



Bison Oil & Gas II, LLC

Weld Co., CO (NAD-83)

Tatanka Pads

Tatanka Federal LD13-645

OH

Plan: Plan #1

Standard Planning Report

13 January, 2022



Plan #1



Project: Weld Co., CO (NAD-83)
 Site: Tatanka Pads
 Well: Tatanka Federal LD13-645
 Wellbore: OH
 Design: Plan #1
 Lat: 40.749507
 Long: -103.841819
 GL: 4661.00
 KB: KB=23' @ 4684.00usft

WELL DETAILS: Tatanka Federal LD13-645

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1520185.89	3459412.79	40.749507	-103.841819

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Tatanka Federal LD13-645 PBHL	5479.00	282.88	10717.39	1520669.12	3470123.02	Point
Tatanka Federal LD13-645 LP	5519.00	220.43	530.87	1520416.21	3459939.45	Point
Tatanka Federal LD13-645 T1	5519.00	236.13	3091.32	1520479.78	3462499.15	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Build 2°/100'
677.77	3.56	314.80	677.65	3.89	-3.91	2.00	314.80	-3.81	4102' Hold
4780.22	3.56	314.80	4772.21	183.15	-184.43	0.00	0.00	-179.53	Build 8°/100'
5936.55	90.00	89.65	5519.00	220.43	530.87	8.00	134.79	536.50	2560' Hold
8497.04	90.00	89.65	5519.00	236.13	3091.32	0.00	0.00	3096.47	Build 2°/100'
8512.08	90.30	89.65	5518.96	236.22	3106.36	2.00	0.00	3111.51	7611' Hold
16123.37	90.30	89.65	5479.00	282.88	10717.39	0.00	0.00	10721.13	TD at 16123.37

