

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	1	6
SP #	3636	879

Line	MGL1801M1196
Sequence	01
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	200	200	200	200
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3634	879
Date MM/DD/YY	01/09/18	01/10/18
Time UTC	18:23	02:32
Volume (cu in.)	3300in3	3300in3
Wind (kts)	W 8kts	NE 8kts
Sea State (m)	1m	0.5m
Water Depth (m)	59.1m	3520m

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
First good shot point SP 3634, file 3 - first two shots recorded before spectra started
For files 3-1109, SP: 3634-2528: No navigation data from spectra to Seal - SP in SEG2 needed to be corrected by adding 234
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	7	11
SP #	936	3524

Line	MGL1801M1020
Sequence	02
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	175	175	175	175
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	936	3524
Date MM/DD/YY	01/10/18	01/10/18
Time UTC	4:42	12:19
Volume (cu in.)	3300in3	3260/3300in3
Wind (kts)	NE 6kts	SE 7kts
Sea State (m)	0.5m	1m
Water Depth (m)	3500m	90m

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
Stbd source (S1-2) volume reduced to 3260in3 after SP 2345
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	12	16
SP #	3491	879

Line	MGL1801M1204
Sequence	03
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	175	175	175	175
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3491	879
Date MM/DD/YY	01/10/2017	01/10/2017
Time UTC	14:21	21:52
Volume (cu in.)	3260/3300in3	3260/3300in3
Wind (kts)	S 9kts	SW 10 kts
Sea State (m)	1m	1 mm
Water Depth (m)	128.1m	3523m

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
First Full Fold Shotpoint 3402
Source 1 (subarrays 1-2) volume reduced to 3260in3
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	17	21
SP #	924	3525

Line	MGL1801M1028
Sequence	04
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	175	175	175	175
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	924	3525
Date MM/DD/YY	01/11/2017	01/11/2018
Time UTC	0:05	07:46
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SW 10kts	NE 5kts
Sea State (m)	0.5m	0.5m
Water Depth (m)	3500m	95m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	22	26
SP #	3415	878

Line	MGL1801M1212
Sequence	05
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3415	878
Date MM/DD/YY	01/11/18	01/11/18
Time UTC	10:02	17:25
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 6kts	S 2kts
Sea State (m)	1m	1m
Water Depth (m)	300m	3520.5m

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
FFFSF: 3402
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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	27	31
SP #	855	3525

Line	MGL1801M1036
Sequence	06
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	855	3525
Date MM/DD/YY	01/11/18	01/12/18
Time UTC	19:31	03:15
Volume (cu in.)	3300in3	3300in3
Wind (kts)	ESE 6kts	ENE 11kts
Sea State (m)	1m	0.5m
Water Depth (m)	3497.6m	100m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	32	36
SP #	3480	878

Line	MGL1801M1220
Sequence	07
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3480	878
Date MM/DD/YY	01/12/18	01/12/18
Time UTC	5:13	12:46
Volume (cu in.)	3300in3	3300in3
Wind (kts)	E 10kts	E 9kts
Sea State (m)	1 m	1m
Water Depth (m)	135m	3523.8m

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
traffic noise at beginning of line from freight container aft
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	37	42
SP #	776	3524

Line	MGL1801M1044
Sequence	08
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	776	3524
Date MM/DD/YY	01/12/18	01/12/18
Time UTC	14:42	22:50
Volume (cu in.)	3300in3	3300in3
Wind (kts)	E 10kts	NE 15kts
Sea State (m)	1 m	1m
Water Depth (m)	3504.7m	100m

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
FFFSP 3402
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	43	47
SP #	3502	878

Line	MGL1801M1228
Sequence	09
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3502	878
Date MM/DD/YY	01/13/18	01/13/18
Time UTC	0:58	08:34
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 15kts	NE 17kts
Sea State (m)	1m	1m
Water Depth (m)	125m	3530m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	48	52
SP #	909	3524

Line	MGL1801M1052
Sequence	010
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	909	3524
Date MM/DD/YY	01/13/18	01/13/18
Time UTC	10:47	18:21
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE16kts	N 12kts
Sea State (m)	1m	1m
Water Depth (m)	3500m	92.44m

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	
<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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	53	57
SP #	3561	879

