

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	1383432.53	3343454.92	40.379370	-104.267150	

Original Well Elev WELL @ 4530.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FNL, 662'FEL	6029.0	4706.9	835.7	Point
T1 470'FSL, 672'FEL	6029.0	309.7	849.7	Point



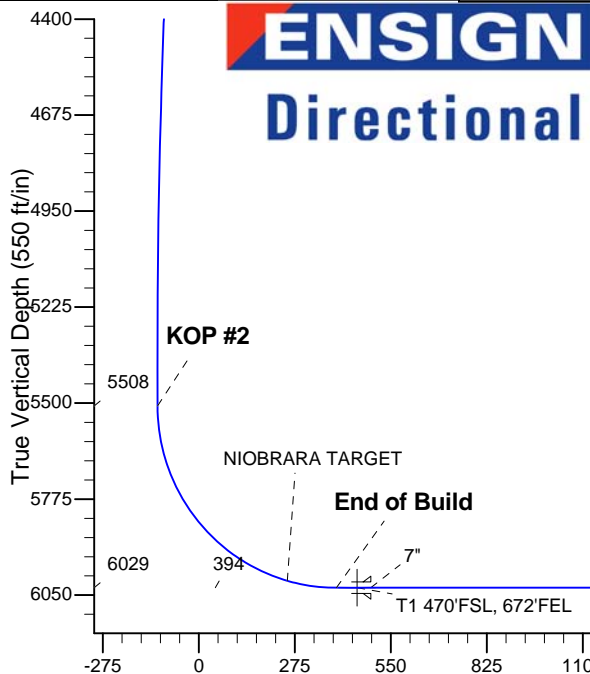
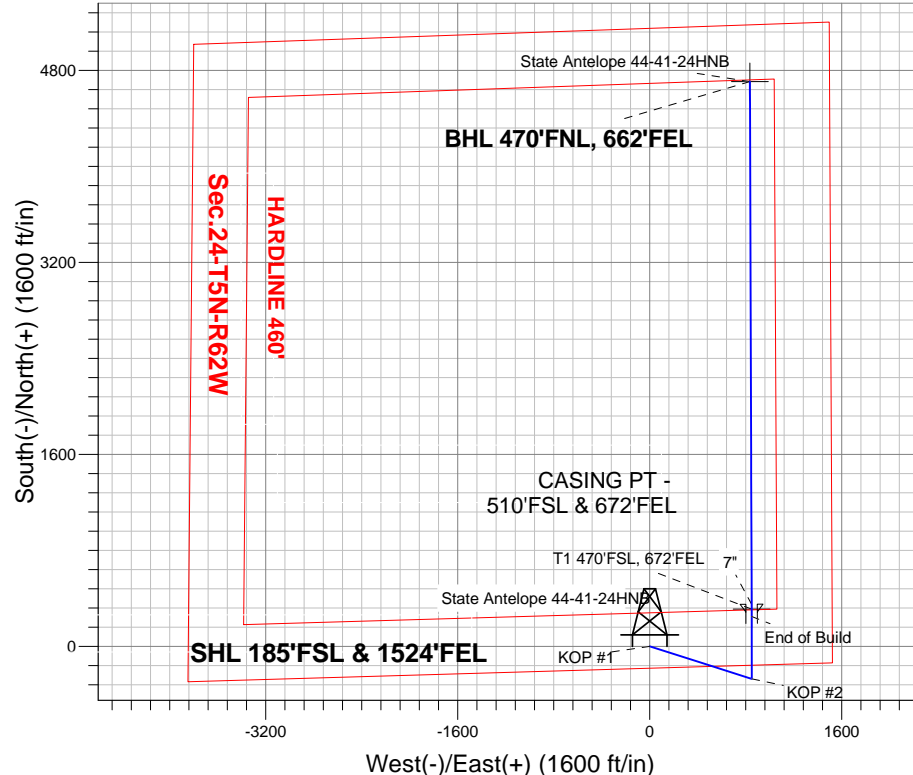
Azimuths to True North
Magnetic North: 8.41°

