

# IODP 1364A Borehole Geophysical Observatory Installation

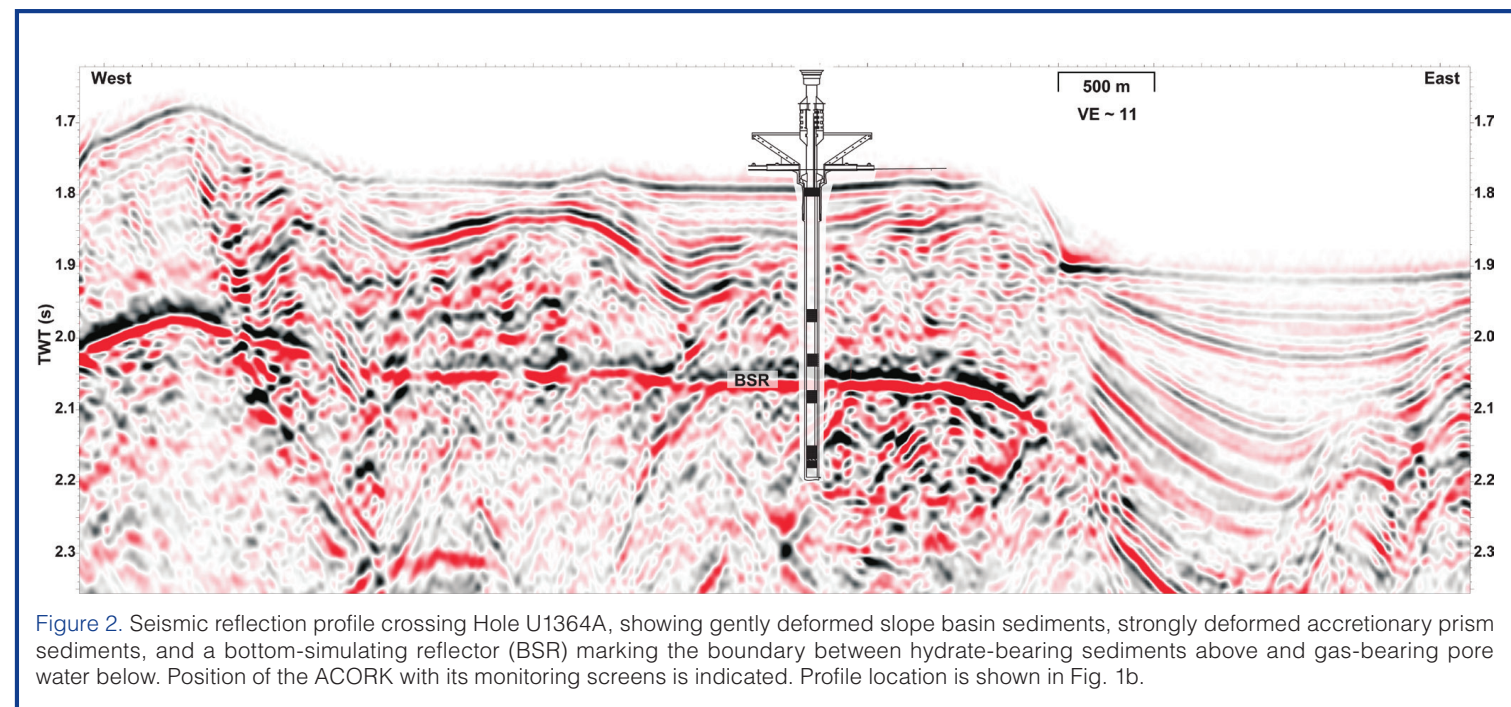
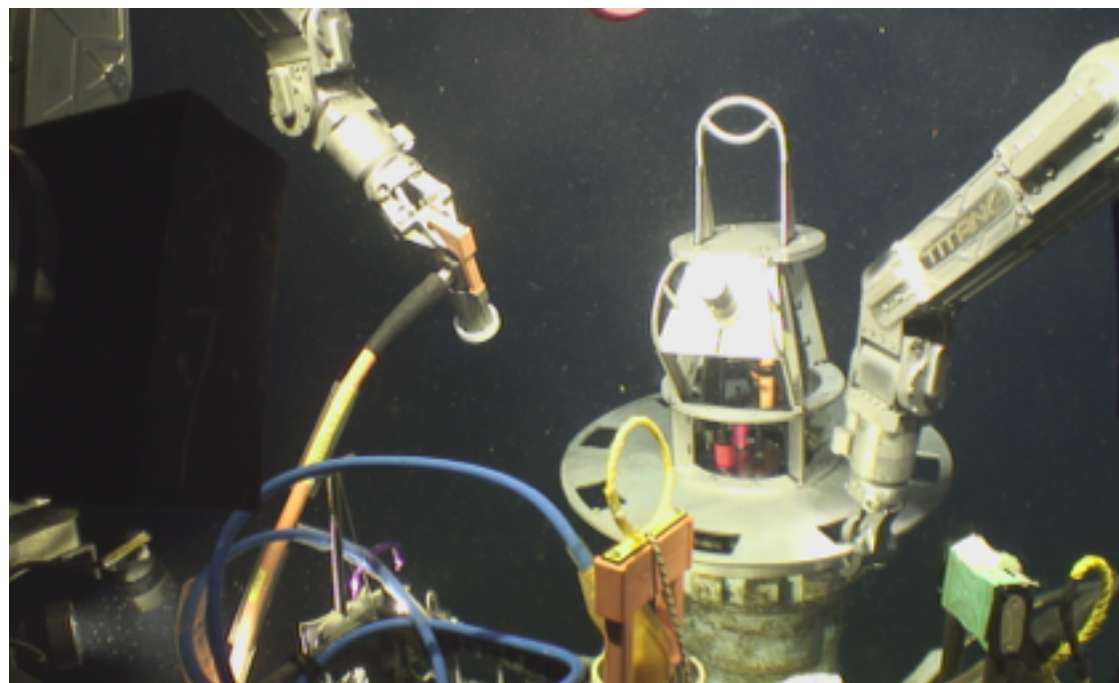
