

8/2/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Tue 02 Aug

The gun mechanics worked most of the day on getting the overboarding sheave to work. A lot of blood, sweat and even a few manly tears went into the sheave today. The good news is we now have a fully working overboarding sheave with a swivel that we can hang tomorrow. The plan is to work on the sheave right after breakfast. Some spare guns were removed from the wet lab and loaded on to the pier. The hamboldt winch was loaded in to the container. The 322 winch was removed from the A-frame.

We now have a full Science and PSO crew onboard. The majority of the science team went through the vessel orientation today. The remaining sci team member along with the PSO team will complete the orientation tomorrow.

The deck was busy today with shipments coming in, scaffolding going up, lifts slinging onboard, new crew member covid tests, staging of gear and provisions arriving. The sci team did a ton of work in the stbd dry and wet lab getting gear secured, organized and ready to go.

Configurations are 90% done in the main lab, just a few items to tweak and we should be ready to go. The gun strings are ready to click test the guns and this will be done tomorrow. 12 digibirds and 2 acoustics were checked and batteries installed. A few monitors were installed in the main lab, along with plenty of places to secure.

A meeting was held to discuss the best place to setup the USBL interface along with the WHOI traducer interface. The wetlab was decided on as being the best spot. There was discussion for a transmitter to be installed on to the heat probe and how this will communicate to the vessel. This is ongoing but a solution is potentially in the works.

Daily Comment Summaries - Plan for Tomorrow

Tue 02 Aug

After breakfast the overboard sheave will be lifted to the A-Frame, tested and hopefully installed for the last time.

The marine crew will continue to work on the pinger pole. The traducer cable will be run to the wetlab.

Run deck cable for WHOI traducer. Continue work on using the Chirp in passive mode to receive the pings from the transmitter on the Heat Probe.

Meeting with PIs and Captain to discuss the first couple of days at sea and any procedures/best practices with the heat probe.

One more orientation for 4 crew members who could not make it this morning.

Timing Diary (Marcus G Langseth)

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Category	Code	Start	End	Duration
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Timing Day By Day (Marcus G Langseth)

Cascadia (MGL2208) (no data for period)

2-Aug	Hours	% Percent
Day's Total	0.000	0.000

Timing Breakdown Summary (Marcus G Langseth)

Cascadia (MGL2208) (no data for period)

Category	Hours	% Percent
Total	0.000	

Basic Project Details

Hi-Rez

General Details

Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		

Cable Details

No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment

General Details

Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1
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Production Listing (Accpt km) - Prime: Full Fold, Infill: Unknown

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Cascadia: Accpt
8/2/2022 - 8/2/2022
OBS_Deployment, Hi-Rez



Easting

Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 02 Aug

Navigation:

No Major Issues to Report
Configuration ongoing

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

No Major Issues to Report
Configuration ongoing

Towing and Handling (Source):

No Major Issues to Report

Heat Probe:

Pinger pole 40% installed
Overboarding sheave working, needs to be installed tomorrow

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Tue 02 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Brian Agee L-DEO OMO Source Mechanic
Paul Parolski - Contract Navigator
Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Ana Lira - RPS PSO
Michelle Klein - RPS PSO
Jimena Ortega - RPS PSO
Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
Anne Trehu - Co-PI OSU
Robert Harris - Co-PI OSU
Mandy Kiger - Heat Flow Tech - OSU
Thomas Kyrirtz - Graduate Research asst. - NMT
Benjamin Norvell - Graduate Research asst. - NMT
Kristin Dickerson - Graduate Research asst. - UCSC
Danqi Jian - Graduate Research asst. - UTIG
Robert Perrin - Graduate Research asst. - U.Calgary
Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
Matt Perry - Research asst. - Planetary Science Inst.
Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin ## - Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Start-up Meeting	Mtgs_StUp	Tue 2. Aug 10:20	Tue 2. Aug 11:20
HSE - Orientation			

8/3/2022

Page 1

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Daily Comment Summaries - Daily Summary

Wed 03 Aug

Another busy but productive day. The good news is the bow thrusters were tested and we are ready to sail!

Over boarding sheave was hung, tested, calibrated and is ready to go. The scaffolding was de rigged and a bulkhead reinstalled under the A-frame for safety.

Two operations meetings were held today to discuss the operations. The first was in the main lab to discuss the overall plan moving forward and the second was on the main deck to discuss heat probe ops along with the equipment deployment/recovery procedure. The Sci team provided a work procedure after the good discussion on deck.

The heat probe was moved in to place and the Sci team have been working to get it ready to go, adjusted lab spaces, securing gear, running cables, installing tables etc. The installation on the pinger pole finished around noon. There was one issue with mounting the traducer to the pinger pole, however the langseth machine shop was put to good use and an adapter plate was fabricated.

The Main lab configs are just about ready to go. The guns were clicked tested and both the generator and injector were coming in good. Both GPS pods were tested good as well. The arrays are just about as tested as good as they can before getting wet, for the true test....

The work boat was launched and we ran the river for 30-45 minutes. We did a full function test in anticipation for the upcoming crew change. We drove out to the bar and had a look at the seas. On a calm day it will certainly be doable, however if the weather is marginal it will be a safety call. The good news is the boat ran like a Ferrari.

The PSO's have been busy going over all the equipment, testing their PAM cable, reviewing the permits and updating the crew on the procedures. There was one issue with a lack of batteries for the NVG's. A quick trip to walgreens sorted this out.

Daily Comment Summaries - Plan for Tomorrow

Wed 03 Aug

Anchors away and over the bar at 6 am.

The decision was made to not do the casius calibration but head directly to our first drop location and start our first heat flow campaign.

Timing Diary (Marcus G Langseth)

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Category	Code	Start	End	Duration
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Timing Day By Day (Marcus G Langseth)

Cascadia (MGL2208) (no data for period)

3-Aug	Hours	% Percent
Day's Total	0.000	0.000

Timing Breakdown Summary - Project (Marcus G Langseth)

Cascadia (MGL2208) (no data for period)

Category	Hours	% Percent
Total	0.000	

Basic Project Details

Hi-Rez

General Details

Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		

Cable Details

No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment

General Details

Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1
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Production Listing (Accpt km) - Prime: Full Fold, Infill: Unknown

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Cascadia: Accpt
8/2/2022 - 8/3/2022
OBS_Deployment, Hi-Rez



Northing

Easting

Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 03 Aug

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

Heat Probe:

No Major issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Wed 03 Aug

Technical Staff On-board the Langseth

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 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski - Contract Navigator
 Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
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 Jimena Ortega - RPS PSO
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 Robert Harris - Co-PI OSU
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 Benjamin Norvell - Graduate Research asst. - NMT
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 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin ## - Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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8/4/2022

Page 1

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Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Thu 04 Aug

The vessel threw lines at ~6 am local and set sail for... a last minute change of plans. The OSU techs put in a long night of hard work but could not get the heat probe quite ready for deployment. It was decided to head for NUBBIN and acquire seismic data over that area to give a bit more time for trouble shooting the heat probe.

Quite a few last minute tweaks and trouble shooting were needed for the tech department to get ready to deploy the tailbuoy in 8 hours instead of 3 days. The vessel arrived onsite and it was decided to wait another hour before the seismic gear was ready to go in the water. A good tool box talk was done in the main lab to stress there is no rush and the priority is safety.

At midnight the streamer was deployed and the team was working on guns.

Daily Comment Summaries - Plan for Tomorrow

Thu 04 Aug

Continue Seismic Acquisition.

Timing Diary (Marcus G Langseth, MCS 6000m)

Category	Code	Start	End	Duration
Mob Ashore	MB_MA	Thu 4. Aug 00:00	Thu 4. Aug 13:30	13.500
Mobilising Ashore.				
Mob Offshore	MB_MO	Thu 4. Aug 13:30	Thu 4. Aug 22:46	9.267
Mobilising Offshore - Transity to NUBBIN				
Mob Offshore	MB_MO	Thu 4. Aug 22:46	Thu 4. Aug 23:54	1.133
Mobilising Offshore - Deploying Streamer				
Mob Offshore	MB_MO	Thu 4. Aug 23:54	Thu 4. Aug 24:00	0.100
Mobilising Offshore - Deploying Guns				

Timing Day By Day (Marcus G Langseth, MCS 6000m)

Cascadia (MGL2208)

4-Aug	Hours	% Percent
Mobilisation	24.000	100.000
Mob Ashore	13.500	56.250
Mob Offshore	10.500	43.750
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, MCS 6000m)

Cascadia (MGL2208)

Category	Hours	% Percent
Mobilisation	72.000	100.000
Mob Ashore	61.500	85.417
Mob Offshore	10.500	14.583
Total	72.000	

Basic Project Details

Hi-Rez

General Details

Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		

Cable Details

No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment

General Details

Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1
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Production Listing (Accpt km) - Prime: Full Fold, Infill: Unknown

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

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

Cascadia: Accpt
8/2/2022 - 8/4/2022
OBS_Deployment, Hi-Rez



Easting

8/4/2022

Page 3

Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 04 Aug

Navigation:

No Major Issues to Report
Tailbuoy GPS not working

Information Technology (IT):

No Major Issues to Report

Acquisition (MCS):

No Major Issues to Report

Towing and Handling (Source):

No Major Issues to Report

Heat Probe:

No Major issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 04 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Brian Agee L-DEO OMO Source Mechanic
Paul Parolski - Contract Navigator
Mark Walker - Contract Compressor Mech

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Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin McLeod - Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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8/5/2022

Page 1

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Job No:

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Daily Comment Summaries - Daily Summary

Fri 05 Aug

The day started with finishing deploying the guns and streamer. After a short sail to start of line acquisition was started, unfortunately however the 2 GI guns were not working. After some onboard trouble shooting it was decided to pick the guns up and inspect them. On recovery it was noticed that the guns were flooded. The team cleaned them out, deployed them, tested and started line, on preplot N02,

After the recovery it was down to seismic data. Great cooperation between the science team, tech and bridge on planning lines, shooting speeds etc. Seismic was acquired all day and early indication hints at a great data set. The last line was acquired just before midnight. The students were doing a great job online, a few teething problems initially with the logs, but that has been sorted out and the team is really starting to warm up.

At the end of the day gear recovery was started

Daily Comment Summaries - Plan for Tomorrow

Fri 05 Aug

Just after midnight we were informed that the heat probe is working and we will be transiting to the Marginal site for heat probe ops.

Timing Diary (Marcus G Langseth, Hi-Rez)



Category	Code	Start	End	Duration
Mob Offshore	MB_MO	Fri 5. Aug 00:00	Fri 5. Aug 03:26	3.433
Mobilising Offshore - Deploying guns and running in to line				
Source	DT_SC	Fri 5. Aug 03:26	Fri 5. Aug 07:15	3.817
Downtime due to source. GI Guns Flooded				
Production Prime	AC_PP	Fri 5. Aug 07:15	Fri 5. Aug 08:43	1.467
Seq: 0 MGL2208002N02				
Prime Line Change	AC_PLC	Fri 5. Aug 08:43	Fri 5. Aug 09:00	0.283
Seq: 0 Nominal Prime line change.				
Production Prime	AC_PP	Fri 5. Aug 09:00	Fri 5. Aug 11:19	2.317
Seq: 0 MGL2208003N03				
Prime Line Change	AC_PLC	Fri 5. Aug 11:19	Fri 5. Aug 12:41	1.367
Seq: 0 Nominal Prime line change.				
Production Prime	AC_PP	Fri 5. Aug 12:41	Fri 5. Aug 15:06	2.417
Seq: 0 MGL2208004N05				
Prime Line Change	AC_PLC	Fri 5. Aug 15:06	Fri 5. Aug 15:43	0.617
Seq: 0 Nominal Prime line change.				
Production Prime	AC_PP	Fri 5. Aug 15:43	Fri 5. Aug 16:55	1.200
Seq: 0				

Category	Code	Start	End	Duration
MGL2208005N06				
Prime Line Change	AC_PLC	Fri 5. Aug 16:55	Fri 5. Aug 17:33	0.633
Seq: 0 Nominal Prime line change.				
Production Prime	AC_PP	Fri 5. Aug 17:33	Fri 5. Aug 19:51	2.300
Seq: 0 MGL2208006N07				
Prime Line Change	AC_PLC	Fri 5. Aug 19:51	Fri 5. Aug 21:07	1.267
Seq: 0 Nominal Prime line change.				
Production Prime	AC_PP	Fri 5. Aug 21:07	Fri 5. Aug 23:33	2.433
Seq: 0 MGL2208007N01a				
Recovery	DM_RC	Fri 5. Aug 23:33	Fri 5. Aug 24:00	0.450
Recovering outboard equipment.				

Timing Day By Day (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

5-Aug	Hours	% Percent
Acquisition	16.300	67.917
Prime Line Change	4.167	17.361
Production Prime	12.133	50.556
Demobilisation	0.450	1.875
Recovery	0.450	1.875
DownTime	3.817	15.903
Source	3.817	15.903
Mobilisation	3.433	14.306
Mob Offshore	3.433	14.306
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Mobilisation	3.433	14.306
Mob Offshore	3.433	14.306
Acquisition	16.300	67.917
Prime Line Change	4.167	17.361
Production Prime	12.133	50.556
Demobilisation	0.450	1.875
Recovery	0.450	1.875
DownTime	3.817	15.903
Source	3.817	15.903
Total	24.000	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m

Hi-Rez					
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment					
General Details					
Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1

Production Listing (Chgd km by Shotpoint) - Full Fold

MCS 6000m, Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

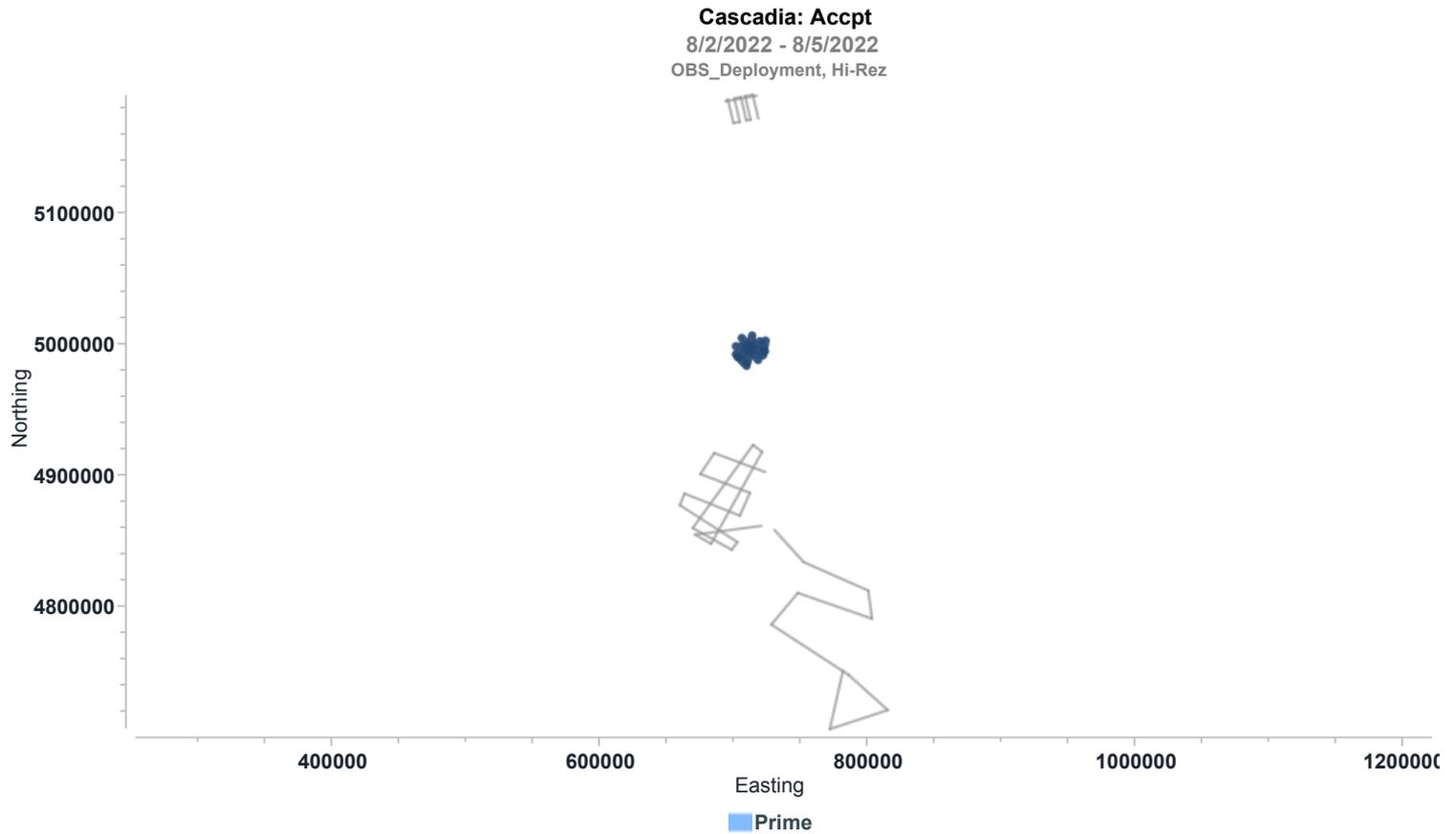
Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
1	001N01	279.9	N/A	N/A	Prime	0.00	N/A	NTBP	NTBP
2	002N02	137.7	1071	1547	Prime	11.93	4.431	Complete	Complete
3	003N03	9.9	1001	1782	Prime	19.55	4.813	Complete	Complete
4	004N05	144.0	1001	1795	Prime	19.88	4.631	Complete	Complete
5	005N06	9.7	1060	1517	Prime	11.45	5.141	Complete	Complete
6	006N07	233.6	1013	1769	Prime	18.93	4.813	Complete	Complete
7	007N01a	99.9	1001	1780	Prime	19.50	4.893	Complete	Complete
Total						101.23			

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

MCS 6000m, Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	107.40	107.40	107.40	107.40
Combined	107.40	107.40	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 05 Aug

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

Heat Probe:

No Major issues to Report

General Purpose Science:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Fri 05 Aug

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 Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
 Anne Trehu - Co-PI OSU

8/5/2022

Page 5

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
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HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category		Code	Count
 Toolbox Meetings	Mtgs_Tbox		1
8/5/2022			
Ops Meeting			

8/6/2022

Page 1

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Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Sat 06 Aug

The day started with streamer and gun recovery from the Nubbin area. The heat probe was not working in the morning so the decision was made to continue with seismic acquisition over the PF area, farther to the south. About an hour in to transit we got the great news that the Heat Probe was fixed and we the plans changed. The PI's decided to go to Marginal and start heat probe measurements there.

We arrived onsite and took our time readying the gear and people, with a do it once and do it right mentality. A good long tool box was had to discuss the flow of operations, highlight associated risks, assigned crew duties and discuss communications. The first deployment went well, with a few lessons learned for the next operations.

After deployment it was discovered that there was not a subsea acoustic pinger onboard. The descscion was made to continue down to take measurements. In the meantime emails were sent to try and locate a pinger on shore for our early week port call. As of this daily, things look promising that the Tommy Thompson might have 2 for us to use.

After penetrating the first site, the heat flow team discovered that there was communications problems between the probe and the WHOI dunker. The decision was made to continue with operations while monitoring the winch tension only. The days of hardwork that the team put in to get this working has really paid off!

Heat flow operations continued for the rest of the day. Slow is steady and steady is fast has been the mantra today. At midnight UTC the probe was inserted at station 7.

Daily Comment Summaries - Plan for Tomorrow

Sat 06 Aug

The probe was recovered after site 7 for planned battery maintenance, to check the data logger and to try and trouble shoot the communication problem. When the probe was recovered onboard a kink was noticed a couple of feet above the termination point. It was decided that the wire would be re-terminated while the heat probe team trouble shot the unit. The wire loaded tested good and the team managed to fix the communication problem and change out a thermometer. Around 10:30 local the unit was deployed again. The lessons learned from the first deployment were done and it was a nice smooth deployment.

