:48:01	7159	2308	9	S2G7 Delta Timing at 8.7 ms
05:48:18	7160	2309	9	S2G7 Delta Timing at -9.5 ms
05:52:10	7170	2319	9	S2G7 Delta Timing at 2.8 ms
05:52:46	7175	2324	9	S2G7 Delta Timing at -3.3 ms
05:53:22	7177	2326	9	S2G7 Delta Timing at -2.2 ms
05:53:55	7179	2328	9	S2G7 spared - New volume 6480 in3
06:26:50	7288	2437	9	S3G1 Delta Timing at -2.1 ms
06:31:21	7303	2452	9	S3G1 Delta Timing at -2.5 ms
08:19:51	7660	2809	9	S4G4 Delta Timing at -2.1 ms
08:54:45	7767	2916	10	Start Tape #10
09:03:35	7796	2945	10	S4G4 Delta Timing at 2.1 ms
09:04:54	7800	2949	10	S4G2 Delta Timing at -2.4 ms
09:06:32	7805	2954	10	S3G1 Delta Timing at -2.1 ms
11:31:33	8223	3772	10	EOL MGL1701MC04 -S1G5,S2G5,S3G5,S4G5, S2G7 spares - Total volume = 6480 in3

Observers Log

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Area	South Pacific - Chile
Job Number	MGL1701

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Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	11	12
SP #	927	2584

Line	MGL1701MC05
Sequence	05
Direction	91.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	927	2584
Date MM/DD/YY	1/15/17	1/16/17
Time UTC	15:53	00:02
Volume (cu in.)	6600in3	6480in3
Wind (kts)	S15kts	S17kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	6200m	2990m

Cable	Dead Channels
1	
2	
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
noise from turn at start
strong swell during all line - significant swell noise at start
total volume decreased to 6480 in3 after SP 1499 following multiple errors from S2G7
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
15:53	8224	927	11	SOL MGL1701MC05 - S1-4G5 spares - Total volume = 6600 in3
16:18	8298	1001	11	Spectra reference shot
18:06:08	8634	1337	11	S2G7 Delta Timing Error 2.1 ms
18:22:38	8689	1392	11	S2G7 Delta Timing at -2.8 ms
18:22:57	8690	1393	11	S2G7 Delta Timing at 8.0 ms
18:23:14	8691	1394	11	S2G7 Delta Timing at -4.5 ms
18:24:44	8696	1399	11	S2G7 Delta Timing at -1.7 ms
18:25:02	8697	1400	11	S2G7 Delta Timing at 6.9 ms
18:25:19	8698	1401	11	S2G7 Delta Timing at -5.3 ms
18:27:24	8705	1408	11	S2G7 Delta Timing at 8.0 ms
18:27:42	8706	1409	11	S2G7 Delta Timing at -6.3 ms
18:33:40	8726	1429	11	S2G7 Delta Timing at -1.5 ms
18:33:58	8727	1430	11	S2G7 Delta Timing at 7.3 ms
18:34:16	8728	1431	11	S2G7 Delta Timing at -4.6 ms
18:38:41	8743	1446	11	S2G7 Delta Timing at 2.3 ms
18:38:59	8744	1447	11	S3G1 Delta Timing at 2.1 ms
18:46:07	8768	1471	11	S4G4 Delta Timing at 2.2 ms
18:53:30	8793	1496	11	S2G7 Delta Timing at 3.8 ms
18:53:47	8794	1497	11	S2G7 Delta Timing at -3.7 ms
18:54:19	8796	1499	11	S2G7 spared after multiple delta timing errors - new volume = 6480 in3
19:01:54	8822	1525	11	S4G4 Delta Timing at -2.2 ms
19:03:18	8827	1530	11	S3G1 Delta Timing at -2.2 ms
19:38:57	8950	1653	11	S3G1 Delta Timing at -2.2 ms
20:13:22	9071	1774	11	S3G1 Delta Timing at -2.6 ms
20:39:17	9164	1867	11	S3G1 Delta Timing at -2.3 ms
20:55:30	9223	1926	11	EOT #11
20:55:47	9224	1927	12	Beginning of tape #12
21:24:56	9326	2029	12	S3G1 Delta Timing at -2.3 ms
21:44:46	9396	2099	12	S3G1 Delta Timing at -2.1 ms
22:21:30	9527	2230	12	S3G1 Delta Timing at -2.7 ms
22:45:44	9613	2316	12	S3G1 Delta Timing at -2.1 ms
22:57:55	9656	2359	12	S3G1 Delta Timing at -2.1 ms
00:02:24	9881	2584	12	EOL MGL1701MC05 - S1-4G5 spares, S2G7 spare - Total volume = 6480 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	13	17
SP #	946	5040

Line	MGL1701MC06
Sequence	06
Direction	182.1

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	946	5040
Date MM/DD/YY	01/16/17	01/17/17
Time UTC	5:20	02:29
Volume (cu in.)	6600in3	6240in3
Wind (kts)	S 20.7kts	S15kts
Sea State (m)	2m	1m
Water Depth (m)	3218m	2975m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
05:20:14	9882	946	13	SOL MGL1701MC06 - S1-4G5 spares - Total volume = 6600 in3
05:32:37	9917	981	13	S4G2 Delta Timing at 2.2 ms
05:39:33	9937	1001	13	spectra reference shot
05:39:56	9938	1002	13	S3G1 Delta Timing at 2.2 ms
5:57:27	9989	1053	13	S3G1 Delta Timing at 2.2 ms
5:59:56	9996	1060	13	S3G1 Delta Timing at 2.2 ms
6:24:10	10072	1136	13	S3G1 Delta Timing at 2.3 ms
6:33:13	10097	1161	13	S3G1 Delta Timing at -2.2 ms
6:54:42	10164-10176	1228-1240	13	S3G2 No fire new volume 6240, 35 guns
6:58:53	10177	1241	13	S3G5 enabled - new volume 6420 36 guns
10:27:39	10882	1946	14	Start tape #14
11:38:24	11126	2190	14	Power down for sea lion - last full SP: 2190
			14	missed SP 2191-2193 while powering down
			14	missed SP 2246-2248 while reconfiguring
11:56:39	11179	2249	14	Back to full volume (6420 in3 due to swap) - first good SP 2249
12:15:14	11240	2310	14	S4G2 Delta Timing at 2.3 ms
12:32:35	11299	2369	14	S4G2 Delta Timing at 2.4 ms
12:35:17	11308	2378	14	S4G2 Delta Timing at -2.3 ms
14:02:55	11599	2669	14	S4G2 Delta Timing at -2.4 ms
15:30:25	11881	2951	14	EOT #14
15:30:43	11882	2952	15	Start tape #15
16:01:33	11979	3049	15	S3G5 No Fire
16:01:52	11980	3050	15	S3G5 Delta Timing at -11.4 ms
16:02:11	11981	3051	15	S3G5 Delta Timing at -4.0 ms
16:02:30	11982	3052	15	S3G5 Delta Timing at -4.3 ms
16:02:48	11983	3053	15	S3G5 Delta Timing at -2.2 ms
16:05:14	11991	3061	15	S4G2 Delta Timing at 2.1 ms
16:07:40	11999	3069	15	S3G5 Delta Timing at 2.4 ms
16:07:58	12000	3070	15	S3G5 Delta Timing at -2.8 ms
16:08:33	12002	3072	15	S3G5 Delta Timing at 2.1 ms
16:08:51	12003	3073	15	S3G5 Delta Timing at -3.0 ms
16:09:29	12005	3075	15	S4G2 Delta Timing at 2.3 ms
16:11:35	12012	3082	15	S3G5 Delta Timing at 2.5 ms
16:12:30	12015	3085	15	S3G5 Delta Timing at -3.3 ms
16:12:50	12016	3086	15	S3G5 No Fire
16:13:06	12017	3087	15	Spared S3G5 - turned on S2G5 - total volume 6420 in3
16:14:40	12022	3092	15	S4G2 Delta Timing at 2.3 ms
16:21:59	12046	3116	15	S4G2 Delta Timing at 2.4 ms
17:08:47	12200	3270	15	S4G2 Delta Timing at 2.2 ms
17:42		3381	15	Missed shot due to speed
20:38:34	12881	3952	15	EOT #15
20:38:55	12882	3953	16	Start tape #16
21:53:00	13108	4179	16	S2G2 No Fire - volume = 6060in3
21:53:20	13109	4180	16	S2G1 Delta Timing at -2.8 ms
21:53:20	13109	4180	16	S2G2 No Fire - volume = 6060in3
21:53:40	13110	4181	16	S2G2 No Fire - volume = 6060in3
21:53:59	13111	4182	16	S2G2 No Fire - volume = 6060in3
21:54:19	13112	4183	16	S2G2 No Fire - volume = 6060in3
21:54:39	13113	4184	16	S2G2 No Fire - volume = 6060in3
21:54:55	13114	4185	16	S2G2 No Fire - volume = 6060in3
21:55:14	13115	4186	16	S2G2 spared - S4G5 on - new volume 6240in3 - air leak on string 2
22:28:11	13212	4283	16	power down to 40in3 for turtle - last SP at 6240in3
22:28		4284	16	missed shot while powering down
22:39		4315	16	missed shot while powering up
22:39:44	13243	4316	16	back to full volume (6240in3) - first SP at 6240in3
01:46:02	13824	4897	16	S1G2 Delta Timing at 2.1 ms
02:03:34	13881	4954	16	EOT #16
02:03:53	13882	4955	17	Start tape #17
02:29:57	13967	5040	17	EOL MGL1701MC06 - S1G5,S2G2,S3G2,S3G5 spares - Total volume = 6240 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	18	18
SP #	5088	5768

Line	MGL1701MC06A
Sequence	07
Direction	182.1

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	8.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	7
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	16s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	5088	5768
Date MM/DD/YY	1/17/17	1/17/17
Time UTC	2:44	06:22
Volume (cu in.)	3120in3	6600in3
Wind (kts)	S16kts	S 17.5kts
Sea State (m)	1m	1.5m
Water Depth (m)	2997m	3047.8m

Cable	Dead Channels
1	
2	
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
Multiple configuration changes made to source while online
Source strings 1 and 2 offline at SOL to change source depth and layback distance
Strings 1 and 2 redeployed while online with 9m depths and 235m layback from NRP
After confirmation strings 1 and 2 good, strings 3 and 4 spared out and recovered to make changes to depth and layback
String 3 and 4 deployed near EOL. Once all 4 strings firing good EOL
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	19	20
SP #	6587	8401

Line	MGL1701MC06B
Sequence	08
Direction	182.1

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	6587	8363
Date MM/DD/YY	01/17/17	01/17/17
Time UTC	6:27	18:30
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S 17.5kts	S19.5kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	3041.7m	2470m

Cable	Dead Channels
1	
2	
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
Last ~40shots with the 40 in3 mitigation gun because of a pinniped
Last shot point at full volume was SP8363, file #16423, at 18:30
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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	21	23
SP #	1005	3767

Line	MGL1701MC07
Sequence	09
Direction	190.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1005	3767
Date MM/DD/YY	01/17/17	01/18/17
Time UTC	18:47	16:32
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S19.8kts	S20kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	2478m	1540m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
18:47	16461	1005	21	SOL MGL1701MC07 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3
19:25:13	16546	1090	21	S3G1 Delta Timing at 2.2 ms
19:32:17	16562	1106	21	S3G1 Delta Timing at 2.1 ms
19:36:23	16571	1115	21	S3G1 Delta Timing at -2.7 ms
22:22:11	16908	1452	21	S3G1 Delta Timing at 2.1 ms
23:16:05	17013	1557	21	S3G1 Delta Timing at 2.3 ms
23:16:43	17014	1558	21	S3G1 Delta Timing at -2.2 ms
23:33:57	17044	1588	21	S3G1 Delta Timing at 2.5 ms
23:34:42	17045	1589	21	S3G1 Delta Timing at -2.2 ms
23:47:26	17066	1610	21	S3G1 Delta Timing at -2.2 ms
3:36:58	17461	2005	22	Start Tape #22
8:00:42	18007	2551	22	S3G1 Delta Timing at 2.4 ms
8:55:48	18142	2686	22	S3G1 Delta Timing at -2.1 ms
9:41:59	18258	2802	22	S3G1 Delta Timing at -2.3 ms
11:05:19	18461	3005	23	Start Tape #23
11:52:35	18568	3112	23	S3G1 Delta Timing at -2.4 ms
13:34:28	18806	3350	23	S3G1 Delta Timing at 2.1 ms
14:28:32	18921	3465	23	power down for pinniped - last full SP
14:28:32		3466	23	missed SP while powering down
14:33:18	18931	3476	23	Auto Fire S1G4 at 6553.5
14:36:09	18938	3483	23	Auto Fire S1G4 at 6553.5
14:36		3485		Missed SP while switching mitigation guns
14:37:50	18941	3487	23	Auto Fire S1G4 at 6553.5
14:40:21	18947	3493	23	Auto Fire S1G4 at 6553.5
14:44:00				Missed SP 3504-3505 while reconfiguring.
14:45:34	18958	3506	23	New volume 3300 (only strings 3 and 4 being fired)
15:40:55		3639	23	Strings 1 and 2 back online, string 3 disabled to repair towpoint - volume = 4950in3
15:52:27		3668	23	String 3 back online - back to full volume 6600 in3
16:32:00	19217	3767	23	EOL MGL1701MC07 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	24	24
SP #	1007	1113

Line	MGL1701MC08
Sequence	010
Direction	199.3

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1007	1113
Date MM/DD/YY	01/18/17	01/18/17
Time UTC	16:34	17:17
Volume (cu in.)	6600in3	40in3
Wind (kts)	20.5kts	S20kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	1534m	1427m

