



Daily Science Report

7/15/2021


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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Daily Comment Summaries - Plan for Tomorrow

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Thu 15. Jul 00:00	Thu 15. Jul 24:00	24.000
Mobilising Ashore. Loaded and secured OBS's for Leg 2. Configuring back deck. Source repair and maintenance. Receiving requisitions.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

15-Jul	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, MCS 15000m 50m)

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

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



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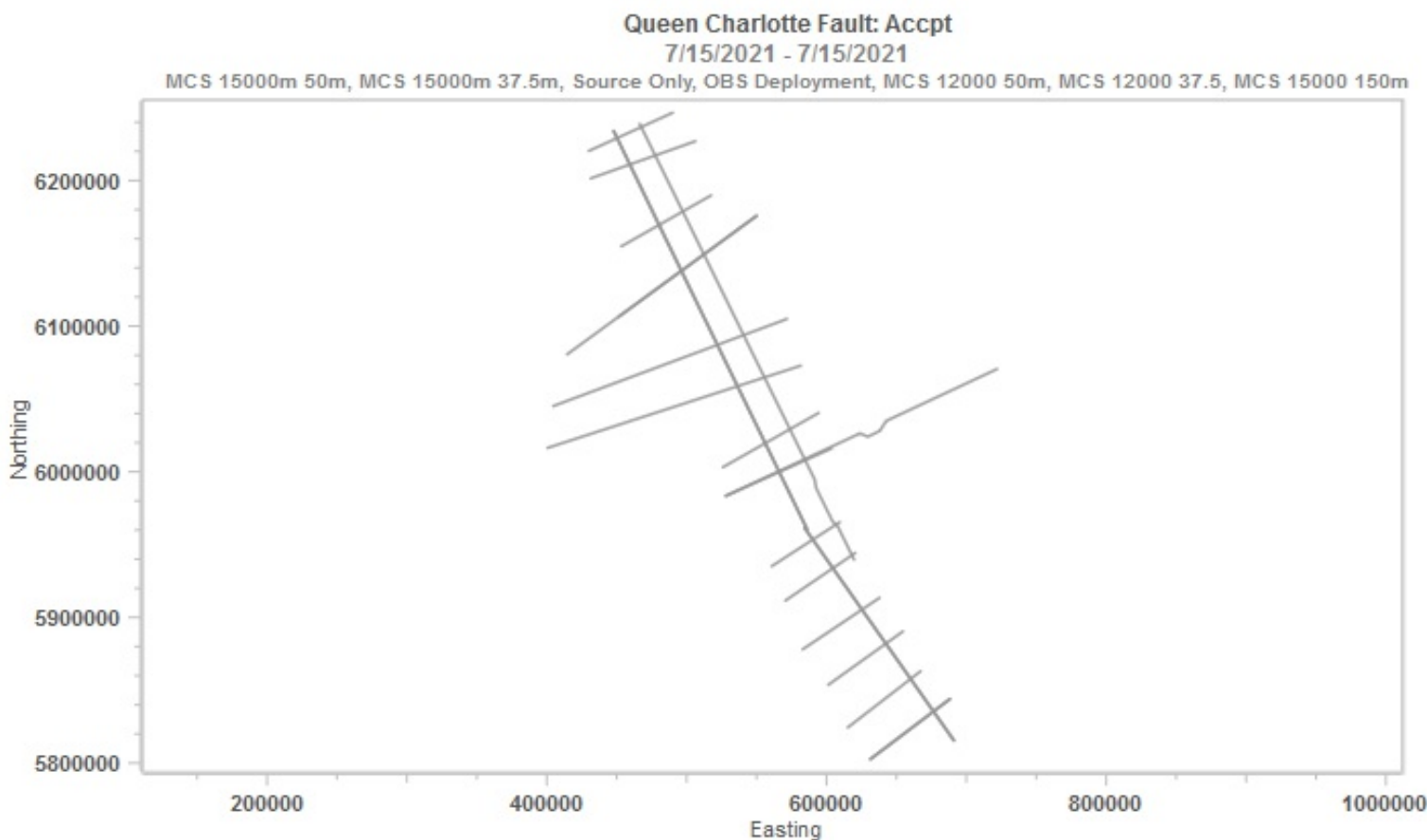
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Accpt km) - Prime: Full Fold, Infill: Unknown

Accepted 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

Daily Comment Summaries - Personnel Onboard

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Daily Comment Summaries - Plan for Tomorrow

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Fri 16. Jul 00:00	Fri 16. Jul 24:00	24.000
Mobilising Ashore. Science Party and PSO's joined the ship. Orientations for new crew. Continue making pre-cruise preparations. Secured decks for sea.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

16-Jul	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, MCS 15000m 50m)

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

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



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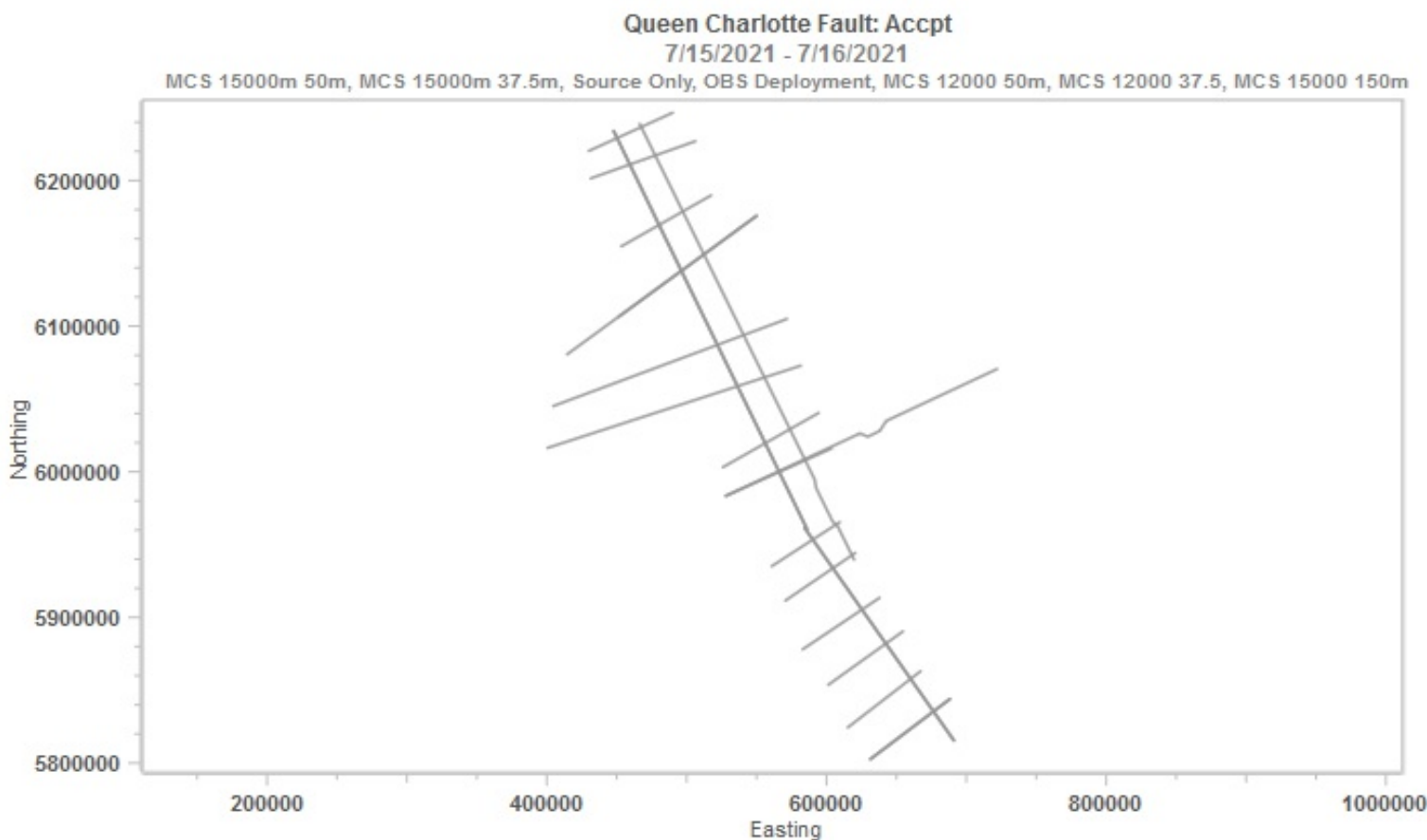
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Accpt km) - Prime: Full Fold, Infill: Unknown

Accepted 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

Daily Comment Summaries - Personnel Onboard

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington


Daily Comment Summaries - Daily Summary

Daily Comment Summaries - Plan for Tomorrow


Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 At Anchor	MB_AA	Sat 17. Jul 00:00	Sat 17. Jul 24:00	24.000
Mobilising, vessel at anchor Conducted risk assessment with Captain and PI. PI Lindsay Worthington gave QCF presentation Bunkering fuel. Finished securing decks for sea. Source maintenance and repair. Lead-in bell housing inspection/repair. AIS testing. SSCU testing and configuring. Much misc preparations.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

17-Jul	Hours	%Percent
 Mobilisation	24.000	100.000
At Anchor	24.000	100.000
Mob Ashore	0.000	0.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m)

Category	Hours	%Percent
 Mobilisation	72.000	100.000
At Anchor	24.000	33.333
Mob Ashore	48.000	66.667
Total	72.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					



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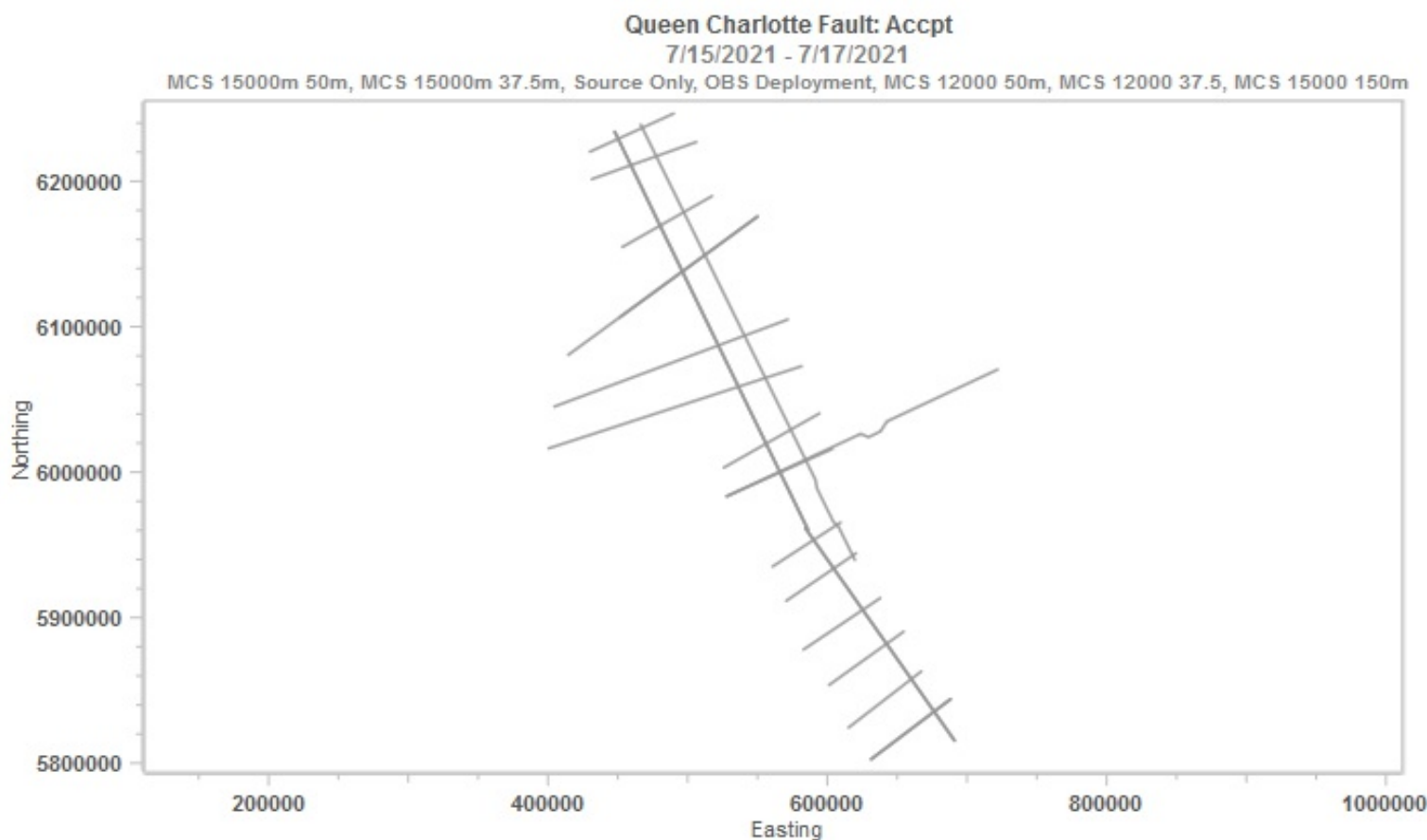
MCS 15000m 50m					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Acpt km) - Prime: Full Fold, Infill: Unknown

Accepted 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

Daily Comment Summaries - Personnel Onboard



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HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 18 Jul

We departed Pier 90 in Seattle at approximately 16:30 GMT to begin transit to project area.
We had a Zoom meeting to discuss marine mammals and permits.
Entered into Canadian waters at approximately 23:40 GMT.
Conducted Man Overboard Drill and Fire Drill.
Reviewed equipment startup procedures.
The TSG and SV sensors are active.
Switched to clean power.

Daily Comment Summaries - Plan for Tomorrow

Sun 18 Jul

Transit all day. Continue making preparations for initial source deployment.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Mob Ashore	MB_MA	Sun 18. Jul 00:00	Sun 18. Jul 16:30	16.500
Mobilising Ashore.				
Departing Port of Seattle. Begin transit to prospect.				
 Transit to Prospect	MB_TT	Sun 18. Jul 16:30	Sun 18. Jul 24:00	7.500
In transit to prospect, for mobilization deployment.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

18-Jul	Hours	% Percent
Mobilisation	24.000	100.000
At Anchor	0.000	0.000
Mob Ashore	16.500	68.750
Transit to Prospect	7.500	31.250
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m)

Category	Hours	% Percent
Mobilisation	96.000	100.000
At Anchor	24.000	25.000
Mob Ashore	64.500	67.188
Transit to Prospect	7.500	7.812
Total	96.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

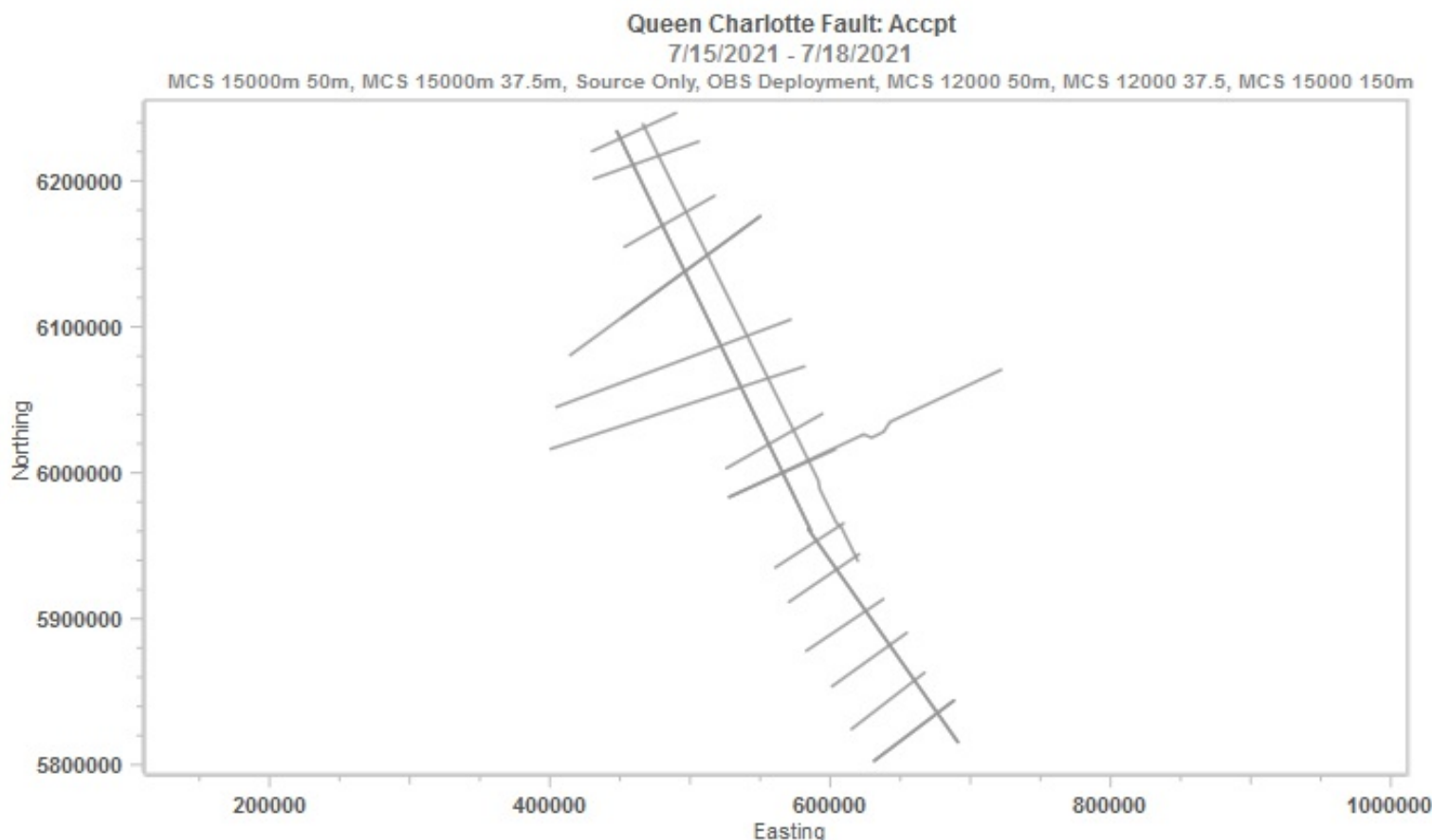
Production Totals (Accpt km) - Prime: Full Fold, Infill: Unknown

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



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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 18 Jul

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:

Replaced uncontaminated sea water trap.

Daily Comment Summaries - Personnel Onboard

Sun 18 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)



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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist




Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Start-up Meeting	Mtgs_StUp	Sun 18. Jul 17:30	Sun 18. Jul 18:05
MMO - Start-up Meeting to discuss permits and specific details. Cassi Frey Lindsay Worthington Sean Higgins Cody Bahlau Todd Jensvold Captain Landow Ben Phrampus			
 Abandon Ship Drill	Drls_AS	Sun 18. Jul 19:30	Sun 18. Jul 20:00
HSE - Abandon Ship Drill			
 Fire Drill	Drls_Fi	Sun 18. Jul 20:00	Sun 18. Jul 20:15
HSE - Fire Drill			



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Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Mon 19 Jul


We continued our transit to QCF all day.
Measured the DT, PT and NHP positions on all four gunstrings.
We made preparations for source deployment.
Fired up the compressor and checked source array for airleaks.
Reviewed shooting plan and Spectra configuration.

Daily Comment Summaries - Plan for Tomorrow

Mon 19 Jul

We will deploy the source array and begin acquiring the first line. Line QCF01BO

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Transit to Prospect	MB_TT	Mon 19. Jul 00:00	Mon 19. Jul 24:00	24.000
In transit to prospect, for mobilization deployment.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

19-Jul	Hours	%Percent
 Mobilisation	24.000	100.000
Transit to Prospect	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m)

Category	Hours	%Percent
 Mobilisation	120.000	100.000
At Anchor	24.000	20.000
Mob Ashore	64.500	53.750
Transit to Prospect	31.500	26.250
Total	120.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m



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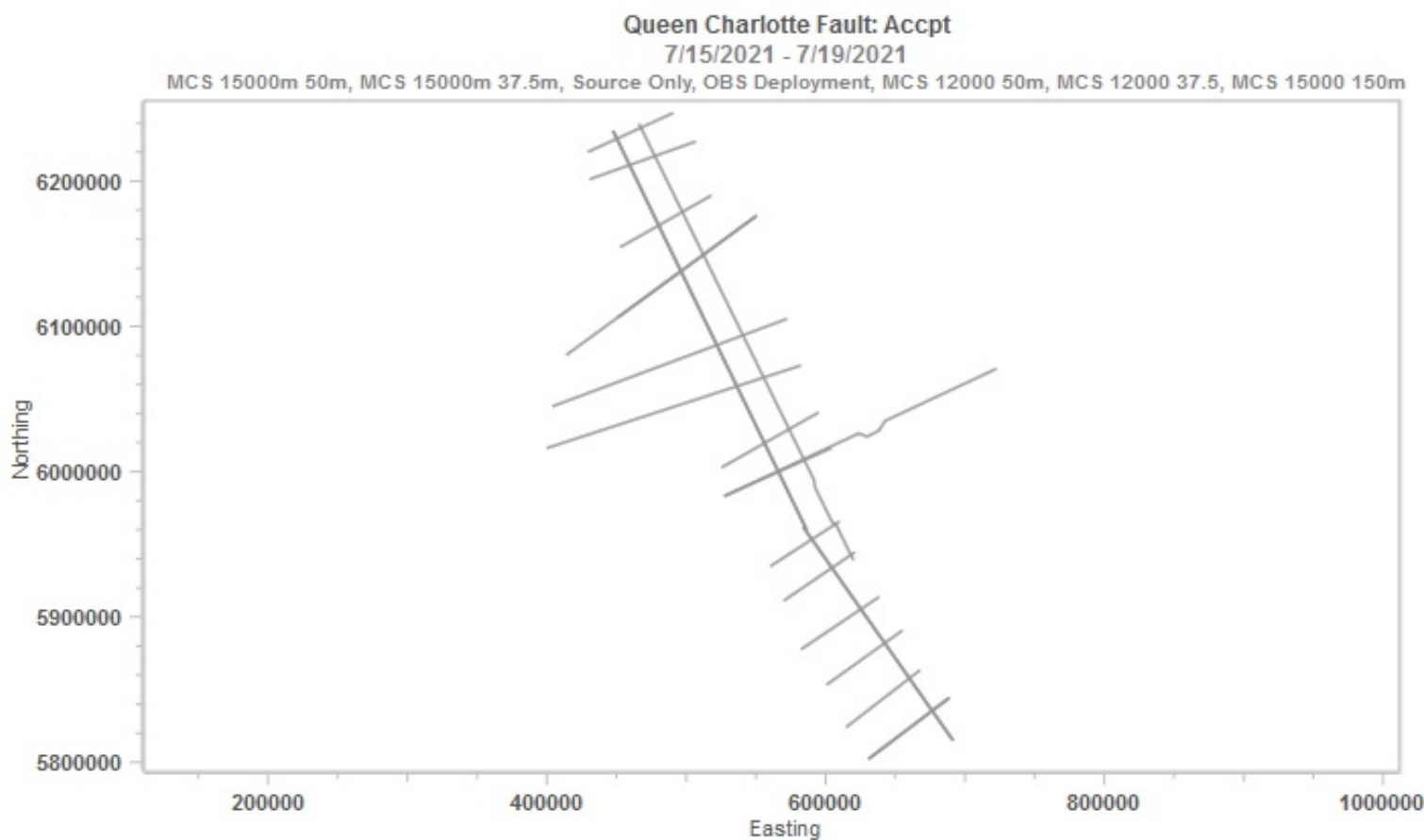
MCS 15000m 50m					
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Accpt km) - Prime: Full Fold, Infill: Unknown

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





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Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 19 Jul

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):

Measured the DT, PT and NHP positions on all four gunstrings.

General Purpose Science:

Replaced uncontaminated sea water trap.

Daily Comment Summaries - Personnel Onboard

Mon 19 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Mon 19. Jul 19:30	Mon 19. Jul 20:30
HSE - Chiefs Meeting			
Captain, Chief PI and department heads reviewed plans for the day. Shooting plan, speeds and turns all discussed.			



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Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 20 Jul

We deployed the magnetometer, PAM cable and guns from approximately 16:00 to 19:00 UTC. We ramped up and began firing the guns and acquiring the first sequence by 19:31 UTC.

We discovered an air leak inside the gun reel on #2. We retrieved gun-string #2 and made the repairs to the air hose inside the reel and then re-deployed the gun-string. We continued to fire the remaining three source sub-arrays while making this repair. We are at full gun volume

The EM122 is not functioning for the first sequence. We are actively trouble-shooting this.

Daily Comment Summaries - Plan for Tomorrow

Tue 20 Jul

Transit all day. Continue making preparations for initial source deployment.

Timing Diary (Marcus G Langseth, MCS 15000m 50m, Source Only)



Category	Code	Start	End	Duration
Transit to Prospect	MB_TT	Tue 20. Jul 00:00	Tue 20. Jul 15:55	15.917
In transit to prospect, for mobilization deployment.				
Deployment	MB_DP	Tue 20. Jul 15:55	Tue 20. Jul 17:35	1.667
Deployed magnetometer, PAM and started Knudsen and continued to transit.				
Deployment	MB_DP	Tue 20. Jul 17:35	Tue 20. Jul 17:57	0.367
Deploying Gunstring #1				
Deployment	MB_DP	Tue 20. Jul 17:57	Tue 20. Jul 18:30	0.550
Deploying Gunstring #2				
Deployment	MB_DP	Tue 20. Jul 18:30	Tue 20. Jul 18:48	0.300
Deploying Gunstring #4				
Deployment	MB_DP	Tue 20. Jul 18:48	Tue 20. Jul 19:05	0.283
Deploying Gunstring #3				
Testing	MB_TE	Tue 20. Jul 19:05	Tue 20. Jul 19:31	0.433
Mobilisation - Testing all guns individually and soft start ramp up.				
Production Prime	AC_PP	Tue 20. Jul 19:31	Tue 20. Jul 24:00	4.483
SOL Seq 1 Line:QCF01BO Block=Queen Charlotte Fault FGSP=897 FCSP=N/AHdg=323.8° Prime MSP Seq 1 Line:QCF01BO Block=Queen Charlotte Fault LGSP=1146 LCSP=1146 Midnight				



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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, Source Only)

20-Jul	Hours	%Percent
Acquisition	4.483	18.681
Production Prime	4.483	18.681
Mobilisation	19.517	81.319
Deployment	3.167	13.194
Testing	0.433	1.806
Transit to Prospect	15.917	66.319
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	96.887
At Anchor	24.000	16.667
Deployment	3.167	2.199
Mob Ashore	64.500	44.792
Testing	0.433	0.301
Transit to Prospect	47.417	32.928
Acquisition	4.483	3.113
Production Prime	4.483	3.113
Total	144.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	QCF01BO	323.8	897	1146	Prime	37.50	4.498	Part	Midnight
Total						37.50			

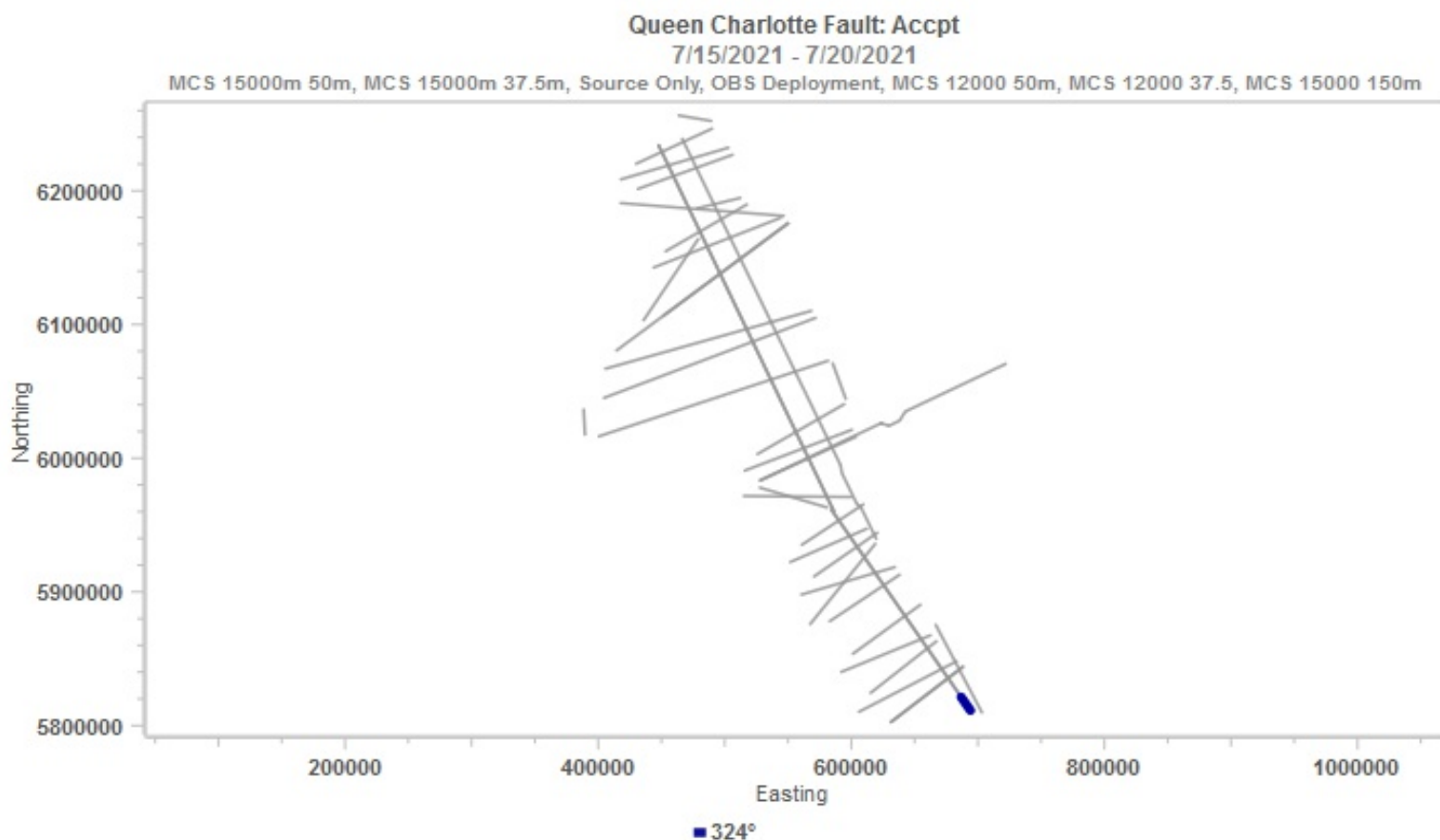


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Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	37.50	37.50	37.50	37.50
Combined	37.50	37.50	37.50	37.50



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 20 Jul

Navigation:

We repaired the GPS pod on sub array #2. The jumper was too short.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

We discovered an air leak inside the gun reel on #2. We retrieved gun-string #2 and made the repairs to the air hose inside the reel and then re-deployed the gun-string. We continued to fire the remaining three source sub-arrays while making this repair.

General Purpose Science:

Replaced uncontaminated sea water trap.



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Daily Comment Summaries - Personnel Onboard

Tue 20 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

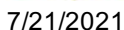
Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
Ben Phrampus - US NRL Sr. Scientist
Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Wed 21 Jul

We were shut down for whale sightings four times today. The longest period was for over nine hours due to the night time visual requirements.

EM122 is fully functional.








Daily Comment Summaries - Plan for Tomorrow

Wed 21 Jul

Complete Lines QCF01B04 and QCF08O.

Timing Diary (Marcus G Langseth, Source Only)



Category	Code	Start	End	Duration
 Production Prime	AC_PP	Wed 21. Jul 00:00	Wed 21. Jul 00:04	0.067
SOL Seq 1 Line:QCF01BO Block=Queen Charlotte Fault FGSP=1437 Hdg=323.8° Prime EOL Seq 1 Line:QCF01BO Block=Queen Charlotte Fault LGSP=1451 Complete				
 Cetacean	SB_CT	Wed 21. Jul 00:04	Wed 21. Jul 01:45	1.683
Chargeable standby due to close proximity of Cetaceans.				
 Production Prime	AC_PP	Wed 21. Jul 01:45	Wed 21. Jul 04:39	2.900
SOL Seq 2 Line:QCF01BO1 Preplot:QCF01BO Block=Queen Charlotte Fault FGSP=1436 Hdg=323.8° Prime EOL Seq 2 Line:QCF01BO1 Preplot:QCF01BO Block=Queen Charlotte Fault LGSP=1967 Complete				
 Cetacean	SB_CT	Wed 21. Jul 04:39	Wed 21. Jul 14:02	9.383
Chargeable standby due to close proximity of Cetaceans. We were standing by all night. Unable to start because of night time visual rules.				
 Production Prime	AC_PP	Wed 21. Jul 14:02	Wed 21. Jul 16:17	2.250
SOL Seq 3 Line:QCF01BO2 Preplot:QCF01BO Block=Queen Charlotte Fault FGSP=2345 Hdg=323.8° Prime EOL Seq 3 Line:QCF01BO2 Preplot:QCF01BO Block=Queen Charlotte Fault LGSP=2753 Complete				
 Cetacean	SB_CT	Wed 21. Jul 16:17	Wed 21. Jul 17:42	1.417
Chargeable standby due to close proximity of Cetaceans.				
 Production Prime	AC_PP	Wed 21. Jul 17:42	Wed 21. Jul 19:06	1.400
SOL Seq 4 Line:QCF01BO3 Preplot:QCF01BO Block=Queen Charlotte Fault FGSP=2708 Hdg=323.8° Prime EOL Seq 4 Line:QCF01BO3 Preplot:QCF01BO Block=Queen Charlotte Fault LGSP=2954 Complete				





Daily Science Report

Lamont-Doherty Earth Observatory
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Category	Code	Start	End	Duration
 Cetacean	SB_CT	Wed 21. Jul 19:06	Wed 21. Jul 20:34	1.467
Chargeable standby due to close proximity of Cetaceans.				
 Production Prime	AC_PP	Wed 21. Jul 20:34	Wed 21. Jul 24:00	3.433
SOL Seq 5 Line:QCF01BO4 Preplot:QCF01BO Block=Queen Charlotte Fault FGSP=2909 FCSP=N/AHdg=323.8° Prime MSP Seq 5 Line:QCF01BO4 Preplot:QCF01BO Block=Queen Charlotte Fault LGSP=3550 LCSP=3550 Midnight				

Timing Day By Day (Marcus G Langseth, Source Only)

21-Jul	Hours	%Percent
Acquisition	10.050	41.875
Production Prime	10.050	41.875
Chargeable Standby	13.950	58.125
Cetacean	13.950	58.125
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	83.046
At Anchor	24.000	14.286
Deployment	3.167	1.885
Mob Ashore	64.500	38.393
Testing	0.433	0.258
Transit to Prospect	47.417	28.224
Chargeable Standby	13.950	8.304
Cetacean	13.950	8.304
Acquisition	14.533	8.651
Production Prime	14.533	8.651
Total	168.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4



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MCS 15000m 50m

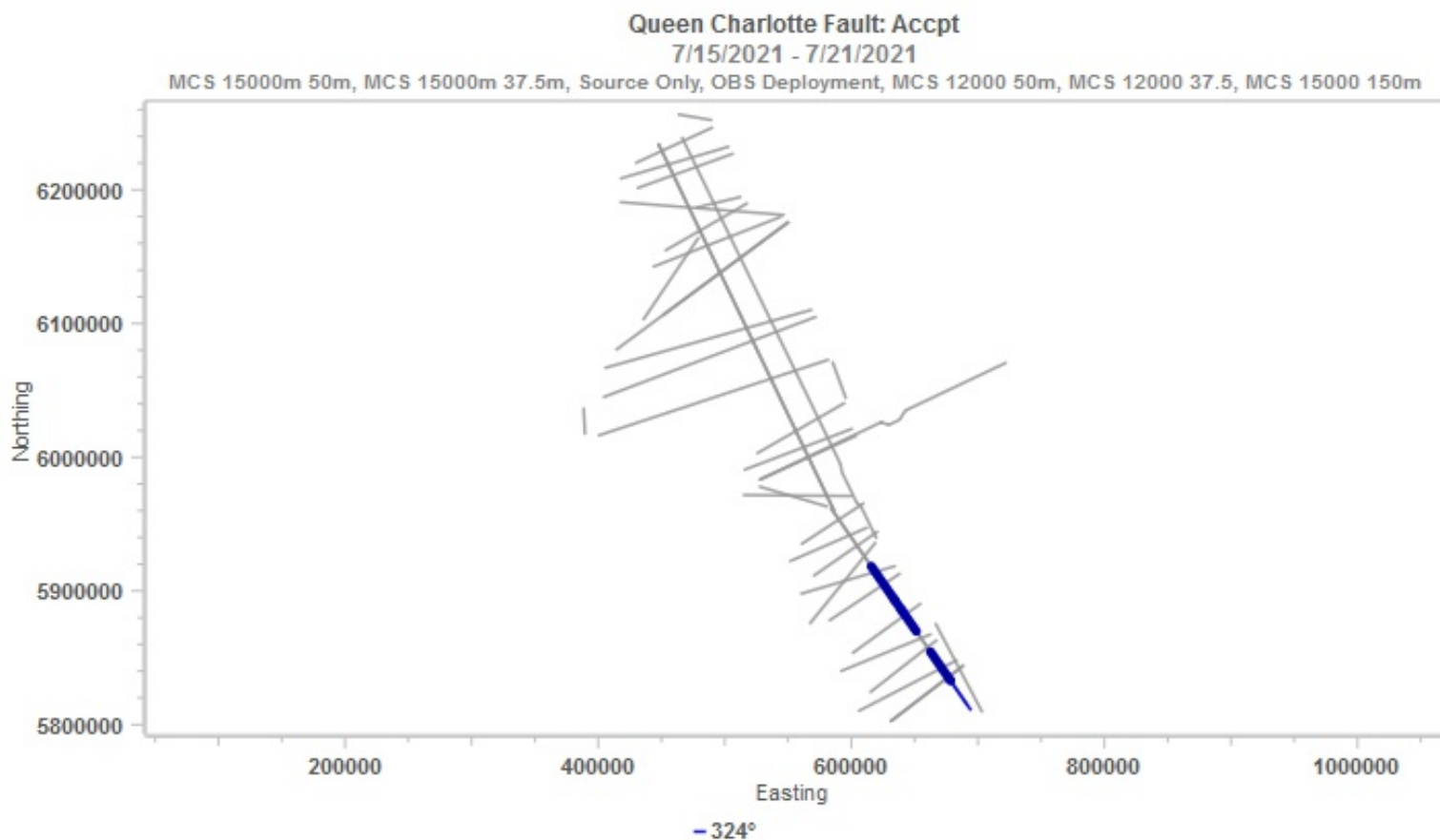
String Separation:	6 m	String length:	0 m		
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Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	QCF01BO	323.8	1437	1451	Prime	2.25	9.862	Complete	Complete
2	QCF01BO1	323.8	1436	1967	Prime	79.80	14.830	Complete	Complete
3	QCF01BO2	323.8	2345	2753	Prime	61.35	14.687	Complete	Complete
4	QCF01BO3	323.8	2708	2954	Prime	37.05	14.232	Complete	Complete
5	QCF01BO4	323.8	2909	3550	Prime	96.30	15.121	Part	Midnight
Total						276.75			

Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	276.75	357.75	357.75	357.75
Combined	276.75	357.75	357.75	357.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 21 Jul

Navigation:

No Major Issues to Report

Information Technology (IT):

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Wed Jul 21 2021 02:54p.m.

