



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/4/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:		Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Tue 04 Jun


Mobilizing ashore Kodiak Alaska
Changing source bundle #2

Daily Comment Summaries - Plan for Tomorrow

Tue 04 Jun

Plan for science party to move on board
Plan to move to fueling dock

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Tue 4. Jun 00:00	Tue 4. Jun 24:00	24.000
Mobilizing Ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

4-Jun	Hours	%Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Total	24.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	18000 ms	Sample rate:	2 ms	Shotpoint interval:	399 m
CoS to CNG:	225 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m



6/4/2019

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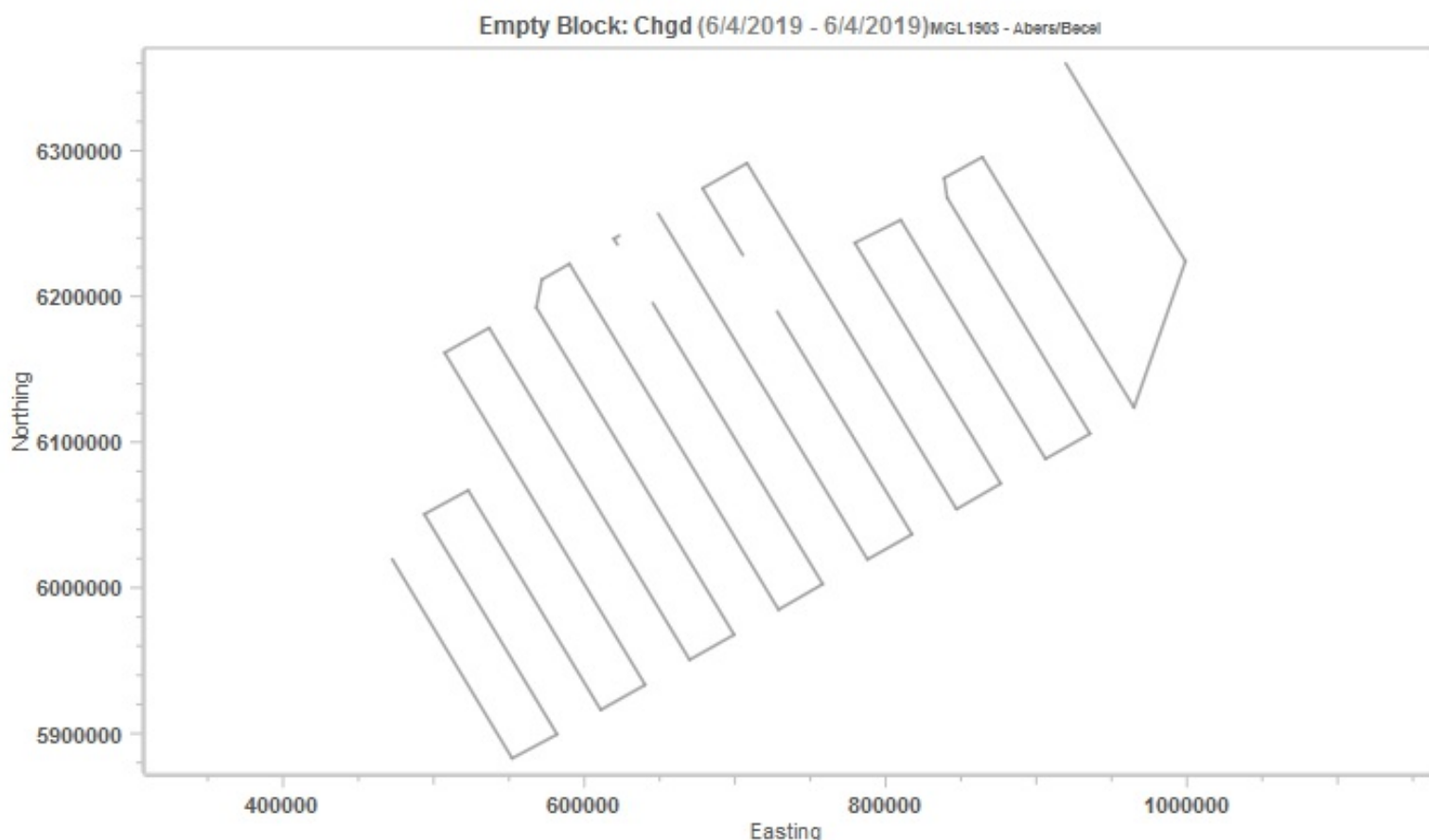
MGL1903 - Abers/Becel					
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Chgd km) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 04 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Thu Jun 6 2019 06:17a.m.

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Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 04 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic

Alan Thompson L-DEO OMO Marine Science Technician - Nav

Chris Abdouch Contract Personnel Marine Science Technician - Nav

Max Skalko Contract Personnel Marine Science Technician - Source

Edmond St. Amant Contract Personnel Marine Science Technician - Source

Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO

Karla Medina RPS Pam/PSO

Andrea Zavaia RPS PSO

Veronica Gonzales RPS PSO

Ana Hernandez RPS PSO

Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI

Sheehan, Anne U. Colorado Boulder Co-PI

Myers, Emma U. Washington

Gokce, Astekin Oklahoma State U.

Frazer, William Binghamton U.

Gomez, Carlos California State U. Northridge

Gonzalez, Lucia U. Texas El Paso

Huggins, Ellyn U. Nevada Reno

Spangler, Mitchell Indiana U.

VanderBeek, Brandon U. Padua

Wang, Hongda U. Colorado Boulder

Foster, Dave USGS

Norris, Tom BioWaves



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/5/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:		Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Wed 05 Jun


Science party moved aboard; given safety orientation briefing, tour, demonstration of donning survival suit. Problem with one main engine, canceled move to fuel dock performing repairs. Securing lab spaces for sea.

Daily Comment Summaries - Plan for Tomorrow

Wed 05 Jun

If repairs are successful, plan to move to fuel dock and depart as soon as possible.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Wed 5. Jun 00:00	Wed 5. Jun 24:00	24.000
Mobilizing Ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

5-Jun	Hours	%Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	48.000	100.000
Mob Ashore	48.000	100.000
Total	48.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	18000 ms	Sample rate:	2 ms	Shotpoint interval:	399 m
CoS to CNG:	225 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m



6/5/2019

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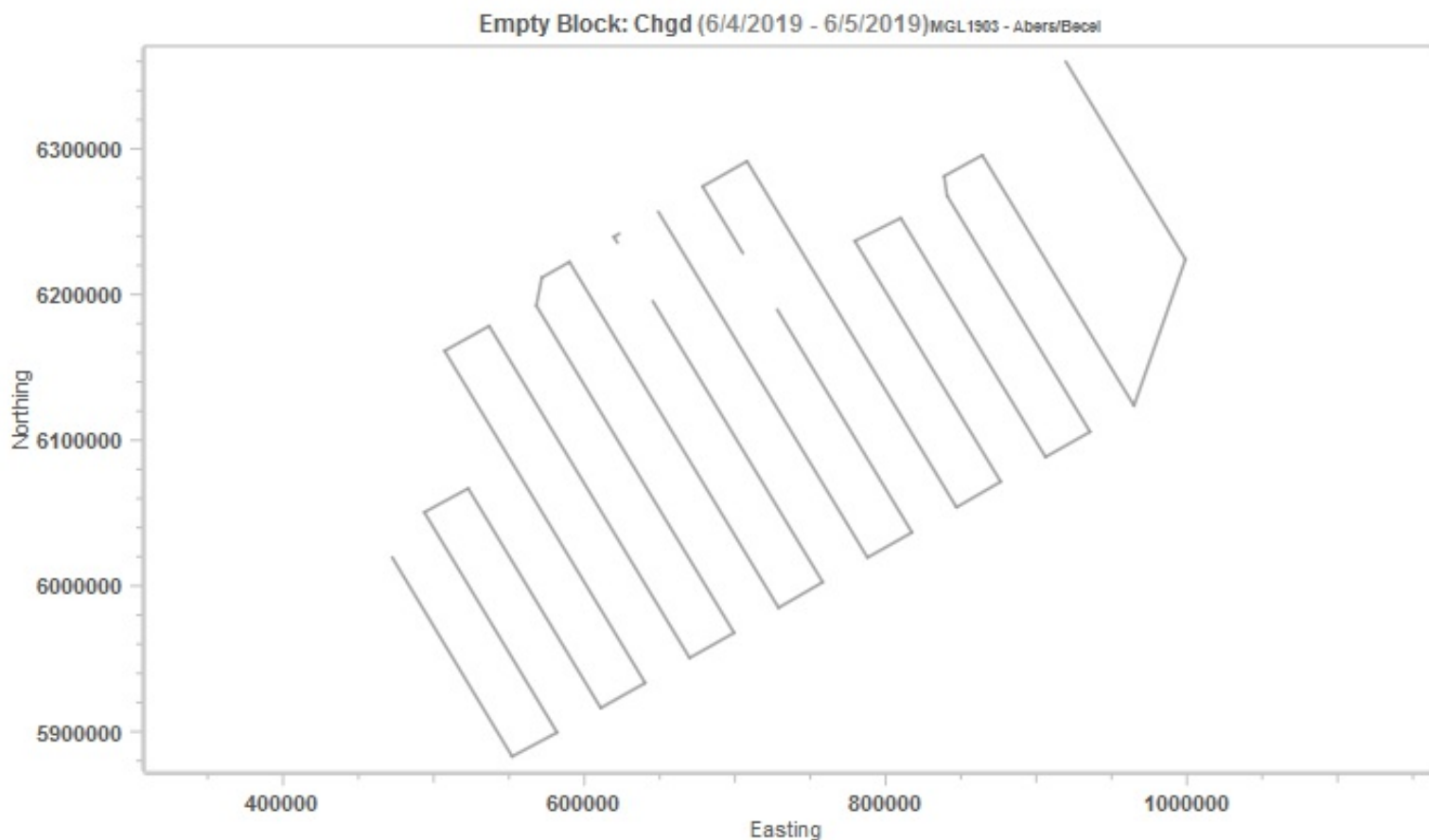
MGL1903 - Abers/Becel					
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Chgd km) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 05 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Thu Jun 6 2019 06:18a.m.

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Page 3

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 05 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO
Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

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Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Gokce, Astekin Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/6/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:		Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Thu 06 Jun


The day was spent alongside the dock while engine room personnel were making repairs.
By the end of the day repairs were completed, no shore availability for remainder of the day to take on fuel.

Daily Comment Summaries - Plan for Tomorrow

Thu 06 Jun

Move to fuel dock and once complete, aim to catch midday slack tide.
Will start deploying gear after short transit.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Thu 6. Jun 00:00	Thu 6. Jun 24:00	24.000
Mobilizing Ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

6-Jun	Hours	%Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	72.000	100.000
Mob Ashore	72.000	100.000
Total	72.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	18000 ms	Sample rate:	2 ms	Shotpoint interval:	399 m
CoS to CNG:	225 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m



6/6/2019

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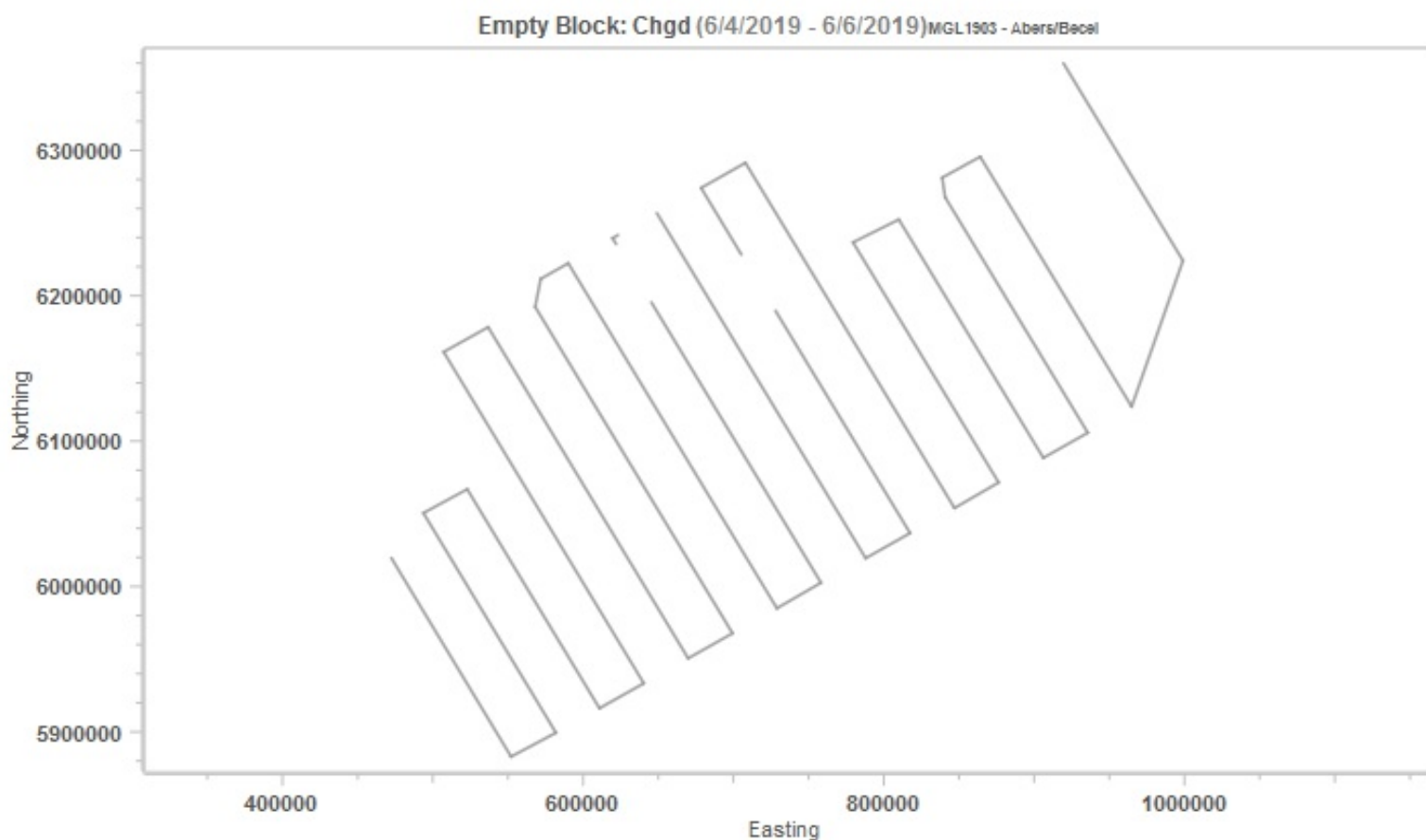
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Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Chgd km) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 06 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Thu Jun 6 2019 09:15p.m.

