

# BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope J-21-16XRL**

Surface Location: State Antelope J-21-16XRL Pad Sec.21-T5N-R62W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

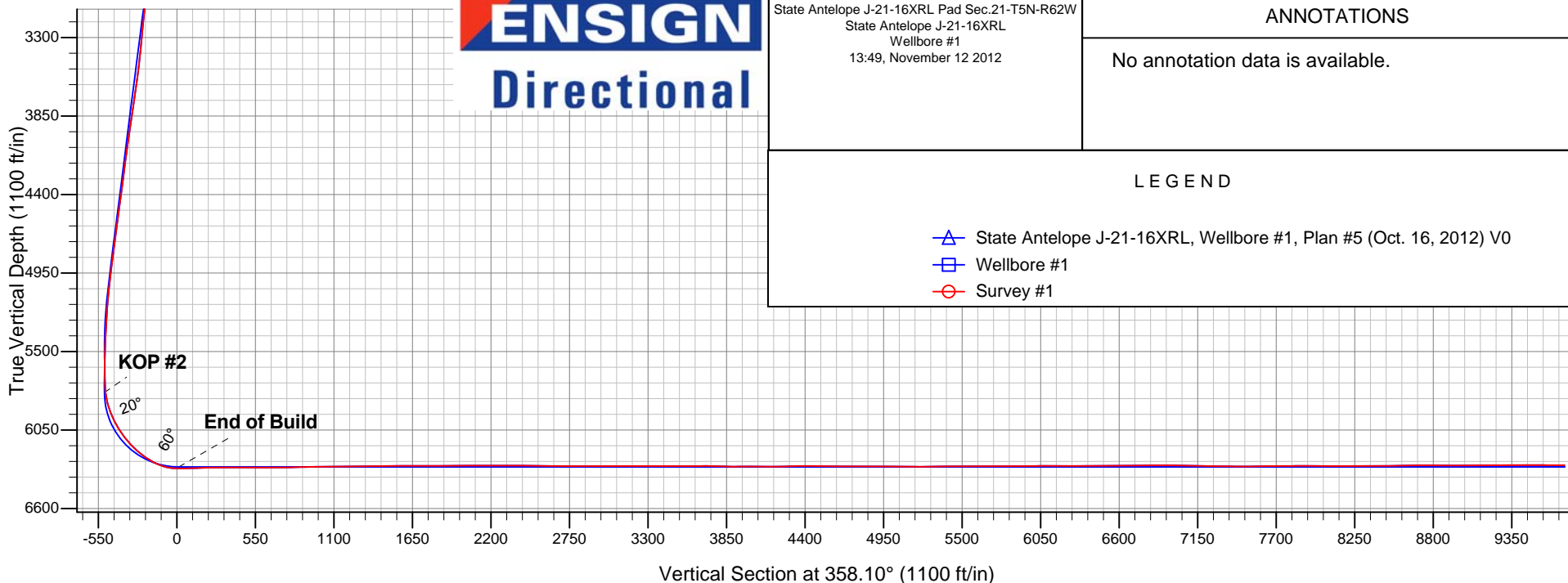
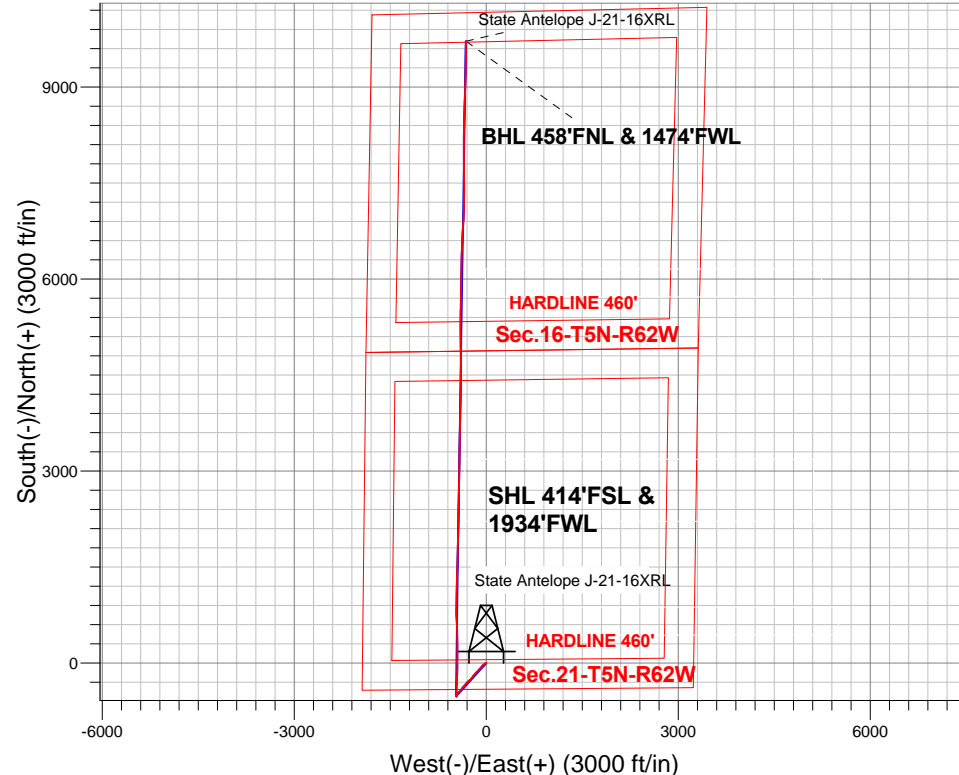
Ground Elevation: 4634.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383081.52	3325608.40	40.379070	-104.331220	

Original Well Elev. WELL @ 4647.0ft (Original Well Elev.)

## FINAL SURVEY

Projected Bottom Hole Location  
16365'MD 6296'TVD 9715'N & 316'W of SHL  
90.2 degree Incl @ 1.4 degree AZM



State Antelope J-21-16XRL Pad Sec.21-T5N-R62W  
State Antelope J-21-16XRL  
Wellbore #1  
13:49, November 12 2012

### ANNOTATIONS

No annotation data is available.