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No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Some small timing errors on Gun 1-1

General Purpose Science:

Replaced uncontaminated sea water trap.

Daily Comment Summaries - Personnel Onboard

Wed 21 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist


Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adededeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Wed 21. Jul 19:25	Wed 21. Jul 20:00
HSE - Chiefs Meeting			



Daily Science Report

Lamont-Doherty Earth Observatory
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7/22/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Thu 22 Jul

A good steady day of production. We finished Line QCF01BO and the Transit Line to QCF08O. We are currently shooting QCF08O.

Daily Comment Summaries - Plan for Tomorrow

Thu 22 Jul

We will cross the border into U.S. waters around 3:30 UTC. We will finish Line QCF08O at approximately 10:00 UTC. We will then turn around to recover the source array and begin our transit to south end of our prospect.

Timing Diary (Marcus G Langseth, Source Only)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 22. Jul 00:00	Thu 22. Jul 06:05	6.083
SOL Seq 5 Line:QCF01BO4 Preplot:QCF01BO Block=Queen Charlotte Fault FGSP=3551 Hdg=323.8° Prime EOL Seq 5 Line:QCF01BO4 Preplot:QCF01BO Block=Queen Charlotte Fault LGSP=4614 Complete				
Production Prime	AC_PP	Thu 22. Jul 06:05	Thu 22. Jul 12:51	6.767
SOL Seq 6 Line:Turn18 Block=Queen Charlotte Fault FGSP=1010 Hdg=285.6° Prime EOL Seq 6 Line:Turn18 Block=Queen Charlotte Fault LGSP=2180 Complete				
Prime Line Change	AC_PLC	Thu 22. Jul 12:51	Thu 22. Jul 13:05	0.233
Nominal Prime line change.				
Production Prime	AC_PP	Thu 22. Jul 13:05	Thu 22. Jul 24:00	10.917
SOL Seq 7 Line:QCF08O Block=Queen Charlotte Fault FGSP=981 FCSP=N/AHdg=65.8° Prime MSP Seq 7 Line:QCF08O Block=Queen Charlotte Fault LGSP=2850 LCSP=2850 Midnight Midnight Shot-point				

Timing Day By Day (Marcus G Langseth, Source Only)

22-Jul	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	0.233	0.972
Production Prime	23.767	99.028
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	139.517	72.665
At Anchor	24.000	12.500
Deployment	3.167	1.649
Mob Ashore	64.500	33.594
Testing	0.433	0.226
Transit to Prospect	47.417	24.696
Chargeable Standby	13.950	7.266
Cetacean	13.950	7.266
Acquisition	38.533	20.069
Prime Line Change	0.233	0.122
Production Prime	38.300	19.948
Total	192.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Acpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
5	QCF01BO4	323.8	3551	4614	Prime	159.60	8.361	Complete	Complete
6	Turn18	285.6	1010	2180	Prime	175.65	14.004	Complete	Complete
7	QCF08O	65.8	981	2850	Prime	280.50	13.867	Part	Midnight
Total						615.75			

Production Totals (Acpt km)

Accepted km	Day	Week	Month	Project
Prime	615.75	973.50	973.50	973.50
Combined	615.75	973.50	973.50	973.50



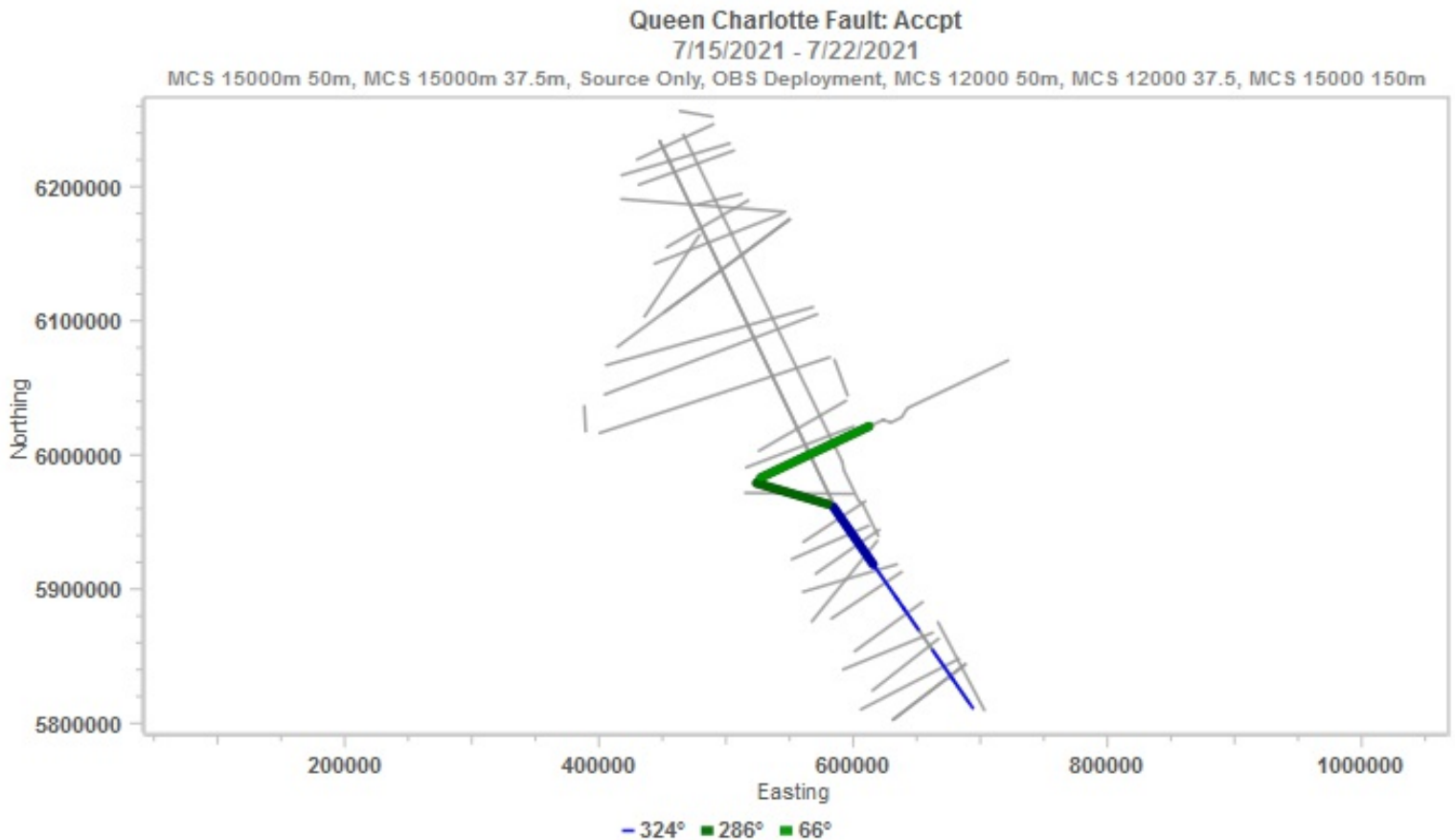
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Daily Science Report

Lamont-Doherty Earth Observatory
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Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 22 Jul

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:

Replaced uncontaminated sea water trap.

Daily Comment Summaries - Personnel Onboard

Thu 22 Jul

Technical Staff On-board the Langseth

Todd Jenvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)



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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

7/23/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Fri 23 Jul

We completed Line QCF08O at 13:25 UTC. The source was recovered and the transit to Line QCF03O has started.

We conducted MOB drills. Science Party reviewed: 1 person MOB raft, personal MOB alarm, MOB Markus Net, MOB procedures.

Maintenance and repair to source arrays and GPS #3

Preparations for MCS deployment.

Daily Comment Summaries - Plan for Tomorrow

Fri 23 Jul

We will deploy source array and shoot Line QCF03O. We will then recovery the source and begin deploying the 15km streamer.

Timing Diary (Marcus G Langseth, Source Only)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 23. Jul 00:00	Fri 23. Jul 13:25	13.417
SOL Seq 7 Line:QCF08O Block=Queen Charlotte Fault FGSP=2851 Hdg=65.8° Prime EOL Seq 7 Line:QCF08O Block=Queen Charlotte Fault LGSP=5351 Complete				
Transit	SB_TRT	Fri 23. Jul 13:25	Fri 23. Jul 15:04	1.650
Recovering source arrays to transit down to south end of survey. Gun strings, PAM and magnetometer onboard.				
Transit	SB_TRT	Fri 23. Jul 15:04	Fri 23. Jul 24:00	8.933
Chargeable standby transit from Dixon Entrance to Line QCF03O				

Timing Day By Day (Marcus G Langseth, Source Only)

23-Jul	Hours	%Percent
Acquisition	13.417	55.903
Production Prime	13.417	55.903
Chargeable Standby	10.583	44.097
Transit	10.583	44.097
Day's Total	24.000	100.000



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Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	139.517	64.591
At Anchor	24.000	11.111
Deployment	3.167	1.466
Mob Ashore	64.500	29.861
Testing	0.433	0.201
Transit to Prospect	47.417	21.952
Chargeable Standby	24.533	11.358
Cetacean	13.950	6.458
Transit	10.583	4.900
Acquisition	51.950	24.051
Prime Line Change	0.233	0.108
Production Prime	51.717	23.943
Total	216.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
7	QCF08O	65.8	2851	5351	Prime	375.15	14.546	Complete	Complete
Total						375.15			

Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	375.15	1348.65	1348.65	1348.65
Combined	375.15	1348.65	1348.65	1348.65



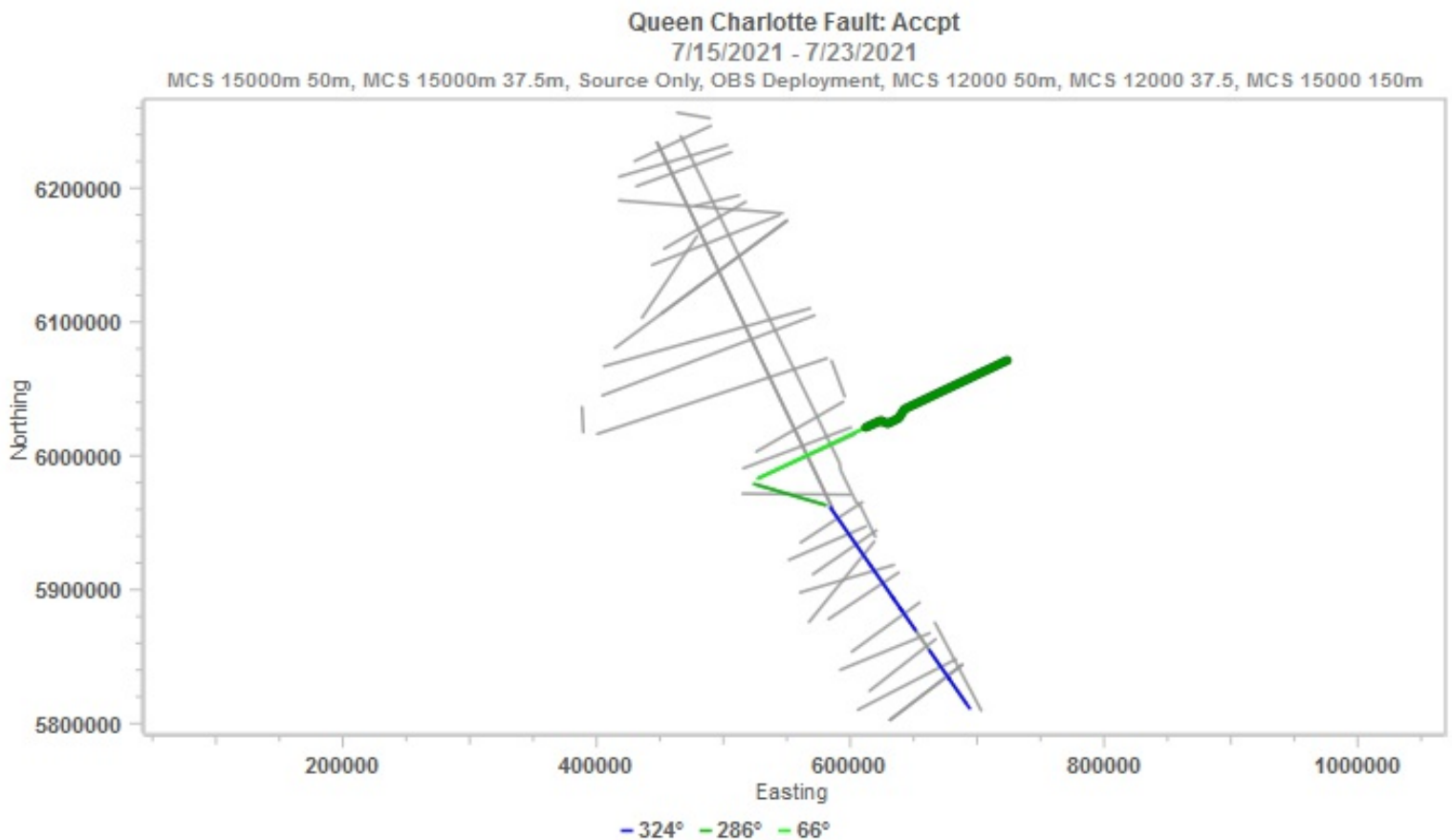
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Lamont-Doherty Earth Observatory
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Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 23 Jul

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:

Replaced uncontaminated sea water trap.

Daily Comment Summaries - Personnel Onboard

Fri 23 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Fri Jul 23 2021 10:28a.m.

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Daily Science Report

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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist


Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 MOB Drill	Drls_MOB	Fri 23. Jul 17:20	Fri 23. Jul 18:20
HSE - MOB Drill Science Party: Mustered. Reviewed 1 person MOB raft on back deck. Reviewed the Markus MOB net on main deck Reviewed the MOB personal devices			
 Chiefs Meeting	Mtgs_Chfs	Fri 23. Jul 19:30	Fri 23. Jul 20:00
HSE - Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			

Daily Total Category	Code	Count
 Toolbox Meetings	Mtgs_Tbox	2
7/23/2021		
Toolbox meeting in gun shack to discuss source recovery.		
7/23/2021		
Toolbox meeting with PSO's to discuss PAM cable recovery.		



Daily Science Report

7/24/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sat 24 Jul

We transited down to south end of the prospect and acquired the source only line QCF03O. We have started to recovery the gun strings and will begin deploying the streamer.






We scouted the bathymetry for the east end of QCF05 during the transit.

Daily Comment Summaries - Plan for Tomorrow

Sat 24 Jul

We will deploy the streamer for most of the day and then begin acquiring Line QCF03M.

Timing Diary (Marcus G Langseth, Source Only)

Category	Code	Start	End	Duration
 Transit	SB_TRT	Sat 24. Jul 00:00	Sat 24. Jul 10:24	10.400
Chargeable standby transit from Dixon Entrance to Line QCF03O. Scouted bathymetry for QCF05.				
 Transit	SB_TRT	Sat 24. Jul 10:24	Sat 24. Jul 12:30	2.100
Deploying magnetometer, PAM and source array.				
 Cetacean	SB_CT	Sat 24. Jul 12:30	Sat 24. Jul 15:03	2.550
Chargeable standby due to close proximity of Cetaceans. Started pre-watch for soft-start. Delayed for whale sighting.				
 Production Prime	AC_PP	Sat 24. Jul 15:03	Sat 24. Jul 23:20	8.283
SOL Seq 8 Line:QCF03O Block=Queen Charlotte Fault FGSP=1001 Hdg=234° Prime EOL Seq 8 Line:QCF03O Block=Queen Charlotte Fault LGSP=2404 Complete				
 Streamer Reconfig	SB_REC_SR	Sat 24. Jul 23:20	Sat 24. Jul 24:00	0.667
Chargeable standby to deploy streamer. Recovering source array #4				

Timing Day By Day (Marcus G Langseth, Source Only)

24-Jul	Hours	% Percent
Acquisition	8.283	34.514
Production Prime	8.283	34.514
Chargeable Standby	15.717	65.486
Cetacean	2.550	10.625
Reconfiguration	0.667	2.778



Daily Science Report

Lamont-Doherty Earth Observatory
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24-Jul	Hours	%Percent
Streamer Reconfig	0.667	2.778
Transit	12.500	52.083
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	58.132
At Anchor	24.000	10.000
Deployment	3.167	1.319
Mob Ashore	64.500	26.875
Testing	0.433	0.181
Transit to Prospect	47.417	19.757
Chargeable Standby	40.250	16.771
Cetacean	16.500	6.875
Reconfiguration	0.667	0.278
Streamer Reconfig	0.667	0.278
Transit	23.083	9.618
Acquisition	60.233	25.097
Prime Line Change	0.233	0.097
Production Prime	60.000	25.000
Total	240.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
8	QCF03O	234.0	1001	2404	Prime	210.60	13.718	Complete	Complete
Total						210.60			

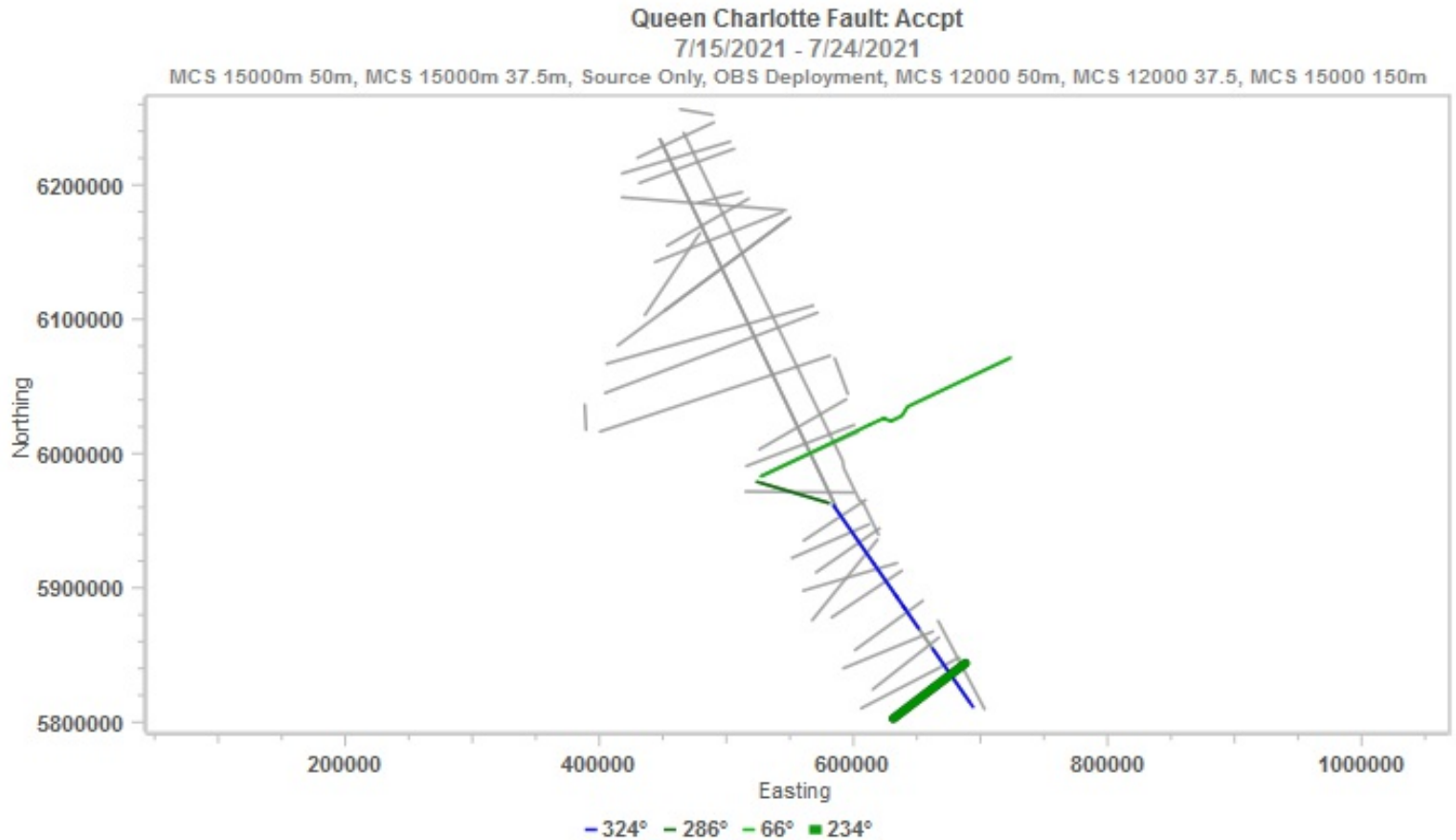


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Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	210.60	1559.25	1559.25	1559.25
Combined	210.60	1559.25	1559.25	1559.25



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 24 Jul

Navigation:

Mounted and tested the AIS on the tail-buoy.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Swapped out the stic cable on reel two.

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Sat 24 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic



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Cody Bahlau - L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth


Cassandra Frey - RPS Lead PSO
 Eren Penfield - RPS PSO
 Evana Douglas - RPS PSO
 Lilia Perez - RPS PSO
 Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
 Ben Phrampus - US NRL Sr. Scientist
 Sarah Nolt-Caraway - U. New Mexico - Scientist
 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Sat 24. Jul 19:30	Sat 24. Jul 20:30
HSE - Chiefs Meeting on Bridge Captain, PI, CSO and Chief Nav discuss daily plans.			

Daily Total Category	Code	Count
 Toolbox Meetings	Mtgs_Tbox	4
7/24/2021		
Toolbox to discuss Maggie and Pam deployment		
7/24/2021		
Toolbox to discuss source deployment.		
7/24/2021		
Toolbox to discuss source recovery		
7/24/2021		
Toolbox meeting to discuss streamer deployment		



Daily Science Report

7/25/2021

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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 25 Jul

The 15km streamer deployment went very well. The trim looks good. The weather has been very favorable.

We changed out section #1 to fix the first bad trace on the streamer.

We changed the soft tow point on the lead-in and moved it back 30 meters. This will move the worn part of the armor on the leadin to behind the gun strings. This also adds some weight and length to the leadin that is deployed.

We shortened the depth rope and lengthened the lift rope on the head-float.

We used the updated the birds and SRD's. The SSCU's are working as expected.

We added the bird diversion ropes to the lead-in.

We started Seq #9, Line QCF03M at approximately 17:50 GMT (10:50 PDT). This was earlier than anticipated.

Daily Comment Summaries - Plan for Tomorrow

Sun 25 Jul

We will finish Line QCF03M at approximately 08:00 UTC and then move to Line QCF16.

Timing Diary (Marcus G Langseth, Source Only)



Category	Code	Start	End	Duration
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 00:00	Sun 25. Jul 01:25	1.417
Chargeable standby to deploy streamer. Recovering source array #4,2,1. PAM and magnetometer onboard				
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 01:25	Sun 25. Jul 04:03	2.633
Deployed tail buoy to begin streamer deployment.				
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 04:03	Sun 25. Jul 08:49	4.767
Installed SSCU #01. Continue streamer deployment.				
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 08:49	Sun 25. Jul 10:47	1.967
Installed SSCU #161. Continue streamer deployment.				
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 10:47	Sun 25. Jul 11:26	0.650
Standby for turn in streamer to come out. Several birds at the tail went deep. Continue streamer deployment.				
Streamer Reconfig	SB_REC_SR	Sun 25. Jul 11:26	Sun 25. Jul 13:38	2.200
Streamer deployment				








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Category	Code	Start	End	Duration
 Streamer Reconfig	SB_REC_SR	Sun 25. Jul 13:38	Sun 25. Jul 14:01	0.383
Standby to change active section with failing channel #1.				
 Streamer Reconfig	SB_REC_SR	Sun 25. Jul 14:01	Sun 25. Jul 14:28	0.450
Deploy head float				
 Streamer Reconfig	SB_REC_SR	Sun 25. Jul 14:28	Sun 25. Jul 15:38	1.167
Move soft tow point. Lead-in is 30 meters further back. Install bird mitigation ropes.				
 Streamer Reconfig	SB_REC_SR	Sun 25. Jul 15:38	Sun 25. Jul 17:38	2.000
Re-deploy airguns, PAM and Maggie. Softstart.				
 Production Prime	AC_PP	Sun 25. Jul 17:38	Sun 25. Jul 24:00	6.367
SOL Seq 9 Line:QCF03M Block=Queen Charlotte Fault FGSP=384 FCSP=N/AHdg=234° Prime MSP Seq 9 Line:QCF03M Block=Queen Charlotte Fault LGSP=1157 LCSP=1157 Midnight First MCS Sequence. 15km streamer deployed.				

Timing Day By Day (Marcus G Langseth, Source Only)

25-Jul	Hours	% Percent
Acquisition	6.367	26.528
Production Prime	6.367	26.528
Chargeable Standby	17.633	73.472
Reconfiguration	17.633	73.472
Streamer Reconfig	17.633	73.472
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	139.517	52.847
At Anchor	24.000	9.091
Deployment	3.167	1.199
Mob Ashore	64.500	24.432
Testing	0.433	0.164
Transit to Prospect	47.417	17.961
Chargeable Standby	57.883	21.926
Cetacean	16.500	6.250
Reconfiguration	18.300	6.932
Streamer Reconfig	18.300	6.932
Transit	23.083	8.744
Acquisition	66.600	25.227
Prime Line Change	0.233	0.088
Production Prime	66.367	25.139



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Category	Hours	% Percent
Total	264.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
9	QCF03M	234.0	384	1157	Prime	116.10	9.834	Part	Midnight
Total						116.10			

Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	116.10	1675.35	1675.35	1675.35
Combined	116.10	1675.35	1675.35	1675.35



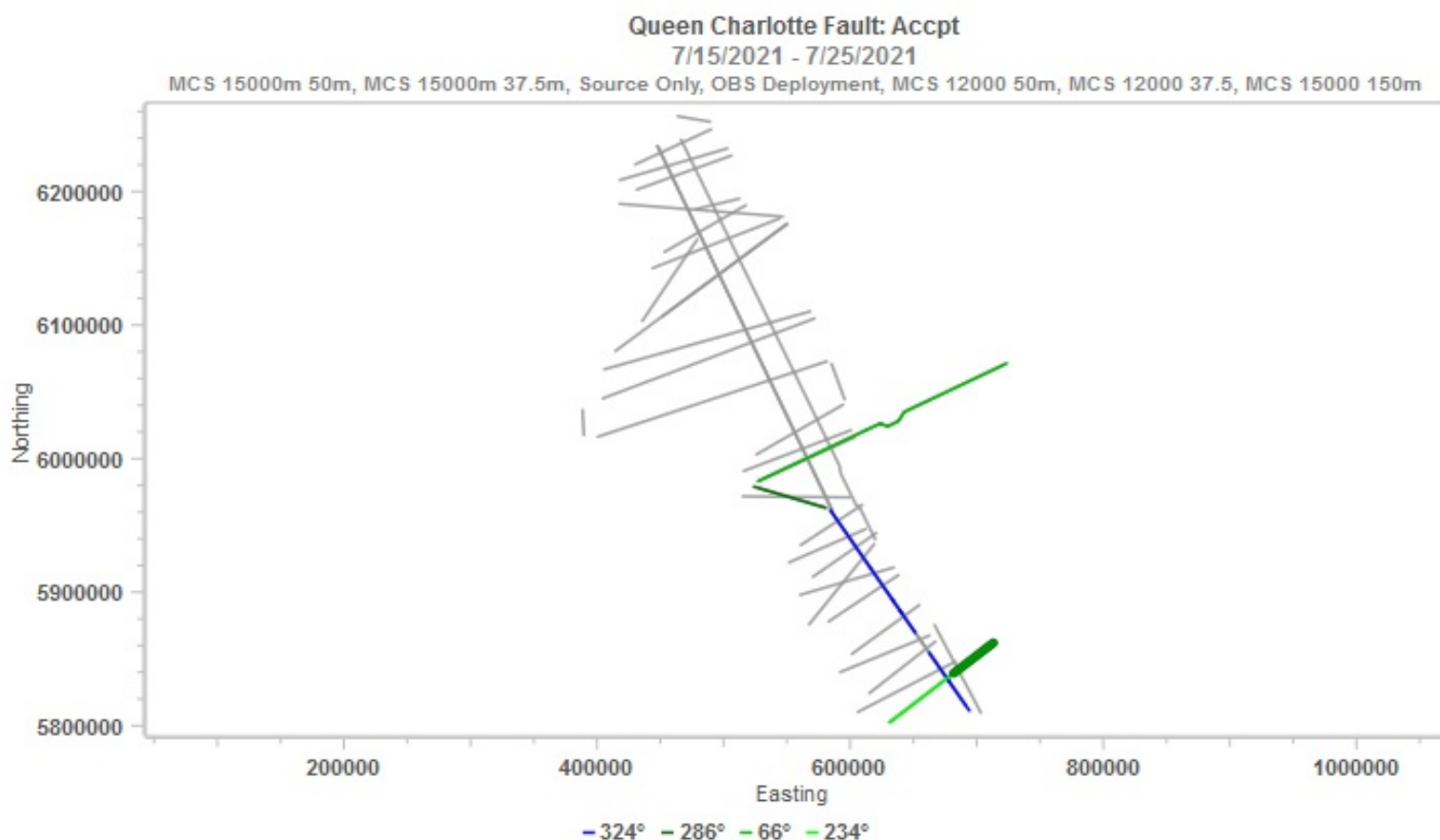
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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 25 Jul

Navigation:

AIS and tail buoy GPS pod are working. Gun pod #2 failed.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

SSCU's are working. Bird comms are solid.

Towing and Handling (Source):

The port tail-buoy boom needs repair.

General Purpose Science:

Re-flushed the sea-water intake. Salinity values corrected.

Daily Comment Summaries - Personnel Onboard

Sun 25 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)



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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

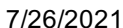
Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Sun 25. Jul 19:20	Sun 25. Jul 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			

Daily Total Category	Code	Count
Toolbox Meetings	Mtgs_Tbox	4
7/25/2021		
Toolbox meeting to discuss streamer deployment overview.		
7/25/2021		
Toolbox meeting to review bird/SRD deployment and awareness.		
7/25/2021		
Toolbox meeting to discuss streamer reel transfers.		
7/25/2021		
Toolbox meeting to discuss head float deployment		



Daily Comment Summaries - Daily Summary

Steady shooting. We were shut down for a whale sighting for approximately two hours on Seq 11.

The lead-in has been traversing freely under the gun strings during the turns.

Daily Comment Summaries - Plan for Tomorrow

We will be finishing Line QCF16 after midnight local time and will transit south to begin Line QCF01BO

Timing Diary (Marcus G Langseth, MCS 15000m 50m, Source Only)

(UTC 00:00) UTC - Universal Time Coordinated
Generated on Mon Jul 26 2021 02:15p.m.



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Category	Code	Start	End	Duration
EOL Seq 11 Line:Turn1 Block=Queen Charlotte Fault LGSP=2830 Complete				
Prime Line Change	AC_PLC	Mon 26. Jul 20:10	Mon 26. Jul 21:24	1.233
Nominal Prime line change.				
Production Prime	AC_PP	Mon 26. Jul 21:24	Mon 26. Jul 24:00	2.600
SOL Seq 12 Line:QCF16 Block=Queen Charlotte Fault FGSP=1302 FCSP=N/AHdg=53.4° Prime MSP Seq 12 Line:QCF16 Block=Queen Charlotte Fault LGSP=1105 LCSP=1105 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, Source Only)

26-Jul	Hours	%Percent
Acquisition	22.100	92.083
Prime Line Change	2.017	8.403
Production Prime	20.083	83.681
Chargeable Standby	1.900	7.917
Cetacean	1.900	7.917
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	48.443
At Anchor	24.000	8.333
Deployment	3.167	1.100
Mob Ashore	64.500	22.396
Testing	0.433	0.150
Transit to Prospect	47.417	16.464
Chargeable Standby	59.783	20.758
Cetacean	18.400	6.389
Reconfiguration	18.300	6.354
Streamers Reconfig	18.300	6.354
Transit	23.083	8.015
Acquisition	88.700	30.799
Prime Line Change	2.250	0.781
Production Prime	86.450	30.017
Total	288.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		



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MCS 15000m 50m					
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km)

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
9	QCF03M	234.0	1158	1839	Prime	102.30	11.048	Complete	Complete
10	QCF01BM	323.8	1848	2438	Prime	88.65	12.358	Complete	Complete
11	Turn1	243.9	1021	2830	Prime	228.00	13.197	Complete	Complete
NTBP: 1711 - 2000 (not chgd)									
12	QCF16	53.4	1302	1105	Prime	29.70	6.137	Part	Midnight
Total						448.65			

Production Totals (Accpt km)

Accepted km	Day	Week	Month	Project
Prime	448.65	448.65	2124.00	2124.00
Combined	448.65	448.65	2124.00	2124.00



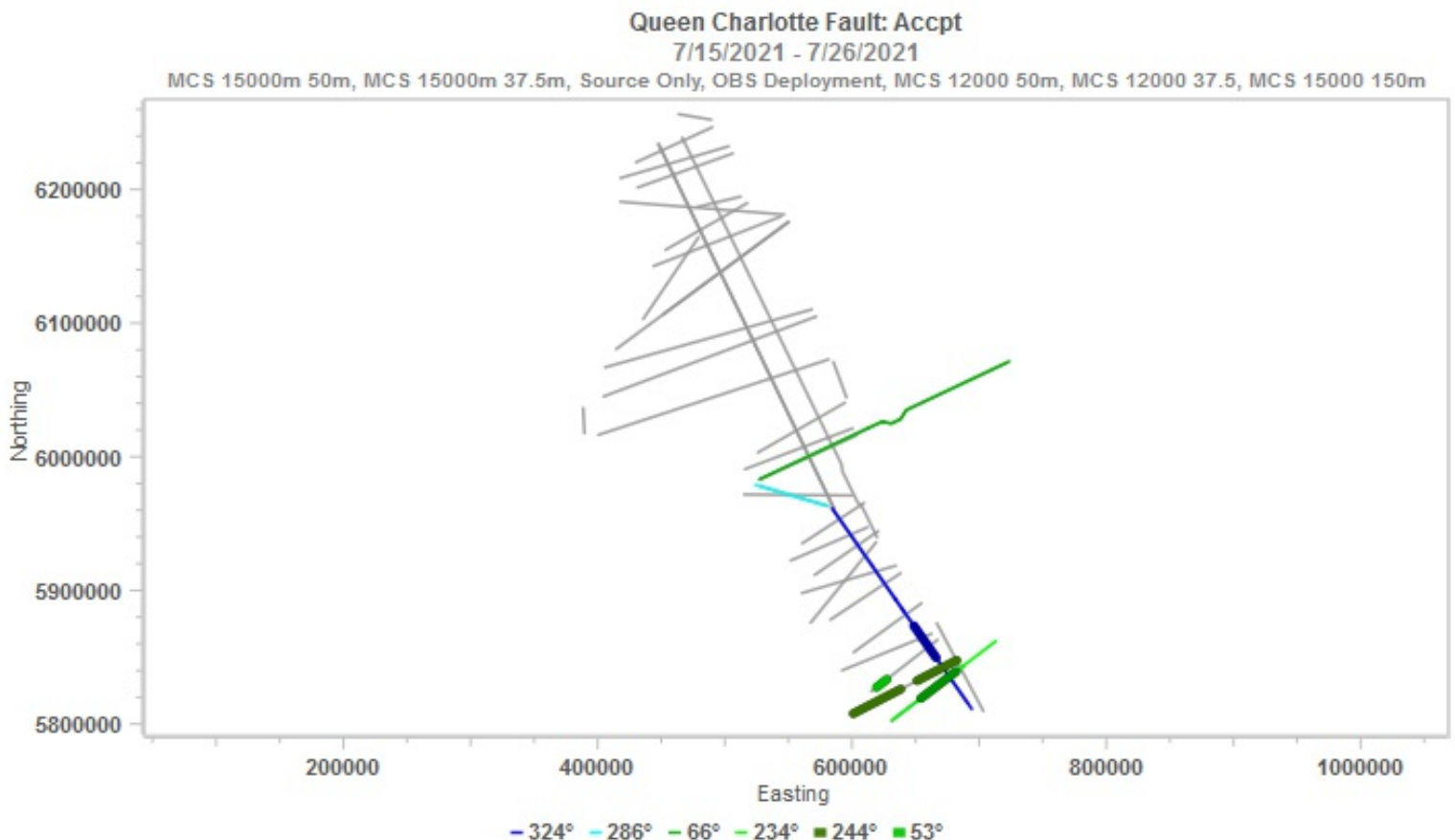
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Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 26 Jul

Navigation:

GPS gun pod #2 not working

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 26 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guérin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)



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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

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Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
<div><div></div>Chiefs Meeting</div>	Mtgs_Chfs	Mon 26. Jul 17:30	Mon 26. Jul 18:30
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			

Daily Total Category	Code	Count
<div><div></div>Toolbox Meetings</div>	Mtgs_Tbox	2
7/26/2021		
Toolbox meeting to discuss tail buoy repairs Toolbox meeting to discuss working aloft		



Daily Science Report

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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 27 Jul

A steady day of production with two cetacean shutdowns. We circled on Line QCF16 to fill in the missed coverage caused by the shutdown. The other shutdown was on the transit line to QCF01B.

