

Daily Drilling Report

UNIVERSITY 10-11B 2H

ENSIGN - 133

Accept: 12/19/2020Release:Days Since LTI: 214.00Days Since RI: 214.00

PERMIAN - JV SOUTHERN WOLFCAMP

Job: ODRReport Date: 12/29/2020Report #: 12DFS: 11AFE #: 9009117Total AFE + Sup: \$2,589,547.90Daily Field Est. (Cost): \$82,764.56

API/UWI 42-383-40859-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP A2 (WFMP A2)		Field Name SPRABERRY (TREND AREA)				
SSN ID00017683	Property Sub	KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,668.00	Ground Elevation (ft) 2,643.00	Spud Date 11/10/2020		TD Date 12/28/2020			
Safety Checks										
Time	Type	Des	Tour	Com						
Jobs										
Responsible Grp 2		Responsible Grp 3		Job Type	Start Date		End Date	Job Status		
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR	11/10/2020 18:30			IN PROGRESS		
Job Dates (ex. Estimated Pad Release, TXRRRC Calls)										
Type		Subtype		Date		Note				
MILESTONE		ESTIMATED PAD RELEASE		1/17/2021		Drilling INT on well 2 of 3, sequentially.				
Type TXRRRC CALL		Subtype CEMENT PROD		Date 12/29/2020		Note Gina operator #14				
Daily Operations										
Footage/Meterage (ft) 1,256.00	Drilling Hours (hr) 14.75	% Rotating Time (%) 76.27	End Depth (ftKB) 20,456.0	Target Depth (ftKB) 20,467.0	Daily Field Est Total (Cost) 82,764.56	Cum Field Est To Date (Cost) 1,694,599.82				
24 HR ROP (ft/hr) 85.2	Circulating Hours (hr) 7.25	% Sliding Time (%) 23.73	End Depth (TVD) (ftKB) 7,655.0	Target Depth (TVD) (ftKB) 7,648.0	Daily Mud Field Est (Cost) 10,302.31	Cum Mud Field Est (Cost) 121,014.72	Total AFE + Sup (Cost) 2,589,547.90			
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 1,253.0		Daily Goal - Next 24 0.0		Goal Comments Goal Met				
Backbuild Yes	Lateral Inclination Toe Flat	Last Casing String INTERMEDIATE, 6,923.0ftKB			Next Casing String PRODUCTION, 20,450.0ftKB					
Avg Connection Gas 500.00	Avg Trip Gas 0.00	Avg Background Gas 526.00	Max Connection Gas 676.00	Max Trip Gas 0.00	Max Drill Gas 689.00					
Operations Summary Drill Lateral F/19,200' T/20,456' (TD) (0.0% Sliding, 1.55 Avg DLS, 12' Below, 4' Right of Plan #1), Circ K&M, TOO H T/17,500'										
Operations Next Report Period TOOH, L/D BHA, Run 5-1/2" Prod. Csg.										
Operations at Report Time TOOH @17,500'										
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	6.5	12:30	PROD, DRL LAT	DRL	NORMAL	Drill Lateral F/ 19,200' T/ 19,744' (544' @ 84 ft/hr).	19,200.0	19,744.0		
12:30	0.5	13:00	PROD, DRL LAT	RIG_SVC	NORMAL	Rig Service.	19,744.0	19,744.0		
13:00	8.25	21:15	PROD, DRL LAT	DRL	NORMAL	Drill Lateral F/ 19,744' T/ 20,456' (712' @ 86 ft/hr).	19,744.0	20,456.0		
21:15	6.75	04:00	PROD, POST DRL	CIRC	NORMAL	Circulated clean up cycle with 6 bottoms up at 600 gpm and 60 rpm with 100% returns.	20,456.0	20,456.0		
04:00	0.5	04:30	PROD, POST DRL	FLOW_CHK	NORMAL	Checked well for flow (static).	20,456.0	20,456.0		
04:30	1.5	06:00	PROD, POST DRL	TOOH_ELEV	NORMAL	Tripped out of hole from 20,456' to 17,500' with no tight hole and proper hole fill using trip tanks.	20,456.0	20,456.0		
Drill Strings										
BHA #2 , PRODUCTION - CURVE/LATERAL										
Bit Run 3		Drill Bit 8 1/2in, SPL613, 54015			Bit Type PDC		Make ULTERRA			
Nozzles (1/32") 11/11/11/11/11/10/10/10		Bit Total Fluid Area (nozzles) (in²) 0.79		IADC Bit Dull -----	Hours Drilled By Bit (hr) 110.00	Depth Drilled By Bit (ft) 13,519.00				
BHA Drilling Time (hr) 110.00		BHA Depth Drilled (ft) 13,519.00		BHA ROP (ft/hr) 122.9	Depth In (ftKB) 6,937.0	Depth Out (ftKB) 20,456.0				
Drill String Components										
Jts	Item Des			OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make
426	DRILL PIPE - INTERNALLY COATED			5	4.28	17,227.81	20,456.00	335,942.3	396	RIG
1	AGITATOR			6 5/8	2.63	35.16	3,228.19		60	NOV
68	DRILL PIPE - INTERNALLY COATED			5	4.28	3,090.47	3,193.03	60,264.2	60	RIG
1	DRILL COLLAR - NON MAG			6 3/4	3.25	30.44	102.56		0	GORDON
1	DRILL COLLAR - NON MAG			6 3/4	3.25	30.87	72.12		0	GORDON
1	SUB - UBHO			6 1/2	2.63	2.66	41.25		0	GORDON
1	STABILIZER			6.8	2.88	5.32	38.59		0	DRILLING TOOLS INTERNATIONAL
1	MOTOR - STABILIZER SLEEVE			6 3/4	2.50	32.27	33.27		0	PHOENIX
Mud Motors										
SN	Bend Angle		Bearing Type	Lobe Config		# Stages	Lwr Defin Type		Bit To Bend	
24X675248-PTS	2		SEALED	7:8		5.7			5.27	
Sensors										
Sensor Type		Sensor-Bit (ft)			Note					
GAMMA					47.98					
DIRECTIONAL					60.00					
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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 (°)	
06:00	07:30	19,200.0	274.00	182.7	50	40	530.0	550	4,470.0	175.0	190	255	100	190	28,000.0	14,000.0	0	
07:30	08:15	19,474.0	12.00	16.0	55	0	275.0	550	4,470.0	15.0	190	255	100	190	0.0	0.0	20	
08:15	09:30	19,486.0	203.00	162.4	50	40	530.0	550	4,470.0	175.0	190	255	100	190	28,000.0	14,000.0	0	
09:30	12:15	19,689.0	10.00	3.6	55	0	75.0	580	4,790.0	15.0	190	255	100	190	0.0	0.0	20	
12:15	12:30	19,699.0	47.00	188.0	44	40	530.0	550	4,470.0	175.0	190	255	100	190	28,000.0	14,000.0	0	
12:30	13:00	19,746.0	0.00		0	0	0.0	320	1,850.0	0.0	190	255	100	190	0.0	0.0	0	
13:00	21:15	19,746.0	710.00	86.1	44	40	530.0	550	4,470.0	50.0	190	255	100	190	28,000.0	14,000.0	0	
21:15	04:00	20,456.0	0.00		0	60	0.0	600	5,100.0	0.0	190	255	100	190	0.0	0.0	0	
Hydraulic Calculations																		
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)	HP/Area (hp/in²)	Jet Vel (ft/s)	Bit dP (psi)	Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)	Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)								
9.50	10.62	180.2	3.2	244.6	514.9	16.8	565.4	362.58	619.51	356.45								
Mud Checks																		
Time 23:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE		Depth (ftKB) 20,456.0		Density (lb/gal) 9.50		Funnel Viscosity (s/qt) 60		T Flowline (°F) 130.0				
PV (cP) 20.0	YP (lb/100ft²) 11.000	Vis 3rpm 7	Vis 6rpm 8	Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 16.0		HTHP Temperature (°F) 250.0		HTHP Pressure (psi) 500.0								
Solids (%) 12.5		Low Gravity Solids (%) 7.6		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)								
Chlorides (ppm) 38,000,000.000		Calcium (ppm) 3,400,000.000		CaCl (ppm)		Oil Water Ratio 71.4/28.6		Electric Stab (V) 687.0		Lime (lb/bbl) 4.4		pH						
Gel 10 sec (lb/100ft²) 10.000				Gel 10 min (lb/100ft²) 15.000				Gel 30 min (lb/100ft²) 20.000										
