

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	1022	1088

Line	MGL2003T01
Sequence	01
Direction	125

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	1022	1088
Date MM/DD/YY	09/09/2020	09/09/2020
Time UTC	18:14	19:37
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 21kts	S 22kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	643m	486m

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	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	1093	1440

Line	MGL2003OBS1A
Sequence	02
Direction	076

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	1094	1440
Date MM/DD/YY	09/09/2020	09/10/2020
Time UTC	19:42	02:08
Volume (cu in.)	3300in3	6600in3
Wind (kts)	S 21kts	SE 20kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	487m	560m

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

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	1511	1797

Line	MGL2003OBS1B
Sequence	03
Direction	313

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	1511	1797
Date MM/DD/YY	09/10/2020	09/10/2020
Time UTC	02:13	07:21
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 20kts	SE 20kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	510m	1676m

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	LFSP - Last Full Fold SP
FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - Imitation Time Break
NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	1855	2324

Line	MGL2003OBS1B1
Sequence	04
Direction	090

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, µB	N/A			
EOL Cable Noise, µB	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	1855	2324
Date MM/DD/YY	09/10/2020	09/10/2020
Time UTC	07:56	16:27
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S 20kts	S 18kts
Sea State (m)	1.5m	1m
Water Depth (m)	1740m	1064m

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 interrupted after spectra failure after SP 1797 - resumed after ~40 minutes troubleshooting - ~40 shots missed
No spectra headers
NB - line was originally named MGL2003OBS1B and renamed to avoid repeated numbers

Abbreviations	
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FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - 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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	2405	2686

Line	MGL2003OBS1C
Sequence	05
Direction	034

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	2405	2686
Date MM/DD/YY	09/10/2020	09/10/2020
Time UTC	16:30	21:35
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S18kts	S12kts
Sea State (m)	1m	1m
Water Depth (m)	1073m	104m

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

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	2703	2779

Line	MGL2003OBS1D
Sequence	06
Direction	077

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	2703	2779
Date MM/DD/YY	09/10/2020	09/10/2020
Time UTC	21:38	22:56
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S18kts	SE 18kts
Sea State (m)	1m	1m
Water Depth (m)	1073m	1290m

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

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	2802	2964

Line	MGL2003OBS1E
Sequence	07
Direction	44.4

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	2802	2964
Date MM/DD/YY	09/10/2020	09/11/2020
Time UTC	22:58	00:53
Volume (cu in.)	6600in3	6600in3
Wind (kts)	S18kts	SW 26kts
Sea State (m)	1 m	1m
Water Depth (m)	1290 m	1766 m

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
Seq #7
Because of a turn, spectra jumped from SP 2897 to SP 2955. Line was interrupted after SP 2964 to address this

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	2966	2979

Line	MGL2003OBS1E1
Sequence	08
Direction	94.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	2966	2979
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	00:56	01:10
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW29ktskts	NE 7kts
Sea State (m)	1 m	1m
Water Depth (m)	1754m	1641m

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	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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	3001	3050

Line	MGL2003OBS1E3
Sequence	09
Direction	94.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	3001	3050
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	01:16	02:10
Volume (cu in.)	6600in3	6600in3
Wind (kts)	NE 9kts	S18kts
Sea State (m)	1 m	1.5m
Water Depth (m)	1540 m	1130mm

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

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	3062	3170

Line	MGL2003OBS1E4
Sequence	010
Direction	124.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, µB	N/A			
EOL Cable Noise, µB	N/A			

Source Parameters	
Total Volume	6600/3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	3062	3170
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	02:12	04:11
Volume (cu in.)	6600in3	3300in3
Wind (kts)	S 24kts	S23kts
Sea State (m)	1.5 m	1.5mm
Water Depth (m)	1190 m	120m

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
Volume reduced to half (3300 in3) after SP 3068 - otter habitat
Additional shot 3213 at the end from interference from kink. Shot 3212 as well, but no GCS
No GCS signature from file 3170 - not in shotlog

