

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

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	16.92
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	06/17/2017	Days Since Spud	14.58
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)	17,907.00
Engineer	BRANDON FOOTE	TVD(ft)	11,647.37
Other Supervisor	JOHNNIE BRASSELL	24 Hr Progress(ft)	1,967.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,800.10 / 2,772.10	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	1.00/4.17	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	1,597,093/2,770,860.00	Current MW / BH EMW(ppg)	/
Actual divided by AFE	0.58	LOT/FIT EMW(ppg)	
Daily Cost	53,107	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	691	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	0 10 16 1500
Safety Comments:							
7 STEP REVIEW							

Drills

Drill Category	Drill Type	Detection (sec)	Complete (sec)	Crew drilled	Pass / Fail	PIC	Comments
HSE Drills	Rescue from heights	20.00	80.00	Night	Pass	J. BRASSELL	
HSE Drills	Fire drill	20.00	95.00	Night	Pass	J. BRASSELL	
HSE Drills	Man-down Drill	30.00	60.00	Night	Pass	J. BRASSELL	

HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	14 1
Last Derrick Inspection	08/15/2017	5		
Last BOP function test	08/07/2017	13		
Last BOP Test	08/28/2017			
Next BOP Test				

Operations Summary

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

Well
WellboreUNIVERSITY 19 PW UNIT 1404H
UNIVERSITY 19 PW UNIT 1404H

24 Hour Summary

SLIDE & DRLG F/ 15940' T/ 17155', C/O SWIVEL PACKING, DRLG F/17155' T/17356', RIG SERVICE, C/O SWIVEL PACKING, DRLG & SLIDE F/ 17356' T/ 17907'

Update Since Report Time

DRLG @ 18266'

24 Hour Forecast

DRLG LATERAL SECTION AS PER PLAN EST TD +/- 21,085'

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

Well UNIVERSITY 19 PW UNIT 1404H
Wellbore UNIVERSITY 19 PW UNIT 1404H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	0.50	MNH1	DRL		15,961.00	0		SLIDE DRILL F/15940' T/15961' (21' @ 42 FPH) WOB: 30K RPM: SURF 0 MOTOR 424 BIT 424 PSI & FLOW: SPP 5600 GPM 285 DIFF 300-500 STRING WT: P/U 210 S/O 160 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
0:30	2.50	MNH1	DRL		16,224.00	0		ROTARY DRILL F/15961' T/16224' (263' @ 105 FPH) WOB: 30K RPM: SURF 100 MOTOR 424 BIT 524 PSI & FLOW: SPP 5600 GPM 285 DIFF 1000-1200 STRING WT: P/U 210 S/O 160 ROT 185 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
3:00	1.00	MNH1	DRL		16,265.00	0		SLIDE DRILL F/16224' T/16265' (41' @ 41 FPH) WOB: 30K RPM: SURF 0 MOTOR 424 BIT 424 PSI & FLOW: SPP 5600 GPM 285 DIFF 300-500 STRING WT: P/U 210 S/O 160 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
4:00	5.50	MNH1	DRL		16,981.00	0		ROTARY DRILL F/16265' T/16981' (716' @ 130 FPH) WOB: 30K RPM: SURF 100 MOTOR 417 BIT 5217 PSI & FLOW: SPP 5575 GPM 280 DIFF 1000-1200 STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
9:30	2.00	MNH1	DRL		17,038.00	0		SLIDE DRILL F/16981' T/17038' (57' @ 28 FPH) WOB: 30K RPM: SURF 0 MOTOR 402 BIT 402 PSI & FLOW: SPP 5250 GPM 270 DIFF 300-500 STRING WT: P/U 210 S/O 150 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
11:30	0.50	MNH1	DRL		17,094.00	0		ROTARY DRILL F/17038' T/17094' (56' @ 112 FPH) WOB: 30K RPM: SURF 100 MOTOR 417 BIT 517 PSI & FLOW: SPP 5575 GPM 280 DIFF 1000-1200 STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
12:00	1.50	MNH1	DRL		17,129.00	0		SLIDE DRILL F/17094' T/17129' (35' @ 23 FPH) WOB: 30K RPM: SURF 0 MOTOR 402 BIT 402 PSI & FLOW: SPP 5250 GPM 270 DIFF 300-500 STRING WT: P/U 210 S/O 150 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
13:30	0.50	MNH1	DRL		17,155.00	0		ROTARY DRILL F/17129' T/17155' (26' @ 52 FPH) WOB: 30K RPM: SURF 100 MOTOR 402 BIT 502 PSI & FLOW: SPP 5250 GPM 270 DIFF 1000-1200

