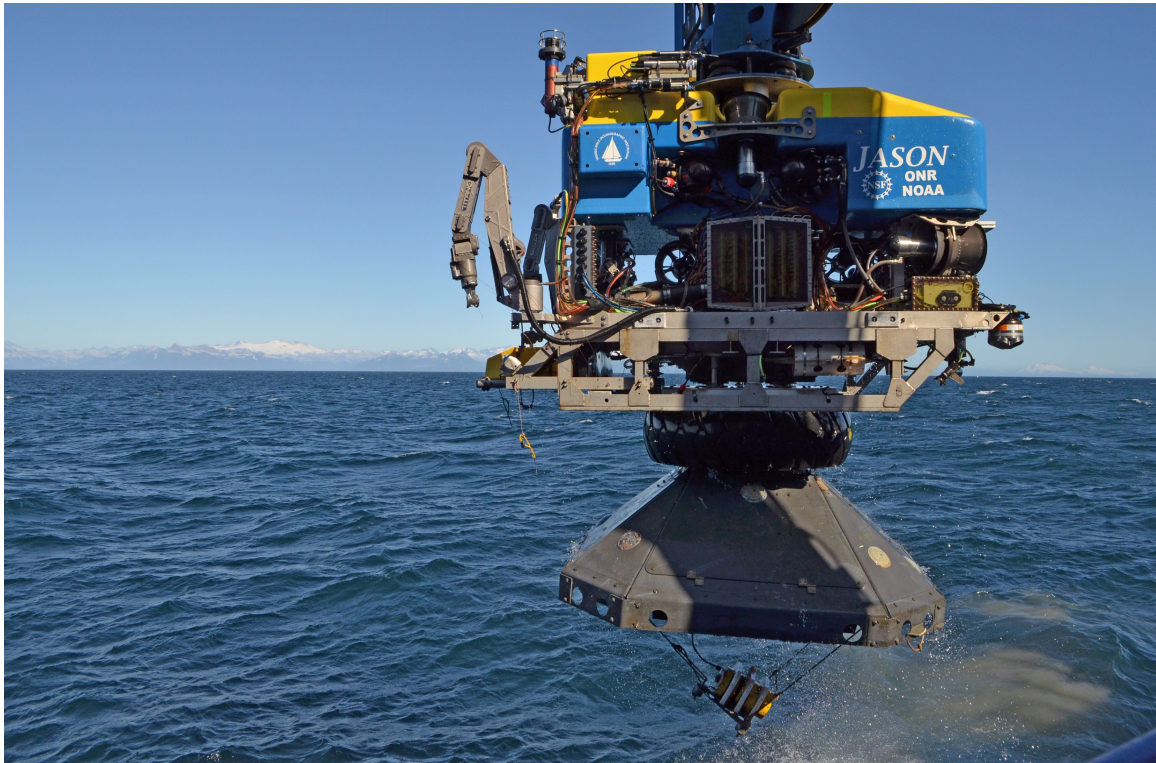


# Alaska Amphibious Community Seismic Experiment Recovery Leg 1

SKQ2019-18S R/V *Sikuliaq*

10 August 2019 – 29 August 2019

Seward, AK, USA to Kodiak, AK, USA



*TRM recovery using JASON for the Alaska Amphibious Community Seismic Experiment (AACSE) Recovery Leg 1.*

## Table of Contents

Overview & Motivation.....	Page 3
Figure 1: AACSE Planned Deployment Sites.....	Page 4
Cruise Objectives and Summary.....	Page 5
SKQ2019-18S Science Party.....	Page 6
SKQ2019-18S Crew.....	Page 7
Figure 2: Ship Track,,,...	Page 8
Cruise Narrative.....	Page 9
Acknowledgements.....	Page 28
Appendix 1.....	Page 29
Glossary of Acronyms and Abbreviations	
Appendix 2.....	Page 30
Instrument summary, serial numbers and performance	
Appendix 3.....	Page 31
Jason Daily Reports	

## Overview and Project Motivation

The Alaska Amphibious Community Seismic Project (AACSE) is a broadband seismic array that collected land and ocean-bottom data during 2018-2019 to investigate the tectonics, structure, and seismicity of the southern Alaskan subduction margin. An array of 75 broad-band ocean bottom seismometers and 30 broad-band land seismometers were deployed on and offshore of the Alaskan Peninsula in May-June 2018 and were recovered in August-September 2019, beginning with this cruise. The array spans ~650 km along-strike and ~500km perpendicular to the Aleutian trench, extending the Earthscope TA offshore and densifying the TA on the Alaskan Peninsula and on the island of Kodiak.

This array is designed to image regions of significant along strike variability. In the past century, the study area has hosted more  $M > 8$  earthquakes than any other subduction system, but these great earthquakes have not been evenly distributed. The eastern portion of the array bridges the rupture zones of several major earthquakes, including the 1962 Great Alaskan Earthquake, but the area near the Shumagin Islands in the west has not hosted a great earthquake in at least 150 years. GPS measurements suggest this variability in seismicity is related to coupling along the plate interface (Fournier and Freymueller, 2007), and other studies find similar variability in incoming plate structures (Shillington et al., 2015), and composition of volcanic products (Keleman et al, 2003).

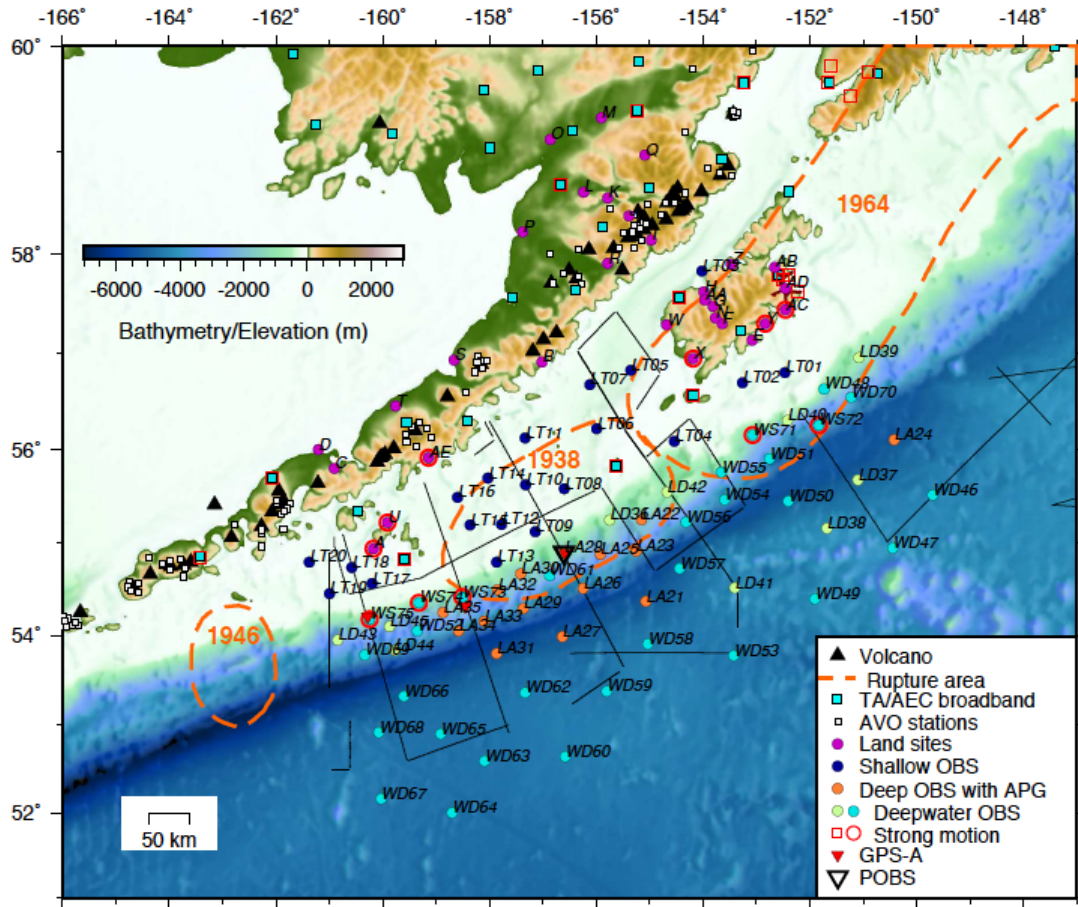
The AACSE was designed and executed in response to the NSF March 2016 Dear Colleague Letter (DCL 16-061), which sought proposals for a large amphibious seismic array focused on the Alaska-Aleutian subduction zone. The objectives of the AACSE align with NSF-GeoPRISMS and NSF-EarthScope program goals, including the following fundamental questions outlined in the GeoPRISMS Subduction Cycles and Deformation, EarthScope and GeoPRISMS Alaska-Aleutians implementation plans:

1. What changes in physical properties cause variation in seismic coupling, the occurrence of great earthquakes and aseismic creep on subduction megathrusts?
2. Is the subducting uppermost mantle hydrated and what controls variations in hydration along-strike?
3. What controls variations in volcanic arc crust/mantle structure, volcanic composition and the geometry of the arc melt production region?
4. How does the flow and volatile release generated by subduction zones interact with large-scale plate flow and the evolution of sub-continental mantle?

All data collected through the project will be archived at the IRIS Data Management Center as soon as possible and will be available to the public immediately upon archival.

This project is funded by the National Science Foundation GeoPRISMS, PREEVENTS and Earthscope programs via NSF-OCE Award #1654568.