### LEGEND

- △ State Antelope J-21-16XRL, Wellbore #1, Plan #5 (Oct. 16, 2012) V0
- Wellbore #1
- Survey #1



# **BONANZA CREEK ENERGY OPERATING**

**SEC.21-T5N-R62W**

**State Antelope J-21-16XRL Pad Sec.21-T5N-R62W**

**State Antelope J-21-16XRL**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**12 November, 2012**



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
923.0	1.80	242.40	922.9	-2.9	-9.9	-2.5	1.13	1.05	-19.26
1,015.0	2.00	216.20	1,014.9	-4.8	-12.1	-4.4	0.96	0.22	-28.48
1,106.0	3.20	229.10	1,105.8	-7.8	-15.0	-7.3	1.46	1.32	14.18
1,198.0	4.00	235.90	1,197.6	-11.3	-19.6	-10.6	0.98	0.87	7.39
1,289.0	5.10	238.00	1,288.3	-15.2	-25.6	-14.3	1.22	1.21	2.31
1,381.0	6.80	241.40	1,379.8	-19.9	-33.9	-18.8	1.89	1.85	3.70
1,472.0	8.10	234.00	1,470.0	-26.3	-43.8	-24.8	1.77	1.43	-8.13
1,564.0	8.50	225.00	1,561.1	-34.9	-53.9	-33.1	1.48	0.43	-9.78
1,654.0	8.40	218.30	1,650.1	-44.8	-62.6	-42.7	1.10	-0.11	-7.44
1,745.0	10.10	223.30	1,739.9	-55.8	-72.2	-53.4	2.06	1.87	5.49
1,835.0	10.30	221.10	1,828.5	-67.6	-82.9	-64.8	0.49	0.22	-2.44
1,866.0	9.80	217.30	1,859.0	-71.8	-86.4	-68.9	2.68	-1.61	-12.26
1,961.0	10.40	224.30	1,952.6	-84.4	-97.2	-81.1	1.44	0.63	7.37
2,053.0	11.30	222.40	2,042.9	-97.0	-109.1	-93.3	1.05	0.98	-2.07
2,147.0	10.30	219.40	2,135.2	-110.3	-120.7	-106.2	1.22	-1.06	-3.19
2,241.0	10.60	223.80	2,227.7	-123.0	-132.0	-118.5	0.91	0.32	4.68
2,336.0	10.70	222.60	2,321.1	-135.8	-144.0	-130.9	0.26	0.11	-1.26
2,430.0	10.10	222.40	2,413.5	-148.3	-155.5	-143.1	0.64	-0.64	-0.21
2,524.0	10.40	222.00	2,506.0	-160.7	-166.7	-155.1	0.33	0.32	-0.43
2,619.0	9.70	220.40	2,599.5	-173.2	-177.6	-167.2	0.79	-0.74	-1.68
2,714.0	11.10	223.80	2,693.0	-185.9	-189.1	-179.5	1.61	1.47	3.58
2,808.0	10.80	217.80	2,785.3	-199.3	-200.8	-192.6	1.25	-0.32	-6.38
2,903.0	8.40	216.90	2,878.9	-211.9	-210.4	-204.8	2.53	-2.53	-0.95
2,997.0	7.30	215.30	2,972.1	-222.3	-218.0	-214.9	1.19	-1.17	-1.70
3,092.0	7.80	220.80	3,066.2	-232.1	-225.7	-224.5	0.92	0.53	5.79
3,187.0	6.90	218.50	3,160.5	-241.4	-233.5	-233.6	1.00	-0.95	-2.42
3,281.0	7.00	217.30	3,253.8	-250.4	-240.5	-242.3	0.19	0.11	-1.28
3,373.0	7.80	226.10	3,345.0	-259.2	-248.4	-250.8	1.51	0.87	9.57
3,467.0	9.70	229.60	3,437.9	-268.8	-259.0	-260.0	2.10	2.02	3.72
3,562.0	11.30	230.50	3,531.3	-279.9	-272.3	-270.7	1.69	1.68	0.95
3,656.0	12.80	230.80	3,623.2	-292.3	-287.4	-282.6	1.60	1.60	0.32
3,750.0	12.70	224.10	3,714.9	-306.3	-302.7	-296.1	1.58	-0.11	-7.13
3,844.0	11.40	221.30	3,806.8	-320.7	-316.0	-310.0	1.52	-1.38	-2.98
3,938.0	11.10	218.50	3,899.0	-334.8	-327.8	-323.7	0.66	-0.32	-2.98
4,032.0	10.20	216.20	3,991.4	-348.6	-338.3	-337.1	1.06	-0.96	-2.45
4,126.0	10.10	219.90	4,084.0	-361.6	-348.5	-349.8	0.70	-0.11	3.94
4,220.0	10.20	221.70	4,176.5	-374.2	-359.4	-362.0	0.35	0.11	1.91
4,314.0	10.20	221.50	4,269.0	-386.6	-370.4	-374.1	0.04	0.00	-0.21
4,408.0	10.20	220.10	4,361.5	-399.2	-381.3	-386.3	0.26	0.00	-1.49
4,502.0	9.80	216.20	4,454.1	-412.0	-391.4	-398.8	0.84	-0.43	-4.15
4,596.0	9.80	214.60	4,546.7	-425.1	-400.6	-411.5	0.29	0.00	-1.70
4,691.0	9.70	222.60	4,640.3	-437.6	-410.6	-423.7	1.43	-0.11	8.42
4,785.0	11.00	225.50	4,732.8	-449.7	-422.4	-435.4	1.49	1.38	3.09
4,878.0	11.30	222.70	4,824.1	-462.6	-434.9	-447.9	0.67	0.32	-3.01
4,972.0	9.00	219.60	4,916.6	-475.1	-445.8	-460.0	2.51	-2.45	-3.30
5,066.0	8.00	215.00	5,009.6	-486.1	-454.3	-470.7	1.29	-1.06	-4.89
5,161.0	6.10	208.80	5,103.8	-495.9	-460.5	-480.4	2.15	-2.00	-6.53
5,255.0	4.80	205.10	5,197.4	-503.9	-464.6	-488.2	1.43	-1.38	-3.94
5,350.0	3.80	195.80	5,292.1	-510.5	-467.1	-494.7	1.28	-1.05	-9.79
5,445.0	2.60	203.20	5,387.0	-515.5	-468.8	-499.7	1.33	-1.26	7.79
5,538.0	1.90	192.80	5,479.9	-519.0	-470.0	-503.1	0.87	-0.75	-11.18
5,633.0	0.40	159.60	5,574.9	-520.8	-470.2	-504.9	1.66	-1.58	-34.95
5,696.0	0.50	88.40	5,637.9	-521.0	-469.9	-505.1	0.84	0.16	-113.02