Cable	Dead Channels
1	
2	
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
line aborted prematurely to untangle PAM cable
Last SP was 1113. SP114/File 19323 not valid
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	25	32
SP #	977	8382

Line	MGL1701MC08R
Sequence	011
Direction	199.3

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	977	8382
Date MM/DD/YY	01/18/17	1/21/17
Time UTC	23:47	04:48
Volume (cu in.)	6600in3	6560in3
Wind (kts)	S18kts	S22kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	1542m	321.6m

Cable	Dead Channels
1	
2	
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
reshoot of line MC08
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
23:47:20	19324	977	25	SOL MGL1701MC08R - SIG5,SIG5,SIG5,SIG5 spares - Total volume = 6600 in3
23:58:08	19348	1001	25	spectra reference
00:00	19353	1006	25	midflight
00:53:55	19428	1081	25	SIG1 delta timing error at 2.2 ms
00:46:23	19460	1113	25	end of rechoot section
00:54:42	19479	1132	25	SIG1 delta timing error at 2.1 ms
01:33:19	19569	1222	25	SIG1 delta timing error at 2.3 ms
02:22:50	19685	1338	25	SIG6 delta timing error at 2.1 ms
3:00:00	19773	1426	25	SIG6 Delta Timing at 2.9 ms
3:00:26	19774	1427	25	SIG6 Delta Timing at 2.7 ms
3:00:50	19775	1428	25	SIG6 Delta Timing at 2.7 ms
3:01:40	19777	1430	25	SIG6 Delta Timing at 2.4 ms
3:02:05	19778	1431	25	SIG6 Delta Timing at 3.1 ms
3:02:30	19779	1432	25	SIG6 Delta Timing at 5.6 ms
3:03:54	19780	1433	25	SIG6 Delta Timing at 3.9 ms
3:03:41	19782	1435	25	SIG6 Delta Timing at 4.7 ms
3:04:06	19783	1436	25	SIG6 spared - Total volume = 6510 in3 35 pums
6:33:14	20324	1977	26	Start Tape #26
9:44:13	20812	2465	26	SIG2 Delta Timing at 2.2 ms due to airleak
9:44:55	20814	2467	26	SIG2 Delta Timing at 2.1 ms due to airleak
9:45:46	20816	2469	26	SIG2 Delta Timing at 2.6 ms due to airleak
9:49:47	20826	2479	26	SIG2 Delta Timing at 2.2 ms due to airleak
9:55:49	20841	2494	26	Swapped out SIG2 due to airleak, swapped in SIG5, SIG5, Volume = 6510 in3 36pums
9:55:49	20841	2494	26	SIG5 Delta Timing at 2.4 ms
9:56:12	20842	2495	26	SIG5 Delta Timing at 3.4 ms
9:57:43	20846	2499	26	SIG5 Delta Timing at 2.2 ms
9:58:07	20847	2500	26	SIG5 Delta Timing at 2.4 ms
10:49:16	20978	2661	26	Strive 2 turned out for recovery, Prime Strives 1, 3, & 4 - Volume=5310, 29 pums
11:32:29	21089	2742	26	Full volume 6600 in3 36 pums, delta errors: SIG1, SIG4, SIG10
11:32:53	21090	2743	26	Delta errors: SIG2, SIG6
11:33:18	21091	2744	26	Delta error: SIG1
13:08:32	21323	2976	26	ROT #25
13:08:58	21324	2977	27	ROT #27
13:15:41	21340	2993	27	Delta error: SIG4, 2.1 ms
14:18			27	Missed SP 3141/3142 while powering down for pinniped
14:19:44	21488	3143	27	Mitigation am, Volume = 40 in3
14:59		3156	27	Pinniped out of exclusion zone, missed SP 3156 while reconfiguring
14:59:41	21501	3157	27	First SP back at full volume 6600 in3
16:48:31	21850	3506	27	last shot at 6600in3 before powering down for pinniped
16:48		3507	27	missed shot while powering down
16:53		3518	27	missed shot while restoring volume
16:53:59	21861	3519	27	first shot back to full volume 6600in3
17:07:08	21892	3550	27	SIG9 Delta Timing at 4.5 ms
17:07:32	21893	3551	27	SIG9 Delta Timing at 2.5 ms
17:11:44	21903	3561	27	SIG1 Delta Timing at 2.4 ms
17:27:05	21940	3598	27	last shot at 6600in3 before powering down for pinniped
17:27		3599	27	missed shot while powering down
17:44:19	21980	3639	27	first shot back to full volume 6600in3
18:33:17	22095	3754	27	last shot at 6600in3 before powering down for pinniped
18:33		3755	27	missed shot while powering down
18:51:26	22136	3796	27	first shot back to full volume 6600in3
20:14:16	22323	3983	27	ROT #27
20:14:42	22324	3984	28	ROT #28
20:59:40	22426	4086	28	last shot at 6600in3 before powering down for pinniped
21:00		4087	28	missed shot while powering down
21:17		4127	28	missed shot while restoring volume
21:17:48	22466	4128	28	first shot back to full volume 6600in3
21:46:16	22531	4193	28	SIG1 Delta Timing at 2.4 ms
22:28:44	22765	4427	28	SIG9 no fire - volume = 6380 in3
23:29:49	22766	4428	28	SIG9 no fire - volume = 6380 in3
00:11:27	22863	4525	28	SIG9 no fire - volume = 6380 in3
03:33:32	23324	4986	29	Start Tape #29
03:41:44	23344	5006	29	SIG1 Delta Timing at 2.4 ms
08:31:34	24072	5734	29	SIG1 Delta Timing at 2.2 ms
09:09:24	24166	5828	29	SIG1 Delta Timing at 2.2 ms
09:59:56	24264	5926	29	SIG1 Delta Timing at 2.1 ms
10:09:46	24308	5970	29	SIG1 Delta Timing at 2.2 ms
10:18:15	24324	5986	30	Start Tape #30
11:22:40	24480	6142	30	SIG1 Delta Timing at 2.1 ms
15:47:33	25089	6751	30	SIG1 Delta Timing at 2.2 ms
17:31:36	25321	6983	30	SIG1 Delta Timing at 2.2 ms
17:52:24	25323	6985	30	ROT #30
17:52:50	25324	6986	31	ROT #31
17:52:50	25324	6986	31	SIG9 no fire - volume = 6380 in3
18:04:31	25394	7056	31	SIG9 no fire - volume = 6380 in3
18:41:50	25475	7137	31	SIG1 Delta Timing at 2.1 ms
19:21:15	25561	7223	31	SIG9 no fire - volume = 6380 in3
22:42:58	25913	7375	31	SIG1 Delta Timing at 2.1 ms
23:59:50	26112	7774	31	midflight
1:02:54	26242	7904	31	SIG9 no fire - volume = 6380 in3
1:05:18	26247	7909	31	SIG9 no fire - volume = 6380 in3
1:05:47	26248	7910	31	SIG9 no fire - volume = 6380 in3
1:08:17	26253	7915	31	SIG9 no fire - volume = 6380 in3
1:09:18	26255	7917	31	SIG9 no fire - volume = 6380 in3
1:11:45	26260	7922	31	SIG9 no fire - volume = 6380 in3
1:13:39	26264	7926	31	SIG9 no fire - volume = 6380 in3
1:14:06	26265	7927	31	SIG9 no fire - volume = 6380 in3
1:14:59	26267	7929	31	SIG9 no fire - volume = 6380 in3
1:15:25	26268	7930	31	SIG9 no fire - volume = 6380 in3
1:16:21	26270	7932	31	SIG9 no fire - volume = 6380 in3
1:16:48	26271	7933	31	SIG9 no fire - volume = 6380 in3
1:17:16	26272	7934	31	SIG9 no fire - volume = 6380 in3
1:17:42	26272	7935	31	SIG9 no fire - volume = 6380 in3
1:18:09	26274	7936	31	SIG9 no fire - volume = 6380 in3
1:18:36	26275	7937	31	SIG9 no fire - volume = 6380 in3
1:19:02	26276	7938	31	SIG9 no fire - volume = 6380 in3
1:19:28	26277	7939	31	SIG9 no fire - volume = 6380 in3
1:19:54	26278	7940	31	SIG9 no fire - volume = 6380 in3
1:20:21	26279	7941	31	SIG9 no fire - volume = 6380 in3
1:20:47	26280	7942	31	SIG9 no fire - volume = 6380 in3
1:21:40	26282	7944	31	SIG9 no fire - volume = 6380 in3
1:22:07	26283	7945	31	SIG9 no fire - volume = 6380 in3
1:22:40	26288	7947	31	SIG9 no fire - volume = 6380 in3
1:23:30	26286	7948	31	SIG9 no fire - volume = 6380 in3
1:24:28	26288	7950	31	SIG1 Delta Timing at 2.1 ms
01:27:14	26294	7956	31	SIG9 no fire - volume = 6380 in3
01:27:42	26295	7957	31	SIG9 no fire - volume = 6380 in3
01:28:11	26296	7958	31	SIG9 spared - replaced by SIG5 - new volume 6560in3
01:49:29	26322	7985	31	ROT #31
01:49:55	26324	7986	32	ROT #32
01:43:33	26330	7992	32	SIG1 Delta Timing at 2.1 ms
02:14:53	26490	8062	32	SIG1 Delta Timing at 2.4 ms
02:44:04	26493	8125	32	SIG1 Delta Timing at 2.2 ms
02:59:35	26497	8159	32	SIG1 Delta Timing at 2.1 ms
03:15:02	26530	8192	32	SIG1 Delta Timing at 2.2 ms
03:16:24	26533	8195	32	SIG1 Delta Timing at 2.1 ms
03:37:42	26557	8219	32	SIG1 Delta Timing at 2.1 ms
04:19:57	26663	8325	32	SIG1 Delta Timing at 2.3 ms
04:48:08	26720	8382	32	FOH MGL1701MC08R - SIG5,SIG5,SIG5,SIG5 spares - Total volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	33	35
SP #	1005	3569

Line	MGL1701MC09
Sequence	012
Direction	183.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1005	3569
Date MM/DD/YY	1/21/17	1/22/17
Time UTC	4:50	00:02
Volume (cu in.)	6560in3	6470in3
Wind (kts)	S22kts	SE18kts
Sea State (m)	1.5m	1m
Water Depth (m)	253.4m	415m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
04:50:09	26721	1005	33	SOL MGL1701MC09 - S1G5,S2G5,S4G5, S3G9 spares - Total volume = 6560 in3
05:40:38	26825	1109	33	S3G1 Delta Timing at -2.1 ms
06:07:42	26880	1164	33	S3G1 Delta Timing at -2.4 ms
08:42:48	27184	1468	33	S3G1 Delta Timing at -2.3 ms
09:13:36	27248	1532	33	S2G6 Delta Timing at 4.9 ms
09:15:28	27252	1536	33	S2G6 Delta Timing at 2.2 ms
09:16:51	27255	1539	33	No fire S2G6- Volume 6470
09:17:20	27256	1540	33	S2G6 Delta Timing at 4.6 ms
09:19:42	27261	1545	33	No fire S2G6- Volume 6470
09:20:08	27262	1546	33	Spared S2G6 due to misfires and no fires
9:30:08	27283	1567	33	S3G1 Delta Timing at -2.2 ms
9:34:05	27291	1575	33	S3G1 Delta Timing at -2.4 ms
9:53:31	27331	1615	33	S3G1 Delta Timing at 2.9 ms
12:57:01	27720	2004	33	EOT #33
12:57:28	27721	2005	34	SOT #34
13:10:08	27749	2033	33	S3G1 Delta Timing at -2.2 ms
13:27:05	27787	2071	33	S3G1 Delta Timing at -2.1 ms
13:36:52	27809	2093	33	S3G1 Delta Timing at -2.4 ms
14:00:41	27862	2146	34	S3G1 Delta Timing at 2.3 ms
14:25:30	27918	2202	34	S3G2 Auto Fire at 6553.5
14:25:55	27920	2203	34	S3G2 Spared due to autofire, Volume = 6110 in3
14:39:12	27949	2233	34	S3G2 autofiring
14:40:03	27951	2235	34	S3G2 spared - volume = 5750 in3
14:40:00		2236		missed shot 2236 while powering down string 3
14:40:56	27952	2237	34	String 3 spared for recovery - volume = 4860 in3
15:14-15:34	28025-28065	2310-2350	34	slowed down very hard to avoid vessels (SOG < 1kt) - most birds dove down to 12-15 meters
15:40-16:08	28075-8130	2360-2415	34	slowed down again - birds down again
16:01:00	28114	2399	34	string 3 back online - S3G9 not firing - first shot at full volume (6290in3)
16:04	3			S3G9 definitely not firing - spared
16:04:08	28121	2406	34	S3G5 on - volume = 6470 in3 - 35 guns
16:22:22	28163	2448	34	S3G1 Delta Timing at 2.2 ms
16:25:42	28171	2456	34	S3G1 Delta Timing at 2.1 ms
20:02-20:08	28685-28699	2970-2984	34	multiple no fires from S2G2 - volume 6110 - spared S2G2
20:08:42	28700	2985	34	S2G5 on volume = 6290 in3
20:09:33	28702	2987	34	S1G5 on - back to volume = 6470 in3 - 36 guns
20:17:14	28720	3005	34	EOT #34
20:17:39	28721	3006	35	SOT #35
20:35:17	28764	3049	35	S3G1 Delta Timing at 2.1 ms
20:51:37	28805	3090	35	S3G1 Delta Timing at 2.3 ms
20:58:43	28823	3108	35	S3G1 Delta Timing at -2.1 ms
20:59:30	28825	3110	35	S3G1 Delta Timing at 2.1 ms
21:29:32	28901	3186	35	S3G1 Delta Timing at -2.1 ms
21:52:27	28958	3243	35	power down for pinniped - last shot at full volume (6470in3)
21:52		3244		missed shot while powering down
22:07		3281		missed shot while powering up
22:07:51	28995	3282	35	back to full volume (6470in3) - first good SP
22:20:09	29027	3314	35	S3G1 Delta Timing at 2.1 ms
22:41:25	29081	3368	35	S3G1 Delta Timing at -2.6 ms
22:55:31	29116	3403	35	S3G1 Delta Timing at 2.4 ms
22:55:55	29117	3404	35	S3G1 Delta Timing at -2.1 ms
23:32:23	29207	3494	35	S3G1 Delta Timing at 2.6 ms
23:48:25	29247	3534	35	S3G1 Delta Timing at -2.1 ms
00:02:39	29282	3569	35	EOL MGL1701MC09 - S2G2,S2G6,S4G5, S3G9 spares - Total volume = 6470 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	36	36
SP #	1098	1552

