

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

Cc: Reports Group

Fm: Jay Johnstone (Science Officer)

## **1. MCS PRODUCTION SUMMARY**

<b>2012-06-10</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-10</b>
MCS Production	0.00
MCS Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0.00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	24:00
Other	0:00
Total:	24:00

## **UTC Midnight (24:00) Position / Heading:**

46° 11.4392' N

123° 51.5262' W

Wind: W @ 10kts

Seas: IN PORT

Depth: IN PORT

SOG: IN PORT

HDG: IN PORT

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations

**R/V Marcus G. Langseth**

Cc: Reports Group

Fm: Jay Johnstone (Science Officer)

### **3. TIME SUMMARY**

	Time	Event
00:00	24:00	Alongside Astoria

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus

Science Officer – Jay Johnstone

Science Officer – David Martenson

Navigator – Mike Martello

Gun Mechanic – Carlos Gutierrez

Gun Mechanic – Michael Tatro

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte

Scientists:

Berta Biescas-Gorriz

Guillermo Bornstein

Laurel Childress

Matthias Delecluse

Aaron Farkas

James Gibson

Shuoshuo Han

Gregory Horning

Helen Janiszewski

Hilena Marjanovic

Beatrice Parker

Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram

Jami Allen

Katherine Douglas

Tatiana Moreno

Emily Ellis

### **5. Daily Summary:**

Alongside Pier 1 Astoria, OR.

On HSN

Preparing birds

Securing equipment for sea

Receiving onsigning Science Party

### **Work in Progress:**

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations

**R/V Marcus G. Langseth**

Cc: Reports Group

Fm: Jay Johnstone (Science Officer)

In port, prep for Carbotte Seismic Mission

**Tomorrow:**

Sail for Carbotte cruise. Depart Astoria 0900

Transit to prospect area, deploy guns and start OBS source operations

Regards

Jay Johnstone

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

## **1. MCS PRODUCTION SUMMARY**

<b>2012-06-10</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-10</b>
MCS Production	0.00
MCS Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0.00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	24:00
Other	0:00
Total:	24:00

## **UTC Midnight (24:00) Position / Heading:**

46° 11.4392' N

123° 51.5262' W

Wind: W @ 10kts

Seas: IN PORT

Depth: IN PORT

SOG: IN PORT

HDG: IN PORT

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations

**R/V Marcus G. Langseth**

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

### **3. TIME SUMMARY**

	Time	Event
00:00	24:00	Alongside Astoria

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte

Scientists:

Berta Biescas-Gorriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel spent the entire day along side Pier 1 in Astoria, Oregon. The Vessel was scheduled to depart for MGL1211 at ~17:00 GMT but due to IHA clearance the vessel the departure was delayed. The Science Crew continued Mobilization efforts and rigging of equipment for the Mission

#### **Tomorrow:**

The Vessel is currently scheduled to depart for the Mission area at ~18:00 GMT if the IHA clearance is received. The Science Crew will continue effort and rigging of the equipment for the mission.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

## **1. MCS PRODUCTION SUMMARY**

<b>2012-06-12</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-12</b>
MCS Production	0.00
MCS Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0.00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	24:00
Other	0:00
Total:	24:00

## **UTC Midnight (24:00) Position / Heading:**

46° 11.4392' N

123° 51.5262' W

Wind: W @ 10kts

Seas: IN PORT

Depth: IN PORT

SOG: IN PORT

HDG: IN PORT

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations

**R/V Marcus G. Langseth**

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

### **3. TIME SUMMARY**

	Time	Event
00:00	24:00	Alongside Astoria

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte

Scientists:

Berta Biescas-Goriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel spent the entire day along side Pier 1 in Astoria, Oregon, delayed for IHA clearance. The Science Crew continued Mobilization efforts and rigging of equipment for the Mission

#### **Tomorrow:**

The Vessel is currently scheduled to depart for the Mission area at ~23:00 GMT if the IHA clearance is received. The Science Crew will continue effort and rigging of the equipment for the mission.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

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Fm: Robert J Steinhaus (Sr. Science Officer)

## **1. MCS PRODUCTION SUMMARY**

<b>2012-06-13</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-13</b>
MCS Production	0.00
MCS Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0.00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	24:00
Other	0:00
Total:	24:00

## **UTC Midnight (24:00) Position / Heading:**

46° 11.4392' N

123° 51.5262' W

Wind: W @ 10kts

Seas: IN PORT

Depth: IN PORT

SOG: IN PORT

HDG: IN PORT

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations

**R/V Marcus G. Langseth**

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

### **3. TIME SUMMARY**

	Time	Event
00:00	24:00	Alongside Astoria

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte

Scientists:

Berta Biescas-Goriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel spent the entire day along side Pier 1 in Astoria, Oregon, delayed for IHA clearance. The Science Crew continued Mobilization efforts and rigging of equipment for the Mission

#### **Tomorrow:**

The Vessel will be expecting the IHA clearance at any time. Once received it the vessel will get underway for the mission area. The Science Crew is continuing efforts and rigging of the equipment for the mission.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

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Fm: Robert J Steinhaus (Sr. Science Officer)

## **1. MCS PRODUCTION SUMMARY**

<b>2012-06-14</b>	<u>Sailed Km</u>
Prime	30.000
Infill	0.000
Reshoot	0.000
Total:	30.000

## **2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-14</b>
Production	3:38
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	1:36
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	2:30
Transit	14:26
Ship Repair	0:00
Maneuvering	0:00
Port Call	1:50
Other	0:00
Total:	24:00

## **UTC Midnight (24:00) Position / Heading:**

44° 27.386' N	125° 23.4144' W	
Wind: N @ 10-15 kts	Seas: 1m	Depth: 2918.71m
SOG: 4.8 kts	HDG: 348.13	

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations

R/V Marcus G. Langseth

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

### **3. TIME SUMMARY**

	Time	Event	FSP	LSP	Total SP	Sail Line KM
	0:00	1:50				
	1:50	14:40				
	14:40	16:16				
	16:16	16:50				
	16:50	18:26				
	18:26	18:40				
	18:40	20:22				
	20:22	0:00	995	1055	60	30.000

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus

Science Officer – Jay Johnstone

Science Officer – David Martenson

Navigator – Mike Martello

Gun Mechanic – Carlos Gutierrez

Gun Mechanic – Michael Tatro

Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte

Scientists:

Berta Biescas-Gorriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas

James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker

Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel started the day along side Pier 1 in Astoria, Oregon, delayed for IHA clearance. At 01:50 GMT the IHA was received and the vessel got underway for the Mission area. At 14:40 GMT the vessel was slowed down and source deployment commenced. This operation was completed at 16:16 GMT and the vessel continued transiting towards line MGL1211OBS03. At 18:26 GMT a marine mammal enters the EZ of the source, so it was powered down. The vessel was forced to circle back around on I and at 20:22 GMT MGL1211OBS03 was started. This line continued throughout the rest of the day.

