

BONANZA CREEK ENERGY OPERATING

Well Name: STATE ANTELOPE 41-15HZ

Surface Location: STATE ANTELOPE 41-15HZ
North American Datum 1983 , US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4651.0

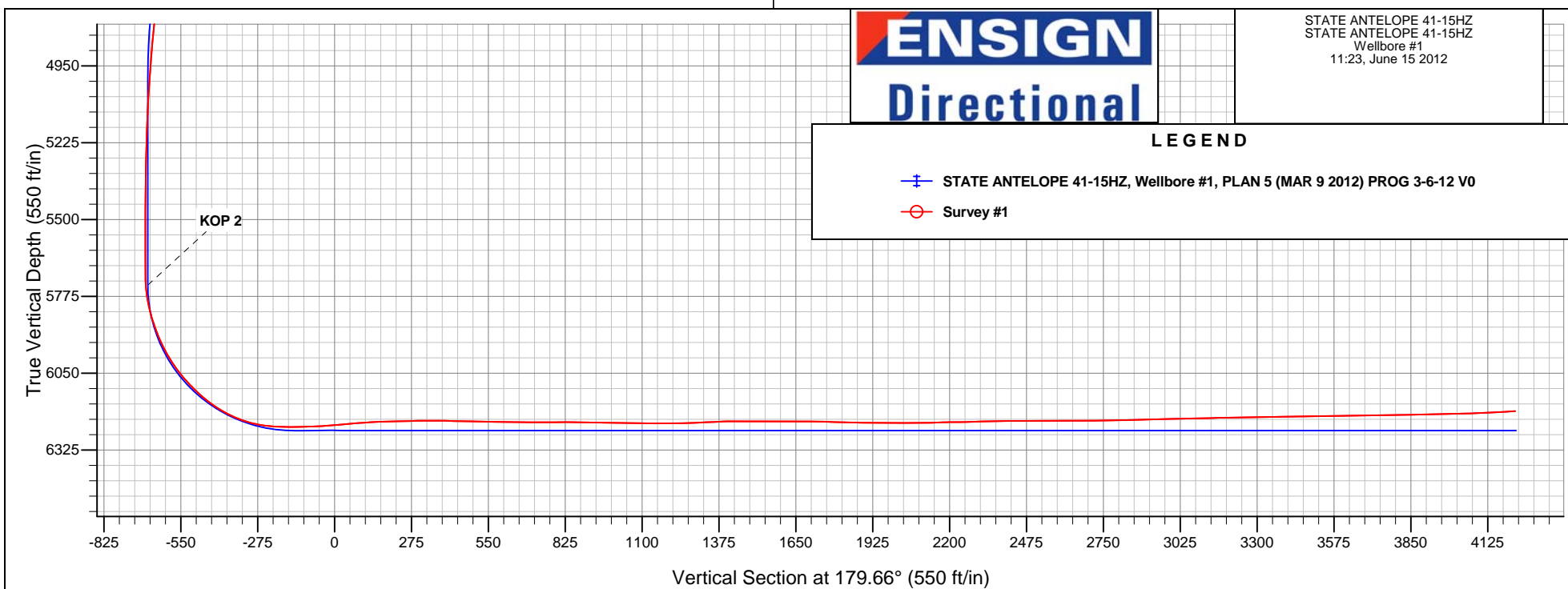
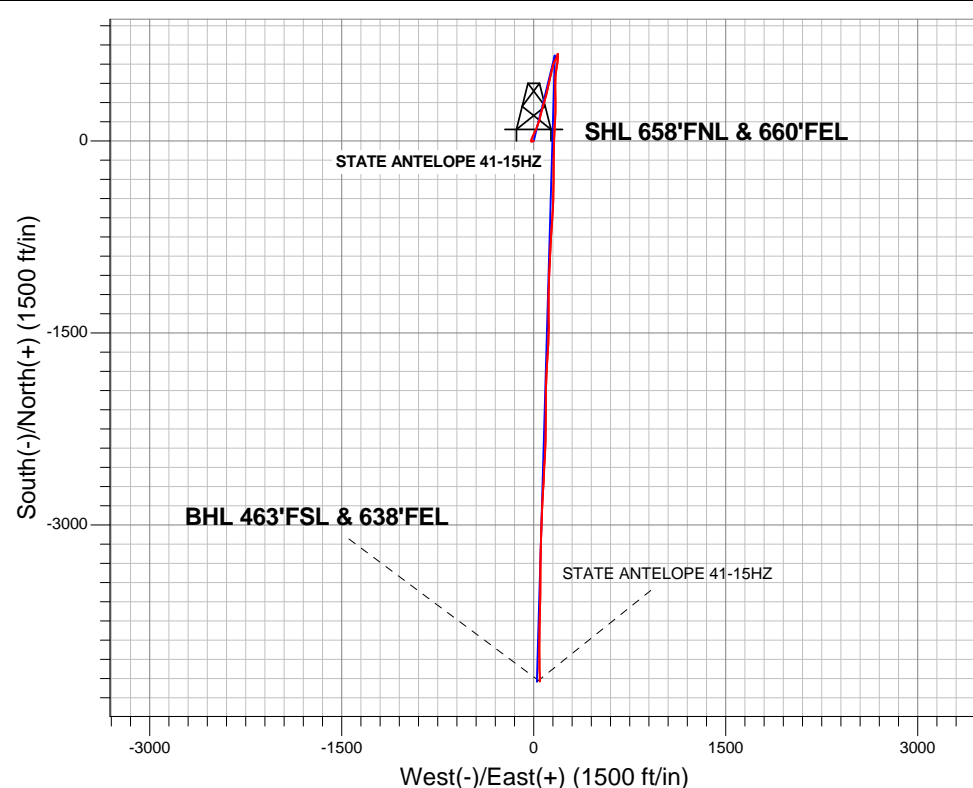
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392812.75	3333526.35	40.405490	-104.302330	

