

### Well Name: Peterson I-28

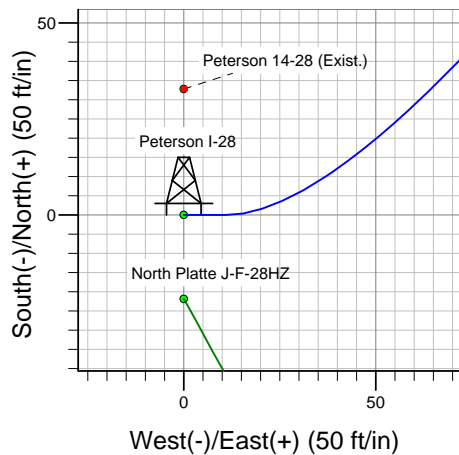
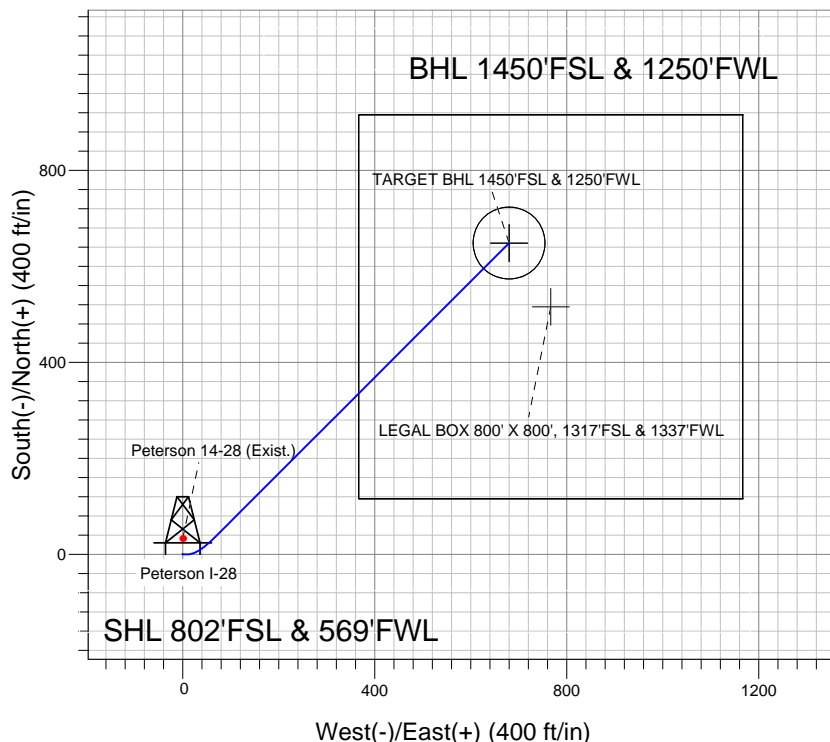
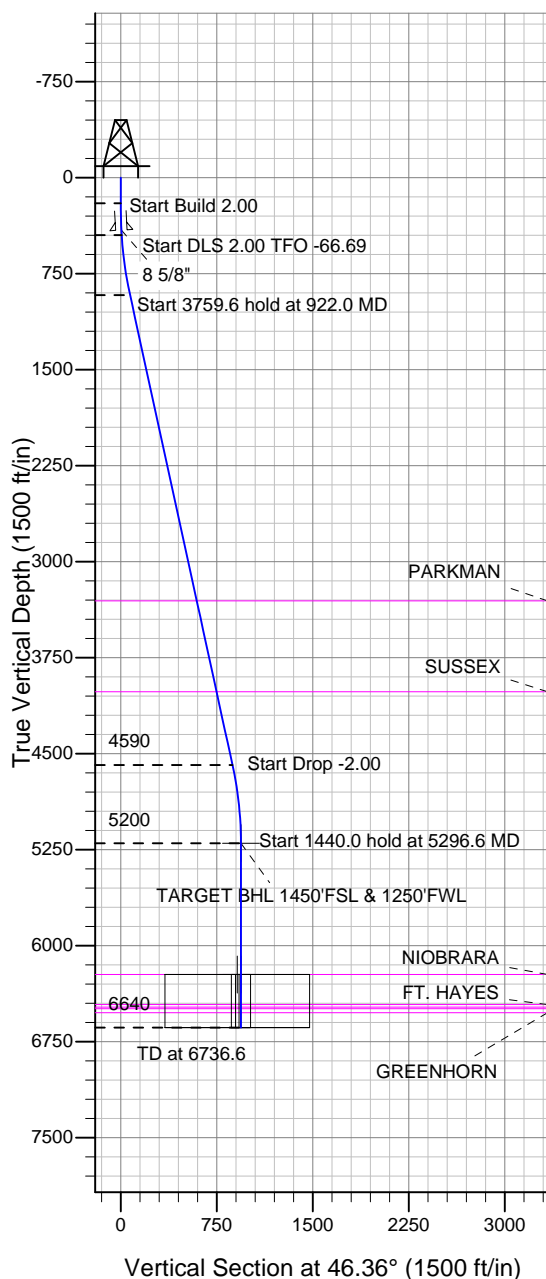
Surface Location: Peterson 14-28 Pad Sec.28-T5N-R63W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4551.0

