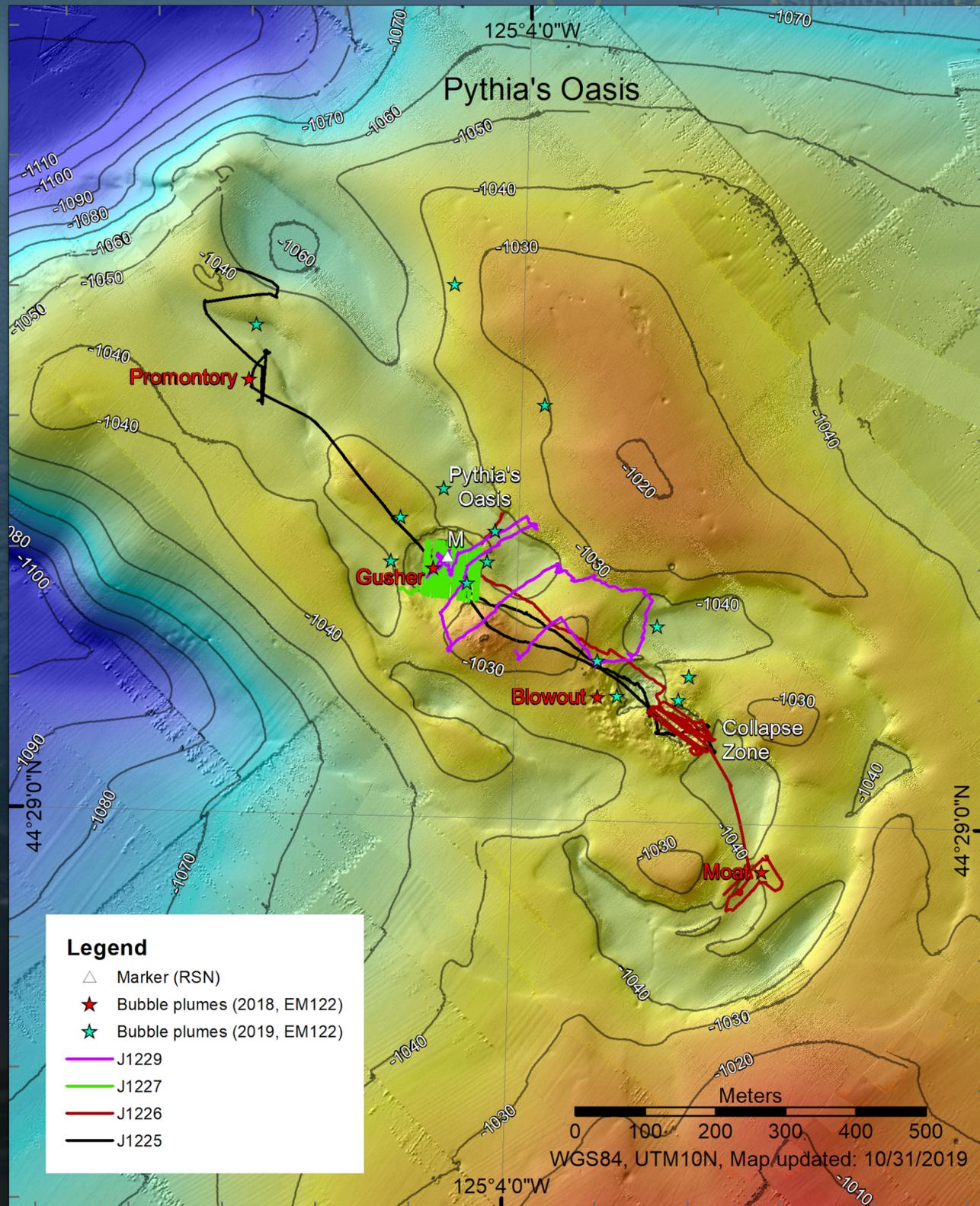


# Pythias Oasis R/V Atlantis, ROV Jason, AUV Sentry, Gravity (Piston) Coring, Heat Flow Sept 14-October 5, 2019

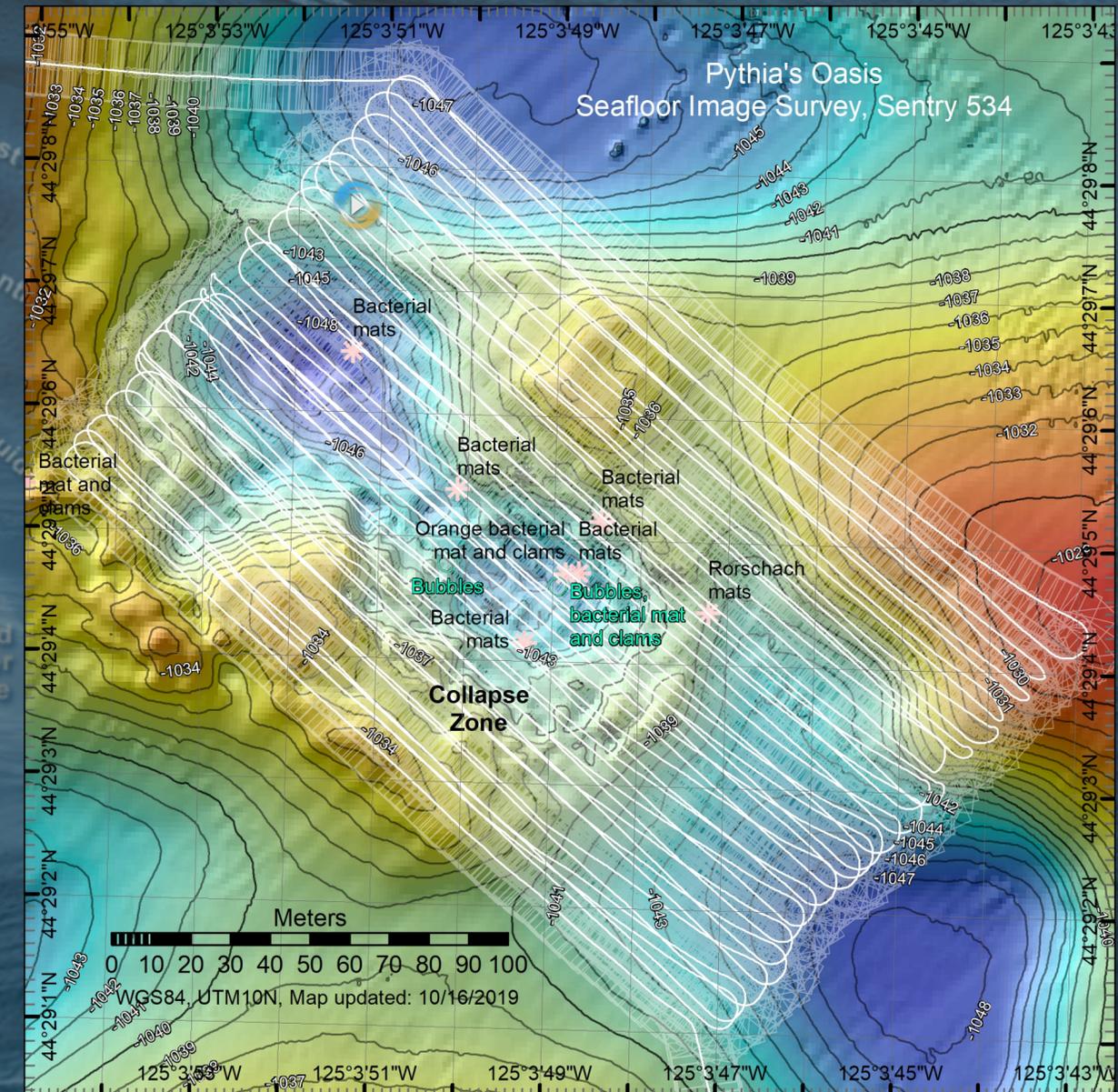