#### **Tomorrow:**

The Vessel will be start the day continuing production on MGL1211OBS03 and is expected to remain in production on this line throughout the rest of the day.

Regards

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1211**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert J Steinhaus (Sr. Science Officer)

**Juan de Fuca Seismic Mission – S. Carbotte**

**R/V Marcus G. Langseth**

Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-15</b>	<u>Sailed Km</u>
Prime	197.000
Infill	0.000
Reshoot	0.000
Total:	197.000

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-15</b>
Production	23:39
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:21
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total:	24:00

**UTC Midnight (24:00) Position / Heading:**

46° 13.412' N	125° 56.750' W	
Wind: W @ 5-10 kts	Seas: 1m	Depth: 2597.95
SOG: 4.6 kts	HDG: 345	

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

### **3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM	
0:00	0:40	Prime - MGL1211OBS03	1056	1065	9	4.500
0:40	0:55	Power down MMO Sighting				
0:55	14:13	Prime - MGL1211OBS03	1070	1294	224	112.000
14:13	14:19	Power down MMO Sighting				
14:19	0:00	Prime - MGL1211OBS03	1296	1457	161	80.500

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel continued production on line MGL1211OBS03, throughout the day. During the day there were two instances where the source had to be powered down for PSO sightings of Marine Mammals in the EZ. Once it was clear the Marine Mammal had left the EZ the source was brought back to full power and production continued.

#### **Tomorrow:**

The Vessel will be start the day continuing production on MGL1211OBS03. At ~23:00 GMT the vessel is expected to complete line MGL1211OBS03. A short line change will be made to MGL1211OBSF01 which will continue throughout the remainder of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-15</b>	<u>Sailed Km</u>
Prime	155.000
Infill	0.000
Reshoot	0.000
Total:	155.000

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-15</b>
Production	19:33
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	4:27
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total:	24:00

**UTC Midnight (24:00) Position / Heading:**

47° 52.0314' N	126° 26.825' W	
Wind: WNW @ 10-15 kts	Seas: 1-2 m	Depth: 2148 m
SOG: 4.3 kts	HDG: 217 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM	
0:00	2:49	Prime - MGL1211OBS03	1458	1505	47	23.500
2:49	3:09	Powered down MMO Sighting				
3:09	16:59	Prime - MGL1211OBS03	1510	1294	216	108.000
16:59	17:27	Powered down MMO Sighting				
17:27	20:08	Prime - MGL1211OBS03	1746	1791	45	22.500
20:08	22:02	Shut down MMO Sighting				
22:02	22:15	Prime - MGL1211OBS03	1816	1818	2	1.000
22:15	22:56	Shut Down down MMO Sighting - End Line MGL1211OBS03				
22:56	0:00	Line Change - Still Powered Down for MMO Sighting.				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
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James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel continued production on line MGL1211OBS03 until 22:56 GMT. At which time a outside turn line change was made to MGL1211OBSF01. The Line change continued throughout the rest of the day. During the day there were a number of instances where the source had to be powered down and at times shutdown for PSO sightings of Marine Mammals (Seals) in the EZ. At the end of the day the vessel was still shut down.

**Tomorrow:**

The Vessel will be start the day continuing the line change to MGL1211OBSF01, which should start at ~00:40 GMT. Once the EZ is clear the source will be ramped back up and production will continue on Line MGL1211OBSF01. This line will end at ~19:00 GMT at which time the vessel will begin a transit line (MGL1211OBS01) to MGL1211OBS02. It is expected that this transit line will continue throughout the day and while on it the vessel will perform routine source maintenance on all sub-arrays.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-17</b>	<u>Sailed Km</u>
Prime	111.500
Infill	0.000
Reshoot	0.000
Total: 111.500	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-17</b>
Production	13:48
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	10:06
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

46° 58' 59.899" N	126° 10' 00.735" W	
Wind: N @ 5 -10 kts	Seas: 1-3 m	Depth: 2565.4 m
SOG: 4.6 kts	HDG: 077.9 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:44	Line Change - Still Powered Down for MMO Sighting.			
0:44	12:50	1845	2040	195	97.500
12:50	13:57	Powered/Shut Down for MMO Sighting			
13:57	16:28	Circled for MMO Sighting			
16:28	17:35	Powered/Shut Down for MMO Sighting			
17:35	20:31	Source Maintenance while Powered/Shut Down for MMO Sighting			
20:31	22:12	Powered /Shut Down for MMO Sighting			
22:12	23:35	2133	2156	23	11.500
23:35	23:41	Line Change			
23:41	0:00	2159	2164	5	2.500

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day on line change to MGL1211OBSF01. At 00:44 GMT this line began and continued until 13:57 GMT when due to a MMO sighting an powered/shut down of the source the line was aborted. The Vessel circled back around on the MGL1211OBSF01A hopping that the Marine Mammal would depart the area. At 17:35 GMT it was decided that the vessel would conduct some preventive maintenance on the source Sub-Arrays. The Sub-Arrays were retrieved, work done on them and redeployed at 20:31 GMT. The Maine Mammal was still in the area and the source remained powered/shut down. At 22:12 GMT the Marine Mammal had departed the EZ and the source was once again at full power (After a Ramp up) MGL1211OBSF01A was started. MGL1211OBSF01A was concluded at 23:41 GMT and after a short line change MGL1211OBST01 was started. This line continued throughout the rest of the day.

