

BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope J-F-21HZ**

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

Ground Elevation: 4634.0

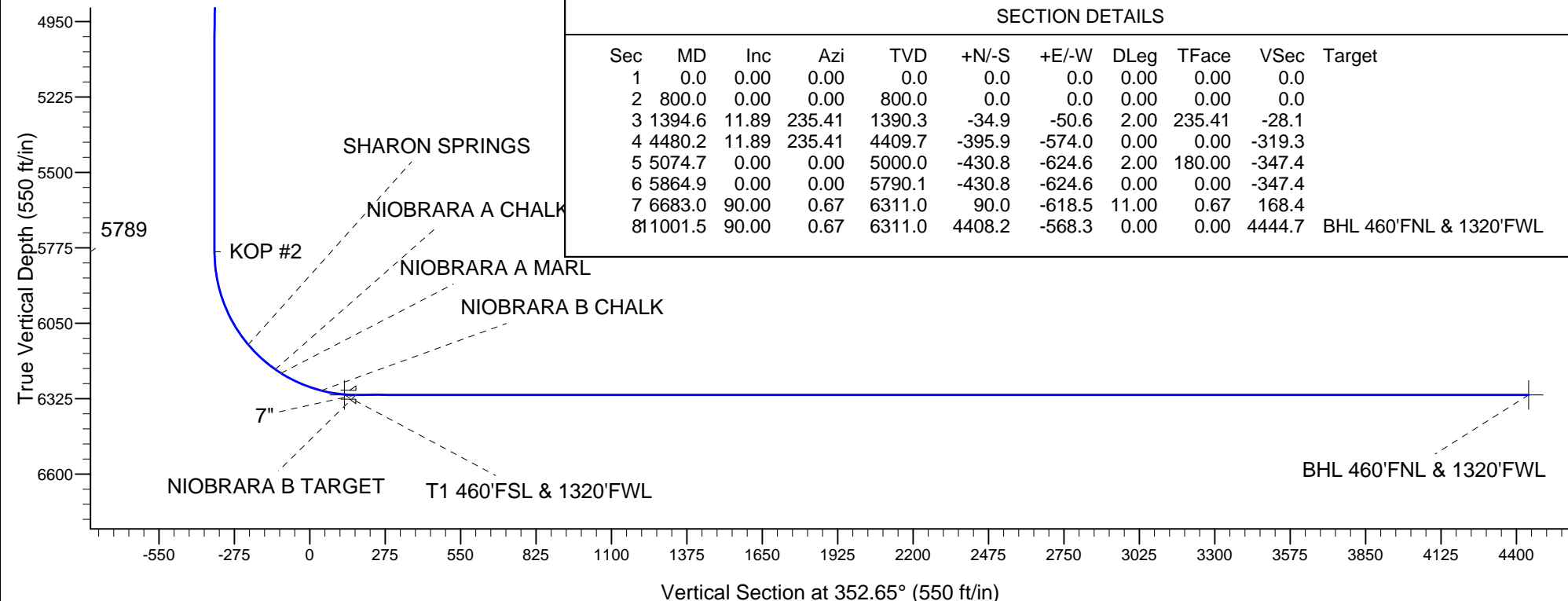
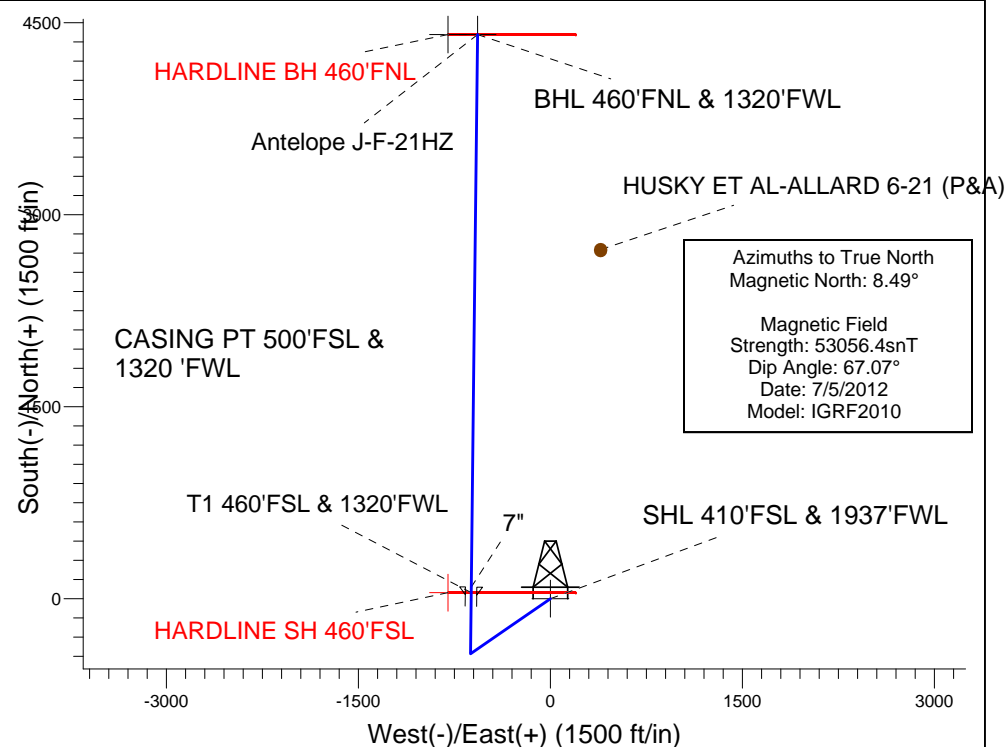
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383081.54	3325608.40	40.379070	-104.331220	

