

SABLE PERMIAN RESOURCES, LLC
Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

Report Date 8/23/2019
Report # 19
Projected Days 22.00
Drilling Days 13.91
Current Depth 18,641
Depth Progress 1,629
Planned VS 15,781
Current VS 10,222
AFE # 1550782
Total AFE 3,640,000

42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS			
Report Summary																	
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 104,105		Cum Field Est (Cost) 2,172,304	
Status at Report Time Drilling 8 3/4 lateral at 18,641 ft																	
Operations Summary 0 HSE Drilled 8 3/4 lateral from 17,012 ft. to 18,522 ft.(1510 ft @ 72.8 fph), shut down for lightening, drilled 8 3/4 lateral from 18,522 ft. to 18,641 ft.(119 ft @ 68 fph), Mud Wt 12.6 ppg, Vis 54 Drilling window: 0' - 15' below, 30' left/right of Plan #1 8-22-2019 23:57 Last survey: 18,483 ft MD Inc 88.45° Azm 1.27°, 10.6 ft Below, 19.7 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)										Planned Operations Drill 8 3/4 lateral as per directional plan to +/- 24,076							
Start MD (ftKB) 17,012				End MD (ftKB) 18,641		Depth Progress (ft) 1,629		Drilling Time (hr) 22.50		Avg ROP (ft/hr) 72.4		Time Since LTI (days) 1,113		Time Since RI (days) 1,113			
Daily Time Log																	
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT			
06:00	17:30	11.50	17,012	17,794	Drilled/slide 8 3/4" lateral hole from 17,012 ft to 17,794 ft (782 ft @ 68 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg New drilling window: 7 above - 7 below, 30' left/right of Plan #1 8-22-2019 17:26 Old drilling window: 0 - 10 below, 30' left/right of Plan #1 8-22-2019 04:38 Old drilling window: 10 - 20 below, 30' left/right of Plan #1. 8-21-2019 13:34 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
17:30	18:00	0.50	17,794	17,794	Rig service				PROD	LAT	DRILL	LUBRICATE RIG		No			
18:00	03:15	9.25	17,794	18,522	Drilled/slide 8 3/4" lateral hole from 17,794 ft to 18,522 ft (728 ft @ 78.7 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg New drilling window: 0' - 15' below, 30' left/right of Plan #1 8-22-2019 23:57 Old drilling window: 7 above - 7 below, 30' left/right of Plan #1 8-22-2019 17:26 Old drilling window: 0 - 10 below, 30' left/right of Plan #1 8-22-2019 04:38 Old drilling window: 10 - 20 below, 30' left/right of Plan #1. 8-21-2019 13:34 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
03:15	04:15	1.00	18,522	18,522	Shut down due to lightening in area				PROD	LAT	DRILL	BOP/OTHER		Yes			
04:15	06:00	1.75	18,522	18,641	Drilled/slide 8 3/4" lateral hole from 18,522 ft to 18,641 ft (119 ft @ 68 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg New drilling window: 0' - 15' below, 30' left/right of Plan #1 8-22-2019 23:57 Old drilling window: 7 above - 7 below, 30' left/right of Plan #1 8-22-2019 17:26 Old drilling window: 0 - 10 below, 30' left/right of Plan #1 8-22-2019 04:38 Old drilling window: 10 - 20 below, 30' left/right of Plan #1. 8-21-2019 13:34 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
Drilling Parameters																	
Start Depth (ftKB)	End Depth (ftKB)	Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq				
17,012	17,042	0.25	0.00	120.0		540	36	600	5,950.0	80	275	0	19,500				
17,042	17,052	0.00	0.50	20.0	0	250	25	600	5,725.0		275	0					
17,052	17,136	0.75	0.00	112.0		516	33	600	6,030.0	80	275	0	19,500				
17,136	17,156	0.00	0.75	26.7	90	100	30	600	5,830.0		275	0					
17,156	17,323	2.00	0.00	83.5		420	32	600	6,025.0	80	275	0	19,500				
17,323	17,348	0.00	1.00	25.0	90	280	36	600	5,930.0		275	0					
17,348	17,511	1.75	0.00	93.1		360	32	600	5,975.0	80	280	0	20,000				
17,511	17,536	0.00	0.50	50.0	-70	211	36	600	6,020.0		280	0					
17,536	17,605	1.00	0.00	69.0		480	36	550	5,445.0	80	280	0	20,000				
17,605	17,623	0.00	0.75	24.0	45	115	37	600	5,750.0		280	0					
17,623	17,699	0.75	0.00	101.3		480	36	550	5,445.0	80	280	0	20,000				
17,699	17,719	0.00	0.75	26.7	0	122	36	600	6,000.0		280	0					
17,719	17,794	0.75	0.00	100.0		480	36	550	5,445.0	80	280	0	20,000				
17,794	18,076	4.00	0.00	70.5		480	35	560	5,780.0	80	290	0	20,500				
18,076	18,101	0.00	0.75	33.3	40	180	30	600	5,985.0		290	0					
18,101	18,264	1.50	0.00	108.7		605	36	570	5,915.0	80	290	0	20,500				
18,264	18,294	0.00	0.75	40.0	90	100	34	590	5,820.0		290	0					
18,294	18,522	2.25	0.00	101.3		550	35	570	5,950.0	80	290	0	20,500				
18,522	18,546	0.25	0.00	96.0		475	32	565	5,850.0	80	290	0	20,500				
18,546	18,574	0.00	1.00	28.0	40	250	48	590	5,900.0		290	0					
18,574	18,641	0.50	0.00	134.0		545	35	590	5,920.0	80	295	0	21,000				
Bit Information																	
Size (in)	Make	Model	Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)			
8 3/4	SMITH	MDi611	PDC	1-1-CT-G-X-0-PN-BHA	7,859	14,403	6,544.00	71.00	92.2	43.00	28.00	127.7	58	251			
8 3/4	ULTERRA	SPL616	PDC	-----	14,403	18,641	4,238.00	48.75	86.9	35.50	13.25	106.4	48	251			
Current BHA Components																	
BHA No	Item Description				Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)				
7	DRILL PIPE				RIG	RIG	5	337	10,611.86	IF							
7	AGITATOR				Impulse	Impulse 1.5" ball activated	6.64		23.55	IF		6.64	1.50				
7	DRILL PIPE				RIG	RIG	5	153	4,806.57	IF							
7	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52				
7	DRILL PIPE				RIG	RIG	5	96	3,011.79	IF							
7	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71					
7	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12				
7	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28				
7	FUSION SPACER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52				
7	MWD - DIRECTIONAL				CATHEDRAL	CATHEDRAL	6 1/2			IF							
7	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6 1/2	1	6.75	IF		6 1/2	1.67				
7	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7					
7	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41				
7	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936					
7	STABILIZER				CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF		6.93	2.00				
7	MUD MOTOR				CATHEDRAL	Claw 250, 1.83° Fixed w/slick sleeve	7.15	1	34.68	IF		7.15					
Mud Reports																	
Time 10:00	Type OIL BASE	Depth (ftKB) 17,267	Density (lb/gal) 12.60	Vis (s/qt) 53	PV Calc (cP) 32.0	YP Calc (lbf/100... 26	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 293,530	OW Ratio 78.2/21.8					
Electric Stab (V) 587.0		Excess Lime (lb/bbl) 0.8	HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 16,862.27		Cum Mud Field Est (Cost) 182,055.17						
Time 22:00	Type OIL BASE	Depth (ftKB) 18,009	Density (lb/gal) 12.60	Vis (s/qt) 58	PV Calc (cP) 34.0	YP Calc (lbf/100... 26	Vis 3rpm 11	Vis 6rpm 14	LGS (%) 3.8	LCM (lb/bbl)	WPS (ppm) 298,932	OW Ratio 77.7/22.3					
Electric Stab (V) 633.0		Excess Lime (lb/bbl) 0.8	HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 16,862.27		Cum Mud Field Est (Cost) 182,055.17						

SABLE PERMIAN RESOURCES, LLC
Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

Report Date 8/24/2019
Report # 20
Projected Days 22.00
Drilling Days 14.91
Current Depth 19,280
Depth Progress 639
Planned VS 15,781
Current VS 10,878
AFE # 1550782
Total AFE 3,640,000

42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS														
Report Summary																												
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 88,103		Cum Field Est (Cost) 2,260,408													
Status at Report Time Broke bit and laying out motor																												
Operations Summary 0 HSE Drilled 8 3/4 lateral from 18,641 ft. to 19,280 ft. (639 ft @ 67.3 fph), Troubleshoot mud motor, circulate bottoms up, T.o.o.h. due to mud motor failure from 19,280 ft. to BHA, broke bit and laying out motor Mud Wt 12.6 ppg, Vis 54 Drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Old drilling window: 0' - 15' below, 30' left/right of Plan #1 8-22-2019 23:57 Last survey: 19,141 ft MD Inc 89.18° Azm 1.65°, OTL ft. Below, 0.9 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)										Planned Operations Pick up 8 3/4" lateral BHA, T.i.h. to casing shoe, slip and cut drill line, Drill 8 3/4 lateral as per directional plan to +/- 24,076																		
Start MD (ftKB) 18,641				End MD (ftKB) 19,280		Depth Progress (ft) 639		Drilling Time (hr) 9.50		Avg ROP (ft/hr) 67.3		Time Since LTI (days) 1,114		Time Since RI (days) 1,114														
Daily Time Log																												
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT														
06:00	15:30	9.50	18,641	19,280	Drilled/slide 8 3/4" lateral hole from 18,641 ft to 19,280 ft (639 ft @ 67.3 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Old drilling window: 0' - 15' below, 30' left/right of Plan #1 8-22-2019 23:57 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No														
15:30	16:30	1.00	19,280	19,280	Troubleshoot pressure loss, while drilling ahead at 19,280 ft. off bottom pressure was 5,500 psi, we lost all differential pressure, picked up off of bottom and checked all surface equipment, all surface equipment tested good, brought pump back up to drilling rate and off bottom pressure was still 5,500 psi, slack off and tag bottom with bit 35k no differential pressure, mud motor drive shaft appeared to be broken.				PROD	LAT	DRILL	3rd PARTY EQUIPMENT REPAIR		Yes														
16:30	19:30	3.00	19,280	19,280	Circulate 2 bottoms up, shakers cleaned up				PROD	LAT	DRILL	CLEANUP CYCLE		Yes														
19:30	20:00	0.50	19,280	19,280	Flow check well, no flow, pump slug.				PROD	LAT	DRILL	BOP/OTHER		Yes														
20:00	05:15	9.25	19,280	19,280	Tripped out of hole due to drive shaft failure in motor f/ 19,280 ft to BHA, (laid 2 joint out below HWDP). Laid down agitators and marked. Removed rotating head, Filled hole continuously from trip tanks. Hole took proper fill.				PROD	LAT	DRILL	TRIPS		Yes														
05:15	06:00	0.75	19,280	19,280	Racked back tools, break bit and laid down motor. No squat, could turned bit box by hand, indication of broken driveshaft.				PROD	LAT	DRILL	P/U & L/D BHA		Yes														
Bit Grade: 1-1-CT-G-X-0-WT-DMF																												
Drilling Parameters																												
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)		Slide Time (hr)		Int ROP (ft/hr)		TFO (°)		dP (SPP) (psi)		WOB (1000lbf)		Q Rate (gpm/cfm)		SPP (psi)		RPM (rpm)		PU Str Wt (1000lbf)		SO Str Wt (1000lbf)		Drill Tq		
18,641		18,670		0.00		1.25		23.2		-115		250		35		590		6,050.0		80		295		0		21,000		
18,670		18,735		0.75		0.00		86.7				450		36		570		5,840.0		80		295		0		21,000		
18,735		18,765		0.00		0.75		40.0		-145		220		39		590		5,920.0				295		0				
18,765		18,923		1.50		0.00		105.3				550		32		570		5,910.0		80		300		0		21,000		
18,923		18,945		0.00		0.75		29.3		-160		205		40		590		5,812.0				300		0				
18,945		19,110		1.75		0.00		94.3				425		30		570		5,780.0		80		300		0		21,000		
19,110		19,140		0.00		0.75		40.0		-160		275		45		590		6,030.0				300		0				
19,140		19,204		0.75		0.00		85.3				385		33		570		5,860.0		80		300		0		21,000		
19,204		19,216		0.00		0.50		24.0		-170		460		40		590		5,927.0				300		0				
19,216		19,280		0.75		0.00		85.3				520		33		570		5,980.0		80		300		0		21,000		
Bit Information																												
Size (in)	Make		Model		Type		Dull Out		Depth In (ftKB)		Depth Out (ftKB)		Depth Drilled This Job (ft)		Job Drill Hrs (hr)		Avg ROP (ft/hr)		Rot Time (hr)		Slide Time (hr)		Rot ROP (ft/hr)		WOB Max (1000lbf)		Max RPM (rpm)	
8 3/4	ULTERRA		SPL616		PDC		1-1-CT-G-X-0-WT-DMF		14,403		19,280		4,877.00		58.25		83.7		41.00		17.25		104.7		48		251	
8 3/4	REED		TKC66 Z1		PDC		-----																					
Current BHA Components																												
BHA No	Item Description						Make		Model		OD (in)		Jts		Length (ft)		Top Thread		Gauge (in)		Fish Neck OD (in)		FN Len (ft)					
8	DRILL PIPE						RIG		RIG		5		357		11,251.00		IF											
8	AGITATOR						Impulse		Impulse 1.5" ball activated		6.64		1		23.55		IF				6.64		1.50					
8	DRILL PIPE						RIG		RIG		5		153		4,806.57		IF											
8	AGITATOR						Impulse		Impulse 1.375" ball activated		6.61		1		17.40		IF				6.61		1.52					
8	DRILL PIPE						RIG		RIG		5		96		3,011.79		IF											
8	DRILL COLLAR - NON MAG						CATHEDRAL		CATHEDRAL		6.71		1		30.26		IF				6.71							
8	DRILL COLLAR - FLEX NON MAG						CATHEDRAL		CATHEDRAL		6.9		1		30.66		IF				6.9		5.12					
8	FUSION PULSER SUB						CATHEDRAL		CATHEDRAL		6.74		1		7.10		IF				6.74		1.28					
8	FUSION SPACER SUB						CATHEDRAL		CATHEDRAL		7		1		5.52		IF				7		1.52					
8	ECM GAP SUB						CATHEDRAL		CATHEDRAL		6.59		1		6.80		IF				6.59		0.96					
8	XO SUB						CATHEDRAL		CATHEDRAL		7		1		3.59		IF				7							
8	DRILL COLLAR - FLEX NON MAG						CATHEDRAL		CATHEDRAL		6.65		1		14.44		IF				6.65		4.41					
8	DRILL COLLAR - NON MAG						CATHEDRAL		CATHEDRAL		6.936		1		30.72		IF				6.936							
8	STABILIZER						CATHEDRAL		CATHEDRAL		7 7/8				5.11		IF				6.93		2.00					
8	MUD MOTOR						CATHEDRAL		Claw 250, 1.83° Fixed w/slick sleeve		7		1		34.49		IF				7							
Mud Reports																												
Time 10:00		Type OIL BASE		Depth (ftKB) 18,905		Density (lb/gal) 12.60		Vis (s/qt) 58		PV Calc (cP) 35.0		YP Calc (lb/100... 24		Vis 3rpm 11		Vis 6rpm 13		LGS (%) 4.9		LCM (lb/bbl)		WPS (ppm) 301,191		OW Ratio 78.2/21.8				
Electric Stab (V) 655.0				Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 3.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,055.21				Cum Mud Field Est (Cost) 185,110.38										
Time 22:00		Type OIL BASE		Depth (ftKB) 19,280		Density (lb/gal) 12.60		Vis (s/qt) 58		PV Calc (cP) 34.0		YP Calc (lb/100... 26		Vis 3rpm 11		Vis 6rpm 14		LGS (%) 4.8		LCM (lb/bbl)		WPS (ppm) 293,530		OW Ratio 78.2/21.8				
Electric Stab (V) 627.0				Excess Lime (lb/bbl) 0.8		HTHP Filtrate (mL/30min) 3.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,055.21				Cum Mud Field Est (Cost) 185,110.38										
Mud Reports																												
Date 8/23/2019 10:00				Type OIL BASE				Depth (ftKB) 18,905		Density (lb/gal) 12.60		Percent Oil (%) 61.0		Mud Temp Out... 212.0		MBT (lb/bbl)		pH		Pm Filtrate (m... 94		Pm (mL/mL)						
Funnel Viscosity (s/qt) 58				PV Calc (cP) 35.0		YP Calc (lb/100ft²) 24		Gel 10 sec (lb/100ft²) 21.000		Gel 10 min (lb/100ft²) 46.000		Vis 3rpm 11				Vis 6rpm 13		Vis 300rpm 59		Vis 600rpm 94								
Corrected Solids (%) 19.8		API Water Loss		LGS (%) 4.9		Excess Lime (lb/bbl) 0.9		LCM (lb/bbl)		Chlorides (mg/L) 60,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 3,055.21		Cum Mud Field Est (Cost) 185,110.38												
Date 8/23/2019 22:00				Type OIL BASE				Depth (ftKB) 19,280		Density (lb/gal) 12.60		Percent Oil (%) 61.0		Mud Temp Out... 0.0		MBT (lb/bbl)		pH		Pm Filtrate (m... 94		Pm (mL/mL)						
Funnel Viscosity (s/qt) 58				PV Calc (cP) 34.0		YP Calc (lb/100ft²) 26		Gel 10 sec (lb/100ft²) 20.000		Gel 10 min (lb/100ft²) 35.000		Vis 3rpm 11				Vis 6rpm 14		Vis 300rpm 60		Vis 600rpm 94								
Corrected Solids (%) 19.9		API Water Loss		LGS (%) 4.8		Excess Lime (lb/bbl) 0.8		LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 3,055.21		Cum Mud Field Est (Cost) 185,110.38												

