

EP WELLS DAILY OPERATIONS REPORT

Report 19

08/22/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1404H
Wellbore	UNIVERSITY 19 PW UNIT 1404H
WBS No/API No	30265150 / 4230133215.00

Event Summary

Event Type	Drilling only	Event Start Date	06/16/2017	Days on Location	18.92
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	16.58
Est. Days	22.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	STEVE SLOOP	Measured Depth(ft)	19,548.00
Engineer	BRANDON FOOTE	TVD(ft)	11,652.04
Other Supervisor	JOHNNIE BRASSELL	24 Hr Progress(ft)	1,244.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	10.50/43.75	Last Casing MD	7.000in@11,969.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	4.500in@21,085.00ft
Actual cost to date/AFE	1,718,974/2,770,860.00	Current MW / BH EMW(ppg)	13.50/
Actual divided by AFE	0.62	LOT/FIT EMW(ppg)	
Daily Cost	52,638	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test	06/19/2017		PSI NII HPI GOAL ZERO DAYS PS BARRIER EVENT PS barrier bowtie review	09/29/2015	693	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	0 10 13 1500
Safety Comments:	CREW CHANG, FIT FOR DUTY, STEP 7, 5x5, LFI's, CARR REPORT						

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection	08/21/2017	1	JSA's/Toolbox Talks	18
Last BOP function test	08/07/2017	15	Days Since Last Drill	3
Last BOP Test	08/28/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
TIH T/ 11756', REMOVE TRIP NIP INST ROT-HEAD, TIH T/ 14204', WASH T/ 18304', DRLG & SLIDE F/ 18304' T/ 19548'
Update Since Report Time
SLIDE @ 19817'
24 Hour Forecast
DRLG LATERAL SECTION AS PER PLAN EST TD +/- 21,085'

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	2.00	MNH1	TIH		18,304.00	1		NPT- TIH T/ 11756'
2:00	0.50	MNH1	TIH		18,304.00	1		NPT- REMOVE TRIP NIP INST ROT-HEAD
2:30	1.00	MNH1	TIH		18,304.00	1		NPT- TIH T/ 14204'
3:30	7.00	MNH1	DRL		18,304.00	1		NPT- WASH T/ 18304'
10:30	1.50	MNH1	DRL		18,391.00	0		ROTARY DRILL F/18304' T/18391' (87' @ 58 FPH) WOB: 25K RPM: SURF 90 MOTOR 222 BIT 312 PSI & FLOW: SPP 5600 GPM 275 DIFF 800-950 STRING WT: P/U 265 S/O 150 ROT 180 TORQUE: ON BTM 9-10K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.81 REV/GAL GAS: BG 500 CG 3000
12:00	1.00	MNH1	DRL		18,430.00	0		SLIDE DRILL F/18391' T/18430' (39' @ 39 FPH) WOB: 30K RPM: SURF 0 MOTOR 222 BIT 222 PSI & FLOW: SPP 5600 GPM 275 DIFF 300 STRING WT: P/U 265 S/O 150 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.81 REV/GAL GAS: BG 500 CG 3000
13:00	9.50	MNH1	DRL		19,526.00	0		ROTARY DRILL F/18430' T/19526' (1096' @ 115 FPH) WOB: 25K RPM: SURF 90 MOTOR 222 BIT 312 PSI & FLOW: SPP 5600 GPM 275 DIFF 800-950 STRING WT: P/U 265 S/O 150 ROT TORQUE: ON BTM 9-10K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.81 REV/GAL GAS: BG 500 CG 3000
22:30	1.50	MNH1	DRL		19,548.00	0		SLIDE DRILL F/19526' T/19548' (22' @ 14 FPH) WOB: 30-40K RPM: SURF 0 MOTOR 222 BIT 222 PSI & FLOW: SPP 5675 GPM 275 DIFF 100-200 STRING WT: P/U 265 S/O 150 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.81 REV/GAL GAS: BG 500 CG 3000
Total	24.00							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
19,084.00	90.04	165.25	11,651.80	-7,218.95	1,912.46	7,467.99	0.65	PTW MWD+HDGM_2016
19,179.00	89.96	165.52	11,651.80	-7,310.88	1,936.44	7,562.98	0.30	PTW MWD+HDGM_2016
19,273.00	90.47	165.30	11,651.44	-7,401.85	1,960.11	7,656.98	0.59	PTW MWD+HDGM_2016
19,368.00	90.10	165.34	11,650.97	-7,493.74	1,984.19	7,751.98	0.39	PTW MWD+HDGM_2016
19,463.00	89.84	166.43	11,651.02	-7,585.87	2,007.36	7,846.97	1.18	PTW MWD+HDGM_2016