Timing Diary (Marcus G Langseth, OBS_Deployment, Hi-Rez)



Category	Code	Start	End	Duration
Recovery	DM_RC	Sat 6. Aug 00:00	Sat 6. Aug 02:00	2.000
Recovery of Streamer and Guns				
Transit	SB_TRT	Sat 6. Aug 02:00	Sat 6. Aug 09:47	7.783
Transit to Marginal Working Area				
Deployment	MB_DP	Sat 6. Aug 09:47	Sat 6. Aug 11:00	1.217
Deploy Heat Probe				
Deploy	AC_SM_De	Sat 6. Aug 11:00	Sat 6. Aug 23:39	12.650
Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:1 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:2 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:3 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:4 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:5 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:6 Deployment Node operation 1 S/N: Line:MGL2208Line HF1 Block:Cascadia SP:7 Deployment				
Recovery	DM_RC	Sat 6. Aug 23:40	Sat 6. Aug 24:00	0.333

Category	Code	Start	End	Duration
Recover Heat Probe				

Timing Day By Day (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

6-Aug	Hours	% Percent
Acquisition	12.650	52.708
Swath Move	12.650	52.708
Deploy	12.650	52.708
Chargeable Standby	7.783	32.431
Transit	7.783	32.431
Demobilisation	2.333	9.722
Recovery	2.333	9.722
Mobilisation	1.217	5.069
Deployment	1.217	5.069
Day's Total	23.983	99.931

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	28.950	60.333
Prime Line Change	4.167	8.684
Production Prime	12.133	25.287
Swath Move	12.650	26.363
Deploy	12.650	26.363
Mobilisation	4.650	9.691
Deployment	1.217	2.536
Mob Offshore	3.433	7.155
Demobilisation	2.783	5.801
Recovery	2.783	5.801
DownTime	3.817	7.954
Source	3.817	7.954
Chargeable Standby	7.783	16.221
Transit	7.783	16.221
Total	47.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment					
General Details					

OBS_Deployment

Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1
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Production Listing (Accept km) - Prime: Full Fold, Infill: Unknown

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

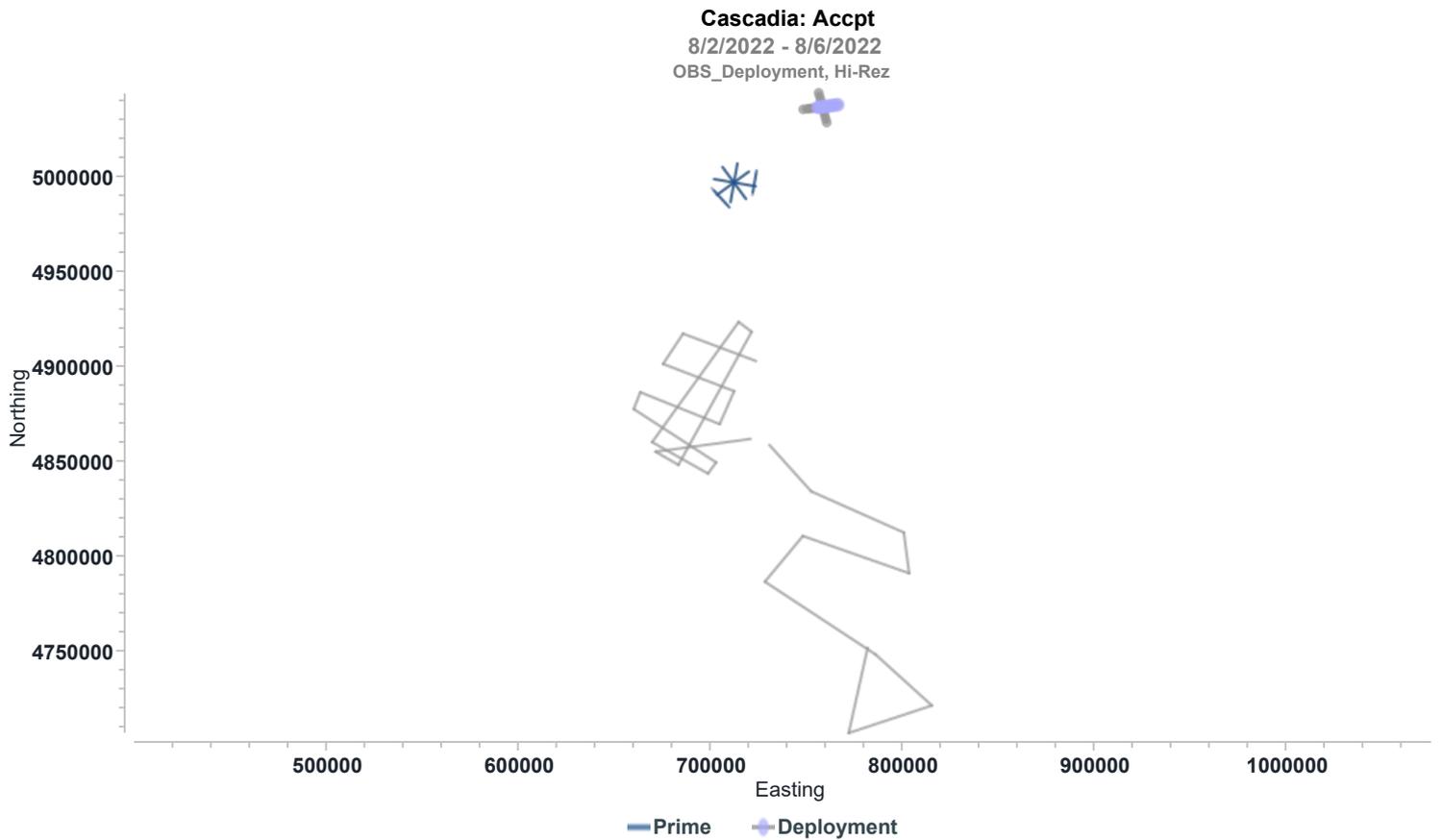
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accept km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	107.40	107.40	107.40
Combined	0.00	107.40	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 06 Aug

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.

Heat Probe:

8/6/2022

Page 4

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 06 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Brian Agee L-DEO OMO Source Mechanic
- Contract Navigator
Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Ana Lira - RPS PSO
Michelle Klein - RPS PSO
Jimena Ortega - RPS PSO
Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
Anne Trehu - Co-PI OSU
Robert Harris - Co-PI OSU
Mandy Kiger - Heat Flow Tech - OSU
Thomas Kyrirtz - Graduate Research asst. - NMT
Benjamin Norvell - Graduate Research asst. - NMT
Kristin Dickerson - Graduate Research asst. - UCSC
Danqi Jian - Graduate Research asst. - UTIG
Robert Perrin - Graduate Research asst. - U.Calgary
Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
Matt Perry - Research asst. - Planetary Science Inst.
Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin Mcloud - Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category

Code

Start

End

8/7/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Sun 07 Aug

At the start of the day the heat probe was recovered for battery checks and trouble shooting. During recovery it was noticed that the cable had a severe kink 1-2 feet up from the termination. The team re-terminated and load tested it good. Meanwhile the Heat probe team were downloading data, troubleshooting the acoustic unit, checking data and preparing the probe for another deployment. Upon inspection something did not look 100% with the recorded data so the team change out the temperature probe.

The probe was lowered on to station HF2-1. Once past 300 meters the team could not longer communicate with the heat probe using the WHOI dunker. The station was completed and it was decided to bring the probe to surface to check the data and try one more time to get the acoustic working. The good news is the data on HF2-1 looked great and the probe was deployed to finish the line, HF2-2 to HF2-7.

Towards the end of the day the probe was recovered again. The teams are really getting in to a rhythm now with deployment and recoveries. We've tweaked how it's done several times, with great feedback from the different team members. I think we have a safe and efficient recipe now.

Due to the invalid data on Stations HF1-1 to HF1-7 there has been a change to the plans. The vessel will return to require those stations before starting the North South Line (Starting in the South). This will of course change our time plan. A good estimate is the vessel will arrive in Newport around noon on Tuesday the 9th, local time. The weather and fog report look favorable for that time.

Daily Comment Summaries - Plan for Tomorrow

Sun 07 Aug

Timing Diary (Marcus G Langseth, OBS_Deployment)



Category	Code	Start	End	Duration
Recovery	DM_RC	Sun 7. Aug 00:00	Sun 7. Aug 01:40	1.667
Heat Probe Recovery				
Deployment	MB_DP	Sun 7. Aug 01:40	Sun 7. Aug 06:57	5.283
Heat Probe Deployment				
Deploy	AC_SM_De	Sun 7. Aug 06:57	Sun 7. Aug 07:41	0.733
Heat Probe Op 2 S/N: HF2-1				
Recovery	DM_RC	Sun 7. Aug 07:41	Sun 7. Aug 08:17	0.600
Heat Probe Recovery				
Deployment	MB_DP	Sun 7. Aug 08:17	Sun 7. Aug 10:46	2.483
Heat Probe Deployment				
Deploy	AC_SM_De	Sun 7. Aug 10:46	Sun 7. Aug 18:46	8.000
Heat Probe Op 3 S/N: HF2-2 Heat Probe Op 3 S/N: HF2-3 Heat Probe Op 3 S/N: HF2-4 Heat Probe Op 3 S/N: HF2-5 Heat Probe Op 3 S/N: HF2-6 Heat Probe Op 3 S/N: HF2-7				
Recovery	DM_RC	Sun 7. Aug 18:46	Sun 7. Aug 20:12	1.433
Heat Probe Recovery				

Category	Code	Start	End	Duration
Deployment	MB_DP	Sun 7. Aug 20:12	Sun 7. Aug 22:59	2.783
Heat Probe Deployment				
Deploy	AC_SM_De	Sun 7. Aug 22:59	Sun 7. Aug 24:00	1.017
Heat Probe Op 4 S/N: Reacquire station 1-3				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

7-Aug	Hours	% Percent
Acquisition	9.750	40.625
Swath Move	9.750	40.625
Deploy	9.750	40.625
Demobilisation	3.700	15.417
Recovery	3.700	15.417
Mobilisation	10.550	43.958
Deployment	10.550	43.958
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	38.700	53.762
Prime Line Change	4.167	5.788
Production Prime	12.133	16.856
Swath Move	22.400	31.118
Deploy	22.400	31.118
Mobilisation	15.200	21.116
Deployment	11.767	16.346
Mob Offshore	3.433	4.770
Demobilisation	6.483	9.007
Recovery	6.483	9.007
DownTime	3.817	5.302
Source	3.817	5.302
Chargeable Standby	7.783	10.813
Transit	7.783	10.813
Total	71.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment

General Details

Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1
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Production Listing (Accpt km) - Prime: Full Fold, Infill: Unknown

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

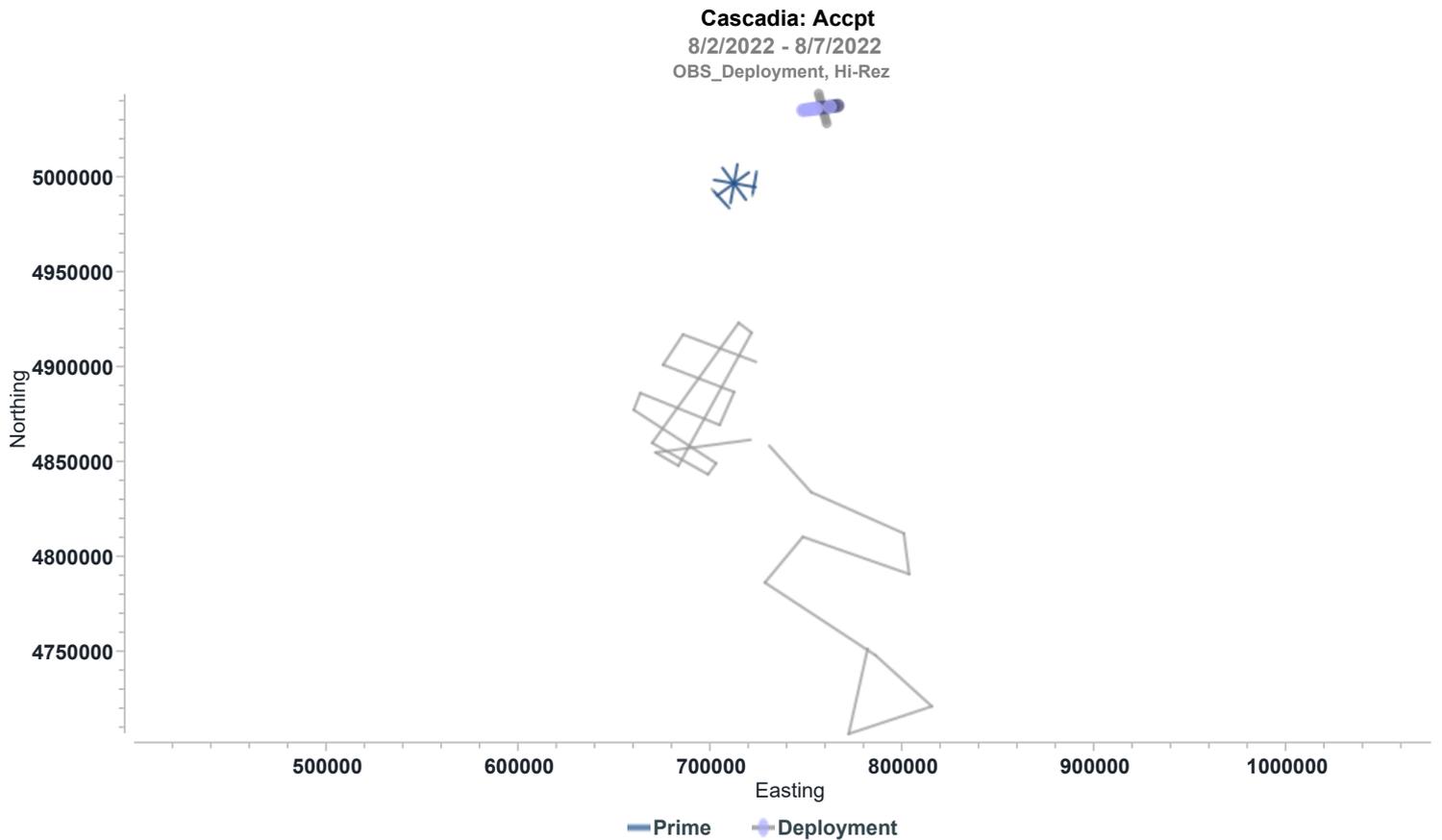
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	107.40	107.40	107.40
Combined	0.00	107.40	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 07 Aug

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 07 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
Josh Kasinger L-DEO OMO Chief Source Mechanic
Brian Agee L-DEO OMO Source Mechanic
Paul Parolski Jr.- Contract Navigator
Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Ana Lira - RPS PSO
Michelle Klein - RPS PSO
Jimena Ortega - RPS PSO
Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
Anne Trehu - Co-PI OSU
Robert Harris - Co-PI OSU
Mandy Kiger - Heat Flow Tech - OSU
Thomas Kyritz - Graduate Research asst. - NMT
Benjamin Norvell - Graduate Research asst. - NMT
Kristin Dickerson - Graduate Research asst. - UCSC
Danqi Jian - Graduate Research asst. - UTIG
Robert Perrin - Graduate Research asst. - U.Calgary
Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
Matt Perry - Research asst. - Planetary Science Inst.
Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin Mcleod- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category

Code

Start

End

8/8/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Mon 08 Aug

At the start of the day the vessel was on station of original HF1-4. The remaining sites were required, the probe was recovered and the vessel transited to the southern portion of the North South Line. While on deck the probe was serviced, data confirmed, batteries change and made ready to go. After another good tool box talk the probe was deployed over the side, re-zeroed and sent down deep.

Operations have continued all day moving to the North, at the close of day the vessel was transiting to the 9th station (out of 11) on the North South Line.

A safety meeting was held today between the Captain and technical crew to discuss the upcoming small boat operations. A good discussion was had with suggestions, and improvements which will make this a good, safe and efficient operation. As part of our preventive measures the mechanics tested both engines on the workboat, checked all the instrumentation, the VHF radio and the emergency/safety gear onboard. The crew members who will be leaving us tomorrow were also briefed on what to expect, what PPE will be needed, where to put their luggage and where they will board the boat. It should be a fun and exciting run in to port tomorrow.

Daily Comment Summaries - Plan for Tomorrow

Mon 08 Aug

The time plan looks to be spot on for finishing up this line of stations. The probe should be on deck around 23:00 local. The vessel will then transit in and will be near the jetty on the 9th at around 8-9 am local.

There are a couple of shipments to pick up along with the pingers. If all the plans materialize we should be coming back with 4. Both OSU and UW have been a great help in making this come together!

After the crew change operations the vessel will head back to NUBBIN where Heat flow operations will commence. The crew have been working 24hrs to merge, process and choose potential sights on these brand new seismic lines.

Timing Diary (Marcus G Langseth, OBS_Deployment)

Category	Code	Start	End	Duration
 Deploy	AC_SM_De	Mon 8. Aug 00:00	Mon 8. Aug 05:34	5.567
Heat Probe Op 5 S/N: HF3-2 Heat Probe Op 5 S/N: HF3-2 Heat Probe Op 5 S/N: HF3-2 Heat Probe Op 5 S/N: HF3-2				
 Recovery	DM_RC	Mon 8. Aug 05:34	Mon 8. Aug 07:59	2.417
Heat Probe Recovery				
 Deployment	MB_DP	Mon 8. Aug 07:59	Mon 8. Aug 09:26	1.450
Heat Probe Deployment				
 Deploy	AC_SM_De	Mon 8. Aug 09:26	Mon 8. Aug 24:00	14.567
Heat Probe 6 S/N: HF4-1 Heat Probe 6 S/N: HF4-2 Heat Probe 6 S/N: HF4-3 Heat Probe 6 S/N: HF4-4 Heat Probe 6 S/N: HF4-5 Heat Probe 6 S/N: HF4-6 Heat Probe 6 S/N: HF4-7 Heat Probe 6 S/N: HF4-8 Heat Probe 6 S/N: HF4-9				

8/8/2022

Page 2

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

8-Aug	Hours	% Percent
Acquisition	20.133	83.889
Swath Move	20.133	83.889
Deploy	20.133	83.889
Demobilisation	2.417	10.069
Recovery	2.417	10.069
Mobilisation	1.450	6.042
Deployment	1.450	6.042
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	58.833	61.295
Prime Line Change	4.167	4.341
Production Prime	12.133	12.641
Swath Move	42.533	44.313
Deploy	42.533	44.313
Mobilisation	16.650	17.347
Deployment	13.217	13.770
Mob Offshore	3.433	3.577
Demobilisation	8.900	9.272
Recovery	8.900	9.272
DownTime	3.817	3.976
Source	3.817	3.976
Chargeable Standby	7.783	8.109
Transit	7.783	8.109
Total	95.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment					
General Details					
Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

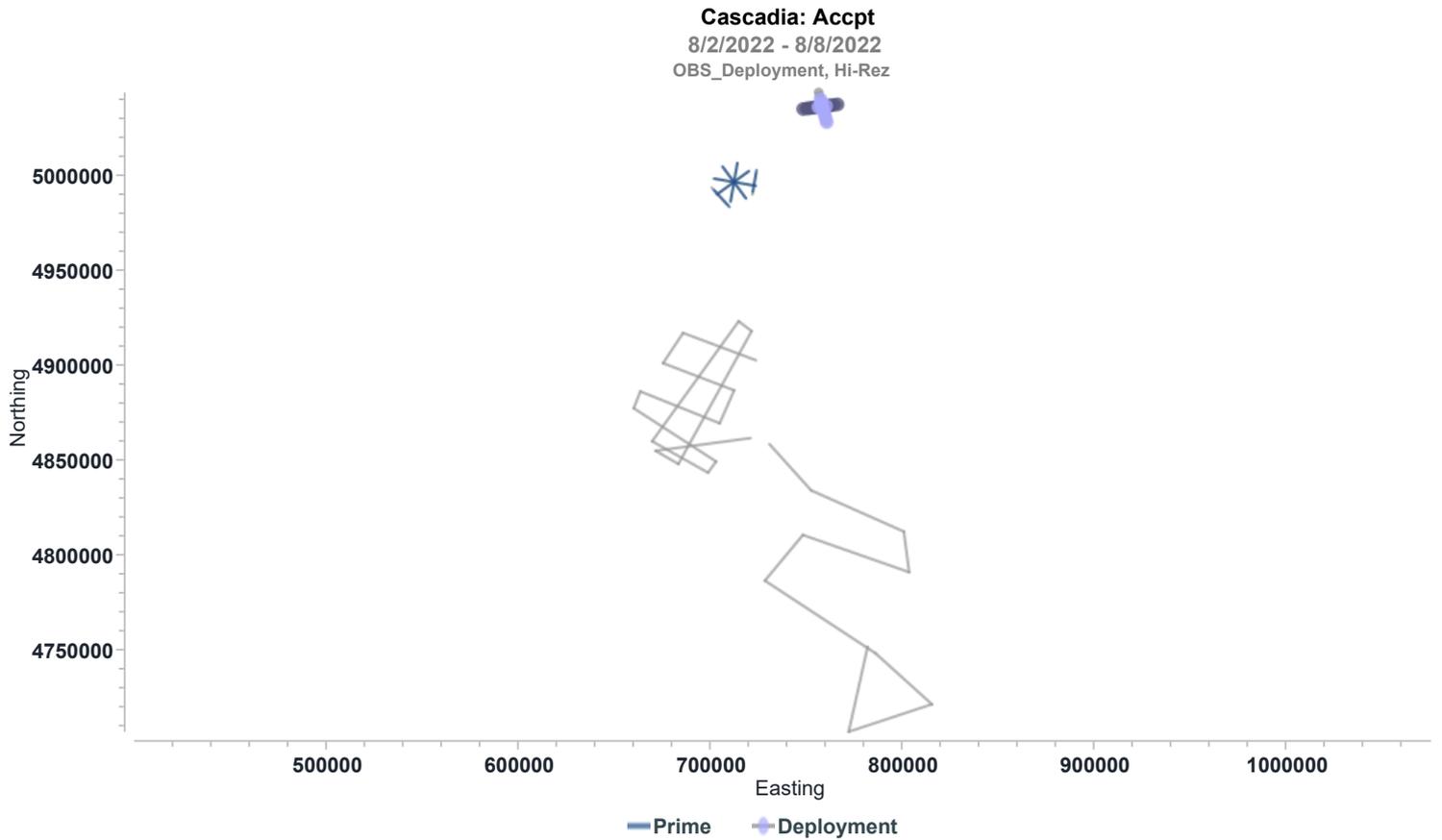
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accept km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	107.40	107.40
Combined	0.00	0.00	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 08 Aug

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.

