

## EP WELLS DAILY OPERATIONS REPORT

Report 5

05/14/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1407H
Wellbore	UNIVERSITY 19 PW UNIT 1407H
WBS No/API No	30264950 / 4230133203

## Event Summary

Event Type	Drilling only	Event Start Date	04/28/2017	Days on Location	5.00
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date		Days Since Spud	3.96
Est. Days	25.00	Contractor	PRECISION		
Work Unit	PRECISION 559	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	DENNIS MORGAN	Measured Depth(ft)	6,100.00
Engineer	YERMEK TYNYSHBAYEV	TVD(ft)	6,045.24
Other Supervisor	TANNER MANUEL / YU LIU	24 Hr Progress(ft)	1,128.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,792.70 / 2,766.70	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	3.50/14.58	Last Casing MD	9.625in@4,972.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@
Actual cost to date/AFE	391,043/2,726,365.58	Current MW / BH EMW(ppg)	10.05/
Actual divided by AFE	0.14	LOT/FIT EMW(ppg)	
Daily Cost	106,928	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>	10/12/2016	214	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							
MAN HRS: 287							

## Drills

Drill Category	Drill Type	Detection (sec)	Complete (sec)	Crew drilled	Pass / Fail	PIC	Comments
HSE Drills	H2S Drill				Pass	dennis morgan	Both crews (Larry &
Well Control Crew	BOP			Night		Tanner manuel	Shawn Dearmon's

## HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection	05/14/2017	0	JSA's/Toolbox Talks Days Since Last Drill	4
Last BOP function test	05/14/2017	0		
Last BOP Test	06/04/2017			
Next BOP Test				

## Operations Summary

24 Hour Summary
3.5HRS NPT CAMERON: DUE TO NOT REMOVING SET SCREWS. N/U & TEST BOPS. M/U BHA. RIH DRILL OUT DV TOOL. RIH TAGGED COLLAR @ 4884. DRILL OUT SHOE TRACK. ROTATE & SLIDE DRILL F/ 4972' - T/ 6100'.

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Update Since Report Time
ROTATE DRILL F/ 6100' - T/ 7000'. @ 0400.
24 Hour Forecast
CONTINUE DRILLING INTERMEDIATE SECTION.

