



Bison Oil & Gas II, LLC

Weld Co., CO (NAD-83)

Tatanka Pads

Tatanka Federal LD13-635

OH

Plan: Plan #1

Standard Planning Report

13 January, 2022



Plan #1



Project: Weld Co., CO (NAD-83)
 Site: Tatanka Pads
 Well: Tatanka Federal LD13-635
 Wellbore: OH
 Design: Plan #1
 Lat: 40.749431
 Long: -103.841817
 GL: 4661.00
 KB: KB=23' @ 4684.00usft

WELL DETAILS: Tatanka Federal LD13-635

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1520158.22	3459413.86	40.749431	-103.841817

WELLBORE TARGET DETAILS (LAT/LONG)

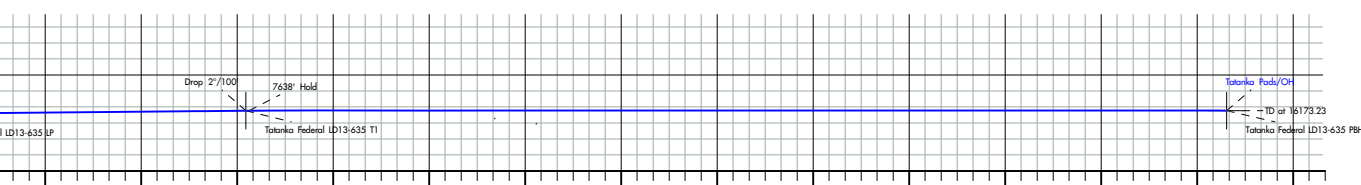
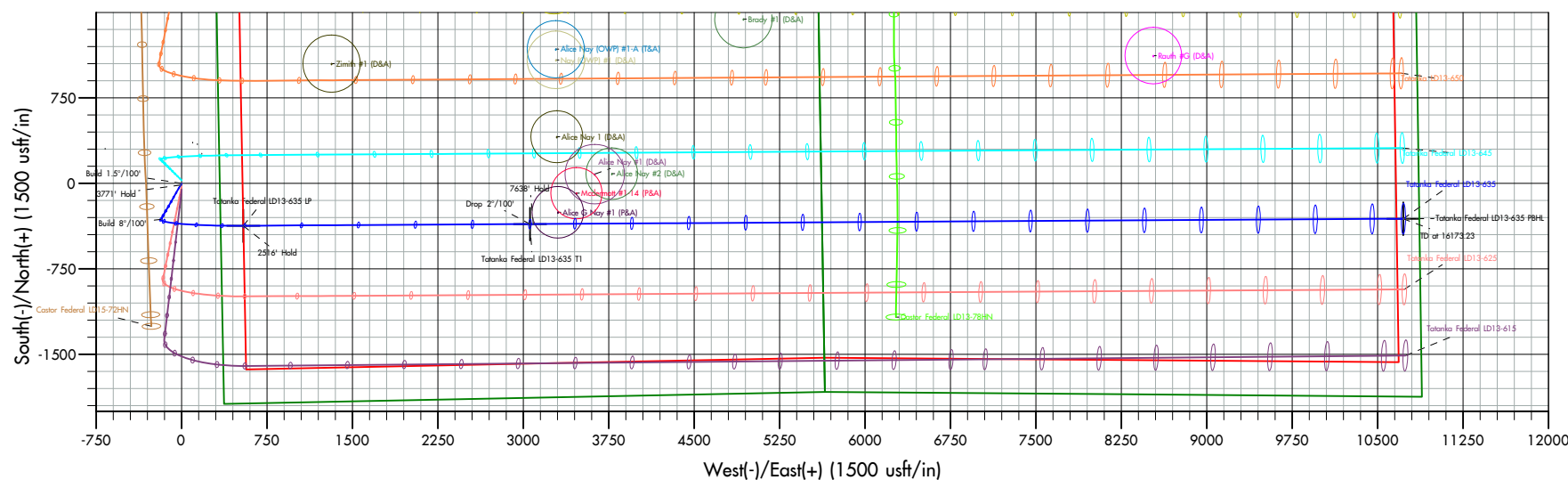
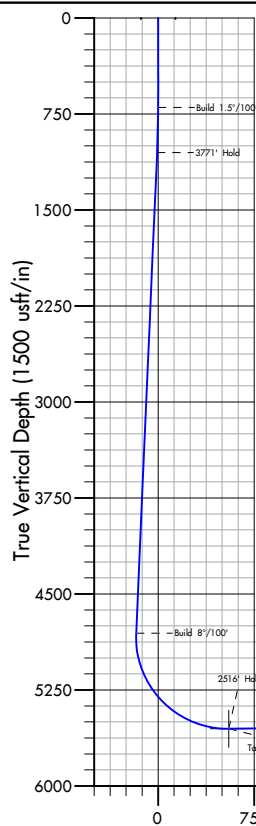
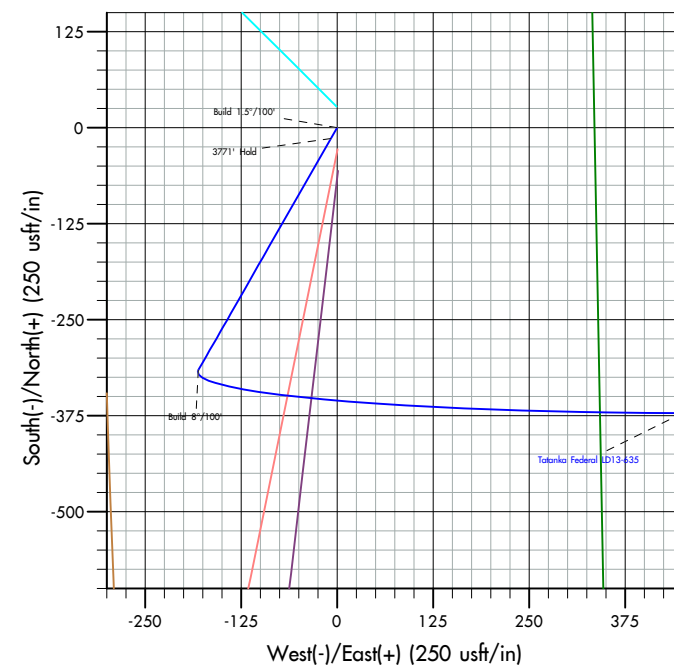
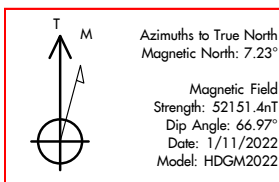
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Tatanka Federal LD13-635 PBHL	5529.00	-309.88	10726.25	1520048.95	3470144.04	Point
Tatanka Federal LD13-635 T1	5529.00	-356.35	3058.89	1519859.13	3462478.88	Point
Tatanka Federal LD13-635 LP	5554.00	-371.60	542.24	1519796.82	3459962.96	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	Build 1.5°/100'
1052.37	5.29	209.78	1051.87	-14.10	-8.07	1.50	209.78	-7.66	3771' Hold
4823.69	5.29	209.78	4807.16	-315.62	-180.63	0.00	0.00	-171.44	Build 8°/100'
5988.91	90.57	89.65	5554.00	-371.60	542.24	8.00	-119.98	552.75	2516' Hold
8505.73	90.57	89.65	5529.00	-356.35	3058.89	0.00	0.00	3067.91	Drop 2°/100'
8534.24	90.00	89.65	5528.86	-356.18	3087.40	2.00	-180.00	3096.40	7638' Hold
16173.23	90.00	89.65	5529.00	-309.88	10726.25	0.00	0.00	10730.73	TD at 16173.23

FORMATION TOPS

TVDPath	MDPath	Formation
340.00	340.00	Pierre Shale (Base of Fox Hills)
3164.00	3173.52	Parkman
3661.00	3672.64	Sussex
4261.00	4275.20	Shannon
5354.00	5432.25	Sharon Springs
5434.00	5560.41	Sharon Springs Hot Marker
5454.00	5598.06	Niobrara A Chalk
5529.00	5791.54	Niobrara B Chalk



Plan: Plan #1 (Tatanka Federal LD13-635/OH)

Created By: Dusty Moyer

Date: 11-28 January 13 2022



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Company:	Bison Oil & Gas II, LLC	TVD Reference:	KB=23' @ 4684.00usft
Project:	Weld Co., CO (NAD-83)	MD Reference:	KB=23' @ 4684.00usft
Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Weld Co., CO (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Tatanka Pads			
Site Position: From: Position Uncertainty:		Northing:	1,522,139.55 usft	Latitude:	40.754872
	Lat/Long	Easting:	3,459,341.34 usft	Longitude:	-103.841945
	0.00 usft	Slot Radius:	13-3/16 "		

Well	Tatanka Federal LD13-635					
Well Position	+N/-S	0.00 usft	Northing:	1,520,158.22 usft	Latitude:	40.749431
	+E/-W	0.00 usft	Easting:	3,459,413.86 usft	Longitude:	-103.841817
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	4,661.00 usft
Grid Convergence:	1.07 °					

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	1/11/2022	7.23	66.97	52,151.40000000

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	91.65

Plan Survey Tool Program	Date	1/13/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,173.23 Plan #1 (OH)	MWD+IFR1+MS	
			OWSG MWD + IFR1 + Mult	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	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	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,052.37	5.29	209.78	1,051.87	-14.10	-8.07	1.50	1.50	0.00	209.78	
4,823.69	5.29	209.78	4,807.16	-315.62	-180.63	0.00	0.00	0.00	0.00	
5,988.91	90.57	89.65	5,554.00	-371.60	542.24	8.00	7.32	-10.31	-119.98	Tatanka Federal LD
8,505.73	90.57	89.65	5,529.00	-356.35	3,058.89	0.00	0.00	0.00	0.00	Tatanka Federal LD
8,534.24	90.00	89.65	5,528.86	-356.18	3,087.40	2.00	-2.00	0.00	-180.00	
16,173.23	90.00	89.65	5,529.00	-309.88	10,726.25	0.00	0.00	0.00	0.00	Tatanka Federal LD

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Project:	Weld Co., CO (NAD-83)	MD Reference:	KB=23' @ 4684.00usft
Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	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
340.00	0.00	0.00	340.00	0.00	0.00	0.00	0.00	0.00	0.00
Pierre Shale (Base of Fox Hills)									
400.00	0.00	0.00	400.00	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
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.5°/100'									
800.00	1.50	209.78	799.99	-1.14	-0.65	-0.62	1.50	1.50	0.00
900.00	3.00	209.78	899.91	-4.54	-2.60	-2.47	1.50	1.50	0.00
1,000.00	4.50	209.78	999.69	-10.22	-5.85	-5.55	1.50	1.50	0.00
1,052.37	5.29	209.78	1,051.87	-14.10	-8.07	-7.66	1.50	1.50	0.00
3771' Hold									
1,100.00	5.29	209.78	1,099.30	-17.90	-10.25	-9.73	0.00	0.00	0.00
1,200.00	5.29	209.78	1,198.87	-25.90	-14.82	-14.07	0.00	0.00	0.00
1,300.00	5.29	209.78	1,298.45	-33.90	-19.40	-18.41	0.00	0.00	0.00
1,400.00	5.29	209.78	1,398.02	-41.89	-23.97	-22.75	0.00	0.00	0.00
1,500.00	5.29	209.78	1,497.60	-49.89	-28.55	-27.10	0.00	0.00	0.00
1,600.00	5.29	209.78	1,597.17	-57.88	-33.13	-31.44	0.00	0.00	0.00
1,700.00	5.29	209.78	1,696.75	-65.88	-37.70	-35.78	0.00	0.00	0.00
1,800.00	5.29	209.78	1,796.32	-73.87	-42.28	-40.13	0.00	0.00	0.00
1,900.00	5.29	209.78	1,895.90	-81.87	-46.85	-44.47	0.00	0.00	0.00
2,000.00	5.29	209.78	1,995.47	-89.86	-51.43	-48.81	0.00	0.00	0.00
2,100.00	5.29	209.78	2,095.05	-97.86	-56.00	-53.15	0.00	0.00	0.00
2,200.00	5.29	209.78	2,194.62	-105.85	-60.58	-57.50	0.00	0.00	0.00
2,300.00	5.29	209.78	2,294.20	-113.85	-65.16	-61.84	0.00	0.00	0.00
2,400.00	5.29	209.78	2,393.77	-121.84	-69.73	-66.18	0.00	0.00	0.00
2,500.00	5.29	209.78	2,493.35	-129.84	-74.31	-70.53	0.00	0.00	0.00
2,600.00	5.29	209.78	2,592.92	-137.83	-78.88	-74.87	0.00	0.00	0.00
2,700.00	5.29	209.78	2,692.49	-145.83	-83.46	-79.21	0.00	0.00	0.00
2,800.00	5.29	209.78	2,792.07	-153.82	-88.03	-83.55	0.00	0.00	0.00
2,900.00	5.29	209.78	2,891.64	-161.82	-92.61	-87.90	0.00	0.00	0.00
3,000.00	5.29	209.78	2,991.22	-169.81	-97.18	-92.24	0.00	0.00	0.00
3,100.00	5.29	209.78	3,090.79	-177.81	-101.76	-96.58	0.00	0.00	0.00
3,173.52	5.29	209.78	3,164.00	-183.69	-105.12	-99.78	0.00	0.00	0.00
Parkman									
3,200.00	5.29	209.78	3,190.37	-185.81	-106.34	-100.93	0.00	0.00	0.00
3,300.00	5.29	209.78	3,289.94	-193.80	-110.91	-105.27	0.00	0.00	0.00
3,400.00	5.29	209.78	3,389.52	-201.80	-115.49	-109.61	0.00	0.00	0.00
3,500.00	5.29	209.78	3,489.09	-209.79	-120.06	-113.95	0.00	0.00	0.00
3,600.00	5.29	209.78	3,588.67	-217.79	-124.64	-118.30	0.00	0.00	0.00
3,672.64	5.29	209.78	3,661.00	-223.59	-127.96	-121.45	0.00	0.00	0.00
Sussex									
3,700.00	5.29	209.78	3,688.24	-225.78	-129.21	-122.64	0.00	0.00	0.00
3,800.00	5.29	209.78	3,787.82	-233.78	-133.79	-126.98	0.00	0.00	0.00
3,900.00	5.29	209.78	3,887.39	-241.77	-138.37	-131.33	0.00	0.00	0.00
4,000.00	5.29	209.78	3,986.97	-249.77	-142.94	-135.67	0.00	0.00	0.00
4,100.00	5.29	209.78	4,086.54	-257.76	-147.52	-140.01	0.00	0.00	0.00
4,200.00	5.29	209.78	4,186.12	-265.76	-152.09	-144.36	0.00	0.00	0.00
4,275.20	5.29	209.78	4,261.00	-271.77	-155.53	-147.62	0.00	0.00	0.00

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Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Shannon									
4,300.00	5.29	209.78	4,285.69	-273.75	-156.67	-148.70	0.00	0.00	0.00
4,400.00	5.29	209.78	4,385.27	-281.75	-161.24	-153.04	0.00	0.00	0.00
4,500.00	5.29	209.78	4,484.84	-289.74	-165.82	-157.38	0.00	0.00	0.00
4,600.00	5.29	209.78	4,584.42	-297.74	-170.40	-161.73	0.00	0.00	0.00
4,700.00	5.29	209.78	4,683.99	-305.73	-174.97	-166.07	0.00	0.00	0.00
4,800.00	5.29	209.78	4,783.57	-313.73	-179.55	-170.41	0.00	0.00	0.00
4,823.69	5.29	209.78	4,807.16	-315.62	-180.63	-171.44	0.00	0.00	0.00
Build 8°/100'									
4,850.00	4.61	186.46	4,833.37	-317.73	-181.35	-172.10	8.00	-2.57	-88.65
4,900.00	5.73	142.56	4,883.18	-321.71	-180.06	-170.69	8.00	2.25	-87.79
4,950.00	8.74	121.06	4,932.79	-325.65	-175.28	-165.81	8.00	6.02	-43.00
5,000.00	12.33	111.19	4,981.94	-329.54	-167.05	-157.46	8.00	7.17	-19.75
5,050.00	16.11	105.79	5,030.40	-333.36	-155.39	-145.70	8.00	7.56	-10.79
5,100.00	19.97	102.43	5,077.94	-337.09	-140.38	-130.58	8.00	7.73	-6.74
5,150.00	23.88	100.12	5,124.31	-340.70	-122.07	-112.18	8.00	7.81	-4.62
5,200.00	27.81	98.43	5,169.31	-344.19	-100.56	-90.58	8.00	7.86	-3.38
5,250.00	31.76	97.13	5,212.69	-347.54	-75.96	-65.89	8.00	7.90	-2.60
5,300.00	35.71	96.09	5,254.27	-350.72	-48.38	-38.24	8.00	7.92	-2.08
5,350.00	39.68	95.24	5,293.82	-353.73	-17.96	-7.74	8.00	7.93	-1.71
5,400.00	43.65	94.51	5,331.17	-356.54	15.15	25.44	8.00	7.94	-1.45
5,432.25	46.21	94.10	5,354.00	-358.25	37.86	48.19	8.00	7.95	-1.28
Sharon Springs									
5,450.00	47.63	93.89	5,366.12	-359.15	50.79	61.14	8.00	7.95	-1.20
5,500.00	51.60	93.34	5,398.51	-361.54	88.79	99.20	8.00	7.96	-1.10
5,550.00	55.58	92.84	5,428.18	-363.71	128.97	139.42	8.00	7.96	-0.99
5,560.41	56.41	92.75	5,434.00	-364.13	137.59	148.04	8.00	7.96	-0.93
Sharon Springs Hot Marker									
5,598.06	59.41	92.41	5,454.00	-365.56	169.45	179.94	8.00	7.96	-0.89
Niobrara A Chalk									
5,600.00	59.57	92.39	5,454.99	-365.63	171.12	181.61	8.00	7.97	-0.86
5,650.00	63.55	91.98	5,478.79	-367.31	215.04	225.56	8.00	7.97	-0.83
5,700.00	67.53	91.60	5,499.49	-368.72	260.53	271.07	8.00	7.97	-0.77
5,750.00	71.52	91.23	5,516.98	-369.88	307.34	317.90	8.00	7.97	-0.73
5,791.54	74.83	90.94	5,529.00	-370.63	347.10	357.66	8.00	7.97	-0.70
Niobrara B Chalk									
5,800.00	75.51	90.88	5,531.16	-370.76	355.27	365.83	8.00	7.97	-0.68
5,850.00	79.49	90.55	5,541.99	-371.37	404.07	414.63	8.00	7.97	-0.67
5,900.00	83.48	90.22	5,549.39	-371.70	453.51	464.05	8.00	7.97	-0.65
5,950.00	87.47	89.90	5,553.33	-371.76	503.34	513.87	8.00	7.97	-0.64
5,988.91	90.57	89.65	5,554.00	-371.60	542.24	552.75	8.00	7.97	-0.64
2516' Hold									
6,000.00	90.57	89.65	5,553.89	-371.54	553.33	563.83	0.00	0.00	0.00
6,100.00	90.57	89.65	5,552.90	-370.93	653.32	663.76	0.00	0.00	0.00
6,200.00	90.57	89.65	5,551.90	-370.32	753.32	763.70	0.00	0.00	0.00
6,300.00	90.57	89.65	5,550.91	-369.72	853.31	863.63	0.00	0.00	0.00
6,400.00	90.57	89.65	5,549.92	-369.11	953.30	963.57	0.00	0.00	0.00
6,500.00	90.57	89.65	5,548.92	-368.51	1,053.30	1,063.50	0.00	0.00	0.00
6,600.00	90.57	89.65	5,547.93	-367.90	1,153.29	1,163.43	0.00	0.00	0.00
6,700.00	90.57	89.65	5,546.94	-367.29	1,253.28	1,263.37	0.00	0.00	0.00
6,800.00	90.57	89.65	5,545.94	-366.69	1,353.28	1,363.30	0.00	0.00	0.00
6,900.00	90.57	89.65	5,544.95	-366.08	1,453.27	1,463.24	0.00	0.00	0.00
7,000.00	90.57	89.65	5,543.96	-365.48	1,553.26	1,563.17	0.00	0.00	0.00

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Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,100.00	90.57	89.65	5,542.96	-364.87	1,653.26	1,663.10	0.00	0.00	0.00
7,200.00	90.57	89.65	5,541.97	-364.26	1,753.25	1,763.04	0.00	0.00	0.00
7,300.00	90.57	89.65	5,540.98	-363.66	1,853.24	1,862.97	0.00	0.00	0.00
7,400.00	90.57	89.65	5,539.98	-363.05	1,953.24	1,962.91	0.00	0.00	0.00
7,500.00	90.57	89.65	5,538.99	-362.45	2,053.23	2,062.84	0.00	0.00	0.00
7,600.00	90.57	89.65	5,538.00	-361.84	2,153.22	2,162.77	0.00	0.00	0.00
7,700.00	90.57	89.65	5,537.00	-361.23	2,253.22	2,262.71	0.00	0.00	0.00
7,800.00	90.57	89.65	5,536.01	-360.63	2,353.21	2,362.64	0.00	0.00	0.00
7,900.00	90.57	89.65	5,535.02	-360.02	2,453.20	2,462.58	0.00	0.00	0.00
8,000.00	90.57	89.65	5,534.02	-359.42	2,553.20	2,562.51	0.00	0.00	0.00
8,100.00	90.57	89.65	5,533.03	-358.81	2,653.19	2,662.44	0.00	0.00	0.00
8,200.00	90.57	89.65	5,532.04	-358.20	2,753.18	2,762.38	0.00	0.00	0.00
8,300.00	90.57	89.65	5,531.04	-357.60	2,853.18	2,862.31	0.00	0.00	0.00
8,400.00	90.57	89.65	5,530.05	-356.99	2,953.17	2,962.25	0.00	0.00	0.00
8,505.73	90.57	89.65	5,529.00	-356.35	3,058.89	3,067.91	0.00	0.00	0.00
Drop 2°/100'									
8,534.24	90.00	89.65	5,528.86	-356.18	3,087.40	3,096.40	2.00	-2.00	0.00
7638' Hold									
8,600.00	90.00	89.65	5,528.86	-355.78	3,153.16	3,162.12	0.00	0.00	0.00
8,700.00	90.00	89.65	5,528.86	-355.17	3,253.16	3,262.06	0.00	0.00	0.00
8,800.00	90.00	89.65	5,528.86	-354.57	3,353.16	3,362.00	0.00	0.00	0.00
8,900.00	90.00	89.65	5,528.87	-353.96	3,453.15	3,461.94	0.00	0.00	0.00
9,000.00	90.00	89.65	5,528.87	-353.36	3,553.15	3,561.87	0.00	0.00	0.00
9,100.00	90.00	89.65	5,528.87	-352.75	3,653.15	3,661.81	0.00	0.00	0.00
9,200.00	90.00	89.65	5,528.87	-352.14	3,753.15	3,761.75	0.00	0.00	0.00
9,300.00	90.00	89.65	5,528.87	-351.54	3,853.15	3,861.69	0.00	0.00	0.00
9,400.00	90.00	89.65	5,528.87	-350.93	3,953.14	3,961.63	0.00	0.00	0.00
9,500.00	90.00	89.65	5,528.88	-350.33	4,053.14	4,061.57	0.00	0.00	0.00
9,600.00	90.00	89.65	5,528.88	-349.72	4,153.14	4,161.51	0.00	0.00	0.00
9,700.00	90.00	89.65	5,528.88	-349.11	4,253.14	4,261.45	0.00	0.00	0.00
9,800.00	90.00	89.65	5,528.88	-348.51	4,353.14	4,361.39	0.00	0.00	0.00
9,900.00	90.00	89.65	5,528.88	-347.90	4,453.14	4,461.32	0.00	0.00	0.00
10,000.00	90.00	89.65	5,528.89	-347.30	4,553.13	4,561.26	0.00	0.00	0.00
10,100.00	90.00	89.65	5,528.89	-346.69	4,653.13	4,661.20	0.00	0.00	0.00
10,200.00	90.00	89.65	5,528.89	-346.08	4,753.13	4,761.14	0.00	0.00	0.00
10,300.00	90.00	89.65	5,528.89	-345.48	4,853.13	4,861.08	0.00	0.00	0.00
10,400.00	90.00	89.65	5,528.89	-344.87	4,953.13	4,961.02	0.00	0.00	0.00
10,500.00	90.00	89.65	5,528.90	-344.27	5,053.12	5,060.96	0.00	0.00	0.00
10,600.00	90.00	89.65	5,528.90	-343.66	5,153.12	5,160.90	0.00	0.00	0.00
10,700.00	90.00	89.65	5,528.90	-343.05	5,253.12	5,260.84	0.00	0.00	0.00
10,800.00	90.00	89.65	5,528.90	-342.45	5,353.12	5,360.78	0.00	0.00	0.00
10,900.00	90.00	89.65	5,528.90	-341.84	5,453.12	5,460.71	0.00	0.00	0.00
11,000.00	90.00	89.65	5,528.90	-341.24	5,553.12	5,560.65	0.00	0.00	0.00
11,100.00	90.00	89.65	5,528.91	-340.63	5,653.11	5,660.59	0.00	0.00	0.00
11,200.00	90.00	89.65	5,528.91	-340.02	5,753.11	5,760.53	0.00	0.00	0.00
11,300.00	90.00	89.65	5,528.91	-339.42	5,853.11	5,860.47	0.00	0.00	0.00
11,400.00	90.00	89.65	5,528.91	-338.81	5,953.11	5,960.41	0.00	0.00	0.00
11,500.00	90.00	89.65	5,528.91	-338.20	6,053.11	6,060.35	0.00	0.00	0.00
11,600.00	90.00	89.65	5,528.92	-337.60	6,153.10	6,160.29	0.00	0.00	0.00
11,700.00	90.00	89.65	5,528.92	-336.99	6,253.10	6,260.23	0.00	0.00	0.00
11,800.00	90.00	89.65	5,528.92	-336.39	6,353.10	6,360.16	0.00	0.00	0.00
11,900.00	90.00	89.65	5,528.92	-335.78	6,453.10	6,460.10	0.00	0.00	0.00
12,000.00	90.00	89.65	5,528.92	-335.17	6,553.10	6,560.04	0.00	0.00	0.00



Altitude Energy Partners

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Company:	Bison Oil & Gas II, LLC	TVD Reference:	KB=23' @ 4684.00usft
Project:	Weld Co., CO (NAD-83)	MD Reference:	KB=23' @ 4684.00usft
Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,100.00	90.00	89.65	5,528.92	-334.57	6,653.09	6,659.98	0.00	0.00	0.00	
12,200.00	90.00	89.65	5,528.93	-333.96	6,753.09	6,759.92	0.00	0.00	0.00	
12,300.00	90.00	89.65	5,528.93	-333.36	6,853.09	6,859.86	0.00	0.00	0.00	
12,400.00	90.00	89.65	5,528.93	-332.75	6,953.09	6,959.80	0.00	0.00	0.00	
12,500.00	90.00	89.65	5,528.93	-332.14	7,053.09	7,059.74	0.00	0.00	0.00	
12,600.00	90.00	89.65	5,528.93	-331.54	7,153.09	7,159.68	0.00	0.00	0.00	
12,700.00	90.00	89.65	5,528.94	-330.93	7,253.08	7,259.62	0.00	0.00	0.00	
12,800.00	90.00	89.65	5,528.94	-330.33	7,353.08	7,359.55	0.00	0.00	0.00	
12,900.00	90.00	89.65	5,528.94	-329.72	7,453.08	7,459.49	0.00	0.00	0.00	
13,000.00	90.00	89.65	5,528.94	-329.11	7,553.08	7,559.43	0.00	0.00	0.00	
13,100.00	90.00	89.65	5,528.94	-328.51	7,653.08	7,659.37	0.00	0.00	0.00	
13,200.00	90.00	89.65	5,528.95	-327.90	7,753.07	7,759.31	0.00	0.00	0.00	
13,300.00	90.00	89.65	5,528.95	-327.30	7,853.07	7,859.25	0.00	0.00	0.00	
13,400.00	90.00	89.65	5,528.95	-326.69	7,953.07	7,959.19	0.00	0.00	0.00	
13,500.00	90.00	89.65	5,528.95	-326.08	8,053.07	8,059.13	0.00	0.00	0.00	
13,600.00	90.00	89.65	5,528.95	-325.48	8,153.07	8,159.07	0.00	0.00	0.00	
13,700.00	90.00	89.65	5,528.95	-324.87	8,253.07	8,259.01	0.00	0.00	0.00	
13,800.00	90.00	89.65	5,528.96	-324.27	8,353.06	8,358.94	0.00	0.00	0.00	
13,900.00	90.00	89.65	5,528.96	-323.66	8,453.06	8,458.88	0.00	0.00	0.00	
14,000.00	90.00	89.65	5,528.96	-323.05	8,553.06	8,558.82	0.00	0.00	0.00	
14,100.00	90.00	89.65	5,528.96	-322.45	8,653.06	8,658.76	0.00	0.00	0.00	
14,200.00	90.00	89.65	5,528.96	-321.84	8,753.06	8,758.70	0.00	0.00	0.00	
14,300.00	90.00	89.65	5,528.97	-321.24	8,853.05	8,858.64	0.00	0.00	0.00	
14,400.00	90.00	89.65	5,528.97	-320.63	8,953.05	8,958.58	0.00	0.00	0.00	
14,500.00	90.00	89.65	5,528.97	-320.02	9,053.05	9,058.52	0.00	0.00	0.00	
14,600.00	90.00	89.65	5,528.97	-319.42	9,153.05	9,158.46	0.00	0.00	0.00	
14,700.00	90.00	89.65	5,528.97	-318.81	9,253.05	9,258.39	0.00	0.00	0.00	
14,800.00	90.00	89.65	5,528.97	-318.21	9,353.05	9,358.33	0.00	0.00	0.00	
14,900.00	90.00	89.65	5,528.98	-317.60	9,453.04	9,458.27	0.00	0.00	0.00	
15,000.00	90.00	89.65	5,528.98	-316.99	9,553.04	9,558.21	0.00	0.00	0.00	
15,100.00	90.00	89.65	5,528.98	-316.39	9,653.04	9,658.15	0.00	0.00	0.00	
15,200.00	90.00	89.65	5,528.98	-315.78	9,753.04	9,758.09	0.00	0.00	0.00	
15,300.00	90.00	89.65	5,528.98	-315.18	9,853.04	9,858.03	0.00	0.00	0.00	
15,400.00	90.00	89.65	5,528.99	-314.57	9,953.03	9,957.97	0.00	0.00	0.00	
15,500.00	90.00	89.65	5,528.99	-313.96	10,053.03	10,057.91	0.00	0.00	0.00	
15,600.00	90.00	89.65	5,528.99	-313.36	10,153.03	10,157.85	0.00	0.00	0.00	
15,700.00	90.00	89.65	5,528.99	-312.75	10,253.03	10,257.78	0.00	0.00	0.00	
15,800.00	90.00	89.65	5,528.99	-312.14	10,353.03	10,357.72	0.00	0.00	0.00	
15,900.00	90.00	89.65	5,529.00	-311.54	10,453.03	10,457.66	0.00	0.00	0.00	
16,000.00	90.00	89.65	5,529.00	-310.93	10,553.02	10,557.60	0.00	0.00	0.00	
16,100.00	90.00	89.65	5,529.00	-310.33	10,653.02	10,657.54	0.00	0.00	0.00	
16,173.23	90.00	89.65	5,529.00	-309.88	10,726.25	10,730.73	0.00	0.00	0.00	
TD at 16173.23										

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Company:	Bison Oil & Gas II, LLC	TVD Reference:	KB=23' @ 4684.00usft
Project:	Weld Co., CO (NAD-83)	MD Reference:	KB=23' @ 4684.00usft
Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Tatanka Federal LD13	0.00	0.00	5,529.00	-356.35	3,058.89	1,519,859.13	3,462,478.88	40.748452	-103.830777
- plan hits target center									
- Point									
Tatanka Federal LD13	0.00	0.00	5,529.00	-309.88	10,726.25	1,520,048.96	3,470,144.03	40.748574	-103.803105
- plan hits target center									
- Point									
Tatanka Federal LD13	0.00	0.00	5,554.00	-371.60	542.24	1,519,796.82	3,459,962.96	40.748411	-103.839860
- plan hits target center									
- Point									

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
340.00	340.00	Pierre Shale (Base of Fox Hills)			
3,173.52	3,164.00	Parkman			
3,672.64	3,661.00	Sussex			
4,275.20	4,261.00	Shannon			
5,432.25	5,354.00	Sharon Springs			
5,560.41	5,434.00	Sharon Springs Hot Marker			
5,598.06	5,454.00	Niobrara A Chalk			
5,791.54	5,529.00	Niobrara B Chalk			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
700.00	700.00	0.00	0.00	Build 1.5°/100'
1,052.37	1,051.87	-14.10	-8.07	3771' Hold
4,823.69	4,807.16	-315.62	-180.63	Build 8°/100'
5,988.91	5,554.00	-371.60	542.24	2516' Hold
8,505.73	5,529.00	-356.35	3,058.89	Drop 2°/100'
8,534.24	5,528.86	-356.18	3,087.40	7638' Hold
16,173.23	5,529.00	-309.88	10,726.25	TD at 16173.23



Bison Oil & Gas II, LLC

Weld Co., CO (NAD-83)

Tatanka Pads

Tatanka Federal LD13-635

OH

Plan #1

Anticollision Report

13 January, 2022



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Max. Cent. Dist. of 1,000.00usft or Max. SF of 10
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	1/13/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	16,173.23	Plan #1 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Tatanka Offsets						
Alice G Nay #1 (P&A) - OH - OH	8,750.78	5,481.86	101.52	-162.96	0.384	No-Go Zone - Stop Drilling
Alice Nay #1 (2) (D&A) - OH - OH	8,729.34	5,511.86	2,094.57	1,829.14	7.891	CC, ES
Alice Nay #1 (2) (D&A) - OH - OH	8,900.00	5,511.87	2,101.51	1,834.45	7.869	SF
Alice Nay #1 (D&A) - OH - OH	9,076.94	5,488.87	434.77	166.21	1.619	Collision Risk Procedures
Alice Nay #2 (D&A) - OH - OH	9,226.58	5,484.87	437.53	167.37	1.620	Collision Risk Procedures
Alice Nay (OWP) #1-A (T&A) - OH - OH	8,741.52	5,504.86	1,531.96	1,266.67	5.775	CC, ES
Alice Nay (OWP) #1-A (T&A) - OH - OH	8,800.00	5,504.86	1,533.08	1,267.23	5.767	SF
Alice Nay 1 (D&A) - OH - OH	8,746.39	5,491.86	764.63	499.81	2.887	CC, ES, SF
Brady #1 (D&A) - OH - OH	10,389.89	5,524.89	1,786.03	1,500.37	6.252	CC
Brady #1 (D&A) - OH - OH	10,400.00	5,524.89	1,786.06	1,500.29	6.250	ES
Brady #1 (D&A) - OH - OH	10,500.00	5,524.90	1,789.42	1,502.69	6.241	SF
Castor Federal LD13-78HN - OH - OH	11,700.00	9,052.99	41.12	-57.97	0.415	No-Go Zone - Stop Drilling
Castor Federal LD14-68HN - OH - OH						Out of range
Castor Federal LD15-72HN - OH - OH	5,380.08	8,979.07	403.98	339.86	6.301	CC
Castor Federal LD15-72HN - OH - OH	5,400.00	8,980.24	404.75	339.07	6.163	ES
Castor Federal LD15-72HN - OH - OH	5,450.00	8,983.13	413.31	344.11	5.973	SF
Mcdermott #1-14 (P&A) - OH - OH	8,915.24	5,481.87	268.14	1.75	1.007	Collision Avoidance Req.,
Nay (OWP) #1 (D&A) - OH - OH	8,742.08	5,653.86	1,438.69	1,167.43	5.304	CC, ES
Nay (OWP) #1 (D&A) - OH - OH	8,800.00	5,653.86	1,439.85	1,168.06	5.298	SF
Rauth #G (D&A) - OH - OH	13,987.27	5,469.96	1,444.59	1,117.10	4.411	CC
Rauth #G (D&A) - OH - OH	14,000.00	5,469.96	1,444.65	1,117.02	4.409	ES, SF
Zimith #1 (D&A) - OH - OH	6,771.92	5,522.22	1,417.65	1,172.65	5.786	CC, ES
Zimith #1 (D&A) - OH - OH	6,800.00	5,521.94	1,417.93	1,172.75	5.783	SF

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Tatanka Pads						
Tatanka Federal LD13-615 - OH - Plan #1	500.00	500.00	56.12	50.92	10.792	CC, ES
Tatanka Federal LD13-615 - OH - Plan #1	16,173.23	16,381.86	1,200.21	927.63	4.403	SF
Tatanka Federal LD13-625 - OH - Plan #1	600.00	600.00	28.06	22.30	4.873	CC, ES
Tatanka Federal LD13-625 - OH - Plan #1	16,173.23	16,314.79	622.84	353.09	2.309	SF
Tatanka Federal LD13-645 - OH - Plan #1	500.00	500.00	27.69	22.49	5.326	CC, ES
Tatanka Federal LD13-645 - OH - Plan #1	16,173.23	16,123.37	622.54	351.81	2.300	SF
Tatanka LD13-650 - OH - Plan #1	5,951.14	6,071.12	1,271.60	1,228.81	29.718	CC
Tatanka LD13-650 - OH - Plan #1	16,173.23	16,276.52	1,275.66	1,003.34	4.684	ES, SF
Tatanka LD13-660 - OH - Plan #1	5,076.42	5,248.05	1,887.80	1,853.02	54.283	CC
Tatanka LD13-660 - OH - Plan #1	16,173.23	16,203.62	1,896.35	1,625.21	6.994	ES, SF
Tatanka LD13-670 - OH - Plan #1	508.85	527.85	1,954.59	1,949.29	368.603	CC
Tatanka LD13-670 - OH - Plan #1	600.00	614.24	1,954.62	1,948.82	337.101	ES
Tatanka LD13-670 - OH - Plan #1	16,173.23	16,190.56	2,515.99	2,244.85	9.279	SF
Tatanka LD13-685 - OH - Plan #1	408.85	427.85	1,982.65	1,977.96	422.334	CC
Tatanka LD13-685 - OH - Plan #1	500.00	500.00	1,982.74	1,977.54	381.273	ES
Tatanka LD13-685 - OH - Plan #1	800.00	700.00	1,994.18	1,987.32	290.650	SF

Offset Design: Tatanka Offsets - Alice G Nay #1 (P&A) - OH - OH

Survey Program: 5650-Unknown														Offset Site Error:	0.00 usft
Reference				Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned:			Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
6,500.00	5,548.92	5,501.92	5,501.92	22.14	220.08	-102.42	-253.35	3,303.32	2,252.97	2,021.30	231.67	9.725			
6,600.00	5,547.93	5,500.93	5,500.93	22.93	220.04	-101.88	-253.35	3,303.32	2,153.08	1,921.40	231.68	9.293			
6,700.00	5,546.94	5,499.94	5,499.94	23.76	220.00	-101.35	-253.35	3,303.32	2,053.20	1,821.51	231.69	8.862			
6,800.00	5,545.94	5,498.94	5,498.94	24.62	219.96	-100.81	-253.35	3,303.32	1,953.33	1,721.62	231.71	8.430			
6,900.00	5,544.95	5,497.95	5,497.95	25.52	219.92	-100.26	-253.35	3,303.32	1,853.48	1,621.74	231.74	7.998			
7,000.00	5,543.96	5,496.96	5,496.96	26.44	219.88	-99.72	-253.35	3,303.32	1,753.64	1,521.87	231.77	7.566			
7,100.00	5,542.96	5,495.96	5,495.96	27.39	219.84	-99.18	-253.35	3,303.32	1,653.83	1,422.01	231.81	7.134			
7,200.00	5,541.97	5,494.97	5,494.97	28.37	219.80	-98.63	-253.35	3,303.32	1,554.03	1,322.17	231.86	6.702			
7,300.00	5,540.98	5,493.98	5,493.98	29.36	219.76	-98.08	-253.35	3,303.32	1,454.27	1,222.34	231.93	6.270			
7,400.00	5,539.98	5,492.98	5,492.98	30.38	219.72	-97.53	-253.35	3,303.32	1,354.53	1,122.53	232.00	5.838			
7,500.00	5,538.99	5,491.99	5,491.99	31.41	219.68	-96.98	-253.35	3,303.32	1,254.84	1,022.74	232.10	5.406			
7,600.00	5,538.00	5,491.00	5,491.00	32.46	219.64	-96.42	-253.35	3,303.32	1,155.20	922.98	232.22	4.975			
7,700.00	5,537.00	5,490.00	5,490.00	33.52	219.60	-95.87	-253.35	3,303.32	1,055.63	823.26	232.37	4.543			
7,800.00	5,536.01	5,489.01	5,489.01	34.60	219.56	-95.31	-253.35	3,303.32	956.15	723.58	232.57	4.111			
7,900.00	5,535.02	5,488.02	5,488.02	35.69	219.52	-94.76	-253.35	3,303.32	856.78	623.96	232.82	3.680			
8,000.00	5,534.02	5,487.02	5,487.02	36.78	219.48	-94.20	-253.35	3,303.32	757.59	524.42	233.16	3.249			
8,100.00	5,533.03	5,486.03	5,486.03	37.89	219.44	-93.64	-253.35	3,303.32	658.63	424.98	233.64	2.819			
8,200.00	5,532.04	5,485.04	5,485.04	39.01	219.40	-93.08	-253.35	3,303.32	560.04	325.70	234.34	2.390			
8,300.00	5,531.04	5,484.04	5,484.04	40.13	219.36	-92.53	-253.35	3,303.32	462.06	226.63	235.43	1.963	Collision Risk Procedures Req.		
8,400.00	5,530.05	5,483.05	5,483.05	41.26	219.32	-91.97	-253.35	3,303.32	365.17	127.94	237.23	1.539	Collision Risk Procedures Req.		
8,505.73	5,529.00	5,482.00	5,482.00	42.47	219.28	-91.37	-253.35	3,303.32	265.24	24.42	240.82	1.101	Collision Avoidance Req.		
8,534.24	5,528.86	5,481.86	5,481.86	42.79	219.27	-90.00	-253.35	3,303.32	239.15	-3.19	242.34	0.987	No-Go Zone - Stop Drilling		
8,600.00	5,528.86	5,481.86	5,481.86	43.54	219.27	-90.00	-253.35	3,303.32	181.77	-65.65	247.42	0.735	No-Go Zone - Stop Drilling		
8,700.00	5,528.86	5,481.86	5,481.86	44.69	219.27	-90.00	-253.35	3,303.32	113.51	-147.14	260.64	0.435	No-Go Zone - Stop Drilling		
8,750.78	5,528.86	5,481.86	5,481.86	45.28	219.27	-90.00	-253.35	3,303.32	101.52	-162.96	264.48	0.384	No-Go Zone - Stop Drilling, CC, ES		
8,800.00	5,528.86	5,481.86	5,481.86	45.85	219.27	-90.00	-253.35	3,303.32	112.82	-146.90	259.72	0.434	No-Go Zone - Stop Drilling		
8,900.00	5,528.87	5,481.87	5,481.87	47.01	219.27	-90.00	-253.35	3,303.32	180.48	-65.11	245.59	0.735	No-Go Zone - Stop Drilling		

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



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice G Nay #1 (P&A) - OH - OH													Offset Site Error:	0.00 usft
Survey Program:		5650-Unknown <th colspan="4"></th> <th colspan="3">Rule Assigned:</th> <th>Offset Well Error:</th> <td>0.00 usft</td>								Rule Assigned:			Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,000.00	5,528.87	5,481.87	5,481.87	48.17	219.27	-90.00	-253.35	3,303.32	269.10	30.39	238.71	1.127	Collision Avoidance Req.	
9,100.00	5,528.87	5,481.87	5,481.87	49.34	219.27	-90.00	-253.35	3,303.32	363.68	128.07	235.61	1.544	Collision Risk Procedures Req.	
9,200.00	5,528.87	5,481.87	5,481.87	50.52	219.27	-90.00	-253.35	3,303.32	460.55	226.47	234.08	1.968	Collision Risk Procedures Req.	
9,300.00	5,528.87	5,481.87	5,481.87	51.69	219.27	-90.01	-253.35	3,303.32	558.52	325.27	233.26	2.394		
9,400.00	5,528.87	5,481.87	5,481.87	52.87	219.27	-90.01	-253.35	3,303.32	657.11	424.31	232.80	2.823		
9,500.00	5,528.88	5,481.88	5,481.88	54.06	219.28	-90.01	-253.35	3,303.32	756.07	523.54	232.53	3.251		
9,600.00	5,528.88	5,481.88	5,481.88	55.24	219.28	-90.01	-253.35	3,303.32	855.27	622.89	232.38	3.680		
9,700.00	5,528.88	5,481.88	5,481.88	56.43	219.28	-90.01	-253.35	3,303.32	954.63	722.33	232.30	4.109		
9,800.00	5,528.88	5,481.88	5,481.88	57.62	219.28	-90.01	-253.35	3,303.32	1,054.12	821.86	232.26	4.538		
9,900.00	5,528.88	5,481.88	5,481.88	58.82	219.28	-90.01	-253.35	3,303.32	1,153.70	921.44	232.26	4.967		
10,000.00	5,528.89	5,481.89	5,481.89	60.01	219.28	-90.01	-253.35	3,303.32	1,253.34	1,021.06	232.27	5.396		
10,100.00	5,528.89	5,481.89	5,481.89	61.21	219.28	-90.01	-253.35	3,303.32	1,353.04	1,120.73	232.31	5.824		
10,200.00	5,528.89	5,481.89	5,481.89	62.41	219.28	-90.02	-253.35	3,303.32	1,452.77	1,220.43	232.35	6.253		
10,300.00	5,528.89	5,481.89	5,481.89	63.62	219.28	-90.02	-253.35	3,303.32	1,552.54	1,320.15	232.40	6.681		
10,400.00	5,528.89	5,481.89	5,481.89	64.82	219.28	-90.02	-253.35	3,303.32	1,652.34	1,419.89	232.45	7.108		
10,500.00	5,528.90	5,481.90	5,481.90	66.03	219.28	-90.02	-253.35	3,303.32	1,752.17	1,519.65	232.52	7.536		
10,600.00	5,528.90	5,481.90	5,481.90	67.24	219.28	-90.02	-253.35	3,303.32	1,852.01	1,619.42	232.58	7.963		
10,700.00	5,528.90	5,481.90	5,481.90	68.44	219.28	-90.02	-253.35	3,303.32	1,951.86	1,719.21	232.65	8.390		
10,800.00	5,528.90	5,481.90	5,481.90	69.66	219.28	-90.02	-253.35	3,303.32	2,051.73	1,819.01	232.72	8.816		
10,900.00	5,528.90	5,481.90	5,481.90	70.87	219.28	-90.02	-253.35	3,303.32	2,151.62	1,918.82	232.80	9.242		
11,000.00	5,528.90	5,481.90	5,481.90	72.08	219.28	-90.02	-253.35	3,303.32	2,251.51	2,018.63	232.88	9.668		

