

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
Accept: 11/4/2018 **Release:**
Days Since LTI: **Days Since RI:**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/5/2018
Report #: 1
DFS: 0
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$512,444.60

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
13:30	MEETING	JSA	DAY	Skid Rig
17:45	MEETING	PRE-TOUR	NIGHT	OverHead Loads
17:45	MEETING	PRE-TOUR	NIGHT	P/U BHA

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
		ODR	11/4/2018 13:30		AFE APPROVED

Type	Subtype	Date	Note
TXRRC CALL	SPUD	11/4/2018	Rosa
TXRRC CALL	CEMENT SURF	11/4/2018	Rosa

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
110.00	3.00	100.00	258.5		512,444.60	512,444.60
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
36.7		0.00	258.5			4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments
DRILLED FEET						
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
		CONDUCTOR, 148.5ftKB	SURFACE, 1,223.7ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	0.00	0.00	0.00	0.00	0.00	

Operations Summary
 Skid Rig f/University 3-15B 102H to University 3-15C 103H.R/U Rig and PreSpud Inspection,P/U BHA. Repair,P/U BHA,Drill f/125' to 330'

Operations Next Report Period
 Drill

Operations at Report Time
 Drilling @ 330'

Remarks
 R/U Rig and PreSpud Inspection,P/U BHA.Repair,P/U BHA,Drill

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
13:30	2.5	16:00	CONST, DRL SURF	SKID	NORMAL	Skid Rig F/University 3-15B 102H to University 3-15C 103H.	148.5	148.5		
16:00	2	18:00	CONST, DRL SURF	RU MIRU	NORMAL	R/U Rig and PreSpud Inspection	148.5	148.5		
18:00	0.5	18:30	CONST, DRL SURF	PU_BHA	NORMAL	P/U 8" motor,NMDC,UBHO	148.5	148.5		
18:30	3.5	22:00	CONST, DRL SURF	RIG_RPR	NORMAL	Repair Hydraulic hose on Unit	148.5	148.5	3.50	1
22:00	3	01:00	CONST, DRL SURF	PU_BHA	NORMAL	P/U 8" motor,NMDC,UBHO	148.5	148.5		
01:00	5	06:00	CONST, DRL SURF	DRL	NORMAL	Drilling 17 1/2 surface section from 125' to 330' (205' at 41.0 fph.) 10 on bit, 90 rpm,651 gpm 800 psi, With no losses. Spud 17 1/2" Hole @ 1:00 11/5/18	148.5	353.5		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
1	3.50	No	CIRCULATING SYSTEM	HOSES		INTEGRITY SERVICES	Hydraulic Hose Busted on Unit

Bit Run	Drill Bit	Bit Type	Make					
1	17 1/2in, SF65, 12881571	PDC	HALLIBURTON					
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)					
20/20/20/20/20/20/20/20	2.76	-----	3.00					
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)					
3.00	110.00	36.7	148.5					
Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
4	DRILL PIPE	4 1/2	3.00	102.00	330.94	1,693.2	29	INTEGRITY
3	DRILL COLLAR	6	2.50	85.27	228.94	8,484.4	28	INTEGRITY
1	SUB - XO	6 1/2	2.98	2.10	143.67	312.9	19	INTEGRITY
3	DRILL COLLAR	8	2.75	80.30	141.57	11,971.1	19	INTEGRITY
1	SUB - XO	8	2.98	2.85	61.27	424.9	7	INTEGRITY
1	DRILL COLLAR - NON MAG	7 1/2	2.88	27.26	58.42	2,971.3	6	INTEGRITY
1	SUB - UBHO	7 7/8	3.25	2.80	31.16	417.4	3	INTEGRITY
1	MOTOR - TRUE SLICK	8	3.00	26.86	28.36	2,927.7	3	OTHER (PROVIDE DESCRIPTION)

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PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/5/2018
 Report #: 1
 DFS: 0
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$512,444.60

Mud Motors	SN	Bend Angle	Bend Typ	Lobe Config	# Stages	RPG	Bit To Bend

Sensors	Sensor Type	Sensor-Bit (ft)	Note

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 (°)
01:00	04:00	148.5	110.00	36.7	10	90		651	800.0	1.6	39	42	26	29	2,300.0	0.0	

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)

Mud Checks									
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)			
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)		
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	PF (mL/mL)				
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH			
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)							
Comment									

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
202.50	0.26	151.17	202.50	0.44	-0.40	0.22	0.13
229.50	0.66	182.20	229.50	0.65	-0.61	0.25	1.69

Date	Description	Job
	FINAL SURVEY	

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)
222_0_DOKM_E1_SNRS_M/TOP POROUS SAND	1,986.0		747.5		
224_0_DOKM_F1_SNRS_L/BASE POROUS SAND	1,706.0		1,027.5		
SURFACE CASING	1,560.0		1,173.5		
250_0_DWLK	1,506.0		1,227.5		
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		

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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)
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

Job Contact	Title	Office	Mobile	Email
CASTEEL, DARRELL, FOREMAN	FOREMAN	432-571-2737	432-634-2968	DARRELL.CASTEEL@PXD.COM
PLUMLEE, LARRY, LOCATION CONSTRUCTION SUPERVISOR	LOCATION CONSTRUCTION SUPERVISOR	432-571-2878	432-634-2974	LARRY.PLUMLEE@PXD.COM

Company	Count
PIONEER NATURAL RESOURCES USA INC	1
INTEGRITY SERVICES	6

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
Accept: 11/4/2018 **Release:**
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PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/6/2018
Report #: 2
DFS: 1
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$6,455.00

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	OverHead Loads
06:00	MEETING	PRE-TOUR	DAY	Forklift Operations
17:45	MEETING	PRE-TOUR	NIGHT	Drilling
17:45	MEETING	PRE-TOUR	NIGHT	Inspect all lifting Equipment.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
		ODR	11/4/2018 13:30		AFE APPROVED

Type	Subtype	Date	Note

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
635.00	18.50	64.86	988.5		6,455.00	518,899.60	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
34.3		35.14					4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments	
Backbuild	Lateral Inclination	Last Casing String		Next Casing String			
		CONDUCTOR, 148.5ftKB		SURFACE, 1,223.7ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	0.00	0.00	0.00	0.00	0.00		

Operations Summary
 Drill f/330' to 774', Repair, Drill f/774' to 965'.
 Operations Next Report Period
 Drill ,LDDP,Circulate,run Casing,RDRT,
 Operations at Report Time
 Drilling @ 965'
 Remarks
 Drill, Repair, Drill

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	14	20:00	CONST, DRL SURF	DRL	NORMAL	Drilling 17 1/2 surface section from 330' to 774' (444' at 31.71 fph.) 10 on bit, 90 rpm,651 gpm 800 psi, With no losses.	353.5	797.5		
20:00	1	21:00	CONST, DRL SURF	RIG_RPR	NORMAL	Repair Brake Bolts on Top Drive.	797.5	797.5	1.00	2
21:00	9	06:00	CONST, DRL SURF	DRL	NORMAL	Drilling 17 1/2 surface section from 774' to 965' (191' at 21.22 fph.) 10 on bit, 90 rpm,651 gpm 800 psi, With no losses.	797.5	988.5		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
2	1.00	No	ROTARY SYSTEM	TOP DRIVE		INTEGRITY SERVICES	Brake bolts Top Drive

Bit Run	Drill Bit	Bit Type	Make	
1	17 1/2in, SF65, 12881571	PDC	HALLIBURTON	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)	Depth Drilled By Bit (ft)
20/20/20/20/20/20/20/20	2.76	-----	23.50	840.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)	Depth Out (ftKB)
23.50	840.00	35.7	148.5	988.5

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
23	DRILL PIPE	4 1/2	3.00	737.00	965.94	12,234.2	40	INTEGRITY
3	DRILL COLLAR	6	2.50	85.27	228.94	8,484.4	28	INTEGRITY
1	SUB - XO	6 1/2	2.98	2.10	143.67	312.9	19	INTEGRITY
3	DRILL COLLAR	8	2.75	80.30	141.57	11,971.1	19	INTEGRITY
1	SUB - XO	8	2.98	2.85	61.27	424.9	7	INTEGRITY
1	DRILL COLLAR - NON MAG	7 1/2	2.88	27.26	58.42	2,971.3	6	INTEGRITY
1	SUB - UBHO	7 7/8	3.25	2.80	31.16	417.4	3	INTEGRITY
1	MOTOR - TRUE SLICK	8	3.00	26.86	28.36	2,927.7	3	OTHER (PROVIDE DESCRIPTION)

SN	Bend Angle	Bend Typ	Lobe Config	# Stages	RPG	Bit To Bend

Sensor Type	Sensor-Bit (ft)	Note

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	09:30	353.5	159.00	45.4	10	0		651	800.0	1.3	39	42	26	29	0.0	0.0	
09:30	15:30	512.5	285.00	47.5	10	90		651	800.0	1.6	39	42	26	29	2,300.0	0.0	

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Report #: 2
DFS: 1
AFE #: 9000912
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Daily Field Est. (Cost): \$6,455.00

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 (°)
21:00	00:00	797.5	64.00	21.3	10	0		651	800.0	2.9	39	42	26	29	0.0	0.0	
00:00	00:30	861.5	32.00	64.0	10	90		651	850.0	1.9	49	53	45	39	2,300.0	0.0	
00:30	06:00	893.5	95.00	17.3	10	90		651	850.0	3.5	49	53	45	39	0.0	0.0	
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)							
Mud Checks																	
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)											
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)										
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)												
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH											
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)															
Comment																	
Last BOP Test																	
Date	Test Type	Item Tested	Next Test Date	Com													
Leak Off and Formation Integrity Tests																	
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)															
Casing Pressure Test																	
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)											
Kick Offs & Key Depths																	
Date	Type	Top Depth (ftKB)															
	HEEL																
	TOE																
	KICK OFF																
Casing Strings																	
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)										
CONDUCTOR	148.5		20	H40	78.67												
Job Supply Amounts																	
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed									
Mud Additive Amounts																	
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons											
Pump Operations																	
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)											
Pump Checks																	
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)											
Deviation Surveys																	
Date	Description	Job															
	FINAL SURVEY																
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30															
Survey Data - All surveys for 24 hr reporting period																	
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)										
385.50	0.57	144.76	385.49	0.15	-1.73	0.37	1.89										
417.50	0.92	154.43	417.49	0.31	-2.10	0.57	1.16										
448.50	0.97	122.35	448.49	0.59	-2.46	0.90	1.69										
480.50	1.05	115.05	480.48	1.05	-2.73	1.40	0.47										
512.50	0.97	75.76	512.48	1.56	-2.79	1.93	2.14										
543.50	1.27	67.06	543.47	2.16	-2.59	2.50	1.11										
575.50	1.27	72.42	575.46	2.85	-2.34	3.16	0.37										
607.50	1.05	68.03	607.46	3.48	-2.13	3.77	0.74										
639.50	1.10	66.36	639.45	4.06	-1.89	4.32	0.18										
670.50	1.19	63.11	670.45	4.64	-1.63	4.88	0.36										
702.50	0.84	59.24	702.44	5.17	-1.36	5.38	1.11										
734.50	1.05	65.83	734.44	5.67	-1.12	5.85	0.74										
766.50	1.27	71.46	766.43	6.29	-0.89	6.46	0.77										
797.50	1.71	67.15	797.42	7.08	-0.60	7.21	1.46										
829.50	1.93	66.80	829.40	8.05	-0.20	8.14	0.69										
861.50	2.33	62.51	861.38	9.18	0.31	9.21	1.34										
893.50	2.86	76.47	893.35	10.59	0.80	10.57	2.57										
924.50	2.95	83.06	924.31	12.15	1.08	12.11	1.12										
956.50	3.03	81.92	956.26	13.82	1.30	13.77	0.31										

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1

Accept: 11/4/2018 Release:
 Days Since LTI: Days Since RI:

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/6/2018
 Report #: 2
 DFS: 1
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$6,455.00

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
CASTEEL, DARRELL, FOREMAN	FOREMAN	432-571-2737	432-634-2968	DARRELL.CASTEEL@PXD.COM
PLUMLEE, LARRY, LOCATION CONSTRUCTION SUPERVISOR	LOCATION CONSTRUCTION SUPERVISOR	432-571-2878	432-634-2974	LARRY.PLUMLEE@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	1
INTEGRITY SERVICES	6

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
 Accept: 11/4/2018 Release:
 Days Since LTI: Days Since RI:

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/7/2018
 Report #: 3
 DFS: 2
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$6,455.00

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	Cold Weather
06:00	MEETING	PRE-TOUR	DAY	Drilling
17:45	MEETING	PRE-TOUR	NIGHT	TOOH

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
		ODR	11/4/2018 13:30		AFE APPROVED

Type	Subtype	Date	Note

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
250.00	19.50	0.00	1,238.5		6,455.00	525,354.60	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
12.8	0.50	100.00	1,237.9				4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments	
Backbuild	Lateral Inclination	Last Casing String CONDUCTOR, 148.5ftKB		Next Casing String			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		

Operations Summary
 Drill f/965' to 1215', Circulate, LDDP f/1215' to 228', L/D BHA f/228' to KB,
 Operations Next Report Period
 Run Casing, Cement Casing, RDRT, To Move To Ray Reed 32.
 Operations at Report Time
 L/D BHA
 Remarks
 XXXXXX

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	19.5	01:30	CONST, DRL SURF	DRL	NORMAL	Drilling 17 1/2 surface section from 965' to 1215' (250' at 12.82 fph.) 10 on bit, 90 rpm, 651 gpm 800 psi, With no loses	988.5	1,238.5		
01:30	0.5	02:00	CONST, DRL SURF	CIRC	NORMAL	Circulate hole clean. 647 gpm 900 psi,	1,238.5	1,238.5		
02:00	2	04:00	CONST, DRL SURF	TOOH_NONEL EV	NORMAL	TOOH f/1197' to 228"	1,238.5	1,238.5		
04:00	3	07:00	CONST, DRL SURF	L/D BHA	NORMAL	L/D BHA f/228' to KB	1,238.5	1,238.5		

BHA #1, SURFACE				
Bit Run 1	Drill Bit 17 1/2in, SF65, 12881571	Bit Type PDC	Make HALLIBURTON	
Nozzles (1/32") 20/20/20/20/20/20/20/20	Bit Total Fluid Area (nozzles) (in²) 2.76	IADC Bit Dull -----TD	Hours Drilled By Bit (hr) 43.00	Depth Drilled By Bit (ft) 1,090.00
BHA Drilling Time (hr) 43.00	BHA Depth Drilled (ft) 1,090.00	BHA ROP (ft/hr) 25.3	Depth In (ftKB) 148.5	Depth Out (ftKB) 1,238.5

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
32	DRILL PIPE	4 1/2	3.00	987.00	1,215.94	16,384.2	44	INTEGRITY
3	DRILL COLLAR	6	2.50	85.27	228.94	8,484.4	28	INTEGRITY
1	SUB - XO	6 1/2	2.98	2.10	143.67	312.9	19	INTEGRITY
3	DRILL COLLAR	8	2.75	80.30	141.57	11,971.1	19	INTEGRITY
1	SUB - XO	8	2.98	2.85	61.27	424.9	7	INTEGRITY
1	DRILL COLLAR - NON MAG	7 1/2	2.88	27.26	58.42	2,971.3	6	INTEGRITY
1	SUB - UBHO	7 7/8	3.25	2.80	31.16	417.4	3	INTEGRITY
1	MOTOR - TRUE SLICK	8	3.00	26.86	28.36	2,927.7	3	OTHER (PROVIDE DESCRIPTION)

SN	Bend Angle	Bend Typ	Lobe Config	# Stages	RPG	Bit To Bend

Sensor Type	Sensor-Bit (ft)	Note

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	01:30	988.5	250.00	12.8	10	0		651	950.0	4.7	50	54	46	40	0.0	0.0	
01:30	02:00	1,238.5	0.00		0	0		651	950.0		50	54	46	40	2,300.0	0.0	

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)

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
Accept: 11/4/2018 **Release:**
Days Since LTI: **Days Since RI:**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/7/2018
Report #: 3
DFS: 2
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$6,455.00

Mud Checks							
Time	Mud Company		Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
Gel 10 sec (lb/100ft²)			Gel 10 min (lb/100ft²)		Gel 30 min (lb/100ft²)		
Comment							

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
1,020.50	2.95	91.06	1,020.17	17.20	1.37	17.15	0.41	
1,083.50	3.21	90.27	1,083.08	20.57	1.33	20.53	0.42	
1,115.50	2.95	89.91	1,115.04	22.29	1.33	22.25	0.81	
1,146.50	2.81	88.33	1,146.00	23.84	1.35	23.81	0.52	
1,178.50	2.61	90.27	1,177.96	25.36	1.37	25.32	0.69	
1,210.50	2.81	87.37	1,209.93	26.87	1.40	26.83	0.76	

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
Accept: 11/4/2018 **Release:**
Days Since LTI: **Days Since RI:**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/7/2018
Report #: 3
DFS: 2
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$6,455.00

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)
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
CASTEEL, DARRELL, FOREMAN	FOREMAN	432-571-2737	432-634-2968	DARRELL.CASTEEL@PXD.COM
PLUMLEE, LARRY, LOCATION CONSTRUCTION SUPERVISOR	LOCATION CONSTRUCTION SUPERVISOR	432-571-2878	432-634-2974	LARRY.PLUMLEE@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	1
INTEGRITY SERVICES	6

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Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
Accept: 11/4/2018 **Release: 11/7/2018**
Days Since LTI: **Days Since RI:**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/7/2018
Report #: 4
DFS: 3
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$79,063.08

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	Run Casing
11:00	MEETING	JSA	DAY	PJSM W/Cementers and Rig Crew.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
		ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			1,238.5		79,063.08	604,417.68	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			1,237.9				4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments	
Backbuild	Lateral Inclination	Last Casing String		Next Casing String			
		SURFACE, 1,223.7ftKB					
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		

Operations Summary
Run Casing f/KB to 1200', Circulate, Cement Casing, RDRT, To Move To Ray Reed 32.

Operations Next Report Period
RDRT To Move To Ray Reed 32.

Operations at Report Time
RDRT

Remarks
Run Casing, Circulate, Cement Casing, RDRT.

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.5	06:30	CONST, DRL SURF	CSG_W/O ROTATION	NORMAL	PJSM w/rig crew, Rig up Make up shoe track,	1,238.5	1,238.5		
06:30	2.5	09:00	CONST, DRL SURF	CSG_W/O ROTATION	NORMAL	Run 13 3/8" 54.54# J-55 F/44' to 1200'	1,238.5	1,238.5		
09:00	0.5	09:30	CONST, DRL SURF	CSG_W/O ROTATION	NORMAL	Make up casing hanger and landing joint, land Casing.	1,238.5	1,238.5		
09:30	1.5	11:00	CONST, DRL SURF	CIRC	NORMAL	Circulate wait on Cementers.	1,238.5	1,238.5	1.50	3
11:00	1	12:00	CONST, DRL SURF	RU_CMT	NORMAL	Hold PJSM with cementers and rig crew. Install cement head and hook up lines to head	1,238.5	1,238.5		
12:00	2	14:00	CONST, DRL SURF	CMT	NORMAL	Cement Surface Casing: Pump 20 BBL water spacer @ 4 BBL/Min. Pump 243 BBLs of lead cement @ 13 PPG, 6BBL/Min., Pump 160 BBLs of tail cement @ 13.6 PPG. 6 BBL/Min. Drop plug, displaced with 177 BBLs of fresh water @ 6 BBL/Min. Final Lift psi; 400 psi 900 Held psi on plug. Plug Down @ 14:00 11/7/18 Circulate 177 BBLs cement to surface to pit	1,238.5	1,238.5		
14:00	1	15:00	CONST, DRL SURF	RD_CMT	NORMAL	R/D Cementers, Remove landing joint Install cap on casing. Rig Released @ 15:00 11/7/18	1,238.5	1,238.5		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
3	1.50	No	CEMENT	HUMAN ERROR		PIONEER NATURAL RESOURCES USA INC	casing Job shorter then Expected

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)

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)	Gel 30 min (lb/100ft²)					
Comment							

Date	Test Type	Item Tested	Next Test Date	Com

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
 Accept: 11/4/2018 Release: 11/7/2018
 Days Since LTI: Days Since RI:

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/7/2018
 Report #: 4
 DFS: 3
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$79,063.08

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	

Cement			
Surface Casing Cement, Casing, 11/7/2018 12:00			
Cementing End Date	Wellbore	Technical Result	Comment
11/7/2018 14:00	ORIGINAL	SUCCESS	

Cement Stages													
Description	Final Top De...	Btm (ftKB)	Top Pl...	Btm Pl...	Q Pump Init (...)	Q Pump Fina...	Q Pump Avg...	P Pump Final...	P Plug Bump...	Float...	Recip?	Rotated?	
SURFACE CASING CEMENT	31.6	1,223.7	Yes	No	6	4	5	400.0	900.0	Yes	No	No	

Cement Fluids						
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)	
SPACER	23.5	23.5		0.00	8.30	
LEAD CMT	23.5	696.5	CLASS C	1.94	13.00	
TAIL CMT	696.5	1,223.5	CLASS C	1.71	13.60	
DSPLMT	23.5	1,178.5	Class	0.00	8.30	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

INTEGRITY #1
 Accept: 11/4/2018 Release: 11/7/2018
 Days Since LTI: Days Since RI:

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/7/2018
 Report #: 4
 DFS: 3
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$79,063.08

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
CASTEEL, DARRELL, FOREMAN	FOREMAN	432-571-2737	432-634-2968	DARRELL.CASTEEL@PXD.COM
PLUMLEE, LARRY, LOCATION CONSTRUCTION SUPERVISOR	LOCATION CONSTRUCTION SUPERVISOR	432-571-2878	432-634-2974	LARRY.PLUMLEE@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	1
INTEGRITY SERVICES	6

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 148.00 **Days Since RI: 148.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/16/2018
Report #: 5
DFS: 3
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$41,436.00

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	"Patterson 251 - A contractor was mixing dry mud additives at the hopper. Asa bag of soda ash was emptied a small amount went under the safetyglasses being worn and into the right eye. First aid was provided at therig which included flushing the eye between ten and fifteen minutes."
18:00	MEETING	PRE-TOUR	DAY	PTSM - Cementing, Trapped Pressure, Pinch Points and Body Placement, Nipple Down, Clean Tanks, Location Traffic, Hauling Mud. R2LB - #7 Driving Safety, Core Value - #7 Teamwork

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
0.00			1,238.5		41,436.00	645,853.68
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
			1,237.9			4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments
DRILLED FEET		0.0		0.0		Goal Met
Backbuild	Lateral Inclination	Last Casing String		Next Casing String		
		SURFACE, 1,223.7ftKB		PROPOSED INTERMEDIATE, 6,056.0ftKB		
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	0.00	0.00	0.00	0.00	0.00	

Operations Summary
R/D F/ Giddings EST 4116H
Operations Next Report Period
Move rig F/ Giddings EST 4116H T/ University 3-15C 103H
Operations at Report Time
Moving rig F/ Giddings EST 4116H T/ University 3-15C 103H
Remarks
NPT for Nov.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs.)
Surface:100%; Intermediate 0%; Curve: 0%; Lateral 0%

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
18:00	12	06:00	MOB, MOVE	RD RDMO	NORMAL	- R/D Backyard, (Mud pits, shaker skid, gas buster, choke manifold, mud pumps, hopper skid, parts house, VFD house, Gen. package, cricket leg, etc...) R/D Living quarters, meeting room, transformers, etc...	1,238.5	1,238.0		

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)

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)
Chlorides (ppm)		Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)
Gel 10 sec (lbf/100ft²)		Gel 10 min (lbf/100ft²)		Gel 30 min (lbf/100ft²)		
Comment						

Date	Test Type	Item Tested	Next Test Date	Com

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 148.00 Days Since RI: 148.00

PERMIAN - JV SOUTHERN WOLFCAMP ODR
 Job: ODR
 Report Date: 11/16/2018
 Report #: 5
 DFS: 3
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$41,436.00

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, FOREMAN	FOREMAN	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
AERION RENTAL SERVICES	2
WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
SUPERIOR ENERGY SERVICES	2
MAVERICK FIELD SERVICES LLC	2
TRIFECTA OILFIELD SERVICES LLC	4

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 149.00 **Days Since RI: 149.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/17/2018
Report #: 6
DFS: 4
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$51,082.74

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 429 Location: MIDKIFF 1 10H Case#: 38,415 Date: 11-14-18 Classification: Spill/Release Description: Chemical had been delivered to the rig the day before. During a walk around, it was noticed that one of the barrels of Versamod had a hole in it and the barrel had emptied onto the ground. Once spill was found remediation began.
06:00	MEETING	PRE-TOUR	DAY	PTSM - Cementing, Trapped Pressure, Pinch Points and Body Placement, Nipple Down, Clean Tanks, Location Traffic, Hauling Mud. R2LB - #1 Safe Work Permits , Core Value - #1 Respect
16:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man standing between the truck that was spotting house trailer and trailer net to the one being spotted, stopped the job explained to the man that he was standing in a bad spot he needed to stand to the side not in front of the truck because if the man foot slipped off the clutch it could be fatal for him he said he understood
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 429 Location: MIDKIFF 1 10H Case#: 38,415 Date: 11-14-18 Classification: Spill/Release Description: Chemical had been delivered to the rig the day before. During a walk around, it was noticed that one of the barrels of Versamod had a hole in it and the barrel had emptied onto the ground. Once spill was found remediation began.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Cementing, Trapped Pressure, Pinch Points and Body Placement, Nipple Down, Clean Tanks, Location Traffic, Hauling Mud. R2LB - #1 Safe Work Permits , Core Value - #1 Respect

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	11/16/2018	1st Well / 3 Well pad (Revised on 11/16/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			1,238.5		51,082.74	798,798.58	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			1,237.9		4,690.74	4,690.74	4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments	
DRILLED FEET		0.0		0.0		Goal Met	
Backbuild	Lateral Inclination	Last Casing String		Next Casing String			
		SURFACE, 1,223.7ftKB		PROPOSED INTERMEDIATE, 6,056.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	0.00	0.00	0.00	0.00	0.00		

Operations Summary
Move rig F/ Giddings EST 4116H T/ University 3-15C 103H Spotting Equip R/U same

Operations Next Report Period
Continue T/ Move rig F/ Giddings EST 4116H T/ University 3-15C 103H Rigging up same

Operations at Report Time
Move Rig & R/U F/ Giddings EST 4116H T/ University 3-15C 103H

Remarks
NPT for Nov.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs.)
Surface:100%; Intermediate 0%; Curve: 0%; Lateral 0%

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.5	06:30	MOB, MOVE	SFTY	NORMAL	PJSM on Rig Move	1,238.0	1,238.0		
06:30	23.5	06:00	MOB, MOVE	RU MIRU	NORMAL	Start loading out rig equip. F/ Giddings Estate 4116H - T/ University 3-15C 103H Spot & R/U Backyard on new location. (Mud pits, mud pumps, shaker skid, gas buster, hopper skid, parts house, VFD house, Gen. package, etc....) R/U Living quarters, meeting room, transformers, etc...	1,238.0	1,238.0		

Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 149.00 **Days Since RI: 149.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/17/2018
Report #: 6
DFS: 4
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$51,082.74

Mud Checks								
Time 23:15	Mud Company PIONEER DRILLING FLUIDS			Type WATER BASE	Depth (ftKB) 0.0	Density (lb/gal) 0.00	Funnel Viscosity (s/qt) 0	T Flowline (°F)
PV (cP) 0.0	YP (lb/100ft²) 0.000	Vis 3rpm 0	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)	
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
Chlorides (ppm) 0.000	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio		Electric Stab (V)	Lime (lb/bbl)	pH	
Gel 10 sec (lb/100ft²)				Gel 10 min (lb/100ft²)		Gel 30 min (lb/100ft²)		

Comment
 Begin rigging down and moving rig from XBC Giddings Estate 4116H to University 3-15C 103H

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	1,580	0	0	Rig Fuel Transferred from ' XBC GIDDINGS ESTATE 4116H'	1,580	0.0

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	200	200	0.0	200	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	1	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	1	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	1	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	1	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	1	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	330	
TRUCKING	MISCELLANEOUS	EA	2,000	2,000	0.0	2,000	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
1	BOMCO	F1600	5 1/2	12.00	0.088	500.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 149.00 Days Since RI: 149.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/17/2018
 Report #: 6
 DFS: 4
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$51,082.74

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)
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

Job Contact	Title	Office	Mobile	Email
BRINKLEY, DAVID, AREA DRILLING SUPERVISOR	AREA DRILLING SUPERVISOR	325-884-9030	432-301-2825	DAVID.BRINKLEY@PXD.COM
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, FOREMAN	FOREMAN	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
AERION RENTAL SERVICES	2
WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
SUPERIOR ENERGY SERVICES	2
MAVERICK FIELD SERVICES LLC	2
TRIFECTA OILFIELD SERVICES LLC	4

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 150.00 **Days Since RI: 150.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/18/2018
Report #: 7
DFS: 5
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$49,121.74

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - Location Traffic, Pinch Points and Body Placement, Mentoring N2I's, Overhead and Suspended Loads, LOTO. R2LB - #2 By Passing Safety Critical Equipment, Core Value - #2 Ethics and Honesty
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Completions: Sale Ranch - Two Longstar trucks were backed up parallel to each other pulling flowback water out of two frac tanks. When the outside truck was done he pulled forward and turned sharp to the left to turn around contacting his trailer about halfway down with the front of the inside truck. The truck that got hit was able to move off location but not able to drive on the road. No one was injured.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Location Traffic, Pinch Points and Body Placement, Mentoring N2I's, Overhead and Suspended Loads, LOTO. R2LB - #2 By Passing Safety Critical Equipment, Core Value - #2 Ethics and Honesty
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Completions: Sale Ranch - Two Longstar trucks were backed up parallel to each other pulling flowback water out of two frac tanks. When the outside truck was done he pulled forward and turned sharp to the left to turn around contacting his trailer about halfway down with the front of the inside truck. The truck that got hit was able to move off location but not able to drive on the road. No one was injured.
01:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed while Standing up P-Tank W/ crane RSTB was helping he was standing between load stopped the job explained to him he was in a bad place if the crane operator was to pick up the load showed him to stand to the side and use tag lines he said he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/14/2019	1st Well / 3 Well pad (Revised on 11/18/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			1,238.5		49,121.74	847,920.32	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			1,237.9		2,729.74	7,420.48	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	0.0				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		SURFACE, 1,223.7ftKB	PROPOSED INTERMEDIATE, 6,056.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	0.00	0.00	0.00	0.00	0.00		

Operations Summary
 Finished R/D on Giddings 4116 and moving equipment to University 3-15C 103H set subs, pin derrick dress out same,
Operations Next Report Period
 Raise derick & Sub, R/U remaining equip,
Operations at Report Time
 Dressing out derrick
Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 0%; Curve: 0%; Lateral 0%

Trucks 26, Cranes 4, Tamdium 2. Forklifts 2.

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.5	06:30	MOB, MOVE	SFTY	NORMAL	PJSM w/ Patterson, Rig Runner, Trifecta and PNR personel discussing rig move.	1,238.0	1,238.0		
06:30	23.5	06:00	MOB, MOVE	RU MIRU	NORMAL	Finished R/D on Giddings 4116 and moving equipment to University 3-15C 103H.All Equip off Giddings 4116H Location, R/U tanks, Set Subs, Pin derrick Dress out same, Trucks 26, Cranes 4, Tamdium 2. Forklifts 2. 100% Equipt on location 75 % Rigged up	1,238.0	1,238.0		

Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)

Daily Drilling Report

Mud Checks

Time 00:00	Mud Company PIONEER DRILLING FLUIDS	Type WATER BASE	Depth (ftKB) 1,174.0	Density (lb/gal) 0.00	Funnel Viscosity (s/qt) 0	T Flowline (°F)
PV (cP) 0.0	YP (lb/100ft²) 0.000	Vis 3rpm 0	Vis 6rpm 0	Filtrate (mL/30min) 0.0	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)
Solids (%) 0.0	Low Gravity Solids (%) 0.0	Sand (%)	MBT (lb/bbl) 0.0	Pm (mL/mL) 0.000	Pf (mL/mL)	
Chlorides (ppm) 0.000	Calcium (ppm) 0.000	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl) 0.0	pH 0.0
Gel 10 sec (lb/100ft²) 0.000	Gel 10 min (lb/100ft²) 0.000	Gel 30 min (lb/100ft²) 0.000				

Comment
 Recommended Fluids Treatment:
 No Treatment.
 Drilling Fluids Activity Last 24 hrs:
 Rig Move-Cost Report Only. Stood up and set bulk tanks. Ordered remaining sack and bulk material to be delivered tomorrow (11/18/18) evening.
 Active Fluid:
 Drilling Parameters:
 Torque:
 WOB:
 RPM:
 ROP:
 Differential Pressure:
 Deviation (angle):
 Azimuth:
 Volumes:
 Pit volume total = bbls
 Reserve fluids = bbls
 WBM Frac 1 = bbls
 WBM Frac 2 = bbls
 WBM Frac 3 = bbls
 Premix = bbls
 OBM Frac 1 = 300 bbls
 OBM Frac 2 = 275 bbls
 OBM Frac 3 = 250 bbls
 OBM Frac 4 = 250 bbls
 OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	8	8	0.0	8
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	60	60	0.0	260
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	2
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	2
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	2
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	2
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	2
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	660

Pump Operations

Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	500.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks

Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 150.00 Days Since RI: 150.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/18/2018
 Report #: 7
 DFS: 5
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$49,121.74

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, FOREMAN	FOREMAN	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
AERION RENTAL SERVICES	2
WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
SUPERIOR ENERGY SERVICES	2
MAVERICK FIELD SERVICES LLC	2
TRIFECTA OILFIELD SERVICES LLC	4

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
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 Days Since LTI: 151.00 Days Since RI: 151.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/19/2018
 Report #: 8
 DFS: 6
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$86,641.05

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 641 - While attempting to load the forklift onto a flatbed trailer, the driver backed up on the ramps and the forklift slide off due to excessive mud on the tires. Operation was stopped and assessed. There were no injuries or property damage.
06:00	MEETING	PRE-TOUR	DAY	PTSM - Mentoring N2I's, Overhead and Suspended Loads, Location Traffic, N/U BOP's, Pinch Points and Body Placement, LOTO. R2LB - #3 Confined Space Entry, Core Value - #Safety
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Mentoring N2I's, N/U BOP's, Pinch Points and Body Placement, LOTO. R2LB - #3 Confined Space Entry, Core Value - #Safety
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 641 - While attempting to load the forklift onto a flatbed trailer, the driver backed up on the ramps and the forklift slide off due to excessive mud on the tires. Operation was stopped and assessed. There were no injuries or property damage.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man working in the back yard hooking up hoses he did not have proper impact gloves on stopped him told him he was doing a good job but why didn't he have the proper impact gloves on he said he didn't have any I explained to him the impact glove would help if he was to bump his hand it would serve as a coaching got him a pair of the impact gloves he thanked me and continued with his work

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/15/2018	1st Well / 3 Well pad (Revised on 11/19/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
0.00			1,238.5		86,641.05	936,145.37
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
			1,237.9		5,842.91	13,263.39
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	0.0	0.0	0			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
		SURFACE, 1,223.7ftKB	PROPOSED INTERMEDIATE, 6,056.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas			
0.00	0.00	0.00	0.00			
Max Trip Gas	Max Drill Gas					
0.00	0.00					

Operations Summary
 Rigging up Patterson 807, C/O cactus speed head , N/U BOPE, start testing BOPE, BOPE leaking @ mud cross N/D BOPE @ Mud cross

Operations Next Report Period
 N/U BOPE @ mud cross, C/O ring gasket, N/U Test BOPE, P/U BHA TIH

Operations at Report Time
 N/D BOPE @ mud cross

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 0%; Curve: 0%; Lateral 0%

Trucks 26, Cranes 4, Tamdium 2. Forklifts 2.