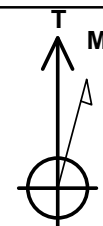
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1377718.67	3293015.44	40.365470	-104.448430	

Original Well Elev WELL @ 4566.0ft (Original Well Elev)

## BONANZA CREEK ENERGY OPERATING



Peterson 14-28 Pad Sec.28-T5N-R63W  
Peterson I-28  
Plan #1 (7-24-12)  
14:34, July 24 2012



Azimuths to True North  
Magnetic North: 8.54°  
Magnetic Field  
Strength: 53032.2snT  
Dip Angle: 67.04°  
Date: 7/24/2012  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1450'FSL & 1250'FWL	5200.0	648.5	679.9	40.367250	-104.445990	Point
LEGAL BOX 800' X 800', 1317'FSL & 1337'FWL	6226.0	515.5	766.9	40.366885	-104.445678	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1450'FSL & 1250'FWL	6226.0	648.5	679.9	40.367250	-104.445990	Circle (Radius: 75.0)

### 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	90.00	449.7	0.0	10.9	2.00	90.00	7.9	
4	922.0	12.30	45.00	916.5	35.6	67.1	2.00	-66.69	73.2	
5	4681.6	12.30	45.00	4589.7	602.0	633.4	0.00	0.00	873.9	
6	5296.6	0.00	0.00	5200.0	648.5	679.9	2.00	180.00	939.6	TARGET BHL 1450'FSL & 1250'FWL
7	6736.6	0.00	0.00	6640.0	648.5	679.9	0.00	0.00	939.6	



# **BONANZA CREEK ENERGY OPERATING**

**SEC.28-T5N-R63W**

**Peterson 14-28 Pad Sec.28-T5N-R63W**

**Peterson I-28**

**Wellbore #1**

**Plan: Plan #1 (7-24-12)**

## **Standard Planning Report**

**24 July, 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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
450.0	5.00	90.00	449.7	0.0	10.9	2.00	2.00	0.00	90.00	
922.0	12.30	45.00	916.5	35.6	67.1	2.00	1.55	-9.53	-66.69	
4,681.6	12.30	45.00	4,589.7	602.0	633.4	0.00	0.00	0.00	0.00	
5,296.6	0.00	0.00	5,200.0	648.5	679.9	2.00	-2.00	0.00	180.00	TARGET BHL 1450
6,736.6	0.00	0.00	6,640.0	648.5	679.9	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

