

# BONANZA CREEK ENERGY OPERATING

Well Name: **Park 44-41-4HNB**

Surface Location: Park T-4 Pad Sec.4-T4N-R63W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4626.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1366453.52	3296037.40	40.334450	-104.438070	

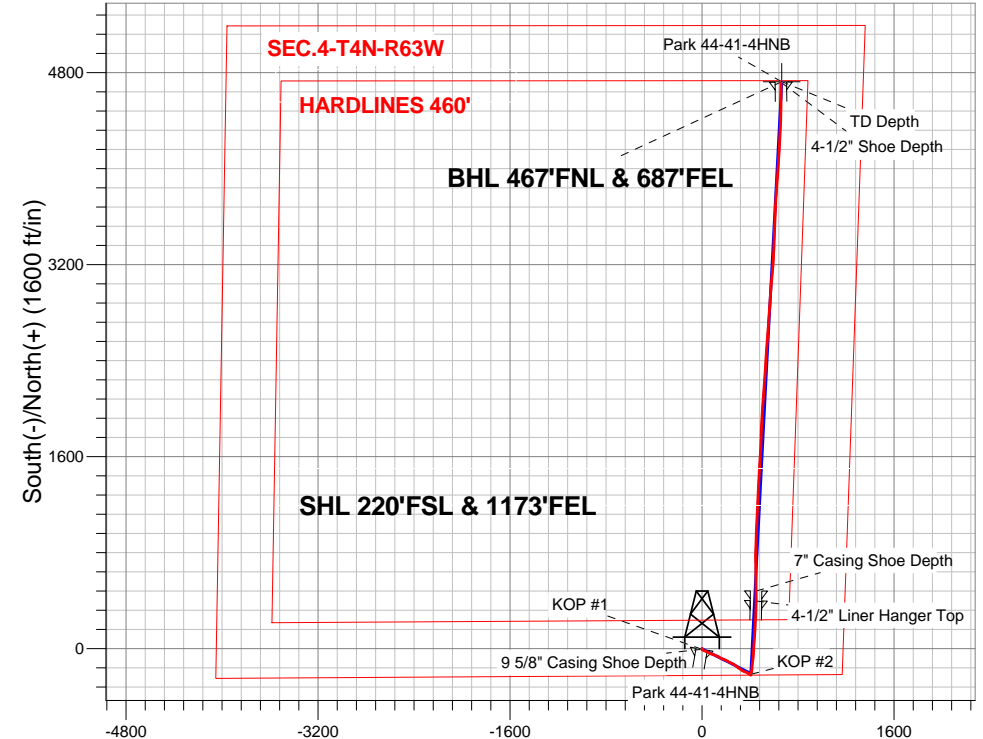
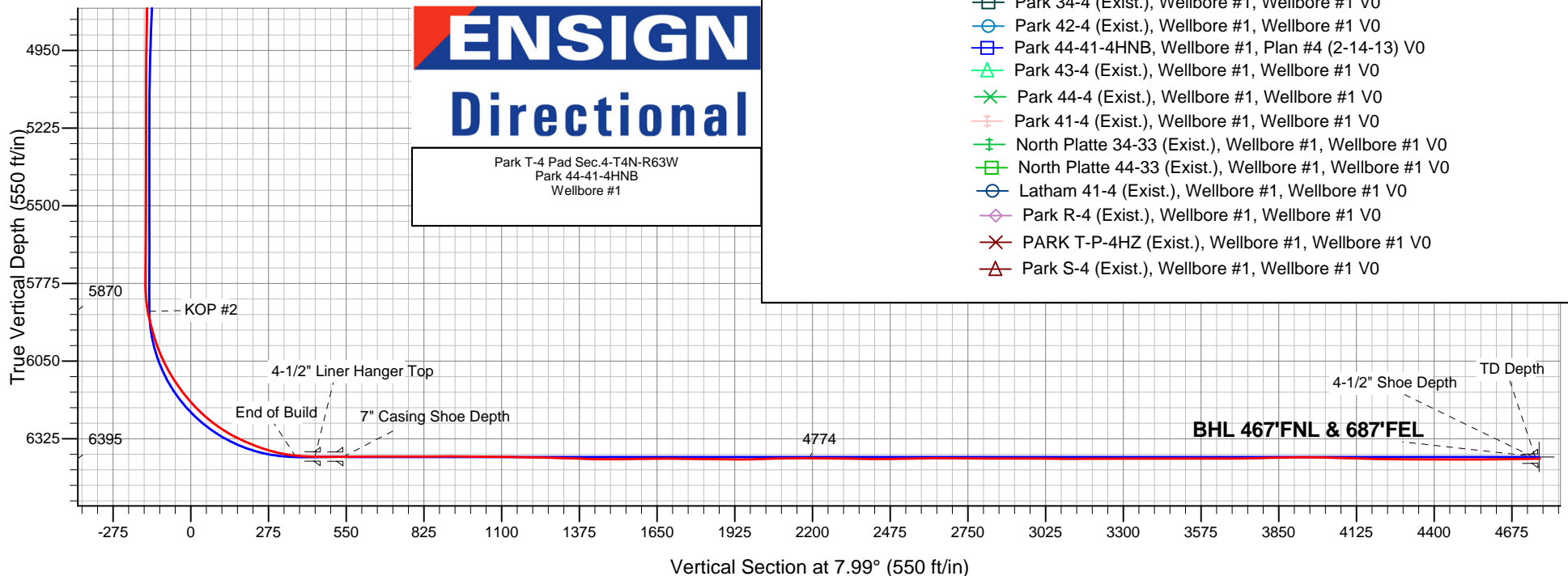
Ensign 136 - RKB 12' WELL @ 4638.0ft (Ensign 136 - RKB 12')