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Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 06 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic

Alan Thompson L-DEO OMO Marine Science Technician - Nav

Chris Abdouch Contract Personnel Marine Science Technician - Nav

Max Skalko Contract Personnel Marine Science Technician - Source

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Brian Agee Contract Personnel Marine Science Technician - Source

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Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/7/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:		Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Fri 07 Jun

Vessel moved to the fuel dock morning local time.
After fueling was completed, waited until high slack tide until departure

Daily Comment Summaries - Plan for Tomorrow

Fri 07 Jun

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
Mob Ashore	MB_MA	Fri 7. Jun 00:00	Fri 7. Jun 24:00	24.000
Mobilizing Ashore. Trouble with main engines unable to shift to fuel dock. Fueling completed, awaiting tide for departure				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

7-Jun	Hours	%Percent
Mobilisation	24.000	100.000
Mob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	96.000	100.000
Mob Ashore	96.000	100.000
Total	96.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	18000 ms	Sample rate:	2 ms	Shotpoint interval:	399 m
CoS to CNG:	225 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m



6/7/2019

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MGL1903 - Abers/Becel

Source Details

No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

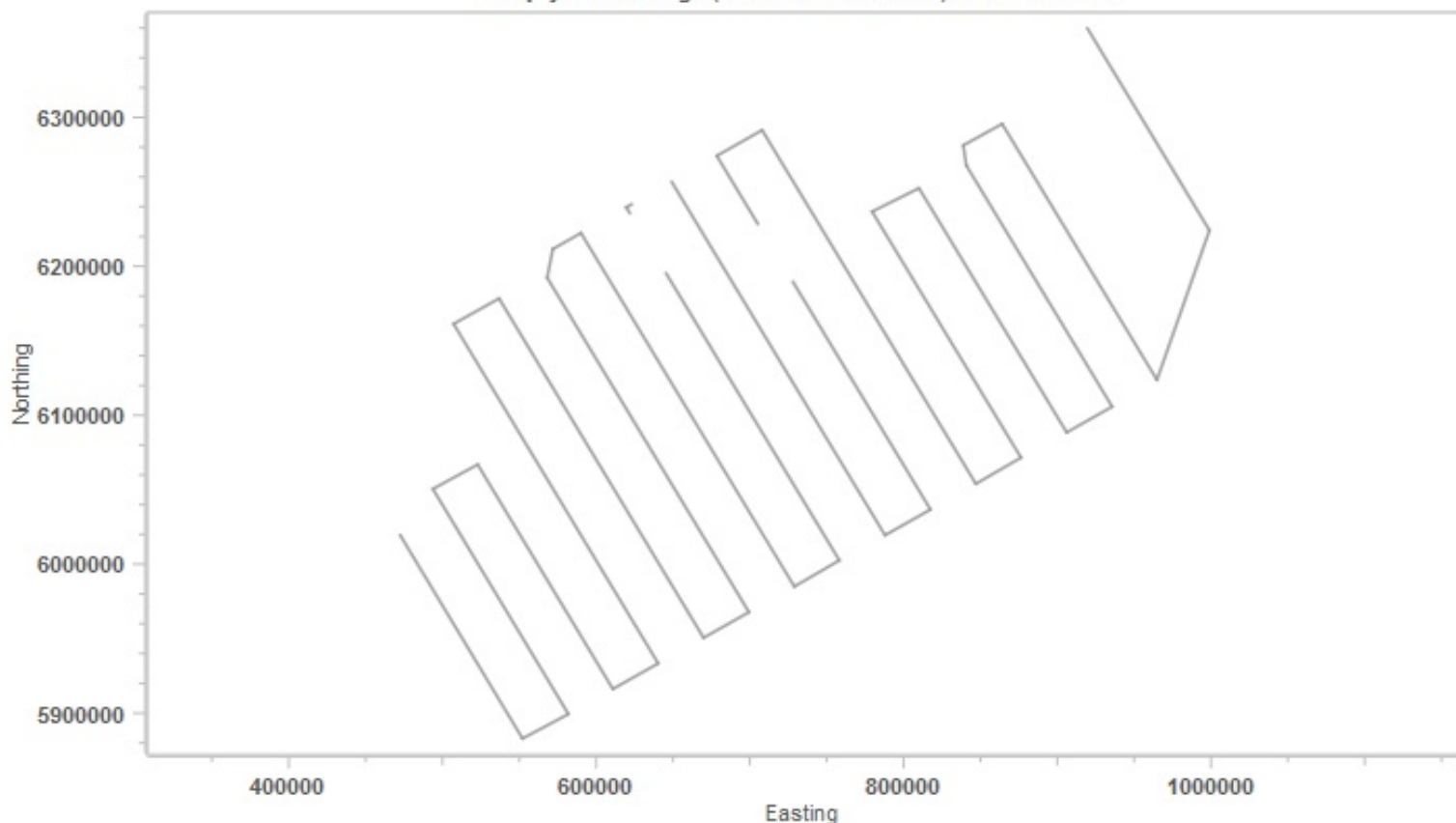
Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Chgd km) - Prime: Sail Line, Infill: Full Fold

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	0.00	0.00
Combined	0.00	0.00	0.00	0.00

Empty Block: Chgd (6/4/2019 - 6/7/2019)MGL1903 - Abers/Becel



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 07 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report



6/7/2019

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Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Fri 07 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

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Daily Science Report

6/8/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:		Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Sat 08 Jun

Beginning of UTC day was spent transiting to the prospect.
After arriving at the planned location, streamer deployment was started followed by deployment of all source arrays, PAM, and magnetometer.
Once cleared, ramp up was initially begun but canceled due to a comm's failure on subarray 1.
Subarray 1 had to be recovered then redeployed and ramp up was restarted.
At the completion of ramp up, the vessel proceeded to the north end of MC01 to acquire data through Right Whale sanctuary during daylight hours.
Acquisition of MC01 continued through end of julian day.

Daily Comment Summaries - Plan for Tomorrow

Sat 08 Jun





It is planned to complete line MC01 and perform an inside turn to line MT01.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Mob Ashore	MB_MA	Sat 8. Jun 00:00	Sat 8. Jun 00:56	0.933
Mobilizing Ashore. Trouble with main engines unable to shift to fuel dock. Fueling completed, awaiting tide for departure				
Transit to Prospect	MB_TT	Sat 8. Jun 00:56	Sat 8. Jun 06:40	5.733
In transit to prospect, for mobilizing deployment.				
Deployment	MB_DP	Sat 8. Jun 06:40	Sat 8. Jun 09:40	3.000
Deploy streamer				
Deployment	MB_DP	Sat 8. Jun 09:40	Sat 8. Jun 10:08	0.467
Deploy Magnetometer and PAM				
Transit	SB_TRT	Sat 8. Jun 10:08	Sat 8. Jun 10:45	0.617
Turning before deploying source subarrays				
Deployment	MB_DP	Sat 8. Jun 10:45	Sat 8. Jun 14:40	3.917
Deploying subarrays 1-4				
Testing	MB_TE	Sat 8. Jun 14:40	Sat 8. Jun 15:08	0.467
Cleared by PSO's to start ramp up Ramp up started 14:57 Ramp up canceled due to subarray 1 GCM failure				



Category	Code	Start	End	Duration
 Source Reconfig	SB_REC_SC	Sat 8. Jun 15:08	Sat 8. Jun 16:44	1.600
Recovering subarray 1 to replace failed GCM 16:42 array 1 back in position and cleared to begin ramp up				
 Testing	MB_TE	Sat 8. Jun 16:44	Sat 8. Jun 17:07	0.383
Ramp up source 17:07 completed ramp up Turn on ADCP, 3.5khz, and EM122				
 Transit	SB_TRT	Sat 8. Jun 17:07	Sat 8. Jun 20:21	3.233
Transit to SOL MGL1903MC01				
 Production Prime	AC_PP	Sat 8. Jun 20:21	Sat 8. Jun 24:00	3.650

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

8-Jun	Hours	%Percent
Acquisition	3.650	15.208
Production Prime	3.650	15.208
Chargeable Standby	5.450	22.708
Reconfiguration	1.600	6.667
Source Reconfig	1.600	6.667
Transit	3.850	16.042
Mobilisation	14.900	62.083
Deployment	7.383	30.764
Mob Ashore	0.933	3.889
Testing	0.850	3.542
Transit to Prospect	5.733	23.889
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	110.900	92.417
Deployment	7.383	6.153
Mob Ashore	96.933	80.778
Testing	0.850	0.708
Transit to Prospect	5.733	4.778
Acquisition	3.650	3.042
Production Prime	3.650	3.042
Chargeable Standby	5.450	4.542
Reconfiguration	1.600	1.333
Source Reconfig	1.600	1.333
Transit	3.850	3.208
Total	120.000	



6/8/2019

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Basic Project Details

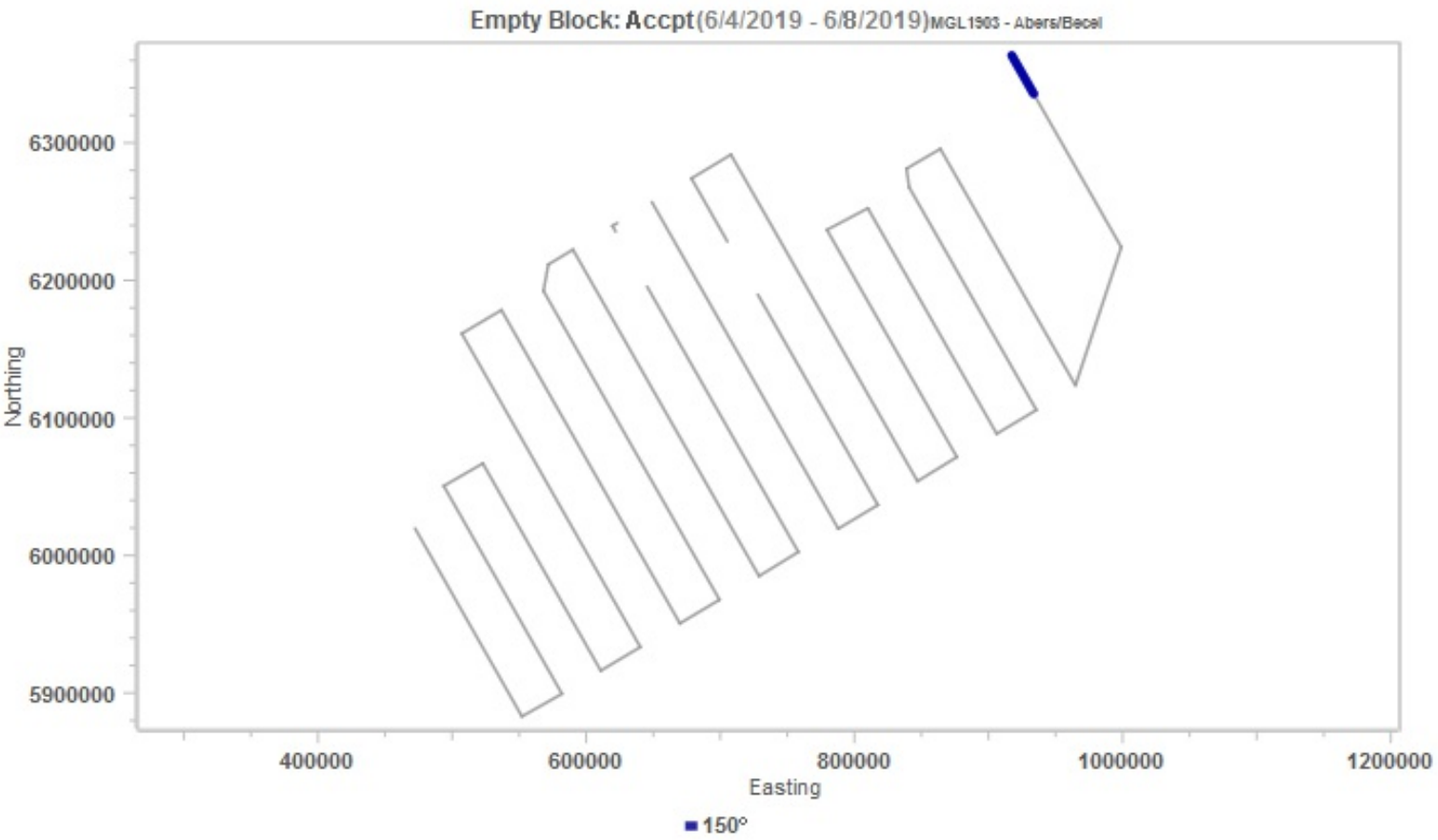
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	Line1	149.6	990	1072	Prime	32.80	4.852	Part	Midnight
Total						32.80			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	32.80	32.80	32.80	32.80
Combined	32.80	32.80	32.80	32.80



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 08 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 08 Jun

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PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



6/8/2019




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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
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Science Party On-board the Langseth

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Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	2	2	2	0.583	
 Abandon Ship Drill	AS	0	1	1	1	0.250	
 Fire Drill	Fi	0	1	1	1	0.333	



Daily Science Report

6/9/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Sun 09 Jun

Completed acquisition of line 1 then turned and started on the first transit line.
Some minor issues getting streamer data into spectra due to long shot times, but appear to be solved.
The weather has picked up slightly, but still operationally good.

Daily Comment Summaries - Plan for Tomorrow

Sun 09 Jun

Complete the transit line and turn onto line MC02

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 9. Jun 00:00	Sun 9. Jun 15:01	15.017
MGL1903MC01				
Prime Line Change	AC_PLC	Sun 9. Jun 15:01	Sun 9. Jun 15:08	0.117
Inside turn				
Production Prime	AC_PP	Sun 9. Jun 15:08	Sun 9. Jun 24:00	8.867

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

9-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.117	0.486
Production Prime	23.883	99.514
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	77.014
Deployment	7.383	5.127
Mob Ashore	96.933	67.315
Testing	0.850	0.590
Transit to Prospect	5.733	3.981



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Category	Hours	%Percent
Acquisition	27.650	19.201
Prime Line Change	0.117	0.081
Production Prime	27.533	19.120
Chargeable Standby	5.450	3.785
Reconfiguration	1.600	1.111
Source Reconfig	1.600	1.111
Transit	3.850	2.674
Total	144.000	

Basic Project Details

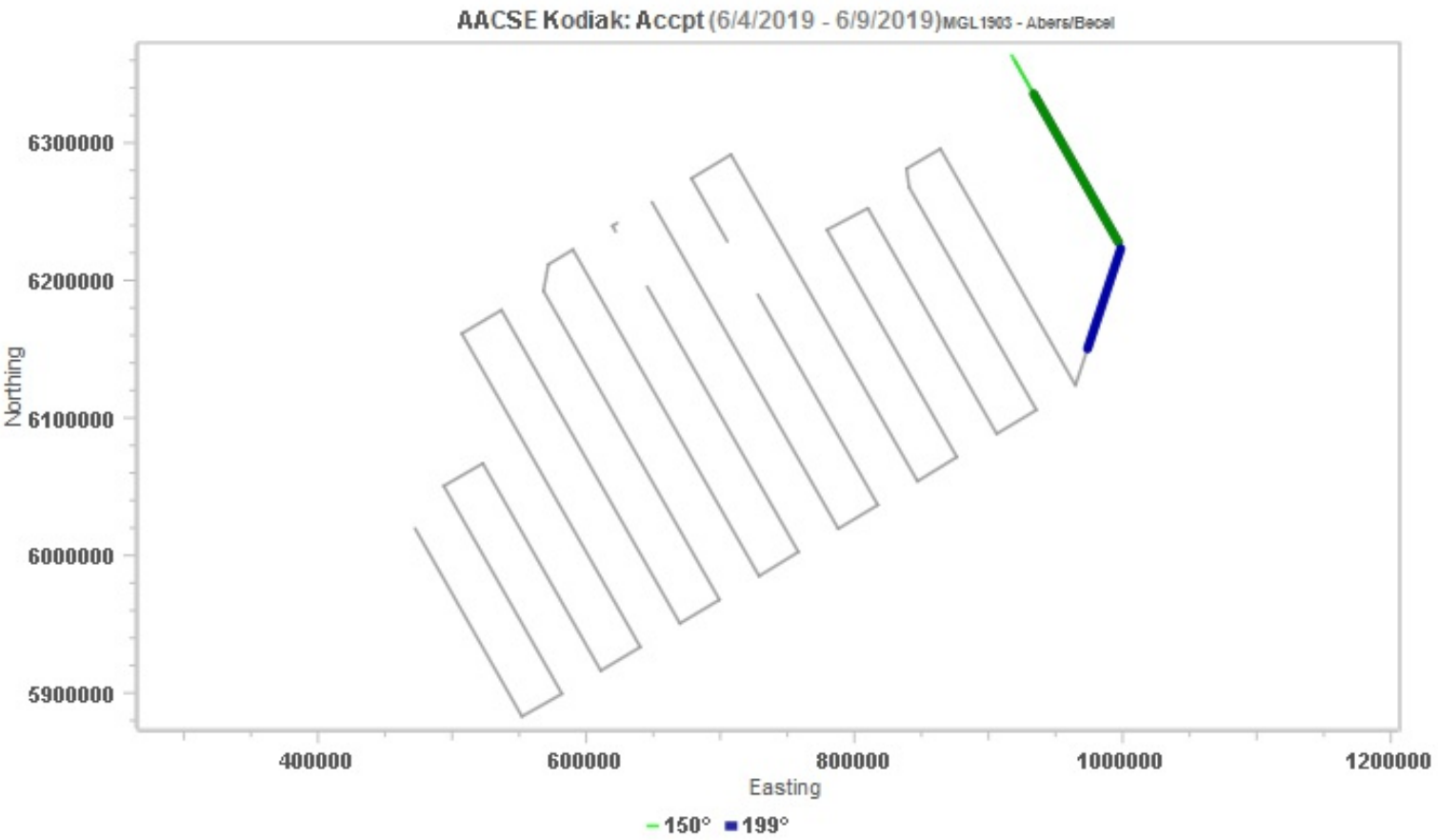
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	Line1	149.6	1073	1393	Prime	128.40	4.663	Complete	Complete
2	C12	198.8	1004	1200	Prime	78.40	4.774	Part	Midnight
Total						206.80			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	206.80	239.60	239.60	239.60
Combined	206.80	239.60	239.60	239.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 09 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 09 Jun

Technical Staff On-board the Langseth

- David Martinson L-DEO OMO Chief Science Officer
- Tom Spoto L-DEO OMO Chief Source Mechanic
- Alan Thompson L-DEO OMO Marine Science Technician - Nav
- Chris Abdouch Contract Personnel Marine Science Technician - Nav
- Max Skalko Contract Personnel Marine Science Technician - Source
- Edmond St. Amant Contract Personnel Marine Science Technician - Source
- Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

- Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	2	2	2	0.583	
 Abandon Ship Drill	AS	0	1	1	1	0.250	
 Fire Drill	Fi	0	1	1	1	0.333	



Daily Science Report

6/10/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Mon 10 Jun




The vessel completed line MT01 and made an inside turn to line MC02. MC02 will be completed soon after midnight UTC. Winds and seas were elevated throughout the day, but not expected to become much larger. Operation speeds have been increased to 5.5kts through the water.