Figure 1. AACSE Full Deployment Plan (2018)



## Cruise Objectives and Summary

The AACSE Recovery Leg 1 objectives were to recover an array of shallow-and deep-water broadband ocean bottom seismometers designed and managed by Lamont-Doherty Earth Observatory (LDEO). A total of 45 LDEO instruments deployed in 2018 were designated for recovery on this cruise, including: 20 trawl-resistant mounted ocean bottom seismometers (TRMs; instrument codes LT##) with an absolute pressure gauge (APG) and hydrophone, 14 ocean bottom seismometers with an absolute pressure gauge and hydrophone (instrument codes LA##), and 11 ocean bottom seismometers with a differential pressure gauge (DPG; instrument codes LD##).

All AACSE instruments from LDEO were successfully recovered, with the exception of the following four stations. Recovery of TRM station LT19 was initiated using a line spool elevator, but the cable used to hoist the station onto the ship broke during recovery. Sea conditions and the loose floating lifting cable made recovery unsafe using Jason and LT19 was left on the seafloor at its deployment location. It could be recovered at a future date. The very weak currents seen at the site during the attempted recovery precluded diving on the site again as the location of the lifting line would have been unpredictable. A stronger current would advect the cable in a more predictable direction making diving with Jason safer. Deepwater station LD43 never responded to acoustic release signals, The acoustic communication with this site following the deployment was very spotty and thus failure of the acoustic release systems was a possibility. Recovery of LD43 was then attempted using JASON, but the station was not found in the deployment location or within survey distance. Location of LD43 is unknown. Deepwater stations LD24 and LA27 did not respond to acoustic release signals and are presumed to remain on the seafloor at their respective deployment locations. The large depth of these sites make failure by implosion of the flotation a possibility. The acoustic systems on these sites provided strong communications during the deployment.

In addition to recovery of OBS stations, cruise objectives also including recovery and servicing of instruments from other, complementary projects. Temperature probes from University of Washington (Paul Johnson, PI) were deployed with most LDEO OBS instruments during 2018, and were recovered, cleaned, cataloged and returned to the University of Washington at the conclusion of the recovery cruise. Two experimental pressure ocean bottom seismometers (POBS) with strong motion seismic sensors and dual absolute pressure gauges with “A-0-A” drift correcting systems were recovered from AACSE site LA34.

One GPS-acoustic benchmark transponder with failing batteries was recovered on acoustic command and replaced with a second transponder using Jason. The waveglider used for determining precise positioning of the GPSA sites was recovered having been deployed from the R/V Sikuliaq in May. The waveglider had made observations at all three GPSA sites (PIs: Webb, Nooner, Chadwell, Foster).

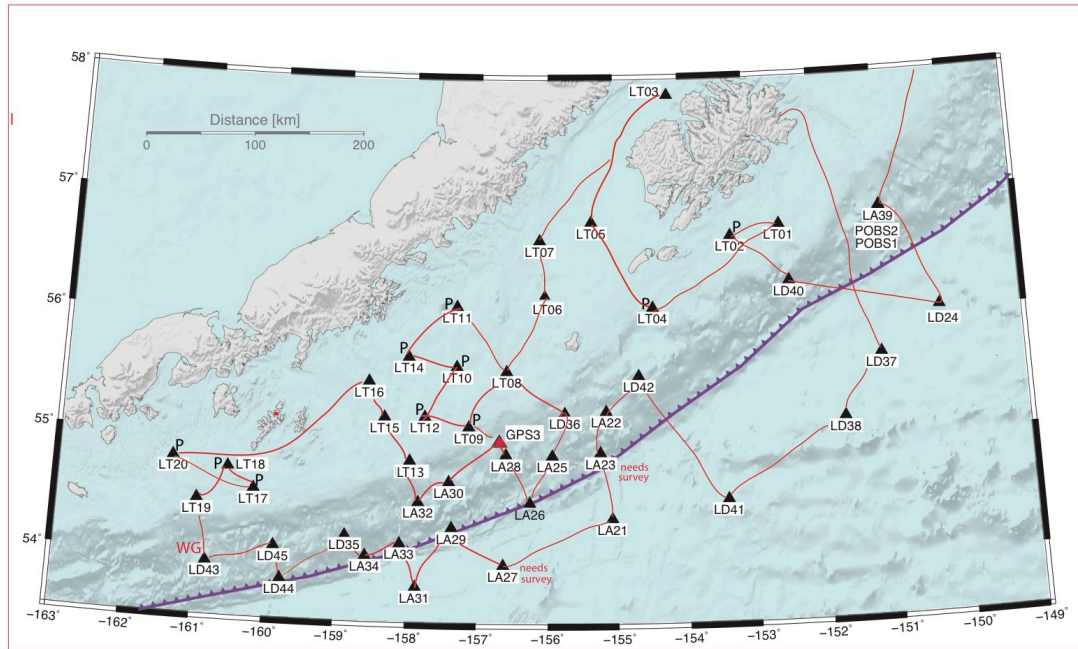
**AACSE 2019 Recovery Leg 1 (SKQ2019-18S) Science Party**

Spahr Webb	AACSE and GPSA co-PI; cruise co-chief	LDEO
Aubrey Adams	AACSE co-PI; cruise co-chief	Colgate
Carlos Becerril	OBS engineer	LDEO
Ted Koczynski	OBS engineer	LDEO
Pete Liljegren	OBS engineer	LDEO
Walt Masterson	OBS engineer	LDEO
Jen Granich	OBS volunteer	LDEO
Kiara Daily	Graduate student; AACSE Apply to Sail	Cornell
Andrew Gase	Graduate student; AACSE Apply to Sail	UT-Austin
Helen Janiszewski	Postdoc; AACSE Apply to Sail	CI-DTM
Zongshan Li	Graduate student; AACSE Apply to Sail	WashU
Alberto Collasius	JASON Scientist	WHOI
Christopher Lathan	JASON Scientist	WHOI
Andrew Billings	JASON Scientist	WHOI
Frederick Denton	JASON Scientist	WHOI
Korey Verhein	JASON Scientist	WHOI
James Convery	JASON Scientist	WHOI
Drewie Bewley	JASON Scientist	WHOI
Scott McCue	JASON Scientist	WHOI
James Pelowski	JASON Scientist	WHOI
Steve Hartz	Marine Science Technician	UAF
Dan Naber	Marine Science Technician	UAF

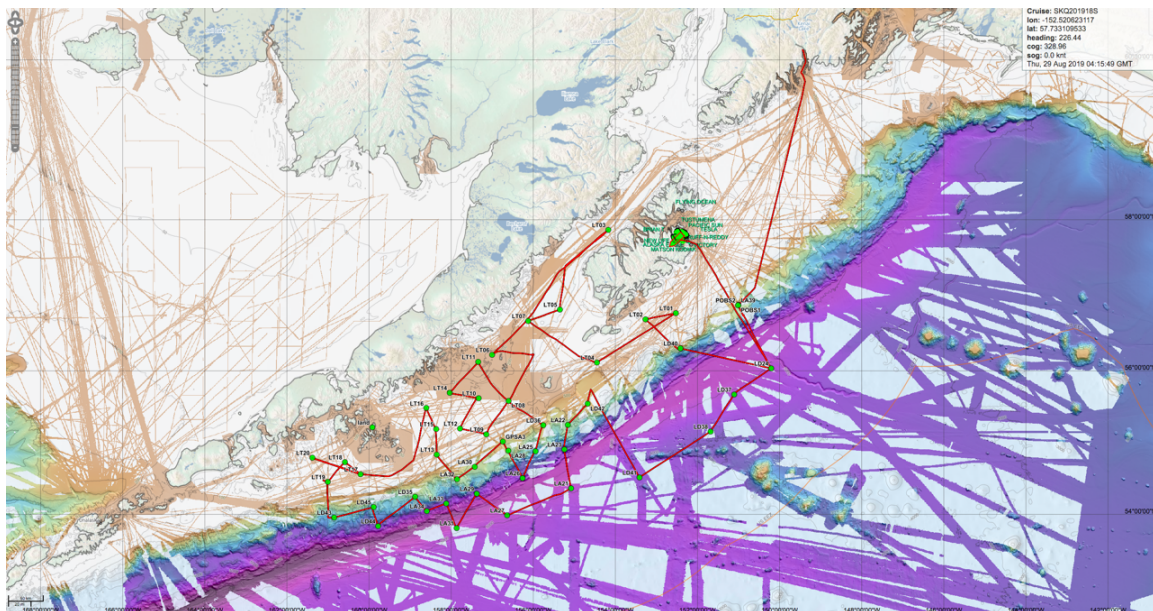
**AACSE 2019 Recovery Leg 1 (SKQ2019-18S) Crew**

Anthony (Diego) Mello	Captain
Rick Null	Chief Engineer
John Hamill	Chief Mate
Arthur Levine	2 Mate
Marian Tudoran	3 Mate
Kevin Reinhardt	1 Engineer
Patrick Bedard	2 Engineer
Jonathan Pierce	3 Engineer
Daniel Montague	QMED
Clayton Carroll	QMED
James Eldred	QMED
Daniel Oliver	Electrician
Paul St. Onge	Bosun
Robert Worrada	AB
Eric Danilson	AB
Sam Elliott	AB
Simin Boroumand	AB
Mark Teckenbrock	Chief Steward
Marc Maluda	Cook
Tim Morrow	Mess Attendant

**Figure 2. AACSE Deployment Leg 1 Ship Track and Deployment Locations**



Approximate cruise track showing the sites and the order visited. Some sites were visited more than once.