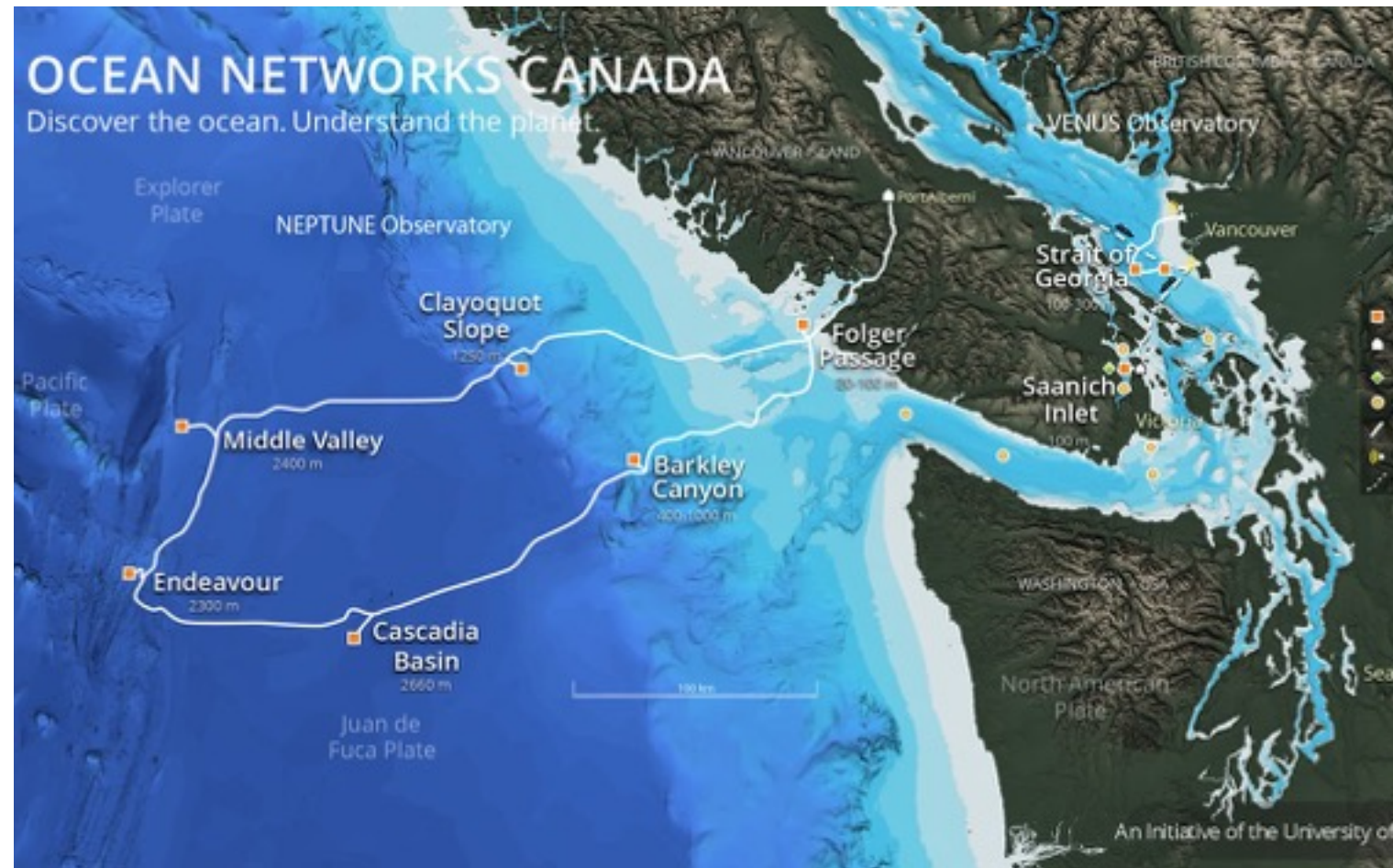
Jeff McGuire, John Collins, Keir Becker, Jeff O'Brien, Keith von der Heydt, Earl Davis, and ONC

