

EP WELLS DAILY OPERATIONS REPORT

Report 15

08/18/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1404H
Wellbore	UNIVERSITY 19 PW UNIT 1404H
WBS No/API No	30265150 / 4230133215.00

Event Summary

Event Type	Drilling only	Event Start Date	06/16/2017	Days on Location	14.92
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	12.58
Est. Days	22.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	STEVE SLOOP	Measured Depth(ft)	14,863.00
Engineer	BRANDON FOOTE	TVD(ft)	11,643.55
Other Supervisor	JOHNNIE BRASSELL	24 Hr Progress(ft)	313.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	8.50/35.42	Last Casing MD	7.000in@11,969.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	4.500in@21,085.00ft
Actual cost to date/AFE	1,496,412/2,770,860.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.54	LOT/FIT EMW(ppg)	
Daily Cost	58,242	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test	06/19/2017		PSI NII HPI GOAL ZERO DAYS PS BARRIER EVENT PS barrier bowtie review	09/29/2015	689	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	10 16 1500
Safety Comments:							
4-HAZARD HUNTS							

Drills

Drill Category	Drill Type	Detection (sec)	Complete (sec)	Crew drilled	Pass / Fail	PIC	Comments
Well Control Crew	Pit	10.00	60.00	Day	Pass	S. SLOOP	
Well Control Crew	Trip	20.00	80.00	Night	Pass	J. BRASSELL	
HSE Drills	Spill drill	20.00	160.00	Day	Pass	S. SLOOP	
HSE Drills	Man-down Drill	30.00	180.00	Day	Pass	S. SLOOP	
HSE Drills	Fire drill	15.00	75.00	Day	Pass	S. SLOOP	

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HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	15 1
Last Derrick Inspection	08/15/2017	3		
Last BOP function test	08/07/2017	11		
Last BOP Test	08/28/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
SLIDE & DRLG F/ 14550' T/ 14799', PUMP CLEAN UP CYCLE, SLIDE F/ 14799' T/ 14863', C/BU, TOH T/ 9703', L/D SHOCK SUB, TOH T/ 1822', L/D AGITATOR, TOH T/ 103', L/D BHA, RIG SERVICE
Update Since Report Time
TIH @ 8600'
24 Hour Forecast
COMPLETE TRIP, DRLG AS PER PLAN EST TD +/- 21,085'

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.00	MNH1	DRL		14,562.00	0		SLIDE DRILL F/14550' T/14562' (12' @ 12 FPH) WOB: 15K RPM: SURF 0 MOTOR 248 BIT 248 PSI & FLOW: SPP 5875 GPM 307 DIFF 100-150 STRING WT: P/U 210 S/O 170 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: .81 REV/GAL GAS: BG 500 CG 4000
1:00	0.50	MNH1	DRL		14,625.00	0		ROTARY DRILL F/14562' T/14625' (63' @ 126 FPH) WOB: 10K RPM: SURF 80 MOTOR 248 BIT 328 PSI & FLOW: SPP 5750 GPM 307 DIFF 850-950 STRING WT: P/U 210 S/O 170 ROT 190 TORQUE: ON BTM 8-10K OFF BTM 4-5K MW: 13.4 PPG MOTOR: .81 REV/GAL GAS: BG 500 CG 4000
1:30	7.50	MNH1	DRL		14,799.00	0		SLIDE DRILL F/14625' T/14799' (174' @ 23 FPH) WOB: 15K RPM: SURF 0 MOTOR 248/243 BIT 248/243 PSI & FLOW: SPP 5875 GPM 307/300 DIFF 100-150/300 STRING WT: P/U 210 S/O 170 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: .81 REV/GAL GAS: BG 500 CG 4000
9:00	1.50	MNH1	CDM		14,799.00	0		PUMP CLEAN UP CYCLE
10:30	4.00	MNH1	DRL		14,863.00	0		SLIDE DRILL F/14799' T/14863' (174' @ 23 FPH) WOB: 15K RPM: SURF 0 MOTOR 222 BIT 222 PSI & FLOW: SPP 4700 GPM 275 DIFF 100-300 STRING WT: P/U 210 S/O 170 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: .81 REV/GAL GAS: BG 500 CG 4000
14:30	1.00	MNH1	CDM		14,863.00	0		PUMP SWEEP AROUND
15:30	4.50	MNH1	TOH		14,863.00	1		NPT-DUE TO LACK OF BUILD REACTION- TOH T/ 9703' PULL ROT-HEAD
20:00	0.50	MNH1	TOH		14,863.00	1		NPT-L/D SHOCK SUB
20:30	1.00	MNH1	TOH		14,863.00	1		NPT- TOH T/ 1822'
21:30	0.50	MNH1	TOH		14,863.00	1		NPT- L/D AGITATOR
22:00	0.50	MNH1	TOH		14,863.00	1		NPT- TOH T/ 103'
22:30	1.00	MNH1	BHA		14,863.00	1		NPT L/D BHA BIT GRADE: 1,1,CT,S,X,I,CT,BHA
23:30	0.50	MNH1	SVC		14,863.00	1		NPT- RIG SERVICE
Total	24.00							

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NPT Summary

Start Date/Time	Responsible Company	NPT Code	Failure MD (ft)	Ops Code	Type*	Equipment Type	Net time (hr)	Gross time (hr)	Severity	Status
08/18/2017 15:30	SHELL	Directional (MWD Measurement While Drilling/gyro)	14,863.00	TOH	N		0.00	0.00		OPEN
Description: TOH T/ 9703' PULL ROT-HEAD. L/D SHOCK SUB. TOH T/ 1822'. L/D AGITATOR. TOH T/ 103'. L/D BHA BIT GRADE: 1,1,CT,S,X,I,CT,BHA.						Title: DUE TO LACK OF BUILD REACTION				
Total							0.00	0.00		

