

BONANZA CREEK ENERGY OPERATING

Well Name: STATE ANTELOPE 31-11HZ

Surface Location: STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W
North American Datum 1983, US State Plane 1983 Colorado Northern Zone

Ground Elevation: 4603.0

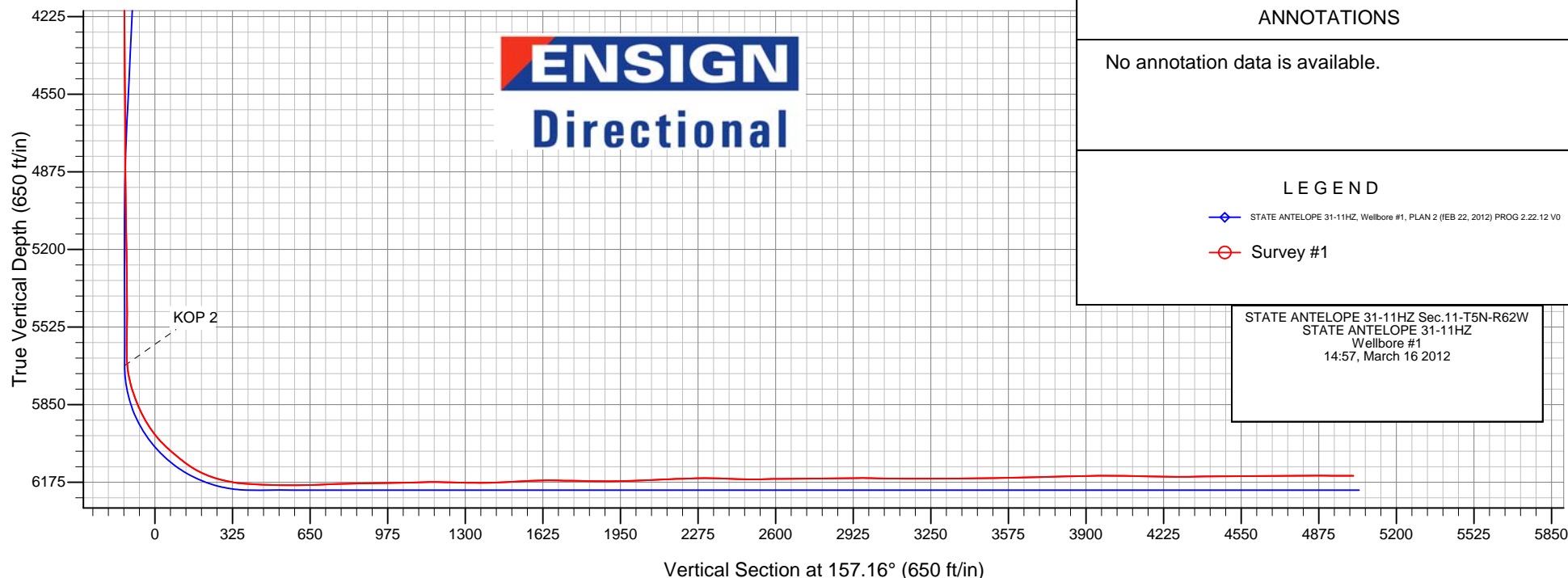
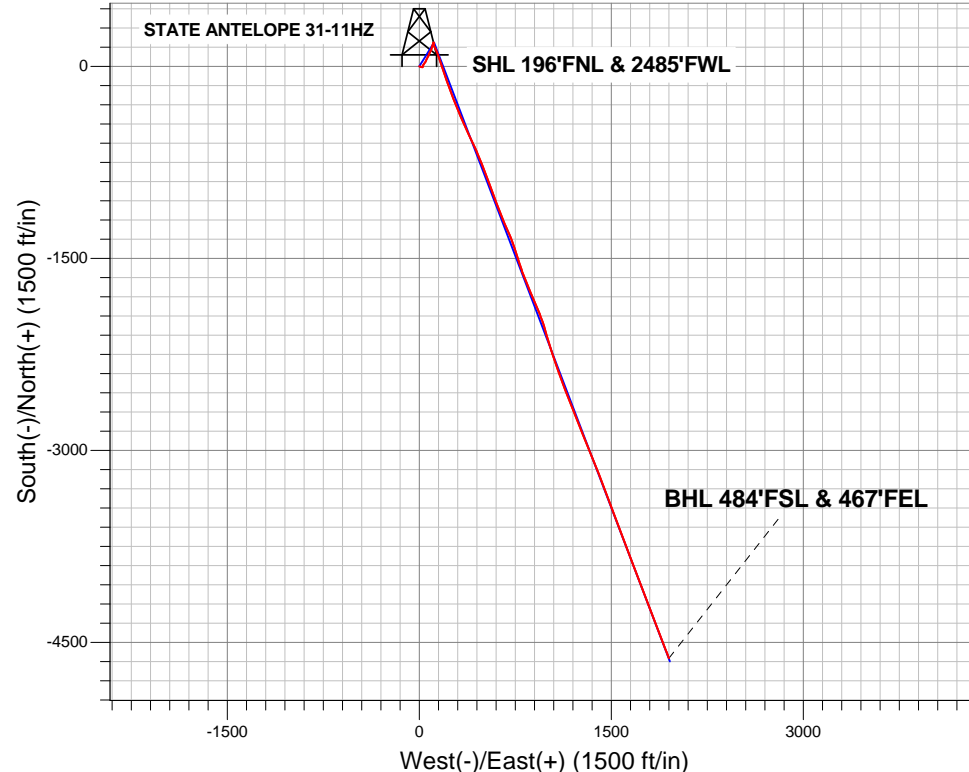
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1398809.18	3336978.83	40.421820	-104.289640	