## FINAL SURVEY

Projected Bottom Hole Location  
11114' MD 6395' TVD 4728' N & 657' E of  
SHL  
91.1 degree Incl @ 359.1 degree AZM

### ANNOTATIONS

TVD	MD	Annotation
1091.0	1091.0	KOP #1
5869.6	5899.0	KOP #2
6395.2	11114.0	TD Depth



### OFFSET WELLS

- Park 34-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Park 42-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Park 44-41-4HNB, Wellbore #1, Plan #4 (2-14-13) V0
- Park 43-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Park 44-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Park 41-4 (Exist.), Wellbore #1, Wellbore #1 V0
- North Platte 34-33 (Exist.), Wellbore #1, Wellbore #1 V0
- North Platte 44-33 (Exist.), Wellbore #1, Wellbore #1 V0
- Latham 41-4 (Exist.), Wellbore #1, Wellbore #1 V0
- Park R-4 (Exist.), Wellbore #1, Wellbore #1 V0
- PARK T-P-4HZ (Exist.), Wellbore #1, Wellbore #1 V0
- Park S-4 (Exist.), Wellbore #1, Wellbore #1 V0



## **Directional**

# **BONANZA CREEK ENERGY OPERATING**

**SEC.4-T4N-R63W**

**Park T-4 Pad Sec.4-T4N-R63W**

**Park 44-41-4HNB**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**19 March, 2013**

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Park 44-41-4HNB
<b>Project:</b>	SEC.4-T4N-R63W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Site:</b>	Park T-4 Pad Sec.4-T4N-R63W	<b>MD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<b>Project</b>	SEC.4-T4N-R63W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Park T-4 Pad Sec.4-T4N-R63W		
<b>Site Position:</b>		<b>Northing:</b>	1,366,432.54 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,296,110.14 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.334390
		<b>Longitude:</b>	-104.437810
		<b>Grid Convergence:</b>	0.69 °

<b>Well</b>	Park 44-41-4HNB		
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b>	ft
		<b>Latitude:</b>	40.334450
		<b>Longitude:</b>	-104.438070
		<b>Ground Level:</b>	4,626.0 ft

<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>
	IGRF2010	2/12/2013	8.46	66.99	52,958