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice Nay #1 (2) (D&A) - OH - OH											Offset Site Error:
											0.00 usft
											Offset Well Error:
											0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:	Distance	Minimum	Separation	Warning	
Measured	Vertical	Measured	Reference	Toolface	+N/-S	+E/-W	Between	Separation	Factor		
Depth	Depth	Depth	Offset	(°)	(usft)	(usft)	Centres	(usft)			
(usft)	(usft)	(usft)	(usft)				(usft)	(usft)			
7,400.00	5,539.98	5,522.98	30.38	220.92	-90.36	1,739.54	3,269.80	2,480.77	2,232.12	248.65	9.977
7,500.00	5,538.99	5,521.99	31.41	220.88	-90.33	1,739.54	3,269.80	2,428.66	2,178.80	249.86	9.720
7,600.00	5,538.00	5,521.00	32.46	220.84	-90.31	1,739.54	3,269.80	2,379.61	2,128.50	251.11	9.476
7,700.00	5,537.00	5,520.00	33.52	220.80	-90.28	1,739.54	3,269.80	2,333.82	2,081.41	252.40	9.246
7,800.00	5,536.01	5,519.01	34.60	220.76	-90.25	1,739.54	3,269.80	2,291.47	2,037.75	253.72	9.031
7,900.00	5,535.02	5,518.02	35.69	220.72	-90.23	1,739.54	3,269.80	2,252.77	1,997.72	255.06	8.832
8,000.00	5,534.02	5,517.02	36.78	220.68	-90.20	1,739.54	3,269.80	2,217.91	1,961.51	256.40	8.650
8,100.00	5,533.03	5,516.03	37.89	220.64	-90.17	1,739.54	3,269.80	2,187.07	1,929.32	257.75	8.485
8,200.00	5,532.04	5,515.04	39.01	220.60	-90.14	1,739.54	3,269.80	2,160.42	1,901.34	259.08	8.339
8,300.00	5,531.04	5,514.04	40.13	220.56	-90.12	1,739.54	3,269.80	2,138.12	1,877.74	260.38	8.212
8,400.00	5,530.05	5,513.05	41.26	220.52	-90.09	1,739.54	3,269.80	2,120.31	1,858.67	261.64	8.104
8,505.73	5,529.00	5,512.00	42.47	220.48	-90.06	1,739.54	3,269.80	2,106.47	1,843.56	262.91	8.012
8,534.24	5,528.86	5,511.86	42.79	220.47	-90.00	1,739.54	3,269.80	2,103.64	1,840.39	263.25	7.991
8,600.00	5,528.86	5,511.86	43.54	220.47	-90.00	1,739.54	3,269.80	2,098.56	1,834.55	264.02	7.949
8,700.00	5,528.86	5,511.86	44.69	220.47	-90.00	1,739.54	3,269.80	2,094.78	1,829.66	265.12	7.901
8,729.34	5,528.86	5,511.86	45.03	220.47	-90.00	1,739.54	3,269.80	2,094.57	1,829.14	265.43	7.891 CC, ES
8,800.00	5,528.86	5,511.86	45.85	220.47	-90.00	1,739.54	3,269.80	2,095.76	1,829.62	266.14	7.875
8,900.00	5,528.87	5,511.87	47.01	220.47	-90.00	1,739.54	3,269.80	2,101.51	1,834.45	267.07	7.869 SF
9,000.00	5,528.87	5,511.87	48.17	220.47	-90.00	1,739.54	3,269.80	2,111.99	1,844.09	267.90	7.884
9,100.00	5,528.87	5,511.87	49.34	220.47	-90.00	1,739.54	3,269.80	2,127.12	1,858.49	268.63	7.919
9,200.00	5,528.87	5,511.87	50.52	220.47	-90.00	1,739.54	3,269.80	2,146.80	1,877.55	269.25	7.973
9,300.00	5,528.87	5,511.87	51.69	220.47	-90.00	1,739.54	3,269.80	2,170.92	1,901.14	269.78	8.047
9,400.00	5,528.87	5,511.87	52.87	220.48	-90.00	1,739.54	3,269.80	2,199.32	1,929.12	270.20	8.140
9,500.00	5,528.88	5,511.88	54.06	220.48	-90.00	1,739.54	3,269.80	2,231.85	1,961.31	270.53	8.250
9,600.00	5,528.88	5,511.88	55.24	220.48	-90.00	1,739.54	3,269.80	2,268.32	1,997.54	270.78	8.377
9,700.00	5,528.88	5,511.88	56.43	220.48	-90.00	1,739.54	3,269.80	2,308.55	2,037.61	270.94	8.520
9,800.00	5,528.88	5,511.88	57.62	220.48	-90.00	1,739.54	3,269.80	2,352.35	2,081.32	271.03	8.679
9,900.00	5,528.88	5,511.88	58.82	220.48	-90.00	1,739.54	3,269.80	2,399.52	2,128.46	271.06	8.852
10,000.00	5,528.89	5,511.89	60.01	220.48	-90.00	1,739.54	3,269.80	2,449.86	2,178.84	271.02	9.039
10,100.00	5,528.89	5,511.89	61.21	220.48	-90.00	1,739.54	3,269.80	2,503.19	2,232.25	270.93	9.239
10,200.00	5,528.89	5,511.89	62.41	220.48	-90.00	1,739.54	3,269.80	2,559.31	2,288.51	270.80	9.451
10,300.00	5,528.89	5,511.89	63.62	220.48	-90.00	1,739.54	3,269.80	2,618.05	2,347.42	270.63	9.674
10,400.00	5,528.89	5,511.89	64.82	220.48	-90.00	1,739.54	3,269.80	2,679.24	2,408.81	270.43	9.907

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice Nay #1 (D&A) - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 6528-Unknown													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,800.00	5,545.94	5,505.94	5,505.94	24.62	220.24	-92.98	81.87	3,627.45	2,317.99	2,084.57	233.42	9.931	
6,900.00	5,544.95	5,504.95	5,504.95	25.52	220.20	-92.85	81.87	3,627.45	2,219.85	1,986.26	233.59	9.503	
7,000.00	5,543.96	5,503.96	5,503.96	26.44	220.16	-92.72	81.87	3,627.45	2,121.88	1,888.08	233.80	9.076	
7,100.00	5,542.96	5,502.96	5,502.96	27.39	220.12	-92.59	81.87	3,627.45	2,024.11	1,790.08	234.04	8.649	
7,200.00	5,541.97	5,501.97	5,501.97	28.37	220.08	-92.46	81.87	3,627.45	1,926.57	1,692.26	234.31	8.222	
7,300.00	5,540.98	5,500.98	5,500.98	29.36	220.04	-92.32	81.87	3,627.45	1,829.29	1,594.66	234.63	7.796	
7,400.00	5,539.98	5,499.98	5,499.98	30.38	220.00	-92.19	81.87	3,627.45	1,732.33	1,497.32	235.01	7.371	
7,500.00	5,538.99	5,498.99	5,498.99	31.41	219.96	-92.06	81.87	3,627.45	1,635.72	1,400.28	235.45	6.947	
7,600.00	5,538.00	5,498.00	5,498.00	32.46	219.92	-91.93	81.87	3,627.45	1,539.56	1,303.59	235.96	6.525	
7,700.00	5,537.00	5,497.00	5,497.00	33.52	219.88	-91.80	81.87	3,627.45	1,443.91	1,207.33	236.57	6.103	
7,800.00	5,536.01	5,496.01	5,496.01	34.60	219.84	-91.67	81.87	3,627.45	1,348.89	1,111.59	237.29	5.684	
7,900.00	5,535.02	5,495.02	5,495.02	35.69	219.80	-91.54	81.87	3,627.45	1,254.64	1,016.49	238.15	5.268	
8,000.00	5,534.02	5,494.02	5,494.02	36.78	219.76	-91.41	81.87	3,627.45	1,161.36	922.18	239.18	4.856	
8,100.00	5,533.03	5,493.03	5,493.03	37.89	219.72	-91.28	81.87	3,627.45	1,069.29	828.88	240.42	4.448	
8,200.00	5,532.04	5,492.04	5,492.04	39.01	219.68	-91.15	81.87	3,627.45	978.78	736.87	241.91	4.046	
8,300.00	5,531.04	5,491.04	5,491.04	40.13	219.64	-91.02	81.87	3,627.45	890.30	646.57	243.73	3.653	
8,400.00	5,530.05	5,490.05	5,490.05	41.26	219.60	-90.89	81.87	3,627.45	804.52	558.58	245.94	3.271	
8,505.73	5,529.00	5,489.00	5,489.00	42.47	219.56	-90.75	81.87	3,627.45	717.84	469.03	248.81	2.885	
8,534.24	5,528.86	5,488.86	5,488.86	42.79	219.55	-90.00	81.87	3,627.45	695.37	445.68	249.69	2.785	
8,600.00	5,528.86	5,488.86	5,488.86	43.54	219.55	-90.00	81.87	3,627.45	645.36	393.45	251.91	2.562	
8,700.00	5,528.86	5,488.86	5,488.86	44.69	219.55	-90.00	81.87	3,627.45	575.42	319.66	255.76	2.250	
8,800.00	5,528.86	5,488.86	5,488.86	45.85	219.55	-90.00	81.87	3,627.45	515.48	255.47	260.01	1.983	Collision Risk Procedures Req.
8,900.00	5,528.87	5,488.87	5,488.87	47.01	219.55	-90.00	81.87	3,627.45	469.40	205.21	264.19	1.777	Collision Risk Procedures Req.
9,000.00	5,528.87	5,488.87	5,488.87	48.17	219.55	-90.00	81.87	3,627.45	441.53	174.13	267.40	1.651	Collision Risk Procedures Req.
9,076.94	5,528.87	5,488.87	5,488.87	49.07	219.55	-90.00	81.87	3,627.45	434.77	166.21	268.56	1.619	Collision Risk Procedures Req., CC
9,100.00	5,528.87	5,488.87	5,488.87	49.34	219.55	-90.00	81.87	3,627.45	435.38	166.74	268.64	1.621	Collision Risk Procedures Req.
9,200.00	5,528.87	5,488.87	5,488.87	50.52	219.55	-90.00	81.87	3,627.45	451.85	184.29	267.57	1.689	Collision Risk Procedures Req.
9,300.00	5,528.87	5,488.87	5,488.87	51.69	219.55	-90.00	81.87	3,627.45	488.66	223.89	264.76	1.846	Collision Risk Procedures Req.
9,400.00	5,528.87	5,488.87	5,488.87	52.87	219.56	-90.00	81.87	3,627.45	541.66	280.46	261.20	2.074	
9,500.00	5,528.88	5,488.88	5,488.88	54.06	219.56	-90.00	81.87	3,627.45	606.64	349.01	257.63	2.355	
9,600.00	5,528.88	5,488.88	5,488.88	55.24	219.56	-90.00	81.87	3,627.45	680.16	425.76	254.40	2.674	
9,700.00	5,528.88	5,488.88	5,488.88	56.43	219.56	-90.00	81.87	3,627.45	759.76	508.13	251.63	3.019	
9,800.00	5,528.88	5,488.88	5,488.88	57.62	219.56	-90.00	81.87	3,627.45	843.71	594.40	249.31	3.384	
9,900.00	5,528.88	5,488.88	5,488.88	58.82	219.56	-90.00	81.87	3,627.45	930.84	683.47	247.37	3.763	
10,000.00	5,528.89	5,488.89	5,488.89	60.01	219.56	-90.00	81.87	3,627.45	1,020.33	774.57	245.76	4.152	
10,100.00	5,528.89	5,488.89	5,488.89	61.21	219.56	-90.00	81.87	3,627.45	1,111.62	867.20	244.42	4.548	
10,200.00	5,528.89	5,488.89	5,488.89	62.41	219.56	-90.00	81.87	3,627.45	1,204.28	960.99	243.29	4.950	
10,300.00	5,528.89	5,488.89	5,488.89	63.62	219.56	-90.00	81.87	3,627.45	1,298.04	1,055.69	242.35	5.356	
10,400.00	5,528.89	5,488.89	5,488.89	64.82	219.56	-90.00	81.87	3,627.45	1,392.67	1,151.12	241.55	5.766	
10,500.00	5,528.90	5,488.90	5,488.90	66.03	219.56	-90.00	81.87	3,627.45	1,488.00	1,247.13	240.87	6.178	
10,600.00	5,528.90	5,488.90	5,488.90	67.24	219.56	-90.00	81.87	3,627.45	1,583.90	1,343.61	240.29	6.592	
10,700.00	5,528.90	5,488.90	5,488.90	68.44	219.56	-90.00	81.87	3,627.45	1,680.29	1,440.49	239.80	7.007	
10,800.00	5,528.90	5,488.90	5,488.90	69.66	219.56	-90.00	81.87	3,627.45	1,777.07	1,537.70	239.37	7.424	
10,900.00	5,528.90	5,488.90	5,488.90	70.87	219.56	-90.00	81.87	3,627.45	1,874.19	1,635.18	239.01	7.842	
11,000.00	5,528.90	5,488.90	5,488.90	72.08	219.56	-90.00	81.87	3,627.45	1,971.60	1,732.90	238.69	8.260	
11,100.00	5,528.91	5,488.91	5,488.91	73.30	219.56	-90.00	81.87	3,627.45	2,069.26	1,830.83	238.43	8.679	
11,200.00	5,528.91	5,488.91	5,488.91	74.51	219.56	-90.01	81.87	3,627.45	2,167.12	1,928.93	238.19	9.098	
11,300.00	5,528.91	5,488.91	5,488.91	75.73	219.56	-90.01	81.87	3,627.45	2,265.18	2,027.19	237.99	9.518	
11,400.00	5,528.91	5,488.91	5,488.91	76.95	219.56	-90.01	81.87	3,627.45	2,363.40	2,125.58	237.82	9.938	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice Nay #2 (D&A) - OH - OH											Offset Site Error:
											0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Offset Well Error:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	0.00 usft	Minimum Separation (usft)	Separation Factor	Warning
7,000.00	5,543.96	5,499.96	26.44	220.00	85.54	3,777.07	2,269.08	2,035.61	233.47	9.719	
7,100.00	5,542.96	5,498.96	27.39	219.96	85.54	3,777.07	2,171.05	1,937.37	233.68	9.291	
7,200.00	5,541.97	5,497.97	28.37	219.92	85.54	3,777.07	2,073.20	1,839.28	233.92	8.863	
7,300.00	5,540.98	5,496.98	29.36	219.88	85.54	3,777.07	1,975.57	1,741.37	234.20	8.435	
7,400.00	5,539.98	5,495.98	30.38	219.84	85.54	3,777.07	1,878.19	1,643.67	234.52	8.009	
7,500.00	5,538.99	5,494.99	31.41	219.80	85.54	3,777.07	1,781.10	1,546.20	234.90	7.582	
7,600.00	5,538.00	5,494.00	32.46	219.76	85.54	3,777.07	1,684.35	1,449.01	235.34	7.157	
7,700.00	5,537.00	5,493.00	33.52	219.72	85.54	3,777.07	1,588.00	1,352.15	235.85	6.733	
7,800.00	5,536.01	5,492.01	34.60	219.68	85.54	3,777.07	1,492.13	1,255.68	236.45	6.311	
7,900.00	5,535.02	5,491.02	35.69	219.64	85.54	3,777.07	1,396.84	1,159.68	237.15	5.890	
8,000.00	5,534.02	5,490.02	36.78	219.60	85.54	3,777.07	1,302.25	1,064.26	237.99	5.472	
8,100.00	5,533.03	5,489.03	37.89	219.56	85.54	3,777.07	1,208.53	969.55	238.99	5.057	
8,200.00	5,532.04	5,488.04	39.01	219.52	85.54	3,777.07	1,115.91	875.73	240.18	4.646	
8,300.00	5,531.04	5,487.04	40.13	219.48	85.54	3,777.07	1,024.67	783.06	241.61	4.241	
8,400.00	5,530.05	5,486.05	41.26	219.44	85.54	3,777.07	935.23	691.88	243.35	3.843	
8,505.73	5,529.00	5,485.00	42.47	219.40	85.54	3,777.07	843.24	597.64	245.59	3.433	
8,534.24	5,528.86	5,484.86	42.79	219.39	85.54	3,777.07	819.00	572.71	246.29	3.325	
8,600.00	5,528.86	5,484.86	43.54	219.39	85.54	3,777.07	764.22	516.17	248.05	3.081	
8,700.00	5,528.86	5,484.86	44.69	219.39	85.54	3,777.07	684.63	433.44	251.18	2.726	
8,800.00	5,528.86	5,484.86	45.85	219.39	85.54	3,777.07	611.06	356.16	254.90	2.397	
8,900.00	5,528.87	5,484.87	47.01	219.39	85.54	3,777.07	545.97	286.83	259.14	2.107	
9,000.00	5,528.87	5,484.87	48.17	219.39	85.54	3,777.07	492.72	229.13	263.58	1.869	Collision Risk Procedures Req.
9,100.00	5,528.87	5,484.87	49.34	219.39	85.54	3,777.07	455.47	187.95	267.52	1.703	Collision Risk Procedures Req.
9,200.00	5,528.87	5,484.87	50.52	219.39	85.54	3,777.07	438.34	168.43	269.91	1.624	Collision Risk Procedures Req.
9,226.58	5,528.87	5,484.87	50.83	219.39	85.54	3,777.07	437.53	167.37	270.16	1.620	Collision Risk Procedures Req., CC
9,300.00	5,528.87	5,484.87	51.69	219.39	85.54	3,777.07	443.65	173.68	269.97	1.643	Collision Risk Procedures Req.
9,400.00	5,528.87	5,484.87	52.87	219.39	85.54	3,777.07	470.65	202.81	267.84	1.757	Collision Risk Procedures Req.
9,500.00	5,528.88	5,484.88	54.06	219.40	85.54	3,777.07	515.94	251.50	264.44	1.951	Collision Risk Procedures Req.
9,600.00	5,528.88	5,484.88	55.24	219.40	85.54	3,777.07	575.22	314.55	260.68	2.207	
9,700.00	5,528.88	5,484.88	56.43	219.40	85.54	3,777.07	644.64	387.52	257.12	2.507	
9,800.00	5,528.88	5,484.88	57.62	219.40	85.54	3,777.07	721.28	467.29	254.00	2.840	
9,900.00	5,528.88	5,484.88	58.82	219.40	85.54	3,777.07	803.08	551.73	251.35	3.195	
10,000.00	5,528.89	5,484.89	60.01	219.40	85.54	3,777.07	888.61	639.48	249.13	3.567	
10,100.00	5,528.89	5,484.89	61.21	219.40	85.54	3,777.07	976.89	729.61	247.28	3.951	
10,200.00	5,528.89	5,484.89	62.41	219.40	85.54	3,777.07	1,067.24	821.50	245.73	4.343	
10,300.00	5,528.89	5,484.89	63.62	219.40	85.54	3,777.07	1,159.17	914.73	244.44	4.742	
10,400.00	5,528.89	5,484.89	64.82	219.40	85.54	3,777.07	1,252.34	1,008.99	243.35	5.146	
10,500.00	5,528.90	5,484.90	66.03	219.40	85.54	3,777.07	1,346.49	1,104.06	242.43	5.554	
10,600.00	5,528.90	5,484.90	67.24	219.40	85.54	3,777.07	1,441.43	1,199.78	241.65	5.965	
10,700.00	5,528.90	5,484.90	68.44	219.40	85.54	3,777.07	1,537.02	1,296.03	240.99	6.378	
10,800.00	5,528.90	5,484.90	69.66	219.40	85.54	3,777.07	1,633.13	1,392.71	240.42	6.793	
10,900.00	5,528.90	5,484.90	70.87	219.40	85.54	3,777.07	1,729.68	1,489.75	239.93	7.209	
11,000.00	5,528.90	5,484.90	72.08	219.40	85.54	3,777.07	1,826.60	1,587.09	239.51	7.626	
11,100.00	5,528.91	5,484.91	73.30	219.40	85.54	3,777.07	1,923.84	1,684.69	239.15	8.044	
11,200.00	5,528.91	5,484.91	74.51	219.40	85.54	3,777.07	2,021.35	1,782.51	238.84	8.463	
11,300.00	5,528.91	5,484.91	75.73	219.40	85.54	3,777.07	2,119.09	1,880.52	238.57	8.882	
11,400.00	5,528.91	5,484.91	76.95	219.40	85.54	3,777.07	2,217.03	1,978.69	238.34	9.302	
11,500.00	5,528.91	5,484.91	78.17	219.40	85.54	3,777.07	2,315.15	2,077.01	238.14	9.722	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice Nay (OWP) #1-A (T&A) - OH - OH													Offset Site Error:
Survey Program: 6277-Unknown													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,900.00	5,544.95	5,520.95	5,520.95	25.52	220.84	-90.68	1,177.01	3,285.40	2,395.38	2,154.15	241.22	9.930	
7,000.00	5,543.96	5,519.96	5,519.96	26.44	220.80	-90.65	1,177.01	3,285.40	2,319.39	2,077.29	242.09	9.581	
7,100.00	5,542.96	5,518.96	5,518.96	27.39	220.76	-90.61	1,177.01	3,285.40	2,245.28	2,002.24	243.04	9.238	
7,200.00	5,541.97	5,517.97	5,517.97	28.37	220.72	-90.57	1,177.01	3,285.40	2,173.25	1,929.18	244.07	8.904	
7,300.00	5,540.98	5,516.98	5,516.98	29.36	220.68	-90.54	1,177.01	3,285.40	2,103.50	1,858.32	245.18	8.579	
7,400.00	5,539.98	5,515.98	5,515.98	30.38	220.64	-90.50	1,177.01	3,285.40	2,036.28	1,789.91	246.37	8.265	
7,500.00	5,538.99	5,514.99	5,514.99	31.41	220.60	-90.46	1,177.01	3,285.40	1,971.84	1,724.20	247.64	7.963	
7,600.00	5,538.00	5,514.00	5,514.00	32.46	220.56	-90.42	1,177.01	3,285.40	1,910.47	1,661.48	248.98	7.673	
7,700.00	5,537.00	5,513.00	5,513.00	33.52	220.52	-90.39	1,177.01	3,285.40	1,852.46	1,602.06	250.40	7.398	
7,800.00	5,536.01	5,512.01	5,512.01	34.60	220.48	-90.35	1,177.01	3,285.40	1,798.14	1,546.27	251.87	7.139	
7,900.00	5,535.02	5,511.02	5,511.02	35.69	220.44	-90.31	1,177.01	3,285.40	1,747.86	1,494.46	253.40	6.898	
8,000.00	5,534.02	5,510.02	5,510.02	36.78	220.40	-90.28	1,177.01	3,285.40	1,701.98	1,447.02	254.95	6.676	
8,100.00	5,533.03	5,509.03	5,509.03	37.89	220.36	-90.24	1,177.01	3,285.40	1,660.85	1,404.33	256.52	6.474	
8,200.00	5,532.04	5,508.04	5,508.04	39.01	220.32	-90.20	1,177.01	3,285.40	1,624.85	1,366.76	258.09	6.296	
8,300.00	5,531.04	5,507.04	5,507.04	40.13	220.28	-90.16	1,177.01	3,285.40	1,594.32	1,334.70	259.61	6.141	
8,400.00	5,530.05	5,506.05	5,506.05	41.26	220.24	-90.13	1,177.01	3,285.40	1,569.57	1,308.50	261.07	6.012	
8,505.73	5,529.00	5,505.00	5,505.00	42.47	220.20	-90.09	1,177.01	3,285.40	1,550.00	1,287.48	262.52	5.904	
8,534.24	5,528.86	5,504.86	5,504.86	42.79	220.19	-90.00	1,177.01	3,285.40	1,545.92	1,283.03	262.89	5.881	
8,600.00	5,528.86	5,504.86	5,504.86	43.54	220.19	-90.00	1,177.01	3,285.40	1,538.49	1,274.77	263.72	5.834	
8,700.00	5,528.86	5,504.86	5,504.86	44.69	220.19	-90.00	1,177.01	3,285.40	1,532.52	1,267.66	264.86	5.786	
8,741.52	5,528.86	5,504.86	5,504.86	45.17	220.19	-90.00	1,177.01	3,285.40	1,531.96	1,266.67	265.29	5.775 CC, ES	
8,800.00	5,528.86	5,504.86	5,504.86	45.85	220.19	-90.00	1,177.01	3,285.40	1,533.08	1,267.23	265.84	5.767 SF	
8,900.00	5,528.87	5,504.87	5,504.87	47.01	220.19	-90.00	1,177.01	3,285.40	1,540.14	1,273.49	266.65	5.776	
9,000.00	5,528.87	5,504.87	5,504.87	48.17	220.19	-90.00	1,177.01	3,285.40	1,553.61	1,286.35	267.27	5.813	
9,100.00	5,528.87	5,504.87	5,504.87	49.34	220.19	-90.00	1,177.01	3,285.40	1,573.34	1,305.64	267.71	5.877	
9,200.00	5,528.87	5,504.87	5,504.87	50.52	220.19	-90.00	1,177.01	3,285.40	1,599.10	1,331.12	267.97	5.967	
9,300.00	5,528.87	5,504.87	5,504.87	51.69	220.19	-90.00	1,177.01	3,285.40	1,630.58	1,362.51	268.08	6.082	
9,400.00	5,528.87	5,504.87	5,504.87	52.87	220.20	-90.00	1,177.01	3,285.40	1,667.48	1,399.44	268.04	6.221	
9,500.00	5,528.88	5,504.88	5,504.88	54.06	220.20	-90.00	1,177.01	3,285.40	1,709.44	1,441.57	267.88	6.381	
9,600.00	5,528.88	5,504.88	5,504.88	55.24	220.20	-90.00	1,177.01	3,285.40	1,756.10	1,488.50	267.61	6.562	
9,700.00	5,528.88	5,504.88	5,504.88	56.43	220.20	-90.00	1,177.01	3,285.40	1,807.09	1,539.84	267.25	6.762	
9,800.00	5,528.88	5,504.88	5,504.88	57.62	220.20	-90.00	1,177.01	3,285.40	1,862.06	1,595.24	266.82	6.979	
9,900.00	5,528.88	5,504.88	5,504.88	58.82	220.20	-90.00	1,177.01	3,285.40	1,920.67	1,654.32	266.35	7.211	
10,000.00	5,528.89	5,504.89	5,504.89	60.01	220.20	-90.00	1,177.01	3,285.40	1,982.59	1,716.76	265.84	7.458	
10,100.00	5,528.89	5,504.89	5,504.89	61.21	220.20	-90.00	1,177.01	3,285.40	2,047.53	1,782.23	265.30	7.718	
10,200.00	5,528.89	5,504.89	5,504.89	62.41	220.20	-90.00	1,177.01	3,285.40	2,115.20	1,850.46	264.74	7.990	
10,300.00	5,528.89	5,504.89	5,504.89	63.62	220.20	-90.00	1,177.01	3,285.40	2,185.35	1,921.17	264.18	8.272	
10,400.00	5,528.89	5,504.89	5,504.89	64.82	220.20	-90.00	1,177.01	3,285.40	2,257.75	1,994.13	263.62	8.564	
10,500.00	5,528.90	5,504.90	5,504.90	66.03	220.20	-90.00	1,177.01	3,285.40	2,332.20	2,069.13	263.07	8.865	
10,600.00	5,528.90	5,504.90	5,504.90	67.24	220.20	-90.00	1,177.01	3,285.40	2,408.49	2,145.97	262.52	9.174	
10,700.00	5,528.90	5,504.90	5,504.90	68.44	220.20	-90.00	1,177.01	3,285.40	2,486.47	2,224.48	261.99	9.491	
10,800.00	5,528.90	5,504.90	5,504.90	69.66	220.20	-90.00	1,177.01	3,285.40	2,565.98	2,304.50	261.47	9.814	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Alice Nay 1 (D&A) - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 5705-Unknown												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,600.00	5,547.93	5,510.93	5,510.93	22.93	220.44	-91.60	409.73	3,294.92	2,278.44	2,043.26	235.18	9.688	
6,700.00	5,546.94	5,509.94	5,509.94	23.76	220.40	-91.52	409.73	3,294.92	2,184.50	1,948.95	235.54	9.274	
6,800.00	5,545.94	5,508.94	5,508.94	24.62	220.36	-91.45	409.73	3,294.92	2,091.12	1,855.16	235.96	8.862	
6,900.00	5,544.95	5,507.95	5,507.95	25.52	220.32	-91.37	409.73	3,294.92	1,998.39	1,761.95	236.44	8.452	
7,000.00	5,543.96	5,506.96	5,506.96	26.44	220.28	-91.30	409.73	3,294.92	1,906.38	1,669.40	236.99	8.044	
7,100.00	5,542.96	5,505.96	5,505.96	27.39	220.24	-91.23	409.73	3,294.92	1,815.23	1,577.61	237.62	7.639	
7,200.00	5,541.97	5,504.97	5,504.97	28.37	220.20	-91.15	409.73	3,294.92	1,725.05	1,486.72	238.34	7.238	
7,300.00	5,540.98	5,503.98	5,503.98	29.36	220.16	-91.08	409.73	3,294.92	1,636.02	1,396.86	239.16	6.841	
7,400.00	5,539.98	5,502.98	5,502.98	30.38	220.12	-91.00	409.73	3,294.92	1,548.32	1,308.22	240.10	6.449	
7,500.00	5,538.99	5,501.99	5,501.99	31.41	220.08	-90.93	409.73	3,294.92	1,462.20	1,221.03	241.17	6.063	
7,600.00	5,538.00	5,501.00	5,501.00	32.46	220.04	-90.85	409.73	3,294.92	1,377.96	1,135.56	242.40	5.685	
7,700.00	5,537.00	5,500.00	5,500.00	33.52	220.00	-90.78	409.73	3,294.92	1,295.96	1,052.17	243.79	5.316	
7,800.00	5,536.01	5,499.01	5,499.01	34.60	219.96	-90.70	409.73	3,294.92	1,216.66	971.29	245.37	4.958	
7,900.00	5,535.02	5,498.02	5,498.02	35.69	219.92	-90.63	409.73	3,294.92	1,140.61	893.46	247.15	4.615	
8,000.00	5,534.02	5,497.02	5,497.02	36.78	219.88	-90.56	409.73	3,294.92	1,068.52	819.38	249.14	4.289	
8,100.00	5,533.03	5,496.03	5,496.03	37.89	219.84	-90.48	409.73	3,294.92	1,001.23	749.91	251.32	3.984	
8,200.00	5,532.04	5,495.04	5,495.04	39.01	219.80	-90.41	409.73	3,294.92	939.78	686.11	253.67	3.705	
8,300.00	5,531.04	5,494.04	5,494.04	40.13	219.76	-90.33	409.73	3,294.92	885.39	629.26	256.14	3.457	
8,400.00	5,530.05	5,493.05	5,493.05	41.26	219.72	-90.26	409.73	3,294.92	839.43	580.84	258.60	3.246	
8,505.73	5,529.00	5,492.00	5,492.00	42.47	219.68	-90.18	409.73	3,294.92	801.61	540.58	261.03	3.071	
8,534.24	5,528.86	5,491.86	5,491.86	42.79	219.67	-90.00	409.73	3,294.92	793.52	531.89	261.63	3.033	
8,600.00	5,528.86	5,491.86	5,491.86	43.54	219.67	-90.00	409.73	3,294.92	778.52	515.63	262.89	2.961	
8,700.00	5,528.86	5,491.86	5,491.86	44.69	219.67	-90.00	409.73	3,294.92	766.04	501.67	264.37	2.898	
8,746.39	5,528.86	5,491.86	5,491.86	45.23	219.67	-90.00	409.73	3,294.92	764.63	499.81	264.83	2.887	CC, ES, SF
8,800.00	5,528.86	5,491.86	5,491.86	45.85	219.67	-90.00	409.73	3,294.92	766.51	501.34	265.17	2.891	
8,900.00	5,528.87	5,491.87	5,491.87	47.01	219.67	-90.00	409.73	3,294.92	779.91	514.64	265.27	2.940	
9,000.00	5,528.87	5,491.87	5,491.87	48.17	219.67	-90.00	409.73	3,294.92	805.59	540.86	264.73	3.043	
9,100.00	5,528.87	5,491.87	5,491.87	49.34	219.67	-90.00	409.73	3,294.92	842.44	578.75	263.69	3.195	
9,200.00	5,528.87	5,491.87	5,491.87	50.52	219.67	-90.00	409.73	3,294.92	889.06	626.75	262.31	3.389	
9,300.00	5,528.87	5,491.87	5,491.87	51.69	219.67	-90.00	409.73	3,294.92	944.00	683.26	260.74	3.620	
9,400.00	5,528.87	5,491.87	5,491.87	52.87	219.68	-90.00	409.73	3,294.92	1,005.91	746.79	259.12	3.882	
9,500.00	5,528.88	5,491.88	5,491.88	54.06	219.68	-90.00	409.73	3,294.92	1,073.58	816.07	257.52	4.169	
9,600.00	5,528.88	5,491.88	5,491.88	55.24	219.68	-90.00	409.73	3,294.92	1,145.99	890.01	255.99	4.477	
9,700.00	5,528.88	5,491.88	5,491.88	56.43	219.68	-90.00	409.73	3,294.92	1,222.30	967.74	254.56	4.802	
9,800.00	5,528.88	5,491.88	5,491.88	57.62	219.68	-90.00	409.73	3,294.92	1,301.82	1,048.58	253.24	5.141	
9,900.00	5,528.88	5,491.88	5,491.88	58.82	219.68	-90.00	409.73	3,294.92	1,384.00	1,131.96	252.04	5.491	
10,000.00	5,528.89	5,491.89	5,491.89	60.01	219.68	-90.00	409.73	3,294.92	1,468.40	1,217.45	250.95	5.851	
10,100.00	5,528.89	5,491.89	5,491.89	61.21	219.68	-90.00	409.73	3,294.92	1,554.64	1,304.68	249.96	6.220	
10,200.00	5,528.89	5,491.89	5,491.89	62.41	219.68	-90.00	409.73	3,294.92	1,642.45	1,393.38	249.07	6.594	
10,300.00	5,528.89	5,491.89	5,491.89	63.62	219.68	-90.00	409.73	3,294.92	1,731.57	1,483.31	248.26	6.975	
10,400.00	5,528.89	5,491.89	5,491.89	64.82	219.68	-90.00	409.73	3,294.92	1,821.83	1,574.30	247.54	7.360	
10,500.00	5,528.90	5,491.90	5,491.90	66.03	219.68	-90.00	409.73	3,294.92	1,913.06	1,666.18	246.88	7.749	
10,600.00	5,528.90	5,491.90	5,491.90	67.24	219.68	-90.00	409.73	3,294.92	2,005.12	1,758.84	246.29	8.141	
10,700.00	5,528.90	5,491.90	5,491.90	68.44	219.68	-90.00	409.73	3,294.92	2,097.91	1,852.16	245.75	8.537	
10,800.00	5,528.90	5,491.90	5,491.90	69.66	219.68	-90.00	409.73	3,294.92	2,191.34	1,946.07	245.26	8.935	
10,900.00	5,528.90	5,491.90	5,491.90	70.87	219.68	-90.00	409.73	3,294.92	2,285.32	2,040.50	244.82	9.335	
11,000.00	5,528.90	5,491.90	5,491.90	72.08	219.68	-90.00	409.73	3,294.92	2,379.79	2,135.37	244.42	9.736	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Brady #1 (D&A) - OH - OH											Offset Site Error:
											0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Offset Well Error:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.00	5,528.86	5,524.86	43.54	220.99	-90.00	1,441.06	4,932.20	2,528.56	2,274.01	254.55	9.933
8,700.00	5,528.86	5,524.86	44.69	220.99	-90.00	1,441.06	4,932.20	2,458.79	2,202.70	256.09	9.601
8,800.00	5,528.86	5,524.86	45.85	220.99	-90.00	1,441.06	4,932.20	2,391.16	2,133.46	257.71	9.279
8,900.00	5,528.87	5,524.87	47.01	220.99	-90.00	1,441.06	4,932.20	2,325.87	2,066.48	259.39	8.967
9,000.00	5,528.87	5,524.87	48.17	220.99	-90.00	1,441.06	4,932.20	2,263.12	2,001.97	261.15	8.666
9,100.00	5,528.87	5,524.87	49.34	220.99	-90.00	1,441.06	4,932.20	2,203.12	1,940.15	262.96	8.378
9,200.00	5,528.87	5,524.87	50.52	220.99	-90.00	1,441.06	4,932.20	2,146.10	1,881.26	264.84	8.103
9,300.00	5,528.87	5,524.87	51.69	220.99	-90.00	1,441.06	4,932.20	2,092.31	1,825.56	266.76	7.844
9,400.00	5,528.87	5,524.87	52.87	221.00	-90.00	1,441.06	4,932.20	2,042.01	1,773.30	268.71	7.599
9,500.00	5,528.88	5,524.88	54.06	221.00	-90.00	1,441.06	4,932.20	1,995.45	1,724.77	270.68	7.372
9,600.00	5,528.88	5,524.88	55.24	221.00	-90.00	1,441.06	4,932.20	1,952.90	1,680.25	272.65	7.163
9,700.00	5,528.88	5,524.88	56.43	221.00	-90.00	1,441.06	4,932.20	1,914.64	1,640.03	274.61	6.972
9,800.00	5,528.88	5,524.88	57.62	221.00	-90.00	1,441.06	4,932.20	1,880.92	1,604.40	276.52	6.802
9,900.00	5,528.88	5,524.88	58.82	221.00	-90.00	1,441.06	4,932.20	1,852.00	1,573.63	278.37	6.653
10,000.00	5,528.89	5,524.89	60.01	221.00	-90.00	1,441.06	4,932.20	1,828.09	1,547.96	280.13	6.526
10,100.00	5,528.89	5,524.89	61.21	221.00	-90.00	1,441.06	4,932.20	1,809.40	1,527.63	281.77	6.422
10,200.00	5,528.89	5,524.89	62.41	221.00	-90.00	1,441.06	4,932.20	1,796.10	1,512.83	283.27	6.341
10,300.00	5,528.89	5,524.89	63.62	221.00	-90.00	1,441.06	4,932.20	1,788.29	1,503.68	284.61	6.283
10,389.89	5,528.89	5,524.89	64.70	221.00	-90.00	1,441.06	4,932.20	1,786.03	1,500.37	285.66	6.252 CC
10,400.00	5,528.89	5,524.89	64.82	221.00	-90.00	1,441.06	4,932.20	1,786.06	1,500.29	285.76	6.250 ES
10,500.00	5,528.90	5,524.90	66.03	221.00	-90.00	1,441.06	4,932.20	1,789.42	1,502.69	286.73	6.241 SF
10,600.00	5,528.90	5,524.90	67.24	221.00	-90.00	1,441.06	4,932.20	1,798.34	1,510.84	287.50	6.255
10,700.00	5,528.90	5,524.90	68.44	221.00	-90.00	1,441.06	4,932.20	1,812.75	1,524.68	288.07	6.293
10,800.00	5,528.90	5,524.90	69.66	221.00	-90.00	1,441.06	4,932.20	1,832.51	1,544.07	288.44	6.353
10,900.00	5,528.90	5,524.90	70.87	221.00	-90.00	1,441.06	4,932.20	1,857.45	1,568.82	288.62	6.436
11,000.00	5,528.90	5,524.90	72.08	221.00	-90.00	1,441.06	4,932.20	1,887.36	1,598.72	288.64	6.539
11,100.00	5,528.91	5,524.91	73.30	221.00	-90.00	1,441.06	4,932.20	1,922.02	1,633.53	288.49	6.662
11,200.00	5,528.91	5,524.91	74.51	221.00	-90.00	1,441.06	4,932.20	1,961.17	1,672.96	288.20	6.805
11,300.00	5,528.91	5,524.91	75.73	221.00	-90.00	1,441.06	4,932.20	2,004.54	1,716.75	287.79	6.965
11,400.00	5,528.91	5,524.91	76.95	221.00	-90.00	1,441.06	4,932.20	2,051.88	1,764.60	287.28	7.142
11,500.00	5,528.91	5,524.91	78.17	221.00	-90.00	1,441.06	4,932.20	2,102.91	1,816.22	286.69	7.335
11,600.00	5,528.92	5,524.92	79.39	221.00	-90.00	1,441.06	4,932.20	2,157.37	1,871.35	286.03	7.543
11,700.00	5,528.92	5,524.92	80.61	221.00	-90.00	1,441.06	4,932.20	2,215.01	1,929.70	285.31	7.763
11,800.00	5,528.92	5,524.92	81.83	221.00	-90.00	1,441.06	4,932.20	2,275.59	1,991.03	284.56	7.997
11,900.00	5,528.92	5,524.92	83.05	221.00	-90.00	1,441.06	4,932.20	2,338.87	2,055.09	283.78	8.242
12,000.00	5,528.92	5,524.92	84.27	221.00	-90.00	1,441.06	4,932.20	2,404.65	2,121.67	282.98	8.498
12,100.00	5,528.92	5,524.92	85.50	221.00	-90.00	1,441.06	4,932.20	2,472.72	2,190.55	282.18	8.763
12,200.00	5,528.93	5,524.93	86.72	221.00	-90.00	1,441.06	4,932.20	2,542.91	2,261.53	281.37	9.037
12,300.00	5,528.93	5,524.93	87.95	221.00	-90.00	1,441.06	4,932.20	2,615.03	2,334.46	280.57	9.320
12,400.00	5,528.93	5,524.93	89.18	221.00	-90.00	1,441.06	4,932.20	2,688.95	2,409.16	279.78	9.611
12,500.00	5,528.93	5,524.93	90.40	221.00	-90.00	1,441.06	4,932.20	2,764.50	2,485.49	279.01	9.908

