

**SABLE PERMIAN RESOURCES, LLC**  
**Daily Drilling Partner Report**

Report Date	8/9/2019
Report #	5
Projected Days	22.00
Drilling Days	3.30
Current Depth	1,121
Depth Progress	0
Planned VS	15,781
Current VS	0
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	RR Date	Target Formation WFMP2_346_SH	Proposed TD (ftKB) 24,076	Target Line Plan #1	Daily Field Est (Cost) 86,483	Cum Field Est (Cost) 561,204
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Status at Report Time  
Calibrating MD Totco sensors.

## Operations Summary

Tested BOP's 250/psi low 5,000/psi high. Installed flow line and wear bushing. Rigged up MD Totco equipment and calibrated equipment in use. P/U 12 1/4" Intermediate BHA. TIH and tag CMT @ 1,095'. Calibrated MD Totco equipment.

Mud Wt 8.9 ppg, Vis 53.  
Last survey: 1,065 ft MD Inc 1.29° Azm 195.07°, (Gyro)  
Big rig spud date: 8-8-19 23:00 hrs.  
Next well: University Lands 10 35-23 07HA (Walk)

Planned Operations  
Complete calibration of MD Totco equipment, displace water with 8.9 ppg OBM while drilling shoe track. Drill 12 1/4" intermediate section to +/- 7,700 ft.

Start MD (ftKB)	End MD (ftKB)	Depth Progress (ft)	Drilling Time (hr)	Avg ROP (ft/hr)	Time Since LTI (days)	Time Since RI (days)
1,121	1,121	0			1,099	1,099

## Daily Time Log

Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments	Hole Section	Interval	Category	Activity	NPT
06:00	11:30	5.50	1,121	1,121	Tested top and bottom rams 250 low, 5,000 psi high t/5 mins., tested choke, kill, HCR, inner manual valves 250 low, 5,000 high t/5 mins., tested hydril 250 psi low, and 3,500 psi high t/5 mins., tested top drive manual 250 psi low, 5,000 psi high t/5 mins., tested back to pumps 250 low, 5,000 psi high t/5 mins tested TIW/Inside Gray valve 250 psi low, 5,000 psi high t/5 mins. Tested Blind rams 250 low, 5,000 psi high t/ 5min.	MOB	SKID/W ALK	RIGGING UP	TEST B.O.P	No
11:30	12:15	0.75	1,121	1,121	Rigged down MCE Testers. Pulled test plug and L/D test joint.	MOB	SKID/W ALK	RIGGING UP	RU/RD 3rd PARTY EQUIPMENT	No
12:15	14:30	2.25	1,121	1,121	Installed flow line & fill up lines. Installed mousehole. Centered stack.	MOB	SKID/W ALK	RIGGING UP	NIPPLE UP B.O.P./WELLHEAD	No
14:30	15:00	0.50	1,121	1,121	Installed wear bushing. Laid out BHA on racks and staged on gull wings.	MOB	SKID/W ALK	RIGGING UP	BOP/OTHER	No
15:00	17:00	2.00	1,121	1,121	Slipped and cut 14 wraps drill line.	MOB	SKID/W ALK	RIGGING UP	CUT SLIP & DRILL LINE	No
17:00	18:00	1.00	1,121	1,121	Installed bails and elevators. Installed tarp on catch can.	MOB	SKID/W ALK	RIGGING UP	BOP/OTHER	No
18:00	23:00	5.00	1,121	1,121	Rigged up MD Totco PVT system and installed miscellaneous sensors, transducers, stroke counters, and monitors. Rig crew Flushed topdrive and changed oil in same. Changed O ring in solenoid, C/O rotating head rubbers, and installed cylinder on catwalk kicker.	MOB	SKID/W ALK	RIGGING UP	RU/RD 3rd PARTY EQUIPMENT	No
23:00	23:30	0.50	1,121	1,121	Staged BHA on rig floor while MD Totco calibrated block height and set trigger points for depth tracking.	MOB	SKID/W ALK	RIGGING UP	RU/RD 3rd PARTY EQUIPMENT	No
23:30	02:45	3.25	1,121	1,121	P/U 12 1/4" Intermediate BHA.	MOB	SKID/W ALK	RIGGING UP	P/U & L/D BHA	No
02:45	03:30	0.75	1,121	1,121	TIH with 5" HWDP from 194' to 653'.	MOB	SKID/W ALK	RIGGING UP	TRIPS	No
03:30	04:00	0.50	1,121	1,121	Installed rotating head.	MOB	SKID/W ALK	RIGGING UP	BOP/OTHER	No
04:00	04:45	0.75	1,121	1,121	TIH 5" DP from 653' to 1,095' and tagged cement. P/U 30' off cement.	MOB	SKID/W ALK	RIGGING UP	TRIPS	No
04:45	06:00	1.25	1,121	1,121	MD Totco calibrated stroke counters, standpipe pressure sensors, RPM, torque, flow show, PVT, and Drillers screen.	MOB	SKID/W ALK	RIGGING UP	RU/RD 3rd PARTY EQUIPMENT	No

## 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)
17 1/2	NUMA	N125	HAMMER BIT	-----	40	459	410.00	11.50	35.7	11.50		35.7	1	2
17 1/2	NUMA	N125	HAMMER BIT	-----	459	1,121	662.00	10.50	63.0	10.50		63.0	1	2

## 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)
2	XO SUB	INTEGRITY	INTEGRITY	5 1/2	1	1.33	IF			
2	DRILL COLLAR	INTEGRITY	INTEGRITY	5 1/2	1	28.06	FH			
2	DRILL COLLAR	INTEGRITY	INTEGRITY	5 1/2	1	28.45	FH			
2	XO SUB	INTEGRITY	INTEGRITY	5 1/2	1	1.98	FH			
2	DRILL COLLAR	INTEGRITY	INTEGRITY	8	1	30.76	REG			
2	AIR HAMMER	INTEGRITY	INTEGRITY	10.63	1	6.58	REG			

## Mud Reports

Time 22:00	Type OIL BASE	Depth (ft/KB) 1.121	Density (lb/gal) 8.90	Vis (s/qt) 53	PV Calc (cP) 16.0	YP Calc (lb/100...) 17	Vis 3rpm 5	Vis 6rpm 7	LGS (%) 3.1	LCM (lb/bbl)	WPS (ppm) 292,583	OW Ratio 75/25
Electric Stab (V) 421.0	Excess Lime (lb/bbl) 0.8	HTHP Filtrate (mL/30min) 4.0	HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 11,793.94	Cum Mud Field Est (Cost) 11,793.94						

## Mud Reports

Date	Type	Depth (ftKB)	Density (lb/gal)	Percent Oil (%)	Mud Temp Out...	MBT (lb/bbl)	pH	Pm Filtrate (m...	Pm (mL/mL)
8/8/2019 22:00	OIL BASE	1,121	8.90	69.0					
Funnel Viscosity (s/qt)	PV Calc (cP)	YP Calc (lb/100ft²)	Gel 10 sec (lb/100ft²)	Gel 10 min (lb/100ft²)	Vis 3rpm	Vis 6rpm	Vis 300rpm	Vis 600rpm	
53	16.0	17	8.000	12.000	5	7	33	49	
Corrected Solids (%)	API Water Loss	LGS (%)	Excess Lime (lb/bbl)	LCM (lb/bbl)	Chlorides (mg/L)	Filter Cake (1/32")	Daily Mud Field Est (Cost)	Cum Mud Field Est (Cost)	
5.1		3.1	0.8		60,000		11,793.94	11,793.94	

## Mud Reports

Date 8/8/2019	Type OIL BASE	Depth (ftKB) 1,121	Dens (lb/gal) 8.90	Vis (s/qt) 53	PV Calc (cP) 16.0	YP Calc (l...) 17	Vis 3rpm 5	Vis 6rpm 7	LGS (%) 3.1	LCM (lb/bbl)	Chlor (mg/L) 60,000	Oil Water Ratio 75/25
Daily Mud Field Est (Cost) 11,793.94	Cum Mud Field Est (Cost) 11,793.94	Electric Stab (V) 421.0			Excess Lime (lb/bbl) 0.8			HTHP Filtrate (mL/30min) 4.0		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		9 5/8	40.00	P-110HC		7,600.0	7,569.00
PRODUCTION		5 1/2	17.00	HCP-110		24,076.0	24,045.00

## Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
750	0.15	59.55	750	1.61	1.60	-0.88	0.16	-0.10
800	0.37	146.51	800	1.51	1.50	-0.74	0.78	0.44
850	0.09	187.04	850	1.33	1.33	-0.65	0.61	-0.56
900	0.15	173.20	900	1.23	1.22	-0.65	0.13	0.12
950	0.36	153.15	950	1.02	1.02	-0.57	0.45	0.42
1,000	0.70	194.34	1,000	0.59	0.58	-0.58	0.98	0.68
1,050	0.92	196.33	1,050	-0.09	-0.10	-0.77	0.44	0.44

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**ENSIGN 786**

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Projected Days	22.00
Drilling Days	3.30
Current Depth	1,121
Depth Progress	0
Planned VS	15,781
Current VS	0
AFE #	1550782
Total AFE	3,640,000

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

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/10/2019
Report #	6
Projected Days	22,000
Drilling Days	0.91
Current Depth	2,787
Depth Progress	1,666
Planned VS	15,781
Current VS	-27
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 WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 75,164		Cum Field Est (Cost) 636,368				
Status at Report Time Drilling 12 1/4" intermediate at 2,787 ft.																				
Operations Summary 0 HSE Calibrated MD Totco equipment, Drilled cement and shoe track from 1,107 ft to 1,121 ft. Drilled 12 1/4" intermediate hole from 1,121 ft to 1,876 ft. Serviced rig. Drilled 12 1/4" intermediate hole from 1,876 ft to 2,065 ft. Troubleshoot MWD signal loss. Drilled 12 1/4" intermediate hole from 2,065 ft to 2,787'.									Planned Operations Drill 12 1/4" intermediate section to +/- 7,700 ft.											
Mud Wt 8.9 ppg, Vis 53. Last survey: 2656 ft MD Inc 7.30° Azm 262.00° , 8 ft Behind, 6.6 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																				
Start MD (ftKB) 1,121				End MD (ftKB) 2,787				Depth Progress (ft) 1,666			Drilling Time (hr) 20.25			Avg ROP (ft/hr) 82.3			Time Since LTI (days) 1,100		Time Since RI (days) 1,100	
Daily Time Log																				
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity			NPT					
06:00	06:45	0.75	1,121	1,121	MD Totco calibrated stroke counters, standpipe pressure sensors, RPM, torque, flow show, PVT, and Drillers screen.				MOB	SKID/W ALK	RIGGING UP	RU/RD 3rd PARTY EQUIPMENT			Yes					
06:45	08:15	1.50	1,121	1,121	Drill cement, float collar and shoe track from 1,107 ft. to 1,121 ft. Displaced hole with 8.9 OBM while drilling shoe track.				MOB	SKID/W ALK	RIGGING UP	DRILL SHOE TRACK			No					
08:15	16:45	8.50	1,121	1,876	Rotate/slide drilled from 1,121 ft to 1,876 ft ( 755 ft @ 88.8 ft/hr) while staging pumps up to 750 gpm. Full returns and no flow on connections.				INT	DIR	DRILL	DRILL W/ MUD			No					
16:45	17:15	0.50	1,876	1,876	Serviced rig and TDS.				INT	DIR	DRILL	LUBRICATE RIG			No					
17:15	20:30	3.25	1,876	2,065	Rotate/slide drilled from 1,876 ft to 2,065 ft (189 ft @ 58 ft/hr) . Full returns and no flow on connections. 8.9 ppg 46 vis				INT	DIR	DRILL	DRILL W/ MUD			No					
20:30	21:30	1.00	2,065	2,065	Troubleshoot MWD signal loss after drilling through very hard formation. Checked surface equipment and found nothing. Pulled up to last survey point and turned power up on tool. Tool sending good packages afterwards.				INT	DIR	DRILL	3rd PARTY EQUIPMENT REPAIR			Yes					
21:30	02:30	5.00	2,065	2,535	Rotate/slide drilled from 2,065' to 2,535' ( 470 ft @ 94 ft/hr) . Full returns and no flow on connections. 8.9 ppg 47 vis				INT	DIR	DRILL	DRILL W/ MUD			No					
02:30	06:00	3.50	2,535	2,787	Rotate/slide drilled @ 640 GPM with 2 mud pumps while changed valve and seat in #3 mud pump from 2,535' to 2,787 ft ( 252 ft @ 72 ft/hr) . Full returns and no flow on connections. 8.9+ ppg 46 vis				INT	DIR	DRILL	DRILL W/ MUD			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							
1,107	1,121			75			7	550	810.0	20	110	110	6,000							
1,121	1,312	2.00	0.00	95.5		300	28	700	1,525.0	20	115	110	9,000							
1,312	1,332	0.00	0.25	80.0	260	200	30	700	1,425.0		115	110								
1,332	1,406	1.00	0.00	74.0		440	29	850	2,175.0	50	115	115	9,000							
1,406	1,426	0.00	0.25	80.0	260	145	30	850	2,226.0		115	110								
1,426	1,500	0.75	0.00	98.7		365	30	850	2,275.0	50	115	110	8,000							
1,500	1,515	0.00	0.25	60.0	-60	145	25	750	1,825.0		115	110								
1,515	1,594	1.00	0.00	79.0		275	30	640	1,275.0	50	125	115	8,000							
1,594	1,619	0.00	0.50	50.0	-80	275	30	640	1,325.0		125	115								
1,619	1,876	2.50	0.00	102.8		275	30	640	1,275.0	50	125	115	8,000							
1,876	2,065	3.25	0.00	58.2		300	30	750	1,665.0	50	125	115	8,000							
2,065	2,535	5.00	0.00	94.0		300	30	750	1,665.0	50	135	128	8,000							
2,535	2,560	0.00	1.00	25.0	0	300	30	640	1,475.0		135	128								
2,560	2,787	2.50	0.00	90.8		300	30	640	1,665.0	50	135	128	8,000							
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)						
17 1/2	NUMA	N125	HAMMER BIT	-----	459	1,121	662.00	10.50	63.0	10.50		63.0	1	2						
12 1/4	HALLIBURTON	GT65DMHEO	PDC	-----	1,121	2,787	1,666.00	20.25	82.3	18.00	2.25	86.7	30	195						
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)							
3	DRILL PIPE				ENSIGN 786	ENSIGN 786	5	175	5,487.79	IF		6.56	1.50							
3	HWDP				ENSIGN 786	ENSIGN 786	6.31	15	458.71	IF		6.31	1.75							
3	XO SUB - NON MAG				CATHEDRAL	CATHEDRAL	6.91	1	4.06	IF		6.91	1.63							
3	NMDC				CATHEDRAL	CATHEDRAL	8.08	1	31.04	REG		8.08								
3	NMDC				CATHEDRAL	CATHEDRAL	8	1	30.94	REG		8								
3	NMDC				CATHEDRAL	CATHEDRAL	8.17	1	30.73	REG		8.17								
3	ECM GAP SUB				CATHEDRAL	CATHEDRAL	8.19	1	5.83	REG		8.19	0.84							
3	NMDC				CATHEDRAL	CATHEDRAL	7.79	1	29.69	REG		7.79								
3	DRILL COLLAR - PONY				CATHEDRAL	CATHEDRAL	7.94	1	13.68	REG		7.94								
3	STABILIZER				STABILDRILL	STRAIGHT BLADE	11 1/2	1	7.32	REG	11.50	8.19	3.23							
3	MOTOR WITH STABILIZER				Hunting	Motor 7/8, 5.9 Stg. w/ 11.75" stab	8	1	39.51	REG	11.75		1.82							
Mud Reports																				
Time 10:00	Type OIL BASE	Depth (ftKB) 1,195	Density (lb/gal) 8.90	Vis (s/qt) 60	PV Calc (cP) 17	YP Calc (lb/100... 17	Vis 3rpm 6	Vis 6rpm 7	LGS (%) 3.3	LCM (lb/bbl)	WPS (ppm) 292,583	OW Ratio 75/25								
Electric Stab (V) 422.0		Excess Lime (lb/bbl) 0.8	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,003.48			Cum Mud Field Est (Cost) 20,797.42								
Time 22:00	Type OIL BASE	Depth (ftKB) 2,135	Density (lb/gal) 8.90	Vis (s/qt) 46	PV Calc (cP) 15.0	YP Calc (lb/100... 14	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 5.3	LCM (lb/bbl)	WPS (ppm) 281,799	OW Ratio 73.6/26.4								
Electric Stab (V) 485.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,003.48			Cum Mud Field Est (Cost) 20,797.42								
Mud Reports																				
Date 8/9/2019 10:00		Type OIL BASE	Depth (ftKB) 1,195	Density (lb/gal) 8.90	Percent Oil (%) 69.0	Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m... Pm (mL/mL)										
Funnel Viscosity (s/qt) 60		PV Calc (cP) 16.0	YP Calc (lb/100ft²) 17	Gel 10 sec (lb/100ft²) 8.000	Gel 10 min (lb/100ft²) 13.000	Vis 3rpm 6		Vis 6rpm 7		Vis 300rpm 33		Vis 600rpm 49								
Corrected Solids (%) 5.1		API Water Loss	LGS (%) 3.3	Excess Lime (lb/bbl) 0.8	LCM (lb/bbl)		Chlorides (mg/L) 60,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 9,003.48		Cum Mud Field Est (Cost) 20,797.42							
Date 8/9/2019 22:00		Type OIL BASE	Depth (ftKB) 2,135	Density (lb/gal) 8.90	Percent Oil (%) 67.0	Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m... Pm (mL/mL)										
Funnel Viscosity (s/qt) 46		PV Calc (cP) 15.0	YP Calc (lb/100ft²) 14	Gel 10 sec (lb/100ft²) 7.000	Gel 10 min (lb/100ft²) 11.000	Vis 3rpm 5		Vis 6rpm 6		Vis 300rpm 29		Vis 600rpm 44								
Corrected Solids (%) 6.1		API Water Loss	LGS (%) 5.3	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl)		Chlorides (mg/L) 700,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 9,003.48		Cum Mud Field Est (Cost) 20,797.42							