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	7.99	

<b>Survey Program</b>	<b>Date</b>	3/19/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
167.0	11,114.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
167.0	0.40	193.30	167.0	-0.6	-0.1	-0.6	0.24	0.24	0.00	
408.0	0.60	210.80	408.0	-2.5	-1.0	-2.6	0.10	0.08	7.26	
662.0	0.20	255.40	662.0	-3.7	-2.1	-4.0	0.19	-0.16	17.56	
757.0	0.10	53.50	757.0	-3.7	-2.2	-4.0	0.31	-0.11	166.42	
781.4	0.17	9.98	781.4	-3.7	-2.2	-3.9	0.48	0.28	-178.35	
<b>9 5/8" Casing Shoe Depth</b>										
834.0	0.40	348.20	834.0	-3.4	-2.2	-3.7	0.48	0.44	-41.41	
920.0	0.10	29.00	920.0	-3.1	-2.2	-3.3	0.38	-0.35	47.44	
1,006.0	0.60	223.60	1,006.0	-3.3	-2.5	-3.6	0.81	0.58	-192.33	
1,091.0	1.30	129.70	1,091.0	-4.3	-2.0	-4.5	1.73	0.82	-110.47	
<b>KOP #1</b>										
1,177.0	2.60	126.20	1,176.9	-6.0	0.3	-5.9	1.52	1.51	-4.07	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Park 44-41-4HNB
<b>Project:</b>	SEC.4-T4N-R63W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Site:</b>	Park T-4 Pad Sec.4-T4N-R63W	<b>MD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,262.0	4.00	116.40	1,261.8	-8.5	4.5	-7.8	1.77	1.65	-11.53	
1,348.0	6.10	115.30	1,347.4	-11.8	11.3	-10.1	2.44	2.44	-1.28	
1,434.0	6.90	117.10	1,432.9	-16.1	20.0	-13.1	0.96	0.93	2.09	
1,519.0	7.10	113.80	1,517.3	-20.5	29.4	-16.2	0.53	0.24	-3.88	
1,605.0	7.10	115.50	1,602.6	-25.0	39.1	-19.3	0.24	0.00	1.98	
1,690.0	7.10	115.70	1,686.9	-29.5	48.5	-22.5	0.03	0.00	0.24	
1,776.0	6.80	116.70	1,772.3	-34.1	57.9	-25.7	0.38	-0.35	1.16	
1,862.0	6.90	113.80	1,857.7	-38.5	67.1	-28.8	0.42	0.12	-3.37	
1,947.0	6.90	112.30	1,942.1	-42.5	76.5	-31.4	0.21	0.00	-1.76	
2,033.0	6.50	110.60	2,027.5	-46.1	85.9	-33.7	0.52	-0.47	-1.98	
2,118.0	6.90	105.50	2,111.9	-49.2	95.3	-35.5	0.84	0.47	-6.00	
2,204.0	7.20	110.80	2,197.3	-52.5	105.3	-37.3	0.83	0.35	6.16	
2,289.0	6.50	111.50	2,281.7	-56.1	114.8	-39.6	0.83	-0.82	0.82	
2,375.0	6.90	113.20	2,367.1	-60.0	124.0	-42.1	0.52	0.47	1.98	
2,460.0	7.10	120.60	2,451.4	-64.6	133.3	-45.5	1.09	0.24	8.71	
2,546.0	6.80	120.30	2,536.8	-69.9	142.2	-49.5	0.35	-0.35	-0.35	
2,632.0	8.40	115.90	2,622.0	-75.2	152.3	-53.3	1.98	1.86	-5.12	
2,717.0	8.90	113.40	2,706.1	-80.6	163.9	-57.0	0.74	0.59	-2.94	
2,803.0	9.10	112.20	2,791.0	-85.8	176.3	-60.4	0.32	0.23	-1.40	
