IODP EXP 358 Daily Geomechanics Report

Report #047 20181226

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)	Toby Colson

Well Status

Site Name:	C0002		**Hole Name:**	R	
Water Depth:	1,939.0	m	**RT-MSL:**	28.5	m
0600h Depth:	4,887.5 (4,885.0)	mBRT (mTVD)	**Section TD:**	5,667.5 (5,664.5)	mBRT (mTVD)
Section #:	0		**CSG Depth/Size:**	4757.0 11-3/4	mBRT inches
Static MW:	1.39	sg	**Current ECD:**	(1.41)	sg
FIT/LOT/ XLOT:	1.46sg FIT @ 4,757mBRT.				
Current formation/ lithology:	Shale				
Sensor Offsets from the Bit:	TeleScope 675: (Direction + Inclination: 18.37 m)				
Other BHA Offsets from the Bit:	8-1/2" Insert Rock Bit: 0~0.25 m 8.125" Stabilizer: 8.47~10.13 m 2 x 6-3/4" Non-Magnetic Drill Collar + TeleScope 675: 10.91~32.58 m 9 x 6-3/4" Drill Collar: 32.58~117.17 m 6-1/2" Hydraulic Jar: 117.17~127.10 m 2 x 6-3/4" Drill Collar: 127.10~145.76 m 12 x 5.68" Heavy Weight Drill Pipe: 146.56~257.51 m Top of BHA: 258.51 m				
Current Operations:	After reaming down/up between 4820-4840 mBRT, drilled 8 1/2 " hole from 4843.0 m to 4887 mBRT. Took surveys at 4836.6 mBRT and 4844.0 mBRT, obtaining inclinations/azimuths of 5.20°/78.51°N and 5.77°/85.98°N, respectively.				

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 1.39 sg remains recommended MW for Section 1.

Principal Findings

N/A

IODP EXP 358 Daily Geomechanics Report

Report #047 20181226

Observations Summary

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

Fracture Gradient	N/A
Pore Pressure	No indications of overpressure observed.
Wellbore Breakout	N/A
Tensile Failure	N/A
Drilling Parameters	N/A
Other	N/A

Analysis

Drilling Experience Analysis

Drilled ahead encountering further tight spots and challenging drilling between 4835 and 4839 mBRT. Achieved good build and improved ROP with increased flow rate and WOB from 4841 mBRT.