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**Tomorrow:**

The Vessel will be start the day continuing production on MGL1211OBST01, which should start at ~10:00 GMT. At which time a line change will be made to MGL1211OBS02. This line is expected to continue throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-18</b>	<u>Sailed Km</u>
Prime	189.000
Infill	0.000
Reshoot	0.000
Total:	189.000

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-18</b>
Production	22:29
Line Change	0:17
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	1:14
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total:	24:00

**UTC Midnight (24:00) Position / Heading:**

47° 27' 34.352" N	126° 32' 16.761" W	
Wind: N @ 15-20 kts	Seas: 2-3 m	Depth: 2387.3 m
SOG: 3.9 kts	HDG: 280.9 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	9:17 Prime -MGL1211OBST01	2165	2333	168	84.000
9:17	9:34 Line Change				
9:34	14:43 Prime - MGL1211OBS02	3124	3205	81	40.500
14:43	14:57 Powered /Shut Down for MMO Sighting				
14:57	22:54 Prime - MGL1211OBS02	3210	3338	128	64.000
22:54	23:13 Powered /Shut Down for MMO Sighting				
23:13	23:19 Prime - MGL1211OBS02	3343	3344	1	0.500
23:19	0:00 Powered /Shut Down for MMO Sighting				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

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Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day in production on MGL1211OBST01. At 09:17 GMT this line ended and a short line change commenced. At 09:34 production on MGL1211OBS02 was started and continued throughout the rest of the day. Throughout the day there were a total of three Power / Shut Down of the energy source due to MMO Sightings in the EZ, but unlike yesterday the impact was much less sever (Time).

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBS02 and this line is expected to continue throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-19</b>	<u>Sailed Km</u>
Prime	74.500
Infill	0.000
Reshoot	0.000
	Total: 74.500

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-19</b>
Production	9:07
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	14:53
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

47° 39' 39.907" N	126° 30' 35.747" W	
Wind: WNW @ 5-10 kts	Seas: 1-2 m	Depth: 2618.1 m
SOG: 4.7 kts	HDG: 290.9 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:08				
	Powered /Shut Down for MMO Sighting				
0:08	0:55				
	Prime - MGL1211OBS02	3359		3371	12 6.000
0:55	1:12				
	Powered /Shut Down for MMO Sighting				
1:12	1:25				
	Prime - MGL1211OBS02	3376		3379	3 1.500
1:25	1:41				
	Powered /Shut Down for MMO Sighting				
1:41	1:44				
	Prime - MGL1211OBS02	3384		3385	1 0.500
1:44	2:04				
	Powered /Shut Down for MMO Sighting				
2:04	2:34				
	Prime - MGL1211OBS02	3390		3398	8 4.000
2:34	5:46				
	Powered /Shut Down for MMO Sighting				
5:46	14:49				
	Aborted Line MGL1211OBS02 Due Power Down for MMO Sighting and Night fall				
14:49	20:24				
	Prime - MGL1211OBS02A	3555		3648	93 46.500
20:24	20:44				
	Powered /Shut Down for MMO Sighting				
20:44	21:02				
	Prime - MGL1211OBS02A	3654		3659	5 2.500
21:02	22:19				
	Powered /Shut Down for MMO Sighting				
22:19	0:00				
	Prime - MGL1211OBS02A	3681		3708	27 13.500

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The Vessel started the day in production on MGL1211OBS02. After numerous Power / Shut Down of the energy source for MMO sightings in the EZ, the line was aborted at 05:46 GMT. It had gotten to dark to see the Marine Mammal that was in the EZ (near the source) and all production for the night was halted. The vessel made its way back around to reshoot the areas missed while collecting a Multibeam survey line on the way. At 14:49 line MGL1211OBS02A was started and continued throughout the rest of the day. There were again numerous Power / Shut Down of the energy source for MMO sightings in the EZ. The longest of those was 1:17 long.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBS02A and at ~14:00 GMT is expected to conclude the line near the Neptune Canada site and the R/V Thomas G. Thompson. At that time the vessel will begin recovery of the Energy Source and start Streamer Deployment operations. Streamer Deployment is expected to continue throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-20</b>	<u>Sailed Km</u>
Prime	113.500
Infill	0.000
Reshoot	0.000
	Total: 113.500

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-20</b>
Production	13:54
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:55
Streamer	8:59
Seismic Air Compressor	0:00
Mitigation/PAM	00:12
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

47° 47.011" N	126° 07.465" W	
Wind: SE @ 5-10 kts	Seas: 1 m	Depth: 2641.5 m
SOG: 3.5 kts	HDG: 100.8 Deg	

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

### **3. TIME SUMMARY**

	Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	13:54	Prime - MGL1211OBS02A		3709	3936	227 113.500
13:54	14:06	Powered /Shut Down for MMO Sighting				
14:06	15:01	Recovering Source				
15:01	15:38	Preparing to Deploy Streamer				
15:38	0:00	Deploying Streamer				

### **4. Comments**

#### **Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martenson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

#### **Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

#### **Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

### **5. Daily Summary:**

The Vessel started the day in production on MGL1211OBS02A, which continued until 14:06 when the line was aborted because of a PSO sighting that required a power down. Recovery of the Source commenced and was completed at 15:01 GMT. There was a short time to prepare for the streamer deployment which commenced at 15:38 GMT and continued throughout the day.

#### **Tomorrow:**

The Vessel will start the day continuing deployment of the streamer cable and all other towed equipment. Once the Towed Equipment is deployed the vessel will begin production on MGL1211MCS02. Part way down the MGL1211MCS02 the line will be stopped and the vessel will circle around to reacquire a section of an OBS line that was missed from the previous day. It will then restart MGL1211MCS02 and continue it throughout the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-21</b>	<u>Sailed Km</u>
Prime	69.600
Infill	0.000
Reshoot	0.000
	Total: 69.600

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-21</b>
Production	8:15
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	1:25
Streamer	3:01
Seismic Air Compressor	0:00
Mitigation/PAM	11:19
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

47° 27.947" N	126° 34.037" W	
Wind: NE @ 5-10 kts	Seas: 1 m	Depth: 2393 m
SOG: 4.3 kts	HDG: 110.9 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:41				
	Deploying Streamer				
0:41	0:51				
	Deploying Sub-Array 1				
0:51	3:11				
	Deploying Streamer				
3:11	4:26				
	Deploying Sub-Arrays 2, 3, & 4				
4:26	10:55	6657	8132	1475	55.313
10:55	15:17				
	Circling around to Reshoot OBS02 for MMO Sighting				
15:17	21:45				
	Powered /Shut Down for MMO Sighting				
21:45	23:22	8716	9069	353	13.238
23:22	23:51				
	Powered /Shut Down for MMO Sighting				
23:51	0:00	9156	9184	28	1.050