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
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<b>Well:</b>	State Antelope J-21-16XRL	<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)
5,790.0	1.80	353.20	5,731.9	-519.5	-469.6	-503.6	2.03	1.38	-101.28
5,822.0	4.80	345.80	5,763.8	-517.7	-470.0	-501.8	9.45	9.38	-23.13
5,853.0	7.80	357.00	5,794.6	-514.4	-470.5	-498.5	10.41	9.68	36.13
5,885.0	10.70	0.00	5,826.2	-509.2	-470.6	-493.3	9.18	9.06	9.38
5,917.0	14.20	359.30	5,857.5	-502.3	-470.6	-486.4	10.95	10.94	-2.19
5,948.0	17.40	358.80	5,887.3	-493.9	-470.8	-478.0	10.33	10.32	-1.61
5,979.0	20.00	0.50	5,916.6	-484.0	-470.8	-468.0	8.57	8.39	5.48
6,010.0	22.90	2.50	5,945.5	-472.6	-470.5	-456.7	9.65	9.35	6.45
6,042.0	25.60	2.50	5,974.7	-459.5	-469.9	-443.6	8.44	8.44	0.00
6,073.0	27.90	1.60	6,002.3	-445.6	-469.4	-429.7	7.53	7.42	-2.90
6,104.0	30.30	0.40	6,029.4	-430.5	-469.2	-414.7	7.97	7.74	-3.87
6,136.0	33.30	0.70	6,056.6	-413.6	-469.0	-397.8	9.39	9.38	0.94
6,167.0	36.10	1.20	6,082.1	-396.0	-468.7	-380.2	9.08	9.03	1.61
6,199.0	39.50	1.60	6,107.4	-376.4	-468.2	-360.6	10.65	10.63	1.25
6,231.0	41.30	4.60	6,131.8	-355.7	-467.1	-340.0	8.28	5.63	9.38
6,262.0	43.40	5.60	6,154.7	-334.9	-465.3	-319.2	7.11	6.77	3.23
6,294.0	45.40	5.80	6,177.5	-312.6	-463.0	-297.0	6.27	6.25	0.63
6,325.0	48.50	5.30	6,198.7	-290.1	-460.8	-274.6	10.07	10.00	-1.61
6,356.0	52.10	3.40	6,218.5	-266.3	-459.0	-250.9	12.53	11.61	-6.13
6,388.0	55.70	2.60	6,237.3	-240.5	-457.7	-225.1	11.43	11.25	-2.50
6,419.0	58.70	0.20	6,254.1	-214.4	-457.1	-199.1	11.66	9.68	-7.74
6,450.0	61.40	359.70	6,269.6	-187.6	-457.1	-172.3	8.82	8.71	-1.61
6,482.0	64.40	359.50	6,284.2	-159.1	-457.3	-143.8	9.39	9.38	-0.63
6,513.0	69.00	359.30	6,296.4	-130.6	-457.6	-115.3	14.85	14.84	-0.65
6,544.0	74.30	0.50	6,306.2	-101.2	-457.6	-85.9	17.49	17.10	3.87
6,576.0	79.80	1.10	6,313.4	-70.0	-457.2	-54.8	17.28	17.19	1.88
6,602.0	84.00	1.20	6,317.0	-44.3	-456.7	-29.1	16.16	16.15	0.38
6,650.0	91.60	1.20	6,318.9	3.6	-455.7	18.8	15.83	15.83	0.00
6,670.0	91.70	1.20	6,318.3	23.6	-455.3	38.7	0.50	0.50	0.00
6,702.0	91.40	1.10	6,317.4	55.6	-454.6	70.7	0.99	-0.94	-0.31
6,722.0	91.40	0.90	6,316.9	75.6	-454.3	90.6	1.00	0.00	-1.00
6,743.8	91.40	0.90	6,316.4	97.4	-453.9	112.4	0.00	0.00	0.00
CASING PT 510'FSL & 1470'FWL									
6,755.4	91.40	0.90	6,316.1	109.0	-453.7	124.0	0.00	0.00	0.00
T1 500'FSL & 2450'FWL									
6,770.0	91.40	0.90	6,315.8	123.6	-453.5	138.6	0.00	0.00	0.00
6,812.0	91.20	0.40	6,314.8	165.5	-453.0	180.5	1.28	-0.48	-1.19
6,843.0	91.50	0.00	6,314.1	196.5	-452.9	211.5	1.61	0.97	-1.29
6,874.0	91.70	359.70	6,313.2	227.5	-453.0	242.5	1.16	0.65	-0.97
6,906.0	91.50	0.20	6,312.3	259.5	-453.0	274.4	1.68	-0.63	1.56
6,937.0	92.00	359.10	6,311.4	290.5	-453.2	305.4	3.90	1.61	-3.55
6,968.0	90.50	359.70	6,310.7	321.5	-453.6	336.4	5.21	-4.84	1.94
6,999.0	88.50	359.50	6,311.0	352.5	-453.8	367.4	6.48	-6.45	-0.65
7,031.0	88.50	358.60	6,311.8	384.5	-454.3	399.4	2.81	0.00	-2.81
7,062.0	88.40	358.80	6,312.6	415.4	-455.0	430.3	0.72	-0.32	0.65
7,093.0	89.10	358.80	6,313.3	446.4	-455.7	461.3	2.26	2.26	0.00
7,124.0	89.40	358.40	6,313.7	477.4	-456.4	492.3	1.61	0.97	-1.29
7,156.0	90.40	358.10	6,313.8	509.4	-457.4	524.3	3.26	3.13	-0.94
7,187.0	90.90	357.60	6,313.4	540.4	-458.6	555.3	2.28	1.61	-1.61
7,218.0	91.70	357.60	6,312.7	571.3	-459.8	586.3	2.58	2.58	0.00
7,249.0	91.30	357.40	6,311.9	602.3	-461.2	617.3	1.44	-1.29	-0.65
7,280.0	89.70	357.00	6,311.6	633.3	-462.7	648.3	5.32	-5.16	-1.29
7,312.0	89.60	358.40	6,311.8	665.2	-464.0	680.3	4.39	-0.31	4.38