Original Well Elev WELL @ 4646.0ft (Original Well Elev)

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HARDLINE BH 460'FNL	1.0	4408.2	-800.0	40.391170	-104.334092	Polygon
HARDLINE SH 460'FSL	1.0	47.4	-800.0	40.379200	-104.334091	Polygon
SHL 410'FSL & 1937'FWL	1.0	0.0	0.0	40.379070	-104.331220	Point
BHL 460'FNL & 1320'FWL	6311.0	4408.2	-568.3	40.391170	-104.333260	Point
T1 460'FSL & 1320'FWL	6311.0	47.4	-618.5	40.379200	-104.333440	Point

Antelope J-F-21HZ Pad Sec.21-T5N-R62W
Antelope J-F-21HZ
Plan #2 (JULY 9, 2012)
11:24, July 09 2012





Directional

BONANZA CREEK ENERGY OPERATING

SEC.21-T5N-R62W

Antelope J-F-21HZ Pad Sec.21-T5N-R62W

Antelope J-F-21HZ

Wellbore #1

Plan: Plan #2 (JULY 9, 2012)

Standard Planning Report

09 July, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope J-F-21HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4646.0ft (Original Well Elev)
Project:	SEC.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope J-F-21HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (JULY 9, 2012)		

Project	SEC.21-T5N-R62W, Weld County, CO		
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

Well	Antelope J-F-21HZ			
Well Position	+N/-S	0.0 ft	Northing:	1,383,081.54 ft
	+E/-W	0.0 ft	Easting:	3,325,608.40 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Latitude:	40.379070
			Longitude:	-104.331220
			Ground Level:	4,634.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/5/2012	8.49	67.07	53,056

Design	Plan #2 (JULY 9, 2012)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	352.65

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,394.6	11.89	235.41	1,390.3	-34.9	-50.6	2.00	2.00	0.00	235.41	
4,480.2	11.89	235.41	4,409.7	-395.9	-574.0	0.00	0.00	0.00	0.00	
5,074.7	0.00	0.00	5,000.0	-430.8	-624.6	2.00	-2.00	0.00	180.00	
5,864.9	0.00	0.00	5,790.1	-430.8	-624.6	0.00	0.00	0.00	0.00	
6,683.0	90.00	0.67	6,311.0	90.0	-618.5	11.00	11.00	0.00	0.67	
11,001.5	90.00	0.67	6,311.0	4,408.2	-568.3	0.00	0.00	0.00	0.00	BHL 460'FNL & 132

