

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021 Release:
Days Since LTI: 461.00 Days Since RI: 461.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/13/2021
Report #: 3
DFS: 1
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$26,009.19

P/I/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			10/5/2021			Drilling Intermediate on well #2 of 3. Estimated pad release 10-5-21. Updated 9/13/21					
Daily Operations															
Footage/Meterage (ft) 10.00		Drilling Hours (hr) 0.50		% Rotating Time (%) 100.00		End Depth (ftKB) 1,321.0		Target Depth (ftKB) 18,616.0		Daily Field Est Total (Cost) 26,009.19		Cum Field Est To Date (Cost) 402,944.52			
24 HR ROP (ft/hr) 20.0		Circulating Hours (hr) 0.50		% Sliding Time (%) 0.00		End Depth (TVD) (ftKB) 1,319.7		Target Depth (TVD) (ftKB) 8,357.8		Daily Mud Field Est (Cost)		Cum Mud Field Est (Cost)		Total AFE + Sup (Cost) 2,725,650.08	
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 0.0				Daily Goal - Next 24 3,500.0				Goal Comments Goal met			
Backbuild		Lateral Inclination		Last Casing String SURFACE, 1,291.2ftKB					Next Casing String PROPOSED INTERMEDIATE, 7,859.0ftKB						
Avg Connection Gas 0.00			Avg Trip Gas 0.00			Avg Background Gas 0.00			Max Connection Gas 0.00			Max Trip Gas 0.00		Max Drill Gas 0.00	
Operations Summary Skid Rig from University 1 32 23H, NU BOP, R/U, Shell Test BOP, P/U BHA, TIH, Slip & Cut, TIH D/O float equipment plus 10'. CBU.															
Operations Next Report Period Perform FIT to 12.5 EMW. Drill intermediate and build to 12° and hold to 5,944'															
Operations at Report Time Circulating for FIT.															
Remarks Surface - 100% Intermediate - 1% Production Curve - 0% Production Lateral - 0%															
Time Log															
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com				Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #		
19:00	0.5	19:30	MOB, RIG UP	SKID	NORMAL	Walk from University 1 32 23H				1,311.0	1,311.0				
19:30	0.25	19:45	MOB, RIG UP	NU_BOPE	NORMAL	Set BOP Stack & Torque QDC				1,311.0	1,311.0				
19:45	0.5	20:15	MOB, RIG UP	RU MIRU	NORMAL	Install Choke line, Mudlines and Flowline				1,311.0	1,311.0				
20:15	2.5	22:45	MOB, RIG UP	TEST_BOPE	NORMAL	Install Test Plug, Full Test with 5" DP onBOP Connections 250 Low/5,000 High, Test choke and floor valves. Test Mudlines Back to Pump 250 Low/5,500 high, Good Test, Remove Test Plug				1,311.0	1,311.0				
22:45	0.25	23:00	INT, PRE DRL	WRBSH	NORMAL	Install Wear Bushing				1,311.0	1,311.0				
23:00	0.25	23:15	INT, PRE DRL	SFTY	NORMAL	PJSM W/Ensign, Phoenix, Gordon and PNR over PU BHA. Discussed Order of Operation, Potential Hazards and Assigned Roles and Responsibilities				1,311.0	1,311.0				
23:15	1	00:15	INT, PRE DRL	PU_ DIR	NORMAL	PU BHA as Directed by Phoenix				1,311.0	1,311.0				
00:15	1	01:15	INT, PRE DRL	HDL_BHA	NORMAL	TIH W/8" DC's & 5" HWDP T/1,035'				1,311.0	1,311.0				
01:15	0.25	01:30	INT, PRE DRL	TIH_ELEV	NORMAL	TIH to 1,169'.				1,311.0	1,311.0				
01:30	1.5	03:00	INT, PRE DRL	SLIP_CUT	NORMAL	Slip and cut drill line.				1,311.0	1,311.0				
03:00	0.5	03:30	INT, PRE DRL	RIG_SVC	NORMAL	Service top drive change oil.				1,311.0	1,311.0				
03:30	0.25	03:45	INT, PRE DRL	HDL_ROTHD	NORMAL	Remove Trip Nipple & Install Rotating Head				1,311.0	1,311.0				
03:45	0.25	04:00	INT, PRE DRL	TIH_ELEV	NORMAL	TIH F/1,169' T/1,248'				1,311.0	1,311.0				
04:00	1	05:00	INT, PRE DRL	DRL_OUT	NORMAL	Drill out FC, shoetrack, and FS, wash ratholeF/ 1,248' T/ 1311'.				1,311.0	1,311.0				
05:00	0.5	05:30	INT, PRE DRL	DRL	NORMAL	Drill 10' new formation T/ 1321'.				1,311.0	1,321.0				
05:30	0.5	06:00	INT, PRE DRL	CIRC	NORMAL	CBU and conditon mud for FIT.				1,321.0	1,321.0				
Drill Strings															
BHA #2 , Intermediate															
Bit Run 2			Drill Bit 12 1/4in, D507VTWSX, 5323231						Bit Type PDC			Make GE/BAKER HUGHES			
Nozzles (1/32") 10/10/10/10/10/10/10/11			Bit Total Fluid Area (nozzles) (in²) 0.78			IADC Bit Dull -----			Hours Drilled By Bit (hr) 0.50			Depth Drilled By Bit (ft) 10.00			
BHA Drilling Time (hr) 0.50			BHA Depth Drilled (ft) 10.00			BHA ROP (ft/hr) 20.0			Depth In (ftKB) 1,311.0			Depth Out (ftKB) 1,321.0			
Drill String Components															
Jts	Item Des				OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make				
7	DRILL PIPE				5	4.27	284.62	1,320.00	5,550.1	30	RIG				
5	HWDP - INTERNALLY COATED				5	3.13	150.74	1,035.38	7,084.8	24	RIG				
Daily Drilling Report															

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Job:	ODR
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ENSIGN - 133	
Accept: 9/12/2021	Release:
Days Since LTI: 462.00	Days Since RI: 462.00

Job:	ODR
Report Date:	9/14/2021
Report #:	4
DFS:	2
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$115,893.75

Daily Drilling Report

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UNIVERSITY 1-32 24H

ENSIGN - 133
Accept: 9/12/2021 Release:
Days Since LTI: 462.00 Days Since RI: 462.00

PERMIAN ASSET TEAM

Job: ODR
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Report #: 4
DFS: 2
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
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Mud Checks

Time 22:00		Mud Company PIONEER DRILLING FLUIDS		Type WATER BASE	Depth (ftKB) 4,400.0	Density (lb/gal) 8.80	Funnel Viscosity (s/qt) 47	T Flowline (°F) 98.0	
PV (cP) 10.0	YP (lb/100ft²) 15.000	Vis 3rpm 13	Vis 6rpm 14	Filtrate (mL/30min) 26.0	HTHP Filtrate (mL/30min)	HTHP Temperature (°F)		HTHP Pressure (psi)	
Solids (%) 5.0		Low Gravity Solids (%) 3.3		Sand (%) 0.1	MBT (lb/bbl) 22.5	Pm (mL/mL) 0.400		Pf (mL/mL)	
Chlorides (mg/L) 22,000		Calcium (mg/L) 560		CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)		Lime (lb/bbl) 0.1	pH 9.5
Gel 10 sec (lb/100ft²) 15.000				Gel 10 min (lb/100ft²) 21.000			Gel 30 min (lb/100ft²) 26.000		

Comment

RECOMMENDED FLUID TREATMENT
Maintain MW at 8.8-9.0 ppg while drilling. Maintain volume and MW with whole fluid dilution from WBM built in premix. Pre-mix mud 1.25 ppb soda ash, 25 ppb Gel, 1.25 ppb PAC, 3.1 ppb Lig, 0.25 ppb Zinc Oxide.

DRILLING FLUID ACTIVITY LAST 24 HRS

Cleaned pits and filled w/ brine. Displaced hole and performed FIT t/ 12.5 ppg EMW. Maintained MW @ 9.8-10.2 while drilling brine section. Received 800 bbls Brine. Built 1,800 bbls WBM to use for displacement. Displaced to WBM @ 4,300' - noted 10% washout. Continue to build pre-mix gel mud and dump/dilute to maintain MW @ 8.8 - 9.0 ppg while drilling.

RIG ACTIVITY LAST 24 HOURS

P/U BHA & TIH t/ 1,169', Drill out shoe track & 10' formation, Circulate, Perform FIT t/ 12.5 ppg EMW, Drill ahead f/ 1,321' t/ 4,545'. Displaced to WBM @ 4,300'. Drilling ahead at time of report.
ROP 220, WOB 30, RPM 60, Torque 15K, Diff 1,000, P/U 200, S/O 180, Conn Gas 45, BG Gas 34, Max Gas 45 units @ 2,850' MD, FTG Last 24 Hrs- 3,234', Lithology at 4,460', 10% SD, 50% SH, 40% LS.

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

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

Kick Offs & Key Depths

Date	Type	Top Depth (ftKB)	Depth Top (TVD) (ftKB)

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

Gas Emissions - Flare

Type	Method	Dur (min)	Amount	Units	Com
FLARE	METERED	1,440.00	0.0	SCF	16635.39

Job Supply Amounts

Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL		3,288			6,330	4,558.0
WATER	FRESH	BBL	4,185	4,185		Meter reading 104705	0	15,157.0

Mud Additive Amounts

Des	Type	Units	Rec	Consumed	On Loc	Cum Cons
BA.BLOWER	MISCELLANEOUS	DAY	1	1	0.0	1
BA.TANK RENTAL	MISCELLANEOUS	DAY	2	2	0.0	2
BCI DEFOAMER G	DEFOAMER	GAL	32	13	19.0	13
BENTONITE - BULK	VISCOSIFIER	CWT	25	19	20.0	19
LIME	ALKALINITY CONTROL	LB	100	10	165.0	10
PALLET	MISCELLANEOUS	EA	14	14	0.0	14
PHPA	VISCOSIFIER	GAL		3	56.0	3
SCALE CHARGE	MISCELLANEOUS	EA	2	2	0.0	2

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Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
SHRINK WRAP	MISCELLANEOUS	EA	13	13	0.0	13	
SODA ASH	ALKALINITY CONTROL	LB	200	29	259.0	29	
TRANSPORTATION	MISCELLANEOUS	EA	1,800	1,800	0.0	1,800	
XANTHAN GUM	VISCOSIFIER	LB		6	69.0	6	
ZINC OXIDE	SPECIALITY	LB		8	64.0	8	
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	3,394.0	17:00	215.0	30	106	95	
1	3,394.0	17:01	240.0	40	141	95	
1	3,394.0	17:02	270.0	50	176	95	
2	3,394.0	17:00	185.0	30	106	95	
2	3,394.0	17:01	215.0	40	141	95	
2	3,394.0	17:02	255.0	50	176	95	
3	3,394.0	17:00	160.0	30	106	95	
3	3,394.0	17:01	200.0	40	141	95	
3	3,394.0	17:02	240.0	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)
1,420.00	4.04	77.09	1,418.41	48.89	12.37	47.37	0.16
1,511.00	4.16	70.73	1,509.18	55.37	14.18	53.61	0.52
1,602.00	4.30	70.32	1,599.93	62.02	16.41	59.94	0.16
1,691.00	4.09	73.98	1,688.69	68.49	18.41	66.13	0.38
1,782.00	3.95	69.62	1,779.47	74.82	20.40	72.19	0.37
1,873.00	4.06	72.50	1,870.25	81.12	22.46	78.20	0.25
1,965.00	4.84	74.30	1,961.97	88.23	24.49	85.05	0.86
2,056.00	6.66	79.20	2,052.51	97.34	26.52	93.93	2.07
2,147.00	7.69	79.06	2,142.79	108.71	28.66	105.09	1.13
2,237.00	9.94	79.93	2,231.73	122.49	31.16	118.65	2.50
2,326.00	11.05	82.46	2,319.24	138.68	33.63	134.67	1.35
2,416.00	12.79	82.71	2,407.29	157.22	36.02	153.10	1.93
2,507.00	12.39	84.14	2,496.10	176.98	38.30	172.80	0.56
2,597.00	12.26	84.16	2,584.03	196.09	40.26	191.92	0.14
2,690.00	12.49	83.64	2,674.87	215.93	42.37	211.73	0.27
2,779.00	12.17	82.92	2,761.82	234.86	44.60	230.61	0.40
2,869.00	11.97	83.80	2,849.83	253.61	46.77	249.30	0.30
2,958.00	11.90	83.17	2,936.90	271.94	48.86	267.59	0.17
3,050.00	11.95	79.51	3,026.92	290.92	51.72	286.37	0.82
3,142.00	11.98	78.75	3,116.92	309.99	55.32	305.10	0.17
3,233.00	11.84	78.41	3,205.96	328.77	59.04	323.51	0.17
3,323.00	12.14	78.82	3,294.00	347.47	62.73	341.84	0.35
3,414.00	11.82	78.08	3,383.02	366.35	66.51	360.34	0.39
3,503.00	11.91	77.57	3,470.11	384.65	70.37	378.23	0.16
3,594.00	12.02	78.31	3,559.14	403.52	74.31	396.68	0.21
3,686.00	12.02	79.16	3,649.12	422.68	78.05	415.47	0.19
3,777.00	11.91	79.74	3,738.14	441.54	81.51	434.02	0.18
3,867.00	11.76	78.80	3,826.23	459.99	84.94	452.15	0.27
3,958.00	11.85	79.99	3,915.30	478.61	88.37	470.45	0.29
4,048.00	11.56	79.51	4,003.43	496.86	91.62	488.42	0.34
4,139.00	11.32	78.30	4,092.63	514.91	95.09	506.13	0.37
4,229.00	11.45	79.08	4,180.85	532.67	98.57	523.55	0.22
4,319.00	11.86	78.77	4,269.00	550.85	102.06	541.39	0.46
4,411.00	11.62	79.20	4,359.07	569.57	105.64	559.77	0.28
4,501.00	11.00	77.18	4,447.33	587.22	109.24	577.04	0.82
4,592.00	11.40	77.16	4,536.59	604.89	113.17	594.28	0.44
4,683.00	11.22	75.42	4,625.83	622.72	117.40	611.61	0.42
4,774.00	11.17	75.47	4,715.09	640.37	121.84	628.71	0.06
4,864.00	12.48	76.25	4,803.18	658.79	126.34	646.60	1.47
4,955.00	11.48	75.76	4,892.20	677.66	130.90	664.93	1.10
5,045.00	10.95	73.66	4,980.48	695.13	135.51	681.81	0.74
5,136.00	11.57	75.33	5,069.73	712.86	140.25	698.93	0.77
5,226.00	13.00	75.99	5,157.67	731.98	144.99	717.49	1.60
5,317.00	12.05	75.63	5,246.50	751.70	149.82	736.62	1.05
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Accept: 9/12/2021 Release:
Days Since LTI: 463.00 Days Since RI: 463.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/15/2021
Report #: 5
DFS: 3
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$96,376.23