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 - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	3218	3751

Line	MGL2003OBS1E5
Sequence	011
Direction	134.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, µB	N/A			
EOL Cable Noise, µB	N/A			

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	3218	3750
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	04:29	14:15
Volume (cu in.)	3300in3	3300in3
Wind (kts)	S 21kts	SE 14kts
Sea State (m)	1.5 m	.5m
Water Depth (m)	132m	96.3m

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
Volume reduced to half (3300 in3) entire sequence - otter habitat
Spectra locked up several times on this sequence
because of one of these lockups, shots were renumbered (+ 5 after SP 3549) in the last valid segment

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	SP	Description
04:29	3218	SOL MGL2003OBS1E5 S1-2G5;S3-4 spared - Volume 3300 in3 - 18 guns
06:05	3308-3309	No shots fired for 3308-3309
10:01	3517-3518	Spectra failed again at small kink - shots 3517 and 3518 missed
10:08	3521	Double Pop 3521,3524
10:31	3546	last good SP before spectra failure - going internal
10:36	3548	First SP back on external
14:15	3750	last good SP before spectra failure
14:15	3750	EOL MGL2003OBS1E5 S1-2G5;S3-4 spared - Volume 3300 in3 - 18 guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	3900	3907

Line	MGL2003OBS1E6
Sequence	012
Direction	134.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	3900	3907
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	14:29	14:38
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 14.4kts	S 12kts
Sea State (m)	0.5m	0.5m
Water Depth (m)	96.3m	94m

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
Volume reduced to half (3300 in3) - otter habitat
Line started and ended because of spectra lockups - originally named E1

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 - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	4010	4202

Line	MGL2003OBS1F
Sequence	013
Direction	358.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	4010	4202
Date MM/DD/YY	09/11/2020	09/11/2020
Time UTC	14:47	18:17
Volume (cu in.)	3300in3	6600in3
Wind (kts)	SE 7kts	S 21kts
Sea State (m)	1m	1m
Water Depth (m)	96.1m	1114m

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
Volume reduced to half (3300 in3) at start - otter habitat
Full Gun Volume at 15:19 - SP 4937

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	4308	4649

Line	MGL2003OBS1G
Sequence	014
Direction	86.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	4308	4649
Date MM/DD/YY	09/11/2020	09/12/2020
Time UTC	18:24	00:32
Volume (cu in.)	6600in3	6600 in3
Wind (kts)	S21kts	SW 22kts
Sea State (m)	1m	1 m
Water Depth (m)	1287m	115 m

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

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	4678	5305

Line	MGL2003OBS1H
Sequence	015
Direction	80.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	4678	5305
Date MM/DD/YY	09/12/2020	9/12/2020
Time UTC	00:35	11:53
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW 23kts	S 21.5kts
Sea State (m)	1m	1m
Water Depth (m)	115 m	451.8m

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

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	5333	

Line	MGL2003OBD1A
Sequence	016
Direction	347.2

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	250			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	5333	5575
Date MM/DD/YY	09/16/2020	9/16/2020
Time UTC	11:53	19:11
Volume (cu in.)	6600in3	6600in3
Wind (kts)	W 15.5kts	NW 21kts
Sea State (m)	1m	1.5m
Water Depth (m)	6414.4m	4646.6m

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

[illegible]

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

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	5672	5935

Line	MGL2003OBD1A1
Sequence	017
Direction	347.2

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	250			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

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	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	5672	5935
Date MM/DD/YYYY	09/16/2020	9/17/2020
Time UTC	20:28	04:24
Volume (cu in.)	6600in3	6600in3
Wind (kts)	NW20kts	NW 17kts
Sea State (m)	2 m	2 m
Water Depth (m)	4650m	90 m

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

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

	SOL	EOL
Tape #	NA	NA
SP #	6015	6217

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, µB	N/A			
EOL Cable Noise, µB	N/A			