ENSIGN RIG 12 KB 12' RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')

FINAL SURVEY

Projected Bottom Hole Location
11002'MD 6185'TVD 4223'S & 47'E of SHL

93.70 degree Incl @ 179.30 degree AZM





BONANZA CREEK ENERGY OPERATING

**SEC.15-T5N-R62W
STATE ANTELOPE 41-15HZ
STATE ANTELOPE 41-15HZ**

Wellbore #1

Survey: Survey #1

Standard Survey Report

15 June, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 41-15HZ
Project:	SEC.15-T5N-R62W	TVD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Site:	STATE ANTELOPE 41-15HZ	MD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Well:	STATE ANTELOPE 41-15HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.15-T5N-R62W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		STATE ANTELOPE 41-15HZ			
Site Position:		Northing:	1,392,809.20ft	Latitude:	40.405480
From:	Lat/Long	Easting:	3,333,531.96ft	Longitude:	-104.302310
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.77 °

Well	STATE ANTELOPE 41-15HZ					
Well Position	+N-S	0.0 ft	Northing:	1,392,812.75 ft	Latitude:	40.405490
	+E-W	0.0 ft	Easting:	3,333,526.35 ft	Longitude:	-104.302330
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,651.0 ft

Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/5/2012	8.54	67.11	53,126
	IGRF2010	2/25/2012	8.52	67.11	53,111
	IGRF2010	3/5/2012	8.52	67.11	53,108

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	6,255.0	0.0	0.0	179.66	

Survey Program		Date	6/15/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
478.0	11,002.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
HARDLINES 460'									
478.0	0.90	244.80	478.0	-1.6	-3.4	1.6	0.19	0.19	0.00
604.0	1.30	240.00	604.0	-2.7	-5.5	2.7	0.33	0.32	-3.81
728.0	0.30	257.80	727.9	-3.5	-7.1	3.5	0.82	-0.81	14.35
854.0	0.60	251.40	853.9	-3.8	-8.0	3.7	0.24	0.24	-5.08
979.0	1.00	272.70	978.9	-3.9	-9.7	3.9	0.39	0.32	17.04
1,105.0	1.80	274.10	1,104.9	-3.8	-12.8	3.7	0.64	0.63	1.11
1,228.0	1.10	255.30	1,227.8	-3.9	-15.9	3.8	0.68	-0.57	-15.28

