

11/2/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Thu 02 Nov

Completed Crew transfer and sail towards the deployment point for MGL 2315.

Daily Comment Summaries - Plan for Tomorrow

Thu 02 Nov

Continue to transit to deployment point and start to the deploy the streamer.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
21:44	24:00	Transit to Prospect	MB_TT	2.267
Crew Transfer complete. In transit to prospect, for mobilizing deployment.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

2-Nov	Hours	% Percent
Mobilisation	2.267	9.444
Transit to Prospect	2.267	9.444
Day's Total	2.267	9.444

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m)

Category	Hours	% Percent
Mobilisation	2.267	100.000
Transit to Prospect	2.267	100.000
Total	2.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

Production Totals (Acqpt Main km) - Prime: Full Fold, Infill: Unknown
Source Only, MCS 13650m 50m

11/2/2023

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

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

Source Only, MCS 13650m 50m

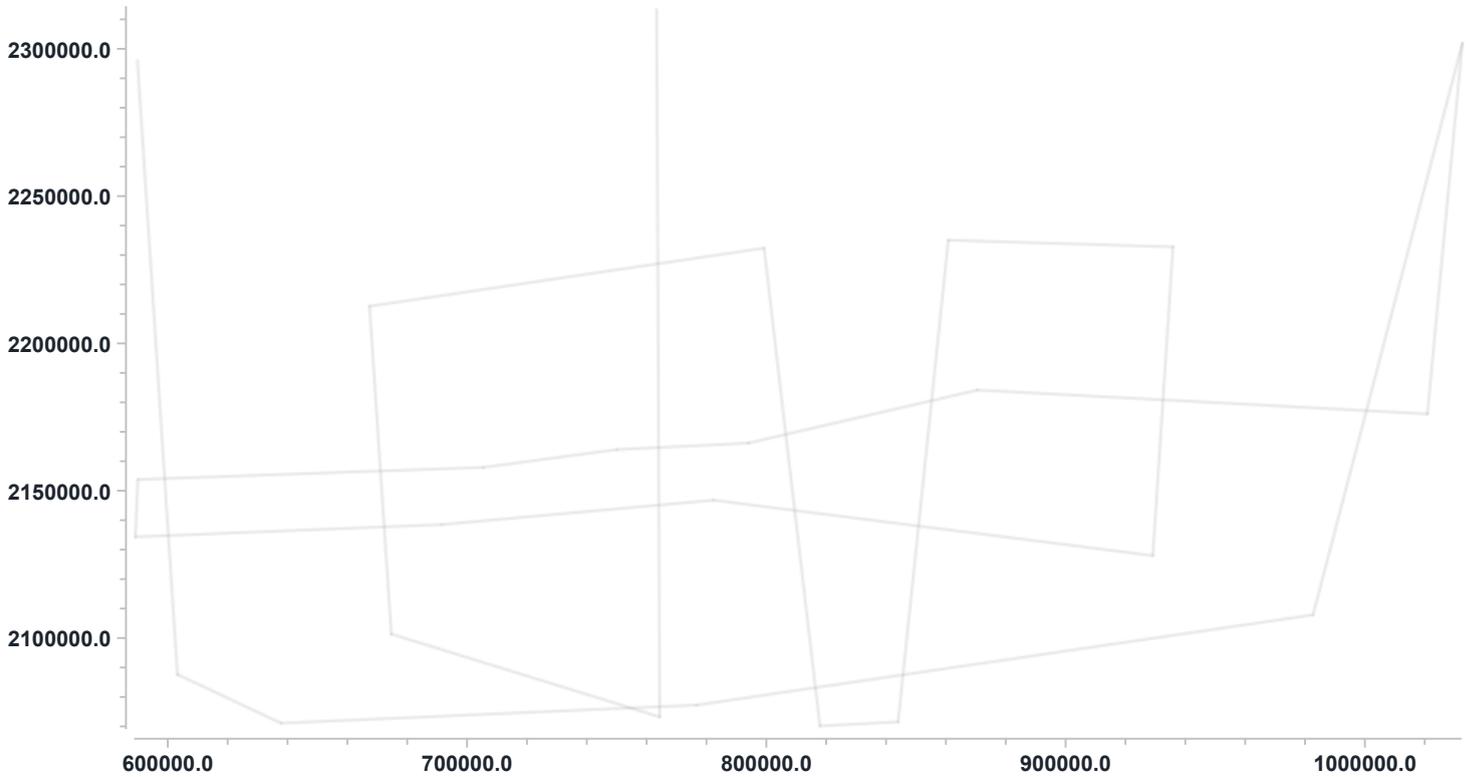
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

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

Source Only, MCS 13650m 50m

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

North Puerto Rico: Acctpt
11/2/2023 - 11/2/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 02 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

11/2/2023

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No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 02 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Elizabeth Breton - RPS PSO
 Tiffany Ramdoo - RPS PSO
 Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
 Uri Ten Brink - Co-Pi
 Hanchao Jian - Co-Chief Scientist
 Dave Foster - Technical staff
 Wayne Baldwin - Technical staff
 Nick Harmon - Res. Specialist
 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
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11/3/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Fri 03 Nov

Completed Crew transfer and sail towards the deployment point for MGL 2315. Around 9am local a safety talk was held and the gear deployment was started. During deployment multiple problems were encountered, Digi Bird Communication, electrical leakage, and communication with the front 10 sections (1500 meters). Multiple trouble shooting steps were taken to deploy the gear which created some down time.

Daily Comment Summaries - Plan for Tomorrow

Fri 03 Nov

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	13:07	Transit to Prospect	MB_TT	13.117
In transit to prospect, for mobilizing deployment.				
13:07	24:00	Deployment	MB_DP	10.883
Mobilizing offshore, deploying outboard equipment.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

3-Nov	Hours	% Percent
Mobilisation	24.000	100.000
Deployment	10.883	45.347
Transit to Prospect	13.117	54.653
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m)

Category	Hours	% Percent
Mobilisation	26.267	100.000
Transit to Prospect	15.383	58.566
Deployment	10.883	41.434
Total	26.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m

MCS 13650m 50m					
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

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

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

Source Only, MCS 13650m 50m

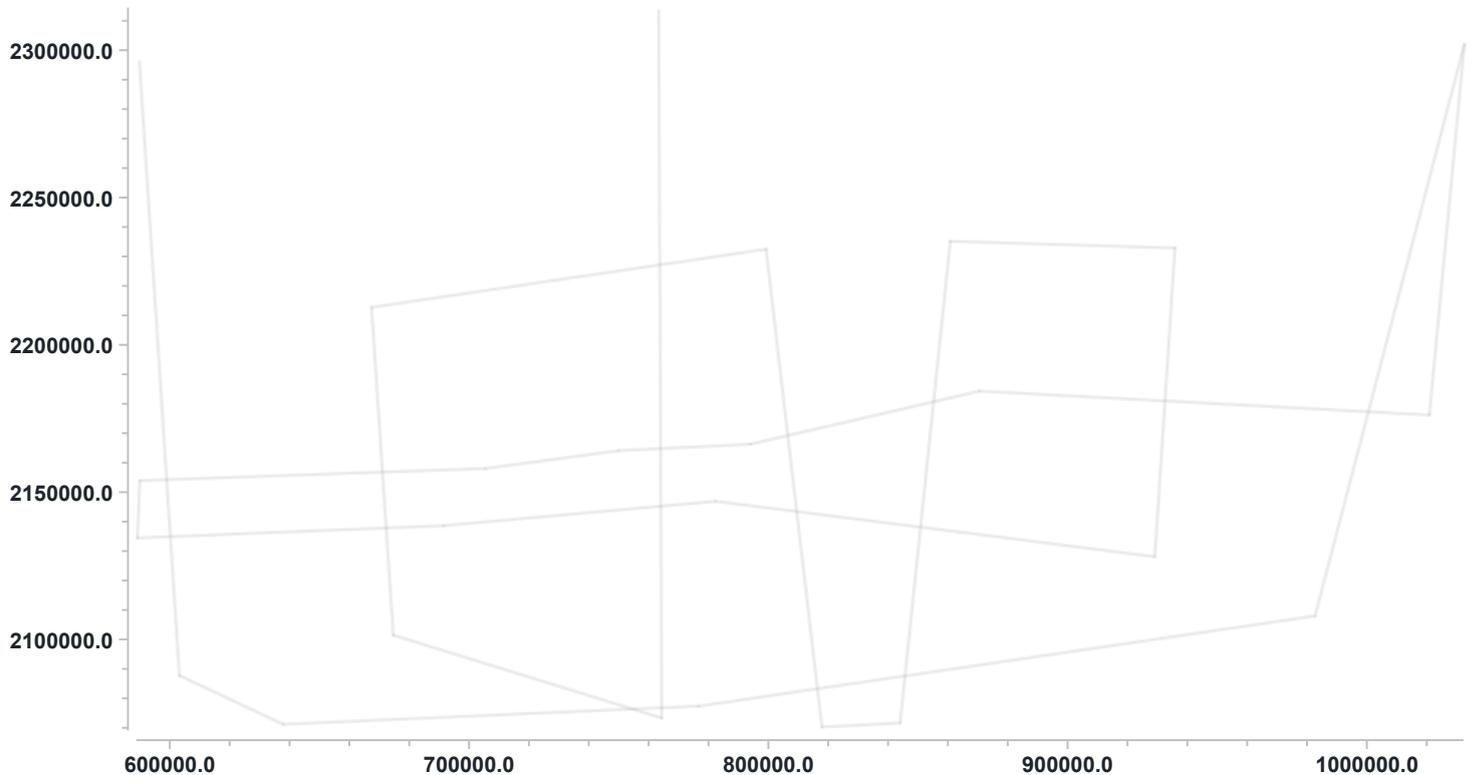
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

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

Source Only, MCS 13650m 50m

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

North Puerto Rico: Accpt
11/2/2023 - 11/3/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 03 Nov

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Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

Trouble shooting during deployment

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Fri 03 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Elizabeth Breton - RPS PSO
 Tiffany Ramdoo - RPS PSO
 Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
 Uri Ten Brink - Co-Pi
 Hanchao Jian - Co-Chief Scientist
 Dave Foster - Technical staff
 Wayne Baldwin - Technical staff
 Nick Harmon - Res. Specialist
 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
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11/4/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sat 04 Nov

Continue to trouble shoot the streamer during deployment.

Daily Comment Summaries - Plan for Tomorrow

Sat 04 Nov

Finish deploying the streamer and start the first line.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	13:00	Deployment	MB_DP	13.000
Mobilizing offshore, deploying outboard equipment.				
13:00	24:00	Streamers	DT_ST	11.000
Downtime due to streamers. Problems with digibird communication and sections 1-10 in the front.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m, Source Only)

4-Nov	Hours	% Percent
DownTime	11.000	45.833
Streamers	11.000	45.833
Mobilisation	13.000	54.167
Deployment	13.000	54.167
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m)

Category	Hours	% Percent
Mobilisation	28.383	72.069
Transit to Prospect	15.383	39.061
Deployment	13.000	33.009
DownTime	11.000	27.931
Streamers	11.000	27.931
Total	39.383	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m

11/4/2023

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MCS 13650m 50m					
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

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

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

Source Only, MCS 13650m 50m

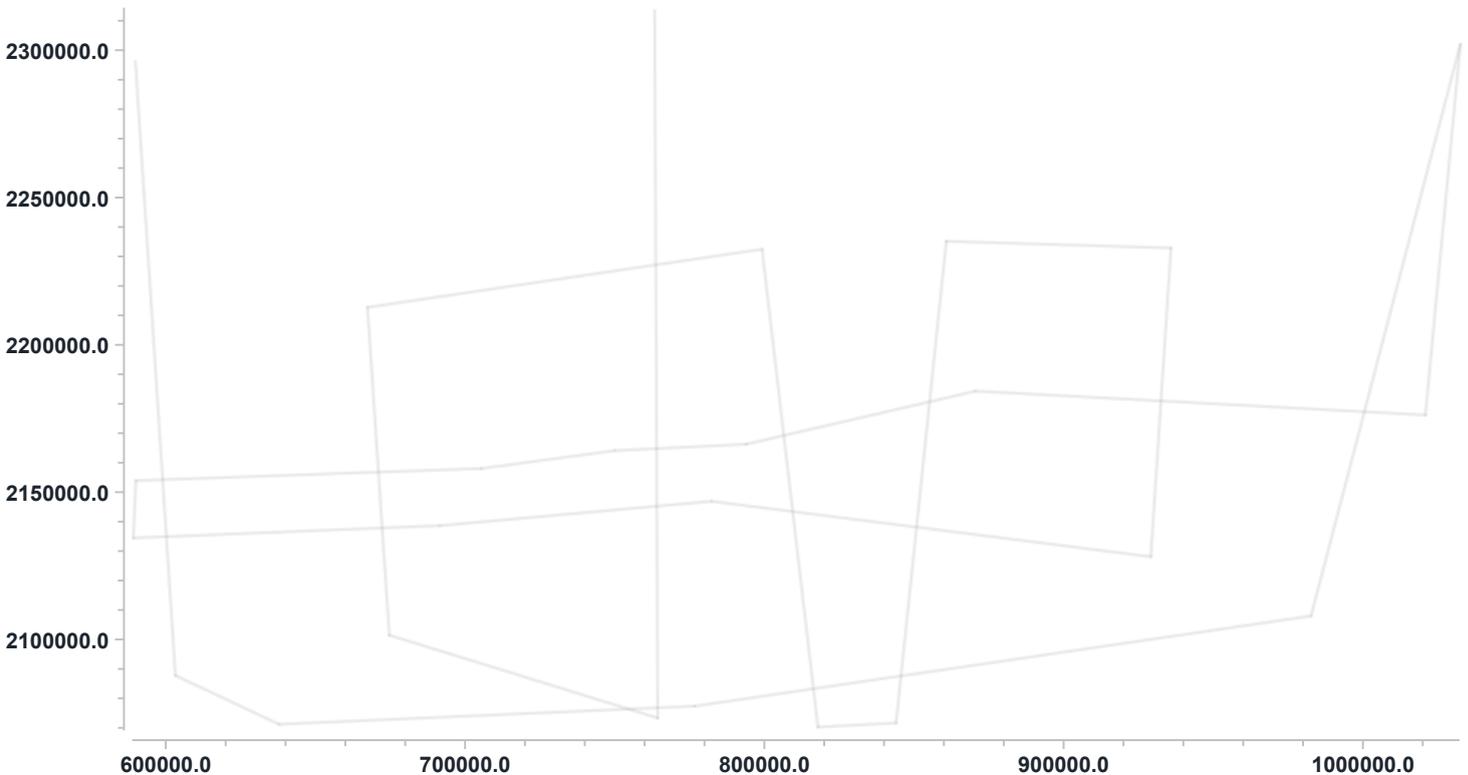
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

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

Source Only, MCS 13650m 50m

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

North Puerto Rico: Accpt
11/2/2023 - 11/4/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 04 Nov

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Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

Trouble shooting during deployment

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 04 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
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PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
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 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
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11/5/2023

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Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sun 05 Nov

At the start of the day we were still deploying the steamer.
 The decision was made to deploy 91 sections (13,650 meters), what was working in the water instead of 100 sections.
 At the end of day the vessel was picking up gear to trouble shoot a telemetry issue in the front of the steamer.