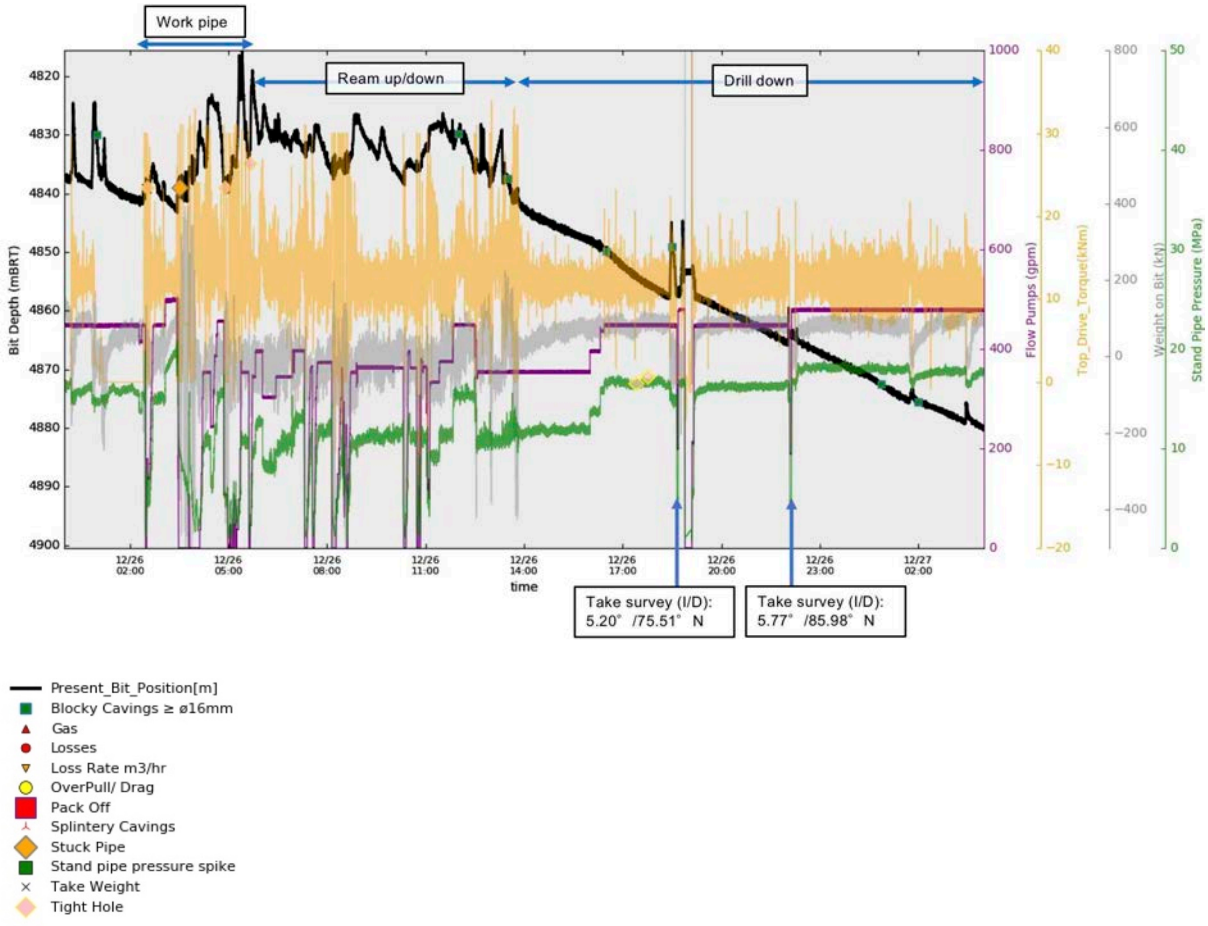

Figure 1: Drilling experiences over the last 28 hrs (~04:00 Dec.27).

Cuttings and Cavings Analysis

Coarser rock fragments > ø4mm in diameter, which are possibly coarse cuttings or fine cavings, were typically blocky and approximately 10 mm in size. No notable indications of wellbore instability was seen. Felsic tuff fragments were present from lag depth of 4841 mBRT and below, relatively dominant between 4843-4846 mBRT.

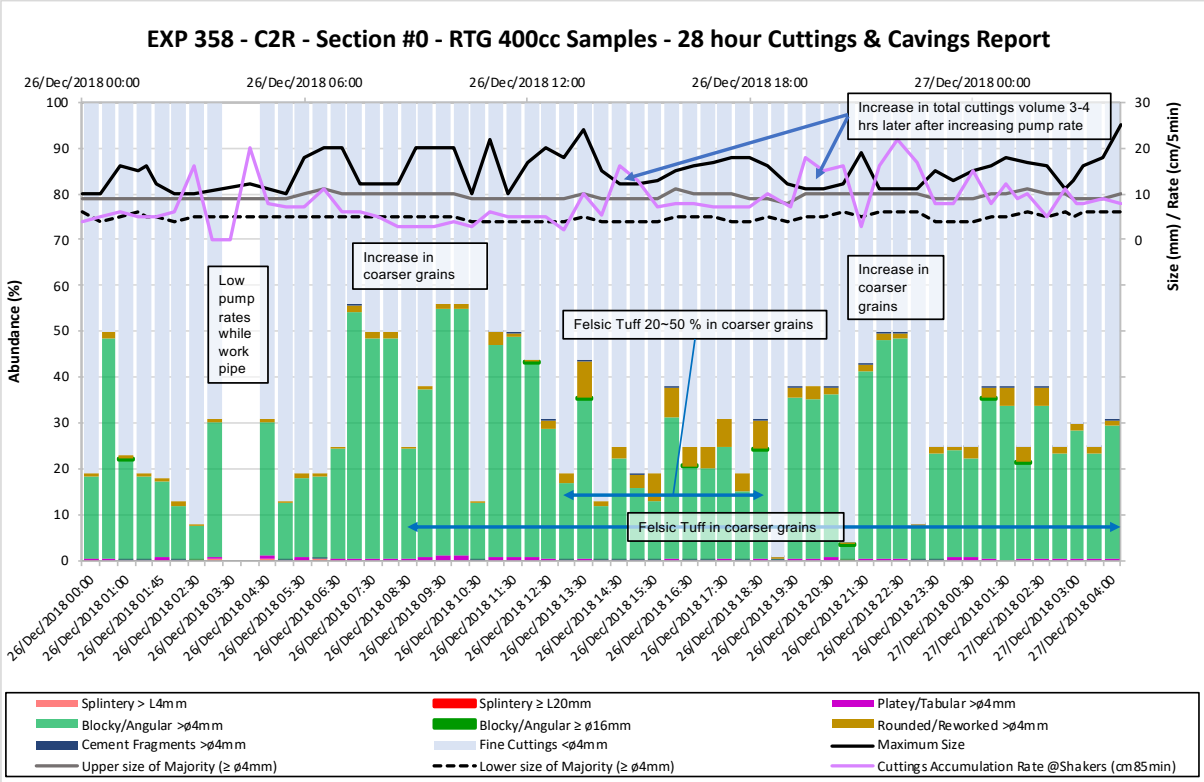

Figure 2: Analysis of cuttings/cavings > ø 4mm (taken from 400cc RTG Samples) over last 28 hrs (~04:00 Dec.27).