Comment WELL MATERIALS COST DAILY COST \$ \$11,652.31 TOTAL WELL COST \$ \$92,960.38 RECOMMENDED FLUIDS TREATMENT DRILLING FLUIDS ACTIVITY LAST 24 HRS MW 9.5 - 9.6 ppg, Diesel - 2 sec/qt - 10.7 BPH, Water 5 sec/qt - 4.3 BPH Additions- Lime - 1 ppb, CACL - 1.5 ppb, Soltex - 1 ppb, Bentone 990 - 1 ppb, Bentone 910 - 1 ppb, Gilsonite 1 ppb, 1 Drum of Wetting Agent - .2 ppb, 1 Drum of BCI Primary - .2 ppb. Maintain 9.5 - 9.6 ppg mud weight. Dust with barite as needed. Building volume to ensure enough mud to complete well. Move 180 bbls from active to frac tanks due to pits getting full. During K&M Clean up cycle turn off diesel/water additions and allow mud to climb to 9.6 - 9.7 ppb. Built a PreMix full of Gel mud to be moved to the frac tanks.																		
WELL VOLUMES RECAP Daily Diesel Used 9,131 GAL Cumulative Diesel Used 35,366 GAL Daily OBM Surface Losses 75 BBL Daily OBM Downhole Losses BBL Cumulative OBM Surface Losses 1,225 BBL Cumulative OBM Downhole Losses BBL OBM Volume Accounting 2,652 BBL Total OBM Received BBL Total OBM on Location 2,652 BBL Daily Water Used 75 BBL Cumulative Water Used 285 BBL RIG ACTIVITY LAST 24 HOURS Drilling ahead f/ 18,490 t/ 20,456. Drilling ahead lateral. Maintain mud volume, and mud weight. TD well at 20,456, Circulate K&M Clean up, after second bottoms up turn off diesel/water additions and let mud weight climb to 9.6 - 9.7 ppg. ROP 127, WOB 46, RPM 51, Torque 27993, Diff 333, P/U 245 S/O 125 Conn Gas, 247, BG Gas 416, Max Gas 602, Ftg Last 24 - 1966'. Lithology 20300 25% Shale, 75% Limestone.																		
Last BOP Test																		
Date		Test Type			Item Tested			Next Test Date		Com								
12/19/2020		BOP			BOP'S, 12/19/2020 08:30, U			1/9/2021		Full BOP Test								
Leak Off and Formation Integrity Tests																		
Test Type					Depth (ftKB)					Dens Fluid (lb/gal)								
FORMATION INTEGRITY					1,037.0					12.49								
FORMATION INTEGRITY					6,902.0					11.03								
Casing Pressure Test																		
Test Type			Test Subtype				Date		Item Tested			Failed?	Time (min)		P (psi)			
CASING			STANDARD				11/22/2020		SURFACE, 1,037.8ftKB			No	30.00		1,000.0			
CASING			STANDARD				12/24/2020		INTERMEDIATE, 6,923.0ftKB			No	30.00		2,500.0			
Kick Offs & Key Depths																		
Date					Type					Top Depth (ftKB)			Depth Top (TVD) (ftKB)					
12/24/2020 06:00					KICK OFF					7,055.0			7,028.8					
12/24/2020 18:30					HEEL					8,060.0			7,616.3					
12/28/2020 21:15					TOE					20,456.0			7,655.0					
Casing Strings																		
Description		Set Depth (ftKB)		Set Depth (TVD) (ftKB)		OD (in)		Grade		Wt/Len (lb/ft)		Top Thread		P LeakOff (psi)				
CONDUCTOR		125.0				20		H40		78.67								
SURFACE		1,037.8		1,037.4		13 3/8		K55		54.50		BTC		672.3				
INTERMEDIATE		6,923.0		6,896.8		9 5/8		L80-IC		40.00		BTC		3,939.0				
Job Supply Amounts																		
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		Note			Cum On Loc		Cum Consumed	
DIESEL		MUD		GAL		14,728		9,131		0		Mud Diesel			12,630		35,366.0	
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Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	0	1,675	0	Rig Fuel	3,709	21,573.0
WATER	FRESH	BBL	0	0	0	Meter reading 84790	0	8,084.0
Mud Additive Amounts								
Des	Type	Units	Rec	Consumed		On Loc		Cum Cons
BARITE - BULK	WEIGHTING MATERIAL	CWT		19		43.0		30
BCI OBM PRIMARY	OIL MUD ADDITIVE	GAL		1		11.0		8
BCI OBM RHEO MODIFIER	OIL MUD ADDITIVE	GAL		1		10.0		3
BCI OBM SECONDARY	OIL MUD ADDITIVE	GAL		1		10.0		5
BCI OBM WETTING AGENT	OIL MUD ADDITIVE	GAL		1		13.0		9
BENTONE 910	OIL MUD ADDITIVE	GAL		15		49.0		66
BENTONE 990	OIL MUD ADDITIVE	LB		11		49.0		79
CALCIUM CHLORIDE	SALT	LB		40		90.0		285
GILSONITE	FLUID LOSS ADDITIVES	LB		15		55.0		95
LIME	ALKALINITY CONTROL	LB		60		105.0		305
SOLTEX	FLUID LOSS ADDITIVES	LB		15		40.0		95
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	18,827.0	02:30	620.0	30	106	95		
1	18,827.0	02:31	740.0	40	141	95		
1	18,827.0	02:32	880.0	50	176	95		
2	18,827.0	02:33	620.0	30	106	95		
2	18,827.0	02:34	740.0	40	141	95		
2	18,827.0	02:35	880.0	50	176	95		
Deviation Surveys								
Date 11/10/2020		Description AS DRILL SURVEY				Job ODR, 11/10/2020 18:30		
Survey Data - All surveys for 24 hr reporting period								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	
19,231.00	90.25	2.00	7,634.60	11,389.47	11,390.30	74.23	1.69	
19,322.00	89.85	1.27	7,634.52	11,480.46	11,481.26	76.83	0.91	
19,414.00	89.60	0.25	7,634.96	11,572.46	11,573.25	78.05	1.14	
19,504.00	90.75	3.12	7,634.69	11,662.44	11,663.20	80.69	3.44	
19,595.00	90.44	3.22	7,633.74	11,753.38	11,754.06	85.72	0.36	
19,686.00	89.88	3.19	7,633.49	11,844.33	11,844.91	90.81	0.62	
19,778.00	91.28	2.47	7,632.56	11,936.28	11,936.79	95.35	1.71	
19,870.00	91.39	2.53	7,630.42	12,028.23	12,028.68	99.37	0.14	
19,961.00	88.73	0.13	7,630.32	12,119.21	12,119.64	101.48	3.94	
20,053.00	88.67	0.39	7,632.41	12,211.18	12,211.62	101.90	0.29	
20,144.00	88.03	359.90	7,635.03	12,302.13	12,302.58	102.13	0.89	
20,235.00	86.96	359.34	7,639.00	12,393.00	12,393.49	101.52	1.33	
20,327.00	85.98	358.54	7,644.67	12,484.76	12,485.30	99.82	1.37	
20,395.00	85.20	358.12	7,649.90	12,552.47	12,553.07	97.85	1.30	
Daily Contacts								
Job Contact		Title	Office	Mobile	Email			
JACKSON, AUSTIN, ENGINEER		ENGINEER	972-969-5954	469-503-1379	AUSTIN.JACKSON@PXD.COM			
LUTHER, JACKIE, ENGINEER		ENGINEER	972-969-5626	303-512-3803	JACKIE.LUTHER@PXD.COM			
POLYA, JOE, AREA DRILLING SUPERINTENDENT		AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM			
BROWN, DAN, SUPERINTENDENT		SUPERINTENDENT		469-203-9731	DAN.BROWN@PXD.COM			
PARSELL, VIC, SUPERINTENDENT		SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM			
DAFFRON, MIKE, SUPERINTENDENT		SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM			
JACOBS, TUCKER, ENGINEER		ENGINEER	972-444-9001	361-318-6782	TUCKER.JACOBS@PXD.COM			
PEARCE, JIMMY, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		661-667-7023	JIMMY.PEARCE@PXD.COM			
SENTZ, RON, MUD ENGINEER		MUD ENGINEER		469-585-7376	RON.SENTZ@PXD.COM			
RIG-ENSIGN 133, RIG PHONE		RIG PHONE	432-355-3047	432-530-1214				
Personnel Log								
Company							Count	
PIONEER NATURAL RESOURCES USA INC							3	
ENSIGN ENERGY SERVICES							13	
PHOENIX TECHNOLOGY SERVICES USA INC							2	
GORDON TECHNOLOGIES LLC							1	
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ENSIGN - 133