Description	SOL/FGSP	EOL/LGSP
SP	6015	6217
Date MM/DD/YY	09/17/2020	9/17/2020
Time UTC	12:27	16:04
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	W 14.1kts	W 13.7kts
Sea State (m)	1.0m	1m
Water Depth (m)	174.8m	111m

Cable	Dead Channels
1	
2	
3	
4	

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

Line	MGL2003OBS11
Sequence	018
Direction	78.8

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

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
Short segment of S1, on the transit between the two sections of D1
150m shot spacing

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	
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Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold
Acquisition Leader	Gilles Guerin		
Navigation Leader	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	NA	NA
SP #	6302	6770

Line	MGL2003OBD1B
Sequence	019
Direction	347.0

Streamer Parameters				
	1	2	3	4
Length (m)	N/A			
Auxiliaries	N/A			
Shotpoint Interval: (m)	250			
Offset CS - CNG (m)	N/A			
Group Interval: (m)	N/A			
Number of channels	N/A			
Streamer Depth (m)	N/A			
SOL Cable Noise, μ B	N/A			
EOL Cable Noise, μ B	N/A			

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	No
Depth	9
Sub-array Separation	6 m
COS to COS	Single Source

Recording Parameters	
Record Length	N/A
Total recording delay	N/A
Sample Rate	N/A
Polarity	N/A
Low-Cut	N/A
Hi-Cut	N/A
File Format	N/A

Description	SOL/FGSP	EOL/LGSP
SP	6302	6770
Date MM/DD/YY	09/17/2020	09/18/2020
Time UTC	16:06	06:07
Volume (cu in.)	3300 in3	6600in3
Wind (kts)	W13.7kts	SW 12kts
Sea State (m)	1.0m	1.5 m
Water Depth (m)	114m	3700 m

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 - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	1	1
SP #	1108	1192

Line	MGL2003MCT02
Sequence	020
Direction	189.0

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	16.0			
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 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1108	1192
Date MM/DD/YY	09/24/2020	09/24/2020
Time UTC	00:36	01:07
Volume (cu in.)	6600in3	6600in3
Wind (kts)	NE 6 kts	N 5 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5325 m	5400 m

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
00:35	1	1108	1	SOL MGL2003MCT02 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
01:07	85	1192	1	EOL MGL2003MCT02 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
				End of test line - turning into main line 1

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	2	4
SP #	872	2305

Line	MGL2003MCAFZ1
Sequence	021
Direction	265.0

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	872	2305
Date MM/DD/YY	09/24/2020	09/24/2020
Time UTC	01:10	09:53
Volume (cu in.)	6600in3	6600in3
Wind (kts)	N 5 kts	NW 11 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5400 m	5075 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
Significant noise turn at start
6 (2 times 3 in a row) instances of losing communication with ~half the streamer. In each case 4-10 files with missing traces and a couple of SP missed while restarting the streamer

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
01:10	86	872	2	SOL MGL2003MCAFZ1 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
01:59	215	1001	2	Spectra reference
03:39	492	1278	2	Lost communication with streamer behind LAUM1257
	492-495	1278-1281	2	missing ~half traces
03:40	495	1281	2	EOT # 2 while restartting streamer
		1282-1291		missed shots while restarting streamer
03:44	496	1292	3	BOT #3 - streamer back fully online
03:59		1335	3	Lost communication with streamer behind LAUM1257
03:59	539-541	1335-1337	3	missing ~half traces
04:00		1388-1342	3	missed shots while restarting streamer
04:08	559-561	1360-1362	3	missing ~half traces
04:09		1363	3	missed shot while restarting streamer
07:53	1179	1981	4	BOT # 4
08:20	1253-1262	2055-2064	4	missing ~half traces
08:24	2065	2065	4	missed while restarting streamer
08:50	1333-1334	2136-2137	4	missing ~half traces
08:51		2138	4	missed while restarting streamer
08:51	1336-1337	2140-2141	4	missing ~half traces
08:52		2142-2143	4	missed while restarting streamer
09:53	1499	2305	4	EOL MGL2003MCAFZ1 - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	5	5
SP #	1015	1341