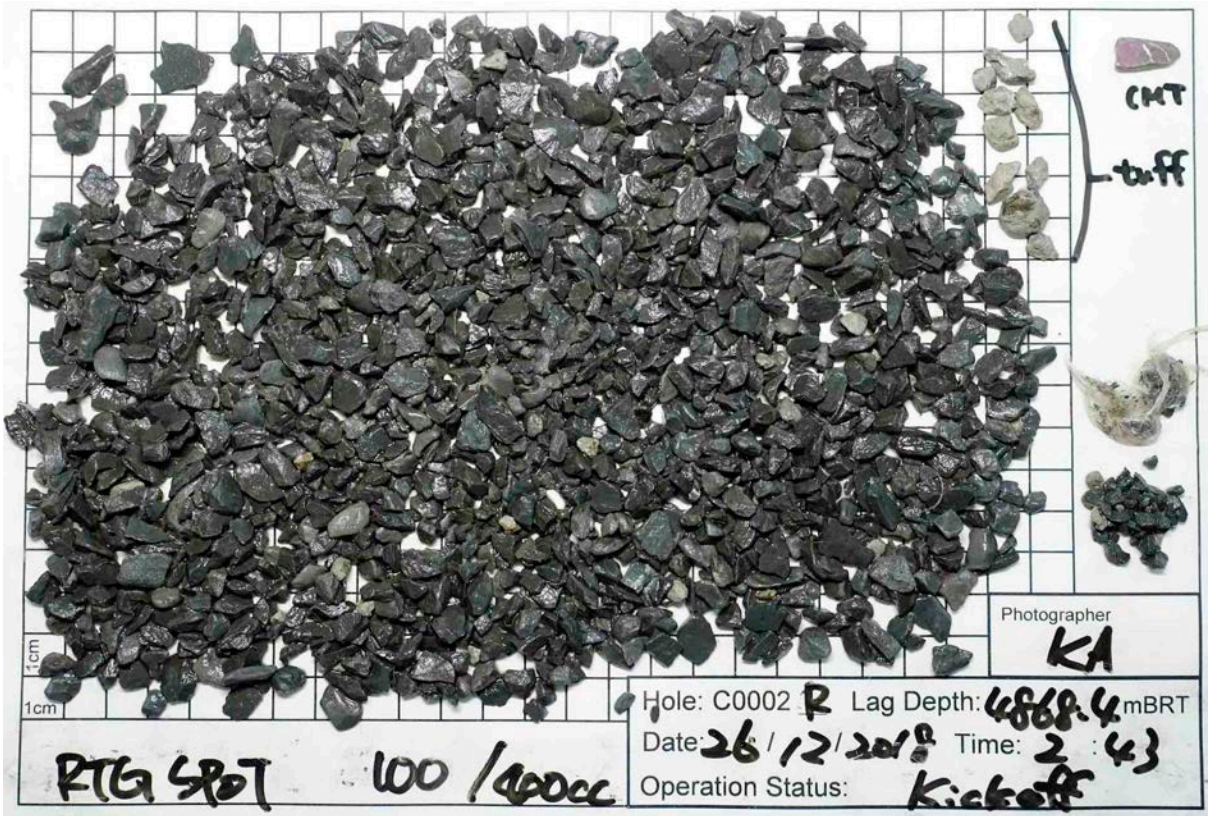

Figure 3: Example of cuttings/cavings > ø 4mm (taken from 400cc RTG Samples). Felsic tuff grains are included.

LWD Data Analysis

N/A

SFIB Analysis
No further updates

Geomechanical Model Review

No change in the current stress model.

