Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	1001
SP #	995	1831	LGSP	1831

Line	MGL1211OBS03
Sequence	001
Direction	347.9

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	995	1831
Date MM/DD/YY	06/14/12	6/16
Time UTC	20:22	22:56
Volume (cu in.)	6600in3	6600in3in3
Wind (kts)	10	10
Sea State (m)	1m	1mm
Water Depth (m)	2979.5m	2187.4m

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 SP 1001
EOL SP
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
23:59	1055	Start of Julian Day 167
00:40	1066	Power down for whale inside exclusion zone
00:54	1070	Source at full volume
03:07	1108	Air pressure dropped to 1389. Stopped guns and slowed vessel. No shots were missed when air was back up
12:09	1259	Air pressure dropped to approx 1600psi and recovered without intervention. No shots lost
13:26	1281	Air pressure dropped to approx 1430psi and recovered without intervention. No shots lost
14:15	1295	Power down for whale inside exclusion zone
14:19	1296	Source at full volume
24:00	1458	Start of Julian Day 168
02:51	1506	Power down for sea lions inside exclusion zone
02:56	1507	Missed shot while reconfiguring source, source did not fire
03:11	1510	Source at full volume
17:00	1741	Power down for sea lions inside exclusion zone
17:27	1746	Source at full volume
20:08	1791	Power down for mammals inside exclusion zone
20:40	1799	Shutdown for seals inside source safety radius
21:32	1811	Start ramp-up
22:02	1816	Ramp-up complete, source at full volume
22:13	1819	Shutdown for seals inside source safety radius
22:56	1831	EOL

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	1845
SP #	1845	2048	LGSP	2062

Line	MGL1211OBSFS01
Sequence	002
Direction	Fan Shoot

Streamer Parameters				
	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a

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

Description	SOL/FQCSP	EOL/LQCSP
	1845	2062
Date MM/DD/YY	6/17	6/17
Time UTC	00:44	13:58
Volume (cu in.)	6600in3	6600in3in3
Wind (kts)	21	22
Sea State (m)	1m	3m
Water Depth (m)	2201.9m	2548.8m

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 SP

EOL SP

SOL NOISY CHANNELS

None - streamer not in use

EOL NOISY CHANNELS

None - streamer not in use

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	

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Time UTC	SP	Description
00:44	1845	SOL
12:46	2048	LGSP - line aborted dt Seals in EZ
12:50	2049	Power down for seal inside exclusion zone
13:58	2062	EOL - line aborted to circle back

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	2133
SP #	2133	2156	LGSP	2156

Line	MGL1211OBSFS01A
Sequence	003
Direction	Fan Shoot

Streamer Parameters				
	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a

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

Description	SOL/FQCSP	EOL/LQCSP
	2133	2156
Date MM/DD/YY	06/17/2012	06/17/2012
Time UTC	22:12	23:35
Volume (cu in.)	6600in3	6600in3
Wind (kts)	5	10
Sea State (m)	2m	1m
Water Depth (m)	2552.5m	2565.6m

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 SP

EOL SP

SOL NOISY CHANNELS

None - streamer not in use

EOL NOISY CHANNELS

None - streamer not in use

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	

Printed - 8/8/2012 3:24 PM

Time UTC	SP	Description
		No events to report

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	2159
SP #	2159	2333	LGSP	2333

Line	MGL1211OBST01
Sequence	004
Direction	76.7

Streamer Parameters				
	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a

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

Description	SOL/FQCSP	EOL/LQCSP
	2159	2333
Date MM/DD/YY	06/17/2012	06/18/2013
Time UTC	23:41	09:17
Volume (cu in.)	6600in3	6600 in3
Wind (kts)	10	15
Sea State (m)	1m	1 m
Water Depth (m)	2569.5m	2046.3m

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 SP
EOL SP
SOL NOISY CHANNELS
None - streamer not in use

EOL NOISY CHANNELS
None - streamer not in use

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	

Printed - 8/8/2012 3:24 PM

Time UTC	SP	Description
		No events to report

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	3124
SP #	3124	3450	LGSP	3398

Line	MGL1211OBS02
Sequence	005
Direction	275.4

Streamer Parameters				
	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a

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

Description	SOL/FQCSP	EOL/LQCSP
	3124	3450
Date MM/DD/YY	06/18/2012	6/19/12
Time UTC	09:34	05:43
Volume (cu in.)	6600in3	6600in3
Wind (kts)	10	22
Sea State (m)	1m	2m
Water Depth (m)	2569.5m	2531m

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 SP

EOL SP

SOL NOISY CHANNELS

None - streamer not in use

EOL NOISY CHANNELS

None - streamer not in use

Abbreviations

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

Time UTC	SP	Description
12:49	3174	Delta timing 2.4
12:53	3175	Delta timing -2.5
14:43	3206	Power down for seals
18:34	3269	Source at full volume
22:55	3339	Power down for seals
23:13	3343	Source at full volume
23:21	3345	Shutdown for seals
23:23	3345	Start mitigation gun
00:08	3358	Source at full volume
00:55	3371	Power down for seals
01:13	3376	Source at full volume
01:27	3380	Power down for dolphins
01:41	3384	Source at full volume
01:45	3385	Power down for fur seal
02:04	3390	Source at full volume
02:36	3399	Shutdown for seals
02:43	3401	Start mitigation gun
02:50	3403	Shutdown for seals

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	3555
SP #	3555	3939	LGSP	3936

Line	MGL1211OBS02
Sequence	006
Direction	275.4

Streamer Parameters				
	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a

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

Description	SOL/FQCSP	EOL/LQCSP
	3555	3939
Date MM/DD/YY	06/19/12	06/20/13
Time UTC	14:49	14:06
Volume (cu in.)	6600in3	40in3
Wind (kts)	20	1
Sea State (m)	2m	<1m
Water Depth (m)	2385.9m	2398.0m

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 SP
EOL SP
SOL NOISY CHANNELS
None - streamer not in use

EOL NOISY CHANNELS
None - streamer not in use

Abbreviations

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

Time UTC	SP	Description
14:49	3555	Start of Line - FGSP
20:25	3649	Power down for seals
20:44	3654	Source at full volume
21:02	3659	Shutdown for seals
21:23	3665	Start mitigation gun
21:29	3667	Shutdown for seals
21:43	3671	Start mitigation gun
21:47	3672	Start ramp-up
22:19	3681	Source at full volume
00:00	3708	Midnight Shot Point
03:40	3769	Shutdown for seals
03:57	#	Start ramp-up
04:28	3778	Source at full volume
13:54	#	Shutdown for seals
14:02	#	fire mitigaion gun 3 times between shot points
14:04	3939	first mitigation shot point
14:06	#	End line - PSO wants 15mins for seals to clear, line is shorter in time d/t to r/v Thomas Thompson on line.