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
14,172.00	90.72	160.84	11,637.59	-2,545.75	493.22	2,592.13	0.84	PTW MWD+HDGM_2016
14,268.00	89.81	161.13	11,637.14	-2,636.51	524.50	2,687.51	0.99	PTW MWD+HDGM_2016
14,362.00	89.52	159.82	11,637.69	-2,725.10	555.92	2,780.81	1.43	PTW MWD+HDGM_2016
14,457.00	89.50	150.99	11,638.51	-2,811.39	595.42	2,873.61	9.29	PTW MWD+HDGM_2016
14,551.00	89.26	149.13	11,639.52	-2,892.84	642.33	2,963.29	2.00	PTW MWD+HDGM_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	POM (cc)
MD (ft)		TS/HGS/LGS (%)	CaCl2 (%)
Mud Density (ppg)		Sand (%)	Caom/Clom (ppm)
Vis (s/qt)		Oil/Water Ratio (%)	ACT
PV/YP (cp/lbf/100ft²)			XS Lime(lbm/bbl)
Gels 10 s/m (lbf/100ft²)		LCM (lbm/bbl)	ES (Volts)
API/HTHP WL (cc/30min)		ECD (ppg)	R600/300 (°)
FC/HTHP FC (32nd")		H2S (gas unit)	R200/100 (°)
WPS (ppm)		KCl (%)	R6/3 (°)
FL temp. (°F)		Ditch Magnet in Last 24hrs/Cum. (gm)	

Gas Concentrations and Fluid Losses

Avg Connection Gas (gas unit)	Avg. trip gas (gas unit)	Losses Last 24 Hours/Cumulative...	
Max. connection gas (gas unit)	Max. trip gas (gas unit)	Surface Losses (bbl)	/0.00
Avg. background gas (gas unit)	Avg H2S Gas (gas unit)	Sub Surface Losses (bbl)	/0.00
Max. background gas (gas unit)	Max H2S Gas (gas unit)	Total Losses	0.00/0.00
		End vol. (bbl)	0.00

Bulks Summary

Product	Quantity Onboard	Units	Daily Usage
Diesel	-7,058.00	GAL	1,500.00

Bit Details

Bit no.	Size (in)	Manufacturer	Model no.	Class	IADC code	Serial no.	Size (32nd")	MD in (ft)	MD out (ft)	IADC Dull Grade
5	6.125	BAKER HUGHES	TD405FX			7163435	1x15, 4x16	11,983.00	14,863.00	1-1-CT-S-X-I-CT-BHA

Bit Operations

MD (ft)	WOB Min/Max (kip)	Current RPM (rpm)	Flow rate (gpm)	SPP (psi)	P bit (psi)	% @ Bit	HHP (hp)	Hours (hr)	Footage (ft)	ROP (ft/hr)	Hours cum (hr)	Footage cum. (ft)	ROP cum. (ft/hr)

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Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DP	304	9,588.43	4.000		3.340	XT-39			RIG
SHOCK SUB	1	11.14	5.000		2.750	XT-39			W1681970
(110 JTS) DRILL PIPE	110	3,469.93	5.000		3.250	XT-39			RIG
AGITATOR 1.4 PLATE & SHOCK SUB	1	22.24	5.000		2.750	XT-39			W1830287
(53 JTS) DRILL PIPE	53	1,667.63	5.000		3.250	XT-39			RIG
CROSSOVER SUB	1	1.95	5.000		2.750	XT-39			DR18060
FLOAT SUB	1	2.96	4.750		2.750	3-1/2 IF			NESFS475151
SCREEN SUB	1	3.98	4.875		2.750	3-1/2 IF			DR31955
NM SLICK COLLAR	1	29.12	4.500		2.560	3-1/2 IF			NESNM475445
GAP SUB	1	3.76	5.125			3-1/2 IF			VG4755094PTS
CENTRALIZER COLLAR	1	8.34	5.000			4.3 ACME			VC475012
LANDING SUB	1	3.43	5.125			4.3 ACME			VL475074
CROSSOVER	1	1.50	4.750		2.750	3-1/2 IF			VX475012
NM PONY SLICK COLLAR	1	11.01	4.630		2.750	3-1/2 IF			DR31741
STABILIZER	1	4.83	5.875		2.625	3-1/2 IF			DR27098
5" BICO MUD MOTOR, LOBES: 6/7, STG: 8, FIXED @ 1.83°	1	31.75	5.875			3-1/2 IF			G254
BIT #5 RUN #1 BAKER TD405FX, 4X16's, 1X15's, SN: 7163435	1	1.00	6.125	6.125					7163435

Drillstring Details

Date/Time in	Date/Time out	BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
08/15/2017 00:05	08/18/2017 23:30	5	137.01		DRILL 6.125" PRODUCTION SECTION

PUMP/HYDRAULIC DATA

Pump No.	Type	Make/Model	Stroke (in)	Liner size (in)	Efficiency (%)	Pressure (psi)	SPM (spm)	Output (gpm)	Kill SPM/Pressure/Depth (spm/psi/ft)
1		GARDENER-DENVER / PZ-11-1600	11.00						
2		GARDENER-DENVER / PZ-11-1600	11.00						

Remarks

FUEL ON LOCATION: 17596 GAL
FUEL USED (RIG): 1680 GAL
FUEL USED (PITS): 1500 GAL
FUEL DELIVERED: 0 GAL