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

Survey									
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7,343.0	89.70	357.40	6,312.0	696.2	-465.1	711.3	3.24	0.32	-3.23
7,374.0	90.50	358.40	6,312.0	727.2	-466.3	742.3	4.13	2.58	3.23
7,405.0	91.10	358.10	6,311.5	758.2	-467.2	773.3	2.16	1.94	-0.97
7,437.0	91.20	359.00	6,310.9	790.2	-468.0	805.3	2.83	0.31	2.81
7,468.0	91.40	0.00	6,310.2	821.2	-468.3	836.3	3.29	0.65	3.23
7,499.0	91.10	0.70	6,309.5	852.1	-468.1	867.2	2.46	-0.97	2.26
7,530.0	91.80	1.10	6,308.7	883.1	-467.6	898.2	2.60	2.26	1.29
7,561.0	91.30	1.40	6,307.9	914.1	-466.9	929.1	1.88	-1.61	0.97
7,592.0	90.20	1.40	6,307.5	945.1	-466.2	960.1	3.55	-3.55	0.00
7,623.0	90.60	1.10	6,307.3	976.1	-465.5	991.0	1.61	1.29	-0.97
7,654.0	91.00	1.10	6,306.8	1,007.1	-464.9	1,022.0	1.29	1.29	0.00
7,686.0	91.50	0.50	6,306.1	1,039.1	-464.5	1,053.9	2.44	1.56	-1.88
7,717.0	91.00	0.90	6,305.5	1,070.1	-464.1	1,084.9	2.07	-1.61	1.29
7,748.0	90.20	1.20	6,305.1	1,101.1	-463.5	1,115.8	2.76	-2.58	0.97
7,780.0	90.40	1.10	6,305.0	1,133.0	-462.9	1,147.8	0.70	0.63	-0.31
7,811.0	90.70	0.90	6,304.7	1,164.0	-462.3	1,178.8	1.16	0.97	-0.65
7,842.0	90.10	1.10	6,304.5	1,195.0	-461.8	1,209.7	2.04	-1.94	0.65
7,874.0	90.30	1.20	6,304.4	1,227.0	-461.2	1,241.7	0.70	0.63	0.31
7,905.0	90.80	1.20	6,304.1	1,258.0	-460.5	1,272.6	1.61	1.61	0.00
7,936.0	91.20	1.10	6,303.5	1,289.0	-459.9	1,303.6	1.33	1.29	-0.32
7,968.0	91.10	1.80	6,302.9	1,321.0	-459.1	1,335.5	2.21	-0.31	2.19
7,999.0	91.70	1.60	6,302.1	1,352.0	-458.2	1,366.4	2.04	1.94	-0.65
8,031.0	90.70	1.60	6,301.4	1,383.9	-457.3	1,398.4	3.13	-3.13	0.00
8,063.0	90.00	1.80	6,301.3	1,415.9	-456.3	1,430.3	2.28	-2.19	0.63
8,094.0	90.20	2.10	6,301.2	1,446.9	-455.3	1,461.2	1.16	0.65	0.97
8,125.0	91.10	2.10	6,300.8	1,477.9	-454.1	1,492.2	2.90	2.90	0.00
8,157.0	90.10	1.90	6,300.5	1,509.9	-453.0	1,524.1	3.19	-3.13	-0.63
8,189.0	89.30	1.60	6,300.7	1,541.9	-452.0	1,556.0	2.67	-2.50	-0.94
8,220.0	89.30	1.90	6,301.1	1,572.8	-451.1	1,587.0	0.97	0.00	0.97
8,252.0	89.70	1.20	6,301.3	1,604.8	-450.2	1,618.9	2.52	1.25	-2.19
8,283.0	90.40	2.30	6,301.3	1,635.8	-449.3	1,649.8	4.21	2.26	3.55
8,315.0	91.00	2.60	6,300.9	1,667.8	-447.9	1,681.7	2.10	1.88	0.94
8,346.0	90.10	1.20	6,300.6	1,698.8	-446.9	1,712.7	5.37	-2.90	-4.52
8,378.0	89.90	1.10	6,300.6	1,730.8	-446.2	1,744.6	0.70	-0.63	-0.31
8,409.0	90.50	1.10	6,300.5	1,761.7	-445.6	1,775.6	1.94	1.94	0.00
8,441.0	90.20	1.20	6,300.3	1,793.7	-445.0	1,807.5	0.99	-0.94	0.31
8,473.0	90.70	1.40	6,300.1	1,825.7	-444.3	1,839.5	1.68	1.56	0.63
8,504.0	90.70	1.40	6,299.7	1,856.7	-443.5	1,870.4	0.00	0.00	0.00
8,535.0	90.00	0.50	6,299.5	1,887.7	-443.0	1,901.4	3.68	-2.26	-2.90
8,567.0	89.80	0.90	6,299.6	1,919.7	-442.6	1,933.4	1.40	-0.63	1.25
8,598.0	90.80	0.70	6,299.4	1,950.7	-442.2	1,964.3	3.29	3.23	-0.65
8,630.0	90.30	0.70	6,299.1	1,982.7	-441.8	1,996.3	1.56	-1.56	0.00
8,661.0	89.80	0.70	6,299.1	2,013.7	-441.4	2,027.3	1.61	-1.61	0.00
8,693.0	89.60	1.10	6,299.2	2,045.7	-440.9	2,059.2	1.40	-0.63	1.25
8,724.0	90.70	1.20	6,299.1	2,076.7	-440.3	2,090.2	3.56	3.55	0.32
8,756.0	91.10	1.20	6,298.6	2,108.7	-439.6	2,122.1	1.25	1.25	0.00
8,787.0	90.70	1.40	6,298.2	2,139.7	-438.9	2,153.1	1.44	-1.29	0.65
8,819.0	90.10	1.90	6,297.9	2,171.7	-438.0	2,185.0	2.44	-1.88	1.56
8,851.0	89.40	2.10	6,298.1	2,203.6	-436.9	2,216.9	2.28	-2.19	0.63
8,880.0	89.80	2.10	6,298.3	2,232.6	-435.8	2,245.9	1.38	1.38	0.00
8,912.0	89.60	1.10	6,298.4	2,264.6	-434.9	2,277.8	3.19	-0.63	-3.13
8,943.0	89.40	0.20	6,298.7	2,295.6	-434.6	2,308.8	2.97	-0.65	-2.90
8,974.0	89.70	359.80	6,299.0	2,326.6	-434.6	2,339.8	1.61	0.97	-1.29

