

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133  
Accept: 9/12/2021      Release:  
Days Since LTI: 470.00      Days Since RI: 470.00

PERMIAN ASSET TEAM

Job: ODR  
Report Date: 9/22/2021  
Report #: 12  
DFS: 10  
AFE #: 9015847  
Total AFE + Sup: \$2,725,650.08  
Daily Field Est. (Cost): \$105,344.85

API/UWI 42-383-41034-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B3 (WFMP B3)		Field Name SPRABERRY (TREND AREA)											
SSN ID00020821	Property Sub	KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,791.00	Ground Elevation (ft) 2,766.00	Spud Date 8/22/2021	TD Date											
Jobs																	
Responsible Grp 2		Responsible Grp 3		Job Type	Start Date	End Date	Job Status										
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR	8/22/2021 01:30		IN PROGRESS										
Job Dates (ex. Estimated Pad Release, TXRRRC Calls)																	
Type		Subtype		Date	Note												
MILESTONE		ESTIMATED PAD RELEASE		10/6/2021	Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/6/21. Updated 9/21/21												
Daily Operations																	
Footage/Meterage (ft) 2,362.00		Drilling Hours (hr) 23.00		% Rotating Time (%) 100.00	End Depth (ftKB) 16,732.0	Target Depth (ftKB) 18,616.0	Daily Field Est Total (Cost) 105,344.85	Cum Field Est To Date (Cost) 1,688,757.26									
24 HR ROP (ft/hr) 102.7		Circulating Hours (hr) 1.00		% Sliding Time (%) 0.00	End Depth (TVD) (ftKB) 8,369.7	Target Depth (TVD) (ftKB) 8,357.8	Daily Mud Field Est (Cost) 4,959.36	Cum Mud Field Est (Cost) 64,628.26	Total AFE + Sup (Cost) 2,725,650.08								
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 2,500.0			Daily Goal - Next 24 1,868.0		Goal Comments Goal Not Met Due To Slower ROP Than Expected.										
Backbuild Yes		Lateral Inclination		Last Casing String INTERMEDIATE, 7,804.0ftKB		Next Casing String PROPOSED PRODUCTION, 18,616.0ftKB											
Avg Connection Gas 455.00		Avg Trip Gas 0.00		Avg Background Gas 364.00		Max Connection Gas 576.00		Max Trip Gas 0.00	Max Drill Gas 728.00								
Operations Summary Drill 8 1/2" Prod Lateral F/ 14,370 - T/16,732', (0% Sliding RSS, Avg Lateral DLS 1.5°, 5' Above, 2' Left)																	
Operations Next Report Period Drill 8 1/2" Prod Lateral T/ 18,600', With No HSE																	
Operations at Report Time Drill 8 1/2" Prod Lateral @ 16,732'																	
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 82%																	
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	3.75	09:45	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 14,370' T/ 14,732', (362' @ 96.5 fph), With no issues, Full returns	14,370.0	14,732.0									
09:45	0.5	10:15	PROD, DRL LAT	RIG_SVC	NORMAL	Perform Daily Rig Service (Grease Top Drive Track & Check In Line Screen)	14,732.0	14,732.0									
10:15	7.75	18:00	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 14,732 T/ 15,750', (1,018' @ 131.3 fph), With no issues, Full returns	14,732.0	15,750.0									
18:00	10.75	04:45	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 15,750 T/ 16,642', (892' @ 83 fph), With no issues, Full returns	15,750.0	16,642.0									
04:45	0.5	05:15	PROD, DRL LAT	RIG_SVC	NORMAL	Perform Daily Rig Service (Service Drawworks, TDS 11, & IR3080, Check In Line Screen)	16,642.0	16,642.0									
05:15	0.75	06:00	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 16,642' T/ 16,732', (90' @ 112.5 fph), With no issues, Full returns	16,642.0	16,732.0									
Drill Strings																	
BHA #4 , PRODUCTION - LATERAL																	
Bit Run 4			Drill Bit 8 1/2in, TKC66, A267867			Bit Type PDC		Make REED									
Nozzles (1/32") 12/12/12/12/12/11			Bit Total Fluid Area (nozzles) (in²) 0.65		IADC Bit Dull -----	Hours Drilled By Bit (hr) 65.00		Depth Drilled By Bit (ft) 7,659.00									
BHA Drilling Time (hr) 65.00			BHA Depth Drilled (ft) 7,659.00		BHA ROP (ft/hr) 117.8		Depth In (ftKB) 9,073.0		Depth Out (ftKB) 16,732.0								
Drill String Components																	
Jts	Item Des			OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make							
366	DRILL PIPE - INTERNALLY COATED			5	4.27	16,599.26	16,732.99	371,657.4	385	RIG							
1	DRILL COLLAR - NON MAG			6 1/2	3.25	28.43	133.73	2,405.7	14	GORDON							
1	MOTOR - SLICK SLEEVE			7 1/8	1.63	33.20	105.30	4,264.9	11	PHOENIX							
1	ANTI-STALL TOOL			6 3/4	2.75	17.07	72.10	1,732.1	7	TOMAX							
1	SUB - FILTER			6.63	3.00	2.82	55.03	263.2	5	DRILLING TOOLS INTERNATIONAL							
1	STABILIZER			6 3/4	2.88	4.52	52.21	534.3	5	DRILLING TOOLS INTERNATIONAL							
1	DRILL COLLAR - NON MAG			6 3/4	3.75	29.39	47.69	2,472.3	4	GORDON							
1	SUB - UBHO			6 3/4	2.50	3.92	18.30	411.5	2	GORDON							
1	RSS TOOL			6 7/8	2.25	13.38	14.38	1,569.9	2	PHOENIX							
Mud Motors																	
SN		Bend Angle		Bearing Type	Lobe Config		# Stages	Lwr Defin Type	Bit To Bend								
PHX-725052-PTS		0		NOT SEALED	7:8		8.5		0								
Sensors																	
Sensor Type			Sensor-Bit (ft)			Note											
GAMMA						30.56	Mud Pulse										
DIRECTIONAL						36.00	Mud Pulse										
Drilling Parameters																	
Start Time	End Time	Start Depth (ftKB)	Int Depth (ft)	Int ROP (ft/hr)	WOB (1000lbf)	RPM (rpm)	dP (SPP) (psi)	Q Flow (gpm)	SPP (psi)	ROP Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
06:00	09:45	14,370.0	362.00	96.5	45	120	600.0	612	4,150.0	96.5	175	250	140	175	18,000.0	7,000.0	0
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Printed: Wednesday, September 22, 2021																	