Weekly Tech Meeting.

Daily Comment Summaries - Plan for Tomorrow

Tue 27 Jul

We will acquire Line QCF01B and then begin Line QCF01AO.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 27. Jul 00:00	Tue 27. Jul 03:59	3.983
SOL Seq 12 Line:QCF16 Block=Queen Charlotte Fault FGSP=1106 Hdg=53.4° Prime EOL Seq 12 Line:QCF16 Block=Queen Charlotte Fault LGSP=1743 Complete				
Cetacean	SB_CT	Tue 27. Jul 03:59	Tue 27. Jul 06:58	2.983
Chargeable standby due to close proximity of Cetaceans. Shutdown for North Pacific Right Whales.				
Production Prime	AC_PP	Tue 27. Jul 06:58	Tue 27. Jul 09:15	2.283
SOL Seq 13 Line:T1616ABlock=Queen Charlotte Fault FGSP=1152 Hdg=232.5° Prime EOL Seq 13 Line:T1616ABlock=Queen Charlotte Fault LGSP=1525 Complete Acquiring data while circling back around to fill gap in coverage due to cetacean sighting.				
Cetacean	SB_CT	Tue 27. Jul 09:15	Tue 27. Jul 10:05	0.833
Extra line change due to Cetaceans.				
Production Prime	AC_PP	Tue 27. Jul 10:05	Tue 27. Jul 15:11	5.100
SOL Seq 14 Line:QCF16APreplot:QCF16 Block=Queen Charlotte Fault FGSP=1420 Hdg=53.4° Prime EOL Seq 14 Line:QCF16APreplot:QCF16 Block=Queen Charlotte Fault LGSP=2282 Complete				
Prime Line Change	AC_PLC	Tue 27. Jul 15:11	Tue 27. Jul 16:22	1.183
Nominal Prime line change.				
Production Prime	AC_PP	Tue 27. Jul 16:22	Tue 27. Jul 17:15	0.883
SOL Seq 15 Line:Turn3 Block=Queen Charlotte Fault FGSP=1028 Hdg=142.8° Prime EOL Seq 15 Line:Turn3 Block=Queen Charlotte Fault LGSP=1130 Incomplete				





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Category	Code	Start	End	Duration
 Cetacean	SB_CT	Tue 27. Jul 17:15	Tue 27. Jul 19:12	1.950
NTBP Seq 15 Turn3 Block=Queen Charlotte Fault FSP=1131 LSP=1421 Shutdown and ramp up for Cetacean sighting.				
 Production Prime	AC_PP	Tue 27. Jul 19:12	Tue 27. Jul 24:00	4.800
SOL Seq 15 Line:Turn3 Block=Queen Charlotte Fault FGSP=1422 FCSP=N/AHdg=142.8° Prime MSP Seq 15 Line:Turn3 Block=Queen Charlotte Fault LGSP=2231 LCSP=2231 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, Source Only)

27-Jul	Hours	%Percent
Acquisition	18.233	75.972
Prime Line Change	1.183	4.931
Production Prime	17.050	71.042
Chargeable Standby	5.767	24.028
Cetacean	5.767	24.028
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	44.717
At Anchor	24.000	7.692
Deployment	3.167	1.015
Mob Ashore	64.500	20.673
Testing	0.433	0.139
Transit to Prospect	47.417	15.198
Chargeable Standby	65.550	21.010
Cetacean	24.167	7.746
Reconfiguration	18.300	5.865
Streammer Reconfig	18.300	5.865
Transit	23.083	7.399
Acquisition	106.933	34.274
Prime Line Change	3.433	1.100
Production Prime	103.500	33.173
Total	312.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					



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MCS 15000m 50m					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
12	QCF16	53.4	1106	1743	Prime	31.90	4.277	Complete	Complete
13	T1616A	232.5	1152	1525	Prime	18.65	4.410	Complete	Complete
14	QCF16A	53.4	1420	2282	Prime	43.10	4.563	Complete	Complete
15	Turn3	142.8	1028	2231	Prime	45.60	4.328	Part	Midnight
NTBP: 1131 - 1421 (not chgd)									
Total						139.25			

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

Accepted km	Day	Week	Month	Project
Prime	139.25	299.05	876.50	876.50
Combined	139.25	299.05	876.50	876.50



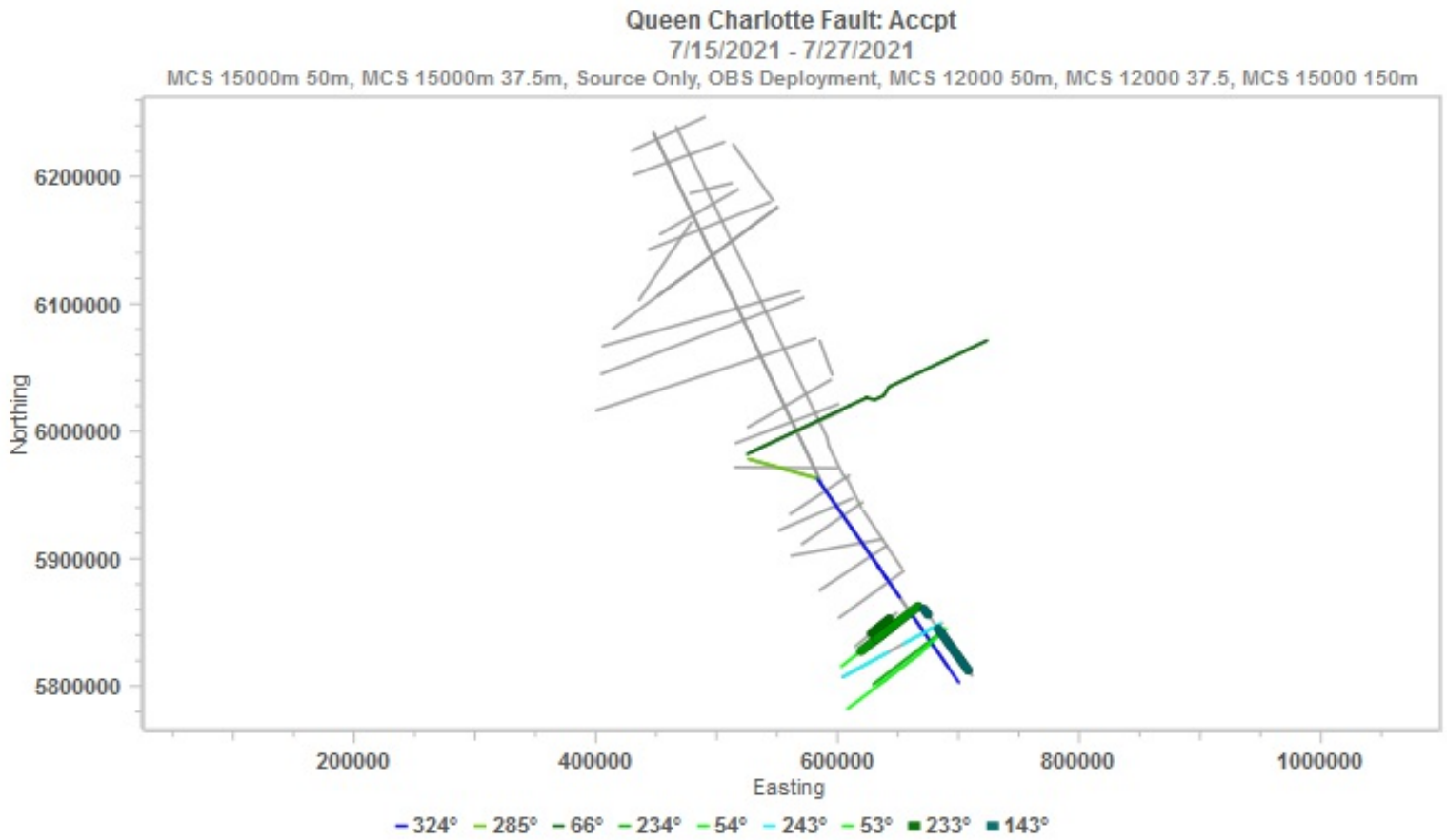
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Lamont-Doherty Earth Observatory
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Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 27 Jul

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 27 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

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Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adededeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Shutdown	Cet_SD	Tue 27. Jul 03:59	Tue 27. Jul 05:32
HSE - Mammal Shut Down. North Pacific Right Whales			
 Source Soft Start	Cet_SSS	Tue 27. Jul 05:32	Tue 27. Jul 06:58
HSE - Source Soft Start and run in			
 Shutdown	Cet_SD	Tue 27. Jul 17:15	Tue 27. Jul 19:12
HSE - Mammal Shut Down and softstarts			
 Weekly Telecon	Mtgs_WTel	Tue 27. Jul 18:00	Tue 27. Jul 19:00
HSE - Weekly Conference Call with Tech Team			
 Chiefs Meeting	Mtgs_Chfs	Tue 27. Jul 19:30	Tue 27. Jul 20:30
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues. Discussed cetacean mitigation and pre-planning criteria for circling the vessel.			



Daily Science Report

7/28/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Wed 28 Jul

We were shut down three times for whales today. We circled twice and was down all night for one of the shutdowns. We didn't circle on the third cetacean shutdown. Instead, we are continuing down line at the end of the day to try to move away from the whales.

Daily Comment Summaries - Plan for Tomorrow

Wed 28 Jul

Continue acquiring QCF01BM and start QCF01AO.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 28. Jul 00:00	Wed 28. Jul 00:30	0.500
SOL Seq 15 Line:Turn3 Block=Queen Charlotte Fault FGSP=2232 Hdg=142.8° Prime EOL Seq 15 Line:Turn3 Block=Queen Charlotte Fault LGSP=2310 Complete				
Prime Line Change	AC_PLC	Wed 28. Jul 00:30	Wed 28. Jul 02:19	1.817
Nominal Prime line change.				
Production Prime	AC_PP	Wed 28. Jul 02:19	Wed 28. Jul 05:06	2.783
SOL Seq 16 Line:PM01BM Preplot:QCF01BM Block=Queen Charlotte Fault FGSP=701 Hdg=323.8° Prime EOL Seq 16 Line:PM01BM Preplot:QCF01BM Block=Queen Charlotte Fault LGSP=1147 Complete EEOL dt whale sighting				
Cetacean	SB_CT	Wed 28. Jul 05:06	Wed 28. Jul 13:34	8.467
Chargeable standby due to close proximity of Cetaceans. We were shutdown for nighttime PSO restrictions.				
Production Prime	AC_PP	Wed 28. Jul 13:34	Wed 28. Jul 16:27	2.883
SOL Seq 17 Line:PM01B1 Preplot:QCF01BM Block=Queen Charlotte Fault FGSP=1036 Hdg=323.8° Prime EOL Seq 17 Line:PM01B1 Preplot:QCF01BM Block=Queen Charlotte Fault LGSP=1514 Complete EEOL dt whale sighting				
Cetacean	SB_CT	Wed 28. Jul 16:27	Wed 28. Jul 18:48	2.350
Chargeable standby due to close proximity of Cetaceans. 1 hour shutdown plus softstart and circle.				
Production Prime	AC_PP	Wed 28. Jul 18:48	Wed 28. Jul 20:11	1.383
SOL Seq 18 Line:T1B11B2 Preplot:QCF01BM Block=Queen Charlotte Fault FGSP=1188 Hdg=143.8° Prime EOL Seq 18 Line:T1B11B2 Preplot:QCF01BM Block=Queen Charlotte Fault LGSP=1400 Complete Turn line acquisition during circle for whales.				
Cetacean	SB_CT	Wed 28. Jul 20:11	Wed 28. Jul 21:12	1.017





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Category	Code	Start	End	Duration
Chargeable standby due to close proximity of Cetaceans. Turning back onto original line.				
 Production Prime	AC_PP	Wed 28. Jul 21:12	Wed 28. Jul 22:56	1.733
SOL Seq 19 Line:PM01B2 Preplot:QCF01BM Block=Queen Charlotte Fault FGSP=1230 Hdg=323.8° Prime EOL Seq 19 Line:PM01B2 Preplot:QCF01BM Block=Queen Charlotte Fault LGSP=1487 Complete EEOL dt whale sighting				
 Cetacean	SB_CT	Wed 28. Jul 22:56	Wed 28. Jul 24:00	1.067
Chargeable standby due to close proximity of Cetaceans. Shut down for whale sighting and continuing down the line.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

28-Jul	Hours	%Percent
Acquisition	11.100	46.250
Prime Line Change	1.817	7.569
Production Prime	9.283	38.681
Chargeable Standby	12.900	53.750
Cetacean	12.900	53.750
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	41.523
At Anchor	24.000	7.143
Deployment	3.167	0.942
Mob Ashore	64.500	19.196
Testing	0.433	0.129
Transit to Prospect	47.417	14.112
Chargeable Standby	78.450	23.348
Cetacean	37.067	11.032
Reconfiguration	18.300	5.446
Streamer Reconfig	18.300	5.446
Transit	23.083	6.870
Acquisition	118.033	35.129
Prime Line Change	5.250	1.562
Production Prime	112.783	33.566
Total	336.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		



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MCS 15000m 50m					
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
15	Turn3	142.8	2232	2310	Prime	3.95	4.323	Complete	Complete
16	PM01BM	323.8	701	1147	Prime	22.30	4.326	Complete	Complete
17	PM01B1	323.8	1036	1514	Prime	23.90	4.476	Complete	Complete
18	T1B11B2	143.8	1188	1400	Prime	10.60	4.138	Complete	Complete
19	PM01B2	323.8	1230	1487	Prime	12.85	4.003	Complete	Complete
Total						73.60			

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

Accepted km	Day	Week	Month	Project
Prime	73.60	372.65	950.10	950.10
Combined	73.60	372.65	950.10	950.10



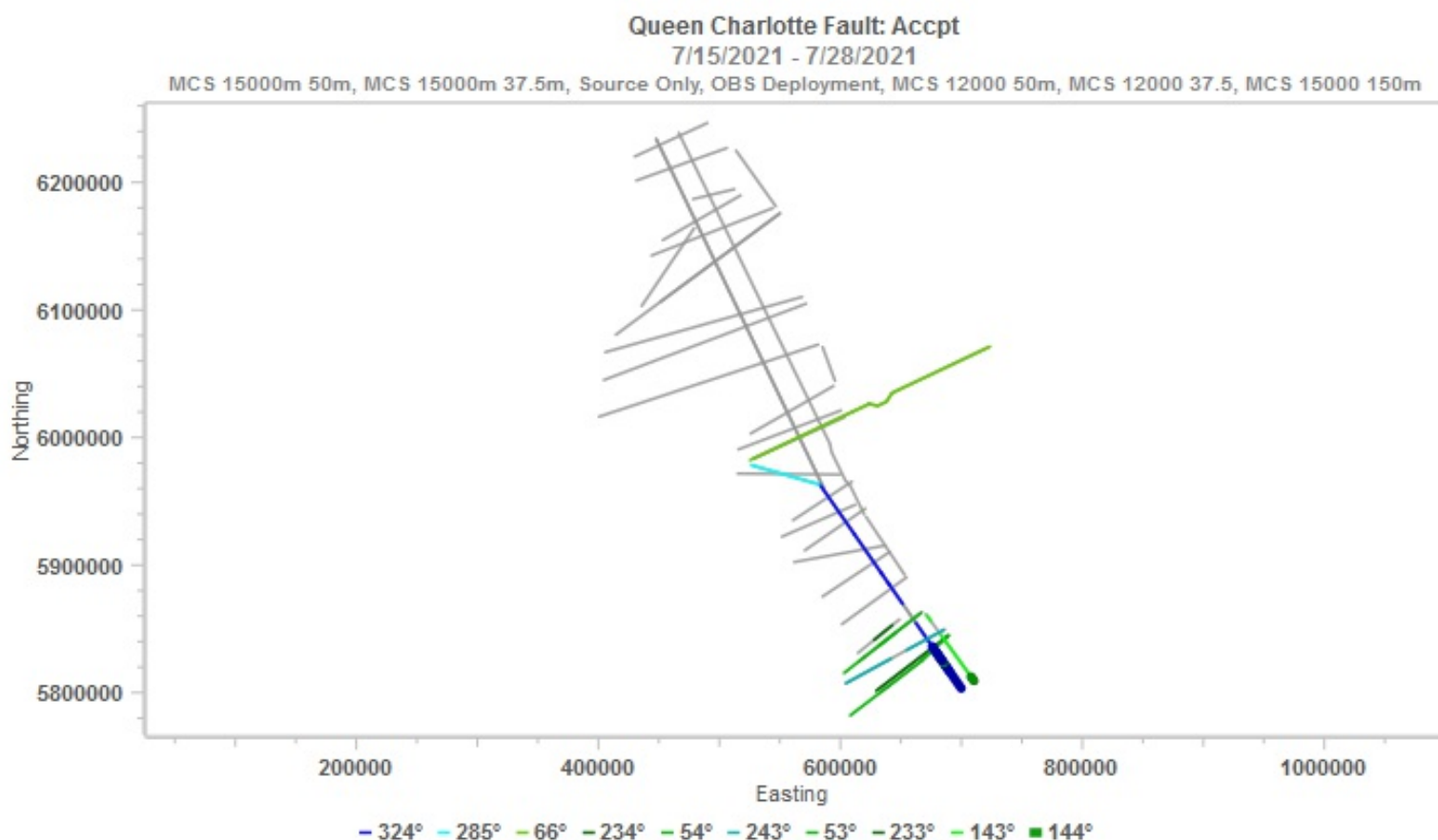
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Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 28 Jul

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):

The port compressor was down.

General Purpose Science:

No Major Issues to Report

Daily Comment Summaries - Personnel Onboard

Wed 28 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist






Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Shutdown	Cet_SD	Wed 28. Jul 05:06	Wed 28. Jul 13:34
HSE - Mammal Shut Down			
 Shutdown	Cet_SD	Wed 28. Jul 16:27	Wed 28. Jul 18:48
HSE - Mammal Shut Down			
 Chiefs Meeting	Mtgs_Chfs	Wed 28. Jul 19:20	Wed 28. Jul 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues. Whales. whales. whales.			
 Shutdown	Cet_SD	Wed 28. Jul 20:11	Wed 28. Jul 21:12
HSE - Mammal Shut Down. Turning for whales.			
 Shutdown	Cet_SD	Wed 28. Jul 22:56	Wed 28. Jul 24:00
HSE - Mammal Shut Down			



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Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Thu 29 Jul

A good day of production. We will cross back into U.S. waters about 8 pm local time.

We had one small shutdown for cetacean sighting.

Daily Comment Summaries - Plan for Tomorrow

Thu 29 Jul

We will continue to shoot Line QCF01AO for the next two days. The weather continues to be favorable.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Cetacean	SB_CT	Thu 29. Jul 00:00	Thu 29. Jul 01:06	1.100
NTBP Seq 19 Block=Queen Charlotte Fault FSP=1488 LSP=1758				
Chargeable standby due to close proximity of Cetaceans. Shut down for whale sighting and continuing down the line.				
Production Prime	AC_PP	Thu 29. Jul 01:06	Thu 29. Jul 17:50	16.733
SOL Seq 19 Line:PM01B2 Preplot:QCF01BM Block=Queen Charlotte Fault FGSP=1759 Hdg=323.8° Prime EOL Seq 19 Line:PM01B2 Preplot:QCF01BM Block=Queen Charlotte Fault LGSP=4481 Complete				
Prime Line Change	AC_PLC	Thu 29. Jul 17:50	Thu 29. Jul 17:56	0.100
Nominal Prime line change.				
Production Prime	AC_PP	Thu 29. Jul 17:56	Thu 29. Jul 24:00	6.067
SOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault FGSP=967 FCSP=N/AHdg=333.2° Prime MSP Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault LGSP=1301 LCSP=1301 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

29-Jul	Hours	%Percent
Acquisition	22.900	95.417
Prime Line Change	0.100	0.417
Production Prime	22.800	95.000
Chargeable Standby	1.100	4.583
Cetacean	1.100	4.583



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29-Jul	Hours	%Percent
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only)

Category	Hours	%Percent
Mobilisation	139.517	38.755
At Anchor	24.000	6.667
Deployment	3.167	0.880
Mob Ashore	64.500	17.917
Testing	0.433	0.120
Transit to Prospect	47.417	13.171
Chargeable Standby	79.550	22.097
Cetacean	38.167	10.602
Reconfiguration	18.300	5.083
Streamer Reconfig	18.300	5.083
Transit	23.083	6.412
Acquisition	140.933	39.148
Prime Line Change	5.350	1.486
Production Prime	135.583	37.662
Total	360.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

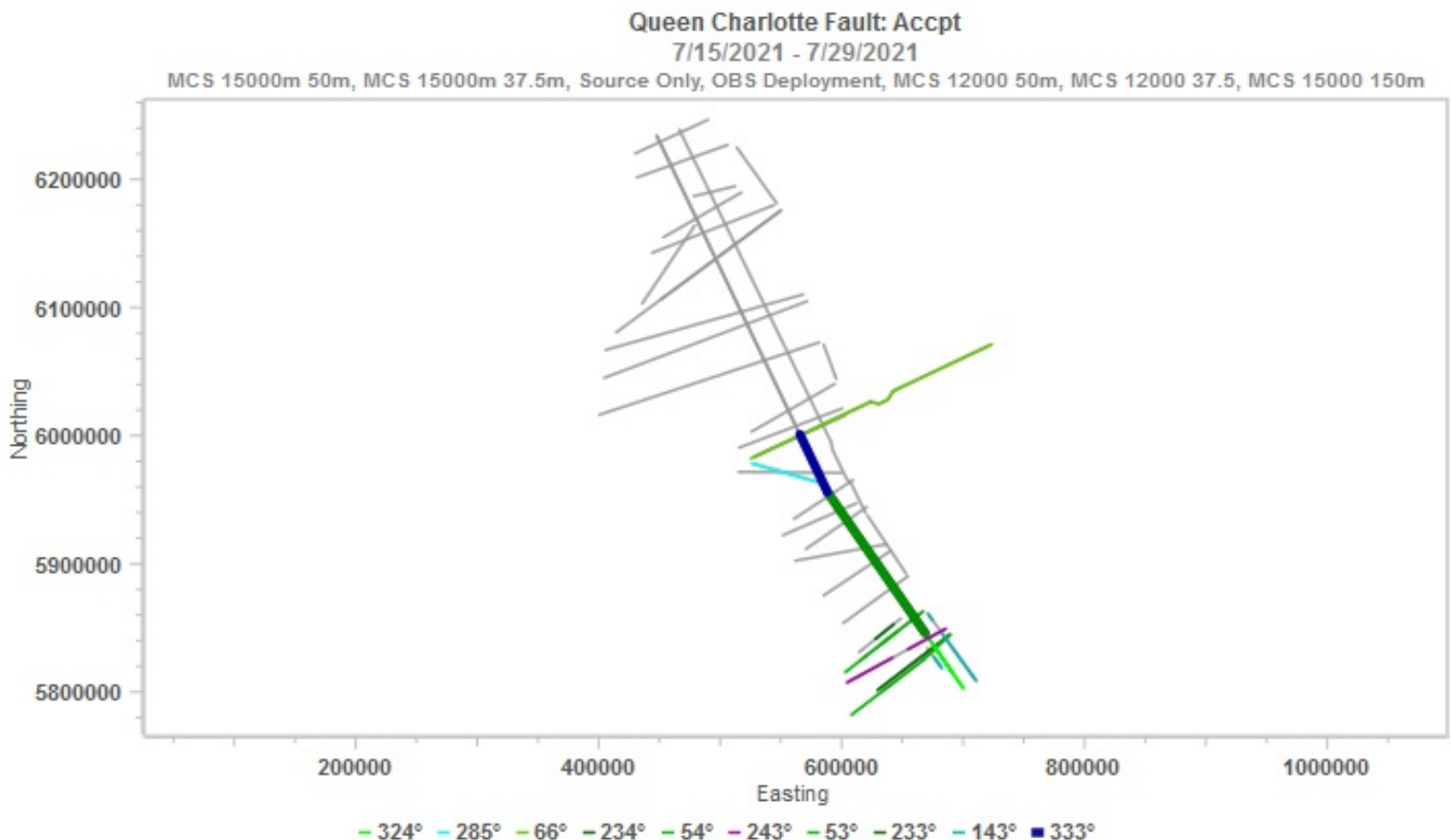
Production Listing (Accpt km by interval) - Prime: Full Fold, Infill: Sail Line

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
19	PM01B2	323.8	N/A	4481	Prime	136.15	4.355	Complete	Complete
20	PO01A	333.2	967	1301	Prime	16.70	1.486	Part	Midnight
Total						152.85			



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

Accepted km	Day	Week	Month	Project
Prime	152.85	525.50	1102.95	1102.95
Combined	152.85	525.50	1102.95	1102.95



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 29 Jul

Navigation:
TB and #2 gunstring GPS are out.

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 29 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Cody Bahlau L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)




PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
 Eren Penfield - RPS PSO
 Evana Douglas - RPS PSO
 Lilia Perez - RPS PSO
 Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
 Ben Phrampus - US NRL Sr. Scientist
 Sarah Nolt-Caraway - U. New Mexico - Scientist
 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Shutdown	Cet_SD	Thu 29. Jul 00:00	Thu 29. Jul 01:24
HSE - Mammal Shut Down			
 Chiefs Meeting	Mtgs_Chfs	Thu 29. Jul 19:20	Thu 29. Jul 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			
 Shutdown	Cet_SD	Thu 29. Jul 20:35	Thu 29. Jul 21:06
HSE - Mammal Shut Down			



Daily Science Report

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Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Fri 30 Jul

A very good day of production. The weather continues to be favorable.

Disabled Gun 4-1 after it auto-fired for a few shots on Line QCF01AO. We will recover gun strings 3 and 4 for repair and maintenance on the turn line between QCF01A1M and QCF12O.

Daily Comment Summaries - Plan for Tomorrow

Fri 30 Jul

We will complete Line QCF01AO and do a tear drop line change and start back down QCF01A1M.

Timing Diary (Marcus G Langseth, MCS 15000 150m)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 30. Jul 00:00	Fri 30. Jul 24:00	24.000
SOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault FGSP=1302 FCSP=N/AHdg=333.2° Prime MSP Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault LGSP=2648 LCSP=2648 Midnight 24 Hours of shooting without any downtime.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

30-Jul	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, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	36.332
At Anchor	24.000	6.250
Deployment	3.167	0.825
Mob Ashore	64.500	16.797
Testing	0.433	0.113
Transit to Prospect	47.417	12.348
Chargeable Standby	79.550	20.716



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Category	Hours	% Percent
Cetacean	38.167	9.939
Reconfiguration	18.300	4.766
Streamer Reconfig	18.300	4.766
Transit	23.083	6.011
Acquisition	164.933	42.951
Prime Line Change	5.350	1.393
Production Prime	159.583	41.558
Total	384.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Acpt km by Shotpoint) - Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
20	PO01A	333.2	1302	2648	Prime	202.05	4.528	Part	Midnight
Total						202.05			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	202.05	761.10	1338.55	1338.55
Combined	202.05	761.10	1338.55	1338.55



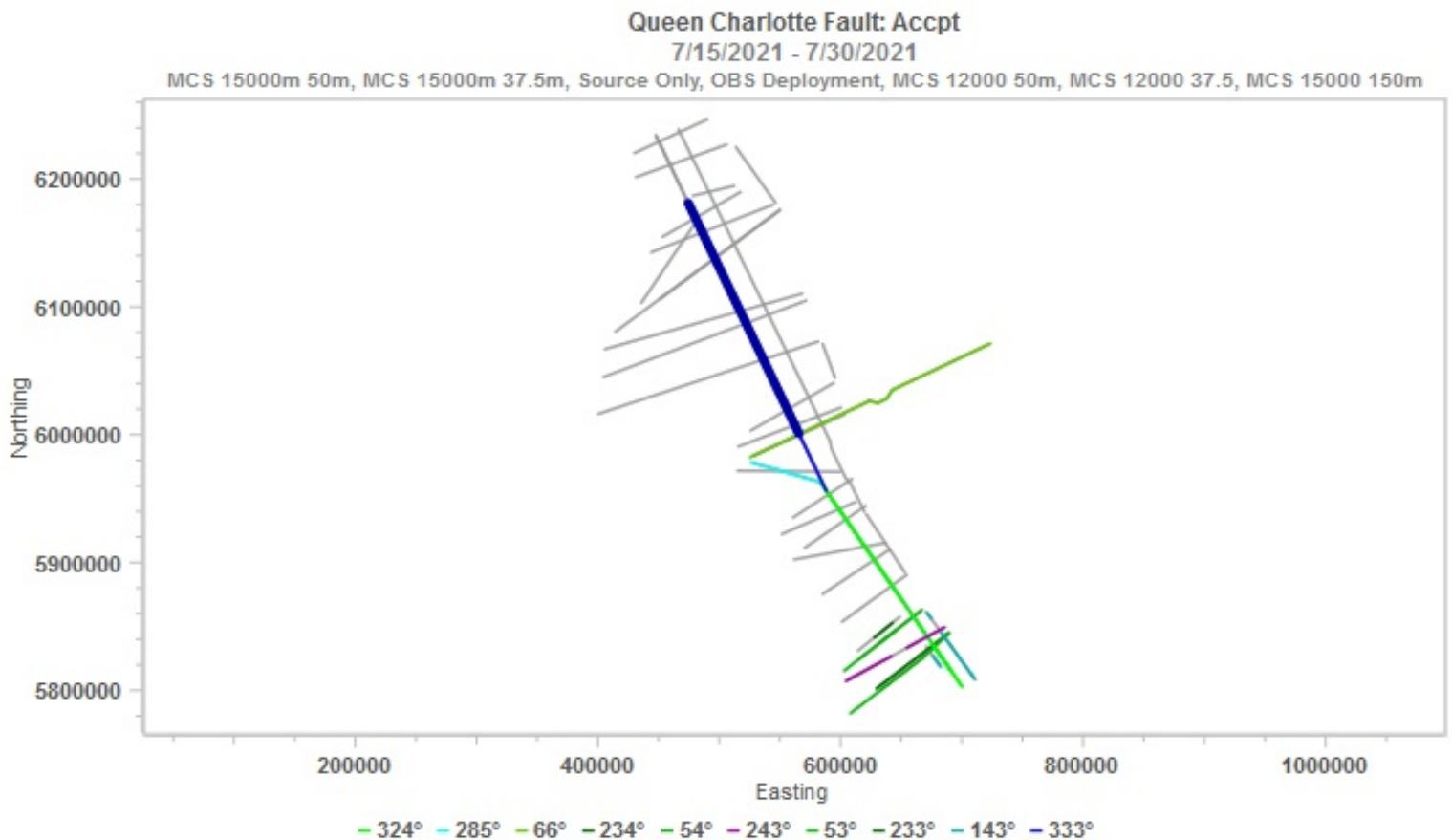
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Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 30 Jul

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):

Gun 4-1 disabled. Volume: 6240 CI

General Purpose Science:

XBT deployed

Daily Comment Summaries - Personnel Onboard

Fri 30 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Fri Jul 30 2021 02:15p.m.

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Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Fri 30. Jul 19:10	Fri 30. Jul 20:10
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			



Daily Science Report

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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sat 31 Jul

Two small shutdowns for whales sightings today.

We recovered gun-strings 3 and 4 today for repairs and maintenance. There was an air leak on string #4 due to the mud hose turning inside the clamps. We recovered these while acquiring Seq 21 and made the repairs and modifications to the mud hose and clamps to solve the twisting.. We finished Seq. 21 with only gun-strings #1 and #2.

We started Seq 22 with three gun-strings and were at full volume shortly after SOL.

Steady shooting.

Daily Comment Summaries - Plan for Tomorrow

Sat 31 Jul

Continue acquiring QCF120 and QCF14

Gun maintenance on strings 1 and 2 at next opportunity.