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**ENSIGN 786**

Report Date	8/10/2019
Report #	6
Projected Days	22.00
Drilling Days	0.91
Current Depth	2,787
Depth Progress	1,666
Planned VS	15,781
Current VS	-27
AFE #	1550782
Total AFE	3,640,000

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/11/2019
Report #	7
Projected Days	22.00
Drilling Days	1.91
Current Depth	4,538
Depth Progress	1,751
Planned VS	15,781
Current VS	-65
AFE #	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		RR Date		Target Formation WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 84,199		Cum Field Est (Cost) 720,567												
Status at Report Time Drilling 12 1/4" intermediate at 4,538 ft.																											
Operations Summary 0 HSE Drilled 12 1/4" intermediate hole from 2,787 ft to 3,571 ft. Serviced rig and recalibrated MD Totco block height. Drilled 12 1/4" intermediate hole from 3,571 ft to 4,538 ft.									Planned Operations Drill 12 1/4" intermediate section to +/- 7,700 ft.																		
Mud Wt 9.1 ppg, Vis 47 Last survey: 4,445 ft MD Inc 5.50° Azm 261.80°, 4.3 ft Ahead, 7.0 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																											
Start MD (ftKB) 2,787				End MD (ftKB) 4,538		Depth Progress (ft) 1,751		Drilling Time (hr) 23.25		Avg ROP (ft/hr) 75.3		Time Since LTI (days) 1,101		Time Since RI (days) 1,101													
Daily Time Log																											
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity		NPT												
06:00	09:30	3.50	2,787	3,571	Rotate/slide drilled @ 640 GPM with 2 mud pumps while changed valve and seat in #3 mud pump from 2,787 ft to 2,978 ft ( 191 ft @ 76.4 ft/hr) . Full returns and no flow on connections. 8.9+ ppg 62 vis					INT	DIR	DRILL	DRILL W/ MUD		Yes												
09:30	17:15	7.75	3,571	3,571	Rotate/slide drilled from 2,978 ft to 3,571 ft ( 593 ft @ 69.8 ft/hr) . Full returns 9.0 ppg 63 vis					INT	DIR	DRILL	DRILL W/ MUD		No												
17:15	17:30	0.25	3,571	3,571	Note : Well flowing at 20 bbl/hr on connections, weight up to 9.1 ppg. Calibrated MD Totco block height.					INT	DIR	DRILL	3rd PARTY EQUIPMENT REPAIR		Yes												
17:30	18:00	0.50	3,571	3,571	Serviced rig and TDS.					INT	DIR	DRILL	LUBRICATE RIG		No												
18:00	06:00	12.00	3,571	4,538	Rotate/slide drilled from 3,578 ft to 4,538 ft (960 ft @ 80 ft/hr) . Full returns. No flow on connections after 9.1 MW got around. 9.1 ppg 47 vis					INT	DIR	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	
2,787		2,978		2.50		0.00		76.4				400		32		640		1,665.0		50		145		140		10,000	
2,978		3,100		2.50		0.00		48.8				375		35		750		2,042.0		50		150		140		10,000	
3,100		3,130		0.00		1.00		30.0		-25		215		20		890		2,440.0				150		140			
3,130		3,571		5.25		0.00		84.0				425		38		750		2,100.0		50		160		150		12,000	
3,571		4,044		6.75		0.00		70.1				450		38		750		2,200.0		50		160		150		12,000	
4,044		4,074		0.00		0.75		40.0		0		200		20		850		2,500.0				170		160			
4,074		4,513		3.50		0.00		125.4				550		20		850		2,900.0		50		170		160		12,000	
4,513		4,538		0.00		1.00		25.0		0		200		20		850		2,600.0				170		160			
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)										
17 1/2	NUMA		N125		HAMMER BIT	-----		459	1,121	662.00	10.50	63.0	10.50		63.0	1	2										
12 1/4	HALLIBURTON		GT65DMHEO		PDC	-----		1,121	4,538	3,417.00	43.50	78.6	38.50	5.00	83.8	38	195										
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)							
3	DRILL PIPE					ENSIGN 786		ENSIGN 786		5		175	5,487.79		IF			6.56		1.50							
3	HWDP					ENSIGN 786		ENSIGN 786		6.31		15	458.71		IF			6.31		1.75							
3	XO SUB - NON MAG					CATHEDRAL		CATHEDRAL		6.91		1	4.06		IF			6.91		1.63							
3	NMDC					CATHEDRAL		CATHEDRAL		8.08		1	31.04		REG			8.08									
3	NMDC					CATHEDRAL		CATHEDRAL		8		1	30.94		REG			8									
3	NMDC					CATHEDRAL		CATHEDRAL		8.17		1	30.73		REG			8.17									
3	ECM GAP SUB					CATHEDRAL		CATHEDRAL		8.19		1	5.83		REG			8.19		0.84							
3	NMDC					CATHEDRAL		CATHEDRAL		7.79		1	29.69		REG			7.79									
3	DRILL COLLAR - PONY					CATHEDRAL		CATHEDRAL		7.94		1	13.68		REG			7.94									
3	STABILIZER					STABILDRILL		STRAIGHT BLADE		11 1/2		1	7.32		REG		11.50	8.19		3.23							
3	MOTOR WITH STABILIZER					Hunting		Motor 7/8, 5.9 Stg. w/ 11.75" stab		8		1	39.51		REG		11.75			1.82							
Mud Reports																											
Time 02:00	Type OIL BASE		Depth (ftKB) 3,733		Density (lb/gal) 9.00		Vis (s/qt) 58		PV Calc (cP) 14.0		YP Calc (lb/100... 11		Vis 3rpm 5		Vis 6rpm 6		LGS (%) 4.5		LCM (lb/bbl)		WPS (ppm) 283,686		OW Ratio 74.7/25.3				
Electric Stab (V) 495.0			Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 11,152.42				Cum Mud Field Est (Cost) 31,949.84										
Time 10:00	Type OIL BASE		Depth (ftKB) 2,996		Density (lb/gal) 9.00		Vis (s/qt) 49		PV Calc (cP) 12.0		YP Calc (lb/100... 10		Vis 3rpm 5		Vis 6rpm 6		LGS (%) 4.5		LCM (lb/bbl)		WPS (ppm) 280,976		OW Ratio 73.6/26.4				
Electric Stab (V) 533.0			Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 5.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 11,152.42				Cum Mud Field Est (Cost) 31,949.84										
Mud Reports																											
Date 8/10/2019 02:00		Type OIL BASE				Depth (ftKB) 3,733		Density (lb/gal) 9.00		Percent Oil (%) 68.0		Mud Temp Out... 110.0		MBT (lb/bbl)		pH		Pm Filtrate (m... 39		Pm (mL/mL) 39							
Funnel Viscosity (s/qt) 58		PV Calc (cP) 14.0		YP Calc (lb/100ft²) 11		Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 9.000		Vis 3rpm 5			Vis 6rpm 6			Vis 300rpm 25			Vis 600rpm 39								
Corrected Solids (%) 6.2		API Water Loss 4.5		LGS (%) 4.5		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 71,000		Filter Cake (1/32") 2		Daily Mud Field Est (Cost) 11,152.42		Cum Mud Field Est (Cost) 31,949.84											
Date 8/10/2019 10:00		Type OIL BASE				Depth (ftKB) 2,996		Density (lb/gal) 9.00		Percent Oil (%) 67.0		Mud Temp Out... 127.0		MBT (lb/bbl)		pH		Pm Filtrate (m... 22		Pm (mL/mL) 34							
Funnel Viscosity (s/qt) 49		PV Calc (cP) 12.0		YP Calc (lb/100ft²) 10		Gel 10 sec (lb/100ft²) 0.000		Gel 10 min (lb/100ft²) 0.000		Vis 3rpm 5			Vis 6rpm 6			Vis 300rpm 22			Vis 600rpm 34								
Corrected Solids (%) 6.1		API Water Loss 4.5		LGS (%) 4.5		Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 67,000		Filter Cake (1/32") 2		Daily Mud Field Est (Cost) 11,152.42		Cum Mud Field Est (Cost) 31,949.84											
Mud Reports																											
Date 8/10/2019		Type OIL BASE				Depth (ftKB) 3,733		Dens (lb/gal) 9.00		Vis (s/qt) 58		PV Calc (cP) 14.0		YP Calc (l... 11		Vis 3rpm 5		Vis 6rpm 6		LGS (%) 4.5		LCM (lb/bbl)		Chlor (mg/L) 71,000		Oil Water Ratio 74.7/25.3	
Daily Mud Field Est (Cost) 11,152.42				Cum Mud Field Est (Cost) 31,949.84				Electric Stab (V) 495.0				Excess Lime (lb/bbl) 0.5				HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0							
Date 8/10/2019		Type OIL BASE				Depth (ftKB) 2,996		Dens (lb/gal) 9.00		Vis (s/qt) 49		PV Calc (cP) 12.0		YP Calc (l... 10		Vis 3rpm 5		Vis 6rpm 6		LGS (%) 4.5		LCM (lb/bbl)		Chlor (mg/L) 67,000		Oil Water Ratio 73.6/26.4	
Daily Mud Field Est (Cost) 11,152.42				Cum Mud Field Est (Cost) 31,949.84				Electric Stab (V) 533.0				Excess Lime (lb/bbl) 0.7				HTHP Filtrate (mL/30min) 5.0		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								

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/11/2019
Report #	7
Projected Days	22.00
Drilling Days	1.91
Current Depth	4,538
Depth Progress	1,751
Planned VS	15,781
Current VS	-65
AFE #	1550782
Total AFE	3,640,000

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/12/2019
Report #	8
Projected Days	22.00
Drilling Days	2.91
Current Depth	6,495
Depth Progress	1,957
Planned VS	15,781
Current VS	-110
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		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 101,905		Cum Field Est (Cost) 822,187		
Status at Report Time Drilling 12 1/4" intermediate at 6,495 ft.																		
Operations Summary 0 HSE Drilled 12 1/4" intermediate hole from 4,538 ft to 5,271 ft. Serviced rig and TDS. Drilled 12 1/4" intermediate hole from 5,271 ft to 6,495 ft.									Planned Operations Drill 12 1/4" intermediate section to +/- 7,700 ft., T.o.o.h. to run and cemet 9 5/8" casing									
Mud Wt 9.1+ ppg, Vis 46 Last survey: 6,333 ft MD Inc 0.3° Azm 152.20°, 12.5 ft Behind, 19.3 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																		
Start MD (ftKB) 4,538				End MD (ftKB) 6,495				Depth Progress (ft) 1,957		Drilling Time (hr) 23.50		Avg ROP (ft/hr) 83.3			Time Since LTI (days) 1,102		Time Since RI (days) 1,102	
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	4,538	5,271	Rotate/slide drilled from 4,538 ft to 5,271 ft ( 733 ft @ 63 ft/hr ) . Full returns. No flow on connections. 9.1+ ppg 47 vis					INT	DIR	DRILL	DRILL W/ MUD		No			
17:30	18:00	0.50	5,271	5,271	Serviced rig and TDS.					INT	DIR	DRILL	LUBRICATE RIG		No			
18:00	06:00	12.00	5,271	6,495	Rotate/slide drilled from 5,271 ft to 6,495 ft(1,224 ft @ 102 ft/hr ) . Full returns. No flow on connections. Reduced flow rate and WOB to transition into Spraberry. 9.1+ ppg 47 vis					INT	DIR	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					
4,538	4,543	0.00	0.50	10.0	-30	140	17	850	2,510.0		170	160						
4,543	4,607	1.00	0.00	64.0		615	32	850	3,050.0	50	180	170	14,000					
4,607	4,637	0.00	2.25	13.3	0	115	18	850	2,600.0		180	170						
4,637	5,176	5.25	0.00	102.7		475	36	850	2,890.0	50	190	185	14,000					
5,176	5,196	0.00	1.75	11.4	30	125	36	850	2,600.0		190	185						
5,196	5,271	0.75	0.00	100.0		500	36	850	2,885.0	50	190	185	14,000					
5,271	5,741	4.50	0.00	104.4		500	36	850	2,885.0	50	190	185	14,000					
5,741	6,495	7.50	0.00	100.5		550	36	750	2,550.0	50	190	185	14,000					
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)				
17 1/2	NUMA	N125	HAMMER BIT	-----	459	1,121	662.00	10.50	63.0	10.50		63.0	1	2				
12 1/4	HALLIBURTON	GT65DMHEO	PDC	-----	1,121	6,495	5,374.00	67.00	80.2	57.50	9.50	89.2	38	196				
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)					
3	DRILL PIPE				ENSIGN 786	ENSIGN 786	5	175	5,487.79	IF		6.56	1.50					
3	HWDP				ENSIGN 786	ENSIGN 786	6.31	15	458.71	IF		6.31	1.75					
3	XO SUB - NON MAG				CATHEDRAL	CATHEDRAL	6.91	1	4.06	IF		6.91	1.63					
3	NMDC				CATHEDRAL	CATHEDRAL	8.08	1	31.04	REG		8.08						
3	NMDC				CATHEDRAL	CATHEDRAL	8	1	30.94	REG		8						
3	NMDC				CATHEDRAL	CATHEDRAL	8.17	1	30.73	REG		8.17						
3	ECM GAP SUB				CATHEDRAL	CATHEDRAL	8.19	1	5.83	REG		8.19	0.84					
3	NMDC				CATHEDRAL	CATHEDRAL	7.79	1	29.69	REG		7.79						
3	DRILL COLLAR - PONY				CATHEDRAL	CATHEDRAL	7.94	1	13.68	REG		7.94						
3	STABILIZER				STABILDRILL	STRAIGHT BLADE	11 1/2	1	7.32	REG		8.19	3.23					
3	MOTOR WITH STABILIZER				Hunting	Motor 7/8, 5.9 Stg. w/ 11.75" stab	8	1	39.51	REG		11.75	1.82					
Mud Reports																		
Time 10:00	Type OIL BASE	Depth (ftKB) 4,621	Density (lb/gal) 9.10	Vis (s/qt) 47	PV Calc (cP) 15.0	YP Calc (lb/100... 10	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 3.8	LCM (lb/bbl)	WPS (ppm) 281,907	OW Ratio 74.7/25.3						
Electric Stab (V) 497.0		Excess Lime (lb/bbl) 0.4		HTHP Filtrate (mL/30min) 5.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,883.84			Cum Mud Field Est (Cost) 41,833.68					
Time 22:00	Type OIL BASE	Depth (ftKB) 5,645	Density (lb/gal) 9.10	Vis (s/qt) 46	PV Calc (cP) 15.0	YP Calc (lb/100... 11	Vis 3rpm 4	Vis 6rpm 5	LGS (%) 4.8	LCM (lb/bbl)	WPS (ppm) 281,965	OW Ratio 75/25						
Electric Stab (V) 503.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 6.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 9,883.84			Cum Mud Field Est (Cost) 41,833.68					
Mud Reports																		
Date 8/11/2019 10:00	Type OIL BASE	Depth (ftKB) 4,621	Density (lb/gal) 9.10	Percent Oil (%) 68.0	Mud Temp Out... 149.0	MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)						
Funnel Viscosity (s/qt) 47		PV Calc (cP) 15.0		YP Calc (lb/100ft²) 10		Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 9.000		Vis 3rpm 5		Vis 6rpm 6		Vis 300rpm 25		Vis 600rpm 40		
Corrected Solids (%) 6.2		API Water Loss		LGS (%) 3.8		Excess Lime (lb/bbl) 0.4		LCM (lb/bbl)		Chlorides (mg/L) 60,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 9,883.84		Cum Mud Field Est (Cost) 41,833.68		
Date 8/11/2019 22:00	Type OIL BASE	Depth (ftKB) 5,645	Density (lb/gal) 9.10	Percent Oil (%) 75.0	Mud Temp Out... 148.0	MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)						
Funnel Viscosity (s/qt) 46		PV Calc (cP) 15.0		YP Calc (lb/100ft²) 11		Gel 10 sec (lb/100ft²) 10.000		Gel 10 min (lb/100ft²) 8.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 26		Vis 600rpm 41		
Corrected Solids (%) 6.7		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) 9,883.84		Cum Mud Field Est (Cost) 41,833.68		
Mud Reports																		
Date 8/11/2019	Type OIL BASE	Depth (ftKB) 4,621	Dens (lb/gal) 9.10	Vis (s/qt) 47	PV Calc (cP) 15.0	YP Calc (l... 10	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 3.8	LCM (lb/bbl)	Chlor (mg/L) 60,000	Oil Water Ratio 74.7/25.3						
Daily Mud Field Est (Cost) 9,883.84			Cum Mud Field Est (Cost) 41,833.68			Electric Stab (V) 497.0		Excess Lime (lb/bbl) 0.4		HTHP Filtrate (mL/30min) 5.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0				
Date 8/11/2019	Type OIL BASE	Depth (ftKB) 5,645	Dens (lb/gal) 9.10	Vis (s/qt) 46	PV Calc (cP) 15.0	YP Calc (l... 11	Vis 3rpm 4	Vis 6rpm 5	LGS (%) 4.8	LCM (lb/bbl)	Chlor (mg/L) 57,000	Oil Water Ratio 75/25						
Daily Mud Field Est (Cost) 9,883.84			Cum Mud Field Est (Cost) 41,833.68			Electric Stab (V) 503.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 6.0		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						9 5/8		40.00		K-55		LT&C		7,700.0		7,703.70		
PRODUCTION						5 1/2		17.00		HCP-110				24,076.0		24,045.00		
Survey Data																		
MD (ftKB)		Incl (°)		Azm (°)		TVD (ftKB)		VS (ft)		NS (ft)		EW (ft)		DLS (°/100ft)		BUR (°/100ft)		
5,673		2.30		249.70		5,642		-105.99		-112.42		-497.36		0.96		-0.96		
5,767		1.90		249.70		5,736		-107.14		-113.61		-500.59		0.43		-0.43		