SABLE PERMIAN RESOURCES, LLC

Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342

ENSIGN 786

Report Date8/24/2019

Report #20

Projected Days22.00

Drilling Days14.91

Current Depth19,280

Depth Progress639

Planned VS15,781

Current VS10,878

AFE #1550782

Total AFE3,640,000

Mud Reports													
Date	Type	Depth (ftKB)	Dens (lb/gal)	Vis (s/qt)	PV Calc (cP)	YP Calc (l...	Vis 3rpm	Vis 6rpm	LGS (%)	LCM (lb/bbl)	Chlor (mg/L)	Oil Water Ratio	
8/23/2019	OIL BASE	18,905	12.60	58	35.0	24	11	13	4.9		60,000	78.2/21.8	
Daily Mud Field Est (Cost)		Cum Mud Field Est (Cost)		Electric Stab (V)		Excess Lime (lb/bbl)		HTHP Filtrate (mL/30min)		HTHP Filter Cake (1/32")		HTHP Temperature (°F)	
3,055.21		185,110.38		655.0		0.9		3.0		2		250.0	
Date	Type	Depth (ftKB)	Dens (lb/gal)	Vis (s/qt)	PV Calc (cP)	YP Calc (l...	Vis 3rpm	Vis 6rpm	LGS (%)	LCM (lb/bbl)	Chlor (mg/L)	Oil Water Ratio	
8/23/2019	OIL BASE	19,280	12.60	58	34.0	26	11	14	4.8		58,000	78.2/21.8	
Daily Mud Field Est (Cost)		Cum Mud Field Est (Cost)		Electric Stab (V)		Excess Lime (lb/bbl)		HTHP Filtrate (mL/30min)		HTHP Filter Cake (1/32")		HTHP Temperature (°F)	
3,055.21		185,110.38		627.0		0.8		3.0		2		250.0	

Wellbore Design							
Casing Description	Run Date	OD (in)	Wt (lb/ft)	Grade	Conn	Set Depth (ftKB)	Length (ft)
CONDUCTOR	6/22/2019	20	106.50	J-55	WELDED	71.0	40.00
SURFACE	7/9/2019	13 3/8	54.50	J-55	BUTTRESS THREAD	1,119.0	1,120.29
INTERMEDIATE	8/14/2019	9 5/8	40.00	K-55	LT&C	7,703.7	7,703.70
PRODUCTION		5 1/2	20.00	P-110 CY	BUTTRESS THREAD	24,076.0	24,061.41

Survey Data								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
18,483	88.45	1.27	8,417	10,157.05	10,153.87	-312.03	0.68	-0.65
18,578	92.45	6.62	8,416	10,251.68	10,248.59	-305.50	7.03	4.21
18,672	92.58	3.90	8,412	10,345.07	10,342.10	-296.89	2.89	0.14
18,766	89.92	0.93	8,410	10,438.88	10,435.97	-292.93	4.24	-2.83
18,860	90.62	1.72	8,410	10,532.82	10,529.94	-290.76	1.12	0.74
18,953	89.20	1.07	8,410	10,625.75	10,622.91	-288.50	1.68	-1.53
19,047	91.76	2.76	8,409	10,719.64	10,716.85	-285.36	3.26	2.72
19,141	89.18	1.65	8,408	10,813.50	10,810.76	-281.74	2.99	-2.74

Mud Logging Information		
Max Trip Gas (units)		Max Drill Gas (units)

Geological Data			
Formation Name	Prog Top TVD (ftKB)	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)

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Report Date	8/25/2019
Report #	21
Projected Days	22.00
Drilling Days	15.91
Current Depth	19,280
Depth Progress	0
Planned VS	15,781
Current VS	10,878
AFE #	15507822
Total AFE	3,640,000

WELL NO. 342
ENSIGN 786

API 42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10			Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS	
Report Summary																	
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 71,210		Cum Field Est (Cost) 2,331,618	
Status at Report Time Washing to bottom at 17,887 ft																	
Operations Summary 0 HSE Change out mud motor, bit, gap sub and MWD tools, T.i.h. to 7,628 ft, slip and cut drill line, shutdown 15 min for weather, TIH f/ 7,628 ft to 13,009 ft, washed f/ 13,009 ft to 13,115 ft and cir bottoms up, tripped in hole f/ 13,115 ft to 13,470 ft, washed f/ 13,470 ft to 13,490 ft, tripped f/ 13,490 ft to 15,080 ft, washed f/ 15,080 ft to 15,173 ft, tripped f/ 15,173 ft to 16,080 ft (Lost slack off), washed f/ 16,080 ft to 17,887 ft.								Planned Operations Wash to bottom, drill 8 3/4 lateral as per directional plan to +/- 24,076									
Mud Wt 12.6 ppg, Vis 73 Drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Last survey: 19,141 ft MD Inc 89.18° Azm 1.65°, OTL ft. Below, 0.9 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																	
Start MD (ftKB) 19,280				End MD (ftKB) 19,280		Depth Progress (ft) 0		Drilling Time (hr)			Avg ROP (ft/hr)			Time Since LTI (days) 1,115		Time Since RI (days) 1,115	
Daily Time Log																	
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category		Activity		NPT		
06:00	06:30	0.50	19,280	19,280	Cleaned and clear rig floor				PROD	LAT	DRILL		TRIPS		Yes		
06:30	10:45	4.25	19,280	19,280	Picked up BHA #8; Reed TKC66 Z1 8 3/4", 7.0" Claw 250, fixed, slick sleeve, 1.83 deg. 7/8" stabilizer, NM slick DC, NM flex pony DC, Double Pin sub, Gap Sub, Fusion Spacer Sub, Fusion Pulser Sub, NM Flex DC, NM Slick DC (Lower Agitator 3198.88, Upper agitator 8,029.00 ft behind the bit)				PROD	LAT	DRILL		P/U & L/D BHA		Yes		
10:45	14:45	4.00	19,280	19,280	Tripped in hole from 170 ft to 7,628 ft. Displacements as calculated to trip tank.				PROD	LAT	DRILL		TRIPS		Yes		
14:45	15:15	0.50	19,280	19,280	Installed rotating head.				PROD	LAT	DRILL		BOP/OTHER		Yes		
15:15	18:00	2.75	19,280	19,280	Slip and cut drill line				PROD	LAT	DRILL		CUT SLIP & DRILL LINE		Yes		
18:00	18:15	0.25	19,280	19,280	Severe thunderstorm, wait on weather				PROD	LAT	DRILL		BOP/OTHER		Yes		
18:15	22:00	3.75	19,280	19,280	Tripped in the hole from 7,628 ft to 13,009 ft. Displacements as calculated to trip tank.				PROD	LAT	DRILL		TRIPS		Yes		
22:00	23:15	1.25	19,280	19,280	Filled drill pipe and washed through tight spot at 13,018 ft, staged pumps up to 650 gpm recording pressures, washed f/13,009 ft to 13,115 ft. pumping at 650 gpm 60 rpm, circulated bottoms up. (got some fine cuttings on bottoms up, nothing of any size)				PROD	LAT	DRILL		REAMING		Yes		
23:15	23:30	0.25	19,280	19,280	Tripped in the hole from 13,115 ft to 13,470 ft. Displacements as calculated to trip tank.				PROD	LAT	DRILL		TRIPS		Yes		
23:30	23:45	0.25	19,280	19,280	Washed and reamed through tight spot w/ 600 gpm 80 rpm f/ 13,470 ft to 13,490 ft. MW 12.7 ppg. fines on shakers and a few 1" shale.				PROD	LAT	DRILL		REAMING		Yes		
23:45	00:30	0.75	19,280	19,280	Tripped in hole f/ 13,490 ft to 15,080 ft, unable to get through spot, (Loosing slack off)				PROD	LAT	DRILL		TRIPS		Yes		
00:30	01:00	0.50	19,280	19,280	Washed and reamed f/ 15,080 ft to 15,173 ft at 600 gpm, 80 rpm. fines on shakers.				PROD	LAT	DRILL		REAMING		Yes		
01:00	01:30	0.50	19,280	19,280	Tripped in hole f/ 15,173 ft to 16,080 ft, (Lost slack off, unable to trip)				PROD	LAT	DRILL		TRIPS		Yes		
01:30	06:00	4.50	19,280	19,280	Washed and reamed f/ 16,080 ft to 17,887 ft at 600 gpm, 80 rpm. fines on shakers and a small amout of 1" to 1.5" shale. MW 12.6 vis 73				PROD	LAT	DRILL		REAMING		Yes		
Drilling Parameters																	
Start Depth (ftKB)	End Depth (ftKB)	Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq				
16,080	17,887					200	25	600	5,800.0	80	280	0	19,000				
Bit Information																	
Size (in)	Make	Model	Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)			
8 3/4	SMITH	MDi611	PDC	1-1-CT-G-X-0-PN-BHA	7,859	14,403	6,544.00	71.00	92.2	43.00	28.00	127.7	58	251			
8 3/4	ULTERRA	SPL616	PDC	1-1-CT-G-X-0-WT-DMF	14,403	19,280	4,877.00	58.25	83.7	41.00	17.25	104.7	48	251			
Current BHA Components																	
BHA No	Item Description				Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)				
7	DRILL PIPE				RIG	RIG	5	337	10,611.86	IF							
7	AGITATOR				Impulse	Impulse 1.5" ball activated	6.64		23.55	IF		6.64	1.50				
7	DRILL PIPE				RIG	RIG	5	153	4,806.57	IF							
7	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52				
7	DRILL PIPE				RIG	RIG	5	96	3,011.79	IF							
7	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71					
7	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12				
7	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28				
7	FUSION SPACER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52				
7	MWD - DIRECTIONAL				CATHEDRAL	CATHEDRAL	6 1/2			IF							
7	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6 1/2	1	6.75	IF		6 1/2	1.67				
7	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7					
7	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41				
7	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936					
7	STABILIZER				CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF		6.93	2.00				
7	MUD MOTOR				CATHEDRAL	Claw 250, 1.83° Fixed w/slick sleeve	7.15	1	34.68	IF		7.15					
Mud Reports																	
Time 10:00	Type OIL BASE	Depth (ftKB) 19,280	Density (lb/gal) 12.60	Vis (s/qt) 58	PV Calc (cP) 32.0	YP Calc (lb/100... 26	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 293,530	OW Ratio 78.2/21.8					
Electric Stab (V) 642.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95			Cum Mud Field Est (Cost) 186,017.33					
Time 22:00	Type OIL BASE	Depth (ftKB) 19,280	Density (lb/gal) 12.70	Vis (s/qt) 59	PV Calc (cP) 34.0	YP Calc (lb/100... 26	Vis 3rpm 10	Vis 6rpm 12	LGS (%) 4.1	LCM (lb/bbl)	WPS (ppm) 301,191	OW Ratio 78.2/21.8					
Electric Stab (V) 651.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95			Cum Mud Field Est (Cost) 186,017.33					
Mud Reports																	
Date 8/24/2019 10:00	Type OIL BASE	Depth (ftKB) 19,280	Density (lb/gal) 12.60	Percent Oil (%) 61.0	Mud Temp Out... MBT (lb/bbl)	pH		Pm Filtrate (m... Pm (mL/mL)									
Funnel Viscosity (s/qt) 58	PV Calc (cP) 32.0	YP Calc (lb/100ft²) 26	Gel 10 sec (lb/100ft²) 20.000	Gel 10 min (lb/100ft²) 38.000	Vis 3rpm 9			Vis 6rpm 11		Vis 300rpm 58		Vis 600rpm 90					
Corrected Solids (%) 19.9	API Water Loss	LGS (%) 4.8	Excess Lime (lb/bbl) 0.9	LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 186,017.33					
Date 8/24/2019 22:00	Type OIL BASE	Depth (ftKB) 19,280	Density (lb/gal) 12.70	Percent Oil (%) 61.0	Mud Temp Out... MBT (lb/bbl)	pH		Pm Filtrate (m... Pm (mL/mL)									
Funnel Viscosity (s/qt) 59	PV Calc (cP) 34.0	YP Calc (lb/100ft²) 26	Gel 10 sec (lb/100ft²) 20.000	Gel 10 min (lb/100ft²) 35.000	Vis 3rpm 10			Vis 6rpm 12		Vis 300rpm 60		Vis 600rpm 94					
Corrected Solids (%) 19.8	API Water Loss	LGS (%) 4.1	Excess Lime (lb/bbl) 0.7	LCM (lb/bbl)		Chlorides (mg/L) 59,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 186,017.33					
Mud Reports																	
Date 8/24/2019	Type OIL BASE	Depth (ftKB) 19,280	Dens (lb/gal) 12.60	Vis (s/qt) 58	PV Calc (cP) 32.0	YP Calc (l... 26	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 58,000	Oil Water Ratio 78.2/21.8					
Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 186,017.33			Electric Stab (V) 642.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0				

WELL NO. 342
ENSIGN 786

Report Date	8/25/2019
Report #	21
Projected Days	22.00
Drilling Days	15.91
Current Depth	19,280
Depth Progress	0
Planned VS	15,781
Current VS	10,878
AFE #	1550782
Total AFE	3,640,000

SABLE PERMIAN RESOURCES, LLC

Daily Drilling Partner Report

Report Date	8/26/2019
Report #	22
Projected Days	22.000
Drilling Days	16.91
Current Depth	20,679
Depth Progress	1,399
Planned VS	15,781
Current VS	12,288
AFE #	15507822
Total AFE	3,640,000

