

EP WELLS DAILY OPERATIONS REPORT

Report 23

10/02/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1804H
Wellbore	UNIVERSITY 19 PW UNIT 1804H
WBS No/API No	30269397 / 4230133264.00

Event Summary

Event Type	Drilling only	Event Start Date	08/09/2017	Days on Location	23.88
Objective	Drill - Wolfcamp	Original Spud Date	08/10/2017	Days Since Spud	22.13
Est. Days	23.00	Contractor	PRECISION		
Work Unit	PRECISION 563	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	KEVIN BERGERON	Measured Depth(ft)	15,051.00
Engineer	ROBERT HAHN	TVD(ft)	11,649.64
Other Supervisor	ROSS GRAHAM	24 Hr Progress(ft)	1,299.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,788.55 / 2,762.90	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	7.000in@11,261.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	4.500in@20,210.00ft
Actual cost to date/AFE	1,936,748/2,627,752.00	Current MW / BH EMW(ppg)	13.30/
Actual divided by AFE	0.74	LOT/FIT EMW(ppg)	
Daily Cost	74,912	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 GOAL ZERO DAYS PS BARRIER EVENT PS barrier bowtie review	10/31/2016	336	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							

HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	23
Last Derrick Inspection	09/15/2017	17		
Last BOP function test	09/25/2017	7		
Last BOP Test	10/16/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
DRILLED FROM 13752' TO 15051' IN LATERAL. DID A LOT OF SLIDING DUE TO HARD WALK TO THE RIGHT.
Update Since Report Time
@ 02:30 - DRILLING AHEAD AT 15141'.
24 Hour Forecast
DRILL AHEAD IN LATERAL.

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.50	MNH1	DRL		13,886.00	0		SLIDE FROM 13752' TO 13886' (134' @ 38 FPH) WOB: 5-20K PRESSURE & FLOW: 5650 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.2 PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
3:30	0.50	MNH1	DRL		14,007.00	0		ROTATE FROM 13886' TO 14007' (121' @ 242 FPH) WOB: 20-30K PRESSURE & FLOW: 6200 PSI @ 300 GPM RPM: SURFACE 100 MOTOR 240 BIT 340 TORQUE: ON BOT 12-13K OFF BOT 8K STRING WEIGHT: P/U 220K S/O 100K ROT 165K MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
4:00	1.50	MNH1	DRL		14,065.00	0		SLIDE FROM 14007' TO 14065' (58' @ 39 FPH) WOB: 20-25K PRESSURE & FLOW: 5650 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
5:30	0.50	MNH1	SVC		14,065.00	0		RIG SERVICE.
6:00	3.50	MNH1	DRL		14,453.00	0		ROTATE FROM 14065' TO 14453' (388' @ 111 FPH) WOB: 20-30K PRESSURE & FLOW: 6500 PSI @ 300 GPM RPM: SURFACE 100 MOTOR 240 BIT 340 TORQUE: ON BOT 12-13K OFF BOT 8K STRING WEIGHT: P/U 220K S/O 100K ROT 165K MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
9:30	1.00	MNH1	DRL		14,501.00	0		SLIDE FROM 14453' TO 14501' (48' @ 48 FPH) WOB: 10-20K PRESSURE & FLOW: 5800 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
10:30	0.50	MNH1	DRL		14,533.00	0		ROTATE FROM 14501' TO 14533' (32' @ 64 FPH) WOB: 20-30K PRESSURE & FLOW: 6500 PSI @ 300 GPM RPM: SURFACE 100 MOTOR 240 BIT 340 TORQUE: ON BOT 12-13K OFF BOT 8K STRING WEIGHT: P/U 230K S/O 100K ROT 161K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
11:00	2.50	MNH1	DRL		14,600.00	0		SLIDE FROM 14533' TO 14600' (67' @ 27 FPH) WOB: 30-45K PRESSURE & FLOW: 5900 PSI @ 300 GPM

