

EP WELLS DAILY OPERATIONS REPORT

Report 6

07/06/2017

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	5.31
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	3.98
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)	7,584.00
Engineer	BRANDON FOOTE	TVD(ft)	7,574.83
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	2,691.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	0.50/2.08	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	550,046/2,770,860.00	Current MW / BH EMW(ppg)	9.35/
Actual divided by AFE	0.20	LOT/FIT EMW(ppg)	
Daily Cost	39,483	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	646	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	1500
Safety Comments:							
252 MAN HOURS							

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection	07/05/2017	1	JSA's/Toolbox Talks	6
Last BOP function test	06/28/2017	8	Days Since Last Drill	
Last BOP Test	07/19/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
TIH T/4733'. DRILL OUT SHOE TRACK. ROTATE & SLIDE DRILL F/4893' T/7584'.
Update Since Report Time
DRILL T/7910'
24 Hour Forecast
DRILL TOWARDS KOP @ ~11055'

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.00	INT1	BHA		4,893.00	0		PAUSE P/U BHA #2 TIH T/ 1217'
1:00	0.50	INT1	DCM		4,893.00	0		DRILL OUT DV TOOL @1217' 450 GPM, 1000 PSI, 325 DIFF, 20 RPM, 10-15K WOB
1:30	1.50	INT1	TIH		4,893.00	0		TIH F/1218' T/4420'
3:00	0.50	INT1	TIH		4,893.00	0		REMOVE TRIP NIPPLE & INSTALL ROT HEAD
3:30	0.50	INT1	TIH		4,893.00	0		TIH F/4420' T/4733' TAG CMT @4733'
4:00	0.50	INT1	DCM		4,893.00	0		DRILL CMT & FLOAT COLLAR F/4733' T/4800' WOB:15K RPM: SURF 20 MOTOR 126 BIT 146 PSI & FLOW: SPP 1350 GPM 450 DIFF 85 STRING WT: P/U 210 S/O 185 ROT 200 TORQUE: ON BTM OFF BTM MW: 9.0 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
4:30	0.50	INT1	NOA		4,893.00	1		NPT: PASON DOWN (WAIT ON PASON)
5:00	1.00	INT1	DRL		4,893.00	0		DRILL CMT & SHOE F/4800' T/4893' WOB:15-17K RPM: SURF 20 MOTOR 126 BIT 146 PSI & FLOW: SPP 1450 GPM 450 DIFF 85 STRING WT: P/U 210 S/O 185 ROT 200 TORQUE: ON BTM OFF BTM MW: 9.0 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
6:00	3.00	INT1	DRL		5,314.00	0		DRILL F/4893' T/5314' (421' @ 140.3 FPH) WOB:35-45K RPM: SURF 70 MOTOR 197 BIT 267 PSI & FLOW: SPP 2550 GPM 703 DIFF 600-800 STRING WT: P/U 230 S/O 195 ROT 210 TORQUE: ON BTM 12-15K OFF BTM 4-5K MW: 9.0 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
9:00	0.50	INT1	DRL		5,339.00	0		SLIDE DRILL F/5314' T/5339' (25' @ 50 FPH) WOB:20-25K RPM: SURF MOTOR 197 BIT 197 PSI & FLOW: SPP 2550 GPM 703 DIFF 350-450 STRING WT: P/U 230 S/O 195 ROT 210 TORQUE: ON BTM OFF BTM MW: 9.0 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
9:30	7.50	INT1	DRL		6,922.00	0		DRILL F/5339' T/6922' (1583' @ 211.1 FPH) WOB:40-45K RPM: SURF 70 MOTOR 209 BIT 279 PSI & FLOW: SPP 2950 GPM 745 DIFF 500-800 STRING WT: P/U 265 S/O 215 ROT 225 TORQUE: ON BTM 14-16K OFF BTM 7-8K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
17:00	0.50	INT1	DRL		6,922.00	0		C/O ROT HEAD
17:30	0.50	INT1	DRL		6,922.00	0		C/O SWIVEL PACKING
18:00	1.50	INT1	DRL		7,100.00	0		DRILL F/6922' T/7100' (178' @ 119 FPH) WOB:40-45K RPM: SURF 70 MOTOR 209 BIT 279 PSI & FLOW: SPP 2950 GPM 745 DIFF 500-800 STRING WT: P/U 265 S/O 215 ROT 225 TORQUE: ON BTM 14-16K OFF BTM 7-8K