Timing Diary (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)







Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 31. Jul 00:00	Sat 31. Jul 02:24	2.400
SOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault FGSP=2649 Hdg=333.2° Prime EOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault LGSP=2786 Incomplete				
Cetacean	SB_CT	Sat 31. Jul 02:24	Sat 31. Jul 03:18	0.900
NTBP Seq 20 Block=Queen Charlotte Fault FSP=2787 LSP=2821 Shutdown for fin whale sighting.				
Production Prime	AC_PP	Sat 31. Jul 03:18	Sat 31. Jul 10:16	6.967
SOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault FGSP=2822 Hdg=333.2° Prime EOL Seq 20 Line:PO01APreplot:QCF01AO Block=Queen Charlotte Fault LGSP=3158 Complete				
Prime Line Change	AC_PLC	Sat 31. Jul 10:16	Sat 31. Jul 10:59	0.717
Nominal Prime line change.				
Production Prime	AC_PP	Sat 31. Jul 10:59	Sat 31. Jul 17:00	6.017
SOL Seq 21 Line:PM01A1 Preplot:QCF01A1M Block=Queen Charlotte Fault FGSP=1329 Hdg=153.2° Prime EOL Seq 21 Line:PM01A1 Preplot:QCF01A1M Block=Queen Charlotte Fault LGSP=1675 Incomplete				



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Category	Code	Start	End	Duration
 Cetacean	SB_CT	Sat 31. Jul 17:00	Sat 31. Jul 17:38	0.633
NTBP Seq 21 Block=Queen Charlotte Fault FSP=1676 LSP=1763				
Shutdown for whale sighting.				
 Production Prime	AC_PP	Sat 31. Jul 17:38	Sat 31. Jul 22:01	4.383
SOL Seq 21 Line:PM01A1 Preplot:QCF01A1M Block=Queen Charlotte Fault FGSP=1764 Hdg=153.2° Prime EOL Seq 21 Line:PM01A1 Preplot:QCF01A1M Block=Queen Charlotte Fault LGSP=2450 Complete				
Turn in the streamer a SOL				
 Prime Line Change	AC_PLC	Sat 31. Jul 22:01	Sat 31. Jul 22:08	0.117
Nominal Prime line change.				
 Production Prime	AC_PP	Sat 31. Jul 22:08	Sat 31. Jul 24:00	1.867
SOL Seq 22 Line:T01A112 Preplot:Turn4 Block=Queen Charlotte Fault FGSP=1011 FCSP=N/AHdg=215.4° Prime MSP Seq 22 Line:T01A112 Preplot:Turn4 Block=Queen Charlotte Fault LGSP=1280 LCSP=1280 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

31-Jul	Hours	%Percent
Acquisition	22.467	93.611
Prime Line Change	0.833	3.472
Production Prime	21.633	90.139
Chargeable Standby	1.533	6.389
Cetacean	1.533	6.389
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	34.195
At Anchor	24.000	5.882
Deployment	3.167	0.776
Mob Ashore	64.500	15.809
Testing	0.433	0.106
Transit to Prospect	47.417	11.622
Chargeable Standby	81.083	19.873
Cetacean	39.700	9.730
Reconfiguration	18.300	4.485
Streamers Reconfig	18.300	4.485
Transit	23.083	5.658
Acquisition	187.400	45.931
Prime Line Change	6.183	1.516



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Category	Hours	%Percent
Production Prime	181.217	44.416
Total	408.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Acpt km by Shotpoint) - Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
20	PO01A	333.2	2649	3158	Prime	71.25	4.426	Complete	Complete
NTBP: 2787 - 2821 (not chgd)									
21	PM01A1	153.2	1329	2450	Prime	155.10	8.037	Complete	Complete
NTBP: 1676 - 1763 (not chgd)									
22	T01A112	215.4	1011	1280	Prime	40.50	11.672	Part	Midnight
Total						266.85			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	266.85	1027.95	1605.40	1605.40
Combined	266.85	1027.95	1605.40	1605.40



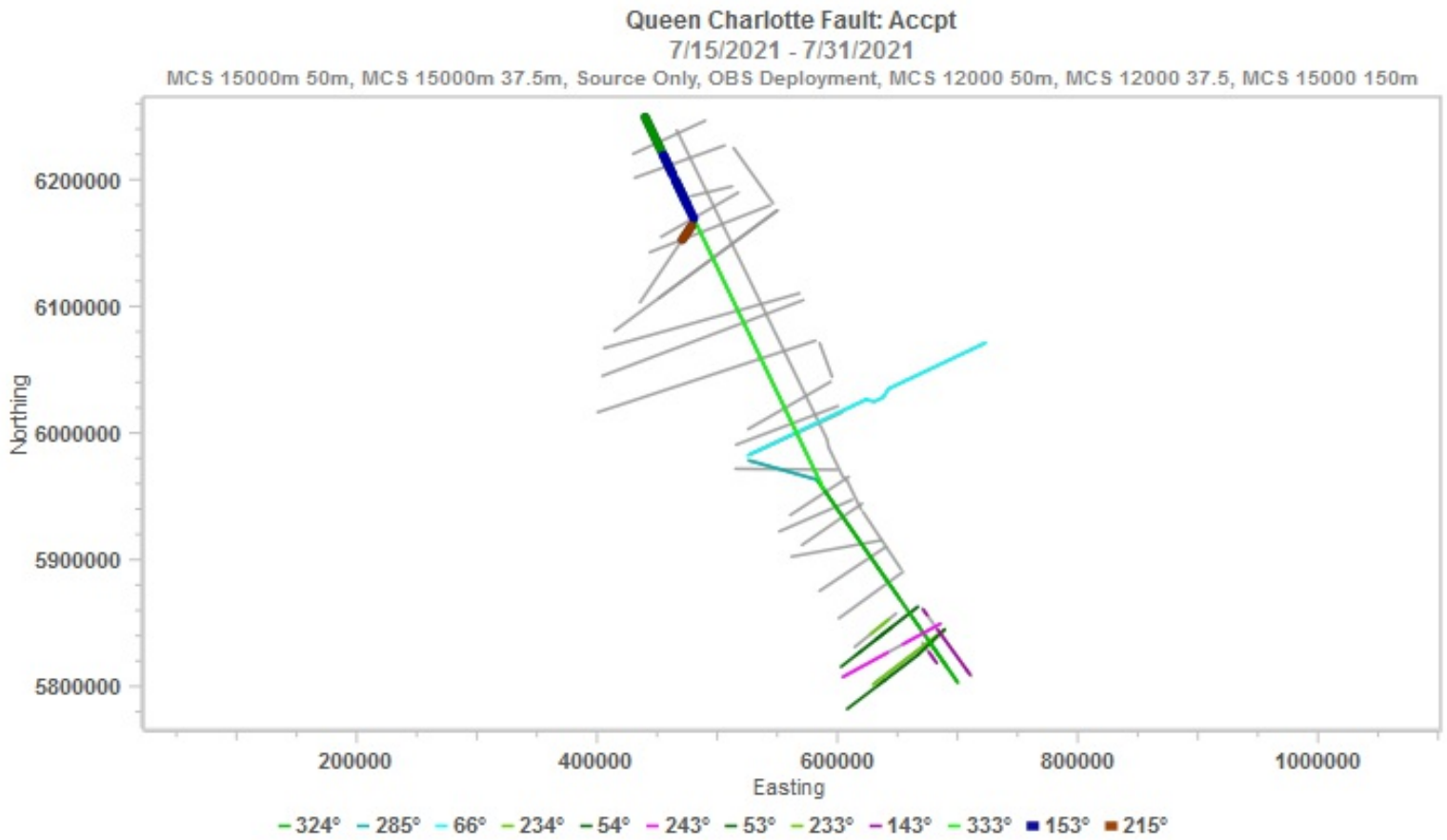
7/31/2021



Daily Science Report

Lamont-Doherty Earth Observatory
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Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 31 Jul

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):

We replaced the solenoid on Gun 4-1

We loosened all of the mud hose clamps and added mud hose shims and scotch coat to stop the twisting.

Repaired an air hose on gun string #4 that was damaged due to the twisting.

General Purpose Science:

Swapped the gyro feed to the navigation screen.

Daily Comment Summaries - Personnel Onboard

Sat 31 Jul

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Sat Jul 31 2021 04:29p.m.

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Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth


Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
Ben Phrampus - US NRL Sr. Scientist
Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Shutdown	Cet_SD	Sat 31. Jul 02:24	Sat 31. Jul 03:18
HSE - Mammal Shut Down			
 Shutdown	Cet_SD	Sat 31. Jul 17:00	Sat 31. Jul 17:38
HSE - Mammal Shut Down			
 Chiefs Meeting	Mtgs_Chfs	Sat 31. Jul 19:00	Sat 31. Jul 19:25
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			

Daily Total Category	Code	Count
 Toolbox Meetings	Mtgs_Tbox	2
7/31/2021		
Toolbox meeting to discuss source recovery with large air leak. Toolbox meeting to review plan to modify the mud hose clamps.		



Daily Science Report

8/1/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 01 Aug

There was one cetacean sighting and it was decided to circle the vessel to acquire the deficiency in coverage created by the shutdown.

Good production and favorable weather.

Daily Comment Summaries - Plan for Tomorrow

Sun 01 Aug

Picking up gun-strings # 1 and #2 for maintenance and inspection during the transit line between Lines QCF120 and QCF14.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 1. Aug 00:00	Sun 1. Aug 07:09	7.150
SOL Seq 22 Line:T01A112 Preplot:Turn4 Block=Queen Charlotte Fault FGSP=1281 Hdg=214.4° Prime EOL Seq 22 Line:T01A112 Preplot:Turn4 Block=Queen Charlotte Fault LGSP=2472 Complete				
Prime Line Change	AC_PLC	Sun 1. Aug 07:09	Sun 1. Aug 08:15	1.100
Nominal Prime line change.				
Production Prime	AC_PP	Sun 1. Aug 08:15	Sun 1. Aug 12:55	4.667
SOL Seq 23 Line:PO12 Preplot:QCF120 Block=Queen Charlotte Fault FGSP=949 Hdg=54.9° Prime EOL Seq 23 Line:PO12 Preplot:QCF120 Block=Queen Charlotte Fault LGSP=1195 Complete EEOL dt cetacean sighting. Circle for cetacean.				
Cetacean	SB_CT	Sun 1. Aug 12:55	Sun 1. Aug 16:05	3.167
Chargeable standby due to close proximity of Cetaceans. Circled for cetacean sighting.				
Production Prime	AC_PP	Sun 1. Aug 16:05	Sun 1. Aug 24:00	7.917
SOL Seq 24 Line:PO12APreplot:QCF120 Block=Queen Charlotte Fault FGSP=1196 FCSP=N/AHdg=54.9° Prime MSP Seq 24 Line:PO12APreplot:QCF120 Block=Queen Charlotte Fault LGSP=1597 LCSP=1597 Midnight				



Daily Science Report

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

1-Aug	Hours	%Percent
Acquisition	20.833	86.806
Prime Line Change	1.100	4.583
Production Prime	19.733	82.222
Chargeable Standby	3.167	13.194
Cetacean	3.167	13.194
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	32.296
At Anchor	24.000	5.556
Deployment	3.167	0.733
Mob Ashore	64.500	14.931
Testing	0.433	0.100
Transit to Prospect	47.417	10.976
Chargeable Standby	84.250	19.502
Cetacean	42.867	9.923
Reconfiguration	18.300	4.236
Stream Reconfig	18.300	4.236
Transit	23.083	5.343
Acquisition	208.233	48.202
Prime Line Change	7.283	1.686
Production Prime	200.950	46.516
Total	432.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		



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8/1/2021

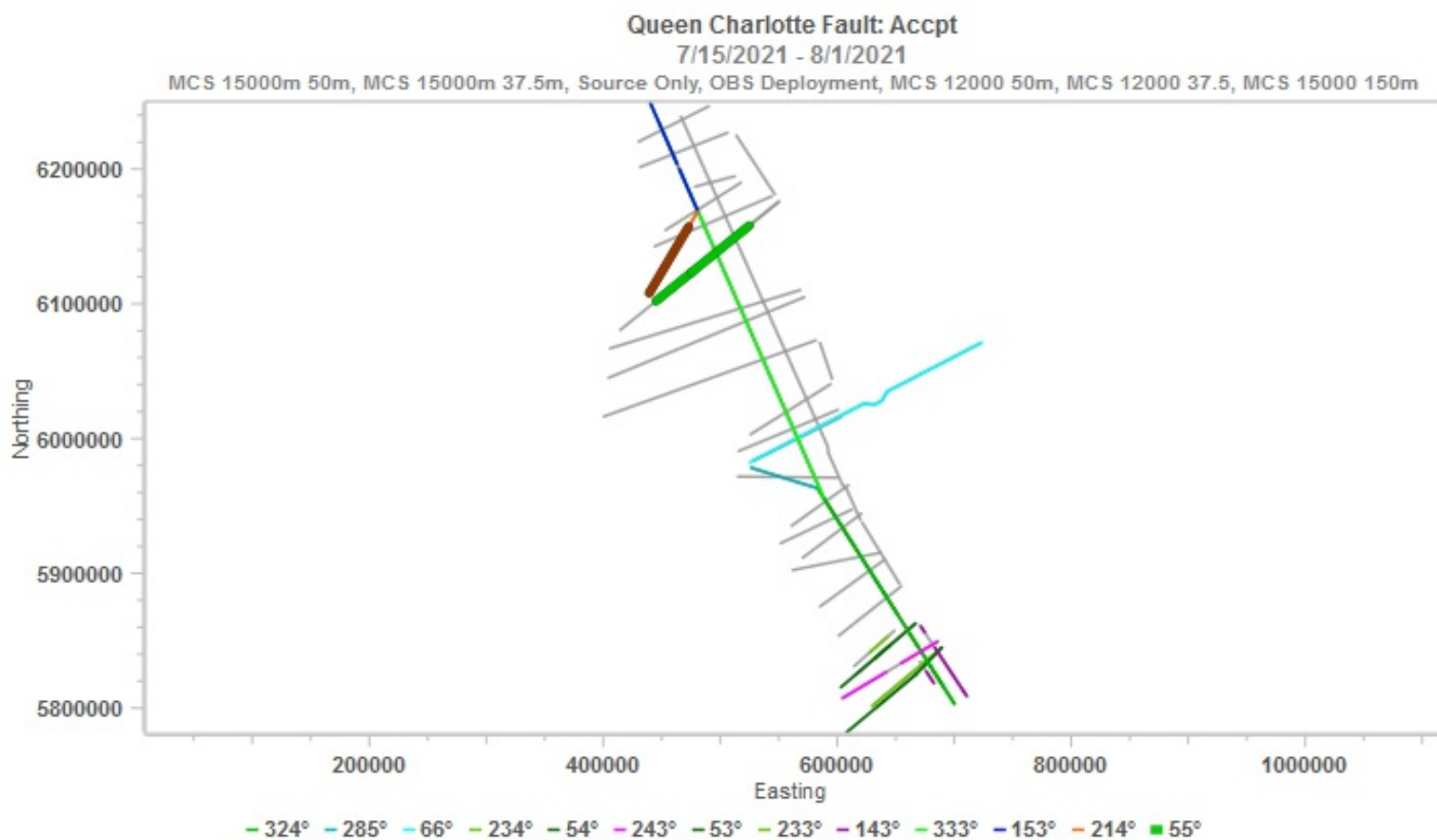
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Production Listing (Acpt km by interval) - Prime: Full Fold, Infill: Sail Line

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
22	T01A112	214.4	1281	2472	Prime	59.60	4.375	Complete	Complete
23	PO12	54.9	949	1195	Prime	12.30	1.423	Complete	Complete
24	PO12A	54.9	1196	1597	Prime	20.05	1.368	Part	Midnight
Total						91.95			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	91.95	1022.20	91.95	1599.65
Combined	91.95	1022.20	91.95	1599.65



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 01 Aug

Navigation:

GPS on #2 gun string and tail-buoy.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report



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General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sun 01 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
Ben Phrampus - US NRL Sr. Scientist
Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Sun 1. Aug 19:30	Sun 1. Aug 20:00
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/2/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Mon 02 Aug

We had one small shutdown for whales on Seq 27.

We completed some source maintenance on Seq 25.

Daily Comment Summaries - Plan for Tomorrow

Mon 02 Aug

We will complete QCF14 and QCF15 and start the long line south QCF020.

Timing Diary (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 2. Aug 00:00	Mon 2. Aug 02:51	2.850
SOL Seq 24 Line:PO12APreplot:QCF120 Block=Queen Charlotte Fault FGSP=1598 Hdg=54.9° Prime EOL Seq 24 Line:PO12APreplot:QCF120 Block=Queen Charlotte Fault LGSP=1755 Complete				
Prime Line Change	AC_PLC	Mon 2. Aug 02:51	Mon 2. Aug 03:46	0.917
Nominal Prime line change.				
Production Prime	AC_PP	Mon 2. Aug 03:46	Mon 2. Aug 06:51	3.083
SOL Seq 25 Line:T12A14 Block=Queen Charlotte Fault FGSP=1004 Hdg=335.3° Prime EOL Seq 25 Line:T12A14 Block=Queen Charlotte Fault LGSP=1470 Complete				
Prime Line Change	AC_PLC	Mon 2. Aug 06:51	Mon 2. Aug 06:55	0.067
Nominal Prime line change.				
Production Prime	AC_PP	Mon 2. Aug 06:55	Mon 2. Aug 12:34	5.650
SOL Seq 26 Line:T12A14B Preplot:T12A14 Block=Queen Charlotte Fault FGSP=1004 Hdg=335.3° Prime EOL Seq 26 Line:T12A14B Preplot:T12A14 Block=Queen Charlotte Fault LGSP=1812 Complete				
Production Prime	AC_PP	Mon 2. Aug 12:50	Mon 2. Aug 21:04	8.233
SOL Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault FGSP=949 Hdg=71.2° Prime EOL Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault LGSP=2252 Incomplete				
Cetacean	SB_CT	Mon 2. Aug 21:04	Mon 2. Aug 21:39	0.583
NTBP Seq 27 Block=Queen Charlotte Fault FSP=2253 LSP=2326				
Production Prime	AC_PP	Mon 2. Aug 21:39	Mon 2. Aug 24:00	2.350



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Category	Code	Start	End	Duration
SOL Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault FGSP=2327 FCSP=N/AHdg=71.2° Prime				
MSP Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault LGSP=2695 LCSP=2695 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

2-Aug	Hours	% Percent
Acquisition	23.150	96.458
Prime Line Change	0.983	4.097
Production Prime	22.167	92.361
Chargeable Standby	0.583	2.431
Cetacean	0.583	2.431
Day's Total	23.733	98.889

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	30.614
At Anchor	24.000	5.266
Deployment	3.167	0.695
Mob Ashore	64.500	14.153
Testing	0.433	0.095
Transit to Prospect	47.417	10.404
Chargeable Standby	84.833	18.615
Cetacean	43.450	9.534
Reconfiguration	18.300	4.016
Streamer Reconfig	18.300	4.016
Transit	23.083	5.065
Acquisition	231.383	50.772
Prime Line Change	8.267	1.814
Production Prime	223.117	48.958
Total	455.733	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



Daily Science Report

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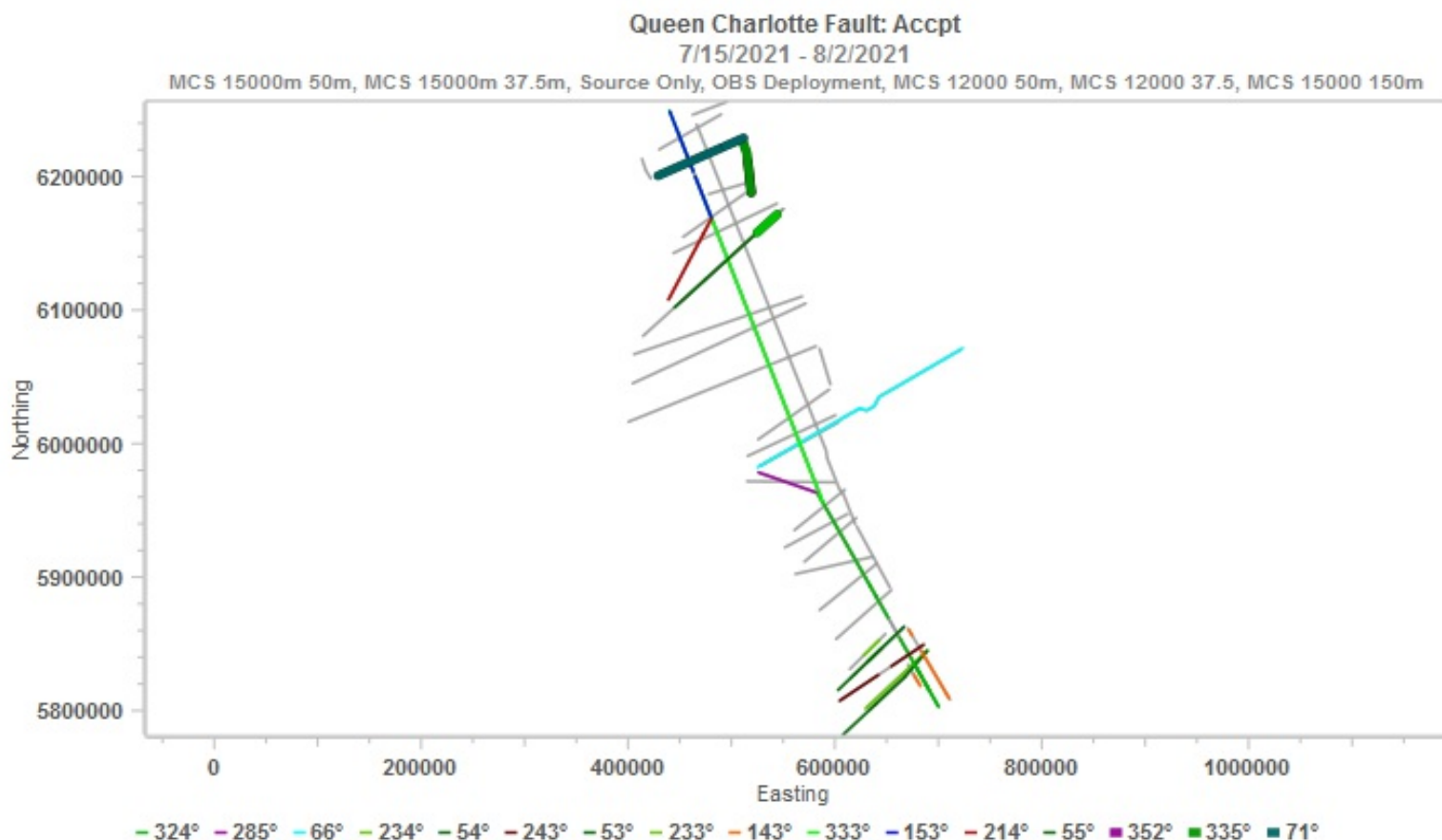
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Acctpt km by Shotpoint) - Prime: Full Fold, Infill: Various

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
24	PO12A	54.9	1598	1755	Prime	23.70	4.205	Complete	Complete
25	T12A14A	351.7	1004	1470	Prime	23.30	4.080	Complete	Complete
26	T12A14B	335.3	1004	1812	Prime	40.40	3.861	Complete	Complete
27	PM14	71.2	949	2695	Prime	83.60	4.263	Part	Midnight
NTBP: 2253 - 2326 (not chgd)									
Total						171.00			

Production Totals (Acctpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	171.00	171.00	327.95	1699.50
Combined	171.00	171.00	327.95	1699.50





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Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 02 Aug

Navigation:

Repaired GPS on gunstring #2
GPS on #3 failed.
TB GPS not working.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Repaired the mud hose twisting on gun strings 1,2
Replaced after cluster on gun string #1

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Mon 02 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

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Evana Douglas - RPS PSO
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Jillian Daniel - RPS PSO

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Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Mon 2. Aug 19:20	Mon 2. Aug 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			
Shutdown	Cet_SD	Mon 2. Aug 21:04	Mon 2. Aug 21:39



Daily Science Report

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Category	Code	Start	End
HSE - Mammal Shut Down			



Daily Science Report

8/3/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 03 Aug

Gun 4-1 started to autofire at the end of Seq 30. We finished that line with Gun 4-1 disabled. We started to acquire line QCF020 at half volume in order to pick up gun strings #3 and #4 to make the repairs. The decision was made to circle back to the beginning of the line to achieve full gun volume before starting the OBS line.

The weather has picked up significantly.

Daily Comment Summaries - Plan for Tomorrow

Tue 03 Aug

We will continue to shoot Line QCF020 for the next two days.

Timing Diary (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

<div></div>				
Category	Code	Start	End	Duration
<div></div> Production Prime	AC_PP	Tue 3. Aug 00:00	Tue 3. Aug 00:12	0.200
SOL Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault FGSP=2696 Hdg=71.2° Prime EOL Seq 27 Line:PM14 Preplot:QCF14 Block=Queen Charlotte Fault LGSP=2729 Complete				
<div></div> Prime Line Change	AC_PLC	Tue 3. Aug 00:12	Tue 3. Aug 00:40	0.467
Nominal Prime line change.				
<div></div> Production Prime	AC_PP	Tue 3. Aug 00:40	Tue 3. Aug 02:27	1.783
SOL Seq 28 Line:Turn6 Block=Queen Charlotte Fault FGSP=1029 Hdg=322° Prime EOL Seq 28 Line:Turn6 Block=Queen Charlotte Fault LGSP=1310 Complete				
<div></div> Prime Line Change	AC_PLC	Tue 3. Aug 02:27	Tue 3. Aug 02:55	0.467
Nominal Prime line change.				
<div></div> Production Prime	AC_PP	Tue 3. Aug 02:55	Tue 3. Aug 13:41	10.767
SOL Seq 29 Line:PM15 Preplot:QCF15 Block=Queen Charlotte Fault FGSP=701 Hdg=66.3° Prime EOL Seq 29 Line:PM15 Preplot:QCF15 Block=Queen Charlotte Fault LGSP=2465 Complete				
<div></div> Prime Line Change	AC_PLC	Tue 3. Aug 13:41	Tue 3. Aug 14:13	0.533
Nominal Prime line change.				
<div></div> Production Prime	AC_PP	Tue 3. Aug 14:13	Tue 3. Aug 17:59	3.767
SOL Seq 30 Line:Turn7 Block=Queen Charlotte Fault FGSP=1002 Hdg=253.6° Prime				



Daily Science Report

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Category	Code	Start	End	Duration
EOL Seq 30 Line:Turn7 Block=Queen Charlotte Fault LGSP=1605 Complete				
Prime Line Change	AC_PLC	Tue 3. Aug 17:59	Tue 3. Aug 18:26	0.450
Nominal Prime line change.				
Production Prime	AC_PP	Tue 3. Aug 18:26	Tue 3. Aug 20:13	1.783
SOL Seq 31 Line:PO02 Preplot:QCF02O Block=Queen Charlotte Fault FGSP=953 Hdg=152.9° Prime EOL Seq 31 Line:PO02 Preplot:QCF02O Block=Queen Charlotte Fault LGSP=1045 Complete				
Source	DT_SC	Tue 3. Aug 20:13	Tue 3. Aug 23:11	2.967
Downtime due to source. We circled to repair guns to start this OBS line with full gun volume. Auto fire on gun 4-1				
Production Prime	AC_PP	Tue 3. Aug 23:11	Tue 3. Aug 24:00	0.817
SOL Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault FGSP=966 FCSP=N/AHdg=152.9° Prime MSP Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault LGSP=1012 LCSP=1012 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

3-Aug	Hours	%Percent
Acquisition	21.033	87.639
Prime Line Change	1.917	7.986
Production Prime	19.117	79.653
DownTime	2.967	12.361
Source	2.967	12.361
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	29.066
At Anchor	24.000	5.000
Deployment	3.167	0.660
Mob Ashore	64.500	13.438
Testing	0.433	0.090
Transit to Prospect	47.417	9.878
Chargeable Standby	84.833	17.674
Cetacean	43.450	9.052
Reconfiguration	18.300	3.812
Streamers Reconfig	18.300	3.812
Transit	23.083	4.809
Acquisition	252.683	52.642
Prime Line Change	10.450	2.177
Production Prime	242.233	50.465
DownTime	2.967	0.618



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

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Category	Hours	% Percent
Source	2.967	0.618
Total	480.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
27	PM14	71.2	2696	2729	Prime	1.70	4.269	Complete	Complete
28	Turn6	322.0	1029	1310	Prime	14.05	4.254	Complete	Complete
29	PM15	66.3	701	2465	Prime	88.20	4.423	Complete	Complete
30	Turn7	253.6	1002	1605	Prime	30.15	4.322	Complete	Complete
31	PO02	152.9	953	1045	Prime	13.95	4.178	Complete	Complete
32	PO02A	152.9	966	1012	Prime	7.05	4.562	Part	Midnight
Total						155.10			

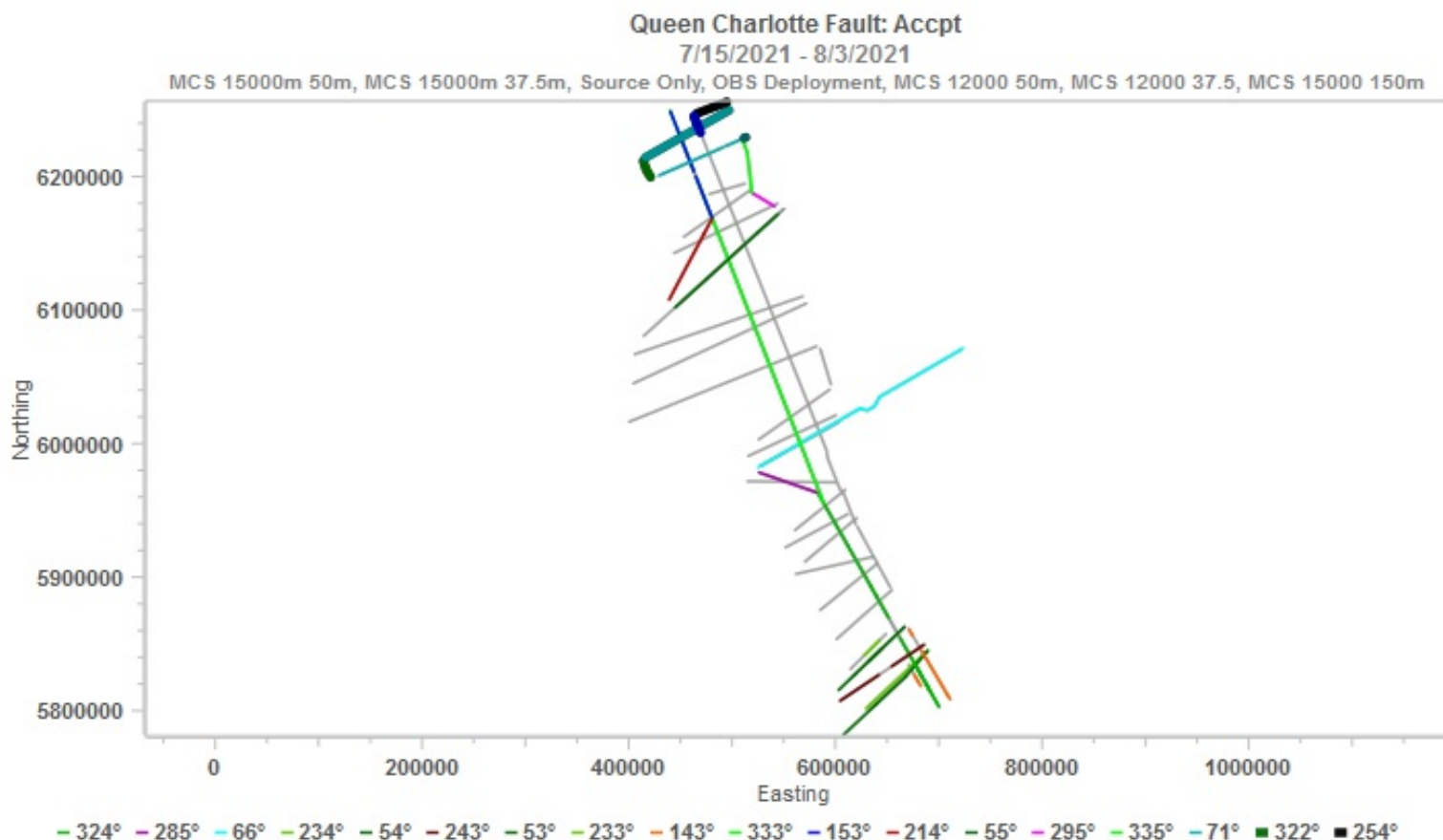
Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	155.10	326.10	483.05	1854.60
Combined	155.10	326.10	483.05	1854.60



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Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 03 Aug

Navigation:

GPS on gunstrings 1, 4 have dropped out
TB GPS

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

We picked up gun strings #3 and #4 to fix the autofire on gun 4-1

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Tue 03 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adededeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Tue 3. Aug 19:10	Tue 3. Aug 20:10
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues.			



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/4/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Wed 04 Aug

A very solid day. We shot on Seq 32, Line MGL2105PO02A, for 24 hours without any shutdowns.

The streamer has been solid and the gear is towing well.

Daily Comment Summaries - Plan for Tomorrow

Wed 04 Aug

We will complete the current line at approximately 12pm local time. We then transit to QCF04. The weather has been choppy.

We will cross back into Canadian waters around midnight local time.

Timing Diary (Marcus G Langseth, MCS 15000 150m)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 4. Aug 00:00	Wed 4. Aug 24:00	24.000
SOL Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault FGSP=1013 FCSP=N/AHdg=152.9° Prime MSP Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault LGSP=2275 LCSP=2275 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000 150m)

4-Aug	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, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	27.682
At Anchor	24.000	4.762
Deployment	3.167	0.628
Mob Ashore	64.500	12.798
Testing	0.433	0.086



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Category	Hours	% Percent
Transit to Prospect	47.417	9.408
Chargeable Standby	84.833	16.832
Cetacean	43.450	8.621
Reconfiguration	18.300	3.631
Streamer Reconfig	18.300	3.631
Transit	23.083	4.580
Acquisition	276.683	54.897
Prime Line Change	10.450	2.073
Production Prime	266.233	52.824
DownTime	2.967	0.589
Source	2.967	0.589
Total	504.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Listing (Accpt km by Shotpoint) - Full Fold

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
32	PO02A	152.9	1013	2275	Prime	189.45	4.272	Part	Midnight
Total						189.45			

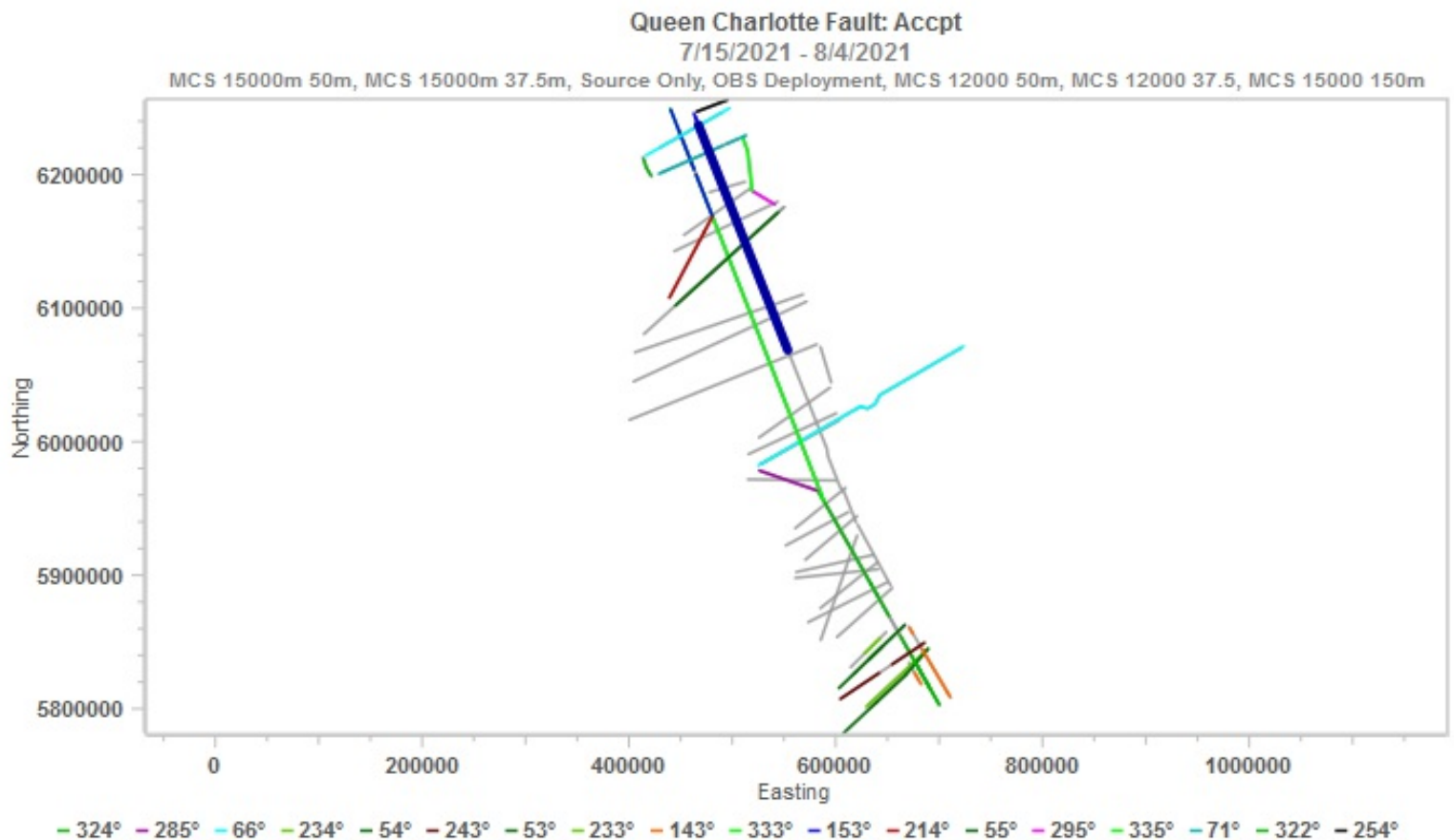
Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	189.45	515.55	672.50	2044.05
Combined	189.45	515.55	672.50	2044.05



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Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 04 Aug

Navigation:

GPS on gunstrings 1, 4 have dropped out
TB GPS is out.

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 04 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

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Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

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Ben Phrampus - US NRL Sr. Scientist


Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Wed 4. Aug 19:25	Wed 4. Aug 20:25
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

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Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Thu 05 Aug

We completed the OBS program for MGL2105.






One small shutdown for cetacean sighting.

