

IODP EXP 358 Daily Geomechanics Report

Report #085 20190202

RTG Team

RTG Supervisor(s)	David Castillo / Thomas Finkbeiner / Demian Saffer
RTG Watch Lead (00:00-12:00)	Kan Aoike
RTG Watch Lead (12:00-24:00)	Emily Wisbey

Well Status

Site Name:	C0002	Hole Name:	S
Water Depth:	1,939.0 m	RT-MSL:	28.5 m
0600h Hole Depth:	4,779.0 mBRT (4,777.0) (mTVD)	Section TD:	6,000.0 mBRT (5,998.0) (mTVD)
Section #:	0	CSG Depth/Size:	4,773.0 mBRT 11-3/4" ESET inches
Static MW:	(1.35) sg	Current ECD:	- sg
FIT/LOT/ XLOT:	N/A Note: 1.46sg FIT @ 4,757mBRT		
Current formation/ lithology:	Shale		
Sensor Offsets from the Bit:	N/A		
Other BHA Offsets from the Bit:	N/A		
Current Operations:	Continued circulation for hole cleaning and dressing window. POOH Milling BHA. Made up Kick-off LWD BHA.		

Geomechanics Alert

GREEN	<p>Green = Projected model remains accurate White = Unanticipated deviation from model which <i>should not</i> affect drilling Yellow = Unanticipated deviation from model which <i>may</i> affect drilling Red = Imminent requirement to stop drillin80</p>
<p>Basis for Alert Level + Recommendations</p>	<p>C2S can initially be drilled with a 1.35 SG MW using only FracSeal as the mud additive.</p> <p>While C2S is within 2-4 m horizontally from the C2P hole, an extra amount of FracSeal should be blended with the mud to seal the existing open cracks/beds/fractures as quickly and efficiently as possible. The extra FracSeal would help maximise stability in the fragile hole section near the C2S window and keep it stable during drilling, POOH with LWD BHA, and RIH/POOH with coring BHA operations.</p> <p>If we find earth stress gradients increases with depth (and UCS does not increase as quickly), RTG may recommend increasing the MW slightly (e.g., +0.01 SG increments) with Watch Leaders and Supervisors closely monitoring. This process could be repeated based on real-time learnings. Any subsequent increase in MW in C2S would not pose a serious risk of drilling fluid invasion in the shallower sections if FracSeal was applied generously.</p> <p>1.35 SG MW would increase ROP and perhaps deepen section TD if needed.</p>

Principal Findings

N/A

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Observations Summary

Fracture Gradient	N/A
Pore Pressure	N/A
Wellbore Breakout	N/A
Tensile Failure	N/A
Drilling Parameters	N/A
Other	N/A