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Castor Federal LD13-78HN - OH - OH													Offset Site Error:
Survey Program: 275-MWD													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,800.00	5,528.88	9,070.20	5,521.11	57.62	74.03	143.43	-354.74	6,286.09	1,933.11	1,846.18	86.93	22.236	
9,900.00	5,528.88	9,069.45	5,521.12	58.82	74.02	144.61	-353.99	6,286.09	1,833.13	1,746.13	87.00	21.070	
10,000.00	5,528.89	9,068.69	5,521.13	60.01	74.01	145.84	-353.22	6,286.09	1,733.14	1,646.07	87.07	19.905	
10,100.00	5,528.89	9,067.91	5,521.14	61.21	73.99	147.13	-352.44	6,286.10	1,633.16	1,546.01	87.14	18.741	
10,200.00	5,528.89	9,067.11	5,521.16	62.41	73.98	148.49	-351.65	6,286.10	1,533.17	1,445.95	87.22	17.579	
10,300.00	5,528.89	9,066.30	5,521.17	63.62	73.97	149.92	-350.84	6,286.10	1,433.19	1,345.89	87.30	16.418	
10,400.00	5,528.89	9,065.47	5,521.18	64.82	73.95	151.42	-350.01	6,286.10	1,333.21	1,245.83	87.38	15.258	
10,500.00	5,528.90	9,064.63	5,521.19	66.03	73.94	152.99	-349.17	6,286.11	1,233.23	1,145.77	87.46	14.100	
10,600.00	5,528.90	9,063.77	5,521.20	67.24	73.92	154.63	-348.31	6,286.11	1,133.26	1,045.70	87.56	12.943	
10,700.00	5,528.90	9,062.89	5,521.22	68.44	73.91	156.36	-347.43	6,286.11	1,033.29	945.63	87.66	11.788	
10,800.00	5,528.90	9,061.99	5,521.23	69.66	73.89	158.17	-346.53	6,286.12	933.33	845.56	87.77	10.634	
10,900.00	5,528.90	9,061.08	5,521.24	70.87	73.87	160.07	-345.61	6,286.12	833.37	745.48	87.89	9.482	
11,000.00	5,528.90	9,060.14	5,521.26	72.08	73.86	162.05	-344.68	6,286.13	733.42	645.39	88.03	8.332	
11,100.00	5,528.91	9,059.19	5,521.27	73.30	73.84	164.12	-343.72	6,286.13	633.49	545.30	88.20	7.183	
11,200.00	5,528.91	9,058.21	5,521.28	74.51	73.82	166.27	-342.75	6,286.13	533.59	445.18	88.40	6.036	
11,300.00	5,528.91	9,057.21	5,521.30	75.73	73.81	168.51	-341.75	6,286.14	433.72	345.03	88.69	4.890	
11,400.00	5,528.91	9,056.19	5,521.31	76.95	73.79	170.84	-340.73	6,286.14	333.93	244.82	89.12	3.747	
11,500.00	5,528.91	9,055.15	5,521.33	78.17	73.77	173.25	-339.68	6,286.15	234.32	144.43	89.90	2.607	
11,600.00	5,528.92	9,054.08	5,521.34	79.39	73.75	175.73	-338.62	6,286.15	135.28	43.44	91.83	1.473	Collision Avoidance Req.
11,700.00	5,528.92	9,052.99	5,521.36	80.61	73.73	178.28	-337.53	6,286.16	41.12	-57.97	99.08	0.415	No-Go Zone - Stop Drilling, CC, ES
11,800.00	5,528.92	9,051.87	5,521.38	81.83	73.71	-179.10	-336.41	6,286.16	71.26	-17.69	88.96	0.801	No-Go Zone - Stop Drilling
11,900.00	5,528.92	9,050.73	5,521.39	83.05	73.69	-176.43	-335.26	6,286.17	168.71	81.76	86.95	1.940	Collision Risk Procedures Req.
12,000.00	5,528.92	9,049.56	5,521.41	84.27	73.67	-173.71	-334.09	6,286.18	268.04	180.94	87.10	3.077	
12,100.00	5,528.92	9,048.36	5,521.43	85.50	73.65	-170.97	-332.90	6,286.18	367.73	280.40	87.34	4.211	
12,200.00	5,528.93	9,047.13	5,521.45	86.72	73.63	-168.20	-331.67	6,286.19	467.55	380.02	87.54	5.341	
12,300.00	5,528.93	9,045.87	5,521.47	87.95	73.61	-165.42	-330.41	6,286.20	567.43	479.73	87.70	6.470	
12,400.00	5,528.93	9,044.58	5,521.49	89.18	73.58	-162.66	-329.12	6,286.21	667.35	579.50	87.85	7.596	
12,500.00	5,528.93	9,043.26	5,521.51	90.40	73.56	-159.90	-327.80	6,286.21	767.28	679.30	87.98	8.721	
12,600.00	5,528.93	9,041.90	5,521.53	91.63	73.54	-157.19	-326.44	6,286.22	867.23	779.13	88.10	9.844	
12,700.00	5,528.94	9,040.51	5,521.55	92.86	73.51	-154.51	-325.05	6,286.23	967.18	878.98	88.20	10.965	
12,800.00	5,528.94	9,039.08	5,521.57	94.09	73.49	-151.88	-323.62	6,286.24	1,067.15	978.84	88.31	12.085	
12,900.00	5,528.94	9,037.61	5,521.60	95.32	73.46	-149.32	-322.15	6,286.25	1,167.12	1,078.71	88.40	13.202	
13,000.00	5,528.94	9,036.10	5,521.62	96.55	73.44	-146.83	-320.64	6,286.26	1,267.09	1,178.59	88.50	14.318	
13,100.00	5,528.94	9,034.56	5,521.65	97.78	73.41	-144.41	-319.10	6,286.27	1,367.06	1,278.47	88.59	15.432	
13,200.00	5,528.95	9,033.00	5,521.67	99.01	73.38	-142.13	-317.54	6,286.28	1,467.04	1,378.36	88.67	16.544	
13,300.00	5,528.95	9,033.00	5,521.67	100.24	73.38	-142.13	-317.54	6,286.28	1,567.02	1,478.22	88.79	17.648	
13,400.00	5,528.95	9,033.00	5,521.67	101.47	73.38	-142.13	-317.54	6,286.28	1,667.00	1,578.09	88.91	18.749	
13,500.00	5,528.95	9,033.00	5,521.67	102.70	73.38	-142.13	-317.54	6,286.28	1,766.98	1,677.95	89.03	19.847	
13,600.00	5,528.95	9,033.00	5,521.67	103.94	73.38	-142.13	-317.54	6,286.28	1,866.97	1,777.82	89.14	20.943	
13,700.00	5,528.95	9,033.00	5,521.67	105.17	73.38	-142.13	-317.54	6,286.28	1,966.95	1,877.69	89.26	22.036	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Castor Federal LD15-72HN - OH - OH

Survey Program: Reference		350-MWD						Rule Assigned:				Offset Well Error:		0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
3,700.00	3,688.24	8,890.19	5,632.09	13.48	64.55	108.05	-283.71	-301.99	1,908.57	1,868.00	40.56	47.052		
3,800.00	3,787.82	8,894.55	5,631.97	13.87	64.62	106.75	-288.07	-301.85	1,808.80	1,768.05	40.75	44.388		
3,900.00	3,887.39	8,905.00	5,631.69	14.25	64.80	103.35	-298.51	-301.51	1,709.05	1,668.09	40.97	41.719		
4,000.00	3,986.97	8,905.00	5,631.69	14.64	64.80	103.35	-298.51	-301.51	1,609.30	1,568.15	41.15	39.112		
4,100.00	4,086.54	8,908.51	5,631.60	15.02	64.86	102.10	-302.01	-301.40	1,509.58	1,468.23	41.35	36.510		
4,200.00	4,186.12	8,913.76	5,631.46	15.41	64.95	100.14	-307.26	-301.23	1,409.87	1,368.31	41.56	33.922		
4,300.00	4,285.69	8,919.01	5,631.33	15.79	65.04	98.05	-312.50	-301.06	1,310.19	1,268.41	41.79	31.355		
4,400.00	4,385.27	8,924.26	5,631.19	16.18	65.13	95.82	-317.75	-300.89	1,210.54	1,168.52	42.02	28.807		
4,500.00	4,484.84	8,929.50	5,631.05	16.57	65.22	93.46	-322.99	-300.73	1,110.93	1,068.66	42.27	26.280		
4,600.00	4,584.42	8,934.75	5,630.91	16.95	65.31	90.95	-328.23	-300.56	1,011.37	968.83	42.54	23.773		
4,700.00	4,683.99	8,939.99	5,630.78	17.34	65.40	88.29	-333.47	-300.38	911.88	869.04	42.84	21.286		
4,800.00	4,783.57	8,945.24	5,630.64	17.73	65.49	85.48	-338.71	-300.21	812.47	769.30	43.17	18.818		
4,823.69	4,807.16	8,946.48	5,630.61	17.81	65.51	84.80	-339.95	-300.17	788.94	745.68	43.26	18.237		
4,850.00	4,833.37	8,947.88	5,630.57	17.90	65.54	101.66	-341.35	-300.13	762.87	719.51	43.37	17.591		
4,900.00	4,883.18	8,950.60	5,630.50	18.06	65.58	138.99	-344.06	-300.04	713.83	670.19	43.64	16.357		
4,950.00	4,932.79	8,953.40	5,630.43	18.13	65.63	156.97	-346.87	-299.95	665.76	621.73	44.03	15.120		
5,000.00	4,981.94	8,956.28	5,630.35	18.13	65.68	164.61	-349.74	-299.85	619.16	574.55	44.61	13.881		
5,050.00	5,030.40	8,959.22	5,630.27	18.11	65.73	168.43	-352.68	-299.76	574.64	529.19	45.44	12.645		
5,100.00	5,077.94	8,962.20	5,630.20	18.07	65.78	170.58	-355.66	-299.66	532.95	486.29	46.66	11.422		
5,150.00	5,124.31	8,965.21	5,630.12	18.02	65.84	171.91	-358.67	-299.56	495.06	446.66	48.40	10.229		
5,200.00	5,169.31	8,968.24	5,630.04	17.97	65.89	172.77	-361.69	-299.46	462.09	411.31	50.78	9.100		
5,250.00	5,212.69	8,971.27	5,629.96	17.91	65.94	173.33	-364.72	-299.36	435.35	381.47	53.88	8.080		
5,300.00	5,254.27	8,974.29	5,629.88	17.86	65.99	173.70	-367.74	-299.26	416.17	358.57	57.60	7.225		
5,350.00	5,293.82	8,977.28	5,629.80	17.82	66.04	173.93	-370.73	-299.16	405.72	344.05	61.67	6.579		
5,380.08	5,316.57	8,979.07	5,629.75	17.79	66.07	174.02	-372.51	-299.10	403.98	339.86	64.11	6.301	CC	
5,400.00	5,331.17	8,980.24	5,629.72	17.78	66.09	174.05	-373.68	-299.06	404.75	339.07	65.67	6.163	ES	
5,401.49	5,332.24	8,980.32	5,629.72	17.78	66.09	174.06	-373.76	-299.06	404.86	339.08	65.78	6.154		
5,450.00	5,366.12	8,983.13	5,629.65	17.76	66.14	174.08	-376.57	-298.96	413.31	344.11	69.20	5.973	SF	
5,500.00	5,398.51	8,985.96	5,629.57	17.75	66.19	174.03	-379.40	-298.87	430.81	358.81	72.00	5.983		
5,550.00	5,428.18	8,988.71	5,629.50	17.76	66.24	173.90	-382.14	-298.78	456.13	382.09	74.05	6.160		
5,600.00	5,454.99	8,991.36	5,629.43	17.80	66.28	173.68	-384.79	-298.69	487.96	412.52	75.44	6.468		
5,650.00	5,478.79	8,993.91	5,629.37	17.85	66.33	173.35	-387.34	-298.60	524.97	448.63	76.34	6.877		
5,700.00	5,499.49	8,996.33	5,629.30	17.94	66.37	172.87	-389.76	-298.52	565.99	489.08	76.91	7.359		
5,750.00	5,516.98	8,998.62	5,629.24	18.04	66.41	172.19	-392.05	-298.45	610.03	532.77	77.25	7.896		
5,800.00	5,531.16	9,000.76	5,629.19	18.17	66.45	171.17	-394.18	-298.37	656.29	578.82	77.47	8.472		
5,850.00	5,541.99	9,002.72	5,629.13	18.33	66.48	169.53	-396.15	-298.31	704.14	626.53	77.60	9.074		
5,900.00	5,549.39	9,004.52	5,629.09	18.52	66.51	166.43	-397.94	-298.25	753.06	675.37	77.69	9.693		
5,950.00	5,553.33	9,006.15	5,629.05	18.73	66.54	158.51	-399.57	-298.19	802.64	724.89	77.75	10.323		
5,988.91	5,554.00	9,007.29	5,629.02	18.90	66.56	133.36	-400.70	-298.15	841.47	763.69	77.78	10.818		
6,000.00	5,553.89	9,007.59	5,629.01	18.95	66.56	132.98	-401.01	-298.14	852.55	774.76	77.79	10.959		
6,100.00	5,552.90	9,010.37	5,628.94	19.48	66.61	129.82	-403.79	-298.05	952.48	874.62	77.86	12.233		
6,200.00	5,551.90	9,013.15	5,628.87	20.06	66.66	127.01	-406.56	-297.96	1,052.41	974.49	77.93	13.505		
6,300.00	5,550.91	9,015.93	5,628.80	20.70	66.71	124.51	-409.34	-297.86	1,152.35	1,074.35	78.00	14.774		
6,400.00	5,549.92	9,018.71	5,628.73	21.40	66.75	122.28	-412.12	-297.77	1,252.30	1,174.23	78.07	16.041		
6,500.00	5,548.92	9,021.49	5,628.66	22.14	66.80	120.29	-414.89	-297.68	1,352.24	1,274.10	78.14	17.305		
6,600.00	5,547.93	9,024.27	5,628.59	22.93	66.85	118.49	-417.67	-297.58	1,452.19	1,373.97	78.22	18.566		
6,700.00	5,546.94	9,027.04	5,628.52	23.76	66.90	116.88	-420.44	-297.49	1,552.14	1,473.84	78.29	19.825		
6,800.00	5,545.94	9,029.82	5,628.45	24.62	66.95	115.41	-423.22	-297.40	1,652.09	1,573.72	78.37	21.080		
6,900.00	5,544.95	9,032.60	5,628.38	25.52	66.99	114.09	-425.99	-297.30	1,752.04	1,673.59	78.45	22.333		
7,000.00	5,543.96	9,035.37	5,628.31	26.44	67.04	112.88	-428.77	-297.21	1,851.99	1,773.46	78.53	23.583		
7,100.00	5,542.96	9,038.15	5,628.25	27.39	67.09	111.77	-431.54	-297.12	1,951.95	1,873.33	78.61	24.830		

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Mcdermott #1-14 (P&A) - OH - OH													Offset Site Error:
Survey Program: 5631-Unknown													0.00 usft
Rule Assigned:													Offset Well Error:
													0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,700.00	5,546.94	5,499.94	5,499.94	23.76	220.00	-94.69	-85.74	3,466.77	2,231.32	1,998.98	232.34	9.604	
6,800.00	5,545.94	5,498.94	5,498.94	24.62	219.96	-94.48	-85.74	3,466.77	2,132.09	1,899.66	232.43	9.173	
6,900.00	5,544.95	5,497.95	5,497.95	25.52	219.92	-94.27	-85.74	3,466.77	2,032.92	1,800.39	232.53	8.743	
7,000.00	5,543.96	5,496.96	5,496.96	26.44	219.88	-94.06	-85.74	3,466.77	1,933.85	1,701.20	232.65	8.312	
7,100.00	5,542.96	5,495.96	5,495.96	27.39	219.84	-93.85	-85.74	3,466.77	1,834.87	1,602.08	232.79	7.882	
7,200.00	5,541.97	5,494.97	5,494.97	28.37	219.80	-93.64	-85.74	3,466.77	1,736.01	1,503.05	232.96	7.452	
7,300.00	5,540.98	5,493.98	5,493.98	29.36	219.76	-93.42	-85.74	3,466.77	1,637.29	1,404.12	233.16	7.022	
7,400.00	5,539.98	5,492.98	5,492.98	30.38	219.72	-93.21	-85.74	3,466.77	1,538.73	1,305.33	233.40	6.593	
7,500.00	5,538.99	5,491.99	5,491.99	31.41	219.68	-93.00	-85.74	3,466.77	1,440.37	1,206.68	233.69	6.164	
7,600.00	5,538.00	5,491.00	5,491.00	32.46	219.64	-92.79	-85.74	3,466.77	1,342.25	1,108.21	234.04	5.735	
7,700.00	5,537.00	5,490.00	5,490.00	33.52	219.60	-92.58	-85.74	3,466.77	1,244.43	1,009.97	234.47	5.308	
7,800.00	5,536.01	5,489.01	5,489.01	34.60	219.56	-92.37	-85.74	3,466.77	1,146.99	912.00	234.99	4.881	
7,900.00	5,535.02	5,488.02	5,488.02	35.69	219.52	-92.15	-85.74	3,466.77	1,050.03	814.39	235.64	4.456	
8,000.00	5,534.02	5,487.02	5,487.02	36.78	219.48	-91.94	-85.74	3,466.77	953.69	717.23	236.45	4.033	
8,100.00	5,533.03	5,486.03	5,486.03	37.89	219.44	-91.73	-85.74	3,466.77	858.19	620.69	237.50	3.613	
8,200.00	5,532.04	5,485.04	5,485.04	39.01	219.40	-91.52	-85.74	3,466.77	763.84	524.99	238.85	3.198	
8,300.00	5,531.04	5,484.04	5,484.04	40.13	219.36	-91.31	-85.74	3,466.77	671.12	430.49	240.63	2.789	
8,400.00	5,530.05	5,483.05	5,483.05	41.26	219.32	-91.09	-85.74	3,466.77	580.83	337.81	243.03	2.390	
8,505.73	5,529.00	5,482.00	5,482.00	42.47	219.28	-90.87	-85.74	3,466.77	489.49	243.00	246.49	1.986	Collision Risk Procedures Req.
8,534.24	5,528.86	5,481.86	5,481.86	42.79	219.27	-90.00	-85.74	3,466.77	465.90	218.26	247.63	1.881	Collision Risk Procedures Req.
8,600.00	5,528.86	5,481.86	5,481.86	43.54	219.27	-90.00	-85.74	3,466.77	413.85	163.17	250.69	1.651	Collision Risk Procedures Req.
8,700.00	5,528.86	5,481.86	5,481.86	44.69	219.27	-90.00	-85.74	3,466.77	343.84	87.45	256.39	1.341	Collision Avoidance Req.
8,800.00	5,528.86	5,481.86	5,481.86	45.85	219.27	-90.00	-85.74	3,466.77	291.85	29.29	262.57	1.112	Collision Avoidance Req.
8,900.00	5,528.87	5,481.87	5,481.87	47.01	219.27	-90.00	-85.74	3,466.77	268.57	2.29	266.28	1.009	Collision Avoidance Req.
8,915.24	5,528.87	5,481.87	5,481.87	47.18	219.27	-90.00	-85.74	3,466.77	268.14	1.75	266.39	1.007	Collision Avoidance Req., CC, ES,
9,000.00	5,528.87	5,481.87	5,481.87	48.17	219.27	-90.00	-85.74	3,466.77	281.21	16.66	264.56	1.063	Collision Avoidance Req.
9,100.00	5,528.87	5,481.87	5,481.87	49.34	219.27	-90.00	-85.74	3,466.77	325.63	66.54	259.08	1.257	Collision Avoidance Req.
9,200.00	5,528.87	5,481.87	5,481.87	50.52	219.27	-90.00	-85.74	3,466.77	391.13	137.83	253.30	1.544	Collision Risk Procedures Req.
9,300.00	5,528.87	5,481.87	5,481.87	51.69	219.27	-90.00	-85.74	3,466.77	468.97	220.34	248.63	1.886	Collision Risk Procedures Req.
9,400.00	5,528.87	5,481.87	5,481.87	52.87	219.28	-90.00	-85.74	3,466.77	553.97	308.83	245.15	2.260	
9,500.00	5,528.88	5,481.88	5,481.88	54.06	219.28	-90.00	-85.74	3,466.77	643.30	400.72	242.58	2.652	
9,600.00	5,528.88	5,481.88	5,481.88	55.24	219.28	-90.00	-85.74	3,466.77	735.38	494.71	240.68	3.055	
9,700.00	5,528.88	5,481.88	5,481.88	56.43	219.28	-90.00	-85.74	3,466.77	829.30	590.05	239.25	3.466	
9,800.00	5,528.88	5,481.88	5,481.88	57.62	219.28	-90.00	-85.74	3,466.77	924.50	686.33	238.17	3.882	
9,900.00	5,528.88	5,481.88	5,481.88	58.82	219.28	-90.00	-85.74	3,466.77	1,020.61	783.28	237.33	4.300	
10,000.00	5,528.89	5,481.89	5,481.89	60.01	219.28	-90.00	-85.74	3,466.77	1,117.41	880.73	236.68	4.721	
10,100.00	5,528.89	5,481.89	5,481.89	61.21	219.28	-90.00	-85.74	3,466.77	1,214.72	978.55	236.17	5.143	
10,200.00	5,528.89	5,481.89	5,481.89	62.41	219.28	-90.01	-85.74	3,466.77	1,312.44	1,076.67	235.77	5.567	
10,300.00	5,528.89	5,481.89	5,481.89	63.62	219.28	-90.01	-85.74	3,466.77	1,410.48	1,175.03	235.45	5.991	
10,400.00	5,528.89	5,481.89	5,481.89	64.82	219.28	-90.01	-85.74	3,466.77	1,508.77	1,273.58	235.19	6.415	
10,500.00	5,528.90	5,481.90	5,481.90	66.03	219.28	-90.01	-85.74	3,466.77	1,607.28	1,372.29	234.99	6.840	
10,600.00	5,528.90	5,481.90	5,481.90	67.24	219.28	-90.01	-85.74	3,466.77	1,705.96	1,471.13	234.83	7.265	
10,700.00	5,528.90	5,481.90	5,481.90	68.44	219.28	-90.01	-85.74	3,466.77	1,804.79	1,570.08	234.71	7.690	
10,800.00	5,528.90	5,481.90	5,481.90	69.66	219.28	-90.01	-85.74	3,466.77	1,903.73	1,669.12	234.61	8.114	
10,900.00	5,528.90	5,481.90	5,481.90	70.87	219.28	-90.01	-85.74	3,466.77	2,002.79	1,768.25	234.54	8.539	
11,000.00	5,528.90	5,481.90	5,481.90	72.08	219.28	-90.01	-85.74	3,466.77	2,101.93	1,867.44	234.49	8.964	
11,100.00	5,528.91	5,481.91	5,481.91	73.30	219.28	-90.01	-85.74	3,466.77	2,201.15	1,966.70	234.45	9.388	
11,200.00	5,528.91	5,481.91	5,481.91	74.51	219.28	-90.01	-85.74	3,466.77	2,300.44	2,066.00	234.43	9.813	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Nay (OWP) #1 (D&A) - OH - OH													Offset Site Error:
Survey Program: 6310-Unknown													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	5,545.94	5,670.94	5,670.94	24.62	226.84	-90.77	1,083.74	3,286.52	2,416.85	2,170.85	246.00	9.825	
6,900.00	5,544.95	5,669.95	5,669.95	25.52	226.80	-90.73	1,083.74	3,286.52	2,337.26	2,090.48	246.78	9.471	
7,000.00	5,543.96	5,668.96	5,668.96	26.44	226.76	-90.69	1,083.74	3,286.52	2,259.29	2,011.66	247.63	9.124	
7,100.00	5,542.96	5,667.96	5,667.96	27.39	226.72	-90.65	1,083.74	3,286.52	2,183.12	1,934.56	248.56	8.783	
7,200.00	5,541.97	5,666.97	5,666.97	28.37	226.68	-90.61	1,083.74	3,286.52	2,108.94	1,859.37	249.57	8.450	
7,300.00	5,540.98	5,665.98	5,665.98	29.36	226.64	-90.57	1,083.74	3,286.52	2,036.97	1,786.29	250.67	8.126	
7,400.00	5,539.98	5,664.98	5,664.98	30.38	226.60	-90.53	1,083.74	3,286.52	1,967.45	1,715.59	251.86	7.812	
7,500.00	5,538.99	5,663.99	5,663.99	31.41	226.56	-90.49	1,083.74	3,286.52	1,900.65	1,647.51	253.14	7.508	
7,600.00	5,538.00	5,663.00	5,663.00	32.46	226.52	-90.45	1,083.74	3,286.52	1,836.86	1,582.37	254.49	7.218	
7,700.00	5,537.00	5,662.00	5,662.00	33.52	226.48	-90.41	1,083.74	3,286.52	1,776.42	1,520.49	255.93	6.941	
7,800.00	5,536.01	5,661.01	5,661.01	34.60	226.44	-90.37	1,083.74	3,286.52	1,719.67	1,462.24	257.43	6.680	
7,900.00	5,535.02	5,660.02	5,660.02	35.69	226.40	-90.33	1,083.74	3,286.52	1,666.99	1,408.00	259.00	6.436	
8,000.00	5,534.02	5,659.02	5,659.02	36.78	226.36	-90.29	1,083.74	3,286.52	1,618.79	1,358.18	260.60	6.212	
8,100.00	5,533.03	5,658.03	5,658.03	37.89	226.32	-90.25	1,083.74	3,286.52	1,575.46	1,313.23	262.23	6.008	
8,200.00	5,532.04	5,657.04	5,657.04	39.01	226.28	-90.21	1,083.74	3,286.52	1,537.42	1,273.57	263.85	5.827	
8,300.00	5,531.04	5,656.04	5,656.04	40.13	226.24	-90.17	1,083.74	3,286.52	1,505.07	1,239.64	265.43	5.670	
8,400.00	5,530.05	5,655.05	5,655.05	41.26	226.20	-90.14	1,083.74	3,286.52	1,478.80	1,211.85	266.95	5.540	
8,505.73	5,529.00	5,654.00	5,654.00	42.47	226.16	-90.09	1,083.74	3,286.52	1,457.97	1,189.53	268.44	5.431	
8,534.24	5,528.86	5,653.86	5,653.86	42.79	226.15	-90.00	1,083.74	3,286.52	1,453.62	1,184.80	268.82	5.407	
8,600.00	5,528.86	5,653.86	5,653.86	43.54	226.15	-90.00	1,083.74	3,286.52	1,445.69	1,176.02	269.67	5.361	
8,700.00	5,528.86	5,653.86	5,653.86	44.69	226.15	-90.00	1,083.74	3,286.52	1,439.30	1,168.48	270.83	5.315	
8,742.08	5,528.86	5,653.86	5,653.86	45.18	226.15	-90.00	1,083.74	3,286.52	1,438.69	1,167.43	271.26	5.304 CC, ES	
8,800.00	5,528.86	5,653.86	5,653.86	45.85	226.15	-90.00	1,083.74	3,286.52	1,439.85	1,168.06	271.79	5.298 SF	
8,900.00	5,528.87	5,653.87	5,653.87	47.01	226.15	-90.00	1,083.74	3,286.52	1,447.33	1,174.77	272.56	5.310	
9,000.00	5,528.87	5,653.87	5,653.87	48.17	226.15	-90.00	1,083.74	3,286.52	1,461.62	1,188.50	273.12	5.351	
9,100.00	5,528.87	5,653.87	5,653.87	49.34	226.15	-90.00	1,083.74	3,286.52	1,482.54	1,209.06	273.48	5.421	
9,200.00	5,528.87	5,653.87	5,653.87	50.52	226.15	-90.00	1,083.74	3,286.52	1,509.81	1,236.15	273.65	5.517	
9,300.00	5,528.87	5,653.87	5,653.87	51.69	226.15	-90.00	1,083.74	3,286.52	1,543.08	1,269.43	273.65	5.639	
9,400.00	5,528.87	5,653.87	5,653.87	52.87	226.16	-90.00	1,083.74	3,286.52	1,581.99	1,308.50	273.49	5.784	
9,500.00	5,528.88	5,653.88	5,653.88	54.06	226.16	-90.00	1,083.74	3,286.52	1,626.12	1,352.92	273.20	5.952	
9,600.00	5,528.88	5,653.88	5,653.88	55.24	226.16	-90.00	1,083.74	3,286.52	1,675.07	1,402.26	272.81	6.140	
9,700.00	5,528.88	5,653.88	5,653.88	56.43	226.16	-90.00	1,083.74	3,286.52	1,728.42	1,456.08	272.34	6.347	
9,800.00	5,528.88	5,653.88	5,653.88	57.62	226.16	-90.00	1,083.74	3,286.52	1,785.78	1,513.98	271.81	6.570	
9,900.00	5,528.88	5,653.88	5,653.88	58.82	226.16	-90.00	1,083.74	3,286.52	1,846.78	1,575.55	271.23	6.809	
10,000.00	5,528.89	5,653.89	5,653.89	60.01	226.16	-90.00	1,083.74	3,286.52	1,911.07	1,640.44	270.63	7.062	
10,100.00	5,528.89	5,653.89	5,653.89	61.21	226.16	-90.00	1,083.74	3,286.52	1,978.33	1,708.32	270.01	7.327	
10,200.00	5,528.89	5,653.89	5,653.89	62.41	226.16	-90.00	1,083.74	3,286.52	2,048.26	1,778.88	269.38	7.604	
10,300.00	5,528.89	5,653.89	5,653.89	63.62	226.16	-90.00	1,083.74	3,286.52	2,120.60	1,851.84	268.76	7.890	
10,400.00	5,528.89	5,653.89	5,653.89	64.82	226.16	-90.00	1,083.74	3,286.52	2,195.11	1,926.97	268.14	8.186	
10,500.00	5,528.90	5,653.90	5,653.90	66.03	226.16	-90.00	1,083.74	3,286.52	2,271.59	2,004.05	267.54	8.491	
10,600.00	5,528.90	5,653.90	5,653.90	67.24	226.16	-90.00	1,083.74	3,286.52	2,349.83	2,082.87	266.96	8.802	
10,700.00	5,528.90	5,653.90	5,653.90	68.44	226.16	-90.00	1,083.74	3,286.52	2,429.67	2,163.28	266.39	9.121	
10,800.00	5,528.90	5,653.90	5,653.90	69.66	226.16	-90.00	1,083.74	3,286.52	2,510.95	2,245.10	265.85	9.445	
10,900.00	5,528.90	5,653.90	5,653.90	70.87	226.16	-90.00	1,083.74	3,286.52	2,593.54	2,328.22	265.32	9.775	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Rauth #G (D&A) - OH - OH											Offset Site Error:
											0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Offset Well Error:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,800.00	5,528.92	5,469.92	81.83	218.80	1,121.44	8,531.57	2,621.26	2,354.19	267.06	9.815	
11,900.00	5,528.92	5,469.92	83.05	218.80	1,121.44	8,531.57	2,538.41	2,269.30	269.11	9.432	
12,000.00	5,528.92	5,469.92	84.27	218.80	1,121.44	8,531.57	2,456.85	2,185.56	271.28	9.056	
12,100.00	5,528.92	5,469.92	85.50	218.80	1,121.44	8,531.57	2,376.69	2,103.11	273.57	8.688	
12,200.00	5,528.93	5,469.93	86.72	218.80	1,121.44	8,531.57	2,298.08	2,022.09	275.99	8.327	
12,300.00	5,528.93	5,469.93	87.95	218.80	1,121.44	8,531.57	2,221.20	1,942.65	278.55	7.974	
12,400.00	5,528.93	5,469.93	89.18	218.80	1,121.44	8,531.57	2,146.22	1,864.98	281.24	7.631	
12,500.00	5,528.93	5,469.93	90.40	218.80	1,121.44	8,531.57	2,073.36	1,789.29	284.07	7.299	
12,600.00	5,528.93	5,469.93	91.63	218.80	1,121.44	8,531.57	2,002.84	1,715.81	287.03	6.978	
12,700.00	5,528.94	5,469.94	92.86	218.80	1,121.44	8,531.57	1,934.92	1,644.80	290.12	6.669	
12,800.00	5,528.94	5,469.94	94.09	218.80	1,121.44	8,531.57	1,869.88	1,576.55	293.34	6.375	
12,900.00	5,528.94	5,469.94	95.32	218.80	1,121.44	8,531.57	1,808.04	1,511.39	296.65	6.095	
13,000.00	5,528.94	5,469.94	96.55	218.80	1,121.44	8,531.57	1,749.73	1,449.68	300.05	5.831	
13,100.00	5,528.94	5,469.94	97.78	218.80	1,121.44	8,531.57	1,695.32	1,391.82	303.50	5.586	
13,200.00	5,528.95	5,469.95	99.01	218.80	1,121.44	8,531.57	1,645.19	1,338.23	306.96	5.360	
13,300.00	5,528.95	5,469.95	100.24	218.80	1,121.44	8,531.57	1,599.75	1,289.38	310.37	5.154	
13,400.00	5,528.95	5,469.95	101.47	218.80	1,121.44	8,531.57	1,559.40	1,245.71	313.69	4.971	
13,500.00	5,528.95	5,469.95	102.70	218.80	1,121.44	8,531.57	1,524.56	1,207.72	316.84	4.812	
13,600.00	5,528.95	5,469.95	103.94	218.80	1,121.44	8,531.57	1,495.60	1,175.85	319.75	4.677	
13,700.00	5,528.95	5,469.95	105.17	218.80	1,121.44	8,531.57	1,472.88	1,150.53	322.35	4.569	
13,800.00	5,528.96	5,469.96	106.40	218.80	1,121.44	8,531.57	1,456.68	1,132.12	324.56	4.488	
13,900.00	5,528.96	5,469.96	107.64	218.80	1,121.44	8,531.57	1,447.23	1,120.89	326.34	4.435	
13,987.27	5,528.96	5,469.96	108.71	218.80	1,121.44	8,531.57	1,444.59	1,117.10	327.49	4.411 CC	
14,000.00	5,528.96	5,469.96	108.87	218.80	1,121.44	8,531.57	1,444.65	1,117.02	327.63	4.409 ES, SF	
14,100.00	5,528.96	5,469.96	110.10	218.80	1,121.44	8,531.57	1,448.99	1,120.57	328.41	4.412	
14,200.00	5,528.96	5,469.96	111.34	218.80	1,121.44	8,531.57	1,460.17	1,131.49	328.69	4.442	
14,300.00	5,528.97	5,469.97	112.57	218.80	1,121.44	8,531.57	1,478.06	1,149.59	328.47	4.500	
14,400.00	5,528.97	5,469.97	113.81	218.80	1,121.44	8,531.57	1,502.40	1,174.60	327.80	4.583	
14,500.00	5,528.97	5,469.97	115.05	218.80	1,121.44	8,531.57	1,532.89	1,206.16	326.73	4.692	
14,600.00	5,528.97	5,469.97	116.28	218.80	1,121.44	8,531.57	1,569.17	1,243.85	325.32	4.823	
14,700.00	5,528.97	5,469.97	117.52	218.80	1,121.44	8,531.57	1,610.85	1,287.22	323.63	4.977	
14,800.00	5,528.97	5,469.97	118.76	218.80	1,121.44	8,531.57	1,657.52	1,335.79	321.73	5.152	
14,900.00	5,528.98	5,469.98	119.99	218.80	1,121.44	8,531.57	1,708.78	1,389.11	319.67	5.345	
15,000.00	5,528.98	5,469.98	121.23	218.80	1,121.44	8,531.57	1,764.22	1,446.71	317.51	5.556	
15,100.00	5,528.98	5,469.98	122.47	218.80	1,121.44	8,531.57	1,823.46	1,508.17	315.29	5.783	
15,200.00	5,528.98	5,469.98	123.70	218.80	1,121.44	8,531.57	1,886.15	1,573.10	313.05	6.025	
15,300.00	5,528.98	5,469.98	124.94	218.80	1,121.44	8,531.57	1,951.95	1,641.14	310.81	6.280	
15,400.00	5,528.99	5,469.99	126.18	218.80	1,121.44	8,531.57	2,020.56	1,711.95	308.61	6.547	
15,500.00	5,528.99	5,469.99	127.42	218.80	1,121.44	8,531.57	2,091.70	1,785.25	306.45	6.825	
15,600.00	5,528.99	5,469.99	128.66	218.80	1,121.44	8,531.57	2,165.12	1,860.76	304.36	7.114	
15,700.00	5,528.99	5,469.99	129.90	218.80	1,121.44	8,531.57	2,240.60	1,938.27	302.33	7.411	
15,800.00	5,528.99	5,469.99	131.14	218.80	1,121.44	8,531.57	2,317.94	2,017.56	300.38	7.717	
15,900.00	5,529.00	5,470.00	132.38	218.80	1,121.44	8,531.57	2,396.96	2,098.44	298.51	8.030	
16,000.00	5,529.00	5,470.00	133.61	218.80	1,121.44	8,531.57	2,477.49	2,180.77	296.72	8.350	
16,100.00	5,529.00	5,470.00	134.85	218.80	1,121.44	8,531.57	2,559.39	2,264.38	295.01	8.676	
16,173.23	5,529.00	5,470.00	135.76	218.80	1,121.44	8,531.57	2,620.17	2,326.36	293.81	8.918	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Zimith #1 (D&A) - OH - OH													Offset Site Error:	0.00 usft
Survey Program: Reference		6292-Unknown Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	51.41	1,050.77	1,316.60	1,684.68					
100.00	100.00	76.00	76.00	0.88	3.04	51.41	1,050.77	1,316.60	1,684.50	1,680.58	3.92	429.277		
200.00	200.00	176.00	176.00	1.50	7.04	51.41	1,050.77	1,316.60	1,684.50	1,675.96	8.54	197.197		
300.00	300.00	276.00	276.00	1.94	11.04	51.41	1,050.77	1,316.60	1,684.50	1,671.53	12.98	129.824		
400.00	400.00	376.00	376.00	2.29	15.04	51.41	1,050.77	1,316.60	1,684.50	1,667.17	17.33	97.198		
500.00	500.00	476.00	476.00	2.60	19.04	51.41	1,050.77	1,316.60	1,684.50	1,662.86	21.64	77.841		
600.00	600.00	576.00	576.00	2.88	23.04	51.41	1,050.77	1,316.60	1,684.50	1,658.59	25.92	64.990		
700.00	700.00	676.00	676.00	3.14	27.04	51.41	1,050.77	1,316.60	1,684.50	1,654.33	30.18	55.823		
800.00	799.99	775.99	775.99	3.42	31.04	-158.39	1,050.77	1,316.60	1,685.72	1,651.27	34.45	48.926		
900.00	899.91	875.91	875.91	3.70	35.04	-158.41	1,050.77	1,316.60	1,689.37	1,650.65	38.72	43.633		
1,000.00	999.69	975.69	975.69	3.99	39.03	-158.46	1,050.77	1,316.60	1,695.46	1,652.47	42.99	39.440		
1,052.37	1,051.87	1,027.87	1,027.87	4.08	41.12	-158.49	1,050.77	1,316.60	1,699.61	1,654.46	45.16	37.638		
1,100.00	1,099.30	1,075.30	1,075.30	4.16	43.01	-158.55	1,050.77	1,316.60	1,703.70	1,656.57	47.13	36.151		
1,200.00	1,198.87	1,174.87	1,174.87	4.44	47.00	-158.66	1,050.77	1,316.60	1,712.28	1,660.90	51.38	33.323		
1,300.00	1,298.45	1,274.45	1,274.45	4.75	50.98	-158.77	1,050.77	1,316.60	1,720.87	1,665.22	55.65	30.921		
1,400.00	1,398.02	1,374.02	1,374.02	5.06	54.96	-158.88	1,050.77	1,316.60	1,729.46	1,669.53	59.94	28.855		
1,500.00	1,497.60	1,473.60	1,473.60	5.38	58.94	-158.99	1,050.77	1,316.60	1,738.07	1,673.84	64.23	27.061		
1,600.00	1,597.17	1,573.17	1,573.17	5.72	62.93	-159.10	1,050.77	1,316.60	1,746.67	1,678.15	68.53	25.489		
1,700.00	1,696.75	1,672.75	1,672.75	6.06	66.91	-159.21	1,050.77	1,316.60	1,755.29	1,682.45	72.83	24.100		
1,800.00	1,796.32	1,772.32	1,772.32	6.40	70.89	-159.31	1,050.77	1,316.60	1,763.91	1,686.76	77.14	22.865		
1,900.00	1,895.90	1,871.90	1,871.90	6.76	74.88	-159.42	1,050.77	1,316.60	1,772.53	1,691.07	81.46	21.759		
2,000.00	1,995.47	1,971.47	1,971.47	7.11	78.86	-159.52	1,050.77	1,316.60	1,781.16	1,695.38	85.78	20.764		
2,100.00	2,095.05	2,071.05	2,071.05	7.47	82.84	-159.63	1,050.77	1,316.60	1,789.80	1,699.70	90.11	19.863		
2,200.00	2,194.62	2,170.62	2,170.62	7.83	86.82	-159.73	1,050.77	1,316.60	1,798.44	1,704.01	94.43	19.044		
2,300.00	2,294.20	2,270.20	2,270.20	8.20	90.81	-159.83	1,050.77	1,316.60	1,807.09	1,708.33	98.77	18.297		
2,400.00	2,393.77	2,369.77	2,369.77	8.57	94.79	-159.93	1,050.77	1,316.60	1,815.75	1,712.65	103.10	17.612		
2,500.00	2,493.35	2,469.35	2,469.35	8.94	98.77	-160.03	1,050.77	1,316.60	1,824.41	1,716.97	107.44	16.981		
2,600.00	2,592.92	2,568.92	2,568.92	9.31	102.76	-160.13	1,050.77	1,316.60	1,833.07	1,721.30	111.77	16.400		
2,700.00	2,692.49	2,668.49	2,668.49	9.68	106.74	-160.22	1,050.77	1,316.60	1,841.74	1,725.63	116.11	15.862		
2,800.00	2,792.07	2,768.07	2,768.07	10.06	110.72	-160.32	1,050.77	1,316.60	1,850.42	1,729.96	120.46	15.362		
2,900.00	2,891.64	2,867.64	2,867.64	10.44	114.71	-160.42	1,050.77	1,316.60	1,859.10	1,734.30	124.80	14.897		
3,000.00	2,991.22	2,967.22	2,967.22	10.81	118.69	-160.51	1,050.77	1,316.60	1,867.78	1,738.64	129.14	14.463		
3,100.00	3,090.79	3,066.79	3,066.79	11.19	122.67	-160.61	1,050.77	1,316.60	1,876.48	1,742.99	133.49	14.057		
3,200.00	3,190.37	3,166.37	3,166.37	11.57	126.65	-160.70	1,050.77	1,316.60	1,885.17	1,747.33	137.84	13.677		
3,300.00	3,289.94	3,265.94	3,265.94	11.95	130.64	-160.79	1,050.77	1,316.60	1,893.87	1,751.69	142.19	13.320		
3,400.00	3,389.52	3,365.52	3,365.52	12.33	134.62	-160.88	1,050.77	1,316.60	1,902.58	1,756.04	146.54	12.984		
3,500.00	3,489.09	3,465.09	3,465.09	12.72	138.60	-160.97	1,050.77	1,316.60	1,911.29	1,760.40	150.89	12.667		
3,600.00	3,588.67	3,564.67	3,564.67	13.10	142.59	-161.06	1,050.77	1,316.60	1,920.00	1,764.77	155.24	12.368		
3,700.00	3,688.24	3,664.24	3,664.24	13.48	146.57	-161.15	1,050.77	1,316.60	1,928.72	1,769.13	159.59	12.086		
3,800.00	3,787.82	3,763.82	3,763.82	13.87	150.55	-161.24	1,050.77	1,316.60	1,937.45	1,773.50	163.94	11.818		
3,900.00	3,887.39	3,863.39	3,863.39	14.25	154.54	-161.33	1,050.77	1,316.60	1,946.17	1,777.88	168.30	11.564		
4,000.00	3,986.97	3,962.97	3,962.97	14.64	158.52	-161.41	1,050.77	1,316.60	1,954.91	1,782.26	172.65	11.323		
4,100.00	4,086.54	4,062.54	4,062.54	15.02	162.50	-161.50	1,050.77	1,316.60	1,963.64	1,786.64	177.01	11.094		
4,200.00	4,186.12	4,162.12	4,162.12	15.41	166.48	-161.58	1,050.77	1,316.60	1,972.39	1,791.02	181.36	10.875		
4,300.00	4,285.69	4,261.69	4,261.69	15.79	170.47	-161.67	1,050.77	1,316.60	1,981.13	1,795.41	185.72	10.667		
4,400.00	4,385.27	4,361.27	4,361.27	16.18	174.45	-161.75	1,050.77	1,316.60	1,989.88	1,799.81	190.08	10.469		
4,500.00	4,484.84	4,460.84	4,460.84	16.57	178.43	-161.83	1,050.77	1,316.60	1,998.64	1,804.20	194.43	10.279		
4,700.00	4,683.99	4,659.99	4,659.99	17.34	186.40	-162.00	1,050.77	1,316.60	2,016.16	1,813.01	203.15	9.924		
4,800.00	4,783.57	4,759.57	4,759.57	17.73	190.38	-162.08	1,050.77	1,316.60	2,024.92	1,817.41	207.51	9.758		
4,823.69	4,807.16	4,783.16	4,783.16	17.81	191.33	-162.10	1,050.77	1,316.60	2,027.00	1,818.47	208.54	9.720		
4,850.00	4,833.37	4,809.37	4,809.37	17.90	192.37	-138.78	1,050.77	1,316.60	2,028.95	1,819.29	209.67	9.677		
4,900.00	4,883.18	4,859.18	4,859.18	18.06	194.37	-95.06	1,050.77	1,316.60	2,030.69	1,818.89	211.79	9.588		

