IODP EXP 358 Daily Geomechanics Report

Report #036 20181215

RTG Team

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

Well Status

Site Name:	C0002		**Hole Name:**	Q	
Water Depth:	1,939.0	m	**RT-MSL:**	28.5	m
Current Depth:	No bit in hole	mBRT (mTVD)	**Section TD:**	5,667.5 (5,664.5)	mBRT (mTVD)
Section #:	1		**CSG Depth/Size:**	(4855.0) 11-3/4	mBRT
Static MW:	1.37	sg	**Current ECD:**	1.41	sg
FIT/LOT/ XLOT:	FIT maximum pressure = 1.45 sg, Possible “LOP” = 1.43 sg @4855 mBRT				
Current formation/ lithology:	Shale				
Sensor Offsets from the Bit:	N/A				
Other BHA Offsets from the Bit	N/A				
Current Operations:	Rigged up wireline. Made up 11-3/4” EZSV to plug setting tool and RIH on wireline to setting depth. Commenced depth correlation.				

Geomechanics Alert

GREEN	Green = Projected model remains accurate White = Unanticipated deviation from model which *should not* affect drilling Yellow = Unanticipated deviation from model which *may* affect drilling Red = Imminent requirement to stop drilling
Basis for Alert Level + Recommendations	No further observations have been made to suggest any change in wellbore condition. 1.37 sg remains recommended MW for Section 1.

Principal Findings

N/A.

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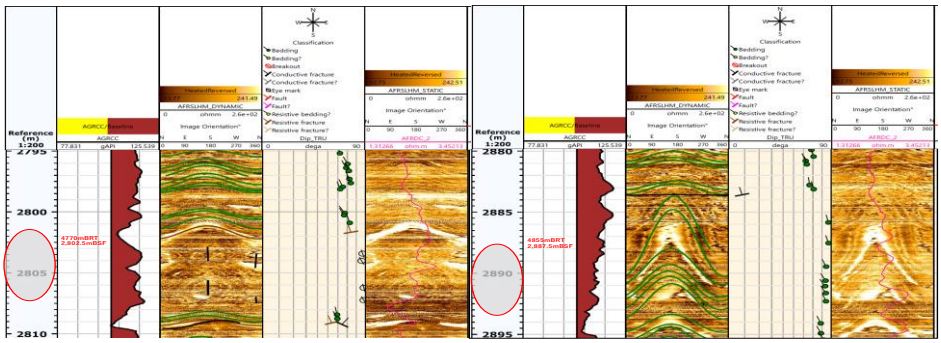
Observations Summary

Use this space to discuss any observations while drilling, running casing etc.

Fracture Gradient	N/A
Pore Pressure	No significant gas peaks or other indications of overpressure observed.
Wellbore Breakout	N/A
Tensile Failure	N/A
Drilling Parameters	N/A
Other	Based on AFR image collected in C2P hole (Figure 1), a comparison between bedding at the window setting depths indicate C2Q would have encountered beds dipping ~85° to the NNW, while the C2R planned window is likely to encounter beds dipping 60°-70° to the NNW. – Both bedding plane geometries are vulnerable to anisotropic bedding plane failure. – Both window setting depths likely experienced anisotropic failure during Exp 348 due to inadequate MW and mechanically-induced hole damage from numerous pack-off events. It is unlikely the hole is in pristine condition and may contain cement in the annulus with clasts of well-rounded blocky cavings from Exp 348. – The cement at the C2R window may or may not have been damaged during C2Q operations. Note: High-resolution repeat passes of the AFR image tool did not occur across the two window depths; however, repeat passes below the window depths indicated substantial anisotropic failure. We would expect similar failure at the window depths since bedding planes are suitable for failure and they experienced pack-off events.  **Figure 1 Proposed C0002Q v Actual C0002P whipstock setting depths** **Windows represented by grey circles on depth track*

Analysis

Drilling Experience Analysis

N/A

Cuttings Analysis

N/A

Cavings Analysis

N/A

LWD Data Analysis

N/A

SFIB Analysis

N/A

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Geomechanical Model Review

No change in the latest stress model.