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

API 42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS													
Report Summary																											
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 85,542		Cum Field Est (Cost) 2,417,160												
Status at Report Time Drilling 8 3/4 lateral at 20,679 ft																											
Operations Summary 0 HSE Washed and reamed from 17,887 ft. to bottom at 19,280 ft., Drilled 8 3/4 lateral from 19,280 ft. to 20,679 ft. (1,399 ft @ 70.8 fph) Mud Wt 12.6 ppg, Vis 62 Drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Last survey: 20,552 ft MD Inc 90.26° Azm 1.42°, 5.8 ft. Below, 16.1 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)								Planned Operations Drill 8 3/4 lateral as per directional plan to +/- 24,076																			
Start MD (ftKB) 19,280				End MD (ftKB) 20,679		Depth Progress (ft) 1,399		Drilling Time (hr) 19.75		Avg ROP (ft/hr) 70.8		Time Since LTI (days) 1,116		Time Since RI (days) 1,116													
Daily Time Log																											
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT													
06:00	10:15	4.25	19,280	19,280	Washed and reamed t/ 17,887 ft to 19,280 ft at 590 gpm, 80 rpm. fines on shakers and a small amout of 1" shale. MW 12.6 vis 64				PROD	LAT	DRILL	REAMING		Yes													
10:15	06:00	19.75	19,280	20,679	Drilled/slide 8 3/4" lateral hole from 19,280 ft to 20,679 ft (1,399 ft @ 70.8 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No													
Drilling Parameters																											
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq												
17,887		19,280						200	25	600	5,800.0	80	280	0	19,000												
19,280		19,298		0.25	0.00	72.0		250	35	570	6,020.0	80	280	0	21,000												
19,298		19,328		0.00	1.50	20.0	0	150	45	575	5,870.0		280	0													
19,328		19,392		0.75	0.00	85.3		320	28	570	5,960.0	80	290	0	21,000												
19,392		19,428		0.00	0.75	48.0	60	165	45	575	5,800.0		290	0													
19,428		19,862		4.50	0.00	96.4		460	25	560	5,950.0	80	315	0	21,000												
19,862		19,887		0.00	1.50	16.7	-100	160	60	575	5,711.0		315	0													
19,887		20,679		10.50	0.00	75.4		415	26	560	5,900.0	80	310	0	25,000												
Bit Information																											
Size (in)	Make		Model		Type	Dull Out		Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)										
8 3/4	ULTERRA		SPL616		PDC	1-1-CT-G-X-0-WT-DMF		14,403	19,280	4,877.00	58.25	83.7	41.00	17.25	104.7	48	251										
8 3/4	REED		TKC66 Z1		PDC	-----		19,280	20,679	1,399.00	19.75	70.8	16.00	3.75	81.8	60	223										
Current BHA Components																											
BHA No	Item Description					Make		Model		OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)											
8	DRILL PIPE					RIG		RIG		5	401	12,650.00	IF														
8	AGITATOR					Impulse		Impulse 1.5" ball activated		6.64	1	23.55	IF		6.64	1.50											
8	DRILL PIPE					RIG		RIG		5	153	4,806.57	IF														
8	AGITATOR					Impulse		Impulse 1.375" ball activated		6.61	1	17.40	IF		6.61	1.52											
8	DRILL PIPE					RIG		RIG		5	96	3,011.79	IF														
8	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.71	1	30.26	IF		6.71												
8	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.9	1	30.66	IF		6.9	5.12											
8	FUSION PULSER SUB					CATHEDRAL		CATHEDRAL		6.74	1	7.10	IF		6.74	1.28											
8	FUSION SPACER SUB					CATHEDRAL		CATHEDRAL		7	1	5.52	IF		7	1.52											
8	ECM GAP SUB					CATHEDRAL		CATHEDRAL		6.59	1	6.80	IF		6.59	0.96											
8	XO SUB					CATHEDRAL		CATHEDRAL		7	1	3.59	IF		7												
8	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.65	1	14.44	IF		6.65	4.41											
8	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.936	1	30.72	IF		6.936												
8	STABILIZER					CATHEDRAL		CATHEDRAL		7 7/8		5.11	IF		6.93	2.00											
8	MUD MOTOR					CATHEDRAL		Claw 250, 1.83° Fixed w/slick sleeve		7	1	34.49	IF		7												
Mud Reports																											
Time 10:00		Type OIL BASE		Depth (ftKB) 19,280		Density (lb/gal) 12.60		Vis (s/qt) 63		PV Calc (cP) 34.0		YP Calc (lbf/100... 23		Vis 3rpm 9		Vis 6rpm 10		LGS (%) 4.9		LCM (lb/bbl)		WPS (ppm) 301,191		OW Ratio 78.2/21.8			
Electric Stab (V) 592.0				Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,746.47				Cum Mud Field Est (Cost) 195,763.80									
Time 22:00		Type OIL BASE		Depth (ftKB) 19,955		Density (lb/gal) 12.60		Vis (s/qt) 70		PV Calc (cP) 37.0		YP Calc (lbf/100... 26		Vis 3rpm 11		Vis 6rpm 13		LGS (%) 6.9		LCM (lb/bbl)		WPS (ppm) 297,754		OW Ratio 79.2/20.8			
Electric Stab (V) 599.0				Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,746.47				Cum Mud Field Est (Cost) 195,763.80									
Mud Reports																											
Date 8/25/2019 10:00			Type OIL BASE				Depth (ftKB) 19,280		Density (lb/gal) 12.60		Percent Oil (%) 61.0		Mud Temp Out... 190.0		MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)						
Funnel Viscosity (s/qt) 63		PV Calc (cP) 34.0		YP Calc (lbf/100ft²) 23		Gel 10 sec (lbf/100ft²) 16.000		Gel 10 min (lbf/100ft²) 44.000		Vis 3rpm 9			Vis 6rpm 10		Vis 300rpm 57		Vis 600rpm 91										
Corrected Solids (%) 19.8		API Water Loss		LGS (%) 4.9		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 61,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 9,746.47		Cum Mud Field Est (Cost) 195,763.80											
Date 8/25/2019 22:00			Type OIL BASE				Depth (ftKB) 19,955		Density (lb/gal) 12.60		Percent Oil (%) 61.0		Mud Temp Out... 205.0		MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)						
Funnel Viscosity (s/qt) 70		PV Calc (cP) 37.0		YP Calc (lbf/100ft²) 26		Gel 10 sec (lbf/100ft²) 21.000		Gel 10 min (lbf/100ft²) 42.000		Vis 3rpm 11			Vis 6rpm 13		Vis 300rpm 63		Vis 600rpm 100										
Corrected Solids (%) 21.0		API Water Loss		LGS (%) 6.9		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 9,746.47		Cum Mud Field Est (Cost) 195,763.80											
Mud Reports																											
Date 8/25/2019		Type OIL BASE				Depth (ftKB) 19,280		Dens (lb/gal) 12.60		Vis (s/qt) 63		PV Calc (cP) 34.0		YP Calc (l... 23		Vis 3rpm 9		Vis 6rpm 10		LGS (%) 4.9		LCM (lb/bbl)		Chlor (mg/L) 61,000		Oil Water Ratio 78.2/21.8	
Daily Mud Field Est (Cost) 9,746.47				Cum Mud Field Est (Cost) 195,763.80				Electric Stab (V) 592.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0											
Date 8/25/2019		Type OIL BASE				Depth (ftKB) 19,955		Dens (lb/gal) 12.60		Vis (s/qt) 70		PV Calc (cP) 37.0		YP Calc (l... 26		Vis 3rpm 11		Vis 6rpm 13		LGS (%) 6.9		LCM (lb/bbl)		Chlor (mg/L) 58,000		Oil Water Ratio 79.2/20.8	
Daily Mud Field Est (Cost) 9,746.47				Cum Mud Field Est (Cost) 195,763.80				Electric Stab (V) 599.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0											
Wellbore Design																											
Casing Description					Run Date		OD (in)		Wt (lb/ft)		Grade		Conn		Set Depth (ftKB)		Length (ft)										
CONDUCTOR					6/22/2019		20		106.50		J-55		WELDED		71.0		40.00										
SURFACE					7/9/2019		13 3/8		54.50		J-55		BUTTRESS THREAD		1,119.0		1,120.29										
INTERMEDIATE					8/14/2019		9 5/8		40.00		K-55		LT&C		7,703.7		7,703.70										
PRODUCTION							5 1/2		20.00		P-110 CY		BUTTRESS THREAD		24,076.0		24,061.41										

WELL NO. 342
ENSIGN 786

Report Date	8/26/2019
Report #	22
Projected Days	22.00
Drilling Days	16.91
Current Depth	20,679
Depth Progress	1,399
Planned VS	15,781
Current VS	12,288
AFE #	1550782
Total AFE	3,640,000

Survey Data								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
19,893	88.99	1.05	8,401	11,564.06	11,561.72	-255.81	4.60	-3.17
19,987	89.43	1.34	8,403	11,657.99	11,655.69	-253.85	0.56	0.47
20,081	91.76	2.11	8,402	11,751.90	11,749.63	-251.03	2.61	2.48
20,175	91.28	2.11	8,399	11,845.75	11,843.54	-247.57	0.51	-0.51
20,268	91.98	2.23	8,397	11,938.59	11,936.43	-244.05	0.76	0.75
20,363	90.72	1.66	8,394	12,033.45	12,031.35	-240.82	1.46	-1.33
20,458	91.90	2.13	8,392	12,128.33	12,126.27	-237.68	1.34	1.24
20,552	90.26	1.42	8,390	12,222.22	12,220.20	-234.77	1.90	-1.74
Mud Logging Information								
Max Trip Gas (units)			Avg Drill Gas (units)			Max Drill Gas (units)		
Geological Data								
Formation Name			Prog Top TVD (ftKB)		Drill Top MD (ftKB)		Drill Top (TVD) (ftKB)	

WELL NO. 342
ENSIGN 786

Report Date	8/27/2019
Report #	23
Projected Days	22.00
Drilling Days	17.91
Current Depth	21,955
Depth Progress	1,276
Planned VS	15,781
Current VS	13,513
APE #	15507822
Total APE	3,640,000

API 42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10			Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS	
Report Summary																	
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 81,977		Cum Field Est (Cost) 2,499,398	
Status at Report Time Drilling 8 3/4 lateral at 21,955 ft																	
Operations Summary 0 HSE Drilled 8 3/4 lateral from 20,679 ft. to 21,949 ft.(1,270 ft @ 58.4 fph), 2 pumps down circulated with #3 pump 1 hr, drilled lateral f/ 21,949 ft to 21,955 ft (6 ft @ 12 ft/hr) Mud Wt 12.6 ppg, Vis 62 Drilling window: 10' Above - 5' Below, 30' left/right of Plan #1 8-26-2019 06:51 Old drilling window: 5' Above - 10' Below, 30' left/right of Plan #1 8-23-2019 15:00 Last survey: 21,777 ft MD Inc 91.10° Azm .27°, 6.9 ft. Below, 18.3 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)									Planned Operations Drill 8 3/4 lateral as per directional plan to +/- 24,076								
Start MD (ftKB) 20,679				End MD (ftKB) 21,955			Depth Progress (ft) 1,276		Drilling Time (hr) 22.25		Avg ROP (ft/hr) 57.3			Time Since LTI (days) 1,117		Time Since RI (days) 1,117	
Daily Time Log																	
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT			
06:00	10:45	4.75	20,679	21,058	Drilled/slide 8 3/4" lateral hole from 20,679 ft to 21,058 ft (379 ft @ 79.8 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Old drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
10:45	11:00	0.25	21,058	21,058	Re-log gamma from 21,040 ft. to 21,058 ft. due to bad signal				PROD	LAT	DRILL	3rd PARTY EQUIPMENT REPAIR		Yes			
11:00	23:15	12.25	21,058	21,746	Drilled/slide 8 3/4" lateral hole from 21,058 ft to 21,746 ft (688 ft @ 56.2 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Old drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
23:15	23:45	0.50	21,746	21,746	Rig Service				PROD	LAT	DRILL	LUBRICATE RIG		No			
23:45	04:30	4.75	21,746	21,949	Drilled/slide 8 3/4" lateral hole from 21,746 ft to 21,949 ft (203 ft @ 42.7 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Old drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
04:30	05:30	1.00	21,949	21,949	*****#2 pump blew a swab while changing swab on #1 pump #1 bay***** Circulated with #3 pump while repairing swab on #1 pump, #2 pump down also				PROD	LAT	DRILL	COND MUD & CIRC		Yes			
05:30	06:00	0.50	21,949	21,955	Drilled/slide 8 3/4" lateral hole from 21,949 ft to 21,955 ft (6 ft @ 12 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Old drilling window: 5' Above - 10' below, 30' left/right of Plan #1 8-23-2019 15:00 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No			
Drilling Parameters																	
Start Depth (ftKB)	End Depth (ftKB)	Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq				
20,679	21,058	4.75	0.00	79.8		360	25	560	5,960.0	80	315	0	25,000				
21,058	21,558	7.00	0.00	71.4		360	25	550	5,875.0	80	315	0	24,000				
21,558	21,588	0.00	1.75	17.1	70	60	25	570	5,930.0		315	0					
21,588	21,652	1.25	0.00	51.2		425	25	550	5,920.0	80	310	0	24,500				
21,652	21,685	0.00	1.50	22.0	70	200	40	570	5,900.0		310	0					
21,685	21,746	0.75	0.00	81.3		430	25	550	5,950.0	80	310	0	24,500				
21,746	21,766	0.00	1.50	13.3	20	130	37	570	5,950.0		310	0					
21,766	21,935	2.50	0.00	67.6		490	27	550	6,000.0	80	305	0	24,500				
21,935	21,949	0.00	0.75	18.7	70	130	37	570	5,970.0		305	0					
21,949	21,955	0.00	0.50	12.0	70	130	35	570	5,970.0		305	0					
Bit Information																	
Size (in)	Make	Model	Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)			
8 3/4	ULTERRA	SPL616	PDC		14,403	19,280	4,877.00	58.25	83.7	41.00	17.25	104.7	48	251			
8 3/4	REED	TKC66 Z1	PDC	1-1-CT-G-X-O-WT-DMF	19,280	21,955	2,675.00	42.00	63.7	32.25	9.75	76.9	60	223			
Current BHA Components																	
BHA No	Item Description				Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)				
8	DRILL PIPE				RIG	RIG	5	442	13,926.00	IF							
8	AGITATOR				Impulse	Impulse 1.5" ball activated	6.64	1	23.55	IF		6.64	1.50				
8	DRILL PIPE				RIG	RIG	5	153	4,806.57	IF							
8	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52				
8	DRILL PIPE				RIG	RIG	5	96	3,011.79	IF							
8	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71					
8	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12				
8	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28				
8	FUSION SPACER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52				
8	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6.59	1	6.80	IF		6.59	0.96				
8	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7					
8	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41				
8	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936					
8	STABILIZER				CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF		6.93	2.00				
8	MUD MOTOR				CATHEDRAL	Claw 250, 1.83° Fixed w/slick sleeve	7	1	34.49	IF		7					
Mud Reports																	
Time 10:00	Type OIL BASE	Depth (ftKB) 21,001	Density (lb/gal) 12.60	Vis (s/qt) 61	PV Calc (cP) 38.0	YP Calc (lb/100... 23	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 5.9	LCM (lb/bbl)	WPS (ppm) 297,754	OW Ratio 79.4/20.6					
Electric Stab (V) 633.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 6,205.46		Cum Mud Field Est (Cost) 201,969.26						
Time 22:00	Type OIL BASE	Depth (ftKB) 21,650	Density (lb/gal) 12.60	Vis (s/qt) 58	PV Calc (cP) 38.0	YP Calc (lb/100... 22	Vis 3rpm 9	Vis 6rpm 10	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 306,313	OW Ratio 79.5/20.5					
Electric Stab (V) 621.0		Excess Lime (lb/bbl) 0.8	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 6,205.46		Cum Mud Field Est (Cost) 201,969.26						

WELL NO. 342
ENSIGN 786

Report Date	8/28/2019
Report #	24
Projected Days	22.00
Drilling Days	18.91
Current Depth	22,282
Depth Progress	327
Planned VS	15,781
Current VS	13,889
A/E #	1550782
Total A/E	3,640,000