Cruise track from ship's navigation



## Cruise Narrative

### Saturday 10 August 2019

Left dock about 9AM. Went out into the harbor to test heave compensating winch using a test weight. The winch seemed very unstable on its base, bouncing and oscillating while hauling in. Perturbation to system takes order 1 minute to settle down. MRU is very loosely mounted to winch, base of winch very flexible. The winch control was switched from “automatic” to “hydrographic” and appears to be more stable. Winch tech Josh Eaton was transferred to shore using a small boat.

### Sunday 11 August 2019

**Daily notes:** Arrived at a location close to our first collection site (LA39, POBS1, POBS2) to do an ROV Jason ballast test. Test began at 19:00 UTC and finished at 19:28 UTC. Arrived at the first collection site at 19:45 UTC.

#### Site: LA39

Sensor: 661

Seismic Logger: 3137

Hydrophone: 768023

APG: 114654

Temperature Probe: S9404 – Iceland, 20233117 – Tidbit

On station: 11/08/2019 19:45 UTC

Instrument on surface: 20:34 UTC

Deployment location: 56.882703 N 151.001099 W

Water depth (b.s.l.): 1644 m

Time on station: 1h

Depart station:

#### Site: POBS1

Sensor: SOS sensor 1

Seismic Logger: POBS1

Hydrophone: none

APG: dual systems

Temperature Probe: none

On station: 11/08/2019 20:50 UTC

Instrument on surface: 21:58 UTC

Deployment location: 56.882357 N 151.004563 W

Water depth (b.s.l.): 1641 m

Time on station: 1h 10 min

Depart station: 11/08/2019 22:00 UTC

#### Site: POBS2

Sensor: SOS sensor 2

Seismic Logger: POBS2

Hydrophone: none

APG: dual systems

Temperature Probe: none  
On station: 11/08/2019 23:33 UTC  
Instrument on surface: 23:57 UTC  
Deployment location: 56.880306 N 151.005261 W  
Water depth (b.s.l.): 1655 m  
Time on station: 1h 30 min  
Depart station: 12/08/2019 00:03 UTC

### **Monday 12 August 2019**

**Daily notes:** At 00:40 UTC we headed to 2000m for Cassius test. A Cassius dip test started at 01:50 UTC and was complete at 01:54 UTC. Cassius was then deployed on the seafloor and used to calibrate the orientation and azimuth of the Sondardyne short baseline acoustic navigation transponder installed on the R/V/ Sikuliaq's centerboard. We then remained at this location and at 14:49 UTC underwent active ROV Jason testing of Cassius. The weather was dark and foggy. At 15:27 UTC Cassius was out of the water. At 15:40 UTC we departed this site and headed to LD24. At 16:10 UTC the foggy conditions were clearing.

#### **Site: LD24**

Notes: We received no indication that the instrument heard or responded to the acoustic signals we sent. We did however remain at the station for 4 hours attempting to bring it to the surface. The weather was overcast but had good visibility so if it were on the surface we believe we would have seen it.

Sensor: 2310  
Seismic Logger: 3136  
Hydrophone: none  
DPG: 47  
On station: 12/08/2019 20:05 UTC  
Instrument on surface: Instrument did not reach the surface  
Deployment location: 56.033164 N 150.200412 W  
Water depth (b.s.l.): 4912 m  
Time on station: 4 h  
Depart station: 13/08/2019 00:00 UTC

### **Tuesday 13 August 2019**

#### **Site: LD40**

Sensor: 653  
Seismic Logger: 3133  
Hydrophone: none  
DPG: 038  
Temperature Probe: S9416 – Iceland, 20233082 – Tidbit  
On station: 13/08/2019 08:30 UTC  
Instrument on surface: 09:12 UTC  
Deployment location: 56.303740 N 152.410232 W  
Water depth (b.s.l.): 1419 m

Time on station: 1h  
Depart station: 13/08/2019 09:30 UTC

**Site: LT02**

Notes: We arrived at LT02 early in the morning, before the sun rose and so we remained at the site while we waited for the sun to rise so we could see the TRM pop-up float on the surface.

Recovery: Pop-up  
Sensor: 598  
Seismic Logger: 3147  
Hydrophone: 768013  
APG: 114650  
APG Logger: 09  
Temperature Probe: S9415 – Iceland  
On station: 13/08/2019 13:57 UTC  
Instrument on surface: 15:15 UTC  
Deployment location: 56.693216 N 153.261046 W  
Water depth (b.s.l.): 152 m  
Time on station: 1h 30 min  
Depart station: 13/08/2019 15:30 UTC

Heave compensating winch is working OK except starts oscillating with a roughly 1s period as TRM nears surface. This appears to be due the very flexible mounting of the winch to the deck. We add cargo straps to pull the winch hard backwards to the deck. This reduces, but doesn't eliminate the problem later in the cruise.

**Site: LT01**

Notes: Attempted to recover LT01 by diving to and locating the TRM on the seafloor and then attaching the TRM to the ROV Jason's underside using a winch on Jason. The winch tether snapped with Jason at the surface from loading from wave motion, dropping LT01 back to the seafloor. LT01 was finally recovered using ROV Jason to attach the line-spool elevator. The elevator is released from the seafloor to rise to the surface trailing a line. The TRM is then recovered similarly to using the pop-up floats. A stronger line was attached to ROV Jason's winch for future recoveries.

**Timeline:**

ROV Jason was in the water at 20:09 UTC  
At 23:16 UTC as ROV Jason and LT01 breached the surface the rope between LT01 and ROV Jason snapped and LT01 fell back to the ocean floor.  
At 14/08/2019 03:06 UTC we dropped the line-spool elevator near to the location of LT01. ROV Jason then located the elevator and connected it to the LT01. Once connected ROV Jason pulled the pin which made the elevator rise to the surface.  
06:41 UTC ROV Jason was on board and the elevator was waiting to be retrieved.  
08:33 UTC LT01 is on board

Recovery: ROV Jason/Line spool elevator

Sensor: 701  
Seismic Logger: 3142  
Hydrophone: 768040  
APG: 116479  
APG Logger: 56  
Temperature Probe: S9423 – Iceland  
On station: 13/08/2019 19:10 UTC  
Instrument on surface: 14/08/2019 08:33 UTC  
Deployment location: 56.775359 N 152.523112 W  
Water depth (b.s.l.): 156.00 m  
Time on station: 13 h  
Depart station: 13/08/2019 08:33 UTC  
ROV Jason dive duration: 1<sup>st</sup> dive 2h 42 min, 2<sup>nd</sup> dive 1 h 57 min

### **Wednesday 14 August 2019**

#### **Site: LT04**

Recovery: Pop-up  
Sensor: 201  
Seismic Logger: 3150  
Hydrophone: 768032  
APG: 116484  
APG Logger: 62  
Temperature Probe: S9432 – Iceland  
On station: 14/08/2019 16:00 UTC  
Instrument on surface: 14/08/2019 16:35 UTC  
Deployment location: 56.111769 N 154.444618 W  
Water depth (b.s.l.): 157 m  
Time on station: 1 h  
Depart station: 14/08/2019 17:00 UTC

### **Thursday 15 August 2019**

#### **Site: LT07**

Recovery: ROV Jason  
Sensor: TC2315  
Seismic Logger: 3146  
Hydrophone: 768022  
APG: 129768  
APG Logger: 73  
Temperature Probe: S9399 – Iceland  
On station: 15/08/2019 00:10 UTC  
Instrument on surface: 15/08/2019 04:00 UTC  
Deployment location: 56.671500 N 156.119806 W  
Water depth (b.s.l.): 261.00 m

Time on station: 4 h  
Depart station: 15/08/2019 04:10 UTC  
ROV Jason dive duration: 1h 40 min

**Site: LT05**

Notes: ROV Jason in water at 01:39 UTC. We replaced the rope used for ROV Jason with stronger rope. Successfully recovered LT05 mounted to bottom of ROV Jason.

Recovery: ROV Jason  
Sensor: TC3759  
Seismic Logger: 3056  
Hydrophone: 768005  
APG: 116472  
APG Logger: APG010 047  
Temperature Probe: S9409 – Iceland  
On station: 15/08/2019 06:45 UTC  
Instrument on surface: 15/08/2019 09:13 UTC  
Deployment location: 56.823445 N 155.346663 W  
Water depth (b.s.l.): 232.00 m  
Time on station: 2 h 45 min  
Depart station: 15/08/2019 09:30 UTC  
ROV Jason dive duration: 1h

**Site: LT03**

Notes: This station had a lot of snail eggs on it.  
Recovery: ROV Jason  
Sensor: TC2314  
Seismic Logger: 3139  
Hydrophone: 768012  
APG: 116482  
APG Logger: APG011 53  
Temperature Probe: S9414 – Iceland  
On station: 15/08/2019 16:53 UTC  
Deployment location: 57.866770 N 154.166486 W  
Water depth (b.s.l.): 198.00 m  
Time on station: 1 h  
Depart station: 15/08/2019 18:01 UTC  
ROV Jason dive duration: 1h 45 min

**Friday 16 August 2019**

We arrived at what we believe was the LT06 station at 11:00 UTC however the station was unresponsive. At 11:35 UTC we realized that the location in last year's cruise report was off by a degree. The log sheet documentation and the ship's log were then consulted. The corrected coordinates are 56.216302 N 155.997700 W. At 11:37 UTC we began transit to the correct location.