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Site:	STATE ANTELOPE 41-15HZ	MD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Well:	STATE ANTELOPE 41-15HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
1,353.0	1.20	243.00	1,352.8	-4.8	-18.2	4.7	0.21	0.08	-9.84
1,446.0	0.90	295.90	1,445.8	-4.9	-19.7	4.8	1.05	-0.32	56.88
1,540.0	1.80	351.30	1,539.8	-3.2	-20.6	3.0	1.58	0.96	58.94
1,633.0	3.60	14.30	1,632.7	1.1	-20.1	-1.2	2.22	1.94	24.73
1,727.0	5.20	16.80	1,726.4	8.1	-18.1	-8.2	1.71	1.70	2.66
1,820.0	6.90	20.60	1,818.9	17.3	-15.0	-17.4	1.88	1.83	4.09
1,913.0	7.70	22.40	1,911.1	28.3	-10.6	-28.4	0.89	0.86	1.94
2,007.0	9.50	24.70	2,004.1	41.2	-5.0	-41.2	1.95	1.91	2.45
2,100.0	10.90	25.60	2,095.6	56.1	2.0	-56.1	1.52	1.51	0.97
2,192.0	11.80	25.20	2,185.8	72.4	9.8	-72.4	0.98	0.98	-0.43
2,286.0	13.30	23.60	2,277.5	91.0	18.2	-90.9	1.64	1.60	-1.70
2,380.0	14.00	20.80	2,368.9	111.6	26.6	-111.4	1.02	0.74	-2.98
2,473.0	14.00	19.20	2,459.1	132.7	34.3	-132.5	0.42	0.00	-1.72
2,567.0	14.20	18.40	2,550.3	154.4	41.7	-154.2	0.30	0.21	-0.85
2,659.0	14.20	14.30	2,639.5	176.0	48.0	-175.8	1.09	0.00	-4.46
2,753.0	14.50	13.80	2,730.6	198.6	53.7	-198.3	0.35	0.32	-0.53
2,846.0	14.00	13.30	2,820.7	220.9	59.0	-220.5	0.55	-0.54	-0.54
2,939.0	13.20	13.60	2,911.1	242.2	64.1	-241.8	0.86	-0.86	0.32
3,033.0	12.90	15.90	3,002.7	262.7	69.5	-262.3	0.64	-0.32	2.45
3,125.0	12.50	15.70	3,092.4	282.2	75.0	-281.7	0.44	-0.43	-0.22
3,219.0	12.10	18.40	3,184.2	301.3	80.9	-300.8	0.75	-0.43	2.87
3,311.0	13.20	15.00	3,274.0	320.6	86.6	-320.1	1.44	1.20	-3.70
3,405.0	14.80	16.30	3,365.2	342.5	92.8	-341.9	1.73	1.70	1.38
3,499.0	17.10	14.50	3,455.6	367.4	99.6	-366.8	2.50	2.45	-1.91
3,593.0	18.90	13.30	3,545.0	395.6	106.6	-395.0	1.96	1.91	-1.28
3,685.0	19.30	12.70	3,631.9	424.9	113.4	-424.2	0.48	0.43	-0.65
3,779.0	17.90	11.30	3,721.0	454.2	119.6	-453.5	1.56	-1.49	-1.49
3,873.0	16.40	13.30	3,810.8	481.3	125.5	-480.6	1.71	-1.60	2.13
3,965.0	15.10	12.60	3,899.4	505.7	131.1	-504.9	1.43	-1.41	-0.76
4,058.0	12.70	12.90	3,989.6	527.5	136.0	-526.6	2.58	-2.58	0.32
4,150.0	11.10	14.80	4,079.7	545.9	140.5	-545.0	1.79	-1.74	2.07
4,244.0	10.60	14.30	4,172.0	563.0	145.0	-562.1	0.54	-0.53	-0.53
4,338.0	9.70	12.90	4,264.5	579.1	148.9	-578.2	0.99	-0.96	-1.49
4,431.0	8.40	15.40	4,356.4	593.3	152.4	-592.4	1.46	-1.40	2.69
4,525.0	7.90	20.80	4,449.4	605.9	156.5	-605.0	0.97	-0.53	5.74
4,618.0	7.90	25.40	4,541.5	617.7	161.6	-616.7	0.68	0.00	4.95
4,712.0	7.10	27.20	4,634.7	628.7	167.0	-627.7	0.89	-0.85	1.91
4,805.0	7.10	24.50	4,727.0	639.0	172.0	-638.0	0.36	0.00	-2.90
4,898.0	6.20	28.90	4,819.4	648.7	176.8	-647.6	1.11	-0.97	4.73
4,990.0	4.70	25.40	4,911.0	656.4	180.8	-655.3	1.67	-1.63	-3.80
5,083.0	4.40	19.90	5,003.7	663.2	183.7	-662.1	0.57	-0.32	-5.91
5,176.0	3.40	28.00	5,096.5	669.0	186.2	-667.9	1.23	-1.08	8.71
5,270.0	2.40	34.40	5,190.3	673.1	188.6	-672.0	1.12	-1.06	6.81
5,363.0	1.40	359.70	5,283.3	675.8	189.7	-674.7	1.59	-1.08	-37.31
5,457.0	0.60	300.30	5,377.3	677.2	189.3	-676.1	1.29	-0.85	-63.19
5,550.0	1.00	286.40	5,470.3	677.7	188.1	-676.6	0.47	0.43	-14.95
5,644.0	0.40	304.80	5,564.3	678.1	187.0	-677.0	0.67	-0.64	19.57
5,705.0	0.50	287.50	5,625.3	678.3	186.6	-677.2	0.27	0.16	-28.36
5,735.0	0.40	262.20	5,655.3	678.3	186.4	-677.2	0.73	-0.33	-84.33
5,766.0	0.40	190.50	5,686.3	678.2	186.2	-677.1	1.51	0.00	-231.29
5,797.0	2.60	160.90	5,717.2	677.5	186.4	-676.3	7.29	7.10	-95.48
5,829.0	5.70	161.80	5,749.2	675.3	187.2	-674.1	9.69	9.69	2.81

