**ROV** **Jason** **Daily Report**

**Cruise Number:** RR 1902

**Dive number:** J2-1124  
**Chief Scientist: Evan Soloman**

**Report Date: 2/13/2019**  
**Expedition Leader:** Alberto Collasius Jr.

**Prepared By:** Expedition Leader

**Vessel Location: Pacific 38 35.28s 178 45.92 e**  
**Position: Weather: Getting better**

**Dive Times:** GMT

**Dive Activities/Future Activities**:

Explore site for Mosquito deployment and deploy. Push cores. Niskin. Explore 2nd site for CAT deployment and deploy.

**Reason for Dive Termination: Objectives completed**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Dive No.** | **Dates** | **Max Depth** | **Hours Descending** | **Hours Ascending** | **Hours on Bottom** | **Hours in water** | **Time On Deck** | **Time on Deck not available to science** |
| J2-1113 | 01/28/2019 | 2405 | 2:43 | 1:50 | 15:41 | 20:14 |  | 0 |
| J2-1114 | 01/29/2019 | 1985 | 1:47 | 1:39 | 1:27 | 4:53 | 5:59 | 0 |
| J2-1115 | 01/30/2019 | 1229 | 00:58 | 1:05 | 6:13 | 8:16 | 22:25 | 22:25 |
| J2-1116 | 1/30-1/31/2019 | 1983 | 1:20 | 1:38 | 6:07 | 9:06 | 2:58 | 0 |
| J2-1117 | 2/2 – 2/3/2019 | 1907 | 1:31 | 1:05 | 9:08 | 11:44 | 68:14 | 0 |
| J2-1118 | 2/3 -2/4/2019 | 1075 | 0:56 | 0:45 | 14:12 | 15:53 | 4:14 | 0 |
| J2-1119 | 2/5/2019 | 968 | 0:58 | 0:42 | 5:04 | 6:44 | 19:36 | 0 |
| J2-1120 | 2/7/2019 | 872 | 0:47 | 0:52 | 9:57 | 11:36 | 42:06 | 0 |
| J2-1121 | 2/8/2019 | 181 | 0:19 | 0:19 | 6:03 | 6:41 | 10:52 | 0 |
| J2-1122 | 2/8 – 2/9/2019 | 1023 | 0:50 | 1:00 | 5:12 | 7:02 | 10:24 | 10:24 |
| J2-1123 | 2/9/2019 | 187 | 0:17 | 0:23 | 3:43 | 4:23 | 1:29 | 0 |
| J2-1124 | 2/11-2/12/2019 | 2514 | 1:31 | 1:44 | 8:01 | 11:16 | 63:39 | 0 |

**Completed Dive Summaries:**  
**Vehicle Status: Vehicle working well. No problems.**

**Weather Forecast:**

A weakening cold front will approach the work site later today into tonight. Winds will be quite light and variable ahead of the front. A bit more SW breeze behind the front Wed but still overall light winds. Broad high pressure will continue to be close to the SE and SW ahead of and behind this front. The next front will bring fresher NNE to N winds later Thu. Winds become SW and lighter behind it for Fri. Both fronts will not have much weather with them, just some cloudiness. Seas look pretty reasonable over the next few days with no real big swell and limited wind waves. Will continue to watch the tropics to the north, but it continues to look like activity will not bother the work site.

#### Expedition Leader Comments: Another very good dive. All objectives completed.

**Chief Scientist Comments:** This dive focused on two fault zones near the deformation front with elevated heat flow determined from ship-deployed violin-style heat flow probe measurements. The dive started at the seafloor expression of the fourth splay fault landward of the deformation front at the northern Hikurangi subduction zone. We conducted an ~2-hour reconnaissance survey of the area and deployed Mosquito fluid flow meter 19-8 adjacent to the location of the heat flow measurement and a gravity core collected earlier in the expedition. We collected a push core for shore-based porosity measurements before transiting ~1.5-km to the surface expression of the next splay fault downslope in a region of elevated heat flow. We conducted a short reconnaissance survey of the area and deployed CAT fluid flow meter 19-4. A push core was collected for porosity measurements. A Niskin bottom water sample was collected before returning to the surface.

**Contact Numbers:**

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| --- | --- | --- | --- |
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