

EP WELLS DAILY OPERATIONS REPORT

Report 3

06/18/2017

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	3.19
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	1.85
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)	4,893.00
Engineer	POWER CHARLES	TVD(ft)	4,884.29
Other Supervisor	TREVOR KELLEY	24 Hr Progress(ft)	1,733.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	12.250
THF Datum			
Daily NPT(hr/%)	0.50/2.08	Last Casing MD	20.000in@148.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	9.625in@4,892.00ft
Actual cost to date/AFE	213,866/2,770,860.00	Current MW / BH EMW(ppg)	10.00/
Actual divided by AFE	0.08	LOT/FIT EMW(ppg)	
Daily Cost	53,368	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	09/29/2015	628	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	
Safety Comments:							
268 MAN HOURS							

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection Last BOP function test Last BOP Test Next BOP Test			JSA's/Toolbox Talks Days Since Last Drill	3

Operations Summary

24 Hour Summary
ROTATE & SLIDE DRILL F/3160' T/4893'. CIRC. POOH T/ BHA. C/O BHA.
Update Since Report Time
FINISH C/O BHA & RACK BACK. N/D CONDUCTOR. PJSM W/ EXPRESS. RUN 9 5/8" CSG T/400'
24 Hour Forecast
RUN 9 5/8" CSG. WALK RIG. OFFLINE CMT.

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.50	SRF1	DRL		3,353.00	0		ROTARY DRILL F/3160' T/3353' (193' @ 128.7 FPH) WOB: 42-48K RPM: SURF 80 MOTOR 212.5 BIT 292.5 PSI & FLOW: SPP 2650 GPM 850 DIFF 700-900 STRING WT: P/U 165, S/O 150, ROT 155 TORQUE: ON BTM 8-12 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
1:30	1.00	SRF1	DRL		3,442.00	0		*DRILLING ON ONE PUMP ROTARY DRILL F/3353' T/3442' (89' @ 89 FPH) WOB: 30K RPM: SURF 80 MOTOR 119 BIT 199 PSI & FLOW: SPP 1050 GPM 475 DIFF 700-900 STRING WT: P/U 185, S/O 165, ROT 175 TORQUE: ON BTM 8-12 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
2:30	2.50	SRF1	DRL		3,711.00	0		ROTARY DRILL F/3442' T/3711' (269' @ 107.6 FPH) WOB: 42-48K RPM: SURF 80 MOTOR 212.5 BIT 292.5 PSI & FLOW: SPP 2650 GPM 850 DIFF 700-900 STRING WT: P/U 185, S/O 165, ROT 175 TORQUE: ON BTM 8-12 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
5:00	2.00	SRF1	DRL		4,006.00	0		ROTARY DRILL F/3711' T/4006' (295' @ 147.5 FPH) WOB: 45-49K RPM: SURF 90 MOTOR 200 BIT 290 PSI & FLOW: SPP 2670 GPM 800 DIFF 900 STRING WT: P/U 190, S/O 180, ROT 185 TORQUE: ON BTM 10-11 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
7:00	0.50	SRF1	DRL		4,006.00	1		NPT: PASON SHUT DOWN (REBOOT)
7:30	1.00	SRF1	DRL		4,068.00	0		ROTARY DRILL F/4006' T/4068' (62' @ 62 FPH) WOB: 48K RPM: SURF 90 MOTOR 200 BIT 290 PSI & FLOW: SPP 2670 GPM 800 DIFF 900 STRING WT: P/U 190, S/O 180, ROT 185 TORQUE: ON BTM 13 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
8:30	0.50	SRF1	DRL		4,098.00	0		SLIDE DRILL F/4068' T/4098' (30' @ 60 FPH) WOB: 38K RPM: SURF MOTOR 200 BIT 200 PSI & FLOW: SPP 2700 GPM 800 DIFF 620 STRING WT: P/U 190, S/O 180, ROT TORQUE: ON BTM OFF BTM MW: 10 PPG MOTOR: .25 REV/GAL
9:00	6.50	SRF1	DRL		4,681.00	0		ROTARY DRILL F/4098' T/4681' (583' @ 89.7 FPH) WOB: 45-48K RPM: SURF 90 MOTOR 200 BIT 290 PSI & FLOW: SPP 2750 GPM 800 DIFF 650 STRING WT: P/U 190, S/O 180, ROT 185 TORQUE: ON BTM 11-12 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
15:30	0.50	SRF1	SVC		4,681.00	0		RIG SERVICE
16:00	2.00	SRF1	DRL		4,893.00	0		ROTARY DRILL F/4681' T/4893' (212' @ 105.5 FPH) WOB: 38-42K RPM: SURF 90 MOTOR 200 BIT 290 PSI & FLOW: SPP 2800 GPM 800 DIFF 850-900 STRING WT: P/U 215, S/O 200, ROT 215