Daily Comment Summaries - Plan for Tomorrow

Mon 10 Jun

It is planned to perform an inside turn onto line MT02 followed by another inside turn to MC03 and head away from shore.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Production Prime	AC_PP	Mon 10. Jun 00:00	Mon 10. Jun 02:13	2.217
MGL1903MT01				
 Prime Line Change	AC_PLC	Mon 10. Jun 02:13	Mon 10. Jun 03:06	0.883
Nominal Prime line change.				
 Production Prime	AC_PP	Mon 10. Jun 03:06	Mon 10. Jun 24:00	20.900
MGL1903MC02				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

10-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.883	3.681
Production Prime	23.117	96.319
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	66.012
Deployment	7.383	4.395
Mob Ashore	96.933	57.698



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Category	Hours	%Percent
Testing	0.850	0.506
Transit to Prospect	5.733	3.413
Acquisition	51.650	30.744
Prime Line Change	1.000	0.595
Production Prime	50.650	30.149
Chargeable Standby	5.450	3.244
Reconfiguration	1.600	0.952
Source Reconfig	1.600	0.952
Transit	3.850	2.292
Total	168.000	

Basic Project Details

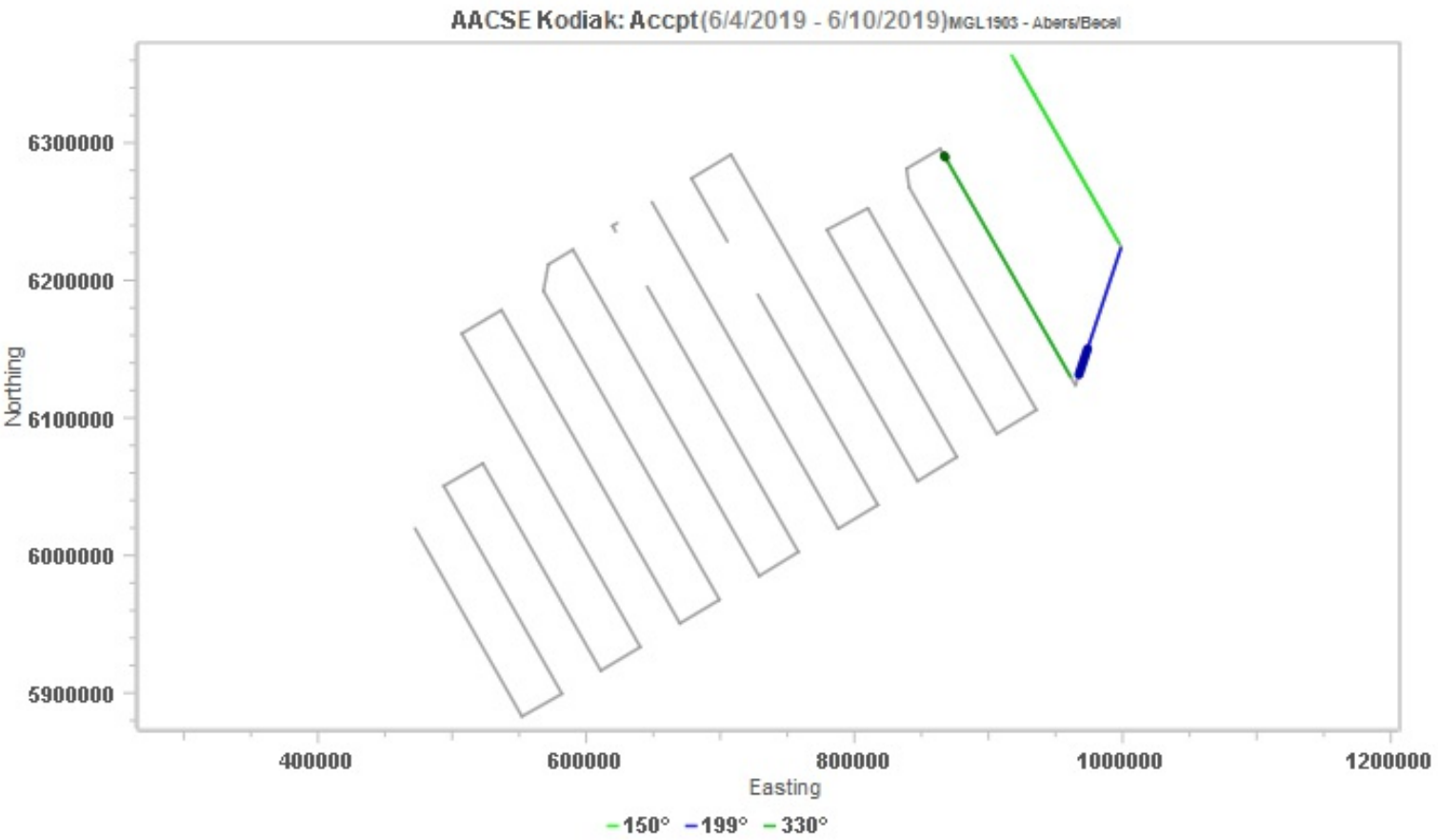
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
2	C12	198.8	1201	1251	Prime	20.40	4.813	Complete	Complete
3	Line2	329.6	1494	1496	Prime	1.20	4.888	Complete	Complete
Total						21.60			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	21.60	21.60	450.40	450.40
Combined	21.60	21.60	450.40	450.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 10 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 10 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/11/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Tue 11 Jun

PAM streamer became entangled with sub array 4 due to elevated seas and swell direction from the port side. Sub array 3 had to be recovered and 4 partially recovered to untangle the PAM cable on deck from array 4. Magnetometer was recovered to allow deployment of PAM on the starboard side and will remain onboard until weather changes. SEAL Chassis froze near EOL of line MC03 that required the reset of hardware cards, the final 11 shots of line MC03 were not recorded on streamer.

Daily Comment Summaries - Plan for Tomorrow

Tue 11 Jun

Finish acquisition of line MT03 and turn to line MC04

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 11. Jun 00:00	Tue 11. Jun 00:08	0.133
MGL1903MC02				
Prime Line Change	AC_PLC	Tue 11. Jun 00:08	Tue 11. Jun 00:28	0.333
Nominal Prime line change.				
Production Prime	AC_PP	Tue 11. Jun 00:28	Tue 11. Jun 02:51	2.383
MGL1903MT02				
Prime Line Change	AC_PLC	Tue 11. Jun 02:51	Tue 11. Jun 02:56	0.083
Nominal Prime line change.				
Production Prime	AC_PP	Tue 11. Jun 02:56	Tue 11. Jun 23:13	20.283
MGL1903MC03				
Prime Line Change	AC_PLC	Tue 11. Jun 23:13	Tue 11. Jun 23:21	0.133
Nominal Prime line change.				
Production Prime	AC_PP	Tue 11. Jun 23:21	Tue 11. Jun 24:00	0.650
MGL1903MT03				



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Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

11-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.550	2.292
Production Prime	23.450	97.708
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	57.760
Deployment	7.383	3.845
Mob Ashore	96.933	50.486
Testing	0.850	0.443
Transit to Prospect	5.733	2.986
Acquisition	75.650	39.401
Prime Line Change	1.550	0.807
Production Prime	74.100	38.594
Chargeable Standby	5.450	2.839
Reconfiguration	1.600	0.833
Source Reconfig	1.600	0.833
Transit	3.850	2.005
Total	192.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
4	C23	240.3	1009	1073	Prime	25.60	5.800	Complete	Complete
5	1903MC03	171.9	1004	1502	Prime	199.20	5.578	Complete	Complete
6	C34	239.7	1006	1021	Prime	6.00	4.984	Part	Midnight



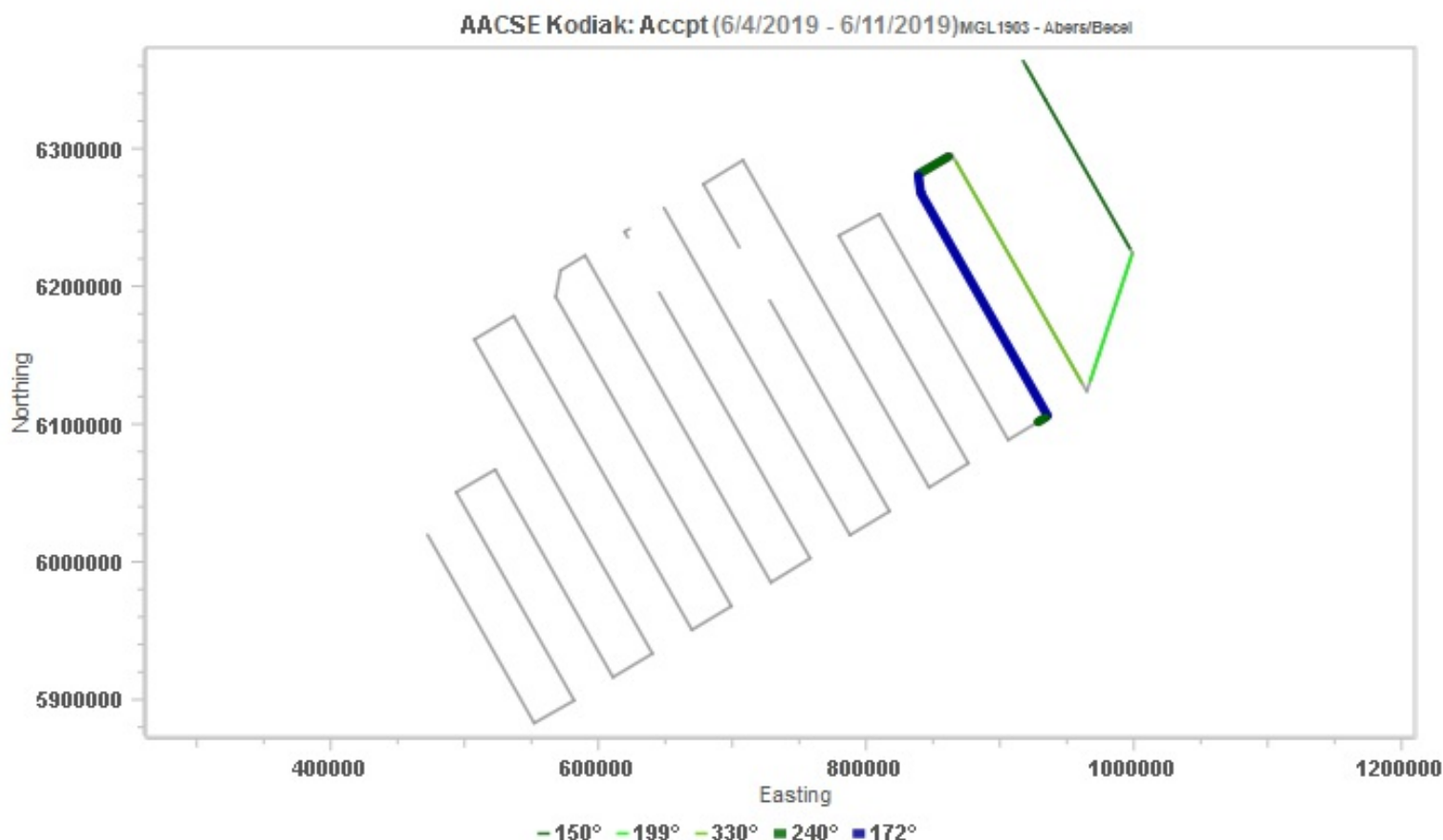
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Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total						230.80			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	230.80	252.40	681.20	681.20
Combined	230.80	252.40	681.20	681.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 11 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

PAM cable became tangled with string 4

General Purpose Science:

Magnetometer will stay on board until PAM can be redeployed off the port side



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Daily Comment Summaries - Personnel Onboard

Tue 11 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source




PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO
Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/12/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Wed 12 Jun

Completed line MC04 and turned to line MT04

Daily Comment Summaries - Plan for Tomorrow

Wed 12 Jun

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 12. Jun 00:00	Wed 12. Jun 02:34	2.567
MGL1903MT03				
Prime Line Change	AC_PLC	Wed 12. Jun 02:34	Wed 12. Jun 02:50	0.267
Nominal Prime line change.				
Production Prime	AC_PP	Wed 12. Jun 02:50	Wed 12. Jun 21:09	18.317
MGL1903MC04				
Prime Line Change	AC_PLC	Wed 12. Jun 21:09	Wed 12. Jun 21:23	0.233
Nominal Prime line change.				
Production Prime	AC_PP	Wed 12. Jun 21:23	Wed 12. Jun 24:00	2.617

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

12-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.500	2.083
Production Prime	23.500	97.917
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	51.343
Deployment	7.383	3.418
Mob Ashore	96.933	44.877



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Category	Hours	%Percent
Testing	0.850	0.394
Transit to Prospect	5.733	2.654
Acquisition	99.650	46.134
Prime Line Change	2.050	0.949
Production Prime	97.600	45.185
Chargeable Standby	5.450	2.523
Reconfiguration	1.600	0.741
Source Reconfig	1.600	0.741
Transit	3.850	1.782
Total	216.000	

Basic Project Details

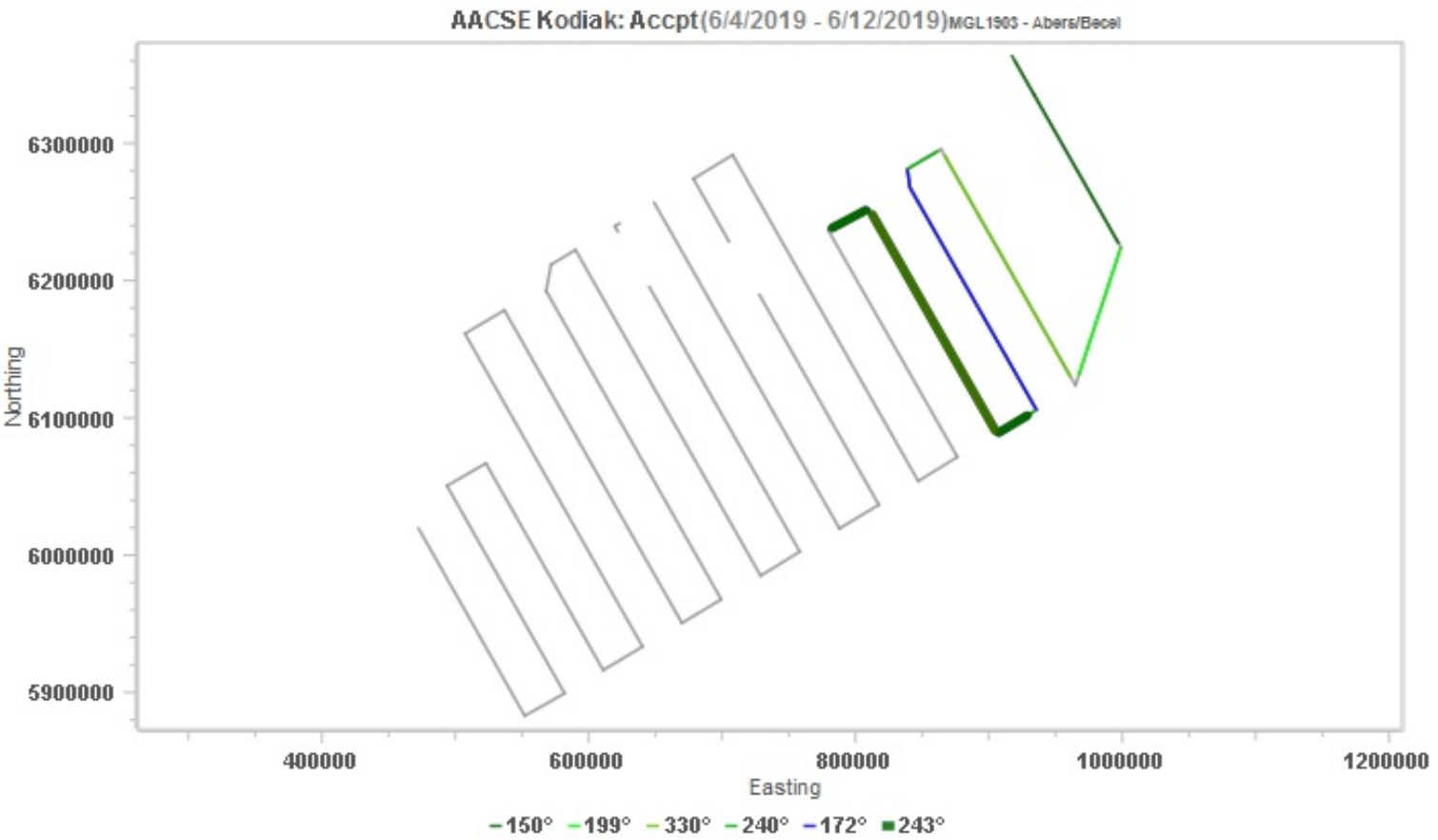
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
6	C34	239.7	1022	1084	Prime	25.20	5.237	Complete	Complete
7	Line4	329.6	1008	1474	Prime	186.40	5.495	Complete	Complete
8	C45	242.8	1008	1079	Prime	28.40	5.860	Part	Midnight
Total						240.00			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	240.00	492.40	921.20	921.20
Combined	240.00	492.40	921.20	921.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 12 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 12 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/13/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Thu 13 Jun

The vessel started the day on MT04 then made an inside turn to line MC05. During line MC05 fishing gear was spotted in front of us on the track line and the bridge crew diverted around it. After completion of line MC05 the vessel acquired MT05 and began MC06 shortly before midnight UTC.