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
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Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The Vessel started the day continuing the deployment of the streamer and source. At 04:26 GMT all MCS Towed Equipment was deployed and production began on Line MGL1211MCS02. This line continued until 10:55 GMT when the line was stopped to circle around in an attempt to reshoot some of the Missing OBS data from the previous day. At 15:17 GMT the circle was complete, however by that time the source was again Powered / Shut down for MMO Sightings. The vessel continued in this stated until 21:45 GMT at which time production resumed on MGL1211MCS02A and there was one more Powered / Shut down for MMO Sightings before the end of the day. At day change the vessel was in full production on MGL1211MCS02A

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS02A. At ~16:00 GMT the vessel will make a line change to MGL1211MCST02 and continue on it through out the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-22</b>	<u>Sailed Km</u>
Prime	148.388
Infill	0.000
Reshoot	0.000
Total: 148.388	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-22</b>
Production	16:58
Line Change	2:10
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:56
Seismic Air Compressor	0:00
Mitigation/PAM	3:56
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

47° 19.064" N	126° 52.991" W	
Wind: E @ 5-10 kts	Seas: 1 m	Depth: 1787 m
SOG: 4.9 kts	HDG: 285.92 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	1:54 Prime MGL1211MCS02A	9185	9608	423	15.863
1:54	2:11 Powered /Shut Down for MMO Sighting				
2:11	3:22 Prime MGL1211MCS02A	9661	9913	252	9.450
3:22	3:37 Powered /Shut Down for MMO Sighting				
3:37	3:41 Prime MGL1211MCS02A	9964	9977	13	0.488
3:41	3:48 Powered /Shut Down for MMO Sighting				
3:48	4:18 Prime MGL1211MCS02A	9999	10111	112	4.200
4:18	6:06 Powered /Shut Down for MMO Sighting				
6:06	12:42 Prime MGL1211MCS02A	10438	11926	1488	55.800
12:42	13:04 Powered /Shut Down for MMO Sighting				
13:04	14:25 Prime MGL1211MCS02A	12009	12316	307	11.513
14:25	15:36 Line Change				
15:36	16:32 Untangling Lead-in from Sub-Arrays 1 & 2				
16:32	17:09 Line Change				
17:09	19:19 Prime MGL1211MCST02	15083	15534	451	16.913
19:19	19:23 Line Change				
19:23	20:54 Prime MGL1211MCST02A	15547	15877	330	12.375
20:54	21:09 Line Change				
21:09	22:43 Prime MGL1211MCST03	15930	16310	380	14.250
22:43	23:00 Powered /Shut Down for MMO Sighting				
23:00	23:07 Prime MGL1211MCST03	16380	16402	22	0.825
23:07	23:10 Line Change				
23:10	0:00 Prime MGL1211MCS02B	16502	16681	179	6.713

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

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James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

Today was a very busy day for the vessel. It acquired data on Lines MGL1211MCS02A, MGL1211MCST02, & MGL1211MCST02A, and at the end of the day was still in production on MGL12MCS02B. There was multiple Power / Shut Downs of the Source for PSO sightings throughout the day.

During the line change between MGL1211MCS02A and MGL1211MCST02 the Streamers lead-in was tangled up in Source Sub-Arrays 1 & 2. This took about an hour to sort out and Sub-Array 2 was picked up for inspection. At a matter of standard procedure the vessel will be slowed to ~2,500 lbs of Tension on the streamer ~5 min before any turn and will remain that way until the lead-in is back straight behind the vessel and in-between Sub-Arrays 2 & 3 where it belongs.

During MGL1211MCST03, the link between DP and Spectra (Seismic) navigation system was tested and Spectra, was able to steer the line for a while.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS02B. Further into the day is will acquire data on MGL1211MCS03, MGL1211OBS03B, and MGL1211MCS03A and at the end of the day is expected to be continuing production on MGL1211MCS03A

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-23</b>	<u>Sailed Km</u>
Prime	148.388
Infill	0.000
Reshoot	0.000
Total: 148.388	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-23</b>
Production	12:04
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	11:56
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

47° 03.318" N	126° 13.262" W	
Wind: SW @ <5 kts	Seas: <1 m	Depth: 2552.4 m
SOG: 4.9 kts	HDG: 161.6 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	3:38 Prime MGL1211MCS02B	16682	17515	833	31.238
3:38	4:00 Powered /Shut Down for MMO Sighting				
4:00	5:06 Prime MGL1211MCS02B	17593	17825	232	8.700
5:06	5:27 Line Change				
5:27	9:11 Prime MGL1211MCS03	18139	18799	660	24.750
9:11	9:15 Line Change				
9:15	11:37 Prime MGL1211OBS03B	19004	19149	145	21.750
11:37	14:20 Line Change				
14:20	16:23 Prime MGL1211MCS03A	20167	20599	432	16.200
16:23	16:48 Powered /Shut Down for MMO Sighting				
16:48	17:55 Prime MGL1211MCS03A	20687	20948	261	9.788
17:55	18:12 Powered /Shut Down for MMO Sighting				
18:12	18:35 Prime MGL1211MCS03A	21020	21118	98	3.675
18:35	18:52 Powered /Shut Down for MMO Sighting				
18:52	22:36 Prime MGL1211MCS03A	21185	22110	925	34.688
22:36	22:54 Powered /Shut Down for MMO Sighting				
22:54	23:57 Prime MGL1211MCS03A	22174	22416	242	9.075
23:57	0:00 Powered /Shut Down for MMO Sighting				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The first part of the day was spent going back to pickup gaps in the coverage due to the Power / Shutdown of the Source for previous PSO Sightings. The Vessel pickup up coverage on MGL1211MCS02B, MGL1211MCS03, and MGL1211OBS03B and at 14:20 GMT began acquisition on MGL1211MCS03B. Production continued on this line throughout the rest of the day. There were again numerous Power / Shutdowns of the source for PSO Sightings (See Above Time Summary) but none were longer than 20 min and vessel was able to go back into full production once the EZ was clear.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS03A and this is expected to continue throughout the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-24</b>	<u>Sailed Km</u>
Prime	197.213
Infill	0.000
Reshoot	0.000
Total: 197.213	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-24</b>
Production	23:03
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:57
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