**Site: LT06**

Notes: ROV Jason was deployed to find and retrieve the TRM however, however we found that the LT06 was upside down. We then deployed the line-spool elevator and attached it to the TRM using Jason to retrieve the station.

Very strong seafloor currents during Jason dive order 1m/s.

Recovery: ROV Jason

Sensor: TC2377

Seismic Logger: 3143

Hydrophone: 768016

APG: 114623

APG Logger: 57

Temperature Probe: S9436 – Iceland

On station: 16/08/2019 14:59 UTC

Instrument on surface: 16/08/2019 23:15 UTC

Deployment location: 56.216668 N 157.0568631 W

Water depth (b.s.l.): 221.00 m

Time on station: 8 h 31 min

Depart station: 14/08/2019 23:30 UTC

ROV Jason dive duration: 3h 48 min

**Saturday 17 August 2019****Site: LT08**

Notes: Attempted recovery using the winch under the ROV Jason. Somewhere close to the surface the rope between ROV Jason and LT08 snapped again under wave loading and LT08 went sailing back down to the sea floor and landed upside down. We then surveyed the location of the TRM and decided to return to it later on in the cruise. All later TRM recoveries were performed with a line-spool elevator.

Very strong seafloor currents during Jason dive order 1m/s.

Recovery: ROV Jason

Sensor: TC750

Seismic Logger: 3161

Hydrophone: 768001

APG: 115400

APG Logger: 71

Temperature Probe: S9400 – Iceland

On station: 17/08/2019 03:00 UTC

Instrument on surface: didn't reach the surface

Deployment location: 55.588346 N 156.5976591 W

Water depth (b.s.l.): 244 m

Time on station: 4 h 00 min

Depart station: 17/08/2019 07:00 UTC  
ROV Jason dive duration: 1h 33 min

**Site: LT11**

Notes: The station is a Pop-up station, it received the signal to pop-up but it did not rise and so ROV Jason was deployed to retrieve the station.. Used ROV Jason to nudge the buoy which was partially released, but hung up on the release mechanism. Pulling up slightly on the buoy with ROV Jason's arm triggered the full release. Strong currents hindered recovery, endangering entanglement in the failed pop-up line, but the recovery was successful.

Recovery: Failed pop-up, ROV Jason assisted retrieval

Sensor: 680

Seismic Logger: 3138

Hydrophone: 768036

APG: 116468

APG Logger: 52

Temperature Probe: S9434 – Iceland

On station: 17/08/2019 14:51 UTC

Instrument on surface: 17/08/2019 20:50 UTC

Deployment location: 56.120423 N 157.3356188

Water depth (b.s.l.): 159 m

Time on station: 6 h 30 min

Depart station: 17/08/2019 21:21 UTC

ROV Jason dive duration: 2h 30 min

**Sunday 18 August 2019**

**Site: LT14**

Notes: Sent the release signal and the station acknowledged the signal but the pop-up did not come up to the surface. Station was upside down and so required ROV Jason to retrieve it. We sent down the line-spool elevator which was hooked onto the TRM.

Captain had concerns about safety with the buoy from the chimney interfering with the elevator which could cause it to rise faster or in a different detection than expected. As a result, we waited until daylight to release the elevator. Probe may have been in the mud.

Recovery: Failed pop-up, ROV Jason sent down for retrieval. The line spool elevator was attached to a point such that the float would remain underneath the TRM, driven into the housing by its buoyancy. The tactic worked, the float remained within the TRM until it lifted clear of the surface at which point the float dropped out under its weight. The pop-up line was rapidly recovered on the surface as the TRM was lifted on board.

Sensor: 583

Seismic Logger: 3158

Hydrophone: 768022

APG: 116483

APG Logger: APG012

Temperature Probe: S9411 – Iceland

On station: 18/08/2019 2:08 UTC  
Instrument on surface:18/08/2019 16:30 UTC  
Deployment location: 55.700099 N 158.029683 W  
Water depth (b.s.l.): 126 m  
Time on station: 15 h  
Depart station: 18/08/2019 17:00 UTC  
ROV Jason dive duration: 3h

**Site: LT10**

Recovery: Pop-up  
Sensor: 484  
Seismic Logger: 3135  
Hydrophone: none  
APG: 129436  
APG Logger: 72  
Temperature Probe: S9408 – Iceland  
On station: 18/08/2019 18:11 UTC  
Instrument on surface:18/08/2019 20:30 UTC  
Deployment location: 55.6251 N 157.3251 W  
Water depth (b.s.l.): 98 m  
Time on station: 2 h 30 min  
Depart station: 18/08/2019 20:40 UTC

**Monday 19 August 2019**

**Site: LT12**

Notes: Only a very faint response from the acoustics on the instrument so took some time for it to acknowledge the release signal.

Recovery: Pop-up  
Sensor: 2512  
Seismic Logger: 3061  
Hydrophone: 768028  
APG: 129431  
APG Logger: 044  
Temperature Probe: S9420 – Iceland  
On station: 19/08/2019 23:30 UTC  
Instrument on surface:19/08/2019 00:45 UTC  
Deployment location: 55.207 N 157.778 W  
Water depth (b.s.l.): 83 m  
Time on station: 2 h  
Depart station: 19/08/2019 00:30 UTC

**Site: LT09**

Notes: Enable was sent to the instrument but did not pop-up. TRM deployed upside down. ROV Jason and line-spool elevator deployed to retrieve the station.  
Recovery: Pop-up but ROV Jason and line elevator for retrieval.



Sensor: 2521  
Seismic Logger: 3160  
Hydrophone: 768010  
APG: 129886  
APG Logger: none  
Temperature Probe: S9426 – Iceland  
On station: 19/08/2019 02:53 UTC  
Instrument on surface: 19/08/2019 07:43 UTC  
Deployment location: 55.126306 N 157.1959133 W  
Water depth (b.s.l.): 150 m  
Time on station: 5 h  
Depart station: 19/08/2019 07:53 UTC  
ROV Jason dive duration: 1 h 26 min

**Site: LT08**

Notes: Returned to LT08. This time we deployed the line-spool elevator as well as ROV Jason. Very strong currents (order 2 knots, 1 m/s at this site).

Recovery: ROV Jason  
Sensor: TC750  
Seismic Logger: 3161  
Hydrophone: 768001  
APG: 115400  
APG Logger: 71  
Temperature Probe: S9400 – Iceland  
On station: 19/08/2019 14:17 UTC  
Instrument on surface: 19/08/2019 20:25 UTC  
Depth and location same as previous entry for LT08  
Time on station: 6h 10 min  
Depart station: 19/08/2019 20:27 UTC  
ROV Jason dive duration: 2 h 37 min

**Tuesday 20 August 2019**

**Site: LD36**

Sensor: 2347  
Seismic Logger: 3079  
Hydrophone: none  
DPG: none  
Temperature Probe: 1854464 – Antares, 20233116 – Tidbit  
On station: 20/08/2019 00:14 UTC  
Instrument on surface: 20/08/2019 23:15 UTC  
Deployment location: 55.252416 N 155.752458 W  
Water depth (b.s.l.): 916.00 m  
Time on station: 8 h 31 min  
Depart station: 20/08/2019 23:30 UTC

**Site: LA25**

Sensor: 3832  
Seismic Logger: 3141  
Hydrophone: 768007  
APG: 117994  
Temperature Probe: 1854467 – Antares  
On station: 20/08/2019 03:29 UTC  
Instrument on surface: 20/08/2019 05:04 UTC  
Deployment location: 54.890050 N 155.940841 W  
Water depth (b.s.l.): 2576.00 m  
Time on station: 2 h  
Depart station: 20/08/2019 05:29 UTC

**Site: LA26**

Sensor: 3762  
Seismic Logger: 3076  
Hydrophone: 768033  
APG: 121998  
Temperature Probe: none  
On station: 20/08/2019 07:29 UTC  
Instrument on surface: 20/08/2019 09:09 UTC  
Deployment location: 54.512878 N 156.256102 W  
Water depth (b.s.l.): 5089.00 m  
Time on station: 2 h  
Depart station: 20/08/2019 09:29 UTC

**Site: LA28**

Notes: The sensor did not drop  
Sensor: 731  
Seismic Logger: 3149  
Hydrophone: 768037  
APG: 117997  
Temperature Probe: 1854465 – Antares  
On station: 20/08/2019 13:13 UTC  
Instrument on surface: 20/08/2019 15:12 UTC  
Deployment location: 54.898337 N 156.603038 W  
Water depth (b.s.l.): 1873.00 m  
Time on station: 2 h 6 min  
Depart station: 20/08/2019 15:19 UTC

**GPS3-**

GPS transponder MPL014 at site GPS3 recovered using acoustic release.  
Notes: retrieved transponder U0057A5, address 5210 and installed replacement transponder U003C80 deployed and aligned on benchmark using ROV Jason  
Retrieved transponder: U0057A5, address 5210  
Installed transponder: U00C80

Benchmark: MPL014  
On station: 20/08/2019 17:00 UTC  
Deployment location: 55.024908 N 156.7363055 W  
Water depth (b.s.l.): 1176.00 m  
Time on station: 4 hr 00 min  
Depart station: 20/08/2019 21:00 UTC

