



**Weatherford®**

## **BONANZA CREEK**

**WELD COUNTY, CO  
PRONGHORN F-16 PAD  
PRONGHORN A-E-16HNB**

**PRONGHORN A-E-16HNB**

**Plan: Design #1**

## **PROPOSAL**

**26 December, 2013**



**Weatherford®**



Project: WELD COUNTY, CO  
Site: PRONGHORN F-16 PAD  
Well: PRONGHORN A-E-16HNB  
Wellbore: PRONGHORN A-E-16HNB  
Design: Design #1  
Latitude: 40.407500°N  
Longitude: 104.219150°W  
GL: 4642.00  
KB: WELL @ 4658.50ft (CADE 21)



#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
VP PRONGHORN A-E-16HNB	5878.25	320.00	-1249.00	40.408428°N	104.223618°W
LP PRONGHORN A-E-16HNB	6425.00	-297.41	-1240.89	40.406733°N	104.223621°W
PBHL PRONGHORN A-E-16HNB	6425.00	-4516.64	-1185.49	40.395150°N	104.223640°W

#### WELL DETAILS: PRONGHORN A-E-16HNB

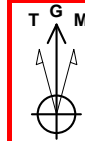
+N/-S	+E/-W	Northing	Ground Level: Easting	4642.00 Latitude	Longitude	Slot
0.00	0.00	1393868.66	3356678.12	40.407500°N	104.219150°W	

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	
1344.63	15.89	284.37	1334.48	27.18	-106.06	2.00	284.37	0.64	Start Build 2.00
5253.32	15.89	284.37	5093.77	292.82	-1142.92	0.00	0.00	6.93	Start Drop -2.00
6047.95	0.00	0.00	5878.25	320.00	-1249.00	2.00	180.00	7.57	Start Build 11.00
6320.68	30.00	179.25	6138.69	250.22	-1248.08	11.00	179.25	74.83	Start Build 11.00
6729.77	75.00	179.25	6381.37	-66.03	-1243.93	11.00	0.00	379.66	Start 100.00 hold at 6729.77 MD
6829.77	75.00	179.25	6407.26	-162.61	-1242.66	0.00	0.00	472.76	Start DLS 11.00 TFO 0.00
6966.14	90.00	179.25	6425.00	-297.41	-1240.89	11.00	0.00	602.69	Start DLS 0.00 TFO 164.44
11185.73	90.00	179.25	6425.00	-4516.64	-1185.49	0.00	164.78	4669.63	TD at 11185.73

#### PROJECT DETAILS: WELD COUNTY, CO

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

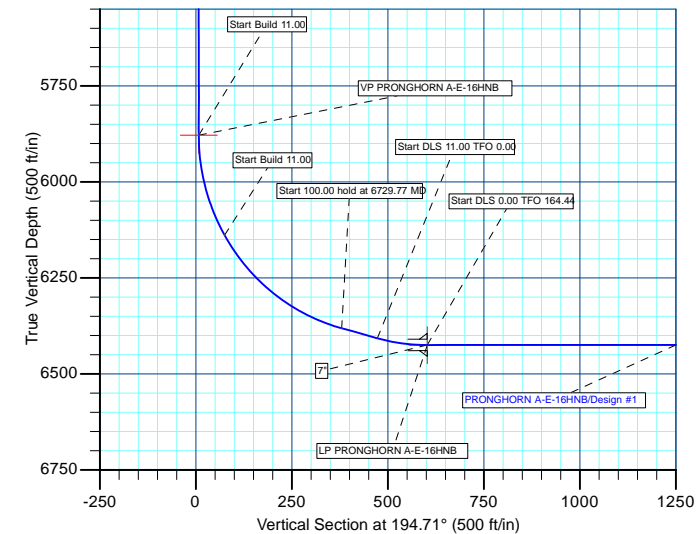
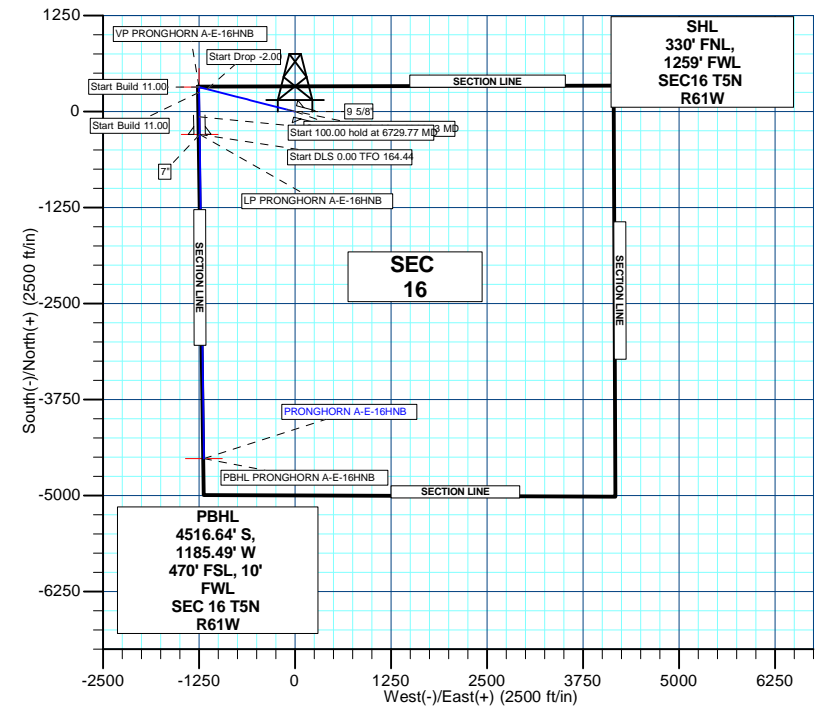
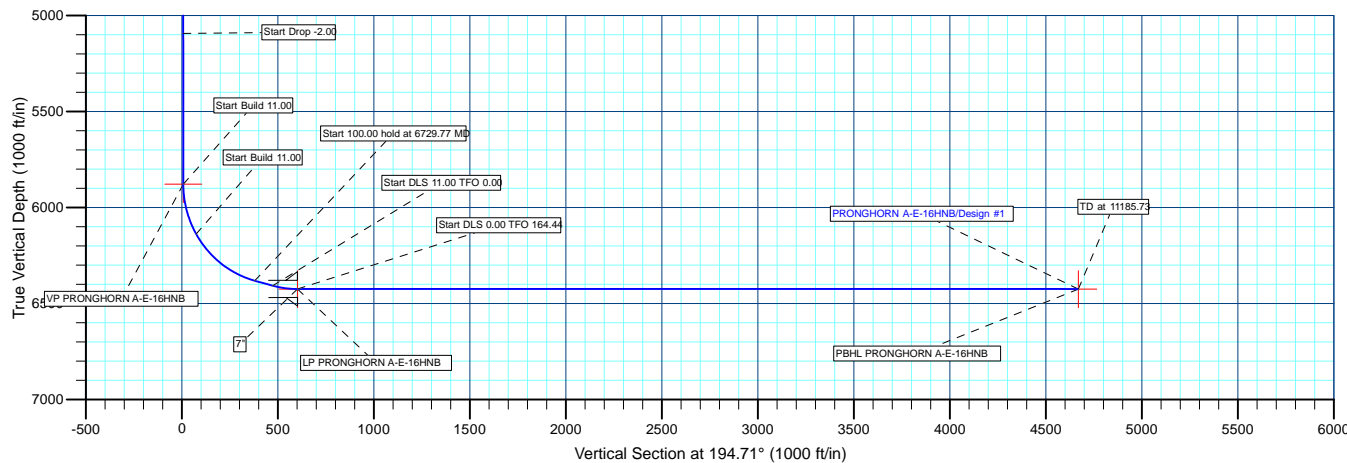