47° 15' 21.733" N	126° 38' 16.048" W	
Wind: SSW @ 5-10 kts	Seas: 1 m	Depth: 2647.7 m
SOG: 4.7 kts	HDG: 171.6 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:02 Powered /Shut Down for MMO Sighting				
0:02	13:08 Prime MGL1211MCS03A	22436	25381	2945	110.438
13:08	13:16 Powered /Shut Down for MMO Sighting				
13:16	16:09 Prime MGL1211MCS03A	25411	26053	642	24.075
16:09	16:23 Powered /Shut Down for MMO Sighting				
16:23	16:43 Prime MGL1211MCS03A	26100	26175	75	2.813
16:43	16:50 Powered /Shut Down for MMO Sighting				
16:50	21:00 Prime MGL1211MCS03A	26201	27208	1007	37.763
21:00	21:26 Powered /Shut Down for MMO Sighting				
21:26	0:00 Prime MGL1211MCS03A	27306	27896	590	22.125

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The day was spent in production on MGL1211MCS03A and the vessel continued this way throughout the rest of the day. There were again numerous Power / Shutdowns of the source for PSO Sightings (See Above Time Summary) but none were longer than 30 min and vessel was able to go back into full production once the EZ was clear.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS03A and this is expected to complete this line at 13:00 GMT. At which time a line change will be made to MGL1211MCST03, during which preventive maintenance will be performed on all source sub arrays. Shortly before the end of day the vessel will begin production on MGL1211MCS01 to the NW and will continue this way throughout the remainder of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-25</b>	<u>Sailed Km</u>
Prime	142.275
Infill	0.000
Reshoot	0.000
Total: 142.275	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-25</b>
Production	17:15
Line Change	0:22
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	3:33
Streamer	1:11
Seismic Air Compressor	0:00
Mitigation/PAM	1:39
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

47° 14' 54.760" N	126° 25' 26.578" W	
Wind: W @ < 5 kts	Seas: <1 m	Depth: 89 m
SOG: 3.9 kts	HDG: 080 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	13:13 Prime MGL1211MCS03A	27897	30808	2911	109.163
13:13	13:35 Powered /Shut Down for MMO Sighting				
13:35	13:57 Line Change				
13:57	15:08 Line Change aborted due to Lead-in tangled in the guns.				
15:08	18:41 Source Maintenance				
18:41	19:46 Powered /Shut Down for MMO Sighting				
19:46	23:06 Prime MGL1211MCST04	31333	32081	748	28.050
23:06	23:18 Powered /Shut Down for MMO Sighting				
23:18	0:00 Prime MGL1211MCST04	32123	32258	135	5.063

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing production on MGL1211MCS03A which concluded at 13:35 GMT after a short shutdown of the source for PSO Sightings. Shorting into the Line Change at 13:57 GMT it was observed that the lead-in was tangled up with Sub-Arrays 2 & 3. At 15:08 GMT after some maneuvering of the vessel the Lead-in was dislodged from the Sub-Arrays and they were recovered for planned Maintenance. During the source Maintenance the Soft tow point was moved 100m further up the lead-in to allow for more sag in the lead-in, so it will pass under the source more easily. At 18:41 GMT all source maintenance was complete but we could not ramp up due to PSO Sightings. At 19:46 MGT the Source was up to full power and production on MGL1211MCST04 Started and continued throughout the day.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCST04 and this is expected to complete this line at 00:41 GMT. At which time a line change will be made to MGL1211MCS01, which will continue throughout the remainder of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-26</b>	<u>Sailed Km</u>
Prime	178.838
Infill	0.000
Reshoot	0.000
Total: 178.838	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-26</b>
Production	22:03
Line Change	0:48
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	1:09
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

44° 57' 20.213" N	126° 28' 02.155" W	
Wind: WSW @ 5-10 kts	Seas: 1 m	Depth: 2814.8 m
SOG: 3.4 kts	HDG: 290 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:41 Prime MGL1211MCST04	32259	32391	132	4.950
0:41	1:29 Line Change				
1:29	16:43 Prime MGL1211MCS01	32467	35806	3339	125.213
16:43	16:47 Powered /Shut Down for MMO Sighting				
16:47	22:40 Prime MGL1211MCS01	35828	37076	1248	46.800
22:40	23:38 Powered /Shut Down for MMO Sighting				
23:38	23:53 Prime MGL1211MCS01	37267	37317	50	1.875
23:53	0:00 Powered /Shut Down for MMO Sighting				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing production on MGL1211MCST04 which concluded at 00:41GMT. A Line Change was made to MGL1211MCS01 which started at 01:29 GMT and continued throughout the day. There were again a couple of Source Power / Shut downs due to PSO sightings throughout the day. Please see "**TIME SUMMARY**" for times.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS01 which will continue throughout the remainder of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-27</b>	<u>Sailed Km</u>
Prime	189.188
Infill	0.000
Reshoot	0.000
Total: 189.188	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-27</b>
Production	23:05
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:55
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

45° 35' 33.335" N	128° 46' 38.067" W	
Wind: SE @ 10-15 kts	Seas: 1 -2 m	Depth: 2763.9 m
SOG: 4.6 kts	HDG: 290 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	0:55				
	Powered /Shut Down for MMO Sighting				
0:55	0:00				
	Prime MGL1211MCS01	37478	42523	5045	189.188

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing production on MGL1211MCS01 which continued throughout the day. There was a Source Power / Shut down due to PSO at the beginning of the day which lasted ~55 min.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211MCS01 which will continue until ~13:00 GMT at which time a line change will be made to MGL1211AX01. During this line change Sub-Array 3 will be recovered to repair an air leak and do other preventive maintenance. Once MGL1211AX01 is complete another line change will be made to MGL1211AX02 which should take us through the end of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-28</b>	<u>Sailed Km</u>
Prime	168.600
Infill	0.000
Reshoot	0.000
Total: 168.600	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-28</b>
Production	21:57
Line Change	2:03
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

45° 56.810" N	129° 40.344" W	
Wind: SW @ 10-15 kts	Seas: 2 m	Depth: 2510.42 m
SOG: 3.7 kts	HDG: 011 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	12:43 Prime MGL1211MCS01	42524	45199	2675	100.313
12:43	12:55 Line Change				
12:55	15:47 Prime MGL1211MCST05	46011	46506	495	18.563
15:47	16:43 Line Change				
16:43	20:28 Prime MGL1211MCSAX1	46845	47704	859	32.213
20:28	21:08 Line Change				
21:08	23:45 Prime MGL1211MCST06	47851	48318	467	17.513
23:45	0:00 Line Change				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The Vessel started the day continuing production on MGL1211MCS01 which continued until 12:34 GMT at which time a line change was made to MGL1211MCST05. This Line started at 12:55 GMT and continued to 15:47 GMT. During this Transit Line Source Sub-Array #3 was picked up to do preventive maintenance and fix an air leak. As 15:47 GMT another line change to MGL1211MCSAX1 was made and this line started 16:43 GMT and went until 20:28 GMT, when another line change to MGL1211MCST06 was started. At 21:08 GMT MGL1211MCST06 was started and during the first part of this line Source Sub-Array #2 was pickup to do preventive maintenance and fix an air leak. MGL1211MCST06 continued until 23:45 GMT at which time the vessel started a line change to MGL1211MCSAX2 that continued throughout the rest of the day.