Line	MGL1801M1236
Sequence	011
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3561	879
Date MM/DD/YY	01/13/18	01/14/18
Time UTC	20:07	04:03
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE11kts	NE 16kts
Sea State (m)	1m	1m
Water Depth (m)	104.7m	3530m

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	

[illegible]

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	58	62
SP #	942	3524

Line	MGL1801I1052
Sequence	012
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	942	3524
Date MM/DD/YY	01/14/18	01/14/18
Time UTC	6:40	14:17
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 14kts	NE 17kts
Sea State (m)	1m	1m
Water Depth (m)	3500m	89.8m

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
Infill for MGL1801M1052
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	63	67
SP #	3548	879

Line	MGL1801M1244
Sequence	013
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3548	879
Date MM/DD/YY	01/14/18	01/14/18
Time UTC	16:05	23:59
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 14kts	NE 17kts
Sea State (m)	1m	1m
Water Depth (m)	109.4m	3525m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	68	72
SP #	943	3524

Line	MGL1801M1060
Sequence	014
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	943	3524
Date MM/DD/YY	01/15/2018	01/15/18
Time UTC	2:20	10:00
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 16kts	NE 17kts
Sea State (m)	1.5 m	1.5 m
Water Depth (m)	3500m	90m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	73	77
SP #	3548	878

Line	MGL1801M1252
Sequence	015
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3548	878
Date MM/DD/YY	01/15/18	1/15/18
Time UTC	11:49	19:39
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 16kts	NE 19kts
Sea State (m)	1m	1m
Water Depth (m)	111.8m	3527m

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
First full fold shotpoint = 3402
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	78	82
SP #	903	3525

Line	MGL1801M1068
Sequence	016
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	903	3525
Date MM/DD/YY	01/15/18	01/16/18
Time UTC	22:18	06:09
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 20kts	NE 20 kts
Sea State (m)	1m	1.5 m
Water Depth (m)	3504.4m	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

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	83	87
SP #	3459	879

Line	MGL1801M1260
Sequence	017
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3459	879
Date MM/DD/YY	01/16/18	01/16/18
Time UTC	8:13	15:47
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	NE 27kts	NE 22kts
Sea State (m)	2m	2m
Water Depth (m)	140m	3526.8m

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
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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	88	92
SP #	850	3524

Line	MGL1801M1076
Sequence	018
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	850	3524
Date MM/DD/YY	01/16/18	01/17/18
Time UTC	17:52	01:49
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	N 22kts	NE 30kts
Sea State (m)	2m	2m
Water Depth (m)	3506.9m	90m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	93	93
SP #	3485	3349

Line	MGL1801M1268
Sequence	019
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3485	3349
Date MM/DD/YY	01/17/18	01/17/18
Time UTC	4:02	04:26
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 33kts	N 36kts
Sea State (m)	2 m	2 m
Water Depth (m)	135m	230m

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
Sequence interrupted because of weather
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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	94	98
SP #	3494	879

Line	MGL1801M1268A
Sequence	020
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3494	879
Date MM/DD/YY	01/18/2018	01/18/2018
Time UTC	4:53	12:25
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	NNE 24kts	N 21kts
Sea State (m)	1 m	2m
Water Depth (m)	130m	3524m

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
SP3300 - ship noise from container ship crossing ahead
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	99	103
SP #	885	3524

Line	MGL1801M1084
Sequence	021
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	885	3524
Date MM/DD/YY	01/18/2018	01/18/2018
Time UTC	14:35	22:10
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	N 24kts	N 15kts
Sea State (m)	1m	1m
Water Depth (m)	3506.5m	86.7m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	104	108
SP #	3453	879

Line	MGL1801M1276
Sequence	022
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3453	879
Date MM/DD/YY	01/19/18	01/19/18
Time UTC	0:22	07:44
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	N 15kts	N 24kts
Sea State (m)	1 m	1m
Water Depth (m)	145 m	3530m

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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	109	113
SP #	936	3525

Line	MGL1801M1092
Sequence	023
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	936	3525
Date MM/DD/YY	01/19/18	01/19/18
Time UTC	10:03	17:38
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 24kts	N 10kts
Sea State (m)	1.5m	1m
Water Depth (m)	3500m	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
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	114	118
SP #	3486	879