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Survey									
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5,860.0	9.30	167.10	5,779.9	671.4	188.2	-670.2	11.81	11.61	17.10
5,891.0	12.50	175.50	5,810.3	665.6	189.0	-664.4	11.50	10.32	27.10
5,923.0	15.70	182.20	5,841.4	657.8	189.1	-656.6	11.21	10.00	20.94
5,954.0	18.40	183.90	5,871.0	648.7	188.6	-647.6	8.86	8.71	5.48
5,985.0	20.80	184.70	5,900.2	638.3	187.9	-637.2	7.79	7.74	2.58
6,016.0	23.90	184.70	5,928.9	626.6	186.9	-625.5	10.00	10.00	0.00
6,047.0	27.30	187.30	5,956.8	613.3	185.5	-612.2	11.55	10.97	8.39
6,078.0	29.40	188.70	5,984.1	598.7	183.4	-597.6	7.11	6.77	4.52
6,110.0	33.30	188.70	6,011.4	582.2	180.9	-581.2	12.19	12.19	0.00
6,141.0	37.00	188.70	6,036.8	564.6	178.2	-563.5	11.94	11.94	0.00
6,173.0	40.50	189.20	6,061.7	544.8	175.1	-543.8	10.98	10.94	1.56
6,204.0	43.00	186.20	6,084.8	524.4	172.3	-523.3	10.32	8.06	-9.68
6,235.0	45.10	182.50	6,107.1	502.9	170.7	-501.9	10.71	6.77	-11.94
6,267.0	48.50	181.80	6,129.0	479.6	169.8	-478.6	10.74	10.63	-2.19
6,298.0	52.10	181.50	6,148.8	455.7	169.2	-454.7	11.64	11.61	-0.97
6,329.0	55.80	180.60	6,167.1	430.7	168.7	-429.7	12.16	11.94	-2.90
6,361.0	59.70	180.10	6,184.1	403.6	168.5	-402.6	12.26	12.19	-1.56
6,392.0	63.70	179.60	6,198.8	376.3	168.6	-375.3	12.98	12.90	-1.61
6,423.0	68.00	178.90	6,211.5	348.1	169.0	-347.1	14.02	13.87	-2.26
6,454.0	72.30	178.90	6,222.0	318.9	169.5	-317.9	13.87	13.87	0.00
6,485.0	77.00	179.20	6,230.2	289.0	170.0	-288.0	15.19	15.16	0.97
6,516.0	81.30	180.30	6,236.1	258.6	170.2	-257.6	14.30	13.87	3.55
6,531.0	83.70	181.70	6,238.0	243.7	169.9	-242.7	18.48	16.00	9.33
6,577.8	87.54	182.47	6,241.6	197.2	168.2	-196.2	8.38	8.22	1.65
TARGET 1 460°FNL & 460°FEL									
6,604.0	89.70	182.90	6,242.2	171.0	167.0	-170.0	8.38	8.22	1.64
6,635.0	90.60	183.10	6,242.2	140.0	165.4	-139.0	2.97	2.90	0.65
6,667.0	91.60	182.90	6,241.5	108.0	163.7	-107.1	3.19	3.13	-0.63
6,698.0	92.50	182.50	6,240.4	77.1	162.2	-76.1	3.18	2.90	-1.29
6,729.0	93.00	182.00	6,238.9	46.2	161.0	-45.2	2.28	1.61	-1.61
6,760.0	94.20	181.70	6,237.0	15.2	160.0	-14.3	3.99	3.87	-0.97
6,792.0	95.10	181.50	6,234.4	-16.6	159.1	17.6	2.88	2.81	-0.63
6,823.0	95.10	181.50	6,231.6	-47.5	158.3	48.4	0.00	0.00	0.00
6,854.0	95.10	182.00	6,228.9	-78.4	157.4	79.3	1.61	0.00	1.61
6,885.0	94.30	181.30	6,226.3	-109.3	156.5	110.2	3.42	-2.58	-2.26
6,917.0	92.90	180.40	6,224.3	-141.2	156.0	142.1	5.20	-4.38	-2.81
6,948.0	91.40	180.40	6,223.2	-172.2	155.8	173.1	4.84	-4.84	0.00
6,979.0	91.50	180.60	6,222.4	-203.2	155.5	204.1	0.72	0.32	0.65
7,011.0	91.70	179.90	6,221.5	-235.1	155.4	236.1	2.27	0.63	-2.19
7,042.0	91.30	179.60	6,220.7	-266.1	155.5	267.0	1.61	-1.29	-0.97
7,073.0	90.90	180.80	6,220.1	-297.1	155.4	298.0	4.08	-1.29	3.87
7,104.0	89.70	180.80	6,219.9	-328.1	155.0	329.0	3.87	-3.87	0.00
7,136.0	90.30	180.60	6,219.9	-360.1	154.6	361.0	1.98	1.88	-0.63
7,167.0	89.30	180.60	6,220.0	-391.1	154.3	392.0	3.23	-3.23	0.00
7,199.0	88.20	181.50	6,220.7	-423.1	153.7	424.0	4.44	-3.44	2.81
7,230.0	88.80	181.70	6,221.5	-454.1	152.8	455.0	2.04	1.94	0.65
7,261.0	89.30	182.10	6,222.1	-485.1	151.8	485.9	2.07	1.61	1.29
7,293.0	88.80	183.40	6,222.6	-517.0	150.3	517.9	4.35	-1.56	4.06
7,324.0	89.40	183.10	6,223.1	-548.0	148.5	548.8	2.16	1.94	-0.97
7,355.0	88.00	183.80	6,223.8	-578.9	146.6	579.8	5.05	-4.52	2.26
7,387.0	88.50	184.10	6,224.8	-610.8	144.4	611.7	1.82	1.56	0.94
7,418.0	89.00	183.20	6,225.4	-641.7	142.5	642.6	3.32	1.61	-2.90