**Tomorrow:**

The Vessel will start the day continuing the line change to MGL1211MCSAX2. The vessel is expected to acquire data on lines, MGL1211MCSAX2, MGL1211MCST07, MGL1211MCSAX3, MGL1211OBS01 and MGL1211OBSF02A before the day is completed.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-29</b>	<u>Sailed Km</u>
Prime	149.788
Infill	0.000
Reshoot	0.000
Total: 149.788	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-29</b>
Production	19:12
Line Change	3:48
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	1:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

46° 01' 15.124" N	128° 56' 12.493" W	
Wind: NNW @ 5-10 kts	Seas: 1 m	Depth: 2755 m
SOG: 4.4 kts	HDG: 077.3 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	1:04 Line Change				
1:04	5:15 Prime MGL1211MCSAX2	48886	49754	868	32.550
5:15	7:45 Line Change				
7:45	8:45 Line Change Extended due to Source Maintenance				
8:45	12:00 Prime MGL1211MCS01A	50101	50794	693	25.988
12:00	12:03 Line Change				
12:03	17:55 Prime MGL1211OBS01	51032	51123	91	45.500
17:55	18:06 Line Change				
18:06	0:00 Prime MGL1211OBSF02A	51207	51512	305	45.750

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing a line change to MGL1211MCSAX2. At 01:04 GMT the line change was complete and production began. Line MGL1211MCSAX2 ended at 05:15 and a Line change was started back to MGL1211MCS01A. During this time source Maintenance was performed on Sub-Array’s 3 & 4. At 08:45 Production began and continued until 12:00 GMT on Line MGL1211MCS01A. A short line change took place and at 12:03 GMT production began on MGL1211OBS01, which continued until 17:55 GMT. At this time another short line change happen and Production on MGL1211OBSF02A was started at 18:06 and continued throughout the rest of the day.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBSF02A. The vessel is expected to acquire data on lines, MGL1211OBSF02A, MGL1211OBS04, and MGL1211OBSF02B, which it should be in production on at the end of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-06-30</b>	<u>Sailed Km</u>
Prime	188.250
Infill	0.000
Reshoot	0.000
	Total: 188.250

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-06-30</b>
Production	22:52
Line Change	0:34
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:34
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

45° 39' 06.796" N	129° 23' 50.617" W	
Wind: N @ 10-15 kts	Seas: 1 m	Depth: 2692.9 m
SOG: 4.4 kts	HDG: 004.2 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	4:04 Prime MGL1211OBSF02A		51513	51725	212 31.800
4:04	4:22 Line Change				
4:22	15:37 Prime MGL1211OBS04		52013	52656	643 96.450
15:37	15:53 Line Change				
15:53	21:07 Prime MGL1211OBSF02B		52711	52991	280 42.000
21:07	21:33 Powered /Shut Down for MMO Sighting				
21:33	23:45 Prime MGL1211OBSF02B		53016	53129	113 16.950
23:45	23:53 Powered /Shut Down for MMO Sighting				
23:53	0:00 Prime MGL1211OBSF02B		53136	53143	7 1.050

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line to MGL1211OBSF02A. At 04:04 GMT the line ended and a line change was begun. At 04:22 GMT Production started on MGL1211OBS04, which continued until 15:37 GMT when another line change was begun. At 15:53 GMT Production on MGL1211OBSF02B was started and continued throughout the rest of the day. There were a couple of short power down for Maine Mammals during Line MGL1211OBSF02B.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBSF02B. At ~01:00 this line should conclude and a line change to MGL1211OBS01A will take place and the line should start at ~01:30. We will continue online until ~12:00 GMT at which time the Line MGL1211OBS01A will be aborted to recover all towed equipment. Once the Streamer is onboard the Vessel will redeploy the Energy Source and resume production on MGL1211OBS01B throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-01</b>	<u>Sailed Km</u>
Prime	137.950
Infill	0.000
Reshoot	0.000
Total: 137.950	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-01</b>
Production	16:23
Line Change	0:17
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	2:17
Streamer	3:44
Seismic Air Compressor	0:00
Mitigation/PAM	0:36
Transit	0:00
Ship Repair	0:00
Maneuvering	0:43
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

45° 21' 15.972" N	127° 53' 05.488" W	
Wind: N @ 5-10 kts	Seas: 1 m	Depth: 2915.9 m
SOG: 4.5 kts	HDG: 105.8 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM	
0:00	1:14	Prime MGL1211OBSF02B	53143	53206	63	9.450
1:14	1:31	Line Change				
1:31	13:06	Prime MGL1211OBS01	53423	53620	197	98.500
13:06	14:10	Recovering Source				
14:10	17:54	Recovering Streamer				
17:54	19:07	Deploying Source				
19:07	19:43	Ramping Up Source				
19:43	20:26	Maneuvering to Line				
20:26	0:00	Prime MGL1211OBS01A	54312	54372	60	30.000

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line to MGL1211OBSF02B. At 01:14 GMT the line ended and a line change was begun. At 01:31 GMT Production started on MGL1211OBS01, which continued until 13:06 GMT at which time the line was aborted for recovery of the Streamer Cable. All Source Sub-Array's and Streamer were onboard at 17:54 GMT at which time the Source Sub-Arrays were redeployed. At 20:26 GMT the vessel was back in Production on MGL1211OBS01A and this continued throughout the rest of the day.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBS01A, which will continue throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-01</b>	<u>Sailed Km</u>
Prime	194.000
Infill	0.000
Reshoot	0.000
	Total: 194.000

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-01</b>
Production	23:04
Line Change	0:00
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:56
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

44° 40' 43.737" N	125° 31' 34.233" W	
Wind: SW @ 10-15 kts	Seas: 1 m	Depth: 2837.5 m
SOG: 4.5 kts	HDG: 114.9 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM	
0:00	14:13	Prime MGL1211OBS01A	54373	54610	237	118.500
14:13	15:09	Powered /Shut Down for MMO Sighting				
15:09	0:00	Prime MGL1211OBS01A	54622	54773	151	75.500

