

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope 44-41-24HNB**

Surface Location: State Antelope T-24 Pad Sec.24-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

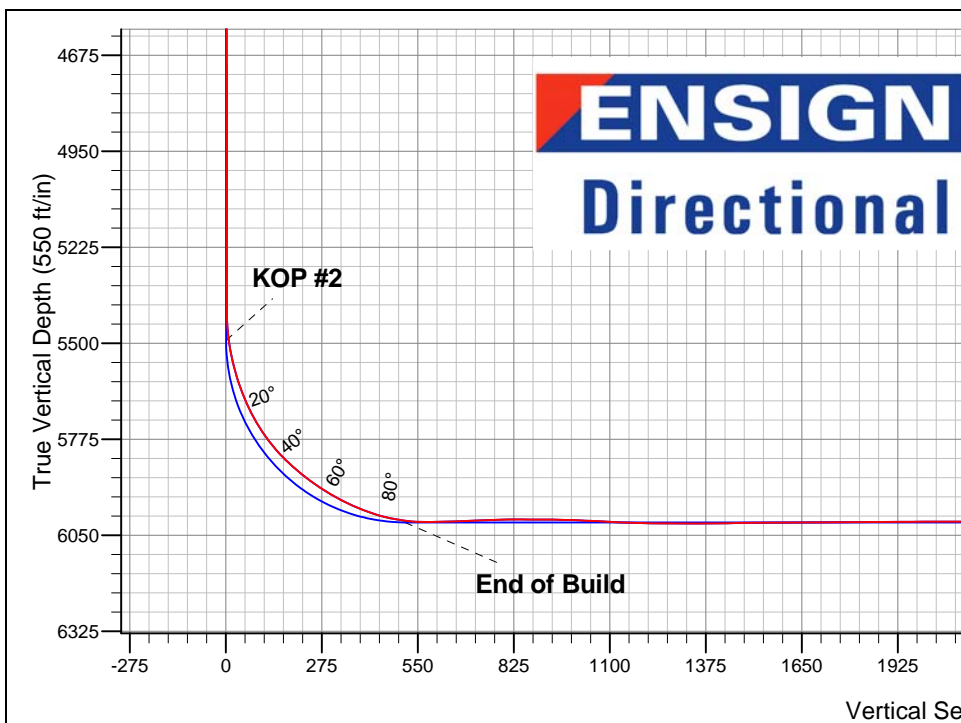
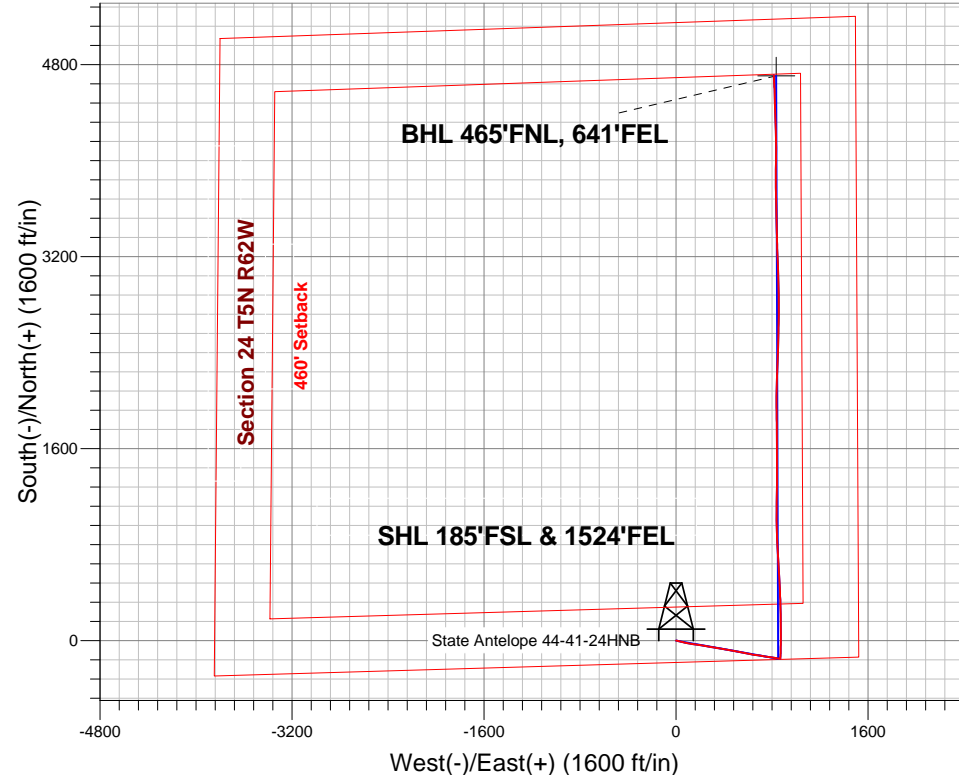
Ground Elevation: 4517.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383432.52	3343454.92	40.379370	-104.267150	