Daily Comment Summaries - Plan for Tomorrow

Sun 05 Nov

Continue trouble shooting.

Timing Diary (Marcus G Langseth, MCS 13650m 50m, Source Only)



Start	End	Category	Code	Duration (hrs)
00:00	05:10	Streamers	DT_ST	5.167
Downtime due to streamers				
05:10	20:04	Prime	AC_PP	14.900
Seq: 1 SOL Seq 1 Line:MCSCN Block:North Puerto Rico FGSP:1027 Hdg:179.7° Prime EOL Seq 1 Line:MCSCN Block:North Puerto Rico LGSP:3130 Complete Line was acquired with a recording length of 21.5 seconds				
20:04	24:00	Streamers	DT_ST	3.933
Downtime due to streamers, Loss of high side telemetry at the front of the steamer.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m, Source Only)

5-Nov	Hours	% Percent
Acquisition	14.900	62.083
Prime	14.900	62.083
DownTime	9.100	37.917
Streamers	9.100	37.917
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	28.383	44.780
Transit to Prospect	15.383	24.270
Deployment	13.000	20.510
DownTime	20.100	31.712
Streamers	20.100	31.712
Acquisition	14.900	23.508
Prime	14.900	23.508
Total	63.383	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	105.15	105.15	105.15	105.15
Combined	105.15	105.15	105.15	105.15

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

Source Only, MCS 13650m 50m

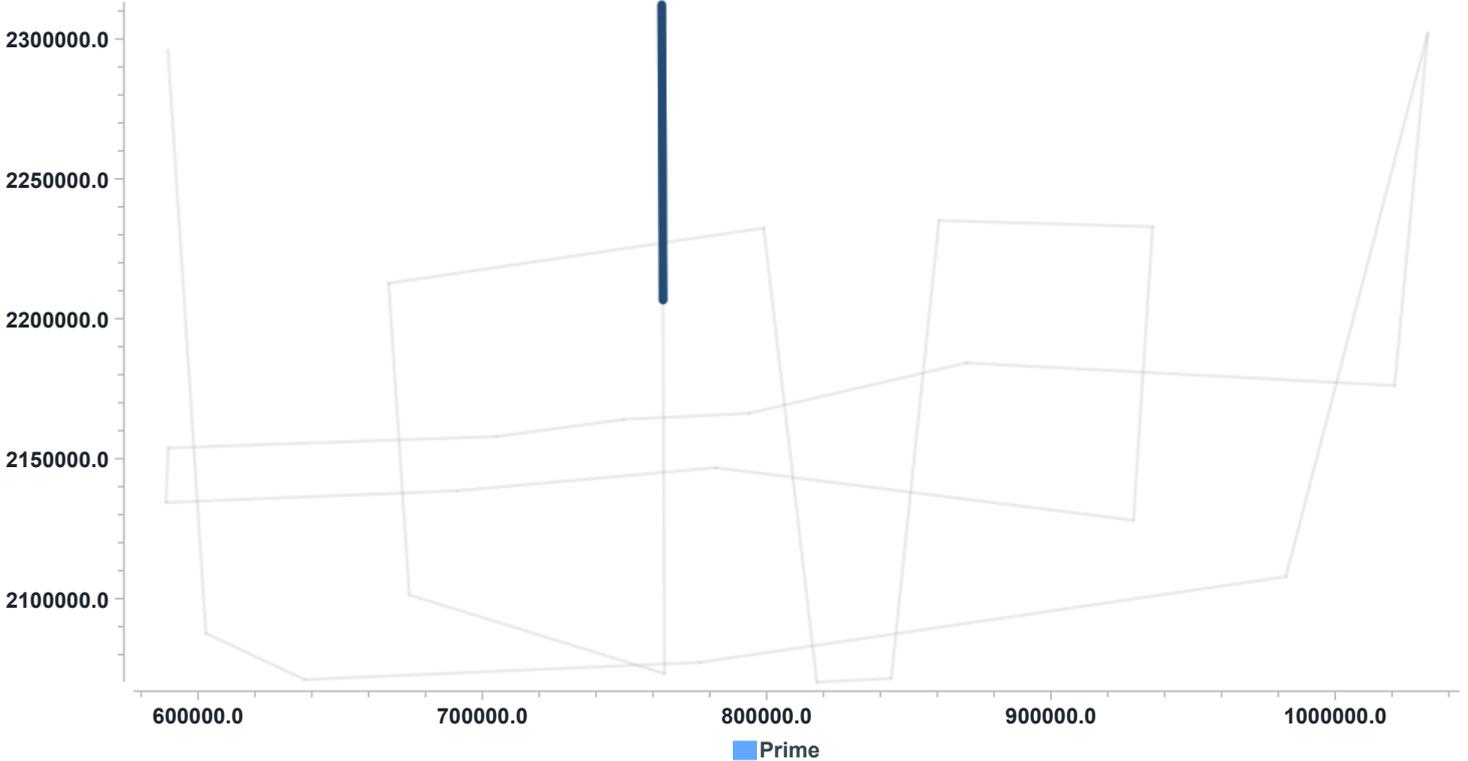
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	MCSCN	179.7	1027	3130	Prime	105.15	3.811	Complete	Complete
Total						105.15			

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	105.15	105.15	105.15	105.15
Combined	105.15	105.15	105.15	105.15

North Puerto Rico: Acqpt
11/2/2023 - 11/5/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 05 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

Telemetry problem in the front of the streamer

Towing and Handling (Source):

No Major Issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sun 05 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/5/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
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11/6/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Mon 06 Nov

Ongoing trouble shooting for the telemetry issues in the front of the streamer.
 The crew was able to isolate the problem to Lead 2 up to the Main Lab.
 The streamer was transferred from Reel 2 to Reel 4 and deployed.
 At end of day the vessel was acquiring data on line CN heading south.

Daily Comment Summaries - Plan for Tomorrow

Mon 06 Nov

Continue on line CN

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	16:37	■ Streamers	DT_ST	16.617
Downtime due to streamers, Loss of high side telemetry at the front of the streamer.				
16:37	24:00	■ Prime	AC_PP	7.383
Seq: 2 SOL Seq 2 Line:MCSCN Block:North Puerto Rico FGSP:2302 FCSP:N/A Hdg:179.7° Prime MSP Seq 2 Line:MCSCN Block:North Puerto Rico LGSP:2302 LCSP:2302 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

6-Nov	Hours	% Percent
Acquisition	7.383	30.764
Prime	7.383	30.764
DownTime	16.617	69.236
Streamers	16.617	69.236
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	28.383	32.481
Transit to Prospect	15.383	17.604
Deployment	13.000	14.877
DownTime	36.717	42.018
Streamers	36.717	42.018
Acquisition	22.283	25.501
Prime	22.283	25.501
Total	87.383	

11/6/2023

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Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	44.60	44.60	149.75	149.75
Combined	44.60	44.60	149.75	149.75

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

Source Only, MCS 13650m 50m

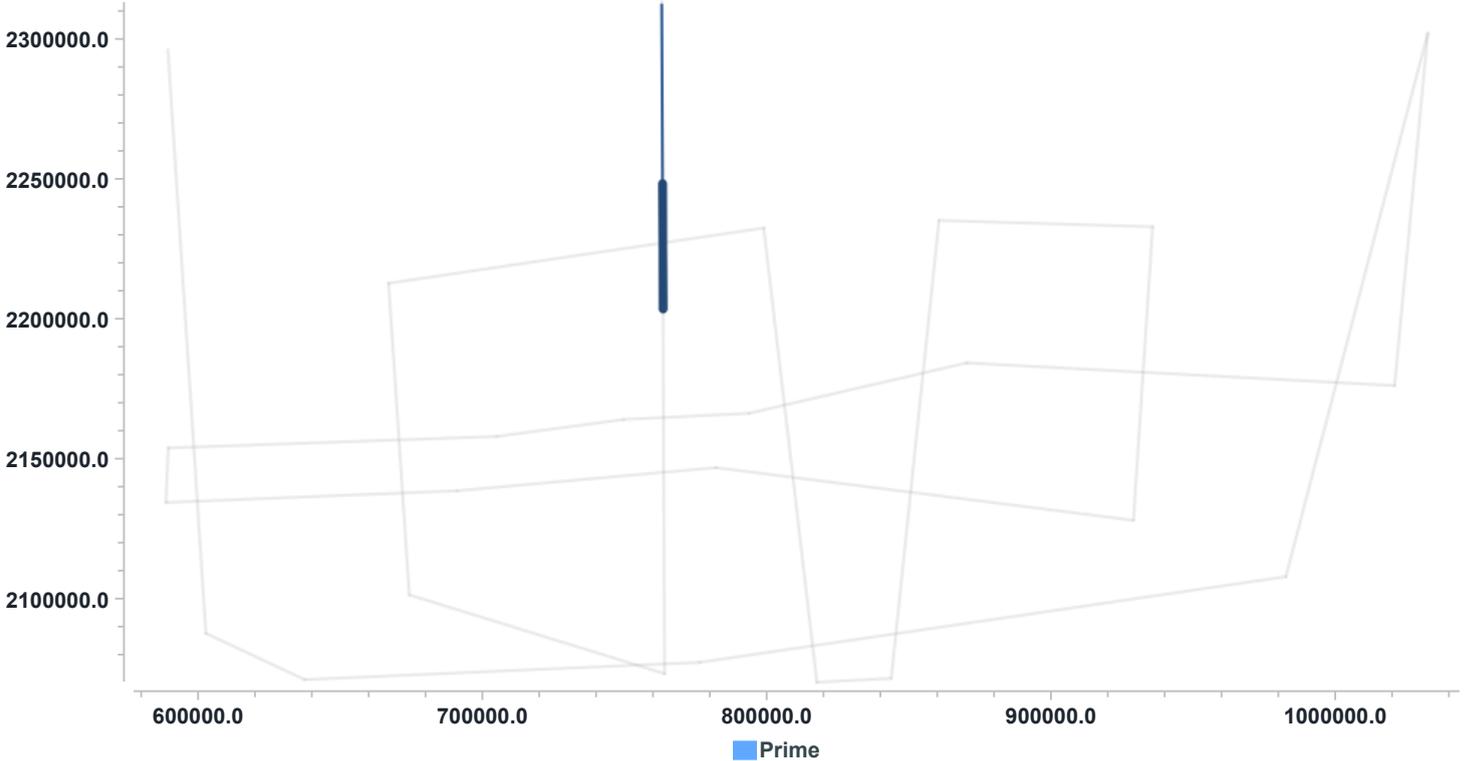
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
2	MCSCN	179.7	2302	3194	Prime	44.60	3.262	Midnight	Part
Total						44.60			

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	44.60	44.60	149.75	149.75
Combined	44.60	44.60	149.75	149.75

North Puerto Rico: Acqpt
11/2/2023 - 11/6/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 06 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 06 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/6/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
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Dave Foster - Technical staff
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Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
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11/7/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Tue 07 Nov

Start of day the vessel was on line CN heading south.
 Towards the end of line it was observed that the leadin was caught on either Array 3 or Array 4.
 After line CN the vessel made an outside turn to port as per plan, during this time Array's 3 and 4 were moved back and forth to clear the leadin.
 Line D4A1 was started with Arrays 1 and 2 only.
 Once the leadin was clear of Arrays 3 and 4 the decision was made to recover array 3 for gun maintenance and an air leak.
 Array 4 would be recovered and parked 20 meters behind the vessel.
 This allowed the leadin to be recovered on reel 4, extra weight to be added and the soft tow moved by 50 meters.

