

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/14/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/14/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Mobilization	0:00
Demobilization	0.00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	0:00
Ship Repair	0:00
Main Engines	0:00
Port Call	24:00

Total: 24.00

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

Pos: 21 18 58.21 N  
157 53 19.32 W

Cos: N/A deg

Speed: N/A kts

### **Weather:**

Wind: N/A

Seas: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

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Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Along Side UH Dock in Honolulu, Hawaii .

### **4. Comments**

Local time is UTC-10

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

Steinhaus, Johnson, Martinson, McKiernan, Tatro, Ng, Zhang (M), Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback,

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

Fossati

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

The vessel spent the entire day alongside the UH Marine Facility making preparation for getting underway for science mission MGL1004. During the day the Science Party joined the vessel and was assigned berthing. In addition the Science Party was given safety briefing and tour of the vessel. Provisions were delivered from the chandlers in the afternoon.

Tomorrow: We will continue getting the vessel ready to depart for science mission MGL1004. The vessel will move over to the Navy Fuel Dock in Pearl Harbor to take on bunkers. Once complete the vessel will return to the UH Marine Facility to continue preparation while waiting on the IHA to be approved.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/15/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/15/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Mobilization	0:00
Demobilization	0.00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	2:21
Ship Repair	0:00
Main Engines	0:00
Port Call	21:39

Total: 24.00

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

Pos: 21 21.14 N  
157 56.59 W

Cos: N/A deg  
Speed: N/A kts

### **Weather:**

Wind: N/A  
Seas: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	17:57	Along Side UH Dock in Honolulu, Hawaii
17:57	20:18	Transit to Navy Pier M3 (Pearl Harbor) in Bunkering
20:18	24:00	Along Side Navy Pier M3 (Pearl Harbor) Bunkering Vessel.

### **4. Comments**

Local time is UTC-10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback,

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

Fossati

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

The vessel spent the first part of the day (GMT) alongside the UH Marine Facility making preparation for getting underway for science mission MGL1004. In the afternoon (GMT) the vessel got underway for a short transit over to Pearl Harbor Navy Pier M3, where it remained for the rest of the day taking on bunkers.

Tomorrow: The vessel will continue to take on Bunkers at the start of the day. Once Bunkering is complete the vessel will get under way for the short transit back to the UH Marine Facility, where we will continue with preparation for the upcoming Science Mission MGL1004.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/16/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/16/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Mobilization	0:00
Demobilization	0.00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	2:29
Ship Repair	0:00
Main Engines	0:00
Port Call	21:31

Total: 24.00

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

Pos: 21 18.975 N  
157 53.175 W

Cos: N/A deg  
Speed: N/A kts

### **Weather:**

Wind: N/A  
Seas: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	03:00	Along Side Navy Pier M3 (Pearl Harbor) Bunkering Vessel
03:00	05:29	Transit to UH Dock in Honolulu, Hawaii
05:29	24:00	Along Side UH Dock in Honolulu, Hawaii

### **4. Comments**

Local time is UTC-10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyed

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The vessel spent the first part of the day (GMT) alongside the Pearl Harbor Navy Pier M3 taking on bunkers. Once bunkering was completed the vessel transited back to the UH Marine Facility to continue making preparation for getting underway for science mission MGL1004. During the day a meeting (Teleconference) with New York was held to go over the particulars of the draft version of the IHA that was provided to the vessel been provided.

Tomorrow: The vessel will be docked at the UH Marine Facility, where we will continue with preparation for the upcoming Science Mission MGL1004 and awaiting the delivery of the Approved IHA, before setting sail.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/17/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/17/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Mobilization	0:00
Demobilization	0.00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	0:00
Ship Repair	0:00
Main Engines	0:00
Port Call	24:00

Total: 24.00

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

Pos: 21 18.975 N  
157 53.175 W

Cos: N/A deg  
Speed: N/A kts

### **Weather:**

Wind: N/A  
Seas: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Along Side UH Dock in Honolulu, Hawaii

### **4. Comments**

Local time is UTC-10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyed

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The vessel spent the day (GMT) alongside the UH Marine Facility to continue making preparation for getting underway for science mission. The Approved IHA and Sailing orders were received, but the vessel sailing time had to be delayed slightly due to one of the Science Technicians Travel being delayed. The Technician flight is scheduled to arrive at 12:45 Local, so sail time was set for 15:30 Local (00:30 GMT 18<sup>th</sup> of July)

Tomorrow: Once the Technician is onboard the Vessel will begin the transit to Shatsky Rise for Science Mission MGL1004. All underway science systems (Knudsen, EM122, USS, TSG, PCo2, Gravity, Magnetism etc...) will be brought on-line and data logging will commence as soon as the vessel is past the Honolulu sea buoy.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/18/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/18/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Mobilization	0:00
Demobilization	0.00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	21:30
Ship Repair	0:00
Main Engines	0:00
Port Call	2:30

Total: 24.00

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

Pos: 21 19.7 N  
159 11.5W

Cos: 280 deg  
Speed: 11.8 kts

### **Weather:**

Wind: NE @ 5-10 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	02:30	Along Side UH Dock in Honolulu, Hawaii
02:30	24:00	Vessel in Transit to Shatsky Rise.

### **4. Comments**

Local time is UTC-10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyed

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The vessel spent the first few hours of the day (GMT) alongside the UH Marine Facility to continue making preparation for getting underway for science mission and waiting on the science tech that had the delayed arrival. Once the Technician was onboard, the vessel got underway to Shatsky Rise for Science Mission MGL1004. Shortly after departure all underway science systems (Knudsen, EM122, USS, TSG, PCo2, Gravity, Magnetics etc...) were brought on-line and data logging commenced. During the day a fire and abandon ship drill was held, as well a orientation to the Science Party on watch Standers duties and logging procedures.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. At 00:00 (local time) both the Science Crew and Science Party will being stand their designated watches. The Science Crew will be 12 hours on and 12 hours off. The Science Party will be 4 hours on 8 Hours off with other duties as determined by the PI on their 8 hours off. We will continue to make perpetration for the deployment of the equipment and acquisition of OBS and MSC data once on location.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/19/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/19/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0.09
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	23:31
Ship Repair	0:00
Main Engines	0:20
Port Call	2:30

Total: 24.00

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

Pos: 22 38.3 N  
166 29.8 W

Cos: 280 deg  
Speed: 11.8 kts

### **Weather:**

Wind: NE @ 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	18:37	Transit to Shatsky Rise.
18:37	18:46	Slowed Vessel to 7kts STW to retrieve Maggie for Visual Inspection
18:46	23:40	Transit to Shatsky Rise
23:40	24:00	Slowed Vessel to 6kts due to Stbd Main Engine being taken offline for Maintenance

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyed

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel continued the transit to Shatsky Rise in the Northwestern Pacific Ocean throughout the day. All parties continued to make preparation for deployment of science gear. During the day the vessel was slowed a short time to allow the retrieval of the Magnetometer so visual inspection of the Tow leader and Hardware could be made. All looked good and the Magnetometer was re deployed. Towards the end of the day (GMT) the vessel again slowed for issues with the Stbd Main, which continued through the rest of the day (GMT)

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. Work will continue on the Stbd Main Engine. All parties will continue preparation for deployment of science gear on on location at Shatsky Rise.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/20/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/20/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	23:10
Ship Repair	0:00
Main Engines	0:50
Port Call	0:00

Total: 24.00

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

Pos: 23 58.6 N  
171 06.1 W

Cos: 290 deg  
Speed: 11 kts

### **Weather:**

Wind: N @ 10-15 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	00:50	Slowed Vessel to 6kts due to Stbd Main Engine being taken offline for Maintenance.
00:50	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyed

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

At the start of the day (GMT) the vessel continued to work on the issues with the Stbd Main. Once repairs (#2 Cylinder Fuel Pump) were made the vessel continued the transit at full speed to Shatsky rise. All parties also continued to make preparation for deployment of science gear.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. We plan on slowing down (7kts) for a short time to retrieve the Magnetometer for a visual inspection before putting it back into service. All parties will continue to make preparation for deployment of science gear on arrival at Shatsky Rise.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/21/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/21/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:10
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	23:50
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 25 18.89 N  
175 37.02 W

Cos: 288 deg  
Speed: 10.8 kts

### **Weather:**

Wind: N @ 10-15 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	21:05	Transit to Shatsky Rise
21:05	21:10	Vessel Slowed to 7kts to allow retrieval of Magnetometer for inspection of Tow Leader and Hardware
21:10	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel started the day underway in transit to Shatsky Rise in the Northwestern Pacific Ocean. Shortly after midday (GMT) an UPS failure, which caused the EM122, Spectra, and a few other systems to shut down. All systems were moved to a different UPS and brought back on line and are operating normally. Later in the Day (GMT) the vessel was slowed down to 7 Kts to allow for the retrieval of the Magnetometer so a visual inspection of the tow leader and hardware could be made. All looked good and the Magnetometer was re-deployed.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. All parties will continue to make preparation for deployment of science gear on arrival at Shatsky Rise.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/22/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/22/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	24:00
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 26 37.5 N  
196 48.1 E

Cos: 288 deg  
Speed: 11.2 kts

### **Weather:**

Wind: NE @ 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel started the day underway in transit to Shatsky Rise in the Northwestern Pacific Ocean. All parties continued to make preparation for deployment of science gear on arrival at Shatsky Rise.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. Magnetometer will be retrieved during the day for a short visual inspection of the hardware and two leader. All parties will continue to make preparation for deployment of science gear on arrival at Shatsky Rise.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/23/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/23/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:12
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	23:47
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 27 56.8 N  
175 17.5 E

