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<div>EP ENERGY</div> <div>Daily Drilling Report Onshore</div>				Well Name/Wellbore No.: UNIVERSITY SALT DRAW 3820OH/00				Report Number: 005 Report Date: 03/26/2017 Spud Date: 03/23/2017 Release Date: DFS: 2.96 Last BOP T.: 03/22/2017				API #: 4210542358  DOL: 4 AFE Days: 8							
Country: USA State/OCSG: TEXAS Field/Permit#: SALT DRAW Supervisors: Danny Richmond / Kenneth Gardner Engineer/Manager: MOTLEY, DEREK / MARES, SERGIO																			
**Data shared on this report is CONFIDENTIAL**																			
Depth md/tvd (ft): 9,492.02 / 6,650.18				Rig: NABORS DRILLING/888															
Progress (ft): 2,272.00				Rig Phone: 713-997-1160															
ROP: 2,272.0 / 17.00 = 133.65				RKB (ft): 2,638.01															
Proposed TD (ft): 15,454.00				Ground Level (ft): 2,611.0															
Next Csg Point (ft): 15,454.03				POB: 20 Total Man Hours: 236.00															
Current Activity: DRILLING LATERAL @ 9,492' PTB @ 6,648' TVD INC- 89.3°, AZ- 0.1° , 1.2' ABOVE , 26' RIGHT, TOTAL LATERAL 2,514'																			
24 Hr Summary: TRIP OUT OF HOLE, CHANGE BHA, TRIP IN HOLE, DRILLING LATERAL.																			
24 Hr Forecast: DRILLING LATERAL, CIRCULATE CLEAN UP CYCLE.																			
MUD PROPERTIES				MUD MATERIALS				BIT RECORD				CASING							
Fluids Co.: HALLIBURTON								Bit# 3				Size(in) MD(ft)/TVD(ft)							
Fluids Eng: DANIEL A. MARTINEZ								S/N 7160840 7160840				Fit/LOT(ppg)							
Time: 6:01 Oil Cnt (%): 70				Mud Additives Used				Size (in) 8.50 8.50				14.00 67.00 / 67.00							
Location: IN H2O Cnt (%): 21				RIG WASH 2				Mfg BAKER BAKER				9.63 1,045.52 / 1,045.52							
Pit Temp: Sand Cnt (%): 0.01				BARABLOK 35				IADC Type				5.50 15,454.03 / 6,714.01							
Depth (ft): 8,680.02 MBT:				SHRINK WRAP 10				Model # T606X T606X											
Density (ppg): 9.00 pH:				FUEL 300															
FV (s/qt): 50 Pm:				GELTONE 10				Jets 6X22 6X22											
PV (cp): 13 P/Mf:				TAX 9,913				Depth In (ft) 6,817 7,220											
YP (lb/100ft²): 13 Chloride:				LIME 70				Depth Out (ft) 7,220											
Gels (l): 8/12/15 Calcium:				SUSPENTONE 10				Bit Rotations 70/70 75/243											
WL: 8.00 LCM:				BARITE 41 160				On Btm Hrs Cum 2.50 17.00											
HTHP ("F"): 250 ES (mV): 671.0				TRANSPORTATION 329				Footage Cum (ft) 403 2,272											
Cake: 2.00 LGS (%): 0.70				PALLETES 10				ROP Cum 161.2 133.6											
Solids: Ex Lime (ppb): 4.5				ENGINEER 1				WOB mm/mx (kip) 30 / 30 25 / 35											
ECD (ppg): 9.4 OWR: 76.8 / 23.2				CALCIUM CHLORIDE 100				RPM rot/bit 70 / 70 75 / 243											
								Bit HP 0.00 0.82											
								HSI 0.00 0.37											
								PSI Drop (psi) 0.00 59.74											
								Jet Vel (ft/s) 0.00 86.13											
