

Bonanza Creek Energy Inc.

Archer

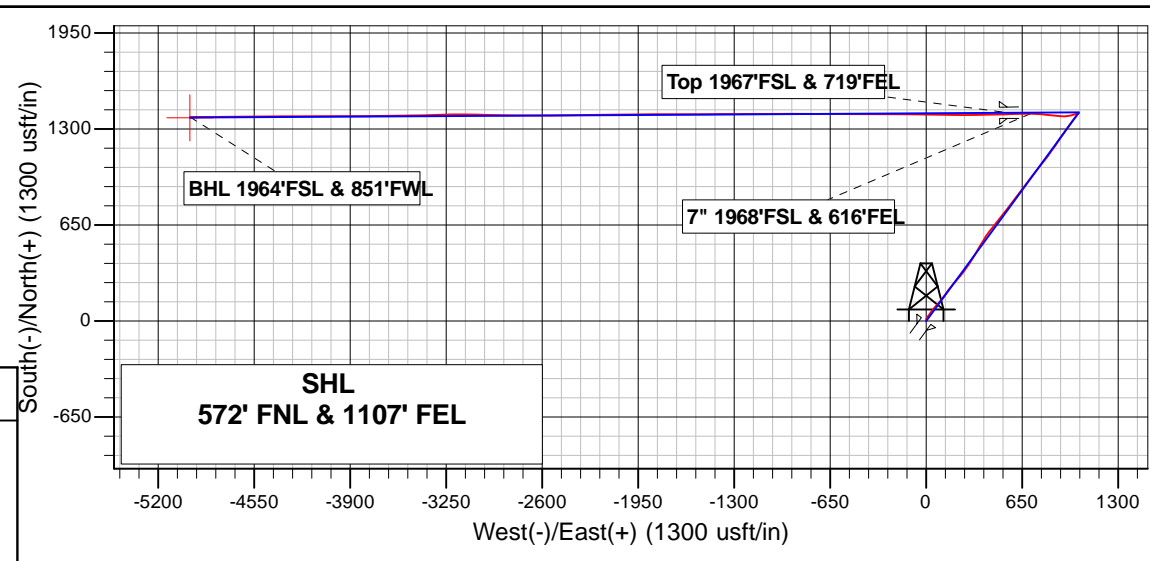
Bonanza Creek Energy Inc.
Project: Weld Co., CO
Site: Sec.32-T5N-R61W
Well: State Pronghorn 43-32-31MRLNB
Wellbore: Wellbore #1
Design: Design #2
Lat: 40° 21' 5.544 N
Long: 104° 13' 38.316 W
Pad GL: 4531.0
KB: Well @ 4548.0usft

PROJECT DETAILS: Weld Co., CO

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

Projected Bottom Hole Location
12157'MD 5969.6'TVD 1382.1'N & 4984.9'W OF SHL
90.50 degree Incl @ 270.40 degree AZM

