

IODP EXP 358 Daily Geomechanics Report

Report #093 20190210

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:	4,901.4 mBRT (4,899.4) (mTVD)	Section TD:	6,000.0 mBRT (5,998.0) (mTVD)
Section #:	1	CSG Depth/Size:	4,769~4,775 mBRT 11-3/4" ESET inches
Static MW:	1.35 sg	Current ECD:	1.39 sg
FIT/LOT/ XLOT:	N/A Note: 1.46sg FIT @ 4,757mBRT		
Current formation/ lithology:	Shale		
Sensor Offsets from the Bit:	N/A		
Left BHA to be fished:	8-1/2" PDC Bit (AxeBlade XZ716): 0~0.258 m Xceed675 8-3/8" Stabilizers: 0.258~8.027 m Lower C-Link 675: 8.027~10.971 m		
Current Operations:	Continued to ream down with Overshot Fishing BHA. Cleared tight zone between 4855 and 4856 mBRT. Tagged the top of fish at 4889 mBRT. Attempted to fish the section of the left BHA but no success. Decided to POOH.		

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 drilling</p>
<p>Basis for Alert Level + Recommendations</p>	<p>1.35 sg remains recommended MW for C2S; however, RTG also recognizes that it is reasonable to reduce MW to 1.33 sg and still maintaining hole integrity. This reduction in MW will likely improve ROP.</p> <p>Earth stress gradients may rapidly increase with depth (with UCS not increasing as rapidly). If this occurs, 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>

Principal Findings

N/A

Observations Summary

Fracture Gradient	N/A
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Pore Pressure	No indication suggesting abnormal pressure has been observed.
Wellbore Breakout	Minor isotropic and/or anisotropic breakouts were identified below 4835 mBRT.
Tensile Failure	N/A
Drilling Parameters	N/A
Other	N/A

Analysis

Drilling Experience Analysis

- No significant adverse condition was observed down to 4855 mBRT while washing/reaming down with the fishing BHA.
- Encountered a tight zone between 4855-4856 mBRT where a high resistivity layer with nearly vertical dipping had been identified in the MicroScope images.
- After clearing the tight spot, no further adverse conditions were observed until tagging the top of fish at 4889 mBRT.
- Total gas increase ~1.45 % 3 hours later after attempting to clear the tight spot of 4855-4856 mBRT.
- No success in fishing.

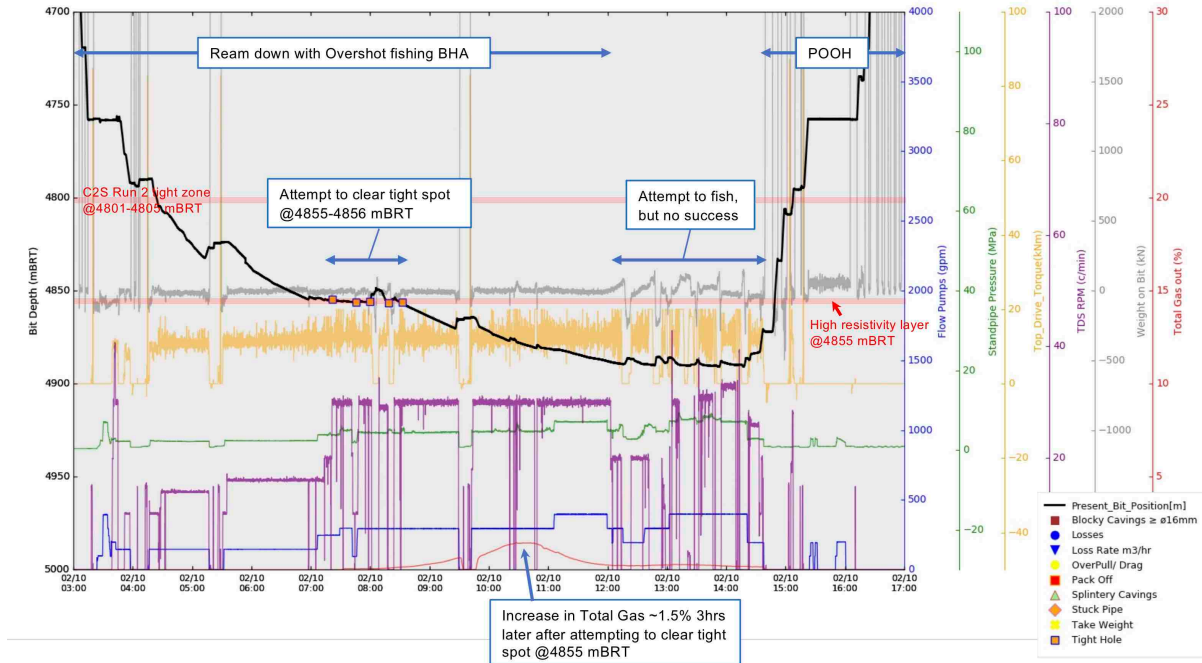


Figure 1 Drilling Experiences from 03:00 to 17:00 Feb.10.