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	2.00	90.00	300.0	0.0	1.7	1.3	2.00	2.00	0.00
400.0	4.00	90.00	399.8	0.0	7.0	5.0	2.00	2.00	0.00
410.2	4.20	90.00	410.0	0.0	7.7	5.6	2.00	2.00	0.00
8 5/8"									
450.0	5.00	90.00	449.7	0.0	10.9	7.9	2.00	2.00	0.00
500.0	5.47	80.33	499.5	0.4	15.4	11.4	2.00	0.95	-19.35
600.0	6.77	65.94	598.9	3.6	25.5	21.0	2.00	1.30	-14.38
700.0	8.35	56.55	698.0	10.0	37.0	33.7	2.00	1.58	-9.39
800.0	10.08	50.24	796.7	19.6	49.7	49.5	2.00	1.73	-6.31
900.0	11.89	45.80	894.9	32.4	63.9	68.6	2.00	1.81	-4.44
922.0	12.30	45.00	916.5	35.6	67.1	73.2	2.00	1.85	-3.65
1,000.0	12.30	45.00	992.6	47.4	78.9	89.8	0.00	0.00	0.00
1,100.0	12.30	45.00	1,090.3	62.4	94.0	111.1	0.00	0.00	0.00
1,200.0	12.30	45.00	1,188.0	77.5	109.0	132.4	0.00	0.00	0.00
1,300.0	12.30	45.00	1,285.7	92.6	124.1	153.7	0.00	0.00	0.00
1,400.0	12.30	45.00	1,383.5	107.6	139.1	175.0	0.00	0.00	0.00
1,500.0	12.30	45.00	1,481.2	122.7	154.2	196.3	0.00	0.00	0.00
1,600.0	12.30	45.00	1,578.9	137.8	169.3	217.6	0.00	0.00	0.00
1,700.0	12.30	45.00	1,676.6	152.8	184.3	238.9	0.00	0.00	0.00
1,800.0	12.30	45.00	1,774.3	167.9	199.4	260.2	0.00	0.00	0.00
1,900.0	12.30	45.00	1,872.0	183.0	214.5	281.5	0.00	0.00	0.00
2,000.0	12.30	45.00	1,969.7	198.0	229.5	302.8	0.00	0.00	0.00
2,100.0	12.30	45.00	2,067.4	213.1	244.6	324.1	0.00	0.00	0.00
2,200.0	12.30	45.00	2,165.1	228.2	259.6	345.4	0.00	0.00	0.00
2,300.0	12.30	45.00	2,262.8	243.2	274.7	366.6	0.00	0.00	0.00
2,400.0	12.30	45.00	2,360.5	258.3	289.8	387.9	0.00	0.00	0.00
2,500.0	12.30	45.00	2,458.2	273.3	304.8	409.2	0.00	0.00	0.00
2,600.0	12.30	45.00	2,555.9	288.4	319.9	430.5	0.00	0.00	0.00
2,700.0	12.30	45.00	2,653.6	303.5	335.0	451.8	0.00	0.00	0.00
2,800.0	12.30	45.00	2,751.3	318.5	350.0	473.1	0.00	0.00	0.00
2,900.0	12.30	45.00	2,849.0	333.6	365.1	494.4	0.00	0.00	0.00
3,000.0	12.30	45.00	2,946.7	348.7	380.1	515.7	0.00	0.00	0.00
3,100.0	12.30	45.00	3,044.4	363.7	395.2	537.0	0.00	0.00	0.00
3,200.0	12.30	45.00	3,142.1	378.8	410.3	558.3	0.00	0.00	0.00
3,300.0	12.30	45.00	3,239.8	393.9	425.3	579.6	0.00	0.00	0.00
3,367.7	12.30	45.00	3,306.0	404.1	435.5	594.0	0.00	0.00	0.00
PARKMAN									
3,400.0	12.30	45.00	3,337.5	408.9	440.4	600.9	0.00	0.00	0.00
3,500.0	12.30	45.00	3,435.2	424.0	455.5	622.2	0.00	0.00	0.00
3,600.0	12.30	45.00	3,533.0	439.1	470.5	643.5	0.00	0.00	0.00
3,700.0	12.30	45.00	3,630.7	454.1	485.6	664.8	0.00	0.00	0.00
3,800.0	12.30	45.00	3,728.4	469.2	500.6	686.1	0.00	0.00	0.00
3,900.0	12.30	45.00	3,826.1	484.2	515.7	707.4	0.00	0.00	0.00
4,000.0	12.30	45.00	3,923.8	499.3	530.8	728.7	0.00	0.00	0.00
4,094.4	12.30	45.00	4,016.0	513.5	545.0	748.8	0.00	0.00	0.00
SUSSEX									
4,100.0	12.30	45.00	4,021.5	514.4	545.8	750.0	0.00	0.00	0.00
4,200.0	12.30	45.00	4,119.2	529.4	560.9	771.3	0.00	0.00	0.00
4,300.0	12.30	45.00	4,216.9	544.5	576.0	792.6	0.00	0.00	0.00
4,400.0	12.30	45.00	4,314.6	559.6	591.0	813.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