API 42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS		
Report Summary																
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 89,975		Cum Field Est (Cost) 2,589,373	
Status at Report Time Tripping out @ 4,230 ft																
Operations Summary 0 HSE Drilled 8 3/4 lateral from 21,955 ft to 22,282 ft (327 ft @ 31.1 ft/hr), trouble shoot differential pressure loss, mud motor driveshaft appeared to be broken, circulated 2 bottoms up, checked flow, no flow, pumped slug, Trip out of hole f/ 22,282 ft to 4,230 ft									Planned Operations Trip out of hole change out motor and bit, Trip in hole to 22,282 ft, Drill 8 3/4 lateral as per directional plan to +/- 24,076							
Mud Wt 12.6 ppg, Vis 62 Drilling window: 10' Above - 5' Below, 30' left/right of Plan #1 8-26-2019 06:51 Last survey: 22,154 ft MD Inc 91.74° Azm .18°, 5.3 ft. Below, 23.1 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																
Start MD (ftKB) 21,955				End MD (ftKB) 22,282		Depth Progress (ft) 327		Drilling Time (hr) 10.50		Avg ROP (ft/hr) 31.1		Time Since LTI (days) 1,118		Time Since RI (days) 1,118		
Daily Time Log																
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT		
06:00	16:30	10.50	21,955	22,282	Drilled/slide 8 3/4" lateral hole from 21,955 ft to 22,282 ft (327 ft @ 31.1 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Surveys Magvar corrected				PROD	LAT	DRILL	DRILL W/ MUD		No		
16:30	20:15	3.75	22,282	22,282	Troubleshoot pressure loss, while drilling ahead at 22,282 ft. off bottom pressure was 5,850 psi, we lost all differential pressure, picked up off of bottom and checked all surface equipment, all surface equipment tested good, brought pump back up to drilling rate and off bottom pressure was still 5,550 psi, slack off and tag bottom with bit 25k no differential pressure, mud motor drive shaft appeared to be broken.				PROD	LAT	DRILL	3rd PARTY EQUIPMENT REPAIR		Yes		
20:15	22:15	2.00	22,282	22,282	Circulated 2 bottoms up, shakers cleaned up				PROD	LAT	DRILL	COND MUD & CIRC		Yes		
22:15	22:30	0.25	22,282	22,282	Flow checked well, No flow, Pumped slug				PROD	LAT	DRILL	BOP/OTHER		Yes		
22:30	06:00	7.50	22,282	22,282	Tripped out of hole due to drive shaft failure in motor f/ 22,282 ft to 4,230 ft, (laid 1 joint out to break up breaks). Laid down upper agitator and marked. Filled hole continuously from trip tanks. Hole took proper fill.				PROD	LAT	DRILL	TRIPS		Yes		
Drilling Parameters																
Start Depth (ftKB)	End Depth (ftKB)	Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq			
21,955	21,965	0.00	1.00	10.0	70	115	35	550	5,848.0		305	0				
21,965	22,029	1.00	0.00	64.0		382	35	545	5,945.0	70	305	0	24,000			
22,029	22,064	0.00	2.50	14.0	40	100	26	550	5,855.0		305	0				
22,064	22,218	2.75	0.00	56.0		440	28	540	6,015.0	80	310	0	24,000			
22,218	22,253	0.00	2.25	15.6	90	120	28	540	6,015.0		310	0				
22,253	22,282	1.00	0.00	29.0		395	28	540	5,915.0	80	310	0	24,500			
Bit Information																
Size (in)	Make	Model	Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)		
8 3/4	ULTERRA	SPL616	PDC	1-1-CT-G-X-0-WT-DMF	14,403	19,280	4,877.00	58.25	83.7	41.00	17.25	104.7	48	251		
8 3/4	REED	TKC66 Z1	PDC	-----	19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223		
Current BHA Components																
BHA No	Item Description				Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)			
8	DRILL PIPE				RIG	RIG	5	453	14,253.00	IF						
8	AGITATOR				Impulse	Impulse 1.5" ball activated	6.64	1	23.55	IF		6.64	1.50			
8	DRILL PIPE				RIG	RIG	5	153	4,806.57	IF						
8	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52			
8	DRILL PIPE				RIG	RIG	5	96	3,011.79	IF						
8	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71				
8	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12			
8	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28			
8	FUSION SPACER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52			
8	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6.59	1	6.80	IF		6.59	0.96			
8	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7				
8	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41			
8	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936				
8	STABILIZER				CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF		6.93	2.00			
8	MUD MOTOR				CATHEDRAL	Claw 250, 1.83° Fixed w/slick sleeve	7	1	34.49	IF		7				
Mud Reports																
Time 10:00	Type OIL BASE	Depth (ftKB) 22,057	Density (lb/gal) 12.60	Vis (s/qt) 63	PV Calc (cP) 38.0	YP Calc (lb/100... 22	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 304,545	OW Ratio 79.5/20.5				
Electric Stab (V) 647.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 10,641.74		Cum Mud Field Est (Cost) 212,611.00					
Time 22:00	Type OIL BASE	Depth (ftKB) 22,282	Density (lb/gal) 12.60	Vis (s/qt) 60	PV Calc (cP) 37.0	YP Calc (lb/100... 22	Vis 3rpm 10	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 306,313	OW Ratio 79.5/20.5				
Electric Stab (V) 641.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 10,641.74		Cum Mud Field Est (Cost) 212,611.00					
Mud Reports																
Date 8/26/2019 10:00	Type OIL BASE			Depth (ftKB) 22,057	Density (lb/gal) 12.60	Percent Oil (%) 62.0	Mud Temp Out... 212.0		MBT (lb/bbl)		pH	Pm Filtrate (m...	Pm (mL/mL)			
Funnel Viscosity (s/qt) 63		PV Calc (cP) 38.0		YP Calc (lb/100ft²) 22	Gel 10 sec (lb/100ft²) 19.000	Gel 10 min (lb/100ft²) 45.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 59		Vis 600rpm 97		
Corrected Solids (%) 19.9		API Water Loss 4.8		LGS (%) 4.8	Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 57,000		Filter Cake (1/32") 10,641.74		Daily Mud Field Est (Cost) 10,641.74		Cum Mud Field Est (Cost) 212,611.00	
Date 8/27/2019 22:00	Type OIL BASE			Depth (ftKB) 22,282	Density (lb/gal) 12.60	Percent Oil (%) 62.0	Mud Temp Out... 212.0		MBT (lb/bbl)		pH	Pm Filtrate (m...	Pm (mL/mL)			
Funnel Viscosity (s/qt) 60		PV Calc (cP) 37.0		YP Calc (lb/100ft²) 22	Gel 10 sec (lb/100ft²) 17.000	Gel 10 min (lb/100ft²) 41.000		Vis 3rpm 10		Vis 6rpm 11		Vis 300rpm 61		Vis 600rpm 98		
Corrected Solids (%) 19.9		API Water Loss 4.8		LGS (%) 4.8	Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32") 10,641.74		Daily Mud Field Est (Cost) 10,641.74		Cum Mud Field Est (Cost) 212,611.00	
Mud Reports																
Date 8/26/2019	Type OIL BASE			Depth (ftKB) 22,057	Dens (lb/gal) 12.60	Vis (s/qt) 63	PV Calc (cP) 38.0	YP Calc (l... 22	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 57,000	Oil Water Ratio 79.5/20.5		
Daily Mud Field Est (Cost) 10,641.74			Cum Mud Field Est (Cost) 212,611.00			Electric Stab (V) 647.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0		
Date 8/27/2019	Type OIL BASE			Depth (ftKB) 22,282	Dens (lb/gal) 12.60	Vis (s/qt) 60	PV Calc (cP) 37.0	YP Calc (l... 22	Vis 3rpm 10	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 58,000	Oil Water Ratio 79.5/20.5		
Daily Mud Field Est (Cost) 10,641.74			Cum Mud Field Est (Cost) 212,611.00			Electric Stab (V) 641.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0		

WELL NO. 342
ENSIGN 786

Report Date	8/28/2019
Report #	24
Projected Days	22.00
Drilling Days	18.91
Current Depth	22,282
Depth Progress	327
Planned VS	15,781
Current VS	13,889
A/E #	1550782
Total A/E	3,640,000

Wellbore Design							
Casing Description	Run Date	OD (in)	Wt (lb/ft)	Grade	Conn	Set Depth (ftKB)	Length (ft)
CONDUCTOR	6/22/2019	20	106.50	J-55	WELDED	71.0	40.00
SURFACE	7/9/2019	13 3/8	54.50	J-55	BUTTRESS THREAD	1,119.0	1,120.29
INTERMEDIATE	8/14/2019	9 5/8	40.00	K-55	LT&C	7,703.7	7,703.70
PRODUCTION		5 1/2	20.00	P-110 CY	BUTTRESS THREAD	24,076.0	24,061.41

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
21,494	90.74	357.20	8,374	13,163.84	13,161.83	-240.81	1.47	-0.88
21,588	90.41	358.66	8,373	13,257.81	13,255.76	-244.21	1.59	-0.35
21,682	90.46	1.49	8,372	13,351.79	13,349.75	-244.08	3.01	0.05
21,777	91.10	0.27	8,371	13,446.74	13,444.73	-242.62	1.45	0.67
21,871	91.01	359.20	8,369	13,540.72	13,538.71	-243.06	1.14	-0.10
21,965	90.31	0.83	8,368	13,634.70	13,632.70	-243.03	1.89	-0.74
22,059	91.91	1.27	8,366	13,728.64	13,726.66	-241.31	1.77	1.70
22,154	91.74	0.18	8,363	13,823.55	13,821.61	-240.11	1.16	-0.18

Max Trip Gas (units)	Avg Drill Gas (units)	Max Drill Gas (units)
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Formation Name	Prog Top TVD (ftKB)	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)

SABLE PERMIAN RESOURCES, LLC

Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

Report Date	8/29/2019
Report #	25
Projected Days	22.00
Drilling Days	19.91
Current Depth	22,282
Depth Progress	0
Planned VS	15,781
Current VS	13,889
AFE #	15507822
Total AFE	3,640,000

PI 42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS														
Report Summary																												
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMP2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 73,228		Cum Field Est (Cost) 2,662,180													
Status at Report Time Washing in hole at 16,600 ft																												
Operations Summary 0 HSE Tripped out of hole f/ 4,230 ft to 162 ft. Racked back monels. Broke bit and L/D motor visually inspected motor and bit, motor could be turned by hand). M/U new bit and motor. Programmed and scribed MWD. Tripped in the hole from 169 ft to 7,063 ft repair Iron rough neck, tripped in hole f/ 7,063 ft to 11,130 ft, staged pumps up to 640 gpm and recorded pressures, tripped in hole f/ 11,130 ft to 13,184 ft, staged pumps up to 640 gpm and circulated bottoms up, shakers clean very few fines, tripped in hole f/ 13,184 ft to 16,211 ft, staged pumps up to 640 gpm, tripped in hole f/ 16,211 ft to 16,232 ft lost slack off, washed f/ 16,232 ft to 16,600 ft Mud Wt 12.6 ppg, Vis 62 Drilling window: 10' Above - 5' Below, 30' left/right of Plan #1 8-26-2019 06:51 Last survey: 22.154 ft MD Inc 91.74° Azm .18°, 5.3 ft. Below, 23.1 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)								Planned Operations Trip in hole to 22,282 ft, Drill 8 3/4 lateral as per directional plan to +/- 24,076																				
								Start MD (ftKB) 22,282		End MD (ftKB) 22,282		Depth Progress (ft) 0		Drilling Time (hr)		Avg ROP (ft/hr)		Time Since LTI (days) 1,119		Time Since RI (days) 1,119								
								Daily Time Log																				
								Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT						
								06:00	09:45	3.75	22,282	22,282	Pulled out of the hole from 4,230 ft to 169 ft.				PROD	LAT	DRILL	TRIPS		Yes						
09:45	10:30	0.75	22,282	22,282	PJSM with crew, racked back monels, powered down MWD, broke bit and L/D mud motor. Bit grading: 2-2-BT-N-X-0-CT-DTF Note: Bit could be turned by hand				PROD	LAT	DRILL	P/U & L/D BHA		Yes														
10:30	11:00	0.50	22,282	22,282	Cleaned rig floor of oil base mud.				PROD	LAT	DRILL	BOP/OTHER		Yes														
11:00	13:00	2.00	22,282	22,282	Picked up BHA #9; Ulterra SPL616 8 3/4", 7.0" Claw 250, fixed, slick sleeve, 1.83 deg with 8 1/8" stabilizer on motor. 7 7/8" stabilizer, NM slick DC, NM flex pony DC, Double Pin sub, Gap Sub, Fusion Spacer Sub, Fusion Pulser Sub, NM Flex DC, NM Slick DC (Lower Agitator 3198.11, Upper agitator 8,028.23 ft behind the bit)				PROD	LAT	DRILL	P/U & L/D BHA		Yes														
13:00	17:45	4.75	22,282	22,282	Tripped in the hole from 169 ft to 7,063 ft				PROD	LAT	DRILL	TRIPS		Yes														
17:45	18:15	0.50	22,282	22,282	Rig Service				PROD	LAT	DRILL	LUBRICATE RIG		Yes														
18:15	19:00	0.75	22,282	22,282	Replaced blown air hose on Iron roughneck				PROD	LAT	DRILL	REPAIR RIG		Yes														
19:00	00:00	5.00	22,282	22,282	Tripped in the hole from 7,063 ft to 11,130 ft. Circulated and staged pumps up to 640 gpm and recorded pressures. No indication of packing off. Tripped in hole f/ 11,130 ft to 13,184 ft.				PROD	LAT	DRILL	TRIPS		Yes														
00:00	01:15	1.25	22,282	22,282	Staged pumps up to 640 gpm and circulated bottoms up, shakers had very little of fines at bottoms up.				PROD	LAT	DRILL	COND MUD & CIRC		Yes														
01:15	05:00	3.75	22,282	22,282	Tripped in hole f/ 13,184 ft to 16,211 ft, loosing slack off, staged pumps up to 640 gpm no indication of packing off, shakers clean, tripped in hole f/ 16,211 ft to 16,232 ft, lost slack off, unable to trip in.				PROD	LAT	DRILL	TRIPS		Yes														
05:00	06:00	1.00	22,282	22,282	Washed and reamed f/ 16,232 ft to 16,600 ft at 550 gpm, 50 rpm. fines on shakers. MWI 12.8 ppg vis 63 MWO 12.7 ppg				PROD	LAT	DRILL	REAMING		Yes														
Drilling Parameters																												
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)		Slide Time (hr)		Int ROP (ft/hr)		TFO (°)		dP (SPP) (psi)		WOB (1000lbf)		Q Rate (gpm/cfm)		SPP (psi)		RPM (rpm)		PU Str Wt (1000lbf)		SO Str Wt (1000lbf)		Drill Tq		
22,282		22,282		0.00		0.00																						
Bit Information																												
Size (in)	Make		Model		Type		Dull Out		Depth In (ftKB)		Depth Out (ftKB)		Depth Drilled This Job (ft)		Job Drill Hrs (hr)		Avg ROP (ft/hr)		Rot Time (hr)		Slide Time (hr)		Rot ROP (ft/hr)		WOB Max (1000lbf)		Max RPM (rpm)	
8 3/4	REED		TKC66 Z1		PDC		2-2-BT-N-X-0-CT-DMF		19,280		22,282		3,002.00		52.50		57.2		37.00		15.50		73.7		60		223	
8 3/4	ULTERRA		SPL616		PDC		-----		22,282		22,282																	
Current BHA Components																												
BHA No	Item Description						Make		Model		OD (in)		Jts		Length (ft)		Top Thread		Gauge (in)		Fish Neck OD (in)		FN Len (ft)					
9	DRILL PIPE						RIG		RIG		5						IF											
9	AGITATOR						Impulse		Impulse 1.5" ball activated		6.64		1		23.55		IF				6.64		1.50					
9	DRILL PIPE						RIG		RIG		5		153		4,806.57		IF											
9	AGITATOR						Impulse		Impulse 1.375" ball activated		6.61		1		17.40		IF				6.61		1.52					
9	DRILL PIPE						RIG		RIG		5		96		3,011.79		IF											
9	DRILL COLLAR - NON MAG						CATHEDRAL		CATHEDRAL		6.71		1		30.26		IF				6.71							
9	DRILL COLLAR - FLEX NON MAG						CATHEDRAL		CATHEDRAL		6.9		1		30.66		IF				6.9		5.12					
9	FUSION PULSER SUB						CATHEDRAL		CATHEDRAL		6.74		1		7.10		IF				6.74		1.28					
9	FUSION SPACER SUB						CATHEDRAL		CATHEDRAL		7		1		5.52		IF				7		1.52					
9	ECM GAP SUB						CATHEDRAL		CATHEDRAL		6.59		1		6.80		IF				6.59		0.96					
9	XO SUB						CATHEDRAL		CATHEDRAL		7		1		3.59		IF				7							
9	DRILL COLLAR - FLEX NON MAG						CATHEDRAL		CATHEDRAL		6.65		1		14.44		IF				6.65		4.41					
9	DRILL COLLAR - NON MAG						CATHEDRAL		CATHEDRAL		6.936		1		30.72		IF				6.936							
9	STABILIZER						CATHEDRAL		CATHEDRAL		7 7/8				5.11		IF				6.93		2.00					
9	MUD MOTOR						CATHEDRAL		Claw 250, 1.83° Fixed w/8 1/8" IBS stabilizer		7		1		33.72		IF		7.88 8.13		6.93							
Mud Reports																												
Time 10:00		Type OIL BASE		Depth (ftKB) 22,282		Density (lb/gal) 12.60		Vis (s/qt) 60		PV Calc (cP) 37.0		YP Calc (lb/100... 26		Vis 3rpm 11		Vis 6rpm 13		LGS (%) 4.8		LCM (lb/bbl)		WPS (ppm) 304,545		OW Ratio 79.5/20.5				
Electric Stab (V) 640.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 1,879.34				Cum Mud Field Est (Cost) 214,069.34														
Time 22:00		Type OIL BASE		Depth (ftKB) 22,282		Density (lb/gal) 12.80		Vis (s/qt) 62		PV Calc (cP) 37.0		YP Calc (lb/100... 26		Vis 3rpm 9		Vis 6rpm 11		LGS (%) 3.3		LCM (lb/bbl)		WPS (ppm) 302,803		OW Ratio 79.5/20.5				
Electric Stab (V) 645.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 2.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 1,879.34				Cum Mud Field Est (Cost) 214,069.34														
Mud Reports																												
Date 8/28/2019 10:00		Type OIL BASE				Depth (ftKB) 22,282		Density (lb/gal) 12.60		Percent Oil (%) 62.0		Mud Temp Out... 212.0		MBT (lb/bbl)		pH		Pm Filtrate (m...)		Pm (mL/mL)								
Funnel Viscosity (s/qt) 60		PV Calc (cP) 37.0		YP Calc (lb/100ft²) 26		Gel 10 sec (lb/100ft²) 19.000		Gel 10 min (lb/100ft²) 43.000		Vis 3rpm 11		Vis 6rpm 13		Vis 300rpm 63		Vis 600rpm 100												
Corrected Solids (%) 20.0		API Water Loss		LGS (%) 4.8		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 57,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 1,879.34		Cum Mud Field Est (Cost) 214,069.34												
Date 8/28/2019 22:00		Type OIL BASE				Depth (ftKB) 22,282		Density (lb/gal) 12.80		Percent Oil (%) 62.0		Mud Temp Out... 212.0		MBT (lb/bbl)		pH		Pm Filtrate (m...)		Pm (mL/mL)								
Funnel Viscosity (s/qt) 62		PV Calc (cP) 37.0		YP Calc (lb/100R²) 26		Gel 10 sec (lb/100ft²) 21.000		Gel 10 min (lb/100ft²) 42.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 63		Vis 600rpm 100												
Corrected Solids (%) 19.9		API Water Loss		LGS (%) 3.3		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 59,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 1,879.34		Cum Mud Field Est (Cost) 214,069.34												