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		10/5/2021	Drilling Intermediate on well #2 of 3. Estimated pad release 10-5-21. Updated 9/13/21						
Daily Operations												
Footage/Meterage (ft) 1,561.00		Drilling Hours (hr) 23.00		% Rotating Time (%) 39.13		End Depth (ftKB) 7,040.0		Target Depth (ftKB) 18,616.0	Daily Field Est Total (Cost) 96,376.23	Cum Field Est To Date (Cost) 614,346.36		
24 HR ROP (ft/hr) 67.9		Circulating Hours (hr) 1.00		% Sliding Time (%) 60.87		End Depth (TVD) (ftKB) 6,957.4		Target Depth (TVD) (ftKB) 8,357.8	Daily Mud Field Est (Cost) 14,070.99	Cum Mud Field Est (Cost) 21,397.46		Total AFE + Sup (Cost) 2,725,650.08
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 2,400.0				Daily Goal - Next 24 650.0		Goal Comments Goal not met due to sliding.		
Backbuild No		Lateral Inclination		Last Casing String SURFACE, 1,291.2ftKB				Next Casing String PROPOSED INTERMEDIATE, 7,859.0ftKB				
Avg Connection Gas 223.00		Avg Trip Gas 0.00		Avg Background Gas 346.00		Max Connection Gas 593.00		Max Trip Gas 0.00		Max Drill Gas 572.00		
Operations Summary Drill intermediate to above sprayberry @ 6,113'. CBU. Drill to 7,040'. Last survey: 6,853' 3.21° Inc, 66.14° Azm, 47' B, 25' R Operations Next Report Period Finish drilling to CP (7,800' +/-). CBU x2. TOOH. Ream thru 4,000' to 3,500' for DV tool. TOOH to BHA. Work BHA. Pull WB. R/U and RIH with 9 5/8" casing. Operations at Report Time Drilling int @ 7,040'. Remarks Surface - 100% Intermediate - 90% Production Curve - 0% Production Lateral - 0%												
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	8.75	14:45	INT, DRL	DRL	NORMAL	Drill Int 1 F/ 5,479' T/ 6,113' (634' @ 72.4 ft/hr) with full returns			5,479.0	6,113.0		
14:45	0.5	15:15	INT, DRL	CIRC	NORMAL	CBU above Spraberry. Full returns.			6,113.0	6,113.0		
15:15	1.75	17:00	INT, DRL	DRL	NORMAL	Drill Int 1 F/ 6,113' T/ 6,384' (271' @ 155 ft/hr) with full returns			6,113.0	6,384.0		
17:00	0.5	17:30	INT, DRL	RIG_SVC	NORMAL	Service rig equipment			6,384.0	6,384.0		
17:30	12.5	06:00	INT, DRL	DRL	NORMAL	Drill Int 1 F/ 6,384' T/ 7,040' (656' @ 52.4 ft/hr) with full returns			6,384.0	7,040.0		
Drill Strings												
BHA #2 , Intermediate												
Bit Run 2			Drill Bit 12 1/4in, D507VTWSX, 5323231				Bit Type PDC		Make GE/BAKER HUGHES			
Nozzles (1/32") 10/10/10/10/10/10/10/11			Bit Total Fluid Area (nozzles) (in²) 0.78			IADC Bit Dull -----		Hours Drilled By Bit (hr) 44.50		Depth Drilled By Bit (ft) 5,729.00		
BHA Drilling Time (hr) 44.50			BHA Depth Drilled (ft) 5,729.00			BHA ROP (ft/hr) 128.7		Depth In (ftKB) 1,311.0		Depth Out (ftKB) 7,040.0		
Drill String Components												
Jts	Item Des			OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make		
133	DRILL PIPE			5	4.27	6,004.62	7,040.00	117,090.1	141	RIG		
5	HWDP - INTERNALLY COATED			5	3.13	150.74	1,035.38	7,084.8	24	RIG		
1	DRILLING JARS - HYDRAULIC			6 1/2	2.81	32.04	884.64		17	YELLOW JACKET OILFIELD SERVICES		
12	HWDP - INTERNALLY COATED			5	3.13	365.87	852.60	17,195.9	17	RIG		
1	SUB - XO			7 7/8	2.88	2.63	486.73		0	DRILLING TOOLS INTERNATIONAL		
12	DRILL COLLAR			8	2.88	345.52	484.10		0	RIG		
1	SUB - XO			8 1/8	2.88	1.92	138.58		0	DRILLING TOOLS INTERNATIONAL		
1	SUB - SHOCK			8 1/8	3.50	27.18	136.66		0	COUGAR		
1	DRILL COLLAR - NON MAG			8	3.75	30.62	109.48		0	GORDON		
1	DRILL COLLAR - NON MAG			8	3.75	28.02	78.86		0	GORDON		
1	SUB - UBHO			8	3.50	3.01	50.84		0	GORDON		
1	STABILIZER			8 1/4	2.88	6.55	47.83		0	DRILLING TOOLS INTERNATIONAL		
1	MOTOR - STABILIZER SLEEVE			9	2.88	39.78	41.28		0	PHOENIX		
Mud Motors												
SN	Bend Angle		Bearing Type	Lobe Config		# Stages	Lwr Defin Type		Bit To Bend			
PHX-900024-PTS	1.5		SEALED	7:8		7			6.84			
Sensors												
Sensor Type			Sensor-Bit (ft)				Note					
GAMMA			58.81									
DIRECTIONAL			71.00									
Daily Drilling Report												

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021Release:
Days Since LTI: 463.00Days Since RI: 463.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/15/2021
Report #: 5
DFS: 3
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$96,376.23

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	5,479.0	270.00	180.0	55	60	1,200.0	1,000	3,400.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
07:30	09:15	5,749.0	50.00	28.6	25	0	150.0	1,000	3,400.0	28.6	210	250	175	210	0.0	0.0	20	
09:15	09:30	5,799.0	64.00	256.0	55	60	1,200.0	1,000	3,400.0	256.0	210	250	175	210	23,000.0	6,000.0	0	
09:30	10:45	5,863.0	25.00	20.0	25	0	150.0	1,000	3,400.0	20.0	210	250	175	210	0.0	0.0	20	
10:45	11:00	5,888.0	55.00	220.0	55	60	1,200.0	1,000	3,400.0	220.0	210	250	175	210	23,000.0	6,000.0	0	
11:00	12:15	5,943.0	30.00	24.0	25	0	150.0	1,000	3,400.0	24.0	210	250	175	210	0.0	0.0	0	
12:15	12:30	5,973.0	72.00	288.0	55	60	1,200.0	1,000	3,400.0	288.0	210	250	175	210	23,000.0	6,000.0	0	
12:30	14:30	6,045.0	30.00	15.0	25	0	150.0	1,000	3,400.0	15.0	210	250	175	210	0.0	0.0	20	
14:30	14:45	6,075.0	38.00	152.0	55	60	1,200.0	1,000	3,400.0	152.0	210	250	175	210	23,000.0	6,000.0	0	
14:45	15:15	6,113.0	0.00		0	60	0.0	1,000	3,400.0	0.0	210	250	175	210	0.0	0.0	0	
15:15	16:15	6,113.0	180.00	180.0	55	60	1,200.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
16:15	16:45	6,293.0	10.00	20.0	25	0	150.0	800	2,365.0	20.0	210	280	175	210	0.0	0.0	20	
16:45	17:00	6,303.0	81.00	324.0	55	60	1,075.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
17:00	17:30	6,384.0	0.00		0	20	0.0	800	2,365.0	0.0	210	250	175	210	6,000.0	6,000.0	0	
17:30	17:45	6,384.0	8.00	32.0	55	60	1,065.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
17:45	18:00	6,392.0	8.00	32.0	25	0	200.0	800	2,365.0	20.0	210	280	175	210	0.0	0.0	120	
18:00	19:00	6,400.0	85.00	85.0	55	60	985.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
19:00	19:45	6,485.0	10.00	13.3	15	0	170.0	800	2,365.0	10.0	210	280	175	210	0.0	0.0	120	
19:45	21:45	6,495.0	260.00	130.0	55	60	1,050.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
21:45	23:30	6,755.0	20.00	11.4	15	0	160.0	800	2,365.0	10.0	210	280	175	210	0.0	0.0	120	
23:30	00:00	6,775.0	70.00	140.0	55	60	1,100.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
00:00	01:00	6,845.0	7.00	7.0	15	0	125.0	800	2,365.0	10.0	210	280	175	210	0.0	0.0	150	
01:00	01:45	6,852.0	82.00	109.3	55	60	1,050.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
01:45	05:15	6,934.0	40.00	11.4	15	0	125.0	800	2,365.0	10.0	210	280	175	210	0.0	0.0	150	
05:15	06:00	6,974.0	66.00	88.0	55	60	1,100.0	800	2,365.0	180.0	210	250	175	210	23,000.0	6,000.0	0	
Hydraulic Calculations																		
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)		HP/Area (hp/in²)		Jet Vel (ft/s)		Bit dP (psi)		Min Open Hole AV (ft/min)		Max Open Hole AV (ft/min)		Vol DrillString (bbl)		Vol Bit to Shoe (bbl)		Vol Shoe to Top (bbl)
9.05	9.26	411.0		3.5		327.8		880.7		22.4		283.9		115.87		681.58		166.09

Daily Drilling Report

Mud Checks											
Time 22:00		Mud Company PIONEER DRILLING FLUIDS			Type WATER BASE		Depth (ftKB) 6,755.0		Density (lb/gal) 9.05	Funnel Viscosity (s/qt) 50	T Flowline (°F) 125.0
PV (cP) 11.0	YP (lb/100ft²) 18.000	Vis 3rpm 15	Vis 6rpm 16	Filtrate (mL/30min) 14.4		HTHP Filtrate (mL/30min)		HTHP Temperature (°F)		HTHP Pressure (psi)	
Solids (%) 7.5		Low Gravity Solids (%) 6.6		Sand (%) 0.3		MBT (lb/bbl) 20.0		Pm (mL/mL) 0.500		Pf (mL/mL)	
Chlorides (mg/L) 11,000		Calcium (mg/L) 200		CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)		Lime (lb/bbl) 0.1		pH 10.0	
Gel 10 sec (lb/100ft²) 18.000				Gel 10 min (lb/100ft²) 24.000				Gel 30 min (lb/100ft²) 27.000			
Comment RECOMMENDED FLUID TREATMENT Maintain MW at 8.8-9.0 ppg while drilling. Maintain volume and MW with whole fluid dilution from WBM built in premix. Pre-mix mud 1.6 ppb soda ash, 20 ppb Gel, 1.3 ppb PAC LV, 1.1 ppb Lig, 0.4 ppb Zinc Oxide.											
DRILLING FLUID ACTIVITY LAST 24 HRS Continue to build pre-mix gel mud and dump/dilute to maintain MW @ 8.8 - 9.0 ppg while drilling. Circulated above the Clearfork & Spraberry to lower ECD from cuttings load. Built 2,500 bbls while dumping/diluting and filling fracs to have excess if needed. No flows/losses encountered while drilling.											
RIG ACTIVITY LAST 24 HOURS Drilled ahead f/ 4,545' t/ 5,479', Circulate above Clearfork, Drill t/ 6,113', Circulate above Spraberry, Drill t/ 6,800'. Drilling ahead at time of report. ROP 240, WOB 45, RPM 60, Torque 19K, Diff 900, P/U 260, S/O 200, Conn Gas 223, BG Gas 346, Max Gas 593 units @ 6,200' MD, FTG Last 24 Hrs- 2,255', Lithology at 6,710', 70% SH, 30% LS.											