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)
4,500.0	12.30	45.00	4,412.3	574.6	606.1	835.2	0.00	0.00	0.00
4,600.0	12.30	45.00	4,510.0	589.7	621.1	856.5	0.00	0.00	0.00
4,681.6	12.30	45.00	4,589.7	602.0	633.4	873.9	0.00	0.00	0.00
4,700.0	11.93	45.00	4,607.7	604.7	636.2	877.7	2.00	-2.00	0.00
4,800.0	9.93	45.00	4,705.9	618.1	649.6	896.7	2.00	-2.00	0.00
4,900.0	7.93	45.00	4,804.7	629.1	660.5	912.2	2.00	-2.00	0.00
5,000.0	5.93	45.00	4,903.9	637.6	669.1	924.3	2.00	-2.00	0.00
5,100.0	3.93	45.00	5,003.6	643.7	675.2	932.9	2.00	-2.00	0.00
5,200.0	1.93	45.00	5,103.4	647.3	678.8	938.0	2.00	-2.00	0.00
5,296.6	0.00	0.00	5,200.0	648.5	679.9	939.6	2.00	-2.00	0.00
TARGET BHL 1450'FSL & 1250'FWL									
5,300.0	0.00	0.00	5,203.4	648.5	679.9	939.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,303.4	648.5	679.9	939.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,403.4	648.5	679.9	939.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,503.4	648.5	679.9	939.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,603.4	648.5	679.9	939.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,703.4	648.5	679.9	939.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,803.4	648.5	679.9	939.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,903.4	648.5	679.9	939.6	0.00	0.00	0.00
6,100.0	0.00	0.00	6,003.4	648.5	679.9	939.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,103.4	648.5	679.9	939.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,203.4	648.5	679.9	939.6	0.00	0.00	0.00
6,322.6	0.00	0.00	6,226.0	648.5	679.9	939.6	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1450'FSL & 1250'FWL - LEGAL BOX 800' X 800', 1317'FSL & 1337'FWL									
6,400.0	0.00	0.00	6,303.4	648.5	679.9	939.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,403.4	648.5	679.9	939.6	0.00	0.00	0.00
6,555.6	0.00	0.00	6,459.0	648.5	679.9	939.6	0.00	0.00	0.00
FT. HAYES									
6,576.6	0.00	0.00	6,480.0	648.5	679.9	939.6	0.00	0.00	0.00
CODELL									
6,588.6	0.00	0.00	6,492.0	648.5	679.9	939.6	0.00	0.00	0.00
CARLILE									
6,600.0	0.00	0.00	6,503.4	648.5	679.9	939.6	0.00	0.00	0.00
6,620.6	0.00	0.00	6,524.0	648.5	679.9	939.6	0.00	0.00	0.00
GREENHORN									
6,700.0	0.00	0.00	6,603.4	648.5	679.9	939.6	0.00	0.00	0.00
6,736.6	0.00	0.00	6,640.0	648.5	679.9	939.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 1450'F: - plan hits target center - Point	0.00	0.00	5,200.0	648.5	679.9	1,378,375.15	3,293,687.60	40.367250	-104.445990
TARGET CIRCLE 1450'F: - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,226.0	648.5	679.9	1,378,375.15	3,293,687.60	40.367250	-104.445990
LEGAL BOX 800' X 800' F: - plan misses target center by 158.9ft at 6322.6ft MD (6226.0 TVD, 648.5 N, 679.9 E) - Rectangle (sides W800.0 H800.0 D414.0)	0.00	0.00	6,226.0	515.5	766.9	1,378,243.21	3,293,776.14	40.366885	-104.445678

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
410.2	410.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,367.7	3,306.0	PARKMAN		0.00		
4,094.4	4,016.0	SUSSEX		0.00		
6,322.6	6,226.0	NIOBRARA		0.00		
6,555.6	6,459.0	FT. HAYES		0.00		
6,576.6	6,480.0	CODELL		0.00		
6,588.6	6,492.0	CARLILE		0.00		
6,620.6	6,524.0	GREENHORN		0.00		