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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)
7,449.0	89.50	183.20	6,225.8	-672.7	140.7	673.5	1.61	1.61	0.00
7,480.0	90.60	183.80	6,225.8	-703.6	138.8	704.4	4.04	3.55	1.94
7,511.0	90.70	183.90	6,225.5	-734.6	136.7	735.4	0.46	0.32	0.32
7,542.0	91.40	184.30	6,224.9	-765.5	134.5	766.3	2.60	2.26	1.29
7,574.0	89.70	184.10	6,224.6	-797.4	132.2	798.1	5.35	-5.31	-0.63
7,605.0	89.20	182.50	6,224.9	-828.3	130.4	829.1	5.41	-1.61	-5.16
7,636.0	89.50	182.50	6,225.2	-859.3	129.1	860.0	0.97	0.97	0.00
7,667.0	88.80	183.10	6,225.7	-890.3	127.5	891.0	2.97	-2.26	1.94
7,699.0	89.10	182.40	6,226.3	-922.2	126.0	922.9	2.38	0.94	-2.19
7,730.0	90.00	182.40	6,226.5	-953.2	124.7	953.9	2.90	2.90	0.00
7,760.0	88.90	182.00	6,226.8	-983.2	123.6	983.9	3.90	-3.67	-1.33
7,791.0	89.20	182.70	6,227.3	-1,014.1	122.3	1,014.8	2.46	0.97	2.26
7,823.0	88.50	181.50	6,228.0	-1,046.1	121.1	1,046.8	4.34	-2.19	-3.75
7,853.0	88.90	181.70	6,228.7	-1,076.1	120.3	1,076.8	1.49	1.33	0.67
7,884.0	89.30	182.20	6,229.1	-1,107.1	119.2	1,107.7	2.07	1.29	1.61
7,916.0	89.60	182.00	6,229.4	-1,139.0	118.0	1,139.7	1.13	0.94	-0.63
7,947.0	90.40	181.00	6,229.4	-1,170.0	117.2	1,170.7	4.13	2.58	-3.23
7,978.0	90.60	180.80	6,229.2	-1,201.0	116.7	1,201.7	0.91	0.65	-0.65
8,008.0	90.90	181.00	6,228.8	-1,231.0	116.3	1,231.7	1.20	1.00	0.67
8,040.0	91.90	180.30	6,228.0	-1,263.0	115.9	1,263.7	3.81	3.13	-2.19
8,071.0	92.50	180.40	6,226.8	-1,294.0	115.7	1,294.6	1.96	1.94	0.32
8,103.0	92.40	180.40	6,225.4	-1,325.9	115.5	1,326.6	0.31	-0.31	0.00
8,134.0	92.80	179.70	6,224.0	-1,356.9	115.5	1,357.6	2.60	1.29	-2.26
8,165.0	92.20	179.90	6,222.7	-1,387.9	115.6	1,388.5	2.04	-1.94	0.65
8,197.0	90.70	180.10	6,221.9	-1,419.9	115.6	1,420.5	4.73	-4.69	0.63
8,228.0	89.40	180.10	6,221.8	-1,450.9	115.5	1,451.5	4.19	-4.19	0.00
8,259.0	89.50	180.40	6,222.1	-1,481.9	115.4	1,482.5	1.02	0.32	0.97
8,290.0	90.00	180.60	6,222.3	-1,512.9	115.1	1,513.5	1.74	1.61	0.65
8,322.0	89.00	180.40	6,222.6	-1,544.9	114.8	1,545.5	3.19	-3.13	-0.63
8,353.0	90.20	181.70	6,222.8	-1,575.9	114.3	1,576.5	5.71	3.87	4.19
8,385.0	91.00	181.70	6,222.4	-1,607.8	113.3	1,608.5	2.50	2.50	0.00
8,416.0	90.30	183.10	6,222.1	-1,638.8	112.0	1,639.4	5.05	-2.26	4.52
8,447.0	89.20	183.90	6,222.2	-1,669.8	110.1	1,670.4	4.39	-3.55	2.58
8,479.0	88.90	184.30	6,222.8	-1,701.7	107.8	1,702.3	1.56	-0.94	1.25
8,510.0	89.50	185.00	6,223.2	-1,732.6	105.3	1,733.2	2.97	1.94	2.26
8,541.0	87.70	182.90	6,223.9	-1,763.5	103.2	1,764.1	8.92	-5.81	-6.77
8,572.0	88.10	182.70	6,225.1	-1,794.4	101.7	1,795.0	1.44	1.29	-0.65
8,604.0	88.50	183.20	6,226.0	-1,826.4	100.0	1,826.9	2.00	1.25	1.56
8,635.0	89.30	182.40	6,226.6	-1,857.3	98.5	1,857.9	3.65	2.58	-2.58
8,666.0	89.40	182.40	6,227.0	-1,888.3	97.2	1,888.8	0.32	0.32	0.00
8,697.0	89.90	181.30	6,227.2	-1,919.3	96.2	1,919.8	3.90	1.61	-3.55
8,729.0	90.10	181.00	6,227.2	-1,951.3	95.6	1,951.8	1.13	0.63	-0.94
8,759.0	89.00	180.40	6,227.4	-1,981.3	95.2	1,981.8	4.18	-3.67	-2.00
8,791.0	89.50	180.60	6,227.8	-2,013.3	94.9	2,013.8	1.68	1.56	0.63
8,822.0	90.00	180.30	6,228.0	-2,044.3	94.7	2,044.8	1.88	1.61	-0.97
8,853.0	90.40	180.30	6,227.8	-2,075.3	94.5	2,075.8	1.29	1.29	0.00
8,885.0	90.80	180.40	6,227.5	-2,107.3	94.3	2,107.8	1.29	1.25	0.31
8,914.0	91.60	180.30	6,226.9	-2,136.2	94.2	2,136.8	2.78	2.76	-0.34
8,946.0	92.40	179.40	6,225.8	-2,168.2	94.2	2,168.7	3.76	2.50	-2.81
8,977.0	90.90	181.10	6,224.9	-2,199.2	94.1	2,199.7	7.31	-4.84	5.48
9,009.0	90.40	180.30	6,224.5	-2,231.2	93.7	2,231.7	2.95	-1.56	-2.50
9,040.0	91.00	179.90	6,224.2	-2,262.2	93.7	2,262.7	2.33	1.94	-1.29
9,072.0	91.70	180.10	6,223.4	-2,294.2	93.7	2,294.7	2.27	2.19	0.63