Accept: 12/19/2020	Release:
Days Since LTI: 214.00	Days Since RI: 214.00

PERMIAN - JV SOUTHERN WOLFCAMP	
Job:	ODR
Report Date:	12/29/2020
Report #:	12
DFS:	11
AFE #:	9009117
Total AFE + Sup:	\$2,589,547.90
Daily Field Est. (Cost):	\$82,764.56

Personnel Log	
Company	Count
STRATAGRAPH INC	1
SAFETY AUTOMATION TECHNOLOGY LLC	1
HALLIBURTON ENERGY SERVICES INC	1

Daily Drilling Report

API/UWI 42-383-40859-0000		Well Profile HORIZONTAL		Open Formation WOLFCAMP A2 (WFMP A2)		Field Name SPRABERRY (TREND AREA)				
SSN ID00017683	Property Sub	KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,668.00	Ground Elevation (ft) 2,643.00	Spud Date 11/10/2020	TD Date 12/28/2020				
Safety Checks										
Time	Type	Des	Tour	Com						
Jobs										
Responsible Grp 2		Responsible Grp 3		Job Type	Start Date		End Date		Job Status	
DRL ENG - JACKIE LUTHER		AREA TEAM 4		ODR	11/10/2020 18:30				IN PROGRESS	
Job Dates (ex. Estimated Pad Release, TXRRC Calls)										
Type			Subtype		Date		Note			
MILESTONE			ESTIMATED PAD RELEASE		1/17/2021		Drilling INT on well 2 of 3, sequentially.			
Daily Operations										
Footage/Meterage (ft) 0.00	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB) 20,456.0	Target Depth (ftKB) 20,467.0	Daily Field Est Total (Cost) 82,354.10	Cum Field Est To Date (Cost) 1,778,852.56				
24 HR ROP (ft/hr)	Circulating Hours (hr) 0.25	% Sliding Time (%)	End Depth (TVD) (ftKB) 7,656.1	Target Depth (TVD) (ftKB) 7,648.0	Daily Mud Field Est (Cost) 7,276.77	Cum Mud Field Est (Cost) 128,291.49	Total AFE + Sup (Cost) 2,589,547.90			
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 Flat	Last Casing String INTERMEDIATE, 6,923.0ftKB				Next Casing String PRODUCTION, 20,444.0ftKB				
Avg Connection Gas 500.00	Avg Trip Gas 0.00	Avg Background Gas 80.00	Max Connection Gas 676.00	Max Trip Gas 0.00	Max Drill Gas 689.00					
Operations Summary TOOH, L/D BHA, R/U and Run 5.5" Prod. Csg T/ 12,200'										
Operations Next Report Period Run 5.5" Prod. Csg T/ 20,444' and Cmt, Install Pack-off and BPV, N/D BOP, Install Abandonment Cap Release rig to University 10-11A 1H										
Operations at Report Time Run Prod. Csg. @ 12,200'										
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	5.5	11:30	PROD, POST DRL	TOOH_ELEV	NORMAL	TOOH F/ 17,500' T/ 3,500'. Hole taking proper fill.	20,456.0	20,456.0		
11:30	0.25	11:45	PROD, POST DRL	HDL_ROT HD	NORMAL	Pull rotating head.	20,456.0	20,456.0		
11:45	0.25	12:00	PROD, POST DRL	HDL_AGITATOR	NORMAL	L/D agitator.	20,456.0	20,456.0		
12:00	1.5	13:30	PROD, POST DRL	TOOH_ELEV	NORMAL	TOOH F/ 3500' T/ BHA'. Hole taking proper fill.	20,456.0	20,456.0		
13:30	0.5	14:00	PROD, POST DRL	SFTY	NORMAL	Clean rig floor.	20,456.0	20,456.0		
14:00	0.25	14:15	PROD, POST DRL	SFTY	NORMAL	PJSM on laying down directional tools.	20,456.0	20,456.0		
14:15	0.5	14:45	PROD, POST DRL	LD_DIR	NORMAL	L/D all directional tools. Note: Found 3 nozzles plugged w/ rubber and bit nose rung out.	20,456.0	20,456.0		
14:45	0.5	15:15	PROD, POST DRL	WRBSH	NORMAL	Pull wearbushing and clean rig floor.	20,456.0	20,456.0		
15:15	0.75	16:00	PROD, POST DRL	RIG_SVC	NORMAL	Serviced rig.	20,456.0	20,456.0		
16:00	0.25	16:15	PROD, POST DRL	SFTY	NORMAL	PJSM w/ Ensign, Frank's Csg Crew & Torque Turn, Tenaris, and PNR Rep on RU and run casing tools.	20,456.0	20,456.0		
16:15	1.5	17:45	PROD, CASE & CMT	RU_CSG	NORMAL	RU Frank's casing crew.	20,456.0	20,456.0		
17:45	0.25	18:00	PROD, CASE & CMT	MU_SHOE_TRACK	NORMAL	PU pre-bucked shoe track. Test floats, good test.	20,456.0	20,456.0		
18:00	5.5	23:30	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" 20# TXP-BTC P-110 IC casing T/5,800' with proper displacement.	20,456.0	20,456.0		
23:30	1	00:30	PROD, CASE & CMT	3RD_PTY	NORMAL	Trouble shoot and replaced dump valve for torque turn unit due to pre-mature dumping prior to full make up torque being achieve.	20,456.0	20,456.0	1.00	3
00:30	1	01:30	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" 20# TXP-BTC P-110 IC casing F/ 5,800' T/7,150' with proper displacement.	20,456.0	20,456.0		
Daily Drilling Report										
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Printed: Wednesday, December 30, 2020										

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 #									
01:30	0.5	02:00	PROD, CASE & CMT	RIG_SVC	NORMAL	Serviced rig. Add hydrolic oil to top drive due to seal on RLA leaking.			20,456.0	20,456.0											
02:00	4	06:00	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" 20# TXP-BTC P-110 IC casing F/ 7,150' T/12,200' with proper displacement.			20,456.0	20,456.0											
Interval Problems																					
3RD PARTY, 20,456.0ftKB, 12/29/2020 23:30																					
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party			Comment												