Azimuths to Grid North  
True North: -0.83°  
Magnetic North: 7.43°

Magnetic Field  
Strength: 52847.6snT  
Dip Angle: 67.04°  
Date: 12/26/2013  
Model: BGGM2013

#### CASING DETAILS

TVD	MD	Name	Size
450.00	450.00	9 5/8"	9-5/8
6425.00	6966.14	7"	7



Plan: Design #1 (PRONGHORN A-E-16HNB/PRONGHORN A-E-16HNB)

Created By: THOMAS JANOUSEK Date: 10:33, December 27 2013



**Weatherford®**

## **BONANZA CREEK**

**WELD COUNTY, CO  
PRONGHORN F-16 PAD  
PRONGHORN A-E-16HNB**

**PRONGHORN A-E-16HNB**

**Plan: Design #1**

## **Standard Planning Report**

**26 December, 2013**



**Weatherford®**



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN A-E-16HNB
<b>Company:</b>	BONANZA CREEK	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site:</b>	PRONGHORN F-16 PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PRONGHORN A-E-16HNB		
<b>Design:</b>	Design #1		

<b>Project</b>	WELD COUNTY, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	PRONGHORN F-16 PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,393,868.66 usft	<b>Latitude:</b> 40.407500°N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,356,678.12 usft	<b>Longitude:</b> 104.219150°W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b> 0.83 °

<b>Well</b>	PRONGHORN A-E-16HNB			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,393,868.66 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,356,678.12 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,642.00 ft

<b>Wellbore</b>	PRONGHORN A-E-16HNB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	12/26/2013	8.26	67.04	52,848

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	194.71

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,344.63	15.89	284.37	1,334.48	27.18	-106.08	2.00	2.00	0.00	284.37	
5,253.32	15.89	284.37	5,093.77	292.82	-1,142.92	0.00	0.00	0.00	0.00	
6,047.95	0.00	0.00	5,878.25	320.00	-1,249.00	2.00	-2.00	0.00	180.00	VP PRONGHORN A-I
6,320.68	30.00	179.25	6,138.69	250.22	-1,248.08	11.00	11.00	0.00	179.25	
6,729.77	75.00	179.25	6,381.37	-66.03	-1,243.93	11.00	11.00	0.00	0.00	
6,829.77	75.00	179.25	6,407.26	-162.61	-1,242.66	0.00	0.00	0.00	0.00	
6,966.14	90.00	179.25	6,425.00	-297.41	-1,240.89	11.00	11.00	0.00	0.00	LP PRONGHORN A-E
11,185.73	90.00	179.25	6,425.00	-4,516.64	-1,185.49	0.00	0.00	0.00	164.44	PBHL PRONGHORN