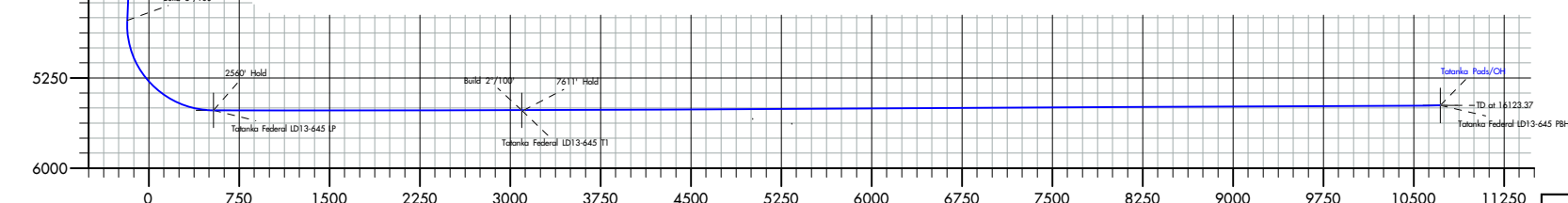
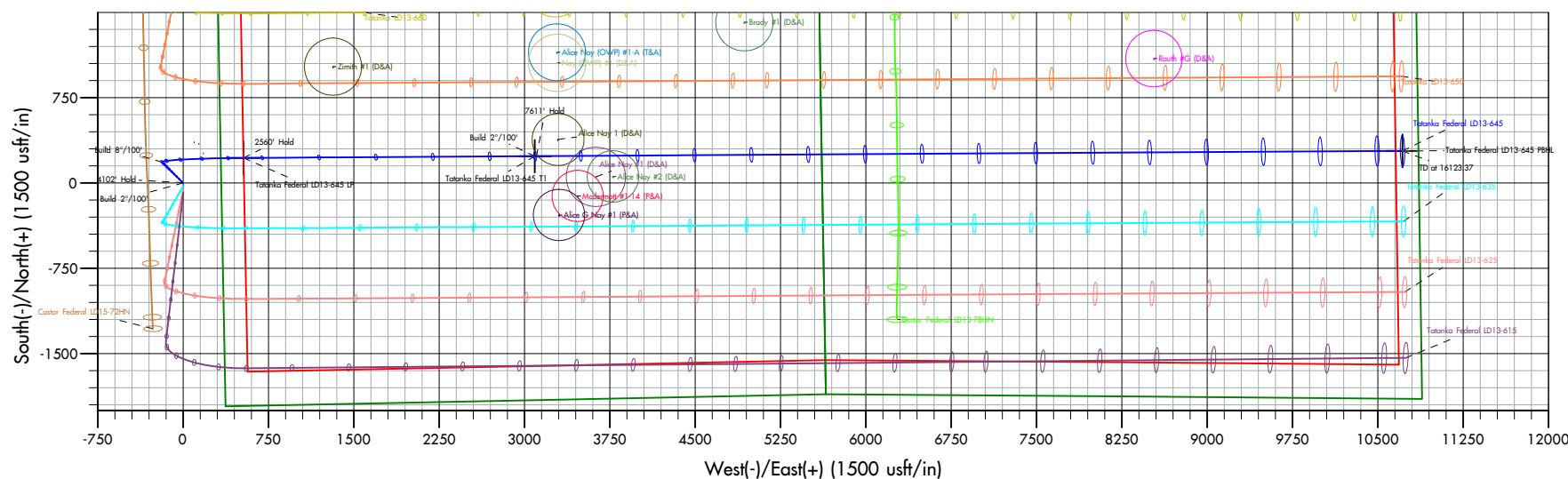
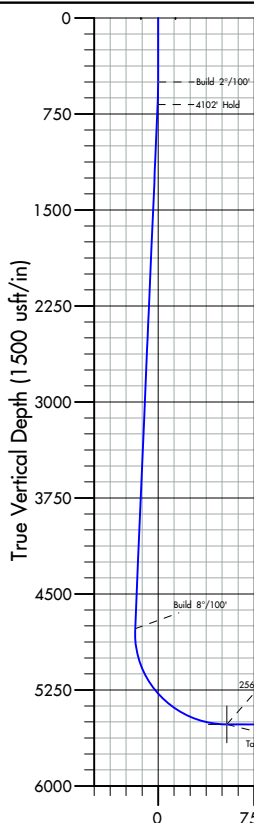
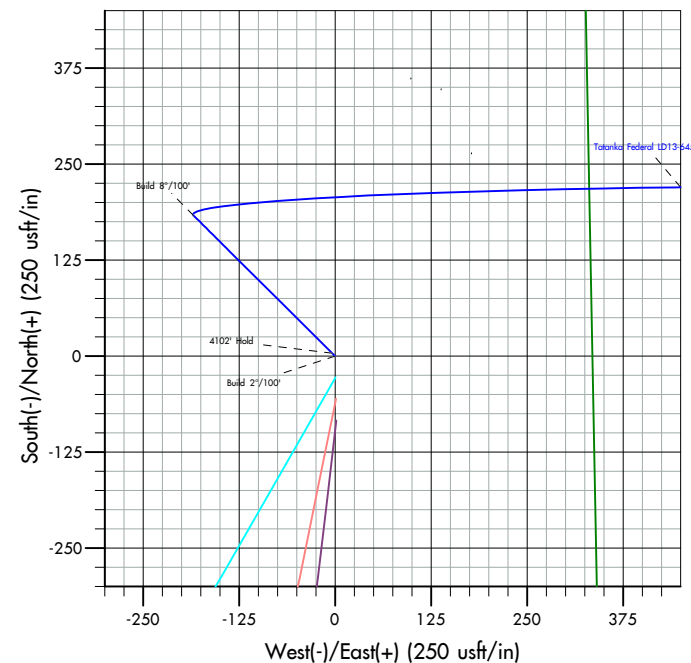
FORMATION TOPS

TVDPath	MDPath	Formation
340.00	340.00	Pierre Shale (Base of Fox Hills)
3164.00	3168.91	Parkman
3661.00	3666.87	Sussex
4261.00	4268.02	Shannon
5354.00	5440.29	Sharon Springs
5434.00	5583.89	Sharon Springs Hot Marker
5454.00	5628.91	Niobrara A Chalk



Azimuths to True North
 Magnetic North: 7.23°

Magnetic Field
 Strength: 52152.6nT
 Dip Angle: 66.97°
 Date: 1/11/2022
 Model: HDGM2022



Plan: Plan #1 (Tatanka Federal LD13-645/OH)

Created By: Dusty Moyer

Date: 11:41 January 13, 2022



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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:	Lat/Long	Northing:	1,522,139.55 usft	Latitude:	40.754872
		Easting:	3,459,341.34 usft	Longitude:	-103.841945
	Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	

Well	Tatanka Federal LD13-645					
Well Position	+N/-S	0.00 usft	Northing:	1,520,185.90 usft	Latitude:	40.749507
	+E/-W	0.00 usft	Easting:	3,459,412.79 usft	Longitude:	-103.841819
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	52,152.60000000