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.25	06:15	MOB, MOVE	SFTY	NORMAL	PJSM w/ Patterson, Rig Runner, Trifecta and PNR personel discussing rig up.	1,238.0	1,238.0		
06:15	9.75	16:00	MOB, MOVE	RU MIRU	NORMAL	R/U Patterson 807 on University 3-15C 103H. Rig movers releaded @ 15:00 HRS, Raise derrick & subs @ 10:00 AM , run flair line, Trucks 26, Cranes 4, Tamdium 2. Forklifts 2. 100% Equipt on location 85 % Rigged up	1,238.0	1,238.0		
16:00	2.25	18:15	MOB, MOVE	NU_BOPE	NORMAL	Removed Cactus Speed Head Adapter from BOPs	1,238.0	1,238.0		
18:15	2.5	20:45	MOB, MOVE	NU_BOPE	NORMAL	N/U BOPE & choke and kill line	1,238.0	1,238.0		
20:45	2.75	23:30	MOB, MOVE	RU MIRU	NORMAL	R/U vibrator hoses t/ rig floor	1,238.0	1,238.0		
23:30	1	00:30	MOB, MOVE	TEST_BOPE	NORMAL	P/U and m/u test plug RIH set same in well head,	1,238.0	1,238.0		
00:30	1	01:30	MOB, MOVE	TEST_BOPE	NORMAL	Fill BOPE w/ water attempt to test found leak on Kill Line Flange	1,238.0	1,238.0		
01:30	1.5	03:00	MOB, MOVE	RIG_RPR	NORMAL	Replace ring gasket in Kill line, Pressured back up on BOPE leaking @ top flange on the mud cross,	1,238.0	1,238.0	1.50	4
03:00	3	06:00	MOB, MOVE	RIG_RPR	NORMAL	N/D BOPE @ top of mud Cross. Having to N/D w/ hammer wrenches ,Trifecta torque wrench broke got a wrench on the way	1,238.0	1,238.0	3.00	4

Daily Drilling Report

Interval Problems										
RIG, 1,238.0ftKB, 11/19/2018 01:30										
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment			
4		No	PRESSURE CONTROL	BOP		PATTERSON-UTI DRILLING COMPANY LLC	BOPE leaking @ top flange on mud cross			
Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
Mud Checks										
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)		
00:15	PIONEER DRILLING FLUIDS			WATER BASE	1,174.0	0.00	0			
PV (cP)	YP (lb/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)			
0.0	0.000	0	0	0.0		250.0	500.0			
Solids (%)	Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)	Pm (mL/mL)	PF (mL/mL)			
0.0	0.0				0.0	0.000				
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio		Electric Stab (V)	Lime (lb/bbl)	pH			
0.000	0.000					0.0	0.0			
Gel 10 sec (lb/100ft ²)			Gel 10 min (lb/100ft ²)			Gel 30 min (lb/100ft ²)				
0.000			0.000			0.000				
Comment										
Recommended Fluids Treatment: No Treatment. Drilling Fluids Activity Last 24 hrs: Rig Move-Cost Report Only. Rigging Up. Received sack and bulk material. Active Fluid: Drilling Parameters: Torque: WOB: RPM: ROP: Differential Pressure: Deviation (angle): Azimuth: Volumes: Pit volume total = bbls Reserve fluids = bbls WBM Frac 1 = bbls WBM Frac 2 = bbls WBM Frac 3 = bbls Premix = bbls OBM Frac 1 = 300 bbls OBM Frac 2 = 275 bbls OBM Frac 3 = 250 bbls OBM Frac 4 = 250 bbls OBM Frac 5 = 275 bbls										
Last BOP Test										
Date	Test Type	Item Tested			Next Test Date	Com				
Leak Off and Formation Integrity Tests										
Test Type		Depth (ftKB)				Dens Fluid (lb/gal)				
Casing Pressure Test										
Test Type	Test Subtype	Date	Item Tested		Failed?	Time (min)	P (psi)			
Kick Offs & Key Depths										
Date			Type			Top Depth (ftKB)				
			HEEL							
			TOE							
			KICK OFF							
Casing Strings										
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)			
CONDUCTOR	148.5		20	H40	78.67					
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC				
Job Supply Amounts										
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed		
Mud Additive Amounts										
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons				
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	12				
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	60	60	0.0	320				
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	3				
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	3				
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	3				
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	3				
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	3				
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	990				
Daily Drilling Report										

Daily Drilling Report

UNIVERSITY 3-15C 103H

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 Job: ODR
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 DFS: 6
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$86,641.05

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
TRUCKING	MISCELLANEOUS	EA	3,213	3,213	0.0	5,213

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	500.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
251_0_RSRL	1,402.0		1,331.5		
251_0_SLDO	1,323.0		1,410.5		
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
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SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
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SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

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PIONEER NATURAL RESOURCES USA INC	2
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PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
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MAVERICK FIELD SERVICES LLC	2
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Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 152.00 Days Since RI: 152.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/20/2018
Report #: 9
DFS: 7
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$72,511.30

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 638 - While drilling the intermediate 2 section. The 12" PVC discharge cutting line running from the trough to the reserve pit stopped up. When doing so 10 barrels of brine water spilled onto the ground. Operations was stopped, the line and trough cleaned out, and operations resumed.
06:00	MEETING	PRE-TOUR	DAY	PTSM - N/U and Test BOPs, Finish RU, Manlift Operation, Forklift Operation, PPE. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 638 - While drilling the intermediate 2 section. The 12" PVC discharge cutting line running from the trough to the reserve pit stopped up. When doing so 10 barrels of brine water spilled onto the ground. Operations was stopped, the line and trough cleaned out, and operations resumed.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Finish RU, Forklift Operation, PPE, P/U BHA, TIH, Drill Out. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed hand had his hands on the threads when trying to stab collar on stump M/U BHA. The job was stopped and talked to RTM about not putting his hands on the threads while making up pipe & also talked to him about watching out for pinch points. He understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/15/2018	1st Well / 3 Well pad (Revised on 11/19/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
0.00			1,238.0	19,076.0	72,511.30	1,008,656.67
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
			1,237.4	4,210.30	17,473.69	4,068,828.95
Daily Goal Description		Daily Goal - Last 24		Daily Goal - Next 24		Goal Comments
DRILLED FEET		0.0		800.0		Goal Met
Backbuild	Lateral Inclination	Last Casing String		Next Casing String		
		SURFACE, 1,223.7ftKB		PROPOSED INTERMEDIATE, 6,056.0ftKB		
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	0.00	0.00	0.00	0.00	0.00	

Operations Summary
 N/D Bope @ Mud cross C/O ring gasket N/U same, test bope ,C/O saver sub & swivel packing Directional P/U BHA

Operations Next Report Period
 TIH drill out F/E & 10' new hole , perform FIT, Drill INT hole

Operations at Report Time
 Picking up BHA

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 0%; Curve: 0%; Lateral 0%

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	5.5	11:30	MOB, MOVE	RIG_RPR	NORMAL	N/D BOPE @ top of mud Cross. Nuts were seized on and difficult to remove, Then the spool was stuck on the studs from not being removed for a long period of time. Inspected ring grooves for damage. They were ok. Installed ring gasket and re-installed Mud Cross. ? Choke and Standpipe to pumps tested off line.	1,238.0	1,238.0	5.50	4
11:30	2.5	14:00	MOB, MOVE	NU_BOPE	NORMAL	N/U BOP.	1,238.0	1,238.0	2.50	4
14:00	5.25	19:15	MOB, MOVE	TEST_BOPE	NORMAL	Test Rams and related valves to 250 / 5000 psi. Annular Preventer tested to 250 / 3500 psi. & pull test plug	1,238.0	1,238.0		
19:15	1	20:15	MOB, MOVE	RIG_RPR	NORMAL	Attempt T/ C/O saver sub on Top drive, Top drive Rotating on it own repair same	1,238.0	1,238.0	1.00	5
20:15	0.25	20:30	MOB, MOVE	SFTY	NORMAL	PJSM on C/O swivel packing & saver sub	1,238.0	1,238.0		
20:30	2.75	23:15	INT, PRE DRL	RIG_RPR	NORMAL	C/O swivel packing & saver sub	1,238.0	1,238.0		
23:15	1	00:15	INT, PRE DRL	TEST_BOPE	NORMAL	Pressure test Top drive and kelly hose back to stand pipe	1,238.0	1,238.0		
00:15	0.5	00:45	INT, PRE DRL	RU MIRU	NORMAL	R/U drill floor and handling tools	1,238.0	1,238.0		
00:45	0.5	01:15	INT, PRE DRL	WRBSH	NORMAL	Installed wear bushing and closed casing valve.	1,238.0	1,238.0		
01:15	1.25	02:30	INT, PRE DRL	SFTY	NORMAL	Pre spud check list, mud pumps would not cut on trouble shooting same	1,238.0	1,238.0		
02:30	0.25	02:45	INT, PRE DRL	RU MIRU	NORMAL	Recalibrate Block Hight	1,238.0	1,238.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
02:45	0.25	03:00	INT, PRE DRL	SFTY	NORMAL	PJSM on P/U BHA	1,238.0	1,238.0		
03:00	3	06:00	INT, PRE DRL	PU_DIR	NORMAL	P/U Directional BHA scribe & load MWD M/U BIT (Note)While Trouble shooting Mud Pumps Pumps still down	1,238.0	1,238.0		

Interval Problems

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
4	12.50	No	PRESSURE CONTROL	BOP		PATTERSON-UTI DRILLING COMPANY LLC	BOPE leaking @ top flange on mud cross

RIG, 1,238.0ftKB, 11/19/2018 19:15

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
5	1.00	No	ROTARY SYSTEM	TOP DRIVE		PATTERSON-UTI DRILLING COMPANY LLC	Top drive turning on it own repair same

RIG, 1,238.0ftKB, 11/19/2018 20:15

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
6	2.25	Yes	DRILL STRING	SUBS		PATTERSON-UTI DRILLING COMPANY LLC	C/O swivel Packing and saver sub

Drill Strings

BHA #2 , INTERMEDIATE

Bit Run	Drill Bit	Bit Type	Make
2	12 1/4in, SPL616, 43786	PDC	ULTERRA
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
11/11/11/11/11/10/10/10/10	0.77	-----	
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
			1,238.0
			Depth Out (ftKB)
			1,238.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
9	DRILL PIPE	5	3.00	306.87	1,238.00	5,984.0	19	
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
03:00	06:00	1,238.0	0.00		0	0	0.0	0	0.0	0.0	150	150	150	150	0.0	0.0	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)
8.40						0.0	0.0			

Daily Drilling Report

Mud Checks

Time 00:15	Mud Company PIONEER DRILLING FLUIDS	Type WATER BASE	Depth (ftKB) 1,238.0	Density (lb/gal) 8.40	Funnel Viscosity (s/qt) 27	T Flowline (°F)	
PV (cP) 0.0	YP (lb/100ft²) 0.000	Vis 3rpm 0	Vis 6rpm 0	Filtrate (mL/30min) 0.0	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 0.0	Low Gravity Solids (%) 0.0	Sand (%)	MBT (lb/bbl) 0.0	Pm (mL/mL) 0.000	Pf (mL/mL)		
Chlorides (ppm) 0.000	Calcium (ppm) 0.000	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl) 0.0	pH 0.0	
Gel 10 sec (lb/100ft²) 0.000	Gel 10 min (lb/100ft²) 0.000	Gel 30 min (lb/100ft²) 0.000					

Comment
Recommended Fluids Treatment:
Once Rigged up and drilling allow MW to increase to 10.0ppg through salt beds. Maintain with reserve pit water/fresh water additions. Pump Soap Sticks/SAPP Sticks and PHPA, also Mix 5-10 gallons Drilling Detergent every connection to 3200-3500 ft. Pump 30-40 bbls High Vis sweeps (50-70 sec/qt) every other connection or as directed.

Drilling Fluids Activity Last 24 hrs:

Continue rigging up. Working on pumps and getting all lines connected from frac tanks to pits. Once completed will start mixing and filling frac tanks with Lig/PAC/Gel mud. Testing Desander, Desilter, and Degasser to assess operational performance and identify any repairs/parts needed at time of report.

Active Fluid: Water

Drilling Parameters:

Torque:

WOB:

RPM:

ROP:

Differential Pressure:

Deviation (angle):

Azimuth:

Volumes:

Pit volume total = 455 bbls

Reserve fluids = bbls

WBM Frac 1 = bbls

WBM Frac 2 = bbls

WBM Frac 3 = bbls

Premix = bbls

OBM Frac 1 = 300 bbls

OBM Frac 2 = 275 bbls

OBM Frac 3 = 250 bbls

OBM Frac 4 = 250 bbls

OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	7,225	992	0		7,813	992.0
DIESEL	MUD	GAL	0	0	0	Mud diesel	0	0.0
WATER	FRESH	BBL	0	0	0	water meter bbl15.46 bbl	0	0.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	16
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	4
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	4
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	4
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	4
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	4
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	1,320
TRUCKING	MISCELLANEOUS	EA	1,650	1,650	0.0	6,863

Pump Operations

Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 152.00 Days Since RI: 152.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/20/2018
 Report #: 9
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 AFE #: 9000912
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 Daily Field Est. (Cost): \$72,511.30

Pump Operations						
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1	BOMCO	F1600	5 1/2	12.00	0.088	500.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
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SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
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SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

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WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
SUPERIOR ENERGY SERVICES	2
MAVERICK FIELD SERVICES LLC	2
TRIFECTA OILFIELD SERVICES LLC	4

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 153.00 **Days Since RI: 153.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/21/2018
Report #: 10
DFS: 8
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$101,895.28

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - P/U BHA, Pinch Points and Body Placement, PPE, Buffer Zones, P/U Drill Pipe. R2LB - #5 Fall or Elevated Work Safety, Core Value - #5 Entrepreneurship
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 487 - While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 487 - While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Pinch Points and Body Placement, PPE, Buffer Zones, P/U Drill Pipe w/ Single Latch Elevators in Mouse Hole. R2LB - #5 Fall or Elevated Work Safety, Core Value - #5 Entrepreneurship
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man lifting hoses on the rig floor he was by him self, stop him told him he was doing a good job but the hoses was too heavy for him to be handling by his self he could strain him self he agreed and got help

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/15/2018	1st Well / 3 Well pad (Revised on 11/19/18)

Daily Operations							
Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
353.00	6.00	91.67	1,587.0	19,076.0	101,895.28	1,110,551.95	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
58.8		8.33	1,585.9		6,622.98	24,096.67	4,068,828.95
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 800.0		Daily Goal - Next 24 1,000.0		Goal Comments Goal not met due to NPT on mud pumps	
Backbuild	Lateral Inclination	Last Casing String SURFACE, 1,223.7ftKB		Next Casing String PROPOSED INTERMEDIATE, 6,056.0ftKB			
Avg Connection Gas 0.00	Avg Trip Gas 0.00	Avg Background Gas 8.00	Max Connection Gas 0.00	Max Trip Gas 0.00	Max Drill Gas 9.00		

Operations Summary
P/U and GIH w/ BHA, fix Mud pump, Drill F/E & 10' new hole Performed FIT, Drill INT Hole F/ 1244' T/ 1587'

Operations Next Report Period
Drill INT Hole F/ 1587' t/ 2587'

Operations at Report Time
Drill INT Hole @ 1587'

Remarks
NPT for Nov.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs.)
Surface:100%; Intermediate 7%; Curve: 0%; Lateral 0%

Last Survey : MD1493 , inc 3.33, az 65.16,

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	5	11:00	INT, PRE DRL	PU_BHA	NORMAL	P/U 9 - 8" drill collars, 17 HWDP and Jars t- 931'	1,238.0	1,238.0		
11:00	0.25	11:15	INT, PRE DRL	PU_DP	NORMAL	Strap drill pipe	1,238.0	1,238.0		
11:15	0.5	11:45	INT, PRE DRL	PU_DP	NORMAL	P/U drill pipe f- 931' t- 1118' ? Just above float collar	1,238.0	1,238.0		
11:45	0.5	12:15	INT, PRE DRL	RIG_SVC	NORMAL	Serviced rig	1,238.0	1,238.0		
12:15	7.5	19:45	INT, PRE DRL	RIG_RPR	NORMAL	Troubleshoot and repair control issues with mud pumps, Function Both pumps (ok)	1,238.0	1,238.0	7.50	7
19:45	1.25	21:00	INT, PRE DRL	3RD_PTY	NORMAL	Pason depth Not tracking, Pason hand fix same	1,238.0	1,238.0	1.25	8
21:00	2	23:00	INT, PRE DRL	DRL_OUT	NORMAL	Drill Float Equip F/ 1179' t/ 1234' & 10' new hole t/ 1244' WOB: 10, RPM: 30, SPP: 750, DIFF: 150, GPM: 450, TQ: 2-4, 100% Returns.	1,238.0	1,244.0		
23:00	0.5	23:30	INT, PRE DRL	CIRC	NORMAL	Circ B/U Prior T/ FIT	1,244.0	1,244.0		
23:30	0.5	00:00	INT, PRE DRL	FIT	NORMAL	FIT to 12.5 ppg EMW W/ test MW 8.4 ppg & 265 psi Good Test	1,244.0	1,244.0		
00:00	6	06:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 1244' T/ 1587' (343'@ 57' fph) 100% Returns. WOB:20-25, RPM:70; SPP:1100, DIFF: 300, GPM:450, TQ: 4-6k.	1,244.0	1,587.0		

Interval Problems						
RIG, 1,238.0ftKB, 11/20/2018 12:15						
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party
7	7.50	No	CIRCULATING SYSTEM	MUD PUMPS		PATTERSON-UTI DRILLING COMPANY LLC
						Comment Mud pumps will not run showing faults

Daily Drilling Report

Interval Problems

3RD PARTY, 1,238.0ftKB, 11/20/2018 19:45

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
8	1.25	No	RECORDING DEVICES	COMMUNICA TION		PASON SYSTEMS USA CORP	Pason no tracking depth data encoder was out of callibration Pason guy fixed it

Drill Strings

BHA #2 , INTERMEDIATE

Bit Run 2	Drill Bit 12 1/4in, SPL616, 43786	Bit Type PDC	Make ULTERRA
Nozzles (1/32") 11/11/11/11/11/10/10/10/10	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 6.00
BHA Drilling Time (hr) 6.00	BHA Depth Drilled (ft) 353.00	BHA ROP (ft/hr) 58.8	Depth In (ftKB) 1,234.0
			Depth Out (ftKB) 1,587.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
20	DRILL PIPE	5	3.00	655.87	1,587.00	12,789.5	26	
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defin Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
00:00	03:30	1,234.0	165.00	47.1	19	70	300.0	450	1,100.0	98.0	125	127	125	125	4,500.0	2,000.0	0
03:30	04:00	1,399.0	20.00	40.0	18	0	175.0	450	1,050.0	50.0	125	127	125	125	0.0	0.0	30
04:00	06:00	1,419.0	168.00	84.0	20	70	300.0	450	1,100.0	120.0	125	127	125	125	4,500.0	2,000.0	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)
8.40	8.49	70.1	0.6	187.3	266.9	12.6	138.0	13.20	32.33	155.25

Daily Drilling Report

Mud Checks

Time 00:15	Mud Company PIONEER DRILLING FLUIDS	Type WATER BASE	Depth (ftKB) 1,244.0	Density (lb/gal) 8.40	Funnel Viscosity (s/qt) 27	T Flowline (°F)	
PV (cP) 0.0	YP (lb/100ft²) 0.000	Vis 3rpm 0	Vis 6rpm 0	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 0.0	Low Gravity Solids (%) 0.0	Sand (%) 0.0	MBT (lb/bbl) 0.0	Pm (mL/mL) 0.000	Pf (mL/mL)		
Chlorides (ppm) 600.000	Calcium (ppm) 400.000	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl) 0.0	pH 8.7	
Gel 10 sec (lb/100ft²) 0.000	Gel 10 min (lb/100ft²) 0.000	Gel 30 min (lb/100ft²) 0.000					

Comment
 Recommended Fluids Treatment:
 Allow MW to increase to 10.0ppg through salt beds. Maintain with reserve pit water/fresh water additions. Pump Soap Sticks/SAPP Sticks and PHPA, also Mix 5-10 gallons Drilling Detergent every connection to 3200-3500 ft. Pump 30-40 bbls High Vis sweeps (50-70 sec/qt) every other connection or as directed.
 Drilling Fluids Activity Last 24 hrs:
 Filled frac tanks and pre mix with 1650 bbls of Lig/PAC/Gel mud.
 Active Fluid: WBM
 Drilling Parameters:
 Torque: 3 ft/lbs
 WOB: 18 kLBS
 RPM: 70 rpm
 ROP: 87 ft/hr
 Differential Pressure: 179 psi
 Deviation (angle):
 Azimuth:
 Volumes:
 Pit volume total = 569 bbls
 Reserve fluids = 1650 bbls
 WBM Frac 1 = 450 bbls
 WBM Frac 2 = 450 bbls
 WBM Frac 3 = 450 bbls
 Premix = 300 bbls
 OBM Frac 1 = 300 bbls
 OBM Frac 2 = 275 bbls
 OBM Frac 3 = 250 bbls
 OBM Frac 4 = 250 bbls
 OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
PLANNED FIT	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.1	13 3/8	J55	54.50	BTC	823.6

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	4,883	493	0	Rig Diesel	12,203	1,485.0
DIESEL	FUEL	GAL	2,594	0	0	Rig Reserve small frac tank	2,594	0.0
WATER	FRESH	BBL	7,600	7,600	0	water meter bbl 68776	0	7,600.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	20
DEFOAMER	DEFOAMER	CAN		13	51.0	13
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	5
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	5
LIGNITE	DISPERSANTS/T HINNER	SACK	200	150	200.0	150
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	5
PAC LV	FLUID LOSS ADDITIVES	SACK		18	102.0	18
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	5
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	5
SODA ASH	ALKALINITY CONTROL	SACK		10	190.0	10
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	1,650

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 153.00 Days Since RI: 153.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/21/2018
 Report #: 10
 DFS: 8
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$101,895.28

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
TRUCKING	MISCELLANEOUS	EA	577	577	0.0	7,440

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	500.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
1,243.50	2.68	87.76	1,242.89	-2.07	1.47	28.41	0.40
1,279.00	2.55	90.84	1,278.35	-2.13	1.49	30.03	0.54
1,341.00	2.52	90.55	1,340.29	-2.15	1.46	32.77	0.05
1,435.00	3.33	65.16	1,434.17	-3.37	2.59	37.32	1.60

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)
255_0_TNSL_TOP_DOL	586.0		2,147.5		
256_0_YATES	515.0		2,218.5		
257_0_SEVEN RIVERS	225.0		2,508.5		
258_0_QUEEN	-445.0		3,178.5		
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, FOREMAN	FOREMAN	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	4

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 154.00 Days Since RI: 154.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/22/2018
Report #: 11
DFS: 9
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$142,553.39

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 429 - Contractor was backing trailer to frac tank to unload fresh water for camp. Contractor had a spotter and proceeded to back up. As contractor was backing up the trailer came into contact with a bumper of a personal vehicle of another contractor. Driver stopped and reported incident immediately.
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #6 Excavation & Tranching, Core Value - #6 Communication
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #6 Excavation & Tranching, Core Value - #6 Communication
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 429 - Contractor was backing trailer to frac tank to unload fresh water for camp. Contractor had a spotter and proceeded to back up. As contractor was backing up the trailer came into contact with a bumper of a personal vehicle of another contractor. Driver stopped and reported incident immediately.
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed Man helping get pipe on the pipe rack with the forklift, he was between the pipe on the forklift and the cat walk, stopped the job told him he was doing a good job but why was he in between the pipe and the cat walk he was pinning a arm on the cat walk, explained to him not to get between any loads being transfer he could get smashed he under stood had the forklift back up away then finished pinning the arm.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
1,872.00	23.25	83.15	3,459.0	19,076.0	142,553.39	1,314,017.34
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
80.5	0.45	16.85	3,409.5	12,520.18	36,616.85	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	1,000.0	1,500.0	Goal Met			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
		SURFACE, 1,223.7ftKB	PROPOSED INTERMEDIATE, 6,056.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas			
9.00	0.00	9.00	9.00			
Max Trip Gas	Max Drill Gas					
0.00	10.00					

Operations Summary
 Drill INT section F/ 1587' T/ 3459'
 Operations Next Report Period
 Drill INT Hole F/ 3459' T/ 4959'
 Operations at Report Time
 Drill INT Hole @ 3459'

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 46%; Curve: 0%; Lateral 0%

Last Survey : MD: 3365 , inc 11.84, az 65.55, Right 6.41 Above 40

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	15	21:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 1587' T/ 2804' (1217' @ 81 fph) 100% Returns. WOB:20-25, RPM:70; SPP:1100, DIFF: 300, GPM:450, TQ: 4-6k.	1,587.0	2,804.0		
21:00	0.5	21:30	INT, DRL	RIG_SVC	NORMAL	Service Rig	2,804.0	2,804.0		
21:30	3	00:30	INT, DRL	DRL	NORMAL	Drill INT section F/ 2804' T/ 3086' (282' @ 94 fph) 100% Returns. WOB:20-25, RPM:70; SPP:1100, DIFF: 300, GPM:450, TQ: 4-6k.	2,804.0	3,086.0		
00:30	0.25	00:45	INT, DRL	RIG_RPR	NORMAL	C/O swab in #1 mud pump	3,086.0	3,086.0		
00:45	5.25	06:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 3086' T/ 3459' (373' @ 71 fph) 100% Returns. WOB:20-25, RPM:70; SPP:1100, DIFF: 300, GPM:450, TQ: 4-6k.	3,086.0	3,459.0		

Ref #	Dur (N...)	Ex... Ye	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
9	0.25	s	CIRCULATING SYSTEM	MUD PUMPS		PATTERSON-UTI DRILLING COMPANY LLC	C/O swab in # 1 mud pump

Bit Run	Drill Bit	Bit Type	Make
2	12 1/4in, SPL616, 43786	PDC	ULTERRA
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
11/11/11/11/11/10/10/10/10	0.77	-----	29.25
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
29.25	2,225.00	76.1	1,234.0
			Depth Out (ftKB)
			3,459.0

Daily Drilling Report

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
80	DRILL PIPE	5	3.00	2,527.87	3,459.00	49,293.5	63	
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defin Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	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	06:15	1,587.0	10.00	40.0	10	70	450.0	500	1,475.0	200.0	128	130	127	128	3,000.0	1,000.0	0
06:15	06:45	1,597.0	15.00	30.0	15	0	200.0	500	1,200.0	65.0	130	130	130	130	0.0	1,000.0	20
06:45	08:00	1,612.0	78.00	62.4	10	70	350.0	500	1,300.0	140.0	130	130	130	130	6,000.0	1,000.0	0
08:00	08:15	1,690.0	20.00	80.0	15	0	350.0	500	1,450.0	80.0	130	130	130	130	0.0	1,000.0	45
08:15	09:15	1,710.0	74.00	74.0	10	70	325.0	525	1,425.0	130.0	130	130	130	130	5,000.0	1,000.0	0
09:15	09:45	1,784.0	20.00	40.0	15	0	250.0	550	1,450.0	70.0	130	130	130	130	0.0	1,000.0	45
09:45	10:45	1,804.0	73.00	73.0	10	70	400.0	575	1,600.0	120.0	130	130	130	130	4,000.0	1,000.0	0
10:45	11:15	1,877.0	20.00	40.0	15	0	250.0	575	1,850.0	70.0	130	130	130	130	0.0	2,000.0	45
11:15	12:15	1,897.0	74.00	74.0	15	70	400.0	705	2,000.0	200.0	130	130	130	130	8,000.0	2,000.0	0
12:15	12:45	1,971.0	20.00	40.0	35	0	375.0	705	2,050.0	65.0	135	140	130	135	0.0	2,000.0	20
12:45	14:00	1,991.0	158.00	126.4	15	70	450.0	705	2,075.0	250.0	135	140	130	135	9,000.0	2,000.0	0
14:00	15:15	2,149.0	103.00	82.4	25	80	450.0	705	2,075.0	250.0	135	140	130	135	8,000.0	2,000.0	0
15:15	15:45	2,252.0	20.00	40.0	20	0	350.0	705	2,100.0	80.0	135	140	130	135	0.0	3,000.0	225
15:45	21:00	2,272.0	532.00	101.3	25	80	400.0	705	2,150.0	190.0	135	140	130	135	9,000.0	3,000.0	0
21:00	21:45	2,804.0	0.00		0	0	0.0	705	1,850.0	0.0	135	140	130	135	0.0	0.0	0
21:45	23:15	2,804.0	197.00	131.3	32	80	425.0	705	2,300.0	145.0	153	162	137	153	10,000.0	4,000.0	0
23:15	00:00	3,001.0	25.00	33.3	18	0	320.0	705	2,175.0	50.0	153	162	137	153	0.0	0.0	180
00:00	03:25	3,026.0	256.00	74.9	32	80	425.0	705	2,300.0	125.0	153	162	137	153	9,500.0	4,000.0	0
03:25	03:50	3,282.0	12.00	28.8	18	0	225.0	705	2,150.0	35.0	153	165	140	153	0.0	0.0	270
03:50	06:00	3,294.0	165.00	76.2	30	70	375.0	705	2,275.0	135.0	153	165	140	153	9,500.0	4,500.0	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)
10.30	10.35	330.4	2.8	293.4	803.4	19.7	216.2	29.57	258.66	156.36

Daily Drilling Report

Mud Checks

Time 00:00	Mud Company PIONEER DRILLING FLUIDS	Type WATER BASE	Depth (ftKB) 2,992.0	Density (lb/gal) 10.30	Funnel Viscosity (s/qt) 39	T Flowline (°F) 87.0
PV (cP) 3.0	YP (lb/100ft²) 9.000	Vis 3rpm 4	Vis 6rpm 5	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0
Solids (%) 13.0	Low Gravity Solids (%) 5.0	Sand (%) 0.0	MBT (lb/bbl) 8.8	Pm (mL/mL) 1.800	Pf (mL/mL)	HTHP Pressure (psi) 500.0
Chlorides (ppm) 151,000.000	Calcium (ppm) 1,280.000	CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)	Lime (lb/bbl) 0.3	pH 11.5
Gel 10 sec (lb/100ft²) 5.000	Gel 10 min (lb/100ft²) 7.000	Gel 30 min (lb/100ft²) 7.000				

Comment
Recommended Fluids Treatment:
Maintain MW between 9.5-10.2ppg. Continue additions of lignite mud from frac tanks to maintain mud properties as per mud program. Use fresh water for dilution to maintain mud weight. Make additions of Soda Ash for hardness less than 500mg/l. Continue caustic additions to maintain pH above 10. Keep WBM frac tanks full at all times.

Drilling Fluids Activity Last 24 hrs:
Keeping WBM frac tanks full at all times with Lig/PAC/Gel mud. Pumped high-vis sweep @2842'. Treating system with caustic for pH control; soda ash for hardness. Additional product usage for building Lig/Pac/Gel mud and high-vis gel slurry.

Active Fluid: WBM

Drilling Parameters:

Torque: 10 ft/lbs

WOB: 20 kLBS

RPM: 80 rpm

ROP: 204 ft/hr

Differential Pressure: 416 psi

Deviation (angle): 13.97

Azimuth: 67.31

Volumes:

Pit volume total = 472 bbls

Reserve fluids = 1650 bbls

WBM Frac 1 = 450 bbls

WBM Frac 2 = 450 bbls

WBM Frac 3 = 450 bbls

Premix = 300 bbls

OBM Frac 1 = 300 bbls

OBM Frac 2 = 275 bbls

OBM Frac 3 = 250 bbls

OBM Frac 4 = 250 bbls

OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
PLANNED FIT	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	1,208	2,304		Rig Diesel	11,107	3,789.0
DIESEL	FUEL	GAL	5,829	0	0	Rig Reserve small frac tank	8,423	0.0
WATER	FRESH	BBL	7,600	7,600	0	72548 meter reading	57,348	15,200.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO GEL (BULK)	VISCOSIFIER	TON	17	17	38.0	17
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	24
CAUSTIC SODA	ALKALINITY CONTROL	SACK	60	30	330.0	30
DEFOAMER	DEFOAMER	CAN		2	49.0	15
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	1,562	1,562	0.0	1,882
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	6
ENGINEERING SERVICE	MISCELLANEOUS	DAY	2	2	0.0	7
LIGNITE	DISPERSANTS/T HINNER	SACK	300	42	458.0	192
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	6
PAC LV	FLUID LOSS ADDITIVES	SACK	40	12	130.0	30
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	6

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 154.00 Days Since RI: 154.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/22/2018
 Report #: 11
 DFS: 9
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$142,553.39

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	6
SODA ASH	ALKALINITY CONTROL	SACK		17	173.0	27
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	1,980
TRUCKING	MISCELLANEOUS	EA	1,306	1,306	0.0	8,746
XANTHAM GUM	VISCOSIFIER	SACK	240	3	237.0	3

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	500.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	3,290.0	04:00	123.0	20	70	95
1	3,290.0	04:00	135.0	30	106	95
1	3,290.0	04:00	162.0	40	141	95
2	3,290.0	04:00	158.0	20	70	95
2	3,290.0	04:00	103.0	30	106	95
2	3,290.0	04:00	124.0	40	141	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
1,622.00	6.56	59.90	1,620.35	-11.92	10.76	54.69	1.63
1,716.00	8.28	61.31	1,713.56	-18.08	16.71	65.28	1.84
1,809.00	10.08	65.37	1,805.36	-24.97	23.31	78.55	2.06
1,903.00	12.12	69.36	1,897.60	-32.23	30.22	95.27	2.32
1,997.00	14.29	71.50	1,989.11	-39.81	37.38	115.50	2.37
2,091.00	15.37	72.05	2,079.98	-47.81	44.90	138.36	1.16
2,184.00	15.74	71.35	2,169.57	-56.14	52.73	162.03	0.45
2,278.00	14.37	67.33	2,260.34	-65.20	61.31	184.88	1.83
2,371.00	14.21	66.16	2,350.47	-74.70	70.37	205.97	0.35
2,465.00	14.10	66.57	2,441.61	-84.36	79.59	227.03	0.16
2,559.00	13.97	67.19	2,532.81	-93.75	88.54	247.99	0.21
2,652.00	13.97	67.31	2,623.06	-102.87	97.22	268.70	0.03
2,746.00	14.17	67.45	2,714.24	-112.10	106.01	289.79	0.22
2,839.00	14.08	67.33	2,804.42	-121.27	114.73	310.74	0.10
2,933.00	14.04	67.72	2,895.61	-130.44	123.46	331.84	0.11
3,027.00	12.66	68.08	2,987.07	-139.04	131.63	351.95	1.47
3,120.00	12.27	69.71	3,077.87	-146.66	138.86	370.68	0.56
3,214.00	12.01	69.67	3,169.77	-153.91	145.73	389.22	0.28
3,307.00	11.84	65.55	3,260.77	-161.60	153.04	406.97	0.93

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)
259_0_GRAYBURG	-1,156.0		3,889.5		
261_0_SAN ANDRES	-1,357.0		4,090.5		
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 154.00 Days Since RI: 154.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/22/2018
 Report #: 11
 DFS: 9
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$142,553.39

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 155.00 **Days Since RI: 155.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/23/2018
Report #: 12
DFS: 10
APE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$85,123.27

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 638 Location: Cunningham 37G 7H Case#: 38454 Classification: Spill/Release Description: While drilling the intermediate 2 section. The 12" PVC discharge cutting line running from the trough to the reserve pit stopped up. When doing so 10 barrels of brine water spilled onto the ground. Operations was stopped, the line and trough cleaned out, and operations resumed.
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #7 Driving Safety , Core Value - #7 Teamwork
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 638 Location: Cunningham 37G 7H Case#: 38454 Classification: Spill/Release Description: While drilling the intermediate 2 section. The 12" PVC discharge cutting line running from the trough to the reserve pit stopped up. When doing so 10 barrels of brine water spilled onto the ground. Operations was stopped, the line and trough cleaned out, and operations resumed.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #7 Driving Safety , Core Value - #7 Teamwork
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man coming down the stairs not holding the rail stopped the man explained to him if he slipped he would hurt him self, told him to use the trailing hand technique he said he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
1,541.00	22.25	76.78	5,000.0	19,076.0	85,123.27	1,399,140.61	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
69.3	1.75	23.22	4,915.1	11,200.27	47,817.12	4,068,828.95	
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	1,500.0	1,500.0	Goal Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		SURFACE, 1,223.7ftKB	INTERMEDIATE, 8,410.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
10.00	0.00	13.00	13.00	0.00	15.00		

Operations Summary
 Drill INT section F/ 3459' T/ 5000'
Operations Next Report Period
 Drill T/ 6000' ~ Clearfork w/ mud WT Of 9.2 PPG Check for Flow if no flow cont T/ Drill INT Hole F/ 5000' T/ 6500' if there is flow SWI check press discuss w/ superintendent & Engineer plan forward

Operations at Report Time
 Drill Int Hole @ 5000'

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 52%; Curve: 0%; Lateral 0%

Last Survey : MD: 4957' , inc 10.86 , az 65.79, Right 1.59 Above 46.11

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	5.75	11:45	INT, DRL	DRL	NORMAL	Drill INT section F/ 3459' T/ 3899' (440' @ 76 fph) 100% Returns. WOB 25-30, RPM:70; SPP:2300, DIFF: 300, GPM:700, TQ: 8-10k.	3,459.0	3,899.0		
11:45	1.75	13:30	INT, DRL	RIG_RPR	NORMAL	Circ with #2 Mud pump while change out wear plate, Liner gasket, & swab on #1 mud pump (#3 pod)	3,899.0	3,899.0		
13:30	16.5	06:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 3899' T/ 5000' (1101' @ 66.7' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2300, DIFF: 300, GPM:700, TQ: 8-10k.	3,899.0	5,000.0		

Interval Problems
 RIG, 3,899.0ftKB, 11/22/2018 11:45

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript..	Est Cost OR (Cost)	Accountable Party	Comment
10	1.75	Ye	CIRCULATIN G SYSTEM	MUD PUMPS	5,796.00	PATTERSON-UTI DRILLING COMPANY LLC	Circ with #2 Mud pump while change out wear plate, Liner gasket, & swab on #1 mud pump (#3 pod)

Drill Strings
 BHA #2, INTERMEDIATE

Bit Run	Drill Bit	Bit Type	Make
2	12 1/4in, SPL616, 43786	PDC	ULTERRA
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
11/11/11/11/11/10/10/10/10	0.77	-----	51.50
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
51.50	3,766.00	73.1	1,234.0
			Depth Out (ftKB)
			5,000.0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 155.00 Days Since RI: 155.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/23/2018
 Report #: 12
 DFS: 10
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$85,123.27

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
129	DRILL PIPE	5	3.00	4,068.87	5,000.00	79,343.0	93	
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	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	08:15	3,459.0	197.00	87.6	32	75	350.0	705	2,350.0	100.0	162	176	148	162	11,000.0	4,500.0	0
08:15	09:15	3,656.0	15.00	15.0	25	0	175.0	705	2,200.0	30.0	162	176	148	162	0.0	4,500.0	360
09:15	11:45	3,671.0	228.00	91.2	32	75	350.0	705	2,350.0	100.0	162	176	148	162	11,000.0	4,500.0	0
11:45	13:30	3,899.0	0.00		0	0	0.0	705	2,025.0	0.0	162	176	148	162	0.0	4,500.0	0
13:30	14:15	3,899.0	38.00	50.7	32	75	350.0	705	2,350.0	100.0	165	190	155	165	11,000.0	4,500.0	0
14:15	15:30	3,937.0	20.00	16.0	30	0	150.0	705	2,150.0	20.0	162	176	148	162	0.0	4,500.0	20
15:30	22:30	3,957.0	532.00	76.0	32	70	350.0	705	2,500.0	120.0	162	176	148	162	17,000.0	4,500.0	0
22:30	00:35	4,489.0	197.00	94.6	32	70	450.0	705	2,450.0	85.0	180	200	167	180	14,000.0	4,500.0	0
00:35	02:00	4,686.0	40.00	28.2	15	0	250.0	705	2,200.0	35.0	180	200	167	180	0.0	0.0	360
02:00	04:30	4,726.0	231.00	92.4	28	70	450.0	705	2,475.0	140.0	180	200	167	180	15,000.0	5,000.0	0
04:30	06:00	4,957.0	43.00	28.7	15	0	250.0	705	2,200.0	35.0	180	200	167	180	0.0	0.0	360

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)
10.10	10.22	324.0	2.7	293.4	787.8	19.7	216.2	43.04	445.87	156.36

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 155.00 **Days Since RI: 155.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/23/2018
Report #: 12
DFS: 10
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$85,123.27

Mud Checks

Time 00:00	Mud Company PIONEER DRILLING FLUIDS	Type WATER BASE	Depth (ftKB) 4,459.0	Density (lb/gal) 10.10	Funnel Viscosity (s/qt) 41	T Flowline (°F) 95.0	
PV (cP) 3.0	YP (lb/100ft²) 14.000	Vis 3rpm 7	Vis 6rpm 8	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 10.0	Low Gravity Solids (%) 4.0	Sand (%) 0.0	MBT (lb/bbl) 12.5	Pm (mL/mL) 2.800	Pf (mL/mL)		
Chlorides (ppm) 102,000.000	Calcium (ppm) 1,160.000	CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)	Lime (lb/bbl) 0.4	pH 11.4	
Gel 10 sec (lb/100ft²) 6.000	Gel 10 min (lb/100ft²) 7.000	Gel 30 min (lb/100ft²) 7.000					

Comment
Recommended Fluids Treatment:
 Maintain MW between 9.2-10.2ppg. Continue additions of Lig/Pac/Gel mud from frac tanks to maintain mud properties as per mud program; fresh water for dilution to maintain mud weight; Soda Ash for hardness < 500mg/l; Caustic additions to maintain pH above 10; Zinc Oxide and Scavenger for potential H2S intrusion; Keep WBM frac tanks full at all times.