Database:	Landmark	Local Co-ordinate Reference:	Well Antelope J-F-21HZ
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Project:	SEC.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope J-F-21HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (JULY 9, 2012)		

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
KOP #1									
900.0	2.00	235.41	900.0	-1.0	-1.4	-0.8	2.00	2.00	0.00
1,000.0	4.00	235.41	999.8	-4.0	-5.7	-3.2	2.00	2.00	0.00
1,100.0	6.00	235.41	1,099.5	-8.9	-12.9	-7.2	2.00	2.00	0.00
1,200.0	8.00	235.41	1,198.7	-15.8	-23.0	-12.8	2.00	2.00	0.00
1,300.0	10.00	235.41	1,297.5	-24.7	-35.8	-19.9	2.00	2.00	0.00
1,394.6	11.89	235.41	1,390.3	-34.9	-50.6	-28.1	2.00	2.00	0.00
1,400.0	11.89	235.41	1,395.6	-35.5	-51.5	-28.7	0.00	0.00	0.00
1,500.0	11.89	235.41	1,493.5	-47.2	-68.5	-38.1	0.00	0.00	0.00
1,600.0	11.89	235.41	1,591.3	-58.9	-85.5	-47.5	0.00	0.00	0.00
1,700.0	11.89	235.41	1,689.2	-70.6	-102.4	-57.0	0.00	0.00	0.00
1,800.0	11.89	235.41	1,787.0	-82.3	-119.4	-66.4	0.00	0.00	0.00
1,900.0	11.89	235.41	1,884.9	-94.0	-136.3	-75.8	0.00	0.00	0.00
2,000.0	11.89	235.41	1,982.7	-105.7	-153.3	-85.3	0.00	0.00	0.00
2,100.0	11.89	235.41	2,080.6	-117.4	-170.3	-94.7	0.00	0.00	0.00
2,200.0	11.89	235.41	2,178.5	-129.1	-187.2	-104.1	0.00	0.00	0.00
2,300.0	11.89	235.41	2,276.3	-140.8	-204.2	-113.6	0.00	0.00	0.00
2,400.0	11.89	235.41	2,374.2	-152.5	-221.2	-123.0	0.00	0.00	0.00
2,500.0	11.89	235.41	2,472.0	-164.2	-238.1	-132.4	0.00	0.00	0.00
2,600.0	11.89	235.41	2,569.9	-175.9	-255.1	-141.9	0.00	0.00	0.00
2,700.0	11.89	235.41	2,667.7	-187.6	-272.0	-151.3	0.00	0.00	0.00
2,800.0	11.89	235.41	2,765.6	-199.3	-289.0	-160.7	0.00	0.00	0.00
2,900.0	11.89	235.41	2,863.4	-211.0	-306.0	-170.2	0.00	0.00	0.00
3,000.0	11.89	235.41	2,961.3	-222.7	-322.9	-179.6	0.00	0.00	0.00
3,100.0	11.89	235.41	3,059.1	-234.4	-339.9	-189.0	0.00	0.00	0.00
3,200.0	11.89	235.41	3,157.0	-246.1	-356.8	-198.5	0.00	0.00	0.00
3,300.0	11.89	235.41	3,254.9	-257.8	-373.8	-207.9	0.00	0.00	0.00
3,400.0	11.89	235.41	3,352.7	-269.5	-390.8	-217.4	0.00	0.00	0.00
3,406.4	11.89	235.41	3,359.0	-270.3	-391.9	-218.0	0.00	0.00	0.00
PARKMAN									
3,500.0	11.89	235.41	3,450.6	-281.2	-407.7	-226.8	0.00	0.00	0.00
3,600.0	11.89	235.41	3,548.4	-292.9	-424.7	-236.2	0.00	0.00	0.00
3,700.0	11.89	235.41	3,646.3	-304.6	-441.7	-245.7	0.00	0.00	0.00
3,800.0	11.89	235.41	3,744.1	-316.3	-458.6	-255.1	0.00	0.00	0.00
3,873.5	11.89	235.41	3,816.0	-324.9	-471.1	-262.0	0.00	0.00	0.00
SUSSEX									
3,900.0	11.89	235.41	3,842.0	-328.0	-475.6	-264.5	0.00	0.00	0.00
4,000.0	11.89	235.41	3,939.8	-339.7	-492.5	-274.0	0.00	0.00	0.00
4,100.0	11.89	235.41	4,037.7	-351.4	-509.5	-283.4	0.00	0.00	0.00
4,200.0	11.89	235.41	4,135.5	-363.1	-526.5	-292.8	0.00	0.00	0.00
4,300.0	11.89	235.41	4,233.4	-374.8	-543.4	-302.3	0.00	0.00	0.00
4,400.0	11.89	235.41	4,331.2	-386.5	-560.4	-311.7	0.00	0.00	0.00
4,480.2	11.89	235.41	4,409.7	-395.9	-574.0	-319.3	0.00	0.00	0.00
4,500.0	11.49	235.41	4,429.1	-398.2	-577.3	-321.1	2.00	-2.00	0.00