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	88.49

Plan Survey Tool Program	Date	1/13/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,123.37 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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
677.77	3.56	314.80	677.65	3.89	-3.91	2.00	2.00	0.00	314.80	
4,780.22	3.56	314.80	4,772.21	183.15	-184.43	0.00	0.00	0.00	0.00	
5,936.55	90.00	89.65	5,519.00	220.43	530.87	8.00	7.48	11.66	134.79	Tatanka Federal LD
8,497.04	90.00	89.65	5,519.00	236.13	3,091.32	0.00	0.00	0.00	0.00	Tatanka Federal LD
8,512.08	90.30	89.65	5,518.96	236.22	3,106.36	2.00	2.00	0.00	0.00	
16,123.37	90.30	89.65	5,479.00	282.88	10,717.39	0.00	0.00	0.00	0.00	Tatanka Federal LD

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Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-645	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
Build 2°/100'									
600.00	2.00	314.80	599.98	1.23	-1.24	-1.21	2.00	2.00	0.00
677.77	3.56	314.80	677.65	3.89	-3.91	-3.81	2.00	2.00	0.00
4102' Hold									
700.00	3.56	314.80	699.84	4.86	-4.89	-4.76	0.00	0.00	0.00
800.00	3.56	314.80	799.65	9.23	-9.29	-9.04	0.00	0.00	0.00
900.00	3.56	314.80	899.46	13.60	-13.69	-13.33	0.00	0.00	0.00
1,000.00	3.56	314.80	999.27	17.97	-18.09	-17.61	0.00	0.00	0.00
1,100.00	3.56	314.80	1,099.07	22.34	-22.49	-21.89	0.00	0.00	0.00
1,200.00	3.56	314.80	1,198.88	26.71	-26.89	-26.18	0.00	0.00	0.00
1,300.00	3.56	314.80	1,298.69	31.08	-31.29	-30.46	0.00	0.00	0.00
1,400.00	3.56	314.80	1,398.50	35.44	-35.69	-34.74	0.00	0.00	0.00
1,500.00	3.56	314.80	1,498.30	39.81	-40.09	-39.03	0.00	0.00	0.00
1,600.00	3.56	314.80	1,598.11	44.18	-44.49	-43.31	0.00	0.00	0.00
1,700.00	3.56	314.80	1,697.92	48.55	-48.89	-47.59	0.00	0.00	0.00
1,800.00	3.56	314.80	1,797.73	52.92	-53.29	-51.88	0.00	0.00	0.00
1,900.00	3.56	314.80	1,897.53	57.29	-57.69	-56.16	0.00	0.00	0.00
2,000.00	3.56	314.80	1,997.34	61.66	-62.09	-60.44	0.00	0.00	0.00
2,100.00	3.56	314.80	2,097.15	66.03	-66.49	-64.73	0.00	0.00	0.00
2,200.00	3.56	314.80	2,196.96	70.40	-70.89	-69.01	0.00	0.00	0.00
2,300.00	3.56	314.80	2,296.76	74.77	-75.29	-73.29	0.00	0.00	0.00
2,400.00	3.56	314.80	2,396.57	79.14	-79.69	-77.58	0.00	0.00	0.00
2,500.00	3.56	314.80	2,496.38	83.51	-84.09	-81.86	0.00	0.00	0.00
2,600.00	3.56	314.80	2,596.19	87.88	-88.49	-86.14	0.00	0.00	0.00
2,700.00	3.56	314.80	2,695.99	92.25	-92.89	-90.43	0.00	0.00	0.00
2,800.00	3.56	314.80	2,795.80	96.62	-97.29	-94.71	0.00	0.00	0.00
2,900.00	3.56	314.80	2,895.61	100.99	-101.69	-98.99	0.00	0.00	0.00
3,000.00	3.56	314.80	2,995.42	105.36	-106.09	-103.28	0.00	0.00	0.00
3,100.00	3.56	314.80	3,095.22	109.73	-110.49	-107.56	0.00	0.00	0.00
3,168.91	3.56	314.80	3,164.00	112.74	-113.53	-110.51	0.00	0.00	0.00
Parkman									
3,200.00	3.56	314.80	3,195.03	114.10	-114.89	-111.84	0.00	0.00	0.00
3,300.00	3.56	314.80	3,294.84	118.47	-119.30	-116.13	0.00	0.00	0.00
3,400.00	3.56	314.80	3,394.65	122.84	-123.70	-120.41	0.00	0.00	0.00
3,500.00	3.56	314.80	3,494.45	127.21	-128.10	-124.69	0.00	0.00	0.00
3,600.00	3.56	314.80	3,594.26	131.58	-132.50	-128.98	0.00	0.00	0.00
3,666.87	3.56	314.80	3,661.00	134.50	-135.44	-131.84	0.00	0.00	0.00
Sussex									
3,700.00	3.56	314.80	3,694.07	135.95	-136.90	-133.26	0.00	0.00	0.00
3,800.00	3.56	314.80	3,793.88	140.32	-141.30	-137.54	0.00	0.00	0.00
3,900.00	3.56	314.80	3,893.68	144.69	-145.70	-141.83	0.00	0.00	0.00
4,000.00	3.56	314.80	3,993.49	149.06	-150.10	-146.11	0.00	0.00	0.00
4,100.00	3.56	314.80	4,093.30	153.43	-154.50	-150.39	0.00	0.00	0.00
4,200.00	3.56	314.80	4,193.11	157.80	-158.90	-154.68	0.00	0.00	0.00
4,268.02	3.56	314.80	4,261.00	160.77	-161.89	-157.59	0.00	0.00	0.00