Heat Probe:
No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Mon 08 Aug

Technical Staff On-board the Langseth
Cody Bahlau L-DEO OMO Chief Science Officer

8/8/2022

Page 4

Josh Kasinger L-DEO OMO Chief Source Mechanic
Brian Agee L-DEO OMO Source Mechanic
Paul Parolski Jr.- Contract Navigator
Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
Cassandra Frey - RPS PSO
Ana Lira - RPS PSO
Michelle Klein - RPS PSO
Jimena Ortega - RPS PSO
Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
Anne Trehu - Co-PI OSU
Robert Harris - Co-PI OSU
Mandy Kiger - Heat Flow Tech - OSU
Thomas Kyrirtz - Graduate Research asst. - NMT
Benjamin Norvell - Graduate Research asst. - NMT
Kristin Dickerson - Graduate Research asst. - UCSC
Danqi Jian - Graduate Research asst. - UTIG
Robert Perrin - Graduate Research asst. - U.Calgary
Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
Matt Perry - Research asst. - Planetary Science Inst.
Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin McCloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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8/9/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Tue 09 Aug

The remaining station on the North south line were completed. The heat probe was recovered, and secured for transit.

When the MGL arrived at newport, the small boat was launched, crew members loaded and the small boat left for the OSU dock. The operation went very well in the morning, there were no last minute surprises, it was done safe and efficient. At the OSU dock the small boat unloaded the crew for a well earned break. While a walmart run was started the remained crew started to load supplies, the acoustic pingers and had a tutorial from the OSU crew. After a burger king lunch, which always tastes better wearing life jackets sitting in the boat, the crew drove the boat over to Elgund marine to pick up the boat hooks. Once all supplies were safely secured the small boat headed back to the mother ship.

The science team were burning the midnight oil looking at seismic data and picking the best points for our next heat flow campaign. The captain has the waypoints and we are full steam ahead for NUBBIN and our first drop which should be around midnight local.

Daily Comment Summaries - Plan for Tomorrow

Tue 09 Aug

Continue with Heat Flow ops on NUBBIN

Timing Diary (Marcus G Langseth, OBS_Deployment)

Category	Code	Start	End	Duration
Deploy	AC_SM_De	Tue 9. Aug 00:00	Tue 9. Aug 05:50	5.833
Heat Probe Op 7 S/N: HF4-10 Heat Probe Op 7 S/N: HF4-11				
Recovery	DM_RC	Tue 9. Aug 05:50	Tue 9. Aug 07:45	1.917
Demobilising offshore, recovering outboard equipment.				
Transit	SB_TRT	Tue 9. Aug 07:45	Tue 9. Aug 17:00	9.250
Transit to Newport				
Field Operations	NC_FO	Tue 9. Aug 17:00	Tue 9. Aug 21:00	4.000
Crew Change and Supplie run				
Transit	SB_TRT	Tue 9. Aug 21:00	Tue 9. Aug 24:00	3.000
Transit from Newport to NUBBIN				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

9-Aug	Hours	% Percent
Acquisition	5.833	24.306
Swath Move	5.833	24.306
Deploy	5.833	24.306
Chargeable Standby	12.250	51.042
Transit	12.250	51.042
Demobilisation	1.917	7.986
Recovery	1.917	7.986

9-Aug	Hours	% Percent
Non-Chargeable StandBy	4.000	16.667
Field Operations	4.000	16.667
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	64.667	53.896
Prime Line Change	4.167	3.473
Production Prime	12.133	10.113
Swath Move	48.367	40.311
Deploy	48.367	40.311
Mobilisation	16.650	13.877
Deployment	13.217	11.015
Mob Offshore	3.433	2.862
Non-Chargeable StandBy	4.000	3.334
Field Operations	4.000	3.334
Demobilisation	10.817	9.015
Recovery	10.817	9.015
DownTime	3.817	3.181
Source	3.817	3.181
Chargeable Standby	20.033	16.697
Transit	20.033	16.697
Total	119.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Basic Project Details

OBS_Deployment					
General Details					
Rcvr Separation:	0 m	Rcvr Interval:	0 m	Rcvr Increment:	1

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

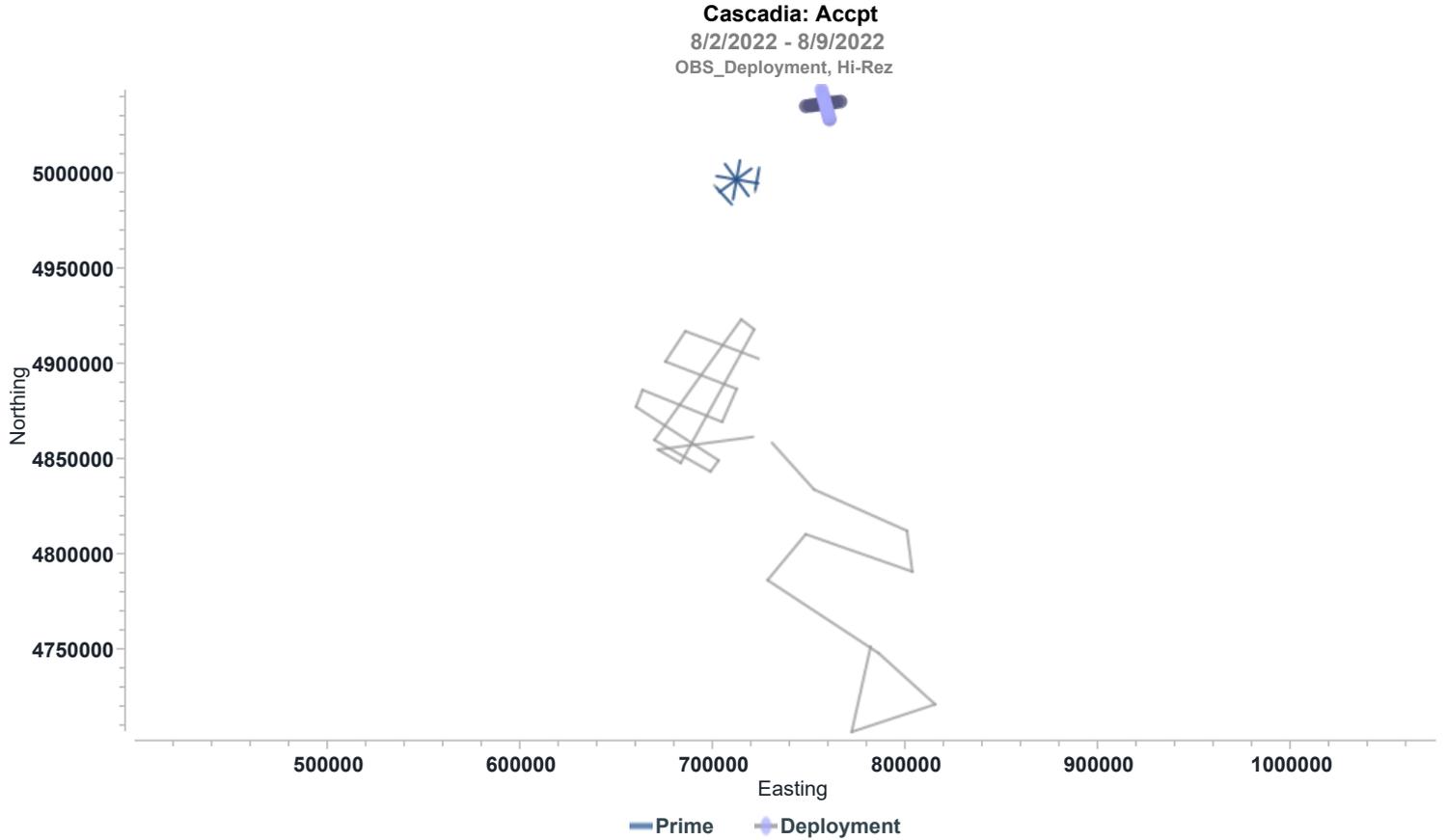
Seq	Line	FGSP	LGSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	107.40	107.40
Combined	0.00	0.00	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 09 Aug

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.

Heat Probe:
No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Tue 09 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski Jr.- Contract Navigator
 Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Ana Lira - RPS PSO
 Michelle Klein - RPS PSO

8/9/2022

Page 4

Jimena Ortega - RPS PSO
Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
Anne Trehu - Co-PI OSU
Robert Harris - Co-PI OSU
Mandy Kiger - Heat Flow Tech - OSU
Thomas Kyrirtz - Graduate Research asst. - NMT
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Ariful Islam - Graduate Research asst. - U. Nebraska
Clara Stanbury - Research asst. - Los Alamos National Lab
Ben Russel - Machinist - OSU
Justin McCloud - Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
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8/10/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Wed 10 Aug

Transit from Newport after a safe and efficient crew change and supply run. The vessel was on station at ~7:00 UTC. A tool box talk was held and the probe was deployed. The probe was stopped at 50 meters and the OSU acoustic pinger was installed. A few settings needed to be tweaked, and then the two arrivals were coming in strong and solid. After a training session by the PIs we were off the races, deploying the probe and watching the returns. Six stations were acquired on line 1a, the probe was recovered for a longer transit to check batteries and data. Once on deck the cable needed to be re terminated. It was kinked in several spots 2-3 feet up from the termination. The team found some fibre hose to put over the first 2 meters of cable to hopefully reduce the wear and tear the 680 cable is seeing. This is our first prevention/mitigation tactic, we have a few more options up our sleeve if this still is an issue.

The probe was redeployed for the 7th and 8th station on line 1a. Before heading past the sea mount the decision was made to pull the probe to surface download the data and then once on station to deploy it again.

At the end of day the probe was being deployed back down for station 9 on Line 1a.

Ongoing maintenance and preparations:

Re-rigged shackles on tailbuoy lifting harness

Bolted on light on tail buoy

Put new parts onto GI Gun. Still no changes.

Inspected aft tail buoy door on main deck and came up plan with Mark to get it repaired

As discussed the second GI gun has an air leak that has been trouble shot for the last several days. It appears to be wear in the main housing, while it can't be fixed it should not get any worse.

The team used up the last new termination kit today. They will clean and refurbish the used parts, this is what we will use moving forward. All the procedures will be followed along with the pull test specifications.





Daily Comment Summaries - Plan for Tomorrow

Wed 10 Aug

Continue to acquire Heat Flow Station on Nubbin

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
NUBBIN Heat Flow	24			50:00:00	8/10/2022 0:04	8/12/2022 2:04	
Transit to PF				6:00:00	8/12/2022 2:04	8/12/2022 8:04	8.5
Deploy Gear				3:00:00	8/12/2022 8:04	8/12/2022 11:04	
Acquire Seismic Lines - PF							
1 P05		219.7°			8/12/2022 11:45	8/12/2022 21:07	5.00 kt
2 P03		32.8°			8/12/2022 23:45	8/13/2022 9:22	5.00 kt

Timing Diary (Marcus G Langseth, OBS_Deployment)



Category	Code	Start	End	Duration
Transit	SB_TRT	Wed 10. Aug 00:00	Wed 10. Aug 07:04	7.067
Transit from Newport to NUBBIN				
Deployment	MB_DP	Wed 10. Aug 07:04	Wed 10. Aug 09:02	1.967
Heat Probe Deployment				
Deploy	AC_SM_De	Wed 10. Aug 09:02	Wed 10. Aug 17:35	8.550
Heat Probe Op 8 S/N: HF5-1 Heat Probe Op 8 S/N: HF5-2 Heat Probe Op 8 S/N: HF5-3 Heat Probe Op 8 S/N: HF5-4 Heat Probe Op 8 S/N: HF5-5 Heat Probe Op 8 S/N: HF5-6				
Recovery	DM_RC	Wed 10. Aug 17:35	Wed 10. Aug 18:47	1.200
Heat Probe Recovery				

Category	Code	Start	End	Duration
Deployment	MB_DP	Wed 10. Aug 18:47	Wed 10. Aug 22:13	3.433
Heat Probe Deployment				
Deploy	AC_SM_De	Wed 10. Aug 22:13	Wed 10. Aug 24:00	1.783
Heat Probe Op 9 S/N: HF6-1				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

10-Aug	Hours	% Percent
Acquisition	10.333	43.056
Swath Move	10.333	43.056
Deploy	10.333	43.056
Chargeable Standby	7.067	29.444
Transit	7.067	29.444
Demobilisation	1.200	5.000
Recovery	1.200	5.000
Mobilisation	5.400	22.500
Deployment	5.400	22.500
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	75.000	52.089
Prime Line Change	4.167	2.894
Production Prime	12.133	8.427
Swath Move	58.700	40.769
Deploy	58.700	40.769
Mobilisation	22.050	15.314
Deployment	18.617	12.930
Mob Offshore	3.433	2.385
Non-Chargeable StandBy	4.000	2.778
Field Operations	4.000	2.778
Demobilisation	12.017	8.346
Recovery	12.017	8.346
DownTime	3.817	2.651
Source	3.817	2.651
Chargeable Standby	27.100	18.822
Transit	27.100	18.822
Total	143.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m

Hi-Rez

Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m
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Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	101.23	101.23
Combined	0.00	0.00	101.23	101.23

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

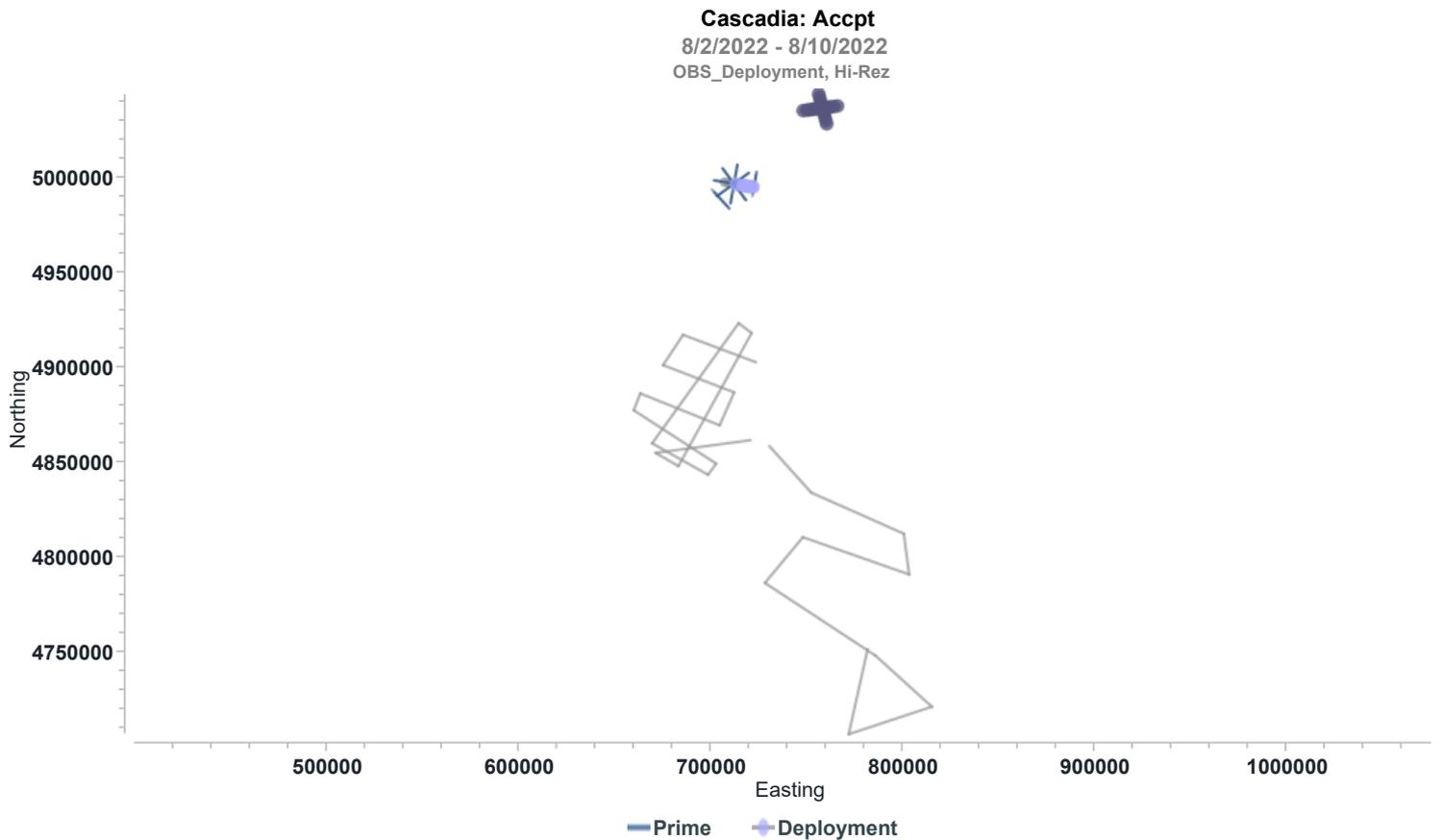
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	107.40	107.40
Combined	0.00	0.00	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 10 Aug

Navigation:
No Major Issues to Report

8/10/2022

Page 5

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Wed 10 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
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 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category	Code		Count
 Task, Hazard, Control	Re_Con_THC		1
8/10/2022			
Positive - Recognition to the Galley			
 Toolbox Meetings	Mtgs_Tbox		3
8/10/2022			
Tool Box Meeting To discuss Recovery			
8/10/2022			
Too Box Meeting to Discuss Deployment			
8/10/2022			
Tool Box Meeting to discuss Deployment			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	3	8	18	18	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	3	8	17	17		
Reports	Re	1	1	1	1		
Contractor	Con	1	1	1	1		
Task, Hazard, Control	THC	1	1	1	1		

8/11/2022

Page 1

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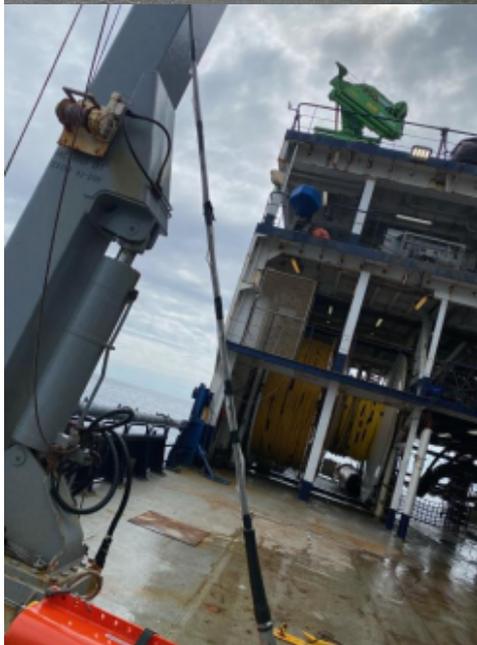
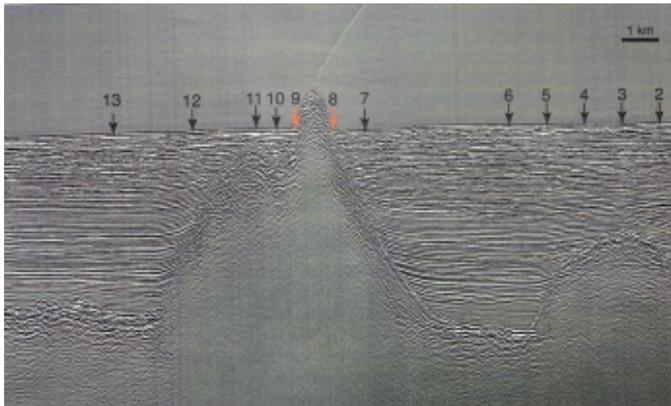
Daily Comment Summaries - Daily Summary

Thu 11 Aug

A busy day of deployments, recoveries and data acquisition! Four probe recoveries today, a small tool box talk was held either as a group or individually to discuss each crew members role in the recovery/deployment. The seas are calm but we should not get lulled in to complacency, the heat probe is 1000 plus pounds and every recovery/deployment must be respected. As mentioned in yesterdays daily report, the cable was re-terminated right at the end of yesterday and the start of today. That is two mechanical re-terminations for this project. The team put some bend restriction/chafing gear on the wire, from the termination 5-6 feet up. After a busy day of probe insertions and recoveries everything so far looks good with the wire. Hopefully this will mitigate the problem.

As the probe was recovered the data was inspected, it appears that there was a problem in the probe with sites HF5-1 to HF5-6. Those sites are located on the Eastern Edge of line 1a. To prevent further problems the probe was recovered to just download and check the data. At one point when on deck the cable connectors were disconnected and cleaned. This appears to have fixed the problem of possible water intrusion when the pressures increased. The remaining sites on line 1a look better, while the sites on lines 3,5 and 7 look very good. The plan therefore is to go back and reacquire the first 6 stations on line 1a. These are particularly important because the hirez seismic uncovered a smaller sea mount that is completely covered in sediment, baby nubbin...

After completion of NUBBIN the plan is to head south, deploy the streamer and acquire seismic data over PF. There may be a slight change in plans as the Team onboard is discussing the best strategy. The current plan is to acquire the high priority lines first. Recovery the gear and transit to Diebold for heat probe ops. This will give the onboard team plenty of time to analyse the seismic data and choose good stations for PF.