Cos: 288 deg  
Speed: 11.2 kts

### **Weather:**

Wind: NE @ 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	20:15	Transit to Shatsky Rise.
20:15	20:27	Vessel Slowed to 7 kts for Magnetometer inspection
20:27	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel started the day underway in transit to Shatsky Rise in the Northwestern Pacific Ocean. Magnetometer was retrieved during the day for a visual inspection of the hardware and two leader. All look good and the Magnetometer was redeployed. All parties continued to make preparation for deployment of science gear on arrival at Shatsky Rise.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. All parties will continue to make preparation for deployment of science gear on arrival at Shatsky Rise.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/24/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/24/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	24:00
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 29 14.9 N  
170 25.7 E

Cos: 282 deg  
Speed: 10.7 kts

### **Weather:**

Wind: NE 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel started the day underway in transit to Shatsky Rise in the Northwestern Pacific Ocean. A-Frame was exercised in an out in preparation for OBS Deployment as well as winches and turning blocks rigged on main deck.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. Magnetometer will be retrieved for a visual inspect tow leader and hardware. As per OMO Instruction we will also start running a Daily BIST test on the EM-122 Multibeam.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/25/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/25/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
Streamer Control	0.00
Cetaceans - PAM	0:00
Transit	24:00
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 30 30.7 N  
165 49.8 E

Cos: 284 deg  
Speed: 10.7 kts

### **Weather:**

Wind: NE 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel started the day underway to Shatsky Rise in the Northwestern Pacific Ocean. As per OMO instruction a practice of running a daily Bist Test was started. All parties continued to make preparation for Science equipment deployment.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. All parties will continue to make preparation for science equipment deployment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/26/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/26/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0.00
Cetaceans - PAM	0:00
Transit	24:00
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 31 48.2 N  
161 03.4 E

Cos: 284 deg  
Speed: 10.7 kts

### **Weather:**

Wind: SE 5-10 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise

### **4. Comments**

Local time is UTC-11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel was underway to Shatsky Rise in the Northwestern Pacific Ocean. All parties continued to make preparation for Science equipment deployment.

Tomorrow: The Vessel will continue the transit to Shatsky Rise in the Northwestern Pacific Ocean. We should reach the first OBS Deployment location a few hours into the Day (GMT) where we will start deploying the instruments. This operation will continue throughout the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/27/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/27/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:08
OBS Deployment	0.25
OBS Testing	1:58
Cetaceans - PAM	0:00
Transit	21:29
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 46.6 N  
158 36.6 E

Cos: 59.84 deg  
Speed: 1.7 kts

### **Weather:**

Wind: NE 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	2:47	Transit to Shatsky Rise
2:47	2:55	Maggie Retrieval
2:55	3:37	Transit to OBS Site A21
3:37	3:50	OBS #A21 Away
3:50	4:11	OBS #A21 Testing
4:11	5:40	Transit to OBS Site A20
5:40	5:41	OBS #A20 Away
5:41	5:49	OBS #A20 Testing
5:49	7:03	Transit to OBS Site A19
7:03	7:04	OBS #A19 Away
7:04	7:13	OBS #A19 Testing
7:13	8:29	Transit to OBS Site A18
8:29	8:30	OBS #A18 Away
8:30	8:40	OBS #A18 Testing
8:40	9:56	Transit to OBS Site 17
9:56	9:57	OBS #A17 Away
9:57	10:05	OBS #A17 Testing
10:05	11:31	Transit to OBS Site A16
11:31	11:32	OBS #A16 Away
11:32	11:43	OBS #A16 Testing
11:43	13:07	Transit to OBS Site A15
13:07	13:08	OBS #A15 Away
13:08	13:17	OBS #A15 Testing
13:17	14:50	Transit to OBS Site A14
14:50	14:51	OBS #A14 Away
14:51	14:57	OBS #A14 Testing
14:57	15:53	Transit to OBS Site A13
15:53	15:54	OBS #A13 Away
15:54	16:01	OBS #A13 Testing
16:01	19:27	Transit to OBS Site B7
19:27	19:28	OBS #B7 Away
19:28	19:34	OBS #B7 Testing
19:34	20:57	Transit to OBS Site B6
20:57	20:58	OBS #B6 Away
20:58	21:05	OBS #B6 Testing
21:05	22:22	Transit to OBS Site B5
22:22	22:23	OBS #B5 Away
22:23	22:34	OBS #B5 Testing
22:34	23:54	Transit to OBS Site A12
23:54	23:55	OBS #A12 Away

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

23:55

24:00

OBS #A12 Testing

#### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel was underway to Shatsky Rise in the Northwestern Pacific Ocean at the start of the day. A couple hours after the start of the day, the vessel was slowed for a short time to allow for the retrieval magnetometer as we approached the first OBS Drop site. At 03:37 GMT OBS Deployment Operations commenced and were continued throughout the day. During the past few days, the Engine Department had been doing some trouble shooting of inconsistent 4<sup>th</sup> and 5<sup>th</sup> stage pressure readings on the Stbd Seismic Air Compressor. They determined that there is damage to the 4<sup>th</sup>/5<sup>th</sup> stage liner which is letting air leak back into the 4<sup>th</sup> stage causing the inconsistent pressure readings. The damage is not repairable at sea, so we are currently continuing the operation on the Port Seismic Air Compressor without a back if it should have issues.

Tomorrow: The Vessel will continue with OBS Deployment Operation throughout the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/28/2010</b>	<u>Sailed Km</u>
Prime	0.0000
Infill	0.0000
Reshoot	0.0000
Total:	0.0000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/28/2010</b>
Recording	0.00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0.05
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:08
OBS Deployment	0.15
OBS Testing	2:27
Cetaceans - PAM	0:12
Transit	20:53
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 38.8 N  
156 34.5 E

Cos: 311 deg  
Speed: 3.8 kts

### **Weather:**

Wind: ESE 10 -15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:04	OBS #A12 Testing
0:04	1:23	Transit to OBS Site B4
1:23	1:24	OBS #B4 Away
1:24	1:31	OBS #B4 Testing
1:31	2:50	Transit to OBS Site B3
2:50	2:51	OBS #B3 Away
2:51	3:01	OBS #B3 Testing
3:01	4:25	Transit to OBS Site B2
4:25	4:26	OBS #B2 Away
4:26	4:36	OBS #B2 Testing
4:36	5:56	Transit to OBS Site B1
5:56	5:57	OBS #B1 Away
5:57	6:09	OBS #B1 Testing
6:09	10:15	Transit to OBS Site A11
10:15	10:16	OBS #A11 Away
10:16	10:23	OBS #A1 Testing
10:23	11:23	Transit to OBS Site A10
11:23	11:24	OBS #A10 Away
11:24	11:33	OBS #A10 Testing
11:33	12:31	Transit to OBS Site A9
12:31	12:32	OBS #A9 Away
12:32	12:39	OBS #A9 Testing
12:39	14:00	Transit to OBS Site A8
14:00	14:01	OBS #A8 Away
14:01	14:07	OBS #A8 Testing
14:07	15:20	Transit to OBS Site A7
15:20	15:21	OBS #A7 Away
15:21	15:28	OBS #A7 Testing
15:28	16:40	Transit to OBS Site A6
16:40	16:41	OBS #A6 Away
16:41	16:47	OBS #A6 Testing
16:47	17:53	Transit to OBS Site A5
17:53	17:54	OBS #A5 Away
17:54	18:03	OBS #A5 Testing
18:03	19:14	Transit to OBS Site A4
19:14	19:15	OBS #A4 Away
19:15	19:24	OBS #A4 Testing
19:24	20:09	Transit to OBS Site A3
20:09	20:29	Delayed for OBS Testing A3
20:29	20:49	Con't Transit to OBS Site A3
20:49	20:50	OBS #A3 Away

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

20:50	20:58	OBS #A3 Testing
20:58	22:08	Transit to OBS Site A2
22:08	22:09	OBS #A2 Away
22:09	22:17	OBS #A2 Testing
22:17	23:26	Transit to OBS Site A1
23:26	23:27	OBS #A1 Away
23:27	23:35	OBS #A1 Testing
23:35	23:43	Deploying Maggie
23:43	23:55	Deploying PAM
23:55	24:00	Deploying Gun String #1

#### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel spent the majority of the day deploying OBS instruments, which concluded shortly before midnight (GMT). As soon as the last OBS was deployed and test good the Magnetometer and PAM Streamer were deployed. Once the Maggie and PAM were in their tow location, we started deployment of the Energy Source Arrays, which continued through the day change.

Tomorrow: The Vessel will continue deploying the Energy Source Arrays. Once the Arrays are in Location and a short test line has been run we will start production on Line MGL1004\_RL\_B which we will continue on for the rest of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/29/2010</b>	<b><u>Sailed Km</u></b>
Prime	161.190
Infill	0.000
Reshoot	0.000
Total:	161.190

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/29/2010</b>
Recording	19:37
Line Change	0:00
Weather	0:00
Instrument	1:36
Hydraulics	0:00
Source	1.44
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans - PAM	0:00
Transit	1:03
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 59 50.665 N  
158 05 54.334 E

Cos: 129 deg  
Speed: 4.4 kts

### **Weather:**

Wind: ESE 20-25 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:27	Deploying Gun String #1
0:27	0:59	Deploying Gun String #2
0:59	1:22	Deploying Gun String #3
1:22	1:44	Deploying Gun String #4
1:44	2:47	Maneuvering To Line MGL1004_RL_B
2:47	4:23	Run-in (Test) MGL1004_RL_B FSP: 924 LSP 1000
4:23	24:00	MGL1004_RL_B FGSP 1001 – Midnight Shot Point 1996

### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

We started out the day continuing to deploy the Energy Source. When this operation was complete we made a turn towards Line MGL1004\_RL\_B. Once line we started running final systems test and at 04:27 GMT we started Production on MGL1004\_RL\_B. Production continued throughout the day with no major issues to report.