Daily Comment Summaries - Plan for Tomorrow

Tue 07 Nov

Continue acquisition on line D4A1

Timing Diary (Marcus G Langseth, MCS 13650m 50m)



Start	End	Category	Code	Duration (hrs)
00:00	16:22	Prime	AC_PP	16.367
Seq: 2 SOL Seq 2 Line:MCSCN Block:North Puerto Rico FGSP:3195 Hdg:179.7° Prime EOL Seq 2 Line:MCSCN Block:North Puerto Rico LGSP:5880 Complete				
16:22	18:32	Prime L/C	AC_PLC	2.167
Seq: 2 Line: MCSCN Nominal Prime line change. Extended line change due to outside circle				
18:32	22:16	Prime	AC_PP	3.733
Seq: 3 SOL Seq 3 Line:MCSD4 A Block:North Puerto Rico FGSP:875 Hdg:287.4° Prime EOL Seq 3 Line:MCSD4 A Block:North Puerto Rico LGSP:1291 Complete				
22:16	24:00	Streamers	DT_ST	1.733
Downtime due to streamers. Recovered leadin to add extra weight and reconfigure the soft tow so the streamer is now 50 m farther out.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

7-Nov	Hours	% Percent
Acquisition	22.267	92.778
Prime	20.100	83.750
Prime L/C	2.167	9.028
DownTime	1.733	7.222
Streamers	1.733	7.222
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	32.116
Transit to Prospect	15.383	12.582
Deployment	23.883	19.534
DownTime	38.450	31.448
Streamers	38.450	31.448
Acquisition	44.550	36.437
Prime	42.383	34.665
Prime L/C	2.167	1.772
Total	122.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	155.10	199.70	304.85	304.85
Combined	155.10	199.70	304.85	304.85

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

Source Only, MCS 13650m 50m

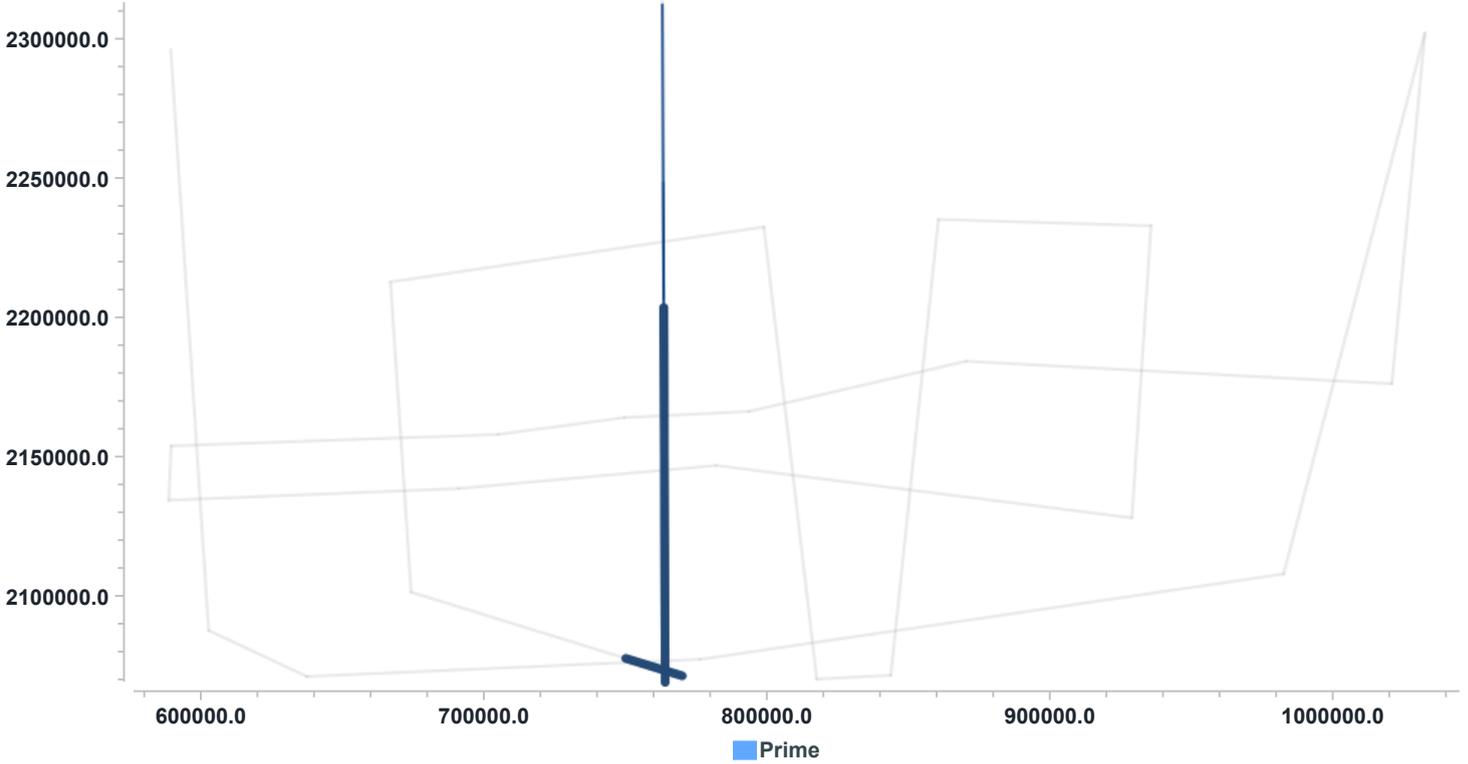
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
2	MCSCN	179.7	3195	5880	Prime	134.30	4.067	Complete	Complete
3	MCSD4 A	287.4	875	1291	Prime	20.80	3.008	Complete	Complete
Total						155.10			

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	155.10	199.70	304.85	304.85
Combined	155.10	199.70	304.85	304.85

North Puerto Rico: Acqpt
11/2/2023 - 11/7/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 07 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 07 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/7/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:00	18:00	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	1	1	1	1.000	
Daily HSE Ops Meeting	DOps	1	1	1	1	1.000	

11/8/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Wed 08 Nov

At the start of day the vessel was completing the turn back on to line after adding extra weights and changing the soft tow location. Line D4A was started and completed. Line D4B was started. Shortly after starting D4B there was a problem on the port compressor, the engineers switched over to the Stbd Compressor. At end of day the vessel is acquiring data on D4B.

Daily Comment Summaries - Plan for Tomorrow

Wed 08 Nov

Finish line D4B and D4D3.
Start D3

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	03:19	■ Streamers	DT_ST	3.317
Downtime due to streamers. Recovered leadin to add extra weight and reconfigure the soft tow so the streamer is now 50 m farther out.				
03:19	14:42	■ Prime	AC_PP	11.383
Seq: 4 SOL Seq 4 Line:MCSD4 A Block:North Puerto Rico FGSP:1000 Hdg:287.4° Prime EOL Seq 4 Line:MCSD4 A Block:North Puerto Rico LGSP:2870 Complete				
14:42	14:59	■ Prime L/C	AC_PLC	0.283
Seq: 4 Line: MCSD4 A Nominal Prime line change.				
14:59	16:01	■ Prime	AC_PP	1.033
Seq: 5 SOL Seq 5 Line:MCSD4 B Block:North Puerto Rico FGSP:1044 FCSP:N/A Hdg:356.3° Prime MSP Seq 5 Line:MCSD4 B Block:North Puerto Rico LGSP:1214 LCSP:1214 Midnight				
16:01	16:03	■ High Pressure	DT_HP	0.033
Downtime due to onboard compressor pressure issues.				
16:03	24:00	■ Prime	AC_PP	7.950
Seq: 5 SOL Seq 5 Line:MCSD4 B Block:North Puerto Rico FGSP:1222 FCSP:N/A Hdg:356.3° Prime MSP Seq 5 Line:MCSD4 B Block:North Puerto Rico LGSP:2536 LCSP:2536 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

8-Nov	Hours	% Percent
Acquisition	20.650	86.042
Prime	20.367	84.861

8-Nov	Hours	% Percent
Prime L/C	0.283	1.181
DownTime	3.350	13.958
High Pressure	0.033	0.139
Streamers	3.317	13.819
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	26.846
Transit to Prospect	15.383	10.517
Deployment	23.883	16.329
DownTime	41.800	28.578
High Pressure	0.033	0.023
Streamers	41.767	28.555
Acquisition	65.200	44.576
Prime	62.750	42.901
Prime L/C	2.450	1.675
Total	146.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	167.80	367.50	472.65	472.65
Combined	167.80	367.50	472.65	472.65

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

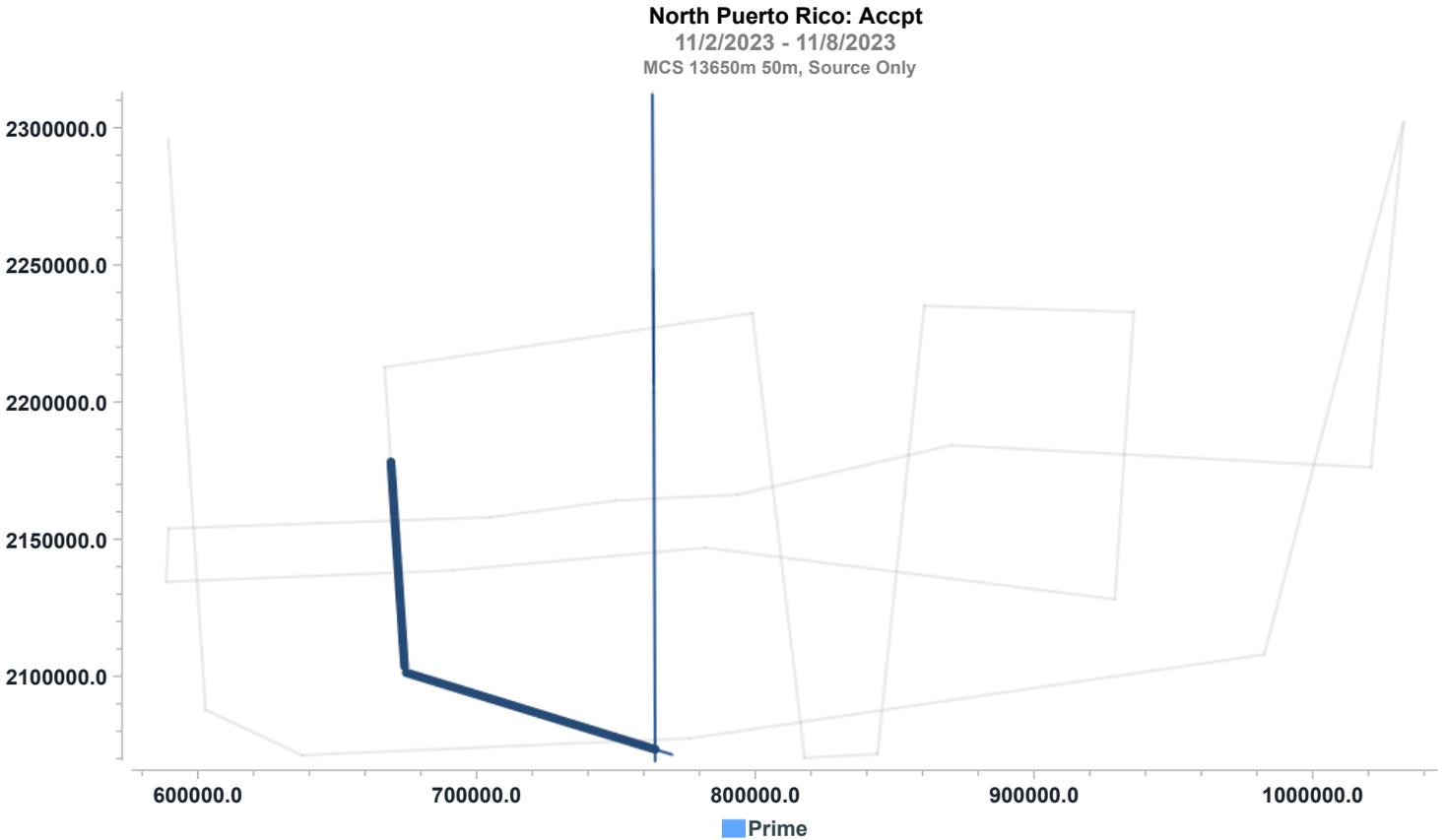
Source Only, MCS 13650m 50m

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
4	MCSD4 A	287.4	1000	2870	Prime	93.50	4.435	Complete	Complete
5	MCSD4 B	356.3	1044	2536	Prime	74.30	4.466	Midnight	Part
NTBP: 1215 - 1221 (not chgd)									
Total						167.80			

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

Source Only, MCS 13650m 50m

Accepted km	Day	Week	Month	Project
Prime	167.80	367.50	472.65	472.65
Combined	167.80	367.50	472.65	472.65



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 08 Nov

Navigation:

Tail Buoy has failed

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 08 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer

Brian Agee L-DEO OMO Chief Source Mechanic

Gilles Guerin - L-DEO OMO Observer

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Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Elizabeth Breton - RPS PSO
 Tiffany Ramdoo - RPS PSO
 Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
 Uri Ten Brink - Co-Pi
 Hanchao Jian - Co-Chief Scientist
 Dave Foster - Technical staff
 Wayne Baldwin - Technical staff
 Nick Harmon - Res. Specialist
 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	0	1	1	1	1.000	
Daily HSE Ops Meeting	DOps	0	1	1	1	1.000	

11/9/2023

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Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Thu 09 Nov

Started the day on Line D4.
 Finished Line D4.
 Started and finished line D4D3.
 As D4D3 is a lower priority transit line the team took the opportunity to recover array 2 to work on gun 2 and the forward GPS.
 Unfortunately on deployment the problems are still there.
 At end of day the vessel is on line D3 headed south.

