

## EP WELLS DAILY OPERATIONS REPORT

Report 2

06/20/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 D 0904H
Wellbore	UNIVERSITY 19 D 0904H
WBS No/API No	30265147 / 4230133226.00

## Event Summary

Event Type	Drilling only	Event Start Date	06/19/2017	Days on Location	1.56
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/19/2017	Days Since Spud	1.19
Est. Days	21.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	STEVE SLOOP	Measured Depth(ft)	4,336.00
Engineer	POWER CHARLES	TVD(ft)	4,307.25
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	3,549.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,799.10 / 2,771.10	Hole size(in)	12.250
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	20.000in@150.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	9.625in@4,912.00ft
Actual cost to date/AFE	101,621/2,503,951.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.04	LOT/FIT EMW(ppg)	
Daily Cost	48,817	Lithology	
		Formation/MD Top	

## HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test			PSI NII HPI <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>	09/29/2015	630	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							
316 MAN HOURS							

## HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			JSA's/Toolbox Talks Days Since Last Drill	1

## Operations Summary

24 Hour Summary
ROTATE & SLIDE DRILL F/787' T/4336'
Update Since Report Time
DRILL T/ TD 4912' @0430
24 Hour Forecast
CIRC. POOH. C/O BHA & RACK BACK. N/D CONDUCTOR. RUN CSG. WALK RIG T/ UNIVERSITY 19 PW UNIT 1403H. OFFLINE CMT.

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	2.00	SRF1	DRL		1,129.00	0		ROTARY DRILL F/787' T/1129' (342' @ 171 FPH) WOB: 30-35K RPM: SURF 80 MOTOR 225 BIT 305 PSI & FLOW: SPP 1800 GPM 900 DIFF 400-800 STRING WT: P/U 135, S/O 125, ROT 130 TORQUE: ON BTM 5-8 OFF BTM 2-3 MW: 8.9 PPG MOTOR: .25 REV/GAL
2:00	0.50	SRF1	DRL		1,208.00	0		ROTARY DRILL F/1129' T/1208' (79' @ 158 FPH) WOB: 10-15K RPM: SURF 80 MOTOR 119 BIT 199 PSI & FLOW: SPP 800 GPM 475 DIFF 400-800 STRING WT: P/U 140, S/O 130, ROT 135 TORQUE: ON BTM 5-8 OFF BTM 2-3 MW: 8.9 PPG MOTOR: .25 REV/GAL
2:30	5.50	SRF1	DRL		2,371.00	0		ROTARY DRILL F/1208' T/2371' (1163' @ 211.5 FPH) WOB: 25-30K RPM: SURF 70 MOTOR 213 BIT 283 PSI & FLOW: SPP 2450 GPM 850 DIFF 750 STRING WT: P/U 155, S/O 140, ROT 150 TORQUE: ON BTM 10-11 OFF BTM 3 MW: 9.9 PPG MOTOR: .25 REV/GAL
8:00	0.50	SRF1	DRL		2,391.00	0		SLIDE DRILL F/2371' T/2391' (20' @ 40 FPH) WOB: 22K RPM: SURF MOTOR 213 BIT 213 PSI & FLOW: SPP 2600 GPM 850 DIFF 500 STRING WT: P/U 155, S/O 140, ROT TORQUE: ON BTM OFF BTM MW: 9.9 PPG MOTOR: .25 REV/GAL
8:30	7.50	SRF1	DRL		3,577.00	0		ROTARY DRILL F/2391' T/3577' (1186' @ 158.1 FPH) WOB: 45-50K RPM: SURF 70 MOTOR 213 BIT 283 PSI & FLOW: SPP 2700 GPM 850 DIFF 750-1000 STRING WT: P/U 160, S/O 150, ROT 160 TORQUE: ON BTM 10-11 OFF BTM 3 MW: 9.9 PPG MOTOR: .25 REV/GAL
16:00	0.50	SRF1	DRL		3,602.00	0		SLIDE DRILL F/3577' T/3602' (25' @ 50 FPH) WOB: 22K RPM: SURF MOTOR 213 BIT 213 PSI & FLOW: SPP 2600 GPM 850 DIFF 500 STRING WT: P/U 160, S/O 150, ROT TORQUE: ON BTM OFF BTM MW: 9.9 PPG MOTOR: .25 REV/GAL
16:30	1.00	SRF1	DRL		3,711.00	0		ROTARY DRILL F/3602' T/3711' (109' @ 109 FPH) WOB: 45-50K RPM: SURF 70 MOTOR 213 BIT 283 PSI & FLOW: SPP 2700 GPM 850 DIFF 750-1000 STRING WT: P/U 160, S/O 150, ROT 160 TORQUE: ON BTM 10-11 OFF BTM 3 MW: 9.9 PPG MOTOR: .25 REV/GAL
17:30	0.50	SRF1	SVC		3,711.00	0		LUBRICATE RIG
18:00	1.00	SRF1	DRL		3,888.00	0		ROTARY DRILL F/3711' T/3888' (177' @ 177 FPH) WOB: 45-50K RPM: SURF 70 MOTOR 200 BIT 270 PSI & FLOW: SPP 2600 GPM 800 DIFF 600-800 STRING WT: P/U 190, S/O 170, ROT 185 TORQUE: ON BTM 10-11 OFF BTM 4-5 MW: 9.9 PPG MOTOR: .25 REV/GAL