Magnetic Field
Strength: 53030.3srT
Dip Angle: 67.07°
Date: 10/30/2012
Model: IGRF2010

State Antelope T-24 Pad Sec.24-T5N-R62W
State Antelope 44-41-24HNB
Plan #1 (10-30-12)
16:34, November 01 2012

ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP #1
5508.1	5610.6	KOP #2
6029.0	6428.8	End of Build



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1697.6	13.95	107.66	1690.8	-25.6	80.5	2.00	107.66	-11.2	
4	4704.8	13.95	107.66	4609.2	-245.7	771.5	0.00	0.00	-107.0	
5	5402.5	0.00	0.00	5300.0	-271.3	852.0	2.00	180.00	-118.2	
6	5610.6	0.00	0.00	5508.1	-271.3	852.0	0.00	0.00	-118.2	
7	6428.8	90.00	359.79	6029.0	249.6	850.1	11.00	359.79	394.3	
8	6528.9	90.00	359.79	6029.0	349.7	849.7	0.00	0.00	492.9	
9	6529.7	90.00	359.81	6029.0	350.5	849.7	3.00	90.00	493.6	
10	10886.2	90.00	359.81	6029.0	4706.9	835.7	0.00	0.00	4780.5	BHL 470'FNL, 662'FEL

BHL 470'FNL, 662'FEL

Vertical Section at 10.07° (550 ft/in)



BONANZA CREEK ENERGY OPERATING

SEC.24-T5N-R62W

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

State Antelope 44-41-24HNB

Wellbore #1

Plan: Plan #1 (10-30-12)

Standard Planning Report

01 November, 2012

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,697.6	13.95	107.66	1,690.8	-25.6	80.5	2.00	2.00	0.00	107.66	
4,704.8	13.95	107.66	4,609.2	-245.7	771.5	0.00	0.00	0.00	0.00	
5,402.5	0.00	0.00	5,300.0	-271.3	852.0	2.00	-2.00	0.00	180.00	
5,610.6	0.00	0.00	5,508.1	-271.3	852.0	0.00	0.00	0.00	0.00	
6,428.8	90.00	359.79	6,029.0	249.6	850.1	11.00	11.00	0.00	359.79	
6,528.9	90.00	359.79	6,029.0	349.7	849.7	0.00	0.00	0.00	0.00	
6,529.7	90.00	359.81	6,029.0	350.5	849.7	3.00	0.00	3.00	90.00	
10,886.2	90.00	359.81	6,029.0	4,706.9	835.7	0.00	0.00	0.00	0.00	BHL 470'FNL, 662'

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4530.0ft (Original Well Elev)
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4530.0ft (Original Well Elev)
Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope 44-41-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-30-12)		

