

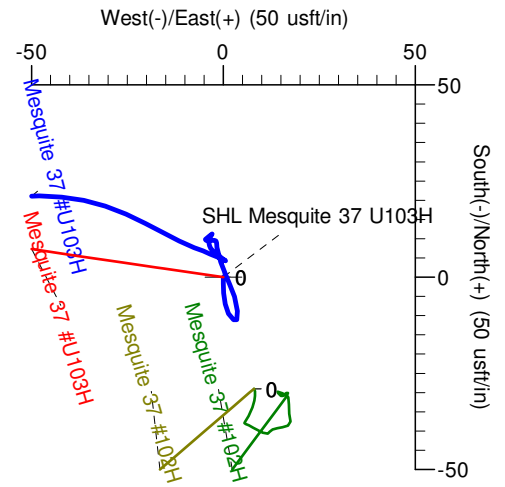


# ABRAXAS PETROLEUM CORPORATION

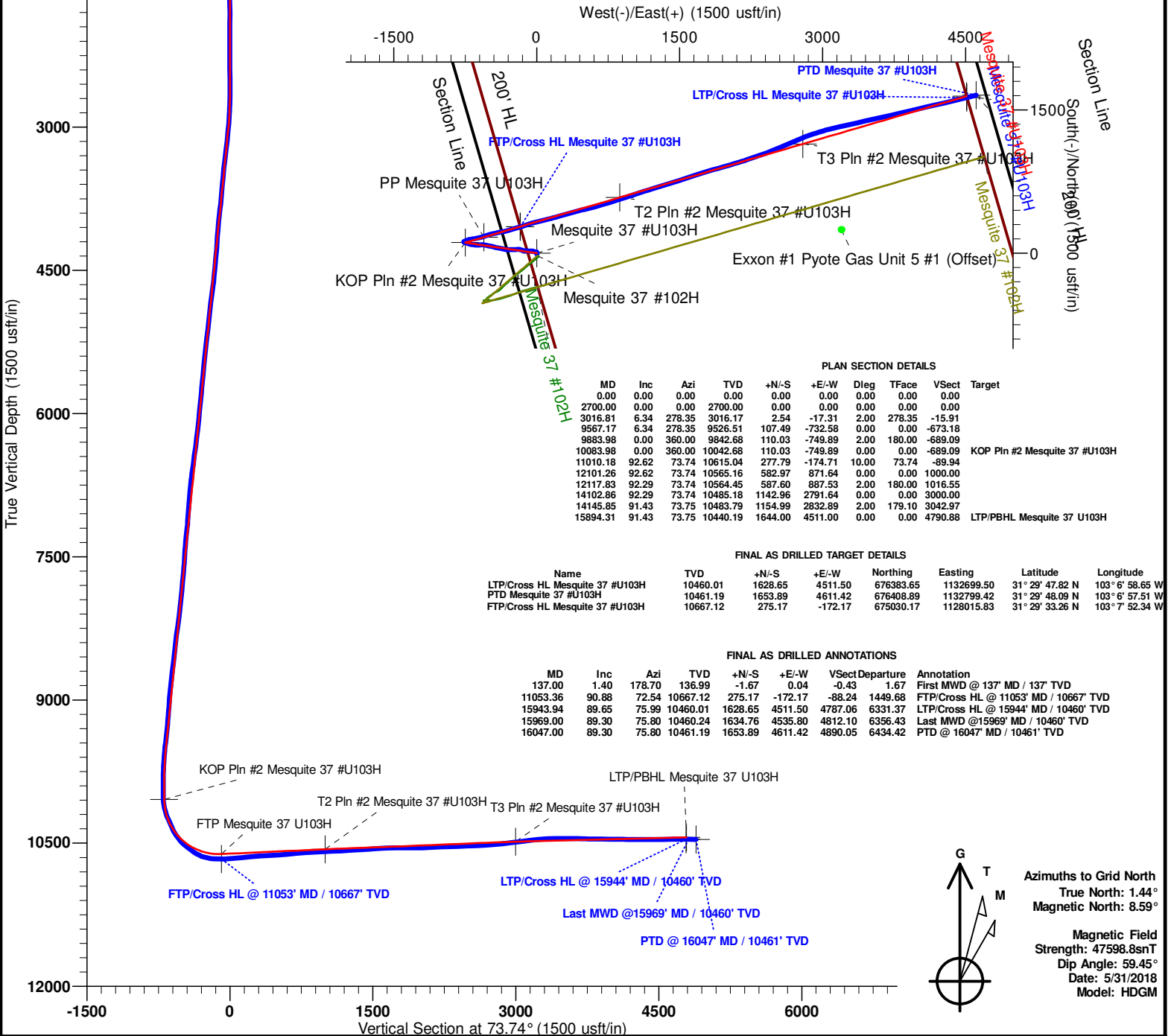
Project: Ward County, TX  
Site: Mesquite 37 Pad  
Well: Mesquite 37 #U103H  
Wellbore: Wellbore #1  
Design: Plan #3

## FORMATION TOP DETAILS

MDPath	TVDPath	Formation
4937.38	4925.00	B/Anhydrite-T/Delaware
4952.47	4940.00	Bell Canyon
5742.29	5725.00	Cherry Canyon
6029.05	6010.00	Manzanita
6924.52	6900.00	Brushy Canyon
7960.85	7930.00	1st Bone Spring
8987.12	8950.00	2nd Bone Spring
10081.30	10040.00	3rd Bone Spring Lime
10718.00	10555.00	3rd Bone Spring Upper
10956.97	10615.00	3rd Bone Spring Up Target



SHL-Mesquite 37 U103H  
First MWD @ 137' MD / 137' TVD



## PLAN SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	
3016.81	6.34	278.35	3016.17	2.54	-17.31	2.00	278.35	-15.91	
9567.17	6.34	278.35	9526.51	107.49	-732.58	0.00	0.00	-673.18	
9883.98	0.00	360.00	9842.68	110.03	-749.89	2.00	180.00	-689.09	
10083.98	0.00	360.00	10042.68	110.03	-749.89	0.00	0.00	-689.09	
11010.18	92.62	73.74	10615.04	277.79	-174.71	10.00	73.74	-89.94	
12101.26	92.62	73.74	10565.16	582.97	871.64	0.00	0.00	1000.00	
12117.83	92.29	73.74	10564.45	587.60	887.53	2.00	180.00	1016.55	
14102.86	92.29	73.74	10485.18	1142.96	2791.64	0.00	0.00	3000.00	
14145.85	91.43	73.75	10483.79	1154.99	2832.89	2.00	179.10	3042.97	
15894.31	91.43	73.75	10440.19	1644.00	4511.00	0.00	0.00	4790.88	LTP/PBHL Mesquite 37 U103H

## FINAL AS DRILLED TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP/Cross HL Mesquite 37 #U103H	10460.01	1628.65	4511.50	676383.65	1132699.50	31° 29' 47.82 N	103° 6' 58.65 W
PTD Mesquite 37 #U103H	10461.19	1653.89	4611.42	676408.89	1132799.42	31° 29' 48.09 N	103° 6' 57.51 W
FTP/Cross HL Mesquite 37 #U103H	10667.12	275.17	-172.17	675030.17	1128015.83	31° 29' 33.26 N	103° 7' 52.34 W

## FINAL AS DRILLED ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VsectDeparture	Annotation
137.00	1.40	178.70	136.99	-1.67	0.04	-0.43	1.67
11053.36	90.88	72.54	10667.12	275.17	-172.17	-88.24	1449.68
15943.94	89.65	75.99	10460.01	1628.65	4511.50	4787.06	6331.37
15969.00	89.30	75.80	10460.24	1634.76	4535.80	4812.10	6356.43
16047.00	89.30	75.80	10461.19	1653.89	4611.42	4890.05	6434.42

KOP Pln #2 Mesquite 37 #U103H  
T2 Pln #2 Mesquite 37 #U103H  
T3 Pln #2 Mesquite 37 #U103H  
FTP Mesquite 37 U103H  
FTP/Cross HL @ 11053' MD / 10667' TVD  
LTP/Cross HL @ 15944' MD / 10460' TVD  
Last MWD @ 15969' MD / 10460' TVD  
PTD @ 16047' MD / 10461' TVD  
LTP/PBHL Mesquite 37 U103H



Azimuths to Grid North  
True North: 1.44°  
Magnetic North: 8.59°

Magnetic Field  
Strength: 47598.8snT  
Dip Angle: 59.45°  
Date: 5/31/2018  
Model: HDGM



# **ABRAXAS PETROLEUM CORPORATION**

**Ward County, TX**

**Mesquite 37 Pad**

**Mesquite 37 #U103H - Slot Mesquite 37 U103H**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**23 July, 2018**



<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

<b>Project</b>	Ward County, TX		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Texas Central 4203		

<b>Site</b>	Mesquite 37 Pad		
<b>Site Position:</b>		<b>Northing:</b>	674,726.00 usft
<b>From:</b>	Map	<b>Easting:</b>	1,128,196.00 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	31° 29' 30.30 N
		<b>Longitude:</b>	103° 7' 50.17 W
		<b>Grid Convergence:</b>	-1.44 °

<b>Well</b>	Mesquite 37 #U103H - Slot Mesquite 37 U103H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 674,755.00 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 1,128,188.00 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	31° 29' 30.58 N
		<b>Longitude:</b>	103° 7' 50.27 W
		<b>Ground Level:</b>	2,594.00 usft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	HDGM	5/31/2018	7.15
			<b>Dip Angle (°)</b>
			59.45
			<b>Field Strength (nT)</b>
			47,599

<b>Design</b>	Wellbore #1		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>
	0.00	0.00	0.00
			<b>Direction (°)</b>
			73.74

<b>Survey Program</b>	<b>Date</b> 7/23/2018		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>
137.00	16,047.00	Survey #1 (Wellbore #1)	MWD+HRGM
			<b>Description</b>
			OWSG MWD + HRGM

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
137.00	1.40	178.70	136.99	-1.67	0.04	-0.43	1.02	1.02	0.00	
230.00	1.60	176.30	229.95	-4.10	0.15	-1.01	0.23	0.22	-2.58	
320.00	2.00	171.50	319.91	-6.91	0.46	-1.49	0.47	0.44	-5.33	
411.00	1.50	146.30	410.87	-9.47	1.36	-1.35	1.00	-0.55	-27.69	
505.00	1.00	128.80	504.85	-11.01	2.68	-0.51	0.66	-0.53	-18.62	
596.00	0.70	26.90	595.84	-11.01	3.55	0.32	1.47	-0.33	-111.98	
688.00	2.20	355.80	687.81	-8.75	3.67	1.08	1.78	1.63	-33.80	
782.00	2.40	341.30	781.73	-5.09	2.91	1.37	0.65	0.21	-15.43	
874.00	1.90	335.30	873.67	-1.88	1.66	1.06	0.60	-0.54	-6.52	

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
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<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
966.00	1.90	338.60	965.62	0.93	0.46	0.70	0.12	0.00	3.59
1,061.00	2.00	342.70	1,060.56	3.98	-0.61	0.53	0.18	0.11	4.32
1,155.00	1.10	345.00	1,154.53	6.42	-1.33	0.52	0.96	-0.96	2.45
1,250.00	0.60	349.10	1,249.52	7.79	-1.66	0.59	0.53	-0.53	4.32
1,345.00	0.80	359.70	1,344.51	8.94	-1.75	0.82	0.25	0.21	11.16
1,440.00	0.70	272.80	1,439.50	9.63	-2.34	0.45	1.09	-0.11	-91.47
1,534.00	1.10	266.00	1,533.49	9.59	-3.81	-0.97	0.44	0.43	-7.23
1,628.00	0.40	17.80	1,627.49	9.84	-4.61	-1.67	1.39	-0.74	118.94
1,722.00	1.20	56.90	1,721.48	10.69	-3.69	-0.55	0.98	0.85	41.60
1,817.00	0.00	360.00	1,816.47	11.24	-2.85	0.41	1.26	-1.26	0.00
1,912.00	0.60	219.40	1,911.47	10.85	-3.17	0.00	0.63	0.63	0.00
2,007.00	0.70	195.30	2,006.46	9.91	-3.64	-0.72	0.30	0.11	-25.37
2,101.00	0.50	172.40	2,100.46	8.95	-3.73	-1.08	0.33	-0.21	-24.36
2,195.00	0.40	160.60	2,194.46	8.23	-3.57	-1.12	0.14	-0.11	-12.55
2,287.00	0.60	156.70	2,286.45	7.49	-3.27	-1.05	0.22	0.22	-4.24
2,394.00	0.80	122.30	2,393.44	6.57	-2.42	-0.48	0.43	0.19	-32.15
2,489.00	1.10	132.30	2,488.43	5.60	-1.19	0.43	0.36	0.32	10.53
2,584.00	1.00	123.30	2,583.42	4.54	0.18	1.44	0.20	-0.11	-9.47
2,678.00	0.40	309.30	2,677.41	4.29	0.61	1.79	1.49	-0.64	-185.11
2,773.00	2.80	292.70	2,772.37	5.40	-1.79	-0.20	2.55	2.53	-17.47
2,867.00	4.80	291.20	2,866.16	7.71	-7.57	-5.11	2.13	2.13	-1.60
2,962.00	6.10	299.20	2,960.73	11.61	-15.68	-11.81	1.58	1.37	8.42
3,057.00	7.00	294.10	3,055.11	16.43	-25.37	-19.76	1.13	0.95	-5.37
3,151.00	7.20	281.90	3,148.39	19.99	-36.37	-29.32	1.62	0.21	-12.98
3,245.00	7.10	269.80	3,241.66	21.18	-47.94	-40.09	1.60	-0.11	-12.87
3,339.00	7.10	264.60	3,334.94	20.61	-59.53	-51.38	0.68	0.00	-5.53
3,434.00	6.20	272.30	3,429.31	20.27	-70.50	-62.01	1.33	-0.95	8.11
3,529.00	5.80	278.00	3,523.79	21.14	-80.38	-71.25	0.75	-0.42	6.00
3,624.00	5.70	277.30	3,618.31	22.41	-89.82	-79.95	0.13	-0.11	-0.74
3,719.00	5.50	279.30	3,712.86	23.74	-98.99	-88.38	0.29	-0.21	2.11
3,814.00	6.00	269.40	3,807.38	24.43	-108.45	-97.27	1.17	0.53	-10.42
3,908.00	7.30	263.40	3,900.75	23.69	-119.29	-107.89	1.57	1.38	-6.38
4,003.00	6.20	274.90	3,995.09	23.43	-130.40	-118.62	1.83	-1.16	12.11
4,099.00	5.50	291.30	4,090.60	25.55	-139.85	-127.11	1.88	-0.73	17.08
4,193.00	4.20	296.80	4,184.26	28.74	-147.12	-133.19	1.47	-1.38	5.85
4,288.00	4.90	283.80	4,278.96	31.27	-154.17	-139.24	1.31	0.74	-13.68
4,383.00	6.60	281.80	4,373.48	33.36	-163.45	-147.57	1.80	1.79	-2.11
4,478.00	6.60	293.50	4,467.85	36.65	-173.80	-156.59	1.41	0.00	12.32
4,573.00	5.90	282.00	4,562.29	39.84	-183.59	-165.09	1.51	-0.74	-12.11
4,667.00	7.40	264.10	4,655.67	40.23	-194.34	-175.30	2.70	1.60	-19.04
4,762.00	8.10	264.40	4,749.80	38.94	-207.08	-187.90	0.74	0.74	0.32
4,855.00	7.30	265.60	4,841.96	37.85	-219.49	-200.12	0.88	-0.86	1.29

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
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<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,950.00	6.70	268.80	4,936.25	37.27	-231.05	-211.38	0.75	-0.63	3.37
5,044.00	6.30	268.50	5,029.65	37.02	-241.69	-221.66	0.43	-0.43	-0.32
5,139.00	6.50	265.80	5,124.06	36.49	-252.26	-231.96	0.38	0.21	-2.84
5,235.00	6.60	267.70	5,219.43	35.87	-263.20	-242.62	0.25	0.10	1.98
5,329.00	6.40	268.00	5,312.83	35.47	-273.83	-252.94	0.22	-0.21	0.32
5,423.00	6.00	267.30	5,406.28	35.06	-283.97	-262.80	0.43	-0.43	-0.74
5,518.00	5.70	270.00	5,500.78	34.83	-293.65	-272.15	0.43	-0.32	2.84
5,613.00	6.30	275.60	5,595.26	35.33	-303.56	-281.52	0.88	0.63	5.89
5,708.00	6.40	280.30	5,689.68	36.79	-313.95	-291.09	0.56	0.11	4.95
5,803.00	5.20	276.40	5,784.19	38.22	-323.44	-299.80	1.33	-1.26	-4.11
5,897.00	5.70	281.00	5,877.77	39.58	-332.26	-307.88	0.71	0.53	4.89
5,992.00	6.40	284.10	5,972.24	41.77	-342.02	-316.65	0.81	0.74	3.26
6,086.00	6.30	285.90	6,065.66	44.46	-352.06	-325.53	0.24	-0.11	1.91
6,180.00	7.50	281.80	6,158.98	47.13	-363.03	-335.31	1.38	1.28	-4.36
6,275.00	8.40	279.10	6,253.06	49.49	-375.95	-347.06	1.03	0.95	-2.84
6,371.00	8.60	280.40	6,348.01	51.90	-389.93	-359.81	0.29	0.21	1.35
6,466.00	8.70	280.30	6,441.93	54.47	-403.99	-372.58	0.11	0.11	-0.11
6,561.00	8.40	280.90	6,535.87	57.06	-417.87	-385.18	0.33	-0.32	0.63
6,656.00	8.80	282.50	6,629.81	59.95	-431.78	-397.73	0.49	0.42	1.68
6,751.00	6.80	284.10	6,723.92	62.89	-444.33	-408.95	2.12	-2.11	1.68
6,846.00	6.00	286.20	6,818.33	65.65	-454.55	-417.99	0.88	-0.84	2.21
6,940.00	5.50	284.20	6,911.86	68.12	-463.64	-426.02	0.57	-0.53	-2.13
7,034.00	4.70	285.40	7,005.48	70.25	-471.72	-433.18	0.86	-0.85	1.28
7,129.00	4.60	276.70	7,100.17	71.73	-479.26	-440.00	0.75	-0.11	-9.16
7,224.00	6.70	277.40	7,194.70	72.89	-488.54	-448.59	2.21	2.21	0.74
7,318.00	6.60	281.10	7,288.07	74.63	-499.27	-458.41	0.47	-0.11	3.94
7,413.00	5.30	284.00	7,382.56	76.74	-508.89	-467.05	1.40	-1.37	3.05
7,507.00	4.20	286.00	7,476.23	78.74	-516.41	-473.71	1.18	-1.17	2.13
7,602.00	4.30	283.40	7,570.97	80.53	-523.22	-479.74	0.23	0.11	-2.74
7,696.00	5.80	278.30	7,664.61	82.03	-531.35	-487.13	1.66	1.60	-5.43
7,791.00	6.10	278.50	7,759.09	83.47	-541.09	-496.08	0.32	0.32	0.21
7,885.00	6.20	280.20	7,852.55	85.11	-551.03	-505.16	0.22	0.11	1.81
7,980.00	5.90	280.20	7,947.02	86.88	-560.88	-514.12	0.32	-0.32	0.00
8,074.00	6.50	270.90	8,040.48	87.82	-570.96	-523.53	1.24	0.64	-9.89
8,168.00	7.60	265.20	8,133.77	87.38	-582.47	-534.70	1.39	1.17	-6.06
8,263.00	8.00	265.10	8,227.89	86.29	-595.32	-547.34	0.42	0.42	-0.11
8,358.00	7.10	264.60	8,322.06	85.17	-607.75	-559.59	0.95	-0.95	-0.53
8,453.00	6.30	269.80	8,416.41	84.60	-618.81	-570.37	1.06	-0.84	5.47
8,547.00	7.00	272.20	8,509.78	84.81	-629.69	-580.76	0.80	0.74	2.55
8,641.00	7.60	276.40	8,603.02	85.72	-641.59	-591.92	0.85	0.64	4.47
8,736.00	7.70	278.10	8,697.17	87.32	-654.13	-603.52	0.26	0.11	1.79
8,830.00	7.00	271.00	8,790.40	88.30	-666.09	-614.73	1.22	-0.74	-7.55
8,924.00	6.20	277.80	8,883.78	89.09	-676.85	-624.83	1.19	-0.85	7.23

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,019.00	5.10	280.40	8,978.32	90.55	-686.09	-633.29	1.19	-1.16	2.74
9,114.00	4.00	279.10	9,073.02	91.84	-693.51	-640.06	1.16	-1.16	-1.37
9,206.00	5.40	287.80	9,164.71	93.67	-700.80	-646.54	1.70	1.52	9.46
9,302.00	6.90	292.00	9,260.15	97.21	-710.45	-654.82	1.63	1.56	4.37
9,396.00	7.60	288.90	9,353.40	101.34	-721.57	-664.33	0.85	0.74	-3.30
9,491.00	8.00	290.10	9,447.52	105.64	-733.72	-674.79	0.45	0.42	1.26
9,585.00	7.00	291.60	9,540.72	110.00	-745.19	-684.58	1.08	-1.06	1.60
9,678.00	5.10	292.70	9,633.19	113.68	-754.27	-692.27	2.05	-2.04	1.18
9,773.00	2.80	289.80	9,727.96	116.10	-760.35	-697.43	2.43	-2.42	-3.05
9,867.00	1.20	294.50	9,821.90	117.28	-763.41	-700.03	1.71	-1.70	5.00
9,963.00	1.30	15.40	9,917.88	118.75	-764.03	-700.22	1.69	0.10	84.27
10,057.00	2.70	9.10	10,011.82	121.97	-763.40	-698.71	1.51	1.49	-6.70
10,088.00	1.50	61.90	10,042.81	122.88	-762.92	-698.00	6.95	-3.87	170.32
10,119.00	5.10	81.40	10,073.75	123.28	-761.20	-696.24	12.00	11.61	62.90
10,151.00	9.40	76.80	10,105.49	124.09	-757.25	-692.22	13.55	13.44	-14.37
10,182.00	13.50	71.40	10,135.86	125.82	-751.35	-686.07	13.66	13.23	-17.42
10,214.00	17.10	66.60	10,166.73	128.88	-743.49	-677.67	11.92	11.25	-15.00
10,245.00	19.80	67.20	10,196.13	132.72	-734.47	-667.93	8.73	8.71	1.94
10,276.00	21.40	70.20	10,225.15	136.68	-724.31	-657.07	6.18	5.16	9.68
10,308.00	23.30	73.20	10,254.74	140.48	-712.75	-644.91	6.92	5.94	9.37
10,339.00	24.20	78.30	10,283.12	143.54	-700.66	-632.44	7.23	2.90	16.45
10,371.00	24.40	80.40	10,312.29	145.98	-687.72	-619.34	2.77	0.62	6.56
10,402.00	24.80	81.30	10,340.47	148.03	-674.98	-606.54	1.77	1.29	2.90
10,433.00	27.30	81.60	10,368.32	150.05	-661.52	-593.05	8.08	8.06	0.97
10,465.00	30.60	80.40	10,396.32	152.48	-646.23	-577.68	10.47	10.31	-3.75
10,496.00	34.50	79.10	10,422.45	155.46	-629.82	-561.10	12.78	12.58	-4.19
10,528.00	37.70	77.00	10,448.30	159.37	-611.38	-542.30	10.72	10.00	-6.56
10,559.00	41.20	75.20	10,472.23	164.12	-592.27	-522.62	11.88	11.29	-5.81
10,591.00	44.30	73.50	10,495.73	169.98	-571.36	-500.91	10.34	9.69	-5.31
10,623.00	47.80	72.00	10,517.94	176.82	-549.36	-477.88	11.45	10.94	-4.69
10,655.00	50.60	71.60	10,538.84	184.39	-526.35	-453.67	8.80	8.75	-1.25
10,686.00	53.00	72.60	10,558.01	191.87	-503.17	-429.32	8.15	7.74	3.23
10,717.00	54.20	75.30	10,576.41	198.76	-479.20	-404.37	8.01	3.87	8.71
10,749.00	56.40	77.80	10,594.63	204.88	-453.61	-378.10	9.41	6.87	7.81
10,781.00	60.40	79.10	10,611.39	210.32	-426.91	-350.95	12.97	12.50	4.06
10,812.00	64.70	78.40	10,625.68	215.69	-399.94	-323.55	14.01	13.87	-2.26
10,844.00	69.70	78.10	10,638.08	221.70	-371.07	-294.15	15.65	15.62	-0.94
10,875.00	73.80	77.20	10,647.78	228.00	-342.32	-264.78	13.51	13.23	-2.90
10,907.00	77.90	76.20	10,655.60	235.14	-312.13	-233.80	13.17	12.81	-3.12
10,938.00	81.60	75.20	10,661.12	242.67	-282.57	-203.32	12.35	11.94	-3.23
10,971.00	85.80	73.90	10,664.74	251.41	-250.96	-170.53	13.32	12.73	-3.94
11,086.00	92.90	72.00	10,666.04	285.10	-141.10	-55.63	6.39	6.17	-1.65

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,180.00	94.00	73.70	10,660.39	312.77	-51.45	38.18	2.15	1.17	1.81
11,275.00	96.10	76.80	10,652.02	336.86	40.05	132.77	3.93	2.21	3.26
11,370.00	96.00	76.20	10,642.01	358.92	131.91	227.13	0.64	-0.11	-0.63
11,465.00	93.50	74.20	10,634.14	383.10	223.43	321.76	3.37	-2.63	-2.11
11,559.00	93.10	74.10	10,628.73	408.73	313.70	415.60	0.44	-0.43	-0.11
11,653.00	92.60	74.50	10,624.06	434.14	404.08	509.48	0.68	-0.53	0.43
11,748.00	96.10	76.60	10,616.85	457.77	495.79	604.14	4.29	3.68	2.21
11,842.00	95.60	75.80	10,607.27	480.08	586.60	697.56	1.00	-0.53	-0.85
11,937.00	93.80	73.80	10,599.49	504.90	677.96	792.22	2.83	-1.89	-2.11
12,031.00	92.90	72.70	10,593.99	531.95	767.82	886.05	1.51	-0.96	-1.17
12,126.00	92.60	72.30	10,589.44	560.48	858.32	980.92	0.53	-0.32	-0.42
12,221.00	92.40	72.10	10,585.29	589.49	948.68	1,075.79	0.30	-0.21	-0.21
12,316.00	92.40	71.60	10,581.31	619.06	1,038.88	1,170.66	0.53	0.00	-0.53
12,410.00	93.90	73.60	10,576.15	647.13	1,128.43	1,264.49	2.66	1.60	2.13
12,505.00	93.60	72.40	10,569.94	674.84	1,219.08	1,359.28	1.30	-0.32	-1.26
12,599.00	94.30	72.90	10,563.46	702.81	1,308.59	1,453.03	0.91	0.74	0.53
12,693.00	92.60	72.10	10,557.80	731.02	1,398.08	1,546.84	2.00	-1.81	-0.85
12,787.00	93.10	73.00	10,553.13	759.18	1,487.64	1,640.70	1.09	0.53	0.96
12,882.00	90.30	72.00	10,550.31	787.73	1,578.19	1,735.63	3.13	-2.95	-1.05
12,977.00	89.80	72.30	10,550.23	816.85	1,668.62	1,830.59	0.61	-0.53	0.32
13,071.00	90.30	72.80	10,550.15	845.04	1,758.29	1,924.57	0.75	0.53	0.53
13,165.00	91.30	73.50	10,548.83	872.28	1,848.24	2,018.55	1.30	1.06	0.74
13,260.00	93.40	74.70	10,544.94	898.28	1,939.53	2,113.46	2.55	2.21	1.26
13,354.00	92.10	74.20	10,540.43	923.45	2,029.98	2,207.35	1.48	-1.38	-0.53
13,448.00	92.30	72.80	10,536.82	950.13	2,120.04	2,301.27	1.50	0.21	-1.49
13,542.00	90.50	70.90	10,534.52	979.40	2,209.33	2,395.19	2.78	-1.91	-2.02
13,637.00	94.20	71.80	10,530.63	1,009.75	2,299.25	2,490.01	4.01	3.89	0.95
13,731.00	91.30	69.80	10,526.12	1,040.63	2,387.90	2,583.76	3.75	-3.09	-2.13
13,825.00	92.70	67.50	10,522.84	1,074.82	2,475.39	2,677.32	2.86	1.49	-2.45
13,920.00	95.00	67.50	10,516.46	1,111.09	2,562.95	2,771.54	2.42	2.42	0.00
14,014.00	97.70	66.90	10,506.06	1,147.29	2,649.07	2,864.35	2.94	2.87	-0.64
14,107.00	96.70	66.70	10,494.41	1,183.64	2,733.87	2,955.94	1.10	-1.08	-0.22
14,201.00	96.00	69.30	10,484.01	1,218.63	2,820.49	3,048.88	2.85	-0.74	2.77
14,295.00	98.20	71.80	10,472.39	1,249.69	2,908.43	3,142.00	3.53	2.34	2.66
14,382.00	96.10	73.10	10,461.56	1,275.72	2,990.73	3,228.30	2.83	-2.41	1.49
14,476.00	93.70	76.40	10,453.53	1,300.34	3,081.07	3,321.92	4.33	-2.55	3.51
14,570.00	88.50	76.80	10,451.73	1,322.11	3,172.46	3,415.75	5.55	-5.53	0.43
14,665.00	91.60	77.80	10,451.64	1,343.00	3,265.12	3,510.56	3.43	3.26	1.05
14,759.00	88.40	77.20	10,451.64	1,363.34	3,356.88	3,604.34	3.46	-3.40	-0.64
14,853.00	87.30	77.80	10,455.17	1,383.67	3,448.59	3,698.07	1.33	-1.17	0.64
14,947.00	89.90	77.50	10,457.47	1,403.77	3,540.38	3,791.82	2.78	2.77	-0.32
15,042.00	89.80	77.40	10,457.72	1,424.41	3,633.11	3,886.62	0.15	-0.11	-0.11
15,136.00	89.30	77.20	10,458.45	1,445.08	3,724.81	3,980.43	0.57	-0.53	-0.21

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,231.00	89.70	76.90	10,459.28	1,466.36	3,817.39	4,075.27	0.53	0.42	-0.32
15,325.00	88.10	76.40	10,461.09	1,488.06	3,908.83	4,169.13	1.78	-1.70	-0.53
15,420.00	89.00	76.20	10,463.49	1,510.56	4,001.09	4,264.00	0.97	0.95	-0.21
15,514.00	90.80	77.30	10,463.66	1,532.10	4,092.58	4,357.87	2.24	1.91	1.17
15,608.00	91.30	77.70	10,461.93	1,552.44	4,184.34	4,451.65	0.68	0.53	0.43
15,703.00	89.80	77.00	10,461.02	1,573.24	4,277.03	4,546.45	1.74	-1.58	-0.74
15,796.00	90.50	77.00	10,460.78	1,594.16	4,367.64	4,639.30	0.75	0.75	0.00
15,891.00	90.40	76.40	10,460.03	1,616.02	4,460.09	4,734.17	0.64	-0.11	-0.63
15,969.00	89.30	75.80	10,460.24	1,634.76	4,535.80	4,812.10	1.61	-1.41	-0.77
16,047.00	89.30	75.80	10,461.19	1,653.89	4,611.42	4,890.05	0.00	0.00	0.00

## Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LTP/Cross HL Mesqui	0.00	360.00	10,460.0 1	1,628.65	4,511.50	676,383.64	1,132,699.50	31° 29' 47.82 N	103° 6' 58.65 W
- actual wellpath hits target center									
- Point									
PTD Mesquite 37 #U1	0.00	0.00	10,461.1 9	1,653.89	4,611.42	676,408.88	1,132,799.41	31° 29' 48.09 N	103° 6' 57.51 W
- actual wellpath hits target center									
- Point									
FTP/Cross HL Mesqui	0.00	360.00	10,667.1 2	275.17	-172.17	675,030.17	1,128,015.82	31° 29' 33.26 N	103° 7' 52.34 W
- actual wellpath misses target center by 0.01usft at 11053.37usft MD (10667.12 TVD, 275.17 N, -172.16 E)									
- Point									

## Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
137.00	136.99	-1.67	0.04	First MWD @ 137' MD / 137' TVD
11,053.36	10,667.12	275.17	-172.17	FTP/Cross HL @ 11053' MD / 10667' TVD
15,943.94	10,460.01	1,628.65	4,511.50	LTP/Cross HL @ 15944' MD / 10460' TVD
15,969.00	10,460.24	1,634.76	4,535.80	Last MWD @15969' MD / 10460' TVD
16,047.00	10,461.19	1,653.89	4,611.42	PTD @ 16047' MD / 10461' TVD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

# ABRAXAS PETROLEUM CORP.

LEASE NAME & WELL NO.:  
**MESQUITE 37 #U103H**

TOPOGRAPHY & VEGETATION:  
**NATURAL MESQUITE PASTURE**

NEAREST TOWN IN COUNTY:  
**±2.97 MILES SOUTHWEST FROM PYOTE, TEXAS**

DESCRIPTION:  
SHL/FTP/LTP/BHL: SECTION 37, BLOCK 16, UNIVERSITY LANDS SURVEY,  
PP: SECTION 33, LEE F. FREEMAN SURVEY,  
WARD COUNTY, TEXAS

## SPECIAL NOTES:

Original Document Size: 8.5"x14"

All Coordinates are in NAD 27 TX-C Zone unless otherwise noted.

## CERTIFICATION:

This well location shown on this permit plat was surveyed on the ground under my direct supervision. This plat is for Texas Railroad Commission permit purpose only and should not be considered a boundary survey.



Texas Reg. No.

5041



**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY

2003 NORTH BIG SPRING - MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1963 OR (800) 787-1963 • FAX (432) 682-1743  
WWW.TOPOGRAPHIC.COM

Texas FIRM Registration NO. 10042500

FILE NAME: LO\_MESQUITE\_37\_#U103H\_REV3

## Surface Hole Location:

2625' FNL & 289' FWL (SEC. 37)

SHL Ground Elevation: 2594'

X = 1128188 Y = 674755

LAT.: N 31.4918282 LONG.: W 103.1306324

NAD 83 TX-C ZONE

X = 1424654 Y = 10517330

LAT.: N 31.4919625 LONG.: W 103.1310711

## Penetration Point:

2310' FNL & 195' FEL (SEC. 33)

X = 1127635 Y = 674922

LAT.: N 31.4922486 LONG.: W 103.1324202

## First Take Point Location:

2310' FNL & 200' FWL (SEC. 37)

X = 1128014 Y = 675033

LAT.: N 31.4925788 LONG.: W 103.1312129

## Last Take Point/ Bottom Hole Location:

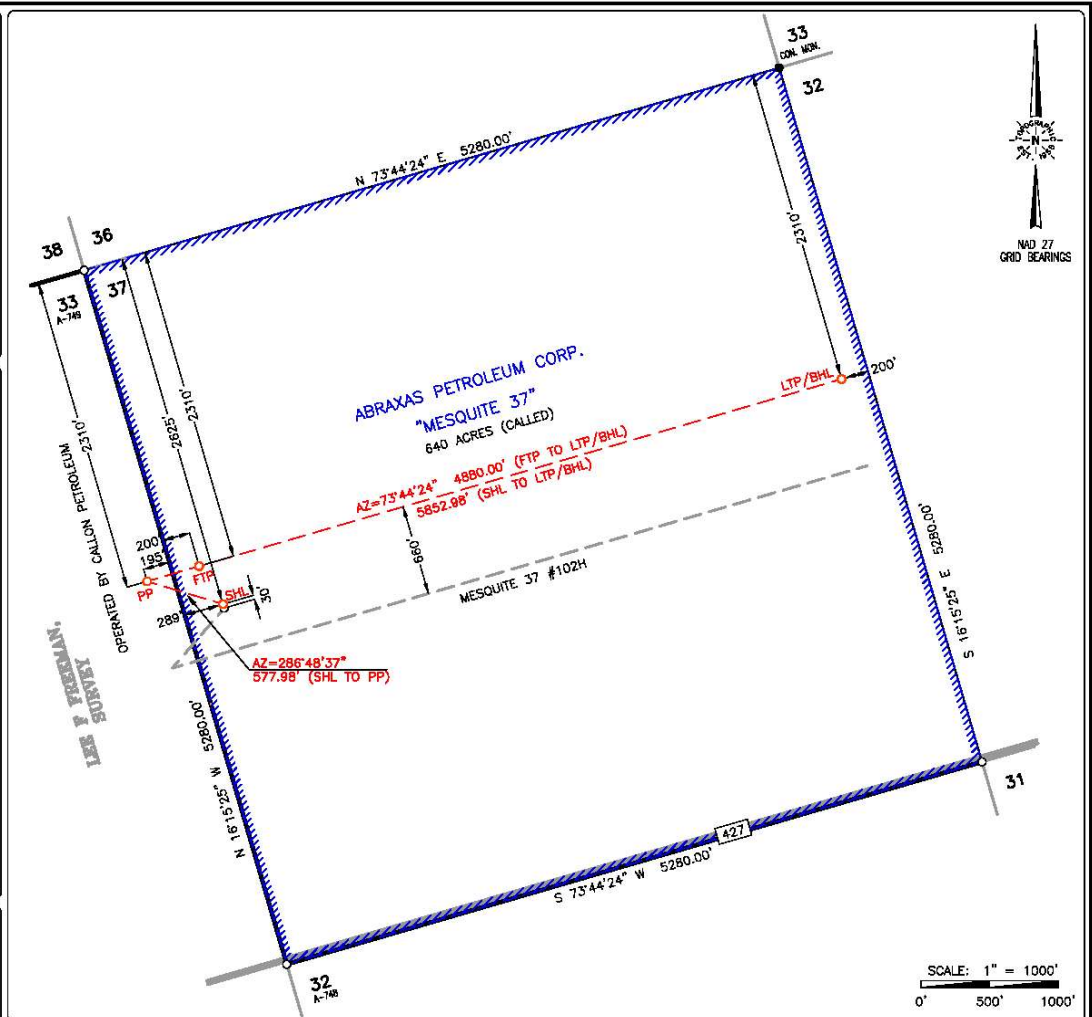
2310' FNL & 200' FEL (SEC. 37)

X = 1132699 Y = 676399

LAT.: N 31.4966572 LONG.: W 103.1162971

LEGEND

- Section Line
- Block Line
- Abstract Line
- Tract Line
- Lease Road
- County Road
- Unit/Lease Boundary
- Found Monument
- Set 1/2" Rebar w/cap
- Calculated Corner



Surveyed: 10/31/17

Scale: 1"=1000'

COGO: 575-120469

Drawn By: AG; 11/2/17

Revision: 3(IG) Date Revised: 02/15/18

Railroad Commission of Texas  
 Oil and Gas Division  
 P.O.Box 12967  
 Capitol Station  
 Austin TX, 78711

August 27, 2018

Attn: Pam Johns

Enclosed, please find the original and one copy of the surveys performed on the referenced well by Premier Directional Drilling, LLC (Operator No. 676002) supervised by Heath Angelle. Other information required by your office is as follows:

<b>JOB NUMBER</b>	M18264	<b>CUSTOMER</b>	Abraxas
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<b>WELL NAME</b>	Mesquite 37 U103H	<b>COUNTY &amp; STATE</b>	Ward, TX
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<b>API WELL NUMBER</b>	42-475-37466	<b>PROPOSED DIRECTION</b>	73.74
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TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLINATION	AZIMUTH	N-S	E-W	DATA SOURCE
.00 ft	.00 ft	0°	0°	.00 ft	.00 ft	(Surface)

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLINATION	AZIMUTH
6/8/2018	137 ft	1.4°	178.7°

SURVEY INSTRUMENT TYPE
Premier MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLINATION	AZIMUTH
7/22/2018	15,969 ft	89.3°	75.8°

TO THE BEST OF MY KNOWLEDGE I  
 CERTIFY THIS SURVEY DATA TO BE  
 TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLINATION	AZIMUTH
7/22/2018	16,047 ft	89.3°	75.8°

Heath Angelle  
 MWD Coordinator  
 Premier Directional Drilling, LLC

<b>TOTAL CORRECTION USED</b>	8.59
<b>DECLINATION OR GRID</b>	GRID

<b>MWD SUPERVISOR 1</b>	Matthew Walkoviak	<b>DIRECTIONAL DRILLER 1</b>	Brian Hancock
<b>MWD SUPERVISOR 2</b>	Dustin Westall	<b>DIRECTIONAL DRILLER 2</b>	Charles Becton

A certified plat on which the bottom-hole location is oriented to the surface location is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Enclosures (Surveys and Plat)



12941 North Freeway Suite 400  
Houston, TX 77060

August 27, 2018

State of Texas

County of Harris

I, Heath Angelle, certify that; I am employed by Premier Directional Drilling, LLC; that on the day(s) of June 8, 2018 – July 22, 2018 we conducted and/or supervised the taking of MWD surveys for Mesquite 37 U103H from a depth of 137.00 feet to a depth of 16,047.00 feet; that the data is true, correct, complete, and within the limitations of the tool as set forth by Premier Directional Drilling, LLC; that I am authorized and qualified to make this report; that this survey was conducted accordingly at the request of Abraxas ; that I reviewed this report and find it conforms to the principles and procedures as set forth by Premier Directional Drilling, LLC.