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

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

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

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

Gas Emissions - Flare					
Type	Method	Dur (min)	Amount	Units	Com
FLARE	METERED	1,440.00	250.51	SCF	16635.39 -16885.9

Job Supply Amounts								
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed
DIESEL	FUEL	GAL	7,404	2,518		TP #66000	11,216	7,076.0
WATER	FRESH	BBL	3,086	3,086		Meter reading 107791	0	18,243.0

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BA.BLOWER	MISCELLANEOUS	DAY	1	1	0.0	2	
BA.TANK RENTAL	MISCELLANEOUS	DAY	2	2	0.0	4	
BENTONITE - BULK	VISCOSIFIER	CWT	23	28	15.0	47	
DRILLPAC LV	FLUID LOSS ADDITIVES	LB		68	65.0	68	
LIGNITE	DISPERSANTS/T HINNER	LB		55	150.0	55	
SCALE CHARGE	MISCELLANEOUS	EA	2	2	0.0	3	
SODA ASH	ALKALINITY CONTROL	LB		82	177.0	111	
TRANSPORTATION	MISCELLANEOUS	EA	1,350	1,350	0.0	2,700	

Daily Drilling Report			Page 3/4	Printed: Wednesday, September 15, 2021
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Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021 Release:

Days Since LTI: 463.00 Days Since RI: 463.00

PERMIAN ASSET TEAM

Job: ODR

Report Date: 9/15/2021

Report #: 5

DFS: 3

AFE #: 9015847

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

Daily Field Est. (Cost): \$96,376.23

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
ZINC OXIDE	SPECIALITY	LB		18	46.0	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 (%)	
1	6,384.0	17:28	370.0	30	106	95	
1	6,384.0	17:29	390.0	40	141	95	
1	6,384.0	17:30	430.0	50	176	95	
2	6,384.0	17:00	360.0	30	106	95	
2	6,384.0	17:01	380.0	40	141	95	
2	6,384.0	17:02	420.0	50	176	95	
3	6,384.0	17:02	340.0	30	106	95	
3	6,384.0	17:03	365.0	40	141	95	
3	6,384.0	17:04	405.0	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)
5,498.00	10.19	71.30	5,423.99	786.22	159.98	770.55	1.45
5,588.00	8.85	69.27	5,512.75	801.04	164.98	784.56	1.53
5,678.00	7.66	68.09	5,601.82	813.86	169.67	796.60	1.34
5,769.00	7.26	65.54	5,692.05	825.53	174.31	807.46	0.57
5,860.00	7.46	66.94	5,782.30	837.03	179.01	818.13	0.30
5,951.00	7.43	66.05	5,872.53	848.66	183.71	828.95	0.13
6,042.00	7.29	60.33	5,962.78	860.03	188.96	839.34	0.82
6,132.00	6.59	57.54	6,052.12	870.44	194.55	848.66	0.86
6,222.00	5.78	54.90	6,141.60	879.58	199.93	856.72	0.95
6,313.00	5.55	55.62	6,232.15	887.99	205.05	864.10	0.26
6,404.00	5.11	54.99	6,322.76	895.91	209.86	871.06	0.49
6,495.00	4.28	57.36	6,413.45	902.93	214.02	877.23	0.94
6,584.00	3.70	55.98	6,502.24	908.78	217.42	882.41	0.66
6,674.00	3.59	56.62	6,592.05	914.17	220.59	887.17	0.13
6,764.00	3.40	60.59	6,681.89	919.41	223.45	891.85	0.34
6,853.00	3.21	66.14	6,770.74	924.42	225.76	896.43	0.42
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)		
268_7_SPBY_L_C1/LOWER SPRABERRY SHALE	-4,280.0		7,071.0				
269_0_DEAN	-4,705.0		7,496.0				
270_0_WFMP_A1	-4,875.0		7,666.0				
271_0_WFMP_A2	-4,970.0		7,761.0				
272_0_WFMP_A3	-5,110.0		7,901.0				
275_0_WFMP_B1	-5,200.0		7,991.0				
276_0_WFMP_B2	-5,250.0		8,041.0				
278_0_WFMP_B3	-5,485.0		8,276.0				
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			
POLYA, JOE, AREA DRILLING SUPERINTENDENT	AREA DRILLING SUPERINTENDENT	432-413-6147	432-352-3155	JOE.POLYA@PXD.COM			
DAFFRON, MIKE, SUPERINTENDENT	SUPERINTENDENT	432-385-9242	318-243-5902	MIKE.DAFFRON@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			
YOUNG, JC, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		662-633-1897	JC.YOUNG@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			
Personnel Log							
Company					Count		
PIONEER NATURAL RESOURCES USA INC					3		
ENSIGN UNITED STATES DRILLING S W INC					14		
PHOENIX TECHNOLOGY SERVICES USA INC					2		
GORDON TECHNOLOGIES LLC					1		
STRATAGRAPH INC					2		
STALLION SOLIDS CONTROL INC					1		
Daily Drilling Report			Page 4/4		Printed: Wednesday, September 15, 2021		

Daily Drilling Report

UNIVERSITY 1-32 24H				PERMIAN ASSET TEAM	
ENSIGN - 133				Job:	ODR
Accept: 9/12/2021		Release:		Report Date:	9/16/2021
Days Since LTI: 464.00		Days Since RI: 464.00		Report #:	6
				DFS:	4
				AFE #:	9015847
				Total AFE + Sup:	\$2,725,650.08
				Daily Field Est. (Cost):	\$85,606.41

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, TXRRC Calls)										
Type			Subtype		Date		Note			
MILESTONE			ESTIMATED PAD RELEASE		10/5/2021		Running Int Csg. on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/3/21. Updated 9/16/21			
Type TXRRC CALL			Subtype CEMENT INT		Date 9/16/2021		Note Kay, Operator #40			
Daily Operations										
Footage/Meterage (ft) 780.00		Drilling Hours (hr) 10.25		% Rotating Time (%) 58.54		End Depth (ftKB) 7,820.0		Target Depth (ftKB) 18,616.0		
								Daily Field Est Total (Cost) 85,606.41		
								Cum Field Est To Date (Cost) 699,952.77		
24 HR ROP (ft/hr) 76.1		Circulating Hours (hr) 4.00		% Sliding Time (%) 41.46		End Depth (TVD) (ftKB) 7,737.3		Target Depth (TVD) (ftKB) 8,357.8		
								Daily Mud Field Est (Cost) 4,661.15		
								Cum Mud Field Est (Cost) 26,058.61		
								Total AFE + Sup (Cost) 2,725,650.08		
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 650.0			Daily Goal - Next 24 0.0		Goal Comments Goal Met	
Backbuild No	Lateral Inclination	Last Casing String SURFACE, 1,291.2ftKB					Next Casing String INTERMEDIATE, 7,804.0ftKB			
Avg Connection Gas 634.00		Avg Trip Gas 33.00		Avg Background Gas 984.00		Max Connection Gas 1,946.00		Max Trip Gas 42.00		
								Max Drill Gas 2,624.00		
Operations Summary Drill 12 1/4" Intermediate to 7,820', ICP, (41.46% Sliding, 12° Tangent Dropped Out, 47' Behind and 1' Right of Plan 2 Line), Pump 2 x Hi-Vis Caliper Sweeps. TOOH T/4,637', Backream 4,637' - 3,581', TOOH to BHA. Work BHA, LD Dir. Tools. Pull WB, R/U Casing Crew										
Operations Next Report Period MU Shoe Track & Test, Run & Land 9 5/8" Int Casing @ 7,804', Circ STS, Cement, Set Packer, LD Landing Jt & Install Packoff, IWB, PU Curve Assy., TIH, Test Casing Above DV Tool, Drill out DV Tool, TIH To TOC, With no HSE										
Operations at Report Time RU Casing Tools										
Remarks Surface - 100% Intermediate - 100% Production Curve - 0% Production Lateral - 0%										
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	10.25	16:15	INT, DRL	DRL	NORMAL	Drill 12 1/4" Int. F/7,040' - 7,820' (ICP), (780' @ 76 ft/hr) with full returns. Tubulars counted prior to section TD, Pason Tally is Correct.	7,040.0	7,820.0		
16:15	0.5	16:45	INT, POST DRL	RIG_SVC	NORMAL	Service rig equipment Note: Circ while performing rig service	7,820.0	7,820.0		
16:45	1.75	18:30	INT, POST DRL	CIRC	NORMAL	Circ and cond hole clean @ 7,820' Pumped 2 Hi-Vis caliper sweeps Calculated 10% OH Washout	7,820.0	7,820.0		
18:30	0.25	18:45	INT, POST DRL	FLOW_CHK	NORMAL	Flow check to trip tanks, well static.	7,820.0	7,820.0		
18:45	2	20:45	INT, POST DRL	TOOH_ELEV	NORMAL	TOOH F/7,820' - 4,637', With no issues, hole taking proper fill from trip tanks.	7,820.0	7,820.0		
20:45	1.75	22:30	INT, POST DRL	TOOH_NONEL EV	NORMAL	Backream F/4,637' - 3,581', With no issues, Full returns.	7,820.0	7,820.0		
22:30	0.25	22:45	INT, POST DRL	FLOW_CHK	NORMAL	Flow check to trip tanks, well static.	7,820.0	7,820.0		
22:45	1.75	00:30	INT, POST DRL	TOOH_ELEV	NORMAL	Pump Slug & TOOH F/3,581' - 1,127', With no issues, hole taking proper fill from trip tanks.	7,820.0	7,820.0		
00:30	0.25	00:45	INT, POST DRL	HDL_ROT HD	NORMAL	Pull Rotating head & Install Trip Nipple	7,820.0	7,820.0		
00:45	0.5	01:15	INT, POST DRL	HDL_BHA	NORMAL	NPT due to (tall) stand of 6 3/4" Dir Tools and Motor being racked in collar finger. Had to move it to rack HWDP	7,820.0	7,820.0	0.50	3
01:15	1.5	02:45	INT, POST DRL	HDL_BHA	NORMAL	TOOH Racking Back HWDP, Jars & 8" DC's	7,820.0	7,820.0		
02:45	0.25	03:00	INT, POST DRL	SFTY	NORMAL	PJSM W/Ensign, Phoenix, Gordon & PNR over Working Dir. Tools. Discussed order of operation, potential hazards and assigned roles and responsibilities.	7,820.0	7,820.0		
03:00	1	04:00	INT, POST DRL	LD_DIR	NORMAL	Pull Thruster & NMDC, B/O NDMC, Retrieve MWD, MU NMDC, Pull Stand, BO UBHO & Rack back stand. LD Stabilizer, Drain MM & Break bit & LD Same Note MM had approx 1/4" axial play and 1/16' radial play	7,820.0	7,820.0		
Daily Drilling Report										
Page 1/4					Printed: Thursday, September 16, 2021					

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 #				
04:00	0.75	04:45	INT, POST DRL	WRBSH	NORMAL	Pull Wear Bushing & Clean Rig Floor				7,820.0	7,820.0						
04:45	0.25	05:00	INT, POST DRL	SFTY	NORMAL	PJSM W/Ensign, Franks & PNR over RU Casing Crew, Discussed order of operation, potential hazards and assigned roles and responsibilities.				7,820.0	7,820.0						
05:00	1	06:00	INT, CASE & CMT	RU_CSG	NORMAL	RU Casing Tools				7,820.0	7,820.0						
Interval Problems																	
RIG, 7,820.0ftKB, 9/16/2021 00:45																	
Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party			Comment								
3	0.50	No	DRILL STRING	HUMAN ERROR		ENSIGN UNITED STATES DRILLING S W INC			NPT due to (tall) stand of 6 3/4" Dir Tools and Motor being racked in collar finger. Had to move it to rack HWDP								
Drill Strings																	
BHA #2 , INTERMEDIATE																	
Bit Run 2				Drill Bit 12 1/4in, D507VTWSX, 5323231				Bit Type PDC		Make GE/BAKER HUGHES							
Nozzles (1/32") 10/10/10/10/10/10/10/11				Bit Total Fluid Area (nozzles) (in²) 0.78		IADC Bit Dull 1-2-BT-S-X-0-NO-TD		Hours Drilled By Bit (hr) 54.75		Depth Drilled By Bit (ft) 6,509.00							
BHA Drilling Time (hr) 54.75				BHA Depth Drilled (ft) 6,509.00		BHA ROP (ft/hr) 118.9		Depth In (ftKB) 1,311.0		Depth Out (ftKB) 7,820.0							
Drill String Components																	
Jts	Item Des				OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make						
150	DRILL PIPE				5	4.27	6,784.62	7,820.00	132,300.1	157	RIG						
5	HWDP - INTERNALLY COATED				5	3.13	150.74	1,035.38	7,084.8	24	RIG						
1	DRILLING JARS - HYDRAULIC				6 1/2	2.81	32.04	884.64		17	YELLOW JACKET OILFIELD SERVICES						
12	HWDP - INTERNALLY COATED				5	3.13	365.87	852.60	17,195.9	17	RIG						
1	SUB - XO				7 7/8	2.88	2.63	486.73		0	DRILLING TOOLS INTERNATIONAL						
12	DRILL COLLAR				8	2.88	345.52	484.10		0	RIG						
1	SUB - XO				8 1/8	2.88	1.92	138.58		0	DRILLING TOOLS INTERNATIONAL						
1	SUB - SHOCK				8 1/8	3.50	27.18	136.66		0	COUGAR						
1	DRILL COLLAR - NON MAG				8	3.75	30.62	109.48		0	GORDON						
1	DRILL COLLAR - NON MAG				8	3.75	28.02	78.86		0	GORDON						
1	SUB - UBHO				8	3.50	3.01	50.84		0	GORDON						
1	STABILIZER				8 1/4	2.88	6.55	47.83		0	DRILLING TOOLS INTERNATIONAL						
1	MOTOR - STABILIZER SLEEVE				9	2.88	39.78	41.28		0	PHOENIX						
Mud Motors																	
SN		Bend Angle		Bearing Type		Lobe Config		# Stages		Lwr Defln Type		Bit To Bend					
PHX-900024-PTS		1.5		SEALED		7:8		7				6.84					
Sensors																	
Sensor Type				Sensor-Bit (ft)				Note									
GAMMA				58.81													
DIRECTIONAL				71.00													
Drilling Parameters																	
Start Time	End Time	Start Depth (ftKB)	Int Depth (ft)	Int ROP (ft/hr)	WOB (1000lbf)	RPM (rpm)	dP (SPP) (psi)	Q Flow (gpm)	SPP (psi)	ROP Average (ft/hr)	Drill Str Wt (1000lbf)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Off-Btm Str Wt (1000lbf)	Drill Tq	Off Btm Tq	TFO (°)
06:00	09:00	7,040.0	40.00	13.3	20	0	100.0	800	2,525.0	13.3	210	260	200	210	0.0	0.0	180
09:00	11:00	7,080.0	207.00	103.5	48	60	1,025.0	800	2,525.0	76.0	210	260	200	210	22,000.0	7,000.0	0
11:00	12:15	7,287.0	15.00	12.0	20	0	100.0	800	2,525.0	12.0	210	260	200	210	0.0	0.0	220
12:15	16:15	7,302.0	518.00	129.5	48	60	885.0	800	2,525.0	129.5	210	260	200	210	22,000.0	7,000.0	0
16:15	18:30	7,820.0	0.00		0	60	0.0	740	2,350.0	0.0	210	260	200	210	9,000.0	9,000.0	0
20:45	22:30	7,820.0	0.00		0	60	0.0	740	2,350.0	0.0	210	260	200	210	0.0	8,000.0	0
Hydraulic Calculations																	
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)		HP/Area (hp/in²)		Jet Vel (ft/s)		Bit dP (psi)		Min Open Hole AV (ft/min)		Max Open Hole AV (ft/min)		Vol DrillString (bbl)	Vol Bit to Shoe (bbl)	Vol Shoe to Top (bbl)	
9.05	9.26	325.3		2.8		303.2		753.5		20.7		262.6		129.68	776.34	166.09	