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Offsets - Zimith #1 (D&A) - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 6292-Unknown												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,950.00	4,932.79	4,908.79	4,908.79	18.13	196.35	-73.94	1,050.77	1,316.60	2,029.84	1,816.04	213.81	9.494	
5,000.00	4,981.94	4,957.94	4,957.94	18.13	198.32	-64.64	1,050.77	1,316.60	2,026.45	1,810.70	215.74	9.393	
5,050.00	5,030.40	5,006.40	5,006.40	18.11	200.26	-60.03	1,050.77	1,316.60	2,020.54	1,802.91	217.63	9.284	
5,100.00	5,077.94	5,053.94	5,053.94	18.07	202.16	-57.66	1,050.77	1,316.60	2,012.20	1,792.73	219.46	9.169	
5,150.00	5,124.31	5,100.31	5,100.31	18.02	204.01	-56.56	1,050.77	1,316.60	2,001.49	1,780.24	221.25	9.046	
5,200.00	5,169.31	5,145.31	5,145.31	17.97	205.81	-56.29	1,050.77	1,316.60	1,988.54	1,765.56	222.98	8.918	
5,250.00	5,212.69	5,188.69	5,188.69	17.91	207.55	-56.64	1,050.77	1,316.60	1,973.45	1,748.80	224.65	8.784	
5,300.00	5,254.27	5,230.27	5,230.27	17.86	209.21	-57.47	1,050.77	1,316.60	1,956.36	1,730.10	226.26	8.647	
5,350.00	5,293.82	5,269.82	5,269.82	17.82	210.79	-58.71	1,050.77	1,316.60	1,937.44	1,709.64	227.80	8.505	
5,400.00	5,331.17	5,307.17	5,307.17	17.78	212.29	-60.30	1,050.77	1,316.60	1,916.85	1,687.59	229.26	8.361	
5,450.00	5,366.12	5,342.12	5,342.12	17.76	213.68	-62.20	1,050.77	1,316.60	1,894.77	1,664.12	230.65	8.215	
5,500.00	5,398.51	5,374.51	5,374.51	17.75	214.98	-64.38	1,050.77	1,316.60	1,871.40	1,639.45	231.95	8.068	
5,550.00	5,428.18	5,404.18	5,404.18	17.76	216.17	-66.80	1,050.77	1,316.60	1,846.95	1,613.78	233.17	7.921	
5,600.00	5,454.99	5,430.99	5,430.99	17.80	217.24	-69.40	1,050.77	1,316.60	1,821.63	1,587.32	234.30	7.775	
5,650.00	5,478.79	5,454.79	5,454.79	17.85	218.19	-72.15	1,050.77	1,316.60	1,795.65	1,560.31	235.34	7.630	
5,700.00	5,499.49	5,475.49	5,475.49	17.94	219.02	-74.99	1,050.77	1,316.60	1,769.25	1,532.97	236.28	7.488	
5,750.00	5,516.98	5,492.98	5,492.98	18.04	219.72	-77.86	1,050.77	1,316.60	1,742.65	1,505.52	237.13	7.349	
5,800.00	5,531.16	5,507.16	5,507.16	18.17	220.29	-80.70	1,050.77	1,316.60	1,716.07	1,478.20	237.87	7.214	
5,850.00	5,541.99	5,517.99	5,517.99	18.33	220.72	-83.46	1,050.77	1,316.60	1,689.73	1,451.22	238.51	7.084	
5,900.00	5,549.39	5,525.39	5,525.39	18.52	221.02	-86.09	1,050.77	1,316.60	1,663.84	1,424.79	239.04	6.960	
5,950.00	5,553.33	5,529.33	5,529.33	18.73	221.17	-88.55	1,050.77	1,316.60	1,638.59	1,399.12	239.47	6.843	
5,988.91	5,554.00	5,530.00	5,530.00	18.90	221.20	-90.31	1,050.77	1,316.60	1,619.50	1,379.78	239.71	6.756	
6,000.00	5,553.89	5,529.89	5,529.89	18.95	221.20	-90.31	1,050.77	1,316.60	1,614.17	1,374.39	239.78	6.732	
6,100.00	5,552.90	5,528.90	5,528.90	19.48	221.16	-90.27	1,050.77	1,316.60	1,568.81	1,328.44	240.37	6.527	
6,200.00	5,551.90	5,527.90	5,527.90	20.06	221.12	-90.23	1,050.77	1,316.60	1,528.66	1,287.64	241.01	6.343	
6,300.00	5,550.91	5,526.91	5,526.91	20.70	221.08	-90.19	1,050.77	1,316.60	1,494.13	1,252.43	241.70	6.182	
6,400.00	5,549.92	5,525.92	5,525.92	21.40	221.04	-90.15	1,050.77	1,316.60	1,465.62	1,223.21	242.42	6.046	
6,500.00	5,548.92	5,524.92	5,524.92	22.14	221.00	-90.11	1,050.77	1,316.60	1,443.49	1,200.35	243.14	5.937	
6,600.00	5,547.93	5,523.93	5,523.93	22.93	220.96	-90.07	1,050.77	1,316.60	1,428.04	1,184.19	243.85	5.856	
6,700.00	5,546.94	5,522.94	5,522.94	23.76	220.92	-90.03	1,050.77	1,316.60	1,419.48	1,174.94	244.54	5.805	
6,771.92	5,546.22	5,522.22	5,522.22	24.38	220.89	-90.00	1,050.77	1,316.60	1,417.65	1,172.65	245.01	5.786 CC, ES	
6,800.00	5,545.94	5,521.94	5,521.94	24.62	220.88	-89.99	1,050.77	1,316.60	1,417.93	1,172.75	245.18	5.783 SF	
6,900.00	5,544.95	5,520.95	5,520.95	25.52	220.84	-89.95	1,050.77	1,316.60	1,423.43	1,177.67	245.76	5.792	
7,000.00	5,543.96	5,519.96	5,519.96	26.44	220.80	-89.91	1,050.77	1,316.60	1,435.88	1,189.62	246.26	5.831	
7,100.00	5,542.96	5,518.96	5,518.96	27.39	220.76	-89.87	1,050.77	1,316.60	1,455.12	1,208.43	246.69	5.899	
7,200.00	5,541.97	5,517.97	5,517.97	28.37	220.72	-89.83	1,050.77	1,316.60	1,480.87	1,233.84	247.03	5.995	
7,300.00	5,540.98	5,516.98	5,516.98	29.36	220.68	-89.79	1,050.77	1,316.60	1,512.81	1,265.52	247.29	6.118	
7,400.00	5,539.98	5,515.98	5,515.98	30.38	220.64	-89.75	1,050.77	1,316.60	1,550.55	1,303.07	247.47	6.266	
7,500.00	5,538.99	5,514.99	5,514.99	31.41	220.60	-89.71	1,050.77	1,316.60	1,593.67	1,346.09	247.59	6.437	
7,600.00	5,538.00	5,514.00	5,514.00	32.46	220.56	-89.67	1,050.77	1,316.60	1,641.77	1,394.13	247.64	6.630	
7,700.00	5,537.00	5,513.00	5,513.00	33.52	220.52	-89.63	1,050.77	1,316.60	1,694.40	1,446.76	247.64	6.842	
7,800.00	5,536.01	5,512.01	5,512.01	34.60	220.48	-89.59	1,050.77	1,316.60	1,751.17	1,503.57	247.60	7.073	
7,900.00	5,535.02	5,511.02	5,511.02	35.69	220.44	-89.55	1,050.77	1,316.60	1,811.68	1,564.16	247.52	7.319	
8,000.00	5,534.02	5,510.02	5,510.02	36.78	220.40	-89.51	1,050.77	1,316.60	1,875.57	1,628.16	247.42	7.581	
8,100.00	5,533.03	5,509.03	5,509.03	37.89	220.36	-89.47	1,050.77	1,316.60	1,942.52	1,695.23	247.29	7.855	
8,200.00	5,532.04	5,508.04	5,508.04	39.01	220.32	-89.43	1,050.77	1,316.60	2,012.20	1,765.05	247.15	8.142	
8,300.00	5,531.04	5,507.04	5,507.04	40.13	220.28	-89.39	1,050.77	1,316.60	2,084.36	1,837.36	247.00	8.439	
8,400.00	5,530.05	5,506.05	5,506.05	41.26	220.24	-89.35	1,050.77	1,316.60	2,158.73	1,911.90	246.84	8.746	
8,505.73	5,529.00	5,505.00	5,505.00	42.47	220.20	-89.30	1,050.77	1,316.60	2,239.54	1,992.88	246.67	9.079	
8,534.24	5,528.86	5,504.86	5,504.86	42.79	220.19	-90.00	1,050.77	1,316.60	2,261.69	2,015.06	246.62	9.171	
8,600.00	5,528.86	5,504.86	5,504.86	43.54	220.19	-90.00	1,050.77	1,316.60	2,313.29	2,066.75	246.54	9.383	
8,700.00	5,528.86	5,504.86	5,504.86	44.69	220.19	-90.00	1,050.77	1,316.60	2,393.10	2,146.68	246.42	9.712	

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



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-615 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	178.87	-56.11	1.11	56.12				
100.00	100.00	100.00	100.00	0.88	0.88	178.87	-56.11	1.11	56.12	54.35	1.77	31.749	
200.00	200.00	200.00	200.00	1.50	1.50	178.87	-56.11	1.11	56.12	53.12	3.00	18.682	
300.00	300.00	300.00	300.00	1.94	1.94	178.87	-56.11	1.11	56.12	52.25	3.87	14.501	
400.00	400.00	400.00	400.00	2.29	2.29	178.87	-56.11	1.11	56.12	51.54	4.58	12.251	
500.00	500.00	500.00	500.00	2.60	2.60	178.87	-56.11	1.11	56.12	50.92	5.20	10.792	CC, ES
600.00	600.00	598.06	598.04	2.88	3.03	179.09	-57.78	0.91	57.82	51.91	5.91	9.790	
700.00	700.00	695.89	695.73	3.14	3.43	179.70	-62.76	0.33	62.91	56.36	6.55	9.605	
800.00	799.99	793.37	792.86	3.42	3.82	-29.73	-71.02	-0.63	70.25	63.05	7.20	9.758	
900.00	899.91	890.51	889.30	3.70	4.21	-30.08	-82.51	-1.97	78.68	70.86	7.83	10.050	
1,000.00	999.69	987.25	984.90	3.99	4.61	-30.90	-97.17	-3.68	88.23	79.76	8.47	10.420	
1,052.37	1,051.87	1,037.74	1,034.59	4.08	4.83	-31.46	-106.09	-4.72	93.67	84.93	8.73	10.724	
1,100.00	1,099.30	1,083.52	1,079.50	4.16	5.02	-31.98	-114.94	-5.75	99.13	90.16	8.98	11.043	
1,200.00	1,198.87	1,179.06	1,172.72	4.44	5.44	-32.68	-135.68	-8.17	113.05	103.43	9.62	11.757	
1,300.00	1,298.45	1,273.63	1,264.26	4.75	5.86	-32.98	-159.24	-10.91	130.20	119.93	10.27	12.681	
1,400.00	1,398.02	1,367.04	1,353.86	5.06	6.28	-33.00	-185.44	-13.97	150.52	139.59	10.93	13.772	
1,500.00	1,497.60	1,460.09	1,442.24	5.38	6.64	-32.83	-214.37	-17.34	173.91	162.38	11.54	15.076	
1,600.00	1,597.17	1,557.06	1,534.00	5.72	7.02	-32.64	-245.50	-20.97	198.34	186.12	12.23	16.224	
1,700.00	1,696.75	1,654.03	1,625.76	6.06	7.42	-32.50	-276.63	-24.60	222.78	209.82	12.95	17.196	
1,800.00	1,796.32	1,751.00	1,717.53	6.40	7.84	-32.38	-307.76	-28.23	247.21	233.51	13.70	18.045	
1,900.00	1,895.90	1,847.96	1,809.29	6.76	8.27	-32.28	-338.90	-31.85	271.64	257.19	14.46	18.790	
2,000.00	1,995.47	1,944.93	1,901.05	7.11	8.70	-32.20	-370.03	-35.48	296.08	280.85	15.22	19.447	
2,100.00	2,095.05	2,041.90	1,992.82	7.47	9.15	-32.13	-401.16	-39.11	320.51	304.51	16.00	20.030	
2,200.00	2,194.62	2,138.87	2,084.58	7.83	9.59	-32.08	-432.29	-42.74	344.95	328.16	16.79	20.548	
2,300.00	2,294.20	2,235.84	2,176.34	8.20	10.05	-32.02	-463.42	-46.37	369.38	351.80	17.58	21.012	
2,400.00	2,393.77	2,332.81	2,268.11	8.57	10.50	-31.98	-494.55	-50.00	393.82	375.44	18.38	21.429	
2,500.00	2,493.35	2,429.77	2,359.87	8.94	10.97	-31.94	-525.68	-53.63	418.25	399.07	19.18	21.805	
2,600.00	2,592.92	2,526.74	2,451.63	9.31	11.43	-31.91	-556.82	-57.26	442.69	422.70	19.99	22.146	
2,700.00	2,692.49	2,623.71	2,543.40	9.68	11.90	-31.87	-587.95	-60.88	467.13	446.32	20.80	22.456	
2,800.00	2,792.07	2,720.68	2,635.16	10.06	12.37	-31.85	-619.08	-64.51	491.56	469.95	21.62	22.738	
2,900.00	2,891.64	2,817.65	2,726.92	10.44	12.84	-31.82	-650.21	-68.14	516.00	493.56	22.44	22.997	
3,000.00	2,991.22	2,914.61	2,818.69	10.81	13.32	-31.80	-681.34	-71.77	540.44	517.18	23.26	23.235	
3,100.00	3,090.79	3,011.58	2,910.45	11.19	13.80	-31.78	-712.47	-75.40	564.87	540.79	24.08	23.454	
3,200.00	3,190.37	3,108.55	3,002.21	11.57	14.28	-31.76	-743.60	-79.03	589.31	564.40	24.91	23.656	
3,300.00	3,289.94	3,205.52	3,093.97	11.95	14.76	-31.74	-774.73	-82.66	613.75	588.01	25.74	23.843	
3,400.00	3,389.52	3,302.49	3,185.74	12.33	15.24	-31.72	-805.87	-86.29	638.18	611.61	26.57	24.017	
3,500.00	3,489.09	3,399.45	3,277.50	12.72	15.72	-31.71	-837.00	-89.91	662.62	635.22	27.41	24.179	
3,600.00	3,588.67	3,496.42	3,369.26	13.10	16.21	-31.69	-868.13	-93.54	687.06	658.82	28.24	24.330	
3,700.00	3,688.24	3,593.39	3,461.03	13.48	16.69	-31.68	-899.26	-97.17	711.50	682.42	29.08	24.470	
3,800.00	3,787.82	3,690.36	3,552.79	13.87	17.18	-31.67	-930.39	-100.80	735.93	706.02	29.91	24.602	
3,900.00	3,887.39	3,787.33	3,644.55	14.25	17.67	-31.66	-961.52	-104.43	760.37	729.62	30.75	24.726	
4,000.00	3,986.97	3,884.29	3,736.32	14.64	18.16	-31.65	-992.65	-108.06	784.81	753.21	31.59	24.842	
4,100.00	4,086.54	3,981.26	3,828.08	15.02	18.65	-31.64	-1,023.78	-111.69	809.24	776.81	32.43	24.952	
4,200.00	4,186.12	4,078.23	3,919.84	15.41	19.14	-31.63	-1,054.92	-115.32	833.68	800.41	33.27	25.055	
4,300.00	4,285.69	4,175.20	4,011.61	15.79	19.63	-31.62	-1,086.05	-118.94	858.12	824.00	34.12	25.152	
4,400.00	4,385.27	4,272.17	4,103.37	16.18	20.12	-31.61	-1,117.18	-122.57	882.56	847.59	34.96	25.244	
4,500.00	4,484.84	4,369.13	4,195.13	16.57	20.61	-31.60	-1,148.31	-126.20	906.99	871.19	35.81	25.331	
4,600.00	4,584.42	4,466.10	4,286.90	16.95	21.11	-31.59	-1,179.44	-129.83	931.43	894.78	36.65	25.414	
4,700.00	4,683.99	4,563.07	4,378.66	17.34	21.60	-31.59	-1,210.57	-133.46	955.87	918.37	37.50	25.492	
4,800.00	4,783.57	4,660.04	4,470.42	17.73	22.09	-31.58	-1,241.70	-137.09	980.30	941.96	38.34	25.567	
4,823.69	4,807.16	4,683.01	4,492.16	17.81	22.21	-31.58	-1,249.08	-137.95	986.09	947.56	38.54	25.589	
4,850.00	4,833.37	4,708.52	4,516.30	17.90	22.34	-8.84	-1,257.27	-138.90	992.51	953.75	38.76	25.608	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-615 - OH - Plan #1													Offset Site Error:
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,883.18	4,756.89	4,562.08	18.06	22.59	34.12	-1,272.80	-140.71	1,004.60	965.39	39.22	25.616	
4,950.00	4,932.79	4,804.92	4,607.53	18.13	22.83	54.88	-1,288.22	-142.51	1,016.56	976.88	39.68	25.617	
5,000.00	4,981.94	4,852.38	4,652.44	18.13	23.08	64.20	-1,303.45	-144.29	1,028.39	988.26	40.13	25.626	
5,050.00	5,030.40	4,899.03	4,696.58	18.11	23.31	69.21	-1,318.43	-146.03	1,040.14	999.56	40.57	25.636	
5,100.00	5,077.94	4,944.64	4,739.75	18.07	23.55	72.34	-1,333.08	-147.74	1,051.86	1,010.85	41.01	25.648	
5,150.00	5,124.31	4,989.01	4,781.73	18.02	23.77	74.52	-1,347.32	-149.40	1,063.66	1,022.22	41.44	25.665	
5,200.00	5,169.31	5,031.90	4,822.32	17.97	23.99	76.16	-1,361.09	-151.00	1,075.65	1,033.79	41.86	25.696	
5,250.00	5,212.69	5,075.41	4,863.50	17.91	24.20	77.52	-1,375.06	-152.38	1,087.92	1,045.64	42.28	25.734	
5,300.00	5,254.27	5,123.01	4,908.57	17.86	24.44	78.72	-1,390.32	-151.30	1,100.39	1,057.69	42.71	25.767	
5,350.00	5,293.82	5,172.79	4,955.53	17.82	24.67	79.78	-1,406.19	-146.80	1,112.98	1,069.86	43.12	25.810	
5,400.00	5,331.17	5,225.11	5,004.45	17.78	24.90	80.73	-1,422.70	-138.37	1,125.61	1,082.10	43.52	25.867	
5,450.00	5,366.12	5,280.36	5,055.33	17.76	25.12	81.63	-1,439.82	-125.41	1,138.20	1,094.32	43.88	25.941	
5,500.00	5,398.51	5,338.98	5,108.13	17.75	25.32	82.49	-1,457.55	-107.17	1,150.63	1,106.44	44.20	26.035	
5,550.00	5,428.18	5,401.50	5,162.69	17.76	25.51	83.35	-1,475.82	-82.78	1,162.81	1,118.34	44.47	26.150	
5,600.00	5,454.99	5,468.45	5,218.67	17.80	25.67	84.22	-1,494.51	-51.20	1,174.58	1,129.90	44.68	26.288	
5,650.00	5,478.79	5,540.45	5,275.47	17.85	25.82	85.10	-1,513.40	-11.26	1,185.79	1,140.94	44.84	26.443	
5,700.00	5,499.49	5,618.05	5,332.13	17.94	25.96	85.98	-1,532.16	38.28	1,196.24	1,151.28	44.96	26.609	
5,750.00	5,516.98	5,701.74	5,387.17	18.04	26.09	86.86	-1,550.27	98.60	1,205.72	1,160.69	45.03	26.777	
5,800.00	5,531.16	5,791.81	5,438.56	18.17	26.23	87.70	-1,567.04	170.58	1,213.99	1,168.91	45.08	26.932	
5,850.00	5,541.99	5,888.22	5,483.64	18.33	26.39	88.48	-1,581.56	254.47	1,220.80	1,175.66	45.13	27.050	
5,900.00	5,549.39	5,990.41	5,519.34	18.52	26.59	89.13	-1,592.80	349.47	1,225.89	1,180.66	45.23	27.104	
5,950.00	5,553.33	6,097.24	5,542.59	18.73	26.85	89.61	-1,599.75	453.40	1,229.06	1,183.65	45.41	27.066	
5,988.91	5,554.00	6,182.49	5,550.50	18.90	27.11	89.83	-1,601.66	538.21	1,230.07	1,184.44	45.63	26.956	
6,000.00	5,553.89	6,206.97	5,550.99	18.95	27.19	89.87	-1,601.61	562.68	1,230.11	1,184.40	45.71	26.911	
6,100.00	5,552.90	6,308.68	5,551.00	19.48	27.58	89.91	-1,600.70	664.39	1,229.82	1,183.22	46.60	26.391	
6,200.00	5,551.90	6,408.68	5,551.00	20.06	28.01	89.96	-1,599.80	764.38	1,229.52	1,181.92	47.61	25.827	
6,300.00	5,550.91	6,508.67	5,551.00	20.70	28.49	90.01	-1,598.90	864.37	1,229.23	1,180.51	48.72	25.232	
6,400.00	5,549.92	6,608.67	5,551.00	21.40	29.01	90.05	-1,598.00	964.36	1,228.94	1,179.01	49.93	24.614	
6,500.00	5,548.92	6,708.66	5,551.00	22.14	29.58	90.10	-1,597.10	1,064.35	1,228.64	1,177.41	51.23	23.983	
6,600.00	5,547.93	6,808.66	5,551.00	22.93	30.20	90.14	-1,596.20	1,164.34	1,228.35	1,175.74	52.62	23.346	
6,700.00	5,546.94	6,908.65	5,551.00	23.76	30.85	90.19	-1,595.30	1,264.34	1,228.06	1,173.98	54.08	22.709	
6,800.00	5,545.94	7,008.65	5,551.00	24.62	31.53	90.24	-1,594.40	1,364.33	1,227.77	1,172.16	55.61	22.077	
6,900.00	5,544.95	7,108.64	5,551.00	25.52	32.25	90.28	-1,593.50	1,464.32	1,227.48	1,170.27	57.21	21.455	
7,000.00	5,543.96	7,208.64	5,551.00	26.44	33.00	90.33	-1,592.60	1,564.31	1,227.19	1,168.32	58.87	20.846	
7,100.00	5,542.96	7,308.63	5,551.00	27.39	33.78	90.38	-1,591.70	1,664.30	1,226.90	1,166.32	60.58	20.251	
7,200.00	5,541.97	7,408.63	5,551.00	28.37	34.59	90.42	-1,590.80	1,764.29	1,226.62	1,164.27	62.35	19.673	
7,300.00	5,540.98	7,508.62	5,551.00	29.36	35.42	90.47	-1,589.90	1,864.28	1,226.33	1,162.17	64.16	19.114	
7,400.00	5,539.98	7,608.61	5,551.00	30.38	36.27	90.52	-1,589.00	1,964.27	1,226.05	1,160.03	66.01	18.573	
7,500.00	5,538.99	7,708.61	5,551.00	31.41	37.15	90.56	-1,588.10	2,064.26	1,225.76	1,157.86	67.90	18.051	
7,600.00	5,538.00	7,808.60	5,551.00	32.46	38.05	90.61	-1,587.20	2,164.25	1,225.48	1,155.65	69.83	17.549	
7,700.00	5,537.00	7,908.60	5,551.00	33.52	38.96	90.66	-1,586.30	2,264.24	1,225.19	1,153.40	71.79	17.066	
7,800.00	5,536.01	8,008.59	5,551.00	34.60	39.89	90.70	-1,585.40	2,364.23	1,224.91	1,151.13	73.78	16.601	
7,900.00	5,535.02	8,108.59	5,551.00	35.69	40.84	90.75	-1,584.50	2,464.22	1,224.63	1,148.83	75.80	16.156	
8,000.00	5,534.02	8,208.58	5,551.00	36.78	41.81	90.80	-1,583.60	2,564.21	1,224.35	1,146.50	77.85	15.727	
8,100.00	5,533.03	8,308.58	5,551.00	37.89	42.78	90.84	-1,582.70	2,664.20	1,224.07	1,144.15	79.92	15.317	
8,200.00	5,532.04	8,408.57	5,551.00	39.01	43.78	90.89	-1,581.80	2,764.19	1,223.79	1,141.78	82.01	14.923	
8,300.00	5,531.04	8,508.57	5,551.00	40.13	44.78	90.94	-1,580.90	2,864.18	1,223.51	1,139.39	84.12	14.545	
8,400.00	5,530.05	8,608.56	5,551.00	41.26	45.80	90.98	-1,580.00	2,964.18	1,223.24	1,136.99	86.25	14.182	
8,505.73	5,529.00	8,714.29	5,551.00	42.47	46.88	91.03	-1,579.05	3,069.90	1,222.94	1,134.42	88.53	13.815	
8,534.24	5,528.86	8,742.80	5,551.00	42.79	47.18	91.04	-1,578.79	3,098.41	1,222.86	1,133.72	89.14	13.718	
8,600.00	5,528.86	8,808.55	5,551.00	43.54	47.86	91.04	-1,578.20	3,164.16	1,222.67	1,132.09	90.58	13.498	
8,700.00	5,528.86	8,908.55	5,551.00	44.69	48.91	91.04	-1,577.30	3,264.16	1,222.38	1,129.60	92.78	13.175	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-615 - OH - Plan #1													Offset Site Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Offset Well Error:					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
8,800.00	5,528.86	9,008.55	5,551.00	45.85	49.96	91.04	-1,576.40	3,364.15	1,222.08	1,127.08	95.00	12.864	
8,900.00	5,528.87	9,108.55	5,551.00	47.01	51.03	91.04	-1,575.50	3,464.15	1,221.79	1,124.56	97.23	12.566	
9,000.00	5,528.87	9,208.55	5,551.00	48.17	52.10	91.04	-1,574.60	3,564.14	1,221.49	1,122.02	99.47	12.280	
9,100.00	5,528.87	9,308.55	5,551.00	49.34	53.18	91.04	-1,573.70	3,664.14	1,221.20	1,119.48	101.72	12.005	
9,200.00	5,528.87	9,408.55	5,551.00	50.52	54.27	91.04	-1,572.80	3,764.13	1,220.91	1,116.92	103.99	11.741	
9,300.00	5,528.87	9,508.55	5,551.00	51.69	55.36	91.04	-1,571.90	3,864.13	1,220.61	1,114.35	106.27	11.486	
9,400.00	5,528.87	9,608.55	5,551.00	52.87	56.46	91.04	-1,571.00	3,964.13	1,220.32	1,111.77	108.55	11.242	
9,500.00	5,528.88	9,708.55	5,551.00	54.06	57.57	91.04	-1,570.10	4,064.12	1,220.03	1,109.18	110.85	11.007	
9,600.00	5,528.88	9,808.55	5,551.00	55.24	58.68	91.04	-1,569.20	4,164.12	1,219.73	1,106.58	113.15	10.780	
9,700.00	5,528.88	9,908.55	5,551.00	56.43	59.80	91.04	-1,568.30	4,264.11	1,219.44	1,103.98	115.46	10.562	
9,800.00	5,528.88	10,008.55	5,551.00	57.62	60.92	91.04	-1,567.40	4,364.11	1,219.14	1,101.37	117.78	10.351	
9,900.00	5,528.88	10,108.55	5,551.00	58.82	62.04	91.04	-1,566.50	4,464.10	1,218.85	1,098.75	120.10	10.148	
10,000.00	5,528.89	10,208.55	5,551.00	60.01	63.18	91.04	-1,565.60	4,564.10	1,218.56	1,096.12	122.44	9.953	
10,100.00	5,528.89	10,308.55	5,551.00	61.21	64.31	91.04	-1,564.70	4,664.09	1,218.26	1,093.49	124.78	9.764	
10,200.00	5,528.89	10,408.55	5,551.00	62.41	65.45	91.04	-1,563.80	4,764.09	1,217.97	1,090.85	127.12	9.581	
10,300.00	5,528.89	10,508.62	5,550.98	63.62	66.59	91.04	-1,562.90	4,864.16	1,217.67	1,088.20	129.47	9.405	
10,400.00	5,528.89	10,608.76	5,550.04	64.82	67.74	91.00	-1,562.00	4,964.29	1,217.36	1,085.52	131.84	9.233	
10,500.00	5,528.90	10,708.76	5,549.03	66.03	68.89	90.95	-1,561.10	5,064.28	1,217.05	1,082.83	134.23	9.067	
10,600.00	5,528.90	10,808.75	5,548.02	67.24	70.05	90.90	-1,560.20	5,164.26	1,216.74	1,080.13	136.61	8.906	
10,700.00	5,528.90	10,908.75	5,547.01	68.44	71.20	90.85	-1,559.30	5,264.25	1,216.43	1,077.43	139.00	8.751	
10,800.00	5,528.90	11,008.74	5,546.01	69.66	72.36	90.81	-1,558.40	5,364.23	1,216.12	1,074.72	141.40	8.601	
10,900.00	5,528.90	11,108.74	5,545.00	70.87	73.53	90.76	-1,557.50	5,464.22	1,215.82	1,072.02	143.80	8.455	
11,000.00	5,528.90	11,208.73	5,543.99	72.08	74.69	90.71	-1,556.60	5,564.21	1,215.51	1,069.31	146.20	8.314	
11,100.00	5,528.91	11,308.73	5,542.99	73.30	75.86	90.66	-1,555.70	5,664.19	1,215.20	1,066.59	148.61	8.177	
11,200.00	5,528.91	11,408.72	5,541.98	74.51	77.03	90.62	-1,554.80	5,764.18	1,214.90	1,063.88	151.02	8.045	
11,300.00	5,528.91	11,508.71	5,540.97	75.73	78.20	90.57	-1,553.90	5,864.16	1,214.59	1,061.16	153.44	7.916	
11,400.00	5,528.91	11,608.71	5,539.96	76.95	79.38	90.52	-1,553.00	5,964.15	1,214.29	1,058.44	155.85	7.791	
11,500.00	5,528.91	11,708.70	5,538.96	78.17	80.56	90.47	-1,552.10	6,064.13	1,213.99	1,055.71	158.27	7.670	
11,600.00	5,528.92	11,808.70	5,537.95	79.39	81.74	90.43	-1,551.20	6,164.12	1,213.69	1,052.99	160.70	7.553	
11,700.00	5,528.92	11,908.69	5,536.94	80.61	82.92	90.38	-1,550.30	6,264.10	1,213.38	1,050.26	163.12	7.438	
11,800.00	5,528.92	12,008.69	5,535.94	81.83	84.10	90.33	-1,549.40	6,364.09	1,213.08	1,047.53	165.55	7.328	
11,900.00	5,528.92	12,108.68	5,534.93	83.05	85.29	90.28	-1,548.50	6,464.07	1,212.79	1,044.80	167.98	7.220	
12,000.00	5,528.92	12,208.68	5,533.92	84.27	86.48	90.24	-1,547.60	6,564.06	1,212.49	1,042.07	170.42	7.115	
12,100.00	5,528.92	12,308.67	5,532.91	85.50	87.66	90.19	-1,546.70	6,664.04	1,212.19	1,039.34	172.85	7.013	
12,200.00	5,528.93	12,408.67	5,531.91	86.72	88.86	90.14	-1,545.80	6,764.03	1,211.89	1,036.60	175.29	6.914	
12,300.00	5,528.93	12,508.65	5,530.92	87.95	90.05	90.09	-1,544.90	6,864.01	1,211.60	1,033.87	177.73	6.817	
12,400.00	5,528.93	12,608.64	5,530.86	89.18	91.24	90.09	-1,544.00	6,963.99	1,211.30	1,031.15	180.15	6.724	
12,500.00	5,528.93	12,708.64	5,530.86	90.40	92.43	90.09	-1,543.10	7,063.99	1,211.01	1,028.43	182.58	6.633	
12,600.00	5,528.93	12,808.64	5,530.87	91.63	93.63	90.09	-1,542.20	7,163.98	1,210.71	1,025.71	185.00	6.544	
12,700.00	5,528.94	12,908.64	5,530.87	92.86	94.83	90.09	-1,541.30	7,263.98	1,210.42	1,022.99	187.43	6.458	
12,800.00	5,528.94	13,008.64	5,530.87	94.09	96.03	90.09	-1,540.40	7,363.97	1,210.13	1,020.26	189.86	6.374	
12,900.00	5,528.94	13,108.64	5,530.88	95.32	97.23	90.09	-1,539.50	7,463.97	1,209.83	1,017.54	192.30	6.292	
13,000.00	5,528.94	13,208.64	5,530.88	96.55	98.43	90.09	-1,538.60	7,563.96	1,209.54	1,014.81	194.73	6.211	
13,100.00	5,528.94	13,308.64	5,530.88	97.78	99.63	90.09	-1,537.70	7,663.96	1,209.24	1,012.08	197.17	6.133	
13,200.00	5,528.95	13,408.64	5,530.89	99.01	100.84	90.09	-1,536.80	7,763.95	1,208.95	1,009.35	199.60	6.057	
13,300.00	5,528.95	13,508.64	5,530.89	100.24	102.04	90.09	-1,535.90	7,863.95	1,208.66	1,006.61	202.04	5.982	
13,400.00	5,528.95	13,608.63	5,530.90	101.47	103.25	90.09	-1,535.00	7,963.95	1,208.36	1,003.88	204.48	5.909	
13,500.00	5,528.95	13,708.63	5,530.90	102.70	104.46	90.09	-1,534.10	8,063.94	1,208.07	1,001.14	206.92	5.838	
13,600.00	5,528.95	13,808.63	5,530.90	103.94	105.67	90.09	-1,533.20	8,163.94	1,207.78	998.41	209.37	5.769	
13,700.00	5,528.95	13,908.63	5,530.91	105.17	106.87	90.09	-1,532.30	8,263.93	1,207.48	995.67	211.81	5.701	
13,800.00	5,528.96	14,008.63	5,530.91	106.40	108.08	90.09	-1,531.40	8,363.93	1,207.19	992.93	214.26	5.634	
13,900.00	5,528.96	14,108.63	5,530.91	107.64	109.30	90.09	-1,530.50	8,463.92	1,206.89	990.19	216.70	5.569	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-615 - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:	Distance	Minimum	Separation	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)		
14,000.00	5,528.96	14,208.63	5,530.92	108.87	110.51	90.09	-1,529.60	8,563.92	1,206.60	987.45	219.15	5.506	
14,100.00	5,528.96	14,308.63	5,530.92	110.10	111.72	90.09	-1,528.70	8,663.91	1,206.31	984.70	221.60	5.444	
14,200.00	5,528.96	14,408.63	5,530.93	111.34	112.93	90.09	-1,527.80	8,763.91	1,206.01	981.96	224.05	5.383	
14,300.00	5,528.97	14,508.63	5,530.93	112.57	114.15	90.09	-1,526.90	8,863.91	1,205.72	979.22	226.50	5.323	
14,400.00	5,528.97	14,608.63	5,530.93	113.81	115.36	90.09	-1,526.00	8,963.90	1,205.42	976.47	228.95	5.265	
14,500.00	5,528.97	14,708.63	5,530.94	115.05	116.58	90.09	-1,525.10	9,063.90	1,205.13	973.72	231.41	5.208	
14,600.00	5,528.97	14,808.63	5,530.94	116.28	117.80	90.09	-1,524.20	9,163.89	1,204.84	970.97	233.86	5.152	
14,700.00	5,528.97	14,908.63	5,530.94	117.52	119.01	90.09	-1,523.30	9,263.89	1,204.54	968.22	236.32	5.097	
14,800.00	5,528.97	15,008.63	5,530.95	118.76	120.23	90.09	-1,522.40	9,363.88	1,204.25	965.47	238.77	5.043	
14,900.00	5,528.98	15,108.63	5,530.95	119.99	121.45	90.09	-1,521.50	9,463.88	1,203.95	962.72	241.23	4.991	
15,000.00	5,528.98	15,208.63	5,530.96	121.23	122.67	90.09	-1,520.60	9,563.87	1,203.66	959.97	243.69	4.939	
15,100.00	5,528.98	15,308.63	5,530.96	122.47	123.89	90.09	-1,519.70	9,663.87	1,203.37	957.22	246.15	4.889	
15,200.00	5,528.98	15,408.63	5,530.96	123.70	125.11	90.09	-1,518.80	9,763.87	1,203.07	954.47	248.61	4.839	
15,300.00	5,528.98	15,508.63	5,530.97	124.94	126.33	90.09	-1,517.90	9,863.86	1,202.78	951.71	251.07	4.791	
15,400.00	5,528.99	15,608.63	5,530.97	126.18	127.55	90.09	-1,517.00	9,963.86	1,202.48	948.96	253.53	4.743	
15,500.00	5,528.99	15,708.63	5,530.97	127.42	128.77	90.09	-1,516.10	10,063.85	1,202.19	946.20	255.99	4.696	
15,600.00	5,528.99	15,808.63	5,530.98	128.66	129.99	90.09	-1,515.20	10,163.85	1,201.90	943.44	258.45	4.650	
15,700.00	5,528.99	15,908.62	5,530.98	129.90	131.22	90.09	-1,514.30	10,263.84	1,201.60	940.69	260.92	4.605	
15,800.00	5,528.99	16,008.62	5,530.99	131.14	132.44	90.10	-1,513.40	10,363.84	1,201.31	937.93	263.38	4.561	
15,900.00	5,529.00	16,108.62	5,530.99	132.38	133.66	90.10	-1,512.50	10,463.83	1,201.02	935.17	265.84	4.518	
16,000.00	5,529.00	16,208.62	5,530.99	133.61	134.89	90.10	-1,511.60	10,563.83	1,200.72	932.41	268.31	4.475	
16,100.00	5,529.00	16,308.62	5,531.00	134.85	136.11	90.10	-1,510.70	10,663.82	1,200.43	929.65	270.77	4.433	
16,173.23	5,529.00	16,381.86	5,531.00	135.76	137.01	90.10	-1,510.04	10,737.06	1,200.21	927.63	272.58	4.403 SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1

Survey Program: Reference		0-MWD+IFR1+MS Offset							Rule Assigned:				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	178.87	-28.05	0.55	28.06					
100.00	100.00	100.00	100.00	0.88	0.88	178.87	-28.05	0.55	28.06	26.29	1.77	15.873		
200.00	200.00	200.00	200.00	1.50	1.50	178.87	-28.05	0.55	28.06	25.05	3.00	9.340		
300.00	300.00	300.00	300.00	1.94	1.94	178.87	-28.05	0.55	28.06	24.19	3.87	7.250		
400.00	400.00	400.00	400.00	2.29	2.29	178.87	-28.05	0.55	28.06	23.48	4.58	6.125		
500.00	500.00	500.00	500.00	2.60	2.60	178.87	-28.05	0.55	28.06	22.86	5.20	5.396		
600.00	600.00	600.00	600.00	2.88	2.88	178.87	-28.05	0.55	28.06	22.30	5.76	4.873	CC, ES	
700.00	700.00	699.14	699.13	3.14	3.23	179.50	-29.52	0.26	29.54	23.18	6.36	4.645		
800.00	799.99	798.16	798.04	3.42	3.56	-29.77	-33.93	-0.64	32.85	25.90	6.95	4.726		
900.00	899.91	897.05	896.64	3.70	3.90	-30.43	-41.25	-2.12	36.86	29.33	7.53	4.895		
1,000.00	999.69	995.78	994.82	3.99	4.25	-31.88	-51.47	-4.19	41.57	33.45	8.12	5.122		
1,052.37	1,051.87	1,047.42	1,046.03	4.08	4.44	-32.85	-57.97	-5.51	44.33	35.98	8.36	5.304		
1,100.00	1,099.30	1,094.32	1,092.44	4.16	4.62	-33.63	-64.56	-6.85	47.27	38.70	8.58	5.512		
1,200.00	1,198.87	1,192.49	1,189.26	4.44	4.99	-34.35	-80.45	-10.07	55.60	46.42	9.18	6.059		
1,300.00	1,298.45	1,290.32	1,285.22	4.75	5.32	-34.16	-99.10	-13.85	66.76	57.03	9.74	6.857		
1,400.00	1,398.02	1,389.55	1,382.32	5.06	5.67	-33.78	-119.15	-17.92	79.07	68.70	10.37	7.628		
1,500.00	1,497.60	1,488.79	1,479.43	5.38	6.04	-33.51	-139.20	-21.98	91.38	80.35	11.03	8.287		
1,600.00	1,597.17	1,588.03	1,576.54	5.72	6.42	-33.30	-159.25	-26.05	103.69	91.98	11.71	8.857		
1,700.00	1,696.75	1,687.27	1,673.64	6.06	6.81	-33.13	-179.30	-30.12	116.00	103.60	12.40	9.353		
1,800.00	1,796.32	1,786.51	1,770.75	6.40	7.22	-33.00	-199.35	-34.18	128.32	115.21	13.11	9.787		
1,900.00	1,895.90	1,885.75	1,867.86	6.76	7.63	-32.89	-219.41	-38.25	140.63	126.80	13.83	10.168		
2,000.00	1,995.47	1,984.99	1,964.96	7.11	8.05	-32.80	-239.46	-42.31	152.95	138.39	14.56	10.505		
2,100.00	2,095.05	2,084.22	2,062.07	7.47	8.47	-32.72	-259.51	-46.38	165.26	149.97	15.30	10.805		
2,200.00	2,194.62	2,183.46	2,159.18	7.83	8.90	-32.65	-279.56	-50.45	177.58	161.54	16.04	11.072		
2,300.00	2,294.20	2,282.70	2,256.28	8.20	9.33	-32.59	-299.61	-54.51	189.89	173.11	16.79	11.311		
2,400.00	2,393.77	2,381.94	2,353.39	8.57	9.76	-32.54	-319.66	-58.58	202.21	184.67	17.54	11.527		
2,500.00	2,493.35	2,481.18	2,450.50	8.94	10.20	-32.49	-339.72	-62.64	214.52	196.22	18.30	11.722		
2,600.00	2,592.92	2,580.42	2,547.60	9.31	10.64	-32.45	-359.77	-66.71	226.84	207.78	19.06	11.899		
2,700.00	2,692.49	2,679.66	2,644.71	9.68	11.09	-32.42	-379.82	-70.78	239.16	219.33	19.83	12.060		
2,800.00	2,792.07	2,778.89	2,741.82	10.06	11.53	-32.38	-399.87	-74.84	251.47	230.87	20.60	12.207		
2,900.00	2,891.64	2,878.13	2,838.92	10.44	11.98	-32.35	-419.92	-78.91	263.79	242.42	21.37	12.342		
3,000.00	2,991.22	2,977.37	2,936.03	10.81	12.43	-32.33	-439.97	-82.98	276.10	253.96	22.15	12.467		
3,100.00	3,090.79	3,076.61	3,033.14	11.19	12.88	-32.30	-460.03	-87.04	288.42	265.50	22.92	12.581		
3,200.00	3,190.37	3,175.85	3,130.24	11.57	13.33	-32.28	-480.08	-91.11	300.74	277.03	23.70	12.687		
3,300.00	3,289.94	3,275.09	3,227.35	11.95	13.79	-32.26	-500.13	-95.17	313.05	288.57	24.48	12.786		
3,400.00	3,389.52	3,374.33	3,324.46	12.33	14.24	-32.24	-520.18	-99.24	325.37	300.10	25.27	12.877		
3,500.00	3,489.09	3,473.56	3,421.56	12.72	14.70	-32.22	-540.23	-103.31	337.69	311.64	26.05	12.962		
3,600.00	3,588.67	3,572.80	3,518.67	13.10	15.15	-32.20	-560.28	-107.37	350.00	323.17	26.84	13.042		
3,700.00	3,688.24	3,672.04	3,615.77	13.48	15.61	-32.19	-580.34	-111.44	362.32	334.70	27.62	13.116		
3,800.00	3,787.82	3,771.28	3,712.88	13.87	16.07	-32.17	-600.39	-115.50	374.64	346.22	28.41	13.186		
3,900.00	3,887.39	3,870.52	3,809.99	14.25	16.53	-32.16	-620.44	-119.57	386.95	357.75	29.20	13.251		
4,000.00	3,986.97	3,969.76	3,907.09	14.64	16.99	-32.15	-640.49	-123.64	399.27	369.28	29.99	13.313		
4,100.00	4,086.54	4,069.00	4,004.20	15.02	17.45	-32.13	-660.54	-127.70	411.59	380.80	30.78	13.371		
4,200.00	4,186.12	4,168.23	4,101.31	15.41	17.91	-32.12	-680.59	-131.77	423.90	392.33	31.57	13.426		
4,300.00	4,285.69	4,267.47	4,198.41	15.79	18.37	-32.11	-700.64	-135.83	436.22	403.85	32.37	13.478		
4,400.00	4,385.27	4,366.71	4,295.52	16.18	18.83	-32.10	-720.70	-139.90	448.54	415.38	33.16	13.526		
4,500.00	4,484.84	4,465.95	4,392.63	16.57	19.29	-32.09	-740.75	-143.97	460.85	426.90	33.95	13.573		
4,600.00	4,584.42	4,565.19	4,489.73	16.95	19.76	-32.08	-760.80	-148.03	473.17	438.42	34.75	13.617		
4,700.00	4,683.99	4,664.43	4,586.84	17.34	20.22	-32.08	-780.85	-152.10	485.49	449.94	35.54	13.659		
4,800.00	4,783.57	4,763.67	4,683.95	17.73	20.68	-32.07	-800.90	-156.16	497.80	461.46	36.34	13.699		
4,823.69	4,807.16	4,787.18	4,706.95	17.81	20.79	-32.07	-805.65	-157.13	500.72	464.20	36.52	13.711		
4,850.00	4,833.37	4,813.28	4,732.50	17.90	20.92	-9.03	-810.93	-158.20	503.94	467.21	36.73	13.719		

