

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 132.00 Days Since RI: 132.00

Job: ODR
 Report Date: 12/20/2019
 Report #: 4
 DFS: 3
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$233,997.30

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: N/D, skid rig test BOPs, P/U BHA, TIH well control, working with third party, housekeeping and maintenance around the rig. and watch for slippery conditions, Pinch points and confined space entries 2: R2LB #2: By-Passing Safety Critical Equipment Core Values #2: Ethics and Honesty
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	10. Weekly trend: safe - Procedures: Discussed with RTM's about trend of observations that have identified safe behavior
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Drill out shoe track, FIT, Drill Int #1, well control, working with third party, housekeeping and maintenance around the rig. and watch for slippery conditions, Pinch points and confined space entries 2: R2LB #2: By-Passing Safety Critical Equipment Core Values #2: Ethics and Honesty
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	10. Weekly trend: safe - Procedures: Discussed with RTM's about trend of observations that have identified safe behavior
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	While tripping in the hole RTM was positioned between the stump and pipe being tailed in. Stopped the job, had a conversation with the employee about staying out strike zones, employee understood and resumed tripping.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JASON TILLEY	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/11/2020	Drilling 2nd INT #1 on 3 well pad

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)	
1,839.00	9.75	89.74	3,878.0	18,403.0	233,997.30	590,779.79	
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)	Total AFE + Sup (Cost)
188.6	0.50	10.26	3,866.7	9,200.0	14,664.39	14,664.39	3,430,137.57
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	2,211.0	Operational Goal achieved				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		SURFACE, 2,020.4ftKB	PROPOSED INTERMEDIATE, 6,089.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
2.00	0.00	2.00	4.00	0.00	3.00		

Operations Summary
 Finish N/U BOP and Misc. Equipment, Test BOP, P/U BHA, TIH, Displace to DEM, Drill out FE, Perform FIT, Drill INT #1 T/3878 (10% sldg, 6.18 deg tang, 6' Above, 5' Right)

Operations Next Report Period
 Drill INT#1 F/3878' T/6089', Circ, POOH

Operations at Report Time
 Drill INT#1 T/3878'

Remarks
 No Accidents,
 NPT Hrs- Rig: hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:0% Inter 2: 0% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 86627 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

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	07:00	INT, PRE DRL	SKID	NORMAL	Skid rig over well center and set down BOP	2,039.5	2,039.5		
07:00	1	08:00	INT, PRE DRL	NU_BOPE	NORMAL	N/U BOP, Finish Dressing rig floor, nipple up flow line, and choke manifold.	2,039.5	2,039.5		
08:00	0.25	08:15	INT, PRE DRL	SFTY	NORMAL	PJSM on BOP testing.	2,039.5	2,039.5		
08:15	4.75	13:00	INT, PRE DRL	TEST_BOPE	NORMAL	Test BOP with 5" and 4.5" DP- perform draw down test	2,039.5	2,039.5		
13:00	0.5	13:30	INT, PRE DRL	WRBSH	NORMAL	Install wearbushing.	2,039.5	2,039.5		
13:30	0.25	13:45	INT, PRE DRL	SFTY	NORMAL	PJSM on picking up BHA.	2,039.5	2,039.5		
13:45	0.5	14:15	INT, PRE DRL	RIG_SVC	NORMAL	Lubricate and inspect rig.	2,049.0	2,049.0		
14:15	0.75	15:00	INT, PRE DRL	PU_DIR	NORMAL	P/U 9 5/8 combo MM with RPS616. Install MWD and lock down. P/U directional tools.	2,039.5	2,039.5		
15:00	2.25	17:15	INT, PRE DRL	TIH_ELEV	NORMAL	TIH F/BHA T/1975' hole spacing properly	2,039.5	2,039.5		
17:15	0.5	17:45	INT, PRE DRL	HDL_ROTND	NORMAL	Install rotating head.	2,039.5	2,039.5		
17:45	0.75	18:30	INT, PRE DRL	CIRC	NORMAL	Displace hole with OBM	2,039.5	2,039.5		
18:30	1	19:30	INT, PRE DRL	DRL_OUT	NORMAL	Drill out FE and rat hole F/1975' T/2039' with 30 RPM, 10k WOB, 5-6k TQ, 500 gpm Tag float collar @ 1975', Float shoe @ 2018'	2,039.5	2,039.5		

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19:30	0.25	19:45	INT, PRE DRL	DRL	NORMAL	Drill 10 ft of new formation F/2039 T/2049' 30 RPM, 10k WOB, 5-6k TQ, 500 gpm.	2,039.5	2,049.0		
19:45	0.5	20:15	INT, PRE DRL	FIT	NORMAL	Perform FIT to 12.5 ppg with 9.9 ppg in/out. 272 surface pressure applied. Good test.	2,049.0	2,049.0		
20:15	9.75	06:00	INT, DRL	DRL	NORMAL	Drill F/2049' T/3878' (1829' @ 193 fph), 50% complete. 87% Rot @ 214 fph 13% Sldg @ 53 fph MW-10.3 w/ 43 vis, full returns. Pump 25 bbl, vis sweeps every other std. Last Survey @ 3438' ? Inc-6.4°, Azm-324.84°, 6' high & 5' right to plan #1, Gamma-9°, CBHT-124.48°F	2,049.0	3,878.0		

Drill Strings

BHA #2 , INTERMEDIATE

Bit Run 2	Drill Bit 12 1/4in, RPS616, 50265	Bit Type PDC	Make ULTERRA
Nozzles (1/32") 13/13/13/13/13	Bit Total Fluid Area (nozzles) (in²) 0.78	IADC Bit Dull -----	Hours Drilled By Bit (hr) 9.75
BHA Drilling Time (hr) 9.75	BHA Depth Drilled (ft) 1,839.00	BHA ROP (ft/hr) 188.6	Depth In (ftKB) 2,039.0
			Depth Out (ftKB) 3,878.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
167	DRILL PIPE	5	4.27	2,552.98	3,878.00	49,783.1	92	RIG
6	HWDP	5	3.00	182.19	1,325.02	9,473.9	42	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.63	29.20	1,142.83		33	OTHER (PROVIDE DESCRIPTION)
21	HWDP - SPIRALED	5	3.00	633.93	1,113.63	32,964.4	33	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	8	3.00	3.30	479.70		0	OTHER (PROVIDE DESCRIPTION)
12	DRILL COLLAR - SPIRALED	8	3.00	361.86	476.40		0	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	8	2.94	3.58	114.54		0	STABIL DRILL
1	REAMER - DRILL N' REAM	8	3.00	6.35	110.96		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8	3.25	28.86	104.61		0	STABIL DRILL
1	DRILL COLLAR - NON MAG	8	3.31	28.87	75.75		0	STABIL DRILL
1	SUB - UBHO	8	3.00	2.83	46.88		0	GYRODATA
1	STABILIZER	8	2.88	4.93	44.05		0	STABIL DRILL
1	MOTOR - STABILIZER SLEEVE	9 5/8	2.88	37.62	39.12		0	GYRODATA

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM962015	1.75	NOT SEALED	7:8	5.9		6.44

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	49.00	
D&I (INC/AZI)	61.00	

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 (°)
19:15	19:30	2,039.0	10.00	40.0	30	30	500.0	500	2,000.0	150.0	162	166	144	162	10.0	4.0	0
19:30	20:00	2,049.0	0.00		0	30	0.0	500	1,600.0	0.0	162	166	144	162	4.0	4.0	0
20:30	22:00	2,049.0	136.00	90.7	40	80	900.0	850	4,300.0	300.0	162	166	144	162	14.0	5.0	0
22:00	22:30	2,185.0	27.00	54.0	25	0	375.0	850	3,700.0	90.0	162	166	144	162	0.0	0.0	330
22:30	23:30	2,212.0	169.00	169.0	40	80	900.0	850	4,300.0	300.0	162	166	144	162	17.0	5.0	0
23:30	23:45	2,381.0	24.00	96.0	25	0	375.0	850	3,700.0	90.0	162	166	144	162	0.0	0.0	310
23:45	00:30	2,405.0	170.00	226.7	40	80	900.0	850	4,300.0	300.0	162	166	144	162	17.0	5.0	0
00:30	00:45	2,575.0	14.00	56.0	25	0	375.0	850	3,700.0	90.0	162	166	144	162	0.0	0.0	350
00:45	06:00	2,589.0	1,289.00	245.5	40	80	900.0	850	4,300.0	300.0	162	166	144	162	17.0	5.0	0

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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)
10.30	10.38	568.8	4.8	350.6	1,147.2	23.8	97.5	56.80	487.41	260.85
Mud Checks										
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)				
00:00	PIONEER DRILLING FLUIDS	DIRECT EMULSION	3,151.0	10.30	43	125.0				
PV (cP)	YP (lb/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)			
11.0	10.000	5	6	0.0						
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)					
17.0	9.1	0.3	5.0	1.400						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH				
168,000,000.000			24.1/75.9		0.3	10.5				
Gel 10 sec (lb/100ft ²)	Gel 10 min (lb/100ft ²)	Gel 30 min (lb/100ft ²)								
8.000	12.000	14.000								
Comment										
RECOMMENDED FLUIDS TREATMENT										
Treating active with additions of Caustic 2 per/hr to increase pH and maintain alkalinities. Soda Ash 4 per/hr to lower hardness and maintain. Mul 2 per/tr to keep emulsion stability. 25 BBL Hi-Vis sweeps every other connection										
DRILLING FLUIDS ACTIVITY LAST 24 HRS										
Brought mud from frac to active, begin processing with centrifuge to lower mud weight in order to start off on the low side of MW range. Displaced hole with DEM begin with tourly treatments and pumping sweeps every other connection.										
RIG ACTIVITY LAST 24 HOURS										
Finished skidding from the 11H to the 10H. Nipple up BOP's and perform full BOP test. P/U BHA and TIH. Tag up on float collar and begin displacement. Drill out FE, shoe track, and 10' of new formation. Perform FIT to 12.5 ppg EMW. Once FIT finished begin drilling ahead as per plan. No issues to report on rig.										
Last BOP Test										
Date	Test Type	Item Tested	Next Test Date	Com						
12/19/2019	BOP		1/9/2020							
Leak Off and Formation Integrity Tests										
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)								
FORMATION INTEGRITY	2,018.0	12.50								
Casing Pressure Test										
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)				
Kick Offs & Key Depths										
Date	Type	Top Depth (ftKB)								
Casing Strings										
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)			
CONDUCTOR	106.5	106.5	20	H40	78.67					
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3			
Job Supply Amounts										
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed		
DIESEL	FUEL	GAL	8,881			Transferred from UNIVERSITY 6K 11H'	8,881	0.0		
DIESEL	FUEL	GAL		2,025			6,856	2,025.0		
DIESEL	MUD	GAL	12,500			Transferred from UNIVERSITY 6K 11H'	12,500	0.0		
DIESEL	MUD	GAL		1,737			10,763	1,737.0		
Mud Additive Amounts										
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons				
CAUSTIC SODA	ALKALINITY CONTROL	SACK	84	82	2.0	82				
PAC R	FLUID LOSS ADDITIVES	SACK	84	80	4.0	80				
PALLET	MISCELLANEOUS	EA	12	12	0.0	12				
PHPA	VISCOSIFIER	GAL	16	14	2.0	14				
POLYDRIL DEFOAMER 3010	DEFOAMER	GAL	16	13	3.0	13				
POLYDRIL DIRECT MUL LDE	SPECIALTY	DRUM	12	3	9.0	3				
SODIUM BICARB	ALKALINITY CONTROL	SACK	34	20	14.0	20				
XANTHAM GUM	VISCOSIFIER	SACK	128	5	123.0	5				
Pump Operations										
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)				
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0				
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0				
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0				
Pump Checks										
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)				
1	3,304.0	05:17	450.0	20	64	95				
1	3,304.0	05:17	560.0	40	129	95				
1	3,304.0	05:17	380.0	60	193	95				
2	3,304.0	05:17	420.0	40	129	95				
2	3,304.0	05:17	530.0	60	193	95				
2	3,304.0	05:17	360.0	20	64	95				
3	3,304.0	05:17	330.0	20	64	95				
3	3,304.0	05:17	510.0	60	193	95				
3	3,304.0	05:17	420.0	40	129	95				

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UNIVERSITY 6J 10H

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Deviation Surveys

Date: 10/22/2019	Description: AS DRILL SURVEY	Job: ODR, 10/21/2019 16:00
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Survey Data - All surveys for 24 hr reporting period

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
2,112.00	0.97	352.25	2,110.91	56.88	49.50	-28.06	0.64
2,207.00	2.81	354.07	2,205.85	59.73	52.61	-28.41	1.94
2,302.00	4.05	356.30	2,300.68	64.82	58.28	-28.87	1.31
2,397.00	4.60	338.28	2,395.41	71.56	65.16	-30.49	1.54
2,492.00	5.54	329.71	2,490.04	79.91	72.66	-34.21	1.27
2,586.00	6.26	328.17	2,583.54	89.57	80.93	-39.21	0.78
2,681.00	7.27	326.58	2,677.88	100.75	90.35	-45.25	1.08
2,776.00	7.06	326.24	2,772.14	112.59	100.22	-51.80	0.23
2,870.00	7.12	326.41	2,865.42	124.18	109.88	-58.24	0.07
2,965.00	7.05	326.32	2,959.70	135.88	119.63	-64.73	0.07
3,060.00	6.92	326.72	3,053.99	147.43	129.27	-71.10	0.15
3,155.00	6.58	326.67	3,148.33	158.58	138.60	-77.23	0.36
3,249.00	6.69	326.42	3,241.70	169.43	147.66	-83.22	0.12
3,344.00	6.56	326.39	3,336.07	180.38	156.79	-89.28	0.14
3,438.00	6.40	324.84	3,429.47	190.97	165.55	-95.27	0.25

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)
258_0_QUEEN	-1,102.0		4,111.5		
259_0_GRAYBURG	-1,611.0		4,620.5		
261_0_SAN ANDRES	-1,802.0		4,811.5		
263_5_Top_Cherry_Canyon	-2,701.0		5,710.5		
Recommended ICP1	-3,056.0		6,065.5		
264_0_Top_Brushy_Canyon	-3,299.0		6,308.5		
264_5_Mid_Brushy_Canyon	-3,598.0		6,607.5		
265_0_CLEARFORK/POP	-3,819.0		6,828.5		
267_0_SPBY_U_A1/267_0_SPBY	-5,445.0		8,454.5		
267_5_SPBY_M_A1	-5,761.0		8,770.5		
268_5_SPBY_L_A1	-5,991.0		9,000.5		
268_5_SPBY_L_A2	-6,028.0		9,037.5		
268_5_SPBY_L_A3	-6,113.0		9,122.5		
268_6_SPBY_L_B1/JO MILL	-6,267.0		9,276.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-6,316.0		9,325.5		
RECOMMENDED ICP2	-6,436.0		9,445.5		
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts

Job Contact	Title	Office	Mobile	Email
VOGEL, DERRICK, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-664-0046	DERRICK.VOGEL@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
PARSELL, VIC, SUPERINTENDENT	SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
GREGAN, DOMINIC, MUD ENGINEER	MUD ENGINEER		830-481-9669	DOMINIC.GREGAN@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

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UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

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 Days Since LTI: 133.00 Days Since RI: 133.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Drilling fast hole, be aware of surrounding and be on floor for connection, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 3: R2LB #3: Confined Space Entry Core Values #3: Safety
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	11. Weekly trend: safe - Positions Of People. Discussed with RTM's about being aware of their surroundings and body placement.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Drilling fast hole, Circ, POOH, L/D BHA be aware of surrounding and be on floor for connection, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 3: R2LB #3: Confined Space Entry Core Values #3: Safety
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	11. Weekly trend: safe - Positions Of People. Discussed with RTM's about being aware of their surroundings and body placement.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	While tripping out of the hole an employee was seen placing his hand on the ST80 as it was being extended out to the stump. The job was stopped and the employee was told to never place hands near the equipment as it is being moved. There is a potential for having his hands smashed. He was shown the correct places to put his hands. Employee understood and complied

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 2	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	2/11/2020	POOH on 2nd INT #1 on 3 well pad

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)	
2,211.00	18.00	90.28	6,089.0	18,403.0	116,162.39	707,921.18	
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)
122.8	3.00	9.72	6,063.5	9,200.0	8,854.18	23,518.57	3,430,137.57
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	2,211.0	0.0	Operational Goal achieved				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
		SURFACE, 2,020.4ftKB	PROPOSED INTERMEDIATE, 6,089.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
4.00	5.00	4.00	10.00	5.00	8.00		

Operations Summary
 Drill INT#1 F/3878' T/6089' (10% sldg, 5.92 deg tang, 18' Above, 17' Right), Circ, POOH backreaming- short trip

Operations Next Report Period
 Finish short trip, POOH, L/D BHA, R/U and run 9 5/8" Int 1 casing

Operations at Report Time
 POOH @ 4000'

Remarks
 No Accidents,
 NPT Hrs- Rig: hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 0% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 86627 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	5.25	11:15	INT, POST DRL	DRL	NORMAL	Drill F/3878' T/4729' (848' @ 162 fph), 52% complete. 89% Rot @ 210 fph 11% Sldg @ 61 fph MW-10.3 w/ 43 vis, full returns. Pump 25 bbl, vis sweeps every other std.Last Survey @ 4670' ? Inc-6.4°, Azm-319.41°, 13.6' high & 2.9' left to plan #1, Gamma-23°, CBHT-135.11°F	3,878.0	4,729.0		
11:15	0.5	11:45	INT, POST DRL	CIRC	NORMAL	Circ B/U	4,729.0	4,729.0		
11:45	5.25	17:00	INT, POST DRL	DRL	NORMAL	Drill F/4729' T/5408' (679' @ 129 fph), 60% complete. 95% Rot @ 235 fph 13% Sldg @ 35 fph MW-10.2 w/ 48 vis, full returns. Pump 25 bbl, vis sweeps every other std.Last Survey @ 5333' ? Inc-19°, Azm-317.16°, 19' high & 12.7' left to plan #1, Gamma-32°, CBHT-143.97°F	4,729.0	5,408.0		
17:00	0.5	17:30	INT, POST DRL	RIG_RPR	NORMAL	Wash in the standpipe and kelly hose. Replace O-ring.	5,408.0	5,408.0	0.50	2
17:30	2.25	19:45	INT, POST DRL	TIH_NONELEV	NORMAL	POOH 4 stands due to intermittent returns when attempting to establish returns, Circ B/U, wash and ream back to bottom with 90% returns.	5,408.0	5,408.0		

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 133.00 Days Since RI: 133.00

Job: ODR
 Report Date: 12/21/2019
 Report #: 5
 DFS: 4
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$116,162.39

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
19:45	5.25	01:00	INT, POST DRL	DRL	NORMAL	Drill F/5408' T/6089' (681' @ 130 fph), 50% complete. 90% Rot @ 200 fph 10% Sldg @ 50 fph MW-10.3 w/ 43 vis, 85-90% returns. Pump 25 bbl, vis sweeps every other std. Last Survey @ 6018' ? Inc-5.92°, Azm-334.72°, 18' high & 17' left to plan #1, Gamma-49°, CBHT-128.02°F	5,408.0	6,089.0		
01:00	2.5	03:30	INT, POST DRL	CIRC	NORMAL	Circ hole clean in preparation for the trip	6,089.0	6,089.0		
03:30	1	04:30	INT, POST DRL	TOOH_NONEL EV	NORMAL	POOH wet F/6089' T/5700' Begin pulling tight @ 5700'- screw in to string and backream out of the hole- Short trip	6,089.0	6,089.0		
04:30	1.5	06:00	INT, POST DRL	TOOH_NONEL EV	NORMAL	Backream F/5700' T/5000' 80 RPM, 850 GPM, SPP 3700	6,089.0	6,089.0		

Interval Problems
RIG, 5,408.0ftKB, 12/20/2019 17:00

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
2	0.50	No	CIRCULATING SYSTEM	PIPING	1,000.00	HELMERICH & PAYNE INTERNATIONAL DRILLING CO	Wash in the standpipe and kelly hose. Replace O-ring.