Daily Comment Summaries - Plan for Tomorrow

Thu 09 Nov

Finish line D3, start and finish line D3D2 and start line D2.
 During the transit line D3D2 the vessel will recover arrays 3 and 4 for maintenance.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	04:10	Prime	AC_PP	4.167
Seq: 5 SOL Seq 5 Line:MCSD4 B Block:North Puerto Rico FGSP:2537 Hdg:356.3° Prime EOL Seq 5 Line:MCSD4 B Block:North Puerto Rico LGSP:3214 Complete				
04:10	04:18	Prime L/C	AC_PLC	0.133
Seq: 5 Line: MCSD4 B Nominal Prime line change.				
04:18	21:47	Prime	AC_PP	17.483
Seq: 6 SOL Seq 6 Line:TMCS4D3 Block:North Puerto Rico FGSP:1027 Hdg:81.5° Prime EOL Seq 6 Line:TMCS4D3 Block:North Puerto Rico LGSP:3645 Complete				
21:47	21:53	Prime L/C	AC_PLC	0.100
Seq: 6 Line: TMCS4D3 Nominal Prime line change.				
21:53	24:00	Prime	AC_PP	2.117
Seq: 7 SOL Seq 7 Line:MCSD3 Block:North Puerto Rico FGSP:1024 FCSP:N/A Hdg:173.4° Prime MSP Seq 7 Line:MCSD3 Block:North Puerto Rico LGSP:1357 LCSP:18356 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

9-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	23.767	99.028
Prime L/C	0.233	0.972

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9-Nov	Hours	% Percent
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	23.062
Deployment	23.883	14.027
Transit to Prospect	15.383	9.035
DownTime	41.800	24.550
High Pressure	0.033	0.020
Streamers	41.767	24.530
Acquisition	89.200	52.388
Prime	86.517	50.812
Prime L/C	2.683	1.576
Total	170.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	181.45	548.95	654.10	654.10
Combined	181.45	548.95	654.10	654.10

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

MCS 13650m 50m, Source Only

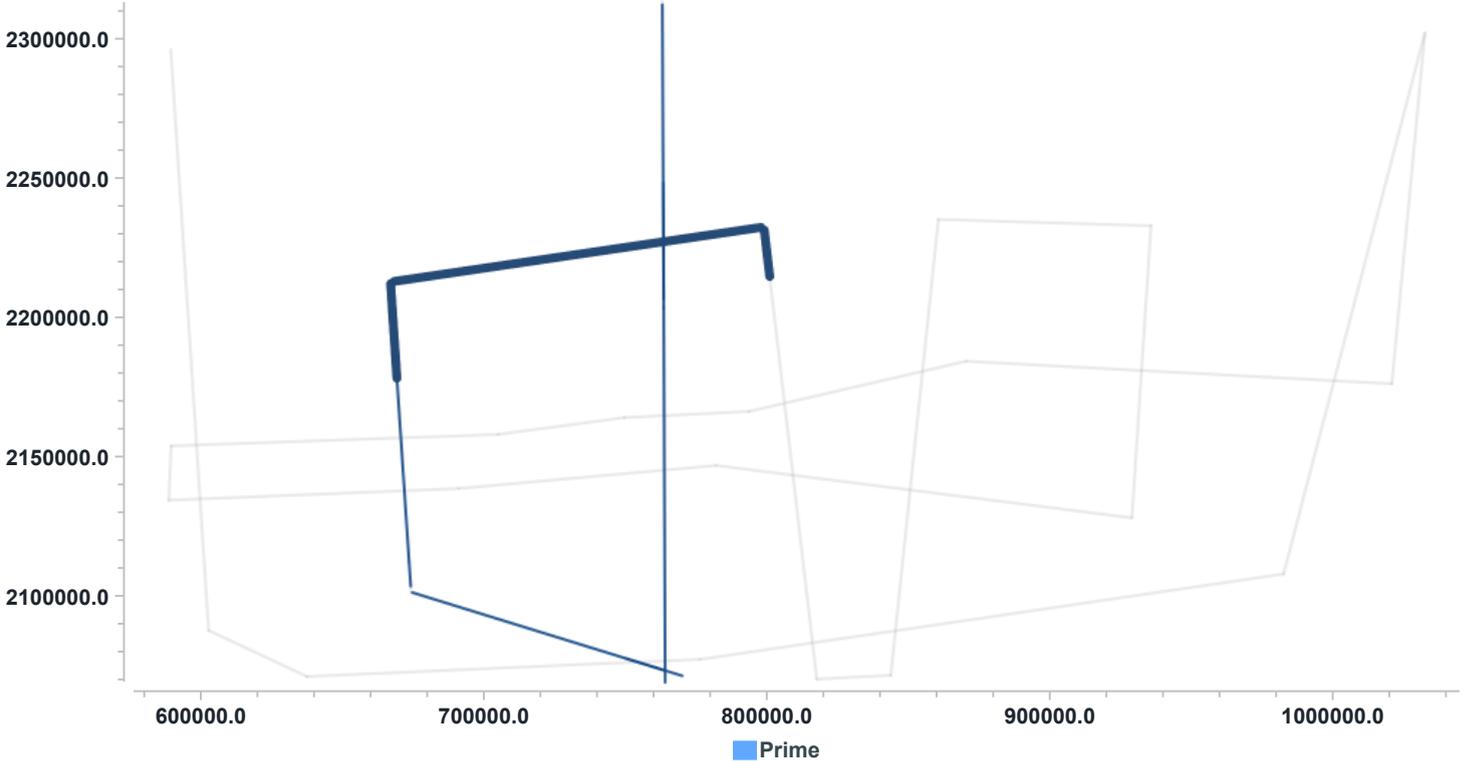
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
5	MCSD4 B	356.3	2537	3214	Prime	33.90	4.443	Complete	Complete
6	TMCS4D3	81.5	1027	3645	Prime	130.90	4.043	Complete	Complete
7	MCSD3	173.4	1024	1357	Prime	16.65	4.247	Midnight	Part
Total						181.45			

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	181.45	548.95	654.10	654.10
Combined	181.45	548.95	654.10	654.10

North Puerto Rico: Acqpt
11/2/2023 - 11/9/2023
MCS 13650m 50m, Source Only



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 09 Nov

Navigation:

Tail Buoy Out

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

No Major Issues to Report

Towing and Handling (Source):

Gun 2-2 and 3-1 Disabled

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 09 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/9/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:10	18:10	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	2	2	2	2.000	
Daily HSE Ops Meeting	DOps	1	2	2	2	2.000	

11/10/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Fri 10 Nov

At start of the day the vessel was acquiring data headed south on line D3.
 Around 7:20am local the air pressure dropped to ~1500 psi on all arrays.
 The compressors were checked and were working as expected.
 Array 4 had a large air leak, the array was disabled and air flow to that array was restricted to 500 psi.
 Once done, arrays 1-3 came back up to 1950 psi and the vessel continued down line.
 As the vessel approached the end of line D3 it appears there is similar interference to the radio frequency that the front float and tail buoy are working on.
 The front float dropped out again. More trouble shooting is being done onboard and the manufacture has been contacted.
 On the transit line,D3D2, arrays 3 and 4 were recovered for maintenance.
 Array 3: Gun 1 was worked on and repaired, forward GPS is now working, last NFH is working.
 Array 4: Gun 4-4 was repaired, two air leaks were found and fixed, fixed the depth traducer and pressure transducer, several ropes were repaired.
 When array 4 was recovered, it appears that something had struck the array. Quite a few ropes were cut/broken.
 The arrays were deployed after the vessel turned on to the next line.
 At end of day the vessel is acquiring data headed north on Line D2.

Daily Comment Summaries - Plan for Tomorrow

Fri 10 Nov

Finish line D2, D2D1 and start D1.
 On line D2D1 there will be source maintenance as this will be the last transit line for several days.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	15:58	Prime	AC_PP	15.967
Seq: 7 SOL Seq 7 Line:MCS D3 Block:North Puerto Rico FGSP:18023 Hdg:173.4° Prime EOL Seq 7 Line:MCS D3 Block:North Puerto Rico LGSP:20900 Complete				
15:58	16:10	Prime L/C	AC_PLC	0.200
Seq: 7 Line: D3 Nominal Prime line change.				
16:10	21:42	Prime	AC_PP	5.533
Seq: 9 SOL Seq 9 Line:D3D2 Block:North Puerto Rico FGSP:22042 Hdg:89° Prime EOL Seq 9 Line:D3D2 Block:North Puerto Rico LGSP:22735 Complete				
21:42	21:55	Prime L/C	AC_PLC	0.217
Seq: 9 Line: D3D2 Nominal Prime line change.				
21:55	24:00	Prime	AC_PP	2.083
Seq: 10 SOL Seq 10 Line:D2 Block:North Puerto Rico FGSP:24042 FCSP:N/A Hdg:3.9° Prime MSP Seq 10 Line:D2 Block:North Puerto Rico LGSP:24374 LCSP:1374 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

10-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	23.583	98.264
Prime L/C	0.417	1.736
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	20.213
Deployment	23.883	12.294
Transit to Prospect	15.383	7.919
DownTime	41.800	21.517
High Pressure	0.033	0.017
Streamers	41.767	21.500
Acquisition	113.200	58.270
Prime	110.100	56.675
Prime L/C	3.100	1.596
Total	194.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	178.50	727.45	832.60	832.60
Combined	178.50	727.45	832.60	832.60

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

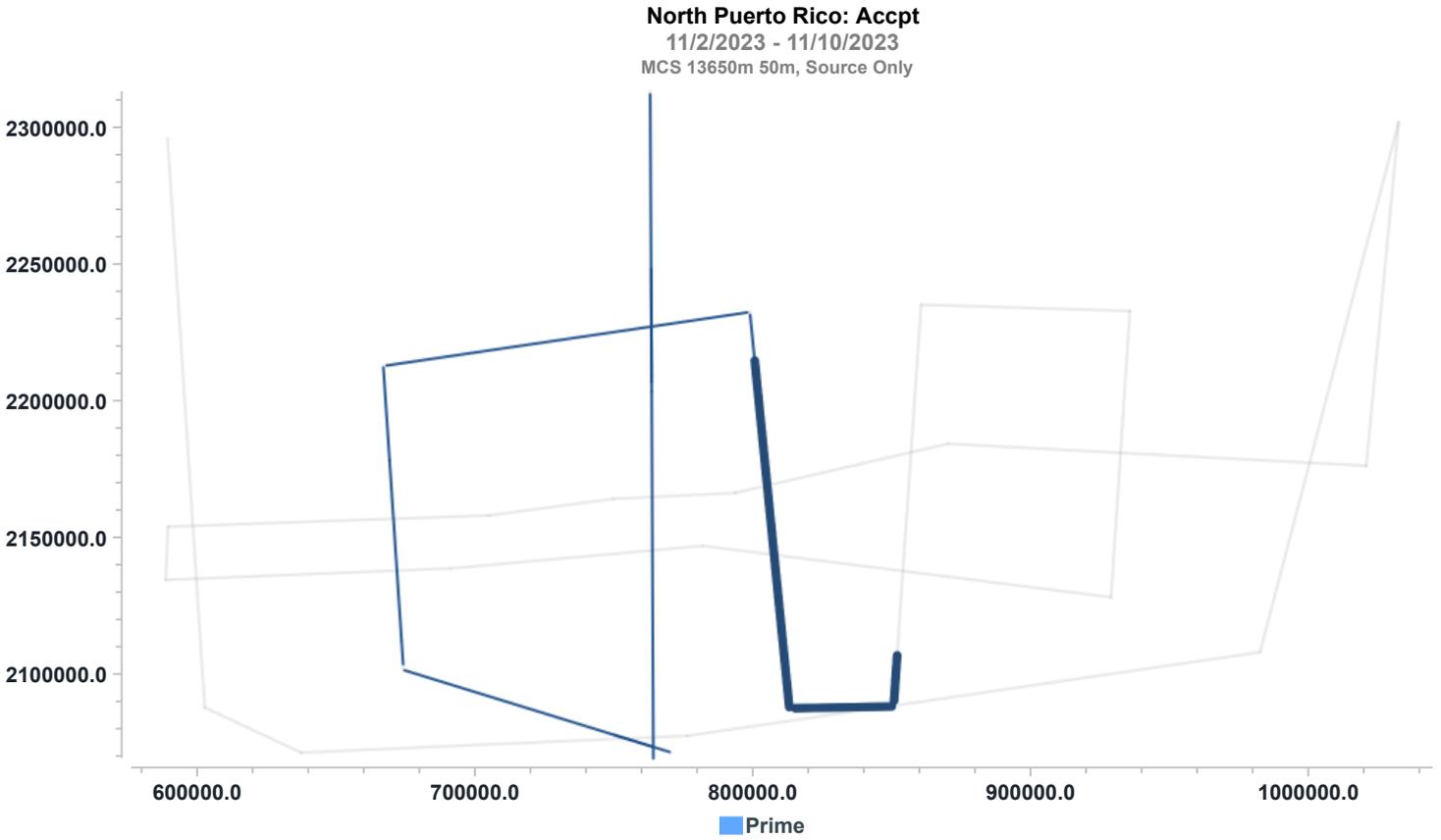
MCS 13650m 50m, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
7	D3	174.4	1358	3901	Prime	127.20	4.295	Complete	Complete
9	D3D2	89.0	1042	1736	Prime	34.70	3.386	Complete	Complete
10	D2	3.9	1042	1374	Prime	16.60	4.302	Midnight	Part
Total						178.50			

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	178.50	727.45	832.60	832.60
Combined	178.50	727.45	832.60	832.60



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 10 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

No Major Issues to Report

Towing and Handling (Source):

Gun 2-2 is out

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Fri 10 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer

Brian Agee L-DEO OMO Chief Source Mechanic

Gilles Guerin - L-DEO OMO Observer

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Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Elizabeth Breton - RPS PSO
 Tiffany Ramdoo - RPS PSO
 Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
 Uri Ten Brink - Co-Pi
 Hanchao Jian - Co-Chief Scientist
 Dave Foster - Technical staff
 Wayne Baldwin - Technical staff
 Nick Harmon - Res. Specialist
 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:15	18:15	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	3	3	3	3.000	
Daily HSE Ops Meeting	DOps	1	3	3	3	3.000	

11/11/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sat 11 Nov

At the start of day the vessel was on line D2.
 Ground speed was slightly slower as the the vessel was going in to the East North East currents that are common for this area.
 Started line D2D1.
 The PI's picked a point towards the end of line D2D1 where arrays 1 and 2 could be recovered for maintenance.