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,900.00	4,883.18	4,862.78	4,780.93	18.06	21.15	34.63	-820.93	-160.23	509.97	472.76	37.21	13.706	
4,950.00	4,932.79	4,911.92	4,829.01	18.13	21.38	56.27	-830.86	-162.24	515.92	478.20	37.72	13.677	
5,000.00	4,981.94	4,960.46	4,876.52	18.13	21.60	66.62	-840.67	-164.23	521.89	483.65	38.24	13.648	
5,050.00	5,030.40	5,008.70	4,923.73	18.11	21.81	72.75	-850.41	-165.65	528.04	489.29	38.75	13.626	
5,100.00	5,077.94	5,057.83	4,971.82	18.07	22.03	76.87	-860.32	-164.04	534.41	495.18	39.24	13.620	
5,150.00	5,124.31	5,107.95	5,020.64	18.02	22.22	79.92	-870.37	-158.94	540.97	501.30	39.67	13.636	
5,200.00	5,169.31	5,159.10	5,070.00	17.97	22.39	82.32	-880.50	-150.15	547.67	507.63	40.05	13.676	
5,250.00	5,212.69	5,211.37	5,119.65	17.91	22.53	84.32	-890.68	-137.48	554.48	514.13	40.35	13.742	
5,300.00	5,254.27	5,264.79	5,169.35	17.86	22.64	86.02	-900.84	-120.74	561.32	520.74	40.58	13.833	
5,350.00	5,293.82	5,319.45	5,218.78	17.82	22.73	87.52	-910.93	-99.76	568.15	527.41	40.74	13.946	
5,400.00	5,331.17	5,375.38	5,267.60	17.78	22.80	88.85	-920.86	-74.37	574.90	534.07	40.83	14.079	
5,450.00	5,366.12	5,432.63	5,315.41	17.76	22.86	90.05	-930.57	-44.43	581.51	540.64	40.87	14.228	
5,500.00	5,398.51	5,491.22	5,361.76	17.75	22.92	91.13	-939.95	-9.86	587.91	547.05	40.86	14.389	
5,550.00	5,428.18	5,551.19	5,406.17	17.76	22.98	92.10	-948.90	29.40	594.01	553.21	40.81	14.557	
5,600.00	5,454.99	5,612.51	5,448.10	17.80	23.03	92.99	-957.32	73.32	599.76	559.03	40.73	14.727	
5,650.00	5,478.79	5,675.16	5,486.99	17.85	23.10	93.78	-965.09	121.80	605.06	564.43	40.63	14.891	
5,700.00	5,499.49	5,739.09	5,522.24	17.94	23.18	94.48	-972.08	174.65	609.86	569.32	40.54	15.044	
5,750.00	5,516.98	5,804.22	5,553.26	18.04	23.28	95.09	-978.18	231.56	614.08	573.62	40.46	15.177	
5,800.00	5,531.16	5,870.44	5,579.49	18.17	23.41	95.61	-983.27	292.12	617.65	577.23	40.42	15.280	
5,850.00	5,541.99	5,937.59	5,600.37	18.33	23.56	96.03	-987.25	355.80	620.52	580.09	40.43	15.347	
5,850.25	5,542.03	5,937.93	5,600.46	18.33	23.56	96.04	-987.26	356.12	620.53	580.10	40.43	15.348	
5,900.00	5,549.39	6,005.52	5,615.47	18.52	23.74	96.36	-990.01	421.94	622.63	582.13	40.50	15.372	
5,900.13	5,549.40	6,005.70	5,615.50	18.52	23.74	96.36	-990.02	422.12	622.64	582.13	40.51	15.372	
5,950.00	5,553.33	6,074.02	5,624.42	18.73	23.96	96.60	-991.50	489.81	623.96	583.30	40.66	15.347	
5,950.42	5,553.35	6,074.60	5,624.46	18.73	23.96	96.60	-991.51	490.39	623.96	583.31	40.66	15.347	
5,988.91	5,554.00	6,127.59	5,626.96	18.90	24.15	96.71	-991.75	543.30	624.42	583.59	40.83	15.294	
5,988.91	5,554.00	6,127.59	5,626.96	18.90	24.15	96.71	-991.75	543.31	624.42	583.59	40.83	15.294	
6,000.00	5,553.89	6,142.87	5,626.97	18.95	24.21	96.72	-991.67	558.59	624.44	583.56	40.89	15.272	
6,002.02	5,553.87	6,145.67	5,626.94	18.97	24.22	96.72	-991.64	561.38	624.44	583.54	40.90	15.268	
6,100.00	5,552.90	6,241.66	5,626.59	19.48	24.63	96.78	-991.07	657.37	624.52	582.79	41.72	14.968	
6,100.35	5,552.89	6,242.00	5,626.59	19.48	24.63	96.78	-991.07	657.72	624.52	582.79	41.73	14.967	
6,200.00	5,551.90	6,341.66	5,626.20	20.06	25.10	96.83	-990.46	757.37	624.59	581.91	42.68	14.634	
6,200.35	5,551.90	6,342.00	5,626.20	20.06	25.11	96.83	-990.46	757.71	624.59	581.90	42.69	14.632	
6,300.00	5,550.91	6,441.65	5,625.81	20.70	25.63	96.89	-989.86	857.36	624.66	580.90	43.76	14.275	
6,300.35	5,550.91	6,442.00	5,625.81	20.71	25.64	96.89	-989.86	857.71	624.66	580.90	43.76	14.274	
6,400.00	5,549.92	6,541.65	5,625.42	21.40	26.21	96.94	-989.25	957.36	624.73	579.79	44.94	13.900	
6,400.35	5,549.91	6,542.00	5,625.41	21.40	26.21	96.94	-989.25	957.71	624.73	579.78	44.95	13.899	
6,500.00	5,548.92	6,641.65	5,625.02	22.14	26.84	97.00	-988.65	1,057.36	624.80	578.57	46.23	13.514	
6,500.35	5,548.92	6,642.00	5,625.02	22.14	26.84	97.00	-988.64	1,057.70	624.80	578.57	46.23	13.514	
6,600.00	5,547.93	6,741.65	5,624.63	22.93	27.50	97.05	-988.04	1,157.35	624.88	577.27	47.61	13.125	
6,600.35	5,547.93	6,742.00	5,624.63	22.93	27.50	97.05	-988.04	1,157.70	624.88	577.26	47.61	13.124	
6,700.00	5,546.94	6,841.65	5,624.24	23.76	28.21	97.11	-987.43	1,257.35	624.95	575.88	49.07	12.735	
6,700.35	5,546.93	6,842.00	5,624.24	23.76	28.21	97.11	-987.43	1,257.70	624.95	575.87	49.08	12.733	
6,800.00	5,545.94	6,941.64	5,623.84	24.62	28.95	97.16	-986.83	1,357.34	625.02	574.41	50.62	12.348	
6,800.35	5,545.94	6,941.99	5,623.84	24.62	28.95	97.16	-986.82	1,357.69	625.02	574.40	50.62	12.347	
6,900.00	5,544.95	7,041.64	5,623.45	25.52	29.72	97.21	-986.22	1,457.34	625.10	572.87	52.23	11.969	
6,900.35	5,544.95	7,041.99	5,623.45	25.52	29.73	97.21	-986.22	1,457.69	625.10	572.87	52.23	11.967	
7,000.00	5,543.96	7,141.64	5,623.06	26.44	30.53	97.27	-985.61	1,557.33	625.18	571.27	53.90	11.598	
7,000.35	5,543.95	7,141.99	5,623.06	26.44	30.53	97.27	-985.61	1,557.68	625.18	571.27	53.91	11.597	
7,100.00	5,542.96	7,241.64	5,622.67	27.39	31.36	97.32	-985.01	1,657.33	625.25	569.61	55.64	11.238	
7,100.35	5,542.96	7,241.99	5,622.66	27.40	31.37	97.32	-985.01	1,657.68	625.25	569.61	55.64	11.237	
7,200.00	5,541.97	7,341.64	5,622.27	28.37	32.22	97.38	-984.40	1,757.32	625.33	567.90	57.42	10.890	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,200.35	5,541.97	7,341.99	5,622.27	28.37	32.23	97.38	-984.40	1,757.68	625.33	567.90	57.43	10.888	
7,300.00	5,540.98	7,441.64	5,621.88	29.36	33.11	97.43	-983.80	1,857.32	625.40	566.15	59.26	10.554	
7,300.35	5,540.97	7,441.99	5,621.88	29.37	33.11	97.43	-983.79	1,857.67	625.41	566.14	59.27	10.552	
7,400.00	5,539.98	7,541.63	5,621.49	30.38	34.02	97.49	-983.19	1,957.32	625.48	564.34	61.14	10.231	
7,400.35	5,539.98	7,541.99	5,621.49	30.38	34.02	97.49	-983.19	1,957.67	625.48	564.34	61.15	10.229	
7,500.00	5,538.99	7,641.63	5,621.09	31.41	34.94	97.54	-982.58	2,057.31	625.56	562.50	63.06	9.921	
7,500.35	5,538.99	7,641.98	5,621.09	31.42	34.95	97.54	-982.58	2,057.66	625.56	562.50	63.06	9.919	
7,600.00	5,538.00	7,741.63	5,620.70	32.46	35.89	97.60	-981.98	2,157.31	625.64	560.63	65.01	9.623	
7,600.35	5,537.99	7,741.98	5,620.70	32.47	35.90	97.60	-981.97	2,157.66	625.64	560.62	65.02	9.622	
7,700.00	5,537.00	7,841.63	5,620.31	33.52	36.86	97.65	-981.37	2,257.30	625.72	558.72	67.00	9.339	
7,700.35	5,537.00	7,841.98	5,620.31	33.53	36.86	97.65	-981.37	2,257.66	625.72	558.71	67.01	9.338	
7,800.00	5,536.01	7,941.63	5,619.92	34.60	37.84	97.71	-980.76	2,357.30	625.80	556.78	69.02	9.067	
7,800.35	5,536.01	7,941.98	5,619.91	34.60	37.84	97.71	-980.76	2,357.65	625.80	556.77	69.03	9.066	
7,900.00	5,535.02	8,041.62	5,619.52	35.69	38.84	97.76	-980.16	2,457.29	625.88	554.82	71.06	8.807	
7,900.35	5,535.01	8,041.98	5,619.52	35.69	38.84	97.76	-980.16	2,457.65	625.88	554.81	71.07	8.806	
8,000.00	5,534.02	8,141.62	5,619.13	36.78	39.85	97.81	-979.55	2,557.29	625.96	552.83	73.14	8.559	
8,000.35	5,534.02	8,141.98	5,619.13	36.79	39.85	97.81	-979.55	2,557.64	625.96	552.82	73.14	8.558	
8,100.00	5,533.03	8,241.62	5,618.74	37.89	40.87	97.87	-978.95	2,657.29	626.04	550.81	75.23	8.322	
8,100.36	5,533.03	8,241.98	5,618.74	37.89	40.87	97.87	-978.94	2,657.64	626.04	550.81	75.24	8.321	
8,200.00	5,532.04	8,341.62	5,618.34	39.01	41.91	97.92	-978.34	2,757.28	626.13	548.77	77.35	8.095	
8,200.36	5,532.03	8,341.98	5,618.34	39.01	41.91	97.92	-978.34	2,757.64	626.13	548.77	77.35	8.094	
8,300.00	5,531.04	8,441.62	5,617.95	40.13	42.95	97.98	-977.73	2,857.28	626.21	546.73	79.48	7.879	
8,300.36	5,531.04	8,441.97	5,617.95	40.13	42.96	97.98	-977.73	2,857.63	626.21	546.72	79.49	7.878	
8,400.00	5,530.05	8,541.62	5,617.56	41.26	44.01	98.03	-977.13	2,957.27	626.29	544.66	81.63	7.672	
8,400.37	5,530.05	8,541.99	5,617.56	41.27	44.01	98.03	-977.12	2,957.65	626.29	544.65	81.64	7.671	
8,505.73	5,529.00	8,647.35	5,617.14	42.47	45.14	98.09	-976.49	3,063.00	626.38	542.45	83.93	7.463	
8,505.73	5,529.00	8,647.35	5,617.14	42.47	45.14	98.09	-976.49	3,063.00	626.38	542.45	83.93	7.463	
8,534.24	5,528.86	8,675.86	5,617.03	42.79	45.44	98.09	-976.31	3,091.51	626.38	541.83	84.56	7.408	
8,548.23	5,528.86	8,689.84	5,616.98	42.95	45.59	98.09	-976.23	3,105.49	626.38	541.51	84.87	7.381	
8,600.00	5,528.86	8,741.61	5,616.77	43.54	46.15	98.07	-975.91	3,157.26	626.35	540.33	86.02	7.281	
8,621.28	5,528.86	8,762.90	5,616.69	43.79	46.38	98.06	-975.79	3,178.55	626.34	539.84	86.50	7.241	
8,700.00	5,528.86	8,841.61	5,616.38	44.69	47.24	98.03	-975.31	3,257.26	626.29	538.03	88.27	7.095	
8,721.28	5,528.86	8,862.90	5,616.30	44.94	47.47	98.03	-975.18	3,278.54	626.28	537.53	88.75	7.057	
8,800.00	5,528.86	8,941.61	5,615.99	45.85	48.33	98.00	-974.70	3,357.26	626.24	535.71	90.52	6.918	
8,821.28	5,528.86	8,962.90	5,615.90	46.09	48.56	97.99	-974.57	3,378.54	626.23	535.22	91.01	6.881	
8,900.00	5,528.87	9,041.61	5,615.59	47.01	49.43	97.96	-974.10	3,457.25	626.18	533.39	92.80	6.748	
8,921.28	5,528.87	9,062.90	5,615.51	47.26	49.67	97.95	-973.97	3,478.54	626.17	532.89	93.28	6.713	
9,000.00	5,528.87	9,141.61	5,615.20	48.17	50.54	97.93	-973.49	3,557.25	626.13	531.05	95.08	6.585	
9,021.28	5,528.87	9,162.89	5,615.12	48.42	50.77	97.92	-973.36	3,578.53	626.12	530.55	95.57	6.552	
9,100.00	5,528.87	9,241.61	5,614.81	49.34	51.65	97.89	-972.88	3,657.25	626.07	528.70	97.37	6.430	
9,121.28	5,528.87	9,262.89	5,614.73	49.59	51.89	97.88	-972.75	3,678.53	626.06	528.20	97.86	6.397	
9,200.00	5,528.87	9,341.61	5,614.42	50.52	52.77	97.85	-972.28	3,757.24	626.02	526.34	99.68	6.280	
9,221.29	5,528.87	9,362.89	5,614.33	50.77	53.01	97.85	-972.15	3,778.53	626.01	525.84	100.17	6.249	
9,300.00	5,528.87	9,441.61	5,614.02	51.69	53.90	97.82	-971.67	3,857.24	625.96	523.97	101.99	6.137	
9,321.29	5,528.87	9,462.89	5,613.94	51.94	54.14	97.81	-971.54	3,878.52	625.95	523.47	102.49	6.108	
9,400.00	5,528.87	9,541.61	5,613.63	52.87	55.03	97.78	-971.06	3,957.24	625.91	521.60	104.31	6.000	
9,421.29	5,528.88	9,562.89	5,613.55	53.12	55.27	97.77	-970.94	3,978.52	625.90	521.09	104.81	5.972	
9,500.00	5,528.88	9,641.61	5,613.24	54.06	56.16	97.75	-970.46	4,057.23	625.86	519.21	106.65	5.869	
9,521.29	5,528.88	9,662.89	5,613.15	54.31	56.40	97.74	-970.33	4,078.52	625.85	518.70	107.14	5.841	
9,600.00	5,528.88	9,741.61	5,612.84	55.24	57.30	97.71	-969.85	4,157.23	625.80	516.82	108.98	5.742	
9,621.29	5,528.88	9,762.89	5,612.76	55.50	57.54	97.70	-969.72	4,178.52	625.79	516.31	109.48	5.716	
9,700.00	5,528.88	9,841.60	5,612.45	56.43	58.45	97.67	-969.25	4,257.23	625.75	514.42	111.33	5.621	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,721.29	5,528.88	9,862.89	5,612.37	56.69	58.69	97.67	-969.12	4,278.51	625.74	513.91	111.83	5.595	
9,800.00	5,528.88	9,941.60	5,612.06	57.62	59.59	97.64	-968.64	4,357.22	625.70	512.01	113.68	5.504	
9,821.29	5,528.88	9,962.89	5,611.98	57.88	59.84	97.63	-968.51	4,378.51	625.69	511.50	114.19	5.480	
9,900.00	5,528.88	10,041.60	5,611.67	58.82	60.75	97.60	-968.03	4,457.22	625.65	509.60	116.04	5.391	
9,921.29	5,528.88	10,062.89	5,611.58	59.07	60.99	97.60	-967.90	4,478.51	625.63	509.09	116.55	5.368	
10,000.00	5,528.89	10,141.60	5,611.27	60.01	61.90	97.57	-967.43	4,557.22	625.59	507.18	118.41	5.283	
10,021.29	5,528.89	10,162.89	5,611.19	60.27	62.15	97.56	-967.30	4,578.50	625.58	506.67	118.92	5.261	
10,100.00	5,528.89	10,241.60	5,610.88	61.21	63.06	97.53	-966.82	4,657.21	625.54	504.76	120.78	5.179	
10,121.29	5,528.89	10,262.89	5,610.80	61.47	63.31	97.52	-966.69	4,678.50	625.53	504.24	121.29	5.157	
10,200.00	5,528.89	10,341.60	5,610.49	62.41	64.23	97.50	-966.21	4,757.21	625.49	502.33	123.16	5.079	
10,221.29	5,528.89	10,362.89	5,610.40	62.67	64.48	97.49	-966.09	4,778.50	625.48	501.81	123.67	5.058	
10,300.00	5,528.89	10,441.60	5,610.09	63.62	65.39	97.46	-965.61	4,857.21	625.44	499.89	125.54	4.982	
10,321.29	5,528.89	10,462.89	5,610.01	63.87	65.64	97.45	-965.48	4,878.49	625.43	499.38	126.05	4.962	
10,400.00	5,528.89	10,541.60	5,609.70	64.82	66.56	97.42	-965.00	4,957.20	625.39	497.46	127.93	4.888	
10,421.29	5,528.89	10,562.89	5,609.62	65.08	66.81	97.42	-964.87	4,978.49	625.38	496.94	128.44	4.869	
10,500.00	5,528.90	10,641.60	5,609.31	66.03	67.74	97.39	-964.40	5,057.20	625.34	495.01	130.32	4.798	
10,521.29	5,528.90	10,662.89	5,609.22	66.28	67.99	97.38	-964.27	5,078.49	625.32	494.49	130.83	4.780	
10,600.00	5,528.90	10,741.60	5,608.92	67.24	68.91	97.35	-963.79	5,157.20	625.28	492.56	132.72	4.711	
10,621.29	5,528.90	10,762.89	5,608.83	67.49	69.16	97.34	-963.66	5,178.48	625.27	492.04	133.23	4.693	
10,700.00	5,528.90	10,841.60	5,608.52	68.44	70.09	97.32	-963.18	5,257.19	625.23	490.11	135.12	4.627	
10,721.29	5,528.90	10,862.88	5,608.44	68.70	70.34	97.31	-963.05	5,278.48	625.22	489.59	135.63	4.610	
10,800.00	5,528.90	10,941.60	5,608.13	69.66	71.27	97.28	-962.58	5,357.19	625.18	487.66	137.53	4.546	
10,821.29	5,528.90	10,962.88	5,608.05	69.91	71.52	97.27	-962.45	5,378.48	625.17	487.13	138.04	4.529	
10,900.00	5,528.90	11,041.60	5,607.74	70.87	72.45	97.24	-961.97	5,457.19	625.13	485.20	139.93	4.467	
10,921.29	5,528.90	11,062.88	5,607.65	71.13	72.70	97.24	-961.84	5,478.47	625.12	484.67	140.45	4.451	
11,000.00	5,528.90	11,141.59	5,607.34	72.08	73.64	97.21	-961.36	5,557.17	625.08	482.74	142.35	4.391	
11,021.29	5,528.90	11,162.88	5,607.26	72.34	73.89	97.20	-961.24	5,578.47	625.07	482.21	142.86	4.375	
11,100.00	5,528.91	11,241.59	5,606.95	73.30	74.82	97.17	-960.76	5,657.18	625.03	480.27	144.76	4.318	
11,121.29	5,528.91	11,262.88	5,606.87	73.55	75.08	97.17	-960.63	5,678.47	625.02	479.75	145.28	4.302	
11,200.00	5,528.91	11,341.59	5,606.56	74.51	76.01	97.14	-960.15	5,757.18	624.98	477.80	147.18	4.246	
11,221.29	5,528.91	11,362.88	5,606.47	74.77	76.26	97.13	-960.02	5,778.46	624.97	477.28	147.70	4.231	
11,300.00	5,528.91	11,441.59	5,606.17	75.73	77.20	97.10	-959.55	5,857.17	624.94	475.33	149.60	4.177	
11,321.29	5,528.91	11,462.88	5,606.08	75.99	77.46	97.09	-959.42	5,878.46	624.93	474.81	150.12	4.163	
11,400.00	5,528.91	11,541.59	5,605.77	76.95	78.39	97.07	-958.94	5,957.17	624.89	472.86	152.03	4.110	
11,421.29	5,528.91	11,562.88	5,605.69	77.21	78.65	97.06	-958.81	5,978.46	624.88	472.33	152.55	4.096	
11,500.00	5,528.91	11,641.59	5,605.38	78.17	79.59	97.03	-958.33	6,057.17	624.84	470.38	154.46	4.045	
11,521.29	5,528.91	11,662.88	5,605.30	78.43	79.84	97.02	-958.20	6,078.45	624.83	469.85	154.97	4.032	
11,600.00	5,528.92	11,741.59	5,604.99	79.39	80.78	96.99	-957.73	6,157.16	624.79	467.90	156.89	3.982	
11,621.29	5,528.92	11,762.88	5,604.90	79.65	81.04	96.99	-957.60	6,178.45	624.78	467.37	157.41	3.969	
11,700.00	5,528.92	11,841.59	5,604.59	80.61	81.98	96.96	-957.12	6,257.16	624.74	465.42	159.32	3.921	
11,721.29	5,528.92	11,862.88	5,604.51	80.87	82.24	96.95	-956.99	6,278.45	624.73	464.89	159.84	3.908	
11,800.00	5,528.92	11,941.59	5,604.20	81.83	83.18	96.92	-956.51	6,357.16	624.69	462.94	161.76	3.862	
11,821.29	5,528.92	11,962.88	5,604.12	82.09	83.44	96.91	-956.39	6,378.45	624.68	462.41	162.28	3.850	
11,900.00	5,528.92	12,041.59	5,603.81	83.05	84.38	96.89	-955.91	6,457.15	624.65	460.45	164.20	3.804	
11,921.29	5,528.92	12,062.88	5,603.72	83.31	84.64	96.88	-955.78	6,478.44	624.64	459.92	164.71	3.792	
12,000.00	5,528.92	12,141.59	5,603.42	84.27	85.58	96.85	-955.30	6,557.15	624.60	457.96	166.64	3.748	
12,021.29	5,528.92	12,162.88	5,603.33	84.53	85.84	96.84	-955.17	6,578.44	624.59	457.43	167.16	3.737	
12,100.00	5,528.92	12,241.59	5,603.02	85.50	86.79	96.81	-954.70	6,657.15	624.55	455.47	169.08	3.694	
12,121.29	5,528.93	12,262.88	5,602.94	85.76	87.04	96.81	-954.57	6,678.44	624.54	454.94	169.60	3.682	
12,200.00	5,528.93	12,341.59	5,602.63	86.72	87.99	96.78	-954.09	6,757.14	624.50	452.98	171.52	3.641	
12,221.29	5,528.93	12,362.88	5,602.55	86.98	88.25	96.77	-953.96	6,778.43	624.49	452.45	172.04	3.630	
12,300.00	5,528.93	12,441.58	5,602.24	87.95	89.20	96.74	-953.48	6,857.14	624.46	450.49	173.97	3.589	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,321.29	5,528.93	12,462.88	5,602.15	88.21	89.45	96.73	-953.35	6,878.43	624.45	449.96	174.49	3.579	
12,400.00	5,528.93	12,541.58	5,601.84	89.18	90.40	96.71	-952.88	6,957.14	624.41	447.99	176.42	3.539	
12,421.29	5,528.93	12,562.88	5,601.76	89.44	90.66	96.70	-952.75	6,978.43	624.40	447.46	176.94	3.529	
12,500.00	5,528.93	12,641.58	5,601.45	90.40	91.61	96.67	-952.27	7,057.13	624.37	445.50	178.87	3.491	
12,521.29	5,528.93	12,662.88	5,601.37	90.66	91.87	96.66	-952.14	7,078.42	624.36	444.96	179.39	3.480	
12,600.00	5,528.93	12,741.58	5,601.06	91.63	92.82	96.63	-951.66	7,157.13	624.32	443.00	181.32	3.443	
12,621.29	5,528.93	12,762.87	5,600.97	91.89	93.08	96.63	-951.54	7,178.42	624.31	442.47	181.84	3.433	
12,700.00	5,528.94	12,841.58	5,600.67	92.86	94.03	96.60	-951.06	7,257.13	624.27	440.50	183.78	3.397	
12,721.29	5,528.94	12,862.87	5,600.58	93.12	94.29	96.59	-950.93	7,278.42	624.26	439.97	184.30	3.387	
12,800.00	5,528.94	12,941.58	5,600.27	94.09	95.24	96.56	-950.45	7,357.12	624.23	438.00	186.23	3.352	
12,821.29	5,528.94	12,962.87	5,600.19	94.35	95.50	96.55	-950.32	7,378.41	624.22	437.46	186.75	3.342	
12,900.00	5,528.94	13,041.58	5,599.88	95.32	96.45	96.53	-949.85	7,457.12	624.18	435.49	188.69	3.308	
12,921.29	5,528.94	13,062.87	5,599.80	95.58	96.71	96.52	-949.72	7,478.41	624.17	434.96	189.21	3.299	
13,000.00	5,528.94	13,141.58	5,599.49	96.55	97.67	96.49	-949.24	7,557.12	624.14	432.99	191.15	3.265	
13,021.29	5,528.94	13,162.87	5,599.40	96.81	97.93	96.48	-949.11	7,578.41	624.13	432.46	191.67	3.256	
13,100.00	5,528.94	13,241.58	5,599.09	97.78	98.88	96.45	-948.63	7,657.11	624.09	430.48	193.61	3.223	
13,121.29	5,528.94	13,262.87	5,599.01	98.04	99.14	96.45	-948.50	7,678.40	624.08	429.95	194.13	3.215	
13,200.00	5,528.95	13,341.58	5,598.70	99.01	100.10	96.42	-948.03	7,757.11	624.05	427.98	196.07	3.183	
13,221.29	5,528.95	13,362.87	5,598.62	99.27	100.36	96.41	-947.90	7,778.40	624.04	427.44	196.59	3.174	
13,300.00	5,528.95	13,441.58	5,598.31	100.24	101.31	96.38	-947.42	7,857.10	624.00	425.47	198.53	3.143	
13,321.29	5,528.95	13,462.87	5,598.22	100.50	101.57	96.37	-947.29	7,878.40	624.00	424.94	199.06	3.135	
13,400.00	5,528.95	13,541.58	5,597.92	101.47	102.53	96.35	-946.81	7,957.10	623.96	422.96	201.00	3.104	
13,421.29	5,528.95	13,562.87	5,597.83	101.73	102.79	96.34	-946.69	7,978.40	623.95	422.43	201.52	3.096	
13,500.00	5,528.95	13,641.58	5,597.52	102.70	103.75	96.31	-946.21	8,057.10	623.92	420.45	203.46	3.066	
13,521.30	5,528.95	13,662.87	5,597.44	102.97	104.01	96.30	-946.08	8,078.39	623.91	419.92	203.99	3.059	
13,600.00	5,528.95	13,741.57	5,597.13	103.94	104.97	96.27	-945.60	8,157.09	623.87	417.94	205.93	3.030	
13,621.30	5,528.95	13,762.87	5,597.05	104.20	105.22	96.27	-945.47	8,178.39	623.86	417.41	206.46	3.022	
13,700.00	5,528.95	13,841.57	5,596.74	105.17	106.18	96.24	-945.00	8,257.09	623.83	415.43	208.40	2.993	
13,721.30	5,528.95	13,862.87	5,596.65	105.43	106.44	96.23	-944.87	8,278.39	623.82	414.90	208.93	2.986	
13,800.00	5,528.96	13,941.57	5,596.34	106.40	107.40	96.20	-944.39	8,357.09	623.79	412.92	210.87	2.958	
13,821.30	5,528.96	13,962.87	5,596.26	106.66	107.66	96.19	-944.26	8,378.38	623.78	412.38	211.40	2.951	
13,900.00	5,528.96	14,041.57	5,595.95	107.64	108.62	96.17	-943.78	8,457.08	623.74	410.40	213.34	2.924	
13,921.30	5,528.96	14,062.87	5,595.87	107.90	108.88	96.16	-943.65	8,478.38	623.74	409.87	213.87	2.916	
14,000.00	5,528.96	14,141.57	5,595.56	108.87	109.85	96.13	-943.18	8,557.08	623.70	407.89	215.81	2.890	
14,021.30	5,528.96	14,162.87	5,595.47	109.13	110.11	96.12	-943.05	8,578.38	623.69	407.35	216.34	2.883	
14,100.00	5,528.96	14,241.57	5,595.17	110.10	111.07	96.09	-942.57	8,657.08	623.66	405.37	218.29	2.857	
14,121.30	5,528.96	14,262.87	5,595.08	110.37	111.33	96.09	-942.44	8,678.37	623.65	404.84	218.81	2.850	
14,200.00	5,528.96	14,341.57	5,594.77	111.34	112.29	96.06	-941.96	8,757.07	623.62	402.86	220.76	2.825	
14,221.30	5,528.96	14,362.87	5,594.69	111.60	112.55	96.05	-941.84	8,778.37	623.61	402.32	221.29	2.818	
14,300.00	5,528.97	14,441.57	5,594.38	112.57	113.51	96.02	-941.36	8,857.07	623.58	400.34	223.23	2.793	
14,321.30	5,528.97	14,462.87	5,594.30	112.84	113.77	96.01	-941.23	8,878.37	623.57	399.81	223.76	2.787	
14,400.00	5,528.97	14,541.57	5,593.99	113.81	114.74	95.99	-940.75	8,957.07	623.53	397.82	225.71	2.763	
14,421.30	5,528.97	14,562.87	5,593.90	114.07	115.00	95.98	-940.62	8,978.36	623.53	397.29	226.24	2.756	
14,500.00	5,528.97	14,641.57	5,593.59	115.05	115.96	95.95	-940.15	9,057.06	623.49	395.31	228.19	2.732	
14,521.30	5,528.97	14,662.87	5,593.51	115.31	116.22	95.94	-940.02	9,078.36	623.48	394.77	228.71	2.726	
14,600.00	5,528.97	14,741.57	5,593.20	116.28	117.18	95.91	-939.54	9,157.06	623.45	392.79	230.66	2.703	
14,621.30	5,528.97	14,762.86	5,593.12	116.55	117.44	95.91	-939.41	9,178.36	623.44	392.25	231.19	2.697	
14,700.00	5,528.97	14,841.57	5,592.81	117.52	118.41	95.88	-938.93	9,257.06	623.41	390.27	233.14	2.674	
14,721.30	5,528.97	14,862.86	5,592.72	117.78	118.67	95.87	-938.80	9,278.36	623.40	389.73	233.67	2.668	
14,800.00	5,528.97	14,941.57	5,592.42	118.76	119.63	95.84	-938.33	9,357.05	623.37	387.75	235.62	2.646	
14,821.30	5,528.98	14,962.86	5,592.33	119.02	119.90	95.83	-938.20	9,378.35	623.36	387.21	236.15	2.640	
14,900.00	5,528.98	15,041.56	5,592.02	119.99	120.86	95.81	-937.72	9,457.05	623.33	385.23	238.10	2.618	

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



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-625 - OH - Plan #1											Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS											Offset Well Error:	0.00 usft
Reference												
Measured Depth	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Rule Assigned:		Minimum	Separation
Depth	Depth	Depth	Depth	Reference	Offset		+N/-S	+E/-W	Distance	Between		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	Toolface	(usft)	(usft)	Between	Ellipses	Separation	Factor
						(°)			Centres	(usft)		Warning
									Centres	(usft)		
14,921.30	5,528.98	15,062.86	5,591.94	120.26	121.12	95.80	-937.59	9,478.35	623.32	384.69	238.63	2.612
15,000.00	5,528.98	15,141.56	5,591.63	121.23	122.09	95.77	-937.11	9,557.05	623.29	382.71	240.58	2.591
15,021.30	5,528.98	15,162.86	5,591.55	121.49	122.35	95.76	-936.99	9,578.35	623.28	382.17	241.11	2.585
15,100.00	5,528.98	15,241.56	5,591.24	122.47	123.31	95.73	-936.51	9,657.04	623.25	380.18	243.07	2.564
15,121.30	5,528.98	15,262.86	5,591.15	122.73	123.58	95.73	-936.38	9,678.34	623.24	379.65	243.60	2.559
15,200.00	5,528.98	15,341.56	5,590.84	123.70	124.54	95.70	-935.90	9,757.04	623.21	377.66	245.55	2.538
15,221.30	5,528.98	15,362.86	5,590.76	123.97	124.80	95.69	-935.77	9,778.34	623.20	377.13	246.08	2.533
15,300.00	5,528.98	15,441.56	5,590.45	124.94	125.77	95.66	-935.30	9,857.04	623.17	375.14	248.03	2.512
15,321.30	5,528.98	15,462.86	5,590.37	125.21	126.03	95.65	-935.17	9,878.34	623.16	374.60	248.56	2.507
15,400.00	5,528.99	15,541.56	5,590.06	126.18	127.00	95.62	-934.69	9,957.03	623.13	372.62	250.52	2.487
15,421.30	5,528.99	15,562.86	5,589.97	126.44	127.26	95.62	-934.56	9,978.33	623.13	372.08	251.05	2.482
15,500.00	5,528.99	15,641.56	5,589.67	127.42	128.23	95.59	-934.08	10,057.03	623.09	370.09	253.00	2.463
15,521.30	5,528.99	15,662.86	5,589.58	127.68	128.49	95.58	-933.95	10,078.33	623.09	369.56	253.53	2.458
15,600.00	5,528.99	15,741.56	5,589.27	128.66	129.46	95.55	-933.48	10,157.03	623.06	367.57	255.49	2.439
15,621.30	5,528.99	15,762.86	5,589.19	128.92	129.72	95.54	-933.35	10,178.33	623.05	367.03	256.02	2.434
15,700.00	5,528.99	15,841.56	5,588.88	129.90	130.68	95.52	-932.87	10,257.02	623.02	365.04	257.97	2.415
15,721.30	5,528.99	15,862.86	5,588.80	130.16	130.95	95.51	-932.74	10,278.32	623.01	364.51	258.50	2.410
15,800.00	5,528.99	15,941.56	5,588.49	131.14	131.91	95.48	-932.26	10,357.02	622.98	362.52	260.46	2.392
15,821.30	5,528.99	15,962.86	5,588.40	131.40	132.18	95.47	-932.14	10,378.32	622.97	361.98	260.99	2.387
15,900.00	5,529.00	16,041.56	5,588.09	132.38	133.14	95.44	-931.66	10,457.02	622.94	359.99	262.95	2.369
15,921.30	5,529.00	16,062.86	5,588.01	132.64	133.41	95.44	-931.53	10,478.32	622.93	359.46	263.48	2.364
16,000.00	5,529.00	16,141.56	5,587.70	133.61	134.38	95.41	-931.05	10,557.01	622.90	357.47	265.44	2.347
16,021.30	5,529.00	16,162.86	5,587.62	133.88	134.64	95.40	-930.92	10,578.32	622.90	356.93	265.97	2.342
16,100.00	5,529.00	16,241.56	5,587.31	134.85	135.61	95.37	-930.45	10,657.01	622.87	354.94	267.93	2.325
16,115.59	5,529.00	16,257.15	5,587.25	135.05	135.80	95.37	-930.35	10,672.60	622.86	354.55	268.31	2.321
16,173.23	5,529.00	16,314.79	5,587.02	135.76	136.51	95.35	-930.00	10,730.24	622.84	353.09	269.75	2.309 SF