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Well:	Antelope J-F-21HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (JULY 9, 2012)		

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)
4,600.0	9.49	235.41	4,527.4	-408.5	-592.3	-329.4	2.00	-2.00	0.00
4,700.0	7.49	235.41	4,626.3	-416.9	-604.5	-336.2	2.00	-2.00	0.00
4,800.0	5.49	235.41	4,725.7	-423.3	-613.8	-341.4	2.00	-2.00	0.00
4,900.0	3.49	235.41	4,825.4	-427.8	-620.2	-345.0	2.00	-2.00	0.00
5,000.0	1.49	235.41	4,925.3	-430.2	-623.8	-347.0	2.00	-2.00	0.00
5,074.7	0.00	0.00	5,000.0	-430.8	-624.6	-347.4	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,025.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,125.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,225.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,325.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,425.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,525.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,625.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,725.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,864.0	0.00	0.00	5,789.3	-430.8	-624.6	-347.4	0.00	0.00	0.00
KOP #2									
5,864.9	0.00	0.00	5,790.1	-430.8	-624.6	-347.4	0.00	0.00	0.00
5,900.0	3.87	0.67	5,825.2	-429.6	-624.6	-346.2	11.00	11.00	0.00
6,000.0	14.87	0.67	5,923.8	-413.4	-624.4	-330.1	11.00	11.00	0.00
6,100.0	25.87	0.67	6,017.4	-378.6	-624.0	-295.7	11.00	11.00	0.00
6,200.0	36.87	0.67	6,102.6	-326.7	-623.4	-244.3	11.00	11.00	0.00
6,232.5	40.44	0.67	6,128.0	-306.4	-623.2	-224.2	11.00	11.00	0.00
SHARON SPRINGS									
6,300.0	47.87	0.67	6,176.4	-259.4	-622.6	-177.7	11.00	11.00	0.00
6,367.0	55.23	0.67	6,218.0	-207.0	-622.0	-125.8	11.00	11.00	0.00
NIORARA A CHALK									
6,392.4	58.03	0.67	6,232.0	-185.7	-621.7	-104.7	11.00	11.00	0.00
NIORARA A MARL									
6,400.0	58.87	0.67	6,236.0	-179.3	-621.7	-98.3	11.00	11.00	0.00
6,500.0	69.87	0.67	6,279.2	-89.3	-620.6	-9.2	11.00	11.00	0.00
6,553.6	75.76	0.67	6,295.0	-38.1	-620.0	41.5	11.00	11.00	0.00
NIORARA B CHALK									
6,600.0	80.87	0.67	6,304.4	7.3	-619.5	86.5	11.00	11.00	0.00
6,683.0	89.99	0.67	6,311.0	90.0	-618.5	168.3	11.00	11.00	0.00
NIORARA B TARGET - 7"									
6,700.0	90.00	0.67	6,311.0	107.0	-618.3	185.2	0.03	0.03	0.00
6,800.0	90.00	0.67	6,311.0	207.0	-617.2	284.2	0.00	0.00	0.00
6,900.0	90.00	0.67	6,311.0	307.0	-616.0	383.2	0.00	0.00	0.00
7,000.0	90.00	0.67	6,311.0	407.0	-614.8	482.2	0.00	0.00	0.00
7,100.0	90.00	0.67	6,311.0	507.0	-613.7	581.3	0.00	0.00	0.00
7,200.0	90.00	0.67	6,311.0	607.0	-612.5	680.3	0.00	0.00	0.00
7,300.0	90.00	0.67	6,311.0	706.9	-611.4	779.3	0.00	0.00	0.00
7,400.0	90.00	0.67	6,311.0	806.9	-610.2	878.3	0.00	0.00	0.00
7,500.0	90.00	0.67	6,311.0	906.9	-609.0	977.4	0.00	0.00	0.00
7,600.0	90.00	0.67	6,311.0	1,006.9	-607.9	1,076.4	0.00	0.00	0.00
7,700.0	90.00	0.67	6,311.0	1,106.9	-606.7	1,175.4	0.00	0.00	0.00
7,800.0	90.00	0.67	6,311.0	1,206.9	-605.5	1,274.4	0.00	0.00	0.00
7,900.0	90.00	0.67	6,311.0	1,306.9	-604.4	1,373.5	0.00	0.00	0.00
8,000.0	90.00	0.67	6,311.0	1,406.9	-603.2	1,472.5	0.00	0.00	0.00
8,100.0	90.00	0.67	6,311.0	1,506.9	-602.0	1,571.5	0.00	0.00	0.00
8,200.0	90.00	0.67	6,311.0	1,606.9	-600.9	1,670.5	0.00	0.00	0.00
8,300.0	90.00	0.67	6,311.0	1,706.9	-599.7	1,769.5	0.00	0.00	0.00
8,400.0	90.00	0.67	6,311.0	1,806.9	-598.5	1,868.6	0.00	0.00	0.00

