

EP WELLS DAILY OPERATIONS REPORT

Report 10

07/10/2017

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	9.31
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	7.98
Est. Days	22.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	TRAMPUS STEWART	Measured Depth(ft)	11,978.00
Engineer	BRANDON FOOTE	TVD(ft)	11,614.90
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	727.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	9.625in@4,893.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@12,236.00ft
Actual cost to date/AFE	796,288/2,770,860.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.29	LOT/FIT EMW(ppg)	
Daily Cost	60,047	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	650	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	8 2 1500
Safety Comments:							
290 MAN HOURS							

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection	07/05/2017	5	JSA's/Toolbox Talks	14
Last BOP function test	06/28/2017	12	Days Since Last Drill	10
Last BOP Test	07/19/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
DRILL CURVE T/11978'. CIRC. POOH. L/D BHA. CLEAN RIG FLOOR. PJSM & R/U CSG EQUIP. RUN 7" 29# P110 CSG T/3003'.
Update Since Report Time
RUN 7" CSG T/6575'
24 Hour Forecast
RUN 7" CSG T/11978'. CIRC. CMT 7" CSG. INSTALL PACKOFF & BPV. N/D BOPS. WALK T/ UNIVERSITY 19 D 0904H

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	3.50	INT1	DRL		11,466.00	0		SLIDE DRILL F/11251' T/11466' (215' @ 61.4 FPH) WOB:9-12K RPM: SURF MOTOR 273 BIT 273 PSI & FLOW: SPP 2335 GPM 550 DIFF 240-300 STRING WT: P/U 350 S/O 290 ROT 315 TORQUE: ON BTM K OFF BTM K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
3:30	2.00	INT1	DRL		11,645.00	0		SLIDE DRILL F/11466' T/11645' (179' @ 89.5 FPH) WOB:9-12K RPM: SURF MOTOR 290 BIT 290 PSI & FLOW: SPP 2560 GPM 583 DIFF 650-750 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
5:30	0.50	INT1	DRL		11,690.00	0		DRILL F/11645' T/11690' (45' @ 90 FPH) WOB:15-20K RPM: SURF 20 MOTOR 290 BIT 310 PSI & FLOW: SPP 2560 GPM 583 DIFF 450-500 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM 13-14K OFF BTM 10K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
6:00	0.50	INT1	DRL		11,735.00	0		SLIDE DRILL F/11690' T/11735' (45' @ 90 FPH) WOB:20-25K RPM: SURF MOTOR 290 BIT 290 PSI & FLOW: SPP 2560 GPM 583 DIFF 500-600 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
6:30	0.50	INT1	DRL		11,765.00	0		DRILL F/11735' T/11765' (30' @ 60 FPH) WOB:20-25K RPM: SURF 20 MOTOR 290 BIT 310 PSI & FLOW: SPP 2560 GPM 583 DIFF 500-600 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM 14-15K OFF BTM 8-10K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
7:00	2.00	INT1	DRL		11,932.00	0		SLIDE DRILL F/11765' T/11932' (167' @ 83.5 FPH) WOB:20-25K RPM: SURF MOTOR 290 BIT 290 PSI & FLOW: SPP 2560 GPM 583 DIFF 500-600 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM K OFF BTM K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
9:00	0.50	INT1	DRL		11,978.00	0		DRILL F/11932' T/11978' (46' @ 92 FPH) WOB:30K RPM: SURF 20 MOTOR 290 BIT 310 PSI & FLOW: SPP 2600 GPM 583 DIFF 500-600 STRING WT: P/U 355 S/O 265 ROT 300 TORQUE: ON BTM 14-15K OFF BTM 8-10K MW: 9.3 PPG MOTOR: .497 REVS/GAL GAS: BG 1000 CG 2000
9:30	2.50	INT1	CBU		11,978.00	0		PUMP SWEEPS. CIRC HOLE CLEAN. WEIGHT MUD UP T/ 9.4PPG. FLOW CHECK. SVY. PUMP SLUG.

