

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	1	5
SP #	833	2064

Line	MGL1212MCS11
Sequence	001
Direction	350

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15m
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	833	2064
Date MM/DD/YY	13/07/12	07/13/12
Time UTC	0938	1726
Volume (cu in.)	6560in3	1650in3
Wind (kts)	19 NW	18 nw
Sea State (m)	2m	3m
Water Depth (m)	1937m	1894m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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 833 is in file, SPECTRA required a RTNU reboot. NO SPECTRA RECORDED at SP 833. Reset corrected SP 838 File 538
SOL NOISY CHANNELS
SP1364-SP1474 ALL BAD**** Spectra crashed
*****LINE ENDED EARLY***** due to tow rope parting on GS 2. This caused the gun array to entangle the lead in, and gun string 3 and 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	

[illegible]

# Observers Log

<b>Vessel</b>	<b>Marcus G. Langseth</b>
<b>Client</b>	<b>W. Steven Holbrook / Graham Kent</b>
<b>Area</b>	<b>Cascadia Seismic Mission</b>
<b>Job Number</b>	<b>MGL1212</b>

<b>Chief Science Officer</b>	<b>Jay Johnstone</b>		
<b>Science Officer</b>	<b>David Martinson</b>		
<b>Acquisition Leader</b>	<b>David Martinson 12:00-24:00</b>	<b>Bern McKiernan 00:00-12:00</b>	<b>Lisa Hawkins 12:00-24:00</b>
<b>Navigation Leader</b>	<b>Grady Hanley 12:00-24:00</b>	<b>Mike Martello 00:00-12:00</b>	

	SOL	EOL
<b>Tape #</b>	<b>6</b>	<b>7</b>
<b>SP #</b>	<b>2981</b>	<b>3292</b>

Line	MGL1212T01
Sequence	002
Direction	267

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, $\mu$ B				
EOL Cable Noise, $\mu$ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15m
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	2981	3292
Date MM/DD/YY	13/07/12	13/07/12
Time UTC	01:33	03:33
Volume (cu in.)	4950in3	6600in3
Wind (kts)	15 NW	22 NW
Sea State (m)	2m	2m
Water Depth (m)	2295m	2548m

Cable	EOL High Noise Channels (in u-bar)
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
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	8	8
SP #	3226	3433

Line	MGL1212MCS01
Sequence	003
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15m
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	3226	3433
Date MM/DD/YY	07/14/12	7/14/12
Time UTC	04:41	06:04
Volume (cu in.)	6600in3	6600in3
Wind (kts)	20NW	20NW
Sea State (m)	2m	2m
Water Depth (m)	2558m	1894m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
S4G4 disabled at start of line. S4G5 enabled at start of line.
SOL NOISY CHANNELS
****Line ended due to complete power failure after sunset and exceeded the 8 minute allowance for shut down. No rampup.
EOL NOISY CHANNELS

Abbreviations	
SOL/EOL - Start/End of Line	LGSP - Last Good SP
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FOLSP - First Overlap SP	Fa - Feather Angle
BOT/EOT - Begin/End of Tape	SI - Seismic Interference
NDR - No Data Recorded	ITB - 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
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Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	009	016
SP #	3632	5517

Line	MGL1212MCS01A
Sequence	004
Direction	82

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	12288ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	3632	5517
Date MM/DD/YY	07/14/12	07/15/12
Time UTC	1310	0042
Volume (cu in.)	6600in3	6600in3
Wind (kts)	12 nw	1.7 NE
Sea State (m)	1m	1m
Water Depth (m)	2552m	148.5m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL early due to fishing traffic ahead
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
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NDR - No Data Recorded	ITB - Internal Time Break
N.T.B.P. - Not To Be Processed	



