EP WELLS DAILY OPERATIONS REPORT

Report 20 08/11/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1407H
Wellbore	UNIVERSITY 19 PW UNIT 1407H
WBS No/API No	30264950 / 4230133203

Event Summary

Event Type	Drilling only	Event Start Date	05/10/2017	Days on Location	19.38
Objective	Drill - Wolfcamp B1 Shale	Original Spud Date	05/11/2017	Days Since Spud	16.94
Est. Days	25.00	Contractor	PRECISION		
Work Unit	PRECISION 559	Days To Release			
		Rig Phone/FAX No.			

Well Status

Supervisor	DENNIS JOHNSON	Measured Depth(ft)	16,870.00
Engineer	YERMEK TYNYSHBAYEV	TVD(ft)	11,728.28
Other Supervisor	TANNER MANUEL, YU LIU	24 Hr Progress(ft)	1,879.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,792.70 / 2,766.70	Hole size(in)	6.125
THF Datum			
Daily NPT(hr/%)	0/0	Last Casing MD	7.000in@12,087.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	4.500in@
Actual cost to date/AFE	1,743,447/2,726,365.58	Current MW / BH EMW(ppg)	13.40/
Actual divided by AFE	0.64	LOT/FIT EMW(ppg)	
Daily Cost	60,582	Lithology	
		Formation/MD Top	

HSE Summary

Last Incident	Date	Days	Last Incident	Date	Days	KPI's	
LWC			PSI			TRCF	
RWC			NII			LWCF	
MTC			HPI			Safety Cards - Safe	
FAC			**GOAL ZERO DAYS**	10/12/2016	303	Safety Card - Unsafe	
Last casing pressure test			**PS BARRIER EVENT**			SSE%	
			PS barrier bowtie review			Last casing pressure(psi)	

Safety Comments:

NO HSE ISSUES
MAN HOURS - 325 HRS

HSE Drills

Drills/Tests	Date	Days Since Last		
Last Derrick Inspection			JSA's/Toolbox Talks	
Last BOP function test	05/14/2017	89	Days Since Last Drill	19
Last BOP Test	05/14/2017	89		
Next BOP Test	06/04/2017			

Operations Summary

24 Hour Summary

DRILL F/14,991' T/16,870'

Update Since Report Time

ROTATE/SLIDE F/16,870' T/17,290'

24 Hour Forecast

CONTINUE DRILL LATERAL SECTION

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	1.50	MNH1	DRL		15,128.00	0		ROTATE DRILL F/ 14,991' T/ 15,128' (137' @ 91 FPH) WOB: 35K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 811 UNITS B/U GAS: 2480 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
1:30	1.00	MNH1	DRL		15,150.00	0		SLIDE DRILL F/ 15,128' T/ 15,150'(22' @ 22 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5640 PSI FLOW: 290 GPM P/U: 220K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2680 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
2:30	1.50	MNH1	DRL		15,308.00	0		ROTATE DRILL F/ 15,150' T/ 15,308' (158' @ 105 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
4:00	1.00	MNH1	DRL		15,334.00	0		SLIDE DRILL F/ 15,308' T/ 15,334'(26' @ 26 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5640 PSI FLOW: 290 GPM P/U: 220K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2658 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
5:00	1.00	MNH1	DRL		15,410.00	0		ROTATE DRILL F/ 15,334' T/ 15,410' (76' @ 76 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
6:00	8.00	MNH1	DRL		16,475.00	0		ROTATE DRILL F/ 15,410' T/ 16,475' (1065' @ 133 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
14:00	1.50	MNH1	DRL		16,520.00	0		SLIDE DRILL F/ 16,475' T/ 16,520'(45' @ 30 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5640 PSI FLOW: 290 GPM P/U: 220K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2658 UNITS MW: 13.5 MOTOR REV/GAL: 0.8