Daily Drilling Report

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 (°)	
09:45	10:15	14,732.0	0.00	0.0	0	0	0.0	612	4,150.0	0.0	175	250	140	175	0.0	0.0	0	
10:15	14:45	14,732.0	639.00	142.0	45	120	650.0	600	4,490.0	222.0	170	250	130	170	21,000.0	7,000.0	0	
14:45	18:30	15,371.0	454.00	121.1	45	120	530.0	600	4,540.0	121.1	170	250	130	170	21,000.0	7,000.0	0	
18:30	00:30	15,825.0	364.00	60.7	45	120	165.0	610	4,700.0	60.7	170	250	130	170	17,000.0	7,500.0	0	
00:30	04:45	16,189.0	453.00	106.6	45	120	540.0	585	4,400.0	106.6	170	260	130	170	21,000.0	7,500.0	0	
04:45	05:15	16,642.0	0.00	0.0	0	0	0.0	585	4,400.0	0.0	170	260	130	170	0.0	0.0	0	
05:15	06:00	16,642.0	90.00	120.0	45	120	535.0	585	4,400.0	120.0	170	260	130	170	21,000.0	7,500.0	0	
Hydraulic Calculations																		
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)								
11.85		310.1	5.5	291.0	908.8	16.4	667.4	295.04	413.46	401.83								
Mud Checks																		
Time 22:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE		Depth (ftKB) 16,050.0		Density (lb/gal) 11.90		Funnel Viscosity (s/qt) 62		T Flowline (°F) 142.0				
PV (cP) 25.0	YP (lbf/100ft²) 16.000	Vis 3rpm 9	Vis 6rpm 10	Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 13.4		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0								
Solids (%) 23.0		Low Gravity Solids (%) 11.4		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)								
Chlorides (mg/L) 32,000		Calcium (mg/L) 9,000		CaCl (ppm) 21,770		Oil Water Ratio 76.6/23.4		Electric Stab (V) 736.0		Lime (lb/bbl) 4.4		pH						
Gel 10 sec (lbf/100ft²) 16.000				Gel 10 min (lbf/100ft²) 23.000				Gel 30 min (lbf/100ft²) 27.000										
Comment																		
Maintain MW @ 11.8-11.9 ppg while drilling lateral, Diesel - 7.1 bph, Water - 2.1 bph, Additions- Lime - 1.7 ppb, CaCl - 1.0 ppb, Soltex - .3 ppb, Gilsonite - .3 ppb, BCI Primary - .25 ppb, BCI Secondary - .25 ppb, BCI Wet - .25 ppb. Maintaining MW in active @ 11.8-11.9 ppg. Adding chemicals to maintain mud properties in spec and running dilution @ 9 bph to help maintain volume while drilling. Run centrifuge to lower LGS and mud weight. Drilled 8.5" lateral f/ 13,770' t/ 16,050'. Drilling ahead at time of report. Run centrifuge to help lower LGS and Mud Weight. ROP 214, WOB 46, RPM 120, Torque 22K, Diff 658, P/U 250, S/O 140, Conn Gas 146, BG Gas 590, Max Gas728 units @ 15166' MD, FTG Last 24 Hrs- 2,280', Lithology at 16,030', 100% SH, tr LS, tr PYR.																		
Last BOP Test																		
Date	Test Type			Item Tested			Next Test Date		Com									
9/12/2021	BOP			BOP'S, 9/12/2021 19:00, <class>			10/3/2021		Full BOP test with 5" DP, 250 low/5,000 high, Mudlines back to pump 250 low/5,300 high									
Leak Off and Formation Integrity Tests																		
Test Type				Depth (ftKB)				Dens Fluid (lb/gal)										
FORMATION INTEGRITY				1,321.0				12.50										
FORMATION INTEGRITY				7,804.0				13.49										
Casing Pressure Test																		
Test Type		Test Subtype			Date		Item Tested			Failed?	Time (min)		P (psi)					
CASING		STANDARD			8/23/2021		SURFACE, 1,291.2ftKB			No	30.00		1,000.0					
CASING		STANDARD			9/17/2021		INTERMEDIATE, 7,804.0ftKB			No	30.00		2,500.0					
Kick Offs & Key Depths																		
Date				Type				Top Depth (ftKB)			Depth Top (TVD) (ftKB)							
9/17/2021 21:30				KICK OFF				7,883.0			7,800.3							
9/18/2021 11:30				HEEL				8,790.0			8,374.8							
Casing Strings																		
Description		Set Depth (ftKB)		Set Depth (TVD) (ftKB)		OD (in)		Grade		Wt/Len (lb/ft)		Top Thread		P LeakOff (psi)				
CONDUCTOR		105.0		105.0		20		H40		78.67								
SURFACE		1,291.2		1,289.9		13 3/8		J55		54.50		BTC		856.8				
INTERMEDIATE		7,804.0		7,721.3		9 5/8		L80-IC		40.00		BTC		5,411.9				
Gas Emissions - Flare																		
Type		Method		Dur (min)		Amount		Units		Com								
Flare		Metered		1,440.00		0.003		MCF		Previous Meter 17313.01 SCF Todays Meter 17315.53 SCF								
Job Supply Amounts																		
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		Note				Cum On Loc		Cum Consumed
DIESEL		FUEL		GAL		0		3,686		0						8,696		24,379.0
DIESEL		MUD		GAL		7,213		3,853		0						16,170		14,500.0
WATER		FRESH		BBL		0		0		0		Meter reading 108,639				0		19,091.0
Mud Additive Amounts																		
Des		Type		Units		Rec		Consumed		On Loc		Cum Cons						
BCI OBM PRIMARY		OIL MUD ADDITIVE		GAL		0		2		5.0		6						
BCI OBM SECONDARY		OIL MUD ADDITIVE		GAL		0		1		6.0		5						
BCI OBM WETTING AGENT		OIL MUD ADDITIVE		GAL		0		1		6.0		7						
BENTONE 990		OIL MUD ADDITIVE		LB		0		5		60.0		5						
CALCIUM CHLORIDE		SALT		LB		0		36		179.0		121						
GILSONITE		FLUID LOSS ADDITIVES		LB		0		15		65.0		45						
LIME		ALKALINITY CONTROL		LB		0		65		105.0		220						
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PERMIAN ASSET TEAM

Job: ODR  
Report Date: 9/22/2021  
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Mud Additive Amounts							
Des		Type	Units	Rec	Consumed	On Loc	Cum Cons
SOLTEX		FLUID LOSS ADDITIVES	LB	0	15	35.0	45
Pump Operations							
Pump #	Make		Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)
1	H&H		1600	5 1/2	12.00	0.088	5,549.0
2	H&H		1600	5 1/2	12.00	0.088	5,549.0
3	H&H		1600	5 1/2	12.00	0.088	5,549.0
Pump Checks							
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)	
2	14,732.0	09:48	700.0	30	106	95	
2	14,732.0	09:49	800.0	40	141	95	
2	14,732.0	19:00	900.0	50	176	95	
2	16,189.0	00:30	800.0	30	106	95	
2	16,189.0	00:31	900.0	40	141	95	
2	16,189.0	00:32	1,000.0	50	176	95	
3	14,732.0	09:45	650.0	30	106	95	
3	14,732.0	09:46	750.0	40	141	95	
3	14,732.0	09:47	850.0	50	176	95	
3	16,189.0	00:33	800.0	30	106	95	
3	16,189.0	00:34	900.0	40	141	95	
3	16,189.0	00:35	1,000.0	50	176	95	
Deviation Surveys							
Date 8/22/2021		Description AS DRILL SURVEY				Job ODR, 8/22/2021 01:30	
Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
14,423.00	91.33	181.73	8,404.39	5,987.23	-6,004.91	804.53	2.31
14,514.00	91.07	181.41	8,402.49	6,078.21	-6,095.86	802.03	0.45
14,605.00	92.03	182.01	8,400.02	6,169.17	-6,186.78	799.32	1.24
14,696.00	91.05	182.09	8,397.58	6,260.13	-6,277.69	796.07	1.08
14,787.00	92.45	181.94	8,394.80	6,351.07	-6,368.59	792.87	1.55
14,877.00	90.21	181.45	8,392.71	6,441.04	-6,458.52	790.21	2.55
14,969.00	90.09	181.35	8,392.47	6,533.04	-6,550.49	787.96	0.17
15,060.00	91.19	181.89	8,391.45	6,624.03	-6,641.45	785.39	1.35
15,153.00	90.46	182.12	8,390.11	6,717.01	-6,734.38	782.13	0.82
15,244.00	90.63	181.91	8,389.25	6,807.99	-6,825.32	778.93	0.30
15,335.00	91.89	181.95	8,387.25	6,898.96	-6,916.25	775.87	1.39
15,426.00	94.27	182.66	8,382.36	6,989.80	-7,007.03	772.22	2.73
15,517.00	90.85	179.23	8,378.29	7,080.69	-7,097.90	770.72	5.32
15,608.00	90.26	180.66	8,377.41	7,171.66	-7,188.90	770.81	1.70
15,698.00	90.23	181.27	8,377.03	7,261.66	-7,278.88	769.29	0.68
15,789.00	90.63	181.53	8,376.34	7,352.65	-7,369.85	767.07	0.52
15,879.00	94.39	181.18	8,372.40	7,442.55	-7,459.72	764.94	4.20
15,971.00	92.28	179.92	8,367.05	7,534.38	-7,551.56	764.06	2.67
16,062.00	89.59	180.14	8,365.57	7,625.34	-7,642.54	764.01	2.97
16,153.00	88.72	180.59	8,366.91	7,716.32	-7,733.52	763.44	1.08
16,242.00	89.84	181.45	8,368.03	7,805.31	-7,822.50	761.85	1.59
16,335.00	89.34	181.32	8,368.69	7,898.31	-7,915.47	759.60	0.56
16,425.00	89.90	181.63	8,369.29	7,988.31	-8,005.44	757.29	0.71
16,516.00	89.93	181.14	8,369.42	8,079.31	-8,096.41	755.09	0.54
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			-5,644.0		8,435.0		
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, WILLIS, SUPERINTENDENT		SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM		
WAGNON, TIM, SUPERINTENDENT		SUPERINTENDENT		409-489-2208	TIM.WAGNON@PXD.COM		
LUTHER, JACKIE, ENGINEER		ENGINEER	972-969-5626	303-512-3803	JACKIE.LUTHER@PXD.COM		
JACKSON, AUSTIN, ENGINEER		ENGINEER	972-969-5954	469-503-1379	AUSTIN.JACKSON@PXD.COM		
DANDRIDGE, CURTIS, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		601-917-5575	CURTIS.DANDRIDGE@PXD.COM		
MITCHELL, KADE, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		337-378-2696	KADE.MITCHELL@PXD.COM		
JUNKIN, DUSTIN, MUD ENGINEER		MUD ENGINEER		972-935-1498	DUSTIN.JUNKIN@PXD.COM		
RIG-ENSIGN 133, RIG PHONE		RIG PHONE	432-355-3047	432-530-1214	DL-ENSIGN133@PXD.COM		
SENTZ, RON, MUD ENGINEER		MUD ENGINEER		469-585-7376	RON.SENTZ@PXD.COM		
Personnel Log							
Company						Count	
PIONEER NATURAL RESOURCES USA INC						2	
ENSIGN UNITED STATES DRILLING S W INC						13	
PHOENIX TECHNOLOGY SERVICES USA INC						2	
GORDON TECHNOLOGIES LLC						1	
STRATAGRAPH INC						2	
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Daily Drilling Report

