

EP WELLS DAILY OPERATIONS REPORT

Report 26

10/05/2017

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	26.88
Objective	Drill - Wolfcamp	Original Spud Date	08/10/2017	Days Since Spud	25.13
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)	17,027.00
Engineer	ROBERT HAHN	TVD(ft)	11,696.50
Other Supervisor	ROSS GRAHAM	24 Hr Progress(ft)	345.00
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	2,144,403/2,627,752.00	Current MW / BH EMW(ppg)	13.35/
Actual divided by AFE	0.82	LOT/FIT EMW(ppg)	
Daily Cost	57,239	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	339	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	26
Last Derrick Inspection	09/15/2017	20		
Last BOP function test	09/25/2017	10		
Last BOP Test	10/16/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
DRILL FROM 16682' TO 17027', PUMP A SWEEP AROUND AND TOO H TO BASE OF CURVE AT 12000'. PUMP A C/U CYCLE AND TOO H TO BHA. L/D MWD, MOTOR AND BIT, P/U NEW, TIH FROM BHA TO 6268'.
Update Since Report Time
@ 03:00 - SLIPPING AND CUTTING DRILL LINE AT 11273'.
24 Hour Forecast
TIH, 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	1.50	MNH1	DRL		16,695.00	0		SLIDE FROM 16682' TO 16695' (13' @ 12 FPH) WOB: 45-50K PRESSURE & FLOW: 5700 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
1:30	1.00	MNH1	DRL		16,780.00	0		ROTATE FROM 16695' TO 16780' (85' @ 85 FPH) WOB: 10-15K PRESSURE & FLOW: 6700 PSI @ 300 GPM RPM: SURFACE 85 MOTOR 240 BIT 325 TORQUE: ON BOT 14-16K OFF BOT 10K STRING WEIGHT: P/U 260K S/O 110K ROT 160K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
2:30	1.50	MNH1	DRL		16,799.00	0		SLIDE FROM 16780' TO 16799' (19' @ 13 FPH) WOB: 45-50K PRESSURE & FLOW: 5600 PSI @ 300 GPM RPM: SURFACE 0 MOTOR 240 BIT 240 MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
4:00	0.50	MNH1	DRL		16,848.00	0		ROTATE FROM 16799' TO 16848' (49' @ 98 FPH) WOB: 20-25K PRESSURE & FLOW: 6600 PSI @ 300 GPM RPM: SURFACE 85 MOTOR 240 BIT 325 TORQUE: ON BOT 13-15K OFF BOT 10K STRING WEIGHT: P/U 260K S/O 100K ROT 160K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
4:30	0.50	MNH1	SVC		16,848.00	0		RIG SERVICE.
5:00	1.50	MNH1	DRL		17,027.00	0		ROTATE FROM 16848' TO 17027' (179' @ 119 FPH) WOB: 20-25K PRESSURE & FLOW: 6700 PSI @ 300 GPM RPM: SURFACE 85 MOTOR 240 BIT 325 TORQUE: ON BOT 12-13K OFF BOT 10K STRING WEIGHT: P/U 260K S/O 100K ROT 160K MW: 13.3 PPG MOTOR: 0.8 RPG GAS: CG 1700 BG 500 FLARE: NONE
6:30	1.50	MNH1	CDM		17,027.00	0		PUMP 30 BBL SWEEP. WORK PIPE WHILE ROTATING AT 100 RPM. DECISION WAS MADE TO TOOH HALFWAY THROUGH LATERAL AND CLEAN UP AT BASE OF CURVE DUE TO HAVING 650' OF 8 3/4" RATHOLE BELOW 7". THEN CONTINUE TO TOOH AND P/U NEW TOOLS.
8:00	0.50	MNH1	TOH		17,027.00	0		PULL 5 STANDS WET, PULLED SMOOTH.
8:30	0.50	MNH1	CDM		17,027.00	0		PUMP SLUG.
9:00	2.50	MNH1	TOH		17,027.00	0		TOOH FROM 16577' TO BASE OF CURVE AT 12000'.
11:30	2.00	MNH1	CDM		17,027.00	0		PUMP 30 BBL SWEEP. WORK PIPE WHILE ROTATING AT 100 RPM. GOT A GOOD AMOUNT OF CUTTINGS BACK. PUMP SLUG.