								Imp Force 0.00 240.16											
MUD LOGGING								Grading I O D L B G O R											
Trip Gas (units): @ BG Gas (units):				Surf to Surf:				Bit # 3 0 0 NO A X I NO DTF											
Conn Gas (units): @				Lag Strokes:				Bit # 3RR											
Form: Pore Pressure: (%)				Lag Time: (min)															
BHA # 4												STRING LOADS				MUD PUMPS			
Qty Item Description ID (in) OD (in) Len (ft) Cum (ft)												On Btm Torque:				#1 #2 #3			
1 T606X 8.500 1.00 1.00												Off Btm Torque:				Pump DR DR			
1 TOMAHAWK 6 3/4" 7/8 5.0 1.75 FBH 6.750 25.69												Str. Wt. Up:				Type:			
1 PONY DC 3.250 6.500 15.04 41.73												Str. Wt. Down:				Liner ID: 5.50 5.50			
1 EM TOOL 2.875 6.750 27.52 69.25												Str. Wt. Rot.:				SPM: 85.00 85.00			
1 NMDC 3.250 6.438 30.16 99.41												Max Over Pull:				GPM: 298.98 298.98			
90 5" D.P. 4.276 6.438 2,836.64 2,936.05																SPR:			
1 AGITATOR 2.500 6.625 12.96 2,949.01																1 SPM: 0.00 0.00			
1 SHOCK SUB 2.500 6.625 11.90 2,960.91																Pressure: 0.00 0.00			
207 5" DP 4.276 5.000 6,531.11 9,492.02																2 SPM: 0.00 0.00			
Total Length: 9,492.02																Pressure: 0.00 0.00			
												BHA PROPERTIES							
												BHA Hrs:							
												Jar Hrs:							
												Cum String Hours: 3							
												Weight B Jars (kip):							
																T GPM (gpm): 600 SPP (psi): 3,700			
																AV (DC): 472 AV (DP): 268			
SURVEYS																			
MD (ft)		Inclination(°)		Azimuth (°)		TVD (ft)		V Section (ft)		+E/-W (ft)		+N/-S (ft)		Dog Leg (°/100ft)					
8,585		90.31		0.61		6,636		1,929.75		-39.89		1,930.07		3.13					
8,680		88.69		359.20		6,637		2,024.74		-40.05		2,025.06		2.26					
8,774		89.19		355.51		6,639		2,118.57		-44.38		2,118.93		3.96					
8,869		90.31		0.61		6,639		2,213.46		-47.60		2,213.84		5.50					
8,964		87.81		357.44		6,641		2,308.40		-49.21		2,308.79		4.25					
9,059		88.75		357.62		6,644		2,403.24		-53.31		2,403.66		1.01					
9,153		90.88		358.67		6,644		2,497.16		-56.35		2,497.60		2.53					
9,248		88.63		357.97		6,644		2,592.09		-59.13		2,592.56		2.48					
OPERATION DETAILS																			
FROM		TO		HRS		OP CODE		PHASE		CODE		ACTIVITY		DESCRIPTION					
06:00		07:30		1.50		N		DRLPRD		13		TRIP		TOH TO BHA.					
07:30		08:00		0.50		N		DRLPRD		14		PULDSTR		L/D EM TOOL AND MOTOR. (FOUND SCRIBE OFF BY 55")					
08:00		08:30		0.50		N		DRLPRD		14		PULDSTR		PICK UP LATERAL BHA (1.75", 7/8, 5.0 FBH, PDM, EM TOOL, RR 8 1/2 HUGHES T606X)					
08:30		11:00		2.50		N		DRLPRD		12		RIGSVC		TIH TO 7,220'. FILL PIPE EVERY 30 STANDS.					
11:00		01:30		14.50		P		DRLPRD		10		DRLLAT		DRILLING LATERAL F/ 7,220' - 9,114'					
01:30		02:00		0.50		P		DRLPRD		12		RIGSVC		RIG SERVICE.					