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 2500 BG 1000 FLARE: NONE
13:30	0.50	MNH1	DRL		14,650.00	0		ROTATE FROM 14600' TO 14650' (50' @ 100 FPH) WOB: 20-30K PRESSURE & FLOW: 6500 PSI @ 300 GPM RPM: SURFACE 100 MOTOR 240 BIT 340 TORQUE: ON BOT 12-13K OFF BOT 8.5K STRING WEIGHT: P/U 230K S/O 100K ROT 161K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
14:00	1.50	MNH1	DRL		14,693.00	0		SLIDE FROM 14650' TO 14693' (43' @ 29 FPH) WOB: 30-45K PRESSURE & FLOW: 5800 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 2500 BG 1000 FLARE: NONE
15:30	0.50	MNH1	SVC		14,693.00	0		RIG SERVICE.
16:00	0.50	MNH1	DRL		14,825.00	0		ROTATE FROM 14693' TO 14825' (132' @ 264 FPH) WOB: 20-30K PRESSURE & FLOW: 6500 PSI @ 300 GPM RPM: SURFACE 100 MOTOR 240 BIT 340 TORQUE: ON BOT 12-13K OFF BOT 8.5K STRING WEIGHT: P/U 230K S/O 100K ROT 161K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 4000 BG 1000 FLARE: NONE
16:30	7.50	MNH1	DRL		15,051.00	0		SLIDE FROM 14825' TO 15051' (226' @ 30 FPH) WOB: 20-45K PRESSURE & FLOW: 5750 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 1500 BG 900 FLARE: NONE **ROTATED DURING CONNECTIONS FROM 14872' TO 14885' (13') AND FROM 14961' TO 14974' (13')**
Total	24.00							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
14,640.65	90.00	167.87	11,649.25	-2,214.64	988.82	-888.72	0.73	PTW MWD+HDGM_2016
14,730.65	89.94	165.88	11,649.30	-2,302.28	1,009.25	-936.98	2.21	PTW MWD+HDGM_2016
14,820.65	90.23	171.51	11,649.16	-2,390.50	1,026.89	-987.61	6.26	PTW MWD+HDGM_2016
14,909.65	89.97	169.02	11,649.01	-2,478.21	1,041.94	-1,039.70	2.81	PTW MWD+HDGM_2016
14,999.65	89.51	164.11	11,649.42	-2,565.72	1,062.84	-1,087.54	5.48	PTW MWD+HDGM_2016

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Fluid Details

Mud type	Invermul	Oil/Water (%)	56.00/18.00	POM (cc)	4.01 544.0
MD (ft)	14,740.00	TS/HGS/LGS (%)	23.90/16.80/7.10	CaCl2 (%)	
Mud Density (ppg)	13.30	Sand (%)	0.10	Caom/Clom (ppm)	
Vis (s/qt)	72.00	Oil/Water Ratio (%)	75.70/24.30	ACT	
PV/YP (cp/lbf/100ft²)	27.00/14.000	LCM (lbm/bbl) ECD (ppg) H2S (gas unit) KCl (%)	13.340	XS Lime(lbm/bbl)	
Gels 10 s/m (lbf/100ft²)	12.000/14.000			ES (Volts)	
API/HTHP WL (cc/30min)	/10.4			R600/300 (°)	
FC/HTHP FC (32nd")	/4.0			R200/100 (°)	
WPS (ppm)	279,556			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
8	6.125	BAKER HUGHES	T405FTS			5273362	5x15	12,010.00		-----