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021 Release:
Days Since LTI: 464.00 Days Since RI: 464.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/16/2021
Report #: 6
DFS: 4
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$85,606.41

Mud Checks									
Time 23:00		Mud Company PIONEER DRILLING FLUIDS			Type WATER BASE	Depth (ftKB) 7,820.0	Density (lb/gal) 9.20	Funnel Viscosity (s/qt) 48	T Flowline (°F) 125.0
PV (cP) 12.0	YP (lb/100ft²) 20.000	Vis 3rpm 14	Vis 6rpm 16	Filtrate (mL/30min) 13.2		HTHP Filtrate (mL/30min)		HTHP Temperature (°F)	
Solids (%) 8.5		Low Gravity Solids (%) 7.3		Sand (%) 0.3		MBT (lb/bbl) 17.5		Pm (mL/mL) 0.400	
Chlorides (mg/L) 16,000		Calcium (mg/L) 200		CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)		Lime (lb/bbl) 0.1	pH 10.0
Gel 10 sec (lb/100ft²) 18.000				Gel 10 min (lb/100ft²) 22.000			Gel 30 min (lb/100ft²) 16.000		
Comment RECOMMENDED FLUID TREATMENT Maintain MW at 8.8-9.0 ppg while drilling. Increased MW t/ 9.2 ppg prior to TOO. Maintain volume and MW with whole fluid dilution from WBM built in premix. Pre -mix mud 1.6 ppb soda ash, 20 ppb Gel, 1.3 ppb PAC LV, 1.1 ppb Lig, 0.4 ppb Zinc Oxide.									
DRILLING FLUID ACTIVITY LAST 24 HRS Continue to build pre-mix gel mud and dump/dilute to maintain MW @ 8.8 - 9.0 ppg while drilling. Let MW increase t/ 9.2 ppg prior to TOO. Circulated caliper sweeps and noted 10% washout. Performed flow check - well static. Maintaining 9.2 ppg while TOO & Reaming.									
RIG ACTIVITY LAST 24 HOURS Drilled ahead f/ 6,800' t/ TD @ 7,820', Circulate sweeps, Flow check - well static, TOO f/ 7,820' t/ 4,637, Back reaming through area where DV tool & Packer will be at time of report. ROP 145, WOB 45, RPM 60, Torque 18K, Diff 700, P/U 260, S/O 200, Conn Gas 634, BG Gas 984, Max Gas 2,624 units @ 7,780' MD, FTG Last 24 Hrs- 1,020', Lithology at 7,820', 75% SH, 20% LS, 5% SD.									
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		
Casing Pressure Test									
Test Type		Test Subtype			Date		Item Tested		Failed?
CASING		STANDARD			8/23/2021		SURFACE, 1,291.2ftKB		No
Kick Offs & Key Depths									
Date				Type		Top Depth (ftKB)		Depth Top (TVD) (ftKB)	
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
Gas Emissions - Flare									
Type	Method	Dur (min)	Amount		Units	Com			
FLARE	METERED	1,440.00	0.0		MCF	Previous Meter16885.9 Today's Meter 16885.9			
Job Supply Amounts									
Supply Item Des		Type	Unit Label	Received	Consumed	Returned	Note		Cum On Loc
DIESEL		FUEL	GAL	0	2,989	0			8,227
DIESEL		MUD	GAL	0	0	0			10,500
WATER		FRESH	BBL	134	134	0	Meter reading 107,925		0
Mud Additive Amounts									
Des		Type	Units		Rec	Consumed	On Loc		Cum Cons
BA.BLOWER		MISCELLANEOUS	DAY		1	1	0.0		3
BA.TANK RENTAL		MISCELLANEOUS	DAY		2	2	0.0		6
BARITE - BULK		WEIGHTING MATERIAL	CWT		0	8	63.0		8
BENTONITE - BULK		VISCOSIFIER	CWT		20	7	28.0		54
DRILLPAC LV		FLUID LOSS ADDITIVES	LB		0	10	55.0		78
LIGNITE		DISPERSANTS/T HINNER	LB		0	20	130.0		75
NUT SHELL		LOST CIRCULATION	LB		0	5	35.0		5
SCALE CHARGE		MISCELLANEOUS	EA		1	1	0.0		4
SODA ASH		ALKALINITY CONTROL	LB		0	20	157.0		131
TRANSPORTATION		MISCELLANEOUS	EA		675	675	0.0		3,375
ZINC OXIDE		SPECIALITY	LB		0	2	44.0		28
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	7,105.0	06:00	250.0	30	106		95		
1	7,105.0	06:01	275.0	40	141		95		
1	7,105.0	06:02	325.0	50	176		95		
2	7,105.0	06:03	250.0	30	106		95		
Daily Drilling Report									

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Printed: Thursday, September 16, 2021

Daily Drilling Report

ENSIGN - 133

Accept: 9/12/2021

Days Since LTI: 464.00

Release:

Days Since RI: 464.00

PERMIAN ASSET TEAM**Job:**

ODR

Report Date:

9/16/2021

Report #:

6

DFS:

4

AFE #:

9015847

Total AFE + Sup:

\$2,725,650.08

Daily Field Est. (Cost):

\$85,606.41

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Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021Release: Days Since LTI: 465.00Days Since RI: 465.00

PERMIAN ASSET TEAM

Job: ODRReport Date: 9/17/2021Report #: 7DFS: 5AFE #: 9015847Total AFE + Sup: \$2,725,650.08Daily Field Est. (Cost): \$413,553.93

P/I/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		10/5/2021		Running Int Csg. on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/3/21. Updated 9/16/21				
Daily Operations										
Footage/Meterage (ft) 0.00	Drilling Hours (hr)	% Rotating Time (%)	End Depth (ftKB) 7,820.0	Target Depth (ftKB) 18,616.0	Daily Field Est Total (Cost) 413,553.93	Cum Field Est To Date (Cost) 1,113,509.38				
24 HR ROP (ft/hr)	Circulating Hours (hr)	% Sliding Time (%)	End Depth (TVD) (ftKB) 7,737.3	Target Depth (TVD) (ftKB) 8,357.8	Daily Mud Field Est (Cost) 4,829.81	Cum Mud Field Est (Cost) 30,888.42	Total AFE + Sup (Cost) 2,725,650.08			
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 0.0		Daily Goal - Next 24 600.0		Goal Comments Ops Goal Not Met, Pump 2nd Stage due to no returns				
Backbuild No	Lateral Inclination	Last Casing String INTERMEDIATE, 7,804.0ftKB			Next Casing String PROPOSED PRODUCTION, 18,616.0ftKB					
Avg Connection Gas 0.00		Avg Trip Gas 28.00		Avg Background Gas 28.00		Max Connection Gas 0.00		Max Trip Gas 33.00	Max Drill Gas 0.00	
Operations Summary MU Shoe Track & Test, Run & Land 9 5/8" Int Casing @ 7,804', Circ Csg. Capacity, Cement Stage 1 W/No Returns, Set Packer, Drop Opening Cone, Pressure Up & Shift DV Tool Open, Circ Bottoms Up, Cement Stage 2, Flush Lines, Install & Test Packoff										
Operations Next Report Period Install Wear Bushing, MU BHA, TIH T/DV Tool, Test Casing, Slip & Cut, C/O Saver Sub, Drill Out DV Tool, TIH, Test Casing, Drill out Shoe Track + 10' New Formation, Circ & FIT to 13.5 ppg EMW, Drill 8 3/4" Prod Curve T/8,420', With No HSE										
Operations at Report Time Install Packoff										
Remarks Surface - 100% Intermediate - 100% Production Curve - 0% Production Lateral - 0%										
Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
06:00	0.25	06:15	INT, CASE & CMT	SFTY	NORMAL	PJSM W/Ensign, Franks & PNR over RIH with 9 5/8" Casing, Discussed order of operation, potential hazards and assigned roles and responsibilities.	7,820.0	7,820.0		
06:15	0.5	06:45	INT, CASE & CMT	MU_SHOE_TR K	NORMAL	M/U 9 5/8" shoe track and test floats	7,820.0	7,820.0		
06:45	3.75	10:30	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	P/U and RIH with 9 5/8" casing T/4,000' with proper displacement	7,820.0	7,820.0		
10:30	3.5	14:00	INT, CASE & CMT	CSG_W/O ROTATION	NORMAL	P/U and RIH with 9 5/8" casing F/ 4,000' T/ 7,804' with partial t no displacement. Had 9.5 ppg coming out of hole cut and maintained 9.1 ppg in pits and in trip tank keeping hole full with trip tank. (Est lost 360 bbls) Note: landed out with 200k on hanger	7,820.0	7,820.0		
14:00	2.75	16:45	INT, CASE & CMT	CIRC	NORMAL	Circulate casing capacity @ 6 bbl/min w/ no returns maintaining hole fill with trip tank on and static. (Est.lost 711 bbls)	7,820.0	7,820.0		
16:45	0.5	17:15	INT, CASE & CMT	RIG_RPR	NORMAL	Troubleshoot and attempt to break out of CRT with TDS. TDS will not spin.	7,820.0	7,820.0	0.50	4
17:15	0.75	18:00	INT, CASE & CMT	RU_CMT	NORMAL	Manually release CRT with rig tongs & RU Schlumberger cement head and iron.	7,820.0	7,820.0		
18:00	0.25	18:15	INT, CASE & CMT	SFTY	NORMAL	PJSM W/Ensign, Schlumberger, Weatherford, Shepherd & PNR on pumping cement job. Discussed order of operation, potential hazards and assigned roles and responsibilities.	7,820.0	7,820.0		
Daily Drilling Report										

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Printed: Friday, September 17, 2021

Daily Drilling Report

UNIVERSITY 1-32 24H	
ENSIGN - 133	
Accept: 9/12/2021	Release:
Days Since LTI: 465.00	Days Since RI: 465.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	9/17/2021
Report #:	7
DFS:	5
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$413,553.93

Time Log										
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com	Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #
18:15	9.75	04:00	INT, CASE & CMT	CMT	NORMAL	<p>Flush 20 bbl to pit & Test lines to 5000 psi, Cement 9 5/8" Intermediate casing per SLB. Performed Stage 1 as follows: 50 bbls of 11.0 ppg MPE, 763 bbl 11.0 ppg lead, 62 bbl 14.8 ppg tail. Drop plug and displaced W/310 bbl H2O followed by 275 bbls of 8.8 gel mud. With trip tank on backside gained 8 bbl throughout entire cement job (No Returns). Final lift 1,170 psi, Bumped plug @ 23:18 9/16/21 to 630 psi over to 1,800 psi. Held 5 mins then pressured up in 200 psi increments @ 1 bbl/min to 2,500 psi, where packer opened, packer set @ 2,390 psi Pressured up to 2,850 and held, bled back to 1,800 psi (2.5 bbl in/2.0 bbl out) Packer took 1/2 bbl to inflate. Bled 4 bbls back. Floats held.</p> <p>(Estimated Losses 1,452 bbl)</p> <p>Dropped opening cone and allowed to fall 30 mins. Pressured up to 880 psi where DV tool opened and established circ with cement pump (10 bbl). Swapped over to Rig and circulated BU @ 8 bbl/min with full returns and no mud push or cement back to surface.</p> <p>Performed Stage 2 as follows: 50 bbls of 11.0 ppg MPE, 374 bbl 11.0 ppg lead, 56 bbl 14.8 ppg tail, Drop plug and displace W/290 bbl FW, With full returns through entire 2nd stage. With 260 bbl Cement returned to surface. Final lift 840 psi. Bumped plug @ 03:53 9/17/21 with 1,430 psi over to 2,270 psi. Held 5 minutes and bled back 3 bbl. DV Tool Closed</p> <p>Note: SLB Cement Uploader unavailable at time of report, due to cementer being from out of district and unfamiliar with Pioneer. Details to follow on next report.</p>	7,820.0	7,820.0		
04:00	0.5	04:30	INT, CASE & CMT	RD_CMT	NORMAL	<p>Flush thru lines and BOP, RD Cement head and lines.</p> <p>Pit cleaners cleaning pits</p>	7,820.0	7,820.0		
04:30	1.5	06:00	INT, CASE & CMT	WH	NORMAL	R/D landing joint. Install pack off and test.	7,820.0	7,820.0		

Interval Problems

RIG, 7,820.0ftKB, 9/16/2021 16:45

Ref #	Dur (N...)	Ex...	Subtype	Problem Descript...	Est Cost OR (Cost)	Accountable Party	Comment
4	0.50	No	ROTARY SYSTEM	TOP DRIVE		ENSIGN UNITED STATES DRILLING S W INC	Troubleshoot and attempt to break out of CRT with TDS. TDS will not spin.