Drill Strings

BHA #2, INTERMEDIATE

Bit Run	Drill Bit	Bit Type	Make
2	12 1/4in, RPS616, 50265	PDC	ULTERRA
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
13/13/13/13/13	0.78	-----	27.75
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
27.75	4,050.00	145.9	2,039.0
Depth Drilled By Bit (ft)			
4,050.00			
Depth Out (ftKB)			
6,089.0			

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
151	DRILL PIPE	5	4.27	4,763.98	6,089.00	92,897.6	135	RIG
6	HWDP	5	3.00	182.19	1,325.02	9,473.9	42	OTHER (PROVIDE DESCRIPTION)
1	DRILLING JARS - HYDRAULIC	6 5/8	2.63	29.20	1,142.83		33	OTHER (PROVIDE DESCRIPTION)
21	HWDP - SPIRALED	5	3.00	633.93	1,113.63	32,964.4	33	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	8	3.00	3.30	479.70		0	OTHER (PROVIDE DESCRIPTION)
12	DRILL COLLAR - SPIRALED	8	3.00	361.86	476.40		0	OTHER (PROVIDE DESCRIPTION)
1	SUB - XO	8	2.94	3.58	114.54		0	STABIL DRILL
1	REAMER - DRILL N' REAM	8	3.00	6.35	110.96		0	OTHER (PROVIDE DESCRIPTION)
1	DRILL COLLAR - NON MAG	8	3.25	28.86	104.61		0	STABIL DRILL
1	DRILL COLLAR - NON MAG	8	3.31	28.87	75.75		0	STABIL DRILL
1	SUB - UBHO	8	3.00	2.83	46.88		0	GYRODATA
1	STABILIZER	8	2.88	4.93	44.05		0	STABIL DRILL
1	MOTOR - STABILIZER SLEEVE	9 5/8	2.88	37.62	39.12		0	GYRODATA

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM962015	1.75	NOT SEALED	7:8	5.9		6.44

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	49.00	
D&I (INC/AZI)	61.00	

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	3,878.0	307.00	153.5	45	80	900.0	850	4,600.0	330.0	186	201	179	186	20.0	5.0	0
08:00	08:30	4,185.0	17.00	34.0	18	0	400.0	850	4,100.0	65.0	186	201	179	186	0.0	0.0	20
08:30	11:15	4,202.0	529.00	192.4	55	80	900.0	850	4,700.0	265.0	186	201	179	186	20.0	6.0	0
11:15	11:45	4,731.0	0.00	0.0	0	80	0.0	850	3,800.0	0.0	186	201	179	186	6.0	6.0	0

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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 (°)	
11:45	13:15	4,731.0	202.00	134.7	55	80	900.0	850	4,800.0	240.0	193	215	170	193	21.0	7.0	0	
13:15	13:45	4,933.0	17.00	34.0	36	0	400.0	695	3,200.0	35.0	193	215	170	193	0.0	0.0	50	
13:45	17:00	4,950.0	453.00	139.4	55	80	900.0	850	4,800.0	240.0	193	215	170	193	21.0	7.0	0	
17:30	21:00	5,403.0	197.00	56.3	55	80	900.0	850	4,800.0	240.0	193	215	170	193	21.0	7.0	0	
21:00	21:45	5,600.0	20.00	26.7	36	0	400.0	695	3,200.0	35.0	193	215	170	193	0.0	0.0	100	
21:45	01:00	5,620.0	469.00	144.3	55	80	900.0	850	4,800.0	240.0	193	215	170	193	21.0	7.0	0	
01:00	03:30	6,089.0	0.00	0.0	0	80	0.0	850	4,000.0	0.0	193	215	170	193	7.0	7.0	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)
10.20	10.23	563.3	4.8	350.6	1,136.0	23.8	97.5	95.96	1,091.49	260.85

Mud Checks										
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)				
00:00	PIONEER DRILLING FLUIDS	DIRECT EMULSION	6,089.0	10.20	45	122.0				
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)			
13.0	9.000	3	2	0.0	0.0	0.0	0.0			
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)					
18.0	9.5	0.3	5.0	0.700						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH				
142,000,000.000	0.000	0	22/78	0.0	0.3	9.5				
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)								
5.000	8.000	15.000								

Comment
RECOMMENDED FLUIDS TREATMENT
 Treated active while drilling with additions of Caustic 2 per/hr to maintain pH and alkalinity. Xan 1 per/hr to increase rheologies. Pac R 2 per/hr to lower fluid loss in conjunction with Xan. Defoamer as needed. Emulsifier 3 per/tr to help with emulsion stability. Pumped hi-vis every other connection. Once returns were re-established pumped LCM sweeps to try and get back to 100% returns.

DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Continued with tourly additions to maintain mud in spec. Had full returns until 5408' (MD). Encountered seepage. Had to change out ring gasket and when pumps were staged back saw seepage, TOO H 5 stands and re-establish full returns, TIH to bottom and drilled with 90% returns. LCM sweeps were pumped with no changes to flow or gain.

RIG ACTIVITY LAST 24 HOURS
 Drilled from 3348' to 6089' (TD). Drilled to 5408' when ring gasket had to be replaced. Once pumps were staged back in saw seepage. TOO H 5 stands and re-establish full returns, TIH to bottom and drilled with 90% returns. LCM sweeps were pumped with no changes to flow or gain. Drilled to TD with 9

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP		1/9/2020	

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

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

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL		2,577			4,279	4,602.0	
DIESEL	MUD	GAL		7,622			3,141	9,359.0	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BULK BARITE	WEIGHTING MATERIAL	TON		6	75.15	6
CALCIUM CARBONATE FINE	LOST CIRCULATION	SACK		15	90.0	15
CALCIUM CARBONATE MEDIUM	LOST CIRCULATION	SACK		15	90.0	15
CAUSTIC SODA	ALKALINITY CONTROL	SACK		23	-21.0	105
MICA MEDIUM	LOST CIRCULATION	BAG		15	75.0	15
NUT PLUG M	LOST CIRCULATION	SACK		10	36.0	10
PAC R	FLUID LOSS ADDITIVES	SACK		43	-39.0	123

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 Daily Field Est. (Cost): \$116,162.39

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PHPA	VISCOSIFIER	GAL		9	-7.0	23
SODA ASH	ALKALINITY CONTROL	SACK		105	159.0	105
ZINC OXIDE	SPECIALITY	SACK		15	25.0	15

Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	6,053.0	05:24	400.0	20	64	95
1	6,053.0	05:24	540.0	40	129	95
1	6,053.0	05:24	650.0	60	193	95
2	6,053.0	05:24	480.0	20	64	95
2	6,053.0	05:24	530.0	40	129	95
2	6,053.0	05:24	640.0	60	193	95
3	6,053.0	05:24	440.0	20	64	95
3	6,053.0	05:24	530.0	40	129	95
3	6,053.0	05:24	620.0	60	193	95

Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
3,912.00	6.09	322.99	3,900.70	241.61	206.95	-125.31	0.05
4,007.00	6.00	322.75	3,995.17	251.60	214.92	-131.35	0.10
4,102.00	5.82	320.47	4,089.67	261.35	222.59	-137.42	0.31
4,196.00	6.63	322.89	4,183.11	271.52	230.59	-143.72	0.91
4,291.00	7.44	324.01	4,277.40	283.14	239.94	-150.65	0.86
4,386.00	7.05	322.71	4,371.64	295.11	249.56	-157.79	0.45
4,480.00	6.82	322.44	4,464.95	306.44	258.57	-164.69	0.25
4,575.00	6.52	321.47	4,559.31	317.45	267.26	-171.49	0.34
4,670.00	6.40	319.41	4,653.70	328.09	275.50	-178.29	0.27
4,764.00	5.86	317.11	4,747.17	338.04	283.00	-184.97	0.63
4,859.00	5.38	315.24	4,841.71	347.21	289.71	-191.41	0.54
4,954.00	6.54	318.59	4,936.19	356.95	296.93	-198.12	1.27
5,049.00	7.32	321.24	5,030.50	368.35	305.71	-205.49	0.89
5,143.00	6.92	318.99	5,123.77	379.94	314.65	-212.95	0.52
5,238.00	6.96	319.02	5,218.08	391.34	323.32	-220.48	0.04
5,333.00	6.87	317.16	5,312.39	402.67	331.83	-228.12	0.25
5,427.00	6.87	317.57	5,405.71	413.79	340.10	-235.74	0.05
5,522.00	6.87	313.73	5,500.03	424.96	348.22	-243.68	0.48
5,617.00	6.73	326.69	5,594.37	436.09	356.80	-250.84	1.62
5,711.00	6.69	336.13	5,687.73	446.98	366.41	-256.08	1.17
5,806.00	6.44	334.92	5,782.10	457.69	376.30	-260.58	0.30
5,901.00	6.27	334.99	5,876.52	468.07	385.82	-265.03	0.18
5,996.00	5.87	334.12	5,970.99	478.00	394.90	-269.34	0.43
6,018.00	5.92	334.72	5,992.87	480.24	396.93	-270.32	0.36

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)
Recommended ICP1	-3,056.0		6,065.5		
264_0_Top_Brushy_Canyon	-3,299.0		6,308.5		
264_5_Mid_Brushy_Canyon	-3,598.0		6,607.5		
265_0_CLEARFORK/POP	-3,819.0		6,828.5		
267_0_SPBY_U_A1/267_0_SPBY	-5,445.0		8,454.5		
267_5_SPBY_M_A1	-5,761.0		8,770.5		
268_5_SPBY_L_A1	-5,991.0		9,000.5		
268_5_SPBY_L_A2	-6,028.0		9,037.5		
268_5_SPBY_L_A3	-6,113.0		9,122.5		
268_6_SPBY_L_B1/JO MILL	-6,267.0		9,276.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-6,316.0		9,325.5		
RECOMMENDED ICP2	-6,436.0		9,445.5		
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 133.00	Days Since RI: 133.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/21/2019
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DFS:	4
AFE #:	9006929
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Daily Field Est. (Cost):	\$116,162.39

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)
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
VOGEL, DERRICK, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-664-0046	DERRICK.VOGEL@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
PARSELL, VIC, SUPERINTENDENT	SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
HARDIN, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM
GREGAN, DOMINIC, MUD ENGINEER	MUD ENGINEER		830-481-9669	DOMINIC.GREGAN@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/22/2019
 Report #: 6
 DFS: 5
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$97,671.03

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 134.00 Days Since RI: 134.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: POOH, R/U casing crews run casing, be aware of surroundings, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 4: R2LB #4:Energy Isolation Core Values #4: Personal Accountability
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	12. Weekly trend: Unsafe - Procedures Followed : Discussed with RTM's about Procedures Followed Always Follow Procedures It Will Keep You From Getting Hurt Or Killed Never Cut Corner And Short Cut Always Think Before Attempting To Do Unsafe Job.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Run casing, circ, working with third party, be aware of surrounding and be on floor for connection, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 4: R2LB #4:Energy Isolation Core Values #4: Personal Accountability
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	12. Weekly trend: Unsafe - Procedures Followed : Discussed with RTM's about Procedures Followed Always Follow Procedures It Will Keep You From Getting Hurt Or Killed Never Cut Corner And Short Cut Always Think Before Attempting To Do Unsafe Job.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	While running casing it was noticed that there was an employee standing near the stump as a joint was being tailed in. The employee was waiting on the joint to be tailed in but was standing in the swing path. The job was stopped and the employee was told where to stand. He understood the hazards and where to stand during these operations

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Running casing on 2nd INT #1 on 3 well pad

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			6,089.0	18,403.0	97,671.03	795,566.09
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)
			6,063.5	9,200.0	8,578.03	22,070.48
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	0.0	2,500.0	Operational Goal achieved			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
		SURFACE, 2,020.4ftKB	PROPOSED INTERMEDIATE 2, 9,528.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas			
0.00	22.00	2.00	0.00			
Max Trip Gas	Max Drill Gas					
22.00	0.00					

Operations Summary
 Finish short trip in hole F/4000' T/6089', POOH, L/D BHA, R/U and run 9 5/8" Int 1 casing T/6079', Circ prior to cement
 Operations Next Report Period
 Finish circulation, pump Int 1 cement job, L/D landing jt, P/U Int 2 BHA, TIH, Drill out and drill liner section T/8589'

Operations at Report Time
 Circ prior to cement

Remarks
 No Accidents,
 NPT Hrs- Rig: hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 0% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	2.5	08:30	INT, POST DRL	WPR_TRIP	NORMAL	TIH F/4000' T/6089'. with no excess drag. Hole displacing properly.	6,089.0	6,089.0		
08:30	1	09:30	INT, POST DRL	CIRC	NORMAL	Circulate Hole Clean with 550- 800 gpm, 3550 psi. full returns	6,089.0	6,089.0		
09:30	0.25	09:45	INT, POST DRL	FLOW_CHK	NORMAL	Flow Check. Well Static.	6,089.0	6,089.0		
09:45	0.75	10:30	INT, POST DRL	TIH_ELEV	NORMAL	TOOH wet F/6089' T/5099' with no excess drag. Hole taking an additional 12 bbls per 5 stands	6,089.0	6,089.0		
10:30	2.25	12:45	INT, POST DRL	TOOH_ELEV	NORMAL	TOOH F/5099' T/1300' with no excess drag. Hole taking an additional 12bbls per 5 stands Filling backside with 9.9ppg	6,089.0	6,089.0		
12:45	0.25	13:00	INT, POST DRL	HDL_ROT HD	NORMAL	Pull rotating head and install trip nipple.	6,089.0	6,089.0		
13:00	0.5	13:30	INT, POST DRL	HDL_BHA	NORMAL	TOOH racking back HWDP and 8" DC's F/1300' T/BHA Hole taking an additional 4 bbls per 3 stands on HWDP Hole taking an additional 2 bbls per stand of 8" collars Filling backside with 9.9ppg	6,089.0	6,089.0		

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019 Release: Days Since LTI: 134.00 Days Since RI: 134.00

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/22/2019
 Report #: 6
 DFS: 5
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$97,671.03

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
13:30	0.25	13:45	INT, POST DRL	SFTY	NORMAL	PJSM on laying down directional tools.	6,089.0	6,089.0		
13:45	0.25	14:00	INT, POST DRL	LD_DIR	NORMAL	L/D all directional tools. Note: Bit graded 0-1-NO-G -0-0-NO-TD Hole staying full	6,089.0	6,089.0		
14:00	0.5	14:30	INT, POST DRL	RIG_SVC	NORMAL	Rig Service	6,089.0	6,089.0		
14:30	0.25	14:45	INT, POST DRL	WRBSH	NORMAL	Pull wear bushing.	6,089.0	6,089.0		
14:45	0.25	15:00	INT, POST DRL	SFTY	NORMAL	Clean rig floor in preparation for upcoming casing run.	6,089.0	6,089.0		
15:00	0.25	15:15	INT, POST DRL	SFTY	NORMAL	PJSM on rigging up casing tools.	6,089.0	6,089.0		
15:15	0.5	15:45	INT, CASE & CMT	RU_CSG	NORMAL	Rig up casing crews and equipment.	6,089.0	6,089.0		
15:45	0.25	16:00	INT, CASE & CMT	SFTY	NORMAL	PJSM on running casing with all parties involved.	6,089.0	6,089.0		
16:00	0.75	16:45	INT, CASE & CMT	MU_SHOE_TR K	NORMAL	M/U shoe track with float shoe, 2x joints, and float collar. Pump through, good test.	6,089.0	6,089.0		
16:45	11.75	04:30	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	RIH with 9 5/8 casing F/97' T/6079' @ 40fpm. Hole displacing 30-35bbbls per 10 jts T/4800' Hole displacing 9-15bbbls per 10jts F/4800' T/6079' @ 30fpm Lost returns @ 4800' keeping backside full with 9.9ppg	6,089.0	6,089.0		
04:30	1.5	06:00	INT, CASE & CMT	CIRC	NORMAL	Circ 1.5 csg capacity prior to cement job	6,089.0	6,089.0		

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)

Mud Checks										
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)				
00:00	PIONEER DRILLING FLUIDS	DIRECT EMULSION	6,089.0	10.30	41	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)			
13.0	6.000	1	2	12.8	0.0	0.0	0.0			
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)					
15.0	7.4	0.3	5.0	0.300						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH				
142,000,000.000	0.000	0	23.5/76.5	0.0	0.1	9.5				
Gel 10 sec (lb/100ft ²)	Gel 10 min (lb/100ft ²)	Gel 30 min (lb/100ft ²)								
2.000	5.000	7.000								

Comment
 RECOMMENDED FLUIDS TREATMENT
 No Treatment at this time

DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Finished circulating and began TOOHS 15 stands back reaming. TIH to bottom and circulate to get consistent mud weights in and out. During TOOHS pumped lighter mud on backside due to taking excess fill. Hole not displacing 15 bbls less during casing run. Catch light mud in and send to frac tanks. Mud weight in pits 10.2ppg

RIG ACTIVITY LAST 24 HOURS
 Short trip 15 stands back reaming through tight spots. Trip back to bottom and circulate until mud weights are consistent in/out. Pull 10 stands wet hole taking an additional 12 bbls per 5 stands. Pump slug, and continue to TOOHS, hole still taking additional 12 bbls per 5 stands, fill backside w/ 9.9ppg until tripped out. Rig up casing crew and begin running casing. Hole displaced 30-35 bbls per 10 joints t/ 4800'. Continue to keep MW in active between 10.2-10.3 ppg.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019 Release: Days Since LTI: 134.00 Days Since RI: 134.00

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/22/2019
 Report #: 6
 DFS: 5
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$97,671.03

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	7,201	1,838			9,642	6,440.0
DIESEL	MUD	GAL	7,501	2,923			12,200	7,801.0
WATER	FRESH	BBL	0	0		Water meter reading 105001	0	20,582.0

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
PAC R	FLUID LOSS ADDITIVES	SACK		13	28.0	56
POLYDRIL DIRECT MUL LDE	SPECIALTY	DRUM		7	2.0	10
SODA ASH	ALKALINITY CONTROL	SACK		31	128.0	136

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

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)
Recommended ICP1	-3,056.0		6,065.5		
264_0_Top_Brushy_Canyon	-3,299.0		6,308.5		
264_5_Mid_Brushy_Canyon	-3,598.0		6,607.5		
265_0_CLEARFORK/POP	-3,819.0		6,828.5		
267_0_SPBY_U_A1/267_0_SPBY	-5,445.0		8,454.5		
267_5_SPBY_M_A1	-5,761.0		8,770.5		
268_5_SPBY_L_A1	-5,991.0		9,000.5		
268_5_SPBY_L_A2	-6,028.0		9,037.5		
268_5_SPBY_L_A3	-6,113.0		9,122.5		
268_6_SPBY_L_B1/JO MILL	-6,267.0		9,276.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-6,316.0		9,325.5		
RECOMMENDED ICP2	-6,436.0		9,445.5		
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
VOGEL, DERRICK, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-664-0046	DERRICK.VOGEL@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
PARSELL, VIC, SUPERINTENDENT	SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
GREGAN, DOMINIC, MUD ENGINEER	MUD ENGINEER		830-481-9669	DOMINIC.GREGAN@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/23/2019
 Report #: 7
 DFS: 6
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$175,472.89

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 135.00 Days Since RI: 135.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Circ, R/d csg equipment, pump cement, working with third party, be aware of surrounding and be on floor for connection, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 5: R2LB #5: Fall or Elevated Work Safety Core Values #5: Entrepreneurship
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	13. Weekly trend: Unsafe - ROP Rearrange Job: Discussed with RTM about always doing the right thing regardless of who might not be present.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Run casing, circ, working with third party, be aware of surrounding and be on floor for connection, visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s 5: R2LB #5: Fall or Elevated Work Safety Core Values #5: Entrepreneurship
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	13. Weekly trend: Unsafe - ROP Rearrange Job: Discussed with RTM about always doing the right thing regardless of who might not be present.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	Employees were removing the guard for the DWS coupling while repairing the park brake. The rig floor hoist was connected to the guard and was about to be picked off of the DWS. It was noticed that the shackle that was attached to the guard was side loaded. The job was stopped and the shackle was fixed. The employees were shown the hazard and what could have potentially happened in doing this. The employees understood and vowed to make sure all lifting apparatuses were installed correctly in the future prior to lifting any loads.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad

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			6,089.0	18,403.0	175,472.89	971,038.98
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)
			6,063.5	9,200.0		22,070.48
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	2,500.0	2,500.0	Goal not achieved- Repair DWS park brake			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
		SURFACE, 2,020.4ftKB	PROPOSED INTERMEDIATE 2, 9,528.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	11.00	3.00	0.00	11.00	0.00	

Operations Summary
 Finish circulation, pump Int 1 cement job, L/D landing jt, P/U Int 2 BHA, TIH, repair DWS park brake

Operations Next Report Period
 Finish repair DWS park brake, TIH, test casing, Drill out DV, test casing, Drill out float/ shoe and drill liner section T/8589'

Operations at Report Time
 Repairing DWS park brake

Remarks
 No Accidents,
 NPT Hrs- Rig: hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 0% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	1.5	07:30	INT, CASE & CMT	CIRC	NORMAL	Circulate surface to surface with 5bpm and 220 psi 80% - 100% returns . MW 10.3ppg in/out.	6,089.0	6,089.0		
07:30	0.25	07:45	INT, CASE & CMT	SFTY	NORMAL	PJSM on rigging down casing equipment.	6,089.0	6,089.0		
07:45	0.5	08:15	INT, CASE & CMT	RD_CSG	NORMAL	Rig down casing equipment.	6,089.0	6,089.0		
08:15	0.25	08:30	INT, CASE & CMT	SFTY	NORMAL	PJSM on rigging up cementers.	6,089.0	6,089.0		
08:30	0.5	09:00	INT, CASE & CMT	RU_CMT	NORMAL	Rig up cement head and circulating iron.	6,089.0	6,089.0		
09:00	0.25	09:15	INT, CASE & CMT	SFTY	NORMAL	PJSM on cementing operations with all parties involved.	6,089.0	6,089.0		

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 135.00 Days Since RI: 135.00

Job: ODR
 Report Date: 12/23/2019
 Report #: 7
 DFS: 6
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$175,472.89

Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #	
09:15	4.25	13:30	INT, CASE & CMT	CMT	NORMAL	Cemented 9 5/8" casing at 6089': Pump 10 bbls ahead to Flush through lines and pressure test lines to 4000 psi (tested good). Pump 50 bbls Mud Push at 10.5 ppg, Followed by 414 bbl's 11 ppg lead, 48 bbls 11ppg of Middle cement, 41 bbls 14.8 ppg tail cement, drop plug and displace with 100 bbls of h2o & 354 bbl's of 10.3 DEM. Full returns @ 7 BPM. Inflate packer with no issue. 50 bbls spacer and 144 bbls of cement to surface. Final lift pressure 500 psi, plug bump with 1500 psi. Floats held, 4.5 bbls bled back. Drop cancellation bomb and wait 45 min. Pressure up to 2500 psi and hold 5 min to ensure DV tool closed. Good Test.	6,089.0	6,089.0			
13:30	0.25	13:45	INT, CASE & CMT	SFTY	NORMAL	PJSM on rigging down cementing equipment.	6,089.0	6,089.0			
13:45	0.5	14:15	INT, CASE & CMT	RD_CMT	NORMAL	Rig down cementing equipment.	6,089.0	6,089.0			
14:15	0.25	14:30	INT, CASE & CMT	CMT	NORMAL	Flush lines	6,089.0	6,089.0			
14:30	0.5	15:00	INT, CASE & CMT	RIG_SVC	NORMAL	Rig Service	6,089.0	6,089.0			
15:00	1	16:00	INT, CASE & CMT	WH	NORMAL	lay down landing joint, install packoff and test.	6,089.0	6,089.0			
16:00	0.25	16:15	INT2, PRE DRL	WRBSH	NORMAL	Install wear bushing.	6,089.0	6,089.0			
16:15	0.25	16:30	INT2, PRE DRL	SFTY	NORMAL	PJSM on picking up 8.75" directional BHA.	6,089.0	6,089.0			
16:30	0.75	17:15	INT2, PRE DRL	PU_DIR	NORMAL	P/U 7" 1.83 deg 6/7, 6.5 stg. 0.23 rpg with 8.25" stab and a 8.5" stab, 2x NMDC's. Install and lock down MWD. Bit: SPL616	6,089.0	6,089.0			
17:15	2.5	19:45	INT2, PRE DRL	HDL_BHA	NORMAL	TIH F/BHA T/4225' with HWDP Hole displacing properly to trip tanks.	6,089.0	6,089.0			
19:45	0.5	20:15	INT2, PRE DRL	CIRC	NORMAL	Circulate and displace DEM in the wellbore used to displace cement in case a second stage was needed on the cement job.	6,089.0	6,089.0			
20:15	9.75	06:00	INT2, PRE DRL	RIG_RPR	NORMAL	Trouble shoot DWS traction motor/ shaft coupling. During trip the coupling area was smoking so operations halted. Inspections showed the park brake to be damaged and in need of repair. Parts/ personnel dispatched and equipment is being replaced	6,089.0	6,089.0	9.75	8	

Interval Problems

RIG, 6,089.0ftKB, 12/22/2019 20:15

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
8		No	HOISTING	DRAW WORKS		HELMERICH & PAYNE INTERNATIONAL DRILLING CO	Trouble shoot DWS traction motor/ shaft coupling. During trip the coupling area was smoking so operations halted. Inspections showed the park brake to be damaged and in need of repair. Parts dispatched and equipment being replaced

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)

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 135.00	Days Since RI: 135.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/23/2019
Report #:	7
DFS:	6
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$175,472.89

Mud Checks								
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)
01:00	PIONEER DRILLING FLUIDS			WATER BASE	6,089.0	8.50	28	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)	
2.0	1.000	1	1	0.0	0.0	0.0	0.0	
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)	
2.0		1.2		0.1	2.0	0.700		
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH		
10,500,000.000	0.000	0	0/100	0.0	0.2	10.0		
Gel 10 sec (lb/100ft²)				Gel 10 min (lb/100ft²)		Gel 30 min (lb/100ft²)		
1.000				1.000		2.000		

Comment
RECOMMENDED FLUID TREATMENT
 Maintain mud weights between 8.4-8.8 with the use of fresh water dilution. Utilize caustic to keep elevated pH levels while using Xanthan Gum for rheological properties. Added Pac R for increased bore hole stability and to reduce water loss.

DRILLING FLUID ACTIVITY LAST 24 HRS
 Finished running casing and circulating with full returns, brought water over as needed to maintain MW's between 10.2-10.4ppg. Pumped cement job with full returns. 50 bbls spacer to surface, 144 bbls lead to surface. Clean and drain pits and prepare to bring fresh water into pits. Pumped 100 bbl fresh water and 346 bbl DEM on cement displacement. While TIH w/ BHA catch mud in TT and transfer to frac farm.

RIG ACTIVITY LAST 24 HOURS
 Finished running 9 5/8" casing. Displacement slowed down @ 4,800'. Began pumping light mud @ 9.9 ppg on backside. Returns were regained closer to bottom. Once casing landed began pumping. Maintained full returns. Finished circ sur/sur, rig up cementers and pump cement job. Full returns throughout job, displaced and got 50 bbl spacer and 144 bbls lead cement to surface. Install and set pack off. P/U BHA and begin TIH, got to 4200 and bearing on traction motor went out. Displaced hole with fresh water while waiting

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3

Cement			
INTERMEDIATE CASING CEMENT, Casing, 12/22/2019 09:15			
Cementing End Date	Wellbore	Technical Result	Comment
12/22/2019 13:30	ORIGINAL	SUCCESS	Cemented 9 5/8" casing at 6089': Pump 10 bbls ahead to Flush through lines and pressure test lines to 4000 psi (tested good). Pump 50 bbls Mud Push at 10.5 ppg, Followed by 414 bbl's 11 ppg lead, 48 bbls 11ppg of Middle cement, 41 bbls 14.8 ppg tail cement, drop plug and displace with 100 bbls of h2o & 354 bbl's of 10.3 DEM. Full returns @ 7 BPM. Inflate packer with no issue. 50 bbls spacer and 144 bbls of cement to surface. Final lift pressure 500 psi, plug bump with 1500 psi. Floats held, 4.5 bbls bled back. Drop cancellation bomb and wait 45 min. Pressure up to 2500 psi and hold 5 min to ensure DV tool closed. Good Test.

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	0.0	6,089.0	Yes	No	6	5	5	540.0	1,800.0	No	No	No	

Cement Fluids						
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)	
SPACER	0.0	0.0	FRESH WATER		11.00	
LEAD CMT	0.0	4,928.0	LITECRETE	2.80	11.00	
LEAD CMT	4,928.0	5,589.0	LITECRETE	2.33	11.50	
TAIL CMT	5,589.0	6,079.0	CLASS C	1.33	14.80	
DSPLMT	0.0	6,079.0	FRESH WATER		8.33	

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL		953			8,689	7,393.0
DIESEL	MUD	GAL		0			12,200	7,801.0
WATER	FRESH	BBL	3,611	3,611		Water meter reading 108612	0	24,193.0

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

Daily Drilling Report		
Page 3/4		
Printed: Monday, December 23, 2019		

Job: ODR
 Report Date: 12/23/2019
 Report #: 7
 DFS: 6
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$175,472.89

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 135.00 Days Since RI: 135.00

Daily Drilling Report

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)
Recommended ICP1	-3,056.0		6,065.5		
264_0_Top_Brushy_Canyon	-3,299.0		6,308.5		
264_5_Mid_Brushy_Canyon	-3,598.0		6,607.5		
265_0_CLEARFORK/POP	-3,819.0		6,828.5		
267_0_SPBY_U_A1/267_0_SPBY	-5,445.0		8,454.5		
267_5_SPBY_M_A1	-5,761.0		8,770.5		
268_5_SPBY_L_A1	-5,991.0		9,000.5		
268_5_SPBY_L_A2	-6,028.0		9,037.5		
268_5_SPBY_L_A3	-6,113.0		9,122.5		
268_6_SPBY_L_B1/JO MILL	-6,267.0		9,276.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-6,316.0		9,325.5		
RECOMMENDED ICP2	-6,436.0		9,445.5		
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
VOGEL, DERRICK, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-664-0046	DERRICK.VOGEL@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
PARSELL, VIC, SUPERINTENDENT	SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
GREGAN, DOMINIC, MUD ENGINEER	MUD ENGINEER		830-481-9669	DOMINIC.GREGAN@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/24/2019
 Report #: 8
 DFS: 7
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$86,446.39

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 136.00 Days Since RI: 136.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Repair drawworks parking brake, finish TIH, test casing above DV tool, Drill out. visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s. R2LB #6: Excavation and Trenching Core Values #6: Communication
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: While drilling intermediate section, the rig was dumping and diluting their brine-based drilling fluid while simultaneously hauling off pit water for disposal. Brine-based drilling fluid from reserve pit was noticed flowing from reserve pit across location. The reserve pit fluid had risen and washed part of the dirt berm out causing the spill. Pumping on the well was stopped and the well shut in immediately. More dirt was dumped on the berm break to hold back flow, while reserve fluid was pumped over to spare frac tanks for relief. The spill traveled across location and off the corner and side of pad and stopped at the neighboring lease road. Vacuum trucks continued to pull loads for disposal to a safe level below the berm. Free-standing fluid in and around the pad was vacuumed as well. An approximated total of 111 bbl. was spilled, while 63 bbl. escaped off the pad. PNR Environmental Dept. contacted. Further remediation to follow.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Repair drawworks parking brake, finish TIH, test casing above DV tool, Drill out, test casing below dv tool, TIH, drill out and begin drilling liner section. Visibility on the rig floor is minimal, do checklists doing mud transfers, be aware of wind direction this is the section for possible h2s. R2LB #6: Excavation and Trenching Core Values #6: Communication
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: While drilling intermediate section, the rig was dumping and diluting their brine-based drilling fluid while simultaneously hauling off pit water for disposal. Brine-based drilling fluid from reserve pit was noticed flowing from reserve pit across location. The reserve pit fluid had risen and washed part of the dirt berm out causing the spill. Pumping on the well was stopped and the well shut in immediately. More dirt was dumped on the berm break to hold back flow, while reserve fluid was pumped over to spare frac tanks for relief. The spill traveled across location and off the corner and side of pad and stopped at the neighboring lease road. Vacuum trucks continued to pull loads for disposal to a safe level below the berm. Free-standing fluid in and around the pad was vacuumed as well. An approximated total of 111 bbl. was spilled, while 63 bbl. escaped off the pad. PNR Environmental Dept. contacted. Further remediation to follow.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	While swapping out 2" on the floor, RTM was standing too close to the swing path of the sledgehammer being used to break the union. Stopped the job and had a discussion with both RTM's about situational and environmental awareness. Both agreed they could have done a better job communicating with each other and paying attention.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad

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)	
311.00	2.25	100.00	6,400.0	18,403.0	86,446.39	1,057,295.37	
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)	Total AFE + Sup (Cost)
138.2	0.00	0.00	6,372.8	9,200.0	4,563.94	27,484.42	3,430,137.57
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	2,500.0	3,070.0	Goal not achieved- Repair DWS park brake				
Backbuild No	Lateral Inclination	Last Casing String	Next Casing String				
No		INTERMEDIATE, 6,079.0ftKB	PROPOSED INTERMEDIATE 2, 9,528.0ftKB				
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 repair DWS park brake, TIH, test casing, Drill out DV, Test Casing, Drill out shoe track, Drill INT #2 F/6089' T/6400' (0% sliding, 6 deg tang, 18 ft above, 17 ft left)

Operations Next Report Period
 Drill INT 2 F/6400' T/9470', CHC, TOOH, L/D BHA, Rig up and Run Liner

Operations at Report Time
 Drilling INT #2 @ 6400'

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 3% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 136.00	Days Since RI: 136.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/24/2019
Report #:	8
DFS:	7
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$86,446.39

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	14.5	20:30	INT2, PRE DRL	RIG_RPR	NORMAL	Trouble shoot DWS traction motor/ shaft coupling. During trip the coupling area was smoking so operations halted. Inspections showed the park brake to be damaged and in need of repair. Parts/ personnel dispatched and equipment is being replaced Heat up hub shaft coupling for removal. Hub removed @ 11:00hrs.	6,089.0	6,089.0	14.50	6
20:30	1.5	22:00	INT2, PRE DRL	SLIP_CUT	NORMAL	Slip and cut drilling line.	6,089.0	6,089.0		
22:00	0.25	22:15	INT2, PRE DRL	HDL_ROTTHD	NORMAL	Pull trip nipple and install rotating head.	6,089.0	6,089.0		
22:15	0.5	22:45	INT2, PRE DRL	TIH_ELEV	NORMAL	TIH F/4223' T/4822' with no issues. Hole displacing properly to trip tanks.	6,089.0	6,089.0		
22:45	0.5	23:15	INT2, PRE DRL	RIG_SVC	NORMAL	Lubricate and inspect rig.	6,089.0	6,089.0		
23:15	0.75	00:00	INT2, PRE DRL	CSG_TEST	NORMAL	Test casing above DV tool at 2500 psi for 10 min. Good Test. Note: Pressure kept bleeding off, replace 2" valve on rig floor. Good Test.	6,089.0	6,089.0		
00:00	0.5	00:30	INT2, PRE DRL	DRL_OUT	NORMAL	Drill out DV tool with 30 rpm, 6k TQ, 450 gpm, and 5k WOB. Full returns.	6,089.0	6,089.0		
00:30	0.75	01:15	INT2, PRE DRL	CSG_TEST	NORMAL	Test Casing below DV tool to 2500 psi for 30 min.	6,089.0	6,089.0		
01:15	0.75	02:00	INT2, PRE DRL	TIH_ELEV	NORMAL	TIH F/4822' T/5991' with no issues. Hole displacing properly to trip tanks. Note: Tag Float Collar at 5991'	6,089.0	6,089.0		
02:00	1.75	03:45	INT2, PRE DRL	DRL_OUT	NORMAL	Drill out Float Equipment, cement, and rathole F/5991' T/6089' with 450-500 gpm, 1360 psi, 6k TQ. Full returns. Note: Float Collar @ 5991', Float Shoe @ 6079'	6,089.0	6,089.0		
03:45	2.25	06:00	INT2, DRL	DRL	NORMAL	Drill F/6089' T/6400' (311' @ 138 fph), 3% complete. MW-8.4 w/ 30 vis, full returns.	6,089.0	6,400.0		

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
6	24.25	No	HOISTING	DRAW WORKS		HELMERICH & PAYNE INTERNATIONAL DRILLING CO	Trouble shoot DWS traction motor/ shaft coupling. During trip the coupling area was smoking so operations halted. Inspections showed the park brake to be damaged and in need of repair. Parts dispatched and equipment being replaced

Drill Strings				
BHA #3, INTERMEDIATE 2				
Bit Run	Drill Bit	Bit Type	Make	
3	17 1/2in, DT616X, S00353	PDC	DRILLPOINT	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)	Depth Drilled By Bit (ft)
10/10/10/11/11/11/11/11	0.79	-----	30.25	2,244.00
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)	Depth Out (ftKB)
2.25	311.00	138.2	6,089.0	6,400.0

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
171	DRILL PIPE	5	4.27	5,390.64	6,400.00	105,117.5	152	RIG
9	HWDP	5	3.00	273.31	1,009.36	14,212.1	47	
21	HWDP - SPIRALED	5	3.00	633.93	736.05	32,964.4	33	
1	DRILL COLLAR - NON MAG	6 5/8	3.25	29.07	102.12		0	STABIL DRILL
1	DRILL COLLAR - NON MAG	6 5/8	3.25	29.77	73.05		0	STABIL DRILL
1	SUB - UBHO	6 3/4	2.25	2.95	43.28		0	GYRODATA
1	STABILIZER	6 3/4	2.38	5.85	40.33		0	STABIL DRILL
1	MOTOR - STABILIZER SLEEVE	7	2.38	32.88	34.48		0	GYRODATA

Mud Motors						
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defln Type	Bit To Bend
GDM700010	1.83	NOT SEALED	6:7	6.5		4.8

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	45.00	
D&I (INC/AZI)	57.00	

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 (°)
03:45	06:00	6,089.0	311.00	138.2	30	70	650.0	700	2,300.0	175.0	185	205	175	185	6.0	3.0	0

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/24/2019
 Report #: 8
 DFS: 7
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$86,446.39

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 136.00 Days Since RI: 136.00

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)
8.50	8.61	256.1	1.1	285.4	627.1	19.6	622.5	104.24	14.69	312.83

Mud Checks												
Time		Mud Company			Type		Depth (ftKB)		Density (lb/gal)		Funnel Viscosity (s/qt)	T Flowline (°F)
01:00		PIONEER DRILLING FLUIDS			WATER BASE		6,089.0		8.50		27	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)				
2.0	1.000	1	1	0.0	0.0	0.0		0.0				
Solids (%)		Low Gravity Solids (%)		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)		
2.0		1.2		0.1		2.0		0.400				
Chlorides (ppm)		Calcium (ppm)		CaCl (ppm)		Oil Water Ratio		Electric Stab (V)		Lime (lb/bbl)		pH
8,800,000.000		0.000		0		0/100		0.0		0.0		9.0
Gel 10 sec (lb/100ft ²)				Gel 10 min (lb/100ft ²)				Gel 30 min (lb/100ft ²)				
1.000				1.000				1.000				

Comment
RECOMMENDED FLUID TREATMENT
 When drilling....Maintain mud weights between 8.4-8.8 with the use of fresh water dilution. Utilize caustic to keep elevated pH levels while using Xanthan Gum for rheological properties. Added Pac R for increased bore hole stability and to reduce water loss.