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Heath Angelle  
MWD Coordinator  
Premier Directionaldrilling, LLC



## **Final Well Report**

**Mesquite 37 U 103H  
Ward County, Texas**

**Prepared for  
Mr. Kenny Johnson**



**PREMIER  
DIRECTIONAL DRILLING**

# **Section One**

## **Direction Comparison Plot**

### **Actual vs. Proposed**



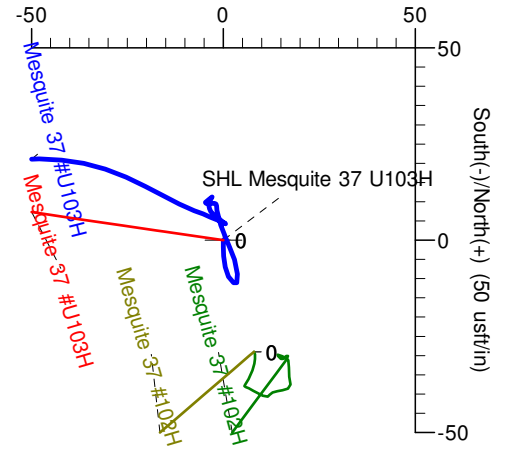
# ABRAXAS PETROLEUM CORPORATION

Project: Ward County, TX  
Site: Mesquite 37 Pad  
Well: Mesquite 37 #U103H  
Wellbore: Wellbore #1  
Design: Plan #3

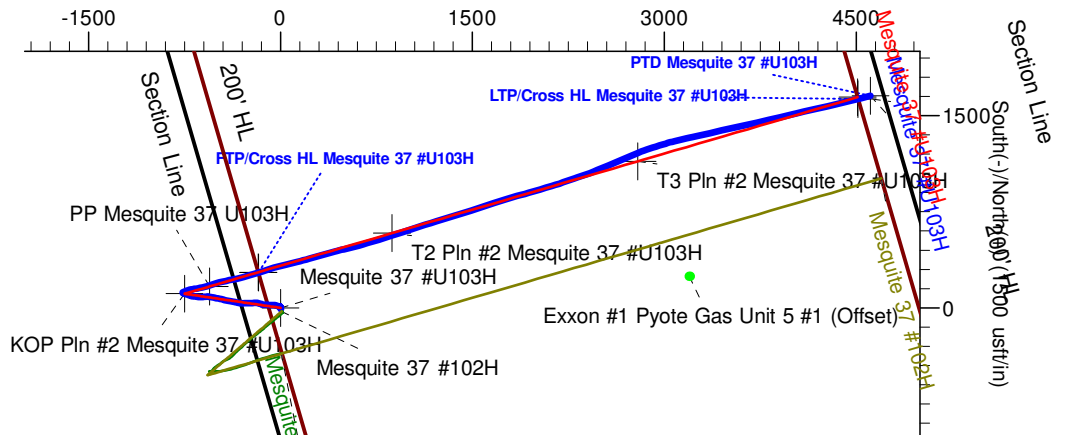
## FORMATION TOP DETAILS

MDPath	TVDPath	Formation
4937.38	4925.00	B/Anhydrite-T/Delaware
4952.47	4940.00	Bell Canyon
5742.29	5725.00	Cherry Canyon
6029.05	6010.00	Manzanita
6924.52	6900.00	Brushy Canyon
7960.85	7930.00	1st Bone Spring
8987.12	8950.00	2nd Bone Spring
10081.30	10040.00	3rd Bone Spring Lime
10718.00	10555.00	3rd Bone Spring Upper
10956.97	10615.00	3rd Bone Spring Up Target

West(-)/East(+) (50 usft/in)



West(-)/East(+) (1500 usft/in)



## PLAN SECTION DETAILS

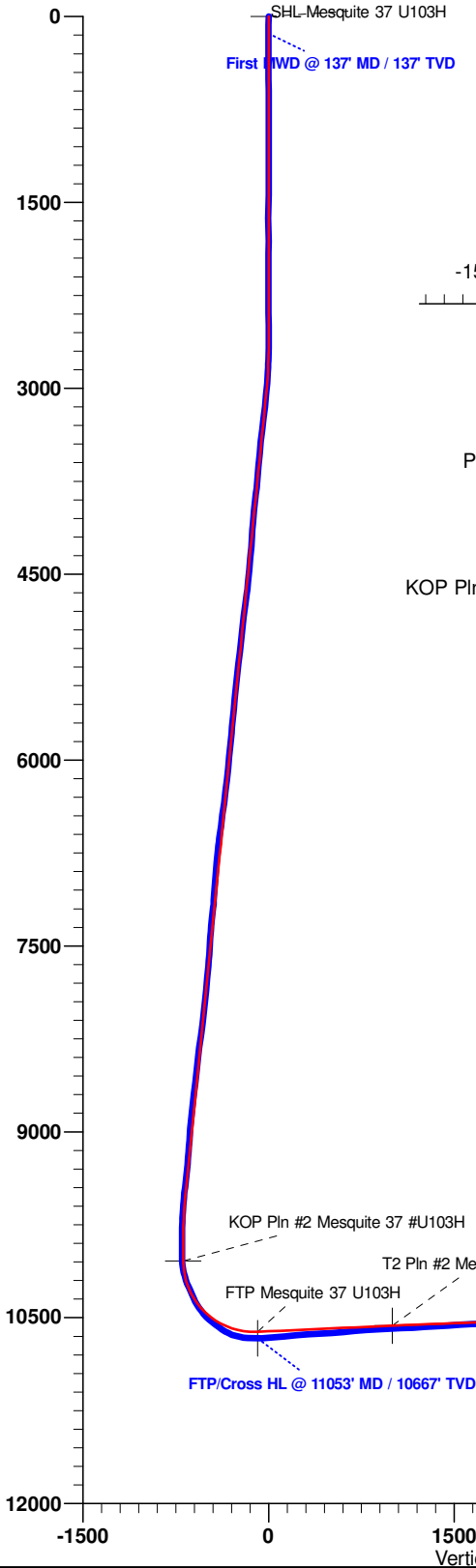
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	
3016.81	6.34	278.35	3016.17	2.54	-17.31	2.00	278.35	-15.91	
9567.17	6.34	278.35	9526.51	107.49	-732.58	0.00	0.00	-673.18	
9883.98	0.00	360.00	9842.68	110.03	-749.89	2.00	180.00	-689.09	
10083.98	0.00	360.00	10042.68	110.03	-749.89	0.00	0.00	-689.09	
11010.18	92.62	73.74	10615.04	277.79	-174.71	10.00	73.74	-89.94	
12101.26	92.62	73.74	10565.16	582.97	871.64	0.00	0.00	1000.00	
12117.83	92.29	73.74	10564.45	587.60	887.53	2.00	180.00	1016.55	
14102.86	92.29	73.74	10485.18	1142.96	2791.64	0.00	0.00	3000.00	
14145.85	91.43	73.75	10483.79	1154.99	2832.89	2.00	179.10	3042.97	
15894.31	91.43	73.75	10440.19	1644.00	4511.00	0.00	0.00	4790.88	LTP/PBHL Mesquite 37 U103H

## FINAL AS DRILLED TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP/Cross HL Mesquite 37 #U103H	10460.01	1628.65	4511.50	676383.65	1132699.50	31° 29' 47.82 N	103° 6' 58.65 W
PTD Mesquite 37 #U103H	10461.19	1653.89	4611.42	676408.89	1132799.42	31° 29' 48.09 N	103° 6' 57.51 W
FTP/Cross HL Mesquite 37 #U103H	10667.12	275.17	-172.17	675030.17	1128015.83	31° 29' 33.26 N	103° 7' 52.34 W

## FINAL AS DRILLED ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VsectDeparture	Annotation
137.00	1.40	178.70	136.99	-1.67	0.04	-0.43	1.67
11053.36	90.88	72.54	10667.12	275.17	-172.17	-88.24	1449.68
15943.94	89.65	75.99	10460.01	1628.65	4511.50	4787.06	6331.37
15969.00	89.30	75.80	10460.24	1634.76	4535.80	4812.10	6356.43
16047.00	89.30	75.80	10461.19	1653.89	4611.42	4890.05	6434.42



Azimuths to Grid North  
True North: 1.44°  
Magnetic North: 8.59°

Magnetic Field  
Strength: 47598.8snT  
Dip Angle: 59.45°  
Date: 5/31/2018  
Model: HDGM

Plan: Plan #3 (Mesquite 37 #U103H/Wellbore #1)

## PREMIER DIRECTIONAL DRILLING

363 N. Sam Houston Pkwy, Ste 300, Houston TX 77060  
Phone: 281-673-4000



Created By: Nephi Smith Date: 15:44, July 23 2018



# **ABRAXAS PETROLEUM CORPORATION**

**Ward County, TX**

**Mesquite 37 Pad**

**Mesquite 37 #U103H - Slot Mesquite 37 U103H**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**23 July, 2018**





## Survey Report



<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

<b>Project</b>	Ward County, TX		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Texas Central 4203		

<b>Site</b>	Mesquite 37 Pad		
<b>Site Position:</b>		<b>Northing:</b>	674,726.00 usft
<b>From:</b>	Map	<b>Easting:</b>	1,128,196.00 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	31° 29' 30.30 N
		<b>Longitude:</b>	103° 7' 50.17 W
		<b>Grid Convergence:</b>	-1.44 °

<b>Well</b>	Mesquite 37 #U103H - Slot Mesquite 37 U103H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 674,755.00 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 1,128,188.00 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	31° 29' 30.58 N
		<b>Longitude:</b>	103° 7' 50.27 W
		<b>Ground Level:</b>	2,594.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	5/31/2018	7.15	59.45	47,599

<b>Design</b>	Wellbore #1			
<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	73.74

<b>Survey Program</b>	<b>Date</b> 7/23/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
137.00	16,047.00	Survey #1 (Wellbore #1)	MWD+HRGM	OWSG MWD + HRGM

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
137.00	1.40	178.70	136.99	-1.67	0.04	-0.43	1.02	1.02	0.00	
230.00	1.60	176.30	229.95	-4.10	0.15	-1.01	0.23	0.22	-2.58	
320.00	2.00	171.50	319.91	-6.91	0.46	-1.49	0.47	0.44	-5.33	
411.00	1.50	146.30	410.87	-9.47	1.36	-1.35	1.00	-0.55	-27.69	
505.00	1.00	128.80	504.85	-11.01	2.68	-0.51	0.66	-0.53	-18.62	
596.00	0.70	26.90	595.84	-11.01	3.55	0.32	1.47	-0.33	-111.98	
688.00	2.20	355.80	687.81	-8.75	3.67	1.08	1.78	1.63	-33.80	
782.00	2.40	341.30	781.73	-5.09	2.91	1.37	0.65	0.21	-15.43	
874.00	1.90	335.30	873.67	-1.88	1.66	1.06	0.60	-0.54	-6.52	

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
966.00	1.90	338.60	965.62	0.93	0.46	0.70	0.12	0.00	3.59
1,061.00	2.00	342.70	1,060.56	3.98	-0.61	0.53	0.18	0.11	4.32
1,155.00	1.10	345.00	1,154.53	6.42	-1.33	0.52	0.96	-0.96	2.45
1,250.00	0.60	349.10	1,249.52	7.79	-1.66	0.59	0.53	-0.53	4.32
1,345.00	0.80	359.70	1,344.51	8.94	-1.75	0.82	0.25	0.21	11.16
1,440.00	0.70	272.80	1,439.50	9.63	-2.34	0.45	1.09	-0.11	-91.47
1,534.00	1.10	266.00	1,533.49	9.59	-3.81	-0.97	0.44	0.43	-7.23
1,628.00	0.40	17.80	1,627.49	9.84	-4.61	-1.67	1.39	-0.74	118.94
1,722.00	1.20	56.90	1,721.48	10.69	-3.69	-0.55	0.98	0.85	41.60
1,817.00	0.00	360.00	1,816.47	11.24	-2.85	0.41	1.26	-1.26	0.00
1,912.00	0.60	219.40	1,911.47	10.85	-3.17	0.00	0.63	0.63	0.00
2,007.00	0.70	195.30	2,006.46	9.91	-3.64	-0.72	0.30	0.11	-25.37
2,101.00	0.50	172.40	2,100.46	8.95	-3.73	-1.08	0.33	-0.21	-24.36
2,195.00	0.40	160.60	2,194.46	8.23	-3.57	-1.12	0.14	-0.11	-12.55
2,287.00	0.60	156.70	2,286.45	7.49	-3.27	-1.05	0.22	0.22	-4.24
2,394.00	0.80	122.30	2,393.44	6.57	-2.42	-0.48	0.43	0.19	-32.15
2,489.00	1.10	132.30	2,488.43	5.60	-1.19	0.43	0.36	0.32	10.53
2,584.00	1.00	123.30	2,583.42	4.54	0.18	1.44	0.20	-0.11	-9.47
2,678.00	0.40	309.30	2,677.41	4.29	0.61	1.79	1.49	-0.64	-185.11
2,773.00	2.80	292.70	2,772.37	5.40	-1.79	-0.20	2.55	2.53	-17.47
2,867.00	4.80	291.20	2,866.16	7.71	-7.57	-5.11	2.13	2.13	-1.60
2,962.00	6.10	299.20	2,960.73	11.61	-15.68	-11.81	1.58	1.37	8.42
3,057.00	7.00	294.10	3,055.11	16.43	-25.37	-19.76	1.13	0.95	-5.37
3,151.00	7.20	281.90	3,148.39	19.99	-36.37	-29.32	1.62	0.21	-12.98
3,245.00	7.10	269.80	3,241.66	21.18	-47.94	-40.09	1.60	-0.11	-12.87
3,339.00	7.10	264.60	3,334.94	20.61	-59.53	-51.38	0.68	0.00	-5.53
3,434.00	6.20	272.30	3,429.31	20.27	-70.50	-62.01	1.33	-0.95	8.11
3,529.00	5.80	278.00	3,523.79	21.14	-80.38	-71.25	0.75	-0.42	6.00
3,624.00	5.70	277.30	3,618.31	22.41	-89.82	-79.95	0.13	-0.11	-0.74
3,719.00	5.50	279.30	3,712.86	23.74	-98.99	-88.38	0.29	-0.21	2.11
3,814.00	6.00	269.40	3,807.38	24.43	-108.45	-97.27	1.17	0.53	-10.42
3,908.00	7.30	263.40	3,900.75	23.69	-119.29	-107.89	1.57	1.38	-6.38
4,003.00	6.20	274.90	3,995.09	23.43	-130.40	-118.62	1.83	-1.16	12.11
4,099.00	5.50	291.30	4,090.60	25.55	-139.85	-127.11	1.88	-0.73	17.08
4,193.00	4.20	296.80	4,184.26	28.74	-147.12	-133.19	1.47	-1.38	5.85
4,288.00	4.90	283.80	4,278.96	31.27	-154.17	-139.24	1.31	0.74	-13.68
4,383.00	6.60	281.80	4,373.48	33.36	-163.45	-147.57	1.80	1.79	-2.11
4,478.00	6.60	293.50	4,467.85	36.65	-173.80	-156.59	1.41	0.00	12.32
4,573.00	5.90	282.00	4,562.29	39.84	-183.59	-165.09	1.51	-0.74	-12.11
4,667.00	7.40	264.10	4,655.67	40.23	-194.34	-175.30	2.70	1.60	-19.04
4,762.00	8.10	264.40	4,749.80	38.94	-207.08	-187.90	0.74	0.74	0.32
4,855.00	7.30	265.60	4,841.96	37.85	-219.49	-200.12	0.88	-0.86	1.29

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<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,950.00	6.70	268.80	4,936.25	37.27	-231.05	-211.38	0.75	-0.63	3.37
5,044.00	6.30	268.50	5,029.65	37.02	-241.69	-221.66	0.43	-0.43	-0.32
5,139.00	6.50	265.80	5,124.06	36.49	-252.26	-231.96	0.38	0.21	-2.84
5,235.00	6.60	267.70	5,219.43	35.87	-263.20	-242.62	0.25	0.10	1.98
5,329.00	6.40	268.00	5,312.83	35.47	-273.83	-252.94	0.22	-0.21	0.32
5,423.00	6.00	267.30	5,406.28	35.06	-283.97	-262.80	0.43	-0.43	-0.74
5,518.00	5.70	270.00	5,500.78	34.83	-293.65	-272.15	0.43	-0.32	2.84
5,613.00	6.30	275.60	5,595.26	35.33	-303.56	-281.52	0.88	0.63	5.89
5,708.00	6.40	280.30	5,689.68	36.79	-313.95	-291.09	0.56	0.11	4.95
5,803.00	5.20	276.40	5,784.19	38.22	-323.44	-299.80	1.33	-1.26	-4.11
5,897.00	5.70	281.00	5,877.77	39.58	-332.26	-307.88	0.71	0.53	4.89
5,992.00	6.40	284.10	5,972.24	41.77	-342.02	-316.65	0.81	0.74	3.26
6,086.00	6.30	285.90	6,065.66	44.46	-352.06	-325.53	0.24	-0.11	1.91
6,180.00	7.50	281.80	6,158.98	47.13	-363.03	-335.31	1.38	1.28	-4.36
6,275.00	8.40	279.10	6,253.06	49.49	-375.95	-347.06	1.03	0.95	-2.84
6,371.00	8.60	280.40	6,348.01	51.90	-389.93	-359.81	0.29	0.21	1.35
6,466.00	8.70	280.30	6,441.93	54.47	-403.99	-372.58	0.11	0.11	-0.11
6,561.00	8.40	280.90	6,535.87	57.06	-417.87	-385.18	0.33	-0.32	0.63
6,656.00	8.80	282.50	6,629.81	59.95	-431.78	-397.73	0.49	0.42	1.68
6,751.00	6.80	284.10	6,723.92	62.89	-444.33	-408.95	2.12	-2.11	1.68
6,846.00	6.00	286.20	6,818.33	65.65	-454.55	-417.99	0.88	-0.84	2.21
6,940.00	5.50	284.20	6,911.86	68.12	-463.64	-426.02	0.57	-0.53	-2.13
7,034.00	4.70	285.40	7,005.48	70.25	-471.72	-433.18	0.86	-0.85	1.28
7,129.00	4.60	276.70	7,100.17	71.73	-479.26	-440.00	0.75	-0.11	-9.16
7,224.00	6.70	277.40	7,194.70	72.89	-488.54	-448.59	2.21	2.21	0.74
7,318.00	6.60	281.10	7,288.07	74.63	-499.27	-458.41	0.47	-0.11	3.94
7,413.00	5.30	284.00	7,382.56	76.74	-508.89	-467.05	1.40	-1.37	3.05
7,507.00	4.20	286.00	7,476.23	78.74	-516.41	-473.71	1.18	-1.17	2.13
7,602.00	4.30	283.40	7,570.97	80.53	-523.22	-479.74	0.23	0.11	-2.74
7,696.00	5.80	278.30	7,664.61	82.03	-531.35	-487.13	1.66	1.60	-5.43
7,791.00	6.10	278.50	7,759.09	83.47	-541.09	-496.08	0.32	0.32	0.21
7,885.00	6.20	280.20	7,852.55	85.11	-551.03	-505.16	0.22	0.11	1.81
7,980.00	5.90	280.20	7,947.02	86.88	-560.88	-514.12	0.32	-0.32	0.00
8,074.00	6.50	270.90	8,040.48	87.82	-570.96	-523.53	1.24	0.64	-9.89
8,168.00	7.60	265.20	8,133.77	87.38	-582.47	-534.70	1.39	1.17	-6.06
8,263.00	8.00	265.10	8,227.89	86.29	-595.32	-547.34	0.42	0.42	-0.11
8,358.00	7.10	264.60	8,322.06	85.17	-607.75	-559.59	0.95	-0.95	-0.53
8,453.00	6.30	269.80	8,416.41	84.60	-618.81	-570.37	1.06	-0.84	5.47
8,547.00	7.00	272.20	8,509.78	84.81	-629.69	-580.76	0.80	0.74	2.55
8,641.00	7.60	276.40	8,603.02	85.72	-641.59	-591.92	0.85	0.64	4.47
8,736.00	7.70	278.10	8,697.17	87.32	-654.13	-603.52	0.26	0.11	1.79
8,830.00	7.00	271.00	8,790.40	88.30	-666.09	-614.73	1.22	-0.74	-7.55
8,924.00	6.20	277.80	8,883.78	89.09	-676.85	-624.83	1.19	-0.85	7.23

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,019.00	5.10	280.40	8,978.32	90.55	-686.09	-633.29	1.19	-1.16	2.74
9,114.00	4.00	279.10	9,073.02	91.84	-693.51	-640.06	1.16	-1.16	-1.37
9,206.00	5.40	287.80	9,164.71	93.67	-700.80	-646.54	1.70	1.52	9.46
9,302.00	6.90	292.00	9,260.15	97.21	-710.45	-654.82	1.63	1.56	4.37
9,396.00	7.60	288.90	9,353.40	101.34	-721.57	-664.33	0.85	0.74	-3.30
9,491.00	8.00	290.10	9,447.52	105.64	-733.72	-674.79	0.45	0.42	1.26
9,585.00	7.00	291.60	9,540.72	110.00	-745.19	-684.58	1.08	-1.06	1.60
9,678.00	5.10	292.70	9,633.19	113.68	-754.27	-692.27	2.05	-2.04	1.18
9,773.00	2.80	289.80	9,727.96	116.10	-760.35	-697.43	2.43	-2.42	-3.05
9,867.00	1.20	294.50	9,821.90	117.28	-763.41	-700.03	1.71	-1.70	5.00
9,963.00	1.30	15.40	9,917.88	118.75	-764.03	-700.22	1.69	0.10	84.27
10,057.00	2.70	9.10	10,011.82	121.97	-763.40	-698.71	1.51	1.49	-6.70
10,088.00	1.50	61.90	10,042.81	122.88	-762.92	-698.00	6.95	-3.87	170.32
10,119.00	5.10	81.40	10,073.75	123.28	-761.20	-696.24	12.00	11.61	62.90
10,151.00	9.40	76.80	10,105.49	124.09	-757.25	-692.22	13.55	13.44	-14.37
10,182.00	13.50	71.40	10,135.86	125.82	-751.35	-686.07	13.66	13.23	-17.42
10,214.00	17.10	66.60	10,166.73	128.88	-743.49	-677.67	11.92	11.25	-15.00
10,245.00	19.80	67.20	10,196.13	132.72	-734.47	-667.93	8.73	8.71	1.94
10,276.00	21.40	70.20	10,225.15	136.68	-724.31	-657.07	6.18	5.16	9.68
10,308.00	23.30	73.20	10,254.74	140.48	-712.75	-644.91	6.92	5.94	9.37
10,339.00	24.20	78.30	10,283.12	143.54	-700.66	-632.44	7.23	2.90	16.45
10,371.00	24.40	80.40	10,312.29	145.98	-687.72	-619.34	2.77	0.62	6.56
10,402.00	24.80	81.30	10,340.47	148.03	-674.98	-606.54	1.77	1.29	2.90
10,433.00	27.30	81.60	10,368.32	150.05	-661.52	-593.05	8.08	8.06	0.97
10,465.00	30.60	80.40	10,396.32	152.48	-646.23	-577.68	10.47	10.31	-3.75
10,496.00	34.50	79.10	10,422.45	155.46	-629.82	-561.10	12.78	12.58	-4.19
10,528.00	37.70	77.00	10,448.30	159.37	-611.38	-542.30	10.72	10.00	-6.56
10,559.00	41.20	75.20	10,472.23	164.12	-592.27	-522.62	11.88	11.29	-5.81
10,591.00	44.30	73.50	10,495.73	169.98	-571.36	-500.91	10.34	9.69	-5.31
10,623.00	47.80	72.00	10,517.94	176.82	-549.36	-477.88	11.45	10.94	-4.69
10,655.00	50.60	71.60	10,538.84	184.39	-526.35	-453.67	8.80	8.75	-1.25
10,686.00	53.00	72.60	10,558.01	191.87	-503.17	-429.32	8.15	7.74	3.23
10,717.00	54.20	75.30	10,576.41	198.76	-479.20	-404.37	8.01	3.87	8.71
10,749.00	56.40	77.80	10,594.63	204.88	-453.61	-378.10	9.41	6.87	7.81
10,781.00	60.40	79.10	10,611.39	210.32	-426.91	-350.95	12.97	12.50	4.06
10,812.00	64.70	78.40	10,625.68	215.69	-399.94	-323.55	14.01	13.87	-2.26
10,844.00	69.70	78.10	10,638.08	221.70	-371.07	-294.15	15.65	15.62	-0.94
10,875.00	73.80	77.20	10,647.78	228.00	-342.32	-264.78	13.51	13.23	-2.90
10,907.00	77.90	76.20	10,655.60	235.14	-312.13	-233.80	13.17	12.81	-3.12
10,938.00	81.60	75.20	10,661.12	242.67	-282.57	-203.32	12.35	11.94	-3.23
10,971.00	85.80	73.90	10,664.74	251.41	-250.96	-170.53	13.32	12.73	-3.94
11,086.00	92.90	72.00	10,666.04	285.10	-141.10	-55.63	6.39	6.17	-1.65

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,180.00	94.00	73.70	10,660.39	312.77	-51.45	38.18	2.15	1.17	1.81
11,275.00	96.10	76.80	10,652.02	336.86	40.05	132.77	3.93	2.21	3.26
11,370.00	96.00	76.20	10,642.01	358.92	131.91	227.13	0.64	-0.11	-0.63
11,465.00	93.50	74.20	10,634.14	383.10	223.43	321.76	3.37	-2.63	-2.11
11,559.00	93.10	74.10	10,628.73	408.73	313.70	415.60	0.44	-0.43	-0.11
11,653.00	92.60	74.50	10,624.06	434.14	404.08	509.48	0.68	-0.53	0.43
11,748.00	96.10	76.60	10,616.85	457.77	495.79	604.14	4.29	3.68	2.21
11,842.00	95.60	75.80	10,607.27	480.08	586.60	697.56	1.00	-0.53	-0.85
11,937.00	93.80	73.80	10,599.49	504.90	677.96	792.22	2.83	-1.89	-2.11
12,031.00	92.90	72.70	10,593.99	531.95	767.82	886.05	1.51	-0.96	-1.17
12,126.00	92.60	72.30	10,589.44	560.48	858.32	980.92	0.53	-0.32	-0.42
12,221.00	92.40	72.10	10,585.29	589.49	948.68	1,075.79	0.30	-0.21	-0.21
12,316.00	92.40	71.60	10,581.31	619.06	1,038.88	1,170.66	0.53	0.00	-0.53
12,410.00	93.90	73.60	10,576.15	647.13	1,128.43	1,264.49	2.66	1.60	2.13
12,505.00	93.60	72.40	10,569.94	674.84	1,219.08	1,359.28	1.30	-0.32	-1.26
12,599.00	94.30	72.90	10,563.46	702.81	1,308.59	1,453.03	0.91	0.74	0.53
12,693.00	92.60	72.10	10,557.80	731.02	1,398.08	1,546.84	2.00	-1.81	-0.85
12,787.00	93.10	73.00	10,553.13	759.18	1,487.64	1,640.70	1.09	0.53	0.96
12,882.00	90.30	72.00	10,550.31	787.73	1,578.19	1,735.63	3.13	-2.95	-1.05
12,977.00	89.80	72.30	10,550.23	816.85	1,668.62	1,830.59	0.61	-0.53	0.32
13,071.00	90.30	72.80	10,550.15	845.04	1,758.29	1,924.57	0.75	0.53	0.53
13,165.00	91.30	73.50	10,548.83	872.28	1,848.24	2,018.55	1.30	1.06	0.74
13,260.00	93.40	74.70	10,544.94	898.28	1,939.53	2,113.46	2.55	2.21	1.26
13,354.00	92.10	74.20	10,540.43	923.45	2,029.98	2,207.35	1.48	-1.38	-0.53
13,448.00	92.30	72.80	10,536.82	950.13	2,120.04	2,301.27	1.50	0.21	-1.49
13,542.00	90.50	70.90	10,534.52	979.40	2,209.33	2,395.19	2.78	-1.91	-2.02
13,637.00	94.20	71.80	10,530.63	1,009.75	2,299.25	2,490.01	4.01	3.89	0.95
13,731.00	91.30	69.80	10,526.12	1,040.63	2,387.90	2,583.76	3.75	-3.09	-2.13
13,825.00	92.70	67.50	10,522.84	1,074.82	2,475.39	2,677.32	2.86	1.49	-2.45
13,920.00	95.00	67.50	10,516.46	1,111.09	2,562.95	2,771.54	2.42	2.42	0.00
14,014.00	97.70	66.90	10,506.06	1,147.29	2,649.07	2,864.35	2.94	2.87	-0.64
14,107.00	96.70	66.70	10,494.41	1,183.64	2,733.87	2,955.94	1.10	-1.08	-0.22
14,201.00	96.00	69.30	10,484.01	1,218.63	2,820.49	3,048.88	2.85	-0.74	2.77
14,295.00	98.20	71.80	10,472.39	1,249.69	2,908.43	3,142.00	3.53	2.34	2.66
14,382.00	96.10	73.10	10,461.56	1,275.72	2,990.73	3,228.30	2.83	-2.41	1.49
14,476.00	93.70	76.40	10,453.53	1,300.34	3,081.07	3,321.92	4.33	-2.55	3.51
14,570.00	88.50	76.80	10,451.73	1,322.11	3,172.46	3,415.75	5.55	-5.53	0.43
14,665.00	91.60	77.80	10,451.64	1,343.00	3,265.12	3,510.56	3.43	3.26	1.05
14,759.00	88.40	77.20	10,451.64	1,363.34	3,356.88	3,604.34	3.46	-3.40	-0.64
14,853.00	87.30	77.80	10,455.17	1,383.67	3,448.59	3,698.07	1.33	-1.17	0.64
14,947.00	89.90	77.50	10,457.47	1,403.77	3,540.38	3,791.82	2.78	2.77	-0.32
15,042.00	89.80	77.40	10,457.72	1,424.41	3,633.11	3,886.62	0.15	-0.11	-0.11
15,136.00	89.30	77.20	10,458.45	1,445.08	3,724.81	3,980.43	0.57	-0.53	-0.21

<b>Company:</b>	ABRAXAS PETROLEUM CORPORATION	<b>Local Co-ordinate Reference:</b>	Well Mesquite 37 #U103H - Slot Mesquite 37 U103H
<b>Project:</b>	Ward County, TX	<b>TVD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Site:</b>	Mesquite 37 Pad	<b>MD Reference:</b>	2594+25 @ 2619.00usft (Patterson 228)
<b>Well:</b>	Mesquite 37 #U103H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Multi User

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,231.00	89.70	76.90	10,459.28	1,466.36	3,817.39	4,075.27	0.53	0.42	-0.32
15,325.00	88.10	76.40	10,461.09	1,488.06	3,908.83	4,169.13	1.78	-1.70	-0.53
15,420.00	89.00	76.20	10,463.49	1,510.56	4,001.09	4,264.00	0.97	0.95	-0.21
15,514.00	90.80	77.30	10,463.66	1,532.10	4,092.58	4,357.87	2.24	1.91	1.17
15,608.00	91.30	77.70	10,461.93	1,552.44	4,184.34	4,451.65	0.68	0.53	0.43
15,703.00	89.80	77.00	10,461.02	1,573.24	4,277.03	4,546.45	1.74	-1.58	-0.74
15,796.00	90.50	77.00	10,460.78	1,594.16	4,367.64	4,639.30	0.75	0.75	0.00
15,891.00	90.40	76.40	10,460.03	1,616.02	4,460.09	4,734.17	0.64	-0.11	-0.63
15,969.00	89.30	75.80	10,460.24	1,634.76	4,535.80	4,812.10	1.61	-1.41	-0.77
16,047.00	89.30	75.80	10,461.19	1,653.89	4,611.42	4,890.05	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LTP/Cross HL Mesqui	0.00	360.00	10,460.0 1	1,628.65	4,511.50	676,383.64	1,132,699.50	31° 29' 47.82 N	103° 6' 58.65 W
- actual wellpath hits target center									
- Point									
PTD Mesquite 37 #U1	0.00	0.00	10,461.1 9	1,653.89	4,611.42	676,408.88	1,132,799.41	31° 29' 48.09 N	103° 6' 57.51 W
- actual wellpath hits target center									
- Point									
FTP/Cross HL Mesqui	0.00	360.00	10,667.1 2	275.17	-172.17	675,030.17	1,128,015.82	31° 29' 33.26 N	103° 7' 52.34 W
- actual wellpath misses target center by 0.01usft at 11053.37usft MD (10667.12 TVD, 275.17 N, -172.16 E)									
- Point									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
137.00	136.99	-1.67	0.04	First MWD @ 137' MD / 137' TVD
11,053.36	10,667.12	275.17	-172.17	FTP/Cross HL @ 11053' MD / 10667' TVD
15,943.94	10,460.01	1,628.65	4,511.50	LTP/Cross HL @ 15944' MD / 10460' TVD
15,969.00	10,460.24	1,634.76	4,535.80	Last MWD @15969' MD / 10460' TVD
16,047.00	10,461.19	1,653.89	4,611.42	PTD @ 16047' MD / 10461' TVD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

## **Section Two**

# **Daily Drilling Activity Reports**

	JOB NO.:		Report Time:		1 of 29
	Company:		API JOB #		
	LOCATION:		WORK ORDER#		
	RIG NAME:		FIELD:		
	STATE:		Legal Desc.	Township-Section-Range	
	COUNTY:			--	
	WELL NAME:				

From Thursday, June 07, 2018 at 0530 to Friday, June 08, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	N/A	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	N/A	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0 - 0	0	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	.00 Kg/m³	GAS	0	YP	0	BHT°	.0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL				CASING			BHA		
Lead Directional :				Size	lbf/Ft	Set Depth	N/A		
Second Directional :				20.00	.00	.00			
MWD Operator1									
MWD Operator2									
Directional Company:									
Geologist:				Signature:					
Company Man:									
Incl. In:		Azm. In:		Incl. Out:		Azm. Out:			

GENERAL COMMENT							
Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT

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	JOB NO.:		Report Time:		2 of 29
	Company:		API JOB #		
	LOCATION:		WORK ORDER#		
	RIG NAME:		FIELD:		
	STATE:		Legal Desc.	Township-Section-Range	
	COUNTY:			--	
	WELL NAME:				

From Friday, June 08, 2018 at 0530 to Saturday, June 09, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	N/A	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	N/A	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0 - 0	0	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	.00 Kg/m³	GAS	0	YP	0	BHT°	.0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL				CASING			BHA		
Lead Directional :				Size	lbf/Ft	Set Depth	N/A		
Second Directional :				20.00	.00	.00			
MWD Operator1									
MWD Operator2									
Directional Company:									
Geologist:				Signature:					
Company Man:									
Incl. In:		Azm. In:		Incl. Out:		Azm. Out:			

### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
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	JOB NO.:	M18264	Report Time:	0530	3 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Saturday, June 09, 2018 at 0530 to Sunday, June 10, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	108.00	Rotary Hours	3.00	WOB	10	Pick UP	60	Slack Off	60	SPM
End Depth	761.00	Circulating Hours	0.00	RAB	55	SPP	940	FlowRate	0 - 493	140
Total Drilled:	653.00	Avg. Total ROP:	182.23	Mud Data						
Total Rotary Drilled:	571.00	Avg. Rotary ROP:	190.33	Type	WBM			PV	1	SOLID
Total Drilled Sliding:	82.00	Avg. Slide ROP:	140.57	Weight	8.40 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	0.58	Percent Rotary:	87.44	Viscosity	29	SAND	0	PH	8	Flow T°
Below Rotary Hrs.	14.25	Percent Slide:	12.56	Chlorides	50000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 1:12 1/4" Drillformance 616 6x18's, 1x16, 6 5/8 NOV 7/8 4.0 1.83° Adj W 12" Stab, 11 3/4" Stabilizer, Shock Sub, 8" NM Pony DC, UBHO, 8" NMDC, 8" NMDC, 3- 8" DCs, Bottleneck XO 4/12XH Box X 6 5/8 Reg Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box, 18- HWDP, ,
Second Directional :		Tim Owens				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eric Vernon							
Incl. In:	0	Azm. In:	0	Incl. Out:	0.6	Azm. Out:	156.7		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
9-Jun-18	15:30	20:15	4.75	108.0	108.0	Change BHA	Change BHA
9-Jun-18	20:15	20:30	0.25	108	121	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
9-Jun-18	20:30	21:30	1.00	121	121	Connection	Connection
9-Jun-18	21:30	21:50	0.33	121	150	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
9-Jun-18	21:50	22:40	0.83	150	150	Connection	Connection
9-Jun-18	22:40	23:10	0.50	150	210	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
9-Jun-18	23:10	24:00	0.83	210	210	Connection	Connection
10-Jun-18	00:00	00:30	0.50	210	210	Survey & Conn.	Survey & Conn.@137' Inc 1.4° Azm 178.7°
10-Jun-18	00:30	01:30	1.00	210	210	Other - No Circ	L/D DC due to wash out
10-Jun-18	01:30	01:45	0.25	210	303	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
10-Jun-18	01:45	02:00	0.25	303	303	Survey & Conn.	Survey & Conn.@230' Inc 1.6° Azm 176.3°
10-Jun-18	02:00	02:15	0.25	303	365	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
10-Jun-18	02:15	02:25	0.17	365	377	Sliding	Sliding - (WOB:5.00;GPM :368;TFO:0M))
10-Jun-18	02:25	02:45	0.33	377	426	Drilling	Drilling - (WOB:5.00;GPM :300.00;RPM:30)
10-Jun-18	02:45	03:10	0.42	426	426	Survey & Conn.	Survey & Conn.@320' Inc 2° Azm 171.5°
10-Jun-18	03:10	03:40	0.50	426	484	Drilling	Drilling - (WOB:5.00;GPM :493.00;RPM:45)
10-Jun-18	03:40	04:00	0.33	484	484	Survey & Conn.	Survey & Conn.@411' Inc 1.5° Azm 146.3°
10-Jun-18	04:00	04:10	0.17	484	504	Sliding	Sliding - (WOB:5.00;GPM :368;TFO:350M))

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Jun-18	04:10	04:15	0.08	504	517	Drilling	Drilling - (WOB:5.00;GPM :493.00;RPM:45)
10-Jun-18	04:15	04:20	0.08	517	517	Connection	Connection
10-Jun-18	04:20	04:30	0.17	517	578	Drilling	Drilling - (WOB:5.00;GPM :493.00;RPM:45)
10-Jun-18	04:30	04:45	0.25	578	578	Survey & Conn.	Survey & Conn.@505' Inc 1° Azm 128.8°
10-Jun-18	04:45	04:55	0.17	578	608	Sliding	Sliding - (WOB:5.00;GPM :368;TFO:340M))
10-Jun-18	04:55	05:00	0.08	608	669	Drilling	Drilling - (WOB:10.00;GPM :493.00;RPM:45)
10-Jun-18	05:00	05:10	0.17	669	669	Survey & Conn.	Survey & Conn.@596' Inc 0.7° Azm 26.9°
10-Jun-18	05:10	05:15	0.08	669	689	Sliding	Sliding - (WOB:5.00;GPM :368;TFO:320M))
10-Jun-18	05:15	05:30	0.25	689	761	Drilling	Drilling - (WOB:10.00;GPM :493.00;RPM:45)