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	1	3	FGSP	6657
SP #	6657	8132	LGSP	8132

Line	MGL1211MCS02
Sequence	007
Direction	105.5

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	6657	8132
Date MM/DD/YY	6/21/12	6/21/12
Time UTC	04:26	10:55
Volume (cu in.)	6600in3	6600in3
Wind (kts)	9	9
Sea State (m)	1m	1m
Water Depth (m)	2659.7m	2503.6m

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 SP 6657
EOL SP 8132
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	

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Time UTC	FILE	SP	Tape	Description
04:26	1	6657	1	SOL
07:20	643	7299	1	EOT
07:20	644	7300	2	BOT
		7533		something header related…?
10:10	1286	7943	2	EOT
10:10	1287	7944	3	BOT
10:55	1475	8132	3	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	4	9	FGSP	8716
SP #	8716	12316	LGSP	12316

Line	MGL1211MCS02A
Sequence	008
Direction	105.5

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	8716	12316
Date MM/DD/YY	06/21/12	06/22/12
Time UTC	21:45	14:25
Volume (cu in.)	6600in3	6600in3
Wind (kts)	7	10
Sea State (m)	1m	1m
Water Depth (m)	2436m	1070m

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 SP 8176
EOL SP 12316
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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
21:45	1	8716	4	SOL - FGSP	8715	642	643
23:22	355	9070	4	Power down for seal	8715		
23:24	362	9077	4	Source at full volume	8715		
23:28	377	9092	4	Power down for seal	8715		
23:30	381	9096	4	Source at full volume	8715		
23:31	386	9101	4	Power down for porpoise	8715		
23:51		9155	4	missed shot d/t reconfigure for full volume			
23:51	442	9156	4	Source at full volume	8714		
00:00	499	9213	4	Midnight Shotpoint	8714		
00:47	644	9358	4	EOT 4	8714		
00:47	645	9359	5	BOT 5	8714	641	640
01:55	895	9609	5	Power down for seal	8714		
02:11		9660	5	missed shot d/t reconfigure for full volume			
02:11	946	9661	5	Source at full volume	8715		
03:17	1184	9899	5	Delta error at 10.8 ms	8715		
03:17	1185	9900	5	Delta error at 11.7 ms	8715		
03:18	1186	9901	5	Delta error at 2.7 ms	8715		
03:22	1198	9913	5	Power down for seal	8715		
03:37	1249	9964	5	Source at full volume	8715		
03:40	1259	9974	5	Disable S2 gun 4 for autofire, enable S2 gun 5	8715		
03:41	1262	9977	5	Power down for seal	8715		
03:48	1284	9999	5	Source at full volume	8715		
03:48	1285	10000	5	EOT 5	8715		
03:48	1286	10001	6	BOT 6	8715	**644**	**643**
04:18	1397	10112	6	Shutdown for seal	8715		
04:20	1405	10120	6	Start mitigation gun	8715		
04:24	1419	10134	6	Shutdown for seal	8715		
04:40	1470	10185	6	Start mitigation gun	8715		
04:43	1481	10196	6	Shutdown for seal	8715		
05:00	1529	10244	6	Start mitigation gun	8715		
05:36	1632	10347	6	Start ramp up	8715		
06:07	1723	10438	6	Ramp up complete	8715		
06:54		10591	6	missed shotpoint			
07:09	1929	10645	6	EOT 6	8716		
07:09	1930	10646	7	BOT 7	8716	**642**	**642**
09:56	2572	11288	7	EOT 7	8716		
09:56	2573	11289	8	BOT 8	8716	**642**	**642**
12:42	3210	11926	8	Shutdown for porpoise	**8716**		
12:43	3215	11931	8	EOT 8	**8716**		
12:44	3216	11932	9	BOT 9	**8716**		
12:49	3238	11954	9	Start mitigation gun	**8716**		
13:04	3293	12009	9	Source at full volume	**8716**		
13:04	3294	12010	9	Delta error at 4.9ms	**8716**		
13:04	3295	12011	9	Delta error at -3.9ms	**8716**		
14:25	3600	12316	9	EOL - LGSP	**8716**		

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	10	10	FGSP	15083
SP #	15083	15534	LGSP	15534

Line	MGL1211MCST02
Sequence	009
Direction	310

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	15083	15534
Date MM/DD/YY	06/22/12	6/22/12
Time UTC	17:09	19:20
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 5-10	SE 5-10
Sea State (m)	1m	1mm
Water Depth (m)	1496m	1710.8m

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

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
17:09	1	15083	10	SOL - FGSP
19:20	451	15534	10	EOL - LGSP

SP vs File	check SP	check File
15082	-15083	-1
15083		

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	11	11	FGSP	15083
SP #	15547	15877	LGSP	15877

Line	MGL1211MCST02A
Sequence	010
Direction	310

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	15547	15877
Date MM/DD/YY	06/22/12	6/22/12
Time UTC	19:23	20:54
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 5-10	SE 5-10
Sea State (m)	1m	1m
Water Depth (m)	1710.8m	1413.3m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
19:23	1	15547	11	SOL - FGSP	15546	-15547	-1
20:54	331	15877	11	EOL - LGSP	15546		

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	12	12	FGSP	15930
SP #	15930	16401	LGSP	16401

Line	MGL1211MCST03
Sequence	011
Direction	260.4

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	15930	16401
Date MM/DD/YY	06/22/12	6/22/12
Time UTC	21:09	23:09
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 5-10	E 10
Sea State (m)	1m	1m
Water Depth (m)	1468m	1733.6m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
21:09	1	15930	12	SOL - FGSP	15929	-15930	-1
22:44	381	16311	12	Power down for seal	15930		
23:00	450	16380	12	Source at full volume	15930		
23:07	471	16401	12	EOL - LGSP	15930		

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	13	15	FGSP	16502
SP #	16502	17825	LGSP	17825

Line	MGL1211MCS02B
Sequence	012
Direction	287.9

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	16502	17825
Date MM/DD/YY	06/22/12	06/23/12
Time UTC	23:10	05:06
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 5-10	E 10
Sea State (m)	1m	1m
Water Depth (m)	1733.3m	2390.7m

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

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	SP vs File	check SP	check File
23:10	1	16502	13	SOL - FGSP	16502	181	181
00:00	182	16683	13	Midnight Shotpoint	16502	181	181
01:59	643	17145	13	EOT 13	16503	462	461
02:00	644	17146	14	BOT 14	16503	1	1
03:38	1013	17515	14	Power down for seal	16503	369	369
04:00	1091	17593	14	Source at full volume	16503	78	78
04:53	1286	17788	14	EOT 14	16503	195	195
04:53	1287	17789	15	BOT 15	16503	1	1
05:06	1323	17825	15	EOL - LGSP	16503	36	36
					1	-17825	-1323
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	16	17	FGSP	18139
SP #	18139	18799	LGSP	18799

