

### Daily Drilling Report

## UNIVERSITY 2-20 78H

H & P #607  
 Accept: 10/10/2017 Release:  
 Days Since LTI: 347.00 Days Since RI: 347.00

PERMIAN - JV SOUTHERN WOLFCAMP  
 Job: ODR  
 Report Date: 10/26/2017  
 Report #: 18  
 DFS: 17  
 AFE #: 043595  
 Total AFE + Sup: \$3,545,103.21  
 Daily Field Est. (Cost): \$67,695.07

API/UWI 42-383-39948-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP D (WFMP D)	Field Name SPRABERRY (TREND AREA)
SSN ID00020336	WellIDE 927351-078	KB-Grd (ft) 26.00	Orig KB Elev (ft) 2,670.00
		Ground Elevation (ft) 2,644.00	Spud Date 8/13/2017
			TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	Pre-Tour Mtg. Drilling vertical T /KOP, and Building Curve as per plan. Safety discussion - Escape routes, communication, teamwork, pinch points, forklift ops and complacency.
15:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed RTM with safety glasses around neck. Stopped him and him put glasses on and reminded him the importance of wearing PPE.
18:00	MEETING	PRE-TOUR	DAY	Pre-Tour Mtg. Building Curve as per plan. Safety discussion - Escape routes, communication, teamwork, pinch points, forklift ops and complacency.

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	12/27/2017	1st well on 3 well pad. Date last modified 10/23/2017 End of well date 11/9/17

Daily Operations							
Footage/Meterage (ft) 851.00	Drilling Hours (hr) 24.00	% Rotating Time (%) 100.00	End Depth (ftKB) 9,618.0	Target Depth (ftKB) 20,063.0	Daily Field Est Total (Cost) 67,695.07	Cum Field Est To Date (Cost) 1,909,812.45	
24 HR ROP (ft/hr) 35.5	Circulating Hours (hr)	% Sliding Time (%) 0.00	End Depth (TVD) (ftKB) 9,490.0	Target Depth (TVD) (ftKB) 10,107.0	Daily Mud Field Est (Cost) 9,055.07	Cum Mud Field Est (Cost) 105,775.28	Total AFE + Sup (Cost) 3,545,103.21
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 1,000.0		Daily Goal - Next 24 1,000.0		Goal Comments Missed Goal	
Backbuild Yes	Lateral Incl Toe Up	Vertical Length (ft)	Curve Length (ft)	Lateral Length (ft)	Last Casing String INTERMEDIATE, 8,660.0ftKB	Next Casing String PROPOSED PRODUCTION, 20,063.0ftKB	
Avg Connection Gas 224.00	Avg Trip Gas 90.00	Avg Background Gas 160.00	Max Connection Gas 303.00	Max Trip Gas 90.00	Max Drill Gas 320.00		

Operations Summary  
 Drill 8 3/4 Vertical section T/9562', Drill Curve T/9618' with no accidents, incidents or spills.

Operations Next Report Period  
 Build Curve & Land Same. Dril 200' of Lateral, POOH with no accidents, incidents or spills.

Operations at Report Time  
 Drill 8 3/4 Curve Sec. @ 9618'

Remarks  
 Rig NPT: 0 hrs for previous 24 hrs: 12 hrs. for the well  
 Cumulative 3rd Party NPT: 0 hrs for previous 24 hrs; 2.75 hrs for well  
 Intermediate - 100%, Vertical - 100% Curve - 20%, Lateral - 0%

9471 MD, INC: 0.74, AZI: 294.19, TVD: 9343, VSEC: -603.84, DLS: 0.16 A/B: 41 AHEAD, L/R: 12.7 RIGHT

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	18	00:00	PROD, DRL	DRL	NORMAL	Drill 8 3/4 Vertical Section F/8767' T/9562'. (795' at 44 ft/hr)	8,767.0	9,562.0		
00:00	6	06:00	PROD, DRL CURVE	DRL	NORMAL	Drill 8 3/4 Curve Section F/ 9562' T/ 9618'(56' at 9 ft/hr)	9,562.0	9,618.0		