	JOB NO.:	M18264	Report Time:	0530	4 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Sunday, June 10, 2018 at 0530 to Monday, June 11, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	855.00	Rotary Hours	10.17	WOB	30	Pick UP	134	Slack Off	120	SPM
End Depth	2360.00	Circulating Hours	2.67	RAB	128	SPP	1850	FlowRate	564 - 704	200
Total Drilled:	1505.00	Avg. Total ROP:	131.82	Mud Data						
Total Rotary Drilled:	1445.00	Avg. Rotary ROP:	142.13	Type	WBM		PV	1	SOLID	0
Total Drilled Sliding:	60.00	Avg. Slide ROP:	48.00	Weight	8.40 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	1.25	Percent Rotary:	96.01	Viscosity	29	SAND	0	PH	8	Flow T°
Below Rotary Hrs.	23.00	Percent Slide:	3.99	Chlorides	1800	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 1:12 1/4" Drillformance 616 6x18's, 1x16 6 5/8 NOV 7/8 4.0 1.83" Adj W 12" Stab, 11 3/4" Stabilizer, Shock Sub, 8" NM Pony DC, UBHO, 8" NMDC, 8" NMDC, 3- 8" DCs, Bottleneck XO 4/12XH Box X 6 5/8 Reg Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box, 18- HWDP, ,
Second Directional :		Tim Owens				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eric Vernon							
Incl. In:	0.6	Azm. In:	156.7	Incl. Out:	0.6	Azm. Out:	156.7		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Jun-18	05:30	05:45	0.25	761.0	761.0	Survey & Conn.	Survey & Conn.@688' Inc 2.2° Azm 355.8°
10-Jun-18	05:45	06:00	0.25	761	855	Drilling	Drilling - (WOB:10.00;GPM :564.00;RPM:55)
10-Jun-18	06:00	06:10	0.17	855	855	Survey & Conn.	Survey & Conn.@782' Inc 2.4° Azm 341.3°
10-Jun-18	06:10	06:45	0.58	855	947	Drilling	Drilling - (WOB:10.00;GPM :704.00;RPM:60)
10-Jun-18	06:45	06:55	0.17	947	947	Survey & Conn.	Survey & Conn.@874' Inc 1.9° Azm 335.3°
10-Jun-18	06:55	07:35	0.67	947	1039	Drilling	Drilling - (WOB:10.00;GPM :704.00;RPM:60)
10-Jun-18	07:35	07:50	0.25	1039	1039	Survey & Conn.	Survey & Conn.@966' Inc 1.9° Azm 338.6°
10-Jun-18	07:50	08:30	0.67	1039	1134	Drilling	Drilling - (WOB:15.00;GPM :704.00;RPM:60)
10-Jun-18	08:30	08:50	0.33	1134	1134	Survey & Conn.	Survey & Conn.@1061' Inc 2° Azm 342.7°
10-Jun-18	08:50	09:05	0.25	1134	1146	Sliding	Sliding - (WOB:5.00;GPM :704;TFO:160M))
10-Jun-18	09:05	09:50	0.75	1146	1228	Drilling	Drilling - (WOB:18.00;GPM :704.00;RPM:60)
10-Jun-18	09:50	10:00	0.17	1228	1228	Survey & Conn.	Survey & Conn.@1155' Inc 1.1° Azm 345°
10-Jun-18	10:00	10:30	0.50	1228	1323	Drilling	Drilling - (WOB:20.00;GPM :704.00;RPM:60)
10-Jun-18	10:30	10:45	0.25	1323	1323	Survey & Conn.	Survey & Conn.@1250' Inc 0.6° Azm 349.1°
10-Jun-18	10:45	11:15	0.50	1323	1418	Drilling	Drilling - (WOB:20.00;GPM :704.00;RPM:60)
10-Jun-18	11:15	11:25	0.17	1418	1418	Survey & Conn.	Survey & Conn.@1345' Inc 0.8° Azm 359.7°
10-Jun-18	11:25	11:35	0.17	1418	1432	Sliding	Sliding - (WOB:18.00;GPM :704;TFO:200M))
10-Jun-18	11:35	12:00	0.42	1432	1513	Drilling	Drilling - (WOB:20.00;GPM :704.00;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Jun-18	12:00	12:10	0.17	1513	1513	Survey & Conn.	Survey & Conn.@1440' Inc 0.7° Azm 272.8°
10-Jun-18	12:10	12:55	0.75	1513	1607	Drilling	Drilling - (WOB:20.00;GPM :704.00;RPM:60)
10-Jun-18	12:55	13:10	0.25	1607	1607	Survey & Conn.	Survey & Conn.@1534' Inc 1.1° Azm 266°
10-Jun-18	13:10	13:45	0.58	1607	1621	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:90M))
10-Jun-18	13:45	14:35	0.83	1621	1701	Drilling	Drilling - (WOB:26.00;GPM :704.00;RPM:60)
10-Jun-18	14:35	14:50	0.25	1701	1701	Survey & Conn.	Survey & Conn.@1628' Inc 0.4° Azm 17.8°
10-Jun-18	14:50	15:30	0.67	1701	1795	Drilling	Drilling - (WOB:26.00;GPM :704.00;RPM:60)
10-Jun-18	15:30	15:45	0.25	1795	1795	Survey & Conn.	Survey & Conn.@1722' Inc 1.2° Azm 56.9°
10-Jun-18	15:45	16:00	0.25	1795	1815	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:230M))
10-Jun-18	16:00	16:25	0.42	1815	1890	Drilling	Drilling - (WOB:26.00;GPM :704.00;RPM:60)
10-Jun-18	16:25	17:05	0.67	1890	1890	Rig Service-Inhole	Rig Service-Inhole
10-Jun-18	17:05	17:35	0.50	1890	1985	Drilling	Drilling - (WOB:26.00;GPM :704.00;RPM:60)
10-Jun-18	17:35	17:50	0.25	1985	1985	Survey & Conn.	Survey & Conn.@1912' Inc 0.6° Azm 219.4°
10-Jun-18	17:50	18:40	0.83	1985	2080	Drilling	Drilling - (WOB:26.00;GPM :704.00;RPM:60)
10-Jun-18	18:40	18:55	0.25	2080	2080	Survey & Conn.	Survey & Conn.@2007' Inc 0.7° Azm 195.3°
10-Jun-18	18:55	19:35	0.67	2080	2174	Drilling	Drilling - (WOB:30.00;GPM :704.00;RPM:60)
10-Jun-18	19:35	19:50	0.25	2174	2174	Survey & Conn.	Survey & Conn.@2101' Inc 0.5° Azm 172.4°
10-Jun-18	19:50	20:20	0.50	2174	2268	Drilling	Drilling - (WOB:30.00;GPM :704.00;RPM:60)
10-Jun-18	20:20	20:35	0.25	2268	2268	Survey & Conn.	Survey & Conn.@2195' Inc 0.4° Azm 160.6°
10-Jun-18	20:35	21:30	0.92	2268	2360	Drilling	Drilling - (WOB:30.00;GPM :704.00;RPM:60)
10-Jun-18	21:30	21:35	0.08	2360	2360	MWD Survey	MWD Survey@2287' Inc 0.6° Azm 156.7°
10-Jun-18	21:35	23:30	1.92	2360	2360	Circulating	Circulate sweeps
10-Jun-18	23:30	24:00	0.50	2360	2360	Short Trip	Wiper Trip
11-Jun-18	00:00	05:00	5.00	2360	2360	Short Trip	Wiper Trip L/D MWD tool, clean stabilizers and bit

	JOB NO.:		Report Time:		5 of 29
	Company:		API JOB #		
	LOCATION:		WORK ORDER#		
	RIG NAME:		FIELD:		
	STATE:		Legal Desc.	Township-Section-Range	
	COUNTY:			--	
	WELL NAME:				

From Friday, June 29, 2018 at 0530 to Saturday, June 30, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	N/A	Rotary Hours	0.00	WOB	0	Pick UP	0	Slack Off	0	SPM	
End Depth	N/A	Circulating Hours	0.00	RAB	0	SPP	0	FlowRate	0 - 0	0	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type				PV	0	SOLID	0
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	.00 Kg/m³	GAS	0	YP	0	BHT°	.0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	0	SAND	0	PH	0	Flow T°	.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	0	WL	0			Oil %	0

PERSONNEL				CASING			BHA	
Lead Directional :				Size	lbf/Ft	Set Depth	N/A	
Second Directional :				20.00	.00	.00		
MWD Operator1								
MWD Operator2								
Directional Company:								
Geologist:				Signature:				
Company Man:								
Incl. In:		Azm. In:		Incl. Out:		Azm. Out:		

### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
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JOB NO.:	M18264	Report Time:	0530	6 of 29
Company:	Abraxas	API JOB #	42-475-37466	
LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
RIG NAME:	Patterson 228	FIELD:		
STATE:	Texas	Legal Desc.	Township-Section-Range	
COUNTY:	Ward		-37-	
WELL NAME:	Mesquite 37 U103H			

From Saturday, June 30, 2018 at 0530 to Sunday, July 01, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	2360.00	Rotary Hours	9.67	WOB	24	Pick UP	134	Slack Off	120	SPM
End Depth	3428.00	Circulating Hours	0.50	RAB	128	SPP	1780	FlowRate	450 - 704	170
Total Drilled:	1068.00	Avg. Total ROP:	88.39	Mud Data						
Total Rotary Drilled:	975.00	Avg. Rotary ROP:	100.86	Type	WBM		PV	1	SOLID	0
Total Drilled Sliding:	93.00	Avg. Slide ROP:	38.48	Weight	9.00 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	2.42	Percent Rotary:	91.29	Viscosity	28	SAND	0	PH	8	Flow T°
Below Rotary Hrs.	19.17	Percent Slide:	8.71	Chlorides	19000	WL	0		Oil %	0

PERSONNEL				CASING			BHA
Lead Directional :	Brian Hancock			Size	lbf/Ft	Set Depth	BHA # 2:Reed SKC716M 7x16's, 6.5" Gearcon 7/8 5.7 1.5" FBH, 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box, 18- HWDP, ,
Second Directional :	Don Sims			20.00	.00	.00	
MWD Operator1	Mathew Walkoviack						
MWD Operator2	Dustin Westall						
Directional Company:	Premier						
Geologist:				Signature:			
Company Man:	Skye Yocum/Eugene Hernandez						
Incl. In:	4.8	Azm. In:	291.2	Incl. Out:	6.5	Azm. Out:	265.8

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
30-Jun-18	10:30	12:20	1.83	2360.0	2360.0	Change BHA	Change BHA, pick up and test BHA #2 110 spm = 375 psi
30-Jun-18	12:20	15:00	2.67	2360	2360	TIH	TIH, tag @ 2265
30-Jun-18	15:00	15:50	0.83	2360	2370	Drilling	Drilling - (WOB:10.00;GPM :450.00;RPM:60)
30-Jun-18	15:50	16:20	0.50	2370	2370	Circulating	Circulating, FIT
30-Jun-18	16:20	16:25	0.08	2370	2381	Drilling	Drilling - (WOB:10.00;GPM :598.00;RPM:40)
30-Jun-18	16:25	16:35	0.17	2381	2381	Connection	Connection
30-Jun-18	16:35	17:35	1.00	2381	2475	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:50)
30-Jun-18	17:35	17:50	0.25	2475	2475	Survey & Conn.	Survey & Conn.@2394' Inc 0.8° Azm 122.3°
30-Jun-18	17:50	18:50	1.00	2475	2570	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
30-Jun-18	18:50	19:00	0.17	2570	2570	Survey & Conn.	Survey & Conn.@2489' Inc 1.1° Azm 132.3°
30-Jun-18	19:00	20:00	1.00	2570	2665	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
30-Jun-18	20:00	20:10	0.17	2665	2665	Survey & Conn.	Survey & Conn.@2584' Inc 1° Azm 123.3°
30-Jun-18	20:10	20:35	0.42	2665	2680	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:300M))
30-Jun-18	20:35	21:35	1.00	2680	2759	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
30-Jun-18	21:35	21:45	0.17	2759	2759	Survey & Conn.	Survey & Conn.@2678' Inc 0.4° Azm 309.3°
30-Jun-18	21:45	22:00	0.25	2759	2774	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:270M))
30-Jun-18	22:00	22:45	0.75	2774	2854	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
30-Jun-18	22:45	22:55	0.17	2854	2854	Survey & Conn.	Survey & Conn.@2773' Inc 2.8° Azm 292.7°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
30-Jun-18	22:55	23:10	0.25	2854	2867	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:280M))
30-Jun-18	23:10	23:40	0.50	2867	2948	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
30-Jun-18	23:40	23:50	0.17	2948	2948	Survey & Conn.	Survey & Conn.@2867' Inc 4.8° Azm 291.2°
30-Jun-18	23:50	24:00	0.17	2948	2955	Sliding	Sliding - (WOB:24.00;GPM :704.00;TFO:280M)
1-Jul-18	00:00	00:10	0.17	2955	2962	Sliding	Sliding - (WOB:24.00;GPM :704.00;TFO:280M)
1-Jul-18	00:10	00:50	0.67	2962	3043	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	00:50	01:00	0.17	3043	3043	Survey & Conn.	Survey & Conn.@2962' Inc 6.1° Azm 299.2°
1-Jul-18	01:00	01:15	0.25	3043	3051	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:60L))
1-Jul-18	01:15	02:00	0.75	3051	3138	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	02:00	02:10	0.17	3138	3138	Survey & Conn.	Survey & Conn.@3057' Inc 7° Azm 294.1°
1-Jul-18	02:10	02:25	0.25	3138	3150	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:90L))
1-Jul-18	02:25	03:10	0.75	3150	3232	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	03:10	03:20	0.17	3232	3232	Survey & Conn.	Survey & Conn.@3151' Inc 7.2° Azm 281.9°
1-Jul-18	03:20	03:35	0.25	3232	3240	Sliding	Sliding - (WOB:24.00;GPM :704;TFO:110L))
1-Jul-18	03:35	04:15	0.67	3240	3326	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	04:15	04:25	0.17	3326	3326	Survey & Conn.	Survey & Conn.@3245' Inc 7.1° Azm 269.8°
1-Jul-18	04:25	05:05	0.67	3326	3420	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	05:05	05:15	0.17	3420	3420	Survey & Conn.	Survey & Conn.@3339' Inc 7.1° Azm 264.6°

	JOB NO.:	M18264	Report Time:	0530	7 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Sunday, July 01, 2018 at 0530 to Monday, July 02, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	3515.00	Rotary Hours	15.00	WOB	30	Pick UP	200	Slack Off	160	SPM
End Depth	6073.00	Circulating Hours	0.67	RAB	170	SPP	1950	FlowRate	598 - 598	170
Total Drilled:	2558.00	Avg. Total ROP:	139.53	Mud Data						
Total Rotary Drilled:	2457.00	Avg. Rotary ROP:	163.80	Type	WBM		PV	1	SOLID	0
Total Drilled Sliding:	101.00	Avg. Slide ROP:	30.30	Weight	9.00 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	3.33	Percent Rotary:	96.05	Viscosity	28	SAND	0	PH	8	Flow T°
Below Rotary Hrs.	23.75	Percent Slide:	3.95	Chlorides	19000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 2:Reed SKC716M 7x16's, 6.5" Gearcon 7/8 5.7 1.5° FBH, 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box 18- HWDP, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eugene Hernandez							
Incl. In:	6.5	Azm. In:	265.8	Incl. Out:	4.3	Azm. Out:	283.4		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
1-Jul-18	05:40	06:10	0.50	3428.0	3515.0	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	06:10	06:25	0.25	3515	3515	Survey & Conn.	Survey & Conn.@3434' Inc 6.2° Azm 272.3°
1-Jul-18	06:25	07:05	0.67	3515	3610	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	07:05	07:25	0.33	3610	3610	Survey & Conn.	Survey & Conn.@3529' Inc 5.8° Azm 278°
1-Jul-18	07:25	08:05	0.67	3610	3705	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	08:05	08:15	0.17	3705	3705	Survey & Conn.	Survey & Conn.@3624' Inc 5.7° Azm 277.3°
1-Jul-18	08:15	08:55	0.67	3705	3800	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	08:55	09:10	0.25	3800	3800	Survey & Conn.	Survey & Conn.@3719' Inc 5.5° Azm 279.3°
1-Jul-18	09:10	09:25	0.25	3800	3810	Sliding	Sliding - (WOB:18.00;GPM :598;TFO:45L))
1-Jul-18	09:25	10:05	0.67	3810	3895	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	10:05	10:15	0.17	3895	3895	Survey & Conn.	Survey & Conn.@3814' Inc 6° Azm 269.4°
1-Jul-18	10:15	10:55	0.67	3895	3989	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	10:55	11:10	0.25	3989	3989	Survey & Conn.	Survey & Conn.@3908' Inc 7.3° Azm 263.4°
1-Jul-18	11:10	11:25	0.25	3989	3997	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:90R))
1-Jul-18	11:25	11:55	0.50	3997	4084	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	11:55	12:05	0.17	4084	4084	Survey & Conn.	Survey & Conn.@4003' Inc 6.2° Azm 274.9°
1-Jul-18	12:05	12:25	0.33	4084	4180	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	12:25	12:35	0.17	4180	4180	Survey & Conn.	Survey & Conn.@4099' Inc 5.5° Azm 291.3°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
1-Jul-18	12:35	12:55	0.33	4180	4190	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:50L))
1-Jul-18	12:55	13:30	0.58	4190	4274	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	13:30	13:50	0.33	4274	4274	Survey & Conn.	Survey & Conn.@4193' Inc 4.2° Azm 296.8°
1-Jul-18	13:50	14:20	0.50	4274	4288	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:250M))
1-Jul-18	14:20	15:00	0.67	4288	4369	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	15:00	15:15	0.25	4369	4369	Survey & Conn.	Survey & Conn.@4288' Inc 4.9° Azm 283.8°
1-Jul-18	15:15	15:40	0.42	4369	4379	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:270M))
1-Jul-18	15:40	16:00	0.33	4379	4464	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	16:00	16:15	0.25	4464	4464	Rig Service-Inhole	Rig Service-Inhole
1-Jul-18	16:15	16:25	0.17	4464	4464	Survey & Conn.	Survey & Conn.@4383' Inc 6.6° Azm 281.8°
1-Jul-18	16:25	17:05	0.67	4464	4559	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	17:05	17:15	0.17	4559	4559	Survey & Conn.	Survey & Conn.@4478' Inc 6.6° Azm 293.5°
1-Jul-18	17:15	17:35	0.33	4559	4574	Sliding	Sliding - (WOB:18.00;GPM :598;TFO:70L))
1-Jul-18	17:35	18:00	0.42	4574	4574	Circulating	Circulating, checking 370 psi loss.
1-Jul-18	18:00	18:15	0.25	4574	4602	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	18:15	18:20	0.08	4602	4602	Other	Kill Pumps Check 2 Inch
1-Jul-18	18:20	18:50	0.50	4602	4654	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	18:50	19:00	0.17	4654	4654	Survey & Conn.	Survey & Conn.@4573' Inc 5.9° Azm 282°
1-Jul-18	19:00	19:20	0.33	4654	4664	Sliding	Sliding - (WOB:18.00;GPM :598;TFO:40L))
1-Jul-18	19:20	20:00	0.67	4664	4748	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	20:00	20:10	0.17	4748	4748	Survey & Conn.	Survey & Conn.@4667' Inc 7.4° Azm 264.1°
1-Jul-18	20:10	20:55	0.75	4748	4843	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	20:55	21:05	0.17	4843	4843	Survey & Conn.	Survey & Conn.@4762' Inc 8.1° Azm 264.4°
1-Jul-18	21:05	21:50	0.75	4843	4936	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	21:50	21:55	0.08	4936	4936	Survey & Conn.	Survey & Conn.@4855' Inc 7.3° Azm 265.6°
1-Jul-18	21:55	22:30	0.58	4936	5031	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	22:30	22:35	0.08	5031	5031	Survey & Conn.	Survey & Conn.@4950' Inc 6.7° Azm 268.8°
1-Jul-18	22:35	23:00	0.42	5031	5125	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	23:00	23:10	0.17	5125	5125	Survey & Conn.	Survey & Conn.@5044' Inc 6.3° Azm 268.5°
1-Jul-18	23:10	23:30	0.33	5125	5220	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
1-Jul-18	23:30	23:40	0.17	5220	5220	Survey & Conn.	Survey & Conn.@5139' Inc 6.5° Azm 265.8°
1-Jul-18	23:40	24:00	0.33	5220	5316	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	00:00	00:10	0.17	5316	5316	Survey & Conn.	Survey & Conn.@5235' Inc 6.6° Azm 267.7°
2-Jul-18	00:10	00:40	0.50	5316	5410	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	00:40	00:45	0.08	5410	5410	Survey & Conn.	Survey & Conn.@5329' Inc 6.4° Azm 268°
2-Jul-18	00:45	01:15	0.50	5410	5504	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	01:15	01:20	0.08	5504	5504	Survey & Conn.	Survey & Conn.@5423' Inc 6° Azm 267.3°
2-Jul-18	01:20	01:45	0.42	5504	5599	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	01:45	01:55	0.17	5599	5599	Survey & Conn.	Survey & Conn.@5518' Inc 5.7° Azm 270°
2-Jul-18	01:55	02:20	0.42	5599	5609	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:40L))
2-Jul-18	02:20	02:50	0.50	5609	5694	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	02:50	02:55	0.08	5694	5694	Survey & Conn.	Survey & Conn.@5613' Inc 6.3° Azm 275.6°
2-Jul-18	02:55	03:35	0.67	5694	5789	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	03:35	03:40	0.08	5789	5789	Survey & Conn.	Survey & Conn.@5708' Inc 6.4° Azm 280.3°
2-Jul-18	03:40	04:05	0.42	5789	5884	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	04:05	04:15	0.17	5884	5884	Survey & Conn.	Survey & Conn.@5803' Inc 5.2° Azm 276.4°
2-Jul-18	04:15	04:45	0.50	5884	5898	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:40R))

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
2-Jul-18	04:45	05:15	0.50	5898	5978	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	05:15	05:25	0.17	5978	5978	Survey & Conn.	Survey & Conn.@5897' Inc 5.7° Azm 281°

	JOB NO.:	M18264	Report Time:	0530	8 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Monday, July 02, 2018 at 0530 to Tuesday, July 03, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	6073.00	Rotary Hours	15.50	WOB	30	Pick UP	280	Slack Off	210	SPM	
End Depth	7966.00	Circulating Hours	0.00	RAB	240	SPP	1900	FlowRate	598 - 598	170	
Total Drilled:	1893.00	Avg. Total ROP:	98.34	Mud Data							
Total Rotary Drilled:	1808.00	Avg. Rotary ROP:	116.65	Type	Brine			PV	1	SOLID	6
Total Drilled Sliding:	85.00	Avg. Slide ROP:	22.67	Weight	9.30 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	3.75	Percent Rotary:	95.51	Viscosity	28	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	23.00	Percent Slide:	4.49	Chlorides	112000	WL	0			Oil %	0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 2:Reed SKC716M 7x16's, 6.5" Gearcon 7/8 5.7 1.5° FBH, 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box 18- HWDP, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Skye Yocum/Eric Vernon				Signature:			
Incl. In:	4.3	Azm. In:	283.4	Incl. Out:	6.5	Azm. Out:	270.9		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
2-Jul-18	05:55	06:05	0.17	6073.0	6073.0	Survey & Conn.	Survey & Conn.@5992' Inc 6.4° Azm 284.1°
2-Jul-18	06:05	06:20	0.25	6073	6167	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	06:20	06:35	0.25	6167	6167	Survey & Conn.	Survey & Conn.@6086' Inc 6.3° Azm 285.9°
2-Jul-18	06:35	06:55	0.33	6167	6179	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:30L))
2-Jul-18	06:55	07:10	0.25	6179	6261	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	07:10	07:20	0.17	6261	6261	Survey & Conn.	Survey & Conn.@6180' Inc 7.5° Azm 281.8°
2-Jul-18	07:20	07:40	0.33	6261	6356	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	07:40	07:50	0.17	6356	6356	Survey & Conn.	Survey & Conn.@6275' Inc 8.4° Azm 279.1°
2-Jul-18	07:50	08:15	0.42	6356	6452	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	08:15	08:25	0.17	6452	6452	Survey & Conn.	Survey & Conn.@6371' Inc 8.6° Azm 280.4°
2-Jul-18	08:25	08:50	0.42	6452	6547	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	08:50	09:00	0.17	6547	6547	Survey & Conn.	Survey & Conn.@6466' Inc 8.7° Azm 280.3°
2-Jul-18	09:00	09:20	0.33	6547	6642	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	09:20	09:30	0.17	6642	6642	Survey & Conn.	Survey & Conn.@6561' Inc 8.4° Azm 280.9°
2-Jul-18	09:30	09:55	0.42	6642	6737	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	09:55	10:05	0.17	6737	6737	Survey & Conn.	Survey & Conn.@6656' Inc 8.8° Azm 282.5°
2-Jul-18	10:05	10:25	0.33	6737	6747	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:180))
2-Jul-18	10:25	11:00	0.58	6747	6832	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
2-Jul-18	11:00	11:15	0.25	6832	6832	Survey & Conn.	Survey & Conn.@6751' Inc 6.8° Azm 284.1°
2-Jul-18	11:15	11:55	0.67	6832	6927	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	11:55	12:05	0.17	6927	6927	Survey & Conn.	Survey & Conn.@6846' Inc 6° Azm 286.2°
2-Jul-18	12:05	12:40	0.58	6927	7021	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	12:40	12:55	0.25	7021	7021	Survey & Conn.	Survey & Conn.@6940' Inc 5.5° Azm 284.2°
2-Jul-18	12:55	13:35	0.67	7021	7115	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	13:35	13:45	0.17	7115	7115	Survey & Conn.	Survey & Conn.@7034' Inc 4.7° Azm 285.4°
2-Jul-18	13:45	14:20	0.58	7115	7127	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:250M))
2-Jul-18	14:20	15:20	1.00	7127	7210	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	15:20	15:30	0.17	7210	7210	Survey & Conn.	Survey & Conn.@7129' Inc 4.6° Azm 276.7°
2-Jul-18	15:30	16:05	0.58	7210	7224	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:280M))
2-Jul-18	16:05	16:55	0.83	7224	7305	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	16:55	17:05	0.17	7305	7305	Survey & Conn.	Survey & Conn.@7224' Inc 6.7° Azm 277.4°
2-Jul-18	17:05	18:00	0.92	7305	7399	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	18:00	18:10	0.17	7399	7399	Survey & Conn.	Survey & Conn.@7318' Inc 6.6° Azm 281.1°
2-Jul-18	18:10	19:10	1.00	7399	7494	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	19:10	19:20	0.17	7494	7494	Survey & Conn.	Survey & Conn.@7413' Inc 5.3° Azm 284°
2-Jul-18	19:20	20:25	1.08	7494	7588	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	20:25	20:35	0.17	7588	7588	Survey & Conn.	Survey & Conn.@7507' Inc 4.2° Azm 286°
2-Jul-18	20:35	21:25	0.83	7588	7602	Sliding	Sliding - (WOB:30.00;GPM :598;TFO:240M))
2-Jul-18	21:25	22:40	1.25	7602	7683	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
2-Jul-18	22:40	22:50	0.17	7683	7683	Survey & Conn.	Survey & Conn.@7602' Inc 4.3° Azm 283.4°
2-Jul-18	22:50	23:25	0.58	7683	7698	Sliding	Sliding - (WOB:24.00;GPM :598.00;TFO:240M)
2-Jul-18	23:25	24:00	0.58	7698	7730	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
3-Jul-18	00:00	00:50	0.83	7730	7777	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
3-Jul-18	00:50	01:05	0.25	7777	7777	Survey & Conn.	Survey & Conn.@7696' Inc 5.8° Azm 278.3°
3-Jul-18	01:05	02:50	1.75	7777	7872	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
3-Jul-18	02:50	03:05	0.25	7872	7872	Survey & Conn.	Survey & Conn.@7791' Inc 6.1° Azm 278.5°
3-Jul-18	03:05	03:35	0.50	7872	7880	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:0G))
3-Jul-18	03:35	04:55	1.33	7880	7966	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
3-Jul-18	04:55	05:05	0.17	7966	7966	Survey & Conn.	Survey & Conn.@7885' Inc 6.2° Azm 280.2°

	JOB NO.:	M18264	Report Time:	0530	9 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Tuesday, July 03, 2018 at 0530 to Wednesday, July 04, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	8061.00	Rotary Hours	8.00	WOB	30	Pick UP	290	Slack Off	205	SPM	
End Depth	8534.00	Circulating Hours	2.58	RAB	240	SPP	1975	FlowRate	598 - 598	170	
Total Drilled:	473.00	Avg. Total ROP:	50.23	Mud Data							
Total Rotary Drilled:	447.00	Avg. Rotary ROP:	55.88	Type	Brine			PV	1	SOLID	6
Total Drilled Sliding:	26.00	Avg. Slide ROP:	18.35	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	1.42	Percent Rotary:	94.50	Viscosity	28	SAND	0	PH	11	Flow T°	84.0
Below Rotary Hrs.	23.50	Percent Slide:	5.50	Chlorides	120000	WL	0			Oil %	0

PERSONNEL						CASING			BHA		
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 3:Ulterra 716M 7x16, 6.5" Gearcon 7/8 5.7 1.5° FBH, 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box, 18- HWDP, ,		
Second Directional :		Don Sims				20.00	.00	.00			
MWD Operator1		Mathew Walkoviack									
MWD Operator2		Dustin Westall									
Directional Company:		Premier									
Geologist:						Signature:					
Company Man:		Skye Yocum/Eric Vernon									
Incl. In:	6.5	Azm. In:	270.9	Incl. Out:	7.6	Azm. Out:	276.4				

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
3-Jul-18	06:20	06:35	0.25	8061.0	8061.0	Survey & Conn.	Survey & Conn.@7980' Inc 5.9° Azm 280.2°
3-Jul-18	06:35	07:20	0.75	8061	8075	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:30L))
3-Jul-18	07:20	08:40	1.33	8075	8155	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
3-Jul-18	08:40	08:50	0.17	8155	8155	Survey & Conn.	Survey & Conn.@8074' Inc 6.5° Azm 270.9°
3-Jul-18	08:50	10:25	1.58	8155	8212	Drilling	Drilling - (WOB:35.00;GPM :598.00;RPM:60)
3-Jul-18	10:25	11:40	1.25	8212	8212	Circulating	Circulating for bit trip.
3-Jul-18	11:40	16:30	4.83	8212	8212	POOH	POOH
3-Jul-18	16:30	17:00	0.50	8212	8212	Change BHA	Change bit and test motor.
3-Jul-18	17:00	18:30	1.50	8212	8212	TIH	TIH
3-Jul-18	18:30	18:40	0.17	8212	8212	Circulating	Circulating / Test MWD
3-Jul-18	18:40	19:05	0.42	8212	8212	Rig Service-Inhole	Rig Service-Inhole
3-Jul-18	19:05	19:20	0.25	8212	8212	Other	Pull Trip Nipple and Set Rotating Head
3-Jul-18	19:20	22:30	3.17	8212	8212	TIH	TIH
3-Jul-18	22:30	23:15	0.75	8212	8212	Circulating	Circulating / Ream 7777' to 8212'
3-Jul-18	23:15	24:00	0.75	8212	8249	Drilling	Drilling - (WOB:35.00;GPM :598.00;RPM:60)
4-Jul-18	00:00	00:10	0.17	8249	8249	Survey & Conn.	Survey & Conn.@8168' Inc 7.6° Azm 265.2°
4-Jul-18	00:10	01:30	1.33	8249	8344	Drilling	Drilling - (WOB:35.00;GPM :598.00;RPM:60)
4-Jul-18	01:30	01:40	0.17	8344	8344	Survey & Conn.	Survey & Conn.@8263' Inc 8° Azm 265.1°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
4-Jul-18	01:40	03:15	1.58	8344	8439	Drilling	Drilling - (WOB:35.00;GPM :598.00;RPM:60)
4-Jul-18	03:15	03:25	0.17	8439	8439	Survey & Conn.	Survey & Conn.@8358' Inc 7.1° Azm 264.6°
4-Jul-18	03:25	04:05	0.67	8439	8451	Sliding	Sliding - (WOB:24.00;GPM :598;TFO:60R))
4-Jul-18	04:05	05:30	1.42	8451	8534	Drilling	Drilling - (WOB:35.00;GPM :598.00;RPM:60)

	JOB NO.:	M18264	Report Time:	0530	10 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Wednesday, July 04, 2018 at 0530 to Thursday, July 05, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	8544.00	Rotary Hours	5.75	WOB	32	Pick Up	290	Slack Off	205	SPM
End Depth	8755.00	Circulating Hours	1.00	RAB	240	SPP	2050	FlowRate	598 - 598	170
Total Drilled:	211.00	Avg. Total ROP:	33.32	Mud Data						
Total Rotary Drilled:	201.00	Avg. Rotary ROP:	34.96	Type	Brine			PV	1	SOLID
Total Drilled Sliding:	10.00	Avg. Slide ROP:	17.14	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	0.58	Percent Rotary:	95.26	Viscosity	28	SAND	0	PH	11	Flow T°
Below Rotary Hrs.	19.83	Percent Slide:	4.74	Chlorides	120000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 4:Baker T607FX 7x15's, 6.5" Gearcon 7/8 5.7 1.5° ABH 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box 18- HWDP, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eric Vernon							
Incl. In:	7.6	Azm. In:	276.4	Incl. Out:	8	Azm. Out:	290.1		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
4-Jul-18	05:30	05:50	0.33	8534.0	8534.0	Survey & Conn.	Survey & Conn.@8453' Inc 6.3° Azm 269.8°
4-Jul-18	05:50	06:35	0.75	8534	8544	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:40R))
4-Jul-18	06:35	08:25	1.83	8544	8628	Drilling	Drilling - (WOB:30.00;GPM :598.00;RPM:60)
4-Jul-18	08:25	08:45	0.33	8628	8628	Survey & Conn.	Survey & Conn.@8547' Inc 7° Azm 272.2°
4-Jul-18	08:45	09:20	0.58	8628	8638	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:80R))
4-Jul-18	09:20	12:15	2.92	8638	8722	Drilling	Drilling - (WOB:32.00;GPM :598.00;RPM:60)
4-Jul-18	12:15	12:30	0.25	8722	8722	Survey & Conn.	Survey & Conn.@8641' Inc 7.6° Azm 276.4°
4-Jul-18	12:30	13:30	1.00	8722	8755	Drilling	Drilling - (WOB:32.00;GPM :598.00;RPM:60)
4-Jul-18	13:30	14:20	0.83	8755	8755	Circulating	Circulating
4-Jul-18	14:20	18:00	3.67	8755	8755	POOH	POOH (tight @ 4130, reamed through tight spot)
4-Jul-18	18:00	19:50	1.83	8755	8755	POOH	POOH
4-Jul-18	19:50	23:00	3.17	8755	8755	Change BHA	Change Motor and Bit
4-Jul-18	23:00	23:10	0.17	8755	8755	Circulating	Test MWD
4-Jul-18	23:10	23:25	0.25	8755	8755	Other	Make Up Bit
4-Jul-18	23:25	24:00	0.58	8755	8755	TIH	TIH
5-Jul-18	00:00	00:50	0.83	8755	8755	TIH	TIH
5-Jul-18	00:50	02:25	1.58	8755	8755	Rig repair	Slip and Cut Drill Line

	JOB NO.:	M18264	Report Time:	0530	11 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Thursday, July 05, 2018 at 0530 to Friday, July 06, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	8755.00	Rotary Hours	13.17	WOB	28	Pick UP	340	Slack Off	240	SPM
End Depth	9759.00	Circulating Hours	1.00	RAB	270	SPP	2300	FlowRate	598 - 598	170
Total Drilled:	1004.00	Avg. Total ROP:	55.01	Mud Data						
Total Rotary Drilled:	924.00	Avg. Rotary ROP:	70.18	Type	Brine			PV	1	SOLID
Total Drilled Sliding:	80.00	Avg. Slide ROP:	15.74	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	5.08	Percent Rotary:	92.03	Viscosity	28	SAND	0	PH	11	Flow T°
Below Rotary Hrs.	22.92	Percent Slide:	7.97	Chlorides	120000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 4:Baker T607FX 7x15's, 6.5" Gearcon 7/8 5.7 1.5° ABH 8 1/2" Stab, 8 1/4" Stabilizer, Shock Sub, 6 3/4" NM Pony DC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, XO 4/12XH Box X 4 1/2 IF Pin, 9- 6 1/2" DC, 4 1/2 XH Pin X 4 1/2 IF Box 18- HWDP, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eric Vernon							
Incl. In:	8	Azm. In:	290.1	Incl. Out:	1.3	Azm. Out:	15.4		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
5-Jul-18	07:00	07:30	0.50	8755.0	8755.0	Circulating	Circulating, wash 250' to bottom
5-Jul-18	07:30	08:15	0.75	8755	8817	Drilling	Drilling - (WOB:24.00;GPM :598.00;RPM:50)
5-Jul-18	08:15	08:25	0.17	8817	8817	Survey & Conn.	Survey & Conn.@8736' Inc 7.7° Azm 278.1°
5-Jul-18	08:25	09:30	1.08	8817	8911	Drilling	Drilling - (WOB:24.00;GPM :598.00;RPM:50)
5-Jul-18	09:30	09:45	0.25	8911	8911	Survey & Conn.	Survey & Conn.@8830' Inc 7° Azm 271°
5-Jul-18	09:45	10:30	0.75	8911	8923	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:80R))
5-Jul-18	10:30	11:40	1.17	8923	9005	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	11:40	11:50	0.17	9005	9005	Survey & Conn.	Survey & Conn.@8924' Inc 6.2° Azm 277.8°
5-Jul-18	11:50	12:40	0.83	9005	9068	Drilling	Drilling - (WOB:24.00;GPM :598.00;RPM:50)
5-Jul-18	12:40	13:10	0.50	9068	9068	Circulating	Circulating, change cap gasket.
5-Jul-18	13:10	13:25	0.25	9068	9100	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	13:25	13:40	0.25	9100	9100	Survey & Conn.	Survey & Conn.@9019' Inc 5.1° Azm 280.4°
5-Jul-18	13:40	14:20	0.67	9100	9112	Sliding	Sliding - (WOB:10.00;GPM :598;TFO:20R))
5-Jul-18	14:20	15:30	1.17	9112	9195	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	15:30	15:45	0.25	9195	9195	Survey & Conn.	Survey & Conn.@9114' Inc 4° Azm 279.1°
5-Jul-18	15:45	16:25	0.67	9195	9210	Sliding	Sliding - (WOB:10.00;GPM :598;TFO:300M))
5-Jul-18	16:25	17:30	1.08	9210	9287	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	17:30	17:45	0.25	9287	9287	Survey & Conn.	Survey & Conn.@9206' Inc 5.4° Azm 287.8°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
5-Jul-18	17:45	18:25	0.67	9287	9297	Sliding	Sliding - (WOB:10.00;GPM :598;TFO:0G))
5-Jul-18	18:25	19:25	1.00	9297	9383	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	19:25	19:40	0.25	9383	9383	Survey & Conn.	Survey & Conn.@9302' Inc 6.9° Azm 292°
5-Jul-18	19:40	21:05	1.42	9383	9477	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	21:05	21:20	0.25	9477	9477	Survey & Conn.	Survey & Conn.@9396' Inc 7.6° Azm 288.9°
5-Jul-18	21:20	22:55	1.58	9477	9572	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:50)
5-Jul-18	22:55	23:10	0.25	9572	9572	Survey & Conn.	Survey & Conn.@9491' Inc 8° Azm 290.1°
5-Jul-18	23:10	24:00	0.83	9572	9580	Sliding	Sliding - (WOB:25.00;GPM :598;TFO:170L))
6-Jul-18	00:00	00:25	0.42	9580	9587	Sliding	Sliding - (WOB:25.00;GPM :598;TFO:170L))
6-Jul-18	00:25	01:50	1.42	9587	9666	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:65)
6-Jul-18	01:50	02:05	0.25	9666	9666	Survey & Conn.	Survey & Conn.@9585' Inc 7° Azm 291.6°
6-Jul-18	02:05	03:10	1.08	9666	9682	Sliding	Sliding - (WOB:10.00;GPM :598;TFO:160L))
6-Jul-18	03:10	03:20	0.17	9682	9688	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:65)
6-Jul-18	03:20	04:40	1.33	9688	9688	Rig repair	Rig repair / VFD Overheating

	JOB NO.:	M18264	Report Time:	0530	12 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Friday, July 06, 2018 at 0530 to Saturday, July 07, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	9759.00	Rotary Hours	4.33	WOB	28	Pick UP	340	Slack Off	240	SPM	
End Depth	10083.00	Circulating Hours	2.58	RAB	270	SPP	2250	FlowRate	598 - 598	170	
Total Drilled:	324.00	Avg. Total ROP:	53.26	Mud Data							
Total Rotary Drilled:	296.00	Avg. Rotary ROP:	68.31	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	28.00	Avg. Slide ROP:	16.00	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	1.75	Percent Rotary:	91.36	Viscosity	27	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	18.67	Percent Slide:	8.64	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA		
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 5:Baker DD406X 6x16's, 6 3/4 NOV 4/5 7.0 2.38", 4 1/2 XH Pin X 4 1/2 IF Box, 6 3/4" NMDC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, 6 3/4" Flex DC, 15 stands Drill Pipe, 18- HWDP, ,		
Second Directional :		Don Sims				20.00	.00	.00			
MWD Operator1		Mathew Walkoviack									
MWD Operator2		Dustin Westall									
Directional Company:		Premier									
Geologist:						Signature:					
Company Man:		Skye Yocum/Eric Vernon									
Incl. In:	1.3	Azm. In:	15.4	Incl. Out:	30.6	Azm. Out:	80.4				

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
6-Jul-18	05:55	06:15	0.33	9759.0	9759.0	Survey & Conn.	Survey & Conn.@9678' Inc 5.1° Azm 292.7°
6-Jul-18	06:15	07:05	0.83	9759	9773	Sliding	Sliding - (WOB:18.00;GPM :598;TFO:140L))
6-Jul-18	07:05	08:25	1.33	9773	9854	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:60)
6-Jul-18	08:25	08:40	0.25	9854	9854	Survey & Conn.	Survey & Conn.@9773' Inc 2.8° Azm 289.8°
6-Jul-18	08:40	09:35	0.92	9854	9868	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:120M))
6-Jul-18	09:35	10:50	1.25	9868	9948	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:60)
6-Jul-18	10:50	11:05	0.25	9948	9948	Survey & Conn.	Survey & Conn.@9867' Inc 1.2° Azm 294.5°
6-Jul-18	11:05	12:15	1.17	9948	10044	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:60)
6-Jul-18	12:15	12:30	0.25	10044	10044	Survey & Conn.	Survey & Conn.@9963' Inc 1.3° Azm 15.4°
6-Jul-18	12:30	13:05	0.58	10044	10083	Drilling	Drilling - (WOB:28.00;GPM :598.00;RPM:60)
6-Jul-18	13:05	15:00	1.92	10083	10083	Circulating	Circulating
6-Jul-18	15:00	19:40	4.67	10083	10083	POOH	POOH
6-Jul-18	19:40	20:00	0.33	10083	10083	Other	Pull Rotating Head / Install Trip Nipple
6-Jul-18	20:00	20:55	0.92	10083	10083	POOH	POOH
6-Jul-18	20:55	22:15	1.33	10083	10083	L/D DP	Lay Down Drill Collars
6-Jul-18	22:15	24:00	1.75	10083	10083	Change BHA	Lay Down BHA # 4
7-Jul-18	00:00	01:20	1.33	10083	10083	Change BHA	Make Up BHA # 5 / Curve Assembly
7-Jul-18	01:20	01:30	0.17	10083	10083	Circulating	Test MWD