R/V Sikuliaq

ROV Jason

Cruise Skq201609S

June 29-July 6, 2016





**Cascadia Geodesy Observatory @ U1364A AOCOK**  
Woods Hole Oceanographic Institution  
Drawing by Je O'Brien (jlobrien@wholedu)  
Version 1.03 20160615

Note: 17" Glass sphere has nominal 56 lb buoyancy, not including hat or attachment hardware, net buoyancy of 52 lbs. Quantity required 10-13

Note: 8.8lb plastic oars to be used to adjust ballasting before removing sinker weight. 18 available  
DW: 5.5  
WW: 8.8

EdgeTech 8011 Acoustic Release

Note: ODI connector to CMC seabed cable Jason to plug in after system is confirmed through JASON's tether

Surface/Interface Instrument Module (SIM) Frame  
DW: 225  
WW: 125

Thermistor Cable  
DW: 180  
WW: 30  
Note: 276m of Thermistor chain cable taped to armored cable every 3m with black electrical tape cut with knife

Armored Cable w/ 1 decoupling angle  
DW: 705  
WW: 281  
Note: Armored cable specs: max working load is 3000 lb and breaking strength is 12,500 lb. Minimum bend diameter 24"

Soft Link  
DW: 5  
WW:

Note: 7/16" diameter amsteel-blue color: orange. The overall length is just under 68" from eye to eye and each eye is 4" long. We broke two of the four lengths and got a breaking strength of 22,650 lbs and 22,450 lbs. This is approximately 4% higher than the manufacturer's minimum breaking strength for this size amsteel-blue spliced line.