Daily Comment Summaries - Plan for Tomorrow

Thu 13 Jun

It is planned to acquire MC06 throughout the day followed, once completed the source and streamer will be recovered then the source will be redeployed.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 13. Jun 00:00	Thu 13. Jun 00:14	0.233
MGL1903MT04				
Prime Line Change	AC_PLC	Thu 13. Jun 00:14	Thu 13. Jun 00:32	0.300
Nominal Prime line change.				
Production Prime	AC_PP	Thu 13. Jun 00:32	Thu 13. Jun 20:08	19.600
MGL1903MC05				
Prime Line Change	AC_PLC	Thu 13. Jun 20:08	Thu 13. Jun 20:24	0.267
Nominal Prime line change.				
Production Prime	AC_PP	Thu 13. Jun 20:24	Thu 13. Jun 23:32	3.133
MGL1903MT05				
Prime Line Change	AC_PLC	Thu 13. Jun 23:32	Thu 13. Jun 23:46	0.233
Nominal Prime line change.				
Production Prime	AC_PP	Thu 13. Jun 23:46	Thu 13. Jun 24:00	0.233
MGL1903MC06				



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Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

13-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.800	3.333
Production Prime	23.200	96.667
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	46.208
Deployment	7.383	3.076
Mob Ashore	96.933	40.389
Testing	0.850	0.354
Transit to Prospect	5.733	2.389
Acquisition	123.650	51.521
Prime Line Change	2.850	1.188
Production Prime	120.800	50.333
Chargeable Standby	5.450	2.271
Reconfiguration	1.600	0.667
Source Reconfig	1.600	0.667
Transit	3.850	1.604
Total	240.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accept km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
8	C45	242.8	1080	1084	Prime	2.00	5.760	Complete	Complete
9	Line5	149.6	1009	1477	Prime	187.20	5.157	Complete	Complete
10	C56	239.0	1008	1084	Prime	30.40	5.239	Complete	Complete



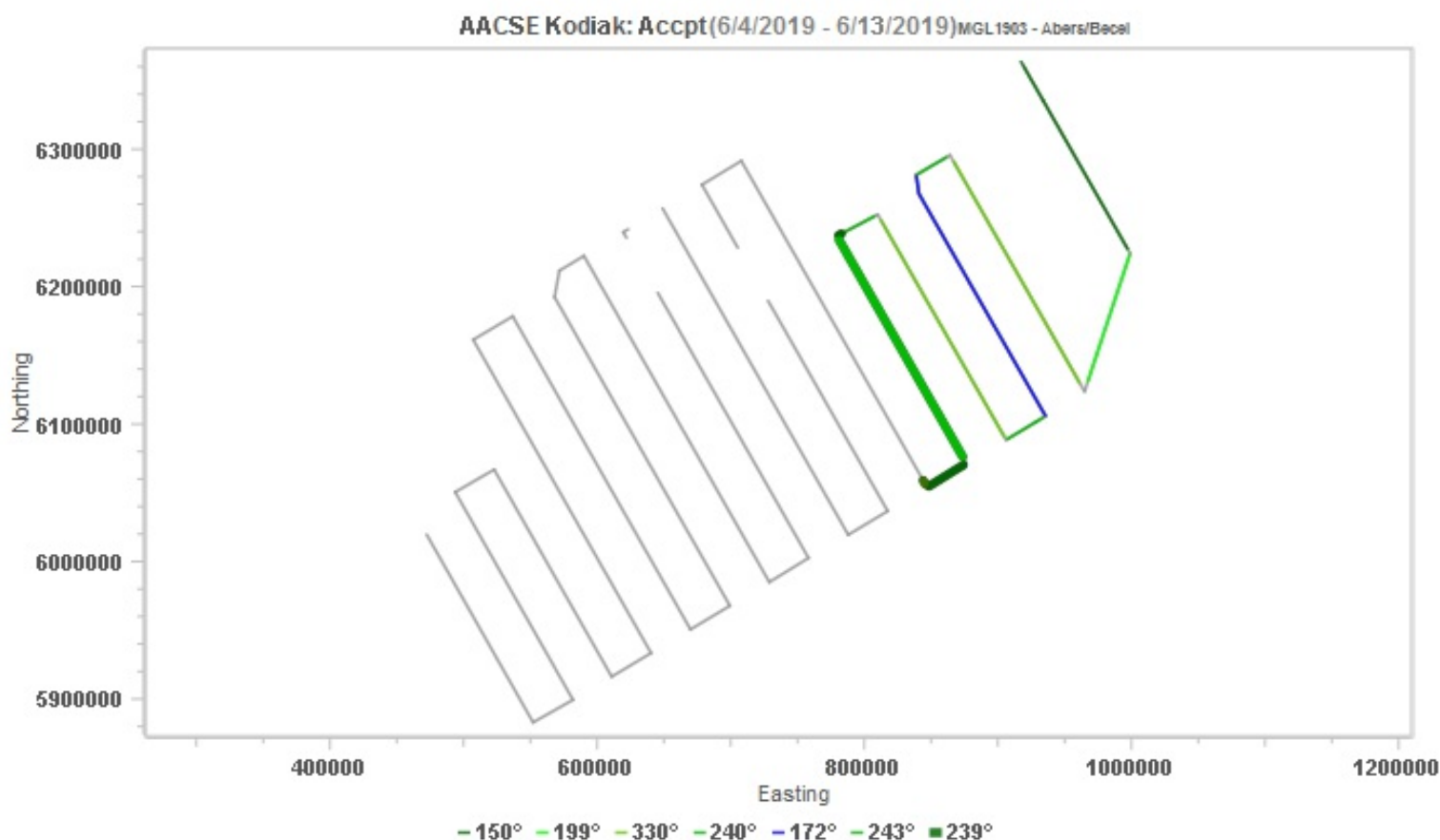
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Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
11	Line6	329.6	1008	1015	Prime	2.80	6.479	Part	Midnight
Total						222.40			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	222.40	714.80	1143.60	1143.60
Combined	222.40	714.80	1143.60	1143.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 13 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report



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Daily Comment Summaries - Personnel Onboard

Thu 13 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source




PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO
Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/14/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Fri 14 Jun


The vessel spent the entire UTC day acquiring on line MC06. Weather conditions have been deteriorating throughout the day with 30+kt winds and 2-4m seas along with intermittent fog. Due to the swell direction, the PAM cable was moved back to the port side to lessen the chances of a tangle. The vessel entered the fin whale protected area at 13:08 UTC

Daily Comment Summaries - Plan for Tomorrow

Fri 14 Jun

Depending on the weather conditions at the end of line MC06 the streamer recovery may be postponed.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Production Prime	AC_PP	Fri 14. Jun 00:00	Fri 14. Jun 24:00	24.000
MGL1903MC06				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

14-Jun	Hours	%Percent
Acquisition	24.000	100.000
Production Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	%Percent
Mobilisation	110.900	42.008
Deployment	7.383	2.797
Mob Ashore	96.933	36.717
Testing	0.850	0.322
Transit to Prospect	5.733	2.172
Acquisition	147.650	55.928
Prime Line Change	2.850	1.080
Production Prime	144.800	54.848
Chargeable Standby	5.450	2.064
Reconfiguration	1.600	0.606



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Category	Hours	%Percent
Source Reconfig	1.600	0.606
Transit	3.850	1.458
Total	264.000	

Basic Project Details

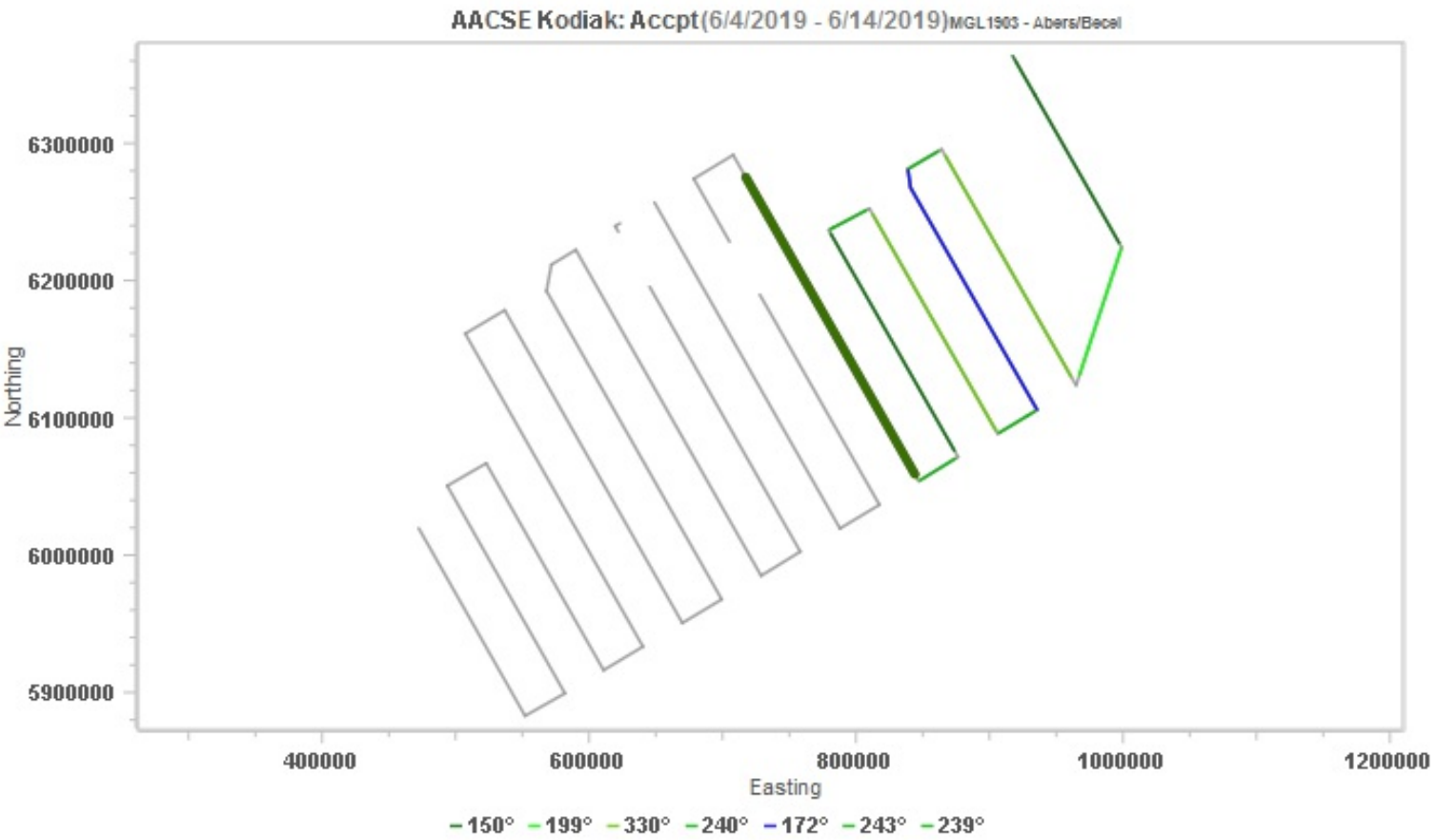
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
11	Line6	329.6	1016	1658	Prime	257.20	5.793	Part	Midnight
Total						257.20			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	257.20	972.00	1400.80	1400.80
Combined	257.20	972.00	1400.80	1400.80



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 14 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Fri 14 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/15/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Sat 15 Jun

Due to fog concerns, the source and streamer were not recovered between lines MC06 and MT06. The PAM cable was moved back to the starboard side at the start of MC07 due to large swells and the direction of swell. The vessel maneuvered around the sea otter protected area and rejoined the line after passing it. The vessel also exited the fin whale protected area.

Daily Comment Summaries - Plan for Tomorrow

Sat 15 Jun

At the conclusion of line MC07 it is planned to recover PAM, Source, and Streamer then redeploy the PAM, Source, and Magnetometer.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 15. Jun 00:00	Sat 15. Jun 01:12	1.200
MGL1903MC06				
Prime Line Change	AC_PLC	Sat 15. Jun 01:12	Sat 15. Jun 01:25	0.217
Nominal Prime line change.				
Production Prime	AC_PP	Sat 15. Jun 01:25	Sat 15. Jun 04:42	3.283
MGL1903MT06				
Prime Line Change	AC_PLC	Sat 15. Jun 04:42	Sat 15. Jun 05:17	0.583
Nominal Prime line change.				
Production Prime	AC_PP	Sat 15. Jun 05:17	Sat 15. Jun 24:00	18.717
MGL1903MC07				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

15-Jun	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.800	3.333
Production Prime	23.200	96.667
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	110.900	38.507
Deployment	7.383	2.564
Mob Ashore	96.933	33.657
Testing	0.850	0.295
Transit to Prospect	5.733	1.991
Acquisition	171.650	59.601
Prime Line Change	3.650	1.267
Production Prime	168.000	58.333
Chargeable Standby	5.450	1.892
Reconfiguration	1.600	0.556
Source Reconfig	1.600	0.556
Transit	3.850	1.337
Total	288.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
11	Line6	329.6	1659	1686	Prime	11.20	5.758	Complete	Complete
12	C67	239.6	1007	1083	Prime	30.40	4.999	Complete	Complete
13	1903MC07	149.7	1009	1516	Prime	202.80	5.779	Part	Midnight
Total						244.40			

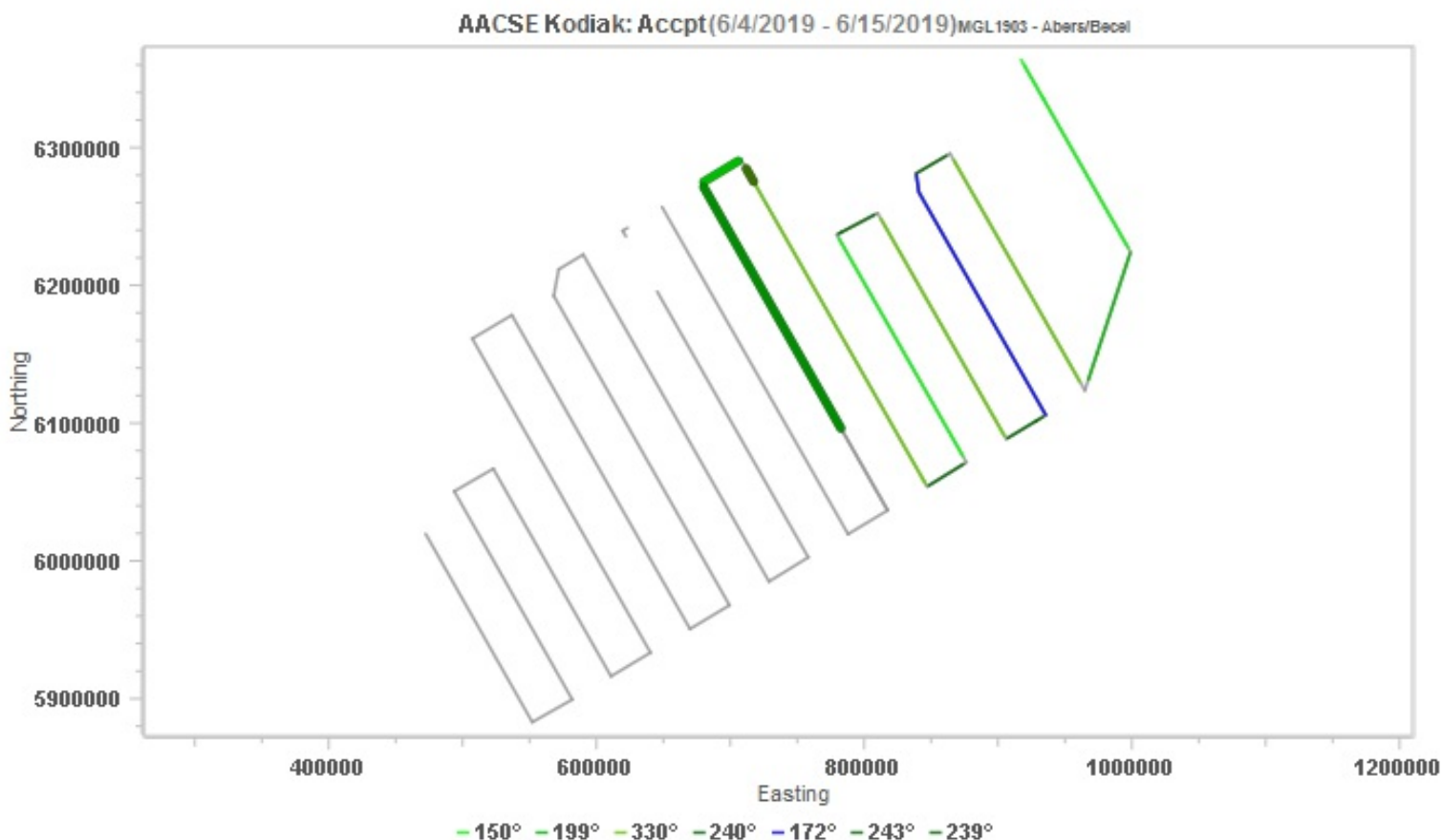
Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	244.40	1216.40	1645.20	1645.20
Combined	244.40	1216.40	1645.20	1645.20



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 15 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 15 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic

Alan Thompson L-DEO OMO Marine Science Technician - Nav

Chris Abdouch Contract Personnel Marine Science Technician - Nav

Max Skalko Contract Personnel Marine Science Technician - Source

Edmond St. Amant Contract Personnel Marine Science Technician - Source

Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Sat Jun 15 2019 04:51p.m.