**Site: LA30**

Sensor: 2376  
Seismic Logger: 3144  
Hydrophone: 768008  
APG: 117334  
Temperature Probe: S9433 – Iceland  
On station: 21/08/2019 01:05 UTC  
Instrument on surface: 21/08/2019 02:20 UTC  
Deployment location: 54.672698 N 157.420323 W  
Water depth (b.s.l.): 1583.00 m  
Time on station: 1 h 35 min  
Depart station: 21/08/2019 02:40 UTC

**Site: LA32**

Sensor: 652  
Seismic Logger: 3140  
Hydrophone: 768034  
APG: 117996  
Temperature Probe: S9402 – Iceland  
On station: 21/08/2019 04:17 UTC  
Instrument on surface: 21/08/2019 05:45 UTC  
Deployment location: 54.498254 N 157.852213 W  
Water depth (b.s.l.): 1632.00 m  
Time on station: 1 h 48 min  
Depart station: 21/08/2019 06:05 UTC

**Site: LT13**

Recovery: ROV Jason  
Sensor: 743  
Seismic Logger: 3169  
Hydrophone: 768006  
APG: 129887  
APG Logger: 75  
Temperature Probe: S9403 – Iceland  
On station: 21/08/2019 8:34 UTC  
Instrument on surface: 21/08/2019 13:25 UTC  
Deployment location: 54.843971 N 158.403324 W  
Water depth (b.s.l.): 202 m

Time on station: 5 h 25 min  
Depart station: 14/08/2019 13:59 UTC  
ROV Jason dive duration: 2h 41 min

**Site: LT15**

Recovery: ROV Jason  
Sensor: 738  
Seismic Logger: 3163  
Hydrophone: 768029  
APG: 116478  
APG Logger: APG001  
Temperature Probe: S9405 – Iceland  
On station: 21/08/2019 15:50 UTC  
Instrument on surface: 21/08/2019 19:10 UTC  
Deployment location: 55.200202 N 158.3592733 W  
Water depth (b.s.l.): 167 m  
Time on station: 4 h 47 min  
Depart station: 14/08/2019 20:03 UTC  
ROV Jason dive duration: 1 h 23 min

**Site: LT16**

Recovery: ROV Jason  
Sensor: 726  
Seismic Logger: 3050  
Hydrophone: 768017  
APG: 116474  
APG Logger: 049  
Temperature Probe: S9428 – Iceland  
On station: 21/08/2019 22:10 UTC  
Instrument on surface: 22/08/2019 01:07 UTC  
Deployment location: 55.492034 N 158.6568309 W  
Water depth (b.s.l.): 169 m  
Time on station: 3 h 28 min  
Depart station: 22/08/2019 01:38 UTC  
ROV Jason dive duration: 1 h 31 min

**Site: LT20**

Recovery: Pop-up  
Sensor: 656  
Seismic Logger: 3148  
Hydrophone: 768021  
APG: 116486  
APG Logger: none  
Temperature Probe: S9421 – Iceland  
On station: 22/08/2019 15:47 UTC  
Instrument on surface: 22/08/2019 15:55 UTC

Deployment location: 54.8002 N 161.3746 W  
Water depth (b.s.l.): 150 m  
Time on station: 1 hr 24 min  
Depart station: 22/08/2019 17:19 UTC

**Site: LT17**

Recovery: Pop-up  
Sensor: 744  
Seismic Logger: 3168  
Hydrophone: 768009  
APG: 129437  
APG Logger: w/CSAC  
Temperature Probe: S9424 – Iceland  
On station: 22/08/2019 21:38 UTC  
Instrument on surface: 22/08/2019 22:21 UTC  
Deployment location: 54.5677 N 160.2016 W  
Water depth (b.s.l.): 114 m  
Time on station: 1 h 52 min  
Depart station: 22/08/2019 23:30 UTC

**Site: LT18**

Notes: Instrument indicated that it was unlevel and therefore unwise to activate the pop-up. We retrieved with ROV Jason and line-spool elevator. The TRM was upside down on the seafloor.

Recovery: Pop-up  
Sensor: 666  
Seismic Logger: 3084  
Hydrophone: 768026  
APG: 118851  
APG Logger: N/A  
Temperature Probe: S9410 – Iceland  
On station: 23/08/2019 01:00 UTC  
Instrument on surface: 23/08/2019 04:09 UTC  
Deployment location: 54.740005 N 160.577522 W  
Water depth (b.s.l.): 116 m  
Time on station: 4 h 8 min  
Depart station: 23/08/2019 05:08 UTC  
ROV Jason dive duration: 1 h 43 min

**Site: LT19**

Notes: Not recovered. We successfully attached the TRM to the line-spool elevator with ROV Jason. TRM was right side up. The line broke as the TRM reached the surface. We decided it was unwise to redeploy ROV Jason due to entanglement risk. Attempts to find the broken line at the surface were unsuccessful. The currents at the site were very weak, so that it was impossible to predict where the floating lifting line might lie in azimuth. It

may be possible to retrieve this site at some future date with an ROV, if the current is stronger. Most of the sites showed much stronger currents during this cruise.

Recovery: ROV Jason, not recovered

Sensor: 3842

Seismic Logger: 3159

Hydrophone: 768002

APG: 129434

APG Logger: 004

Temperature Probe: S9427 – Iceland

On station: 23/08/2019 07:22 UTC

Instrument on surface: 23/08/2019 11:12 UTC – line broke

Deployment location: 54.459966 N 161.05432 W

Water depth (b.s.l.): 125 m

Time on station: 7 h 48 min

Depart station: 23/08/2019 18:00 UTC

ROV Jason dive duration: 1 h 21 min

### **Waveglider**

Recovery: waveglider for the Webb/Chadwell/Nooner GPSA Alaskan project was recovered with about 20m of trailing kelp.

Location: 54.01488N 160.954 W

Recovery time: 23/08/2019 21:00 UTC

### **Site: LD43**

Notes: LD43 never responded to attempts to communicate. We sent multiple burn-wire activation messages. LD43 was never sighted at the surface. The station was within diving range of ROV Jason. The acoustic communications to both transponders were very poor during the deployment leg so failure of both systems was a possibility. We dove to the surveyed site but did not find the instrument after surveying a 250 m x 250 m area. Visibility was 10-20m and we found numerous acoustic targets on the sonar, so it is small possibility the instrument is still at the site. The navigated position from the deployment cruise had large errors due to the poor acoustic results from the deployment cruise.

Sensor: 2511

Seismic Logger: 3081

Hydrophone: none

APG: DPG32

Temperature Probe: S9425 – Iceland

On station: 23/08/2019 22:11 UTC

Instrument on surface: N.A.

Deployment location: 53.953750 N 160.845702 W

Water depth (b.s.l.): 2394.00 m

Time on station: 15 h 6 min

Depart station: 24/08/2019 12:55 UTC

ROV Jason dive duration: 6 h 47 min

**Site: LD45**

Sensor: 746

Seismic Logger: 3165

Hydrophone: none

DPG: 22

Temperature Probe: S9407 – Iceland, 20233128 – Tidbit

On station: 24/08/2019 16:53 UTC

Instrument on surface: 24/08/2019 18:02 UTC

Deployment location: 54.102518 N 159.882909 W

Water depth (b.s.l.): 1999.00 m

Time on station: 1 h 37 min

Depart station: 24/08/2019 18:30 UTC

**Site: LD44**

Sensor: L001

Seismic Logger: 3085

Hydrophone: none

DPG: 23

Temperature Probe: 1854487 – Antares, 20233122 – Tidbit

On station: 24/08/2019 20:59 UTC

Instrument on surface: 24/08/2019 22:24 UTC

Deployment location: 53.830194 N 159.773620 W

Water depth (b.s.l.): 4663.00 m

Time on station: 1 h 36 min

Depart station: 24/08/2019 22:35 UTC

**Site: LD35**

Sensor: 658

Seismic Logger: 3166

Hydrophone: none

DPG: 020

Temperature Probe: S9401 – Iceland, 20233115 – Tidbit

On station: 25/08/2019 02:41 UTC

Instrument on surface: 25/08/2019 03:56 UTC

Deployment location: 54.249511 N 158.871991 W

Water depth (b.s.l.): 2023.00 m

Time on station: 1 h 31 min

Depart station: 25/08/2019 04:10 UTC

**Site: LA34**

Sensor: TC3756

Seismic Logger: 3068

Hydrophone: 768020

APG: 122006

Temperature Probe: 1854466 – Antares

On station: 25/08/2019 05:44 UTC  
Instrument on surface:25/08/2019 07:42 UTC  
Deployment location: 54.044897 N 158.588083 W  
Water depth (b.s.l.): 4600.00 m  
Time on station: 2 h 16 min  
Depart station: 25/08/2019 08:00 UTC

**Site: LA33**

Sensor: 2593  
Seismic Logger: 3066  
Hydrophone: 768015  
APG: 121760  
Temperature Probe: 1854490 - Antares  
On station: 25/08/2019 10:21 UTC  
Instrument on surface:25/08/2019 12:35 UTC  
Deployment location: 54.152771 N 158.114296 W  
Water depth (b.s.l.): 4493.00 m  
Time on station: 2 h 39 min  
Depart station: 25/08/2019 13:00 UTC

**Site: LA31**

Sensor: 742  
Seismic Logger: 3064  
Hydrophone: 768011  
APG: 121759  
Temperature Probe: none  
On station: 25/08/2019 15:08 UTC  
Instrument on surface:25/08/2019 18:00 UTC  
Deployment location: 53.802600 N 157.861031 W  
Water depth (b.s.l.): 5292.00 m  
Time on station: 2 h 08 min  
Depart station: 25/08/2019 18:16 UTC

**Site: LA29**

Sensor: 759  
Seismic Logger: 3069  
Hydrophone: none  
APG: 121757  
Temperature Probe: 1854658 – Antares  
On station: 25/08/2019 21:31 UTC  
Instrument on surface:25/08/2019 23:17 UTC  
Deployment location: 54.291840 N 157.370453 W  
Water depth (b.s.l.): 4403.00 m  
Time on station: 2 h 10 min  
Depart station: 25/08/2019 23:41 UTC



**Site: LA27**

Notes: Attempted to communicate numerous times. Sent burn enable numerous times. LA27 never acknowledged successful communications. We waited for ~3 hours and never saw the OBS on the surface. Left station, OBS may still be on seafloor perhaps damaged due to glass ball implosion.