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line to MGL1211OBS01A which continued throughout the rest of the day. There was on Power / Shut Down for PSO sighting which lasted Fifty Six min.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBS01A, which will continue until ~10:50 GMT. At which time the vessel will begin a line change. At this it is still under discussion whether the vessel will begin the Trehu Survey Lines or continue on an OBS Transit Line (MGL1211OBS07) back up to the West North West so the vessel can start line MGL1211OBSF03 later in the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-03</b>	<u>Sailed Km</u>
Prime	132.550
Infill	0.000
Reshoot	0.000
	Total: 132.550

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-03</b>
Production	15:28
Line Change	0:03
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	8:29
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
	Total: 24:00

**UTC Midnight (24:00) Position / Heading:**

44° 00' 38.751" N	124° 24' 00.669" W	
Wind: NW @ 5-10 kts	Seas: 1 2 m	Depth: 112.7 m
SOG: 5.5 kts	HDG: 220.3 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	1:14 Prime MGL1211OBS01B	54774	54794	20	10.000
1:14	4:41 Powered / Shutdown for MMO Sighting				
4:41	5:03 Prime MGL1211OBS01B	54834	54840	6	3.000
5:03	8:47 Circling for MMO Sightings				
8:47	13:21 Prime MGL1211OBS01C	55792	55870	78	39.000
13:21	13:36 Powered / Shutdown for MMO Sighting				
13:36	14:05 Prime MGL1211OBS01C	55874	55881	7	3.500
14:05	14:23 Powered / Shutdown for MMO Sighting				
14:23	16:08 Prime MGL1211OBS01C	55884	55913	29	14.500
16:08	16:34 Powered /Shutdown for MMO Sighting				
16:34	18:16 Prime MGL1211OBS01C	55918	55947	29	14.500
18:16	18:35 Powered /Shutdown for MMO Sighting				
18:35	21:02 Prime MGL1211OBS01C	55951	55991	40	20.000
21:02	21:04 Line Change				
21:04	23:18 Prime TREHUOBS01	56004	56136	132	22.440
23:18	23:19 Line Change				
23:19	0:00 Prime TREHUOBS02	56207	56240	33	5.610

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorriz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5.Daily Summary:**

The Vessel started the day continuing Production on line to MGL1211OBS01B, which continued to 05:03 GMT when the line was aborted and the vessel began circling around due to PSO Sightings of Marine Mammal in the EZ. The Circle was completed at 08:46 GMT when the vessel restarted production on MGL1211OBS01C. This line continued until 21:02 GMT and had a number of Source Power/Shutdowns due to PSO Sightings. At 21:04 GMT the Vessel began production on TREHUOBS01 which continued uninterrupted until 23:18 GMT. At which time a short line change was undertaken and the vessel began production on TREHUOBS02, which continued throughout the end of the day.

**Tomorrow:**

The Vessel will start the day continuing production on TREHUOBS02. It is expected that the vessel will also acquire data on TREHUOBS03, TREHUOBS04, TREHUOBS05 and possible TREHUOBS06 before the end of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-04</b>	<u>Sailed Km</u>
Prime	209.950
Infill	0.000
Reshoot	0.000
Total: 209.950	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-04</b>
Production	21:38
Line Change	0:19
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	2:03
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

44° 06' 41.120" N	124° 42' 18.242" W	
Wind: N @ 15-20 kts	Seas: 1 m	Depth: 98.9 m
SOG: 5.6 kts	HDG: 198.8 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	1:23 Prime TREHUOBS02	56241	56322	81	13.770
1:23	1:39 Line Change				
1:39	12:57 Prime TREHUOBS03	56433	57058	625	106.250
12:57	13:15 Powered / Shutdown for MMO Sighting				
13:15	13:20 Prime TREHUOBS04	58013	58016	3	0.510
13:20	14:38 Powered / Shutdown for MMO Sighting				
14:38	14:45 Prime TREHUOBS04	58060	58064	4	0.680
14:45	15:12 Powered / Shutdown for MMO Sighting				
15:12	15:31 Prime TREHUOBS04	58081	58096	15	2.550
15:31	15:34 Line Change				
15:34	0:00 Prime TREHUOBS05	59003	59510	507	86.190

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line TREHUOBS02. During the day production was also acquired on TREHUOBS03, TREHUOBS04, and at the end of the day Production was continuing on TREHUOBS05. There were a number of Power / Shutdowns of the source due to PSO Sightings throughout the day (See **TIME SUMMARY** above)

**Tomorrow:**

The Vessel will start the day continuing production on TREHUOBS05. It is expected that the vessel will also acquire data on TREHUOBS06, TREHUOBS07, and TREHUOBS08 before the end of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

	<u>Sailed Km</u>
2012-07-05	
Prime	210.630
Infill	0.000
Reshoot	0.000
Total:	210.630

**2. STATISTICAL ANALYSIS (HH:MM)**

<u>Time Activity Analysis</u>	<u>2012-07-05</u>
Production	20:45
Line Change	0:05
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	3:10
Transit	0:00
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total:	24:00

**UTC Midnight (24:00) Position / Heading:**

44° 31' 08.242" N	124° 12' 43.391" W	
Wind: N @ 10-15 kts	Seas: 1 m	Depth: 59.0 m
SOG: 5.4 kts	HDG: 183.2 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

	Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	2:18	Prime TREHUOBS05	59511	59648	137	23.290
2:18	2:30	Powered / Shutdown for MMO Sighting				
2:30	2:51	Prime TREHUOBS05	59660	59681	21	3.570
2:51	3:05	Powered / Shutdown for MMO Sighting				
3:05	4:23	Prime TREHUOBS05	59695	59768	73	12.410
4:23	4:25	Line Change				
4:25	7:07	Prime TREHUOBS06	60015	60160	145	24.650
7:07	7:08	Line Change				
7:08	14:04	Prime TREHUOBS07	61001	61411	410	69.700
14:04	14:52	Powered / Shutdown for MMO Sighting				
14:52	17:01	Prime TREHUOBS07	61458	61578	120	20.400
17:01	18:57	Powered / Shutdown for MMO Sighting				
18:57	22:41	Prime TREHUOBS08	62046	62303	257	43.690
22:41	22:43	Line Change				
22:43	0:00	Prime TREHUOBS09	62303	62379	76	12.920