ENSIGN RIG 128 15' KB RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)

FINAL SURVEY

Projected Bottom Hole Location
11105' MD 6149' TVD 5019' VS 4624' S &
1951' E of SHL

89.70 degree Incl @ 158.60 degree AZM





BONANZA CREEK ENERGY OPERATING

SEC.11-T5N-R62W

STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W

STATE ANTELOPE 31-11HZ

Wellbore #1

Survey: Survey #1

Standard Survey Report

16 March, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 31-11HZ
Project:	SEC.11-T5N-R62W	TVD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Site:	STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W	MD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Well:	STATE ANTELOPE 31-11HZ	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.11-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 31-11HZ Sec.11-T5N-R62W			
Site Position:		Northing:	1,398,805.58 ft	Latitude:	40.421810
From:	Lat/Long	Easting:	3,336,981.67 ft	Longitude:	-104.289630
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.78 °

Well	STATE ANTELOPE 31-11HZ					
Well Position	+N-S	0.0 ft	Northing:	1,398,809.18 ft	Latitude:	40.421820
	+E-W	0.0 ft	Easting:	3,336,978.83 ft	Longitude:	-104.289640
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,603.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/1/2011	8.55	67.13	53,146
	IGRF2010	2/22/2012	8.52	67.12	53,122

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 (°)
	6,208.0	0.0	0.0	157.16

Survey Program		Date		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
488.0	11,105.0	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)
HARDLINES SH	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	1.7	0.01	112.40	1.7	0.0	0.0	0.0	0.39	0.39	0.00
	60.4	0.24	112.40	60.4	0.0	0.1	0.1	0.39	0.39	0.00
	488.0	1.90	112.40	487.9	-3.1	7.5	5.7	0.39	0.39	0.00
	673.0	0.70	79.30	672.9	-4.0	11.4	8.2	0.74	-0.65	-17.89
	859.0	0.80	85.70	858.8	-3.7	13.8	8.8	0.07	0.05	3.44
	1,043.0	0.90	107.50	1,042.8	-4.1	16.5	10.2	0.18	0.05	11.85
	1,230.0	0.90	108.00	1,229.8	-5.0	19.3	12.1	0.00	0.00	0.27
	1,414.0	1.70	100.00	1,413.8	-5.9	23.4	14.5	0.44	0.43	-4.35