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.50	INT1	RUP		4,972.00	1		NPT: CAMERON. INSTALL FLOWLINE. HOOK UP CHOKE LINE. INSTALL KOOMEY LINES, ROTATING HEAD LINES, ORBIT VALVE LINES. INSTALL 2" FILL UP LINE. HOOK UP SUPER CHOKE LINES. FUNCTION TEST: ORBIT VALVE, ROTATING CLAMP & FILL UP LINE. POWER UP KOOMEY & FUNCTION.
3:30	0.50	INT1	RUP		4,972.00	0		R/U BOP TESTERS. INSTALL TEST PLUG.
4:00	4.00	INT1	BOP		4,972.00	0		TEST BOPS. ACCUMULATOR DRAW DOWN. (ALL TESTS GOOD).
8:00	2.50	INT1	PUP		4,972.00	0		R/D TESTERS. INSTALL WEAR BUSHING & LOCK DOWN PINS. CLOSE CASING VALVES.
10:30	1.00	INT1	BHA		4,972.00	0		P/U DIRECTIONAL TOOLS. M/U MOTO & SCRIBE. M/U BIT.
11:30	1.50	INT1	TIH		4,972.00	0		TIH T/ 1162'. TAGGED DV TOOL.
13:00	0.50	INT1	DCM		4,972.00	0		DRILL OUT DV TOOL.
13:30	1.50	INT1	TIH		4,972.00	0		TIH T/ 4671'.
15:00	1.50	INT1	TIH		4,972.00	0		SLIP & CUT DRILL LINE.
16:30	1.00	INT1	TIH		4,972.00	0		WASH & REAM F/ 4684' - T/ 4884. TAGGED COLLAR @ 4884'.
17:30	1.00	INT1	DCM		4,972.00	0		DRILL OUT SHOE TRACK F/ 4884' - T/ 4972'.
18:30	1.50	INT1	DRL		5,048.00	0		ROTATE DRILL F/ 4972' - T/ 5048' (76' @ 50.7 FT/HR) RPM SURFACE 35 MOTOR 186 BIT 221 WOB 40 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K TORQUE OFF BTM 5 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG MOTOR REV: .27
20:00	2.00	INT1	DRL		5,671.00	0		ROTATE DRILL F/ 5048' - T/ 5671' (623' @ 311.5 FT/HR) RPM SURFACE 80 MOTOR 186 BIT 266 WOB 45 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K TORQUE OFF BTM 5 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG MOTOR REV: .27 GAS: 20 UNITS
22:00	0.50	INT1	DRL		5,695.00	0		SLIDE DRILL F/ 5671' - T/ 5695' (24' @ 48 FT/HR) RPM MOTOR 186 BIT 186 WOB 35 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG MOTOR REV: .27 GAS: 20 UNITS
22:30	0.50	INT1	DRL		5,940.00	0		ROTATE DRILL F/ 5695' - T/ 5940' (245' @ 490 FT/HR) RPM SURFACE 80 MOTOR 186 BIT 266 WOB 45 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K TORQUE OFF BTM 5 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG MOTOR REV: .27 GAS: 20 UNITS
23:00	0.50	INT1	DRL		5,970.00	0		SLIDE DRILL F/ 5940' - T/ 5970' (30' @ 60 FT/HR) RPM MOTOR 186 BIT 186 WOB 35 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								MOTOR REV: .27 GAS: 20 UNITS
23:30	0.50	INT1	DRL		6,100.00	0		ROTATE DRILL F/ 5970' - T/ 6100' (130' @ 260 FT/HR) RPM SURFACE 80 MOTOR 186 BIT 266 WOB 45 K SPP 3175 PSI GPM 688 TORQUE ON BTM 14-16 K TORQUE OFF BTM 5 K P/U 245 K S/O 150 K ROT 192 K MUD 9.4 PPG MOTOR REV: .27 GAS: 20 UNITS
<b>Total</b>	<b>24.00</b>							

## 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
05/14/2017 00:00	CAMERON INTERNATIONAL CORPORATION D	BOP & Pressure Control Equipment	4,972.00	RUP	N			3.50		OPEN
<b>Description:</b> INSTALL FLOWLINE. HOOK UP CHOKE LINE. INSTALL KOOMEY LINES, ROTATING HEAD LINES, ORBIT VALVE LINES. INSTALL 2" FILL UP LINE. HOOK UP SUPER CHOKE LINES. FUNCTION TEST: ORBIT VALVE, ROTATING CLAMP & FILL UP LINE. POWER UP KOOMEY & FUNCTION.						<b>Title:</b> DID NOT REMOVE SET SCREWS.				
<b>Total</b>								<b>3.50</b>		

## Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
5,656.70	4.02	44.09	5,602.60	555.86	460.47	721.81	1.39	PTW MWD_2016
5,745.70	3.92	27.98	5,691.39	560.79	464.07	727.90	1.25	PTW MWD_2016
5,834.70	4.03	27.64	5,780.17	566.25	466.95	733.93	0.13	PTW MWD_2016
5,923.70	2.77	34.53	5,869.01	570.79	469.62	739.13	1.49	PTW MWD_2016
6,012.70	1.20	49.78	5,957.96	573.16	471.55	742.19	1.85	PTW MWD_2016

## Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	pH/Pm (cc)	7.00/0.05
MD (ft)	4,972.00	TS/HGS/LGS (%)	Pf/Mf (cc)	0.05/0.10
Mud Density (ppg)	10.05	Sand (%)	Ca+ (ppm)	
Vis (s/qt)	27.00		Cl- (ppm)	187
PV/YP (cp/lbf/100ft²)	1.00/3.000	MBT (lbm/bbl)		
Gels 10 s/m (lb/100ft²)	1.000/1.000	LCM (lbm/bbl)		
API/HTHP WL (cc/30min)	100.0/	ECD (ppg)	R600/300 (°)	
FC/HTHP FC (32nd")	1.0/	H2S (gas unit)	R200/100 (°)	
		KCl (%)	R6/3 (°)	
FL temp. (°F)		Ditch Magnet in Last 24hrs/Cum. (gm)		