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well PRONGHORN A-E-16HNB
Company:	BONANZA CREEK	TVD Reference:	WELL @ 4658.50ft (CADE 21)
Project:	WELD COUNTY, CO	MD Reference:	WELL @ 4658.50ft (CADE 21)
Site:	PRONGHORN F-16 PAD	North Reference:	Grid
Well:	PRONGHORN A-E-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	PRONGHORN A-E-16HNB		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.00	284.37	600.00	0.11	-0.42	0.00	2.00	2.00	0.00
700.00	3.00	284.37	699.93	0.97	-3.80	0.02	2.00	2.00	0.00
800.00	5.00	284.37	799.68	2.71	-10.56	0.06	2.00	2.00	0.00
900.00	7.00	284.37	899.13	5.30	-20.69	0.13	2.00	2.00	0.00
1,000.00	9.00	284.37	998.15	8.75	-34.17	0.21	2.00	2.00	0.00
1,100.00	11.00	284.37	1,096.63	13.06	-50.99	0.31	2.00	2.00	0.00
1,200.00	13.00	284.37	1,194.44	18.22	-71.13	0.43	2.00	2.00	0.00
1,300.00	15.00	284.37	1,291.46	24.23	-94.56	0.57	2.00	2.00	0.00
Start 3908.69 hold at 1344.63 MD									
1,344.63	15.89	284.37	1,334.48	27.18	-106.08	0.64	2.00	2.00	0.00
1,400.00	15.89	284.37	1,387.73	30.94	-120.76	0.73	0.00	0.00	0.00
1,500.00	15.89	284.37	1,483.91	37.74	-147.29	0.89	0.00	0.00	0.00
1,600.00	15.89	284.37	1,580.09	44.53	-173.82	1.05	0.00	0.00	0.00
1,700.00	15.89	284.37	1,676.27	51.33	-200.34	1.21	0.00	0.00	0.00
1,800.00	15.89	284.37	1,772.44	58.13	-226.87	1.38	0.00	0.00	0.00
1,900.00	15.89	284.37	1,868.62	64.92	-253.40	1.54	0.00	0.00	0.00
2,000.00	15.89	284.37	1,964.80	71.72	-279.92	1.70	0.00	0.00	0.00
2,100.00	15.89	284.37	2,060.98	78.51	-306.45	1.86	0.00	0.00	0.00
2,200.00	15.89	284.37	2,157.15	85.31	-332.98	2.02	0.00	0.00	0.00
2,300.00	15.89	284.37	2,253.33	92.11	-359.50	2.18	0.00	0.00	0.00
2,400.00	15.89	284.37	2,349.51	98.90	-386.03	2.34	0.00	0.00	0.00
2,500.00	15.89	284.37	2,445.69	105.70	-412.56	2.50	0.00	0.00	0.00
2,600.00	15.89	284.37	2,541.87	112.50	-439.08	2.66	0.00	0.00	0.00
2,700.00	15.89	284.37	2,638.04	119.29	-465.61	2.82	0.00	0.00	0.00
2,800.00	15.89	284.37	2,734.22	126.09	-492.14	2.98	0.00	0.00	0.00
2,900.00	15.89	284.37	2,830.40	132.88	-518.66	3.14	0.00	0.00	0.00
3,000.00	15.89	284.37	2,926.58	139.68	-545.19	3.30	0.00	0.00	0.00
3,100.00	15.89	284.37	3,022.75	146.48	-571.72	3.47	0.00	0.00	0.00
3,200.00	15.89	284.37	3,118.93	153.27	-598.24	3.63	0.00	0.00	0.00
3,300.00	15.89	284.37	3,215.11	160.07	-624.77	3.79	0.00	0.00	0.00
3,400.00	15.89	284.37	3,311.29	166.87	-651.30	3.95	0.00	0.00	0.00
3,500.00	15.89	284.37	3,407.46	173.66	-677.82	4.11	0.00	0.00	0.00
3,600.00	15.89	284.37	3,503.64	180.46	-704.35	4.27	0.00	0.00	0.00
3,700.00	15.89	284.37	3,599.82	187.25	-730.88	4.43	0.00	0.00	0.00
3,800.00	15.89	284.37	3,696.00	194.05	-757.41	4.59	0.00	0.00	0.00
3,900.00	15.89	284.37	3,792.17	200.85	-783.93	4.75	0.00	0.00	0.00
4,000.00	15.89	284.37	3,888.35	207.64	-810.46	4.91	0.00	0.00	0.00
4,100.00	15.89	284.37	3,984.53	214.44	-836.99	5.07	0.00	0.00	0.00
4,200.00	15.89	284.37	4,080.71	221.24	-863.51	5.23	0.00	0.00	0.00
4,300.00	15.89	284.37	4,176.89	228.03	-890.04	5.39	0.00	0.00	0.00
4,400.00	15.89	284.37	4,273.06	234.83	-916.57	5.56	0.00	0.00	0.00
4,500.00	15.89	284.37	4,369.24	241.62	-943.09	5.72	0.00	0.00	0.00
4,600.00	15.89	284.37	4,465.42	248.42	-969.62	5.88	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well PRONGHORN A-E-16HNB
Company:	BONANZA CREEK	TVD Reference:	WELL @ 4658.50ft (CADE 21)
Project:	WELD COUNTY, CO	MD Reference:	WELL @ 4658.50ft (CADE 21)
Site:	PRONGHORN F-16 PAD	North Reference:	Grid
Well:	PRONGHORN A-E-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	PRONGHORN A-E-16HNB		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	15.89	284.37	4,561.60	255.22	-996.15	6.04	0.00	0.00	0.00
4,800.00	15.89	284.37	4,657.77	262.01	-1,022.67	6.20	0.00	0.00	0.00
4,900.00	15.89	284.37	4,753.95	268.81	-1,049.20	6.36	0.00	0.00	0.00
5,000.00	15.89	284.37	4,850.13	275.61	-1,075.73	6.52	0.00	0.00	0.00
5,100.00	15.89	284.37	4,946.31	282.40	-1,102.25	6.68	0.00	0.00	0.00
5,200.00	15.89	284.37	5,042.48	289.20	-1,128.78	6.84	0.00	0.00	0.00
Start Drop -2.00									
5,253.32	15.89	284.37	5,093.77	292.82	-1,142.92	6.93	0.00	0.00	0.00
5,300.00	14.96	284.37	5,138.76	295.90	-1,154.95	7.00	2.00	-2.00	0.00
5,400.00	12.96	284.37	5,235.81	301.89	-1,178.32	7.14	2.00	-2.00	0.00
5,500.00	10.96	284.37	5,333.63	307.03	-1,198.39	7.26	2.00	-2.00	0.00
5,600.00	8.96	284.37	5,432.12	311.33	-1,215.14	7.37	2.00	-2.00	0.00
5,700.00	6.96	284.37	5,531.15	314.76	-1,228.56	7.45	2.00	-2.00	0.00
5,800.00	4.96	284.37	5,630.60	317.34	-1,238.61	7.51	2.00	-2.00	0.00
5,900.00	2.96	284.37	5,730.36	319.05	-1,245.30	7.55	2.00	-2.00	0.00
6,000.00	0.96	284.37	5,830.30	319.90	-1,248.61	7.57	2.00	-2.00	0.00
Start Build 11.00									
6,047.95	0.00	0.00	5,878.25	320.00	-1,249.00	7.57	2.00	-2.00	0.00
6,050.00	0.23	179.25	5,880.30	320.00	-1,249.00	7.57	11.00	11.00	0.00
6,100.00	5.72	179.25	5,930.21	317.40	-1,248.97	10.07	11.00	11.00	0.00
6,150.00	11.22	179.25	5,979.64	310.04	-1,248.87	17.17	11.00	11.00	0.00
6,200.00	16.72	179.25	6,028.15	297.97	-1,248.71	28.81	11.00	11.00	0.00
6,250.00	22.22	179.25	6,075.27	281.31	-1,248.49	44.87	11.00	11.00	0.00
6,300.00	27.72	179.25	6,120.57	260.20	-1,248.21	65.21	11.00	11.00	0.00
Start Build 11.00									
6,320.68	30.00	179.25	6,138.69	250.22	-1,248.08	74.83	11.00	11.00	0.00
6,350.00	33.22	179.25	6,163.65	234.86	-1,247.88	89.64	11.00	11.00	0.00