P/UWI 42-383-41034-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B3 (WFMP B3)		Field Name SPRABERRY (TREND AREA)													
SSN ID00020821		Property Sub		KB-Grd (ft) 25.00		Orig KB Elev (ft) 2,791.00		Ground Elevation (ft) 2,766.00		Spud Date 8/22/2021		TD Date							
Jobs																			
Responsible Grp 2			Responsible Grp 3			Job Type		Start Date			End Date		Job Status						
DRL ENG - JACKIE LUTHER			AREA TEAM 4			ODR		8/22/2021 01:30					IN PROGRESS						
Job Dates (ex. Estimated Pad Release, TXRRC Calls)																			
Type				Subtype			Date			Note									
MILESTONE				ESTIMATED PAD RELEASE			10/6/2021			Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/6/21. Updated 9/23/21									
Daily Operations																			
Footage/Meterage (ft) 1,868.00		Drilling Hours (hr) 23.00		% Rotating Time (%) 100.00		End Depth (ftKB) 18,600.0		Target Depth (ftKB) 18,616.0		Daily Field Est Total (Cost) 93,066.53		Cum Field Est To Date (Cost) 1,782,175.61							
24 HR ROP (ft/hr) 81.2		Circulating Hours (hr) 1.00		% Sliding Time (%) 0.00		End Depth (TVD) (ftKB) 8,355.1		Target Depth (TVD) (ftKB) 8,357.8		Daily Mud Field Est (Cost) 5,395.47		Cum Mud Field Est (Cost) 70,023.73		Total AFE + Sup (Cost) 2,725,650.08					
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 1,868.0				Daily Goal - Next 24 41.0				Goal Comments Goal Met							
Backbuild Yes		Lateral Inclination		Last Casing String INTERMEDIATE, 7,804.0ftKB						Next Casing String PROPOSED PRODUCTION, 18,616.0ftKB									
Avg Connection Gas 486.00			Avg Trip Gas 0.00			Avg Background Gas 391.00			Max Connection Gas 676.00			Max Trip Gas 0.00		Max Drill Gas 808.00					
Operations Summary Drill 8 1/2" Prod Lateral F/ 16,732' - T/18,600', (0% Sliding RSS, Avg Lateral DLS 1.42°, 9' Above, 20' Left)																			
Operations Next Report Period Complete On Bottom CUC, CBU, TOO H to Run 5 1/2" Prod Casing, LD RSS, PWB, RU & Run 5 1/2" Prod Casing, With no HSE																			
Operations at Report Time Drill 8 1/2" Prod Lateral @ 18,600' (Performing On Bottom CUC @ 20 FPH)																			
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 99%																			
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		10	16:00	PROD, DRL LAT	DRL	NORMAL	Drilled Lateral F/ 16,732' T/ 17,823' (1,091' @ 109 ft/hr). Dropping GPMs as needed to stay under 5.5" liner pressure limit.				16,732.0	17,823.0							
16:00		0.5	16:30	PROD, DRL LAT	RIG_SVC	NORMAL	Perform Daily Rig Service (Service Drawworks, TDS 11, & IR3080, Check In Line Screen, Replaced carrier cables on pipe wrangler)				17,823.0	17,823.0							
16:30		5	21:30	PROD, DRL LAT	DRL	NORMAL	Drilled Lateral F/ 17,823' T/ 18,187' (364' @ 72.8 ft/hr). Limiting differential pressure as needed to stay under liner pressure limit - could not lower GPM anymore due to insufficient pad pressure to steer RSS.				17,823.0	18,187.0							
21:30		0.5	22:00	PROD, DRL LAT	RIG_SVC	NORMAL	Perform Daily Rig Service (Service Drawworks, TDS 11, & IR3080, Check In Line Screen)				18,187.0	18,187.0							
22:00		3.5	01:30	PROD, DRL LAT	DRL	NORMAL	Drilled Lateral F/ 18,187' T/ 18,511' (324' @ 92.6 ft/hr). Limiting differential pressure as needed to stay under liner pressure limit - could not lower GPM anymore due to insufficient pad pressure to steer RSS.				18,187.0	18,511.0							
01:30		4.5	06:00	PROD, DRL LAT	DRL	NORMAL	Perform on bottom CUC @ 20 fph F/18,511' T/18,600', (On Bottom CUC 6 x B/Up)				18,511.0	18,600.0							
Drill Strings																			
BHA #4 , PRODUCTION - LATERAL																			
Bit Run 4				Drill Bit 8 1/2in, TKC66, A267867				Bit Type PDC				Make REED							
Nozzles (1/32") 12/12/12/12/11				Bit Total Fluid Area (nozzles) (in²) 0.65			IADC Bit Dull -----		Hours Drilled By Bit (hr) 88.00			Depth Drilled By Bit (ft) 9,527.00							
BHA Drilling Time (hr) 88.00				BHA Depth Drilled (ft) 9,527.00			BHA ROP (ft/hr) 108.3		Depth In (ftKB) 9,073.0			Depth Out (ftKB) 18,600.0							
Drill String Components																			
Jts		Item Des				OD (in)		ID (in)		Len (ft)		Cum Len (ft)		Wt (lbf)		Cum Wt (1000lbf)		Make	
407		DRILL PIPE - INTERNALLY COATED				5		4.27		18,466.27		18,600.00		413,459.8		427		RIG	
1		DRILL COLLAR - NON MAG				6 1/2		3.25		28.43		133.73		2,405.7		14		GORDON	
1		MOTOR - SLICK SLEEVE				7 1/8		1.63		33.20		105.30		4,264.9		11		PHOENIX	
1		ANTI-STALL TOOL				6 3/4		2.75		17.07		72.10		1,732.1		7		TOMAX	
1		SUB - FILTER				6.63		3.00		2.82		55.03		263.2		5		DRILLING TOOLS INTERNATIONAL	
1		STABILIZER				6 3/4		2.88		4.52		52.21		534.3		5		DRILLING TOOLS INTERNATIONAL	
1		DRILL COLLAR - NON MAG				6 3/4		3.75		29.39		47.69		2,472.3		4		GORDON	
1		SUB - UBHO				6 3/4		2.50		3.92		18.30		411.5		2		GORDON	
1		RSS TOOL				6 7/8		2.25		13.38		14.38		1,569.9		2		PHOENIX	
Mud Motors																			
SN		Bend Angle			Bearing Type		Lobe Config			# Stages			Lwr DefIn Type			Bit To Bend			
PHX-725052-PTS		0			NOT SEALED		7:8			8.5						0			
Sensors																			
Sensor Type				Sensor-Bit (ft)						Note									
GAMMA				30.56						Mud Pulse									
Daily Drilling Report																			

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# Daily Drilling Report

<b>UNIVERSITY 1-32 24H</b>		<b>PERMIAN ASSET TEAM</b>	
		<b>Job:</b>	<b>ODR</b>
		<b>Report Date:</b>	<b>9/23/2021</b>
		<b>Report #:</b>	<b>13</b>
		<b>DFS:</b>	<b>11</b>
<b>ENSIGN - 133</b>		<b>AFE #:</b>	<b>9015847</b>
<b>Accept: 9/12/2021</b>	<b>Release:</b>	<b>Total AFE + Sup:</b>	<b>\$2,725,650.08</b>
<b>Days Since LTI: 471.00</b>	<b>Days Since RI: 471.00</b>	<b>Daily Field Est. (Cost):</b>	<b>\$93,066.53</b>