Sensor: 2518

Seismic Logger: 3071

Hydrophone: 768027

APG: 121754

Temperature Probe: none

On station: 26/08/2019 02:53 UTC

Instrument on surface: N.A.

Deployment location:

Water depth (b.s.l.):

Time on station: 3 h 11 min

Depart station: 24/08/2019 06:04 UTC

**Site: LA21**

Notes: initial rise speed was extremely slow ~5 m/min. Rise speed increased when second weight was finally released. No problems with flotation or flooding of the pressure cases was found on recovery. The most likely cause of the slow initial rise rate is considerable mud had been deposited on the instrument, perhaps due to a turbidity current.

Sensor: 654

Seismic Logger: 3078

Hydrophone: 768031

APG: 129511

Temperature Probe: none

On station: 26/08/2019 11:50 UTC

Instrument on surface: 26/08/2019 15:12 UTC

Deployment location: 54.369118 N 155.073511 W

Water depth (b.s.l.): 5093.00 m

Time on station: 5 h 09 min

Depart station: 26/08/2019 15:59 UTC

**Site: LA23**

Notes:

Sensor: 2279

Seismic Logger: 3151

Hydrophone: 768035

APG: 116584

Temperature Probe: 1854656 – Antares

On station: 26/08/2019 19:27 UTC

Instrument on surface: 26/08/2019 22:00 UTC

Deployment location: 54.916633 N 155.241133 W  
Water depth (b.s.l.): 3977.00 m  
Time on station: 3 h 03 min  
Depart station: 26/08/2019 22:30 UTC

**Site: LA22**

Sensor: 3760  
Seismic Logger: 3760  
Hydrophone: 768019  
APG: 117992  
Temperature Probe: 1854484 – Antares  
On station: 27/08/2019 00:29 UTC  
Instrument on surface: 27/08/2019 01:31 UTC  
Deployment location: 55.257568 N 155.152951 W  
Water depth (b.s.l.): 2161.00 m  
Time on station: 1 h 20 min  
Depart station: 27/08/2019 01:51 UTC

**Site: LD42**

Sensor: 2521  
Seismic Logger: 3134  
Hydrophone: none  
DPG: 25  
Temperature Probe: S9412 – Iceland, 20233114 – Tidbit  
On station: 27/08/2019 04:15 UTC  
Instrument on surface: 27/08/2019 04:45 UTC  
Deployment location: 55.549885 N 154.671428 W  
Water depth (b.s.l.): 982.00 m  
Time on station: 0 h 50 min  
Depart station: 27/08/2019 05:05 UTC

**Site: LD41**

Sensor: 2356  
Seismic Logger: 3086  
Hydrophone: none  
DPG: 043  
Temperature Probe: 1854413 – Antares, 20233127 – Tidbit  
On station: 27/08/2019 13:58 UTC  
Instrument on surface: 27/08/2019 15:40 UTC  
Deployment location: 54.521943 N 153.407360 W  
Water depth (b.s.l.): 4293.00 m  
Time on station: 2 h 02 min  
Depart station: 27/08/2019 16:00 UTC

**Site: LD38**

Sensor: 740

Seismic Logger: 3162

Hydrophone: none

DPG: 39

Temperature Probe: 1854483 – Antares, 20233129 – Tidbit

On station: 27/08/2019 22:43 UTC

Instrument on surface: 28/08/2019 00:41 UTC

Deployment location: 55.164906 N 151.675604 W

Water depth (b.s.l.): 4053.00 m

Time on station: 2 h 07 min

Depart station: 28/08/2019 00:50 UTC

**Site: LD37**

Sensor: 2357

Seismic Logger: 3167

Hydrophone: none

DPG: 09

Temperature Probe: 1854412 – Antares, 20233130 – Tidbit

On station: 28/08/2019 04:35 UTC

Instrument on surface: 28/08/2019 06:30 UTC

Deployment location: 55.676425 N 151.100481 W

Water depth (b.s.l.): 4818.00 m

Time on station: 2 h 15 min

Depart station: 28/08/2019 06:50 UTC

**Site: LD24**

Notes: Revisited site to attempt communication. Instrument remains unresponsive.

Sensor: 2310

Seismic Logger: 3136

Hydrophone: none

DPG: 47

On station: 28/08/2019 10:32 UTC

Deployment location: 56.033164 N 150.200412 W

Water depth (b.s.l.): 4912 m

Time on station: 2 h 59 min

Depart station: 28/08/2019 13:31 UTC

**Instrument Deployment and Survey Operations**

Acoustic surveys of LT03, LT06, LT08, LT09, LT11, LT14, LT15, LT16, LT18 and LT19 were conducted before deploying Jason to speed location of the instrument on the seafloor. The resurveys resulted in small changes (<100m) to the logged instrument location. Locations are updated in the table in Appendix 2.

**Acknowledgements**

The OBS instruments used in the AACSE are part of the Ocean Bottom Seismograph Instrument Pool ([www.obsip.org](http://www.obsip.org)), which is funded by the National Science Foundation. Instruments recovered during this cruise were designed, maintained and operated by OBS group from Lamont-Doherty Earth Observatory. OBSIP and land data from the project will be archived at the IRIS Data Management Center as soon as possible and will be open to the scientific community immediately upon archival ([www.iris.edu](http://www.iris.edu)). We thank the Captain Diego Mello and the crew of the R/V *Sikuliaq* for their help during recovery.

## **Appendix 1. Glossary of Acronyms and Abbreviations**

AACSE – Alaska Amphibious Community Seismic Experiment

APG – OBS with absolute pressure gauge

DPG – OBS with differential pressure gauge

GPS –A – global position system – acoustics

OBS – ocean bottom seismometer

POBS – pressure ocean bottom seismometer

SKQ – R/V *Sikuliaq*

TRM – trawl resistant mount ocean bottom seismometer

UAF – University of Alaska, Fairbanks

CI-DTM – Carnegie Institution – Department of Terrestrial Magnetism

Colgate – Colgate University

Cornell – Cornell University

LDEO – Lamont-Doherty Earth Observatory

UT-Austin – University of Texas, Austin

USGS – United States Geological Survey

WashU – Washington University in St. Louis

WHOI – Wood’s Hole Oceanographic Institution

## Appendix 2. Instrument Summary

\*Lat, Long for TRM: on bottom

Revision Sept. 25,2019 with new TRM renav

OBS location for deep water is renavigated position if typeface is small.

Station	Instrument	Lat* N	Long* W	Date (UTC)	Time (UTC)	Water depth (m)	
GPSA3	west	55.024908	156.736306	43233	0.86597222	1176	Fetch to be replaced
LA21	3078	54.369118	-155.07351	43242	0.66319444	5113	
LA22	3760	55.257568	-155.15295	43243	0.72152778	2130	
LA23	3151	54.916341	155.237562	43243	0.52083333	3967	
LA25	3141	54.89005	-155.94084	43234	0.58333333	2622	
LA26	3076	54.512878	-156.2561	43242	0.29513889	5103	
LA27	3071	53.98546	156.632035	43242	0.01319444	5176	not recovered no contact
LA28	3149	54.898337	-156.60304	43234	0.77569444	1852	
LA29	3069	54.29184	-157.37045	43241	0.73958333	4408	
LA30	3144	54.672698	-157.42032	43235	0.12916667	1564	
LA31	3064	53.8026	-157.86103	43241	0.40555556	5316	
LA32	3140	54.498254	-157.85221	43235	0.29791667	1595	
LA33	3066	54.152771	-158.1143	43241	0.21319444	4478	
LA34	3068	54.044897	-158.58808	43240	0.88402778	4612	
LA39	3137	56.882703	-151.0011	43247	0.77916667	1628	
LD24	3136	56.033071	150.199447	43246	0.02291667	4912	not recovered no contact
LD35	3166	54.249511	-158.87199	43236	0.21458333	1993	
LD36	3079	55.252416	-155.75246	43234	0.33472222	935	
LD37	3167	55.676425	-151.10048	43245	0.74236111	4826	
LD38	3162	55.164906	-151.6756	43245	0.47291667	4043	
LD40	3133	56.30374	-152.41023	43245	0.09722222	1055	
LD41	3086	54.521943	-153.40736	43243	0.05486111	4284	
LD42	3134	55.549885	-154.67143	43243	0.93888889	969	
LD43	3081	53.95375	-160.8457	43239	0.89236111	2324	not recovered no contact
LD44	3085	53.830194	-159.77362	43240	0.58958333	4675	
LD45	3165	54.102518	-159.88291	43240	0.41111111	2019	
LT01	3142	56.775555	152.522757	43244	0.92777778	156	
LT02	3159	56.693216	153.261046	43244	0.78819444	152	
LT03	3139	57.8668	154.1665	43230	0.65625	202	
LT04	3150	56.111769	154.444618	43244	0.12222222	157	
LT05	3056	56.823024	155.346907	43231	0.86180556	236	
LT06	3143	56.21666	155.9979	43232	0.26111111	225	Upside down. Jason corrected longitude, bottom survey
LT07	3146	56.671183	156.119948	43232	1.08	262	
LT08	3161	55.5883	156.5975	43233	0.42013889	246	
LT09	3160	55.1215	157.13892	43234	0.99166667	151	Upside down
LT10	3135	55.6251	157.3251	43233	0.27569444	98	
LT11	3138	56.1202	157.3355	43232	0.49652778	162	Upside down
LT12	3061	55.207	157.778	43233	0.11875	83	
LT13	3169	54.843925	158.34662	43235	0.52847222	203	
LT14	3158	55.69978	158.03025	43232	0.725	125	
LT15	3163	55.20023	158.3598	43233	0.01319444	167	
LT16	3050	55.491596	158.601325	43232	0.84513889	125	
LT17	3168	54.567719	160.201555	43236	0.61875	114	
LT18	3084	54.74005	160.5814	43237	0.24444444	115	upside down
LT19	3159	54.45988	160.99978	43236	0.82708333	125	not recovered, line failure, rightside up
LT20	3148	54.8002	161.3746	43237	0.02013889	150	
POBS1	1	56.882357	-151.00456	43247	0.87638889	1641	
POBS2	2	56.880306	-151.00526	43247	0.91458333	1655	