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/12/2019
Report #	8
Projected Days	22.00
Drilling Days	2.91
Current Depth	6,495
Depth Progress	1,957
Planned VS	15,781
Current VS	-110
AFE #	1550782
Total AFE	3,640,000

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
5,862	1.40	241.00	5,831	-108.22	-114.72	-503.08	0.59	-0.53
5,955	1.10	233.70	5,924	-109.27	-115.80	-504.79	0.36	-0.32
6,049	0.70	239.40	6,018	-110.08	-116.63	-506.01	0.44	-0.43
6,144	0.50	206.10	6,113	-110.74	-117.30	-506.70	0.41	-0.21
6,238	0.20	174.00	6,207	-111.27	-117.83	-506.86	0.37	-0.32
6,333	0.30	152.20	6,302	-111.66	-118.21	-506.73	0.14	0.11

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 8/13/2019  
Report # 9  
Projected Days 22.00  
Drilling Days 3.91  
Current Depth 7,082  
Depth Progress 587  
Planned VS 15,781  
Current VS -115  
AFE # 1550782  
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		RR Date		Target Formation WFMPC2_346_SH			Proposed TD (ftKB) 24,076			Target Line Plan #1			Daily Field Est (Cost) 70,877			Cum Field Est (Cost) 891,752											
Status at Report Time TIH @ 2,900 ft.																													
Operations Summary 0 HSE Drilled 12 1/4" intermediate hole from 6,495 ft to 7,082 ft. ( 587 ft @ 52.2 fph) POOH due to mud motor failure. Changed out mud motor and bit, TIH to 2,840 ft., wash and ream tight spot from 2,840 ft. to 2,900 ft.									Planned Operations TIH and Drill 12 1/4" intermediate section to +/- 7,718 ft., POOH to run and cement 9 5/8" Intermediate casing.																				
Mud Wt 9.1+ ppg, Vis 48 Last survey: 6,991 ft MD Inc 0.6° Azm 146.30°, 17.2 ft Behind, 21.3 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																													
Start MD (ftKB) 6,495				End MD (ftKB) 7,082				Depth Progress (ft) 587			Drilling Time (hr) 11.25			Avg ROP (ft/hr) 52.2			Time Since LTI (days) 1,103		Time Since RI (days) 1,103										
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		6,495		7,059		Slide/Drilled 12 1/4" hole from 6,495 ft to 7,059 ft. ( 564 ft @ 53.7 fph) MW 9.1+, Vis 48 with full returns and no flow on connections.				INT		DIR		DRILL		DRILL W/ MUD		No							
16:30		17:00		0.50		7,059		7,059		Serviced rig and TDS.				INT		DIR		DRILL		LUBRICATE RIG		No							
17:00		17:45		0.75		7,059		7,082		Slide/Drilled 12 1/4" hole from 7,059 ft to 7,082 ft. ( 23 ft @ 30.7 fph) MW 9.1+, Vis 48 with full returns and no flow on connections.				INT		DIR		DRILL		DRILL W/ MUD		No							
17:45		18:45		1.00		7,082		7,082		Circulated sweep around.				INT		DIR		DRILL		COND MUD & CIRC		Yes							
18:45		22:15		3.50		7,082		7,082		Flow checked-well static. Pumped slug and POOH due to mud motor failure from 7,082 ft to BHA. Reamed through tight spot @ 2,868 ft. Hole took proper fill and no excess drag. Flow checked above San Andres. Well static.				INT		DIR		DRILL		TRIPS		Yes							
22:15		22:45		0.50		7,082		7,082		Removed rotating head. Checked flow. Well static.				INT		DIR		DRILL		BOP/OTHER		Yes							
22:45		03:00		4.25		7,082		7,082		Racked back 5 stands of HWDP and 1 stand monels in derrick. Laid out stabilizer. Laid out mud motor and bit. P/U new motor and bit. P/U stabilizer. Scribed motor and MWD. Ran monels and 5 stands HWDP from derrick to 640 ft.				INT		DIR		DRILL		P/U & L/D BHA		Yes							
Bit #3 Grade: 1-3-BT-S-X-0-PN-DMF																													
03:00		03:15		0.25		7,082		7,082		TIH from 640 ft to 696 ft.				INT		DIR		DRILL		TRIPS		Yes							
03:15		04:00		0.75		7,082		7,082		Installed new rotating head and shallow tested mud motor. Good test.				INT		DIR		DRILL		BOP/OTHER		Yes							
04:00		05:00		1.00		7,082		7,082		TIH from 696 ft to 2,840 ft.				INT		DIR		DRILL		TRIPS		Yes							
05:00		06:00		1.00		7,082		7,082		Wash and ream tight spot at 2,840 ft. to 2,900 ft.				INT		DIR		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			
6,495		6,589		2.50		0.00		37.6				620		30		750		2,775.0		50		215		205		18,000			
6,589		6,965		6.50		0.00		57.8				675		38		850		3,375.0		50		225		215		16,000			
6,965		7,059		1.50		0.00		62.7				575		38		750		2,740.0		50		225		215		16,000			
7,059		7,082		0.75		0.00		30.7				575		38		800		3,025.0		50		230		215		15,000			
7,082		7,082		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)	
12 1/4		HALLIBURTON		GT65DMHEO		PDC		1-3-BT-S-X-0-PN-DMF		1,121		7,082		5,961.00		78.25		76.2		68.75		9.50		83.1		38		196	
12 1/4		HALLIBURTON		GT65DMHEO		PDC		-----		7,082		7,082																136	
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)					
4		DRILL PIPE						ENSIGN 786		ENSIGN 786		5		175		5,487.79		IF				6.56		1.50					
4		HWDP						ENSIGN 786		ENSIGN 786		6.31		15		458.71		IF				6.31		1.75					
4		XO SUB - NON MAG						CATHEDRAL		CATHEDRAL		6.91		1		4.06		IF				6.91		1.63					
4		NMDC						CATHEDRAL		CATHEDRAL		8.08		1		31.04		REG				8.08							
4		NMDC						CATHEDRAL		CATHEDRAL		8		1		30.94		REG				8							
4		NMDC						CATHEDRAL		CATHEDRAL		8.17		1		30.73		REG				8.17							
4		ECM GAP SUB						CATHEDRAL		CATHEDRAL		8.19		1		5.83		REG				8.19		0.84					
4		NMDC						CATHEDRAL		CATHEDRAL		7.79		1		29.69		REG				7.79							
4		DRILL COLLAR - PONY						CATHEDRAL		CATHEDRAL		7.94		1		13.68		REG				7.94							
4		STABILIZER						STABILDRIILL		STRAIGHT BLADE		11 1/2		1		7.32		REG		11.50		8.19		3.23					
4		MOTOR WITH STABILIZER						CATHEDRAL		Motor 7/8, 4.0 Stg. w/ 11.25" stab		8		1		27.24		REG		11.25				1.82					
Mud Reports																													
Time 10:00		Type OIL BASE		Depth (ftKB) 6,586		Density (lb/gal) 9.10		Vis (s/qt) 48		PV Calc (cP) 15.0		YP Calc (lb/100... 10		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 3.8		LCM (lb/bbl)		WPS (ppm) 284,857		OW Ratio 75.8/24.2					
Electric Stab (V) 513.0				Excess Lime (lb/bbl) 0.4		HTHP Filtrate (mL/30min) 4.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 5,347.15				Cum Mud Field Est (Cost) 47,180.83											
Time 02:00		Type OIL BASE		Depth (ftKB) 7,082		Density (lb/gal) 9.10		Vis (s/qt) 48		PV Calc (cP) 14.0		YP Calc (lb/100... 12		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 3.8		LCM (lb/bbl)		WPS (ppm) 286,003		OW Ratio 76.4/23.6					
Electric Stab (V) 495.0				Excess Lime (lb/bbl)		HTHP Filtrate (mL/30min) 4.0				HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 5,347.15				Cum Mud Field Est (Cost) 47,180.83											
Mud Reports																													
Date 8/12/2019 10:00		Type OIL BASE						Depth (ftKB) 6,586		Density (lb/gal) 9.10		Percent Oil (%) 69.0		Mud Temp Out... 153.0		MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)							
Funnel Viscosity (s/qt) 48		PV Calc (cP) 15.0		YP Calc (lb/100ft²) 10		Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 10.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 25		Vis 600rpm 40													
Corrected Solids (%) 6.3		API Water Loss		LGS (%) 3.8		Excess Lime (lb/bbl) 0.4		LCM (lb/bbl)		Chlorides (mg/L) 55,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 5,347.15		Cum Mud Field Est (Cost) 47,180.83													
Date 8/13/2019 02:00		Type OIL BASE						Depth (ftKB) 7,082		Density (lb/gal) 9.10		Percent Oil (%) 69.5		Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)									
Funnel Viscosity (s/qt) 48		PV Calc (cP) 14.0		YP Calc (lb/100ft²) 12		Gel 10 sec (lb/100ft²) 11.000		Gel 10 min (lb/100ft²) 10.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 26		Vis 600rpm 40													
Corrected Solids (%) 6.3		API Water Loss		LGS (%) 3.8		Excess Lime (lb/bbl)		LCM (lb/bbl)		Chlorides (mg/L) 64,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 5,347.15		Cum Mud Field Est (Cost) 47,180.83													
Mud Reports																													
Date 8/12/2019		Type OIL BASE						Depth (ftKB) 6,586		Dens (lb/gal) 9.10		Vis (s/qt) 48		PV Calc (cP) 15.0		YP Calc (l... 10		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 3.8		LCM (lb/bbl)		Chlor (mg/L) 55,000		Oil Water Ratio 75.8/24.2	
Daily Mud Field Est (Cost) 5,347.15				Cum Mud Field Est (Cost) 47,180.83				Electric Stab (V) 513.0				Excess Lime (lb/bbl) 0.4				HTHP Filtrate (mL/30min) 4.0				HTHP Filter Cake (1/32") 2				HTHP Temperature (°F) 250.0					
Date 8/13/2019		Type OIL BASE						Depth (ftKB) 7,082		Dens (lb/gal) 9.10		Vis (s/qt) 48		PV Calc (cP) 14.0		YP Calc (l... 12		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 3.8		LCM (lb/bbl)		Chlor (mg/L) 64,000		Oil Water Ratio 76.4/23.6	
Daily Mud Field Est (Cost) 5,347.15				Cum Mud Field Est (Cost) 47,180.83				Electric Stab (V) 495.0				Excess Lime (lb/bbl)				HTHP Filtrate (mL/30min) 4.0				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										9 5/8		40.00		K-55		LT&C		7,703.7		7,703.70									
PRODUCTION										5 1/2		17.00		HCP-110				24,076.0		24,045.00									

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/13/2019
Report #	9
Projected Days	22.00
Drilling Days	3.91
Current Depth	7,082
Depth Progress	587
Planned VS	15,781
Current VS	-115
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)
6,333	0.30	152.20	6,302	-111.66	-118.21	-506.73	0.14	0.11
6,427	0.30	177.80	6,396	-112.12	-118.68	-506.60	0.14	0.00
6,521	0.40	157.10	6,490	-112.67	-119.23	-506.46	0.17	0.11
6,615	0.40	164.00	6,584	-113.29	-119.84	-506.25	0.05	0.00
6,708	0.40	162.40	6,677	-113.92	-120.46	-506.06	0.01	0.00
6,802	0.50	151.60	6,771	-114.60	-121.14	-505.76	0.14	0.11
6,897	0.50	152.50	6,866	-115.33	-121.87	-505.38	0.01	0.00
6,991	0.60	146.30	6,960	-116.11	-122.64	-504.91	0.12	0.11
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

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342  
ENSIGN 786

Report Date 8/14/2019  
Report # 10  
Projected Days 22.00  
Drilling Days 4.91  
Current Depth 7,718  
Depth Progress 636  
Planned VS 15,781  
Current VS -119  
AFE # 1550782  
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	RR Date	Target Formation WFMPC2_346_SH	Proposed TD (ftKB) 24,076	Target Line Plan #1	Daily Field Est (Cost) 100,181			Cum Field Est (Cost) 991,932					
Status at Report Time Made up shoe track														
Operations Summary 0 HSE TIH from 2,900 ft. to 7,082 ft., Drilled 12 1/4" intermediate hole from 7,082 ft to 7,718 ft. ( 636 ft @ 72.7 fph), By-passed shakers at 7,450 ft. adding 4 ppb LCM, circulate 2 bottoms up, POOH from 7,718 ft. to BHA. L/D 12 1/4" BHA. Pull wear bushing, Rig up Frank's casing tools. Make up 9 5/8" shoe track					Planned Operations Run and cement 9 5/8" Intermediate casing. Make up 8 3/4" curve BHA. TIH, build curve									
Mud Wt 9.3 ppg, Vis 43 LCM 4 ppb Last survey: 7,662 ft MD Inc 0.4° Azm 151.10°, 21.0 ft Behind, 24.6 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)														
Start MD (ftKB) 7,082		End MD (ftKB) 7,718		Depth Progress (ft) 636		Drilling Time (hr) 8.75		Avg ROP (ft/hr) 72.7		Time Since LTI (days) 1,104	Time Since RI (days) 1,104			
Daily Time Log														
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments		Hole Section	Interval	Category	Activity	NPT			
06:00	08:45	2.75	7,082	7,082	TIH from 2,900 ft to 7,082 ft.		INT	DIR	DRILL	TRIPS	Yes			
08:45	17:30	8.75	7,082	7,718	Slide/Drilled 12 1/4" hole from 7,082 ft to 7,718 ft. ( 636 ft @ 72.7 fph) MW 9.1+, Vis 48 with full returns		INT	DIR	DRILL	DRILL W/ MUD	No			
17:30	19:30	2.00	7,718	7,718	Note : Checked flow at 7,450 ft., well flowing at 20 bbls/hr., weighted up to 9.3 MW, no flow on connections, started by-passing shakers with 4 ppb LCM  Performed clean up cycle at 7,718 ft. circulate 2 btm's up while maintaining 4 ppb cedar fiber. MW 9.3 ppg Swapped returns to shakers long enough to get percentage of cuttings on bottoms up TD cuttings on shakers 90 % 1st bottoms up cuttings on shakers 50% 2nd bottoms up cuttings on shakers 40% Perform Flow Check, No Flow Pump Slug from Clean Mud		INT	DIR	CSG/CEMENT	COND MUD & CIRC	No			
19:30	22:45	3.25	7,718	7,718	Note : Notified Sherri Operator #0091 W/TXRRC at 18:00 hrs on 8/13/19 of intent to run and cement intermediate casing. POOH from 7,718 ft to BHA ft. Hole took proper fill and no excess drag. Flow checked above San Andres, Well static.		INT	DIR	CSG/CEMENT	TRIPS	No			
22:45	23:15	0.50	7,718	7,718	Removed rotating head, checked flow, well static. Conducted trip drill.		INT	DIR	CSG/CEMENT	BOP/OTHER	No			
23:15	03:00	3.75	7,718	7,718	Racked back 5 stands of HWDP in derrick and laid out 12 1/4" X 8" intermediate directional BHA.		INT	DIR	CSG/CEMENT	P/U & L/D BHA	No			
03:00	03:45	0.75	7,718	7,718	Bit Grade: 1-3-BT-S-X-0-PN-TD Drained stack and pulled wear bushing. Cleaned and cleared rig floor.		INT	DIR	CSG/CEMENT	BOP/OTHER	No			
03:45	05:00	1.25	7,718	7,718	PJSM, Rigged up Franks casing tools.		INT	DIR	CSG/CEMENT	RU/RD 3rd PARTY EQUIPMENT	No			
05:00	06:00	1.00	7,718	7,718	Made up and thread locked 2 joint shoe track to 82 ft, confirmed auto fill float equipment working correctly. Weatherford float shoe Model : 355 and Float collar Model : 455		INT	DIR	CSG/CEMENT	RUN CASING	No			
Drilling Parameters														
Start Depth (ftKB) 7,082	End Depth (ftKB) 7,718	Rot Time (hr) 8.75	Slide Time (hr) 0.00	Int ROP (ft/hr) 72.7	TFO (°)	dP (SPP) (psi) 722	WOB (1000lbf) 35	Q Rate (gpm/cfm) 850	SPP (psi) 3,449.0	RPM (rpm) 50	PU Str Wt (1000lbf) 240	SO Str Wt (1000lbf) 225	Drill Tq 17,000	
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)
12 1/4	HALLIBURTON	GT65DMHEO	PDC	1-3-BT-S-X-0-PN-DMF	1,121	7,082	5,961.00	78.25	76.2	68.75	9.50	83.1	38	196
12 1/4	HALLIBURTON	GT65DMHEO	PDC	1-2-BT-S-X-0-PN-TD	7,082	7,718	636.00	8.75	72.7	8.75		72.7	35	196
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)		
4	DRILL PIPE			ENSIGN 786	ENSIGN 786	5	175	5,487.79	IF		6.56	1.50		
4	HWDP			ENSIGN 786	ENSIGN 786	6.31	15	458.71	IF		6.31	1.75		
4	XO SUB - NON MAG			CATHEDRAL	CATHEDRAL	6.91	1	4.06	IF		6.91	1.63		
4	NMDC			CATHEDRAL	CATHEDRAL	8.08	1	31.04	REG		8.08			
4	NMDC			CATHEDRAL	CATHEDRAL	8	1	30.94	REG		8			
4	NMDC			CATHEDRAL	CATHEDRAL	8.17	1	30.73	REG		8.17			
4	ECM GAP SUB			CATHEDRAL	CATHEDRAL	8.19	1	5.83	REG		8.19	0.84		
4	NMDC			CATHEDRAL	CATHEDRAL	7.79	1	29.69	REG		7.79			
4	DRILL COLLAR - PONY			CATHEDRAL	CATHEDRAL	7.94	1	13.68	REG		7.94			
4	STABILIZER			STABILDRILL	STRAIGHT BLADE	11 1/2	1	7.32	REG	11.50	8.19	3.23		
4	MOTOR WITH STABILIZER			CATHEDRAL	Motor 7/8, 4.0 Stg. w/ 11.25" stab	8	1	27.24	REG	11.25		1.82		
Mud Reports														
Time 10:00	Type OIL BASE	Depth (ftKB) 7,153	Density (lb/gal) 9.10	Vis (s/qt) 49	PV Calc (cP) 15.0	YP Calc (lb/100... 12	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 3.7	LCM (lb/bbl)	WPS (ppm) 281,166	OW Ratio 76.4/23.6		
Electric Stab (V) 466.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 20,966.12		Cum Mud Field Est (Cost) 68,146.95				
Time 22:00	Type OIL BASE	Depth (ftKB) 7,718	Density (lb/gal) 9.30	Vis (s/qt) 43	PV Calc (cP) 15.0	YP Calc (lb/100... 12	Vis 3rpm 3	Vis 6rpm 4	LGS (%) 4.4	LCM (lb/bbl)	WPS (ppm) 289,971	OW Ratio 77.8/22.2		
Electric Stab (V) 460.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 20,966.12		Cum Mud Field Est (Cost) 68,146.95				
Mud Reports														
Date 8/13/2019 10:00		Type OIL BASE		Depth (ftKB) 7,153	Density (lb/gal) 9.10	Percent Oil (%) 69.5	Mud Temp Out... 144.0		MBT (lb/bbl)	pH	Pm Filtrate (m...	Pm (mL/mL)		
Funnel Viscosity (s/qt) 49		PV Calc (cP) 15.0	YP Calc (lb/100ft²) 12	Gel 10 sec (lb/100ft²) 13.000	Gel 10 min (lb/100ft²) 11.000		Vis 3rpm 5		Vis 6rpm 6	Vis 300rpm 27		Vis 600rpm 42		
Corrected Solids (%) 6.4		API Water Loss	LGS (%) 3.7	Excess Lime (lb/bbl) 0.7	LCM (lb/bbl)		Chlorides (mg/L) 62,000		Filter Cake (1/32")	Daily Mud Field Est (Cost) 20,966.12		Cum Mud Field Est (Cost) 68,146.95		
Date 8/13/2019 22:00		Type OIL BASE		Depth (ftKB) 7,718	Density (lb/gal) 9.30	Percent Oil (%) 70.0	Mud Temp Out... 144.0		MBT (lb/bbl)	pH	Pm Filtrate (m...	Pm (mL/mL)		
Funnel Viscosity (s/qt) 43		PV Calc (cP) 15.0	YP Calc (lb/100ft²) 12	Gel 10 sec (lb/100ft²) 11.000	Gel 10 min (lb/100ft²) 10.000		Vis 3rpm 3		Vis 6rpm 4	Vis 300rpm 27		Vis 600rpm 42		
Corrected Solids (%) 7.5		API Water Loss	LGS (%) 4.4	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl)		Chlorides (mg/L) 61,000		Filter Cake (1/32")	Daily Mud Field Est (Cost) 20,966.12		Cum Mud Field Est (Cost) 68,146.95		
Mud Reports														
Date 8/13/2019		Type OIL BASE		Depth (ftKB) 7,153	Dens (lb/gal) 9.10	Vis (s/qt) 49	PV Calc (cP) 15.0	YP Calc (l... 12	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 3.7	LCM (lb/bbl)	Chlor (mg/L) 62,000	Oil Water Ratio 76.4/23.6
Daily Mud Field Est (Cost) 20,966.12			Cum Mud Field Est (Cost) 68,146.95			Electric Stab (V) 466.0		Excess Lime (lb/bbl) 0.7		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2	HTHP Temperature (°F) 250.0	
Date 8/13/2019		Type OIL BASE		Depth (ftKB) 7,718	Dens (lb/gal) 9.30	Vis (s/qt) 43	PV Calc (cP) 15.0	YP Calc (l... 12	Vis 3rpm 3	Vis 6rpm 4	LGS (%) 4.4	LCM (lb/bbl)	Chlor (mg/L) 61,000	Oil Water Ratio 77.8/22.2
Daily Mud Field Est (Cost) 20,966.12			Cum Mud Field Est (Cost) 68,146.95			Electric Stab (V) 460.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2	HTHP Temperature (°F) 250.0	