Tomorrow: We will continue on production on MGL1004\_RL\_B and once completed we will make a short line change onto MGL1004\_RL\_

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/29/2010</b>	<b><u>Sailed Km</u></b>
Prime	183.870
Infill	0.000
Reshoot	0.000
Total:	183.870

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/29/2010</b>
Recording	22:39
Line Change	1:21
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans - PAM	0:00
Transit	0:00
Ship Repair	0:00
Main Engines	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 09 48.310 N  
158 50 17.654 E

Cos: 201 deg  
Speed: 4.4 kts

### **Weather:**

Wind: ESE 20-25 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	6:35	MGL1004_RL_B FSP: 1997 LSP 2338
6:35	7:24	Line Change
7:24	13:18	MGL1004_RL_E FSP: 990 LSP 1289
13:18	13:20	Line Change
13:20	19:49	MGL1004_RL_DD FSP 1005 LSP 1323
19:49	20:19	Line Change
20:19	24:00	MGL1004_RL_B FGSP 966 – Midnight Shot Point 1143

### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

We had a good day of production with Completing 3 of the OBS Source Only lines and starting a 4 which will be continued on the new day.

Tomorrow: We will continue production on the OBS Source Only lines, which should take us through the end of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>07/29/2010</b>	<u>Sailed Km</u>
Prime	3.564
Infill	0.000
Reshoot	0.000
Total:	3.564

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>07/29/2010</b>
Recording	0:29
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:59
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	21:45
Ship Repair	0:00
Other (Standby)	0:47
Port Call	0:00

Total: 24.00

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

Pos: 33 28.4 N  
153 56.4 E

Cos: 262 deg  
Speed: 8.0 kts

### **Weather:**

Wind: ESE 20-25 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:29	MGL1004_RL_D FSP: 1144 LSP 1166 – Early EOL due to Medical Emergency.
0:29	0:39	Retrieval of PAM and Maggie
0:39	0:48	Retrieval of Source Array #4
0:48	0:59	Retrieval of Source Array #3
0:59	1:14	Retrieval of Source Array #2
1:14	1:28	Retrieval of Source Array #1
1:28	2:15	Standing by for Orders
2:15	24:00	In-Transit to Yokohama, Japan

### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

We started the day out in production on OBS Source Only Line MGL1004\_RL\_D. However shortly after day change there was a medical emergency. This emergency warranted the immediate stoppage of all science operations and retrieval of the all towed equipment. At ~01:45 (GMT) the person that had the medical emergency was officially pronounced as deceased. Shortly after the at the vessel got underway for Yokohama, Japan, which continued throughout the rest of the day.

Tomorrow: We will continue in Transit to Yokohama, Japan which will continue throughout the day. During the transit we will continue to monitor all underway science systems, as well as do preventive maintenance on other science systems.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/01/2010</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/01/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 53.75 N  
149 19.93 E

Cos: 275 deg  
Speed: 10.8 kts

### **Weather:**

Wind: S 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Yokohama, Japan

### **4. Comments**

Local time is UTC-12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel was in transit the entire day to Yokohama, Japan. During the day the 12 khz Transducer was hooked up to the Knudsen and test to see if it would interfere with any of the other sonar systems. A T-7 XBT was launched and the daily BIST test was run on the EM-122. The rest of the day was spent doing regular preventive maintenance on science equipment and systems.

Tomorrow: We will continue in Transit to Yokohama, Japan throughout the day. During the transit we will continue to monitor all underway science systems, as well as do preventive maintenance on other science equipment and systems.

At the current speed we are look at arriving in Yokohama, Japan on Wednesday 4<sup>th</sup> of August 2010 at ~12:00 hours JST.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/02/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/02/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 34 22.00 N  
144 19.02 E

Cos: 278 deg  
Speed: 10.8 kts

### **Weather:**

Wind: S 10-15 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Yokohama, Japan

### **4. Comments**

Local time is UTC +10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel was in transit the entire day to Yokohama, Japan. At ~22:00 we started making peroration for shutting down all underway science systems for entry into the Japanese EEZ. At ~22:18 we had stopped logging all underway science systems and secured all other system that are not associated with the safe Navigation of the vessel. During this time frame the Maggie was also retrieved and secured and at ~22:25 we entered the Japanese EEZ.

Tomorrow: We will continue in Transit to Yokohama, Japan throughout the day. We will continue with preventive maintenance on all science system, as well as getting the spaces clean and secured for arrival in port.

At the current speed we are look at arriving in Yokohama, Japan on Wednesday 4<sup>th</sup> of August 2010 at ~12:00 hours JST.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/03/2010</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/03/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 34 49.85 N  
139 41.11 E

Cos: 315 deg  
Speed: 10.8 kts

### **Weather:**

Wind: S 10-15 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Yokohama, Japan

### **4. Comments**

Local time is UTC +10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Nicolas, Beland

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

The Vessel was in transit the entire day to Yokohama, Japan. We continued with preventive maintenance on all science system, as well as getting the spaces clean and secured for arrival in port.

Tomorrow: We will continue in Transit to Yokohama, Japan throughout the day. We will continue with preventive maintenance on all science system, as well as getting the spaces clean and secured for arrival in port.

At the current speed we are look at arriving in Yokohama, Japan on Wednesday 4<sup>th</sup> of August 2010 at ~14:30 hours JST.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/04/2010</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/04/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	18:52
Ship Repair	0:00
Other (Standby)	0:00
Port Call	5:08

Total: 24.00

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

Pos: 34 35.90 N  
141 53 89 E

Cos: 99 deg  
Speed: 11.2 kts

### **Weather:**

Wind: SE 10-15 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	5:02	In-Transit to Yokohama, Japan
5:02	10:10	Port Call Yokohama, Japan
10:10	24:00	In-Transit to Shatsky, Rise

### **4. Comments**

Local time is UTC +10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The Vessel began the day in transit to Yokohama, Japan. The science crew continued doing their preventive maintenance on all science system, as well as getting the spaces clean and secured for arrival in port. The vessel arrived in Yokohama, Japan at ~05:02 (GMT) to off load the remains of our deceased crew member. We took on a small order of provisions and returned to sea at ~10:10 (GMT) where we started our transit back to Shatsky Rise.

Tomorrow: We will continue in Shatsky Rise throughout the day. During the afternoon hours will pass out of the Japanese EEZ and will again resume operation and logging of all underway science systems. We will continue with preventive maintenance on all science system and preparation for return to OBS (Source Only) production on arrival in the prospect.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/05/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/05/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 34 13.49 N  
147 11.62 E

Cos: 99 deg  
Speed: 10.6 kts

### **Weather:**

Wind: SE 10-15 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Shatsky, Rise

### **4. Comments**

Local Vessel time is UTC -14

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The vessel spent the whole day in transit to Shatsky Rise. Shortly after midday (GMT) the vessels crossed over the Japanese EEZ and back into international waters where we resumed operation of all underway science systems and data logging. Throughout the other times during the day the crew continued with preventive maintenance on all science system and preparation for return to OBS (Source Only) operation on arrival to the prospect area.

Tomorrow: We will continue in transit Shatsky Rise throughout the day. We will continue with preventive maintenance on all science system and preparation for return to OBS (Source Only) operation on arrival to the prospect area.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/06/2010</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/06/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 45.89 N  
152 22.04 E

Cos: 96 deg  
Speed: 10.9 kts

### **Weather:**

Wind: SE 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Shatsky, Rise

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The vessel spent the whole day in transit to Shatsky Rise. Throughout the day the crew continued with preventive maintenance on all science system and preparation for return to OBS (Source Only) operation on arrival to the prospect area.

Tomorrow: We will continue in transit Shatsky Rise throughout the day. We will continue with preventive maintenance on all science system and preparation for return to OBS (Source Only) operation on arrival to the prospect area.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/07/2010</b>	<u>Sailed Km</u>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/07/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0.00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 17.80 N  
157 19.60 E

Cos: 96 deg  
Speed: 9.3 kts

### **Weather:**

Wind: SE 5-10 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	In-Transit to Shatsky, Rise

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The vessel spent the whole day in transit to Shatsky Rise. Throughout the day the crew continued with preventive maintenance on all science system and preparation for return to OBS (Source Only) operation on arrival to the prospect area.