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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 LD13-645	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	3.56	314.80	4,292.91	162.17	-163.30	-158.96	0.00	0.00	0.00
4,400.00	3.56	314.80	4,392.72	166.54	-167.70	-163.24	0.00	0.00	0.00
4,500.00	3.56	314.80	4,492.53	170.91	-172.10	-167.53	0.00	0.00	0.00
4,600.00	3.56	314.80	4,592.34	175.28	-176.50	-171.81	0.00	0.00	0.00
4,700.00	3.56	314.80	4,692.14	179.65	-180.90	-176.09	0.00	0.00	0.00
4,780.22	3.56	314.80	4,772.21	183.15	-184.43	-179.53	0.00	0.00	0.00
Build 8°/100'									
4,800.00	2.69	339.53	4,791.96	184.02	-185.02	-180.10	8.00	-4.39	124.97
4,850.00	3.98	50.34	4,841.89	186.22	-184.10	-179.12	8.00	2.58	141.62
4,900.00	7.51	70.13	4,891.64	188.44	-179.69	-174.65	8.00	7.07	39.59
4,950.00	11.36	76.98	4,940.96	190.66	-171.82	-166.73	8.00	7.69	13.70
5,000.00	15.28	80.37	4,989.60	192.87	-160.52	-155.38	8.00	7.85	6.78
5,050.00	19.24	82.40	5,037.34	195.07	-145.85	-140.66	8.00	7.91	4.05
5,100.00	23.21	83.75	5,083.94	197.23	-127.89	-122.64	8.00	7.94	2.71
5,150.00	27.18	84.73	5,129.18	199.35	-106.72	-101.42	8.00	7.96	1.95
5,200.00	31.17	85.47	5,172.82	201.42	-82.43	-77.09	8.00	7.97	1.49
5,250.00	35.16	86.06	5,214.67	203.44	-55.16	-49.78	8.00	7.97	1.18
5,300.00	39.14	86.55	5,254.52	205.38	-25.04	-19.61	8.00	7.98	0.97
5,350.00	43.14	86.95	5,292.16	207.24	7.80	13.26	8.00	7.98	0.82
5,400.00	47.13	87.31	5,327.43	209.01	43.18	48.68	8.00	7.98	0.70
5,440.29	50.35	87.56	5,354.00	210.36	73.43	78.96	8.00	7.99	0.62
Sharon Springs									
5,450.00	51.12	87.61	5,360.15	210.68	80.94	86.48	8.00	7.99	0.59
5,500.00	55.11	87.89	5,390.15	212.24	120.90	126.46	8.00	7.99	0.55
5,550.00	59.11	88.14	5,417.29	213.70	162.85	168.43	8.00	7.99	0.50
5,583.89	61.82	88.30	5,434.00	214.61	192.32	197.92	8.00	7.99	0.47
Sharon Springs Hot Marker									
5,600.00	63.10	88.37	5,441.45	215.03	206.60	212.20	8.00	7.99	0.45
5,628.91	65.41	88.49	5,454.00	215.74	232.63	238.24	8.00	7.99	0.43
Niobrara A Chalk									
5,650.00	67.10	88.58	5,462.49	216.24	251.93	257.55	8.00	7.99	0.42
5,700.00	71.10	88.78	5,480.33	217.31	298.62	304.24	8.00	7.99	0.40
5,750.00	75.09	88.98	5,494.87	218.24	346.44	352.07	8.00	7.99	0.38
5,800.00	79.09	89.16	5,506.04	219.03	395.15	400.80	8.00	7.99	0.37
5,850.00	83.08	89.34	5,513.78	219.68	444.54	450.18	8.00	7.99	0.36
5,900.00	87.08	89.52	5,518.07	220.17	494.34	499.98	8.00	7.99	0.35
5,936.55	90.00	89.65	5,519.00	220.43	530.87	536.50	8.00	7.99	0.35
2560' Hold									
6,000.00	90.00	89.65	5,519.00	220.82	594.32	599.94	0.00	0.00	0.00
6,100.00	90.00	89.65	5,519.00	221.44	694.32	699.92	0.00	0.00	0.00
6,200.00	90.00	89.65	5,519.00	222.05	794.32	799.90	0.00	0.00	0.00
6,300.00	90.00	89.65	5,519.00	222.66	894.32	899.88	0.00	0.00	0.00
6,400.00	90.00	89.65	5,519.00	223.28	994.31	999.86	0.00	0.00	0.00
6,500.00	90.00	89.65	5,519.00	223.89	1,094.31	1,099.84	0.00	0.00	0.00
6,600.00	90.00	89.65	5,519.00	224.50	1,194.31	1,199.82	0.00	0.00	0.00
6,700.00	90.00	89.65	5,519.00	225.11	1,294.31	1,299.80	0.00	0.00	0.00
6,800.00	90.00	89.65	5,519.00	225.73	1,394.31	1,399.78	0.00	0.00	0.00
6,900.00	90.00	89.65	5,519.00	226.34	1,494.30	1,499.76	0.00	0.00	0.00
7,000.00	90.00	89.65	5,519.00	226.95	1,594.30	1,599.74	0.00	0.00	0.00
7,100.00	90.00	89.65	5,519.00	227.57	1,694.30	1,699.72	0.00	0.00	0.00
7,200.00	90.00	89.65	5,519.00	228.18	1,794.30	1,799.70	0.00	0.00	0.00
7,300.00	90.00	89.65	5,519.00	228.79	1,894.30	1,899.67	0.00	0.00	0.00