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
19:30	4.50	INT1	DRL		7,584.00	0		DRILL F/7100' T/7584' (484' @ 107.6 FPH) WOB:40-45K RPM: SURF 20 MOTOR 168 BIT 188 PSI & FLOW: SPP 2120 GPM 600 DIFF 925 STRING WT: P/U 265 S/O 215 ROT 225 TORQUE: ON BTM 14-16K OFF BTM 7-8K MW: 9.3 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
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
07/06/2017 04:30	PASON SYSTEMS USA CORP	Rig/Work Unit Misc	4,893.00	NOA	EN	Drill Console/Instrumentation	0.50	0.50		OPEN
Description: PASON DOWN						Title: PASON DOWN				
							Total	0.50	0.50	

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
6,846.00	0.78	269.82	6,836.94	153.77	-144.23	210.12	0.09	PTW MWD+HDGM_2016
7,025.00	0.94	258.97	7,015.92	153.48	-146.89	211.90	0.13	PTW MWD+HDGM_2016
7,204.00	1.03	249.74	7,194.89	152.64	-149.84	213.53	0.10	PTW MWD+HDGM_2016
7,382.00	1.08	236.18	7,372.86	151.15	-152.74	214.67	0.14	PTW MWD+HDGM_2016
7,561.00	1.10	218.65	7,551.83	148.87	-155.21	214.98	0.19	PTW MWD+HDGM_2016

Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	0.00/93.50	pH/Pm (cc)	9.50/0.30
MD (ft)	6,826.00	TS/HGS/LGS (%)	2.50/0.30/2.30	Pf/Mf (cc)	0.15/0.30
Mud Density (ppg)	9.35	Sand (%)	0.15	Ca+ (ppm)	
Vis (s/qt)	28.00			Cl- (ppm)	72,000
PV/YP (cp/lbf/100ft²)	1.00/3.000	MBT (lbm/bbl)			
Gels 10 s/m (lbf/100ft²)	1.000/2.000	LCM (lbm/bbl)			
API/HTHP WL (cc/30min)	100.0/	ECD (ppg)	9.500	R600/300 (°)	
FC/HTHP FC (32nd")	2.0/	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
2	8.750	BAKER HUGHES	T607FX			7164145	7x16	4,893.00		-----

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)
5,314.00	35.0/45.0	70	703.0	2,550.00	216.84	8.50	88.92	3.00	421.00	140.3	3.00	421.00	140.3
5,339.00	20.0/25.0	0	703.0	2,550.00	216.84	8.50	88.92	0.50	25.00	50.0	3.50	446.00	127.4
6,922.00	40.0/45.0	70	745.0	2,950.00	248.94	8.44	108.19	7.50	1,583.00	211.1	11.00	2,029.00	184.5
7,100.00	40.0/45.0	70	745.0	2,950.00	251.65	8.53	109.36	1.50	178.00	118.7	12.50	2,207.00	176.6
7,584.00	40.0/45.0	20	600.0	2,120.00	163.22	7.70	57.13	4.50	484.00	107.6	17.00	2,691.00	158.3

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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.
5" DP	211	6,647.42	5.000		4.276				RIG
(12 JTS) HWDP	12	360.68	6.500		3.250	4 1/2 IF			RIG
CROSSOVER SUB	1	2.34	6.700		2.810	4 1/2 IF			NESXO675548
(15 JTS) DRILL COLLARS	15	445.77	6.500		2.500	4 1/2 XH			RIG
SCREEN SUB	1	3.16	6.500		3.250	4 1/2 XH			DR27053
STABILIZER	1	5.91	8.500		2.870	4 1/2 XH			DR34214
NON-MAG SLICK COLLAR	1	30.79	6.750		2.870	4 1/2 XH			NESNM675637
STABILIZER	1	5.90	8.500		2.870	4 1/2 XH			DR34216
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
NON-MAG PONY SLICK COLLAR	1	15.23	6.500		2.870	4 1/2 XH			PXGPC6501068
STABILIZER	1	5.92	8.500		2.870	4 1/2 XH			DR34217
CROSSOVER SUB	1	2.09	6.560		3.250	4 1/2 XH			DR26769
SCIENTIFIC MUD MOTOR, LOBES: 7/8, STG: 9.4, FIXED @	1	40.55	8.500			5-1/2 FH			SDI700043
BIT #2 RUN #1 BAKER T607FX, 7X16's, SN: 7164145	1	1.00	8.750	8.750					7164145

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
07/05/2017 21:00				2	936.58		DRILL 8.75" INTERMEDIATE 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)
5,314.00	230.0	195.00	210.00	20.00	15,000.0	5,000.0	421.00
5,339.00	230.0	195.00	0.00	230.00	0.0	0.0	25.00
6,922.00	265.0	215.00	225.00	40.00	16,000.0	8,000.0	1,583.00
7,100.00	265.0	215.00	225.00	40.00	16,000.0	8,000.0	178.00
7,584.00	265.0	215.00	225.00	40.00	16,000.0	8,000.0	484.00

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: 14416 GAL
FUEL USED: 2120 GAL