3	1.00	No	PIPE HANDLING	TONGS		FRANK'S INTERNATIONAL LLC			Trouble shoot and replaced dump valve for torque turn unit due to pre-mature dumping prior to full make up torque being achieved.												
Drill Strings																					
BHA #2 , PRODUCTION - CURVE/LATERAL																					
Bit Run 3			Drill Bit 8 1/2in, SPL613, 54015			Bit Type PDC			Make ULTERRA												
Nozzles (1/32") 11/11/11/11/11/11/10/10/10			Bit Total Fluid Area (nozzles) (in²) 0.79			IADC Bit Dull 4-2-RO-N-X-0-BT-TD			Hours Drilled By Bit (hr) 110.00			Depth Drilled By Bit (ft) 13,519.00									
BHA Drilling Time (hr) 110.00			BHA Depth Drilled (ft) 13,519.00			BHA ROP (ft/hr) 122.9			Depth In (ftKB) 6,937.0			Depth Out (ftKB) 20,456.0									
Drill String Components																					
Jts	Item Des				OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make										
426	DRILL PIPE - INTERNALLY COATED				5	4.28	17,227.81	20,456.00	335,942.3	396	RIG										
1	AGITATOR				6 5/8	2.63	35.16	3,228.19		60	NOV										
68	DRILL PIPE - INTERNALLY COATED				5	4.28	3,090.47	3,193.03	60,264.2	60	RIG										
1	DRILL COLLAR - NON MAG				6 3/4	3.25	30.44	102.56		0	GORDON										
1	DRILL COLLAR - NON MAG				6 3/4	3.25	30.87	72.12		0	GORDON										
1	SUB - UBHO				6 1/2	2.63	2.66	41.25		0	GORDON										
1	STABILIZER				6.8	2.88	5.32	38.59		0	DRILLING TOOLS INTERNATIONAL										
1	MOTOR - STABILIZER SLEEVE				6 3/4	2.50	32.27	33.27		0	PHOENIX										
Mud Motors																					
SN		Bend Angle		Bearing Type		Lobe Config		# Stages		Lwr Defln Type		Bit To Bend									
24X675248-PTS		2		SEALED		7:8		5.7				5.27									
Sensors																					
Sensor Type				Sensor-Bit (ft)				Note													
GAMMA				47.98																	
DIRECTIONAL				60.00																	
Drilling Parameters																					
Start Time	End Time	Start Depth (ftKB)	Int Depth (ft)	Int ROP (ft/hr)	WOB (1000lbf)	RPM (rpm)	dP (SPP) (psi)	Q Flow (gpm)	SPP (psi)	ROP Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)				
06:00	06:15	20,456.0	0.00		0	60	0.0	600	5,100.0	0.0	190	255	100	190	0.0	0.0	0				
Hydraulic Calculations																					
Dens Mud (lb/gal)		ECD End (lb/gal)		Bit Hydraulic Power (hp)		HP/Area (hp/in²)		Jet Vel (ft/s)		Bit dP (psi)		Min Open Hole AV (ft/min)		Max Open Hole AV (ft/min)		Vol DrillString (bbl)		Vol Bit to Shoe (bbl)		Vol Shoe to Top (bbl)	
9.50		10.62		180.2		3.2		244.6		514.9		16.8		565.4		362.58		619.51		356.45	
Mud Checks																					
Time 23:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE		Depth (ftKB) 20,456.0		Density (lb/gal) 9.70		Funnel Viscosity (s/qt) 70		T Flowline (°F) 70.0							
PV (cP) 21.0		YP (lb/100ft²) 13.000		Vis 3rpm 8		Vis 6rpm 9		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 16.0		HTHP Temperature (°F) 250.0		HTHP Pressure (psi) 500.0							
Solids (%) 13.5				Low Gravity Solids (%) 8.2		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)									
Chlorides (ppm) 37,000,000.000				Calcium (ppm) 3,400,000.000		CaCl (ppm)		Oil Water Ratio 71.7/28.3		Electric Stab (V) 652.0		Lime (lb/bbl) 4.3		pH							
Gel 10 sec (lb/100ft²) 11.000						Gel 10 min (lb/100ft²) 18.000						Gel 30 min (lb/100ft²) 24.000									
Comment																					
WELL MATERIALS COST																					
DAILY COST \$ \$9,996.77																					
TOTAL WELL COST \$ \$102,957.14																					
RECOMMENDED FLUIDS TREATMENT DRILLING FLUIDS ACTIVITY LAST 24 HRS																					
No treatment at this time. Maintain 9.6 ppg, and volume in pits while tripping out and RIH with casing building 500 bbls Gel Mud in premix. Will be transferring this to frac farm for use on the 1H Intermediate.																					
WELL VOLUMES RECAP																					
Daily Diesel Used 3,150 GAL																					
Cumulative Diesel Used 38,516 GAL																					
Daily OBM Surface Losses 22 BBL																					
Daily OBM Downhole Losses BBL																					
Cumulative OBM Surface Losses 1,247 BBL																					
Cumulative OBM Downhole Losses BBL																					
OBM Volume Accounting 2,800 BBL																					
Total OBM Received BBL																					
Total OBM on Location 2,800 BBL																					
Daily Water Used 34 BBL																					
Cumulative Water Used 319 BBL																					
RIG ACTIVITY LAST 24 HOURS																					
TD well at 20,456, maintain mud volume and weight. Finish circulating K&M clean up. Flow check, well static, pump slug and POOH. Lay down BHA and rig up 5.5" production casing, begin RIH with same. ROP 127, WOB 46, RPM 51, Torque 27993, Diff 333, P/U 245 S/O 125 Conn Gas, 247, BG Gas 416, Max Gas 602, Ftg Last 24 - 1966'. Lithology 20300 25% Shale, 75% Limestone.																					

