

NDSF Vehicle Operations Summary

NDSF NATIONAL
DEEP SUBMERGENCE
FACILITY



Alvin Operations Summary



3 cruises

- East Pacific Rise (Dec/Jan 2019/2020)
- Gulf of Mexico (Feb 2020)
- Gulf of Mexico/Eastern Seaboard (Feb/Mar 2020)

85 operating days

26 Sylvan/Mullineaux/Fornari

- *Microbiology - Superb cruise with concurrent Sentry/Alvin Ops*

13 McClain

- Biology - Excellent cruise although two days lost to fog in-port resulting in no engineering dive time – all remaining dives to science

22 Young

- Biology - Excellent cruise overcoming many weather and clearance challenges

27 dives

- 12 Sylvan (2,500m)
- 6 McClain (2000m)
- 9 Young (380m – 3300m)



204 hours submerged

154 hours on bottom

5.43 hours average bottom time per dive

Sentry Operations Summary

- **26 operating days**
- **1 Cruise Completed**
 - Mapping EPR (w/Alvin)
- **11 dives**
- **Total survey time:** 109 hrs
- **Total Survey coverage:** 391 km
- **Vessels:** R/V Atlantis
- **COVID-19 Impacts:**
 - 3 cruises canceled (Beinart/Resing/Boetcher)
 - Over 130 operating days lost
 - Over 1 month delay in return of system
 - lengthy Logistics meetings and planning
 - 2 cruises remaining for the year



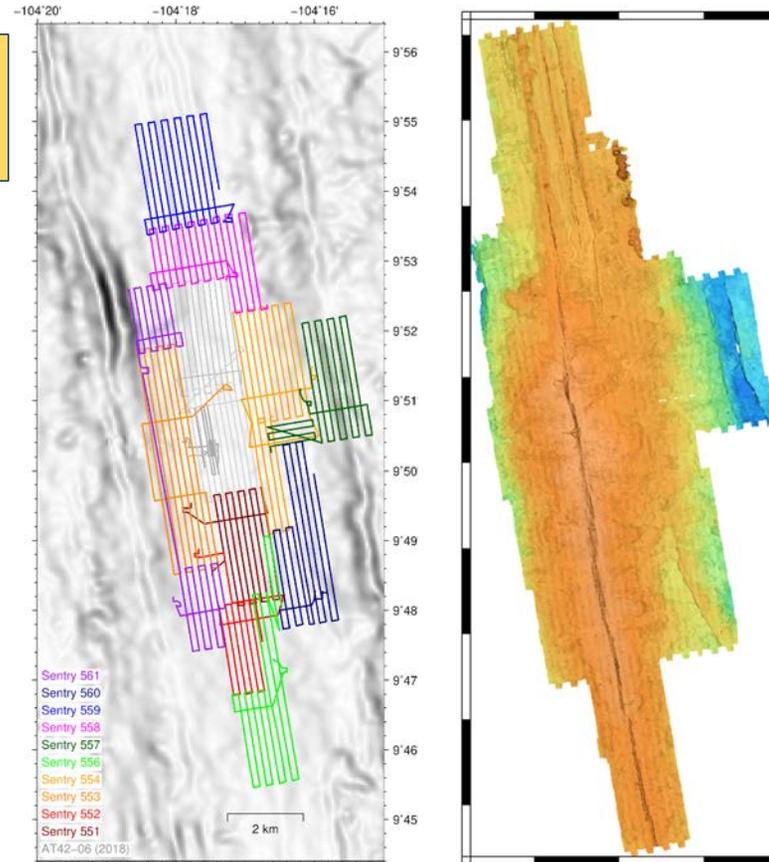
Sentry mission planning document created this year



Sentry Operations out of Newport Oregon 2019

Sentry Operation Highlights

- **11 Dives** on EPR extending high resolution survey.
- Sylvan cruise first science cruise relying on new Kongsberg MB. **Kongsberg system operated very well.**
- One dive extended on Sylvan cruise following a **successful joint-ops with Alvin.**
- Successful merge of two cruises worth of multibeam.
- Waveglider operations (WG had some HW & software issues).



EPR Completed survey and high resolution combined bathy. Credit Dan Fornari, Jason Sylvan, et al

JASON Operations Summary

- ❑ One cruise
- ❑ *Seewald/Lang/Rogers: Carbon at Cayman & Cayman Deep*
- ❑ *Atlantis*
- ❑ *2-body ops*
- ❑ *24 op days*
- ❑ *11 dives 191 hours 36 min in water*
- ❑ *3 cruises deferred due to COVID-19*
 - ❑ *Beinart- deferred till 2021?*
 - ❑ *Engineering- moved to July 2020*
 - ❑ *Gartman-deferred to 2021?*



JASON Highlights

- ❑ New Control Vans received great feedback
- ❑ New 4 k camera interface improved
- ❑ Sentry Kongsberg EM 2040 tested successfully on Jason (was to be used on now deferred Gartman)
- ❑ Sea-log being used extensively, positive feedback