Planned 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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,100.0	2.00	107.66	1,100.0	-0.5	1.7	-0.2	2.00	2.00	0.00
1,200.0	4.00	107.66	1,199.8	-2.1	6.6	-0.9	2.00	2.00	0.00
1,300.0	6.00	107.66	1,299.5	-4.8	15.0	-2.1	2.00	2.00	0.00
1,400.0	8.00	107.66	1,398.7	-8.5	26.6	-3.7	2.00	2.00	0.00
1,500.0	10.00	107.66	1,497.5	-13.2	41.5	-5.8	2.00	2.00	0.00
1,600.0	12.00	107.66	1,595.6	-19.0	59.7	-8.3	2.00	2.00	0.00
1,697.6	13.95	107.66	1,690.8	-25.6	80.5	-11.2	2.00	2.00	0.00
1,700.0	13.95	107.66	1,693.1	-25.8	81.1	-11.2	0.00	0.00	0.00
1,800.0	13.95	107.66	1,790.1	-33.1	104.1	-14.4	0.00	0.00	0.00
1,900.0	13.95	107.66	1,887.2	-40.5	127.0	-17.6	0.00	0.00	0.00
2,000.0	13.95	107.66	1,984.2	-47.8	150.0	-20.8	0.00	0.00	0.00
2,100.0	13.95	107.66	2,081.3	-55.1	173.0	-24.0	0.00	0.00	0.00
2,200.0	13.95	107.66	2,178.3	-62.4	196.0	-27.2	0.00	0.00	0.00
2,300.0	13.95	107.66	2,275.4	-69.7	218.9	-30.4	0.00	0.00	0.00
2,400.0	13.95	107.66	2,372.4	-77.0	241.9	-33.6	0.00	0.00	0.00
2,500.0	13.95	107.66	2,469.5	-84.3	264.9	-36.7	0.00	0.00	0.00
2,600.0	13.95	107.66	2,566.5	-91.7	287.9	-39.9	0.00	0.00	0.00
2,700.0	13.95	107.66	2,663.6	-99.0	310.8	-43.1	0.00	0.00	0.00
2,800.0	13.95	107.66	2,760.6	-106.3	333.8	-46.3	0.00	0.00	0.00
2,900.0	13.95	107.66	2,857.6	-113.6	356.8	-49.5	0.00	0.00	0.00
3,000.0	13.95	107.66	2,954.7	-120.9	379.8	-52.7	0.00	0.00	0.00
3,100.0	13.95	107.66	3,051.7	-128.2	402.7	-55.9	0.00	0.00	0.00
3,200.0	13.95	107.66	3,148.8	-135.6	425.7	-59.1	0.00	0.00	0.00
3,300.0	13.95	107.66	3,245.8	-142.9	448.7	-62.2	0.00	0.00	0.00
3,400.0	13.95	107.66	3,342.9	-150.2	471.7	-65.4	0.00	0.00	0.00
3,500.0	13.95	107.66	3,439.9	-157.5	494.6	-68.6	0.00	0.00	0.00
3,600.0	13.95	107.66	3,537.0	-164.8	517.6	-71.8	0.00	0.00	0.00
3,700.0	13.95	107.66	3,634.0	-172.1	540.6	-75.0	0.00	0.00	0.00
3,800.0	13.95	107.66	3,731.1	-179.5	563.6	-78.2	0.00	0.00	0.00
3,900.0	13.95	107.66	3,828.1	-186.8	586.5	-81.4	0.00	0.00	0.00
4,000.0	13.95	107.66	3,925.2	-194.1	609.5	-84.6	0.00	0.00	0.00
4,100.0	13.95	107.66	4,022.2	-201.4	632.5	-87.7	0.00	0.00	0.00
4,200.0	13.95	107.66	4,119.3	-208.7	655.5	-90.9	0.00	0.00	0.00
4,300.0	13.95	107.66	4,216.3	-216.0	678.4	-94.1	0.00	0.00	0.00
4,400.0	13.95	107.66	4,313.4	-223.4	701.4	-97.3	0.00	0.00	0.00
4,500.0	13.95	107.66	4,410.4	-230.7	724.4	-100.5	0.00	0.00	0.00
4,600.0	13.95	107.66	4,507.5	-238.0	747.4	-103.7	0.00	0.00	0.00
4,700.0	13.95	107.66	4,604.5	-245.3	770.3	-106.9	0.00	0.00	0.00
4,704.8	13.95	107.66	4,609.2	-245.7	771.5	-107.0	0.00	0.00	0.00
4,800.0	12.05	107.66	4,702.0	-252.1	791.9	-109.8	2.00	-2.00	0.00
4,900.0	10.05	107.66	4,800.1	-258.0	810.1	-112.4	2.00	-2.00	0.00
5,000.0	8.05	107.66	4,898.8	-262.7	825.1	-114.5	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4530.0ft (Original Well Elev)
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4530.0ft (Original Well Elev)
Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope 44-41-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-30-12)		