Continued Maintenance and Preparation:

Fixed starboard aft tailbuoy door. Welded tabs in proper locations so the cross bar will actually work. It is better than it was before
Mounted quick links on P-links for ease of connections while deploying head float on streamer

Daily Comment Summaries - Plan for Tomorrow

Thu 11 Aug

Continue with Heat Flow Ops

MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Margin HF - East West	5				8/7/2022 14:27	8/8/2022 0:59	
Margin Transit to North Line					8/8/2022 0:59	8/8/2022 1:06	
Margin HF - North South	11				8/8/2022 1:06	8/9/2022 0:30	
Transit to Newport					8/9/2022 0:30	8/9/2022 10:30	
Crew Change and Supplies					8/9/2022 10:30	8/9/2022 14:00	
Transit to Nubbin					8/9/2022 14:00	8/10/2022 0:04	8.5
NUBBIN Heat Flow (11 Stations)	11			23:00:00	8/11/2022 18:00	8/12/2022 17:00	
Transit to PF				6:00:00	8/12/2022 17:00	8/12/2022 23:00	8.5
Deploy Gear				3:00:00	8/12/2022 23:00	8/13/2022 2:00	
Acquire Seismic Lines - PF							
1 P05		219.7°			8/13/2022 2:45	8/13/2022 12:07	5.00 kt
2 P03		32.8°			8/13/2022 14:45	8/14/2022 0:22	5.00 kt
3 P14		294.9°			8/14/2022 3:11	8/14/2022 8:06	5.00 kt
4 P13		217.4°			8/14/2022 9:36	8/14/2022 11:56	5.00 kt
5 P12		115.3°			8/14/2022 13:29	8/14/2022 18:18	5.00 kt
6 P11		207.7°			8/14/2022 19:49	8/14/2022 22:08	5.00 kt
7 P10		296.3°			8/14/2022 23:40	8/15/2022 5:04	5.00 kt
8 P09		205.3°			8/15/2022 6:35	8/15/2022 7:47	5.00 kt
9 P08		127.4°			8/15/2022 9:17	8/15/2022 15:29	5.00 kt
10 P07		220.0°			8/15/2022 17:01	8/15/2022 17:56	5.00 kt
11 P06		303.8°			8/15/2022 19:26	8/15/2022 23:30	5.00 kt
12 P01		86.5°			8/16/2022 0:50	8/16/2022 6:52	5.00 kt
Recover Gear				3:00:00	8/16/2022 6:52	8/16/2022 9:52	
PSEUDOFAULT Heat Flow	70			140:00:00	8/16/2022 9:52	8/22/2022 5:52	
Transit to DIEBOLD				2:00:00	8/22/2022 5:52	8/22/2022 7:52	
DIEBOLD Heat Flow	32			64:00:00	8/22/2022 7:52	8/24/2022 23:52	
Transit to Newport			105	12:30	8/24/2022 23:52	8/25/2022 12:22	8.5

Timing Diary (Marcus G Langseth, OBS_Deployment)



Category	Code	Start	End	Duration
Deploy	AC_SM_De	Thu 11. Aug 00:00	Thu 11. Aug 01:11	1.183
Heat Probe Op 10 S/N: HF6-2				
Recovery	DM_RC	Thu 11. Aug 01:11	Thu 11. Aug 01:40	0.483
Heat Probe Recovery				
Deployment	MB_DP	Thu 11. Aug 01:40	Thu 11. Aug 02:16	0.600
Heat Probe Deployment				
Deploy	AC_SM_De	Thu 11. Aug 02:16	Thu 11. Aug 08:50	6.567
Heat Probe Op 11 S/N: HF6-3				
Heat Probe Op 11 S/N: HF6-4				
Heat Probe Op 11 S/N: HF6-5				

Category	Code	Start	End	Duration
Heat Probe Op 11 S/N: HF6-6 Heat Probe Op 11 S/N: HF6-7				
Recovery	DM_RC	Thu 11. Aug 08:50	Thu 11. Aug 10:00	1.167
Heat Probe Recovery				
Deployment	MB_DP	Thu 11. Aug 10:00	Thu 11. Aug 12:56	2.933
Heat Probe Deployment				
Deploy	AC_SM_De	Thu 11. Aug 12:56	Thu 11. Aug 14:32	1.600
Heat Probe Op 12 S/N: HF7-1				
Recovery	DM_RC	Thu 11. Aug 14:32	Thu 11. Aug 15:11	0.650
Heat Probe Recovery				
Deployment	MB_DP	Thu 11. Aug 15:11	Thu 11. Aug 16:51	1.667
Heat Probe Deployment				
Deploy	AC_SM_De	Thu 11. Aug 16:51	Thu 11. Aug 21:41	4.833
Heat Probe Op 13 S/N: HF8-1 Heat Probe Op 13 S/N: HF8-2 Heat Probe Op 13 S/N: HF8-3 Heat Probe Op 13 S/N: HF8-4				
Recovery	DM_RC	Thu 11. Aug 21:41	Thu 11. Aug 22:30	0.817
Heat Probe Recovery				
Deployment	MB_DP	Thu 11. Aug 22:30	Thu 11. Aug 24:00	1.500
Heat Probe Deployment				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

11-Aug	Hours	% Percent
Acquisition	14.183	59.097
Swath Move	14.183	59.097
Deploy	14.183	59.097
Demobilisation	3.117	12.986
Recovery	3.117	12.986
Mobilisation	6.700	27.917
Deployment	6.700	27.917
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	89.183	53.085
Prime Line Change	4.167	2.480
Production Prime	12.133	7.222
Swath Move	72.883	43.383
Deploy	72.883	43.383
Mobilisation	28.750	17.113
Deployment	25.317	15.069
Mob Offshore	3.433	2.044
Non-Chargeable StandBy	4.000	2.381
Field Operations	4.000	2.381

8/11/2022

Page 4

Category	Hours	% Percent
Demobilisation	15.150	9.018
Recovery	15.150	9.018
DownTime	3.817	2.272
Source	3.817	2.272
Chargeable Standby	27.100	16.131
Transit	27.100	16.131
Total	168.000	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	101.23	101.23
Combined	0.00	0.00	101.23	101.23

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

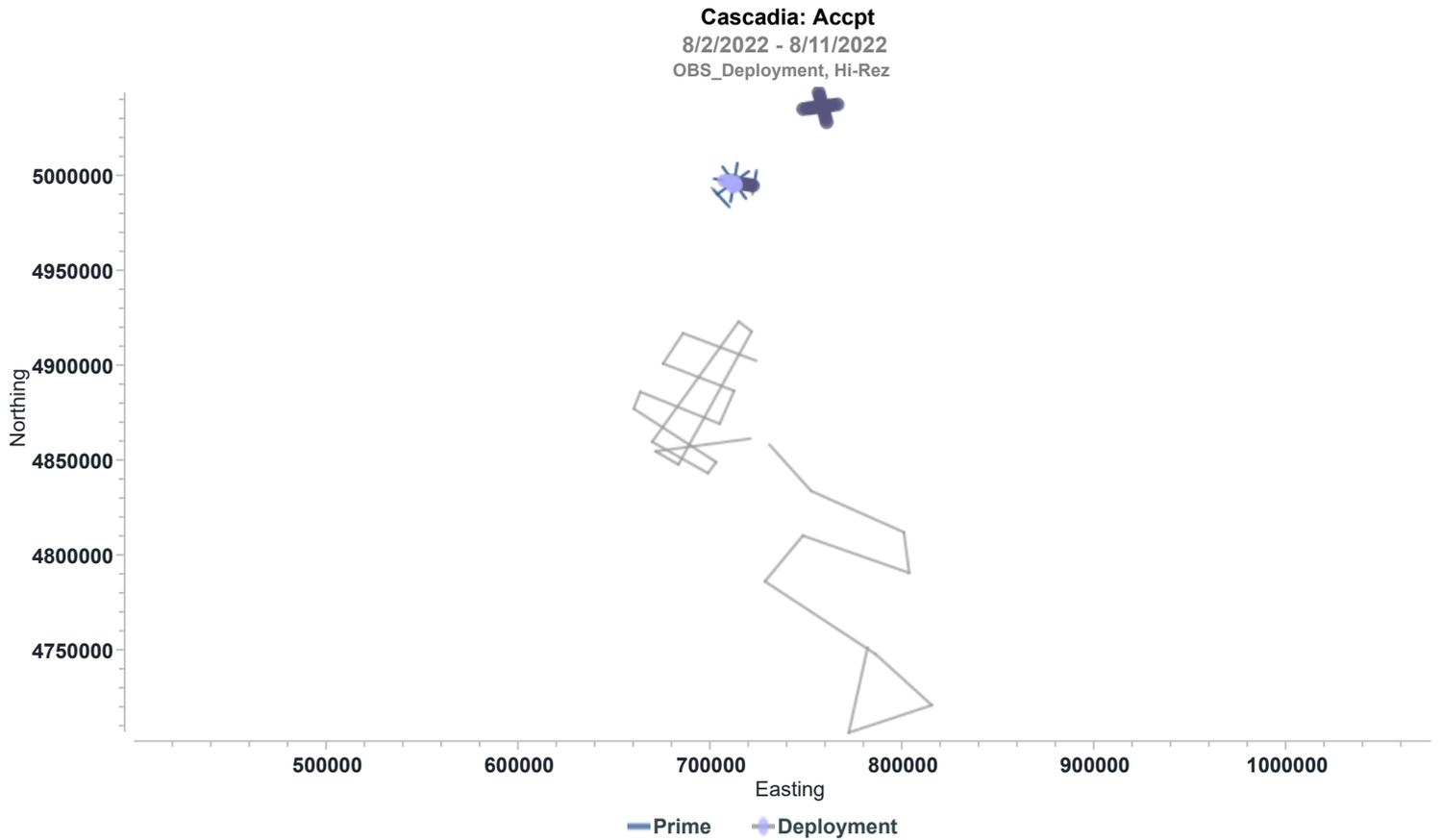
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	107.40	107.40
Combined	0.00	0.00	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Thu 11 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 11 Aug

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8/11/2022

Page 6

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 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
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HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category		Code	Count
☑ Toolbox Meetings	Mtgs_Tbox		8
8/11/2022			
TBT - Heat Probe Deployment			
8/11/2022			
TBT - Heat Probe Recovery			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
☑ Meetings	Mtgs	8	16	26	26	1.000	
☑ Start-up Meeting	StUp	0	0	1	1	1.000	
☑ Toolbox Meetings	Tbox	8	16	25	25		
☐ Reports	Re	0	1	1	1		
☐ Contractor	Con	0	1	1	1		
☐ Task, Hazard, Control	THC	0	1	1	1		

8/12/2022

Page 1

Client: Lamont-Doherty Earth Observatory
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Daily Comment Summaries - Daily Summary

Fri 12 Aug

A steady day of heat Probe ops. Several cycles of recoveries and deployments followed by some good data acquisition. Based on the brand new data acquired, the seismic along with the heat probe, there appears to be some exciting things heating up near NUBBIN... The Science Team decided on 3 new locations on the South West side. At the end of the day the vessel was just finishing up points 1-6 that needed to be reacquired and will transit to the new points 25, 26 and 27. After those points the vessel will sail south for seismic.

The seismic lines were slightly altered to give all teams onboard the best use of time. The high priority seismic lines with the potential heat flow stations will be acquired. The gear will then be recovered and the vessel will go to Diebold for heat flow ops. This will give the processing team plenty of time to analyze the data and select some high value points.

On the last recovery of the day, once onboard the cable had very slight damage. The fibre hose/chafing guard really seems to be paying off. It was not enough to want to re-terminate but all agreed that without the hose we would most likely would have needed to. A few more wraps of black seismic magic tape was applied and the probe was sent down deep again.

Daily Comment Summaries - Plan for Tomorrow

Fri 12 Aug

Heat flow ops until early morning local, transit and start Seismic around noon local.

MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
NUBBIN Heat Flow (5 Remain)	5			10:00:00	8/12/2022 16:19	8/13/2022 2:19	
Transit to PF				6:00:00	8/13/2022 2:19	8/13/2022 8:19	8.5
Deploy Gear				3:00:00	8/13/2022 8:19	8/13/2022 11:19	
Acquire Seismic Lines - PF							
1 P01		290.7°			8/13/2022 11:21	8/13/2022 15:46	5.00 kt
2 P02		213.2°			8/13/2022 17:07	8/13/2022 19:13	5.00 kt
3 P03		111.1°			8/13/2022 20:37	8/14/2022 0:57	5.00 kt
4 P04		203.5°			8/14/2022 2:19	8/14/2022 4:24	5.00 kt
5 P05		292.1°			8/14/2022 5:46	8/14/2022 10:38	5.00 kt
6 P06		201.1°			8/14/2022 12:00	8/14/2022 13:05	5.00 kt
7 P07		123.2°			8/14/2022 14:25	8/14/2022 20:00	5.00 kt
8 P08		358.3°			8/14/2022 21:22	8/14/2022 21:44	5.00 kt
9 P09		270.4°			8/14/2022 23:04	8/15/2022 2:30	5.00 kt
10 P10		358.5°			8/15/2022 3:52	8/15/2022 4:50	5.00 kt
11 P11		82.3°			8/15/2022 6:11	8/15/2022 11:37	5.00 kt
Recover Gear				3:00:00	8/15/2022 11:37	8/15/2022 14:37	
Transit to DIEBOLD				1:00:00	8/15/2022 14:37	8/15/2022 15:37	~8.5
DIEBOLD Heat Flow	32			64:00:00	8/15/2022 15:37	8/18/2022 7:37	
Transit to PSEUDFAULT				2:00:00	8/18/2022 7:37	8/18/2022 9:37	~8.5
PSEUDFAULT Heat Flow	70			140:00:00	8/18/2022 9:37	8/24/2022 5:37	
Transit to Newport			105	12:30	8/24/2022 5:37	8/24/2022 18:07	8.5

Timing Diary (Marcus G Langseth, OBS_Deployment)



Category	Code	Start	End	Duration
■ Deploy	AC_SM_De	Fri 12. Aug 00:00	Fri 12. Aug 05:22	5.367
Heat Probe Op 14 S/N: HF9-1 Heat Probe Op 14 S/N: HF9-2 Heat Probe Op 14 S/N: HF9-3 Heat Probe Op 14 S/N: HF9-4				
■ Recovery	DM_RC	Fri 12. Aug 05:22	Fri 12. Aug 06:39	1.283
Heat Probe Recovery				
■ Deployment	MB_DP	Fri 12. Aug 06:39	Fri 12. Aug 09:07	2.467
Heat Probe Deployment				
■ Deploy	AC_SM_De	Fri 12. Aug 09:07	Fri 12. Aug 11:19	2.200
Heat Probe Op 15 S/N: HF10-1 Heat Probe Op 15 S/N: HF10-2				
■ Recovery	DM_RC	Fri 12. Aug 11:19	Fri 12. Aug 12:34	1.250
Heat Probe Recovery				
■ Deployment	MB_DP	Fri 12. Aug 12:34	Fri 12. Aug 14:58	2.400
Heat Probe Deployment				
■ Deploy	AC_SM_De	Fri 12. Aug 14:58	Fri 12. Aug 20:38	5.667
Heat Probe Op 16 S/N: HF11-1 Heat Probe Op 16 S/N: HF11-2 Heat Probe Op 16 S/N: HF11-3 Heat Probe Op 16 S/N: HF11-4				
■ Recovery	DM_RC	Fri 12. Aug 20:38	Fri 12. Aug 22:28	1.833
Heat Probe Recovery				
■ Deployment	MB_DP	Fri 12. Aug 22:28	Fri 12. Aug 24:00	1.533
Heat Probe Deployment				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

12-Aug	Hours	% Percent
Acquisition	13.233	55.139
Swath Move	13.233	55.139
Deploy	13.233	55.139
Demobilisation	4.367	18.194
Recovery	4.367	18.194
Mobilisation	6.400	26.667
Deployment	6.400	26.667
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	102.417	53.342
Prime Line Change	4.167	2.170
Production Prime	12.133	6.319
Swath Move	86.117	44.852
Deploy	86.117	44.852
Mobilisation	35.150	18.307
Deployment	31.717	16.519

Category	Hours	% Percent
Mob Offshore	3.433	1.788
Non-Chargeable StandBy	4.000	2.083
Field Operations	4.000	2.083
Demobilisation	19.517	10.165
Recovery	19.517	10.165
DownTime	3.817	1.988
Source	3.817	1.988
Chargeable Standby	27.100	14.115
Transit	27.100	14.115
Total	192.000	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	0.00	101.23	101.23
Combined	0.00	0.00	101.23	101.23

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

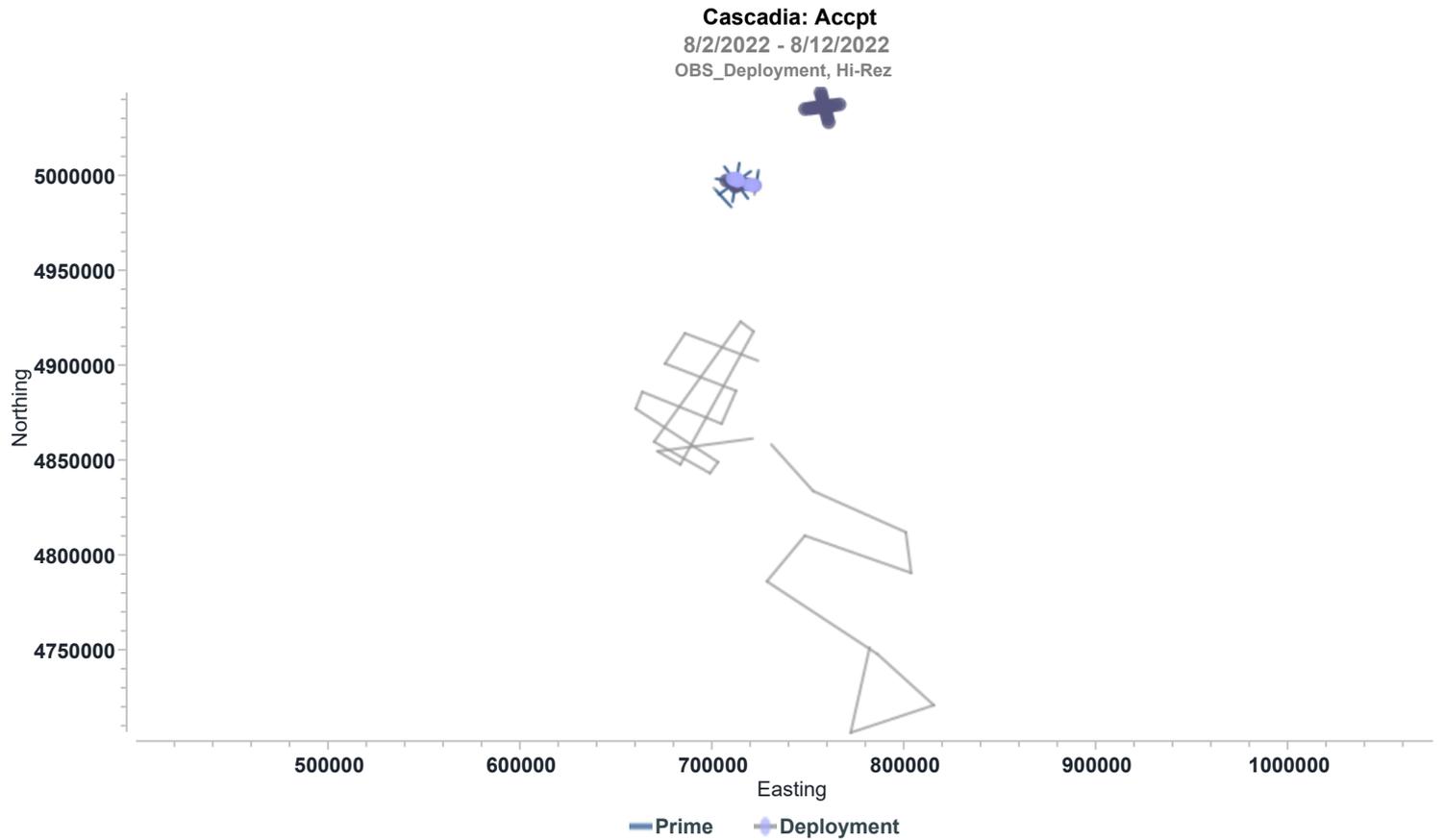
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	0.00	107.40	107.40
Combined	0.00	0.00	107.40	107.40



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 12 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Fri 12 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski Jr.- Contract Navigator
 Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

Amanda Dubuque - RPS Lead PSO
 Cassandra Frey - RPS PSO
 Ana Lira - RPS PSO
 Michelle Klein - RPS PSO
 Jimena Ortega - RPS PSO
 Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
 Anne Trehu - Co-PI OSU

8/12/2022

Page 5

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
 Benjamin Norvell - Graduate Research asst. - NMT
 Kristin Dickerson - Graduate Research asst. - UCSC
 Danqi Jian - Graduate Research asst. - UTIG
 Robert Perrin - Graduate Research asst. - U.Calgary
 Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category			
		Code	Count
Task, Hazard, Control	Re_Con_THC		3
8/12/2022			
THC - Multiple items. Noise is mentioned several times.			
Toolbox Meetings	Mtgs_Tbox		6
8/12/2022			
TBT - Recovery			
8/12/2022			
TBT - Deployment			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	6	22	32	32	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	6	22	31	31		
Reports	Re	3	4	4	4		
Contractor	Con	3	4	4	4		
Task, Hazard, Control	THC	3	4	4	4		

8/13/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Sat 13 Aug

Early in the morning the Heat Flow operation on NUBBIN was wrapped up. The team acquired some very exciting data, the extra time taken has paid off in the end. After the heat probe was secured on deck the vessel transited south to Pseudofault. After a tool box talk in the main lab the tail buoy was soon in the water. Just under 2 hours for full deployment, a great job on the back deck! The gear was tested on the run in to line and SOL was 16:01 UTC (09:01 Local). Based on the initial data that the team was seeing the decision was made to extend the PF lines to the maximum amount allowed by the restraints of the box. PF version 3 lines were created on the fly and sent up to the Captain and crew for the navigation system. At the end of day the vessel had finished lines P01 and P02.