Line	MGL1801M1284
Sequence	024
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3486	879
Date MM/DD/YY	01/19/18	01/19/18
Time UTC	19:43	03:08
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 11kts	N 17kts
Sea State (m)	1m	1 m
Water Depth (m)	132.6m	3525m

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
Issues with digishot closure and tape export resulted in more files in tape 114 and missing 20 shot points: SP 3340-3344 and 3403-3417
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	119	123
SP #	924	3524

Line	MGL1801M1100
Sequence	025
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	924	3524
Date MM/DD/YY	01/20/18	01/20/18
Time UTC	5:26	13:06
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 17kts	W 7kts
Sea State (m)	1 m	1m
Water Depth (m)	3500 m	100.6m

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
SP 3132 fired on wrong source.
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	124	128
SP #	3532	879

Line	MGL1801M1292
Sequence	026
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3532	879
Date MM/DD/YY	01/20/18	01/20/18
Time UTC	15:03	22:45
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NW 4kts	W 9kts
Sea State (m)	1 m	1m
Water Depth (m)	120.6m	3527.2m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	129	133
SP #	923	3524

Line	MGL1801M1108
Sequence	027
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	923	3524
Date MM/DD/YY	01/21/18	01/21/18
Time UTC	2:08	09:49
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	S 2kts	N 8kts
Sea State (m)	1 m	1m
Water Depth (m)	3510m	100m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	134	138
SP #	3463	879

Line	MGL1801M1300
Sequence	028
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3463	879
Date MM/DD/YY	01/21/18	01/21/18
Time UTC	12:06	19:26
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	W 5kts	N 15kts
Sea State (m)	1m	2m
Water Depth (m)	139.4m	3528m

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 2030 source didn't 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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	139	143
SP #	886	3525

Line	MGL1801M1116
Sequence	029
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	886	3525
Date MM/DD/YY	01/21/18	01/22/18
Time UTC	21:54	05:43
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NW 12kts	N 11kts
Sea State (m)	1.5m	1 m
Water Depth (m)	3508.8m	100m

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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	144	148
SP #	3462	879

Line	MGL1801M1308
Sequence	030
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3462	879
Date MM/DD/YY	01/22/18	01/22/18
Time UTC	7:58	15:21
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 6kts	N 9kts
Sea State (m)	1m	1m
Water Depth (m)	140m	3529m

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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	149	153
SP #	871	3525

Line	MGL1801M1012
Sequence	031
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	871	3525
Date MM/DD/YY	01/22/18	01/23/18
Time UTC	18:30	02:12
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NW 8kts	NE 12 kts
Sea State (m)	1m	1 m
Water Depth (m)	3497.6m	100 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
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	154	158
SP #	3474	879

Line	MGL1801M1188
Sequence	032
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3474	879
Date MM/DD/YY	01/23/18	01/23/18
Time UTC	4:19	11:47
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	NE 15kts	N 13kts
Sea State (m)	1 m	1m
Water Depth (m)	130m	3518.3m

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
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	159	163
SP #	799	3524

Line	MGL1801M1004
Sequence	033
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	799	3524
Date MM/DD/YY	01/23/18	01/23/18
Time UTC	13:46	21:57
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	N 9kts	N 9kts
Sea State (m)	1m	1m
Water Depth (m)	3496.96m	102.7m

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	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
13:46	81499	799	159	SOL MGL1801M1004; S1-4G5 spares; Sce 1 (S1-2) vol: 3300 in3 Sce2 (S3-4) vol: 3300 in3
15:23	82048	1348	160	BOT #160
17:01	82597	1897	161	BOT #161
18:36	83146	2446	162	BOT #162
20:17	83695	2995	163	BOT #163
21:27	84224	3524	163	EOL MGL1801M1004; S1-4G5 spares; Sce 1 (S1-2) vol: 3300 in3 Sce2 (S3-4) vol: 3300 in3
15:13	81988	1228		S2G1 false autofire

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	164	168
SP #	3419	879

Line	MGL1801M1316
Sequence	034
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3419	879
Date MM/DD/YY	01/24/18	01/24/18
Time UTC	0:45	08:05
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	NE 12 kts	NE 10 kts
Sea State (m)	0.5 m	1 m
Water Depth (m)	150 m	3530 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
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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	169	173
SP #	989	3525