Line	MGL2003MCAFZ2
Sequence	022
Direction	180.7

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1015	1341
Date MM/DD/YY	09/24/2020	09/24/2020
Time UTC	09:58	11:58
Volume (cu in.)	6600	6600
Wind (kts)	NW 13 kts	NW 14 kts kts
Sea State (m)	1 m	1 m
Water Depth (m)	5060 m	5025 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
09:58	1500	1015	5	SOL MGL2003MCAFZ2 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
11:58	1826	1341	5	EOL MGL2003MCAFZ2 - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jenvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	6	7
SP #	1018	2295

Line	MGL2003MCAFZ3
Sequence	023
Direction	85.7

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1018	2295
Date MM/DD/YY	09/24/2020	09/24/2020
Time UTC	12:02	19:52
Volume (cu in.)	6600	6600
Wind (kts)	NW 14 kts	W 13 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5039 m	5570 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
12:02	1827	1018	6	SOL MGL2003MCAFZ3 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
13:42	2101	1292	6	Lost communication with streamer behind LAUM1257
			6	missing ~half traces
		1294-1296	6	missed shots while restarting streamer
13:46	2107	1301	6	Lost communication with streamer behind LAUM1257
13:46	2108	1302	6	missing ~half traces
		1303-1306	6	missed shots while restarting streamer
16:11	2509	1707	6	EOT # 6
16:12	2510	1708	7	BOT # 7
19:52	3097	2295	7	EOL MGL2003MCAFZ3 - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	8	8
SP #	1019	1345

Line	MGL2003MCAFZ4
Sequence	024
Direction	176.7

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1019	1345
Date MM/DD/YY	09/24/2020	09/24/2020
Time UTC	19:57	21:57
Volume (cu in.)	6600 in	6600 in
Wind (kts)	W 13 kts	W 7 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5555 m	5603 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
19:57	3098	1019	8	SOL MGL2003MCAFZ4 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
21:57	3424	1345	8	EOL MGL2003MCAFZ4 - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizzaralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	9	10
SP #	1024	2373

Line	MGL2003MCAFZ5
Sequence	025
Direction	176.7

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1024	2373
Date MM/DD/YY	09/24/2020	09/25/2020
Time UTC	22:01	06:18
Volume (cu in.)	6600 in	6600 in
Wind (kts)	W 7.3 kts	N 3.4 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5603 m	5104 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
22:01	3425	1024	9	SOL MGL2003MCAFZ5 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
02:09	4108	1707	10	BOT 10
05:31		2263	10	probably last good SP
05:31		2264-2265	10	missing traces
05:32		2266-2267	10	missed SP
05:34		2272	10	missed SP
05:40		2290-2296	10	missed SP
05:44		2301	10	missed SP
05:45		2303-2309	10	missed SP
05:49		2312-2318	10	missed SP
05:54		2322-2335	10	missed SP
06:02		2339	10	missed SP
06:03		2341-2345	10	missed SP
06:06		2348-2369	10	missed SP
06:18	4707	2373	10	EOL MGL2003MCAFZ5 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
				line ended to retrieve streamer and replace faulty LAUMs

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	11	11
SP #	3142	3804

Line	MGL2003MCAFZ6
Sequence	026
Direction	266.0

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	3142	3804
Date MM/DD/YY	09/25/20	09/25/20
Time UTC	16:21	20:27
Volume (cu in.)	6600 in	6600 in
Wind (kts)	E 4 kts	SE 8 kts
Sea State (m)	0.5 m	1 m
Water Depth (m)	5268 m	5297 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
Significant noise turn at start and end
string 4 gun 2 having occasional delta errors throughout line.
NB - line was originally named MGL2003MCAFZ5 and renamed to avoid repeated numbers

