

## EP WELLS DAILY OPERATIONS REPORT

Report 9

07/15/2017

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	6.94
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/19/2017	Days Since Spud	6.56
Est. Days	21.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	TRAMPUS STEWART	Measured Depth(ft)	11,557.00
Engineer	BRANDON FOOTE	TVD(ft)	11,447.64
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	650.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,799.10 / 2,771.10	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	9.625in@4,879.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@12,236.00ft
Actual cost to date/AFE	680,952/2,503,951.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.27	LOT/FIT EMW(ppg)	
Daily Cost	52,575	Lithology	
		Formation/MD Top	

## HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test	06/23/2017		PSI NII HPI <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>	09/29/2015	655	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	1500
Safety Comments:							
260 MAN HOURS							

## HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection	07/11/2017	4	JSA's/Toolbox Talks	8
Last BOP function test	06/28/2017	17	Days Since Last Drill	
Last BOP Test	07/19/2017			
Next BOP Test				

## Operations Summary

24 Hour Summary
DRILL T/ KOP @ 11060'. POOH. L/D BHA & P/U CURVE ASSY. TIH. DRILL CURVE F/11060' T/11557'.
Update Since Report Time
DRILL CURVE T/11940'
24 Hour Forecast
CIRC. POOH. L/D BHA. RUN 7" CSG.

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.50	INT1	DRL		11,060.00	0		DRILL F/10907' T/11060' (153' @ 102 FPH) WOB:38-40K RPM: SURF 60 MOTOR 210 BIT 270 PSI & FLOW: SPP 3250 GPM 750 DIFF 400-600 STRING WT: P/U 355 S/O 285 ROT 305 TORQUE: ON BTM 16-18K OFF BTM 5-8K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4500
1:30	0.50	INT1	CDM		11,060.00	0		PUMP SLUG & DOWNLINK MWD TOOL
2:00	3.50	INT1	TOH		11,060.00	0		POOH F/11060' T/1294'
5:30	0.50	INT1	TOH		11,060.00	0		PULL ROT HEAD & INSTALL TRIP NIPPLE
6:00	1.00	INT1	TOH		11,060.00	0		POOH F/1294' T/127'
7:00	1.00	INT1	BHA		11,060.00	0		L/D BHA & B/O BIT
8:00	1.00	INT1	BHA		11,060.00	0		P/U DIR TOOLS, M/U BIT, SCRIBE MOTOR
9:00	0.50	INT1	TIH		11,060.00	0		TIH F/93' T/1763'
9:30	1.50	INT1	BHA		11,060.00	0		GAS MIGRATED UP, SHUT WELL IN & CIRC B/U, P/U SHOCK SUB/AGITATOR, TEST SAME 973 PSI BELOW, 1500 PSI ABOVE
11:00	0.50	INT1	TIH		11,060.00	0		REMOVE TRIP NIPPLE & INSTALL ROT HEAD
11:30	4.00	INT1	TIH		11,060.00	0		TIH F/1763' T/11060'
15:30	1.00	INT1	CBU		11,060.00	0		CIRC B/U
16:30	1.50	INT1	DRL		11,106.00	0		SLIDE DRILL F/11060' T/11106' (46' @ 30.7 FPH) WOB:10-15K RPM: SURF MOTOR 154 BIT 154 PSI & FLOW: SPP 2250 GPM 550 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.4 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
18:00	2.50	INT1	DRL		11,289.00	0		SLIDE DRILL F/11106' T/11289' (183' @ 73.2FPH) WOB:10-15K RPM: SURF MOTOR 154 BIT 154 PSI & FLOW: SPP 2250 GPM 550 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.4 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
20:30	0.50	INT1	DRL		11,309.00	0		DRILL F/11289' T/11309' (20' @ 40 FPH) WOB:10-15K RPM: SURF 20 MOTOR 154 BIT 174 PSI & FLOW: SPP 2250 GPM 550 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM 14-15K OFF BTM 5-6K MW: 9.4 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
21:00	1.00	INT1	DRL		11,378.00	0		SLIDE DRILL F/11309' T/11378' (69' @ 69 FPH) WOB:10-15K RPM: SURF MOTOR 154 BIT 154 PSI & FLOW: SPP 2250 GPM 550 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.4 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
22:00	0.50	INT1	DRL		11,408.00	0		DRILL F/11378' T/11408' (30' @ 60 FPH) WOB:10-15K RPM: SURF 20 MOTOR 164 BIT 184 PSI & FLOW: SPP 2650 GPM 585 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM 14-15K OFF BTM 5-6K MW: 9.5 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
22:30	0.50	INT1	DRL		11,468.00	0		SLIDE DRILL F/11408' T/11468' (60' @ 120 FPH) WOB:10-15K RPM: SURF MOTOR 164 BIT 164 PSI & FLOW: SPP 2650 GPM 585 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.5 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
23:00	0.50	INT1	DRL		11,503.00	0		DRILL F/11468' T/11503' (35' @ 70 FPH) WOB:10-15K RPM: SURF 20 MOTOR 164 BIT 184 PSI & FLOW: SPP 2650 GPM 585 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM 14-15K OFF BTM 5-6K MW: 9.5 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
23:30	0.50	INT1	DRL		11,557.00	0		SLIDE DRILL F/11503' T/11557' (54' @ 108 FPH) WOB:10-15K RPM: SURF MOTOR 164 BIT 164 PSI & FLOW: SPP 2650 GPM 585 DIFF 300-600 STRING WT: P/U 330 S/O 260 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.5 PPG MOTOR: .28 REVS/GAL GAS: BG 2000 CG 4000
<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
11,062.00	0.33	304.55	11,017.42	-752.40	-211.18	-665.33	1.00	PTW MWD+HDGM_2016
11,151.00	9.22	6.12	11,106.03	-745.15	-210.63	-658.51	10.19	PTW MWD+HDGM_2016
11,241.00	20.85	356.80	11,192.81	-721.91	-210.75	-636.13	13.16	PTW MWD+HDGM_2016
11,330.00	29.73	351.89	11,273.21	-684.17	-214.76	-598.74	10.24	PTW MWD+HDGM_2016
11,419.00	37.58	352.00	11,347.24	-635.37	-221.66	-549.93	8.82	PTW MWD+HDGM_2016

## Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	pH/Pm (cc) Pf/Mf (cc) Ca+ (ppm) Cl- (ppm)
MD (ft)		TS/HGS/LGS (%)	
Mud Density (ppg)		Sand (%)	
Vis (s/qt)		MBT (lbm/bbl)	
PV/YP (cp/lbf/100ft²)		LCM (lbm/bbl)	
Gels 10 s/m (lbf/100ft²)		ECD (ppg)	R600/300 (°)
API/HTHP WL (cc/30min)		H2S (gas unit)	R200/100 (°)
FC/HTHP FC (32nd")		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
3	8.750	ULTERRA	U716M			35779	7x16	9,429.00	11,060.00	-----

## 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	322	10,123.27	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) DC'S	15	445.77	6.500		2.500	4 1/2 XH			RIG
FILTER 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	1	2.09	6.560		3.250	4-1/2 XH			DR26769
7" SCIENTIFIC MUD MOTOR, 7/8 LOBES, 9.4 STG. FIXED @ 1.50°.	1	40.70	8.500			5-1/2 FH			SD1700017
BIT #3 RUN #1 ULTERRA U716M. SN: 35779. 7x16's	1	1.00	8.750	8.750					35779

## Drillstring Details

Date/Time in	Date/Time out	BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
07/14/2017 05:00	07/15/2017 08:00	3	936.73		DRILL 8.75" INTERMEDIATE 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: 18232 GAL  
FUEL DELIVERED: 7400 GAL  
FUEL USED: 1696 GAL