WELL NO. 342
ENSIGN 786

Report Date	8/29/2019
Report #	25
Projected Days	22.00
Drilling Days	19.91
Current Depth	22,282
Depth Progress	0
Planned VS	15,781
Current VS	13,889
A/E #	1550782
Total A/E	3,640,000

WELL NO. 342
ENSIGN 786

Report Date	8/30/2019
Report #	26
Projected Days	22.00
Drilling Days	20.91
Current Depth	23,001
Depth Progress	719
Planned VS	15,781
Current VS	14,640
A/E #	1550782
Total A/E	3,640,000

42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10			Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS											
Report Summary																											
Well Spud 7/7/2019		TD Date		RR Date		Target Formation WFMP22_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 60,536		Cum Field Est (Cost) 2,722,716											
Status at Report Time Drilling 8 3/4 lateral at 23,001 ft																											
Operations Summary 0 HSE Washed f/ 16,600 ft to 22,282 ft, drilled 8 3/4 lateral from 22,282 ft to 23,001 ft (719 ft @ 65.4 ft/hr) Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Mud Wt 12.6 ppg, Vis 62 Drilling window: 10' Above - 5' Below, 30' left/right of Plan #1 8-26-2019 06:51 Last survey: 22,907 ft MD Inc 91.52° Azm 2.15°, 3.4 ft. Above, 11.9 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)									Planned Operations Drill 8 3/4 lateral as per directional plan to +/- 24,076																		
Start MD (ftKB) 22,282				End MD (ftKB) 23,001			Depth Progress (ft) 719		Drilling Time (hr) 11.00			Avg ROP (ft/hr) 65.4		Time Since LTI (days) 1,120		Time Since RI (days) 1,120											
Daily Time Log																											
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments						Hole Section	Interval	Category	Activity	NPT												
06:00	19:00	13.00	22,282	22,282	Washed and reamed f/ 16,600 ft to 22,028 ft at 550 gpm, 50 rpm. MWI 12.6 ppg vis 70 MWO 12.7 ppg Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19						PROD	LAT	DRILL	REAMING	Yes												
19:00	06:00	11.00	22,282	23,001	Drilled/slide 8 3/4" lateral hole from 22,282 ft to 23,001 ft (719 ft @ 65.4 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Surveys Magvar corrected Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19						PROD	LAT	DRILL	DRILL W/ MUD	No												
Drilling Parameters																											
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)		Slide Time (hr)		Int ROP (ft/hr)		TFO (°)		dP (SPP) (psi)		WOB (1000lbf)		Q Rate (gpm/cfm)		SPP (psi)		RPM (rpm)		PU Str Wt (1000lbf)		SO Str Wt (1000lbf)		Drill Tq	
22,282		23,001		11.00		0.00		65.4				430		28		530		5,900.0		70		310		0		22,000	
Bit Information																											
Size (in)	Make		Model		Type	Dull Out		Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)										
8 3/4	REED		TKC66 Z1		PDC	2-2-BT-N-X-0-CT-DMF		19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223										
8 3/4	ULTERRA		SPL616		PDC	-----		22,282	23,001	719.00	11.00	65.4	11.00		65.4	28	203										
Current BHA Components																											
BHA No	Item Description					Make		Model		OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)											
9	DRILL PIPE					RIG		RIG		5	475	14,972.77	IF														
9	AGITATOR					Impulse		Impulse 1.5" ball activated		6.64	1	23.55	IF		6.64	1.50											
9	DRILL PIPE					RIG		RIG		5	153	4,806.57	IF														
9	AGITATOR					Impulse		Impulse 1.375" ball activated		6.61	1	17.40	IF		6.61	1.52											
9	DRILL PIPE					RIG		RIG		5	96	3,011.79	IF														
9	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.71	1	30.26	IF		6.71												
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.9	1	30.66	IF		6.9	5.12											
9	FUSION PULSER SUB					CATHEDRAL		CATHEDRAL		6.74	1	7.10	IF		6.74	1.28											
9	FUSION SPACER SUB					CATHEDRAL		CATHEDRAL		7	1	5.52	IF		7	1.52											
9	ECM GAP SUB					CATHEDRAL		CATHEDRAL		6.59	1	6.80	IF		6.59	0.96											
9	XO SUB					CATHEDRAL		CATHEDRAL		7	1	3.59	IF		7												
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.65	1	14.44	IF		6.65	4.41											
9	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.936	1	30.72	IF		6.936												
9	STABILIZER					CATHEDRAL		CATHEDRAL		7 7/8		5.11	IF		7.88	6.93											
9	MUD MOTOR					CATHEDRAL		Claw 250, 1.83° Fixed w/8 1/8" IBS stabilizer		7	1	33.72	IF		8.13												
Mud Reports																											
Time 10:00		Type OIL BASE		Depth (ftKB) 22,282		Density (lb/gal) 12.90		Vis (s/qt) 74		PV Calc (cP) 33.0		YP Calc (lb/100... 17		Vis 3rpm 7		Vis 6rpm 8		LGS (%) 3.6		LCM (lb/bbl)		WPS (ppm) 306,313		OW Ratio 79.4/20.6			
Electric Stab (V) 626.0			Excess Lime (lb/bbl) 0.5			HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 2,435.83			Cum Mud Field Est (Cost) 216,505.17									
Time 22:00		Type OIL BASE		Depth (ftKB) 22,419		Density (lb/gal) 12.60		Vis (s/qt) 62		PV Calc (cP) 32.0		YP Calc (lb/100... 26		Vis 3rpm 9		Vis 6rpm 11		LGS (%) 4.8		LCM (lb/bbl)		WPS (ppm) 302,803		OW Ratio 79.5/20.5			
Electric Stab (V) 636.0			Excess Lime (lb/bbl) 0.7			HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 2,435.83			Cum Mud Field Est (Cost) 216,505.17									
Mud Reports																											
Date 8/29/2019 10:00			Type OIL BASE					Depth (ftKB) 22,282		Density (lb/gal) 12.90		Percent Oil (%) 61.5		Mud Temp Out... 212.0		MBT (lb/bbl)		pH		Pm Filtrate (m...)		Pm (mL/mL)					
Funnel Viscosity (s/qt) 74		PV Calc (cP) 33.0		YP Calc (lb/100ft²) 17		Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 25.000		Vis 3rpm 7			Vis 6rpm 8			Vis 300rpm 50			Vis 600rpm 83								
Corrected Solids (%) 20.4		API Water Loss		LGS (%) 3.6		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 57,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 2,435.83		Cum Mud Field Est (Cost) 216,505.17											
Date 8/29/2019 22:00			Type OIL BASE					Depth (ftKB) 22,419		Density (lb/gal) 12.60		Percent Oil (%) 62.0		Mud Temp Out... 210.0		MBT (lb/bbl)		pH		Pm Filtrate (m...)		Pm (mL/mL)					
Funnel Viscosity (s/qt) 62		PV Calc (cP) 32.0		YP Calc (lb/100ft²) 26		Gel 10 sec (lb/100ft²) 18.000		Gel 10 min (lb/100ft²) 43.000		Vis 3rpm 9			Vis 6rpm 11			Vis 300rpm 58			Vis 600rpm 90								
Corrected Solids (%) 19.9		API Water Loss		LGS (%) 4.8		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 2,435.83		Cum Mud Field Est (Cost) 216,505.17											
Mud Reports																											
Date 8/29/2019		Type OIL BASE			Depth (ftKB) 22,282		Dens (lb/gal) 12.90		Vis (s/qt) 74		PV Calc (cP) 33.0		YP Calc (l... 17		Vis 3rpm 7		Vis 6rpm 8		LGS (%) 3.6		LCM (lb/bbl)		Chlor (mg/L) 57,000		Oil Water Ratio 79.4/20.6		
Daily Mud Field Est (Cost) 2,435.83				Cum Mud Field Est (Cost) 216,505.17				Electric Stab (V) 626.0			Excess Lime (lb/bbl) 0.5			HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2			HTHP Temperature (°F) 250.0							
Date 8/29/2019		Type OIL BASE			Depth (ftKB) 22,419		Dens (lb/gal) 12.60		Vis (s/qt) 62		PV Calc (cP) 32.0		YP Calc (l... 26		Vis 3rpm 9		Vis 6rpm 11		LGS (%) 4.8		LCM (lb/bbl)		Chlor (mg/L) 58,000		Oil Water Ratio 79.5/20.5		
Daily Mud Field Est (Cost) 2,435.83				Cum Mud Field Est (Cost) 216,505.17				Electric Stab (V) 636.0			Excess Lime (lb/bbl) 0.7			HTHP Filtrate (mL/30min) 3.0			HTHP Filter Cake (1/32") 2			HTHP Temperature (°F) 250.0							
Wellbore Design																											
Casing Description					Run Date			OD (in)		Wt (lb/ft)		Grade		Conn		Set Depth (ftKB)		Length (ft)									
CONDUCTOR					6/22/2019			20		106.50		J-55		WELDED		71.0		40.00									
SURFACE					7/9/2019			13 3/8		54.50		J-55		BUTTRESS THREAD		1,119.0		1,120.29									
INTERMEDIATE					8/14/2019			9 5/8		40.00		K-55		LT&C		7,703.7		7,703.70									
PRODUCTION								5 1/2		20.00		P-110 CY		BUTTRESS THREAD		24,076.0		24,061.41									

WELL NO. 342
ENSIGN 786

Report Date	8/30/2019
Report #	26
Projected Days	22.00
Drilling Days	20.91
Current Depth	23,001
Depth Progress	719
Planned VS	15,781
Current VS	14,640
AFE #	1550782
Total AFE	3,640,000

Survey Data								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
21,494	90.74	357.20	8,374	13,163.84	13,161.83	-240.81	1.47	-0.88
21,588	90.41	358.66	8,373	13,257.81	13,255.76	-244.21	1.59	-0.35
21,682	90.46	1.49	8,372	13,351.79	13,349.75	-244.08	3.01	0.05
21,777	91.10	0.27	8,371	13,446.74	13,444.73	-242.62	1.45	0.67
21,871	91.01	359.20	8,369	13,540.72	13,538.71	-243.06	1.14	-0.10
21,965	90.31	0.83	8,368	13,634.70	13,632.70	-243.03	1.89	-0.74
22,059	91.91	1.27	8,366	13,728.64	13,726.66	-241.31	1.77	1.70
22,154	91.74	0.18	8,363	13,823.55	13,821.61	-240.11	1.16	-0.18
Mud Logging Information								
Max Trip Gas (units)			Avg Drill Gas (units)			Max Drill Gas (units)		
Geological Data								
Formation Name			Prog Top TVD (ftKB)		Drill Top MD (ftKB)		Drill Top (TVD) (ftKB)	

WELL NO. 342
ENSIGN 786

Report Date	8/31/2019
Report #	27
Projected Days	22.00
Drilling Days	21.91
Current Depth	24,112
Depth Progress	1,111
Planned VS	15,781
Current VS	15,779
APE #	15507822
Total AFE	3,640,000