Sensors																			
Sensor Type				Sensor-Bit (ft)						Note									
DIRECTIONAL				36.00						Mud Pulse									
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	16,732.0	544.00	90.7	45	120	550.0	585	4,570.0	90.7	175	235	135	175	18,000.0	8,000.0	0		
12:00	14:15	17,276.0	365.00	162.2	45	120	450.0	570	4,520.0	162.2	175	235	135	175	21,000.0	8,500.0	0		
14:15	16:00	17,641.0	182.00	104.0	45	120	450.0	570	4,520.0	104.0	165	235	135	165	23,500.0	8,500.0	0		
16:00	16:30	17,823.0	0.00	0.0	0	0	0.0	565	4,450.0	0.0	165	235	135	165	0.0	0.0	0		
16:30	21:30	17,823.0	364.00	72.8	45	120	465.0	565	4,550.0	72.8	165	235	135	165	22,500.0	8,500.0	0		
21:30	22:00	18,187.0	0.00		0	0	0.0	565	4,450.0	0.0	165	235	135	165	0.0	0.0	0		
22:00	01:30	18,187.0	324.00	92.6	45	120	475.0	565	4,550.0	92.6	165	240	130	165	22,500.0	8,500.0	0		
01:30	06:00	18,511.0	89.00	19.8	10	120	225.0	600	4,675.0	19.8	165	240	130	165	11,750.0	8,500.0	0		
Hydraulic Calculations																			
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)									
11.90	13.07	336.0	5.9	298.4	960.0	16.8	684.5	328.13	499.20	401.83									
Mud Checks																			
Time 22:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE			Depth (ftKB) 18,270.0		Density (lb/gal) 11.70		Funnel Viscosity (s/qt) 67		T Flowline (°F) 137.0				
PV (cP) 24.0		YP (lb/100ft²) 14.000		Vis 3rpm 9		Vis 6rpm 10		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 14.0		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0					
Solids (%) 23.0				Low Gravity Solids (%) 12.9			Sand (%)			MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)					
Chlorides (mg/L) 32,000			Calcium (mg/L) 8,200			CaCl (ppm) 22,000		Oil Water Ratio 76.6/23.4		Electric Stab (V) 769.0		Lime (lb/bbl) 3.9			pH				
Gel 10 sec (lb/100ft²) 15.000						Gel 10 min (lb/100ft²) 21.000						Gel 30 min (lb/100ft²) 25.000							
Comment Rec Fluids Treatment: Maintain MW @ 11.6-11.7 ppg while drilling lateral, Diesel - 10.7 bph, Water - 4.7 bph, Additions- Lime - 1.7 ppb, CaCl - 1.0 ppb, Soltex - .3 ppb, Gilsonite - .3 ppb, BCI Primary - .25 ppb, BCI Secondary - .25 ppb, BCI Wet - .25 ppb.  Rig Activity Last 24 Hrs: Drilled 8.5" lateral f/ 16,050' t/ 18,270'. Drilling ahead at time of report. Decision made to drop mud weight to 11.7 ppg due to lack of pressure to control RSS. Run centrifuge to help lower LGS and Mud Weight. ROP 103, WOB 38, RPM 120, Torque 20K, Diff 442, P/U 210, S/O 140, Conn Gas 123, BG Gas 401, Max Gas 808 units @ 17428' MD, FTG Last 24 Hrs- 1,200', Lithology at 18,160', 100% SH, tr PYR.  Drilling Fluids Last 24 Hrs: Maintaining MW in active @ 11.7 ppg. Adding chemicals to maintain mud properties in spec and increase dilution @ 16 bph to help maintain volume while drillingand drop mud weight back down to 11.7 ppg Run centrifuge to lower LGS and mud weight. Transfer 170 bbls OBM to frac tank to make room for increased dilution.																			
Last BOP Test																			
Date		Test Type				Item Tested				Next Test Date		Com							
9/12/2021		BOP				BOP'S, 9/12/2021 19:00, <class>				10/3/2021		Full BOP test with 5" DP, 250 low/5,000 high, Mudlines back to pump 250 low/5,300 high							
Leak Off and Formation Integrity Tests																			
Test Type					Depth (ftKB)					Dens Fluid (lb/gal)									
FORMATION INTEGRITY										1,321.0					12.50				
FORMATION INTEGRITY										7,804.0					13.49				
Casing Pressure Test																			
Test Type			Test Subtype				Date			Item Tested			Failed?		Time (min)		P (psi)		
CASING			STANDARD				8/23/2021			SURFACE, 1,291.2ftKB			No		30.00		1,000.0		
CASING			STANDARD				9/17/2021			INTERMEDIATE, 7,804.0ftKB			No		30.00		2,500.0		
Kick Offs & Key Depths																			
Date					Type					Top Depth (ftKB)				Depth Top (TVD) (ftKB)					
9/17/2021 21:30					KICK OFF					7,883.0				7,800.3					
9/18/2021 11:30					HEEL					8,790.0				8,374.8					
Casing Strings																			
Description		Set Depth (ftKB)		Set Depth (TVD) (ftKB)		OD (in)		Grade		Wt/Len (lb/ft)		Top Thread		P LeakOff (psi)					
CONDUCTOR		105.0		105.0		20		H40		78.67									
SURFACE		1,291.2		1,289.9		13 3/8		J55		54.50		BTC		856.8					
INTERMEDIATE		7,804.0		7,721.3		9 5/8		L80-IC		40.00		BTC		5,411.9					
Gas Emissions - Flare																			
Type		Method		Dur (min)		Amount		Units		Com									
Flare		Metered		1,440.00		0.008		MCF		Previous Meter 17315.53 SCF Todays Meter 17321.95 SCF									
Job Supply Amounts																			
Supply Item Des			Type		Unit Label		Received		Consumed		Returned		Note			Cum On Loc		Cum Consumed	
DIESEL			FUEL		GAL		7,329		3,524		0					12,501		27,903.0	
DIESEL			MUD		GAL		0		6,300		0					9,870		20,800.0	
WATER			FRESH		BBL		1,794		1,794		0		Meter reading 110,433			0		20,885.0	
Mud Additive Amounts																			
Des			Type			Units			Rec		Consumed		On Loc			Cum Cons			
BCI OBM PRIMARY			OIL MUD ADDITIVE			GAL			0		2		3.0			8			
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Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BCI OBM SECONDARY	OIL MUD ADDITIVE	GAL	0	2	4.0	7	
BCI OBM WETTING AGENT	OIL MUD ADDITIVE	GAL	0	1	5.0	8	
BENTONE 910	OIL MUD ADDITIVE	GAL	0	5	60.0	5	
BENTONE 990	OIL MUD ADDITIVE	LB	0	5	55.0	10	
CALCIUM CHLORIDE	SALT	LB	0	25	154.0	146	
GILSONITE	FLUID LOSS ADDITIVES	LB	0	10	55.0	55	
LIME	ALKALINITY CONTROL	LB	0	45	60.0	265	
SOLTEX	FLUID LOSS ADDITIVES	LB	0	15	20.0	60	
Pump Operations							
Pump #	Make	Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	H&H	1600	5 1/2	12.00	0.088	5,549.0	
2	H&H	1600	5 1/2	12.00	0.088	5,549.0	
3	H&H	1600	5 1/2	12.00	0.088	5,549.0	
Pump Checks							
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)	
1	18,278.0	22:00	825.0	30	106	95	
1	18,278.0	22:01	950.0	40	141	95	
1	18,278.0	22:02	1,100.0	50	176	95	
3	18,278.0	22:03	800.0	30	106	95	
3	18,278.0	22:04	925.0	40	141	95	
3	18,278.0	22:05	1,050.0	50	176	95	
Deviation Surveys							
Date 8/22/2021		Description AS DRILL SURVEY			Job ODR, 8/22/2021 01:30		
Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
16,786.00	90.65	181.29	8,367.23	8,349.29	-8,366.35	749.75	0.11
16,878.00	89.90	180.39	8,366.78	8,441.29	-8,458.33	748.41	1.27
16,967.00	90.18	180.81	8,366.72	8,530.28	-8,547.33	747.47	0.57
17,057.00	91.13	181.54	8,365.69	8,620.28	-8,637.30	745.63	1.33
17,149.00	90.07	180.23	8,364.73	8,712.27	-8,729.28	744.21	1.83
17,240.00	89.84	179.75	8,364.80	8,803.25	-8,820.28	744.22	0.58
17,332.00	89.56	179.60	8,365.28	8,895.22	-8,912.28	744.75	0.35
17,423.00	89.73	180.15	8,365.85	8,986.19	-9,003.28	744.94	0.63
17,514.00	92.50	182.92	8,364.08	9,077.15	-9,094.21	742.51	4.30
17,605.00	90.37	179.31	8,361.80	9,168.10	-9,185.14	740.74	4.60
17,695.00	91.07	179.91	8,360.66	9,258.06	-9,275.13	741.35	1.02
17,787.00	91.33	180.07	8,358.74	9,350.02	-9,367.11	741.37	0.33
17,877.00	90.51	180.08	8,357.29	9,439.99	-9,457.10	741.25	0.91
17,968.00	90.35	179.94	8,356.61	9,530.97	-9,548.10	741.23	0.23
18,060.00	90.46	180.76	8,355.96	9,622.96	-9,640.09	740.67	0.90
18,151.00	90.35	181.39	8,355.32	9,713.96	-9,731.08	738.97	0.70
18,242.00	90.21	181.16	8,354.87	9,804.96	-9,822.05	736.94	0.30
18,332.00	89.45	180.54	8,355.14	9,894.95	-9,912.04	735.61	1.09
18,422.00	89.28	180.56	8,356.14	9,984.94	-10,002.03	734.74	0.19
18,514.00	90.71	181.19	8,356.14	10,076.94	-10,094.02	733.34	1.70
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)
ILP			-5,568.0		8,359.0		
TARGET_1			-5,644.0		8,435.0		
PBHL/TD			-5,567.0		8,358.0		
Daily Contacts							
Job Contact		Title	Office	Mobile	Email		
HARDIN, JOE, AREA DRILLING SUPERINTENDENT		AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	THOMAS.HARDIN@PXD.COM		
VOGEL, WILLIS, SUPERINTENDENT		SUPERINTENDENT		432-301-6784	WILLIS.VOGEL@PXD.COM		
WAGNON, TIM, SUPERINTENDENT		SUPERINTENDENT		409-489-2208	TIM.WAGNON@PXD.COM		
LUTHER, JACKIE, ENGINEER		ENGINEER	972-969-5626	303-512-3803	JACKIE.LUTHER@PXD.COM		
JACKSON, AUSTIN, ENGINEER		ENGINEER	972-969-5954	469-503-1379	AUSTIN.JACKSON@PXD.COM		
JACOBS, TUCKER, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR	972-444-9001	361-318-8269	TUCKER.JACOBS@PXD.COM		
MITCHELL, KADE, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		337-378-2696	KADE.MITCHELL@PXD.COM		
RIG-ENSIGN 133, RIG PHONE		RIG PHONE	432-355-3047	432-530-1214	DL-ENSIGN133@PXD.COM		
SENTZ, RON, MUD ENGINEER		MUD ENGINEER		469-585-7376	RON.SENTZ@PXD.COM		
Personnel Log							
Company					Count		
PIONEER NATURAL RESOURCES USA INC					2		
ENSIGN UNITED STATES DRILLING S W INC					13		
Daily Drilling Report							