Time UTC	FILE	SP	Tape	Description
1310	001	3632	009	SOL MGL1212MCS01A sequence 004 6600 in3 no noise in record.
1319	26	3657	009	DT S3G01 2.1 ms
1327	46	3677	009	DT S3G01 -2.3 ms
1400	134	3765	009	DT S3G01 2.1 ms
1442	240	3871	010	Tape change
1530	372	4003	010	DT S3G01 2.1 ms
1610	480	4111	011	Tape change
1612	489	4120	011	DT S3G01 2.1 ms
1629	537	4168	011	DT S3G01 -2.2 ms
1737	721	4352	012	Tape change
1743	740	4371	012	DT S3G01 -2.2 ms
1744	743	4374	012	DT S3G01 -2.2 ms
1748	753	4384	012	DT S3G01 -2.1 ms
1752	766	4397	012	DT S3G01 -2.1 ms
1804	797	4428	012	DT S3G01 -2.1 ms
1811	817	4448	012	DT S3G01 -2.1 ms
1826	859	4490	012	DT S3G01 -2.3 ms
1832	874	4505	012	DT S3G01 -2.1 ms
1837	886	4517	012	DT S3G01 -2.1 ms
1848	917	4548	012	DT S3G01 2.2 ms
1851	923	4554	012	DT S3G01 -2.3 ms
1857	940	4571	012	DT S3G01 -2.2 ms
1858	942	4573	012	DT S3G01 2.1 ms
1902	954	4585	012	DT S3G01 -2.2 ms
1907	961	4592	013	Tape change to 013
1907	966	4597	013	DT S3G01 -2.3 ms
1914	984	4615	013	DT S3G01 -2.1 ms
1919	998	4629	013	DT S3G01 -2.4 ms
1927	1020	4651	013	DT S3G01 -2.2 ms
1929	1025	4656	013	DT S3G01 -2.2 ms
1930	1028	4659	013	DT S3G01 -2.3 ms
1943	1064	4695	013	DT S3G01 -2.1 ms
1945	1069	4700	013	DT S3G01 -2.7 ms
1951	1085	4716	013	DT S3G01 -2.5 ms
1954	1092	4723	013	DT S3G01 -2.5 ms
1956	1099	4730	013	DT S3G01 -2.4 ms
1957	1102	4733	013	DT S3G01 -2.2 ms
2000	1109	4740	013	DT S3G01 -2.4 ms
2001	1113	4744	013	DT S3G01 +2.1 ms
2002	1117	4748	013	DT S3G01 -2.1 ms
2006	1126	4757	013	DT S3G01 -2.3 ms
2009	1134	4765	013	DT S3G01 -2.1 ms
2015	1150	4781	013	DT S3G01 -2.4 ms
2020	1164	4795	013	DT S3G01 -2.2 ms
2031	1198	4829	013	DT S3G01 -2.4 ms
2032	1200	4831	013	DT S3G01 -2.3 ms
2032	1200	4831	014	Tape change to 014
2034	1205	4836	014	DT S3G01 -2.3 ms
2036	1213	4844	014	DT S3G01 -2.4 ms
2043	1230	4861	014	DT S3G01 -2.4 ms
2044	1233	4864	014	DT S3G01 -2.5 ms
2045	1236	4867	014	DT S3G01 -2.4 ms
2046	1238	4869	014	DT S3G01 -2.4 ms
2046	1240	4871	014	DT S3G01 -2.2 ms
2059	1276	4907	014	DT S3G01 -2.1 ms
2159	1441	5072	015	Tape Change to 015
2326	1680	5311	015	End of tape 015
2326	1681	5312	016	start of tape 016
0042	1886	5517	016	EOL MGL1212MCS01A sequence 004 6600 in3



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Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	0017	25
SP #	6371	8484

Line	MGL1212MCS03
Sequence	005
Direction	263.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	12288ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	6371	8484
Date MM/DD/YY	07/15/12	07/15/12
Time UTC	0515	1837
Volume (cu in.)	6600in3	6600in3
Wind (kts)	12 nnw	22 NW
Sea State (m)	1m	3-4m
Water Depth (m)	326m	2599.4m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

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Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	26	37
SP #	9419	12085

Line	MGL1212MCS05
Sequence	006
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	9419	12085
Date MM/DD/YY	07/16/12	07/16/12
Time UTC	0104	1730
Volume (cu in.)	6600in3	6600in3
Wind (kts)	20 N	0
Sea State (m)	4m	1m
Water Depth (m)	2625m	131m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
Ended line early due to humback sighting.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