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Site:	Tatanka Pads	North Reference:	True
Well:	Tatanka Federal LD13-645	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)
7,400.00	90.00	89.65	5,519.00	229.41	1,994.30	1,999.65	0.00	0.00	0.00
7,500.00	90.00	89.65	5,519.00	230.02	2,094.29	2,099.63	0.00	0.00	0.00
7,600.00	90.00	89.65	5,519.00	230.63	2,194.29	2,199.61	0.00	0.00	0.00
7,700.00	90.00	89.65	5,519.00	231.24	2,294.29	2,299.59	0.00	0.00	0.00
7,800.00	90.00	89.65	5,519.00	231.86	2,394.29	2,399.57	0.00	0.00	0.00
7,900.00	90.00	89.65	5,519.00	232.47	2,494.29	2,499.55	0.00	0.00	0.00
8,000.00	90.00	89.65	5,519.00	233.08	2,594.28	2,599.53	0.00	0.00	0.00
8,100.00	90.00	89.65	5,519.00	233.70	2,694.28	2,699.51	0.00	0.00	0.00
8,200.00	90.00	89.65	5,519.00	234.31	2,794.28	2,799.49	0.00	0.00	0.00
8,300.00	90.00	89.65	5,519.00	234.92	2,894.28	2,899.47	0.00	0.00	0.00
8,400.00	90.00	89.65	5,519.00	235.54	2,994.28	2,999.45	0.00	0.00	0.00
8,497.04	90.00	89.65	5,519.00	236.13	3,091.32	3,096.47	0.00	0.00	0.00
Build 2°/100'									
8,500.00	90.06	89.65	5,519.00	236.15	3,094.27	3,099.43	2.00	2.00	0.00
8,512.08	90.30	89.65	5,518.96	236.22	3,106.36	3,111.51	2.00	2.00	0.00
7611' Hold									
8,600.00	90.30	89.65	5,518.50	236.76	3,194.27	3,199.41	0.00	0.00	0.00
8,700.00	90.30	89.65	5,517.97	237.37	3,294.27	3,299.38	0.00	0.00	0.00
8,800.00	90.30	89.65	5,517.45	237.99	3,394.27	3,399.36	0.00	0.00	0.00
8,900.00	90.30	89.65	5,516.92	238.60	3,494.26	3,499.34	0.00	0.00	0.00
9,000.00	90.30	89.65	5,516.40	239.21	3,594.26	3,599.32	0.00	0.00	0.00
9,100.00	90.30	89.65	5,515.87	239.83	3,694.26	3,699.30	0.00	0.00	0.00
9,200.00	90.30	89.65	5,515.35	240.44	3,794.25	3,799.28	0.00	0.00	0.00
9,300.00	90.30	89.65	5,514.82	241.05	3,894.25	3,899.25	0.00	0.00	0.00
9,400.00	90.30	89.65	5,514.30	241.67	3,994.25	3,999.23	0.00	0.00	0.00
9,500.00	90.30	89.65	5,513.77	242.28	4,094.24	4,099.21	0.00	0.00	0.00
9,600.00	90.30	89.65	5,513.25	242.89	4,194.24	4,199.19	0.00	0.00	0.00
9,700.00	90.30	89.65	5,512.72	243.50	4,294.24	4,299.17	0.00	0.00	0.00
9,800.00	90.30	89.65	5,512.20	244.12	4,394.23	4,399.14	0.00	0.00	0.00
9,900.00	90.30	89.65	5,511.67	244.73	4,494.23	4,499.12	0.00	0.00	0.00
10,000.00	90.30	89.65	5,511.15	245.34	4,594.23	4,599.10	0.00	0.00	0.00
10,100.00	90.30	89.65	5,510.62	245.96	4,694.22	4,699.08	0.00	0.00	0.00
10,200.00	90.30	89.65	5,510.10	246.57	4,794.22	4,799.06	0.00	0.00	0.00
10,300.00	90.30	89.65	5,509.57	247.18	4,894.22	4,899.03	0.00	0.00	0.00
10,400.00	90.30	89.65	5,509.05	247.80	4,994.21	4,999.01	0.00	0.00	0.00
10,500.00	90.30	89.65	5,508.52	248.41	5,094.21	5,098.99	0.00	0.00	0.00
10,600.00	90.30	89.65	5,508.00	249.02	5,194.21	5,198.97	0.00	0.00	0.00