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# Daily Drilling Report

**ENSIGN - 133**

**Release:**

Days Since RI: 471.00

<b>Daily Field Est. (Cost):</b>	<b>\$93,066.53</b>
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Daily Drilling Report

P/UWI 42-383-41034-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B3 (WFMP B3)		Field Name SPRABERRY (TREND AREA)									
SSN ID00020821		Property Sub		KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,791.00	Ground Elevation (ft) 2,766.00	Spud Date 8/22/2021	TD Date 9/23/2021							
Jobs															
Responsible Grp 2		Responsible Grp 3		Job Type		Start Date		End Date		Job Status					
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR		8/22/2021 01:30				IN PROGRESS					
Job Dates (ex. Estimated Pad Release, TXRRC Calls)															
Type			Subtype		Date			Note							
MILESTONE			ESTIMATED PAD RELEASE		10/6/2021			Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/6/21. Updated 9/23/21							
Type TXRRC CALL			Subtype CEMENT PROD		Date 9/23/2021			Note Thanja on call answering service out of San Angelo							
Daily Operations															
Footage/Meterage (ft) 41.00		Drilling Hours (hr) 1.25		% Rotating Time (%) 100.00		End Depth (ftKB) 18,641.0		Target Depth (ftKB) 18,616.0		Daily Field Est Total (Cost) 97,666.17		Cum Field Est To Date (Cost) 1,882,964.61			
24 HR ROP (ft/hr) 32.8		Circulating Hours (hr) 6.75		% Sliding Time (%) 0.00		End Depth (TVD) (ftKB) 8,353.9		Target Depth (TVD) (ftKB) 8,357.8		Daily Mud Field Est (Cost) 9,126.01		Cum Mud Field Est (Cost) 85,224.74		Total AFE + Sup (Cost) 2,725,650.08	
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 41.0				Daily Goal - Next 24 0.0				Goal Comments Goal Met			
Backbuild Yes		Lateral Inclination		Last Casing String INTERMEDIATE, 7,804.0ftKB						Next Casing String PRODUCTION, 18,629.0ftKB					
Avg Connection Gas 304.00		Avg Trip Gas 62.00			Avg Background Gas 272.00		Max Connection Gas 325.00		Max Trip Gas 140.00		Max Drill Gas 361.00				
Operations Summary Finish clean up cycles on bttm to TD, TOO H T/ 17,720' - encountered tight hole, TIH to bttm and bring MW up to 12.0 ppg. TOO H, L/D RSS Assembly. Pull W.B., PJSM & RU csg running tools.															
Operations Next Report Period RIH with 5.5" casing. Land out. Circulate casing volume. Cement casing. Set packoff. N/D BOP. Install cap. Skid to University 1 32 25H.															
Operations at Report Time PJSM for 5 1/2" casing r/up & run															
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 100%															
Time Log															
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com			Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #			
06:00	1.25	07:15	PROD, POST DRL	DRL_K&M	NORMAL	On bottom cleanup cycles while drilling to TD @ 18,641'.			18,600.0	18,641.0					
07:15	1.5	08:45	PROD, POST DRL	K&M_CLEANUP	NORMAL	Hole still looked dirty, CBU x1.5 until hole cleaned up.			18,641.0	18,641.0					
08:45	0.25	09:00	PROD, POST DRL	FLOW_CHK	NORMAL	Flow check, well static.			18,641.0	18,641.0					
09:00	0.75	09:45	PROD, POST DRL	TOOH_ELEV	NORMAL	Planned to pull 10 stds wet, pulled through tight spots on stds 7, 8, and 10. Decided to pull 5 more wet. On std 11 hit a tight spot that we couldnt drop back down through w/o wash reaming - took 20K wob and 300 diff psi. Finally got that stabd cleaned up and decided to go back to bttm and bring MW up. Hole was taking			18,641.0	18,641.0					
09:45	1.5	11:15	PROD, POST DRL	TIH_NONELEV	NORMAL	Washed back to bottom while bringing MW up to 11.9 in/out (original wt in lateral before we lowered it towards the end).			18,641.0	18,641.0	1.50	7			
11:15	3.75	15:00	PROD, POST DRL	CIRC	NORMAL	Circulate while bringing MW up to 11.9 ppg. Observed splintering shale as well as quarter sized rubbel across shakers. Continued circulating and Brought MW up to 12.0 ppg in/out, observed shakers clean up after 4-5 total bttms up after being back on bttm.			18,641.0	18,641.0	3.75	7			
15:00	0.25	15:15	PROD, POST DRL	FLOW_CHK	NORMAL	Flow check well, well static.			18,641.0	18,641.0	0.25	7			
15:15	0.5	15:45	PROD, POST DRL	TOOH_ELEV	NORMAL	Pull 12 stds wet, took good fill and never saw any of the previously seen tight spots.			18,641.0	18,641.0	0.50	7			
15:45	1.25	17:00	PROD, POST DRL	TOOH_ELEV	NORMAL	Slug pipe and TOO H T/ 15,800'. Hole taking proper fill.			18,641.0	18,641.0					
17:00	0.5	17:30	PROD, POST DRL	RIG_SVC	NORMAL	Rig Service.			18,641.0	18,641.0					
17:30	1.5	19:00	PROD, POST DRL	RIG_RPR	NORMAL	Repair bent link tilt on TDS. (Stab FOSV for barrier purposes)			18,641.0	18,641.0	1.50	8			
19:00	2.75	21:45	PROD, POST DRL	TOOH_ELEV	NORMAL	TOOH F/ 15,800' T/ 9,500' (Pulled slick & taking proper fill)			18,641.0	18,641.0					
21:45	0.75	22:30	PROD, POST DRL	CIRC	NORMAL	Circulate bottoms up at 9,500' (Hole Cup cleaned up well)			18,641.0	18,641.0					
Daily Drilling Report															
Page 1/4															
Printed: Friday, September 24, 2021															



Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133  
Accept: 9/12/2021      Release:  
Days Since LTI: 472.00      Days Since RI: 472.00

PERMIAN ASSET TEAM

Job: ODR  
Report Date: 9/24/2021  
Report #: 14  
DFS: 12  
AFE #: 9015847  
Total AFE + Sup: \$2,725,650.08  
Daily Field Est. (Cost): \$97,666.17