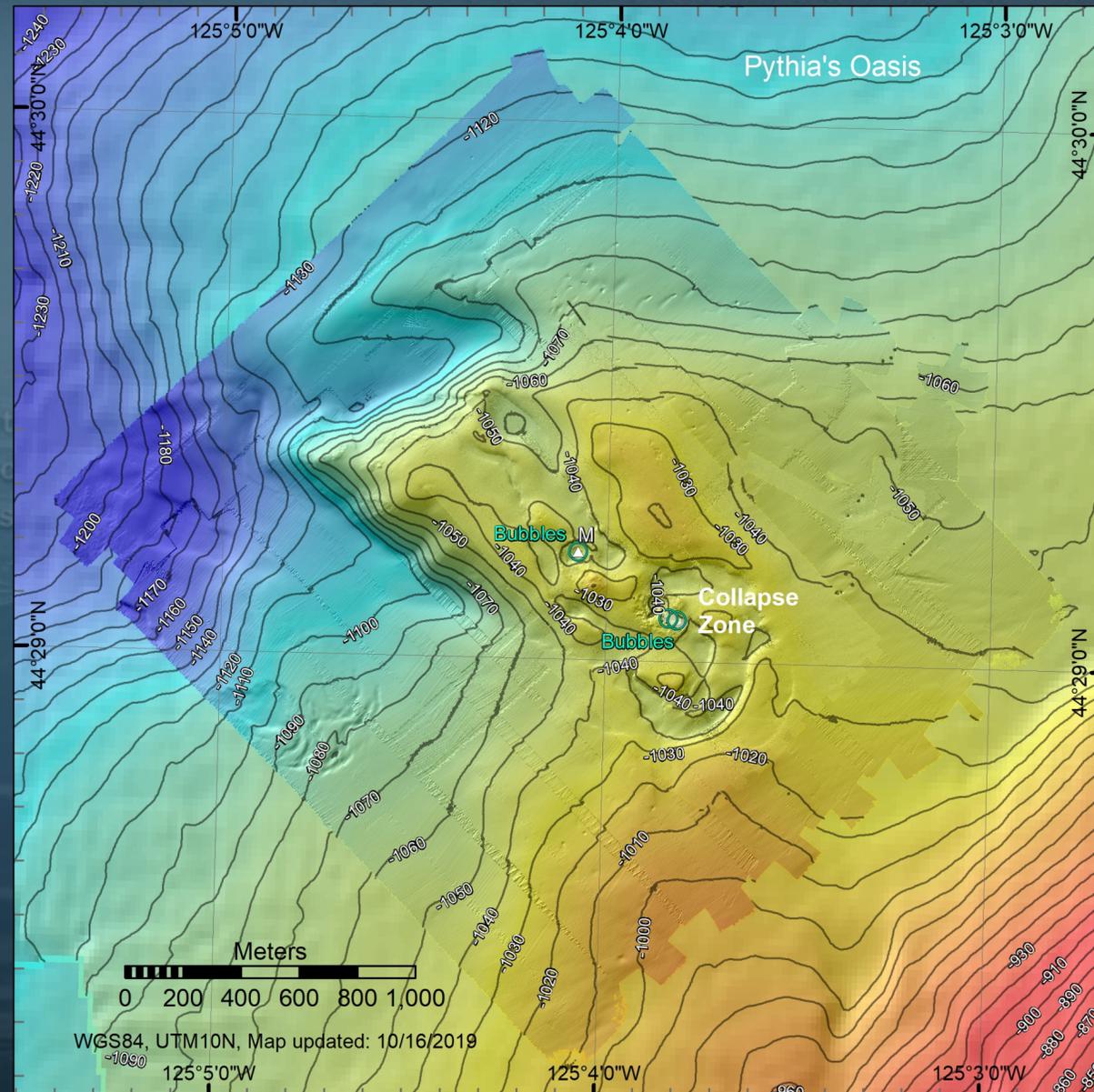
NSF - Collaborative Research: Pythias Oasis – Access to Deep Subduction Zone Fluids D. Kelley, E. Solomon, M. Torres, B. Collier, R. Harris, G. Spinelli UW-OSU