Line	MGL1211MCS03
Sequence	013
Direction	347

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	18139	18799
Date MM/DD/YY	6/23/12	6/23/12
Time UTC	05:27	09:11
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SE 5-10	W 10
Sea State (m)	1m	1m
Water Depth (m)	2383.6m	2280.1m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
05:27	1	18139	16	SOL - FGSP	18139	353	353
	354	18492	16	Delta Error Gun 1-2, -2.6ms	18139	5	5
	359	18497	16	Delta Error Gun 1-2, -3.4ms	18139	1	1
	360	18498	16	Delta Error Gun 1-2, 5.0ms	18139	282	282
09:06	642	18780	16	EOT 16	18139	1	1
	643	18781	17	BOT 17	18139	18	18
09:11	661	18799	17	EOL - LGSP	18139	-18799	-661
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	18	18	FGSP	19004
SP #	19004	19149	LGSP	19149

Line	MGL1211OBS03B
Sequence	014
Direction	347

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	19004	19149
Date MM/DD/YY	6/23/12	6/23/12
Time UTC	09:14	11:37
Volume (cu in.)	6600in3	6600in3
Wind (kts)	W 10	W 10
Sea State (m)	1m	1m
Water Depth (m)	2280.1m	2165.5m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
09:14	1	19004	18	SOL - FGSP	19004	73	-1
10:25		19077	18	Missed Shotpoint	19078	14	
10:39		19091	18	Missed Shotpoint	19092	52	138
11:29	138	19143	18	Initiate turn to STBD	19006	6	6
11:37	144	19149	18	EOL - LGSP	19006	-19149	-144
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	19	35	FGSP	20167
SP #	20167	30897	LGSP	30897

Line	MGL1211MCS03A
Sequence	015
Direction	347

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	152.7			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	20167	30879
Date MM/DD/YY	06/23/12	06/25/12
Time UTC	14:20	13:35
Volume (cu in.)	6600in3	6600in3
Wind (kts)		NE 6
Sea State (m)	1m	<1m
Water Depth (m)	2244.2m	2963.1m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
14:20	1	20167	19	SOL - FGSP	20167	432	-1
16:23		20599	19	no source fired - power down dt dolphin	20600	1	
16:23		20600	19	no source fired	20601	1	433
16:23	433	20601	19	mitigation gun firing	20169	85	85
16:48	518	20686	19	no source fired	20169	1	1
16:48	519	20687	19	Source at full volume (6600 cu in) - Delta error gun 4-3 - 2.1ms	20169	120	-519
17:21		20807	19	20807-20809 SPs - no file recorded	20808	6	643
17:22	643	20813	19	EOT 19	20171	1	1
17:22	644	20814	20	BOT 20	20171	138	-644
17:55		20952	20	source not firing through SP 20956 - power down for seal	20953	5	786
17:57	786	20957	20	mitigation gun firing	20172	62	-786
18:12		21019	20	no source fired	21020	1	848
18:12	848	21020	20	Source at full volume (6600 cu in)	20173	18	-848
18:16		21038	20	no file recorded	21039	1	
18:16		21039	20	no file recorded	21040	80	
18:36		21119	20	no source fired - power down dt seal	21120	1	944
18:36	944	21120	20	mitigation gun firing	20177	25	-944
18:43		21145	20	no file recorded	21146	1	
18:43		21146	20	no file recorded	21147	38	
18:52		21184	20	no source fired	21185	1	1007
18:52	1007	21185	20	Source at full volume (6600 cu in)	20179	280	279
20:00	1286	21465	20	EOT 20	20180	1	1
20:01	1287	21466	21	BOT 21	20180	#VALUE!	-1287
20:22		21522-21527	21	shots missed d/t NCC lockup	#VALUE!	#VALUE!	1926
22:37	1926	22111	21	Power down for dolphins	20186	3	3
22:37	1929	22114	21	EOT 21	20186	1	1
22:38	1930	22115	22	BOT 22	20186	58	58
22:54	1988	22173	22	no source fired	20186	1	1
22:54	1989	22174	22	Source at full volume	20186	243	243
23:57	2232	22417	22	Power down for seal	20186	12	12
24:00	2244	22429	22	Midnight Shot Point	20186	5	5
00:01	2249	22434	22	No Source Fired	20186	1	1
00:01	2250	22435	22	No Source Fired	20186	1	1
00:02	2251	22436	22	Source at full volume	20186	321	321
01:25	2572	22757	22	EOT 22	20186	1	1
01:26	2573	22758	23	BOT 23	20186	#VALUE!	411
02:49	2984	23077-23080	23	missed shots due to NCC lockup	#VALUE!	#VALUE!	1
02:50	2985	23081	23	First good shot after lockup	20096	325	230
04:10	3215	23406	23	EOT 23	**20191**	1	1
04:10	3216	23407	24	BOT 24	**20191**	644	642
07:01	3858	24051	24	EOT 24	**20193**	1	1
07:02	3859	24052	25	BOT 25	**20193**	642	642
10:05	4501	24694	25	EOT 25	**20193**	1	1
10:05	4502	24695	26	BOT 26	**20193**	#VALUE!	-4502
		25306-25307	26	no file recorded	**#VALUE!**	#VALUE!	5144
	5144	25339	26	EOT 26	**20195**	1	1
	5145	25340	27	BOT 27	**20195**	#VALUE!	-5145
13:08		25382-25383	27	no source fired - power down dt seal	**#VALUE!**		
13:09	5187	25384	27	mitigation gun firing	**20197**		
13:11	5197	25394	27	Shutdown for Dolphin	**20197**		
13:14	5208	25405	27	mitigation gun firing	**20197**		

13:16	5213	25410	27	no source fired	20197
13:16	5214	25411	27	Source at full volume	20197
15:51	5787	25984	27	EOT 27	20197
15:52	5788	25985	28	BOT 28	20197
16:09	5857	26054	28	no source fired - power down for seal	20197
16:09	5858	26055	28	mitigation gun firing	20197
16:23	5902	26099	28	no source fired	20197
16:23	5903	26100	28	Source at full volume	20197
16:43	5979	26176	28	no source fired - power down for dolphin	20197
16:43	5980	26177	28	mitigation gun firing	20197
16:50	6003	26200	28	no source fired	20197
16:50	6004	26201	28	Source at full volume	20197
18:38	6430	26627	28	EOT 28	20197
18:39	6431	26628	29	BOT 29	20197
21:00	7011	27208	29	Power down for seal, no source fired	20197
21:00	7012	27209	29	mitigation gun firing	20197
21:15	7073	27270	29	EOT 29	20197
21:15	7074	27271	30	BOT 30	20197
21:26	7108	27305	30	missed shot	20197
21:26	7109	27306	30	Source at full volume	20197
24:00	7693	27896	30	Midnight Shot Point	20203
00:07	7715	27918	30	EOT 30	20203
00:07	7716	27919	31	BOT 31	20203
02:31	8229	28432	31	Spectra restart	20203
02:31	8230	28437	31	First good shot after lockup, SP's 28433-28436 missed	20207
02:59	8359	28566	31	EOT 31	20207
02:59	8360	28567	32	BOT 32	20207
05:55	9002	29211	32	EOT 32	20209
05:55	9003	29212	33	BOT 33	20209
07:22	9313	29523	33	missed shot	20210
07:34	9355	29565	33	LSP before NCC lockup	20210
07:42	9356	29592	33	FSP after NCC lockup	20236
09:07	9645	29881	33	EOT 33	20236
09:08	9646	29882	34	BOT 34	20236
11:58	10288	30524	34	EOT 34	20236
11:58	10289	30525	35	BOT 35	20236
12:58		30750-30751	35	missed SPs	#VALUE!
13:13	10571	30809	35	Power down for mammal, no source fired	20238
13:13	10572	30810	35	mitigation gun firing	20238
13:14		30813	35	missed SP	30813
		30815	35	missed SP	30815
13:15	10578	30818	35	Shut down for mammal	20240
13:18	10589	30829	35	mitigation gun firing	20240
13:22	10601	30841	35	Shut down for mammal	20240
13:35	10639	30879	35	EOL - line aborted dt dolphin in array	20240