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
9,005.0	90.50	0.20	6,298.9	2,357.6	-434.6	2,370.7	2.89	2.58	1.29
9,037.0	90.00	0.50	6,298.8	2,389.6	-434.4	2,402.7	1.82	-1.56	0.94
9,068.0	89.30	0.70	6,298.9	2,420.6	-434.0	2,433.7	2.35	-2.26	0.65
9,099.0	88.50	1.20	6,299.5	2,451.6	-433.5	2,464.6	3.04	-2.58	1.61
9,131.0	88.80	1.20	6,300.3	2,483.6	-432.9	2,496.6	0.94	0.94	0.00
9,162.0	89.30	1.20	6,300.8	2,514.6	-432.2	2,527.5	1.61	1.61	0.00
9,194.0	89.50	1.60	6,301.1	2,546.5	-431.4	2,559.5	1.40	0.63	1.25
9,225.0	90.00	2.10	6,301.3	2,577.5	-430.4	2,590.4	2.28	1.61	1.61
9,256.0	90.00	1.20	6,301.3	2,608.5	-429.5	2,621.3	2.90	0.00	-2.90
9,288.0	89.00	1.10	6,301.6	2,640.5	-428.9	2,653.3	3.14	-3.13	-0.31
9,319.0	89.30	1.10	6,302.0	2,671.5	-428.3	2,684.3	0.97	0.97	0.00
9,350.0	89.60	0.70	6,302.3	2,702.5	-427.8	2,715.2	1.61	0.97	-1.29
9,382.0	89.90	0.90	6,302.5	2,734.5	-427.4	2,747.2	1.13	0.94	0.63
9,392.5	89.97	0.90	6,302.5	2,745.0	-427.2	2,757.7	0.65	0.65	0.00
WP1									
9,413.0	90.10	0.90	6,302.5	2,765.5	-426.9	2,778.1	0.65	0.65	0.00
9,445.0	89.90	1.80	6,302.5	2,797.5	-426.1	2,810.1	2.88	-0.63	2.81
9,476.0	89.90	1.40	6,302.5	2,828.5	-425.3	2,841.0	1.29	0.00	-1.29
9,508.0	89.90	1.10	6,302.6	2,860.5	-424.6	2,873.0	0.94	0.00	-0.94
9,539.0	90.10	1.10	6,302.6	2,891.4	-424.0	2,903.9	0.65	0.65	0.00
9,570.0	90.70	0.50	6,302.4	2,922.4	-423.5	2,934.9	2.74	1.94	-1.94
9,601.0	90.70	0.90	6,302.0	2,953.4	-423.2	2,965.9	1.29	0.00	1.29
9,633.0	90.10	0.90	6,301.8	2,985.4	-422.6	2,997.8	1.88	-1.88	0.00
9,664.0	89.50	0.40	6,301.9	3,016.4	-422.3	3,028.8	2.52	-1.94	-1.61
9,695.0	89.70	0.50	6,302.1	3,047.4	-422.1	3,059.8	0.72	0.65	0.32
9,726.0	89.90	0.40	6,302.2	3,078.4	-421.8	3,090.7	0.72	0.65	-0.32
9,757.0	89.60	0.40	6,302.3	3,109.4	-421.6	3,121.7	0.97	-0.97	0.00
9,789.0	89.80	359.70	6,302.5	3,141.4	-421.6	3,153.7	2.28	0.63	-2.19
9,821.0	90.10	0.00	6,302.5	3,173.4	-421.6	3,185.7	1.33	0.94	0.94
9,852.0	90.30	359.80	6,302.4	3,204.4	-421.7	3,216.7	0.91	0.65	-0.65
9,884.0	90.10	359.70	6,302.3	3,236.4	-421.8	3,248.7	0.70	-0.63	-0.31
9,915.0	90.60	0.00	6,302.1	3,267.4	-421.9	3,279.6	1.88	1.61	0.97
9,946.0	91.10	1.10	6,301.6	3,298.4	-421.6	3,310.6	3.90	1.61	3.55
9,978.0	90.70	1.20	6,301.1	3,330.4	-421.0	3,342.6	1.29	-1.25	0.31
10,009.0	89.50	1.40	6,301.1	3,361.4	-420.3	3,373.5	3.92	-3.87	0.65
10,040.0	88.70	1.80	6,301.6	3,392.4	-419.4	3,404.4	2.89	-2.58	1.29
10,072.0	89.10	1.60	6,302.2	3,424.4	-418.5	3,436.4	1.40	1.25	-0.63
10,103.0	89.30	1.80	6,302.6	3,455.3	-417.5	3,467.3	0.91	0.65	0.65
10,134.0	89.10	1.40	6,303.1	3,486.3	-416.7	3,498.3	1.44	-0.65	-1.29
10,166.0	90.70	1.90	6,303.1	3,518.3	-415.8	3,530.2	5.24	5.00	1.56
10,197.0	91.20	1.90	6,302.6	3,549.3	-414.7	3,561.1	1.61	1.61	0.00
10,229.0	89.30	1.40	6,302.5	3,581.3	-413.8	3,593.1	6.14	-5.94	-1.56
10,260.0	90.20	1.80	6,302.6	3,612.3	-412.9	3,624.0	3.18	2.90	1.29
10,291.0	91.40	2.50	6,302.2	3,643.2	-411.8	3,654.9	4.48	3.87	2.26
10,323.0	91.10	1.20	6,301.5	3,675.2	-410.8	3,686.8	4.17	-0.94	-4.06
10,354.0	90.10	1.80	6,301.1	3,706.2	-409.9	3,717.8	3.76	-3.23	1.94
10,385.0	89.20	1.80	6,301.3	3,737.2	-409.0	3,748.7	2.90	-2.90	0.00
10,416.0	87.40	1.20	6,302.2	3,768.2	-408.2	3,779.6	6.12	-5.81	-1.94
10,447.0	87.40	0.70	6,303.7	3,799.1	-407.6	3,810.6	1.61	0.00	-1.61
10,479.0	88.40	0.70	6,304.8	3,831.1	-407.3	3,842.5	3.13	3.13	0.00
10,510.0	89.30	0.70	6,305.4	3,862.1	-406.9	3,873.5	2.90	2.90	0.00
10,542.0	90.30	0.50	6,305.6	3,894.1	-406.5	3,905.5	3.19	3.13	-0.63
10,574.0	90.40	0.40	6,305.4	3,926.1	-406.3	3,937.4	0.44	0.31	-0.31