DRILLING FLUID ACTIVITY LAST 24 HRS
 Rig working on draw works past 24 hours. Centrifuge went down, dynamic is bringing a another one and rigging it up while the VFD for the old one is repaired. Crane and new equipment will be rigged up tonight. Once drilling begin with additions and maintain mud in spec

RIG ACTIVITY LAST 24 HOURS
 TIH w/ BHA @ 4200' traction motor and brake hub went out on drawworks. Mechanics and welders spent past 24 working on repairs. Finished @ 2200hrs. Continued to TIH to DV tool and begin drilling out cancelation plug. Trip to bottom, test casing, and begin drilling out FE, shoe track, and into formation.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.5	9 5/8	L80-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		1,562			7,127	8,955.0
WATER	FRESH	BBL	617	617		Water meter reading 109229	0	24,810.0

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BA.MILEAGE	MISCELLANEOUS	EA	445	445	0.0	445	
BULK BARITE	WEIGHTING MATERIAL	TON		11	64.0	17	
CAUSTIC SODA	ALKALINITY CONTROL	SACK	110	11	160.0	34	
PALLET	MISCELLANEOUS	EA	15	15	0.0	27	
PHPA	VISCOSIFIER	GAL	32	3	36.0	12	
SHRINK WRAPPING	SPECIALITY	EA	12	12	0.0	12	
TRANSPORTATION	MISCELLANEOUS	EA	850	850	0.0	1,700	

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
2	6,122.0	04:15	300.0	20	64	95
2	6,122.0	04:16	375.0	40	129	95
2	6,122.0	04:17	470.0	60	193	95
3	6,122.0	04:15	275.0	20	64	95
3	6,122.0	04:16	350.0	40	129	95
3	6,122.0	04:17	480.0	60	193	95

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

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)
264_5_Mid_Brushy_Canyon	-3,598.0		6,607.5		

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H & P #645

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Daily Drilling Report

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)
265_0_CLEARFORK/POP	-3,819.0		6,828.5		
267_0_SPBY_U_A1/267_0_SPBY	-5,445.0		8,454.5		
267_5_SPBY_M_A1	-5,761.0		8,770.5		
268_5_SPBY_L_A1	-5,991.0		9,000.5		
268_5_SPBY_L_A2	-6,028.0		9,037.5		
268_5_SPBY_L_A3	-6,113.0		9,122.5		
268_6_SPBY_L_B1/JO MILL	-6,267.0		9,276.5		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-6,316.0		9,325.5		
RECOMMENDED ICP2	-6,436.0		9,445.5		
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
GREGAN, DOMINIC, MUD ENGINEER	MUD ENGINEER		830-481-9669	DOMINIC.GREGAN@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Company	Count
PIONEER NATURAL RESOURCES USA INC	2
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
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H & P #645

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API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: continue drilling int 2 while using good pxdrill practices, currently repairing charging pump so only have 2 operational pumps currently. Need to get that other one fixed ASAP. Always keep in mind well control. Be thinking ahead to casing run and cement job. R2LB #7: Driving Safety #7: Teamwork
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: Contractor was washing out the stand pipe on top of module control center house, when approximately 3 bbl. of oil based mud was released to the ground and around the mud pumps. Remediation was immediately performed and 2.5 bbl. was recovered.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Wake up mud logger when you get to 9000', TD will be around 9470', still pumping sweeps every other connections, At TD circulate some of the cuttings up the hole before we pump the first sweep, well pump 2 sweeps and low water loss pill, pull 10 joints wet, pump slug DROP RABBIT, TOO, pull rotating head, pjsm with gyro data l/d BHA, PWB, clean floor r/u csg crew R2LB #7: Driving Safety #7: Teamwork
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: After offloading diesel in the diesel mud tank contractor was unhooking two hoses that connected. As the hoses came apart one of them sprang back and hit the contractor on the nose causing a small cut on contractor's nose. Contractor cleaned cut and put a bandage on it and refused any further treatment.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	RTM was cleaning off the shakers screens using a pressure washer with his face shield raised up exposing his face. Stopped the job and had him put his face shield down so that it would do what it was designed to do. He agreed and work continued safely.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad. Drilling Sequentially Updated 12.25.19

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)	
3,106.00	19.75	83.54	9,506.0	18,403.0	63,723.46	1,121,018.83	
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)
157.3	1.75	16.46	9,477.7	9,200.0	2,314.88	29,799.30	3,430,137.57
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 3,070.0	Daily Goal - Next 24 0.0	Goal Comments Operational Goal achieved			
Backbuild No	Lateral Inclination	Last Casing String INTERMEDIATE, 6,079.0ftKB	Next Casing String LINER, 9,494.0ftKB				
Avg Connection Gas 21.00	Avg Trip Gas 0.00	Avg Background Gas 11.00	Max Connection Gas 99.00	Max Trip Gas 0.00	Max Drill Gas 91.00		

Operations Summary
 Drill INT 2 F/6400' T/9506' (ICP #2), CHC, TOO

Operations Next Report Period
 TOO, L/D BHA, Rig up and Run Liner, Circulate Capacity, R/D Casing Crews, P/U and M/U Liner Hanger, TIH with Liner on DP, Circulate BU, TIH with Liner on DP, Circulate STS, Hang Liner, Rig up and Pump Liner Cement

Operations at Report Time
 TOO to Run Liner @ 6100'

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	12	18:00	INT2, DRL	DRL	NORMAL	Drill F/6400' T/8491' (2091' @ 174 fph), 68% complete. 90% Rot @ 188 fph 10% Sldg @ 51 fph MW-8.7 w/ 31 vis, full returns.	6,400.0	8,491.0		
18:00	0.5	18:30	INT2, DRL	RIG_SVC	NORMAL	Lubricate and inspect rig.	8,491.0	8,491.0		
18:30	7.75	02:15	INT2, DRL	DRL	NORMAL	Drill F/8491' T/9506' (1015' @ 131 fph), 100% complete. 81% Rot @ 150 fph 19% Sldg @ 52 fph MW-8.8 w/ 31 vis, full returns.	8,491.0	9,506.0		
02:15	1.75	04:00	INT2, POST DRL	CIRC	NORMAL	Pump two Hi-Vis sweeps and spot 100 bbl Low-water loss pill on bottom with full returns. 750 gpm and 8.8 ppg in/out.	9,506.0	9,506.0		
04:00	0.25	04:15	INT2, POST DRL	FLOW_CHK	NORMAL	Flow Check. Well Static.	9,506.0	9,506.0		
04:15	0.5	04:45	INT2, POST DRL	TOOH_ELEV	NORMAL	TOOH wet F/9506' T/8581' with no issues. Hole taking proper fill from trip tanks.	9,506.0	9,506.0		
04:45	0.25	05:00	INT2, POST DRL	CIRC	NORMAL	Pump slug and drop rabbit.	9,506.0	9,506.0		

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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 #
05:00	1	06:00	INT2, POST DRL	TOOH_ELEV	NORMAL	TOOH F/8581' T/6100' with no issues. Hole taking proper fill from trip tanks.	9,506.0	9,506.0		

Drill Strings				
BHA #3 , INTERMEDIATE 2				
Bit Run	3	Drill Bit	8 3/4in, SPL616, 47883	
Bit Type	PDC	Make	ULTERRA	
Nozzles (1/32")	10/10/10/11/11/11/11/11	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
		0.79	-----	22.00
BHA Drilling Time (hr)	22.00	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
		3,417.00	155.3	6,089.0
			Depth Out (ftKB)	9,506.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
266	DRILL PIPE	5	4.27	8,496.64	9,505.40	165,684.5	222	RIG	
9	HWDP	5	3.00	273.31	1,008.76	14,212.1	56		
21	HWDP - SPIRALED	5	3.00	633.93	735.45	32,964.4	42		
1	DRILL COLLAR - NON MAG	6 5/8	3.25	29.07	101.52	2,645.4	9	STABIL DRILL	
1	DRILL COLLAR - NON MAG	6 5/8	3.25	29.77	72.45	2,709.1	7	STABIL DRILL	
1	SUB - UBHO	6 3/4	2.25	2.95	42.68	268.4	4	GYRODATA	
1	STABILIZER	6 3/4	2.38	5.85	39.73	532.3	4	STABIL DRILL	
1	MOTOR - STABILIZER SLEEVE	7	2.38	32.88	33.88	2,992.1	3	GYRODATA	

Mud Motors							
SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defin Type	Bit To Bend	
GDM700010	1.83	NOT SEALED	6:7	6.5		4.8	

Sensors		
Sensor Type	Sensor-Bit (ft)	Note
GAMMA	45.00	
D&I (INC/AZI)	57.00	

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	6,400.0	125.00	250.0	30	70	650.0	700	3,300.0	175.0	185	205	175	185	6.0	3.0	0
06:30	07:00	6,525.0	27.00	54.0	15	0	300.0	700	2,700.0	80.0	185	205	175	185	0.0	0.0	180
07:00	08:30	6,552.0	258.00	172.0	30	70	750.0	710	3,300.0	175.0	185	205	175	185	14.0	6.0	0
08:30	08:45	6,810.0	17.00	68.0	15	0	300.0	700	2,700.0	80.0	185	205	175	185	0.0	0.0	170
08:45	11:45	6,827.0	553.00	184.3	30	70	750.0	700	3,300.0	175.0	185	205	175	185	14.0	6.0	0
11:45	12:00	7,380.0	12.00	48.0	15	0	300.0	700	2,700.0	80.0	185	205	175	185	0.0	0.0	135
12:00	14:45	7,392.0	553.00	201.1	40	70	750.0	700	3,300.0	175.0	185	205	175	185	14.0	6.0	0
14:45	15:00	7,945.0	27.00	108.0	15	0	300.0	700	2,700.0	80.0	185	205	175	185	0.0	0.0	120
15:00	16:45	7,972.0	355.00	202.9	40	70	750.0	700	3,300.0	175.0	185	205	175	185	14.0	6.0	0
16:45	17:15	8,327.0	25.00	50.0	15	0	300.0	700	2,700.0	80.0	230	270	200	230	0.0	0.0	140
17:15	18:00	8,352.0	139.00	185.3	40	70	750.0	700	3,300.0	175.0	230	270	200	230	14.0	6.0	0
18:30	18:45	8,491.0	24.00	96.0	15	0	300.0	700	2,700.0	80.0	230	270	200	230	0.0	0.0	200
18:45	21:30	8,515.0	378.00	137.5	40	70	750.0	700	3,300.0	175.0	230	270	200	230	14.0	6.0	0
21:30	22:00	8,893.0	25.00	50.0	15	0	300.0	700	2,700.0	80.0	230	270	200	230	0.0	0.0	220
22:00	23:00	8,918.0	165.00	165.0	40	70	750.0	700	3,300.0	175.0	230	270	200	230	14.0	6.0	0
23:00	23:45	9,083.0	22.00	29.3	15	0	300.0	700	2,700.0	80.0	230	270	200	230	0.0	0.0	200
23:45	02:15	9,105.0	401.00	160.4	40	70	750.0	700	3,300.0	175.0	230	270	200	230	14.0	6.0	0
02:15	04:00	9,506.0	0.00		0	70	750.0	700	3,300.0		230	270	200	230	6.0	6.0	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)
8.70	8.90	262.1	4.4	285.4	641.9	19.6	622.5	159.27	170.30	312.83

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019

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Mud Checks									
Time	Mud Company			Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
01:00	PIONEER DRILLING FLUIDS			WATER BASE	8,913.0	8.70	31	110.0	
PV (cP)	YP (lb/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)		HTHP Pressure (psi)	
2.0	4.000	1	1	0.0	0.0	0.0		0.0	
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)		Pf (mL/mL)	
3.0		2.4		0.3	3.5	0.600			
Chlorides (ppm)		Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)		pH	
7,800,000.000		0.000	0	0/100	0.0	0.1		10.3	
Gel 10 sec (lb/100ft²)				Gel 10 min (lb/100ft²)			Gel 30 min (lb/100ft²)		
1.000				1.000			2.000		

Comment
RECOMMENDED FLUIDS TREATMENT
 Maintain mud weights between 8.4-8.8 with the use of fresh water dilution. Utilize caustic to keep elevated pH levels while using Xanthan Gum for rheological properties. Added Pac R for increased bore hole stability and to reduce water loss.
DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Treated active with toury additions while drilling. Pump 20bbl/HiVis-Water Loss [Bentonite, Pac R & PHPA] sweeps every other stand to assist in cuttings removal & formation integrity. ***Note*** 80 bbls of 40ppb LCM sweep has been prepared before entering the upper Spraberry.
RIG ACTIVITY LAST 24 HOURS
 Continued drilling & sliding, pumping hi vis sweeps every other connection. Circulated a bottom's up before entering the Clearfork to reduce ECD due to cuttings load. Drilled to TD; 9,146' with full returns up to this point; monitoring gains/loses & drilling parameters for any indications from the well. Drilling & Sliding at time of report.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-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		2,292			4,835	11,247.0	
DIESEL	MUD	GAL	0	0			12,200	7,801.0	
WATER	FRESH	BBL	0	0		Water meter reading 109229	0	24,810.0	

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
CALCIUM CARBONATE FINE	LOST CIRCULATION	SACK		15	75.0	30	
CALCIUM CARBONATE MEDIUM	LOST CIRCULATION	SACK		22	68.0	37	
CAUSTIC SODA	ALKALINITY CONTROL	SACK		17	143.0	51	
OIL DRY ABSORBANT	MISCELLANEOUS	SACK		8	52.0	8	
PAC R	FLUID LOSS ADDITIVES	SACK	80	13	95.0	69	
PHPA	VISCOSIFIER	GAL		2	34.0	14	
XANTHAM GUM	VISCOSIFIER	SACK		5	118.0	10	

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	7,374.0	14:03	370.0	20	64	95
1	7,374.0	14:04	515.0	40	129	95
1	7,374.0	14:05	620.0	60	193	95
1	8,488.0	20:00	340.0	20	64	95
1	8,488.0	20:01	460.0	40	129	95
1	8,488.0	20:02	600.0	60	193	95
1	9,153.0	02:15	400.0	20	64	95
1	9,153.0	02:16	480.0	40	129	95
1	9,153.0	02:17	610.0	60	193	95
2	7,893.0	15:33	420.0	20	64	95
2	7,893.0	15:34	490.0	40	129	95
2	7,893.0	15:35	660.0	60	193	95
2	8,488.0	20:00	330.0	20	64	95
2	8,488.0	20:01	450.0	40	129	95
2	8,488.0	20:02	570.0	60	193	95

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019

Release:

Days Since LTI: 137.00

Days Since RI: 137.00

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/25/2019
 Report #: 9
 DFS: 8
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$63,723.46

Pump Checks

Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
2	9,153.0	02:15	360.0	20	64	95
2	9,153.0	02:16	470.0	40	129	95
2	9,153.0	02:17	590.0	60	193	95
3	7,893.0	15:30	400.0	20	64	95
3	7,893.0	15:31	490.0	40	129	95
3	8,488.0	20:00	340.0	20	64	95
3	8,488.0	20:01	430.0	40	129	95
3	8,488.0	20:02	580.0	60	193	95
3	9,153.0	02:15	350.0	20	64	95
3	9,153.0	02:16	420.0	40	129	95
3	9,153.0	02:17	560.0	60	193	95

Deviation Surveys

Date: 10/22/2019	Description: AS DRILL SURVEY	Job: ODR, 10/21/2019 16:00
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Survey Data - All surveys for 24 hr reporting period

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
6,445.00	4.94	333.12	6,417.92	490.66	433.45	-288.20	0.13
6,540.00	3.21	340.41	6,512.68	497.30	439.61	-290.95	1.90
6,635.00	2.52	352.66	6,607.56	502.02	444.18	-292.10	0.97
6,730.00	2.38	353.45	6,702.47	506.05	448.21	-292.60	0.15
6,824.00	1.07	344.91	6,796.43	508.86	451.00	-293.05	1.42
6,919.00	0.69	345.64	6,891.42	510.32	452.41	-293.42	0.40
7,014.00	0.82	333.21	6,986.41	511.56	453.57	-293.87	0.22
7,109.00	1.06	317.32	7,081.40	512.99	454.83	-294.77	0.37
7,203.00	0.90	328.10	7,175.38	514.46	456.09	-295.75	0.26
7,298.00	0.61	312.29	7,270.38	515.59	457.06	-296.52	0.37
7,393.00	0.36	54.00	7,365.37	516.12	457.58	-296.65	0.81
7,488.00	0.20	47.94	7,460.37	516.31	457.87	-296.29	0.17
7,582.00	0.37	250.37	7,554.37	516.36	457.87	-296.45	0.60
7,677.00	0.60	295.16	7,649.37	516.65	457.98	-297.19	0.45
7,772.00	1.18	260.69	7,744.36	517.04	458.04	-298.60	0.81
7,867.00	1.43	271.23	7,839.33	517.44	457.90	-300.76	0.36
7,962.00	1.21	228.03	7,934.31	517.28	457.26	-302.69	1.05
8,056.00	0.77	202.19	8,028.30	516.31	456.01	-303.66	0.66
8,151.00	2.34	44.54	8,123.27	516.81	456.80	-302.54	3.23
8,246.00	3.59	41.29	8,218.15	519.50	460.42	-299.22	1.33
8,340.00	2.90	46.95	8,311.99	522.32	464.25	-295.54	0.81
8,434.00	2.57	43.90	8,405.89	524.59	467.39	-292.34	0.38
8,529.00	1.65	77.48	8,500.83	525.68	469.23	-289.53	1.58
8,624.00	1.73	107.45	8,595.79	524.89	469.09	-286.83	0.92
8,718.00	1.55	104.41	8,689.75	523.54	468.35	-284.24	0.21
8,813.00	1.18	88.44	8,784.72	522.72	468.06	-282.02	0.56
8,908.00	1.35	87.49	8,879.70	522.28	468.13	-279.92	0.18
9,003.00	0.51	85.00	8,974.68	521.99	468.22	-278.38	0.89
9,098.00	0.43	147.19	9,069.68	521.58	467.96	-277.77	0.52
9,192.00	0.30	218.89	9,163.68	521.10	467.47	-277.73	0.47
9,287.00	0.17	267.38	9,258.68	520.98	467.27	-278.03	0.24
9,382.00	0.58	282.99	9,353.68	521.22	467.37	-278.64	0.44
9,449.00	0.68	299.21	9,420.67	521.65	467.64	-279.32	0.30

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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 137.00	Days Since RI: 137.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/25/2019
Report #:	9
DFS:	8
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$63,723.46

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/26/2019
 Report #: 10
 DFS: 9
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$215,184.24

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 138.00 Days Since RI: 138.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: tooh, lay down bha, pull wear bushing, clean rig floor, rig up liner crews, make up shoe track, RIH with liner, break circ every 20 joints, circulate casing cap, rig down liner stuff, pick up and make up liner hanger, pump through it to make sure it is clear, RIH with liner on DP filling pipe every 10 stands. Core Value: #1 Respect Rule to Live By: #1 Safe Work Permits
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: After offloading diesel in the diesel mud tank contractor was unhooking two hoses that connected. As the hoses came apart one of them sprang back and hit the contractor on the nose causing a small cut on contractor's nose. Contractor cleaned cut and put a bandage on it and refused any further treatment.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: TIH t/6000', install rotate head, CBU before entering open hole. 45fpm in open hole with the liner, RIH with liner on DP filling pipe every 10 stands. Core Value: #1 Respect Rule to Live By: #1 Safe Work Permits
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: After offloading diesel in the diesel mud tank contractor was unhooking two hoses that connected. As the hoses came apart one of them sprang back and hit the contractor on the nose causing a small cut on contractor's nose. Contractor cleaned cut and put a bandage on it and refused any further treatment.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	RTM was not using three points of contact while walking on the stairs to the rig floor. Had a discussion in regards of importance of following three points of contact and potential hazards correlated to not following the guidelines. RTM agreed and committed to follow 3 points of contact rule.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad. Drilling Sequentially Updated 12.26.19
TXRRC CALL	CEMENT INT2	12/25/2019	Note Linda #8

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			9,506.0	18,403.0	215,184.24	1,515,846.51	
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)
			9,477.7	9,200.0	2,968.37	32,767.67	3,430,137.57
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET		0.0	0.0	Operational Goal achieved			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
No		LINER, 9,494.0ftKB	PROPOSED PRODUCTION, 20,634.0ftKB				
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas		
0.00	71.00	1.00	0.00	71.00	0.00		

Operations Summary
 TOO, L/D BHA, Rig up and Run Liner, Circulate Capacity, R/D Casing Crews, P/U and M/U Liner Hanger, TIH with Liner on DP, Circulate BU, TIH with Liner on DP, Circulate STS, Hang Liner, Rig up and Pump Liner Cement, R/D Cementers, Inflate Packer, Circulate BU, Test packer (No Success), TOO