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Site:	STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W	MD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Well:	STATE ANTELOPE 31-11HZ	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)
1,598.0	1.00	19.00	1,597.7	-4.8	26.6	14.8	1.00	-0.38	-44.02
1,782.0	1.10	355.30	1,781.7	-1.6	26.9	11.9	0.24	0.05	-12.88
1,966.0	1.00	2.60	1,965.7	1.8	26.9	8.8	0.09	-0.05	3.97
2,057.0	2.60	14.00	2,056.6	4.6	27.4	6.4	1.79	1.76	12.53
2,149.0	4.40	33.70	2,148.4	9.6	29.9	2.8	2.33	1.96	21.41
2,241.0	6.40	37.30	2,240.0	16.6	34.9	-1.7	2.20	2.17	3.91
2,333.0	7.70	33.90	2,331.3	25.8	41.5	-7.6	1.48	1.41	-3.70
2,424.0	8.00	29.00	2,421.5	36.4	48.0	-14.9	0.81	0.33	-5.38
2,517.0	8.00	24.60	2,513.6	47.9	53.8	-23.3	0.66	0.00	-4.73
2,609.0	8.00	24.70	2,604.7	59.5	59.1	-31.9	0.02	0.00	0.11
2,702.0	8.00	26.20	2,696.8	71.2	64.7	-40.5	0.22	0.00	1.61
2,794.0	7.50	25.90	2,787.9	82.4	70.1	-48.7	0.55	-0.54	-0.33
2,888.0	6.60	29.20	2,881.2	92.6	75.5	-56.1	1.05	-0.96	3.51
2,982.0	6.40	23.70	2,974.6	102.1	80.2	-63.0	0.70	-0.21	-5.85
3,076.0	6.40	26.60	3,068.0	111.6	84.6	-70.0	0.34	0.00	3.09
3,170.0	6.80	28.00	3,161.4	121.2	89.6	-76.9	0.46	0.43	1.49
3,263.0	7.00	16.10	3,253.7	131.5	93.8	-84.8	1.55	0.22	-12.80
3,357.0	6.10	14.80	3,347.1	141.8	96.6	-93.2	0.97	-0.96	-1.38
3,450.0	6.40	19.40	3,439.6	151.5	99.6	-101.0	0.63	0.32	4.95
3,544.0	6.20	17.40	3,533.0	161.3	102.9	-108.7	0.32	-0.21	-2.13
3,638.0	4.50	18.10	3,626.6	169.6	105.5	-115.4	1.81	-1.81	0.74
3,732.0	3.50	23.40	3,720.4	175.8	107.8	-120.2	1.13	-1.06	5.64
3,824.0	2.90	19.80	3,812.2	180.6	109.7	-123.8	0.69	-0.65	-3.91
3,917.0	1.80	19.50	3,905.1	184.1	111.0	-126.6	1.18	-1.18	-0.32
4,011.0	0.90	33.50	3,999.1	186.1	111.9	-128.1	1.01	-0.96	14.89
4,105.0	0.30	92.30	4,093.1	186.8	112.6	-128.4	0.84	-0.64	62.55
4,199.0	0.40	124.80	4,187.1	186.6	113.1	-128.0	0.23	0.11	34.57
4,293.0	0.40	157.10	4,281.1	186.1	113.5	-127.4	0.24	0.00	34.36
4,387.0	0.40	193.50	4,375.1	185.4	113.5	-126.8	0.27	0.00	38.72
4,480.0	0.70	200.10	4,468.1	184.6	113.2	-126.2	0.33	0.32	7.10
4,574.0	0.70	187.70	4,562.1	183.5	113.0	-125.3	0.16	0.00	-13.19
4,668.0	0.40	201.80	4,656.1	182.6	112.8	-124.5	0.35	-0.32	15.00
4,761.0	0.40	221.00	4,749.1	182.1	112.4	-124.2	0.14	0.00	20.65
4,854.0	0.80	224.30	4,842.1	181.4	111.8	-123.8	0.43	0.43	3.55
4,948.0	0.70	240.30	4,936.1	180.6	110.8	-123.4	0.25	-0.11	17.02
5,041.0	1.20	170.70	5,029.1	179.4	110.5	-122.4	1.25	0.54	-74.84
5,135.0	1.30	171.40	5,123.0	177.3	110.8	-120.4	0.11	0.11	0.74
5,229.0	0.80	180.90	5,217.0	175.6	110.9	-118.8	0.56	-0.53	10.11
5,322.0	0.60	193.80	5,310.0	174.5	110.8	-117.8	0.27	-0.22	13.87
5,416.0	0.50	229.20	5,404.0	173.8	110.4	-117.3	0.37	-0.11	37.66
5,512.0	0.60	285.70	5,500.0	173.5	109.1	-117.6	0.34	0.06	36.22
5,603.0	0.40	317.40	5,591.0	173.7	108.9	-117.8	1.08	-0.65	102.26
5,635.0	0.60	314.60	5,623.0	173.9	108.7	-118.0	0.63	0.63	-8.75
5,666.0	1.50	155.10	5,654.0	173.6	108.7	-117.8	6.69	2.90	-514.52
5,697.0	5.00	157.40	5,684.9	172.0	109.4	-116.0	11.30	11.29	7.42
TARGET 1 460°FNL & 2233°FEL									
5,727.0	9.30	155.10	5,714.7	168.6	110.9	-112.3	14.36	14.33	-7.67
5,758.0	12.60	154.10	5,745.1	163.3	113.5	-106.4	10.66	10.65	-3.23
5,789.0	15.80	154.10	5,775.2	156.4	116.8	-98.8	10.32	10.32	0.00
5,821.0	18.90	153.70	5,805.7	147.9	121.0	-89.3	9.69	9.69	-1.25
5,852.0	21.70	154.20	5,834.8	138.2	125.7	-78.6	9.05	9.03	1.61
5,884.0	24.30	154.80	5,864.2	126.9	131.1	-66.1	8.16	8.13	1.88
5,915.0	26.70	157.20	5,892.2	114.7	136.5	-52.7	8.43	7.74	7.74