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	-1.15	27.69	-0.55	27.69				
100.00	100.00	100.00	100.00	0.88	0.88	-1.15	27.69	-0.55	27.69	25.93	1.77	15.667	
200.00	200.00	200.00	200.00	1.50	1.50	-1.15	27.69	-0.55	27.69	24.69	3.00	9.219	
300.00	300.00	300.00	300.00	1.94	1.94	-1.15	27.69	-0.55	27.69	23.82	3.87	7.156	
400.00	400.00	400.00	400.00	2.29	2.29	-1.15	27.69	-0.55	27.69	23.11	4.58	6.046	
500.00	500.00	500.00	500.00	2.60	2.60	-1.15	27.69	-0.55	27.69	22.49	5.20	5.326 CC, ES	
600.00	600.00	599.27	599.25	2.88	3.05	-3.51	28.90	-1.77	28.97	23.11	5.85	4.951	
700.00	700.00	698.49	698.34	3.14	3.29	-9.40	32.48	-5.38	32.96	26.63	6.33	5.206	
800.00	799.99	798.27	797.92	3.42	3.57	136.65	36.84	-9.77	39.11	32.23	6.88	5.683	
900.00	899.91	897.93	897.40	3.70	3.87	135.89	41.20	-14.15	47.24	39.83	7.41	6.377	
1,000.00	999.69	997.42	996.69	3.99	4.18	137.15	45.54	-18.53	57.26	49.33	7.94	7.216	
1,052.37	1,051.87	1,049.43	1,048.60	4.08	4.34	138.27	47.82	-20.82	63.30	55.15	8.15	7.766	
1,100.00	1,099.30	1,096.69	1,095.77	4.16	4.49	139.35	49.88	-22.90	69.05	60.70	8.34	8.276	
1,200.00	1,198.87	1,195.93	1,194.82	4.44	4.81	141.10	54.22	-27.27	81.18	72.31	8.87	9.156	
1,300.00	1,298.45	1,295.16	1,293.86	4.75	5.14	142.40	58.55	-31.63	93.37	83.97	9.40	9.933	
1,400.00	1,398.02	1,394.40	1,392.90	5.06	5.46	143.40	62.89	-36.00	105.59	95.65	9.94	10.621	
1,500.00	1,497.60	1,493.63	1,491.95	5.38	5.79	144.19	67.23	-40.37	117.84	107.35	10.49	11.233	
1,600.00	1,597.17	1,592.87	1,590.99	5.72	6.13	144.83	71.56	-44.73	130.11	119.06	11.05	11.778	
1,700.00	1,696.75	1,692.10	1,690.04	6.06	6.47	145.37	75.90	-49.10	142.39	130.78	11.61	12.267	
1,800.00	1,796.32	1,791.34	1,789.08	6.40	6.80	145.81	80.23	-53.47	154.68	142.51	12.17	12.706	
1,900.00	1,895.90	1,890.57	1,888.13	6.76	7.14	146.19	84.57	-57.83	166.98	154.24	12.74	13.103	
2,000.00	1,995.47	1,989.81	1,987.17	7.11	7.48	146.52	88.91	-62.20	179.29	165.97	13.32	13.463	
2,100.00	2,095.05	2,089.04	2,086.21	7.47	7.83	146.81	93.24	-66.57	191.60	177.70	13.89	13.791	
2,200.00	2,194.62	2,188.28	2,185.26	7.83	8.17	147.06	97.58	-70.93	203.91	189.44	14.47	14.090	
2,300.00	2,294.20	2,287.51	2,284.30	8.20	8.52	147.28	101.92	-75.30	216.23	201.18	15.05	14.365	
2,400.00	2,393.77	2,386.75	2,383.35	8.57	8.86	147.48	106.25	-79.66	228.55	212.91	15.64	14.617	
2,500.00	2,493.35	2,485.98	2,482.39	8.94	9.21	147.66	110.59	-84.03	240.87	224.65	16.22	14.850	
2,600.00	2,592.92	2,585.22	2,581.43	9.31	9.55	147.82	114.93	-88.40	253.20	236.39	16.81	15.066	
2,700.00	2,692.49	2,684.45	2,680.48	9.68	9.90	147.97	119.26	-92.76	265.53	248.13	17.39	15.266	
2,800.00	2,792.07	2,783.69	2,779.52	10.06	10.25	148.10	123.60	-97.13	277.85	259.87	17.98	15.451	
2,900.00	2,891.64	2,882.92	2,878.57	10.44	10.60	148.23	127.93	-101.50	290.18	271.61	18.57	15.624	
3,000.00	2,991.22	2,982.16	2,977.61	10.81	10.95	148.34	132.27	-105.86	302.52	283.35	19.16	15.786	
3,100.00	3,090.79	3,081.39	3,076.65	11.19	11.30	148.44	136.61	-110.23	314.85	295.09	19.75	15.938	
3,200.00	3,190.37	3,180.63	3,175.70	11.57	11.65	148.54	140.94	-114.60	327.18	306.83	20.35	16.080	
3,300.00	3,289.94	3,279.87	3,274.74	11.95	12.00	148.63	145.28	-118.96	339.52	318.58	20.94	16.213	
3,400.00	3,389.52	3,379.10	3,373.79	12.33	12.35	148.71	149.62	-123.33	351.85	330.32	21.53	16.339	
3,500.00	3,489.09	3,478.34	3,472.83	12.72	12.70	148.78	153.95	-127.70	364.19	342.06	22.13	16.457	
3,600.00	3,588.67	3,577.57	3,571.88	13.10	13.05	148.86	158.29	-132.06	376.52	353.80	22.72	16.569	
3,700.00	3,688.24	3,676.81	3,670.92	13.48	13.40	148.92	162.62	-136.43	388.86	365.54	23.32	16.675	
3,800.00	3,787.82	3,776.04	3,769.96	13.87	13.75	148.99	166.96	-140.80	401.20	377.28	23.92	16.775	
3,900.00	3,887.39	3,875.28	3,869.01	14.25	14.10	149.05	171.30	-145.16	413.53	389.02	24.51	16.871	
4,000.00	3,986.97	3,974.51	3,968.05	14.64	14.45	149.10	175.63	-149.53	425.87	400.76	25.11	16.961	
4,100.00	4,086.54	4,073.75	4,067.10	15.02	14.80	149.16	179.97	-153.90	438.21	412.50	25.71	17.047	
4,200.00	4,186.12	4,172.98	4,166.14	15.41	15.16	149.20	184.31	-158.26	450.55	424.25	26.30	17.129	
4,300.00	4,285.69	4,272.22	4,265.18	15.79	15.51	149.25	188.64	-162.63	462.89	435.99	26.90	17.207	
4,400.00	4,385.27	4,371.45	4,364.23	16.18	15.86	149.30	192.98	-166.99	475.23	447.73	27.50	17.281	
4,500.00	4,484.84	4,470.69	4,463.27	16.57	16.21	149.34	197.32	-171.36	487.57	459.47	28.10	17.353	
4,600.00	4,584.42	4,569.92	4,562.32	16.95	16.57	149.38	201.65	-175.73	499.91	471.21	28.70	17.421	
4,700.00	4,683.99	4,669.16	4,661.36	17.34	16.92	149.42	205.99	-180.09	512.25	482.95	29.30	17.486	
4,800.00	4,783.57	4,768.39	4,760.40	17.73	17.26	149.45	210.32	-184.46	524.59	494.70	29.88	17.554	
4,823.69	4,807.16	4,791.93	4,783.90	17.81	17.34	149.47	211.35	-185.40	527.51	497.50	30.01	17.576	
4,850.00	4,833.37	4,818.08	4,810.02	17.90	17.41	173.03	212.50	-185.65	530.76	500.59	30.17	17.590	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,883.18	4,867.73	4,859.56	18.06	17.48	-142.64	214.70	-183.49	536.94	506.45	30.48	17.615	
4,950.00	4,932.79	4,917.32	4,908.78	18.13	17.45	-120.71	216.90	-177.91	543.09	512.38	30.71	17.686	
5,000.00	4,981.94	4,966.86	4,957.45	18.13	17.38	-110.42	219.10	-168.94	549.19	518.34	30.86	17.799	
5,050.00	5,030.40	5,016.36	5,005.34	18.11	17.30	-104.63	221.28	-156.64	555.21	524.25	30.96	17.931	
5,100.00	5,077.94	5,065.83	5,052.23	18.07	17.21	-100.88	223.45	-141.07	561.12	530.08	31.05	18.073	
5,150.00	5,124.31	5,115.27	5,097.91	18.02	17.11	-98.22	225.57	-122.31	566.89	535.78	31.12	18.218	
5,200.00	5,169.31	5,164.69	5,142.17	17.97	17.02	-96.19	227.66	-100.45	572.49	541.31	31.18	18.361	
5,250.00	5,212.69	5,214.09	5,184.81	17.91	16.93	-94.58	229.69	-75.60	577.90	546.66	31.24	18.498	
5,300.00	5,254.27	5,263.49	5,225.63	17.86	16.84	-93.27	231.66	-47.87	583.08	551.78	31.30	18.627	
5,350.00	5,293.82	5,312.88	5,264.43	17.82	16.77	-92.16	233.55	-17.39	588.01	556.64	31.37	18.742	
5,400.00	5,331.17	5,362.27	5,301.05	17.78	16.71	-91.21	235.37	15.70	592.67	561.22	31.46	18.840	
5,450.00	5,366.12	5,411.67	5,335.30	17.76	16.66	-90.40	237.09	51.23	597.04	565.48	31.56	18.918	
5,500.00	5,398.51	5,461.07	5,367.03	17.75	16.63	-89.70	238.72	89.05	601.09	569.41	31.69	18.971	
5,550.00	5,428.18	5,510.48	5,396.08	17.76	16.61	-89.09	240.25	128.98	604.81	572.97	31.84	18.995	
5,600.00	5,454.99	5,559.90	5,422.32	17.80	16.62	-88.57	241.66	170.83	608.17	576.14	32.03	18.989	
5,650.00	5,478.79	5,609.34	5,445.62	17.85	16.66	-88.12	242.95	214.40	611.16	578.91	32.25	18.950	
5,700.00	5,499.49	5,658.78	5,465.86	17.94	16.72	-87.74	244.12	259.48	613.77	581.25	32.52	18.876	
5,750.00	5,516.98	5,708.23	5,482.95	18.04	16.80	-87.43	245.16	305.86	615.98	583.16	32.82	18.767	
5,800.00	5,531.16	5,757.69	5,496.80	18.17	16.91	-87.18	246.06	353.32	617.78	584.61	33.17	18.624	
5,850.00	5,541.99	5,807.15	5,507.35	18.33	17.05	-86.99	246.82	401.63	619.17	585.60	33.56	18.447	
5,900.00	5,549.39	5,856.62	5,514.55	18.52	17.22	-86.86	247.44	450.56	620.13	586.13	34.00	18.241	
5,950.00	5,553.33	5,906.09	5,518.35	18.73	17.41	-86.78	247.91	499.87	620.66	586.19	34.47	18.007	
5,958.69	5,553.66	5,914.69	5,518.67	18.77	17.45	-86.78	247.97	508.46	620.71	586.15	34.55	17.963	
5,988.91	5,554.00	5,944.68	5,519.00	18.90	17.57	-86.77	248.17	538.44	620.78	585.92	34.86	17.809	
6,000.00	5,553.89	5,955.76	5,519.00	18.95	17.63	-86.78	248.24	549.53	620.77	585.80	34.98	17.749	
6,003.23	5,553.86	5,958.99	5,519.00	18.97	17.64	-86.78	248.26	552.76	620.77	585.76	35.01	17.730	
6,100.00	5,552.90	6,055.76	5,519.00	19.48	18.12	-86.87	248.85	649.52	620.72	584.60	36.13	17.181	
6,119.85	5,552.70	6,075.61	5,519.00	19.59	18.23	-86.89	248.98	669.38	620.71	584.34	36.38	17.064	
6,200.00	5,551.90	6,155.75	5,519.00	20.06	18.69	-86.96	249.47	749.52	620.68	583.27	37.41	16.591	
6,219.86	5,551.71	6,175.61	5,519.00	20.19	18.81	-86.98	249.59	769.38	620.67	582.98	37.68	16.470	
6,300.00	5,550.91	6,255.75	5,519.00	20.70	19.33	-87.05	250.08	849.51	620.63	581.82	38.81	15.990	
6,319.87	5,550.71	6,275.61	5,519.00	20.84	19.46	-87.07	250.20	869.38	620.62	581.51	39.11	15.869	
6,400.00	5,549.92	6,355.74	5,519.00	21.40	20.02	-87.14	250.69	949.50	620.59	580.27	40.32	15.391	
6,419.87	5,549.72	6,375.62	5,519.00	21.55	20.17	-87.16	250.82	969.38	620.58	579.94	40.64	15.272	
6,500.00	5,548.92	6,455.74	5,519.00	22.14	20.78	-87.24	251.31	1,049.50	620.55	578.62	41.93	14.801	
6,519.88	5,548.73	6,475.62	5,519.00	22.30	20.93	-87.25	251.43	1,069.38	620.54	578.28	42.26	14.685	
6,600.00	5,547.93	6,555.73	5,519.00	22.93	21.58	-87.33	251.92	1,149.49	620.51	576.89	43.61	14.227	
6,619.89	5,547.73	6,575.62	5,519.00	23.09	21.75	-87.35	252.04	1,169.38	620.50	576.54	43.96	14.115	
6,700.00	5,546.94	6,655.73	5,519.00	23.76	22.43	-87.42	252.53	1,249.48	620.47	575.09	45.38	13.673	
6,719.90	5,546.74	6,675.62	5,519.00	23.93	22.61	-87.44	252.65	1,269.38	620.46	574.72	45.74	13.565	
6,800.00	5,545.94	6,755.72	5,519.00	24.62	23.32	-87.51	253.15	1,349.48	620.43	573.22	47.21	13.143	
6,819.91	5,545.75	6,775.63	5,519.00	24.80	23.51	-87.53	253.27	1,369.38	620.42	572.84	47.58	13.039	
6,900.00	5,544.95	6,855.72	5,519.00	25.52	24.25	-87.60	253.76	1,449.47	620.40	571.30	49.10	12.636	
6,919.92	5,544.75	6,875.63	5,519.00	25.70	24.44	-87.62	253.88	1,469.38	620.39	570.91	49.48	12.538	
7,000.00	5,543.96	6,955.71	5,519.00	26.44	25.21	-87.69	254.37	1,549.46	620.36	569.32	51.04	12.155	
7,019.93	5,543.76	6,975.64	5,519.00	26.63	25.40	-87.71	254.49	1,569.39	620.36	568.92	51.43	12.061	
7,100.00	5,542.96	7,055.71	5,519.00	27.39	26.19	-87.79	254.98	1,649.46	620.33	567.30	53.03	11.698	
7,119.94	5,542.77	7,075.64	5,519.00	27.59	26.39	-87.80	255.11	1,669.39	620.32	566.89	53.43	11.610	
7,200.00	5,541.97	7,155.70	5,519.00	28.37	27.20	-87.88	255.60	1,749.45	620.30	565.24	55.06	11.266	
7,219.95	5,541.77	7,175.65	5,519.00	28.57	27.41	-87.90	255.72	1,769.40	620.29	564.82	55.47	11.182	
7,300.00	5,540.98	7,255.70	5,519.00	29.36	28.23	-87.97	256.21	1,849.44	620.27	563.14	57.13	10.858	
7,319.96	5,540.78	7,275.66	5,519.00	29.57	28.44	-87.99	256.33	1,869.40	620.26	562.72	57.55	10.779	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,400.00	5,539.98	7,355.69	5,519.00	30.38	29.28	-88.06	256.82	1,949.44	620.24	561.01	59.23	10.472	
7,419.98	5,539.79	7,375.67	5,519.00	30.59	29.49	-88.08	256.95	1,969.41	620.24	560.58	59.65	10.397	
7,500.00	5,538.99	7,455.69	5,519.00	31.41	30.35	-88.15	257.44	2,049.43	620.22	558.85	61.36	10.108	
7,519.99	5,538.79	7,475.68	5,519.00	31.62	30.56	-88.17	257.56	2,069.42	620.21	558.42	61.79	10.037	
7,600.00	5,538.00	7,555.68	5,519.00	32.46	31.43	-88.24	258.05	2,149.42	620.19	556.67	63.52	9.764	
7,620.01	5,537.80	7,575.69	5,519.00	32.67	31.64	-88.26	258.17	2,169.43	620.19	556.23	63.96	9.697	
7,700.00	5,537.00	7,655.68	5,519.00	33.52	32.52	-88.34	258.66	2,249.42	620.17	554.47	65.70	9.439	
7,720.03	5,536.80	7,675.71	5,519.00	33.74	32.74	-88.35	258.78	2,269.44	620.17	554.02	66.14	9.376	
7,800.00	5,536.01	7,755.67	5,519.00	34.60	33.63	-88.43	259.28	2,349.41	620.15	552.24	67.91	9.132	
7,820.05	5,535.81	7,775.73	5,519.00	34.82	33.85	-88.45	259.40	2,369.46	620.14	551.79	68.35	9.072	
7,900.00	5,535.02	7,855.67	5,519.00	35.69	34.74	-88.52	259.89	2,449.40	620.13	549.99	70.13	8.842	
7,920.08	5,534.82	7,875.74	5,519.00	35.91	34.97	-88.54	260.01	2,469.48	620.13	549.54	70.58	8.786	
8,000.00	5,534.02	7,955.66	5,519.00	36.78	35.87	-88.61	260.50	2,549.40	620.11	547.73	72.38	8.568	
8,020.10	5,533.82	7,975.77	5,519.00	37.01	36.09	-88.63	260.62	2,569.50	620.11	547.28	72.83	8.514	
8,100.00	5,533.03	8,055.66	5,519.00	37.89	37.00	-88.70	261.11	2,649.39	620.09	545.46	74.64	8.308	
8,120.14	5,532.83	8,075.79	5,519.00	38.12	37.23	-88.72	261.24	2,669.52	620.09	545.00	75.10	8.257	
8,200.00	5,532.04	8,155.65	5,519.00	39.01	38.14	-88.80	261.73	2,749.38	620.08	543.17	76.91	8.062	
8,230.17	5,531.74	8,185.82	5,519.00	39.35	38.49	-88.82	261.91	2,779.55	620.08	542.47	77.60	7.990	
8,300.00	5,531.04	8,255.65	5,519.00	40.13	39.29	-88.89	262.34	2,849.37	620.07	540.87	79.20	7.829	
8,330.21	5,530.74	8,285.86	5,519.00	40.47	39.64	-88.91	262.53	2,879.59	620.06	540.17	79.90	7.761	
8,400.00	5,530.05	8,355.64	5,519.00	41.26	40.44	-88.98	262.95	2,949.37	620.06	538.55	81.50	7.608	
8,430.26	5,529.75	8,385.91	5,519.00	41.61	40.79	-89.01	263.14	2,979.63	620.05	537.85	82.20	7.543	
8,505.73	5,529.00	8,461.37	5,519.00	42.47	41.67	-89.08	263.60	3,055.09	620.05	536.10	83.95	7.386	
8,521.67	5,528.89	8,477.31	5,519.00	42.65	41.86	-89.09	263.70	3,071.03	620.04	535.73	84.32	7.354	
8,521.67	5,528.89	8,477.31	5,519.00	42.65	41.86	-89.09	263.70	3,071.03	620.04	535.73	84.32	7.354	
8,534.24	5,528.86	8,489.88	5,519.00	42.79	42.00	-89.09	263.78	3,083.60	620.04	535.44	84.61	7.329	
8,549.27	5,528.86	8,504.88	5,518.99	42.96	42.18	-89.09	263.87	3,098.60	620.05	535.09	84.95	7.299	
8,600.00	5,528.86	8,555.59	5,518.73	43.54	42.77	-89.06	264.18	3,149.31	620.05	533.93	86.13	7.199	
8,622.62	5,528.86	8,578.21	5,518.61	43.80	43.03	-89.05	264.32	3,171.93	620.06	533.40	86.65	7.156	
8,700.00	5,528.86	8,655.59	5,518.21	44.69	43.94	-89.02	264.79	3,249.30	620.07	531.62	88.45	7.010	
8,722.65	5,528.86	8,678.23	5,518.09	44.95	44.20	-89.00	264.93	3,271.95	620.07	531.09	88.98	6.968	
8,800.00	5,528.86	8,755.58	5,517.68	45.85	45.11	-88.97	265.40	3,349.30	620.09	529.29	90.79	6.830	
8,822.67	5,528.86	8,778.26	5,517.56	46.11	45.38	-88.96	265.54	3,371.97	620.09	528.77	91.32	6.790	
8,900.00	5,528.87	8,855.58	5,517.16	47.01	46.29	-88.92	266.02	3,449.29	620.10	526.97	93.14	6.658	
8,922.69	5,528.87	8,878.28	5,517.04	47.27	46.56	-88.91	266.16	3,471.98	620.11	526.44	93.67	6.620	
9,000.00	5,528.87	8,955.58	5,516.63	48.17	47.47	-88.87	266.63	3,549.29	620.12	524.63	95.49	6.494	
9,022.71	5,528.87	8,978.29	5,516.51	48.44	47.74	-88.86	266.77	3,572.00	620.12	524.10	96.02	6.458	
9,100.00	5,528.87	9,055.58	5,516.11	49.34	48.66	-88.82	267.24	3,649.28	620.14	522.29	97.85	6.338	
9,122.73	5,528.87	9,078.31	5,515.99	49.61	48.93	-88.81	267.38	3,672.01	620.14	521.75	98.39	6.303	
9,200.00	5,528.87	9,155.58	5,515.58	50.52	49.85	-88.77	267.86	3,749.28	620.16	519.94	100.22	6.188	
9,222.75	5,528.87	9,178.33	5,515.46	50.78	50.12	-88.76	268.00	3,772.03	620.16	519.40	100.75	6.155	
9,300.00	5,528.87	9,255.58	5,515.06	51.69	51.04	-88.72	268.47	3,849.27	620.17	517.59	102.59	6.045	
9,322.76	5,528.87	9,278.34	5,514.94	51.96	51.31	-88.71	268.61	3,872.04	620.18	517.05	103.13	6.014	
9,400.00	5,528.87	9,355.58	5,514.53	52.87	52.24	-88.67	269.08	3,949.27	620.19	515.23	104.97	5.908	
9,422.78	5,528.88	9,378.35	5,514.41	53.14	52.51	-88.66	269.22	3,972.05	620.20	514.69	105.51	5.878	
9,500.00	5,528.88	9,455.57	5,514.01	54.06	53.44	-88.63	269.70	4,049.26	620.21	512.86	107.35	5.777	
9,522.79	5,528.88	9,478.37	5,513.89	54.33	53.71	-88.62	269.84	4,072.05	620.22	512.32	107.89	5.748	
9,600.00	5,528.88	9,555.57	5,513.48	55.24	54.64	-88.58	270.31	4,149.26	620.23	510.49	109.74	5.652	
9,622.80	5,528.88	9,578.38	5,513.36	55.51	54.91	-88.57	270.45	4,172.06	620.24	509.95	110.28	5.624	
9,700.00	5,528.88	9,655.57	5,512.96	56.43	55.84	-88.53	270.92	4,249.25	620.25	508.12	112.13	5.531	
9,722.82	5,528.88	9,678.39	5,512.84	56.70	56.11	-88.52	271.06	4,272.07	620.26	507.58	112.68	5.505	
9,800.00	5,528.88	9,755.57	5,512.43	57.62	57.04	-88.48	271.53	4,349.25	620.27	505.74	114.53	5.416	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,822.83	5,528.88	9,778.40	5,512.31	57.90	57.32	-88.47	271.67	4,372.08	620.28	505.20	115.08	5.390	
9,900.00	5,528.88	9,855.57	5,511.91	58.82	58.25	-88.43	272.15	4,449.24	620.29	503.36	116.93	5.305	
9,922.84	5,528.88	9,878.41	5,511.79	59.09	58.52	-88.42	272.29	4,472.08	620.30	502.82	117.48	5.280	
10,000.00	5,528.89	9,955.57	5,511.38	60.01	59.46	-88.38	272.76	4,549.24	620.32	500.98	119.34	5.198	
10,022.85	5,528.89	9,978.41	5,511.26	60.29	59.73	-88.37	272.90	4,572.09	620.32	500.43	119.89	5.174	
10,100.00	5,528.89	10,055.57	5,510.86	61.21	60.67	-88.33	273.37	4,649.24	620.34	498.59	121.75	5.095	
10,122.86	5,528.89	10,078.42	5,510.74	61.49	60.94	-88.32	273.51	4,672.09	620.34	498.04	122.30	5.072	
10,200.00	5,528.89	10,155.56	5,510.33	62.41	61.88	-88.29	273.99	4,749.23	620.36	496.20	124.16	4.996	
10,222.87	5,528.89	10,178.43	5,510.21	62.69	62.16	-88.27	274.13	4,772.10	620.37	495.65	124.71	4.974	
10,300.00	5,528.89	10,255.56	5,509.81	63.62	63.09	-88.24	274.60	4,849.23	620.38	493.81	126.58	4.901	
10,322.87	5,528.89	10,278.44	5,509.69	63.89	63.37	-88.23	274.74	4,872.10	620.39	493.26	127.13	4.880	
10,400.00	5,528.89	10,355.56	5,509.28	64.82	64.31	-88.19	275.21	4,949.22	620.41	491.41	129.00	4.810	
10,422.88	5,528.89	10,378.44	5,509.16	65.10	64.58	-88.18	275.35	4,972.10	620.41	490.86	129.55	4.789	
10,500.00	5,528.90	10,455.56	5,508.76	66.03	65.52	-88.14	275.83	5,049.22	620.43	489.01	131.42	4.721	
10,522.89	5,528.90	10,478.45	5,508.64	66.30	65.80	-88.13	275.97	5,072.10	620.44	488.46	131.97	4.701	
10,600.00	5,528.90	10,555.56	5,508.23	67.24	66.74	-88.09	276.44	5,149.21	620.45	486.61	133.84	4.636	
10,622.90	5,528.90	10,578.45	5,508.11	67.51	67.02	-88.08	276.58	5,172.11	620.46	486.06	134.40	4.617	
10,700.00	5,528.90	10,655.56	5,507.71	68.44	67.96	-88.04	277.05	5,249.21	620.48	484.21	136.27	4.553	
10,722.90	5,528.90	10,678.46	5,507.59	68.72	68.24	-88.03	277.19	5,272.11	620.49	483.66	136.82	4.535	
10,800.00	5,528.90	10,755.56	5,507.18	69.66	69.18	-87.99	277.66	5,349.20	620.50	481.81	138.70	4.474	
10,822.91	5,528.90	10,778.46	5,507.06	69.93	69.46	-87.98	277.81	5,372.11	620.51	481.26	139.25	4.456	
10,900.00	5,528.90	10,855.55	5,506.66	70.87	70.40	-87.95	278.28	5,449.20	620.53	479.40	141.13	4.397	
10,922.91	5,528.90	10,878.47	5,506.54	71.15	70.68	-87.93	278.42	5,472.11	620.54	478.85	141.69	4.380	
11,000.00	5,528.90	10,955.55	5,506.13	72.08	71.62	-87.90	278.89	5,549.19	620.56	476.99	143.56	4.323	
11,022.92	5,528.90	10,978.47	5,506.01	72.36	71.90	-87.89	279.03	5,572.11	620.56	476.44	144.12	4.306	
11,100.00	5,528.91	11,055.55	5,505.61	73.30	72.84	-87.85	279.50	5,649.19	620.58	474.58	146.00	4.251	
11,122.93	5,528.91	11,078.48	5,505.49	73.57	73.12	-87.84	279.64	5,672.11	620.59	474.03	146.56	4.234	
11,200.00	5,528.91	11,155.55	5,505.08	74.51	74.07	-87.80	280.12	5,749.18	620.61	472.17	148.44	4.181	
11,222.93	5,528.91	11,178.48	5,504.96	74.79	74.35	-87.79	280.26	5,772.11	620.62	471.62	149.00	4.165	
11,300.00	5,528.91	11,255.55	5,504.56	75.73	75.29	-87.75	280.73	5,849.18	620.64	469.76	150.88	4.114	
11,322.94	5,528.91	11,278.48	5,504.44	76.01	75.57	-87.74	280.87	5,872.11	620.64	469.21	151.44	4.098	
11,400.00	5,528.91	11,355.55	5,504.03	76.95	76.52	-87.70	281.34	5,949.18	620.66	467.35	153.32	4.048	
11,422.94	5,528.91	11,378.49	5,503.91	77.23	76.80	-87.69	281.48	5,972.11	620.67	466.79	153.88	4.034	
11,500.00	5,528.91	11,455.55	5,503.51	78.17	77.74	-87.65	281.96	6,049.17	620.69	464.93	155.76	3.985	
11,522.95	5,528.91	11,478.49	5,503.39	78.45	78.02	-87.64	282.10	6,072.11	620.70	464.38	156.32	3.971	
11,600.00	5,528.92	11,555.54	5,502.98	79.39	78.97	-87.61	282.57	6,149.17	620.72	462.52	158.20	3.924	
11,622.95	5,528.92	11,578.49	5,502.86	79.67	79.25	-87.59	282.71	6,172.11	620.73	461.96	158.77	3.910	
11,700.00	5,528.92	11,655.54	5,502.46	80.61	80.20	-87.56	283.18	6,249.16	620.75	460.10	160.65	3.864	
11,722.95	5,528.92	11,678.50	5,502.34	80.89	80.48	-87.55	283.32	6,272.11	620.76	459.55	161.21	3.851	
11,800.00	5,528.92	11,755.54	5,501.93	81.83	81.42	-87.51	283.79	6,349.16	620.78	457.68	163.10	3.806	
11,822.96	5,528.92	11,778.50	5,501.81	82.11	81.71	-87.50	283.94	6,372.11	620.79	457.13	163.66	3.793	
11,900.00	5,528.92	11,855.54	5,501.41	83.05	82.65	-87.46	284.41	6,449.15	620.81	455.27	165.55	3.750	
11,922.96	5,528.92	11,878.50	5,501.29	83.33	82.94	-87.45	284.55	6,472.11	620.82	454.71	166.11	3.737	
12,000.00	5,528.92	11,955.54	5,500.88	84.27	83.88	-87.41	285.02	6,549.15	620.84	452.85	167.99	3.696	
12,022.97	5,528.92	11,978.50	5,500.76	84.56	84.17	-87.40	285.16	6,572.11	620.85	452.29	168.56	3.683	
12,100.00	5,528.92	12,055.54	5,500.36	85.50	85.11	-87.36	285.63	6,649.14	620.87	450.43	170.45	3.643	
12,122.97	5,528.93	12,078.51	5,500.24	85.78	85.40	-87.35	285.77	6,672.11	620.88	449.87	171.01	3.631	
12,200.00	5,528.93	12,155.54	5,499.83	86.72	86.34	-87.31	286.25	6,749.14	620.90	448.01	172.90	3.591	
12,222.97	5,528.93	12,178.51	5,499.71	87.01	86.63	-87.30	286.39	6,772.11	620.91	447.45	173.46	3.580	
12,300.00	5,528.93	12,255.54	5,499.31	87.95	87.58	-87.27	286.86	6,849.13	620.94	445.59	175.35	3.541	
12,322.98	5,528.93	12,278.51	5,499.19	88.23	87.86	-87.25	287.00	6,872.11	620.94	445.03	175.91	3.530	
12,400.00	5,528.93	12,355.53	5,498.78	89.18	88.81	-87.22	287.47	6,949.13	620.97	443.16	177.80	3.492	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+MS						Rule Assigned:				Offset Well Error:	0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,422.98	5,528.93	12,378.51	5,498.66	89.46	89.09	-87.21	287.61	6,972.11	620.98	442.61	178.37	3.481		
12,500.00	5,528.93	12,455.53	5,498.26	90.40	90.04	-87.17	288.09	7,049.12	621.00	440.74	180.26	3.445		
12,522.98	5,528.93	12,478.51	5,498.14	90.68	90.32	-87.16	288.23	7,072.11	621.01	440.18	180.82	3.434		
12,600.00	5,528.93	12,555.53	5,497.73	91.63	91.27	-87.12	288.70	7,149.12	621.03	438.32	182.71	3.399		
12,622.99	5,528.93	12,578.52	5,497.61	91.91	91.56	-87.11	288.84	7,172.10	621.04	437.76	183.28	3.388		
12,700.00	5,528.94	12,655.53	5,497.21	92.86	92.51	-87.07	289.31	7,249.11	621.07	435.90	185.17	3.354		
12,722.99	5,528.94	12,678.52	5,497.09	93.14	92.79	-87.06	289.45	7,272.10	621.08	435.34	185.74	3.344		
12,800.00	5,528.94	12,755.53	5,496.68	94.09	93.74	-87.02	289.92	7,349.11	621.10	433.47	187.63	3.310		
12,822.99	5,528.94	12,778.52	5,496.56	94.37	94.02	-87.01	290.07	7,372.10	621.11	432.92	188.19	3.300		
12,900.00	5,528.94	12,855.53	5,496.16	95.32	94.97	-86.97	290.54	7,449.11	621.14	431.05	190.09	3.268		
12,922.99	5,528.94	12,878.52	5,496.04	95.60	95.26	-86.96	290.68	7,472.10	621.14	430.49	190.65	3.258		
13,000.00	5,528.94	12,955.53	5,495.63	96.55	96.21	-86.93	291.15	7,549.10	621.17	428.62	192.55	3.226		
13,023.00	5,528.94	12,978.52	5,495.51	96.83	96.49	-86.91	291.29	7,572.10	621.18	428.07	193.11	3.217		
13,100.00	5,528.94	13,055.52	5,495.11	97.78	97.44	-86.88	291.76	7,649.10	621.21	426.20	195.01	3.186		
13,123.00	5,528.94	13,078.52	5,494.99	98.06	97.73	-86.87	291.90	7,672.09	621.21	425.64	195.57	3.176		
13,200.00	5,528.95	13,155.52	5,494.58	99.01	98.68	-86.83	292.38	7,749.09	621.24	423.78	197.47	3.146		
13,223.00	5,528.95	13,178.52	5,494.46	99.29	98.96	-86.82	292.52	7,772.09	621.25	423.22	198.03	3.137		
13,300.00	5,528.95	13,255.52	5,494.06	100.24	99.91	-86.78	292.99	7,849.09	621.28	421.35	199.93	3.108		
13,323.00	5,528.95	13,278.53	5,493.94	100.52	100.20	-86.77	293.13	7,872.09	621.29	420.79	200.49	3.099		
13,400.00	5,528.95	13,355.52	5,493.53	101.47	101.15	-86.73	293.60	7,949.08	621.32	418.93	202.39	3.070		
13,423.01	5,528.95	13,378.53	5,493.41	101.75	101.43	-86.72	293.74	7,972.09	621.32	418.37	202.96	3.061		
13,500.00	5,528.95	13,455.52	5,493.01	102.70	102.39	-86.68	294.22	8,049.08	621.35	416.50	204.85	3.033		
13,523.01	5,528.95	13,478.53	5,492.89	102.99	102.67	-86.67	294.36	8,072.09	621.36	415.94	205.42	3.025		
13,600.00	5,528.95	13,555.52	5,492.48	103.94	103.62	-86.64	294.83	8,149.07	621.39	414.08	207.31	2.997		
13,623.01	5,528.95	13,578.53	5,492.36	104.22	103.91	-86.62	294.97	8,172.08	621.40	413.52	207.88	2.989		
13,700.00	5,528.95	13,655.52	5,491.96	105.17	104.86	-86.59	295.44	8,249.07	621.43	411.65	209.78	2.962		
13,723.01	5,528.95	13,678.53	5,491.84	105.45	105.14	-86.58	295.58	8,272.08	621.44	411.09	210.34	2.954		
13,800.00	5,528.96	13,755.51	5,491.43	106.40	106.10	-86.54	296.05	8,349.06	621.47	409.23	212.24	2.928		
13,823.02	5,528.96	13,778.53	5,491.31	106.69	106.38	-86.53	296.20	8,372.08	621.48	408.67	212.81	2.920		
13,900.00	5,528.96	13,855.51	5,490.91	107.64	107.33	-86.49	296.67	8,449.06	621.51	406.80	214.71	2.895		
13,923.02	5,528.96	13,878.53	5,490.79	107.92	107.62	-86.48	296.81	8,472.08	621.52	406.24	215.27	2.887		
14,000.00	5,528.96	13,955.51	5,490.38	108.87	108.57	-86.44	297.28	8,549.05	621.55	404.38	217.17	2.862		
14,023.02	5,528.96	13,978.53	5,490.26	109.15	108.86	-86.43	297.42	8,572.07	621.55	403.82	217.74	2.855		
14,100.00	5,528.96	14,055.51	5,489.86	110.10	109.81	-86.39	297.89	8,649.05	621.59	401.95	219.64	2.830		
14,123.02	5,528.96	14,078.53	5,489.74	110.39	110.09	-86.38	298.03	8,672.07	621.59	401.39	220.20	2.823		
14,200.00	5,528.96	14,155.51	5,489.33	111.34	111.05	-86.34	298.51	8,749.05	621.63	399.53	222.10	2.799		
14,223.02	5,528.96	14,178.53	5,489.21	111.62	111.33	-86.33	298.65	8,772.07	621.64	398.97	222.67	2.792		
14,300.00	5,528.97	14,255.51	5,488.81	112.57	112.29	-86.30	299.12	8,849.04	621.67	397.10	224.57	2.768		
14,323.03	5,528.97	14,278.53	5,488.69	112.86	112.57	-86.29	299.26	8,872.07	621.68	396.54	225.13	2.761		
14,400.00	5,528.97	14,355.51	5,488.28	113.81	113.53	-86.25	299.73	8,949.04	621.71	394.68	227.03	2.738		
14,423.03	5,528.97	14,378.53	5,488.16	114.09	113.81	-86.24	299.87	8,972.06	621.72	394.12	227.60	2.732		
14,500.00	5,528.97	14,455.50	5,487.76	115.05	114.76	-86.20	300.35	9,049.03	621.75	392.25	229.50	2.709		
14,523.03	5,528.97	14,478.53	5,487.64	115.33	115.05	-86.19	300.49	9,072.06	621.76	391.69	230.07	2.703		
14,600.00	5,528.97	14,555.50	5,487.23	116.28	116.00	-86.15	300.96	9,149.03	621.79	389.83	231.97	2.681		
14,623.03	5,528.97	14,578.53	5,487.11	116.57	116.29	-86.14	301.10	9,172.06	621.80	389.27	232.53	2.674		
14,700.00	5,528.97	14,655.50	5,486.71	117.52	117.24	-86.10	301.57	9,249.02	621.83	387.40	234.43	2.653		
14,723.03	5,528.97	14,678.53	5,486.59	117.80	117.53	-86.09	301.71	9,272.05	621.84	386.84	235.00	2.646		
14,800.00	5,528.97	14,755.50	5,486.18	118.76	118.48	-86.05	302.18	9,349.02	621.88	384.98	236.90	2.625		
14,823.03	5,528.98	14,778.53	5,486.06	119.04	118.77	-86.04	302.33	9,372.05	621.89	384.42	237.47	2.619		
14,900.00	5,528.98	14,855.50	5,485.66	119.99	119.72	-86.01	302.80	9,449.01	621.92	382.55	239.37	2.598		
14,923.04	5,528.98	14,878.53	5,485.54	120.28	120.01	-85.99	302.94	9,472.05	621.93	382.00	239.94	2.592		
15,000.00	5,528.98	14,955.50	5,485.13	121.23	120.96	-85.96	303.41	9,549.01	621.96	380.13	241.83	2.572		

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



Altitude Energy Partners Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka Federal LD13-645 - OH - Plan #1											Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS											Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Rule Assigned:		Distance		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	
15,023.04	5,528.98	14,978.53	5,485.01	121.51	121.25	-85.95	303.55	9,572.04	621.97	379.57	242.40	2.566
15,100.00	5,528.98	15,055.50	5,484.61	122.47	122.20	-85.91	304.02	9,649.00	622.01	377.71	244.30	2.546
15,123.04	5,528.98	15,078.53	5,484.49	122.75	122.49	-85.90	304.16	9,672.04	622.02	377.15	244.87	2.540
15,200.00	5,528.98	15,155.50	5,484.08	123.70	123.44	-85.86	304.64	9,749.00	622.05	375.28	246.77	2.521
15,223.04	5,528.98	15,178.53	5,483.96	123.99	123.73	-85.85	304.78	9,772.04	622.06	374.72	247.34	2.515
15,300.00	5,528.98	15,255.49	5,483.56	124.94	124.68	-85.81	305.25	9,848.99	622.10	372.86	249.24	2.496
15,323.04	5,528.98	15,278.54	5,483.44	125.23	124.97	-85.80	305.39	9,872.03	622.11	372.30	249.81	2.490
15,400.00	5,528.99	15,355.49	5,483.03	126.18	125.93	-85.76	305.86	9,948.99	622.14	370.44	251.71	2.472
15,423.04	5,528.99	15,378.54	5,482.91	126.47	126.21	-85.75	306.00	9,972.03	622.15	369.88	252.28	2.466
15,500.00	5,528.99	15,455.49	5,482.51	127.42	127.17	-85.72	306.48	10,048.98	622.19	368.01	254.18	2.448
15,523.04	5,528.99	15,478.54	5,482.39	127.70	127.45	-85.70	306.62	10,072.03	622.20	367.46	254.74	2.442
15,600.00	5,528.99	15,555.49	5,481.98	128.66	128.41	-85.67	307.09	10,148.98	622.24	365.59	256.64	2.425
15,623.05	5,528.99	15,578.54	5,481.86	128.94	128.69	-85.66	307.23	10,172.03	622.25	365.03	257.21	2.419
15,700.00	5,528.99	15,655.49	5,481.46	129.90	129.65	-85.62	307.70	10,248.98	622.28	363.17	259.11	2.402
15,723.05	5,528.99	15,678.54	5,481.34	130.18	129.94	-85.61	307.84	10,272.02	622.29	362.61	259.68	2.396
15,800.00	5,528.99	15,755.49	5,480.93	131.14	130.89	-85.57	308.31	10,348.97	622.33	360.75	261.58	2.379
15,823.05	5,528.99	15,778.53	5,480.81	131.42	131.18	-85.56	308.46	10,372.02	622.34	360.19	262.15	2.374
15,900.00	5,529.00	15,855.49	5,480.41	132.38	132.13	-85.52	308.93	10,448.97	622.38	358.33	264.05	2.357
15,923.05	5,529.00	15,878.53	5,480.29	132.66	132.42	-85.51	309.07	10,472.02	622.39	357.77	264.62	2.352
16,000.00	5,529.00	15,955.48	5,479.88	133.61	133.37	-85.47	309.54	10,548.96	622.43	355.91	266.52	2.335
16,023.05	5,529.00	15,978.53	5,479.76	133.90	133.66	-85.46	309.68	10,572.01	622.44	355.35	267.09	2.330
16,100.00	5,529.00	16,055.48	5,479.36	134.85	134.62	-85.43	310.15	10,648.96	622.48	353.49	268.99	2.314
16,116.25	5,529.00	16,071.74	5,479.27	135.06	134.82	-85.42	310.25	10,665.21	622.48	353.09	269.39	2.311
16,173.23	5,529.00	16,123.37	5,479.00	135.76	135.46	-85.39	310.57	10,716.84	622.54	351.81	270.72	2.300 SF

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-650 - OH - Plan #1

Survey Program: 0-MWD+IFR1+MS											Offset Site Error: 0.00 usft	
Rule Assigned:											Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	19.00	19.00	0.00	0.17	-1.03	1,898.17	-34.08	1,898.47			
100.00	100.00	119.00	119.00	0.88	1.00	-1.03	1,898.17	-34.08	1,898.47	1,896.59	1.89	1,007.062
200.00	200.00	219.00	219.00	1.50	1.58	-1.03	1,898.17	-34.08	1,898.47	1,895.39	3.09	615.114
300.00	300.00	319.00	319.00	1.94	2.00	-1.03	1,898.17	-34.08	1,898.47	1,894.54	3.94	482.136
400.00	400.00	419.00	419.00	2.29	2.35	-1.03	1,898.17	-34.08	1,898.47	1,893.84	4.64	409.181
500.00	500.00	554.01	554.01	2.60	2.84	-1.03	1,897.67	-34.17	1,898.30	1,892.87	5.43	349.344
600.00	600.00	836.76	835.99	2.88	3.99	-1.15	1,878.76	-37.83	1,891.63	1,884.80	6.83	277.008
700.00	700.00	1,113.09	1,108.42	3.14	5.17	-1.45	1,834.01	-46.49	1,875.47	1,867.27	8.20	228.672
800.00	799.99	1,205.63	1,198.91	3.42	5.48	148.81	1,814.99	-50.17	1,856.10	1,847.33	8.77	211.606
900.00	899.91	1,304.11	1,295.21	3.70	5.83	148.87	1,794.74	-54.09	1,838.93	1,829.55	9.38	196.025
1,000.00	999.69	1,402.98	1,391.88	3.99	6.20	148.95	1,774.41	-58.02	1,823.97	1,813.95	10.02	182.051
1,052.37	1,051.87	1,454.89	1,442.64	4.08	6.40	149.00	1,763.73	-60.09	1,817.03	1,806.73	10.30	176.494
1,100.00	1,099.30	1,502.13	1,488.84	4.16	6.59	149.01	1,754.02	-61.97	1,810.99	1,800.44	10.55	171.680
1,200.00	1,198.87	1,601.32	1,585.83	4.44	6.98	149.02	1,733.62	-65.91	1,798.31	1,787.09	11.21	160.369
1,300.00	1,298.45	1,700.52	1,682.82	4.75	7.39	149.02	1,713.22	-69.86	1,785.62	1,773.73	11.90	150.088
1,400.00	1,398.02	1,799.71	1,779.81	5.06	7.80	149.03	1,692.82	-73.81	1,772.94	1,760.35	12.60	140.747
1,500.00	1,497.60	1,898.90	1,876.80	5.38	8.22	149.04	1,672.42	-77.75	1,760.26	1,746.95	13.31	132.257
1,600.00	1,597.17	1,998.09	1,973.80	5.72	8.65	149.05	1,652.03	-81.70	1,747.58	1,733.55	14.03	124.531
1,700.00	1,696.75	2,097.29	2,070.79	6.06	9.07	149.06	1,631.63	-85.65	1,734.90	1,720.13	14.77	117.487
1,800.00	1,796.32	2,196.48	2,167.78	6.40	9.51	149.07	1,611.23	-89.59	1,722.22	1,706.71	15.51	111.051
1,900.00	1,895.90	2,295.67	2,264.77	6.76	9.94	149.08	1,590.83	-93.54	1,709.54	1,693.28	16.26	105.156
2,000.00	1,995.47	2,394.86	2,361.76	7.11	10.38	149.09	1,570.44	-97.49	1,696.86	1,679.84	17.01	99.745
2,100.00	2,095.05	2,494.05	2,458.76	7.47	10.83	149.10	1,550.04	-101.43	1,684.18	1,666.40	17.77	94.765
2,200.00	2,194.62	2,593.25	2,555.75	7.83	11.27	149.11	1,529.64	-105.38	1,671.49	1,652.96	18.54	90.170
2,300.00	2,294.20	2,692.44	2,652.74	8.20	11.72	149.12	1,509.24	-109.33	1,658.81	1,639.51	19.31	85.921
2,400.00	2,393.77	2,791.63	2,749.73	8.57	12.17	149.13	1,488.84	-113.27	1,646.13	1,626.05	20.08	81.982
2,500.00	2,493.35	2,890.82	2,846.72	8.94	12.62	149.14	1,468.45	-117.22	1,633.45	1,612.60	20.86	78.323
2,600.00	2,592.92	2,990.02	2,943.72	9.31	13.07	149.15	1,448.05	-121.16	1,620.77	1,599.14	21.63	74.917
2,700.00	2,692.49	3,089.21	3,040.71	9.68	13.52	149.16	1,427.65	-125.11	1,608.09	1,585.67	22.42	71.738
2,800.00	2,792.07	3,188.40	3,137.70	10.06	13.98	149.17	1,407.25	-129.06	1,595.41	1,572.21	23.20	68.767
2,900.00	2,891.64	3,287.59	3,234.69	10.44	14.43	149.18	1,386.85	-133.00	1,582.73	1,558.74	23.99	65.984
3,000.00	2,991.22	3,386.78	3,331.69	10.81	14.89	149.19	1,366.46	-136.95	1,570.05	1,545.27	24.77	63.373
3,100.00	3,090.79	3,485.98	3,428.68	11.19	15.35	149.21	1,346.06	-140.90	1,557.37	1,531.80	25.56	60.918
3,200.00	3,190.37	3,585.17	3,525.67	11.57	15.81	149.22	1,325.66	-144.84	1,544.69	1,518.33	26.36	58.607
3,300.00	3,289.94	3,684.36	3,622.66	11.95	16.27	149.23	1,305.26	-148.79	1,532.01	1,504.86	27.15	56.427
3,400.00	3,389.52	3,783.55	3,719.65	12.33	16.73	149.24	1,284.87	-152.74	1,519.33	1,491.38	27.94	54.369
3,500.00	3,489.09	3,882.75	3,816.65	12.72	17.19	149.25	1,264.47	-156.68	1,506.65	1,477.91	28.74	52.422
3,600.00	3,588.67	3,981.94	3,913.64	13.10	17.65	149.27	1,244.07	-160.63	1,493.97	1,464.43	29.54	50.577
3,700.00	3,688.24	4,081.13	4,010.63	13.48	18.11	149.28	1,223.67	-164.58	1,481.29	1,450.95	30.34	48.828
3,800.00	3,787.82	4,180.32	4,107.62	13.87	18.57	149.29	1,203.27	-168.52	1,468.61	1,437.47	31.14	47.167
3,900.00	3,887.39	4,279.52	4,204.61	14.25	19.04	149.30	1,182.88	-172.47	1,455.93	1,423.99	31.94	45.588
4,000.00	3,986.97	4,378.71	4,301.61	14.64	19.50	149.32	1,162.48	-176.41	1,443.25	1,410.51	32.74	44.085
4,100.00	4,086.54	4,477.90	4,398.60	15.02	19.96	149.33	1,142.08	-180.36	1,430.57	1,397.03	33.54	42.652
4,200.00	4,186.12	4,577.09	4,495.59	15.41	20.43	149.34	1,121.68	-184.31	1,417.89	1,383.54	34.34	41.285
4,300.00	4,285.69	4,676.28	4,592.58	15.79	20.89	149.36	1,101.29	-188.25	1,405.21	1,370.06	35.15	39.980
4,400.00	4,385.27	4,775.48	4,689.57	16.18	21.36	149.37	1,080.89	-192.20	1,392.53	1,356.58	35.95	38.732
4,500.00	4,484.84	4,874.67	4,786.57	16.57	21.82	149.39	1,060.49	-196.15	1,379.85	1,343.09	36.76	37.539
4,600.00	4,584.42	4,973.86	4,884.76	16.95	22.27	149.46	1,039.85	-198.89	1,367.15	1,329.59	37.56	36.399
4,700.00	4,683.99	5,073.05	4,982.38	17.34	22.67	150.02	1,019.40	-189.95	1,354.35	1,315.92	38.43	35.244
4,800.00	4,783.57	5,172.24	5,072.72	17.73	22.95	151.11	1,000.56	-168.78	1,341.81	1,302.52	39.29	34.150
4,823.69	4,807.16	5,191.38	5,092.64	17.81	22.99	151.43	996.42	-162.34	1,338.96	1,299.47	39.48	33.913
4,850.00	4,833.37	5,214.69	5,114.18	17.90	23.04	174.78	991.95	-154.62	1,335.85	1,296.16	39.69	33.657