10,700.00	90.30	89.65	5,507.47	249.63	5,294.20	5,298.95	0.00	0.00	0.00
10,800.00	90.30	89.65	5,506.95	250.25	5,394.20	5,398.92	0.00	0.00	0.00
10,900.00	90.30	89.65	5,506.42	250.86	5,494.20	5,498.90	0.00	0.00	0.00
11,000.00	90.30	89.65	5,505.90	251.47	5,594.19	5,598.88	0.00	0.00	0.00
11,100.00	90.30	89.65	5,505.37	252.09	5,694.19	5,698.86	0.00	0.00	0.00
11,200.00	90.30	89.65	5,504.85	252.70	5,794.19	5,798.84	0.00	0.00	0.00
11,300.00	90.30	89.65	5,504.32	253.31	5,894.18	5,898.82	0.00	0.00	0.00
11,400.00	90.30	89.65	5,503.80	253.93	5,994.18	5,998.79	0.00	0.00	0.00
11,500.00	90.30	89.65	5,503.27	254.54	6,094.18	6,098.77	0.00	0.00	0.00
11,600.00	90.30	89.65	5,502.75	255.15	6,194.17	6,198.75	0.00	0.00	0.00
11,700.00	90.30	89.65	5,502.22	255.77	6,294.17	6,298.73	0.00	0.00	0.00
11,800.00	90.30	89.65	5,501.70	256.38	6,394.17	6,398.71	0.00	0.00	0.00
11,900.00	90.30	89.65	5,501.17	256.99	6,494.16	6,498.68	0.00	0.00	0.00
12,000.00	90.30	89.65	5,500.65	257.60	6,594.16	6,598.66	0.00	0.00	0.00
12,100.00	90.30	89.65	5,500.12	258.22	6,694.16	6,698.64	0.00	0.00	0.00
12,200.00	90.30	89.65	5,499.60	258.83	6,794.15	6,798.62	0.00	0.00	0.00
12,300.00	90.30	89.65	5,499.07	259.44	6,894.15	6,898.60	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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)
12,400.00	90.30	89.65	5,498.55	260.06	6,994.15	6,998.57	0.00	0.00	0.00
12,500.00	90.30	89.65	5,498.02	260.67	7,094.14	7,098.55	0.00	0.00	0.00
12,600.00	90.30	89.65	5,497.50	261.28	7,194.14	7,198.53	0.00	0.00	0.00
12,700.00	90.30	89.65	5,496.97	261.90	7,294.14	7,298.51	0.00	0.00	0.00
12,800.00	90.30	89.65	5,496.45	262.51	7,394.13	7,398.49	0.00	0.00	0.00
12,900.00	90.30	89.65	5,495.92	263.12	7,494.13	7,498.47	0.00	0.00	0.00
13,000.00	90.30	89.65	5,495.40	263.73	7,594.13	7,598.44	0.00	0.00	0.00
13,100.00	90.30	89.65	5,494.87	264.35	7,694.13	7,698.42	0.00	0.00	0.00
13,200.00	90.30	89.65	5,494.35	264.96	7,794.12	7,798.40	0.00	0.00	0.00
13,300.00	90.30	89.65	5,493.82	265.57	7,894.12	7,898.38	0.00	0.00	0.00
13,400.00	90.30	89.65	5,493.30	266.19	7,994.12	7,998.36	0.00	0.00	0.00
13,500.00	90.30	89.65	5,492.77	266.80	8,094.11	8,098.33	0.00	0.00	0.00
13,600.00	90.30	89.65	5,492.25	267.41	8,194.11	8,198.31	0.00	0.00	0.00
13,700.00	90.30	89.65	5,491.72	268.03	8,294.11	8,298.29	0.00	0.00	0.00
13,800.00	90.30	89.65	5,491.20	268.64	8,394.10	8,398.27	0.00	0.00	0.00
13,900.00	90.30	89.65	5,490.67	269.25	8,494.10	8,498.25	0.00	0.00	0.00
14,000.00	90.30	89.65	5,490.15	269.86	8,594.10	8,598.22	0.00	0.00	0.00
14,100.00	90.30	89.65	5,489.62	270.48	8,694.09	8,698.20	0.00	0.00	0.00