Hydraulic Calculations

[illegible]

Mud Checks

Time 22:00	Mud Company PIONEER DRILLING FLUIDS				Type WATER BASE	Depth (ftKB) 7,820.0	Density (lb/gal) 8.80	Funnel Viscosity (s/qt) 47	T Flowline (°F) 125.0
PV (cP) 10.0	YP (lb/100ft²) 14.000	Vis 3rpm 12	Vis 6rpm 13	Filtrate (mL/30min) 16.8	HTHP Filtrate (mL/30min)		HTHP Temperature (°F)		HTHP Pressure (psi)
Solids (%) 8.0		Low Gravity Solids (%) 6.6		Sand (%) 0.3	MBT (lb/bbl) 15.0		Pm (mL/mL) 0.500		Pf (mL/mL)
Chlorides (mg/L) 15,000		Calcium (mg/L) 200		CaCl (ppm)	Oil Water Ratio 0/100	Electric Stab (V)		Lime (lb/bbl) 0.1	pH 9.5
Gel 10 sec (lb/100ft²) 16.000				Gel 10 min (lb/100ft²) 21.000				Gel 30 min (lb/100ft²) 26.000	

Comment

RECOMMENDED FLUID TREATMENT

Maintain MW @ 9.2 ppg while TOO. Maintain volume and MW with whole fluid dilution from WBM built in premix. Pre-mix mud 1.6 ppb soda ash, 20 ppb Gel, 1.3 ppb PAC LV, 1.1 ppb Lig, 0.4 ppb Zinc Oxide.

DRILLING FLUID ACTIVITY LAST 24 HRS

Maintained 9.2 ppg while TOO & Reaming. Lost displacement running casing @ 4,000', Noted 9.5 ppg coming back - Cut MW back to 9.1 ppg (Lost 360 bbls running casing). Circulated casing w/ no returns (Lost 711 bbls circulating). Built PreMix mud and filled pits w/ 8.8 ppg WBM to use for displacement and circulating after 1st stage. Performing 1st stage cement job at time of report.

RIG ACTIVITY LAST 24 HOURS

Back reaming f/ 4,637' t/ 3,581', Flow check - well static, TOOH & L/D BHA, R/U Casing crew & Run Casing t/ 7,804', Circulate w/ out returns, R/U Cement crew and perform 1st stage cement job at time of report.

ROP 145, WOB 45, RPM 60, Torque 18K, Diff 700, P/U 260, S/O 200, Conn Gas 634, BG Gas 984, Max Gas 2,624 units @ 7,780' MD, FTG Last 24 Hrs- 0', Lithology at 7,820', 75% SH, 20% LS, 5% SD.

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

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021Release: Days Since LTI: 465.00Days Since RI: 465.00

PERMIAN ASSET TEAM

Job: ODR

Report Date: 9/17/2021

Report #: 7

DFS: 5

AFE #: 9015847

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

Daily Field Est. (Cost): \$413,553.93

Leak Off and Formation Integrity Tests										
Test Type			Depth (ftKB)			Dens Fluid (lb/gal)				
FORMATION INTEGRITY			1,321.0			12.50				
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
Kick Offs & Key Depths										
Date			Type			Top Depth (ftKB)		Depth Top (TVD) (ftKB)		
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				
Gas Emissions - Flare										
Type	Method	Dur (min)	Amount	Units	Com					
FLARE	METERED	1,440.00	0.023	MCF	Previous Meter16885.9 Today's Meter 16908.89					
Job Supply Amounts										
Supply Item Des	Type	Unit Label	Received	Consumed	Returned	Note	Cum On Loc	Cum Consumed		
DIESEL	FUEL	GAL	0	947	0		7,280	11,012.0		
WATER	FRESH	BBL	0	0	0	Meter reading 107,925	0	18,377.0		
Mud Additive Amounts										
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons				
BA.BLOWER	MISCELLANEOUS	DAY	1	1	0.0	4				
BA.TANK RENTAL	MISCELLANEOUS	DAY	2	2	0.0	8				
BCI ZC 1500 H2S SCAVENGER	SPECIALTY	DRUM	20	0	26.0	0				
BENTONITE - BULK	VISCOSIFIER	CWT	0	10	18.0	64				
DRILLPAC LV	FLUID LOSS ADDITIVES	LB	0	15	40.0	93				
LIGNITE	DISPERSANTS/T HINNER	LB	0	20	110.0	95				
SODA ASH	ALKALINITY CONTROL	LB	0	32	125.0	163				
ZINC OXIDE	SPECIALITY	LB	0	15	29.0	43				
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				
Formations										
Formation Name			Prog Top (TVD SS) Override (ft(elv))	Prog Top MD (ftKB)	Prog Top (TVD) (ftKB)	Final Top MD (ftKB)	Final Top (TVD) (ftKB)			
271_0_WFMP_A2			-4,970.0		7,761.0					
272_0_WFMP_A3			-5,110.0		7,901.0					
275_0_WFMP_B1			-5,200.0		7,991.0					
276_0_WFMP_B2			-5,250.0		8,041.0					
278_0_WFMP_B3			-5,485.0		8,276.0					
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					
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					
KEETH, BERNARD, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		405-850-9583	BERNARD.KEETH@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					
Personnel Log										
Company								Count		
PIONEER NATURAL RESOURCES USA INC								3		
ENSIGN UNITED STATES DRILLING S W INC								13		
PHOENIX TECHNOLOGY SERVICES USA INC								2		
GORDON TECHNOLOGIES LLC								1		
STRATAGRAPH INC								2		
Daily Drilling Report										

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Printed: Friday, September 17, 2021

Daily Drilling Report

ENSIGN - 133

Accept: 9/12/2021	Release:
Days Since LTI: 465.00	Days Since RI: 465.00

Job:	ODR
Report Date:	9/17/2021
Report #:	7
DFS:	5
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$413,553.93

Personnel Log	
Company	Count
STALLION SOLIDS CONTROL INC	1

Daily Drilling Report

ENSIGN - 133 Accept: 9/12/2021 Release: Days Since LTI: 466.00 Days Since RI: 466.00	
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Job:	ODR
Report Date:	9/18/2021
Report #:	8
DFS:	6
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$119,914.89

Daily Drilling Report

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 (°)		
02:30	03:30	8,175.0	82.00	82.0	52	0	410.0	700	4,000.0	82.0	185	215	175	185	0.0	0.0	310		
03:30	03:45	8,257.0	20.00	80.0	40	30	420.0	700	4,000.0	80.0	185	215	175	185	8,600.0	5,000.0	0		
03:45	04:30	8,277.0	72.00	96.0	52	0	395.0	700	4,000.0	96.0	185	215	175	185	0.0	0.0	320		
04:30	05:00	8,349.0	30.00	60.0	40	30	400.0	700	4,000.0	60.0	185	215	175	185	9,100.0	5,000.0	0		
05:00	06:00	8,379.0	62.00	62.0	52	0	410.0	700	4,000.0	62.0	185	215	175	185	0.0	0.0	340		
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)
11.00		11.27		339.3		5.6		288.8		830.9		19.6		665.1		148.51		31.08	401.83
Mud Checks																			
Time		Mud Company				Type		Depth (ftKB)		Density (lb/gal)		Funnel Viscosity (s/qt)		T Flowline (°F)					
22:00		PIONEER DRILLING FLUIDS				OIL BASE		7,930.0		11.00		68		105.0					
PV (cP)		YP (lb/100ft²)		Vis 3rpm		Vis 6rpm		Filtrate (mL/30min)		HTHP Filtrate (mL/30min)		HTHP Temperature (°F)		HTHP Pressure (psi)					
24.0		14.000		9		10		17.2		200.0		500.0							
Solids (%)				Low Gravity Solids (%)				Sand (%)				MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)			
19.0				10.2															
Chlorides (mg/L)				Calcium (mg/L)				CaCl (ppm)		Oil Water Ratio		Electric Stab (V)		Lime (lb/bbl)		pH			
35,000				8,400				19,000		71.6/28.4		558.0		2.3					
Gel 10 sec (lb/100ft²)						Gel 10 min (lb/100ft²)						Gel 30 min (lb/100ft²)							
14.000						19.000						22.000							
Comment																			
RECOMMENDED FLUIDS TREATMENT																			
Increase MW t/ 11.8 ppg while drilling curve, Diesel - 3.6 bph, Water - 1.4 bph, Additions- Lime - 1.0 ppb, CaCl - 1.0 ppb, Soltex - .3 ppb, Gilsonite .3 ppb, Bentone 990 - .2 ppb, Bentone 910 - .2 ppb, BCI Primary - .3 ppb, BCI Secondary - .3 ppb, BCI Wet - .3 ppb.																			
DRILLING FLUIDS ACTIVITY LAST 24 HRS																			
Performed 2nd stage cement job - noted 260 bbls cement to surface. Cleaned pits and filled w/ 10.7 ppg OBM. Drilled out and displaced t/ OBM. Performed FIT t/ 13.5 ppg EMW. Weighting up active t/ 11.8 ppg while drilling curve. Adding chemicals to increase mud properties in spec and increasing MW t/ 11.8 ppg.																			
RIG ACTIVITY LAST 24 HOURS																			
Cemented 2nd stage - noted 260 bbls cement to surface, P/U Curve BHA and TIH t/ 3,719', C/O Saver sub, Test Casing, D/O DV tool, TIH t/ 7,614', Test Casing. D/O cement, shoe track & 10' formation, Circulate, Perform FIT t/ 13.5 ppg EMW, Drill t/ KOP @ 7,883', Begin building the curve f/ 7,883' t/ 7,950'. Building the curve at time of report.																			
ROP 60, WOB 40, RPM 40, Torque 7K, Diff 360, P/U 215, S/O 175, Conn Gas 102, BG Gas 112, Max Gas 193 units @ 7,887' MD', FTG Last 24 Hrs- 130', Lithology at 7,900', 85% SH, 15% LS.																			
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 20:30						KICK OFF						7,883.0		7,800.3					
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		0.31		MCF		Previous Meter 16908.89 Today's Meter 17218.09									
Job Supply Amounts																			
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		Note				Cum On Loc		Cum Consumed	
DIESEL		FUEL		GAL		0		1,580		0						5,700		12,592.0	
DIESEL		MUD		GAL		0		0		0						10,500		0.0	
WATER		FRESH		BBL		0		0		0		Meter reading 107,925				0		18,377.0	
Mud Additive Amounts																			
Des				Type		Units		Rec		Consumed		On Loc		Cum Cons					
ADDITIONAL RIG BLOWER				MISCELLANEOUS		DAY		1		1		0.0		5					
BA.TANK RENTAL				MISCELLANEOUS		DAY		2		2		0.0		10					
BARITE - BULK				WEIGHTING MATERIAL		CWT		0		5		58.0		13					
BCI OBM PRIMARY				OIL MUD ADDITIVE		GAL		4		1		10.0		1					
Daily Drilling Report																			
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Daily Drilling Report