Hole Lock Top  
DW: 78  
WW: 56.5

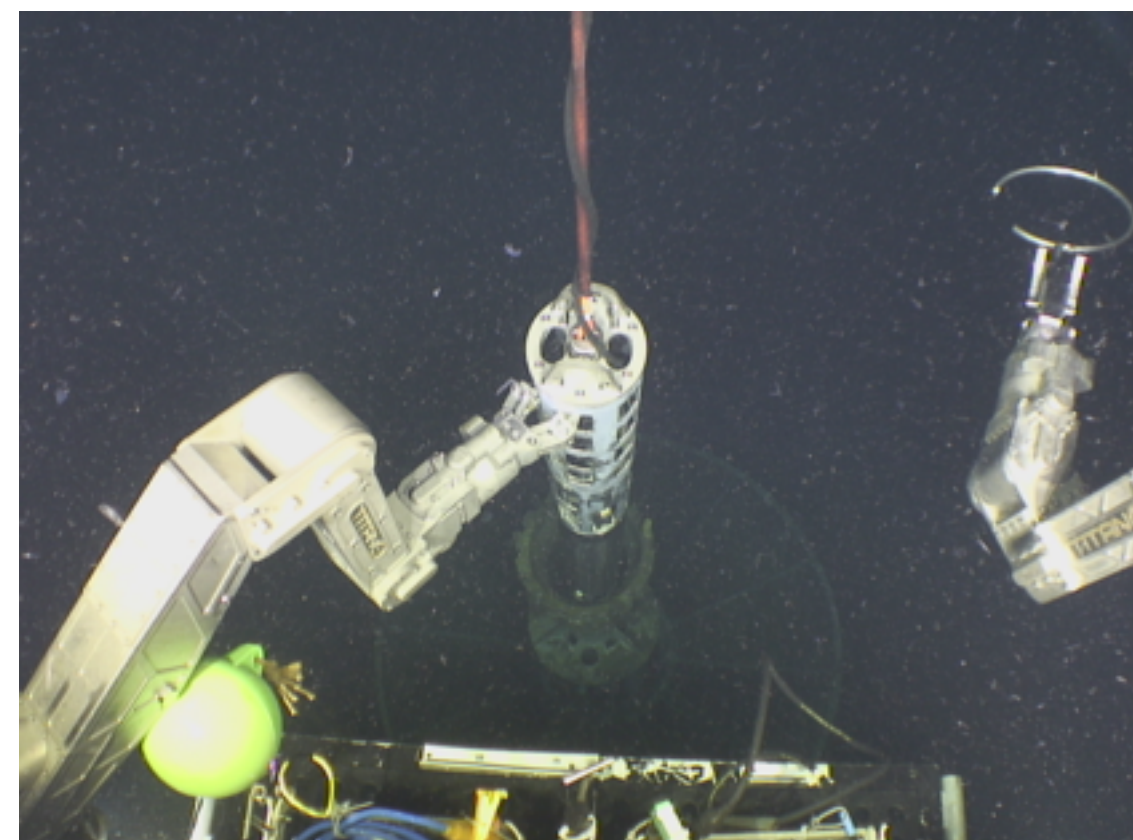
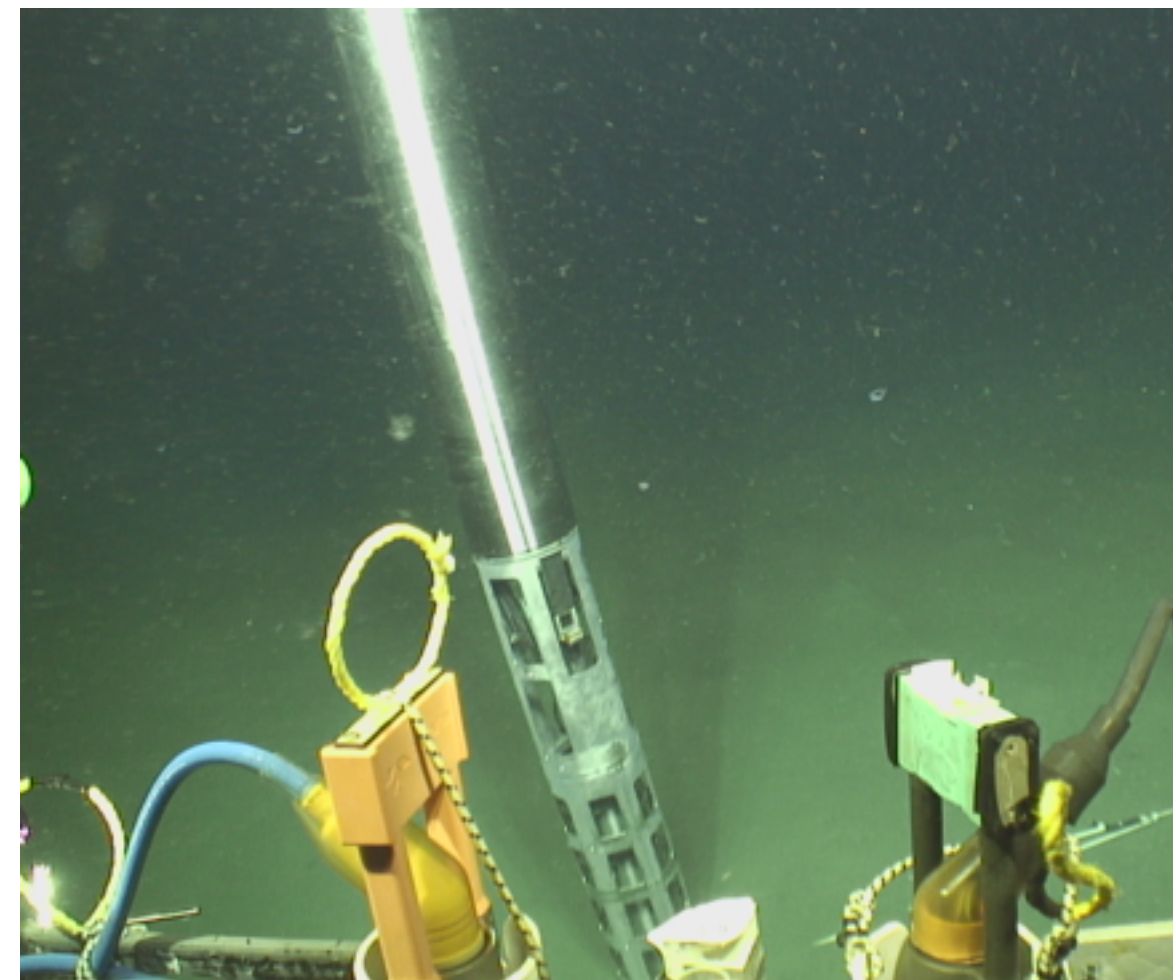
Borehole Instrument Package (BIP)  
DW: 197  
WW: 66