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Project:	SEC.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	North Reference:	True
Well:	Antelope J-F-21HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (JULY 9, 2012)		

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)
8,500.0	90.00	0.67	6,311.0	1,906.9	-597.4	1,967.6	0.00	0.00	0.00
8,600.0	90.00	0.67	6,311.0	2,006.9	-596.2	2,066.6	0.00	0.00	0.00
8,700.0	90.00	0.67	6,311.0	2,106.9	-595.1	2,165.6	0.00	0.00	0.00
8,800.0	90.00	0.67	6,311.0	2,206.8	-593.9	2,264.7	0.00	0.00	0.00
8,900.0	90.00	0.67	6,311.0	2,306.8	-592.7	2,363.7	0.00	0.00	0.00
9,000.0	90.00	0.67	6,311.0	2,406.8	-591.6	2,462.7	0.00	0.00	0.00
9,100.0	90.00	0.67	6,311.0	2,506.8	-590.4	2,561.7	0.00	0.00	0.00
9,200.0	90.00	0.67	6,311.0	2,606.8	-589.2	2,660.8	0.00	0.00	0.00
9,300.0	90.00	0.67	6,311.0	2,706.8	-588.1	2,759.8	0.00	0.00	0.00
9,400.0	90.00	0.67	6,311.0	2,806.8	-586.9	2,858.8	0.00	0.00	0.00
9,500.0	90.00	0.67	6,311.0	2,906.8	-585.7	2,957.8	0.00	0.00	0.00
9,600.0	90.00	0.67	6,311.0	3,006.8	-584.6	3,056.9	0.00	0.00	0.00
9,700.0	90.00	0.67	6,311.0	3,106.8	-583.4	3,155.9	0.00	0.00	0.00
9,800.0	90.00	0.67	6,311.0	3,206.8	-582.2	3,254.9	0.00	0.00	0.00
9,900.0	90.00	0.67	6,311.0	3,306.8	-581.1	3,353.9	0.00	0.00	0.00
10,000.0	90.00	0.67	6,311.0	3,406.8	-579.9	3,453.0	0.00	0.00	0.00
10,100.0	90.00	0.67	6,311.0	3,506.8	-578.8	3,552.0	0.00	0.00	0.00
10,200.0	90.00	0.67	6,311.0	3,606.8	-577.6	3,651.0	0.00	0.00	0.00
10,300.0	90.00	0.67	6,311.0	3,706.7	-576.4	3,750.0	0.00	0.00	0.00
10,400.0	90.00	0.67	6,311.0	3,806.7	-575.3	3,849.0	0.00	0.00	0.00
10,500.0	90.00	0.67	6,311.0	3,906.7	-574.1	3,948.1	0.00	0.00	0.00
10,600.0	90.00	0.67	6,311.0	4,006.7	-572.9	4,047.1	0.00	0.00	0.00
10,700.0	90.00	0.67	6,311.0	4,106.7	-571.8	4,146.1	0.00	0.00	0.00
10,800.0	90.00	0.67	6,311.0	4,206.7	-570.6	4,245.1	0.00	0.00	0.00
10,900.0	90.00	0.67	6,311.0	4,306.7	-569.4	4,344.2	0.00	0.00	0.00
11,000.0	90.00	0.67	6,311.0	4,406.7	-568.3	4,443.2	0.00	0.00	0.00
11,001.5	90.00	0.67	6,311.0	4,408.2	-568.3	4,444.7	0.00	0.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	800.0	800.0	0.0	0.0	KOP #1
	5,864.0	5,789.3	-430.8	-624.6	KOP #2



Directional

BONANZA CREEK ENERGY OPERATING

SEC.21-T5N-R62W

Antelope J-F-21HZ Pad Sec.21-T5N-R62W

Antelope J-F-21HZ

Wellbore #1

Plan #2 (JULY 9, 2012)

Anticollision Summary Report

09 July, 2012

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope J-F-21HZ
Project:	SEC.21-T5N-R62W	TVD Reference:	WELL @ 4646.0ft (Original Well Elev)
Reference Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope J-F-21HZ	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 #2 (JULY 9, 2012)	Offset TVD Reference:	Offset Datum