Operations Next Report Period
 L/D Cement Head, TOO, L/D Liner Running Tool, P/U Test Packer, TIH to Liner Top, Test Liner top, TOO, Run Baker Tie Back Packer

Operations at Report Time
 L/D Baker Cement Head

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

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	INT2, POST DRL	HDL_ROTTHD	NORMAL	Pull rotating head install trip nipple	9,506.0	9,506.0		
06:15	3	09:15	INT2, POST DRL	TOOH_ELEV	NORMAL	TOOH F/8483' T/6100' with no issues. Hole taking proper fill from trip tanks.	9,506.0	9,506.0		
09:15	0.25	09:30	INT2, POST DRL	SFTY	NORMAL	PJSM on laying down directional tools.	9,506.0	9,506.0		
09:30	0.5	10:00	INT2, POST DRL	LD_DIR	NORMAL	L/D all directional tools. Note: Bit Graded 1-3-BT-C-X-0-WT-TD	9,506.0	9,506.0		
10:00	0.5	10:30	INT2, POST DRL	WRBSH	NORMAL	Pull Wear Bushing.	9,506.0	9,506.0		
10:30	0.5	11:00	INT2, POST DRL	SFTY	NORMAL	Clean rig floor in preparation for liner run.	9,506.0	9,506.0		
11:00	0.25	11:15	INT2, POST DRL	SFTY	NORMAL	PJSM on rigging up casing tools.	9,506.0	9,506.0		

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 138.00 Days Since RI: 138.00

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 #
11:15	0.75	12:00	INT2, CASE & CMT	RU_CSG	NORMAL	R/U casing tools for running liner.	9,506.0	9,506.0		
12:00	0.25	12:15	INT2, CASE & CMT	SFTY	NORMAL	PJSM with Baker, Byrd, Maverick, Maximum on rigging up & running csg.	9,506.0	9,506.0		
12:15	1	13:15	INT2, CASE & CMT	RU_CSG	NORMAL	R/U Valant & casing equipment	9,506.0	9,506.0		
13:15	0.25	13:30	INT2, CASE & CMT	MU_SHOE_TR K	NORMAL	Make up shoe track & pump through same.	9,506.0	9,506.0		
13:30	2.5	16:00	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	RIH with liner T/3636' with full displacement.	9,506.0	9,506.0		
16:00	0.75	16:45	INT2, CASE & CMT	CIRC	NORMAL	Circ casing capacity with 250 gpm and full returns.	9,506.0	9,506.0		
16:45	0.25	17:00	INT2, CASE & CMT	SFTY	NORMAL	PJSM on rigging down csg crew.	9,506.0	9,506.0		
17:00	0.75	17:45	INT2, CASE & CMT	RD_CSG	NORMAL	Rig down csg crew.	9,506.0	9,506.0		
17:45	0.25	18:00	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	P/U and M/U liner hanger. Pump through, Good Test. Liner Weight - 100 klbs P/U 143 and S/O - 137 klbs	9,506.0	9,506.0		
18:00	1.75	19:45	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	RIH w/ liner on DP F/3664' T/5959' with proper displacment to trip tanks. Filling pipe every 10 stands.	9,506.0	9,506.0		
19:45	0.5	20:15	INT2, CASE & CMT	HDL_ROT HD	NORMAL	Remove trip nipple. Install rotating head.	9,506.0	9,506.0		
20:15	0.25	20:30	INT2, CASE & CMT	CIRC	NORMAL	Circulate BU with 250 gpm and full returns before entering openhole.	9,506.0	9,506.0		
20:30	3.25	23:45	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	RIH w/ liner on DP F/5959' T/9506' and tag bottom with proper displacment to trip tanks. Filling pipe every 10 stands.	9,506.0	9,506.0		
23:45	1	00:45	INT2, CASE & CMT	CIRC	HOLE CONDITIO N	Circulate STS prior to cement job with 100% returns at 248 gpm, 560 psi.	9,506.0	9,506.0		
00:45	0.25	01:00	INT2, CASE & CMT	SFTY	NORMAL	PJSM on rigging up Baker cement head.	9,506.0	9,506.0		
01:00	0.25	01:15	INT2, CASE & CMT	RU_CMT	NORMAL	Rig up cement head and iron	9,506.0	9,506.0		
01:15	0.25	01:30	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	Drop 1.25" Ball, wait 30 minutes to Fall. Pressure up 1900 psi. and hold 5 min. S/O to 170k to set hanger. Stage pressure up T/2300 psi. S/O 155k. Note: Hanger Set at 5830'.	9,506.0	9,506.0		
01:30	0.5	02:00	INT2, CASE & CMT	LNR_W/OWAS H	NORMAL	Drop 2" Ball to release running tool. Wait 15 minutes to Fall. Pump 1 bpm and pressure to 2445 psi- pressure drop observed -- Running Tool Released. Note: Top of Liner Set at 5830' MD, Liner Shoe: 9494' MD	9,506.0	9,506.0		
02:00	0.25	02:15	INT2, CASE & CMT	SFTY	NORMAL	PJSM on cementing operations.	9,506.0	9,506.0		
02:15	1.75	04:00	INT2, CASE & CMT	CMT	NORMAL	Pump Liner Cement Job.- Test CMT lines T/ 7500 psi OK. Pump 20 bbls of Fresh Water to the open top - Pressure Test Pump and Lines. Mix and Pump 50 bbls of 9.0 ppg Spacer, Mix and Pump 83 bbls of 11.0 ppg Lead cement. Mix and Pump 15 bbls of 13.2 ppg Tail cement. Displace with 267 bbls 8.4 ppg FW bumped plug on schedule, bump pressure from 951 psi to 1951 psi, hold psi 5 mins bled back 1.75 bbs - floats held. Full returns. 45 bbl of spacer to the surface.	9,506.0	9,506.0		
04:00	0.25	04:15	INT2, CASE & CMT	RD_CMT	NORMAL	R/D cement lines and equipment	9,506.0	9,506.0		
04:15	0.5	04:45	INT2, CASE & CMT	CIRC	NORMAL	Pick up to 175K, S/O to 70K and set packer, unstng from liner and circulate B/U @ 600 GPM with fresh water.	9,506.0	9,506.0		
04:45	1	05:45	INT2, CASE & CMT	CSG_TEST	NORMAL	Shut in top pipe rams and test liner top to 1,000 psi. Pressure would only build up to 600 psi. Surface equipment tested and held 1500 psi with no issue. Packer/Liner Top believed to be leaking.	9,506.0	9,506.0		
05:45	0.25	06:00	INT2, CASE & CMT	RD_CMT	NORMAL	L/D baker cement head	9,506.0	9,506.0		

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 138.00 Days Since RI: 138.00

Job: ODR
 Report Date: 12/26/2019
 Report #: 10
 DFS: 9
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$215,184.24

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)	
03:30	PIONEER DRILLING FLUIDS				WATER BASE	9,506.0	8.70	31		
PV (cP)	YP (lb/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)			
2.0	4.000	1	1	0.0	0.0	0.0	0.0			
Solids (%)		Low Gravity Solids (%)		Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)			
3.0		2.4		0.3	3.5	0.600				
Chlorides (ppm)		Calcium (ppm)		CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH		
7,200,000.000		0.000		0	0/100	0.0	0.1	10.0		
Gel 10 sec (lb/100ft ²)				Gel 10 min (lb/100ft ²)			Gel 30 min (lb/100ft ²)			
1.000				1.000			2.000			

Comment
 RECOMMENDED FLUIDS TREATMENT
 Maintaining 8.4-8.8ppg in active. Currently there are no fluid treatments
 DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while running liner; proper displacement. Processing active with centrifuge to maintain weight while running liner.
 RIG ACTIVITY LAST 24 HOURS
 Continued pulling out of the hole to lay down BHA & run the 7-5/8" liner. Began running liner, filling every 20 joints. Circulated casing capacity prior to picking up the hanger and before entering into the open hole with full returns. Once on bottom, circulation was established, again with complete returns, before rigging up & performing cement job.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test							
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)	
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0	
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0	

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	

Cement			
LINER CEMENT, Casing, 12/26/2019 02:15			
Cementing End Date	Wellbore	Technical Result	Comment
12/26/2019 04:00	ORIGINAL	SUCCESS	Pump Liner Cement Job.- Test CMT lines T/ 7500 psi OK. Pump 20 bbls of Fresh Water to the open top - Pressure Test Pump and Lines. Mix and Pump 50 bbls of 9.0 ppg Spacer, Mix and Pump 83 bbls of 11.0 ppg Lead cement. Mix and Pump 15 bbls of 13.2 ppg Tail cement. Displace with 267 bbls 8.4 ppg FW bumped plug on schedule, bump pressure from 951 psi to 1951 psi, hold psi 5 mins bled back 1.75 bbs - floats held. Full returns. 45 bbl of spacer to the 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?	
LINER CEMENT	5,830.0	9,494.0	Yes	No	8	4	6	951.0	1,951.0	No	No	No	

Cement Fluids						
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft ³ /sack)	Density (lb/gal)	
SPACER	0.0	0.0	FRESH WATER		9.00	
LEAD CMT	5,889.0	8,970.0	LITECRETE	2.51	11.00	
TAIL CMT	8,970.0	9,494.0	CLASS C POZ	1.57	13.20	
DSPLMT	0.0	9,400.0	FRESH WATER		8.33	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	7,201	930			11,106	12,177.0	
DIESEL	MUD	GAL		56			12,144	7,857.0	
WATER	FRESH	BBL	500	500		Water meter reading 109729	0	25,310.0	

Mud Additive Amounts						
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BENTONITE	VISCOSIFIER	SACK		24	96.0	24
CAUSTIC SODA	ALKALINITY CONTROL	SACK		5	138.0	56
PAC R	FLUID LOSS ADDITIVES	SACK		4	91.0	73
XANTHAM GUM	VISCOSIFIER	SACK		35	83.0	45

Pump Operations						
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 138.00 Days Since RI: 138.00

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/26/2019
 Report #: 10
 DFS: 9
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$215,184.24

Deviation Surveys

Date 10/22/2019	Description AS DRILL SURVEY	Job ODR, 10/21/2019 16:00
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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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/27/2019
 Report #: 11
 DFS: 10
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$82,754.22

H & P #645

Accept: 12/19/2019 Release:
 Days Since LTI: 139.00 Days Since RI: 139.00

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub	KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50
		Ground Elevation (ft) 2,983.00	Spud Date 10/22/2019
			TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: TOO H and lay down liner running tool, pick up packer to test liner top, TIH and test, TOO H, P/U polisher, mill top and and attempt to set packer again, TOO H, to pick up tie back assembly. Good hand and body placement while tripping. Core Value: #2 Ethics and Honesty Rule to Live By: #2 By-Passing Safety Critical Equipment
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: While drilling intermediate section, the rig was dumping and diluting their brine-based drilling fluid while simultaneously hauling off pit water for disposal. Brine-based drilling fluid from reserve pit was noticed flowing from reserve pit across location. The reserve pit fluid had risen and washed part of the dirt berm out causing the spill. Pumping on the well was stopped and the well shut in immediately. More dirt was dumped on the berm break to hold back flow, while reserve fluid was pumped over to spare frac tanks for relief. The spill traveled across location and off the corner and side of pad and stopped at the neighboring lease road. Vacuum trucks continued to pull loads for disposal to a safe level below the berm. Free-standing fluid in and around the pad was vacuumed as well. An approximated total of 111 bbl. was spilled, while 63 bbl. escaped off the pad. PNR Environmental Dept. contacted. Further remediation to follow.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: TOH and ran 9 5/8" packer, 9 5/8" csg tested good, not a good test below packer on the liner packer, TOO H, RIH with mill/polisher to clean and polish liner top, set 70k and test again, TOO H. Pay attention to unusual traffic to location and the 3rd party tools that we are using for this irregular operation. Good hand and body placement while tripping. Core Value: #2 Ethics and Honesty Rule to Live By: #2 By-Passing Safety Critical Equipment
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: While conducting a team lift of wireline weight bar, tail end of weight bar slipped out of team members grasp, causing opposite end to whip. Second team-member attempted to control whipping weight bar, slightly straining his right bicep muscle. Event was immediately reported, and contractor case management contacted. Team member took an anti-inflammatory and returned to work.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	3rd party employee did not wear H2S monitor in the breathing zone. Stopped the job and had a conversation with employee in regards of importance of PPE and reasoning behind wearing monitor in the breathing zone. Employee understood and committed to wear H2S monitor within breathing zone.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad. Drilling Sequentially Updated 12.26.19

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			9,506.0	18,403.0	82,754.22	1,598,600.73	
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)
	0.50		9,477.7	9,200.0		32,767.67	3,430,137.57
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments				
DRILLED FEET	0.0	0.0	Operational Goal not achieved				
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
No		LINER, 9,494.0ftKB	PROPOSED PRODUCTION, 20,634.0ftKB				
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
 L/D Liner Running Tool, P/U Test Packer, TIH to Liner Top, Test 9-5/8" Casing, TOO H, P/U and Run Baker Mill/Polish Assembly, TOO H, P/U and Run Baker Tie Back Packer Assembly with no success, TOO H, P/U and M/U 7 5/8" Packer, TIH to Find Casing Leak

Operations Next Report Period
 TIH with 7 5/8" Packer, Troubleshoot Potential Casing Leak

Operations at Report Time
 TIH with 7 5/8" Packer

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

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	INT2, CASE & CMT	HDL_ROT HD	NORMAL	Remove rotating head & install trip nipple.	9,506.0	9,506.0		
06:30	1.75	08:15	INT2, CASE & CMT	TOOH_ELEV	NORMAL	TOOH F/5778' T/Liner running tool'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0		
08:15	0.25	08:30	INT2, CASE & CMT	L/D BHA	NORMAL	Lay down bumper jars and liner running tool.	9,506.0	9,506.0		
08:30	0.25	08:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for running test packer in the hole.	9,506.0	9,506.0	0.25	7
08:45	0.25	09:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U 9-5/8" test packer (6.5') to the 5" DP.	9,506.0	9,506.0	0.25	7

Job: ODR
 Report Date: 12/27/2019
 Report #: 11
 DFS: 10
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Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 139.00 Days Since RI: 139.00

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
09:00	2.75	11:45	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH with 9-5/8" test packer T/5750' @ 180 fpm and set the packer with 25,000 lbs. Full displacement.	9,506.0	9,506.0	2.75	7
11:45	0.75	12:30	PROD, PRE DRL	CSG_TEST	NORMAL	Test 9-5/8" casing above the packer to 1000 psi for 5 minutes. (Good test) Attempt to test 7-5/8" liner below the packer to 1000 psi. (Unsuccessful). Reached 841 psi and then started leak off and pressure dropped back to 555 psi	9,506.0	9,506.0	0.75	7
12:30	0.25	12:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for TOOH with packer.	9,506.0	9,506.0	0.25	7
12:45	1.75	14:30	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with packer F/5750' T/68.5'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	1.75	7
14:30	0.25	14:45	PROD, PRE DRL	HDL_BHA	NORMAL	L/D packer tool	9,506.0	9,506.0	0.25	7
14:45	0.25	15:00	PROD, PRE DRL	WRBSH	NORMAL	Install wear bushing.	9,506.0	9,506.0	0.25	7
15:00	0.25	15:15	PROD, PRE DRL	SFTY	NORMAL	PJSM for picking up mill assembly.	9,506.0	9,506.0	0.25	7
15:15	0.25	15:30	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U mill assembly.	9,506.0	9,506.0	0.25	7
15:30	2	17:30	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH to top of liner and tag at 5830'.	9,506.0	9,506.0	2.00	7
17:30	0.25	17:45	PROD, PRE DRL	MILL	NORMAL	Polish top of the 7-5/8" Liner with 20 RPM, 200 GPM, 5 WOB. Full displacement.	9,506.0	9,506.0	0.25	7
17:45	0.25	18:00	PROD, PRE DRL	CSG_TEST	NORMAL	After polishing tried to apply weight and test packer again. Unable to achieve pressure above 700 psi (Unsuccessful test).	9,506.0	9,506.0	0.25	7
18:00	2.25	20:15	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with mill assembly F/5750'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	2.25	7
20:15	0.25	20:30	PROD, PRE DRL	HDL_BHA	NORMAL	L/D mill assembly.	9,506.0	9,506.0	0.25	7
20:30	0.25	20:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for picking up tie back assembly.	9,506.0	9,506.0	0.25	7
20:45	0.25	21:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U tie back assembly.	9,506.0	9,506.0	0.25	7
21:00	3.25	00:15	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH to top of liner at 5830'.	9,506.0	9,506.0	3.25	7
00:15	1.75	02:00	PROD, PRE DRL	CSG_TEST	NORMAL	Sting into liner and attempt to test the 7-5/8" Liner (Unsuccessful). Unable to achieve pressure above 700 psi. Tested the initial liner packer on the back side trough kill line to 1000 psi (Successful Test).	9,506.0	9,506.0	1.75	7
02:00	2.75	04:45	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with tie back assembly F/5830'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	2.75	7
04:45	0.25	05:00	PROD, PRE DRL	HDL_BHA	NORMAL	L/D tie back assembly.	9,506.0	9,506.0	0.25	7
05:00	0.5	05:30	PROD, PRE DRL	RIG_SVC	NORMAL	Rig service and lubrication	9,506.0	9,506.0	0.50	7
05:30	0.5	06:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U 7-5/8" test packer (6.5') to the 5" DP.	9,506.0	9,506.0	0.50	7

Interval Problems

3RD PARTY, 9,506.0ftKB, 12/26/2019 08:30

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
7	21.50	No	CEMENT	CEMENT PLUGS / SLURRY PERFORMANCE	50,000.00	PIONEER NATURAL RESOURCES USA INC	Unsuccessful liner packer test. Unable to reach 1000 psi. Tested successfully 9-5/8" casing above the liner. Tested successfully liner packer with tie back assembly. Liner casing below packer is leaking, currently waiting for 7-5/8" packer.