RKB - 16' WELL @ 4533.0ft (RKB - 16')

FINAL SURVEY

Projected Bottom Hole Location
10723' MD 6010' TVD 4712' N & 815' E of SHL
90.0 degree Incl @ 356.4 degree AZM



State Antelope T-24 Pad Sec.24-T5N-R62W
State Antelope 44-41-24HNB
Wellbore #1
7:51, May 08 2013

ANNOTATIONS

TVD	MD	Annotation
999.9	1000.0	KOP #1
5450.4	5551.0	KOP #2

LEGEND

- △ State Antelope 44-41-24HNB, Wellbore #1, Plan #5 (2-20-13) R V0
- Wellbore #1
- Survey #1

BHL 465'FNL, 641'FEL

TD at 10723'



BONANZA CREEK ENERGY OPERATING

SEC.24-T5N-R62W

State Antelope T-24 Pad Sec.24-T5N-R62W

State Antelope 44-41-24HNB

Wellbore #1

Survey: Survey #1

Standard Survey Report

08 May, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4533.0ft (RKB - 16')
Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4533.0ft (RKB - 16')
Well:	State Antelope 44-41-24HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.24-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 T-24 Pad Sec.24-T5N-R62W				
Site Position:		Northing:	1,383,414.32ft	Latitude:	40.379320
From:	Lat/Long	Easting:	3,343,455.17ft	Longitude:	-104.267150
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.80 °

Well	State Antelope 44-41-24HNB					
Well Position	+N-S	0.0 ft	Northing:	1,383,432.52 ft	Latitude:	40.379370
	+E-W	0.0 ft	Easting:	3,343,454.92 ft	Longitude:	-104.267150
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,517.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/8/2013	8.37	67.06	53,001

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 (°)	
	0.0	0.0	0.0	10.07	

Survey Program	Date	5/8/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
95.0	10,723.0	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	
95.0	0.50	106.30	95.0	-0.1	0.4	0.0	0.53	0.53	0.00	
219.0	0.10	270.50	219.0	-0.3	0.8	-0.1	0.48	-0.32	132.42	
347.0	0.30	114.40	347.0	-0.4	1.0	-0.2	0.31	0.16	-121.95	
414.0	0.40	111.40	414.0	-0.6	1.4	-0.3	0.15	0.15	-4.48	
439.8	0.40	106.83	439.8	-0.6	1.5	-0.3	0.12	-0.02	-17.72	
9 5/8"										
533.0	0.40	90.10	533.0	-0.7	2.2	-0.3	0.12	0.01	-17.95	
660.0	0.40	59.00	660.0	-0.5	3.0	0.0	0.17	0.00	-24.49	
786.0	0.40	105.20	786.0	-0.4	3.8	0.3	0.25	0.00	36.67	
913.0	1.20	100.80	913.0	-0.7	5.5	0.2	0.63	0.63	-3.46	
1,000.0	2.77	97.78	999.9	-1.2	8.5	0.3	1.81	1.81	-3.48	
KOP #1										