Drilling Fluids Activity Last 24 hrs:
 Continue with utilizing the Lig/Pac/Gel mud and fresh water for volume, aid in lowering mud weight and chlorides; high-vis gel sweeps; H2S scavenger and zinc oxide for potential H2S intrusion; soda ash for hardness; caustic for pH control.

Active Fluid: WBM
Drilling Parameters:
 Torque: 10 ft/lbs
 WOB: 24 kLBS
 RPM: 70 rpm
 ROP: 124 ft/hr
 Differential Pressure: 419 psi
 Deviation (angle): 11.96
 Azimuth: 65.69

Volumes:
 Pit volume total = 485 bbls
 Reserve fluids = 1650 bbls
 WBM Frac 1 = 450 bbls
 WBM Frac 2 = 450 bbls
 WBM Frac 3 = 450 bbls
 Premix = 300 bbls
 OBM Frac 1 = 300 bbls
 OBM Frac 2 = 275 bbls
 OBM Frac 3 = 250 bbls
 OBM Frac 4 = 250 bbls
 OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
PLANNED FIT	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	2,414	0	Rig Diesel	8,693	6,203.0
DIESEL	FUEL	GAL	0	0	0	Rig Reserve small frac tank	8,423	0.0
WATER	FRESH	BBL	2,625	2,625	0	75173 meter reading	57,348	17,825.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO GEL (BULK)	VISCOSIFIER	TON		18	20.0	35
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	28
CAUSTIC SODA	ALKALINITY CONTROL	SACK		59	271.0	89
DEFOAMER	DEFOAMER	CAN		13	36.0	28
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	7
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	8
H2S SCAVENGER	SPECIALITY	DRUM		1	23.0	1
LIGNITE	DISPERSANTS/T HINNER	SACK		72	386.0	264
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	7
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	7
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	7

Daily Drilling Report

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
SODA ASH	ALKALINITY CONTROL	SACK		38	135.0	65
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	2,310
XANTHAM GUM	VISCOSIFIER	SACK		7	230.0	10
ZINC OXIDE	SPECIALITY	SACK		3	117.0	3

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	4,864.0	04:00	159.0	40	141	95
1	4,864.0	04:00	200.0	50	176	95
1	4,864.0	04:00	121.0	30	106	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period									
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)		
3,495.00	11.65	64.55	3,444.77	-178.77	169.48	441.82	0.28		
3,588.00	11.55	64.86	3,535.87	-187.11	177.47	458.73	0.13		
3,682.00	12.22	64.21	3,627.86	-195.81	185.79	476.21	0.73		
3,776.00	12.57	63.56	3,719.67	-205.07	194.68	494.32	0.40		
3,869.00	12.37	63.35	3,810.47	-214.42	203.65	512.29	0.22		
3,963.00	13.14	64.59	3,902.15	-223.91	212.75	530.94	0.87		
4,057.00	13.23	65.21	3,993.68	-233.42	221.84	550.35	0.18		
4,150.00	13.30	65.21	4,084.19	-242.77	230.79	569.73	0.08		
4,244.00	13.25	66.24	4,175.68	-252.06	239.67	589.40	0.26		
4,335.00	12.87	65.96	4,264.33	-260.78	248.00	608.20	0.42		
4,431.00	12.54	65.36	4,357.98	-269.89	256.70	627.44	0.37		
4,525.00	11.96	65.69	4,449.84	-278.54	264.96	645.59	0.62		
4,618.00	11.24	66.29	4,540.94	-286.51	272.57	662.67	0.78		
4,712.00	12.28	66.43	4,632.96	-294.56	280.25	680.22	1.11		
4,806.00	12.38	66.17	4,724.80	-303.01	288.32	698.60	0.12		
4,899.00	10.86	65.79	4,815.89	-310.99	295.94	715.71	1.64		

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)
263_0_SAN ANDRES SHALE	-2,431.0		5,164.5		
265_0_CLEARFORK/POP	-3,217.0		5,950.5		
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2

PATTERSON - UTI #807

Accept: 11/15/2018 Release:
 Days Since LTI: 155.00 Days Since RI: 155.00

Daily Drilling Report

Personnel Log	
Company	Count
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 156.00 **Days Since RI: 156.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/24/2018
Report #: 13
DFS: 11
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$88,032.88

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #6 Excavation & Trenching , Core Value - #1 Respect
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Case#: 38463 Classification: Spill/Release Description: While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Case#: 38463 Classification: Spill/Release Description: While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #6 Excavation & Trenching , Core Value - #1 Respect
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man on the rig floor pulling slips using his back to lift with, stopped him told him he was doing a good job but he should use his legs to lift not his back he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
1,504.00	22.00	69.32	6,504.0	19,076.0	88,032.88	1,487,173.49	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
68.4	2.00	30.68	6,409.4	13,364.92	13,364.92	61,182.04	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	1,500.0	1,500.0	Goal Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		SURFACE, 1,223.7ftKB	INTERMEDIATE, 8,410.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
45.00	0.00	65.00	73.00	0.00	85.00		

Operations Summary
 Drill INT section F/ 5000' T/ 6065', Circ BU prior to checking for flow After drilling 10' into clearfork, Flow Check (no Flow), Drill INT section F/ 6065' T/ 6504'

Operations Next Report Period
 Drill INT Hole F/ 6504' T/ 8004'

Operations at Report Time
 Drill Int Hole @ 6504'

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 52%; Curve: 0%; Lateral 0%

Last Survey : MD: 6365' , inc 0.70 , az 70.61 , Right 6.89 Above 0.50

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	17.5	23:30	INT, DRL	DRL	NORMAL	Drill INT section F/ 5000' T/ 6065' (1065' @ 60.8' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2500, DIFF: 550, GPM:700, TQ: 14/16k.	5,000.0	6,065.0		
23:30	1	00:30	INT, DRL	CIRC	NORMAL	Circ BU prior to checking for flow After drilling 10' into clearfork W/ full returns	6,065.0	6,065.0		
00:30	0.5	01:00	INT, DRL	FLOW_CHK	NORMAL	Flow Check before continuing to drill Clearfork 30 min No Flow	6,065.0	6,065.0		
01:00	1.5	02:30	INT, DRL	DRL	NORMAL	Drill INT section F/ 6065' T/ 6177 (112' @ 74.6' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2000, DIFF: 450, GPM:600, TQ: 14/16k.	6,065.0	6,177.0		
02:30	0.5	03:00	INT, DRL	RIG_SVC	NORMAL	Service Rig	6,177.0	6,177.0		
03:00	3	06:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 6177 T/ 6504' (327' @ 109' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2000, DIFF: 450, GPM:600, TQ: 14/16k.	6,177.0	6,504.0		

BHA #2 , INTERMEDIATE			
Bit Run 2	Drill Bit 12 1/4in, SPL616, 43786	Bit Type PDC	Make ULTERRA
Nozzles (1/32") 11/11/11/11/11/10/10/10	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 73.50
BHA Drilling Time (hr) 73.50	BHA Depth Drilled (ft) 5,270.00	BHA ROP (ft/hr) 71.7	Depth Drilled By Bit (ft) 5,270.00
		Depth In (ftKB) 1,234.0	Depth Out (ftKB) 6,504.0

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
129	DRILL PIPE		5	3.00	5,572.87	6,504.00	108,671.0	122
11	HWDP		5	3.00	337.36	931.13	6,497.6	13
								OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8		2.75	32.60	593.77		7
								WEATHERFORD

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 156.00 Days Since RI: 156.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/24/2018
 Report #: 13
 DFS: 11
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$88,032.88

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	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	06:30	5,000.0	12.00	24.0	35	0	185.0	705	2,150.0	30.0	190	210	170	190	0.0	5,000.0	360
06:30	07:15	5,012.0	45.00	60.0	18	70	285.0	705	2,275.0	120.0	190	210	170	190	11,000.0	5,000.0	0
07:15	09:30	5,057.0	50.00	22.2	35	0	225.0	705	2,225.0	25.0	190	210	170	190	0.0	5,000.0	360
09:30	10:15	5,107.0	45.00	60.0	18	70	575.0	705	2,400.0	150.0	190	210	170	190	17,000.0	5,000.0	0
10:15	12:00	5,152.0	35.00	20.0	35	0	250.0	705	2,250.0	25.0	190	210	170	190	0.0	5,000.0	360
12:00	12:45	5,187.0	63.00	84.0	30	70	575.0	705	2,400.0	130.0	190	210	170	190	15,000.0	5,000.0	0
12:45	15:00	5,250.0	50.00	22.2	35	0	250.0	705	2,250.0	25.0	190	210	170	190	0.0	5,000.0	360
15:00	23:30	5,300.0	765.00	90.0	30	70	600.0	705	2,425.0	170.0	190	210	170	190	19,000.0	5,000.0	0
23:30	01:00	6,065.0	0.00		0	70	0.0	705	2,000.0	0.0	190	210	170	190	8,000.0	8,000.0	0
01:00	02:30	6,065.0	112.00	74.7	26	70	425.0	600	1,950.0	100.0	212	240	185	212	12,000.0	6,000.0	0
02:30	03:00	6,177.0	0.00	0.0	0	30	0.0	600	1,475.0	0.0	212	240	185	212	6,000.0	6,000.0	0
03:00	06:00	6,177.0	327.00	109.0	26	70	425.0	600	2,000.0	0.0	212	240	185	212	12,000.0	6,000.0	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)
9.30	9.33	183.9	1.6	249.7	525.4	16.8	184.0	56.19	628.59	156.36

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 156.00 **Days Since RI: 156.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/24/2018
Report #: 13
DFS: 11
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$88,032.88

Mud Checks

Time 00:30	Mud Company PIONEER DRILLING FLUIDS			Type WATER BASE	Depth (ftKB) 5,966.0	Density (lb/gal) 9.30	Funnel Viscosity (s/qt) 35	T Flowline (°F) 92.0
PV (cP) 3.0	YP (lb/100ft²) 4.000	Vis 3rpm 2	Vis 6rpm 3	Filtrate (mL/30min) 52.0	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0	
Solids (%) 6.0		Low Gravity Solids (%) 3.2		Sand (%) 0.0	MBT (lb/bbl) 10.0	Pm (mL/mL) 1.900	Pf (mL/mL)	
Chlorides (ppm) 69,000.000	Calcium (ppm) 400.000	CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)	Lime (lb/bbl) 0.4	pH 11.6		
Gel 10 sec (lb/100ft²) 4.000			Gel 10 min (lb/100ft²) 5.000		Gel 30 min (lb/100ft²) 5.000			

Comment

Recommended Fluids Treatment:

Maintain MW around 9.2ppg to drill thru Clearfork formation. Continue additions of Lig/Pac/Gel mud from frac tanks to maintain mud properties as per mud program; fresh water for dilution to maintain mud weight; Soda Ash for hardness < 500mg/l; Caustic additions to maintain pH above 10; Zinc Oxide and Scavenger for potential H2S intrusion; Keep WBM frac tanks full at all times.

Drilling Fluids Activity Last 24 hrs:

Maintaining MW @ 9.2ppg by diluting with fresh additions of Lig/Pac/Gel mud and fresh water and dumping sand trap regularly. Pumped high-vis gel sweeps @ 4866', 5057', 5246', 5424', 5628', 5809'; H2S scavenger and zinc oxide for potential H2S intrusion; soda ash for hardness; caustic for pH control.

Active Fluid: WBM

Drilling Parameters:

Torque: 14 ft/lbs

WOB: 27 kLBS

RPM: 70 rpm

ROP: 114 ft/hr

Differential Pressure: 457 psi

Deviation (angle): 1.97

Azimuth: 61.93

Volumes:

Pit volume total = 430 bbls

Reserve fluids = 1650 bbls

WBM Frac 1 = 450 bbls

WBM Frac 2 = 450 bbls

WBM Frac 3 = 450 bbls

Premix = 300 bbls

OBM Frac 1 = 300 bbls

OBM Frac 2 = 275 bbls

OBM Frac 3 = 250 bbls

OBM Frac 4 = 250 bbls

OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	2,526	0	Rig Diesel	6,167	8,729.0
DIESEL	FUEL	GAL	0	0	0	Rig Reserve small frac tank	8,423	0.0
WATER	FRESH	BBL	0	1,683	0	76856 meter reading	55,665	19,508.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO GEL (BULK)	VISCOSIFIER	TON	20	10	30.0	44
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	32
CAUSTIC SODA	ALKALINITY CONTROL	SACK		55	216.0	144
DEFOAMER	DEFOAMER	CAN		8	28.0	36
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	8
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	9
H2S SCAVENGER	SPECIALITY	DRUM		2	21.0	3
LIGNITE	DISPERSANTS/T HINNER	SACK		97	289.0	361
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	8
PAC LV	FLUID LOSS ADDITIVES	SACK		28	102.0	58
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	8

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Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	8
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	2,640
TRUCKING	MISCELLANEOUS	EA	873	873	0.0	9,619
XANTHAM GUM	VISCOSIFIER	SACK		18	212.0	28
ZINC OXIDE	SPECIALITY	SACK		7	110.0	10

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	6,177.0	04:00	131.0	30	106	95
1	6,177.0	04:00	171.0	40	141	95
1	6,177.0	04:00	225.0	50	176	95
2	6,177.0	04:00	129.0	30	106	95
2	6,177.0	04:00	170.0	40	141	95
2	6,177.0	04:00	222.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
5,087.00	12.08	65.50	5,000.19	-327.23	311.48	749.40	0.85
5,181.00	11.48	66.17	5,092.21	-335.46	319.34	766.91	0.65
5,275.00	11.75	66.81	5,184.28	-343.37	326.88	784.26	0.32
5,368.00	9.55	68.24	5,275.67	-350.30	333.47	800.13	2.38
5,462.00	6.94	68.97	5,368.70	-355.49	338.40	812.68	2.78
5,556.00	5.21	69.93	5,462.16	-359.19	341.91	821.99	1.84
5,650.00	4.00	71.75	5,555.86	-361.83	344.40	829.11	1.30
5,744.00	2.91	70.81	5,649.69	-363.75	346.21	834.48	1.16
5,838.00	2.34	67.58	5,743.59	-365.35	347.73	838.50	0.63
5,931.00	1.97	61.93	5,836.52	-366.90	349.20	841.67	0.46
6,025.00	1.66	51.20	5,930.47	-368.56	350.82	844.16	0.49
6,119.00	1.08	58.85	6,024.45	-369.91	352.13	845.98	0.65
6,213.00	0.75	65.56	6,118.44	-370.65	352.84	847.29	0.37
6,307.00	0.70	70.61	6,212.43	-371.12	353.28	848.40	0.09

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)
267_0_SPBY_U_A1/267_0_SPBY	-3,989.0		6,722.5		
267_5_SPBY_M_A1	-4,191.0		6,924.5		
268_5_SPBY_L_A1	-4,534.0		7,267.5		
268_6_SPBY_L_B1/JO MILL	-4,834.0		7,567.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,902.0		7,635.5		
269_0_DEAN	-5,331.0		8,064.5		
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
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Days Since LTI: 156.00 Days Since RI: 156.00

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Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$88,032.88

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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Accept: 11/15/2018 Release:
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PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/25/2018
Report #: 14
DFS: 12
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$88,087.98

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #2 By Passing Safety Critical Equipment , Core Value - #2 Ethics & Honesty
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 429 Case#: 38462 Classification: Motor Vehicle Incident Description: Contractor was backing trailer to frac tank to unload fresh water for camp. Contractor had a spotter and proceeded to back up. As contractor was backing up the trailer came into contact with a bumper of a personal vehicle of another contractor. Driver stopped and reported incident immediately.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 429 Case#: 38462 Classification: Motor Vehicle Incident Description: Contractor was backing trailer to frac tank to unload fresh water for camp. Contractor had a spotter and proceeded to back up. As contractor was backing up the trailer came into contact with a bumper of a personal vehicle of another contractor. Driver stopped and reported incident immediately.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #2 By Passing Safety Critical Equipment , Core Value - #2 Ethics & Honesty
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed floor hand Toating tools in his hands while walking up Stairs . Stopped him Told him he was doing a good job and reminded him to always use three points of contact while going up stairs. Always think safety first. he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Daily Operations							
Footage/Meterage (ft) 1,656.00	Drilling Hours (hr) 23.50	% Rotating Time (%) 100.00	End Depth (ftKB) 8,160.0	Target Depth (ftKB) 19,076.0	Daily Field Est Total (Cost) 88,087.98	Cum Field Est To Date (Cost) 1,575,261.46	
24 HR ROP (ft/hr) 70.5	Circulating Hours (hr) 0.50	% Sliding Time (%) 0.00	End Depth (TVD) (ftKB) 8,065.1	Target Depth (TVD) (ftKB) 12,916.18	Daily Mud Field Est (Cost) 74,098.21	Cum Mud Field Est (Cost) 74,098.21	Total AFE + Sup (Cost) 4,068,828.95
Daily Goal Description DRILLED FEET	Daily Goal - Last 24 1,500.0		Daily Goal - Next 24 243.0		Goal Comments Goal Met		

Backbuild	Lateral Inclination	Last Casing String SURFACE, 1,223.7ftKB	Next Casing String INTERMEDIATE, 8,385.0ftKB
Avg Connection Gas 216.00	Avg Trip Gas 0.00	Avg Background Gas 192.00	Max Connection Gas 417.00
		Max Trip Gas 0.00	Max Drill Gas 420.00

Operations Summary
 Drill INT Hole F/ 6504' T/ 8160'

Operations Next Report Period
 Drill INT Hole F/ 8160' T/ 8403' , Circ Clean Up cycles, POOH R/U casing Equip Run 9 5/8 Csg

Operations at Report Time
 Drill Int Hole @ 8160'

Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 97%; Curve: 0%; Lateral 0%

Last Survey : MD: 8052' , inc 0.56 , az 103.13, Right 29.0 Below 9.8

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	20.75	02:45	INT, DRL	DRL	NORMAL	Drill INT section F/ 6504 T/ 7958' (1454' @ 70' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2000, DIFF: 450, GPM:600, TQ: 14/16k. Note @ 7700' Half of returns for 5 bbl then regained full returns	6,504.0	7,958.0		
02:45	0.5	03:15	INT, DRL	RIG_SVC	NORMAL	Service Rig	7,958.0	7,958.0		
03:15	2.75	06:00	INT, DRL	DRL	NORMAL	Drill INT section F/ 7958' T/ 8160' (202' @73' fph) 100% Returns. WOB 25-30, RPM:70; SPP:2000, DIFF: 450, GPM:600, TQ: 14/16k.	7,958.0	8,160.0		

Drill Strings							
BHA #2, INTERMEDIATE							
Bit Run 2	Drill Bit 12 1/4in, SPL616, 43786			Bit Type PDC		Make ULTERRA	
Nozzles (1/32") 11/11/11/11/11/10/10/10	Bit Total Fluid Area (nozzles) (in²) 0.77		IADC Bit Dull -----	Hours Drilled By Bit (hr) 97.00		Depth Drilled By Bit (ft) 6,926.00	
BHA Drilling Time (hr) 97.00	BHA Depth Drilled (ft) 6,926.00		BHA ROP (ft/hr) 71.4	Depth In (ftKB) 1,234.0		Depth Out (ftKB) 8,160.0	

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
229	DRILL PIPE	5	3.00	7,228.87	8,160.00	140,963.0	154		

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Daily Field Est. (Cost): \$88,087.98

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defin Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	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	18:15	6,504.0	892.00	72.8	28	80	525.0	600	2,100.0	125.0	240	265	210	240	17,000.0	8,000.0	0
18:15	02:45	7,396.0	562.00	66.1	34	80	500.0	600	2,175.0	85.0	245	282	214	245	16,000.0	8,000.0	0
02:45	03:15	7,958.0	0.00		0	30	0.0	600	1,675.0	0.0	245	282	214	245	8,000.0	8,000.0	0
03:15	06:00	7,958.0	202.00	73.5	30	8	400.0	600	2,100.0	75.0	245	282	215	245	16,000.0	8,000.0	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)
9.30	9.38	183.9	1.6	249.7	525.4	16.8	184.0	70.67	829.78	156.36

Mud Checks

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
00:30	PIONEER DRILLING FLUIDS	WATER BASE	7,661.0	9.30	42	102.0	
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
6.0	13.000	7	8	29.0		250.0	500.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
7.0	5.5		15.0	2.100			
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
57,000.000	160.000		0/100		0.4	11.5	
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)					
7.000	8.000	8.000					

Comment

Recommended Fluids Treatment:

Maintain MW around 9.2-9.3ppg. Continue additions of Lig/Pac/Gel mud from frac tanks to maintain mud properties as per mud program; fresh water for dilution to maintain mud weight; Soda Ash for hardness < 500mg/l; Caustic additions to maintain pH above 10; Zinc Oxide and Scavenger for potential H2S intrusion; Keep WBM frac tanks full at all times.

Drilling Fluids Activity Last 24 hrs:

Maintaining MW around 9.2-9.3ppg with additions of Lig/Pac/Gel slurry and fresh water and dumping sand trap regularly. Pumped high-vis gel sweeps @ 6121', 6187', 6293', 6382', 7743'; H2S scavenger and zinc oxide for potential H2S intrusion; soda ash for hardness; caustic for pH control.

Active Fluid: WBM

Drilling Parameters:

Torque: 17 ft/lbs

WOB: 32 kLBS

RPM: 80 rpm

ROP: 91 ft/hr

Differential Pressure: 591 psi

Deviation (angle): 0.74 degrees

Azimuth: 127.43 degrees

Volumes:

Pit volume total = 479 bbls

Reserve fluids = 1650 bbls

WBM Frac 1 = 450 bbls

WBM Frac 2 = 450 bbls

WBM Frac 3 = 450 bbls

Premix = 300 bbls

OBM Frac 1 = 300 bbls

OBM Frac 2 = 275 bbls

OBM Frac 3 = 250 bbls

OBM Frac 4 = 250 bbls

OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 157.00 Days Since RI: 157.00

PERMIAN - JV SOUTHERN WOLFCAMP ODR
 Job: ODR
 Report Date: 11/25/2018
 Report #: 14
 DFS: 12
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$88,087.98

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	2,106	0	Rig Diesel	4,061	10,835.0
DIESEL	FUEL	GAL	0	0	0	Rig Reserve small frac tank	8,423	0.0
WATER	FRESH	BBL	3,740	3,740	0	80596 meter reading	57,348	23,248.0

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
ANCO GEL (BULK)	VISCOSIFIER	TON	36	11	55.0	55	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	36	
CAUSTIC SODA	ALKALINITY CONTROL	SACK		33	183.0	177	
DEFOAMER	DEFOAMER	CAN		9	19.0	45	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	9	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	10	
H2S SCAVENGER	SPECIALITY	DRUM		2	19.0	5	
LIGNITE	DISPERSANTS/T HINNER	SACK		39	250.0	400	
LIME	ALKALINITY CONTROL	SACK		7	293.0	7	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	9	
PAC LV	FLUID LOSS ADDITIVES	SACK		8	94.0	66	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	9	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	9	
SODA ASH	ALKALINITY CONTROL	SACK		80	55.0	145	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	2,970	
TRUCKING	MISCELLANEOUS	EA	1,576	1,576	0.0	11,194	
XANTHAM GUM	VISCOSIFIER	SACK		19	193.0	47	
ZINC OXIDE	SPECIALITY	SACK		6	104.0	16	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks							
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)	
1	7,958.0	04:00	230.0	50	176	95	
1	7,958.0	04:00	177.0	40	141	95	
1	7,958.0	04:00	137.0	30	106	95	
2	7,958.0	04:00	229.0	50	176	95	
2	7,959.0	04:00	173.0	40	141	95	
2	7,958.0	04:00	132.0	30	106	95	

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
6,588.00	1.33	22.02	6,493.39	-374.22	356.31	851.81	0.62	
6,682.00	1.73	35.39	6,587.35	-376.41	358.48	853.04	0.57	
6,776.00	1.52	39.59	6,681.32	-378.57	360.60	854.65	0.26	
6,870.00	1.29	37.79	6,775.29	-380.39	362.40	856.10	0.25	
6,964.00	1.61	51.30	6,869.26	-382.09	364.06	857.78	0.50	
7,057.00	1.67	61.16	6,962.22	-383.61	365.53	859.98	0.31	
7,151.00	0.86	78.72	7,056.20	-384.45	366.33	861.87	0.95	
7,245.00	0.44	67.62	7,150.19	-384.74	366.60	862.90	0.46	

Daily Drilling Report

Survey Data - All surveys for 24 hr reporting period

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
7,338.00	0.56	90.87	7,243.19	-384.89	366.73	863.68	0.25
7,432.00	0.76	110.92	7,337.18	-384.68	366.50	864.73	0.32
7,526.00	0.80	123.68	7,431.17	-384.12	365.92	865.85	0.19
7,619.00	0.74	127.43	7,524.16	-383.41	365.19	866.87	0.08
7,713.00	0.58	110.84	7,618.16	-382.90	364.65	867.80	0.26
7,806.00	0.49	103.65	7,711.15	-382.65	364.39	868.62	0.12
7,900.00	0.66	105.58	7,805.15	-382.43	364.15	869.54	0.18
7,994.00	0.56	103.13	7,899.14	-382.20	363.90	870.50	0.11

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)
270_0_WFMP_A1	-5,503.0		8,236.5		
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 158.00 **Days Since RI: 158.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/26/2018
Report #: 15
DFS: 13
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$91,756.98

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #3 Confined Space Entry , Core Value - #3 Safety
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 601 Classification: Injury/Illness Description: Contractor was flagging the forklift that was attempting to move 8" drill collars. While the 8" collars were being moved back on the racks with the forklift carriage, so the 6 3/4" non-mag collars could be reached, the collar slid at an angle on the racks rather than roll as anticipated. The 8" collars pinched the contractor flagger's right knee between the box ends of two drill collars. Contractor was taken for medical treatment and is undetermined the extent of injury at this time.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 601 Classification: Injury/Illness Description: Contractor was flagging the forklift that was attempting to move 8" drill collars. While the 8" collars were being moved back on the racks with the forklift carriage, so the 6 3/4" non-mag collars could be reached, the collar slid at an angle on the racks rather than roll as anticipated. The 8" collars pinched the contractor flagger's right knee between the box ends of two drill collars. Contractor was taken for medical treatment and is undetermined the extent of injury at this time.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #3 Confined Space Entry , Core Value - #3 Safety
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed floor hands laying down Mud motor, man was in between pipe wrangler and Drill pipe racked in derrick, stopped the job told the man he was doing a good job but he was standing in a bad spot, explained to him the hazards he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
244.00	4.25	100.00	8,404.0	19,076.0	91,756.98	1,601,900.44	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
57.4	3.75	0.00	8,309.1	10,914.07	10,914.07	85,012.28	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	243.0	0.0	Goal Met				

Backbuild	Lateral Inclination	Last Casing String SURFACE, 1,223.7ftKB	Next Casing String INTERMEDIATE, 8,385.0ftKB
Avg Connection Gas 188.00	Avg Trip Gas 15.00	Avg Background Gas 242.00	Max Connection Gas 225.00
			Max Trip Gas 41.00
			Max Drill Gas 261.00

Operations Summary
 Drill Int section F/ 8160' T/ 8404' Circ hole clean, POOH, L/D directional BHA,,R/U casing tools,
 Operations Next Report Period
 M/U shoe trac circ thru same, Run 9 5/8 csg
 Operations at Report Time
 Rigging up Casing equip
 Remarks
 NPT for Nov.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs.)
 Surface:100%; Intermediate 100%; Curve: 0%; Lateral 0%
 Last Survey : MD:8404' , inc 0.24 , az 138.49, Left 30.40 Above 9.40

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	4.25	10:15	INT, DRL	DRL	NORMAL	Drill Int section F/ 8160' T/ 8404' (244' @ 57' fph) 100% Returns. WOB 30-32, RPM:70; SPP:2000, DIFF: 500, GPM:600, TQ: 16/18k.	8,160.0	8,404.0		
10:15	3.75	14:00	INT, POST DRL	CIRC	NORMAL	Circ 3xBtm up prior to TOOH for 9 5/8 csg. 1st BU 50% coverage - drill cuttings 2nd BU 30% coverage - fines 3rd BU 10% coverage - fines	8,404.0	8,404.0		
14:00	0.25	14:15	INT, POST DRL	FLOW_CHK	NORMAL	Check well for flow (static)	8,404.0	8,404.0		
14:15	1	15:15	INT, POST DRL	TOOH_ELEV	NORMAL	TOOH wet from 8404 to 7573 (10 stds); Hole taking proper fill with trip tanks No excess drag	8,404.0	8,404.0		
15:15	0.25	15:30	INT, POST DRL	FLOW_CHK	NORMAL	Check well for flow. (static) Pump slug	8,404.0	8,404.0		
15:30	3	18:30	INT, POST DRL	TOOH_ELEV	NORMAL	TOOH from 7573' to 2240'. Hole taking proper fill with trip tanks. (Tight Hole @ 2240')	8,404.0	8,404.0		

Daily Drilling Report

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
18:30	4	22:30	INT, POST DRL	TOOH_NONEL EV	NORMAL	POOH Backreaming Tight hole F/ 2240' t/ 1400' , 350 GPM 40 RPM , SPP 450 W/ Full returns	8,404.0	8,404.0		
22:30	0.5	23:00	INT, POST DRL	TOOH_ELEV	NORMAL	POOH F/ 1400' T/ 992' Hole taking proper fill with trip tanks.	8,404.0	8,404.0		
23:00	0.25	23:15	INT, POST DRL	HDL_ROTTHD	NORMAL	Retrieve Rotating head & Install Trip nipple. well static on trip tank	8,404.0	8,404.0		
23:15	1.75	01:00	INT, POST DRL	TOOH_ELEV	NORMAL	POOH F/ 992' T/ 120' , Hole taking proper fill with trip tanks.	8,404.0	8,404.0		
01:00	0.25	01:15	INT, POST DRL	SFTY	NORMAL	PJSM on L/D directional BHA, Hole taking correct fill.	8,404.0	8,404.0		
01:15	1	02:15	INT, POST DRL	LD_DIR	NORMAL	L/D directional tools. Hole taking correct fill.	8,404.0	8,404.0		
02:15	0.75	03:00	INT, POST DRL	WRBSH	NORMAL	Removed wear bushing / (had trouble retrieving wear bushing packed off with cuttings)	8,404.0	8,404.0		
03:00	0.5	03:30	INT, POST DRL	SFTY	NORMAL	Clean & Clear Rig Floor for running Casing After trip	8,404.0	8,404.0		
03:30	0.5	04:00	INT, POST DRL	RIG_SVC	NORMAL	Service Rig & Top Drive, Well static on trip tank	8,404.0	8,404.0		
04:00	0.25	04:15	INT, POST DRL	SFTY	NORMAL	PJSM - Discussed R/U casing tools and running 9-5/8" casing w/ Byrd, Weatherford, Patterson and PNR personnel prior to R/U casing tools. Well static on trip tank	8,404.0	8,404.0		
04:15	1.75	06:00	INT, POST DRL	RU_CSG	NORMAL	R/U Byrd casing tools and CRT	8,404.0	8,404.0		

Drill Strings							
BHA #2 , INTERMEDIATE							
Bit Run	2	Drill Bit	12 1/4in, SPL616, 43786	Bit Type	PDC	Make	ULTERRA
Nozzles (1/32")	11/11/11/11/11/10/10/10/10	Bit Total Fluid Area (nozzles) (in ²)	0.77	IADC Bit Dull	3-3-CT-A-3-0-BT-TD	Hours Drilled By Bit (hr)	101.25
BHA Drilling Time (hr)	101.25	BHA Depth Drilled (ft)	7,170.00	BHA ROP (ft/hr)	70.8	Depth In (ftKB)	1,234.0
						Depth Out (ftKB)	8,404.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
237	DRILL PIPE	5	3.00	7,472.87	8,404.00	145,721.0	159		
11	HWDP	5	3.00	337.36	931.13	6,497.6	13	OTHER (PROVIDE DESCRIPTION)	
1	DRILLING JARS - HYDRAULIC	6 5/8	2.75	32.60	593.77		7	WEATHERFORD	
6	HWDP	5	3.00	182.84	561.17	6,759.6	7	OTHER (PROVIDE DESCRIPTION)	
1	SUB - XO	6 3/4	2.88	3.51	378.33		0	STABIL DRILL	
6	DRILL COLLAR	8	2.63	273.94	374.82		0	OTHER (PROVIDE DESCRIPTION)	
1	DRILL COLLAR - NON MAG	8 1/8	3.25	30.87	100.88		0	STABIL DRILL	
1	SUB (OTHER)	8 3/8	3.75	3.17	70.01		0	GYRODATA	
1	Drill Collar - Non Mag	8 1/8	3.25	28.10	66.84		0	Stabil Drill	
1	STABILIZER	8	2.75	8.00	38.74		0	STABIL DRILL	
1	Motor - Slick Sleeve	8	2.00	28.94	30.74		0	Gyrodata	

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM800079	1.83	NOT SEALED	7:8	4		6.1

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	47.00	
DIRECTIONAL	58.00	

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 Average (ft/hr)	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	10:15	8,160.0	244.00	57.4	28	80	350.0	600	2,150.0	65.0	260	300	220	260	20,000.0	10,000.0	0
10:15	14:00	8,404.0	0.00		0	80	0.0	600	1,700.0	0.0	260	300	220	260	10,000.0	10,000.0	0

Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
9.30	9.38	183.9	1.6	249.7	525.4	16.8	184.0	72.80	859.42	156.36

Daily Drilling Report

Mud Checks									
Time 00:15	Mud Company PIONEER DRILLING FLUIDS			Type WATER BASE	Depth (ftKB) 8,404.0	Density (lb/gal) 9.50	Funnel Viscosity (s/qt) 39	T Flowline (°F) 0.0	
PV (cP) 5.0	YP (lb/100ft²) 7.000	Vis 3rpm 4	Vis 6rpm 4	Filtrate (mL/30min) 23.0	HTHP Filtrate (mL/30min)	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0		
Solids (%) 7.0		Low Gravity Solids (%) 5.0		Sand (%)	MBT (lb/bbl) 15.0	Pm (mL/mL) 1.400	Pf (mL/mL)		
Chlorides (ppm) 56,000.000	Calcium (ppm) 480.000	CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)	Lime (lb/bbl) 0.3	pH 10.6			
Gel 10 sec (lb/100ft²) 5.000			Gel 10 min (lb/100ft²) 7.000			Gel 30 min (lb/100ft²) 7.000			
<p>Comment</p> <p>Recommended Fluids Treatment: Maintain MW around 9.2-9.3ppg. Continue additions of Lig/Pac/Gel mud from frac tanks to maintain mud properties as per mud program; fresh water for dilution to maintain mud weight; Soda Ash for hardness < 500mg/l; Caustic additions to maintain pH above 10; Zinc Oxide and Scavenger for potential H2S intrusion; Keep WBM frac tanks full at all times.</p> <p>Drilling Fluids Activity Last 24 hrs: Maintaining MW around 9.2-9.3ppg with additions of Lig/Pac/Gel slurry and fresh water and dumping sand trap regularly. Pumped high-vis gel sweeps @ 7825', 8122', 8402'; H2S scavenger and zinc oxide for potential H2S intrusion; Barite for slug; soda ash for hardness; caustic for pH control.</p> <p>Active Fluid: WBM</p> <p>Drilling Parameters: Torque: ft/lbs WOB: kLBS RPM: rpm ROP: ft/hr Differential Pressure: psi Deviation (angle): degrees Azimuth: degrees Volumes: Pit volume total = 658 bbls Reserve fluids = 1450 bbls WBM Frac 1 = 400 bbls WBM Frac 2 = 400 bbls WBM Frac 3 = 400 bbls Premix = 250 bbls OBM Frac 1 = 300 bbls OBM Frac 2 = 275 bbls OBM Frac 3 = 250 bbls OBM Frac 4 = 250 bbls OBM Frac 5 = 275 bbls</p>									
Last BOP Test									
Date	Test Type	Item Tested			Next Test Date	Com			
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>			12/11/2018	Tested BOPE 250 /5000			
Leak Off and Formation Integrity Tests									
Test Type		Depth (ftKB)			Dens Fluid (lb/gal)				
FORMATION INTEGRITY		1,244.0			12.75				
Casing Pressure Test									
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)			
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0			
Kick Offs & Key Depths									
Date	Type			Top Depth (ftKB)					
	HEEL								
	TOE								
	KICK OFF								
Casing Strings									
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)		
CONDUCTOR	148.5		20	H40	78.67				
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5		
Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	7,307	1,403	0	Rig Diesel	9,965	12,238.0	
DIESEL	FUEL	GAL	0	0	0	Rig Reserve small frac tank	8,423	0.0	
WATER	FRESH	BBL	1,867	1,867	0	82463 meter reading	57,348	25,115.0	
Mud Additive Amounts									
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons			
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		4	34.3	4			
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		0	34.0	4			
ANCO GEL (BULK)	VISCOSIFIER	TON		8	47.0	63			
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	40			
CAUSTIC SODA	ALKALINITY CONTROL	SACK		45	138.0	222			
DEFOAMER	DEFOAMER	CAN		6	13.0	51			
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	10			
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	11			
H2S SCAVENGER	SPECIALITY	DRUM		1	18.0	6			
LIGNITE	DISPERSANTS/T HINNER	SACK		50	200.0	450			
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	10			