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
16:21	4708	3142	11	SOL MGL2003MCAFZ6 - Sce : S1-4G5 spare, 6600 in3, 36 Guns
20:27	5370	3804	11	EOL MGL2003MCAFZ6 - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	12	18
SP #	1017	5891

Line	MGL2003MCD1S
Sequence	027
Direction	347.5

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	1017	5891
Date MM/DD/YY	09/25/20	09/27/2020
Time UTC	20:30	01:52
Volume (cu in.)	6600 in	6600 in
Wind (kts)	SE 8 kts	N 9 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5297 m	97 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
Significant noise turn at start

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
20:29	5371	1017	12	SOL MGL2003MCD1S - Sce : S1-4G5 spare, 6600 in3, 36 Guns
23:59	5950	1596	12	Last shot of day
00:36	6054	1700	13	BOT #13
02:32	6374	2020	13	Shutdown for Mink whale - last good SP before shutdown
		2021-2099	13	missed shots during ramp-up
03:02	6375	2100	13	First shot at start of ramp-up
				Shots missed while ramping up: 2102, 2103, 2106, 2109, 2110, 2112, 2113, 2116, 2119, 2120, 2122,2123,2126,2129,2130,2132,2133,2136,2139,2140,2142,2143,2145,2146,2149,2150,2152
				Files without spectra SP: 6377,6382,6384,6389,6391,6396,6398,6403, 6405, 6407, 6410
03:23	6412	2153	13	First good shot after ramp-up
05:21	6737	2478	14	BOT #14
09:28	7420	3161	15	BOT #15
13:36	8103	3844	16	BOT #16
17:42	8786	4527	17	BOT #17
21:46	9469	5210	18	BOT #18
23:59	9838	5579	18	Last shot of day
01:52	10150	5891	18	EOL MGL2003MCD1S - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	19	23
SP #	1071	4406

Line	MGL2003MCD2S
Sequence	028
Direction	167.3

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	1071	4406
Date MM/DD/YY	09/27/20	09/28/2020
Time UTC	12:28	08:35
Volume (cu in.)	3300 in3	6600 in3
Wind (kts)	N 12 kts	NW 14.5 kts
Sea State (m)	1 m	1 m
Water Depth (m)	166 m	5860 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
Significant noise turn at start
End of line with reduced volume because of comm erros with string 1

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
12:28	10151	1071	19	SOL MGL2003MCD2S - Sce : S3-4,S1-4G5 spare, 3300 in3, 18 Guns
12:35	10168	1088	19	S3 added; 4950 in3
12:36	10171	1091	19	S4 added; 6600 in3
16:33	10834	1754	20	BOT #20
20:41	11517	2437	21	BOT #21
23:59	12067	2987	21	last shot of day 271
00:47	12200	3120	22	BOT #22
01:37	12339	3259	22	Last good shot beforeShutdown for protected species
		3260-3288	22	missed shots during shut-down: 3260-3288
01:50	12340	3289	22	Start of ramp-up
02:11	12395	3344	22	First shot at full volume at end of ramp up
05:06	12883	3832	23	BOT #23
07:04	13214	4163	23	Start of omm errors with String 1 Guns 3,7-10 - apparent volume 5940 in3 - 31 guns
07:19	3249-1325	4198-4200	23	while switching comm lines , comm lost with string 1 - vol = 4950 in3, 27 guns
07:20	13252	4201	23	After comm line switch, comm error only with Guns 9,10 - volume = 6160in3, 34 guns
07:59	13357	4306	23	Strings 1 and 2 spared for recovery - 18 guns, vol = 3300in3
08:35	13457	4406	23	EOL MGL2003MCD2S - Sce : S3-4,S1-4G5 spare, 3300 in3, 18 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	24	26
SP #	884	2618