Tomorrow: We will continue in transit Shatsky Rise for a short time in the new day. Once we are about 4 hours at 4.5 kts from the start of the survey line we will slow down and start deploying the rest of the towed science equipment and source arrays. We should start production about ~09:00 GMT.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/08/2010</b>	<u>Sailed Km</u>
Prime	96.3900
Infill	6.804
Reshoot	0.000
Total:	103.194

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/08/2010</b>
Recording	12:47
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	2:41
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:15
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:04
Transit	8:13
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 21.30 N  
158 21.60 E

Cos: 200.7 deg  
Speed: 4.3 kts SOG

### **Weather:**

Wind: NW 15-20 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	5:20	In-Transit to Shatsky, Rise
5:20	5:35	Maggie Retrieval and Re-Deployment
5:35	5:39	PAM Deployment
5:39	8:20	Deployment of Source
8:20	11:13	In-Transit to Line MGL1004_RL_DR
11:13	12:04	MGL1004_RL_DR Infill FSP 1124 – LSP 1166
12:04	24:00	MGL1004_RL_DR Prime FSP 1167 – LSP of Day 1762

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The vessel spent the first part of the day in-transit to Shatsky Rise and at ~05:20 (GMT) the vessel was slowed down to allow for the retrieval and inspection of the Magnetometer. Inspection of the Magnetometer was completed and it was re-deployed along with the PAM streamer. The Source Deployment followed shortly after PAM was in location and at ~08:20 (GMT) the entire source was fully deployed and ramped up, shortly before sunset. The Vessel continue it transit into LINE MGL1004\_RL\_DR and at ~11:13 (GMT) began production which continued throughout the rest of the day.

Tomorrow: The Vessel will continue in production on Line MGL1004\_RL\_DR at the start of the day. Once completed the vessel will make a line change to MGL1004\_RL\_CC and after that another shot line change to MGL1004\_RL\_C and by the end of day should be on Line MGL1004\_RL\_EA

Best Regards  
Robert Steinhaus

# Lamont-Doherty Earth Observatory

## COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **1. PRODUCTION SUMMARY**

<b>08/09/2010</b>	<b><u>Sailed Km</u></b>
Prime	176.256
Infill	0.000
Reshoot	0.000
Total:	176.256

### **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/09/2010</b>
Recording	21:52
Line Change	2:08
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 39.4 N  
158 52.7 E

Cos: 120 deg  
Speed: 3.8 kts SOG

### **Weather:**

Wind: E 20-25 Kts.  
Seas: 6-8 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	4:25	MGL1004_RL_DR Prime FSP 1167 – LSP 1763
4:25	5:22	Line Change
5:22	12:24	MGL1004_RL_C Prime FSP 969 – LSP 1326
12:24	12:26	Line Change
12:26	18:56	MGL1004_RL_CC Infill FSP 1003 – LSP 1325
18:56	20:05	Line Change
20:05	24:00	MGL1004_RL_EA Prime FSP 987 – LSP of Day 1176

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The Vessel had a good day of production OBS Source Only line. We completed 3 lines and started a fourth shortly before the end of the day. The weather pickup slowly during the night, which made for a not so comfortable ride of the vessel. The increase in weather also caused some problem with the Magnetometer getting tangled around gun string #1's hose bundle. We waited until the end of line MGL1004\_RL\_CC during the line change to fix this issue. Due to the weather the Magnetometer will remain onboard. At the end of day the vessel was on line and in production on MGL104\_RL\_EA, which is the last of the OBS Source Only Lines.

Tomorrow: The Vessel will continue in production on Line MGL1004\_RL\_EA throughout most of the day. When complete we will begin retrieval of the Source and PAM, so the deployment of Streamer #3 can begin.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/09/2010</b>	<u>Sailed Km</u>
Prime	167.346
Infill	0.000
Reshoot	0.000
Total:	167.346

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/09/2010</b>
Recording	20:56
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	1:02
Streamer	2:02
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 31 53.89 N  
160 40.919 E

Cos: 97.6 deg  
Speed: 4.2 kts SOG

### **Weather:**

Wind: E 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	20:56	MGL1004_RL_EA Prime FSP 1177 – LSP of Day 2210
20:56	21:58	Source Retrieval
21:58	22:13	Deploying Tailbuoy
22:13	24:00	Deploying Streamer #3

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

The Vessel had a good day of production on OBS Source Only lines. We were in production on line MGL104\_RL\_EA for the majority of the day. At ~20:56 we completed the line and began retrieving the source to allow us to start deploying the streamer. As soon as the source was onboard streamer deployment started and continued throughout the rest of the day.

Tomorrow: We will continue deploying streamer and as soon as that is completed we will re-deploy the source and start MCS production on line MGL1004\_ML\_A.

Best Regards  
Robert Steinhaus

# Lamont-Doherty Earth Observatory

## COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **1. PRODUCTION SUMMARY**

<b>08/09/2010</b>	<b><u>Sailed Km</u></b>
Prime	127.250
Infill	0.000
Reshoot	0.000
Total:	127.250

### **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/09/2010</b>
Recording	13:34
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	3:28
Streamer	6:54
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:04
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 28.2 N  
159 18.0 E

Cos: 299.5 deg  
Speed: 4.8 kts SOG

### **Weather:**

Wind: E 5-10 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	6:54	Deploying Streamer #3
6:54	6:58	Deploying PAM
6:58	10:24	Deploying Source
10:24	10:54	MGL1004_ML_A FSP 925 LSP 1007 Rejected Due to Syntrak Parameters
10:54	24:00	MGL1004_ML_A FGSP 1008 LSP of Day 3553.

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day deploying streamer #3 and once completed we deployed the source. Once all gear was out and in position, we began production on MGL1004\_ML\_A which took the rest of the day.

Tomorrow: We will continue in Production on MGL1004\_ML\_A throughout the day. While on line the crew will clean up and get everything back in order after yesterday streamer deployment and source maintenance.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/12/2010</b>	<u>Sailed Km</u>
Prime	222.600
Infill	0.000
Reshoot	0.000
Total:	222.600

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/12/2010</b>
Recording	24:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 24.57 N  
157 08.17 E

Cos: 299 deg  
Speed: 5.2 kts SOG

### **Weather:**

Wind: SW 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	24:00	MGL1004_ML_A FSP 3554 LSP of Day 8006.

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We began the day in production on MGL1004\_ML\_A which we remained on the entire day. No major issues to report.

Tomorrow: We will continue in Production on line MGL1004\_ML\_A until ~07:00 (GMT). At that time we will begin retrieval of the Stbd Source Sub-Arrays for preventive Maintenance while on line change to MGL1004\_ML\_B. Once the Stbd Sub-Arrays have been checked out we will redeploy them and begin production on MGL1004\_ML\_B which will continue throughout the rest of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/13/2010</b>	<u>Sailed Km</u>
Prime	164.050
Infill	0.000
Reshoot	0.000
Total:	164.050

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<u>Time Activity Analysis</u>	<b>08/13/2010</b>
Recording	24:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 49.90 N  
156 51.10 E

Cos: 164 deg  
Speed: 3.7 kts SOG

### **Weather:**

Wind: SE 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	05:52	MGL1004_ML_A FSP 8006 LSP 9287
05:52	08:52	Line Change
08:52	09:53	Line Change Extended due to Source Maintenance
09:53	24:00	MGL1004_ML_B FSP: 916 LSP of Day: 2916

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We began the day in production on MGL1004\_ML\_A and at ~5:52 (GMT) we ended that line and began the Line change to MGL1004\_ML\_B. During this line change we picked up the Stbd Source Sub-Arrays to do some preventive Maintenance. The Line Change had to be extended by ~1 hr to all for this Maintenance. When the Source was re-deployed and ramped up we began production on MGL1004\_ML\_B, which at the current Speed over Ground will take just a little over 2 days to complete.

Tomorrow: We will continue in Production on line MGL1004\_ML\_B throughout the day..

Best Regards

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/14/2010</b>	<b><u>Sailed Km</u></b>
Prime	199.750
Infill	0.000
Reshoot	0.000
Total:	199.750

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/14/2010</b>
Recording	24:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 31 06.0 N  
157 28.0 E

Cos: 164 deg  
Speed: 4.9 kts SOG

### **Weather:**

Wind: SW 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	MGL1004_ML_B FSP: 2917 LSP of Day: 6912

.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We began the day in production on MGL1004\_ML\_B, which continued throughout the day. No major problems to report during the day.

Tomorrow: We will continue in Production on line MGL1004\_ML\_B at the start of the day. At ~08:00 (GMT) we will conclude the line and make a line change to MGL1004\_ML\_7. During this line change we will retrieve the Port Source Sub-Arrays for preventive maintenance. Once that Maintenance is complete we will re-deploy and begin production on Line: MGL1004\_ML\_7.

We are expecting the weather to start picking up over the next 24 hours and are forecast to have 4m seas in the survey area in the next 48 hours.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/15/2010</b>	<b><u>Sailed Km</u></b>
Prime	184.500
Infill	0.000
Reshoot	0.000
Total:	185.500

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/15/2010</b>
Recording	20:43
Line Change	3:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:17
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 30 40.94 N  
156 37.99 E

Cos: 275 deg  
Speed: 4.9 kts SOG

### **Weather:**

Wind: SW 25-30 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	08:08	MGL1004_ML_B FSP: 6913 LSP: 8368
08:08	11:08	Line Change
11:08	11:25	Line Change Extended Due to Port Source Maintenance
11:25	24:00	MGL1004_ML_7 FSP: 802 LSP of Day: 3037.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We began the day in production on MGL1004\_ML\_B, which continued until ~08:08 (GMT) at which time we started a line change to MGL1004\_ML\_7. During the line change we retrieved Sub-Arrays 3 & 4 (Port Sub-Arrays) for Preventive Maintenance. The Sub-Arrays were re-deployed and production on Line MGL1004\_ML\_7 began at ~11:25 (GMT) and continued throughout the day. Just before day change the Magnetometer we retrieved due to tangling concerns with the Stbd Sub-Arrays because of the deteriorating weather conditions. No major problems to report during the day.