Line	MGL1701MC10
Sequence	013
Direction	36.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1098	1552
Date MM/DD/YY	1/22/17	1/22/2017
Time UTC	3:02	6:02
Volume (cu in.)	6560in3	6560in3
Wind (kts)	S 17.7kts	S23.5kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	154.3m	73.5m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	37	39
SP #	971	3516

Line	MGL1701MC11
Sequence	014
Direction	276.6

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	971	3516
Date MM/DD/YY	1/22/17	1/23/17
Time UTC	8:15	00:54
Volume (cu in.)	6560in3	6560in3
Wind (kts)	S17.8kts	s20kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	114.2m	4444m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
		971	37	SOL MGL1701MC11 - S1G5,S2G5,S4G5, S3G9 spares - Total volume = 6560 in3
08:15:38	29740		37	Delta Timing S1G2 3.1 ms, S4G4 3.4 ms
08:15:59	29741	972	37	Delta Timing S1G2 -2.4 ms, S4G4 -2.1 ms
08:16:22	29742	973	37	S3G1 Delta Timing at -2.2 ms
08:54:50	29841	1072	37	S3G1 Delta Timing at 2.5 ms
08:58:35	29851	1082	37	S3G1 Delta Timing at 2.5 ms
09:28:47	29929	1160	37	S3G1 Delta Timing at -2.2 ms
09:56:33	30001	1232	37	S3G1 Delta Timing at 2.2 ms
10:41:42	30117	1348	37	S3G1 Delta Timing at 2.4 ms
10:42:05	30118	1349	37	S3G1 Delta Timing at -2.1 ms
10:47:10	30131	1362	37	S3G1 Delta Timing at 2.2 ms
10:50:59	30141	1372	37	S3G1 Delta Timing at 2.1 ms
10:52:56	30146	1377	37	S3G1 Delta Timing at 2.1 ms
10:58:53	30161	1392	37	S3G1 Delta Timing at 2.3 ms
11:04:17	30174	1405	37	S3G1 Delta Timing at 2.2 ms
11:10:47	30191	1422	37	S3G1 Delta Timing at -2.1 ms
11:12:21	30195	1426	37	S3G1 Delta Timing at 2.2 ms
11:21:28	30219	1450	37	S3G1 Delta Timing at -2.7 ms
11:31:12	30244	1475	37	S3G1 Delta Timing at 2.3 ms
11:33:56	30251	1482	37	S3G1 Delta Timing at -2.9 ms
11:56:58	30310	1541	37	S3G1 Delta Timing at 2.6 ms
12:37:59	30417	1648	37	Last shot at 6560 in3, power down for sea turtle
12:38		1649		SP 1649 missed while powering down
12:38:45	30418	1650	37	First shot on mitigation gun, 40 in3
12:48		1674		SP 1674 missed while reconfiguring
12:48:16	30442	1675	37	First shot back to full volume - 6560 in3
13:02:35	30479	1712	37	S3G1 Delta Timing at -2.2 ms
13:36:18	30567	1800	37	S3G1 Delta Timing at -2.2 ms
13:38:14	30572	1805	37	S3G1 Delta Timing at -2.5 ms
13:54:40	30614	1847	37	S3G1 Delta Timing at -2.1 ms
14:00:35	30629	1862	37	S3G1 Delta Timing at 2.4 ms
14:43:53	30740	1973	38	Start Tape #38
14:47:15	30750	1983	38	S3G1 Delta Timing at -2.1 ms
14:57:52	30778	2011	38	power down for pinniped - last shot at 6560in3
15:17:00		2061	38	missed shot 2061 while reconfiguring
15:17-15:19	30828-30831	2062-2065	38	S3G9 not firing after reconfiguration - vol = 6380in3
15:19:02	30832	2066	38	SP 2066 first shot back at 6560 in3
15:27:13	30852	2086	38	S3G1 Delta Timing at 2.3 ms
15:39:26	30882	2116	38	power down for pinniped - last shot at 6560in3
15:40:00		2117-2118	38	missed shots while powering down
15:56:37	30922	2158	38	S3G9 not firing during first shot after restoring volume - vol = 6380 in3
15:57:02	30923	2159	38	SP 2159 first shot back at 6560 in3
16:16:05	30969	2205	38	S3G1 Delta Timing at 2.1 ms
16:17:44	30973	2209	38	S3G1 Delta Timing at 2.1 ms
16:54:51	31065	2301	38	S3G1 Delta Timing at 2.1 ms
17:11:39	31079	2315	38	S3G1 Delta Timing at 2.4 ms
17:26:14	31144	2380	38	S3G1 Delta Timing at 2.4 ms
17:27:23	31147	2383	38	S3G1 Delta Timing at -2.2 ms
17:35:22	31167	2403	38	S3G1 Delta Timing at -2.4 ms
17:49:47	31203	2439	38	S3G1 Delta Timing at -2.1 ms
18:32:14	31312	2548	38	S3G1 Delta Timing at -2.3 ms
18:33:23	31315	2551	38	S3G1 Delta Timing at -2.1 ms
18:40:22	31333	2569	38	S3G1 Delta Timing at -2.5 ms
19:03:01	31390	2626	38	S3G1 Delta Timing at -2.2 ms
19:07:28	31401	2637	38	S3G1 Delta Timing at -2.6 ms
19:37:00	31475	2711	38	S3G1 Delta Timing at -2.5 ms
19:40:10	31483	2719	38	S3G1 Delta Timing at -2.3 ms
20:56:16	31677	2913	38	S3G1 Delta Timing at -2.2 ms
21:20:43	31739	2975	38	EOT #38
21:21:07	31740	2976	39	SOT #39
21:44:06	31798	3034	39	S3G1 Delta Timing at 2.1 ms
22:00:23	31839	3075	39	S3G1 Delta Timing at -2.3 ms
22:18:05	31884	3120	39	S3G1 Delta Timing at -2.7 ms
22:49:53	31964	3200	39	S3G1 Delta Timing at -2.4 ms
00:00	32141	3377	39	midnight
00:23:45	32201	3437	39	S3G1 Delta Timing at 2.3 ms
00:54:14	32280	3516	39	EOL MGL1701MC11 - S1G5,S2G5,S4G5, S3G9 spares - Total volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	40	46
SP #	909	3510

Line	MGL1701MC13
Sequence	015
Direction	105.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	909	3510
Date MM/DD/YY	1/23/17	1/23/17
Time UTC	4:55	21:44
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S-SW19kts	S-SW17kts
Sea State (m)	2m	1.5m
Water Depth (m)	4515.5m	85m

Cable	Dead Channels
1	
2	
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
SP 3511 was recorded on file #35875, tape 46. However spectra was off and there is no navigation
Tapes 41,42,43 were generated while troubleshooting exporting issues from Seal when exporting file 32849. They should be ignored.
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
04:55:27	32281	909	40	SOL MGL1701MC13 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3 S1G2 Delta Timing at 2.1 ms
04:56:12	32284	911	40	S3G1 Delta Timing at -2.2 ms
06:18:10	32489	1117	40	S3G1 Delta Timing at -2.1 ms
08:40:33	32849	1477	40	EOT:SEAL suffering Export failure, files saving to SEAL buffer
	32849	1477	41	BOT/EOT: troubleshooting SEAL Export
	32849	1477	42	BOT/EOT: troubleshooting SEAL Export
	32849	1477	43	BOT/EOT: troubleshooting SEAL Export
08:40:33	32849	1477	44	BOT: SEAL Export re-established, clearing SEAL buffer
10:00:23	33009	1637	44	S4G4 Delta Timing at 2.1ms
13:25:14	33559	2187	44	Power down for pinniped - last shot at 6600in3
		2188	44	Missed shot while powering down
13:25:59	33560	2189	44	Mitigation gun 40 in3
		2202	44	Missed shot while reconfiguring
13:31:13	33573	2203	44	First SP back at full volume 6600 in3
15:11:35	33848	2478	44	Power down for pinniped - last SP at 6600in3: 2478- EOT #44
15:20		2479		missed shot 2479 while powering down
15:12:20	33849	2480	45	first shot at 40 in3 - BOT #45
15:26		2519	45	missed shot 2519 while powering up
15:27:32	33888	2520	45	first SP back at full volume 6600in3: 2520
15:35:59	33910	2542	45	Power down for pinniped - last SP at 6600in3: 2542
15:36		2543		missed shot 2543 while powering down
15:36:46	33911	2544	45	first shot at 40 in3
15:41		2555	45	missed shot 2555 while powering up
15:41:30	33888	2556	45	first SP back at full volume 6600in3: 2556
17:45:19	34248	2882	45	Power down for pinniped - last SP at 6600in3: 2882
17:45		2883	45	missed shot 2883 while powering down
17:46:07	34249	2884	45	first shot at 40 in3
17:50		2896		missed shot 2896 while powering up
17:51:06	34261	2897	45	first SP back at full volume 6600in3: 2897
21:36:42	34849	3485	45	EOT #45
21:37:05	34850	3486	46	BOT #46
21:44:38	34874	3510	46	EOL MGL1701MC13 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	47	49
SP #	946	3565

Line	MGL1701MC14
Sequence	016
Direction	187.3

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	946	3565
Date MM/DD/YY	01/24/17	01/24/17
Time UTC	3:22	21:30
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S4.5kts	S2kts
Sea State (m)	1m	0.5m
Water Depth (m)	255.9m	555m

Cable	Dead Channels
1	
2	
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
Ship noise initially from astern apx 12:20 (SP 2317) moving forward until apx 14:08 (SP 2571), may be present later at lower amplitudes.
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
03:22:26	34876	946	47	SOL MGL1701MC14 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3 S1G2 Delta Timing at 4.3 ms
03:22:46	34877	947	47	S1G2 Delta Timing at -3.3 ms
09:48:48	35876	1946	48	SOT 48
10:26:54	35969	2039	48	Power down for dolphin - last SP at 6600in3: 2039
		2040	48	missed shot 2040 while powering down
10:27:42	35970	2041	48	first shot at 40 in3
		2077	48	missed shot 2077 while powering up
10:42:28	36006	2078	48	first SP back at full volume 6600in3: 2078
11:23:45	36108	2180	48	S3G1 Delta Timing at -2.1ms
Apx 12:20	apx 36245	apx 2317	48	Beginning of ship noise initially from astern, moving forward
12:51:33	36321	2393	48	Power down for pinniped- last SP at 6600 in3: 2393
		2394	48	missed shot 2394 while powering down
12:52:24	36322	2395	48	first shot at 40 in3
13:01:15	36343	2416	48	last shot at 40 in3 before shut down
		2417-2423	48	shut down for pinniped, missed SP 2417-2423
13:04:40	36344	2424	48	back to 40 in3
		2459, 2460	48	missed shots 2459, 2460 while powering up
13:20:21	36379	2461	48	first SP back at full volume 6600in3: 2461; Delta Timing S1G2: 2.7 ms, S4G4: 3.1 ms
13:20:44	36380	2462	48	S4G4 Delta Timing at -2.3 ms
Apx 14:08	apx 36489	apx 2571	48	Ship noise mostly disappeared
16:07:44	36744	2826	48	Power down for pinniped- last SP at 6600 in3: 2826
16:08		2827	48	missed SP 2827 while powering down
16:15		2840	48	missed SP 2840 while powering up
16:15:10	36757	2841	48	first SP back at full volume 6600in3: 2841
16:28:59	36785	2869	48	Power down for pinniped- last SP at 6600 in3: 2869
16:29		2870	48	missed shot 2870 while powering down
16:47		2908	48	missed shot 2908 while powering up
16:48:27	36823	2909	48	first SP back at full volume 6600in3: 2909
17:13:02	36875	2961	48	EOT #48
17:13:30	36876	2962	49	SOT #49
18:24:03	37031	3117	49	Power down for dolphins - last SP at 6600 in3: 3117
18:55		3190	49	missed SP 3190 while powering up
18:55:54	37104	3191	49	first SP back at full volume 6600in3: 3191
19:19:33	37160	3247	49	Power down for pinniped - last SP at 6600 in3: 3247
19:19		3248	49	missed shot 3248 while powering down
19:49:29	37232	3320	49	only SP back at full volume 6600in3: 3320 before powering down for pinniped
19:49		3321	49	missed shot 3321 while powering down
19:51-19:53		3325-3328	49	shut down for pinniped, missed SP 3325-3328
19:53:10	37236	3329	49	first SP back at 40in3
20:08		3365	49	missed shot 3365 while powering up
20:08:31	37272	3366	49	first SP back at full volume 6600in3: 3366
20:31:51	37328	3422	49	S4G4 Delta Timing at -2.1 ms
21:30:15	37471	3565	49	EOL MGL1701MC14 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	50	50
SP #	1379	1959

Line	MGL1701MC15
Sequence	017
Direction	70.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1379	1959
Date MM/DD/YY	01/24/17	1/25/17
Time UTC	23:39	03:12
Volume (cu in.)	6600in3	6600in3in3
Wind (kts)	S12kts	S12.2kts
Sea State (m)	1m	0.5m
Water Depth (m)	132m	44.7m