API 42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10			Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00	RKB (ft) 31.00	County REAGAN		State TEXAS		
Report Summary																
Well Spud 7/7/2019		TD Date 8/30/2019		RR Date		Target Formation WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 83,692		Cum Field Est (Cost) 2,806,408	
Status at Report Time POH hole laying down drillpipe @ 20,458 ft																
Operations Summary 0 HSE Drilled 8 3/4 lateral from 23,001 ft to 24,112 ft (1111 ft @ 76.6 ft/hr). Circulated hole clean, checked flow, static, pumped slug, POH racking back 20 stands f/ 24,112 ft to 22,217 ft, POH lay down drillpipe f/ 24,112 ft to 20,458 ft Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing. Mud Wt 12.6 ppg, Vis 62 New Drilling window: 15' Above - 0' above, 30' left/right of Plan #1 8-30-2019 06:45 Old Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Last survey: 23.660 ft MD Inc 90.43° Azm 0.69°, 2.9 ft. Above, 15.3 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: R/D Demob									Planned Operations Pull out of hole laying down, run 5.5" casing, cement same							
Start MD (ftKB) 23,001				End MD (ftKB) 24,112		Depth Progress (ft) 1,111		Drilling Time (hr) 14.50		Avg ROP (ft/hr) 76.6		Time Since LTI (days) 1,121		Time Since RI (days) 1,121		
Daily Time Log																
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT		
06:00	16:15	10.25	23,001	23,814	Drilled/slide 8 3/4" lateral hole from 23,001 ft to 23,814 ft (813 ft @ 79.3 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg 1st clean up sweep 1.5 ppg over, pumped at 500 ft f/TD, Start: P/U 340 S/O 0 Rot 200 OB Tq: 12,500 End: P/U 340 S/O 0 Rot 200 OB Tq: 12,500 Shaker coverage 85% bottoms up Shaker coverage 75% after sweep bottoms up New Drilling window: 15' Above - 0' above, 30' left/right of Plan #1 8-30-2019 06:45 Old Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Surveys Magvar corrected Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19				PROD	LAT	DRILL	DRILL W/ MUD		No		
16:15	17:00	0.75	23,814	23,814	Trouble shoot MWD, unable to get signal back. Discussed with Engineer, plan to drill ahead to TD without MWD				PROD	LAT	DRILL	DIRECTIONAL WORK		Yes		
17:00	21:15	4.25	23,814	24,112	Drilled/slide 8 3/4" lateral hole from 23,814 ft to 24,112 ft (298 ft @ 70.1 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg 2nd clean up sweep 2.0 ppg over, pumped at 250 ft. f/TD Start: P/U 350 S/O 0 Rot 200 OB Tq: 13,000 End: P/U 340 S/O 0 Rot 200 OB Tq: 13,000 Shaker coverage 85% bottoms up Shaker coverage 70% after bottoms up New Drilling window: 15' Above - 0' above, 30' left/right of Plan #1 8-30-2019 06:45 Old Drilling window: 10' Above - 5' below, 30' left/right of Plan #1 8-26-2019 06:21 Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing.				PROD	LAT	DRILL	DRILL W/ MUD		No		
21:15	01:15	4.00	24,112	24,112	Pumped 3rd sweep at TD 2.0 ppg over, Circulated 2 bottoms up. Start: P/U 340 S/O 0 Rot 200 OB Tq: 13,000 End: P/U 300 S/O 0 Rot 200 OB Tq: 11,000 Shaker coverage 75% bottoms up Shaker coverage 50% after bottoms up MW 12.6 VIS 59 Build slug and fill trip tanks Flow checked well, Well static. Pumped slug Tripped out of hole f/ 24,112 ft to 22,217 ft racking back P/U on first stand was 340k				PROD	PROD	CSG/CEMENT	CLEANUP CYCLE		No		
01:15	06:00	4.75	24,112	24,112	Pulled out of hole f/ 22,217 ft to 20,458 ft, laying down dp				PROD	PROD	CSG/CEMENT	TRIPS		No		
Drilling Parameters																
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)		RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq
23,001		24,112		14.50	0.00	76.6		390	26	525	5,900.0		70	360	0	22,000
Bit Information																
Size (in)	Make		Model	Type	Dull Out		Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)
8 3/4	REED		TKC66 Z1	PDC	2-2-BT-N-X-0-CT-DMF		19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223
8 3/4	ULTERRA		SPL616	PDC	-----		22,282	24,112	1,830.00	25.50	71.8	25.50		71.8	28	203
Current BHA Components																
BHA No	Item Description					Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)		
9	DRILL PIPE					RIG	RIG	5	510	16,083.77	IF					
9	AGITATOR					Impulse	Impulse 1.5" ball activated	6.64	1	23.55	IF		6.64	1.50		
9	DRILL PIPE					RIG	RIG	5	153	4,806.57	IF					
9	AGITATOR					Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52		
9	DRILL PIPE					RIG	RIG	5	96	3,011.79	IF					
9	DRILL COLLAR - NON MAG					CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71			
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12		
9	FUSION PULSER SUB					CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28		
9	FUSION SPACER SUB					CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52		
9	ECM GAP SUB					CATHEDRAL	CATHEDRAL	6.59	1	6.80	IF		6.59	0.96		
9	XO SUB					CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7			
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41		
9	DRILL COLLAR - NON MAG					CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936			
9	STABILIZER					CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF	7.88	6.93	2.00		

Report Date	8/31/2019
Report #	27
Projected Days	22.000
Drilling Days	21.91
Current Depth	24,112
Depth Progress	1,111
Planned VS	15,781
Current VS	15,779
AFE #	15507822
Total AFE	3,640,000

WELL NO. 342
ENSIGN 786

Current BHA Components

BHA No	Item Description	Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)
9	MUD MOTOR	CATHEDRAL	Claw 250, 1.83" Fixed w/8 1/8" IBS stabilizer	7	1	33.72	IF	8.13		

Mud Reports

Time 10:00	Type OIL BASE	Depth (ftKB) 23,302	Density (lb/gal) 12.60	Vis (s/qt) 60	PV Calc (cP) 30.0	YP Calc (lb/100... 27	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 302,803	OW Ratio 79.5/20.5
Electric Stab (V) 623.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43	
Time 22:00	Type OIL BASE	Depth (ftKB) 24,112	Density (lb/gal) 12.60	Vis (s/qt) 57	PV Calc (cP) 30.0	YP Calc (lb/100... 25	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 297,754	OW Ratio 79.5/20.5
Electric Stab (V) 615.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43	

Mud Reports

Date 8/30/2019 10:00		Type OIL BASE		Depth (ftKB) 23,302	Density (lb/gal) 12.60	Percent Oil (%) 62.0	Mud Temp Out... 205.0	MBT (lb/bbl)		pH	Pm Filtrate (m...	Pm (mL/mL)		
Funnel Viscosity (s/qt) 60	PV Calc (cP) 30.0		YP Calc (lb/100ft²) 27		Gel 10 sec (lb/100ft²) 16.000	Gel 10 min (lb/100ft²) 44.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 57	Vis 600rpm 87	
Corrected Solids (%) 19.9	API Water Loss		LGS (%) 4.8	Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43
Date 8/30/2019 22:00		Type OIL BASE		Depth (ftKB) 24,112	Density (lb/gal) 12.60	Percent Oil (%) 62.0	Mud Temp Out... 208.0	MBT (lb/bbl)		pH	Pm Filtrate (m...	Pm (mL/mL)		
Funnel Viscosity (s/qt) 57	PV Calc (cP) 30.0		YP Calc (lb/100ft²) 25		Gel 10 sec (lb/100ft²) 16.000	Gel 10 min (lb/100ft²) 44.000		Vis 3rpm 8		Vis 6rpm 10		Vis 300rpm 55	Vis 600rpm 85	
Corrected Solids (%)	API Water Loss		LGS (%) 4.8	Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 57,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43

Mud Reports

Date 8/30/2019		Type OIL BASE		Depth (ftKB) 23,302	Dens (lb/gal) 12.60	Vis (s/qt) 60	PV Calc (cP) 30.0	YP Calc (l... 27	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 58,000	Oil Water Ratio 79.5/20.5
Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43		Electric Stab (V) 623.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0		
Date 8/30/2019		Type OIL BASE		Depth (ftKB) 24,112	Dens (lb/gal) 12.60	Vis (s/qt) 57	PV Calc (cP) 30.0	YP Calc (l... 25	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 57,000	Oil Water Ratio 79.5/20.5
Daily Mud Field Est (Cost) 3,094.26		Cum Mud Field Est (Cost) 219,599.43		Electric Stab (V) 615.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0		

Wellbore Design

Casing Description	Run Date	OD (in)	Wt (lb/ft)	Grade	Conn	Set Depth (ftKB)	Length (ft)
CONDUCTOR	6/22/2019	20	106.50	J-55	WELDED	71.0	40.00
SURFACE	7/9/2019	13 3/8	54.50	J-55	BUTTRESS THREAD	1,119.0	1,120.29
INTERMEDIATE	8/14/2019	9 5/8	40.00	K-55	LT&C	7,703.7	7,703.70
PRODUCTION		5 1/2	20.00	P-110 CY	BUTTRESS THREAD	24,106.0	24,105.91

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
23,001	89.67	0.64	8,352	14,669.56	14,668.03	-212.95	2.54	-1.97
23,095	89.56	0.81	8,353	14,763.53	14,762.02	-211.76	0.22	-0.12
23,189	89.20	0.79	8,354	14,857.49	14,856.01	-210.45	0.38	-0.38
23,283	90.30	0.61	8,354	14,951.46	14,950.00	-209.30	1.19	1.17
23,377	91.02	1.26	8,353	15,045.41	15,043.98	-207.77	1.03	0.77
23,472	90.30	0.60	8,352	15,140.36	15,138.96	-206.22	1.03	-0.76
23,566	89.31	359.96	8,352	15,234.34	15,232.96	-205.76	1.25	-1.05
23,660	90.43	0.69	8,352	15,328.33	15,326.95	-205.23	1.42	1.19

Mud Logging Information

Max Trip Gas (units)	Avg Drill Gas (units)	Max Drill Gas (units)
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Geological Data

Formation Name	Prog Top TVD (ftKB)	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)

SABLE PERMIAN RESOURCES, LLC
Daily Drilling Partner Report

Report Date	9/2/2019
Report #	29
Projected Days	22.00
Drilling Days	23.91
Current Depth	24,112
Depth Progress	0
Planned VS	15,781
Current VS	15,779
AFE #	15507822
Total AFE	3,640,000

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10		Latitude 31.2357190000	Longitude -101.5459610900	Orig KB El... 2,747.00	RKB (ft) 31.00	County REAGAN	State TEXAS				
Report Summary														
Well Spud 7/7/2019	TD Date 8/30/2019	RR Date	Target Formation WFMP C2_346_SH		Proposed TD (ftKB) 24,076	Target Line Plan #1			Daily Field Est (Cost) 157,226	Cum Field Est (Cost) 3,103,713				
Status at Report Time Rigging up back up power tongs														
Operations Summary 0 HSE POOH laid down drill pipe f/ 4,733 ft to 169 ft, L/D BHA, R/U Express tools and lay down truck, M/U shoe track and pumped thru, M/U toe sleeves, ran 42 jts (1,996 ft) of 20 ppf BPN P-110 5 1/2" Prod casing. Express power tong broke and was locked on pipe, R/D head in tongs, back out joint, w/ rig tongs, rig down bad power tongs and lay down, P/U back up tongs. Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing. Mud Wt 12.6 ppg, Vis 62 Last survey: 23,660 ft MD Inc 90.43° Azm 0.69°, 2.9 ft. Above, 15.3 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: R/D Demob						Planned Operations Run 5.5" casing. rig down casing crew and CRT, rig up cement head, burst floatation collar, circulate 1 1/2 bottoms up. Cement 5.5" production casing, nipple down BOP's, install TA cap and rig down, release rig.								
Start MD (ftKB) 24,112		End MD (ftKB) 24,112		Depth Progress (ft) 0		Drilling Time (hr)		Avg ROP (ft/hr)		Time Since LTI (days) 1,123	Time Since RI (days) 1,123			
Daily Time Log														
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments			Hole Section	Interval	Category	Activity	NPT		
06:00	15:30	9.50	24,112	24,112	Pulled out of hole laying down drill pipe from 4,733 ft to 169 ft.			PROD	PROD	CSG/CEMENT	P/U & L/D DRILL PIPE	No		
15:30	15:45	0.25	24,112	24,112	Safety meeting for laying down BHA			PROD	PROD	CSG/CEMENT	SAFETY MEETING	No		
15:45	19:30	3.75	24,112	24,112	L/D monels. Visually inspected MWD and attempted to communicate with tool (Unsuccessful). L/D MWD tool, motor and broke bit. Note: Found data port on EM tool had mud invasion. Could not communicate with tool. Bit grading: 1-1-WT-S-X-0-WT-TD			PROD	PROD	CSG/CEMENT	P/U & L/D BHA	No		
19:30	20:45	1.25	24,112	24,112	Pulled wear bushing and cleaned rig floor. Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing.			PROD	PROD	CSG/CEMENT	BOP/OTHER	No		
20:45	23:45	3.00	24,112	24,112	R/U Express casing tools and lay down truck, Inspect same			PROD	PROD	CSG/CEMENT	3rd PARTY EQUIPMENT REPAIR	No		
23:45	03:15	3.50	24,112	24,112	PJSM. Made up Weatherford float shoe (Model 323HD) and float collar (Model 4EHD), pump thru shoe track, floats open. Picked up and ran Geo Dynamics toe sleeves, Baker locked down to shoe (TC-MV577-BT-625K 110, 11,000 X 2 Sn : 78468-12447, 12448), ran 42 jts (1,996 ft) of 20 ppf BPN P-110 BTC 5 1/2" production casing. 5 1/2" swedge with lo-torque functioned and left in open position on rig floor. CRT rigged up Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing.			PROD	PROD	CSG/CEMENT	RUN CASING	No		
03:15	06:00	2.75	24,112	24,112	Express power tongs broke and was locked on pipe. disassembled the dies to release from pipe, opening was 180" from door on tongs, tongs locked up. Used tongs to break casing joint back out to be able to lay tongs down. Collar messed up on next joint. R/D power tongs and R/U new set. Called office for another back up set of power tongs			PROD	PROD	CSG/CEMENT	3rd PARTY EQUIPMENT REPAIR	Yes		
Drilling Parameters														
Start Depth (ftKB)	End Depth (ftKB)	Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq	
Bit Information														
Size (in)	Make	Model	Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)
8 3/4	REED	TKC66 Z1	PDC	2-2-BT-N-X-0-CT-DMF	19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223
8 3/4	ULTEERRA	SPL616	PDC	1-1-WT-S-X-0-WT-TD	22,282	24,112	1,830.00	25.50	71.8	25.50		71.8	28	203
Current BHA Components														
BHA No	Item Description			Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)		
9	DRILL PIPE			RIG	RIG	5	510	16,083.77	IF					
9	AGITATOR			Impulse	Impulse 1.5" ball activated	6.64	1	23.55	IF		6.64	1.50		
9	DRILL PIPE			RIG	RIG	5	153	4,806.57	IF					
9	AGITATOR			Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52		
9	DRILL PIPE			RIG	RIG	5	96	3,011.79	IF					
9	DRILL COLLAR - NON MAG			CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71			
9	DRILL COLLAR - FLEX NON MAG			CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12		
9	FUSION PULSER SUB			CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28		
9	FUSION SPACER SUB			CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52		
9	ECM GAP SUB			CATHEDRAL	CATHEDRAL	6.59	1	6.80	IF		6.59	0.96		
9	XO SUB			CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7			
9	DRILL COLLAR - FLEX NON MAG			CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41		
9	DRILL COLLAR - NON MAG			CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936			
9	STABILIZER			CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF	7.88	6.93	2.00		
9	MUD MOTOR			CATHEDRAL	Claw 250, 1.83° Fixed w/8 1/8" IBS stabilizer	7	1	33.72	IF	8.13				
Mud Reports														
Time 10:00	Type OIL BASE	Depth (ftKB) 24,112	Density (lb/gal) 12.70	Vis (s/qt) 60	PV Calc (cP) 32.0	YP Calc (lb/100... 26	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.1	LCM (lb/bbl)	WPS (ppm) 302,803	OW Ratio 79.5/20.5		
Electric Stab (V) 618.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33			
Time 22:00	Type OIL BASE	Depth (ftKB) 24,112	Density (lb/gal) 12.90	Vis (s/qt) 58	PV Calc (cP) 30.0	YP Calc (lb/100... 15	Vis 3rpm 9	Vis 6rpm 8	LGS (%) 4.7	LCM (lb/bbl)	WPS (ppm) 297,754	OW Ratio 79.2/20.8		
Electric Stab (V) 611.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33			
Mud Reports														
Date 9/1/2019 10:00		Type OIL BASE		Depth (ftKB) 24,112	Density (lb/gal) 12.70	Percent Oil (%) 62.0	Mud Temp Out... 208.0	MBT (lb/bbl)		pH	Pm Filtrate (m...)	Pm (mL/mL)		
Funnel Viscosity (s/qt) 60	PV Calc (cP) 32.0	YP Calc (lb/100ft²) 26	Gel 10 sec (lb/100ft²) 20.00	Gel 10 min (lb/100ft²) 41.000	Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 58		Vis 600rpm 90			
Corrected Solids (%) 19.9	API Water Loss	LGS (%) 4.1	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl)		Chlorides (mg/L) 56,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33		

