

EP WELLS DAILY OPERATIONS REPORT

Report 6

07/12/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 D 0904H
Wellbore	UNIVERSITY 19 D 0904H
WBS No/API No	30265147 / 4230133226.00

Event Summary

Event Type	Drilling only	Event Start Date	06/19/2017	Days on Location	3.94
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/19/2017	Days Since Spud	3.56
Est. Days	21.00	Contractor	ENSIGN		
Work Unit	ENSIGN 775	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	TRAMPUS STEWART	Measured Depth(ft)	7,514.00
Engineer	BRANDON FOOTE	TVD(ft)	7,470.83
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	2,602.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,799.10 / 2,771.10	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	9.625in@4,879.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@12,236.00ft
Actual cost to date/AFE	547,715/2,503,951.00	Current MW / BH EMW(ppg)	9.30/
Actual divided by AFE	0.22	LOT/FIT EMW(ppg)	
Daily Cost	74,429	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC RWC MTC FAC Last casing pressure test	06/23/2017		PSI NII HPI GOAL ZERO DAYS PS BARRIER EVENT PS barrier bowtie review	09/29/2015	652	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	07/11/2017	1	JSA's/Toolbox Talks	5
Last BOP function test	06/28/2017	14	Days Since Last Drill	
Last BOP Test	07/19/2017			
Next BOP Test				

Operations Summary

24 Hour Summary
TIH T/4150'. SLIP & CUT DRILL LINE. TIH T/4812'. DRILL OUT SHOE TRACK. ROTATE & SLIDE DRILL F/4812' T/7514'
Update Since Report Time
DRILL T/8020'
24 Hour Forecast
DRILL AHEADS TOWARDS KOP @ ~11089'

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.00	INT1	TIH		4,912.00	0		TIH F/126' T/1209'
1:00	0.50	INT1	DCM		4,912.00	0		DRILL OUT DV TOOL
1:30	1.50	INT1	TIH		4,912.00	0		TIH F/1209' T/4150'
3:00	2.00	INT1	CUT		4,912.00	0		SLIP & CUT 13 WRAPS & RECALIBRATE BLOCK HEIGHT
5:00	1.00	INT1	TIH		4,912.00	0		TIH F/4150' T/4687'
6:00	0.50	INT1	TIH		4,912.00	0		WASH DOWN F/4687' T/4812'. @500 GPM, 20 RPM, 1250 PSI
6:30	2.00	INT1	DCM		4,912.00	0		DRILL OUT FLOAT COLLAR & SHOE TRACK F/4812' T/4912' WOB:10K RPM: SURF 20 MOTOR 140 BIT 160 PSI & FLOW: SPP 1250 GPM 500 DIFF 50 STRING WT: P/U 210 S/O 185 ROT 200 TORQUE: ON BTM 4-5K OFF BTM K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
8:30	2.00	INT1	DRL		5,042.00	0		DRILL F/4912' T/5042' (130' @ 65 FPH) WOB:31-33K RPM: SURF 20 MOTOR 140 BIT 160 PSI & FLOW: SPP 1260 GPM 500 DIFF 580 STRING WT: P/U 210 S/O 185 ROT 200 TORQUE: ON BTM 9-10K OFF BTM 2-3K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
10:30	1.00	INT1	DRL		5,313.00	0		DRILL F/5042' T/5313' (271' @ 271 FPH) WOB:31-33K RPM: SURF 80 MOTOR 168 BIT 248 PSI & FLOW: SPP 1850 GPM 600 DIFF 500-650 STRING WT: P/U 220 S/O 190 ROT 210 TORQUE: ON BTM 9-10K OFF BTM 2-3K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
11:30	0.50	INT1	DRL		5,338.00	0		SLIDE DRILL F/5313' T/5338' (25' @ 50 FPH) WOB:10-15K RPM: SURF MOTOR 211 BIT 211 PSI & FLOW: SPP 2800 GPM 754 DIFF 250 STRING WT: P/U 220 S/O 190 ROT TORQUE: ON BTM K OFF BTM K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
12:00	6.00	INT1	DRL		6,653.00	0		DRILL F/5338' T/6653' (1315' @ 219.2 FPH) WOB:38-40K RPM: SURF 70 MOTOR 211 BIT 281 PSI & FLOW: SPP 2650 GPM 754 DIFF 500-650 STRING WT: P/U 235 S/O 200 ROT 225 TORQUE: ON BTM 15-16K OFF BTM 4-5K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
18:00	0.50	INT1	DRL		6,705.00	0		SLIDE DRILL F/6653' T/6705' (52' @ 104 FPH) WOB:10-15K RPM: SURF MOTOR 211 BIT 211 PSI & FLOW: SPP 2650 GPM 754 DIFF 400-600 STRING WT: P/U 235 S/O 200 ROT TORQUE: ON BTM K OFF BTM K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0