Ongoing maintenance and preparation:

- Re-mounted two lights on main deck. These two make the third light that has fell. A THC card was entered.
- Pressure washed the main deck to remove all of the slippery mud.
- Cleaned up paravane deck and put out XBT Tube
- Removed winch from port side aft main deck. Cleaned up to paint and rebuild.

Daily Comment Summaries - Plan for Tomorrow

Sat 13 Aug

Continue with seismic Ops

MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
3 P03		111.1°			8/13/2022 18:33	8/14/2022 0:02	
4 P04		203.5°			8/14/2022 1:23	8/14/2022 4:30	5.00 kt
5 P05		292.1°			8/14/2022 5:54	8/14/2022 12:41	5.00 kt
6 P06		201.1°			8/14/2022 14:04	8/14/2022 15:08	5.00 kt
7 P07		123.2°			8/14/2022 16:30	8/15/2022 0:11	5.00 kt
8 P08		358.3°			8/15/2022 1:44	8/15/2022 8:02	5.00 kt
9 P09		270.4°			8/15/2022 9:24	8/15/2022 10:16	5.00 kt
10 P10		358.5°			8/15/2022 11:37	8/15/2022 17:43	5.00 kt
Recover Gear				3:00:00	8/15/2022 17:43	8/15/2022 20:43	
Transit to DIEBOLD				1:00:00	8/15/2022 20:43	8/15/2022 21:43	~8.5
DIEBOLD Heat Flow	32			64:00:00	8/15/2022 21:43	8/18/2022 13:43	
Transit to PSEUDFAULT				2:00:00	8/18/2022 13:43	8/18/2022 15:43	~8.5
PSEUDFAULT Heat Flow	70			140:00:00	8/18/2022 15:43	8/24/2022 11:43	
Transit to Newport			105	12:30	8/24/2022 11:43	8/25/2022 0:13	8.5

Timing Diary (Marcus G Langseth, OBS_Deployment, Hi-Rez)



Category	Code	Start	End	Duration
Deploy	AC_SM_De	Sat 13. Aug 00:00	Sat 13. Aug 01:47	1.783
Heat Probe Op 17 S/N: HF12-1 Heat Probe Op 17 S/N: HF12-2				
Recovery	DM_RC	Sat 13. Aug 01:47	Sat 13. Aug 02:55	1.133
Heat Probe Recovery				

Category	Code	Start	End	Duration
Deployment	MB_DP	Sat 13. Aug 02:55	Sat 13. Aug 05:18	2.383
Heat Probe Deployment				
Deploy	AC_SM_De	Sat 13. Aug 05:18	Sat 13. Aug 07:38	2.333
Heat Probe Op 18 S/N: HF13-1 Heat Probe Op 18 S/N: HF13-2 Heat Probe Op 18 S/N: HF13-3				
Recovery	DM_RC	Sat 13. Aug 07:38	Sat 13. Aug 09:15	1.617
Demobilising offshore, recovering outboard equipment.				
Transit	SB_TRT	Sat 13. Aug 09:15	Sat 13. Aug 13:07	3.867
Transit to Pseudofault				
Deployment	MB_DP	Sat 13. Aug 13:07	Sat 13. Aug 16:01	2.900
Deploy Streamer, Guns, PAM and Maggy				
Production Prime	AC_PP	Sat 13. Aug 16:01	Sat 13. Aug 22:12	6.183
Seq: 8 SOL Seq 8 Line:MGL2208008P01 Preplot:P01 Block:Cascadia FGSP:920 FCSP:1001 Hdg:262.3° Prime EOL Seq 8 Line:MGL2208008P01 Preplot:P01 Block:Cascadia LGSP:3260 LCSP:3260 Complete				
Prime Line Change	AC_PLC	Sat 13. Aug 22:12	Sat 13. Aug 22:37	0.417
Seq: 8 Line: 008P01 Nominal Prime line change.				
Production Prime	AC_PP	Sat 13. Aug 22:37	Sat 13. Aug 24:00	1.383
Seq: 9 SOL Seq 9 Line:MGL2208009P02 Preplot:P02 Block:Cascadia FGSP:1059 FCSP:1059 Hdg:120.4° Prime MSP Seq 9 Line:MGL2208009P02 Preplot:P02 Block:Cascadia LGSP:1620 LCSP:1620 Midnight				

Timing Day By Day (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

13-Aug	Hours	% Percent
Acquisition	12.100	50.417
Prime Line Change	0.417	1.736
Production Prime	7.567	31.528
Swath Move	4.117	17.153
Deploy	4.117	17.153
Chargeable Standby	3.867	16.111
Transit	3.867	16.111
Demobilisation	2.750	11.458
Recovery	2.750	11.458
Mobilisation	5.283	22.014
Deployment	5.283	22.014
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	114.517	53.017
Prime Line Change	4.583	2.122
Production Prime	19.700	9.120
Swath Move	90.233	41.775
Deploy	90.233	41.775

Category	Hours	% Percent
Mobilisation	40.433	18.719
Deployment	37.000	17.130
Mob Offshore	3.433	1.590
Non-Chargeable StandBy	4.000	1.852
Field Operations	4.000	1.852
Demobilisation	22.267	10.309
Recovery	22.267	10.309
DownTime	3.817	1.767
Source	3.817	1.767
Chargeable Standby	30.967	14.336
Transit	30.967	14.336
Total	216.000	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Charged km	Day	Week	Month	Project
Prime	70.55	70.55	171.78	171.78
Combined	70.55	70.55	171.78	171.78

Production Listing (Chgd km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

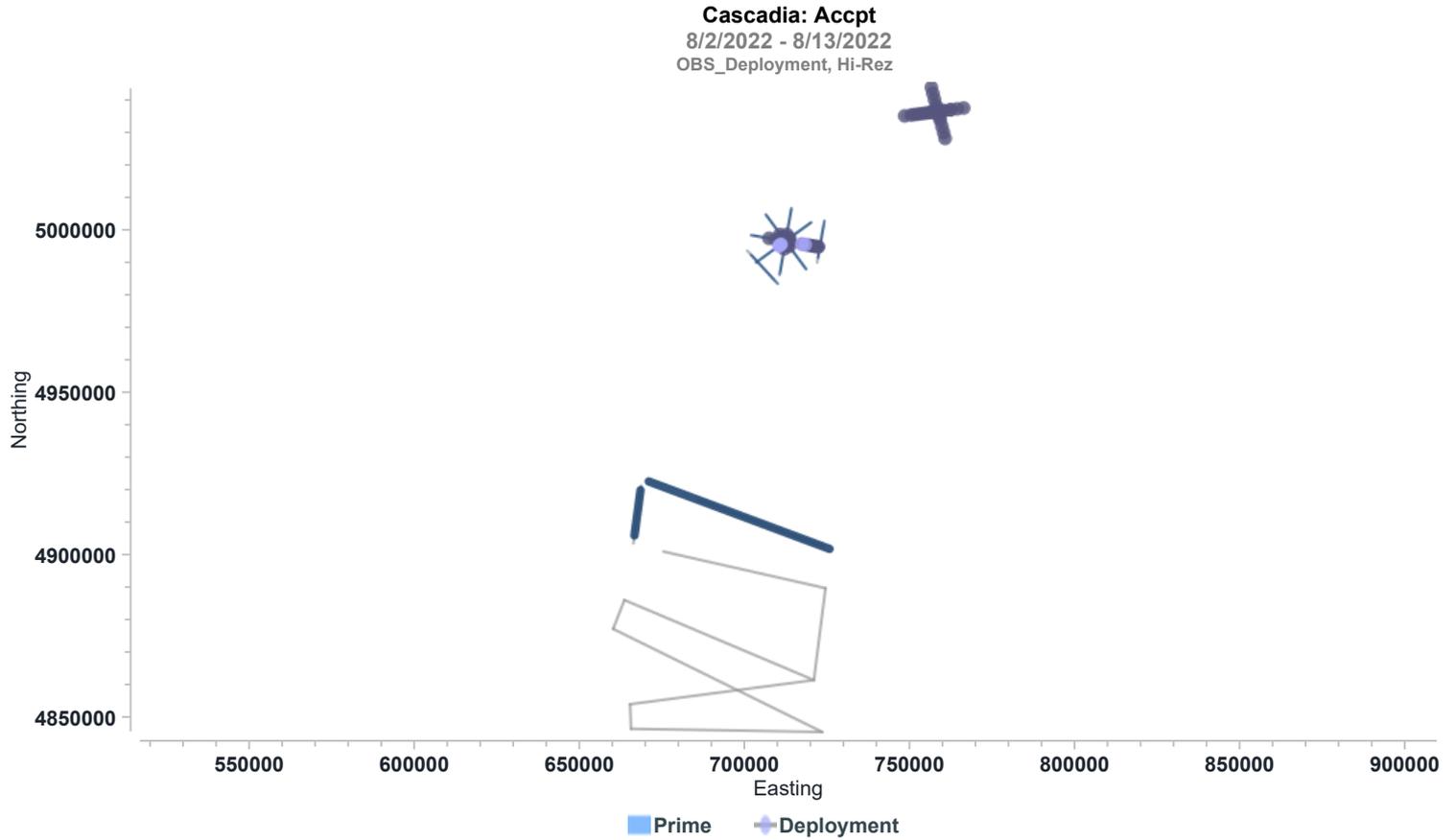
Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
8	008P01	290.7	1001	3260	Prime	56.50	5.108	Complete	Complete
9	009P02	187.5	1059	1620	Prime	14.05	5.474	Midnight	Part
Total						70.55			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	72.58	72.58	179.98	179.98
Combined	72.58	72.58	179.98	179.98



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 13 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 13 Aug

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Josh Kasinger L-DEO OMO Chief Source Mechanic
- Brian Agee L-DEO OMO Source Mechanic
- Paul Parolski Jr.- Contract Navigator
- Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

- Amanda Dubuque - RPS Lead PSO
- Cassandra Frey - RPS PSO
- Ana Lira - RPS PSO
- Michelle Klein - RPS PSO
- Jimena Ortega - RPS PSO
- Martiza Martinez - RPS PSO

Science Party On-board the Langseth

- Glenn Spinelli - PI NMT
- Anne Trehu - Co-PI OSU

8/13/2022

Page 5

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
 Benjamin Norvell - Graduate Research asst. - NMT
 Kristin Dickerson - Graduate Research asst. - UCSC
 Danqi Jian - Graduate Research asst. - UTIG
 Robert Perrin - Graduate Research asst. - U.Calgary
 Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category			
	Code	Count	
Task, Hazard, Control	Re_Con_THC	3	
8/13/2022			
THC x 3			
Toolbox Meetings	Mtgs_Tbox	2	
8/13/2022			
TBT - Heat Flow Recovery			
8/13/2022			
TBT - Streamer Deployment			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	2	24	34	34	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	2	24	33	33		
Reports	Re	3	7	7	7		
Contractor	Con	3	7	7	7		
Task, Hazard, Control	THC	3	7	7	7		

8/14/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Sun 14 Aug

A good day of seismic Acquisition. The vessel was just finishing up Seq 009, line P02 at the start of the day. The science team is settling in to the online desk, updating logs, doing XBTs, sharpening pencils and filling out the Elog. They are coming to understand the old doodlebugger saying, "Boring Seismic is Good Seismic". The onshore team has been hard at work providing support and processing lines. There are quite a few eager team members ready to start merging data and picking the Heat Probe stations for our pseudofault heat flow campaign. The PSO team did a great job today spotting a fastly approaching fog bank, they radioed down and we were able to get ramped up before visibility was 100-200 meters. This would have been a significant delay.

Thanksgiving came early, August 14th to be precise. The galley out did themselves tonight; Turkey, Stuffing, Mashed Potatoes, Green Beans, Gravy, and Cranberry Sauce. It was a great meal, as the talk of naps in the main lab can attest to....

The multibeam displayed some CPU over heating errors.

- The fans are on high
- The engineers looked at the AC, nothing else can be done right now.
- Door, top vent and back panel are off
- Cage is cleared of the stacked cabin AC units
- Filters have been cleaned

At end of day the vessel was on Seq 013, Line P07.

Ongoing maintenance and preparation:

Painted utility winch from port side aft that was removed yesterday. Changed out oil seals in the drum.

Removed winch from Port slipway.

Put winch from port side aft onto port slipway. Installed new rope and tested

Removed starboard slipway winch, changed oil seals, re-mounted and tested. Ensured both winches, port and starboard, were full of gear oil

Cleaned and painted winch that was removed from port slipway. Changed O-ring in brake and oil seals in the drum.

Daily Comment Summaries - Plan for Tomorrow

Sun 14 Aug

Continue with Seismic ops. Will recover gear around 13:00 local if all goes to plan. The vessel will then transit to Diebold to start heat flow ops.

MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Margin HF - East West	5				8/7/2022 14:27	8/8/2022 0:59	
Margin Transit to North Line					8/8/2022 0:59	8/8/2022 1:06	
Margin HF - North South	11				8/8/2022 1:06	8/9/2022 0:30	
Transit to Newport					8/9/2022 0:30	8/9/2022 10:30	
Crew Change and Supplies					8/9/2022 10:30	8/9/2022 14:00	
Transit to Nubbin					8/9/2022 14:00	8/10/2022 0:04	
NUBBIN Heat Flow (5 Remain)	5				8/12/2022 16:19	8/13/2022 2:15	
Transit to PF					8/13/2022 2:15	8/13/2022 6:07	
Deploy Gear					8/13/2022 6:07	8/13/2022 7:57	
Acquire Seismic Lines - PF							
1 P01		290.7°			8/13/2022 9:01	8/13/2022 15:16	
2 P02		213.2°			8/13/2022 15:41	8/13/2022 17:05	
3 P03		111.1°			8/13/2022 17:24	8/13/2022 23:59	
4 P04		203.5°			8/14/2022 0:37	8/14/2022 3:17	
5 P05		292.1°			8/14/2022 3:45	8/14/2022 11:01	
6 P06					Did not Acquire - Turn Line		
7 P07		123.2°			8/14/2022 11:59	8/14/2022 19:55	5.00 kt
8 P08		358.3°			8/14/2022 21:28	8/15/2022 3:46	5.00 kt
9 P09		270.4°			8/15/2022 5:08	8/15/2022 6:00	5.00 kt
10 P10		358.5°			8/15/2022 7:21	8/15/2022 13:27	5.00 kt
Recover Gear				3:00:00	8/15/2022 13:27	8/15/2022 16:27	
Transit to DIEBOLD				1:00:00	8/15/2022 16:27	8/15/2022 17:27	~8.5
DIEBOLD Heat Flow	32			64:00:00	8/15/2022 17:27	8/18/2022 9:27	
Transit to PSEUDFAULT				2:00:00	8/18/2022 9:27	8/18/2022 11:27	~8.5
PSEUDFAULT Heat Flow	70			140:00:00	8/18/2022 11:27	8/24/2022 7:27	
Transit to Newport			105	12:30	8/24/2022 7:27	8/24/2022 19:57	8.5

The Transit to Newport Date/Time does not take in to consideration any seismic contingency lines. Arrival to port will be the 26th time TBD.

Timing Diary (Marcus G Langseth, Hi-Rez)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Sun 14. Aug 00:00	Sun 14. Aug 00:01	0.017
Seq: 9 SOL Seq 9 Line:MGL2208009P02 Preplot:P02 Block:Cascadia FGSP:1621 FCSP:1621 Hdg:187.5° Prime EOL Seq 9 Line:MGL2208009P02 Preplot:P02 Block:Cascadia LGSP:1623 LCSP:1623 Complete				
Prime Line Change	AC_PLC	Sun 14. Aug 00:01	Sun 14. Aug 00:22	0.350
Seq: 9 Line: 009P02 Nominal Prime line change.				
Production Prime	AC_PP	Sun 14. Aug 00:22	Sun 14. Aug 06:51	6.483
Seq: 10 SOL Seq 10 Line:MGL2208010P03 Preplot:P03 Block:Cascadia FGSP:571 FCSP:571 Hdg:102.9° Prime EOL Seq 10 Line:MGL2208010P03 Preplot:P03 Block:Cascadia LGSP:3045 LCSP:3031 Complete				
Prime Line Change	AC_PLC	Sun 14. Aug 06:51	Sun 14. Aug 07:14	0.383
Seq: 10 Line: 010P03 Nominal Prime line change.				
Production Prime	AC_PP	Sun 14. Aug 07:14	Sun 14. Aug 10:17	3.050
Seq: 11 SOL Seq 11 Line:MGL2208011P04 Preplot:P04 Block:Cascadia FGSP:1021 FCSP:1021 Hdg:187.1° Prime EOL Seq 11 Line:MGL2208011P04 Preplot:P04 Block:Cascadia LGSP:2018 LCSP:2018 Complete				

Category	Code	Start	End	Duration
Prime Line Change	AC_PLC	Sun 14. Aug 10:17	Sun 14. Aug 10:45	0.467
Seq: 11 Line: 011P04 Nominal Prime line change.				
Production Prime	AC_PP	Sun 14. Aug 10:45	Sun 14. Aug 18:01	7.267
Seq: 12 SOL Seq 12 Line:MGL2208012P05 Preplot:P05 Block:Cascadia FGSP:1022 FCSP:1022 Hdg:293.2° Prime EOL Seq 12 Line:MGL2208012P05 Preplot:P05 Block:Cascadia LGSP:3465 LCSP:3465 Complete				
Prime Line Change	AC_PLC	Sun 14. Aug 18:01	Sun 14. Aug 18:59	0.967
Seq: 12 Line: 012P05 Nominal Prime line change.				
Production Prime	AC_PP	Sun 14. Aug 18:59	Sun 14. Aug 24:00	5.017
Seq: 13 SOL Seq 13 Line:MGL2208013P07 Preplot:P07 Block:Cascadia FGSP:1030 FCSP:1030 Hdg:116.6° Prime MSP Seq 13 Line:MGL2208013P07 Preplot:P07 Block:Cascadia LGSP:3032 LCSP:3032 Midnight				

Timing Day By Day (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

14-Aug	Hours	% Percent
Acquisition	24.000	100.000
Prime Line Change	2.167	9.028
Production Prime	21.833	90.972
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	138.517	57.715
Prime Line Change	6.750	2.813
Production Prime	41.533	17.306
Swath Move	90.233	37.597
Deploy	90.233	37.597
Mobilisation	40.433	16.847
Deployment	37.000	15.417
Mob Offshore	3.433	1.431
Non-Chargeable StandBy	4.000	1.667
Field Operations	4.000	1.667
Demobilisation	22.267	9.278
Recovery	22.267	9.278
DownTime	3.817	1.590
Source	3.817	1.590
Chargeable Standby	30.967	12.903
Transit	30.967	12.903
Total	240.000	

Basic Project Details

Hi-Rez

General Details

Hi-Rez					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Charged km	Day	Week	Month	Project
Prime	197.73	268.28	369.50	369.50
Combined	197.73	268.28	369.50	369.50

Production Listing (Chgd km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

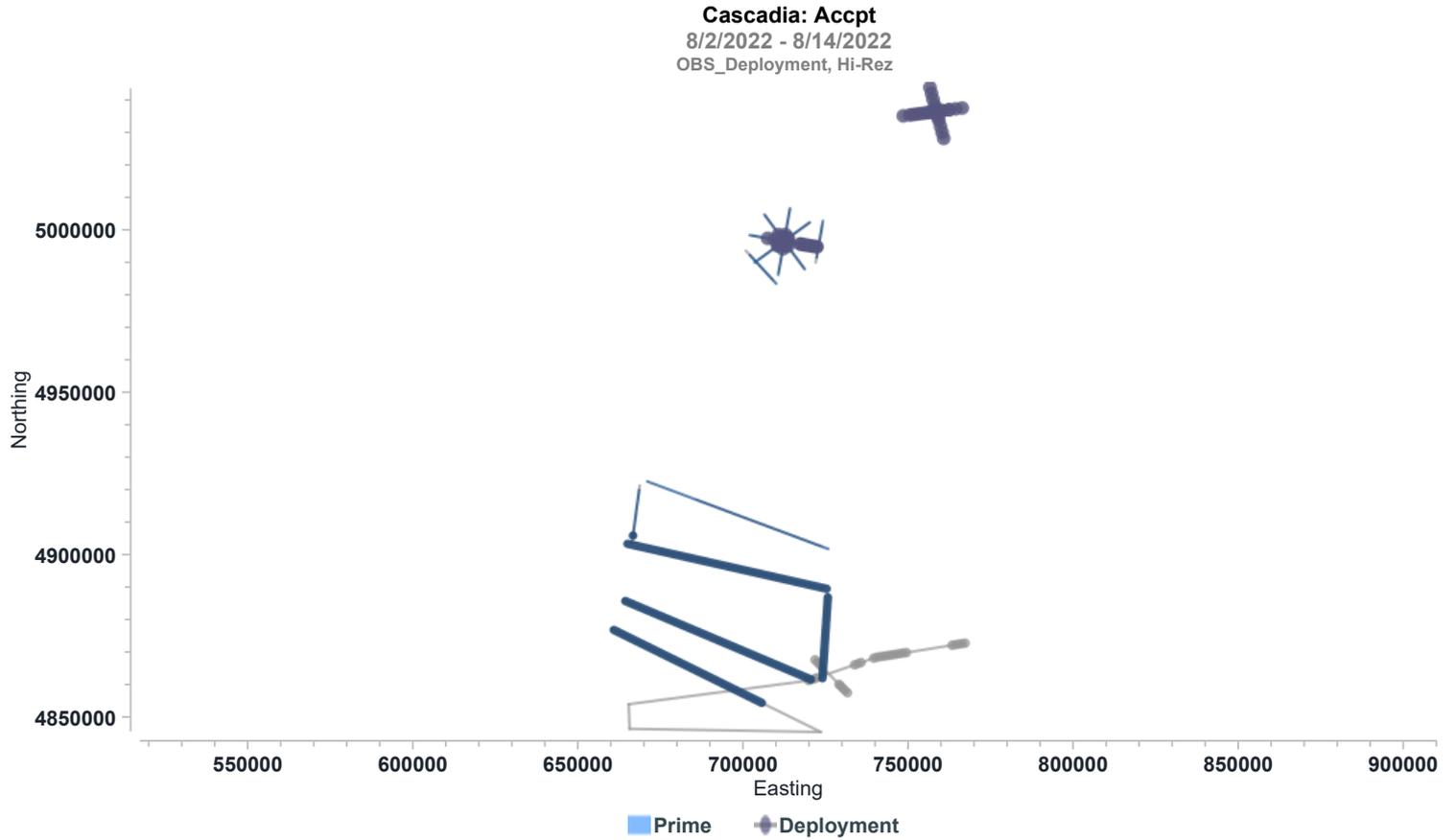
Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
9	009P02	187.5	1621	1623	Prime	0.08	5.438	Complete	Complete
10	010P03	102.9	571	3031	Prime	61.53	5.151	Complete	Complete
11	011P04	183.8	1021	2018	Prime	24.95	4.413	Complete	Complete
12	012P05	293.2	1022	3465	Prime	61.10	4.538	Complete	Complete
13	013P07	116.6	1030	3032	Prime	50.08	5.387	Midnight	Part
Total						197.73			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	198.07	270.65	378.05	378.05
Combined	198.07	270.65	378.05	378.05