Planned 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)
5,100.0	6.05	107.66	4,998.1	-266.5	836.8	-116.1	2.00	-2.00	0.00
5,200.0	4.05	107.66	5,097.7	-269.1	845.2	-117.2	2.00	-2.00	0.00
5,300.0	2.05	107.66	5,197.5	-270.7	850.3	-117.9	2.00	-2.00	0.00
5,400.0	0.05	107.66	5,297.5	-271.3	852.0	-118.2	2.00	-2.00	0.00
5,402.5	0.00	0.00	5,300.0	-271.3	852.0	-118.2	2.00	-2.00	0.00
5,500.0	0.00	0.00	5,397.5	-271.3	852.0	-118.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,497.5	-271.3	852.0	-118.2	0.00	0.00	0.00
5,610.6	0.00	0.00	5,508.1	-271.3	852.0	-118.2	0.00	0.00	0.00
KOP #2									
5,700.0	9.83	359.79	5,597.1	-263.6	852.0	-110.7	11.00	11.00	0.00
5,800.0	20.83	359.79	5,693.4	-237.2	851.9	-84.7	11.00	11.00	0.00
5,900.0	31.83	359.79	5,782.9	-193.0	851.7	-41.1	11.00	11.00	0.00
6,000.0	42.83	359.79	5,862.3	-132.4	851.5	18.5	11.00	11.00	0.00
6,100.0	53.83	359.79	5,928.6	-57.8	851.2	91.9	11.00	11.00	0.00
6,200.0	64.83	359.79	5,979.6	28.1	850.9	176.4	11.00	11.00	0.00
6,284.0	74.07	359.79	6,009.0	106.6	850.6	253.7	11.00	11.00	0.00
NIOBRARA TARGET									
6,300.0	75.83	359.79	6,013.2	122.1	850.6	268.9	11.00	11.00	0.00
6,400.0	86.83	359.79	6,028.2	220.8	850.2	366.0	11.00	11.00	0.00
6,428.8	90.00	359.79	6,029.0	249.6	850.1	394.3	11.00	11.00	0.00
End of Build									
6,488.9	90.00	359.79	6,029.0	309.7	849.9	453.5	0.00	0.00	0.00
T1 470'FSL, 672'FEL									
6,500.0	90.00	359.79	6,029.0	320.8	849.8	464.4	0.00	0.00	0.00
6,528.9	90.00	359.79	6,029.0	349.7	849.7	492.8	0.00	0.00	0.00
7"									
6,529.7	90.00	359.81	6,029.0	350.5	849.7	493.6	2.92	0.00	2.92
6,600.0	90.00	359.81	6,029.0	420.8	849.5	562.8	0.00	0.00	0.00
6,700.0	90.00	359.81	6,029.0	520.8	849.2	661.2	0.00	0.00	0.00
6,800.0	90.00	359.81	6,029.0	620.8	848.9	759.6	0.00	0.00	0.00
6,900.0	90.00	359.81	6,029.0	720.8	848.5	858.0	0.00	0.00	0.00
7,000.0	90.00	359.81	6,029.0	820.8	848.2	956.4	0.00	0.00	0.00
7,100.0	90.00	359.81	6,029.0	920.8	847.9	1,054.8	0.00	0.00	0.00
7,200.0	90.00	359.81	6,029.0	1,020.8	847.6	1,153.2	0.00	0.00	0.00
7,300.0	90.00	359.81	6,029.0	1,120.8	847.2	1,251.6	0.00	0.00	0.00
7,400.0	90.00	359.81	6,029.0	1,220.8	846.9	1,350.0	0.00	0.00	0.00
7,500.0	90.00	359.81	6,029.0	1,320.8	846.6	1,448.4	0.00	0.00	0.00
7,600.0	90.00	359.81	6,029.0	1,420.8	846.3	1,546.8	0.00	0.00	0.00
7,700.0	90.00	359.81	6,029.0	1,520.8	846.0	1,645.2	0.00	0.00	0.00
7,800.0	90.00	359.81	6,029.0	1,620.8	845.6	1,743.6	0.00	0.00	0.00
7,900.0	90.00	359.81	6,029.0	1,720.8	845.3	1,842.0	0.00	0.00	0.00
8,000.0	90.00	359.81	6,029.0	1,820.8	845.0	1,940.4	0.00	0.00	0.00
8,100.0	90.00	359.81	6,029.0	1,920.8	844.7	2,038.8	0.00	0.00	0.00
8,200.0	90.00	359.81	6,029.0	2,020.8	844.3	2,137.3	0.00	0.00	0.00
8,300.0	90.00	359.81	6,029.0	2,120.8	844.0	2,235.7	0.00	0.00	0.00
8,400.0	90.00	359.81	6,029.0	2,220.8	843.7	2,334.1	0.00	0.00	0.00
8,500.0	90.00	359.81	6,029.0	2,320.8	843.4	2,432.5	0.00	0.00	0.00
8,600.0	90.00	359.81	6,029.0	2,420.8	843.0	2,530.9	0.00	0.00	0.00
8,700.0	90.00	359.81	6,029.0	2,520.8	842.7	2,629.3	0.00	0.00	0.00
8,800.0	90.00	359.81	6,029.0	2,620.8	842.4	2,727.7	0.00	0.00	0.00
8,900.0	90.00	359.81	6,029.0	2,720.8	842.1	2,826.1	0.00	0.00	0.00
9,000.0	90.00	359.81	6,029.0	2,820.8	841.8	2,924.5	0.00	0.00	0.00
9,100.0	90.00	359.81	6,029.0	2,920.8	841.4	3,022.9	0.00	0.00	0.00

