

## EP WELLS DAILY OPERATIONS REPORT

Report 7

07/07/2017

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	6.31
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	4.98
Est. Days	22.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	TRAMPUS STEWART	Measured Depth(ft)	9,296.00
Engineer	BRANDON FOOTE	TVD(ft)	9,286.54
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	1,712.00
Depth Ref/Grd Elev/Water Depth(ft)	DfE: 2,800.10 / 2,772.10	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	9.625in@4,893.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@12,236.00ft
Actual cost to date/AFE	596,381/2,770,860.00	Current MW / BH EMW(ppg)	9.35/
Actual divided by AFE	0.22	LOT/FIT EMW(ppg)	
Daily Cost	46,335	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 <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>	09/29/2015	647	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	1500
Safety Comments:							
292 MAN HOURS							

## Drills

Drill Category	Drill Type	Detection (sec)	Complete (sec)	Crew drilled	Pass / Fail	PIC	Comments
Well Control Crew	Pit	10.00	150.00	Night	Pass		

## HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	7
Last Derrick Inspection	07/05/2017	2		
Last BOP function test	06/28/2017	9		
Last BOP Test	07/19/2017			
Next BOP Test				

## Operations Summary

24 Hour Summary
DRILL F/7584' T/9296'
Update Since Report Time
DRILL T/9600'
24 Hour Forecast

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DRILL T/ KOP @ 11055'. POOH F/ CURVE ASSY.

## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	6.00	INT1	DRL		8,060.00	0		DRILL F/7584' T/8060' (476' @ 79.3 FPH) WOB:40-45K RPM: SURF 20 MOTOR 168 BIT 188 PSI & FLOW: SPP 2180 GPM 600 DIFF 450-550 STRING WT: P/U 275 S/O 245 ROT 260 TORQUE: ON BTM 14-16K OFF BTM 7-8K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
6:00	4.00	INT1	DRL		8,352.00	0		DRILL F/8060' T/8352' (292' @ 73 FPH) WOB:42-45K RPM: SURF 20 MOTOR 171 BIT 191 PSI & FLOW: SPP 2230 GPM 612 DIFF 300-500 STRING WT: P/U 300 S/O 245 ROT 265 TORQUE: ON BTM 9-12K OFF BTM 7K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
10:00	0.50	INT1	SVC		8,352.00	0		SERVICE TOP DRIVE & CROWN
10:30	7.50	INT1	DRL		8,888.00	0		DRILL F/8352' T/8888' (536' @ 71.5 FPH) WOB:42-45K RPM: SURF 20 MOTOR 170 BIT 190 PSI & FLOW: SPP 2175 GPM 604 DIFF 400-600 STRING WT: P/U 305 S/O 255 ROT 275 TORQUE: ON BTM 9-14K OFF BTM 7K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
18:00	6.00	INT1	DRL		9,296.00	0		DRILL F/8888' T/9296' (408' @ 68 FPH) WOB:40-45K RPM: SURF 20 MOTOR 170 BIT 190 PSI & FLOW: SPP 2175 GPM 604 DIFF 400-600 STRING WT: P/U 310 S/O 265 ROT 285 TORQUE: ON BTM 11-12K OFF BTM 7K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
<b>Total</b>	<b>24.00</b>							

## Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
8,454.00	1.11	227.13	8,444.69	138.06	-166.43	-115.65	0.02	PTW MWD+HDGM_2016
8,633.00	1.06	230.39	8,623.66	135.82	-168.98	-113.11	0.04	PTW MWD+HDGM_2016
8,812.00	0.91	233.00	8,802.63	133.91	-171.39	-110.90	0.09	PTW MWD+HDGM_2016
9,080.00	1.06	264.05	9,070.60	132.37	-175.55	-108.85	0.20	PTW MWD+HDGM_2016
9,259.00	1.40	269.70	9,249.55	132.19	-179.39	-108.18	0.20	PTW MWD+HDGM_2016

## Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	0.00/93.50	pH/Pm (cc)	9.00/0.40
MD (ft)	8,885.00	TS/HGS/LGS (%)	1.30/0.10/1.20	Pf/Mf (cc)	0.15/0.30
Mud Density (ppg)	9.35	Sand (%)	0.15	Ca+ (ppm)	
Vis (s/qt)	28.00			Cl- (ppm)	92,000
PV/YP (cp/lbf/100ft²)	1.00/3.000	MBT (lbm/bbl)			
Gels 10 s/m (lbf/100ft²)	1.000/2.000	LCM (lbm/bbl)			
API/HTHP WL (cc/30min)	100.0/	ECD (ppg)	9.500	R600/300 (°)	
FC/HTHP FC (32nd")	2.0/	H2S (gas unit)		R200/100 (°)	
		KCl (%)		R6/3 (°)	
FL temp. (°F)		Ditch Magnet in Last 24hrs/Cum. (gm)			

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## 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
2	8.750	BAKER HUGHES	T607FX			7164145	7x16	4,893.00		-----

## 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)
8,060.00	40.0/45.0	20	600.0	2,180.00	163.22	7.49	57.13	6.00	476.00	79.3	23.00	3,167.00	137.7
8,352.00	42.0/45.0	20	612.0	2,230.00	169.82	7.62	60.62	4.00	292.00	73.0	27.00	3,459.00	128.1
8,888.00	42.0/45.0	20	604.0	2,175.00	165.41	7.60	58.28	7.50	536.00	71.5	34.50	3,995.00	115.8
9,296.00	40.0/45.0	20	604.0	2,175.00	165.41	7.60	58.28	6.00	408.00	68.0	40.50	4,403.00	108.7

## Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	265	8,359.42	5.000		4.276				RIG
(12 JTS) HWDP	12	360.68	6.500		3.250	4 1/2 IF			RIG
CROSSOVER SUB	1	2.34	6.700		2.810	4 1/2 IF			NESXO6755 48
(15 JTS) DRILL COLLARS	15	445.77	6.500		2.500	4 1/2 XH			RIG
SCREEN SUB	1	3.16	6.500		3.250	4 1/2 XH			DR27053
STABILIZER	1	5.91	8.500		2.870	4 1/2 XH			DR34214
NON-MAG SLICK COLLAR	1	30.79	6.750		2.870	4 1/2 XH			NESNM6756 37
STABILIZER	1	5.90	8.500		2.870	4 1/2 XH			DR34216
GAP SUB	1	3.59	6.625		2.870	4 1/2 XH			VG650134P TS
CENTRALIZER COLLAR	1	8.54	6.625		4.490	4 1/2 IF			VC650021
LANDING SUB	1	3.55	6.625		3.780	4 1/2 IF			VL650121
CROSSOVER SUB	1	1.56	6.500		2.750	4-1/2 XH			VX650075
NON-MAG PONY SLICK COLLAR	1	15.23	6.500		2.870	4 1/2 XH			PXGPC6501 068
STABILIZER	1	5.92	8.500		2.870	4 1/2 XH			DR34217
CROSSOVER SUB	1	2.09	6.560		3.250	4 1/2 XH			DR26769
SCIENTIFIC MUD MOTOR, LOBES: 7/8, STG: 9.4, FIXED @	1	40.55	8.500			5-1/2 FH			SDI700043
BIT #2 RUN #1 BAKER T607FX, 7X16's, SN: 7164145	1	1.00	8.750	8.750					7164145

## Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
07/05/2017 21:00				2	936.58		DRILL 8.75" INTERMEDIATE SECTION
MD (ft)	SW Up (kip)	SW Down (kip)	SW Rotn (kip)	Drag (kip)	Tq On Btm (ft-lbf)	Tq Off Btm (ft-lbf)	Footage (ft)
8,060.00	275.0	245.00	260.00	15.00	16,000.0	8,000.0	476.00
8,352.00	300.0	245.00	265.00	35.00	12,000.0	7,000.0	292.00
8,888.00	305.0	255.00	275.00	30.00	14,000.0	7,000.0	536.00
9,296.00	310.0	265.00	285.00	25.00	12,000.0	7,000.0	408.00

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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: 12084 GAL  
FUEL USED: 1908 GAL