2,888.0	9.10	115.50	2,875.0	-91.2	188.6	-64.1	0.61	0.00	3.88	
2,971.0	9.40	119.00	2,956.9	-97.3	200.4	-68.5	0.77	0.36	4.22	
3,059.0	8.30	120.40	3,043.8	-104.0	212.2	-73.5	1.27	-1.25	1.59	
3,145.0	7.30	119.70	3,129.0	-109.9	222.3	-77.9	1.17	-1.16	-0.81	
3,231.0	6.90	116.70	3,214.4	-114.9	231.7	-81.6	0.63	-0.47	-3.49	
3,317.0	6.90	114.30	3,299.7	-119.3	241.0	-84.7	0.34	0.00	-2.79	
3,402.0	6.90	112.90	3,384.1	-123.4	250.3	-87.4	0.20	0.00	-1.65	
3,488.0	7.50	115.50	3,469.5	-127.8	260.2	-90.4	0.79	0.70	3.02	
3,573.0	8.00	123.80	3,553.7	-133.5	270.1	-94.7	1.44	0.59	9.76	
3,659.0	8.10	125.50	3,638.8	-140.4	280.0	-100.1	0.30	0.12	1.98	
3,745.0	8.10	127.60	3,724.0	-147.6	289.7	-105.9	0.34	0.00	2.44	
3,830.0	8.40	130.10	3,808.1	-155.2	299.2	-112.1	0.55	0.35	2.94	
3,916.0	7.70	125.70	3,893.2	-162.6	308.7	-118.1	1.08	-0.81	-5.12	
4,001.0	7.10	127.10	3,977.5	-169.1	317.5	-123.4	0.74	-0.71	1.65	
4,087.0	7.40	127.80	4,062.9	-175.7	326.1	-128.7	0.36	0.35	0.81	
4,172.0	7.90	120.60	4,147.1	-182.1	335.5	-133.7	1.27	0.59	-8.47	
4,258.0	7.70	114.50	4,232.3	-187.5	345.8	-137.6	0.99	-0.23	-7.09	
4,343.0	6.80	105.10	4,316.6	-191.1	355.9	-139.8	1.75	-1.06	-11.06	
4,429.0	6.70	112.70	4,402.0	-194.4	365.4	-141.7	1.04	-0.12	8.84	
4,514.0	6.40	117.40	4,486.5	-198.5	374.2	-144.5	0.72	-0.35	5.53	
4,600.0	5.90	122.50	4,572.0	-203.1	382.2	-148.0	0.86	-0.58	5.93	
4,685.0	5.10	121.00	4,656.6	-207.4	389.1	-151.3	0.96	-0.94	-1.76	
4,771.0	3.90	121.00	4,742.3	-210.8	394.9	-153.9	1.40	-1.40	0.00	
4,856.0	2.60	119.20	4,827.2	-213.3	399.0	-155.7	1.53	-1.53	-2.12	
4,942.0	2.20	108.50	4,913.1	-214.8	402.3	-156.7	0.70	-0.47	-12.44	
5,028.0	1.10	161.60	4,999.1	-216.1	404.1	-157.8	2.06	-1.28	61.74	
5,113.0	0.30	106.50	5,084.1	-216.9	404.6	-158.5	1.13	-0.94	-64.82	
5,199.0	0.40	57.70	5,170.1	-216.8	405.1	-158.4	0.35	0.12	-56.74	
5,284.0	0.30	126.80	5,255.1	-216.8	405.5	-158.3	0.48	-0.12	81.29	
5,370.0	0.40	124.70	5,341.1	-217.1	405.9	-158.5	0.12	0.12	-2.44	
5,456.0	0.30	150.80	5,427.1	-217.4	406.3	-158.8	0.22	-0.12	30.35	
5,541.0	0.50	105.70	5,512.1	-217.7	406.8	-159.1	0.42	0.24	-53.06	
5,627.0	0.40	137.00	5,598.1	-218.1	407.3	-159.3	0.30	-0.12	36.40	
5,712.0	0.40	153.70	5,683.1	-218.5	407.7	-159.7	0.14	0.00	19.65	
5,755.0	0.50	167.50	5,726.1	-218.9	407.8	-160.0	0.34	0.23	32.09	