Tomorrow: We will continue in Production on line MGL1004\_ML\_7 at the start of the day. At ~17:00 (GMT) we will conclude the line and make a line change to MGL1004\_ML\_6. During this line change we will retrieve the Stbd Sub-Arrays for preventive maintenance. Once that Maintenance is complete we will re-deploy and begin production on Line: MGL1004\_ML\_6. Also during this line change we will be doing some preventive maintenance on the Seismic Air Compressor (Filter Changes) which will require us to go down to a single element while this work is going on. If the maintenance takes more than 8 min we will be required to ramp the full source up which will take ~30 min.

We are expecting the weather to continue picking up over the next 24 hours and are forecast to have 4m seas in the survey area in the next 24 hours.

Best Regards

# Lamont-Doherty Earth Observatory

COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/16/2010</b>	<b><u>Sailed Km</u></b>
Prime	16.800
Infill	0.000
Reshoot	0.000
Total:	16.800

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/16/2010</b>
Recording	01:52
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	01:23
Streamer	02:17
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	18:28
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 31 22.30 N  
153 23.80 E

Cos: 287 deg  
Speed: 11.2 kts SOG

### **Weather:**

Wind: N 20-25 Kts.  
Seas: 6-9 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	01:52	MGL1004_ML_7 FSP: 3038 LSP: 3374
01:52	03:15	Retrieval of Air Source
03:15	05:32	Retrieval of Streamer Cable #3
05:32	24:00	Transit to Yokohama, Japan for Medical Diversion

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We began the day in production on MGL1004\_ML\_7 which continued to ~01:52 GMT, which I received orders from the Captain to begin retrieval of all towed equipment due to a Medical Diversion. The line was stopped and retrieval began. The Tailbuoy was onboard and secure at ~05:32 and the vessel got the transit underway. The Transit continued throughout the rest of the day.

Tomorrow: We will continue the Transit to Yokohama, Japan. During this time we will continue to monitor all underway science systems as well as do preventive maintenance to all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/17/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/17/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 46.50 N  
147 50.53 E

Cos: 285 deg  
Speed: 12 kts SOG

### **Weather:**

Wind: WNW 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Yokohama, Japan for Medical Diversion

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the whole day in transit to Yokohama, Japan for a Medical Diversion. We continued to monitor all underway science systems as well as do preventive maintenance to all other towed science equipment.

Tomorrow: We will continue the Transit to Yokohama, Japan, as well as continue to monitor all underway science systems and do preventive maintenance to all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/18/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/18/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00

Total: 24.00

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

Pos: 34 03.20 N  
142 41.21 E

Cos: 287 deg  
Speed: 10.9 kts SOG

### **Weather:**

Wind: N 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Yokohama, Japan for Medical Diversion

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the whole day in transit to Yokohama, Japan for a Medical Diversion. We continued to monitor all underway science systems, until ~17:13 when we entered the Japanese EEZ and all none safe navigation related equipment was secured. Crew continued to do preventive maintenance to all other towed science equipment.

Tomorrow: We will continue the Transit to Yokohama, Japan and at ~20:00 (GTM) we will arrive at the entrance to Tokyo (Yokohama) Harbor and will conduct a boat transfer of the person for which we made the medical diversion for. As soon as the transfer is completed we will start making our way back out to Shatsky rise so as to complete as much of mission as possible. We will also continue to do preventive maintenance to all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/19/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/19/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	23:39
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	0:21

Total: 24.00

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

Pos: 34 37.80 N  
140 07.31 E

Cos: 100 deg  
Speed: 10.7 kts SOG

### **Weather:**

Wind: NE 25-30 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	19:57	Transit to Yokohama, Japan for Medical Diversion
19:57	20:18	Transfer of Crew Member to Harbor Tug
20:18	24:00	Transit to Shatsky Rise.

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the majority of the day in transit to Yokohama, Japan for a Medical Diversion. At ~19:57 (GMT) we rendezvoused with a Harbor Tug at the entrance to Tokyo Bay to transfer the Crew member for whom we had made the Medical Diversion for. Transfer was complete at 20:18 (GMT) and the vessel began its Transit back to the survey area at Shatsky Rise. The Crew continued to do preventive maintenance to all other towed science equipment.

Tomorrow: We will continue the Transit to Shatsky Rise. As soon as we depart the Japanese EEZ all underway science Systems will be brought back online and logging will re-commence. We will also continue to do preventive maintenance to all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/20/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/20/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 33 29.23 N  
145 25.07 E

Cos: 105 deg  
Speed: 10.7 kts SOG

### **Weather:**

Wind: ESE 20-25 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise.

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to the survey at Shatsky Rise. At ~17:59 (GMT) the vessel departed the Japanese EEZ and all underway science systems were brought back online. The Crew continued to do preventive maintenance to all other towed science equipment.

Tomorrow: We will continue the Transit to Shatsky Rise. The Crew will continue to monitor all underway science Systems as well as continue to do preventive maintenance to all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/21/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/21/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 32 13.00 N  
150 29.10 E

Cos: 106 deg  
Speed: 11.9 kts SOG

### **Weather:**

Wind: ESE 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise.

### **4. Comments**

Local Vessel time is UTC -13

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to the survey at Shatsky Rise. The Crew continued to monitor all underway science Systems, as well as continued to do preventive maintenance on all other towed science equipment.

Tomorrow: We will continue the Transit to Shatsky Rise. The Crew will continue to monitor all underway science Systems, as well as continue to do preventive maintenance on all other towed science equipment.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/22/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/22/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	24:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 30 55.70 N  
155 34.20 E

Cos: 109 deg  
Speed: 12.1 kts SOG

### **Weather:**

Wind: SE 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Shatsky Rise.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to the survey at Shatsky Rise. The Crew continued to monitor all underway science Systems, as well as continued to do preventive maintenance on all other towed science equipment.

Tomorrow: We will continue the Transit to Shatsky Rise at the start of the day. At ~01:00 (GMT) we will slow the vessel down and begin deploying Streamer #3. Once Streamer deployment has been completed we will deploy the Source Sub-Arrays and get back into production on Line: MGL1004\_ML\_7R.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/23/2010</b>	<b><u>Sailed Km</u></b>
Prime	134.050
Infill	9.200
Reshoot	1.350
Total:	144.600

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/23/2010</b>
Recording	15:35
Line Change	0:46
Weather	0:00
Instrument	0:30
Hydraulics	0:00
Source	2:20
Streamer	3:31
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	1:01
Ship Repair	0:17
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 30 54.10 N  
155 18.00 E

Cos: 276 deg  
Speed: 4.7 kts SOG

### **Weather:**

Wind: NW @ 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	01:01	Transit to Shatsky Rise
01:01	01:18	Transferring to Slow Speed on the Propellers
01:18	04:49	Deploying Streamer
04:49	07:09	Deploying Source
07:09	07:39	Confirming System Parameters and Ramping up Source
07:39	10:01	MGL1004_ML_Test Prime FSP 3648 LSP 4068
10:01	10:47	Line Change
10:47	11:45	MGL1004_ML_7R Infill FSP: 3162 LSP: 3346
11:45	11:54	MGL1004_ML_7R Reshoot FSP: 3347 LSP 3374
11:54	24:00	MGL1004_ML_7R Prime FSP 3375 LSP of Day: 5636

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day out transiting to Shatsky Rise. At ~01:00 (GMT) the vessel slowed down to switch the gear boxes back into low speed and once complete, we began deploying Streamer. As soon as the streamer was deployed, we started out with the source. All gear was deployed at ~07:09 (GMT) and we began production on a test line shortly after confirming all systems were setup correctly. The Test line was completed and we made a short line change to MGL1004\_ML\_7R and at 10:47 we began production, which continued through the rest of the day.

Tomorrow: We will continue on MGL1004\_ML\_7R until ~03:30 (GMT) which we will make a line change to MGL1004\_ML\_06 which should take us the rest of the day to complete. During the line change we will pick up the port sub-arrays for maintenance.

Best Regards

# Lamont-Doherty Earth Observatory

COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/24/2010</b>	<b><u>Sailed Km</u></b>
Prime	188.800
Infill	0.000
Reshoot	0.000
Total:	188.800

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/24/2010</b>
Recording	20:19
Line Change	3:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:41
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 31 40.00 N  
156 18.3 E

Cos: 54.72 deg  
Speed: 5.3 kts SOG

### **Weather:**

Wind: NW @ 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	03:32	MGL1004_ML_7R Prime FSP 5637 LSP 6286
03:32	06:32	Line Change
06:32	07:13	Extended Line Change due to Source Maintenance
07:13	24:00	MGL1004_ML_6 Prime FSP 825 LSP of Day: 3952

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day in production on MGL1004\_ML\_7R. This line ended at ~03:30 (GMT) and began a line change to MGL1004\_ML\_6, during which time the Port Sub-Arrays were retrieved for maintenance. On retrieval it was noticed that water was coming out of a crack in Sub-Array #4's Float nose piece. It was changed out with the spare and onboard all Sub-Arrays were re-deployed. Production on Line MGL1004\_ML\_6 commenced at 07:13 (GMT).