Cable	Dead Channels
1	
2	
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
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	51	53
SP #	982	3510

Line	MGL1701MC16
Sequence	018
Direction	270.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	982	3510
Date MM/DD/YY	1/25/17	1/25/17
Time UTC	5:33	21:17
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S15.9kts	S25ktskts
Sea State (m)	0.5m	0.5m
Water Depth (m)	77.8m	4410m

Cable	Dead Channels
1	
2	
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 SOL, low amplitude still slightly visible at apx SP 1080
early end of line for emergency call
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
05:33:44	38054	982	51	SOL MGL1701MC16 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3 S1G2 Delta Timing at 4.7 ms
05:34:04	38055	983	51	Delta Timing, S1G2: -3.6 ms, S4G4 -2.2 ms
09:15:35	38619	1547	51	S3G1 Delta Timing at -2.1 ms
09:19:44	38630	1558	51	S3G1 Delta Timing at -2.1 ms
11:56:59	39054	1982	52	Start of tape #52
12:01:38	39067	1995	52	S3G1 Delta Timing at -2.1 ms
12:52:46	39208	2136	52	S3G1 Delta Timing at -2.8 ms
13:08:23	39250	2178	52	Last shot at full volume 6600 in3 before power down for pinniped
		2179	52	Missed SP while powering down
13:09:08	39251	2180	52	First shot on mitigation gun
		2223	52	Missed SP while powering up
13:25:22	39294	2224	52	First shot back at full volume 6600 in3; S1G2 Delta Timing at 2.6 ms
15:16:02	39597	2527	52	S4G4 Delta Timing at 2.1 ms
15:17:07	39600	2530	52	S2G9 Delta Timing at 2.8 ms
15:18:55	39605	2535	52	S2G9 Delta Timing at -2.9 ms
15:22:55	39616	2546	52	S2G9 Delta Timing at -3.3 ms
15:24:43	39621	2551	52	S4G4 Delta Timing at 2.3 ms
15:39:33	39662	2592	52	S4G4 Delta Timing at 2.8 ms
16:25:20	39789	2719	52	S2G7 Comm Error
17:01:21	39889	2819	52	S3G1 Delta Timing at -2.1 ms
17:01:43	39890	2820	52	S4G4 Delta Timing at -2.1 ms
17:34:22	39981	2911	52	Power down for pinniped; last SP 6600in3: SP 2911
17:49		2952	52	missed SP 2952 while restoring volume
17:49:25	40022	2953	52	First SP at 6600in3: SP 2953
18:00:41	40053	2984	52	EOT #52
18:01:02	40054	2985	53	SOT #53
19:15:21	40257	3188	53	S4G4 Delta Timing at 2.1 ms
19:48:11	40343	3274	53	S4G4 Delta Timing at 2.1 ms
19:55:45	40363	3294	53	S4G4 Delta Timing at 2.1 ms
20:50:06	40508	3439	53	S4G4 Delta Timing at -2.2 ms
21:17:27	40579	3510	53	EOL MGL1701MC16 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	54	55
SP #	3109	4229

Line	MGL1701MC16A
Sequence	019
Direction	270.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	3109	4229
Date MM/DD/YY	1/26/17	1/26/17
Time UTC	10:41	17:31:18
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S27.8kts	S15kts
Sea State (m)	1.5m	1m
Water Depth (m)	3297.5m	3694m

Cable	Dead Channels
1	
2	
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
continuation of sequence 18, line 16, after conclusion of rescue effort
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP- First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	56	59
SP #	982	4083

Line	MGL1701MC18
Sequence	020
Direction	92.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	982	4083
Date MM/DD/YY	01/26/17	1/27/17
Time UTC	21:13	17:38
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW25kts	SW10kts
Sea State (m)	1.5m	0.5m
Water Depth (m)	4330m	55m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
21:13:19	41700	982	56	SOL MGL1701MC18 - S1G5,S2G5,S3G5,S4G5 spares - Total volume = 6600 in3
21:13:14	41700	982	56	S1G2,S2G4,S3G4,S4G4 Delta Timing errors 2.2-3.4 ms
21:13:42	41701	983	56	S1G2 Delta Timing at -3.2 ms
21:20:22	41718	1000	56	S3G1 Delta Timing at -2.2 ms
23:59:57	42127	1409	56	power down for pinniped; last SP at 6600in3: SP 1409 = midnight shot
00:00		1410	56	missed shot while powering down
00:17:16	42169	1452	56	First SP back at 6600in3: 1452
01:26:12	42341	1624	56	S4G4 Delta Timing at 3.0 ms
01:38:45	42372	1655	56	S4G4 Delta Timing at -2.1 ms
01:52:30	42406	1689	56	S4G4 Delta Timing at -2.2 ms
02:03:04	42432	1715	56	S4G4 Delta Timing at 2.1 ms
2:09:04	42447	1730	56	S4G4 Delta Timing at -2.2 ms
2:10:43	42451	1734	56	S3G1 Delta Timing at 2.1 ms
2:19:38	42473	1756	56	S4G4 Delta Timing at -2.5 ms
2:25:39	42488	1771	56	S4G4 Delta Timing at 2.1 ms
2:28:05	42494	1777	56	S4G4 Delta Timing at -2.8 ms
3:15:44	42609	1892	56	S4G4 Delta Timing at -2.2 ms
3:41:43	42668	1951	56	S4G4 Delta Timing at -2.4 ms
3:54:51	42698	1981	56	S4G4 Delta Timing at -2.5 ms
3:55:17	42699	1982	56	S4G4 Delta Timing at 2.4 ms
3:58:42	42700	1983	57	Start of tape #57
4:00:05	42710	1993	57	S3G1 Delta Timing at -2.2 ms
4:19:35	42755	2038	57	S4G4 Delta Timing at -2.2 ms
4:45:58	42816	2099	57	S4G4 Delta Timing at -2.3 ms
5:06:37	42863	2146	57	S4G4 Delta Timing at 2.1 ms
6:17:44	43029	2312	57	S4G4 Delta Timing at -2.4 ms
6:18:09	43030	2313	57	S4G4 Delta Timing at 2.4 ms
6:42:56	43088	2371	57	S4G4 Delta Timing at -2.7 ms
6:58:02	43122	2405	57	S2G1 Delta Timing at -2.1 ms
7:04:11	43136	2419	57	S3G1 Delta Timing at -2.2 ms
7:17:39	43167	2450	57	S4G4 Delta Timing at 2.1 ms
7:34:47	43207	2490	57	S4G4 Delta Timing at -2.5 ms
7:42:23	43225	2508	57	S4G4 Delta Timing at -2.2 ms
7:47:06	43236	2519	57	S4G4 Delta Timing at 2.4 ms
7:55:20	43255	2538	57	S3G1 Delta Timing at -2.4 ms
8:02:36	43272	2555	57	S4G4 Delta Timing at -2.1 ms

8:28:40	43334	2617	57	S4G4 Delta Timing at 2.4 ms
8:35:23	43350	2633	57	S4G4 Delta Timing at 2.8 ms
9:35:06	43498	2781	57	S4G4 Delta Timing at -2.1 ms
9:41:02	43513	2796	57	S4G4 Delta Timing at -2.6 ms
9:41:50	43515	2798	57	Swapped out S4G4, swapped in S4G5, Volume = 6600 in3 S4G5 Delta Timing at 3.9 ms
9:42:13	43516	2799	57	S4G5 Delta Timing at -2.6 ms
10:52:49	43700	2983	58	Start of tape #58
12:31:08	43966	3249	58	power down for pinniped; last SP at 6600in3
12:31		3250	58	missed SP 3250 while powering down
12:31:51	43967	3251	58	mitigation gun, 40 in3
12:45		3290	58	missed SP 3291 while reconfiguring
12:46:19	44006	3291	58	back to full volume, 6600 in3 S1G5 S2G5 S3G5 S4G4 spared
12:53:51	44027	3312	58	power down for pinniped; last SP at 6600in3
12:54		3313	58	missed SP 3313 while powering down
12:54:35	44028	3314	58	mitigation gun, 40 in3
13:11		3363	58	missed SP 3363 while reconfiguring
13:12:19	44077	3364	58	back to full volume, 6600 in3 S1G5 S2G5 S3G5 S4G4 spared
16:31:45	44620	3907	58	S3G1 Delta Timing at -2.1 ms
17:01:43	44699	3986	58	EOT #58
17:02:06	44700	3987	59	BOT #59
17:38:40	44796	4083	59	EOL MGL1701MC18 - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	60	60
SP #	1211	1760

Line	MGL1701MC18T
Sequence	021
Direction	281.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1211	1760
Date MM/DD/YY	1/27/17	1/27/17
Time UTC	20:25	23:52
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S12kts	S13kts
Sea State (m)	0.5m	1m
Water Depth (m)	95m	216m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
20:25:45	44797	1211	60	SOL MGL1701MC18T - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3
22:44:30	45167	1581	60	power down for dolphins; last SP at 6600in3: 1581
23:07		1642	60	missed SP 1642 while restoring full volume
23:07:44	45228	1643	60	back to full volume; first SP at 6600 in3: 1643
23:52:52	45345	1760	60	EOL MGL1701MC18T - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	61	62
SP #	921	2023

Line	MGL1701MC19
Sequence	022
Direction	183.6

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	921	2023
Date MM/DD/YY	1/28/17	1/28/17
Time UTC	1:53	9:53
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S15kts	S18kts
Sea State (m)	1.5m	2m
Water Depth (m)	428m	129.9m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
01:53:08	45346	921	61	SOL MGL1701MC19 - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3
03:04:35	45505	1080	61	S3G1 Delta Timing at 2.1 ms
03:15:06	45529	1104	61	S3G1 Delta Timing at 2.2 ms
09:49:36	46439	2014	62	S3G1 Delta Timing at 2.5 ms
09:53:29	46448	2023	62	EOL MGL1701MC19 - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	63	63
SP #	1005	1255

Line	MGL1701MC20
Sequence	023
Direction	189.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1005	1255
Date MM/DD/YY	1/28/17	1/28/17
Time UTC	9:55	11:45
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S18kts	S13.4kts
Sea State (m)	2m	2m
Water Depth (m)	128.6m	250.7m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
09:55:04	46449	1005	63	SOL MGL1701MC20 - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3
10:15:08	46496	1052	63	Power down for whale, last full volume SP 1052, 6600 in3
		1053	63	missed SP 1053 while powering down
10:16:01	46497	1054	63	mitigation gun
		1121	63	missed SP 1021 while reconfiguring
10:45:32	46564	1122	63	first shot back to full volume, 6600 in3
10:46:42	46567	1125	63	S3G1 Delta Timing at -2.3 ms
10:55:54	46588	1146	63	Power down for dolphins, last full volume SP 1146, 6600 in3
		1147	63	missed SP 1147 while powering down
10:56:44	46589	1148	63	mitigation gun
11:45:12	46696	1255	63	Last SP on mitigation gun before shut down.
12:00		1285		EOL due to being shut down for too long. EOL MGL1701MC20 - Total volume = 40 in3
				Last full volume SP 1146

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	64	65
SP #	1397	3290

Line	MGL1701MC20A
Sequence	024
Direction	189.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1397	3290
Date MM/DD/YY	1/28/17	1/29/17
Time UTC	12:59	02:45
Volume (cu in.)	6600in3	6420in3
Wind (kts)	S10.7kts	S16kts
Sea State (m)	2m	2m
Water Depth (m)	238m	170m

Cable	Dead Channels
1	
2	
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
Resuming line 20 after having to terminate line due to over 8 minute shut down
Swell noiseduring most line
volume was changed from 6600in3 to 6420in3 after SP 2009, following failure of S2G1

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
12:59:45	46697	1397	64	SOL MGL1701MC20A - S1G5,S2G5,S3G5,S4G4 spares - Total volume = 6600 in3
13:18:06	46741	1441	64	S3G1 Delta Timing at 2.4 ms
15:13:40	47026	1726	64	S3G1 Delta Timing at 2.4 ms
16:12:51	47173	1873	64	S3G1 Delta Timing at -2.3 ms
17:01-17:07	47293-47308	1993-2008	64	S2G1 not firing - volume 6240 in3
17:08:05	47309	2009	64	swaped S2G5 for S2G1 - new volume 6420in3; S2G5 delta timing error 2.1 ms
17:17:44	47332	2032	64	S3G1 Delta Timing at -2.2 ms
17:55:18	47423	2123	64	S3G1 Delta Timing at -2.2 ms
19:17:54	47631	2331	64	S3G1 Delta Timing at 2.3 ms
19:34:17	47673	2373	64	power down for whale - last SP at 6420in3: 2373
19:42		2395	64	missed SP 2395 while restoring volume
19:43:18	47695	2396	64	back to 6420in3; first SP: SP 2396
19:43:41	47696	2397	64	EOT #64
19:44:04	47697	2398	65	SOT #65
19:47:56	47707	2408	65	S3G1 Delta Timing at -2.3 ms
20:25:07	47798	2499	65	S3G1 Delta Timing at 2.2 ms
22:36:44	48081	2782	65	S3G1 Delta Timing at -2.3 ms
00:00	48248	2949	65	midnight
00:37:43	48322	3023	65	S3G1 Delta Timing at 2.4 ms
02:45:07	48589	3290	65	EOL MGL1701MC20A - S1G5,S2G1,S3G5,S4G4 spares - Total volume = 6420 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	66	68
SP #	995	3769