Daily Comment Summaries - Plan for Tomorrow

Sat 11 Nov

Finish line D1 and start the strike line S2 headed to the West.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	16:52	Prime	AC_PP	16.867
Seq: 10 SOL Seq 10 Line:D2 Block:North Puerto Rico FGSP:24375 Hdg:3.9° Prime EOL Seq 10 Line:D2 Block:North Puerto Rico LGSP:27000 Complete				
16:52	17:34	Prime L/C	AC_PLC	0.700
Seq: 10 Line: D2 Nominal Prime line change.				
17:34	24:00	Prime	AC_PP	6.433
Seq: 11 SOL Seq 11 Line:D2D1 Block:North Puerto Rico FGSP:28077 FCSP:N/A Hdg:91.7° Prime MSP Seq 11 Line:D2D1 Block:North Puerto Rico LGSP:29476 LCSP:2000 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

11-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	23.300	97.083
Prime L/C	0.700	2.917
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	17.990
Deployment	23.883	10.942
Transit to Prospect	15.383	7.048
DownTime	41.800	19.151
High Pressure	0.033	0.015
Streamers	41.767	19.136
Acquisition	137.200	62.859

Category	Hours	% Percent
Prime	133.400	61.118
Prime L/C	3.800	1.741
Total	218.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	121 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	177.45	904.90	1010.05	1010.05
Combined	177.45	904.90	1010.05	1010.05

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

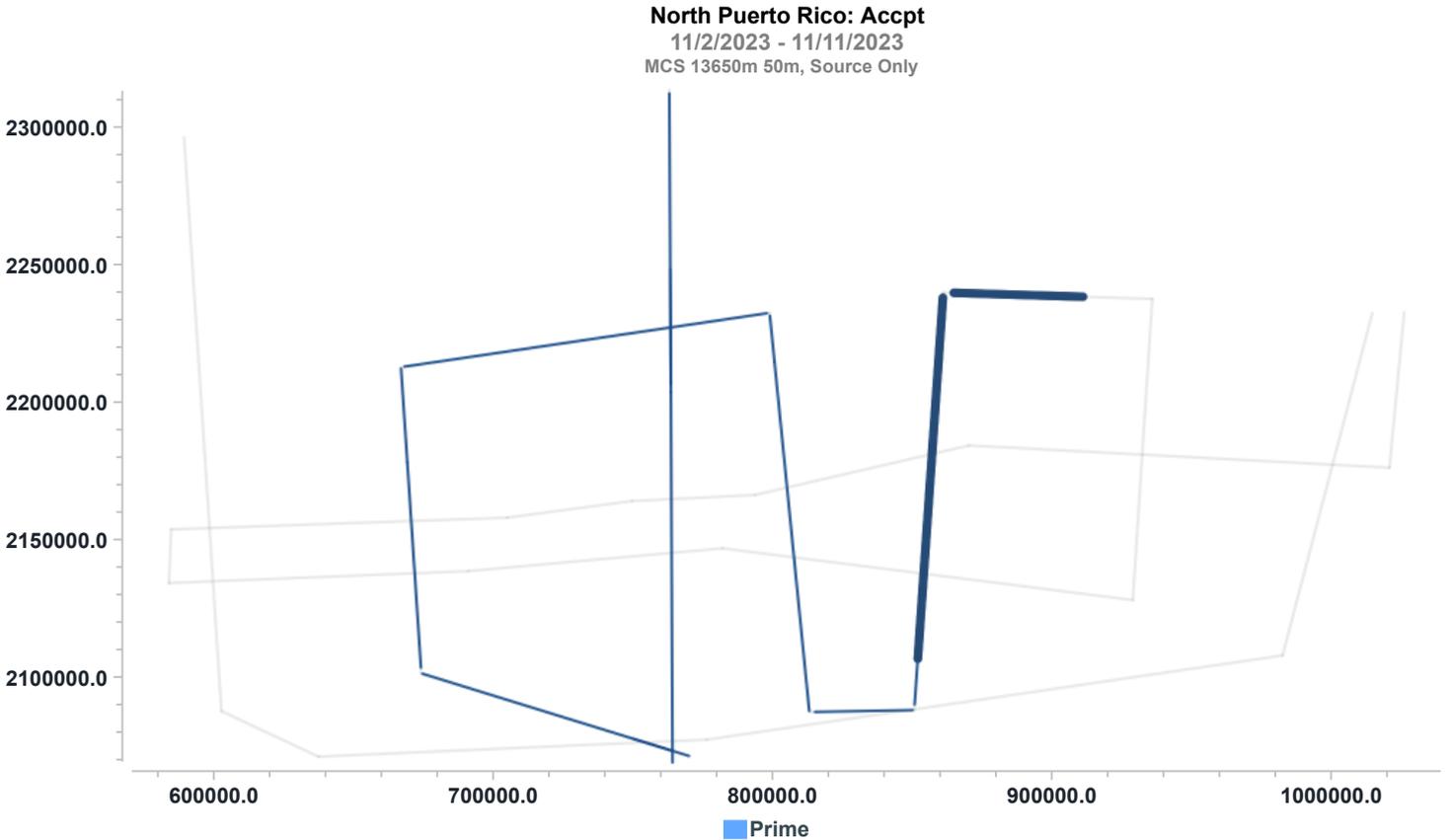
MCS 13650m 50m, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
10	D2	3.9	1375	4000	Prime	131.30	4.214	Complete	Complete
11	D2D1	91.7	1077	2000	Prime	46.15	3.873	Midnight	Part
Total						177.45			

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

MCS 13650m 50m, Source Only

Accepted km	Day	Week	Month	Project
Prime	177.45	904.90	1010.05	1010.05
Combined	177.45	904.90	1010.05	1010.05



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 11 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 11 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:05	18:05	 Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
 Meetings	Mtgs	1	4	4	4	4.000	
 Daily HSE Ops Meeting	DOps	1	4	4	4	4.000	

11/12/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sun 12 Nov

At the start of day the vessel was on line D2D1.
 Line D2D1 and D1 were finished.
 At the end of D1 after the 8km run out a small test was done to refine the COS to CNG offset.
 The Last guns, centre gun and front guns were fired for 20 shots each.
 This will enable some investigation in to the timing of the direct arrival.
 An outside turn was done from line D1 to S2.
 At end of day the vessel was just coming on to line S2.

Daily Comment Summaries - Plan for Tomorrow

Sun 12 Nov

Continue on line S2

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	04:13	Prime	AC_PP	4.217
Seq: 11 SOL Seq 11 Line:D2D1 Block:North Puerto Rico FGSP:29001 Hdg:91.7° Prime EOL Seq 11 Line:D2D1 Block:North Puerto Rico LGSP:29476 Complete				
04:13	04:27	Prime L/C	AC_PLC	0.233
Seq: 11 Line: D2D1 Nominal Prime line change.				
04:27	19:39	Prime	AC_PP	15.200
Seq: 12 SOL Seq 12 Line:D1 Block:North Puerto Rico FGSP:30039 Hdg:183.6° Prime EOL Seq 12 Line:D1 Block:North Puerto Rico LGSP:32351 Complete				
19:39	19:45	Prime L/C	AC_PLC	0.100
Seq: 12 Line: D1 Nominal Prime line change.				
19:45	19:59	Prime	AC_PP	0.233
Seq: 13 SOL Seq 13 Line:Test Block:North Puerto Rico FGSP:1225 Hdg:184.4° Prime EOL Seq 13 Line:Test Block:North Puerto Rico LGSP:1225 Complete				
19:59	23:53	Prime L/C	AC_PLC	3.900
Seq: 13 Line: Test Nominal Prime line change. Extended Line change due to outside turn, 8km run out and 14 km run in				
23:53	24:00	Prime	AC_PP	0.117
Seq: 14				

Start	End	Category	Code	Duration (hrs)
SOL Seq 14 Line:S2 Block:North Puerto Rico FGSP:33731 Hdg:277.3° Prime				
MSP Seq 14 Line:S2 Block:North Puerto Rico LGSP:33747 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

12-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	19.767	82.361
Prime L/C	4.233	17.639
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	16.208
Deployment	23.883	9.858
Transit to Prospect	15.383	6.350
DownTime	41.800	17.254
High Pressure	0.033	0.014
Streamers	41.767	17.240
Acquisition	161.200	66.538
Prime	153.167	63.222
Prime L/C	8.033	3.316
Total	242.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	142.20	1047.10	1152.25	1152.25
Combined	142.20	1047.10	1152.25	1152.25

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
11	D2D1	91.7	2001	2476	Prime	23.80	3.546	Complete	Complete
12	D1	183.6	1039	3351	Prime	115.60	4.107	Complete	Complete
13	Test	184.4	1066	1225	Prime	2.00	4.599	Complete	Complete

11/12/2023

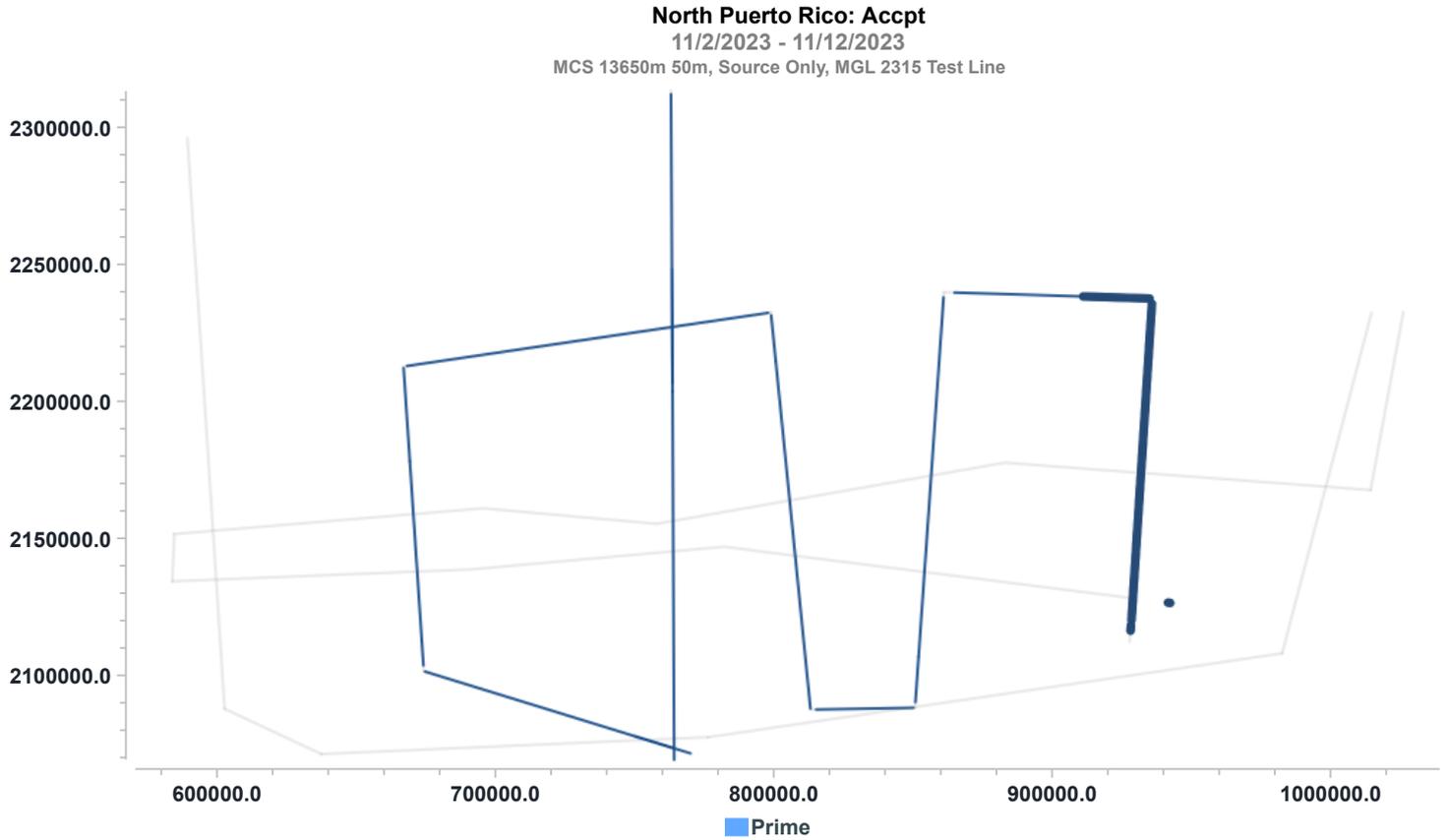
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Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
14	S2	277.3	731	747	Prime	0.80	4.510	Midnight	Part
Total						142.20			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	142.20	1047.10	1152.25	1152.25
Combined	142.20	1047.10	1152.25	1152.25



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 12 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 12 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Elizabeth Breton - RPS PSO
 Tiffany Ramdoo - RPS PSO
 Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
 Uri Ten Brink - Co-Pi
 Hanchao Jian - Co-Chief Scientist
 Dave Foster - Technical staff
 Wayne Baldwin - Technical staff
 Nick Harmon - Res. Specialist
 Jose-Luis Granaha-Bruna - Professor
 Sam Heller - Technical staff
 Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
15:05	16:05	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	5	5	5	5.000	
Daily HSE Ops Meeting	DOps	1	5	5	5	5.000	

11/13/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Mon 13 Nov

At the start of day the vessel was acquiring data on line S2.
 Good production all day with a following sea maximizing our ground speed.
 A lot of various job being done on the ship to prepare for recovery.
 The science team did an engine room tour held by the Chief Engineer.
 Another great dinner!
 At end of day the vessel is on line S2.