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/14/2019
Report #	10
Projected Days	22.00
Drilling Days	4.91
Current Depth	7,718
Depth Progress	636
Planned VS	15,781
Current VS	-119
AFE #	1550782
Total AFE	3,640,000

Report Date	8/15/2019
Report #	11
Projected Days	22,000
Drilling Days	5,91
Current Depth	7,718
Depth Progress	0
Planned VS	15,781
Current VS	-119
A/E #	15507822
Total A/E	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) 406,036		Cum Field Est (Cost) 1,399,678											
Status at Report Time Repair catwalk																											
Operations Summary 0 HSE Ran 9 5/8" intermediate casing, landed at 7,703 ft, converted float, circulated 1.5 casing capacity. Cemented 9 5/8" casing. Cement to surface, canceled DV tool. Backed out Landing joint and set packoff. Set wear bushing. Cleaned rig floor. Assisted Sprint pit cleaners in spotting equipment. Staged BHA components. Serviced rig. Repaired catwalk.  Mud Wt 9.3 ppg, Vis 43 LCM 4 ppb Last survey: 7,662 ft MD Inc 0.4° Azm 151.10°, 21.0 ft Behind, 24.6 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)									Planned Operations Make up 8 3/4" curve BHA. TIH, slip & cut drill line, test casing, drill cement and FE, build curve.																		
Start MD (ftKB) 7,718			End MD (ftKB) 7,718			Depth Progress (ft) 0		Drilling Time (hr)		Avg ROP (ft/hr)			Time Since LTI (days) 1,105		Time Since RI (days) 1,105												
Daily Time Log																											
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity		NPT												
06:00	16:00	10.00	7,718	7,718	R.I.H. with 9 5/8" 40# J-55/K-55 casing from 82 ft. to 7,622 ft.					INT	DIR	CSG/CEMENT	RUN CASING		No												
16:00	16:30	0.50	7,718	7,718	Serviced cat walk.					INT	DIR	CSG/CEMENT	LUBRICATE RIG		No												
16:30	17:30	1.00	7,718	7,718	R.I.H. with 9 5/8" 40# J-55/K-55 casing from 7,622 ft to 7,718 ft. tagged bottom, pick up landing joint and land shoe at 7,703 ft., Confirm land out with visual inspection, Weatherford DV tool at 2,903 ft. Record P/U 365 K and S/O 315 K prior to picking up landing joint. Land out with Encore Wellhead rep. Verify landed with visual through wellhead port.					INT	DIR	CSG/CEMENT	RUN CASING		No												
17:30	18:15	0.75	7,718	7,718	Rig down Franks casing equipment / Rig up Halliburton cement head, chain down cement head.					INT	DIR	CSG/CEMENT	RU/RD 3rd PARTY EQUIPMENT		No												
18:15	20:00	1.75	7,718	7,718	Converted float @ 2 bpm with 665 psi. Circulated 1-1/2 casing capacity at 8 bpm, 9.3+ in and out with 4 PPB LCM while rigging down casing crew.					INT	DIR	CSG/CEMENT	COND MUD & CIRC		No												
20:00	00:30	4.50	7,718	7,718	Stage 1 - Held pre job safety meeting on cement job. Pressure tested lines to 3,000 psi. Halliburton mixed and pumped: 30 bbls 10.0 ppg spacer, followed with 489 bbls, 805 sx 10.5 ppg slurry with additives at 6 bpm, followed with 41bbls, 135 sx 12.5 ppg slurry with additives at 6 bpm. Dropped plug and pumped 578 bbls 9.5 ppg OBM. Bumped plug, final circulating pressure was 750 psi, increased pressure to 1,350 psi and held 5 mins. Bled back 3 bbls. Weatherford hand converted Bomb to cancellation plug and dropped same. Waited 30 mins. Pumped 2.25 bbls @ 4 BPM to 2,180 psi. Bled back 2 bbls. Pumped 2 bbls to 2,235 psi. Held 5 mins. DV tool canceled as per Weatherford hand. 78 bbls/128 sxs cement to surface. Estimated Top of tail @ 6,449'					INT	DIR	CSG/CEMENT	RUN CEMENT		No												
00:30	01:15	0.75	7,718	7,718	Flushed through all surface lines and drew down pits while rigged down Halliburton equipment.					INT	DIR	CSG/CEMENT	RU/RD 3rd PARTY EQUIPMENT		No												
01:15	03:00	1.75	7,718	7,718	L/O landing joint and removed casing bales and elevators. P/U one joint of 5" drill pipe, set packoff with 15,000 lbs. Tested pack off to 5,000 psi for 5 min. L/O setting tool.					INT	DIR	CSG/CEMENT	BOP/OTHER		No												
03:00	03:30	0.50	7,718	7,718	Install wear bushing.					INT	DIR	CSG/CEMENT	BOP/OTHER		No												
03:30	04:30	1.00	7,718	7,718	Assist Sprint Energy cleaning crew with spotting their equipment, moving trucks around location and finish sucking mud out of pits.					INT	DIR	CSG/CEMENT	RU/RD 3rd PARTY EQUIPMENT		No												
04:30	05:00	0.50	7,718	7,718	Clean and clear rig floor of excess tools and equipment. Stage BHA components on gull wings and rig floor.					INT	DIR	CSG/CEMENT	BOP/OTHER		No												
05:00	05:30	0.50	7,718	7,718	Service rig and TDS.					INT	DIR	CSG/CEMENT	LUBRICATE RIG		No												
05:30	06:00	0.50	7,718	7,718	Repair catwalk.					INT	DIR	CSG/CEMENT	REPAIR RIG		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)									
12 1/4	HALLIBURTON		GT65DMIHEO		PDC		1-3-BT-S-X-0-PN-DMF		1,121	7,082	5,961.00	78.25	76.2	68.75	9.50	83.1	38	196									
12 1/4	HALLIBURTON		GT65DMIHEO		PDC		1-2-BT-S-X-0-PN-TD		7,082	7,718	636.00	8.75	72.7	8.75		72.7	35	196									
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)											
4	DRILL PIPE					ENSIGN 786		ENSIGN 786		5	175	5,487.79	IF		6.56	1.50											
4	HWDP					ENSIGN 786		ENSIGN 786		6.31	15	458.71	IF		6.31	1.75											
4	XO SUB - NON MAG					CATHEDRAL		CATHEDRAL		6.91	1	4.06	IF		6.91	1.63											
4	NMDC					CATHEDRAL		CATHEDRAL		8.08	1	31.04	REG		8.08												
4	NMDC					CATHEDRAL		CATHEDRAL		8	1	30.94	REG		8												
4	NMDC					CATHEDRAL		CATHEDRAL		8.17	1	30.73	REG		8.17												
4	ECM GAP SUB					CATHEDRAL		CATHEDRAL		8.19	1	5.83	REG		8.19	0.84											
4	NMDC					CATHEDRAL		CATHEDRAL		7.79	1	29.69	REG		7.79												
4	DRILL COLLAR - PONY					CATHEDRAL		CATHEDRAL		7.94	1	13.68	REG		7.94												
4	STABILIZER					STABILDRILL		STRAIGHT BLADE		11 1/2	1	7.32	REG		8.19	3.23											
4	MOTOR WITH STABILIZER					CATHEDRAL		Motor 7/8, 4.0 Stg. w/ 11.25" stab		8	1	27.24	REG	11.25		1.82											
Mud Reports																											
Time 10:00		Type OIL BASE		Depth (ftKB) 7,718		Density (lb/gal) 9.40		Vis (s/qt) 43		PV Calc (cP) 15.0		YP Calc (lb/100... 13		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 5.7		LCM (lb/bbl) 28		WPS (ppm) 289,971		OW Ratio 77.5/22.5			
Electric Stab (V) 472.0			Excess Lime (lb/bbl) 0.4			HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 6,517.78			Cum Mud Field Est (Cost) 74,664.73									
Time 22:00		Type OIL BASE		Depth (ftKB) 7,718		Density (lb/gal) 9.40		Vis (s/qt) 44		PV Calc (cP) 14.0		YP Calc (lb/100... 14		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 5.7		LCM (lb/bbl) 28		WPS (ppm) 284,372		OW Ratio 77.5/22.5			
Electric Stab (V) 461.0			Excess Lime (lb/bbl) 0.5			HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 6,517.78			Cum Mud Field Est (Cost) 74,664.73									
Mud Reports																											
Date 8/14/2019 10:00		Type OIL BASE				Depth (ftKB) 7,718		Density (lb/gal) 9.40		Percent Oil (%) 69.0		Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m... Pm (mL/mL)											
Funnel Viscosity (s/qt) 43		PV Calc (cP) 15.0		YP Calc (lb/100ft²) 13		Gel 10 sec (lb/100ft²) 12.000		Gel 10 min (lb/100ft²) 11.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 28		Vis 600rpm 43											
Corrected Solids (%) 8.5		API Water Loss		LGS (%) 5.7		Excess Lime (lb/bbl) 0.4		LCM (lb/bbl)		Chlorides (mg/L) 60,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 6,517.78		Cum Mud Field Est (Cost) 74,664.73											
Date 8/14/2019 22:00		Type OIL BASE				Depth (ftKB) 7,718		Density (lb/gal) 9.40		Percent Oil (%) 69.0		Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m... Pm (mL/mL)											
Funnel Viscosity (s/qt) 44		PV Calc (cP) 14.0		YP Calc (lb/100ft²) 14		Gel 10 sec (lb/100ft²) 12.000		Gel 10 min (lb/100ft²) 10.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 28		Vis 600rpm 42											
Corrected Solids (%) 8.5		API Water Loss		LGS (%) 5.7		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 60,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 6,517.78		Cum Mud Field Est (Cost) 74,664.73											
Mud Reports																											
Date 8/14/2019		Type OIL BASE				Depth (ftKB) 7,718		Dens (lb/gal) 9.40		Vis (s/qt) 43		PV Calc (cP) 15.0		YP Calc (L... 13		Vis 3rpm 4		Vis 6rpm 5		LGS (%) 5.7		LCM (lb/bbl) 28		Chlor (mg/L) 60,000		Oil Water Ratio 77.5/22.5	
Daily Mud Field Est (Cost) 6,517.78			Cum Mud Field Est (Cost) 74,664.73			Electric Stab (V) 472.0			Excess Lime (lb/bbl) 0.4			HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			HTHP Temperature (°F) 250.0									

SABLE PERMIAN RESOURCES, LLC  
Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342  
ENSIGN 786

Report Date 8/15/2019  
Report # 11  
Projected Days 22.00  
Drilling Days 5.91  
Current Depth 7,718  
Depth Progress 0  
Planned VS 15,781  
Current VS -119  
AFE # 1550782  
Total AFE 3,640,000

Mud Reports																	
Date 8/14/2019	Type OIL BASE	Depth (ftKB) 7,718	Dens (lb/gal) 9.40	Vis (s/qt) 44	PV Calc (cP) 14.0	YP Calc (l... 14	Vis 3rpm 4	Vis 6rpm 5	LGS (%) 5.7	LCM (lb/bbl)	Chlor (mg/L) 60,000	Oil Water Ratio 77.5/22.5					
Daily Mud Field Est (Cost) 6,517.78		Cum Mud Field Est (Cost) 74,664.73		Electric Stab (V) 461.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0		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		17.00		HCP-110				24,076.0		24,045.00			
Survey Data																	
MD (ftKB)		Incl (°)		Azim (°)		TVD (ftKB)		VS (ft)		NS (ft)		EW (ft)		DLS (°/100ft)		BUR (°/100ft)	
6,991		0.60		146.30		6,960		-116.11		-122.64		-504.91		0.12		0.11	
7,085		0.60		139.00		7,054		-116.90		-123.42		-504.32		0.08		0.00	
7,179		0.50		132.60		7,148		-117.56		-124.07		-503.69		0.12		-0.11	
7,273		0.40		130.90		7,242		-118.06		-124.57		-503.14		0.11		-0.11	
7,367		0.40		139.30		7,336		-118.53		-125.03		-502.68		0.06		0.00	
7,462		0.40		131.70		7,431		-119.00		-125.50		-502.22		0.06		0.00	
7,556		0.40		144.80		7,525		-119.50		-125.99		-501.78		0.10		0.00	
7,662		0.40		151.10		7,631		-120.13		-126.61		-501.39		0.04		0.00	
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**

UNIVERSITY LANDS 10 35-23 13HK

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/16/2019
Report #	12
Projected Days	22.00
Drilling Days	6.91
Current Depth	7,859
Depth Progress	141
Planned VS	15,781
Current VS	-119
AFE #	1550782
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
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## 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) 80,253	Cum Field Est (Cost) 1,534,701
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Status at Report Time  
Changing out MWD tool and gap sub.