14,200.00	90.30	89.65	5,489.10	271.09	8,794.09	8,798.18	0.00	0.00	0.00
14,300.00	90.30	89.65	5,488.57	271.70	8,894.09	8,898.16	0.00	0.00	0.00
14,400.00	90.30	89.65	5,488.05	272.32	8,994.08	8,998.14	0.00	0.00	0.00
14,500.00	90.30	89.65	5,487.52	272.93	9,094.08	9,098.11	0.00	0.00	0.00
14,600.00	90.30	89.65	5,487.00	273.54	9,194.08	9,198.09	0.00	0.00	0.00
14,700.00	90.30	89.65	5,486.47	274.16	9,294.07	9,298.07	0.00	0.00	0.00
14,800.00	90.30	89.65	5,485.95	274.77	9,394.07	9,398.05	0.00	0.00	0.00
14,900.00	90.30	89.65	5,485.42	275.38	9,494.07	9,498.03	0.00	0.00	0.00
15,000.00	90.30	89.65	5,484.90	275.99	9,594.06	9,598.01	0.00	0.00	0.00
15,100.00	90.30	89.65	5,484.37	276.61	9,694.06	9,697.98	0.00	0.00	0.00
15,200.00	90.30	89.65	5,483.85	277.22	9,794.06	9,797.96	0.00	0.00	0.00
15,300.00	90.30	89.65	5,483.32	277.83	9,894.05	9,897.94	0.00	0.00	0.00
15,400.00	90.30	89.65	5,482.80	278.45	9,994.05	9,997.92	0.00	0.00	0.00
15,500.00	90.30	89.65	5,482.27	279.06	10,094.05	10,097.90	0.00	0.00	0.00
15,600.00	90.30	89.65	5,481.75	279.67	10,194.04	10,197.87	0.00	0.00	0.00
15,700.00	90.30	89.65	5,481.22	280.29	10,294.04	10,297.85	0.00	0.00	0.00
15,800.00	90.30	89.65	5,480.70	280.90	10,394.04	10,397.83	0.00	0.00	0.00
15,900.00	90.30	89.65	5,480.17	281.51	10,494.03	10,497.81	0.00	0.00	0.00
16,000.00	90.30	89.65	5,479.65	282.12	10,594.03	10,597.79	0.00	0.00	0.00
16,100.00	90.30	89.65	5,479.12	282.74	10,694.03	10,697.76	0.00	0.00	0.00
16,123.37	90.30	89.65	5,479.00	282.88	10,717.39	10,721.13	0.00	0.00	0.00
TD at 16123.37									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Tatanka Federal LD13	0.00	0.00	5,479.00	282.88	10,717.39	1,520,669.13	3,470,123.02	40.750277	-103.803138
- plan hits target center									
- Point									
Tatanka Federal LD13	0.00	0.00	5,519.00	220.43	530.87	1,520,416.22	3,459,939.44	40.750112	-103.839903
- plan hits target center									
- Point									
Tatanka Federal LD13	0.00	0.00	5,519.00	236.13	3,091.32	1,520,479.79	3,462,499.15	40.750155	-103.830662
- plan hits target center									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
340.00	340.00	Pierre Shale (Base of Fox Hills)			
3,168.91	3,164.00	Parkman			
3,666.87	3,661.00	Sussex			
4,268.02	4,261.00	Shannon			
5,440.29	5,354.00	Sharon Springs			
5,583.89	5,434.00	Sharon Springs Hot Marker			
5,628.91	5,454.00	Niobrara A Chalk			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Build 2°/100'
677.77	677.65	3.89	-3.91	4102' Hold
4,780.22	4,772.21	183.15	-184.43	Build 8°/100'
5,936.55	5,519.00	220.43	530.87	2560' Hold
8,497.04	5,519.00	236.13	3,091.32	Build 2°/100'
8,512.08	5,518.96	236.22	3,106.36	7611' Hold
16,123.37	5,479.00	282.88	10,717.39	TD at 16123.37