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
BCI OBM SECONDARY	OIL MUD ADDITIVE	GAL	4	0	11.0	0	
BCI OBM WETTING AGENT	OIL MUD ADDITIVE	GAL	12	1	12.0	1	
CALCIUM CHLORIDE	SALT	LB	200	0	300.0	0	
GILSONITE	FLUID LOSS ADDITIVES	LB	50	0	110.0	0	
LIME	ALKALINITY CONTROL	LB	150	15	300.0	25	
PALLET	MISCELLANEOUS	EA	14	14	0.0	28	
SHRINK WRAP	MISCELLANEOUS	EA	9	9	0.0	22	
SOLTEX	FLUID LOSS ADDITIVES	LB	40	0	80.0	0	
TRANSPORTATION	MISCELLANEOUS	EA	675	675	0.0	4,050	
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	8,349.0	04:30	525.0	30	106	95	
1	8,349.0	04:31	625.0	40	141	95	
1	8,349.0	04:32	750.0	50	176	95	
2	8,349.0	04:33	550.0	30	106	95	
2	8,349.0	04:34	650.0	40	141	95	
2	8,349.0	04:35	750.0	50	176	95	
3	8,349.0	04:36	550.0	30	106	95	
3	8,349.0	04:37	625.0	40	141	95	
3	8,349.0	04:38	750.0	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)
7,826.00	1.12	81.73	7,743.35	-245.04	226.27	921.77	0.35
7,836.00	1.12	65.44	7,753.34	-245.10	226.32	921.95	3.17
7,927.00	6.80	180.81	7,844.14	-240.09	221.30	922.69	8.08
8,017.00	18.05	196.41	7,931.91	-221.25	202.53	918.66	12.93
8,108.00	26.71	198.47	8,015.98	-188.05	169.54	908.18	9.55
8,200.00	35.79	188.56	8,094.60	-141.51	123.20	897.59	11.31
8,292.00	44.22	181.91	8,165.04	-82.62	64.41	892.51	10.26
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)		
278_0_WFMP_B3	-5,485.0		8,276.0				
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			
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			
KEETH, BERNARD, WELLSITE SUPERVISOR	WELLSITE SUPERVISOR		405-850-9583	BERNARD.KEETH@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			
Personnel Log							
Company					Count		
PIONEER NATURAL RESOURCES USA INC					3		
ENSIGN UNITED STATES DRILLING S W INC					13		
PHOENIX TECHNOLOGY SERVICES USA INC					2		
GORDON TECHNOLOGIES LLC					1		
STRATAGRAPH INC					2		
STALLION SOLIDS CONTROL INC					1		
Daily Drilling Report							

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Printed: Saturday, September 18, 2021

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133

Accept: 9/12/2021Release: Days Since LTI: 467.00Days Since RI: 467.00

PERMIAN ASSET TEAM

Job: ODRReport Date: 9/19/2021Report #: 9DFS: 7AFE #: 9015847Total AFE + Sup: \$2,725,650.08Daily Field Est. (Cost): \$109,337.96

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, TXRRRC Calls)										
Type		Subtype		Date		Note				
MILESTONE		ESTIMATED PAD RELEASE		10/3/2021		Drilling Lateral on well #2 of 3 well pad, Sequential Drilling. Estimated pad release 10/3/21. Updated 9/16/21				
Daily Operations										
Footage/Meterage (ft) 632.00	Drilling Hours (hr) 10.50	% Rotating Time (%) 45.24	End Depth (ftKB) 9,073.0	Target Depth (ftKB) 18,616.0	Daily Field Est Total (Cost) 109,337.96	Cum Field Est To Date (Cost) 1,342,591.23				
24 HR ROP (ft/hr) 60.2	Circulating Hours (hr) 3.50	% Sliding Time (%) 54.76	End Depth (TVD) (ftKB) 8,379.8	Target Depth (TVD) (ftKB) 8,357.8	Daily Mud Field Est (Cost) 15,706.34	Cum Mud Field Est (Cost) 49,100.80	Total AFE + Sup (Cost) 2,725,650.08			
Daily Goal Description DRILLED FEET		Daily Goal - Last 24 509.0		Daily Goal - Next 24 3,600.0		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 211.00		Avg Trip Gas 71.00		Avg Background Gas 296.00		Max Connection Gas 357.00		Max Trip Gas 89.00	Max Drill Gas 370.00	
Operations Summary Drill & Land 8 3/4" Prod Curve @ 8,790', Cont Drilling Lateral T/9,073', CBU, TOO H T/7,883', Ream through Curve, CBU, TOO H, LD Curve BHA, PU RSS, Service Rig, TIH T/1,914'										
Operations Next Report Period TIH, Downlink RSS, Drill 8 1/2" Prod Lateral T/12,673', With No HSE										
Operations at Report Time TIH W/RSS @ 1,914'										
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 3%										
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, DRL CURVE	DRL	NORMAL	Drill 8 3/4" Prod Curve F/8,441' - 8,790', (349' @ 63.5 fph), With no issues, Full returns	8,441.0	8,790.0		
11:30	4.75	16:15	PROD, DRL LAT	DRL	NORMAL	Drill 8 3/4" Prod Lateral F/8,790' - 9,073', (283' @ 59.6 fph), With no issues, Full returns	8,790.0	9,073.0		
16:15	0.5	16:45	PROD, DRL LAT	CIRC	NORMAL	Circulate BU Serviced Rig while circulating	9,073.0	9,073.0		
16:45	0.25	17:00	PROD, DRL LAT	FLOW_CHK	NORMAL	Flow check to trip tanks, well static	9,073.0	9,073.0		
17:00	0.75	17:45	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH F/9,073' - 7,883', With no issues, hole taking proper fill from trip tanks	9,073.0	9,073.0		
17:45	2.5	20:15	PROD, DRL LAT	TIH_NONELEV	NORMAL	Ream Through Curve F/7,883' - 9,073' with 693 GPM & 50 RPM @ 650 FPM	9,073.0	9,073.0		
20:15	0.5	20:45	PROD, DRL LAT	CIRC	NORMAL	Circulate BU	9,073.0	9,073.0		
20:45	0.25	21:00	PROD, DRL LAT	FLOW_CHK	NORMAL	Flow check to trip tanks, well static	9,073.0	9,073.0		
21:00	0.5	21:30	PROD, DRL LAT	TOOH_ELEV	NORMAL	Pump Slug & TOO H F/9,073' - 7,762', With no issues, hole taking proper fill from trip tanks	9,073.0	9,073.0		
21:30	0.25	21:45	PROD, DRL LAT	HDL_ROT HD	NORMAL	Pull Rotating Head & Install Trip Nipple	9,073.0	9,073.0		
21:45	2.5	00:15	PROD, DRL LAT	TOOH_ELEV	NORMAL	TOOH F/7,762' - 1,914, With no issues, hole taking proper fill from trip tanks	9,073.0	9,073.0		
00:15	1.25	01:30	PROD, DRL LAT	TRIP_NON_ST 80	NORMAL	TOOH W/Tongs F/1,914' - BHA, Hole taking proper fill from trip tanks Tight Connections	9,073.0	9,073.0		
01:30	0.25	01:45	PROD, DRL LAT	SFTY	NORMAL	PJSM W/Ensign, Phoenix, Gordon & PNR over LD Curve BHA, Discussed order of operation, potential hazards and assigned roles and responsibilities.	9,073.0	9,073.0		
01:45	0.75	02:30	PROD, DRL LAT	LD_DIR	NORMAL	L/D MWD, motor and UBHO. P/U new motor & rack back in derrick. Bit had 2 nozzles plugged with stator rubber	9,073.0	9,073.0		
02:30	0.25	02:45	PROD, DRL LAT	SFTY	NORMAL	PJSM W/Ensign, Phoenix, Gordon & PNR over PU RSS BHA, Discussed order of operation, potential hazards and assigned roles and responsibilities.	9,073.0	9,073.0		
02:45	1.75	04:30	PROD, DRL LAT	PU_DIR	NORMAL	P/U RSS assembly as directed by Phoenix	9,073.0	9,073.0		
04:30	0.5	05:00	PROD, DRL LAT	RIG_SVC	NORMAL	Service Rig & TDS	9,073.0	9,073.0		
05:00	1	06:00	PROD, DRL LAT	TIH_ELEV	NORMAL	TIH W/RSS F/134' - 1,914', With no issues, hole giving proper cslosed end displacement to trip tanks.	9,073.0	9,073.0		
Daily Drilling Report				Page 1/4			Printed: Sunday, September 19, 2021			

Daily Drilling Report

Interval Problems																		
RIG, 9,073.0ftKB, 9/19/2021 00:15																		
Ref #	Dur (N...)	Ex... Ye	Subtype PIPE HANDLING	Problem Descript...	Est Cost OR (Cost)	Accountable Party ENSIGN UNITED STATES DRILLING S W INC				Comment TOOH W/Tongs F/1,914' - BHA, Due to Tight Connections.								
6	4.25	s		PIPE SPINNER														
Drill Strings																		
BHA #3 , PRODUCTION - CURVE																		
Bit Run 3			Drill Bit 8 3/4in, CF611, 56317						Bit Type PDC			Make ULTERRA						
Nozzles (1/32") 13/13/13/13/13/13			Bit Total Fluid Area (nozzles) (in²) 0.78			IADC Bit Dull 2-1-BT-N-X-0-PN-BHA			Hours Drilled By Bit (hr) 20.75			Depth Drilled By Bit (ft) 1,253.00						
BHA Drilling Time (hr) 20.75			BHA Depth Drilled (ft) 1,253.00			BHA ROP (ft/hr) 60.4			Depth In (ftKB) 7,820.0			Depth Out (ftKB) 9,073.0						
Drill String Components																		
Jts	Item Des				OD (in)		ID (in)		Len (ft)		Cum Len (ft)		Wt (lbf)		Cum Wt (1000lbf)		Make	
198	DRILL PIPE - INTERNALLY COATED				5		4.27		8,974.22		9,073.00		200,932.8		211		RIG	
1	DRILL COLLAR - NON MAG				6 1/2		3.25		30.50		98.78		2,580.9		10		GORDON	
1	DRILL COLLAR - NON MAG				6 1/2		3.25		30.57		68.28		2,586.8		7		GORDON	
1	SUB - UBHO				6 1/2		3.25		2.61		37.71		220.9		5		GORDON	
1	MOTOR - TRUE SLICK				7 1/8		1.75		34.10		35.10		4,343.7		4		PHOENIX	
Mud Motors																		
SN			Bend Angle			Bearing Type		Lobe Config			# Stages			Lwr Defin Type			Bit To Bend	
PHX712001			2			SEALED		7:8			8.5						4.11	
Sensors																		
Sensor Type				Sensor-Bit (ft)						Note								
GAMMA				45.73						Mud Pulse								
DIRECTIONAL				57.00						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	06:15	8,441.0	15.00	60.0	40	30	350.0	700	4,050.0	60.0	185	215	160	185	10,000.0	5,000.0	0	
06:15	07:15	8,456.0	44.00	44.0	52	0	400.0	700	3,830.0	44.0	185	215	160	185	0.0	0.0	340	
07:15	08:15	8,500.0	85.00	85.0	40	30	375.0	700	3,830.0	85.0	185	215	160	185	10,000.0	5,000.0	0	
08:15	11:30	8,585.0	205.00	63.1	33	0	400.0	700	3,830.0	63.1	185	215	160	185	0.0	0.0	0	
11:30	13:15	8,790.0	110.00	62.9	40	30	400.0	700	4,080.0	62.9	185	215	160	185	10,000.0	5,000.0	0	
13:15	13:45	8,900.0	25.00	50.0	33	0	400.0	700	4,080.0	50.0	185	215	160	185	0.0	0.0	110	
13:45	14:30	8,925.0	57.00	76.0	40	30	400.0	700	4,250.0	76.0	185	215	160	185	10,000.0	5,000.0	0	
14:30	15:30	8,982.0	22.00	22.0	33	0	400.0	700	4,250.0	22.0	185	215	160	185	0.0	0.0	40	
15:30	16:30	9,004.0	69.00	69.0	40	30	400.0	700	4,250.0	69.0	185	215	160	185	10,000.0	5,000.0	0	
16:30	17:00	9,073.0	0.00		0	0	0.0	700	4,250.0	0.0	185	215	160	185	0.0	0.0	0	
17:45	20:15	9,073.0	0.00		0	50	0.0	700	4,250.0	0.0	185	215	160	185	0.0	5,000.0	0	
20:15	20:45	9,073.0	0.00	0.0	0	20	0.0	700	4,250.0	0.0	185	215	160	185	5,000.0	5,000.0	0	
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)			Depth Drilled By Bit (ft)						
BHA Drilling Time (hr)			BHA Depth Drilled (ft)			BHA ROP (ft/hr)			Depth In (ftKB)			Depth Out (ftKB)						
Drill String Components																		
Jts	Item Des				OD (in)		ID (in)		Len (ft)		Cum Len (ft)		Wt (lbf)		Cum Wt (1000lbf)		Make	
198	DRILL PIPE - INTERNALLY COATED				5		4.27		8,939.27		9,073.00		200,150.3		214		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	
Daily Drilling Report																		
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Printed: Sunday, September 19, 2021																		

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133
Accept: 9/12/2021 Release:
Days Since LTI: 467.00 Days Since RI: 467.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/19/2021
Report #: 9
DFS: 7
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$109,337.96