6,400.00	38.72	179.25	6,204.10	205.50	-1,247.50	117.94	11.00	11.00	0.00
6,450.00	44.22	179.25	6,241.55	172.40	-1,247.06	149.84	11.00	11.00	0.00
6,500.00	49.72	179.25	6,275.65	135.87	-1,246.58	185.06	11.00	11.00	0.00
6,550.00	55.22	179.25	6,306.09	96.23	-1,246.06	223.26	11.00	11.00	0.00
6,600.00	60.72	179.25	6,332.60	53.86	-1,245.50	264.10	11.00	11.00	0.00
6,650.00	66.22	179.25	6,354.92	9.14	-1,244.92	307.21	11.00	11.00	0.00
6,700.00	71.72	179.25	6,372.85	-37.51	-1,244.30	352.17	11.00	11.00	0.00
Start 100.00 hold at 6729.77 MD									
6,729.77	75.00	179.25	6,381.37	-66.03	-1,243.93	379.66	11.00	11.00	0.00
6,800.00	75.00	179.25	6,399.55	-133.85	-1,243.04	445.04	0.00	0.00	0.00
Start DLS 11.00 TFO 0.00									
6,829.77	75.00	179.25	6,407.26	-162.61	-1,242.66	472.76	0.00	0.00	0.00
6,850.00	77.23	179.25	6,412.11	-182.24	-1,242.40	491.68	11.00	11.00	0.00
6,900.00	82.73	179.25	6,420.81	-231.46	-1,241.76	539.12	11.00	11.00	0.00
6,950.00	88.23	179.25	6,424.75	-281.28	-1,241.10	587.14	11.00	11.00	0.00
Start DLS 0.00 TFO 164.44 - 7"									
6,966.14	90.00	179.25	6,425.00	-297.41	-1,240.89	602.70	11.00	11.00	0.00
7,000.00	90.00	179.25	6,425.00	-331.27	-1,240.44	635.33	0.00	0.00	0.00
7,100.00	90.00	179.25	6,424.99	-431.26	-1,239.13	731.71	0.00	0.00	0.00
7,200.00	90.00	179.25	6,424.99	-531.25	-1,237.82	828.10	0.00	0.00	0.00
7,300.00	90.00	179.25	6,424.98	-631.24	-1,236.50	924.48	0.00	0.00	0.00
7,400.00	90.00	179.25	6,424.98	-731.24	-1,235.19	1,020.86	0.00	0.00	0.00
7,500.00	90.00	179.25	6,424.98	-831.23	-1,233.87	1,117.24	0.00	0.00	0.00
7,600.00	90.00	179.25	6,424.97	-931.22	-1,232.56	1,213.62	0.00	0.00	0.00
7,700.00	90.00	179.25	6,424.97	-1,031.21	-1,231.25	1,310.00	0.00	0.00	0.00
7,800.00	90.00	179.25	6,424.97	-1,131.20	-1,229.93	1,406.39	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well PRONGHORN A-E-16HNB
Company:	BONANZA CREEK	TVD Reference:	WELL @ 4658.50ft (CADE 21)
Project:	WELD COUNTY, CO	MD Reference:	WELL @ 4658.50ft (CADE 21)
Site:	PRONGHORN F-16 PAD	North Reference:	Grid
Well:	PRONGHORN A-E-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	PRONGHORN A-E-16HNB		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,900.00	90.00	179.25	6,424.96	-1,231.19	-1,228.62	1,502.77	0.00	0.00	0.00
8,000.00	90.00	179.25	6,424.96	-1,331.18	-1,227.30	1,599.15	0.00	0.00	0.00
8,100.00	90.00	179.25	6,424.96	-1,431.18	-1,225.99	1,695.53	0.00	0.00	0.00
8,200.00	90.00	179.25	6,424.96	-1,531.17	-1,224.68	1,791.91	0.00	0.00	0.00
8,300.00	90.00	179.25	6,424.95	-1,631.16	-1,223.36	1,888.30	0.00	0.00	0.00
8,400.00	90.00	179.25	6,424.95	-1,731.15	-1,222.05	1,984.68	0.00	0.00	0.00
8,500.00	90.00	179.25	6,424.95	-1,831.14	-1,220.74	2,081.06	0.00	0.00	0.00
8,600.00	90.00	179.25	6,424.95	-1,931.13	-1,219.42	2,177.44	0.00	0.00	0.00
8,700.00	90.00	179.25	6,424.95	-2,031.12	-1,218.11	2,273.82	0.00	0.00	0.00
8,800.00	90.00	179.25	6,424.95	-2,131.12	-1,216.80	2,370.21	0.00	0.00	0.00
8,900.00	90.00	179.25	6,424.95	-2,231.11	-1,215.48	2,466.59	0.00	0.00	0.00
9,000.00	90.00	179.25	6,424.95	-2,331.10	-1,214.17	2,562.97	0.00	0.00	0.00
9,100.00	90.00	179.25	6,424.95	-2,431.09	-1,212.86	2,659.35	0.00	0.00	0.00
9,200.00	90.00	179.25	6,424.95	-2,531.08	-1,211.55	2,755.73	0.00	0.00	0.00
9,300.00	90.00	179.25	6,424.95	-2,631.07	-1,210.23	2,852.12	0.00	0.00	0.00
9,400.00	90.00	179.25	6,424.95	-2,731.06	-1,208.92	2,948.50	0.00	0.00	0.00
9,500.00	90.00	179.25	6,424.95	-2,831.05	-1,207.61	3,044.88	0.00	0.00	0.00
9,600.00	90.00	179.25	6,424.95	-2,931.05	-1,206.29	3,141.26	0.00	0.00	0.00
9,700.00	90.00	179.25	6,424.95	-3,031.04	-1,204.98	3,237.65	0.00	0.00	0.00
9,800.00	90.00	179.25	6,424.95	-3,131.03	-1,203.67	3,334.03	0.00	0.00	0.00
9,900.00	90.00	179.25	6,424.95	-3,231.02	-1,202.36	3,430.41	0.00	0.00	0.00
10,000.00	90.00	179.25	6,424.96	-3,331.01	-1,201.05	3,526.79	0.00	0.00	0.00
10,100.00	90.00	179.25	6,424.96	-3,431.00	-1,199.73	3,623.17	0.00	0.00	0.00
10,200.00	90.00	179.25	6,424.96	-3,530.99	-1,198.42	3,719.56	0.00	0.00	0.00
10,300.00	90.00	179.25	6,424.96	-3,630.99	-1,197.11	3,815.94	0.00	0.00	0.00
10,400.00	90.00	179.25	6,424.97	-3,730.98	-1,195.80	3,912.32	0.00	0.00	0.00
10,500.00	90.00	179.25	6,424.97	-3,830.97	-1,194.48	4,008.70	0.00	0.00	0.00
10,600.00	90.00	179.25	6,424.97	-3,930.96	-1,193.17	4,105.09	0.00	0.00	0.00
10,700.00	90.00	179.25	6,424.98	-4,030.95	-1,191.86	4,201.47	0.00	0.00	0.00
10,800.00	90.00	179.25	6,424.98	-4,130.94	-1,190.55	4,297.85	0.00	0.00	0.00
10,900.00	90.00	179.25	6,424.99	-4,230.93	-1,189.24	4,394.23	0.00	0.00	0.00
11,000.00	90.00	179.25	6,424.99	-4,330.93	-1,187.93	4,490.62	0.00	0.00	0.00
11,100.00	90.00	179.25	6,425.00	-4,430.92	-1,186.61	4,587.00	0.00	0.00	0.00
TD at 11185.73									
11,185.73	90.00	179.25	6,425.00	-4,516.64	-1,185.49	4,669.63	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP PRONGHORN A-E-1 - hit/miss target - Shape - Point	0.00	0.00	5,878.25	320.00	-1,249.00	1,394,188.66	3,355,429.12	40.408428°N	104.223618°W
PBHL PRONGHORN A- - plan hits target center - Point	0.00	0.00	6,425.00	-4,516.64	-1,185.49	1,389,352.02	3,355,492.63	40.395150°N	104.223640°W
LP PRONGHORN A-E-1 - plan hits target center - Point	0.00	0.00	6,425.00	-297.41	-1,240.89	1,393,571.25	3,355,437.23	40.406733°N	104.223621°W