Tomorrow: We will continue production on MGL1004\_ML\_6 at the start of the day. At ~03:00 we will come to the end of MGL1004\_ML\_6 and will make a very short line Change on to Line MGL1004\_ML\_5. We should remain on this line for the rest of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/25/2010</b>	<b><u>Sailed Km</u></b>
Prime	189.550
Infill	0.000
Reshoot	0.000
Total:	189.550

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/25/2010</b>
Recording	20:26
Line Change	3:03
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:31
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 31 58.60 N  
158 12.80 E

Cos: 253 deg  
Speed: 5.2 kts SOG

### **Weather:**

Wind: SE @ 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	02:54	MGL1004_ML_6 Prime FSP 3952 LSP 4501
02:54	02:57	Line Change
02:57	20:29	MGL1004_ML_5 Prime FSP 1005 LSP 4247
20:29	23:29	Line Change
23:29	24:00	Extended Line Change due to Stbd Source Sub-Array Maintenance.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We had a good day of production. We started the day on MGL1004\_ML\_6 which we completed at 02:54 (GMT) and began a slight line change to MGL1004\_ML\_5 which we completed at 20:29 (GMT). We began a Line change to MGL1004\_ML\_C which was extended due to Source Maintenance through the end of the day. Only issue we are having that is impacting data quality at this time is with Source Sub-Array #2. Source Sub-Array #2 looks to have intermittent power line leakage on it and about 5 shots out of every 100 the last 4 guns or so do not fire, reducing our total volume for that shot. We have done some trouble shooting of this problem but as it is intermittent it giving us a little trouble finding the source.

Tomorrow: Once we finish the line change we will begin shooting on MGL1004\_ML\_C, which we will remain on the rest of the day.

Best Regards

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/26/2010</b>	<b><u>Sailed Km</u></b>
Prime	174.650
Infill	7.550
Reshoot	1.900
Total:	184.100

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/26/2010</b>
Recording	18:50
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	1:09
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	4:01
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	24:00

Total: 24.00

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

Pos: 33 25.86 N  
158 58.93 E

Cos: 014 deg  
Speed: 5.0 kts SOG

### **Weather:**

Wind: SE @ 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	01:09	Extended Line Change due to Stbd Source Sub-Array Maintenance.
01:09	05:26	MGL1004_ML_C Prime FSP 803 LSP 1586
05:26	05:37	MGL1004_ML_C Prime FSP 1587 LSP 1625 Rejected d/t Source Power Down for Whale sighting.
05:37	08:38	Circle due to Source Power Down for Whale sighting
08:38	09:30	MGL1004_ML_CR Infill FSP 1435 LSP 1586
09:30	09:38	MGL1004_ML_CR Reshoot FSP 1587 LSP 1625
09:38	24:00	MGL1004_ML_CR Prime FSP 1626 LSP 4336 Last Shot Point of the day

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We had a good day of production for the most part. We started the day on an extended line change for Stbd Source Sub-Array Maintenance. Once that was complete we began production on MGL1004\_ML\_C. At ~05:26 the MMO called down with a Whale Sighting in the safety radius and we powered down to one gun. It was decided shortly after that we should circle around and pick the line up at the point of the power down. During the circle we picked up Sub-Array #4 to inspect the Head of the float for leaks. The float was found to have taken on a large amount of water. It was drained and temporary repairs were made. It was redeployed and we began production on MGL1004\_ML\_CR at 08:38. Throughout the day we continued to have intermittent drop outs (No Fires) on string #2, which seem to be related to power line issues.

Tomorrow: We will begin the day in production on line MGL1004\_ML\_CR. When that is complete we will make a line change to MGL1004\_ML\_D. While on this line change we will retrieve Source Sub-Arrays 1 & 2 for Maintenance. We will also change out hose bundle #2 with a spare, to see if

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**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

we can fix the intermittent drop outs (No Fires) on string #2, which seem to be related to power line issues.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/27/2010</b>	<b><u>Sailed Km</u></b>
Prime	132.400
Infill	0.000
Reshoot	0.000
Total:	132.400

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/27/2010</b>
Recording	14:43
Line Change	3:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	6:17
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Other (Standby)	0:00
Port Call	0:00
Medical Transfer	0:00

Total: 24.00

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

Pos: 33 37 11.8 N  
157 57 16.5 E

Cos: 271 deg  
Speed: 5.0 kts SOG

### **Weather:**

Wind: SE @ 5-10 Kts.  
Seas: 1-3 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	02:20	MGL1004_ML_CR Prime FSP 4337 LSP 4766
02:20	05:20	Line Change
05:20	11:37	Line Change Extended Due to Changing of Hose Bundle #2
05:37	08:38	MGL1004_ML_D Prime FSP 803 LSP 2119 Last Shot Point of the day

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day out in production on MGL1004\_ML\_CR which concluded at ~02:20 (GMT). During the Line change we changed out Hose Bundle #2. This process took longer than expected due the failure of the wooden shipping spool. Once the Bundle was installed and tested the string was re-deployed. Shortly after its deployment we started production on MGL1004\_ML\_D. The changing of Host Bundle #2 has seemed to of fixed our intermittent power line issues that we were having.

Tomorrow: We will continue production on MGL1004\_ML\_D until ~13:00 (GMT) were we will make a line change to MGL1004\_ML\_B2. During this line change we will pick up the Port Sub-Arrays for preventive maintenance and to inspect the Float Nose Piece on String #4

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/28/2010</b>	<b><u>Sailed Km</u></b>
Prime	174.050
Infill	0.000
Reshoot	0.000
Total:	174.050

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/28/2010</b>
Recording	19:32
Line Change	3:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	0:00
Ship Repair	0:00
Currents	1:28
Port Call	0:00
Medical Transfer	0:00

Total: 24.00

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

Pos: 33 46 34.0 N  
156 14 33.0 E

Cos: 290 deg  
Speed: 5.0 kts SOG

### **Weather:**

Wind: E @ 10-15 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	15:00	MGL1004_ML_D2 Prime FSP 3033 LSP 5695
15:00	18:00	Line Change
18:00	19:28	Line Change Extended Due Currents +2kts out of the south
19:28	24:00	MGL1004_ML_D Prime FSP 817 LSP 1636 Last Shot Point of the day

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day out in production on MGL1004\_ML\_D2 which concluded at ~15:00 (GMT). During the Line change we picked up the Port Sub-Arrays for maintenance. The Nose piece on Sub-Array #4 had again taken on water and was changed out with the recently patch spare Nose Piece. At ~19:28 (GMT) the line change was completed and we began production on MGL1004\_ML\_B2 which lasted throughout the day.

Tomorrow: We will continue production on MGL1004\_ML\_D2 until ~18:30 (GMT) were we will begin retrieval of all towed equipment and transit back to point B to begin retrieval of the OBS's

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/29/2010</b>	<u>Sailed Km</u>
Prime	161.400
Infill	0.000
Reshoot	0.000
Total:	161.400

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/29/2010</b>
Recording	18:15
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:48
Streamer	2:18
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Deployment	0:00
OBS Testing	0:00
Cetaceans – PAM	0:00
Transit	2:39
Ship Repair	0:00
Currents	0:00
Port Call	0:00

Total: 24.00

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

Pos: 34 12.10 N  
154 53.90 E

Cos: 111.3 deg  
Speed: 10.5 kts SOG

### **Weather:**

Wind: SE @ 20-25 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	18:15	MGL1004_ML_B2 Prime FSP 3033 LSP 5695
18:15	19:03	Source Recovery
19:03	21:21	Streamer Recovery
21:21	24:00	Transit to OBS A1

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day out in production on MGL1004\_ML\_B2 which concluded at ~18:00 (GMT). At that time we began recovery operations of all towed MCS Equipment. Recovery was concluded at ~21:21 and we began transiting to OBS Site A1 to begin recovery of OBS units.

Tomorrow: At the start of the day we will continue the transit to OBS Site A1 and at ~10:00 GMT we will be OBS recovery operations. Also during the day we will do maintenance and get all towed equipment ready for the transit back to Honolulu.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/30/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/30/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:45
OBS Maneuvering	1:28
OBS Recovery (Rise Time)	6:55
Cetaceans – PAM	0:00
Transit	14:24
Other (Securing Deck)	0:28
Ship Repair	0:00
Port Call	0:00

Total: 24.00

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

Pos: 33 14.03 N  
157 32.1 E

Cos: 118 deg  
Speed: 9.8 kts SOG

### **Weather:**

Wind: SW @ 20-25 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	8:40	Transit to OBS A1
8:40	8:47	Sending Release Command
8:47	10:27	OBS A1 Sited on the surface
10:27	10:47	OBS A1 Recovered
10:47	10:50	Securing Main Deck
10:50	11:47	Transit to OBS A2
11:47	11:54	Sending Release Command
11:54	13:20	OBS A2 Sighted on the Surface
13:20	13:40	OBS A2 Recovered
13:40	13:49	Securing Main Deck
13:49	15:02	Transit to OBS A3
15:02	15:04	Sending Release Command
15:04	16:38	OBS A3 Sighted on the Surface
16:38	17:03	OBS A3 Recovered
17:03	17:10	Securing Main Deck
17:10	18:25	Transit to OBS A4
18:25	18:50	Sending Release Command
18:50	19:51	OBS A4 Sighted on the Surface
19:51	20:05	OBS A4 Recovered
20:05	20:08	Securing Main Deck
20:08	21:24	Transit to OBS A5
21:24	21:28	Sending Release Command
21:28	22:42	OBS A5 Sighted on the Surface
22:42	22:51	OBS A5 Recovered
22:51	22:57	Securing Main Deck
22:57	0:00	Transit to OBS A6

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

**Marine Mammal Observer Staff on board:**

Fossati, Antochiw, Dubuque, Beland

**5. Daily Summary:**

We started the day in transit to the Site where OBS A1 was deployed to begin OBS recovery Operations. At 08:40 (GMT) OBS recovery operations began and continued throughout the day. OBS 1A through OBS 5A were recovered.