Line	MGL1801M1124
Sequence	035
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	989	3525
Date MM/DD/YY	01/24/18	01/24/18
Time UTC	10:41	18:17
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 6kts	N 6kts
Sea State (m)	1m	1m
Water Depth (m)	3510m	99.42m

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	

[illegible]

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	174	178
SP #	3413	879

Line	MGL1801M1324
Sequence	036
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3413	879
Date MM/DD/YY	01/24/18	01/25/18
Time UTC	20:43	04:02
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 9kts	N 20kts
Sea State (m)	1m	1.5 m
Water Depth (m)	150 m	3530 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
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	179	183
SP #	991	3525

Line	MGL1801M1132
Sequence	037
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	991	3525
Date MM/DD/YY	01/24/18	01/24/18
Time UTC	6:39	14:13
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 27kts	N 10kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	3500m	101.75m

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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	184	184
SP #	3411	3397

Line	MGL1801M1332
Sequence	038
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3411	3397
Date MM/DD/YY	01/24/18	01/24/18
Time UTC	16:40	16:42
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 8kts	N 8kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	153.4m	149.2m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	185	189
SP #	3423	879

Line	MGL1801A1332
Sequence	039
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3423	879
Date MM/DD/YY	01/25/18	01/26/18
Time UTC	20:55	04:46
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 8kts	W 3kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	148.9m	3350 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
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	190	194
SP #	986	3525

Line	MGL1801M1140
Sequence	040
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	986	3525
Date MM/DD/YY	01/26/18	01/26/18
Time UTC	7:25	14:57
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	0kts	S 18kts
Sea State (m)	1 m	1m
Water Depth (m)	3500m	101.5m

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	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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	195	199
SP #	3437	879

Line	MGL1801M1340
Sequence	041
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3437	879
Date MM/DD/YY	01/26/18	01/27/18
Time UTC	17:22	00:56
Volume (cu in.)	3300 in3	3300/3120 in3
Wind (kts)	S 11kts	NE 12kts
Sea State (m)	1m	1 m
Water Depth (m)	142.83m	3530m

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
SN NMO at BOL
Volume of source 2 reduced to 3120cu. after SP 2896
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	

[illegible]

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	200	204
SP #	986	3524

Line	MGL1801M1148
Sequence	042
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	989	3524
Date MM/DD/YY	01/27/18	01/27/18
Time UTC	3:50	11:20
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 8kts	N 10kts
Sea State (m)	1 m	1m
Water Depth (m)	3505 m	100.7m

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
streamers 2,3,4 - last ~8 birds at ~10m at beginning of line
streamer 2 spooled out about 15m at beginning of line while trying to separate streamers 1 and 2
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	205	209
SP #	3437	879

Line	MGL1801M1348
Sequence	043
Direction	120.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3437	879
Date MM/DD/YY	01/27/18	01/27/18
Time UTC	13:48	21:15
Volume (cu in.)	3300in3	3300in3
Wind (kts)	NE 8kts	N 10kts
Sea State (m)	1 m	1m
Water Depth (m)	141.7m	3532m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	210	214
SP #	984	3524

Line	MGL1801M1156
Sequence	044
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	984	3524
Date MM/DD/YY	01/27/18	01/28/18
Time UTC	23:56	07:30
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 5kts	E 5kts
Sea State (m)	1 m	1m
Water Depth (m)	3510m	100m

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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	215	219
SP #	3413	879

Line	MGL1801M1356
Sequence	045
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	984	879
Date MM/DD/YY	01/28/18	01/28/18
Time UTC	9:59	17:22
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	SE 6kts	S 10kts
Sea State (m)	0.5 m	1m
Water Depth (m)	150m	3532m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	220	224
SP #	960	3524

Line	MGL1801M1164
Sequence	046
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	960	3524
Date MM/DD/YY	01/28/18	01/29/18
Time UTC	19:55	03:40
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	SE 6kts	SE 9kts
Sea State (m)	1m	1 m
Water Depth (m)	3510.7m	101m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	225	229
SP #	3423	879