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
7-Jul-18	<b>01:30</b>	<b>01:45</b>	0.25	<b>10083</b>	<b>10083</b>	Other	Make Up Bit
7-Jul-18	<b>01:45</b>	<b>02:15</b>	0.50	<b>10083</b>	<b>10083</b>	Rig Service-Inhole	Rig Service-Inhole

	JOB NO.:	M18264	Report Time:	0530	13 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Saturday, July 07, 2018 at 0530 to Sunday, July 08, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	10083.00	Rotary Hours	4.83	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	10762.00	Circulating Hours	3.67	RAB	270	SPP	2350	FlowRate	598 - 598	170	
Total Drilled:	679.00	Avg. Total ROP:	45.02	Mud Data							
Total Rotary Drilled:	211.00	Avg. Rotary ROP:	43.66	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	468.00	Avg. Slide ROP:	45.66	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	10.25	Percent Rotary:	31.08	Viscosity	27	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	20.33	Percent Slide:	68.92	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 5:Baker DD406X 6x16's, 6 3/4 NOV 4/5 7.0 2.38", 4 1/2 XH Pin X 4 1/2 IF Box, 6 3/4" NMDC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, 6 3/4" Flex DC, 15 stands Drill Pipe, 18- HWDP, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Skye Yocum/Eric Vernon				Signature:			
Incl. In:	30.6	Azm. In:	80.4	Incl. Out:	56.4	Azm. Out:	77.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
7-Jul-18	09:30	10:00	0.50	10083.0	10083.0	Circulating	Circulating, wash and ream 9692 to 10083
7-Jul-18	10:00	10:40	0.67	10083	10100	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:170M))
7-Jul-18	10:40	11:45	1.08	10100	10133	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:75M))
7-Jul-18	11:45	11:55	0.17	10133	10133	MWD Survey	MWD Survey@10119' Inc 5.1° Azm 81.4°
7-Jul-18	11:55	12:10	0.25	10133	10139	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	12:10	12:45	0.58	10139	10164	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:75M))
7-Jul-18	12:45	13:00	0.25	10164	10164	Survey & Conn.	Survey & Conn.@10151' Inc 9.4° Azm 76.8°
7-Jul-18	13:00	13:10	0.17	10164	10169	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	13:10	13:45	0.58	10169	10195	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:70M))
7-Jul-18	13:45	13:55	0.17	10195	10195	MWD Survey	MWD Survey@10182' Inc 13.5° Azm 71.4°
7-Jul-18	13:55	14:05	0.17	10195	10205	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	14:05	14:40	0.58	10205	10227	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:70M))
7-Jul-18	14:40	14:50	0.17	10227	10227	MWD Survey	MWD Survey@10214' Inc 17.1° Azm 66.6°
7-Jul-18	14:50	15:00	0.17	10227	10242	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	15:00	15:30	0.50	10242	10258	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:20R))
7-Jul-18	15:30	16:05	0.58	10258	10258	Rig Service-Inhole	Rig Service-Inhole
7-Jul-18	16:05	16:15	0.17	10258	10258	Survey & Conn.	Survey & Conn.@10245' Inc 19.8° Azm 67.2°
7-Jul-18	16:15	16:30	0.25	10258	10274	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
7-Jul-18	16:30	16:50	0.33	10274	10290	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:30R))
7-Jul-18	16:50	17:00	0.17	10290	10290	MWD Survey	MWD Survey@10276' Inc 21.4° Azm 70.2°
7-Jul-18	17:00	17:15	0.25	10290	10306	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	17:15	17:35	0.33	10306	10321	Sliding	Sliding - (WOB:28.00;GPM :598;TFO:45R))
7-Jul-18	17:35	17:40	0.08	10321	10321	MWD Survey	MWD Survey@10308' Inc 23.3° Azm 73.2°
7-Jul-18	17:40	18:00	0.33	10321	10338	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	18:00	18:25	0.42	10338	10352	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:45R))
7-Jul-18	18:25	18:35	0.17	10352	10352	Survey & Conn.	Survey & Conn.@10339' Inc 24.2° Azm 78.3°
7-Jul-18	18:35	19:10	0.58	10352	10384	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	19:10	19:30	0.33	10384	10384	MWD Survey	MWD Survey@10371' Inc 24.4° Azm 80.4°
7-Jul-18	19:30	19:50	0.33	10384	10396	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:45R)
7-Jul-18	19:50	20:20	0.50	10396	10415	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	20:20	20:30	0.17	10415	10415	MWD Survey	MWD Survey@10402' Inc 24.8° Azm 81.3°
7-Jul-18	20:30	21:00	0.50	10415	10447	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:0G))
7-Jul-18	21:00	21:15	0.25	10447	10447	Survey & Conn.	Survey & Conn.@10433' Inc 27.3° Azm 81.6°
7-Jul-18	21:15	21:25	0.17	10447	10453	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	21:25	21:50	0.42	10453	10478	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:20L))
7-Jul-18	21:50	22:05	0.25	10478	10478	MWD Survey	MWD Survey@10465' Inc 30.6° Azm 80.4°
7-Jul-18	22:05	22:10	0.08	10478	10483	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	22:10	22:35	0.42	10483	10509	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:20L)
7-Jul-18	22:35	22:45	0.17	10509	10509	MWD Survey	MWD Survey@10496' Inc 34.5° Azm 79.1°
7-Jul-18	22:45	23:00	0.25	10509	10519	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
7-Jul-18	23:00	23:25	0.42	10519	10541	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:20L))
7-Jul-18	23:25	23:40	0.25	10541	10541	Survey & Conn.	Survey & Conn.@10528' Inc 37.7° Azm 77°
7-Jul-18	23:40	24:00	0.33	10541	10546	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	00:00	00:20	0.33	10546	10572	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:20L)
8-Jul-18	00:20	00:35	0.25	10572	10572	MWD Survey	MWD Survey@10559' Inc 41.2° Azm 75.2°
8-Jul-18	00:35	00:50	0.25	10572	10581	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	00:50	01:20	0.50	10581	10604	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:20L)
8-Jul-18	01:20	01:30	0.17	10604	10604	MWD Survey	MWD Survey@10591' Inc 44.3° Azm 73.5°
8-Jul-18	01:30	01:40	0.17	10604	10613	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	01:40	02:05	0.42	10613	10635	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:20L)
8-Jul-18	02:05	02:20	0.25	10635	10635	Survey & Conn.	Survey & Conn.@10623' Inc 47.8° Azm 72°
8-Jul-18	02:20	02:35	0.25	10635	10643	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	02:35	03:00	0.42	10643	10667	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:0G))
8-Jul-18	03:00	03:10	0.17	10667	10667	MWD Survey	MWD Survey@10655' Inc 50.6° Azm 71.6°
8-Jul-18	03:10	03:25	0.25	10667	10675	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	03:25	03:55	0.50	10675	10699	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:20R))
8-Jul-18	03:55	04:05	0.17	10699	10699	MWD Survey	MWD Survey@10686' Inc 53° Azm 72.6°
8-Jul-18	04:05	04:20	0.25	10699	10711	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	04:20	04:45	0.42	10711	10731	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:20R:))
8-Jul-18	04:45	04:55	0.17	10731	10731	Circulating	SPR
8-Jul-18	04:55	05:10	0.25	10731	10731	Survey & Conn.	Survey & Conn.@10717' Inc 54.2° Azm 75.3°
8-Jul-18	05:10	05:20	0.17	10731	10734	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)

	JOB NO.:	M18264	Report Time:	0530	14 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Sunday, July 08, 2018 at 0530 to Monday, July 09, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	10762.00	Rotary Hours	0.08	WOB	16	Pick UP	355	Slack Off	225	SPM
End Depth	10825.00	Circulating Hours	1.08	RAB	270	SPP	2350	FlowRate	598 - 598	170
Total Drilled:	63.00	Avg. Total ROP:	34.36	Mud Data						
Total Rotary Drilled:	3.00	Avg. Rotary ROP:	36.00	Type	Brine		PV	1	SOLID	7
Total Drilled Sliding:	60.00	Avg. Slide ROP:	34.29	Weight	9.50 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	1.75	Percent Rotary:	4.76	Viscosity	27	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	22.33	Percent Slide:	95.24	Chlorides	124000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 6:Ulterra CF613, 6 3/4 NOV 4/5 7.0 2.38", 4 1/2 XH Pin X 4 1/2 IF Box, 6 3/4" NMDC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, 6 3/4" Flex DC, 15 stands Drill Pipe, 18- HWDP, .
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Skye Yocum/Eric Vernon							
Incl. In:	56.4	Azm. In:	77.8	Incl. Out:	85.8	Azm. Out:	73.9		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
8-Jul-18	05:50	06:00	0.17	10762.0	10762.0	MWD Survey	MWD Survey@10749' Inc 56.4° Azm 77.8°
8-Jul-18	06:00	06:55	0.92	10762	10793	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:0G)
8-Jul-18	06:55	07:05	0.17	10793	10793	MWD Survey	MWD Survey@10749' Inc 56.4° Azm 77.8°
8-Jul-18	07:05	07:10	0.08	10793	10796	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
8-Jul-18	07:10	08:00	0.83	10796	10825	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:0G)
8-Jul-18	08:00	08:55	0.92	10825	10825	Survey & Conn.	Survey & Conn.@10749' Inc 56.4° Azm 77.8°
8-Jul-18	08:55	09:50	0.92	10825	10825	Circulating	Circulating
8-Jul-18	09:50	16:00	6.17	10825	10825	POOH	POOH, for bit.
8-Jul-18	16:00	18:30	2.50	10825	10825	Change BHA	Change BHA, check scribe, inspect motor and bit. Change muleshoe sleeve. Test MWD and motor.
8-Jul-18	18:30	18:45	0.25	10825	10825	Other	Make Up Bit
8-Jul-18	18:45	24:00	5.25	10825	10825	TIH	TIH
9-Jul-18	00:00	01:55	1.92	10825	10825	TIH	TIH
9-Jul-18	01:55	04:20	2.42	10825	10825	Rig repair	Rig repair / Troubleshoot and Work on Pump # 2

	JOB NO.:	M18264	Report Time:	0530	15 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Monday, July 09, 2018 at 0530 to Tuesday, July 10, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	10825.00	Rotary Hours	1.17	WOB	16	Pick UP	355	Slack Off	225	SPM
End Depth	11042.00	Circulating Hours	4.50	RAB	270	SPP	2350	FlowRate	598 - 598	170
Total Drilled:	217.00	Avg. Total ROP:	40.06	Mud Data						
Total Rotary Drilled:	47.00	Avg. Rotary ROP:	40.29	Type	Brine			PV	1	SOLID
Total Drilled Sliding:	170.00	Avg. Slide ROP:	40.00	Weight	10.10 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	4.25	Percent Rotary:	21.66	Viscosity	31	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	17.75	Percent Slide:	78.34	Chlorides	124000	WL	0	Oil %		0

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 6:Ulterra CF613, 6 3/4 NOV 4/5 7.0 2.38", 4 1/2 XH Pin X 4 1/2 IF Box, 6 3/4" NMDC, UBHO, 6 3/4" NMDC, 6 3/4" NMDC, 6 3/4" Flex DC, 15 stands Drill Pipe, 18- HWDP, .
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eric Vernon				Signature:			
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	85.8	Azm. Out:	73.9		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
9-Jul-18	06:00	06:40	0.67	10825.0	10857.0	Sliding	Sliding - (WOB:16.00;GPM :598.00;TFO:0G)
9-Jul-18	06:40	06:50	0.17	10857	10857	MWD Survey	MWD Survey@10781_Inc 60.4°_Azm 79.1°
9-Jul-18	06:50	07:00	0.17	10857	10862	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	07:00	07:45	0.75	10862	10888	Sliding	Sliding - (WOB:26.00;GPM :598;TFO:10L))
9-Jul-18	07:45	07:55	0.17	10888	10888	MWD Survey	MWD Survey@10812_Inc 64.7°_Azm 78.4°
9-Jul-18	07:55	08:10	0.25	10888	10895	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	08:10	08:45	0.58	10895	10920	Sliding	Sliding - (WOB:26.00;GPM :598;TFO:20L))
9-Jul-18	08:45	09:05	0.33	10920	10920	Survey & Conn.	Survey & Conn.@10844_Inc 96.7°_Azm 78.1°
9-Jul-18	09:05	09:15	0.17	10920	10928	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	09:15	09:55	0.67	10928	10951	Sliding	Sliding - (WOB:26.00;GPM :598.00;TFO:20L)
9-Jul-18	09:55	10:10	0.25	10951	10951	MWD Survey	MWD Survey@10875_Inc 73.8°_Azm 77.2°
9-Jul-18	10:10	10:20	0.17	10951	10959	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	10:20	10:50	0.50	10959	10983	Sliding	Sliding - (WOB:26.00;GPM :598.00;TFO:20L)
9-Jul-18	10:50	11:05	0.25	10983	10983	MWD Survey	MWD Survey@10907_Inc 77.9°_Azm 76.2°
9-Jul-18	11:05	11:15	0.17	10983	10993	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	11:15	12:15	1.00	10993	10993	Circulating	Circulating, unplug shaker overboard line.
9-Jul-18	12:15	12:40	0.42	10993	11014	Sliding	Sliding - (WOB:26.00;GPM :598;TFO:0G))
9-Jul-18	12:40	13:05	0.42	11014	11014	Survey & Conn.	Survey & Conn.@10938_Inc 81.6°_Azm 75.2°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
9-Jul-18	13:05	13:20	0.25	11014	11023	Drilling	Drilling - (WOB:16.00;GPM :598.00;RPM:30)
9-Jul-18	13:20	14:00	0.67	11023	11042	Sliding	Sliding - (WOB:16.00;GPM :598;TFO:0G))
9-Jul-18	14:00	14:15	0.25	11042	11042	MWD Survey	MWD Survey@110971_Inc 85.8°_Azm 73.9°
9-Jul-18	14:15	16:40	2.42	11042	11042	Circulating	Circulating
9-Jul-18	16:40	22:00	5.33	11042	11042	POOH	POOH TD of curve.
9-Jul-18	22:00	23:45	1.75	11042	11042	POOH	POOH / Lay Down BHA # 6
9-Jul-18	23:45	24:00	0.25	11042	11042	Standby	Standby / Reamer Run
10-Jul-18	00:00	05:30	5.50	11042	11042	Standby	Standby / Reamer Run

	JOB NO.:	M18264	Report Time:	0530	16 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Tuesday, July 10, 2018 at 0530 to Wednesday, July 11, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	270	SPP	2350	FlowRate	598 - 598	170	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.10 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	31	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA	
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	N/A	
Second Directional :		Don Sims				20.00	.00	.00		
MWD Operator1		Mathew Walkoviack								
MWD Operator2		Dustin Westall								
Directional Company:		Premier								
Geologist:						Signature:				
Company Man:		Gary Hernandez/Eric Vernon								
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	85.8	Azm. Out:	73.9			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
10-Jul-18	05:30	24:00	18.50	11042.0	11042.0	Standby	Standby / Reamer Run
11-Jul-18	00:00	05:30	5.50	11042	11042	Standby	Standby / Reamer and casing operations.

	JOB NO.:	M18264	Report Time:	0530	17 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Wednesday, July 11, 2018 at 0530 to Thursday, July 12, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	270	SPP	2350	FlowRate	598 - 598	170	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.10 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	31	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA	
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	N/A	
Second Directional :		Don Sims				20.00	.00	.00		
MWD Operator1		Mathew Walkoviack								
MWD Operator2		Dustin Westall								
Directional Company:		Premier								
Geologist:						Signature:				
Company Man:		Gary Hernandez/Eric Vernon								
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	85.8	Azm. Out:	73.9			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
11-Jul-18	05:30	24:00	18.50	11042.0	11042.0	Standby	Standby / Casing Operations
12-Jul-18	00:00	05:30	5.50	11042	11042	Standby	Standby / Casing Operations

	JOB NO.:	M18264	Report Time:	0530	18 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Thursday, July 12, 2018 at 0530 to Friday, July 13, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	270	SPP	2350	FlowRate	598 - 598	170	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.10 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	31	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA					
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	N/A					
Second Directional :		Don Sims				20.00	.00	.00						
MWD Operator1		Mathew Walkoviack												
MWD Operator2		Dustin Westall												
Directional Company:		Premier												
Geologist:						Signature:								
Company Man:		Gary Hernandez/Eric Vernon												
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	85.8	Azm. Out:	73.9							

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
12-Jul-18	05:30	24:00	18.50	11042.0	11042.0	Standby	Standby / Casing Operations
13-Jul-18	00:00	05:30	5.50	11042	11042	Standby	Standby / Casing Operations

	JOB NO.:	M18264	Report Time:	0530	19 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Friday, July 13, 2018 at 0530 to Saturday, July 14, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	270	SPP	2350	FlowRate	598 - 598	170	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Brine			PV	1	SOLID	7
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.10 Kg/m³	GAS	0	YP	1	BHT°	120.2
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	31	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA		
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	N/A		
Second Directional :		Don Sims				20.00	.00	.00			
MWD Operator1		Mathew Walkoviack									
MWD Operator2		Dustin Westall									
Directional Company:		Premier									
Geologist:									Signature:		
Company Man:		Gary Hernandez/Eric Vernon									
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	85.8	Azm. Out:	73.9				

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
13-Jul-18	05:30	24:00	18.50	11042.0	11042.0	Standby	Standby / Casing Operations
14-Jul-18	00:00	05:30	5.50	11042	11042	Standby	Standby / Casing Operations

	JOB NO.:	M18264	Report Time:	0530	20 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Saturday, July 14, 2018 at 0530 to Sunday, July 15, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	16	Pick UP	355	Slack Off	225	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	270	SPP	2350	FlowRate	246 - 598	70	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	Brine			PV	24	SOLID	7
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	10.10 Kg/m³	GAS	0	YP	13	BHT°	120.2
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	31	SAND	0	PH	12	Flow T°	84.0
Below Rotary Hrs.	14.50	Percent Slide:	NA	Chlorides	124000	WL	0			Oil %	0

PERSONNEL						CASING			BHA
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	BHA # 7:6 1/8 REED SK613M 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.5 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 2 stands Drill Pipe, Drill-N-Ream Tool, 63 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eric Vernon				Signature:			
Incl. In:	85.8	Azm. In:	73.9	Incl. Out:	96.1	Azm. Out:	76.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
14-Jul-18	05:30	15:00	9.50	11042.0	11042.0	Standby	Standby/ TIH and Drill out DV Tool / POOH
14-Jul-18	15:00	18:15	3.25	11042	11042	Change BHA	Pick up Directional Tools
14-Jul-18	18:15	24:00	5.75	11042	11042	TIH	TIH with Lateral Assembly / Pick up DP
15-Jul-18	00:00	05:30	5.50	11042	11042	TIH	TIH with Lateral Assembly / Tag Cement @ 10826'

	JOB NO.:	M18264	Report Time:	0530	21 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Sunday, July 15, 2018 at 0530 to Monday, July 16, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	11042.00	Rotary Hours	15.17	WOB	12	Pick Up	215	Slack Off	165	SPM
End Depth	11731.00	Circulating Hours	3.25	RAB	180	SPP	3625	FlowRate	211 - 282	80
Total Drilled:	689.00	Avg. Total ROP:	40.93	Mud Data						
Total Rotary Drilled:	648.00	Avg. Rotary ROP:	42.73	Type	OBM		PV	24	SOLID	19
Total Drilled Sliding:	41.00	Avg. Slide ROP:	24.60	Weight	11.30 Kg/m³	GAS	0	YP	11	BHT°
Slide Hours:	1.67	Percent Rotary:	94.05	Viscosity	55	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	23.33	Percent Slide:	5.95	Chlorides	124000	WL	0	Oil %		59

PERSONNEL						CASING			BHA	
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	BHA # 7:6 1/8 REED SK613M 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.5 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 2 stands Drill Pipe, Drill-N-Ream Tool, 63 stands Drill Pipe, 10 stands 4" Hevi, ,	
Second Directional :		Don Sims				20.00	.00	.00		
MWD Operator1		Mathew Walkoviack								
MWD Operator2		Dustin Westall								
Directional Company:		Premier								
Geologist:						Signature:				
Company Man:		Gary Hernandez/Eric Vernon								
Incl. In:	96.1	Azm. In:	76.8	Incl. Out:	92.6	Azm. Out:	72.1			

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
15-Jul-18	05:30	06:30	1.00	11042.0	11042.0	Other	Pull Trip Nipple and Install Rotating Head
15-Jul-18	06:30	08:00	1.50	11042	11042	Other	Slip and cut drill line
15-Jul-18	08:00	08:30	0.50	11042	11042	Rig Service-Inhole	Rig Service-Inhole
15-Jul-18	08:30	10:30	2.00	11042	11042	Circulating	Circulating Displace hole to 11.3 OBM
15-Jul-18	10:30	14:00	3.50	11042	11042	Drilling	Drilling - (WOB:8.00;GPM :211.00;RPM:30)
15-Jul-18	14:00	14:30	0.50	11042	11052	Drilling	Drilling - (WOB:12.00;GPM :246.00;RPM:35)
15-Jul-18	14:30	15:15	0.75	11052	11052	Circulating	Circulating
15-Jul-18	15:15	15:30	0.25	11052	11052	Other	Preform FIT
15-Jul-18	15:30	18:15	2.75	11052	11164	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:40)
15-Jul-18	18:15	18:25	0.17	11164	11164	Survey & Conn.	Survey & Conn.@11086' Inc 92.9° Azm 72°
15-Jul-18	18:25	18:55	0.50	11164	11176	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:20R))
15-Jul-18	18:55	20:25	1.50	11176	11258	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:35)
15-Jul-18	20:25	20:40	0.25	11258	11258	Survey & Conn.	Survey & Conn.@11180' Inc 94° Azm 73.7°
15-Jul-18	20:40	22:35	1.92	11258	11353	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:40)
15-Jul-18	22:35	22:55	0.33	11353	11353	Survey & Conn.	Survey & Conn.@11275' Inc 96.1° Azm 76.8°
15-Jul-18	22:55	23:35	0.67	11353	11368	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:130L))
15-Jul-18	23:35	24:00	0.42	11368	11390	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:35)
16-Jul-18	00:00	00:25	0.42	11390	11418	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:40)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Jul-18	00:25	00:50	0.42	11418	11448	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:40)
16-Jul-18	00:50	01:05	0.25	11448	11448	Survey & Conn.	Survey & Conn.@11370' Inc 96° Azm 76.2°
16-Jul-18	01:05	01:35	0.50	11448	11462	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:130L))
16-Jul-18	01:35	02:45	1.17	11462	11543	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	02:45	03:00	0.25	11543	11543	Survey & Conn.	Survey & Conn.@11465' Inc 93.5° Azm 74.2°
16-Jul-18	03:00	04:30	1.50	11543	11637	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	04:30	04:45	0.25	11637	11637	Survey & Conn.	Survey & Conn.@11559' Inc 93.1° Azm 74.1°

	JOB NO.:	M18264	Report Time:	0530	22 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Monday, July 16, 2018 at 0530 to Tuesday, July 17, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	11731.00	Rotary Hours	12.58	WOB	9	Pick Up	210	Slack Off	165	SPM
End Depth	12960.00	Circulating Hours	0.50	RAB	180	SPP	3750	FlowRate	282 - 282	80
Total Drilled:	1229.00	Avg. Total ROP:	67.65	Mud Data						
Total Rotary Drilled:	1095.00	Avg. Rotary ROP:	87.02	Type	OBM		PV	1	SOLID	7
Total Drilled Sliding:	134.00	Avg. Slide ROP:	24.00	Weight	11.30 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	5.58	Percent Rotary:	89.10	Viscosity	55	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	21.92	Percent Slide:	10.90	Chlorides	124000	WL	0	Oil %		59

PERSONNEL						CASING			BHA
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	BHA # 7:6 1/8 REED SK613M 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.5 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 2 stands Drill Pipe, Drill-N-Ream Tool, 63 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Gary Hernandez/Eric Vernon							
Incl. In:	92.6	Azm. In:	72.1	Incl. Out:	94.2	Azm. Out:	71.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Jul-18	05:50	06:05	0.25	11731.0	11731.0	Survey & Conn.	Survey & Conn.@11653' Inc 92.6° Azm 74.5°
16-Jul-18	06:05	06:30	0.42	11731	11741	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:70L))
16-Jul-18	06:30	07:15	0.75	11741	11826	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	07:15	07:30	0.25	11826	11826	Survey & Conn.	Survey & Conn.@11748' Inc 96.1° Azm 76.6°
16-Jul-18	07:30	08:00	0.50	11826	11841	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:120L))
16-Jul-18	08:00	09:00	1.00	11841	11920	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	09:00	09:15	0.25	11920	11920	Survey & Conn.	Survey & Conn.@11842' Inc 95.6° Azm 75.8°
16-Jul-18	09:15	09:45	0.50	11920	11935	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:130L))
16-Jul-18	09:45	10:30	0.75	11935	12015	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	10:30	10:45	0.25	12015	12015	Survey & Conn.	Survey & Conn.@11937' Inc 93.8° Azm 73.8°
16-Jul-18	10:45	11:15	0.50	12015	12025	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:100L))
16-Jul-18	11:15	12:00	0.75	12025	12109	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	12:00	12:15	0.25	12109	12109	Survey & Conn.	Survey & Conn.@12031' Inc 92.9° Azm 72.7°
16-Jul-18	12:15	12:30	0.25	12109	12119	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:105L))
16-Jul-18	12:30	13:30	1.00	12119	12204	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	13:30	14:00	0.50	12204	12204	Rig Service-Inhole	Rig Service-Inhole
16-Jul-18	14:00	14:15	0.25	12204	12204	Survey & Conn.	Survey & Conn.@12126' Inc 92.6° Azm 72.3°
16-Jul-18	14:15	15:00	0.75	12204	12299	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
16-Jul-18	15:00	15:15	0.25	12299	12299	Survey & Conn.	Survey & Conn.@12221' Inc 92.4° Azm 72.1°
16-Jul-18	15:15	16:00	0.75	12299	12394	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
16-Jul-18	16:00	16:15	0.25	12394	12394	Survey & Conn.	Survey & Conn.@12316' Inc 92.4° Azm 71.6°
16-Jul-18	16:15	16:30	0.25	12394	12402	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:95R))
16-Jul-18	16:30	17:30	1.00	12402	12488	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:60)
16-Jul-18	17:30	17:45	0.25	12488	12488	Survey & Conn.	Survey & Conn.@12410' Inc 93.9° Azm 73.6°
16-Jul-18	17:45	18:15	0.50	12488	12500	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:100L))
16-Jul-18	18:15	19:25	1.17	12500	12583	Drilling	Drilling - (WOB:12.00;GPM :282.00;RPM:60)
16-Jul-18	19:25	19:40	0.25	12583	12583	Survey & Conn.	Survey & Conn.@12505' Inc 93.6° Azm 72.4°
16-Jul-18	19:40	20:20	0.67	12583	12593	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:100L))
16-Jul-18	20:20	21:10	0.83	12593	12677	Drilling	Drilling - (WOB:14.00;GPM :282.00;RPM:70)
16-Jul-18	21:10	21:25	0.25	12677	12677	Survey & Conn.	Survey & Conn.@12599' Inc 94.3° Azm 72.9°
16-Jul-18	21:25	22:00	0.58	12677	12691	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:100L))
16-Jul-18	22:00	23:00	1.00	12691	12771	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
16-Jul-18	23:00	23:15	0.25	12771	12771	Survey & Conn.	Survey & Conn.@12693' Inc 92.6° Azm 72.1°
16-Jul-18	23:15	23:35	0.33	12771	12778	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:100L))
16-Jul-18	23:35	24:00	0.42	12778	12804	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
17-Jul-18	00:00	00:15	0.25	12804	12817	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
17-Jul-18	00:15	00:50	0.58	12817	12827	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:160L))
17-Jul-18	00:50	01:20	0.50	12827	12865	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	01:20	01:35	0.25	12865	12865	Survey & Conn.	Survey & Conn.@12787' Inc 93.1° Azm 73°
17-Jul-18	01:35	02:05	0.50	12865	12878	Sliding	Sliding - (WOB:20.00;GPM :598;TFO:150L))
17-Jul-18	02:05	03:45	1.67	12878	12960	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	03:45	04:00	0.25	12960	12960	Survey & Conn.	Survey & Conn.@12882' Inc 90.3° Azm 72°

	JOB NO.:	M18264	Report Time:	0530	23 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Tuesday, July 17, 2018 at 0530 to Wednesday, July 18, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	13055.00	Rotary Hours	10.08	WOB	20	Pick UP	215	Slack Off	160	SPM
End Depth	13970.00	Circulating Hours	0.58	RAB	180	SPP	3800	FlowRate	282 - 282	80
Total Drilled:	915.00	Avg. Total ROP:	53.30	Mud Data						
Total Rotary Drilled:	744.00	Avg. Rotary ROP:	73.79	Type	OBM		PV	23	SOLID	17
Total Drilled Sliding:	171.00	Avg. Slide ROP:	24.14	Weight	11.30 Kg/m³	GAS	0	YP	6	BHT°
Slide Hours:	7.08	Percent Rotary:	81.31	Viscosity	54	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	23.25	Percent Slide:	18.69	Chlorides	32000	WL	0	Oil %		61

PERSONNEL						CASING			BHA
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	BHA # 7:6 1/8 REED SK613M 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.5 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 2 stands Drill Pipe, Drill-N-Ream Tool, 63 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Gary Hernandez/Eugene Hernandez							
Incl. In:	94.2	Azm. In:	71.8	Incl. Out:	98.2	Azm. Out:	71.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Jul-18	06:15	06:30	0.25	13055.0	13055.0	Survey & Conn.	Survey & Conn.@12977' Inc 89.8° Azm 72.3°
17-Jul-18	06:30	08:00	1.50	13055	13149	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	08:00	08:15	0.25	13149	13149	Survey & Conn.	Survey & Conn.@13071' Inc 90.3° Azm 72.8°
17-Jul-18	08:15	08:45	0.50	13149	13161	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:150L)
17-Jul-18	08:45	09:45	1.00	13161	13243	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	09:45	10:00	0.25	13243	13243	Survey & Conn.	Survey & Conn.@13165' Inc 91.3° Azm 73.5°
17-Jul-18	10:00	10:30	0.50	13243	13255	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:30R)
17-Jul-18	10:30	11:15	0.75	13255	13331	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	11:15	14:15	3.00	13331	13331	Other	Lost rig power
17-Jul-18	14:15	14:45	0.50	13331	13338	Drilling	Drilling - (WOB:9.00;GPM :282.00;RPM:70)
17-Jul-18	14:45	15:00	0.25	13338	13338	Survey & Conn.	Survey & Conn.@13260' Inc 93.4° Azm 74.7°
17-Jul-18	15:00	16:00	1.00	13338	13432	Drilling	Drilling - (WOB:11.00;GPM :282.00;RPM:70)
17-Jul-18	16:00	16:15	0.25	13432	13432	Survey & Conn.	Survey & Conn.@13354' Inc 92.1° Azm 74.2°
17-Jul-18	16:15	16:45	0.50	13432	13444	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:0)
17-Jul-18	16:45	17:45	1.00	13444	13526	Drilling	Drilling - (WOB:11.00;GPM :282.00;RPM:70)
17-Jul-18	17:45	18:00	0.25	13526	13526	Survey & Conn.	Survey & Conn.@13448' Inc 92.3° Azm 72.8°
17-Jul-18	18:00	18:45	0.75	13526	13541	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:20L)
17-Jul-18	18:45	19:35	0.83	13541	13587	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
17-Jul-18	19:35	20:00	0.42	13587	13595	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:20L)
17-Jul-18	20:00	20:15	0.25	13595	13620	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
17-Jul-18	20:15	20:50	0.58	13620	13620	Rig Service-Inhole	Rig Service-Inhole
17-Jul-18	20:50	21:05	0.25	13620	13620	Survey & Conn.	Survey & Conn.@13542' Inc 90.5° Azm 70.9°
17-Jul-18	21:05	21:35	0.50	13620	13636	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:20L))
17-Jul-18	21:35	22:30	0.92	13636	13715	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
17-Jul-18	22:30	22:45	0.25	13715	13715	Survey & Conn.	Survey & Conn.@13637' Inc 94.2° Azm 71.8°
17-Jul-18	22:45	23:00	0.25	13715	13725	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
17-Jul-18	23:00	23:25	0.42	13725	13740	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:0G)
17-Jul-18	23:25	24:00	0.58	13740	13770	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	00:00	00:25	0.42	13770	13782	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:20R))
18-Jul-18	00:25	00:40	0.25	13782	13809	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	00:40	00:55	0.25	13809	13809	Survey & Conn.	Survey & Conn.@13731' Inc 91.3° Azm 69.8°
18-Jul-18	00:55	01:40	0.75	13809	13831	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:20R))
18-Jul-18	01:40	02:05	0.42	13831	13860	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	02:05	02:40	0.58	13860	13875	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:45R))
18-Jul-18	02:40	02:55	0.25	13875	13903	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	02:55	03:10	0.25	13903	13903	Survey & Conn.	Survey & Conn.@13825' Inc 92.7° Azm 67.5°
18-Jul-18	03:10	04:00	0.83	13903	13920	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:45R))
18-Jul-18	04:00	04:35	0.58	13920	13955	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	04:35	05:30	0.92	13955	13970	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:45R))

	JOB NO.:	M18264	Report Time:	0530	24 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Wednesday, July 18, 2018 at 0530 to Thursday, July 19, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	13998.00	Rotary Hours	4.50	WOB	15	Pick UP	215	Slack Off	160	SPM
End Depth	14373.00	Circulating Hours	2.25	RAB	180	SPP	3800	FlowRate	282 - 282	80
Total Drilled:	375.00	Avg. Total ROP:	28.66	Mud Data						
Total Rotary Drilled:	227.00	Avg. Rotary ROP:	50.44	Type	OBM		PV	23	SOLID	17
Total Drilled Sliding:	148.00	Avg. Slide ROP:	17.24	Weight	11.30 Kg/m³	GAS	0	YP	6	BHT°
Slide Hours:	8.58	Percent Rotary:	60.53	Viscosity	54	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	17.83	Percent Slide:	39.47	Chlorides	32000	WL	0	Oil %		61

PERSONNEL						CASING			BHA
Lead Directional :		Charles Becton				Size	lbf/Ft	Set Depth	BHA # 7:6 1/8 REED SK613M 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.5 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 2 stands Drill Pipe, Drill-N-Ream Tool, 63 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Don Sims				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:						Signature:			
Company Man:		Gary Hernandez/Eugene Hernandez							
Incl. In:	98.2	Azm. In:	71.8	Incl. Out:	98.2	Azm. Out:	71.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Jul-18	05:30	06:10	0.67	13970.0	13998.0	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	06:10	06:25	0.25	13998	13998	Survey & Conn.	Survey & Conn. @13920' Inc 95° Azm 67.5°
18-Jul-18	06:25	07:30	1.08	13998	14016	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:70R))
18-Jul-18	07:30	08:00	0.50	14016	14045	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	08:00	08:45	0.75	14045	14055	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:70R))
18-Jul-18	08:45	09:30	0.75	14055	14092	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:70)
18-Jul-18	09:30	10:15	0.75	14092	14092	Survey & Conn.	Survey & Conn. @14014' Inc 97.7° Azm 66.9°
18-Jul-18	10:15	10:45	0.50	14092	14112	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:110R))
18-Jul-18	10:45	11:15	0.50	14112	14145	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
18-Jul-18	11:15	11:45	0.50	14145	14155	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:110R)
18-Jul-18	11:45	12:15	0.50	14155	14185	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
18-Jul-18	12:15	12:30	0.25	14185	14185	Survey & Conn.	Survey & Conn. @14107' Inc 96.7° Azm 66.7°
18-Jul-18	12:30	15:15	2.75	14185	14237	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:110R)
18-Jul-18	15:15	16:00	0.75	14237	14279	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
18-Jul-18	16:00	16:15	0.25	14279	14279	Survey & Conn.	Survey & Conn. @14201' Inc 96° Azm 69.3°
18-Jul-18	16:15	17:15	1.00	14279	14292	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:120R)
18-Jul-18	17:15	17:40	0.42	14292	14315	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
18-Jul-18	17:40	19:40	2.00	14315	14340	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:145R))

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
18-Jul-18	19:40	20:45	1.08	14340	14373	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
18-Jul-18	20:45	21:00	0.25	14373	14373	MWD Survey	MWD Survey@14295' Inc 98.2° Azm 71.8°
18-Jul-18	21:00	21:30	0.50	14373	14373	Rig Service-Inhole	Rig Service-Inhole
18-Jul-18	21:30	23:00	1.50	14373	14373	Circulating	Circulating/ Prep to POOH
18-Jul-18	23:00	23:20	0.33	14373	14373	POOH	POOH
18-Jul-18	23:20	24:00	0.67	14373	14373	Rig repair	Work on ST80

	JOB NO.:	M18264	Report Time:	0530	25 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Thursday, July 19, 2018 at 0530 to Friday, July 20, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	14373.00	Rotary Hours	1.50	WOB	15	Pick UP	215	Slack Off	160	SPM
End Depth	14459.00	Circulating Hours	2.83	RAB	180	SPP	4150	FlowRate	282 - 282	80
Total Drilled:	86.00	Avg. Total ROP:	17.49	Mud Data						
Total Rotary Drilled:	49.00	Avg. Rotary ROP:	32.67	Type	OBM		PV	24	SOLID	18
Total Drilled Sliding:	37.00	Avg. Slide ROP:	10.83	Weight	11.30 Kg/m³	GAS	0	YP	13	BHT°
Slide Hours:	3.42	Percent Rotary:	56.98	Viscosity	55	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	18.50	Percent Slide:	43.02	Chlorides	47000	WL	0	Oil %		75

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 8: 6 1/8 REED E1234 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.83 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 65 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Charles Becton				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eugene Hernandez				Signature:			
Incl. In:	98.2	Azm. In:	71.8	Incl. Out:	98.2	Azm. Out:	71.8		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
19-Jul-18	09:30	10:00	0.50	14373.0	14373.0	POOH	L/Dn Bit and MWD
19-Jul-18	10:00	12:00	2.00	14373	14373	Change BHA	Adj. mtr bend, scribe, p/up MWD, test MWD, & p/up bit
19-Jul-18	12:00	20:15	8.25	14373	14373	TIH	TIH
19-Jul-18	20:15	21:20	1.08	14373	14373	Reaming	Wash f/13991-14373
19-Jul-18	21:20	24:00	2.67	14373	14391	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:145R)
20-Jul-18	00:00	01:00	1.00	14391	14421	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:50)
20-Jul-18	01:00	01:15	0.25	14421	14421	MWD Survey	MWD Survey@14382' Inc 96.1° Azm 73.1°
20-Jul-18	01:15	02:00	0.75	14421	14440	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:160R))
20-Jul-18	02:00	02:30	0.50	14440	14459	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:90)
20-Jul-18	02:30	03:30	1.00	14459	14459	Circulating	Circulating Troubleshoot MWD (MWD not working)
20-Jul-18	03:30	04:00	0.50	14459	14459	Circulating	Circulating p/slugs

	JOB NO.:	M18264	Report Time:	0530	26 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Friday, July 20, 2018 at 0530 to Saturday, July 21, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	14459.00	Rotary Hours	2.75	WOB	15	Pick UP	215	Slack Off	160	SPM
End Depth	14648.00	Circulating Hours	1.25	RAB	180	SPP	4000	FlowRate	282 - 282	80
Total Drilled:	189.00	Avg. Total ROP:	30.24	Mud Data						
Total Rotary Drilled:	144.00	Avg. Rotary ROP:	52.36	Type	OBM		PV	1	SOLID	7
Total Drilled Sliding:	45.00	Avg. Slide ROP:	12.86	Weight	11.30 Kg/m³	GAS	0	YP	1	BHT°
Slide Hours:	3.50	Percent Rotary:	76.19	Viscosity	31	SAND	0	PH	12	Flow T°
Below Rotary Hrs.	17.75	Percent Slide:	23.81	Chlorides	124000	WL	0	Oil %		75