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Well:	STATE ANTELOPE 31-11HZ	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)
5,945.0	29.50	159.20	5,918.7	101.6	141.7	-38.6	9.85	9.33	6.67
5,976.0	33.20	160.40	5,945.2	86.5	147.3	-22.5	12.10	11.94	3.87
6,008.0	37.70	161.60	5,971.2	68.9	153.3	-4.0	14.23	14.06	3.75
6,039.0	42.40	161.60	5,994.9	50.0	159.6	15.9	15.16	15.16	0.00
6,070.0	45.70	160.70	6,017.2	29.6	166.6	37.4	10.83	10.65	-2.90
6,102.0	48.10	160.70	6,039.1	7.5	174.3	60.7	7.50	7.50	0.00
6,133.0	49.90	160.90	6,059.4	-14.5	182.0	84.1	5.83	5.81	0.65
6,163.0	50.80	161.40	6,078.6	-36.4	189.5	107.1	3.26	3.00	1.67
6,195.0	54.10	161.40	6,098.1	-60.4	197.6	132.4	10.31	10.31	0.00
6,226.0	58.10	161.30	6,115.3	-84.8	205.8	158.0	12.91	12.90	-0.32
6,257.0	63.00	161.30	6,130.6	-110.4	214.4	185.0	15.81	15.81	0.00
6,287.0	67.40	161.30	6,143.2	-136.2	223.2	212.1	14.67	14.67	0.00
6,319.0	71.30	160.40	6,154.4	-164.5	233.0	242.0	12.47	12.19	-2.81
6,350.0	75.20	160.40	6,163.4	-192.4	243.0	271.6	12.58	12.58	0.00
6,381.0	78.00	159.00	6,170.6	-220.7	253.4	301.7	10.04	9.03	-4.52
6,412.0	80.40	158.10	6,176.4	-249.0	264.5	332.2	8.25	7.74	-2.90
6,454.0	86.00	157.90	6,181.3	-287.7	280.2	373.9	13.34	13.33	-0.48
6,525.0	88.30	157.60	6,184.9	-353.3	307.0	444.8	3.27	3.24	-0.42
6,556.0	88.20	157.20	6,185.8	-381.9	318.9	475.8	1.33	-0.32	-1.29
6,587.0	88.50	156.70	6,186.7	-410.4	331.1	506.7	1.88	0.97	-1.61
6,617.0	88.70	156.40	6,187.4	-437.9	343.0	536.7	1.20	0.67	-1.00
6,648.0	89.60	155.60	6,187.9	-466.3	355.6	567.7	3.88	2.90	-2.58
6,678.0	90.70	154.90	6,187.8	-493.5	368.2	597.7	4.35	3.67	-2.33
6,708.0	91.00	154.40	6,187.4	-520.6	381.0	627.7	1.94	1.00	-1.67
6,740.0	91.70	154.40	6,186.6	-549.5	394.8	659.6	2.19	2.19	0.00
6,770.0	92.20	154.20	6,185.6	-576.5	407.8	689.6	1.79	1.67	-0.67
6,801.0	92.90	155.10	6,184.2	-604.5	421.1	720.5	3.68	2.26	2.90
6,832.0	92.50	155.80	6,182.8	-632.6	434.0	751.5	2.60	-1.29	2.26
6,862.0	92.10	156.90	6,181.6	-660.1	446.0	781.4	3.90	-1.33	3.67
6,893.0	91.40	157.10	6,180.6	-688.6	458.1	812.4	2.35	-2.26	0.65
6,924.0	90.50	157.90	6,180.1	-717.2	469.9	843.4	3.88	-2.90	2.58
6,954.0	90.10	158.50	6,179.9	-745.1	481.1	873.4	2.40	-1.33	2.00
6,985.0	90.50	158.50	6,179.8	-773.9	492.4	904.4	1.29	1.29	0.00
7,016.0	90.70	158.30	6,179.5	-802.8	503.9	935.4	0.91	0.65	-0.65
7,046.0	91.00	158.30	6,179.0	-830.6	514.9	965.4	1.00	1.00	0.00
7,077.0	91.80	159.30	6,178.3	-859.5	526.2	996.4	4.13	2.58	3.23
7,109.0	92.20	159.20	6,177.1	-889.4	537.5	1,028.3	1.29	1.25	-0.31
7,140.0	91.50	159.30	6,176.1	-918.4	548.5	1,059.3	2.28	-2.26	0.32
7,171.0	91.20	160.20	6,175.4	-947.5	559.2	1,090.2	3.06	-0.97	2.90
7,202.0	91.40	160.60	6,174.7	-976.7	569.6	1,121.2	1.44	0.65	1.29
7,232.0	90.50	160.40	6,174.2	-1,005.0	579.6	1,151.1	3.07	-3.00	-0.67
7,263.0	89.20	160.60	6,174.3	-1,034.2	589.9	1,182.1	4.24	-4.19	0.65
7,294.0	88.60	159.90	6,174.9	-1,063.3	600.4	1,213.0	2.97	-1.94	-2.26
7,325.0	87.80	158.80	6,175.9	-1,092.3	611.3	1,244.0	4.39	-2.58	-3.55
7,357.0	88.50	157.80	6,176.9	-1,122.1	623.2	1,276.0	3.81	2.19	-3.13
7,388.0	89.50	157.20	6,177.4	-1,150.7	635.0	1,307.0	3.76	3.23	-1.94
7,420.0	89.50	156.70	6,177.7	-1,180.1	647.6	1,339.0	1.56	0.00	-1.56
7,451.0	90.50	156.40	6,177.7	-1,208.6	659.9	1,370.0	3.37	3.23	-0.97
7,482.0	91.30	156.40	6,177.2	-1,237.0	672.3	1,400.9	2.58	2.58	0.00
7,514.0	91.90	157.10	6,176.3	-1,266.4	684.9	1,432.9	2.88	1.88	2.19
7,545.0	92.80	157.90	6,175.1	-1,295.0	696.8	1,463.9	3.88	2.90	2.58
7,576.0	92.90	157.90	6,173.5	-1,323.7	708.4	1,494.9	0.32	0.32	0.00
7,607.0	92.80	158.60	6,172.0	-1,352.4	719.9	1,525.8	2.28	-0.32	2.26