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,284.0	6,009.0	NIORARA TARGET		0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4530.0ft (Original Well Elev)
Project:	SEC.24-T5N-R62W	MD Reference:	WELL @ 4530.0ft (Original Well Elev)
Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	North Reference:	True
Well:	State Antelope 44-41-24HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-30-12)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.0	1,000.0	0.0	0.0	KOP #1
5,610.6	5,508.1	-271.3	852.0	KOP #2
6,428.8	6,029.0	249.6	850.1	End of Build



BONANZA CREEK ENERGY OPERATING

SEC.24-T5N-R62W

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

State Antelope 44-41-24HNB

Wellbore #1

Plan #1 (10-30-12)

Anticollision Report

01 November, 2012

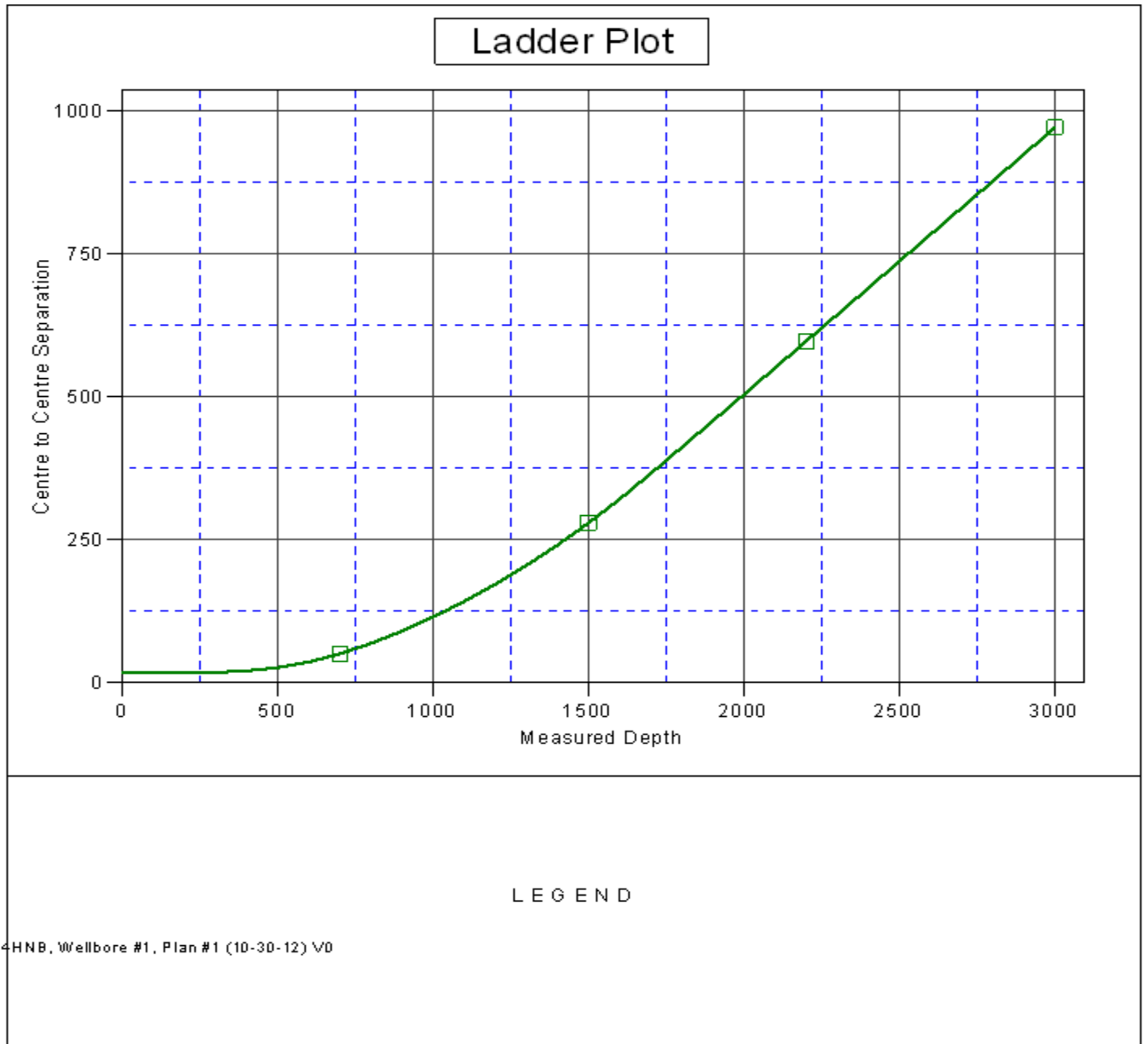
Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4530.0ft (Original Well Elev)
Reference Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4530.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope 44-41-24HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (10-30-12)	Offset TVD Reference:	Offset Datum