### Appendix 3: Jason Daily Reports

## ROV Jason Daily Report

*Cruise Number: SKQ201918S*

*Dive number: J2-1202*

*Chief Scientist: Spahr Webb*

*Report Date: 8/13/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 20-25 knots with 4-6 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Recover TRM #LT01

**Reason for Dive Termination: TRM Acquired**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0

**Completed Dive Summaries:**

**Vehicle Status:** Flex link ground. No impact as we used it during connection.

**Weather Forecast:**

**Expedition Leader Comments:** Tire worked well but 2" bend radius for 7700 lb. BS Amsteel reduced strength enough that we lost package/TRM with a moderate heave very

close to surface. As we believe TRM is inverted on bottom we are launching line elevator to connect and recover.

**Chief Scientist Comments:** Dive went very well up until final seconds. The TRM LT01 was found, latched into without difficulty and brought to the surface. Pre-cruise planning with Jason group yielded a good solution to latching into the TRM in a stable manner. Line broke during a modest jerk at the surface due to wave action. Line on winch was somewhat marginal given the weight of TRM. The TRM was moving slightly during ascent, possibly causing wear. Post-dive assessment yielded a plan to replace the line on winch with a heavier line and to maintain some pressure on winch hydraulics to prevent loosening of line to the TRM.

**Contact Numbers:**

<b>WHOI/NDSF</b>	<b>Vessel Other</b>
<b>Voice: 508 289 3445 (Cathy Offinger)</b>	
<b>Mobile: 774 392 2986 (Matt Heintz)</b>	
<b>Email: mheintz@whoi.edu</b>	

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1203*

*Chief Scientist: Spahr Webb*

*Report Date: 8/13/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 20-25 knots with 5-7 foot seas**

**Dive Times: GMT**



**Dive Activities/Future Activities:** Recover TRM #LT01 with line elevator

**Reason for Dive Termination:** Line elevator attached and released

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/13	157	00:15	00:30	2:02	2:47	4:33	

**Vehicle Status:** Vehicle working well

**Weather Forecast:**

**Expedition Leader Comments:** Good dive. Everything went well. Acquired TRM. Fetched line elevator and hooked up to TRM. Released manually and recovered vehicle.

**Chief Scientist Comments:** Well executed dive attaching line spool elevator for recovery of TRM.

**Contact Numbers:**

**WHOI/NDSF**

**Vessel Other**

**Voice: 508 289 3445 (Cathy Offinger)**

**Mobile: 774 392 2986 (Matt Heintz)**

**Email: mheintz@whoi.edu**

## **ROV Jason Daily Report**

**Cruise Number:** SKQ201918S

**Dive number:** J2-1204

**Chief Scientist:** Spahr Webb

**Report Date:** 8/14/2019

**Expedition Leader:** Alberto Collasius Jr.

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**  
**Weather: 10-15 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Recover TRM #LT02

**Reason for Dive Termination: Connection made to TRM**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Everything went well. Acquired TRM. Connected to it and recovered.

**Chief Scientist Comments:** Well executed dive for recovery of TRM beneath Jason. TRM was found, latched on to, winched beneath Jason and brought to surface. Changing the line on the winch yielded a successful TRM recovery. Applying constant hydraulic pressure to winch provided a very stable connection between the TRM and the tire mounted beneath Jason.

**Contact Numbers:**

**WHOI/NDSF**  
**Voice: 508 289 3445 (Cathy Offinger)**

**Vessel Other**

**Mobile: 774 392 2986 (Matt Heintz)**  
**Email: mheintz@whoi.edu**

## ROV Jason Daily Report

*Cruise Number: SKQ201918S*

*Dive number: J2-1205*  
*Chief Scientist: Spahr Webb*

*Report Date: 8/15/2019*  
*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**  
**Weather: 10-15 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Recover TRM #LT03

**Reason for Dive Termination: Connection made to TRM**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	4/15	232	00:25	00:24	00:38	1:27	3:43	

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Everything went well. Acquired TRM. Connected to it and recovered.

**Chief Scientist Comments:** Dive went very well. No issues. Position was determined pre-dive using acoustics from ship.

**Contact Numbers:**

<b>WHOI/NDSF</b>	<b>Vessel Other</b>
<b>Voice: 508 289 3445 (Cathy Offinger)</b>	
<b>Mobile: 774 392 2986 (Matt Heintz)</b>	
<b>Email: mheintz@whoi.edu</b>	

## **ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1206*

*Chief Scientist: Spahr Webb*

*Report Date: 8/15/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 10-15 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Recover TRM #LT03

**Reason for Dive Termination: Connection made to TRM**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	4/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	4/15	198	00:19	00:54	00:24	1:37	9:21	

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Everything went well. Acquired TRM. Connected to it and recovered.

**Chief Scientist Comments:** Dive went very well. No problems.

**Contact Numbers:**

**WHOI/NDSF**

**Vessel Other**

**Voice: 508 289 3445 (Cathy Offinger)**

**Mobile: 774 392 2986 (Matt Heintz)**

**Email: mheintz@whoi.edu**

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1207*

*Chief Scientist: Spahr Webb*

**Report Date:** 8/16/2019

**Expedition Leader:** Alberto Collasius Jr.

**Prepared By:** Expedition Leader

**Vessel Location:** Gulf of Alaska

**Weather:** 10-15 knots with 3-5 foot seas

**Dive Times:** GMT

**Dive Activities/Future Activities:** Recover TRM #LT06

**Reason for Dive Termination:** Connection made to TRM with line elevator

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. TRM inverted so launched line elevator and attached.

**Chief Scientist Comments:** Dive went very well despite very strong currents that made Jason operations challenging. After LT06 was found inverted, the line elevator was deployed up current, located with Jason, moved and attached to LT06. Release pin was pulled to elevator, Jason retrieved and LT06 lifted using elevator line.

**Contact Numbers:**

**WHOI/NDSF**

**Vessel Other**

**Voice: 508 289 3445 (Cathy Offinger)**  
**Mobile: 774 392 2986 (Matt Heintz)**  
**Email: mheintz@whoi.edu**

## ROV Jason Daily Report

*Cruise Number: SKQ201918S*

*Dive number: J2-1208*

*Chief Scientist: Spahr Webb*

*Report Date: 8/16/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 10-15 knots with 3-5 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Recover TRM #LT08

**Reason for Dive Termination:** Connection made to TRM with winch.

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	4/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	4/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	4/16	223	00:21	00:41	2:48	3:50	20:25	

J2-1208	4/17	243	00:36	00:24	00:34	1:34	9:07
---------	------	-----	-------	-------	-------	------	------

**Completed Dive Summaries:**

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Lost package 5 meters from surface. Line broke at knot.

**Chief Scientist Comments:** The TRM was found and latched onto the bottom of Jason despite very strong current. The TRM appears to be a little too heavy and large for the winch and lifting line. A small snap roll near the surface resulted in the line parting and the TRM falling to the seafloor. The TRM will be recovered using Jason to attach the line spool elevator later in this cruise.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1209*

*Chief Scientist: Spahr Webb*

*Report Date: 8/17/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*



**Vessel Location: Gulf of Alaska**  
**Weather: 18-25 knots with 4-6 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Nudge pop up on TRM11

**Reason for Dive Termination: Pop up released from TRM**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	4/13	158	00:25	00:18	2:06	2:49		0
J2-1203	4/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	4/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	4/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	4/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	4/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	4/17	243	00:36	00:24	00:34	1:34	9:07	

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Didn't get the drift quite right so getting to TRM took a bit longer than planned. Visibility was awful. Got to TRM and observed float had been released but hung up somehow. Gave it a gentle nudge and it flew right into light bar. Quick action from the pilot and engineer allowed us to clear and stay clear. LAR went very well.