Line	MGL1701MC30
Sequence	025
Direction	273.7

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	995	3769
Date MM/DD/YY	1/29/17	1/30/17
Time UTC	7:57	02:48
Volume (cu in.)	6420in3	6420in3
Wind (kts)	SSE4.3kts	SW16kts
Sea State (m)	1m	2m
Water Depth (m)	155.2m	3932m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
07:57:58	48590	995	66	SOL MGL1701MC30 - S1G5,S2G1,S3G5,S4G4 spares - Total volume = 6420 in3
07:58:16	48591	996	66	Delta Timing S1G2 -2.8 ms, S3G4 -2.6 ms
08:24:14	48659	1064	66	Delta Timing S3G1 2.1 ms
08:56:30	48739	1144	66	S3G1 Delta Timing at 2.7 ms
09:00:11	48748	1153	66	S3G1 Delta Timing at 2.2 ms
09:07:33	48766	1171	66	S3G1 Delta Timing at 2.3 ms
09:54:07	48884	1289	66	S4G5 no fire, reported volume 6240 in3
09:54:30	48885	1290	66	S4G5 bad fire pulse, delta timing reported at 11.6 ms, reported volume 6420 in3
09:54:52	48886	1291	66	S4G5 bad fire pulse, reported volume 6240 in3
09:55:21	48887	1292	66	S4G5 disabled, volume = 6240 in3
09:56:01	48889	1294	66	S3G5 swapped in, volume = 6420 in3, S3G5 Delta Timing at 4.9 ms
09:56:24	48890	1295	66	S3G5 Delta Timing at -4.0 ms
10:28:25	48974	1379	66	S3G1 Delta Timing at 2.2 ms
11:32:52	49147	1552	66	S3G1 Delta Timing at -2.1 ms
13:38:58	49484	1888	66	Power down for dolphins, last SP at full volume 6420 in3
		1889		missed SP while powering down
13:39:44	49484	1890	66	mitigation gun
		1908, 1909		missed SP while powering up
13:47:18	49502	1910	66	first SP at full volume 6420 in3
14:46:11	49652	2060	66	S3G1 Delta Timing at 2.5 ms
15:01:04	49689	2097	66	EOT #66
15:01:29	49690	2098	67	BOT #67
15:05:03	49699	2107	67	S3G1 Delta Timing at 2.5 ms
15:46:51	49799	2207	67	S3G1 Delta Timing at -2.1 ms
16:09:14	49850	2258	67	S3G1 Delta Timing at -2.8 ms
17:13:02	49999	2407	67	S3G1 Delta Timing at 2.2 ms
19:08:58	50268	2676	67	S3G1 Delta Timing at -2.1 ms
19:27:22	50310	2718	67	S3G1 Delta Timing at -2.1 ms
19:28:15	50312	2720	67	S3G1 Delta Timing at 2.3 ms
19:38:54	50337	2745	67	S3G1 Delta Timing at -2.2 ms
20:24:52	50444	2852	67	S3G1 Delta Timing at 2.1 ms
20:28:40	50453	2861	67	S3G1 Delta Timing at -2.5 ms
20:46:45	50495	2903	67	S3G1 Delta Timing at -2.4 ms
20:47:31	50497	2905	67	S3G1 Delta Timing at 2.2 ms
21:26:45	50589	2997	67	EOT #67
21:27:09	50590	2998	68	BOT #68
00:00	50955	3363	68	midnight
02:48:56	51361	3769	68	EOL MGL1701MC30 - S1G5,S2G1,S4G4,S4G5 spares - Total volume = 6420 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	69	71
SP #	975	3599

Line	MGL1701MC28
Sequence	026
Direction	96.8

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	975	3526
Date MM/DD/YY	1/30/17	1/31/17
Time UTC	6:13	00:39
Volume (cu in.)	6240in3	6240in3
Wind (kts)	SW15.5kts	S13kts
Sea State (m)	3m	2m
Water Depth (m)	4050.0m	142m

Cable	Dead Channels
1	
2	
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
Heavy swell noise throughout
Periods of streamer instability due to the swell.
streamer depth changed several times to limit influence of swell
The end of the line was at SP3599 - while using the mitigation gun because of whales
The last good Shot point was SP 3526 at 00:39, 01/30 before switching to the mitigation gun

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
06:13:03	51362	975	69	SOL MGL1701MC28 - S1G5,S2G1,S2G5, S3G5,S4G5 spares - Total volume = 6240 in3
06:13:25	51363	976	69	S1G2 Delta Timing at -2.9 ms
09:39:11	51825	1438	69	S2G9 Delta Timing at 6.8 ms
09:39:37	51826	1439	69	S2G9 Delta Timing at -4.6 ms
10:05:37	51887	1500	69	Streamer instability due to rough weather. Birds set to 12m depth to pull back to correct depth.
10:17:49	51917	1530	69	S4G4 Delta Timing at 2.6 ms
10:25:57	51937	1550	69	streamer stabilized under control, bringing depths to 11m
10:43:45	51982	1595	69	S4G4 Delta Timing at -2.2 ms
10:45				bird depths set to 10.5m
12:39:43	52267	1880	69	Streamer instability due to rough weather. Birds set to 12m.
13:19:25	52362	1975	70	Start of tape #70
14:04:12	52467	2080	70	streamer stabilized, depth now set to 13m
20:23	53303	2916	70	Birds depth set to 12m
20:49:27	53361	2974	70	EOT # 70
20:49:54	53362	2975	71	BOT #71
23:20:58	53709	3322	71	power down for whale - last SP at full volume SP 3322
23:58		3420	71	missed SP 3420 while restoring volume
23:58:53	53807	3421	71	resume full volume - first SP at full volume (6240 in3) SP 3421
00:00:05	53810	3424	71	midnight
00:39:04	53912	3526	71	power down for whale - last SP at 6240in3: SP 3526 - last good SP for line MGL1701MC28
01:06	53985	3599	71	EOL MGL1701MC28 - only mitigation gun S1G3 on - Total volume = 40 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	72	73
SP #	3201	5018

Line	MGL1701MC20B
Sequence	027
Direction	189.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	3201	5018
Date MM/DD/YY	01/31/17	1/31/17
Time UTC	10:19	23:27
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S15.9kts	S23kts
Sea State (m)	2.5m	2m
Water Depth (m)	161.0m	1127m

Cable	Dead Channels
1	
2	
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 throughout
Periods of minor streamer instability due to the swell and to fresh water currents

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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	74	79
SP #	1009	6559

Line	MGL1701MC21
Sequence	028
Direction	183.6

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1009	6559
Date MM/DD/YY	01/31/17	02/02/17
Time UTC	23:30	15:31
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S24kts	NNE22kts
Sea State (m)	2m	1m
Water Depth (m)	1127m	146m

Cable	Dead Channels
1	
2	
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
noise from swell at start
Periods of minor streamer instability at the beginning due to the swell and to fresh water currents
Ship noise visible on real time display from apx SP5000-5075. Ship is still passing from behind on stbd at SP5075, low amplitude noise may be present after SP5075. Passing vessel adjacent to head at apx SP 5190.
Moving to port ~SP 5186 for island, associated turn noise moving head to tail, very low amplitude after bend passes mid streamer (~SP5400)
Begin turning back to stbd ~SP 5563, associated turn noise moving head to tail, v. low amp. after bend passes 2/3rds of streamer (~SP5900)
Between SP 5888-5917, 5983-6040, 6053-6054, 6154-6155, 6211-6212, 6224-6225, 6224-6236 unidentified noise from abeam, not in every shot
Ship noise from astern apx SP 6400 -

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
23:30	55804	1009	74	SOL MGL1701MC21 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
06:49:46	56804	2009	75	Start of tape #75
12:14:55	57523	2728	75	S3G7 "Comm Error"
12:35:15	57566	2771	75	Power down for pinniped, last SP at full volume 6600 in3
		2772		Missed SP 2772 while powering down
12:36:10	57567	2773	75	mitigation gun
12:52:19	57601	2807	75	Powered up, first SP back to full volume 6600 in3. Delta Timing S4G4 2.4 ms
13:41:01	57706	2912	75	Power down for pinniped, last SP at full volume 6600 in3
13:50				Partially recovering gun strings 3 and 4 to remove fishing gear
13:56:16	57739	2945	75	Power up, half volume 3300 in3, 18 guns
13:58				Gun strings 3 and 4 back in place
13:59:53	57747	2953	75	Powered up, first SP back to full volume 6600 in3.
14:17:50	57787	2993	75	S4G4 Delta Timing at 2.4 ms
14:25:06	57803	3009	75	EOT #75
14:25:33	57804	3010	76	BOT #76
17:20:34	58201	3407	76	power down for whale; last SP at full volume: SP 3407
17:20		3408	76	missed shot point 3408 while powering down
17:43		3463	76	missed shot point 3462 while restoring volume
17:43:42	58255	3463	76	back to full volume (6600in3) - first good SP: 3463
21:29:18	58803	4011	76	EOT #76
21:29:45	58804	4012	77	BOT #77
04:50:19	59803	5011	77	EOT #77
04:50:43	59804	5012	78	BOT #78
05:31:00	59907	5115	78	S4G4 Delta Timing at 2.4 ms
05:42:54	59937	5145	78	S4G4 Delta Timing at -2.2 ms
05:58	59978	5186	78	Begin moving to port for passing island
06:09:16	60007	5215	78	S4G4 Delta Timing at -2.1 ms
06:40:39	60079	5287	78	S4G4 Delta Timing at -2.3 ms
07:04:03	60131	5339	78	S4G4 Delta Timing at -2.5 ms
07:27:09	60181	5389	78	S4G4 Delta Timing at 2.1 ms
08:53	60355	5563	78	Begin moving to stbd
10:36:23	60571	5779	78	S4G4 Delta Timing at -2.1 ms
10:38:27	60576	5784	78	S4G4 Delta Timing at -2.2 ms
10:40:05	60580	5788	78	S4G4 Delta Timing at -2.1 ms
10:41:19	60583	5791	78	S4G4 Delta Timing at -2.3 ms
10:56:02	60619	5827	78	power down for pinniped; last SP at full volume: SP 5827
10:56		5829		missed shot point 5828 while powering down
10:56:52	60620	5829	78	mitigation gun
11:11:21	60654	5863	78	back to full volume (6600in3) - first good SP: 5863
11:14:59	60663	5872	78	S4G4 Delta Timing at -2.3 ms
11:25:30	60688	5897	78	S4G4 Delta Timing at 2.1 ms
	60691-60711	5900-5920	78	Between SP 5888-5917 unidentified noise from abeam, not in every shot
11:33:19	60707	5916	78	S4G4 Delta Timing at 2.1 ms
11:37:25	60717	5926	78	S4G4 Delta Timing at -2.2 ms
11:43:04	60731	5940	78	S4G4 Delta Timing at 2.1 ms
11:49:30	60747	5956	78	S4G4 Delta Timing at -2.5 ms
11:51:06	60751	5960	78	S4G4 Delta Timing at -2.1 ms
11:51:54	60753	5962	78	S4G4 Delta Timing at 2.2 ms
11:52:43	60755	5964	78	Swapped out S4G4, swapped in S3G5. Volume = 6600 in3. S3G5 Delta Timing at 7.8 ms
11:53:07	60756	5965	78	S3G5 Delta Timing at -5.1 ms
	60774-60831	5983-6040	78	Between SP 5983-6040 unidentified noise from abeam, not in every shot
12:11:33	60803	6012	78	EOT #78
12:11:56	60804	6013	79	BOT #79
	60844-60845	6053-6054	79	Between SP 6053-6054 unidentified noise from abeam
	60945-60946	6154-6155	79	Between SP 6154-6155 unidentified noise from abeam
	61002-61003	6211-6212	79	Between SP 6211-6212 unidentified noise from abeam tail
	61015-61027	6224-6236	79	Between SP 6224-6236 unidentified noise from abeam tail, not in every shot
14:32	61176	6385	79	Start of ship noise from astern apx SP 6385
15:31:26	61350	6559	79	EOL MGL1701MC21 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	80	82
SP #	961	3592

Line	MGL1701MC22
Sequence	029
Direction	269.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	961	3592
Date MM/DD/YY	02/02/17	02/03/17
Time UTC	17:10	10:52
Volume (cu in.)	6600in3	6600in3
Wind (kts)	N26kts	S17.1kts
Sea State (m)	1m	2m
Water Depth (m)	110m	3412.5m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
17:10:35	61351	961	80	SOL MGL1701MC22 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3
17:26:31	61391	1001	80	spectra reference SP
00:00	62289	1899	80	midnight
00:22:35	62350	1960	80	EOT #80
00:22:57	62351	1961	81	BOT #81
06:37:03	63350	2960	81	EOT #81
06:37:27	63351	2961	82	BOT #82
10:52:13	63982	3592	82	EOL MGL1701MC22 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	83	85
SP #	1291	3500

Line	MGL1701MC23
Sequence	030
Direction	9.6

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1291	3500
Date MM/DD/YY	02/03/17	02/04/17
Time UTC	12:17	03:32
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S5.0kts	S18kts
Sea State (m)	2m	2m
Water Depth (m)	3444.7m	3719.9m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
12:47:38	63983	1291	83	SOL MGL1701MC23 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3
19:10:21	64982	2290	83	EOT #83
19:10:45	64983	2291	84	BOT #84
00:00:12	65693	3001	84	midnight
02:01:01	65982	3290	84	EOT #84
02:01:27	65983	3291	85	BOT #85
03:32:45	66192	3500	85	EOL MGL1701MC23 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	86	88
SP #	963	3360