Drill Strings

BHA #4 , BRIDGE PLUG

Bit Run	Drill Bit	Bit Type	Make
4	9 5/8in, 0, 1	RETRIEVABLE BRIDGE PLUG	B&R TOOLS
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
		-----BHA	
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
			9,506.0
			Depth Out (ftKB)
			9,506.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
185	DRILL PIPE	5	4.27	5,743.50	5,755.00	111,998.3	112	RIG
1	RTTS	8.835	7.00	6.50	11.50	260.0	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 (°)
10:30	10:45	9,506.0	0.00		0	0		21	150.0	0.0	112	165	157	0	0.0	0.0	

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Drill Strings				
BHA #5 , CLEAN OUT/REAMING				
Drill Run 5	Drill Bit 6 3/4in, 0, 1	Bit Type POLISHING MILL	Make GE/BAKER HUGHES	
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull -----BHA	Hours Drilled By Bit (hr)	Depth Drilled By Bit (ft)
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB) 9,506.0	Depth Out (ftKB) 9,506.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
184	DRILL PIPE	5	4.27	5,806.74	5,837.00	113,231.4	114	RIG	
1	MILL	8.835	4.27	23.26	30.26	930.4	1		

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 (°)
17:30	17:45	9,506.0	0.00		5	20		200	150.0	0.0	112	165	157	0	0.0	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)
8.70	8.82					5.6	5.6	167.83		378.78

Mud Checks									
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)			
03:30	PIONEER DRILLING FLUIDS	WATER BASE	9,506.0	8.50	28				
PV (cP)	YP (lbf/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)		
1.0	1.000	1	1	0.0	0.0	0.0	0.0		
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)				
2.0	1.4	0.3	1.5	0.300					
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH			
6,300,000.000	0.000	0	0/100	0.0	0.1	9.6			
Gel 10 sec (lbf/100ft ²)	Gel 10 min (lbf/100ft ²)	Gel 30 min (lbf/100ft ²)							
1.000	1.000	1.000							

Comment
 RECOMMENDED FLUIDS TREATMENT
 Maintaining 8.4-8.8ppg in active. Currently there are no fluid treatments
 DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while tripping in & out of the hole; proper displacement. There was no centrifuge processing today; the centrifuge was flushed out in preparation for OBM.
 RIG ACTIVITY LAST 24 HOURS
 Upon landing the 7-5/8" liner, the cementing equipment was rigged up and the liner cement job was performed. Full returns were experienced throughout the entire process. Upon bumping the plug, the 5" drillpipe was stung out of the liner hanger and a bottom's up was circulated; received 50bbls of spacer at surface. The liner top was then tested; test negative. Pulled out of the hole and picked up an inflatable packer to test the 9-5/8" casing; test positive. A polishing mill was then made up and ran in the hole to polish of the top of the hanger. An additional test was performed; negative. Began pulling out of the hole to pick up a sleeve/tie-back packer. The tie-back was then ran & set before testing the liner once again to no avail. Plan forward is to pick up another packer and test below the liner hanger.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL		905			10,201	13,082.0	
DIESEL	MUD	GAL		0			12,144	7,857.0	
WATER	FRESH	BBL	0	0		Water meter reading 109729	0	25,310.0	

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 139.00 Days Since RI: 139.00

Job: ODR
 Report Date: 12/27/2019
 Report #: 11
 DFS: 10
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$82,754.22

Deviation Surveys

Date 10/22/2019	Description AS DRILL SURVEY	Job ODR, 10/21/2019 16:00
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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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 139.00	Days Since RI: 139.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/27/2019
Report #:	11
DFS:	10
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$82,754.22

API/UWI 42-003-48170-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B2 (WFMP B2)		Field Name SPRABERRY (TREND AREA)	
SSN ID00053070	Property Sub	KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00	Spud Date 10/22/2019	TD Date	

Safety Checks				
Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: TOO H and lay down liner running tool, pick up packer to test liner top, TIH and test, TOO H, P/U polisher, mill top and attempt to set packer again, TOO H, to pick up tie back assembly. Good hand and body placement while tripping. Core Value: #2 Ethics and Honesty Rule to Live By: #2 By-Passing Safety Critical Equipment
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: While drilling intermediate section, the rig was dumping and diluting their brine-based drilling fluid while simultaneously hauling off pit water for disposal. Brine-based drilling fluid from reserve pit was noticed flowing from reserve pit across location. The reserve pit fluid had risen and washed part of the dirt berm out causing the spill. Pumping on the well was stopped and the well shut in immediately. More dirt was dumped on the berm break to hold back flow, while reserve fluid was pumped over to spare frac tanks for relief. The spill traveled across location and off the corner and side of pad and stopped at the neighboring lease road. Vacuum trucks continued to pull loads for disposal to a safe level below the berm. Free-standing fluid in and around the pad was vacuumed as well. An approximated total of 111 bbl. was spilled, while 63 bbl. escaped off the pad. PNR Environmental Dept. contacted. Further remediation to follow.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: TOH and ran 9 5/8" packer, 9 5/8" csg tested good, not a good test below packer on the liner packer, TOO H, RIH with mill/polisher to clean and polish liner top, set 70k and test again, TOO H. Pay attention to unusual traffic to location and the 3rd party tools that we are using for this irregular operation. Good hand and body placement while tripping. Core Value: #2 Ethics and Honesty Rule to Live By: #2 By-Passing Safety Critical Equipment
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: While conducting a team lift of wireline weight bar, tail end of weight bar slipped out of team members grasp, causing opposite end to whip. Second team-member attempted to control whipping weight bar, slightly straining his right bicep muscle. Event was immediately reported, and contractor case management contacted. Team member took an anti-inflammatory and returned to work.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	3rd party employee did not wear H2S monitor in the breathing zone. Stopped the job and had a conversation with employee in regards of importance of PPE and reasoning behind wearing monitor in the breathing zone. Employee understood and committed to wear H2S monitor within breathing zone.

Jobs					
Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Job Dates (ex. Estimated Pad Release, TXRRC Calls)			
Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad. Drilling Sequentially Updated 12.26.19

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)	
0.00			9,506.0	18,403.0	82,754.22	1,598,600.73	
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)
	0.50		9,477.7	9,200.0		32,767.67	3,430,137.57
Daily Goal Description		Daily Goal - Last 24	Daily Goal - Next 24		Goal Comments		
DRILLED FEET		0.0	0.0		Operational Goal not achieved		
Backbuild	Lateral Inclination	Last Casing String	Next Casing String				
No		LINER, 9,494.0ftKB	PROPOSED PRODUCTION, 20,634.0ftKB				
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
L/D Liner Running Tool, P/U Test Packer, TIH to Liner Top, Test 9-5/8" Casing, TOO H, P/U and Run Baker Mill/Polish Assembly, TOO H, P/U and Run Baker Tie Back Packer Assembly with no success, TOO H, P/U and M/U 7 5/8" Packer, TIH to Find Casing Leak

Operations Next Report Period
TIH with 7 5/8" Packer, Troubleshoot Potential Casing Leak

Operations at Report Time
TIH with 7 5/8" Packer

Remarks
No Accidents,
NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
Initial water reading- bbls
Start- 105001 bbls
Stop @ bbls
Resume @ bbls
Final water meter reading bbls

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	0.5	06:30	INT2, CASE & CMT	HDL_ROT HD	NORMAL	Remove rotating head & install trip nipple.	9,506.0	9,506.0			
06:30	1.75	08:15	INT2, CASE & CMT	TOOH_ELEV	NORMAL	TOOH F/5778' T/Liner running tool. Hole taking proper fill from trip tanks.	9,506.0	9,506.0			
08:15	0.25	08:30	INT2, CASE & CMT	L/D BHA	NORMAL	Lay down bumper jars and liner running tool.	9,506.0	9,506.0			
08:30	0.25	08:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for running test packer in the hole.	9,506.0	9,506.0	0.25	7	
08:45	0.25	09:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U 9-5/8" test packer (6.5') to the 5" DP.	9,506.0	9,506.0	0.25	7	

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 #
09:00	2.75	11:45	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH with 9-5/8" test packer T/5750' @ 180 fpm and set the packer with 25,000 lbs. Full displacement.	9,506.0	9,506.0	2.75	7
11:45	0.75	12:30	PROD, PRE DRL	CSG_TEST	NORMAL	Test 9-5/8" casing above the packer to 1000 psi for 5 minutes. (Good test) Attempt to test 7-5/8" liner below the packer to 1000 psi. (Unsuccessful). Reached 841 psi and then started leak off and pressure dropped back to 555 psi	9,506.0	9,506.0	0.75	7
12:30	0.25	12:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for TOOH with packer.	9,506.0	9,506.0	0.25	7
12:45	1.75	14:30	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with packer F/5750' T/68.5'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	1.75	7
14:30	0.25	14:45	PROD, PRE DRL	HDL_BHA	NORMAL	L/D packer tool	9,506.0	9,506.0	0.25	7
14:45	0.25	15:00	PROD, PRE DRL	WRBSH	NORMAL	Install wear bushing.	9,506.0	9,506.0	0.25	7
15:00	0.25	15:15	PROD, PRE DRL	SFTY	NORMAL	PJSM for picking up mill assembly.	9,506.0	9,506.0	0.25	7
15:15	0.25	15:30	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U mill assembly.	9,506.0	9,506.0	0.25	7
15:30	2	17:30	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH to top of liner and tag at 5830'.	9,506.0	9,506.0	2.00	7
17:30	0.25	17:45	PROD, PRE DRL	MILL	NORMAL	Polish top of the 7-5/8" Liner with 20 RPM, 200 GPM, 5 WOB. Full displacement.	9,506.0	9,506.0	0.25	7
17:45	0.25	18:00	PROD, PRE DRL	CSG_TEST	NORMAL	After polishing tried to apply weight and test packer again. Unable to achieve pressure above 700 psi (Unsuccessful test).	9,506.0	9,506.0	0.25	7
18:00	2.25	20:15	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with mill assembly F/5750'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	2.25	7
20:15	0.25	20:30	PROD, PRE DRL	HDL_BHA	NORMAL	L/D mill assembly.	9,506.0	9,506.0	0.25	7
20:30	0.25	20:45	PROD, PRE DRL	SFTY	NORMAL	PJSM for picking up tie back assembly.	9,506.0	9,506.0	0.25	7
20:45	0.25	21:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U tie back assembly.	9,506.0	9,506.0	0.25	7
21:00	3.25	00:15	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH to top of liner at 5830'.	9,506.0	9,506.0	3.25	7
00:15	1.75	02:00	PROD, PRE DRL	CSG_TEST	NORMAL	Sting into liner and attempt to test the 7-5/8" Liner (Unsuccessful). Unable to achieve pressure above 700 psi. Tested the initial liner packer on the back side trough kill line to 1000 psi (Successful Test).	9,506.0	9,506.0	1.75	7
02:00	2.75	04:45	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with tie back assembly F/5830'. Hole taking proper fill from trip tanks.	9,506.0	9,506.0	2.75	7
04:45	0.25	05:00	PROD, PRE DRL	HDL_BHA	NORMAL	L/D tie back assembly.	9,506.0	9,506.0	0.25	7
05:00	0.5	05:30	PROD, PRE DRL	RIG_SVC	NORMAL	Rig service and lubrication	9,506.0	9,506.0	0.50	7
05:30	0.5	06:00	PROD, PRE DRL	HDL_BHA	NORMAL	P/U and M/U 7-5/8" test packer (6.5') to the 5" DP.	9,506.0	9,506.0	0.50	7

Interval Problems
3RD PARTY, 9,506.0ftKB, 12/26/2019 08:30

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
7	21.50	No	CEMENT	CEMENT PLUGS / SLURRY PERFORMANCE	50,000.00	PIONEER NATURAL RESOURCES USA INC	Unsuccessful liner packer test. Unable to reach 1000 psi. Tested successfully 9-5/8" casing above the liner. Tested successfully liner packer with tie back assembly. Liner casing below packer is leaking, currently waiting for 7-5/8" packer.

Drill Strings
BHA #4 , BRIDGE PLUG

Bit Run	Drill Bit	Bit Type	Make
4	9 5/8in, 0, 1	RETRIEVABLE BRIDGE PLUG	B&R TOOLS
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
		-----BHA	
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
			9,506.0
			Depth Out (ftKB)
			9,506.0

Drill String Components								
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
185	DRILL PIPE	5	4.27	5,743.50	5,755.00	111,998.3	112	RIG
1	RTTS	8.835	7.00	6.50	11.50	260.0	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 (°)
10:30	10:45	9,506.0	0.00		0	0		21	150.0	0.0	112	165	157	0	0.0	0.0	

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 139.00 Days Since RI: 139.00

Job: ODR
 Report Date: 12/27/2019
 Report #: 11
 DFS: 10
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$82,754.22

Drill Strings				
BHA #5, CLEAN OUT/REAMING				
Drill Run	Drill Bit	Bit Type	Make	
5	6 3/4in, 0, 1	POLISHING MILL	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)
		-----BHA		
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)	Depth Out (ftKB)
			9,506.0	9,506.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
184	DRILL PIPE	5	4.27	5,806.74	5,837.00	113,231.4	114	RIG	
1	MILL	8.835	4.27	23.26	30.26	930.4	1		

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 (°)
17:30	17:45	9,506.0	0.00		5	20		200	150.0	0.0	112	165	157	0	0.0	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)
8.70	8.82					5.6	5.6	167.83		378.78

Mud Checks									
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)			
03:30	PIONEER DRILLING FLUIDS	WATER BASE	9,506.0	8.50	28				
PV (cP)	YP (lbf/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)		
1.0	1.000	1	1	0.0	0.0	0.0	0.0		
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)				
2.0	1.4	0.3	1.5	0.300					
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH			
6,300,000.000	0.000	0	0/100	0.0	0.1	9.6			
Gel 10 sec (lbf/100ft ²)	Gel 10 min (lbf/100ft ²)		Gel 30 min (lbf/100ft ²)						
1.000	1.000		1.000						

Comment
 RECOMMENDED FLUIDS TREATMENT
 Maintaining 8.4-8.8ppg in active. Currently there are no fluid treatments
 DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while tripping in & out of the hole; proper displacement. There was no centrifuge processing today; the centrifuge was flushed out in preparation for OBM.
 RIG ACTIVITY LAST 24 HOURS
 Upon landing the 7-5/8" liner, the cementing equipment was rigged up and the liner cement job was performed. Full returns were experienced throughout the entire process. Upon bumping the plug, the 5" drillpipe was stung out of the liner hanger and a bottom's up was circulated; received 50bbls of spacer at surface. The liner top was then tested; test negative. Pulled out of the hole and picked up an inflatable packer to test the 9-5/8" casing; test positive. A polishing mill was then made up and ran in the hole to polish of the top of the hanger. An additional test was performed; negative. Began pulling out of the hole to pick up a sleeve/tie-back packer. The tie-back was then ran & set before testing the liner once again to no avail. Plan forward is to pick up another packer and test below the liner hanger.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL		905			10,201	13,082.0	
DIESEL	MUD	GAL		0			12,144	7,857.0	
WATER	FRESH	BBL	0	0		Water meter reading 109729	0	25,310.0	

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 139.00	Days Since RI: 139.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/27/2019
Report #:	11
DFS:	10
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$82,754.22

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

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Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 140.00	Days Since RI: 140.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/28/2019
Report #:	12
DFS:	11
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$104,255.52

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Previous Tour: TOO H with mill assembly, P/U and TIH with Tie back assembly, Stang in to the liner and attempted to pressure test the liner without success, tested the packer from the back side and held 1000 psi, TOO H. Current Tour: P/U 7-5/8 packer, TIH and test the liner searching for casing leaks. 3: R2LB #3: Confined Space Entry Core Values #3: Safety
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: While conducting a team lift of wireline weight bar, tail end of weight bar slipped out of team members grasp, causing opposite end to whip. Second team-member attempted to control whipping weight bar, slightly straining his right bicep muscle. Event was immediately reported, and contractor case management contacted. Team member took an anti-inflammatory and returned to work.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Previous Tour: P/U 7-5/8 packer, tested hanger/packer 1500psi (good)TIH tagged LC and test the liner 1500 (good), test below packer to 1500psi good, TOH, M/U 2 junk backest, BS, & mill tooth bit, TIH. Current tour: TIH with drill out assembly, Drill out float equipment 10' new formation, Attempt FIT & go from there, if FIT is not good we will TOH P/U 2 7/8" mule shoe and 1000' tubing, TIH, get injection rate, spot cement, TOH 200' above plug, drop nerf CBU, squeeze @ .5bpm for 10bbls 3: R2LB #3: Confined Space Entry Core Values #3: Safety
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: Contractor was washing out the stand pipe on top of module control center house, when approximately 3 bbl. of oil based mud was released to the ground and around the mud pumps. Remediation was immediately performed and 2.5 bbl. was recovered.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	RTM had improper handling of the pipe and there was a potential of finger injury. Stopped the job and had the discussion with RTM in regards of importance of proper handling due to injury potential. RTM agreed and committed to use proper handling.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/25/2020	Drilling 2nd INT #2 on 3 well pad. Drilling Sequentially Updated 12.26.19

Daily Operations							
Footage/Meterage (ft) 10.00	Drilling Hours (hr) 0.75	% Rotating Time (%) 100.00	End Depth (ftKB) 9,516.0	Target Depth (ftKB) 18,403.0	Daily Field Est Total (Cost) 104,255.52	Cum Field Est To Date (Cost) 1,703,256.25	
24 HR ROP (ft/hr) 13.3	Circulating Hours (hr)	% Sliding Time (%) 0.00	End Depth (TVD) (ftKB) 9,487.7	Target Depth (TVD) (ftKB) 9,200.0	Daily Mud Field Est (Cost) 32,767.67	Cum Mud Field Est (Cost) 3,430,137.57	Total AFE + Sup (Cost)
Daily Goal Description DRILLED FEET	Daily Goal - Last 24 0.0	Daily Goal - Next 24 0.0	Goal Comments Operational Goal not achieved				
Backbuild No	Lateral Inclination	Last Casing String LINER, 9,494.0ftKB	Next Casing String PROPOSED PRODUCTION, 20,634.0ftKB				
Avg Connection Gas 0.00	Avg Trip Gas 0.00	Avg Background Gas 2.00	Max Connection Gas 0.00	Max Trip Gas 0.00	Max Drill Gas 2.00		

Operations Summary
TIH with 7 5/8" Packer, Test 7-5/8" Casing Above and Below the Packer, TOO H, P/U Drill Out BHA, TIH, Drill out FE, Attempt to Perform FIT, TOO H, L/D Drill out BHA, P/U 2-7/8" Tubing Stinger with Mule Shoe, TIH

Operations Next Report Period
Finish TIH, Perform Injection Rate Test, TIH below Casing Shoe, R/U Cementers, Perform 7-5/8" Liner Shoe Squeeze Job

Operations at Report Time
TIH w 2-7/8" tubing @ 450'

Remarks
No Accidents,
NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
Initial water reading- bbls
Start- 105001 bbls
Stop @ bbls
Resume @ bbls
Final water meter reading bbls

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	0.25	06:15	PROD, PRE DRL	SFTY	NORMAL	PJSM on TIH with packer with rig crew.	9,506.0	9,506.0	0.25	7
06:15	2.75	09:00	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH with 7 5/8" packer T/5970 with no issues. Hole displacing properly to trip tanks.	9,506.0	9,506.0	2.75	7
09:00	0.5	09:30	PROD, PRE DRL	CSG_TEST	NORMAL	Set packer at 5970' and test integrity of 9 5/8 casing and original liner top packer above to 1500 psi. Good test. Note: TOL @ 5830'	9,506.0	9,506.0	0.50	7
09:30	2.25	11:45	PROD, PRE DRL	TIH_ELEV	NORMAL	Continue TIH with 7 5/8" packer F/5970' T/9390' with no issues. Hole displacing properly to trip tanks. Note: Latch Collar @ 9399'	9,506.0	9,506.0	2.25	7
11:45	0.75	12:30	PROD, PRE DRL	CSG_TEST	NORMAL	Set packer at 9390' and test casing above to 1500 psi for 30 min. Good Test.	9,506.0	9,506.0	0.75	7
12:30	0.5	13:00	PROD, PRE DRL	CSG_TEST	NORMAL	Test below packer to 1700 psi. Good test.	9,506.0	9,506.0	0.50	7
13:00	0.25	13:15	PROD, PRE DRL	SFTY	NORMAL	PJSM on TOO H with packer.	9,506.0	9,506.0	0.25	7

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 140.00	Days Since RI: 140.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/28/2019
Report #:	12
DFS:	11
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$104,255.52

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
13:15	3.5	16:45	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH F/9390' T/surface with no issues. Hole takign proper fill from trip tanks.	9,506.0	9,506.0	3.50	7
16:45	0.25	17:00	PROD, PRE DRL	SFTY	NORMAL	PJSM on P/U dumb iron/drill out BHA	9,506.0	9,506.0	0.25	7
17:00	0.25	17:15	PROD, PRE DRL	HDL_BHA	NORMAL	M/U 6.75" drill out bit, bit sub, and junk baskets.	9,506.0	9,506.0	0.25	7
17:15	3.75	21:00	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH with drill out BHA F/surface T/9390' with no issues. Hole displacing properly to trip tanks.	9,506.0	9,506.0	3.75	7
21:00	0.5	21:30	PROD, PRE DRL	HDL_ROTTHD	NORMAL	Pull trip nipple and install rotating head.	9,506.0	9,506.0	0.50	7
21:30	2	23:30	PROD, PRE DRL	DRL_OUT	NORMAL	Drill out latch collar, shoe track, and rathole F/9390' T/9506' with 20-25k WOB, 30-50 rpm, 275-300 gpm and 6k TQ.	9,506.0	9,506.0	2.00	7
23:30	0.75	00:15	PROD, PRE DRL	DRL	NORMAL	Drill 10' of new formation F/9506' T/9516' with 25k WOB, 65 rpm, 275-300 gpm, 10k TQ. Full returns.	9,506.0	9,516.0	0.75	7
00:15	0.5	00:45	PROD, PRE DRL	FIT	NORMAL	Attempt to perform FIT with 8.6 ppg to 12.0 ppg EMW. Test pressure required is 1660 psi. Achieved 652 psi. (Unsuccessful)	9,516.0	9,516.0	0.50	7
00:45	2.5	03:15	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with dumb iron assembly F/9516' T/2400'. Hole taking proper fill from trip tanks.	9,516.0	9,516.0	2.50	7
03:15	0.25	03:30	PROD, PRE DRL	HDL_ROTTHD	NORMAL	Pull rotating head install trip nipple	9,516.0	9,516.0	0.25	7
03:30	0.5	04:00	PROD, PRE DRL	TOOH_ELEV	NORMAL	TOOH with dumb iron assembly F/2400' T/Surface. Hole taking proper fill from trip tanks.	9,516.0	9,516.0	0.50	7
04:00	0.5	04:30	PROD, PRE DRL	HDL_BHA	NORMAL	L/D drill out BHA.	9,516.0	9,516.0	0.50	7
04:30	0.5	05:00	PROD, PRE DRL	RIG_SVC	NORMAL	Rig service and lubrication	9,516.0	9,516.0	0.50	7
05:00	0.25	05:15	PROD, PRE DRL	SFTY	REMEDIAL CEMENTING	PJSM for P/U of tubing stinger with mule shoe.	9,516.0	9,516.0	0.25	7
05:15	0.5	05:45	PROD, PRE DRL	HDL_BHA	REMEDIAL CEMENTING	P/U of 2-7/8" tubing stinger with mule shoe.	9,516.0	9,516.0	0.50	7
05:45	0.25	06:00	PROD, PRE DRL	TIH_ELEV	REMEDIAL CEMENTING	TIH with 2-7/8" tubing @ 450'.	9,516.0	9,516.0	0.25	7

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
7	45.50	No	CEMENT	CEMENT PLUGS / SLURRY PERFORMANCE	50,000.00	PIONEER NATURAL RESOURCES USA INC	Unsuccessful liner packer test. Unable to reach 1000 psi. Tested successfully 9-5/8" casing above the liner. Tested successfully liner packer with tie back assembly. Liner casing below packer is leaking, currently waiting for 7-5/8" packer.