Daily Comment Summaries - Plan for Tomorrow

Thu 05 Aug

We will complete lines TO204 and QCF04,

Timing Diary (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

Category	Code	Start	End	Duration
 Production Prime	AC_PP	Thu 5. Aug 00:00	Thu 5. Aug 19:14	19.233
SOL Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault FGSP=2276 Hdg=152.9° Prime EOL Seq 32 Line:PO02APreplot:QCF02O Block=Queen Charlotte Fault LGSP=3490 Complete This completes the OBS program for MGL2105.				
 Prime Line Change	AC_PLC	Thu 5. Aug 19:14	Thu 5. Aug 19:25	0.183
Nominal Prime line change.				
 Production Prime	AC_PP	Thu 5. Aug 19:25	Thu 5. Aug 22:39	3.233
SOL Seq 33 Line:T0204 Block=Queen Charlotte Fault FGSP=1033 Hdg=204.2° Prime EOL Seq 33 Line:T0204 Block=Queen Charlotte Fault LGSP=1512 Incomplete				
 Cetacean	SB_CT	Thu 5. Aug 22:39	Thu 5. Aug 23:11	0.533
NTBP Seq 33 T0204 Block=Queen Charlotte Fault FSP=1513 LSP=1584				
 Production Prime	AC_PP	Thu 5. Aug 23:11	Thu 5. Aug 24:00	0.817
SOL Seq 33 Line:T0204 Block=Queen Charlotte Fault FGSP=1585 FCSP=N/AHdg=204.2° Prime MSP Seq 33 Line:T0204 Block=Queen Charlotte Fault LGSP=1698 LCSP=1698 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m, MCS 15000 150m)

5-Aug	Hours	%Percent
Acquisition	23.467	97.778
Prime Line Change	0.183	0.764



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5-Aug	Hours	% Percent
Production Prime	23.283	97.014
Chargeable Standby	0.533	2.222
Cetacean	0.533	2.222
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	26.424
At Anchor	24.000	4.545
Deployment	3.167	0.600
Mob Ashore	64.500	12.216
Testing	0.433	0.082
Transit to Prospect	47.417	8.980
Chargeable Standby	85.367	16.168
Cetacean	43.983	8.330
Reconfiguration	18.300	3.466
Streamer Reconfig	18.300	3.466
Transit	23.083	4.372
Acquisition	300.150	56.847
Prime Line Change	10.633	2.014
Production Prime	289.517	54.833
DownTime	2.967	0.562
Source	2.967	0.562
Total	528.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		



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Lamont-Doherty Earth Observatory
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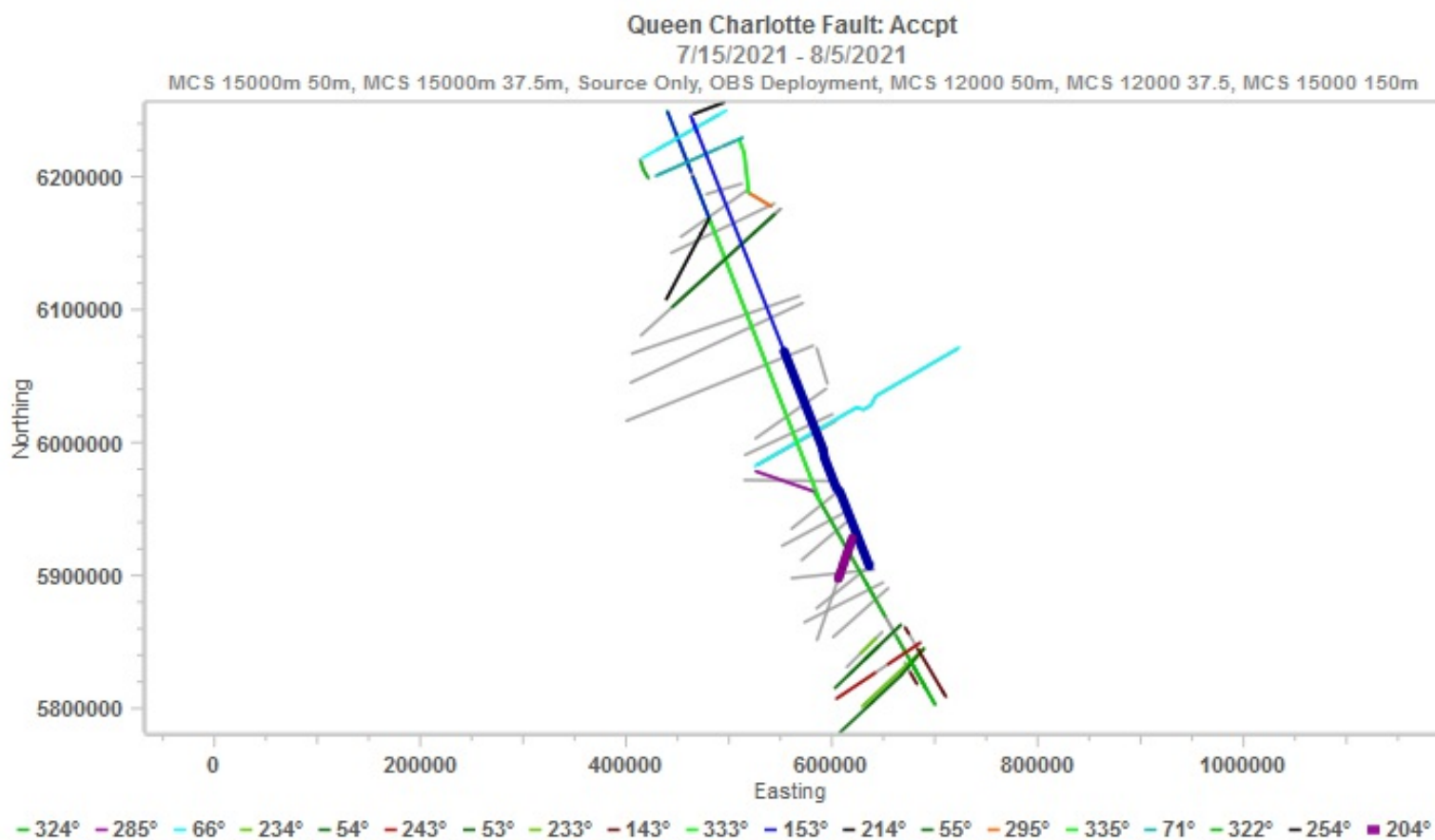
Page 3

Production Listing (Acpt km by Shotpoint) - Prime: Full Fold, Infill: Various

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
32	PO02A	152.9	2276	3490	Prime	182.25	4.641	Complete	Complete
33	T0204	204.2	1033	1698	Prime	29.65	3.946	Part	Midnight
NTBP: 1513 - 1584 (not chgd)									
Total						211.90			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	211.90	727.45	884.40	2255.95
Combined	211.90	727.45	884.40	2255.95



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 05 Aug

Navigation:

GPS on gunstrings 1, 4 have dropped out
TB GPS is out

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Thu Aug 5 2021 02:18p.m.

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General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 05 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Cody Bahlau L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)


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 Eren Penfield - RPS PSO
 Evana Douglas - RPS PSO
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 Jillian Daniel - RPS PSO

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Lindsay Worthington - U. New Mexico - PI
 Ben Phrampus - US NRL Sr. Scientist
 Sarah Nolt-Caraway - U. New Mexico - Scientist
 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Thu 5. Aug 19:20	Thu 5. Aug 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

8/6/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Fri 06 Aug

We ended Seq 34 early to circle back and reshoot coverage rejected for an autofiring gun 4-1. Gun strings #3 and #4 were recovered to make repairs.

The gun-string GPS situation improved dramatically when a new PBX box was swapped in the rack. We have 3 out of 4 working again.

The GunLink locked up and spontaneously rebooted during Seq 33. It is working fine again. We lost about five minutes of acquisition.

The weather looks good through Tuesday.

Daily Comment Summaries - Plan for Tomorrow

Fri 06 Aug

We will acquire QCF05 and transit lines.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 6. Aug 00:00	Fri 6. Aug 07:00	7.000
SOL Seq 33 Line:T0204 Block=Queen Charlotte Fault FGSP=1699 Hdg=204.2° Prime EOL Seq 33 Line:T0204 Block=Queen Charlotte Fault LGSP=2811 Incomplete				
Source	DT_SC	Fri 6. Aug 07:00	Fri 6. Aug 07:05	0.083
NTBP Seq 33 T0204 Block=Queen Charlotte Fault FSP=2812 LSP=2822 Gunlink 2000 locked up and rebooted spontaneously.				
Production Prime	AC_PP	Fri 6. Aug 07:05	Fri 6. Aug 07:31	0.433
SOL Seq 33 Line:T0204 Block=Queen Charlotte Fault FGSP=2823 Hdg=204.2° Prime EOL Seq 33 Line:T0204 Block=Queen Charlotte Fault LGSP=2886 Complete				
Prime Line Change	AC_PLC	Fri 6. Aug 07:31	Fri 6. Aug 08:39	1.133
Nominal Prime line change.				
Source	DT_SC	Fri 6. Aug 08:39	Fri 6. Aug 10:52	2.217
SOL Seq 34 Line:PM04 Preplot:QCF04 Block=Queen Charlotte Fault FGSP=657 Hdg=55.5° Prime EOL Seq 34 Line:PM04 Preplot:QCF04 Block=Queen Charlotte Fault LGSP=991 Incomplete				



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Category	Code	Start	End	Duration
NTBP due to gun 4-1 autofire.				
■ Source	DT_SC	Fri 6. Aug 10:52	Fri 6. Aug 15:38	4.767
Downtime due to source. Circle back to re-shoot the beginning of previous line. Recover gun-strings #3, #4 for repairs.				
■ Production Prime	AC_PP	Fri 6. Aug 15:38	Fri 6. Aug 24:00	8.367
SOL Seq 35 Line:PM04APreplot:QCF04 Block=Queen Charlotte Fault FGSP=837 FCSP=N/AHdg=55.5° Prime MSP Seq 35 Line:PM04APreplot:QCF04 Block=Queen Charlotte Fault LGSP=2224 LCSP=2224 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

6-Aug	Hours	%Percent
Acquisition	16.933	70.556
Prime Line Change	1.133	4.722
Production Prime	15.800	65.833
DownTime	7.067	29.444
Source	7.067	29.444
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	25.275
At Anchor	24.000	4.348
Deployment	3.167	0.574
Mob Ashore	64.500	11.685
Testing	0.433	0.079
Transit to Prospect	47.417	8.590
Chargeable Standby	85.367	15.465
Cetacean	43.983	7.968
Reconfiguration	18.300	3.315
Streamer Reconfig	18.300	3.315
Transit	23.083	4.182
Acquisition	317.083	57.443
Prime Line Change	11.767	2.132
Production Prime	305.317	55.311
DownTime	10.033	1.818
Source	10.033	1.818
Total	552.000	



Daily Science Report

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Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
33	T0204	204.2	1699	2886	Prime	58.85	4.157	Complete	Complete
NTBP: 2812 - 2822 (not chgd)									
34	PM04	55.5	N/A	N/A	Prime	0.00	N/A	NTBP	NTBP
NTBP: 657 - 991 (not chgd)									
35	PM04A	55.5	837	2224	Prime	69.35	4.476	Part	Midnight
Total						128.20			

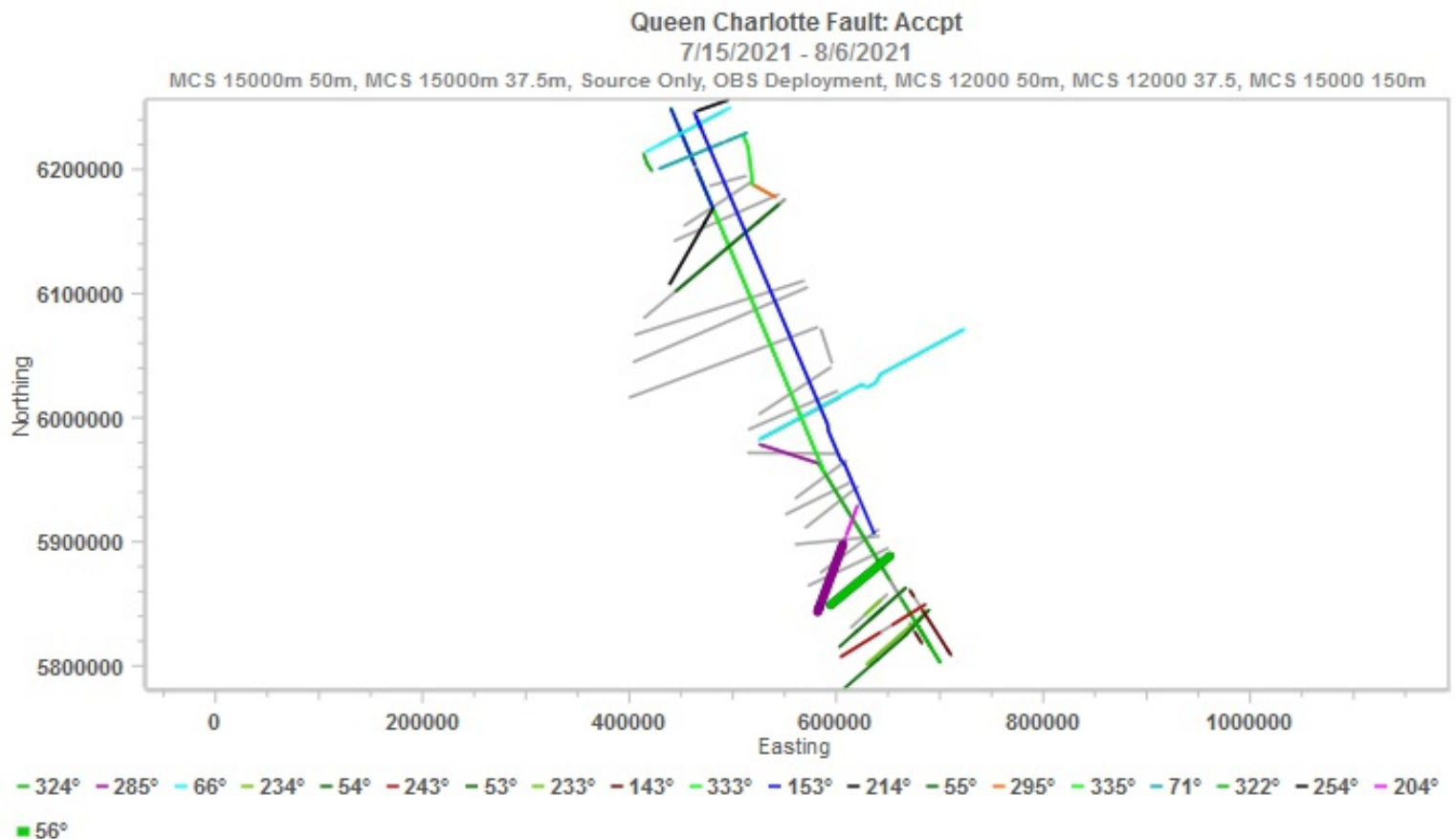
Production Totals (Acct km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	128.20	855.65	1012.60	2384.15
Combined	128.20	855.65	1012.60	2384.15



8/6/2021

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Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 06 Aug

Navigation:

TB GPS is out
Gunstring #1 GPS is out.

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 06 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

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Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

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Michael Coufal - Contract Personnel Marine Science Technician (Source)



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/6/2021

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Jacob Greenberg - UNOLS Tech (Source)

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Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Fri 6. Aug 19:20	Fri 6. Aug 20:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
Toolbox Meetings	Mtgs_Tbox	1
8/6/2021		
Toolbox to discuss source retrieval and deployment		



Daily Science Report

8/7/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sat 07 Aug

Steady shooting.

We had one long line change between Seq #37 and Seq #38 due to the shallow water restrictions and turn noise on the streamer.

Daily Comment Summaries - Plan for Tomorrow

Sat 07 Aug

We will shoot transit line TO506 and I line QCF06.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 7. Aug 00:00	Sat 7. Aug 00:21	0.350
SOL Seq 35 Line:PM04APreplot:QCF04 Block=Queen Charlotte Fault FGSP=2225 Hdg=55.5° Prime EOL Seq 35 Line:PM04APreplot:QCF04 Block=Queen Charlotte Fault LGSP=2270 Complete				
Prime Line Change	AC_PLC	Sat 7. Aug 00:21	Sat 7. Aug 01:23	1.033
Nominal Prime line change.				
Production Prime	AC_PP	Sat 7. Aug 01:23	Sat 7. Aug 11:29	10.100
SOL Seq 36 Line:TO405 Preplot:T0405 Block=Queen Charlotte Fault FGSP=1029 Hdg=245.3° Prime EOL Seq 36 Line:TO405 Preplot:T0405 Block=Queen Charlotte Fault LGSP=2680 Complete				
Prime Line Change	AC_PLC	Sat 7. Aug 11:29	Sat 7. Aug 13:13	1.733
Nominal Prime line change.				
Production Prime	AC_PP	Sat 7. Aug 13:13	Sat 7. Aug 22:18	9.083
SOL Seq 37 Line:PM05 Preplot:QCF05 Block=Queen Charlotte Fault FGSP=776 Hdg=58.2° Prime EOL Seq 37 Line:PM05 Preplot:QCF05 Block=Queen Charlotte Fault LGSP=2283 Complete				
Prime Line Change	AC_PLC	Sat 7. Aug 22:18	Sat 7. Aug 24:00	1.700
Nominal Prime line change.				



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/7/2021

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

7-Aug	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	4.467	18.611
Production Prime	19.533	81.389
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	24.222
At Anchor	24.000	4.167
Deployment	3.167	0.550
Mob Ashore	64.500	11.198
Testing	0.433	0.075
Transit to Prospect	47.417	8.232
Chargeable Standby	85.367	14.821
Cetacean	43.983	7.636
Reconfiguration	18.300	3.177
Streamer Reconfig	18.300	3.177
Transit	23.083	4.008
Acquisition	341.083	59.216
Prime Line Change	16.233	2.818
Production Prime	324.850	56.398
DownTime	10.033	1.742
Source	10.033	1.742
Total	576.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		



Daily Science Report

Lamont-Doherty Earth Observatory
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8/7/2021

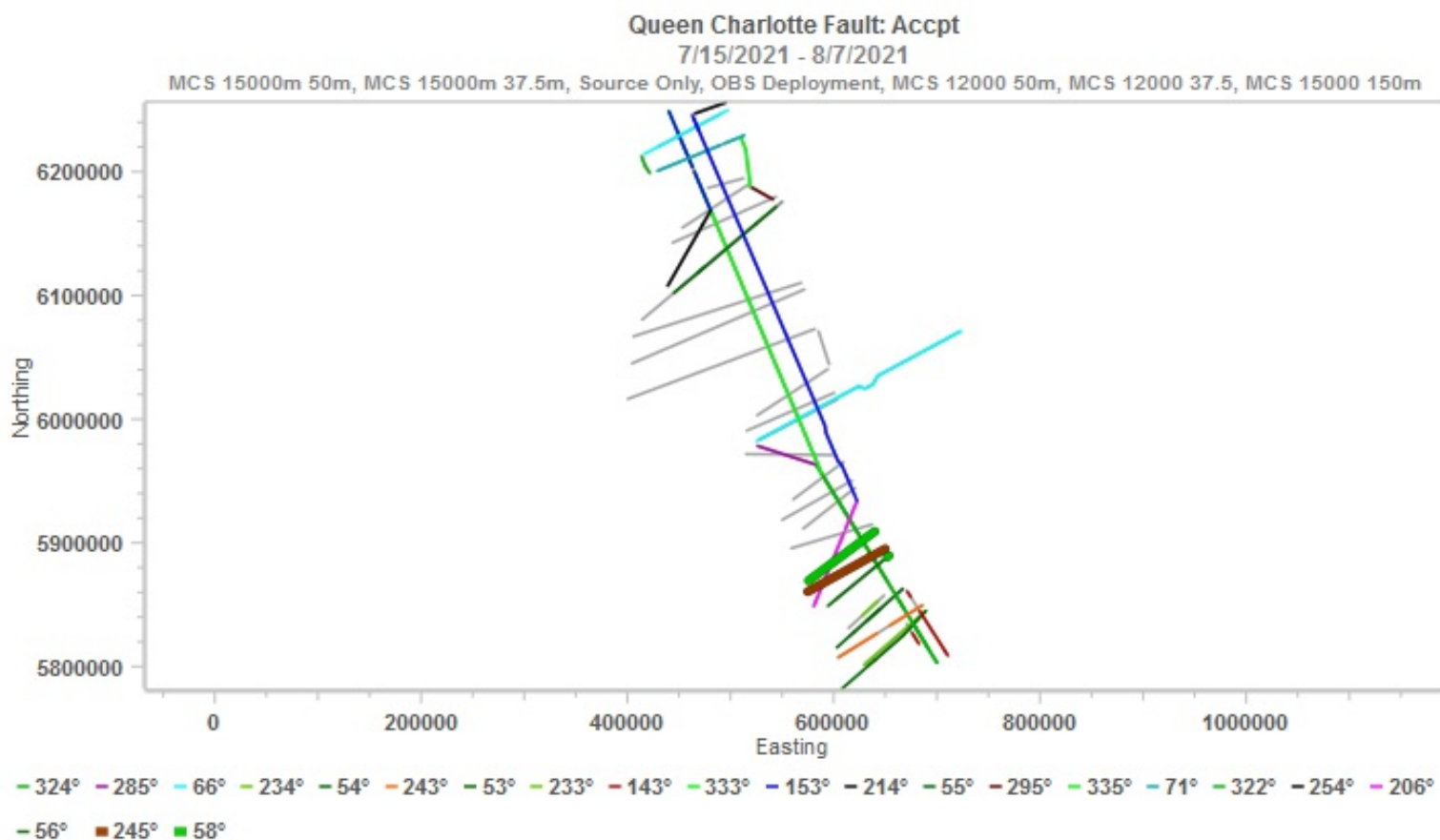
Page 3

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
35	PM04A	55.5	2225	2270	Prime	2.30	4.438	Complete	Complete
36	TO405	245.3	1029	2680	Prime	82.55	4.413	Complete	Complete
37	PM05	58.2	776	2283	Prime	75.35	4.479	Complete	Complete
Total						160.20			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	160.20	985.85	1150.45	2657.65
Combined	160.20	985.85	1150.45	2657.65



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 07 Aug

Navigation:

TB GPS is out

Gunstring #1 GPS is out.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Sat Aug 7 2021 01:54p.m.

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General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 07 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI
Ben Phrampus - US NRL Sr. Scientist
Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

8/8/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 08 Aug

We had three small shutdowns for whales today totaling almost 4 hours.

We picked up gun-strings #3, #4 for maintenance and repairs today. There was an air-leak on the aft cluster on string #4. After we fixed the air-leak we discovered that the fire chamber on 4-7 was cracked so we changed out the entire cluster. We were shutdown for cetaceans during the line change so we did some preventative maintenance during this time. We started the line with two gun-strings (#1,#2) and were back to full volume shortly after the line started.

Daily Comment Summaries - Plan for Tomorrow

Sun 08 Aug

We will acquire Line QCF06 and the transit line.

The weather will be picking up considerably late in the day.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)







Category	Code	Start	End	Duration
Prime Line Change	AC_PLC	Sun 8. Aug 00:00	Sun 8. Aug 00:46	0.767
Nominal Prime line change.				
Production Prime	AC_PP	Sun 8. Aug 00:46	Sun 8. Aug 04:06	3.333
SOL Seq 38 Line:T0506 Block=Queen Charlotte Fault FGSP=1300 Hdg=256.2° Prime EOL Seq 38 Line:T0506 Block=Queen Charlotte Fault LGSP=1831 Incomplete				
Cetacean	SB_CT	Sun 8. Aug 04:06	Sun 8. Aug 05:33	1.450
NTBP Seq 38 T0506 Block=Queen Charlotte Fault FSP=1832 LSP=2070 Shut down for whales				
Production Prime	AC_PP	Sun 8. Aug 05:33	Sun 8. Aug 08:39	3.100
SOL Seq 38 Line:T0506 Block=Queen Charlotte Fault FGSP=2071 Hdg=256.2° Prime EOL Seq 38 Line:T0506 Block=Queen Charlotte Fault LGSP=2571 Complete				
Prime Line Change	AC_PLC	Sun 8. Aug 08:39	Sun 8. Aug 10:39	2.000
Nominal Prime line change.				
Cetacean	SB_CT	Sun 8. Aug 10:39	Sun 8. Aug 11:33	0.900
Chargeable standby due to close proximity of Cetaceans.				



Daily Science Report

8/8/2021

Page 2

Category	Code	Start	End	Duration
Extended line change due to shutdown for whales				
 Production Prime	AC_PP	Sun 8. Aug 11:33	Sun 8. Aug 20:04	8.517
SOL Seq 39 Line:QCF06 Block=Queen Charlotte Fault FGSP=923 Hdg=56.8° Prime EOL Seq 39 Line:QCF06 Block=Queen Charlotte Fault LGSP=2200 Complete				
 Prime Line Change	AC_PLC	Sun 8. Aug 20:04	Sun 8. Aug 21:27	1.383
Nominal Prime line change.				
 Cetacean	SB_CT	Sun 8. Aug 21:27	Sun 8. Aug 23:00	1.550
Chargeable standby due to close proximity of Cetaceans.				
Extended line change due to shutdown for whales				
 Production Prime	AC_PP	Sun 8. Aug 23:00	Sun 8. Aug 24:00	1.000
SOL Seq 40 Line:T0607 Block=Queen Charlotte Fault FGSP=1236 FCSP=N/AHdg=244.9° Prime MSP Seq 40 Line:T0607 Block=Queen Charlotte Fault LGSP=1377 LCSP=1377 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

8-Aug	Hours	%Percent
Acquisition	20.100	83.750
Prime Line Change	4.150	17.292
Production Prime	15.950	66.458
Chargeable Standby	3.900	16.250
Cetacean	3.900	16.250
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	23.253
At Anchor	24.000	4.000
Deployment	3.167	0.528
Mob Ashore	64.500	10.750
Testing	0.433	0.072
Transit to Prospect	47.417	7.903
Chargeable Standby	89.267	14.878
Cetacean	47.883	7.981
Reconfiguration	18.300	3.050
Streammer Reconfig	18.300	3.050
Transit	23.083	3.847
Acquisition	361.183	60.197



Daily Science Report

8/8/2021

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Category	Hours	%Percent
Prime Line Change	20.383	3.397
Production Prime	340.800	56.800
DownTime	10.033	1.672
Source	10.033	1.672
Total	600.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
38	T0506	256.2	1300	2571	Prime	51.60	4.327	Complete	Complete
NTBP: 1832 - 2070 (not chgd)									
39	QCF06	56.8	923	2200	Prime	63.85	4.048	Complete	Complete
40	T0607	244.9	1236	1377	Prime	7.05	3.807	Part	Midnight
Total						122.50			

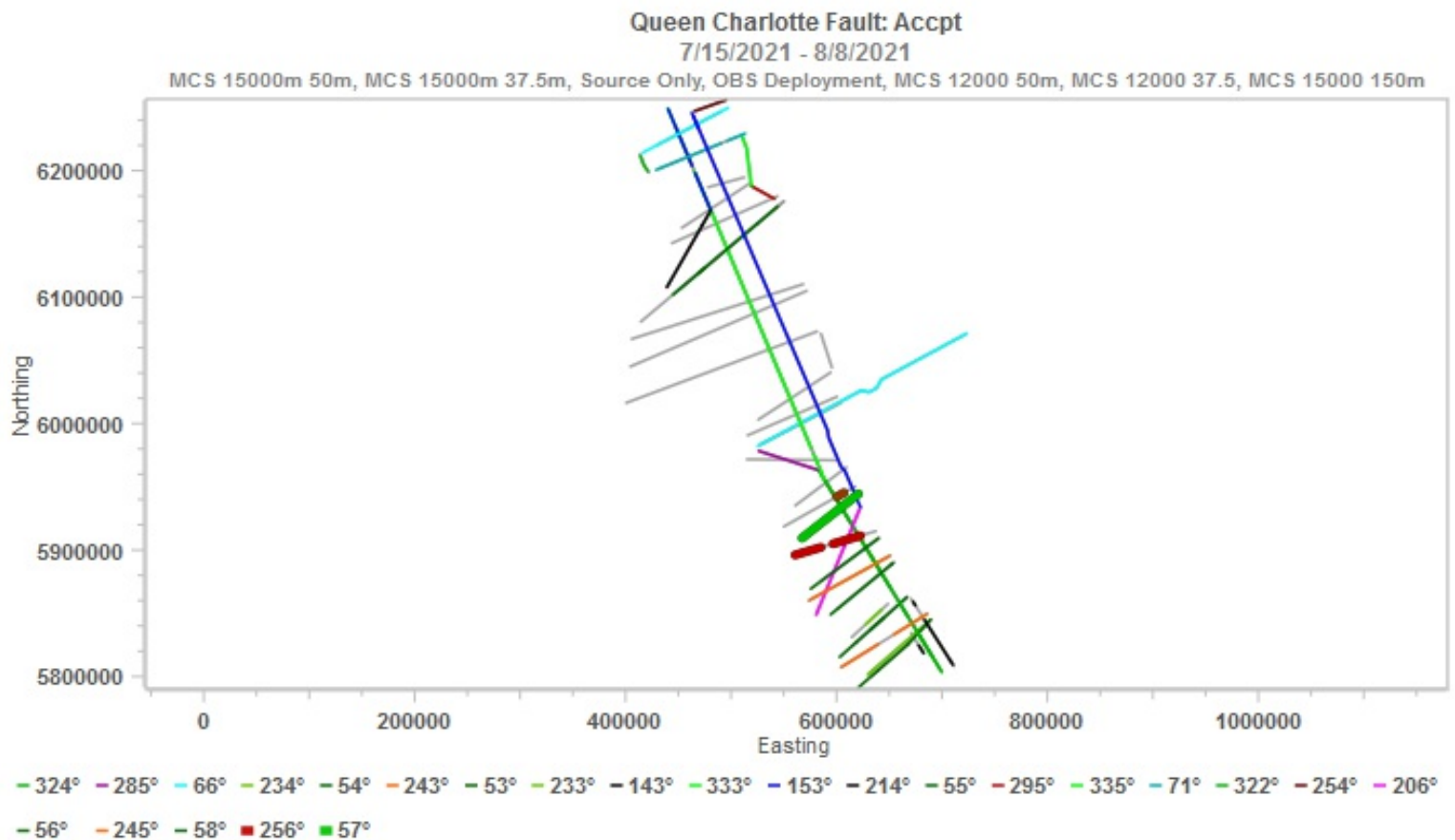
Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	122.50	1103.90	1268.50	2735.30
Combined	122.50	1103.90	1268.50	2735.30



8/8/2021

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Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 08 Aug

Navigation:

TB GPS is out
Gunstring #1 GPS is out.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Replaced solenoid on gun 4-1
Replaced after cluster for broken fire chamber.
Air leak on 4-7

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sun 08 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/8/2021

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Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

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Lindsay Worthington - U. New Mexico - PI
Ben Phrampus - US NRL Sr. Scientist
Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

8/9/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Mon 09 Aug

Some swell noise on the streamer with surging tension and speeds due to the increasing sea state.

We extended two line changes to adhere to the 200 meter water depth exclusion zone rule.

Steady production.

Daily Comment Summaries - Plan for Tomorrow

Mon 09 Aug

We will shoot QCF08M and the transit line in Dixon's Entrance.

We will cross back over into U.S. waters.

Weather continuing to pick up.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 9. Aug 00:00	Mon 9. Aug 06:43	6.717
SOL Seq 40 Line:T0607 Block=Queen Charlotte Fault FGSP=1378 Hdg=244.9° Prime EOL Seq 40 Line:T0607 Block=Queen Charlotte Fault LGSP=2470 Complete				
Prime Line Change	AC_PLC	Mon 9. Aug 06:43	Mon 9. Aug 08:43	2.000
Nominal Prime line change.				
Survey Design	SB_SD	Mon 9. Aug 08:43	Mon 9. Aug 09:27	0.733
Line change extended to stay out of 200 meter water depth exclusion zone.				
Production Prime	AC_PP	Mon 9. Aug 09:27	Mon 9. Aug 17:21	7.900
SOL Seq 41 Line:QCF07 Block=Queen Charlotte Fault FGSP=933 Hdg=58.1° Prime EOL Seq 41 Line:QCF07 Block=Queen Charlotte Fault LGSP=2129 Complete				
Prime Line Change	AC_PLC	Mon 9. Aug 17:21	Mon 9. Aug 19:21	2.000
Nominal Prime line change.				
Survey Design	SB_SD	Mon 9. Aug 19:21	Mon 9. Aug 20:43	1.367
Line change extended to stay out of 200 meter water depth exclusion zone.				




Daily Science Report

Lamont-Doherty Earth Observatory
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8/9/2021

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Category	Code	Start	End	Duration
 Production Prime	AC_PP	Mon 9. Aug 20:43	Mon 9. Aug 24:00	3.283
SOL Seq 42 Line:TO708 Preplot:Turn11 Block=Queen Charlotte Fault FGSP=1389 FCSP=N/AHdg=270.5° Prime MSP Seq 42 Line:TO708 Preplot:Turn11 Block=Queen Charlotte Fault LGSP=1882 LCSP=1882 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

9-Aug	Hours	% Percent
Acquisition	21.900	91.250
Prime Line Change	4.000	16.667
Production Prime	17.900	74.583
Chargeable Standby	2.100	8.750
Survey Design	2.100	8.750
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	22.358
At Anchor	24.000	3.846
Deployment	3.167	0.507
Mob Ashore	64.500	10.337
Testing	0.433	0.069
Transit to Prospect	47.417	7.599
Chargeable Standby	91.367	14.642
Cetacean	47.883	7.674
Reconfiguration	18.300	2.933
Streamers Reconfig	18.300	2.933
Survey Design	2.100	0.337
Transit	23.083	3.699
Acquisition	383.083	61.392
Prime Line Change	24.383	3.908
Production Prime	358.700	57.484
DownTime	10.033	1.608
Source	10.033	1.608
Total	624.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		



Daily Science Report

Lamont-Doherty Earth Observatory
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8/9/2021

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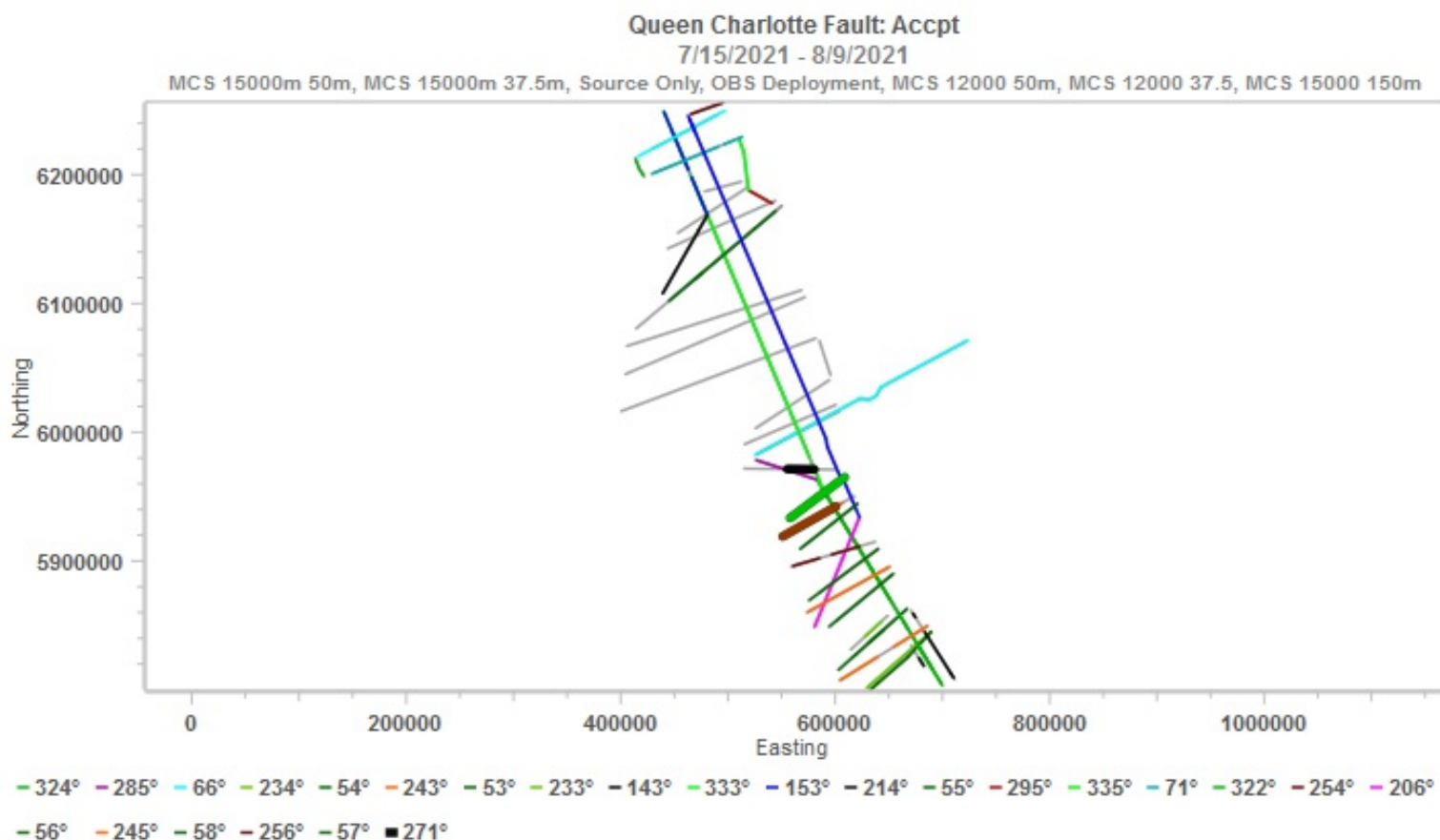
MCS 15000m 50m					
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
40	T0607	244.9	1378	2470	Prime	54.65	4.317	Complete	Complete
41	QCF07	58.1	933	2129	Prime	59.80	4.087	Complete	Complete
42	TO708	270.5	1389	1882	Prime	24.65	4.054	Part	Midnight
Total						139.10			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	139.10	139.10	1407.60	2859.35
Combined	139.10	139.10	1407.60	2859.35





8/9/2021

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Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 09 Aug

Navigation:

TB GPS is out
Gunstring #1 GPS is out.