Daily Comment Summaries - Daily Comments On Status of Equipment

Sun 14 Aug

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:

Multibeam over heating error

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sun 14 Aug

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Josh Kasinger L-DEO OMO Chief Source Mechanic
- Brian Agee L-DEO OMO Source Mechanic
- Paul Parolski Jr.- Contract Navigator
- Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

- Amanda Dubuque - RPS Lead PSO
- Cassandra Frey - RPS PSO
- Ana Lira - RPS PSO
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- Martiza Martinez - RPS PSO

Science Party On-board the Langseth

- Glenn Spinelli - PI NMT
- Anne Trehu - Co-PI OSU

8/14/2022

Page 6

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
 Benjamin Norvell - Graduate Research asst. - NMT
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 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category		Code	Count
Task, Hazard, Control	Re_Con_THC		1
8/14/2022			
THC - Ladder with loose bracing on the main deck.			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	0	24	34	34	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	0	24	33	33		
Reports	Re	1	8	8	8		
Contractor	Con	1	8	8	8		
Task, Hazard, Control	THC	1	8	8	8		

8/15/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Mon 15 Aug

A day of transition. The day started with the vessel acquiring seismic data on Seq 13, Line P07. The vessel finished Seq 16, Line P10 by Lunch time local and transited to the eastern end of the Diebold heat flow working area. The vessel deployed the heat probe and within hours the vessel was back in to heat probe mode. At the end of day, 2 stations were already completed on Diebold.

The engineers worked on the AC units in the dry lab. There is more airflow now. Since arriving on Diebold the multibeam has not been giving any more over heating alarms.

Ongoing maintenance and preparation:
 Ongoing repairs, inventories, cleaning and tidying.

Daily Comment Summaries - Plan for Tomorrow

Mon 15 Aug

Continue with Heat Flow ops. The vessel will work from Station 28 moving west to station 54. There will be multiple recoveries/deployments along the way.



MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Recover Gear					8/15/2022 10:17	8/15/2022 12:02	
Transit to DIEBOLD					8/15/2022 12:02	8/15/2022 14:02	~8.5
DIEBOLD Heat Flow	32			64:00:00	8/15/2022 14:02	8/18/2022 6:02	
Transit to PSEUDFAULT				2:00:00	8/18/2022 6:02	8/18/2022 8:02	~8.5
PSEUDFAULT Heat Flow	70			140:00:00	8/18/2022 8:02	8/24/2022 4:02	
Transit to Newport			105	12:30	8/24/2022 4:02	8/24/2022 16:32	8.5

The Transit to Newport Date/Time does not take in to consideration any seismic contingency lines. Arrival to port will be the 26th time TBD.

Timing Diary (Marcus G Langseth, OBS_Deployment, Hi-Rez)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Mon 15. Aug 00:00	Mon 15. Aug 02:08	2.133
Seq: 13 SOL Seq 13 Line:MGL2208013P07 Preplot:P07 Block:Cascadia FGSP:3033 FCSP:3033 Hdg:116.6° Prime EOL Seq 13 Line:MGL2208013P07 Preplot:P07 Block:Cascadia LGSP:3913 LCSP:3832 Complete				
Prime Line Change	AC_PLC	Mon 15. Aug 02:08	Mon 15. Aug 03:11	1.050
Seq: 13 Line: 013P07 Nominal Prime line change.				
Production Prime	AC_PP	Mon 15. Aug 03:11	Mon 15. Aug 10:09	6.967
Seq: 14 SOL Seq 14 Line:MGL2208014P08 Preplot:P08 Block:Cascadia FGSP:844 FCSP:1001 Hdg:271° Prime EOL Seq 14 Line:MGL2208014P08 Preplot:P08 Block:Cascadia LGSP:3334 LCSP:3316 Complete				
Prime Line Change	AC_PLC	Mon 15. Aug 10:09	Mon 15. Aug 10:35	0.433
Seq: 14 Line: 014P08 Nominal Prime line change.				
Production Prime	AC_PP	Mon 15. Aug 10:35	Mon 15. Aug 10:57	0.367
Seq: 15 SOL Seq 15 Line:MGL2208015P09 Preplot:P09 Block:Cascadia FGSP:1051 FCSP:1051 Hdg:353.4° Prime EOL Seq 15 Line:MGL2208015P09 Preplot:P09 Block:Cascadia LGSP:1181 LCSP:1181 Complete				
Prime Line Change	AC_PLC	Mon 15. Aug 10:57	Mon 15. Aug 11:16	0.317
Seq: 15 Line: 015P09 Nominal Prime line change.				
Production Prime	AC_PP	Mon 15. Aug 11:16	Mon 15. Aug 17:12	5.933
Seq: 16 SOL Seq 16 Line:MGL2208016P10 Preplot:P10 Block:Cascadia FGSP:1002 FCSP:1002 Hdg:82.4° Prime EOL Seq 16 Line:MGL2208016P10 Preplot:P10 Block:Cascadia LGSP:3263 LCSP:3263 Complete				
Recovery	DM_RC	Mon 15. Aug 17:12	Mon 15. Aug 19:02	1.833
Recover; PAM, Maggy, Guns and Streamer				
Transit	SB_TRT	Mon 15. Aug 19:02	Mon 15. Aug 21:11	2.150
Transit to Diebold heat Flow Station 28				
Deployment	MB_DP	Mon 15. Aug 21:11	Mon 15. Aug 22:29	1.300
Heat Probe Deployment				
Deploy	AC_SM_De	Mon 15. Aug 22:29	Mon 15. Aug 24:00	1.517
Heat Flow Op 19 S/N: HF14-1 Heat Flow Op 19 S/N: HF14-2				

Timing Day By Day (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

15-Aug	Hours	% Percent
Acquisition	18.717	77.986
Prime Line Change	1.800	7.500
Production Prime	15.400	64.167
Swath Move	1.517	6.319
Deploy	1.517	6.319
Chargeable Standby	2.150	8.958
Transit	2.150	8.958
Demobilisation	1.833	7.639
Recovery	1.833	7.639

8/15/2022

Page 3

15-Aug	Hours	% Percent
Mobilisation	1.300	5.417
Deployment	1.300	5.417
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	157.233	59.558
Prime Line Change	8.550	3.239
Production Prime	56.933	21.566
Swath Move	91.750	34.754
Deploy	91.750	34.754
Mobilisation	41.733	15.808
Deployment	38.300	14.508
Mob Offshore	3.433	1.301
Non-Chargeable StandBy	4.000	1.515
Field Operations	4.000	1.515
Demobilisation	24.100	9.129
Recovery	24.100	9.129
DownTime	3.817	1.446
Source	3.817	1.446
Chargeable Standby	33.117	12.544
Transit	33.117	12.544
Total	264.000	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Charged km	Day	Week	Month	Project
Prime	137.73	137.73	507.23	507.23
Combined	137.73	137.73	507.23	507.23

Production Listing (Chgd km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
13	013P07	116.6	3033	3832	Prime	20.00	5.443	Complete	Complete
14	014P08	271.0	1001	3316	Prime	57.90	4.825	Complete	Complete

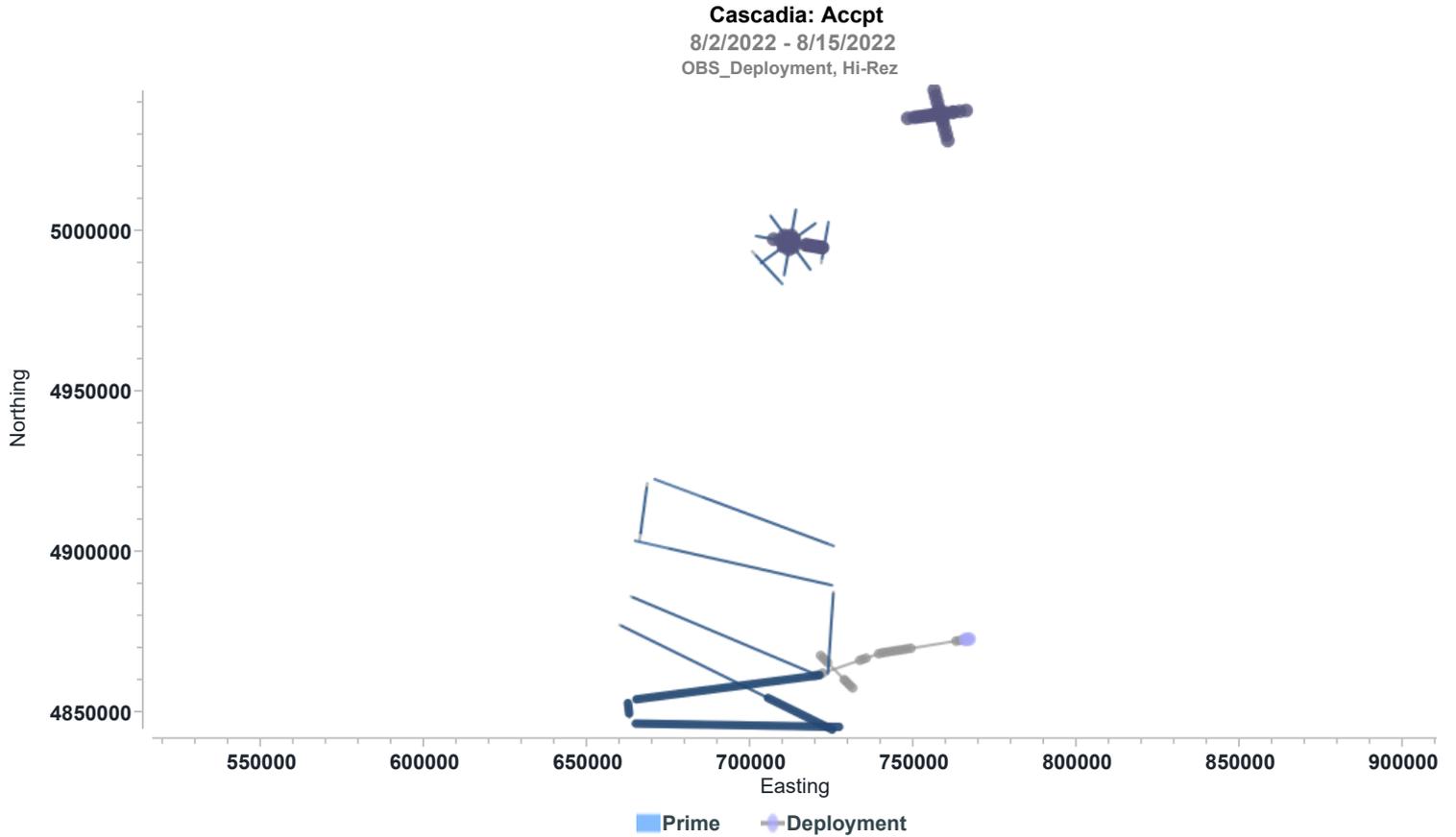
Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
15	015P09	353.4	1051	1181	Prime	3.28	4.786	Complete	Complete
16	016P10	82.4	1002	3263	Prime	56.55	5.144	Complete	Complete
Total						137.73			

Production Totals (Accept km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	144.13	144.13	522.17	522.17
Combined	144.13	144.13	522.17	522.17



Daily Comment Summaries - Daily Comments On Status of Equipment

Mon 15 Aug

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.

Heat Probe:
No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

8/15/2022

Page 5

Mon 15 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski Jr.- Contract Navigator
 Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

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 Ana Lira - RPS PSO
 Michelle Klein - RPS PSO
 Jimena Ortega - RPS PSO
 Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
 Anne Trehu - Co-PI OSU
 Robert Harris - Co-PI OSU
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 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category	Code		Count
☑ Toolbox Meetings	Mtgs_Tbox		2
8/15/2022			
TBT - Recover Streamer			
8/15/2022			
TBT - Deploy Heat Probe			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
☑ Meetings	Mtgs	2	2	36	36	1.000	
☑ Start-up Meeting	StUp	0	0	1	1	1.000	
☑ Toolbox Meetings	Tbox	2	2	35	35		
☐ Reports	Re	0	0	8	8		
☐ Contractor	Con	0	0	8	8		
☐ Task, Hazard, Control	THC	0	0	8	8		

8/16/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Tue 16 Aug

The weather has started to pick up today. There was a brief discussion in the main lab on vessel orientation and the best way to acquire the remaining stations on Diebold. There were a few good suggestions on different ways to recover the probe during marginal seas to minimize the time in the air.

A great day of heat probe production, on stations 34-43 the vessel was averaging about 1.5 hours a station. That is from Deck to Deck. At the close of the day the vessel is transiting to Station 45.

There has been a change to the operations plan.

Diebold:

Currently we are acquiring heat flow stations on Diebold, we have 14 stations left. It looks like diebold heat flow ops will be completed tomorrow around 9pm local.

PF:

After Diebold we will start to deploy gear as we transit back to PF. The vessel will shoot seismic for 24 hours.

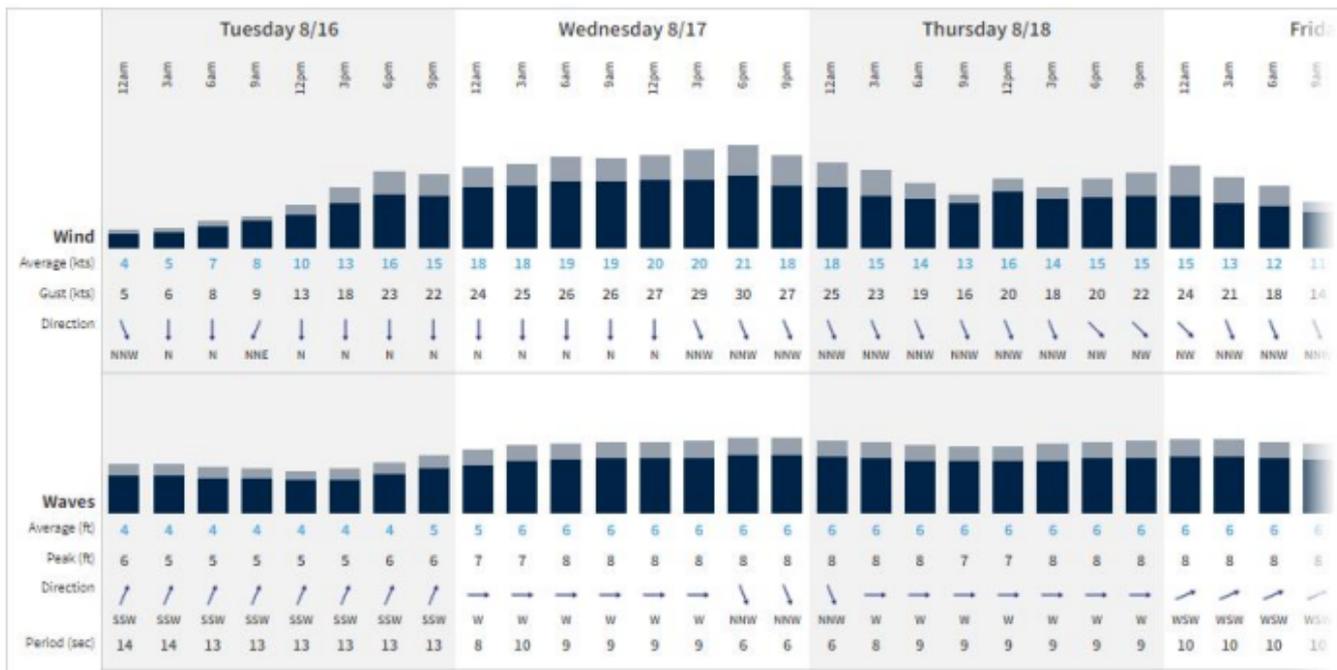
After acquiring 24 hours of seismic the gear will be recovered and heat flow ops will start.

Margin:

After completing all the Heat Flow Stations on PF, the vessel will transit back to Margin and do another 12-16 hours of heat stations there.

Coast:

Once done with the extra points on Margin, the vessel will transit to Coast. The order of ops will be weather dependent as it's supposed to pick up at the end of next week.



Ongoing maintenance and preparation:
 Mounted winch on port side aft after rebuild.
 Swapped out P.A.M. tow cable.
 Greased Dynacon Winch

Daily Comment Summaries - Plan for Tomorrow

Tue 16 Aug

Complete Heat Flow Ops on Diebold

Timing Diary (Marcus G Langseth, OBS_Deployment)

Category	Code	Start	End	Duration
Deploy	AC_SM_De	Tue 16. Aug 00:00	Tue 16. Aug 03:55	3.917
Heat Probe Op 20 S/N: HF14-3 Heat Probe Op 20 S/N: HF14-4 Heat Probe Op 20 S/N: HF14-5				
Recovery	DM_RC	Tue 16. Aug 03:55	Tue 16. Aug 05:18	1.383
Heat Probe Recovery				
Deployment	MB_DP	Tue 16. Aug 05:18	Tue 16. Aug 07:47	2.483
Heat Probe Deployment				
Deploy	AC_SM_De	Tue 16. Aug 07:47	Tue 16. Aug 19:21	11.567
Heat Probe Op 21 S/N: HF15-1 Heat Probe Op 21 S/N: HF15-2 Heat Probe Op 21 S/N: HF15-3 Heat Probe Op 21 S/N: HF15-4 Heat Probe Op 21 S/N: HF15-5 Heat Probe Op 21 S/N: HF15-6 Heat Probe Op 21 S/N: HF15-7 Heat Probe Op 21 S/N: HF15-8 Heat Probe Op 21 S/N: HF15-9 Heat Probe Op 21 S/N: HF15-10				
Recovery	DM_RC	Tue 16. Aug 19:21	Tue 16. Aug 21:15	1.900
Heat Probe Recovery				
Deployment	MB_DP	Tue 16. Aug 21:15	Tue 16. Aug 23:07	1.867
Heat Probe Deployment				
Deploy	AC_SM_De	Tue 16. Aug 23:07	Tue 16. Aug 23:59	0.867
Heat Probe Op 22 S/N: HF16-1				

Timing Day By Day (Marcus G Langseth, OBS_Deployment)

Cascadia (MGL2208)

16-Aug	Hours	% Percent
Acquisition	16.350	68.125
Swath Move	16.350	68.125
Deploy	16.350	68.125
Demobilisation	3.283	13.681
Recovery	3.283	13.681
Mobilisation	4.350	18.125
Deployment	4.350	18.125
Day's Total	23.983	99.931

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	173.583	60.275

Category	Hours	% Percent
Prime Line Change	8.550	2.969
Production Prime	56.933	19.770
Swath Move	108.100	37.537
Deploy	108.100	37.537
Mobilisation	46.083	16.002
Deployment	42.650	14.810
Mob Offshore	3.433	1.192
Non-Chargeable StandBy	4.000	1.389
Field Operations	4.000	1.389
Demobilisation	27.383	9.509
Recovery	27.383	9.509
DownTime	3.817	1.325
Source	3.817	1.325
Chargeable Standby	33.117	11.500
Transit	33.117	11.500
Total	287.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	137.73	507.23	507.23
Combined	0.00	137.73	507.23	507.23

