EP WELLS DAILY OPERATIONS REPORT

Report 27 10/06/2017

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	27.88
Objective	Drill - Wolfcamp	Original Spud Date	08/10/2017	Days Since Spud	26.13
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)	17,607.00
Engineer	ROBERT HAHN	TVD(ft)	11,635.82
Other Supervisor	ROSS GRAHAM	24 Hr Progress(ft)	580.00
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	2,192,178/2,627,752.00	Current MW / BH EMW(ppg)	13.70/
Actual divided by AFE	0.83	LOT/FIT EMW(ppg)	
Daily Cost	47,775	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			**GOAL ZERO DAYS**	10/31/2016	340	Safety Card - Unsafe	
Last casing pressure test			**PS BARRIER EVENT**			SSE%	
			PS barrier bowtie review			Last casing pressure(psi)	

Safety Comments:

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection			JSA's/Toolbox Talks	
Last BOP function test	09/15/2017	21	Days Since Last Drill	27
Last BOP Test	09/25/2017	11		
Next BOP Test	10/16/2017			

Operations Summary

24 Hour Summary

TIH TO SHOE, SLIPPED AND CUT, TIH, WASHED LAST 1000' DOWN, DRILLED FROM 17027' TO 17607'.

Update Since Report Time

@ 03:00 - DRILLING AHEAD AT 17746'.

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	2.50	MNH1	TIH		17,027.00	0		TIH FROM 6268' TO 11311'.
2:30	1.50	MNH1	CUT		17,027.00	0		SLIP AND CUT DRILL LINE.
4:00	2.00	MNH1	TIH		17,027.00	0		TIH FROM 11311' TO 14465'.
6:00	0.50	MNH1	SVC		17,027.00	0		RIG SERVICE.
6:30	0.50	MNH1	TIH		17,027.00	0		TIH FROM 14465' TO 16305'.
7:00	2.00	MNH1	WTR		17,027.00	0		STARTED TAKING WEIGHT SO WE WASHED AND REAMED DOWN FROM 16305' TO 17027'.
9:00	2.50	MNH1	DRL		17,064.00	0		SLIDE FROM 17027' TO 17064' (37' @ 15 FPH) WOB: 45-50K PRESSURE & FLOW: 6400 PSI @ 310 GPM RPM: SURFACE 0 MOTOR 248 BIT 248 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
11:30	3.00	MNH1	DRL		17,305.00	0		ROTATE FROM 17064' TO 17305' (241' @ 81 FPH) WOB: 25-30K PRESSURE & FLOW: 6950 PSI @ 300 GPM RPM: SURFACE 80 MOTOR 240 BIT 320 TORQUE: ON BOT 12K OFF BOT 7K STRING WEIGHT: P/U 215K S/O 135K ROT 162K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
14:30	2.50	MNH1	DRL		17,338.00	0		SLIDE FROM 17305' TO 17338' (33' @ 13 FPH) WOB: 45-55K PRESSURE & FLOW: 6400 PSI @ 310 GPM RPM: SURFACE 0 MOTOR 248 BIT 248 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
17:00	2.50	MNH1	DRL		17,486.00	0		ROTATE FROM 17338' TO 17486' (148' @ 60 FPH) WOB: 25-30K PRESSURE & FLOW: 6950 PSI @ 300 GPM RPM: SURFACE 80 MOTOR 240 BIT 320 TORQUE: ON BOT 12K OFF BOT 7K STRING WEIGHT: P/U 225K S/O 115K ROT 160K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
19:30	3.00	MNH1	DRL		17,520.00	0		SLIDE FROM 17486' TO 17520' (34' @ 11 FPH) WOB: 45-55K PRESSURE & FLOW: 5300 PSI @ 275 GPM RPM: SURFACE 0 MOTOR 220 BIT 220 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
22:30	1.00	MNH1	DRL		17,601.00	0		ROTATE FROM 17520' TO 17601' (81' @ 81 FPH) WOB: 25-30K PRESSURE & FLOW: 6300 PSI @ 275 GPM RPM: SURFACE 80 MOTOR 220 BIT 300 TORQUE: ON BOT 12-14K OFF BOT 8K