Daily Comment Summaries - Plan for Tomorrow

Mon 13 Nov

Complete S2
 Start and finish a small transit line to S1.
 Start S1

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	24:00	Prime	AC_PP	24.000
Seq: 14 SOL Seq 14 Line:S2 Block:North Puerto Rico FGSP:33748 Hdg:277.3° Prime MSP Seq 14 Line:S2 Block:North Puerto Rico LGSP:37752 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

13-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	14.747
Deployment	23.883	8.970
Transit to Prospect	15.383	5.777
DownTime	41.800	15.699
High Pressure	0.033	0.013
Streamers	41.767	15.686
Acquisition	185.200	69.554
Prime	177.167	66.537
Prime L/C	8.033	3.017
Total	266.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	200.25	200.25	1352.50	1352.50
Combined	200.25	200.25	1352.50	1352.50

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

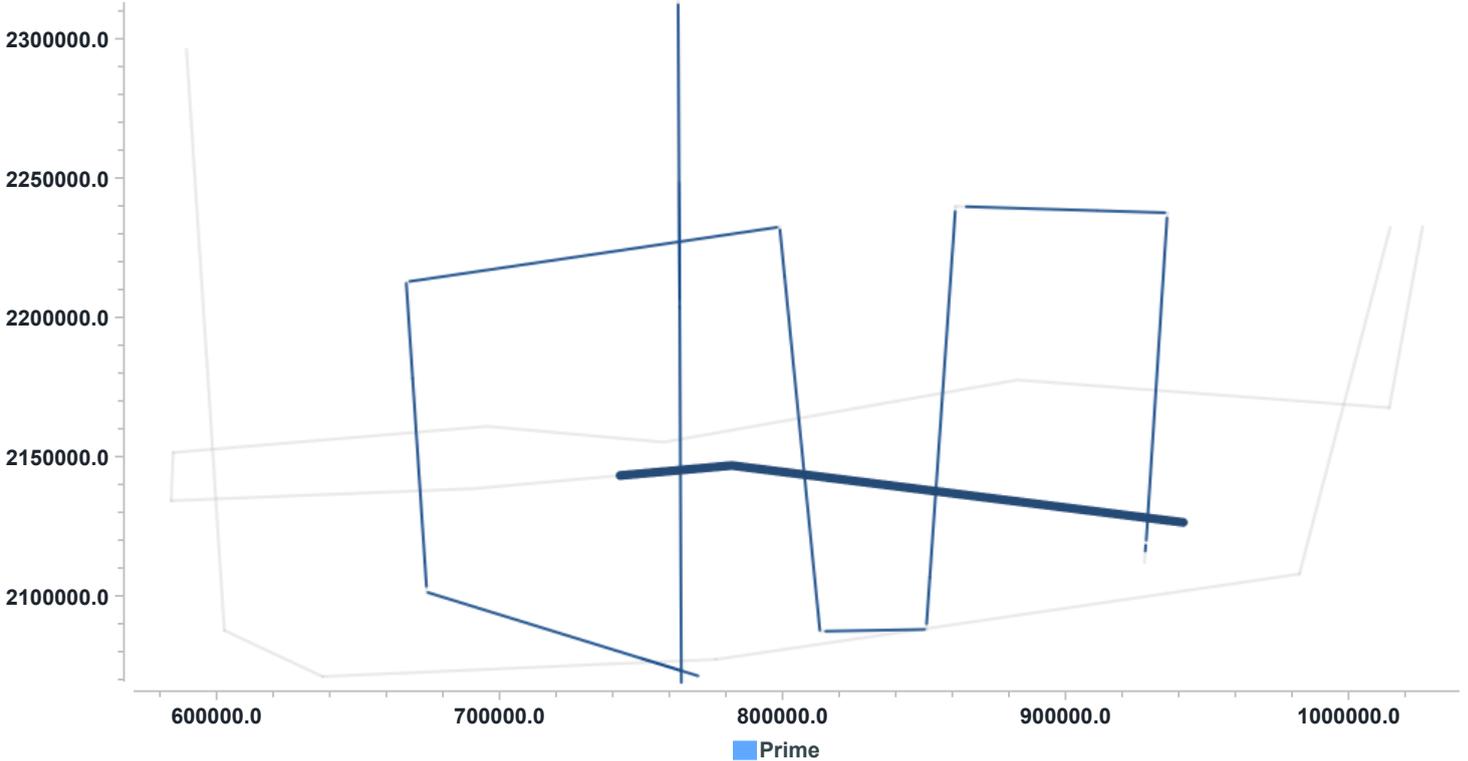
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
14	S2	277.3	748	4752	Prime	200.25	4.510	Midnight	Part
Total						200.25			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	200.25	200.25	1352.50	1352.50
Combined	200.25	200.25	1352.50	1352.50

North Puerto Rico: Accpt
11/2/2023 - 11/13/2023
MCS 13650m 50m, Source Only, MGL 2315 Test Line



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 13 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 13 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/13/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:05	18:05	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	1	6	6	6.000	
Daily HSE Ops Meeting	DOps	1	1	6	6	6.000	

Client:	Lamont-Doherty Earth Observatory	Contractor:	Lamont-Doherty Earth Observatory
Job No:	MGL2315	Job No:	MGL2315
Block:	North Puerto Rico	Vessel:	Marcus G Langseth
Client Contact:		Supervisor:	
Consultancy:		Party Chiefs:	Cody Bahlau
Job No:		Client Reps:	Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Tue 14 Nov

At the start of the day the vessel was on Line S2.
S2 was completed along with the transit line S2S1.
At end of day the vessel is on line S1.

The vessel is going in to a slight current so the speed over ground will not be maximized.

Daily Comment Summaries - Plan for Tomorrow

Tue 14 Nov

Continue on Line S1.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	18:49	Prime	AC_PP	18.817
Seq: 14 SOL Seq 14 Line:S2 Block:North Puerto Rico FGSP:37753 Hdg:277.3° Prime EOL Seq 14 Line:S2 Block:North Puerto Rico LGSP:40903 Complete				
18:49	18:56	Prime L/C	AC_PLC	0.117
Seq: 14 Line: S2 Nominal Prime line change.				
18:56	20:53	Prime	AC_PP	1.950
Seq: 15 SOL Seq 15 Line:S2S1 Block:North Puerto Rico FGSP:41025 Hdg:2.4° Prime EOL Seq 15 Line:S2S1 Block:North Puerto Rico LGSP:41328 Complete				
20:53	21:00	Prime L/C	AC_PLC	0.117
Seq: 15 Line: S2S1 Nominal Prime line change.				
21:00	24:00	Prime	AC_PP	3.000
Seq: 16 SOL Seq 16 Line:S1 Block:North Puerto Rico FGSP:42018 FCSP:N/A Hdg:85.2° Prime MSP Seq 16 Line:S1 Block:North Puerto Rico LGSP:42519 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

14-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	23.767	99.028
Prime L/C	0.233	0.972
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	13.528
Deployment	23.883	8.228
Transit to Prospect	15.383	5.300
DownTime	41.800	14.401
High Pressure	0.033	0.011
Streamers	41.767	14.389
Acquisition	209.200	72.072
Prime	200.933	69.224
Prime L/C	8.267	2.848
Total	290.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	197.75	398.00	1550.25	1550.25
Combined	197.75	398.00	1550.25	1550.25

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

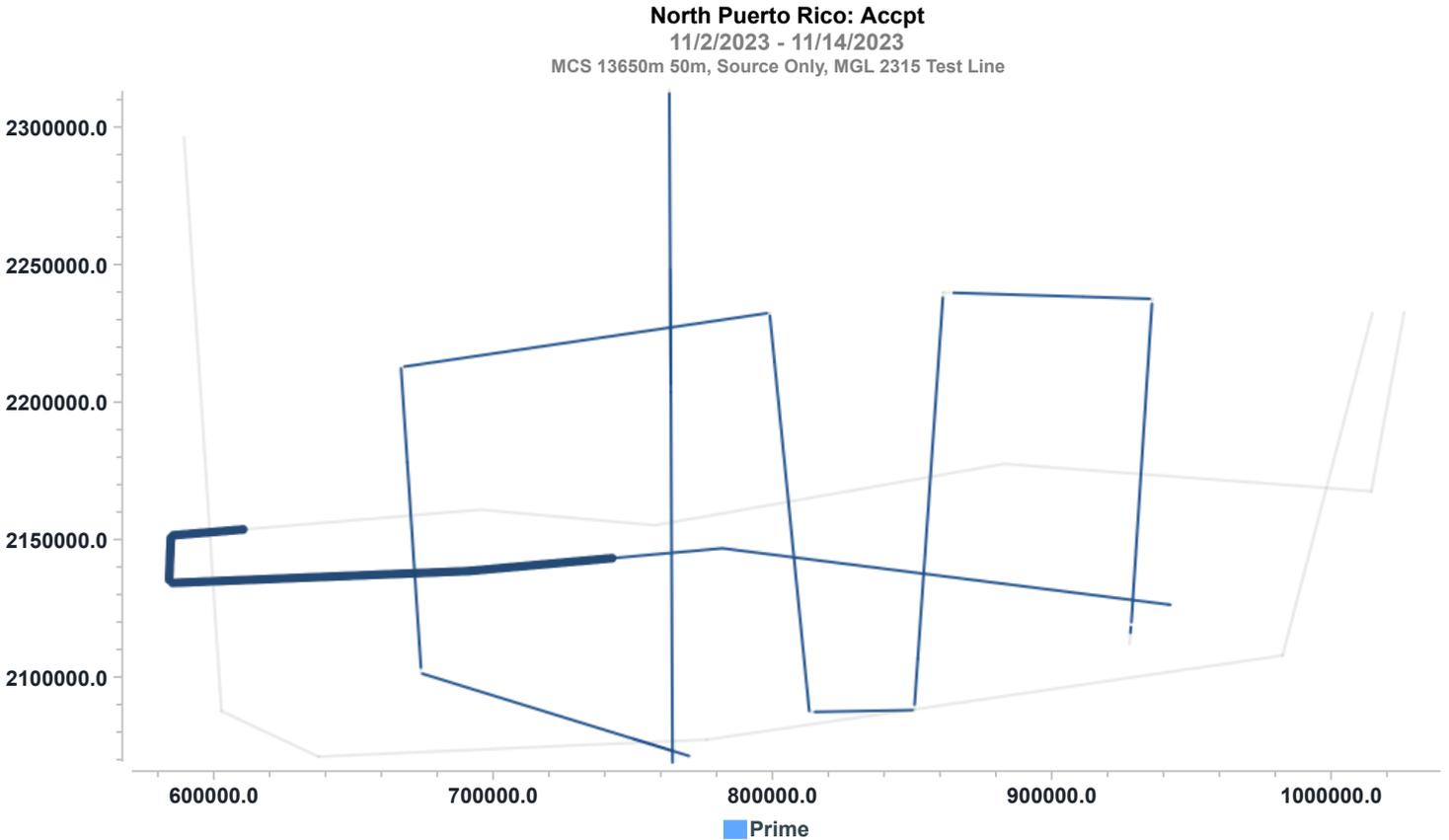
MCS 13650m 50m, MGL 2315 Test Line, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
14	S2	277.3	4753	7903	Prime	157.55	4.510	Complete	Complete
15	S2S1	2.4	1025	1328	Prime	15.15	4.195	Complete	Complete
16	S1	85.2	1018	1519	Prime	25.05	4.509	Midnight	Part
Total						197.75			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	197.75	398.00	1550.25	1550.25
Combined	197.75	398.00	1550.25	1550.25



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 14 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 14 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/14/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:10	18:10	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	2	7	7	7.000	
Daily HSE Ops Meeting	DOps	1	2	7	7	7.000	

11/15/2023

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Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Wed 15 Nov

At start of day the vessel was on line S1.
 Air gun 2 on Array 4 was disabled due to a bad sensor signal.
 At end of day the vessel was on line S1.

A great day of production with high ground speed in the afternoon and calm seas.
 Conversations have been ongoing with regards to port call and crew change.
 Work on MGL 2316 - OBS has started with looking at shooting lines and drop points.

Daily Comment Summaries - Plan for Tomorrow

Wed 15 Nov

Finish line S1 and start transit line to East.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	24:00	Prime	AC_PP	24.000
Seq: 16 SOL Seq 16 Line:S1 Block:North Puerto Rico FGSP:42520 FCSP:N/A Hdg:85.2° Prime MSP Seq 16 Line:S1 Block:North Puerto Rico LGSP:46396 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

15-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	12.495
Deployment	23.883	7.600
Transit to Prospect	15.383	4.895
DownTime	41.800	13.301
High Pressure	0.033	0.011
Streamers	41.767	13.290
Acquisition	233.200	74.204
Prime	224.933	71.574
Prime L/C	8.267	2.630
Total	314.267	

Basic Project Details

MCS 13650m 50m

General Details

MCS 13650m 50m					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	193.85	591.85	1744.10	1744.10
Combined	193.85	591.85	1744.10	1744.10

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

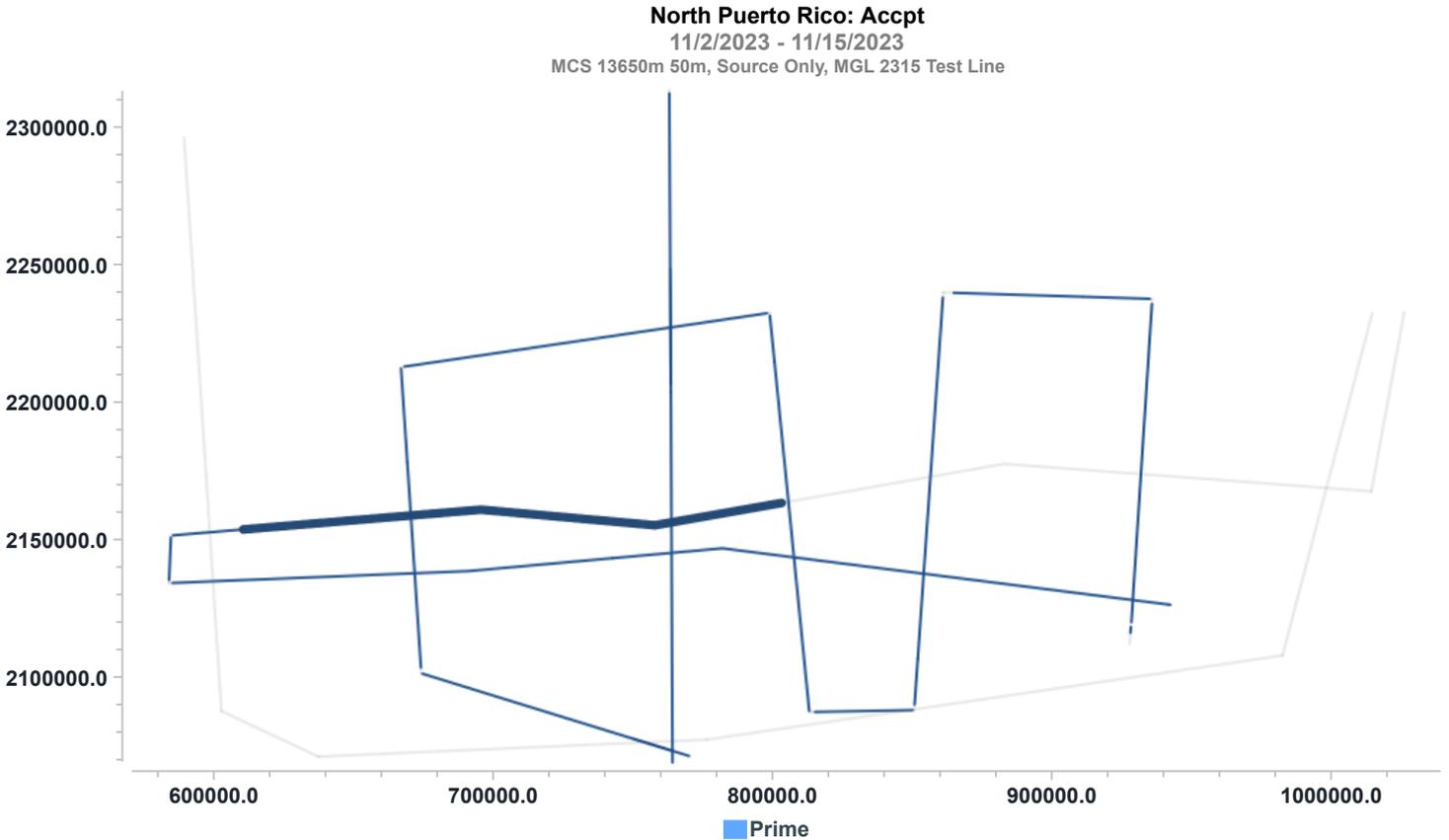
MCS 13650m 50m, MGL 2315 Test Line, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
16	S1	85.2	1520	5396	Prime	193.85	4.378	Midnight	Part
Total						193.85			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	193.85	591.85	1744.10	1744.10
Combined	193.85	591.85	1744.10	1744.10



