

EP WELLS DAILY OPERATIONS REPORT

Report 31

10/10/2017

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	31.88
Objective	Drill - Wolfcamp	Original Spud Date	08/10/2017	Days Since Spud	30.13
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)	22,200.00
Engineer	ROBERT HAHN	TVD(ft)	11,622.54
Other Supervisor	ROSS GRAHAM	24 Hr Progress(ft)	1,130.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,788.55 / 2,762.90	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	3.00/12.50	Last Casing MD	7.000in@11,261.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	4.500in@22,400.00ft
Actual cost to date/AFE	2,574,159/2,627,752.00	Current MW / BH EMW(ppg)	13.25/
Actual divided by AFE	0.98	LOT/FIT EMW(ppg)	
Daily Cost	71,876	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	344	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							

Drills

Drill Category	Drill Type	Detection (sec)	Complete (sec)	Crew drilled	Pass / Fail	PIC	Comments
Well Control Crew	BOP		60.00	Day	Pass	DARRYL ROUX	

HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	31
Last Derrick Inspection	09/15/2017	25		
Last BOP function test	09/25/2017	15		
Last BOP Test	10/16/2017			

Operations Summary

24 Hour Summary
DRILLED FROM 21070' TO 22200'.
Update Since Report Time
@ 04:00 - PUMPING C/U CYCLES AT TD OF 22500'.
24 Hour Forecast

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DRILL TO 22500', PUMP C/U CYCLES, TOOH, L/D BHA, R/U AND RUN 4 1/2" LINER.

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.00	MNH1	DRL		21,169.00	0		ROTATE FROM 21070' TO 21169' (99' @ 99 FPH) WOB: 20-30K PRESSURE & FLOW: 6950 PSI @ 285 GPM RPM: SURFACE 80 MOTOR 230 BIT 310 TORQUE: ON BOT 13-15K OFF BOT 9K STRING WEIGHT: P/U 260K S/O 120K ROT 160K MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 2500 BG 500 FLARE: NONE
1:00	7.50	MNH1	DRL		21,201.00	0		SLIDE FROM 21169' TO 21201' (32' @ 4 FPH) WOB: 15-30K PRESSURE & FLOW: 5000 PSI @ 250 GPM RPM: SURFACE 0 MOTOR 200 BIT 200 MW: 13.2+ PPG MOTOR: 0.8 RPG GAS: CG 500 BG 500 FLARE: NONE
8:30	2.50	MNH1	DRL		21,415.00	0		ROTATE FROM 21201' TO 21415' (214' @ 86 FPH) WOB: 20-30K PRESSURE & FLOW: 6950 PSI @ 285 GPM RPM: SURFACE 85 MOTOR 230 BIT 315 TORQUE: ON BOT 13-15K OFF BOT 9K STRING WEIGHT: P/U 260K S/O 120K ROT 160K MW: 13.2 PPG MOTOR: 0.8 RPG GAS: CG 2000 BG 500 FLARE: NONE
11:00	3.00	MNH1	DRL		21,415.00	1		NPT - R/U PUMP IN SUB. CIRCULATE WHILE CHANGING OUT SWIVEL PACKING AND WASH PIPE.
14:00	10.00	MNH1	DRL		22,200.00	0		ROTATE FROM 21415' TO 22200' (785' @ 79 FPH) WOB: 20-30K PRESSURE & FLOW: 7000 PSI @ 285 GPM RPM: SURFACE 80 MOTOR 230 BIT 310 TORQUE: ON BOT 13-15K OFF BOT 9K STRING WEIGHT: P/U 290K S/O 100K ROT 160K MW: 13.2 PPG MOTOR: 0.8 RPG GAS: CG 2500 BG 1500 FLARE: NONE
Total	24.00							

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
10/10/2017 11:00	PRECISION DRILLING COMPANY LP	Rig/Work Unit Misc	21,415.00	DRL	EN	Top Drive/Power Swivel		3.00		OPEN
Description: R/U PUMP IN SUB. CIRCULATE WHILE CHANGING OUT SWIVEL PACKING AND WASH PIPE.						Title: CHANGE SWIVEL PACKING				
Total								3.00		

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
21,734.65	90.34	162.97	11,626.46	-8,977.25	3,053.17	-4,271.28	0.53	PTW MWD+HDGM_2016

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Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
21,824.65	91.09	162.13	11,625.34	-9,063.10	3,080.15	-4,313.67	1.25	PTW MWD+HDGM_2016
21,918.65	90.69	161.08	11,623.88	-9,152.28	3,109.81	-4,356.58	1.20	PTW MWD+HDGM_2016
22,012.65	88.91	159.00	11,624.21	-9,240.63	3,141.90	-4,397.18	2.91	PTW MWD+HDGM_2016
22,106.65	90.98	159.59	11,624.30	-9,328.55	3,175.13	-4,436.68	2.29	PTW MWD+HDGM_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	58.00/16.00	POM (cc)	5.31 607.0
MD (ft)	21,597.00	TS/HGS/LGS (%)	24.20//	CaCl2 (%)	
Mud Density (ppg)	13.25	Sand (%)	0.00	Caom/Clom (ppm)	
Vis (s/qt)	74.00	Oil/Water Ratio (%)	78.40/21.60	ACT	
PV/YP (cp/lbf/100ft²)	23.00/12.000	LCM (lbm/bbl) ECD (ppg) H2S (gas unit) KCl (%)	17.710	XS Lime(lbm/bbl)	
Gels 10 s/m (lbf/100ft²)	7.000/11.000			ES (Volts)	
API/HTHP WL (cc/30min)	0.0/			R600/300 (°)	
FC/HTHP FC (32nd")	0.0/4.0			R200/100 (°)	
WPS (ppm)	278,547			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)
21,169.00	20.0/30.0	80	285.0	6,950.00	102.84	1.48	17.10	1.00	99.00	99.0	83.00	4,142.00	49.9
21,201.00	15.0/30.0	0	250.0	5,000.00	79.13	1.58	11.54	7.50	32.00	4.3	90.50	4,174.00	46.1
21,415.00	20.0/30.0	85	285.0	6,950.00	102.84	1.48	17.10	2.50	214.00	85.6	93.00	4,388.00	47.2
22,200.00	20.0/30.0	80	285.0	7,000.00	102.84	1.47	17.10	10.00	785.00	78.5	103.00	5,173.00	50.2

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DRILL PIPE	521	17,563.98	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			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

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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)
21,169.00	260.0	120.00	160.00	100.00	15,000.0	9,000.0	99.00
21,201.00	260.0	120.00	0.00	260.00	0.0	0.0	32.00
21,415.00	260.0	120.00	160.00	100.00	15,000.0	9,000.0	214.00
22,200.00	290.0	100.00	160.00	130.00	15,000.0	9,000.0	785.00

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: 12007 GALS
FUEL USED: 4197 GALS
FUEL RECEIVED: 7403 GAL