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								STRING WEIGHT: P/U 250K S/O 100K ROT 160K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
23:30	0.50	MNH1	DRL		17,607.00	0		SLIDE FROM 17601' TO 17607' (6' @ 12 FPH) WOB: 45-55K PRESSURE & FLOW: 5300 PSI @ 275 GPM RPM: SURFACE 0 MOTOR 220 BIT 220 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
Total	**24.00**							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
17,244.65	93.39	156.91	11,654.36	-4,658.71	1,841.82	-2,036.33	0.88	PTW MWD+HDGM_2016
17,334.65	93.44	160.97	11,649.00	-4,742.53	1,874.10	-2,073.57	4.50	PTW MWD+HDGM_2016
17,424.65	92.35	161.81	11,644.46	-4,827.71	1,902.78	-2,114.30	1.53	PTW MWD+HDGM_2016
17,513.65	92.61	164.60	11,640.60	-4,912.83	1,928.47	-2,157.08	3.15	PTW MWD+HDGM_2016
17,603.65	93.24	166.08	11,636.01	-4,999.78	1,951.22	-2,203.23	1.79	PTW MWD+HDGM_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	58.00/14.00	POM (cc)	
MD (ft)	18,385.00	TS/HGS/LGS (%)	26.70/18.40/8.20	CaCl2 (%)	
Mud Density (ppg)	13.70	Sand (%)	0.20	Caom/Clom (ppm)	
Vis (s/qt)	64.00	Oil/Water Ratio (%)	80.60/19.40	ACT	
PV/YP (cp/lbf/100ft²)	26.00/12.000			XS Lime(lbm/bbl)	2.33
Gels 10 s/m (lbf/100ft²)	15.000/18.000	LCM (lbm/bbl)		ES (Volts)	505.0
API/HTHP WL (cc/30min)	/8.0	ECD (ppg)		R600/300 (°)	
FC/HTHP FC (32nd")	/4.0	H2S (gas unit)		R200/100 (°)	
WPS (ppm)	241,539	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
9	6.125	BAKER HUGHES	DD405T			5273464	5x16	17,027.00		- - - - - -

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)
17,064.00	45.0/50.0	0	310.0	6,400.00	122.13	1.91	22.09	2.50	37.00	14.8	2.50	37.00	14.8
17,305.00	25.0/30.0	80	300.0	6,950.00	114.38	1.65	20.02	3.00	241.00	80.3	5.50	278.00	50.5
17,338.00	45.0/55.0	0	310.0	6,400.00	122.13	1.91	22.09	2.50	33.00	13.2	8.00	311.00	38.9
17,486.00	25.0/30.0	80	300.0	6,950.00	114.38	1.65	20.02	2.50	148.00	59.2	10.50	459.00	43.7
17,520.00	45.0/55.0	0	275.0	5,300.00	96.11	1.81	15.42	3.00	34.00	11.3	13.50	493.00	36.5
17,601.00	25.0/30.0	80	275.0	6,300.00	96.11	1.53	15.42	1.00	81.00	81.0	14.50	574.00	39.6
17,607.00	45.0/55.0	0	275.0	5,300.00	96.11	1.81	15.42	0.50	6.00	12.0	15.00	580.00	38.7

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DRILL PIPE	411	12,970.98	4.000		3.340	XT-39			RIG

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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.
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			C2078
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
NDS 5" MUD MOTOR, LOBES: 6/7, STAGE: 8.0, SET @ 1.82°.	1	28.33	5.000			3-1/2 IF			RY500021
BIT #9 RUN #1 6.125" BAKER DD405T (5X16) SN: 5273464	1	0.91	6.125	6.125		3 -1/2 REG			5273464

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
10/05/2017 21:00				9	148.21		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)**
17,064.00	0.0	0.00	0.00	0.00	0.0	0.0	37.00
17,305.00	215.0	135.00	162.00	53.00	12,000.0	7,000.0	241.00
17,338.00	0.0	0.00	0.00	0.00	0.0	0.0	33.00
17,486.00	225.0	115.00	160.00	65.00	12,000.0	7,000.0	148.00
17,520.00	0.0	0.00	0.00	0.00	0.0	0.0	34.00
17,601.00	250.0	100.00	160.00	90.00	14,000.0	8,000.0	81.00
17,607.00	0.0	0.00	0.00	0.00	0.0	0.0	6.00

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: 12426 GALS
FUEL USED: 3158 GALS
FUEL RECEIVED: 0 GAL