Analysis

Drilling Experience Analysis

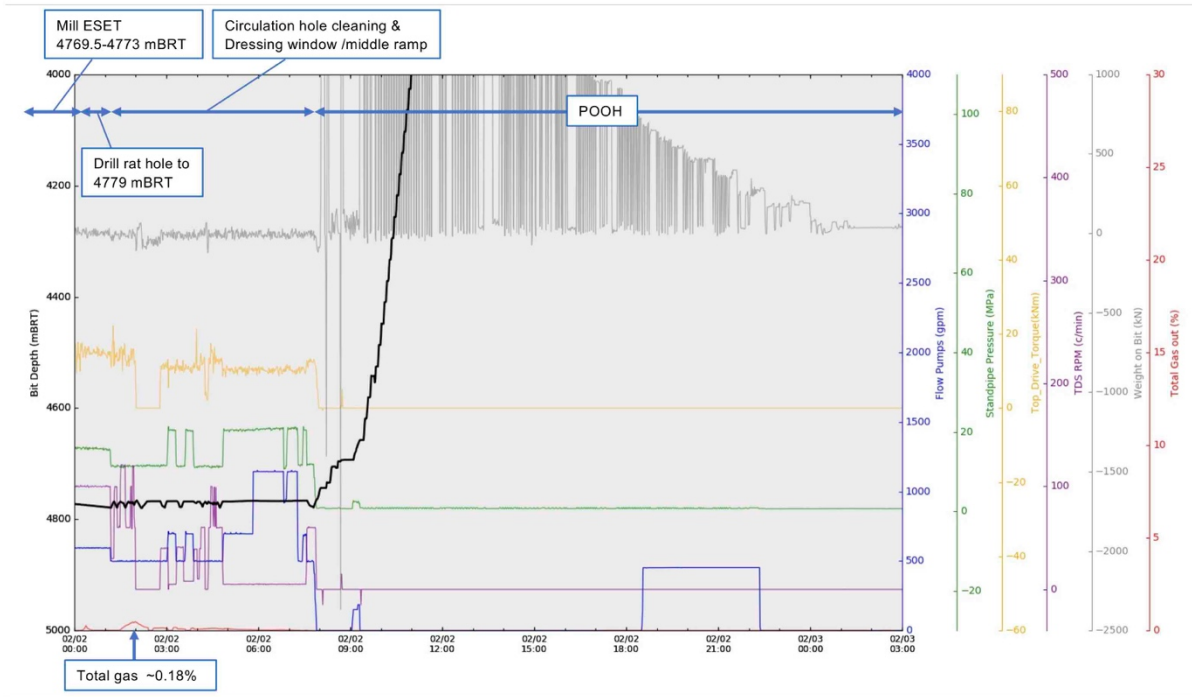


Figure 1 Drilling Experiences over last 27hrs

No particular indication of change in borehole condition was observed. Gases ~0.18% were detected at surface 3 hours later after commencing window cut.

Cuttings and Cavings Analysis

Barolift fibers were predominant, associated with thin metal shavings, a tiny amount of fine cuttings and cement fragments while circulation.

LWD Data Analysis

N/A

SFIB Analysis

No further updates.

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Geomechanical Model Review

There is no change in the current stress model, but planned MW profile is updated.

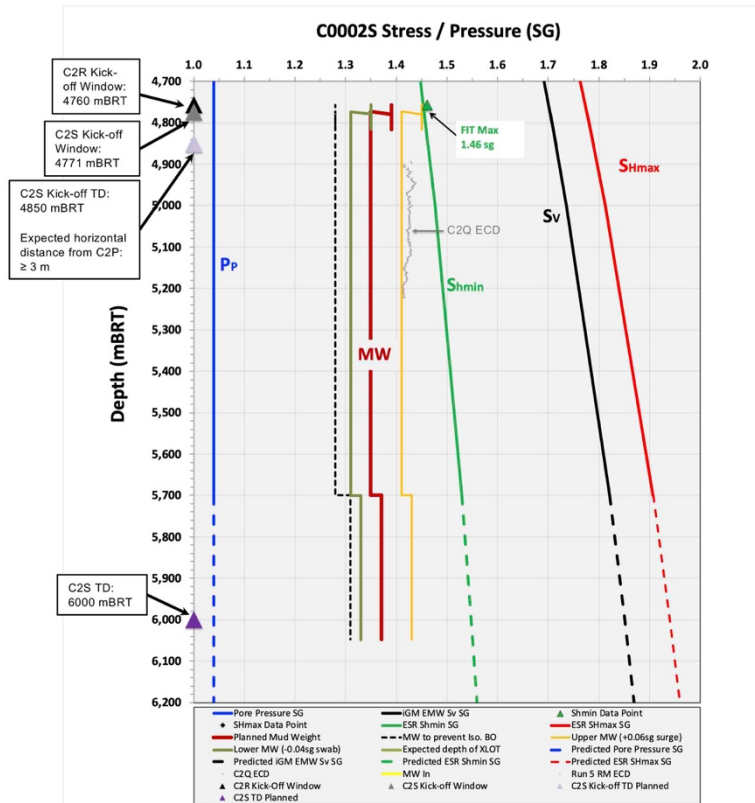


Figure 2 Current stress model for C2S