## Major Discovery - A site like no other

- ▶ Emission of low salinity, high iron, methane-saturated fluids, 4 times higher in temperature than background ocean water; continuous venting since discovered in 2014 by Brendan Philip as an UW undergrad
- ▶ Very intense mobilization – aft deck jammed packed, could not walk a straight line anywhere. Gigantic thanks to Captain Derek and Bosun Catfish, and R/V Atlantis crew, and Tina for data delivery and help
- ▶ Jason worked extremely well big thanks to Akel Kevis-Sterling Expedition Lead and team. 4 dives, IGT and Major Samplers, Push Cores, Detailed Photomosaics flying 3 m off bottom, 2.5 m spaced lines
- ▶ Never seen so much gas hydrate in recovered gravity cores – big shout out to Paul Walczak OSU Coring Facility



# AUV Sentry



- ▶ Anticipated 1 m resolution bathymetry map of area first 1-2 days for detailed Jason, Coring, Heat Flow surveys
- ▶ RESON Sonar did not work – resulting in no high resolution (1 - 0.25 m) map until end of cruise so geology not fully characterized
- ▶ Subbottom chirp workflow failed – data 2 months after cruise (data person at sea)
- ▶ Successful Sentry photomosaic surveys 4-5 m off bottom, together with Jason 17,000 images - investigating AI component