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well PRONGHORN A-E-16HNB
Company:	BONANZA CREEK	TVD Reference:	WELL @ 4658.50ft (CADE 21)
Project:	WELD COUNTY, CO	MD Reference:	WELL @ 4658.50ft (CADE 21)
Site:	PRONGHORN F-16 PAD	North Reference:	Grid
Well:	PRONGHORN A-E-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	PRONGHORN A-E-16HNB		
Design:	Design #1		

## Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,966.14	6,425.00	7"	7	8-3/4
450.00	450.00	9 5/8"	9-5/8	12-1/4

## Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
550.00	550.00	0.00	0.00	Start Build 2.00
1,344.63	1,334.48	27.18	-106.08	Start 3908.69 hold at 1344.63 MD
5,253.32	5,093.77	292.82	-1,142.92	Start Drop -2.00
6,047.95	5,878.25	320.00	-1,249.00	Start Build 11.00
6,320.68	6,138.69	250.22	-1,248.08	Start Build 11.00
6,729.77	6,381.37	-66.03	-1,243.93	Start 100.00 hold at 6729.77 MD
6,829.77	6,407.26	-162.61	-1,242.66	Start DLS 11.00 TFO 0.00
6,966.14	6,425.00	-297.41	-1,240.89	Start DLS 0.00 TFO 164.44
11,185.73	6,425.00	-4,516.64	-1,185.49	TD at 11185.73





**Weatherford®**

## **BONANZA CREEK**

**WELD COUNTY, CO**

**PRONGHORN F-16 PAD**

**PRONGHORN A-E-16HNB**

**PRONGHORN A-E-16HNB**

**Design #1**

## **Anticollision Report**

**27 December, 2013**



**Weatherford®**

<b>Company:</b>	BONANZA CREEK	<b>Local Co-ordinate Reference:</b>	Site PRONGHORN F-16 PAD
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Reference Site:</b>	PRONGHORN F-16 PAD	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	PRONGHORN A-E-16HNB	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Design #1
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference
<b>Interpolation Method:</b>	MD Interval 100.00ft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 1,318.57 ft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	ISCWSA
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic
<b>Casing Method:</b>	Not applied

Survey Tool Program		Date	12/27/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,185.73	Design #1 (PRONGHORN A-E-16HNB)	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						
PRONGHORN F-16 PAD						
PRONGHORN 11-14-16HNB - PRONGHORN 11-14-16H	1,024.95	1,026.01	10.33	5.95	2.358	CC, ES, SF