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 9: 6 1/8 REED E1234 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.83 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 65 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Charles Becton				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eugene Hernandez				Signature:			
Incl. In:	98.2	Azm. In:	71.8	Incl. Out:	89	Azm. Out:	76.2		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
20-Jul-18	11:30	13:00	1.50	14459.0	14459.0	Change BHA	Change BHA, change m/s sleeve, MWD tool and test, OK.
20-Jul-18	13:00	19:00	6.00	14459	14459	TIH	TIH
20-Jul-18	19:00	20:00	1.00	14459	14459	Rig Service-Inhole	Rig Service-Inhole
20-Jul-18	20:00	22:00	2.00	14459	14459	TIH	TIH
20-Jul-18	22:00	22:15	0.25	14459	14459	Survey & Conn.	Survey & Conn. @14382' Inc 96.1° Azm 73.1°
20-Jul-18	22:15	23:45	1.50	14459	14469	Sliding	Sliding - (WOB:20.00;GPM :282;TFO:170R))
20-Jul-18	23:45	24:00	0.25	14469	14469	MWD Survey	MWD Survey@14382' Inc 96.1° Azm 73.1°
21-Jul-18	00:00	00:30	0.50	14469	14505	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
21-Jul-18	00:30	01:30	1.00	14505	14525	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:170R)
21-Jul-18	01:30	02:15	0.75	14525	14554	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
21-Jul-18	02:15	02:30	0.25	14554	14554	Survey & Conn.	Survey & Conn. @14476' Inc 93.7° Azm 76.4°
21-Jul-18	02:30	03:15	0.75	14554	14562	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:170R)
21-Jul-18	03:15	04:00	0.75	14562	14605	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
21-Jul-18	04:00	04:15	0.25	14605	14612	Sliding	Sliding - (WOB:20.00;GPM :282.00;TFO:160R)
21-Jul-18	04:15	05:00	0.75	14612	14648	Drilling	Drilling - (WOB:15.00;GPM :282.00;RPM:60)
21-Jul-18	05:00	05:15	0.25	14648	14648	Survey & Conn.	Survey & Conn. @14570' Inc 88.5° Azm 76.8°

	JOB NO.:	M18264	Report Time:	0530	27 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Saturday, July 21, 2018 at 0530 to Sunday, July 22, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	14743.00	Rotary Hours	14.08	WOB	22	Pick Up	215	Slack Off	160	SPM
End Depth	15686.00	Circulating Hours	0.58	RAB	180	SPP	4300	FlowRate	282 - 306	87
Total Drilled:	936.00	Avg. Total ROP:	49.92	Mud Data						
Total Rotary Drilled:	868.00	Avg. Rotary ROP:	61.63	Type	OBM		PV	24	SOLID	18
Total Drilled Sliding:	68.00	Avg. Slide ROP:	14.57	Weight	11.30 Kg/m³	GAS	0	YP	13	BHT°
Slide Hours:	4.67	Percent Rotary:	92.74	Viscosity	55	SAND	0	PH	3.4	Flow T°
Below Rotary Hrs.	21.92	Percent Slide:	7.26	Chlorides	47000	WL	0	Oil %		80

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 9: 6 1/8 REED E1234 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.83 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 65 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Charles Becton				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eugene Hernandez				Signature:			
Incl. In:	89	Azm. In:	76.2	Incl. Out:	89.3	Azm. Out:	76.2		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
21-Jul-18	06:50	07:10	0.33	14743.0	14743.0	Survey & Conn.	Survey & Conn.@14665' Inc 91.6° Azm 77.8°
21-Jul-18	07:10	08:30	1.33	14743	14763	Sliding	Sliding - (WOB:38.00;GPM :282;TFO:170L))
21-Jul-18	08:30	09:25	0.92	14763	14806	Drilling	Drilling - (WOB:20.00;GPM :306.00;RPM:60)
21-Jul-18	09:25	10:00	0.58	14806	14814	Sliding	Sliding - (WOB:38.00;GPM :282.00;TFO:170L)
21-Jul-18	10:00	10:25	0.42	14814	14837	Drilling	Drilling - (WOB:20.00;GPM :306.00;RPM:60)
21-Jul-18	10:25	10:40	0.25	14837	14837	Survey & Conn.	Survey & Conn.@14759' Inc 88.4° Azm 77.2°
21-Jul-18	10:40	11:05	0.42	14837	14857	Drilling	Drilling - (WOB:20.00;GPM :306.00;RPM:60)
21-Jul-18	11:05	11:10	0.08	14857	14857	Circulating	Circulating, check shot
21-Jul-18	11:10	11:45	0.58	14857	14867	Sliding	Sliding - (WOB:38.00;GPM :282;TFO:0G))
21-Jul-18	11:45	12:10	0.42	14867	14895	Drilling	Drilling - (WOB:20.00;GPM :306.00;RPM:60)
21-Jul-18	12:10	12:15	0.08	14895	14895	Circulating	Circulating, check shot.
21-Jul-18	12:15	12:50	0.58	14895	14905	Sliding	Sliding - (WOB:38.00;GPM :282;TFO:0G))
21-Jul-18	12:50	13:10	0.33	14905	14931	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	13:10	13:25	0.25	14931	14931	Survey & Conn.	Survey & Conn.@14853' Inc 87.3° Azm 77.8°
21-Jul-18	13:25	14:55	1.50	14931	15025	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	14:55	15:10	0.25	15025	15025	Survey & Conn.	Survey & Conn.@14947' Inc 89.9° Azm 77.5°
21-Jul-18	15:10	16:30	1.33	15025	15120	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	16:30	16:50	0.33	15120	15120	Survey & Conn.	Survey & Conn.@15042' Inc 89.8° Azm 77.4°

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
21-Jul-18	16:50	17:55	1.08	15120	15214	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	17:55	18:20	0.42	15214	15214	Rig Service-Inhole	Rig Service
21-Jul-18	18:20	18:30	0.17	15214	15214	Survey & Conn.	Survey & Conn.@15136' Inc 89.3° Azm 77.2°
21-Jul-18	18:30	20:15	1.75	15214	15309	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	20:15	20:30	0.25	15309	15309	Survey & Conn.	Survey & Conn.@15231' Inc 89.7° Azm 76.9°
21-Jul-18	20:30	21:45	1.25	15309	15403	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	21:45	22:00	0.25	15403	15403	Survey & Conn.	Survey & Conn.@15325' Inc 88.1° Azm 76.4°
21-Jul-18	22:00	22:10	0.17	15403	15410	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
21-Jul-18	22:10	22:45	0.58	15410	15420	Sliding	Sliding - (WOB:38.00;GPM :282.00;TFO:0G)
21-Jul-18	22:45	24:00	1.25	15420	15498	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	00:15	01:15	1.00	15505	15515	Sliding	Sliding - (WOB:38.00;GPM :282.00;TFO:20L)
22-Jul-18	01:15	02:45	1.50	15515	15592	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	02:45	03:00	0.25	15592	15592	Survey & Conn.	Survey & Conn.@15514' Inc 90.8° Azm 77.3°
22-Jul-18	03:00	04:45	1.75	15592	15686	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	04:45	05:00	0.25	15686	15686	Survey & Conn.	Survey & Conn.@15608' Inc 91.3° Azm 77.7°

	JOB NO.:	M18264	Report Time:	0530	28 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Sunday, July 22, 2018 at 0530 to Monday, July 23, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters						
Start Depth	15781.00	Rotary Hours	4.50	WOB	22	Pick UP	215	Slack Off	160	SPM
End Depth	16047.00	Circulating Hours	2.00	RAB	180	SPP	4300	FlowRate	282 - 306	87
Total Drilled:	266.00	Avg. Total ROP:	49.88	Mud Data						
Total Rotary Drilled:	256.00	Avg. Rotary ROP:	56.89	Type	OBM		PV	24	SOLID	18
Total Drilled Sliding:	10.00	Avg. Slide ROP:	12.00	Weight	11.30 Kg/m³	GAS	0	YP	13	BHT°
Slide Hours:	0.83	Percent Rotary:	96.24	Viscosity	55	SAND	0	PH	3.4	Flow T°
Below Rotary Hrs.	17.33	Percent Slide:	3.76	Chlorides	47000	WL	0	Oil %		80

PERSONNEL						CASING			BHA
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	BHA # 9: 6 1/8 REED E1234 3X12 3X16 Jets, 5 Gyrodata 6/7 8.0 1.83 ABH, Float Sub (Double), NMDC, UBHO, NMDC, NMDC, NM Flex, X-Over, 65 stands Drill Pipe, 10 stands 4" Hevi, ,
Second Directional :		Charles Becton				20.00	.00	.00	
MWD Operator1		Mathew Walkoviack							
MWD Operator2		Dustin Westall							
Directional Company:		Premier							
Geologist:									
Company Man:		Gary Hernandez/Eugene Hernandez				Signature:			
Incl. In:	89.3	Azm. In:	79.8	Incl. Out:	89.3	Azm. Out:	76.2		

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
22-Jul-18	06:40	06:50	0.17	15781.0	15781.0	Survey & Conn.	Survey & Conn.@15703' Inc 89.8° Azm 77°
22-Jul-18	06:50	07:30	0.67	15781	15806	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	07:30	08:20	0.83	15806	15816	Sliding	Sliding - (WOB:38.00;GPM :282;TFO:30L))
22-Jul-18	08:20	09:25	1.08	15816	15874	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	09:25	09:40	0.25	15874	15874	Survey & Conn.	Survey & Conn.@15796' Inc 90.5° Azm 77°
22-Jul-18	09:40	11:10	1.50	15874	15969	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	11:10	11:25	0.25	15969	15969	Survey & Conn.	Survey & Conn.@15891' Inc 90.4° Azm 76.4°
22-Jul-18	11:25	12:40	1.25	15969	16047	Drilling	Drilling - (WOB:22.00;GPM :306.00;RPM:60)
22-Jul-18	12:40	14:40	2.00	16047	16047	Circulating	Circulating, sweep hole for reamer trip. TD of lateral.
22-Jul-18	14:40	23:00	8.33	16047	16047	POOH	POOH
22-Jul-18	23:00	24:00	1.00	16047	16047	POOH	POOH L/dn Bit, flt sub & mtr / Rack collars in derrick

	JOB NO.:	M18264	Report Time:	0530	29 of 29
	Company:	Abraxas	API JOB #	42-475-37466	
	LOCATION:	2.5 miles SW of Pyote TX	WORK ORDER#		
	RIG NAME:	Patterson 228	FIELD:		
	STATE:	Texas	Legal Desc.	Township-Section-Range	
	COUNTY:	Ward		-37-	
	WELL NAME:	Mesquite 37 U103H			

From Monday, July 23, 2018 at 0530 to Tuesday, July 24, 2018 at 0530

DRILLING SUMMARY				Drilling Parameters							
Start Depth	0.00	Rotary Hours	0.00	WOB	22	Pick UP	215	Slack Off	160	SPM	
End Depth	0.00	Circulating Hours	0.00	RAB	180	SPP	4300	FlowRate	306 - 306	87	
Total Drilled:	0.00	Avg. Total ROP:	NA	Mud Data							
Total Rotary Drilled:	0.00	Avg. Rotary ROP:	NA	Type	OBM		PV	24	SOLID	18	
Total Drilled Sliding:	0.00	Avg. Slide ROP:	NA	Weight	11.30 Kg/m³	GAS	0	YP	13	BHT°	172.0
Slide Hours:	0.00	Percent Rotary:	NA	Viscosity	55	SAND	0	PH	3.4	Flow T°	104.0
Below Rotary Hrs.	0.00	Percent Slide:	NA	Chlorides	47000	WL	0		Oil %	80	

PERSONNEL						CASING			BHA					
Lead Directional :		Brian Hancock				Size	lbf/Ft	Set Depth	N/A					
Second Directional :		Charles Becton				20.00	.00	.00						
MWD Operator1		Mathew Walkoviack												
MWD Operator2		Dustin Westall												
Directional Company:		Premier												
Geologist:												Signature:		
Company Man:		Gary Hernandez/Eugene Hernandez												
Incl. In:	89.3	Azm. In:	76.2	Incl. Out:	0	Azm. Out:	0							

#### GENERAL COMMENT

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
24-Jul-18	00:00	05:30	5.50	16047.0	16047.0	Standby	Standby /TIH Reaming curve and circ

## **Section Three**

### **Bottom Hole Assembly Recap**

## Well Information

BHA # 1

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Steerable Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	13.42	Start Depth	108.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	21.67 / 6.42	End Depth	2360.00	Range
09-Jun-18 @ 20:15	11-Jun-18 @ 13:00	Slide Hours	1.83	Percent Rotary:	93.69	30 - 60
		Below Rotary Hrs.	40.75	Percent Slide:	6.31	300 - 704
Total Drilled:	2252.00	Avg. Total ROP:	147.67	Incl.	Azimuth	
Total Rotary Drilled:	2110.00	Avg. Rotary ROP:	157.27	IN	OUT	IN
Total Drilled Sliding:	142.00	Avg. Slide ROP:	77.45	1.2	.0	.00
SPP	275 - 1850	Weights	SO	60 - 120	PU	60 - 134
				RAB	55 - 128	Reason POOH
						TD

Bit Data				MOTOR DATA				Mud Data			
Drillforman	12 1/4" Drillformance 616 6x18's,	National 8" 7/8 4.0, 1.83 ADJ, 12" stab				Type	WBM				
Type Bit	PDC		Model:	40	Pad OD	WT	9.0	GAS	0	Solids	0
TFA	1.69 in <sup>2</sup>		MFG.	National	8 5/16	Vis	28	SAND	0	T °	72.0
JETS	18	18	18	18	18	Bend °	1.83	Stator/Rotor	7/8	PV	1
	18	16				Bit to Bend	7.1	Motor Diff	500.0	YP	1
Bit Coding	IADC#		Revs/Gal	0.17	PUMPS	PUMP1	PUMP2				
IR	OR	DL	Loc	BS	G	ODL	NB Stab	12.0	NAME		
1	2	BT	S	X	0	WT	Rotor Jet	0	Model		
Bit Drop:	996kPa @ 704 GPM	Sensor Offsets				Type					
Comments		Sensor	69.96	Sonic	0	Liner	.00		.00		
		Gamma	0	DNCS	0	Stroke	.00		.00		
		Restiv	0	GYRO	0	Efficiency	.00		.00		

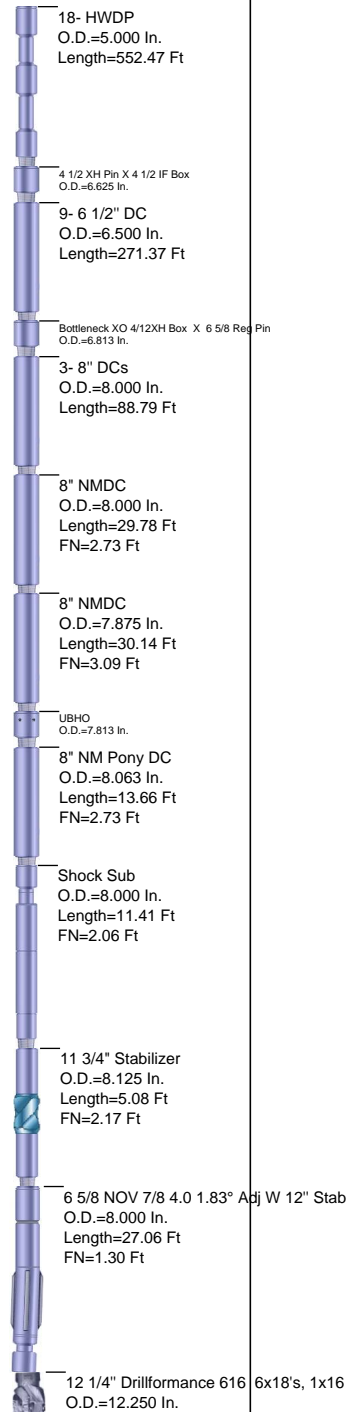
National 8" 7/8 4.0, 1.83 ADJ, 12" stab  
 RPM= 0.17  
 Min/Max GPM 300-900  
 Bit to Bend= 7.1  
 12" Stab On Motor  
 Max Diff = 855 psi

Bit to Sensor=

Drillformance 616  
 SN# 23544  
 6 Blade 16 mm cutters with back up cutters  
 Jets 6x18, 1x16 = 1.69 TFA

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	12 1/4" Drillformance 616 6x18's, 1x16	23544		12 1/4	0.75	0.75	6 5/8 REGP
2	6 5/8 NOV 7/8 4.0 1.83° Adj W 12" Stab	800-40-105		8	27.06	27.81	6 5/8 REGB
3	11 3/4" Stabilizer	111	2 7/8	8 1/8	5.08	32.89	6 5/8 REGB
4	Shock Sub	12	2 7/8	8	11.41	44.30	6 5/8 REGB
5	8" NM Pony DC	2901	2 13/16	8 1/16	13.66	57.96	6 5/8 REGB
6	UBHO	BT80747	3 1/8	7 13/16	3.73	61.69	6 5/8 REGB
7	8" NMDC	3625	3 1/4	7 7/8	30.14	91.83	6 5/8 REGB
8	8" NMDC	4445	3 1/4	8	29.78	121.61	6 5/8 REGB
9	3- 8" DCs	Rig DC	2 3/4	8	88.79	210.40	6 5/8 REGB
10	Bottleneck XO 4/12XH Box X 6 5/8 Reg Pin	4688	2 13/16	6 13/16	3.03	213.43	4 1/2 XHB
11	9- 6 1/2" DC	Rig	2 3/4	6 1/2	271.37	484.80	4 1/2 XHB
12	4 1/2 XH Pin X 4 1/2 IFB	DR28059	2 7/8	6 5/8	2.23	487.03	4 1/2 IFB
13	18- HWDP	Rig HWDP	3	5	552.47	1039.50	4 1/2 IFB
14					0.00	1039.50	



## Well Information

BHA # 2

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Steerable Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	44.83	Start Depth	2360.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	57.50 / 2.42	End Depth	8212.00	Range
30-Jun-18 @ 12:20	03-Jul-18 @ 17:00	Slide Hours	10.25	Percent Rotary:	94.99	40 - 60
		Below Rotary Hrs.	76.67	Percent Slide:	5.01	450 - 704
Total Drilled:	5852.00	Avg. Total ROP:	106.24	Incl.	Azimuth	
Total Rotary Drilled:	5559.00	Avg. Rotary ROP:	123.99	IN	OUT	IN
Total Drilled Sliding:	293.00	Avg. Slide ROP:	28.59	.0	.0	.00
SPP	820 - 2200	Weights	SO	120 - 210	PU	134 - 280
				RAB	128 - 240	Reason POOH
						PR

## Bit Data

## MOTOR DATA

## Mud Data

REED	Reed SKC716M 7x16's	Model:	G9	Pad OD	WT	9.5 Kg/m³	GAS	0	Solids	6
Type Bit	PDC	MFG.	Gearcon	6 7/8	Vis	28	SAND	0	T °	84.0
TFA	1.37 in²	Bend °	1.5	Stator/Rotor	7/8	PV	1	PH	11	Chlor
JETS	16 16 16 16 16	Bit to Bend	4.6	Motor Diff	600.0	YP	1	WL	0	Oil %
Bit Coding	IADC#	Revs/Gal	0.24	PUMPS	PUMP1	PUMP2				
IR	OR	DL	Loc	BS	G	ODL	NB Stab	8.5	NAME	
4	3	CT	A		0		Rotor Jet	55.08	Model	
Bit Drop:	1584kPa @ 704 GPM	Sensor Offsets	Type							
Comments	Sensor	0	Sonic	0	Liner	.00			.00	
	Gamma	0	DNsc	0	Stroke	.00			.00	
	Restiv	0	GYRO	0	Efficiency	.00			.00	

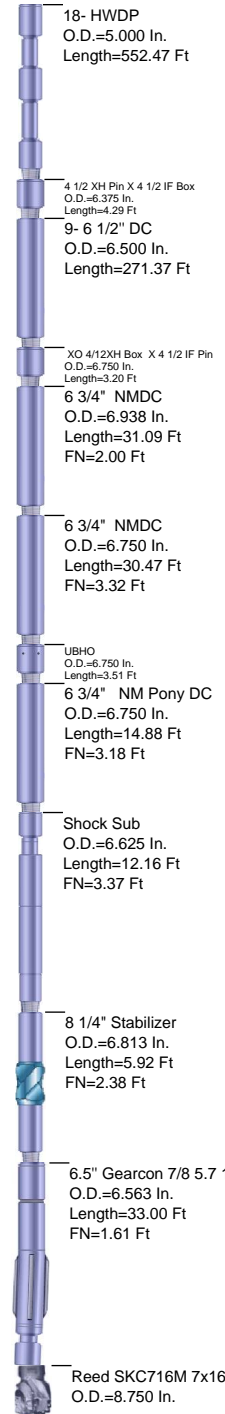
6 1/2 7/8, 5.7, 1.5 FBH, 8 1/2 stab  
RPM= .242 R/G  
Min/Max GPM 300-600  
Bit to Bend= 4.62  
Max Diff =1280

Bit to Sensor =78.11  
Bit to gamma = 76.21

Reed SKC716M  
SN# A246867  
7 Bld.w/16mm Cutters/ B/U cutters  
3.5" Gage  
Jets = 7x16  
1.37 TFA

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Reed SKC716M 7x16's	A246867		8 3/4	0.90	0.90	4 1/2 REGP
2	6.5" Gearcon 7/8 5.7 1.5° FBH, 8 1/2" Stab	16507		6 9/16	33.00	33.90	4 1/2 IFB
3	8 1/4" Stabilizer	8.25	2 7/8	6 13/16	5.92	39.82	4 1/2 IFB
4	Shock Sub	1144-07	2 1/4	6 5/8	12.16	51.98	4 1/2 IFB
5	6 3/4" NM Pony DC	5195	3 1/4	6 3/4	14.88	66.86	4 1/2 IFB
6	UBHO	BT675946	3 1/4	6 3/4	3.51	70.37	4 1/2 IFB
7	6 3/4" NMDC	5009	3 1/4	6 3/4	30.47	100.84	4 1/2 IFB
8	6 3/4" NMDC	7647	3 1/4	6 15/16	31.09	131.93	4 1/2 IFB
9	XO 4/12XH Box X 4 1/2 IF Pin	3635	2 3/4	6 3/4	3.20	135.13	4 1/2 XHB
10	9- 6 1/2" DC	Rig	2 3/4	6 1/2	271.37	406.50	4 1/2 XHB
11	4 1/2 XH Pin X 4 1/2 IF Box	3838	2 15/16	6 3/8	4.29	410.79	4 1/2 IFB
12	18- HWDP	Rig HWDP	3	5	552.47	963.26	4 1/2 IFB
13					0.00	963.26	



## Well Information

BHA # 3

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Steerable Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	10.83	Start Depth	8212.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	15.00 / 2.17	End Depth	8755.00	Range
03-Jul-18 @ 17:00	04-Jul-18 @ 23:00	Slide Hours	2.00	Percent Rotary:	94.11	60 - 60
		Below Rotary Hrs.	30.00	Percent Slide:	5.89	598 - 598
Total Drilled:	543.00	Avg. Total ROP:	42.31	Incl.	Azimuth	
Total Rotary Drilled:	511.00	Avg. Rotary ROP:	47.17	IN	OUT	IN
Total Drilled Sliding:	32.00	Avg. Slide ROP:	16.00	.0	.0	.00
SPP	1820 - 2050	Weights	SO	205 - 210	PU	280 - 290
				RAB	240 - 240	Reason POOH
						PR

## Bit Data

## MOTOR DATA

## Mud Data

Ultrerra	Ultrerra 716M 7x16	Model:	G9	Pad OD	WT	9.5 Kg/m³	GAS	0	Solids	6
Type Bit	PDC	MFG.	Gearcon	6 7/8	Vis	28	SAND	0	T °	84.0
TFA	1.37 in²	Bend °	1.5	Stator/Rotor	7/8	PV	1	PH	11	Chlor
JETS	16 16 16 16 16	Bit to Bend	4.6	Motor Diff	600.0	YP	1	WL	0	Oil %
Bit Coding	IADC#	Revs/Gal	0.24	PUMPS	PUMP1	PUMP2				
IR	OR	DL	Loc	BS	G	ODL	NB Stab	8.5	NAME	
1	2	WT	A	X	0	WT	Rotor Jet	0	Model	
Bit Drop:	1143kPa @ 598 GPM	Sensor Offsets	Type							
Comments	Sensor	0	Sonic	0	Liner	.00			.00	
	Gamma	0	DNsc	0	Stroke	.00			.00	
	Restiv	0	GYRO	0	Efficiency	.00			.00	

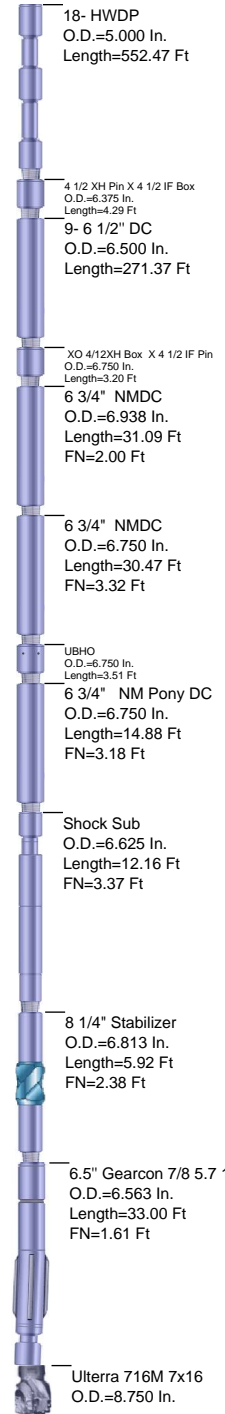
6 1/2 7/8, 5.7, 1.5 FBH, 8 1/2 stab  
RPM= .242 R/G  
Min/Max GPM 300-600  
Bit to Bend= 4.62  
Max Diff =1280

Bit to Sensor =78.11  
Bit to gamma = 76.21

Ultrerra 716M  
SN# 39373  
7 Bld.w/16mm Cutters/ B/U cutters  
3.0" Gage  
Jets = 7x16  
1.37 TFA

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Ultrerra 716M 7x16	39373		8 3/4	0.90	0.90	4 1/2 REGP
2	6.5" Gearcon 7/8 5.7 1.5° FBH, 8 1/2" Stab	16507		6 9/16	33.00	33.90	4 1/2 IFB
3	8 1/4" Stabilizer	8.25	2 7/8	6 13/16	5.92	39.82	4 1/2 IFB
4	Shock Sub	1144-07	2 1/4	6 5/8	12.16	51.98	4 1/2 IFB
5	6 3/4" NM Pony DC	5195	3 1/4	6 3/4	14.88	66.86	4 1/2 IFB
6	UBHO	BT675946	3 1/4	6 3/4	3.51	70.37	4 1/2 IFB
7	6 3/4" NMDC	5009	3 1/4	6 3/4	30.47	100.84	4 1/2 IFB
8	6 3/4" NMDC	7647	3 1/4	6 15/16	31.09	131.93	4 1/2 IFB
9	XO 4/12XH Pin X 4 1/2 IF Pin	3635	2 3/4	6 3/4	3.20	135.13	4 1/2 XHB
10	9- 6 1/2" DC	Rig	2 3/4	6 1/2	271.37	406.50	4 1/2 XHB
11	4 1/2 XH Pin X 4 1/2 IF Box	3838	2 15/16	6 3/8	4.29	410.79	4 1/2 IFB
12	18- HWDP	Rig HWDP	3	5	552.47	963.26	4 1/2 IFB
13					0.00	963.26	



## Well Information

BHA # 4

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Steerable Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	17.50	Start Depth	8755.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	27.42 / 3.08	End Depth	10083.00	Range
04-Jul-18 @ 23:00	06-Jul-18 @ 24:00	Slide Hours	6.83	Percent Rotary:	91.87	50 - 65
		Below Rotary Hrs.	47.67	Percent Slide:	8.13	598 - 598
Total Drilled:	1328.00	Avg. Total ROP:	54.58	Incl.	Azimuth	
Total Rotary Drilled:	1220.00	Avg. Rotary ROP:	69.71	IN	OUT	OUT
Total Drilled Sliding:	108.00	Avg. Slide ROP:	15.80	.0	.0	.00
SPP	2050 - 2500	Weights	SO	205 - 240	PU	290 - 340
				RAB	240 - 270	Reason POOH
						BHA

Bit Data							MOTOR DATA					Mud Data												
BAKER		Baker T607FX 7x15's					GDT 7/8 5.7, 1.5 ABH, 8.5 stb					Type		Brine										
Type Bit				PDC			Model:		G9		Pad OD		WT		9.5 Kg/m³		GAS		0		Solids		7	
TFA		1.21 in²					MFG.		Gearcon		6 13/16		Vis		27		SAND		0		T °		84.0	
JETS		15	15	15	15	15	Bend °		1.5		Stator/Rotor		7/8		PV		1	PH		12	Chlor		124000	
		15	15				Bit to Bend		5.9		Motor Diff		600.0		YP		1	WL		0	Oil %		0	
Bit Coding				IADC#				Revs/Gal		0.24		PUMPS		PUMP1				PUMP2						
IR	OR	DL	Loc	BS	G	ODL	NB Stab		8.5		NAME													
2	3	CT	A	X	-12 5		Rotor Jet		0		Model													
Bit Drop:			1480kPa @ 598 GPM				Sensor Offsets			Type														
Comments					Sensor	0	Sonic	0	Liner		.00				.00									
					Gamma	0	DNSS	0	Stroke		.00				.00									
					Restiv	0	GYRO	0	Efficiency		.00				.00									

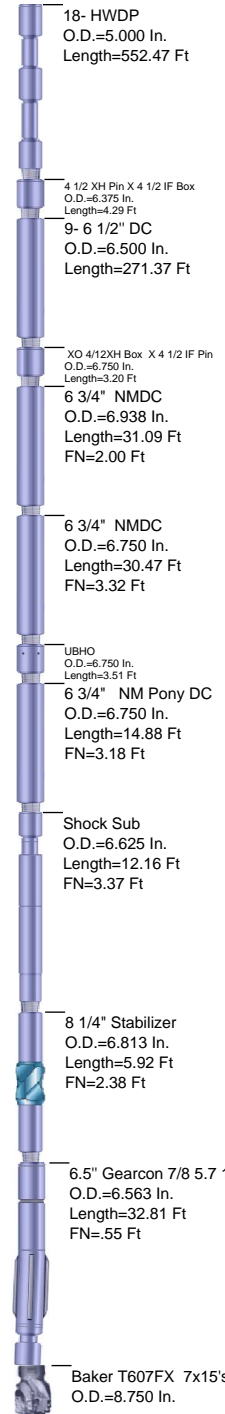
6 1/2 7/8, 5.7, 1.5 ABH, 8 1/2 stab  
RPM= .242 R/G  
Min/Max GPM 300-600  
Bit to Bend= 5.93  
Max Diff =1280

Bit to Sensor = 77.97  
Bit to gamma = 76.07

Baker T607FX 716M  
SN# 7162165  
7 Bld.w/19mm Cutters  
4 1/4" Gage  
Jets = 7x15  
1.21 TFA

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Baker T607FX 7x15's	7162165		8 3/4	0.95	0.95	4 1/2 REGP
2	6.5" Gearcon 7/8 5.7 1.5° ABH 8 1/2" Stab	16501		6 9/16	32.81	33.76	4 1/2 IFB
3	8 1/4" Stabilizer	8.25	2 7/8	6 13/16	5.92	39.68	4 1/2 IFB
4	Shock Sub	1144-07	2 1/4	6 5/8	12.16	51.84	4 1/2 IFB
5	6 3/4" NM Pony DC	5195	3 1/4	6 3/4	14.88	66.72	4 1/2 IFB
6	UBHO	BT675946	3 1/4	6 3/4	3.51	70.23	4 1/2 IFB
7	6 3/4" NMDC	5009	3 1/4	6 3/4	30.47	100.70	4 1/2 IFB
8	6 3/4" NMDC	7647	3 1/4	6 15/16	31.09	131.79	4 1/2 IFB
9	XO 4/12XH Box X 4 1/2 IF Pin	3635	2 3/4	6 3/4	3.20	134.99	4 1/2 XHB
10	9- 6 1/2" DC	Rig	2 3/4	6 1/2	271.37	406.36	4 1/2 XHB
11	4 1/2 XH Pin X 4 1/2 IF Box	3838	2 15/16	6 3/8	4.29	410.65	4 1/2 IFB
12	18- HWDP	Rig HWDP	3	5	552.47	963.12	4 1/2 IFB
13					0.00	963.12	



## Well Information

BHA # 5

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Slick Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	4.92	Start Depth	10083.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	22.50 / 5.58	End Depth	10825.00	Range
07-Jul-18 @ 00:00	08-Jul-18 @ 18:30	Slide Hours	12.00	Percent Rotary:	28.84	30 - 60
		Below Rotary Hrs.	42.50	Percent Slide:	71.16	598 - 598
Total Drilled:	742.00	Avg. Total ROP:	43.86	Incl.	Azimuth	
Total Rotary Drilled:	214.00	Avg. Rotary ROP:	43.53	IN OUT	IN	OUT
Total Drilled Sliding:	528.00	Avg. Slide ROP:	44.00	.0 .0	.00	.00
SPP	2000 - 2350	Weights	SO	225 - 255	PU	340 - 355
				RAB	270 - 270	Reason POOH
						HR

Bit Data				MOTOR DATA				Mud Data			
BAKER	Baker DD406X 6x16's			6 3/4 4/5 7.0, 2.38 ADJ slick				Type	Brine		
Type Bit	PDC			Model:	36	Pad OD	WT	9.5 Kg/m <sup>3</sup>	GAS	0	Solids
TFA	1.18 in <sup>2</sup>			MFG.	NOV	7 7/16	Vis	27	SAND	0	T °
JETS	16	16	16	16	16	Bend °	2.38	Stator/Rotor	4/5	PV	1
	16				Bit to Bend	6.1	Motor Diff	750.0	YP	1	WL
Bit Coding	IADC#			Revs/Gal	0.52	PUMPS	PUMP1	PUMP2	Chlor	124000	Oil %
IR	OR	DL	Loc	BS	G	ODL	NB Stab	0.0	NAME		
1	4	CT	A	X	-0.06 25	BT	Rotor Jet	16.92	Model		
Bit Drop:	1556kPa @ 598 GPM			Sensor Offsets	Type						
Comments	Sensor	0	Sonic	0	Liner	.00		.00			
	Gamma	0	DNCS	0	Stroke	.00		.00			
	Restiv	0	GYRO	0	Efficiency	.00		.00			

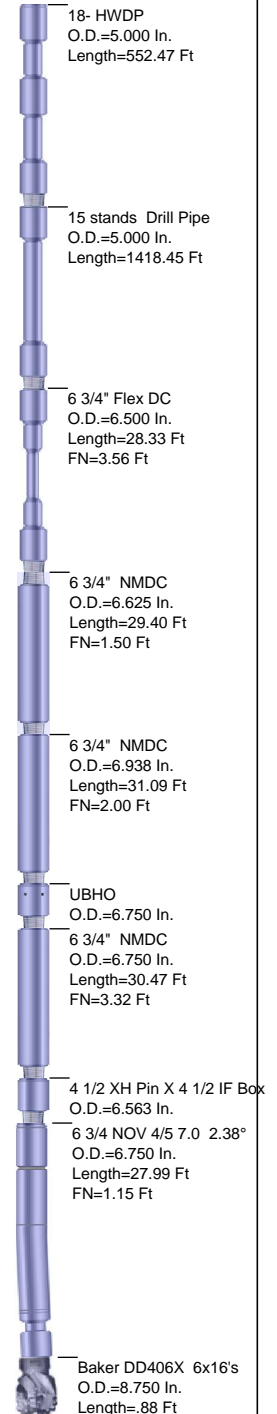
6 3/4 4/5, 7.0, 2.38 ABH,  
RPM= .52 R/G  
Min/Max GPM 300-600  
Bit to Bend= 6.14  
Max Diff =1500

Baker DD406X  
SN# 5285308  
6 Bld.w/13mm Cutters  
3" Gage  
Jets = 6x16  
1.18 TFA

Bit to Sensor =  
Bit to gamma =

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Baker DD406X 6x16's	5285308		8 3/4	0.88	0.88	4 1/2 REGP
2	6 3/4 NOV 4/5 7.0 2.38°	MM3606750056		6 3/4	27.99	28.87	4 1/2 XHB
3	4 1/2 XH Pin X 4 1/2 IF Box	4235	2 3/4	6 9/16	2.73	31.60	4 1/2 IFB
4	6 3/4" NMDC	5009	3 1/4	6 3/4	30.47	62.07	4 1/2 IFB
5	UBHO	BT675946	3 1/4	6 3/4	3.51	65.58	4 1/2 IFB
6	6 3/4" NMDC	7647	3 1/4	6 15/16	31.09	96.67	4 1/2 IFB
7	6 3/4" NMDC	5150	2 13/16	6 5/8	29.40	126.07	4 1/2 IFP
8	6 3/4" Flex DC	2399	2 13/16	6 1/2	28.33	154.40	4 1/2 IFB
9	15 stands Drill Pipe	DP-4.3-S-135	4.3	5	1,418.45	1572.85	4 1/2 IFB
10	18- HWDP	Rig HWDP	3	5	552.47	2125.32	4 1/2 IFB
11					0.00	2125.32	



## Well Information

BHA # 6

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Skye Yocum/Eric Vernon
COUNTY:	Ward	BHA TYPE:	Slick Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	1.17	Start Depth	10825.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	11.58 / 6.17	End Depth	11042.00	Range
08-Jul-18 @ 18:30	09-Jul-18 @ 23:45	Slide Hours	4.25	Percent Rotary:	21.66	30 - 30
		Below Rotary Hrs.	29.25	Percent Slide:	78.34	598 - 598
Total Drilled:	217.00	Avg. Total ROP:	40.06	Incl.	Azimuth	
Total Rotary Drilled:	47.00	Avg. Rotary ROP:	40.29	IN	OUT	IN
Total Drilled Sliding:	170.00	Avg. Slide ROP:	40.00	.0	.0	.00
SPP	2250 - 2350	Weights	SO	225 - 225	PU	355 - 355
				RAB	270 - 270	Reason POOH
						TD

Bit Data								MOTOR DATA						Mud Data												
Ulterra		Ulterra CF613						6 3/4 4/5 7.0, 2.38 ADJ slick						Type		Brine										
Type Bit					PDC			Model:		36		Pad OD		WT		10.1 Kg/m³		GAS		0		Solids		7		
TFA		1.18 in²						MFG.		NOV		7 7/16		Vis		31		SAND		0		T °		84.0		
JETS			16	16	16	16	16	Bend °		2.38		Stator/Rotor		4/5		PV		1	PH		12		Chlor		124000	
			16					Bit to Bend		6.1		Motor Diff		500.0		YP		1	WL		0		Oil %		0	
Bit Coding				IADC#						Revs/Gal		0.52		PUMPS		PUMP1				PUMP2						
IR	OR	DL	Loc	BS	G	ODL	NB Stab		0.0		NAME															
1	4	CT	G	X	-06 25	BT	Rotor Jet		5.42		Model															
Bit Drop:			1654kPa @ 598 GPM					Sensor Offsets				Type														
Comments					Sensor	0	Sonic	0	Liner		.00				.00											
					Gamma	0	DNsc	0	Stroke		.00				.00											
					Restiv	0	GYRO	0	Efficiency		.00				.00											

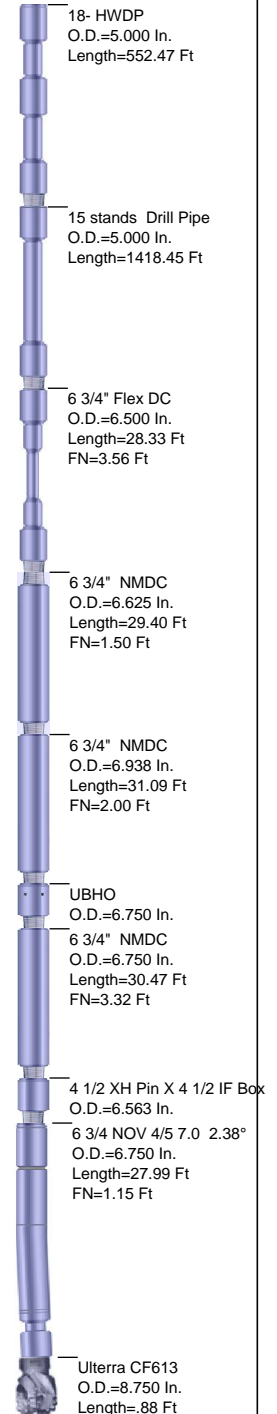
6 3/4 4/5, 7.0, 2.38 ABH,  
RPM= .52 R/G  
Min/Max GPM 300-600  
Bit to Bend= 6.14  
Max Diff =1500

Bit to Sensor =  
Bit to gamma =

Ulterra CF613  
SN# 35900  
6 Bld.w/13mm Cutters  
2" Gage  
Jets = 6x16  
1.18 TFA

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Ulterra CF613	35900		8 3/4	0.88	0.88	4 1/2 REGP
2	6 3/4 NOV 4/5 7.0 2.38°	MM3606750056		6 3/4	27.99	28.87	4 1/2 XHB
3	4 1/2 XH Pin X 4 1/2 IF Box	4235	2 3/4	6 9/16	2.73	31.60	4 1/2 IFB
4	6 3/4" NMDC	5009	3 1/4	6 3/4	30.47	62.07	4 1/2 IFB
5	UBHO	BT675946	3 1/4	6 3/4	3.51	65.58	4 1/2 IFB
6	6 3/4" NMDC	7647	3 1/4	6 15/16	31.09	96.67	4 1/2 IFB
7	6 3/4" NMDC	5150	2 13/16	6 5/8	29.40	126.07	4 1/2 IFP
8	6 3/4" Flex DC	2399	2 13/16	6 1/2	28.33	154.40	4 1/2 IFB
9	15 stands Drill Pipe	DP-4.3-S-135	4.3	5	1,418.45	1572.85	4 1/2 IFB
10	18- HWDP	Rig HWDP	3	5	552.47	2125.32	4 1/2 IFB
11					0.00	2125.32	



## Well Information

BHA # 7

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Charles Becton
STATE:	Texas	Co. Man:	Gary Hernandez/Eugene Hernandez
COUNTY:	Ward	BHA TYPE:	Slack Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	45.25	Start Depth	11042.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	74.75 / 6.58	End Depth	14373.00	Range
14-Jul-18 @ 15:00	19-Jul-18 @ 10:00	Slide Hours	22.92	Percent Rotary:	85.17	30 - 70
		Below Rotary Hrs.	115.00	Percent Slide:	14.83	211 - 282
Total Drilled:	3331.00	Avg. Total ROP:	48.87	Incl.	Azimuth	
Total Rotary Drilled:	2837.00	Avg. Rotary ROP:	62.70	IN OUT	IN	OUT
Total Drilled Sliding:	494.00	Avg. Slide ROP:	21.56	.0 .0	.00	.00
SPP	2000 - 3800	Weights	SO	160 - 165	PU	210 - 220
				RAB	180 - 180	Reason POOH
						FM

Bit Data				MOTOR DATA				Mud Data			
REED	6 1/8 REED SK613M 3X12 3X16				5" 6/7, 8.0, 1.50 ABH				Type	OBM	
Type Bit	PDC				Model:	GDM5000		Pad OD	WT	11.3 Kg/m <sup>3</sup>	GAS
TFA	0.92 in <sup>2</sup>				MFG.	Gyro/Data		5	Vis	48	SAND
JETS	16	12	16	12	16	Bend °	1.5	Stator/Rotor	6/7	PV	24
	12					Bit to Bend	5.1	Motor Diff	1800.0	YP	13
Bit Coding	IADC#				Revs/Gal	0.81	PUMPS	PUMP1	PUMP2		
IR	OR	DL	Loc	BS	G	ODL	NB Stab	0.0	NAME		
1	1	NO	A	X	6.12	BT	Rotor Jet	68.17	Model		
Bit Drop:	674kPa @ 282 GPM				Sensor Offsets	Type					
Comments				Sensor	0	Sonic	0	Liner	.00	.00	
				Gamma	0	DNDC	0	Stroke	.00	.00	
				Restiv	0	GYRO	0	Efficiency	.00	.00	

5" 6/7, 8.0, 1.50 ABH,  
RPM= .81. R/G  
Min/Max GPM 150-350  
Bit to Bend= 5.05  
Max Diff =1800

Reed SK613M  
SN# A250898  
6 Bld.w/13mm Cutters  
2 1/2" Gage  
Jets = 3x16 & 3x12  
.92 TFA

Bit to Sensor = 75.12  
Bit to gamma = 73.22

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	6 1/8 REED SK613M 3X12 3X16 Jets	A250898		6 1/8	0.65	0.65	3 1/2 REGP
2	5 Gyrodata 6/7 8.0 1.5 ABH	GDM500016		5	30.06	30.71	3 1/2 IFB
3	Float Sub (Double)	5544	2 5/8	4 3/4	3.68	34.39	3 1/2 IFB
4	NMDC	3136	2 11/16	4 3/4	29.48	63.87	3 1/2 IFB
5	UBHO	BT475684	2 11/16	4 11/16	3.09	66.96	3 1/2 IFB
6	NMDC	3728	2 11/16	4 3/4	29.54	96.50	3 1/2 IFB
7	NMDC	4332	2 11/16	4 3/4	29.95	126.45	3 1/2 IFP
8	NM Flex	0538	2 11/16	4 3/4	28.94	155.39	3 1/2 IFB
9	X-Over	6295	2 1/2	5 5/16	3.47	158.86	XT-39B
10	2 stands Drill Pipe	DP-2.7-X-95	2.7	4	189.90	348.76	XT-39B
11	Drill-N-Ream Tool	DTI-DNR-188	2.5	5 1/4	6.79	355.55	XT-39B
12	63 stands Drill Pipe	DP-2.7-X-95	2.7	4	5,937.64	6293.19	XT-39B
13	10 stands 4" Hevi	HWDP-2.6-	2.6	5	907.35	7200.54	XT-39B
14						7200.54	

10 stands 4" Hevi  
O.D.=5.000 In.  
Length=907.35 Ft

63 stands Drill Pipe  
O.D.=4.000 In.  
Length=5937.64 Ft

Drill-N-Ream Tool  
O.D.=5.250 In.  
Length=6.79 Ft  
2 stands Drill Pipe  
O.D.=4.000 In.  
Length=189.90 Ft

X-Over  
O.D.=5.313 In.  
Length=3.47 Ft  
NM Flex  
O.D.=4.750 In.  
Length=28.94 Ft  
FN=4.00 Ft

NMDC  
O.D.=4.750 In.  
Length=29.95 Ft  
FN=2.42 Ft

NMDC  
O.D.=4.750 In.  
Length=29.54 Ft

UBHO  
O.D.=4.688 In.  
Length=3.09 Ft

NMDC  
O.D.=4.750 In.  
Length=29.48 Ft  
FN=1.48 Ft

Float Sub (Double)  
O.D.=4.750 In.  
Length=3.68 Ft

5 Gyrodata 6/7 8.0 1.5 ABH  
O.D.=5.000 In.  
Length=30.06 Ft

6 1/8 REED SK613M 3X12 3X16 Jets  
O.D.=6.125 In.