Line	MGL2003MCD2S1
Sequence	029
Direction	302.5

Streamer Parameters				
	1	2	3	4
Length (m)	9000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	720			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	884	2618
Date MM/DD/YY	09/28/20	09/28/20
Time UTC	10:17	20:46
Volume (cu in.)	6600 in3	6600 in3
Wind (kts)	N 14 kts	NW 8 kts
Sea State (m)	1 m	1 m
Water Depth (m)	5992 m	4820 m

Cable	Dead Channels
1	1, 9, 33,81, 531
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
Plenty of noise turn at star
Early end of line because of engine failure

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	27	29
SP #	4510	6996

Line	MGL2003MCD2S2
Sequence	030
Direction	302.5

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	4510	6996
Date MM/DD/YY	09/29/20	09/29/20
Time UTC	04:22	19:18
Volume (cu in.)	6600 in3	6600 in3
Wind (kts)	N 4 kts	NE 10 kts
Sea State (m)	0.5 m	0.5 m
Water Depth (m)	3850 m	596 m

Cable	Dead Channels
1	1, 9, 13, 33,81
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 29 after restoring engine and reconfiguring streamer to 6km

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	30	30
SP #	901	1823

Line	MGL2003MCS1A
Sequence	031
Direction	76.1

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

22

Description	SOL/FGSP	EOL/LGSP
SP	901	1823
Date MM/DD/YY	09/30/20	09/30/20
Time UTC	01:20	06:58
Volume (cu in.)	3300 in3	6600 in3
Wind (kts)	NW 9 kts	N17 kts
Sea State (m)	1 m	1 m
Water Depth (m)	490 m	614 m

Cable	Dead Channels
1	1, 9, 13, 33,81
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
Start of line at half volume (3300in3) in otter territory
Noise turn at start, then S-shaped streamer
Offset between bridge and spectra at start - corrected around SP 1220

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
01:20	17680	901	30	SOL MGL2003MCS1A - Sce : S1-2,S3-4G5 spare, 3300 in3, 18 Guns
01:40		954	30	Missed shot because of speed
01:41		956	30	Missed shot because of speed
01:41		958	30	Missed shot because of speed
01:58	17777	1001	30	Spectra Reference
03:55		1323	30	Missed SP while changing volume
03:56	18099	1324	30	First shot with String 2 active: S1,S2-4G5 spare; 27 guns, 4950 in3
03:57		1328	30	Missed SP while changing volume
03:58	18103	1329	30	First shot with String 1 active: S1-4G5 spare; 36 guns, 6600 in3
06:58	18597	1823	30	EOL MGL2003MCS1A - Sce : S1-4G5 spare, 6600 in3, 36 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	31	31
SP #	1011	1519

Line	MGL2003MCS1B
Sequence	032
Direction	0.0

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1011	1519
Date MM/DD/YY	09/30/20	09/30/20
Time UTC	07:00	10:07
Volume (cu in.)	6600 in3	6600 in3 in3
Wind (kts)	N17 kts	N 13 kts
Sea State (m)	1 m	1 m
Water Depth (m)	640 m	2320 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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 at start & end

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	32	35
SP #	1020	4556

Line	MGL2003MCS1C
Sequence	033
Direction	86

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1020	4556
Date MM/DD/YY	09/30/20	10/01/20
Time UTC	10:10	07:25
Volume (cu in.)	6600 in3	3300 in3
Wind (kts)	N 12 kts	N 18 kts
Sea State (m)	1 m	1.5 m
Water Depth (m)	2320 m	116 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Direction 86 is direction of first segment
Sporadic delta timing errors from S2G2
Source volume reduced by half (18 guns, 3300 in3) after SP 4250, entering otter zone