Daily Drilling Report

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PAC LV	FLUID LOSS ADDITIVES	SACK		21	73.0	87
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	10
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	10
SODA ASH	ALKALINITY CONTROL	SACK		8	47.0	153
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	3,300
XANTHAM GUM	VISCOSIFIER	SACK		14	179.0	61
ZINC OXIDE	SPECIALITY	SACK		7	97.0	23

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	8,404.0	10:00	140.0	30	106	95
1	8,404.0	10:00	235.0	50	176	95
1	8,404.0	10:00	180.0	40	141	95
2	8,404.0	10:00	175.0	40	141	95
2	8,404.0	10:00	231.0	50	176	95
2	8,404.0	10:00	139.0	30	106	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
8,182.00	0.19	105.60	8,087.14	-381.94	363.61	871.57	0.12	
8,275.00	0.22	78.06	8,180.14	-381.94	363.61	871.90	0.11	
8,346.00	0.24	138.49	8,251.14	-381.86	363.53	872.13	0.33	

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)
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 159.00 Days Since RI: 159.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/27/2018
Report #: 16
DFS: 14
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$77,012.89

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	PAT Drilling: Rig: Patterson 251 Location: Brook B-12T 20H Case#: 38549 Date: 11-24-18 Classification: Spill/Release Description: While mixing barite in hopper, RTM failed to close hopper and walked off, resulting hopper overflow and spilling 2 bbls. of water-base mud onto ground.
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #4 Energy Isolation , Core Value - #4 Personal Accountability
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	PAT Drilling: Rig: Patterson 251 Location: Brook B-12T 20H Case#: 38549 Date: 11-24-18 Classification: Spill/Release Description: While mixing barite in hopper, RTM failed to close hopper and walked off, resulting hopper overflow and spilling 2 bbls. of water-base mud onto ground.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #4 Energy Isolation , Core Value - #4 Personal Accountability
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed men running Casing, the tong line did not have a keeper in the shackle the nut was loose, stopped the job told the men they were doing a good job, showed them the shackle explained to them the hazards if the shackle came off they understood told them to keep a check on all equip while running pipe

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)
TXRRRC CALL	CEMENT INT	11/26/2018	Ivey Job # 153383

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			8,404.0	19,076.0	77,012.89	1,678,913.33	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			8,309.1		3,862.89	88,875.17	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	Goal Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		INTERMEDIATE, 8,385.0ftKB	INTERMEDIATE, 8,385.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	15.00	12.00	0.00	68.00	0.00		

Operations Summary
M/U shoe trac Circ Thru Same, Run 9 5/8 x 40# csg Land out same @ 8385', Circ Surface to surface,
Operations Next Report Period
R/U Crest cementers , Cement 9 5/8 CSG, set Pack Off,N/D BOPE, install abandon cap walk rig T/ 102H well
Operations at Report Time
Circ while waiting on Crest Cementers and pump trucks
Remarks
NPT for Nov.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs.)
Surface:100%; Intermediate 100%; Curve: 0%; Lateral 0%
Last Survey : MD:8404' , inc 0.24 , az 138.49, Left 30.40 Above 9.40

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.25	06:15	INT, CASE & CMT	SFTY	NORMAL	Held Safety Mtg with Byrd csg crew, Weatherford tool hand, & Patterson Rig crew on P/U & Run 9 5/8 csg	8,404.0	8,404.0		
06:15	1.25	07:30	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	P/U Float equip & 2 Jt shoe track; Flow test same (ok)	8,404.0	8,404.0		
07:30	6.5	14:00	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 9 5/8 f F/139' - T/4042' filling up csg. every 15 joint. Monitor displacement on trip tanks. (ok) (40lbs. / L80-IC / BTC)	8,404.0	8,404.0		
14:00	1.5	15:30	INT, CASE & CMT	PULL_CSG	NORMAL	L/D 2 jts 9 5/8 csg & Change out same	8,404.0	8,404.0		
15:30	10	01:30	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 9 5/8 f F/4042' - T/ 8352' filling up csg. every 15 joint. Monitor displacement on trip tanks. (ok) (40lbs. / L80-IC / BTC)	8,404.0	8,404.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
01:30	0.5	02:00	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	M/U landing joint. with Cactus rep. Land out 9 5/8 CSG @ 8385' well static on trip tank From the top FS - 8383' FC - 8290' DV - 4257'	8,404.0	8,404.0		
02:00	2	04:00	INT, CASE & CMT	CIRC	NORMAL	Circulate Surface to surface vol. GPM 300 . SPP 150. with 100% returns. Crest Cementers and Pump truck have not arrived EST time for cementers to be on location is 08:00 am	8,404.0	8,404.0		
04:00	0.5	04:30	INT, CASE & CMT	WAIT	NORMAL	R/D Byrd csg crew and CRT. well static on trip tank Waiting on cementers	8,404.0	8,404.0	0.50	11
04:30	0.5	05:00	INT, CASE & CMT	WAIT	NORMAL	Install circulating swedge hook up pump line F/ stand pipe manifold , well static on trip tank Waiting on cementers	8,404.0	8,404.0	0.50	11
05:00	1	06:00	INT, CASE & CMT	WAIT	NORMAL	Continue Circ thru circ swedge @ 212 GPM, 188 SPP, 100% returns, while waiting on Crest Cementers Waiting on cementers	8,404.0	8,404.0	1.00	11

Interval Problems

3RD PARTY, 8,404.0ftKB, 11/27/2018 04:00

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
11		No	CEMENT	LOGISTICS		CREST PUMPING TECHNOLOGIES LLC	Cementers were on another job they had 3 back to back jobs

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)

Mud Checks

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
00:30	PIONEER DRILLING FLUIDS	WATER BASE	8,404.0	9.50	38	0.0	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
5.0	8.000	4	4	24.0		250.0	500.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
7.0	5.1		15.0	1.500			
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
55,000.000	400.000		0/100		0.3	10.8	
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)	Gel 30 min (lb/100ft²)					
5.000	7.000	7.000					

Comment
Recommended Fluids Treatment:
Maintain MW around 9.2-9.3ppg. Continue additions of Lig/Pac/Gel mud from frac tanks to maintain mud properties as per mud program; fresh water for dilution to maintain mud weight; Soda Ash for hardness < 500mg/l; Caustic additions to maintain pH above 10; Zinc Oxide and Scavenger for potential H2S intrusion; Keep WBM frac tanks full at all times.

Drilling Fluids Activity Last 24 hrs:
Finish POOH. R/U and running 9 5/8" intermediate casing.

Active Fluid: WBM

Drilling Parameters:

Torque: ft/lbs

WOB: kLBS

RPM: rpm

ROP: ft/hr

Differential Pressure: psi

Deviation (angle): degrees

Azimuth: degrees

Volumes:

Pit volume total = 435 bbls

Reserve fluids = 1450 bbls

WBM Frac 1 = 400 bbls

WBM Frac 2 = 400 bbls

WBM Frac 3 = 400 bbls

Premix = 250 bbls

OBM Frac 1 = 300 bbls

OBM Frac 2 = 275 bbls

OBM Frac 3 = 250 bbls

OBM Frac 4 = 250 bbls

OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	

Daily Drilling Report

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	700	0	Rig Diesel	9,265	12,938.0	
DIESEL	FUEL	GAL	0	0	0	Rig Reserve small frac tank	8,423	0.0	
WATER	FRESH	BBL	0	0	0	82463 meter reading	57,348	25,115.0	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	44	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	11	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	12	
H2S SCAVENGER	SPECIALITY	DRUM		1	17.0	7	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	11	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	11	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	11	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	3,630	
TRUCKING	MISCELLANEOUS	EA	652	652	0.0	11,846	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Formations						
Formation Name	Prog Top (TVD SS) Override (ft(lev))	Prog Top MD (ftKB)	Prog Top (TVD) (ftKB)	Final Top MD (ftKB)	Final Top (TVD) (ftKB)	
272_0_WFMP_A2	-5,596.0		8,329.5			
271_0_WFMP_A3	-5,741.0		8,474.5			
275_0_WFMP_B1	-5,833.0		8,566.5			
276_0_WFMP_B2	-5,910.0		8,643.5			
278_0_WFMP_B3	-6,173.0		8,906.5			
WFMP B3 TOT	-6,199.0		8,932.5			
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5			
Target 1	-6,282.0		9,015.5			
Target 2	-6,282.0		9,015.5			
Target 3	-6,250.0		8,983.5			
Target 4	-6,260.0		8,993.5			
BHL	-6,240.0		8,973.5			

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 160.00 Days Since RI: 160.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/28/2018
Report #: 17
DFS: 15
AFE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$152,002.06

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	PAT Drilling: Rig: H&P 437 Location: Ray Reed 32 18H Case#: 38560 Date: 11/26/2018 Classification: Injury/Illness (low) Description: While contractor was walking down a set of steps at the end of the catwalk, the steps tipped over. Causing the Contractor to land on his right side and hand rail striking him on the side of the head. Contractor was taken for observation to XtremeMD. Contractor returned to work.
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #4 Energy Isolation , Core Value - #4 Personal Accountability
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	PAT Drilling: Rig: H&P 437 Location: Ray Reed 32 18H Case#: 38560 Date: 11/26/2018 Classification: Injury/Illness (low) Description: While contractor was walking down a set of steps at the end of the catwalk, the steps tipped over. Causing the Contractor to land on his right side and hand rail striking him on the side of the head. Contractor was taken for observation to XtremeMD. Contractor returned to work.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Awareness, Pinch Points and Body Placement, Buffer Zones, Makung Connections, Mixing Mud. R2LB - #4 Energy Isolation , Core Value - #4 Personal Accountability
19:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed contractor walking in buffer zone of the cement lines while cementing. Waved contractor over to a safe spot and explained to him the dangers of being in the buffer zone while lines were pressured up. He thanked me and said he would not get back in the buffer zone again.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/17/2019	1st Well / 3 Well pad (Revised on 11/22/18)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			8,404.0	19,076.0	152,002.06	1,830,915.39	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			8,309.1		2,808.07	91,683.24	4,068,828.95
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	Goal Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		INTERMEDIATE, 8,385.0ftKB	INTERMEDIATE, 8,385.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	16.00	14.00	0.00	23.00	0.00		

Operations Summary
Run 1st Stage did not Bump plug, drop Contingency Plug set Packer, Open DV tool & circ. 1.5 X's csg. cap., Run 2nd stage. cement job, Install packer & test, install cap & test (Release rig on 11-28-18 @ 03:00 AM)

Operations Next Report Period
Released rig on 11-28-18 @ 03:00 AM. (See University 3-15B 102H report.)

Operations at Report Time
Released rig on 11-28-18 @ 03:00 AM.

Remarks
NPT for Nov.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs.)
Surface:100%; Intermediate 100%; Curve: 0%; Lateral 0%
Rig release on 11-28-18 @ 03:00 AM.

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	4.5	10:30	INT, CASE & CMT	WAIT	NORMAL	Continue Circ thru circ swedge @ 212 GPM, 188 SPP, 100% returns, while waiting on Crest Cementers Waiting on cementers	8,404.0	8,404.0	4.50	11
10:30	0.25	10:45	INT, CASE & CMT	SFTY	NORMAL	Pre job safety meeting with Crest, Rig Crew, PNR Supervisor, & Weatherford	8,404.0	8,404.0		
10:45	0.25	11:00	INT, CASE & CMT	RU_CMT	NORMAL	R/U CMT head and circ. iron	8,404.0	8,404.0		
11:00	5.25	16:15	INT, CASE & CMT	CMT	NORMAL	Pump 1st stage: Test lines to 5000 psi.- Pump 50 bbls. GXT spacer @10.7 ppg. - Pump 306 bbls of Lead cmt. (690 sks) @ 11.0 pp. - Pump 49 bbls of Tail cmt. (205sks) @ 14.8 ppb. - Drop plug & disp. w/ 628 bbls.of WBM. plug did not bump, pumped 3.75 bbl 1/2 of shoe trac Plug did not bump, Check float bled back 1/2 bbl WBM Float held, Drop Contingency Plug wait 21 min to fall, pressure up t/ 1200 psi stage pressure up t/ 2220 psi PKR opened PSI drop t/ 1900 psi, bring pressure up t/ 2600 psi PKR set bled back press t/ 1200 leaving 2 bbl in PKR Bled press to -0-,	8,404.0	8,404.0		
16:15	0.5	16:45	INT, CASE & CMT	CMT	NORMAL	Drop opening tool - wait 21 min; Open DV tool w/ 820 psi and circulate 20 bbls WBM with CMT pump. (100% returns.)	8,404.0	8,404.0		

Daily Drilling Report

Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #	
16:45	1	17:45	INT, CASE & CMT	CIRC	NORMAL	Circ. B/U w ith Rig pumps; 100% returns. GPM:350; SSP: 350;	8,404.0	8,404.0			
17:45	2.75	20:30	INT, CASE & CMT	CMT	NORMAL	Swapped lines and pump 2nd stage: Pump 50 bbls. GXT spacer @10.7, 364 bbls (735 sks) #11.0 Lead CMT, 56 bbls (235 sks) 14.8 Tail CMT, 322 bbls displacement w/ full returns. Bumped plug on schedule w/ 500 psi then pressured up to 2070 psi to close DV Tool. Bled off, Floats held & got back 2.5 bbls. No cement to surface.	8,404.0	8,404.0			
20:30	0.75	21:15	INT, CASE & CMT	RD_CMT	NORMAL	R/D cement iron and head	8,404.0	8,404.0			
21:15	0.5	21:45	INT, CASE & CMT	PULL_CSG	NORMAL	Backed out and L/D Landing Joint	8,404.0	8,404.0			
21:45	0.5	22:15	INT, CASE & CMT	WH	NORMAL	Wash thru BOPE stack and wash out well head	8,404.0	8,404.0			
22:15	1	23:15	INT, CASE & CMT	WH	NORMAL	Installed and tested pack off to 5000 psi L/D Setting tool.	8,404.0	8,404.0			
23:15	1.25	00:30	PROD, PRE DRL	ND_BOPE	NORMAL	N/D BOPE	8,404.0	8,404.0			
00:30	2.5	03:00	PROD, PRE DRL	WH	NORMAL	Install and test abandonment cap t/ 5000 psi & hold for 10 min. Good test! (Prep. rig to walk.) ? Released rig on 11-28-18 @ 03:00 AM.	8,404.0	8,404.0			

Interval Problems

3RD PARTY, 8,404.0ftKB, 11/27/2018 04:00

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
11	6.50	No	CEMENT	LOGISTICS	19,175.00	CREST PUMPING TECHNOLOGIES LLC	Cementers were on another job they had 3 back to back jobs

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)

Mud Checks

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
00:15	PIONEER DRILLING FLUIDS	WATER BASE	8,404.0	9.55	35	0.0	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
5.0	6.000	3	3	51.0		250.0	500.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
7.0	4.6		15.0	2.900			
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
60,000.000	920.000		0/100		0.6	12.0	
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)	Gel 30 min (lb/100ft²)					
5.000	10.000	15.000					

Comment
 Recommended Fluids Treatment:
 No treatment made.
 Drilling Fluids Activity Last 24 hrs:
 Cement 9 5/8" intermediate casing. Prep rig to skid to next well.
 Active Fluid: WBM
 Drilling Parameters:
 Torque: ft/lbs
 WOB: kLBS
 RPM: rpm
 ROP: ft/hr
 Differential Pressure: psi
 Deviation (angle): degrees
 Azimuth: degrees
 Volumes:
 Pit volume total = 499 bbls
 Reserve fluids = 1200 bbls
 WBM Frac 1 = 150 bbls
 WBM Frac 2 = 400 bbls
 WBM Frac 3 = 400 bbls
 Premix = 250 bbls
 OBM Frac 1 = 300 bbls
 OBM Frac 2 = 275 bbls
 OBM Frac 3 = 250 bbls
 OBM Frac 4 = 250 bbls
 OBM Frac 5 = 275 bbls

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
11/20/2018	BOP	BOP'S, 11/19/2018 00:30, <class>	12/11/2018	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 160.00 **Days Since RI: 160.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 11/28/2018
Report #: 17
DFS: 15
APE #: 9000912
Total AFE + Sup: \$4,068,828.95
Daily Field Est. (Cost): \$152,002.06

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	

Cement			
INTERMEDIATE CASING CEMENT, Casing, 11/27/2018 10:45			
Cementing End Date	Wellbore	Technical Result	Comment
11/27/2018 20:30	ORIGINAL	SUCCESS	<p>1st stage: Test lines to 5000 psi.- Pump 50 bbls. GXT spacer @10.7 ppg. - Pump 306 bbls of Lead cmt. (690 sks) @ 11.0 pp. - Pump 49 bbls of Tail cmt. (205sks) @ 14.8 ppb. - Drop plug & disp. w/ 628 bbls.of WBM. plug did not bump, pumped 3.75 bbl 1/2 of shoe trac Plug did not bump, Check float bled back 1/2 bbl WBM Float held, Drop Contingency Plug wait 21 min to fall, pressure up t/ 1200 psi stage pressure up t/ 2220 psi PKR opened PSI drop t/ 1900 psi, bring pressure up t/ 2600 psi PKR set bled back press t/ 1200 leaving 2 bbl in PKR Bled press to -0,</p> <p>2nd stage: Pump 50 bbls. GXT spacer @10.7, 364 bbls (735 sks) #11.0 Lead CMT, 56 bbls (235 sks) 14.8 Tail CMT, 322 bbls displacement w/ full returns. Bumped plug on schedule w/ 500 psi then pressured up to 2070 psi to close DV Tool. Bled off, Floats held & got back 2.5 bbls. No cement to surface.</p>

Cement Stages													
Description	Final Top De...	Btm (ftKB)	Top Pl...	Btm Pl...	Q Pump Init (...)	Q Pump Fina...	Q Pump Avg...	P Pump Final...	P Plug Bump...	Float...	Recip?	Rotated?	
INTERMEDIATE CASING CEMENT	4,248.0	8,404.0	Yes	No	8	8	4	450.0	0.0	No	No	No	

Cement Fluids													
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)								
SPACER	0.0	28.0		0.00	10.00								
LEAD CMT	28.0	7,643.0	LITECRETE	2.50	11.00								
TAIL CMT	7,643.0	8,404.0	CLASS C	1.33	14.80								
DSPLMT	31.0	8,404.0		0.00	8.33								

Description	Final Top De...	Btm (ftKB)	Top Pl...	Btm Pl...	Q Pump Init (...)	Q Pump Fina...	Q Pump Avg...	P Pump Final...	P Plug Bump...	Float...	Recip?	Rotated?
INTERMEDIATE CASING CEMENT	31.0	3,748.0	Yes	No	7	7	4	510.0	2,400.0	No	No	No

Cement Fluids													
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)								
SPACER	0.0	28.0		0.00	10.00								
LEAD CMT	28.0	3,721.0	LITECRETE	2.50	11.00								
TAIL CMT	3,721.0	3,259.0	CLASS C	1.33	14.80								
DSPLMT	31.0	3,259.0		0.00	8.33								

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	1,090	0	56"	8,175	14,028.0	
DIESEL	FUEL	GAL	0	0	0	0"	8,423	0.0	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	48	
CAUSTIC SODA	ALKALINITY CONTROL	SACK	7	7	371.0	229	
DEFOAMER	DEFOAMER	CAN	1	1	36.0	52	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	12	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	13	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	12	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	12	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	12	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	3,960	

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	Job ODR, 11/4/2018 13:30

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)
272_0_WFMP_A2	-5,596.0		8,329.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807

Accept: 11/15/2018 Release:
 Days Since LTI: 160.00 Days Since RI: 160.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 11/28/2018
 Report #: 17
 DFS: 15
 AFE #: 9000912
 Total AFE + Sup: \$4,068,828.95
 Daily Field Est. (Cost): \$152,002.06

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)
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, FOREMAN	FOREMAN		318-481-3868	KENNETH.TRANSIER@PXD.COM
SHELTON, GARY, FOREMAN	FOREMAN		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 161.00 **Days Since RI: 161.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/14/2019
Report #: 18
DFS: 16
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$65,139.00

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
10:15	MEETING	JSA	DAY	PJSM with PNR, & Patterson personnel on skidding rig.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Flush BOP's, Install Pack Off, N.D BOP's, Skid Rig, N/U BOP's, Test BOP's Trapped Pressure, P/U Dumb Iron, TIH, 100% Tie Off. R2LB - #1 Safe Work Permits, Core Value - #1 Respect
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Pinnergy #4 - During surface drilling operations the open top tank in the backyard overflowed due to miscommunication between the derrick hand and solids control employee. Approximately 3 barrels of fresh water was released on to the ground. Fresh water on the ground was immediately sucked up by vac truck that was on location.
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man working tongs while making up bit pulling the tongs trying to make the bite, stopped the job explained how the tongs worked showed him proper hand placement to the tongs he understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/11/2019	3RD Well / 3 Well pad (Revised on 1/13/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			8,404.0	19,076.0	65,139.00	1,874,354.69	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			8,309.1		6,114.00	97,797.24	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	10.0	250.0	Goal not Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depth>ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	0.00	0.00	0.00	0.00	0.00		

Operations Summary
Walk Rig from University 102H to University 103H, N/U BOP's, Test BOP's, M/U drill out BHA, TIH w/ same, Tag Dv tool Test 9 5/8 CSG above DV tool, drill out DV tool, test 9 5/8 csg t/ 2500 psi, TIH

Operations Next Report Period
Drill F/E, 10' new hole, FIT test, POOH

Operations at Report Time
Drilling F/E

Remarks
NPT for Jan.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs)
Surface:100%; Intermediate 100%; Curve: 0%; Lateral 0%
Last Survey: MD:8404', inc 0.24, az 138.49, Left 30.40 Above 9.40

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
10:15	0.25	10:30	PROD, PRE DRL	SFTY	NORMAL	PJSM with PNR, & Patterson personnel on skidding rig.	8,404.0	8,404.0		
10:30	3	13:30	PROD, PRE DRL	SKID	NORMAL	Walk Rig from University 102H to University 103H	8,404.0	8,404.0		
13:30	0.25	13:45	PROD, PRE DRL	SFTY	NORMAL	PJSM with PNR & Patterson personnel on nipple up BOPs.	8,404.0	8,404.0		
13:45	2	15:45	PROD, PRE DRL	NU_BOPE	NORMAL	N/U BOP's, (Install BOP on wellhead, R/U Turn buckles, choke line, kill line, & flow line.)	8,404.0	8,404.0		
15:45	0.25	16:00	PROD, PRE DRL	SFTY	NORMAL	PJSM with PNR, Battle, & Patterson personnel on testing BOP's.	8,404.0	8,404.0		
16:00	3	19:00	PROD, PRE DRL	TEST_BOPE	NORMAL	R/U Battle Testers, Test BOP's 250L/5000H, Hydril 250L/3500H, Floor valves & std. pipe 250L/5000H, ? Choke manifold (250/5000) and mud line to pumps (250/6000 psi) tested off line	8,404.0	8,404.0		
19:00	0.5	19:30	PROD, PRE DRL	WRBSH	NORMAL	Install Wear Bushing	8,404.0	8,404.0		
19:30	0.5	20:00	PROD, PRE DRL	RIG_SVC	NORMAL	Service rig	8,404.0	8,404.0		
20:00	0.5	20:30	PROD, PRE DRL	HDL_ROTND	NORMAL	Installed trip nipple	8,404.0	8,404.0		
20:30	0.25	20:45	PROD, PRE DRL	HDL_BHA	NORMAL	P/U Drill out BHA. (Bit, 2 junk baskets, bit sub)	8,404.0	8,404.0		
20:45	0.5	21:15	PROD, PRE DRL	HDL_BHA	NORMAL	Run 6 stds HWDP in hole F/ Derrick.	8,404.0	8,404.0		
21:15	2.75	00:00	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH t- 4257' (DV Tool)	8,404.0	8,404.0		
00:00	0.5	00:30	PROD, PRE DRL	CSG_TEST	NORMAL	Break circ, set down 50k 2 times. Test DV to 2500 psi for 5 min (ok)	8,404.0	8,404.0		
00:30	3	03:30	PROD, PRE DRL	DRL_OUT	NORMAL	Drill DV tool from 4257 to 4259; gpm 300; RPM 5-30; WOB 15	8,404.0	8,404.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
03:30	0.75	04:15	PROD, PRE DRL	CSG_TEST	NORMAL	Test 9 5/8 csg to 2500 psi for 30 min Good test	8,404.0	8,404.0		
04:15	1.5	05:45	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH 4259 to 8290 (Float Collar); ? displacing to trip tanks	8,404.0	8,404.0		
05:45	0.25	06:00	PROD, PRE DRL	DRL_OUT	NORMAL	Drill cmt & float equip 8290'	8,404.0	8,404.0		

Drill Strings

BHA #3, DRILL OUT

Bit Run 3	Drill Bit 8 3/4in, GX 117, 5294587	Bit Type MILL TOOTH	Make GE/BAKER HUGHES
Nozzles (1/32") 20/20/20	Bit Total Fluid Area (nozzles) (in²) 0.92	IADC Bit Dull -----	Hours Drilled By Bit (hr)
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB) 8,404.0
			Depth Out (ftKB) 8,404.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
94	DRILL PIPE	5	4.27	7,725.41	8,290.00	150,645.5	178	
18	HWDP	5	3.00	550.47	564.59	27,138.2	28	
1	SUB - BIT	6	3.50	3.95	14.12	194.7	1	
1	SUB - JUNK	6 1/2	2.25	4.64	10.17	228.8	0	
1	SUB - JUNK	7	2.25	4.53	5.53	223.3	0	

Sensors

Sensor Type	Sensor-Bit (ft)	Note

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 Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
00:30	03:30	8,404.0	0.00		15	25	0.0	300	400.0	1.0	160	160	160	160	3.0	3.0	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)
11.90	12.09	20.6	0.3	104.6	117.9	58.8	72.8	143.81	1.96	432.34

Mud Checks

Time 01:00	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 8,404.0	Density (lb/gal) 11.90	Funnel Viscosity (s/qt) 99	T Flowline (°F)	
PV (cP) 17.0	YP (lbf/100ft²) 13.000	Vis 3rpm 8	Vis 6rpm 9	Filtrate (mL/30min)	HTHP Filtrate (mL/30min) 18.0	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 21.0	Low Gravity Solids (%) 7.2	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
Chlorides (ppm) 23,000.000	Calcium (ppm) 8,000.000	CaCl (ppm) 23	Oil Water Ratio 84.8/15.2	Electric Stab (V) 928.0	Lime (lb/bbl) 2.3	pH	
Gel 10 sec (lbf/100ft²) 11.000	Gel 10 min (lbf/100ft²) 20.000	Gel 30 min (lbf/100ft²) 22.000					

Comment

Recommended Fluids Treatments:
 No Treatment. Daily cost on this report is for OBM rental only, all other costs reported on report #21 of the University 3-15B 102H.
 Drilling Fluids Activity Last 24 Hrs:
 First two mud checks (4am & 10am) are on report #21 of the University 3-15B 102H. Skid rig back to the University 3-15C 103H, nipple up and test BOP's. Pick up dumb iron and TIH to drill out DV tool.
 Drilling Fluids Forecast Next 24 Hrs:
 Displace to OBM and treat as necessary to maintain properties within program specs.
 Rig Activity Last 24 hrs
 Pre/post tour safety meetings. Skid rig to 103H well. PJSM with Cactus Well Head; nipple up BOP. PJSM with Cactus and Battle to set plug and test BOP's. Pull test plug and install wear bushings. Install trip nipple and center stack. M/U BHA. Start TIH at time of mud report.

Volumes

Daily Diesel Used	898 GAL
Cumulative Diesel Used	898 GAL
Diesel on Location	7,425 GAL
Daily Water Used	0 GAL
Cumulative Water Used	0 GAL
Daily OBM Surface Losses	BBLS
OBM Volume Accounting:	
Total OBM Received	BBLS
Total OBM Rental	2,038 BBLS
Total OBM on Location	1,652 BBLS
Daily Drying Shaker Recovered	0 BBLS
Cumulative Drying Shaker Recovered	0 BBLS
Daily OBM Downhole Losses	0 BBLS
Cumulative OBM Surface Losses	0 BBLS
Cumulative OBM Downhole Losses	0 BBLS

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Daily Drilling Report

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - 100% Tie Off, TIH, Spill Prevention, OBM Transfers, Hand and Body Placement, Pinch Points, PPE. R2LB - #2 By Passing Safety Critical Equipment, Core Value - #2 Ethics and Honesty
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Patterson 252 - While filling the hole with the trip tank pump the gasket for the valve washed out resulting in a 23 gallon release of OBM. 13 gallons were released inside containment and 10 gallons outside containment. The release was remediated, and 23 gallons were recovered.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Patterson 252 - While filling the hole with the trip tank pump the gasket for the valve washed out resulting in a 23 gallon release of OBM. 13 gallons were released inside containment and 10 gallons outside containment. The release was remediated, and 23 gallons were recovered.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Hand and Body Placement, Pinch Points, PPE, 100% Tie Off, TIH, Spill Prevention, OBM Transfers. R2LB - #2 By Passing Safety Critical Equipment, Core Value - #2 Ethics and Honesty
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man running the wrangler while P/U BHA he could not see around the drill pipe in the derrick stopped the job explained to the crew that the man could not see around the drill pipe got one crew member to flag the man running the wrangler while bring in BHA, they understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/5/2019	3RD Well / 3 Well pad (Revised on 1/15/19)

Daily Operations							
Footage/Meterage (ft) 10.00	Drilling Hours (hr) 1.50	% Rotating Time (%) 100.00	End Depth (ftKB) 8,414.0	Target Depth (ftKB) 19,076.0	Daily Field Est Total (Cost) 43,433.24	Cum Field Est To Date (Cost) 1,916,765.64	
24 HR ROP (ft/hr) 6.7	Circulating Hours (hr)	% Sliding Time (%) 0.00	End Depth (TVD) (ftKB) 8,319.1	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost) 3,213.24	Cum Mud Field Est (Cost) 99,988.19	Total AFE + Sup (Cost) 4,134,694.81
Daily Goal Description DRILLED FEET	Daily Goal - Last 24 250.0	Daily Goal - Next 24 300.0	Goal Comments Goal not met				
Backbuild Yes	Lateral Inclination	Last Casing String INTERMEDIATE, 8,385.0ftKB	Next Casing String PROPOSED PRODUCTION, <depthbtm>ftKB				
Avg Connection Gas 0.00	Avg Trip Gas 0.00	Avg Background Gas 12.00	Max Connection Gas 227.00	Max Trip Gas 0.00	Max Drill Gas 301.00		

Operations Summary
Push DV Tool debris down f- 8100' t- 8290'. Drilled Cement and Float Equipment, Drilled 10' new hole, FIT test, POOH, L/D drill out BHA, P/U Curve directional assy, TIH T/ 8383', Slip and cut drill line

Operations Next Report Period
TIH F/ 8383' T/ 8414', Drill Production curve

Operations at Report Time
Tripping in hole

Remarks
NPT for Jan.
Patterson: Past 24hr - 0 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs)
Surface:100%; Intermediate 100%; Curve: 0%; Lateral 0%
Last Survey : MD:8404', inc 0.24 , az 138.49, Left 30.40 Above 9.40

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	6	12:00	PROD, PRE DRL	TOOH_NONEL EV	NORMAL	Pushing DV Tool debris down f- 8100' t- 8290'.	8,404.0	8,404.0		
12:00	3	15:00	PROD, PRE DRL	DRL_OUT	NORMAL	Drilled Cement and Float Equipment f- 8290' t- 8404' ? Full Returns ? Displaced hole w/ OBM	8,404.0	8,404.0		
15:00	1.5	16:30	PROD, PRE DRL	DRL	NORMAL	Drilled 10' new hole f- 8404' t- 8414' ? full returns	8,404.0	8,414.0		
16:30	0.5	17:00	PROD, PRE DRL	FIT	NORMAL	FIT to 13.3 ppg EMW using 11.9 ppg PMW @ 640 psi	8,414.0	8,414.0		
17:00	0.25	17:15	PROD, PRE DRL	FLOW_CHK	NORMAL	Checked flow and pumped slug	8,414.0	8,414.0		
17:15	3.5	20:45	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH f- 8414' t- 564'. ? Filling hole from trip tanks	8,414.0	8,414.0		
20:45	0.5	21:15	PROD, PRE DRL	HDL_BHA	NORMAL	L/D 12 jts HWDP	8,414.0	8,414.0		
21:15	0.25	21:30	PROD, PRE DRL	HDL_BHA	NORMAL	Rack 2 stds HWDP into derrick.	8,414.0	8,414.0		
21:30	0.5	22:00	PROD, PRE DRL	HDL_BHA	NORMAL	L/D junk baskets bit and bit sub.	8,414.0	8,414.0		
22:00	0.25	22:15	PROD, PRE DRL	SFTY	NORMAL	PJSM - Discussed process to P/U Curve Assy w/ Gyrodata, Patterson and PNR personnel. Well static on trip tank	8,414.0	8,414.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
22:15	0.75	23:00	PROD, PRE DRL	PU_DIR	NORMAL	P/U and Orient Curve Assy Well static on trip tank	8,414.0	8,414.0		
23:00	0.25	23:15	PROD, PRE DRL	HDL_BHA	NORMAL	Ran 2 stds HWDP from derrick. ? Displacing to trip tanks proper displacement	8,414.0	8,414.0		
23:15	4.25	03:30	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH f- 273' t- 8383'. (Casing shoe) ? Displacing to trip tanks proper displacement	8,414.0	8,414.0		
03:30	0.5	04:00	PROD, PRE DRL	HDL_ROTTHD	NORMAL	Removed Trip Nipple and installed Rotating Head Assy Well static on trip tank	8,414.0	8,414.0		
04:00	1.5	05:30	PROD, PRE DRL	SLIP_CUT	NORMAL	Slip & cut D/L, Recalibrate Well static on trip tank	8,414.0	8,414.0		
05:30	0.5	06:00	PROD, PRE DRL	RIG_SVC	NORMAL	Service Rig Well static on trip tank	8,414.0	8,414.0		

Drill Strings

BHA #3, DRILL OUT

Bit Run 3	Drill Bit 8 3/4in, GX 117, 5294587	Bit Type MILL TOOTH	Make GE/BAKER HUGHES
Nozzles (1/32") 20/20/20	Bit Total Fluid Area (nozzles) (in ²) 0.92	IADC Bit Dull 1-1-NO-A-1-0-NO-BHA	Hours Drilled By Bit (hr) 1.50
BHA Drilling Time (hr) 1.50	BHA Depth Drilled (ft) 10.00	BHA ROP (ft/hr) 6.7	Depth In (ftKB) 8,414.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
94	DRILL PIPE	5	4.27	7,849.41	8,414.00	153,063.5	181	
18	HWDP	5	3.00	550.47	564.59	27,138.2	28	
1	SUB - BIT	6	3.50	3.95	14.12	194.7	1	
1	SUB - JUNK	6 1/2	2.25	4.64	10.17	228.8	0	
1	SUB - JUNK	7	2.25	4.53	5.53	223.3	0	

Sensors

Sensor Type	Sensor-Bit (ft)	Note

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 Average (ft/hr)	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	8,404.0	10.00	6.7	15	25	0.0	300	400.0	6.0	160	160	160	160	3.0	3.0	0

BHA #4, PRODUCTION - CURVE

Bit Run 4	Drill Bit 8 1/2in, GTD55DM, 13176630	Bit Type PDC	Make HALLIBURTON
Nozzles (1/32") 14/14/14/14/14	Bit Total Fluid Area (nozzles) (in ²) 0.75	IADC Bit Dull -----	Hours Drilled By Bit (hr)
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB) 8,414.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
94	DRILL PIPE	5	4.27	7,849.41	8,123.05	153,063.5	168	
6	HWDP	5	3.00	182.84	273.64	6,759.6	15	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 5/8	3.31	29.99	90.80	2,699.1	8	STABIL DRILL
1	DRILL COLLAR - NON MAG	6 7/8	3.25	31.07	60.81	2,796.3	5	STABIL DRILL
1	SUB - UBHO	6 3/4	2.75	3.05	29.74	274.5	3	GYRODATA
1	MOTOR - TRUE SLICK	6 3/4	2.88	25.84	26.69	2,325.6	2	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675028	2.12	NOT SEALED	6:7	5		4

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	32.00	
D&I (INC/AZI)	43.00	

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 Average (ft/hr)	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	8,414.0	0.00		15	25	0.0	300	400.0	6.0	160	160	160	160	3.0	3.0	0

Hydraulic Calculations

Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
11.90	12.12	30.9	0.5	128.1	176.8	70.4	70.4	146.71	2.86	431.10

Daily Drilling Report

Mud Checks

Time 00:00	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 8,414.0	Density (lb/gal) 11.90	Funnel Viscosity (s/qt) 94	T Flowline (°F)	
PV (cP) 17.0	YP (lb/100ft²) 15.000	Vis 3rpm 9	Vis 6rpm 9	Filtrate (mL/30min)	HTHP Filtrate (mL/30min) 18.2	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 21.0	Low Gravity Solids (%) 7.1	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
Chlorides (ppm) 24,000.000	Calcium (ppm) 8,400.000	CaCl (ppm) 238,400	Oil Water Ratio 84.8/15.2	Electric Stab (V) 856.0	Lime (lb/bbl) 2.5	pH	
Gel 10 sec (lb/100ft²) 12.000	Gel 10 min (lb/100ft²) 21.000	Gel 30 min (lb/100ft²) 26.000					

Comment
 Recommended Fluids Treatments:
 Maintain MW 11.9 ppg with bulk barite additions. As needed, add Megadrive P, Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction of drilling assembly; Run diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP. Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.

Drilling Fluids Activity Last 24 Hrs:

No treatment today. Displaced to OBM. Barite usage for slug.

Drilling Fluids Forecast Next 24 Hrs:

Treat as necessary to maintain properties within program specs.