Line	MGL1801M1364
Sequence	047
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3423	879
Date MM/DD/YY	01/29/18	01/29/18
Time UTC	6:05	13:20
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 11kts	NE 12kts
Sea State (m)	1 m	1m
Water Depth (m)	150m	3534.35m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	230	234
SP #	971	3525

Line	MGL1801M1172
Sequence	048
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	971	3525
Date MM/DD/YY	01/29/18	01/30/18
Time UTC	15:57	00:24
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 10kts	NE 23kts
Sea State (m)	1 m	1m
Water Depth (m)	3511.1m	100m

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 2930 slow down for main engine
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	235	239
SP #	3418	879

Line	MGL1801M1372
Sequence	049
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3418	879
Date MM/DD/YY	01/30/18	01/30/18
Time UTC	2:53	10:08
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NNE 26kts	N 27kts
Sea State (m)	1.5 m	1.5 m
Water Depth (m)	145m	3550m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	240	244
SP #	933	3525

Line	MGL1801M1180
Sequence	050
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	933	3525
Date MM/DD/YY	01/30/18	01/30/18
Time UTC	12:46	21:10
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 25kts	N 26kts
Sea State (m)	2m	1.5m
Water Depth (m)	3515.51m	97.86m

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	

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

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	245	245
SP #	3422	2932

Line	MGL1801R1268
Sequence	051
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3422	2932
Date MM/DD/YY	01/30/18	01/31/18
Time UTC	23:38	01:01
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 35 kts	N 32kts
Sea State (m)	2 m	2 m
Water Depth (m)	160m	980m

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 MGL1801M1268A
line aborted after SP 2932 because of weather
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	246	246
SP #	2666	2799

Line	MGL1801T1084
Sequence	052
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	2666	2799
Date MM/DD/YY	02/02/2018	02/02/2018
Time UTC	18:57	19:21
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	S 24kts	S 28kts
Sea State (m)	2m	2m
Water Depth (m)	906m	959.8m

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
Reshoot of MGL1801M1076
Missed sps 2647-2665 due to Nav headers
DNP d/t sea noise
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	247	249
SP #	3473	2309

Line	MGL1801I1276
Sequence	053
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3473	2309
Date MM/DD/YY	02/03/2018	12/03/2018
Time UTC	14:34	18:11
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	S 10kts	S 7kts
Sea State (m)	2m	2m
Water Depth (m)	132.32m	931.89m

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
Dropped streamers to 9 meter depth at 15:05 due to sea noise.
Missing traces at tail of streamer #4. (456)
EEOL due to streamer #4 missing traces
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	250	252
SP #	2243	879

Line	MGL1801A1276
Sequence	054
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	2243	879
Date MM/DD/YY	02/03/2018	12/03/2018
Time UTC	18:25	23:08
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	S 8kts	E 6kts
Sea State (m)	2m	1 m
Water Depth (m)	774.44m	8540 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
Streamers to 9 meter depth due to sea noise at PI request.
Hotstart line after EEOL of previous sequence.
SP 1476 decompression error
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	253	257
SP #	968	3524

Line	MGL1801R1076
Sequence	055
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	968	3524
Date MM/DD/YY	02/04/18	02/04/18
Time UTC	1:57	09:24
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 6kts	N 24kts
Sea State (m)	1 m	1 m
Water Depth (m)	3500 m	100m

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
streamer at 9m from ~SP 1000 because of swell noise
SP 2690-2731 missed while troubleshooting/restarting streamer 4
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	258	262
SP #	3383	879

Line	MGL1801B1268
Sequence	056
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μB				
EOL Cable Noise, μB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3383	879
Date MM/DD/YY	02/04/18	02/04/18
Time UTC	10:45	18:34
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	NE 22kts	N 18kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	185m	3524.47m

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	

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	263	267
SP #	967	3525

Line	MGL1801I1116
Sequence	057
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	967	3525
Date MM/DD/YY	02/04/18	02/05/18
Time UTC	20:54	04:16
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	N 17kts	N 33kts
Sea State (m)	1.5m	1.5m
Water Depth (m)	3505.55m	100 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
SP 1644-1664 missing 118 traces
SP 1665-1690 missing all streamer 4 (468 traces)
SP 1691,1692 missed while restarting acquisition
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	268	272
SP #	3169	879