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Job Number	MGL1212

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Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	38	39
SP #	12346	12633

Line	MGL1212MCST02
Sequence	007
Direction	172

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	12346	12633
Date MM/DD/YY	07/16/12	07/16/12
Time UTC	1739	1938
Volume (cu in.)	40in3	40in3
Wind (kts)	0	0
Sea State (m)	1m	1m
Water Depth (m)	131m	124m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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 coming onto Line 07
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

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Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	40	49
SP #	13293	15320

Line	MGL1212MCS07
Sequence	008
Direction	263.46

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	13293	15320
Date MM/DD/YY	7/16/12	7/17/12
Time UTC	2102	1038
Volume (cu in.)	40in3	6600in3
Wind (kts)	5 NNW	CALM
Sea State (m)	1m	~1m
Water Depth (m)	370m	2633m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL shooting with 40in3 mitigation gun only.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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



[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	50	51
SP #	15530	15788

Line	MGL1212MCST03
Sequence	009
Direction	176

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	15530	15788
Date MM/DD/YY	07/17/12	07/17/12
Time UTC	1055	1246
Volume (cu in.)	6600in3	6600in3
Wind (kts)	16 N	4
Sea State (m)	2m	1m
Water Depth (m)	2616m	2567m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
Bird 18 not updating but appears functional. Bad coil on cable probable cause
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	52	59
SP #	15891	17766

Line	MGL1212MCS09
Sequence	010
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	15.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	15
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	15891	17766
Date MM/DD/YY	07/17/12	07/18/12
Time UTC	1300	0015
Volume (cu in.)	6600in3	6600in3
Wind (kts)	6 NNW	calm
Sea State (m)	1m	1m
Water Depth (m)	2570m	988.5m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
Bird 18 not updating but appears functional. Bad coil on cable probable cause intermittant status updates.
End of line early due to mammals ahead
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	60	64
SP #	18994	20127

Line	MGL1212MCS08
Sequence	011
Direction	263.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	18994	20127
Date MM/DD/YY	07/18/12	07/19/12
Time UTC	2231	0528
Volume (cu in.)	40in3	6560in3
Wind (kts)	7 WNW	12 NNW
Sea State (m)	1m	1-2m
Water Depth (m)	1883.6m	2593.4m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL - started during ramp up - FSP at 40 in3
EOL volume 6560 in3
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]



# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	65	66
SP #	20222	20482

Line	MGL1212MCST04
Sequence	012
Direction	358

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	20222	20482
Date MM/DD/YY	07-19-12	7/19/12
Time UTC	0549	0730
Volume (cu in.)	6560in3	6560in3
Wind (kts)	12 NNW	10 n
Sea State (m)	2m	1m
Water Depth (m)	2612m	2623m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	67	76
SP #	20890	23250

Line	MGL1212MCS06
Sequence	013
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	20890	23250
Date MM/DD/YY	7/19/12	7/19/12
Time UTC	0744	2152
Volume (cu in.)	6560in3	40in3
Wind (kts)	11 N	14N
Sea State (m)	1m	1m
Water Depth (m)	2619m	97m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL 6560 in3 volume, EOL 40in3 volume
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