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

Well UNIVERSITY 19 PW UNIT 1404H
Wellbore UNIVERSITY 19 PW UNIT 1404H

Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
14:00	0.50	MNH1	SVC		17,155.00	0		C/O SWIVEL PACKING
14:30	2.00	MNH1	DRL		17,356.00	0		ROTARY DRILL F/17155' T/17356' (201' @ 100.5 FPH) WOB: 30K RPM: SURF 100 MOTOR 417 BIT 517 PSI & FLOW: SPP 5250 GPM 280 DIFF 1000-1200 STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
16:30	0.50	MNH1	SVC		17,356.00	0		RIG SERVICE
17:00	1.00	MNH1	SVC		17,356.00	1		NPT REDUCED RATE- C/O SWIVEL PACKING
18:00	1.50	MNH1	DRL		17,547.00	0		ROTARY DRILL F/17356' T/17547' (201' @ 100.5 FPH) WOB: 35K RPM: SURF 100 MOTOR 402 BIT 502 PSI & FLOW: SPP 5600 GPM 270 DIFF 1000-1200 STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
19:30	2.50	MNH1	DRL		17,598.00	0		SLIDE DRILL F/17547' T/17598' (51' @ 20 FPH) WOB: 50K RPM: SURF 0 MOTOR 402 BIT 402 PSI & FLOW: SPP 5600 GPM 270 DIFF 300-500 STRING WT: P/U 210 S/O 150 ROT TORQUE: ON BTM OFF BTM MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
22:00	2.00	MNH1	DRL		17,907.00	0		ROTARY DRILL F/17598' T/17907' (309' @ 154 FPH) WOB: 35K RPM: SURF 100 MOTOR 402 BIT 502 PSI & FLOW: SPP 5600 GPM 270 DIFF 1000-1200 STRING WT: P/U 210 S/O 150 ROT 180 TORQUE: ON BTM 10-12K OFF BTM 5-8K MW: 13.4 PPG MOTOR: 0.00 REV/GAL GAS: BG 500 CG 3000
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
08/20/2017 17:00	ENSIGN UNITED STATES DRILLING INC	Rig/Work Unit Misc	17,356.00	SVC	EN	Swivel	1.00	1.00	1	OPEN
Description: LEAKING						Title: REPAIR SWIVEL PACKING				
							Total	1.00	1.00	

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
17,479.00	90.44	165.26	11,647.79	-5,679.06	1,462.41	5,864.27	1.22	PTW MWD+HDGM_2016

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

Well UNIVERSITY 19 PW UNIT 1404H
Wellbore UNIVERSITY 19 PW UNIT 1404H

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
17,573.00	90.38	162.78	11,647.12	-5,769.41	1,488.29	5,958.24	2.64	PTW MWD+HDGM_2016
17,668.00	89.50	160.83	11,647.21	-5,859.66	1,517.95	6,053.06	2.25	PTW MWD+HDGM_2016
17,762.00	90.50	161.48	11,647.21	-5,948.62	1,548.31	6,146.81	1.27	PTW MWD+HDGM_2016
17,856.00	89.64	162.18	11,647.10	-6,037.93	1,577.63	6,240.63	1.18	PTW MWD+HDGM_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	POM (cc)
MD (ft)		TS/HGS/LGS (%)	CaCl2 (%)
Mud Density (ppg)		Sand (%)	Caom/Clom (ppm)
Vis (s/qt)		Oil/Water Ratio (%)	ACT
PV/YP (cp/lbf/100ft²)			XS Lime(lbm/bbl)
Gels 10 s/m (lbf/100ft²)		LCM (lbm/bbl)	ES (Volts)
API/HTHP WL (cc/30min)		ECD (ppg)	R600/300 (°)
FC/HTHP FC (32nd")		H2S (gas unit)	R200/100 (°)
WPS (ppm)		KCl (%)	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	-10,364.00	GAL	2,116.00

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
6	6.125	BAKER HUGHES	DD405T			5272309	5x16	14,863.00		-----

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.
4" DP	401	12,638.19	4.000		3.340	XT-39			RIG
SHOCK SUB	1	11.14	5.000		2.750	XT-39			W1681970
(110 JTS) DRILL PIPE	110	3,469.93	5.000		3.250	XT-39			RIG
AGITATOR 1.4 PLATE & SHOCK SUB	1	22.24	5.000		2.750	XT-39			W1830287
(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

EP WELLS DAILY OPERATIONS REPORT

Report 17

08/20/2017

Well UNIVERSITY 19 PW UNIT 1404H
Wellbore UNIVERSITY 19 PW UNIT 1404H

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
NM SLICK COLLAR	1	29.12	4.500		2.560	3-1/2 IF			NESNM475445
GAP SUB	1	3.76	5.130			3-1/2 IF			VG4755094PTS
CENTRALIZER COLLAR	1	8.34	5.000			4.3 ACME			VC475012
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
BAKER MUD MOTOR, LOBES: 4/5. STC: 10. FIXED @ 1.8°.	1	30.82	5.187			3-1/2 IF			12129898
BIT #6 RUN #1 BAKER DD405T, 5X16's. SN: 5272309	1	1.00	6.125	6.125					5272309

Drillstring Details

Date/Time in	Date/Time out	BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
08/19/2017 01:30		6	131.25		DRILL 6.125" PRODUCTION 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: 14840 GAL
FUEL USED (RIG): 1992 GAL
FUEL USED (PITS): 2116 GAL
FUEL DELIVERED: 7500 GAL