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**5. Daily Summary:**

The Vessel started the day continuing Production on line TREHUOBS05. During the day production was also acquired on TREHUOBS06, TREHUOBS07, TREHUOBS08 and TREHUOBS09. At the end of the day Production was continuing on TREHUOBS09. There were a number of Power / Shutdowns of the source due to PSO Sightings throughout the day (See **TIME SUMMARY** above)

**Tomorrow:**

The Vessel will start the day continuing production on TREHUOBS09. Once complete this will conclude the TREHU portion of the mission. The vessel will go back to work on the Juan de Fuca portion of the mission and acquire data on MGL1211OBS07 and MGL1211OBS03, which should continue throughout the rest of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-06</b>	<u>Sailed Km</u>
Prime	222.020
Infill	0.000
Reshoot	0.000
Total: 222.020	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-06</b>
Production	22:10
Line Change	1:13
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:24
Transit	0:00
Ship Repair	0:13
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

44° 35' 58.599" N	126° 04' 39.326" W	
Wind: N @ 5-10 kts	Seas: 1 m	Depth: 2890.4 m
SOG: 5.4 kts	HDG: 171.8 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	2:35 Prime TREHUOBS09		62379	62533	154 26.180
2:35	3:45 Line Change				
3:45	15:59 Prime MGL1112OBST02	62659		63376	717 121.890
15:59	16:15 Powered / Shutdown for MMO Sighting				
16:15	16:36 Prime MGL1112OBST02	63392		63412	20 3.400
16:36	16:39 Line Change				
16:39	18:28 Prime MGL1112OBSF03	64003		64111	108 18.360
18:28	18:41 STBD Compressor Issue				
18:41	19:03 Prime MGL1112OBSF03	64119		64140	21 3.570
19:03	19:11 Powered / Shutdown for MMO Sighting				
19:11	0:00 Prime MGL1112OBSF03	64147		64433	286 48.620

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

**Science Party on board:**

Chief Scientist – Suzanne Carbotte  
Scientists:  
Berta Biescas-Gorritz, Guillermo Bornstein, Laurel Childress, Matthias Delecluse, Aaron Farkas  
James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line TREHUOBS09. During the day production was also acquired on MGL1211OBST02 & MGL1211OBSF03. At the end of the day Production was continuing on MGL1211OBSF03. There were a couple of Power / Shutdowns of the source due to PSO Sightings throughout the day (See **TIME SUMMARY** above).

In addition at 18:28 GMT a sensor on the STBD Compressor shut it down and at 18:41 GMT the Port Compressor was online and production resumed. It was found that the 4th / 5th stage piston connecting rod had failed. Repairs will be made while the vessel is alongside in Astoria from the 8<sup>th</sup> to 12<sup>th</sup> of July.

**Tomorrow:**

The Vessel will start the day continuing production on MGL1211OBSF03. At the conclusion of MGL1211OBSF03 the vessel will acquire additional data on MGL1211OBS03 to the southeast until it is time to recover all the towed equipment and head to port. The vessel is expected to be underway at the end of the day.

Regards  
Robert J Steinhaus

Cruise : MGL1211

Juan de Fuca Seismic Mission – S. Carbotte

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

R/V Marcus G. Langseth

**1. MCS PRODUCTION SUMMARY**

<b>2012-07-06</b>	<u>Sailed Km</u>
Prime	179.620
Infill	0.000
Reshoot	0.000
Total: 179.620	

**2. STATISTICAL ANALYSIS (HH:MM)**

<b><u>Time Activity Analysis</u></b>	<b>2012-07-06</b>
Production	19:45
Line Change	0:06
Weather	0:00
Instrument Acquisition	0:00
Instrument Navigation	0:00
OBS Rosette Drop Test	0:00
OBS Deployment	0:00
OBS Recovery	0:00
CTD Cast	0:00
Gravity Core	0:00
Piston Core	0:00
Multi-Core	0:00
Sonar Survey	0:00
Hydraulics	0:00
Source	0:54
Streamer	0:00
Seismic Air Compressor	0:00
Mitigation/PAM	0:00
Transit	3:15
Ship Repair	0:00
Maneuvering	0:00
Port Call	0:00
Other	0:00
Total: 24:00	

**UTC Midnight (24:00) Position / Heading:**

43° 51.0599" N	124° 58.2778" W	
Wind: N @ 20-25 kts	Seas: 2-3 m	Depth: 417 m
SOG: 9.7 kts	HDG: 010 Deg	

**Cruise : MGL1211**

**Juan de Fuca Seismic Mission – S. Carbotte**

To: Office of Marine Operations  
Cc: Reports Group  
Fm: Robert J Steinhaus (Sr. Science Officer)

**R/V Marcus G. Langseth**

**3. TIME SUMMARY**

Time	Event	FSP	LSP	Total SP	Sail Line KM
0:00	8:12 Prime MGL1112OBSF03		64434	64920	486 82.620
8:12	8:18 Line Change				
8:18	19:51 Prime MGL1112OBS03A	65002		65196	194 97.000
19:51	20:45 Source Recovery				
20:45	0:00 Transit to Astoria, OR USA				

**4. Comments**

**Science Technical staff on board:**

Senior Science Officer – Robert Steinhaus  
Science Officer – Jay Johnstone  
Science Officer – David Martinson  
Navigator – Mike Martello  
Gun Mechanic – Carlos Gutierrez  
Gun Mechanic – Michael Tatro  
Gun Mechanic – Weston Groves

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James Gibson, Shuoshuo Han, Gregory Horning, Helen Janiszewski Hilena Marjanovic, Beatrice Parker  
Louise Watremez

**Marine Mammal Observer Staff on board:**

Heidi Ingram, Jami Allen, Katherine Douglas, Tatiana Moreno, Emily Ellis

**5. Daily Summary:**

The Vessel started the day continuing Production on line MGL1211OBSF03. At 08:12 GMT a short line change to MGL1211OBS03A was started and 08:18 GMT production commenced. At 19:51 GMT MGL1211OBS03A was completed and all towed equipment was recovered. At 20:45 GMT the vessel got underway for Astoria, OR USA.

**Tomorrow:**

The Vessel will start the transiting to Astoria, OR. The vessel is scheduled to arrive alongside Pier 1 at ~20:00 GMT and will begin demobilization efforts for MGL1211 which will continue throughout the rest of the day.

Regards  
Robert J Steinhaus