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<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,771.0	0.40	147.20	5,742.1	-219.0	407.8	-160.2	1.17	-0.63	-126.88
5,814.0	0.30	80.00	5,785.1	-219.1	408.0	-160.2	0.92	-0.23	-156.28
5,857.0	4.60	7.80	5,828.0	-217.4	408.3	-158.5	10.51	10.00	-167.91
5,899.0	10.40	8.30	5,869.6	-211.9	409.1	-153.0	13.81	13.81	1.19
<b>KOP #2</b>									
5,942.0	14.30	10.00	5,911.6	-202.9	410.6	-143.8	9.11	9.07	3.95
5,985.0	15.90	9.00	5,953.1	-191.8	412.4	-132.6	3.77	3.72	-2.33
6,028.0	19.30	6.00	5,994.1	-178.9	414.1	-119.6	8.18	7.91	-6.98
6,071.0	23.90	4.40	6,034.1	-163.2	415.5	-103.8	10.78	10.70	-3.72
6,113.0	28.40	4.90	6,071.8	-144.7	417.0	-85.3	10.73	10.71	1.19
6,156.0	31.80	6.40	6,109.0	-123.3	419.2	-63.8	8.10	7.91	3.49
6,199.0	36.00	6.70	6,144.7	-99.4	421.9	-39.8	9.78	9.77	0.70
6,241.0	39.40	6.70	6,177.9	-73.9	424.9	-14.1	8.10	8.10	0.00
6,284.0	43.20	4.60	6,210.2	-45.7	427.7	14.2	9.41	8.84	-4.88
6,327.0	47.80	3.40	6,240.3	-15.1	429.8	44.8	10.88	10.70	-2.79
6,370.0	52.80	4.10	6,267.8	17.9	432.0	77.8	11.70	11.63	1.63
6,413.0	57.20	3.20	6,292.4	53.0	434.2	112.9	10.38	10.23	-2.09
6,455.0	61.60	2.30	6,313.8	89.1	435.9	148.9	10.64	10.48	-2.14
6,498.0	66.50	3.40	6,332.6	127.7	437.9	187.4	11.62	11.40	2.56
6,541.0	68.80	4.60	6,349.0	167.4	440.6	227.0	5.94	5.35	2.79
6,584.0	72.40	3.50	6,363.3	207.9	443.5	267.5	8.71	8.37	-2.56
6,626.0	77.50	3.40	6,374.2	248.3	445.9	307.9	12.15	12.14	-0.24
6,669.0	82.00	1.10	6,381.8	290.6	447.6	350.0	11.71	10.47	-5.35
6,712.0	86.20	1.10	6,386.2	333.3	448.4	392.5	9.77	9.77	0.00
6,755.0	89.00	1.10	6,388.0	376.3	449.2	435.1	6.51	6.51	0.00
6,778.4	89.44	1.10	6,388.3	399.7	449.7	458.3	1.86	1.86	0.00
<b>4-1/2" Liner Hanger Top</b>									
6,798.0	89.80	1.10	6,388.5	419.3	450.1	477.8	1.86	1.86	0.00
6,859.1	90.26	0.29	6,388.4	480.4	450.8	538.4	1.52	0.75	-1.32
<b>7" Casing Shoe Depth</b>									
6,904.0	90.60	359.70	6,388.1	525.3	450.8	582.9	1.52	0.75	-1.32
6,947.0	90.60	357.40	6,387.7	568.3	449.7	625.3	5.35	0.00	-5.35
6,989.0	89.60	359.10	6,387.6	610.2	448.4	666.7	4.70	-2.38	4.05
7,031.0	89.60	359.30	6,387.9	652.2	447.8	708.2	0.48	0.00	0.48
7,074.0	90.70	359.00	6,387.8	695.2	447.2	750.7	2.65	2.56	-0.70
7,116.0	89.90	359.50	6,387.5	737.2	446.7	792.2	2.25	-1.90	1.19
7,159.0	90.00	0.20	6,387.6	780.2	446.5	834.7	1.64	0.23	1.63
7,201.0	90.70	1.40	6,387.3	822.2	447.1	876.4	3.31	1.67	2.86
7,243.0	89.80	2.30	6,387.1	864.2	448.5	918.2	3.03	-2.14	2.14
7,286.0	89.30	2.50	6,387.5	907.2	450.3	961.0	1.25	-1.16	0.47
7,328.0	89.50	2.70	6,387.9	949.1	452.2	1,002.8	0.67	0.48	0.48
7,371.0	88.90	3.20	6,388.5	992.1	454.4	1,045.6	1.82	-1.40	1.16
7,413.0	89.70	2.30	6,389.0	1,034.0	456.4	1,087.4	2.87	1.90	-2.14
7,456.0	90.10	2.00	6,389.1	1,077.0	458.0	1,130.2	1.16	0.93	-0.70
7,498.0	89.40	2.00	6,389.3	1,118.9	459.5	1,172.0	1.67	-1.67	0.00
7,541.0	88.50	2.50	6,390.1	1,161.9	461.2	1,214.7	2.39	-2.09	1.16
7,584.0	88.50	3.40	6,391.2	1,204.8	463.4	1,257.6	2.09	0.00	2.09
7,627.0	87.60	2.50	6,392.7	1,247.7	465.6	1,300.4	2.96	-2.09	-2.09
7,669.0	87.50	3.00	6,394.5	1,289.7	467.6	1,342.1	1.21	-0.24	1.19
7,712.0	88.50	3.00	6,396.0	1,332.6	469.9	1,385.0	2.33	2.33	0.00
7,755.0	89.50	2.80	6,396.7	1,375.5	472.1	1,427.8	2.37	2.33	-0.47
7,798.0	89.70	3.40	6,397.0	1,418.4	474.4	1,470.6	1.47	0.47	1.40
7,840.0	90.40	3.40	6,397.0	1,460.4	476.9	1,512.5	1.67	1.67	0.00
7,883.0	90.90	3.50	6,396.5	1,503.3	479.5	1,555.4	1.19	1.16	0.23