Rig Activity Last 24 hrs

Pre/post tour safety meetings. Spill drill. Continue to TIH and wash down from 8100' to 8281', tag Float Collar, drill out FC and Float Shoe @ 8374', wash down to 8404'. Drill to 8414', FIT Test to 13.5ppg @699 psi. Flow check, well static, pump slug. POOH. L/D BHA at time of mud report.

Volumes

Daily Diesel Used	0 GAL
Cumulative Diesel Used	898 GAL
Diesel on Location	7,425 GAL
Daily Water Used	0 GAL
Cumulative Water Used	0 GAL
Daily OBM Surface Losses	10 BBLS
OBM Volume Accounting:	
Total OBM Received	BBLS
Total OBM Rental	2,038 BBLS
Total OBM on Location	1,646 BBLS
Daily Drying Shaker Recovered	0 BBLS
Cumulative Drying Shaker Recovered	0 BBLS
Daily OBM Downhole Losses	0 BBLS
Cumulative OBM Surface Losses	10 BBLS
Cumulative OBM Downhole Losses	0 BBLS

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	HEEL	
	TOE	
	KICK OFF	

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	1,245	0	74"	11,324	15,573.0
DIESEL	FUEL	GAL	4,284	0	0		8,568	0.0
DIESEL	MUD	GAL	0	279	0		7,425	1,177.0
WATER	FRESH	BBL	0	0	0	109180 METER READING	57,348	25,115.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON	75	3	72.0	7
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	48
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	12
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	13
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	12
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	12
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	12
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	3,960

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 162.00 Days Since RI: 162.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/15/2019
 Report #: 19
 DFS: 17
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$43,433.24

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
272_0_WFMP_A2	-5,596.0		8,329.5		
271_0_WFMP_A3	-5,741.0		8,474.5		
275_0_WFMP_B1	-5,833.0		8,566.5		
276_0_WFMP_B2	-5,910.0		8,643.5		
278_0_WFMP_B3	-6,173.0		8,906.5		
WFMP B3 TOT	-6,199.0		8,932.5		
INTENDED LANDING POINT (ILP)	-6,215.0		8,948.5		
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SHELTON, GARY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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Daily Drilling Report

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 390 - While contractor was pulling slack out of the diesel pressure washer line, he inadvertently struck himself in the mouth with the wand. Contractor received minor injuries. First aid was performed on location and he refused medical attention.
06:00	MEETING	PRE-TOUR	DAY	PTSM - PPE, Spill Prevention, Transfer OBM, Housekeeping, Making Connections. R2LB - #3 Confined Space Entry, Core Value - #3 Safety
14:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed man get on forklift and start it up without fastening seat belt. I stopped him and asked why he hadn't fastened his seat belt. He told me he was only moving it to it's proper parking spot. I told him moving it is driving it and that requires a seat belt. He said he understood and buckled up
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 390 - While contractor was pulling slack out of the diesel pressure washer line, he inadvertently struck himself in the mouth with the wand. Contractor received minor injuries. First aid was performed on location and he refused medical attention.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Housekeeping, Making Connections, PPE, Spill Prevention, Transfer OBM. R2LB - #3 Confined Space Entry, Core Value - #3 Safety

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/5/2019	3RD Well / 3 Well pad (Revised on 1/15/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
1,323.00	24.00	48.61	9,737.0	19,076.0	42,003.03	1,958,768.67
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
55.1		51.39	8,962.9	5,373.03	105,361.22	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	300.0	1,500.0	Met goal			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depth>ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas			
128.00	0.00	95.00	2,232.00			
Max Trip Gas	Max Drill Gas					
0.00	231.00					

Operations Summary
 Drill curve F/8,485' T/9,362', drill lateral T/9,737
 Operations Next Report Period
 Drill Lateral F/9,737 T/11,237
 Operations at Report Time
 Drilling Lateral At 9,737

Remarks
 NPT for Jan.
 Patterson: Past 24hr - 0 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 2%
 Last Survey : MD:9599' , inc 89.27 , az 178.57 Left 5.44 Above 12.51

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.25	06:15	PROD, PRE DRL	TIH_NONELEV	NORMAL	Washed f- 8383' t- 8414'. ? good returns	8,414.0	8,414.0		
06:15	3	09:15	PROD, DRL CURVE	DRL	NORMAL	Drilled production hole to KOP F/ 8414' - T/8485'. 425 gpm. 30 rpm, full returns	8,414.0	8,485.0		
09:15	15.25	00:30	PROD, DRL CURVE	DRL	NORMAL	Drill curve section F/ 8485' - T/ 9,362' (877' @ 57' fph) with 100% Returns. WOB:30-36, SPP:4350, GPM:570, MM:165 ? Landed Curve @ 00.30 1-16-19	8,485.0	9,362.0		
00:30	5.5	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section F/ 9,362' - T/ 9,737' (375' @ 68' fph) 100% Returns. WOB:30-34, SPP:4550, GPM:600, MM:174	9,362.0	9,737.0		

Bit Run	Drill Bit	Bit Type	Make
4	8 1/2in, GTD55DM, 13176630	PDC	HALLIBURTON
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
14/14/14/14	0.75	-----	24.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
24.00	1,323.00	55.1	8,414.0
			Depth Out (ftKB)
			9,737.0

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
300	DRILL PIPE	5	4.27	9,463.36	9,737.00	184,535.5	199	
6	HWDP	5	3.00	182.84	273.64	6,759.6	15	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 5/8	3.31	29.99	90.80	2,699.1	8	STABIL DRILL
1	DRILL COLLAR - NON MAG	6 7/8	3.25	31.07	60.81	2,796.3	5	STABIL DRILL
1	SUB - UBHO	6 3/4	2.75	3.05	29.74	274.5	3	GYRODATA

PATTERSON - UTI #807

Accept: 11/15/2018 **Release:**
Days Since LTI: 163.00 **Days Since RI: 163.00**

Daily Drilling Report

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
1	MOTOR - TRUE SLICK	6 3/4	2.88	25.84	26.69	2,325.6	2	Gyrodata

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675028	2.12	NOT SEALED	6:7	5		4

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	32.00	
D&I (INC/AZI)	43.00	

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 Average (ft/hr)	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	08:15	8,414.0	71.00	31.6	25	50	400.0	550	3,543.0	65.0	199	215	189	160	10,000.0	4,500.0	0	
08:15	11:30	8,485.0	127.00	39.1	33	0	275.0	550	3,333.0	45.0	199	215	189	160	0.0	0.0	181	
11:30	12:00	8,612.0	20.00	40.0	25	50	350.0	550	3,243.0	65.0	199	215	189	160	8,000.0	3,500.0	0	
12:00	13:30	8,632.0	74.00	49.3	34	0	325.0	550	3,240.0	45.0	199	215	189	160	0.0	0.0	340	
13:30	14:30	8,706.0	45.00	45.0	25	50	400.0	550	3,243.0	65.0	199	215	189	160	8,000.0	3,500.0	0	
14:30	15:15	8,751.0	49.00	65.3	34	0	425.0	550	3,240.0	45.0	199	215	189	160	0.0	0.0	285	
15:15	15:45	8,800.0	31.00	62.0	25	50	500.0	550	3,243.0	65.0	199	215	189	160	8,000.0	3,500.0	0	
15:45	17:00	8,831.0	63.00	50.4	36	0	400.0	550	3,300.0	65.0	199	220	189	160	0.0	0.0	360	
17:00	17:30	8,894.0	63.00	126.0	25	50	450.0	550	3,243.0	65.0	199	215	189	160	8,000.0	3,500.0	0	
17:30	18:00	8,957.0	31.00	62.0	36	0	400.0	550	3,300.0	65.0	199	220	189	160	0.0	0.0	360	
18:00	18:35	8,988.0	31.00	53.1	26	50	450.0	550	3,353.0	75.0	199	215	189	160	8,000.0	3,500.0	0	
18:35	19:35	9,019.0	62.00	62.0	36	0	400.0	550	3,300.0	65.0	199	220	189	160	0.0	0.0	360	
19:35	20:00	9,081.0	19.00	45.6	26	50	450.0	550	3,350.0	75.0	199	220	189	160	8,000.0	3,500.0	0	
20:00	21:15	9,100.0	75.00	60.0	32	0	400.0	550	3,300.0	65.0	199	220	189	160	0.0	0.0	360	
21:15	21:40	9,175.0	25.00	60.0	28	50	450.0	575	3,550.0	85.0	215	230	197	160	9,000.0	4,000.0	0	
21:40	22:55	9,200.0	69.00	55.2	33	0	400.0	575	3,400.0	75.0	215	230	197	160	0.0	0.0	360	
22:55	23:35	9,269.0	53.00	79.5	28	50	450.0	575	3,550.0	110.0	215	230	197	160	10,000.0	4,000.0	0	
23:35	00:30	9,322.0	40.00	43.6	34	0	450.0	575	3,450.0	65.0	215	230	197	160	0.0	0.0	360	
00:30	02:05	9,362.0	104.00	65.7	29	50	450.0	575	3,550.0	125.0	215	230	197	160	10,000.0	4,000.0	0	
02:05	02:45	9,466.0	35.00	52.5	32	0	450.0	575	3,450.0	65.0	210	230	195	160	0.0	0.0	245	
02:45	06:00	9,501.0	236.00	72.6	32	65	525.0	600	3,825.0	125.0	210	230	195	160	11,000.0	5,000.0	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)
11.70	12.14	243.3	4.3	256.1	695.1	16.8	588.6	170.08	61.65	430.71

Daily Drilling Report

Mud Checks

Time 01:30	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 9,210.0	Density (lb/gal) 11.70	Funnel Viscosity (s/qt) 64	T Flowline (°F) 113.0
PV (cP) 17.0	YP (lb/100ft²) 10.000	Vis 3rpm 7	Vis 6rpm 8	Filtrate (mL/30min) 13.4	HTHP Filtrate (mL/30min) 13.4	HTHP Temperature (°F) 250.0
Solids (%) 20.0	Low Gravity Solids (%) 6.8	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	HTHP Pressure (psi) 500.0	
Chlorides (ppm) 23,000.000	Calcium (ppm) 8,800.000	CaCl (ppm) 216,800	Oil Water Ratio 83.8/16.2	Electric Stab (V) 956.0	Lime (lb/bbl) 3.4	pH
Gel 10 sec (lb/100ft²) 11.000	Gel 10 min (lb/100ft²) 21.000	Gel 30 min (lb/100ft²) 23.000				

Comment
 Maintain MW 11.7ppg with bulk barite additions. As needed, add Megadrive P, Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction of drilling assembly; Run diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP. Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.

Drilling Fluids Activity Last 24 Hrs:

MW maintained around 11.7ppg; diesel @3 bbls/hr & water 1.2 bbls/hr for volume, OWR and aid in lowering LSG; Megadrive S for diesel/water additions and keeping solids oil-wet; Graphite for friction reduction; Lime for alkalinity and calcium source for emulsifier; VG Plus for rheologies (YP & low-end) and filter cake lubricity; Versatrol for HTHP fluid loss.

Rig Activity Last 24 hrs

Pre/post tour safety meetings. BOP Trip Drill. TIH to 8425', remove trip nipple and install rotating head. Slip & cut drill line. Drilling and sliding building curve at time of mud report.

Volumes

Daily Diesel Used	2,908 GAL
Cumulative Diesel Used	3,806 GAL
Diesel on Location	4,517 GAL
Daily Water Used	1,218 GAL
Cumulative Water Used	1,218 GAL
Daily OBM Surface Losses	64 BBLS
OBM Volume Accounting:	
Total OBM Received	BBLS
Total OBM Rental	2,038 BBLS
Total OBM on Location	1,678 BBLS
Daily Drying Shaker Recovered	50 BBLS
Cumulative Drying Shaker Recovered	50 BBLS
Daily OBM Downhole Losses	0 BBLS
Cumulative OBM Surface Losses	79 BBLS
Cumulative OBM Downhole Losses	0 BBLS

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	TOE	
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	2,242	0		9,082	17,815.0
DIESEL	FUEL	GAL	0	0	0		8,568	0.0
DIESEL	FUEL	GAL	0				8,568	0.0
DIESEL	MUD	GAL	0	2,908			4,517	4,085.0
WATER	FRESH	BBL	0	0	0	109180 METER READING	57,348	25,115.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	52
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	13
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	14
GRAPHITE	FLUID LOSS ADDITIVES	SACK		22	-22.0	22
LIME	ALKALINITY CONTROL	SACK		22	-22.0	29
MEGADRIVE S	SPECIALITY	DRUM	1	1	0.0	1
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	13
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	13

Daily Drilling Report

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	13
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	4,290
VERSATROL M	OIL MUD ADDITIVE	SACK	223	15	208.0	15
VG-PLUS	OIL MUD ADDITIVE	SACK	58	8	50.0	8

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	9,457.0	01:00	570.0	50	176	95
1	9,457.0	01:00	450.0	40	141	95
1	9,457.0	02:00	370.0	30	106	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8,475.00	0.36	178.87	8,380.14	-381.52	363.18	872.40	0.43
8,568.00	15.56	195.70	8,471.97	-369.08	350.81	869.01	16.36
8,662.00	27.28	195.39	8,559.33	-335.87	317.78	859.85	12.47
8,756.00	33.56	189.44	8,640.36	-289.21	271.33	849.86	7.40
8,850.00	40.05	181.09	8,715.64	-233.16	215.36	845.01	8.70
8,944.00	45.27	182.05	8,784.74	-169.49	151.71	843.24	5.60
9,037.00	51.19	181.50	8,846.66	-100.16	82.42	841.11	6.38
9,131.00	61.59	182.92	8,898.63	-22.00	4.30	838.04	11.13
9,225.00	73.97	183.06	8,934.10	64.81	-82.43	833.50	13.17
9,318.00	81.71	183.48	8,953.68	155.60	-173.13	828.31	8.33
9,412.00	90.61	185.98	8,959.97	249.11	-266.49	820.58	9.83
9,505.00	89.32	179.42	8,960.03	342.02	-359.34	816.20	7.19
9,599.00	89.27	178.57	8,961.18	435.94	-453.31	817.85	0.91

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		
BHL	-6,240.0		8,973.5		

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
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
PASSMORE, DAVID, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR	432-360-4057	318-780-3935	DAVID.PASSMORE@PXD.COM
SANDERS, RODNEY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-435-1713	RODNEY.SANDERS@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 164.00 Days Since RI: 164.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/17/2019
Report #: 21
DFS: 19
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$49,081.76

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub	KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50
		Ground Elevation (ft) 2,705.00	Spud Date 11/5/2018
			TD Date

Safety Checks				
Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Alarms and Drills, Making Connections, PPE, Pinch Points and Body Placement, Spill Prevention, OBM Transfers. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Patterson 253 - While contractor was operating the manlift to pin the derrick board, he struck the derrick board causing damage to the basket railing.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Patterson 253 - While contractor was operating the manlift to pin the derrick board, he struck the derrick board causing damage to the basket railing.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Pinch Points and Body Placement, Spill Prevention, OBM Transfers, H2S Alarms and Drills, Making Connections, PPE. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
18:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Observed Hand pressure washing rig floor without faceshield. Stopped hand and ask him if there was a reason for not using faceshield. Hand said he would be using pressure washer for just a few minutes. Even though he had safety glasses it was explained to him that faceshield was the proper PPE to use when pressure washing to avoid getting any debris in his face or eyes. Hand understands to use proper PPE from now on.

Jobs					
Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Job Dates (ex. Estimated Pad Release, TXRRRC Calls)			
Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/5/2019	3RD Well / 3 Well pad (Revised on 1/15/19)

Daily Operations							
Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
1,412.00	15.25	78.14	11,336.0	19,076.0	49,081.76	2,020,718.43	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
92.6	3.25	21.86	9,008.5		12,451.76	117,812.98	4,134,694.81
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET		1,500.0	1,500.0	Not met due to NPT on Rig			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depthbtm>ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
337.00	0.00	47.00	715.00	265.00	664.00		

Operations Summary
 Drill Lateral from 9,737 to 11336'

Operations Next Report Period
 Drill Lateral T/12,836'

Operations at Report Time
 Drilling Lateral At 11,336'

Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 2%
 Last Survey : MD:11,104 , inc 89.49 , az 184.12 Right 10.24 Above 10.24

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	6.5	12:30	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section F/ 9,737' - T/ 10,490' (753' @ 115' fph) 100% Returns. WOB:30-34, SPP:4550, GPM:600, MM:174	9,737.0	10,490.0		
12:30	0.5	13:00	PROD, DRL LAT	CIRC	NORMAL	CBU prior to trip to shoe to change contaminated oil in top drive.	10,490.0	10,490.0	0.50	12
13:00	0.25	13:15	PROD, DRL LAT	FLOW_CHK	NORMAL	Checked flow and pumped slug	10,490.0	10,490.0	0.25	12
13:15	1.25	14:30	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH f- 10,490' t- 8350' ? Filling hole from trip tanks	10,490.0	10,490.0	1.25	12
14:30	1	15:30	PROD, DRL LAT	RIG_RPR	NORMAL	Changed contaminated oil in top drive	10,490.0	10,490.0	1.00	12
15:30	0.5	16:00	PROD, DRL LAT	RIG_SVC	NORMAL	Service Rig & Top Drive.	10,490.0	10,490.0	0.50	12
16:00	1.25	17:15	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f- 8350' t- 10,490' ? displacing to trip tanks	10,490.0	10,490.0	1.25	12
17:15	5.75	23:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section F/ 10,490' - T/ 11,052' (562' @ 97' fph) 100% Returns. WOB:30-34, SPP:4550, GPM:600, MM:174	10,490.0	11,052.0		
23:00	2.5	01:30	PROD, DRL LAT	RIG_RPR	NORMAL	Rack Back 1 std; Circ while Toubleshoot Leaking module; Remove #3 Suction Module On #2 Mud Pump Found Worn Gasket And Change Out Same	11,052.0	11,052.0	2.50	13
01:30	4.5	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section F/ 11,052' - T/ 11,336' (282' @ 63' fph) 100% Returns. WOB:30-34, SPP:4550, GPM:600, MM:174	11,052.0	11,336.0		

Daily Drilling Report

Interval Problems

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
12	4.75	No	ROTARY SYSTEM	TOP DRIVE	9,585.50	PATTERSON-UTI DRILLING COMPANY LLC	trip to shoe to change contaminated oil in top drive. And Trip Back To Bottom.
RIG, 11,052.0ftKB, 1/16/2019 23:00							
13	2.50	No	CIRCULATING SYSTEM	MUD PUMPS	5,000.00	PATTERSON-UTI DRILLING COMPANY LLC	Rack Back 1 Stand Back In Derick. Criculat While Toubleshoot Leaking Module Remove #3 Suction Module On #2 Mud Pump Found Worn Gasket And Change Out Same

Drill Strings

BHA #4 , PRODUCTION - CURVE			
Bit Run	Drill Bit	Bit Type	Make
4	8 1/2in, GTD55DM, 13176630	PDC	HALLIBURTON
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
14/14/14/14/14	0.75	-----	39.25
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
39.25	2,735.00	69.7	8,414.0
			Depth Out (ftKB)
			11,336.0

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
351	DRILL PIPE	5	4.27	11,062.36	11,336.00	215,716.0	231	
6	HWDP	5	3.00	182.84	273.64	6,759.6	15	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 5/8	3.31	29.99	90.80	2,699.1	8	STABIL DRILL
1	DRILL COLLAR - NON MAG	6 7/8	3.25	31.07	60.81	2,796.3	5	STABIL DRILL
1	SUB - UBHO	6 3/4	2.75	3.05	29.74	274.5	3	GYRODATA
1	MOTOR - TRUE SLICK	6 3/4	2.88	25.84	26.69	2,325.6	2	Gyrodata

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defn Type	Bit To Bend
GDM675028	2.12	NOT SEALED	6:7	5		4

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	32.00	
D&I (INC/AZI)	43.00	

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 Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
07:15	08:00	9,924.0	94.00	125.3	31	0	300.0	600	3,500.0	55.0	210	230	190	210	0.0	0.0	40
08:00	09:00	10,018.0	94.00	94.0	29	65	550.0	600	3,850.0	186.0	210	230	190	210	11,000.0	5,500.0	0
09:00	09:15	10,112.0	13.00	52.0	36	0	300.0	600	3,640.0	70.0	210	230	190	210	0.0	0.0	180
09:15	11:30	10,125.0	270.00	120.0	27	65	524.0	600	3,930.0	180.0	210	230	190	210	12,000.0	6,500.0	0
11:30	11:45	10,395.0	10.00	40.0	39	0	250.0	600	3,650.0	50.0	201	238	170	201	0.0	0.0	30
11:45	12:30	10,405.0	84.00	112.0	27	65	545.0	600	3,930.0	180.0	201	238	170	201	12,000.0	6,500.0	0
12:30	13:00	10,489.0	0.00		0	65	0.0	600	3,400.0	0.0	201	238	170	201	5,000.0	5,000.0	0
17:15	17:45	10,489.0	10.00	20.0	30	0	250.0	600	3,650.0	45.0	201	238	170	201	0.0	0.0	255
17:45	21:20	10,499.0	376.00	104.9	32	70	485.0	600	4,025.0	170.0	201	238	170	201	12,000.0	5,000.0	0
21:20	21:45	10,875.0	10.00	24.0	28	0	200.0	600	3,750.0	40.0	205	240	170	205	0.0	0.0	90
21:45	23:00	10,885.0	167.00	133.6	32	70	500.0	600	4,175.0	200.0	205	240	170	205	14,500.0	6,000.0	0
23:00	01:45	11,052.0	0.00		0	65	0.0	300	1,200.0	0.0	205	240	170	205	5,000.0	5,000.0	0
01:45	01:50	11,052.0	10.00	120.0	32	70	500.0	600	4,175.0	120.0	205	240	170	205	13,000.0	6,000.0	0
01:50	02:20	11,062.0	10.00	20.0	28	0	200.0	600	3,800.0	35.0	205	240	170	205	0.0	0.0	255
02:20	03:00	11,072.0	86.00	129.0	32	65	425.0	600	4,100.0	145.0	205	240	170	205	13,000.0	6,000.0	0
03:00	03:40	11,158.0	12.00	18.0	24	0	225.0	0	1,850.0	28.0	205	240	170	205	0.0	0.0	255
03:40	06:00	11,170.0	166.00	71.1	30	70	450.0	600	4,075.0	125.0	205	240	170	205	14,000.0	6,000.0	0

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)
11.80	12.33	245.4	4.3	256.1	701.1	16.8	588.6	198.40	135.05	430.71

Daily Drilling Report

Mud Checks									
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
01:00	PIONEER DRILLING FLUIDS			OIL BASE	10,923.0	11.80	61	120.0	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)		
17.0	11.000	6	7		15.2	250.0	500.0		
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
20.5		7.1							
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH			
22,000.000	8,600.000	209,400	83.6/16.4	772.0	3.6				
Gel 10 sec (lb/100ft²)				Gel 10 min (lb/100ft²)		Gel 30 min (lb/100ft²)			
10.000				20.000		22.000			
Comment									
Maintain MW 11.7 ppg with bulk barite additions. As needed, add Megadrive P, Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction of drilling assembly; Run diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss.									
Drilling Fluids Activity Last 24 Hrs:									
MW maintained around 11.7ppg with bulk barite; diesel @3 bbls/hr & water 1.2 bbls/hr for volume, OWR and aid in lowering LSG; Megadrive P; Graphite for friction reduction; Lime for alkalinity and calcium source for emulsifier; VG Plus for rheologies and filter cake quality; Versatrol for HTHP fluid loss..									
Rig Activity Last 24 hrs									
Pre/post tour safety meetings. Drilled & slide curve and landed @ 9362'. Drilling/sliding lateral to 10,490', circulated B/U, flow check and well static. Trip to shoe 8327'. Change contaminated oil in Top Drive. TIH to 10,490'. Drilling and sliding lateral to 11,052'. Rack back one stand & circulate due to washed module on MP #2. Circulate while waiting on new module at time of mud report.									
Volumes									
Daily Diesel Used	3,917 GAL								
Cumulative Diesel Used	7,723 GAL								
Diesel on Location	4,098 GAL								
Daily Water Used	1,092 GAL								
Cumulative Water Used	2,310 GAL								
Daily OBM Surface Losses	59 BBLS								
OBM Volume Accounting:									
Total OBM Received	BBLS								
Total OBM Rental	2,038 BBLS								
Total OBM on Location	1,774 BBLS								
Daily Drying Shaker Recovered	20 BBLS								
Cumulative Drying Shaker Recovered	70 BBLS								
Daily OBM Downhole Losses	0 BBLS								
Cumulative OBM Surface Losses	138 BBLS								
Cumulative OBM Downhole Losses	0 BBLS								
Last BOP Test									
Date	Test Type	Item Tested	Next Test Date	Com					
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000					
Leak Off and Formation Integrity Tests									
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)							
FORMATION INTEGRITY	1,244.0	12.75							
LEAK OFF	8,414.0	13.38							
Casing Pressure Test									
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)			
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0			
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0			
Kick Offs & Key Depths									
Date	Type	Top Depth (ftKB)							
	TOE								
1/15/2019 09:15	KICK OFF	8,485.0							
1/16/2019 00:30	HEEL	9,362.0							
Casing Strings									
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)		
CONDUCTOR	148.5		20	H40	78.67				
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5		
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7		
Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	3,696	2,299			10,479	20,114.0	
DIESEL	FUEL	GAL	0	0	0	42"	4,284	0.0	
DIESEL	MUD	GAL	3,498	3,917			4,098	8,002.0	
WATER	FRESH	BBL	0	0	0	109180 METER READING	57,348	25,115.0	
Mud Additive Amounts									
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons			
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		22	50.0	29			
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	56			
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	1,131	1,131	0.0	3,013			
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	14			
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	15			
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	1			
GRAPHITE	FLUID LOSS ADDITIVES	SACK		39	166.0	61			
LIME	ALKALINITY CONTROL	SACK		28	346.0	57			
MEGADRIVE P	SPECIALITY	DRUM		1	6.0	1			
Daily Drilling Report									

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 164.00 Days Since RI: 164.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/17/2019
 Report #: 21
 DFS: 19
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$49,081.76

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	14
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	14
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	14
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	4,620
VERSATROL M	OIL MUD ADDITIVE	SACK		9	199.0	24
VG-PLUS	OIL MUD ADDITIVE	SACK		3	47.0	11

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
9,974.00	88.48	180.71	8,977.17	810.36	-827.90	822.14	2.91	
10,068.00	91.25	182.82	8,977.39	904.34	-921.85	819.24	3.70	
10,162.00	86.64	181.39	8,979.13	998.28	-1,015.74	815.79	5.13	
10,256.00	86.27	182.00	8,984.94	1,092.10	-1,109.52	813.02	0.76	
10,351.00	86.41	182.92	8,991.00	1,186.88	-1,204.23	808.95	0.98	
10,539.00	90.19	180.82	8,996.58	1,374.74	-1,392.01	802.82	2.30	
10,633.00	88.82	180.11	8,997.39	1,468.73	-1,486.00	802.06	1.64	
10,726.00	88.65	179.99	8,999.44	1,561.69	-1,578.97	801.98	0.22	
10,821.00	88.79	179.21	9,001.57	1,656.63	-1,673.95	802.64	0.83	
10,915.00	88.85	183.20	9,003.50	1,750.59	-1,767.89	800.66	4.24	
11,010.00	89.02	183.60	9,005.27	1,845.50	-1,862.70	795.03	0.46	
11,104.00	89.49	184.12	9,006.49	1,939.39	-1,956.48	788.70	0.75	

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
SANDERS, RODNEY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-435-1713	RODNEY.SANDERS@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 165.00 Days Since RI: 165.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/18/2019
Report #: 22
DFS: 20
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$116,915.18

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:15	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #5Entrepreneurship Core Value - #5 Fall or elevated work safety
06:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	H&P 429 While drilling at 7687' H2S alarm sounded. Shut well in and everyone mustered in safe area. SAT was on location monitoring the area. SAT's monitor read 25 ppm, at it's highest. When H2S was clear, everyone returned to normal peration.
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 429 While drilling at 7687' H2S alarm sounded. Shut well in and everyone mustered in safe area. SAT was on location monitoring the area. SAT's monitor read 25 ppm, at it's highest. When H2S was clear, everyone returned to normal peration.
18:15	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #5Entrepreneurship Core Value - #5 Fall or elevated work safety
23:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Observed employee walked under lifted elevators. Stopped hand and spoke to same.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/30/2019	3RD Well / 3 Well pad (Revised on 1/17/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
361.00	4.00	85.42	11,697.0	19,076.0	116,915.18	2,144,067.61	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
90.2	4.00	14.58			10,158.78	127,971.76	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	1,500.0	1,500.0	Not met due to Trip for BHA				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depthbtm>ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
337.00	335.00	82.00	422.00	415.00	367.00		

Operations Summary
 Drill lateral f/ 11,336 to 11,440' CBU 2x, TOOH f/ Bit and Motor, TIH. Drill f/ 11,440' to 11,697'

Operations Next Report Period
 Drill Lateral T/12,836'

Operations at Report Time
 Drilling Lateral At 11,697'.

Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 24%
 Last Survey : 11,516 MD, INC 91.41, AZ 182.57

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	1.75	07:45	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 11,336' to 11,440' (104' @ 59' fph) 100% Returns. WOB:30-34, SPP:4550, GPM:600, MM:174 ROP slowed to 18/20 fph	11,336.0	11,440.0		
07:45	1.5	09:15	PROD, DRL LAT	CIRC	NORMAL	Circulate 2 x bottoms up, to TOOH, 13,600 PS 600 GPM w/ 4000 psi, w/ full returns.70 RPM w/ 8/12K	11,440.0	11,440.0		
09:15	0.25	09:30	PROD, DRL LAT	FLOW_CHK	NORMAL	Flow check well. Well static.	11,440.0	11,440.0		
09:30	5	14:30	PROD, DRL LAT	TOOH_NONEL EV	NORMAL	Tooh f/ 11,440' to BHA. Well taking correct displacement.	11,440.0	11,440.0		
14:30	0.5	15:00	PROD, DRL LAT	HDL_ROTTHD	NORMAL	Remove rotating head and install trip nipple. Well static.	11,440.0	11,440.0		
15:00	0.25	15:15	PROD, DRL LAT	L/D BHA	NORMAL	L/D BHA. well static.	11,440.0	11,440.0		
15:15	0.5	15:45	PROD, DRL LAT	LD_DIR	NORMAL	PJSM. w/ Gyrodata. L/D BHA.	11,440.0	11,440.0		
15:45	0.5	16:15	PROD, DRL LAT	PU_DIR	NORMAL	PJSM w/ Gyro Data.P/U BHA	11,440.0	11,440.0		
16:15	1.75	18:00	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 254' to 2750'. Correct displacement.	11,440.0	11,440.0		
18:00	0.75	18:45	PROD, DRL LAT	HDL_AGITATO R	NORMAL	P/U, install and test agitator. 300 PSI increase 1000 psi to 1300 psi.	11,440.0	11,440.0		
18:45	2.75	21:30	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 2750' to 8095'. Correct displacement.	11,440.0	11,440.0		
21:30	0.5	22:00	PROD, DRL LAT	HDL_ROTTHD	NORMAL	Pull trip nipple and install rotating head. Well static.	11,440.0	11,440.0		
22:00	0.25	22:15	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 8095' to 8470'. Correct Displacement.	11,440.0	11,440.0		

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Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
22:15	1.25	23:30	PROD, DRL LAT	SRVY_MGMT	NORMAL	Survey F/ 8470' to 9033'. 6 axis survey. Relog f/ 8983' to 9033'. SURVEY 8564 8657 8751 8845 8939 9033	11,440.0	11,440.0		
23:30	2.5	02:00	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 9033' to 11,440'. Correct displacement.	11,440.0	11,440.0		
02:00	1.5	03:30	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 11,440' to 11,571' (131' @ 87.3' fph) 100% Returns. WOB:24/28/, SPP:4600, GPM:600, MM:144, Rot 70, TQ 12/15	11,440.0	11,571.0		
03:30	0.5	04:00	PROD, DRL LAT	RIG_SVC	NORMAL	Rig Service	11,571.0	11,571.0		
04:00	2	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 11,571' to 11,697' (126' @ 63' fph) 100% Returns. WOB:24/28/, SPP:4600, GPM:600, MM:144, Rot 70, TQ 12/15 Lithology: 50% sh, 50% LS	11,571.0	11,697.0		

Drill Strings

BHA #4 , PRODUCTION - CURVE

Bit Run 4	Drill Bit 8 1/2in, GTD55DM, 13176630	Bit Type PDC	Make HALLIBURTON
Nozzles (1/32") 14/14/14/14/14	Bit Total Fluid Area (nozzles) (in²) 0.75	IADC Bit Dull 2-7-CT-S-X-0-WT-PR	Hours Drilled By Bit (hr) 39.25
BHA Drilling Time (hr) 39.25	BHA Depth Drilled (ft) 3,026.00	BHA ROP (ft/hr) 77.1	Depth In (ftKB) 8,414.0
			Depth Out (ftKB) 11,440.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
370	DRILL PIPE	5	4.27	11,423.36	11,697.00	222,755.5	238	
6	HWDP	5	3.00	182.84	273.64	6,759.6	15	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 5/8	3.31	29.99	90.80	2,699.1	8	STABIL DRILL
1	DRILL COLLAR - NON MAG	6 7/8	3.25	31.07	60.81	2,796.3	5	STABIL DRILL
1	SUB - UBHO	6 3/4	2.75	3.05	29.74	274.5	3	GYRODATA
1	MOTOR - TRUE SLICK	6 3/4	2.88	25.84	26.69	2,325.6	2	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr DefIn Type	Bit To Bend
GDM675028	2.12	NOT SEALED	6:7	5		4

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	32.00	
D&I (INC/AZI)	43.00	

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 Average (ft/hr)	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	07:45	11,336.0	104.00	1,786.7 05,195, 360.8	30	70	450.0	600	4,075.0	0.0	205	240	170	205	14,000.0	6,000.0	0
07:45	09:45	11,440.0	0.00		0	70	0.0	600	3,574.0	0.0	205	240	170	205	5,000.0	5,000.0	0

BHA #5 , PRODUCTION - CURVE/LATERAL

Bit Run 5	Drill Bit 8 1/2in, D507TX, 5278701	Bit Type PDC	Make GE/BAKER HUGHES
Nozzles (1/32") 12/12/12/12/12/12/12	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 4.00
BHA Drilling Time (hr) 4.00	BHA Depth Drilled (ft) 257.00	BHA ROP (ft/hr) 64.2	Depth In (ftKB) 11,440.0
			Depth Out (ftKB) 11,697.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
	DRILL PIPE	5	4.30		2,659.47		93	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.47		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.35	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	102.96		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	72.97		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.90		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.85		0	Stabil Drill

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Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lb)	Cum Wt (1000lb)	Make
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.56	32.41		0	Gyrodata

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675206						4.65

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

Start Time	End Time	Start Depth (ftKB)	Int Depth (ft)	Int ROP (ft/hr)	WOB (1000lb)	RPM (rpm)	dP (SPP) (psi)	Q Flow (gpm)	SPP (psi)	ROP Average (ft/hr)	Drill Str Wt (1000lb)	PU Str Wt (1000lb)	SO Str Wt (1000lb)	Off-Btm Str Wt (1000lb)	Drill Tq	Off Btm Tq	TFO (°)
02:00	04:15	11,440.0	141.00	62.7	30	70	450.0	600	5,125.0	125.0	205	240	170	205	17,000.0	6,000.0	0
04:15	04:50	11,581.0	20.00	34.3	28	0	300.0	600	4,825.0	45.0	205	230	180	205	0.0	0.0	240
04:50	06:00	11,601.0	96.00	82.3	32	70	450.0	600	5,125.0	110.0	205	230	180	205	16,000.0	6,000.0	0

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)

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
00:30	PIONEER DRILLING FLUIDS	OIL BASE	11,440.0	12.00	79	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)
17.0	11.000	7	7	10.4	10.4	250.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	PF (mL/mL)	
21.0	6.6					
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH
21,000.000	8,200.000	201,800	83.5/16.5	767.0	2.8	
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)	Gel 30 min (lb/100ft²)				
11.000	20.000	22.000				

Comment
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.
 Drilling Fluids Activity Last 24 Hrs:
 MW around 11.7-11.8ppg (note: 22:00 check OBM was cold so MW was @ 12ppg, but weight will drop back to desired range once fluid heats up); diesel @1.8bbls/hr & water 2.7 bbls/hr for volume, OWR and aid in lowering LSG; VG Plus for rheologies and filter cake quality; Versatrol for HTHP fluid loss; Megadrive P for ES; Graphite for friction reduction; Lime for alkalinity and calcium source for emulsifier.
 Rig Activity Last 24 hrs:
 Pre/post tour safety meetings. Drilling and sliding lateral 11,440', circ. 2 b/u, flow check well static. POOH to p/u lateral assembly. L/D BHA; PJSM w/ Gyrodata on p/u BHA. TIH to 2750', p/u and install/test agitator. TIH, wash, survey f/8470' to 9033. TIH at time.