# **BONANZA CREEK ENERGY OPERATING**

**SEC.28-T5N-R63W**

**Peterson 14-28 Pad Sec.28-T5N-R63W**

**Peterson I-28**

**Wellbore #1**

**Plan #1 (7-24-12)**

## **Anticollision Report**

**24 July, 2012**





<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Peterson 14-28 Pad Sec.28-T5N-R63W - North Platte J-F-28HZ - Wellbore #1 - Plan #1 (7-24-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWDD												Offset Well Error:	0.0 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	
1,800.0	1,774.3	1,740.3	1,725.0	6.2	4.9	152.76	-171.4	82.1	362.4	353.2	9.24	39.214	
1,900.0	1,872.0	1,834.9	1,817.7	6.7	5.3	152.04	-188.0	91.2	394.7	384.8	9.88	39.930	
2,000.0	1,969.7	1,929.4	1,910.3	7.1	5.7	151.42	-204.6	100.3	427.0	416.5	10.53	40.553	
2,100.0	2,067.4	2,023.9	2,002.9	7.6	6.1	150.89	-221.2	109.4	459.4	448.2	11.18	41.100	
2,200.0	2,165.1	2,118.5	2,095.5	8.0	6.5	150.42	-237.8	118.5	491.8	480.0	11.83	41.584	
2,300.0	2,262.8	2,213.0	2,188.2	8.5	6.9	150.02	-254.4	127.6	524.2	511.7	12.48	42.014	
2,400.0	2,360.5	2,307.5	2,280.8	8.9	7.3	149.66	-270.9	136.7	556.6	543.5	13.13	42.399	
2,500.0	2,458.2	2,402.1	2,373.4	9.4	7.7	149.34	-287.5	145.8	589.1	575.3	13.78	42.746	
2,600.0	2,555.9	2,496.6	2,466.0	9.9	8.2	149.06	-304.1	154.9	621.6	607.2	14.44	43.060	
2,700.0	2,653.6	2,591.2	2,558.7	10.3	8.6	148.80	-320.7	164.0	654.1	639.0	15.09	43.345	
2,800.0	2,751.3	2,685.7	2,651.3	10.8	9.0	148.57	-337.3	173.1	686.6	670.8	15.75	43.605	
2,900.0	2,849.0	2,780.2	2,743.9	11.2	9.4	148.36	-353.9	182.2	719.1	702.7	16.40	43.843	
3,000.0	2,946.7	2,874.8	2,836.5	11.7	9.8	148.16	-370.4	191.3	751.6	734.5	17.06	44.062	
3,100.0	3,044.4	2,969.3	2,929.2	12.1	10.3	147.99	-387.0	200.4	784.1	766.4	17.72	44.263	
3,200.0	3,142.1	3,063.8	3,021.8	12.6	10.7	147.82	-403.6	209.5	816.7	798.3	18.37	44.449	
3,300.0	3,239.8	3,158.4	3,114.4	13.1	11.1	147.67	-420.2	218.6	849.2	830.2	19.03	44.622	
3,400.0	3,337.5	3,252.9	3,207.0	13.5	11.5	147.53	-436.8	227.7	881.7	862.1	19.69	44.783	
3,500.0	3,435.2	3,347.4	3,299.7	14.0	12.0	147.40	-453.4	236.8	914.3	893.9	20.35	44.933	
3,600.0	3,533.0	3,442.0	3,392.3	14.4	12.4	147.28	-469.9	245.9	946.8	925.8	21.01	45.072	
3,700.0	3,630.7	3,536.5	3,484.9	14.9	12.8	147.17	-486.5	255.0	979.4	957.7	21.67	45.203	
3,800.0	3,728.4	3,631.1	3,577.5	15.3	13.2	147.06	-503.1	264.1	1,011.9	989.6	22.33	45.326	
3,900.0	3,826.1	3,725.6	3,670.2	15.8	13.6	146.97	-519.7	273.2	1,044.5	1,021.5	22.99	45.441	
4,000.0	3,923.8	3,820.1	3,762.8	16.3	14.1	146.87	-536.3	282.3	1,077.1	1,053.4	23.65	45.549	
4,100.0	4,021.5	3,914.7	3,855.4	16.7	14.5	146.79	-552.9	291.4	1,109.6	1,085.3	24.31	45.651	