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Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
								NO FLARE
15:30	0.50	MNH1	DRL		16,564.00	0		ROTATE DRILL F/ 16,520' T/ 16,564' (44' @ 88 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
16:00	1.50	MNH1	DRL		16,620.00	0		SLIDE DRILL F/ 16,520' T/ 16,620'(100' @ 66 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5640 PSI FLOW: 290 GPM P/U: 220K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2658 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
17:30	0.50	MNH1	SVC		16,620.00	0		SERVICE TOP DRIVE
18:00	0.50	MNH1	DRL		16,664.00	0		ROTATE DRILL F/ 16,620' T/ 16,664' (44' @ 88 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
18:30	2.50	MNH1	DRL		16,714.00	0		SLIDE DRILL F/ 16,664' T/ 16,714'(50' @ 20 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5600 PSI FLOW: 290 GPM P/U: 230K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2658 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
21:00	1.50	MNH1	DRL		16,839.00	0		ROTATE DRILL F/ 16,714' T/ 16,839' (125' @ 83 FPH) WOB: 25K RPM: SURF 75 MOTOR 232 BIT 307 PRESSURE: 6240 PSI FLOW: 290 GPM TORQUE: ON BTM 11K OFF BTM 6K P/U: 220K S/O: 120K ROT: 156K B/G GAS: 420 UNITS B/U GAS: 1350 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
22:30	1.50	MNH1	DRL		16,870.00	0		SLIDE DRILL F/ 16,839 T/ 16,870'(31' @ 20.6 FPH) WOB: 30K RPM: MOTOR 232 BIT 232 PRESSURE: 5600 PSI FLOW: 290 GPM P/U: 230K S/O: 120K B/G GAS: 950 UNITS B/U GAS: 2658 UNITS MW: 13.5 MOTOR REV/GAL: 0.8 NO FLARE
Total	**24.00**							

Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
16,503.00	89.45	152.69	11,728.16	-4,195.11	1,883.52	4,555.02	1.40	PTW MWD_2016

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Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
16,593.00	89.27	153.90	11,729.17	-4,275.51	1,923.96	4,643.53	1.36	PTW MWD_2016
16,683.00	89.67	157.73	11,730.00	-4,357.59	1,960.82	4,732.66	4.28	PTW MWD_2016
16,773.00	89.87	161.33	11,730.36	-4,441.89	1,992.29	4,822.40	4.01	PTW MWD_2016
16,863.00	92.40	163.53	11,728.58	-4,527.66	2,019.45	4,912.35	3.72	PTW MWD_2016

Fluid Details

Mud type	Invermul	Oil/Water (%)	55.00/18.00	POM (cc)	
MD (ft)	16,581.00	TS/HGS/LGS (%)	24.80//	CaCl2 (%)	
Mud Density (ppg)	13.40	Sand (%)	0.10	Caom/Clom (ppm)	
Vis (s/qt)	54.00	Oil/Water Ratio (%)	75.30/24.70	ACT	
PV/YP (cp/lbf/100ft²)	26.00/10.000			XS Lime(lbm/bbl)	5.83
Gels 10 s/m (lbf/100ft²)	9.000/14.000	LCM (lbm/bbl)		ES (Volts)	544.0
API/HTHP WL (cc/30min)	0.0/	ECD (ppg)	15.320	R600/300 (°)	
FC/HTHP FC (32nd")	0.0/4.0	H2S (gas unit)		R200/100 (°)	
WPS (ppm)	280,437	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
6	6.125	BAKER HUGHES	TD405FX			5271645	5x16	14,220.00		- - - - - -