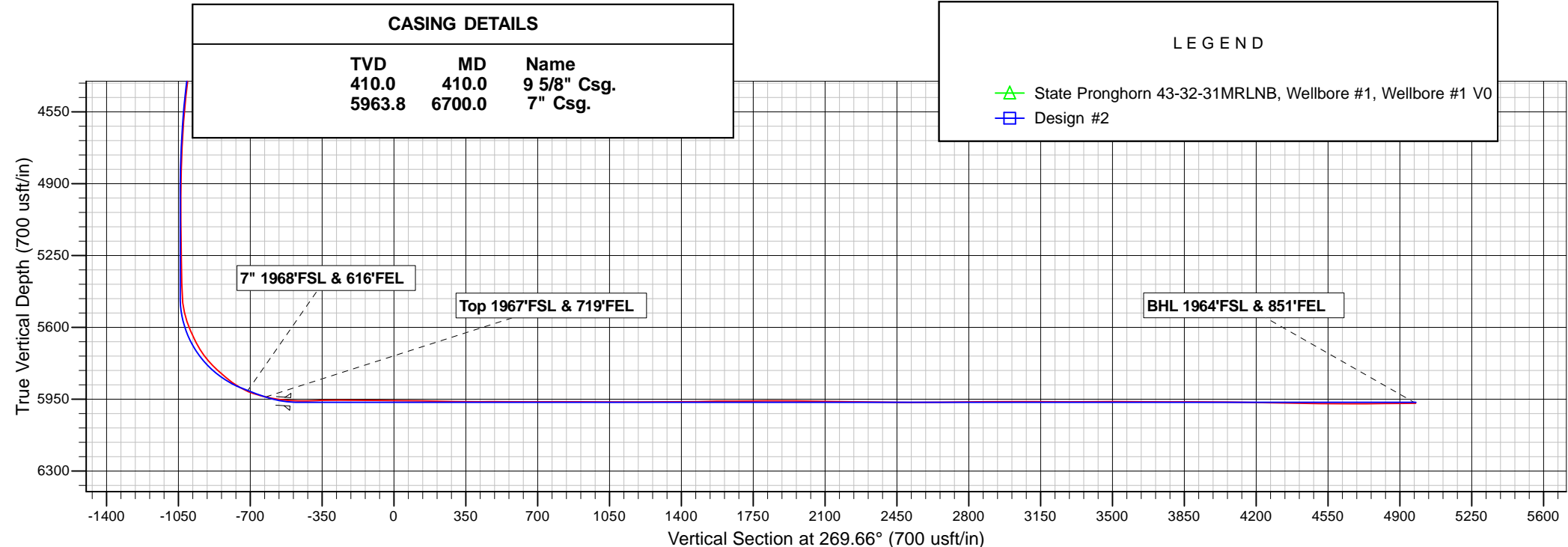


CASING DETAILS

TVD	MD	Name
410.0	410.0	9 5/8" Csg.
5963.8	6700.0	7" Csg.

LEGEND

State Pronghorn 43-32-31MRLNB, Wellbore #1, Wellbore #1 V0
Design #2



Bonanza Creek Energy Inc.

Weld Co., CO

Sec.32-T5N-R61W

State Pronghorn 43-32-31MRLNB

Wellbore #1

Survey: Survey #1

Standard Survey Report

29 July, 2015

Archer

Survey Report

Company:	Bonanza Creek Energy Inc.	Local Co-ordinate Reference:	Well State Pronghorn 43-32-31MRLNB
Project:	Weld Co., CO	TVD Reference:	Well @ 4548.0usft
Site:	Sec.32-T5N-R61W	MD Reference:	Well @ 4548.0usft
Well:	State Pronghorn 43-32-31MRLNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

Project	Weld Co., CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec.32-T5N-R61W			
Site Position:		Northing:	1,373,452.07 usft	Latitude:	40° 21' 5.544 N
From:	Lat/Long	Easting:	3,354,698.54 usft	Longitude:	104° 13' 38.316 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.82 °

Well	State Pronghorn 43-32-31MRLNB					
Well Position	+N/-S	0.0 usft	Northing:	1,373,452.07 usft	Latitude:	40° 21' 5.544 N
	+E/-W	0.0 usft	Easting:	3,354,698.54 usft	Longitude:	104° 13' 38.316 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,531.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/12/31	8.73	67.16	53,338

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	269.66	

Survey Program	Date	2015/07/29			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
532.0	12,157.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
first Archer Survey										
532.0	0.30	163.10	532.0	-1.3	0.4	-0.4	0.06	0.06	0.00	
624.0	2.20	3.30	624.0	0.2	0.6	-0.6	2.70	2.07	-173.70	
718.0	4.20	356.60	717.8	5.4	0.5	-0.5	2.16	2.13	-7.13	
812.0	6.20	13.80	811.4	13.8	1.5	-1.6	2.68	2.13	18.30	
906.0	7.80	30.70	904.7	24.2	6.0	-6.1	2.76	1.70	17.98	
1,001.0	10.20	37.00	998.6	36.5	14.3	-14.5	2.73	2.53	6.63	
1,094.0	12.20	35.40	1,089.8	51.1	25.0	-25.3	2.18	2.15	-1.72	
1,187.0	14.10	37.10	1,180.4	68.1	37.5	-37.9	2.08	2.04	1.83	
1,282.0	14.80	39.80	1,272.3	86.7	52.2	-52.7	1.02	0.74	2.84	
1,375.0	17.30	41.90	1,361.7	106.1	69.1	-69.7	2.76	2.69	2.26	
1,469.0	18.80	40.10	1,451.1	128.1	88.2	-88.9	1.70	1.60	-1.91	