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Park 44-41-4HNB
<b>Project:</b>	SEC.4-T4N-R63W	<b>TVD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Site:</b>	Park T-4 Pad Sec.4-T4N-R63W	<b>MD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

## Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,926.0	90.70	2.80	6,395.9	1,546.2	481.8	1,598.2	1.69	-0.47	-1.63
7,969.0	89.90	3.50	6,395.7	1,589.2	484.2	1,641.0	2.47	-1.86	1.63
8,012.0	90.00	3.40	6,395.7	1,632.1	486.8	1,683.9	0.33	0.23	-0.23
8,054.0	90.50	2.30	6,395.5	1,674.0	488.9	1,725.7	2.88	1.19	-2.62
8,097.0	89.60	2.10	6,395.5	1,717.0	490.5	1,768.5	2.14	-2.09	-0.47
8,140.0	88.60	2.00	6,396.2	1,760.0	492.0	1,811.3	2.34	-2.33	-0.23
8,183.0	88.80	1.40	6,397.1	1,802.9	493.3	1,854.0	1.47	0.47	-1.40
8,225.0	89.30	2.50	6,397.8	1,844.9	494.7	1,895.8	2.88	1.19	2.62
8,268.0	90.50	3.20	6,397.9	1,887.8	496.9	1,938.6	3.23	2.79	1.63
8,311.0	91.20	3.50	6,397.3	1,930.8	499.4	1,981.4	1.77	1.63	0.70
8,354.0	91.10	4.10	6,396.4	1,973.7	502.2	2,024.3	1.41	-0.23	1.40
8,397.0	91.40	4.60	6,395.5	2,016.5	505.5	2,067.2	1.36	0.70	1.16
8,439.0	91.40	3.40	6,394.4	2,058.4	508.4	2,109.1	2.86	0.00	-2.86
8,482.0	90.10	4.40	6,393.9	2,101.3	511.4	2,152.0	3.81	-3.02	2.33
8,525.0	90.10	3.90	6,393.8	2,144.2	514.5	2,194.9	1.16	0.00	-1.16
8,568.0	89.70	3.50	6,393.9	2,187.1	517.2	2,237.8	1.32	-0.93	-0.93
8,611.0	88.70	3.90	6,394.5	2,230.0	520.0	2,280.7	2.50	-2.33	0.93
8,653.0	88.90	4.10	6,395.4	2,271.9	523.0	2,322.5	0.67	0.48	0.48
8,696.0	89.30	4.10	6,396.0	2,314.8	526.0	2,365.4	0.93	0.93	0.00
8,739.0	89.90	4.10	6,396.3	2,357.7	529.1	2,408.3	1.40	1.40	0.00
8,782.0	90.30	3.70	6,396.3	2,400.6	532.0	2,451.2	1.32	0.93	-0.93
8,825.0	90.60	3.70	6,395.9	2,443.5	534.8	2,494.1	0.70	0.70	0.00
8,867.0	91.00	4.80	6,395.3	2,485.4	537.9	2,536.0	2.79	0.95	2.62
8,910.0	91.50	4.10	6,394.4	2,528.2	541.2	2,578.9	2.00	1.16	-1.63
8,953.0	90.40	4.40	6,393.7	2,571.1	544.4	2,621.8	2.65	-2.56	0.70