<b>Offset Design</b>	PRONGHORN F-16 PAD - PRONGHORN 11-14-16HNB - PRONGHORN 11-14-16HNB - Design #1												<b>Offset Site Error:</b>	0.00 ft
<b>Survey Program:</b>	0-MWD												<b>Offset Well Error:</b>	0.00 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Distance</b>		<b>Minimum Separation</b>		<b>Separation Factor</b>		<b>Warning</b>				
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>		
0.00	0.00	0.00	0.00	0.00	0.00	179.17	-18.22	0.26	18.22					
100.00	100.00	100.00	100.00	0.09	0.09	179.17	-18.22	0.26	18.22	18.03	0.19	97.075		
200.00	200.00	200.00	200.00	0.32	0.32	179.17	-18.22	0.26	18.22	17.58	0.64	28.592		
300.00	300.00	300.00	300.00	0.54	0.54	179.17	-18.22	0.26	18.22	17.13	1.09	16.765		
400.00	400.00	400.00	400.00	0.77	0.77	179.17	-18.22	0.26	18.22	16.68	1.54	11.859		
500.00	500.00	500.00	500.00	0.99	0.99	179.17	-18.22	0.26	18.22	16.23	1.99	9.175		
600.00	600.00	600.16	600.16	1.21	1.21	-105.35	-18.00	-0.12	18.11	15.68	2.43	7.459		
700.00	699.93	700.49	700.42	1.42	1.43	-106.61	-16.22	-3.15	17.22	14.36	2.86	6.029		
800.00	799.68	800.79	800.47	1.65	1.66	-109.56	-12.68	-9.21	15.47	12.16	3.31	4.675		
900.00	899.13	901.05	900.17	1.90	1.91	-115.43	-7.38	-18.29	12.95	9.16	3.79	3.415		
1,000.00	998.15	1,001.09	999.32	2.18	2.19	-129.86	-0.68	-29.75	10.48	6.21	4.27	2.452		
1,024.95	1,022.78	1,026.01	1,024.02	2.26	2.26	-136.44	1.02	-32.66	10.33	5.95	4.38	2.358	CC, ES, SF	
1,100.00	1,096.63	1,100.91	1,098.23	2.50	2.48	-158.65	6.13	-41.41	11.93	7.29	4.64	2.569		
1,200.00	1,194.44	1,200.53	1,196.93	2.88	2.79	-178.04	12.92	-53.04	19.01	13.95	5.06	3.759		
1,300.00	1,291.46	1,299.81	1,295.30	3.32	3.09	174.24	19.69	-64.63	30.51	24.97	5.54	5.510		
1,400.00	1,387.73	1,398.71	1,393.30	3.82	3.41	171.36	26.44	-76.18	45.15	39.11	6.05	7.466		
1,500.00	1,483.91	1,497.57	1,491.24	4.34	3.73	169.96	33.18	-87.72	60.19	53.61	6.58	9.149		
1,600.00	1,580.09	1,596.42	1,589.19	4.88	4.05	169.12	39.92	-99.26	75.25	68.13	7.12	10.572		
1,700.00	1,676.27	1,695.28	1,687.14	5.43	4.37	168.56	46.67	-110.80	90.32	82.66	7.66	11.787		
1,800.00	1,772.44	1,794.13	1,785.09	5.98	4.69	168.16	53.41	-122.35	105.39	97.18	8.21	12.833		
1,900.00	1,868.62	1,892.99	1,883.03	6.54	5.02	167.86	60.15	-133.89	120.47	111.70	8.77	13.743		
2,000.00	1,964.80	1,991.84	1,980.98	7.11	5.35	167.63	66.90	-145.43	135.55	126.23	9.32	14.539		
2,100.00	2,060.98	2,090.70	2,078.93	7.68	5.67	167.44	73.64	-156.97	150.63	140.75	9.88	15.241		
2,200.00	2,157.15	2,189.55	2,176.87	8.25	6.00	167.29	80.38	-168.51	165.72	155.27	10.45	15.865		
2,300.00	2,253.33	2,288.41	2,274.82	8.82	6.33	167.16	87.12	-180.05	180.80	169.79	11.01	16.422		
2,400.00	2,349.51	2,387.26	2,372.77	9.40	6.66	167.06	93.87	-191.60	195.89	184.31	11.58	16.923		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	BONANZA CREEK	<b>Local Co-ordinate Reference:</b>	Site PRONGHORN F-16 PAD
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Reference Site:</b>	PRONGHORN F-16 PAD	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	PRONGHORN A-E-16HNB	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design PRONGHORN F-16 PAD - PRONGHORN 11-14-16HNB - PRONGHORN 11-14-16HNB - Design #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
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		
2,500.00	2,445.69	2,486.12	2,470.72	9.98	7.00	166.96	100.61	-203.14	210.97	198.83	12.14	17.375		
2,600.00	2,541.87	2,584.97	2,568.66	10.55	7.33	166.88	107.35	-214.68	226.06	213.35	12.71	17.784		
2,700.00	2,638.04	2,683.83	2,666.61	11.13	7.66	166.81	114.09	-226.22	241.15	227.86	13.28	18.158		
2,800.00	2,734.22	2,782.68	2,764.56	11.71	7.99	166.75	120.84	-237.76	256.23	242.38	13.85	18.499		
2,900.00	2,830.40	2,881.54	2,862.50	12.30	8.32	166.70	127.58	-249.30	271.32	256.90	14.42	18.812		
3,000.00	2,926.58	2,980.39	2,960.45	12.88	8.66	166.65	134.32	-260.85	286.41	271.41	14.99	19.100		
3,100.00	3,022.75	3,079.25	3,058.40	13.46	8.99	166.60	141.06	-272.39	301.49	285.93	15.57	19.367		
3,200.00	3,118.93	3,178.10	3,156.35	14.04	9.32	166.57	147.81	-283.93	316.58	300.44	16.14	19.613		
3,300.00	3,215.11	3,276.96	3,254.29	14.62	9.66	166.53	154.55	-295.47	331.67	314.96	16.71	19.843		
3,400.00	3,311.29	3,375.81	3,352.24	15.21	9.99	166.50	161.29	-307.01	346.76	329.47	17.29	20.056		