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 09 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
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Evana Douglas - RPS PSO
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Jillian Daniel - RPS PSO

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Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Mon 9. Aug 19:15	Mon 9. Aug 20:15
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/10/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 10 Aug

Steady production.

The streamer was dropped from 12 to 14 meters due to the sea state.

We crossed back into the U.S. while transiting in the Dixon Entrance.

Daily Comment Summaries - Plan for Tomorrow

Tue 10 Aug

We will acquire QCF09 and transit lines.

We will transit from U.S. back into Canadian waters and then back (again) into U.S waters. Line QCF09 and transit line skirt the international border.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 10. Aug 00:00	Tue 10. Aug 06:35	6.583
SOL Seq 42 Line:TO708 Preplot:Turn11 Block=Queen Charlotte Fault FGSP=1883 Hdg=268.3° Prime EOL Seq 42 Line:TO708 Preplot:Turn11 Block=Queen Charlotte Fault LGSP=2900 Complete				
Prime Line Change	AC_PLC	Tue 10. Aug 06:35	Tue 10. Aug 09:19	2.733
Nominal Prime line change.				
Production Prime	AC_PP	Tue 10. Aug 09:19	Tue 10. Aug 21:12	11.883
SOL Seq 43 Line:PM08 Preplot:QCF08M Block=Queen Charlotte Fault FGSP=930 Hdg=66.7° Prime EOL Seq 43 Line:PM08 Preplot:QCF08M Block=Queen Charlotte Fault LGSP=2817 Complete				
Prime Line Change	AC_PLC	Tue 10. Aug 21:12	Tue 10. Aug 21:20	0.133
Nominal Prime line change.				
Production Prime	AC_PP	Tue 10. Aug 21:20	Tue 10. Aug 24:00	2.667
SOL Seq 44 Line:T08M09 Block=Queen Charlotte Fault FGSP=1006 FCSP=N/AHdg=9.1° Prime MSP Seq 44 Line:T08M09 Block=Queen Charlotte Fault LGSP=1422 LCSP=1422 Midnight				



Daily Science Report

Lamont-Doherty Earth Observatory
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8/10/2021

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

10-Aug	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	2.867	11.944
Production Prime	21.133	88.056
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	21.530
At Anchor	24.000	3.704
Deployment	3.167	0.489
Mob Ashore	64.500	9.954
Testing	0.433	0.067
Transit to Prospect	47.417	7.317
Chargeable Standby	91.367	14.100
Cetacean	47.883	7.389
Reconfiguration	18.300	2.824
Streamer Reconfig	18.300	2.824
Survey Design	2.100	0.324
Transit	23.083	3.562
Acquisition	407.083	62.822
Prime Line Change	27.250	4.205
Production Prime	379.833	58.616
DownTime	10.033	1.548
Source	10.033	1.548
Total	648.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4



Daily Science Report

Lamont-Doherty Earth Observatory
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8/10/2021

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MCS 15000m 50m

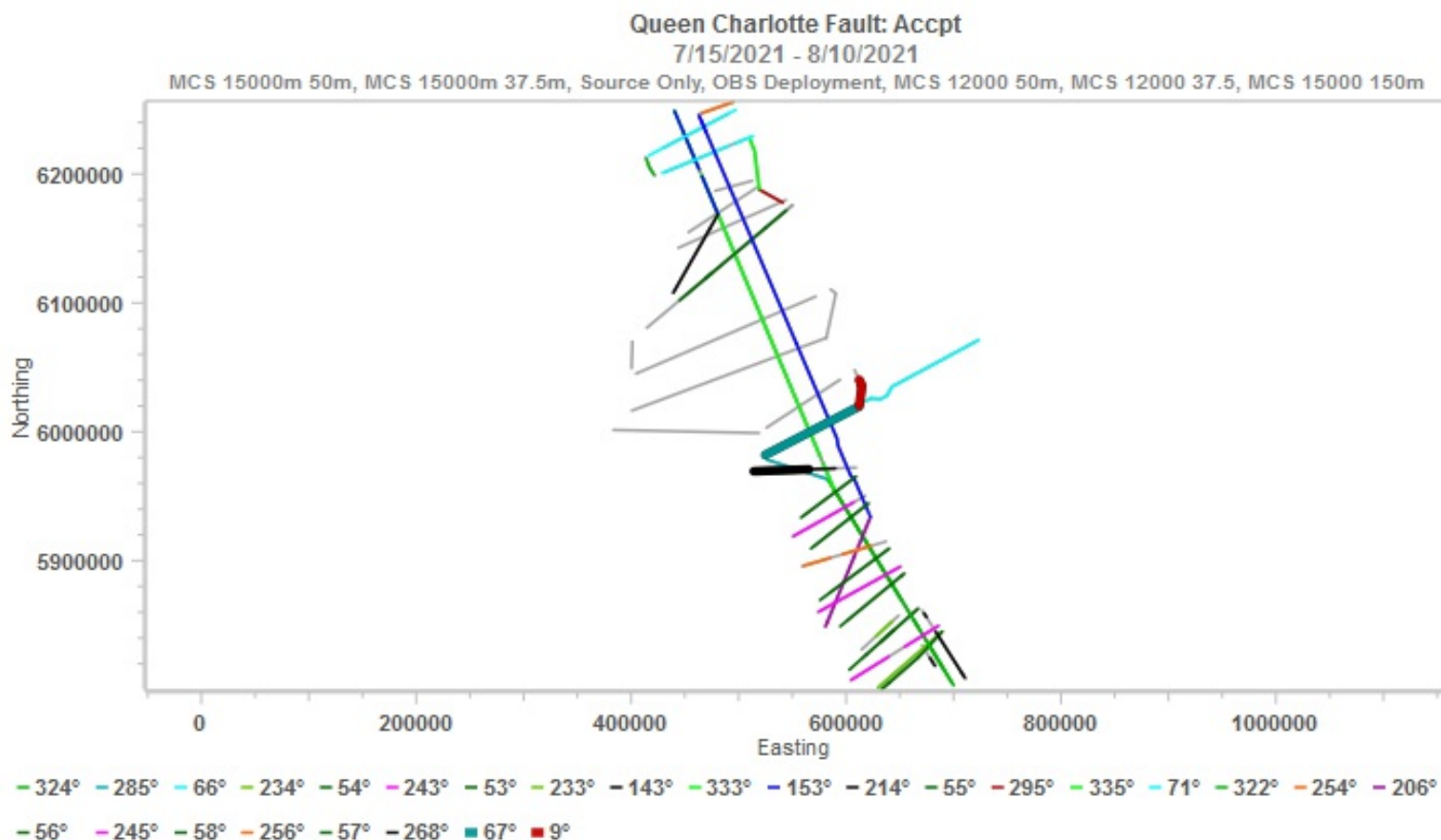
String Separation:	6 m	String length:	0 m		
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Production Listing (Acpt km by interval) - Prime: Full Fold, Infill: Sail Line

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
42	TO708	268.3	1883	2900	Prime	50.90	4.135	Complete	Complete
43	PM08	66.7	930	2817	Prime	94.35	4.287	Complete	Complete
44	T08M09	9.1	1006	1422	Prime	20.80	4.212	Part	Midnight
Total						166.05			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	166.05	305.15	1573.65	3025.40
Combined	166.05	305.15	1573.65	3025.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 10 Aug

Navigation:

TB GPS is out
Gunstring #1 GPS is out.

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Tue Aug 10 2021 02:09p.m.

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Daily Science Report

8/10/2021

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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 10 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

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Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Tue 10. Aug 19:30	Tue 10. Aug 20:00
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

8/11/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Wed 11 Aug

We recovered the streamer to Bird #36 to repair and replace the birds that were causing a degradation in streamer control. We swapped out three birds with new units and repaired/replaced the collars on at least six more. We also changed out the LAUM that failed briefly on Seq 32 on August 4th.

We repaired the GPS on gunstring #1 and replaced the solenoid on gun 4-2. Change out a pigtail on string #1.

These repairs to the streamer, birds and gunstrings were done while traversing line TO910. We will turn onto QCF10 when the gear is redeployed.

Daily Comment Summaries - Plan for Tomorrow

Wed 11 Aug

Complete deployment of the streamer and gunstrings while traversing line TO910. We will turn onto QCF10 when the gear is re-deployed and start acquisition.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 11. Aug 00:00	Wed 11. Aug 00:55	0.917
SOL Seq 44 Line:T08M09 Block=Queen Charlotte Fault FGSP=1423 Hdg=9.1° Prime EOL Seq 44 Line:T08M09 Block=Queen Charlotte Fault LGSP=1570 Complete				
Prime Line Change	AC_PLC	Wed 11. Aug 00:55	Wed 11. Aug 01:07	0.200
Nominal Prime line change.				
Production Prime	AC_PP	Wed 11. Aug 01:07	Wed 11. Aug 14:45	13.633
SOL Seq 45 Line:PM09 Preplot:QCF09 Block=Queen Charlotte Fault FGSP=719 Hdg=61.4° Prime EOL Seq 45 Line:PM09 Preplot:QCF09 Block=Queen Charlotte Fault LGSP=2729 Complete				
Streamers	DT_ST	Wed 11. Aug 14:45	Wed 11. Aug 17:13	2.467
Downtime due to streamer balance. We are recovering the front of half of the 15km streamer to troubleshoot/repair birds and ballasting.				
Recovering guns.				



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Category	Code	Start	End	Duration
■ Streamers	DT_ST	Wed 11. Aug 17:13	Wed 11. Aug 17:45	0.533
Downtime due to streamer balance. We are recovering the front of half of the 15km streamer to troubleshoot/repair birds and ballasting.				
Recovering leadin and head float.				
■ Streamers	DT_ST	Wed 11. Aug 17:45	Wed 11. Aug 22:35	4.833
Downtime due to streamer balance. We are recovering the front of half of the 15km streamer to troubleshoot/repair birds and ballasting.				
Recovering streamer to bird #36, Changed out LAUM and transfered reels.				
■ Streamers	DT_ST	Wed 11. Aug 22:35	Wed 11. Aug 24:00	1.417
Downtime due to streamer balance. We are recovering the front of half of the 15km streamer to troubleshoot/repair birds and ballasting.				
Redeploying streamer with 7 new birds.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

11-Aug	Hours	%Percent
Acquisition	14.750	61.458
Prime Line Change	0.200	0.833
Production Prime	14.550	60.625
DownTime	9.250	38.542
Streamers	9.250	38.542
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	20.761
At Anchor	24.000	3.571
Deployment	3.167	0.471
Mob Ashore	64.500	9.598
Testing	0.433	0.064
Transit to Prospect	47.417	7.056
Chargeable Standby	91.367	13.596
Cetacean	47.883	7.125
Reconfiguration	18.300	2.723
Streamer Reconfig	18.300	2.723
Survey Design	2.100	0.312
Transit	23.083	3.435
Acquisition	421.833	62.773
Prime Line Change	27.450	4.085
Production Prime	394.383	58.688



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Category	Hours	%Percent
DownTime	19.283	2.870
Source	10.033	1.493
Streamers	9.250	1.376
Total	672.000	

Basic Project Details

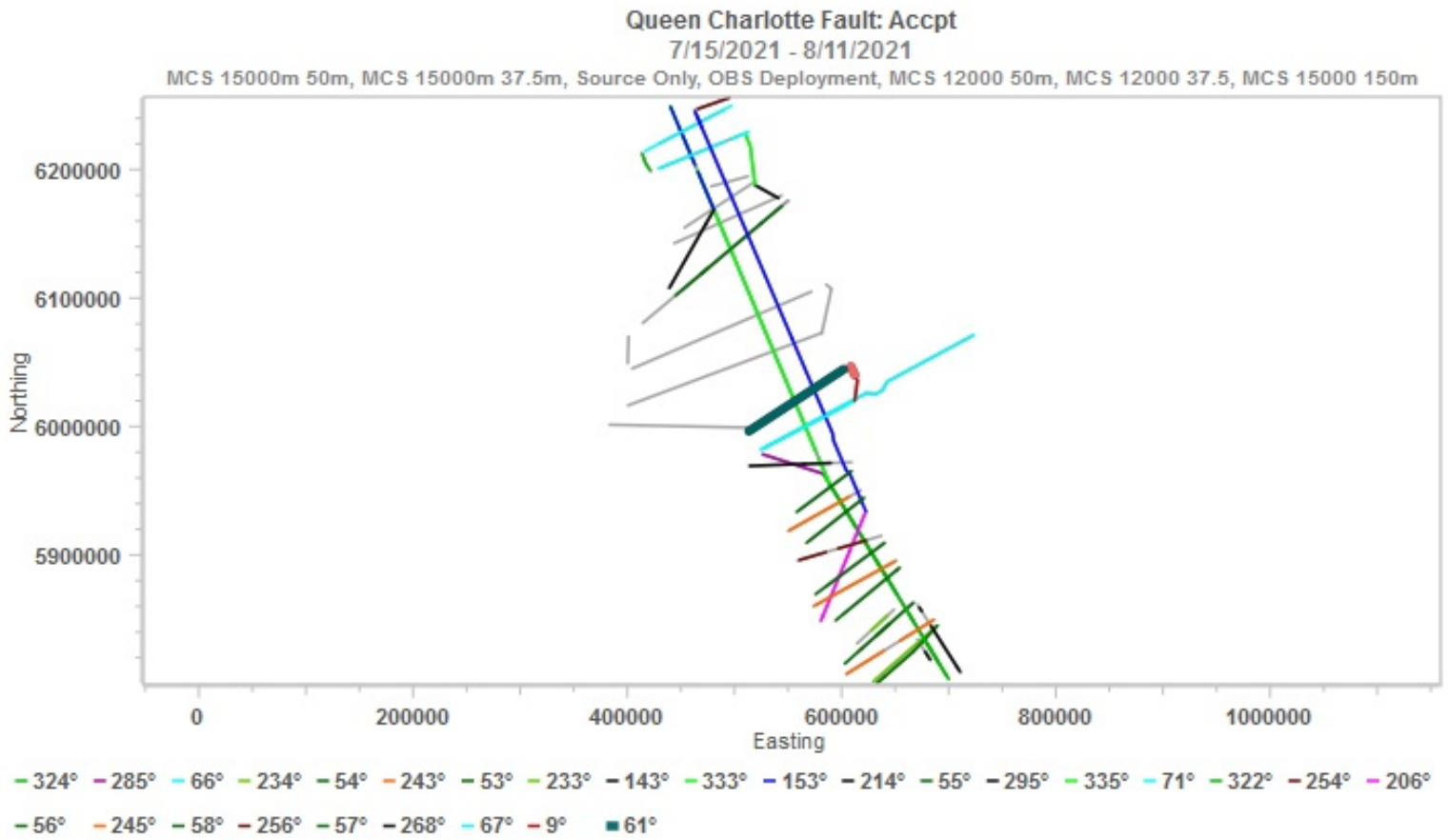
MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
44	T08M09	9.1	1423	1570	Prime	7.40	4.249	Complete	Complete
45	PM09	61.4	719	2729	Prime	100.50	3.980	Complete	Complete
Total						107.90			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	107.90	413.05	1681.55	3133.30
Combined	107.90	413.05	1681.55	3133.30



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 11 Aug

Navigation:

TB GPS is out
Fixed GPS #1

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Replaced the solenoid on 4-2

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Wed 11 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

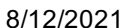
Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
----------	------	-------	-----



Daily Comment Summaries - Daily Summary

We completed the re-deployment of the streamer and guns and soft start at 04:56 UTC and started acquisition on TO910. We are currently shooting into QCF10. The streamer is towing very well. All guns and gun string GPS's are working.

Steady shooting.

Daily Comment Summaries - Plan for Tomorrow

Line QCF10 will be completed at approximately 7AM local time. We will then shoot the transit line T1011.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

(UTC 00:00) UTC - Universal Time Coordinated
Generated on Thu Aug 12 2021 02:01p.m.



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Category	Code	Start	End	Duration
Prime Line Change	AC_PLC	Thu 12. Aug 10:48	Thu 12. Aug 13:31	2.717
Nominal Prime line change.				
Production Prime	AC_PP	Thu 12. Aug 13:31	Thu 12. Aug 24:00	10.483
SOL Seq 47 Line:PM10 Preplot:QCF10 Block=Queen Charlotte Fault FGSP=842 FCSP=N/AHdg=252.7° Prime MSP Seq 47 Line:PM10 Preplot:QCF10 Block=Queen Charlotte Fault LGSP=2512 LCSP=2512 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

12-Aug	Hours	%Percent
Acquisition	19.067	79.444
Prime Line Change	2.717	11.319
Production Prime	16.350	68.125
DownTime	4.933	20.556
Streamers	4.933	20.556
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	20.045
At Anchor	24.000	3.448
Deployment	3.167	0.455
Mob Ashore	64.500	9.267
Testing	0.433	0.062
Transit to Prospect	47.417	6.813
Chargeable Standby	91.367	13.127
Cetacean	47.883	6.880
Reconfiguration	18.300	2.629
Streamers Reconfig	18.300	2.629
Survey Design	2.100	0.302
Transit	23.083	3.317
Acquisition	440.900	63.348
Prime Line Change	30.167	4.334
Production Prime	410.733	59.013
DownTime	24.217	3.479
Source	10.033	1.442
Streamers	14.183	2.038
Total	696.000	



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Lamont-Doherty Earth Observatory
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Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
46	T0910	270.9	2843	3675	Prime	41.60	3.829	Complete	Complete
47	PM10	252.7	842	2512	Prime	83.50	4.301	Part	Midnight
Total						125.10			

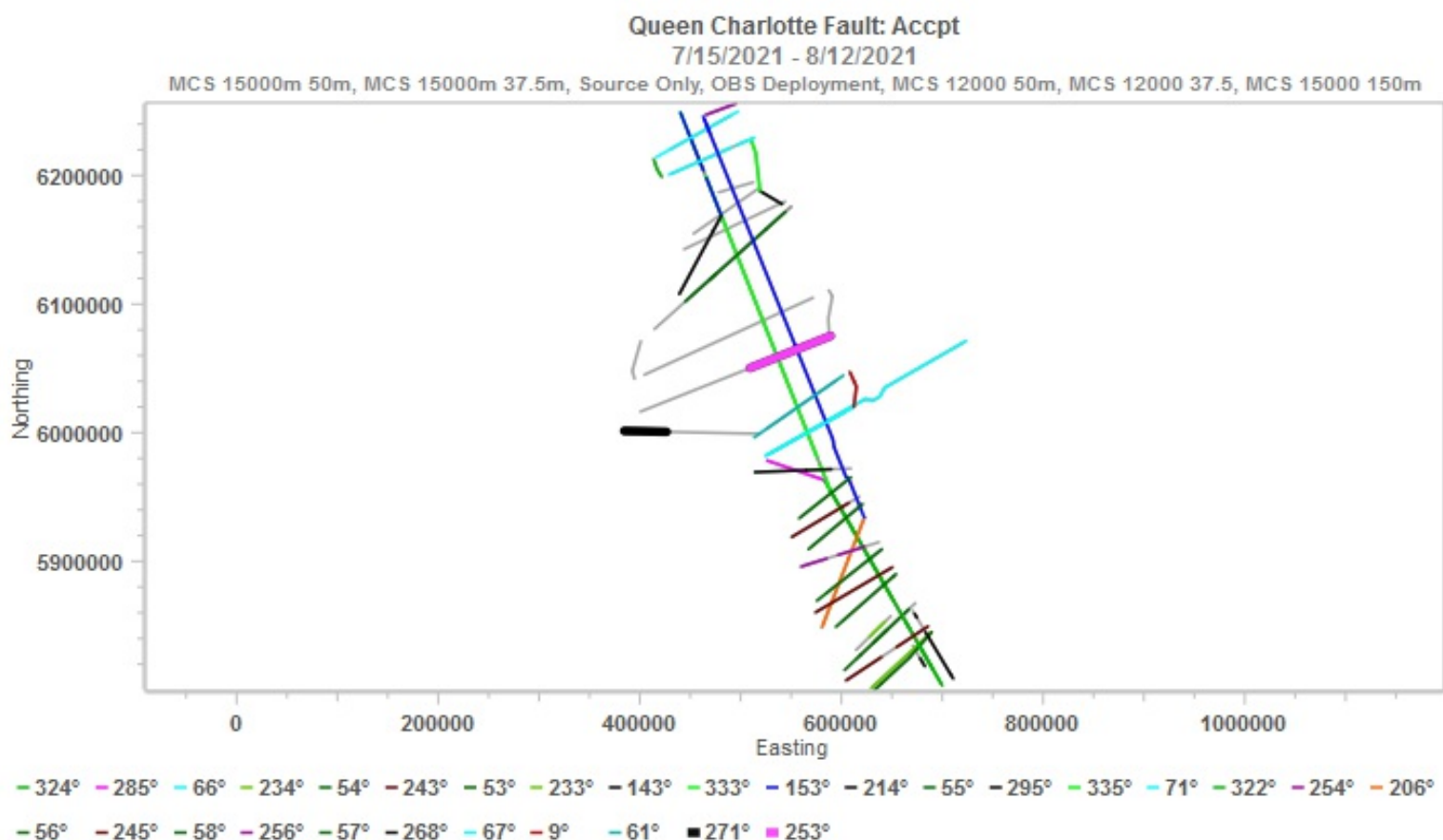
Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	125.10	538.15	1806.65	3258.40
Combined	125.10	538.15	1806.65	3258.40



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Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 12 Aug

Navigation:

TB GPS is out

All four gun string GPS's are working.

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 12 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)



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Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Thu 12. Aug 19:20	Thu 12. Aug 20:00
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
Toolbox Meetings	Mtgs_Tbox	4
8/12/2021		
Toolbox meeting to deploy the head float. Toolbox meeting to discuss the PAM cable deployment Toolbox meeting to discuss source deployment Toolbox meeting to discuss Maggie re-deployment		



Daily Science Report

Lamont-Doherty Earth Observatory
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8/13/2021

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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Fri 13 Aug

Transit line T1001 was shortened and modified due to a lot of fishing boat traffic on our plotted course. We recovered gun-string #3 during this line to fix gun 3-1. We changed out a pigtail and the solenoid and re-deployed.

During the next line, Line QCF11, gun-string #4 started flagging depth errors. We recovered gun-string #4 and found a broken band over plate #7 on the sausage float and a broken depth rope on plate #5. We also had another fire chamber fail on gun 4-9. We were at half volume for almost two hours at the start of this line.

The weather has picked up. We also had a thick fog and tricky currents along the coast.

We are currently shooting with full gun volume and the streamer is towing well.

Daily Comment Summaries - Plan for Tomorrow

Fri 13 Aug

We will finish QCF11 at approximately 1pm local time and start the next transit line.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Fri 13. Aug 00:00	Fri 13. Aug 13:36	13.600
SOL Seq 47 Line:PM10 Preplot:QCF10 Block=Queen Charlotte Fault FGSP=2513 Hdg=252.7° Prime EOL Seq 47 Line:PM10 Preplot:QCF10 Block=Queen Charlotte Fault LGSP=4688 Complete				
Prime Line Change	AC_PLC	Fri 13. Aug 13:36	Fri 13. Aug 14:40	1.067
Nominal Prime line change.				
Production Prime	AC_PP	Fri 13. Aug 14:40	Fri 13. Aug 17:45	3.083
SOL Seq 48 Line:T1011 Block=Queen Charlotte Fault FGSP=1032 Hdg=355.3° Prime EOL Seq 48 Line:T1011 Block=Queen Charlotte Fault LGSP=1500 Complete				
Prime Line Change	AC_PLC	Fri 13. Aug 17:45	Fri 13. Aug 18:28	0.717
Nominal Prime line change.				
Production Prime	AC_PP	Fri 13. Aug 18:28	Fri 13. Aug 24:00	5.533
SOL Seq 49 Line:PM11 Preplot:QCF11 Block=Queen Charlotte Fault FGSP=1233 FCSP=N/AHdg=70.3° Prime MSP Seq 49 Line:PM11 Preplot:QCF11 Block=Queen Charlotte Fault LGSP=2025 LCSP=2025 Midnight				



Daily Science Report

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

13-Aug	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	1.783	7.431
Production Prime	22.217	92.569
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	19.377
At Anchor	24.000	3.333
Deployment	3.167	0.440
Mob Ashore	64.500	8.958
Testing	0.433	0.060
Transit to Prospect	47.417	6.586
Chargeable Standby	91.367	12.690
Cetacean	47.883	6.650
Reconfiguration	18.300	2.542
Streamers Reconfig	18.300	2.542
Survey Design	2.100	0.292
Transit	23.083	3.206
Acquisition	464.900	64.569
Prime Line Change	31.950	4.438
Production Prime	432.950	60.132
DownTime	24.217	3.363
Source	10.033	1.394
Streamers	14.183	1.970
Total	720.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



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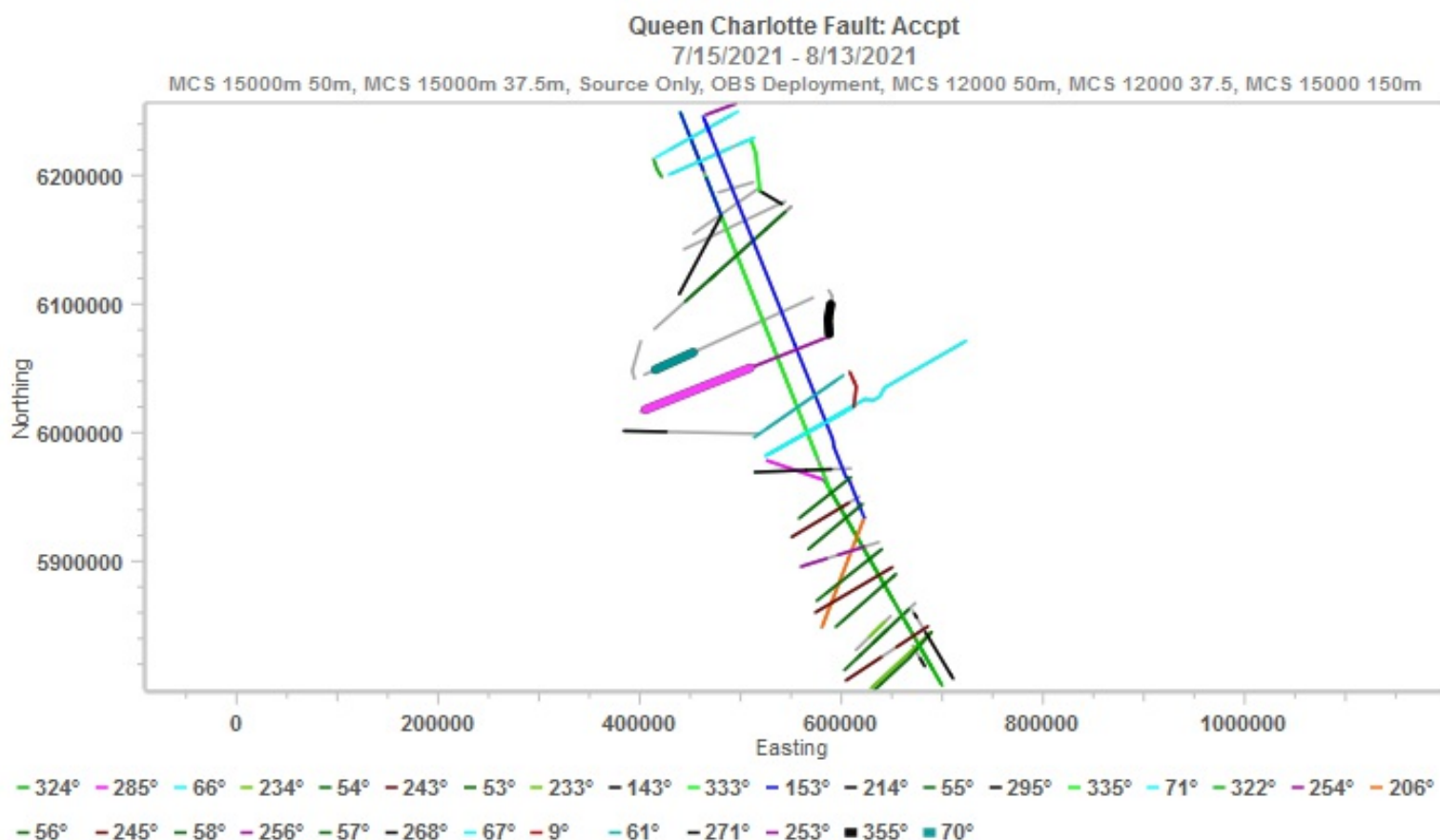
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
47	PM10	252.7	2513	4688	Prime	108.80	4.311	Complete	Complete
48	T1011	355.3	1032	1500	Prime	23.40	4.098	Complete	Complete
49	PM11	70.3	1233	2025	Prime	39.60	3.864	Part	Midnight
Total						171.80			

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	171.80	709.95	1978.45	3430.20
Combined	171.80	709.95	1978.45	3430.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 13 Aug

Navigation:
TB GPS is out

Information Technology (IT):
No Major Issues to Report



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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 13 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adededeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Fri 13. Aug 19:15	Fri 13. Aug 20:15
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
Toolbox Meetings	Mtgs_Tbox	1
8/13/2021		
Discuss oil on the gun slip before deployment and retrieval.		



Daily Science Report

Lamont-Doherty Earth Observatory
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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sat 14 Aug

Very steady shooting. The gear is towing well. There was no downtime or standby today. The speed over ground was a little slower than normal due to currents.

We are currently shooting Line QCF12M and will finish around noon tomorrow.

Disabled the hydrophone on gun 4-1 dt a corrupted signal.

Daily Comment Summaries - Plan for Tomorrow

Sat 14 Aug

We finish shooting Line QCF12M and start the turn line. The weather is picking up tomorrow.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sat 14. Aug 00:00	Sat 14. Aug 19:21	19.350
SOL Seq 49 Line:PM11 Preplot:QCF11 Block=Queen Charlotte Fault FGSP=3524 Hdg=250.3° Prime EOL Seq 49 Line:PM11 Preplot:QCF11 Block=Queen Charlotte Fault LGSP=829 Complete				
Prime Line Change	AC_PLC	Sat 14. Aug 19:21	Sat 14. Aug 20:14	0.883
Nominal Prime line change.				
Production Prime	AC_PP	Sat 14. Aug 20:14	Sat 14. Aug 23:26	3.200
SOL Seq 50 Line:T1112 Block=Queen Charlotte Fault FGSP=1100 Hdg=339.8° Prime EOL Seq 50 Line:T1112 Block=Queen Charlotte Fault LGSP=1620 Complete				
Prime Line Change	AC_PLC	Sat 14. Aug 23:26	Sat 14. Aug 23:39	0.217
Nominal Prime line change.				
Production Prime	AC_PP	Sat 14. Aug 23:39	Sat 14. Aug 24:00	0.350
SOL Seq 51 Line:PM12 Preplot:QCF12M Block=Queen Charlotte Fault FGSP=701 FCSP=N/AHdg=55° Prime MSP Seq 51 Line:PM12 Preplot:QCF12M Block=Queen Charlotte Fault LGSP=756 LCSP=756 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

14-Aug	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	1.100	4.583



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14-Aug	Hours	%Percent
Production Prime	22.900	95.417
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	18.752
At Anchor	24.000	3.226
Deployment	3.167	0.426
Mob Ashore	64.500	8.669
Testing	0.433	0.058
Transit to Prospect	47.417	6.373
Chargeable Standby	91.367	12.280
Cetacean	47.883	6.436
Reconfiguration	18.300	2.460
Streamer Reconfig	18.300	2.460
Survey Design	2.100	0.282
Transit	23.083	3.103
Acquisition	488.900	65.712
Prime Line Change	33.050	4.442
Production Prime	455.850	61.270
DownTime	24.217	3.255
Source	10.033	1.349
Streamers	14.183	1.906
Total	744.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		



Daily Science Report

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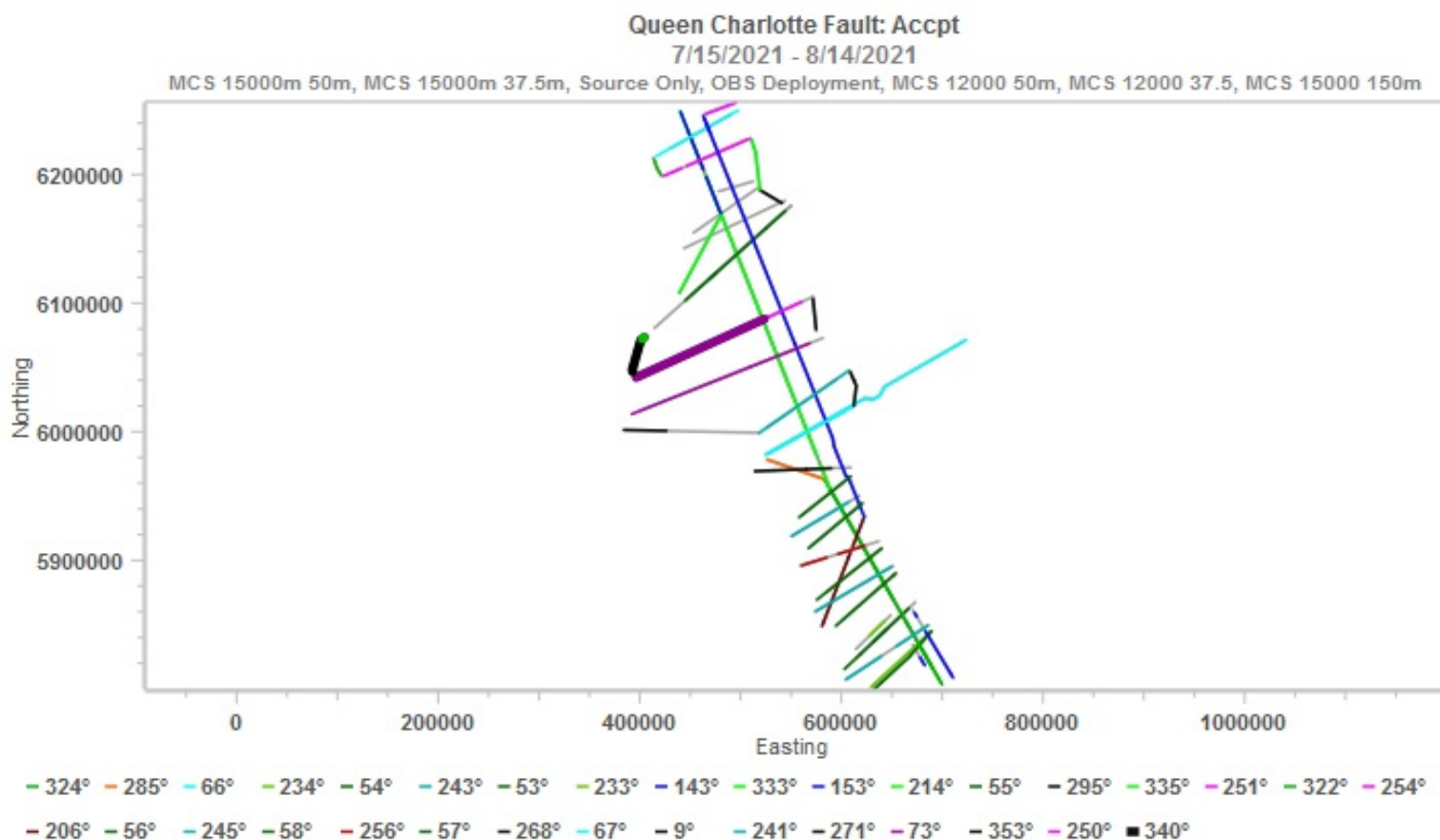
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Production Listing (Acct km by interval) - Prime: Full Fold, Infill: Sail Line

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
49	PM11	250.3	3524	829	Prime	134.80	3.784	Complete	Complete
50	T1112	339.8	1100	1620	Prime	26.00	4.387	Complete	Complete
51	PM12	55.0	701	756	Prime	2.75	4.243	Part	Midnight
Total						163.55			

Production Totals (Acct km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	163.55	865.60	2134.10	3585.85
Combined	163.55	865.60	2134.10	3585.85



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 14 Aug

Navigation:

TB GPS is out

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

Disabled the hydrophone on gun 4-1



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General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 14 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Cody Bahlau L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)


PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
 Eren Penfield - RPS PSO
 Evana Douglas - RPS PSO
 Lilia Perez - RPS PSO
 Jillian Daniel - RPS PSO

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Lindsay Worthington - U. New Mexico - PI
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 Sarah Nolt-Caraway - U. New Mexico - Scientist
 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Sat 14. Aug 18:00	Sat 14. Aug 18:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/15/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 15 Aug

Another very steady day of shooting. There was no downtime or standby time all day.

