Site U1518
ACORK
Pressure package
CORK-II with temperature/chemistry string
Completed observatory
HRT deployment with mud motor, underreamer, and drill bit
Umbilicals strapped to 10-3/4" casing
Instrument hanger J running tool release
Instrument string ERS release
Top plug seat:
- 3-5/8"
- CrN-DLC coating
ROV handles
Top plug:
- CrN-DLC coating
- latched to seat
6.02 m above seafloor
5.09 m above seafloor
Free-fall funnel
Hydraulic release tool
ACORK head:
- Pressure data logger and valves
- ROV handles
Reentry cone
Mud skirt
3-pass flatpack umbilical with 1/4" tubes that pass through or terminate in the casing screens
CORK latched to ACORK
Seafloor 2642 m
Casing 10-3/4" OD (10.05" ID)
Casing screen with 13" OD at 218 mbsf
2 m
P1 218 mbsf
Casing 4-1/2" OD (4.05" ID)
Pressure equilibration port
Temperature sensor (–270.5 m from ports)
Temperature sensor (–240.5 m)
Temperature sensor (–210.5 m)
Temperature sensor (–180.5 m)
Temperature sensor (–150.5 m)
Temperature sensor (–120.5 m)
Temperature sensor (–105.5 m)
Temperature sensor (–90.5 m)
Temperature sensor (–75.4 m)
Temperature sensor (–60.5 m)
Temperature sensor (–53.0 m)
Temperature sensor (–45.5 m)
Temperature sensor (–38.0 m)
Temperature sensor (–30.5 m)
Sinker bar (293.4 mbsf)
Slack in rope (1.15 m)
Weak link (303.11 mbsf)
Swellable packer: 11.6 m long joint, 8.5 m tall packer, 8" diameter
Assembly with OsmoSampler, OsmoFlowmeter, and 7 temperature sensors (20 m long)
Perforated casing, 11.75 m long joint, coated (ID/OD) casing, 7 m interval with 3/8"-size perforations
Double casing screen with 13" max OD centered at 323 mbsf; 8 m tall (1 m longer than perforated portion)
P2 323 mbsf
Quadrant seal: 11.2 m long joint, midpoint at 323 mbsf, 8 m portion with 7-5/8" OD / 4" ID, swellable vertical baffles spaced 90° apart, coated casing (OD only)
Flowmeter seat:
- titanium
- 4 ports
- orientation guides
OsmoFlowmeter ports at 323.11 mbsf
Fault zone
Weak link (323.8 mbsf)
Temperature sensor (+3.0 m)
Temperature sensor (+5.1 m)
Temperature sensor (+7.1 m)
Temperature sensor (+9.2 m)
Temperature sensor (+11.2 m)
Temperature sensor (+16.3 m)
Temperature sensor (+24.0 m)
Temperature sensor (+31.7 m)
Temperature sensor (+47.0 m from ports)
Weak link (377 mbsf)
Sinker bars (3 x 6.05 m)
End of string at 395.3 mbsf
Swellable packer: 11.6 m long joint, 8.5 m tall packer, 8" diameter
Four 6-3/4" drill collars (37 m)
End of bullnose at 412 mbsf
Casing screen with 13" OD at 393 mbsf
2 m
P3 393 mbsf
Hydraulic bridge plug (bottom at 421 m)
Bottom of cased hole at 422 mbsf
Total depth of hole: 426 mbsf