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

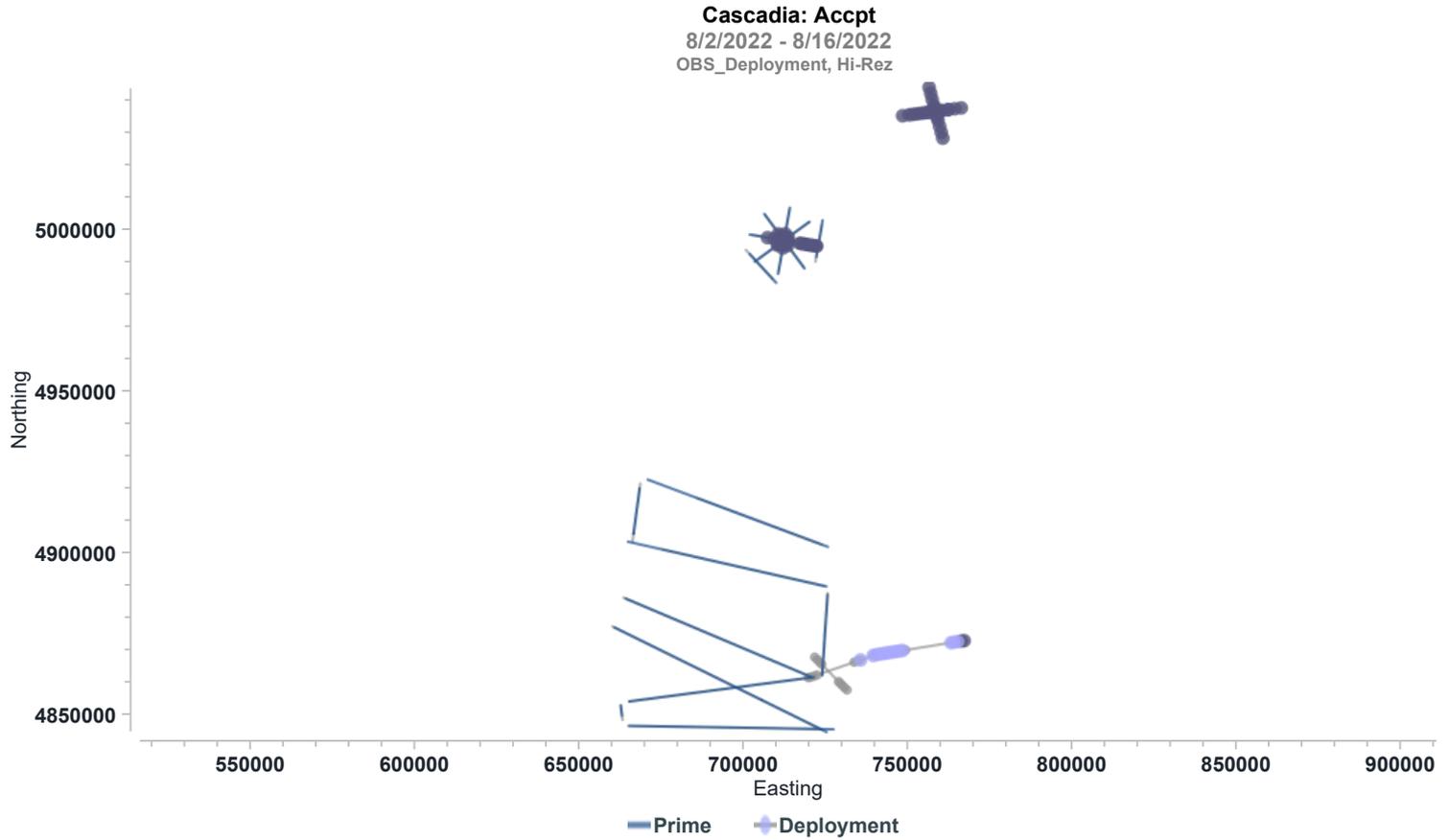
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	144.13	522.17	522.17
Combined	0.00	144.13	522.17	522.17



Daily Comment Summaries - Daily Comments On Status of Equipment

Tue 16 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Tue 16 Aug

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 Anne Trehu - Co-PI OSU

8/16/2022

Page 5

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 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category		Code	Count
☑ Toolbox Meetings	Mtgs_Tbox		4
8/16/2022			
TBT - Heat Probe Deployment			
8/16/2022			
TBT - Heat Probe Recovery			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
☑ Meetings	Mtgs	4	6	40	40	1.000	
☑ Start-up Meeting	StUp	0	0	1	1	1.000	
☑ Toolbox Meetings	Tbox	4	6	39	39		
☐ Reports	Re	0	0	8	8		
☐ Contractor	Con	0	0	8	8		
☐ Task, Hazard, Control	THC	0	0	8	8		

8/17/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Wed 17 Aug

The day started with the vessel performing heat flow ops on Diebold. There were several recoveries and deployments as the vessel worked stations around the sea mount. As the weather had picked up slightly the crew talked about the recovery/deployment process and what could be done to mitigate the rough weather. A few tweaks to the procedure were implemented. After the transit to the south to start working on points, 47-51, the stbd main engine presented problems. The engine department trouble shot it the best they could but in the end the decision was made to bring the probe to surface for more trouble shooting and to get a feel for what is wrong. While the engineers were trouble shooting the Sci team, Captain and tech group started to look at other operational options.

Once the chief engineer and captain had an understanding of what the ship could and could not do, the team put plan A in place, which is to acquire the previously planned seismic lines on pseudofault, approximately 24 hours of shooting. This allows data acquisition on a key target but also gives the captain and chief along with the shore team time to prepare for the ships arrival in to port. The conclusion of the onboard trouble shooting was the vessel has to sail to Newport for inspections of the prop and and more indepth look at the stbd main engine systems.

A time plan was put together based on transit speeds, availability of dock space and timing of slack tides. The vessel will be in Newport on Friday, time yet to be determined. From there we will start the trouble shooting process to see what is exactly wrong, how to fix it, resources needed and time involved.

Ongoing maintenance and preparation:

Fixed three flat float sections. Mender on aft GPS location was cracked. Drilled a hole, tapped, Teflon taped a bolt and threaded it in. Leak is fixed.

The section aft of the forward GPS pod was leaking. Changed the valve core and put a better cap on. The front float section was also leaking. Moved the bands to their proper locations and hopefully this will stop that leak

Daily Comment Summaries - Plan for Tomorrow

Wed 17 Aug

Complete seismic operations around noon local, transit to Newport.

MGL 2208 Time Plan

Purple are actual numbers (ALL TIMES ARE LOCAL)

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Recover Gear					8/15/2022 10:17	8/15/2022 12:02	
Transit to DIEBOLD					8/15/2022 12:02	8/15/2022 14:02	
DIEBOLD Heat Flow					8/15/2022 14:02	8/17/2022 11:53	
Transit to PSEUDFAULT					8/17/2022 11:53	8/17/2022 12:35	

The below times are for a 7:00 Slack Tide

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Deploy Gear					8/17/2022 12:35	8/17/2022 15:31	
11 P11					8/17/2022 15:31	8/18/2022 1:18	4.2
12 P12					8/18/2022 1:46	8/18/2022 8:34	4.2
13 P13					8/18/2022 9:02	8/18/2022 12:00	4.2
14 P14					8/18/2022 12:31	8/18/2022 21:36	4.2
Recover Gear				2:00:00	8/18/2022 9:30	8/18/2022 11:30	
Transit to Newport			130	18:30:00	8/18/2022 11:30	8/19/2022 6:00	7

Speed restricted due to operating on 1 main

The below times are for a 12:30 Slack Tide

Action	# of Stations	Heading	Nautical Miles	Duration	Stat Date & Time	End Date & Time	Speed
Deploy Gear					8/17/2022 12:35	8/17/2022 15:31	
11 P11					8/17/2022 15:31	8/18/2022 1:18	4.2
12 P12					8/18/2022 1:46	8/18/2022 8:34	4.2
13 P13					8/18/2022 9:02	8/18/2022 12:00	4.2
14 P14					8/18/2022 12:31	8/18/2022 21:36	4.2
Recover Gear				2:00:00	8/18/2022 16:00	8/18/2022 18:00	
Transit to Newport			120	17:30:00	8/18/2022 18:00	8/19/2022 11:30	7

Speed restricted due to operating on 1 main

Timing Diary (Marcus G Langseth, OBS_Deployment, Hi-Rez)



Category	Code	Start	End	Duration
Deploy	AC_SM_De	Wed 17. Aug 00:00	Wed 17. Aug 02:00	2.000
Heat Probe Op 23 S/N: HF16-2 Heat Probe Op 23 S/N: HF16-3				
Recovery	DM_RC	Wed 17. Aug 02:00	Wed 17. Aug 03:25	1.417
Heat Probe Recovery				
Deployment	MB_DP	Wed 17. Aug 03:25	Wed 17. Aug 05:47	2.367
Heat Probe Deployment				
Deploy	AC_SM_De	Wed 17. Aug 05:47	Wed 17. Aug 08:58	3.183
Heat Probe Ops 24 S/N: HF17-1 Heat Probe Ops 24 S/N: HF17-2 Heat Probe Ops 24 S/N: HF17-3				
Recovery	DM_RC	Wed 17. Aug 08:58	Wed 17. Aug 11:37	2.650
Heat Probe Recovery				
Deployment	MB_DP	Wed 17. Aug 11:37	Wed 17. Aug 12:38	1.017
Heat Probe Deployment				
Deploy	AC_SM_De	Wed 17. Aug 12:38	Wed 17. Aug 15:49	3.183
Heat Probe Op 25 S/N: HF 18-1 Heat Probe Op 25 S/N: HF 18-2				
Recovery	DM_RC	Wed 17. Aug 15:49	Wed 17. Aug 17:01	1.200
Heat Probe Recovery				

Category	Code	Start	End	Duration
Transit	SB_TRT	Wed 17. Aug 17:01	Wed 17. Aug 19:30	2.483
Transit to Pseudofault while trouble shooting Stbd Main				
Deployment	MB_DP	Wed 17. Aug 19:30	Wed 17. Aug 21:35	2.083
Guns, Streamer, PAM and MAGGY fully Deployed				
Prime Extended L/C	AC_PXL	Wed 17. Aug 21:35	Wed 17. Aug 22:53	1.300
Seq: 25 Extended Prime line change.				
Production Prime	AC_PP	Wed 17. Aug 22:53	Wed 17. Aug 24:00	1.117
Seq: 17 SOL Seq 17 Line:MGL2208P11 Block:Cascadia FGSP:1143 FCSP:1143 Hdg:10.6° Prime MSP Seq 17 Line:MGL2208P11 Block:Cascadia LGSP:1495 LCSP:1495 Midnight				

Timing Day By Day (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

17-Aug	Hours	% Percent
Acquisition	10.783	44.931
Prime Extended L/C	1.300	5.417
Production Prime	1.117	4.653
Swath Move	8.367	34.861
Deploy	8.367	34.861
Chargeable Standby	2.483	10.347
Transit	2.483	10.347
Demobilisation	5.267	21.944
Recovery	5.267	21.944
Mobilisation	5.467	22.778
Deployment	5.467	22.778
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	184.367	59.095
Prime Extended L/C	1.300	0.417
Prime Line Change	8.550	2.741
Production Prime	58.050	18.607
Swath Move	116.467	37.331
Deploy	116.467	37.331
Mobilisation	51.550	16.523
Deployment	48.117	15.423
Mob Offshore	3.433	1.100
Non-Chargeable StandBy	4.000	1.282
Field Operations	4.000	1.282
Demobilisation	32.650	10.465
Recovery	32.650	10.465
DownTime	3.817	1.223
Source	3.817	1.223
Chargeable Standby	35.600	11.411

8/17/2022

Page 4

Category	Hours	% Percent
Transit	35.600	11.411
Total	311.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Charged km	Day	Week	Month	Project
Prime	8.83	146.55	516.05	516.05
Combined	8.83	146.55	516.05	516.05

Production Listing (Chgd km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

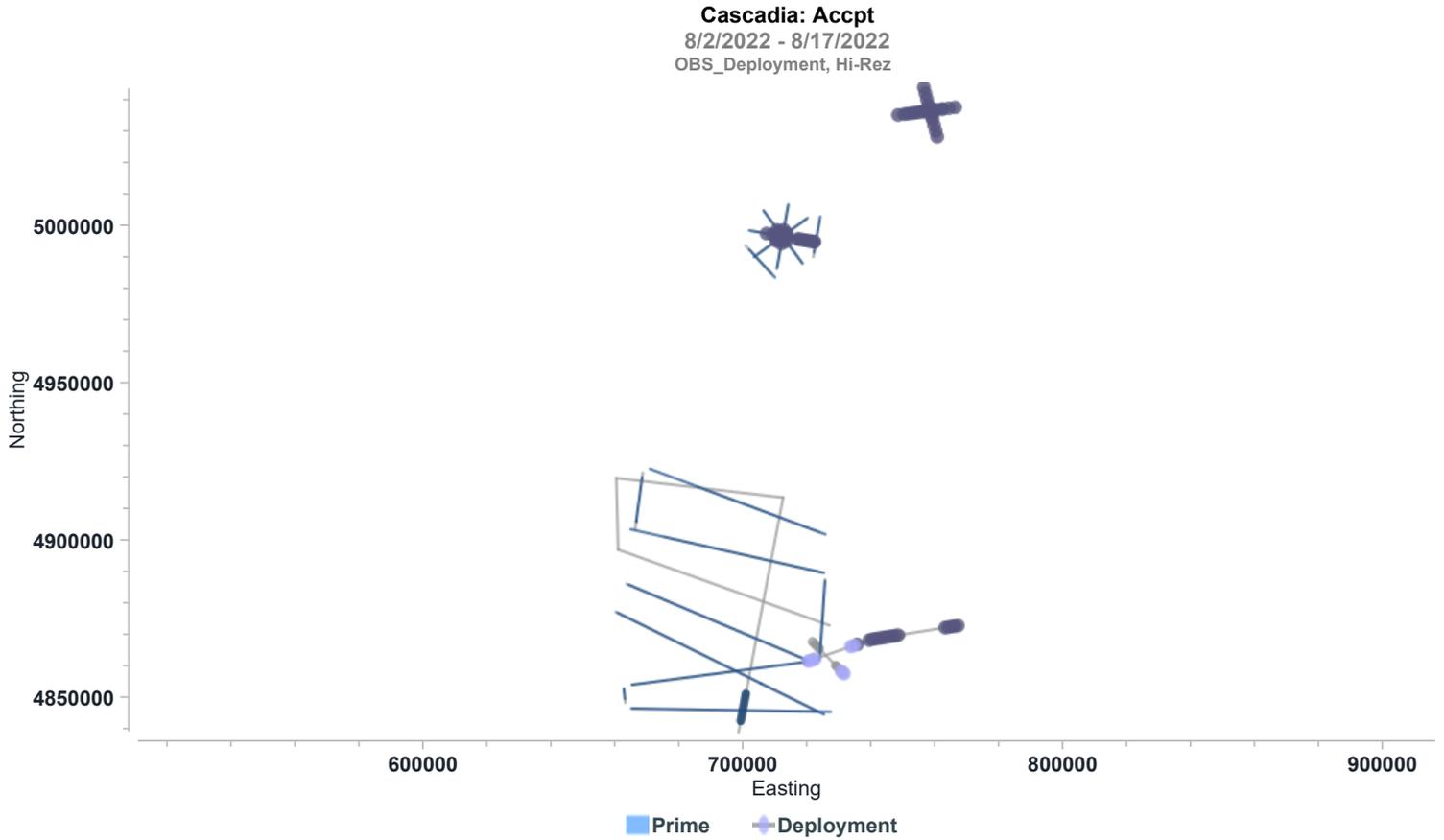
Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
17	P11	10.6	1143	1495	Prime	8.83	4.255	Midnight	Part
Total						8.83			

Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	8.83	152.95	531.00	531.00
Combined	8.83	152.95	531.00	531.00



Daily Comment Summaries - Daily Comments On Status of Equipment

Wed 17 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Wed 17 Aug

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Josh Kasinger L-DEO OMO Chief Source Mechanic
- Brian Agee L-DEO OMO Source Mechanic
- Paul Parolski Jr.- Contract Navigator
- Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

- Amanda Dubuque - RPS Lead PSO
- Cassandra Frey - RPS PSO
- Ana Lira - RPS PSO
- Michelle Klein - RPS PSO
- Jimena Ortega - RPS PSO
- Martiza Martinez - RPS PSO

Science Party On-board the Langseth

- Glenn Spinelli - PI NMT
- Anne Trehu - Co-PI OSU

8/17/2022

Page 6

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
 Benjamin Norvell - Graduate Research asst. - NMT
 Kristin Dickerson - Graduate Research asst. - UCSC
 Danqi Jian - Graduate Research asst. - UTIG
 Robert Perrin - Graduate Research asst. - U.Calgary
 Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab

HSE Events Diary (Marcus G Langseth,)

Category	Code	Start	End
Daily Total Category		Code	Count
■ Toolbox Meetings	Mtgs_Tbox		6
8/17/2022			
TBT - Heat Probe Recovery			
8/17/2022			
TBT - Heat Probe Deployment			
8/17/2022			
TBT - Streamer Deployment			

HSE Event Period Totals - Project (Marcus G Langseth)

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
■ Meetings	Mtgs	6	12	46	46	1.000	
■ Start-up Meeting	StUp	0	0	1	1	1.000	
■ Toolbox Meetings	Tbox	6	12	45	45		
■ Reports	Re	0	0	8	8		
■ Contractor	Con	0	0	8	8		
■ Task, Hazard, Control	THC	0	0	8	8		

8/18/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Thu 18 Aug

A full day of seismic. Sequences 17-20 were acquired today, finishing up the last bit of seismic on Pseudofault.

The wind and seas were with us, just as the vessel was shooting the last shot point our gear recovery time hit. The guns and streamer were recovered in a safe and efficient manner and the vessel picked up speed for Newport. Currently we are making ~6 kts SOG (Speed over ground). We were hoping for a slightly faster speed back to Newport but this should get us back just in time for the pilot.

A meeting was held today where Chief Engineer Jay and the Captain explained in detail our current status and the plan forward in port along with a few timelines. All onboard are hoping for good news this port call. I heard a rumour that there will be a gathering up on the bow this evening around midnight, but I can neither confirm nor deny it... Hopefully after some good systematic trouble shooting we can get back out and continue the heat flow ops but only time will tell.

The crew are keeping busy filling out logs, checking data, quality control and understanding that a flush really does beat 3 of a kind.

ETA at the Sea buoy is ~11 am local

Daily Comment Summaries - Plan for Tomorrow

Thu 18 Aug

The vessel will arrive at Newport for the afternoon slack tide, will be tied up over lunch local.
 A diver is scheduled for 8am on Saturday the 20th

Timing Diary (Marcus G Langseth, Hi-Rez)



Category	Code	Start	End	Duration
Production Prime	AC_PP	Thu 18. Aug 00:00	Thu 18. Aug 08:23	8.383
Seq: 17 SOL Seq 17 Line:MGL2208017P11 Block:Cascadia FGSP:1496 FCSP:1496 Hdg:10.6° Prime EOL Seq 17 Line:MGL2208017P11 Block:Cascadia LGSP:3984 LCSP:3984 Complete				
Prime Line Change	AC_PLC	Thu 18. Aug 08:23	Thu 18. Aug 08:34	0.183
Seq: 17 Line: 017P11 Nominal Prime line change.				
Production Prime	AC_PP	Thu 18. Aug 08:34	Thu 18. Aug 13:52	5.300
Seq: 18 SOL Seq 18 Line:MGL2208018P12 Block:Cascadia FGSP:1064 FCSP:1064 Hdg:276.7° Prime EOL Seq 18 Line:MGL2208018P12 Block:Cascadia LGSP:3046 LCSP:3046 Complete				
Prime Line Change	AC_PLC	Thu 18. Aug 13:52	Thu 18. Aug 14:03	0.183
Seq: 18 Line: 018P12 Nominal Prime line change.				
Production Prime	AC_PP	Thu 18. Aug 14:03	Thu 18. Aug 16:00	1.950
Seq: 19 SOL Seq 19 Line:MGL2208019P13 Block:Cascadia FGSP:1060 FCSP:1060 Hdg:178.6° Prime EOL Seq 19 Line:MGL2208019P13 Block:Cascadia LGSP:1885 LCSP:1885 Complete				
Prime Line Change	AC_PLC	Thu 18. Aug 16:00	Thu 18. Aug 16:11	0.183
Seq: 19 Line: 019P13 Nominal Prime line change.				