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Fluid Details

Mud type	Invermul	Oil/Water (%)	57.00/15.00	POM (cc)	2.59 550.0
MD (ft)	18,304.00	TS/HGS/LGS (%)	26.30/16.90/9.40	CaCl2 (%)	
Mud Density (ppg)	13.50	Sand (%)	0.08	Caom/Clom (ppm)	
Vis (s/qt)	69.00	Oil/Water Ratio (%)	79.20/20.80	ACT	
PV/YP (cp/lbf/100ft²)	24.00/10.000	LCM (lbm/bbl)	13.500	XS Lime(lbm/bbl)	
Gels 10 s/m (lbf/100ft²)	10.000/16.000			ES (Volts)	
API/HTHP WL (cc/30min)	/8.0			R600/300 (°)	
FC/HTHP FC (32nd")	/4.0			R200/100 (°)	
WPS (ppm)	261,912			R6/3 (°)	
FL temp. (°F)				Ditch Magnet in Last 24hrs/Cum. (gm)	

Gas Concentrations and Fluid Losses

Avg Connection Gas (gas unit)	Avg. trip gas (gas unit)	Losses Last 24 Hours/Cumulative...	
Max. connection gas (gas unit)	Max. trip gas (gas unit)	Surface Losses (bbl)	/0.00
Avg. background gas (gas unit)	Avg H2S Gas (gas unit)	Sub Surface Losses (bbl)	/0.00
Max. background gas (gas unit)	Max H2S Gas (gas unit)	Total Losses	0.00/0.00
		End vol. (bbl)	0.00

Bulks Summary

Product	Quantity Onboard	Units	Daily Usage
Diesel	-11,554.00	GAL	1,190.00

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
7	6.125	BAKER HUGHES	DD405T			5272302	5x16	18,304.00		-----

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)
18,391.00	25.0/25.0	90	275.0	5,600.00	96.83	1.73	15.53	1.50	87.00	58.0	1.50	87.00	58.0
18,430.00	30.0/30.0	0	275.0	5,600.00	96.83	1.73	15.53	1.00	39.00	39.0	2.50	126.00	50.4
19,526.00	25.0/25.0	90	275.0	5,600.00	96.83	1.73	15.53	9.50	1,096.00	115.4	12.00	1,222.00	101.8
19,548.00	30.0/40.0	0	275.0	5,675.00	97.55	1.72	15.65	1.50	22.00	14.7	13.50	1,244.00	92.1

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DP	453	14,285.29	4.000		3.340	XT-39			RIG
SHOCK SUB	1	11.14	5.000		2.750	XT-39			1522746
(110 JTS) DRILL PIPE	110	3,469.93	5.000		3.250	XT-39			RIG
AGITATOR 1.4 PLATE	1	21.45	5.000		2.750	XT-39			W1748799
(53 JTS) DRILL PIPE	53	1,667.63	5.000		3.250	XT-39			RIG
CROSSOVER SUB	1	1.95	5.000		2.750	XT-39			DR18060
FLOAT SUB	1	2.96	4.750		2.750	3-1/2 IF			NESFS4751 51
SCREEN SUB	1	3.98	4.875		2.750	3-1/2 IF			DR31955
NM SLICK COLLAR	1	29.12	4.500		2.560	3-1/2 IF			NESNM4754 45
GAP SUB	1	3.76	5.130			3-1/2 IF			VG4755094 PTS
CENTRALIZER COLLAR	1	8.34	5.000			4.3 ACME			VC475012

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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.
LANDING SUB	1	3.43	5.130			4.3 ACME			VL475074
CROSSOVER	1	1.50	4.750		2.750	3-1/2 IF			VX475012
PONY SLICK COLLAR	1	11.01	4.630		2.750	3-1/2 IF			DR31741
PHOENIX 24X MUD MOTOR, LOBES: 6/7. STG: 6.4. FIXED @	1	25.51	5.375			3-1/2 IF			24XH-51302 2-PTS
BIT #7 RUN #1 BAKER DD405T, 5X16's. SN: 5272302	1	1.00	6.125	6.125					5272302

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
08/21/2017 20:30				7	125.15		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)
18,391.00	265.0	150.00	180.00	85.00	10,000.0	8,000.0	87.00
18,430.00	265.0	150.00	0.00	265.00	0.0	0.0	39.00
19,526.00	265.0	150.00	180.00	85.00	10,000.0	8,000.0	1,096.00
19,548.00	265.0	150.00	0.00	265.00	0.0	0.0	22.00

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		GARDENER-DENVER / PZ-11-1600	11.00						
2		GARDENER-DENVER / PZ-11-1600	11.00						

Remarks

FUEL ON LOCATION: 18020 GAL
FUEL USED (RIG): 2103 GAL
FUEL USED (PITS): 1190 GAL
FUEL DELIVERED: 5201 GAL