8,996.0	89.50	3.50	6,393.7	2,614.0	547.4	2,664.7	2.96	-2.09	-2.09
9,038.0	89.40	3.50	6,394.1	2,655.9	550.0	2,706.6	0.24	-0.24	0.00
9,081.0	90.20	4.10	6,394.3	2,698.8	552.8	2,749.5	2.33	1.86	1.40
9,124.0	90.00	3.70	6,394.2	2,741.7	555.7	2,792.4	1.04	-0.47	-0.93
9,167.0	89.20	3.40	6,394.5	2,784.6	558.4	2,835.2	1.99	-1.86	-0.70
9,210.0	89.90	4.10	6,394.8	2,827.5	561.2	2,878.1	2.30	1.63	1.63
9,252.0	90.60	3.20	6,394.7	2,869.5	563.9	2,920.0	2.71	1.67	-2.14
9,295.0	90.40	4.40	6,394.3	2,912.4	566.7	2,962.9	2.83	-0.47	2.79
9,338.0	88.80	4.90	6,394.6	2,955.2	570.2	3,005.8	3.90	-3.72	1.16
9,381.0	89.30	4.80	6,395.3	2,998.1	573.9	3,048.7	1.19	1.16	-0.23
9,423.0	89.30	4.90	6,395.8	3,039.9	577.4	3,090.7	0.24	0.00	0.24
9,466.0	90.20	5.60	6,396.0	3,082.7	581.3	3,133.6	2.65	2.09	1.63
9,509.0	90.40	4.40	6,395.8	3,125.6	585.1	3,176.5	2.83	0.47	-2.79
9,551.0	90.20	4.10	6,395.5	3,167.4	588.2	3,218.5	0.86	-0.48	-0.71
9,594.0	90.00	4.60	6,395.5	3,210.3	591.5	3,261.4	1.25	-0.47	1.16
9,637.0	90.00	3.40	6,395.5	3,253.2	594.5	3,304.3	2.79	0.00	-2.79
9,680.0	90.40	2.70	6,395.3	3,296.1	596.7	3,347.1	1.87	0.93	-1.63
9,723.0	90.40	2.70	6,395.0	3,339.1	598.8	3,389.9	0.00	0.00	0.00
9,765.0	90.50	2.30	6,394.7	3,381.1	600.6	3,431.7	0.98	0.24	-0.95
9,808.0	90.00	2.70	6,394.5	3,424.0	602.5	3,474.5	1.49	-1.16	0.93
9,851.0	90.20	1.60	6,394.4	3,467.0	604.1	3,517.3	2.60	0.47	-2.56
9,896.0	89.70	0.70	6,394.5	3,512.0	605.0	3,562.0	2.29	-1.11	-2.00
9,941.0	89.70	1.60	6,394.7	3,557.0	605.9	3,606.7	2.00	0.00	2.00
9,985.0	90.00	2.00	6,394.8	3,600.9	607.3	3,650.4	1.14	0.68	0.91
10,030.0	90.30	2.80	6,394.7	3,645.9	609.2	3,695.2	1.90	0.67	1.78
10,075.0	90.90	4.10	6,394.2	3,690.8	611.9	3,740.0	3.18	1.33	2.89
10,120.0	91.20	3.00	6,393.4	3,735.7	614.7	3,784.9	2.53	0.67	-2.44
10,165.0	91.40	3.40	6,392.4	3,780.6	617.2	3,829.7	0.99	0.44	0.89
10,209.0	91.90	3.40	6,391.1	3,824.5	619.8	3,873.6	1.14	1.14	0.00