Hole Lock Bottom  
DW: 84  
WW: 60  
(Includes RBR Pressure recorder)

15-30m VLB

Note: 200 lb. sinker weight

Depth: 1329m





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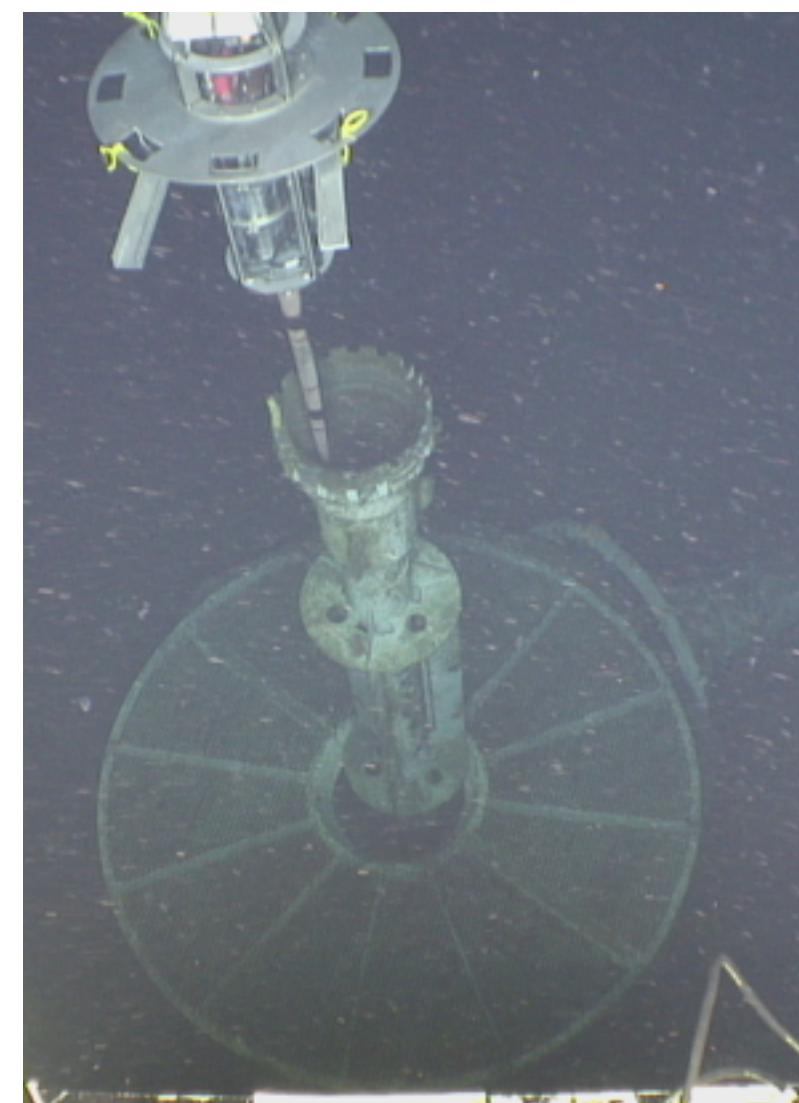
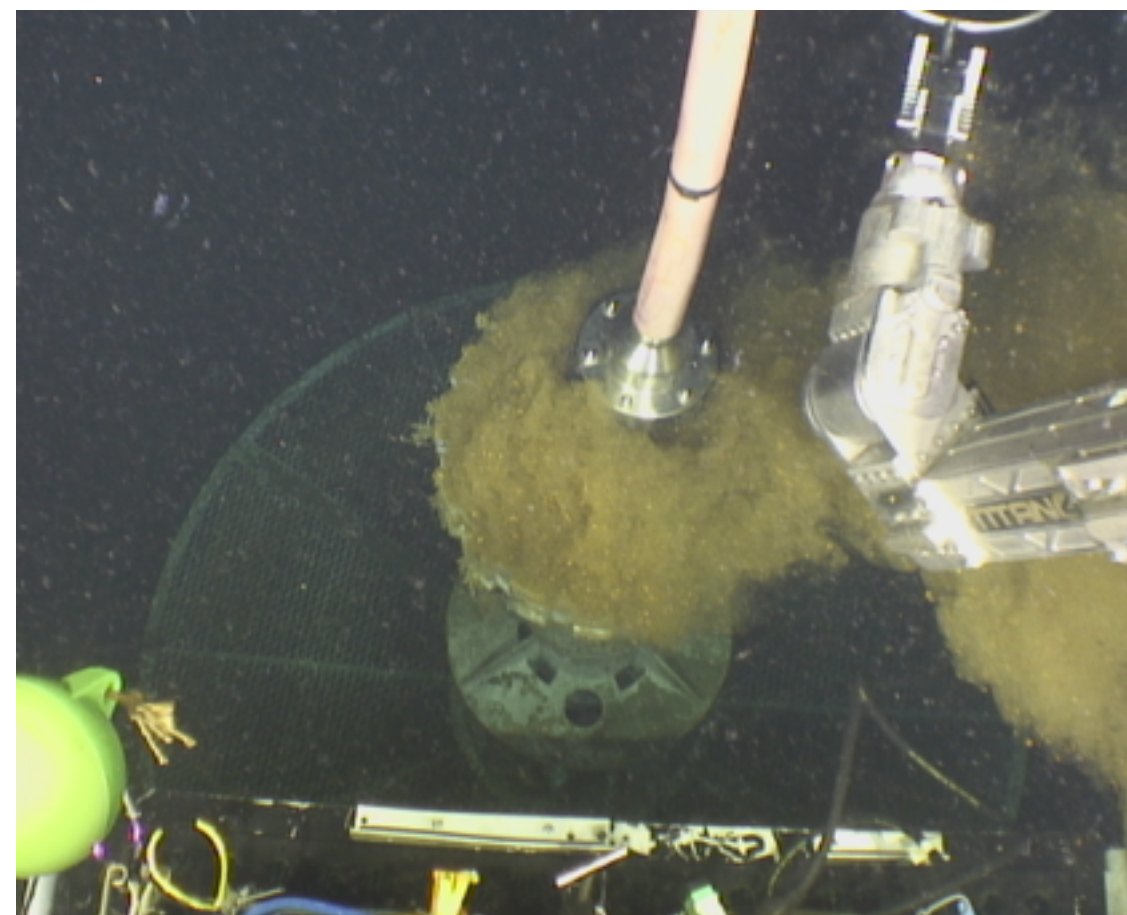
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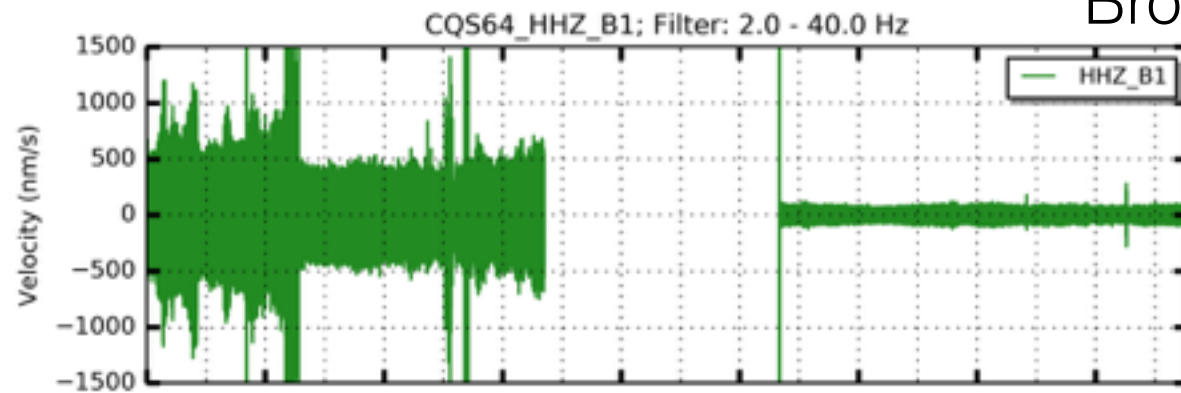
Depth: 1329m