Line	MGL1701MC26
Sequence	031
Direction	81.4

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	963	3360
Date MM/DD/YY	02/04/17	02/04/17
Time UTC	6:07	22:02
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S16kts	SW10kts
Sea State (m)	4m	1.5m
Water Depth (m)	3728.8m	67m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
06:07:50	66193	963	86	SOL MGL1701MC26 - S1G5,S2G5, S4G4,S4G5 spares - Total volume = 6600 in3
06:07:50	66193	963	86	Delta Timing S1G2 2.7 ms, S3G4 2.3 ms, S4G2 2.2 ms
06:07:50	66193	963	86	majority of streamer on surface at start due to instability because weather
06:08:16	66194	964	86	S1G2 Delta Timing -2.1 ms
07:28		~1150	86	front 1/3 of streamer off surface and deep
07:44		~1190	86	front 1/2 of streamer off surface and deep
08:02		~1235	86	front 2/3 of streamer off surface and deep
08:10		~1255	86	front 3/4 of streamer off surface and deep
08:25		1294	86	majority of streamer off surface and >16m depth, birds set for 16m depth
~08:47		~1351	86	streamer mostly at ~16m depth
09:18		~1430	86	birds set to 14m depth
12:54:42	67192	1962	86	EOT #86
12:55:06	67193	1963	87	BOT #87
16:11:14	67694	2464	87	power down for whale; last SP at 6600in3: SP 2464
16:50		2560	87	SP 2560 missed while restoring volume
16:50:26	67790	2561	87	back at full volume 6600in3; first SP: 2561
19:29:28	68192	2963	87	EOT #87
19:29:51	68193	2964	88	BOT #88
22:02:26	68589	3360	88	EOL MGL1701MC26 - S1G5, S2G5, S4G4, S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	89	89
SP #	1379	1751

Line	MGL1701MC42
Sequence	032
Direction	5.6

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1379	1751
Date MM/DD/YY	02/05/17	02/05/17
Time UTC	0:18	02:42
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S11kts	S11kts
Sea State (m)	1m	1m
Water Depth (m)	84m	87m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	90	92
SP #	983	3488

Line	MGL1701MC41
Sequence	033
Direction	269.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	983	3488
Date MM/DD/YY	02/05/17	02/05/17
Time UTC	4:04	20:43:04
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S11.1kts	S15kts
Sea State (m)	1.5m	1m
Water Depth (m)	142.8m	3787m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable SP	FFSP - 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
04:04:17	68963	983	90	SOL MGL1701MC41 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
	68963	983	90	12m streamer depth
	68963	983	90	Delta Timing S1G2 2.9 ms, S4G4 2.1 ms
04:04:40	68964	984	90	Delta Timing S4G4 -2.4 ms
04:47:21	69068	1088	90	Begin moving streamer up to 11m
08:50		~1680	90	Pulling streamer in slightly to move soft tow higher - in preparation for shallow spot
08:56		~1697	90	Streamer in position on higher soft tow, changes inline offset
10:54:27	69962	1982	90	EOT #90
10:54:51	69963	1983	91	BOT #91
17:20:25	70962	2982	91	EOT #91
17:20:49	70963	2983	92	BOT #92
20:43:04	71468	3488	92	EOL MGL1701MC41 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	93	94
SP #	1115	2202

Line	MGL1701MC43
Sequence	034
Direction	105.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1115	2202
Date MM/DD/YY	02/05/17	02/06/17
Time UTC	23:17	06:14
Volume (cu in.)	6600in3	6600in3
Wind (kts)	NW13kts	SSW18.2kts
Sea State (m)	1m	2m
Water Depth (m)	3789m	1327.1m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	95	98
SP #	923	4909

Line	MGL1701MC27
Sequence	035
Direction	9.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	923	4909
Date MM/DD/YY	02/06/17	02/07/17
Time UTC	7:58	9:28
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSW16kts	S16.4kts
Sea State (m)	1.5m	3.5m
Water Depth (m)	1527.7m	1397.8m

Cable	Dead Channels
1	
2	
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 at start
streamer set to various depths during line
increase in swell noise ~midway through line

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
7:58:24	72557	923	95	SOL MGL1701MC27 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
	72557	923	95	Delta Timing S1G2 3.0 ms, S4G4 3.1 ms
7:58:47	72558	924	95	S4G4 Delta Timing at -2.9 ms
10:03:53	72870	1236	95	S4G4 Delta Timing at 2.3 ms
11:01:11	73017	1383	95	S1G7 "Comm Error"
13:24:36	73373	1739	95	S4G1 Delta Timing at -2.1 ms
13:30:27	73388	1754	95	S4G1 Delta Timing at 2.3 ms
14:37:28	73556	1922	95	EOT #95
14:37:52	73557	1923	96	BOT #96
21:19:23	74556	2922	96	EOT #96
21:19:45	74557	2923	97	BOT #97
~00:10		~3380		large swell brought birds 8-17 to less than 9 m
~00:30		~3440		birds depth set to 12 m
03:23:07	75556	3922	97	EOT #97
03:23:28	75557	3923	98	BOT #98
04:08:12	75685	4051	98	S4G4 Delta Timing at 2.4 ms
05:15:04	75876	4241	98	S4G4 Delta Timing at 2.1 ms
09:28:34	76543	4909	98	EOL MGL1701MC27 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	99	105
SP #	1006	7472

Line	MGL1701MC31
Sequence	036
Direction	6.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1006	7472
Date MM/DD/YY	02/07/17	02/09/17
Time UTC	9:30	03:30
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S16.4kts	S10kts
Sea State (m)	3.5m	2m
Water Depth (m)	1399.0m	1864.0m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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	Type	Description
09:30:28	76544	1006	99	SGR_MCL1701MC11 - SIGS,S2GS,S3GS,S4GS squares - Total volume = 6600 m3
09:30:28	76544	1006	99	12m streamer depth
-9:36		-1020		streamer instability from SP -1020 to SP -1155 due to swell, at times 1-2 birds on surface, affecting from 1.4 to 1.3 of streamer, surrounding birds set down due to bird -281
00:17:57	76662	1124	99	S4G4 Delta Timing at 2.1 ms
-10:20	76693	1145	99	from half of streamer at -14m for stability
-10:56	76758	1220	99	bottom returns from half of streamer set to 13m
-11:43	76878	1340	99	bird 23 to tail set to 12m, remainder set at 13m
12:03	76930	1392	99	bird 20 to tail set to 12m, remainder set at 13m
12:54	77009	1471	99	birds 1,7 and birds 20 to tail set to 12m, remainder set at 13m
13:08	77098	1560	99	bird 20 to tail set to 12m, remainder set at 13m
-13:21	77138	1600	99	from half of streamer losing stability, various depths (both shallow and deep) but not on surface
-14:01	77238	1700	99	stabilized, birds 1-32 set at -13.14m for stability, remainder at 12m
14:21	77290	1752	99	birds 1-19 set at -13.14m for stability, remainder at 12m
14:40	77342	1804	99	all birds set to 14m
15:33:45	77543	2005	99	EOT #99
15:54:06	77544	2006	100	BOF #100
17:15:18	77715	2217	100	SG2 Delta Timing at 2.3 ms
-21:45	78488	-2950	100	from 1/3 of streamer below 15m - mouth back @ 14m -22:45
22:04:11	78543	3005	100	EOT #100
22:04:34	78544	3006	101	BOF #101
01:33:40:39	79101-79117	3563-3579	101	SG2 no fire error (gun was firing)
02:27:58	79256	3738	101	SG2 Delta Timing at 2.2 ms
02:29:05	79279	3741	101	SG2 Delta Timing at 2.1 ms
02:54:06	79311	3772	101	SG2 Delta Timing at 2.3 ms
03:10:29	79364	3826	101	SG2 Delta Timing at 2.1 ms
03:29:34	79417	3879	101	SG2 Delta Timing at 2.3 ms
03:44:49	79458	3920	101	SG2 Delta Timing at 2.1 ms
03:45:12	79459	3921	101	SG2 Delta Timing at 2.4 ms
04:06:49	79518	3980	101	SG2 Delta Timing at 2.5 ms
04:07:55	79521	3983	101	SG2 Delta Timing at 2.6 ms
04:16:13	79543	4005	101	EOT #101
04:16:24	79544	4006	102	BOF #102
04:17:49	79548	4010	102	SG2 Delta Timing at 2.2 ms
04:19:17	79552	4014	102	SG2 Delta Timing at 2.2 ms
04:29:10	79579	4141	102	SG2 Delta Timing at 2.1 ms
04:32:36	79588	4090	102	SG2 Delta Timing at 2.1 ms
04:33:00	79595	4057	102	SG2 Delta Timing at 2.1 ms
-05:11	79602	4114	102	from 1/3 bottom stability, mouth back @ 14m -5:25
05:19:41	79715	4177	102	SG2 no fire error (gun fired)
05:28:25	79738	4200	102	SG2 no fire error (gun fired)
05:29:19	79739	4201	102	SG2 no fire error (gun fired)
05:29:22	79740	4202	102	SG2 no fire error (gun fired)
05:32:35	79749	4211	102	SG2 Delta Timing at 2.4 ms
05:32:58	79750	4212	102	SG2 Delta Timing at 2.3 ms
05:33:34	79751	4213	102	SG2 swapped in, SG2S swapped in, New volume 6420 m3, SG2S Delta Timing 5.4 ms
05:39:27	79767	4229	102	SG2 Delta Timing at 2.2 ms
05:40		-4230	102	very occasional unidentified noise from stream, coming in pulses, SP +4230 to -4414
05:42:50	79789	4251	102	SG2 Delta Timing at 2.1 ms
06:23:17	79975	4417	102	Double gun string 2 db lock and occasional underfire but no up at 6420 cubic inches
06:37:39	79976	4438	102	Prima string 1, 3, and 4 (4950 cubic inches firing 27 guns)
06:49			102	Recovering gun string 2
07:11			102	Gun string 2 collapsed
07:31			102	Deploying gun string 2
07:41			102	gun string 2 fully deployed
07:42:12	80097	4559	102	last shot point at 4950 cubic inches
07:42:36	80098	4560	102	first shot point at 6600 cubic inches
10:36:22	80543	5005	102	EOT #102
10:36:47	80544	5006	102	BOF #103
14:43:20	81059	5491	103	unidentified noise coming from behind streamer seen on far traces, single occurrence
14:43:49	81097	5559	103	Power down for pumped, last SP at full volume 6600 m3
14:43:15	81098	5560	103	mitigation run
14:50		5579	103	missed SP 5579 while powering up
14:50:56	81117	5580	103	first SP at full volume 6600 m3
16:00:53	81282	5745	103	Power down for pumped, last SP at full volume 6600 m3, SP 5745
16:02:05	81285	5748	103	shot down - last shot with mitigation run, SP 5748
16:02:16:04		5749-5753	103	missed SP 5749-5753 while shot down
16:04:28	81286	5754	103	first shot after recovery, mitigation run
16:06		5758	103	missed SP 5758 while powering up
16:06:28	81290	5759	103	first shot back to full volume 6600m3 - SP 5759
16:23:11	81335	5843	103	power down for pumped - last SP at full volume SP 5804
16:24		5805	103	missed SP 5805 while powering down
16:39		5843	103	missed SP 5843 while powering up
16:40:27	81373	5844	103	first shot back to full volume 6600m3 - SP 5844
17:45:54	81543	6014	103	EOT #103
17:46:16	81544	6015	104	BOF #104
17:48:30	81550	6021	104	power down for pumped - last SP at full volume SP 6021
17:48		6024	104	missed SP 6024 while powering down
17:57		6044	104	missed SP 6044 while powering up
17:57:28	81572	6045	104	first shot back to full volume 6600m3: SP 6045
18:30:16	81657	6130	104	power down for pumped - last SP at 6600m3: SP 6130
18:30		6131	104	missed SP 6131 while powering down
18:36		6145	104	missed SP 6145 while powering up
18:36:30	81671	6146	104	first shot back at 6600m3 SP 6146
18:54:13	81718	6193	104	power down for pumped - last SP at 6600m3: SP 6193
18:59:02	81721	6206	104	first shot back at 6600m3 SP 6206
19:07:15	81753	6238	104	power down for pumped - last SP at 6600m3: SP 6238
19:07		6239	104	missed SP 6239 while powering down
19:09		6244	104	missed SP 6244 while powering up
19:09:52	81758	6235	104	first shot back at 6600m3 SP 6235
19:16:23	81775	6252	104	power down for pumped - last SP at 6600m3: SP 6252
19:16		6253	104	missed SP 6253 while powering down
19:18		6258	104	missed SP 6258 while powering up
19:19:05	81780	6259	104	first shot back at 6600m3: SP 6259
19:20:24	81785	6262	104	power down for pumped - last SP at 6600m3: SP 6262
19:20		6263	104	missed SP 6263 while powering down
19:34		6300	104	missed SP 6300 while restoring volume
19:35:18	81820	6301	104	first shot back at 6600m3 SP 6301
20:08:13	81906	6387	104	power down for pumped - last SP at 6600m3: SP 6387
20:08		6388	104	missed SP 6388 while powering down
20:12:25	81916	6398	104	first shot back at 6600m3: SP 6398
20:26:02	81950	6432	104	power down for pumped - last SP at 6600m3: SP 6432
20:26		6433	104	missed SP 6433 while powering down
21:02		6527	104	missed SP 6527 while powering up
21:02:59	82044	6528	104	first shot back at 6600m3: SP 6528
21:16:22	82232	6716	104	power down for pumped - last SP at 6600m3: SP 6716
21:16		6717	104	missed SP 6717 while powering down
21:33		6759	104	missed SP 6759 while powering up
21:34:17	82274	6760	104	first shot back at 6600m3: SP 6760
21:39:26	82434	6970	104	power down for pumped - last SP at 6600m3: SP 6920
21:44:13	82445	6931	104	shot down - last shot with mitigation run, SP 6931
21:44:23:49		6932-6943	104	missed shots 6932-6943 while shot down
21:49:41	82446	6944	104	first shot back on mitigation run SP 6944
00:04:28	82481	6979	104	first shot back at 6600m3: SP 6979
00:21:17	82521	7019	104	power down for dolphins - last SP at 6600m3: SP 7019
00:21		7020	104	missed SP 7020 while powering down
00:25		7029	104	missed SP 7029 while powering up
00:25:56	82530	7030	104	first shot back at 6600m3: SP 7030
00:31:47	82543	7043	104	EOT #104
00:32:12	82544	7044	105	BOF #105
03:30:00	82972	7472	105	EOB_MCL1701MC11 - SIGS,S2GS,S3GS,S4GS squares - Total volume = 6600 m3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	106	110
SP #	1003	5021