Hydraulic Calculations												
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)		
11.70	12.74	330.4	5.8	298.4	943.9	16.8	684.5	328.85	501.08	401.83		
Mud Checks												
Time 22:00		Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE		Depth (ftKB) 18,641.0		Density (lb/gal) 12.00			
Funnel Viscosity (s/qt) 78		T Flowline (°F) 110.0		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 13.6		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0		
PV (cP) 27.0		YP (lb/100ft²) 18.000		Vis 3rpm 10		Vis 6rpm 11		Solids (%) 22.0		Low Gravity Solids (%) 8.3		
Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)		Chlorides (mg/L) 29,000		Calcium (mg/L) 6,500		
CaCl (ppm) 20,140		Oil Water Ratio 76.9/23.1		Electric Stab (V) 779.0		Lime (lb/bbl) 3.0		pH		Gel 10 sec (lb/100ft²) 17.000		
Gel 10 min (lb/100ft²) 24.000		Gel 30 min (lb/100ft²) 32.000		Comment Recommended Fluids Treatment: Maintain MW @ 11.6-11.7 ppg while drilling lateral, Diesel - 10.7 bph, Water - 4.7 bph, Additions- Lime - 1.7 ppb, CaCl - 1.0 ppb, Soltex - .3 ppb, Gilsonite - .3 ppb, BCI Primary - .25 ppb, BCI Secondary - .25 ppb, BCI Wet - .25 ppb.  Rig Activity Last 24 Hrs: Drilled 8.5" lateral f/ 18,270' t/ 18,641'. Drilling ahead to TD of 18,641', slow drill last several stands for cleanup while drilling. Dropped mud weight to 11.6 at TD, flow check well static, begin POOH 11 stands pulled tight, wash back to bottom while raising mud weight to 12.0 ppg. Flow Check, well static, pump slug POOH to 9,500. Circulate bottoms up, flow check, well static, pump slug and POOH. ROP 103, WOB 38, RPM 120, Torque 20K, Diff 442, P/U 210, S/O 140, Conn Gas 123, BG Gas 401, Max Gas 808 units @ 17428' MD, FTG Last 24 Hrs- 1,200', Lithology at 18,160', 100% SH, tr PYR.  Drilling Fluids Last 24 Hrs: Drop mud weight to 11.6 ppg while drilling to TD. Once TD pulled tight coming out of hole. Raise mud weight to 11.9 ppg. After 11.9 all the way around raise to 12.0 ppg.								
Last BOP Test												
Date	Test Type		Item Tested			Next Test Date		Com				
9/12/2021	BOP		BOP'S, 9/12/2021 19:00, <class>			10/3/2021		Full BOP test with 5" DP, 250 low/5,000 high, Mudlines back to pump 250 low/5,300 high				
Leak Off and Formation Integrity Tests												
Test Type			Depth (ftKB)				Dens Fluid (lb/gal)					
FORMATION INTEGRITY			1,321.0				12.50					
FORMATION INTEGRITY			7,804.0				13.49					
Casing Pressure Test												
Test Type		Test Subtype			Date		Item Tested		Failed?			
CASING		STANDARD			8/23/2021		SURFACE, 1,291.2ftKB		No			
CASING		STANDARD			9/17/2021		INTERMEDIATE, 7,804.0ftKB		No			
Kick Offs & Key Depths												
Date			Type			Top Depth (ftKB)			Depth Top (TVD) (ftKB)			
9/17/2021 21:30			KICK OFF			7,883.0			7,800.3			
9/18/2021 11:30			HEEL			8,790.0			8,374.8			
9/23/2021 07:15			TOE			18,641.0			8,353.9			
Casing Strings												
Description		Set Depth (ftKB)		Set Depth (TVD) (ftKB)		OD (in)		Grade		Wt/Len (lb/ft)		
CONDUCTOR		105.0		105.0		20		H40		78.67		
SURFACE		1,291.2		1,289.9		13 3/8		J55		54.50		
INTERMEDIATE		7,804.0		7,721.3		9 5/8		L80-IC		40.00		
Gas Emissions - Flare												
Type		Method		Dur (min)		Amount		Units		Com		
Flare		Metered		1,440.00		0.047		MCF		Previous Meter 17321.95 SCF Todays Meter 17369.10 SCF		
Job Supply Amounts												
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		
DIESEL		FUEL		GAL		0		1,993		0		
DIESEL		MUD		GAL		7,233		1,143		0		
WATER		FRESH		BBL		2,817		2,817		0		
Mud Additive Amounts												
Des		Type		Units		Rec		Consumed		On Loc		
BARITE - BULK		WEIGHTING MATERIAL		CWT		45		38		62.0		
BCI OBM WETTING AGENT		OIL MUD ADDITIVE		GAL		0		1		4.0		
SCALE CHARGE		MISCELLANEOUS		EA		2		2		0.0		
TRANSPORTATION		MISCELLANEOUS		EA		1		1		0.0		
Pump Operations												
Pump #		Make			Model		Liner Size (in)		Stroke (in)		Vol/Stk (bbl/stk)	
1		H&H			1600		5 1/2		12.00		0.088	
2		H&H			1600		5 1/2		12.00		0.088	
3		H&H			1600		5 1/2		12.00		0.088	
Pump Checks												
Pump #		Depth (ftKB)		Time		P (psi)		Strokes (spm)		Q Flow (gpm)		
Deviation Surveys												
Date 8/22/2021		Description AS DRILL SURVEY							Job ODR, 8/22/2021 01:30			
Survey Data - All surveys for 24 hr reporting period												
MD (ftKB)		Incl (°)		Azm (°)		TVD (ftKB)		VS (ft)		NS (ft)		
18,605.00		91.21		180.85		8,354.62		10,167.93		-10,184.99		
Formations												
Formation Name				Prog Top (TVD SS) Override (ft(elv))		Prog Top MD (ftKB)		Prog Top (TVD) (ftKB)		Final Top MD (ftKB)		
ILP				-5,568.0				8,359.0				
Daily Drilling Report												

# Daily Drilling Report

**ENSIGN - 133**

Accept: 9/12/2021	Release:
Days Since LTI: 472.00	Days Since RI: 472.00

Job:	ODR
Report Date:	9/24/2021
Report #:	14
DFS:	12
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$97,666.17

[illegible]

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133  
Accept: 9/12/2021      Release:  
Days Since LTI: 473.00      Days Since RI: 473.00

PERMIAN ASSET TEAM

Job: ODR  
Report Date: 9/25/2021  
Report #: 15  
DFS: 13  
AFE #: 9015847  
Total AFE + Sup: \$2,725,650.08  
Daily Field Est. (Cost): \$427,489.84

API/UWI 42-383-41034-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B3 (WFMP B3)		Field Name SPRABERRY (TREND AREA)					
SSN ID00020821	Property Sub	KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,791.00	Ground Elevation (ft) 2,766.00	Spud Date 8/22/2021	TD Date 9/23/2021					
Jobs											
Responsible Grp 2		Responsible Grp 3		Job Type	Start Date		End Date		Job Status		
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR	8/22/2021 01:30				IN PROGRESS		
Job Dates (ex. Estimated Pad Release, TXRRC Calls)											
Type			Subtype		Date		Note				
MILESTONE			ESTIMATED PAD RELEASE		10/6/2021		Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/6/21. Updated 9/23/21				
Daily Operations											
Footage/Meterage (ft) 0.00		Drilling Hours (hr)		% Rotating Time (%)		End Depth (ftKB) 18,641.0		Target Depth (ftKB) 18,616.0		Daily Field Est Total (Cost) 427,489.84	
24 HR ROP (ft/hr)		Circulating Hours (hr)		% Sliding Time (%)		End Depth (TVD) (ftKB) 8,353.9		Target Depth (TVD) (ftKB) 8,357.8		Daily Mud Field Est (Cost) 4,834.36	
										Cum Field Est To Date (Cost) 2,310,454.45	
										Cum Mud Field Est (Cost) 90,059.10	
										Total AFE + Sup (Cost) 2,725,650.08	
Daily Goal Description DRILLED FEET			Daily Goal - Last 24 0.0			Daily Goal - Next 24 0.0			Goal Comments Goal Met		
Backbuild Yes		Lateral Inclination Toe Up		Last Casing String PRODUCTION, 18,629.0ftKB				Next Casing String PRODUCTION, 18,629.0ftKB			
Avg Connection Gas 0.00		Avg Trip Gas 36.00		Avg Background Gas 48.00		Max Connection Gas 0.00		Max Trip Gas 95.00		Max Drill Gas 0.00	
Operations Summary Rig Up & RIH with 5.5" casing. Land out. Circulate 1.5x casing volume. Start 5 1/2" Cement Job.											
Operations Next Report Period Complete cement casing. Set packoff. N/D BOP. Install TA Cap. Release rig to the University 1-32-25H											
Operations at Report Time Cementing 5 1/2" Production Casing											
Remarks Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 100%											
Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com		Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	1	07:00	PROD, CASE & CMT	RU_CSG	NORMAL	RU csg crew.		18,641.0	18,641.0		
07:00	0.25	07:15	PROD, CASE & CMT	MU_SHOE_TR K	NORMAL	MU shoe track and test.		18,641.0	18,641.0		
07:15	7.75	15:00	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" VA Roughneck prod csg T/ 8245' w/ full displacement, top filling.		18,641.0	18,641.0		
15:00	0.5	15:30	PROD, CASE & CMT	3RD_PTY	NORMAL	Tq turn had to swap out comms cable. Use CRT to break circulation.		18,641.0	18,641.0	0.50	9
15:30	9.75	01:15	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" VA Roughneck prod csg F/ 8245' T/ 18,629' at an average of 1,065 fph. w/ full displacement, top filling.		18,641.0	18,641.0		
01:15	1.75	03:00	PROD, CASE & CMT	CIRC	NORMAL	Circ 1.5x casing capacity with CRT at 8 bpm while R/D casing equipment.  Note: Held PJSM with Ensign Frank's and Schlumberger on R/D CRT and R/U cement head while circulating		18,641.0	18,641.0		
03:00	0.25	03:15	PROD, CASE & CMT	RD_CSG	NORMAL	R/D Franks External CRT Tool		18,641.0	18,641.0		
03:15	0.25	03:30	PROD, CASE & CMT	RU_CMT	NORMAL	R/Up Schlumberger Cement head (Confirmed head not loaded)		18,641.0	18,641.0		
03:30	2.5	06:00	PROD, CASE & CMT	CMT	NORMAL	Pump 20 bbls FW to pit, pressure test to 8,500 psi. Pump 50 bbls Mudpush at 13 ppg. Pump 746 bbls of 13.2 tail, Drop 1k plug, Pump 5 bbls retarded water, Drop 3k top plug, Displace with 35 bbls Retarded water, Start displacement. (Cement details to follow on final report)		18,641.0	18,641.0		
Interval Problems											
3RD PARTY, 18,641.0ftKB, 9/24/2021 15:00											
Ref #	Dur (N...	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party		Comment			
9	0.50	No	CASING	ROTATION / TORQUE		TEXAS TORQUE TURN OILFIELD SERVICES LLC		Tq turn had to swap out comms cable. Use CRT to break circulation.			
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											



Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021      Release: 9/12/2021

Days Since LTI: 473.00      Days Since RI: 473.00

PERMIAN ASSET TEAM

Job: ODR

Report Date: 9/25/2021

Report #: 15

DFS: 13

AFE #: 9015847

Total AFE + Sup: \$2,725,650.08

Daily Field Est. (Cost): \$427,489.84

Mud Checks									
Time 22:00		Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE	Depth (ftKB) 18,641.0	Density (lb/gal) 12.00	Funnel Viscosity (s/qt) 70	T Flowline (°F) 80.0
PV (cP) 28.0	YP (lb/100ft²) 15.000	Vis 3rpm 10	Vis 6rpm 11	Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 14.0	HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0
Solids (%) 22.0		Low Gravity Solids (%) 8.2		Sand (%)		MBT (lb/bbl)	Pm (mL/mL)		Pf (mL/mL)
Chlorides (mg/L) 29,000		Calcium (mg/L) 6,300		CaCl (ppm) 21,070	Oil Water Ratio 78.2/21.8	Electric Stab (V) 791.0		Lime (lb/bbl) 2.8	pH
Gel 10 sec (lb/100ft²) 16.000				Gel 10 min (lb/100ft²) 24.000			Gel 30 min (lb/100ft²) 31.000		
Comment Recommended Treatment: No treatment at this time. Maintain 12.0 ppg in pits.									
Daily Fluids Activity: Maintain pit volume as well as hold 12.0 ppg weight. Add Diesel and water to lower weight and cut viscosity back. Transfer 275 bbls OBM from active to frac tank to make room for dilution.									
Rig Activity Last 24 Hrs: Drilled to TD of 18,641'. Finish POOH and lay down BHA. Rig up and RIH with 5.5" production casing. Add diesel and water as needed to reduce weight of mud coming out of hole. Maintain 12.0 ppg in pits. Tag bottom and circulate.									
Last BOP Test									
Date	Test Type			Item Tested		Next Test Date	Com		
9/12/2021	BOP			BOP'S, 9/12/2021 19:00, <class>		10/3/2021	Full BOP test with 5" DP, 250 low/5,000 high, Mudlines back to pump 250 low/5,300 high		
Leak Off and Formation Integrity Tests									
Test Type				Depth (ftKB)			Dens Fluid (lb/gal)		
FORMATION INTEGRITY				1,321.0			12.50		
FORMATION INTEGRITY				7,804.0			13.49		
Casing Pressure Test									
Test Type		Test Subtype			Date	Item Tested		Failed?	Time (min) P (psi)
CASING		STANDARD			8/23/2021	SURFACE, 1,291.2ftKB		No	30.00 1,000.0
CASING		STANDARD			9/17/2021	INTERMEDIATE, 7,804.0ftKB		No	30.00 2,500.0
Kick Offs & Key Depths									
Date				Type		Top Depth (ftKB)		Depth Top (TVD) (ftKB)	
9/17/2021 21:30				KICK OFF		7,883.0		7,800.3	
9/18/2021 11:30				HEEL		8,790.0		8,374.8	
9/23/2021 07:15				TOE		18,641.0		8,353.9	
Casing Strings									
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread		P LeakOff (psi)	
CONDUCTOR	105.0	105.0	20	H40	78.67				
SURFACE	1,291.2	1,289.9	13 3/8	J55	54.50	BTC		856.8	
INTERMEDIATE	7,804.0	7,721.3	9 5/8	L80-IC	40.00	BTC		5,411.9	
PRODUCTION	18,629.0	8,354.1	5 1/2	P110	20.00	BTC			
Gas Emissions - Flare									
Type	Method	Dur (min)	Amount	Units	Com				
Flare	Metered	1,440.00	0.014	MCF	Previous Meter 17369.10 SCF Todays Meter 17383.35 SCF				
Job Supply Amounts									
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed	
DIESEL	FUEL	GAL	0	1,042	0		9,466	30,938.0	
DIESEL	MUD	GAL	0	1,680	0		14,280	23,623.0	
WATER	FRESH	BBL	802	802	0	Meter Reading 114,052	0	24,504.0	
Mud Additive Amounts									
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons			
BARITE - BULK	WEIGHTING MATERIAL	CWT	0	5	57.0	124			
BCI OBM PRIMARY	OIL MUD ADDITIVE	GAL	0	1	2.0	9			
BCI OBM SECONDARY	OIL MUD ADDITIVE	GAL	0	1	3.0	8			
BCI OBM WETTING AGENT	OIL MUD ADDITIVE	GAL	0	2	2.0	11			
BENTONE 990	OIL MUD ADDITIVE	LB	0	10	45.0	20			
CALCIUM CHLORIDE	SALT	LB	0	14	140.0	160			
GILSONITE	FLUID LOSS ADDITIVES	LB	0	5	50.0	60			
LIME	ALKALINITY CONTROL	LB	0	20	40.0	285			
SOLTEX	FLUID LOSS ADDITIVES	LB	0	5	15.0	65			
Pump Operations									
Pump #	Make			Model	Liner Size (in)	Stroke (in)	Vol/Stk (bbl/stk)	P Max (psi)	
1	H&H			1600	5 1/2	12.00	0.088	5,549.0	
2	H&H			1600	5 1/2	12.00	0.088	5,549.0	
3	H&H			1600	5 1/2	12.00	0.088	5,549.0	
Pump Checks									
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)		Eff (%)		
Deviation Surveys									
Date 8/22/2021		Description AS DRILL SURVEY					Job ODR, 8/22/2021 01:30		
Daily Drilling Report									

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Printed: Saturday, September 25, 2021



# Daily Drilling Report

**ENSIGN - 133**

Accept: 9/12/2021	Release:
Days Since LTI: 473.00	Days Since RI: 473.00

Job:	ODR
Report Date:	9/25/2021
Report #:	15
DFS:	13
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$427,489.84

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Daily Drilling Report

UNIVERSITY 1-32 24H		PERMIAN ASSET TEAM	
ENSIGN - 133		Job:	ODR
Accept: 9/12/2021	Release:	Report Date:	9/25/2021
Days Since LTI: 474.00	Days Since RI: 474.00	Report #:	16
		DFS:	14
		AFE #:	9015847
		Total AFE + Sup:	\$2,725,650.08
		Daily Field Est. (Cost):	\$106,629.00

API/UWI 42-383-41034-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP B3 (WFMP B3)		Field Name SPRABERRY (TREND AREA)					
SSN ID00020821	Property Sub	KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,791.00	Ground Elevation (ft) 2,766.00	Spud Date 8/22/2021	TD Date 9/23/2021					
Jobs											
Responsible Grp 2		Responsible Grp 3		Job Type	Start Date	End Date	Job Status				
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR	8/22/2021 01:30	9/25/2021 10:30	COMPLETE				
Job Dates (ex. Estimated Pad Release, TXRRRC Calls)											
Type		Subtype		Date		Note					
MILESTONE		ESTIMATED PAD RELEASE		10/6/2021		Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/6/21. Updated 9/23/21					
Daily Operations											
Footage/Meterage (ft) 0.00		Drilling Hours (hr)		% Rotating Time (%)		End Depth (ftKB) 18,641.0					
						Target Depth (ftKB) 18,616.0					
						Daily Field Est Total (Cost) 106,629.00					
						Cum Field Est To Date (Cost) 2,395,028.45					
24 HR ROP (ft/hr)		Circulating Hours (hr)		% Sliding Time (%)		End Depth (TVD) (ftKB) 8,353.9					
						Target Depth (TVD) (ftKB) 8,357.8					
						Daily Mud Field Est (Cost) 90,059.10					
						Cum Mud Field Est (Cost) 2,725,650.08					
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 0.0		Daily Goal - Next 24 0.0		Goal Comments Goal Met					
Backbuild Yes		Lateral Inclination Toe Up		Last Casing String PRODUCTION, 18,629.0ftKB		Next Casing String PRODUCTION, 18,629.0ftKB					
Avg Connection Gas		Avg Trip Gas		Avg Background Gas		Max Connection Gas					
						Max Trip Gas					
						Max Drill Gas					
Operations Summary Finish cementing casing. Set packoff. N/D BOP. Install cap. Release rig @ 10:30 9/25/21. Skid to University 1-32 25H.											
Operations Next Report Period Rig released to the University 1-32 24H 9-25-21 @ 10:30											
Operations at Report Time Rig released to the University 1-32 24H @ 10:30											
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 100%											
Time Log											
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #	
06:00	2	08:00	PROD, CASE & CMT	CMT	NORMAL	Finish Cement Operations as follows: Pump 20 bbls FW to pit, pressure test to 8,500 psi. Pump 50 bbls Mudpush at 13 ppg, Pump 746 bbls of 13.2 tail, Drop 1k plug, Pump 5 bbls retarded water, Drop 3k top plug, Displace with 35 bbls Retarded water, Start displacement. (413 total displaced behind top plug). Latch in 1K plug @ 3 bpm @ 2400 psi, ruptured with 3360 psi. Latch in 3k plug @ 3 bpm @ 2480 psi, pressure up to 4000 psi, held for 5 min. Bled back 5 bbls, full returns through out job, floats held. (50 bbls of spacer to surface)	18,641.0	18,641.0			
08:00	0.5	08:30	DEMOB, RIG DOWN	RD_CMT	NORMAL	RD Cement head and cement lines.	18,641.0	18,641.0			
08:30	1	09:30	DEMOB, RIG DOWN	WH	NORMAL	L/D Landing Joint, Install packoff, pressure test void between seals to 5k, pull test to 40k, and pressure test again to 5,000 psi. Positive tests. Set back pressure valve. Flush thru all surface lines.	18,641.0	18,641.0			
09:30	0.25	09:45	DEMOB, RIG DOWN	ND_BOPE	NORMAL	N/D QDC & Lift Stack	18,641.0	18,641.0			
09:45	0.75	10:30	DEMOB, RIG DOWN	WH	NORMAL	Install TA cap and Test same to 5,000 psi. Rig released to University 1-32 25H @ 10:30 Hrs 9/25/21	18,641.0	18,641.0			
Hydraulic Calculations											
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)	
Mud Checks											
Time 23:00	Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE		Depth (ftKB) 18,641.0	Density (lb/gal) 12.00	Funnel Viscosity (s/qt) 70	T Flowline (°F) 80.0		
PV (cP) 28.0	YP (lb/100ft²) 15.000	Vis 3rpm 10	Vis 6rpm 11	Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 14.0		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0	
Solids (%) 22.0		Low Gravity Solids (%) 8.2		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)	
Chlorides (mg/L) 29,000		Calcium (mg/L) 6,300		CaCl (ppm) 21,000		Oil Water Ratio 78.2/21.8		Electric Stab (V) 791.0		Lime (lb/bbl) 2.8	pH
Gel 10 sec (lb/100ft²) 16.000				Gel 10 min (lb/100ft²) 24.000				Gel 30 min (lb/100ft²) 31.000			
Comment Recommended Treatment: No treatment at this time. Maintain 12.0 ppg in pits.											
Daily Fluids Activity: Maintain pit volume as well as hold 12.0 ppg weight. Once casing on bottom during cement job transfered all OBM to frac tanks for storage to be used on the next well											
Rig Activity Last 24 Hrs: Finish RIH w/Casing to 18,629. Rig up cement crew and pump cement. Full returns during cement with spacer seen at surface during displacement. Transfered all OBM to frac tanks for storage to be used on the next well. Clean Pits , perform repairs on hopper pump and valves that needed maintenance. Prepare for filling pits with 10ppg brine.											
Daily Drilling Report											