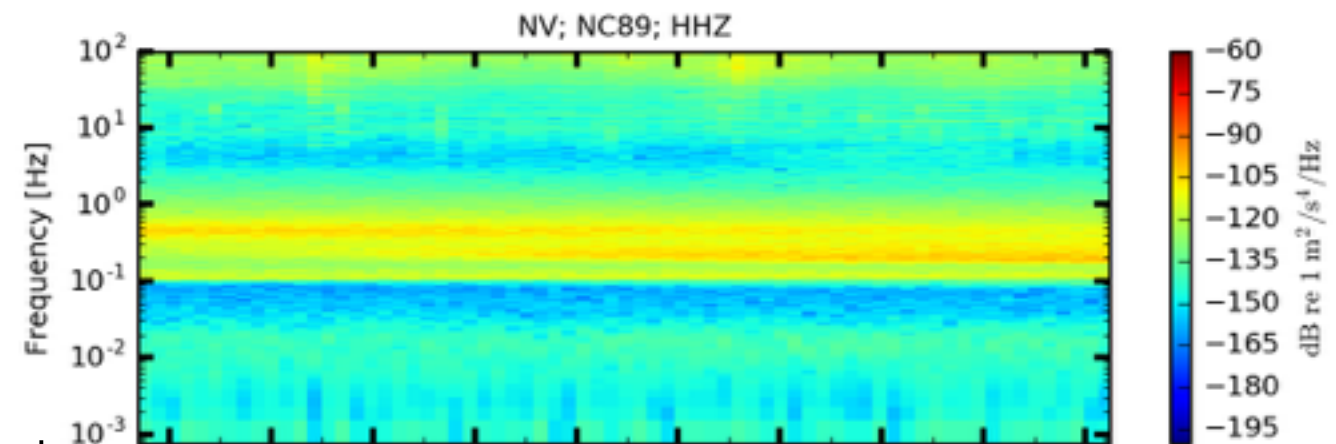
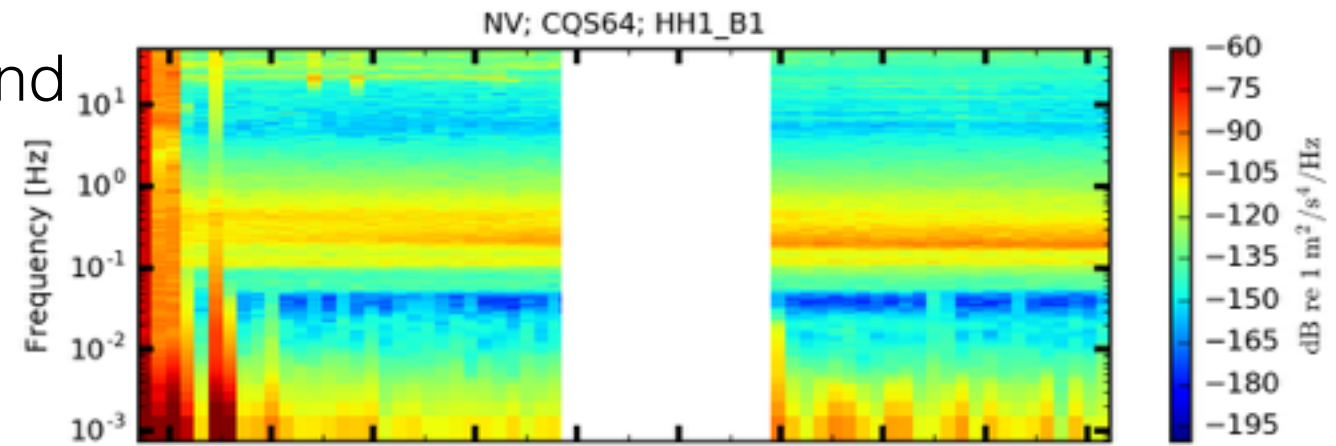
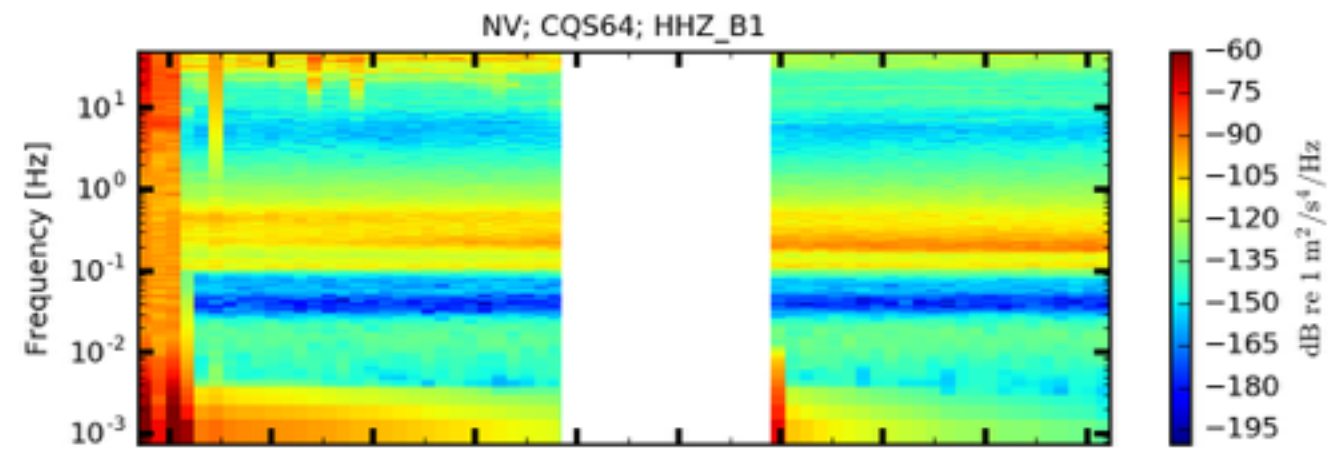
# Initial Data