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7,638.0	93.30	160.20	6,170.3	-1,381.4	730.8	1,556.8	5.40	1.61	5.16
7,669.0	92.80	161.30	6,168.7	-1,410.6	741.0	1,587.6	3.89	-1.61	3.55
7,701.0	91.10	162.00	6,167.6	-1,441.0	751.1	1,619.5	5.74	-5.31	2.19
7,732.0	89.70	162.50	6,167.4	-1,470.5	760.5	1,650.4	4.80	-4.52	1.61
7,763.0	89.00	162.00	6,167.7	-1,500.0	770.0	1,681.3	2.77	-2.26	-1.61
7,795.0	89.00	162.20	6,168.3	-1,530.5	779.8	1,713.2	0.62	0.00	0.63
7,826.0	89.30	161.40	6,168.7	-1,559.9	789.5	1,744.1	2.76	0.97	-2.58
7,857.0	89.60	160.70	6,169.0	-1,589.2	799.6	1,775.0	2.46	0.97	-2.26
7,889.0	88.90	159.30	6,169.5	-1,619.3	810.5	1,806.9	4.89	-2.19	-4.38
7,920.0	88.20	158.80	6,170.2	-1,648.2	821.6	1,837.9	2.77	-2.26	-1.61
7,951.0	88.70	158.30	6,171.1	-1,677.1	832.9	1,868.9	2.28	1.61	-1.61
7,983.0	89.90	158.10	6,171.5	-1,706.8	844.8	1,900.9	3.80	3.75	-0.63
8,014.0	91.00	157.40	6,171.2	-1,735.5	856.5	1,931.9	4.21	3.55	-2.26
8,046.0	92.10	157.20	6,170.4	-1,765.0	868.9	1,963.9	3.49	3.44	-0.63
8,077.0	92.00	156.90	6,169.3	-1,793.5	881.0	1,994.8	1.02	-0.32	-0.97
8,108.0	92.00	156.50	6,168.2	-1,822.0	893.2	2,025.8	1.29	0.00	-1.29
8,140.0	92.70	157.40	6,166.9	-1,851.4	905.7	2,057.8	3.56	2.19	2.81
8,171.0	92.90	156.90	6,165.3	-1,879.9	917.8	2,088.8	1.74	0.65	-1.61
8,203.0	92.80	157.60	6,163.8	-1,909.4	930.1	2,120.7	2.21	-0.31	2.19
8,234.0	91.90	158.60	6,162.5	-1,938.1	941.7	2,151.7	4.34	-2.90	3.23
8,265.0	91.80	159.90	6,161.5	-1,967.1	952.6	2,182.7	4.20	-0.32	4.19
8,296.0	92.20	160.60	6,160.4	-1,996.3	963.1	2,213.6	2.60	1.29	2.26
8,328.0	91.80	161.40	6,159.3	-2,026.5	973.5	2,245.5	2.79	-1.25	2.50
8,359.0	91.40	163.00	6,158.4	-2,056.0	983.0	2,276.4	5.32	-1.29	5.16
8,390.0	89.90	163.20	6,158.1	-2,085.7	992.0	2,307.2	4.88	-4.84	0.65
8,421.0	88.30	164.80	6,158.6	-2,115.5	1,000.5	2,338.0	7.30	-5.16	5.16