Operations Summary  
0 HSE  
Picked up 8 3/4" Curve/Lateral BHA. TIH to 2,904 ft and drilled out DV Tool. TIH to 7,608 ft tagged cmt.  
Tested casing. Drilled cement, FE, and Rathole to 7,718'. Drilled tangent to 7,859'. Troubleshot MWD.  
POOH for MWD failure. Rack back monels. Change out MWD tool and gap sub.

Planned Operations  
Change out MWD tool and Gap Sub. TIH to 9 5/8" shoe. Slip & Cut Drill line. TIH to KOP. Build curve.

Mud Wt 11.2 ppg, Vis 52  
Last survey: 7,662 ft MD Inc 0.4° Azm 151.10°, 21.0 ft Behind, 24.6 ft Right  
Big rig spud date: 8-9-19 8:15 hrs.  
Next well: University Lands 10 35-23 07HA (Walk)

Start MD (ftKB)	End MD (ftKB)	Depth Progress (ft)	Drilling Time (hr)	Avg ROP (ft/hr)	Time Since LTI (days)	Time Since RI (days)
7,718	7,859	141	1.75	80.6	1,106	1,106

## 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	7,718	7,718	Repaired catwalk.	INT	DIR	CSG/CEMENT	REPAIR RIG	Yes
06:30	11:30	5.00	7,718	7,718	Picked up BHA #5; Smith MDI611 8 3/4", slick 7.0" Claw 250, fixed 2.00 deg. NM slick DC, NM flex pony DC, Double Pin sub, Gap Sub, Fusion Spacer Sub, Fusion Pulsar Sub, NM Flex DC, NM Slick DC ( Drill N Ream 1,019 ft behind the bit. Lower Agitator 1,789 ft behind the bit)	INT	DIR	CSG/CEMENT	P/U & L/D BHA	No
					Note: Completed cleaning pits at 08:00. Mud in pits at 10:00.					
11:30	13:00	1.50	7,718	7,718	Tripped in hole from 163 ft to 2,904 ft.	INT	DIR	CSG/CEMENT	TRIPS	No
13:00	13:30	0.50	7,718	7,718	Installed rotating head.	INT	DIR	CSG/CEMENT	BOP/OTHER	No
13:30	17:00	3.50	7,718	7,718	Drilled out cement and DV tool from 2,904 ft to 2,906 ft.	INT	DIR	CSG/CEMENT	DRILL SHOE TRACK	No
17:00	20:00	3.00	7,718	7,718	Tripped in the hole from 2,906 ft to 7,608 ft. and tagged cement.	INT	DIR	CSG/CEMENT	TRIPS	No
20:00	20:30	0.50	7,718	7,718	Filled pipe and circulated surface to surface.	INT	DIR	CSG/CEMENT	COND MUD & CIRC	No
20:30	21:00	0.50	7,718	7,718	Tested 9 5/8" casing to 1,500 psi for 30 mins with rig pump. Good test.	INT	DIR	CSG/CEMENT	BOP/OTHER	No
21:00	22:00	1.00	7,718	7,718	Drilled shoe track and cement from 7,608 ft to 7,718 ft.	INT	DIR	CSG/CEMENT	DRILL SHOE TRACK	No
22:00	23:45	1.75	7,718	7,859	Rotate drilled tangent from 7,718 ft to KOP @ 7,859 ft ( 141 ft @ 70.5 ft/hr) Full returns and no flow on connections, mud weight 11.1 ppg	PROD	DIR	DRILL	DRILL W/ MUD	No
23:45	01:00	1.25	7,859	7,859	Troubleshoot MWD inclinometer/accelerometer issue. No success.	PROD	DIR	DRILL	3rd PARTY EQUIPMENT REPAIR	Yes
01:00	01:30	0.50	7,859	7,859	Circulated bottoms up @ 7,859 ft while built slug and filled trip tank.	PROD	DIR	DRILL	COND MUD & CIRC	Yes
01:30	04:00	2.50	7,859	7,859	Flow checked, well static. Pumped slug and POOH for MWD failure to 2,071 ft. Hole slick and took proper fill from trip tank.	PROD	DIR	DRILL	TRIPS	Yes
04:00	04:30	0.50	7,859	7,859	Removed rotating head.	PROD	DIR	DRILL	BOP/OTHER	Yes
04:30	05:30	1.00	7,859	7,859	POOH from 2,071 ft to BHA. Hole took proper fill from trip tank. L/D lower agitator and Drill N Ream.	PROD	DIR	DRILL	TRIPS	Yes
05:30	06:00	0.50	7,859	7,859	Racked back monels in derrick. Changed out MWD Tool and gap sub.	PROD	DIR	DRILL	P/U & L/D BHA	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
2,904	2,905					150	15	325	940.0	20	110	110	6,000
2,905	2,907					305	15	450	1,200.0	30	110	110	8,500
7,608	7,718					300	15	350	1,050.0	20	230	210	8,500
7,718	7,859	1.75	0.00	80.6		650	25	550	2,700.0	60	230	210	9,500

## 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)
12 1/4	HALLIBURTON	GT65DMIHEO	PDC	1-2-BT-S-X-0-PN-TD	7,082	7,718	636.00	8.75	72.7	8.75		72.7	35	196
8 3/4	SMITH	MDI611	PDC	-----	7,718	7,859	141.00	1.75	80.6	1.75		80.6	25	191

## 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)
5	DRILL PIPE	RIG	RIG	5	251	0.00	IF			
5	AGITATOR	Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.50
5	DRILL PIPE	RIG	RIG	5	21	752.42	IF			
5	REAMER	Drill-N-Ream	Drill-N-Ream	6 1/2	1	8.50	IF		6 1/2	1.24
5	DRILL PIPE	RIG	RIG	5	27	847.50	IF		6 1/2	
5	DRILL COLLAR - NON MAG	CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF			
5	DRILL COLLAR - FLEX NON MAG	CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12
5	FUSION PULSER SUB	CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28
5	FUSION SPACER SUB	CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52
5	MWD - DIRECTIONAL	CATHEDRAL	CATHEDRAL				IF			
5	ECM GAP SUB	CATHEDRAL	CATHEDRAL	6.76	1	6.73	IF		6.76	0.94
5	XO SUB	CATHEDRAL	CATHEDRAL	7	1	3.59	IF			
5	DRILL COLLAR - FLEX NON MAG	CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.71	4.41
5	DRILL COLLAR - NON MAG	CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF			
5	MUD MOTOR	CATHEDRAL	Claw 250, 2.0 Fixed true slick	7	1	33.47	IF			

## Mud Reports

Time 10:00	Type OIL BASE	Depth (ftKB) 7,718	Density (lb/gal) 9.40	Vis (s/qt) 44	PV Calc (cP) 14.0	YP Calc (lb/100... 14	Vis 3rpm 4	Vis 6rpm 5	LGS (%) 5.7	LCM (lb/bbl)	WPS (ppm) 284,372	OW Ratio 77.5/22.5
Electric Stab (V) 461.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	
Time 22:00	Type OIL BASE	Depth (ftKB) 7,718	Density (lb/gal) 10.90	Vis (s/qt) 52	PV Calc (cP) 23.0	YP Calc (lb/100... 21	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 4.0	LCM (lb/bbl)	WPS (ppm) 289,971	OW Ratio 76.3/23.7
Electric Stab (V) 570.0		Excess Lime (lb/bbl) 0.1	HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2	T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	

## Mud Reports

Date 8/15/2019 10:00		Type OIL BASE		Depth (ftKB) 7,718	Density (lb/gal) 9.40	Percent Oil (%) 69.0	Mud Temp Out... 5	MBT (lb/bbl) 5	pH 10.5	Pm Filtrate (m... 42	Pm (mL/mL) 42	
Funnel Viscosity (s/qt) 44		PV Calc (cP) 14.0	YP Calc (lb/100ft²) 14	Gel 10 sec (lb/100ft²) 12.000	Gel 10 min (lb/100ft²) 10.000		Vis 3rpm 4		Vis 6rpm 5		Vis 300rpm 28	Vis 600rpm 42
Corrected Solids (%) 8.5	API Water Loss 0.5	LGS (%) 5.7	Excess Lime (lb/bbl) 0.5	LCM (lb/bbl) 0.5		Chlorides (mg/L) 61,000		Filter Cake (1/32") 0.5	Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	
Date 8/15/2019 22:00		Type OIL BASE		Depth (ftKB) 7,718	Density (lb/gal) 10.90	Percent Oil (%) 64.5	Mud Temp Out... 5	MBT (lb/bbl) 6	pH 10.5	Pm Filtrate (m... 42	Pm (mL/mL) 42	
Funnel Viscosity (s/qt) 52		PV Calc (cP) 23.0	YP Calc (lb/100ft²) 21	Gel 10 sec (lb/100ft²) 16.000	Gel 10 min (lb/100ft²) 14.000		Vis 3rpm 5		Vis 6rpm 6		Vis 300rpm 44	Vis 600rpm 67
Corrected Solids (%) 13.0	API Water Loss 0.1	LGS (%) 4.0	Excess Lime (lb/bbl) 0.1	LCM (lb/bbl) 0.1		Chlorides (mg/L) 65,000		Filter Cake (1/32") 0.5	Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/16/2019
Report #	12
Projected Days	22.00
Drilling Days	6.91
Current Depth	7,859
Depth Progress	141
Planned VS	15,781
Current VS	-119
AFE #	1550782
Total AFE	3,640,000

## Mud Reports

Date 8/15/2019	Type OIL BASE	Depth (ftKB) 7,718	Dens (lb/gal) 9.40	Vis (s/qt) 44	PV Calc (cP) 14.0	YP Calc (l...) 14	Vis 3rpm 4	Vis 6rpm 5	LGS (%) 5.7	LCM (lb/bbl) 61.00	Chlor (mg/L) 77.5/22.5
Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	Electric Stab (V) 461.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0
Date 8/15/2019	Type OIL BASE	Depth (ftKB) 7,718	Dens (lb/gal) 10.90	Vis (s/qt) 52	PV Calc (cP) 23.0	YP Calc (l...) 21	Vis 3rpm 5	Vis 6rpm 6	LGS (%) 4.0	LCM (lb/bbl) 65.00	Chlor (mg/L) 76.3/23.7
Daily Mud Field Est (Cost) 3,874.66		Cum Mud Field Est (Cost) 78,539.39	Electric Stab (V) 570.0		Excess Lime (lb/bbl) 0.1		HTHP Filtrate (mL/30min) 4.0		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	17.00	HCP-110		24,076.0	24,045.00

## Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
6,991	0.60	146.30	6,960	-116.11	-122.64	-504.91	0.12	0.11
7,085	0.60	139.00	7,054	-116.90	-123.42	-504.32	0.08	0.00
7,179	0.50	132.60	7,148	-117.56	-124.07	-503.69	0.12	-0.11
7,273	0.40	130.90	7,242	-118.06	-124.57	-503.14	0.11	-0.11
7,367	0.40	139.30	7,336	-118.53	-125.03	-502.68	0.06	0.00
7,462	0.40	131.70	7,431	-119.00	-125.50	-502.22	0.06	0.00
7,556	0.40	144.80	7,525	-119.50	-125.99	-501.78	0.10	0.00
7,662	0.40	151.10	7,631	-120.13	-126.61	-501.39	0.04	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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**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/17/2019
Report #	13
Projected Days	22.00
Drilling Days	7.91
Current Depth	8,090
Depth Progress	231
Planned VS	15,781
Current VS	-105
AFE #	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		RR Date		Target Formation WFMPC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 95,702		Cum Field Est (Cost) 1,630,174	
Status at Report Time Drill 8 3/4" curve at 8,090 ft.																
Operations Summary 0 HSE Changed out MWD tools, gap sub and bit, TIH to 7,630 ft., slip and cut drill line. TIH. Build curve to 8,090'.								Planned Operations Build curve as per plan to LP. Drill lateral.								
Mud Wt 11.9 ppg, Vis 49 Current window: 5' above/below, 30' left/right of Plan #1. Last survey: 7,997 ft MD Inc 13.8° Azm 328.10°, 23.9 ft Behind, 9.2 ft Right Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																
Start MD (ftKB) 7,859				End MD (ftKB) 8,090		Depth Progress (ft) 231		Drilling Time (hr) 12.50		Avg ROP (ft/hr) 18.5		Time Since LTI (days) 1,107		Time Since RI (days) 1,107		
Daily Time Log																
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments				Hole Section	Interval	Category	Activity		NPT		
06:00	07:30	1.50	7,859	7,859	Racked back slick and flex, powered down MWD. Laid out gap sub, fusion pulser sub, drained motor, and broke off bit.				PROD	DIR	DRILL	P/U & L/D BHA		Yes		
07:30	10:30	3.00	7,859	7,859	Bit grade: 0-1-BT-G-X-0-BT-DTF Picked up BHA #6; Smith MDI611 8 3/4", slick 7.0" Claw 250, fixed 2.00 deg. NM slick DC, NM flex pony DC, Double Pin sub, Gap Sub, Fusion Spacer Sub, Fusion Pulser Sub, NM Flex DC, NM Slick DC ( Drill N Ream 1,019 ft behind the bit. Lower Agitator 1,789 ft behind the bit)				PROD	DIR	DRILL	P/U & L/D BHA		Yes		
10:30	12:00	1.50	7,859	7,859	Tripped in hole from 163 ft to 3,485 ft. Displacements as calculated to trip tank.				PROD	DIR	DRILL	TRIPS		Yes		
12:00	12:30	0.50	7,859	7,859	Installed rotating head.				PROD	DIR	DRILL	BOP/OTHER		Yes		
12:30	14:45	2.25	7,859	7,859	Tripped in the hole from 3,485 ft to 7,724 ft. Displacements as calculated to trip tank.				PROD	DIR	DRILL	TRIPS		Yes		
14:45	17:00	2.25	7,859	7,859	Slipped and cut drill line.				PROD	DIR	DRILL	CUT SLIP & DRILL LINE		Yes		
17:00	17:30	0.50	7,859	7,859	Washed and reamed from 7,724 ft. to 7,859 ft.				PROD	DIR	DRILL	REAMING		Yes		
17:30	06:00	12.50	7,859	8,090	Drill 8 3/4" curve from 7,859 ft to 8,090'. 11.9 ppg 49 vis. Full returns. ***BOP drill @ 0500 hrs 8-17-19 (2 mins 26 seconds)***				PROD	CURVE	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			
7,859	7,985	0.00	9.50	13.3	333	275	48	550	2,325.0		220	210				
7,985	8,054	0.00	2.00	34.5	350	350	48	650	3,200.0		220	210				
8,054	8,090	0.00	1.00	36.0	0	695	48	725	3,500.0		220	210				
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	0-1-BT-G-X-0-BT-DTF	7,718	7,859	141.00	1.75	80.6	1.75		80.6	25	191		
8 3/4	SMITH	MDI611	PDC	-----	7,859	8,090	231.00	12.50	18.5		12.50		48	181		
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)			
6	DRILL PIPE				RIG	RIG	5	251	0.00	IF						
6	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.50			
6	DRILL PIPE				RIG	RIG	5	21	752.42	IF						
6	REAMER				Drill-N-Ream	Drill-N-Ream	6 1/2	1	8.50	IF		6 1/2	1.24			
6	DRILL PIPE				RIG	RIG	5	27	847.50	IF		6 1/2				
6	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF						
6	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12			
6	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28			
6	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52			
6	MWD - DIRECTIONAL				CATHEDRAL	CATHEDRAL				IF						
6	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6.76	1	6.73	IF		6.76	0.94			
6	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF						
6	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.71	4.41			
6	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF						
6	MUD MOTOR				CATHEDRAL	Claw 250, 2.0 Fixed true slick	7	1	33.47	IF						
Mud Reports																
Time 10:00	Type OIL BASE	Depth (ftKB) 7,859	Density (lb/gal) 11.20	Vis (s/qt) 52	PV Calc (cP) 24.0	YP Calc (lb/100... 20	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.9	LCM (lb/bbl)	WPS (ppm) 300,801	OW Ratio 75.3/24.7				
Electric Stab (V) 475.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 24,542.22			Cum Mud Field Est (Cost) 103,081.61				
Time 22:00	Type OIL BASE	Depth (ftKB) 7,905	Density (lb/gal) 11.50	Vis (s/qt) 54	PV Calc (cP) 26.0	YP Calc (lb/100... 17	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 2.6	LCM (lb/bbl)	WPS (ppm) 289,971	OW Ratio 75.9/24.1				
Electric Stab (V) 452.0		Excess Lime (lb/bbl) 0.5	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 24,542.22			Cum Mud Field Est (Cost) 103,081.61				
Mud Reports																
Date 8/16/2019 10:00	Type OIL BASE				Depth (ftKB) 7,859	Density (lb/gal) 11.20	Percent Oil (%) 62.5	Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)		
Funnel Viscosity (s/qt) 52		PV Calc (cP) 24.0		YP Calc (lb/100ft²) 20		Gel 10 sec (lb/100ft²) 16.000		Gel 10 min (lb/100ft²) 15.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 44 Vis 600rpm 68		
Corrected Solids (%) 14.4		API Water Loss		LGS (%) 4.9		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 62,000		Filter Cake (1/32") 24,542.22		Cum Mud Field Est (Cost) 103,081.61		
Date 8/16/2019 22:00	Type OIL BASE				Depth (ftKB) 7,905	Density (lb/gal) 11.50	Percent Oil (%) 63.0	Mud Temp Out... MBT (lb/bbl)		pH		Pm Filtrate (m...		Pm (mL/mL)		
Funnel Viscosity (s/qt) 54		PV Calc (cP) 26.0		YP Calc (lb/100ft²) 17		Gel 10 sec (lb/100ft²) 16.000		Gel 10 min (lb/100ft²) 14.000		Vis 3rpm 8		Vis 6rpm 10		Vis 300rpm 43 Vis 600rpm 69		
Corrected Solids (%) 14.5		API Water Loss		LGS (%) 2.6		Excess Lime (lb/bbl) 0.5		LCM (lb/bbl)		Chlorides (mg/L) 59,000		Filter Cake (1/32") 24,542.22		Cum Mud Field Est (Cost) 103,081.61		
Mud Reports																
Date 8/16/2019	Type OIL BASE				Depth (ftKB) 7,859	Dens (lb/gal) 11.20	Vis (s/qt) 52	PV Calc (cP) 24.0	YP Calc (l... 20	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 4.9	LCM (lb/bbl)	Chlor (mg/L) 62,000	Oil Water Ratio 75.3/24.7	
Daily Mud Field Est (Cost) 24,542.22			Cum Mud Field Est (Cost) 103,081.61			Electric Stab (V) 475.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0		
Date 8/16/2019	Type OIL BASE				Depth (ftKB) 7,905	Dens (lb/gal) 11.50	Vis (s/qt) 54	PV Calc (cP) 26.0	YP Calc (l... 17	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 2.6	LCM (lb/bbl)	Chlor (mg/L) 59,000	Oil Water Ratio 75.9/24.1	
Daily Mud Field Est (Cost) 24,542.22			Cum Mud Field Est (Cost) 103,081.61			Electric Stab (V) 452.0		Excess Lime (lb/bbl) 0.5		HTHP Filtrate (mL/30min) 4.0		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