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
10,605.0	90.60	0.50	6,305.1	3,957.1	-406.0	3,968.4	0.72	0.65	0.32
10,626.0	90.50	0.70	6,304.9	3,978.1	-405.8	3,989.4	1.06	-0.48	0.95
10,658.0	90.00	0.70	6,304.8	4,010.1	-405.4	4,021.3	1.56	-1.56	0.00
10,689.0	89.70	0.90	6,304.8	4,041.1	-405.0	4,052.3	1.16	-0.97	0.65
10,721.0	89.30	2.10	6,305.1	4,073.1	-404.2	4,084.2	3.95	-1.25	3.75
10,740.0	89.20	1.40	6,305.4	4,092.1	-403.6	4,103.2	3.72	-0.53	-3.68
10,771.0	89.20	1.60	6,305.8	4,123.0	-402.8	4,134.1	0.65	0.00	0.65
10,803.0	90.00	1.80	6,306.0	4,155.0	-401.8	4,166.1	2.58	2.50	0.63
10,834.0	90.90	359.80	6,305.8	4,186.0	-401.4	4,197.0	7.07	2.90	-6.45
10,866.0	91.20	1.20	6,305.2	4,218.0	-401.1	4,229.0	4.47	0.94	4.38
10,897.0	92.00	0.90	6,304.3	4,249.0	-400.5	4,260.0	2.76	2.58	-0.97
10,929.0	91.70	0.40	6,303.3	4,281.0	-400.2	4,291.9	1.82	-0.94	-1.56
10,960.0	91.20	0.90	6,302.5	4,312.0	-399.8	4,322.9	2.28	-1.61	1.61
10,992.0	90.30	1.10	6,302.1	4,344.0	-399.3	4,354.8	2.88	-2.81	0.63
11,023.0	90.00	359.30	6,302.0	4,375.0	-399.2	4,385.8	5.89	-0.97	-5.81
11,034.2	90.14	359.79	6,302.0	4,386.2	-399.2	4,397.0	4.55	1.25	4.37
<b>BHL 500'FNL &amp; 2475'FWL</b>									
11,055.0	90.40	0.70	6,301.9	4,407.0	-399.2	4,417.8	4.55	1.25	4.38
11,086.0	90.60	0.90	6,301.6	4,438.0	-398.7	4,448.7	0.91	0.65	0.65
11,117.0	89.20	359.50	6,301.7	4,468.9	-398.6	4,479.7	6.39	-4.52	-4.52
11,149.0	88.80	359.70	6,302.2	4,500.9	-398.8	4,511.7	1.40	-1.25	0.63
11,180.0	89.20	359.70	6,302.8	4,531.9	-399.0	4,542.7	1.29	1.29	0.00
11,211.0	89.30	359.70	6,303.2	4,562.9	-399.2	4,573.7	0.32	0.32	0.00
11,243.0	88.60	0.50	6,303.8	4,594.9	-399.1	4,605.7	3.32	-2.19	2.50
11,274.0	89.30	359.70	6,304.3	4,625.9	-399.1	4,636.6	3.43	2.26	-2.58
11,306.0	90.00	0.20	6,304.5	4,657.9	-399.1	4,668.6	2.69	2.19	1.56
11,337.0	90.50	0.00	6,304.4	4,688.9	-399.0	4,699.6	1.74	1.61	-0.65
11,369.0	90.10	0.40	6,304.2	4,720.9	-398.9	4,731.6	1.77	-1.25	1.25
11,400.0	90.10	0.70	6,304.2	4,751.9	-398.6	4,762.5	0.97	0.00	0.97
11,432.0	89.90	0.20	6,304.2	4,783.9	-398.4	4,794.5	1.68	-0.63	-1.56
11,463.0	90.10	1.40	6,304.2	4,814.9	-397.9	4,825.5	3.92	0.65	3.87
11,494.0	90.00	359.80	6,304.1	4,845.9	-397.6	4,856.4	5.17	-0.32	-5.16
11,526.0	89.20	359.00	6,304.4	4,877.9	-397.9	4,888.4	3.54	-2.50	-2.50
11,557.0	89.30	359.10	6,304.8	4,908.9	-398.5	4,919.4	0.46	0.32	0.32
11,589.0	90.50	0.00	6,304.8	4,940.9	-398.7	4,951.4	4.69	3.75	2.81
11,620.0	90.00	358.40	6,304.7	4,971.9	-399.1	4,982.4	5.41	-1.61	-5.16
11,651.0	89.00	357.90	6,305.0	5,002.9	-400.1	5,013.4	3.61	-3.23	-1.61
11,683.0	90.30	358.60	6,305.2	5,034.9	-401.1	5,045.4	4.61	4.06	2.19
11,714.0	90.10	357.40	6,305.1	5,065.8	-402.2	5,076.4	3.92	-0.65	-3.87
11,745.0	89.10	358.40	6,305.3	5,096.8	-403.3	5,107.4	4.56	-3.23	3.23
11,777.0	88.80	358.60	6,305.9	5,128.8	-404.2	5,139.4	1.13	-0.94	0.63
11,808.0	89.20	359.10	6,306.4	5,159.8	-404.8	5,170.4	2.07	1.29	1.61
11,840.0	89.30	0.00	6,306.8	5,191.8	-405.1	5,202.4	2.83	0.31	2.81
11,872.0	90.00	0.50	6,307.0	5,223.8	-404.9	5,234.4	2.69	2.19	1.56
11,903.0	90.70	0.50	6,306.8	5,254.8	-404.6	5,265.3	2.26	2.26	0.00
11,935.0	91.30	1.10	6,306.3	5,286.8	-404.2	5,297.3	2.65	1.88	1.88
11,965.0	91.20	0.00	6,305.6	5,316.8	-403.9	5,327.3	3.68	-0.33	-3.67
11,996.0	91.60	0.50	6,304.9	5,347.8	-403.8	5,358.2	2.07	1.29	1.61
12,027.0	90.60	359.50	6,304.3	5,378.8	-403.8	5,389.2	4.56	-3.23	-3.23
12,059.0	90.20	0.40	6,304.0	5,410.8	-403.8	5,421.2	3.08	-1.25	2.81
12,091.0	90.50	0.90	6,303.8	5,442.7	-403.4	5,453.1	1.82	0.94	1.56
12,122.0	91.00	2.30	6,303.4	5,473.7	-402.6	5,484.1	4.80	1.61	4.52
12,154.0	89.90	1.90	6,303.2	5,505.7	-401.4	5,516.0	3.66	-3.44	-1.25