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 41-15HZ
Project:	SEC.15-T5N-R62W	TVD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Site:	STATE ANTELOPE 41-15HZ	MD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Well:	STATE ANTELOPE 41-15HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
9,102.0	91.40	181.50	6,222.6	-2,324.2	93.2	2,324.7	4.77	-1.00	4.67
9,133.0	91.80	181.70	6,221.7	-2,355.2	92.4	2,355.7	1.44	1.29	0.65
9,164.0	90.90	183.20	6,221.0	-2,386.1	91.1	2,386.6	5.64	-2.90	4.84
9,195.0	90.40	182.70	6,220.6	-2,417.1	89.5	2,417.6	2.28	-1.61	-1.61
9,226.0	90.90	183.10	6,220.3	-2,448.0	87.9	2,448.5	2.07	1.61	1.29
9,257.0	89.30	182.70	6,220.2	-2,479.0	86.3	2,479.5	5.32	-5.16	-1.29
9,289.0	90.00	183.40	6,220.4	-2,510.9	84.6	2,511.4	3.09	2.19	2.19
9,319.0	89.60	182.70	6,220.5	-2,540.9	83.0	2,541.3	2.69	-1.33	-2.33
9,350.0	90.20	182.90	6,220.6	-2,571.9	81.5	2,572.3	2.04	1.94	0.65
9,382.0	90.20	182.50	6,220.5	-2,603.8	80.0	2,604.3	1.25	0.00	-1.25
9,413.0	91.20	183.10	6,220.1	-2,634.8	78.5	2,635.2	3.76	3.23	1.94
9,444.0	90.20	183.40	6,219.7	-2,665.7	76.7	2,666.1	3.37	-3.23	0.97
9,475.0	90.00	183.40	6,219.7	-2,696.7	74.9	2,697.1	0.65	-0.65	0.00
9,506.0	90.50	183.40	6,219.5	-2,727.6	73.1	2,728.0	1.61	1.61	0.00
9,537.0	90.70	183.10	6,219.2	-2,758.6	71.3	2,758.9	1.16	0.65	-0.97
9,569.0	91.30	182.50	6,218.6	-2,790.5	69.7	2,790.9	2.65	1.88	-1.88
9,600.0	91.80	182.20	6,217.8	-2,821.5	68.5	2,821.9	1.88	1.61	-0.97
9,631.0	91.50	182.70	6,216.9	-2,852.5	67.1	2,852.8	1.88	-0.97	1.61
9,662.0	91.10	182.40	6,216.2	-2,883.4	65.8	2,883.8	1.61	-1.29	-0.97
9,694.0	91.80	182.40	6,215.4	-2,915.4	64.4	2,915.7	2.19	2.19	0.00
9,725.0	92.30	182.50	6,214.3	-2,946.3	63.1	2,946.6	1.64	1.61	0.32
9,756.0	91.10	182.00	6,213.4	-2,977.3	61.9	2,977.6	4.19	-3.87	-1.61
9,787.0	90.30	182.20	6,213.0	-3,008.3	60.7	3,008.6	2.66	-2.58	0.65
9,818.0	90.80	182.90	6,212.7	-3,039.2	59.4	3,039.5	2.77	1.61	2.26