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)
15,128.00	35.0/35.0	75	290.0	6,240.00	107.68	1.73	18.22	1.50	137.00	91.3	15.50	908.00	58.6
15,150.00	30.0/30.0	0	290.0	5,640.00	107.68	1.91	18.22	1.00	22.00	22.0	16.50	930.00	56.4
15,308.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	1.50	158.00	105.3	18.00	1,088.00	60.4
15,334.00	30.0/30.0	0	290.0	5,640.00	107.68	1.91	18.22	1.00	26.00	26.0	19.00	1,114.00	58.6
15,410.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	1.00	76.00	76.0	20.00	1,190.00	59.5
16,475.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	8.00	1,065.00	133.1	28.00	2,255.00	80.5
16,520.00	30.0/30.0	0	290.0	5,640.00	107.68	1.91	18.22	1.50	45.00	30.0	29.50	2,300.00	78.0
16,564.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	0.50	44.00	88.0	30.00	2,344.00	78.1
16,620.00	30.0/30.0	0	290.0	5,640.00	107.68	1.91	18.22	1.50	56.00	37.3	31.50	2,400.00	76.2
16,664.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	0.50	44.00	88.0	32.00	2,444.00	76.4
16,714.00	30.0/30.0	0	290.0	5,600.00	107.68	1.92	18.22	2.50	50.00	20.0	34.50	2,494.00	72.3
16,839.00	25.0/25.0	75	290.0	6,240.00	107.68	1.73	18.22	1.50	125.00	83.3	36.00	2,619.00	72.7
16,870.00	30.0/30.0	0	290.0	5,600.00	107.68	1.92	18.22	1.50	31.00	20.7	37.50	2,650.00	70.7

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
4" DRILL PIPE	327	12,166.07	4.000		3.340	XT-39			RIG
SHOCK SUB	1	11.07	5.000		2.000	XT-39			W1836693-1
64 JTS 4" DP	64	2,872.72	4.000		3.340	XT-39			RIG
AGITATOR	1	22.10	5.000		2.000	XT-39			W1857319-1 /1583003-10
38 JTS 4" DP	38	1,702.77	4.000		3.340	XT-39			RIG
CROSSOVER	1	2.70	4.800		2.630	XT-39			DR28568
FLOAT SUB	1	1.58	4.625		2.688	3 1/2 IF			NESFS475241
FILTER SUB	1	2.88	4.688		2.250	3 1/2 IF			DR20599
NMDC	1	30.12	4.540		2.688	3 1/2 IF			NESNM475561

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Wellbore UNIVERSITY 19 PW UNIT 1407H

Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
475 GAP SUB	1	3.78	5.100			3 1/2 IF			VG475082PTS
475 CENTRALIZER COLLAR ASSY	1	8.35	5.110			3 1/2 IF			VC475031
475 LANDING SUB	1	3.42	5.080			3 1/2 IF			VL475079
475 X/O SUB	1	1.64	4.760			3 1/2 IF			VX475044
NMPC	1	13.95	4.688		2.688	3 1/2 IF			NESPC4754036
5" PHX FBH MUD MOTOR 6/7 LOBE. STAGE 6.4. SET @ 1.75°	1	25.91	5.020			3 1/2 IF			24XH-513030-PTS
BIT #6 RUN #1 6.125" BAKER TD405FX (5X16'S) SN: 5271645	1	0.94	6.125	6.125		3 1/2 REG			5271645

Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
08/09/2017 23:30				6	128.44		DRILL 6.125" PRODUCTION 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)
15,128.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	137.00
15,150.00	220.0	120.00	0.00	220.00	0.0	0.0	22.00
15,308.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	158.00
15,334.00	220.0	120.00	0.00	220.00	0.0	0.0	26.00
15,410.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	76.00
16,475.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	1,065.00
16,520.00	220.0	120.00	0.00	220.00	0.0	0.0	45.00
16,564.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	44.00
16,620.00	220.0	120.00	0.00	220.00	0.0	0.0	56.00
16,664.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	44.00
16,714.00	230.0	120.00	0.00	230.00	0.0	0.0	50.00
16,839.00	220.0	120.00	156.00	64.00	11,000.0	6,000.0	125.00
16,870.00	230.0	120.00	0.00	230.00	0.0	0.0	31.00

Remarks

DIESEL ON LOCATION: 15514 GAL
DIESEL DELIVERED: 7452 GAL
DIESEL USED: 3492 GAL
LNG USED: 938.78 GAL