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
12,185.0	90.00	1.20	6,303.2	5,536.7	-400.6	5,547.0	2.28	0.32	-2.26
12,217.0	90.20	1.90	6,303.2	5,568.7	-399.7	5,578.9	2.28	0.63	2.19
12,248.0	90.60	2.30	6,302.9	5,599.7	-398.6	5,609.8	1.82	1.29	1.29
12,280.0	90.90	1.80	6,302.5	5,631.6	-397.4	5,641.7	1.82	0.94	-1.56
12,311.0	90.00	0.90	6,302.3	5,662.6	-396.7	5,672.7	4.11	-2.90	-2.90
12,342.0	88.70	0.90	6,302.6	5,693.6	-396.2	5,703.6	4.19	-4.19	0.00
12,374.0	89.10	0.40	6,303.2	5,725.6	-395.8	5,735.6	2.00	1.25	-1.56
12,406.0	89.00	0.20	6,303.8	5,757.6	-395.7	5,767.6	0.70	-0.31	-0.63
12,437.0	90.10	1.10	6,304.0	5,788.6	-395.3	5,798.5	4.58	3.55	2.90
12,469.0	90.30	0.40	6,303.9	5,820.6	-394.9	5,830.5	2.28	0.63	-2.19
12,500.0	90.70	0.70	6,303.6	5,851.6	-394.6	5,861.5	1.61	1.29	0.97
12,531.0	90.90	0.50	6,303.2	5,882.6	-394.3	5,892.4	0.91	0.65	-0.65
12,563.0	90.70	1.60	6,302.8	5,914.6	-393.7	5,924.4	3.49	-0.63	3.44
12,594.0	90.80	0.90	6,302.3	5,945.6	-393.0	5,955.4	2.28	0.32	-2.26
12,625.0	91.10	0.40	6,301.8	5,976.6	-392.7	5,986.3	1.88	0.97	-1.61
12,657.0	91.50	359.80	6,301.1	6,008.6	-392.6	6,018.3	2.25	1.25	-1.88
12,688.0	90.60	0.50	6,300.5	6,039.6	-392.5	6,049.3	3.68	-2.90	2.26
12,720.0	89.60	0.70	6,300.5	6,071.6	-392.2	6,081.2	3.19	-3.13	0.63
12,751.0	89.70	1.40	6,300.7	6,102.5	-391.6	6,112.2	2.28	0.32	2.26
12,783.0	89.70	1.10	6,300.8	6,134.5	-390.9	6,144.1	0.94	0.00	-0.94
12,815.0	90.00	0.90	6,300.9	6,166.5	-390.4	6,176.1	1.13	0.94	-0.63
12,846.0	89.70	1.10	6,301.0	6,197.5	-389.8	6,207.1	1.16	-0.97	0.65
12,877.0	89.60	1.40	6,301.2	6,228.5	-389.1	6,238.0	1.02	-0.32	0.97
12,909.0	89.80	2.10	6,301.4	6,260.5	-388.2	6,269.9	2.28	0.63	2.19
12,941.0	90.00	1.10	6,301.4	6,292.5	-387.3	6,301.9	3.19	0.63	-3.13
12,972.0	90.20	0.70	6,301.4	6,323.5	-386.8	6,332.9	1.44	0.65	-1.29
13,004.0	90.40	0.90	6,301.2	6,355.5	-386.3	6,364.8	0.88	0.63	0.63
13,035.0	91.30	1.90	6,300.7	6,386.5	-385.6	6,395.8	4.34	2.90	3.23
13,066.0	90.80	2.10	6,300.2	6,417.4	-384.5	6,426.7	1.74	-1.61	0.65
13,098.0	90.80	1.90	6,299.7	6,449.4	-383.4	6,458.6	0.62	0.00	-0.63
13,129.0	90.20	2.30	6,299.5	6,480.4	-382.2	6,489.5	2.33	-1.94	1.29
13,160.0	90.20	2.50	6,299.3	6,511.4	-381.0	6,520.4	0.65	0.00	0.65
13,192.0	89.50	2.50	6,299.4	6,543.3	-379.6	6,552.3	2.19	-2.19	0.00
13,223.0	89.50	2.80	6,299.7	6,574.3	-378.1	6,583.2	0.97	0.00	0.97
13,254.0	89.60	2.30	6,299.9	6,605.3	-376.7	6,614.2	1.64	0.32	-1.61
13,286.0	90.50	3.50	6,299.9	6,637.2	-375.1	6,646.0	4.69	2.81	3.75
13,317.0	91.30	4.40	6,299.4	6,668.2	-373.0	6,676.9	3.88	2.58	2.90
13,349.0	91.10	3.50	6,298.8	6,700.1	-370.8	6,708.7	2.88	-0.63	-2.81
13,380.0	90.10	3.70	6,298.4	6,731.0	-368.8	6,739.6	3.29	-3.23	0.65
13,412.0	91.20	4.60	6,298.1	6,762.9	-366.5	6,771.4	4.44	3.44	2.81
13,443.0	90.60	3.20	6,297.6	6,793.8	-364.4	6,802.2	4.91	-1.94	-4.52
13,475.0	89.90	2.10	6,297.4	6,825.8	-362.9	6,834.1	4.07	-2.19	-3.44
13,506.0	90.40	3.00	6,297.4	6,856.8	-361.6	6,865.0	3.32	1.61	2.90
13,537.0	90.20	3.20	6,297.2	6,887.7	-359.9	6,895.9	0.91	-0.65	0.65
13,569.0	90.00	2.30	6,297.1	6,919.7	-358.3	6,927.8	2.88	-0.63	-2.81
13,600.0	89.70	2.30	6,297.2	6,950.7	-357.1	6,958.7	0.97	-0.97	0.00
13,632.0	89.30	3.20	6,297.5	6,982.6	-355.6	6,990.6	3.08	-1.25	2.81
13,663.0	89.10	3.00	6,297.9	7,013.6	-353.9	7,021.5	0.91	-0.65	-0.65
13,695.0	89.00	2.50	6,298.5	7,045.5	-352.4	7,053.4	1.59	-0.31	-1.56
13,726.0	89.00	1.80	6,299.0	7,076.5	-351.2	7,084.3	2.26	0.00	-2.26
13,758.0	88.60	1.60	6,299.7	7,108.5	-350.2	7,116.2	1.40	-1.25	-0.63
13,789.0	88.50	1.20	6,300.5	7,139.5	-349.5	7,147.2	1.33	-0.32	-1.29
13,821.0	88.70	1.20	6,301.2	7,171.5	-348.8	7,179.1	0.63	0.63	0.00

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
13,852.0	88.90	1.10	6,301.9	7,202.4	-348.2	7,210.0	0.72	0.65	-0.32
13,883.0	89.10	1.10	6,302.4	7,233.4	-347.6	7,241.0	0.65	0.65	0.00
13,915.0	89.30	0.50	6,302.9	7,265.4	-347.2	7,273.0	1.98	0.63	-1.88
13,947.0	89.40	0.90	6,303.2	7,297.4	-346.8	7,304.9	1.29	0.31	1.25
13,978.0	89.40	0.00	6,303.6	7,328.4	-346.5	7,335.9	2.90	0.00	-2.90
14,010.0	89.50	359.10	6,303.9	7,360.4	-346.8	7,367.9	2.83	0.31	-2.81
14,041.0	89.70	0.00	6,304.1	7,391.4	-347.0	7,398.9	2.97	0.65	2.90
14,073.0	89.60	359.30	6,304.3	7,423.4	-347.2	7,430.9	2.21	-0.31	-2.19
14,104.0	89.50	359.10	6,304.5	7,454.4	-347.6	7,461.9	0.72	-0.32	-0.65
14,135.0	89.90	358.80	6,304.7	7,485.4	-348.2	7,492.8	1.61	1.29	-0.97
14,167.0	90.30	359.30	6,304.6	7,517.4	-348.7	7,524.8	2.00	1.25	1.56
14,198.0	90.90	359.50	6,304.3	7,548.4	-349.1	7,555.8	2.04	1.94	0.65
14,230.0	91.50	0.70	6,303.6	7,580.4	-349.0	7,587.8	4.19	1.88	3.75
14,261.0	91.70	0.00	6,302.8	7,611.4	-348.8	7,618.8	2.35	0.65	-2.26
14,293.0	91.00	359.50	6,302.0	7,643.4	-349.0	7,650.7	2.69	-2.19	-1.56
14,324.0	90.10	0.40	6,301.7	7,674.4	-349.0	7,681.7	4.11	-2.90	2.90
14,355.0	90.10	359.10	6,301.7	7,705.4	-349.1	7,712.7	4.19	0.00	-4.19
14,387.0	90.30	359.30	6,301.6	7,737.4	-349.6	7,744.7	0.88	0.63	0.63
14,418.0	90.40	0.00	6,301.4	7,768.4	-349.8	7,775.7	2.28	0.32	2.26
14,450.0	90.40	359.70	6,301.1	7,800.4	-349.8	7,807.7	0.94	0.00	-0.94
14,481.0	90.20	358.60	6,301.0	7,831.4	-350.3	7,838.7	3.61	-0.65	-3.55
14,513.0	90.10	358.40	6,300.9	7,863.3	-351.1	7,870.7	0.70	-0.31	-0.63
14,544.0	89.90	359.70	6,300.9	7,894.3	-351.7	7,901.7	4.24	-0.65	4.19
14,576.0	89.90	359.70	6,301.0	7,926.3	-351.8	7,933.7	0.00	0.00	0.00
14,608.0	89.90	359.10	6,301.0	7,958.3	-352.2	7,965.6	1.88	0.00	-1.88
14,639.0	89.70	0.20	6,301.1	7,989.3	-352.3	7,996.6	3.61	-0.65	3.55
14,671.0	89.30	0.20	6,301.4	8,021.3	-352.2	8,028.6	1.25	-1.25	0.00
14,702.0	89.70	1.10	6,301.7	8,052.3	-351.9	8,059.6	3.18	1.29	2.90
14,734.0	89.60	0.50	6,301.9	8,084.3	-351.4	8,091.5	1.90	-0.31	-1.88
14,765.0	89.70	0.50	6,302.1	8,115.3	-351.2	8,122.5	0.32	0.32	0.00
14,797.0	89.60	0.20	6,302.2	8,147.3	-351.0	8,154.5	0.99	-0.31	-0.94
14,828.0	89.40	359.70	6,302.5	8,178.3	-351.0	8,185.5	1.74	-0.65	-1.61
14,859.0	90.00	359.80	6,302.7	8,209.3	-351.1	8,216.5	1.96	1.94	0.32
14,891.0	90.40	1.60	6,302.6	8,241.3	-350.7	8,248.4	5.76	1.25	5.63
14,922.0	90.60	1.40	6,302.3	8,272.3	-349.9	8,279.4	0.91	0.65	-0.65
14,954.0	90.70	1.20	6,301.9	8,304.3	-349.2	8,311.3	0.70	0.31	-0.63
14,985.0	90.70	1.20	6,301.6	8,335.3	-348.6	8,342.3	0.00	0.00	0.00
15,017.0	90.80	1.40	6,301.1	8,367.3	-347.8	8,374.2	0.70	0.31	0.63
15,048.0	91.20	0.90	6,300.6	8,398.3	-347.2	8,405.2	2.07	1.29	-1.61
15,080.0	89.90	1.40	6,300.3	8,430.3	-346.6	8,437.1	4.35	-4.06	1.56
15,111.0	89.90	1.40	6,300.3	8,461.2	-345.8	8,468.1	0.00	0.00	0.00
15,143.0	90.30	1.60	6,300.3	8,493.2	-345.0	8,500.0	1.40	1.25	0.63
15,175.0	90.70	0.70	6,300.0	8,525.2	-344.3	8,532.0	3.08	1.25	-2.81
15,206.0	91.30	0.50	6,299.5	8,556.2	-344.0	8,562.9	2.04	1.94	-0.65
15,238.0	90.90	1.20	6,298.9	8,588.2	-343.5	8,594.9	2.52	-1.25	2.19
15,269.0	91.40	1.40	6,298.2	8,619.2	-342.8	8,625.8	1.74	1.61	0.65
15,301.0	91.20	2.50	6,297.5	8,651.2	-341.7	8,657.8	3.49	-0.63	3.44
15,333.0	90.20	1.90	6,297.1	8,683.1	-340.5	8,689.7	3.64	-3.13	-1.88
15,364.0	90.50	1.80	6,296.9	8,714.1	-339.5	8,720.6	1.02	0.97	-0.32
15,396.0	89.50	2.30	6,296.9	8,746.1	-338.4	8,752.5	3.49	-3.13	1.56
15,427.0	89.30	1.90	6,297.3	8,777.1	-337.2	8,783.4	1.44	-0.65	-1.29
15,459.0	89.30	2.10	6,297.6	8,809.1	-336.1	8,815.4	0.62	0.00	0.63
15,490.0	89.70	2.50	6,297.9	8,840.0	-334.9	8,846.3	1.82	1.29	1.29