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								TORQUE: ON BTM 11-12 OFF BTM 4-5 MW: 10 PPG MOTOR: .25 REV/GAL
18:00	1.00	SRF1	CBU		4,893.00	0		PUMP & CIRC 50 BBL CALIPER SWEEP (11% WASHOUT (79BBL))
19:00	0.50	SRF1	CBU		4,893.00	0		PUMP SLUG & DOWN LINK MWD TOOL
19:30	0.50	SRF1	TOH		4,893.00	0		POOH F/4893' T/4036'
20:00	0.50	SRF1	TOH		4,893.00	0		PULL ROT HEAD
20:30	2.00	SRF1	TOH		4,893.00	0		POOH F/4036' T/941'
22:30	1.50	SRF1	BHA		4,893.00	0		C/O SHOCK SUB, MOTOR & BIT. RACK BACK BHA IN DERRICK BIT GRADE: 3-4-BT-S-X-X-CT-TD
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
06/18/2017 07:00	PASON SYSTEMS USA CORP	Rig/Work Unit Misc	4,006.00	DRL	EN	Drill Console/Instrumentation	0.50	0.50		OPEN
Description: PASON SHUT DOWN (REBOOT)						Title: PASON SHUT 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
3,915.00	2.74	74.36	3,906.57	161.31	-162.56	228.82	1.18	PTW MWD+HDGM_2016
4,093.00	1.66	94.13	4,084.43	162.27	-155.89	224.98	0.73	PTW MWD+HDGM_2016
4,272.00	0.71	124.79	4,263.40	161.45	-152.39	222.00	0.62	PTW MWD+HDGM_2016
4,451.00	0.71	118.74	4,442.38	160.28	-150.51	219.87	0.04	PTW MWD+HDGM_2016
4,630.00	1.24	109.53	4,621.36	159.10	-147.71	217.10	0.31	PTW MWD+HDGM_2016

Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	0.00/89.00	pH/Pm (cc)	9.00/0.50
MD (ft)	4,893.00	TS/HGS/LGS (%)	1.50/0.50/1.00	Pf/Mf (cc)	0.00/0.40
Mud Density (ppg)	10.00	Sand (%)	0.20	Ca+ (ppm)	
Vis (s/qt)	28.00			Cl- (ppm)	162,000
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)	10.750	R600/300 (°)	
FC/HTHP FC (32nd")	3.0/	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
1	12.250	BAKER HUGHES	T606FX			7163439	6x18	143.00	4,893.00	3-4-BT-S-X-I-CT-TD

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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)
3,353.00	42.0/48.0	80	850.0	2,650.00	299.31	11.29	148.41	1.50	193.00	128.7	21.00	3,210.00	152.9
3,442.00	30.0/30.0	80	475.0	1,050.00	93.47	8.90	25.90	1.00	89.00	89.0	22.00	3,299.00	150.0
3,711.00	42.0/48.0	80	850.0	2,650.00	299.31	11.29	148.41	2.50	269.00	107.6	24.50	3,568.00	145.6
4,006.00	45.0/49.0	90	800.0	2,670.00	265.13	9.93	123.73	2.00	295.00	147.5	26.50	3,863.00	145.8
4,068.00	48.0/48.0	90	800.0	2,670.00	265.13	9.93	123.73	1.00	62.00	62.0	27.50	3,925.00	142.7
4,098.00	38.0/38.0	0	800.0	2,700.00	265.13	9.82	123.73	0.50	30.00	60.0	28.00	3,955.00	141.2
4,681.00	45.0/48.0	90	800.0	2,750.00	265.13	9.64	123.73	6.50	583.00	89.7	34.50	4,538.00	131.5
4,893.00	38.0/42.0	90	800.0	2,800.00	265.13	9.47	123.73	2.00	212.00	106.0	36.50	4,750.00	130.1

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	125	3,951.76	5.000		4.276				RIG
(12 JTS) HWDP	12	360.88	6.500		3.250	4-1/2 IF			RIG
CROSSOVER	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
CROSSOVER	1	2.70	8.000		2.875	4 1/2 XH			NESXO800088
SCREEN SUB	1	2.70	8.000		2.875	6 5/8 REG			DR32190
SHOCK SUB	1	11.37	8.000		2.880	6 5/8 REG			SD900166
STABILIZER	1	7.92	12.000		2.875	6 5/8 REG			DR32990
NON-MAG SLICK COLLAR	1	29.35	7.750		3.250	6 5/8 REG			NESNM800065
STABILIZER	1	7.31	12.000		2.875	6 5/8 REG			DR30120
GAP SUB	1	3.57	8.125		3.250	6 5/8 FH			VG800031PTS
CENTRALIZER COLLAR	1	8.55	8.250		3.250	6 5/8 FH			VC800026
LANDING SUB	1	3.73	8.250		3.250	6 5/8 REG			VL800020
CROSSOVER SUB	1	1.55	8.000		2.875	6 5/8 REG			VX800022
NON-MAG PONY SLICK COLLAR	1	14.91	8.125		2.875	6 5/8 REG			NESPC800138
STABILIZER	1	7.62	12.000		3.000	6 5/8 REG			DR29402
7.75" PHOENIX 24X MUD MOTOR. 4/5 LOBE. 5.3 STG. ADJ	1	29.47	12.000			6 5/8 REG			24X-775444-PTS
BIT #1 RUN #1 BAKER T606FX , SN: 7163439. 6x18's	1	1.50	12.250	12.250					7163439

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
06/17/2017 23:59		06/18/2017 23:59		1	941.24		DRILL 12.25" SURFACE 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)
3,353.00	165.0	150.00	155.00	10.00	12,000.0	5,000.0	193.00
3,442.00	185.0	165.00	175.00	10.00	12,000.0	5,000.0	89.00
3,711.00	185.0	165.00	175.00	10.00	12,000.0	5,000.0	269.00
4,006.00	190.0	180.00	185.00	5.00	11,000.0	5,000.0	295.00
4,068.00	190.0	180.00	185.00	5.00	13,000.0	5,000.0	62.00
4,098.00	190.0	180.00	0.00	190.00	0.0	0.0	30.00
4,681.00	190.0	180.00	185.00	5.00	12,000.0	5,000.0	583.00
4,893.00	215.0	200.00	215.00	0.00	12,000.0	5,000.0	212.00

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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: 18232 GAL
FUEL USED: 2544 GAL