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	36	37	FGSP	31333
SP #	31333	32391	LGSP	32391

Line	MGL1211MCST04
Sequence	016
Direction	84.8

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	31333	32391
Date MM/DD/YY	6/25/12	6/26/12
Time UTC	19:46	00:41
Volume (cu in.)	6600in3	6600in3
Wind (kts)	1.5	5
Sea State (m)	1m	1m
Water Depth (m)	105.8m	81.3m

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

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	

Printed - 8/8/2012 3:33 PM

Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
19:46	1	31333	36	SOL - FGSP	31333	642	642
22:35	643	31975	36	EOT 36	31333	1	1
22:35	644	31976	37	BOT 37	31333	105	105
23:06	749	32081	37	Power down, missed shot ITB	31333	1	1
23:06	750	32082	37	Mitigation gun firing	31333	40	40
23:18	790	32122	37	Power up, missed shot ITB	31333	1	1
23:18	791	32123	37	Source at full volume	31333	39	39
23:30	830	32162	37	Missfire S4G6 +6.7 ms	31333	1	1
23:30	831	32163	37	Missfire S4G6 -4.8 ms	31333	228	228
00:41	1059	32391	37	EOL - LGSP	31333	-32391	-1059
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	38	57	FGSP	32467
SP #	32467	45199	LGSP	45199

Line	MGL1211MCS01
Sequence	017
Direction	296.2

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	32467	45199
Date MM/DD/YY	6/26/12	6/28/12
Time UTC	01:29	14:43
Volume (cu in.)	6600in3	6520in3
Wind (kts)	WNW 3	SSW 20
Sea State (m)	1m	2m
Water Depth (m)	77.4m	1548.9m

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

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	

Printed - 8/8/2012 3:37 PM

Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
01:29	1	32467	38	SOL - FGSP	32467	403	403
03:23	404	32870	38	S4G06 delta error 6.8 ms	32467	1	1
03:23	405	32871	38	S4G06 delta error -5.1 ms	32467	91	91
03:51	496	32962	38	S4G06 delta error 6.8 ms	32467	1	1
03:51	497	32963	38	S4G06 delta error -5.1 ms	32467	83	83
04:16	580	33046	38	Spectra NCC lockup, last good shot	32467	9	1
04:23	581	33055	38	First good shot after NCC lockup, missed 33047-33054	32475		
04:18	581	33055	38	S4G06 delta error 6.5 ms	32475	1	1
04:18	582	33056	38	S4G06 delta error -4.8 ms	32475	-1886	61
04:37	643	31170	38	EOT 38	30528	1	1
04:37	644	31171	39	BOT 39	30528	1993	46
04:49	690	33164	39	S4G06 delta error 8.5 ms	32475	1	1
04:49	691	33165	39	S4G06 delta error -6.3 ms	32475	1	1
04:50	692	33166	39	S4G06 delta error 9.1 ms	32475	1	1
04:50	693	33167	39	S4G06 delta error -8.3 ms	32475	1	1
04:51	694	33168	39	S4G06 delta error -2.2 ms	32475	38	38
05:01	732	33206	39	S4G06 delta error -11.8 ms	32475	1	1
05:02	733	33207	39	S4G06 delta error -10.3 ms	32475	1	1
05:02	734	33208	39	S4G06 delta error -2.6 ms	32475	68	68
05:21	802	33276	39	S4G06 delta error 6.9 ms	32475	#VALUE!	-802
		33347-33348		missed SPs	#VALUE!	#VALUE!	873
05:41	873	33349	39	S4G06 delta error -5.0 ms	32477	383	381
07:31	1254	33732	39	S4G06 delta error -4.7 ms	32479	30	30
07:39	1284	33762	39	S4G06 delta error -6.2 ms	32479	2	2
07:39	1286	33764	39	EOT 39	32479	1	1
07:40	1287	33765	40	BOT 40	32479	23	23
07:46	1310	33788	40	S4G06 delta error -4.8 ms	32479	11	11
07:49	1321	33799	40	S4G06 delta error -5.2 ms	32479	12	12
07:52	1333	33811	40	S4G06 delta error -4.6 ms	32479	64	64
08:10	1397	33875	40	S4G06 delta error -5.6 ms	32479	6	6
08:12	1403	33881	40	Gun S4G06 switched to manual delay dt spikes on sensor signature	32479	307	307
09:34	1710	34188	40	S3G01 delta error 2.1 ms	32479	219	219
10:31	1929	34407	40	EOT 40	32479	1	1
10:31	1930	34408	41	BOT 41	32479	642	642
13:22	2572	35050	41	EOT 41	32479	1	1
13:22	2573	35051	42	BOT 42	32479	503	503
15:38	3076	35554	42	S3G01 delta error -2.1 ms	32478	9	9
15:41	3085	35563	42	S3G01 delta error 2.3 ms	32478	130	130
16:14	3215	35693	42	EOT 42	**32478**	1	1
16:15	3216	35694	43	BOT 43	**32478**	#VALUE!	-3216
16:43		35807-35809	43	ITB	**#VALUE!**	#VALUE!	3332
16:44	3332	35810	43	Powered Down for PSO Sighting - Source Volume 40in3	**32478**	17	17
16:49	3349	35827	43	ITB	**32478**	1	1
16:49	3350	35828	43	Resume Full Power on Source - Volume 6600in3	**32478**	253	252
17:59	3602	36081	43	S3G01 delta error -2.2 ms	**32479**	27	27
18:06	3629	36108	43	S3G01 delta error 2.3 ms	**32479**	26	26