9,849.0	91.60	182.40	6,212.0	-3,070.2	57.9	3,070.5	3.04	2.58	-1.61
9,880.0	91.50	181.00	6,211.2	-3,101.2	57.0	3,101.5	4.53	-0.32	-4.52
9,912.0	91.30	181.30	6,210.4	-3,133.2	56.4	3,133.4	1.13	-0.63	0.94
9,943.0	91.60	181.00	6,209.6	-3,164.1	55.7	3,164.4	1.37	0.97	-0.97
9,974.0	90.20	181.10	6,209.2	-3,195.1	55.2	3,195.4	4.53	-4.52	0.32
10,005.0	90.60	181.10	6,208.9	-3,226.1	54.6	3,226.4	1.29	1.29	0.00
10,037.0	91.40	181.00	6,208.4	-3,258.1	54.0	3,258.4	2.52	2.50	-0.31
10,066.0	92.20	180.80	6,207.5	-3,287.1	53.5	3,287.3	2.84	2.76	-0.69
10,097.0	91.20	180.40	6,206.6	-3,318.1	53.2	3,318.3	3.47	-3.23	-1.29
10,128.0	91.50	180.40	6,205.8	-3,349.1	53.0	3,349.3	0.97	0.97	0.00
10,160.0	90.10	181.10	6,205.4	-3,381.1	52.6	3,381.3	4.89	-4.38	2.19
10,191.0	90.20	180.80	6,205.3	-3,412.1	52.1	3,412.3	1.02	0.32	-0.97
10,222.0	90.60	180.30	6,205.1	-3,443.1	51.8	3,443.3	2.07	1.29	-1.61
10,253.0	90.80	179.90	6,204.7	-3,474.0	51.7	3,474.3	1.44	0.65	-1.29
10,284.0	91.50	180.30	6,204.1	-3,505.0	51.7	3,505.3	2.60	2.26	1.29
10,315.0	92.00	180.10	6,203.1	-3,536.0	51.6	3,536.3	1.74	1.61	-0.65
10,346.0	90.90	180.80	6,202.3	-3,567.0	51.3	3,567.3	4.21	-3.55	2.26
10,378.0	91.00	180.80	6,201.8	-3,599.0	50.9	3,599.2	0.31	0.31	0.00
10,408.0	90.00	182.40	6,201.6	-3,629.0	50.0	3,629.2	6.29	-3.33	5.33
10,440.0	90.10	181.80	6,201.5	-3,661.0	48.9	3,661.2	1.90	0.31	-1.88
10,471.0	90.50	181.70	6,201.4	-3,692.0	47.9	3,692.2	1.33	1.29	-0.32
10,503.0	90.80	181.30	6,201.0	-3,723.9	47.1	3,724.2	1.56	0.94	-1.25
10,534.0	91.30	181.30	6,200.4	-3,754.9	46.4	3,755.1	1.61	1.61	0.00
10,565.0	91.50	181.10	6,199.7	-3,785.9	45.7	3,786.1	0.91	0.65	-0.65
10,596.0	90.90	181.30	6,199.0	-3,816.9	45.1	3,817.1	2.04	-1.94	0.65
10,628.0	91.50	180.80	6,198.4	-3,848.9	44.5	3,849.1	2.44	1.88	-1.56
10,659.0	91.40	179.90	6,197.6	-3,879.9	44.3	3,880.1	2.92	-0.32	-2.90
10,689.0	91.40	179.00	6,196.8	-3,909.9	44.6	3,910.1	3.00	0.00	-3.00