Time UTC	FILE	SP	Tape	Description
0744	001	20890	67	SOL MGL1212MCS06 VOL 6560in3 SEQ 013 Turn noise evident in record
0845	175	21070	67	Turn complete noise on cable minimal
0906	240	21129	67	EOT 67
0906	241	21130	68	SOT 68
1034	480	21369	68	EOT 68
1034	481	21370	69	SOT 69
1207	720	21609	69	EOT 69
1207	721	21610	70	SOT 70
1324	925	21814	70	DT 4.3 ms S3G03
1324	926	21815	70	DT -2.8 ms S3G03
1337	960	21859	70	EOT 70
1338	961	21860	71	SOT 71
1504	1200	22089	71	EOT70
1504	1201	22090	72	SOT 71
1629	1440	22329	72	EOT 72
1629	1441	22330	73	EOT 73
1637	1463	22352	73	Power down for fin whale
1730	1592	22481	73	ITB
1730	1593	22482	73	Back to full volume, 6560 cuin
1748	1642	22531	73	ITB
1748	1643	22532	73	Power down for dolphin
1804	1690	22579	73	EOT 73
1804	1691	22580	74	BOT 74
1810	1694	22583	74	ITB
1810	1695	22584	74	Full volume - 6560 in3
1906	1855	22744	74	comm error S4G07
1929	1920	22809	74	EOT 74
1929	1921	22810	75	SOT 75
1932	1932	22821	75	Comm error S4G09
1943	1961	22850	75	DT 12.1 ms S4G09
1943	1962	22851	75	DT 10.2 ms S4G09
1943	1963	22852	75	DT 2.7 ms S4G09
1947	1974	22863	75	Comm error S4G08
2010	2045	22934	75	Comm error S4G08
2011	2049	22938	75	Comm error S4G07
2021	2079	22968	75	Comm error S4G08
2024	2087	22976	75	Comm error S4G09
2026	2093	22982	75	Comm error S4G08
2050	2160	23049	75	EOT 75
2050	2161	23050	76	SOT 76
2058	2185	23074	76	power down to mitigation gun - whales
2058	2186	23075	76	ITB
2112	2225	23114	76	auto fire at S4G05 +6553.5ms
2202	2361	23250	76	EOL MGL1212MCS06 VOL 40 in3 SEQ 013

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	77	78
SP #	23503	23769

Line	MGL1212MCST05
Sequence	014
Direction	2.77

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	23503	23769
Date MM/DD/YY	7/19/12	7/19/12
Time UTC	2209	2351
Volume (cu in.)	40in3	40in3
Wind (kts)	14N	12 NW
Sea State (m)	1m	1m
Water Depth (m)	97.8m	90m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL mitigation gun only
EOL mitigation gun only
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	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	79	89
SP #	23997	26627

Line	MGL1212MCS04
Sequence	015
Direction	263.48

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	23997	
Date MM/DD/YY	07/20/12	07/20/12
Time UTC	00:17	1511
Volume (cu in.)	40in3	6560in3
Wind (kts)	NNW 10	12 W
Sea State (m)	1m	1m
Water Depth (m)	96.4m	2624m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL 40 in3
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
0019	1	23997	79	SOL MGL1212MCS04 40in3
0049	90	24086	79	Shutdown - whale
0059	117	24113	79	mit gun on
0059	117	24113	79	S1G3 DT - 9.2 ms
0059	118	24114	79	S1G3 DT - 12.2 ms
0059	119	24115	79	S1G3 DT - 3.3 ms
0147	240	24236	79	End of tape 79
0147	241	24237	80	Start of tape 80
0149	245	24243	80	Start of ramp up
0221	328	24324	80	First good shot at full power at 6560
0225	340	24336	80	S4G08/S4G07 comm error
0232	362	24358	80	S4G07 comm error
0309	480	24477	80	End of tape 80
0309	481	24478	81	Start of tape 81
0318	509	24505	81	S4G07 comm error
0424	721	24716	81	End of tape 81
0424	721	24717	82	Start of tape 82
0430	740	24736	82	SG407 Comm Error
0526	914	24910	82	SG408 Comm Error
0540	960	24956	82	EOT 82
0541	961	24957	83	SOT 83
0551	994	24990	83	Comm Error S4G08
0607	1041	25037	83	Comm Error S4G08
0618	1075	25071	83	Shot Error S3G3 not firing
0619	1076	25072	83	Shot Error S3G3 not firing
0619	1077	25073	83	Shot Error S3G3 not firing
0620	1080	25076	83	S3G3 off, S2G3 on
0627	1104	25100	83	Comm Error S4G08
0638	1139	25135	83	comm error S4G09
0658	1200	25196	83	End of tape 83
0658	1201	25197	84	Start of tape 84
0816	1440	25436	84	EOT 84
0817	1441	25437	85	SOT 85
0938	1680	25676	85	EOT 85
0938	1681	25677	86	SOT 86
1101	1920	25916	86	EOT 86
1101	1921	25917	87	SOT 87
1221	2160	26156	87	EOT 87
1222	2161	26157	88	SOT 88
1347	2400	26396	88	EOT 88
1347	2401	26397	89	SOT 89
1505	2614	26610	89	Start of turn to next transit line
1511	2631	26627	89	EOL