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 15 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 15 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/15/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
15:05	16:05	■ Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
■ Meetings	Mtgs	1	3	8	8	8.000	
■ Daily HSE Ops Meeting	DOps	1	3	8	8	8.000	

11/16/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Thu 16 Nov

At start of day the vessel was on line S1.
 Towards the end of line a larger air leak was observed on Array 2.
 The plan is to recover array 2 during the transit line north.
 At end of day the vessel is on line S1 nearing the end.

Daily Comment Summaries - Plan for Tomorrow

Thu 16 Nov

Finish Line S1, recover array 2.
 Start and finish the transit line and Start Line "East".

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	24:00	Prime	AC_PP	24.000
Seq: 16 SOL Seq 16 Line:S1 Block:North Puerto Rico FGSP:46397 Hdg:85.2° Prime MSP Seq 16 Line:S1 Block:North Puerto Rico LGSP:50425 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

16-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	11.608
Deployment	23.883	7.061
Transit to Prospect	15.383	4.548
DownTime	41.800	12.357
High Pressure	0.033	0.010
Streamers	41.767	12.347
Acquisition	257.200	76.035
Prime	248.933	73.591
Prime L/C	8.267	2.444
Total	338.267	

Basic Project Details

MCS 13650m 50m

General Details

MCS 13650m 50m					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	201.45	793.30	1945.55	1945.55
Combined	201.45	793.30	1945.55	1945.55

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

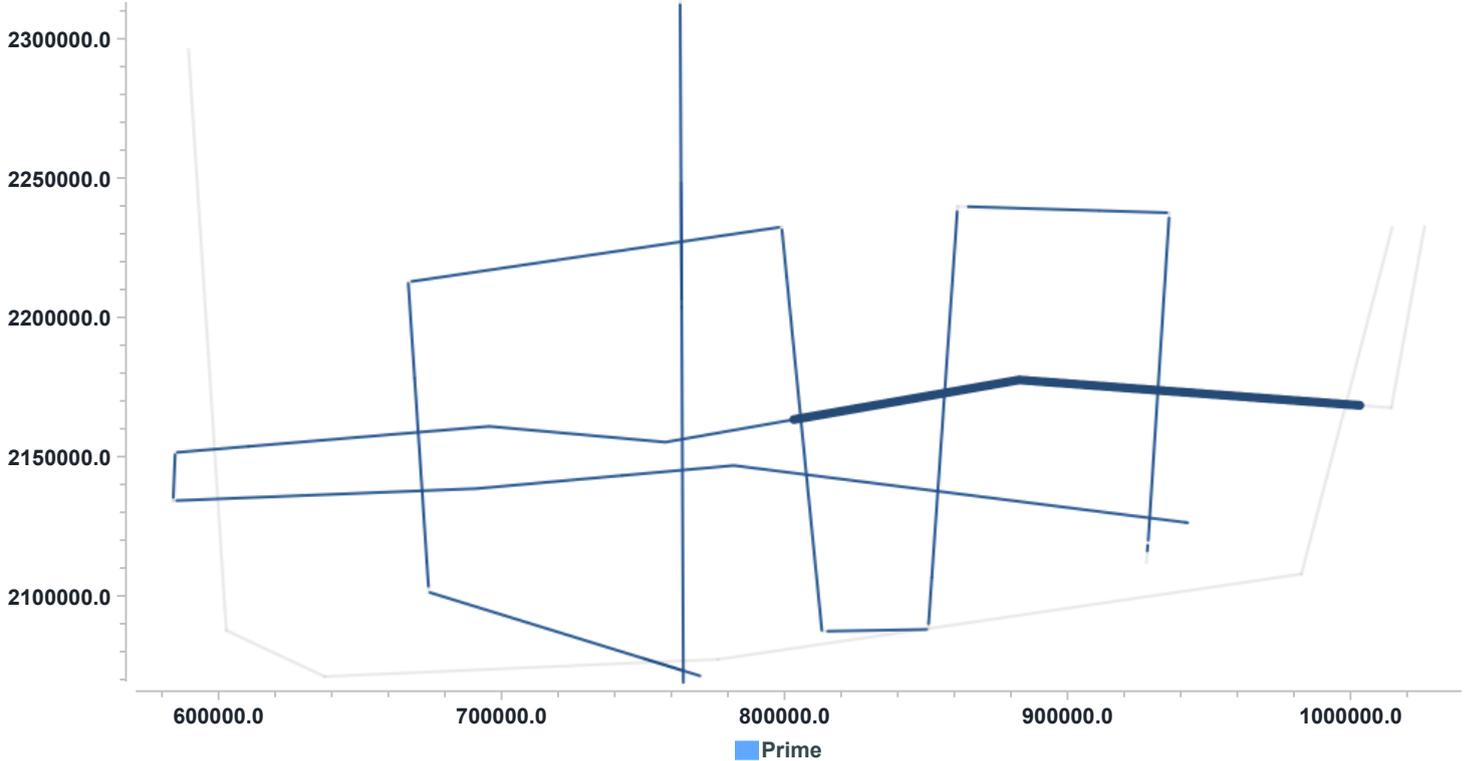
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
16	S1	85.2	5397	9425	Prime	201.45	4.450	Midnight	Part
Total						201.45			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	201.45	793.30	1945.55	1945.55
Combined	201.45	793.30	1945.55	1945.55

North Puerto Rico: Acppt
11/2/2023 - 11/16/2023
MCS 13650m 50m, Source Only, MGL 2315 Test Line



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 16 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 16 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/16/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
17:05	18:05	Daily HSE Ops Meeting	Mtgs_DOps
HSE - Daily Operation Meeting			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	1	4	9	9	9.000	
Daily HSE Ops Meeting	DOps	1	4	9	9	9.000	

11/17/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Fri 17 Nov

At start of day the vessel was just finishing up Line S1.
 Started and completed the transit line.
 Array 2 was recovered on the transit line for an air leak.
 Line "East" was started and the vessel was a few hours away from completing by the end of day.

Daily Comment Summaries - Plan for Tomorrow

Fri 17 Nov

Finish line East and start to recover gear.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	01:14	Prime	AC_PP	1.233
Seq: 16 SOL Seq 16 Line:S1 Block:North Puerto Rico FGSP:50426 Hdg:85.2° Prime EOL Seq 16 Line:S1 Block:North Puerto Rico LGSP:50625 Complete				
01:14	01:21	Prime L/C	AC_PLC	0.117
Seq: 16 Line: S1 Nominal Prime line change.				
01:21	09:07	Prime	AC_PP	7.767
Seq: 17 SOL Seq 17 Line:S1EtoEast Block:North Puerto Rico FGSP:51029 Hdg:10.3° Prime EOL Seq 17 Line:S1EtoEast Block:North Puerto Rico LGSP:52286 Complete				
09:07	10:09	Prime L/C	AC_PLC	1.033
Seq: 17 Line: S1EtoEast Nominal Prime line change.				
10:09	24:00	Prime	AC_PP	13.850
Seq: 18 SOL Seq 18 Line:East Block:North Puerto Rico FGSP:61065 Hdg:194.4° Prime MSP Seq 18 Line:East Block:North Puerto Rico LGSP:63564 Midnight				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

17-Nov	Hours	% Percent
Acquisition	24.000	100.000
Prime	22.850	95.208
Prime L/C	1.150	4.792
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	10.839
Deployment	23.883	6.593
Transit to Prospect	15.383	4.246
DownTime	41.800	11.538
High Pressure	0.033	0.009
Streamers	41.767	11.529
Acquisition	281.200	77.622
Prime	271.783	75.023
Prime L/C	9.417	2.599
Total	362.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	171.50	964.80	2117.05	2117.05
Combined	171.50	964.80	2117.05	2117.05

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

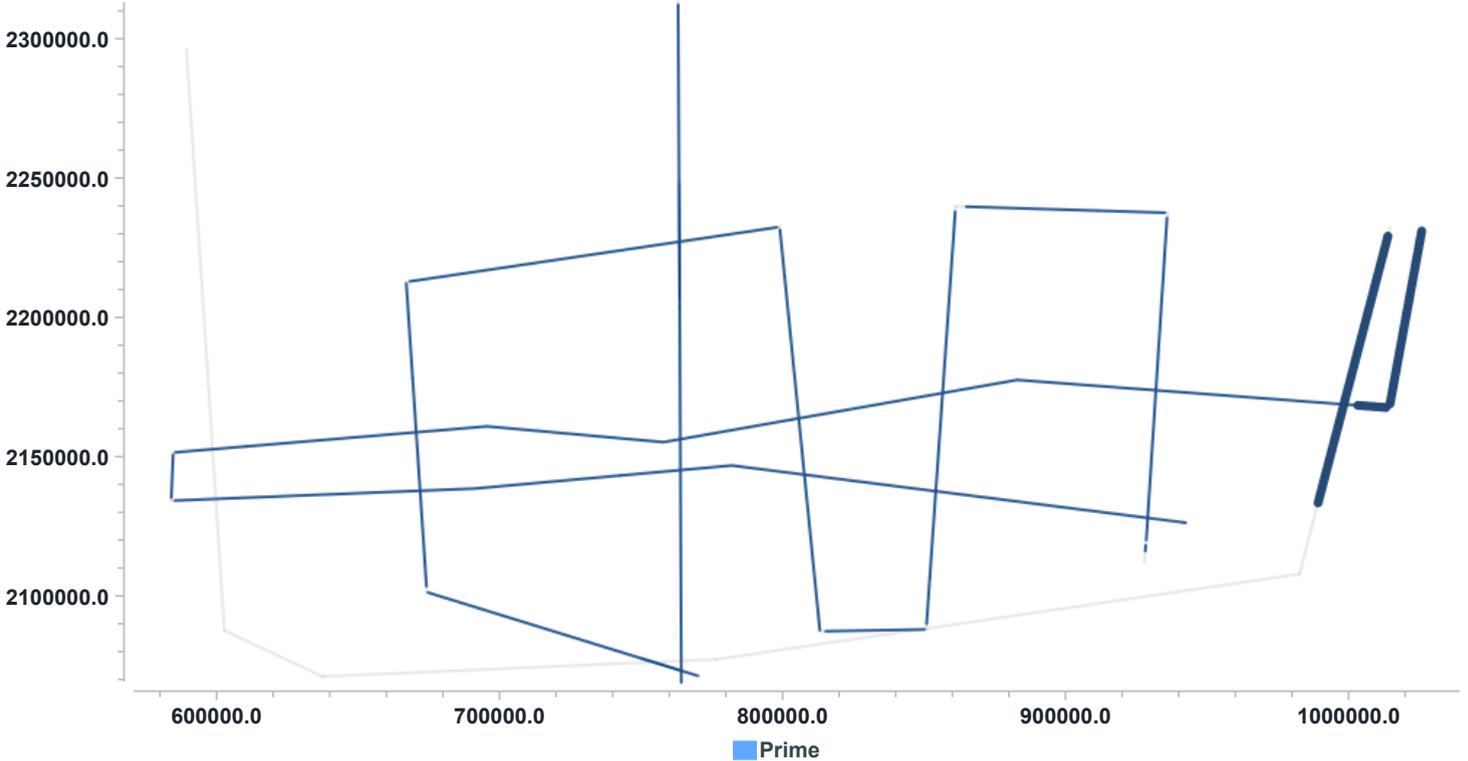
Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
16	S1	85.2	9426	9625	Prime	10.00	4.449	Complete	Complete
17	S1EtoEast	10.3	1029	2286	Prime	62.85	4.369	Complete	Complete
18	East	194.4	1065	3038	Prime	98.65	3.819	Midnight	Part
Total						171.50			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	171.50	964.80	2117.05	2117.05
Combined	171.50	964.80	2117.05	2117.05

North Puerto Rico: Accpt
11/2/2023 - 11/17/2023
MCS 13650m 50m, Source Only, MGL 2315 Test Line



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 17 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 17 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/17/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	0	4	9	9	9.000	
Daily HSE Ops Meeting	DOps	0	4	9	9	9.000	

11/18/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sat 18 Nov

The vessel was just finishing Line East as the day started.
 At ~4am utc the line ended and recovery started.
 Gear recovery went well, some trouble shooting was done on the bird lines and telemetry issues.
 The tail buoy was onboard at 18:59 utc.
 The vessel started transiting for San Juan.