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)
13,886.00	5.0/20.0	0	300.0	5,650.00	146.95	2.60	25.72	3.50	134.00	38.3	30.50	1,876.00	61.5
14,007.00	20.0/30.0	100	300.0	6,200.00	146.95	2.37	25.72	0.50	121.00	242.0	31.00	1,997.00	64.4
14,065.00	20.0/25.0	0	300.0	5,650.00	146.95	2.60	25.72	1.50	58.00	38.7	32.50	2,055.00	63.2
14,453.00	20.0/30.0	100	300.0	6,500.00	146.95	2.26	25.72	3.50	388.00	110.9	36.00	2,443.00	67.9
14,501.00	10.0/20.0	0	300.0	5,800.00	146.95	2.53	25.72	1.00	48.00	48.0	37.00	2,491.00	67.3
14,533.00	20.0/30.0	100	300.0	6,500.00	148.07	2.28	25.91	0.50	32.00	64.0	37.50	2,523.00	67.3
14,600.00	30.0/45.0	0	300.0	5,900.00	148.07	2.51	25.91	2.50	67.00	26.8	40.00	2,590.00	64.7
14,650.00	20.0/30.0	100	300.0	6,500.00	148.07	2.28	25.91	0.50	50.00	100.0	40.50	2,640.00	65.2
14,693.00	30.0/45.0	0	300.0	5,800.00	148.07	2.55	25.91	1.50	43.00	28.7	42.00	2,683.00	63.9
14,825.00	20.0/30.0	100	300.0	6,500.00	148.07	2.28	25.91	0.50	132.00	264.0	42.50	2,815.00	66.2
15,051.00	20.0/45.0	0	300.0	5,750.00	148.07	2.58	25.91	7.50	226.00	30.1	50.00	3,041.00	60.8

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DRILL PIPE	331	10,410.89	4.000		3.340	XT-39			RIG
SHOCK SUB	1	11.15	5.000		2.062	XT-39			W1748799-8
(33 STANDS) 4" DRILL PIPE	94	2,962.27	4.000		2.688	XT-39			RIG
SHOCK SUB/AGITATOR	1	22.35	5.000		2.875	XT-39			W1885763-8
(17 STANDS) 4" DRILL PIPE	48	1,525.54	4.000		2.687	XT-39			RIG
CROSSOVER	1	2.94	4.937		2.687	XT-39			SD112640
FILTER SUB	1	5.95	4.750		2.250	3-1/2 IF			SD117021
NMDC	1	30.66	4.750		2.750	3-1/2 IF			SD53425
ACCUMP	1	28.45	4.750		3.750	3-1/2 IF			C4027
NMPC	1	15.04	4.750		2.312	3-1/2 IF			SD3855
FLOAT SUB	1	2.43	4.625		2.250	3-1/2 IF			SD10611
BICO 5" MUD MOTOR, LOBES: 6/7. STAGE: 8.0. SET @ 1.74°	1	32.33	5.062			3-1/2 IF			G233
BIT #8 RUN #1 6.125" BAKER T405FTX (5X15) SN: 5273362	1	1.00	6.125	6.125		3 -1/2 REG			5273362

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Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
09/30/2017 19:00				8	152.30		DRILL 6.125" PRODUCTION 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)
13,886.00	0.0	0.00	0.00	0.00	0.0	0.0	134.00
14,007.00	220.0	100.00	165.00	55.00	13,000.0	8,000.0	121.00
14,065.00	0.0	0.00	0.00	0.00	0.0	0.0	58.00
14,453.00	220.0	100.00	165.00	55.00	13,000.0	8,000.0	388.00
14,501.00	0.0	0.00	0.00	0.00	0.0	0.0	48.00
14,533.00	230.0	100.00	161.00	69.00	13,000.0	8,000.0	32.00
14,600.00	0.0	0.00	0.00	0.00	0.0	0.0	67.00
14,650.00	230.0	100.00	161.00	69.00	13,000.0	8,500.0	50.00
14,693.00	0.0	0.00	0.00	0.00	0.0	0.0	43.00
14,825.00	230.0	100.00	161.00	69.00	13,000.0	8,500.0	132.00
15,051.00	0.0	0.00	0.00	0.00	0.0	0.0	226.00

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		JJMMC / F-1600	12.00						
2		JJMMC / F-1600	12.00						

Remarks

FUEL ON HAND: 11160 GALS
FUEL USED: 3240 GALS
FUEL RECEIVED: 5600 GAL