# Observers Log

<b>Vessel</b>	<b>Marcus G. Langseth</b>
<b>Client</b>	<b>W. Steven Holbrook / Graham Kent</b>
<b>Area</b>	<b>Cascadia Seismic Mission</b>
<b>Job Number</b>	<b>MGL1212</b>

<b>Chief Science Officer</b>	<b>Jay Johnstone</b>		
<b>Science Officer</b>	<b>David Martinson</b>		
<b>Acquisition Leader</b>	<b>David Martinson 12:00-24:00</b>	<b>Bern McKiernan 00:00-12:00</b>	<b>Lisa Hawkins 12:00-24:00</b>
<b>Navigation Leader</b>	<b>Grady Hanley 12:00-24:00</b>	<b>Mike Martello 00:00-12:00</b>	

	SOL	EOL
<b>Tape #</b>	<b>90</b>	<b>91</b>
<b>SP #</b>	<b>27021</b>	<b>27283</b>

<b>Line</b>	<b>MGL1212MCST06</b>
<b>Sequence</b>	<b>016</b>
<b>Direction</b>	<b>349</b>

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, $\mu$ B				
EOL Cable Noise, $\mu$ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	27021	27283
Date MM/DD/YY	07/20/12	07/20/12
Time UTC	1522	1657
Volume (cu in.)	6560in3	6560in3
Wind (kts)	7 W	5 w
Sea State (m)	1m	1m
Water Depth (m)	2614m	2593m

Cable	EOL High Noise Channels (in u-bar)
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
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	92	100
SP #	27580	29524

Line	MGL1212MCS02
Sequence	017
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	27580	29524
Date MM/DD/YY	07/20/12	07/21/12
Time UTC	1708	0409
Volume (cu in.)	6560in3	6560in3
Wind (kts)	3 NW	5 NE
Sea State (m)	1m	1m
Water Depth (m)	2590m	931m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	101	103
SP #	31278	31923

Line	MGL1212MCS03a
Sequence	018
Direction	82.42

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	31278	31923
Date MM/DD/YY	7/21/12	07/21/12
Time UTC	0508	0848
Volume (cu in.)	6560in3	6560in3
Wind (kts)	1	1
Sea State (m)	1m	1m
Water Depth (m)	469m	89.9m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]



# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	104	105
SP #	32006	32341

Line	MGL1212MCST07
Sequence	019
Direction	75.6

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	32006	32341
Date MM/DD/YY	07/21/12	07/21/12
Time UTC	0859	1134
Volume (cu in.)	40in3	40in3
Wind (kts)	calm	calm
Sea State (m)	1m	1m
Water Depth (m)	85m	40m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	106	111
SP #	33149	34425

Line	MGL1212NTMCS01
Sequence	020
Direction	Variable

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	33149	34425
Date MM/DD/YY	07/21/12	7/21/12
Time UTC	1257	2142
Volume (cu in.)	6560in3	6560in3in3
Wind (kts)	1 W	1 SW
Sea State (m)	1m	1m
Water Depth (m)	40m	1171m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
Bird 11 @12 m depth birds 27, 28, 29@15 m climbing slowly as speed and tension increase at SOL
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

<b>Observers Log</b>
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<b>Vessel</b>	<b>Marcus G. Langseth</b>
<b>Client</b>	<b>W. Steven Holbrook / Graham Kent</b>
<b>Area</b>	<b>Cascadia Seismic Mission</b>
<b>Job Number</b>	<b>MGL1212</b>

<b>Chief Science Officer</b>	<b>Jay Johnstone</b>		
<b>Science Officer</b>	<b>David Martinson</b>		
<b>Acquisition Leader</b>	<b>David Martinson 12:00-24:00</b>	<b>Bern McKiernan 00:00-12:00</b>	<b>Lisa Hawkins 12:00-24:00</b>
<b>Navigation Leader</b>	<b>Grady Hanley 12:00-24:00</b>	<b>Mike Martello 00:00-12:00</b>	