8,453.0	88.00	165.00	6,159.6	-2,146.3	1,008.9	2,369.7	1.13	-0.94	0.63
8,484.0	87.90	164.40	6,160.7	-2,176.2	1,017.1	2,400.4	1.96	-0.32	-1.94
8,516.0	88.00	163.40	6,161.8	-2,207.0	1,025.9	2,432.1	3.14	0.31	-3.13
8,547.0	89.30	162.20	6,162.6	-2,236.6	1,035.1	2,463.0	5.71	4.19	-3.87
8,579.0	90.20	160.70	6,162.7	-2,266.9	1,045.3	2,494.9	5.47	2.81	-4.69
8,610.0	90.50	160.20	6,162.5	-2,296.1	1,055.6	2,525.8	1.88	0.97	-1.61
8,641.0	90.70	160.00	6,162.2	-2,325.3	1,066.2	2,556.8	0.91	0.65	-0.65
8,673.0	91.20	160.00	6,161.7	-2,355.3	1,077.1	2,588.7	1.56	1.56	0.00
8,704.0	90.90	159.50	6,161.1	-2,384.4	1,087.9	2,619.7	1.88	-0.97	-1.61
8,735.0	90.00	159.70	6,160.9	-2,413.5	1,098.7	2,650.7	2.97	-2.90	0.65
8,766.0	90.50	160.20	6,160.7	-2,442.6	1,109.3	2,681.6	2.28	1.61	1.61
8,797.0	90.40	160.40	6,160.5	-2,471.8	1,119.7	2,712.6	0.72	-0.32	0.65
8,829.0	90.20	159.90	6,160.3	-2,501.9	1,130.6	2,744.5	1.68	-0.63	-1.56
8,860.0	91.50	160.40	6,159.9	-2,531.0	1,141.1	2,775.5	4.49	4.19	1.61
8,892.0	91.20	159.70	6,159.1	-2,561.1	1,152.1	2,807.5	2.38	-0.94	-2.19
8,923.0	89.40	158.80	6,158.9	-2,590.1	1,163.0	2,838.4	6.49	-5.81	-2.90
8,954.0	90.00	159.00	6,159.1	-2,619.0	1,174.2	2,869.4	2.04	1.94	0.65
8,986.0	91.10	159.00	6,158.8	-2,648.9	1,185.7	2,901.4	3.44	3.44	0.00
9,017.0	91.40	158.60	6,158.1	-2,677.8	1,196.9	2,932.4	1.61	0.97	-1.29
9,048.0	90.00	157.90	6,157.7	-2,706.5	1,208.4	2,963.4	5.05	-4.52	-2.26
9,079.0	88.60	157.60	6,158.1	-2,735.2	1,220.1	2,994.4	4.62	-4.52	-0.97
9,111.0	88.60	157.60	6,158.9	-2,764.8	1,232.3	3,026.4	0.00	0.00	0.00
9,142.0	88.50	157.40	6,159.7	-2,793.4	1,244.1	3,057.3	0.72	-0.32	-0.65
9,173.0	88.60	157.20	6,160.5	-2,822.0	1,256.1	3,088.3	0.72	0.32	-0.65
9,204.0	89.30	156.70	6,161.0	-2,850.6	1,268.2	3,119.3	2.77	2.26	-1.61
9,236.0	90.70	157.40	6,161.0	-2,880.0	1,280.7	3,151.3	4.89	4.38	2.19
9,267.0	91.20	157.80	6,160.5	-2,908.7	1,292.5	3,182.3	2.07	1.61	1.29