4,200.0	4,119.2	4,009.2	3,948.0	17.2	14.9	146.70	-569.4	300.5	1,142.2	1,117.2	24.97	45.748	
4,300.0	4,216.9	4,103.7	4,040.7	17.6	15.3	146.63	-586.0	309.6	1,174.8	1,149.1	25.63	45.839	
4,400.0	4,314.6	4,198.3	4,133.3	18.1	15.8	146.55	-602.6	318.7	1,207.3	1,181.0	26.29	45.925	
4,500.0	4,412.3	4,292.8	4,225.9	18.5	16.2	146.48	-619.2	327.8	1,239.9	1,213.0	26.95	46.007	
4,600.0	4,510.0	4,387.3	4,318.5	19.0	16.6	146.42	-635.8	336.9	1,272.5	1,244.9	27.61	46.084	
4,681.6	4,589.7	4,464.5	4,394.1	19.4	17.0	146.36	-649.3	344.4	1,299.1	1,270.9	28.15	46.145	
4,700.0	4,607.7	4,481.9	4,411.2	19.5	17.0	146.42	-652.4	346.0	1,305.0	1,276.7	28.29	46.136	
4,800.0	4,705.9	4,577.0	4,504.4	19.8	17.5	146.66	-669.0	355.2	1,335.7	1,306.7	28.96	46.125	
4,900.0	4,804.7	4,672.9	4,598.3	20.1	17.9	146.78	-685.9	364.4	1,363.6	1,334.0	29.60	46.072	
5,000.0	4,903.9	4,769.5	4,693.0	20.3	18.3	146.79	-702.8	373.7	1,388.7	1,358.5	30.20	45.986	
5,100.0	5,003.6	4,862.0	4,782.0	20.5	18.7	146.81	-719.6	383.0	1,413.1	1,383.0	30.83	45.886	
5,200.0	5,103.4	4,961.6	4,876.0	20.7	19.1	146.83	-736.4	392.3	1,437.5	1,407.3	31.45	45.786	
5,296.6	5,200.0	5,060.6	4,970.0	20.8	19.4	146.84	-753.2	401.6	1,461.9	1,431.7	32.07	45.686	
5,300.0	5,203.4	5,063.9	4,973.0	20.8	19.4	146.84	-753.2	401.6	1,461.9	1,431.7	32.07	45.686	
5,400.0	5,303.4	5,163.9	5,073.0	20.9	19.7	146.86	-770.0	410.9	1,486.3	1,456.1	32.69	45.586	
5,500.0	5,403.4	5,263.9	5,173.0	21.0	20.0	146.87	-786.8	420.2	1,510.7	1,480.5	33.31	45.486	
5,600.0	5,503.4	5,363.9	5,273.0	21.2	20.3	146.88	-803.6	429.5	1,535.1	1,504.9	33.93	45.386	
5,700.0	5,603.4	5,463.9	5,373.0	21.3	20.6	146.89	-820.4	438.8	1,559.5	1,529.3	34.55	45.286	
5,800.0	5,703.4	5,563.9	5,473.0	21.4	20.9	146.90	-837.2	448.1	1,583.9	1,553.7	35.17	45.186	
5,900.0	5,803.4	5,663.9	5,573.0	21.5	21.2	146.91	-854.0	457.4	1,608.3	1,578.1	35.79	45.086	
6,000.0	5,903.4	5,763.9	5,673.0	21.7	21.5	146.92	-870.8	466.7	1,632.7	1,602.5	36.41	44.986	
6,100.0	6,003.4	5,863.9	5,773.0	21.8	21.8	146.93	-887.6	476.0	1,657.1	1,626.9	37.03	44.886	
6,200.0	6,103.4	5,963.9	5,873.0	21.9	22.1	146.94	-904.4	485.3	1,681.5	1,651.3	37.65	44.786	
6,300.0	6,203.4	6,063.9	5,973.0	22.1	22.4	146.95	-921.2	494.6	1,705.9	1,675.7	38.27	44.686	
6,400.0	6,303.4	6,163.9	6,073.0	22.2	22.7	146.96	-938.0	503.9	1,730.3	1,700.1	38.89	44.586	
6,417.6	6,321.0	6,181.5	6,091.0	22.2	22.7	146.96	-938.0	503.9	1,730.3	1,700.1	38.89	44.586	SF
6,500.0	6,403.4	6,263.9	6,173.0	22.3	22.9	146.97	-954.8	513.2	1,754.7	1,724.5	39.51	44.486	
6,600.0	6,503.4	6,363.9	6,273.0	22.5	23.2	146.98	-971.6	522.5	1,779.1	1,748.9	40.13	44.386	