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well State Antelope J-21-16XRL
<b>Project:</b>	SEC.21-T5N-R62W	<b>TVD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Site:</b>	State Antelope J-21-16XRL Pad Sec.21-T5N-R62W	<b>MD Reference:</b>	WELL @ 4647.0ft (Original Well Elev.)
<b>Well:</b>	State Antelope J-21-16XRL	<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)
15,522.0	90.00	1.90	6,298.0	8,872.0	-333.6	8,878.2	2.10	0.94	-1.88
15,553.0	89.70	1.10	6,298.1	8,903.0	-332.8	8,909.1	2.76	-0.97	-2.58
15,585.0	90.30	1.60	6,298.1	8,935.0	-332.1	8,941.1	2.44	1.88	1.56
15,616.0	90.40	1.20	6,297.9	8,966.0	-331.3	8,972.0	1.33	0.32	-1.29
15,647.0	89.30	1.60	6,298.0	8,997.0	-330.6	9,003.0	3.78	-3.55	1.29
15,678.0	89.40	1.80	6,298.3	9,028.0	-329.6	9,033.9	0.72	0.32	0.65
15,710.0	90.00	1.80	6,298.5	9,059.9	-328.6	9,065.9	1.88	1.88	0.00
15,741.0	90.10	1.90	6,298.5	9,090.9	-327.6	9,096.8	0.46	0.32	0.32
15,772.0	90.40	1.60	6,298.3	9,121.9	-326.7	9,127.7	1.37	0.97	-0.97
15,804.0	90.70	0.90	6,298.0	9,153.9	-326.0	9,159.7	2.38	0.94	-2.19
15,836.0	91.50	0.90	6,297.4	9,185.9	-325.5	9,191.6	2.50	2.50	0.00
15,867.0	91.50	0.90	6,296.6	9,216.9	-325.0	9,222.6	0.00	0.00	0.00
15,899.0	90.80	1.40	6,296.0	9,248.9	-324.4	9,254.5	2.69	-2.19	1.56
15,930.0	90.20	1.20	6,295.7	9,279.9	-323.6	9,285.5	2.04	-1.94	-0.65
15,962.0	89.80	1.20	6,295.7	9,311.8	-323.0	9,317.4	1.25	-1.25	0.00
15,993.0	90.50	1.20	6,295.6	9,342.8	-322.3	9,348.4	2.26	2.26	0.00
16,025.0	90.90	1.10	6,295.2	9,374.8	-321.7	9,380.3	1.29	1.25	-0.31
16,056.0	90.50	0.20	6,294.8	9,405.8	-321.3	9,411.3	3.18	-1.29	-2.90
16,087.0	90.20	1.40	6,294.6	9,436.8	-320.9	9,442.3	3.99	-0.97	3.87
16,119.0	90.00	0.40	6,294.6	9,468.8	-320.4	9,474.2	3.19	-0.63	-3.13
16,151.0	90.00	0.90	6,294.6	9,500.8	-320.0	9,506.2	1.56	0.00	1.56
16,182.0	88.90	1.10	6,294.9	9,531.8	-319.5	9,537.2	3.61	-3.55	0.65
16,214.0	89.20	1.60	6,295.4	9,563.8	-318.7	9,569.1	1.82	0.94	1.56
16,245.0	89.20	0.50	6,295.8	9,594.8	-318.2	9,600.1	3.55	0.00	-3.55
16,277.0	89.30	0.40	6,296.3	9,626.8	-317.9	9,632.0	0.44	0.31	-0.31
16,315.0	90.20	1.40	6,296.4	9,664.8	-317.3	9,670.0	3.54	2.37	2.63
16,365.0	90.20	1.40	6,296.3	9,714.8	-316.1	9,719.9	0.00	0.00	0.00
BHL 460'FNL & 1470'FWL									

Checked By: _____	Approved By: _____	Date: _____
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