Daily Comment Summaries - Plan for Tomorrow

Sat 18 Nov

Transit to San Juan.
 Pick up Pilot at 6am local.
 Along side at 8-9am local.

Timing Diary (Marcus G Langseth, MCS 13650m 50m)



Start	End	Category	Code	Duration (hrs)
00:00	03:49	Prime	AC_PP	3.817
Seq: 18 SOL Seq 18 Line:East Block:North Puerto Rico FGSP:63039 Hdg:194.4° Prime EOL Seq 18 Line:East Block:North Puerto Rico LGSP:63564 Complete				
03:49	18:59	Recovery	DM_RC	15.167
Demobilizing offshore, recovering outboard equipment.				
18:59	24:00	Transit From Prospect	DM_TF	5.017
Demobilizing, In Transit to San Juan.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

18-Nov	Hours	% Percent
Acquisition	3.817	15.903
Prime	3.817	15.903
Demobilisation	20.183	84.097
Recovery	15.167	63.194
Transit From Prospect	5.017	20.903
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Mobilisation	39.267	10.166
Deployment	23.883	6.183
Transit to Prospect	15.383	3.983
DownTime	41.800	10.822

Category	Hours	% Percent
High Pressure	0.033	0.009
Streamers	41.767	10.813
Acquisition	285.017	73.788
Prime	275.600	71.350
Prime L/C	9.417	2.438
Demobilisation	20.183	5.225
Recovery	15.167	3.926
Transit From Prospect	5.017	1.299
Total	386.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	26.30	991.10	2143.35	2143.35
Combined	26.30	991.10	2143.35	2143.35

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

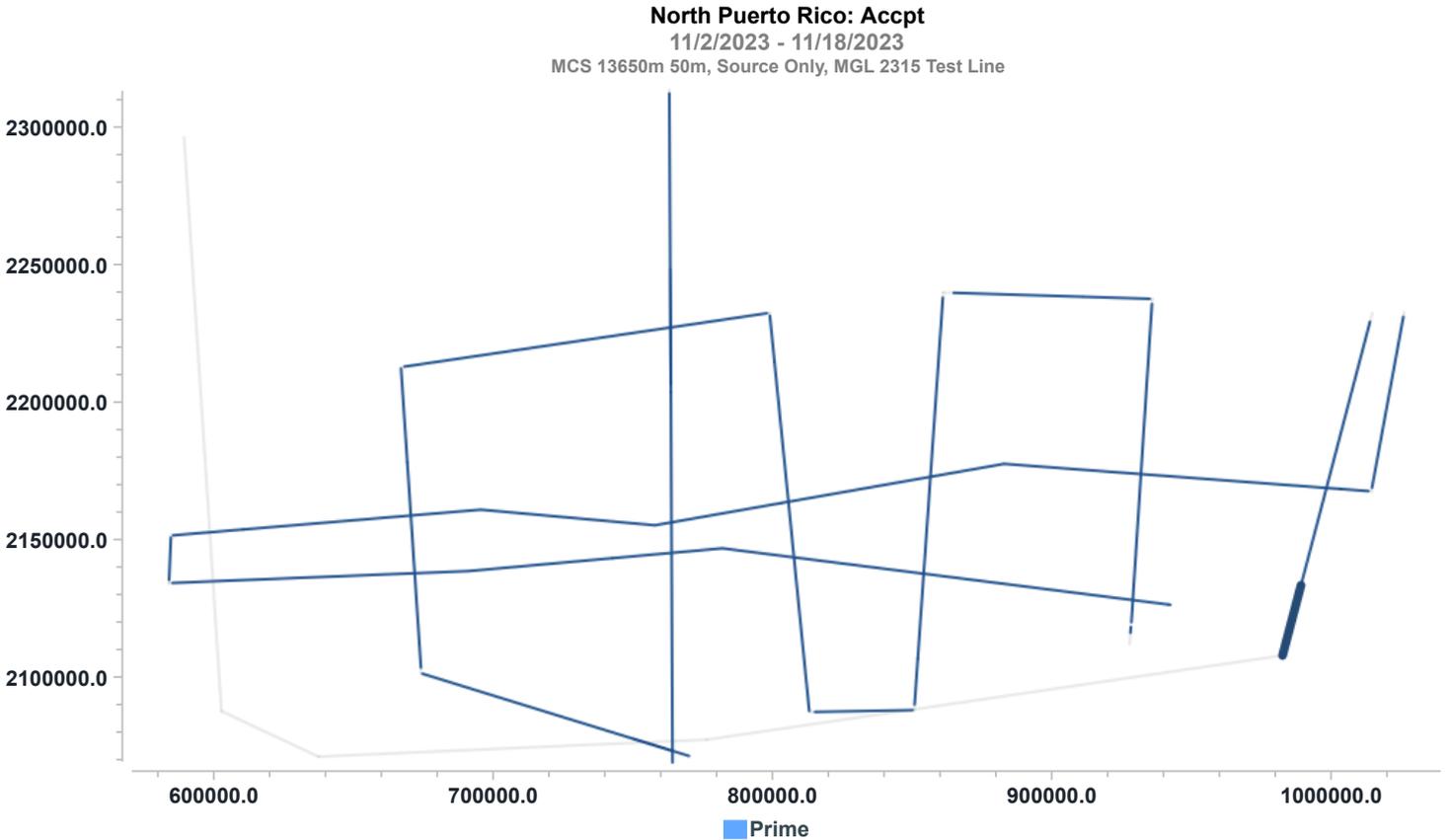
MCS 13650m 50m, MGL 2315 Test Line, Source Only

Seq	Line	Heading	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
18	East	194.4	3039	3564	Prime	26.30	3.819	Complete	Complete
Total						26.30			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	26.30	991.10	2143.35	2143.35
Combined	26.30	991.10	2143.35	2143.35



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 18 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 18 Nov

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Brian Agee L-DEO OMO Chief Source Mechanic
 Gilles Guerin - L-DEO OMO Observer
 Koray Ergun.- L-DEO OMO Navigator
 Aaron Martin.- Contract Navigator
 Mark Walker - Contract Source Mechanic
 Ray Hatton - Contract Source Mechanic
 Jacon Greenberg - Contract Source Mechanic
 Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/18/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

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

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	0	4	9	9	9.000	
Daily HSE Ops Meeting	DOps	0	4	9	9	9.000	

11/19/2023

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2315
Block: North Puerto Rico
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2315
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Dr. Shuoshuo Han

Daily Comment Summaries - Daily Summary

Sun 19 Nov

The vessel is along side at 06:59 local.
Several crew members changing out today.
Demobilization for MGL 2315 and Mobilization for MGL 2316.

This is the last daily report for MGL 2315.

Daily Comment Summaries - Plan for Tomorrow

Sun 19 Nov

Timing Diary (Marcus G Langseth, MCS 13650m 50m)

Start	End	Category	Code	Duration (hrs)
00:00	10:59	Transit From Prospect	DM_TF	10.983
Demobilizing, In Transit to San Juan				
10:59	24:00	Demob Ashore	DM_DA	13.017
Demobilizing ashore in San Juan.				

Timing Day By Day (Marcus G Langseth, MCS 13650m 50m)

19-Nov	Hours	% Percent
Demobilisation	24.000	100.000
Demob Ashore	13.017	54.236
Transit From Prospect	10.983	45.764
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 13650m 50m, Source Only)

Category	Hours	% Percent
Demobilisation	44.183	10.769
Demob Ashore	13.017	3.173
Recovery	15.167	3.697
Transit From Prospect	16.000	3.900
Mobilisation	39.267	9.571
Deployment	23.883	5.821
Transit to Prospect	15.383	3.750
DownTime	41.800	10.188
High Pressure	0.033	0.008
Streamers	41.767	10.180
Acquisition	285.017	69.471
Prime	275.600	67.176

Category	Hours	% Percent
Prime L/C	9.417	2.295
Total	410.267	

Basic Project Details

MCS 13650m 50m					
General Details					
Record length:	20000 ms	Sample rate:	2 ms	Shotpoint interval:	50 m
CoS to CNG:	165 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	1092	Front Depth:	12 m
Tail Depth:	12 m	Length:	13650	Group interval:	12.5 m
Source Details					
No of Sources:	1	Total Volume:	6600 cu ins	Depth:	12
Pressure:	1950 PSI	Volume:	6600	Strings per source:	4
String Separation:	6 m	String length:	0 m		

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	0.00	991.10	2143.35	2143.35
Combined	0.00	991.10	2143.35	2143.35

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

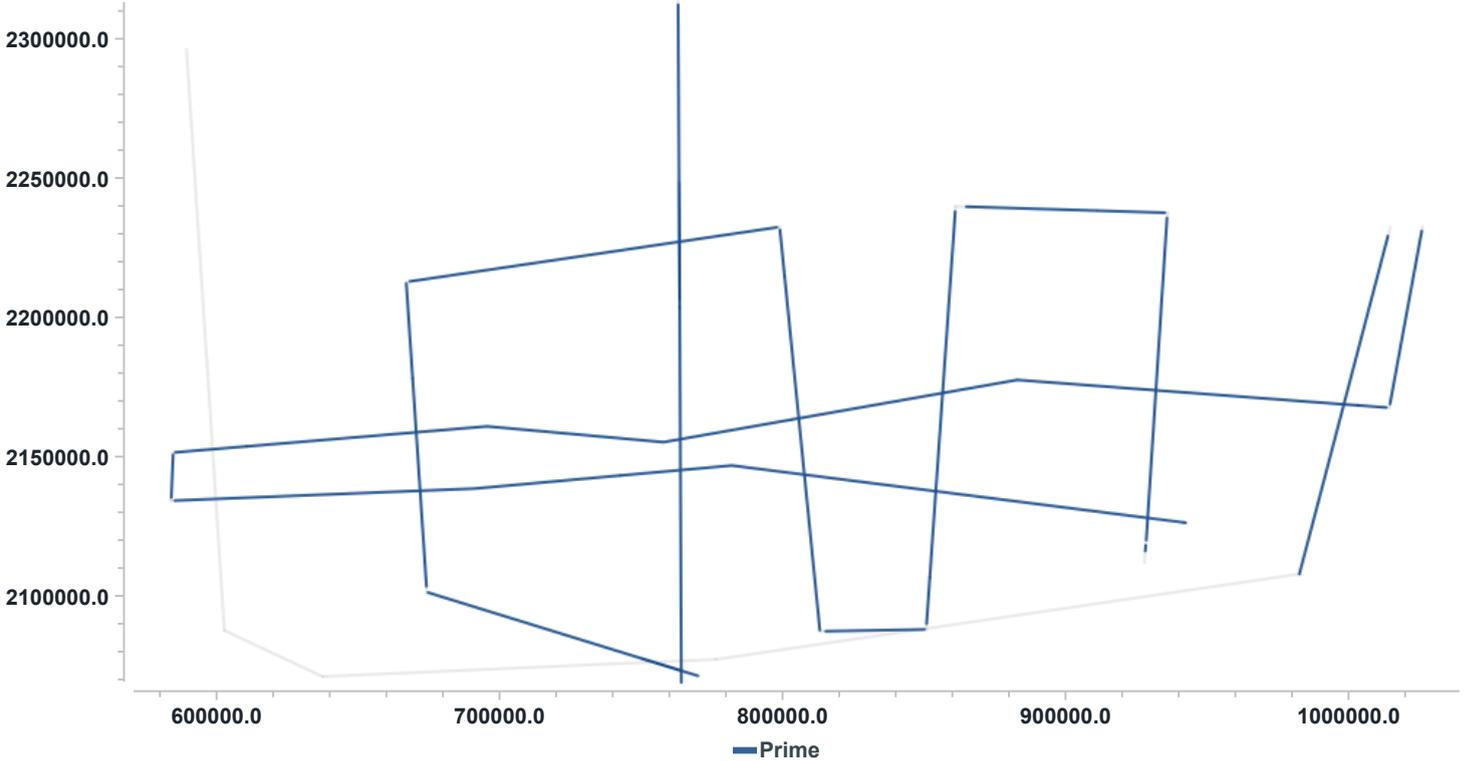
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

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

MCS 13650m 50m, MGL 2315 Test Line, Source Only

Accepted km	Day	Week	Month	Project
Prime	0.00	991.10	2143.35	2143.35
Combined	0.00	991.10	2143.35	2143.35

North Puerto Rico: Accpt
11/2/2023 - 11/19/2023
MCS 13650m 50m, Source Only, MGL 2315 Test Line



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 19 Nov

Navigation:

No Major Issues to Report

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

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 19 Nov

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Brian Agee L-DEO OMO Chief Source Mechanic
- Gilles Guerin - L-DEO OMO Observer
- Koray Ergun.- L-DEO OMO Navigator
- Aaron Martin.- Contract Navigator
- Mark Walker - Contract Source Mechanic
- Ray Hatton - Contract Source Mechanic
- Jacon Greenberg - Contract Source Mechanic
- Sean Seekins - Contract Source Mechanic

PSO Staff On-board the Langseth

11/19/2023

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Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Elizabeth Breton - RPS PSO
Tiffany Ramdoo - RPS PSO
Maria Sandoval - RPS PSO

Science Party On-board the Langseth

Shuoshuo Han - Lead PI
Uri Ten Brink - Co-Pi
Hanchao Jian - Co-Chief Scientist
Dave Foster - Technical staff
Wayne Baldwin - Technical staff
Nick Harmon - Res. Specialist
Jose-Luis Granaha-Bruna - Professor
Sam Heller - Technical staff
Charles Babendreier - Student

HSE Events Diary (Marcus G Langseth)

Start	End	Category	Code
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HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day (num)	Week (num)	Month (num)	Project (num)	Proj Hours	Man Hours
Meetings	Mtgs	0	4	9	9	9.000	
Daily HSE Ops Meeting	DOps	0	4	9	9	9.000	