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Park 44-41-4HNB
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<b>Site:</b>	Park T-4 Pad Sec.4-T4N-R63W	<b>MD Reference:</b>	WELL @ 4638.0ft (Ensign 136 - RKB 12')
<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,254.0	90.10	4.60	6,390.3	3,869.4	622.9	3,918.4	4.81	-4.00	2.67	
10,299.0	89.10	4.10	6,390.6	3,914.3	626.3	3,963.4	2.48	-2.22	-1.11	
10,344.0	88.80	4.60	6,391.5	3,959.2	629.7	4,008.3	1.30	-0.67	1.11	
10,388.0	88.40	4.20	6,392.5	4,003.0	633.1	4,052.2	1.29	-0.91	-0.91	
10,433.0	88.50	3.20	6,393.8	4,047.9	636.0	4,097.0	2.23	0.22	-2.22	
10,478.0	88.60	3.50	6,394.9	4,092.8	638.7	4,141.9	0.70	0.22	0.67	
10,523.0	88.70	4.10	6,396.0	4,137.7	641.6	4,186.7	1.35	0.22	1.33	
10,565.0	88.80	2.80	6,396.9	4,179.6	644.2	4,228.6	3.10	0.24	-3.10	
10,608.0	90.30	4.10	6,397.2	4,222.5	646.7	4,271.4	4.62	3.49	3.02	
10,651.0	89.50	2.80	6,397.3	4,265.5	649.3	4,314.3	3.55	-1.86	-3.02	
10,694.0	89.50	2.30	6,397.7	4,308.4	651.2	4,357.1	1.16	0.00	-1.16	
10,737.0	89.90	2.30	6,397.9	4,351.4	653.0	4,399.9	0.93	0.93	0.00	
10,779.0	89.70	2.30	6,398.0	4,393.3	654.7	4,441.7	0.48	-0.48	0.00	
10,822.0	89.80	0.70	6,398.2	4,436.3	655.8	4,484.4	3.73	0.23	-3.72	
10,865.0	89.90	1.10	6,398.3	4,479.3	656.5	4,527.1	0.96	0.23	0.93	
10,908.0	90.60	359.70	6,398.2	4,522.3	656.8	4,569.7	3.64	1.63	-3.26	
10,950.0	90.70	0.70	6,397.7	4,564.3	656.9	4,611.3	2.39	0.24	2.38	
10,993.0	90.70	0.20	6,397.1	4,607.3	657.2	4,653.9	1.16	0.00	-1.16	
11,036.0	90.80	0.40	6,396.6	4,650.3	657.5	4,696.5	0.52	0.23	0.47	
11,062.0	91.10	359.10	6,396.2	4,676.3	657.4	4,722.3	5.13	1.15	-5.00	
11,107.0	91.10	359.10	6,395.3	4,721.3	656.6	4,766.7	0.00	0.00	0.00	
4-1/2" Shoe Depth										
11,110.8	91.10	359.10	6,395.2	4,725.1	656.6	4,770.5	0.00	0.00	0.00	
BHL 470'FNL & 680'FEL										
11,114.0	91.10	359.10	6,395.2	4,728.3	656.5	4,773.6	0.00	0.00	0.00	
TD Depth										

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude	Longitude
BHL 470'FNL & 680'F	0.00	0.00	6,389.0	4,725.1	663.4	1,371,186.01	3,296,644.14	40.347420	-104.435690
- survey misses target center by 9.2ft at 11110.8ft MD (6395.2 TVD, 4725.1 N, 656.6 E)									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
781.4	781.4	9 5/8" Casing Shoe Depth	9-5/8	12-1/4	
6,859.1	6,388.4	7" Casing Shoe Depth	7	8-3/4	
6,778.4	6,388.3	4-1/2" Liner Hanger Top	4-1/2	6	
11,107.0	6,395.3	4-1/2" Shoe Depth	4-1/2	6	

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<b>Well:</b>	Park 44-41-4HNB	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,091.0	1,091.0	-4.3	-2.0	KOP #1
5,899.0	5,869.6	-211.9	409.1	KOP #2
11,114.0	6,395.2	4,728.3	656.5	TD Depth

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