**Chief Scientist Comments:** Pop-up float was stuck just out of the canister. The float rose after a small nudge from the Jason arm. A changing current direction during the dive was noted and corrected for

so that the pop-up buoy appeared at the surface safely aft of the ship's stern and far from Jason and its cable.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobil e:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1210*

*Chief Scientist: Spahr Webb*

*Report Date: 8/17/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 5-10 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT14

**Reason for Dive Termination: Connected to Line elevator**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
-----------------	--------------	------------------	-------------------------	------------------------	------------------------	-----------------------	---------------------	--

J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	

**Completed Dive Summaries:**

**Vehicle Status:** Vehicle working very well

**Weather Forecast:**

**Expedition Leader Comments:** Dive went well. Got a fix on LT14 and dropped elevator. Connected and recovered

**Chief Scientist Comments:** Dive went well.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1211*

*Chief Scientist: Spahr Webb*

*Report Date: 8/18/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 5-10 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT09

**Reason for Dive Termination: Connected to Line elevator**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	

J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52
---------	------	-----	-------	-------	-------	------	-------

**Completed Dive Summaries:**

**Vehicle Status:** Loss of light for pre dive on 1 fiber. Went composite.

**Weather Forecast:**

**Expedition Leader Comments:** Got a fix on LT09 and dropped elevator. Launched vehicle got connected and recovered

**Chief Scientist Comments:** Dive went well. Uneventful.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

## **ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1212*

*Chief Scientist: Spahr Webb*

*Report Date: 8/19/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 5-10 knots with 2-4 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT08

**Reason for Dive Termination:** Connected to Line elevator

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Got a fix on LT08 and dropped elevator. Launched vehicle got connected and recovered

**Chief Scientist Comments:** Dive went well despite very strong currents.

**Contact Numbers:**

**WHOI/NDSF**  
**Voice: 508 289 3445 (Cathy Offinger)**  
**Mobile: 774 392 2986 (Matt Heintz)**  
**Email: mheintz@whoi.edu**

**Vessel Other**

### ROV Jason Daily Report

*Cruise Number: SKQ201918S*

*Dive number: J2-1213*

*Chief Scientist: Spahr Webb*

*Report Date: 8/20/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 15-20 knots with 3-5 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Replace MPL014 Benchmark OBS

**Reason for Dive Termination: Goals accomplished**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	

J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	

**Completed Dive Summaries:**

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Used our Sonardyne system to release and track old transponder to surface. Then tracked new one to seafloor and installed.

**Chief Scientist Comments:** We first used the sonardyne system to acquire, release and track the fetch transponder on benchmark MPL014 for recovery on the surface. Tracking to the surface was critical as the small fetch transponder was difficult to locate on the surface. The replacement transponder was hung below the surface to confirm acoustic tracking and then dropped, falling within 80m of the benchmark. Jason was used to carry the transponder to the benchmark and to place the transponder onto the benchmark in the correct orientation and with the three centering pins falling into three grooves to align the transponder precisely on the benchmark without disturbing the benchmark. A very successful dive.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobil e:</b>	<b>774 392 2986 (Matt Heintz)</b>		



**Email: mheintz@whoi.edu**

## ROV Jason Daily Report

*Cruise Number: SKQ201918S*

*Dive number: J2-1214*

*Chief Scientist: Spahr Webb*

*Report Date: 8/21/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 10-15 knots with 3-5 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT14

**Reason for Dive Termination: Goals accomplished**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	

J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	
J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	

**Completed Dive Summaries:**

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Dropped elevator, connected and recovered

**Chief Scientist Comments:** A well executed dive with big schools of fish all around Jason.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

**Dive number:** J2-1215  
**Chief Scientist:** Spahr Webb

**Report Date:** 8/21/2019  
**Expedition Leader:** Alberto Collasius Jr.

**Prepared By:** Expedition Leader

**Vessel Location:** Gulf of Alaska  
**Weather:** 10-15 knots with 3-5 foot seas

**Dive Times:** GMT

**Dive Activities/Future Activities:** Attach line elevator to LT15

**Reason for Dive Termination:** Goals accomplished

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	

J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	
J2-1215	8/21	168	00:18	00:22	00:41	1:21	5:22	

**Completed Dive Summaries:**

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Dropped elevator, connected and recovered

**Chief Scientist Comments:** A well executed dive. Work accomplished remarkably quickly.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

## **ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1216*

*Chief Scientist: Spahr Webb*

*Report Date: 8/21/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**  
**Weather: 15-20 knots with 4-6 foot seas**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT16

**Reason for Dive Termination: Goals accomplished**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	
J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	
J2-1215	8/21	168	00:18	00:22	00:41	1:21	5:22	
J2-1216	8/21-8/22	169	00:15	00:17	1:00	1:32	4:40	

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Great dive. Dropped elevator, connected and recovered

**Chief Scientist Comments:** A well executed dive despite very poor visibility.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

## **ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1217*

*Chief Scientist: Spahr Webb*

*Report Date: 8/22/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location:** Gulf of Alaska

**Weather:** 10-15 knots with a few different swells as large as 6'

**Dive Times:** GMT

**Dive Activities/Future Activities:** Attach line elevator to LT18

**Reason for Dive Termination: Goals accomplished**

**Completed Dive Summaries:**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0
J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	
J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	
J2-1215	8/21	168	00:18	00:22	00:41	1:21	5:22	
J2-1216	8/21-8/22	169	00:15	00:17	1:00	1:32	4:40	

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Good dive. Dropped elevator connected and recovered. Tested backup MRU and modified topside software

**Chief Scientist Comments:** TRM was found and elevator attached without any problems.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel</b>	<b>Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>		
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>		
<b>Email:</b>	<b>mheintz@whoi.edu</b>		

**ROV Jason Daily Report**

*Cruise Number: SKQ201918S*

*Dive number: J2-1218*

*Chief Scientist: Spahr Webb*

*Report Date: 8/23/2019*

*Expedition Leader: Alberto Collasius Jr.*

*Prepared By: Expedition Leader*

**Vessel Location: Gulf of Alaska**

**Weather: 10-15 knots with a few different swells as large as 6'**

**Dive Times: GMT**

**Dive Activities/Future Activities:** Attach line elevator to LT19

**Reason for Dive Termination: Goals accomplished**

<b>Dive No.</b>	<b>Dates</b>	<b>Max Depth</b>	<b>Hours Descending</b>	<b>Hours Ascending</b>	<b>Hours on Bottom</b>	<b>Hours in water</b>	<b>Time On Deck</b>	<b>Time on Deck not available to science</b>
J2-1202	8/13	158	00:25	00:18	2:06	2:49		0



J2-1203	8/14	157	00:15	00:30	2:02	2:47	4:33	
J2-1204	8/15	262	1:26	00:27	00:52	2:45	18:40	
J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	
J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	
J2-1215	8/21	168	00:18	00:22	00:41	1:21	5:22	
J2-1216	8/21-8/22	169	00:15	00:17	1:00	1:32	4:40	

**Completed Dive Summaries:**

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Good dive. Dropped elevator connected and recovered.

**Chief Scientist Comments:** Dive went well. TRM was found and elevator attached without any problems.

**Contact Numbers:**



J2-1205	8/15	232	00:25	00:24	00:38	1:27	3:43	
J2-1206	8/15	198	00:19	00:54	00:24	1:37	9:21	
J2-1207	8/16	223	00:21	00:41	2:48	3:50	20:25	
J2-1208	8/17	243	00:36	00:24	00:34	1:34	9:07	
J2-1209	8/17	158	00:15	00:20	1:57	2:32	11:25	
J2-1210	8/18	126	00:15	00:14	2:32	3:01	6:57	
J2-1211	8/19	149	00:18	00:27	00:42	1:27	21:52	
J2-1212	8/19	243	00:31	00:33	1:33	2:37	9:46	
J2-1213	8/20	1174	1:06	1:00	00:58	3:04	24:17	
J2-1214	8/21	201	1:40	00:21	00:40	2:41	11:13	
J2-1215	8/21	168	00:18	00:22	00:41	1:21	5:22	
J2-1216	8/21-8/22	169	00:15	00:17	1:00	1:32	4:40	
J2-1217	8/23	116	00:20	00:21	1:04	1:43	25:44	
J2-1218	8/23	125	00:14	00:20	00:47	01:21	04:24	
J2-1219	8/24	2380	01:46	01:31	03:29	06:46	19:08	

**Completed Dive Summaries:**

**Vehicle Status:** Working well.

**Weather Forecast:**

**Expedition Leader Comments:** Good dive. Dropped elevator, started looking for OBS. Failed to locate and recovered both Jason and Elevator

**Chief Scientist Comments:** This OBS had had very poor acoustics during the deployment leg, both boards were difficult to enable, and to hear. Thus it was unclear whether the instrument was simply gone due

to some failure, or if the acoustics had just completely failed. We thus made an attempt to locate the OBS on the seafloor expecting the OBS would be a good sonar target. We found a seafloor with a thick carpet of soft sediment, however the sonar detected a number of strong targets that proved to be isolated rocks on the surface and otherwise ledges of rock under the sediment. We did a grid search over an area of about 300 x 300m without the finding the OBS. The accuracy of the position of the OBS was poor, given the difficulty we had had in ranging to the OBS during the deployment leg. It is possible we simply didn't cover a big enough area to find the OBS, although the search area size was governed by what seemed reasonable estimate of the errors.

**Contact Numbers:**

	<b>WHOI/NDSF</b>	<b>Vessel Other</b>
<b>Voice:</b>	<b>508 289 3445 (Cathy Offinger)</b>	
<b>Mobile:</b>	<b>774 392 2986 (Matt Heintz)</b>	
<b>Email:</b>	<b>mheintz@whoi.edu</b>	