Volume	Value
Daily Diesel Used	1,522 GAL
Cumulative Diesel Used	9,245 GAL
Diesel on Location	11,363 GAL
Daily Water Used	798 GAL
Cumulative Water Used	3,108 GAL
Daily OBM Surface Losses	85 BBLS
OBM Volume Accounting:	
Total OBM Received	BBLS
Total OBM Rental	2,038 BBLS
Total OBM on Location	1,764 BBLS
Daily Drying Shaker Recovered	20 BBLS
Cumulative Drying Shaker Recovered	80 BBLS
Daily OBM Downhole Losses	0 BBLS
Cumulative OBM Surface Losses	223 BBLS
Cumulative OBM Downhole Losses	0 BBLS

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Date	Type	Top Depth (ftKB)
	TOE	
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

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Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	6,204	865	4,177	76"	11,641	20,979.0	
DIESEL	FUEL	GAL	0	0	4,284	Transferred to large mud diesel tank	0	0.0	
DIESEL	MUD	GAL	8,787	1,522	0		11,363	9,524.0	
WATER	FRESH	BBL	0	0	0	109180 METER READING	57,348	25,115.0	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON	46	13	83.0	43	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	60	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	15	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	2	
GRAPHITE	FLUID LOSS ADDITIVES	SACK		15	151.0	76	
LIME	ALKALINITY CONTROL	SACK		5	341.0	62	
MEGADRIVE P	SPECIALITY	DRUM		1	5.0	2	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	15	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	15	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	1	
SCALE CHARGE	MISCELLANEOUS	EA	2	2	0.0	12	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	4,950	
TRUCKING	MISCELLANEOUS	EA	2,035	2,035	0.0	13,881	
VERSAMOD	OIL MUD ADDITIVE	DRUM		1	2.0	1	
VERSATROL M	OIL MUD ADDITIVE	SACK		8	191.0	32	
VG-PLUS	OIL MUD ADDITIVE	SACK		2	45.0	13	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks							
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)	
1	11,570.0	03:51	517.0	30	106	95	
1	11,570.0	03:51	589.0	40	141	95	
1	11,570.0	03:51	732.0	50	176	95	
2	11,570.0	03:56	470.0	30	106	95	
2	11,570.0	03:57	577.0	40	141	95	
2	11,570.0	03:57	725.0	50	176	95	

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
11,386.00	89.04	181.06	9,013.01	2,221.24	-2,238.21	780.00	1.28	
11,422.00	89.29	181.45	9,013.54	2,257.24	-2,274.20	779.21	1.29	
11,516.00	91.41	182.57	9,012.96	2,351.22	-2,368.13	775.91	2.55	

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2

PIONEER

NATURAL RESOURCES

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GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

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API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Case#: 38463 Classification: Spill/Release Description: While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
06:00	MEETING	PRE-TOUR	DAY	PTSM - Circulate water mud tanks, Cont. clean and organize location. Watch for pinch points. Slip and trip hazards. Overhead loads. Don't turn your back to pragma trough. #1 Safe Work Permits, Core Value - #1 Respect
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Case#: 38463 Classification: Spill/Release Description: While cementing, the cement operator overflowed 1 barrel of water based mud from a tank on the pump truck onto location.
18:00	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Found single latch elevator bolts were loose. Stopped job and retorqued bolts. inspected elevators and sling. Continued with job.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Circulate water mud tanks, Cont. clean and organize location. Watch for pinch points. Slip and trip hazards. Overhead loads. Don't turn your back to pragma trough. #1 Safe Work Permits, Core Value - #1 Respect

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/30/2019	3RD Well / 3 Well pad (Revised on 1/17/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
607.00	13.00	80.77	12,304.0	19,076.0	67,262.21	2,211,329.82	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
46.7	1.00	19.23	9,006.1	7,861.71	135,833.47	4,134,694.81	
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 1,500.0	Daily Goal - Next 24 700.0	Goal Comments Not met due to Trip for BHA ROP			
Backbuild Yes	Lateral Inclination	Last Casing String INTERMEDIATE, 8,385.0ftKB		Next Casing String PROPOSED PRODUCTION, <depthbtm>ftKB			
Avg Connection Gas 289.00	Avg Trip Gas 0.00	Avg Background Gas 41.00	Max Connection Gas 474.00	Max Trip Gas 0.00	Max Drill Gas 411.00		

Operations Summary
Drill lateral f/ 11,697' to 12,304. Circ. 2 X bottoms up. TOOH; C/O BHA

Operations Next Report Period
Drill Lateral T/13,004'

Operations at Report Time
TIH at 600

Remarks
NPT for Jan.
Patterson: Past 24hr - 7.25 Total - 0 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs)
Surface:100%; Intermediate 100%; Curve: 100%; Lateral 30.3 %
Last Survey : 12,231' MD, INC. 92.34, INC 182.19, 10" A, 0.0 L/R

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	13	19:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 11,697' to 12,304' (607' @ 46.7' fph) 100% Returns. WOB:28/30, SPP:4850, GPM:600, MM:144, Rpm 70, TQ 12/15 ROP dropped off f/ 60 to 15 FPM Lithology: 40%SH, 60%LS WOB Step Test Performed WOB Step Test @ 11,950' (28-36) WOB w/ 70 RPM, 2 klb increments in 10' intervals. Result: Optimal drilling @ 32K. MSE 45 Limiter: Max differential @ 36K	11,697.0	12,304.0		
19:00	1.5	20:30	PROD, DRL LAT	CIRC	NORMAL	Circulate 2X BU, 602 GPM w/ 4700 PSI. 70 RPM w/ 4K TQ	12,304.0	12,304.0		
20:30	0.25	20:45	PROD, DRL LAT	FLOW_CHK	NORMAL	Check Flow. Static. Pump slug. Check Flow.	12,304.0	12,304.0		
20:45	3	23:45	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH f 12,304' TO 8193.. Well taking correct displacement.	12,304.0	12,304.0		
23:45	0.5	00:15	PROD, DRL LAT	HDL_ROTHD	NORMAL	Pull rotating head and install trip nipple. Well static.	12,304.0	12,304.0		
00:15	2	02:15	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH f/ 8193' to 2614'. Well taking correct displacement.	12,304.0	12,304.0		
02:15	0.25	02:30	PROD, DRL LAT	HDL_AGITATOR	NORMAL	L/D agitator.	12,304.0	12,304.0		
02:30	0.75	03:15	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH f/ 2614' to BHA. Fill hole with trip tanks	12,304.0	12,304.0		
03:15	0.25	03:30	PROD, DRL LAT	SFTY	NORMAL	PJSM w/ crew prior to L/D BHA.	12,304.0	12,304.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
03:30	0.75	04:15	PROD, DRL LAT	LD_DIR	NORMAL	L/D BHA. well static.	12,304.0	12,304.0		
04:15	0.75	05:00	PROD, DRL LAT	PU_DIR	NORMAL	P/U Directional BHA	12,304.0	12,304.0		
05:00	0.5	05:30	PROD, DRL LAT	RIG_SVC	NORMAL	Service Rig & Top Drive	12,304.0	12,304.0		
05:30	0.5	06:00	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 250' to 600'.proper displacement to trip tanks	12,304.0	12,304.0		

Drill Strings				
BHA #5, PRODUCTION - CURVE/LATERAL				
Bit Run	Drill Bit	Bit Type	Make	
5	8 1/2in, D507TX, 5278701	PDC	GE/BAKER HUGHES	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)	Depth Drilled By Bit (ft)
12/12/12/12/12/12/12	0.77	0-1-NO-A-X-0-WT-PR	17.00	864.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)	Depth Out (ftKB)
17.00	864.00	50.8	11,440.0	12,304.0

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
307	DRILL PIPE	5	4.30	9,644.53	12,304.00	356,558.3	450	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.47		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.35	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	102.96		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	72.97		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.90		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.85		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.56	32.41		0	Gyrodata

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675206	1.83	NOT SEALED	7:8	5.7		4.65

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	08:00	11,697.0	62.00	31.0	32	70	450.0	600	4,700.0	110.0	205	230	180	205	16,000.0	6,000.0	0
08:00	09:00	11,759.0	25.00	25.0	35	0	300.0	600	4,700.0	45.0	205	230	180	205	0.0	0.0	0
09:00	12:30	11,784.0	70.00	20.0	32	70	450.0	600	4,700.0	110.0	205	230	180	205	16,000.0	6,000.0	0
12:30	13:15	11,854.0	126.00	168.0	35	0	325.0	600	4,700.0	45.0	205	230	180	205	0.0	0.0	60
13:15	15:00	11,980.0	62.00	35.4	32	70	400.0	600	4,700.0	110.0	205	230	180	205	16,000.0	6,000.0	0
15:00	15:45	12,042.0	25.00	33.3	30	0	325.0	600	4,700.0	65.0	205	233	180	205	0.0	0.0	60
15:45	19:00	12,067.0	237.00	72.9	30	70	450.0	600	4,700.0	65.0	205	233	180	205	15,000.0	6,500.0	0
19:00	20:00	12,304.0	0.00	0.0	0	70	0.0	600	4,700.0	0.0	205	233	180	205	6,500.0	6,500.0	0

Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
12.00	12.60	235.9	4.2	249.0	673.9	16.8	588.6	219.88	178.75	430.71

Daily Drilling Report

Mud Checks

Time 00:30	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 12,304.0	Density (lb/gal) 11.80	Funnel Viscosity (s/qt) 76	T Flowline (°F)	
PV (cP) 18.0	YP (lb/100ft²) 13.000	Vis 3rpm 8	Vis 6rpm 9	Filtrate (mL/30min)	HTHP Filtrate (mL/30min) 11.0	HTHP Temperature (°F) 250.0	HTHP Pressure (psi) 500.0
Solids (%) 20.5	Low Gravity Solids (%) 7.1	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
Chlorides (ppm) 22,000.000	Calcium (ppm) 8,000.000	CaCl (ppm) 203,200	Oil Water Ratio 83/17	Electric Stab (V) 855.0	Lime (lb/bbl) 3.0	pH	
Gel 10 sec (lb/100ft²) 11.000	Gel 10 min (lb/100ft²) 22.000	Gel 30 min (lb/100ft²) 24.000					

Comment
 Recommended Fluids Treatments:
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.

Drilling Fluids Activity Last 24 Hrs:
 MW around 11.7-11.8ppg; diesel @1.8bbls/hr & water 2.7 bbls/hr.; VG Plus for rheologies and filter cake quality; Versatrol for HTHP fluid loss; Megadrive S for keeping cuttings oil-wet; CaCl2 for WPS; Graphite for friction; Lime for alkalinity.

Drilling Fluids Forecast Next 24 Hrs:
 Treat to maintain properties within program specs.

Rig Activity Last 24 Hrs:

Pre/post tour safety meetings. TIH to 11,440'. Drilling and sliding lateral to 12,304', bit not drilling, decision made to POOH. Circulate 2 B/U, check for flow, well static. Pump slug and POOH at time of mud report.

Volumes

Daily Diesel Used	1,805 GAL
Cumulative Diesel Used	11,050 GAL
Diesel on Location	9,558 GAL
Daily Water Used	1,890 GAL
Cumulative Water Used	4,998 GAL
Daily OBM Surface Losses	22 BBLs
OBM Volume Accounting:	
Total OBM Received	BBLs
Total OBM Rental	2,038 BBLs
Total OBM on Location	1,854 BBLs
Daily Drying Shaker Recovered	15 BBLs
Cumulative Drying Shaker Recovered	95 BBLs
Daily OBM Downhole Losses	0 BBLs
Cumulative OBM Surface Losses	245 BBLs
Cumulative OBM Downhole Losses	0 BBLs

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	TOE	
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	3,104	0	56"	8,537	24,083.0
DIESEL	FUEL	GAL	0	0	0	0"	0	0.0
DIESEL	MUD	GAL	0	1,805	0		9,558	11,329.0
WATER	FRESH	BBL	0	9,130	0	Start109180 Stop118309.82	48,218	34,244.82

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		13	70.0	56
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	64
CALCIUM CHLORIDE	SALT	SACK	226	2	224.0	2
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	16
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	3
GRAPHITE	FLUID LOSS ADDITIVES	SACK		24	127.0	100
LIME	ALKALINITY CONTROL	SACK		15	326.0	77
MEGADRIVE S	SPECIALITY	DRUM	16	1	15.0	2
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	16

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 166.00 Days Since RI: 166.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/19/2019
 Report #: 23
 DFS: 21
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$67,262.21

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	16
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	2
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	5,280
VERSATROL M	OIL MUD ADDITIVE	SACK		15	176.0	47
VG-PLUS	OIL MUD ADDITIVE	SACK		3	42.0	16

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,704.00	87.46	180.47	9,016.30	2,539.14	-2,556.02	772.68	1.14
11,799.00	91.05	180.04	9,017.54	2,634.10	-2,651.00	772.26	3.81
11,893.00	89.03	177.77	9,017.47	2,728.01	-2,744.97	774.05	3.23
11,987.00	90.57	179.06	9,017.80	2,821.89	-2,838.93	776.65	2.14
12,082.00	92.56	180.81	9,015.20	2,916.83	-2,933.88	776.76	2.79
12,176.00	92.28	182.26	9,011.23	3,010.74	-3,027.76	774.25	1.57

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 167.00 **Days Since RI: 167.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/20/2019
Report #: 24
DFS: 22
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$76,645.44

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 645 Case#: 39195 Classification: Property Damage (Medium) Near Miss (Severe) Description: While contractor cranes were tracking over with the driller cabin/BOP handler lead crane dropped his side about 1' due to having the free fall switch on. Contractor Incident Investigation and equipment inspections are currently underway. Safety Stand Down was held prior to returning to work.
06:15	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #6 Excavation & Trenching Core Value - #6 Communication
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 645 Case#: 39195 Classification: Property Damage (Medium) Near Miss (Severe) Description: While contractor cranes were tracking over with the driller cabin/BOP handler lead crane dropped his side about 1' due to having the free fall switch on. Contractor Incident Investigation and equipment inspections are currently underway. Safety Stand Down was held prior to returning to work.
18:15	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #6 Excavation & Trenching Core Value - #6 Communication
18:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Observed Man not wearing impact gloves while working the floor pulling slips stopped the job explained to him the hazards of not wearing the impact gloves while working the floor he said his gloves was soaked with OBM he said he understood he got a new pair of gloves and continued with his work

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/2/2019	3RD Well / 3 Well pad (Revised on 1/19/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
871.00	16.00	70.31	13,175.0	19,076.0	76,645.44	2,298,200.86	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
54.4	0.50	29.69	8,998.9	3,815.84	139,649.31	4,134,694.81	
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 700.0		Daily Goal - Next 24 1,500.0		Goal Comments Goal Met	
Backbuild Yes	Lateral Inclination	Last Casing String INTERMEDIATE, 8,385.0ftKB			Next Casing String PROPOSED PRODUCTION, <depthbtm>ftKB		
Avg Connection Gas 229.00	Avg Trip Gas 117.00	Avg Background Gas 57.00	Max Connection Gas 517.00	Max Trip Gas 209.00	Max Drill Gas 799.00		

Operations Summary
 TIH, perform axis survey f/ 8657' to 8751'. TIH to 12,304'. Drill Lat F/ 12,304' to 13175'
 Operations Next Report Period
 Drill Lateral F/ 13175' T/ 14675'
 Operations at Report Time
 Drill Lateral at 13175'
 Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 39%
 Last Survey : MD:13081', inc 90.49 , az 182.11 Left 0.06 Above 19.57

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.5	06:30	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH from 600' to 2659'. Correct displacement to trip tanks	12,304.0	12,304.0	0.50	14
06:30	0.5	07:00	PROD, DRL LAT	HDL_AGITATOR	NORMAL	P/U, install and test agitator. 300 PSI increase; 1000 psi before; 1300 psi after	12,304.0	12,304.0	0.50	14
07:00	2.5	09:30	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH f/ 2659' to 8264'. Correct displacement to trip tanks	12,304.0	12,304.0	2.50	14
09:30	0.5	10:00	PROD, DRL LAT	HDL_ROTTHD	NORMAL	Pull trip nipple and install rotating head. Well static.	12,304.0	12,304.0	0.50	14
10:00	0.25	10:15	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH from 8264' to 8657'. Correct Displacement to trip tanks	12,304.0	12,304.0	0.25	14
10:15	1.25	11:30	PROD, DRL LAT	SRVY_MGMT	NORMAL	Survey F/ 8470' to 9033'. 6 axis survey; Relog with MWD from 8983' to 9033'. Surveys 1) 8564 2) 8657 3) 8751 4) 8845 5) 8939 6) 9033	12,304.0	12,304.0	1.25	14
11:30	2	13:30	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH from 9033' to 12,304'. Correct displacement to trip tanks	12,304.0	12,304.0	2.00	14
13:30	13.5	03:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 12,304' to 12986' (682' @ 50.5 fph) 100% Returns. WOB:24/28/, SPP:4600, GPM:600, MM:144, Rot 70, TQ 12/15	12,304.0	12,986.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
03:00	0.5	03:30	PROD, DRL LAT	RIG_SVC	NORMAL	Service Rig	12,986.0	12,986.0		
03:30	2.5	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 12986' T/ 13175' (189' @ 75.6 fph) 100% Returns. WOB:24/28/, SPP:4600, GPM:600, MM:144, Rot 70, TQ 12/15	12,986.0	13,175.0		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
14	18.50	No	DRILL STRING	BITS	46,000.00	PIONEER NATURAL RESOURCES USA INC	POOH due to ROP

Bit Run	Drill Bit	Bit Type	Make
6	8 1/2in, D507TX, 5292386	PDC	GE/BAKER HUGHES
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
12/12/12/12/12/12/12	0.77	-----	16.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth Drilled By Bit (ft)
16.00	871.00	54.4	871.00
		Depth In (ftKB)	Depth Out (ftKB)
		12,304.0	13,175.0

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
333	DRILL PIPE	5	4.30	10,515.49	13,175.00	388,757.7	482	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.51		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defn Type	Bit To Bend
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
13:30	16:15	12,304.0	115.00	41.8	29	70	170.0	550	4,481.0	55.0	198	235	165	198	12,000.0	6,000.0	0
16:15	17:15	12,419.0	15.00	15.0	35	0	220.0	550	4,400.0	20.0	198	235	165	198	0.0	0.0	180
17:15	19:00	12,434.0	90.00	51.4	32	70	200.0	550	4,430.0	45.0	198	235	165	198	13,000.0	6,000.0	0
19:00	20:30	12,524.0	15.00	10.0	35	0	150.0	550	4,350.0	15.0	198	235	165	198	0.0	0.0	360
20:30	23:15	12,539.0	171.00	62.2	32	70	450.0	550	4,765.0	160.0	198	235	165	198	15,000.0	7,000.0	0
23:15	00:00	12,710.0	20.00	26.7	30	0	150.0	560	4,525.0	35.0	198	235	165	198	0.0	0.0	150
00:00	01:30	12,730.0	170.00	113.3	32	70	450.0	560	4,765.0	170.0	198	235	165	198	15,000.0	7,000.0	0
01:30	02:15	12,900.0	20.00	26.7	28	0	175.0	560	4,550.0	35.0	198	235	165	198	0.0	0.0	225
02:15	03:00	12,920.0	66.00	88.0	32	70	350.0	560	4,800.0	140.0	198	235	165	198	17,000.0	7,000.0	0
03:00	03:30	12,986.0	0.00	0.0	0	0	0.0	560	4,400.0	0.0	198	235	165	198	0.0	0.0	0
03:30	04:30	12,986.0	105.00	105.0	32	70	450.0	560	4,800.0	150.0	198	235	165	198	17,000.0	7,000.0	0
04:30	05:15	13,091.0	12.00	16.0	28	0	175.0	560	4,550.0	35.0	198	235	165	198	0.0	0.0	180
05:15	06:00	13,103.0	72.00	96.0	32	70	450.0	560	4,800.0	150.0	198	235	165	198	17,000.0	7,000.0	0

Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
11.80	12.41	188.6	3.3	232.4	577.3	15.7	549.4	235.52	218.73	430.71

Daily Drilling Report

Mud Checks

Time 00:30	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 12,607.0	Density (lb/gal) 11.80	Funnel Viscosity (s/qt) 72	T Flowline (°F) 127.0
PV (cP) 21.0	YP (lb/100ft²) 13.000	Vis 3rpm 9	Vis 6rpm 10	Filtrate (mL/30min)	HTHP Filtrate (mL/30min) 11.8	HTHP Temperature (°F) 250.0
Solids (%) 20.5	Low Gravity Solids (%) 7.1	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
Chlorides (ppm) 23,000.000	Calcium (ppm) 8,200.000	CaCl (ppm) 204,500	Oil Water Ratio 82.4/17.6	Electric Stab (V) 795.0	Lime (lb/bbl) 2.7	pH
Gel 10 sec (lb/100ft²) 13.000	Gel 10 min (lb/100ft²) 24.000	Gel 30 min (lb/100ft²) 27.000				

Comment
Recommended Fluids Treatments:
Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.
Drilling Fluids Activity Last 24 Hrs:
MW maintained 11.7-11.8ppg; diesel @ 1.8bbls/hr & water 2.7 bbls/hr.; VG Plus for rheologies and filter cake quality; Versatrol for HTHP fluid loss; CaCl2 for WPS; Graphite for friction; Lime for alkalinity.
Drilling Fluids Forecast Next 24 Hrs:
Treat to maintain properties within program specs.
Rig Activity Last 24 Hrs:
Pre/post tour safety meetings. TIH to 2,659', p/u Agitator and test. TIH to 8,657' and perform Axis surveys @ 8657', 8751', 8845', re-log Gamma 8939' to 9003'. TIH to 12,304'. Drillign and sliding lateral @ 12,683' at time of mud report.
Volumes
Daily Diesel Used 956 GAL
Cumulative Diesel Used 12,006 GAL
Diesel on Location 8,602 GAL
Daily Water Used 924 GAL
Cumulative Water Used 5,922 GAL
Daily OBM Surface Losses 75 BBLs
OBM Volume Accounting:
Total OBM Received BBLs
Total OBM Rental 2,038 BBLs
Total OBM on Location 1,844 BBLs
Daily Drying Shaker Recovered 15 BBLs
Cumulative Drying Shaker Recovered 110 BBLs
Daily OBM Downhole Losses 0 BBLs
Cumulative OBM Surface Losses 320 BBLs
Cumulative OBM Downhole Losses 0 BBLs

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	TOE	
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	2,358	0	45"	6,179	26,441.0
DIESEL	FUEL	GAL	0	0	0	0"	0	0.0
DIESEL	MUD	GAL	0	956	0	48"	8,602	12,285.0
WATER	FRESH	BBL	0	0	0	Start 118309.82 Stop 118309.82	57,348	34,244.82

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	68
CALCIUM CHLORIDE	SALT	SACK		14	210.0	16
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	17
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	4
GRAPHITE	FLUID LOSS ADDITIVES	SACK		12	115.0	112
LIME	ALKALINITY CONTROL	SACK		12	314.0	89
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	17
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	17

Daily Drilling Report

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	3
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	5,610
VERSATROL M	OIL MUD ADDITIVE	SACK		9	167.0	56
VG-PLUS	OIL MUD ADDITIVE	SACK		1	41.0	17

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	13,000.0	04:00	682.0	40	141	95
1	13,000.0	04:00	843.0	50	176	95
1	13,000.0	04:00	570.0	30	106	95
2	13,000.0	04:00	843.0	50	176	95
2	13,000.0	04:00	682.0	40	141	95
2	13,000.0	04:00	570.0	30	106	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
12,364.00	90.96	180.66	9,007.42	3,198.69	-3,215.67	770.26	0.43
12,459.00	89.37	180.26	9,007.15	3,293.68	-3,310.66	769.50	1.73
12,553.00	91.91	180.97	9,006.10	3,387.66	-3,404.64	768.49	2.81
12,646.00	92.31	180.68	9,002.68	3,480.59	-3,497.57	767.15	0.53
12,741.00	89.48	180.72	9,001.19	3,575.57	-3,592.54	765.99	2.98
12,837.00	91.05	183.18	9,000.75	3,671.55	-3,688.48	762.72	3.04
12,931.00	89.73	180.49	9,000.11	3,765.53	-3,782.41	759.71	3.19
13,026.00	90.43	182.03	8,999.98	3,860.52	-3,877.39	757.62	1.78

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
SHELTON, GARY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 168.00 Days Since RI: 168.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/21/2019
Report #: 25
DFS: 23
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$70,398.62

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 487 Case#: PWS Incident Classification: Motor Vehicle (Low) Description: While non-potable water was being delivered to location, the driver was reversing to the tank and struck the driver side door of another contractor's personal vehicle causing damage to the vehicle. The water delivery driver was not utilizing spotter when reversing.
06:15	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 487 Case#: PWS Incident Classification: Motor Vehicle (Low) Description: While non-potable water was being delivered to location, the driver was reversing to the tank and struck the driver side door of another contractor's personal vehicle causing damage to the vehicle. The water delivery driver was not utilizing spotter when reversing.
18:15	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Observed men making a connection, ST80 was to close to rotary while they were pulling slips, stopped them explained to them to move the ST80 back away from the rotary, explained the hazards they understood

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/2/2019	3RD Well / 3 Well pad (Revised on 1/19/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
1,509.00	23.50	77.66	14,684.0	19,076.0	70,398.62	2,368,599.48
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
64.2	0.50	22.34	8,978.4	5,580.62	145,229.93	4,134,694.81
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments		
DRILLED FEET		1,500.0	1,500.0	Goal Met		
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depth>ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
403.00	117.00	325.00	968.00	209.00	935.00	

Operations Summary
 Drill Lat F/ 13175' T/ 14684'
 Operations Next Report Period
 Drill Lateral F/ 14684' T/ 16184'
 Operations at Report Time
 Drill Lateral at 14684'
 Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 54%
 Last Survey : MD:14589', inc 90.63, az 178.97 Left 12.4 Above 8.20
 Degasser Running

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	19.5	01:30	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 13175' to 14495' (1320' @ 67.6 fph) 100% Returns. WOB:24/28/, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	13,175.0	14,495.0		
01:30	0.5	02:00	PROD, DRL LAT	RIG_SVC	NORMAL	Service Rig	14,495.0	14,495.0		
02:00	4	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 14495' T/ 14684' (189' @ 47' fph) 100% Returns. WOB:24/28/, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	14,495.0	14,684.0		

Bit Run	Drill Bit	Bit Type	Make
6	8 1/2in, D507TX, 5292386	PDC	GE/BAKER HUGHES
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
12/12/12/12/12/12	0.77	-----	39.50
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
39.50	2,380.00	60.3	12,304.0
Drill String Components			
Jts	Item Des	OD (in)	ID (in)
381	DRILL PIPE	5	4.30
1	AGITATOR	6 1/2	2.88
81	DRILL PIPE	5	4.30

Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
12,024.49	14,684.00	444,545.4	538	OTHER (PROVIDE DESCRIPTION)
28.12	2,659.51	93	93	SCOUT
2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)

Daily Drilling Report

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	08:00	13,175.0	190.00	95.0	32	65	350.0	565	4,700.0	75.0	202	240	145	202	17,000.0	7,000.0	0
08:00	08:30	13,365.0	14.00	28.0	34	0	250.0	565	4,646.0	35.0	202	240	145	202	0.0	0.0	350
08:30	09:30	13,379.0	81.00	81.0	32	65	350.0	565	4,865.0	125.0	202	240	145	202	17,000.0	8,000.0	0
09:30	10:00	13,460.0	20.00	40.0	34	0	200.0	565	4,646.0	35.0	202	240	145	202	0.0	0.0	240
10:00	12:00	13,480.0	169.00	84.5	32	65	385.0	565	4,865.0	125.0	202	240	145	202	17,000.0	8,000.0	0
12:00	13:00	13,649.0	16.00	16.0	36	0	225.0	565	4,711.0	35.0	202	240	145	202	0.0	0.0	180
13:00	14:00	13,665.0	78.00	78.0	31	65	473.0	565	5,036.0	118.0	202	240	145	200	19,000.0	10,000.0	0
14:00	14:30	13,743.0	10.00	20.0	36	0	225.0	565	4,700.0	25.0	201	248	137	201	0.0	0.0	180
14:30	19:45	13,753.0	371.00	70.7	32	65	384.0	565	4,952.0	110.0	201	248	137	201	16,000.0	9,000.0	0
19:45	20:30	14,124.0	15.00	20.0	25	0	175.0	565	4,575.0	30.0	201	250	150	201	0.0	0.0	360
20:30	01:30	14,139.0	356.00	71.2	32	65	250.0	565	4,800.0	65.0	201	250	150	201	14,000.0	9,000.0	0
01:30	02:00	14,495.0	0.00	0.0	0	0	0.0	565	4,600.0	0.0	201	250	150	201	0.0	0.0	0
02:00	02:15	14,495.0	5.00	20.0	32	65	350.0	565	4,800.0	65.0	201	250	150	201	16,000.0	10,000.0	0
02:15	03:15	14,500.0	25.00	25.0	30	0	275.0	565	4,825.0	30.0	201	250	150	201	0.0	0.0	20
03:15	04:15	14,525.0	74.00	74.0	32	65	375.0	565	5,050.0	100.0	201	250	150	201	16,000.0	10,000.0	0
04:15	05:15	14,599.0	15.00	15.0	30	0	275.0	565	4,825.0	30.0	201	250	150	201	0.0	0.0	90
05:15	06:00	14,614.0	70.00	93.3	32	65	375.0	565	5,050.0	100.0	201	250	150	201	16,000.0	10,000.0	0

Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
11.80	12.50	193.7	3.4	234.5	587.6	15.8	554.3	262.62	287.99	430.71

Daily Drilling Report

Mud Checks								
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
00:30	PIONEER DRILLING FLUIDS			OIL BASE	14,234.0	11.80	70	133.0
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)	
21.0	14.000	8	9		11.6	250.0	500.0	
Solids (%)	Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
20.5	7.4							
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH		
25,000.000	9,600.000	196,500	79.9/20.1	724.0	3.4			
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)			Gel 30 min (lb/100ft²)				
12.000	24.000			28.000				

Comment
Recommended Fluids Treatments:
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed.
Drilling Fluids Activity Last 24 Hrs:
 MW maintained 11.7-11.8ppg; diesel @3.0 bbls/hr & water 0.9 bbls/hr.; VG Plus for rheologies/filter cake quality; Versatrol for HTHP fluid loss; CaCl2 for WPS; Graphite for friction reduction/lubricity; Lime for alkalinity; Versathin for managing rheology and gel strengths profile.
Drilling Fluids Forecast Next 24 Hrs:
 Treat as necessary to maintain properties within program specs.
Rig Activity Last 24 Hrs:
 Pre/post tour safety meetings. Drilling and sliding lateral @14,307' with no problems evident at time of report.
Volumes
 Daily Diesel Used 2,328 GAL
 Cumulative Diesel Used 14,334 GAL
 Diesel on Location 6,274 GAL
 Daily Water Used 2,016 GAL
 Cumulative Water Used 7,938 GAL
 Daily OBM Surface Losses 126 BBLs
OBM Volume Accounting:
 Total OBM Received BBLs
 Total OBM Rental 2,038 BBLs
 Total OBM on Location 1,874 BBLs
 Daily Drying Shaker Recovered 20 BBLs
 Cumulative Drying Shaker Recovered 130 BBLs
 Daily OBM Downhole Losses 0 BBLs
 Cumulative OBM Surface Losses 446 BBLs
 Cumulative OBM Downhole Losses 0 BBLs

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests			
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)	
FORMATION INTEGRITY	1,244.0	12.75	
LEAK OFF	8,414.0	13.38	

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths			
Date	Type	Top Depth (ftKB)	
	TOE		
1/15/2019 09:15	KICK OFF	8,485.0	
1/16/2019 00:30	HEEL	9,362.0	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	3,263	0	26"	2,916	29,704.0	
DIESEL	FUEL	GAL	0	0	0	0"	0	0.0	
DIESEL	MUD	GAL	0	2,328	0	38"	6,274	14,613.0	
WATER	FRESH	BBL	0	0	0	Start 118309.82 Stop 118309.82	57,348	34,244.82	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	72	
CALCIUM CHLORIDE	SALT	SACK		36	174.0	52	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	18	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	5	
GRAPHITE	FLUID LOSS ADDITIVES	SACK		35	80.0	147	
LIME	ALKALINITY CONTROL	SACK		34	280.0	123	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	18	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	18	

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 168.00 Days Since RI: 168.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/21/2019
 Report #: 25
 DFS: 23
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$70,398.62

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	4
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	5,940
VERSATHIN HF	OIL MUD ADDITIVE	CAN	38	5	33.0	5
VERSATROL M	OIL MUD ADDITIVE	SACK		14	153.0	70
VG-PLUS	OIL MUD ADDITIVE	SACK		2	39.0	19

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	14,495.0	04:00	570.0	30	106	95
1	14,495.0	04:00	862.0	40	141	95
1	14,495.0	04:00	827.0	50	176	95
2	14,495.0	04:00	558.0	30	106	95
2	14,495.0	04:00	823.0	50	176	95
2	14,495.0	04:00	678.0	40	141	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
13,214.00	88.64	182.06	9,002.51	4,048.48	-4,065.24	750.89	0.30	
13,310.00	89.23	181.89	9,004.30	4,144.45	-4,161.17	747.58	0.64	
13,405.00	94.58	183.87	9,001.14	4,239.32	-4,255.96	742.82	6.00	
13,499.00	93.12	181.46	8,994.83	4,333.07	-4,349.63	738.46	2.99	
13,594.00	93.63	181.51	8,989.23	4,427.90	-4,444.44	736.00	0.54	
13,688.00	91.78	180.52	8,984.80	4,521.79	-4,538.31	734.34	2.23	
13,782.00	90.49	180.51	8,982.93	4,615.77	-4,632.29	733.49	1.37	
13,876.00	90.93	180.66	8,981.77	4,709.75	-4,726.27	732.53	0.49	
13,969.00	90.57	179.99	8,980.55	4,802.73	-4,819.26	732.01	0.82	
14,063.00	88.75	180.14	8,981.11	4,896.71	-4,913.26	731.90	1.94	
14,157.00	91.61	181.10	8,980.82	4,990.69	-5,007.24	730.88	3.21	
14,252.00	91.75	180.27	8,978.03	5,085.65	-5,102.19	729.75	0.89	
14,347.00	90.18	179.73	8,976.43	5,180.61	-5,197.18	729.75	1.75	
14,440.00	87.52	177.52	8,978.30	5,273.48	-5,290.12	731.98	3.72	
14,534.00	90.57	178.71	8,979.86	5,367.32	-5,384.04	735.07	3.48	

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 3	-6,250.0		8,983.5		
Target 4	-6,260.0		8,993.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
SHELTON, GARY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 169.00 Days Since RI: 169.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/22/2019
Report #: 26
DFS: 24
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$78,560.76

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: Patterson 802 Case#: 39249 Date: 1-19-2019 Description: While contractor was disconnecting the casing tongs from the hanging line on the rig. The tongs were lifted with the hoist to give slack and loosen from shackle and hanging line. In process of doing so, the shackle came out of his hands and struck the rig floor. The floor and area was cleared, drops calculator registered a low.
06:15	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:15	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: Patterson 802 Case#: 39249 Date: 1-19-2019 Description: While contractor was disconnecting the casing tongs from the hanging line on the rig. The tongs were lifted with the hoist to give slack and loosen from shackle and hanging line. In process of doing so, the shackle came out of his hands and struck the rig floor. The floor and area was cleared, drops calculator registered a low.
18:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Observed truck driver hooking up hoses to the frac tanks did not have but one glove on, stopped the job ask him where his 2nd glove was he said he had lost it I explained the hazards and why he needed both gloves he under stood got one of the rig hands to get him a pair of gloves then he continued to hook up his hoses

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/1/2019	3RD Well / 3 Well pad (Revised on 1/22/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
1,166.00	22.00	78.41	15,850.0	19,076.0	78,560.76	2,428,260.24	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
53.0	2.00	21.59	8,996.6	4,840.70	150,070.63	4,134,694.81	
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 1,500.0	Daily Goal - Next 24 1,200.0		Goal Comments Goal not met		
Backbuild Yes	Lateral Inclination	Last Casing String INTERMEDIATE, 8,385.0ftKB		Next Casing String PROPOSED PRODUCTION, <depthbtm>ftKB			
Avg Connection Gas 403.00	Avg Trip Gas 0.00	Avg Background Gas 211.00	Max Connection Gas 925.00	Max Trip Gas 0.00	Max Drill Gas 925.00		

Operations Summary
 Drill Lat F/ 14684' to 15850'
 Operations Next Report Period
 Drill Lateral F/ 15850' t/ 17050'
 Operations at Report Time
 Drill Lateral at 15850'

Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 67%
 Last Survey : MD:15721' , inc 88.67 , az 186.73 Right 4.39 Below 3.54
 Degasser Running

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	6.25	12:15	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 14684' to 15011' (327' @ 52' fph) 100% Returns. WOB:24/28/, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	14,684.0	15,011.0		
12:15	1.5	13:45	PROD, DRL LAT	3RD_PTY	NORMAL	Trouble shoot Pason, Pason shut down found that the sat on location was bad, replaced st pason back up and running.	15,011.0	15,011.0	1.50	15
13:45	12.75	02:30	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 15011' T/ 15721' (710' @ 55.6' fph) 100% Returns. WOB:24/28/, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	15,011.0	15,721.0		
02:30	0.5	03:00	PROD, DRL LAT	RIG_SVC	NORMAL	Service rig	15,721.0	15,721.0		
03:00	3	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 15721' T/ 15850' (129' @ 43' fph) 100% Returns. WOB:24/28/, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	15,721.0	15,850.0		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript..	Est Cost OR (Cost)	Accountable Party	Comment
15	1.50	No	RECORDING DEVICES	COMMUNICA TION	3,000.00	PASON SYSTEMS USA CORP	Pason st went down on location C/O same

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 169.00 Days Since RI: 169.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/22/2019
 Report #: 26
 DFS: 24
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$78,560.76

Drill Strings

BHA #6 , PRODUCTION - LATERAL

Bit Run 6	Drill Bit 8 1/2in, D507TX, 5292386	Bit Type PDC	Make GE/BAKER HUGHES
Nozzles (1/32") 12/12/12/12/12/12/12	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 61.50
BHA Drilling Time (hr) 61.50	BHA Depth Drilled (ft) 3,546.00	BHA ROP (ft/hr) 57.7	Depth Drilled By Bit (ft) 3,546.00
		Depth In (ftKB) 12,304.0	Depth Out (ftKB) 15,850.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
418	DRILL PIPE	5	4.30	13,190.49	15,850.00	487,652.4	581	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.51		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defin Type	Bit To Bend
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	09:30	14,684.0	190.00	54.3	32	65	400.0	565	5,075.0	120.0	201	245	150	201	16,000.0	10,000.0	0
09:30	10:30	14,874.0	30.00	30.0	41	0	325.0	565	4,950.0	45.0	201	245	150	201	0.0	0.0	20
10:30	11:30	14,904.0	64.00	64.0	32	65	400.0	565	5,075.0	120.0	201	245	150	201	16,000.0	10,000.0	0
11:30	12:00	14,968.0	15.00	30.0	41	0	325.0	565	4,950.0	45.0	201	245	150	201	0.0	0.0	20
12:00	12:15	14,983.0	28.00	112.0	32	65	400.0	565	5,075.0	120.0	201	245	150	201	16,000.0	10,000.0	0
12:15	13:45	15,011.0	0.00		0	65	0.0	565	4,700.0	0.0	201	245	150	201	9,000.0	9,000.0	0
13:45	18:30	15,011.0	241.00	50.7	32	65	350.0	565	5,000.0	75.0	201	245	150	201	15,000.0	9,000.0	0
18:30	19:15	15,252.0	12.00	16.0	45	0	215.0	565	4,900.0	30.0	197	250	145	197	0.0	0.0	90
19:15	23:15	15,264.0	275.00	68.8	30	65	415.0	565	5,165.0	100.0	197	250	145	197	19,000.0	8,000.0	0
23:15	00:00	15,539.0	15.00	20.0	45	0	225.0	565	4,900.0	25.0	197	250	145	197	0.0	0.0	90
00:00	02:15	15,554.0	167.00	74.2	30	65	335.0	565	5,180.0	110.0	197	250	145	197	20,000.0	8,000.0	0
02:15	02:45	15,721.0	0.00	0.0	0	0	0.0	565	4,700.0	0.0	197	250	145	197	0.0	0.0	0
02:45	03:45	15,721.0	20.00	20.0	35	0	150.0	565	4,850.0	30.0	197	250	145	197	0.0	0.0	270
03:45	04:45	15,741.0	84.00	84.0	30	65	400.0	565	4,900.0	100.0	197	250	145	197	20,000.0	9,000.0	0
04:45	05:30	15,825.0	10.00	13.3	35	0	150.0	565	4,850.0	30.0	197	250	145	197	0.0	0.0	270
05:30	06:00	15,835.0	15.00	30.0	32	65	400.0	565	4,900.0	100.0	197	250	145	197	20,000.0	9,000.0	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)
11.80	12.55	193.7	3.4	234.5	587.6	15.8	554.3	283.57	341.51	430.71

Daily Drilling Report

Mud Checks								
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
00:30	PIONEER DRILLING FLUIDS			OIL BASE	15,446.0	11.80	68	132.0
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)	
20.0	12.000	8	9		13.0	250.0	500.0	
Solids (%)	Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
20.5	7.3							
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH		
25,000.000	10,400.000	212,500	81.8/18.2	865.0	3.1			
Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)			Gel 30 min (lb/100ft²)				
11.000	23.000			25.000				

Comment
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed; Versathin to manage rheology/gel strengths.