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 31-11HZ
Project:	SEC.11-T5N-R62W	TVD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Site:	STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W	MD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Well:	STATE ANTELOPE 31-11HZ	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)
9,298.0	89.50	157.90	6,160.3	-2,937.4	1,304.2	3,213.3	5.49	-5.48	0.32
9,329.0	89.40	158.30	6,160.6	-2,966.2	1,315.8	3,244.3	1.33	-0.32	1.29
9,360.0	90.90	159.30	6,160.5	-2,995.1	1,327.0	3,275.3	5.82	4.84	3.23
9,391.0	91.50	159.30	6,159.9	-3,024.0	1,337.9	3,306.3	1.94	1.94	0.00
9,423.0	90.70	158.10	6,159.3	-3,053.9	1,349.6	3,338.2	4.51	-2.50	-3.75
9,454.0	89.50	157.40	6,159.2	-3,082.5	1,361.3	3,369.2	4.48	-3.87	-2.26
9,486.0	91.00	158.80	6,159.1	-3,112.2	1,373.2	3,401.2	6.41	4.69	4.38
9,517.0	90.90	158.60	6,158.6	-3,141.1	1,384.5	3,432.2	0.72	-0.32	-0.65
9,548.0	90.30	156.90	6,158.2	-3,169.8	1,396.2	3,463.2	5.82	-1.94	-5.48
9,580.0	90.60	157.90	6,158.0	-3,199.3	1,408.5	3,495.2	3.26	0.94	3.13
9,611.0	91.40	159.30	6,157.5	-3,228.2	1,419.8	3,526.2	5.20	2.58	4.52
9,642.0	90.00	158.10	6,157.1	-3,257.1	1,431.1	3,557.2	5.95	-4.52	-3.87
9,673.0	90.70	159.00	6,156.9	-3,285.9	1,442.4	3,588.2	3.68	2.26	2.90
9,704.0	91.70	159.30	6,156.2	-3,314.9	1,453.5	3,619.2	3.37	3.23	0.97
9,736.0	91.60	158.60	6,155.3	-3,344.7	1,465.0	3,651.1	2.21	-0.31	-2.19
9,767.0	92.20	158.80	6,154.3	-3,373.6	1,476.2	3,682.1	2.04	1.94	0.65
9,798.0	92.10	159.00	6,153.1	-3,402.5	1,487.4	3,713.1	0.72	-0.32	0.65
9,828.0	91.10	159.20	6,152.3	-3,430.5	1,498.1	3,743.0	3.40	-3.33	0.67
9,859.0	91.10	159.70	6,151.7	-3,459.5	1,508.9	3,774.0	1.61	0.00	1.61
9,890.0	91.40	160.00	6,151.0	-3,488.6	1,519.6	3,805.0	1.37	0.97	0.97
9,921.0	91.40	159.70	6,150.3	-3,517.7	1,530.3	3,835.9	0.97	0.00	-0.97
9,952.0	91.30	160.20	6,149.5	-3,546.8	1,540.9	3,866.9	1.64	-0.32	1.61
9,984.0	90.90	160.00	6,148.9	-3,576.9	1,551.8	3,898.8	1.40	-1.25	-0.63
10,015.0	91.10	159.90	6,148.4	-3,606.1	1,562.4	3,929.8	0.72	0.65	-0.32
10,046.0	90.20	160.00	6,148.0	-3,635.2	1,573.1	3,960.7	2.92	-2.90	0.32
10,078.0	89.40	160.00	6,148.1	-3,665.2	1,584.0	3,992.7	2.50	-2.50	0.00
10,109.0	89.60	160.00	6,148.4	-3,694.4	1,594.6	4,023.7	0.65	0.65	0.00
10,140.0	89.70	159.90	6,148.6	-3,723.5	1,605.2	4,054.6	0.46	0.32	-0.32
10,172.0	88.80	159.30	6,149.0	-3,753.5	1,616.4	4,086.6	3.38	-2.81	-1.88
10,203.0	88.80	159.50	6,149.7	-3,782.5	1,627.3	4,117.6	0.65	0.00	0.65
10,234.0	88.80	159.30	6,150.3	-3,811.5	1,638.2	4,148.5	0.65	0.00	-0.65