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
10:10	19107	1020	32	SOL MGL2003MCS1C - Sce : S1-4G5 spare, 6600 in3, 36 Guns
16:19	20131	2044	33	BOT #33
22:30	21155	3068	34	BOT #34
22:43		3103	34	Missed SP 3103 because of kink in line
23:59	21401	3315	34	Last shot of day
03:58		3981	34	Missed SP 3981 because of kink in line
04:38	22179	4094	35	BOT #34
05:23		4220	35	Missed SP 4220 because of kink in line
05:33	22334	4250	35	Last shot at full volume before otter territory
05:34	22335	4251	35	Sce: S1-2,S3-4G5 spare, 3300 in3, 18 guns
07:25	22640	4556	35	EOL MGL2003MCS1C -Sce: S1-2,S3-4G5 spare, 3300 in3, 18 guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	36	37
SP #	1007	2405

Line	MGL2003MCS1D
Sequence	034
Direction	78

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1007	2405
Date MM/DD/YY	10/01/20	10/01/20
Time UTC	07:27	15:48
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 17 kts	W 20 kts
Sea State (m)	1.5 m	2 m
Water Depth (m)	111 m	106 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Source volume only 3300in3 - otter area

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
07:27	22641	1007	36	SOL MGL2003MCS1D - Sce : S1-2,S3-4G5 spare, 3300 in3, 18 Guns
09:30-10:00		~1310-1431		turn noise through multiple turns
09:21		1321-1322		shots skipped by seal during turn, 1321 and 1323 3 seconds apart on spectra, 1322 skipped
09:22		1326		shot skipped by spectra during turn
09:22	22958	1327	36	back on line
09:57		1425		seal:"invalid spectra message length" , skipped by seal
09:58		1426		shot skipped by spectra during turn
09:59		1429-		shot skipped by spectra during turn - double shot
09:59	23058	1430	36	back on line
10:25	23131	1503	36	very noisy streamer data for a couple shots
		1522-1523		skipped by spectra during turn
		1527-1530		skipped by spectra during turn
10:34	23153	1531	36	back on line
10:39	2896	1545-1546		"T0 occurred 80 [70] ms before end of acquisition"
10:43		1556		shot skipped due to speed
10:44		1559		shot skipped due to speed
10:44		1561		shot skipped due to speed
10:46		1567		shot skipped due to speed
10:49	23193	1575	36	T0 error
10:50		1579		shot skipped due to speed
10:51		1582		shot skipped due to speed
10:53		1586		shot skipped due to speed, T0 error
10:54		1590		shot skipped due to speed
10:54	23205	1591	36	T0 error
10:57	23213	1599	36	T0 error
~11:00				streamer on/near surface, channels 150-250 noisy
11:03		1615-1616		shots skipped during turn
11:05		1620-1623		shots skipped during turn; double shot
11:05	23232	1624	36	back on line
11:09	23242	1634	36	T0 occurred 260 ms before end of acquisition
11:13				streamer on/near surface, channels 210-320 noisy
11:24				streamer on/near surface, channels 300-350 noisy
13:19		1998		shot skipped by spectra due to speed
13:20	23606	1999	36	back on line
13:28		2023		shot skipped due to speed?
13:41		2059		shot skipped during turn
13:50		2084		shot skipped during turn
13:51	23690	2086	36	T0 warning
13:51	23691	2087	36	back on line
15:48	24009	2405	36	EOL MGL2003MCS1D - Sce : S3-4G5 spare; S1-2 spare, 3300 in3, 18 Guns

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	38	40
SP #	1002	3482

Line	MGL2003MCD1N
Sequence	035
Direction	346.9

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300/6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1002	3482
Date MM/DD/YY	10/01/20	10/02/20
Time UTC	16:50	07:54
Volume (cu in.)	3300 in3	6600 in3
Wind (kts)	W 13 kts	NW 17 kts
Sea State (m)	2 m	2 m
Water Depth (m)	139 m	3710 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Accidentally recorded first shot, 1002, under sequence 34 - file with correct sequence number recreated later. Original file in tape 38.0
Turn noise at start and end
Source volume 3300in3 at start - otter area - Full volume (6600 in3) after SP 1115