3,500.00	3,407.46	3,474.67	3,450.19	15.79	10.32	166.47	168.03	-318.55	361.85	343.98	17.86	20.255		
3,600.00	3,503.64	3,573.52	3,548.13	16.38	10.66	166.44	174.78	-330.09	376.93	358.50	18.44	20.442		
3,700.00	3,599.82	3,672.38	3,646.08	16.96	10.99	166.41	181.52	-341.64	392.02	373.01	19.02	20.616		
3,800.00	3,696.00	3,771.23	3,744.03	17.54	11.33	166.39	188.26	-353.18	407.11	387.52	19.59	20.780		
3,900.00	3,792.17	3,870.09	3,841.98	18.13	11.66	166.37	195.00	-364.72	422.20	402.03	20.17	20.935		
4,000.00	3,888.35	3,968.94	3,939.92	18.71	11.99	166.35	201.75	-376.26	437.29	416.54	20.74	21.080		
4,100.00	3,984.53	4,067.80	4,037.87	19.30	12.33	166.33	208.49	-387.80	452.38	431.06	21.32	21.218		
4,200.00	4,080.71	4,166.65	4,135.82	19.88	12.66	166.31	215.23	-399.34	467.47	445.57	21.90	21.348		
4,300.00	4,176.89	4,265.51	4,233.76	20.47	13.00	166.29	221.97	-410.89	482.55	460.08	22.48	21.471		
4,400.00	4,273.06	4,364.36	4,331.71	21.06	13.33	166.28	228.72	-422.43	497.64	474.59	23.05	21.587		
4,500.00	4,369.24	4,463.22	4,429.66	21.64	13.67	166.26	235.46	-433.97	512.73	489.10	23.63	21.698		
4,600.00	4,465.42	4,562.07	4,527.60	22.23	14.00	166.25	242.20	-445.51	527.82	503.61	24.21	21.804		
4,700.00	4,561.60	4,660.93	4,625.55	22.81	14.34	166.23	248.94	-457.05	542.91	518.12	24.79	21.904		
4,800.00	4,657.77	4,759.78	4,723.50	23.40	14.67	166.22	255.69	-468.59	558.00	532.63	25.36	21.999		
4,900.00	4,753.95	4,858.64	4,821.45	23.99	15.01	166.21	262.43	-480.14	573.09	547.14	25.94	22.091		
5,000.00	4,850.13	4,957.49	4,919.39	24.57	15.34	166.20	269.17	-491.68	588.18	561.66	26.52	22.178		
5,100.00	4,946.31	5,056.35	5,017.34	25.16	15.68	166.19	275.91	-503.22	603.27	576.17	27.10	22.261		
5,200.00	5,042.48	5,155.20	5,115.29	25.74	16.01	166.18	282.66	-514.76	618.35	590.68	27.68	22.341		
5,300.00	5,138.76	5,254.11	5,213.29	26.29	16.35	166.19	289.40	-526.31	633.08	604.80	28.28	22.390		
5,400.00	5,235.81	5,353.40	5,311.66	26.70	16.68	166.17	296.17	-537.90	644.92	616.06	28.85	22.350		
5,500.00	5,333.63	5,453.02	5,410.37	27.05	17.02	166.05	302.97	-549.53	653.39	623.98	29.41	22.216		
5,600.00	5,432.12	5,549.77	5,506.23	27.36	17.34	165.87	309.55	-560.79	658.54	628.61	29.93	22.006		
5,700.00	5,531.15	5,653.06	5,588.96	27.62	17.56	165.71	314.40	-569.09	661.99	631.67	30.32	21.831		
5,800.00	5,630.61	5,716.34	5,671.93	27.83	17.73	165.59	318.03	-575.31	664.58	633.94	30.65	21.685		
5,900.00	5,730.36	5,800.00	5,755.45	28.00	17.89	165.52	320.45	-579.46	666.31	635.40	30.91	21.557		
6,000.00	5,830.30	5,882.90	5,838.32	28.12	18.01	165.48	321.64	-581.50	667.17	636.06	31.10	21.451		
6,100.00	5,930.21	5,974.29	5,929.62	28.20	18.12	-89.40	319.24	-581.71	667.26	635.97	31.30	21.321		
6,200.00	6,028.15	6,073.17	6,026.50	28.22	18.15	-89.43	300.24	-581.48	667.23	635.87	31.36	21.275		
6,300.00	6,120.57	6,172.11	6,118.12	28.19	18.10	-89.47	263.27	-581.05	667.17	635.92	31.25	21.346		
6,400.00	6,204.10	6,271.15	6,201.18	28.12	18.00	-89.53	209.61	-580.43	667.09	636.03	31.06	21.477		
6,500.00	6,275.65	6,370.32	6,272.69	28.04	17.87	-89.61	141.11	-579.62	666.98	636.08	30.90	21.584		
6,600.00	6,332.60	6,469.66	6,330.02	27.96	17.74	-89.70	60.18	-578.68	666.86	635.95	30.91	21.573		
6,700.00	6,372.85	6,569.19	6,371.03	27.90	17.67	-89.81	-30.33	-577.62	666.73	635.51	31.21	21.360		
6,800.00	6,399.55	6,669.07	6,398.04	27.91	17.67	-89.84	-126.46	-576.49	666.59	634.68	31.91	20.892		
6,900.00	6,420.81	6,768.92	6,420.02	28.00	17.90	-89.92	-223.77	-575.36	666.44	633.49	32.96	20.221		
7,000.00	6,425.00	6,868.86	6,425.00	28.18	18.35	-90.00	-323.48	-574.19	666.30	631.96	34.34	19.405		
7,100.00	6,424.99	6,968.87	6,424.99	28.48	18.97	-90.00	-423.48	-573.02	666.15	630.56	35.60	18.714		
7,200.00	6,424.99	7,068.87	6,424.99	28.87	19.74	-90.00	-523.47	-571.85	666.01	629.04	36.97	18.016		
7,300.00	6,424.98	7,168.87	6,424.99	29.36	20.65	-90.00	-623.46	-570.69	665.86	627.18	38.68	17.213		
7,400.00	6,424.98	7,268.87	6,424.98	29.96	21.67	-90.00	-723.46	-569.52	665.72	625.01	40.71	16.354		
7,500.00	6,424.98	7,368.87	6,424.98	30.66	22.80	-90.00	-823.45	-568.35	665.57	622.58	42.99	15.483		
7,600.00	6,424.97	7,468.87	6,424.97	31.46	24.03	-90.00	-923.45	-567.18	665.43	619.93	45.49	14.628		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