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133  
Accept: 9/12/2021      Release:  
Days Since LTI: 474.00      Days Since RI: 474.00

PERMIAN ASSET TEAM  
Job: ODR  
Report Date: 9/25/2021  
Report #: 16  
DFS: 14  
AFE #: 9015847  
Total AFE + Sup: \$2,725,650.08  
Daily Field Est. (Cost): \$106,629.00

Last BOP Test														
Date	Test Type		Item Tested		Next Test Date		Com							
9/12/2021	BOP		BOP'S, 9/12/2021 19:00, <class>		10/3/2021		Full BOP test with 5" DP, 250 low/5,000 high, Mudlines back to pump 250 low/5,300 high							
Leak Off and Formation Integrity Tests														
Test Type			Depth (ftKB)			Dens Fluid (lb/gal)								
FORMATION INTEGRITY			1,321.0			12.50								
FORMATION INTEGRITY			7,804.0			13.49								
Casing Pressure Test														
Test Type		Test Subtype		Date		Item Tested		Failed?	Time (min)		P (psi)			
CASING		STANDARD		8/23/2021		SURFACE, 1,291.2ftKB		No	30.00		1,000.0			
CASING		STANDARD		9/17/2021		INTERMEDIATE, 7,804.0ftKB		No	30.00		2,500.0			
Kick Offs & Key Depths														
Date			Type			Top Depth (ftKB)		Depth Top (TVD) (ftKB)						
9/17/2021 21:30			KICK OFF			7,883.0		7,800.3						
9/18/2021 11:30			HEEL			8,790.0		8,374.8						
9/23/2021 07:15			TOE			18,641.0		8,353.9						
Casing Strings														
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)							
CONDUCTOR	105.0	105.0	20	H40	78.67									
SURFACE	1,291.2	1,289.9	13 3/8	J55	54.50	BTC	856.8							
INTERMEDIATE	7,804.0	7,721.3	9 5/8	L80-IC	40.00	BTC	5,411.9							
PRODUCTION	18,629.0	8,354.1	5 1/2	P110	20.00	BTC								
Cement														
PRODUCTION CASING CEMENT, Casing, 9/25/2021 03:30														
Cementing End Date 9/25/2021 08:00		Wellbore ORIGINAL	Technical Result		Comment Job went as planed.									
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?
			26.6	18,545.0	No	Yes	4	4	6	4,000.0	2,450.0	No	No	No
Cement Fluids														
Fluid Type MUDPUSH				Estimated Top (ftKB) 2,068.4		Est Btm (ftKB) 3,145.0		Class		Yield (ft³/sack)		Density (lb/gal) 12.50		
Fluid Type TAIL CMT				Estimated Top (ftKB) 3,145.0		Est Btm (ftKB) 18,641.0		Class TXI LITEWEIGHT		Yield (ft³/sack) 1.34		Density (lb/gal) 13.20		
Fluid Type DSPLMT				Estimated Top (ftKB) 0.0		Est Btm (ftKB) 18,625.0		Class FRESH WATER		Yield (ft³/sack)		Density (lb/gal) 8.33		
Gas Emissions - Flare														
Type	Method		Dur (min)		Amount		Units		Com					
Job Supply Amounts														
Supply Item Des		Type	Unit Label	Received	Consumed	Returned	Note			Cum On Loc		Cum Consumed		
DIESEL		FUEL	GAL			9,466	Transferred to 'UNIVERSITY 1-32 25H'			0		30,938.0		
DIESEL		MUD	GAL			14,280	Transferred to 'UNIVERSITY 1-32 25H'			0		23,623.0		
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)	
Pump Checks														
Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)			Q Flow (gpm)			Eff (%)				
Deviation Surveys														
Date 8/22/2021		Description AS DRILL SURVEY								Job ODR, 8/22/2021 01:30				
Formations														
Formation Name				Prog Top (TVD SS) Override (ft(elv))		Prog Top MD (ftKB)		Prog Top (TVD) (ftKB)		Final Top MD (ftKB)		Final Top (TVD) (ftKB)		
ILP				-5,568.0				8,359.0						
TARGET_1				-5,644.0				8,435.0						
PBHL/TD				-5,567.0				8,358.0						
Daily Contacts														
Job Contact			Title		Office		Mobile		Email					
HARDIN, JOE, AREA DRILLING SUPERINTENDENT			AREA DRILLING SUPERINTENDENT		361-452-2118		361-318-8762		THOMAS.HARDIN@PXD.COM					
VOGEL, WILLIS, SUPERINTENDENT			SUPERINTENDENT				432-301-6784		WILLIS.VOGEL@PXD.COM					
WAGNON, TIM, SUPERINTENDENT			SUPERINTENDENT				409-489-2208		TIM.WAGNON@PXD.COM					
LUTHER, JACKIE, ENGINEER			ENGINEER		972-969-5626		303-512-3803		JACKIE.LUTHER@PXD.COM					
JACKSON, AUSTIN, ENGINEER			ENGINEER		972-969-5954		469-503-1379		AUSTIN.JACKSON@PXD.COM					
JACOBS, TUCKER, WELLSITE SUPERVISOR			WELLSITE SUPERVISOR		972-444-9001		361-318-8269		TUCKER.JACOBS@PXD.COM					
JACOBS, TUCKER, WELLSITE SUPERVISOR			WELLSITE SUPERVISOR		972-444-9001		361-318-8269		TUCKER.JACOBS@PXD.COM					
MITCHELL, KADE, WELLSITE SUPERVISOR			WELLSITE SUPERVISOR				337-378-2696		KADE.MITCHELL@PXD.COM					
RIG-ENSIGN 133, RIG PHONE			RIG PHONE		432-355-3047		432-530-1214		DL-ENSIGN133@PXD.COM					
SENTZ, RON, MUD ENGINEER			MUD ENGINEER				469-585-7376		RON.SENTZ@PXD.COM					
Daily Drilling Report														

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Printed: Sunday, September 26, 2021

Daily Drilling Report

UNIVERSITY 1-32 24H	
ENSIGN - 133	
Accept: 9/12/2021	Release:
Days Since LTI: 474.00	Days Since RI: 474.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	9/25/2021
Report #:	16
DFS:	14
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$106,629.00

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	2
ENSIGN UNITED STATES DRILLING S W INC	12
PHOENIX TECHNOLOGY SERVICES USA INC	2
GORDON TECHNOLOGIES LLC	1
STRATAGRAPH INC	2
STALLION SOLIDS CONTROL INC	1