Drilling Fluids Activity Last 24 Hrs:
 MW maintained 11.7-11.8ppg; diesel @3.0 bbls/hr & water 0.9 bbls/hr.; Megadrive S for oil-wetting solids & diesel additions; VG Plus for rheologies/filter cake quality; Versatrol for HTHP fluid loss; CaCl2 for WPS; Graphite for friction reduction/lubricity; Lime for alkalinity

Drilling Fluids Forecast Next 24 Hrs:
 Treat as necessary to maintain properties within program specs.

Rig Activity Last 24 Hrs:
 Pre/post tour safety meetings. Medical drills. Re-log from 14,780' to 15,011' due to communication failure. Drill with one pump while changing piston/liner on MP #2 and #3 Module. Drilling and sliding lateral @15,446' at time of report.

Volumes

Daily Diesel Used	2,982 GAL
Cumulative Diesel Used	17,316 GAL
Diesel on Location	3,292 GAL
Daily Water Used	882 GAL
Cumulative Water Used	8,820 GAL
Daily OBM Surface Losses	124 BBLs

OBM Volume Accounting:

Total OBM Received	BBLs
Total OBM Rental	2,038 BBLs
Total OBM on Location	1,903 BBLs
Daily Drying Shaker Recovered	25 BBLs
Cumulative Drying Shaker Recovered	155 BBLs
Daily OBM Downhole Losses	0 BBLs
Cumulative OBM Surface Losses	570 BBL
Cumulative OBM Downhole Losses	0 BBLs

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests			
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)	
FORMATION INTEGRITY	1,244.0	12.75	
LEAK OFF	8,414.0	13.38	

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths			
Date	Type	Top Depth (ftKB)	
	TOE		
1/15/2019 09:15	KICK OFF	8,485.0	
1/16/2019 00:30	HEEL	9,362.0	

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	7,330	3,181	0	50"	7,065	32,885.0
DIESEL	FUEL	GAL	0	0	0	0	0	0.0
DIESEL	MUD	GAL	0	2,982	0	24"	3,292	17,595.0
WATER	FRESH	BBL	0	0	0	Start 118309.82 Stop 118309.82	57,348	34,244.82

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	76	
CALCIUM CHLORIDE	SALT	SACK		44	130.0	96	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	19	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	6	
GRAPHITE	FLUID LOSS ADDITIVES	SACK		20	60.0	167	
LIME	ALKALINITY CONTROL	SACK		20	260.0	143	
MEGADRIVE S	SPECIALITY	DRUM		1	14.0	3	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	19	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	19	

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 169.00 **Days Since RI: 169.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/22/2019
Report #: 26
DFS: 24
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$78,560.76

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	5
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	6,270
VERSATROL M	OIL MUD ADDITIVE	SACK		8	145.0	78

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	15,721.0	04:00	665.0	30	106	95
1	15,721.0	04:00	768.0	40	141	95
1	15,721.0	04:00	890.0	50	176	95
2	15,721.0	04:00	757.0	40	141	95
2	15,721.0	04:00	628.0	30	106	95
2	15,721.0	04:00	862.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
14,725.00	88.22	180.84	8,980.11	5,558.28	-5,574.98	732.42	2.54	
14,819.00	87.15	180.19	8,983.91	5,652.19	-5,668.90	731.57	1.33	
14,913.00	89.28	181.17	8,986.84	5,746.13	-5,762.84	730.46	2.49	
15,007.00	90.99	181.61	8,986.62	5,840.13	-5,856.81	728.18	1.88	
15,102.00	90.23	181.44	8,985.61	5,935.12	-5,951.77	725.65	0.82	
15,197.00	89.03	180.37	8,986.22	6,030.12	-6,046.76	724.15	1.69	
15,290.00	90.54	184.30	8,986.57	6,123.08	-6,139.66	720.36	4.53	
15,384.00	88.69	179.66	8,987.20	6,217.04	-6,233.57	717.11	5.31	
15,478.00	89.76	179.02	8,988.47	6,310.97	-6,327.55	718.20	1.33	
15,572.00	88.61	186.91	8,989.81	6,404.85	-6,421.34	713.34	8.48	
15,666.00	88.61	186.84	8,992.09	6,498.36	-6,514.64	702.09	0.07	

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
SHELTON, GARY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 170.00 Days Since RI: 170.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/23/2019
Report #: 27
DFS: 25
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$54,930.20

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:15	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: Trinidad 133 Case#: 39265 Date: 1-21-2019 Classification: Injury/Illness (Low) Description: While contractor was on the derrick board, he unlatched a stand from the elevators. The elevators stuck his left pinkie finger causing a laceration. Contractor was wearing his impact gloves at the time. First Aid measures were administered on location and has refused any further medical attention at this time.
18:15	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #7 Driving Safety Core Value - #7 Teamwork
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: Trinidad 133 Case#: 39265 Date: 1-21-2019 Classification: Injury/Illness (Low) Description: While contractor was on the derrick board, he unlatched a stand from the elevators. The elevators stuck his left pinkie finger causing a laceration. Contractor was wearing his impact gloves at the time. First Aid measures were administered on location and has refused any further medical attention at this time.
18:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	While making a connection, driller was pulling a stand out of the mouse hole and I noticed that Hand wasn't using tail rope. Stopped Asked him to use the tail rope to bring stand towards the stump Explained the hazards & reminded to make sure tail rope is used when pulling stds. out of the mouse hole. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
1,380.00	23.25	84.95	17,230.0	19,076.0	54,930.20	2,483,190.44	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
59.4	0.75	15.05	8,999.5	3,922.20	3,922.20	153,992.83	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	1,200.0	1,200.0	Goal Met				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes		INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, <depthbtm>ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
483.00	0.00	292.00	1,047.00	0.00	925.00		

Operations Summary
 Drill Lateral F/ 15850' t/ 17230', (Patterson Had 15 min Safety stand up)
 Operations Next Report Period
 Drill Lateral F/ 17230' T/ 18430'
 Operations at Report Time
 Drill Lateral at 17230'

Remarks
 NPT for Jan.
 Patterson: Past 24hr - 7.25 Total - 0 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 81%
 Last Survey : MD:17076' , inc 91.33 , az 182.60 Right 7.4 Below 7'
 Degasser Running

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	11.25	17:15	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 15850 to 16379' (529' @ 47' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	15,850.0	16,379.0		
17:15	0.5	17:45	PROD, DRL LAT	RIG_SVC	NORMAL	Service rig	16,379.0	16,379.0		
17:45	0.25	18:00	PROD, DRL LAT	SFTY	NORMAL	Patterson Having a Safey stand up for all crews and rigs to call in	16,379.0	16,379.0		
18:00	12	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 16379 to 17230' (851' @ 70' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:560, MM:144, Rot 70, TQ 17/19	16,379.0	17,230.0		

BHA #6 , PRODUCTION - LATERAL			
Bit Run 6	Drill Bit 8 1/2in, D507TX, 5292386	Bit Type PDC	Make GE/BAKER HUGHES
Nozzles (1/32") 12/12/12/12/12/12	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 84.75
BHA Drilling Time (hr) 84.75	BHA Depth Drilled (ft) 4,926.00	BHA ROP (ft/hr) 58.1	Depth In (ftKB) 12,304.0
			Depth Out (ftKB) 17,230.0

Drill String Components										
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make		
462	DRILL PIPE	5	4.30	14,570.49	17,230.00	538,671.0	632	OTHER (PROVIDE DESCRIPTION)		
1	AGITATOR	6 1/2	2.88	28.12	2,659.51		93	SCOUT		

Daily Drilling Report

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors							
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend	
GDM675220	1.83	NOT SEALED	7:8	5.7			4.65

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	14:00	15,850.0	341.00	42.6	30	65	350.0	565	5,234.0	110.0	202	250	135	202	19,000.0	8,000.0	0
14:00	15:00	16,191.0	24.00	24.0	40	0	300.0	565	4,900.0	40.0	202	250	135	202	0.0	0.0	280
15:00	16:00	16,215.0	70.00	70.0	31	65	345.0	565	5,235.0	111.0	202	250	135	202	19,000.0	9,000.0	0
16:00	16:30	16,285.0	15.00	30.0	40	0	300.0	565	4,900.0	40.0	202	250	135	202	0.0	0.0	250
16:30	17:15	16,300.0	79.00	105.3	31	65	388.0	565	5,235.0	111.0	202	250	135	202	19,000.0	9,000.0	0
17:15	18:00	16,379.0	0.00		0	0	0.0	176	394.0	0.0	195	270	135	195	0.0	0.0	0
18:00	20:00	16,379.0	198.00	99.0	31	65	450.0	565	5,294.0	120.0	197	255	135	197	19,000.0	9,000.0	0
20:00	20:45	16,577.0	15.00	20.0	40	0	125.0	565	5,075.0	30.0	197	255	135	197	0.0	0.0	120
20:45	22:45	16,592.0	169.00	84.5	31	65	400.0	565	5,370.0	135.0	197	255	135	197	20,000.0	9,000.0	0
22:45	00:00	16,761.0	15.00	12.0	50	0	135.0	565	5,075.0	15.0	202	255	135	202	0.0	0.0	70
00:00	06:00	16,776.0	454.00	75.7	31	65	450.0	565	5,400.0	75.0	202	255	135	202	23,000.0	9,000.0	0

Hydraulic Calculations										
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)
11.80	12.60	193.7	3.4	234.5	587.6	15.8	554.3	308.35	404.85	430.71

Daily Drilling Report

Mud Checks

Time 00:30	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 16,705.0	Density (lb/gal) 11.80	Funnel Viscosity (s/qt) 68	T Flowline (°F) 128.0
PV (cP) 18.0	YP (lb/100ft²) 13.000	Vis 3rpm 7	Vis 6rpm 8	Filtrate (mL/30min) 15.0	HTHP Filtrate (mL/30min) 15.0	HTHP Temperature (°F) 250.0
Solids (%) 20.0	Low Gravity Solids (%) 6.1	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
Chlorides (ppm) 25,000.000	Calcium (ppm) 9,600.000	CaCl (ppm) 218,400	Oil Water Ratio 82.5/17.5	Electric Stab (V) 867.0	Lime (lb/bbl) 3.6	pH
Gel 10 sec (lb/100ft²) 10.000	Gel 10 min (lb/100ft²) 17.000	Gel 30 min (lb/100ft²) 22.000				

Comment
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed; Versathin to manage rheology/gel strengths.

Drilling Fluids Activity Last 24 Hrs:

MW maintained 11.7-11.8ppg; diesel @3.0 bbls/hr & water 0.9 bbls/hr.; Megadrive S for oil-wetting solids & diesel additions; VG Plus for rheologies/filter cake quality; Versatrol for HTHP fluid loss; Graphite for friction reduction/torque; Lime for alkalinity; Versathin for gel strengths.

Drilling Fluids Forecast Next 24 Hrs:

Treat as necessary to maintain properties within program specs.

Rig Activity Last 24 Hrs:

Pre/post tour safety meetings. Safety stand down. Service rig. Drill with one pump while troubleshooting MP #1 (plastic found in screen). Drilling and sliding lateral @16,705' at time of report.

Volumes

Daily Diesel Used	2,725 GAL
Cumulative Diesel Used	20,041 GAL
Diesel on Location	4,517 GAL
Daily Water Used	882 GAL
Cumulative Water Used	9,702 GAL
Daily OBM Surface Losses	206 BBLs
OBM Volume Accounting:	
Total OBM Received	BBLs
Total OBM Rental	2,038 BBLs
Total OBM on Location	1,786 BBLs
Daily Drying Shaker Recovered	30 BBLs
Cumulative Drying Shaker Recovered	185 BBLs
Daily OBM Downhole Losses	0 BBLs
Cumulative OBM Surface Losses	776 BBLs
Cumulative OBM Downhole Losses	0 BBL

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)
	TOE	
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0

Casing Strings

Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	3,450	2,884	0	53"	7,631	35,769.0
DIESEL	FUEL	GAL	0	0	0		0	0.0
DIESEL	MUD	GAL	3,950	2,725	0		4,517	20,320.0
WATER	FRESH	BBL	0	0	0	Start 118309.82 Stop 118309.82	57,348	34,244.82

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	80
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	20
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	7
GRAPHITE	FLUID LOSS ADDITIVES	SACK		20	40.0	187
LIME	ALKALINITY CONTROL	SACK		21	239.0	164
MEGADRIVE S	SPECIALITY	DRUM		1	13.0	4
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	20
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	20

Daily Drilling Report

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	6
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	6,600
VERSATHIN HF	OIL MUD ADDITIVE	CAN		2	31.0	7
VG-PLUS	OIL MUD ADDITIVE	SACK		1	38.0	20

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	16,850.0	04:00	654.0	30	106	95
1	16,850.0	04:00	765.0	40	141	95
1	16,850.0	04:00	930.0	50	176	95
2	16,850.0	04:00	758.0	40	141	95
2	16,850.0	04:00	642.0	30	106	95
2	16,850.0	04:00	924.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
15,853.00	87.77	181.38	8,995.53	6,684.92	-6,700.92	687.06	4.51
15,947.00	88.50	181.29	8,998.59	6,778.87	-6,794.84	684.87	0.78
16,040.00	88.81	181.91	9,000.77	6,871.84	-6,887.78	682.28	0.75
16,136.00	88.44	182.54	9,003.08	6,967.80	-6,983.68	678.55	0.76
16,230.00	92.00	181.80	9,002.72	7,061.77	-7,077.60	674.99	3.87
16,324.00	90.35	181.20	9,000.79	7,155.74	-7,171.54	672.53	1.87
16,418.00	90.65	178.90	8,999.97	7,249.71	-7,265.53	672.45	2.47
16,512.00	90.71	179.16	8,998.85	7,343.64	-7,359.51	674.04	0.28
16,607.00	89.56	180.64	8,998.63	7,438.61	-7,454.51	674.21	1.97
16,701.00	88.36	178.97	9,000.34	7,532.56	-7,548.49	674.53	2.19
16,795.00	88.86	181.21	9,002.62	7,626.51	-7,642.45	674.38	2.44
16,888.00	89.06	180.71	9,004.30	7,719.49	-7,735.42	672.82	0.58
16,982.00	90.71	182.16	9,004.49	7,813.48	-7,829.39	670.47	2.34
17,131.00	91.33	182.60	9,001.84	7,962.43	-7,978.23	664.28	0.51

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
VOGEL, WILLIS, SUPERINTENDENT	SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
SHELTON, GARY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		601-435-7888	GARY.SHELTON@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
TRICORPS SECURITY	2
GYRODATA INC	4
DWM CONSULTING	2
TRIFECTA OILFIELD SERVICES LLC	0

Daily Drilling Report

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Spill Prevention and OBM transfer procedure. #1 Respect. #1 Safe Work Permits.
06:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 437: While contractor was getting loaded with cuttings, his truck began to leak approximately 8 gallons of oil base mud onto the ground due to seal not being closed all the way. The truck was sealed properly and oil base cleaned off ground.
18:00	MEETING	PRE-TOUR	NIGHT	TSM: Spill Prevention and OBM transfer procedure. #1 Respect. #1 Safe Work Permits
18:15	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	H&P 437: While contractor was getting loaded with cuttings, his truck began to leak approximately 8 gallons of oil base mud onto the ground due to seal not being closed all the way. The truck was sealed properly and oil base cleaned off ground.
18:30	PROACTIVE MEASURES	STOP CARD - NON PNR	NIGHT	Stop card: Noticed hand was standing on casing. Stopped job and explained to him the dangers of pinch points, & casing rolling and falling in crack. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Daily Operations							
Footage/Meterage (ft) 1,123.00	Drilling Hours (hr) 23.25	% Rotating Time (%) 84.95	End Depth (ftKB) 18,353.0	Target Depth (ftKB) 19,076.0	Daily Field Est Total (Cost) 89,363.30	Cum Field Est To Date (Cost) 2,710,119.04	
24 HR ROP (ft/hr) 48.3	Circulating Hours (hr) 0.75	% Sliding Time (%) 15.05	End Depth (TVD) (ftKB) 8,995.7	Target Depth (TVD) (ftKB) 9,907.50	Daily Mud Field Est (Cost) 163,900.33	Cum Mud Field Est (Cost) 4,134,694.81	Total AFE + Sup (Cost)
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 1,200.0	Daily Goal - Next 24 722.0	Goal Comments Goal not met (ROP / Direct. Control)			
Backbuild Yes	Lateral Inclination	Last Casing String INTERMEDIATE, 8,385.0ftKB		Next Casing String PROPOSED PRODUCTION, 19,057.0ftKB			
Avg Connection Gas 654.00	Avg Trip Gas 0.00	Avg Background Gas 293.00	Max Connection Gas 1,348.00	Max Trip Gas 0.00	Max Drill Gas 1,469.00		

Operations Summary
 Drill Lateral Section F/17,230' - T/18,353'

Operations Next Report Period
 Drill Lateral F/ 18,353' - T/19,075' (TD), Perform K&M Cycle, TOOH L/D Drill pipe, L/D BHA, R/U Csg. tools.

Operations at Report Time
 Drill Lateral Section @ 18,353'

Remarks
 NPT for July
 Patterson: Past 24hr - 0 Total - 7.25 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 93%
 Last Survey: 18259 INC: 93.63 AZM: 181.94 Below: 11.42 Left: 12.53

Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #	
06:00	11	17:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 17230 to 17,788' (558' @ 51' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:550, MM:132, RPM:70, TQ 17-19	17,230.0	17,788.0			
17:00	0.5	17:30	PROD, DRL LAT	RIG_SVC	NORMAL	Service rig	17,788.0	17,788.0			
17:30	1.25	18:45	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 17,788' to 17,810'. (22' @ 22' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:550, MM:132, RPM:70, TQ:16-19	17,788.0	17,810.0			
18:45	5.5	00:15	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 17,810' to 18,174'. (364' @ 66' fph) 100% Returns. WOB:22/25, SPP:3200, GPM:385, MM:192, RPM:65, TQ 14-18 . ? Drilling with pump # 2. (Work on pump # 1 - C/O 2 Swabs, 1 liner, & 3 P- Quip rod connectors)	17,810.0	18,174.0			
00:15	5.75	06:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 18,174' to 18,353'. (179' @ 31' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:540, MM:156, RPM:70, TQ 18-20	18,174.0	18,353.0			

BHA #6 , PRODUCTION - LATERAL				
Bit Run 6	Drill Bit 8 1/2in, D507TX, 5292386	Bit Type PDC	Make GE/BAKER HUGHES	
Nozzles (1/32") 12/12/12/12/12/12	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 108.00	Depth Drilled By Bit (ft) 6,049.00
BHA Drilling Time (hr) 108.00	BHA Depth Drilled (ft) 6,049.00	BHA ROP (ft/hr) 56.0	Depth In (ftKB) 12,304.0	Depth Out (ftKB) 18,353.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
498	DRILL PIPE	5	4.30	15,693.49	18,353.00	580,188.3	674	OTHER (PROVIDE DESCRIPTION)	
1	AGITATOR	6 1/2	2.88	28.12	2,659.51	93	93	SCOUT	
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)	
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00	0	0	Stabil Drill	

Daily Drilling Report

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors							
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defn Type	Bit To Bend	
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65	

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	12:30	17,230.0	182.00	28.0	32	65	430.0	565	5,230.0	120.0	202	255	135	202	22,000.0	9,000.0	0	
12:30	13:15	17,412.0	15.00	20.0	40	0	300.0	565	4,953.0	25.0	200	250	130	200	0.0	0.0	270	
13:15	17:00	17,427.0	361.00	96.3	29	70	400.0	552	5,393.0	125.0	200	250	130	200	22,000.0	11,000.0	0	
17:00	17:45	17,788.0	-300.00		0	0	0.0	0	0.0	0.0	202	255	135	202	0.0	0.0	0	
17:45	18:00	17,488.0	312.00	1,248.0	30	65	400.0	565	5,393.0	125.0	202	255	135	202	22,000.0	11,000.0	0	
18:00	18:45	17,800.0	10.00	13.3	40	0	175.0	565	5,075.0	35.0	202	255	135	202	0.0	0.0	20	
18:45	00:15	17,810.0	364.00	66.2	30	65	410.0	385	3,160.0	110.0	202	255	135	202	20,000.0	11,000.0	0	
00:15	02:15	18,174.0	15.00	7.5	40	0	225.0	535	5,075.0	10.0	206	290	100	206	0.0	0.0	20	
02:15	06:00	18,189.0	164.00	43.7	30	65	220.0	535	5,160.0	40.0	206	290	100	206	22,000.0	11,000.0	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)
11.80	12.61	164.4	2.9	222.0	526.9	15.0	524.8	328.53	456.40	430.71

Mud Checks											
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	
00:30	PIONEER DRILLING FLUIDS	OIL BASE	18,015.0	11.80	68	125.0	21.0	16.000	9	9	
Filtrate (mL/30min)		HTHP Filtrate (mL/30min)		HTHP Temperature (°F)		HTHP Pressure (psi)					
21.0		14.0		250.0		500.0					
Solids (%)		Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)	
21.0		8.0									
Chlorides (ppm)		Calcium (ppm)		CaCl (ppm)		Oil Water Ratio		Electric Stab (V)		Lime (lb/bbl)	
24,000.000		7,200.000				82.9/17.1		809.0		2.7	
Gel 10 sec (lbf/100ft²)		Gel 10 min (lbf/100ft²)		Gel 30 min (lbf/100ft²)							
11.000		21.000		24.000							

Comment
 PNR - Patterson 807- University 3-15C 103H - DMR #23
 Recommended Fluids Treatments:
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed; Versathin to manage rheology/gel strengths.
 Drilling Fluids Activity Last 24 Hrs:
 Transferred OBM from Tank Farm to active system for additional volume and sweeps Pumping 20bbl 2ppg over weighted sweeps every 250' to ensure sufficient hole cleaning. Finished transferring Lig WBM to Patterson 252.
 Drilling Fluids Forecast Next 24 Hrs:
 Treat as necessary to maintain properties within program specs.
 Rig Activity Last 24 Hrs:
 Pre / Post tour safety meeting with rig personnel. Change swab on MP #2. Perform rig service on Top drive, Drawworks, and ST-80. Changing Liner on MP #2 drilling lateral with one pump @18,015' at time of mud report.
 Volumes
 Daily Diesel Used 2,163 GAL
 Cumulative Diesel Used 22,204 GAL
 Diesel on Location 2,354 GAL
 Daily Water Used GAL
 Cumulative Water Used 9,702 GAL
 Daily OBM Surface Losses 105 BBLs
 OBM Volume Accounting:
 Total OBM Received BBLs
 Total OBM Rental 2,038 BBLs
 Total OBM on Location 1,748 BBLs
 Daily Drying Shaker Recovered 40 BBLs
 Cumulative Drying Shaker Recovered 225 BBLs
 Daily OBM Downhole Losses 0 BBLs
 Cumulative OBM Surface Losses 881 BBLs

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 171.00 **Days Since RI: 171.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/24/2019
Report #: 28
DFS: 26
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$89,363.30

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
1/15/2019 09:15	TOE	
1/16/2019 00:30	KICK OFF	8,485.0
	HEEL	9,362.0

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	3,050	0	36"	4,581	38,819.0	
DIESEL	FUEL	GAL	0	0	0	0	0	0.0	
DIESEL	MUD	GAL	0	3,007	0	14"	1,510	23,327.0	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		8	62.0	64
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	84
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	1,725	1,725	0.0	4,738
ENGINEERING SERVICE	MISCELLANEOUS	DAY	2	2	0.0	22
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	8
GRAPHITE	FLUID LOSS ADDITIVES	SACK		26	14.0	213
LIME	ALKALINITY CONTROL	SACK		24	215.0	188
MEGADRIVE S	SPECIALITY	DRUM		1	12.0	5
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	21
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	21
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	7
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	6,930
VERSATROL M	OIL MUD ADDITIVE	SACK		16	129.0	94
VG-PLUS	OIL MUD ADDITIVE	SACK		3	35.0	23

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	18,259.0	04:15	722.0	30	106	95
1	18,259.0	04:16	864.0	40	141	95
1	18,259.0	04:17	1,027.0	50	176	95
2	18,259.0	04:15	716.0	30	106	95
2	18,259.0	04:16	846.0	40	141	95
2	18,259.0	04:17	995.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
17,263.00	89.37	181.14	9,008.15	8,094.29	-8,110.14	664.74	3.75
17,357.00	90.60	182.60	9,008.17	8,188.28	-8,204.08	661.67	2.03
17,451.00	89.87	179.97	9,007.79	8,282.27	-8,298.05	659.57	2.90
17,545.00	89.53	178.40	9,008.28	8,376.21	-8,392.04	660.90	1.71
17,639.00	88.97	179.36	9,009.51	8,470.12	-8,486.01	662.74	1.18
17,733.00	88.55	178.98	9,011.54	8,564.04	-8,579.98	664.10	0.60
17,827.00	89.87	179.28	9,012.84	8,657.97	-8,673.96	665.53	1.44
17,920.00	92.42	181.84	9,010.98	8,750.93	-8,766.92	664.62	3.88

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 171.00 Days Since RI: 171.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/24/2019
 Report #: 28
 DFS: 26
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$89,363.30

Survey Data - All surveys for 24 hr reporting period

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
18,014.00	91.13	180.13	9,008.07	8,844.88	-8,860.85	663.01	2.28
18,109.00	89.48	179.62	9,007.56	8,939.85	-8,955.85	663.21	1.82
18,204.00	93.57	181.72	9,005.04	9,034.78	-9,050.78	662.10	4.84

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
FOUNTAIN, KYLE, SUPERINTENDENT	SUPERINTENDENT	817-717-2807	936-465-0896	KYLE.FOUNTAIN@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
UNITED SHUTDOWN SAFETY TEXAS INC	2
GYRODATA INC	4
DWM CONSULTING	2

Daily Drilling Report

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date 1/24/2019

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - PPE, Spill Prevention, Transfer OBM, Housekeeping, Making Connections. R2LB - #3 Confined Space Entry, Core Value - #3 Safety
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: Trinidad 136: While contractor was installing the second half of the bushings, the driller opened the blind rams causing water to come through the rotary table ricocheting off the half of bushings in the rotary table striking employee on the right side of the face. The employee washed his face and flushed his eyes for precautionary measures. He was also taken to be observed, Contractor was released to full duty without restrictions.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - PPE, Spill Prevention, Transfer OBM, Housekeeping, Making Connections. R2LB - #3 Confined Space Entry, Core Value - #3 Safety
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: Trinidad 136: While contractor was installing the second half of the bushings, the driller opened the blind rams causing water to come through the rotary table ricocheting off the half of bushings in the rotary table striking employee on the right side of the face. The employee washed his face and flushed his eyes for precautionary measures. He was also taken to be observed, Contractor was released to full duty without restrictions.
23:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Stop card: Noticed RTM did not cover mouse hole after stand came out while making a connection. Talked to him about the importance of putting cover ASAP to eliminate fall hazard. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
722.00	16.00	81.25	19,075.0	19,076.0	178,163.01	2,888,282.05	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
45.1	8.00	18.75	8,988.7	7,285.01	171,185.34	4,134,694.81	
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET		722.0	0.0	Goal Met			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes	Toe Down	INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, 19,057.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
738.00	0.00	195.00	1,279.00	0.00	1,492.00		

Operations Summary
 Drill Lateral F/ 18,353' - T/19,075' (TD), Perform K&M Cycle (Circ. last B/U).

Operations Next Report Period
 Flow check, TOOH, & L/D BHA, R/U Csg. tools.

Operations at Report Time
 K&M cycle (Circ. last B/U)

Remarks
 NPT for January
 Patterson: Past 24hr - 0 Total - 7.25 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 100%
 Last Survey:19075 INC: 89.45 AZM: 181.97 Below: 11.82 Left: 3.17
 ? TD on 1/24/19 @ 22:00hrs

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	16	22:00	PROD, DRL LAT	DRL	NORMAL	Drill Lat. section from 18353' to 19075'. (722' @ 45' fph) 100% Returns. WOB:28/30, SPP:5000, GPM:540, MM:156, RPM:70, TQ 18-20 ? TD on 1/24/19 @ 22:00hrs	18,353.0	19,075.0		
22:00	0.5	22:30	PROD, POST DRL	RIG_SVC	NORMAL	Service rig & Top Drive	19,075.0	19,075.0		
22:30	7.5	06:00	PROD, POST DRL	CIRC	NORMAL	Perform K&M Clean up cycle with 100% returns., GPM 540, SPP 5050, Intital TQ 15k Racked back a stand in derrick after each B/U F/ 19,075' - T/ 18,602' 1rst B/U = 90% Coverage TQ 10, SPP 4950 2nd B/U = 70%, Coverage TQ 9, SPP 4800 3rd B/U = 45% Coverage TQ 9, SPP 4760 4th B/U = 30% Coverage TQ 9, SPP 4760 5th B/U = 25% Coverage TQ 8, SPP 4750 6th B/U = 20% Coverage TQ 8, SPP 4750	19,075.0	19,075.0		

Drill Strings				
BHA #6, PRODUCTION - LATERAL				
Bit Run	Drill Bit	Bit Type	Make	
6	8 1/2in, D507TX, 5292386	PDC	GE/BAKER HUGHES	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)	Depth Drilled By Bit (ft)
12/12/12/12/12/12	0.77	-----	124.00	6,771.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)	Depth Out (ftKB)
124.00	6,771.00	54.6	12,304.0	19,075.0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 172.00 Days Since RI: 172.00

PERMIAN - JV SOUTHERN WOLFCAMP ODR
Job: ODR
Report Date: 1/25/2019
Report #: 29
DFS: 27
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$178,163.01

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
521	DRILL PIPE	5	4.30	16,415.49	19,075.00	606,880.7	700	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.51		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	09:00	18,353.0	93.00	31.0	30	65	540.0	535	5,385.0	160.0	206	265	130	206	22,000.0	11,000.0	0
09:00	10:15	18,446.0	15.00	12.0	40	0	250.0	385	3,100.0	20.0	200	265	100	200	0.0	0.0	220
10:15	12:00	18,461.0	79.00	45.1	30	65	200.0	385	3,130.0	33.0	200	265	100	200	18,000.0	10,000.0	0
12:00	13:45	18,540.0	30.00	17.1	40	0	250.0	385	3,000.0	20.0	200	265	100	200	0.0	0.0	220
13:45	22:00	18,570.0	505.00	61.2	30	65	0.0	385	3,130.0	33.0	200	265	100	200	18,000.0	10,000.0	0
22:00	06:00	19,075.0	0.00		0	80	0.0	535	4,950.0	0.0	200	265	100	200	10,000.0	10,000.0	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)
11.90	12.76	165.8	2.9	222.0	531.3	15.0	524.8	341.49	489.54	430.71

Mud Checks

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
00:30	PIONEER DRILLING FLUIDS	OIL BASE	19,075.0	11.90	67	130.0	
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
21.0	15.000	7	8	13.8	250.0	250.0	500.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
21.5	8.1						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
24,000.000	6,200.000		83.4/16.6	789.0	2.6		
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)					
11.000	21.000	24.000					

Comment

PNR - Patterson 807- University 3-15C 103H - DMR #24
 Recommended Fluids Treatments:
 Maintain MW 11.7-11.8 ppg; Megadrive P and/or Megadrive S for ES, keep cuttings oil-wet, and aid with HTHP fluid loss; Lime for alkalinity; VG Plus for rheology and filter cake lubricity; VersaMod to adjust low-end rheology; Graphite for friction reduction; diesel for OWR and to aid in keeping LGS <8%; Gilsonite to maintain HTHP fluid loss; Pump 20bbls 2ppg over weighted sweeps every 500' or as needed; Versathin to manage rheology/gel strengths.
 Drilling Fluids Activity Last 24 Hrs:
 MW maintained 11.7-11.8ppg, Additions of VG Plus for rheologies/filter cake quality; Versatrol for HTHP fluid loss; Graphite for friction reduction/torque; Lime for alkalinity. Pumping 2ppg over weighted sweeps every 250'.
 Drilling Fluids Forecast Next 24 Hrs:
 Treat as necessary to maintain properties within program specs.
 Rig Activity Last 24 Hrs:
 Pre / Post tour safety meeting with rig personnel. Drill / Slide lateral to TD @ 19,075'. Pumped 2 20bbl 2ppg over weighted sweeps at TD. Currently circulating K&M clean up cycle (6 B/U) at time of mud report.
 Volumes
 Daily Diesel Used 2,830 GAL
 Cumulative Diesel Used 25,034 GAL
 Diesel on Location 3,240 GAL
 Daily Water Used 840 GAL
 Cumulative Water Used 10,542 GAL
 Daily OBM Surface Losses 24 BBLS
 OBM Volume Accounting:
 Total OBM Received BBLS
 Total OBM Rental 2,038 BBLS
 Total OBM on Location 1,828 BBLS
 Daily Drying Shaker Recovered 35 BBLS
 Cumulative Drying Shaker Recovered 260 BBLS
 Daily OBM Downhole Losses 0 BBLS
 Cumulative OBM Surface Losses 905 BBLS
 Cumulative OBM Downhole

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release: Days Since LTI: 172.00 Days Since RI: 172.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/25/2019
 Report #: 29
 DFS: 27
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$178,163.01

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0
1/24/2019 22:00	TOE	19,075.0

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	3,500	2,975	0	39"	5,106	41,794.0	
DIESEL	FUEL	GAL	0	0	0	0	0	0.0	
DIESEL	MUD	GAL	3,716	2,691	0	20"	2,535	26,018.0	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		8	54.0	72
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	88
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	60	60	0.0	4,798
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	23
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	9
GRAPHITE	FLUID LOSS ADDITIVES	SACK		14	0.0	227
LIME	ALKALINITY CONTROL	SACK		65	150.0	253
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	22
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	22
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	8
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	7,260
VERSATROL M	OIL MUD ADDITIVE	SACK		30	99.0	124
VG-PLUS	OIL MUD ADDITIVE	SACK		2	33.0	25

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	19,075.0	22:00	696.0	30	106	95
1	19,075.0	22:01	845.0	40	141	95
1	19,075.0	22:02	1,026.0	50	176	95
2	19,075.0	22:00	690.0	30	106	95
2	19,075.0	22:01	819.0	40	141	95
2	19,075.0	22:02	1,000.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
18,391.00	92.73	182.28	8,993.06	9,221.37	-9,237.27	655.35	1.58
18,485.00	92.45	183.07	8,988.81	9,315.24	-9,331.07	650.97	0.89
18,579.00	89.23	181.89	8,987.44	9,409.20	-9,424.96	646.90	3.65
18,672.00	90.23	182.04	8,987.87	9,502.19	-9,517.90	643.71	1.09
18,766.00	89.65	181.75	8,987.97	9,596.18	-9,611.85	640.60	0.69
18,859.00	90.15	181.73	8,988.14	9,689.18	-9,704.81	637.78	0.54
18,953.00	90.18	179.79	8,987.86	9,783.17	-9,798.79	636.53	2.06
19,020.00	89.39	181.79	8,988.12	9,850.16	-9,865.78	635.61	3.21

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 172.00 Days Since RI: 172.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/25/2019
 Report #: 29
 DFS: 27
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$178,163.01

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 4	-6,260.0		8,993.5		

Job Contact	Title	Office	Mobile	Email
BRINKLEY, DAVID, AREA DRILLING SUPERVISOR	AREA DRILLING SUPERVISOR	325-884-9030	432-301-2825	DAVID.BRINKLEY@PXD.COM
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
FOUNTAIN, KYLE, SUPERINTENDENT	SUPERINTENDENT	817-717-2807	936-465-0896	KYLE.FOUNTAIN@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	
<contactname>, <title>				

Company	Count
PIONEER NATURAL RESOURCES USA INC	4
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
UNITED SHUTDOWN SAFETY TEXAS INC	2
GYRODATA INC	4
DWM CONSULTING	2

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 **Release:**
Days Since LTI: 173.00 **Days Since RI: 173.00**

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/26/2019
Report #: 30
DFS: 28
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$102,274.24