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/17/2019
Report #	13
Projected Days	22.00
Drilling Days	7.91
Current Depth	8,090
Depth Progress	231
Planned VS	15,781
Current VS	-105
AFE #	1550782
Total AFE	3,640,000

SABLE PERMIAN RESOURCES, LLC  
Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342  
ENSIGN 786

Report Date 8/18/2019  
Report # 14  
Projected Days 22.00  
Drilling Days 8.91  
Current Depth 10,568  
Depth Progress 2,478  
Planned VS 15,781  
Current VS 2,233  
AFE # 1550782  
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	RR Date	Target Formation WFMPC2_346_SH	Proposed TD (ftKB) 24,076	Target Line Plan #1			Daily Field Est (Cost) 73,221		Cum Field Est (Cost) 1,715,499				
Status at Report Time Drilling 8 3/4 lateral at 10,568'.														
Operations Summary 0 HSE Drilled 8 3/4" curve from 8,090 ft. to landing point at 8,808 ft. ( 718 ft @ 75.6 fph ), Drilled 8 3/4" lateral from 8,808 ft. to 8,949 (141 ft @ 94.0 ft/hr). Serviced rig. Drilled 8 3/4 lateral from 8,949 ft. to 10,568 ft.(1619 ft @ 134.9 ft/hr).					Planned Operations Drill 8 3/4 lateral as per directional plan.									
Mud Wt 12.0 ppg, Vis 49 New window: 0 - 10 below, 30' left/right of Plan #1. 8-17-2019 11:28 am Old window: 5' above/below, 30' left/right of Plan #1. Last survey: 10,491 ft MD Inc 89.5° Azm 357.80°, 4.4 ft Below, 11.4 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)														
Start MD (ftKB) 8,090		End MD (ftKB) 10,568		Depth Progress (ft) 2,478		Drilling Time (hr) 23.00		Avg ROP (ft/hr) 107.7		Time Since LTI (days) 1,108	Time Since RI (days) 1,108			
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	8,090	8,808	Drilled 8 3/4" curve from 8,090 ft to 8,808 ft ( 718 ft @ 75.6 ft/hr) Full returns and no flow on connections, mud weight 12.0 ppg  New drilling window: 0'-10' below 8-17-19 11:28 am Old drilling window 5' below - 5' above  Note: Curve performance Drilled curve with 1 bha Max dog leg severity was 14.60° Total hours from KOP 7,859 ft. to 8,808 ft. 22.0 hrs to land curve Downtime 0 hrs Landed curve at 8,808 ft MD/8,406 ft TVD 494.32 ft VS ( Planned VS 458.3 ft )	PROD	CURVE	DRILL	DRILL W/ MUD	No				
15:30	16:00	0.50	8,808	8,808	Re-log gamma due to loosing power in directional drillers trailer when stellar generator over heated and shut off	PROD	LAT	DRILL	RU/RD 3rd PARTY EQUIPMENT	Yes				
16:00	17:30	1.50	8,808	8,949	Drilled/slide 8 3/4" lateral hole from 8,808 ft to 8,949 ft ( 141 ft @ 94.0 ft/hr) Full returns and no flow on connections, mud weight 12.0 ppg	PROD	LAT	DRILL	DRILL W/ MUD	No				
17:30	18:00	0.50	8,949	8,949	Rig service	PROD	LAT	DRILL	LUBRICATE RIG	No				
18:00	06:00	12.00	8,949	10,568	Drilled/slide 8 3/4" lateral hole from 8,949 ft to 10,568 ft (1619 ft @ 134.9 ft/hr) Full returns and no flow on connections, mud weight 12.0 ppg  Current drilling window: 0'-10' Below	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	
8,090	8,384	0.00	4.00	73.5	50	534	21	725	4,052.0		220	195		
8,384	8,409	0.25	0.00	100.0		379	21	725	3,948.0	20	220	195	9,000	
8,409	8,431	0.00	0.50	44.0	50	664	35	725	4,233.0		220	195		
8,431	8,456	0.25	0.00	100.0		572	30	725	4,141.0	20	220	195	10,000	
8,456	8,478	0.00	0.25	88.0	0	565	39	725	4,134.0		220	195		
8,478	8,505	0.50	0.00	54.0		496	32	725	4,042.0	20	220	195	10,000	
8,505	8,525	0.00	0.25	80.0	0	565	47	725	4,105.0		220	195		
8,525	8,546	0.25	0.00	84.0		475	30	725	4,048.0	20	220	195	11,000	
8,546	8,572	0.00	0.25	104.0	0	437	37	725	4,009.0		220	195		
8,572	8,594	0.50	0.00	44.0		492	30	725	3,977.0	20	220	190	11,000	
8,594	8,619	0.00	0.25	100.0	-15	565	40	725	4,085.0		220	190		
8,619	8,641	0.25	0.00	88.0		502	30	725	3,882.0	20	220	190	11,000	
8,641	8,667	0.00	0.50	52.0	-20	641	48	725	4,153.0		220	190		
8,667	8,688	0.25	0.00	84.0		527	30	725	4,045.0	20	220	190		
8,688	8,714	0.00	0.25	104.0	-45	641	48	725	4,153.0		220	190		
8,714	8,730	0.25	0.00	64.0		420	30	725	3,970.0	20	220	190	11,000	
8,730	8,761	0.00	0.25	124.0	-60	485	48	725	4,035.0		220	190		
8,761	8,776	0.25	0.00	60.0		393	30	725	3,879.0	20	220	190	11,000	
8,776	8,808	0.00	0.25	128.0	-45	548	35	725	4,034.0		220	190		
8,808	8,949	1.50	0.00	94.0		472	30	725	3,968.0	20	220	185	12,000	
8,949	9,137	2.00	0.00	94.0		550	23	725	4,085.0	40	220	185	12,000	
9,137	9,149	0.00	0.25	48.0	20	350	20	725	3,964.0		220	185		
9,149	9,326	1.25	0.00	141.6		560	30	725	4,190.0	70	225	180	12,000	
9,326	9,334	0.00	0.50	16.0	160	250	35	725	3,865.0		225	180		
9,334	9,420	0.50	0.00	172.0		660	35	725	4,260.0	70	225	180	12,000	
9,420	9,435	0.00	0.25	60.0	50	175	20	725	4,000.0		225	180		
9,435	9,513	0.50	0.00	156.0		650	34	725	4,375.0	70	225	180	12,000	
9,513	9,525	0.00	0.25	48.0	90	340	30	725	4,080.0		225	180		
9,525	9,702	1.00	0.00	177.0		680	35	725	4,435.0	70	230	175	15,000	
9,702	9,714	0.00	0.25	48.0	90	280	20	725	4,100.0		230	175		
9,714	10,172	2.50	0.00	183.2		630	35	725	4,467.0	70	230	175	16,000	
10,172	10,184	0.00	0.50	24.0	-100	270	28	725	4,165.0		230	175		
10,184	10,548	2.00	0.00	182.0		630	35	725	4,465.0	70	230	175	16,000	
10,548	10,568	0.00	0.25	80.0	90	265	25	725	4,160.0		230	175		
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	0-1-BT-G-X-0-BT-DTF	7,718	7,859	141.00	1.75	80.6	1.75		80.6	25	191
8 3/4	SMITH	MDi611	PDC	-----	7,859	10,568	2,709.00	35.50	76.3	14.00	21.50	133.1	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)		
6	DRILL PIPE			RIG	RIG	5	251	0.00	IF					
6	AGITATOR			Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.50		
6	DRILL PIPE			RIG	RIG	5	21	752.42	IF					
6	REAMER			Drill-N-Ream	Drill-N-Ream	6 1/2	1	8.50	IF		6 1/2	1.24		
6	DRILL PIPE			RIG	RIG	5	27	847.50	IF		6 1/2			
6	DRILL COLLAR - NON MAG			CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF					
6	DRILL COLLAR - FLEX NON MAG			CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12		
6	FUSION PULSER SUB			CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28		
6	FUSION SPACER SUB			CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52		
6	MWD - DIRECTIONAL			CATHEDRAL	CATHEDRAL				IF					
6	ECM GAP SUB			CATHEDRAL	CATHEDRAL	6.76	1	6.73	IF		6.76	0.94		
6	XO SUB			CATHEDRAL	CATHEDRAL	7	1	3.59	IF					
6	DRILL COLLAR - FLEX NON MAG			CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.71	4.41		

**SABLE PERMIAN RESOURCES, LLC**  
**Daily Drilling Partner Report**

Report Date	8/18/2019
Report #	14
Projected Days	22.00
Drilling Days	8.91
Current Depth	10,568
Depth Progress	2,478
Planned VS	15,781
Current VS	2,233
A/E #	1550782
Total A/E	3,640,000

## UNIVERSITY LANDS 10 35-23 13HK

**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)
6	DRILL COLLAR - NON MAG	CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF			
6	MUD MOTOR	CATHEDRAL	Claw 250, 2.0 Fixed true slick	7	1	33.47	IF			

## Mud Reports

Time 10:00	Type OIL BASE	Depth (ftKB) 8,338	Density (lb/gal) 12.00	Vis (s/qt) 50	PV Calc (cP) 25.0	YP Calc (lb/100...) 22	Vis 3rpm 8	Vis 6rpm 9	LGS (%) 5.2	LCM (lb/bbl) 289,971	WPS (ppm) 75/25	OW Ratio
Electric Stab (V) 497.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 17,497.75			Cum Mud Field Est (Cost) 120,579.36	
Time 22:00	Type OIL BASE	Depth (ftKB) 9,302	Density (lb/gal) 12.00	Vis (s/qt) 47	PV Calc (cP) 26.0	YP Calc (lb/100...) 26	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 5.2	LCM (lb/bbl) 289,971	WPS (ppm) 75/25	OW Ratio
Electric Stab (V) 498.0		Excess Lime (lb/bbl) 1.0	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 17,497.75			Cum Mud Field Est (Cost) 120,579.36	

## Mud Reports

Date 8/17/2019 10:00	Type OIL BASE	Depth (ftKB) 8,338	Density (lb/gal) 12.00	Percent Oil (%) 60.0	Mud Temp Out... 163.0	MBT (lb/bbl)	pH	Pm Filtrate (m...)	Pm (mL/mL)
Funnel Viscosity (s/qt) 50	PV Calc (cP) 25.0	YP Calc (lb/100ft²) 22	Gel 10 sec (lb/100ft²) 18.000	Gel 10 min (lb/100ft²) 17.000	Vis 3rpm 8	Vis 6rpm 9	Vis 300rpm 47	Vis 600rpm 72	
Corrected Solids (%) 17.5	API Water Loss	LGS (%) 5.2	Excess Lime (lb/bbl) 0.9	LCM (lb/bbl)	Chlorides (mg/L) 55,000	Filter Cake (1/32")	Daily Mud Field Est (Cost) 17,497.75	Cum Mud Field Est (Cost) 120,579.36	
Date 8/17/2019 22:00	Type OIL BASE	Depth (ftKB) 9,302	Density (lb/gal) 12.00	Percent Oil (%) 60.0	Mud Temp Out... 141.0	MBT (lb/bbl)	pH	Pm Filtrate (m...)	Pm (mL/mL)
Funnel Viscosity (s/qt) 47	PV Calc (cP) 26.0	YP Calc (lb/100ft²) 26	Gel 10 sec (lb/100ft²) 11.000	Gel 10 min (lb/100ft²) 22.000	Vis 3rpm 8	Vis 6rpm 10	Vis 300rpm 52	Vis 600rpm 78	
Corrected Solids (%) 17.5	API Water Loss	LGS (%) 5.2	Excess Lime (lb/bbl) 1.0	LCM (lb/bbl)	Chlorides (mg/L) 58,000	Filter Cake (1/32")	Daily Mud Field Est (Cost) 17,497.75	Cum Mud Field Est (Cost) 120,579.36	

## Mud Reports

Date 8/17/2019	Type OIL BASE	Depth (ft/KB) 8,338	Dens (lb/gal) 12.00	Vis (s/qt) 50	PV Calc (cP) 25.0	YP Calc (l...) 22	Vis 3rpm 8	Vis 6rpm 9	LGS (%) 5.2	LCM (lb/bbl) 1	Chlor (mg/L) 55,000	Oil Water Ratio 75/25
Daily Mud Field Est (Cost) 17,497.75		Cum Mud Field Est (Cost) 120,579.36		Electric Stab (V) 497.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0
Date 8/17/2019	Type OIL BASE	Depth (ft/KB) 9,302	Dens (lb/gal) 12.00	Vis (s/qt) 47	PV Calc (cP) 26.0	YP Calc (l...) 26	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 5.2	LCM (lb/bbl) 1	Chlor (mg/L) 58,000	Oil Water Ratio 75/25
Daily Mud Field Est (Cost) 17,497.75		Cum Mud Field Est (Cost) 120,579.36		Electric Stab (V) 498.0		Excess Lime (lb/bbl) 1.0		HTHP Filtrate (mL/30min) 4.0		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	24,113.06

## Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
9,833	89.10	2.20	8,423	1,518.70	1,512.35	-501.44	0.74	0.74
9,927	88.90	1.90	8,424	1,612.57	1,606.27	-498.08	0.38	-0.21
10,021	89.70	2.20	8,425	1,706.45	1,700.20	-494.71	0.91	0.85
10,115	90.80	2.90	8,425	1,800.29	1,794.11	-490.53	1.39	1.17
10,209	89.90	0.40	8,424	1,894.20	1,888.06	-487.82	2.83	-0.96
10,303	90.80	1.70	8,424	1,988.15	1,982.04	-486.10	1.68	0.96
10,397	90.00	359.40	8,423	2,082.12	2,076.02	-485.20	2.59	-0.85
10,491	89.50	357.80	8,424	2,176.11	2,169.99	-487.50	1.78	-0.53