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-650 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,883.18	5,258.33	5,153.79	18.06	23.12	-141.28	983.73	-138.25	1,330.12	1,290.04	40.08	33.189	
4,950.00	4,932.79	5,300.00	5,190.63	18.13	23.18	-119.76	976.11	-120.36	1,324.63	1,284.23	40.40	32.791	
5,000.00	4,981.94	5,343.30	5,227.77	18.13	23.23	-109.83	968.44	-99.48	1,319.39	1,278.74	40.65	32.459	
5,050.00	5,030.40	5,384.77	5,262.12	18.11	23.28	-104.40	961.37	-77.37	1,314.41	1,273.57	40.84	32.184	
5,100.00	5,077.94	5,425.64	5,294.70	18.07	23.32	-101.01	954.68	-53.62	1,309.69	1,268.70	40.99	31.951	
5,150.00	5,124.31	5,465.97	5,325.51	18.02	23.36	-98.69	948.37	-28.37	1,305.26	1,264.15	41.11	31.752	
5,200.00	5,169.31	5,505.82	5,354.53	17.97	23.40	-96.99	942.45	-1.72	1,301.09	1,259.90	41.20	31.583	
5,250.00	5,212.69	5,545.24	5,381.77	17.91	23.44	-95.69	936.91	26.22	1,297.21	1,255.95	41.26	31.439	
5,300.00	5,254.27	5,584.25	5,407.21	17.86	23.48	-94.66	931.75	55.34	1,293.61	1,252.30	41.31	31.315	
5,350.00	5,293.82	5,622.92	5,430.86	17.82	23.52	-93.83	926.98	85.55	1,290.29	1,248.95	41.35	31.207	
5,400.00	5,331.17	5,661.26	5,452.70	17.78	23.56	-93.14	922.59	116.75	1,287.25	1,245.88	41.38	31.111	
5,450.00	5,366.12	5,700.00	5,473.08	17.76	23.61	-92.55	918.52	149.44	1,284.49	1,243.08	41.41	31.020	
5,500.00	5,398.51	5,737.14	5,490.96	17.75	23.67	-92.06	914.97	181.78	1,282.01	1,240.57	41.44	30.937	
5,550.00	5,428.18	5,774.72	5,507.37	17.76	23.73	-91.64	911.75	215.44	1,279.80	1,238.31	41.49	30.849	
5,600.00	5,454.99	5,812.11	5,521.96	17.80	23.80	-91.28	908.90	249.74	1,277.86	1,236.31	41.55	30.757	
5,650.00	5,478.79	5,850.00	5,534.93	17.85	23.88	-90.97	906.41	285.25	1,276.19	1,234.55	41.63	30.653	
5,700.00	5,499.49	5,886.39	5,545.65	17.94	23.97	-90.72	904.38	319.97	1,274.78	1,233.04	41.74	30.542	
5,750.00	5,516.98	5,923.34	5,554.75	18.04	24.06	-90.50	902.70	355.73	1,273.63	1,231.75	41.88	30.413	
5,800.00	5,531.16	5,960.18	5,562.02	18.17	24.16	-90.33	901.40	391.82	1,272.75	1,230.70	42.05	30.268	
5,850.00	5,541.99	6,000.00	5,567.82	18.33	24.28	-90.18	900.44	431.20	1,272.12	1,229.84	42.28	30.089	
5,900.00	5,549.39	6,033.63	5,571.05	18.52	24.40	-90.09	899.98	464.67	1,271.73	1,229.23	42.50	29.922	
5,950.00	5,553.33	6,070.29	5,572.81	18.73	24.52	-90.02	899.84	501.28	1,271.60	1,228.82	42.78	29.723	
5,951.14	5,553.38	6,071.12	5,572.83	18.73	24.53	-90.02	899.85	502.11	1,271.60	1,228.81	42.79	29.718 CC	
5,988.91	5,554.00	6,103.05	5,573.00	18.90	24.65	-90.00	900.02	534.04	1,271.65	1,228.59	43.06	29.534	
6,000.00	5,553.89	6,114.14	5,573.00	18.95	24.69	-90.00	900.09	545.13	1,271.65	1,228.49	43.16	29.466	
6,100.00	5,552.90	6,214.14	5,573.00	19.48	25.12	-90.05	900.73	645.12	1,271.69	1,227.56	44.13	28.819	
6,102.09	5,552.88	6,216.22	5,573.00	19.49	25.13	-90.05	900.75	647.21	1,271.69	1,227.54	44.15	28.804	
6,200.00	5,551.90	6,314.13	5,573.00	20.06	25.60	-90.09	901.38	745.11	1,271.73	1,226.51	45.22	28.125	
6,200.01	5,551.90	6,314.14	5,573.00	20.06	25.60	-90.09	901.38	745.13	1,271.73	1,226.51	45.22	28.125	
6,300.00	5,550.91	6,414.13	5,573.00	20.70	26.13	-90.14	902.02	845.11	1,271.77	1,225.35	46.42	27.398	
6,300.26	5,550.91	6,414.38	5,573.00	20.71	26.13	-90.14	902.02	845.37	1,271.77	1,225.35	46.42	27.396	
6,400.00	5,549.92	6,514.12	5,573.00	21.40	26.71	-90.18	902.67	945.10	1,271.81	1,224.09	47.72	26.650	
6,400.54	5,549.91	6,514.67	5,573.00	21.40	26.71	-90.18	902.67	945.64	1,271.81	1,224.08	47.73	26.646	
6,500.00	5,548.92	6,614.12	5,573.00	22.14	27.34	-90.23	903.31	1,045.09	1,271.86	1,222.74	49.12	25.893	
6,501.38	5,548.91	6,615.50	5,573.00	22.15	27.34	-90.23	903.32	1,046.47	1,271.86	1,222.72	49.14	25.882	
6,600.00	5,547.93	6,714.11	5,573.00	22.93	28.00	-90.27	903.96	1,145.09	1,271.90	1,221.29	50.60	25.134	
6,601.96	5,547.91	6,716.08	5,573.00	22.95	28.02	-90.27	903.97	1,147.05	1,271.90	1,221.26	50.63	25.119	
6,700.00	5,546.94	6,814.11	5,573.00	23.76	28.71	-90.32	904.60	1,245.08	1,271.94	1,219.78	52.17	24.382	
6,702.40	5,546.91	6,816.50	5,573.00	23.78	28.72	-90.32	904.62	1,247.48	1,271.94	1,219.74	52.21	24.364	
6,800.00	5,545.94	6,914.10	5,573.00	24.62	29.45	-90.36	905.25	1,345.07	1,271.99	1,218.19	53.80	23.643	
6,802.73	5,545.92	6,916.83	5,573.00	24.64	29.47	-90.36	905.26	1,347.80	1,271.99	1,218.14	53.85	23.622	
6,900.00	5,544.95	7,014.10	5,573.00	25.52	30.22	-90.41	905.89	1,445.07	1,272.03	1,216.53	55.50	22.919	
6,903.00	5,544.92	7,017.09	5,573.00	25.54	30.24	-90.41	905.91	1,448.06	1,272.03	1,216.48	55.55	22.898	
7,000.00	5,543.96	7,114.09	5,573.00	26.44	31.02	-90.45	906.54	1,545.06	1,272.08	1,214.82	57.26	22.216	
7,003.21	5,543.92	7,117.30	5,573.00	26.47	31.05	-90.45	906.56	1,548.27	1,272.08	1,214.76	57.32	22.194	
7,100.00	5,542.96	7,214.09	5,573.00	27.39	31.85	-90.50	907.18	1,645.05	1,272.13	1,213.06	59.07	21.535	
7,103.39	5,542.93	7,217.48	5,573.00	27.43	31.88	-90.50	907.20	1,648.44	1,272.13	1,212.99	59.13	21.513	
7,200.00	5,541.97	7,314.08	5,573.00	28.37	32.71	-90.54	907.83	1,745.04	1,272.17	1,211.24	60.93	20.878	
7,203.54	5,541.94	7,317.62	5,573.00	28.40	32.74	-90.54	907.85	1,748.58	1,272.18	1,211.18	61.00	20.855	
7,300.00	5,540.98	7,414.08	5,573.00	29.36	33.59	-90.59	908.47	1,845.04	1,272.22	1,209.38	62.84	20.245	
7,303.67	5,540.94	7,417.75	5,573.00	29.40	33.63	-90.59	908.50	1,848.71	1,272.23	1,209.31	62.91	20.223	
7,400.00	5,539.98	7,514.07	5,573.00	30.38	34.50	-90.63	909.12	1,945.03	1,272.27	1,207.49	64.79	19.638	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-650 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,403.78	5,539.95	7,517.85	5,573.00	30.42	34.53	-90.63	909.14	1,948.81	1,272.27	1,207.41	64.86	19.615	
7,500.00	5,538.99	7,614.07	5,573.00	31.41	35.42	-90.68	909.76	2,045.02	1,272.32	1,205.55	66.77	19.055	
7,503.88	5,538.95	7,617.94	5,573.00	31.45	35.46	-90.68	909.79	2,048.90	1,272.33	1,205.47	66.85	19.032	
7,600.00	5,538.00	7,714.06	5,573.00	32.46	36.37	-90.72	910.41	2,145.02	1,272.37	1,203.58	68.79	18.496	
7,603.96	5,537.96	7,718.02	5,573.00	32.50	36.41	-90.72	910.43	2,148.98	1,272.38	1,203.50	68.87	18.474	
7,700.00	5,537.00	7,814.06	5,573.00	33.52	37.33	-90.77	911.05	2,245.01	1,272.43	1,201.58	70.84	17.962	
7,704.04	5,536.96	7,818.09	5,573.00	33.57	37.37	-90.77	911.08	2,249.05	1,272.43	1,201.50	70.93	17.940	
7,800.00	5,536.01	7,914.05	5,573.00	34.60	38.31	-90.81	911.70	2,345.00	1,272.48	1,199.56	72.92	17.450	
7,804.10	5,535.97	7,918.16	5,573.00	34.64	38.35	-90.81	911.72	2,349.11	1,272.48	1,199.47	73.01	17.430	
7,900.00	5,535.02	8,014.05	5,573.00	35.69	39.30	-90.85	912.34	2,445.00	1,272.53	1,197.51	75.03	16.961	
7,904.17	5,534.98	8,018.21	5,573.00	35.73	39.34	-90.86	912.37	2,449.16	1,272.53	1,197.42	75.11	16.941	
8,000.00	5,534.02	8,114.04	5,573.00	36.78	40.31	-90.90	912.99	2,544.99	1,272.59	1,195.43	77.15	16.494	
8,004.22	5,533.98	8,118.26	5,573.00	36.83	40.35	-90.90	913.01	2,549.21	1,272.59	1,195.34	77.24	16.475	
8,100.00	5,533.03	8,214.04	5,573.00	37.89	41.33	-90.94	913.63	2,644.98	1,272.64	1,193.34	79.31	16.047	
8,104.27	5,532.99	8,218.31	5,573.00	37.94	41.37	-90.95	913.66	2,649.25	1,272.64	1,193.25	79.40	16.029	
8,200.00	5,532.04	8,314.03	5,573.00	39.01	42.36	-90.99	914.28	2,744.97	1,272.70	1,191.22	81.48	15.620	
8,204.32	5,531.99	8,318.35	5,573.00	39.06	42.40	-90.99	914.30	2,749.29	1,272.70	1,191.13	81.57	15.602	
8,300.00	5,531.04	8,414.03	5,573.00	40.13	43.40	-91.03	914.92	2,844.97	1,272.75	1,189.09	83.67	15.212	
8,304.34	5,531.00	8,418.37	5,573.00	40.18	43.45	-91.04	914.95	2,849.31	1,272.76	1,188.99	83.76	15.195	
8,400.00	5,530.05	8,514.16	5,572.96	41.26	44.46	-91.08	915.57	2,945.09	1,272.81	1,186.93	85.88	14.822	
8,400.07	5,530.05	8,514.23	5,572.96	41.26	44.46	-91.08	915.57	2,945.16	1,272.81	1,186.93	85.88	14.821	
8,505.73	5,529.00	8,620.06	5,571.69	42.47	45.58	-91.07	916.25	3,050.98	1,272.85	1,184.64	88.21	14.430	
8,505.83	5,529.00	8,620.15	5,571.69	42.47	45.58	-91.07	916.25	3,051.08	1,272.85	1,184.64	88.21	14.430	
8,534.24	5,528.86	8,648.56	5,571.33	42.79	45.89	-91.06	916.43	3,079.49	1,272.85	1,184.02	88.83	14.328	
8,534.29	5,528.86	8,648.62	5,571.33	42.79	45.89	-91.06	916.43	3,079.54	1,272.85	1,184.02	88.84	14.328	
8,600.00	5,528.86	8,714.32	5,570.50	43.54	46.59	-91.02	916.86	3,145.24	1,272.86	1,182.58	90.28	14.099	
8,600.01	5,528.86	8,714.33	5,570.50	43.54	46.59	-91.02	916.86	3,145.24	1,272.86	1,182.58	90.28	14.099	
8,700.00	5,528.86	8,814.31	5,569.24	44.69	47.67	-90.96	917.50	3,245.22	1,272.88	1,180.38	92.50	13.761	
8,700.01	5,528.86	8,814.32	5,569.24	44.69	47.67	-90.96	917.50	3,245.23	1,272.88	1,180.38	92.50	13.761	
8,800.00	5,528.86	8,914.30	5,567.98	45.85	48.76	-90.91	918.15	3,345.20	1,272.90	1,178.17	94.73	13.437	
8,800.01	5,528.86	8,914.31	5,567.98	45.85	48.76	-90.91	918.15	3,345.21	1,272.90	1,178.17	94.73	13.437	
8,900.00	5,528.87	9,014.29	5,566.72	47.01	49.86	-90.85	918.79	3,445.18	1,272.92	1,175.95	96.97	13.127	
8,900.04	5,528.87	9,014.34	5,566.72	47.01	49.86	-90.85	918.79	3,445.23	1,272.92	1,175.95	96.97	13.127	
9,000.00	5,528.87	9,114.29	5,565.46	48.17	50.96	-90.79	919.44	3,545.16	1,272.94	1,173.72	99.22	12.829	
9,000.03	5,528.87	9,114.31	5,565.46	48.17	50.96	-90.79	919.44	3,545.19	1,272.94	1,173.72	99.23	12.829	
9,100.00	5,528.87	9,214.28	5,564.20	49.34	52.07	-90.73	920.08	3,645.15	1,272.96	1,171.47	101.49	12.543	
9,100.01	5,528.87	9,214.29	5,564.20	49.34	52.07	-90.73	920.08	3,645.16	1,272.96	1,171.47	101.49	12.543	
9,200.00	5,528.87	9,314.27	5,562.93	50.52	53.19	-90.68	920.73	3,745.13	1,272.99	1,169.22	103.76	12.268	
9,200.00	5,528.87	9,314.27	5,562.93	50.52	53.19	-90.68	920.73	3,745.13	1,272.99	1,169.22	103.76	12.268	
9,300.00	5,528.87	9,414.26	5,561.67	51.69	54.31	-90.62	921.37	3,845.11	1,273.01	1,166.97	106.04	12.004	
9,300.01	5,528.87	9,414.27	5,561.67	51.69	54.31	-90.62	921.37	3,845.12	1,273.01	1,166.97	106.05	12.004	
9,400.00	5,528.87	9,514.25	5,560.41	52.87	55.44	-90.56	922.02	3,945.09	1,273.04	1,164.70	108.34	11.751	
9,400.04	5,528.87	9,514.29	5,560.41	52.87	55.44	-90.56	922.02	3,945.13	1,273.04	1,164.70	108.34	11.751	
9,500.00	5,528.88	9,614.25	5,559.15	54.06	56.57	-90.51	922.66	4,045.07	1,273.06	1,162.43	110.64	11.507	
9,500.00	5,528.88	9,614.25	5,559.15	54.06	56.57	-90.51	922.66	4,045.08	1,273.06	1,162.43	110.64	11.507	
9,600.00	5,528.88	9,714.24	5,557.89	55.24	57.71	-90.45	923.31	4,145.06	1,273.09	1,160.15	112.94	11.272	
9,600.01	5,528.88	9,714.25	5,557.89	55.24	57.71	-90.45	923.31	4,145.06	1,273.09	1,160.15	112.94	11.272	
9,700.00	5,528.88	9,814.23	5,556.63	56.43	58.85	-90.39	923.95	4,245.04	1,273.12	1,157.87	115.26	11.046	
9,700.00	5,528.88	9,814.23	5,556.63	56.43	58.85	-90.39	923.95	4,245.04	1,273.12	1,157.87	115.26	11.046	
9,800.00	5,528.88	9,914.22	5,555.37	57.62	60.00	-90.34	924.60	4,345.02	1,273.15	1,155.58	117.58	10.828	
9,800.42	5,528.88	9,914.64	5,555.36	57.63	60.00	-90.34	924.60	4,345.44	1,273.15	1,155.57	117.59	10.827	
9,900.00	5,528.88	10,014.21	5,554.11	58.82	61.15	-90.28	925.24	4,445.00	1,273.18	1,153.28	119.90	10.618	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-650 - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,900.31	5,528.88	10,014.53	5,554.10	58.82	61.15	-90.28	925.24	4,445.31	1,273.19	1,153.27	119.91	10.618	
10,000.00	5,528.89	10,114.21	5,552.85	60.01	62.30	-90.22	925.89	4,544.98	1,273.22	1,150.98	122.24	10.416	
10,000.14	5,528.89	10,114.35	5,552.84	60.02	62.30	-90.22	925.89	4,545.13	1,273.22	1,150.98	122.24	10.416	
10,100.00	5,528.89	10,214.20	5,551.58	61.21	63.46	-90.17	926.53	4,644.97	1,273.25	1,148.68	124.58	10.221	
10,100.00	5,528.89	10,214.20	5,551.58	61.21	63.46	-90.17	926.53	4,644.97	1,273.25	1,148.68	124.58	10.221	
10,200.00	5,528.89	10,314.19	5,550.32	62.41	64.62	-90.11	927.18	4,744.95	1,273.29	1,146.37	126.92	10.032	
10,204.23	5,528.89	10,318.41	5,550.27	62.46	64.67	-90.11	927.20	4,749.17	1,273.29	1,146.27	127.02	10.024	
10,300.00	5,528.89	10,414.18	5,549.06	63.62	65.78	-90.05	927.82	4,844.93	1,273.33	1,144.06	129.27	9.850	
10,301.57	5,528.89	10,415.75	5,549.04	63.64	65.80	-90.05	927.83	4,846.50	1,273.33	1,144.02	129.30	9.847	
10,400.00	5,528.89	10,514.17	5,547.84	64.82	66.95	-90.00	928.47	4,944.91	1,273.36	1,141.74	131.62	9.674	
10,500.00	5,528.90	10,614.18	5,547.78	66.03	68.12	-89.99	929.11	5,044.91	1,273.40	1,139.41	134.00	9.503	
10,600.00	5,528.90	10,714.18	5,547.78	67.24	69.29	-89.99	929.76	5,144.91	1,273.44	1,137.06	136.38	9.337	
10,700.00	5,528.90	10,814.18	5,547.78	68.44	70.47	-89.99	930.40	5,244.91	1,273.48	1,134.71	138.77	9.177	
10,800.00	5,528.90	10,914.18	5,547.79	69.66	71.64	-89.99	931.05	5,344.90	1,273.52	1,132.36	141.16	9.022	
10,900.00	5,528.90	11,014.18	5,547.79	70.87	72.83	-89.99	931.69	5,444.90	1,273.56	1,130.00	143.55	8.872	
11,000.00	5,528.90	11,114.18	5,547.80	72.08	74.01	-90.00	932.34	5,544.90	1,273.60	1,127.65	145.95	8.726	
11,100.00	5,528.91	11,214.18	5,547.80	73.30	75.19	-90.00	932.98	5,644.90	1,273.64	1,125.28	148.36	8.585	
11,200.00	5,528.91	11,314.18	5,547.80	74.51	76.38	-90.00	933.63	5,744.90	1,273.68	1,122.92	150.76	8.448	
11,300.00	5,528.91	11,414.18	5,547.81	75.73	77.57	-90.00	934.27	5,844.89	1,273.72	1,120.55	153.17	8.316	
11,400.00	5,528.91	11,514.18	5,547.81	76.95	78.76	-90.00	934.92	5,944.89	1,273.75	1,118.17	155.58	8.187	
11,500.00	5,528.91	11,614.18	5,547.82	78.17	79.95	-90.00	935.56	6,044.89	1,273.79	1,115.80	157.99	8.062	
11,600.00	5,528.92	11,714.18	5,547.82	79.39	81.15	-90.00	936.21	6,144.89	1,273.83	1,113.42	160.41	7.941	
11,700.00	5,528.92	11,814.18	5,547.82	80.61	82.34	-90.00	936.85	6,244.89	1,273.87	1,111.04	162.83	7.823	
11,800.00	5,528.92	11,914.18	5,547.83	81.83	83.54	-90.00	937.50	6,344.88	1,273.91	1,108.66	165.25	7.709	
11,900.00	5,528.92	12,014.18	5,547.83	83.05	84.74	-90.00	938.14	6,444.88	1,273.95	1,106.28	167.67	7.598	
12,000.00	5,528.92	12,114.18	5,547.83	84.27	85.94	-90.00	938.79	6,544.88	1,273.99	1,103.89	170.10	7.490	
12,100.00	5,528.92	12,214.18	5,547.84	85.50	87.14	-90.00	939.43	6,644.88	1,274.03	1,101.50	172.53	7.385	
12,200.00	5,528.93	12,314.18	5,547.84	86.72	88.34	-90.00	940.08	6,744.88	1,274.07	1,099.11	174.96	7.282	
12,300.00	5,528.93	12,414.17	5,547.85	87.95	89.55	-90.00	940.72	6,844.87	1,274.10	1,096.72	177.39	7.183	
12,400.00	5,528.93	12,514.17	5,547.85	89.18	90.75	-90.00	941.37	6,944.87	1,274.14	1,094.32	179.82	7.086	
12,500.00	5,528.93	12,614.17	5,547.85	90.40	91.96	-90.00	942.01	7,044.87	1,274.18	1,091.93	182.26	6.991	
12,600.00	5,528.93	12,714.17	5,547.86	91.63	93.17	-90.00	942.66	7,144.87	1,274.22	1,089.53	184.69	6.899	
12,700.00	5,528.94	12,814.17	5,547.86	92.86	94.38	-90.00	943.30	7,244.86	1,274.26	1,087.13	187.13	6.809	
12,800.00	5,528.94	12,914.17	5,547.87	94.09	95.59	-90.00	943.95	7,344.86	1,274.30	1,084.73	189.57	6.722	
12,900.00	5,528.94	13,014.17	5,547.87	95.32	96.80	-90.00	944.59	7,444.86	1,274.34	1,082.32	192.02	6.637	
13,000.00	5,528.94	13,114.17	5,547.87	96.55	98.01	-90.00	945.24	7,544.86	1,274.38	1,079.92	194.46	6.553	
13,100.00	5,528.94	13,214.17	5,547.88	97.78	99.22	-90.00	945.88	7,644.86	1,274.42	1,077.51	196.90	6.472	
13,200.00	5,528.95	13,314.17	5,547.88	99.01	100.44	-90.00	946.53	7,744.85	1,274.46	1,075.11	199.35	6.393	
13,300.00	5,528.95	13,414.17	5,547.89	100.24	101.65	-90.00	947.17	7,844.85	1,274.49	1,072.70	201.80	6.316	
13,400.00	5,528.95	13,514.17	5,547.89	101.47	102.87	-90.00	947.82	7,944.85	1,274.53	1,070.29	204.25	6.240	
13,500.00	5,528.95	13,614.17	5,547.89	102.70	104.09	-90.00	948.46	8,044.85	1,274.57	1,067.88	206.69	6.166	
13,600.00	5,528.95	13,714.17	5,547.90	103.94	105.30	-90.00	949.11	8,144.85	1,274.61	1,065.47	209.15	6.094	
13,700.00	5,528.95	13,814.17	5,547.90	105.17	106.52	-90.00	949.75	8,244.84	1,274.65	1,063.05	211.60	6.024	
13,800.00	5,528.96	13,914.17	5,547.91	106.40	107.74	-90.00	950.40	8,344.84	1,274.69	1,060.64	214.05	5.955	
13,900.00	5,528.96	14,014.17	5,547.91	107.64	108.96	-90.00	951.04	8,444.84	1,274.73	1,058.22	216.51	5.888	
14,000.00	5,528.96	14,114.17	5,547.91	108.87	110.18	-90.00	951.69	8,544.84	1,274.77	1,055.81	218.96	5.822	
14,100.00	5,528.96	14,214.17	5,547.92	110.10	111.40	-90.00	952.33	8,644.84	1,274.81	1,053.39	221.42	5.757	
14,200.00	5,528.96	14,314.17	5,547.92	111.34	112.62	-90.00	952.98	8,744.83	1,274.84	1,050.97	223.87	5.694	
14,300.00	5,528.97	14,414.17	5,547.93	112.57	113.84	-90.00	953.62	8,844.83	1,274.88	1,048.55	226.33	5.633	
14,400.00	5,528.97	14,514.17	5,547.93	113.81	115.06	-90.00	954.27	8,944.83	1,274.92	1,046.13	228.79	5.572	
14,500.00	5,528.97	14,614.17	5,547.93	115.05	116.29	-90.00	954.91	9,044.83	1,274.96	1,043.71	231.25	5.513	
14,600.00	5,528.97	14,714.17	5,547.94	116.28	117.51	-90.00	955.56	9,144.83	1,275.00	1,041.29	233.71	5.455	

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



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-650 - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Distance		Minimum	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)		
14,700.00	5,528.97	14,814.17	5,547.94	117.52	118.74	-90.00	956.20	9,244.82	1,275.04	1,038.87	236.17	5.399	
14,800.00	5,528.97	14,914.17	5,547.95	118.76	119.96	-90.00	956.85	9,344.82	1,275.08	1,036.44	238.64	5.343	
14,900.00	5,528.98	15,014.17	5,547.95	119.99	121.19	-90.00	957.49	9,444.82	1,275.12	1,034.02	241.10	5.289	
15,000.00	5,528.98	15,114.17	5,547.95	121.23	122.41	-90.00	958.14	9,544.82	1,275.16	1,031.59	243.56	5.235	
15,100.00	5,528.98	15,214.17	5,547.96	122.47	123.64	-90.00	958.78	9,644.81	1,275.20	1,029.17	246.03	5.183	
15,200.00	5,528.98	15,314.17	5,547.96	123.70	124.86	-90.00	959.43	9,744.81	1,275.23	1,026.74	248.49	5.132	
15,300.00	5,528.98	15,414.17	5,547.97	124.94	126.09	-90.00	960.07	9,844.81	1,275.27	1,024.31	250.96	5.082	
15,400.00	5,528.99	15,514.17	5,547.97	126.18	127.32	-90.00	960.72	9,944.81	1,275.31	1,021.89	253.43	5.032	
15,500.00	5,528.99	15,614.17	5,547.97	127.42	128.55	-90.00	961.36	10,044.81	1,275.35	1,019.46	255.89	4.984	
15,600.00	5,528.99	15,714.17	5,547.98	128.66	129.78	-90.00	962.01	10,144.80	1,275.39	1,017.03	258.36	4.936	
15,700.00	5,528.99	15,814.17	5,547.98	129.90	131.00	-90.00	962.65	10,244.80	1,275.43	1,014.60	260.83	4.890	
15,800.00	5,528.99	15,914.17	5,547.99	131.14	132.23	-90.00	963.30	10,344.80	1,275.47	1,012.17	263.30	4.844	
15,900.00	5,529.00	16,014.17	5,547.99	132.38	133.46	-90.00	963.94	10,444.80	1,275.51	1,009.74	265.77	4.799	
16,000.00	5,529.00	16,114.17	5,547.99	133.61	134.69	-90.00	964.59	10,544.80	1,275.55	1,007.31	268.24	4.755	
16,100.00	5,529.00	16,214.17	5,548.00	134.85	135.92	-90.00	965.23	10,644.79	1,275.59	1,004.88	270.71	4.712	
16,101.65	5,529.00	16,215.82	5,548.00	134.88	135.94	-90.00	965.24	10,646.44	1,275.59	1,004.84	270.75	4.711	
16,173.23	5,529.00	16,276.52	5,548.00	135.76	136.69	-90.00	965.63	10,707.13	1,275.66	1,003.34	272.32	4.684 ES, SF	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1

Survey Program: 0-MWD+IFR1+MS										Rule Assigned:		Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	19.00	19.00	0.00	0.17	-1.03	1,926.22	-34.63	1,926.53				
100.00	100.00	119.00	119.00	0.88	1.00	-1.03	1,926.22	-34.63	1,926.53	1,924.65	1.89	1,021.946	
200.00	200.00	219.00	219.00	1.50	1.58	-1.03	1,926.22	-34.63	1,926.53	1,923.45	3.09	624.206	
300.00	300.00	319.00	319.00	1.94	2.00	-1.03	1,926.22	-34.63	1,926.53	1,922.60	3.94	489.262	
400.00	400.00	419.00	419.00	2.29	2.35	-1.03	1,926.22	-34.63	1,926.53	1,921.89	4.64	415.228	
500.00	500.00	519.00	519.00	2.60	2.65	-1.03	1,926.22	-34.63	1,926.53	1,921.28	5.25	366.725	
600.00	600.00	634.36	634.36	2.88	2.98	-1.03	1,926.08	-34.70	1,926.46	1,920.60	5.86	328.736	
700.00	700.00	814.98	814.86	3.14	3.53	-1.11	1,920.81	-37.34	1,923.57	1,916.94	6.63	290.139	
800.00	799.99	981.53	980.90	3.42	3.96	149.00	1,909.22	-43.13	1,917.68	1,910.40	7.28	263.481	
900.00	899.91	1,081.37	1,080.28	3.70	4.23	148.97	1,900.71	-47.38	1,912.60	1,904.81	7.79	245.601	
1,000.00	999.69	1,181.32	1,179.78	3.99	4.54	148.96	1,892.18	-51.64	1,909.76	1,901.41	8.34	228.905	
1,052.37	1,051.87	1,233.69	1,231.91	4.08	4.71	148.96	1,887.71	-53.88	1,909.16	1,900.59	8.57	222.688	
1,100.00	1,099.30	1,281.32	1,279.32	4.16	4.87	148.96	1,883.65	-55.91	1,908.90	1,900.12	8.78	217.307	
1,200.00	1,198.87	1,381.31	1,378.86	4.44	5.20	148.97	1,875.12	-60.17	1,908.36	1,899.00	9.35	203.995	
1,300.00	1,298.45	1,481.31	1,478.40	4.75	5.54	148.98	1,866.58	-64.44	1,907.82	1,897.87	9.94	191.891	
1,400.00	1,398.02	1,581.31	1,577.95	5.06	5.89	148.99	1,858.05	-68.70	1,907.27	1,896.73	10.54	180.898	
1,500.00	1,497.60	1,681.31	1,677.49	5.38	6.25	149.00	1,849.52	-72.96	1,906.73	1,895.57	11.16	170.912	
1,600.00	1,597.17	1,781.31	1,777.03	5.72	6.61	149.01	1,840.99	-77.23	1,906.18	1,894.40	11.78	161.830	
1,700.00	1,696.75	1,881.30	1,876.57	6.06	6.97	149.02	1,832.46	-81.49	1,905.64	1,893.23	12.41	153.556	
1,800.00	1,796.32	1,981.30	1,976.11	6.40	7.34	149.03	1,823.93	-85.75	1,905.09	1,892.05	13.05	146.003	
1,900.00	1,895.90	2,081.30	2,075.66	6.76	7.71	149.04	1,815.40	-90.02	1,904.55	1,890.86	13.69	139.091	
2,000.00	1,995.47	2,181.30	2,175.20	7.11	8.08	149.05	1,806.86	-94.28	1,904.01	1,889.66	14.34	132.751	
2,100.00	2,095.05	2,281.30	2,274.74	7.47	8.45	149.05	1,798.33	-98.54	1,903.46	1,888.47	15.00	126.921	
2,200.00	2,194.62	2,381.29	2,374.28	7.83	8.83	149.06	1,789.80	-102.81	1,902.92	1,887.26	15.66	121.547	
2,300.00	2,294.20	2,481.29	2,473.83	8.20	9.21	149.07	1,781.27	-107.07	1,902.38	1,886.06	16.32	116.581	
2,400.00	2,393.77	2,581.29	2,573.37	8.57	9.59	149.08	1,772.74	-111.33	1,901.83	1,884.85	16.98	111.981	
2,500.00	2,493.35	2,681.29	2,672.91	8.94	9.97	149.09	1,764.21	-115.60	1,901.29	1,883.64	17.65	107.711	
2,600.00	2,592.92	2,781.29	2,772.45	9.31	10.35	149.10	1,755.68	-119.86	1,900.74	1,882.42	18.32	103.738	
2,700.00	2,692.49	2,881.29	2,871.99	9.68	10.73	149.11	1,747.14	-124.12	1,900.20	1,881.20	19.00	100.033	
2,800.00	2,792.07	2,981.28	2,971.54	10.06	11.12	149.12	1,738.61	-128.39	1,899.66	1,879.99	19.67	96.572	
2,900.00	2,891.64	3,081.28	3,071.08	10.44	11.50	149.13	1,730.08	-132.65	1,899.11	1,878.77	20.35	93.332	
3,000.00	2,991.22	3,181.28	3,170.62	10.81	11.89	149.14	1,721.55	-136.92	1,898.57	1,877.54	21.03	90.294	
3,100.00	3,090.79	3,281.28	3,270.16	11.19	12.28	149.15	1,713.02	-141.18	1,898.03	1,876.32	21.71	87.439	
3,200.00	3,190.37	3,381.28	3,369.71	11.57	12.66	149.15	1,704.49	-145.44	1,897.48	1,875.09	22.39	84.752	
3,300.00	3,289.94	3,481.27	3,469.25	11.95	13.05	149.16	1,695.96	-149.71	1,896.94	1,873.87	23.07	82.220	
3,400.00	3,389.52	3,581.27	3,568.79	12.33	13.44	149.17	1,687.42	-153.97	1,896.40	1,872.64	23.76	79.829	
3,500.00	3,489.09	3,681.27	3,668.33	12.72	13.83	149.18	1,678.89	-158.23	1,895.85	1,871.41	24.44	77.568	
3,600.00	3,588.67	3,781.27	3,767.87	13.10	14.22	149.19	1,670.36	-162.50	1,895.31	1,870.18	25.13	75.428	
3,700.00	3,688.24	3,881.27	3,867.42	13.48	14.61	149.20	1,661.83	-166.76	1,894.77	1,868.95	25.81	73.399	
3,800.00	3,787.82	3,981.26	3,966.96	13.87	15.00	149.21	1,653.30	-171.02	1,894.22	1,867.72	26.50	71.473	
3,900.00	3,887.39	4,081.26	4,066.50	14.25	15.39	149.22	1,644.77	-175.29	1,893.68	1,866.49	27.19	69.642	
4,000.00	3,986.97	4,181.26	4,166.04	14.64	15.78	149.23	1,636.24	-179.55	1,893.14	1,865.26	27.88	67.899	
4,100.00	4,086.54	4,281.26	4,265.58	15.02	16.17	149.24	1,627.70	-183.81	1,892.59	1,864.02	28.57	66.240	
4,200.00	4,186.12	4,381.26	4,365.13	15.41	16.56	149.25	1,619.17	-188.08	1,892.05	1,862.79	29.26	64.657	
4,300.00	4,285.69	4,481.25	4,464.67	15.79	16.95	149.26	1,610.64	-192.34	1,891.51	1,861.55	29.95	63.145	
4,400.00	4,385.27	4,581.25	4,564.21	16.18	17.34	149.26	1,602.11	-196.61	1,890.97	1,860.32	30.65	61.701	
4,500.00	4,484.84	4,681.25	4,663.75	16.57	17.73	149.27	1,593.58	-200.87	1,890.42	1,859.08	31.34	60.319	
4,600.00	4,584.42	4,781.25	4,763.30	16.95	18.12	149.28	1,585.05	-205.13	1,889.88	1,857.85	32.03	58.996	
4,700.00	4,683.99	4,882.02	4,863.62	17.34	18.50	149.31	1,576.45	-208.99	1,889.33	1,856.62	32.72	57.750	
4,800.00	4,783.57	4,983.83	4,964.77	17.73	18.83	149.34	1,567.85	-202.53	1,888.70	1,855.24	33.45	56.456	
4,823.69	4,807.16	5,007.34	4,987.94	17.81	18.75	149.78	1,565.89	-198.99	1,888.55	1,854.94	33.61	56.184	
4,850.00	4,833.37	5,033.18	5,013.24	17.90	18.76	173.17	1,563.76	-194.23	1,888.40	1,854.62	33.78	55.900	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1													Offset Site Error:
													0.00 usft
													Offset Well Error:
													0.00 usft
Survey Program:	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,900.00	4,883.18	5,081.76	5,060.28	18.06	18.75	-142.80	1,559.82	-182.81	1,888.16	1,854.06	34.10	55.376	
4,950.00	4,932.79	5,129.66	5,105.81	18.13	18.72	-121.17	1,556.02	-168.43	1,887.98	1,853.62	34.36	54.949	
5,000.00	4,981.94	5,176.94	5,149.71	18.13	18.69	-111.17	1,552.38	-151.29	1,887.87	1,853.31	34.56	54.633	
5,050.00	5,030.40	5,223.62	5,191.85	18.11	18.65	-105.66	1,548.91	-131.54	1,887.81	1,853.10	34.71	54.389	
5,076.42	5,055.65	5,248.05	5,213.38	18.09	18.63	-103.65	1,547.15	-120.12	1,887.80	1,853.02	34.78	54.283 CC	
5,100.00	5,077.94	5,269.74	5,232.15	18.07	18.61	-102.19	1,545.61	-109.37	1,887.81	1,852.97	34.83	54.196	
5,100.02	5,077.96	5,269.75	5,232.17	18.07	18.61	-102.19	1,545.61	-109.36	1,887.81	1,852.97	34.83	54.196	
5,150.00	5,124.31	5,315.33	5,270.51	18.02	18.58	-99.78	1,542.49	-84.94	1,887.86	1,852.92	34.93	54.040	
5,150.14	5,124.45	5,315.46	5,270.62	18.02	18.57	-99.78	1,542.49	-84.87	1,887.86	1,852.92	34.93	54.040	
5,200.00	5,169.31	5,360.44	5,306.86	17.97	18.54	-98.00	1,539.56	-58.41	1,887.95	1,852.93	35.02	53.913	
5,200.11	5,169.40	5,360.53	5,306.94	17.97	18.54	-98.00	1,539.55	-58.35	1,887.95	1,852.93	35.02	53.912	
5,250.00	5,212.69	5,405.09	5,341.14	17.91	18.52	-96.62	1,536.82	-29.93	1,888.09	1,853.00	35.09	53.805	
5,250.02	5,212.71	5,405.10	5,341.15	17.91	18.52	-96.62	1,536.82	-29.92	1,888.09	1,853.00	35.09	53.805	
5,300.00	5,254.27	5,450.00	5,373.77	17.86	18.50	-95.51	1,534.23	0.81	1,888.27	1,853.11	35.16	53.703	
5,300.03	5,254.30	5,450.00	5,373.77	17.86	18.50	-95.51	1,534.23	0.81	1,888.27	1,853.11	35.16	53.703	
5,350.00	5,293.82	5,493.16	5,403.25	17.82	18.49	-94.61	1,531.91	32.23	1,888.47	1,853.25	35.22	53.614	
5,350.18	5,293.96	5,493.31	5,403.35	17.82	18.49	-94.61	1,531.91	32.35	1,888.48	1,853.25	35.22	53.614	
5,400.00	5,331.17	5,536.64	5,431.00	17.78	18.49	-93.85	1,529.76	65.63	1,888.71	1,853.41	35.29	53.515	
5,400.14	5,331.27	5,536.76	5,431.07	17.78	18.49	-93.85	1,529.75	65.72	1,888.71	1,853.42	35.29	53.515	
5,450.00	5,366.12	5,579.79	5,456.49	17.76	18.51	-93.20	1,527.81	100.38	1,888.96	1,853.59	35.37	53.404	
5,450.09	5,366.18	5,579.87	5,456.53	17.76	18.51	-93.20	1,527.80	100.45	1,888.96	1,853.59	35.37	53.404	
5,500.00	5,398.51	5,622.64	5,479.69	17.75	18.54	-92.65	1,526.06	136.35	1,889.23	1,853.76	35.46	53.273	
5,500.03	5,398.53	5,622.66	5,479.71	17.75	18.54	-92.65	1,526.06	136.37	1,889.23	1,853.76	35.46	53.273	
5,550.00	5,428.18	5,665.22	5,500.59	17.76	18.59	-92.18	1,524.51	173.41	1,889.50	1,853.93	35.57	53.116	
5,550.03	5,428.20	5,665.24	5,500.60	17.76	18.59	-92.18	1,524.51	173.44	1,889.50	1,853.93	35.57	53.116	
5,600.00	5,454.99	5,707.55	5,519.15	17.80	18.65	-91.77	1,523.18	211.43	1,889.78	1,854.07	35.71	52.926	
5,600.01	5,454.99	5,707.56	5,519.16	17.80	18.65	-91.77	1,523.17	211.44	1,889.78	1,854.07	35.71	52.926	
5,650.00	5,478.79	5,750.00	5,535.49	17.85	18.73	-91.43	1,522.03	250.59	1,890.05	1,854.18	35.87	52.694	
5,652.24	5,479.79	5,750.00	5,535.49	17.86	18.73	-91.42	1,522.03	250.59	1,890.06	1,854.20	35.86	52.702	
5,700.00	5,499.49	5,791.59	5,549.23	17.94	18.82	-91.13	1,521.11	289.83	1,890.32	1,854.26	36.06	52.423	
5,701.87	5,500.20	5,793.16	5,549.70	17.94	18.83	-91.12	1,521.08	291.32	1,890.33	1,854.26	36.07	52.412	
5,750.00	5,516.98	5,833.35	5,560.71	18.04	18.94	-90.88	1,520.39	329.96	1,890.57	1,854.28	36.28	52.104	
5,751.59	5,517.48	5,834.67	5,561.04	18.05	18.94	-90.88	1,520.37	331.24	1,890.58	1,854.28	36.29	52.092	
5,800.00	5,531.16	5,874.96	5,569.82	18.17	19.07	-90.68	1,519.88	370.56	1,890.80	1,854.26	36.55	51.739	
5,801.28	5,531.48	5,876.03	5,570.02	18.18	19.07	-90.68	1,519.87	371.60	1,890.81	1,854.26	36.55	51.728	
5,850.00	5,541.99	5,916.46	5,576.55	18.33	19.21	-90.52	1,519.57	411.50	1,891.02	1,854.18	36.84	51.329	
5,851.03	5,542.17	5,917.31	5,576.66	18.34	19.22	-90.52	1,519.56	412.34	1,891.02	1,854.17	36.85	51.320	
5,900.00	5,549.39	5,957.86	5,580.90	18.52	19.37	-90.40	1,519.46	452.66	1,891.21	1,854.04	37.17	50.877	
5,900.87	5,549.49	5,958.58	5,580.95	18.52	19.38	-90.40	1,519.46	453.38	1,891.21	1,854.03	37.18	50.868	
5,950.00	5,553.33	6,000.00	5,582.89	18.73	19.55	-90.33	1,519.57	494.75	1,891.37	1,853.83	37.54	50.377	
5,951.38	5,553.39	6,000.00	5,582.89	18.73	19.55	-90.33	1,519.57	494.75	1,891.38	1,853.83	37.55	50.375	
5,988.91	5,554.00	6,035.23	5,583.00	18.90	19.72	-90.30	1,519.79	529.98	1,891.46	1,853.57	37.89	49.926	
5,989.25	5,554.00	6,035.57	5,583.00	18.90	19.72	-90.30	1,519.79	530.32	1,891.46	1,853.57	37.89	49.921	
6,000.00	5,553.89	6,046.32	5,583.00	18.95	19.77	-90.31	1,519.86	541.07	1,891.46	1,853.47	38.00	49.780	
6,002.45	5,553.87	6,048.77	5,583.00	18.97	19.79	-90.31	1,519.87	543.51	1,891.46	1,853.44	38.02	49.747	
6,100.00	5,552.90	6,146.31	5,583.00	19.48	20.29	-90.34	1,520.51	641.06	1,891.51	1,852.43	39.08	48.399	
6,102.69	5,552.87	6,149.00	5,583.00	19.49	20.31	-90.34	1,520.52	643.75	1,891.51	1,852.40	39.11	48.360	
6,200.00	5,551.90	6,246.31	5,583.00	20.06	20.87	-90.37	1,521.16	741.05	1,891.56	1,851.26	40.29	46.944	
6,202.89	5,551.87	6,249.20	5,583.00	20.08	20.89	-90.37	1,521.17	743.94	1,891.56	1,851.23	40.33	46.900	
6,300.00	5,550.91	6,346.30	5,583.00	20.70	21.51	-90.40	1,521.80	841.04	1,891.61	1,849.98	41.62	45.446	
6,303.06	5,550.88	6,349.37	5,583.00	20.72	21.53	-90.40	1,521.82	844.11	1,891.61	1,849.94	41.67	45.399	
6,400.00	5,549.92	6,446.30	5,583.00	21.40	22.19	-90.43	1,522.45	941.04	1,891.66	1,848.60	43.06	43.934	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD+HFR1+MS		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
6,403.21	5,549.88	6,449.51	5,583.00	21.42	22.21	-90.43	1,522.47	944.25	1,891.66	1,848.55	43.11	43.885			
6,500.00	5,548.92	6,546.29	5,583.00	22.14	22.92	-90.46	1,523.10	1,041.03	1,891.71	1,847.12	44.59	42.429			
6,503.35	5,548.89	6,549.64	5,583.00	22.17	22.95	-90.46	1,523.12	1,044.38	1,891.71	1,847.07	44.64	42.378			
6,600.00	5,547.93	6,646.29	5,583.00	22.93	23.70	-90.49	1,523.75	1,141.02	1,891.76	1,845.56	46.20	40.947			
6,603.46	5,547.90	6,649.75	5,583.00	22.96	23.73	-90.49	1,523.77	1,144.48	1,891.76	1,845.50	46.26	40.896			
6,700.00	5,546.94	6,746.28	5,583.00	23.76	24.52	-90.52	1,524.40	1,241.02	1,891.81	1,843.92	47.89	39.502			
6,703.56	5,546.90	6,749.85	5,583.00	23.79	24.55	-90.52	1,524.42	1,244.58	1,891.81	1,843.86	47.95	39.451			
6,800.00	5,545.94	6,846.28	5,583.00	24.62	25.37	-90.55	1,525.05	1,341.01	1,891.86	1,842.21	49.65	38.103			
6,803.66	5,545.91	6,849.93	5,583.00	24.65	25.40	-90.55	1,525.07	1,344.66	1,891.86	1,842.14	49.72	38.052			
6,900.00	5,544.95	6,946.27	5,583.00	25.52	26.25	-90.58	1,525.69	1,441.00	1,891.91	1,840.44	51.47	36.755			
6,903.74	5,544.91	6,950.01	5,583.00	25.55	26.28	-90.58	1,525.72	1,444.74	1,891.91	1,840.37	51.54	36.705			
7,000.00	5,543.96	7,046.27	5,583.00	26.44	27.16	-90.61	1,526.34	1,540.99	1,891.97	1,838.61	53.35	35.462			
7,003.81	5,543.92	7,050.08	5,583.00	26.48	27.20	-90.61	1,526.37	1,544.81	1,891.97	1,838.54	53.43	35.413			
7,100.00	5,542.96	7,146.26	5,583.00	27.39	28.10	-90.64	1,526.99	1,640.99	1,892.02	1,836.74	55.28	34.226			
7,103.88	5,542.92	7,150.14	5,583.00	27.43	28.14	-90.64	1,527.02	1,644.87	1,892.02	1,836.66	55.36	34.179			
7,200.00	5,541.97	7,246.26	5,583.00	28.37	29.06	-90.67	1,527.64	1,740.98	1,892.07	1,834.82	57.25	33.048			
7,203.94	5,541.93	7,250.20	5,583.00	28.41	29.10	-90.67	1,527.67	1,744.92	1,892.07	1,834.74	57.33	33.002			
7,300.00	5,540.98	7,346.25	5,583.00	29.36	30.04	-90.70	1,528.29	1,840.97	1,892.13	1,832.86	59.27	31.926			
7,304.00	5,540.94	7,350.25	5,583.00	29.41	30.08	-90.70	1,528.31	1,844.97	1,892.13	1,832.78	59.35	31.882			
7,400.00	5,539.98	7,446.25	5,583.00	30.38	31.05	-90.73	1,528.94	1,940.97	1,892.18	1,830.87	61.32	30.860			
7,404.05	5,539.94	7,450.30	5,583.00	30.42	31.09	-90.73	1,528.96	1,945.02	1,892.18	1,830.78	61.40	30.817			
7,500.00	5,538.99	7,546.24	5,583.00	31.41	32.07	-90.76	1,529.58	2,040.96	1,892.24	1,828.84	63.40	29.847			
7,504.10	5,538.95	7,550.34	5,583.00	31.46	32.11	-90.76	1,529.61	2,045.06	1,892.24	1,828.75	63.48	29.806			
7,600.00	5,538.00	7,646.24	5,583.00	32.46	33.10	-90.79	1,530.23	2,140.95	1,892.29	1,826.78	65.51	28.885			
7,604.14	5,537.96	7,650.38	5,583.00	32.51	33.15	-90.79	1,530.26	2,145.10	1,892.29	1,826.70	65.60	28.846			
7,700.00	5,537.00	7,746.23	5,583.00	33.52	34.15	-90.82	1,530.88	2,240.95	1,892.35	1,824.70	67.65	27.973			
7,704.19	5,536.96	7,750.42	5,583.00	33.57	34.20	-90.82	1,530.91	2,245.13	1,892.35	1,824.61	67.74	27.935			
7,800.00	5,536.01	7,846.23	5,583.00	34.60	35.22	-90.85	1,531.53	2,340.94	1,892.41	1,822.59	69.81	27.107			
7,804.22	5,535.97	7,850.45	5,583.00	34.65	35.26	-90.85	1,531.56	2,345.16	1,892.41	1,822.50	69.91	27.071			
7,900.00	5,535.02	7,946.22	5,583.00	35.69	36.29	-90.88	1,532.18	2,440.93	1,892.46	1,820.46	72.00	26.284			
7,904.26	5,534.97	7,950.48	5,583.00	35.73	36.34	-90.88	1,532.21	2,445.19	1,892.47	1,820.37	72.09	26.250			
8,000.00	5,534.02	8,046.22	5,583.00	36.78	37.38	-90.91	1,532.83	2,540.92	1,892.52	1,818.32	74.21	25.504			
8,004.29	5,533.98	8,050.51	5,583.00	36.83	37.43	-90.91	1,532.86	2,545.22	1,892.52	1,818.22	74.30	25.471			
8,100.00	5,533.03	8,146.21	5,583.00	37.89	38.48	-90.94	1,533.48	2,640.92	1,892.58	1,816.15	76.43	24.762			
8,104.33	5,532.99	8,150.54	5,583.00	37.94	38.53	-90.94	1,533.50	2,645.24	1,892.58	1,816.06	76.53	24.731			
8,200.00	5,532.04	8,246.21	5,583.00	39.01	39.58	-90.97	1,534.12	2,740.91	1,892.64	1,813.97	78.67	24.057			
8,204.35	5,531.99	8,250.56	5,583.00	39.06	39.63	-90.97	1,534.15	2,745.26	1,892.64	1,813.87	78.77	24.028			
8,300.00	5,531.04	8,346.20	5,583.00	40.13	40.70	-91.00	1,534.77	2,840.90	1,892.70	1,811.77	80.93	23.387			
8,304.38	5,531.00	8,350.59	5,583.00	40.18	40.75	-91.00	1,534.80	2,845.29	1,892.70	1,811.67	81.03	23.359			
8,400.00	5,530.05	8,446.20	5,583.00	41.26	41.82	-91.03	1,535.42	2,940.90	1,892.76	1,809.56	83.20	22.750			
8,400.05	5,530.05	8,446.24	5,583.00	41.26	41.82	-91.03	1,535.42	2,940.94	1,892.76	1,809.56	83.20	22.749			
8,505.73	5,529.00	8,552.39	5,582.48	42.47	43.02	-91.04	1,536.11	3,047.08	1,892.81	1,807.20	85.61	22.109			
8,505.81	5,529.00	8,552.47	5,582.47	42.47	43.02	-91.04	1,536.11	3,047.16	1,892.81	1,807.20	85.62	22.108			
8,534.24	5,528.86	8,580.90	5,582.09	42.79	43.34	-91.04	1,536.29	3,075.59	1,892.82	1,806.56	86.26	21.943			
8,534.28	5,528.86	8,580.94	5,582.09	42.79	43.34	-91.04	1,536.29	3,075.63	1,892.82	1,806.56	86.26	21.943			
8,600.00	5,528.86	8,646.65	5,581.21	43.54	44.09	-91.01	1,536.72	3,141.33	1,892.83	1,805.08	87.76	21.569			
8,600.01	5,528.86	8,646.66	5,581.21	43.54	44.09	-91.01	1,536.72	3,141.34	1,892.83	1,805.08	87.76	21.569			
8,700.00	5,528.86	8,746.64	5,579.87	44.69	45.23	-90.97	1,537.37	3,241.31	1,892.85	1,802.81	90.04	21.022			
8,700.00	5,528.86	8,746.65	5,579.87	44.69	45.23	-90.97	1,537.37	3,241.32	1,892.85	1,802.81	90.04	21.022			
8,800.00	5,528.86	8,846.63	5,578.53	45.85	46.38	-90.93	1,538.02	3,341.29	1,892.87	1,800.53	92.34	20.498			
8,800.01	5,528.86	8,846.64	5,578.53	45.85	46.38	-90.93	1,538.02	3,341.30	1,892.87	1,800.53	92.34	20.498			
8,900.00	5,528.87	8,946.63	5,577.19	47.01	47.53	-90.89	1,538.67	3,441.27	1,892.89	1,798.24	94.65	19.999			