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
12:00	2.50	INT1	TOH		11,978.00	0		POOH F/11978' T/4631'
14:30	0.50	INT1	TOH		11,978.00	0		REMOVE ROT HEAD. INSTALL TRIP NIPPLE.
15:00	1.50	INT1	TOH		11,978.00	0		POOH F/4631' T/92'
16:30	1.00	INT1	BHA		11,978.00	0		L/D 8.75" CURVE ASSY.
17:30	0.50	INT1	TIH		11,978.00	0		PULL WEAR BUSHING
18:00	1.00	INT1	SVC		11,978.00	0		CLEAN RIG FLOOR
19:00	1.00	INT1	RIC		11,978.00	0		PJSM & R/U CSG TOOLS.
20:00	4.00	INT1	CLR		11,978.00	0		PJSM FOR CSG RUN W/ EXPRESS RUN 7" 29# P110 CSG T/3003'
Total	24.00							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
11,864.00	81.04	160.75	11,609.57	-333.28	-129.54	353.30	13.30	PTW MWD+HDGM_2016
11,867.00	81.04	160.99	11,611.44	-331.83	-134.45	352.93	13.00	PTW MWD+HDGM+AXIAL_2016
11,911.00	87.20	161.00	11,614.39	-377.43	-114.23	393.14	13.12	PTW MWD+HDGM_2016
11,932.00	90.00	161.00	11,614.90	-397.28	-107.40	411.07	13.33	PTW MWD+HDGM_2016
11,970.00	90.00	161.00	11,614.90	-433.21	-95.03	443.51	0.00	PTW MWD+HDGM_2016

Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	pH/Pm (cc)
MD (ft)		TS/HGS/LGS (%)	Pf/Mf (cc)
Mud Density (ppg)		Sand (%)	Ca+ (ppm)
Vis (s/qt)			Cl- (ppm)
PV/YP (cp/lbf/100ft²)		MBT (lbm/bbl)	
Gels 10 s/m (lbf/100ft²)		LCM (lbm/bbl)	
API/HTHP WL (cc/30min)		ECD (ppg)	R600/300 (°)
FC/HTHP FC (32nd")		H2S (gas unit)	R200/100 (°)
		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
4	8.750	BAKER HUGHES	TD406FX			7163218	3x16, 3x18	11,032.00	11,978.00	-----

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)

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	321	10,117.09	5.000		4.276				RIG
6-3/4" SHOCK SUB & AGITATOR TOOL 1.85 BAFFLE PLATE (1 JT) DRILL PIPE	1	23.77	6.870			4-1/2 IF			W1679178
(12 JTS) HWDP	12	360.68	6.500		3.250	4 1/2 IF			RIG

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Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
(30 JTS) DRILL PIPE	30	1,339.76	5.000		2.750	4 1/2 IF			RIG
CROSSOVER SUB	1	2.34	6.700		2.810	4 1/2 IF			NESXO675548
SCREEN SUB	1	3.50	6.750		3.250	4-1/2 XH			DR30026
FLOAT SUB	1	2.50	6.750		2.870	4 1/2 XH			NESFS675486
FLEX MONEL	1	29.67	6.500		2.750	4 1/2 XH			PXGFC6501113
GAP SUB	1	3.59	6.625		2.870	4 1/2 XH			VG650134PTS
CENTRALIZER COLLAR	1	8.54	6.625		4.490	4 1/2 IF			VC650021
LANDING SUB	1	3.55	6.625		3.780	4 1/2 IF			VL650121
CROSSOVER SUB	1	1.56	6.500		2.750	4 1/2 XH			VX650075
SLICK PONY COLLAR	1	9.47	6.500		2.870	4 1/2 XH			DR22324
PHOENIX MUD MOTOR, LOBES: 4/5. STG: 7. FIXED @ 2.38°.	1	26.33	7.625			4-1/2 XH			36B-6502233-PTS
BIT #4 RUN #1 BAKER T406FX, 3X16's. 3X18's. SN: 7163218	1	1.00	8.750	8.750					7163218

Drillstring Details

Date/Time in	Date/Time out	BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
07/09/2017 13:00	07/10/2017 17:30	4	476.50		DRILL 8.75" INTERMEDIATE CURVE SECTION

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: 13356 GAL
FUEL USED: 1484 GAL