Drill Strings				
<b>BHA #5 , PRODUCTION - CURVE</b>				
Bit Run 4	Drill Bit 8 3/4in, MMD55DM, 987050	Bit Type PDC	Make HALLIBURTON DBS	
Nozzles (1/32") 13/13/13/13/13	Bit Total Fluid Area (nozzles) (in²) 0.65	IADC Bit Dull -----	Hours Drilled By Bit (hr) 30.25	Depth Drilled By Bit (ft) 943.00
BHA Drilling Time (hr) 30.25	BHA Depth Drilled (ft) 943.00	BHA ROP (ft/hr) 31.2	Depth In (ftKB) 8,675.0	Depth Out (ftKB) 9,618.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
243	DRILL PIPE	5	4.28	7,655.71	9,618.00	149,286.3	202		
21	HWDP	5	3.50	638.34	1,962.29	18,511.9	53		
36	DRILL PIPE	5	4.00	1,228.83	1,323.95	23,962.2	34		
1	NMDC	6.5556	3.25	30.95	95.12	2,971.2	10	SLB	
1	NM FLOW SLEEVE SUB	6.8889	2.81	2.26	64.17	66.9	7	SLB	
1	MWD (DIRECTIONAL)	6 3/4	3.25	28.81	61.91	4,292.7	7	SLB	
1	UBHO SUB	6 3/4	2.81	2.51	33.10	27.6	3	SLB	
1	STABILIZER (NON MAG)	6 3/4	2.81	3.74	30.59	86.8	3	SLB	
1	MUD MOTOR	6 3/4	5.25	26.10	26.85	2,654.6	3	SLB	

SN	Bend Angle	Upper Defln Type	Lobe Config	# Stages	RPG	Bit To Bend
FH70BO168	2.0		7:8	5	.29	4.38

Sensor Type	Sensor-Bit (ft)	Note
DIRECTIONAL	49.26	
GAMMA	52.32	

Drilling Parameters																	
Start Time	End Time	Start Depth (ftKB)	Int Depth (ft)	Int ROP (ft/hr)	WOB (1000lbf)	RPM (rpm)	dP (SPP) (psi)	Q Flow (gpm)	SPP (psi)	ROP Inst (min/ft)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
06:00	06:00	8,767.0	851.00	35.5	25	60		450	1,350.0		140	146	130	140	8,000.0	4,000.0	

Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)
12.30	12.73	145.1	2.4	222.8	552.9	12.6	444.9	164.31	43.26	446.60

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<b>PERMIAN - JV SOUTHERN WOLFCAMP</b>	
<b>Job:</b>	<b>ODR</b>
<b>Report Date:</b>	<b>10/26/2017</b>
<b>Report #:</b>	<b>18</b>
<b>DFS:</b>	<b>17</b>
<b>AFE #:</b>	<b>043595</b>
<b>Total AFE + Sup:</b>	<b>\$3,545,103.21</b>
<b>Daily Field Est. (Cost):</b>	<b>\$67,695.07</b>

<b>Mud Checks</b>								
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
06:00	DWM CONSULTING LLC			OIL BASE	9,517.0	12.30	88	125.0
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)		HTHP Pressure (psi)
35.0	15.000	10	11		8.0			
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)		Pf (mL/mL)
		6.2						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH		
34,000.000		18	71.1/28.9	654.0	4.1			
Gel 10 sec (lb/100ft²)				Gel 10 min (lb/100ft²)		Gel 30 min (lb/100ft²)		
18.000				28.000		36.000		

Comment: Dusting active system with barite as needed to maintain mud weight. Returned bulk bentonite for credit bulk barite order for today 170-15 200-18 230- 18

<b>Jobs</b>				
Responsible Grp 2	Job Type	Start Date	End Date	Job Status
DRL ENG - ROSS PEARCE	ODR	8/13/2017 16:00		IN PROGRESS

<b>Last BOP Test</b>				
Date	Test Type	Item Tested	Next Test Date	Com
10/13/2017	BOP		11/3/2017	250/ 5000 psi

<b>Leak Off and Formation Integrity Tests</b>		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,063.0	12.69
FORMATION INTEGRITY	8,660.0	14.50

<b>Casing Pressure Test</b>						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	9/6/2017	SURFACE, 1,064.6ftKB	No	30.00	1,000.0
CASING	STANDARD	10/24/2017	INTERMEDIATE, 8,660.0ftKB	No	30.00	2,500.0

<b>Kick Offs &amp; Key Depths</b>			
Date	Type	Top Depth (ftKB)	
	HEEL		
	TOE		
10/26/2017 00:00	KICK OFF		9,562.0

<b>Casing Strings</b>							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.0	106.0	20	H40	78.67		
SURFACE	1,064.6	1,064.5	13 3/8	J55	55.50	BTC	700.8
INTERMEDIATE	8,660.0	8,532.3	9 5/8	L80-IC	40.00	BTC	6,427.5

<b>Job Supply Amounts</b>							
Supply Item Des	Type	Unit Label	Received	Consumed	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL		2,901	6,362	24,443.0	
DIESEL	MUD	GAL		4,296	4,049	4,296.0	
WATER	FRESH	BBL		0	-516	14,276.0	