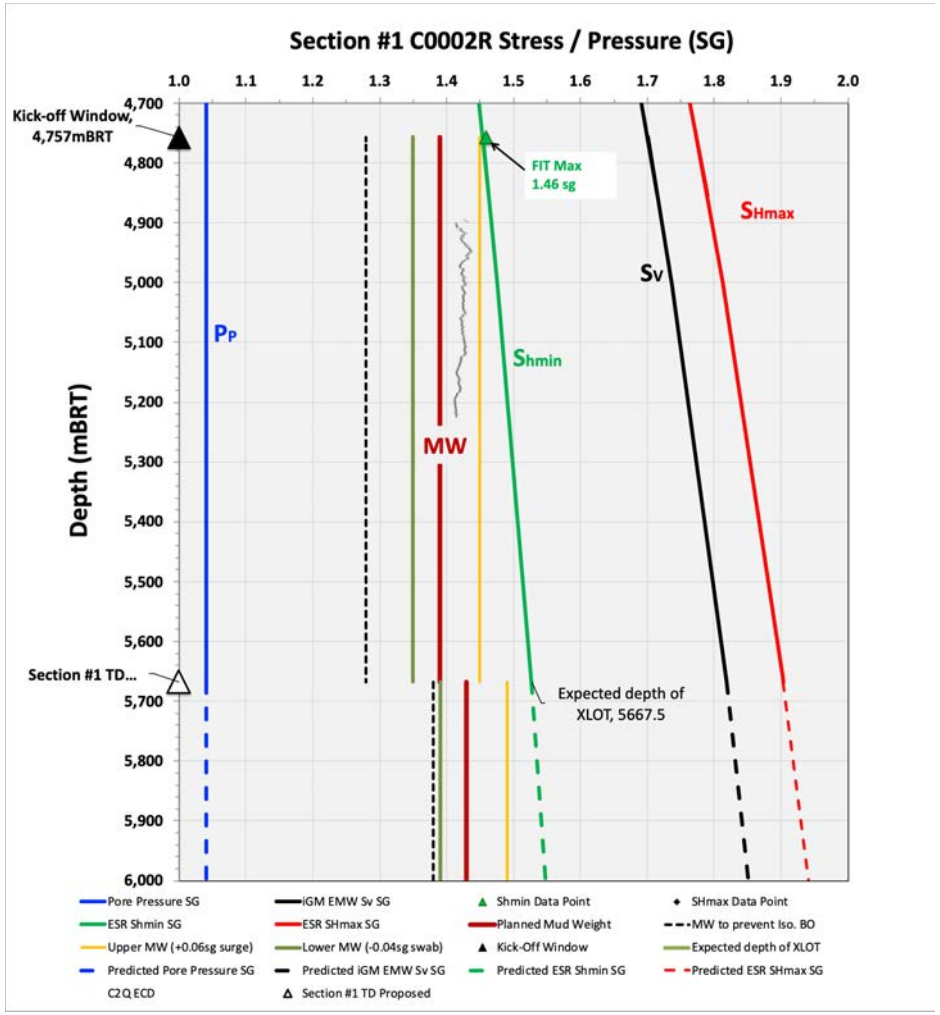

Figure 4: Current stress model for Section #1

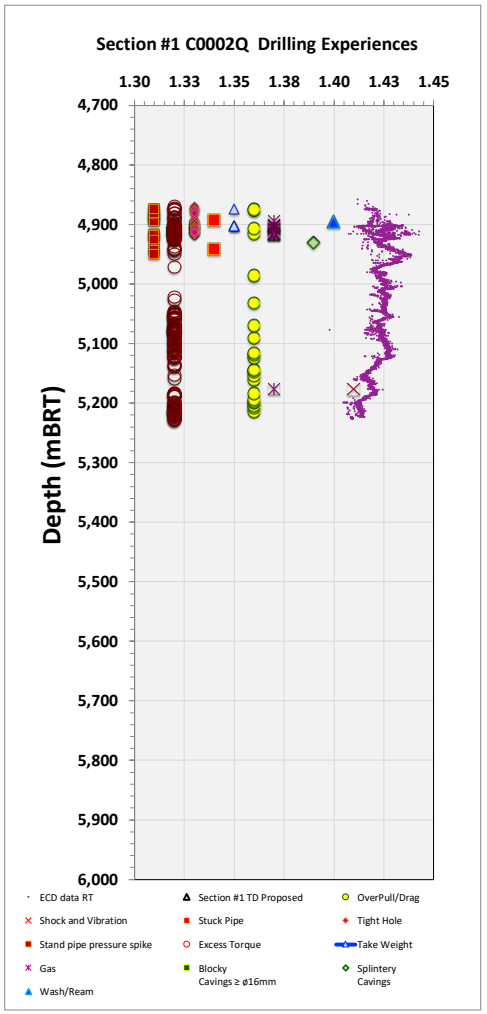

Figure 5: C0002Q Drilling Experiences