18:13	3655	36134	43	S3G01 delta error -2.1 ms	32479	24	24
18:20	3679	36158	43	S3G01 delta error 2.1 ms	32479		
18:21	3682	36161	43	S3G01 delta error 2.3 ms	32479		
18:33	3725	36204	43	S3G01 delta error 2.1 ms	32479		
18:34	3727	36206	43	S3G01 delta error 4.1 ms	32479		
18:38	3742	36221	43	S3G01 delta error 2.3 ms	32479		
18:39	3744	36223	43	S3G01 delta error 3.0 ms	32479		
18:39	3745	36224	43	S3G01 delta error -3.0 ms	32479		
18:40	3750	36229	43	S3G01 delta error -3.5 ms	32479		
18:41	3753	36232	43	Guns S3G01 / S3G03 disabled, S3G05 / S4G05 enabled, new volume 6560cuin	32479		
18:41	3753	36232	43	Delta errors S3G05 7.1ms, S4G05 6.4ms	32479		
18:41	3753	36232	43	Delta errors S3G05 -4.1ms, S4G05 -3.9ms	32479		
18:42	3758	36237	43	Gun S3G05 disabled, Gun S1G05 enabled, no volume change	32479		
18:42	3758	36237	43	S1G05 delta error 10.2ms	32479		
18:42	3759	36238	43	S1G05 delta error -7.2ms	32479		
18:43	3760	36239	43	S1G05 delta error -2.2ms	32479		
19:11	3858	36337	43	EOT 43	32479		
19:11	3859	36338	44	BOT 44	32479		
22:15	4501	36980	44	EOT 44	32479		
22:15	4502	36981	45	BOT 45	32479		
22:41	4597	37076	45	Power down for whale, missed shot ITB	32479		
23:42	4788	37267	45	Source at full volume 6560in3	32479		
23:54	4838	37317	45	Power down for whale, missed shot ITB	32479		
00:00	4857	37336	45	Midnight Shotpoint Start JD179	32479		
00:55	4999	37478	45	Source at full volume 6560in3	32479		
01:36	5144	37623	45	EOT 45	32479		
01:36	5145	37624	46	BOT 46	32479		
04:23	5787	38265	46	EOT 46	32478		
04:23	5788	38266	47	BOT 47	32478		
07:11	6430	38909	47	EOT 47	32479		
07:11	6431	38910	48	BOT 48	32479		
07:16	6448	38927	48	ITB	32479		
07:16		38928-38929	48	ITB	#VALUE!		
10:01	7073	39554	48	EOT 48	32481		
10:01	7074	39555	49	BOT 49	32481		
12:57	7716	40197	49	EOT 49	32481		
12:57	7717	40198	50	BOT 50	32481		
15:49	8359	40840	50	EOT 49	32481		
15:49	8360	40841	51	BOT 50	32481		
18:58	9002	41483	51	EOT 51	32481		
18:58	9003	41484	52	BOT 52	32481		
22:08	9645	42126	52	EOT 52	32481		
22:09	9646	42127	53	BOT 53	32481		
00:00	10042	42523	53	Midnight Shotpoint Start JD180	32481		
01:06	10288	42769	53	EOT 53	32481		
01:06	10289	42770	54	BOT 54	32481		
04:13	10931	43414	54	EOT 54	32483		
04:13	10932	43415	55	BOT 55	32483		
07:19	11574	44057	55	EOT 55	32483		
07:20	11575	44058	56	BOT 56	32483		
10:17		44696	56	ITB, SP missed			
10:18	12217	44701	56	EOT 56	32484		
10:19	12218	44702	57	BOT 57	32484		
12:33	12679-12683	45163-45167	57	S2G09 no fire	#VALUE!		
12:34	12684	45168	57	S2G09 disabled, S2G05 enabled, new volume 6520 cuin	32484		
12:34	12685	45169	57	Delta error S2G05 6.7ms	32484		
12:43	12716	45199	57	EOL - LGSP	32483		

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	58	58	FGSP	46011
SP #	46011	46506	LGSP	46506

Line	MGL1211MCST05
Sequence	018
Direction	323

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	46011	46506
Date MM/DD/YY	06/28/12	06/28/12
Time UTC	12:55	15:47
Volume (cu in.)	6520in3	6520in3
Wind (kts)	SSW 20	SSW 20
Sea State (m)	2m	2m
Water Depth (m)	1542.1m	2263.7m

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

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	SP vs File	check SP	check File
12:55	1	46011	58	SOL - FGSP	46011	309	309
	310	46320	58	Enabling gun string 3	46011	13	13
	323	46333	58	Source firing with guns S3G01, S3G03, S3G05, S2G09 disabled. Volume 6520 cuin	46011	173	173
15:47	496	46506	58	EOL - LGSP	46011	-46506	-496
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	59	60	FGSP	46845
SP #	46845	47704	LGSP	47704

Line	MGL1211MCSAX1
Sequence	019
Direction	323

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	46845	47704
Date MM/DD/YY	06/28/12	6/28/12
Time UTC	16:43	20:28
Volume (cu in.)	6200in3	6200in3
Wind (kts)	21	20
Sea State (m)	2m	2m
Water Depth (m)	1860.8m	2176.8m

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

Streamer surfaced during turn prior to start of line - cable diving from front back, full cable back at depth at SP

Guns S2G01, S2G09, S3G01, S3G05 disabled from SP 47001, volume for line 6200cuin

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	SP vs File	check SP	check File
16:43	1	46845	59	SOL - FGSP	46845	156	156
17:25	157	47001	59	numerous gun errors prior to this point, ref front page comment, shooting volume 6200cuin			
17:25	157	47001	59	middle of streamer cable on surface	46845	49	49
17:39	206	47050	59	streamer at 9m birds 1-18	46845	30	30
17:47	236	47080	59	streamer at 9m birds 1-23	46845	75	75
18:08	311	47155	59	streamer back at 9m	46845	336	332
19:33	643	47491	59	EOT 59	46849	1	1
19:33	644	47492	60	BOT 60	46849	212	212
20:28	856	47704	60	EOL - LGSP	46849	-47704	-856
					1		
					1		
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Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	61	61	47851	48317
SP #	47851	48317	LGSP	48317

Line	MGL1211MCST06
Sequence	020
Direction	41

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	47851	48317
Date MM/DD/YY	06/28/12	6/28/12
Time UTC	21:08	23:45
Volume (cu in.)	4950in3	6380in3
Wind (kts)	17	10
Sea State (m)	2m	2m
Water Depth (m)	2000.4m	2553.9m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
21:08	1	47851	61	SOL - FGSP	47851	102	98
21:49	88	47942	61	Source volume 6380			
21:52	99	47953	61	Source volume 6520	47855	207	207
21:57	306	48160	61	Source volume 6380	47855	157	157
23:45	463	48317	61	EOL - LGSP	47855	-48317	-463
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	62	63	FGSP	48886
SP #	48886	49754	LGSP	49754