Daily Drilling Report

Last BOP Test									
Date	Test Type		Item Tested		Next Test Date	Com			
12/19/2020	BOP		BOP'S, 12/19/2020 08:30, U		1/9/2021	Full BOP Test			
Leak Off and Formation Integrity Tests									
Test Type			Depth (ftKB)			Dens Fluid (lb/gal)			
FORMATION INTEGRITY			1,037.0			12.49			
FORMATION INTEGRITY			6,902.0			11.03			
Casing Pressure Test									
Test Type		Test Subtype		Date	Item Tested		Failed?	Time (min)	P (psi)
CASING		STANDARD		11/22/2020	SURFACE, 1,037.8ftKB		No	30.00	1,000.0
CASING		STANDARD		12/24/2020	INTERMEDIATE, 6,923.0ftKB		No	30.00	2,500.0
Kick Offs & Key Depths									
Date			Type		Top Depth (ftKB)		Depth Top (TVD) (ftKB)		
12/24/2020 06:00			KICK OFF		7,055.0		7,028.9		
12/24/2020 18:30			HEEL		8,060.0		7,616.4		
12/28/2020 21:15			TOE		20,456.0		7,656.1		
Casing Strings									
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)		
CONDUCTOR	125.0	125.0	20	H40	78.67				
SURFACE	1,037.8	1,037.4	13 3/8	K55	54.50	BTC	672.3		
INTERMEDIATE	6,923.0	6,896.9	9 5/8	L80-IC	40.00	BTC	3,939.0		
Job Supply Amounts									
Supply Item Des		Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL		MUD	GAL	2,799	3,150	0	Mud Diesel	12,279	38,516.0
DIESEL		FUEL	GAL	11,710	1,745	0	Rig Fuel	12,763	24,229.0
WATER		FRESH	BBL	0	0	0	Meter reading 84790	0	8,084.0
Mud Additive Amounts									
Des		Type	Units	Rec	Consumed	On Loc	Cum Cons		
BARITE - BULK		WEIGHTING MATERIAL	CWT	19	19	43.0	49		
BENTONITE - BULK		VISCOSIFIER	TON	20	12	38.56	65		
DRILLPAC LV		FLUID LOSS ADDITIVES	LB		10	145.0	135		
LIGNITE		DISPERSANTS/T HINNER	LB		26	254.0	306		
SODA ASH		ALKALINITY CONTROL	LB		45	190.0	148		
ZINC OXIDE		SPECIALITY	LB		2	154.0	26		
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	Description						Job		
11/10/2020	AS DRILL SURVEY						ODR, 11/10/2020 18:30		
Date	Description						Job		
12/28/2020	FINAL SURVEY								
Daily Contacts									
Job Contact			Title	Office	Mobile	Email			
JACKSON, AUSTIN, ENGINEER			ENGINEER	972-969-5954	469-503-1379	AUSTIN.JACKSON@PXD.COM			
LUTHER, JACKIE, ENGINEER			ENGINEER	972-969-5626	303-512-3803	JACKIE.LUTHER@PXD.COM			
POLYA, JOE, AREA DRILLING SUPERINTENDENT			AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM			
BROWN, DAN, SUPERINTENDENT			SUPERINTENDENT		469-203-9731	DAN.BROWN@PXD.COM			
PARSELL, VIC, SUPERINTENDENT			SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM			
DAFFRON, MIKE, SUPERINTENDENT			SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM			
JACOBS, TUCKER, ENGINEER			ENGINEER	972-444-9001	361-318-6782	TUCKER.JACOBS@PXD.COM			
PEARCE, JIMMY, WELLSITE SUPERVISOR			WELLSITE SUPERVISOR		661-667-7023	JIMMY.PEARCE@PXD.COM			
SENTZ, RON, MUD ENGINEER			MUD ENGINEER		469-585-7376	RON.SENTZ@PXD.COM			
RIG-ENSIGN 133, RIG PHONE			RIG PHONE	432-355-3047	432-530-1214				
Personnel Log									
Company								Count	
PIONEER NATURAL RESOURCES USA INC								3	
ENSIGN ENERGY SERVICES								13	
PHOENIX TECHNOLOGY SERVICES USA INC								2	
GORDON TECHNOLOGIES LLC								1	
STRATAGRAPH INC								1	
SAFETY AUTOMATION TECHNOLOGY LLC								1	
HALLIBURTON ENERGY SERVICES INC								1	
FRANK'S INTERNATIONAL LLC								8	
TENARIS GLOBAL SERVICES USA								2	