Major reduction in noise levels (30 db) at both high (1-10 Hz) and low (.01-.1) Hz frequencies on both the vertical and horizontal channels compared to buried OBS at surface

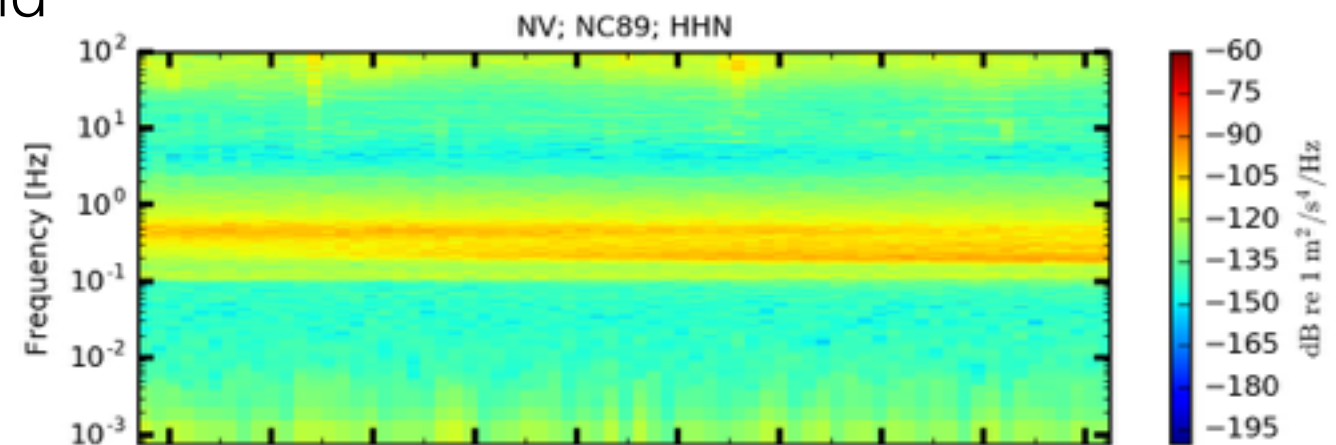


spikes in OBS data  
not a problem in borehole

Borehole  
Broadband



Seafloor  
Broadband



19 hours on July 2nd

19 hours on July 2nd