

## EP WELLS DAILY OPERATIONS REPORT

Report 8

09/17/2017

Company	PERMIAN
Well Type	Development
Well	UNIVERSITY 19 PW UNIT 1804H
Wellbore	UNIVERSITY 19 PW UNIT 1804H
WBS No/API No	30269397 / 4230133264.00

## Event Summary

Event Type	Drilling only	Event Start Date	08/09/2017	Days on Location	7.88
Objective	Drill - New Well	Original Spud Date	08/10/2017	Days Since Spud	6.13
Est. Days	23.00	Contractor	PRECISION		
Work Unit	PRECISION 563	Days To Release			
		Rig Phone/FAX No.			

## Well Status

Supervisor	THOMAS DOWNES	Measured Depth(ft)	9,578.00
Engineer	ROBERT HAHN	TVD(ft)	9,505.07
Other Supervisor	JAMES WHITTINGTON	24 Hr Progress(ft)	1,485.00
Depth Ref/Grd Elev/Water Depth(ft)	DFE: 2,788.55 / 2,762.90	Hole size(in)	8.750
THF Datum			
Daily NPT(hr/%)	3.00/12.50	Last Casing MD	9.625in@4,952.00ft
Days Ahd(-) Bhnd(+)(50/50)		Next Casing MD	7.000in@12,009.00ft
Actual cost to date/AFE	713,608/3,161,561.00	Current MW / BH EMW(ppg)	9.65/
Actual divided by AFE	0.23	LOT/FIT EMW(ppg)	
Daily Cost	37,592	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 <b>GOAL ZERO DAYS</b> <b>PS BARRIER EVENT</b> <b>PS barrier bowtie review</b>	10/31/2016	321	TRCF LWCF Safety Cards - Safe Safety Card - Unsafe SSE% Last casing pressure(psi)	5
Safety Comments:							

## HSE Drills

Drills/Tests	Date	Days Since Last	JSA's/Toolbox Talks Days Since Last Drill	8 7
Last Derrick Inspection	09/15/2017	2		
Last BOP function test	09/06/2017	11		
Last BOP Test	09/20/2017			
Next BOP Test				

## Operations Summary

24 Hour Summary
CONTINUE TO DRILL FROM 8,093' TO 9,578'. PUMP SLUG AND PULL OUT OF HOLE DUE TO LOW ROP.
Update Since Report Time
FINISH PULLING OUT OF HOLE, L/D MWD, MUD MOTOR AND BIT, BIT @ 2-3-CT-A-X-I-NO-ROP. P/U NEW BIT, MOTOR, AND MWD. TIH.
24 Hour Forecast
FINISH PULLING OUT OF HOLE, L/D MWD, MUD MOTOR AND BIT, (BIT @ 2-3-CT-A-X-I-NO-ROP) P/U NEW BIT, MUD MOTOR, AND MWD. TIH. CONTINUE TO DRILL TO KICK OFF POINT.