Daily Drilling Report

UNIVERSITY 10-11B 2H

ENSIGN - 133
Accept: 12/19/2020 Release:
Days Since LTI: 216.00 Days Since RI: 216.00

PERMIAN - JV SOUTHERN WOLFCAMP
Job: ODR
Report Date: 12/31/2020
Report #: 14
DFS: 13
AFE #: 9009117
Total AFE + Sup: \$2,589,547.90
Daily Field Est. (Cost): \$86,537.49

API/UWI 42-383-40859-0000			Well Profile HORIZONTAL		Open Formation WOLFCAMP A2 (WFMP A2)		Field Name SPRABERRY (TREND AREA)					
SSN ID00017683		Property Sub		KB-Grd (ft) 25.00	Orig KB Elev (ft) 2,668.00	Ground Elevation (ft) 2,643.00	Spud Date 11/10/2020		TD Date 12/28/2020			
Safety Checks												
Time	Type	Des		Tour		Com						
Jobs												
Responsible Grp 2		Responsible Grp 3			Job Type	Start Date		End Date		Job Status		
DRL ENG - JACKIE LUTHER		AREA TEAM 4			ODR	11/10/2020 18:30				IN PROGRESS		
Job Dates (ex. Estimated Pad Release, TXRRC Calls)												
Type				Subtype		Date		Note				
MILESTONE				ESTIMATED PAD RELEASE		1/17/2021		Cementing Prod. on 2nd Well of 3 well pad (Sequential Drilling)				
Daily Operations												
Footage/Meterage (ft) 0.00		Drilling Hours (hr)		% Rotating Time (%)		End Depth (ftKB) 20,456.0		Target Depth (ftKB) 20,467.0		Daily Field Est Total (Cost) 86,537.49	Cum Field Est To Date (Cost) 1,863,169.68	
24 HR ROP (ft/hr)		Circulating Hours (hr)		% Sliding Time (%)		End Depth (TVD) (ftKB) 7,656.1		Target Depth (TVD) (ftKB) 7,648.0		Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost) 128,291.49	Total AFE + Sup (Cost) 2,589,547.90
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 0.0				Daily Goal - Next 24 0.0			Goal Comments Goal Not Met due to NPT	
Backbuild Yes		Lateral Inclination Toe Flat		Last Casing String PRODUCTION, 20,444.0ftKB					Next Casing String PRODUCTION, 20,444.0ftKB			
Avg Connection Gas 500.00		Avg Trip Gas 0.00		Avg Background Gas 80.00		Max Connection Gas 676.00		Max Trip Gas 0.00		Max Drill Gas 689.00		
Operations Summary Run Csg. T/20,444', Rupture Air Lock, Circ. STS, Trouble shoot and wait on replacement pump truck, Cement Prod Csg @ 20,444'												
Operations Next Report Period Cement Prod. Csg. Install Pack-off and BPV, N/D BOP, Install Abandonment Cap, Release rig to University 10-11A 1H												
Operations at Report Time Cement Prod Csg @ 20,444'												
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	7.25	13:15	PROD, CASE & CMT	CSG_W/O ROTATION	NORMAL	Run 5.5" 20# TXP-BTC P-110 IC casing F/12,200' T/20,444' with proper displacement at trip tanks. Land out per Cactus.	20,456.0	20,456.0				
13:15	0.5	13:45	PROD, CASE & CMT	RD_CSG	NORMAL	Rig down Franks CRT	20,456.0	20,456.0				
13:45	0.5	14:15	PROD, CASE & CMT	RU_CMT	NORMAL	Rig up cement head, high pressure lines to standpipe.	20,456.0	20,456.0				
14:15	1.25	15:30	PROD, CASE & CMT	CIRC	NORMAL	Rupture air lock with 1837 psi, burp and fill casing.	20,456.0	20,456.0				
15:30	3.25	18:45	PROD, CASE & CMT	CIRC	NORMAL	Circulate STS at 6 BPM. 9.6 ppg MW In/Out with full returns and RD csg tools.	20,456.0	20,456.0				
18:45	0.25	19:00	PROD, CASE & CMT	SFTY	NORMAL	PJSM on cementing operations.	20,456.0	20,456.0				
19:00	0.25	19:15	PROD, CASE & CMT	RU_CMT	NORMAL	Rig up cement head to cement truck stand pipe.	20,456.0	20,456.0				
19:15	1.25	20:30	PROD, CASE & CMT	CMT	NORMAL	Flush lines to pit. Attempt to test cement pump. Pump would not hold pressure.	20,456.0	20,456.0	1.25	4		
20:30	6.5	03:00	PROD, CASE & CMT	CIRC	NORMAL	Rig up standpipe to cement head and circulate while troubleshooting cement pump and waiting on replacement pump truck. Replacement arrived @ 01:00 hrs, cont. circulating while rigging up and priming up pump truck. Test Pump to 7,500 psi. Test Good.	20,456.0	20,456.0	6.50	4		
03:00	3	06:00	PROD, CASE & CMT	CMT	NORMAL	Cementing 5 1/2" Prod. Csg. per Prog. at report time.	20,456.0	20,456.0				
Interval Problems												
3RD PARTY, 20,456.0ftKB, 12/30/2020 19:15												
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment					
4	7.75	No	CEMENT	SURFACE EQUIPMENT		SCHLUMBERGER TECHNOLOGY CORPORATION	Could not get pump truck to test, had to wait on replacement pump truck to be towed to location. Problem time ended when 2nd pump tested.					
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 10-11B 2H		PERMIAN - JV SOUTHERN WOLFCAMP
ENSIGN - 133		Job: ODR
Accept: 12/19/2020	Release:	Report Date: 12/31/2020
Days Since LTI: 216.00	Days Since RI: 216.00	Report #: 14
		DFS: 13
		AFE #: 9009117
		Total AFE + Sup: \$2,589,547.90
		Daily Field Est. (Cost): \$86,537.49