Line	MGL1211MCSAX2
Sequence	021
Direction	246

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	48886	49754
Date MM/DD/YY	6/29/12	6/29/12
Time UTC	01:04	05:15
Volume (cu in.)	3300in3	3300in3
Wind (kts)	19	19
Sea State (m)	2m	2m
Water Depth (m)	1999.9m	2072.7m

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

Disabled S1G1 and enabled S2G1

Abbreviations

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

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
01:04	1	48886	62	SOL - FGSP	48886	644	643
04:09	643	49529	62	EOT 62			
04:09	644	49530	63	BOT 63	48887	224	224
05:15	868	49754	63	EOL - LGSP	48887	-49754	-868
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Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	64	65	FGSP	50101
SP #	50101	50794	LGSP	50794

Line	MGL1211MCS01A
Sequence	022
Direction	111

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	37.5			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	50101	50794
Date MM/DD/YY	06/29/12	06/29/12
Time UTC	08:45	12:00
Volume (cu in.)	6600in3	6600in3
Wind (kts)	SW 6	WSW 7
Sea State (m)	1m	<1m
Water Depth (m)	1630m	1692.2m

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

Streamer coming from 12m turn depth to 9m recording depth at FSP 50101, still deep
From SP 50180, streamer at 9m recording depth

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	SP vs File	check SP	check File
08:45	1	50101	64	SOL - FGSP	50101	79	79
				At SOL, Streamer at 12m, coming up to 9m recording depth			
09:08	80	50180	64	Streamers at 9m recording depth	50101	27	27
09:16	107	50207	64	LSP before Spectra reset	50101	#VALUE!	-107
09:16	108	50208	64	HD1L - nav reset occurring			
		50209-50211		SP lost	#VALUE!	#VALUE!	109
09:17	109	50212	64	FSP after Spectra reset	50104	471	471
11:30	580	50683	64	S4G09 / S4G10 no fire dt comms error	50104	1	1
11:30	581	50684	64	S4G09 / S4G10 no fire dt comms error	50104	16	16
11:35	597	50700	64	S4G09 / S4G10 no fire dt comms error	50104	46	46
11:47	643	50746	64	EOT 64	50104	1	1
11:47	644	50747	65	BOT 65	50104	47	47
12:00	691	50794	65	EOL - LGSP	50104	-50794	-691
					1		
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Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	66	66	FGSP	51032
SP #	51062	51123	LGSP	51123

Line	MGL1211OBS01
Sequence	023
Direction	111

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	51032	51123
Date MM/DD/YY	06/29/12	06/29/12
Time UTC	12:03	17:55
Volume (cu in.)	6600in3	6600in3
Wind (kts)	WSW 7	WSW 4
Sea State (m)	<1m	<1m
Water Depth (m)	1692.2m	2703.6m

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

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
12:03	1	51032	66	SOL - FGSP	51032	69	69
16:22	69	51100	66	S2G02 Delta error 12.1ms			
16:26	70	51101	66	S2G02 Delta error -8.9ms	51032	22	22
17:55	92	51123	66	EOL - LGSP	51032	-51123	-92
					1		
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Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	67	67	FGSP	51207
SP #	51207	51725	LGSP	51725

Line	MGL1211OBSFS02A
Sequence	024
Direction	Fan shoot

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	51207	51725
Date MM/DD/YY	06/29/12	6/30/12
Time UTC	18:06	04:04
Volume (cu in.)	6600in3	6600in3
Wind (kts)	WSW 4	WSW 4
Sea State (m)	<1m	<1m
Water Depth (m)	2702.1m	2751.1m

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

At FSP, streamer fully in turn onto fan line from OBS01

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	

Printed - 8/8/2012 3:41 PM

Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
18:06	1	51207	67	SOL - FGSP	51207	287	-1
				Streamer fully in turn at SOL dt turn from OBS01 onto fan line			
23:42		51494	67	missed shot due to dog-leg in fan shoot	51495	1	288
23:43	288	51495	67	next good shot after missed shot	51208	108	-288
00:00	305	51512	67	Midnight Shotpoint Start of JD182	51208		
01:43		51603	67	missed shot due to dog-leg in fan shoot	51604	1	396
01:44	396	51604	67	next good shot after missed shot	51209	121	121
04:04	517	51725	67	EOL - LGSP	51209	-51725	-517
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	68	69	FGSP	52013
SP #	52013	52656	LGSP	52656

Line	MGL1211OBS04
Sequence	025
Direction	202

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	52013	52656
Date MM/DD/YY	6/30/12	6/30/12
Time UTC	04:22	15:37
Volume (cu in.)	6600in3	6520in3
Wind (kts)	WSW 4	NNW 15
Sea State (m)	<1m	1-2m
Water Depth (m)	2702.1m	2802.6m

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

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	SP vs File	check SP	check File
04:22	1	52013	68	SOL - FGSP S2G2 (NF), S1G3 (good) disabled. S1G5, S2G5 enabled, volume = 6560	52013	376	376
10:56	371	52383	68	S4G10 reports no fire dt comms error			
11:02	377	52389	68	S4G10 reports no fire dt comms error	52013	2	2
11:04	379	52391	68	S4G10 reports no fire dt comms error	52013	12	12
11:15	390	52402	68	S4G10 reports no fire dt comms error	52013		
11:16	391	52403	68	S4G10 reports no fire dt comms error	52013	1	1
11:17	392	52404	68	S4G10 reports no fire dt comms error	52013	1	1
11:18	393	52405	68	S4G10 reports no fire dt comms error	52013	1	1
11:19	394	52406	68	S4G10 disabled, S4G05 enabled, new volume 6520cuin	52013	-52406	-394
				S4G05 delta error 2.5ms	1	52655	643
15:37	643	52655	68	EOT 68	52013	1	1
15:37	644	52656	69	BOT 69 - EOL - LGSP	52013	-52656	-644
					1		
					1		
					1	

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	70	70	FGSP	52711
SP #	52711	53206	LGSP	53206

Line	MGL1211OBSFS02B
Sequence	026
Direction	Fan Shoot

Streamer Parameters				
	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	52711	53206
Date MM/DD/YY	6/30/12	7/1/12
Time UTC	15:53	01:14
Volume (cu in.)	6520in3	6480in3
Wind (kts)	NNW 15	NNW 15
Sea State (m)	1-2m	2mm
Water Depth (m)	2813.0m	2705.9m