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,900.01	5,528.87	8,946.63	5,577.19	47.01	47.53	-90.89	1,538.67	3,441.28	1,892.89	1,798.24	94.65	19.999	
9,000.00	5,528.87	9,046.62	5,575.84	48.17	48.69	-90.85	1,539.31	3,541.25	1,892.91	1,795.95	96.97	19.521	
9,000.04	5,528.87	9,046.65	5,575.84	48.17	48.69	-90.85	1,539.31	3,541.29	1,892.91	1,795.95	96.97	19.521	
9,100.00	5,528.87	9,146.61	5,574.50	49.34	49.85	-90.81	1,539.96	3,641.23	1,892.94	1,793.64	99.29	19.064	
9,100.02	5,528.87	9,146.62	5,574.50	49.34	49.85	-90.81	1,539.96	3,641.25	1,892.94	1,793.64	99.29	19.064	
9,200.00	5,528.87	9,246.60	5,573.16	50.52	51.01	-90.77	1,540.61	3,741.21	1,892.96	1,791.34	101.63	18.627	
9,200.00	5,528.87	9,246.60	5,573.16	50.52	51.01	-90.77	1,540.61	3,741.21	1,892.96	1,791.34	101.63	18.627	
9,300.00	5,528.87	9,346.59	5,571.82	51.69	52.18	-90.72	1,541.26	3,841.19	1,892.99	1,789.02	103.97	18.208	
9,300.00	5,528.87	9,346.59	5,571.82	51.69	52.18	-90.72	1,541.26	3,841.20	1,892.99	1,789.02	103.97	18.208	
9,400.00	5,528.87	9,446.58	5,570.48	52.87	53.36	-90.68	1,541.91	3,941.17	1,893.01	1,786.70	106.31	17.806	
9,400.43	5,528.87	9,447.01	5,570.47	52.88	53.36	-90.68	1,541.91	3,941.61	1,893.01	1,786.69	106.32	17.804	
9,500.00	5,528.88	9,546.57	5,569.13	54.06	54.54	-90.64	1,542.56	4,041.15	1,893.04	1,784.37	108.67	17.421	
9,500.40	5,528.88	9,546.97	5,569.13	54.06	54.54	-90.64	1,542.56	4,041.55	1,893.04	1,784.36	108.68	17.419	
9,600.00	5,528.88	9,646.56	5,567.79	55.24	55.72	-90.60	1,543.20	4,141.13	1,893.07	1,782.04	111.03	17.051	
9,600.36	5,528.88	9,646.92	5,567.79	55.25	55.72	-90.60	1,543.21	4,141.49	1,893.07	1,782.03	111.03	17.049	
9,700.00	5,528.88	9,746.55	5,566.45	56.43	56.90	-90.56	1,543.85	4,241.11	1,893.10	1,779.71	113.39	16.695	
9,700.32	5,528.88	9,746.87	5,566.45	56.44	56.90	-90.56	1,543.85	4,241.43	1,893.10	1,779.70	113.40	16.694	
9,800.00	5,528.88	9,846.54	5,565.11	57.62	58.09	-90.52	1,544.50	4,341.09	1,893.13	1,777.37	115.76	16.354	
9,800.27	5,528.88	9,846.81	5,565.11	57.63	58.09	-90.52	1,544.50	4,341.36	1,893.13	1,777.36	115.77	16.353	
9,900.00	5,528.88	9,946.54	5,563.77	58.82	59.27	-90.48	1,545.15	4,441.07	1,893.16	1,775.02	118.14	16.025	
9,900.20	5,528.88	9,946.74	5,563.77	58.82	59.28	-90.48	1,545.15	4,441.28	1,893.16	1,775.02	118.14	16.025	
10,000.00	5,528.89	10,046.53	5,562.43	60.01	60.46	-90.44	1,545.80	4,541.05	1,893.19	1,772.67	120.51	15.709	
10,000.13	5,528.89	10,046.66	5,562.42	60.02	60.47	-90.44	1,545.80	4,541.19	1,893.19	1,772.67	120.52	15.709	
10,100.00	5,528.89	10,146.52	5,561.08	61.21	61.66	-90.40	1,546.45	4,641.03	1,893.22	1,770.32	122.90	15.405	
10,100.05	5,528.89	10,146.56	5,561.08	61.21	61.66	-90.40	1,546.45	4,641.08	1,893.22	1,770.32	122.90	15.405	
10,200.00	5,528.89	10,246.51	5,559.74	62.41	62.85	-90.36	1,547.09	4,741.01	1,893.25	1,767.97	125.29	15.112	
10,200.04	5,528.89	10,246.55	5,559.74	62.41	62.85	-90.36	1,547.09	4,741.05	1,893.25	1,767.97	125.29	15.111	
10,300.00	5,528.89	10,346.50	5,558.40	63.62	64.05	-90.32	1,547.74	4,840.99	1,893.29	1,765.61	127.68	14.829	
10,300.01	5,528.89	10,346.51	5,558.40	63.62	64.05	-90.32	1,547.74	4,841.00	1,893.29	1,765.61	127.68	14.829	
10,400.00	5,528.89	10,446.49	5,557.06	64.82	65.25	-90.28	1,548.39	4,940.97	1,893.32	1,763.25	130.07	14.556	
10,400.04	5,528.89	10,446.53	5,557.06	64.82	65.25	-90.28	1,548.39	4,941.01	1,893.32	1,763.25	130.07	14.556	
10,500.00	5,528.90	10,546.48	5,555.72	66.03	66.45	-90.24	1,549.04	5,040.95	1,893.36	1,760.89	132.47	14.293	
10,504.40	5,528.90	10,550.88	5,555.66	66.08	66.51	-90.23	1,549.07	5,045.35	1,893.36	1,760.79	132.58	14.281	
10,600.00	5,528.90	10,646.47	5,554.38	67.24	67.66	-90.20	1,549.69	5,140.93	1,893.40	1,758.53	134.87	14.038	
10,604.07	5,528.90	10,650.54	5,554.32	67.28	67.71	-90.19	1,549.71	5,145.00	1,893.40	1,758.43	134.97	14.028	
10,700.00	5,528.90	10,746.46	5,553.03	68.44	68.86	-90.16	1,550.34	5,240.91	1,893.44	1,756.16	137.28	13.793	
10,703.57	5,528.90	10,750.03	5,552.99	68.49	68.90	-90.15	1,550.36	5,244.48	1,893.44	1,756.07	137.36	13.784	
10,800.00	5,528.90	10,846.45	5,551.69	69.66	70.07	-90.11	1,550.98	5,340.89	1,893.48	1,753.79	139.68	13.555	
10,802.69	5,528.90	10,849.14	5,551.66	69.69	70.10	-90.11	1,551.00	5,343.58	1,893.48	1,753.73	139.75	13.549	
10,900.00	5,528.90	10,946.44	5,550.35	70.87	71.28	-90.07	1,551.63	5,440.87	1,893.52	1,751.42	142.10	13.326	
10,900.77	5,528.90	10,947.21	5,550.34	70.88	71.29	-90.07	1,551.64	5,441.64	1,893.52	1,751.40	142.11	13.324	
11,000.00	5,528.90	11,046.44	5,549.01	72.08	72.49	-90.03	1,552.28	5,540.85	1,893.56	1,749.05	144.51	13.103	
11,002.90	5,528.90	11,049.34	5,548.97	72.12	72.52	-90.03	1,552.30	5,543.75	1,893.56	1,748.98	144.58	13.097	
11,100.00	5,528.91	11,146.43	5,547.67	73.30	73.70	-89.99	1,552.93	5,640.83	1,893.60	1,746.68	146.92	12.888	
11,200.00	5,528.91	11,246.42	5,546.33	74.51	74.91	-89.95	1,553.58	5,740.81	1,893.64	1,744.30	149.34	12.680	
11,300.00	5,528.91	11,346.41	5,544.98	75.73	76.12	-89.91	1,554.23	5,840.79	1,893.69	1,741.92	151.76	12.478	
11,400.00	5,528.91	11,446.40	5,543.64	76.95	77.34	-89.87	1,554.87	5,940.77	1,893.73	1,739.55	154.18	12.282	
11,500.00	5,528.91	11,546.42	5,542.52	78.17	78.55	-89.84	1,555.52	6,040.78	1,893.78	1,737.17	156.61	12.092	
11,600.00	5,528.92	11,646.41	5,541.67	79.39	79.77	-89.81	1,556.17	6,140.77	1,893.82	1,734.78	159.04	11.908	
11,618.27	5,528.92	11,664.68	5,541.52	79.61	79.99	-89.81	1,556.29	6,159.04	1,893.83	1,734.35	159.48	11.875	
11,700.00	5,528.92	11,746.41	5,540.83	80.61	80.98	-89.79	1,556.82	6,240.76	1,893.87	1,732.39	161.47	11.729	
11,718.84	5,528.92	11,765.25	5,540.67	80.84	81.21	-89.78	1,556.94	6,259.59	1,893.88	1,731.94	161.93	11.696	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,800.00	5,528.92	11,846.41	5,539.98	81.83	82.20	-89.76	1,557.47	6,340.75	1,893.91	1,730.01	163.91	11.555	
11,819.28	5,528.92	11,865.69	5,539.81	82.06	82.44	-89.75	1,557.59	6,360.03	1,893.92	1,729.54	164.38	11.522	
11,900.00	5,528.92	11,946.40	5,539.13	83.05	83.42	-89.73	1,558.12	6,440.74	1,893.96	1,727.62	166.34	11.386	
11,919.65	5,528.92	11,966.05	5,538.96	83.29	83.66	-89.73	1,558.24	6,460.39	1,893.97	1,727.15	166.82	11.353	
12,000.00	5,528.92	12,046.40	5,538.28	84.27	84.64	-89.71	1,558.77	6,540.73	1,894.01	1,725.22	168.78	11.222	
12,019.94	5,528.92	12,066.34	5,538.11	84.52	84.89	-89.70	1,558.89	6,560.68	1,894.01	1,724.75	169.27	11.189	
12,100.00	5,528.92	12,146.40	5,537.43	85.50	85.86	-89.68	1,559.41	6,640.72	1,894.05	1,722.83	171.22	11.062	
12,120.20	5,528.93	12,166.59	5,537.26	85.75	86.11	-89.68	1,559.54	6,660.92	1,894.06	1,722.35	171.71	11.030	
12,200.00	5,528.93	12,246.39	5,536.58	86.72	87.09	-89.66	1,560.06	6,740.71	1,894.10	1,720.44	173.66	10.907	
12,220.41	5,528.93	12,266.80	5,536.41	86.97	87.34	-89.65	1,560.19	6,761.12	1,894.11	1,719.95	174.16	10.876	
12,300.00	5,528.93	12,346.39	5,535.73	87.95	88.31	-89.63	1,560.71	6,840.70	1,894.15	1,718.04	176.10	10.756	
12,320.59	5,528.93	12,366.98	5,535.56	88.20	88.56	-89.63	1,560.84	6,861.30	1,894.16	1,717.55	176.61	10.725	
12,400.00	5,528.93	12,446.39	5,534.89	89.18	89.53	-89.61	1,561.36	6,940.70	1,894.20	1,715.65	178.55	10.609	
12,420.75	5,528.93	12,467.14	5,534.71	89.43	89.79	-89.60	1,561.49	6,961.45	1,894.21	1,715.15	179.06	10.579	
12,500.00	5,528.93	12,546.38	5,534.04	90.40	90.76	-89.58	1,562.01	7,040.69	1,894.24	1,713.25	180.99	10.466	
12,520.89	5,528.93	12,567.27	5,533.86	90.66	91.01	-89.57	1,562.14	7,061.58	1,894.25	1,712.75	181.50	10.436	
12,600.00	5,528.93	12,646.38	5,533.19	91.63	91.98	-89.55	1,562.66	7,140.68	1,894.29	1,710.85	183.44	10.327	
12,621.02	5,528.93	12,667.39	5,533.01	91.89	92.24	-89.55	1,562.79	7,161.69	1,894.30	1,710.35	183.95	10.298	
12,700.00	5,528.94	12,746.37	5,532.34	92.86	93.21	-89.53	1,563.30	7,240.67	1,894.34	1,708.46	185.89	10.191	
12,721.13	5,528.94	12,767.50	5,532.16	93.12	93.47	-89.52	1,563.44	7,261.79	1,894.35	1,707.95	186.40	10.163	
12,800.00	5,528.94	12,846.37	5,531.49	94.09	94.44	-89.50	1,563.95	7,340.66	1,894.39	1,706.06	188.34	10.059	
12,821.23	5,528.94	12,867.60	5,531.31	94.35	94.70	-89.50	1,564.09	7,361.88	1,894.40	1,705.55	188.86	10.031	
12,900.00	5,528.94	12,946.37	5,530.64	95.32	95.66	-89.48	1,564.60	7,440.65	1,894.44	1,703.66	190.78	9.930	
12,921.32	5,528.94	12,967.68	5,530.46	95.58	95.92	-89.47	1,564.74	7,461.97	1,894.45	1,703.14	191.31	9.903	
13,000.00	5,528.94	13,046.36	5,529.79	96.55	96.89	-89.45	1,565.25	7,540.64	1,894.49	1,701.26	193.24	9.804	
13,021.40	5,528.94	13,067.76	5,529.61	96.81	97.15	-89.45	1,565.39	7,562.04	1,894.50	1,700.74	193.76	9.778	
13,100.00	5,528.94	13,146.36	5,528.94	97.78	98.12	-89.43	1,565.90	7,640.63	1,894.54	1,698.85	195.69	9.681	
13,121.47	5,528.94	13,167.83	5,528.76	98.04	98.38	-89.42	1,566.04	7,662.10	1,894.55	1,698.34	196.21	9.656	
13,200.00	5,528.95	13,246.36	5,528.10	99.01	99.35	-89.40	1,566.55	7,740.62	1,894.59	1,696.45	198.14	9.562	
13,221.54	5,528.95	13,267.90	5,527.91	99.27	99.61	-89.39	1,566.69	7,762.16	1,894.60	1,695.94	198.67	9.536	
13,300.00	5,528.95	13,346.35	5,527.25	100.24	100.58	-89.37	1,567.20	7,840.61	1,894.65	1,694.05	200.59	9.445	
13,321.61	5,528.95	13,367.96	5,527.06	100.50	100.84	-89.37	1,567.34	7,862.21	1,894.66	1,693.53	201.12	9.420	
13,400.00	5,528.95	13,446.35	5,526.40	101.47	101.81	-89.35	1,567.84	7,940.60	1,894.70	1,691.65	203.05	9.331	
13,421.66	5,528.95	13,468.01	5,526.22	101.74	102.07	-89.34	1,567.98	7,962.26	1,894.71	1,691.13	203.58	9.307	
13,500.00	5,528.95	13,546.35	5,525.55	102.70	103.04	-89.32	1,568.49	8,040.59	1,894.75	1,689.24	205.50	9.220	
13,521.72	5,528.95	13,568.06	5,525.37	102.97	103.30	-89.32	1,568.63	8,062.31	1,894.76	1,688.72	206.04	9.196	
13,600.00	5,528.95	13,646.34	5,524.70	103.94	104.27	-89.30	1,569.14	8,140.58	1,894.80	1,686.84	207.96	9.111	
13,621.77	5,528.95	13,668.11	5,524.52	104.20	104.53	-89.29	1,569.28	8,162.35	1,894.81	1,686.32	208.50	9.088	
13,700.00	5,528.95	13,746.34	5,523.85	105.17	105.50	-89.27	1,569.79	8,240.57	1,894.86	1,684.44	210.42	9.005	
13,721.81	5,528.95	13,768.15	5,523.67	105.44	105.77	-89.27	1,569.93	8,262.38	1,894.87	1,683.91	210.95	8.982	
13,800.00	5,528.96	13,846.33	5,523.00	106.40	106.73	-89.25	1,570.44	8,340.56	1,894.91	1,682.03	212.88	8.901	
13,821.85	5,528.96	13,868.19	5,522.82	106.67	107.00	-89.24	1,570.58	8,362.42	1,894.92	1,681.51	213.41	8.879	
13,900.00	5,528.96	13,946.33	5,522.16	107.64	107.96	-89.22	1,571.09	8,440.56	1,894.96	1,679.63	215.34	8.800	
13,921.89	5,528.96	13,968.22	5,521.97	107.91	108.23	-89.21	1,571.23	8,462.45	1,894.97	1,679.10	215.87	8.778	
14,000.00	5,528.96	14,046.33	5,521.31	108.87	109.19	-89.19	1,571.73	8,540.55	1,895.02	1,677.22	217.79	8.701	
14,021.93	5,528.96	14,068.26	5,521.12	109.14	109.46	-89.19	1,571.88	8,562.47	1,895.03	1,676.69	218.33	8.679	
14,100.00	5,528.96	14,146.32	5,520.46	110.10	110.43	-89.17	1,572.38	8,640.54	1,895.07	1,674.82	220.25	8.604	
14,121.97	5,528.96	14,168.29	5,520.27	110.38	110.70	-89.16	1,572.52	8,662.50	1,895.08	1,674.29	220.80	8.583	
14,200.00	5,528.96	14,246.32	5,519.61	111.34	111.66	-89.14	1,573.03	8,740.53	1,895.13	1,672.41	222.72	8.509	
14,222.00	5,528.96	14,268.32	5,519.42	111.61	111.93	-89.14	1,573.17	8,762.52	1,895.14	1,671.88	223.26	8.489	
14,300.00	5,528.97	14,346.32	5,518.76	112.57	112.89	-89.12	1,573.68	8,840.52	1,895.18	1,670.00	225.18	8.416	
14,322.03	5,528.97	14,368.35	5,518.57	112.85	113.16	-89.11	1,573.82	8,862.55	1,895.19	1,669.47	225.72	8.396	

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

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-660 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,400.00	5,528.97	14,446.31	5,517.91	113.81	114.13	-89.09	1,574.33	8,940.51	1,895.24	1,667.60	227.64	8.326	
14,422.06	5,528.97	14,468.37	5,517.73	114.08	114.40	-89.09	1,574.47	8,962.57	1,895.25	1,667.07	228.18	8.306	
14,500.00	5,528.97	14,546.31	5,517.06	115.05	115.36	-89.07	1,574.98	9,040.50	1,895.29	1,665.19	230.10	8.237	
14,522.09	5,528.97	14,568.39	5,516.88	115.32	115.63	-89.06	1,575.12	9,062.58	1,895.31	1,664.66	230.65	8.217	
14,600.00	5,528.97	14,646.31	5,516.22	116.28	116.59	-89.04	1,575.62	9,140.49	1,895.35	1,662.78	232.57	8.150	
14,622.11	5,528.97	14,668.42	5,516.03	116.56	116.87	-89.03	1,575.77	9,162.60	1,895.36	1,662.25	233.11	8.131	
14,700.00	5,528.97	14,746.30	5,515.37	117.52	117.83	-89.01	1,576.27	9,240.48	1,895.41	1,660.38	235.03	8.065	
14,722.14	5,528.97	14,768.44	5,515.18	117.79	118.10	-89.01	1,576.42	9,262.62	1,895.42	1,659.84	235.58	8.046	
14,800.00	5,528.97	14,846.30	5,514.52	118.76	119.06	-88.99	1,576.92	9,340.47	1,895.46	1,657.97	237.49	7.981	
14,822.16	5,528.98	14,868.46	5,514.33	119.03	119.34	-88.98	1,577.07	9,362.63	1,895.48	1,657.44	238.04	7.963	
14,900.00	5,528.98	14,946.29	5,513.67	119.99	120.30	-88.96	1,577.57	9,440.46	1,895.52	1,655.56	239.96	7.899	
14,922.18	5,528.98	14,968.48	5,513.48	120.27	120.57	-88.96	1,577.71	9,462.64	1,895.53	1,655.03	240.51	7.881	
15,000.00	5,528.98	15,046.29	5,512.82	121.23	121.54	-88.94	1,578.22	9,540.45	1,895.58	1,653.15	242.42	7.819	
15,022.21	5,528.98	15,068.50	5,512.63	121.50	121.81	-88.93	1,578.36	9,562.66	1,895.59	1,652.62	242.97	7.802	
15,100.00	5,528.98	15,146.29	5,511.97	122.47	122.77	-88.91	1,578.87	9,640.44	1,895.64	1,650.75	244.89	7.741	
15,122.23	5,528.98	15,168.51	5,511.78	122.74	123.05	-88.91	1,579.01	9,662.67	1,895.65	1,650.21	245.44	7.724	
15,200.00	5,528.98	15,246.28	5,511.12	123.70	124.01	-88.89	1,579.52	9,740.43	1,895.70	1,648.34	247.36	7.664	
15,222.25	5,528.98	15,268.53	5,510.94	123.98	124.28	-88.88	1,579.66	9,762.68	1,895.71	1,647.80	247.91	7.647	
15,300.00	5,528.98	15,346.28	5,510.28	124.94	125.24	-88.86	1,580.16	9,840.43	1,895.76	1,645.93	249.82	7.588	
15,322.26	5,528.98	15,368.54	5,510.09	125.22	125.52	-88.85	1,580.31	9,862.69	1,895.77	1,645.40	250.37	7.572	
15,400.00	5,528.99	15,446.28	5,509.43	126.18	126.48	-88.83	1,580.81	9,940.42	1,895.82	1,643.52	252.29	7.514	
15,422.28	5,528.99	15,468.56	5,509.24	126.46	126.76	-88.83	1,580.96	9,962.70	1,895.83	1,642.99	252.84	7.498	
15,500.00	5,528.99	15,546.27	5,508.58	127.42	127.72	-88.81	1,581.46	10,040.41	1,895.88	1,641.12	254.76	7.442	
15,522.30	5,528.99	15,568.57	5,508.39	127.70	127.99	-88.80	1,581.61	10,062.70	1,895.89	1,640.58	255.31	7.426	
15,600.00	5,528.99	15,646.27	5,507.73	128.66	128.95	-88.78	1,582.11	10,140.40	1,895.94	1,638.71	257.23	7.371	
15,622.32	5,528.99	15,668.58	5,507.54	128.93	129.23	-88.78	1,582.25	10,162.71	1,895.95	1,638.17	257.78	7.355	
15,700.00	5,528.99	15,746.27	5,506.88	129.90	130.19	-88.76	1,582.76	10,240.39	1,896.00	1,636.30	259.70	7.301	
15,722.33	5,528.99	15,768.59	5,506.69	130.17	130.47	-88.75	1,582.90	10,262.72	1,896.01	1,635.76	260.25	7.285	
15,800.00	5,528.99	15,846.26	5,506.03	131.14	131.43	-88.73	1,583.41	10,340.38	1,896.06	1,633.89	262.17	7.232	
15,822.35	5,528.99	15,868.61	5,505.84	131.41	131.71	-88.73	1,583.55	10,362.72	1,896.07	1,633.35	262.72	7.217	
15,900.00	5,529.00	15,946.26	5,505.18	132.38	132.67	-88.71	1,584.05	10,440.37	1,896.12	1,631.48	264.64	7.165	
15,922.36	5,529.00	15,968.62	5,504.99	132.65	132.94	-88.70	1,584.20	10,462.73	1,896.13	1,630.94	265.19	7.150	
16,000.00	5,529.00	16,046.25	5,504.34	133.61	133.91	-88.68	1,584.70	10,540.36	1,896.18	1,629.08	267.11	7.099	
16,022.37	5,529.00	16,068.63	5,504.15	133.89	134.18	-88.67	1,584.85	10,562.73	1,896.19	1,628.54	267.66	7.084	
16,100.00	5,529.00	16,146.25	5,503.49	134.85	135.14	-88.65	1,585.35	10,640.35	1,896.24	1,626.67	269.58	7.034	
16,114.01	5,529.00	16,160.26	5,503.37	135.03	135.32	-88.65	1,585.44	10,654.36	1,896.25	1,626.33	269.92	7.025	
16,173.23	5,529.00	16,203.62	5,503.00	135.76	135.86	-88.64	1,585.72	10,697.72	1,896.35	1,625.21	271.15	6.994 ES, SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Tatanka Pads - Tatanka LD13-670 - OH - Plan #1

Survey Program:		0-MWD+IFR1+MS							Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	19.00	19.00	0.00	0.17	-1.02	1,954.28	-34.91	1,954.59						
100.00	100.00	119.00	119.00	0.88	1.00	-1.02	1,954.28	-34.91	1,954.59	1,952.71	1.89	1,036.830			
200.00	200.00	219.00	219.00	1.50	1.58	-1.02	1,954.28	-34.91	1,954.59	1,951.51	3.09	633.297			
300.00	300.00	319.00	319.00	1.94	2.00	-1.02	1,954.28	-34.91	1,954.59	1,950.65	3.94	496.388			
400.00	400.00	419.00	419.00	2.29	2.35	-1.02	1,954.28	-34.91	1,954.59	1,949.95	4.64	421.276			
500.00	500.00	519.00	519.00	2.60	2.65	-1.02	1,954.28	-34.91	1,954.59	1,949.34	5.25	372.066			
508.85	508.85	527.85	527.85	2.62	2.68	-1.02	1,954.28	-34.91	1,954.59	1,949.29	5.30	368.603	CC		
600.00	600.00	614.24	614.24	2.88	2.92	-1.02	1,954.30	-34.93	1,954.62	1,948.82	5.80	337.101	ES		
700.00	700.00	700.00	699.99	3.14	3.20	-1.05	1,955.12	-35.91	1,955.54	1,949.24	6.30	310.539			
800.00	799.99	763.97	763.92	3.42	3.40	149.11	1,956.53	-37.61	1,958.79	1,952.05	6.74	290.596			
900.00	899.91	844.58	844.42	3.70	3.59	149.01	1,959.25	-40.86	1,965.57	1,958.42	7.15	274.765			
1,000.00	999.69	944.13	943.80	3.99	3.83	148.91	1,962.93	-45.28	1,974.96	1,967.33	7.63	258.676			
1,052.37	1,051.87	996.18	995.77	4.08	3.98	148.86	1,964.86	-47.59	1,980.77	1,972.93	7.84	252.652			
1,100.00	1,099.30	1,043.48	1,042.99	4.16	4.12	148.87	1,966.61	-49.69	1,986.33	1,978.31	8.02	247.532			
1,200.00	1,198.87	1,142.80	1,142.14	4.44	4.42	148.88	1,970.28	-54.10	1,998.00	1,989.47	8.53	234.231			
15,400.00	5,528.99	15,439.24	5,549.30	126.18	126.07	-90.03	2,200.94	9,936.73	2,515.56	2,263.33	252.23	9.973			
15,400.01	5,528.99	15,439.24	5,549.30	126.18	126.07	-90.03	2,200.94	9,936.73	2,515.56	2,263.33	252.23	9.973			
15,500.00	5,528.99	15,539.24	5,549.12	127.42	127.31	-90.03	2,201.59	10,036.72	2,515.61	2,260.89	254.71	9.876			
15,500.01	5,528.99	15,539.25	5,549.12	127.42	127.31	-90.03	2,201.59	10,036.73	2,515.61	2,260.89	254.71	9.876			
15,600.00	5,528.99	15,639.24	5,548.95	128.66	128.56	-90.02	2,202.24	10,136.72	2,515.65	2,258.45	257.20	9.781			
15,700.00	5,528.99	15,739.24	5,548.78	129.90	129.80	-90.02	2,202.89	10,236.72	2,515.69	2,256.01	259.68	9.688			
15,800.00	5,528.99	15,839.24	5,548.61	131.14	131.04	-90.01	2,203.53	10,336.72	2,515.73	2,253.57	262.16	9.596			
15,900.00	5,529.00	15,939.24	5,548.43	132.38	132.28	-90.01	2,204.18	10,436.71	2,515.77	2,251.13	264.64	9.506			
16,000.00	5,529.00	16,039.24	5,548.26	133.61	133.53	-90.01	2,204.83	10,536.71	2,515.82	2,248.69	267.12	9.418			
16,100.00	5,529.00	16,139.24	5,548.09	134.85	134.77	-90.00	2,205.48	10,636.71	2,515.86	2,246.25	269.61	9.332			
16,101.45	5,529.00	16,140.68	5,548.09	134.87	134.79	-90.00	2,205.49	10,638.16	2,515.86	2,246.22	269.64	9.330			
16,173.23	5,529.00	16,190.56	5,548.00	135.76	135.41	-90.00	2,205.81	10,688.03	2,515.99	2,244.85	271.14	9.279	SF		



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

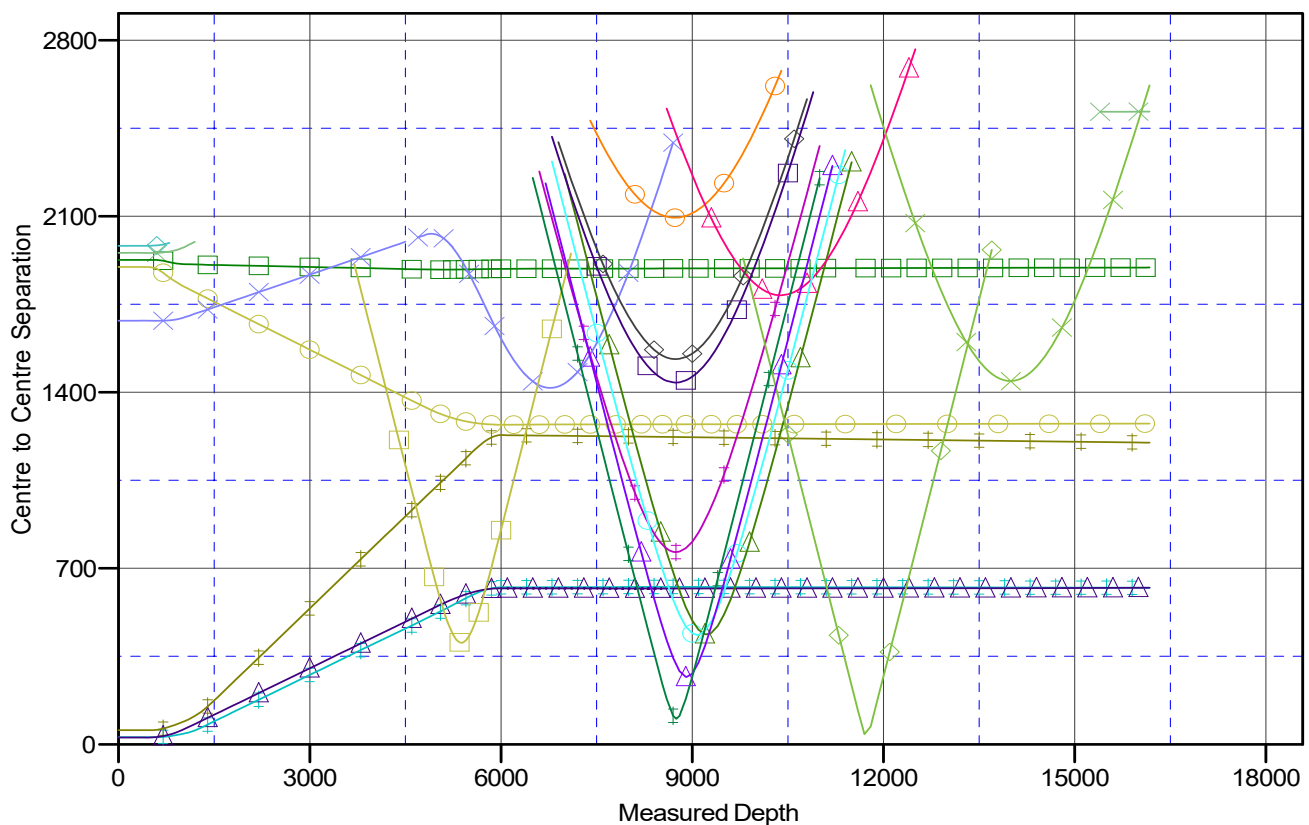
Offset Design: Tatanka Pads - Tatanka LD13-685 - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:				Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	19.00	19.00	0.00	0.17	-1.02	1,982.33	-35.46	1,982.65					
100.00	100.00	119.00	119.00	0.88	1.00	-1.02	1,982.33	-35.46	1,982.65	1,980.77	1.89	1,051.714		
200.00	200.00	219.00	219.00	1.50	1.58	-1.02	1,982.33	-35.46	1,982.65	1,979.56	3.09	642.388		
300.00	300.00	319.00	319.00	1.94	2.00	-1.02	1,982.33	-35.46	1,982.65	1,978.71	3.94	503.514		
400.00	400.00	419.00	419.00	2.29	2.35	-1.02	1,982.33	-35.46	1,982.65	1,978.01	4.64	427.323		
408.85	408.85	427.85	427.85	2.32	2.38	-1.02	1,982.33	-35.46	1,982.65	1,977.96	4.69	422.334 CC		
500.00	500.00	500.00	500.00	2.60	2.60	-1.02	1,982.33	-35.46	1,982.74	1,977.54	5.20	381.273 ES		
600.00	600.00	570.89	570.89	2.88	2.92	-1.03	1,983.19	-35.65	1,984.09	1,978.30	5.79	342.477		
700.00	700.00	630.40	630.36	3.14	3.18	-1.04	1,985.23	-36.10	1,987.54	1,981.23	6.30	315.318		
800.00	799.99	700.00	699.84	3.42	3.47	149.12	1,989.15	-36.97	1,994.18	1,987.32	6.86	290.650 SF		

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=23' @ 4684.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Tatanka Federal LD13-635
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.07°

Ladder Plot



LEGEND

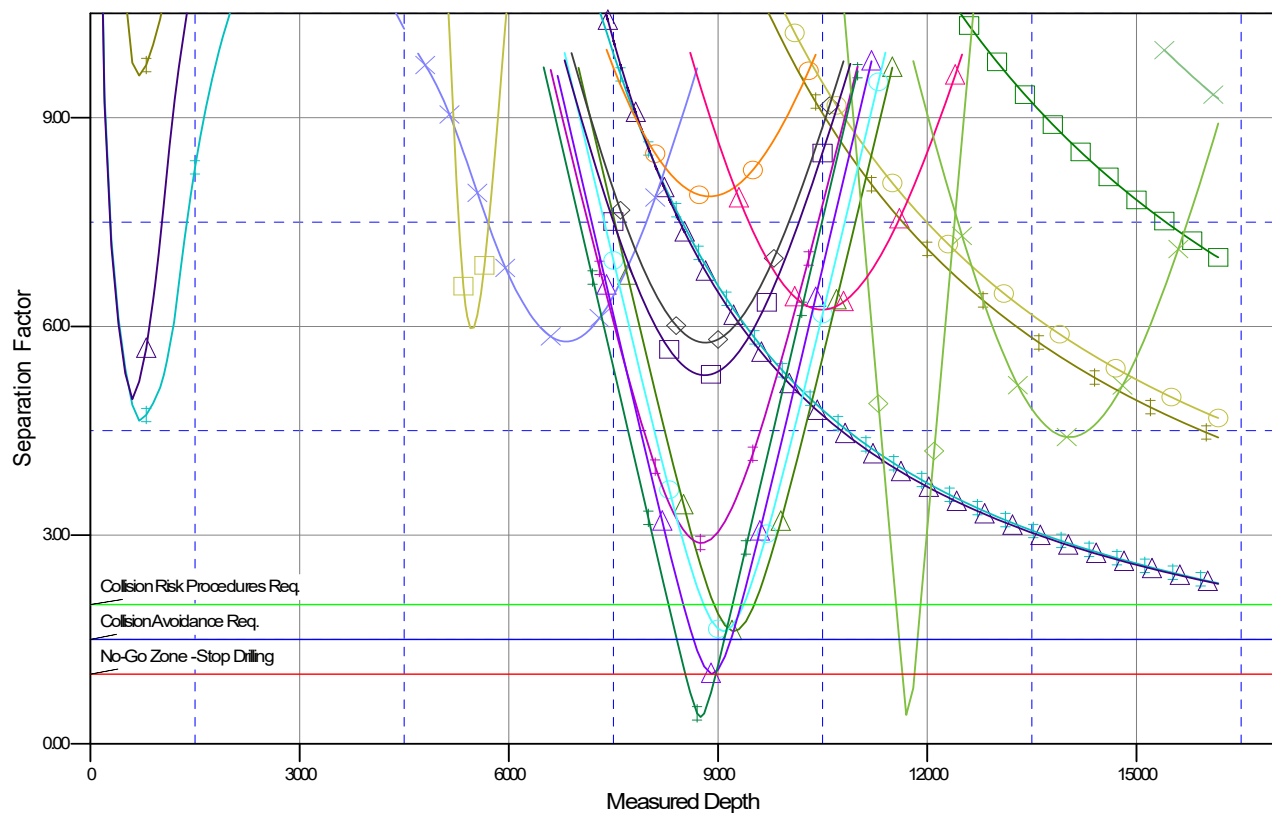
Tatanka Federal LD13-625, OH, Plan #1 V0	Zmith #1 (D&A), OH, OH V0	Rauth #G (D&A), OH, OH V0
Tatanka LD13-660, OH, Plan #1 V0	Alice Nay #2 (D&A), OH, OH V0	Alice Nay #1 (D&A), OH, OH V0
Tatanka LD13-650, OH, Plan #1 V0	Alice Nay 1 (D&A), OH, OH V0	Modemott #14 (P&A), OH, OH V0
Tatanka Federal LD13-615, OH, Plan #1 V0	Castor Federal LD15-72HN, OH, OH V0	Alice Nay (OWP) #1-A (T&A), OH, OH V0
Tatanka LD13-685, OH, Plan #1 V0	Alice Nay #1 (2) (D&A), OH, OH V0	Alice G Nay #1 (P&A), OH, OH V0
Tatanka LD13-670, OH, Plan #1 V0	Castor Federal LD15-78HN, OH, OH V0	Nay (OWP) #1 (D&A), OH, OH V0
Tatanka Federal LD13-645, OH, Plan #1 V0	Brady #1 (D&A), OH, OH V0	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-635
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-635	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=23' @ 4684.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Tatanka Federal LD13-635
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.07°

Separation Factor Plot



LEGEND

Tatanka Federal LD13-625, OH, Plan #1 V0	Zmith #1 (D&A), OH, OH V0	Rauth #1 (D&A), OH, OH V0
Tatanka LD13-660, OH, Plan #1 V0	Alice Nay #2 (D&A), OH, OH V0	Alice Nay #1 (D&A), OH, OH V0
Tatanka LD13-650, OH, Plan #1 V0	Alice Nay #1 (D&A), OH, OH V0	Modemott #1-14 (P&A), OH, OH V0
Tatanka Federal LD13-615, OH, Plan #1 V0	Castor Federal LD15-72HN, OH, OH V0	Alice Nay (OWP) #1-A (T&A), OH, OH V0
Tatanka LD13-685, OH, Plan #1 V0	Alice Nay #1 (2) (D&A), OH, OH V0	Alice G Nay #1 (P&A), OH, OH V0
Tatanka LD13-670, OH, Plan #1 V0	Castor Federal LD13-78HN, OH, OH V0	Nay (OWP) #1 (D&A), OH, OH V0
Tatanka Federal LD13-645, OH, Plan #1 V0	Brady #1 (D&A), OH, OH V0	