Offset Design State Antelope T-24 Pad Sec.24-T5N-R62W - State Antelope O-K-24HNB - Wellbore #1 - Plan #1 (10-3												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,400.0	2,372.4	2,247.6	2,193.5	7.1	10.0	155.47	-131.5	-423.7	691.4	680.2	11.14	62.046	
2,500.0	2,469.5	2,335.9	2,278.7	7.6	10.5	155.91	-137.5	-446.1	738.0	726.4	11.69	63.142	
2,600.0	2,566.5	2,424.2	2,363.9	8.1	11.0	156.30	-143.5	-468.5	784.8	772.5	12.24	64.127	
2,700.0	2,663.6	2,512.5	2,449.1	8.6	11.5	156.64	-149.5	-490.9	831.5	818.7	12.79	65.018	
2,800.0	2,760.6	2,600.8	2,534.3	9.1	12.0	156.95	-155.5	-513.3	878.2	864.9	13.34	65.826	
2,900.0	2,857.6	2,689.1	2,619.5	9.6	12.5	157.23	-161.5	-535.7	925.0	911.1	13.90	66.562	
3,000.0	2,954.7	2,777.4	2,704.7	10.1	13.0	157.48	-167.5	-558.2	971.8	957.4	14.45	67.236	

Company: BONANZA CREEK ENERGY OPERATING
Project: SEC.24-T5N-R62W
Reference Site: State Antelope T-24 Pad Sec.24-T5N-R62W
Site Error: 0.0ft
Reference Well: State Antelope 44-41-24HNB
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (10-30-12)

Local Co-ordinate Reference: Well State Antelope 44-41-24HNB
TVD Reference: WELL @ 4530.0ft (Original Well Elev)
MD Reference: WELL @ 4530.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4530.0ft (Original Well Elev) Coordinates are relative to: State Antelope 44-41-24HNB
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.80°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well State Antelope 44-41-24HNB
Project:	SEC.24-T5N-R62W	TVD Reference:	WELL @ 4530.0ft (Original Well Elev)
Reference Site:	State Antelope T-24 Pad Sec.24-T5N-R62W	MD Reference:	WELL @ 4530.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State Antelope 44-41-24HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
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