02:00		03:30		1.50		N		DRLPRD		43		RRTOP		RIG REPAIR ,REPLACE HYDRAULIC HOSE ON TOP DRIVE SERVICE LOOP.					
03:30		06:00		2.50		P		DRLPRD		10		DRLLAT		DRILLING LATERAL F/ 9,114 - 9,492'					
Daily Operations Comments																			
DRILLING FROM RYAN DIRECTIONAL PLAN #3.																			

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Depth md/tvd (ft): 12,240.02 / 6,679.03 Progress (ft): 2,748.01 ROP: 2,748.0 / 14.00 = 196.29 Proposed TD (ft): 15,454.00 Next Csg Point (ft): 15,454.03		Rig: NABORS DRILLING/888 Rig Phone: 713-997-1160 RKB (ft): 2,638.01 Ground Level (ft): 2,611.0 POB: 26 Total Man Hours: 314.00													
Current Activity: DRILLING LATERAL @ 12,240' MD PTB @ 6,674' TVD INC- 89.8°, AZ- 1.0° , 3.2' BELOW , 13.6' LEFT, TOTAL LATERAL 5,262' 24 Hr Summary: DRILLING LATERAL, CIRCULATE HOLE CLEAN, TRIP OUT OF HOLE, CHANGE BIT & BHA, TRIP IN HOLE, DRILLING LATERAL. 24 Hr Forecast: FINISH DRILLING LATERAL, CIRCULATE CLEAN UP CYCLE, TRIP OUT OF HOLE, R/U RUN PRODUCTION CAING.															
MUD PROPERTIES		MUD MATERIALS		BIT RECORD											
Fluids Co.: HALLIBURTON Fluids Eng: DANIEL A. MARTINEZ Time: 6:01 Oil Cnt (%): 70 Location: IN H2O Cnt (%): 21 Pit Temp (°F): 125 Sand Cnt (%): 0.01 Depth (ft): 10,669.02 MBT: Density (ppg): 9.00 pH: FV (s/qt): 51 Pm: PV (cp): 13 P/Mf: YP (lbf/100ft²): 14 Chloride: Gels (l): 8/12/15 Calcium: WL: 10.00 LCM: HTHP (°F): 250 ES (mV): 787.0 Cake: 2.00 LGS (%): 0.70 Solids: Ex Lime (ppb): 3.6 ECD (ppg): 9.4 OWR: 76.8 / 23.2		Mud Additives Used EZ MUL 2 CALCIUM CHLORIDE 100 ENGINEER 1 BARABLOK 5 LIME 35 TAX 11,681 FUEL 300 SUSPENTONE 20 DRILL TREAT 4 BARITE 41 160 TRANSPORTATION 329 INVERMUL 2 GELTONE 20 SUSPENTONE 20		Bit# 3RR 4 S/N 7160840 12871264 Size (in) 8.50 8.50 Mfg BAKER HALLIBURTON IADC Type Model # T606X MM65D Jets 6X22 6X22 Depth In (ft) 7,220 9,964 Depth Out (ft) 9,964 Bit Rotations 75/243 75/243 On Btm Hrs Cum 3.50 10.50 Footage Cum (ft) 472 2,276 ROP Cum 133.9 216.8 WOB mm/mx (kip) 35 / 35 30 / 30 RPM rot/bit 75 / 243 75 / 243 Bit HP 0.82 0.82 HSI 0.37 0.37 PSI Drop (psi) 60.15 59.74 Jet Vel (ft/s) 86.43 86.13 Imp Force 240.97 240.16 Grading I O D L B G O R Bit # 3RR 0 7 WT S X I BT DTF Bit # 4											
MUD LOGGING		BG Gas (units): Conn Gas (units): Form: Pore Pressure: (%)		Surf to Surf: Lag Strokes: Lag Time: (min)											
BHA # 5		STRING LOADS		MUD PUMPS											