10,265.0	89.00	159.30	6,150.9	-3,840.5	1,649.1	4,179.5	0.65	0.65	0.00
10,297.0	89.00	158.60	6,151.5	-3,870.4	1,660.6	4,211.5	2.19	0.00	-2.19
10,327.0	89.00	158.60	6,152.0	-3,898.3	1,671.6	4,241.5	0.00	0.00	0.00
10,358.0	89.60	158.60	6,152.4	-3,927.1	1,682.9	4,272.5	1.94	1.94	0.00
10,389.0	90.40	158.30	6,152.4	-3,956.0	1,694.3	4,303.4	2.76	2.58	-0.97
10,420.0	91.00	158.60	6,152.0	-3,984.8	1,705.7	4,334.4	2.16	1.94	0.97
10,452.0	90.90	158.10	6,151.5	-4,014.5	1,717.5	4,366.4	1.59	-0.31	-1.56
10,483.0	90.80	158.80	6,151.0	-4,043.4	1,728.9	4,397.4	2.28	-0.32	2.26
10,514.0	90.70	159.00	6,150.6	-4,072.3	1,740.0	4,428.4	0.72	-0.32	0.65
10,545.0	90.50	159.50	6,150.3	-4,101.3	1,751.0	4,459.4	1.74	-0.65	1.61
10,576.0	90.50	159.70	6,150.0	-4,130.3	1,761.8	4,490.3	0.65	0.00	0.65
10,608.0	90.40	159.90	6,149.7	-4,160.4	1,772.9	4,522.3	0.70	-0.31	0.63
10,639.0	90.40	159.70	6,149.5	-4,189.5	1,783.6	4,553.3	0.65	0.00	-0.65
10,670.0	90.40	159.30	6,149.3	-4,218.5	1,794.4	4,584.3	1.29	0.00	-1.29
10,702.0	90.30	159.50	6,149.1	-4,248.4	1,805.7	4,616.2	0.70	-0.31	0.63
10,733.0	90.30	159.30	6,149.0	-4,277.5	1,816.6	4,647.2	0.65	0.00	-0.65
10,764.0	90.10	159.30	6,148.8	-4,306.5	1,827.5	4,678.2	0.65	-0.65	0.00
10,795.0	90.00	159.30	6,148.8	-4,335.5	1,838.5	4,709.2	0.32	-0.32	0.00
10,826.0	90.50	159.00	6,148.7	-4,364.4	1,849.5	4,740.1	1.88	1.61	-0.97
10,858.0	90.60	158.60	6,148.4	-4,394.3	1,861.1	4,772.1	1.29	0.31	-1.25
10,889.0	90.50	158.60	6,148.1	-4,423.1	1,872.4	4,803.1	0.32	-0.32	0.00
10,920.0	90.00	158.80	6,147.9	-4,452.0	1,883.7	4,834.1	1.74	-1.61	0.65

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well STATE ANTELOPE 31-11HZ
Project:	SEC.11-T5N-R62W	TVD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Site:	STATE ANTELOPE 31-11HZ Sec.11-T5N-R62W	MD Reference:	RKB @ 4618.0ft (ENSIGN RIG 128 15' KB)
Well:	STATE ANTELOPE 31-11HZ	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)
10,951.0	90.00	158.80	6,147.9	-4,480.9	1,894.9	4,865.1	0.00	0.00	0.00
10,982.0	89.90	158.80	6,148.0	-4,509.8	1,906.1	4,896.1	0.32	-0.32	0.00
11,014.0	89.70	158.60	6,148.1	-4,539.6	1,917.7	4,928.1	0.88	-0.63	-0.63
11,045.0	89.70	158.80	6,148.2	-4,568.5	1,929.0	4,959.1	0.65	0.00	0.65
11,054.0	89.70	158.60	6,148.3	-4,576.9	1,932.2	4,968.0	2.22	0.00	-2.22
11,105.0	89.70	158.60	6,148.6	-4,624.4	1,950.9	5,019.0	0.00	0.00	0.00
TARGET 2 460'FSL & 460'FEL									

Checked By: _____	Approved By: _____	Date: _____
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