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	41	44
SP #	1036	5093

Line	MGL2003MCD1S1
Sequence	036
Direction	113

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1036	5093
Date MM/DD/YY	10/02/20	10/03/20
Time UTC	08:29	09:05
Volume (cu in.)	6600 in3	6600 in3
Wind (kts)	NW 18 kts	SW 5 kts
Sea State (m)	1.5 m	1.5 m
Water Depth (m)	3700 m	140 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Sporadic comm errors with string 2 guns (at least twice the full array)

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	45	46
SP #	952	2892

Line	MGL2003MCS1G
Sequence	037
Direction	240.4

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	952	2892
Date MM/DD/YY	10/03/20	10/03/20
Time UTC	10:43	22:48
Volume (cu in.)	6600 in3	6600 in3
Wind (kts)	W 8 kts	NW 13 kts
Sea State (m)	1 m	1 m
Water Depth (m)	328 m	108 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	47	48
SP #	1012	2051

Line	MGL2003MCS1F
Sequence	038
Direction	337.0

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1012	2051
Date MM/DD/YY	10/03/20	10/04/20
Time UTC	22:50	05:15
Volume (cu in.)	6600 in3	6600 in3
Wind (kts)	NW13 kts	NW20 kts
Sea State (m)	1 m	1 m
Water Depth (m)	108 m	995m m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Dog leg line - direction is for first segment
Turn noise at start, end, and at the turns near SP 1315 and SP 1630

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	49	49
SP #	1006	1603

Line	MGL2003MCS1E
Sequence	039
Direction	227

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600/3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1006	1603
Date MM/DD/YY	10/04/20	10/04/20
Time UTC	05:17	08:57
Volume (cu in.)	6600 in3	3300 in3
Wind (kts)	NW18 kts	W 13 kts
Sea State (m)	1 m	1 m
Water Depth (m)	1080 m	102 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Dog leg line - direction is for first segment
Turn noise at start, end, and at the turn near SP 1281
Volume reduced to 3300in3 (18 guns) after SP 1510 per IHA requirements

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	50	50
SP #	1013	1487

Line	MGL2003MCS1D1
Sequence	040
Direction	259

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9 m
Sub-array Separation	6 m
COS to COS	single source

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	1013	1487
Date MM/DD/YY	10/04/20	10/04/20
Time UTC	08:59	11:52
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	W 13 kts	W 14 kts
Sea State (m)	1 m	1 m
Water Depth (m)	90 m	155 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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 & end

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 - Lizarralde
Area	Aleutian Arc
Job Number	MGL2003

Shift	12:00-24:00	00:00-12:00	06:00-18:00
Science Officer		Alan Thompson	Todd Jensvold (CSO)
Acquisition	Gilles Guerin	Patrick A'Hearn	
Navigation	Cody Bahlau	Alan Thompson	

	SOL	EOL
Tape #	51	53
SP #	958	3200

Line	MGL2003MCD2N
Sequence	041
Direction	167

Streamer Parameters				
	1	2	3	4
Length (m)	6000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	172			
Group Interval: (m)	12.5			
Number of channels	480			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

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

Recording Parameters	
Record Length	20 s
Total recording delay	0
Sample Rate	2ms
Polarity	SEGD standard
Low-Cut	3Hz digital, 4.7Hz total
Hi-Cut	200Hz, 370dB/octave
File Format	SEGD

Description	SOL/FGSP	EOL/LGSP
SP	958	3200
Date MM/DD/YY	10/05/20	10/05/20
Time UTC	04:21	17:49
Volume (cu in.)	6600 in3	1650 in3
Wind (kts)	NW26 kts	NW 17 kts
Sea State (m)	1.5 m	1 m
Water Depth (m)	3700 m	198 m

Cable	Dead Channels
1	1, 9, 13, 33,81,291
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
Noise throughout sequence because of strong sideways current

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	