Cuttings and Cavings Analysis

N/A

LWD Data Analysis

N/A

SFIB Analysis

N/A

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Geomechanical Model Review

No change in the current stress model.

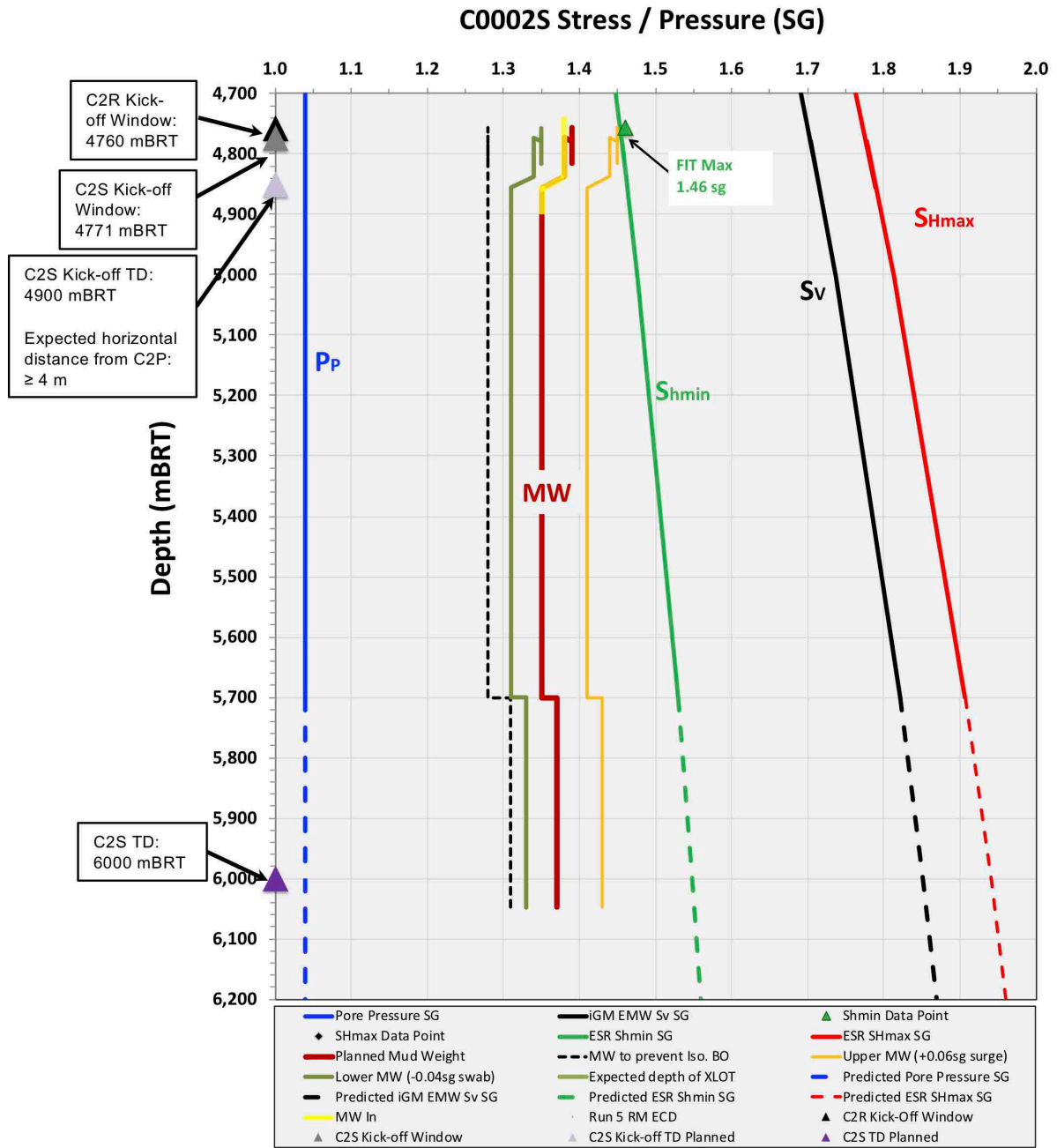


Figure 2 Current stress model for C2S