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Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
18:30	0.50	INT1	DRL		6,742.00	0		DRILL F/6705' T/6742' (37' @ 74 FPH) WOB:38-40K RPM: SURF 70 MOTOR 211 BIT 281 PSI & FLOW: SPP 2650 GPM 754 DIFF 400-800 STRING WT: P/U 240 S/O 220 ROT 235 TORQUE: ON BTM 14-16K OFF BTM 4-5K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
19:00	0.50	INT1	DRL		6,779.00	0		SLIDE DRILL F/6742' T/6779' (37' @ 74 FPH) WOB:10-15K RPM: SURF MOTOR 211 BIT 211 PSI & FLOW: SPP 2650 GPM 754 DIFF 400-600 STRING WT: P/U 240 S/O 220 ROT TORQUE: ON BTM K OFF BTM K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
19:30	2.00	INT1	DRL		7,100.00	0		DRILL F/6779' T/7100' (321' @ 160.5 FPH) WOB:38-40K RPM: SURF 70 MOTOR 211 BIT 281 PSI & FLOW: SPP 2650 GPM 754 DIFF 400-800 STRING WT: P/U 250 S/O 230 ROT 240 TORQUE: ON BTM 14-16K OFF BTM 4-5K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
21:30	2.50	INT1	DRL		7,514.00	0		DRILL F/7100' T/7514' (414' @ 165.6 FPH) WOB:38-40K RPM: SURF 20 MOTOR 168 BIT 188 PSI & FLOW: SPP 1950 GPM 754 DIFF 400-800 STRING WT: P/U 250 S/O 230 ROT 240 TORQUE: ON BTM 14-16K OFF BTM 4-5K MW: 9.2 PPG MOTOR: .28 REVS/GAL GAS: BG 0 CG 0
Total	24.00							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
6,848.00	1.43	174.15	6,804.99	-715.90	-121.89	726.18	2.54	PTW MWD+HDGM_2016
7,026.00	1.54	185.84	6,982.93	-720.49	-121.91	730.71	0.18	PTW MWD+HDGM_2016
7,205.00	1.19	195.10	7,161.88	-724.68	-122.64	734.96	0.23	PTW MWD+HDGM_2016
7,294.00	0.90	196.67	7,250.87	-726.24	-123.08	736.57	0.33	PTW MWD+HDGM_2016
7,473.00	1.19	194.30	7,429.84	-729.39	-123.94	739.82	0.16	PTW MWD+HDGM_2016

Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	0.00/94.00	pH/Pm (cc)	9.50/0.40
MD (ft)	6,762.00	TS/HGS/LGS (%)	0.80/0.30/0.50	Pf/Mf (cc)	0.15/0.20
Mud Density (ppg)	9.30	Sand (%)	0.10	Ca+ (ppm)	
Vis (s/qt)	28.00			Cl- (ppm)	92,000
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)	9.460	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)			

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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	SMITH INTERNA	XS716			JN1394	7x16	4,912.00		-----

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)
5,042.00	31.0/33.0	20	500.0	1,260.00	113.35	9.00	33.06	2.00	130.00	65.0	2.00	130.00	65.0
5,313.00	31.0/33.0	80	600.0	1,850.00	163.22	8.82	57.13	1.00	271.00	271.0	3.00	401.00	133.7
5,338.00	10.0/15.0	0	754.0	2,800.00	257.76	9.21	113.37	0.50	25.00	50.0	3.50	426.00	121.7
6,653.00	38.0/40.0	70	754.0	2,650.00	257.76	9.73	113.37	6.00	1,315.00	219.2	9.50	1,741.00	183.3
6,705.00	10.0/15.0	0	754.0	2,650.00	257.76	9.73	113.37	0.50	52.00	104.0	10.00	1,793.00	179.3
6,742.00	38.0/40.0	70	754.0	2,650.00	257.76	9.73	113.37	0.50	37.00	74.0	10.50	1,830.00	174.3
6,779.00	10.0/15.0	0	754.0	2,650.00	257.76	9.73	113.37	0.50	37.00	74.0	11.00	1,867.00	169.7
7,100.00	38.0/40.0	70	754.0	2,650.00	257.76	9.73	113.37	2.00	321.00	160.5	13.00	2,188.00	168.3
7,514.00	38.0/40.0	20	754.0	1,950.00	257.76	13.22	113.37	2.50	414.00	165.6	15.50	2,602.00	167.9

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	209	6,578.99	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) DC'S	15	445.77	6.500		2.500	4 1/2 XH			RIG
FILTER 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	1	2.09	6.560		3.250	4-1/2 XH			DR26769
7" SCIENTIFIC MUD MOTOR, 7/8 LOBES, 9.4 STG. FIXED @ 1.50°	1	38.98	8.500			5-1/2 FH			SD1700007
BIT #2 RUN #1 SMITH XS716 , SN: JN1394. 7x16's	1	1.00	8.750	8.750					JN1394

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Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
07/12/2017 00:05				1	935.01		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)
5,042.00	210.0	185.00	200.00	10.00	10,000.0	3,000.0	130.00
5,313.00	220.0	190.00	210.00	10.00	10,000.0	3,000.0	271.00
5,338.00	220.0	190.00	0.00	220.00	0.0	0.0	25.00
6,653.00	235.0	200.00	225.00	10.00	16,000.0	5,000.0	1,315.00
6,705.00	235.0	200.00	0.00	235.00	0.0	0.0	52.00
6,742.00	240.0	220.00	235.00	5.00	16,000.0	5,000.0	37.00
6,779.00	240.0	220.00	0.00	240.00	0.0	0.0	37.00
7,100.00	250.0	230.00	240.00	10.00	16,000.0	5,000.0	321.00
7,514.00	250.0	230.00	240.00	10.00	16,000.0	5,000.0	414.00

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: 17172 GAL
FUEL USED: 1908 GAL