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Survey Report

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Site:	Sec.32-T5N-R61W	MD Reference:	Well @ 4548.0usft
Well:	State Pronghorn 43-32-31MRLNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,564.0	19.70	36.00	1,540.8	152.7	107.4	-108.3	1.71	0.95	-4.32
1,657.0	20.60	37.00	1,628.1	178.5	126.5	-127.6	1.04	0.97	1.08
1,752.0	22.00	36.60	1,716.6	206.1	147.2	-148.4	1.48	1.47	-0.42
1,846.0	24.10	38.30	1,803.1	235.3	169.6	-171.0	2.34	2.23	1.81
1,940.0	25.20	42.40	1,888.5	265.2	194.9	-196.5	2.16	1.17	4.36
2,034.0	26.70	40.30	1,973.1	296.1	222.1	-223.9	1.87	1.60	-2.23
2,128.0	28.60	37.40	2,056.3	330.0	249.4	-251.4	2.48	2.02	-3.09
2,222.0	30.90	35.00	2,137.9	367.7	276.9	-279.1	2.75	2.45	-2.55
2,316.0	32.00	32.50	2,218.1	408.5	304.2	-306.6	1.81	1.17	-2.66
2,411.0	30.90	30.50	2,299.2	450.7	330.1	-332.7	1.60	-1.16	-2.11
2,506.0	33.70	30.20	2,379.5	494.5	355.7	-358.7	2.95	2.95	-0.32
2,600.0	35.40	30.80	2,456.9	540.5	382.8	-386.0	1.84	1.81	0.64
2,695.0	33.60	35.30	2,535.2	585.6	412.1	-415.5	3.28	-1.89	4.74
2,790.0	34.10	38.50	2,614.1	627.9	443.8	-447.6	1.95	0.53	3.37
2,884.0	32.60	36.70	2,692.6	668.8	475.4	-479.3	1.91	-1.60	-1.91
2,978.0	31.40	39.90	2,772.3	707.9	506.2	-510.4	2.21	-1.28	3.40
3,073.0	31.50	37.40	2,853.4	746.6	537.2	-541.6	1.38	0.11	-2.63
3,168.0	31.30	38.20	2,934.5	785.7	567.5	-572.2	0.49	-0.21	0.84
3,263.0	31.90	38.10	3,015.4	824.8	598.3	-603.1	0.63	0.63	-0.11
3,357.0	33.00	36.20	3,094.7	865.0	628.7	-633.8	1.60	1.17	-2.02
3,452.0	34.00	36.50	3,173.9	907.3	659.8	-665.2	1.07	1.05	0.32
3,546.0	35.90	36.20	3,251.0	950.6	691.7	-697.3	2.03	2.02	-0.32
3,641.0	36.20	38.70	3,327.8	995.0	725.7	-731.6	1.58	0.32	2.63
3,735.0	34.80	39.90	3,404.3	1,037.2	760.3	-766.4	1.66	-1.49	1.28
3,829.0	32.00	38.40	3,482.8	1,077.4	792.9	-799.3	3.11	-2.98	-1.60
3,924.0	30.70	34.70	3,563.9	1,117.0	822.4	-829.0	2.44	-1.37	-3.89
4,019.0	28.00	35.40	3,646.7	1,155.1	849.1	-855.9	2.86	-2.84	0.74
4,112.0	23.90	35.40	3,730.3	1,188.3	872.7	-879.7	4.41	-4.41	0.00
4,207.0	24.00	33.30	3,817.1	1,220.1	894.4	-901.7	0.90	0.11	-2.21
4,301.0	21.90	33.20	3,903.7	1,250.8	914.5	-921.9	2.23	-2.23	-0.11
4,395.0	19.80	36.60	3,991.5	1,278.3	933.6	-941.2	2.58	-2.23	3.62
4,489.0	16.70	37.80	4,080.8	1,301.7	951.4	-959.1	3.32	-3.30	1.28
4,583.0	16.10	35.40	4,171.0	1,323.0	967.2	-975.1	0.96	-0.64	-2.55
4,677.0	11.70	35.10	4,262.2	1,341.4	980.3	-988.2	4.68	-4.68	-0.32
4,771.0	13.00	35.20	4,354.0	1,357.9	991.8	-999.9	1.38	1.38	0.11
4,866.0	10.10	38.30	4,447.1	1,373.1	1,003.2	-1,011.3	3.12	-3.05	3.26
4,960.0	7.20	36.10	4,540.0	1,384.4	1,011.7	-1,019.9	3.10	-3.09	-2.34
5,054.0	7.20	37.10	4,633.3	1,393.8	1,018.8	-1,027.0	0.13	0.00	1.06
5,149.0	4.30	42.50	4,727.8	1,401.2	1,024.8	-1,033.1	3.10	-3.05	5.68
5,243.0	2.80	34.70	4,821.6	1,405.7	1,028.5	-1,036.8	1.67	-1.60	-8.30
5,338.0	0.30	112.60	4,916.5	1,407.5	1,030.0	-1,038.3	2.90	-2.63	82.00
5,432.0	0.70	175.40	5,010.5	1,406.8	1,030.3	-1,038.6	0.66	0.43	66.81
5,527.0	1.10	323.90	5,105.5	1,407.0	1,029.8	-1,038.1	1.83	0.42	156.32
5,621.0	0.80	302.50	5,199.5	1,408.1	1,028.7	-1,037.0	0.49	-0.32	-22.77
5,715.0	1.10	288.60	5,293.5	1,408.7	1,027.3	-1,035.6	0.40	0.32	-14.79
5,809.0	0.70	239.80	5,387.5	1,408.7	1,025.9	-1,034.3	0.88	-0.43	-51.91
5,902.0	6.10	239.60	5,480.3	1,405.9	1,021.2	-1,029.5	5.81	5.81	-0.22
5,949.0	14.60	249.40	5,526.5	1,402.6	1,013.5	-1,021.8	18.40	18.09	20.85
5,996.0	19.50	255.60	5,571.4	1,398.5	1,000.3	-1,008.6	11.11	10.43	13.19
6,043.0	23.40	254.70	5,615.2	1,394.1	983.7	-992.0	8.33	8.30	-1.91
6,090.0	26.90	258.00	5,657.7	1,389.5	964.3	-972.5	8.02	7.45	7.02
6,137.0	30.50	267.00	5,698.9	1,386.6	942.0	-950.2	11.95	7.66	19.15
6,184.0	36.10	274.50	5,738.2	1,387.1	916.2	-924.4	14.77	11.91	15.96
6,230.0	42.10	275.00	5,773.9	1,389.5	887.3	-895.6	13.06	13.04	1.09