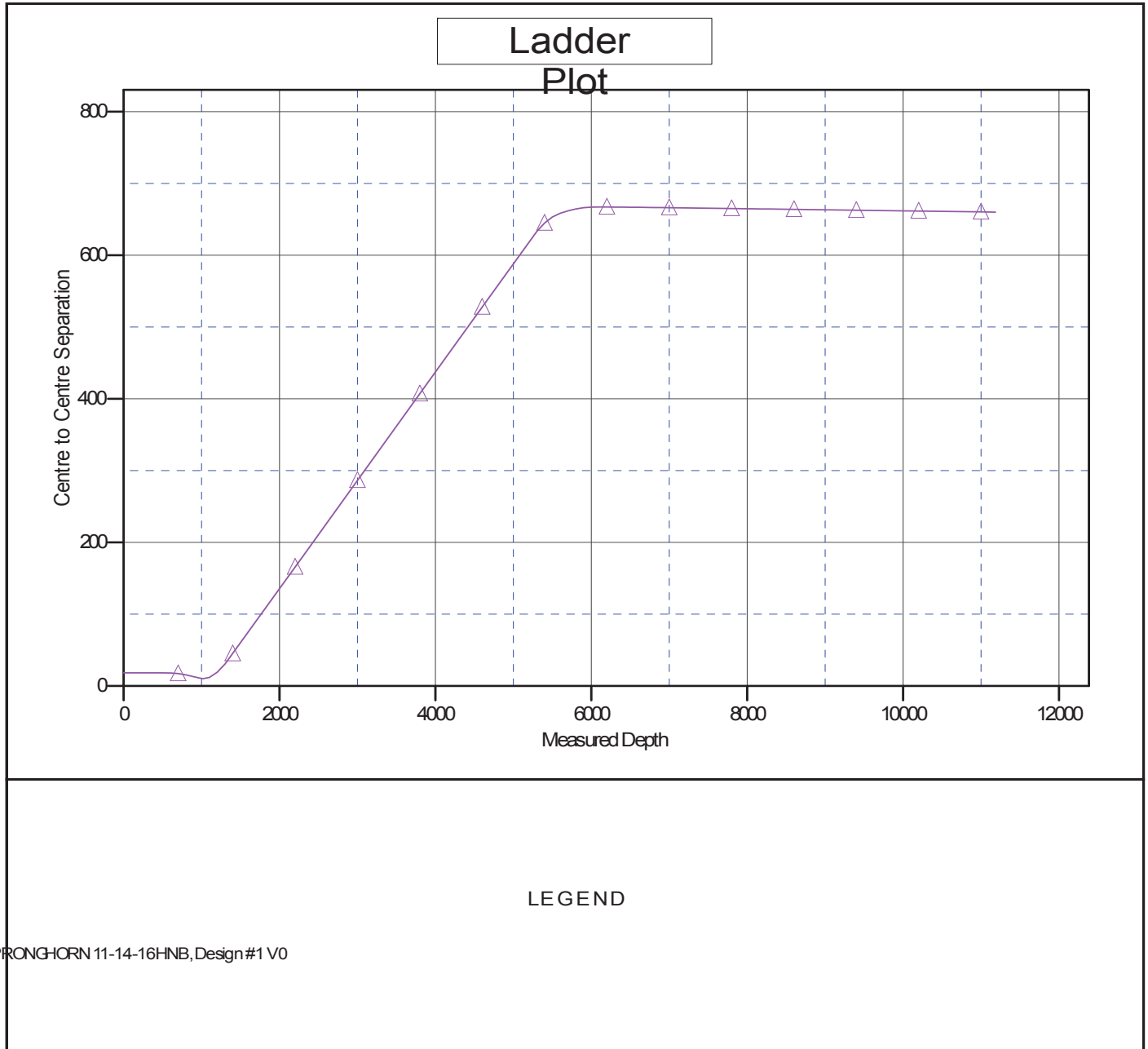
<b>Company:</b>	BONANZA CREEK	<b>Local Co-ordinate Reference:</b>	Site PRONGHORN F-16 PAD
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Reference Site:</b>	PRONGHORN F-16 PAD	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	PRONGHORN A-E-16HNB	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design PRONGHORN F-16 PAD - PRONGHORN 11-14-16HNB - PRONGHORN 11-14-16HNB - Design #1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
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		
7,700.00	6,424.97	7,568.87	6,424.97	32.35	25.35	-90.00	-1,023.44	-566.01	665.28	617.10	48.18	13.808		
7,800.00	6,424.97	7,668.87	6,424.97	33.33	26.74	-90.00	-1,123.43	-564.84	665.13	614.11	51.03	13.035		
7,900.00	6,424.96	7,768.87	6,424.96	34.40	28.20	-90.00	-1,223.43	-563.68	664.99	610.98	54.01	12.313		
8,000.00	6,424.96	7,868.87	6,424.96	35.54	29.71	-90.00	-1,323.42	-562.51	664.84	607.74	57.10	11.644		
8,100.00	6,424.96	7,968.87	6,424.96	36.75	31.28	-90.00	-1,423.42	-561.34	664.70	604.41	60.28	11.026		
8,200.00	6,424.96	8,068.87	6,424.96	38.02	32.89	-90.00	-1,523.41	-560.17	664.55	601.00	63.55	10.457		
8,300.00	6,424.95	8,168.87	6,424.96	39.35	34.54	-90.00	-1,623.40	-559.01	664.40	597.52	66.88	9.934		
8,400.00	6,424.95	8,268.88	6,424.95	40.74	36.22	-90.00	-1,723.40	-557.84	664.26	593.98	70.28	9.452		
8,500.00	6,424.95	8,368.88	6,424.95	42.17	37.92	-90.00	-1,823.39	-556.67	664.11	590.39	73.72	9.009		
8,600.00	6,424.95	8,468.88	6,424.95	43.64	39.66	-90.00	-1,923.39	-555.51	663.96	586.76	77.21	8.600		
8,700.00	6,424.95	8,568.88	6,424.95	45.14	41.41	-90.00	-2,023.38	-554.34	663.82	583.09	80.73	8.222		
8,800.00	6,424.95	8,668.88	6,424.95	46.68	43.19	-90.00	-2,123.37	-553.17	663.67	579.38	84.29	7.874		
8,900.00	6,424.95	8,768.88	6,424.95	48.25	44.98	-90.00	-2,223.37	-552.01	663.52	575.65	87.88	7.550		
9,000.00	6,424.95	8,868.88	6,424.95	49.85	46.79	-90.00	-2,323.36	-550.84	663.38	571.89	91.49	7.251		
9,100.00	6,424.95	8,968.88	6,424.95	51.47	48.61	-90.00	-2,423.35	-549.67	663.23	568.10	95.13	6.972		
9,200.00	6,424.95	9,068.88	6,424.95	53.11	50.44	-90.00	-2,523.35	-548.51	663.08	564.30	98.79	6.712		
9,300.00	6,424.95	9,168.88	6,424.95	54.77	52.28	-90.00	-2,623.34	-547.34	662.94	560.48	102.46	6.470		
9,400.00	6,424.95	9,268.88	6,424.95	56.45	54.14	-90.00	-2,723.34	-546.17	662.79	556.64	106.15	6.244		
9,500.00	6,424.95	9,368.88	6,424.95	58.14	56.00	-90.00	-2,823.33	-545.01	662.64	552.78	109.86	6.032		
9,600.00	6,424.95	9,468.88	6,424.95	59.85	57.87	-90.00	-2,923.32	-543.84	662.50	548.92	113.58	5.833		
9,700.00	6,424.95	9,568.89	6,424.95	61.57	59.75	-90.00	-3,023.32	-542.68	662.35	545.04	117.31	5.646		
9,800.00	6,424.95	9,668.89	6,424.95	63.30	61.63	-90.00	-3,123.31	-541.51	662.20	541.15	121.05	5.470		
9,900.00	6,424.95	9,768.89	6,424.96	65.05	63.52	-90.00	-3,223.31	-540.35	662.06	537.25	124.80	5.305		
10,000.00	6,424.96	9,868.89	6,424.96	66.80	65.42	-90.00	-3,323.30	-539.18	661.91	533.34	128.57	5.148		
10,100.00	6,424.96	9,968.89	6,424.96	68.57	67.32	-90.00	-3,423.29	-538.02	661.76	529.42	132.34	5.001		
10,200.00	6,424.96	10,068.89	6,424.96	70.34	69.22	-90.00	-3,523.29	-536.85	661.61	525.50	136.11	4.861		
10,300.00	6,424.96	10,168.89	6,424.97	72.12	71.13	-90.00	-3,623.28	-535.69	661.47	521.57	139.90	4.728		
10,400.00	6,424.97	10,268.89	6,424.97	73.91	73.04	-90.00	-3,723.28	-534.52	661.32	517.63	143.69	4.602		
10,500.00	6,424.97	10,368.89	6,424.97	75.71	74.96	-90.00	-3,823.27	-533.36	661.17	513.69	147.48	4.483		
10,600.00	6,424.97	10,468.89	6,424.97	77.51	76.88	-90.00	-3,923.26	-532.19	661.02	509.74	151.29	4.369		
10,700.00	6,424.98	10,568.89	6,424.98	79.31	78.80	-90.00	-4,023.26	-531.03	660.87	505.78	155.09	4.261		
10,800.00	6,424.98	10,668.89	6,424.98	81.13	80.73	-90.00	-4,123.25	-529.87	660.73	501.82	158.90	4.158		
10,900.00	6,424.99	10,768.89	6,424.99	82.95	82.66	-90.00	-4,223.25	-528.70	660.58	497.86	162.72	4.060		
11,000.00	6,424.99	10,868.90	6,424.99	84.77	84.59	-90.00	-4,323.24	-527.54	660.43	493.89	166.54	3.966		
11,100.00	6,425.00	10,968.90	6,425.00	86.59	86.52	-90.00	-4,423.23	-526.38	660.28	489.92	170.36	3.876		
11,185.73	6,425.00	11,054.63	6,425.00	88.16	88.15	-90.00	-4,508.96	-525.38	660.16	486.55	173.61	3.803		

<b>Company:</b>	BONANZA CREEK	<b>Local Co-ordinate Reference:</b>	Site PRONGHORN F-16 PAD
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Reference Site:</b>	PRONGHORN F-16 PAD	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	PRONGHORN A-E-16HNB	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4658.50ft (CADE 21)  
Offset Depths are relative to Offset Datum  
Central Meridian is 105.500000°W

Coordinates are relative to: PRONGHORN F-16 PAD  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.83°



<b>Company:</b>	BONANZA CREEK	<b>Local Co-ordinate Reference:</b>	Site PRONGHORN F-16 PAD
<b>Project:</b>	WELD COUNTY, CO	<b>TVD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Reference Site:</b>	PRONGHORN F-16 PAD	<b>MD Reference:</b>	WELL @ 4658.50ft (CADE 21)
<b>Site Error:</b>	0.00 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	PRONGHORN A-E-16HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	PRONGHORN A-E-16HNB	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4658.50ft (CADE 21)  
Offset Depths are relative to Offset Datum  
Central Meridian is 105.500000°W

Coordinates are relative to: PRONGHORN F-16 PAD  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.83°