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

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Peterson 14-28 Pad Sec.28-T5N-R63W - North Platte J-F-28HZ - Wellbore #1 - Plan #1 (7-24-12)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 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	
6,700.0	6,603.4	7,646.8	6,321.0	22.6	24.7	-89.96	648.6	435.3	373.6	329.9	43.70	8.550	
6,736.6	6,640.0	7,646.8	6,321.0	22.7	24.7	-89.96	648.6	435.3	402.0	358.2	43.76	9.187	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 6640-UNKNOWN													Offset Well Error:	0.0 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		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.1	2.0	0.00	32.8	0.0	32.8	30.7	2.11	15.520		
200.0	200.0	200.0	200.0	0.3	4.0	0.00	32.8	0.0	32.8	28.5	4.34	7.559 CC		
227.7	227.7	227.7	227.7	0.4	4.6	-90.23	32.8	0.0	32.8	27.8	4.95	6.622		
300.0	300.0	300.0	300.0	0.6	6.0	-93.04	32.8	0.0	32.8	26.3	6.55	5.012		
400.0	399.8	399.8	399.8	0.8	8.0	-101.99	32.8	0.0	33.5	24.8	8.77	3.823		
450.0	449.7	449.7	449.7	0.9	9.0	-108.33	32.8	0.0	34.6	24.7	9.88	3.496 ES		
500.0	499.5	499.5	499.5	1.0	10.0	-105.73	32.8	0.0	35.9	24.9	11.00	3.261		
600.0	598.9	598.9	598.9	1.3	12.0	-107.00	32.8	0.0	38.8	25.5	13.24	2.929		
700.0	698.0	698.0	698.0	1.6	14.0	-114.68	32.8	0.0	43.4	28.0	15.45	2.809 SF		
800.0	796.7	796.7	796.7	1.9	15.9	-124.99	32.8	0.0	51.5	33.8	17.62	2.921		
900.0	894.9	894.9	894.9	2.3	17.9	-134.82	32.8	0.0	63.9	44.1	19.71	3.240		
922.0	916.5	916.5	916.5	2.4	18.3	-136.76	32.8	0.0	67.2	47.0	20.17	3.333		
1,000.0	992.6	992.6	992.6	2.7	19.9	-144.85	32.8	0.0	80.2	58.4	21.80	3.681		
1,100.0	1,090.3	1,090.3	1,090.3	3.1	21.8	-151.97	32.8	0.0	98.5	74.6	23.91	4.121		
1,200.0	1,188.0	1,188.0	1,188.0	3.5	23.8	-156.82	32.8	0.0	117.8	91.8	26.04	4.525		
1,300.0	1,285.7	1,285.7	1,285.7	4.0	25.7	-160.30	32.8	0.0	137.7	109.5	28.19	4.886		
1,400.0	1,383.5	1,383.5	1,383.5	4.4	27.7	-162.90	32.8	0.0	158.0	127.7	30.34	5.207		
1,500.0	1,481.2	1,481.2	1,481.2	4.9	29.6	-164.91	32.8	0.0	178.5	146.0	32.50	5.492		
1,600.0	1,578.9	1,578.9	1,578.9	5.3	31.6	-166.50	32.8	0.0	199.2	164.5	34.67	5.745		
1,700.0	1,676.6	1,676.6	1,676.6	5.8	33.5	-167.80	32.8	0.0	220.0	183.1	36.83	5.972		
1,800.0	1,774.3	1,774.3	1,774.3	6.2	35.5	-168.87	32.8	0.0	240.9	201.9	39.00	6.175		
1,900.0	1,872.0	1,872.0	1,872.0	6.7	37.4	-169.77	32.8	0.0	261.8	220.6	41.17	6.358		
2,000.0	1,969.7	1,969.7	1,969.7	7.1	39.4	-170.53	32.8	0.0	282.8	239.5	43.35	6.524		
2,100.0	2,067.4	2,067.4	2,067.4	7.6	41.3	-171.19	32.8	0.0	303.9	258.3	45.52	6.675		
2,200.0	2,165.1	2,165.1	2,165.1	8.0	43.3	-171.77	32.8	0.0	324.9	277.2	47.69	6.813		
2,300.0	2,262.8	2,262.8	2,262.8	8.5	45.3	-172.27	32.8	0.0	346.0	296.2	49.87	6.939		
2,400.0	2,360.5	2,360.5	2,360.5	8.9	47.2	-172.72	32.8	0.0	367.2	315.1	52.04	7.055		
2,500.0	2,458.2	2,458.2	2,458.2	9.4	49.2	-173.12	32.8	0.0	388.3	334.1	54.22	7.162		
2,600.0	2,555.9	2,555.9	2,555.9	9.9	51.1	-173.48	32.8	0.0	409.5	353.1	56.40	7.261		
2,700.0	2,653.6	2,653.6	2,653.6	10.3	53.1	-173.80	32.8	0.0	430.7	372.1	58.57	7.352		
2,800.0	2,751.3	2,751.3	2,751.3	10.8	55.0	-174.09	32.8	0.0	451.8	391.1	60.75	7.438		
2,900.0	2,849.0	2,849.0	2,849.0	11.2	57.0	-174.36	32.8	0.0	473.0	410.1	62.93	7.517		
3,000.0	2,946.7	2,946.7	2,946.7	11.7	58.9	-174.60	32.8	0.0	494.3	429.1	65.11	7.591		
3,100.0	3,044.4	3,044.4	3,044.4	12.1	60.9	-174.82	32.8	0.0	515.5	448.2	67.28	7.661		
3,200.0	3,142.1	3,142.1	3,142.1	12.6	62.8	-175.03	32.8	0.0	536.7	467.2	69.46	7.726		
3,300.0	3,239.8	3,239.8	3,239.8	13.1	64.8	-175.22	32.8	0.0	557.9	486.3	71.64	7.788		
3,400.0	3,337.5	3,337.5	3,337.5	13.5	66.8	-175.39	32.8	0.0	579.2	505.3	73.82	7.846		
3,500.0	3,435.2	3,435.2	3,435.2	14.0	68.7	-175.55	32.8	0.0	600.4	524.4	76.00	7.900		
3,600.0	3,533.0	3,533.0	3,533.0	14.4	70.7	-175.71	32.8	0.0	621.6	543.5	78.18	7.952		
3,700.0	3,630.7	3,630.7	3,630.7	14.9	72.6	-175.85	32.8	0.0	642.9	562.5	80.36	8.001		
3,800.0	3,728.4	3,728.4	3,728.4	15.3	74.6	-175.98	32.8	0.0	664.1	581.6	82.53	8.047		
3,900.0	3,826.1	3,826.1	3,826.1	15.8	76.5	-176.11	32.8	0.0	685.4	600.7	84.71	8.091		
4,000.0	3,923.8	3,923.8	3,923.8	16.3	78.5	-176.22	32.8	0.0	706.6	619.8	86.89	8.133		
4,100.0	4,021.5	4,021.5	4,021.5	16.7	80.4	-176.33	32.8	0.0	727.9	638.8	89.07	8.172		
4,200.0	4,119.2	4,119.2	4,119.2	17.2	82.4	-176.44	32.8	0.0	749.2	657.9	91.25	8.210		
4,300.0	4,216.9	4,216.9	4,216.9	17.6	84.3	-176.54	32.8	0.0	770.4	677.0	93.43	8.246		
4,400.0	4,314.6	4,314.6	4,314.6	18.1	86.3	-176.63	32.8	0.0	791.7	696.1	95.61	8.281		
4,500.0	4,412.3	4,412.3	4,412.3	18.5	88.2	-176.72	32.8	0.0	813.0	715.2	97.79	8.314		
4,600.0	4,510.0	4,510.0	4,510.0	19.0	90.2	-176.80	32.8	0.0	834.2	734.3	99.97	8.345		
4,681.6	4,589.7	4,589.7	4,589.7	19.4	91.8	-176.87	32.8	0.0	851.6	749.9	101.75	8.370		
4,700.0	4,607.7	4,607.7	4,607.7	19.5	92.2	-176.89	32.8	0.0	855.5	753.2	102.27	8.365		