	SOL	EOL
<b>Tape #</b>	<b>112</b>	<b>113</b>
<b>SP #</b>	<b>34607</b>	<b>34928</b>

Line	MGL1212MCST08
Sequence	021
Direction	248

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, $\mu$ B				
EOL Cable Noise, $\mu$ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	34607	34928
Date MM/DD/YY	07/21/12	7/22/12
Time UTC	2155	0004
Volume (cu in.)	6560in3	6560in3
Wind (kts)	1 NW	8 SW
Sea State (m)	1m	1m
Water Depth (m)	1228m	1692m

Cable	EOL High Noise Channels (in u-bar)
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
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	114	121
SP #	35092	36775

Line	MGL1212MCS10
Sequence	022
Direction	175

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	35092	36775
Date MM/DD/YY	7/21/12	7/22/12
Time UTC	1940	1111
Volume (cu in.)	6560in3	6560in3
Wind (kts)	10 SW	8 w
Sea State (m)	1m	1m
Water Depth (m)	1739m	1733m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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
Bird 27 has possible fishing gear dragging cable to 14.9 meters
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]



# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	122	126
SP #	40465	41479

Line	MGL1212MCS09A
Sequence	023
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	40465	41479
Date MM/DD/YY	07/22/12	7/22/12
Time UTC	1525	2148
Volume (cu in.)	6560in3	6560in3
Wind (kts)	6nw	10
Sea State (m)	1m	1m
Water Depth (m)	2268m	1867m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

# Observers Log

Vessel	Marcus G. Langseth
Client	W. Steven Holbrook / Graham Kent
Area	Cascadia Seismic Mission
Job Number	MGL1212

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
Tape #	127	131
SP #	42244	43268

Line	MGL1212MCS09B
Sequence	024
Direction	263.46

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, µB				
EOL Cable Noise, µB				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	42244	43268
Date MM/DD/YY	7/23/12	07/23/12
Time UTC	0015	0725
Volume (cu in.)	3260in3	3260in3
Wind (kts)	15	17 N
Sea State (m)	1m	1-2m
Water Depth (m)	1585.2m	2289m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

ProMax - QC the above channels

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

General / Line Comments
Line run 2 x 9m arrays. 3260 in3.
SOL NOISY CHANNELS
EOL NOISY CHANNELS

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

[illegible]

Observers Log									
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<b>Vessel</b>	<b>Marcus G. Langseth</b>
<b>Client</b>	<b>W. Steven Holbrook / Graham Kent</b>
<b>Area</b>	<b>Cascadia Seismic Mission</b>
<b>Job Number</b>	<b>MGL1212</b>

Chief Science Officer	Jay Johnstone		
Science Officer	David Martinson		
Acquisition Leader	David Martinson 12:00-24:00	Bern McKiernan 00:00-12:00	Lisa Hawkins 12:00-24:00
Navigation Leader	Grady Hanley 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL
<b>Tape #</b>	<b>132</b>	<b>135</b>
<b>SP #</b>	<b>45630</b>	<b>46500</b>

Line	MGL1212MCS09C
Sequence	025
Direction	82.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	50			
Offset CS - CNG (m)	264			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9.0			
SOL Cable Noise, $\mu$ B				
EOL Cable Noise, $\mu$ B				

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	9
Source Separation	n/a
COS to COS	

Recording Parameters	
Record Length	16384ms
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	103Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
SP	45630	46500
Date MM/DD/YY	07/23/12	7/23/12
Time UTC	1042	1603
Volume (cu in.)	1650in3	3300in3
Wind (kts)	7 N	12 nw
Sea State (m)	1m	1m
Water Depth (m)	2328m	1751m

Cable	EOL High Noise Channels (in u-bar)
1	
2	
3	
4	

### ProMax - QC the above channels

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

General / Line Comments
SOL only GS1 deployed. VOL is 1650in3. SP45643set streamer to 15M, SP45648 streamer at 15M. Bird 27@25M, 28@18M, 29@16M
SOL NOISY CHANNELS
SP45844 Gun string 2 in positon and firing full volume 3300 in3
EOL full volume 3300in3
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]