Line	MGL1701MC32
Sequence	037
Direction	354.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1003	5021
Date MM/DD/YY	02/09/17	2/10/17
Time UTC	3:32	04:20
Volume (cu in.)	6600in3	4950in3
Wind (kts)	S10kts	S 21kts
Sea State (m)	2m	4m
Water Depth (m)	1347.3m	4771.4m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
03:32:49	82973	1003	106	SOL MGL1701MC32 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
	82973	1003	106	streamer at 14m
05:46:22	83306	1336	106	S3G1 Delta Timing at 2.1 ms
06:51:33	83480	1510	106	SP 1510-1512, unidentified noise coming from behind streamer seen on far traces, single occurrence
10:02:57	83972	2002	106	EOT #106
10:03:21	83973	2003	107	BOT #107
11:13:46	84162	2192	107	unidentified noise initially from abeam, moving to behind the tail, coming in pulses, not in every shot, becoming very sparse and lower in amplitude, SP2192-2468
11:43:14	84241	2271	107	Power down for pinniped, last SP at full volume 6600 in3
		2272		missed SP 2272 while powering down
11:43:59	84242	2273	107	mitigation gun
				missed SP 2320 while powering up
12:01:37	82489	2321	107	First shot back at full volume 6600 in3, S1G2 Delta Timing 2.2 ms
15:53-16:26	2959-3048	2959-3048	107	S2G1 no fire errors - guns was actually firing but with an air leak. Apparent vol = 6240in3
16:10:35	84972	3004	107	EOT #107
16:10:56	84973	3005	108	BOT #108
16:27:04	85017	3049	108	S2G5 swapped in for S2G1 - volume = 6420in3
17:04:22	85119	3151	108	S3G1 Delta Timing at 2.1 ms
17:37:05	85210	3242	108	S3G1 Delta Timing at 2.1 ms
18:59:57	85447	3479	108	S3G1 Delta Timing at -2.1 ms
19:14:55	85490	3522	108	S3G1 Delta Timing at 2.1 ms
19:47:15	85582	3614	108	S3G1 Delta Timing at 2.2 ms
21:25:21	85861	3893	108	S3G1 Delta Timing at 2.4 ms
22:04:17	85972	4004	108	EOT #108
22:04:38	85973	4005	109	BOT #109
22:20:00	86016	4048	109	S2G9 Delta Timing at 2.3 ms
22:54:55	86116	4148	109	S3G1 Delta Timing at 2.1 ms
00:08:59	86329	4361	109	S3G1 Delta Timing at 2.1 ms
02:49:08	86764	4796	109	S3G1 Delta Timing at -2.1 ms
03:01:01	86794	4826	109	S3G1 Delta Timing at 3.0 ms
03:28:24	86862	4894	109	S3G1 Delta Timing at -2.2 ms
03:32:09	86871	4903	109	S3G1 Delta Timing at 2.1 ms
03:56:30	86930	4962	109	Last shot at 6420 in3, spared out string 2 for recovery
03:56:55	86931	4963	109	Firing strings 1, 3, and 4 only: 4950 in3
04:02				Begin recovery gun string 2
04:13:40	86972	5004	109	EOT #109

04:14:03	86973	5005	110	BOT #110
04:14				Gun string 2 onboard
04:20:31	86989	5021	110	EOL MGL1701MC32 - Total volume = 4950 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	111	113
SP #	990	3481

Line	MGL1701MC33
Sequence	038
Direction	104.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	990	3481
Date MM/DD/YY	2/10/17	02/10/17
Time UTC	6:52	23:49
Volume (cu in.)	6600in3	6420in3
Wind (kts)	S25kts	SW19kts
Sea State (m)	4m	2m
Water Depth (m)	4935.7m	93m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
06:52:15	86990	990	111	SOL MGL1701MC33 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
06:57:29	87001	1001	111	started trying to move streamer to 14m
07:33:13	87084	1084	111	S3G1 Delta Timing at 2.1 ms
09:09:40	87317	1317	111	S3G1 Delta Timing at -2.4 ms
09:23:00	87350	1350	111	S3G1 Delta Timing at -2.4 ms
09:33:52	87377	1377	111	S3G1 Delta Timing at 2.4 ms
10:42:00	87551-87562	1551-1562	111	No fire S4G2, Total volume fired 6240 cubic inches
10:46:46	87563	1563	111	S4G5 enabled, Total volume fired 6420 cubic inches
11:00:03	87597	1597	111	S3G1 Delta Timing at -2.2 ms
11:00:51	87599	1599	111	S3G1 Delta Timing at 3.1 ms
11:17:14	87641	1641	111	S3G1 Delta Timing at 2.2 ms
12:33:30	87840	1840	111	S3G1 Delta Timing at 3.0 ms
12:36:35	87848	1848	111	S3G1 Delta Timing at 2.3 ms
12:47:21	87876	1876	111	S3G1 Delta Timing at 2.1 ms
13:13:37	87942	1942	111	S3G1 Delta Timing at 2.9 ms
13:31:34	87989	1989	111	EOT #111
13:31:56	87990	1990	112	BOT #112
13:45:05	88024	2024	112	S3G1 Delta Timing at -2.4 ms
13:47:03	88029	2029	112	S3G1 Delta Timing at 2.7 ms
14:00:02	88062	2062	112	S3G1 Delta Timing at 2.2 ms
14:07:25	88081	2081	112	S3G1 Delta Timing at 2.9 ms
14:07:49	88082	2082	112	S3G1 Delta Timing at -2.1 ms
14:10:14	88088	2088	112	S3G1 Delta Timing at 2.8 ms
15:14:12	88247	2247	112	S3G1 Delta Timing at 2.4 ms
15:36:09	88309	2309	112	S3G1 Delta Timing at 2.2 ms
15:45:50	88334	2334	112	S3G1 Delta Timing at -2.2 ms
15:51:58	88350	2350	112	S3G1 Delta Timing at 2.3 ms
16:00:18	88372	2372	112	S3G1 Delta Timing at 2.1 ms
16:00:41	88373	2373	112	S3G1 Delta Timing at -2.4 ms
16:08:22	88393	2393	112	S3G1 Delta Timing at -2.4 ms
16:08:45	88394	2394	112	S3G1 Delta Timing at 2.4 ms
16:09:08	88395	2395	112	S3G1 Delta Timing at -2.3 ms
16:13:45	88407	2407	112	S3G1 Delta Timing at -2.2 ms
16:15:16	88411	2411	112	S3G1 Delta Timing at 2.8 ms
16:17:57	88418	2418	112	S3G1 Delta Timing at 2.1 ms
17:47:05	88642	2642	112	S3G1 Delta Timing at -2.3 ms

18:21:20	88724	2724	112	S3G1 Delta Timing at 2.3 ms
18:59:02	88812	2812	112	S3G1 Delta Timing at 2.1 ms
19:14:30	88847	2847	112	S3G1 Delta Timing at -2.1 ms
19:33:39	88891	2891	112	S3G1 Delta Timing at 2.3 ms
20:15:54	88989	2989	112	EOT #112
20:16:20	88990	2990	113	BOT #113
20:35:03	89032	3032	113	S3G1 Delta Timing at -2.1 ms
20:44:24	89053	3053	113	S3G1 Delta Timing at 2.7 ms
20:59:12	89086	3086	113	S3G1 Delta Timing at 2.2 ms
21:09:22	89109	3109	113	S3G1 Delta Timing at 3.3 ms
21:24:13	89143	3143	113	S3G1 Delta Timing at 2.4 ms
21:48:34	89199	3199	113	S3G1 Delta Timing at -2.4 ms
22:10:13	89249	3249	113	S3G1 Delta Timing at -2.2 ms
23:49:08	89481	3481	113	EOL MGL1701MC33 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6420 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	114	116
SP #	1248	3581

Line	MGL1701MC35
Sequence	039
Direction	283.5

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	12.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1248	3581
Date MM/DD/YY	02/11/17	02/11/17
Time UTC	4:45	20:09
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SSW 27kts	SSW17kts
Sea State (m)	2m	1m
Water Depth (m)	114.2m	4779m

Cable	Dead Channels
1	
2	
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
Offset to line at SOL due to having to change heading for gun deployment, steering back towards line
At SP ~1330 back to line
Ship noise from behind tail, SP ~1820 to ~1910
streamer depth set to 12m for the entire line

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
04:45:46	89482	1248	114	SOL MGL1701MC35 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
04:47:22	89487	1253	114	S3G1 Delta Timing at 2.5 ms
05:24:59	89587	1353	114	S3G1 Delta Timing at 2.2 ms
05:30:29	89602	1368	114	S3G1 Delta Timing at 2.1 ms
05:57:43	89673	1439	114	S3G1 Delta Timing at 2.2 ms
06:06:42	89696	1462	114	S3G1 Delta Timing at 3.2 ms
06:45:44	89794	1560	114	S3G1 Delta Timing at 2.2 ms
06:56:59	89824	1590	114	S3G1 Delta Timing at -2.2 ms
07:25:00	89897	1663	114	S3G1 Delta Timing at 2.3 ms
07:25:48	89899	1665	114	S3G1 Delta Timing at 2.1 ms
07:26:12	89900	1666	114	S3G1 Delta Timing at -2.3 ms
07:33:01	89918	1684	114	S3G1 Delta Timing at 2.2 ms
07:33:24	89919	1685	114	S3G1 Delta Timing at -2.2 ms
07:48:06	89958	1724	114	S3G1 Delta Timing at 2.2 ms
07:52:21	89969	1735	114	S3G1 Delta Timing at 2.5 ms
08:03:20	89997	1763	114	S3G1 Delta Timing at 2.1 ms
08:11:15	90017	1783	114	S3G1 Delta Timing at 2.3 ms
~8:26	90054	1820	114	Ship noise from behind tail, SP ~1820 to ~1910
08:44:30	90099	1865	114	S3G1 Delta Timing at 2.4 ms
08:46:09	90103	1869	114	S3G1 Delta Timing at 2.2 ms
09:01:58	90142	1908	114	S3G1 Delta Timing at -2.2 ms
09:29:57	90212	1978	114	S3G1 Delta Timing at 2.2 ms
10:15:31	90327	2093	114	S3G1 Delta Timing at 2.7 ms
11:17:26	90481	2247	114	EOT #114
11:17:50	90482	2248	115	BOT #115
12:26:05	90649	2415	115	S2G9 Delta Timing at 3.7 ms
12:26:29	90650	2516	115	S2G9 Delta Timing at -3.8 ms
12:30:22	90659	2425	115	S3G1 Delta Timing at -2.5 ms
12:30:22	90659	2425	115	Power down for pinniped, last SP at full volume 6600 in3
		2426	115	missed SP 2426 while powering down
12:31:14	90660	2427	115	mitigation gun
12:50:20	90706	2473	115	First SP back at full volume 6600 in3
13:22:40	90783	2550	115	Power down for pinniped, last SP at full volume 6600 in3
		2551	115	missed SP 2551, 2552 while powering down
13:23:56	90784	2553	115	mitigation gun
13:39:01	90821	2590	115	First SP back at full volume 6600 in3

13:49:14	90846	2615	115	Power down for pinniped, last SP at full volume 6600 in3
		2616	115	missed SP 2616 while powering down
13:50:03	90847	2617	115	mitigation gun
		2653	115	missed SP 2653 while powering up
14:05:42	90883	2654	115	First SP back at full volume 6600 in3
14:08:28	90890	2661	115	Power down for pinniped, last SP at full volume 6600 in3
		2662	115	missed SP 2662 while powering down
14:09:14	90891	2663	115	mitigation gun
14:26:09	90932	2704	115	First SP back at full volume 6600 in3
14:31:40	90946	2718	115	S3G1 Delta Timing at -2.1 ms
14:40:28	90967	2739	115	S3G1 Delta Timing at 2.2 ms
15:30:10	91089	2861	115	Power down for pinniped, last SP at full volume 6600 in3: SP 2861
15:35		2875	115	missed SP 2875 while restoring volume
15:36:10	91103	2876	115	First SP back at full volume 6600 in3 : SP 2876
16:04:09	91175	2948	115	Power down for whale last SP at full volume 6600 in3: SP 2948
16:04		2949	115	missed SP 2949 while powering down
16:36:13	91257	3031	115	First SP back at full volume 6600in3: SP 3031
17:23:21	91379	3153	115	S3G1 Delta Timing at -2.3 ms
17:40:39	91424	3198	115	S3G1 Delta Timing at -2.2 ms
18:02:34	91481	3255	115	EOT #115
18:02:57	91482	3256	116	BOT #116
19:13:12	91658	3432	116	S3G1 Delta Timing at 2.1 ms
20:09:38	91807	3581	116	EOL MGL1701MC35 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	117	120
SP #	972	4583

Line	MGL1701MC36
Sequence	040
Direction	22.2

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	972	4583
Date MM/DD/YY	02/12/17	02/13/17
Time UTC	1:38	01:35
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S20kts	SW26kts
Sea State (m)	1m	1.5m
Water Depth (m)	4936m	5138m

Cable	Dead Channels
1	
2	
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 at beginning
increase of swell noise during the line
after SP 3925, streamer depth was set to 11m because of the increasing swell; increased to 12m after SP 4342