Mud Checks									
Time 21:00		Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE	Depth (ftKB) 20,456.0	Density (lb/gal) 9.60	Funnel Viscosity (s/qt) 81	T Flowline (°F) 70.0
PV (cP) 20.0	YP (lb/100ft²) 8.000	Vis 3rpm 6	Vis 6rpm 7	Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 16.0	HTHP Temperature (°F) 250.0		HTHP Pressure (psi) 500.0
Solids (%) 13.0		Low Gravity Solids (%) 8.1		Sand (%)		MBT (lb/bbl)		Pm (mL/mL)	Pf (mL/mL)
Chlorides (ppm) 36,500,000.000		Calcium (ppm) 3,400,000.000		CaCl (ppm)	Oil Water Ratio 70.7/29.3	Electric Stab (V) 819.0		Lime (lb/bbl) 4.3	pH
Gel 10 sec (lb/100ft²) 12.000				Gel 10 min (lb/100ft²) 17.000			Gel 30 min (lb/100ft²) 20.000		
Comment DAILY COST \$ \$1,350.00 TOTAL WELL COST \$ \$104,307.14 RECOMMENDED FLUIDS TREATMENT DRILLING FLUIDS ACTIVITY LAST 24 HRS No treatment at this time. Maintain 9.6 ppg, and volume in pits while RIH with casing and circulating. Maintain 9.6 ppg MW and volume in pits while running 5.5" production casing and circulating. 87 bbls 'left in hole' is for volume of air in casing that was present at last report. 182 bbls lost to formation running casing.									
WELL VOLUMES RECAP Daily Diesel Used 2,882 GAL Cumulative Diesel Used 41,398 GAL Daily OBM Surface Losses 9 BBL Daily OBM Downhole Losses 269 BBL Cumulative OBM Surface Losses 1,256 BBL Cumulative OBM Downhole Losses 269 BBL OBM Volume Accounting 2,591 BBL Total OBM Received BBL Total OBM on Location 2,591 BBL Daily Water Used BBL Cumulative Water Used 319 BBL RIG ACTIVITY LAST 24 HOURS Run 5.5" production casing to setting depth of 20,444'. Rupture disk, circulate hole volume. Rig up cement crew, hold PJSM, pressure test lines, could not get pressure test. Circulate and wait on Schlumberger. Max gas while circulating 141u.									
Last BOP Test									
Date	Test Type			Item Tested		Next Test Date	Com		
12/19/2020	BOP			BOP'S, 12/19/2020 08:30, U		1/9/2021	Full BOP Test		
Leak Off and Formation Integrity Tests									
Test Type				Depth (ftKB)			Dens Fluid (lb/gal)		
FORMATION INTEGRITY				1,037.0			12.49		
FORMATION INTEGRITY				6,902.0			11.03		
Casing Pressure Test									
Test Type		Test Subtype			Date	Item Tested		Failed?	Time (min) P (psi)
CASING		STANDARD			11/22/2020	SURFACE, 1,037.8ftKB		No	30.00 1,000.0
CASING		STANDARD			12/24/2020	INTERMEDIATE, 6,923.0ftKB		No	30.00 2,500.0
Kick Offs & Key Depths									
Date			Type			Top Depth (ftKB)		Depth Top (TVD) (ftKB)	
12/24/2020 06:00			KICK OFF			7,055.0		7,028.9	
12/24/2020 18:30			HEEL			8,060.0		7,616.4	
12/28/2020 21:15			TOE			20,456.0		7,656.1	
Casing Strings									
Description	Set Depth (ftKB)	Set Depth (TVD) (ftKB)	OD (in)	Grade	Wt/Len (lb/ft)	Top Thread	P LeakOff (psi)		
CONDUCTOR	125.0	125.0	20	H40	78.67				
SURFACE	1,037.8	1,037.4	13 3/8	K55	54.50	BTC	672.3		
INTERMEDIATE	6,923.0	6,896.9	9 5/8	L80-IC	40.00	BTC	3,939.0		
PRODUCTION	20,444.0	7,655.1	5 1/2	P110-IC	20.00	TXPBTC			
Job Supply Amounts									
Supply Item Des		Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL		MUD	GAL	0	2,882	0	Mud Diesel	9,397	41,398.0
DIESEL		FUEL	GAL	0	1,141	0	Rig Fuel	11,622	25,370.0
WATER		FRESH	BBL	0	0	0	Meter reading 84790	0	8,084.0
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	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 11/10/2020		Description AS DRILL SURVEY					Job ODR, 11/10/2020 18:30		
Date 12/28/2020		Description FINAL SURVEY					Job		
Daily Contacts									
Job Contact			Title	Office	Mobile	Email			
JACKSON, AUSTIN, ENGINEER			ENGINEER	972-969-5954	469-503-1379	AUSTIN.JACKSON@PXD.COM			
LUTHER, JACKIE, ENGINEER			ENGINEER	972-969-5626	303-512-3803	JACKIE.LUTHER@PXD.COM			
HARDIN, JOE, AREA DRILLING SUPERINTENDENT			AREA DRILLING SUPERINTENDENT	361-452-2118	361-318-8762	JOE.HARDIN@PXD.COM			
BROWN, DAN, SUPERINTENDENT			SUPERINTENDENT		469-203-9731	DAN.BROWN@PXD.COM			
PARSELL, VIC, SUPERINTENDENT			SUPERINTENDENT		432-301-2539	VIC.PARSELL@PXD.COM			
Daily Drilling Report					Page 2/3		Printed: Thursday, December 31, 2020		

Daily Drilling Report

ENSIGN - 133

Accept: 12/19/2020	Release:
Days Since LTI: 216.00	Days Since RI: 216.00

PERMIAN - JV SOUTHERN WOLFCAMP	
Job:	ODR
Report Date:	12/31/2020
Report #:	14
DFS:	13
AFE #:	9009117
Total AFE + Sup:	\$2,589,547.90
Daily Field Est. (Cost):	\$86,537.49

Daily Contacts				
Job Contact	Title	Office	Mobile	Email
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-360-4057	318-243-5902	MIKE.DAFFRON@PXD.COM
CARROLL, GRAYSON, FIELD ENGINEER	FIELD ENGINEER		432-215-8655	GRAYSON.CARROLL@PXD.COM
PEARCE, JIMMY, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		661-667-7023	JIMMY.PEARCE@PXD.COM
KEETH, BERNARD, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-850-9583	BERNARD.KEETH@PXD.COM
SENTZ, RON, MUD ENGINEER	MUD ENGINEER		469-585-7376	RON.SENTZ@PXD.COM
RIG-ENSIGN 133, RIG PHONE	RIG PHONE	432-355-3047	432-530-1214	

Personnel Log

Company	Count
PIONEER NATURAL RESOURCES USA INC	3
ENSIGN ENERGY SERVICES	13
PHOENIX TECHNOLOGY SERVICES USA INC	2
GORDON TECHNOLOGIES LLC	1
STRATAGRAPH INC	1
SAFETY AUTOMATION TECHNOLOGY LLC	1
HALLIBURTON ENERGY SERVICES INC	1