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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/16/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Sun 16 Jun

After line MC07 all in water equipment was recovered due to completion of MCS portion of the cruise. The source, PAM, and Magnetometer were redeployed and after ramp up line then started line OT07 followed by acquiring on line OB08 for the remainder of the day.

Daily Comment Summaries - Plan for Tomorrow

Sun 16 Jun

Continue on line OB08

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 16. Jun 00:00	Sun 16. Jun 07:03	7.050
MGL1903MC07				
Source Reconfig	SB_REC_SC	Sun 16. Jun 07:03	Sun 16. Jun 08:56	1.883
End of MCS, recovering source to recover streamer				
Recovery	DM_RC	Sun 16. Jun 08:56	Sun 16. Jun 11:54	2.967
MCS complete, Recovering streamer for remainder of survey				
Source Reconfig	SB_REC_SC	Sun 16. Jun 11:54	Sun 16. Jun 15:19	3.417
Make minor repairs to guns before redeploy. Redeploy source				
Deployment	MB_DP	Sun 16. Jun 15:19	Sun 16. Jun 16:04	0.750
Deploy PAM and Magnetometer				
Tests	SB_TE	Sun 16. Jun 16:04	Sun 16. Jun 17:09	1.083
Ramp up source and head for SOL				
Production Prime	AC_PP	Sun 16. Jun 17:09	Sun 16. Jun 20:37	3.467
MGL1903OT07				
Prime Line Change	AC_PLC	Sun 16. Jun 20:37	Sun 16. Jun 20:45	0.133
Nominal Prime line change.				
Production Prime	AC_PP	Sun 16. Jun 20:45	Sun 16. Jun 24:00	3.250
MGL1903OB08				



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Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

16-Jun	Hours	% Percent
Acquisition	13.900	57.917
Prime Line Change	0.133	0.556
Production Prime	13.767	57.361
Chargeable Standby	6.383	26.597
Reconfiguration	5.300	22.083
Source Reconfig	5.300	22.083
Tests	1.083	4.514
Demobilisation	2.967	12.361
Recovery	2.967	12.361
Mobilisation	0.750	3.125
Deployment	0.750	3.125
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	35.785
Deployment	8.133	2.607
Mob Ashore	96.933	31.068
Testing	0.850	0.272
Transit to Prospect	5.733	1.838
Acquisition	185.550	59.471
Prime Line Change	3.783	1.213
Production Prime	181.767	58.259
Demobilisation	2.967	0.951
Recovery	2.967	0.951
Chargeable Standby	11.833	3.793
Reconfiguration	6.900	2.212
Source Reconfig	6.900	2.212
Tests	1.083	0.347
Transit	3.850	1.234
Total	312.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m



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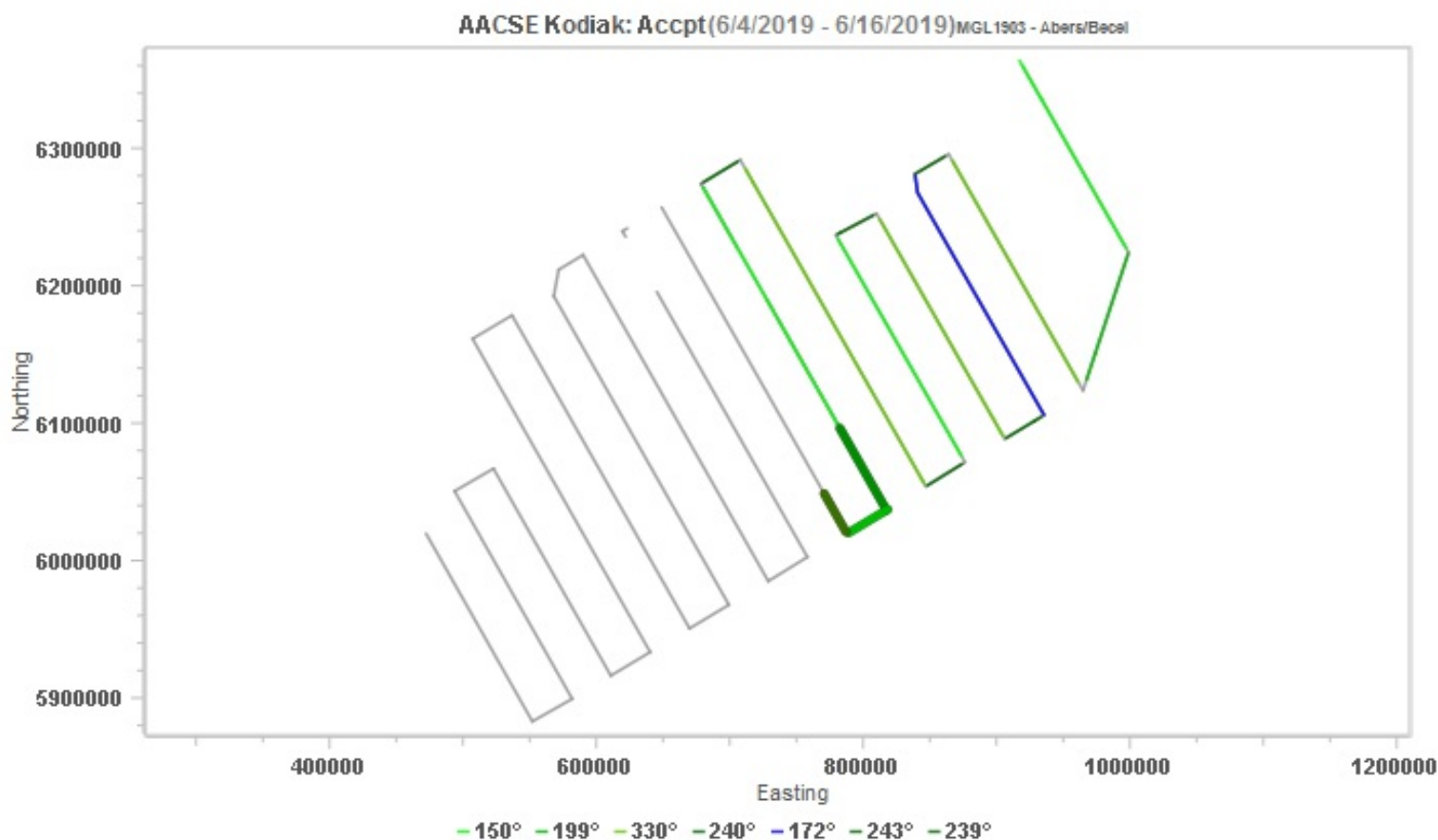
MGL1903 - Abers/Becel					
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
13	1903MC07	149.7	1517	1689	Prime	69.20	5.649	Complete	Complete
14	C78	239.7	998	1084	Prime	34.40	5.358	Complete	Complete
15	Line8	329.7	1005	1087	Prime	32.80	5.449	Part	Midnight
Total						136.40			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	136.40	1352.80	1781.60	1781.60
Combined	136.40	1352.80	1781.60	1781.60





6/16/2019

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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 16 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 16 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic

Alan Thompson L-DEO OMO Marine Science Technician - Nav

Chris Abdouch Contract Personnel Marine Science Technician - Nav

Max Skalko Contract Personnel Marine Science Technician - Source

Edmond St. Amant Contract Personnel Marine Science Technician - Source

Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO

Karla Medina RPS Pam/PSO

Andrea Zavaia RPS PSO

Veronica Gonzales RPS PSO

Ana Hernandez RPS PSO

Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI

Sheehan, Anne U.Colorado Boulder Co-PI

Myers, Emma U.Washington

Astekin, Gokce Oklahoma State U.

Frazer, William Binghamton U.

Gomez, Carlos California State U. Northridge

Gonzalez, Lucia U. Texas El Paso

Huggins, Ellyn U. Nevada Reno

Spangler, Mitchell Indiana U.



VanderBeek, Brandon U. Padua

Wang, Hongda U. Colorado Boulder

Foster, Dave USGS

Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	




Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/16/2019

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Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/17/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Mon 17 Jun

During line OB08 there was a marine mammal shutdown followed by a night time ramp up of the source, resulting in a 7.2km gap.

Also, later during the line string 2 began having autofires and was recovered for repairs. The autofire lasted for approximately an hour before it was fully recovered.


Daily Comment Summaries - Plan for Tomorrow

Mon 17 Jun

Finish line OB08 then make a sharp turn heading to line OT08 towards OB09 while remaining 3miles from protected islands.

Test deploy of Biowaves PAM array

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Production Prime	AC_PP	Mon 17. Jun 00:00	Mon 17. Jun 24:00	24.000
MGL1903OB08				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

17-Jun	Hours	% Percent
Acquisition	24.000	100.000
Production Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	33.229
Deployment	8.133	2.421
Mob Ashore	96.933	28.849
Testing	0.850	0.253
Transit to Prospect	5.733	1.706
Acquisition	209.550	62.366
Prime Line Change	3.783	1.126
Production Prime	205.767	61.240
Demobilisation	2.967	0.883



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Category	Hours	%Percent
Recovery	2.967	0.883
Chargeable Standby	11.833	3.522
Reconfiguration	6.900	2.054
Source Reconfig	6.900	2.054
Tests	1.083	0.322
Transit	3.850	1.146
Total	336.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
15	Line8	329.7	1088	1674	Prime	234.80	5.302	Part	Midnight
Total						234.80			

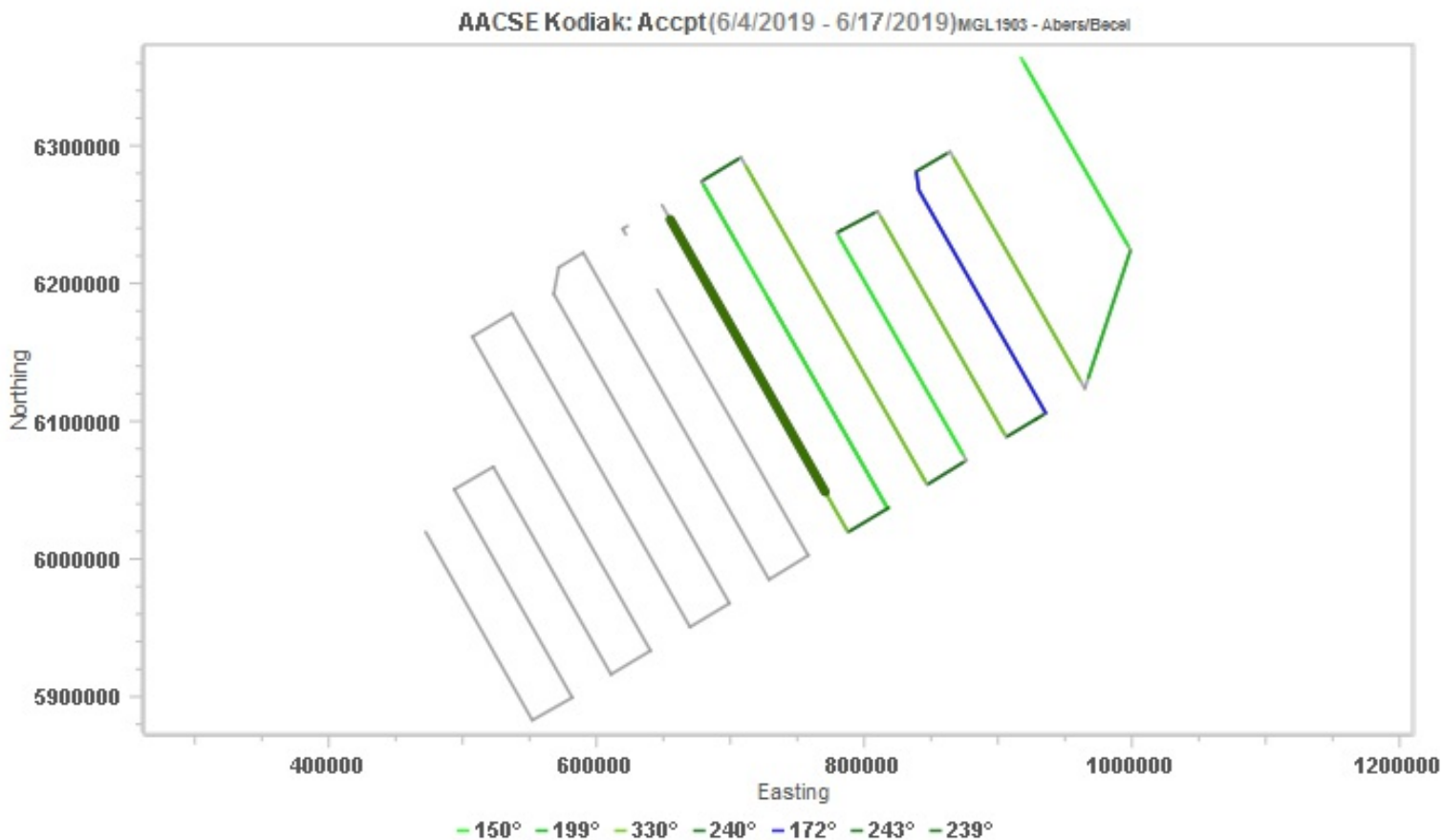
Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	234.80	234.80	2016.40	2016.40
Combined	234.80	234.80	2016.40	2016.40



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Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 17 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Autofiring of elements on string 2 required recovery and repair due to abraded air lines

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 17 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic

Alan Thompson L-DEO OMO Marine Science Technician - Nav

Chris Abdouch Contract Personnel Marine Science Technician - Nav

Max Skalko Contract Personnel Marine Science Technician - Source

Edmond St. Amant Contract Personnel Marine Science Technician - Source

Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Mon Jun 17 2019 02:40p.m.

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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/18/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Tue 18 Jun

Finished line OB08 shortly after midnight UTC then made a sharp turn to line OT08 towards OB09 while remaining 3 miles from protected islands.

At the completion of line OT08 joined OB09 and continued down to end of UTC day.

Biowaves test PAM array was deployed from the center of the stern and recovered before line change.