WELL NO. 342
ENSIGN 786

Report Date	9/2/2019
Report #	29
Projected Days	22.00
Drilling Days	23.91
Current Depth	24,112
Depth Progress	0
Planned VS	15,781
Current VS	15,779
AFE #	1550782
Total AFE	3,640,000

Mud Reports														
Date 9/1/2019 22:00		Type OIL BASE			Depth (ftKB) 24,112	Density (lb/gal) 12.90	Percent Oil (%) 61.0	Mud Temp Out... 208.0	MBT (lb/bbl)	pH		Pm Filtrate (m...)	Pm (mL/mL)	
Funnel Viscosity (s/qt) 58		PV Calc (cP) 30.0		YP Calc (lb/100ft²) 15	Gel 10 sec (lb/100ft²) 16,000	Gel 10 min (lb/100ft²) 44,000		Vis 3rpm 9		Vis 6rpm 8		Vis 300rpm 45		Vis 600rpm 75
Corrected Solids (%) 21.0	API Water Loss 4.7		LGS (%) 4.7	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl)		Chlorides (mg/L) 56,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33	

Mud Reports												
Date 9/1/2019	Type OIL BASE	Depth (ftKB) 24,112	Dens (lb/gal) 12.70	Vis (s/qt) 60	PV Calc (cP) 32.0	YP Calc (l... 26	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.1	LCM (lb/bbl) 	Chlor (mg/L) 56,000	Oil Water Ratio 79.5/20.5
Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33		Electric Stab (V) 618.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0
Date 9/1/2019	Type OIL BASE	Depth (ftKB) 24,112	Dens (lb/gal) 12.90	Vis (s/qt) 58	PV Calc (cP) 30.0	YP Calc (l... 15	Vis 3rpm 9	Vis 6rpm 8	LGS (%) 4.7	LCM (lb/bbl) 	Chlor (mg/L) 56,000	Oil Water Ratio 79.2/20.8
Daily Mud Field Est (Cost) 906.95		Cum Mud Field Est (Cost) 221,413.33		Electric Stab (V) 611.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0

Wellbore Design							
Casing Description	Run Date	OD (in)	Wt (lb/ft)	Grade	Conn	Set Depth (ft)KB	Length (ft)
CONDUCTOR	6/22/2019	20	106.50	J-55	WELDED	71.0	40.00
SURFACE	7/9/2019	13 3/8	54.50	J-55	BUTTRESS THREAD	1,119.0	1,120.29
INTERMEDIATE	8/14/2019	9 5/8	40.00	K-55	LT&C	7,703.7	7,703.70
PRODUCTION		5 1/2	20.00	P-110 CY	BUTTRESS THREAD	24,106.0	24,105.48

Survey Data								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
23,001	89.67	0.64	8,352	14,669.56	14,668.03	-212.95	2.54	-1.97
23,095	89.56	0.81	8,353	14,763.53	14,762.02	-211.76	0.22	-0.12
23,189	89.20	0.79	8,354	14,857.49	14,856.01	-210.45	0.38	-0.38
23,283	90.30	0.61	8,354	14,951.46	14,950.00	-209.30	1.19	1.17
23,377	91.02	1.26	8,353	15,045.41	15,043.98	-207.77	1.03	0.77
23,472	90.30	0.60	8,352	15,140.36	15,138.96	-206.22	1.03	-0.76
23,566	89.31	359.96	8,352	15,234.34	15,232.96	-205.76	1.25	-1.05
23,660	90.43	0.69	8,352	15,328.33	15,326.95	-205.23	1.42	1.19

Mud Logging Information		
Max Trip Gas (units)	Avg Drill Gas (units)	Max Drill Gas (units)

Geological Data			
Formation Name	Prog Top TVD (ftKB)	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)

SABLE PERMIAN RESOURCES, LLC
Daily Drilling Partner Report

Report Date	9/3/2019
Report #	30
Projected Days	22.00
Drilling Days	24.91
Current Depth	24,112
Depth Progress	0
Planned VS	15,781
Current VS	15,779
AFE #	1550782
Total AFE	3,640,000

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

API 42383406890000		Surface Legal Location UL SURVEY, A-U232, BLOCK 10				Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS	
Report Summary																	
Well Spud 7/7/2019		TD Date 8/30/2019		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 83,459		Cum Field Est (Cost) 3,187,172	
Status at Report Time Running casing at 22,378 ft																	
Operations Summary 0 HSE P/U back up tongs. Ran 20 ppf BPN P-110 5 1/2" Prod casing f/ 1,996 ft to 22,021 ft, rotate 22,021 ft to 22,066 ft, run f/ 22,066 ft to 22,156 ft, ream f/ 22,156 ft to 22,200 ft, run f/ 22,156 ft to 22,378 ft Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing. Mud Wt 12.6 ppg, Vis 62 Last survey: 23,660 ft MD Inc 90.43° Azm 0.69°, 2.9 ft. Above, 15.3 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: R/D Demob										Planned Operations Run 5.5" casing. rig down casing crew and CRT, rig up cement head, burst floatation collar, circulate 1 1/2 bottoms up. Cement 5.5" production casing, nipple down BOP's, install TA cap and rig down, release rig.							
Start MD (ftKB) 24,112				End MD (ftKB) 24,112		Depth Progress (ft) 0		Drilling Time (hr)		Avg ROP (ft/hr)		Time Since LTI (days) 1,124		Time Since RI (days) 1,124			
Daily Time Log																	
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity		NPT		
06:00	06:00	24.00	24,112	24,112	PJSM. Ran 20 ppf BPN P-110 BTC 5 1/2" production casing f/ 1,996 ft to 22,021 ft, ream f/ 22,021 ft to 22,066 ft, run csg f/ 22,066 ft to 22,156 ft, ream f/ 22,156 ft to 22,200 ft, run casing f/ 22,156 ft to 22,378 ft Ream at 20 RPM and max TQ at 12,000 ft/lbs (TQ on pipe 15,400 ft/lbs) 5 1/2" swedge with lo-torque functioned and left in open position on rig floor. CRT rigged up Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing.					PROD	PROD	CSG/CEMENT	RUN CASING		No		
Drilling Parameters																	
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)	Slide Time (hr)	Int ROP (ft/hr)	TFO (°)	dP (SPP) (psi)	WOB (1000lbf)	Q Rate (gpm/cfm)	SPP (psi)	RPM (rpm)	PU Str Wt (1000lbf)	SO Str Wt (1000lbf)	Drill Tq		
Bit Information																	
Size (in)	Make		Model		Type	Dull Out	Depth In (ftKB)	Depth Out (ftKB)	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)	
8 3/4	REED		TKC66 Z1		PDC	2-2-BT-N-X-0-CT-DMF	19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223	
8 3/4	ULTERRA		SPL616		PDC	1-1-WT-S-X-0-WT-TD	22,282	24,112	1,830.00	25.50	71.8	25.50		71.8	28	203	
Current BHA Components																	
BHA No	Item Description					Make		Model		OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)	
9	DRILL PIPE					RIG		RIG		5	510	16,083.77	IF				
9	AGITATOR					Impulse		Impulse 1.5" ball activated		6.64	1	23.55	IF		6.64	1.50	
9	DRILL PIPE					RIG		RIG		5	153	4,806.57	IF				
9	AGITATOR					Impulse		Impulse 1.375" ball activated		6.61	1	17.40	IF		6.61	1.52	
9	DRILL PIPE					RIG		RIG		5	96	3,011.79	IF				
9	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.71	1	30.26	IF		6.71		
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.9	1	30.66	IF		6.9	5.12	
9	FUSION PULSER SUB					CATHEDRAL		CATHEDRAL		6.74	1	7.10	IF		6.74	1.28	
9	FUSION SPACER SUB					CATHEDRAL		CATHEDRAL		7	1	5.52	IF		7	1.52	
9	ECM GAP SUB					CATHEDRAL		CATHEDRAL		6.59	1	6.80	IF		6.59	0.96	
9	XO SUB					CATHEDRAL		CATHEDRAL		7	1	3.59	IF		7		
9	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.65	1	14.44	IF		6.65	4.41	
9	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.936	1	30.72	IF		6.936		
9	STABILIZER					CATHEDRAL		CATHEDRAL		7 7/8		5.11	IF	7.88	6.93	2.00	
9	MUD MOTOR					CATHEDRAL		Claw 250, 1.83° Fixed w/8 1/8" IBS stabalizer		7	1	33.72	IF	8.13			
Mud Reports																	
Time 10:00	Type OIL BASE		Depth (ftKB) 24,112		Density (lb/gal) 12.90	Vis (s/qt) 58	PV Calc (cP) 30.0	YP Calc (lb/100... 27	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.7	LCM (lb/bbl) 224,548.44	WPS (ppm) 297,754	OW Ratio 79.2/20.8			
Electric Stab (V) 605.0			Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,135.11		Cum Mud Field Est (Cost) 224,548.44				
Time 22:00	Type OIL BASE		Depth (ftKB) 24,112		Density (lb/gal) 12.90	Vis (s/qt) 60	PV Calc (cP) 30.0	YP Calc (lb/100... 25	Vis 3rpm 9	Vis 6rpm 10	LGS (%) 4.7	LCM (lb/bbl) 224,548.44	WPS (ppm) 302,803	OW Ratio 79.2/20.8			
Electric Stab (V) 605.0			Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,135.11		Cum Mud Field Est (Cost) 224,548.44				
Mud Reports																	
Date 9/2/2019 10:00			Type OIL BASE			Depth (ftKB) 24,112	Density (lb/gal) 12.90	Percent Oil (%) 61.0	Mud Temp Out... 208.0	MBT (lb/bbl)		pH	Pm Filtrate (m... 224,548.44		Pm (mL/mL)		
Funnel Viscosity (s/qt) 58		PV Calc (cP) 30.0		YP Calc (lb/100ft²) 27		Gel 10 sec (lb/100ft²) 16.000		Gel 10 min (lb/100ft²) 45.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 57		Vis 600rpm 87	
Corrected Solids (%) 21.0		API Water Loss 30.0		LGS (%) 4.7		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 56,000		Filter Cake (1/32") 3.0		Daily Mud Field Est (Cost) 3,135.11		Cum Mud Field Est (Cost) 224,548.44	
Date 9/2/2019 22:00			Type OIL BASE			Depth (ftKB) 24,112	Density (lb/gal) 12.90	Percent Oil (%) 61.0	Mud Temp Out... 208.0	MBT (lb/bbl)		pH	Pm Filtrate (m... 224,548.44		Pm (mL/mL)		
Funnel Viscosity (s/qt) 60		PV Calc (cP) 30.0		YP Calc (lb/100ft²) 25		Gel 10 sec (lb/100ft²) 18.000		Gel 10 min (lb/100ft²) 43.000		Vis 3rpm 9		Vis 6rpm 10		Vis 300rpm 55		Vis 600rpm 85	
Corrected Solids (%) 20.9		API Water Loss 30.0		LGS (%) 4.7		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 55,000		Filter Cake (1/32") 3.0		Daily Mud Field Est (Cost) 3,135.11		Cum Mud Field Est (Cost) 224,548.44	
Mud Reports																	
Date 9/2/2019		Type OIL BASE			Depth (ftKB) 24,112	Dens (lb/gal) 12.90	Vis (s/qt) 58	PV Calc (cP) 30.0	YP Calc (L... 27	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.7	LCM (lb/bbl)	Chlor (mg/L) 56,000	Oil Water Ratio 79.2/20.8		
Daily Mud Field Est (Cost) 3,135.11			Cum Mud Field Est (Cost) 224,548.44			Electric Stab (V) 605.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0			
Date 9/2/2019		Type OIL BASE			Depth (ftKB) 24,112	Dens (lb/gal) 12.90	Vis (s/qt) 60	PV Calc (cP) 30.0	YP Calc (L... 25	Vis 3rpm 9	Vis 6rpm 10	LGS (%) 4.7	LCM (lb/bbl)	Chlor (mg/L) 55,000	Oil Water Ratio 79.2/20.8		
Daily Mud Field Est (Cost) 3,135.11			Cum Mud Field Est (Cost) 224,548.44			Electric Stab (V) 605.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0			
Wellbore Design																	
Casing Description					Run Date		OD (in)	Wt (lb/ft)	Grade		Conn		Set Depth (ftKB)		Length (ft)		
CONDUCTOR					6/22/2019		20	106.50	J-55		WELDED		71.0		40.00		
SURFACE					7/9/2019		13 3/8	54.50	J-55		BUTTRESS THREAD		1,119.0		1,120.29		
INTERMEDIATE					8/14/2019		9 5/8	40.00	K-55		LT&C		7,703.7		7,703.70		
PRODUCTION							5 1/2	20.00	P-110 CY		BUTTRESS THREAD		24,106.0		24,106.03		
Survey Data																	
MD (ftKB)		Incl (°)		Azm (°)		TVD (ftKB)		VS (ft)		NS (ft)		EW (ft)		DLS (°/100ft)		BUR (°/100ft)	
23,001		89.67		0.64		8,352		14,669.56		14,668.03		-212.95		2.54		-1.97	

SABLE PERMIAN RESOURCES, LLC

Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

Report Date

Report #

Projected Days

Drilling Days

Current Depth

Depth Progress

Planned VS

Current VS

AFE #

Total AFE

9/3/2019

30

22.00

24.91

24,112

0

15,781

15,779

1550782

3,640,000

Survey Data								
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
23,095	89.56	0.81	8,353	14,763.53	14,762.02	-211.76	0.22	-0.12
23,189	89.20	0.79	8,354	14,857.49	14,856.01	-210.45	0.38	-0.38
23,283	90.30	0.61	8,354	14,951.46	14,950.00	-209.30	1.19	1.17
23,377	91.02	1.26	8,353	15,045.41	15,043.98	-207.77	1.03	0.77
23,472	90.30	0.60	8,352	15,140.36	15,138.96	-206.22	1.03	-0.76
23,566	89.31	359.96	8,352	15,234.34	15,232.96	-205.76	1.25	-1.05
23,660	90.43	0.69	8,352	15,328.33	15,326.95	-205.23	1.42	1.19

WELL NO. 342
ENSIGN 786

Report Date	9/4/2019
Report #	31
Projected Days	22.00
Drilling Days	25.91
Current Depth	24,112
Depth Progress	0
Planned VS	15,781
Current VS	15,779
APE #	15507822
Total AFE	3,640,000