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## Time Summary

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Rig Rate	Description
0:00	11.00	INT1	DRL		8,937.00	0		DRILL ROTATING FROM 8,093' TO 8,937'. 844' @ 77'/HR WOB: 38, 3,950PSI @ 600 GPM 20 RPM, 173 MOTOR RPM, 193 BIT RPM TORQUE O/B: 17K OFF/B 16K STRING WEIGHT: P/U 280, S/O 180, ROT 210 MW@ 9.6 MOTOR @ .288 GAS: CG-1525, BG-103  NOTE: MWD FAILED @ 8,054'.
11:00	0.50	INT1	SVC		8,937.00	0		CHANGE PISTON ON #1 MUD PUMP.
11:30	4.50	INT1	DRL		9,307.00	0		DRILL ROTATING FROM 8,937' TO 9,307'. 370' @ 82'/HR WOB: 38, 3,950PSI @ 600 GPM 20 RPM, 173 MOTOR RPM, 193 BIT RPM TORQUE O/B: 17K OFF/B 16K STRING WEIGHT: P/U 280, S/O 180, ROT 210 MW@ 9.6 MOTOR @ .288 GAS: CG-1525, BG-103
16:00	0.50	INT1	SVC		9,307.00	0		CHANGE PISTON ON #2 MUD PUMP.
16:30	1.00	INT1	DRL		9,397.00	0		DRILL ROTATING FROM 9,307' TO 9,397'. 90' @ 90'/HR WOB: 38, 3,950PSI @ 600 GPM 20 RPM, 173 MOTOR RPM, 193 BIT RPM TORQUE O/B: 17K OFF/B 16K STRING WEIGHT: P/U 280, S/O 180, ROT 210 MW@ 9.6 MOTOR @ .288 GAS: CG-3525, BG-103
17:30	0.50	INT1	SVC		9,397.00	0		SERVICE TOP DRIVE AND RIG.
18:00	3.00	INT1	DRL		9,578.00	0		DRILL ROTATING FROM 9,397' TO 9,578'. 181' @ 60'/HR WOB: 40, 3,980PSI @ 600 GPM 20 RPM, 173 MOTOR RPM, 193 BIT RPM TORQUE O/B: 18K OFF/B 16K STRING WEIGHT: P/U 280, S/O 180, ROT 210 MW@ 9.6 MOTOR @ .288 GAS: CG-5525, BG-103
21:00	0.50	INT1	CBU		9,578.00	1		NPT: CIRCULATE WHILE BUILDING AND PUMPING SLUG. POOH DUE TO LOW ROP
21:30	2.50	INT1	TOH		9,578.00	1		NPT: POOH FROM 9,578' TO 2,244'
<b>Total</b>	<b>24.00</b>							

## 06.00 Update

Start	Hours	PH	OPN	Detail	Drilled Depth (ft)	NPT level	Description
0:00	0.50	INT1	TOH		9,578.00	1	NPT: POOH FROM 2,244' TO 992'
0:30	1.00	INT1	BHA		9,578.00	1	NPT: POOH WITH BHA FROM 992' TO 103'.
1:30	1.00	INT1	BHA		9,578.00	1	NPT: LAY DOWN MWD, MUD MOTOR, AND BIT. (BIT @ 2-3-CT-A-X-I-NO-ROP)
2:30	0.50	INT1	NOA		9,578.00	1	NPT: CLEAN AND ORGANIZE RIG FLOOR, STAGE NEW BHA TOOLS.
3:00		INT1	BHA		9,578.00	1	NPT: P/U AND M/U MUD MOTOR, BIT, AND MWD TOOLS.

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## 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
09/17/2017 21:00	SHELL	Drill Bits, Under-Reducers & SWRD	9,578.00	CBU	EN	Bits	0.00	0.00		OPEN
<b>Description:</b> CIRCULATE WHILE BUILDING AND PUMPING SLUG. POOH FROM 9,578' TO 2,244'						<b>Title:</b> POOH DUE TO LOW ROP				
<b>Total</b>							<b>0.00</b>	<b>0.00</b>		

## Deepest 5 Surveys

MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V.Sec (ft)	DLeg (°/100ft)	Tool
7,540.65	0.91	66.66	7,467.98	851.53	257.60	889.64	0.16	PTW MWD+HDGM_2016
7,629.65	0.56	117.22	7,556.98	851.61	258.64	890.02	0.79	PTW MWD+HDGM_2016
7,718.65	0.37	126.89	7,645.97	851.24	259.26	889.84	0.23	PTW MWD+HDGM_2016
7,808.65	0.57	303.20	7,735.97	851.31	259.11	889.87	1.04	PTW MWD+HDGM_2016
7,897.65	0.98	302.72	7,824.96	851.96	258.10	890.20	0.46	PTW MWD+HDGM_2016