Drill Strings			
BHA #6 , BRIDGE PLUG			
Bit Run	Drill Bit	Bit Type	Make
6	7 5/8in, 0, 1	RETRIEVABLE BRIDGE PLUG	B&R TOOLS
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull -----BHA	Hours Drilled By Bit (hr)
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
			9,506.0
			Depth Out (ftKB)
			9,506.0

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	4.27	9,500.00	9,511.00	185,250.0	186	RIG	
1	RTTS	7 5/8	7.00	6.50	11.00	260.0	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	12:00	9,506.0	0.00		0	0	0.0	50	200.0	0.0	0	0	0	0	0.0	0.0	0

BHA #7 , DRILL OUT			
Bit Run	Drill Bit	Bit Type	Make
7	6 3/4in, HA3PG, 1910305	MILL TOOTH	TAUREX
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull -----BHA	Hours Drilled By Bit (hr)
20/20/20	0.92		0.75
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
0.75	10.00	13.3	9,506.0
			Depth Out (ftKB)
			9,516.0

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
307	DRILL PIPE	4 1/2	3.83	9,502.51	9,516.00	157,741.7	158		
1	SUB - XO	4 3/4	3.00	4.66	13.49	77.4	0		
1	SUB -BIT	4 3/4	3.00	2.97	8.83	49.3	0	SCHLUMBERGER	

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 140.00 Days Since RI: 140.00

Job: ODR
 Report Date: 12/28/2019
 Report #: 12
 DFS: 11
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$104,255.52

Drill String Components									
Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make	
1	SUB - JUNK	4 3/4	3.00	2.37	5.86	39.3	0	SCHLUMBERGER	
1	SUB - JUNK	4 3/4	3.00	2.49	3.49	41.3	0	SCHLUMBERGER	

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 (°)
23:30	00:15	9,506.0	10.00	13.3	25	65		275	515.0	13.0	180	212	203	205	8.0	6.0	

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)	
8.50	8.54	11.4	0.3	95.9	70.8	7.7	293.1	135.52	0.85	422.86	

Mud Checks									
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)			
03:30	PIONEER DRILLING FLUIDS	WATER BASE	9,516.0	8.60	29				
PV (cP)	YP (lbf/100ft ²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)		
1.0	1.000	1	1	0.0	0.0	0.0	0.0		
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)				
2.5	2.0	0.3	1.5	0.300					
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH			
6,200,000.000	0.000	0	0/100	0.0	0.1	9.1			
Gel 10 sec (lbf/100ft ²)	Gel 10 min (lbf/100ft ²)	Gel 30 min (lbf/100ft ²)							
1.000	1.000	1.000							

Comment
 RECOMMENDED FLUIDS TREATMENT
 Maintaining 8.4-8.8ppg in active. Currently there are no fluid treatments
 DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while tripping in & out of the hole; proper displacement. There was no centrifuge processing today; the centrifuge has been flushed out in preparation for OBM.
 RIG ACTIVITY LAST 24 HOURS
 Picked up and tripped in with a 7-5/8" packer assembly. The hanger/packer was tested to 1500psi: good. Continued in the hole, tagging up on the landing collar before testing the liner to 1500psi; good. Another test was performed below the packer, above the landing collar, this test also tested positive. Tripped out of the hole and picked up 2-junk baskets and a mill tooth bit. Tripped back to bottom and began drilling out the shoe track and 10' of new formation utilizing fresh water. The formation was then tested; failed test. Plan forward is to pick up squeeze assembly & tubing to squeeze the shoe.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests			
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)	
FORMATION INTEGRITY	2,018.0	12.50	
FORMATION INTEGRITY	9,516.0	9.87	

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	4,866.0

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL		938			9,263	14,020.0
DIESEL	MUD	GAL		0			12,144	7,857.0
WATER	FRESH	BBL	0	0		Water meter reading 109729	0	25,310.0

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	

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

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

H & P #645
Accept: 12/19/2019 **Release:**
Days Since LTI: 140.00 **Days Since RI: 140.00**

Job: ODR
Report Date: 12/28/2019
Report #: 12
DFS: 11
AFE #: 9006929
Total AFE + Sup: \$3,430,137.57
Daily Field Est. (Cost): \$104,255.52

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	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 141.00 Days Since RI: 141.00

Job: ODR
 Report Date: 12/29/2019
 Report #: 13
 DFS: 12
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$83,214.57

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Rig up and run tubing, TIH with tubing stinger on drill pipe, circulate, pump squeeze cement, tooh above plug, circulate, squeeze cement. Out of normal operations, communicate on next steps and stay flexible on potential plan changes. Changing weather and potential rain and a lot of third party on location. R2LB #4: Energy Isolation Core Values #4: Personal Accountability
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: While Contractor was preparing to clean casing, he squeezed the trigger to the pressure washer wand, Contractor stepped back and lost his balance and twisted his right knee slightly. Contractor refusing medical attention and continued to work.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Squeeze cement, hold squeeze pressure for 4 hrs, bleed off pressure, circulate hole clean, TOOH and lay down tubing. Out of normal operations, communicate on next steps and stay flexible on potential plan changes. Changing weather and potential rain and a lot of third party on location. R2LB #4: Energy Isolation Core Values #4: Personal Accountability
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: While Contractor was preparing to clean casing, he squeezed the trigger to the pressure washer wand, Contractor stepped back and lost his balance and twisted his right knee slightly. Contractor refusing medical attention and continued to work.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	While rigging down cementers, RTM stood in a way while cementer was about to hammer on the hammer union. Stopped the job and discussed with RTM importance of safe buffer zones especially during hammer operation. RTM understood and committed to pay attention to the surroundings and proper positioning/

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/27/2020	Drilling 2nd Production on 3 well pad. Drilling Sequentially Updated 12.29.19

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			9,516.0	18,403.0	83,214.57	1,786,470.82
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)
	1.00		9,487.7	9,200.0	32,767.67	3,430,137.57
Daily Goal Description	Daily Goal - Last 24	Daily Goal - Next 24	Goal Comments			
DRILLED FEET	0.0	400.0	Operational Goal Achieved			
Backbuild	Lateral Inclination	Last Casing String	Next Casing String			
No		LINER, 9,494.0ftKB	PROPOSED PRODUCTION, 20,634.0ftKB			
Avg Connection Gas	Avg Trip Gas	Avg Background Gas	Max Connection Gas	Max Trip Gas	Max Drill Gas	
0.00	7.00	3.00	0.00	7.00	3.00	

Operations Summary
 Finish TIH, Perform Injection Rate Test, TIH below Casing Shoe, R/U Cementers, Perform 7-5/8" Liner Shoe Squeeze Job, Hold Squeeze Pressure for 4 hrs, TOO, Rig up Byrd, L/D 2 7/8" tubing

Operations Next Report Period
 P/U and M/U Curve/Lateral BHA, TIH, Slip and Cut, TIH, Drill out Squeeze Cement, Perform FIT, Drill to KOP, Drill Curve

Operations at Report Time
 Rig Service

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

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	SFTY	NORMAL	Compass card meeting with Byrd & rig crew over m/u of 2 7/8" tubing	9,516.0	9,516.0	0.25	7
06:15	0.25	06:30	PROD, PRE DRL	HDL_BHA	REMEDIAL CEMENTING	Make up & P/U 2 7/8" tubing and mule shoe with byrd.	9,516.0	9,516.0	0.25	7
06:30	1.75	08:15	PROD, PRE DRL	TIH_ELEV	REMEDIAL CEMENTING	Trip in hole from BHA' to 1029'. Hole displacing properly to trip tanks.	9,516.0	9,516.0	1.75	7
08:15	0.25	08:30	PROD, PRE DRL	HDL_BHA	REMEDIAL CEMENTING	Rig down Byrd tong and handling tools	9,516.0	9,516.0	0.25	7
08:30	0.25	08:45	PROD, PRE DRL	SFTY	NORMAL	Compass card meeting with rig crew over TIH.	9,516.0	9,516.0	0.25	7
08:45	4.75	13:30	PROD, PRE DRL	TIH_ELEV	REMEDIAL CEMENTING	Trip in hole from 1029' to 9516'. Hole displacing properly to trip tanks.	9,516.0	9,516.0	4.75	7
13:30	0.75	14:15	PROD, PRE DRL	CIRC	REMEDIAL CEMENTING	Circulate btms up @ 300 gpm with full returns.	9,516.0	9,516.0	0.75	7

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 #
14:15	0.25	14:30	PROD, PRE DRL	SFTY	REMEDIAL CEMENTING	Safety meeting with NINE on spotting cement as per procedure.	9,516.0	9,516.0	0.25	7
14:30	0.25	14:45	PROD, PRE DRL	RU_CMT	REMEDIAL CEMENTING	Rig up Nine NC50 Drill pin and 2" low torque valve and circulating iron.	9,516.0	9,516.0	0.25	7
14:45	0.75	15:30	PROD, PRE DRL	CMT_REM	REMEDIAL CEMENTING	Pumped balanced cement plug as follows, Pump 10 bbls fresh water. ahead to Flush through lines. Pressure tested lines to 5,000 psi (tested good). Close BOPs and Establish injection rates with pump truck, 1 bpm=670psi, 2 bpm=740psi, 3 bpm=850psi, 4 bpm= 970psi, 5 bpm=1280psi, 6 bpm= 1350psi . Open BOPs and Pump 20 bbl's fresh water spacer, Followed by 32 bbl's of 15.6 ppg class H plug cement, then followed by 110.5 bbls of 8.6 ppg mud from active to place balanced plug.	9,516.0	9,516.0	0.75	7
15:30	0.25	15:45	PROD, PRE DRL	TOOH_ELEV	REMEDIAL CEMENTING	Break off NC50 cement pin and 2" low torque and trip out of hole from 9516' to 8523'	9,516.0	9,516.0	0.25	7
15:45	0.5	16:15	PROD, PRE DRL	TOOH_ELEV	REMEDIAL CEMENTING	trip out of hole from 9515' to 8523'.	7,965.0	7,965.0	0.50	7
16:15	1.5	17:45	PROD, PRE DRL	CIRC	REMEDIAL CEMENTING	Drop nerf ball & circulate 1 1/2 btms up at 300 gpm	9,516.0	9,516.0	1.50	7
17:45	0.25	18:00	PROD, PRE DRL	RU_CMT	REMEDIAL CEMENTING	Rig up Nine NC50 Drill pin and 2" low torque valve.	9,516.0	9,516.0	0.25	7
18:00	1.5	19:30	PROD, PRE DRL	CMT_REM	REMEDIAL CEMENTING	Running Squeeze: close variable rams, Pump 10 bbls @ 0.5 bbls/min. Runnig Squeeze BBLS pumping psi 1 bbls 290 2 bbls 390 3 bbl 410 4 bbl 430 5 bbl 460 6 bbl 490 7 bbl 550 8 bbl 580 9 bbl 610 10 bbl 610 Hesitation Squeeze (7.9 bbls) - waiting 250 psi decline between pumping increments after final squeeze pressure reached: 17.9 bbls. left in csg. BBLS pumping psi / static psi wait time 1 bbl 640 / 540 5 1 bbl 690 / 570 5 1 bbl 740 / 630 5 1 bbl 800 / 640 5 1 bbl 860 / 640 10 1 bbl 1050 / 750 15 1 bbl 1260 / 1170 15 0.9 bbl 1500 / 1500 4 hours	9,516.0	9,516.0	1.50	7
19:30	4	23:30	PROD, PRE DRL	CMT_REM	REMEDIAL CEMENTING	Held cmt. squeeze pressure @ 1500 psi for 4 hour with Nine cement pump truck. Monitoring squeeze pressure for 4 hrs. from 1500 psi to final squeeze pressure @ 1500 psi.	9,516.0	9,516.0	4.00	7
23:30	0.5	00:00	PROD, PRE DRL	RD_CMT	REMEDIAL CEMENTING	Rig down Nine NC50 Drill pin and 2" low torque valve and circulating iron.	9,516.0	9,516.0	0.50	7
00:00	1	01:00	PROD, PRE DRL	CIRC	REMEDIAL CEMENTING	Circulate 1x bottoms up with 400 gpm.	9,516.0	9,516.0	1.00	7
01:00	2.5	03:30	PROD, PRE DRL	TOOH_ELEV	REMEDIAL CEMENTING	Trip out hole f/8523' t/1077' with 4.5" DP monitoring displacement in trip tanks with no issue.	9,516.0	9,516.0	2.50	7

Daily Drilling Report

UNIVERSITY 6J 10H

H & P #645

Accept: 12/19/2019 Release: Days Since LTI: 141.00 Days Since RI: 141.00

PERMIAN ASSET TEAM

Job: ODR
 Report Date: 12/29/2019
 Report #: 13
 DFS: 12
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$83,214.57

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
03:30	0.25	03:45	PROD, PRE DRL	SFTY	REMEDIAL CEMENTING	PJSM with Byrd and rig crew on r/u tubing equipment rig up to laydown 2 7/8" tubing.	9,516.0	9,516.0	0.25	7
03:45	0.25	04:00	PROD, PRE DRL	RU_CSG	REMEDIAL CEMENTING	Rig up Byrd tubing equipment.	9,516.0	9,516.0	0.25	7
04:00	1.25	05:15	PROD, PRE DRL	TOOH_ELEV	REMEDIAL CEMENTING	trip out of hole from 1029' to Mule Shoe'.	7,965.0	7,965.0	1.25	7
05:15	0.25	05:30	PROD, PRE DRL	HDL_BHA	REMEDIAL CEMENTING	L/D Mule Shoe with Byrd.	9,516.0	9,516.0	0.25	7
05:30	0.5	06:00	PROD, PRE DRL	RIG_SVC	NORMAL	Rig service and lubrication	9,516.0	9,516.0	0.50	7

Interval Problems

3RD PARTY, 9,506.0ftKB, 12/26/2019 08:30

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
7	69.50	No	CEMENT	CEMENT PLUGS / SLURRY PERFORMANCE	200,000.00	PIONEER NATURAL RESOURCES USA INC	Unsuccessful liner packer test. Unable to reach 1000 psi. Tested successfully 9-5/8" casing above the liner. Tested successfully liner packer with tie back assembly. Liner casing below packer is leaking, currently waiting for 7-5/8" packer.

Drill Strings

BHA #8 , BRIDGE PLUG

Bit Run	Drill Bit	Bit Type	Make
8	7 5/8in, 0, 1	RETRIEVABLE BRIDGE PLUG	B&R TOOLS
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in²)	IADC Bit Dull	Hours Drilled By Bit (hr)
		-----BHA	
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
			9,516.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
307	DRILL PIPE	4 1/2	3.83	9,502.51	10,530.01	157,741.7	166	
1	SUB - XO	3	2.75	5.00	1,027.50	83.0	8	
1	SUB - XO	4 3/4	3.00	4.00	1,022.50	31.6	8	
32	TUBING	2 7/8	2.32	1,014.00	1,018.50	8,010.6	8	

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 (°)
13:30	14:30	9,516.0	0.00		0	0		300	831.0	0.0	0	192	190	187	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)
8.60	8.64					8.4	197.1	126.35	1.00	434.51

Mud Checks

Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)	
03:30	PIONEER DRILLING FLUIDS	WATER BASE	9,516.0	8.60	28		
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)
1.0	1.000	1	1	0.0	0.0	0.0	0.0
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)		
2.0	1.6	0.3	2.0	0.500			
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH	
4,900,000.000	0.000	0	0/100	0.0	0.1	9.6	
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)					
1.000	1.000	1.000					

Comment

RECOMMENDED FLUIDS TREATMENT
 Maintaining 8.4-8.8ppg in active. Currently there are no fluid treatments
 DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while tripping in & out of the hole; proper displacement. There was no centrifuge processing today; the centrifuge has been flushed out in preparation for OBM.
 RIG ACTIVITY LAST 24 HOURS
 Made up and tripped in the hole with 2-7/8" tubing assembly. On bottom, circulation was established, pumping a bottom's up. Injections rates established before pumping and spotting cement in place. Pulled out of the hole 200' above the plug, dropping the ball and circulating 1.5x bottom's up. Began hesitation squeeze procedure. Once complete with the squeeze, a bottom's up was circulated before pulling out to pick up the curve assembly.