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
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Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4533.0ft (RKB - 16')
Well:	State Antelope 44-41-24HNB	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)
9,377.0	89.90	358.40	6,005.8	3,366.4	842.0	3,461.8	2.10	-1.88	-0.94
9,409.0	90.10	358.00	6,005.8	3,398.4	841.0	3,493.1	1.40	0.63	-1.25
9,441.0	89.70	358.90	6,005.9	3,430.4	840.2	3,524.4	3.08	-1.25	2.81
9,473.0	88.90	359.60	6,006.2	3,462.4	839.7	3,555.9	3.32	-2.50	2.19
9,505.0	87.80	358.40	6,007.2	3,494.4	839.2	3,587.2	5.09	-3.44	-3.75
9,537.0	87.50	358.40	6,008.5	3,526.3	838.3	3,618.6	0.94	-0.94	0.00
9,569.0	88.00	358.00	6,009.7	3,558.3	837.3	3,649.8	2.00	1.56	-1.25
9,601.0	88.30	358.70	6,010.8	3,590.2	836.4	3,681.2	2.38	0.94	2.19
9,631.0	88.80	358.90	6,011.5	3,620.2	835.7	3,710.6	1.79	1.67	0.67
9,664.0	88.30	358.00	6,012.4	3,653.2	834.8	3,742.9	3.12	-1.52	-2.73
9,696.0	88.10	358.90	6,013.4	3,685.2	834.0	3,774.2	2.88	-0.63	2.81
9,728.0	88.50	359.40	6,014.3	3,717.2	833.5	3,805.6	2.00	1.25	1.56
9,760.0	90.10	0.10	6,014.7	3,749.2	833.4	3,837.1	5.46	5.00	2.19
9,790.0	90.10	0.10	6,014.7	3,779.2	833.4	3,866.7	0.00	0.00	0.00
9,822.0	89.90	359.80	6,014.7	3,811.2	833.4	3,898.2	1.13	-0.63	-0.94
9,853.0	90.40	0.10	6,014.6	3,842.2	833.4	3,928.7	1.88	1.61	0.97
9,885.0	90.70	359.90	6,014.3	3,874.2	833.4	3,960.2	1.13	0.94	-0.63
9,916.0	91.20	359.90	6,013.8	3,905.1	833.3	3,990.7	1.61	1.61	0.00
9,948.0	91.20	0.80	6,013.1	3,937.1	833.5	4,022.2	2.81	0.00	2.81
9,980.0	90.70	0.10	6,012.6	3,969.1	833.8	4,053.8	2.69	-1.56	-2.19
10,012.0	89.50	0.30	6,012.5	4,001.1	833.9	4,085.3	3.80	-3.75	0.63
10,044.0	89.40	359.10	6,012.8	4,033.1	833.7	4,116.8	3.76	-0.31	-3.75
10,075.0	90.00	0.50	6,013.0	4,064.1	833.6	4,147.3	4.91	1.94	4.52
10,108.0	90.30	1.00	6,012.9	4,097.1	834.0	4,179.8	1.77	0.91	1.52
10,138.0	90.00	0.60	6,012.8	4,127.1	834.4	4,209.4	1.67	-1.00	-1.33
10,170.0	89.50	359.40	6,012.9	4,159.1	834.4	4,240.9	4.06	-1.56	-3.75
10,202.0	89.70	358.70	6,013.2	4,191.1	833.9	4,272.4	2.27	0.63	-2.19
10,234.0	89.90	358.40	6,013.3	4,223.1	833.1	4,303.7	1.13	0.63	-0.94
10,265.0	89.70	358.70	6,013.4	4,254.1	832.3	4,334.1	1.16	-0.65	0.97
10,296.0	90.30	358.40	6,013.4	4,285.1	831.5	4,364.5	2.16	1.94	-0.97
10,328.0	90.60	358.00	6,013.1	4,317.1	830.5	4,395.8	1.56	0.94	-1.25
10,359.0	90.80	357.60	6,012.8	4,348.0	829.3	4,426.1	1.44	0.65	-1.29
10,390.0	91.00	356.90	6,012.3	4,379.0	827.8	4,456.3	2.35	0.65	-2.26
10,422.0	90.70	357.60	6,011.8	4,411.0	826.3	4,487.5	2.38	-0.94	2.19
10,453.0	90.30	358.70	6,011.5	4,441.9	825.3	4,517.8	3.78	-1.29	3.55
10,485.0	90.40	358.40	6,011.3	4,473.9	824.5	4,549.2	0.99	0.31	-0.94
10,516.0	90.50	358.70	6,011.1	4,504.9	823.7	4,579.6	1.02	0.32	0.97
10,548.0	90.70	358.50	6,010.7	4,536.9	822.9	4,610.9	0.88	0.63	-0.63
10,580.0	90.00	358.00	6,010.6	4,568.9	822.0	4,642.2	2.69	-2.19	-1.56
10,611.0	90.40	358.00	6,010.4	4,599.9	820.9	4,672.5	1.29	1.29	0.00
10,643.0	90.10	356.90	6,010.3	4,631.8	819.5	4,703.8	3.56	-0.94	-3.44
10,663.0	90.00	356.40	6,010.3	4,651.8	818.3	4,723.2	2.55	-0.50	-2.50
10,712.5	90.00	356.40	6,010.3	4,701.2	815.2	4,771.3	0.00	0.00	0.00
4-1/2" - BHL 470°FNL, 662°FEL									
10,723.0	90.00	356.40	6,010.3	4,711.7	814.5	4,781.5	0.00	0.00	0.00
TD at 10723'									

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Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4533.0ft (RKB - 16')
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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
BHL 470'FNL, 662'FE	0.00	0.00	6,013.0	4,706.9	835.7	1,388,150.41	3,344,225.03	40.392290	-104.264150
- survey misses target center by 21.4ft at 10712.5ft MD (6010.3 TVD, 4701.2 N, 815.2 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
439.8	439.8	9 5/8"		9-5/8	12-1/4
6,548.3	6,009.5	7"		7	7-1/2
6,504.0	6,010.8	4-1/2"		4-1/2	6
10,712.5	6,010.3	4-1/2"		4-1/2	6

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
1,000.0	999.9	-1.2	8.5	KOP #1
5,551.0	5,450.4	-149.9	868.8	KOP #2
10,723.0	6,010.3	4,711.7	814.5	TD at 10723'

Checked By: _____ Approved By: _____ Date: _____