Tomorrow: We will continue OBS recovery operation starting with OBS 5A and will hopefully get through OBS 11A by the end of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>08/31/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>08/31/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	1:08
OBS Maneuvering	2:30
OBS Recovery (Rise Time)	8:53
Cetaceans – PAM	0:00
Transit	10:32
Other (Securing Deck)	0:57
Ship Repair	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 56.7 N  
158 41.9 E

Cos: 88.75 deg  
Speed: 0.0 kts SOG

### **Weather:**

Wind: NW @ 20-25 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:03	Transit to OBS A6
0:03	0:08	Sending Release Command
0:08	1:24	OBS A6 Sighted on the surface
1:24	1:37	OBS A6 Recovered
1:37	1:44	Securing Main Deck
1:44	2:49	Transit to OBS A7
2:49	3:12	Sending Release Command
3:12	4:18	OBS A7 Sighted on the Surface
4:18	4:24	OBS A7 Recovered
4:24	4:31	Securing Main Deck
4:31	5:36	Transit to OBS A8
5:36	5:41	Sending Release Command
5:41	6:44	OBS A8 Sighted on the Surface
6:44	7:20	OBS A8 Recovered
7:20	7:26	Securing Main Deck
7:26	8:37	Transit to OBS A9
8:37	8:47	Sending Release Command
8:47	9:52	OBS A9 Sighted on the Surface
9:52	10:13	OBS A9 Recovered
10:13	10:22	Securing Main Deck
10:22	11:04	Transit to OBS A10
11:04	11:16	Sending Release Command
11:16	11:59	OBS A10 Sighted on the Surface
11:59	12:33	OBS A10 Recovered
12:33	12:44	Securing Main Deck
12:44	13:33	Transit to OBS A11
13:33	13:37	Sending Release Command
13:37	14:31	OBS A11 Sighted on the surface
14:31	14:49	OBS A11 Recovered
14:49	14:55	Securing Main Deck
14:55	18:26	Transit to OBS B7
18:26	18:29	Sending Release Command
18:29	19:36	OBS B7 Sighted on the surface
19:36	19:48	OBS B7 Recovered
19:48	19:53	Securing Main Deck
19:53	20:56	Transit to OBS B6
20:56	20:59	Sending Release Command

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

20:59	22:00	OBS B6 Sighted on the surface
22:00	22:10	OBS B6 Recovered
22:10	22:16	Securing Main Deck
22:16	23:19	Transit to OBS B5
23:19	23:22	Sending Release Command
23:22	0:00	Standing by for OBS B5 to be Sighted on the surface

#### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day continuing the OBS recovery operations. This went on throughout the day and we were able to Recover OBS's A6 - A11 and B7 – B6.

Tomorrow: We will continue OBS recovery operation starting with OBS B5 and will hopefully get through OBS A14 by the end of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/01/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/01/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:58
OBS Maneuvering	1:48
OBS Recovery (Rise Time)	7:12
Cetaceans – PAM	0:00
Transit	12:54
Other (Securing Deck)	1:08
Ship Repair	0:00
Port Call	0:00

Total: 24.00

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

Pos: 32 27.1 N  
159 20.3 E

Cos: 68.5 deg  
Speed: 0.6 kts SOG

### **Weather:**

Wind: E @ 15-20 Kts.  
Seas: 4-6 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:08	OBS B5 Sighted on the surface
0:08	0:19	OBS B5 Recovered
0:19	0:26	Securing Main Deck
0:26	1:27	Transit to OBS A12
1:27	1:32	Sending Release Command
1:32	2:17	OBS A12 Sighted on the Surface
2:17	2:25	OBS A12 Recovered
2:25	2:32	Securing Main Deck
2:32	3:33	Transit to OBS B4
3:33	3:36	Sending Release Command
3:36	4:18	OBS B4 Sighted on the Surface
4:18	4:25	OBS B4 Recovered
4:25	4:31	Securing Main Deck
4:31	5:31	Transit to OBS B3
5:31	5:36	Sending Release Command
5:36	6:18	OBS B3 Sighted on the Surface
6:18	6:40	OBS B3 Recovered
6:40	6:49	Securing Main Deck
6:49	7:44	Transit to OBS B2
7:44	7:50	Sending Release Command
7:50	8:38	OBS B2 Sighted on the Surface
8:38	8:44	OBS B2 Recovered
8:44	8:52	Securing Main Deck
8:52	9:49	Transit to OBS B1
9:49	9:57	Sending Release Command
9:57	10:45	OBS B1 Sighted on the surface
10:45	10:53	OBS B1 Recovered
10:53	11:02	Securing Main Deck
11:02	15:38	Transit to OBS A13
15:38	15:39	Sending Release Command
15:39	16:38	OBS A13 Sighted on the surface
16:38	16:45	OBS A13 Recovered
16:45	16:51	Securing Main Deck
16:51	17:37	Transit to OBS A14
17:37	17:55	Sending Release Command
17:55	18:48	OBS A14 Sighted on the surface
18:48	19:14	OBS A14 Recovered

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

19:14	19:22	Securing Main Deck
19:22	20:47	Transit to OBS A15
20:47	20:48	Sending Release Command
20:48	21:52	OBS A15 Sighted on the surface
21:52	22:05	OBS A15 Recovered
22:05	22:13	Securing Main Deck
22:13	23:26	Transit to OBS A16
23:26	23:37	Sending Release Command
23:37	0:00	Standing by for OBS A16 to Surface

#### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day continuing the OBS recovery operations. This went on throughout the day and we were able to Recover OBS's B5 – B1 and A12 – A15.

Tomorrow: We will continue OBS recovery operation starting with OBS A16 and work our way through A21 to complete the recovery Operation, which should conclude about ~16:00 (GMT). At that time we will be to collect more Multibeam Data over the southern end of Shatsky Rise throughout the rest of the day.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/02/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/02/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:41
OBS Maneuvering	1:17
OBS Recovery (Rise Time)	6:30
Cetaceans – PAM	0:00
Transit	6:15
Other (Securing Deck)	0:41
Multibeam Survey	7:30
Port Call	0:00

Total: 24.00

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

Pos: 31 15.3 N  
158 59.9 E

Cos: 177.01 deg  
Speed: 10.3 kts SOG

### **Weather:**

Wind: SE @ 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	0:53	OBS A16 Sighted on the surface
0:53	1:05	OBS A16 Recovered
1:05	1:10	Securing Main Deck
1:10	2:25	Transit to OBS A17
2:25	2:29	Sending Release Command
2:29	3:29	OBS A17 Sighted on the Surface
3:29	3:43	OBS A17 Recovered
3:43	3:48	Securing Main Deck
3:48	4:52	Transit to OBS A18
4:52	5:56	Sending Release Command
5:56	6:12	OBS A18 Sighted on the Surface
6:12	6:24	OBS A18 Recovered
6:24	6:30	Securing Main Deck
6:30	7:29	Transit to OBS A19
7:29	7:35	Sending Release Command
7:35	9:00	OBS A19 Sighted on the Surface
9:00	9:09	OBS A19 Recovered
9:09	9:17	Securing Main Deck
9:17	10:12	Transit to OBS A20
10:12	10:38	Sending Release Command
10:38	12:03	OBS A20 Sighted on the Surface
12:03	12:19	OBS A20 Recovered
12:19	12:26	Securing Main Deck
12:26	13:36	Transit to OBS A21
13:36	13:43	Sending Release Command
13:43	15:14	OBS A21 Sighted on the surface
15:14	15:28	OBS A21 Recovered
15:28	15:38	Securing Main Deck
15:38	16:30	Transit to Multibeam Line
16:30	20:10	MB Line Wpt 1 - Wpt 2
20:10	22:34	MB Line Wpt 2 - Wpt 3
22:34	23:51	MB Line Wpt 3 - Wpt 4
23:51	0:00	Continue ML Line to Wpt 5

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

**4. Comments**

Local Vessel time is UTC -12

**Science Technical staff on board:**

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

**Science Party on board:**

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

**Marine Mammal Observer Staff on board:**

Fossati, Antochiw, Dubuque, Beland

**5. Daily Summary:**

We started the day continuing the OBS recovery operations. We recovered OBS A16 – A21 without incident. At 15:38 (GMT) all OBS's were onboard and we began a short transit to a Multibeam Survey Line Provided by the PI. At 16:30 (GMT) we began surveying in the southern portion of Shatsky Rise and this continued throughout the rest of the day.

Tomorrow: We will continue acquiring the Multibeam Survey Data on the line provided by the PI throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until it is needed next year.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/03/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/03/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	1:03
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	0:00
Other (Securing Deck)	0:00
Multibeam Survey	22:57
Port Call	0:00

Total: 24.00

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

Pos: 31 46.47 N  
158 48.15 E

Cos: 83.07 deg  
Speed: 10.9 kts SOG

### **Weather:**

Wind: E @ 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
0:00	1:27	Continue MB Line WPT 4 - WPT 5
1:27	3:31	MB Line WPT 5 - WPT 6
3:31	4:54	MB Line WPT 6 - WPT 6A
4:54	7:12	MB Line WPT 6A - WPT 7
7:12	11:15	MB Line WPT 7 - WPT 8
11:15	13:06	MB Line WPT 8 - WPT 9
13:06	14:19	MB Line WPT 9 - WPT 10
14:19	14:23	Port Turn of Figure 8 for Maggie Cal
14:23	14:53	Stbd Turn of Figure 8 for Maggie Cal
14:53	15:26	Completed Figure 8 heading to WPT 11
15:26	16:53	MB Line WPT 10 - WPT 11
16:53	17:37	MB Line WPT 11 - WPT 12
17:37	0:00	Continue MB Line Towards WPT 13

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day continuing the Multibeam survey Line in the southern portion of Shatsky Rise. At ~14:19 (GMT) we broke off the Multibeam line, at the request of the PI, to conduct a figure 8 for acquiring readings to be used to get calibration readings for the Magnetometer. At 15:26 (GMT) this was complete and we returned to the Multibeam Survey Line in the southern portion of Shatsky Rise, which we continued throughout the rest of the day.