## 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)

Report Date	8/19/2019
Report #	15
Projected Days	22.00
Drilling Days	9.91
Current Depth	13,304
Depth Progress	2,736
Planned VS	15,781
Current VS	4,955
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 WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 75,504		Cum Field Est (Cost) 1,790,616									
Status at Report Time Drilling 8 3/4 lateral at 13,304'.																									
Operations Summary 0 HSE Drilled 8 3/4 lateral from 10,568 ft. to 12,991 ft (2,423 ft @ 121.2 ft/hr). Changed out rotating head element. Drilled 8 3/4 lateral from 12,991 ft. to 13,304 ft (313 ft @ 96.3 ft/hr).  Mud Wt 12.1 ppg, Vis 49 Drilling window: 0 - 10 below, 30' left/right of Plan #1. 8-17-2019 11:28 am Last survey: 13,216 ft MD Inc 90.0° Azm 3.30°, 2.1 ft Below, 4 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 ±13,800'. Trip for dedicated lateral BHA. Drill 8 3/4 latral as per directional plan.																
Start MD (ftKB) 10,568				End MD (ftKB) 13,304			Depth Progress (ft) 2,736			Drilling Time (hr) 23.25			Avg ROP (ft/hr) 117.7		Time Since LTI (days) 1,109		Time Since RI (days) 1,109								
Daily Time Log																									
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity		NPT										
06:00	02:00	20.00		10,568	Drilled/slide 8 3/4" lateral hole from 10,568 ft to 12,991 ft (2,423 ft @ 121.2 ft/hr) Full returns and no flow on connections, mud weight 12.1 ppg  Current drilling window: 0'-10' Below					PROD	LAT	DRILL	DRILL W/ MUD		No										
02:00	02:45	0.75	12,991	12,991	Changed rotating head element.					PROD	LAT	DRILL	BOP/OTHER		Yes										
02:45	06:00	3.25	12,991	13,304	Drilled/slide 8 3/4" lateral hole from 12,991 ft to 13,304 ft (313 ft @ 96.3 ft/hr). Full returns and no flow on connections, mud weight 12.1 ppg  Current drilling window: 0'-10' Below					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										
10,568		10,736		1.00	0.00	168.0		628	35	725	4,626.0	70	240	170	16,000										
10,736		10,751		0.00	0.25	60.0	90	461	28	725	4,458.0		240	170											
10,751		11,041		1.75	0.00	165.7		646	35	725	4,696.0	70	240	170	17,000										
11,041		11,053		0.00	0.25	48.0	-160	249	16	725	4,297.0		240	170											
11,053		11,393		3.00	0.00	113.3		897	34	725	4,986.0	70	245	160	17,000										
11,393		11,403		0.00	0.25	40.0	-160	249	58	725	4,809.0		240	160											
11,403		11,487		0.75	0.00	112.0		503	35	725	4,850.0	70	240	160	17,000										
11,487		11,499		0.00	0.25	48.0	30	485	12	670	4,202.0		240	160											
11,499		11,615		0.75	0.00	154.7		643	33	670	4,463.0	70	245	160	17,000										
11,615		11,623		0.00	0.25	32.0	-160	257	21	670	4,071.0		245	160											
11,623		11,675		0.50	0.00	104.0		639	34	670	4,459.0	70	245	160	17,000										
11,675		12,238		4.00	0.00	140.8		600	35	725	4,836.0	70	245	155	17,000										
12,238		12,250		0.00	0.50	24.0	0	260	30	725	4,600.0		245	155											
12,250		12,332		0.50	0.00	164.0		828	35	725	5,154.0	70	245	155	16,000										
12,332		12,340		0.00	0.50	16.0	30	290	25	725	4,630.0		245	155											
12,340		12,614		2.00	0.00	137.0		500	36	725	4,960.0	70	250	150	17,000										
12,614		12,629		0.00	0.50	30.0	90	210	30	725	4,670.0		250	150											
12,629		12,803		1.25	0.00	139.2		430	35	725	4,985.0	70	250	150	17,000										
12,803		12,811		0.00	0.25	32.0	130	200	25	725	4,583.0		250	150											
12,811		12,897		0.75	0.00	114.7		551	35	725	4,950.0	70	250	150	17,000										
12,897		12,907		0.00	0.25	40.0	180	130	30	725	4,512.0		250	150											
12,907		12,991		0.50	0.00	168.0		540	35	725	4,945.0	70	250	150	17,000										
12,991		13,011		0.00	0.50	40.0	-100	180	35	725	4,520.0		250	150											
13,011		13,092		0.50	0.00	162.0		350	35	725	4,840.0	70	250	150	17,000										
13,092		13,102		0.00	0.50	20.0	-160	180	32	725	4,510.0		250	150											
13,102		13,304		1.75	0.00	115.4		400	35	725	4,860.0	70	250	150	17,000										
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	0-1-BT-G-X-0-BT-DTF		7,718	7,859	141.00	1.75	80.6	1.75		80.6	25	191								
8 3/4	SMITH		MDi611		PDC	-----		7,859	13,304	5,445.00	58.75	92.7	33.00	25.75	135.1	58	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)									
6	DRILL PIPE					RIG		RIG		5	251	0.00	IF												
6	AGITATOR					Impulse		Impulse 1.375" ball activated		6.61	1	17.40	IF		6.61	1.50									
6	DRILL PIPE					RIG		RIG		5	21	752.42	IF												
6	REAMER					Drill-N-Ream		Drill-N-Ream		6 1/2	1	8.50	IF		6 1/2	1.24									
6	DRILL PIPE					RIG		RIG		5	27	847.50	IF		6 1/2										
6	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.71	1	30.26	IF												
6	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.9	1	30.66	IF		6.9	5.12									
6	FUSION PULSER SUB					CATHEDRAL		CATHEDRAL		6.74	1	7.10	IF		6.74	1.28									
6	FUSION SPACER SUB					CATHEDRAL		CATHEDRAL		7	1	5.52	IF		7	1.52									
6	MWD - DIRECTIONAL					CATHEDRAL		CATHEDRAL					IF												
6	ECM GAP SUB					CATHEDRAL		CATHEDRAL		6.76	1	6.73	IF		6.76	0.94									
6	XO SUB					CATHEDRAL		CATHEDRAL		7	1	3.59	IF												
6	DRILL COLLAR - FLEX NON MAG					CATHEDRAL		CATHEDRAL		6.65	1	14.44	IF		6.71	4.41									
6	DRILL COLLAR - NON MAG					CATHEDRAL		CATHEDRAL		6.936	1	30.72	IF												
6	MUD MOTOR					CATHEDRAL		Claw 250, 2.0 Fixed true slick		7	1	33.47	IF												
Mud Reports																									
Time 10:00		Type OIL BASE		Depth (ftKB) 11,133		Density (lb/gal) 12.00		Vis (s/qt) 50		PV Calc (cP) 28.0		YP Calc (lb/100... 20		Vis 3rpm 8		Vis 6rpm 9		LGS (%) 4.3		LCM (lb/bbl) 137,802.08		WPS (ppm) 272,350		OW Ratio 75.2/24.8	
Electric Stab (V) 452.0			Excess Lime (lb/bbl) 0.9			HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 17,222.72			Cum Mud Field Est (Cost) 137,802.08							
Time 22:00		Type OIL BASE		Depth (ftKB) 12,525		Density (lb/gal) 12.10		Vis (s/qt) 48		PV Calc (cP) 30.0		YP Calc (lb/100... 27		Vis 3rpm 9		Vis 6rpm 11		LGS (%) 1.2		LCM (lb/bbl) 137,802.08		WPS (ppm) 284,372		OW Ratio 75.5/24.5	
Electric Stab (V) 565.0			Excess Lime (lb/bbl) 0.9			HTHP Filtrate (mL/30min) 4.0			HTHP Filter Cake (1/32") 2			T HTHP (°F) 250.0			Daily Mud Field Est (Cost) 17,222.72			Cum Mud Field Est (Cost) 137,802.08							
Mud Reports																									
Date 8/18/2019 10:00			Type OIL BASE					Depth (ftKB) 11,133		Density (lb/gal) 12.00		Percent Oil (%) 60.5		Mud Temp Out... 189.0		MBT (lb/bbl)		pH		Pm Filtrate (m... 76		Pm (mL/mL) 76			
Funnel Viscosity (s/qt) 50		PV Calc (cP) 28.0			YP Calc (lb/100ft²) 20			Gel 10 sec (lb/100ft²) 25.000			Gel 10 min (lb/100ft²) 24.000			Vis 3rpm 8			Vis 6rpm 9			Vis 300rpm 48			Vis 600rpm 76		
Corrected Solids (%) 17.2		API Water Loss			LGS (%) 4.3		Excess Lime (lb/bbl) 0.9		LCM (lb/bbl)			Chlorides (mg/L) 47,000			Filter Cake (1/32")		Daily Mud Field Est (Cost) 17,222.72			Cum Mud Field Est (Cost) 137,802.08					

SABLE PERMIAN RESOURCES, LLC  
Daily Drilling Partner Report

UNIVERSITY LANDS 10 35-23 13HK

WELL NO. 342  
ENSIGN 786

Report Date 8/19/2019  
Report # 15  
Projected Days 22.00  
Drilling Days 9.91  
Current Depth 13,304  
Depth Progress 2,736  
Planned VS 15,781  
Current VS 4,955  
AFE # 1550782  
Total AFE 3,640,000

Mud Reports																	
Date 8/18/2019 22:00		Type OIL BASE			Depth (ftKB) 12,525	Density (lb/gal) 12.10	Percent Oil (%) 61.5	Mud Temp Out... 143.0	MBT (lb/bbl)	pH	Pm Filtrate (m...)	Pm (mL/mL)					
Funnel Viscosity (s/qt) 48	PV Calc (cP) 30.0		YP Calc (lb/100ft²) 27		Gel 10 sec (lb/100ft²) 16.000	Gel 10 min (lb/100ft²) 27.000		Vis 3rpm 9		Vis 6rpm 11		Vis 300rpm 57	Vis 600rpm 87				
Corrected Solids (%) 16.0	API Water Loss		LGS (%) 1.2	Excess Lime (lb/bbl) 0.9	LCM (lb/bbl)		Chlorides (mg/L) 61,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 17,222.72		Cum Mud Field Est (Cost) 137,802.08				
Mud Reports																	
Date 8/18/2019		Type OIL BASE			Depth (ftKB) 11,133	Dens (lb/gal) 12.00	Vis (s/qt) 50	PV Calc (cP) 28.0	YP Calc (l... 20	Vis 3rpm 8	Vis 6rpm 9	LGS (%) 4.3	LCM (lb/bbl)	Chlor (mg/L) 47,000	Oil Water Ratio 75.2/24.8		
Daily Mud Field Est (Cost) 17,222.72			Cum Mud Field Est (Cost) 137,802.08			Electric Stab (V) 452.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0			
Date 8/18/2019		Type OIL BASE			Depth (ftKB) 12,525	Dens (lb/gal) 12.10	Vis (s/qt) 48	PV Calc (cP) 30.0	YP Calc (l... 27	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 1.2	LCM (lb/bbl)	Chlor (mg/L) 61,000	Oil Water Ratio 75.5/24.5		
Daily Mud Field Est (Cost) 17,222.72			Cum Mud Field Est (Cost) 137,802.08			Electric Stab (V) 565.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 4.0		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		
Survey Data																	
MD (ftKB)		Incl (°)		Azm (°)		TVD (ftKB)		VS (ft)		NS (ft)		EW (ft)		DLS (°/100ft)		BUR (°/100ft)	
12,464		90.80		0.70		8,424		4,147.63		4,142.15		-450.87		0.88		0.21	
12,557		91.00		359.60		8,422		4,240.61		4,235.14		-450.63		1.20		0.22	
12,652		90.50		1.20		8,421		4,335.58		4,330.13		-449.96		1.76		-0.53	
12,746		91.20		1.80		8,419		4,429.49		4,424.08		-447.50		0.98		0.74	
12,840		90.80		2.80		8,418		4,523.35		4,517.99		-443.73		1.15		-0.43	
12,934		90.20		5.10		8,417		4,617.02		4,611.76		-437.26		2.53		-0.64	
13,028		90.00		2.90		8,417		4,710.69		4,705.52		-430.70		2.35		-0.21	
13,122		89.20		2.10		8,418		4,804.54		4,799.43		-426.60		1.20		-0.85	
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)				

## UNIVERSITY LANDS 10 35-23 13HK

Report Date	8/20/2019
Report #	16
Projected Days	22.00
Drilling Days	10.91
Current Depth	14,403.03
Depth Progress	1,099.99
Planned VS	15,781
Current VS	6,085
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		RR Date		Target Formation WFMPCC2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1				Daily Field Est (Cost) 92,465		Cum Field Est (Cost) 1,883,080				
Status at Report Time Changing out BHA																				
Operations Summary 0 HSE Drilled 8 3/4 lateral from 13,304 ft. to 14,214 ft (910 ft @ 86.7 ft/hr). Changed out rotating head element. Drilled 8 3/4 lateral from 14,214 ft. to 14,403 ft (189 ft @ 94.5 ft/hr). Performed clean up cycle for trip. Tripped out of hole to BHA. Change out BHA.									Planned Operations Change out BHA. Trip in hole with lateral BHA. Drill 8 3/4 lateral as per directional plan.											
Mud Wt 12.5 ppg, Vis 51 Drilling window: 0 - 10 below, 30' left/right of Plan #1. 8-17-2019 11:28 am Last survey: 14,346 ft MD Inc 89.05° Azm 358.24°, 4.3 ft Below, 17.4 ft Left Big rig spud date: 8-9-19 8:15 hrs. Next well: University Lands 10 35-23 07HA (Walk)																				
Start MD (ftKB) 13,304				End MD (ftKB) 14,403				Depth Progress (ft) 1,099			Drilling Time (hr) 12.25			Avg ROP (ft/hr) 89.7			Time Since LTI (days) 1,110		Time Since RI (days) 1,110	
Daily Time Log																				
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity			NPT				
06:00	08:00	2.00	12,991	13,304	Drilled/slide 8 3/4" lateral hole from 13,304 ft to 13,462 ft (158 ft @ 79.0 ft/hr). Full returns and no flow on connections, mud weight 12.1 ppg					PROD	LAT	DRILL	DRILL W/ MUD			No				
08:00	08:15	0.25	13,304	13,304	Current drilling window: 0'-10' Below Drop 1.375" ball to activated agitator, 300 gpm starting stand pipe pressure 1,008 psi ending 1,108 psi					PROD	LAT	DRILL	COND MUD & CIRC			No				
08:15	16:30	8.25	13,304	14,214	Drilled/slide 8 3/4" lateral hole from 13,462 ft to 14,214 ft (752 ft @ 91.2 ft/hr). Full returns and no flow on connections, mud weight 12.2 ppg					PROD	LAT	DRILL	DRILL W/ MUD			No				
16:30	17:00	0.50	14,214	14,214	Current drilling window: 0'-10' Below Changed rotating head element.					PROD	LAT	DRILL	BOP/OTHER			Yes				
17:00	19:00	2.00	14,214	14,403	Drilled/slide 8 3/4" lateral hole from 14,214 ft to 14,403 ft (189 ft @ 94.5 ft/hr). Full returns and no flow on connections, mud weight 12.3 ppg					PROD	LAT	DRILL	DRILL W/ MUD			No				
19:00	22:00	3.00	14,403	14,403	Current drilling window: 0'-10' Below Note: Got more pieces of stator rubber from mud motor over shakers. Decision was made to trip for lateral BHA. Pumped 40 bbl high vis weighted sweep, and performed clean up cycle for trip. Beginning torque: 12K Ending torque: 8K Beginning PU wt: 255K Ending PU wt: 240K Beginning SO wt: 125K Ending SO wt: 140K Beginning SPP: 5000 psi Ending SPP: 4830 psi Shaker coverage with sweep: 80% Shaker coverage after sweep: 20%					PROD	LAT	DRILL	CLEANUP CYCLE			No				
22:00	04:45	6.75	14,403	14,403	Raised mw to 12.5 while performing clean up cycle. Flow checked well (well static). Pumped slug. Tripped out of hole for lateral BHA from 14,403' to BHA. Removed rotating head, and laid down agitator and reamer. Filled hole continuously from trip tanks. Hole took proper fill.					PROD	LAT	DRILL	TRIPS			No				
04:45	06:00	1.25	14,403	14,403	Change out BHA.					PROD	LAT	DRILL	P/U & L/D BHA			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							
13,304	13,367	0.50	0.00	126.0		407	35	725	4,765.0	70	250	120	17,000							
13,367	13,382	0.00	0.50	30.0	-130	201	10	725	4,560.0		250	120								
13,382	13,462	1.00	0.00	80.0		488	35	725	4,846.0	70	250	120	17,000							
13,462	13,477	0.00	0.50	30.0	-75	198	38	725	5,024.0		250	120								
13,477	13,760	2.50	0.00	113.2		399	35	725	5,352.0	70	250	120	17,000							
13,760	13,768	0.00	0.25	32.0	-160	284	35	725	5,237.0		250	120								
13,768	13,860	1.00	0.00	92.0		459	35	725	5,307.0	70	255	115	17,000							
13,860	13,872	0.00	0.50	24.0	45	215	30	725	5,063.0		255	115								
13,872	14,140	2.50	0.00	107.2		459	36	725	5,419.0	70	255	115	19,000							
14,140	14,155	0.00	0.50	30.0	130	121	40	725	5,219.0		255	115								
14,155	14,214	0.50	0.00	118.0		459	36	725	5,523.0	70	250	125	20,000							
14,214	14,403	2.00	0.00	94.5		459	36	725	5,475.0	70	250	125	20,000							
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	0-1-BT-G-X-0-BT-DTF	7,718	7,859	141.00	1.75	80.6	1.75		80.6	25	191						
8 3/4	SMITH	MDi611	PDC	-----	7,859	14,403	6,544.00	71.00	92.2	43.00	28.00	127.7	58	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)							
6	DRILL PIPE				RIG	RIG	5	251	0.00	IF										
6	AGITATOR				Impulse	Impulse 1.375" ball activated	6.61	1	17.40	IF		6.61	1.50							
6	DRILL PIPE				RIG	RIG	5	21	752.42	IF										
6	REAMER				Drill-N-Ream	Drill-N-Ream	6 1/2	1	8.50	IF		6 1/2	1.24							
6	DRILL PIPE				RIG	RIG	5	27	847.50	IF		6 1/2								
6	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.71	1	30.26	IF										
6	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.9	1	30.66	IF		6.9	5.12							
6	FUSION PULSER SUB				CATHEDRAL	CATHEDRAL	6.74	1	7.10	IF		6.74	1.28							
6	FUSION SPACER SUB				CATHEDRAL	CATHEDRAL	7	1	5.52	IF		7	1.52							
6	MWD - DIRECTIONAL				CATHEDRAL	CATHEDRAL				IF										
6	ECM GAP SUB				CATHEDRAL	CATHEDRAL	6.76	1	6.73	IF		6.76	0.94							
6	XO SUB				CATHEDRAL	CATHEDRAL	7	1	3.59	IF										
6	DRILL COLLAR - FLEX NON MAG				CATHEDRAL	CATHEDRAL	6.65	1	14.44	IF		6.71	4.41							
6	DRILL COLLAR - NON MAG				CATHEDRAL	CATHEDRAL	6.936	1	30.72	IF										
6	MUD MOTOR				CATHEDRAL	Claw 250, 2.0 Fixed true slick	7	1	33.47	IF										
Mud Reports																				
Time 10:00	Type OIL BASE	Depth (ftKB) 13,652	Density (lb/gal) 12.20	Vis (s/qt) 50	PV Calc (cP) 30.0	YP Calc (lb/100.. 25	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.7	LCM (lb/bbl)	WPS (ppm) 293,147	OW Ratio 76.1/23.9								
Electric Stab (V) 590.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 13,543.25			Cum Mud Field Est (Cost) 151,345.33								
Time 22:00	Type OIL BASE	Depth (ftKB) 14,400	Density (lb/gal) 12.50	Vis (s/qt) 50	PV Calc (cP) 31.0	YP Calc (lb/100.. 24	Vis 3rpm 9	Vis 6rpm 11	LGS (%) 5.6	LCM (lb/bbl)	WPS (ppm) 296,849	OW Ratio 76.9/23.1								
Electric Stab (V) 590.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 13,543.25			Cum Mud Field Est (Cost) 151,345.33								