## 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	ULTERRA	U716M			32731	7x11	4,972.00		-----

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## 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)
5,048.00	40.0/40.0	35	688.0	3,175.00	970.98	30.58	389.68	1.50	76.00	50.7	1.50	76.00	50.7
5,671.00	45.0/45.0	80	688.0	3,175.00	970.98	30.58	389.68	2.00	623.00	311.5	3.50	699.00	199.7
5,695.00	35.0/35.0	0	688.0	3,175.00	970.98	30.58	389.68	0.50	24.00	48.0	4.00	723.00	180.7
5,940.00	45.0/45.0	80	688.0	3,175.00	970.98	30.58	389.68	0.50	245.00	490.0	5.00	1,213.00	242.6
5,970.00	35.0/35.0	0	688.0	3,175.00	970.98	30.58	389.68	0.50	30.00	60.0	5.50	1,243.00	226.0
6,100.00	45.0/45.0	80	688.0	3,175.00	970.98	30.58	389.68	0.50	130.00	260.0	5.50	1,128.00	205.1

## Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
DRILL PIPE	1	5,163.76	4.500		3.870	4 1/2 IF			RIG
HWDP	12	374.06	5.000		2.875	4 1/2 IF			RIG
X/O SUB	1	3.45	5.000			4 1/2 IF			RIG
DRILL COLLARS	15	443.71	6.500		2.875	4 1/2 XH			RIG
SCREEN SUB	1	2.63	6.250		3.250	4 1/2 XH			DR21586
STABILIZER	1	6.07	8.500		3.187	4 1/2 XH			DR30857
NMDC	1	28.64	6.280		2.880	4 1/2 XH			NESNM650235
STABILIZER	1	5.23	8.500		2.810	4 1/2 XH			DR28753
GAP SUB	1	3.56	6.600		4.500	4 1/2 IF			VG650082PTS
650 CENTRALIZER COLLAR VELOCITY	1	8.53	6.680			4 1/2 IF			VC650077
650 LANDING SUB VELOCITY	1	3.52	6.630			4 1/2 IF			VL650116
650 X/O SUB VELOCITY	1	1.56	6.500			4 1/2 XH			VX650010
NMPC	1	13.47	6.500		275.000	4 1/2 XH			NESPC650709
STABILIZER	1	4.55	8.500		2.880	4 1/2 XH			DR32107
NM X/O	1	2.78	6.300		2.875	4 1/2 XH			X650477NM
MUD MOTOR 725 ML PHX	1	33.28	7.470			4 1/2 IF			PHX-725003-PTS
BIT #2 RUN #1 U716M (7X11's) SN: 32731	1	1.20	8.750	8.750		4 1/2 IF			32731

## Drillstring Details

Date/Time in	Date/Time out			BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
05/14/2017 10:30				2	936.24		DRILL 8.75" INTERMEDIATE HOLE 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)
5,048.00	245.0	150.00	192.00	53.00	16,000.0	5,000.0	76.00
5,671.00	245.0	150.00	192.00	53.00	16,000.0	5,000.0	623.00
5,695.00	245.0	150.00	192.00	53.00	0.0	0.0	0.00
5,940.00	245.0	150.00	192.00	53.00	16,000.0	5,000.0	269.00
5,970.00	245.0	150.00	192.00	53.00	0.0	0.0	275.00
6,100.00	245.0	150.00	192.00	53.00	16,000.0	5,000.0	130.00

## Remarks

DIESEL ON LOCATION: 14334 GAL  
DIESEL DELIVERED: 0 GAL  
DIESEL USED: 1092 GAL  
LNG USED: 330.92 GAL