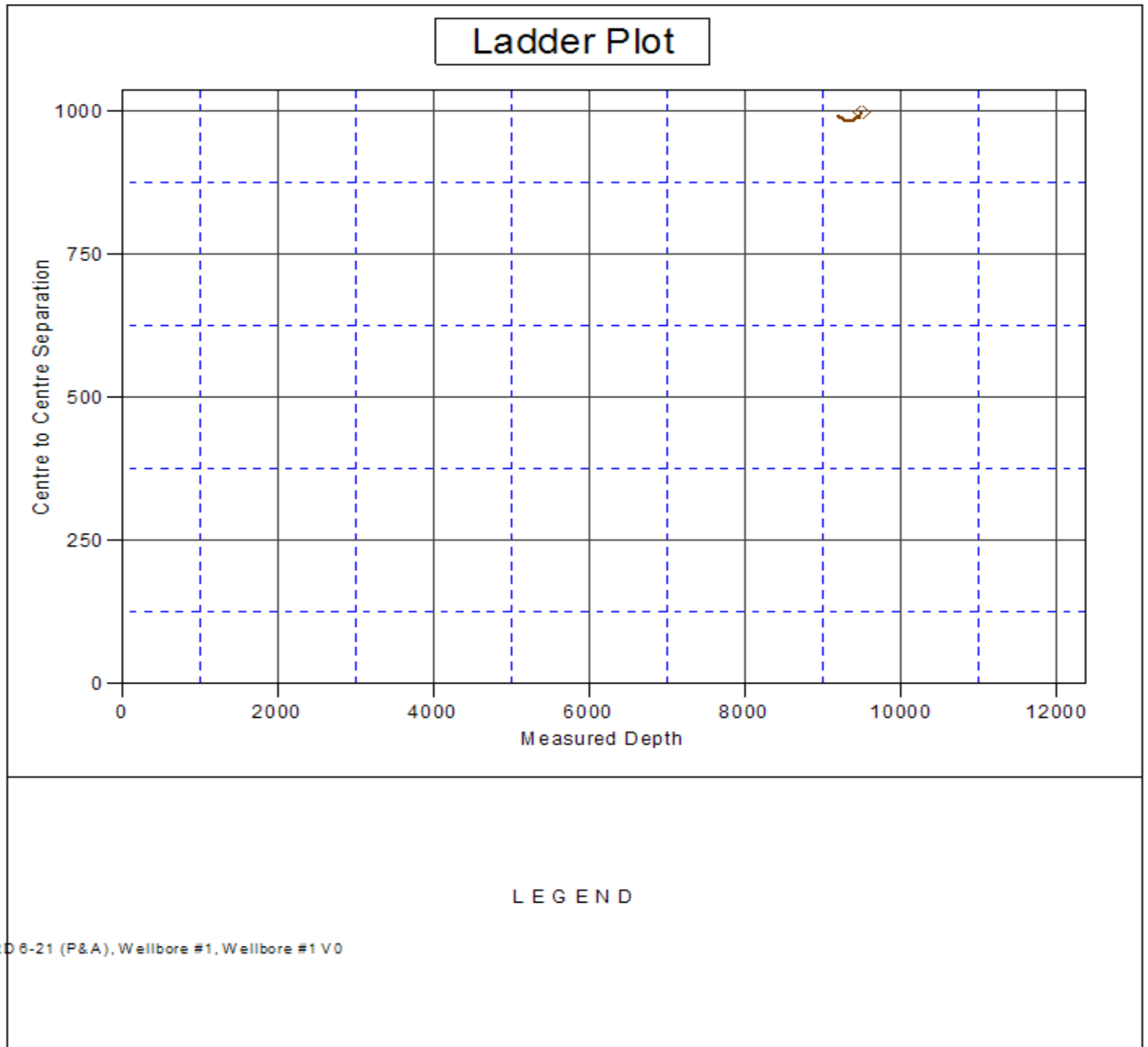
Reference	Plan #2 (JULY 9, 2012)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 50.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 7/9/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,000.6	Plan #2 (JULY 9, 2012) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antelope J-F-21HZ Pad Sec.21-T5N-R62W						
HUSKY ET AL-ALLARD 6-21 (P&A) - Wellbore #1 - Well	9,332.2	6,284.0	984.0	802.9	5.434 CC	
HUSKY ET AL-ALLARD 6-21 (P&A) - Wellbore #1 - Well	9,350.0	6,284.0	984.1	802.7	5.425 ES	
HUSKY ET AL-ALLARD 6-21 (P&A) - Wellbore #1 - Well	9,450.0	6,284.0	991.0	807.7	5.407 SF	

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Reference Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope J-F-21HZ	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 #2 (JULY 9, 2012)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4646.0ft (Original Well Elev)Coordinates are relative to: Antelope J-F-21HZ
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.76°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope J-F-21HZ
Project:	SEC.21-T5N-R62W	TVD Reference:	WELL @ 4646.0ft (Original Well Elev)
Reference Site:	Antelope J-F-21HZ Pad Sec.21-T5N-R62W	MD Reference:	WELL @ 4646.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope J-F-21HZ	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 #2 (JULY 9, 2012)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4646.0ft (Original Well Elev)Coordinates are relative to: Antelope J-F-21HZ
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