Line	MGL1801I1244
Sequence	058
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3169	879
Date MM/DD/YY	02/05/18	02/05/18
Time UTC	6:11	12:52
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	N 28kts	N 23kts
Sea State (m)	1.5 m	1.5m
Water Depth (m)	450m	3526m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	273	277
SP #	963	3524

Line	MGL1801I1004
Sequence	059
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	963	3524
Date MM/DD/YY	02/05/18	02/05/18
Time UTC	15:33	22:55
Volume (cu in.)	3300 in3	3300in3
Wind (kts)	NW 18kts	S 2kts
Sea State (m)	1.5 m	1.5m
Water Depth (m)	3492.2m	100m

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
Missing traces from streamer 4 SP 2038-2067, 2438-2519,3521-3524
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
15:33	138020	963	273	SOL MGL1801I1004; S1-4G5 spares; Sce 1 (S1-2) vol: 3300 in3 Sce2 (S3-4) vol: 3300 in3
17:06	138569	1512	274	BOT #274
18:35	139095-8	2038-41	274	streamer 4 - 118 channels missing
18:35	139099-124	2042-67	274	acquisition stopped on streamer 4 for restart - 468 channels missing
18:39	139118	2061	275	BOT #275
18:40		2068-2069	275	missed sps 2068-2069 while restarting acquisition
19:45	139493-95	2438-40	275	streamer 4 - 118 channels missing
20:00	139496-574	2441-2519	275	acquisition stopped on streamer 4 for restart - 468 channels missing
20:00		2520-21	275	missed sps 2520-2521 while restarting acquisition
20:16	139667	2614	276	BOT #276
21:52	140216	3163	277	BOT #277
22:54	140574-77	3521-3524	277	streamer 4 - 118 channels missing
22:55	140577	3524	277	EOL MGL1801I1004; S1-4G5 spares; Sce 1 (S1-2) vol: 3300 in3 Sce2 (S3-4) vol: 3300 in3

Observers Log

Vessel	Marcus G. Langseth
Client	NSF - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	278	282
SP #	3379	879

Line	MGL1801I1188
Sequence	060
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3379	879
Date MM/DD/YY	02/06/18	02/06/18
Time UTC	0:42	08:18
Volume (cu in.)	3300in3	3300in3
Wind (kts)	SE 7kts	SE 17kts
Sea State (m)	0.5 m	1 m
Water Depth (m)	360 m	3520 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
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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	283	287
SP #	974	3524

Line	MGL1801A1004
Sequence	061
Direction	301.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, μ B				
EOL Cable Noise, μ B				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	974	3524
Date MM/DD/YY	02/06/18	02/06/18
Time UTC	10:42	18:02
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	SE 20kts	SE 17kts
Sea State (m)	1.5 m	1.5m
Water Depth (m)	3500m	101.7m

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 - Bangs
Area	New Zealand North Island 3D
Job Number	MGL1801

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

	SOL	EOL
Tape #	288	288
SP #	3491	3195

Line	MGL1801B1276
Sequence	062
Direction	121.9

Streamer Parameters				
	1	2	3	4
Length (m)	5850	5850	5850	5850
Auxiliaries	n/a	n/a	n/a	n/a
Shotpoint Interval: (m)	25	25	25	25
Offset CS - CNG (m)	172	172	172	172
Group Interval: (m)	12.5	12.5	12.5	12.5
Number of channels	468	468	468	468
Streamer Depth (m)	8.0	8.0	8.0	8.0
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	3300 in3
Work Pressure	1950psi +/- 100psi
Dual Source	yes
Depth	7 m
Sub-array Separation	8 m
COS to COS	75 m

Recording Parameters	
Record Length	9.5s
Total recording delay	-160ms
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	3491	3195
Date MM/DD/YY	02/06/18	02/06/18
Time UTC	19:56	20:50
Volume (cu in.)	3300 in3	3300 in3
Wind (kts)	SE 16kts	SE 16kts
Sea State (m)	1.5 m	1.5m
Water Depth (m)	131.2m	355m

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 Sequence on NZ3D
Early End of Line due to lost birdline and subsequent nav positioning.
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	