We picked up the magnetometer due to the rough sea state. We are seeing some swell noise on the streamer.

We are currently shooting the transit Line T1213 and will be starting QCF13 by mid-day.

Daily Comment Summaries - Plan for Tomorrow

Sun 15 Aug

We are currently shooting the transit Line T1213 and will be starting QCF13 by mid-morning.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 15. Aug 00:00	Sun 15. Aug 20:32	20.533
SOL Seq 51 Line:PM12 Preplot:QCF12M Block=Queen Charlotte Fault FGSP=757 Hdg=55° Prime EOL Seq 51 Line:PM12 Preplot:QCF12M Block=Queen Charlotte Fault LGSP=4000 Complete				
Prime Line Change	AC_PLC	Sun 15. Aug 20:32	Sun 15. Aug 22:11	1.650
Nominal Prime line change.				
Production Prime	AC_PP	Sun 15. Aug 22:11	Sun 15. Aug 24:00	1.817
SOL Seq 52 Line:T1213 Preplot:Turn16 Block=Queen Charlotte Fault FGSP=1100 FCSP=N/AHdg=249.7° Prime MSP Seq 52 Line:T1213 Preplot:Turn16 Block=Queen Charlotte Fault LGSP=1363 LCSP=1363 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

15-Aug	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	1.650	6.875
Production Prime	22.350	93.125
Day's Total	24.000	100.000



Daily Science Report

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Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	18.166
At Anchor	24.000	3.125
Deployment	3.167	0.412
Mob Ashore	64.500	8.398
Testing	0.433	0.056
Transit to Prospect	47.417	6.174
Chargeable Standby	91.367	11.897
Cetacean	47.883	6.235
Reconfiguration	18.300	2.383
Streamer Reconfig	18.300	2.383
Survey Design	2.100	0.273
Transit	23.083	3.006
Acquisition	512.900	66.784
Prime Line Change	34.700	4.518
Production Prime	478.200	62.266
DownTime	24.217	3.153
Source	10.033	1.306
Streamers	14.183	1.847
Total	768.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
51	PM12	55.0	757	4000	Prime	162.20	4.265	Complete	Complete
52	T1213	249.7	1100	1363	Prime	13.15	3.908	Part	Midnight



Daily Science Report

Lamont-Doherty Earth Observatory
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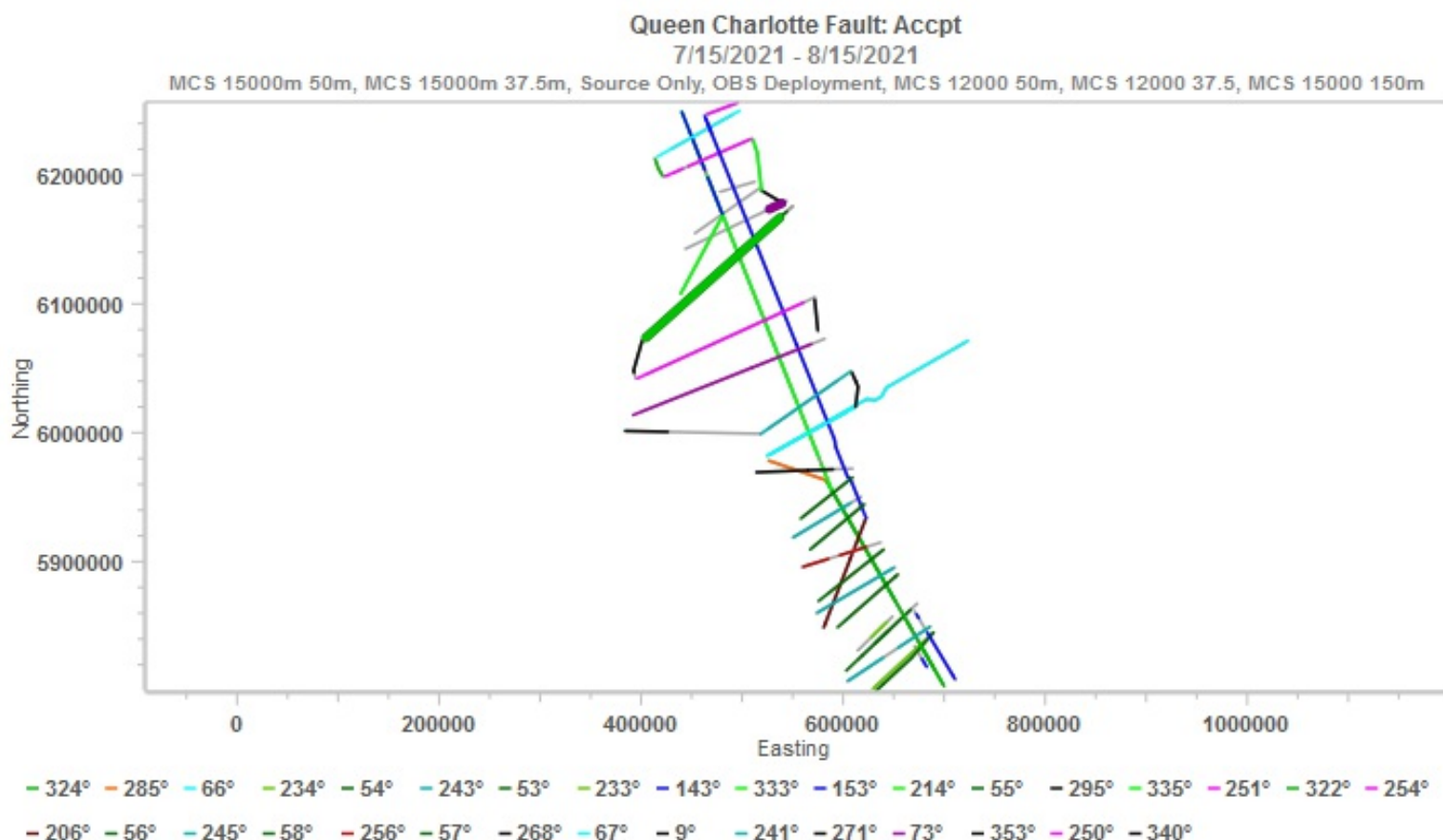
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Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total						175.35			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	175.35	1040.95	2309.45	3761.20
Combined	175.35	1040.95	2309.45	3761.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 15 Aug

Navigation:

TB GPS is out

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:

Recovered magnetometer due to rough sea-state



8/15/2021

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Daily Comment Summaries - Personnel Onboard

Sun 15 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Cody Bahlau L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)

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 Lilia Perez - RPS PSO
 Jillian Daniel - RPS PSO

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 Ben Phrampus - US NRL Sr. Scientist
 Sarah Nolt-Caraway - U. New Mexico - Scientist
 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
<div></div> Chiefs Meeting	Mtgs_Chfs	Sun 15. Aug 18:00	Sun 15. Aug 18:20
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
<div></div> Toolbox Meetings	Mtgs_Tbox	1
8/15/2021		
Toolbox meeting to discuss Maggie retrieval in rough seas.		



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/16/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Mon 16 Aug

Another solid day of production without downtime or standby time.

The weather has improved and the swell noise on the streamer has improved.

The magnetometer was redeployed and we are developing a new procedure to tow the Maggie wider than gun hose #1 during deployment and retrievals.

Daily Comment Summaries - Plan for Tomorrow

Mon 16 Aug

We will finish the transit line and start Line QCF01A2M before midnight local time. We will then shoot all day.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 16. Aug 00:00	Mon 16. Aug 09:46	9.767
SOL Seq 52 Line:T1213 Preplot:Turn16 Block=Queen Charlotte Fault FGSP=1364 Hdg=249.2° Prime EOL Seq 52 Line:T1213 Preplot:Turn16 Block=Queen Charlotte Fault LGSP=2955 Complete				
Prime Line Change	AC_PLC	Mon 16. Aug 09:46	Mon 16. Aug 11:45	1.983
Nominal Prime line change.				
Production Prime	AC_PP	Mon 16. Aug 11:45	Mon 16. Aug 21:49	10.067
SOL Seq 53 Line:PM13 Preplot:QCF13 Block=Queen Charlotte Fault FGSP=828 Hdg=61.4° Prime EOL Seq 53 Line:PM13 Preplot:QCF13 Block=Queen Charlotte Fault LGSP=2462 Complete				
Prime Line Change	AC_PLC	Mon 16. Aug 21:49	Mon 16. Aug 23:30	1.683
Nominal Prime line change.				
Production Prime	AC_PP	Mon 16. Aug 23:30	Mon 16. Aug 24:00	0.500
SOL Seq 54 Line:T1301A2APreplot:Turn17 Block=Queen Charlotte Fault FGSP=1100 FCSP=N/AHdg=257.2° Prime MSP Seq 54 Line:T1301A2APreplot:Turn17 Block=Queen Charlotte Fault LGSP=1181 LCSP=1181 Midnight				



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/16/2021

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

16-Aug	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	3.667	15.278
Production Prime	20.333	84.722
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	17.616
At Anchor	24.000	3.030
Deployment	3.167	0.400
Mob Ashore	64.500	8.144
Testing	0.433	0.055
Transit to Prospect	47.417	5.987
Chargeable Standby	89.733	11.330
Cetacean	46.983	5.932
Reconfiguration	18.300	2.311
Streamers Reconfig	18.300	2.311
Survey Design	1.367	0.173
Transit	23.083	2.915
Acquisition	538.533	67.997
Prime Extended L/C	1.633	0.206
Prime Line Change	38.367	4.844
Production Prime	498.533	62.946
DownTime	24.217	3.058
Source	10.033	1.267
Streamers	14.183	1.791
Total	792.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



Daily Science Report

Lamont-Doherty Earth Observatory
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8/16/2021

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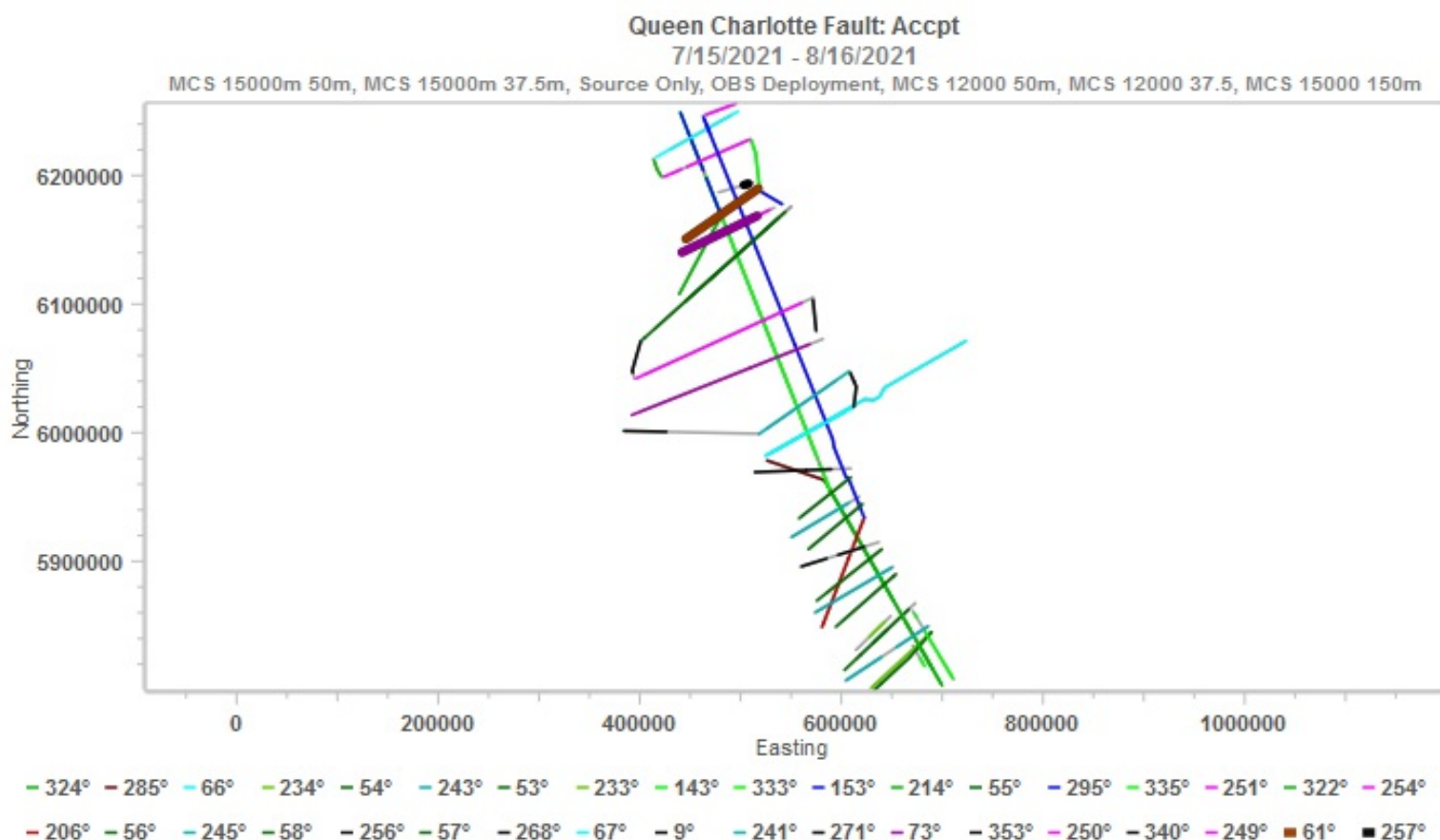
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
52	T1213	249.2	1364	2955	Prime	79.60	4.324	Complete	Complete
53	PM13	61.4	828	2462	Prime	81.70	4.382	Complete	Complete
54	T1301A2A	257.2	1100	1181	Prime	4.05	4.374	Part	Midnight
Total						165.35			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	165.35	165.35	2474.80	3926.55
Combined	165.35	165.35	2474.80	3926.55



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 16 Aug

Navigation:

TB GPS is out

Information Technology (IT):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Mon Aug 16 2021 02:14p.m.

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Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

Maggie is redeployed in calmer seas.

Daily Comment Summaries - Personnel Onboard

Mon 16 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
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Ray Hatton - Contract Personnel Marine Science Technician (Source)
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Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Chiefs Meeting	Mtgs_Chfs	Mon 16. Aug 18:00	Mon 16. Aug 18:30
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
Toolbox Meetings	Mtgs_Tbox	1
8/16/2021		
Toolbox meeting to discuss new Maggie procedure.		



Daily Science Report

8/17/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 17 Aug

Steady production. The streamer is towing well. No downtime or standby time today. Weather is cooperating.

Gun 3-7 quit firing and we think that the SPSU board in the GCU is the culprit. Will test first opportunity.

We conducted a fire drill and MOB drill today.

Daily Comment Summaries - Plan for Tomorrow

Tue 17 Aug

We will reshoot a portion of Line QCF09 for most of the day tomorrow and then resume acquiring Line QCF021A2M. This will complete the original prime acquisition for the Queen Charlotte Fault program. We will then continue to transit down south to collect some reshoots from the beginning of the project.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Tue 17. Aug 00:00	Tue 17. Aug 04:13	4.217
SOL Seq 54 Line:T1301A2APreplot:Turn17 Block=Queen Charlotte Fault FGSP=1182 Hdg=259° Prime EOL Seq 54 Line:T1301A2APreplot:Turn17 Block=Queen Charlotte Fault LGSP=1829 Complete				
Prime Line Change	AC_PLC	Tue 17. Aug 04:13	Tue 17. Aug 05:14	1.017
Nominal Prime line change.				
Production Prime	AC_PP	Tue 17. Aug 05:14	Tue 17. Aug 24:00	18.767
SOL Seq 55 Line:PM01A2APreplot:QCF01A2M Block=Queen Charlotte Fault FGSP=5995 FCSP=N/AHdg=153.2° Prime MSP Seq 55 Line:PM01A2APreplot:QCF01A2M Block=Queen Charlotte Fault LGSP=2903 LCSP=2903 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

17-Aug	Hours	%Percent
Acquisition	24.000	100.000
Prime Line Change	1.017	4.236
Production Prime	22.983	95.764
Day's Total	24.000	100.000



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/17/2021

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Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	17.098
At Anchor	24.000	2.941
Deployment	3.167	0.388
Mob Ashore	64.500	7.904
Testing	0.433	0.053
Transit to Prospect	47.417	5.811
Chargeable Standby	89.733	10.997
Cetacean	46.983	5.758
Reconfiguration	18.300	2.243
Streamer Reconfig	18.300	2.243
Survey Design	1.367	0.167
Transit	23.083	2.829
Acquisition	562.533	68.938
Prime Extended L/C	1.633	0.200
Prime Line Change	39.383	4.826
Production Prime	521.517	63.911
DownTime	24.217	2.968
Source	10.033	1.230
Streamers	14.183	1.738
Total	816.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		



Daily Science Report

Lamont-Doherty Earth Observatory
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8/17/2021

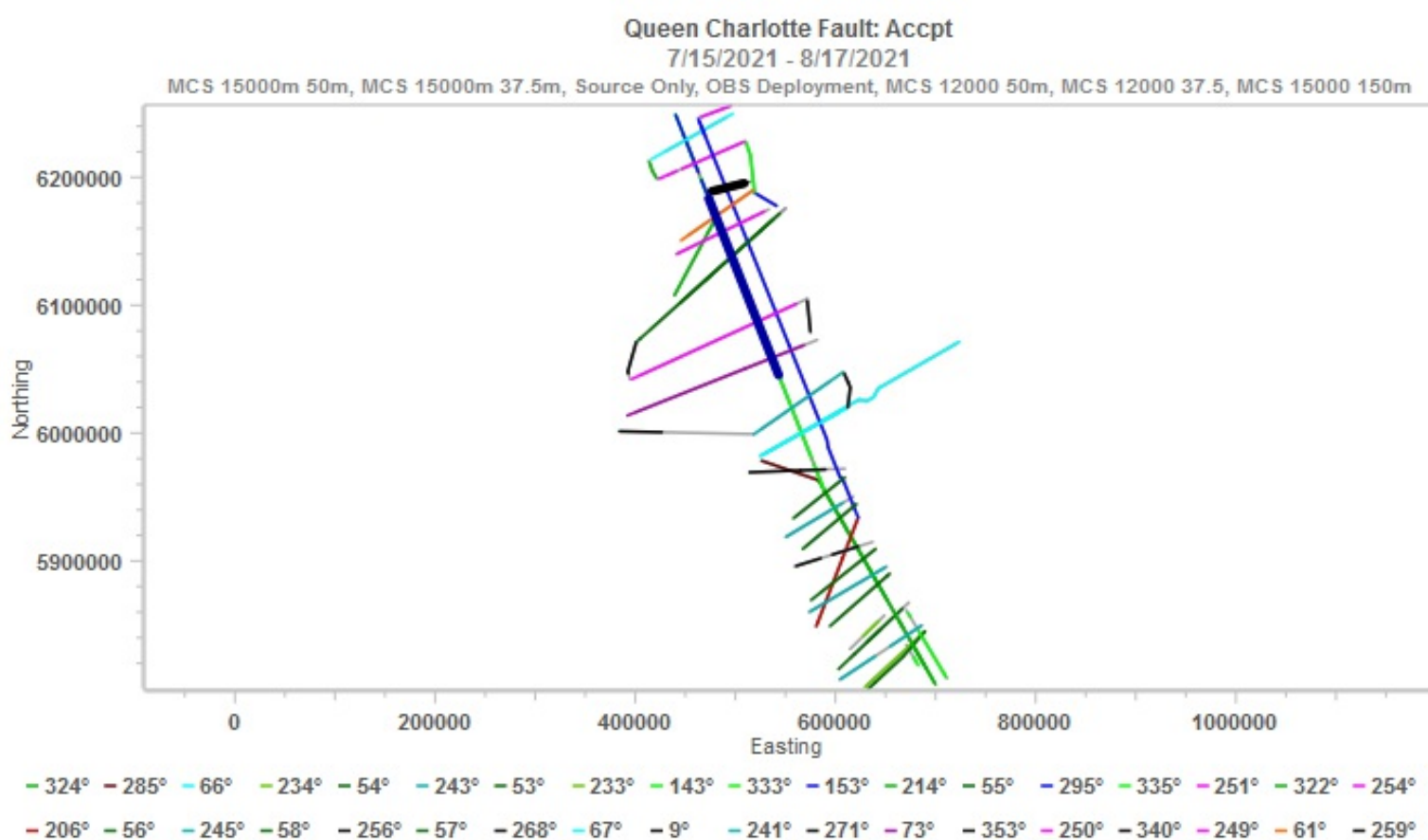
Page 3

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
54	T1301A2A	259.0	1182	1829	Prime	32.40	4.173	Complete	Complete
55	PM01A2A	153.2	5995	2903	Prime	154.60	4.448	Part	Midnight
Total						187.00			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	187.00	352.35	2661.80	4113.55
Combined	187.00	352.35	2661.80	4113.55



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 17 Aug

Navigation:

TB GPS is out

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.



8/17/2021

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Daily Comment Summaries - Personnel Onboard

Tue 17 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Cody Bahlau L-DEO OMO Marine Science Technician - Nav
 Gilles Guerin L-DEO OMO Marine Science Technician - OBS
 Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
 Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
 Ray Hatton - Contract Personnel Marine Science Technician (Source)
 Michael Coufal - Contract Personnel Marine Science Technician (Source)
 Jacob Greenberg - UNOLS Tech (Source)
 Mark Walker - Contract Personnel Marine Science Technician (Compressors)



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 Olumide Adedeji - U. New Mexico - Scientist
 Pinar Gurun - Dalhousie U. - Scientist
 Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Fire Drill	Drls_Fi	Tue 17. Aug 17:20	Tue 17. Aug 17:45
HSE - Fire Drill. Simulate Compressor Fire			
 MOB Drill	Drls_MOB	Tue 17. Aug 17:45	Tue 17. Aug 17:55
HSE - MOB Drill			
 Chiefs Meeting	Mtgs_Chfs	Tue 17. Aug 19:30	Tue 17. Aug 20:05
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			

Daily Total Category	Code	Count
 Toolbox Meetings	Mtgs_Tbox	1
8/17/2021		
Toolbox to discuss safer bird deployment/recovery and fairleads		



Daily Science Report

8/18/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Wed 18 Aug

The weather has increased substantially today. We completed the re-shoot of QCF09 and both lengthy line changes associated with it. This was logged as downtime due to the streamer depth control issues that we experienced when we originally shot this line. This was the line that preceded the streamer recovery we made last week to make repairs.

We recovered the magnetometer in the rough seas to keep it safe.

We disabled source array #3 briefly to swap out the SPSU board in the GCU. This fixed the problem on Gun 3-7.

The gear is towing well.

Daily Comment Summaries - Plan for Tomorrow

Wed 18 Aug

We will resume acquiring Line QCF01A2M this evening and finish around noon tomorrow. This will complete the original prime lines for QCF. We will begin our transit to the south end of our survey to re-acquire several re-shoot lines caused by cetacean sightings.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Wed 18. Aug 00:00	Wed 18. Aug 04:28	4.467
SOL Seq 55 Line:PM01A2APreplot:QCF01A2M Block=Queen Charlotte Fault FGSP=2902 Hdg=153.2° Prime EOL Seq 55 Line:PM01A2APreplot:QCF01A2M Block=Queen Charlotte Fault LGSP=2000 Complete				
Streamers	DT_ST	Wed 18. Aug 04:28	Wed 18. Aug 13:20	8.867
Extra line change to reshoot QCF09. Reshoot due to out of spec streamer depths and sea state.				
Streamers	DT_ST	Wed 18. Aug 13:20	Wed 18. Aug 21:46	8.433
SOL Seq 56 Line:RM09 Preplot:QCF09 Block=Queen Charlotte Fault FGSP=999 Hdg=61.4° Prime EOL Seq 56 Line:RM09 Preplot:QCF09 Block=Queen Charlotte Fault LGSP=2320 Complete				
Streamers	DT_ST	Wed 18. Aug 21:46	Wed 18. Aug 24:00	2.233
Extra line change to reshoot QCF09. Reshoot due to out of spec streamer depths and sea state.				



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

18-Aug	Hours	% Percent
Acquisition	4.467	18.611
Production Prime	4.467	18.611
DownTime	19.533	81.389
Streamers	19.533	81.389
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	16.609
At Anchor	24.000	2.857
Deployment	3.167	0.377
Mob Ashore	64.500	7.679
Testing	0.433	0.052
Transit to Prospect	47.417	5.645
Chargeable Standby	89.733	10.683
Cetacean	46.983	5.593
Reconfiguration	18.300	2.179
Streamer Reconfig	18.300	2.179
Survey Design	1.367	0.163
Transit	23.083	2.748
Acquisition	567.000	67.500
Prime Extended L/C	1.633	0.194
Prime Line Change	39.383	4.688
Production Prime	525.983	62.617
DownTime	43.750	5.208
Source	10.033	1.194
Streamers	33.717	4.014
Total	840.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/18/2021

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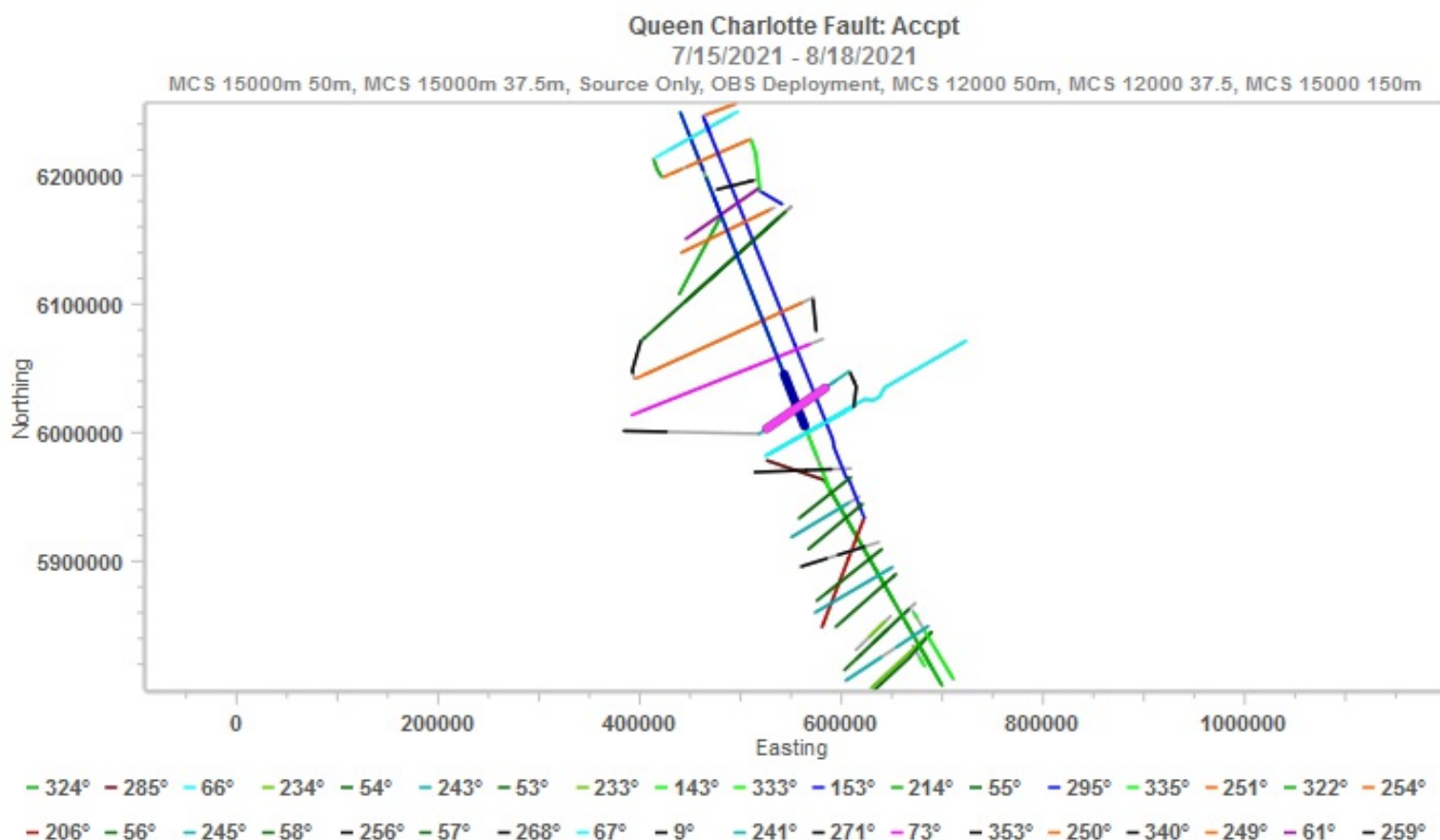
MCS 15000m 50m					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
55	PM01A2A	153.2	2902	2000	Prime	45.15	4.642	Complete	Complete
56	RM09	61.4	999	2320	Prime	66.05	4.229	Complete	Complete
Total						111.20			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	111.20	463.55	2773.00	4224.75
Combined	111.20	463.55	2773.00	4224.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 18 Aug

Navigation:

TB GPS is out

Information Technology (IT):

No Major Issues to Report



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Acquisition (OBS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

We recovered the magnetometer in the rough seas to keep it safe.

Daily Comment Summaries - Personnel Onboard

Wed 18 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category

Code

Start

End



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/19/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Thu 19 Aug

The original prime lines are now completed for QCF. We are currently transiting south to re-acquire several lines that have deficiencies in coverage. There is down time and standby time logged today to reflect the time spent to re-acquire these last few sequences. The utilization has been good.

Daily Comment Summaries - Plan for Tomorrow

Thu 19 Aug

We are transiting to re-shoot QCF16. The start of line should be at approximately 8PM local time. The next two lines will follow rapidly.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Streamers	DT_ST	Thu 19. Aug 00:00	Thu 19. Aug 04:12	4.200
Extra line change to reshoot QCF09. Reshoot due to out of spec streamer depths and sea state.				
Production Prime	AC_PP	Thu 19. Aug 04:12	Thu 19. Aug 13:55	9.717
SOL Seq 57 Line:PM01A2B Preplot:QCF01A2M Block=Queen Charlotte Fault FGSP=1999 Hdg=153.2° Prime EOL Seq 57 Line:PM01A2B Preplot:QCF01A2M Block=Queen Charlotte Fault LGSP=683 Complete				
Prime Line Change	AC_PLC	Thu 19. Aug 13:55	Thu 19. Aug 15:55	2.000
Nominal Prime line change.				
Cetacean	SB_CT	Thu 19. Aug 15:55	Thu 19. Aug 24:00	8.083
Transit to re-shoot Line QCF16 that was ended previously due to cetacean sighting.				
Chargeable standby due to close proximity of Cetaceans.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

19-Aug	Hours	%Percent
Acquisition	11.717	48.819
Prime Line Change	2.000	8.333
Production Prime	9.717	40.486
Chargeable Standby	8.083	33.681



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/19/2021

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19-Aug	Hours	%Percent
Cetacean	8.083	33.681
DownTime	4.200	17.500
Streamers	4.200	17.500
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	16.148
At Anchor	24.000	2.778
Deployment	3.167	0.367
Mob Ashore	64.500	7.465
Testing	0.433	0.050
Transit to Prospect	47.417	5.488
Chargeable Standby	97.817	11.321
Cetacean	55.067	6.373
Reconfiguration	18.300	2.118
Streamer Reconfig	18.300	2.118
Survey Design	1.367	0.158
Transit	23.083	2.672
Acquisition	578.717	66.981
Prime Extended L/C	1.633	0.189
Prime Line Change	41.383	4.790
Production Prime	535.700	62.002
DownTime	47.950	5.550
Source	10.033	1.161
Streamers	37.917	4.389
Total	864.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m



Daily Science Report

Lamont-Doherty Earth Observatory
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8/19/2021

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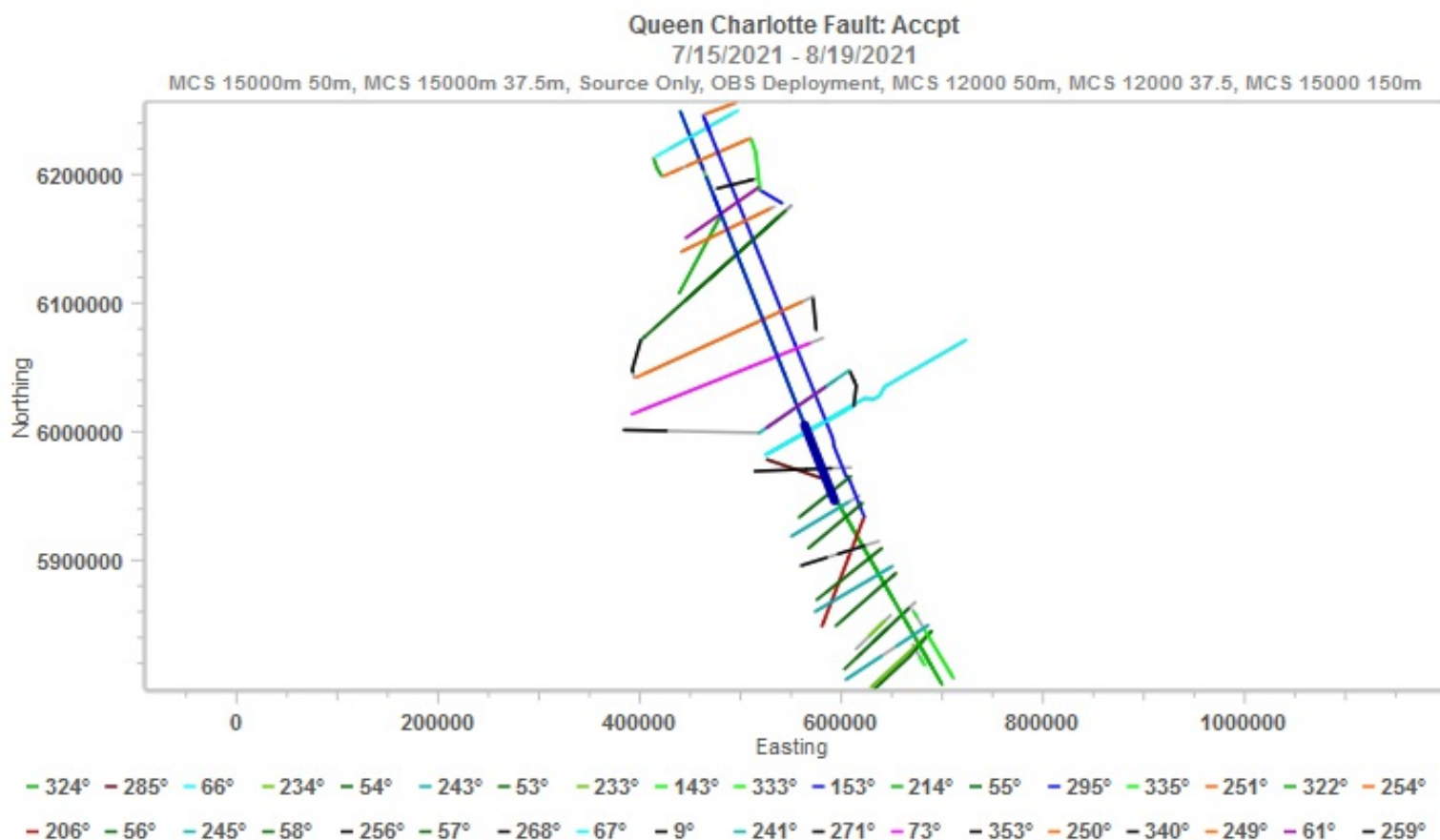
MCS 15000m 50m					
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
57	PM01A2B	153.2	1999	683	Prime	65.80	3.657	Complete	Complete
Total						65.80			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	65.80	529.35	2838.80	4290.55
Combined	65.80	529.35	2838.80	4290.55



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 19 Aug

Navigation:

TB GPS is out

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Thu Aug 19 2021 11:18a.m.

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Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 19 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO
Eren Penfield - RPS PSO
Evana Douglas - RPS PSO
Lilia Perez - RPS PSO
Jillian Daniel - RPS PSO

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Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/20/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Fri 20 Aug

We have completed the reshoot for QCF01B and have one more small piece of re-shoot to acquire on QCF03M and then we will start recovering all of the gear.

We had to extend one line change due to some fishing traffic on the end of RM16.

We reviewed a lot of THC cards and have begun updating them in our HSE folder.

The weather is decent and everyone is ready to begin picking up the toys to go home.

Daily Comment Summaries - Plan for Tomorrow

Fri 20 Aug

We will begin recovering all of the gear early in the morning. The last shotpoint will be around 3AM local time. We have reviewed the recovery plan and procedures with everyone and have the back decks prepped.

We will test some suspect LAUM's, SSCU's and HAU's during the recovery to confirm their status.

We hope to have everything onboard by tomorrow afternoon. Full steam ahead to Ketchikan!