## Well Information

BHA # 8

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Gary Hernandez/Eugene Hernandez
COUNTY:	Ward	BHA TYPE:	Slick Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	1.50	Start Depth	14373.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	7.75 / 2.83	End Depth	14459.00	Range
19-Jul-18 @ 10:00	20-Jul-18 @ 13:00	Slide Hours	3.42	Percent Rotary:	56.98	50 - 60
		Below Rotary Hrs.	27.00	Percent Slide:	43.02	282 - 282
Total Drilled:	86.00	Avg. Total ROP:	17.49	Incl.	Azimuth	
Total Rotary Drilled:	49.00	Avg. Rotary ROP:	32.67	IN	OUT	IN
Total Drilled Sliding:	37.00	Avg. Slide ROP:	10.83	.0	.0	.00
SPP	3800 - 4150	Weights	SO	160 - 160	PU	215 - 215
				RAB	180 - 180	Reason POOH
						DTF

Bit Data							MOTOR DATA						Mud Data							
REED		6 1/8 REED E1234 3X12 3X16					5" 6/7, 8.0, 1.83 ABH						Type		OBM					
Type Bit				PDC			Model:		GDM5000		Pad OD		WT	11.3 Kg/m³	GAS	0	Solids	18		
TFA		0.92 in²					MFG.		Gyro/Data		5		Vis	55	SAND	0	T °	104.0		
JETS		16	12	16	12	16	Bend °	1.83	Stator/Rotor		6/7		PV	24	PH	12	Chlor		47000	
		12					Bit to Bend		5.1	Motor Diff	1800.0		YP	13	WL	0	Oil %		75	
Bit Coding			IADC#				Revs/Gal		0.81		PUMPS		PUMP1			PUMP2				
IR	OR	DL	Loc	BS	G	ODL	NB Stab		0.0		NAME									
1	1				0		Rotor Jet		4.92		Model									
Bit Drop:		674kPa @ 282 GPM					Sensor Offsets			Type										
Comments				Sensor	0	Sonic	0	Liner												
				Gamma	0	DNsc	0	Stroke												
				Restiv	0	GYRO	0	Efficiency												

5" 6/7, 8.0, 1.83 ABH,  
RPM= .81 R/G  
Min/Max GPM 150-350  
Bit to Bend= 5.05  
Max Diff =1800

Bit to Sensor = 75.12  
Bit to gamma = 73.22

Reed E1234  
SN# E210441  
6 Bld. w/13mm Cutters  
3" Gage  
Jets = 3x16 & 3x12  
TFA = .92

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	6 1/8 REED E1234 3X12 3X16 Jets	E210044		6 1/8	0.65	0.65	3 1/2 REGP
2	5 Gyrodata 6/7 8.0 1.83 ABH	GDM500016		5	30.06	30.71	3 1/2 IFB
3	Float Sub (Double)	5544	2 5/8	4 3/4	3.68	34.39	3 1/2 IFB
4	NMDC	3136	2 11/16	4 3/4	29.48	63.87	3 1/2 IFB
5	UBHO	BT475684	2 11/16	4 11/16	3.09	66.96	3 1/2 IFB
6	NMDC	3728	2 11/16	4 3/4	29.54	96.50	3 1/2 IFB
7	NMDC	4332	2 11/16	4 3/4	29.95	126.45	3 1/2 IFP
8	NM Flex	0538	2 11/16	4 3/4	28.94	155.39	3 1/2 IFB
9	X-Over	6295	2 1/2	5 5/16	3.47	158.86	XT-39B
10	65 stands Drill Pipe	DP-2.7-X-95	2.7	4	6,127.54	6286.40	XT-39B
11	10 stands 4" Hevi	HWDP-2.6-	2.6	5	907.35	7193.75	XT-39B
12						7193.75	

10 stands 4" Hevi  
O.D.=5.000 In.  
Length=907.35 Ft

65 stands Drill Pipe  
O.D.=4.000 In.  
Length=6127.54 Ft

X-Over  
O.D.=5.313 In.  
NM Flex  
O.D.=4.750 In.  
Length=28.94 Ft  
FN=4.00 Ft

NMDC  
O.D.=4.750 In.  
Length=29.95 Ft  
FN=2.42 Ft

NMDC  
O.D.=4.750 In.  
Length=29.54 Ft

UBHO  
O.D.=4.688 In.  
NMDC  
O.D.=4.750 In.  
Length=29.48 Ft  
FN=1.48 Ft

Float Sub (Double)  
O.D.=4.750 In.  
5 Gyrodata 6/7 8.0 1.83 ABH  
O.D.=5.000 In.  
Length=30.06 Ft

6 1/8 REED E1234 3X12 3X16 Jets  
O.D.=6.125 In.

# Well Information

BHA # 9

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	Lead DD:	Brian Hancock
STATE:	Texas	Co. Man:	Gary Hernandez/Eugene Hernandez
COUNTY:	Ward	BHA TYPE:	Slick Assembly
WELL NAME:	Mesquite 37 U103H		

## BHA Summary Information

TIME IN - OUT	Rotary Hours	24.58	Start Depth	14459.00	RPM	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	37.42 / 3.83	End Depth	16047.00	Range
20-Jul-18 @ 13:00	22-Jul-18 @ 24:00	Slide Hours	9.00	Percent Rotary:	92.25	60 - 60
		Below Rotary Hrs.	58.75	Percent Slide:	7.75	282 - 306
Total Drilled:	1588.00	Avg. Total ROP:	47.29	Incl.	Azimuth	
Total Rotary Drilled:	1465.00	Avg. Rotary ROP:	59.59	IN OUT	IN	OUT
Total Drilled Sliding:	123.00	Avg. Slide ROP:	13.67	.0 .0	.00	.00
SPP	3900 - 4440	Weights	SO	160 - 160	PU	215 - 215
		RAB	180 - 180	Reason POOH	TD	

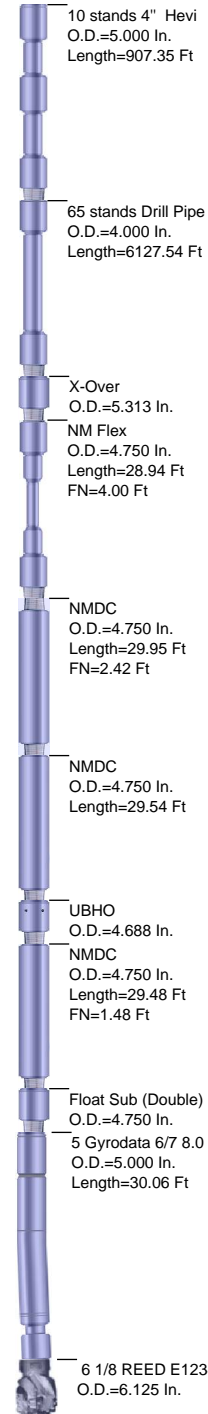
Bit Data	MOTOR DATA	Mud Data
REED	6 1/8 REED E1234 3X12 3X16	5" 6/7, 8.0, 1.83 ABH
Type Bit	PDC	Type OBM
TFA	0.92 in <sup>2</sup>	Model: GDM5000
JETS	16 16 16 12 12	Pad OD
12		WT 11.3 Kg/m <sup>3</sup>
Bit Coding	IADC#	GAS 0 Solids 18
IR OR DL Loc BS G ODL	Revs/Gal	0.81
1 1 NO A X 6.12 5 BT	NAME	
Bit Drop:	794kPa @ 306 GPM	Sensor Offsets
Comments	Sensor 0 Sonic 0	Liner .00
	Gamma 0 DNSC 0	Stroke .00
	Restiv 0 GYRO 0	Efficiency .00

5" 6/7, 8.0, 1.83 ABH,  
RPM= .81 R/G  
Min/Max GPM 150-350  
Bit to Bend= 5.05  
Max Diff =1800  
Bit to Sensor = 75.12  
Bit to gamma = 73.22

Reed E1234  
SN# E210441  
6 Bld. w/13mm Cutters  
3" Gage  
Jets = 3x16 & 3x12  
TFA = .92

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	6 1/8 REED E1234 3X12 3X16 Jets	E210044		6 1/8	0.65	0.65	3 1/2 REGP
2	5 Gyrodata 6/7 8.0 1.83 ABH	GDM500016		5	30.06	30.71	3 1/2 IFB
3	Float Sub (Double)	5544	2 5/8	4 3/4	3.68	34.39	3 1/2 IFB
4	NMDC	3136	2 11/16	4 3/4	29.48	63.87	3 1/2 IFB
5	UBHO	BT475684	2 11/16	4 11/16	3.09	66.96	3 1/2 IFB
6	NMDC	3728	2 11/16	4 3/4	29.54	96.50	3 1/2 IFB
7	NMDC	4332	2 11/16	4 3/4	29.95	126.45	3 1/2 IFP
8	NM Flex	0538	2 11/16	4 3/4	28.94	155.39	3 1/2 IFB
9	X-Over	6295	2 1/2	5 5/16	3.47	158.86	XT-39B
10	65 stands Drill Pipe	DP-2.7-X-95	2.7	4	6,127.54	6286.40	XT-39B
11	10 stands 4" Hevi	HWDP-2.6-	2.6	5	907.35	7193.75	XT-39B
12						7193.75	



JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: National 8" 7/8 4.0, 1.83 ADJ, 12" stab	
Bent Hsg/Sub: 1.83 / 1.83 Bit to Bend: 7.10	
Pad OD: 39584.00 NB Stab: 40606.0	

## Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	9-Jun	Drilling	20:15	20:30	0.25	108	121	13	5	52.0	30	5000	300	400		1.24	0.00	1.02	
1	9-Jun	Drilling	21:30	21:50	0.33	121	150	29	5	87.0	30	5000	300	400		1.43	178.32	0.23	
1	9-Jun	Drilling	22:40	23:10	0.50	150	210	60	5	120.0	30	5000	300	400		1.56	176.76	0.23	
1	10-Jun	Drilling	01:30	01:45	0.25	210	303	93	5	372.0	30	5000	300	400		1.92	172.25	0.47	
1	10-Jun	Drilling	02:00	02:15	0.25	303	365	62	5	248.0	30	5000	300	400		1.71	160.87	1.00	
1	10-Jun	Sliding	02:15	02:25	0.17	365	377	12	5	72.0	30	5000	368	375	0M	1.65	157.44	1.00	
1	10-Jun	Drilling	02:25	02:45	0.33	377	426	49	5	147.0	30	5000	300	275		1.41	144.35	0.66	
1	10-Jun	Drilling	03:10	03:40	0.50	426	484	58	5	116.0	45	2400	493	680		1.10	134.05	0.66	
1	10-Jun	Sliding	04:00	04:10	0.17	484	504	20	5	120.0	45	2400	368	680	350M	1.00	129.07	0.66	
1	10-Jun	Drilling	04:10	04:15	0.08	504	517	13	5	156.0	45	2400	493	680		0.85	122.73	1.47	
1	10-Jun	Drilling	04:20	04:30	0.17	517	578	61	5	366.0	45	2400	493	680		0.56	47.29	1.47	
1	10-Jun	Sliding	04:45	04:55	0.17	578	608	30	5	180.0	45	2400	368	680	340M	0.87	17.06	1.78	
1	10-Jun	Drilling	04:55	05:00	0.08	608	669	61	10	732.0	45	6500	493	940		1.87	358.09	1.78	
1	10-Jun	Sliding	05:10	05:15	0.08	669	689	20	5	240.0	45	6500	368	940	320M	2.20	355.63	0.65	
1	10-Jun	Drilling	05:15	05:30	0.25	689	761	72	10	288.0	45	6500	493	940		2.34	344.31	0.65	
1	10-Jun	Drilling	05:45	06:00	0.25	761	855	94	10	376.0	55	9000	564	1170		2.00	336.78	0.60	
1	10-Jun	Drilling	06:10	06:45	0.58	855	947	92	10	157.7	60	6800	704	1470		1.90	337.92	0.12	
1	10-Jun	Drilling	06:55	07:35	0.67	947	1039	92	10	138.0	60	6800	704	1470		1.98	341.79	0.18	
1	10-Jun	Drilling	07:50	08:30	0.67	1039	1134	95	15	142.5	60	8200	704	1620		1.30	344.21	0.96	
1	10-Jun	Sliding	08:50	09:05	0.25	1134	1146	12	14	48.0	60	8200	704	1370	160M	1.19	344.63	0.96	
1	10-Jun	Drilling	09:05	09:50	0.75	1146	1228	82	18	109.3	60	8900	704	1700		0.72	347.64	0.53	
1	10-Jun	Drilling	10:00	10:30	0.50	1228	1323	95	20	190.0	60	9300	704	1750		0.75	357.75	0.25	
1	10-Jun	Drilling	10:45	11:15	0.50	1323	1418	95	20	190.0	60	9300	704	1750		0.58	291.46	1.09	
1	10-Jun	Sliding	11:25	11:35	0.17	1418	1432	14	18	84.0	60	9300	704	1580	200M	0.65	278.76	1.09	
1	10-Jun	Drilling	11:35	12:00	0.42	1432	1513	81	20	194.4	60	9300	704	1750		1.01	267.05	0.44	
1	10-Jun	Drilling	12:10	12:55	0.75	1513	1607	94	20	125.3	60	9100	704	1750		0.32	331.67	1.39	

# Slide Report for BHA # 1

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
1	10-Jun	Sliding	13:10	13:45	0.58	1607	1621	14	24	24.0	60	9100	704	1600	90M	0.35	5.18	1.39	
1	10-Jun	Drilling	13:45	14:35	0.83	1621	1701	80	26	96.0	60	9400	704	1750		1.00	53.68	0.98	
1	10-Jun	Drilling	14:50	15:30	0.67	1701	1795	94	26	141.0	60	9400	704	1750		0.28	56.90	1.26	
1	10-Jun	Sliding	15:45	16:00	0.25	1795	1815	20	24	80.0	60	9400	704	1750	230M	0.03	56.89	1.26	
1	10-Jun	Drilling	16:00	16:25	0.42	1815	1890	75	26	180.0	60	9400	704	1750		0.46	270.00	0.63	
1	10-Jun	Drilling	17:05	17:35	0.50	1890	1985	95	26	190.0	60	9400	704	1750		0.67	200.18	0.30	
1	10-Jun	Drilling	17:50	18:40	0.83	1985	2080	95	26	114.0	60	9400	704	1750		0.54	178.92	0.33	
1	10-Jun	Drilling	18:55	19:35	0.67	2080	2174	94	30	141.0	60	12000	704	1850		0.42	163.71	0.14	
1	10-Jun	Drilling	19:50	20:20	0.50	2174	2268	94	30	188.0	60	12000	704	1850		0.56	157.28	0.22	
1	10-Jun	Drilling	20:35	21:30	0.92	2268	2360	92	30	100.4	60	12000	704	1850		0.71	131.01	0.43	

Total Drilled: 2252 Ft Avg. Total ROP: 147.67

DEPTH% - TIME %

Total Rotary Drilled: 2110 Ft Avg. Rotary ROP: 157.27

Percent Rotary: 93.69 - 87.98

Total Drilled Sliding: 142 Ft Avg. Slide ROP: 77.45

Percent Slide: 6.31 - 12.02

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: GDT 7/8 5.7, 1.5 FBH, 8.5 stb	
Bent Hsg/Sub: 1.50 / 1.5 Bit to Bend: 4.62	
Pad OD: 38906.00 NB Stab: 8.50	

## Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	30-Jun	Drilling	15:00	15:50	0.83	2360	2370	10	10	12.0	60	2800	450	975		0.74	128.23	0.43	
2	30-Jun	Drilling	16:20	16:25	0.08	2370	2381	11	18	132.0	40	4100	598	1550		0.76	125.39	0.43	
2	30-Jun	Drilling	16:35	17:35	1.00	2381	2475	94	30	94.0	50	7200	598	1780		1.05	131.19	0.36	
2	30-Jun	Drilling	17:50	18:50	1.00	2475	2570	95	30	95.0	60	7200	598	1780		1.01	124.73	0.20	
2	30-Jun	Drilling	19:00	20:00	1.00	2570	2665	95	30	95.0	60	7200	598	1780		0.21	313.29	1.49	
2	30-Jun	Sliding	20:10	20:35	0.42	2665	2680	15	24	36.0	60	7200	704	1780	300M	0.45	307.15	2.55	
2	30-Jun	Drilling	20:35	21:35	1.00	2680	2759	79	30	79.0	60	7200	598	1780		2.44	293.10	2.55	
2	30-Jun	Sliding	21:45	22:00	0.25	2759	2774	15	24	60.0	60	7200	704	1780	270M	2.82	292.67	2.13	
2	30-Jun	Drilling	22:00	22:45	0.75	2774	2854	80	30	106.7	60	7200	598	1780		4.52	291.33	2.13	
2	30-Jun	Sliding	22:55	23:10	0.25	2854	2867	13	24	52.0	60	7200	704	1780	280M	4.80	291.20	2.13	
2	30-Jun	Drilling	23:10	23:40	0.50	2867	2948	81	30	162.0	60	7200	598	1780		5.90	298.24	1.58	
2	30-Jun	Sliding	23:50	24:00	0.17	2948	2955	7	24	42.0	60	7200	704	1780	280M	6.00	298.73	1.58	
2	1-Jul	Sliding	00:00	00:10	0.17	2955	2962	7	24	42.0	60	7200	704	1780	280M	6.10	299.20	1.58	
2	1-Jul	Drilling	00:10	00:50	0.67	2962	3043	81	30	121.5	60	7200	598	1780		6.86	294.77	1.13	
2	1-Jul	Sliding	01:00	01:15	0.25	3043	3051	8	24	32.0	60	7200	704	1780	60L	6.94	294.38	1.13	
2	1-Jul	Drilling	01:15	02:00	0.75	3051	3138	87	30	116.0	60	7200	598	1780		7.15	283.54	1.62	
2	1-Jul	Sliding	02:10	02:25	0.25	3138	3150	12	24	48.0	60	7200	704	1780	90L	7.20	282.03	1.62	
2	1-Jul	Drilling	02:25	03:10	0.75	3150	3232	82	30	109.3	60	7200	598	1780		7.09	271.49	1.60	
2	1-Jul	Sliding	03:20	03:35	0.25	3232	3240	8	24	32.0	60	7200	704	1780	110L	7.10	270.45	1.60	
2	1-Jul	Drilling	03:35	04:15	0.67	3240	3326	86	30	129.0	60	7200	598	1780		7.10	265.32	0.68	
2	1-Jul	Drilling	04:25	05:05	0.67	3326	3420	94	30	141.0	60	7200	598	1780		6.32	271.03	1.33	
2	1-Jul	Sliding	05:15	05:40	0.42	3420	3428	8	24	19.2	60	7200	704	1780	100R	6.25	271.75	1.33	
2	1-Jul	Drilling	05:40	06:10	0.50	3428	3515	87	30	174.0	60	7200	598	1780		5.86	277.11	0.75	
2	1-Jul	Drilling	06:25	07:05	0.67	3515	3610	95	30	142.5	60	9600	598	1950		5.71	277.40	0.13	
2	1-Jul	Drilling	07:25	08:05	0.67	3610	3705	95	30	142.5	60	9600	598	1950		5.53	279.00	0.29	
2	1-Jul	Drilling	08:15	08:55	0.67	3705	3800	95	30	142.5	60	9720	598	1950		5.92	270.75	1.17	

## Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	1-Jul	Sliding	09:10	09:25	0.25	3800	3810	10	18	40.0	60	9720	598	1800	45L	5.98	269.78	1.17	
2	1-Jul	Drilling	09:25	10:05	0.67	3810	3895	85	30	127.5	60	10200	598	2100		7.12	264.10	1.57	
2	1-Jul	Drilling	10:15	10:55	0.67	3895	3989	94	30	141.0	60	10200	598	2100		6.34	272.96	1.83	
2	1-Jul	Sliding	11:10	11:25	0.25	3989	3997	8	18	32.0	60	10200	598	1850	90R	6.26	274.06	1.83	
2	1-Jul	Drilling	11:25	11:55	0.50	3997	4084	87	30	174.0	60	10300	598	2100		5.58	288.49	1.88	
2	1-Jul	Drilling	12:05	12:25	0.33	4084	4180	96	30	288.0	60	10800	598	2150		4.38	295.85	1.47	
2	1-Jul	Sliding	12:35	12:55	0.33	4180	4190	10	18	30.0	60	10800	598	1800	50L	4.24	296.57	1.47	
2	1-Jul	Drilling	12:55	13:30	0.58	4190	4274	84	30	144.0	60	10800	598	2150		4.78	285.47	1.31	
2	1-Jul	Sliding	13:50	14:20	0.50	4274	4288	14	18	28.0	60	10800	598	1850	250M	4.90	283.80	1.31	
2	1-Jul	Drilling	14:20	15:00	0.67	4288	4369	81	30	121.5	60	10600	598	2200		6.35	282.03	1.80	
2	1-Jul	Sliding	15:15	15:40	0.42	4369	4379	10	18	24.0	60	10600	598	1900	270M	6.53	281.86	1.80	
2	1-Jul	Drilling	15:40	16:00	0.33	4379	4464	85	30	255.0	60	10200	598	2200		6.58	291.78	1.41	
2	1-Jul	Drilling	16:25	17:05	0.67	4464	4559	95	30	142.5	60	9800	598	2200		5.99	283.86	1.51	
2	1-Jul	Sliding	17:15	17:35	0.33	4559	4574	15	18	45.0	60	9800	598	2200	70L	5.91	281.77	2.70	
2	1-Jul	Drilling	18:00	18:15	0.25	4574	4602	28	30	112.0	60	9650	598	2000		6.29	275.60	2.70	
2	1-Jul	Drilling	18:20	18:50	0.50	4602	4654	52	30	104.0	60	9650	598	2000		7.16	266.11	2.70	
2	1-Jul	Sliding	19:00	19:20	0.33	4654	4664	10	18	30.0	60	9650	598	2000	40L	7.34	264.55	2.70	
2	1-Jul	Drilling	19:20	20:00	0.67	4664	4748	84	30	126.0	60	9650	598	2000		8.00	264.36	0.74	
2	1-Jul	Drilling	20:10	20:55	0.75	4748	4843	95	30	126.7	60	9650	598	2000		7.40	265.43	0.88	
2	1-Jul	Drilling	21:05	21:50	0.75	4843	4936	93	30	124.0	60	9650	598	2000		6.79	268.29	0.75	
2	1-Jul	Drilling	21:55	22:30	0.58	4936	5031	95	30	162.9	60	9650	598	2000		6.36	268.54	0.43	
2	1-Jul	Drilling	22:35	23:00	0.42	5031	5125	94	30	225.6	60	9650	598	2000		6.47	266.19	0.38	
2	1-Jul	Drilling	23:10	23:30	0.33	5125	5220	95	30	285.0	60	9650	598	2000		6.58	267.41	0.25	
2	1-Jul	Drilling	23:40	24:00	0.33	5220	5316	96	30	288.0	60	9650	598	2000		6.43	267.96	0.22	
2	2-Jul	Drilling	00:10	00:40	0.50	5316	5410	94	30	188.0	60	11000	598	1950		6.06	267.40	0.43	
2	2-Jul	Drilling	00:45	01:15	0.50	5410	5504	94	30	188.0	60	11000	598	1950		5.74	269.58	0.43	
2	2-Jul	Drilling	01:20	01:45	0.42	5504	5599	95	30	228.0	60	11000	598	1950		6.21	274.84	0.88	
2	2-Jul	Sliding	01:55	02:20	0.42	5599	5609	10	24	24.0	60	11000	598	1950	40R	6.27	275.39	0.88	
2	2-Jul	Drilling	02:20	02:50	0.50	5609	5694	85	30	170.0	60	11000	598	1950		6.38	279.62	0.56	
2	2-Jul	Drilling	02:55	03:35	0.67	5694	5789	95	30	142.5	60	11000	598	1950		5.38	277.08	1.33	
2	2-Jul	Drilling	03:40	04:05	0.42	5789	5884	95	30	228.0	60	11000	598	1950		5.63	280.41	0.71	
2	2-Jul	Sliding	04:15	04:45	0.50	5884	5898	14	24	28.0	60	11000	598	1950	40R	5.71	281.04	0.81	
2	2-Jul	Drilling	04:45	05:15	0.50	5898	5978	80	30	160.0	60	11000	598	1950		6.30	283.69	0.81	
2	2-Jul	Drilling	05:25	05:55	0.50	5978	6073	95	30	190.0	60	11000	598	1950		6.31	285.65	0.24	
2	2-Jul	Drilling	06:05	06:20	0.25	6073	6167	94	30	376.0	60	11000	598	1950		7.33	282.29	1.38	

## Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	2-Jul	Sliding	06:35	06:55	0.33	6167	6179	12	24	36.0	60	11000	598	1950	30L	7.49	281.84	1.38	
2	2-Jul	Drilling	06:55	07:10	0.25	6179	6261	82	30	328.0	60	12500	598	2050		8.27	279.46	1.03	
2	2-Jul	Drilling	07:20	07:40	0.33	6261	6356	95	30	285.0	60	12500	598	2050		8.57	280.20	0.29	
2	2-Jul	Drilling	07:50	08:15	0.42	6356	6452	96	30	230.4	60	13200	598	2050		8.69	280.31	0.11	
2	2-Jul	Drilling	08:25	08:50	0.42	6452	6547	95	30	228.0	60	13100	598	2050		8.44	280.81	0.33	
2	2-Jul	Drilling	09:00	09:20	0.33	6547	6642	95	30	285.0	60	13100	598	2050		8.74	282.27	0.49	
2	2-Jul	Drilling	09:30	09:55	0.42	6642	6737	95	30	228.0	60	14100	598	2050		7.09	283.81	2.12	
2	2-Jul	Sliding	10:05	10:25	0.33	6737	6747	10	24	30.0	60	14100	598	2050	180	6.88	284.01	2.12	
2	2-Jul	Drilling	10:25	11:00	0.58	6747	6832	85	30	145.7	60	11900	598	2050		6.12	285.86	0.88	
2	2-Jul	Drilling	11:15	11:55	0.67	6832	6927	95	30	142.5	60	11200	598	1900		5.57	284.50	0.57	
2	2-Jul	Drilling	12:05	12:40	0.58	6927	7021	94	30	161.1	60	11200	598	1900		4.81	285.21	0.86	
2	2-Jul	Drilling	12:55	13:35	0.67	7021	7115	94	30	141.0	60	11200	598	1900		4.61	278.00	0.75	
2	2-Jul	Sliding	13:45	14:20	0.58	7115	7127	12	24	20.6	60	11200	598	1900	250M	4.60	276.89	0.75	
2	2-Jul	Drilling	14:20	15:20	1.00	7127	7210	83	30	83.0	60	12000	598	1950		6.39	277.33	2.21	
2	2-Jul	Sliding	15:30	16:05	0.58	7210	7224	14	24	24.0	60	12000	598	1950	280M	6.70	277.40	2.21	
2	2-Jul	Drilling	16:05	16:55	0.83	7224	7305	81	30	97.2	60	12800	598	1950		6.61	280.58	0.47	
2	2-Jul	Drilling	17:05	18:00	0.92	7305	7399	94	30	102.5	60	12100	598	1950		5.49	283.49	1.40	
2	2-Jul	Drilling	18:10	19:10	1.00	7399	7494	95	30	95.0	60	12100	598	1950		4.35	285.66	1.18	
2	2-Jul	Drilling	19:20	20:25	1.08	7494	7588	94	30	86.8	60	12100	598	1950		4.28	283.78	0.23	
2	2-Jul	Sliding	20:35	21:25	0.83	7588	7602	14	24	16.8	60	12100	598	1950	240M	4.30	283.40	0.23	
2	2-Jul	Drilling	21:25	22:40	1.25	7602	7683	81	30	64.8	60	12100	598	1950		5.59	278.84	1.66	
2	2-Jul	Sliding	22:50	23:25	0.58	7683	7698	15	24	25.7	60	12100	598	1950	240M	5.81	278.30	0.32	
2	2-Jul	Drilling	23:25	24:00	0.58	7698	7730	32	30	54.9	60	12100	598	1950		5.91	278.37	0.32	
2	3-Jul	Drilling	00:00	00:50	0.83	7730	7777	47	30	56.4	60	11000	598	1900		6.06	278.47	0.32	
2	3-Jul	Drilling	01:05	02:50	1.75	7777	7872	95	30	54.3	60	11000	598	1900		6.19	279.97	0.22	
2	3-Jul	Sliding	03:05	03:35	0.50	7872	7880	8	24	16.0	60	11000	598	1900	0G	6.19	280.11	0.22	
2	3-Jul	Drilling	03:35	04:55	1.33	7880	7966	86	30	64.5	60	11000	598	1900		5.94	280.20	0.32	
2	3-Jul	Drilling	05:05	06:20	1.25	7966	8061	95	30	76.0	60	12100	598	1900		6.41	272.08	1.24	
2	3-Jul	Sliding	06:35	07:20	0.75	8061	8075	14	24	18.7	60	12100	598	1900	30L	6.51	270.83	1.39	
2	3-Jul	Drilling	07:20	08:40	1.33	8075	8155	80	32	60.0	60	12800	598	2080		7.44	265.89	1.39	
2	3-Jul	Drilling	08:50	10:25	1.58	8155	8212	57	35	36.0	60	12300	598	1820		7.79	265.15	0.42	

Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
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Total Drilled:		5852 Ft	Avg. Total ROP:		106.24	DEPTH% - TIME %													
Total Rotary Drilled:		5559 Ft	Avg. Rotary ROP:		123.99	Percent Rotary:		94.99 - 81.39											
Total Drilled Sliding:		293 Ft	Avg. Slide ROP:		28.59	Percent Slide:		5.01 - 18.61											

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: GDT 7/8 5.7, 1.5 FBH, 8.5 stb	
Bent Hsg/Sub: 1.50 / 1.5	Bit to Bend: 4.62
Pad OD: 38906.00	NB Stab: 8.50

## Slide Report for BHA # 3

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
3	3-Jul	Drilling	23:15	24:00	0.75	8212	8249	37	35	49.3	60	12300	598	1820		7.94	265.11	0.42	
3	4-Jul	Drilling	00:10	01:30	1.33	8249	8344	95	30	71.3	60	12300	598	1975		7.23	264.68	0.95	
3	4-Jul	Drilling	01:40	03:15	1.58	8344	8439	95	30	60.0	60	12300	598	1975		6.41	268.95	1.06	
3	4-Jul	Sliding	03:25	04:05	0.67	8439	8451	12	24	18.0	60	12300	598	1975	60R	6.32	269.68	1.06	
3	4-Jul	Drilling	04:05	05:30	1.42	8451	8534	83	30	58.6	60	12300	598	1975		6.90	271.90	0.80	
3	4-Jul	Sliding	05:50	06:35	0.75	8534	8544	10	28	13.3	60	12300	598	1975	40R	6.98	272.13	0.80	
3	4-Jul	Drilling	06:35	08:25	1.83	8544	8628	84	30	45.8	60	12900	598	2050		7.51	275.86	0.85	
3	4-Jul	Sliding	08:45	09:20	0.58	8628	8638	10	28	17.1	60	12900	598	2050	80R	7.58	276.28	0.85	
3	4-Jul	Drilling	09:20	12:15	2.92	8638	8722	84	32	28.8	60	12900	598	2050		7.68	277.85	0.26	
3	4-Jul	Drilling	12:30	13:30	1.00	8722	8755	33	32	33.0	60	12900	598	2050		7.55	276.77	1.22	

Total Drilled: 543 Ft Avg. Total ROP: 42.31 DEPTH% - TIME %

Total Rotary Drilled: 511 Ft Avg. Rotary ROP: 47.17 Percent Rotary: 94.11 - 84.42

Total Drilled Sliding: 32 Ft Avg. Slide ROP: 16.00 Percent Slide: 5.89 - 15.58

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: GDT 7/8 5.7, 1.5 ABH, 8.5 stb	
Bent Hsg/Sub: 1.50 / 1.5 Bit to Bend: 5.93	
Pad OD: 42534.00 NB Stab: 8.50	

## Slide Report for BHA # 4

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
4	5-Jul	Drilling	07:30	08:15	0.75	8755	8817	62	24	82.7	50	14800	598	2500		7.09	272.06	1.22	
4	5-Jul	Drilling	08:25	09:30	1.08	8817	8911	94	24	86.8	50	14400	598	2250		6.30	276.76	1.19	
4	5-Jul	Sliding	09:45	10:30	0.75	8911	8923	12	10	16.0	50	14400	598	2250	80R	6.21	277.72	1.19	
4	5-Jul	Drilling	10:30	11:40	1.17	8923	9005	82	28	70.3	50	14400	598	2250		5.26	279.95	1.19	
4	5-Jul	Drilling	11:50	12:40	0.83	9005	9068	63	28	75.6	50	14400	598	2250		4.53	279.81	1.16	
4	5-Jul	Drilling	13:10	13:25	0.25	9068	9100	32	28	128.0	50	14700	598	2300		4.16	279.33	1.16	
4	5-Jul	Sliding	13:40	14:20	0.67	9100	9112	12	10	18.0	50	14700	598	2300	20R	4.02	279.13	1.16	
4	5-Jul	Drilling	14:20	15:30	1.17	9112	9195	83	28	71.1	50	14700	598	2300		5.23	287.01	1.70	
4	5-Jul	Sliding	15:45	16:25	0.67	9195	9210	15	10	22.5	50	14700	598	2300	300M	5.46	288.02	1.63	
4	5-Jul	Drilling	16:25	17:30	1.08	9210	9287	77	28	71.1	50	15100	598	2300		6.66	291.47	1.63	
4	5-Jul	Sliding	17:45	18:25	0.67	9287	9297	10	10	15.0	60	15100	598	2300	0G	6.82	291.83	1.63	
4	5-Jul	Drilling	18:25	19:25	1.00	9297	9383	86	28	86.0	60	15100	598	2300		7.50	289.29	0.85	
4	5-Jul	Drilling	19:40	21:05	1.42	9383	9477	94	28	66.4	60	15100	598	2300		7.94	289.93	0.45	
4	5-Jul	Drilling	21:20	22:55	1.58	9477	9572	95	28	60.0	65	15100	598	2300		7.14	291.37	1.08	
4	5-Jul	Sliding	23:10	24:00	0.83	9572	9580	8	25	9.6	65	15100	598	2300	170L	7.05	291.51	1.08	
4	6-Jul	Sliding	00:00	00:25	0.42	9580	9587	7	25	16.8	65	16300	598	2300	170L	6.96	291.62	2.05	
4	6-Jul	Drilling	00:25	01:50	1.42	9587	9666	79	28	55.8	65	16300	598	2300		5.35	292.51	2.05	
4	6-Jul	Sliding	02:05	03:10	1.08	9666	9682	16	25	14.8	65	16300	598	2300	160L	5.00	292.63	2.43	
4	6-Jul	Drilling	03:10	03:20	0.17	9682	9688	6	28	36.0	65	16300	598	2300		4.86	292.52	2.43	
4	6-Jul	Drilling	04:40	05:55	1.25	9688	9759	71	28	56.8	65	16300	598	2300		3.14	290.49	2.43	
4	6-Jul	Sliding	06:15	07:05	0.83	9759	9773	14	18	16.8	65	16300	598	2175	140L	2.80	289.80	2.43	
4	6-Jul	Drilling	07:05	08:25	1.33	9773	9854	81	28	60.8	60	15900	598	2250		1.42	293.22	1.71	
4	6-Jul	Sliding	08:40	09:35	0.92	9854	9868	14	28	15.3	60	15900	598	2250	120M	1.19	295.14	1.69	
4	6-Jul	Drilling	09:35	10:50	1.25	9868	9948	80	28	64.0	60	16100	598	2250		1.14	6.07	1.69	
4	6-Jul	Drilling	11:05	12:15	1.17	9948	10044	96	28	82.3	60	16100	598	2250		2.51	9.55	1.51	
4	6-Jul	Drilling	12:30	13:05	0.58	10044	10083	39	28	66.9	60	16400	598	2250		1.56	49.06	6.95	

# Slide Report for BHA # 4

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
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Total Drilled: 1328 Ft Avg. Total ROP: 54.58 DEPTH% - TIME %

Total Rotary Drilled: 1220 Ft Avg. Rotary ROP: 69.71 Percent Rotary: 91.87 - 71.92