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 41-15HZ
Project:	SEC.15-T5N-R62W	TVD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Site:	STATE ANTELOPE 41-15HZ	MD Reference:	RKB RIG 12 @ 4663.0ft (ENSIGN RIG 12 KB 12')
Well:	STATE ANTELOPE 41-15HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)	
10,721.0	90.80	179.60	6,196.2	-3,941.9	45.0	3,942.1	2.65	-1.88	1.88	
10,751.0	91.10	179.90	6,195.7	-3,971.9	45.1	3,972.1	1.41	1.00	1.00	
10,782.0	91.50	180.10	6,195.0	-4,002.8	45.1	4,003.0	1.44	1.29	0.65	
10,813.0	91.50	179.60	6,194.2	-4,033.8	45.2	4,034.0	1.61	0.00	-1.61	
10,844.0	92.10	179.70	6,193.2	-4,064.8	45.4	4,065.0	1.96	1.94	0.32	
10,875.0	92.20	179.20	6,192.1	-4,095.8	45.7	4,096.0	1.64	0.32	-1.61	
10,906.0	92.70	179.40	6,190.7	-4,126.8	46.1	4,127.0	1.74	1.61	0.65	
10,962.0	93.30	179.20	6,187.8	-4,182.7	46.7	4,182.9	1.13	1.07	-0.36	
11,000.8	93.69	179.30	6,185.5	-4,221.5	47.2	4,221.7	1.03	1.00	0.25	
TARGET 2 460'FSL & 660'FEL										
11,002.0	93.70	179.30	6,185.4	-4,222.6	47.3	4,222.8	1.03	1.00	0.25	

Checked By: _____	Approved By: _____	Date: _____
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