API 42383406890000			Surface Legal Location UL SURVEY, A-U232, BLOCK 10			Latitude 31.2357190000		Longitude -101.5459610900		Orig KB El... 2,747.00		RKB (ft) 31.00		County REAGAN		State TEXAS													
Report Summary																													
Well Spud 7/7/2019		TD Date 8/30/2019		RR Date		Target Formation WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 500,096		Cum Field Est (Cost) 3,687,269													
Status at Report Time Washing out surface lines.																													
Operations Summary 0 HSE Ran 20 ppf BPN P-110 5 1/2" Prod casing f/ 22,378 ft to 24,112 ft, R/D Express casing tools, rig up Halliburton cement head and circulate 1 1/2 bottoms up. Cement production casing. Flush surface lines. Note: Received verbal approval for BOP test extension from Mr Justin Cartwright with TRRC @ 12:02 pm 8-29-19 Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing. Mud Wt 12.6 ppg, Vis 62 Last survey: 23,660 ft MD Inc 90.43° Azm 0.69°, 2.9 ft. Above, 15.3 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: R/D Demob									Planned Operations Nipple down BOP's, set slips, cut and dress casing, install packoff, install TA cap and rig down, release rig.																				
Start MD (ftKB) 24,112				End MD (ftKB) 24,112		Depth Progress (ft) 0		Drilling Time (hr)		Avg ROP (ft/hr)			Time Since LTI (days) 1,125		Time Since RI (days) 1,125														
Daily Time Log																													
Start Time		End Time		Dur (hr)		Start Depth (ftKB)		End Depth (ftKB)		Comments				Hole Section	Interval	Category	Activity	NPT											
06:00		14:45		8.75		24,112		24,112		Ran 20 lbs/ft. TMK UP, BPN P-110 CY BTC 5.5" production casing from 22,378 ft. to 24,112 ft., picked up and spaced out for setting casing slips. Casing shoe at 24,112 ft. Summary: Made up shoe, 20' pup jnt and float, 1 joint of casing. Made up swage and pumped through floats. Made up toe sleeve with 2 pup jts, 1 joint of casing, toe sleeve with 2 pup jts, and ran 5.5 production casing to 24,112 ft as follows. Ran a total of 540 jts of P-110 CY 20# BPN, and 3 marker jts. Weatherford Float shoe at 24,112' Weatherford Float collar at 24,086' GeoDynamics toe sleeve at 24,026' GeoDynamics toe sleeve at 23,955' P-110 CY 20# marker joint at 19,021' P-110 CY 20# marker joint at 13,941' Arsenal BPN flotation collar at 7,758' P-110 CY 20# marker joint at 6,806' Ran 421 centralizers, 1 every joint in the lateral and curve, 1 every 3rd joint in the vertical hole. Had proper displacement during casing run. 5 1/2" swage with lo-torque functioned and left in open position on rig floor. CRT rigged up. Note: Notified Kara Operator # 0111 with TRRC at 8/30/2019 23:00 of intent to run and cement 5 1/2" production casing.				PROD	PROD	CSG/CEMENT	RUN CASING	No											
14:45		15:45		1.00		24,112		24,112		R/D Express casing equipment and CRT Tool, R/U Halliburton cement head and circulating iron.				PROD	PROD	CSG/CEMENT	RU/RD 3rd PARTY EQUIPMENT	No											
15:45		21:45		6.00		24,112		24,112		Ruptured flotation collar disk @ 1,995 psi @ 2 BPM, shut down & wait 10 minutes & bleed air, pump 100 bbls shut down pump, wait 10 minutes bleeding air. Pump 100 bbls shut down 10 min. Pump 100 bbls shut down 10 min., Circulating bottoms up staged pumps up f/ 3 bpm to 8 bpm., Max gas 1,714 units. Mud wt. 12.6+ in/out.				PROD	PROD	CSG/CEMENT	COND MUD & CIRC	No											
21:45		22:00		0.25		24,112		24,112		Held PJSM with Halliburton Cementers.				PROD	PROD	CSG/CEMENT	SAFETY MEETING	No											
22:00		04:30		6.50		24,112		24,112		Pumped 5 1/2" production cement job with Halliburton as follows: Broke circulation and tested lines to 7,000 psi. Pumped 50 bbl 13.0 ppg Tuned spacer III. Pumped 467 bbl/s/ 1470 sx lead EconoCem cement and additives, 13.0 ppg, 1.785 yield, mixed at 7 bpm. Mixed and pumped tail cement 750 bbl/s/ 2,925 sacks, NeoCem TM plus additives , 13.2 ppg tail cement, 1.44 yield, mixed at 7 bpm. Washed out cement lines. Dropped Weatherford 10 fin dart plug. Displaced with 532 bbl's of treated water (first 20 bbl's with sugar, biocide and corrosion inhibitor), remaining displacement with biocide and corrosion inhibitor at 6 bpm. Decreased rate to 4 bpm for last 30 bbl's of displacement. At 0430 hrs bumped plug 532 bbl's into displacement with 3,600 psi, 1,000 psi over FCP of 2,600 psi. Held 5 min, bled off pressure, 4 bbl's bled back, floats held. Note: Top of Lead cement at surface. Top of Tail Cement at 7,457 ft. 50 bbls spacer to surface. 217 bbls/683 sacks cement to surface.				PROD	PROD	CSG/CEMENT	RUN CEMENT	No											
04:30		06:00		1.50		24,112		24,112		Flushed out Rig mud lines, Stack, Flow line, Choke Line, Trip tank lines, Fill up lines from cement job and oil base mud with fresh water to prepare for nipple down.				PROD	PROD	CSG/CEMENT	COND MUD & CIRC	No											
Drilling Parameters																													
Start Depth (ftKB)		End Depth (ftKB)		Rot Time (hr)		Slide Time (hr)		Int ROP (ft/hr)		TFO (°)		dP (SPP) (psi)		WOB (1000lbf)		Q Rate (gpm/cfm)		SPP (psi)		RPM (rpm)		PU Str Wt (1000lbf)		SO Str Wt (1000lbf)		Drill Tq			
Bit Information																													
Size (in)		Make		Model		Type		Dull Out		Depth In (ftKB)		Depth Out (ftKB)		Depth Drilled This Job (ft)		Job Drill Hrs (hr)		Avg ROP (ft/hr)		Rot Time (hr)		Slide Time (hr)		Rot ROP (ft/hr)		WOB Max (1000lbf)		Max RPM (rpm)	
8 3/4		REED		TKC66 Z1		PDC		2-2-BT-N-X-0-CT-DMF		19,280		22,282		3,002.00		52.50		57.2		37.00		15.50		73.7		60		223	
8 3/4		ULTERRA		SPL616		PDC		1-1-WT-S-X-0-WT-TD		22,282		24,112		1,830.00		25.50		71.8		25.50				71.8		28		203	
Current BHA Components																													
BHA No	Item Description							Make		Model		OD (in)	Jts	Length (ft)		Top Thread		Gauge (in)	Fish Neck OD (in)		FN Len (ft)								
9	DRILL PIPE							RIG		RIG		5	510	16,083.77		IF													
9	AGITATOR							Impulse		Impulse 1.5" ball activated		6.64	1	23.55		IF			6.64		1.50								
9	DRILL PIPE							RIG		RIG		5	153	4,806.57		IF													
9	AGITATOR							Impulse		Impulse 1.375" ball activated		6.61	1	17.40		IF			6.61		1.52								
9	DRILL PIPE							RIG		RIG		5	96	3,011.79		IF													
9	DRILL COLLAR - NON MAG							CATHEDRAL		CATHEDRAL		6.71	1	30.26		IF			6.71										
9	DRILL COLLAR - FLEX NON MAG							CATHEDRAL		CATHEDRAL		6.9	1	30.66		IF			6.9		5.12								
9	FUSION PULSER SUB							CATHEDRAL		CATHEDRAL		6.74	1	7.10		IF			6.74		1.28								
9	FUSION SPACER SUB							CATHEDRAL		CATHEDRAL		7	1	5.52		IF			7		1.52								
9	ECM GAP SUB							CATHEDRAL		CATHEDRAL		6.59	1	6.80		IF			6.59		0.96								
9	XO SUB							CATHEDRAL		CATHEDRAL		7	1	3.59		IF			7										
9	DRILL COLLAR - FLEX NON MAG							CATHEDRAL		CATHEDRAL		6.65	1	14.44		IF			6.65		4.41								
9	DRILL COLLAR - NON MAG							CATHEDRAL		CATHEDRAL		6.936	1	30.72		IF			6.936										
9	STABILIZER							CATHEDRAL		CATHEDRAL		7 7/8		5.11		IF		7.88	6.93		2.00								
9	MUD MOTOR							CATHEDRAL		Claw 250, 1.83° Fixed w/8 1/8" IBS stabalizer		7	1	33.72		IF		8.13											
Mud Reports																													
Time 10:00		Type OIL BASE		Depth (ftKB) 24,112		Density (lb/gal) 12.90		Vis (s/qt) 58		PV Calc (cP) 31.0		YP Calc (lb/100... 13		Vis 3rpm 5		Vis 6rpm 7		LGS (%) 4.7		LCM (lb/bbl)		WPS (ppm) 301,091		OW Ratio 79.2/20.8					
Electric Stab (V) 600.0				Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 3.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95				Cum Mud Field Est (Cost) 225,455.39											

SABLE PERMIAN RESOURCES, LLC
Daily Drilling Partner Report

Report Date	9/5/2019
Report #	32
Projected Days	22.00
Drilling Days	26.17
Current Depth	24,112
Depth Progress	0
Planned VS	15,781
Current VS	15,779
AFE #	1550782
Total AFE	3,640,000

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342
ENSIGN 786

API 42383406890000	Surface Legal Location UL SURVEY, A-U232, BLOCK 10	Latitude 31.2357190000	Longitude -101.5459610900	Orig KB El... 2,747.00	RKB (ft) 31.00	County REAGAN	State TEXAS
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Report Summary

Well Spud 7/7/2019	TD Date 8/30/2019	RR Date 9/4/2019	Target Formation WFMP2_346_SH	Proposed TD (ftKB) 24,076	Target Line Plan #1	Daily Field Est (Cost) 246,144	Cum Field Est (Cost) 3,885,412
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Status at Report Time

Rig release to Drill and Complete Demobilization

Operations Summary

Flush surface lines., N/D BOP and raised same. Set slips with 195K. Make cut, L/D cut joint. Set packoff and Install TA Cap. Rig released to Drill and Complete Demobilization 2019 at 12:15 hrs 9-4-19

Planned Operations

Rig released to Drill and Complete Demobilization 2019

Next well: R/D Demob					

Daily Time Log

Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments	Hole Section	Interval	Category	Activity	NPT
06:00	07:00	1.00	24,112	24,112	Flushed out Rig mud lines, Stack, Flow line, Choke Line, Trip tank lines, Fill up lines from cement job and oil base mud with fresh water to prepare for nipple down.	PROD	PROD	CSG/CEMENT	RIG UP/RIG DOWN	No
07:00	09:00	2.00	24,112	24,112	Installed wrangler, Nippled down BOP	PROD	PROD	CSG/CEMENT	NIPPLE UP B.O.P./WELLHEAD	No
09:00	11:15	2.25	24,112	24,112	Set slips with 195 k down. Cut casing. Set pack off.	PROD	PROD	CSG/CEMENT	NIPPLE UP B.O.P./WELLHEAD	No
11:15	12:15	1.00	24,112	24,112	Installed TA cap and torqued same.	PROD	PROD	CSG/CEMENT	NIPPLE UP B.O.P./WELLHEAD	No
					Rig released to Drill and Complete Demobilization 2019 at 12:15 hrs 9-4-19					

Drilling Parameters

[illegible]

Bit Information

Size (in)	Make	Model	Type	Dull Out	Depth In (ft)KB	Depth Out (ft)KB	Depth Drilled This Job (ft)	Job Drill Hrs (hr)	Avg ROP (ft/hr)	Rot Time (hr)	Slide Time (hr)	Rot ROP (ft/hr)	WOB Max (1000lbf)	Max RPM (rpm)
8 3/4	REED	TKC66 Z1	PDC	2-2-BT-N-X-0-CT-DMF	19,280	22,282	3,002.00	52.50	57.2	37.00	15.50	73.7	60	223
8 3/4	ULTERRA	SPL616	PDC	1-1-WT-S-X-0-WT-TD	22,282	24,112	1,830.00	25.50	71.8	25.50		71.8	28	203

Current BHA Components

BHA No	Item Description	Make	Model	OD (in)	Jts	Length (ft)	Top Thread	Gauge (in)	Fish Neck OD (in)	FN Len (ft)
9	DRILL PIPE	RIG	RIG	5	510	16,083.77	IF			
9	AGITATOR	Impulse	Impulse 1.5" ball activated	6.64	1	23.55	IF		6.64	1.50
9	DRILL PIPE	RIG	RIG	5	153	4,806.57	IF			
9	AGITATOR	Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.52
9	DRILL PIPE	RIG	RIG	5	96	3,011.79	IF			
9	DRILL COLLAR - NON MAG	CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF		6.71	
9	DRILL COLLAR - FLEX NON MAG	CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12
9	FUSION PULSER SUB	CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28
9	FUSION SPACER SUB	CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52
9	ECM GAP SUB	CATHEDRAL	CATHEDRAL	6.59	1	6.80	IF		6.59	0.96
9	XO SUB	CATHEDRAL	CATHEDRAL	7	1	3.59	IF		7	
9	DRILL COLLAR - FLEX NON MAG	CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.65	4.41
9	DRILL COLLAR - NON MAG	CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF		6.936	
9	STABILIZER	CATHEDRAL	CATHEDRAL	7 7/8		5.11	IF	7.88	6.93	2.00
9	MUD MOTOR	CATHEDRAL	Claw 250, 1.83° Fixed w/8 1/8" IBS stabilizer	7	1	33.72	IF	8.13		

Mud Reports

Time 22:00	Type OIL BASE	Depth (ftKB) 24,112	Density (lb/gal) 12.60	Vis (s/qt) 57	PV Calc (cP) 25.0	YP Calc (lbf/100... 22	Vis 3rpm 8	Vis 6rpm 9	LGS (%) 6.9	LCM (lb/bbl)	WPS (ppm) 297,754	OW Ratio 79.2/20.8
Electric Stab (V) 594.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 3.0		HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 906.95			Cum Mud Field Est (Cost) 226,362.34	

Mud Reports

Date 9/4/2019 22:00	Type OIL BASE	Depth (ftKB) 24,112	Density (lb/gal) 12.60	Percent Oil (%) 61.0	Mud Temp Out... 208.0	MBT (lb/bbl)	pH	Pm Filtrate (m...	Pm (mL/mL)
Funnel Viscosity (s/qt) 57	PV Calc (cP) 25.0	YP Calc (lb/100ft²) 22	Gel 10 sec (lb/100ft²) 16.000	Gel 10 min (lb/100ft²) 40.000	Vis 3rpm 8	Vis 6rpm 9	Vis 300rpm 47	Vis 600rpm 72	
Corrected Solids (%) 21.0	API Water Loss	LGS (%) 6.9	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl)	Chlorides (mg/L) 56,000	Filter Cake (1/32")	Daily Mud Field Est (Cost) 906.95	Cum Mud Field Est (Cost) 226,362.34	

Mud Reports

Date	Type	Depth (ft(KB)	Dens (lb/gal)	Vis (s/qt)	PV Calc (cP)	YP Calc (l...	Vis 3rpm	Vis 6rpm	LGS (%)	LCM (lb/bbl)	Chlor (mg/L)	Oil Water Ratio
9/4/2019	OIL BASE	24.112	12.60	57	25.0	22	8	9	6.9		56.000	79.2/20.8
Daily Mud Field Est (Cost)		Cum Mud Field Est (Cost)		Electric Stab (V)		Excess Lime (lb/bbl)		HTHP Filtrate (mL/30min)		HTHP Filter Cake (1/32")		HTHP Temperature (°F)
906.95		226,362.34		594.0		0.5		3.0		2		250.0

Wellbore Design

Casing Description	Run Date	OD (in)	Wt (lb/ft)	Grade	Conn	Set Depth (ftKB)	Length (ft)
CONDUCTOR	6/22/2019	20	106.50	J-55	WELDED	71.0	40.00
SURFACE	7/9/2019	13 3/8	54.50	J-55	BUTTRESS THREAD	1,119.0	1,120.29
INTERMEDIATE	8/14/2019	9 5/8	40.00	K-55	LT&C	7,703.7	7,703.70
PRODUCTION		5 1/2	20.00	P-110 CY	BUTTRESS THREAD	24,112.0	24,115.05

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
23,189	89.20	0.79	8,354	14,857.49	14,856.01	-210.45	0.38	-0.38
23,283	90.30	0.61	8,354	14,951.46	14,950.00	-209.30	1.19	1.17
23,377	91.02	1.26	8,353	15,045.41	15,043.98	-207.77	1.03	0.77
23,472	90.30	0.60	8,352	15,140.36	15,138.96	-206.22	1.03	-0.76
23,566	89.31	359.96	8,352	15,234.34	15,232.96	-205.76	1.25	-1.05
23,660	90.43	0.69	8,352	15,328.33	15,326.95	-205.23	1.42	1.19
24,062	90.43	0.69	8,349	15,730.19	15,728.91	-200.39	0.00	0.00
24,112	90.43	0.69	8,349	15,780.17	15,778.91	-199.79	0.00	0.00

Mud Logging Information

Max Trip Gas (units)	Avg Drill Gas (units)	Max Drill Gas (units)
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Geological Data

Formation Name	Prog Top TVD (ftKB)	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)

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