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
19:00	0.50	SRF1	DRL		3,930.00	0		SLIDE DRILL F/3888' T/3930' (42' @ 84 FPH) WOB: 40K RPM: SURF MOTOR 200 BIT 200 PSI & FLOW: SPP 2600 GPM 800 DIFF 400 STRING WT: P/U 190, S/O 170, ROT 185 TORQUE: ON BTM OFF BTM MW: 9.9 PPG MOTOR: .25 REV/GAL
19:30	1.50	SRF1	DRL		4,084.00	0		ROTARY DRILL F/3930' T/4084' (154' @ 102.7 FPH) WOB: 45-50K RPM: SURF 70 MOTOR 200 BIT 270 PSI & FLOW: SPP 2600 GPM 800 DIFF 600-800 STRING WT: P/U 190, S/O 170, ROT 185 TORQUE: ON BTM 10-11 OFF BTM 4-5 MW: 9.9 PPG MOTOR: .25 REV/GAL
21:00	0.50	SRF1	DRL		4,112.00	0		SLIDE DRILL F/4084' T/4112' (28' @ 56 FPH) WOB: 40K RPM: SURF MOTOR 200 BIT 200 PSI & FLOW: SPP 2600 GPM 800 DIFF 400 STRING WT: P/U 190, S/O 170, ROT 185 TORQUE: ON BTM OFF BTM MW: 9.9 PPG MOTOR: .25 REV/GAL
21:30	2.50	SRF1	DRL		4,336.00	0		ROTARY DRILL F/4112' T/4336' (224' @ 89.6 FPH) WOB: 45-50K RPM: SURF 70 MOTOR 200 BIT 270 PSI & FLOW: SPP 2600 GPM 800 DIFF 600-800 STRING WT: P/U 190, S/O 170, ROT 185 TORQUE: ON BTM 10-11 OFF BTM 4-5 MW: 9.9 PPG MOTOR: .25 REV/GAL
<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
3,469.00	4.78	170.94	3,444.86	-369.49	-76.70	377.18	0.84	PTW MWD+HDGM_2016
3,583.00	5.40	181.55	3,558.42	-379.54	-76.10	386.98	0.99	PTW MWD+HDGM_2016
3,826.00	4.61	170.53	3,800.49	-400.61	-74.80	407.50	0.51	PTW MWD+HDGM_2016
4,005.00	6.16	182.67	3,978.70	-417.30	-74.07	423.82	1.07	PTW MWD+HDGM_2016
4,184.00	7.48	189.18	4,156.44	-438.39	-76.37	445.00	0.85	PTW MWD+HDGM_2016

## 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
1	12.250	BAKER HUGHES	T606FX			7163440	6x18	150.00		-----

## 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)

## Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	107	3,393.86	5.000		4.276				RIG
(12 JTS) HWDP	12	360.68	6.500		3.250	4-1/2 IF			RIG
CROSSOVER	1	2.34	6.700		2.810	4 1/2 IF			NESXO6755 48

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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.
(15 JTS) DC'S	15	445.77	6.500		2.500	4 1/2 XH			RIG
CROSSOVER	1	2.70	8.000		2.875	4 1/2 XH			NESXO800088
SCREEN SUB	1	3.37	8.000		2.880	6 5/8 REG			DR32190
SHOCK SUB	1	11.37	8.000		2.880	6 5/8 REG			SD900122
STABILIZER	1	7.92	12.000		2.875	6 5/8 REG			DR32990
NON-MAG SLICK COLLAR	1	29.35	7.750		3.250	6 5/8 REG			NESNM800065
STABILIZER	1	7.31	12.000		2.875	6 5/8 REG			DR30120
GAP SUB	1	3.57	8.125		3.250	6 5/8 FH			VG800031PTS
CENTRALIZER COLLAR	1	8.55	8.250		3.250	6 5/8 FH			VC800026
LANDING SUB	1	3.73	8.250		3.250	6 5/8 REG			VL800020
CROSSOVER SUB	1	1.55	8.000		2.875	6 5/8 REG			VX800022
NON-MAG PONY SLICK COLLAR	1	14.91	8.125		2.875	6 5/8 REG			NESPC800138
STABILIZER	1	7.62	12.000		3.000	6 5/8 REG			DR29402
7.75" PHOENIX 24X MUD MOTOR. 4/5 LOBE. 5.3 STG. ADJ	1	29.90	12.000			6 5/8 REG			24X-775510-PTS
BIT #1 RUN #1 BAKER T606FX , SN: 7163440. 6x18's	1	1.50	12.250	12.250					7163440

## Drillstring Details

Date/Time in	Date/Time out	BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
06/19/2017 19:30		1	942.14		DRILL 12.25" SURFACE 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: 14204 GAL  
FUEL USED: 2756 GAL