Tomorrow: At the start of the day we will continue acquiring the Multibeam Survey line in the Southern Portion of Shatsky Rise. At ~14:00 (GMT) we will complete this line and begin the transit back to Honolulu. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until it is needed next year.

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

Best Regards

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/04/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/04/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	16:55
Other (Securing Deck)	0:00
Multibeam Survey	07:05
Port Call	0:00

Total: 24.00

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

Pos: 30 58.08 N  
163 46.12 E

Cos: 105 deg  
Speed: 11.3 kts SOG

### **Weather:**

Wind: WSW @ 20-25 Kts.  
Seas: 5-7 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	07:05	Continue MB Line WPT 13
07:05	24:00	Multibeam Line Complete – In Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We started the day continuing the Multibeam survey Line in the southern portion of Shatsky Rise. At 07:05(GMT) the Multibeam line was completed and we began our transit back to Honolulu, Hawaii

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until it is needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping. We will start doing the rest of the upgrade of the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/05/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/05/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

Pos: 29 37.282 N  
168 36.16 E

Cos: 108 deg  
Speed: 11.1 kts SOG

### **Weather:**

Wind: W @ 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We stated upgrading the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

At ~06:45 GMT the Knudsen SBP Failed. It was noticed that there was a loud noise coming from the rack mount unit and large arcs could be seen inside the case. The Power was secured and the unit was open to investigate. It was found that second (of 3) 3.5 kHz High Power Transmitter Backplane boards had a large are of discoloration and a whole burned in the board.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We will start doing the rest of the upgrade of the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/06/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/06/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

Pos: 28 19.78 N  
173 16.12 E

Cos: 110 deg  
Speed: 10.7 kts SOG

### **Weather:**

Wind: NW @ 5-10 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued upgrading the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We should finish doing the rest of the upgrade of the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/07/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/07/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

Pos: 27 00.35677 N  
177 59.50887 E

Cos: 104 deg  
Speed: 10.7 kts SOG

### **Weather:**

Wind: ESE @ 10-15 Kts.  
Seas: 2-4 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued upgrading the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We finish the rest of the upgrade of the DigiCourse 5011 Birds to the 25 kHz. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/08/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/08/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

POS: 26 46.9042N  
177 38.3214W

Cos: 104 deg  
Speed: 10.4 kts SOG

## **Weather:**

Wind: ESE @ 15-20 Kts.  
Seas: 3-5 Ft.

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -12

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We finished upgrading the DigiCourse 5011 Birds to the 25 kHz, so they are compatible with the new DMU. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year. We will also start cleaning of lab spaces and stowing of all equipment from arrival in Honolulu on the 13<sup>th</sup> of Sept.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/09/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/09/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

POS: 24 33.8349N 173 28.9889W

Speed: 9.85 HDG: 107.5 Wind: ESE @ 15-20 kts.

Seas: 5-7ft WDT: 4933m

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

We will also start cleaning of lab spaces and stowing of all equipment from arrival in Honolulu on the 13<sup>th</sup> of Sept.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/10/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/10/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

POS: 23 21.00340N 169 22.12774W

Speed: 9.2 kts HDG: 110.87 Deg Wind: SE @ 15-20 Kts.

Seas: 5-7 Kts WDT: 4680m

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will continue to get all equipment needing repairs checked out and made ready for shipping on arrival. We will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

We will also start cleaning of lab spaces and stowing of all equipment from arrival in Honolulu on the 13<sup>th</sup> of Sept.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/11/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/11/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0.00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

Pos: 22 16.74032 N 165 18.67432 W

Speed: 10.2 kts. HDG: 99.43 Deg Wind: ESE 15-20 kts.

Seas:4-6 ft WDT: 4653m

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii throughout the day. We will continue to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We will also continue to get all equipment needing repairs checked out and made ready for shipping on arrival. In addition we will also continue to complete inventories and get RQN ready for submission on items we will need for science missions next year.

We will also continue cleaning lab spaces and stowing of all equipment from arrival in Honolulu on the 13<sup>th</sup> of Sept.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/12/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/12/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	24:00
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	0:00

Total: 24.00

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

POS: 21 32.71269N 161 02.41190W

Speed: 10.8 kts      HDG: 99.63 Deg      Wind: E @ 15-20 Kts

Seas: 2-4 Ft    WDT: 4408m

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Transit to Honolulu.

### **4. Comments**

Local Vessel time is UTC -11

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager, Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd

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

Fossati, Antochiw, Dubuque, Beland

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

We spent the entire day transiting back to Honolulu, Hawaii. We continued to monitor all other underway science system as well as work on doing preventive maintenance on all other science equipment in preparation for putting it away until needed next year. We continued to complete inventories and getting equipment that needs repair made ready for shipping.

Tomorrow: We will continue our transit back to Honolulu, Hawaii though out most of the day. At ~19:30 (GMT) we should arrive at the Honolulu Sea Buoy, and shortly after we will begin Port Call operations.

Best Regards  
Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/13/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/13/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	20:08
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	3:52

Total: 24.00

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

POS: 21 18.97 N 157 53.17W

Speed: N/A HDG: N/A Wind: N/A

Seas: N/A WDT: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	20:08	Transit to Honolulu.
20:08	24:00	.Port Call Honolulu – U-Hawaii's Dock

### **4. Comments**

Local Vessel time is UTC -10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn,

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

Korenaga, Sager

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

None

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

We spent the majority of the day in transit to Honolulu, Hawaii. At ~17:00 GMT we began shutting down the underway science systems in preparation for arrival. All systems were secured by ~18:11 GMT and we arrived at the dock at ~20:08 GMT. While customs, immigration, and agriculture inspection were taking place we took the opportunity to move some tow equipment from the Main Deck to the OBS Deck. Once all formalities were complete the following Science Party Disembarked the vessel: Olugboji, Reiger, Gao, Lewis, Paul, Zhang (J), Brooks, Lemmond, Dubois, Kane, Eisenback, Floyd. In addition the following MMO's also disembarked: Fossati, Antochiw, Dubuque, Beland.

Tomorrow: We will move to day work schedule (07:00-17:30) for all technical staff and well begin to offload the WHOI OBSIP equipment from the vessel. We will also continue to work out closing out the data for MGL1004 as well as conduct a Post Cruise Gravity Tie.

Best Regards

Robert Steinhaus

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

## **1. PRODUCTION SUMMARY**

<b>09/14/2010</b>	<b><u>Sailed Km</u></b>
Prime	0.000
Infill	0.000
Reshoot	0.000
Total:	0.000

## **2. STATISTICAL ANALYSIS (DECIMAL HOURS)**

<b><u>Time Activity Analysis</u></b>	<b>09/14/2010</b>
Recording	0:00
Line Change	0:00
Weather	0:00
Instrument	0:00
Hydraulics	0:00
Source	0:00
Streamer	0:00
Seismic Air Compressor	0:00
Magnetometer	0:00
OBS Release Command	0:00
OBS Maneuvering	0:00
OBS Recovery (Rise Time)	0:00
Cetaceans – PAM	0:00
Transit	20:08
Other (Securing Deck)	0:00
Multibeam Survey	0:00
Port Call	3:52

Total: 24.00

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

POS: 21 18.97 N 157 53.17W

Speed: N/A HDG: N/A Wind: N/A

Seas: N/A WDT: N/A

**Cruise : MGL1004**

**Korenaga - Shatsky Rise, Northwest Pacific**

To: Office of Marine Operations

Cc: Reports Group

Fm: Robert Steinhaus – Chief Science Officer (LDEO)

**R/V Marcus G. Langseth**

### **3. TIME SUMMARY**

<b>Start</b>	<b>End</b>	<b>Description / Comments</b>
00:00	24:00	Port Call Honolulu – U-Hawaii's Dock.

### **4. Comments**

Local Vessel time is UTC -10

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

Steinhaus, Martinson, McKiernan, Tatro, Ng, Zhang (M), Spoto, Gunn, Gutierrez, Finn, Johnson, Meyer

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

None

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

None

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

We spent the entire day along side Pier 45 U-Hawaii Marine Center, Honolulu, Hawaii. The following science party departed the vessel: Korenaga & Sager. The WHOI OBSIP van was removed from the vessel. All shipments slated for offload in Honolulu were offloaded. All Aire Guns were removed from the Sub-Arrays and transferred to the OBS deck for storage in preparation for Vessel Maintenance later in the year. We continue to close out end of cruise data logging and conducted a Gravity Tie. In addition Science Techs arrived Johnson and Meyer during the day.

Tomorrow: We will move to day work schedule (07:00-17:00) for all technical staff and well begin to offload the WHOI OBSIP equipment from the vessel. We will also continue to work out closing out the data for MGL1004 as well as conduct a Post Cruise Gravity Tie.

Tomorrow will be the last Daily Report for MGL1004 – **Korenaga - Shatsky Rise, Northwest Pacific** and Anthony Johnson will take over Duties as Chief Science Officer (CSO) at end of day.

Best Regards  
Robert Steinhaus