Last BOP Test

Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests

Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50
FORMATION INTEGRITY	9,516.0	9.87

Daily Drilling Report

UNIVERSITY 6J 10H

PERMIAN ASSET TEAM

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 141.00 Days Since RI: 141.00

Job: ODR
 Report Date: 12/29/2019
 Report #: 13
 DFS: 12
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$83,214.57

Casing Pressure Test						
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0

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

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	4,866.0

Cement			
CEMENT SQUEEZE, Casing, 12/28/2019 14:45			
Cementing End Date	Wellbore	Technical Result	Comment
12/28/2019 23:30	ORIGINAL	pumping psi / static psi	Running Squeeze: close variable rams, Pump 10 bbls @ 0.5 bbls/min. Runnig Squeeze BBLs pumping psi 1 bbls 290 2 bbls 390 3 bbl 410 4 bbl 430 5 bbl 460 6 bbl 490 7 bbl 550 8 bbl 580 9 bbl 610 10 bbl 610 Hesitation Squeeze (7.9 bbls) - waiting 250 psi decline between pumping increments after final squeeze pressure reached: 17.9 bbls. left in csg. BBLs pumping psi / static psi wait time 1 bbl 640 / 540 5 1 bbl 690 / 570 5 1 bbl 740 / 630 5 1 bbl 800 / 640 5 1 bbl 860 / 640 10 1 bbl 1050 / 750 15 1 bbl 1260 / 1170 15 0.9 bbl 1500 / 1500 4 hours

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?
CEMENT SQUEEZE	9,188.0	9,516.0	No	No	6	1	3	1,500.0	0.0	No	No	No

Cement Fluids					
Fluid Type	Estimated Top (ftKB)	Est Btm (ftKB)	Class	Yield (ft³/sack)	Density (lb/gal)
SPACER	8,753.0	9,188.0			8.40
CEMENT	9,188.0	9,516.0	CLASS H	1.18	15.60

Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL		1,154			8,109	15,174.0	
DIESEL	MUD	GAL		0			12,144	7,857.0	
WATER	FRESH	BBL	0	0		Water meter reading 109729	0	25,310.0	

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0

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

Deviation Surveys		
Date	Description	Job
10/22/2019	AS DRILL SURVEY	ODR, 10/21/2019 16:00

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)
269_0_DEAN	-6,639.0		9,648.5		
270_0_WFMP_A1	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		

PIONEER

NATURAL RESOURCES

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
Accept: 12/19/2019	Release:
Days Since LTI: 141.00	Days Since RI: 141.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/29/2019
Report #:	13
DFS:	12
AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$83,214.57

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	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 142.00 Days Since RI: 142.00

Job: ODR
 Report Date: 12/30/2019
 Report #: 14
 DFS: 13
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$71,311.42

API/UWI 42-003-48170-0000	Well Profile HORIZONTAL	Open Formation WOLFCAMP B2 (WFMP B2)	Field Name SPRABERRY (TREND AREA)
SSN ID00053070	Property Sub KB-Grd (ft) 26.50	Orig KB Elev (ft) 3,009.50	Ground Elevation (ft) 2,983.00
		Spud Date 10/22/2019	TD Date

Time	Type	Des	Tour	Com
06:00	MEETING	PRE-TOUR	DAY	PTSM: Previous Tour: squeeze @ .5bpm for 10bbls proceed with hesitation squeeze, CBU prior TOOH, TOOH, L/D tubing Current tour: P/U 6.75" Curve BHA, TIH, slip and cut, drill out cement plug, Drill new formation for FIT, Perform FIT, Displace to OBM, Drill curve. Make sure to fill out checklists and return to company man. R2LB #5: Entrepreneurship #5: Fall or Elevated Work Safety
06:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	DAY	Description: Contractor floor hand was in the process of tripping pipe back into the hole, while setting the slips around the Heavy Weight Drill Pipe he lost his footing. This caused contractor to slip and strike his lower back on the tongs. Incident was reported to PNR reps and contractor HSE has been notified.
18:00	MEETING	PRE-TOUR	NIGHT	PTSM: Previous Tour:make up curve bha, TIH, slip and cut drill line, TIH, install rotating head, tag cement, drill out plug, drill a couple feet of new formation, perform FIT. assuming FIT is good to 12.0 we will displace to OBM and perform the FIT again, then go ahead and begin drilling R2LB #5: Entrepreneurship #5: Fall or Elevated Work Safety
18:01	PROACTIVE MEASURES	WEEKLY TRENDS REVIEWED	NIGHT	Description: Contractor floor hand was in the process of tripping pipe back into the hole, while setting the slips around the Heavy Weight Drill Pipe he lost his footing. This caused contractor to slip and strike his lower back on the tongs. Incident was reported to PNR reps and contractor HSE has been notified.
23:30	PROACTIVE MEASURES	STOP CARD - PNR	NIGHT	The hose was on the way from rig floor towards shakers as a potential trip hazard. Discussed with RTM importance of keeping the way clear of obstacles and potential hazards correlated with tripping hazards. RTM understood and put the hose at the proper safe area.

Responsible Grp 2	Responsible Grp 3	Job Type	Start Date	End Date	Job Status
DRL ENG - JOHN GARZA	AREA TEAM 1	ODR	10/21/2019 16:00		IN PROGRESS

Type	Subtype	Date	Note
MILESTONE	ESTIMATED PAD RELEASE	1/27/2020	Drilling 2nd Production on 3 well pad. Drilling Sequentially Updated 12.30.19

Daily Operations							
Footage/Meterage (ft) 286.00	Drilling Hours (hr) 7.25	% Rotating Time (%) 10.34	End Depth (ftKB) 9,805.0	Target Depth (ftKB) 18,403.0	Daily Field Est Total (Cost) 71,311.42	Cum Field Est To Date (Cost) 1,834,166.24	
24 HR ROP (ft/hr) 39.4	Circulating Hours (hr) 1.00	% Sliding Time (%) 89.66	End Depth (TVD) (ftKB) 9,771.3	Target Depth (TVD) (ftKB) 9,200.0	Daily Mud Field Est (Cost) 32,767.67	Cum Mud Field Est (Cost) 3,430,137.57	Total AFE + Sup (Cost)
Daily Goal Description DRILLED FEET	Daily Goal - Last 24 400.0	Daily Goal - Next 24 1,600.0	Goal Comments Operational Goal not achieved				
Backbuild No	Lateral Inclination	Last Casing String LINER, 9,494.0ftKB	Next Casing String PROPOSED PRODUCTION, 20,634.0ftKB				
Avg Connection Gas 26.00	Avg Trip Gas 10.00	Avg Background Gas 39.00	Max Connection Gas 26.00	Max Trip Gas 10.00	Max Drill Gas 54.00		

Operations Summary
 P/U and M/U Curve/Lateral BHA, TIH, Slip and Cut, TIH, Drill out Squeeze Cement, Perform FIT, Drill to KOP, Drill Curve

Operations Next Report Period
 Drill Curve F/9805' T/10450' (LP), Drill Lateral F/10450' T/11405'

Operations at Report Time
 Drill Curve at 9805'

Remarks
 No Accidents,
 NPT Hrs- Rig: 24.25 hrs 3rd Party: hrs PNR: hrs
 Surf:100% Inter:100% Inter 2: 100% Curve:0% Lateral: 0%
 Initial water reading- bbls
 Start- 105001 bbls
 Stop @ bbls
 Resume @ bbls
 Final water meter reading bbls

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	RIG_SVC	NORMAL	Rig service and lubrication	9,516.0	9,516.0		
06:15	0.25	06:30	PROD, PRE DRL	SFTY	NORMAL	PJSM With H&P, PNR, Gyrodata, on picking up curve bha.	9,516.0	9,516.0		
06:30	1	07:30	PROD, PRE DRL	PU_DIR	NORMAL	Pick up 6.75" curve/lateral bha.	9,516.0	9,516.0		
07:30	2	09:30	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH F/96' T/3456'. Hole displacing properly.	9,516.0	9,516.0		
09:30	0.25	09:45	PROD, PRE DRL	HDL_AGITATOR	NORMAL	Pick up agitator. 1000 psi before picking up agitator 300 gpm. 1300 psi after picking up agitator 300 gpm.	9,516.0	9,516.0		
09:45	0.25	10:00	PROD, PRE DRL	HDL_ROTND	NORMAL	Pull trip nipple and install rotating head.	9,516.0	9,516.0		
10:00	2.25	12:15	PROD, PRE DRL	TIH_ELEV	NORMAL	TIH F/3479' T/9118'. Hole displacing properly.	9,516.0	9,516.0		
12:15	0.25	12:30	PROD, PRE DRL	SFTY	NORMAL	PJSM for slip and cut.	9,516.0	9,516.0		
12:30	1	13:30	PROD, PRE DRL	SLIP_CUT	NORMAL	Slip and cut drilling line. 9.5 wraps.	9,516.0	9,516.0		
13:30	0.5	14:00	PROD, PRE DRL	RIG_SVC	NORMAL	Lubricate and inspect rig.	9,516.0	9,516.0		

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 142.00 Days Since RI: 142.00

Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
14:00	2.25	16:15	PROD, PRE DRL	DRL_OUT	REMEDIAL CEMENTING	Drill out cement, shoe track, and rat hole F/9118' T/9516' with 30 rpm, 5-15k wob, 200 gpm, 300 diff, 1025 SPP, 5 tq.	9,516.0	9,516.0		
16:15	0.5	16:45	PROD, PRE DRL	DRL	REMEDIAL CEMENTING	Drill 4 ft of new formation F/9516' T/9520'.	9,516.0	9,520.0		
16:45	1.25	18:00	PROD, PRE DRL	CIRC	REMEDIAL CEMENTING	Condition and circulate the hole for FIT	9,520.0	9,520.0		
18:00	0.5	18:30	PROD, PRE DRL	FIT	REMEDIAL CEMENTING	Perform FIT with 8.6 ppg mud to 11.25 ppg EMW. 1260 psi surface pressure applied.	9,520.0	9,520.0		
18:30	2.25	20:45	PROD, PRE DRL	CIRC	NORMAL	Displace to OBM with 255 gpm and full returns.	9,520.0	9,520.0		
20:45	0.5	21:15	PROD, PRE DRL	FIT	NORMAL	Perform FIT with 10.05 ppg mud to 11.5 ppg EMW. 760 psi surface pressure applied.	9,520.0	9,520.0		
21:15	1	22:15	PROD, DRL CURVE	DRL	NORMAL	Drill F/9520' T/9566' with full returns. (46' @ 46 fph). 100% rotation.	9,520.0	9,566.0		
22:15	4.75	03:00	PROD, DRL CURVE	DRL	NORMAL	Drill curve F/9566' T/9710' with full returns. (144' @ 30 fph). 100 % slide. Note: KOP: 9566'	9,566.0	9,710.0		
03:00	1	04:00	PROD, DRL CURVE	RIG_RPR	NORMAL	Change out grabber dies on Top Drive	9,710.0	9,710.0	1.00	8
04:00	2	06:00	PROD, DRL CURVE	DRL	NORMAL	Drill curve F/9710' T/9805' with full returns. (95' @ 47.5 fph). 100 % slide. Note: KOP: 9566'	9,710.0	9,805.0		

Interval Problems

3RD PARTY, 9,506.0ftKB, 12/26/2019 08:30

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
7	69.50	No	CEMENT	CEMENT PLUGS / SLURRY PERFORMANCE	200,000.00	PIONEER NATURAL RESOURCES USA INC	Unsuccessful liner packer test. Unable to reach 1000 psi. Tested successfully 9-5/8" casing above the liner. Tested successfully liner packer with tie back assembly. Liner casing below packer is leaking, currently waiting for 7-5/8" packer.

RIG, 9,710.0ftKB, 12/30/2019 03:00

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
8	1.00	No	ROTARY SYSTEM	TOP DRIVE	2,500.00	HELMERICH & PAYNE INTERNATIONAL DRILLING CO	Change out grabber dies on Top Drive

Drill Strings

BHA #9 , PRODUCTION - CURVE/LATERAL

Bit Run	Drill Bit	Bit Type	Make
9	6 3/4in, GTD54DM, 13274281	PDC	HALLIBURTON
Nozzles (1/32")	Bit Total Fluid Area (nozzles) (in ²)	IADC Bit Dull	Hours Drilled By Bit (hr)
14/14/14/14/14	0.75	-----	7.25
BHA Drilling Time (hr)	BHA Depth Drilled (ft)	BHA ROP (ft/hr)	Depth In (ftKB)
7.25	286.00	39.4	9,519.0
			Depth Out (ftKB)
			9,805.0

Drill String Components

Jts	Item Des	OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
204	DRILL PIPE	4 1/2	3.00	6,326.10	9,804.57	143,602.5	229	QUAIL
1	AGITATOR	4 1/2	2.88	22.70	3,478.47	515.3	85	NOV
78	DRILL PIPE	4 1/2	3.00	2,465.98	3,455.77	55,977.7	85	QUAIL
1	REAMER - DRILL N' REAM	5 1/4	3.00	8.49	989.79	192.7	29	DRILLING TOOLS INTERNATIONAL
28	DRILL PIPE	4 1/2	3.00	885.00	981.30	20,089.5	29	QUAIL
1	SUB - XO	4 7/8	2.50	4.40	96.30	400.4	9	QUAIL
1	DRILL COLLAR - NON MAG	4 3/4	3.19	28.96	91.90	2,635.4	8	STABIL DRILL
1	DRILL COLLAR - NON MAG	4 3/4	3.25	28.30	62.94	2,575.3	6	STABIL DRILL
1	SUB - UBHO	4 3/4	2.25	3.09	34.64	281.2	3	GYRODATA
1	SUB - FLOAT	4 3/4	2.25	2.09	31.55	190.2	3	STABIL DRILL
1	MOTOR - SLICK SLEEVE	4 3/4	1.00	28.56	29.46	2,599.0	3	GYRODATA

Mud Motors

SN	Bend Angle	Bearing Type	Lobe Config	# Stages	Lwr Defn Type	Bit To Bend
GDM500024	2	NOT SEALED	5:6	8.3		3.94

Sensors

Sensor Type	Sensor-Bit (ft)	Note
GAMMA	37.00	
D&I (INC/AZI)	49.00	

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 (°)
21:45	22:30	9,519.0	47.00	62.7	20	40	600.0	250	2,800.0	60.0	201	209	191	201	6.0	2.0	0

Daily Drilling Report

H & P #645
 Accept: 12/19/2019 Release:
 Days Since LTI: 142.00 Days Since RI: 142.00

Job: ODR
 Report Date: 12/30/2019
 Report #: 14
 DFS: 13
 AFE #: 9006929
 Total AFE + Sup: \$3,430,137.57
 Daily Field Est. (Cost): \$71,311.42

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 (°)	
22:30	03:00	9,566.0	144.00	32.0	10	0	400.0	250	2,600.0	60.0	201	209	191	201	0.0	0.0	15	
03:00	04:00	9,710.0	0.00		0	0	0.0	250	2,600.0	0.0	0	0	0	0	0.0	0.0	0	
04:00	06:00	9,710.0	95.00	47.5	10	0	400.0	250	2,600.0	60.0	201	209	191	201	0.0	0.0	35	

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)
10.15	10.56	15.3	0.4	106.7	104.7	7.0	281.1	85.52	7.77	422.80

Mud Checks										
Time	Mud Company	Type	Depth (ftKB)	Density (lb/gal)	Funnel Viscosity (s/qt)	T Flowline (°F)				
03:30	PIONEER DRILLING FLUIDS	OIL BASE	9,595.0	10.15	85	83.0				
PV (cP)	YP (lbf/100ft²)	Vis 3rpm	Vis 6rpm	Filtrate (mL/30min)	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)	HTHP Pressure (psi)			
17.0	8,000	6	6	0.0	14.2	250.0	250.0			
Solids (%)	Low Gravity Solids (%)	Sand (%)	MBT (lb/bbl)	Pm (mL/mL)	Pf (mL/mL)					
14.5	7.4	0.0	0.0	0.000						
Chlorides (ppm)	Calcium (ppm)	CaCl (ppm)	Oil Water Ratio	Electric Stab (V)	Lime (lb/bbl)	pH				
31,000,000.000	6,800.000	16,820	71.9/28.1	674.0	2.7	0.0				
Gel 10 sec (lbf/100ft²)	Gel 10 min (lbf/100ft²)	Gel 30 min (lbf/100ft²)								
12.000	19.000	21.000								

Comment
RECOMMENDED FLUIDS TREATMENT
 Maintain MW at 10.1-10.2ppg; will maintain until hole dictates otherwise. Running Diesel @ 4sec/qt and water @ 21sec/qt to maintain OWR. Adding Lime (2sx/hr) to maintain current excess lime content, adding Calcium Chloride Powder (2sx/hr) to increase WPS between 200k - 240k ppm. Utilizing additions of VG+ (1sx/hr) & LEM H60 as needed to maintain YP and low-end Rheological properties.
DRILLING FLUIDS ACTIVITY LAST 24 HRS
 Monitoring displacement while tripping in & out of the hole; proper displacement. Once the FIT was performed, the pits were emptied in preparation to transfer OBM and displace the well. Walking OBM transfer lines before & during each transfer, and ensuring all valves are in the closed position on both ends upon completion of transfer.
RIG ACTIVITY LAST 24 HOURS
 The curve assembly was made up and tripped in the hole. Once cement was tagged, drilling commenced, drilling through the cement and 5' of new formation. A bottom's up was circulated before performing an FIT; 11.25 EMW with 8.65ppg water. The well was then displaced to 10.1ppg OBM. An additional FIT was performed with the 10.0ppg OBM, resulting in a 11.5ppg EMW. Drilling & sliding commenced building curve.

Last BOP Test				
Date	Test Type	Item Tested	Next Test Date	Com
12/19/2019	BOP	BOP'S, 12/19/2019 06:00, <class>	1/9/2020	5000 hi/250 low, 3500 hi/250 low on Annular

Leak Off and Formation Integrity Tests		
Test Type	Depth (ftKB)	Dens Fluid (lb/gal)
FORMATION INTEGRITY	2,018.0	12.50
FORMATION INTEGRITY	9,516.0	9.87
FORMATION INTEGRITY	9,520.0	11.26
FORMATION INTEGRITY	9,520.0	11.59

Casing Pressure Test							
Test Type	Test Subtype	Date	Item Tested	Failed?	Time (min)	P (psi)	
CASING	STANDARD	10/28/2019	SURFACE, 2,020.4ftKB	No	30.00	1,500.0	
CASING	STANDARD	12/24/2019	INTERMEDIATE, 6,079.0ftKB	No	30.00	2,500.0	
CASING	STANDARD	12/27/2019	LINER, 9,494.0ftKB	No	30.00	1,500.0	

Kick Offs & Key Depths		
Date	Type	Top Depth (ftKB)
12/29/2019 22:15	KICK OFF	9,566.0

Casing Strings							
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)
CONDUCTOR	106.5	106.5	20	H40	78.67		
SURFACE	2,020.4	2,019.3	13 3/8	J55	54.50	BTC	1,309.3
INTERMEDIATE	6,079.0	6,053.6	9 5/8	L80-IC	40.00	BTC	
LINER	9,494.0	9,465.7	7 5/8	P110-IC	29.70	TSH513	4,866.0

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL		1,360			6,749	16,534.0
DIESEL	MUD	GAL		1,384			10,760	9,241.0
WATER	FRESH	BBL	0	0		Water meter reading 109729	0	25,310.0

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	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	
2	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	
3	GARDNER-DENVER	PZ-11-1600	5 1/2	11.00	0.081	6,324.0	

Pump Checks						
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	9,710.0	02:15	465.0	20	64	95
1	9,710.0	02:16	945.0	40	129	95
1	9,710.0	02:17	1,409.0	60	193	95
2	9,710.0	02:15	480.0	20	64	95
2	9,710.0	02:16	881.0	40	129	95
2	9,710.0	02:17	1,418.0	60	193	95

Daily Drilling Report

UNIVERSITY 6J 10H	
H & P #645	
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PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	12/30/2019
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AFE #:	9006929
Total AFE + Sup:	\$3,430,137.57
Daily Field Est. (Cost):	\$71,311.42

Deviation Surveys

Date 10/22/2019	Description AS DRILL SURVEY	Job ODR, 10/21/2019 16:00
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Survey Data - All surveys for 24 hr reporting period

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9,566.00	2.06	325.18	9,537.64	523.90	469.54	-280.99	1.68
9,613.00	6.95	327.17	9,584.48	527.39	472.63	-283.01	10.41
9,661.00	12.03	328.15	9,631.81	534.91	479.32	-287.23	10.59

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	-6,799.0		9,808.5		
272_0_WFMP_A2	-6,878.0		9,887.5		
271_0_WFMP_A3	-6,933.0		9,942.5		
275_0_WFMP_B1	-7,006.0		10,015.5		
276_0_WFMP_B2	-7,025.0		10,034.5		
278_0_WFMP_B3	-7,102.0		10,111.5		
280_0_WFMP_C1	-7,171.0		10,180.5		
282_0_WFMP_C2	-7,275.0		10,284.5		
292_0_WFMP_D	-7,701.0		10,710.5		
304_0_STRAWN	-8,065.0		11,074.5		
FIRST TAKE POINT (FTP)	-7,078.0		10,087.5		
TARGET #1	-7,094.0		10,103.5		
PBHL/TD	-7,154.0		10,163.5		

Daily Contacts

Job Contact	Title	Office	Mobile	Email
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM
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GARZA, JOHN, ENGINEER	ENGINEER		469-286-7746	JOHN.GARZA@PXD.COM
RATLEY, SHANNON, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		361-813-2804	SHANNON.RATLEY@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
RAYMOND, JOEY, MUD ENGINEER	MUD ENGINEER		337-278-3347	JOEY.RAYMOND@PXD.COM
STACHOVSKYJ, LEO, FIELD ENGINEER	FIELD ENGINEER		432-232-4311	LEONARD.STACHOVSKYJ@PXD.COM
RIG-H&P 645, RIG PHONE	RIG PHONE	432-355-3106	432-257-8384	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
HELMERICH & PAYNE INTERNATIONAL DRILLING CO	13
GYRODATA INC	4
DWM CONSULTING	1
GISLER BROTHERS LOGGING CO INC	1