Qty Item Description ID (in) OD (in) Len (ft) Cum (ft) 1 HALLIBURTON MM65D 1 RYAN 6 3/4" 7/8 5.0 1.75 FBH MUD 1 PONY DC 3.250 6.812 15.04 42.04 1 EM TOOL 2.875 6.750 27.52 69.56 1 NMDC 3.250 6.812 30.16 99.72 90 5" D.P. 2.750 5.000 2,836.64 2,936.36 1 AGITATOR 2.500 6.750 12.96 2,949.32 1 SHOCK SUB 2.500 6.750 11.90 2,961.22 294 5" DP 2.750 5.000 9,278.81 12,240.02 Total Length: 12,240.02		On Btm Torque: 18,000 Off Btm Torque: 9,000 Str. Wt. Up: 205 Str. Wt. Down: 165 Str. Wt. Rot.: 185 Max Over Pull: 20 BHA Hrs: 4 Jar Hrs: Cum String Hours: 23 Weight B Jars (kip):		#1 #2 #3 Pump DR DR Type: Liner ID: 5.50 5.50 SPM: 85.00 85.00 GPM: 298.98 298.98 SPR: 1 SPM: 0.00 0.00 Pressure: 0.00 0.00 2 SPM: 0.00 0.00 Pressure: 0.00 0.00 T GPM (gpm): 600 SPP (psi): 3,800 AV (DC): 472 AV (DP): 268											
SURVEYS															
MD (ft)		Inclination(°)		Azimuth (°)		TVD (ft)		V Section (ft)		+E/-W (ft)		+N/-S (ft)		Dog Leg (°/100ft)	
11,332		89.69		0.96		6,664		4,675.01		-51.40		4,675.47		1.65	
11,427		90.00		0.96		6,664		4,770.01		-49.81		4,770.46		0.33	
11,522		88.56		0.25		6,666		4,864.99		-48.80		4,865.44		1.69	
11,617		90.94		0.25		6,666		4,959.99		-48.39		4,960.43		2.51	
11,711		89.38		1.84		6,666		5,053.97		-46.67		5,054.41		2.37	
11,806		88.69		0.25		6,667		5,148.95		-44.94		5,149.38		1.82	
11,901		90.31		1.31		6,668		5,243.94		-43.65		5,244.36		2.04	
11,995		87.81		2.19		6,670		5,337.89		-40.78		5,338.30		2.82	
OPERATION DETAILS															
FROM		TO		HRS		OP CODE		PHASE		CODE		ACTIVITY		DESCRIPTION	
06:00		09:00		3.00		P		DRLPRD		10		DRLLAT		DRILLING LATERAL F/ 9,492' TO 9,869'.	
09:00		09:30		0.50		P		DRLPRD		12		RIGSVC		SERVICE RIG.	
09:30		10:00		0.50		P		DRLPRD		10		DRLLAT		DRILLING LATERAL F/ 9,869' TO 9,964'. (AVERAGE ROP LAST 4 HOURS 130 FPH).	
10:00		11:00		1.00		N		DRLPRD		15		CIRC		CIRCULATE HOLE CLEAN. ROTATE AND RECIPROCATATE FULL STAND WHILE CIRCULATING.	
11:00		15:00		4.00		N		DRLPRD		13		TRIP		TOH TO BHA TO CHANGE BIT AND MOTOR.	
15:00		15:30		0.50		N		DRLPRD		14		PULDSTR		L/D BIT AND MOTOR.	
15:30		16:00		0.50		N		DRLPRD		14		PULDSTR		PICK UP LATERAL BHA (MOTOR: 1.75°, 7/8, 5.0 FBH) (BIT: HALLIBURTON MM65D W/ 6 X 22 JETS)	
16:00		19:30		3.50		N		DRLPRD		13		TRIP		TIH. FILL PIPE EVERY 30 STANDS.	
19:30		06:00		10.50		P		DRLPRD		10		DRLLAT		DRILLING LATERAL F/ 9,964' - 12,240'	
Daily Operations Comments DRILLING FROM RYAN DIRECTIONAL PLAN #3.															