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

at SOL, S2G2, S1G3, S4G10 disabled. S1G5, S2G5, S4G5 enabled, volume = 6520cuin

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
15:53	1	52711	70	SOL - FGSP	52711	131	131
				S2G2, S1G3, S4G10 disabled. S1G5, S2G5, S4G5 enabled, volume = 6520cuin			
18:09	132	52842	70	S4G09 reports no fire dt comms error	52711	4	4
18:23	136	52846	70	S4G09 reports no fire dt comms error	52711	13	13
18:27	140	52850	70	S4G09 reports no fire dt comms error	52711		
18:37	149	52859	70	S4G09 reports no fire dt comms error	52711	133	133
21:09	282	52992	70	Power down for whale	52711	24	24
21:37	306	53016	70	Source at 6520	52711	51	51
22:35	357	53067	70	S2G2, S1G3, S4G9, S4G10 off. S1G5, S2G5, S3G5, S4G5 enabled, volume = 6480cuin	52711	63	63
23:45	420	53130	70	Power down for whale	52711	6	6
23:52	426	53136	70	Volume back at 6480	52711	7	7
00:00	433	53143	70	Midnight Shotpoint Start JD183	52711	63	63
01:14	496	53206	70	EOL - LGSP	52711	-53206	-496
					1		
					1		
					1		
					1		
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Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte PI
Area	Juan de Fuca
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	71	71	FGSP	53429
SP #	53429	53620	LGSP	53620

Line	MGL1211OBS01A
Sequence	027
Direction	110

Streamer Parameters	1	2	3	4
Length (m)	8000			
Auxiliaries	n/a			
Shotpoint Interval: (m)	150			
Offset CS - CNG (m)	272			
Group Interval: (m)	12.5			
Number of channels	636			
Streamer Depth (m)	9m			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

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

Recording Parameters	
Record Length	12
Total recording delay	0
Sample Rate	2ms
Polarity	N/A
Low-Cut	2Hz /12DB
Hi-Cut	206Hz/276 DB
Tape Format	SEGD rev. 2

Description	SOL/FQCSP	EOL/LQCSP
	53429	53620
Date MM/DD/YY	7/1/12	7/1/12
Time UTC	01:31	13:06
Volume (cu in.)	6480in3	6480in3
Wind (kts)	NNW 15	NNW 9
Sea State (m)	1-2m	1.0m
Water Depth (m)	2707.1m	2800.9m

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

at SOL, S2G2, S1G3, S4G9, S4G10 disabled, volume = 6480cuin

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	

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Time UTC	FILE	SP	Tape	Description	SP vs File	check SP	check File
01:31	1	53429	71	SOL - FGSP	53429	-53429	-1
13:06	192	53620	71	EOL - LGSP			
					1		
					1		
					1

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	54312
SP #	54312	54840	LGSP	54840

Line	MGL1211OBS01B
Sequence	028
Direction	110

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	54312	54840
Date MM/DD/YY	07/01/12	07/03/12
Time UTC	20:26	05:03
Volume (cu in.)	6560in3	6560in3
Wind (kts)	5	20
Sea State (m)	1m	1m
Water Depth (m)	2807.1m	849.8m

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 SP

EOL SP

SOL NOISY CHANNELS

None - no streamer recording

EOL NOISY CHANNELS

None - no streamer recording

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	

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Time UTC	SP	Description
20:26	54312	SOL - FGSP Volume = 6560 in3
00:00	54372	Midnight Shotpoint Start of JD 184
14:13	54611	Power down dt dolphins, mitigation gun on
14:24	54614	Shut down for dolphins
14:37	54616	Soft start after shudown
15:09	54624	Soft start complete, full volume SP
00:00	54773	Midnight Shotpoint Start of JD 185
01:16	54974	Shutdown dt dolphins, mitigation gun on
04:00	54826	Mitigation gun online
04:09	54727	Begin ramp up
04:41	54833	Ramp up complete, volume = 6560 in3
05:03	54840	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	55792
SP #	55792	55991	LGSP	55991

Line	MGL1211OBS01C
Sequence	029
Direction	110

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	55792	55991
Date MM/DD/YY	07/01/12	07/03/12
Time UTC	08:47	21:02
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NE 20	NNW 6
Sea State (m)	2m	2m
Water Depth (m)	2863m	70.8m

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 SP 55792
EOL SP 55991
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
08:47	55792	SOL - FGSP Volume = 6560 in3
13:21	55870	Power down to mitigation gun for dolphin
13:40	55874	Source back to full power, 6560 in3
14:05	55881	Power down to mitigation gun for whale
14:23	55884	Source back to full power, 6560 in3
16:08	55913	Power down to mitigation gun for whale
16:34	55918	Source back to full power, 6560 in3
18:18	55947	Power down to mitigation gun for whale
18:39	55951	Source back to full power, 6560 in3
21:02	55991	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	56006
SP #	56006	56138	LGSP	56138

Line	TREHUOBS01
Sequence	030
Direction	191.3

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	56006	56138
Date MM/DD/YY	07/03/12	7/3/12
Time UTC	21:04	23:18
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NNW 6	NNW 6
Sea State (m)	2m	2m
Water Depth (m)	72.2m	95.2m

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 SP 55792
EOL SP 56138
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

Abbreviations

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

Time UTC	SP	Description
21:04	56006	SOL - FGSP Volume = 6560 in3
23:18	56138	EOL - LGSP Volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	56207
SP #	56207	56322	LGSP	56322

Line	TREHUOBS02
Sequence	031
Direction	220.1

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	56206	56322
Date MM/DD/YY	07/03/12	7/4/12
Time UTC	23:19	01:22
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NNW 6	NNW 18
Sea State (m)	2m	2m
Water Depth (m)	99.2m	130.6m

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 SP 55792
EOL SP 56322
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

Abbreviations

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

Time UTC	SP	Description
23:19	56207	SOL - FGSP Volume = 6560 in3
00:00	56240	Midnight Shotpoint Start of JD 186
01:22	56322	EOL - LGSP Volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	56433
SP #	56433	57059	LGSP	57059

Line	TREHUOBS03
Sequence	032
Direction	13.8

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	56433	57059
Date MM/DD/YY	7/4/12	7/4
Time UTC	01:39	12:59
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NNW 18	W 12
Sea State (m)	2m	1m
Water Depth (m)	138.0m	108m

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 SP 55792
EOL SP 57059
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
01:39	56433	SOL - FGSP Volume = 6560 in3
02:33	56486	String 2 secured d/t broken tag line, volume = 4770 in3
02:46	56498	String 2 back in operation, volume = 6560 in3
12:57	57058	Power Down dt porpoise
12:59	57059	EOL - LGSP - on mitigation gun

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	58005
SP #	58005	58096	LGSP	58096

Line	TREHUOBS04
Sequence	033
Direction	271

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	58005	58096
Date MM/DD/YY	7/4/12	7/4
Time UTC	13:03	15:31
Volume (cu in.)	6560in3	6560in3
Wind (kts)	W 12	N 12
Sea State (m)	1m	1m
Water Depth (m)	113m	155.2m