Daily Comment Summaries - Plan for Tomorrow

Tue 18 Jun

After completing line OB09 the vessel will turn to line OT09 followed by OB10.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 18. Jun 00:00	Tue 18. Jun 00:27	0.450
MGL1903OB08				
Prime Line Change	AC_PLC	Tue 18. Jun 00:27	Tue 18. Jun 01:05	0.633
Nominal Prime line change.				
Production Prime	AC_PP	Tue 18. Jun 01:05	Tue 18. Jun 07:48	6.717
MGL1903OT08				
Prime Line Change	AC_PLC	Tue 18. Jun 07:48	Tue 18. Jun 07:51	0.050
Nominal Prime line change.				
Production Prime	AC_PP	Tue 18. Jun 07:51	Tue 18. Jun 24:00	16.150

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

18-Jun	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.683	2.847
Production Prime	23.317	97.153
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	31.014
Deployment	8.133	2.259
Mob Ashore	96.933	26.926
Testing	0.850	0.236
Transit to Prospect	5.733	1.593
Acquisition	233.550	64.875
Prime Line Change	4.467	1.241
Production Prime	229.083	63.634
Demobilisation	2.967	0.824
Recovery	2.967	0.824
Chargeable Standby	11.833	3.287
Reconfiguration	6.900	1.917
Source Reconfig	6.900	1.917
Tests	1.083	0.301
Transit	3.850	1.069
Total	360.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accept km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
15	Line8	329.7	1675	1685	Prime	4.40	5.302	Complete	Complete
16	LOT08	166.2	1010	1169	Prime	63.60	5.113	Complete	Complete
17	LOB09	149.7	1154	1545	Prime	156.40	5.229	Part	Midnight
Total						224.40			

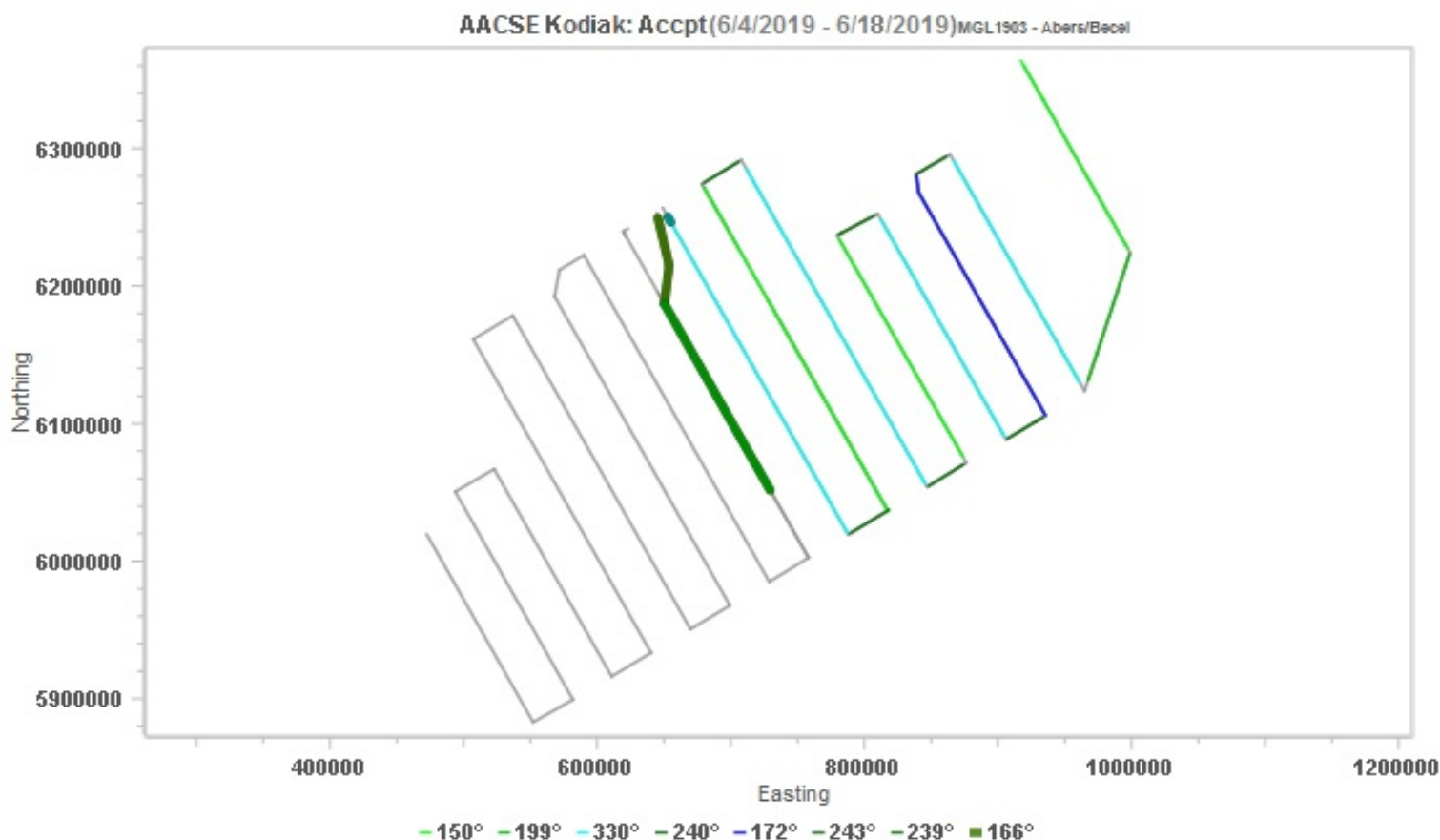


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Production Totals (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	224.40	459.20	2240.80	2240.80
Combined	224.40	459.20	2240.80	2240.80



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 18 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 18 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic



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Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

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Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
■ Drills	Drls	0	0	2	2	0.583	
■ Abandon Ship Drill	AS	0	0	1	1	0.250	
■ Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/19/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Wed 19 Jun

The vessel was acquiring line OB09 at the start of the UTC day, followed by the turn line OT09 and then the remaining part of the day was spent on OB10.

The biowaves PAM array was tested again towing from the center for a few hours without incident.

Daily Comment Summaries - Plan for Tomorrow

Wed 19 Jun

The vessel will continue acquiring line OB10 then turn onto OT10 and OB11.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 19. Jun 00:00	Wed 19. Jun 05:40	5.667
MGL1903OB09				
Prime Line Change	AC_PLC	Wed 19. Jun 05:40	Wed 19. Jun 05:44	0.067
Nominal Prime line change.				
Production Prime	AC_PP	Wed 19. Jun 05:44	Wed 19. Jun 09:05	3.350
MGL1903OT09				
Prime Line Change	AC_PLC	Wed 19. Jun 09:05	Wed 19. Jun 09:09	0.067
Nominal Prime line change.				
Production Prime	AC_PP	Wed 19. Jun 09:09	Wed 19. Jun 24:00	14.850
MGL1903OB10				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

19-Jun	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.133	0.556
Production Prime	23.867	99.444
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	29.076
Deployment	8.133	2.118
Mob Ashore	96.933	25.243
Testing	0.850	0.221
Transit to Prospect	5.733	1.493
Acquisition	257.550	67.070
Prime Line Change	4.600	1.198
Production Prime	252.950	65.872
Demobilisation	2.967	0.773
Recovery	2.967	0.773
Chargeable Standby	11.833	3.082
Reconfiguration	6.900	1.797
Source Reconfig	6.900	1.797
Tests	1.083	0.282
Transit	3.850	1.003
Total	384.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accept km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
17	LOB09	149.7	1546	1685	Prime	56.00	5.257	Complete	Complete
18	C910	239.1	1003	1084	Prime	32.40	5.222	Complete	Complete
19	Line10	329.7	1004	1369	Prime	146.00	5.309	Part	Midnight
Total						234.40			

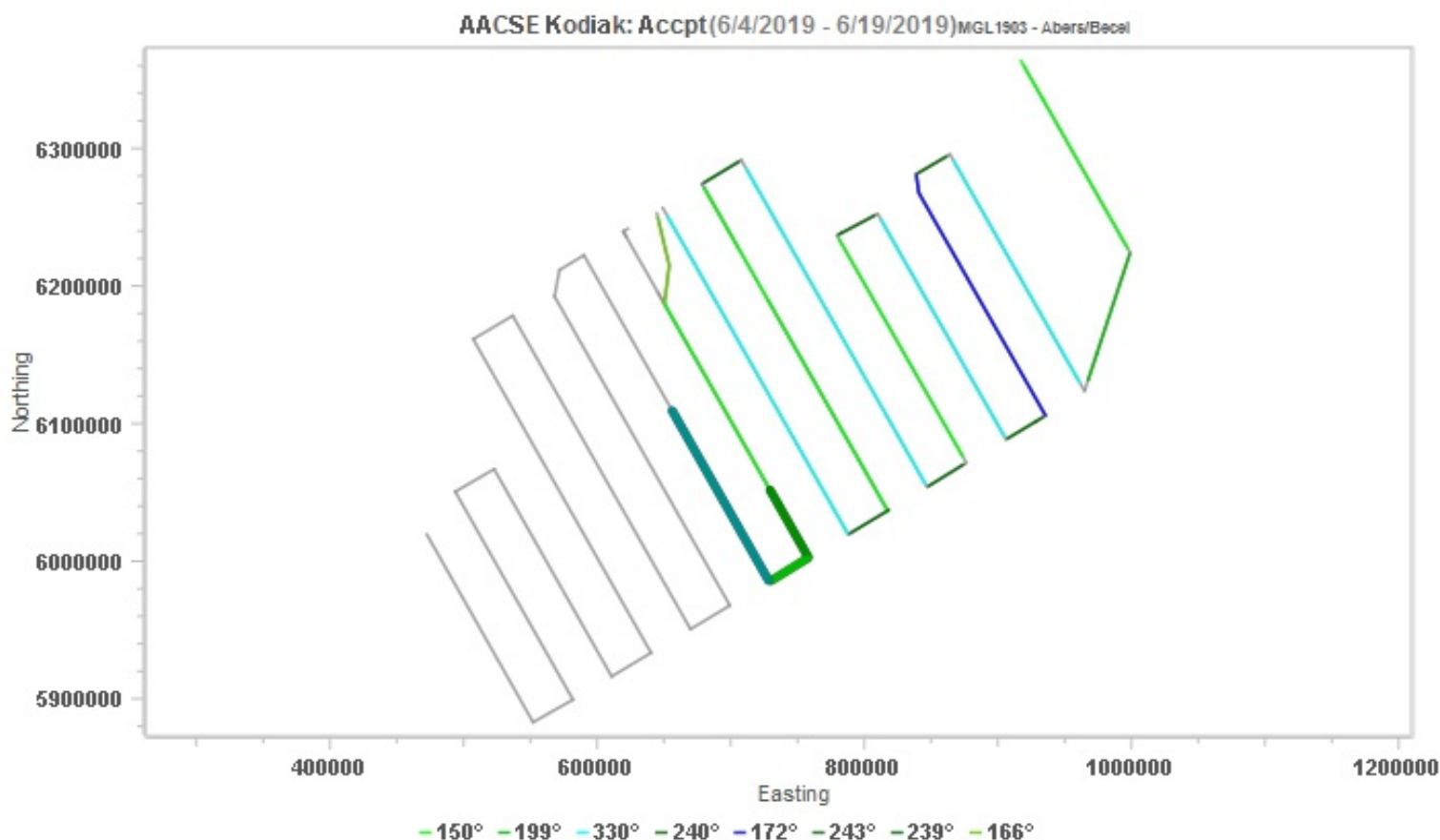


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Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	234.40	693.60	2475.20	2475.20
Combined	234.40	693.60	2475.20	2475.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 19 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 19 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic



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Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

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Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Drills	Drls	0	0	2	2	0.583	
Abandon Ship Drill	AS	0	0	1	1	0.250	
Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/20/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Thu 20 Jun

There was one shutdown on line OB10 due to marine mammal inside the exclusion zone.
Line OB10 and OT10 were completed and the vessel is now on line OB11.
The Biowaves PAM was deployed again for a couple hours from the center of stern.

Daily Comment Summaries - Plan for Tomorrow

Thu 20 Jun

Continue acquiring line OB11.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 20. Jun 00:00	Thu 20. Jun 13:35	13.583
MGL1903OB10				
Prime Line Change	AC_PLC	Thu 20. Jun 13:35	Thu 20. Jun 13:40	0.083
Nominal Prime line change.				
Production Prime	AC_PP	Thu 20. Jun 13:40	Thu 20. Jun 17:32	3.867
MGL1903OT10				
Prime Line Change	AC_PLC	Thu 20. Jun 17:32	Thu 20. Jun 17:34	0.033
Nominal Prime line change.				
Production Prime	AC_PP	Thu 20. Jun 17:34	Thu 20. Jun 24:00	6.433
MGL1903OB11				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

20-Jun	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.117	0.486
Production Prime	23.883	99.514
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	27.365
Deployment	8.133	1.993
Mob Ashore	96.933	23.758
Testing	0.850	0.208
Transit to Prospect	5.733	1.405
Acquisition	281.550	69.007
Prime Line Change	4.717	1.156
Production Prime	276.833	67.851
Demobilisation	2.967	0.727
Recovery	2.967	0.727
Chargeable Standby	11.833	2.900
Reconfiguration	6.900	1.691
Source Reconfig	6.900	1.691
Tests	1.083	0.266
Transit	3.850	0.944
Total	408.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accept km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
19	Line10	329.7	1370	1686	Prime	126.80	5.181	Complete	Complete
20	LOT10	239.6	1004	1103	Prime	39.60	5.530	Complete	Complete
21	Line11	149.7	1002	1152	Prime	60.00	5.036	Part	Midnight
Total						226.40			

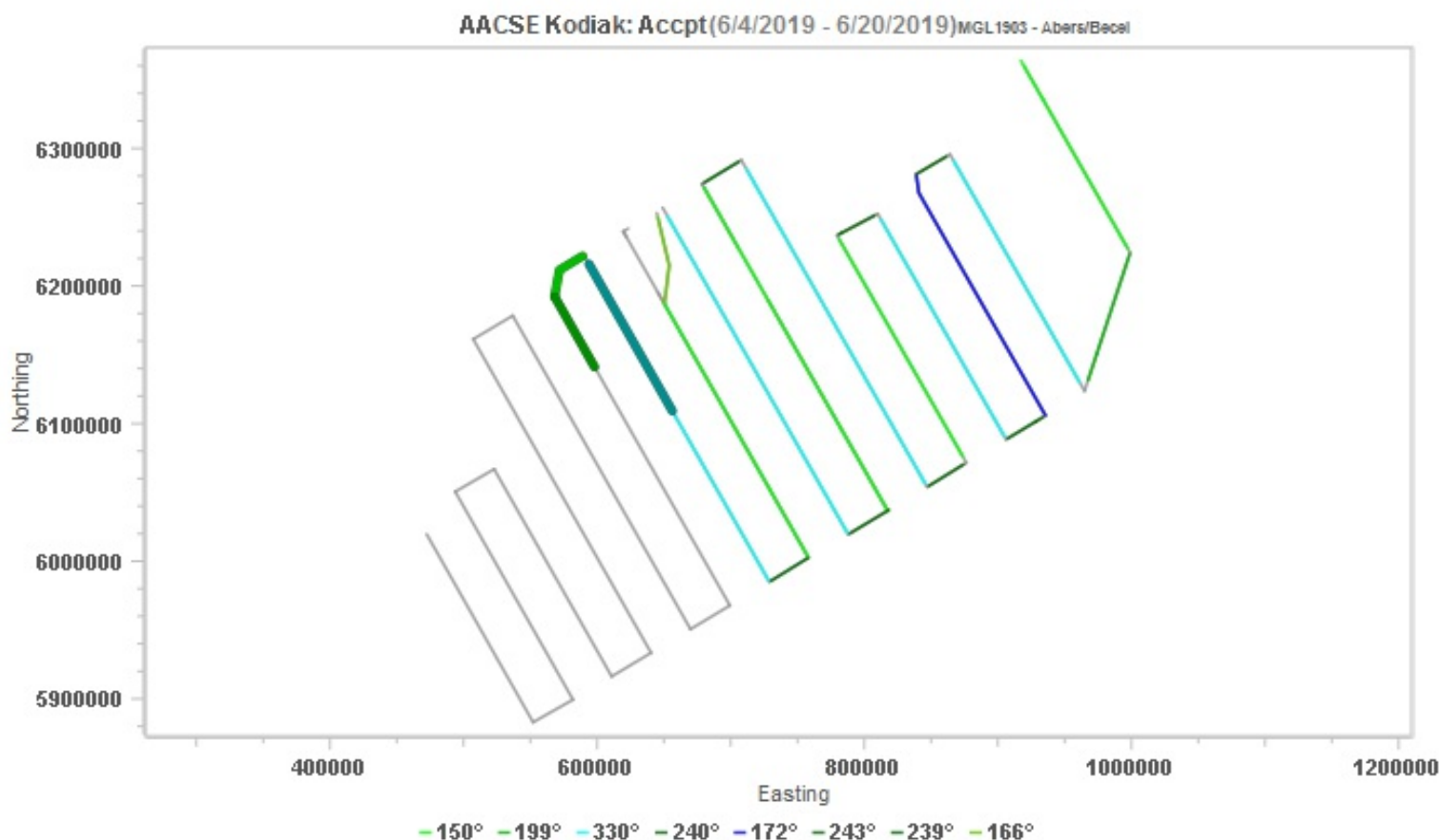


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Production Totals (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	226.40	920.00	2701.60	2701.60
Combined	226.40	920.00	2701.60	2701.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 20 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Thu 20 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic



6/20/2019

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Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
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Brian Agee Contract Personnel Marine Science Technician - Source

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Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
■ Drills	Drls	0	0	2	2	0.583	
■ Abandon Ship Drill	AS	0	0	1	1	0.250	
■ Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

6/21/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Fri 21 Jun

Due to increasing swells the magnetometer had to be recovered and PAM moved to the starboard tow point. In the process of doing this, the magnetometer became entangled with gun string 1 but was eventually retrieved without moving the source. While retrieving the PAM, the cable became entangled with gun string 4 which required the recovery of gun string 3 and partial recovery of gun string 4 to untangle. While the PAM was entangled, we reached our maximum amount of time to operate in darkness without PAM and the source had to be shut off. After untangling from string 4 it was then attempted to redeploy on the starboard side but the swells immediately tangled it with gun string 1. Once the PAM was untangled and onboard, operations were halted to allow for weather to subside. After weather calmed down the PAM was deployed off the starboard side, redeployed gun string 3, and the source was ramped up after clearance.