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

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 6640-UNKNOWN												<b>Offset Well Error:</b>	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
4,800.0	4,705.9	4,705.9	4,705.9	19.8	94.1	-176.97	32.8	0.0	874.4	769.4	105.02	8.326	
4,900.0	4,804.7	4,804.7	4,804.7	20.1	96.1	-177.04	32.8	0.0	889.9	782.2	107.68	8.264	
5,000.0	4,903.9	4,903.9	4,903.9	20.3	98.1	-177.09	32.8	0.0	901.9	791.7	110.22	8.183	
5,100.0	5,003.6	5,003.6	5,003.6	20.5	100.1	-177.13	32.8	0.0	910.5	797.9	112.64	8.083	
5,200.0	5,103.4	5,103.4	5,103.4	20.7	102.1	-177.15	32.8	0.0	915.6	800.7	114.93	7.967	
5,296.6	5,200.0	5,200.0	5,200.0	20.8	104.0	-132.16	32.8	0.0	917.3	800.3	117.01	7.839	
5,300.0	5,203.4	5,203.4	5,203.4	20.8	104.1	-132.16	32.8	0.0	917.3	800.2	117.08	7.835	
5,400.0	5,303.4	5,303.4	5,303.4	20.9	106.1	-132.16	32.8	0.0	917.3	798.0	119.27	7.691	
5,500.0	5,403.4	5,403.4	5,403.4	21.0	108.1	-132.16	32.8	0.0	917.3	795.8	121.45	7.553	
5,600.0	5,503.4	5,503.4	5,503.4	21.2	110.1	-132.16	32.8	0.0	917.3	793.6	123.64	7.419	
5,700.0	5,603.4	5,603.4	5,603.4	21.3	112.1	-132.16	32.8	0.0	917.3	791.4	125.83	7.290	
5,800.0	5,703.4	5,703.4	5,703.4	21.4	114.1	-132.16	32.8	0.0	917.3	789.3	128.02	7.165	
5,900.0	5,803.4	5,803.4	5,803.4	21.5	116.1	-132.16	32.8	0.0	917.3	787.1	130.21	7.045	
6,000.0	5,903.4	5,903.4	5,903.4	21.7	118.1	-132.16	32.8	0.0	917.3	784.9	132.40	6.928	
6,100.0	6,003.4	6,003.4	6,003.4	21.8	120.1	-132.16	32.8	0.0	917.3	782.7	134.59	6.815	
6,200.0	6,103.4	6,103.4	6,103.4	21.9	122.1	-132.16	32.8	0.0	917.3	780.5	136.78	6.706	
6,300.0	6,203.4	6,203.4	6,203.4	22.1	124.1	-132.16	32.8	0.0	917.3	778.3	138.98	6.600	
6,400.0	6,303.4	6,303.4	6,303.4	22.2	126.1	-132.16	32.8	0.0	917.3	776.1	141.17	6.497	
6,500.0	6,403.4	6,403.4	6,403.4	22.3	128.1	-132.16	32.8	0.0	917.3	773.9	143.37	6.398	
6,600.0	6,503.4	6,503.4	6,503.4	22.5	130.1	-132.16	32.8	0.0	917.3	771.7	145.57	6.301	
6,700.0	6,603.4	6,603.4	6,603.4	22.6	132.1	-132.16	32.8	0.0	917.3	769.5	147.76	6.208	
6,736.6	6,640.0	6,640.0	6,640.0	22.7	132.8	-132.16	32.8	0.0	917.3	768.7	148.57	6.174	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4566.0ft (Original Well Elev) Coordinates are relative to: Peterson I-28  
 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: 0.68°



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well Peterson I-28
<b>Project:</b>	SEC.28-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Reference Site:</b>	Peterson 14-28 Pad Sec.28-T5N-R63W	<b>MD Reference:</b>	WELL @ 4566.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Peterson I-28	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

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