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date 1/24/2019

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - H2S Alarms and Drills, Making Connections, PPE, Pinch Points and Body Placement, Spill Prevention, OBM Transfers. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 638: While Road Runner Trucking was transporting well water from the frac pond located behind location, he drove in front of the crew trailers. The driver did not realize one side of his trailer tire had locked up and caused him to drag an electrical cable approximate 30 ft. There was damage to the electric cable, the rig contractor had their electrician repair the cable till a new one could be sent to the rig.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - H2S Alarms and Drills, Making Connections, PPE, Pinch Points and Body Placement, Spill Prevention, OBM Transfers. R2LB - #4 Energy Isolation, Core Value - #4 Personal Accountability
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 638: While Road Runner Trucking was transporting well water from the frac pond located behind location, he drove in front of the crew trailers. The driver did not realize one side of his trailer tire had locked up and caused him to drag an electrical cable approximate 30 ft. There was damage to the electric cable, the rig contractor had their electrician repair the cable till a new one could be sent to the rig.
23:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Stop card: Noticed RTM was standing underneath joint that was being laid down with the elevators onto the pipe wrangler. Talked to him about honoring a safe bufferzone as drill pipe is being laid down. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			19,075.0	19,076.0	102,274.24	3,122,230.49	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			8,988.7		4,518.24	175,703.58	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	Goal met.				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
Yes	Toe Down	INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, 19,057.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
738.00	0.00	24.00	1,279.00	0.00	1,492.00		

Operations Summary
Flow check, TOOH, & L/D Drill pipe T/ 4850'
Operations Next Report Period
Finish L/D Drill pipe, L/D BHA, R/U Casing tools, M/U Shoe track & start running 5.5" Production casing.
Operations at Report Time
L/D Drill pipe @ 4850'

Remarks
NPT for January
Patterson: Past 24hr - 0 Total - 7.25 hrs.
3rd Party: Past 24hr - 0 Total - 0 hrs.
Generators: 3 (24 hrs)
Surface:100%; Intermediate 100%; Curve: 100%; Lateral 100%
Last Survey:19075 INC: 89.45 AZM: 181.97 Below: 11.82 Left: 3.17
? TD on 1/24/19 @ 22:00hrs

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.5	06:30	PROD, POST DRL	CIRC	NORMAL	Finish K&M Clean up cycle with 100% returns., GPM 540, SPP 5050, 6th B/U = 20% Coverage TQ 8, SPP 4750	19,075.0	19,075.0		
06:30	0.25	06:45	PROD, POST DRL	FLOW_CHK	NORMAL	Flow check. (Well static)	19,075.0	19,075.0		
06:45	0.75	07:30	PROD, POST DRL	TOOH_ELEV	NORMAL	TOOH wet F/ 18,509' - T/ 18163' (Hole take proper fill with trip tanks.)	19,075.0	19,075.0		
07:30	0.5	08:00	PROD, POST DRL	FLOW_CHK	NORMAL	Flow check. (Well static) ? Pump slug.	19,075.0	19,075.0		
08:00	2.5	10:30	PROD, POST DRL	TOOH_ELEV	NORMAL	TOOH F/ 18,163' - T/ 15,777' (Hole take proper fill with trip tanks)	19,075.0	19,075.0		
10:30	11.5	22:00	PROD, POST DRL	L/D DP	NORMAL	Cont POOH & L/D DP F/ 15,777' - T/ 5000' (Hole take proper fill with trip tanks)	19,075.0	19,075.0		
22:00	1.25	23:15	PROD, POST DRL	TIH_ELEV	NORMAL	TIH with 35 stds. F/ Derrick F/ 5,000' - T/ 8283' with 100% returns.	19,075.0	19,075.0		

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
23:15	6.75	06:00	PROD, POST DRL	L/D DP	NORMAL	Cont L/D DP F/ 8283' - T/ 4850' (Hole take proper fill with trip tanks) ? Having to use rig tongs periodically while L/D Drill pipe due to over-torque. (Averaging about 508' an hour.)	19,075.0	19,075.0		

Drill Strings

BHA #6, PRODUCTION - LATERAL

Bit Run 6	Drill Bit 8 1/2in, D507TX, 5292386	Bit Type PDC	Make GE/BAKER HUGHES
Nozzles (1/32") 12/12/12/12/12/12/12	Bit Total Fluid Area (nozzles) (in²) 0.77	IADC Bit Dull -----	Hours Drilled By Bit (hr) 124.00
BHA Drilling Time (hr) 124.00	BHA Depth Drilled (ft) 6,771.00	BHA ROP (ft/hr) 54.6	Depth In (ftKB) 12,304.0
			Depth Out (ftKB) 19,075.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
521	DRILL PIPE	5	4.30	16,415.49	19,075.00	606,880.7	700	OTHER (PROVIDE DESCRIPTION)
1	AGITATOR	6 1/2	2.88	28.12	2,659.51		93	SCOUT
81	DRILL PIPE	5	4.30	2,528.39	2,631.39	93,474.6	93	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	6 3/4	3.63	29.99	103.00		0	Stabil Drill
1	Drill Collar - Non Mag	6 3/4	3.25	31.07	73.01		0	Stabil Drill
1	Sub - UBHO	6 7/8	2.19	3.05	41.94		0	Gyrodata
1	STABILIZER	6 7/8	2.25	6.44	38.89		0	Stabil Drill
1	MOTOR - STABILIZER SLEEVE	6 3/4	2.88	31.60	32.45		0	Gyrodata

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM675220	1.83	NOT SEALED	7:8	5.7		4.65

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	44.00	
DIRECTIONAL	55.00	

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 Average (ft/hr)	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	19,075.0	0.00		0	0	0.0	0	0.0		0	0	0	0	0.0	0.0	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)
11.95						0.0	0.0			

Mud Checks

Time 00:30	Mud Company PIONEER DRILLING FLUIDS	Type OIL BASE	Depth (ftKB) 19,075.0	Density (lb/gal) 11.95	Funnel Viscosity (s/qt) 73	T Flowline (°F) 0.0
PV (cP) 19.0	YP (lb/100ft²) 15.000	Vis 3rpm 7	Vis 6rpm 8	Filtrate (mL/30min)	HTHP Filtrate (mL/30min) 13.6	HTHP Temperature (°F) 250.0
HTHP Pressure (psi) 500.0	Solids (%) 21.5	Low Gravity Solids (%) 7.8	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)
Chlorides (ppm) 24,000.000	Calcium (ppm) 5,600.000	CaCl (ppm)	Oil Water Ratio 82.8/17.2	Electric Stab (V) 833.0	Lime (lb/bbl) 2.8	pH
Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 20.000		Gel 30 min (lb/100ft²) 23.000		

Comment

PNR - Patterson 807- University 3-15C 103H - DMR #25

Recommended Fluids Treatments:

No current treatment. TD 19,075'. Laying down drill pipe

Drilling Fluids Activity Last 24 Hrs:

TD 19,075'. Circulating active system over shakers while L/D DP.

Drilling Fluids Forecast Next 24 Hrs:

Receive OBM on next coming pad, Rocker B 147H.

Rig Activity Last 24 Hrs:

Pre/Post tour safety meeting with rig personnel. Finish circulating K&M cycle. Flow check, no flow. POOH F/18,509' T/18,163'. Perform flow check, no flow. Pump slug and POOH F/18,163' T/15,777'. Begin L/D DP at 15,777'. Lubricate rig. Laying down drill pipe at time of mud report.

Volumes

Daily Diesel Used	1,227 GAL
Cumulative Diesel Used	26,261 GAL
Diesel on Location	2,013 GAL
Daily Water Used	0 GAL
Cumulative Water Used	10,542 GAL
Daily OBM Surface Losses	22 BBLS
OBM Volume Accounting:	
Total OBM Received	BBLS
Total OBM Rental	2,038 BBLS
Total OBM on Location	1,848 BBLS
Daily Drying Shaker Recovered	0 BBLS
Cumulative Drying Shaker Recovered	260 BBLS
Daily OBM Downhole Losses	0 BBLS
Cumulative OBM Surface Losses	927 BBLS
Cumulative OBM Downhole Losses	0 BBLS

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release: Days Since LTI: 173.00 Days Since RI: 173.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/26/2019
 Report #: 30
 DFS: 28
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$102,274.24

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0
1/24/2019 22:00	TOE	19,075.0

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	1,543	0	30"	3,563	43,337.0
DIESEL	FUEL	GAL	0	0	0	0	0	0.0
DIESEL	MUD	GAL	0	865	0	15"	1,670	26,883.0
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		9	45.0	81
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	92
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	24
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	10
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	23
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	23
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	9
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	7,590

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	19,075.0	06:00	696.0	30	106	95
1	19,075.0	06:01	845.0	40	141	95
1	19,075.0	06:02	1,026.0	50	176	95
2	19,075.0	06:00	690.0	30	106	95
2	19,075.0	06:01	819.0	40	141	95
2	19,075.0	06:02	1,000.0	50	176	95

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

Formations					
Formation Name	Prog Top (TVD SS) Override (ft(ely))	Prog Top MD (ftKB)	Prog Top (TVD) (ftKB)	Final Top MD (ftKB)	Final Top (TVD) (ftKB)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 4	-6,260.0		8,993.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
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BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM

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NATURAL RESOURCES

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UNIVERSITY 3-15C 103H

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 Daily Field Est. (Cost): \$102,274.24

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Job Contact	Title	Office	Mobile	Email
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	4
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
UNITED SHUTDOWN SAFETY TEXAS INC	2
GYRODATA INC	4
DWM CONSULTING	2

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 174.00 Days Since RI: 174.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/27/2019
Report #: 31
DFS: 29
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$52,203.36

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date 1/24/2019

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	Watch out for slip, trips, & falls while on tour. Be aware of pinch points. Make sure N2I's have a designated mentor. #4 Personal Accountability #4 Energy Isolation.
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 390: While contractor was pulling slack out of the diesel pressure washer line, he inadvertently struck himself in the mouth with the wand. Contractor received minor injuries. First aid was performed on location and he refused medical attention.
18:00	MEETING	PRE-TOUR	NIGHT	Watch out for slip, trips, & falls while on tour. Be aware of pinch points. Make sure N2I's have a designated mentor. #4 Personal Accountability #4 Energy Isolation.
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 390: While contractor was pulling slack out of the diesel pressure washer line, he inadvertently struck himself in the mouth with the wand. Contractor received minor injuries. First aid was performed on location and he refused medical attention.
23:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Stop card: Noticed 3rd party had his hand in the wrong place when using rig tongs to make up shoe track. Talked to him about using tong handles to avoid pinch points. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)
TXRRC CALL	CEMENT PROD	1/26/2019	Rosa / Operator # 7

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)	
0.00			19,075.0	19,076.0	52,203.36	3,174,433.85	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	Total AFE + Sup (Cost)
			8,988.7		3,265.36	178,968.94	4,134,694.81
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	Goal met.				

Backbuild	Lateral Inclination	Last Casing String	Next Casing String		
Yes	Toe Down	INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, 19,057.0ftKB		
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas
0.00	0.00	0.00	0.00	0.00	0.00

Operations Summary
 Finish L/D Drill pipe & BHA, C/O Wear sub on TDS, R/U Csg. tools, M/U Shoe track & run 5.5" Prod. Csg. T/ 5000'

Operations Next Report Period
 Run casing T/ 19,057', Circ. 1.5 X's csg. cap, R/D Csg tools, R/U Cement tools & cement 5.5" Prod. csg.

Operations at Report Time
 Run 5.5" Production casing T/ 5000'

Remarks
 NPT for January
 Patterson: Past 24hr - 0 Total - 7.25 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface: 100%; Intermediate 100%; Curve: 100%; Lateral 100%
 ? TD on 1/24/19 @ 22:00hrs

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	4.25	10:15	PROD, POST DRL	L/D DP	NORMAL	TOOH, L/D 5" DP f/ 5239' to 2985'. ? Hole taking correct fill.	19,075.0	19,075.0		
10:15	0.5	10:45	PROD, POST DRL	HDL_ROTHD	NORMAL	Remove rotating head and install trip nipple. ? Monitoring returns on trip tank. (Well static)	19,075.0	19,075.0		
10:45	5	15:45	PROD, POST DRL	L/D DP	NORMAL	TOOH, L/D 5" DP f/ 2985' to 103. ? Hole taking correct fill.	19,075.0	19,075.0		
15:45	0.25	16:00	PROD, POST DRL	SFTY	NORMAL	PJSM - Discussion w/ Gyrodata, Patterson and PNR Personnel on L/D BHA; ? Monitoring well on trip tank. (Well static.)	19,075.0	19,075.0		
16:00	1.5	17:30	PROD, POST DRL	LD_DIR	NORMAL	L/D lateral BHA. ? Hole taking correct fill.	19,075.0	19,075.0		
17:30	1	18:30	PROD, POST DRL	WRBSH	NORMAL	Cleared and cleaned rig floor. ? Well secured.	19,075.0	19,075.0		
18:30	0.5	19:00	PROD, POST DRL	SFTY	NORMAL	Drained stack and pulled wear bushing. ? Monitoring well on trip tank. (Well static.)	19,075.0	19,075.0		
19:00	0.5	19:30	PROD, POST DRL	RIG_RPR	NORMAL	C/O Saver sub on top drive.	19,075.0	19,075.0		
19:30	0.5	20:00	PROD, POST DRL	RIG_SVC	NORMAL	Rig service.	19,075.0	19,075.0		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 174.00 Days Since RI: 174.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/27/2019
 Report #: 31
 DFS: 29
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$52,203.36

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	1,262	0	22"	2,301	44,599.0	
DIESEL	FUEL	GAL	0	0	0	0	0	0.0	
DIESEL	MUD	GAL	0	0	0	0	1,670	26,883.0	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	96	
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE		402	-402.0	5,200	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	25	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	11	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	24	
OIL ABSORBANT (OIL DRY)	SPECIALITY	SACK	26	26	0.0	26	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	24	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	10	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	7,920	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)	
Target 1	-6,282.0		9,015.5			
Target 2	-6,282.0		9,015.5			
Target 4	-6,260.0		8,993.5			

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
FOUNTAIN, KYLE, SUPERINTENDENT	SUPERINTENDENT	817-717-2807	936-465-0896	KYLE.FOUNTAIN@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	4
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
UNITED SHUTDOWN SAFETY TEXAS INC	2
GYRODATA INC	4
DWM CONSULTING	2
WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
MAVERICK FIELD SERVICES LLC	2
SUPERIOR ENERGY SERVICES	2

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release: 11/15/2018
Days Since LTI: 175.00 Days Since RI: 175.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/28/2019
Report #: 32
DFS: 30
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$47,631.94

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date 1/24/2019

Time	Type	Des	Tour	Com
06:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 641: Contractor received minor cut to the leg while cutting fins off MWD tool with box cutter. Contractor received basic first aid at the rig and refused any further medical treatment.
06:01	MEETING	PRE-TOUR	DAY	Watch out for slip, trips, & falls while on tour. Be aware of pinch points. Make sure N2I's have a designated mentor. #5 Entrepreneurship, #5 Fall or Elevated Work Safety.
18:00	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 641: Contractor received minor cut to the leg while cutting fins off MWD tool with box cutter. Contractor received basic first aid at the rig and refused any further medical treatment.
18:01	MEETING	PRE-TOUR	NIGHT	Watch out for slip, trips, & falls while on tour. Be aware of pinch points. Make sure N2I's have a designated mentor. #5 Entrepreneurship, #5 Fall or Elevated Work Safety.
20:15	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Stop card: Noticed 3rd party hand was standing under joint of casing that was being picked up from pipe wrangler. Talked to him about honoring a safe buffer zone while he is waiting to tail casing in. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Footage/Meterage (ft)	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB)	Target Depth (ftKB)	Daily Field Est Total (Cost)	Cum Field Est To Date (Cost)
0.00			19,075.0	19,076.0	47,631.94	3,223,207.79
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB)	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)
			8,988.7		2,868.94	181,837.88
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24		Goal Comments	
DRILLED FEET		0.0	0.0		Goal met.	
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
Yes	Toe Down	INTERMEDIATE, 8,385.0ftKB	PROPOSED PRODUCTION, 19,057.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	0.00	0.00	0.00	0.00	0.00	

Operations Summary
 Run 5.5" Prod. Csg. F/5,000' - T/9,494', Circ. B/U @ 9,494', Cont. Running csg. T/ 19,025', Making up landing jt.

Operations Next Report Period
 Circ. surface to surface @ 19,057', R/D Csg. tools, R/U Cement tools, Cement 5.5" Prod. csg. R/D Cement tools, Back out landing jt. & install & test packer T/ 5,000 psi.

Operations at Report Time
 Making up landing joint.

Remarks
 NPT for January
 Patterson: Past 24hr - 0 Total - 7.25 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 100%

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	4.5	10:30	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5 1/2" Prod. Csg. F/ 5,000' - T/ 7,480' with 100% returns & with proper displacement into trip tanks. (Filling up every 30 jts.) (5.5" Csg. / 20 Lbs. / P-110-IC / TXPBTC)	19,075.0	19,075.0		
10:30	0.75	11:15	PROD, CASE & CMT	3RD_PTY	NORMAL	Trouble shoot CRT. (Dies slipping while attempting to torque up pipe.) Cleaned dies and re-greased equipment	19,075.0	19,075.0	0.75	16
11:15	2.75	14:00	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5 1/2" Prod. Csg. F/ 7,840' - T/ 9,494' with 100% returns & with proper displacement into trip tanks. (Filling up every 30 jts.) (5.5" Csg. / 20 Lbs. / P-110-IC / TXPBTC)	19,075.0	19,075.0		
14:00	1.25	15:15	PROD, CASE & CMT	CIRC	NORMAL	Circ B/U @ 9494' with 100% returns, GPM:335, SPP:395, BPM:8	19,075.0	19,075.0		
15:15	12.75	04:00	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5 1/2" Prod. Csg. F/ 9,494' - T/ 19,025' with 100% returns & with proper displacement into trip tanks. (Filling up every 30 jts.) (5.5" Csg. / 20 Lbs. / P-110-IC / TXPBTC)	19,075.0	19,075.0		
04:00	1	05:00	PROD, CASE & CMT	3RD_PTY	NORMAL	Trouble shoot CRT. (Dies slipping while attempting to torque up pipe.) Cleaned dies and re-greased equipment	19,075.0	19,075.0	1.00	16
05:00	0.75	05:45	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	L/D Bad joint.	19,075.0	19,075.0		
05:45	0.25	06:00	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	M/U Landing jt. & land production string T/ 19,057'	19,075.0	19,075.0		

Daily Drilling Report

Interval Problems												
3RD PARTY, 19,075.0ftKB, 1/27/2019 10:30												
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment					
16	0.75	No	PIPE HANDLING	CASING RUNNING TOOL	2,212.00	BYRD OILFIELD SERVICES LLC	Trouble shoot CRT. (Dies slipping while attempting to torque up pipe.) Cleaned dies and re-greased equipment					
3RD PARTY, 19,075.0ftKB, 1/28/2019 04:00												
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment					
16	1.00	No	PIPE HANDLING	CASING RUNNING TOOL	2,895.00	BYRD OILFIELD SERVICES LLC	Trouble shoot CRT. (Dies slipping while attempting to torque up pipe.) Cleaned dies and re-greased equipment					
Hydraulic Calculations												
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)		
Mud Checks												
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)				
00:30	PIONEER DRILLING FLUIDS			OIL BASE	19,075.0	11.95	79	0.0				
PV (cP)	YP (lb/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)					
21.0	12.000	7	8		13.4	250.0	500.0					
Solids (%)	Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)					
21.5	7.8											
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio		Electric Stab (V)	Lime (lb/bbl)	pH					
23,500.000	6,000.000		82.8/17.2		885.0	2.5						
Gel 10 sec (lb/100ft ²)	Gel 10 min (lb/100ft ²)			Gel 30 min (lb/100ft ²)								
11.000	20.000			22.000								
Comment PNR - Patterson 807- University 3-15C 103H - DMR #27 Recommended Fluids Treatments: No treatment. Running 5.5' production casing. Drilling Fluids Activity Last 24 Hrs: No treatment. Running 5.5' production casing and circulating active system over shakers. Drilling Fluids Forecast Next 24 Hrs: Cement. Transfer OBM to frac tanks. Rig Activity Last 24 Hrs: Pre/ Post tour safety meeting with rig personnel. Run 5.5 Production casing. Troubleshoot CRT dies, dies slipping while trying to torque. Circulate B/U at 9,473'. Running casing at time of mud report. Volumes Daily Diesel Used 170 GAL Cumulative Diesel Used 26,431 GAL Diesel on Location 1,843 GAL Daily Water Used 0 GAL Cumulative Water Used 10,542 GAL Daily OBM Surface Losses 20 BBLS OBM Volume Accounting: Total OBM Received BBLS Total OBM Rental 2,038 BBLS Total OBM on Location 1,825 BBLS Daily Drying Shaker Recovered 5 BBLS Cumulative Drying Shaker Recovered 275 BBLS Daily OBM Downhole Losses 0 BBLS Cumulative OBM Surface Losses 960 BBLS Cumulative OBM Downhole Losses 0 BBLS												
Last BOP Test												
Date	Test Type	Item Tested			Next Test Date	Com						
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>			2/3/2019	Tested BOPE 250 /5000						
Leak Off and Formation Integrity Tests												
Test Type		Depth (ftKB)				Dens Fluid (lb/gal)						
FORMATION INTEGRITY		1,244.0				12.75						
LEAK OFF		8,414.0				13.38						
Casing Pressure Test												
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)						
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0						
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0						
Kick Offs & Key Depths												
Date	Type			Top Depth (ftKB)								
1/15/2019 09:15	KICK OFF			8,485.0								
1/16/2019 00:30	HEEL			9,362.0								
1/24/2019 22:00	TOE			19,075.0								
Casing Strings												
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)					
CONDUCTOR	148.5		20	H40	78.67							
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5					
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7					
Cement												
PRODUCTION CASING CEMENT, Casing, 1/28/2019 00:00												
Cementing End Date	Wellbore	Technical Result	Comment									
	ORIGINAL											
Cement Stages												
Description	Final Top De...	Btm (ftKB)	Top Pl...	Btm Pl...	Q Pump Init (...)	Q Pump Fina...	Q Pump Avg...	P Pump Final...	P Plug Bump...	Float...	Recip?	Rotated?
PRODUCTION CASING CEMENT	3,637.0		Yes	Yes	6	3	6	2,380.0	3,100.0	Yes	No	No
Cement Fluids												
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft ³ /sack)	Density (lb/gal)							
SPACER	2,679.0	3,648.0			12.30							
Daily Drilling Report												

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 175.00 Days Since RI: 175.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/28/2019
 Report #: 32
 DFS: 30
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$47,631.94

Cement Fluids					
Fluid Type LEAD CMT	Estimated Top (ftKB) 3,648.0	Est Btm (ftKB) 8,285.0	Class CLASS H	Yield (ft ³ /sack) 1.87	Density (lb/gal) 12.50
Fluid Type TAIL CMT	Estimated Top (ftKB) 8,285.0	Est Btm (ftKB) 19,057.0	Class CLASS H	Yield (ft ³ /sack) 1.58	Density (lb/gal) 13.20
Fluid Type DSPLMT	Estimated Top (ftKB) 28.0	Est Btm (ftKB) 19,057.0	Class	Yield (ft ³ /sack)	Density (lb/gal) 8.30

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	4,508	811	0	44"	5,998	45,410.0	
DIESEL	FUEL	GAL	0	0	0	0	0	0.0	
DIESEL	MUD	GAL	0	881	0	9"	789	27,764.0	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	100	
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	268	268	0.0	5,468	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	26	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	12	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	25	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	25	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	11	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	8,250	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	Job ODR, 11/4/2018 13:30

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)
Target 1	-6,282.0		9,015.5		
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SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
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BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

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GYRODATA INC	4
DWM CONSULTING	2
WEATHERFORD INTERNATIONAL INC	1
BYRD OILFIELD SERVICES LLC	6
MAVERICK FIELD SERVICES LLC	2
SUPERIOR ENERGY SERVICES	2

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UNIVERSITY 3-15C 103H

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DFS: 31
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$590,395.08

API/UWI 42-461-40896-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B3 (WFMP B3)	Field Name SPRABERRY (TREND AREA)
SSN ID00020024	Property Sub KB-Grd (ft) 28.50	Orig KB Elev (ft) 2,733.50	Ground Elevation (ft) 2,705.00
		Spud Date 11/5/2018	TD Date 1/24/2019

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #6 Excavation & Trenching Core Value - #6 Communication
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Rig: H&P 429: While contractor was pushing on a monel during tripping out of the hole, that he was caught between the monel and the ST 80. Contractor did not report the incident to his personal until today 11/13/2019. Contractor was feeling discomfort in his chest but did not seek any further medical attention.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM - Slips, trips and falls. Pinch points. Make sure N2I's have designated mentor. R2LB - #6 Excavation & Trenching Core Value - #6 Communication
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Rig: H&P 429: While contractor was pushing on a monel during tripping out of the hole, that he was caught between the monel and the ST 80. Contractor did not report the incident to his personal until today 11/13/2019. Contractor was feeling discomfort in his chest but did not seek any further medical attention.
02:00	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Stop card: Noticed 3rd party hand was standing to close to cellar with out being tied off. Stopped him & told him to put a belt on if he was going to be around cellar. He understood.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - KYLE SPACEK	AREA TEAM 4	ODR	11/4/2018 13:30		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/31/2019	3RD Well / 3 Well pad (Revised on 1/23/19)

Daily Operations							
Footage/Meterage (ft) 0.00	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB) 19,075.0	Target Depth (ftKB) 19,076.0	Daily Field Est Total (Cost) 590,395.08	Cum Field Est To Date (Cost) 3,813,602.87	
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB) 8,988.7	Target Depth (TVD) (ftKB)	Daily Mud Field Est (Cost) 4,370.08	Cum Mud Field Est (Cost) 186,207.96	Total AFE + Sup (Cost) 4,134,694.81
Daily Goal Description DRILLED FEET	Daily Goal - Last 24 0.0	Daily Goal - Next 24 0.0	Goal Comments Goal met.				
Backbuild Yes	Lateral Inclination Toe Down	Last Casing String INTERMEDIATE, 8,385.0ftKB	Next Casing String PRODUCTION, 19,057.0ftKB				
Avg Connection Gas 0.00	Avg Trip Gas 0.00	Avg Background Gas 0.00	Max Connection Gas 0.00	Max Trip Gas 0.00	Max Drill Gas 0.00		

Operations Summary
 Circ. surface to surface @ 19,057', R/D Csg. tools, R/U Cement tools, Cement 5.5" Prod. csg. R/D Cement tools, Install & test packer T/ 5,000 psi. Nipple down BOP's, Install & test abandonment cap T/ 5000 psi.

Operations Next Report Period
 Released rig on 01-29-19 @ 06:00 AM

Operations at Report Time
 Released rig on 01-29-19 @ 06:00 AM

Remarks
 NPT for January
 Patterson: Past 24hr - 0 Total - 7.25 hrs.
 3rd Party: Past 24hr - 0 Total - 0 hrs.
 Generators: 3 (24 hrs)
 Surface:100%; Intermediate 100%; Curve: 100%; Lateral 100%

Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #	
06:00	1.75	07:45	PROD, CASE & CMT	CIRC	NORMAL	Circ 1 1/2 csg vol with Byrd CRT; 388 gpm & 780 psi; 100% returns; Max gas 706u	19,075.0	19,075.0			
07:45	0.5	08:15	PROD, CASE & CMT	RIG_SVC	NORMAL	Service Rig & Top Drive	19,075.0	19,075.0			
08:15	0.25	08:30	PROD, CASE & CMT	SFTY	NORMAL	Held Pre Job safety mtg on R/D Byrd csg crew & R/U Nine Cmt	19,075.0	19,075.0			
08:30	0.5	09:00	PROD, CASE & CMT	RD_CSG	NORMAL	R/D Byrd csg crew & CRT	19,075.0	19,075.0			
09:00	0.5	09:30	PROD, CASE & CMT	RU_CMT	NORMAL	R/U Nine Cmt head & lines	19,075.0	19,075.0			
09:30	4.5	14:00	PROD, CASE & CMT	CMT	NORMAL	Test Lines T/ 9000 psi, - Pump 50 bbls of 12.2 ppg GTX spacer, - Drop 1 st plug; Pump 216 bbls (650sks) of 12.5 ppg Lead cement. Pump 532 bbls (1890 sks) of 13.2 ppg Tail cement; Drop 2nd plug, Pump 5 bbls of chemically retarded water, Drop 3 rd plug, Displace with 423 bbls of fresh water, Bump plug F/2380 psi to 3570 psi; Held for 5 min; Check floats (ok) Bled back 3 bbls; got back spacer and 20bbl cmt to surface	19,075.0	19,075.0			
14:00	0.25	14:15	DEMOB, RIG DOWN	SFTY	NORMAL	Held PJSM on R/D CMT equip	19,075.0	19,075.0			
14:15	0.5	14:45	DEMOB, RIG DOWN	RD_CMT	NORMAL	R/D Nine Cmt head & lines	19,075.0	19,075.0			
14:45	0.5	15:15	DEMOB, RIG DOWN	PULL_CSG	NORMAL	Back out and L/D landing Jt	19,075.0	19,075.0			

Daily Drilling Report

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
15:15	1.25	16:30	DEMOB, RIG DOWN	WH	NORMAL	M/U Cactus Wash tool RIH flush well head, mud lines and BOPE	19,075.0	19,075.0		
16:30	0.25	16:45	DEMOB, RIG DOWN	SFTY	NORMAL	PJSM - Discussed w/ Cactus, Patterson and PNR personnel process of installing casing pack off	19,075.0	19,075.0		
16:45	2	18:45	DEMOB, RIG DOWN	WH	NORMAL	Installed and tested pack off 5000 psi. (PNR to witness test)	19,075.0	19,075.0		
18:45	0.25	19:00	DEMOB, RIG DOWN	SFTY	NORMAL	PJSM - Discussed w/ Cactus, Patterson crew & PNR on procedure for N/D BOP's	19,075.0	19,075.0		
19:00	2	21:00	DEMOB, RIG DOWN	ND_BOPE	NORMAL	N/D BOP's	19,075.0	19,075.0		
21:00	1.5	22:30	DEMOB, RIG DOWN	WH	NORMAL	Installed abandonment cap and tested to 5000 psi	19,075.0	19,075.0		
22:30	7.5	06:00	DEMOB, RIG DOWN	RD RDMO	NORMAL	Finish clean mud pits of OBM Release Rig at 06:00 hrs 1/29/19	19,075.0	19,075.0		

Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in ²)	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)

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
00:30	PIONEER DRILLING FLUIDS	OIL BASE	19,075.0	11.95	84	0.0	
PV (cP)	YP (lb/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
22.0	11.000	7	8	13.0	250.0	500.0	
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
21.5	7.8						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
24,000.000	6,000.000		82.8/17.2	854.0	2.2		
Gel 10 sec (lb/100ft ²)	Gel 10 min (lb/100ft ²)	Gel 30 min (lb/100ft ²)					
11.000	18.000	20.000					

Comment
 PNR - Patterson 807- University 3-15C 103H - DMR #28
 Recommended Fluids Treatments:
 No treatment. Cemented 5.5' production casing.
 Drilling Fluids Activity Last 24 Hrs:
 No treatment. Cement production casing & transfer OBM to frac tanks. Transferring +/- 400 bbls OBM to Rocker B 145H. Transferred all chemicals to Rocker B 145H and returned Bulk Barite to warehouse.
 Drilling Fluids Forecast Next 24 Hrs:
 Transfer 400+ bbls to Rocker B 145H.
 Rig Activity Last 24 Hrs:
 Pre / Post tour safety meeting with rig personnel. Run production casing. Troubleshoot CRT equipment, dies slipping while trying to torque. Change out collar connection on 5.5' casing. Run casing T/19,057'. P/U landing joint & land casing. Circulate surface to surface. R/D casing tools. PJSM with all personnel involved with cement operations. R/U cement equipment & begin cement job. R/D cementers & L/D landing joint. Wash through stack, choke, and lines. Cleaning pit at report time.
 Volumes
 Daily Diesel Used 1,843 GAL
 Cumulative Diesel Used 28,274 GAL
 Diesel on Location 0 GAL
 Daily Water Used 0 GAL
 Cumulative Water Used 10,542 GAL
 Daily OBM Surface Losses 150 BBLs
 OBM Volume Accounting:
 Total OBM Received BBLs
 Total OBM Rental 2,038 BBLs
 Total OBM on Location 1,719 BBLs
 Daily Drying Shaker Recovered 0 BBLs
 Cumulative Drying Shaker Recovered 275 BBLs
 Daily OBM Downhole Losses 0 BBLs
 Cumulative OBM Surface Losses 1110 BBLs
 Cumulative OBM Downhole Losses 0 BBLs

Date	Test Type	Item Tested	Next Test Date	Com
1/13/2019	BOP	BOP'S, 11/19/2018 00:30, <class>	2/3/2019	Tested BOPE 250 /5000

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	1,244.0	12.75
LEAK OFF	8,414.0	13.38

Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	11/8/2018	SURFACE, 1,223.7ftKB	No	30.00	1,000.0
CASING	STANDARD	1/14/2019	INTERMEDIATE, 8,385.0ftKB	No	30.00	2,500.0

Date	Type	Top Depth (ftKB)
1/15/2019 09:15	KICK OFF	8,485.0
1/16/2019 00:30	HEEL	9,362.0
1/24/2019 22:00	TOE	19,075.0

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
Accept: 11/15/2018 Release:
Days Since LTI: 176.00 Days Since RI: 176.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 1/29/2019
Report #: 33
DFS: 31
AFE #: 9000912
Total AFE + Sup: \$4,134,694.81
Daily Field Est. (Cost): \$590,395.08

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	148.5		20	H40	78.67		
SURFACE	1,223.7	1,223.0	13 3/8	J55	54.50	BTC	823.5
INTERMEDIATE	8,385.0	8,290.1	9 5/8	L-80 IC	40.00	BTC	5,782.7

Cement			
PRODUCTION CASING CEMENT, Casing, 1/28/2019 09:43			
Cementing End Date	Wellbore	Technical Result	Comment
1/28/2019 13:38	ORIGINAL	SUCCESS	Test Lines T/ 9000 psi, - Pump 50 bbls of 12.2 ppg GTX spacer, - Drop 1 st plug; Pump 216 bbls (650sks) of 12.5 ppg Lead cement. Pump 532 bbls (1890 sks) of 13.2 ppg Tail cement; Drop 2nd plug, Pump 5 bbls of chemically retarded water, Drop 3 rd plug, Displace with 423 bbls of fresh water, Bump plug F/2380 psi to 3570 psi; Held for 5 min; Check floats (ok) Bled back 3 bbls; got back spacer and 20bbl cmt to surface

Cement Stages													
Description	Final Top De...	Btm (ftKB)	Top Pl...	Btm Pl...	Q Pump Init (...)	Q Pump Fina...	Q Pump Avg...	P Pump Final...	P Plug Bump...	Float...	Recip?	Rotated?	
PRODUCTION CASING CEMENT	3,648.0	19,057.0	Yes	Yes	6	3	6	2,450.0	3,570.0	Yes	No	No	

Cement Fluids						
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)	
SPACER	2,679.0	3,648.0			12.30	
LEAD CMT	3,648.0	8,285.0	CLASS H	1.87	12.50	
TAIL CMT	8,285.0	19,057.0	CLASS H	1.58	13.20	
DSPLMT	28.0	19,057.0			8.30	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	800	0	40"	5,198	46,210.0	
DIESEL	FUEL	GAL	0	0	0		0	0.0	
DIESEL	MUD	GAL	0	0	0		789	27,764.0	
WATER	FRESH	BBL	0	0	0	Start 118309 - Stop 118309	0	34,244.82	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
ANCO BAR (BULK)	WEIGHTING MATERIAL	TON		-2	0.0	78	
BULK TANK RENTAL	MISCELLANEOUS	EA	4	4	0.0	104	
ENGINEERING PER MILEAGE	MISCELLANEOUS	PER MILE	134	134	0.0	5,602	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	27	
ENGINEERING SERVICE	MISCELLANEOUS	DAY	1	1	0.0	13	
OBM TESTING EQUIPMENT	MISCELLANEOUS	DAY	1	1	0.0	26	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	26	
PER DIEM	MISCELLANEOUS	DAY	1	1	0.0	12	
SCALE CHARGE	MISCELLANEOUS	EA	2	2	0.0	14	
TECH SERVICE SUPPORT	MISCELLANEOUS	DAY	330	330	0.0	8,580	
TRUCKING	MISCELLANEOUS	EA	2,075	2,075	0.0	15,956	

Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	
2	BOMCO	F1600	5 1/2	12.00	0.088	5,000.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)

Deviation Surveys		
Date	Description	Job
	FINAL SURVEY	
11/5/2018	AS DRILL SURVEY	ODR, 11/4/2018 13:30

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)
Target 1	-6,282.0		9,015.5		
Target 2	-6,282.0		9,015.5		
Target 4	-6,260.0		8,993.5		

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
GOODWIN, JODY, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	325-884-9044	972-261-4094	JODY.GOODWIN@PXD.COM
FOUNTAIN, KYLE, SUPERINTENDENT	SUPERINTENDENT	817-717-2807	936-465-0896	KYLE.FOUNTAIN@PXD.COM
SPACEK, KYLE, ENGINEER	ENGINEER	432-571-2800		KYLE.SPACEK@PXD.COM
TRANSIER, KENNETH, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		318-481-3868	KENNETH.TRANSIER@PXD.COM

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 3-15C 103H

PATTERSON - UTI #807
 Accept: 11/15/2018 Release:
 Days Since LTI: 176.00 Days Since RI: 176.00

PERMIAN - JV SOUTHERN WOLFCAMP
 Job: ODR
 Report Date: 1/29/2019
 Report #: 33
 DFS: 31
 AFE #: 9000912
 Total AFE + Sup: \$4,134,694.81
 Daily Field Est. (Cost): \$590,395.08

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
BROUSSARD, JEFF, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		337-288-1216	JEFF.BROUSSARD@PXD.COM
PEREZ, GABRIEL, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		956-740-9518	GABRIEL.PEREZ@PXD.COM
RIG-PATTERSON 807, RIG PHONE	RIG PHONE	361-489-3691	432-257-6394	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	4
PATTERSON-UTI DRILLING COMPANY LLC	14
PALADIN GEOLOGICAL SERVICES LLC	2
UNITED SHUTDOWN SAFETY TEXAS INC	2
GYRODATA INC	4
DWM CONSULTING	2