Total Drilled Sliding: 108 Ft Avg. Slide ROP: 15.80 Percent Slide: 8.13 - 28.08

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: 6 3/4 4/5 7.0, 2.38 ADJ slick	
Bent Hsg/Sub: 2.38 / 2.38 Bit to Bend: 6.14	
Pad OD: 39279.00 NB Stab:	

## Slide Report for BHA # 5

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
5	7-Jul	Sliding	10:00	10:40	0.67	10083	10100	17	28	25.5	30	14000	598	2000	170M	2.86	75.23	12.00	
5	7-Jul	Sliding	10:40	11:45	1.08	10100	10133	33	28	30.5	30	14000	598	2300	75M	6.98	78.69	13.55	
5	7-Jul	Drilling	11:55	12:10	0.25	10133	10139	6	16	24.0	30	15000	598	2100		7.78	77.93	13.55	
5	7-Jul	Sliding	12:10	12:45	0.58	10139	10164	25	28	42.9	30	15000	598	2100	75M	11.11	74.06	13.66	
5	7-Jul	Drilling	13:00	13:10	0.17	10164	10169	5	16	30.0	30	15000	598	2100		11.77	73.21	13.66	
5	7-Jul	Sliding	13:10	13:45	0.58	10169	10195	26	28	44.6	30	15000	598	2250	70M	14.95	69.18	11.92	
5	7-Jul	Drilling	13:55	14:05	0.17	10195	10205	10	16	60.0	30	15200	598	2150		16.08	67.74	11.92	
5	7-Jul	Sliding	14:05	14:40	0.58	10205	10227	22	28	37.7	30	15200	598	2150	20L	18.23	66.87	8.73	
5	7-Jul	Drilling	14:50	15:00	0.17	10227	10242	15	16	90.0	30	15500	598	2150		19.54	67.15	8.73	
5	7-Jul	Sliding	15:00	15:30	0.50	10242	10258	16	28	32.0	30	15500	598	2150	20R	20.46	68.51	6.18	
5	7-Jul	Drilling	16:15	16:30	0.25	10258	10274	16	16	64.0	30	15650	598	2150		21.30	70.02	6.18	
5	7-Jul	Sliding	16:30	16:50	0.33	10274	10290	16	28	48.0	30	15650	598	2150	30R	22.22	71.57	6.92	
5	7-Jul	Drilling	17:00	17:15	0.25	10290	10306	16	16	64.0	30	15650	598	2150		23.18	73.03	6.92	
5	7-Jul	Sliding	17:15	17:35	0.33	10306	10321	15	28	45.0	30	15650	598	2150	45R	23.66	75.38	7.23	
5	7-Jul	Drilling	17:40	18:00	0.33	10321	10338	17	16	51.0	30	15650	598	2150		24.17	78.14	7.23	
5	7-Jul	Sliding	18:00	18:25	0.42	10338	10352	14	16	33.6	30	15650	598	2150	45R	24.28	79.16	2.77	
5	7-Jul	Drilling	18:35	19:10	0.58	10352	10384	32	16	54.9	30	15650	598	2150		24.57	80.78	1.77	
5	7-Jul	Sliding	19:30	19:50	0.33	10384	10396	12	16	36.0	30	15650	598	2150	45R	24.72	81.13	1.77	
5	7-Jul	Drilling	19:50	20:20	0.50	10396	10415	19	16	38.0	30	15650	598	2150		25.85	81.43	8.08	
5	7-Jul	Sliding	20:30	21:00	0.50	10415	10447	32	16	64.0	30	15650	598	2150	0G	28.74	81.04	10.47	
5	7-Jul	Drilling	21:15	21:25	0.17	10447	10453	6	16	36.0	30	15650	598	2150		29.36	80.82	10.47	
5	7-Jul	Sliding	21:25	21:50	0.42	10453	10478	25	16	60.0	30	15650	598	2150	20L	32.23	79.82	12.78	
5	7-Jul	Drilling	22:05	22:10	0.08	10478	10483	5	16	60.0	30	15650	598	2150		32.86	79.61	12.78	
5	7-Jul	Sliding	22:10	22:35	0.42	10483	10509	26	16	62.4	30	15650	598	2150	20L	35.80	78.21	10.72	
5	7-Jul	Drilling	22:45	23:00	0.25	10509	10519	10	16	40.0	30	15650	598	2150		36.80	77.56	10.72	
5	7-Jul	Sliding	23:00	23:25	0.42	10519	10541	22	16	52.8	30	15650	598	2150	20L	39.16	76.21	11.88	

# Slide Report for BHA # 5

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
5	7-Jul	Drilling	23:40	24:00	0.33	10541	10546	5	16	15.0	30	15650	598	2150		39.73	75.92	11.88	
5	8-Jul	Sliding	00:00	00:20	0.33	10546	10572	26	16	78.0	30	15650	598	2150	20L	42.46	74.49	10.34	
5	8-Jul	Drilling	00:35	00:50	0.25	10572	10581	9	16	36.0	30	15650	598	2150		43.33	74.01	10.34	
5	8-Jul	Sliding	00:50	01:20	0.50	10581	10604	23	16	46.0	30	15650	598	2150	20L	45.72	72.87	11.45	
5	8-Jul	Drilling	01:30	01:40	0.17	10604	10613	9	16	54.0	30	15650	598	2150		46.70	72.45	11.45	
5	8-Jul	Sliding	01:40	02:05	0.42	10613	10635	22	16	52.8	30	15650	598	2150	20L	48.85	71.85	8.80	
5	8-Jul	Drilling	02:20	02:35	0.25	10635	10643	8	16	32.0	30	15650	598	2350		49.55	71.75	8.80	
5	8-Jul	Sliding	02:35	03:00	0.42	10643	10667	24	16	57.6	30	15650	598	2350	0G	51.53	71.99	8.15	
5	8-Jul	Drilling	03:10	03:25	0.25	10667	10675	8	16	32.0	30	15650	598	2350		52.15	72.25	8.15	
5	8-Jul	Sliding	03:25	03:55	0.50	10675	10699	24	16	48.0	30	15650	598	2350	20R	53.50	73.74	8.01	
5	8-Jul	Drilling	04:05	04:20	0.25	10699	10711	12	16	48.0	30	15650	598	2350		53.96	74.78	8.01	
5	8-Jul	Sliding	04:20	04:45	0.42	10711	10731	20	16	48.0	30	15650	598	2350	20R	55.16	76.41	9.41	
5	8-Jul	Drilling	05:10	05:20	0.17	10731	10734	3	16	18.0	30	15650	598	2350		55.36	76.64	9.41	
5	8-Jul	Sliding	05:20	05:50	0.50	10734	10762	28	16	56.0	30	15650	598	2350	0G	0.00	0.00	0.00	
5	8-Jul	Sliding	06:00	06:55	0.92	10762	10793	31	16	33.8	30	15650	598	2350	0G	0.00	0.00	0.00	
5	8-Jul	Drilling	07:05	07:10	0.08	10793	10796	3	16	36.0	30	17000	598	2350		0.00	0.00	0.00	
5	8-Jul	Sliding	07:10	08:00	0.83	10796	10825	29	16	34.8	30	17000	598	2350	0G	0.00	0.00	0.00	

Total Drilled: 742 Ft Avg. Total ROP: 43.86 DEPTH% - TIME %

Total Rotary Drilled: 214 Ft Avg. Rotary ROP: 43.53 Percent Rotary: 28.84 - 29.06

Total Drilled Sliding: 528 Ft Avg. Slide ROP: 44.00 Percent Slide: 71.16 - 70.94

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: 6 3/4 4/5 7.0, 2.38 ADJ slick	
Bent Hsg/Sub: 2.38 / 2.38 Bit to Bend: 6.14	
Pad OD: 39279.00 NB Stab:	

## Slide Report for BHA # 6

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
6	9-Jul	Sliding	06:00	06:40	0.67	10825	10857	32	26	48.0	30	17000	598	2250	10L	71.42	77.72	13.51	
6	9-Jul	Drilling	06:50	07:00	0.17	10857	10862	5	16	30.0	30	17000	598	2250		72.08	77.57	13.51	
6	9-Jul	Sliding	07:00	07:45	0.75	10862	10888	26	26	34.7	30	17000	598	2350	10L	75.47	76.79	13.17	
6	9-Jul	Drilling	07:55	08:10	0.25	10888	10895	7	16	28.0	30	17500	598	2350		76.36	76.57	13.17	
6	9-Jul	Sliding	08:10	08:45	0.58	10895	10920	25	26	42.9	30	17500	598	2350	20L	79.45	75.78	12.35	
6	9-Jul	Drilling	09:05	09:15	0.17	10920	10928	8	16	48.0	30	17500	598	2350		80.41	75.52	12.35	
6	9-Jul	Sliding	09:15	09:55	0.67	10928	10951	23	26	34.5	30	17500	598	2350	20L	83.25	74.69	13.32	
6	9-Jul	Drilling	10:10	10:20	0.17	10951	10959	8	16	48.0	30	17500	598	2350		84.27	74.37	13.32	
6	9-Jul	Sliding	10:20	10:50	0.50	10959	10983	24	26	48.0	30	17500	598	2350	20L	87.27	73.90	12.25	
6	9-Jul	Drilling	11:05	11:15	0.17	10983	10993	10	16	60.0	30	17500	598	2350		88.50	73.90	12.25	
6	9-Jul	Sliding	12:15	12:40	0.42	10993	11014	21	26	50.4	30	17500	598	2350	0G	91.07	73.90	12.25	
6	9-Jul	Drilling	13:05	13:20	0.25	11014	11023	9	16	36.0	30	17500	598	2350		92.17	73.90	12.25	
6	9-Jul	Sliding	13:20	14:00	0.67	11023	11042	19	16	28.5	30	17500	598	2350	0G	94.50	73.90	12.25	

Total Drilled:	217 Ft	Avg. Total ROP:	40.06	DEPTH% - TIME %
Total Rotary Drilled:	47 Ft	Avg. Rotary ROP:	40.29	Percent Rotary: 21.66 - 21.54
Total Drilled Sliding:	170 Ft	Avg. Slide ROP:	40.00	Percent Slide: 78.34 - 78.46

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: 5" 6/7, 8.0, 1.50 ABH	
Bent Hsg/Sub: 1.50 / 1.5 Bit to Bend: 5.05	
Pad OD: 5.00 NB Stab:	

## Slide Report for BHA # 7

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
7	15-Jul	Drilling	10:30	14:00	3.50	11042	11042	0	8	0.0	30	7500	211	2000		90.18	72.73	6.39	
7	15-Jul	Drilling	14:00	14:30	0.50	11042	11052	10	12	20.0	35	7500	246	2640		90.80	72.56	6.39	
7	15-Jul	Drilling	15:30	18:15	2.75	11052	11164	112	12	40.7	35	7500	282	3400		93.81	73.41	2.15	
7	15-Jul	Sliding	18:25	18:55	0.50	11164	11176	12	20	24.0	35	7500	282	3400	20R	93.95	73.63	2.15	
7	15-Jul	Drilling	18:55	20:25	1.50	11176	11258	82	12	54.7	35	7500	282	3400		95.73	76.24	3.93	
7	15-Jul	Drilling	20:40	22:35	1.92	11258	11353	95	12	49.6	35	7500	282	3400		96.02	76.31	0.64	
7	15-Jul	Sliding	22:55	23:35	0.67	11353	11368	15	20	22.5	35	7500	282	3400	130L	96.00	76.21	0.64	
7	15-Jul	Drilling	23:35	24:00	0.42	11368	11390	22	12	52.8	35	7500	282	3400		95.47	75.78	3.37	
7	16-Jul	Drilling	00:00	00:25	0.42	11390	11418	28	12	67.2	35	7500	282	3625		93.95	74.56	3.37	
7	16-Jul	Drilling	00:25	00:50	0.42	11418	11448	30	12	72.0	35	7500	282	3625		93.95	74.56	3.37	
7	16-Jul	Sliding	01:05	01:35	0.50	11448	11462	14	20	28.0	35	7500	282	3625	130L	93.58	74.26	3.37	
7	16-Jul	Drilling	01:35	02:45	1.17	11462	11543	81	12	69.4	60	7500	282	3625		93.17	74.12	0.44	
7	16-Jul	Drilling	03:00	04:30	1.50	11543	11637	94	12	62.7	60	7500	282	3625		92.69	74.43	0.68	
7	16-Jul	Drilling	04:45	05:50	1.08	11637	11731	94	12	86.8	60	7500	282	3625		95.47	76.22	4.29	
7	16-Jul	Sliding	06:05	06:30	0.42	11731	11741	10	20	24.0	60	7500	282	3625	70L	95.84	76.44	4.29	
7	16-Jul	Drilling	06:30	07:15	0.75	11741	11826	85	12	113.3	60	8000	282	3750		95.69	75.94	1.00	
7	16-Jul	Sliding	07:30	08:00	0.50	11826	11841	15	20	30.0	60	8000	282	3750	120L	95.61	75.81	1.00	
7	16-Jul	Drilling	08:00	09:00	1.00	11841	11920	79	12	79.0	60	8000	282	3750		94.12	74.16	2.83	
7	16-Jul	Sliding	09:15	09:45	0.50	11920	11935	15	20	30.0	60	8000	282	3750	130L	93.84	73.84	2.83	
7	16-Jul	Drilling	09:45	10:30	0.75	11935	12015	80	12	106.7	60	8000	282	3750		93.05	72.89	1.51	
7	16-Jul	Sliding	10:45	11:15	0.50	12015	12025	10	20	20.0	60	8000	282	3750	100L	92.96	72.77	1.51	
7	16-Jul	Drilling	11:15	12:00	0.75	12025	12109	84	12	112.0	60	8000	282	3750		92.65	72.37	0.53	
7	16-Jul	Sliding	12:15	12:30	0.25	12109	12119	10	20	40.0	60	8000	282	3750	105L	92.62	72.33	0.53	
7	16-Jul	Drilling	12:30	13:30	1.00	12119	12204	85	12	85.0	60	8000	282	3750		92.44	72.14	0.30	
7	16-Jul	Drilling	14:15	15:00	0.75	12204	12299	95	15	126.7	60	8000	282	3750		92.40	71.69	0.53	
7	16-Jul	Drilling	15:15	16:00	0.75	12299	12394	95	15	126.7	60	8000	282	3750		93.64	73.26	2.66	

# Slide Report for BHA # 7

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
7	16-Jul	Sliding	16:15	16:30	0.25	12394	12402	8	20	32.0	60	8000	282	3750	95R	93.77	73.43	2.66	
7	16-Jul	Drilling	16:30	17:30	1.00	12402	12488	86	9	86.0	60	8500	282	3750		93.65	72.61	1.30	
7	16-Jul	Sliding	17:45	18:15	0.50	12488	12500	12	20	24.0	60	8500	282	3750	100L	93.62	72.46	1.30	
7	16-Jul	Drilling	18:15	19:25	1.17	12500	12583	83	12	71.1	60	8500	282	3750		94.18	72.81	0.91	
7	16-Jul	Sliding	19:40	20:20	0.67	12583	12593	10	20	15.0	60	8500	282	3750	100L	94.26	72.87	0.91	
7	16-Jul	Drilling	20:20	21:10	0.83	12593	12677	84	14	100.8	70	9500	282	3750		92.89	72.24	2.00	
7	16-Jul	Sliding	21:25	22:00	0.58	12677	12691	14	20	24.0	70	9500	282	3750	100L	92.64	72.12	2.00	
7	16-Jul	Drilling	22:00	23:00	1.00	12691	12771	80	15	80.0	70	9500	282	3750		93.01	72.85	1.09	
7	16-Jul	Sliding	23:15	23:35	0.33	12771	12778	7	20	21.0	70	9500	282	3750	100L	93.05	72.91	1.09	
7	16-Jul	Drilling	23:35	24:00	0.42	12778	12804	26	15	62.4	70	9500	282	3750		92.60	72.82	3.13	
7	17-Jul	Drilling	00:00	00:15	0.25	12804	12817	13	15	52.0	70	8500	282	3750	15	92.22	72.68	3.13	
7	17-Jul	Sliding	00:15	00:50	0.58	12817	12827	10	20	17.1	70	8500	282	3750	160L	91.92	72.58	3.13	
7	17-Jul	Drilling	00:50	01:20	0.50	12827	12865	38	9	76.0	70	8500	282	3750	15	90.80	72.18	3.13	
7	17-Jul	Sliding	01:35	02:05	0.50	12865	12878	13	20	26.0	70	8500	282	3750	150L	90.42	72.04	3.13	
7	17-Jul	Drilling	02:05	03:45	1.67	12878	12960	82	9	49.2	70	8500	282	3750		89.89	72.25	0.61	
7	17-Jul	Drilling	04:00	06:15	2.25	12960	13055	95	9	42.2	70	8500	282	3750		90.21	72.71	0.75	
7	17-Jul	Drilling	06:30	08:00	1.50	13055	13149	94	9	62.7	70	8500	282	3750		91.13	73.38	1.30	
7	17-Jul	Sliding	08:15	08:45	0.50	13149	13161	12	20	24.0	70	8500	282	3750	30R	91.26	73.47	1.30	
7	17-Jul	Drilling	08:45	09:45	1.00	13161	13243	82	9	82.0	70	8500	282	3800		93.02	74.48	2.55	
7	17-Jul	Sliding	10:00	10:30	0.50	13243	13255	12	20	24.0	70	8500	282	3800		93.29	74.64	2.55	
7	17-Jul	Drilling	10:30	11:15	0.75	13255	13331	76	9	101.3	70	8500	282	3800		92.42	74.32	1.48	
7	17-Jul	Drilling	14:15	14:45	0.50	13331	13338	7	9	14.0	70	8500	282	3800		92.32	74.29	1.48	
7	17-Jul	Drilling	15:00	16:00	1.00	13338	13432	94	15	94.0	70	8500	282	3800		92.27	73.04	1.50	
7	17-Jul	Sliding	16:15	16:45	0.50	13432	13444	12	20	24.0	70	8500	282	3800	20L	92.29	72.86	1.50	
7	17-Jul	Drilling	16:45	17:45	1.00	13444	13526	82	15	82.0	70	8500	282	3800		90.81	71.22	2.78	
7	17-Jul	Sliding	18:00	18:45	0.75	13526	13541	15	20	20.0	70	8500	282	3800	20L	90.52	70.92	2.78	
7	17-Jul	Drilling	18:45	19:35	0.83	13541	13587	46	15	55.2	70	8500	282	3800		92.25	71.33	4.01	
7	17-Jul	Sliding	19:35	20:00	0.42	13587	13595	8	20	19.2	70	8500	282	3800	0G	92.56	71.40	4.01	
7	17-Jul	Drilling	20:00	20:15	0.25	13595	13620	25	15	100.0	70	8500	282	3800		93.54	71.64	4.01	
7	17-Jul	Sliding	21:05	21:35	0.50	13620	13636	16	20	32.0	70	8500	282	3800	0G	94.16	71.79	4.01	
7	17-Jul	Drilling	21:35	22:30	0.92	13636	13715	79	15	86.2	70	8500	282	3800		91.79	70.14	3.75	
7	17-Jul	Drilling	22:45	23:00	0.25	13715	13725	10	15	40.0	70	8500	282	3800		91.49	69.93	3.75	
7	17-Jul	Sliding	23:00	23:25	0.42	13725	13740	15	20	36.0	70	8500	282	3800	0G	91.43	69.58	2.86	
7	17-Jul	Drilling	23:25	24:00	0.58	13740	13770	30	15	51.4	70	8500	282	3800		91.88	68.85	2.86	
7	18-Jul	Sliding	00:00	00:25	0.42	13770	13782	12	20	28.8	70	8500	282	3800	45R	92.06	68.55	2.86	

# Slide Report for BHA # 7

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
7	18-Jul	Drilling	00:25	00:40	0.25	13782	13809	27	15	108.0	70	8500	282	3800		92.46	67.89	2.86	
7	18-Jul	Sliding	00:55	01:40	0.75	13809	13831	22	20	29.3	70	8500	282	3800	45R	92.85	67.50	2.42	
7	18-Jul	Drilling	01:40	02:05	0.42	13831	13860	29	15	69.6	70	8500	282	3800		93.55	67.50	2.42	
7	18-Jul	Sliding	02:05	02:40	0.58	13860	13875	15	20	25.7	70	8500	282	3800	45R	93.91	67.50	2.42	
7	18-Jul	Drilling	02:40	02:55	0.25	13875	13903	28	15	112.0	70	8500	282	3800		94.59	67.50	2.42	
7	18-Jul	Sliding	03:10	04:00	0.83	13903	13920	17	20	20.4	70	8500	282	3800	45R	95.00	67.50	2.42	
7	18-Jul	Drilling	04:00	04:35	0.58	13920	13955	35	15	60.0	70	8500	282	3800		96.01	67.28	2.94	
7	18-Jul	Sliding	04:35	05:30	0.92	13955	13970	15	20	16.4	70	8500	282	3800	45R	96.44	67.18	2.94	
7	18-Jul	Drilling	05:30	06:10	0.67	13970	13998	28	15	42.0	50	8500	282	3800		97.24	67.00	2.94	
7	18-Jul	Sliding	06:25	07:30	1.08	13998	14016	18	20	16.6	50	8500	282	3800	70R	97.68	66.90	1.10	
7	18-Jul	Drilling	07:30	08:00	0.50	14016	14045	29	15	58.0	50	8500	282	3800		97.37	66.83	1.10	
7	18-Jul	Sliding	08:00	08:45	0.75	14045	14055	10	20	13.3	50	8500	282	3800	70R	97.26	66.81	1.10	
7	18-Jul	Drilling	08:45	09:30	0.75	14055	14092	37	15	49.3	50	8500	282	3800		96.86	66.73	1.10	
7	18-Jul	Sliding	10:15	10:45	0.50	14092	14112	20	20	40.0	50	9000	282	3800	110R	97.64	66.91	2.94	
7	18-Jul	Drilling	10:45	11:15	0.50	14112	14145	33	15	66.0	50	9000	282	3800		96.42	67.75	2.85	
7	18-Jul	Sliding	11:15	11:45	0.50	14145	14155	10	20	20.0	50	9000	282	3800	110R	96.34	68.03	2.85	
7	18-Jul	Drilling	11:45	12:15	0.50	14155	14185	30	15	60.0	50	9500	282	3800		96.12	68.86	2.85	
7	18-Jul	Sliding	12:30	15:15	2.75	14185	14237	52	20	18.9	50	9500	282	3800	120R	96.84	70.25	3.53	
7	18-Jul	Drilling	15:15	16:00	0.75	14237	14279	42	15	56.0	50	9500	282	3800		97.83	71.37	3.53	
7	18-Jul	Sliding	16:15	17:15	1.00	14279	14292	13	20	13.0	50	9500	282	3800	120R	98.13	71.72	3.53	
7	18-Jul	Drilling	17:15	17:40	0.42	14292	14315	23	15	55.2	50	9500	282	3800		0.00	0.00	0.00	
7	18-Jul	Sliding	17:40	19:40	2.00	14315	14340	25	20	12.5	50	9500	282	3800	145R	0.00	0.00	0.00	
7	18-Jul	Drilling	19:40	20:45	1.08	14340	14373	33	15	30.5	50	9500	282	3800		0.00	0.00	0.00	

Total Drilled: 3331 Ft Avg. Total ROP: 48.87 DEPTH% - TIME %

Total Rotary Drilled: 2837 Ft Avg. Rotary ROP: 62.70 Percent Rotary: 85.17 - 66.38

Total Drilled Sliding: 494 Ft Avg. Slide ROP: 21.56 Percent Slide: 14.83 - 33.62

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: 5' 6/7, 8.0, 1.83 ABH	
Bent Hsg/Sub: 1.83 / 1.83 Bit to Bend: 5.05	
Pad OD: 5.00 NB Stab:	

## Slide Report for BHA # 8

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
8	19-Jul	Sliding	21:20	24:00	2.67	14373	14391	18	20	6.8	50	9500	282	3800	160R	95.87	73.42	4.33	
8	20-Jul	Drilling	00:00	01:00	1.00	14391	14421	30	15	30.0	60	9500	282	4150		95.11	74.47	4.33	
8	20-Jul	Sliding	01:15	02:00	0.75	14421	14440	19	20	25.3	60	9500	282	4150	160R	94.62	75.14	4.33	
8	20-Jul	Drilling	02:00	02:30	0.50	14440	14459	19	15	38.0	60	9500	282	4150		94.14	75.80	4.33	

Total Drilled: 86 Ft Avg. Total ROP: 17.49 DEPTH% - TIME %

Total Rotary Drilled: 49 Ft Avg. Rotary ROP: 32.67 Percent Rotary: 56.98 - 30.51

Total Drilled Sliding: 37 Ft Avg. Slide ROP: 10.83 Percent Slide: 43.02 - 69.49

JOB NO.:	M18264
Company:	Abraxas
LOCATION:	2.5 miles SW of Pyote TX
RIG NAME:	Patterson 228
STATE:	Texas
COUNTY:	Ward
WELL NAME:	Mesquite 37 U103H

FIELD:	
Legal Desc.	Township-Section-Range
	-37-
MOTOR INFORMATION	
Desc: 5" 6/7, 8.0, 1.83 ABH	
Bent Hsg/Sub: 1.83 / 1.83 Bit to Bend: 5.05	
Pad OD: 5.00 NB Stab:	

## Slide Report for BHA # 9

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
9	20-Jul	Sliding	22:15	23:45	1.50	14459	14469	10	20	6.7	60	9500	282	3950	170R	93.88	76.16	4.33	
9	21-Jul	Drilling	00:00	00:30	0.50	14469	14505	36	15	72.0	60	9500	282	3950		92.10	76.52	5.55	
9	21-Jul	Sliding	00:30	01:30	1.00	14505	14525	20	20	20.0	60	9500	282	3950	170R	90.99	76.61	5.55	
9	21-Jul	Drilling	01:30	02:15	0.75	14525	14554	29	15	38.7	60	9500	282	3950		89.39	76.73	5.55	
9	21-Jul	Sliding	02:30	03:15	0.75	14554	14562	8	20	10.7	60	9500	282	3950	160R	88.94	76.77	5.55	
9	21-Jul	Drilling	03:15	04:00	0.75	14562	14605	43	15	57.3	60	10500	282	4000		89.64	77.17	3.43	
9	21-Jul	Sliding	04:00	04:15	0.25	14605	14612	7	20	28.0	60	10500	282	4000	20R	89.87	77.24	3.43	
9	21-Jul	Drilling	04:15	05:00	0.75	14612	14648	36	15	48.0	60	10500	282	4000		91.05	77.62	3.43	
9	21-Jul	Drilling	05:15	06:50	1.58	14648	14743	95	18	60.0	60	9550	282	3900		88.94	77.30	3.46	
9	21-Jul	Sliding	07:10	08:30	1.33	14743	14763	20	38	15.0	60	9550	282	3900	170L	88.35	77.23	1.33	
9	21-Jul	Drilling	08:30	09:25	0.92	14763	14806	43	20	46.9	60	9550	306	4300		87.85	77.50	1.33	
9	21-Jul	Sliding	09:25	10:00	0.58	14806	14814	8	38	13.7	60	9550	282	4300	170L	87.76	77.55	1.33	
9	21-Jul	Drilling	10:00	10:25	0.42	14814	14837	23	20	55.2	60	9550	306	4300		87.49	77.70	1.33	
9	21-Jul	Drilling	10:40	11:05	0.42	14837	14857	20	20	48.0	60	9550	306	4300		87.41	77.79	2.78	
9	21-Jul	Sliding	11:10	11:45	0.58	14857	14867	10	38	17.1	60	9550	282	4300	0G	87.69	77.76	2.78	
9	21-Jul	Drilling	11:45	12:10	0.42	14867	14895	28	20	67.2	60	9550	306	4300		88.46	77.67	2.78	
9	21-Jul	Sliding	12:15	12:50	0.58	14895	14905	10	38	17.1	60	9550	282	4300	0G	88.74	77.63	2.78	
9	21-Jul	Drilling	12:50	13:10	0.33	14905	14931	26	22	78.0	60	9550	306	4300		89.46	77.55	2.78	
9	21-Jul	Drilling	13:25	14:55	1.50	14931	15025	94	22	62.7	60	10200	306	4350		89.82	77.42	0.15	
9	21-Jul	Drilling	15:10	16:30	1.33	15025	15120	95	22	71.3	60	10200	306	4350		89.39	77.23	0.57	
9	21-Jul	Drilling	16:50	17:55	1.08	15120	15214	94	22	86.8	60	10450	306	4440		89.63	76.95	0.53	
9	21-Jul	Drilling	18:30	20:15	1.75	15214	15309	95	22	54.3	60	9200	306	4200		88.37	76.49	1.78	
9	21-Jul	Drilling	20:30	21:45	1.25	15309	15403	94	22	75.2	60	9200	306	4200		88.84	76.24	0.97	
9	21-Jul	Drilling	22:00	22:10	0.17	15403	15410	7	22	42.0	60	9200	306	4200		88.91	76.22	0.97	
9	21-Jul	Sliding	22:10	22:45	0.58	15410	15420	10	38	17.1	60	9200	306	4200	20L	89.00	76.20	0.97	
9	21-Jul	Drilling	22:45	24:00	1.25	15420	15498	78	22	62.4	60	9200	306	4200		90.49	77.11	2.24	

# Slide Report for BHA # 9

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
9	22-Jul	Drilling	00:00		0.00	15498	15505	7	22	0.0	60	9200	306	4300		90.63	77.19	2.24	
9	22-Jul	Sliding	00:15	01:15	1.00	15505	15515	10	32	10.0	60	9200	282	4300	20L	90.81	77.30	0.68	
9	22-Jul	Drilling	01:15	02:45	1.50	15515	15592	77	22	51.3	60	9200	306	4300		91.21	77.63	0.68	
9	22-Jul	Drilling	03:00	04:45	1.75	15592	15686	94	22	53.7	60	9200	306	4300		90.07	77.13	1.74	
9	22-Jul	Drilling	05:00	06:40	1.67	15686	15781	95	22	57.0	60	10100	306	4300		90.39	77.00	0.75	
9	22-Jul	Drilling	06:50	07:30	0.67	15781	15806	25	22	37.5	60	10100	306	4300		90.49	76.94	0.64	
9	22-Jul	Sliding	07:30	08:20	0.83	15806	15816	10	38	12.0	60	10100	282	4300	30L	90.48	76.87	0.64	
9	22-Jul	Drilling	08:20	09:25	1.08	15816	15874	58	22	53.5	60	10400	306	4300		90.42	76.51	0.64	
9	22-Jul	Drilling	09:40	11:10	1.50	15874	15969	95	22	63.3	60	10400	306	4300		89.30	75.80	1.61	
9	22-Jul	Drilling	11:25	12:40	1.25	15969	16047	78	22	62.4	60	10400	306	4300		89.30	75.80	0.00	

Total Drilled: 1588 Ft Avg. Total ROP: 47.29

DEPTH% - TIME %

Total Rotary Drilled: 1465 Ft Avg. Rotary ROP: 59.59

Percent Rotary: 92.25 - 73.20

Total Drilled Sliding: 123 Ft Avg. Slide ROP: 13.67

Percent Slide: 7.75 - 26.80

BHA # 1		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.:	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters						
Date In:	09-Jun-18 @ 20:15		Desc:	National 8" 7/8 4.0, 1.83 ADJ, 12"			SO/PU:	60 - 120		/ 60-134			
Date Out:	11-Jun-18 @ 13:00		MFG.:	National			Rot Wt:	55-128					
Hrs In Hole:	40.75		BHA Circ/ All BHA:	21.67 / 21.00			WOB:	5 - 30					
Start Depth:	108.00		Motor SN:	800-40-105			TORQ:	2400 - 12000					
End Depth:	2360.00		Pad OD:	39584.00			SPP:	275 - 1850					
Total Drilled:	2252.00		NB Stab:	12.00			Motor RPM:	62.6 - 119.7					
Avg. Total ROP:	147.67		Bit to Bend:	7.10			Rotary RPM:	30 - 60					
Circ Hrs:Tot/Only	21.67 / 6.42		Bent Hsg / Sub:	1.83 / 1.83			Flow Rate:	300 - 704					
Percent Slide:	6.31		Lobe/Stage:	7/8 / 4			Avg Diff:	500					
Percent Hrs:	12.02		Revs/Gal	0.17			Stall Pres.:	2200					
Slide Hours:	1.83		Rotor Jet:	0.0			Off Bot Pres.:	1350					
Total Sliding:	142.00		Prop BUR:	0			Bit Record						
Avg. Slide ROP:	77.45		Act BUR:				Drillformance	/ 12 1/4" Drillformance 616 6x18's, 1x16					
Percent Rotary:	93.69		Stator Clearance:				Run #:	1					
Percent Hrs:	87.98		Lower Stab OD:	40606.00			Type Bit:	PDC					
Rot / Total Hrs:	13.42 / 15.25		Upper Stab OD:	11 3/4			IADC#:			TFA:	1.69 in²		
Rotary Drilled:	2110.00		Extended Motor?	YES			JETS:	16,6-18					
Avg. Rotary ROP:	157.27		Number of Stalls:	0			P Drop:	995kPa @ 704 GPM					
Reason POOH:	TD		Stall Duration:	0			Cond.:	Couple of broke cutters					
Mud Data													
Type	WBM		WT:	9.0Kg/m³	Vis:	28	WL:	0	PV:	1	Flow T °:	72.0	
SAND:	0	Chlor:	19000	GAS:	0	SOL:	0	Oil %:	0	YP:	1	PH:	8
Formation:													
EXPANDED REASON PULLED:													
TD Surface section													
BHA PERFORMANCE:													
Drilled 2,252' ( Rotated 2,110' @ 157'/Hour, Slid 142' @ 77'/Hour)													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
Bit graded 1-2-BT-S, bearings appeared in good condition and rerunable.													
WinSURV II Mud Motor Report													

BHA # 2		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA					Drilling Parameters					
Date In:	30-Jun-18 @ 12:20		Desc:	GDT 7/8 5.7, 1.5 FBH, 8.5 stb			SO/PU:	120 - 210		/ 134-280			
Date Out:	03-Jul-18 @ 17:00		MFG.:	Gearcon			Rot Wt:	128-240					
Hrs In Hole:	76.67		BHA Circ/ All BHA:	57.50 / 71.83			WOB:	10 - 35					
Start Depth:	2360.00		Motor SN:	16507			TORQ:	2800 - 14100					
End Depth:	8212.00		Pad OD:	38906.00			SPP:	820 - 2200					
Total Drilled:	5852.00		NB Stab:	8.50			Motor RPM:	144.7 - 170.4					
Avg. Total ROP:	106.24		Bit to Bend:	4.62			Rotary RPM:	40 - 60					
Circ Hrs:Tot/Only	57.50 / 2.42		Bent Hsg / Sub:	1.5 / 1.5			Flow Rate:	450 - 704					
Percent Slide:	5.01		Lobe/Stage:	7/8 / 5.7			Avg Diff:	600					
Percent Hrs:	18.61		Revs/Gal	0.24			Stall Pres.:						
Slide Hours:	10.25		Rotor Jet:	55.1			Off Bot Pres.:	1570					
Total Sliding:	293.00		Prop BUR:	2			Bit Record						
Avg. Slide ROP:	28.59		Act BUR:	2.3			REED	/ Reed SKC716M 7x16's					
Percent Rotary:	94.99		Stator Clearance:				Run #:	2					
Percent Hrs:	81.39		Lower Stab OD:	8.50			Type Bit:	PDC					
Rot / Total Hrs:	44.83 / 55.08		Upper Stab OD:	8.25			IADC#:			TFA:	1.37 in <sup>2</sup>		
Rotary Drilled:	5559.00		Extended Motor?	YES			JETS:	7-16					
Avg. Rotary ROP:	123.99		Number of Stalls:	0			P Drop:	1583kPa @ 704 GPM					
Reason POOH:	PR		Stall Duration:				Cond.:	Cored					
Mud Data													
Type	Brine		WT:	9.5Kg/m <sup>3</sup>		Vis:	28	WL:	0	PV:	1	Flow T °:	84.0
SAND:	0	Chlor:	120000	GAS:	0	SOL:	6	Oil %:	0	YP:	1	PH:	11
Formation:												Bottom Hole T °:	120.2
EXPANDED REASON PULLED:													
ROP dropped to mid 20's													
BHA PERFORMANCE:													
Maintained good rop through out the run until the bit dulled out. We had 5599' of rotation in 44.83 hours for a average of 123.99. We had 293' of slide in 10.25 hours for a average of 28.59. Doglegs on slides were consistent during the run.													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
At surface motor drained normally with no apparent problems. We re-ran the motor on the next BHA. Bit was begining to core, graded @ 4/3 in gauge with cutters chipped in all areas.													
WinSURV II Mud Motor Report													

BHA # 3		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters						
Date In:	03-Jul-18 @ 17:00		Desc:	GDT 7/8 5.7, 1.5 FBH, 8.5 stb			SO/PU:	205 - 210		/ 280-290			
Date Out:	04-Jul-18 @ 23:00		MFG.:	Gearcon			Rot Wt:	240-240					
Hrs In Hole:	30.00		BHA Circ/ All BHA:	15.00 / 71.83			WOB:	24 - 35					
Start Depth:	8212.00		Motor SN:	16507			TORQ:	12300 - 12900					
End Depth:	8755.00		Pad OD:	38906.00			SPP:	1820 - 2050					
Total Drilled:	543.00		NB Stab:	8.50			Motor RPM:	144.7					
Avg. Total ROP:	42.31		Bit to Bend:	4.62			Rotary RPM:	60 - 60					
Circ Hrs:Tot/Only	15.00 / 2.17		Bent Hsg / Sub:	1.5 / 1.5			Flow Rate:	598 - 598					
Percent Slide:	5.89		Lobe/Stage:	7/8 / 5.7			Avg Diff:	600					
Percent Hrs:	15.58		Revs/Gal	0.24			Stall Pres.:						
Slide Hours:	2.00		Rotor Jet:	0.0			Off Bot Pres.:	1675					
Total Sliding:	32.00		Prop BUR:	2			Bit Record						
Avg. Slide ROP:	16.00		Act BUR:	2.3			Ulterra	/ Ulterra 716M 7x16					
Percent Rotary:	94.11		Stator Clearance:				Run #:	3					
Percent Hrs:	84.42		Lower Stab OD:	8.50			Type Bit:	PDC					
Rot / Total Hrs:	10.83 / 12.83		Upper Stab OD:	8.25			IADC#:			TFA:	1.37 in <sup>2</sup>		
Rotary Drilled:	511.00		Extended Motor?	YES			JETS:	7-16					
Avg. Rotary ROP:	47.17		Number of Stalls:	0			P Drop:	1142kPa @ 598 GPM					
Reason POOH:	PR		Stall Duration:				Cond.:	Slight Wear					
Mud Data													
Type	Brine		WT:	9.5Kg/m <sup>3</sup>		Vis:	28	WL:	0	PV:	1	Flow T °:	84.0
SAND:	0	Chlor:	120000	GAS:	0	SOL:	6	Oil %:	0	YP:	1	PH:	11
Formation:													
EXPANDED REASON PULLED:													
ROP dropped to mid 20's													
BHA PERFORMANCE:													
Maintained average rop through out the run of 45 to 50' Hr. until rop slowed down to 30' Hr. We had 511' of rotation in 10.83 hours for a average of 42.31. We had 32' of slide in 2.00 hours for a average of 16.00. Doglegs on slides were consistent during the run.													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
At surface motor drained normally with no apparent problems. Motor was a re-run from BHA # 2. Bit had very slight wear, graded @ 1/2 in gauge with cutters showing slight wear in all areas.													
WinSURV II Mud Motor Report													

BHA # 4		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.:	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters						
Date In:	04-Jul-18 @ 23:00		Desc:	GDT 7/8 5.7, 1.5 ABH, 8.5 stb			SO/PU:	205 - 240		/ 290-340			
Date Out:	06-Jul-18 @ 24:00		MFG.:	Gearcon			Rot Wt:	240-270					
Hrs In Hole:	47.67		BHA Circ/ All BHA:	27.42 / 27.42			WOB:	10 - 32					
Start Depth:	8755.00		Motor SN:	16501			TORQ:	14400 - 16400					
End Depth:	10083.00		Pad OD:	42534.00			SPP:	2050 - 2500					
Total Drilled:	1328.00		NB Stab:	8.50			Motor RPM:	144.7					
Avg. Total ROP:	54.58		Bit to Bend:	5.93			Rotary RPM:	50 - 65					
Circ Hrs:Tot/Only	27.42 / 3.08		Bent Hsg / Sub:	1.5 / 1.5			Flow Rate:	598 - 598					
Percent Slide:	8.13		Lobe/Stage:	7/8 / 5.7			Avg Diff:	600					
Percent Hrs:	28.08		Revs/Gal	0.24			Stall Pres.:						
Slide Hours:	6.83		Rotor Jet:	0.0			Off Bot Pres.:	1900					
Total Sliding:	108.00		Prop BUR:	2			Bit Record						
Avg. Slide ROP:	15.80		Act BUR:	2.3			BAKER	/ Baker T607FX 7x15's					
Percent Rotary:	91.87		Stator Clearance:				Run #:	4					
Percent Hrs:	71.92		Lower Stab OD:	8.50			Type Bit:	PDC					
Rot / Total Hrs:	17.50 / 24.33		Upper Stab OD:	8.25			IADC#:			TFA:	1.21 in <sup>2</sup>		
Rotary Drilled:	1220.00		Extended Motor?	YES			JETS:	7-15					
Avg. Rotary ROP:	69.71		Number of Stalls:	0			P Drop:	1478kPa @ 598 GPM					
Reason POOH:	BHA		Stall Duration:				Cond.:	Used up					
Mud Data													
Type	Brine		WT:	9.5Kg/m <sup>3</sup>	Vis:	27	WL:	0	PV:	1	Flow T °:	84.0	
SAND:	0	Chlor:	124000	GAS:	0	SOL:	7	Oil %:	0	YP:	1	PH:	12
Formation:													
EXPANDED REASON PULLED:													
Completed 6 3/4" Vertical Section.													
BHA PERFORMANCE:													
Maintained average rop through out the run of 45' to 75' Hr and completed intermediate section. We had 1220' of rotation in 17.50 hours for a average of 69.71. We had 108' of slide in 6.83 hours for a average of 15.80. Doglegs on slides were consistent during the run.													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
At surface motor drained normally with no apparent problems. Motor performed as expected. Bit had wear throughout graded @ 2/3 and was approximately 1/8 out of gage with broken and chipped cutters in all areas.													
WinSURV II Mud Motor Report													