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Survey Report

Company:	Bonanza Creek Energy Inc.	Local Co-ordinate Reference:	Well State Pronghorn 43-32-31MRLNB
Project:	Weld Co., CO	TVD Reference:	Well @ 4548.0usft
Site:	Sec.32-T5N-R61W	MD Reference:	Well @ 4548.0usft
Well:	State Pronghorn 43-32-31MRLNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,277.0	49.30	276.20	5,806.7	1,392.8	853.9	-862.1	15.43	15.32	2.55
6,324.0	49.20	276.50	5,837.4	1,396.7	818.5	-826.8	0.53	-0.21	0.64
6,372.0	53.40	275.00	5,867.4	1,400.5	781.2	-789.5	9.08	8.75	-3.12
6,418.0	59.30	272.60	5,892.9	1,403.0	743.0	-751.4	13.54	12.83	-5.22
7" 1968'FSL & 616'FEL									
6,459.0	66.71	270.14	5,911.5	1,403.8	706.5	-714.9	18.85	18.08	-6.01
6,465.0	67.80	269.80	5,913.8	1,403.8	701.0	-709.3	18.85	18.13	-5.60
6,512.0	74.40	270.10	5,929.0	1,403.8	656.6	-664.9	14.06	14.04	0.64
Top 1967'FSL & 719'FEL									
6,553.0	77.90	268.30	5,938.8	1,403.2	616.8	-625.1	9.54	8.54	-4.39
6,560.0	78.50	268.00	5,940.3	1,403.0	609.9	-618.2	9.54	8.56	-4.31
6,606.0	79.60	268.10	5,949.0	1,401.5	564.8	-573.1	2.40	2.39	0.22
6,649.0	84.60	266.90	5,954.9	1,399.6	522.3	-530.6	11.95	11.63	-2.79
6,733.0	91.80	270.20	5,957.5	1,397.5	438.4	-446.7	9.43	8.57	3.93
6,826.0	91.50	269.00	5,954.9	1,396.8	345.4	-353.7	1.33	-0.32	-1.29
6,918.0	89.50	269.60	5,954.1	1,395.7	253.4	-261.7	2.27	-2.17	0.65
7,010.0	89.30	270.70	5,955.0	1,396.0	161.5	-169.7	1.22	-0.22	1.20
7,101.0	89.50	270.80	5,956.0	1,397.1	70.5	-78.8	0.25	0.22	0.11
7,192.0	89.10	270.50	5,957.1	1,398.2	-20.5	12.2	0.55	-0.44	-0.33
7,284.0	90.00	270.90	5,957.8	1,399.3	-112.5	104.2	1.07	0.98	0.43
7,376.0	88.40	270.50	5,959.1	1,400.4	-204.5	196.2	1.79	-1.74	-0.43
7,467.0	89.10	271.00	5,961.1	1,401.6	-295.5	287.1	0.95	0.77	0.55
7,559.0	90.40	270.10	5,961.5	1,402.5	-387.5	379.1	1.72	1.41	-0.98
7,651.0	89.80	270.80	5,961.3	1,403.2	-479.4	471.1	1.00	-0.65	0.76
7,744.0	89.30	270.50	5,962.0	1,404.3	-572.4	564.1	0.63	-0.54	-0.32
7,836.0	89.80	269.50	5,962.8	1,404.3	-664.4	656.1	1.22	0.54	-1.09