**SABLE PERMIAN RESOURCES, LLC**  
**Daily Drilling Partner Report**

Report Date	8/21/2019
Report #	17
Projected Days	22.00
Drilling Days	11.91
Current Depth	14,549
Depth Progress	146
Planned VS	15,781
Current VS	6,201
A/E #	1550782
Total A/E	3,640,000

## UNIVERSITY LANDS 10 35-23 13HK

**WELL NO. 342**  
**ENSIGN 786**

42383406890000			Surface 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) 91,831		Cum Field Est (Cost) 1,974,912		
Status at Report Time Drilling 8 3/4 lateral at 14,549																		
Operations Summary 0 HSE Laid out curve BHA and picked up 8 3/4" lateral BHA, T.i.h. to 12,248 ft. filled pipe, hole packing off and stalled out rotary, worked pipe, racked one back, re-established circulation, staged up to 725 gpm and 80 rpm. 2-3" shale on bottoms up, washed and reamed f/ 12,354 ft to 13,107, hole cleaned up, tripped in hole f/ 13,107 ft to 13,577 ft, took weight and pulled tight, washed and reamed f/ 13,577 ft to 14,403 ft 725 gpm at 80 rpm, hole unloading 1-3" shale, drilled /slide f/ 14,403 ft to 14,549 ft  Mud Wt 12.6 ppg, Vis 54 Drilling window: 0 - 10 below, 30' left/right of Plan #1. 8-17-2019 11:28 am Last survey: 14,455 ft MD Inc 88.33° Azm 2.05°, 5.5 ft Below, 40.0 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) 14,403				End MD (ftKB) 14,549				Depth Progress (ft) 146			Drilling Time (hr) 2.25			Avg ROP (ft/hr) 64.9		Time Since LTI (days) 1,111		Time Since RI (days) 1,111
Daily Time Log																		
Start Time	End Time	Dur (hr)	Start Depth (ftKB)	End Depth (ftKB)	Comments					Hole Section	Interval	Category	Activity		NPT			
06:00	07:15	1.25	14,403	14,403	Reprogramed MWD, drained motor, layed out mud motor and bit.					PROD	LAT	DRILL	P/U & L/D BHA		No			
07:15	08:30	1.25	14,403	14,403	Bit grade: 1-1-CT-G-X-0-PN-BHA Picked up BHA #7; Ulterra SPL616 8 3/4", slick 7.0" Claw 250, fixed 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 3199.02, Upper agitator 8,029.14 ft behind the bit)					PROD	LAT	DRILL	P/U & L/D BHA		No			
08:30	12:15	3.75	14,403	14,403	Tripped in hole from 210 ft to 7,628 ft. Displacements as calculated to trip tank.					PROD	LAT	DRILL	TRIPS		No			
12:15	12:45	0.50	14,403	14,403	Installed rotating head.					PROD	LAT	DRILL	BOP/OTHER		No			
12:45	15:15	2.50	14,403	14,403	Tripped in the hole from 7,628 ft to 12,428 ft. Displacements as calculated to trip tank.					PROD	LAT	DRILL	TRIPS		No			
15:15	21:00	5.75	14,403	14,403	Filled drill pipe and circulated a lateral volume at 12,428 ft., pumping at 300 gpm, began staging pumps up to 600 gpm, hole started packing off and pipe stalling out, rack back one stand in derrick and re-established circulation, staged pump up from 350 gpm ( got some fine cuttings on bottoms up ) to 725 gpm ( bottoms up, large shale 2-3 inches )					PROD	LAT	DRILL	REAMING		No			
21:00	23:45	2.75	14,403	14,403	Washed and reamed w/ 725 gpm 80 rpm f/ 12,354 ft to 13,107 ft, sent 15 bbls sweep 1.5 ppg over MW to clean hole. 1 to 3" shale on shakers at bottoms up. MW 12.6 ppg					PROD	LAT	DRILL	REAMING		No			
23:45	00:15	0.50	14,403	14,403	Triped in hole f/ 13,107 ft to 13,577 ft, took weight, worked back up pulled tight. started packing off when pumping, staged pumps up to 725 gpm and 80 rpm.					PROD	LAT	DRILL	TRIPS		No			
00:15	03:45	3.50	14,403	14,403	Washed and reamed w/ 725 gpm, 80 rpm f/ 13,577 ft to 14,403 ft ( hole unloading 1-3" shale					PROD	LAT	DRILL	REAMING		No			
03:45	06:00	2.25	14,403	14,549	Drilled/slide 8 3/4" lateral hole from 14,403 ft to 14,549 ft (146 ft @ 64.9 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg  Current drilling window: 0'-10' Below Surveys Magyar 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					
14,403	14,424	0.00	0.50	42.0	90	330	37	720	5,830.0		250	125						
14,424	14,439	0.25	0.00	60.0		605	30	685	5,645.0	80	250	125	17,500					
14,439	14,451	0.00	0.25	48.0	90	290	40	720	5,790.0		250	125						
14,451	14,533	0.75	0.00	109.3		710	35	685	5,780.0	80	255	115	18,000					
14,533	14,545	0.00	0.25	48.0	90	290	40	720	5,790.0		255	115						
14,545	14,549	0.25	0.00	16.0		710	35	685	5,795.0	80	255	115	18,000					
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	14,549	146.00	2.25	64.9	1.25	1.00	80.8	40	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	210	6,519.86	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				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) 14,400	Density (lb/gal) 12.50	Vis (s/qt) 51	PV Calc (cP) 30.0	YP Calc (lb/100... 27	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.5	LCM (lb/bbl)	WPS (ppm) 289,971	OW Ratio 77.1/22.9						
Electric Stab (V) 560.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 7,707.99			Cum Mud Field Est (Cost) 159,053.32						
Time 22:00	Type OIL BASE	Depth (ftKB) 14,400	Density (lb/gal) 12.60	Vis (s/qt) 57	PV Calc (cP) 30.0	YP Calc (lb/100... 20	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 3.9	LCM (lb/bbl)	WPS (ppm) 312,398	OW Ratio 77.1/22.9						
Electric Stab (V) 586.0		Excess Lime (lb/bbl) 0.9	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0		Daily Mud Field Est (Cost) 7,707.99			Cum Mud Field Est (Cost) 159,053.32						
Mud Reports																		
Date 8/20/2019 10:00		Type OIL BASE	Depth (ftKB) 14,400	Density (lb/gal) 12.50	Percent Oil (%) 60.5	Mud Temp Out...	MBT (lb/bbl)		pH	Pm Filtrate (m...		Pm (mL/mL)						
Funnel Viscosity (s/qt) 51		PV Calc (cP) 30.0	YP Calc (lb/100ft²) 27	Gel 10 sec (lb/100ft²) 27.000	Gel 10 min (lb/100ft²) 25.000	Vis 3rpm 8			Vis 6rpm 10		Vis 300rpm 57		Vis 600rpm 87					
Corrected Solids (%) 19.3		API Water Loss	LGS (%) 4.5	Excess Lime (lb/bbl) 0.9	LCM (lb/bbl)		Chlorides (mg/L) 58,000		Filter Cake (1/32")		Daily Mud Field Est (Cost) 7,707.99			Cum Mud Field Est (Cost) 159,053.32				

Report Date	8/21/2019
Report #	17
Projected Days	22.00
Drilling Days	11.91
Current Depth	14,549
Depth Progress	146
Planned VS	15,781
Current VS	6,201
A/E #	1550782
Total A/E	3,640,000

**WELL NO. 342**  
**ENSIGN 786**

Mud Reports													
Date 8/20/2019 22:00		Type OIL BASE			Depth (ftKB) 14,400	Density (lb/gal) 12.60	Percent Oil (%) 60.5	Mud Temp Out...	MBT (lb/bbl)	pH	Pm Filtrate (m...	Pm (mL/mL)	
Funnel Viscosity (s/qt) 57		PV Calc (cP) 30.0	YP Calc (lb/100ft²) 20		Gel 10 sec (lb/100ft²) 31.000	Gel 10 min (lb/100ft²) 30.100		Vis 3rpm 8		Vis 6rpm 10		Vis 300rpm 500	Vis 600rpm 80
Corrected Solids (%) 19.1	API Water Loss	LGS (%) 3.9	Excess Lime (lb/bbl) 0.9	LCM (lb/bbl)		Chlorides (mg/L) 52,000		Filter Cake (1/32")	Daily Mud Field Est (Cost) 7,707.99		Cum Mud Field Est (Cost) 159,053.32		

## Mud Reports

Date 8/20/2019	Type OIL BASE	Depth (ftKB) 14,400	Dens (lb/gal) 12.50	Vis (s/qt) 51	PV Calc (cP) 30.0	YP Calc (l...) 27	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.5	LCM (lb/bbl)	Chlor (mg/L) 58,000	Oil Water Ratio 77.1/22.9
Daily Mud Field Est (Cost) 7,707.99		Cum Mud Field Est (Cost) 159,053.32		Electric Stab (V) 560.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		HTHP Temperature (°F) 250.0
Date 8/20/2019	Type OIL BASE	Depth (ftKB) 14,400	Dens (lb/gal) 12.60	Vis (s/qt) 57	PV Calc (cP) 30.0	YP Calc (l...) 20	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 3.9	LCM (lb/bbl)	Chlor (mg/L) 52,000	Oil Water Ratio 77.1/22.9
Daily Mud Field Est (Cost) 7,707.99		Cum Mud Field Est (Cost) 159,053.32		Electric Stab (V) 586.0		Excess Lime (lb/bbl) 0.9		HTHP Filtrate (mL/30min) 4.0		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

## Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	BUR (°/100ft)
13,781	88.10	358.60	8,421	5,462.80	5,457.94	-411.55	3.69	-3.09
13,875	90.00	359.50	8,423	5,556.78	5,551.90	-413.10	2.24	2.02
13,969	91.10	359.70	8,422	5,650.77	5,645.90	-413.76	1.19	1.17
14,063	92.00	359.30	8,419	5,744.73	5,739.86	-414.58	1.05	0.96
14,157	90.96	0.84	8,417	5,838.69	5,833.82	-414.46	1.98	-1.11
14,251	89.21	359.44	8,417	5,932.67	5,927.81	-414.24	2.38	-1.86
14,346	89.05	358.24	8,418	6,027.66	6,022.78	-416.16	1.27	-0.17
14,455	88.33	2.05	8,421	6,136.59	6,131.73	-415.88	3.56	-0.66

## 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)

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/22/2019
Report #	18
Projected Days	22.00
Drilling Days	12.91
Current Depth	17,012
Depth Progress	2,463
Planned VS	15,781
Current VS	8,626
AFE #	1550782
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		RR Date		Target Formation WFMP2_346_SH		Proposed TD (ftKB) 24,076		Target Line Plan #1			Daily Field Est (Cost) 88,047		Cum Field Est (Cost) 2,068,199	
Status at Report Time Drilling 8 3/4 lateral at 17,012																
Operations Summary 0 HSE Drilled 8 3/4 lateral from 14,549 ft. to 17,012 ft.( 2,463 ft @ 102.6 fph )  Mud Wt 12.6 ppg, Vis 53 New 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 Old drilling window: 5 - 15 below, 30' left/right of Plan #1. 8-21-2019 07:20 Old drilling window: 0 - 10 below, 30' left/right of Plan #1. 8-17-2019 11:28 Last survey: 16,887 ft MD Inc 91.27° Azm 1.03°, 12.8 ft Below, 21.0 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) 14,549				End MD (ftKB) 17,012		Depth Progress (ft) 2,463		Drilling Time (hr) 24.00		Avg ROP (ft/hr) 102.6		Time Since LTI (days) 1,112		Time Since RI (days) 1,112		
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	14,549	17,012	Drilled/slide 8 3/4" lateral hole from 14,549 ft to 17,012 ft (2,463 ft @ 102.6 ft/hr). Full returns and no flow on connections, mud weight 12.6 ppg Activated (1.5") upper agitator at 15,270 ft, 1,360 psi before, 1,460 psi after @ 300 GPM  New 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 Old drilling window: 5 - 15 below, 30' left/right of Plan #1. 8-21-2019 07:20 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			
14,549	14,722	1.00	0.00	173.0		670	32	685	5,723.0	80	260	95	19,000			
14,722	14,737	0.00	0.25	60.0	-90	260	35	685	5,390.0		260	95				
14,737	14,810	0.75	0.00	97.3		590	34	685	5,700.0	80	260	95	18,000			
14,810	14,835	0.00	0.50	50.0	145	150	35	685	5,350.0		260	95				
14,835	14,988	1.25	0.00	122.4		730	34	670	5,800.0	80	265	90	18,000			
14,988	15,018	0.00	0.75	40.0	-110	210	35	670	5,310.0		265	90				
15,018	15,176	1.00	0.00	158.0		780	35	670	5,820.0	80	265	80	19,000			
15,176	15,194	0.00	0.75	24.0	-30	255	35	670	5,310.0		265	80				
15,194	15,270	0.75	0.00	101.3		564	35	670	5,662.0	80	265	80	19,000			
15,270	15,285	0.00	0.50	30.0	0	270	30	670	5,709.0		265	80				
15,285	15,647	2.75	0.00	131.6		610	30	670	6,000.0	80	265	80	18,000			
15,647	15,669	0.00	0.50	44.0	90	300	35	670	5,672.0		265	80				
15,669	15,741	0.75	0.00	96.0		480	35	670	5,672.0	80	265	70	18,000			
15,741	15,771	0.00	0.75	40.0	90	340	35	640	5,770.0		265	70				
15,771	16,024	2.00	0.00	126.5		595	33	640	6,005.0	80	260	75	18,000			
16,024	16,211	1.25	0.00	149.6		590	35	615	5,815.0	80	270	0	18,500			
16,211	16,241	0.00	0.50	60.0	-90	200	34	640	5,750.0		270	0				
16,241	16,677	3.50	0.00	124.6		585	34	615	5,995.0	80	270	0	19,000			
16,677	16,707	0.00	1.00	30.0	-120	245	30	640	5,970.0		270	0				
16,707	17,012	3.50	0.00	87.1		540	35	600	6,010.0	80	275	0	19,500			
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	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	17,012	2,609.00	26.25	99.4	19.75	6.50	118.9	40	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	285	8,982.86	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) 14,928	Density (lb/gal) 12.60	Vis (s/qt) 50	PV Calc (cP) 29.0	YP Calc (lb/100... 23	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.9	LCM (lb/bbl)	WPS (ppm) 296,849	OW Ratio 76.9/23.1				
Electric Stab (V) 599.0		Excess Lime (lb/bbl) 0.7	HTHP Filtrate (mL/30min) 4.0		HTHP Filter Cake (1/32") 2		T HTHP (°F) 250.0	Daily Mud Field Est (Cost) 10,898.93			Cum Mud Field Est (Cost) 165,192.90					
Time 22:00	Type OIL BASE	Depth (ftKB) 16,209	Density (lb/gal) 12.60	Vis (s/qt) 52	PV Calc (cP) 30.0	YP Calc (lb/100... 20	Vis 3rpm 8	Vis 6rpm 10	LGS (%) 4.9	LCM (lb/bbl)	WPS (ppm) 298,932	OW Ratio 77.6/22.4				
Electric Stab (V) 590.0		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) 10,898.93			Cum Mud Field Est (Cost) 165,192.90					
Mud Reports																
Date 8/21/2019 10:00		Type OIL BASE			Depth (ftKB) 14,928	Density (lb/gal) 12.60	Percent Oil (%) 60.0	Mud Temp Out... 203.0		MBT (lb/bbl)		pH	Pm Filtrate (m... Pm (mL/mL)			
Funnel Viscosity (s/qt) 50		PV Calc (cP) 29.0	YP Calc (lb/100ft²) 23		Gel 10 sec (lb/100ft²) 31.000	Gel 10 min (lb/100ft²) 30.000	Vis 3rpm 8		Vis 6rpm 10		Vis 300rpm 52		Vis 600rpm 81			
Corrected Solids (%) 19.7		API Water Loss 4.9		LGS (%) 4.9	Excess Lime (lb/bbl) 0.7		LCM (lb/bbl)		Chlorides (mg/L) 60,000	Filter Cake (1/32")		Daily Mud Field Est (Cost) 10,898.93		Cum Mud Field Est (Cost) 165,192.90		
Date 8/21/2019 22:00		Type OIL BASE			Depth (ftKB) 16,209	Density (lb/gal) 12.60	Percent Oil (%) 60.5	Mud Temp Out... 212.0		MBT (lb/bbl)		pH	Pm Filtrate (m... Pm (mL/mL)			
Funnel Viscosity (s/qt) 52		PV Calc (cP) 30.0	YP Calc (lb/100ft²) 20		Gel 10 sec (lb/100ft²) 32.000	Gel 10 min (lb/100ft²) 30.000	Vis 3rpm 8		Vis 6rpm 10		Vis 300rpm 50		Vis 600rpm 80			
Corrected Solids (%) 19.8		API Water Loss 4.9		LGS (%) 4.9	Excess Lime (lb/bbl) 0.8		LCM (lb/bbl)		Chlorides (mg/L) 59,000	Filter Cake (1/32")		Daily Mud Field Est (Cost) 10,898.93		Cum Mud Field Est (Cost) 165,192.90		

**WELL NO. 342**  
**ENSIGN 786**

Report Date	8/22/2019
Report #	18
Projected Days	22.00
Drilling Days	12.91
Current Depth	17,012
Depth Progress	2,463
Planned VS	15,781
Current VS	8,626
A/E #	1550782
Total A/E	3,640,000