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
13:30	4.00	MNH1	TOH		17,027.00	0		TOOH FROM 12000' TO 1600'.
17:30	0.50	MNH1	SVC		17,027.00	0		RIG SERVICE.
18:00	0.50	MNH1	BHA		17,027.00	0		L/D AGITATOR.
18:30	0.50	MNH1	TOH		17,027.00	0		TOOH FROM 1600' TO BHA.
19:00	2.00	MNH1	BHA		17,027.00	0		L/D MWD, MOTOR, AND BIT. BIT GRADE 1-1-NO-A-X-I-BHA.
21:00	0.50	MNH1	TIH		17,027.00	0		TIH FROM BHA TO 1638'.
21:30	0.50	MNH1	BHA		17,027.00	0		P/U AGITATOR. PRESSURE BEFORE 1900 PSI, PRESSURE AFTER 2200 PSI.
22:00	1.00	MNH1	TIH		17,027.00	0		TIH FROM 1638' TO 4623'.
23:00	0.50	MNH1	TIH		17,027.00	0		FILL PIPE AND P/U SECOND SHOCK SUB.
23:30	0.50	MNH1	TIH		17,027.00	0		TIH FROM 4623' TO 6268'.
Total	24.00							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
16,077.65	89.86	167.33	11,645.14	-3,588.45	1,385.95	-1,591.45	1.91	PTW MWD+HDGM_2016
16,166.65	91.06	166.42	11,644.42	-3,675.12	1,406.16	-1,639.18	1.69	PTW MWD+HDGM_2016
16,256.65	88.31	159.74	11,644.92	-3,761.17	1,432.33	-1,682.28	8.03	PTW MWD+HDGM_2016
16,346.65	85.02	155.67	11,650.15	-3,844.27	1,466.40	-1,717.76	5.81	PTW MWD+HDGM_2016
16,436.65	86.17	155.43	11,657.07	-3,925.96	1,503.54	-1,750.07	1.31	PTW MWD+HDGM_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	57.50/16.00	POM (cc)	
MD (ft)	17,027.00	TS/HGS/LGS (%)	24.60/16.90/7.70	CaCl2 (%)	
Mud Density (ppg)	13.35	Sand (%)	0.00	Caom/Clom (ppm)	
Vis (s/qt)	69.00	Oil/Water Ratio (%)	78.20/21.80	ACT	
PV/YP (cp/lbf/100ft²)	24.00/11.000			XS Lime(lbm/bbl)	5.31
Gels 10 s/m (lbf/100ft²)	11.000/13.000	LCM (lbm/bbl)		ES (Volts)	612.0
API/HTHP WL (cc/30min)	/10.0	ECD (ppg)	13.350	R600/300 (°)	
FC/HTHP FC (32nd")	/4.0	H2S (gas unit)		R200/100 (°)	
WPS (ppm)	288,937	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
8	6.125	BAKER HUGHES	T405FTS			5273362	5x15	12,010.00	17,027.00	1-1-NO-A-X-I-NO-BHA

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)
16,695.00	45.0/50.0	0	300.0	5,700.00	148.07	2.60	25.91	1.50	13.00	8.7	95.00	4,685.00	49.3
16,780.00	10.0/15.0	85	300.0	6,700.00	148.07	2.21	25.91	1.00	85.00	85.0	96.00	4,770.00	49.7
16,799.00	45.0/50.0	0	300.0	5,600.00	148.07	2.64	25.91	1.50	19.00	12.7	97.50	4,789.00	49.1
16,848.00	20.0/25.0	85	300.0	6,600.00	148.07	2.24	25.91	0.50	49.00	98.0	98.00	4,838.00	49.4
17,027.00	20.0/25.0	85	300.0	6,700.00	148.07	2.21	25.91	1.50	179.00	119.3	99.50	5,017.00	50.4

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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.
4" DRILL PIPE	393	12,386.89	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

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
09/30/2017 19:00		10/05/2017 21:00		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)
16,695.00	0.0	0.00	0.00	0.00	0.0	0.0	13.00
16,780.00	260.0	110.00	160.00	100.00	16,000.0	10,000.0	85.00
16,799.00	0.0	0.00	0.00	0.00	0.0	0.0	19.00
16,848.00	260.0	100.00	160.00	100.00	15,000.0	10,000.0	49.00
17,027.00	260.0	100.00	160.00	100.00	13,000.0	10,000.0	179.00

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: 15584 GALS
FUEL USED: 2006 GALS
FUEL RECEIVED: 7500 GAL