## Fluid Details

Mud type	NaCl Brine	Oil/Water (%)	0.00/92.00	pH/Pm (cc)	10.00/1.20	
MD (ft)	9,406.00	TS/HGS/LGS (%)	1.20/0.80/0.40	Pf/Mf (cc)	0.10/0.30	
Mud Density (ppg)	9.65	Sand (%)	0.00	Ca+ (ppm)	119,000	
Vis (s/qt)	28.00	MBT (lbm/bbl) LCM (lbm/bbl) ECD (ppg) H2S (gas unit) KCl (%)	9.920	Cl- (ppm)		
PV/YP (cp/lbf/100ft²)	1.00/3.000			R600/300 (°)		
Gels 10 s/m (lbf/100ft²)	1.000/1.000			R200/100 (°)		
API/HTHP WL (cc/30min)	100.0/			Ditch Magnet in Last 24hrs/Cum. (gm)		R6/3 (°)
FC/HTHP FC (32nd")	1.0/					
FL temp. (°F)						

## 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 INTERNATIONAL	XS716			JN2500	2x20, 5x16	5,052.00	9,578.00	2-3-CT-A-X-I-NO-PR

## 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)
8,937.00	38.0/38.0	20	600.0	3,950.00	125.06	3.17	43.77	11.00	844.00	76.7	38.00	3,885.00	102.2
9,307.00	38.0/38.0	20	600.0	3,950.00	125.06	3.17	43.77	4.50	370.00	82.2	42.50	4,255.00	100.1
9,397.00	38.0/38.0	20	600.0	3,950.00	125.06	3.17	43.77	1.00	90.00	90.0	43.50	4,345.00	99.9
9,578.00	40.0/40.0	20	600.0	3,980.00	125.06	3.14	43.77	3.00	181.00	60.3	46.50	4,526.00	97.3

## Drillstring Components

Item description	# Jts	Length (ft)	OD (in)	Max OD (in)	ID (in)	Connection Name	Weight (ppf)	Grade	Serial no.
5" DP	273	8,583.78	5.000		4.276				RIG
(4 STDS) 5" HWDP	12	375.50	5.000						RIG
CROSSOVER SUB	1	3.45							RIG
(5 STDS) 6.5" DC'S	15	464.93	6.500			4 1/2 XH			RIG
CROSSOVER SUB	1	2.95	6.687		2.812	4 1/2 XH			SD100288
FILTER SUB	1	5.92	6.625		2.812	4-1/2 IF			SD116123
NON-MAG SPIRAL IBS	1	6.01	6.750		2.875	4-1/2 IF			SD29586

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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.
NON-MAG DRILL COLLAR	1	29.95	6.812		3.250	4-1/2 IF			SD25817
NON-MAG SPIRAL IBS	1	5.35	6.750		2.812	4-1/2 IF			SD600926
ACCUMP	1	33.85	6.500		2.875	4-1/2 IF			C2022
NON-MAG PONY COLLAR	1	12.32	6.812		2.875	4-1/2 IF			SD53143
SPIRAL IBS	1	5.97	6.562		2.375	4-1/2 IF			SD22383
CROSSOVER SUB	1	4.07	6.875		2.937	4-1/2 IF			SD115532
CROSSOVER SUB	1	2.25	6.687		3.562	4-1/2 XH			66-196
7" SCIENTIC MUD MOTOR, LOBES: 7/8, STAGE: 9.4, FBH @	1	40.70	7.812			5-1/2 FH			SDI700052
BIT #2 RUN #1 8.75" SMITH XS716 (5x16's, 2x20's) SN:	1	1.00	8.750	8.750		4 -1/2 REG			JN2500

## Drillstring Details

Date/Time in		Date/Time out		BHA no.	BHA Length (ft)	Min. ID (in)	Purpose
09/15/2017 13:00		09/18/2017 02:30		2	994.22		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)
8,937.00	280.0	180.00	210.00	70.00	17,000.0	16,000.0	844.00
9,307.00	280.0	180.00	210.00	70.00	17,000.0	16,000.0	370.00
9,397.00	280.0	180.00	210.00	70.00	17,000.0	16,000.0	90.00
9,578.00	280.0	180.00	210.00	70.00	18,000.0	16,000.0	181.00

## 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		JJMMC / F-1600	12.00						
2		JJMMC / F-1600	12.00						

## Remarks

FUEL ON HAND: 11,160 GAL  
FUEL USED: 2,295 GAL  
FUEL DELIVERED: 0 GAL