

Motor Report for AA Pad, AA16, Run #4, BHA #4
Job Number: AB-CD-12345678

Job Number: AB-CD-12345678	Region:	Lease/Block: 07654321	Company Rep. #1: Henry Samuel Quelch
Customer: Anglian Oil Company Ltd.	Field: Northern Lights	UWI No.:	Company Rep. #2: Eusebius Twigg
Well Name: AA16	Project: Northern Lights	Start Date: 24 September 2017	Geologist: Algemon Jasper Capper
Rig Name: Northern Skies III	Structure: AA Pad	End Date: 26 September 2017	Directional Supervisor: Paul Pontifax Prout Esq.

Drilling Summary			
Start Depth: 3,977.54ft	End Depth: 5,423.25ft	Below Rotary Hours: 29.39hrs	Circulating Hours: 17.73hrs
Total Depth Drilled: 1,445.71ft	Total Drilled Hours: 14.59hrs	Ave. Total ROP: 99.06ft/hr	Percent Drilling: 49.66%
Total Rotating: 763.29ft	Rotating Hours: 7.59hrs	Ave. Rotating ROP: 100.62ft/hr	Percent Rotating: 52.80%
Total Sliding: 682.41ft	Sliding Hours: 7.01hrs	Ave. Sliding ROP: 97.38ft/hr	Percent Sliding: 47.20%

Pump Details							
#	Model	Liner Size (in)	Liner Rating (%)	Volume Efficiency (%)	Vol. per Stroke (gal(US))	Maximum Pressure (psi)	Maximum Flow (gpm(US))
1	Gardner-Denver PZ-11-1600	5 1/2	100.00	100.00	3.39	5595	542
2	Gardner-Denver PZ-11-1600	5 1/2	100.00	100.00	3.39	5595	542
3	Gardner-Denver PZ-11-1600	5 1/2	100.00	100.00	3.39	5595	542

Drilling Parameters					
	Min	Max		Min	Max
WOB (lbf)	3	28	SPP Off Bottom (psi)	730	2625
Pick Up (lbf)	8	753	SPP On Bottom (psi)	742	3800
Slack Off (lbf)	8	416	Delta Pressure (psi)	44	1175
Rot. Off Bottom (lbf)	8	652	Flow Rate (gpm(US))	668	792
Bottom Hole Temp (°F)	212.0	229.5	Pump Rate (SPM)	16	132
Rotary Speed (RPM)	33	60	Motor Speed (RPM)	225	273
ROP (ft/hr)	NaN	NaN	Surface Torque (ft-lbs)	2281	22000

Bit Record			
Bit Number (Bit Run): 4 (Run 0)	Description: 6 1/2" PDC Bit		
Manufacturer: Bits'R'Us	TFA: 1.561in ²	Jets: 1 x 20, 2 x 21	
Model: Grabber	Bit Diameter: 6 1/2in	Bit Hours: 14.59Hrs	
Type: Bit	IADC#:	Bit Footage: 1,445.71ft	
Serial Number: 87345967	Condition: Good		
Grade:	Reason for pulling out of hole: TD Well		

Mud Properties																
Date	Time	Bit Depth (ft)	Mud Weight (ppg)	Yield Point (lbf/100ft²)	Plastic Viscosity (cp)	Funnel Viscosity (Secs)	Chlorides (ppm)	pH	Oil (%)	Gas (%)	Sand (%)	Solids (%)	Water Line (ft)	Bot.Hole Temp. (°F)	Flow Temp. (°F)	
25 Sep 2017	03:10	3,993.94	13.9	21.9	20.00	50	1000.00	5.00	0.00	0.00	10.00	10.00	18.04	212.0	176.0	
25 Sep 2017	07:21	4,239.33	13.5	22.0	20.31	52	101.71	5.95	0.00	2058.08	0.00	10.45	16.99	222.6	170.1	
25 Sep 2017	11:09	4,539.65	12.6	21.7	21.98	51	109.24	5.32	0.00	2054.44	0.00	10.08	16.99	227.6	179.6	
25 Sep 2017	14:52	4,785.03	13.7	21.3	20.01	54	100.44	5.28	0.00	2063.03	0.00	10.67	17.15	223.3	170.6	
25 Sep 2017	18:16	5,079.25	13.5	21.1	21.77	54	103.61	5.54	0.00	2023.12	0.00	10.96	17.32	212.8	162.5	
25 Sep 2017	22:24	5,388.47	14.2	21.4	21.42	52	102.22	5.48	0.00	2063.54	0.00	10.07	16.72	229.5	183.5	

Motor Properties							
Description: 4 3/4" Motor Lobe 4:5 - 7.0 stg		Motor Type: Motor	Manufacturer: Motors'R'Us	Model: Roughneck X	Serial Number: 22776575	Lobe/Stage: 7:8/5.0	
Mud Type: Water Based		Stabilizer Type: Straight		Rubber Type: HR		Fit Type:	
Pad OD: 6.890in	NB Stabilizer: 8.268	Bit to Bend: 3.61ft	Bend Angle: 1.25°	Pressure Drop: 0psi	Rev. Rate: 0.29Rev/gal(US)	Rotor Jet: 0/32's	
Motor Footage: 1,445.71ft	Below Rotary Hours: 29.39hrs	Circulating Hours: 17.73hrs	Rotating Footage: 763.29ft	Rotating Hours: 7.59hrs	Sliding Footage: 682.41ft	Sliding Hours: 7.01hrs	
Proposed Build Rate: 9.398°/100ft	Actual Build Rate: 7.925°/100ft	Date/Time In: 24/09/2017 21:52	Date/Time Out: 26/09/2017 03:15	Number of Stalls: 0	Stall Duration: 0.00mins	Extended Motor: No	
Motor Failed: No		Condition: Good					

Motor Discussion

Drilled as expected.
 Drained fully.
 No visible damage.
 No slack in the bearings.

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