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
01:38:47	91808	972	117	SOL MGL1701MC36 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
04:43:40	92293	1457	117	S3G1 Delta Timing at -2.1 ms
06:51:36	92596	1760	117	Comm errors on gun strings 2,3,4, reported volume fired 1650
08:20:46	92807	1971	117	EOT #117
08:21:11	92808	1972	118	BOT #118
08:36:07	92844	2008	118	S3G1 Delta Timing at -2.1 ms
11:34:07	93263	2427	118	S3G1 Delta Timing at -2.1 ms
11:40:30	93278	2442	118	Unidentified noise coming from behind tail (very small earthquake? Really, really small. Or a spacesaucer ?)
12:18:00	93370	2534	118	S3G1 Delta Timing at 2.1 ms
14:24:54	93675	2839	118	S3G1 Delta Timing at -2.2 ms
15:19:42	93807	2971	118	EOT #118
15:20:07	93808	2972	119	BOT #119
17:53:54	94200	3364	119	Power down for pinniped - last SP at full volume SP 3364
18:10		3409	119	missed SP 3409 while restoring volume
18:11:10	94245	3410	119	first shot back to 6600in3: SP 3410
18:49:12	94344	3509	119	Power down for pinniped - last SP at full volume SP 3509
18:49		3510	119	missed SP 3510 while reducing volume
19:20		3588	119	missed SP 3588 while restoring volume
19:20:31	94422	3589	119	first shot back to 6600in3: SP 3589
21:29	94758	3925	119	streamer depth to 11m
21:46:25	94807	3974	119	EOT #119
21:46:48	94808	3975	120	BOT #120
22:28:48	94920	4087	120	Power down for pinniped - last SP at full volume SP 4087
22:29		4088	120	missed SP 4088 while reducing volume
22:44		4128	120	missed SP 4128 while powering up
22:44:24	94960	4129	120	first shot back to 6600in3: SP 4129
00:04	95173	4342	120	streamer depth set to 12m
01:35:08	95414	4583	120	EOL MGL1701MC36 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	121	123
SP #	971	3514

Line	MGL1701MC37
Sequence	041
Direction	112.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	971	3514
Date MM/DD/YY	02/13/17	02/13/17
Time UTC	6:21	23:08
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S24kts	N10kts
Sea State (m)	4m	1m
Water Depth (m)	4997.1m	110m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
06:21:16	95415	971	121	SOL MGL1701MC37 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
06:21:16	95415	971	121	Delta Timing S1G4 2.1 ms, S2G4 4.2 ms, S3G4 3.2 ms, S4G4 4.6 ms
06:21:16	95415	971	121	streamer set to 12m
06:21:42	95416	972	121	Delta Timing S2G4 -2.7 ms, S3G4 -2.6 ms, S4G4 -2.7 ms
07:03:51	95513	1069	121	Delta Timing S3G1 -2.3 ms
07:34:40	95583	1139	121	S3G1 Delta Timing at -2.1 ms
09:05:25	95793	1349	121	S3G1 Delta Timing at 2.5 ms
09:21:32	95830	1386	121	S3G1 Delta Timing at -2.1 ms
09:41:18	95876	1432	121	S3G1 Delta Timing at -2.2 ms
09:57:09	95913	1469	121	S3G1 Delta Timing at -2.4 ms
09:57:59	95915	1471	121	S3G1 Delta Timing at 3.1 ms
10:14:38	95955	1511	121	S3G1 Delta Timing at 2.2 ms
10:43:30	96025	1581	121	S3G1 Delta Timing at 2.2 ms
11:12:38	96092	1648	121	Power down for whales, last SP at full volume 6600 in3
		1649	121	missed SP 1649 while powering down
11:13:33	96093	1650	121	mitigation gun
11:17:54	96103	1660	121	shut down for whales, last SP on mitigation gun
		1661	121	missed SP 1661-1670 while shut down
11:22:40	96104	1671	121	back to mitigation gun
		1701	121	missed SP while powering up
11:35:57	96134	1702	121	First SP back to full volume 6600 in3
11:41:54	96148	1716	121	Power down for whales, last SP at full volume 6600 in3
		1717	121	missed SP 1717 while powering down
11:42:46	96149	1718	121	mitigation gun
		1843	121	missed SP 1843 while powering up
12:35:23	96274	1844	121	First SP back to full volume 6600 in3. Delta Timing S4G4 2.6 ms
12:35:48	96275	1845	121	Delta Timing S3G1 -2.7 ms, S4G4 -2.1 ms
13:33:29	96414	1984	121	EOT #121
13:33:53	96415	1985	122	BOT #122
14:20:05	96530	2100	122	S3G1 Delta Timing at 2.6 ms
15:31:14	96703	2273	122	Power down for whales, last SP at full volume 6600 in3
15:31		2274	122	missed SP 2274 while powering down
15:39	96721	2292	122	streamer set to 10m - first third of streamer is below 15m
16:00		2348	122	missed SP 2348 while restoring full volume
16:01:07	96777	2349	122	first shot back at full volume 6600in3
18:37:00	97214	2786	122	S1G3 comm error

19:49:26	97414	2986	122	EOT #122
19:49:49	97415	2987	123	BOT #123
20:42:01	97554	3126	123	shut down for pinniped - last SP
20:42-20:49		3127-3144	123	missed SP 3127-3144 while shut down
20:49:16	97555	3145	123	first shot at 40in3
21:04		3186	123	missed shot 3186 while restoring volume
21:05:31	97596	3187	123	first shot back at 6600in3
23:08	97923	3514	123	EOL MGL1701MC37 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	124	125
SP #	968	2151*

Line	MGL1701MC39
Sequence	042
Direction	291.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	10.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	968	2151*
Date MM/DD/YY	02/14/17	2/14/17
Time UTC	5:55	13:34
Volume (cu in.)	6600in3	shut down
Wind (kts)	N7.1kts	N9.3kts
Sea State (m)	2m	2m
Water Depth (m)	643.8m	2880.8m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
05:55:34	97924	968	124	SOL MGL1701MC39 - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
05:55:34	97924	968	124	streamer set to 12m
05:55:34	97924	968	124	front 1/3 of streamer as deep as 20m due to instability from weather
05:55:34	97924	968	124	Delta Timing S2G4 3.1 ms, S3G4 3.3 ms, 4.0 ms
05:56:00	97925	969	124	Delta Timing S2G4 -2.3 ms, S3G4 -2.9 ms, -2.7 ms
~06:17	~97981	~1025	124	birds 13-18 as deep as 16m, rest of the streamer fairly stable
~06:24	~98001	~1045	124	streamer mostly stable at ~12m
09:02:34	98409	1453	124	S2G9 Delta Timing at 3.7 ms
09:04:31	98414	1458	124	S2G9 Delta Timing at -3.9 ms
~10:06	~98576	~1620	124	unidentified noise from abeam seen on far traces, coming in pulses, not in every shot, SP ~1620-1790
12:19:26	98923	1967	124	EOT #124
12:19:51	98924	1968	125	BOT #125
13:21:46	99075	2119	125	Power down for pinniped, last SP at full volume
13:22:12	99076	2120	125	mitigation gun in 3
13:26:01	99085	2129	125	shut down, last SP on mitigation gun 40 in3, and last recorded shot
13:34	N/A	2151	N/A	EOL MGL1701MC39, aborted due to 8 minute shut down for pinniped.
				No files for SP 2130 to 2151 due to being shut down for pinniped.

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	126	127
SP #	2280	3370

Line	MGL1701MC39A
Sequence	043
Direction	291.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	12.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	2280	3370
Date MM/DD/YY	2/14/17	2/14/17
Time UTC	14:28	21:40
Volume (cu in.)	6600in3	6600in3
Wind (kts)	N12kts	S7kts
Sea State (m)	2m	1.5m
Water Depth (m)	3431.7m	4830m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
14:28:00	99086	2280	126	SOL MGL1701MC39A - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
18:06:30	99631	2825	126	power down for pinniped - last shot at 6600in3
18:22		2867	126	missed SP 28676 while restoring volume
18:23:15	99673	2868	126	first shot at full volume 6600in3
19:20:52	99820	3015	126	power down for pinniped - last shot at 6600in3
19:31		3041,3043	126	missed shots while adjusting volume
19:52		3096	126	missed shot while restoring full volume
19:52:37	99899	3097	126	first shot at full volume 6600in3
20:30:05	99994	3192	126	power down for pinniped - last shot at 6600in3
20:32:51	100000	3199	126	shut down. Last shot with mitigation gun
20:32-20:35		3200-3204	126	missed shots 3200-3204 while shut down
20:35:12	100001	3205	126	first shot back on mitigation gun
20:51:06	100041	3245	126	first shot back at full volume 6600in3
21:08:27	100085	3289	126	EOT #126
21:08:50	100086	3290	127	BOT #127
21:40:25	100166	3370	127	EOL MGL1701MC39A - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	128	129
SP #	922	2541

Line	MGL1701MC37R
Sequence	044
Direction	112.0

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	12.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	922	2541
Date MM/DD/YY	02/15/17	2/15/17
Time UTC	4:37	14:33
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S10.2kts	NW4kts
Sea State (m)	2m	1m
Water Depth (m)	4998.1m	1734.5m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
04:37:26	100168	922	128	SOL MGL1701MC37R - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
04:37:26	100168	922	128	Delta Timing S1G2 2.9 ms, S1G4 2.9 ms, S2G4 4.2 ms, S3G4 4.4 ms, S4G4 4.2 ms
04:37:26	100168	922	128	Streamer at 12m
04:37:51	100169	923	128	Delta Timing S2G4 -2.1 ms, S3G4 -3.0 ms, S4G4 -2.4 ms
04:52:55	100207	961	128	Beginning infill, SP 961 - 1647
09:10:36	100894	1648	128	Beginning reshoot, SP 1648-1701
09:30:16	100948	1702	128	Beginning infill, SP 1702-1715
09:35:22	100962	1716	128	Beginning reshoot, SP 1716-1843
10:22:01	101090	1844	128	Beginning infill, SP 1844-2272
10:42:53	101149	1903	128	Power down for pinniped, last SP at full volume 6600 in3
		1904	128	missed SP 1904 while powering down
10:43:36	101150	1905	128	mitigation gun
10:49:34	101167	1922	128	EOT #128
10:49:54	101168	1923	129	BOT #129
11:11:09	101226	1981	129	first SP back at full volume 6600 in3, S1G2 Delta Timing 3.6 ms
11:11:32	101227	1982	129	S1G2 Delta Timing -2.3 ms
12:42:13	101477	2232	129	Power down for pinniped, last SP at full volume 6600 in3
		2233	129	missed SP 2233 while powering down
12:42:56	101478	2234	129	mitigation gun
12:56:36	101517	2273	129	Beginning reshoot, SP 2273-2348
		2292	129	missed SP 2292 while powering up
13:03:44	101536	2293	129	first SP back at full volume 6600 in3, S1G2 Delta Timing 2.3 ms, S4G4 2.7 ms
13:24:00	101592	2349	129	Beginning infill, SP 2349-2578
13:53:43	101675	2432-2433	129	unidentified noise from behind tail, SP 2432-2433
13:33:46	101784	2541	129	EOL MGL1701MC37R - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF/UTIG - Bangs
Area	South Pacific - Chile
Job Number	MGL1701

Chief Science Officer	Robert Steinhaus	
Science Officer	David Martinson 12:00-24:00	Todd Jensvold 24:00-12:00
Acquisition Leader	Gilles Guerin 12:00-24:00	Ambrose Mavor-Parker 24:00-12:00
Navigation Leader	Tina Thomas 12:00-24:00	Alan Thompson 24:00-12:00

	SOL	EOL
Tape #	130	131
SP #	1942	3244

Line	MGL1701MC39R
Sequence	045
Direction	291.9

Streamer Parameters				
	1	2	3	4
Length (m)	15150			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	220			
Group Interval: (m)	12.5			
Number of channels	1212			
Streamer Depth (m)	12.0			
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
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	20s
Total recording delay	-160ms
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.5Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1942	3244
Date MM/DD/YY	2/15/17	2/16/17
Time UTC	21:40	05:56
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW8kts	E3.2kts
Sea State (m)	1m	1m
Water Depth (m)	2537m	5124.8m

Cable	Dead Channels
1	
2	
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

[illegible]

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
FGSP - First Good SP	LCSP - Last Chargeable SP
FCSP - First Chargeable 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
21:40	101785	1942	130	SOL MGL1701MC39R - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3
22:08:57	101860	2017	130	last sp before powering down for whale
22:09		2018	130	missed sp 2018 while reducing volume
22:26:49	101906	2064	130	first sp back at full volume 6600in3
22:47:32	101961	2119	130	start reshoot section
22:56:48	101985	2143	130	last sp before powering down for pinniped
23:00:19	101994	2152	130	start of prime section between lines MC39 and MC39A
23:02		2158	130	missed while restoring volume
23:03:00	102000	2159	130	first sp back at full volume 6600in3
23:05:18	102006	2165	130	last sp before powering down for pinniped
23:15		2191	130	missed sp 2191 while restoring volume
23:15:46	102032	2192	130	first sp back at full volume 6600in3
23:41:36	102099	2259	130	last sp before powering down for pinniped
23:41		2260	130	missed shot while reducing volume
23:50:09	102120	2281	130	start of overlap with MC39A
23:55		2296	130	missed sp 2296 while restoring volume
23:56:21	102135	2297	130	first sp back at full volume 6600in3
00:00:11	102145	2307	130	Midnight shot point
03:16:15	102664	2826	130	Begin reshoot
03:32:45	102707	2869	130	Begin infill
04:01:44	102784	2946	130	EOT #130
04:02:07	102785	2947	131	BOT #131
04:27:47	102853	3015	131	Begin reshoot
04:59:37	102936	3098	131	Begin infill
05:36:50	103031	3193	131	Begin reshoot
05:56:56	103082	3244	131	EOL MGL1701MC39R - S1G5,S2G5, S3G5,S4G5 spares - Total volume = 6600 in3