7,927.0	90.50	269.10	5,962.5	1,403.2	-755.4	747.1	0.89	0.77	-0.44
8,019.0	90.20	270.00	5,962.0	1,402.4	-847.4	839.1	1.03	-0.33	0.98
8,111.0	89.00	269.50	5,962.6	1,402.0	-939.4	931.1	1.41	-1.30	-0.54
8,201.0	89.80	270.20	5,963.6	1,401.8	-1,029.4	1,021.1	1.18	0.89	0.78
8,292.0	90.40	270.60	5,963.4	1,402.4	-1,120.4	1,112.1	0.79	0.66	0.44
8,383.0	89.80	269.50	5,963.2	1,402.5	-1,211.4	1,203.1	1.38	-0.66	-1.21
8,475.0	90.90	269.90	5,962.7	1,402.0	-1,303.4	1,295.1	1.27	1.20	0.43
8,567.0	89.80	269.10	5,962.1	1,401.2	-1,395.4	1,387.1	1.48	-1.20	-0.87
8,659.0	91.50	269.80	5,961.1	1,400.4	-1,487.4	1,479.0	2.00	1.85	0.76
8,752.0	90.50	270.10	5,959.4	1,400.3	-1,580.4	1,572.0	1.12	-1.08	0.32
8,844.0	90.10	269.80	5,959.0	1,400.2	-1,672.4	1,664.0	0.54	-0.43	-0.33
8,936.0	90.30	269.50	5,958.6	1,399.6	-1,764.4	1,756.0	0.39	0.22	-0.33
9,027.0	90.60	269.70	5,957.9	1,399.0	-1,855.4	1,847.0	0.40	0.33	0.22
9,111.0	89.20	270.10	5,958.1	1,398.8	-1,939.3	1,931.0	1.73	-1.67	0.48
9,196.0	89.30	269.90	5,959.2	1,398.8	-2,024.3	2,016.0	0.26	0.12	-0.24
9,281.0	89.10	269.50	5,960.4	1,398.4	-2,109.3	2,101.0	0.53	-0.24	-0.47
9,366.0	89.50	269.40	5,961.4	1,397.6	-2,194.3	2,186.0	0.49	0.47	-0.12
9,451.0	88.90	268.70	5,962.6	1,396.2	-2,279.3	2,271.0	1.08	-0.71	-0.82
9,538.0	89.10	269.00	5,964.1	1,394.4	-2,366.3	2,358.0	0.41	0.23	0.34
9,622.0	89.70	269.40	5,965.0	1,393.3	-2,450.3	2,441.9	0.86	0.71	0.48
9,707.0	89.90	269.90	5,965.3	1,392.7	-2,535.3	2,526.9	0.63	0.24	0.59
9,792.0	90.20	269.90	5,965.2	1,392.6	-2,620.3	2,611.9	0.35	0.35	0.00
9,877.0	90.90	269.80	5,964.4	1,392.4	-2,705.2	2,696.9	0.83	0.82	-0.12
9,962.0	90.90	270.10	5,963.1	1,392.3	-2,790.2	2,781.9	0.35	0.00	0.35
10,046.0	90.00	271.30	5,962.4	1,393.3	-2,874.2	2,865.9	1.79	-1.07	1.43
10,131.0	90.10	271.40	5,962.3	1,395.3	-2,959.2	2,950.9	0.17	0.12	0.12
10,217.0	90.80	271.30	5,961.7	1,397.3	-3,045.2	3,036.8	0.82	0.81	-0.12
10,301.0	89.80	270.60	5,961.2	1,398.7	-3,129.2	3,120.8	1.45	-1.19	-0.83