At the beginning of line OT11 the PAM was moved to the port side to prepare for the change of swell direction to the towed equipment.

There was also 1 source shutdown late in the evening (local) due to a whale in the exclusion zone.

Daily Comment Summaries - Plan for Tomorrow

Fri 21 Jun

Finish acquisition on line OT11. and turn to line OB12.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 21. Jun 00:00	Fri 21. Jun 22:35	22.583
MGL1903OB11				
Prime Line Change	AC_PLC	Fri 21. Jun 22:35	Fri 21. Jun 22:53	0.300
Nominal Prime line change.				
Production Prime	AC_PP	Fri 21. Jun 22:53	Fri 21. Jun 24:00	1.117
MGL1903OT11				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

21-Jun	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.300	1.250
Production Prime	23.700	98.750
Day's Total	24.000	100.000



6/21/2019

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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	25.845
Deployment	8.133	1.883
Mob Ashore	96.933	22.438
Testing	0.850	0.197
Transit to Prospect	5.733	1.327
Acquisition	305.550	70.729
Prime Line Change	5.017	1.161
Production Prime	300.533	69.568
Demobilisation	2.967	0.687
Recovery	2.967	0.687
Chargeable Standby	11.833	2.739
Reconfiguration	6.900	1.597
Source Reconfig	6.900	1.597
Tests	1.083	0.251
Transit	3.850	0.891
Total	432.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accept km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
21	Line11	149.7	1153	1649	Prime	198.80	4.816	Complete	Complete
22	C1112	239.8	1008	1035	Prime	10.80	5.222	Part	Midnight
Total						209.60			

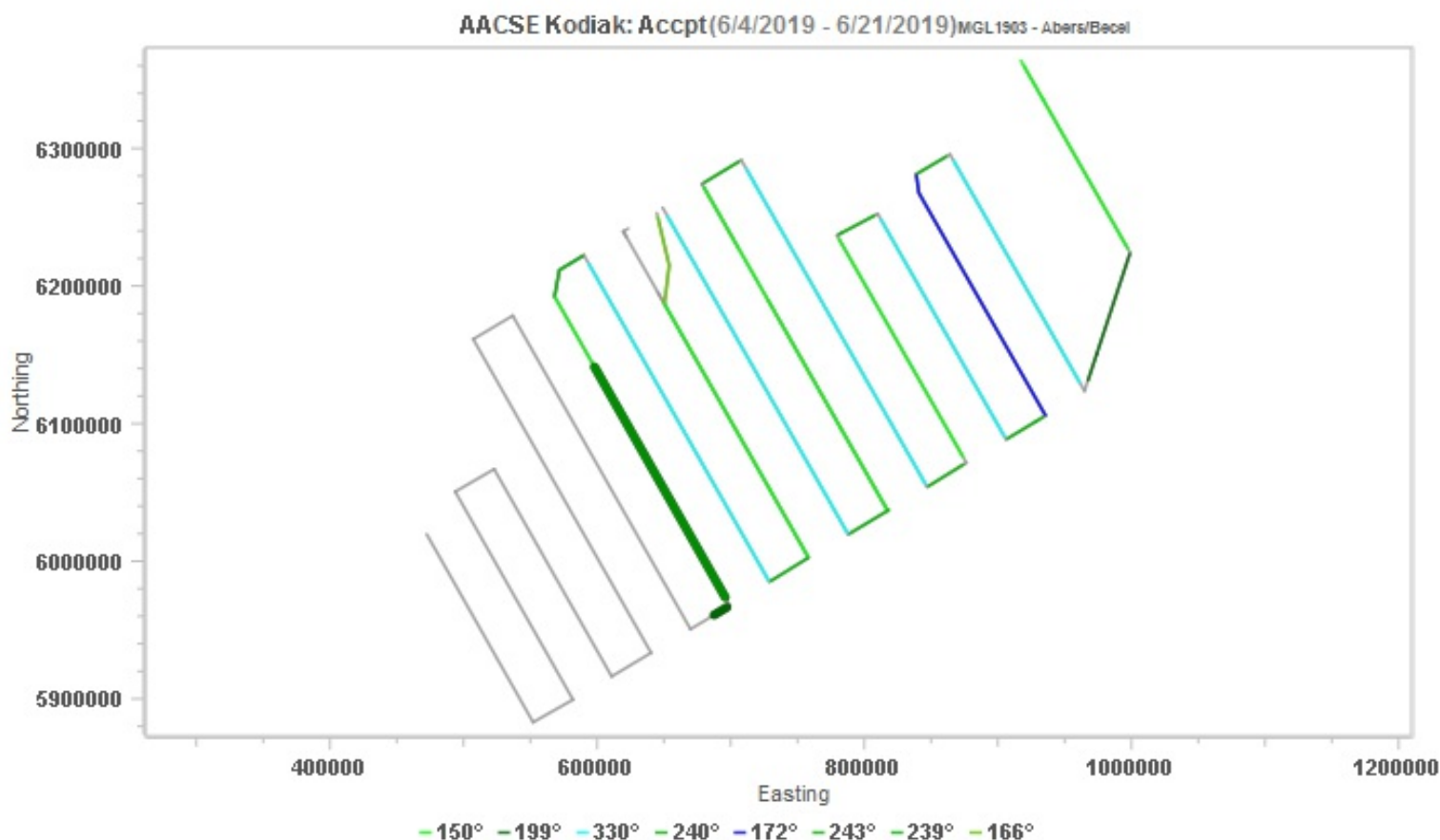


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Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	209.60	1129.60	2911.20	2911.20
Combined	209.60	1129.60	2911.20	2911.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 21 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Multiple PAM and Magnetometer tangles with gun strings due to limited handling room and poor weather conditions.

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Fri 21 Jun

Technical Staff On-board the Langseth

David Martinson L-DEO OMO Chief Science Officer

Tom Spoto L-DEO OMO Chief Source Mechanic



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Max Skalko Contract Personnel Marine Science Technician - Source
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Brian Agee Contract Personnel Marine Science Technician - Source

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Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Drills	Drls	0	0	2	2	0.583	
Abandon Ship Drill	AS	0	0	1	1	0.250	
Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/22/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Sat 22 Jun

The vessel began the day acquiring OT11 then turned to line OB12 for the remainder of the UTC day. Weather much improved from the previous day.

Daily Comment Summaries - Plan for Tomorrow

Sat 22 Jun

At the completion of line OB12 the vessel will turn to line OT12 until survey time runs out at which point the source and PAM array will be recovered, secure the sonars, and begin transit to port.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 22. Jun 00:00	Sat 22. Jun 02:04	2.067
MGL1903OT11				
Prime Line Change	AC_PLC	Sat 22. Jun 02:04	Sat 22. Jun 02:10	0.100
Nominal Prime line change.				
Production Prime	AC_PP	Sat 22. Jun 02:10	Sat 22. Jun 24:00	21.833

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

22-Jun	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	0.100	0.417
Production Prime	23.900	99.583
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Mobilisation	111.650	24.485
Deployment	8.133	1.784
Mob Ashore	96.933	21.257
Testing	0.850	0.186
Transit to Prospect	5.733	1.257



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Category	Hours	% Percent
Acquisition	329.550	72.270
Prime Line Change	5.117	1.122
Production Prime	324.433	71.148
Demobilisation	2.967	0.651
Recovery	2.967	0.651
Chargeable Standby	11.833	2.595
Reconfiguration	6.900	1.513
Source Reconfig	6.900	1.513
Tests	1.083	0.238
Transit	3.850	0.844
Total	456.000	

Basic Project Details

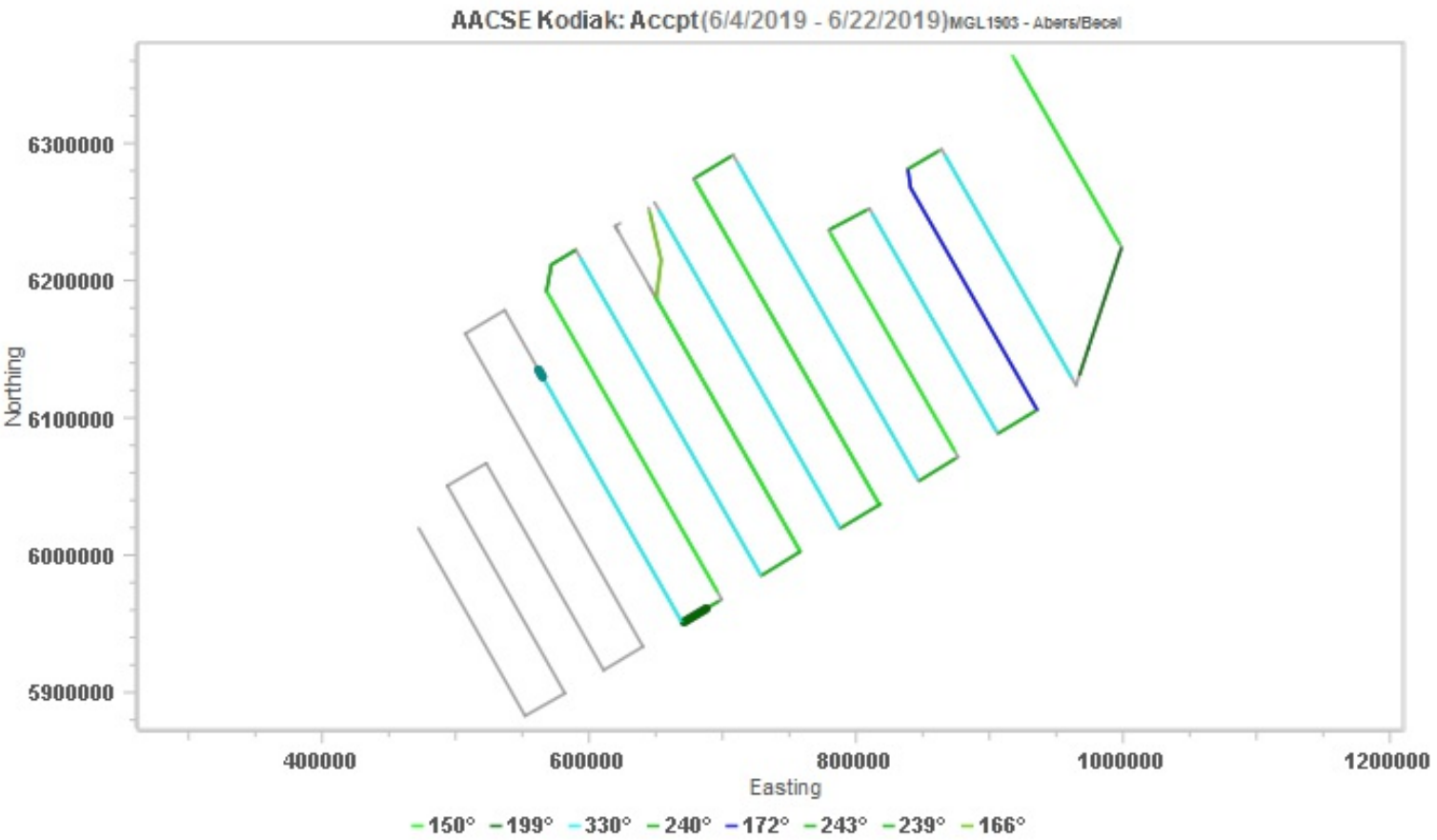
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
22	C1112	239.8	1036	1084	Prime	19.60	5.156	Complete	Complete
23	Line12	329.7	1533	1547	Prime	6.00	2.559	Part	Midnight
Total						25.60			

Production Totals (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	25.60	1366.40	3148.00	3148.00
Combined	25.60	1366.40	3148.00	3148.00



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 22 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 22 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary**Sun 23 Jun**

The vessel started the day on OB11, the source had to be shut down multiple times due to marine mammal sightings, ultimately the line was ended at the turn point with the source still shut down.
The source was still shutdown after turning onto line OT11.
At 0900 UTC it was decided to recover all in water gear and begin transit to Kodiak and was in transit through the remainder of the day.

Daily Comment Summaries - Plan for Tomorrow**Sun 23 Jun**

Continue transiting to Kodiak, due to arrive shortly after lunch local day.

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 23. Jun 00:00	Sun 23. Jun 04:26	4.433
MGL1903OB12 Line aborted early d/t marine mammal shutdown				
Cetacean	SB_CT	Sun 23. Jun 04:26	Sun 23. Jun 07:11	2.750
Source shutdown for many marine mammal sightings				
Recovery	DM_RC	Sun 23. Jun 07:11	Sun 23. Jun 09:13	2.033
Final recovery of source and PAM end of cruise				
Transit From Prospect	DM_TF	Sun 23. Jun 09:13	Sun 23. Jun 24:00	14.783
Demobilising, In Transit from prospect for demobilisation ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

23-Jun	Hours	%Percent
Acquisition	4.433	18.472
Production Prime	4.433	18.472
Chargeable Standby	2.750	11.458
Cetacean	2.750	11.458
Demobilisation	16.817	70.069
Recovery	2.033	8.472
Transit From Prospect	14.783	61.597
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Chargeable Standby	14.583	3.038
Cetacean	2.750	0.573
Reconfiguration	6.900	1.438
Source Reconfig	6.900	1.438
Tests	1.083	0.226
Transit	3.850	0.802
Mobilisation	111.650	23.260
Deployment	8.133	1.694
Mob Ashore	96.933	20.194
Testing	0.850	0.177
Transit to Prospect	5.733	1.194
Acquisition	333.983	69.580
Prime Line Change	5.117	1.066
Production Prime	328.867	68.514
Demobilisation	19.783	4.122
Recovery	5.000	1.042
Transit From Prospect	14.783	3.080
Total	480.000	