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
Cetacean	SB_CT	Fri 20. Aug 00:00	Fri 20. Aug 04:25	4.417
Continued transit to re-shoot Line QCF16 that was ended previously due to cetacean sighting.				
Chargeable standby due to close proximity of Cetaceans.				
Production Prime	AC_PP	Fri 20. Aug 04:25	Fri 20. Aug 10:32	6.117
SOL Seq 58 Line:Reshoot_16 Block=Queen Charlotte Fault FGSP=720 Hdg=53.4° Prime EOL Seq 58 Line:Reshoot_16 Block=Queen Charlotte Fault LGSP=1744 Complete				
Cetacean	SB_CT	Fri 20. Aug 10:32	Fri 20. Aug 19:42	9.167
Chargeable standby due to close proximity of Cetaceans.				
Extra line change due to fishing traffic near the shore.				
Production Prime	AC_PP	Fri 20. Aug 19:42	Fri 20. Aug 24:00	4.300
SOL Seq 59 Line:RM01B Preplot:Reshoot_01B Block=Queen Charlotte Fault FGSP=1001 FCSP=N/AHdg=143.8° Prime MSP Seq 59 Line:RM01B Preplot:Reshoot_01B Block=Queen Charlotte Fault LGSP=1450 LCSP=1450 Midnight				



Daily Science Report

Lamont-Doherty Earth Observatory
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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

20-Aug	Hours	% Percent
Acquisition	10.417	43.403
Production Prime	10.417	43.403
Chargeable Standby	13.583	56.597
Cetacean	13.583	56.597
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	15.711
At Anchor	24.000	2.703
Deployment	3.167	0.357
Mob Ashore	64.500	7.264
Testing	0.433	0.049
Transit to Prospect	47.417	5.340
Chargeable Standby	111.400	12.545
Cetacean	68.650	7.731
Reconfiguration	18.300	2.061
Streamers Reconfig	18.300	2.061
Survey Design	1.367	0.154
Transit	23.083	2.599
Acquisition	589.133	66.344
Prime Extended L/C	1.633	0.184
Prime Line Change	41.383	4.660
Production Prime	546.117	61.500
DownTime	47.950	5.400
Source	10.033	1.130
Streamers	37.917	4.270
Total	888.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

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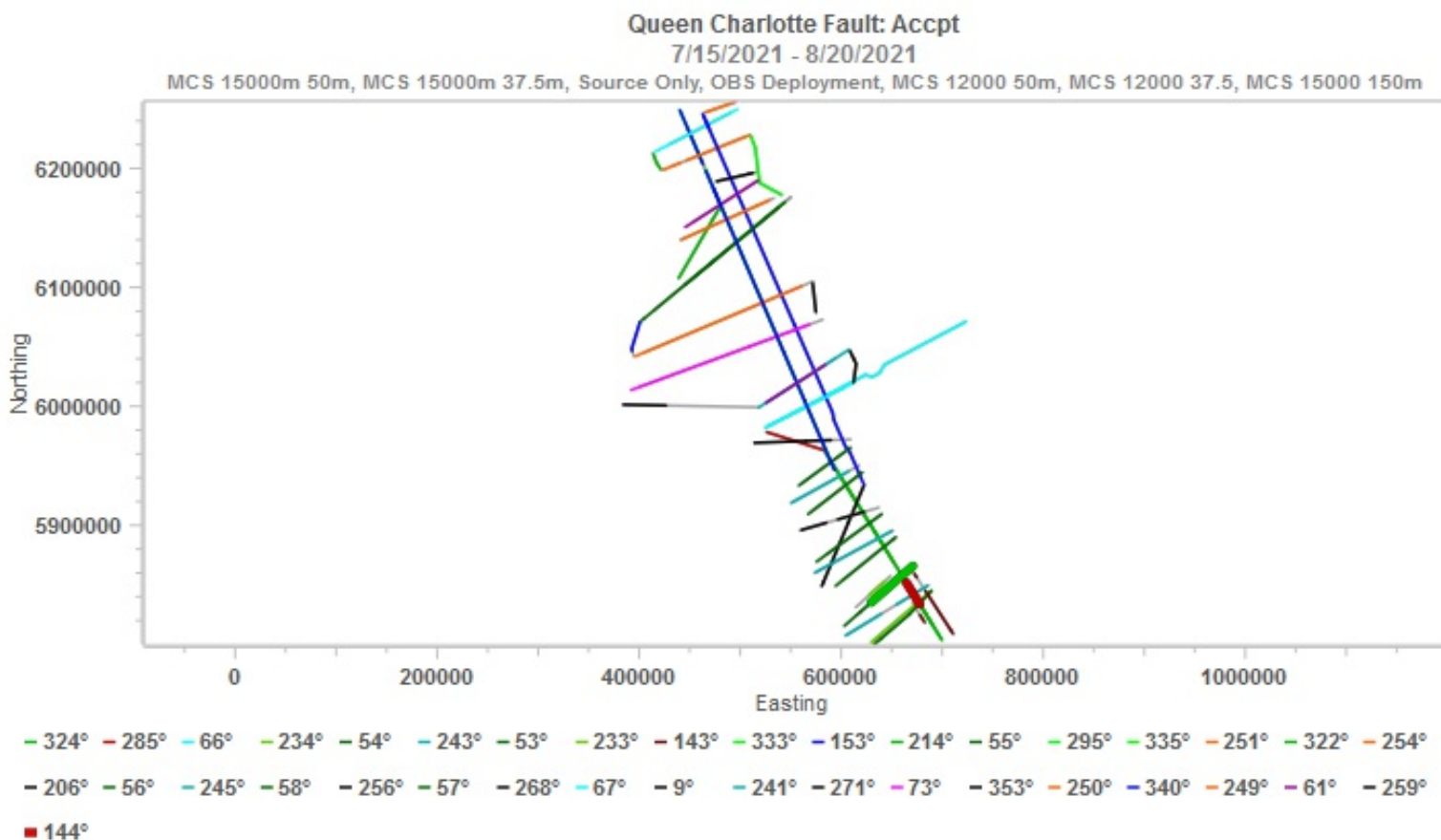
MCS 15000m 50m					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
58	Reshoot_16	53.4	720	1744	Prime	51.20	4.520	Complete	Complete
59	RM01B	143.8	1001	1450	Prime	22.45	2.819	Part	Midnight
Total						73.65			

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	73.65	603.00	2912.45	4364.20
Combined	73.65	603.00	2912.45	4364.20



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 20 Aug

Navigation:

TB GPS is out

The AIS has been getting much less reliable lately.

Information Technology (IT):

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Fri Aug 20 2021 01:32p.m.

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Daily Science Report

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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 20 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Cody Bahlau L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
Mark Walker - Contract Personnel Marine Science Technician (Compressors)


PSO Staff On-board the Langseth

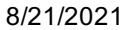
Cassandra Frey - RPS Lead PSO
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Sarah Nolt-Caraway - U. New Mexico - Scientist
Olumide Adedeji - U. New Mexico - Scientist
Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Chiefs Meeting	Mtgs_Chfs	Fri 20. Aug 18:00	Fri 20. Aug 19:00
HSE - Daily Chiefs Meeting Captain, PI, CSO, Chief Nav Review shooting plan and ongoing issues			



Daily Science Report

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sat 21 Aug

The weather deteriorated significantly while approaching the last re-shoot line. After some discussion with the Captain, PI's and key personnel, it was decided to go down for weather. This decision was made to reduce the risk to the crew and equipment.

We started recovering the guns and PAM cable at approximately 04:05 GMT. The streamer and tail buoy were completely onboard at 14:40.

We dropped the RVIM out of the front end to reduce depreciation or damage while being stored. We tested several HAU's, SSCU's, LAUM's during the recovery and updated the inventories.

The crew is currently de-rigging the guns, PSO equipment, tail buoy and antenna's for storage and maintenance during the transit to Ketchikan.

The acquisition phase of QCF is complete.

Daily Comment Summaries - Plan for Tomorrow




Sat 21 Aug

Transit all day toward Ketchikan.

Continue demobilization and preparations.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)



Category	Code	Start	End	Duration
 Production Prime	AC_PP	Sat 21. Aug 00:00	Sat 21. Aug 01:19	1.317
SOL Seq 59 Line:RM01B Preplot:Reshoot_01B Block=Queen Charlotte Fault FGSP=1451 Hdg=143.8° Prime EOL Seq 59 Line:RM01B Preplot:Reshoot_01B Block=Queen Charlotte Fault LGSP=1501 Complete				
 Prime Line Change	AC_PLC	Sat 21. Aug 01:19	Sat 21. Aug 02:19	1.000
Nominal Prime line change.				
 Weather	SB_WX	Sat 21. Aug 02:19	Sat 21. Aug 04:05	1.767
Chargeable standby due to weather. We ended the attempt at the last reshoot line due to weather. Winds 30-40 knots, Seas +10 feet.				



Daily Science Report

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Category	Code	Start	End	Duration
Begin recovering gear and demobilization.				
Recovery	DM_RC	Sat 21. Aug 04:05	Sat 21. Aug 06:30	2.417
Demobilising offshore, recovering gun strings 1-4 and PAM cable.				
Recovery	DM_RC	Sat 21. Aug 06:30	Sat 21. Aug 07:40	1.167
Demobilising offshore, recovering lead-in and head float. Removed bird scare ropes.				
Recovery	DM_RC	Sat 21. Aug 07:40	Sat 21. Aug 09:46	2.100
Demobilising offshore, recovering streamer onto Reel #3; testing HAU modules.				
Recovery	DM_RC	Sat 21. Aug 09:46	Sat 21. Aug 10:39	0.883
Demobilising offshore, recovering streamer and testing SSCU modules.				
Recovery	DM_RC	Sat 21. Aug 10:39	Sat 21. Aug 11:04	0.417
Demobilising offshore, recovering streamer and testing LAUM's				
Recovery	DM_RC	Sat 21. Aug 11:04	Sat 21. Aug 13:30	2.433
Demobilising offshore, recovering streamer onto Reel #4				
Recovery	DM_RC	Sat 21. Aug 13:30	Sat 21. Aug 14:40	1.167
Demobilising offshore, recovering streamer onto Reel #2.				
Tail Buoy onboard and all equipment secured at 14:40.				
Transit From Prospect	DM_TF	Sat 21. Aug 14:40	Sat 21. Aug 24:00	9.333
Demobilising, In Transit from prospect for demobilisation ashore.				
Heading to Ketchikan, Alaska.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

21-Aug	Hours	%Percent
Acquisition	2.317	9.653
Prime Line Change	1.000	4.167
Production Prime	1.317	5.486
Chargeable Standby	1.767	7.361
Weather	1.767	7.361
Demobilisation	19.917	82.986
Recovery	10.583	44.097
Transit From Prospect	9.333	38.889
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	15.298
At Anchor	24.000	2.632
Deployment	3.167	0.347



Daily Science Report

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Category	Hours	%Percent
Mob Ashore	64.500	7.072
Testing	0.433	0.048
Transit to Prospect	47.417	5.199
Chargeable Standby	113.167	12.409
Cetacean	68.650	7.527
Reconfiguration	18.300	2.007
Streamer Reconfig	18.300	2.007
Survey Design	1.367	0.150
Transit	23.083	2.531
Weather	1.767	0.194
Acquisition	591.450	64.852
Prime Extended L/C	1.633	0.179
Prime Line Change	42.383	4.647
Production Prime	547.433	60.026
Demobilisation	19.917	2.184
Recovery	10.583	1.160
Transit From Prospect	9.333	1.023
DownTime	47.950	5.258
Source	10.033	1.100
Streamers	37.917	4.158
Total	912.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

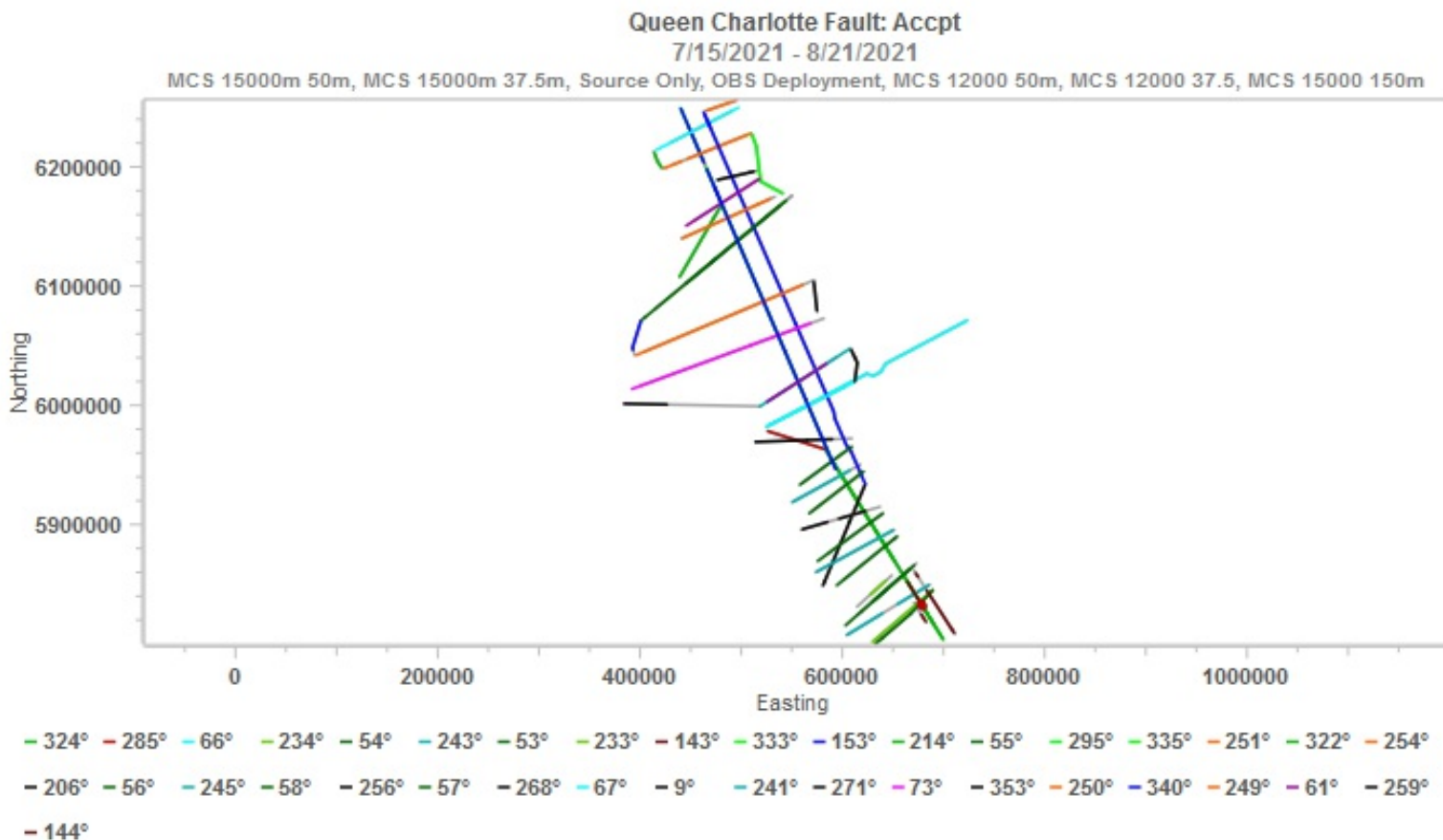
Production Listing (Accpt km by interval) - Prime: Full Fold, Infill: Sail Line

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
59	RM01B	143.8	1451	1501	Prime	2.55	2.403	Complete	Complete
Total						2.55			



Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	2.55	605.55	2915.00	4366.75
Combined	2.55	605.55	2915.00	4366.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 21 Aug

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 21 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic



Daily Science Report

Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE

8/21/2021

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Cody Bahlau - L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
Klayton Curtis - Contract Personnel Marine Science Technician (OBS)
Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)
Ray Hatton - Contract Personnel Marine Science Technician (Source)
Michael Coufal - Contract Personnel Marine Science Technician (Source)
Jacob Greenberg - UNOLS Tech (Source)
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Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

8/22/2021

Page 1

Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Sun 22 Aug

We have been securing the equipment for the upcoming mission and prepping for the shipyard.

The crew had an end of mission meeting to discuss port call expectations and Covid protocols.

De-rigged the PAM gear and completed the inventory. The equipment is prepared for shipping in Seattle. The PSO Tower has been washed down with fresh water and secured. The Big Eyes have been stowed.

Removed the batteries for digibirds and tested them for pre-storage.

Completed the de-rig of the tail buoy and tested GPS pods and AIS unit.

We had a full safety meeting with the Science Party, Techs, Contractors and PSO. We discussed the crew change expectations and protocols, We also reviewed some of the THC cards and discussed the recent injury and possible changes to procedures. GREAT JOB to the entire Science Party and the off-signers!

We have uploaded 24 THC Cards. (Task, Hazard, Control) We have had a great "buy in" from the crew with the new safety observations. There are another dozen sitting on our desks for review.

Daily Comment Summaries - Plan for Tomorrow


Sun 22 Aug

We will take on the Pilot at approximately 6AM local time. We should be at the dock in Ketchikan at approximately 8:30AM.

Crew change preparations.

Gravity tie.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Transit From Prospect	DM_TF	Sun 22. Aug 00:00	Sun 22. Aug 24:00	24.000
Demobilising, In Transit from prospect for demobilisation ashore.				
Heading to Ketchikan, Alaska for crew change.				



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Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

22-Aug	Hours	% Percent
Demobilisation	24.000	100.000
Transit From Prospect	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	% Percent
Mobilisation	139.517	14.906
At Anchor	24.000	2.564
Deployment	3.167	0.338
Mob Ashore	64.500	6.891
Testing	0.433	0.046
Transit to Prospect	47.417	5.066
Chargeable Standby	113.167	12.090
Cetacean	68.650	7.334
Reconfiguration	18.300	1.955
Streamer Reconfig	18.300	1.955
Survey Design	1.367	0.146
Transit	23.083	2.466
Weather	1.767	0.189
Acquisition	591.450	63.189
Prime Extended L/C	1.633	0.175
Prime Line Change	42.383	4.528
Production Prime	547.433	58.486
Demobilisation	43.917	4.692
Recovery	10.583	1.131
Transit From Prospect	33.333	3.561
DownTime	47.950	5.123
Source	10.033	1.072
Streamers	37.917	4.051
Total	936.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m



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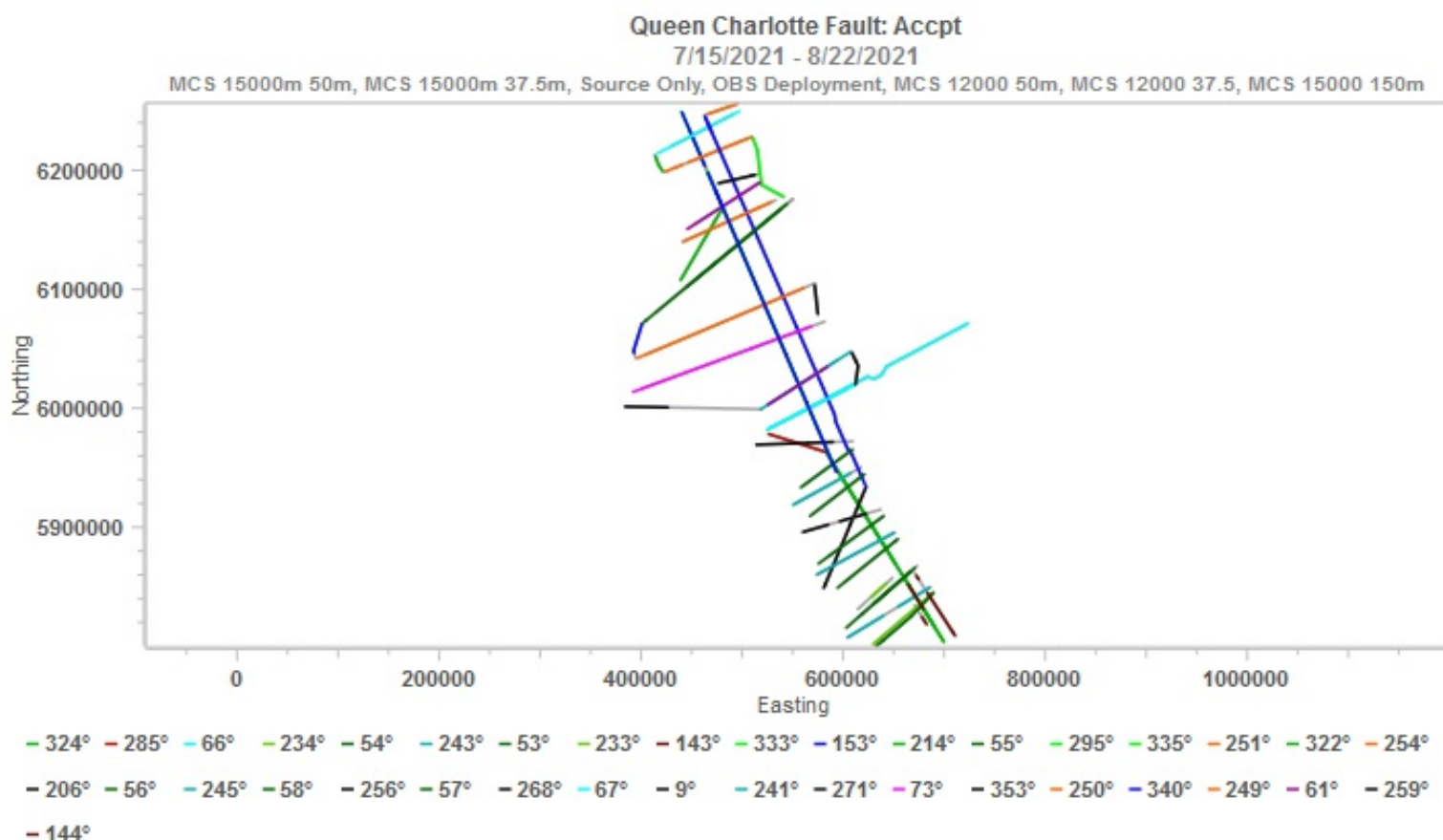
MCS 15000m 50m					
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	0.00	605.55	2915.00	4366.75
Combined	0.00	605.55	2915.00	4366.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 22 Aug

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Sun Aug 22 2021 03:52p.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

Sun 22 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

Ray Hatton - Contract Personnel Marine Science Technician (Source)

Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

PSO Staff On-board the Langseth

Cassandra Frey - RPS Lead PSO

Eren Penfield - RPS PSO

Evana Douglas - RPS PSO

Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

Science Party On-board the Langseth

Lindsay Worthington - U. New Mexico - PI

Ben Phrampus - US NRL Sr. Scientist


Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adediji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
 Full Safety Meeting	Mtgs_FS	Sun 22. Aug 18:30	Sun 22. Aug 19:30
<p>HSE - Full Safety Meeting.</p> <p>We talked about the port call expectations in Ketchikan including social distancing and COVID rules.</p> <p>Discussed dis-embarkation expectations for the off-signing Science Party. Laundry, Room cleaning, Work Areas. etc.</p> <p>Reviewed some of the THC cards and discussed the recent injury and possible changes in procedures.</p> <p>GREAT JOB TO ALL!</p>			

Daily Total Category	Code	Count
 STOP Cards	Re_Con_STOP	24
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Daily Total Category	Code	Count
We have uploaded 24 THC Cards. (Task, Hazard, Control) We have had a great "buy in" from the crew with the new safety observations.		



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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Mon 23 Aug

We arrived in Port at Ketchikan.

Gravity Tie complete.

We had a power problem with one of the UPS's. Will install additional UPS that just arrived.

Stowed the magnetometer.

Cruise Party. Wonderful seafood and beverages.

Much misc.

Daily Comment Summaries - Plan for Tomorrow



Mon 23 Aug

Install new UPS.

Crew Change. Science Party, PSO and Contractor's are departing.

Some Leg 2 personnel will be arriving.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Transit From Prospect	DM_TF	Mon 23. Aug 00:00	Mon 23. Aug 15:30	15.500
Demobilising, In Transit from prospect for demobilisation ashore.				
Arrive in Ketchikan!				
 Demob Ashore	DM_DA	Mon 23. Aug 15:30	Mon 23. Aug 24:00	8.500
Demobilising ashore.				
Gravity Tie complete.				
Crew change operation.				
Cruise Party. Sea food and beverages on Muster Deck.				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

23-Aug	Hours	% Percent
Demobilisation	24.000	100.000
Demob Ashore	8.500	35.417
Transit From Prospect	15.500	64.583



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23-Aug	Hours	%Percent
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	14.533
At Anchor	24.000	2.500
Deployment	3.167	0.330
Mob Ashore	64.500	6.719
Testing	0.433	0.045
Transit to Prospect	47.417	4.939
Chargeable Standby	113.167	11.788
Cetacean	68.650	7.151
Reconfiguration	18.300	1.906
Streamer Reconfig	18.300	1.906
Survey Design	1.367	0.142
Transit	23.083	2.405
Weather	1.767	0.184
Demobilisation	67.917	7.075
Demob Ashore	8.500	0.885
Recovery	10.583	1.102
Transit From Prospect	48.833	5.087
Acquisition	591.450	61.609
Prime Extended L/C	1.633	0.170
Prime Line Change	42.383	4.415
Production Prime	547.433	57.024
DownTime	47.950	4.995
Source	10.033	1.045
Streamers	37.917	3.950
Total	960.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					



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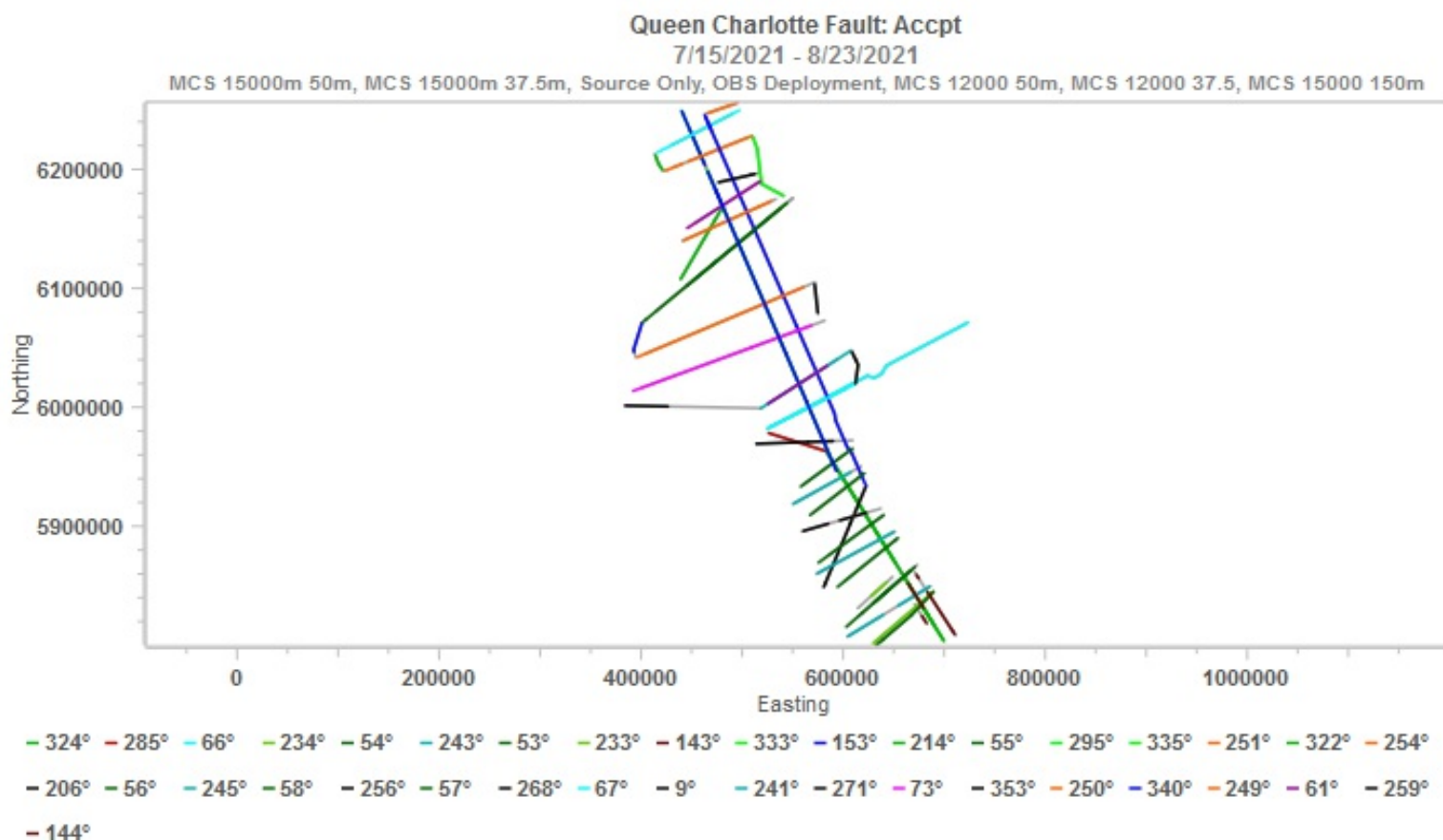
MCS 15000m 50m					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

Production Totals (Acpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	2915.00	4366.75
Combined	0.00	0.00	2915.00	4366.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 23 Aug

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (OBS):

No Major Issues to Report

(UTC 00:00) UTC - Universal Time Coordinated

Generated on Tue Aug 24 2021 05:06a.m.

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Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Mon 23 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic

Cody Bahlau L-DEO OMO Marine Science Technician - Nav

Gilles Guerin L-DEO OMO Marine Science Technician - OBS

Klayton Curtis - Contract Personnel Marine Science Technician (OBS)

Viktor Ubaru - Contract Personnel Marine Science Technician (Nav)

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Michael Coufal - Contract Personnel Marine Science Technician (Source)

Jacob Greenberg - UNOLS Tech (Source)

Mark Walker - Contract Personnel Marine Science Technician (Compressors)

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Eren Penfield - RPS PSO

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Lilia Perez - RPS PSO

Jillian Daniel - RPS PSO

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Ben Phrampus - US NRL Sr. Scientist

Sarah Nolt-Caraway - U. New Mexico - Scientist

Olumide Adedeji - U. New Mexico - Scientist

Pinar Gurun - Dalhousie U. - Scientist

Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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Daily Science Report

Lamont-Doherty Earth Observatory
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Client:	United States National Science Foundation	Contractor:	Lamont-Doherty Earth Observatory
Job No:		Job No:	MGL2105
Block:	Queen Charlotte Fault	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:	N/A	Party Chiefs:	Todd Jensvold
Job No:		Client Reps:	Lindsay Worthington

Daily Comment Summaries - Daily Summary

Tue 24 Aug

A busy day with the QCF offsigners and Leg #2 OBS onsigners on the same day. This will be the last entry for MGL 2105.


Crew change logistics and OBSIC preparedness in full swing.

Daily Comment Summaries - Plan for Tomorrow

Tue 24 Aug

Continue prepping OBS instruments and lab spaces for Leg #2.

Timing Diary (Marcus G Langseth, MCS 15000m 50m)

Category	Code	Start	End	Duration
 Demob Ashore	DM_DA	Tue 24. Aug 00:00	Tue 24. Aug 24:00	24.000
Demobilising ashore. The QCF Science Party departed late morning. Leg #2 arrived onboard early afternoon. This will be the last entry for MGL2105				

Timing Day By Day (Marcus G Langseth, MCS 15000m 50m)

24-Aug	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, MCS 15000m 50m, Source Only, MCS 15000 150m)

Category	Hours	%Percent
Mobilisation	139.517	14.179
At Anchor	24.000	2.439
Deployment	3.167	0.322
Mob Ashore	64.500	6.555
Testing	0.433	0.044



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Category	Hours	% Percent
Transit to Prospect	47.417	4.819
Chargeable Standby	113.167	11.501
Cetacean	68.650	6.977
Reconfiguration	18.300	1.860
Streamer Reconfig	18.300	1.860
Survey Design	1.367	0.139
Transit	23.083	2.346
Weather	1.767	0.180
Demobilisation	91.917	9.341
Demob Ashore	32.500	3.303
Recovery	10.583	1.076
Transit From Prospect	48.833	4.963
Acquisition	591.450	60.107
Prime Extended L/C	1.633	0.166
Prime Line Change	42.383	4.307
Production Prime	547.433	55.633
DownTime	47.950	4.873
Source	10.033	1.020
Streamers	37.917	3.853
Total	984.000	

Basic Project Details

MCS 15000m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	190 m	Fold Coverage:	252		
Cable Details					
No of Cables:	1	Chans Per Cable:	1200	Front Depth:	0 m
Tail Depth:	0 m	Length:	15000 m	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	0 m
Pressure:	0 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

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

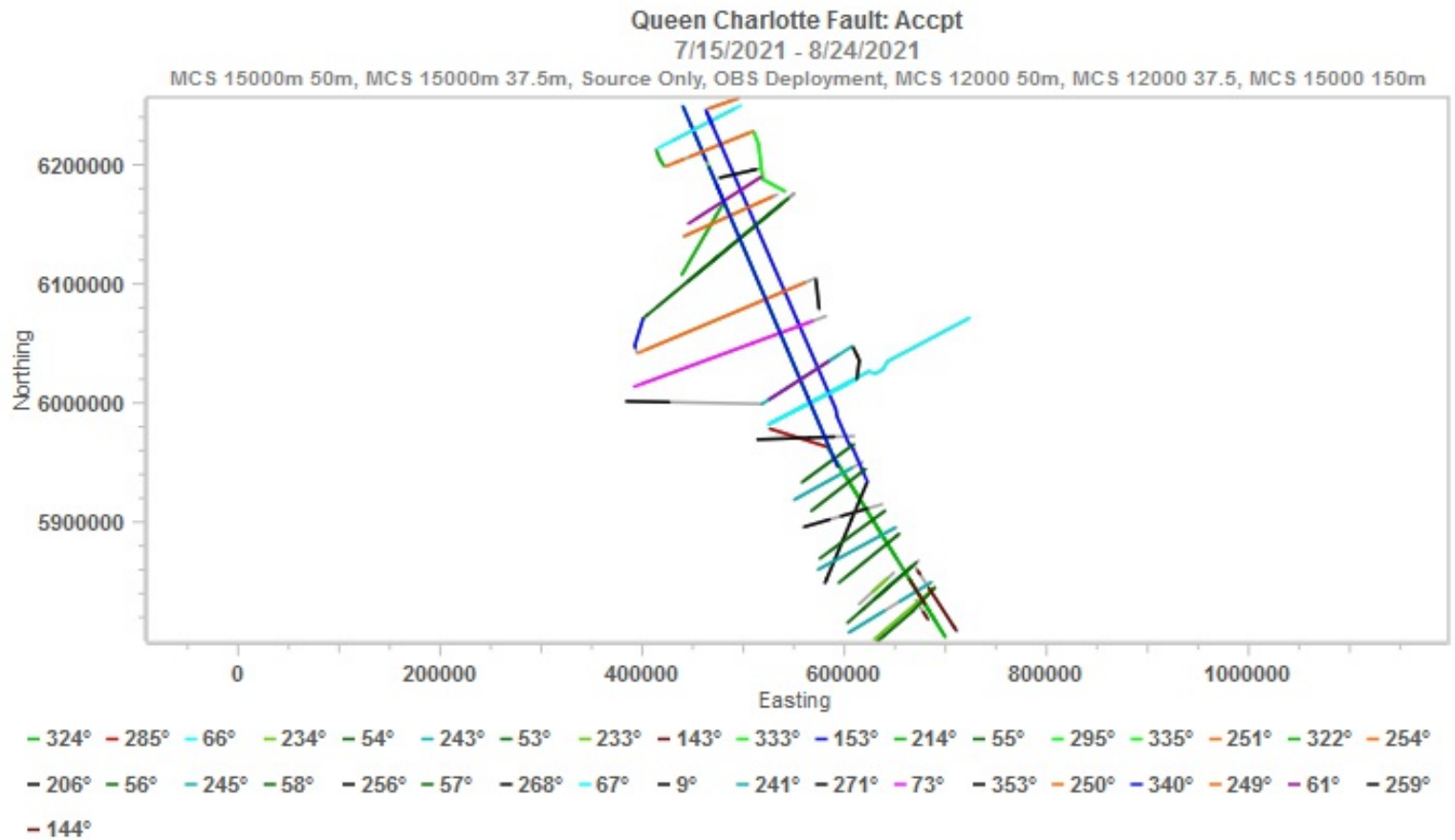


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Production Totals (Accpt km) - Prime: Full Fold, Infill: Various

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	2915.00	4366.75
Combined	0.00	0.00	2915.00	4366.75



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 24 Aug

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 24 Aug

Technical Staff On-board the Langseth

Todd Jensvold L-DEO OMO Chief Science Officer

Josh Kasinger L-DEO OMO Chief Source Mechanic



Daily Science Report

Lamont-Doherty Earth Observatory
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Cody Bahlau - L-DEO OMO Marine Science Technician - Nav
Gilles Guerin L-DEO OMO Marine Science Technician - OBS
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Pinar Gurun - Dalhousie U. - Scientist
Lazaro Garza - Western Washington U. - Scientists

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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