Sensors										
Sensor Type		Sensor-Bit (ft)				Note				
Gamma		30.56				Mud Pulse				
DIRECTIONAL		36.00				Mud Pulse				
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)
11.00	11.29	339.3	5.6	288.8	830.9	19.6	665.1	159.71	62.73	401.83
Mud Checks										
Time 22:00		Mud Company PIONEER DRILLING FLUIDS			Type OIL BASE		Depth (ftKB) 9,073.0		Density (lb/gal) 11.80	
PV (cP) 28.0		YP (lb/100ft²) 17.000		Vis 3rpm 10		Vis 6rpm 11		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 15.6
Solids (%) 21.5		Low Gravity Solids (%) 9.4			Sand (%)		MBT (lb/bbl)		HTHP Temperature (°F) 200.0	
Chlorides (mg/L) 34,000		Calcium (mg/L) 9,200		CaCl (ppm) 19,000		Oil Water Ratio 70.7/29.3		Electric Stab (V) 551.0		Lime (lb/bbl) 3.0
Gel 10 sec (lb/100ft²) 16.000				Gel 10 min (lb/100ft²) 23.000				Gel 30 min (lb/100ft²) 28.000		
Comment RECOMMENDED FLUIDS TREATMENT Maintain MW @ 11.8 ppg while drilling lateral, Diesel - 4.3 bph, Additions- Lime - 1.0 ppb, CaCl - 1.0 ppb, Soltex - .3 ppb, Gilsonite .3 ppb, BCI Primary - .3 ppb, BCI Secondary - .6 ppb, BCI Wet - .6 ppb. DRILLING FLUIDS ACTIVITY LAST 24 HRS Increased MW in active t/ 11.8 ppg while drilling curve. Adding chemicals to increase mud properties in spec and maintaining MW t/ 11.8 ppg. RIG ACTIVITY LAST 24 HOURS Build the curve f/ 7,950' t/ 8,790' - landed curve, Continued drilling lateral t/ 9,073', Circulate, TOOH t/ 7,893', Ream through curve f/ 7,893' t/ 9,073', Circulate, TOOH t/ P/U lateral BHA at time of report. ROP 70, WOB 42, RPM 30, Torque 10K, Diff 750, P/U 215, S/O 175, Conn Gas 211, BG Gas 296, Max Gas 370 units @ 8,934' MD', FTG Last 24 Hrs- 1,123', Lithology at 9,040', 90% SH, 10% LS.										
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)
CASING		STANDARD			8/23/2021		SURFACE, 1,291.2ftKB		No	30.00
CASING		STANDARD			9/17/2021		INTERMEDIATE, 7,804.0ftKB		No	30.00
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
CONDUCTOR	105.0		105.0		20		H40	78.67		
SURFACE	1,291.2		1,289.9		13 3/8		J55	54.50		BTC
INTERMEDIATE	7,804.0		7,721.3		9 5/8		L80-IC	40.00		BTC
Gas Emissions - Flare										
Type	Method		Dur (min)		Amount		Units	Com		
FLARE	METERED		1,440.00		0.027		MCF	Previous Meter 17218.09 SCF Today's Meter 17245.15 SCF		
Job Supply Amounts										
Supply Item Des		Type	Unit Label	Received	Consumed	Returned	Note		Cum On Loc	Cum Consumed
DIESEL		FUEL	GAL	7,233	2,277	0	64386-R		10,656	14,869.0
DIESEL		MUD	GAL	5,736	2,310	0	65352 - M		13,926	2,310.0
WATER		FRESH	BBL	714	714	0	Meter reading 108,639		0	19,091.0
Mud Additive Amounts										
Des		Type		Units		Rec		Consumed		On Loc
BARITE - BULK		WEIGHTING MATERIAL		CWT		46		54		50.0
BCI OBM PRIMARY		OIL MUD ADDITIVE		GAL		0		1		9.0
BCI OBM SECONDARY		OIL MUD ADDITIVE		GAL		0		2		9.0
BCI OBM WETTING AGENT		OIL MUD ADDITIVE		GAL		0		2		10.0
CALCIUM CHLORIDE		SALT		LB		0		25		275.0
GILSONITE		FLUID LOSS ADDITIVES		LB		0		10		100.0
LIME		ALKALINITY CONTROL		LB		0		30		270.0
SCALE CHARGE		MISCELLANEOUS		EA		2		2		0.0
SOLTEX		FLUID LOSS ADDITIVES		LB		0		10		70.0
TRANSPORTATION		MISCELLANEOUS		EA		1,350		1,350		0.0
Daily Drilling Report					Page 3/4			Printed: Sunday, September 19, 2021		

Daily Drilling Report

ENSIGN - 133

Accept: 9/12/2021	Release:
Days Since LTI: 467.00	Days Since RI: 467.00

Job:	ODR
Report Date:	9/19/2021
Report #:	9
DFS:	7
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$109,337.96

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	
Survey Data - All surveys for 24 hr reporting period							
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8,474.00	61.93	178.94	8,274.51	61.84	-80.07	892.05	10.28
8,565.00	64.38	177.47	8,315.60	142.91	-161.21	894.60	3.05
8,655.00	69.50	177.68	8,350.84	225.53	-243.92	898.10	5.69
8,745.00	84.02	176.56	8,371.40	312.68	-331.18	902.52	16.18
8,835.00	90.64	174.71	8,375.59	402.11	-420.77	909.36	7.64
8,925.00	86.97	177.80	8,377.47	491.73	-510.53	915.24	5.33
9,016.00	90.03	183.31	8,379.85	582.65	-601.45	914.35	6.92
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		
KEETH, BERNARD, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		405-850-9583	BERNARD.KEETH@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		
Personnel Log							
Company						Count	
PIONEER NATURAL RESOURCES USA INC						3	
ENSIGN UNITED STATES DRILLING S W INC						13	
PHOENIX TECHNOLOGY SERVICES USA INC						2	
GORDON TECHNOLOGIES LLC						1	
STRATAGRAPH INC						2	
STALLION SOLIDS CONTROL INC						1	

Daily Drilling Report

ENSIGN - 133	
Accept: 9/12/2021	Release:
Days Since LTI: 468.00	Days Since RI: 468.00

Job:	ODR
Report Date:	9/20/2021
Report #:	10
DFS:	8
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$133,730.28

Daily Drilling Report

Daily Drilling Report

UNIVERSITY 1-32 24H

ENSIGN - 133
Accept: 9/12/2021 Release:
Days Since LTI: 468.00 Days Since RI: 468.00

PERMIAN ASSET TEAM

Job: ODR
Report Date: 9/20/2021
Report #: 10
DFS: 8
AFE #: 9015847
Total AFE + Sup: \$2,725,650.08
Daily Field Est. (Cost): \$133,730.28

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 (°)				
09:15	10:00	9,073.0	0.00		0	20	0.0	620	3,890.0	0.0	185	230	175	185	0.0	0.0	0				
10:00	17:15	9,073.0	1,036.00	142.9	45	120	500.0	620	3,900.0	149.7	185	230	175	185	15,750.0	5,750.0	0				
17:15	17:45	10,109.0	0.00	0.0	0	20	500.0	620	3,900.0	0.0	185	230	175	185	5,750.0	5,750.0	0				
17:45	00:15	10,109.0	816.00	125.5	45	120	375.0	620	3,940.0	125.5	185	230	175	185	16,000.0	6,000.0	0				
00:15	04:15	10,925.0	638.00	159.5	45	120	775.0	620	3,940.0	159.5	185	230	175	185	16,500.0	6,000.0	0				
04:15	04:45	11,563.0	0.00		0	20	0.0	620	3,940.0	0.0	185	230	175	185	6,000.0	6,000.0	0				
04:45	06:00	11,563.0	90.00	72.0	45	120	760.0	620	3,950.0	72.0	185	230	175	185	16,500.0	6,000.0	0				
Hydraulic Calculations																					
Dens Mud (lb/gal)		ECD End (lb/gal)		Bit Hydraulic Power (hp)		HP/Area (hp/in²)		Jet Vel (ft/s)		Bit dP (psi)		Min Open Hole AV (ft/min)		Max Open Hole AV (ft/min)		Vol DrillString (bbl)		Vol Bit to Shoe (bbl)		Vol Shoe to Top (bbl)	
11.80		12.53		367.6		6.5		308.4		1,016.5		17.4		589.1		205.08		191.14		401.83	
Mud Checks																					
Time 22:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE			Depth (ftKB) 10,600.0		Density (lb/gal) 11.80		Funnel Viscosity (s/qt) 60		T Flowline (°F) 145.0						
PV (cP) 26.0		YP (lbf/100ft²) 14.000		Vis 3rpm 10		Vis 6rpm 11		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 14.4		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0							
Solids (%) 21.5				Low Gravity Solids (%) 9.2			Sand (%)			MBT (lb/bbl)		Pm (mL/mL)			Pf (mL/mL)						
Chlorides (mg/L) 35,000			Calcium (mg/L) 9,200			CaCl (ppm) 19,930		Oil Water Ratio 72/28		Electric Stab (V) 613.0			Lime (lb/bbl) 3.1			pH					
Gel 10 sec (lbf/100ft²) 14.000						Gel 10 min (lbf/100ft²) 21.000						Gel 30 min (lbf/100ft²) 26.000									
Comment Maintain MW @ 11.8 ppg while drilling lateral, Diesel – 5.4 bph, Additions- Lime - 1.0 ppb, CaCl - .6 ppb, Soltex - .3 ppb, Gilsonite .3 ppb, BCI Primary - .3 ppb, BCI Secondary - .6 ppb, BCI Wet - .6 ppb. 24Hr ops. TOOH, l/d curve bha, p/up lateral RSS BHA, downlink RSS, w/r 9,073' - 10,700 Drill ahead at report time: ROP 250, wob 45, rpm 120, tq 15k, diiff 690, p/up 225, s/off 160, conn gas 343, bg gas 346, max gas 593 @ 9,979' ftg last 24 hrs 1627 lithology at 10,540' 5% sh, 95% ls.																					
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		0.027		MCF		Previous Meter 17245.15 SCF Todays Meter 17297.01 SCF											
Job Supply Amounts																					
Supply Item Des		Type		Unit Label		Received		Consumed		Returned		Note			Cum On Loc		Cum Consumed				
DIESEL		FUEL		GAL		0				0					10,656		14,869.0				
DIESEL		MUD		GAL		0				0					13,926		2,310.0				
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							
BARITE - BULK				WEIGHTING MATERIAL		CWT		20		15		55.0		81							
BCI OBM PRIMARY				OIL MUD ADDITIVE		GAL		0		1		8.0		3							
BCI OBM SECONDARY				OIL MUD ADDITIVE		GAL		0		1		8.0		3							
BCI OBM WETTING AGENT				OIL MUD ADDITIVE		GAL		0		2		8.0		5							
CALCIUM CHLORIDE				SALT		LB		0		20		255.0		45							
Daily Drilling Report																					
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Printed: Monday, September 20, 2021																					

Daily Drilling Report

ENSIGN - 133

Accept: 9/12/2021	Release:
Days Since LTI: 468.00	Days Since RI: 468.00

Job:	ODR
Report Date:	9/20/2021
Report #:	10
DFS:	8
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$133,730.28

Mud Additive Amounts							
Des	Type	Units	Rec	Consumed	On Loc	Cum Cons	
GILSONITE	FLUID LOSS ADDITIVES	LB	0	10	90.0	20	
LIME	ALKALINITY CONTROL	LB	0	35	235.0	90	
SCALE CHARGE	MISCELLANEOUS	EA	1	1	0.0	7	
SOLTEX	FLUID LOSS ADDITIVES	LB	0	10	60.0	20	
TRANSPORTATION	MISCELLANEOUS	EA	1	1	0.0	5,401	
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	11,563.0	05:00	625.0	30	106	95	
2	11,563.0	05:01	725.0	40	141	95	
2	11,563.0	05:02	825.0	40	141	95	
3	11,563.0	05:03	600.0	30	106	95	
3	11,563.0	05:04	700.0	40	141	95	
3	11,563.0	05:05	800.0	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)
9,164.00	90.15	185.12	8,379.96	730.51	-749.15	905.18	2.69
9,254.00	90.57	186.33	8,379.39	820.22	-838.70	896.20	1.42
9,344.00	89.93	183.65	8,379.00	910.01	-928.35	888.38	3.06
9,435.00	89.51	181.20	8,379.45	1,000.98	-1,019.26	884.53	2.73
9,526.00	88.81	179.91	8,380.78	1,091.97	-1,110.24	883.65	1.61
9,617.00	89.14	180.15	8,382.41	1,182.93	-1,201.23	883.60	0.45
9,708.00	89.17	180.14	8,383.75	1,273.91	-1,292.22	883.37	0.03
9,798.00	89.17	179.58	8,385.05	1,363.88	-1,382.21	883.59	0.62
9,890.00	89.00	179.19	8,386.52	1,455.82	-1,474.19	884.58	0.46
9,980.00	89.39	180.33	8,387.79	1,545.78	-1,564.18	884.95	1.34
10,073.00	89.14	180.01	8,388.98	1,638.76	-1,657.17	884.68	0.44
10,163.00	89.53	180.87	8,390.03	1,728.75	-1,747.16	883.99	1.05
10,252.00	89.11	180.30	8,391.08	1,817.73	-1,836.15	883.08	0.80
10,342.00	89.17	180.20	8,392.43	1,907.71	-1,926.14	882.68	0.13
10,433.00	89.79	180.50	8,393.26	1,998.70	-2,017.13	882.13	0.76
10,525.00	88.81	179.81	8,394.38	2,090.68	-2,109.12	881.88	1.30
10,616.00	88.24	180.40	8,396.73	2,181.63	-2,200.09	881.71	0.90
10,707.00	88.97	182.56	8,398.94	2,272.59	-2,291.03	879.36	2.50
10,797.00	89.11	182.97	8,400.45	2,362.55	-2,380.91	875.02	0.48
10,889.00	88.69	182.62	8,402.21	2,454.49	-2,472.78	870.54	0.59
10,980.00	89.00	182.77	8,404.05	2,545.44	-2,563.66	866.26	0.38
11,071.00	88.41	182.60	8,406.11	2,636.39	-2,654.54	862.00	0.67
11,162.00	89.31	182.76	8,407.92	2,727.34	-2,745.42	857.74	1.00
11,252.00	89.37	182.74	8,408.95	2,817.30	-2,835.31	853.42	0.07
11,342.00	88.69	181.98	8,410.48	2,907.26	-2,925.22	849.72	1.13
11,435.00	88.66	181.44	8,412.63	3,000.23	-3,018.16	846.94	0.58
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		
KEETH, BERNARD, WELLSITE SUPERVISOR		WELLSITE SUPERVISOR		405-850-9583	BERNARD.KEETH@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		
Daily Drilling Report				Page 3/4		Printed: Monday, September 20, 2021	