<b>Mud Additive Amounts</b>								
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons		
BARITE		1 TON	21	4	48.0	33		
BCI OBM PRIMARY		55 GAL DRU		1	6.0	1		
BCI OBM SECONDARY		55 GAL DRU		2	7.0	2		
BCI OBM WETTING AGENT		55 GAL DRU		1	7.0	1		
CALCIUM CHORIDE-POWDER		50 LB	288	113	175.0	113		
ENGINEERING PER DIEM		1 EA	2	2	0.0	32		
ENGINEERING SERVICE		1EA	2	2	0.0	34		
LIME		50 LB SACK		40	265.0	85		
MIL1 EAGE		1 EA	859	859	0.0	3,413		
TECH SERVICE SUPPORT		1 EA	1	1	0.0	16		
TRANSPORTATION		1 EA	1,027	1,027	0.0	11,336		

<b>Pump Operations</b>							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	7,500.0	
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	7,500.0	
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	7,500.0	

<b>Pump Checks</b>							
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)	
1	9,331.0	18:15	592.0	20	64	95	
1	9,331.0	18:15	754.0	40	129	95	
1	9,331.0	18:15	1,002.0	60	193	95	
2	9,331.0	18:15	715.0	40	129	95	
2	9,331.0	18:15	975.0	60	193	95	
2	9,331.0	18:15	541.0	20	64	95	

<b>Deviation Surveys</b>		
Date	Description	Job
8/14/2017	AS DRILL SURVEY	ODR, 8/13/2017 16:00

<b>Survey Data - All surveys for 24 hr reporting period</b>							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8,809.00	2.02	312.70	8,681.23	-786.09	-687.34	815.04	3.69
8,904.00	1.96	314.83	8,776.18	-783.52	-685.06	812.66	0.10
8,998.00	1.82	309.40	8,870.13	-781.16	-682.98	810.37	0.24
9,093.00	1.55	303.19	8,965.08	-779.23	-681.32	808.12	0.34
9,187.00	1.36	291.75	9,059.05	-777.86	-680.21	806.02	0.37
9,282.00	0.07	305.02	9,154.04	-777.27	-679.76	804.93	1.36
9,376.00	0.06	302.28	9,248.04	-777.20	-679.70	804.83	0.01

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MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,471.00	0.07	294.19	9,343.04	-777.13	-679.64	804.74	0.02

Formations					
Formation Name	Prog Top (TVD SS) Override (ft(elv))	Prog Top MD (ftKB)	Prog Top (TVD) (ftKB)	Final Top MD (ftKB)	Final Top (TVD) (ftKB)
292_0_WFMP_D	-7,289.0		9,959.0		
304_0_STRAWN	-7,674.0		10,344.0		
INTENDED LANDING POINT (ILP) PRELIM DEPTH	-7,359.0		10,029.0		
TARGET #2	-7,334.0		10,004.0		
TARGET #3	-7,374.0		10,044.0		
TARGET #4	-7,399.0		10,069.0		
TARGET #5	-7,386.0		10,056.0		
TARGET #6	-7,390.0		10,060.0		
TARGET #7	-7,420.0		10,090.0		
PBHL/TD	-7,443.0		10,113.0		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
BRINKLEY, DAVID, AREA DRILLING SUPERVISOR	AREA DRILLING SUPERVISOR	325-884-9030	432-301-2825	DAVID.BRINKLEY@PXD.COM
WOODS, LEE ROY, FOREMAN	FOREMAN	432-571-2516	432-425-3842	LEEROY.WOODS@PXD.COM
FOUNTAIN, KYLE, FOREMAN	FOREMAN	817-717-2807	936-465-0896	KYLE.FOUNTAIN@PXD.COM
PEARCE, ROSS, ENGINEER	ENGINEER	972-444-9001	432-215-2847	PEARCE.ROSS@PXD.COM
BUTLER, WILLIAM, FOREMAN	FOREMAN		713-408-8633	WILLIAM.BUTLER@PXD.COM
REYNOLDS, RODNEY, FOREMAN	FOREMAN		936-671-1056	RODNEY.REYNOLDS@PXD.COM
RIG-H&P 607, RIG PHONE	RIG PHONE	432-355-3114	432-269-4398	
KHAN, WAJAHAT, SPECIALIST	SPECIALIST		469-785-4060	WAJAHAT.KHAN@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
DWM CONSULTING LLC	2
HELMERICH & PAYNE INTL DRILLING CO	13
STALLION OILFIELD SERVICES LTD	2
GISLER BROTHERS LOGGING CO INC	2
SCHLUMBERGER TECHNOLOGY CORP	4

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