Category	Code	Start	End	Duration
■ Production Prime	AC_PP	Thu 18. Aug 16:11	Thu 18. Aug 23:32	7.350
Seq: 20 SOL Seq 20 Line:MGL2208020P14 Preplot:P14 Block:Cascadia FGSP:1071 FCSP:1071 Hdg:110° Prime EOL Seq 20 Line:MGL2208020P14 Preplot:P14 Block:Cascadia LGSP:3830 LCSP:3830 Complete				
■ Recovery	DM_RC	Thu 18. Aug 23:32	Thu 18. Aug 24:00	0.467
Guns and Streamer Recovery				

Timing Day By Day (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

18-Aug	Hours	% Percent
Acquisition	23.533	98.056
Prime Line Change	0.550	2.292
Production Prime	22.983	95.764
Demobilisation	0.467	1.944
Recovery	0.467	1.944
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	207.900	61.878
Prime Extended L/C	1.300	0.387
Prime Line Change	9.100	2.708
Production Prime	81.033	24.118
Swath Move	116.467	34.664
Deploy	116.467	34.664
Mobilisation	51.550	15.343
Deployment	48.117	14.321
Mob Offshore	3.433	1.022
Non-Chargeable StandBy	4.000	1.191
Field Operations	4.000	1.191
Demobilisation	33.117	9.857
Recovery	33.117	9.857
DownTime	3.817	1.136
Source	3.817	1.136
Chargeable Standby	35.600	10.596
Transit	35.600	10.596
Total	335.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

8/18/2022

Page 3

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Charged km	Day	Week	Month	Project
Prime	201.45	348.00	717.50	717.50
Combined	201.45	348.00	717.50	717.50

Production Listing (Chgd km by Shotpoint) - Full Fold

Hi-Rez, OBS_Deployment

Cascadia (MGL2208)

Seq	Line	Heading	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
17	017P11	10.6	1496	3984	Prime	62.23	4.037	Complete	Complete
18	018P12	276.7	1064	3046	Prime	49.58	5.048	Complete	Complete
19	019P13	178.6	1060	1885	Prime	20.65	5.711	Complete	Complete
20	014P14	110.0	1071	3830	Prime	69.00	5.067	Complete	Complete
Total						201.45			

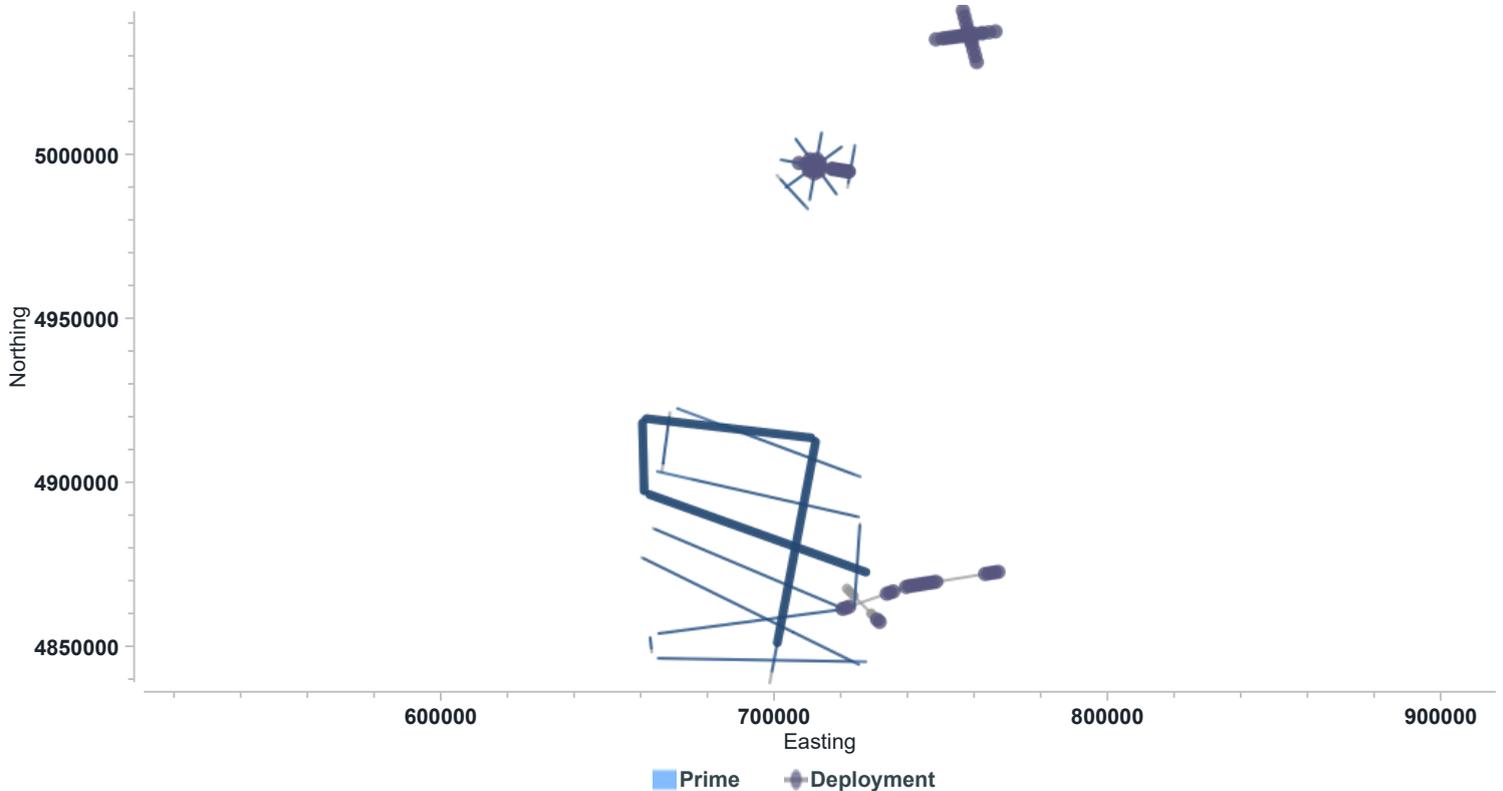
Production Totals (Accpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208)

Accepted km	Day	Week	Month	Project
Prime	201.45	354.40	732.45	732.45
Combined	201.45	354.40	732.45	732.45

Cascadia: Accpt
8/2/2022 - 8/18/2022
OBS_Deployment, Hi-Rez



Daily Comment Summaries - Daily Comments On Status of Equipment

8/18/2022

Page 4

Thu 18 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Thu 18 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski Jr. - Contract Navigator
 Mark Walker - Contract Compressor Mech

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 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab

HSE Events Diary (Marcus G Langseth,)

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

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	0	12	46	46	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	0	12	45	45		
Reports	Re	0	0	8	8		
Contractor	Con	0	0	8	8		
Task, Hazard, Control	THC	0	0	8	8		

8/19/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Fri 19 Aug

At the start of the day the vessel was just finishing up a very efficient and safe recovery. The Mechanical depart has been operating like a Swiss watch, possibly a Brietling or Tudor, this trip with how efficient the deployment/recoveries have gone.

Once recovery was completed the vessel set course for Newport. Arrival to the seabuoy was right on time, we met the pilot and a tug followed us in. The captain and deck crew did a great job bringing the vessel along side.

The diver is schedule for tomorrow morning, 8am local. All onboard are hoping for good news so we can get back out to sea as soon as possible.

Daily Comment Summaries - Plan for Tomorrow

Fri 19 Aug

Trouble Shoot Stbd Main
 Continue with maintenance and preparation

Timing Diary (Marcus G Langseth, Hi-Rez)

Category	Code	Start	End	Duration
Recovery	DM_RC	Fri 19. Aug 00:00	Fri 19. Aug 01:02	1.033
Streamer Recovery				
Transit	SB_TRT	Fri 19. Aug 01:02	Fri 19. Aug 21:10	20.133
Transit to Newport				
Port Call	SB_PC	Fri 19. Aug 21:10	Fri 19. Aug 24:00	2.833
Newport - Trouble Shooting Stbd Main				

Timing Day By Day (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

19-Aug	Hours	% Percent
Chargeable Standby	22.967	95.694
Port Call	2.833	11.806
Transit	20.133	83.889
Demobilisation	1.033	4.306
Recovery	1.033	4.306
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	207.900	57.753
Prime Extended L/C	1.300	0.361
Prime Line Change	9.100	2.528
Production Prime	81.033	22.510

Category	Hours	% Percent
Swath Move	116.467	32.353
Deploy	116.467	32.353
Mobilisation	51.550	14.320
Deployment	48.117	13.366
Mob Offshore	3.433	0.954
Non-Chargeable StandBy	4.000	1.111
Field Operations	4.000	1.111
Chargeable Standby	58.567	16.269
Port Call	2.833	0.787
Transit	55.733	15.482
Demobilisation	34.150	9.487
Recovery	34.150	9.487
DownTime	3.817	1.060
Source	3.817	1.060
Total	359.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	348.00	717.50	717.50
Combined	0.00	348.00	717.50	717.50

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

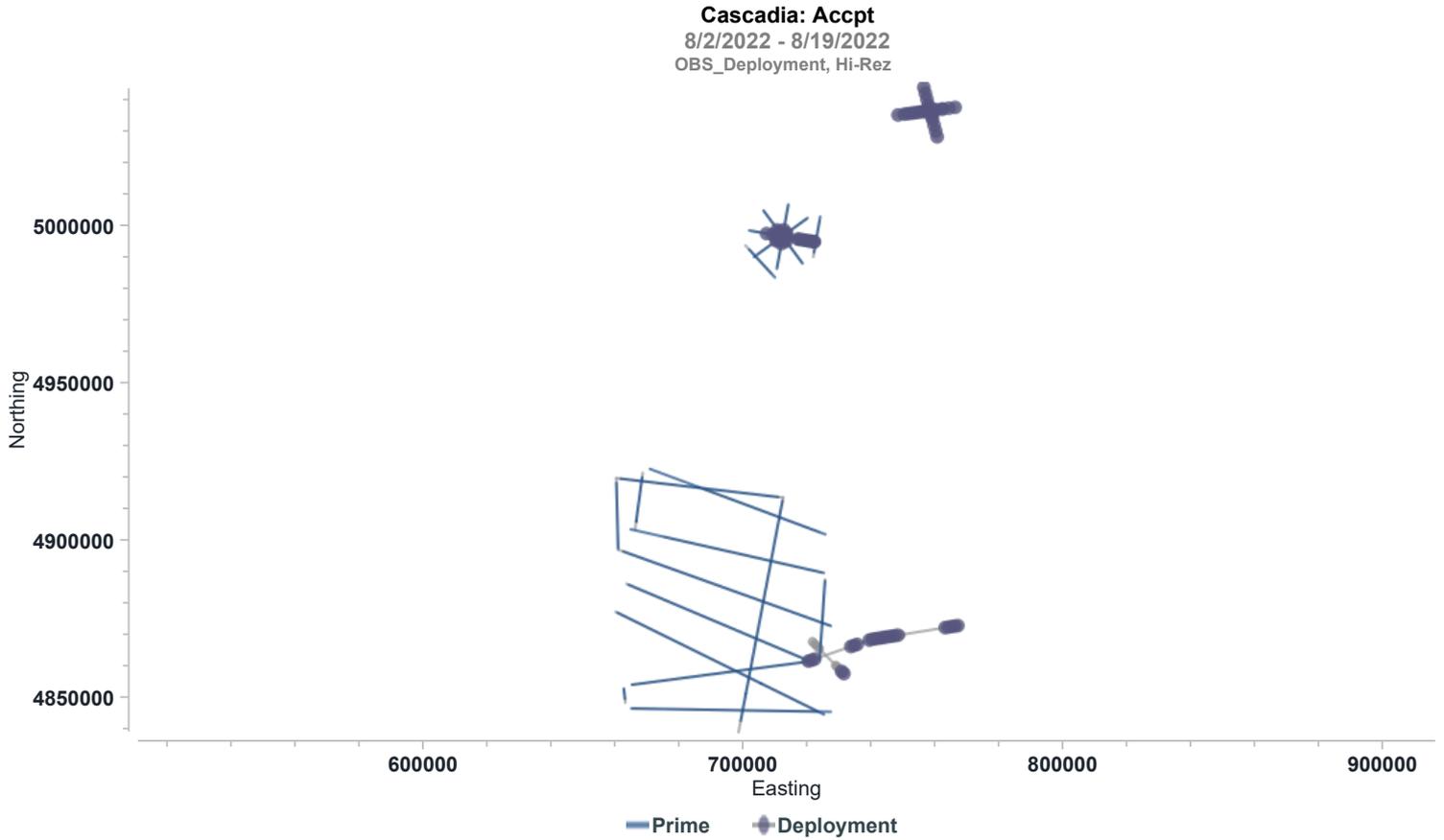
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	354.40	732.45	732.45
Combined	0.00	354.40	732.45	732.45



Daily Comment Summaries - Daily Comments On Status of Equipment

Fri 19 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Fri 19 Aug

Technical Staff On-board the Langseth

Cody Bahlau L-DEO OMO Chief Science Officer
 Josh Kasinger L-DEO OMO Chief Source Mechanic
 Brian Agee L-DEO OMO Source Mechanic
 Paul Parolski Jr.- Contract Navigator
 Mark Walker - Contract Compressor Mech

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 Ana Lira - RPS PSO
 Michelle Klein - RPS PSO
 Jimena Ortega - RPS PSO
 Martiza Martinez - RPS PSO

Science Party On-board the Langseth

Glenn Spinelli - PI NMT
 Anne Trehu - Co-PI OSU

8/19/2022

Page 4

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
 Benjamin Norvell - Graduate Research asst. - NMT
 Kristin Dickerson - Graduate Research asst. - UCSC
 Danqi Jian - Graduate Research asst. - UTIG
 Robert Perrin - Graduate Research asst. - U.Calgary
 Aldiyar Mukhatzhanov - Graduate Research asst. - Rutgers
 Matt Perry - Research asst. - Planetary Science Inst.
 Ariful Islam - Graduate Research asst. - U. Nebraska
 Clara Stanbury - Research asst. - Los Alamos National Lab
 Ben Russel - Machinist - OSU
 Justin Mcloud- Engineer - OSU

HSE Events Diary (Marcus G Langseth,)

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

Category	Code	Day	Week	Month	Project	Proj Hours	Man Hours
Meetings	Mtgs	0	12	46	46	1.000	
Start-up Meeting	StUp	0	0	1	1	1.000	
Toolbox Meetings	Tbox	0	12	45	45		
Reports	Re	0	0	8	8		
Contractor	Con	0	0	8	8		
Task, Hazard, Control	THC	0	0	8	8		

8/20/2022

Page 1

Client: Lamont-Doherty Earth Observatory
Job No: MGL2208
Block: Cascadia
Client Contact:
Consultancy:
Job No:

Contractor: Lamont-Doherty Earth Observatory
Job No: MGL2208
Vessel: Marcus G Langseth
Supervisor:
Party Chiefs: Cody Bahlau
Client Reps: Glenn Spinelli

Daily Comment Summaries - Daily Summary

Sat 20 Aug

The diver was down at 8am local. The shaft and propeller looked clean. The Chief Engineer and team started to trouble shoot the gear box and related equipment. It was discovered that the gear box was damaged along with other items. The time line to fix while uncertain, was past the current cruise dates. The decision was made to end MGL 2208.

The crew have been busy with de-mobilizing the gear on deck and in the Main lab. Some of the crew will start to leave this evening.

Final Job Stats:
 75 Heat Probe Stations Completed
 732.45 Seismic Kms

Daily Comment Summaries - Plan for Tomorrow

Sat 20 Aug

End of Job

Timing Diary (Marcus G Langseth, Hi-Rez)

Category	Code	Start	End	Duration
Port call	NC_PC	Sat 20. Aug 00:00	Sat 20. Aug 24:00	24.000
At the OSU dock in Newport				

Timing Day By Day (Marcus G Langseth, Hi-Rez)

Cascadia (MGL2208)

20-Aug	Hours	% Percent
Chargeable Standby	0.000	0.000
Port Call	0.000	0.000
Non-Chargeable StandBy	24.000	100.000
Port call	24.000	100.000
Day's Total	24.000	100.000

Timing Breakdown Summary - Project (Marcus G Langseth, OBS_Deployment, Hi-Rez)

Cascadia (MGL2208)

Category	Hours	% Percent
Acquisition	207.900	54.143
Prime Extended L/C	1.300	0.339
Prime Line Change	9.100	2.370
Production Prime	81.033	21.103
Swath Move	116.467	30.331
Deploy	116.467	30.331
Mobilisation	51.550	13.425
Deployment	48.117	12.531

8/20/2022

Page 2

Category	Hours	% Percent
Mob Offshore	3.433	0.894
Non-Chargeable StandBy	28.000	7.292
Field Operations	4.000	1.042
Port call	24.000	6.250
Chargeable Standby	58.567	15.252
Port Call	2.833	0.738
Transit	55.733	14.515
Demobilisation	34.150	8.894
Recovery	34.150	8.894
DownTime	3.817	0.994
Source	3.817	0.994
Total	383.983	

Basic Project Details

Hi-Rez					
General Details					
Record length:	8000 ms	Sample rate:	0.5 ms	Shotpoint interval:	25 m
CoS to CNG:	100 m	Fold Coverage:	0		
Cable Details					
No of Cables:	1	Chans Per Cable:	144	Front Depth:	4 m
Tail Depth:	4 m	Length:	900 m	Group interval:	6.25 m

Production Totals (Chgd km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Charged km	Day	Week	Month	Project
Prime	0.00	348.00	717.50	717.50
Combined	0.00	348.00	717.50	717.50

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

Hi-Rez, OBS_Deployment

Cascadia (MGL2208) (no data for period)

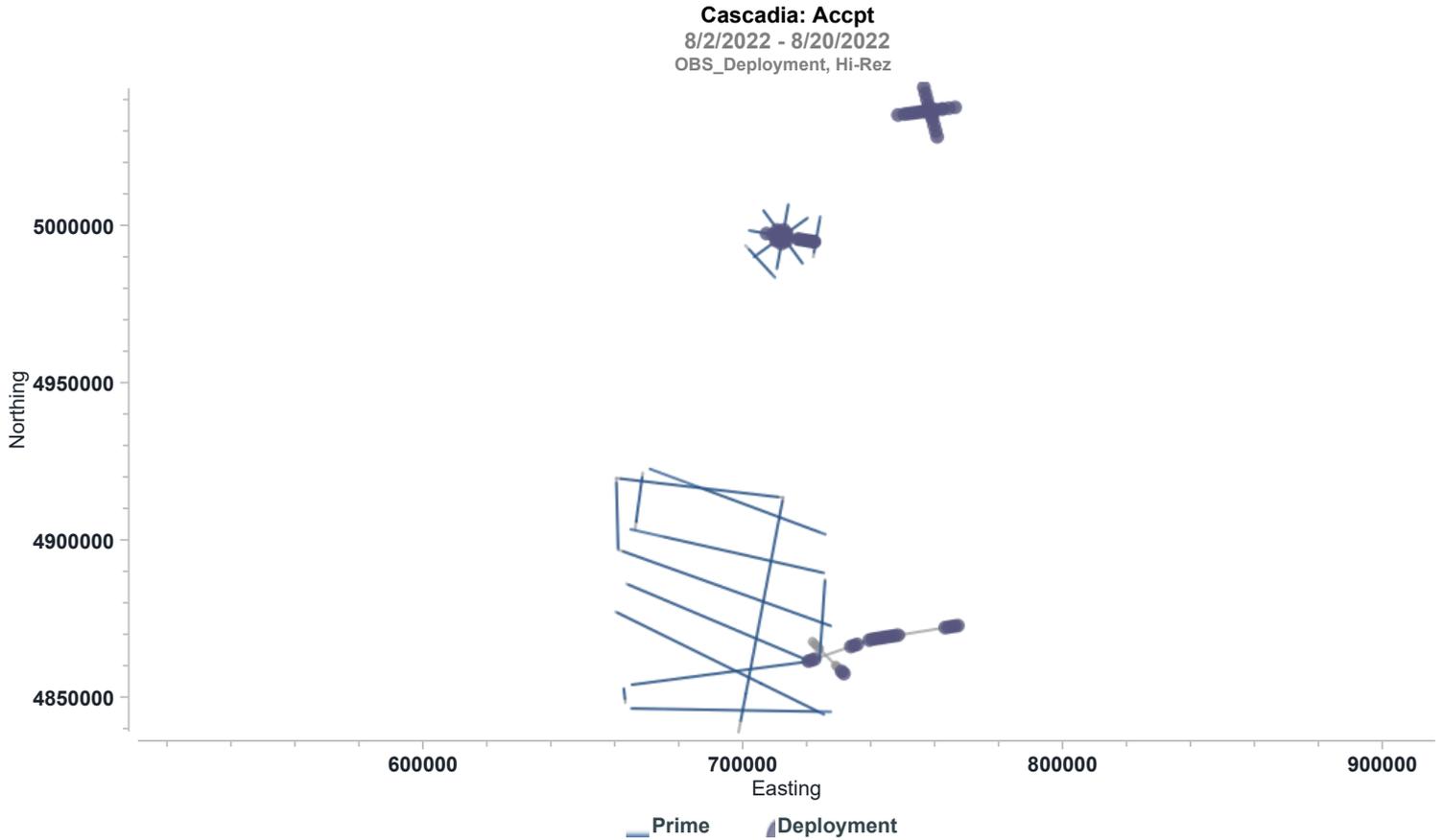
Seq	Line	FCSP	LCSP	Prod Type	Production	Ave Knots	Seq Status	Line Status
Total					0.00			

Production Totals (Acpt km by Shotpoint) - Full Fold

Hi-Rez

Cascadia (MGL2208) (no data for period)

Accepted km	Day	Week	Month	Project
Prime	0.00	354.40	732.45	732.45
Combined	0.00	354.40	732.45	732.45



Daily Comment Summaries - Daily Comments On Status of Equipment

Sat 20 Aug

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.

Heat Probe:

No Major issues to Report.

Daily Comment Summaries - Personnel Onboard

Sat 20 Aug

Technical Staff On-board the Langseth

- Cody Bahlau L-DEO OMO Chief Science Officer
- Josh Kasinger L-DEO OMO Chief Source Mechanic
- Brian Agee L-DEO OMO Source Mechanic
- Paul Parolski Jr.- Contract Navigator
- Mark Walker - Contract Compressor Mech

PSO Staff On-board the Langseth

- Amanda Dubuque - RPS Lead PSO
- Cassandra Frey - RPS PSO
- Ana Lira - RPS PSO
- Michelle Klein - RPS PSO
- Jimena Ortega - RPS PSO
- Martiza Martinez - RPS PSO

Science Party On-board the Langseth

- Glenn Spinelli - PI NMT
- Anne Trehu - Co-PI OSU

8/20/2022

Page 4

Robert Harris - Co-PI OSU
 Mandy Kiger - Heat Flow Tech - OSU
 Thomas Kyrirtz - Graduate Research asst. - NMT
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