Daily Drilling Report

UNIVERSITY 1-32 24H	
ENSIGN - 133	
Accept: 9/12/2021	Release:
Days Since LTI: 468.00	Days Since RI: 468.00

PERMIAN ASSET TEAM	
Job:	ODR
Report Date:	9/20/2021
Report #:	10
DFS:	8
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$133,730.28

Personnel Log	
Company	Count
PIONEER NATURAL RESOURCES USA INC	3
ENSIGN UNITED STATES DRILLING S W INC	13
PHOENIX TECHNOLOGY SERVICES USA INC	2
GORDON TECHNOLOGIES LLC	1
STRATAGRAPH INC	2
STALLION SOLIDS CONTROL INC	1

Daily Drilling Report

P/UW/I 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 9/21/21											
Daily Operations																	
Footage/Meterage (ft) 2,717.00		Drilling Hours (hr) 23.00		% Rotating Time (%) 100.00		End Depth (ftKB) 14,370.0		Target Depth (ftKB) 18,616.0		Daily Field Est Total (Cost) 148,775.89		Cum Field Est To Date (Cost) 1,625,111.68					
24 HR ROP (ft/hr) 118.1		Circulating Hours (hr) 1.00		% Sliding Time (%) 0.00		End Depth (TVD) (ftKB) 8,405.4		Target Depth (TVD) (ftKB) 8,357.8		Daily Mud Field Est (Cost) 3,511.24		Cum Mud Field Est (Cost) 59,668.90		Total AFE + Sup (Cost) 2,725,650.08			
Daily Goal Description DRILLED FEET				Daily Goal - Last 24 3,175.0				Daily Goal - Next 24 2,500.0				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 387.00		Avg Trip Gas 0.00		Avg Background Gas 354.00		Max Connection Gas 492.00		Max Trip Gas 0.00		Max Drill Gas 621.00							
Operations Summary TIH, Downlink RSS, Drill 8 1/2" Prod Lateral F/ 11,653 - T/14,370', (0% Sliding RSS, Avg Lateral DLS 1.53°, 4' Low, 11' Left)																	
Operations Next Report Period Drill 8 1/2" Prod Lateral T/ 16,870', With No HSE																	
Operations at Report Time Drill 8 1/2" Prod Lateral @ 14,370'																	
Remarks Surface - 100% Intermediate - 100% Production Curve - 100% Production Lateral - 57%																	
Time Log																	
Start Time	Dur (hr)	End Time	Phase	Operation	Ops Category	Com				Start Depth (ftKB)	End Depth (ftKB)	Prob Hrs (hr)	Prob Ref #				
06:00	11.5	17:30	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 11,653' T/ 13,372', (1,719' @ 149.47 fph), With no issues, Full returns				11,563.0	13,372.0						
17:30	0.5	18:00	PROD, DRL LAT	RIG_SVC	NORMAL	Perform daily rig service. (Grease TDS & Check Fluids)				13,372.0	13,372.0						
18:00	10	04:00	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 13,372' T/ 14,091', (719' @ 71.9 fph), With no issues, Full returns				13,372.0	14,091.0						
04:00	0.5	04:30	PROD, DRL LAT	RIG_SVC	NORMAL	Perform Daily Rig Service (Service Drawworks, tds 11, & IR3080, check in line screen)				14,091.0	14,091.0						
04:30	1.5	06:00	PROD, DRL LAT	DRL	NORMAL	Drill 8 1/2" Lateral with RSS F/ 14,091' T/ 14,370', (279' @ 186 fph), With no issues, Full returns				14,091.0	14,370.0						
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) 42.00		Depth Drilled By Bit (ft) 5,297.00						
BHA Drilling Time (hr) 42.00			BHA Depth Drilled (ft) 5,297.00			BHA ROP (ft/hr) 126.1			Depth In (ftKB) 9,073.0		Depth Out (ftKB) 14,370.0						
Drill String Components																	
Jts	Item Des				OD (in)	ID (in)	Len (ft)	Cum Len (ft)	Wt (lbf)	Cum Wt (1000lbf)	Make						
314	DRILL PIPE - INTERNALLY COATED				5	4.27	14,236.29	14,370.02	318,750.5	332	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	17:30	11,653.0	1,719.00	149.5	45	120	600.0	620	3,975.0	149.5	170	250	135	170	18,000.0	7,000.0	0
17:30	18:00	13,372.0	0.00	0.0	0	20	0.0	620	4,150.0	0.0	170	250	135	170	7,000.0	7,000.0	0
Daily Drilling Report																	
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Printed: Tuesday, September 21, 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 (°)	
18:00	04:00	13,372.0	723.00	72.3	45	120	720.0	612	4,350.0	72.3	170	270	135	170	18,000.0	7,000.0	0	
04:00	04:30	14,095.0	0.00	0.0	0	20	0.0	612	4,350.0	0.0	170	270	135	170	7,000.0	7,000.0	0	
04:30	06:00	14,095.0	275.00	183.3	45	120	585.0	612	4,350.0	183.3	170	270	135	170	18,000.0	7,000.0	0	
Hydraulic Calculations																		
Dens Mud (lb/gal)	ECD End (lb/gal)	Bit Hydraulic Power (hp)		HP/Area (hp/in²)		Jet Vel (ft/s)		Bit dP (psi)		Min Open Hole AV (ft/min)	Max Open Hole AV (ft/min)		Vol DrillString (bbl)		Vol Bit to Shoe (bbl)		Vol Shoe to Top (bbl)	
11.85	12.74	355.1		6.3		304.4		994.6		17.1	698.2		253.21		305.05		401.83	
Mud Checks																		
Time 22:00		Mud Company PIONEER DRILLING FLUIDS				Type OIL BASE		Depth (ftKB) 10,600.0		Density (lb/gal) 11.85		Funnel Viscosity (s/qt) 58		T Flowline (°F) 148.0				
PV (cP) 25.0		YP (lbf/100ft²) 15.000		Vis 3rpm 9		Vis 6rpm 10		Filtrate (mL/30min)		HTHP Filtrate (mL/30min) 13.8		HTHP Temperature (°F) 200.0		HTHP Pressure (psi) 500.0				
Solids (%) 22.0				Low Gravity Solids (%) 2.6			Sand (%)			MBT (lb/bbl)		Pm (mL/mL)		Pf (mL/mL)				
Chlorides (mg/L) 33,000			Calcium (mg/L) 9,200			CaCl (ppm) 20,520		Oil Water Ratio 74.4/25.6			Electric Stab (V) 643.0		Lime (lb/bbl) 3.2			pH		
Gel 10 sec (lbf/100ft²) 15.000						Gel 10 min (lbf/100ft²) 21.000						Gel 30 min (lbf/100ft²) 25.000						
Comment Drilled 8.5" lateral f/ 10,700' t/ 13,770'. Drilling ahead at time of report. ROP 50, WOB 45, RPM 120, Torque 14K, Diff 135, P/U 270, S/O 140, Conn Gas 387, BG Gas 354, Max Gas 621 units @ 13,436' MD, FTG Last 24 Hrs- 3,070', Lithology at 13,720', 60% SH, 40% LS. 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. 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.																		
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		0.016		MCF		Previous Meter 17297.01 SCF Todays Meter 17313.01 SCF								
Job Supply Amounts																		
Supply Item Des				Type	Unit Label	Received	Consumed	Returned	Note				Cum On Loc		Cum Consumed			
DIESEL				FUEL	GAL	7,550	3,238	0					12,382		20,693.0			
DIESEL				MUD	GAL	7,221	5,751	0					12,810		10,647.0			
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		1		7.0		4				
BCI OBM SECONDARY				OIL MUD ADDITIVE		GAL		0		1		7.0		4				
BCI OBM WETTING AGENT				OIL MUD ADDITIVE		GAL		0		1		7.0		6				
CALCIUM CHLORIDE				SALT		LB		0		40		215.0		85				
GILSONITE				FLUID LOSS ADDITIVES		LB		0		10		80.0		30				
LIME				ALKALINITY CONTROL		LB		0		65		170.0		155				
SOLTEX				FLUID LOSS ADDITIVES		LB		0		10		50.0		30				
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	13,372.0		17:30	675.0		30		106				95						
Daily Drilling Report																		
Page 2/3										Printed: Tuesday, September 21, 2021								

Daily Drilling Report

ENSIGN - 133

Accept: 9/12/2021	Release:
Days Since LTI: 469.00	Days Since RI: 469.00

Job:	ODR
Report Date:	9/21/2021
Report #:	11
DFS:	9
AFE #:	9015847
Total AFE + Sup:	\$2,725,650.08
Daily Field Est. (Cost):	\$148,775.89

Pump #	Depth (ftKB)	Time	P (psi)	Strokes (spm)	Q Flow (gpm)	Eff (%)
1	13,372.0	17:31	750.0	40	141	95
1	13,372.0	17:32	850.0	50	176	95
2	13,372.0	17:34	600.0	30	106	95
2	13,372.0	17:35	725.0	40	141	95
2	13,372.0	17:36	825.0	50	176	95
2	14,095.0	04:15	650.0	30	106	95
2	14,095.0	04:16	750.0	40	141	95
2	14,095.0	04:17	850.0	50	176	95
3	14,095.0	04:18	625.0	30	106	95
3	14,095.0	04:19	725.0	40	141	95
3	14,095.0	04:20	825.0	50	176	95

Date	Description	Job
8/22/2021	AS DRILL SURVEY	ODR, 8/22/2021 01:30

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
11,709.00	90.68	181.23	8,415.21	3,274.19	-3,292.02	839.64	0.99
11,799.00	89.65	180.84	8,414.95	3,364.19	-3,382.01	838.02	1.22
11,889.00	91.13	181.84	8,414.33	3,454.18	-3,471.98	835.91	1.98
11,980.00	90.12	180.93	8,413.34	3,545.18	-3,562.94	833.71	1.49
12,070.00	89.98	181.27	8,413.26	3,635.18	-3,652.93	831.98	0.41
12,162.00	88.64	181.11	8,414.37	3,727.17	-3,744.90	830.07	1.47
12,250.00	87.60	180.26	8,417.26	3,815.11	-3,832.84	829.02	1.53
12,341.00	87.85	179.60	8,420.87	3,906.02	-3,923.77	829.13	0.78
12,433.00	90.71	181.95	8,422.03	3,998.00	-4,015.74	827.89	4.02
12,525.00	91.58	182.13	8,420.19	4,089.97	-4,107.66	824.61	0.97
12,617.00	90.82	181.04	8,418.26	4,181.94	-4,199.60	822.07	1.44
12,707.00	89.11	179.78	8,418.32	4,271.93	-4,289.60	821.43	2.36
12,798.00	90.21	180.90	8,418.86	4,362.91	-4,380.59	820.89	1.73
12,887.00	89.56	179.75	8,419.03	4,451.90	-4,469.59	820.38	1.48
12,976.00	88.75	180.04	8,420.35	4,540.87	-4,558.57	820.54	0.97
13,066.00	89.17	180.50	8,421.98	4,630.84	-4,648.56	820.12	0.69
13,156.00	89.79	180.84	8,422.80	4,720.84	-4,738.55	819.07	0.79
13,246.00	90.15	180.97	8,422.84	4,810.83	-4,828.54	817.65	0.43
13,336.00	88.47	179.50	8,423.93	4,900.81	-4,918.52	817.28	2.48
13,426.00	88.75	179.65	8,426.11	4,990.75	-5,008.49	817.94	0.35
13,517.00	90.15	180.49	8,426.98	5,081.72	-5,099.49	817.83	1.79
13,610.00	89.93	180.41	8,426.92	5,174.72	-5,192.48	817.10	0.25
13,698.00	90.46	180.56	8,426.62	5,262.71	-5,280.48	816.36	0.63
13,789.00	90.60	180.22	8,425.78	5,353.70	-5,371.47	815.74	0.40
13,879.00	91.33	179.34	8,424.26	5,443.66	-5,461.46	816.08	1.27
13,970.00	92.64	180.63	8,421.11	5,534.58	-5,552.40	816.11	2.02
14,059.00	92.20	181.06	8,417.35	5,623.50	-5,641.31	814.80	0.69

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		

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

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
STALLION SOLIDS CONTROL INC	1