Daily Drilling Report

ENSIGN - 133	
Accept: 12/19/2020	Release: 12/31/2020
Days Since LTI: 217.00	Days Since RI: 217.00

PERMIAN - JV SOUTHERN WOLFCAMP	
Job:	ODR
Report Date:	12/31/2020
Report #:	15
DFS:	13
A/E #:	9009117
Total A/E + Sup:	\$2,589,547.90
Daily Field Est. (Cost):	\$136,639.17

Daily Drilling Report Page 1/3 Printed: Friday, January 1, 2021

Mud Checks																											
Time 03:00		Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE		Depth (ftKB) 20,456.0		Density (lb/gal) 9.60		Funnel Viscosity (s/qt) 81		T Flowline (°F) 70.0														
PV (cP) 20.0		YP (lb/100ft²) 8.000		Vis 3rpm 6		Vis 6rpm 7		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 16.0		HTHP Temperature (°F) 250.0		HTHP Pressure (psi) 500.0													
Solids (%) 13.0				Low Gravity Solids (%) 8.1			Sand (%)			MBT (lb/bbl)			Pm (mL/mL)		Pf (mL/mL)												
Chlorides (ppm) 36,500,000.000				Calcium (ppm) 3,400,000.000			CaCl (ppm)		Oil Water Ratio 70.7/29.3		Electric Stab (V) 819.0			Lime (lb/bbl) 4.3		pH											
Gel 10 sec (lb/100ft²) 12.000							Gel 10 min (lb/100ft²) 17.000					Gel 30 min (lb/100ft²) 20.000															
Comment DAILY COST \$ \$1,350.00 TOTAL WELL COST \$ \$106,507.14 RECOMMENDED FLUIDS TREATMENT DRILLING FLUIDS ACTIVITY LAST 24 HRS No treatment at this time. Transfer OBM to tank farm during cement job. Transfer OBM to tank farm during cement job. Dump spacer contaminated OBM, spacer, and 40 bbls cement. Clean pits. WELL VOLUMES RECAP Daily Diesel Used GAL Cumulative Diesel Used 41,398 GAL Daily OBM Surface Losses 207 BBL Daily OBM Downhole Losses BBL Cumulative OBM Surface Losses 1,463 BBL Cumulative OBM Downhole Losses 269 BBL OBM Volume Accounting 2,384 BBL Total OBM Received BBL Total OBM on Location 2,384 BBL Daily Water Used BBL Cumulative Water Used 319 BBL RIG ACTIVITY LAST 24 HOURS Circulate and wait on Schlumberger. Rig up new cement truck. Pressure test lines, pump cement job with full returns and 40 bbls cement back to surface. Rig down cement crew. Install pack off and BPV, N/D BOP, install abandonment cap, release rig.																											
Last BOP Test																											
Date		Test Type			Item Tested			Next Test Date		Com																	
12/19/2020		BOP			BOP'S, 12/19/2020 08:30, U			1/9/2021		Full BOP Test																	
Leak Off and Formation Integrity Tests																											
Test Type					Depth (ftKB)					Dens Fluid (lb/gal)																	
FORMATION INTEGRITY					1,037.0					12.49																	
FORMATION INTEGRITY					6,902.0					11.03																	
Casing Pressure Test																											
Test Type		Test Subtype			Date			Item Tested			Failed?		Time (min)		P (psi)												
CASING		STANDARD			11/22/2020			SURFACE, 1,037.8ftKB			No		30.00		1,000.0												
CASING		STANDARD			12/24/2020			INTERMEDIATE, 6,923.0ftKB			No		30.00		2,500.0												
Kick Offs & Key Depths																											
Date				Type				Top Depth (ftKB)			Depth Top (TVD) (ftKB)																
12/24/2020 06:00				KICK OFF				7,055.0			7,028.9																
12/24/2020 18:30				HEEL				8,060.0			7,616.4																
12/28/2020 21:15				TOE				20,456.0			7,656.1																
Casing Strings																											
Description		Set Depth (ftKB)		Set Depth (TVD) (ftKB)		OD (in)		Grade		Wt/Len (lb/ft)		Top Thread		P LeakOff (psi)													
CONDUCTOR		125.0		125.0		20		H40		78.67																	
SURFACE		1,037.8		1,037.4		13 3/8		K55		54.50		BTC		672.3													
INTERMEDIATE		6,923.0		6,896.9		9 5/8		L80-IC		40.00		BTC		3,939.0													
PRODUCTION		20,444.0		7,655.1		5 1/2		P110-IC		20.00		TXPBTC															
Cement																											
PRODUCTION CASING CEMENT, Casing, 12/30/2020 19:15																											
Cementing End Date 12/31/2020 07:45		Wellbore ORIGINAL			Technical Result SUCCESS			Comment																			
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?	
				26.9		20,346.0		Yes		Yes		6		4		6		2,090.0		3,550.0		No		No		No	
Cement Fluids																											
Fluid Type MUDPUSH						Estimated Top (ftKB) 26.9		Est Btm (ftKB) 0.0		Class			Yield (ft³/sack)		Density (lb/gal)												
Fluid Type CEMENT						Estimated Top (ftKB) 26.9		Est Btm (ftKB) 6,875.0		Class TXI LITEWEIGHT			Yield (ft³/sack) 2.20		Density (lb/gal) 11.50												
Fluid Type CEMENT						Estimated Top (ftKB) 6,875.0		Est Btm (ftKB) 20,345.9		Class TXI LITEWEIGHT			Yield (ft³/sack) 1.61		Density (lb/gal) 12.50												
Fluid Type DSPLMT						Estimated Top (ftKB) 26.9		Est Btm (ftKB) 20,444.0		Class			Yield (ft³/sack)		Density (lb/gal) 8.34												
Job Supply Amounts																											
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		Note			Cum On Loc		Cum Consumed										
DIESEL		MUD		GAL		0		0		9,397		Transferred to 'UNIVERSITY 10-11A 1H'			0		41,398.0										
DIESEL		FUEL		GAL						11,622		Transferred to 'UNIVERSITY 10-11A 1H'			0		25,370.0										
WATER		FRESH		BBL						0		Transferred to 'UNIVERSITY 10-11A 1H'			0		8,084.0										
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)								
Daily Drilling Report																											

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Printed: Friday, January 1, 2021

Daily Drilling Report

ENSIGN - 133

PERMIAN - JV SOUTHERN WOLFCAMP	
Job:	ODR
Report Date:	12/31/2020
Report #:	15
DFS:	13
AFE #:	9009117
Total AFE + Sup:	\$2,589,547.90
Daily Field Est. (Cost):	\$136,639.17

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