Basic Project Details

MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

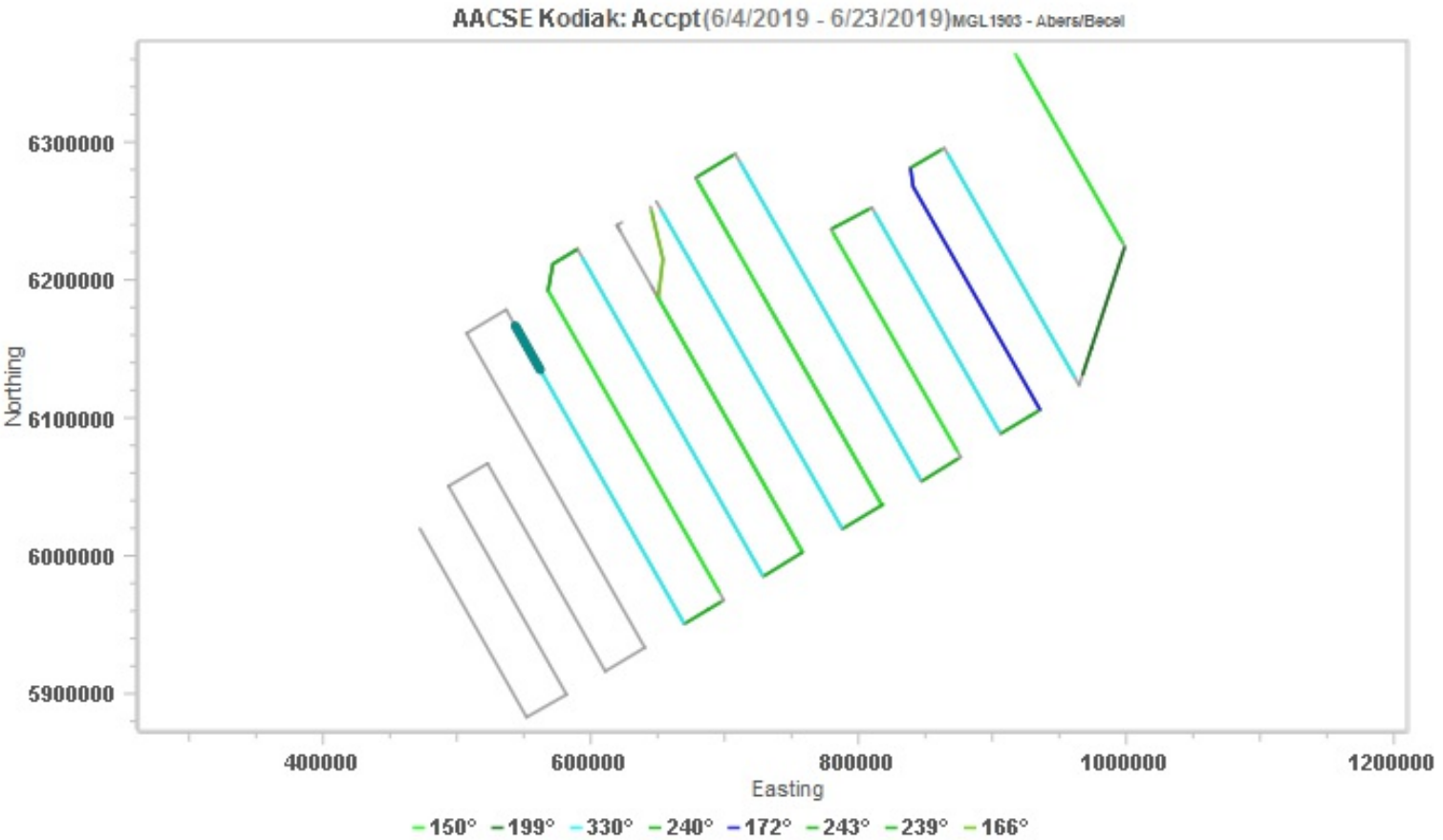
Production Listing (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
23	Line12	329.7	1548	1641	Prime	37.60	2.769	Complete	Complete
NTBP: 1642 - 1655 (not chgd)									
Total						37.60			



Production Totals (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	37.60	1404.00	3185.60	3185.60
Combined	37.60	1404.00	3185.60	3185.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 23 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sun 23 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic



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Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

Amanda Dubuque RPS Lead PSO
Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
■ Drills	Drls	0	0	2	2	0.583	
■ Abandon Ship Drill	AS	0	0	1	1	0.250	
■ Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/24/2019

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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary

Mon 24 Jun



The vessel spent the UTC day in transit to Kodiak and was along side the USCG station pier early afternoon local time.

Daily Comment Summaries - Plan for Tomorrow

Mon 24 Jun

Demob ashore

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Transit From Prospect	DM_TF	Mon 24. Jun 00:00	Mon 24. Jun 22:00	22.000
Demobilising, In Transit from prospect for demobilisation ashore.				
 Demob Ashore	DM_DA	Mon 24. Jun 22:00	Mon 24. Jun 24:00	2.000
Demobilising ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

24-Jun	Hours	% Percent
Demobilisation	24.000	100.000
Demob Ashore	2.000	8.333
Transit From Prospect	22.000	91.667
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Chargeable Standby	14.583	2.894
Cetacean	2.750	0.546
Reconfiguration	6.900	1.369
Source Reconfig	6.900	1.369
Tests	1.083	0.215
Transit	3.850	0.764
Demobilisation	43.783	8.687
Demob Ashore	2.000	0.397



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Category	Hours	% Percent
Recovery	5.000	0.992
Transit From Prospect	36.783	7.298
Mobilisation	111.650	22.153
Deployment	8.133	1.614
Mob Ashore	96.933	19.233
Testing	0.850	0.169
Transit to Prospect	5.733	1.138
Acquisition	333.983	66.267
Prime Line Change	5.117	1.015
Production Prime	328.867	65.251
Total	504.000	

Basic Project Details

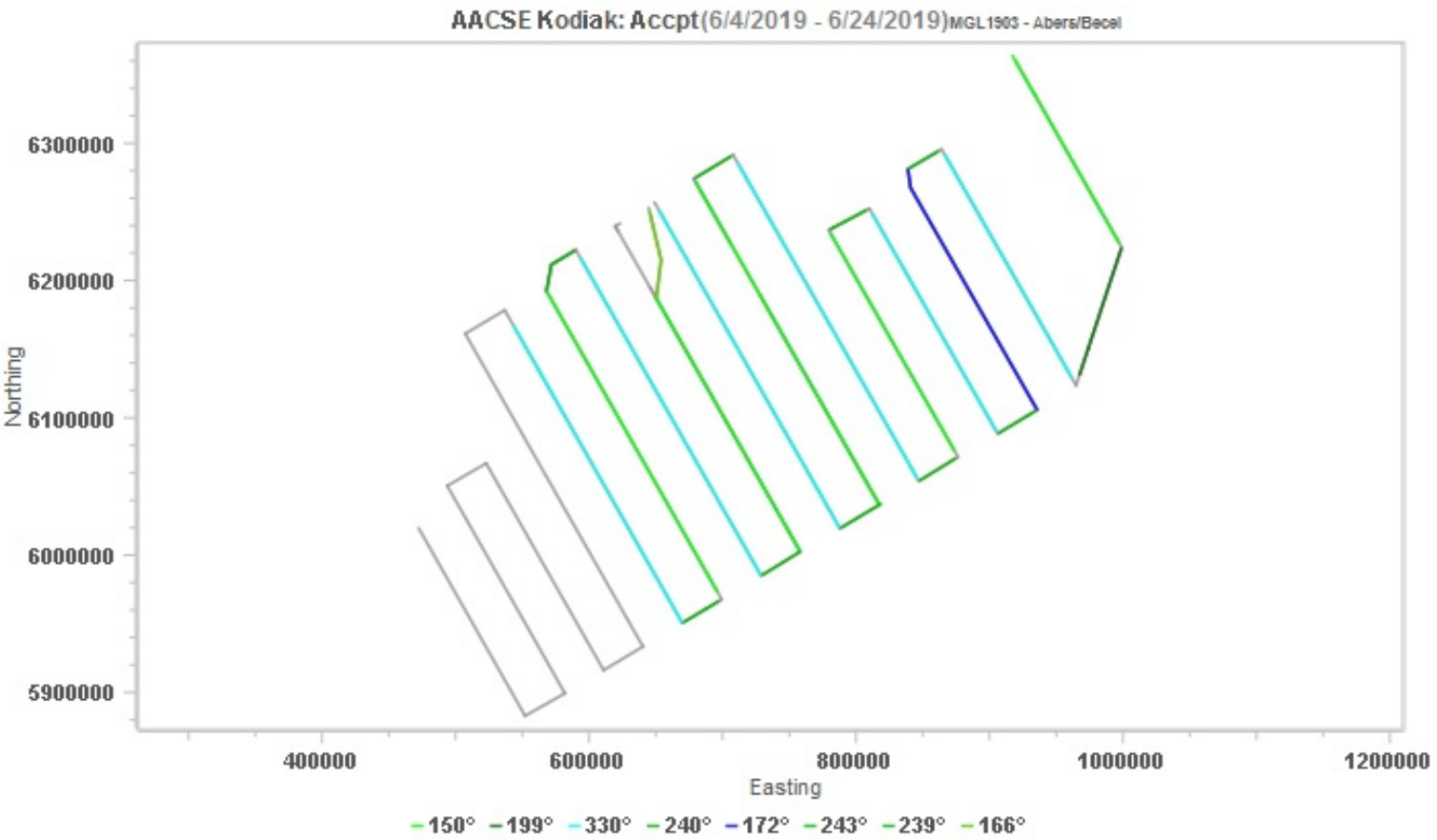
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Acpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Acpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	3185.60	3185.60
Combined	0.00	0.00	3185.60	3185.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 24 Jun

Navigation:
No Major Issues to Report

Information Technology (IT):
No Major Issues to Report

Acquisition (OBS):
No Major Issues to Report

Towing and Handling (Source):
No Major Issues to Report

General Purpose Science:
No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Mon 24 Jun

Technical Staff On-board the Langseth
David Martinson L-DEO OMO Chief Science Officer
Tom Spoto L-DEO OMO Chief Source Mechanic
Alan Thompson L-DEO OMO Marine Science Technician - Nav
Chris Abdouch Contract Personnel Marine Science Technician - Nav
Max Skalko Contract Personnel Marine Science Technician - Source
Edmond St. Amant Contract Personnel Marine Science Technician - Source
Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth
Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	



Daily Science Report

6/25/2019

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL1903	Job No:	MGL1903
Block:	AACSE Kodiak	Vessel:	Marcus G Langseth
Client Contact:	Anne Becel	Supervisor:	Sean Higgins
Consultancy:		Party Chiefs:	Sean Higgins
Job No:		Client Reps:	Anne Becel

Daily Comment Summaries - Daily Summary


Tue 25 Jun

Demob ashore, science party departing, perform gravity tie, close out data syncs.

Daily Comment Summaries - Plan for Tomorrow

Tue 25 Jun

Timing Diary (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Code	Start	End	Duration
 Demob Ashore	DM_DA	Tue 25. Jun 00:00	Tue 25. Jun 24:00	24.000
Demobilising ashore.				

Timing Day By Day (Marcus G Langseth, MGL1903 - Abers/Becel)

25-Jun	Hours	% Percent
Demobilisation	24.000	100.000
Demob Ashore	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MGL1903 - Abers/Becel)

Category	Hours	% Percent
Chargeable Standby	14.583	2.762
Cetacean	2.750	0.521
Reconfiguration	6.900	1.307
Source Reconfig	6.900	1.307
Tests	1.083	0.205
Transit	3.850	0.729
Demobilisation	67.783	12.838
Demob Ashore	26.000	4.924
Recovery	5.000	0.947
Transit From Prospect	36.783	6.967
Mobilisation	111.650	21.146
Deployment	8.133	1.540
Mob Ashore	96.933	18.359



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Category	Hours	% Percent
Testing	0.850	0.161
Transit to Prospect	5.733	1.086
Acquisition	333.983	63.254
Prime Line Change	5.117	0.969
Production Prime	328.867	62.285
Total	528.000	

Basic Project Details

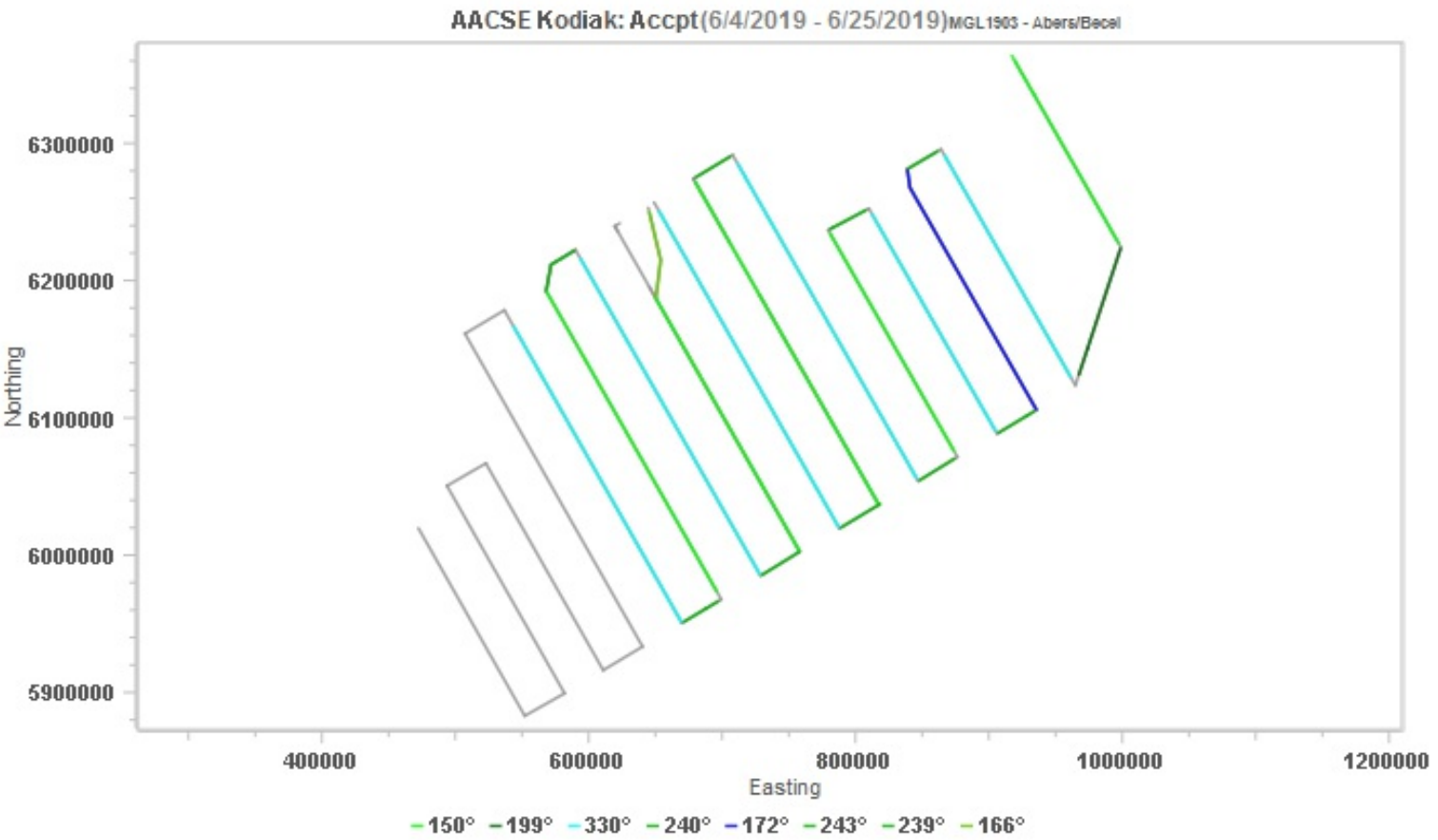
MGL1903 - Abers/Becel					
General Details					
Record length:	25000 ms	Sample rate:	2 ms	Shotpoint interval:	400 m
CoS to CNG:	192 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	324	Front Depth:	12 m
Tail Depth:	12 m	Length:	4050 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12 m
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	18 m		

Production Listing (Accpt km) - Prime: Sail Line, Infill: Full Fold

Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accpt km by interval) - Prime: Sail Line, Infill: Full Fold

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	3185.60	3185.60
Combined	0.00	0.00	3185.60	3185.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 25 Jun

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Tue 25 Jun

Technical Staff On-board the Langseth

- David Martinson L-DEO OMO Chief Science Officer
- Tom Spoto L-DEO OMO Chief Source Mechanic
- Alan Thompson L-DEO OMO Marine Science Technician - Nav
- Chris Abdouch Contract Personnel Marine Science Technician - Nav
- Max Skalko Contract Personnel Marine Science Technician - Source
- Edmond St. Amant Contract Personnel Marine Science Technician - Source
- Brian Agee Contract Personnel Marine Science Technician - Source

PSO Staff On-board the Langseth

- Amanda Dubuque RPS Lead PSO



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Karla Medina RPS Pam/PSO
Andrea Zavaia RPS PSO
Veronica Gonzales RPS PSO
Ana Hernandez RPS PSO
Bianca Mares RPS PSO

Science Party On-board the Langseth

Becel, Anne LDEO PI
Sheehan, Anne U. Colorado Boulder Co-PI
Myers, Emma U. Washington
Astekin, Gokce Oklahoma State U.
Frazer, William Binghamton U.
Gomez, Carlos California State U. Northridge
Gonzalez, Lucia U. Texas El Paso
Huggins, Ellyn U. Nevada Reno
Spangler, Mitchell Indiana U.
VanderBeek, Brandon U. Padua
Wang, Hongda U. Colorado Boulder
Foster, Dave USGS
Norris, Tom BioWaves

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
 Drills	Drls	0	0	2	2	0.583	
 Abandon Ship Drill	AS	0	0	1	1	0.250	
 Fire Drill	Fi	0	0	1	1	0.333	