BHA # 5		Mud Motor Report															
JOB NO.:	M18264					FIELD:											
Company:	Abraxas					Legal Desc.:	Township-Section-Range										
LOCATION:	2.5 miles SW of Pyote TX						-37-										
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock										
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon										
COUNTY:	Ward					Motor Failed?	NO										
WELL NAME:	Mesquite 37 U103H																
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters										
Date In:	07-Jul-18 @ 00:00		Desc:	6 3/4 4/5 7.0, 2.38 ADJ slick			SO/PU:	225 - 255		/ 340-355							
Date Out:	08-Jul-18 @ 18:30		MFG.:	NOV			Rot Wt:	270-270									
Hrs In Hole:	42.50		BHA Circ/ All BHA:	22.50 / 33.00			WOB:	16 - 28									
Start Depth:	10083.00		Motor SN:	MM3606750056			TORQ:	15000 - 17000									
End Depth:	10825.00		Pad OD:	39279.00			SPP:	2000 - 2350									
Total Drilled:	742.00		NB Stab:	0.00			Motor RPM:	311.0									
Avg. Total ROP:	43.86		Bit to Bend:	6.14			Rotary RPM:	30 - 30									
Circ Hrs:Tot/Only	22.50 / 5.58		Bent Hsg / Sub:	2.38		/ 2.38	Flow Rate:	598 - 598									
Percent Slide:	71.16		Lobe/Stage:	4/5 / 7			Avg Diff:	750									
Percent Hrs:	70.94		Revs/Gal	0.52			Stall Pres.:										
Slide Hours:	12.00		Rotor Jet:	16.9			Off Bot Pres.:	1900									
Total Sliding:	528.00		Prop BUR:	10			Bit Record										
Avg. Slide ROP:	44.00		Act BUR:	14			BAKER	/ Baker DD406X 6x16's									
Percent Rotary:	28.84		Stator Clearance:				Run #:	5									
Percent Hrs:	29.06		Lower Stab OD:				Type Bit:	PDC									
Rot / Total Hrs:	4.92 / 16.92		Upper Stab OD:				IADC#:			TFA:	1.96 in <sup>2</sup>						
Rotary Drilled:	214.00		Extended Motor?	YES			JETS:	6-16									
Avg. Rotary ROP:	43.53		Number of Stalls:	0			P Drop:	560kPa @ 598 GPM									
Reason POOH:	HR		Stall Duration:				Cond.:	Heavy wear on gauge rows									
Mud Data																	
Type	Brine		WT:	9.5Kg/m <sup>3</sup>		Vis:	27		WL:	0		PV:	1		Flow T °:	84.0	
SAND:	0		Chlor:	124000		GAS:	0		SOL:	7		Oil %:	0		YP:	1	
PH:	12		Bottom Hole T °:	120.2													
Formation:																	
EXPANDED REASON PULLED:																	
Build rates dropped off and tripped out to change bit.																	
BHA PERFORMANCE:																	
Maintained average rop through out the run of 30' to 85' hr. Built curve section down to 56.4. We had 214' of rotation in 4.92 hours for a average of 43.53 hr. We had 528' of slide in 12.0 hours for a average of 44.0 hr. Doglegs on slides were consistent until 50.60 degrees when motor yields fell off from 14 to 15's down to 10 to 11's due to heavy wear on the bit.																	
ADDITIONAL COMMENTS: (Expands to next page if necessary)																	
At surface motor drained normally with no apparent problems. Motor performed as expected. Rerun motor to complete curve section. Bit had wear throughout graded @ 1/4 and was approximately 1/16 out of gage with broken and chipped cutters on shoulder and gauge row areas.																	
WinSURV II Mud Motor Report																	

BHA # 6		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Skye Yocum/Eric Vernon						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters						
Date In:	08-Jul-18 @ 18:30		Desc:	6 3/4 4/5 7.0, 2.38 ADJ slick			SO/PU:	225 - 225		/ 355-355			
Date Out:	09-Jul-18 @ 23:45		MFG.:	NOV			Rot Wt:	270-270					
Hrs In Hole:	29.25		BHA Circ/ All BHA:	11.58 / 33.00			WOB:	16 - 26					
Start Depth:	10825.00		Motor SN:	MM3606750056			TORQ:	17000 - 17500					
End Depth:	11042.00		Pad OD:	39279.00			SPP:	2250 - 2350					
Total Drilled:	217.00		NB Stab:	0.00			Motor RPM:	311.0					
Avg. Total ROP:	40.06		Bit to Bend:	6.14			Rotary RPM:	30 - 30					
Circ Hrs:Tot/Only	11.58 / 6.17		Bent Hsg / Sub:	2.38		/ 2.38	Flow Rate:	598 - 598					
Percent Slide:	78.34		Lobe/Stage:	4/5 / 7			Avg Diff:	500					
Percent Hrs:	78.46		Revs/Gal	0.52			Stall Pres.:						
Slide Hours:	4.25		Rotor Jet:	5.4			Off Bot Pres.:	2050					
Total Sliding:	170.00		Prop BUR:	10			Bit Record						
Avg. Slide ROP:	40.00		Act BUR:	13.3			Ulterra	/ Ulterra CF613					
Percent Rotary:	21.66		Stator Clearance:				Run #:	6					
Percent Hrs:	21.54		Lower Stab OD:				Type Bit:	PDC					
Rot / Total Hrs:	1.17 / 5.42		Upper Stab OD:				IADC#:			TFA:	1.96 in <sup>2</sup>		
Rotary Drilled:	47.00		Extended Motor?	YES			JETS:	6-16					
Avg. Rotary ROP:	40.29		Number of Stalls:	0			P Drop:	595kPa @ 598 GPM					
Reason POOH:	TD		Stall Duration:				Cond.:	Heavy wear on gauge rows					
Mud Data													
Type	Brine		WT:	10.1Kg/m <sup>3</sup>	Vis:	31	WL:	0	PV:	1	Flow T °:	84.0	
SAND:	0	Chlor:	124000	GAS:	0	SOL:	7	Oil %:	0	YP:	1	PH:	12
Formation:													
EXPANDED REASON PULLED:													
TD curve section.													
BHA PERFORMANCE:													
Maintained average rop through out the run of 30' to 60' hr. Completed curve section down to landing point. We had 47' of rotation in 1.17 hours for a average of 40.29 hr. We had 170' of slide in 4.25 hours for a average of 40.0 hr. Doglegs on slides were consistent throughout run.													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
At surface motor drained normally with no apparent problems. Motor performed as expected. Rerun motor completed curve section. Bit had wear throughout graded @ 1/4 and was approximately 1/16 out of gage with broken and chipped cutters on shoulder and gauge row areas.													
WinSURV II Mud Motor Report													

BHA # 7		Mud Motor Report													
JOB NO.:	M18264					FIELD:									
Company:	Abraxas					Legal Desc.	Township-Section-Range								
LOCATION:	2.5 miles SW of Pyote TX						-37-								
RIG NAME:	Patterson 228					Lead DD:	Charles Becton								
STATE:	Texas					Co. Man:	Gary Hernandez/Eugene Hernandez								
COUNTY:	Ward					Motor Failed?	NO								
WELL NAME:	Mesquite 37 U103H														
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters								
Date In:	14-Jul-18 @ 15:00		Desc:	5" 6/7, 8.0, 1.50 ABH		SO/PU:	160 - 165		/ 210-220						
Date Out:	19-Jul-18 @ 10:00		MFG.:	Gyro/Data		Rot Wt:	180-180								
Hrs In Hole:	115.00		BHA Circ/ All BHA:	74.75 / 116.42		WOB:	8 - 20								
Start Depth:	11042.00		Motor SN:	GDM500016		TORQ:	7500 - 9500								
End Depth:	14373.00		Pad OD:	5.00		SPP:	2000 - 3800								
Total Drilled:	3331.00		NB Stab:	0.00		Motor RPM:	228.4								
Avg. Total ROP:	48.87		Bit to Bend:	5.05		Rotary RPM:	30 - 70								
Circ Hrs:Tot/Only	74.75 / 6.58		Bent Hsg / Sub:	1.5 / 1.5		Flow Rate:	211 - 282								
Percent Slide:	14.83		Lobe/Stage:	6/7 / 8		Avg Diff:	1800								
Percent Hrs:	33.62		Revs/Gal	0.81		Stall Pres.:	2700								
Slide Hours:	22.92		Rotor Jet:	68.2		Off Bot Pres.:	3300								
Total Sliding:	494.00		Prop BUR:	5.55		Bit Record									
Avg. Slide ROP:	21.56		Act BUR:			REED	/ 6 1/8 REED SK613M 3X12 3X16 Jets								
Percent Rotary:	85.17		Stator Clearance:			Run #:	1								
Percent Hrs:	66.38		Lower Stab OD:			Type Bit:	PDC								
Rot / Total Hrs:	45.25 / 68.17		Upper Stab OD:			IADC#:			TFA:	1.71 in <sup>2</sup>					
Rotary Drilled:	2837.00		Extended Motor?	NO		JETS:	3-12,3-16								
Avg. Rotary ROP:	62.70		Number of Stalls:	0		P Drop:	196kPa @ 282 GPM								
Reason POOH:	FM		Stall Duration:			Cond.:	1-1 In gage								
Mud Data															
Type	OBM		WT:	11.3Kg/m <sup>3</sup>	Vis:	48	WL:	0	PV:	24	Flow T °:	106.0			
SAND:	0	Chlor:	38000	GAS:	0	SOL:	18.5	Oil %:	61	YP:	13	PH:	2.7	Bottom Hole T °:	120.2
Formation:															
EXPANDED REASON PULLED:															
POOH to check BHA and Bit and change components necessary to achieve build rates needed for these formation strengths.															
BHA PERFORMANCE:															
Maintained average rop through out the run of 25' to 125' hr. We had 2937' of rotation in 45.25 hours for a average of 64.91 hr. We had 394' of slide in 22.92 hours for a average of 17.19 hr. Motor yielded as per normal thru most of the run but toward the end of the run we had formation strengths working against us and we were unable to achieve normal doglegs unless we tripped the length of each slide. POOH to inspect BHA and possibly dial motor from a 1.5 to a 1.83															
ADDITIONAL COMMENTS: (Expands to next page if necessary)															
At surface motor drained normally with no apparent problems. Motor performed as expected. Bit was graded @ 1-1 and was in gage. Dialed motor up to a 1.83 and reran motor.															
WinSURV II Mud Motor Report															

BHA # 8		Mud Motor Report													
JOB NO.:	M18264					FIELD:									
Company:	Abraxas					Legal Desc.	Township-Section-Range								
LOCATION:	2.5 miles SW of Pyote TX						-37-								
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock								
STATE:	Texas					Co. Man:	Gary Hernandez/Eugene Hernandez								
COUNTY:	Ward					Motor Failed?	NO								
WELL NAME:	Mesquite 37 U103H														
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters								
Date In:	19-Jul-18 @ 10:00		Desc:	5" 6/7, 8.0, 1.83 ABH		SO/PU:	160 - 160		/ 215-215						
Date Out:	20-Jul-18 @ 13:00		MFG.:	Gyro/Data		Rot Wt:	180-180								
Hrs In Hole:	27.00		BHA Circ/ All BHA:	7.75 / 116.42		WOB:	15 - 20								
Start Depth:	14373.00		Motor SN:	GDM500016		TORQ:	9500 - 9500								
End Depth:	14459.00		Pad OD:	5.00		SPP:	3800 - 4150								
Total Drilled:	86.00		NB Stab:	0.00		Motor RPM:	228.4								
Avg. Total ROP:	17.49		Bit to Bend:	5.05		Rotary RPM:	60 - 60								
Circ Hrs:Tot/Only	7.75 / 2.83		Bent Hsg / Sub:	1.83 / 1.83		Flow Rate:	282 - 282								
Percent Slide:	43.02		Lobe/Stage:	6/7 / 8		Avg Diff:	1800								
Percent Hrs:	69.49		Revs/Gal	0.81		Stall Pres.:	2700								
Slide Hours:	3.42		Rotor Jet:	4.9		Off Bot Pres.:	3300								
Total Sliding:	37.00		Prop BUR:			Bit Record									
Avg. Slide ROP:	10.83		Act BUR:			REED	/ 6 1/8 REED E1234 3X12 3X16 Jets								
Percent Rotary:	56.98		Stator Clearance:			Run #:	8								
Percent Hrs:	30.51		Lower Stab OD:			Type Bit:	PDC								
Rot / Total Hrs:	1.50 / 4.92		Upper Stab OD:			IADC#:			TFA:	1.71 in <sup>2</sup>					
Rotary Drilled:	49.00		Extended Motor?	YES		JETS:	3-12,3-16								
Avg. Rotary ROP:	32.67		Number of Stalls:			P Drop:	196kPa @ 282 GPM								
Reason POOH:	DTF		Stall Duration:			Cond.:	Green								
Mud Data															
Type	OBM		WT:	11.3Kg/m <sup>3</sup>	Vis:	55	WL:	0	PV:	24	Flow T °:	104.0			
SAND:	0	Chlor:	47000	GAS:	0	SOL:	18	Oil %:	75	YP:	13	PH:	12	Bottom Hole T °:	120.2
Formation:															
EXPANDED REASON PULLED:															
MWD failure															
BHA PERFORMANCE:															
The first slide to bring down the angle was 18' @160 rt TFO +/- the a 30' rotation was put in, then a second slide of 19' @ 160 rt TFO. Rotation was started again and the MWD tool stopped working approx 15' into the rotation.															
ADDITIONAL COMMENTS: (Expands to next page if necessary)															
After trouble troubleshooting the mwd with no sucess we tripped out for a new tool. Bit and motor checked out on surface inspection and was re-ran.															
WinSURV II Mud Motor Report															

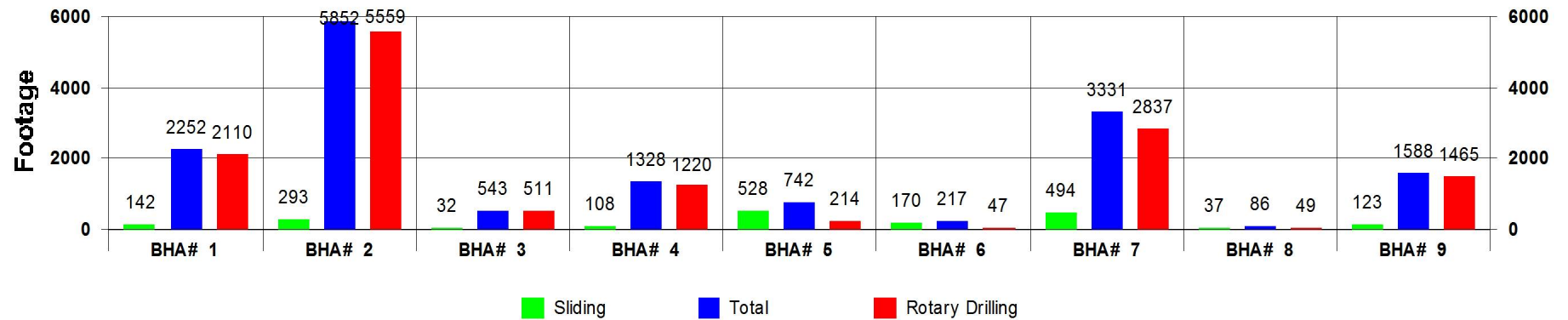
BHA # 9		Mud Motor Report											
JOB NO.:	M18264					FIELD:							
Company:	Abraxas					Legal Desc.	Township-Section-Range						
LOCATION:	2.5 miles SW of Pyote TX						-37-						
RIG NAME:	Patterson 228					Lead DD:	Brian Hancock						
STATE:	Texas					Co. Man:	Gary Hernandez/Eugene Hernandez						
COUNTY:	Ward					Motor Failed?	NO						
WELL NAME:	Mesquite 37 U103H												
Time and Depths (This BHA)			MOTOR DATA				Drilling Parameters						
Date In:	20-Jul-18 @ 13:00		Desc:	5" 6/7, 8.0, 1.83 ABH			SO/PU:	160 - 160		/ 215-215			
Date Out:	22-Jul-18 @ 24:00		MFG.:	Gyro/Data			Rot Wt:	180-180					
Hrs In Hole:	58.75		BHA Circ/ All BHA:	37.42 / 116.42			WOB:	15 - 38					
Start Depth:	14459.00		Motor SN:	GDM500016			TORQ:	9200 - 10500					
End Depth:	16047.00		Pad OD:	5.00			SPP:	3900 - 4440					
Total Drilled:	1588.00		NB Stab:	0.00			Motor RPM:	228.4 - 247.9					
Avg. Total ROP:	47.29		Bit to Bend:	5.05			Rotary RPM:	60 - 60					
Circ Hrs:Tot/Only	37.42 / 3.83		Bent Hsg / Sub:	1.83		/ 1.83	Flow Rate:	282 - 306					
Percent Slide:	7.75		Lobe/Stage:	6/7 / 8			Avg Diff:	550					
Percent Hrs:	26.80		Revs/Gal	0.81			Stall Pres.:	4450					
Slide Hours:	9.00		Rotor Jet:	33.6			Off Bot Pres.:	3850					
Total Sliding:	123.00		Prop BUR:				Bit Record						
Avg. Slide ROP:	13.67		Act BUR:				REED	/ 6 1/8 REED E1234 3X12 3X16 Jets					
Percent Rotary:	92.25		Stator Clearance:				Run #:	1					
Percent Hrs:	73.20		Lower Stab OD:				Type Bit:	PDC					
Rot / Total Hrs:	24.58 / 33.58		Upper Stab OD:				IADC#:			TFA:	1.71 in <sup>2</sup>		
Rotary Drilled:	1465.00		Extended Motor?	NO			JETS:	3-12,3-16					
Avg. Rotary ROP:	59.59		Number of Stalls:				P Drop:	231kPa @ 306 GPM					
Reason POOH:	TD		Stall Duration:				Cond.:	1-1 In gage					
Mud Data													
Type	OBM		WT:	11.3Kg/m <sup>3</sup>		Vis:	55	WL:	0	PV:	24	Flow T °:	104.0
SAND:	0	Chlor:	47000	GAS:	0	SOL:	18	Oil %:	80	YP:	13	PH:	3.4
Formation:													
EXPANDED REASON PULLED:													
TD'ed Lateral section													
BHA PERFORMANCE:													
Drilled f/14459 to 16047 /1588 ft. @47.29 ft per hr / (33.58 total hrs.) Rot. rop 59.95 ft hr. & slide rop of 13.67													
ADDITIONAL COMMENTS: (Expands to next page if necessary)													
Out of the hole inspection revealed no visual wear and motor drained as per normal. Bit grade was a 1-1 in gage.													
WinSURV II Mud Motor Report													

# **Section Four**

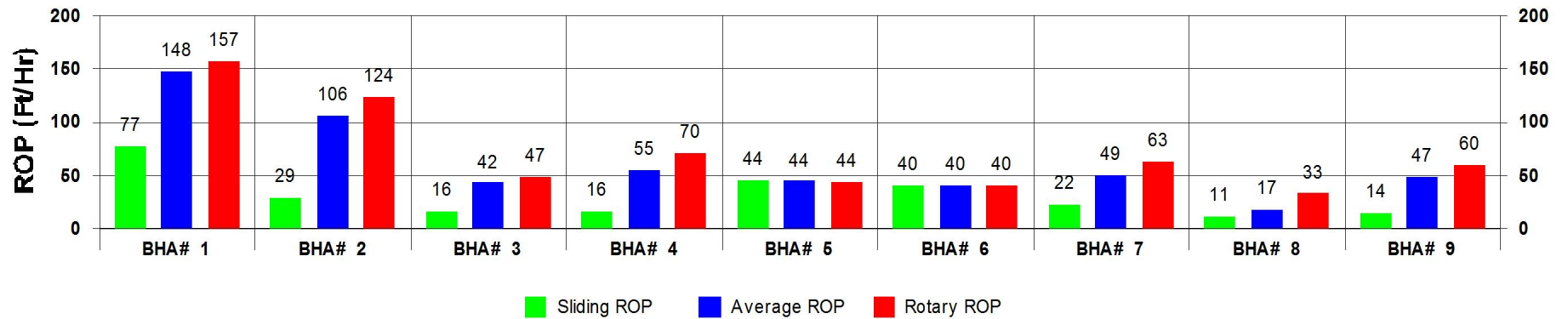
## **Job Summary Charts**

JOB NO.:	M18264	FIELD:	
Company:	Abraxas	Legal Desc.	Township-Section-Range
LOCATION:	2.5 miles SW of Pyote TX		-37-
RIG NAME:	Patterson 228	COMMENT	
STATE:	Texas		
COUNTY:	Ward		
WELL NAME:	Mesquite 37 U103H		

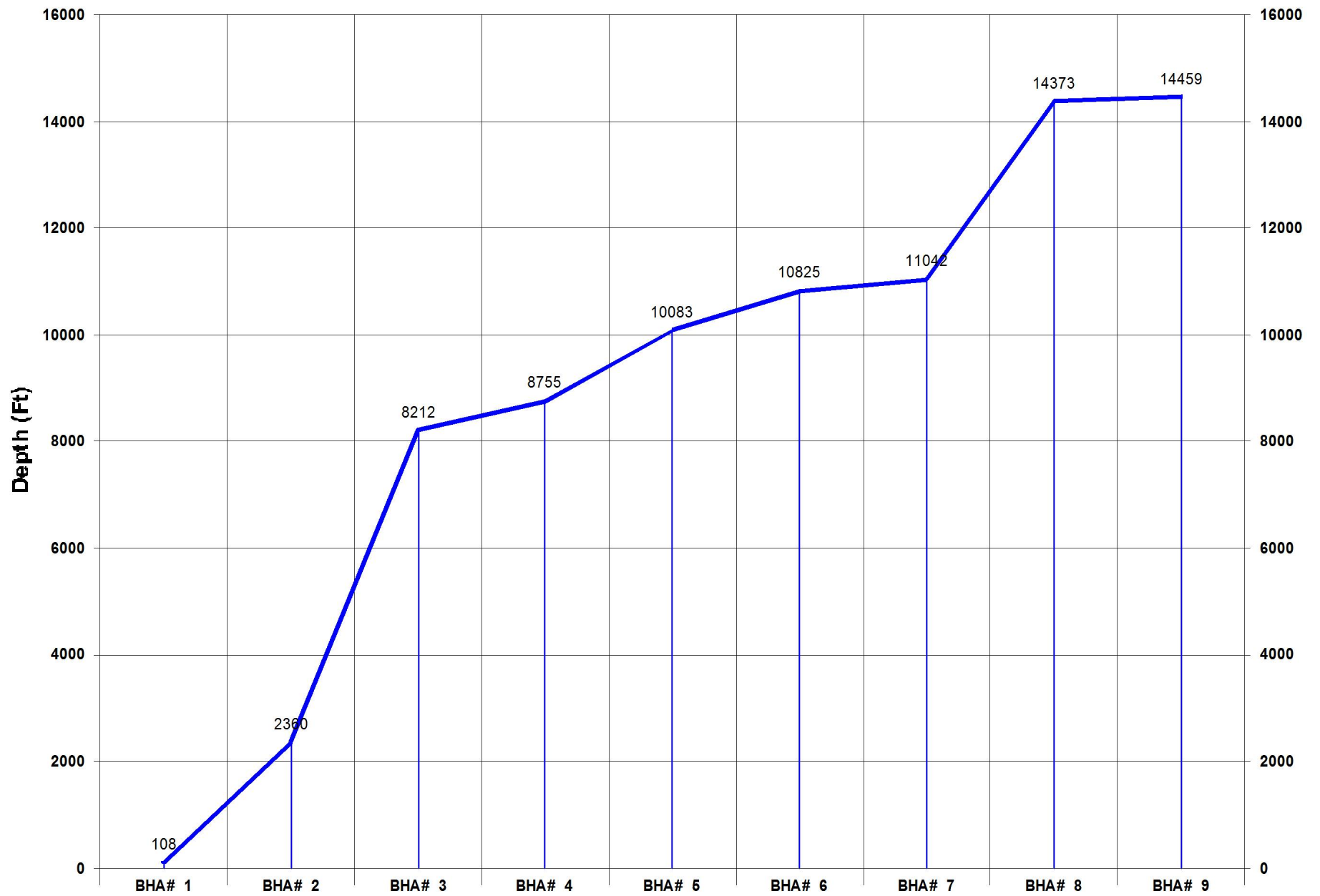
### Footage Drilled with BHA



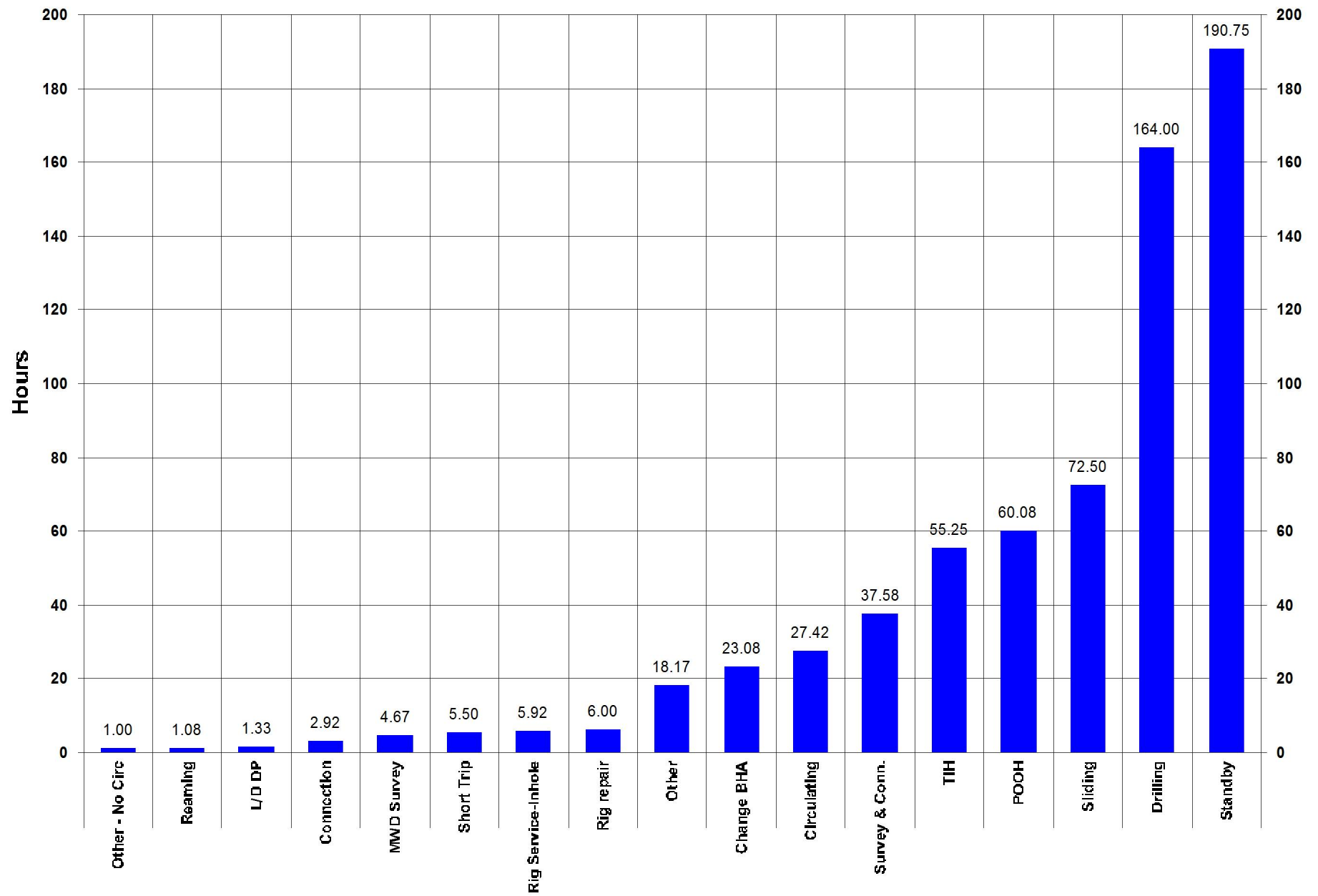
### ROP vs BHA



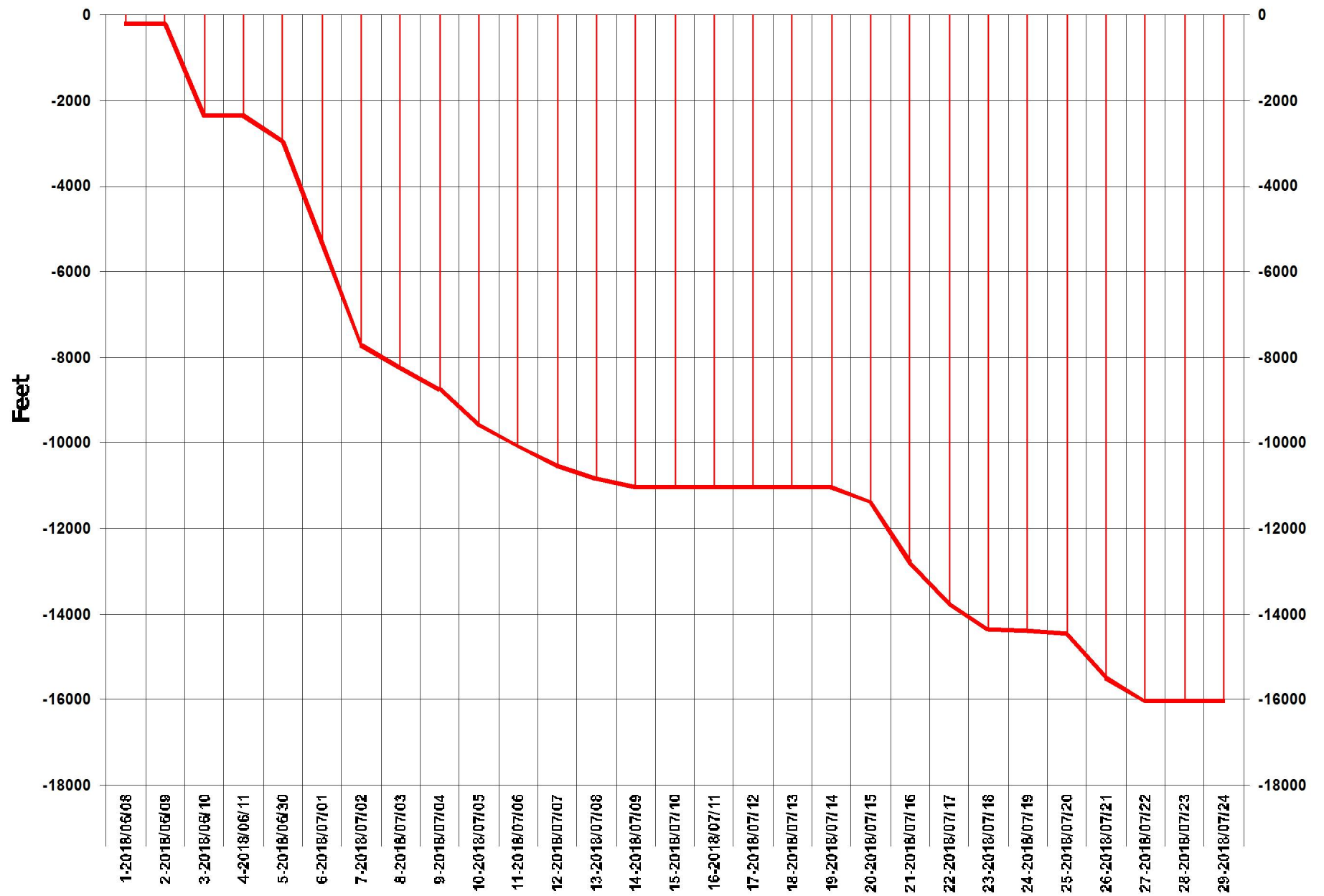
## Depth vs BHA



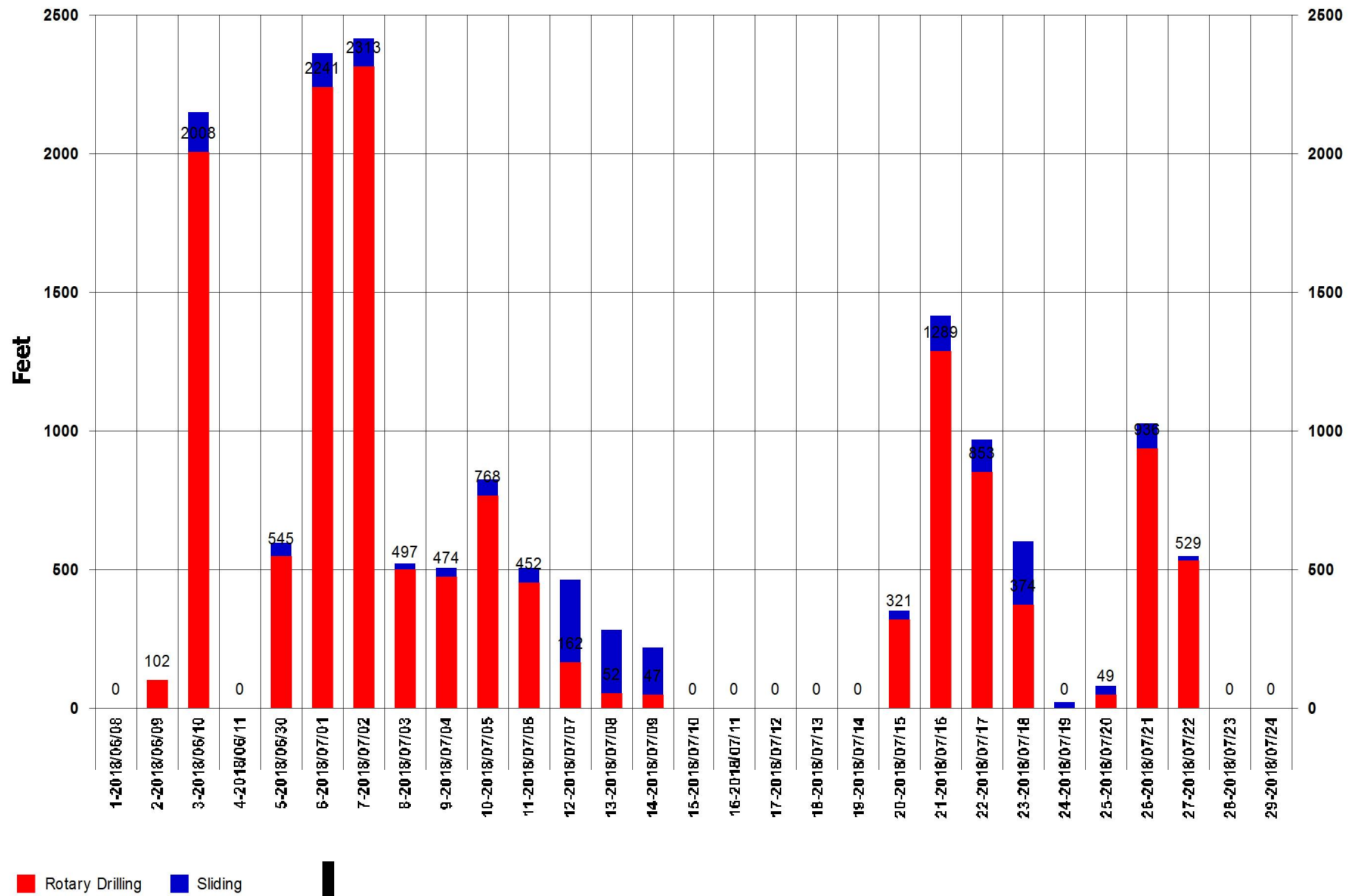
Activity Histogram



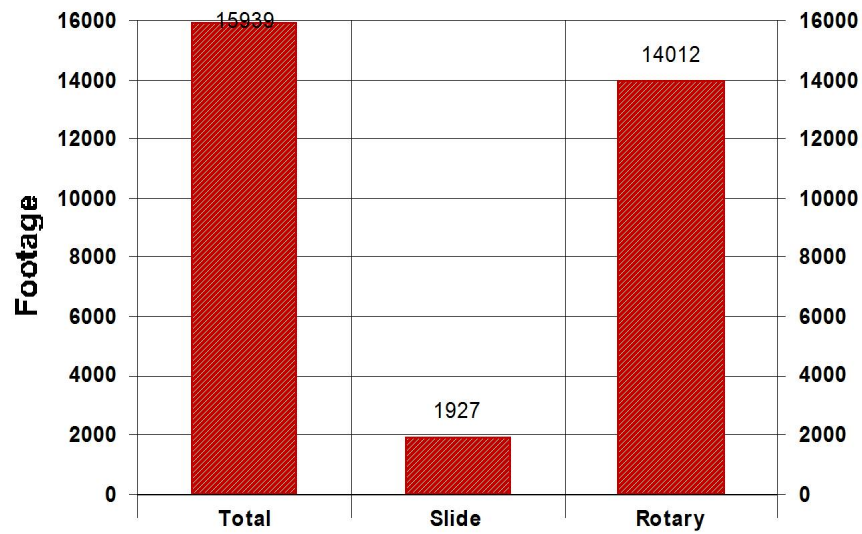
Measured Depth vs Days



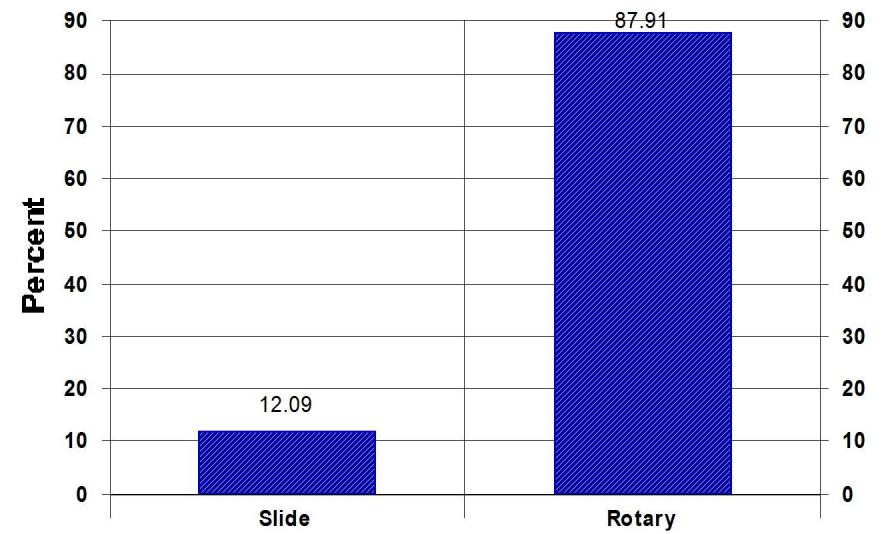
## Daily Footage



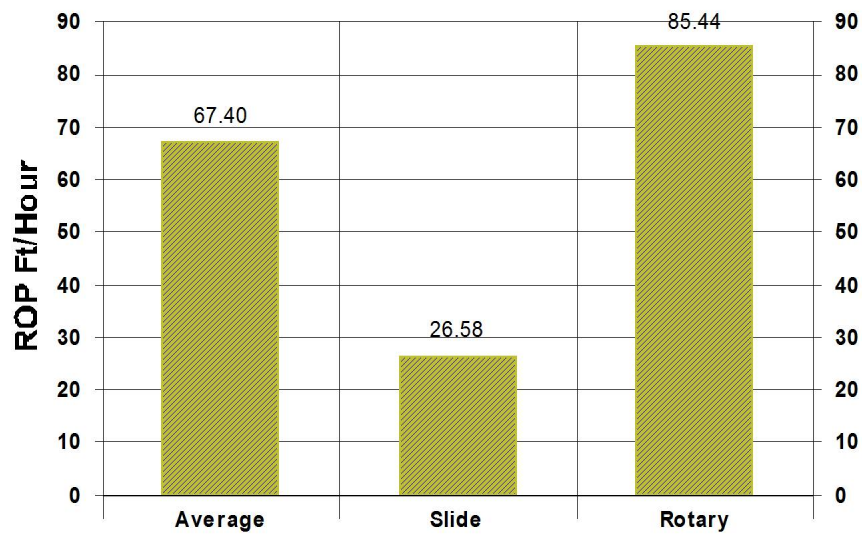
Footage Drilled Totals



Footage Percent



Rate of Penetration Totals



Time Percent