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Survey Report

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Site:	Sec.32-T5N-R61W	MD Reference:	Well @ 4548.0usft
Well:	State Pronghorn 43-32-31MRLNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,386.0	89.20	269.80	5,962.0	1,399.0	-3,214.2	3,205.8	1.18	-0.71	-0.94	
10,471.0	90.00	268.40	5,962.6	1,397.7	-3,299.1	3,290.8	1.90	0.94	-1.65	
10,556.0	90.60	268.00	5,962.1	1,395.0	-3,384.1	3,375.8	0.85	0.71	-0.47	
10,641.0	90.20	268.50	5,961.5	1,392.4	-3,469.1	3,460.7	0.75	-0.47	0.59	
10,726.0	89.90	269.50	5,961.4	1,391.0	-3,554.0	3,545.7	1.23	-0.35	1.18	
10,811.0	89.40	268.90	5,962.0	1,389.8	-3,639.0	3,630.7	0.92	-0.59	-0.71	
10,896.0	89.80	269.00	5,962.6	1,388.2	-3,724.0	3,715.7	0.49	0.47	0.12	
10,981.0	90.20	269.10	5,962.6	1,386.8	-3,809.0	3,800.7	0.49	0.47	0.12	
11,066.0	89.70	269.40	5,962.6	1,385.7	-3,894.0	3,885.7	0.69	-0.59	0.35	
11,152.0	89.60	270.40	5,963.2	1,385.5	-3,980.0	3,971.7	1.17	-0.12	1.16	
11,238.0	89.40	269.90	5,963.9	1,385.8	-4,066.0	4,057.7	0.63	-0.23	-0.58	
11,322.0	88.80	270.30	5,965.2	1,385.9	-4,150.0	4,141.7	0.86	-0.71	0.48	
11,408.0	89.30	270.60	5,966.7	1,386.6	-4,236.0	4,227.7	0.68	0.58	0.35	
11,494.0	89.10	269.80	5,967.9	1,386.9	-4,322.0	4,313.6	0.96	-0.23	-0.93	
11,579.0	88.60	269.80	5,969.6	1,386.6	-4,406.9	4,398.6	0.59	-0.59	0.00	
11,664.0	88.90	269.10	5,971.4	1,385.8	-4,491.9	4,483.6	0.90	0.35	-0.82	
11,749.0	90.40	269.90	5,971.9	1,385.0	-4,576.9	4,568.6	2.00	1.76	0.94	
11,834.0	89.60	269.30	5,971.9	1,384.4	-4,661.9	4,653.6	1.18	-0.94	-0.71	
11,918.0	90.30	268.80	5,972.0	1,383.0	-4,745.9	4,737.6	1.02	0.83	-0.60	
12,003.0	90.80	269.50	5,971.2	1,381.8	-4,830.9	4,822.6	1.01	0.59	0.82	
Last Archer survey										
12,094.0	90.50	270.40	5,970.2	1,381.7	-4,921.9	4,913.6	1.04	-0.33	0.99	
BHL 1964'FSL & 851'FWL - State-Pronghorn 43-32-31MRLNB tgt										
12,157.0	90.50	270.40	5,969.6	1,382.1	-4,984.9	4,976.6	0.00	0.00	0.00	

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
532.0	532.0	-1.3	0.4	first Archer Survey	
6,459.0	5,911.5	1,403.8	706.5	7" 1968'FSL & 616'FEL	
6,553.0	5,938.8	1,403.2	616.8	Top 1967'FSL & 719'FEL	
12,094.0	5,970.2	1,381.7	-4,921.9	Last Archer survey	
12,157.0	5,969.6	1,382.1	-4,984.9	BHL 1964'FSL & 851'FWL	

Checked By: _____ Approved By: _____ Date: _____