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 SP 58005
EOL SP 58096
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
13:03	58005	SOL - FGSP Volume = on mitigation gun dt porpoise
13:15	58013	Source back to full volume, 6560 in3
13:20	58016	Power down to mitigation gun dt whale
13:21	58018	Source shutdown dt Right Whale identified
13:53	58035	Mitigation gun enabled
14:06	58042	Begin source ramp-up
14:36	58059	Ramp up complete, source volume 6560 in3
14:38	58060	FGSP after source ramp-up
14:45	58065	no fire
14:46	58066	Power down to mitigation gun dt whale
15:12	58081	Source back to full volume, 6560 in3
15:31	58096	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	59003
SP #	59003	59768	LGSP	59768

Line	TREHUOBS05
Sequence	034
Direction	195

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	59003	59768
Date MM/DD/YY	7/4/12	7/5/12
Time UTC	15:34	04:23
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 12	n 15
Sea State (m)	1m	1m
Water Depth (m)	157.1m	737.8m

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 SP 59003
EOL SP 59768
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
15:34	59003	SOL - FGSP Volume = 6560 in3
00:00	59510	Midnight Shotpoint Start JD 187
02:18	59648	Power down for whale
02:31	59660	Source at full volume
02:52	59681	Power down for whale
03:07	59695	Source at full volume
04:23	59768	EOL - LGSP Volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	60015
SP #	60015	60160	LGSP	60160

Line	TREHUOBS06
Sequence	035
Direction	329

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	60015	60160
Date MM/DD/YY	7/5/12	7/5/12
Time UTC	04:35	07:07
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 15	N 13
Sea State (m)	1m	1m
Water Depth (m)	789.5m	806.3m

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 SP 60015
EOL SP 60160
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
04:35	60015	SOL - FGSP Volume = 6560 in3
07:07	60160	EOL - LGSP Volume = 6560 in3

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	61001
SP #	61001	61633	LGSP	61633

Line	TREHUOBS07
Sequence	036
Direction	15

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	61001	61633
Date MM/DD/YY	7/5/12	7/5/12
Time UTC	07:08	18:05
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 13	NNE 12
Sea State (m)	1m	<1m
Water Depth (m)	806.3m	357.1m

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 SP 61001
EOL SP 61633
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
07:08	61001	SOL - FGSP Volume = 6560 in3
14:04	61412	no shot fired, powering down for whale
14:05	61413	Mitigation gun firing
14:51	61457	no shot fired
14:52	61458	return to volume 6560in3
17:01	61578	Mitigation gun firing for whale
17:14	61587	shut down dt whale
17:26	61598	Mitigation gun firing
08:05	61633	EOL - LGSP - Mitigation gun firing

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	62006
SP #	62006	62271	LGSP	62271

Line	TREHUOBS08
Sequence	037
Direction	123

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	62006	62271
Date MM/DD/YY	7/5/12	7/5/12
Time UTC	18:13	22:41
Volume (cu in.)	6560in3	6560in3
Wind (kts)	NNE 12	N 6
Sea State (m)	<1m	<1m
Water Depth (m)	292.2m	50m

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 SP 62006
EOL SP 62271
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
18:13	62006	SOL - FGSP Mitigation gun firing dt whales
18:25	62015	Ramp up started
18:57	62046	Ramp up complete
22:41	62271	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	62303
SP #	62303	62533	LGSP	62533

Line	TREHUOBS09
Sequence	038
Direction	192

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	62303	62533
Date MM/DD/YY	7/5/12	7/6/12
Time UTC	22:41	02:35
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 6	N 9
Sea State (m)	<1m	1m
Water Depth (m)	53.2m	69.1m

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 SP 62303
EOL SP 62533
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
22:41	62303	SOL - FGSP
00:00	62379	Midnight Shotpoint Start of JD 188
02:35	62533	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	62659
SP #	62659	63413	LGSP	63413

Line	MGL1211OBST02
Sequence	039
Direction	312

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	62659	63413
Date MM/DD/YY	7/6/12	7/6/12
Time UTC	03:45	16:36
Volume (cu in.)	6560in3	6560in3
Wind (kts)	N 9	NW 5
Sea State (m)	1m	1m
Water Depth (m)	77.9m	2705.1m

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 SP 62659
EOL SP 63413
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
03:45	62659	SOL - FGSP
05:14	62746	Disable S2G2 and S3G3, enable S3G5 and S4G5. Volume = 6520 in3
15:59	63376	Power down to mitigation gun for porpoise
16:15	63392	Source at full volume, 6520 in3
16:36	63413	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	64003
SP #	64003	64920	LGSP	64920

Line	MGL1211OBSFS03
Sequence	040
Direction	Fan Shoot

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	170			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	64003	64920
Date MM/DD/YY	7/6/12	7/7/12
Time UTC	16:39	08:12
Volume (cu in.)	6520in3	6520in3
Wind (kts)	NW 5	N 17
Sea State (m)	1m	1m
Water Depth (m)	2705.8m	2977.3m

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 SP 64003
EOL SP 64920
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
16:39	64003	SOL - FGSP
18:25	64109	LSP before compressor shutdown, firing mitigation gun
18:41	64119	FSP after compressor restart, 6520 in3
19:03	64140	Power down for dolphins
19:12	64148	Source at full volume
00:00	64434	Midnight Shotpoint Start of JD 189
08:12	64920	EOL - LGSP

Observers Log

Vessel	Marcus G. Langseth
Client	Suzanne Carbotte
Area	Juan de Fuca Seismic Mission
Job Number	MGL1211

Chief Science Officer	Robert Steinhaus		
Science Officer	Jay Johnstone		
Acquisition Leader	David Martinson - 12:00-24:00	Jay Johnstone 00:00-12:00	
Navigation Leader	David Martinson 12:00-24:00	Mike Martello 00:00-12:00	

	SOL	EOL		
Tape #	N/A	N/A	FGSP	65002
SP #	65002	65196	LGSP	65196

Line	MGL1211OBS03A
Sequence	041
Direction	167

Streamer Parameters	1	2	3	4
Length (m)	n/a			
Auxiliaries	n/a			
Shotpoint Interval: (m)	500			
Offset CS - CNG (m)	n/a			
Group Interval: (m)	n/a			
Number of channels	n/a			
Streamer Depth (m)	n/a			
SOL Cable Noise, µB	n/a			
EOL Cable Noise, µB	n/a			

Source Parameters	
Total Volume	6600 in3
Work Pressure	1950psi +/- 100psi
Dual Source	no
Depth	12m
Source Separation	n/a
COS to COS	n/a
COS	232m

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

Description	SOL/FQCSP	EOL/LQCSP
	65002	65196
Date MM/DD/YY	7/7/12	7/7/12
Time UTC	08:18	19:51
Volume (cu in.)	6520in3	6520in3
Wind (kts)	N 17	N 11
Sea State (m)	1m	1m
Water Depth (m)	2978.0m	917.6m

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 SP 65002
EOL SP
SOL NOISY CHANNELS
None - no streamer recording

EOL NOISY CHANNELS
None - no streamer recording

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	

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Time UTC	SP	Description
08:18	65002	SOL - FGSP
19:51	65196	Early EOL due to shutdown for dolphins