Bison Oil & Gas II, LLC

Weld Co., CO (NAD-83)

Tatanka Pads

Tatanka Federal LD13-645

OH

Plan #1

Anticollision Report

13 January, 2022



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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	16,123.37	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	8,706.43	5,470.94	518.47	255.16	1.969	Collision Risk Procedures
Alice Nay #1 (2) (D&A) - OH - OH	8,685.13	5,501.05	1,474.59	1,210.33	5.580	CC
Alice Nay #1 (2) (D&A) - OH - OH	8,700.00	5,500.97	1,474.67	1,210.22	5.576	ES
Alice Nay #1 (2) (D&A) - OH - OH	8,800.00	5,500.45	1,479.06	1,213.42	5.568	SF
Alice Nay #1 (D&A) - OH - OH	9,032.56	5,476.23	185.23	-82.15	0.693	No-Go Zone - Stop Drillin
Alice Nay #2 (D&A) - OH - OH	9,182.20	5,471.44	182.48	-86.49	0.678	No-Go Zone - Stop Drillin
Alice Nay (OWP) #1-A (T&A) - OH - OH	8,697.27	5,493.99	911.98	647.86	3.453	CC
Alice Nay (OWP) #1-A (T&A) - OH - OH	8,700.00	5,493.97	911.99	647.83	3.452	ES, SF
Alice Nay 1 (D&A) - OH - OH	8,702.09	5,480.96	144.65	-119.00	0.549	No-Go Zone - Stop Drillin
Brady #1 (D&A) - OH - OH	10,345.68	5,505.33	1,165.93	881.56	4.100	CC, ES
Brady #1 (D&A) - OH - OH	10,400.00	5,505.05	1,167.20	882.16	4.095	SF
Castor Federal LD13-78HN - OH - OH	11,700.00	8,431.71	54.44	-27.53	0.664	No-Go Zone - Stop Drillin
Castor Federal LD14-68HN - OH - OH						Out of range
Castor Federal LD15-72HN - OH - OH	5,350.00	8,379.81	441.10	384.32	7.769	CC
Castor Federal LD15-72HN - OH - OH	5,350.01	8,379.81	441.10	384.32	7.769	ES
Castor Federal LD15-72HN - OH - OH	5,450.00	8,380.16	461.76	399.80	7.453	SF
Mcdermott #1-14 (P&A) - OH - OH	8,870.91	5,470.08	351.86	86.64	1.327	Collision Avoidance Req.,
Nay (OWP) #1 (D&A) - OH - OH	8,697.82	5,642.99	818.71	548.62	3.031	CC
Nay (OWP) #1 (D&A) - OH - OH	8,700.00	5,642.97	818.71	548.59	3.031	ES, SF
Rauth #G (D&A) - OH - OH	13,943.08	5,431.45	824.25	498.58	2.531	CC, ES, SF
Zimith #1 (D&A) - OH - OH	6,727.74	5,495.00	797.81	555.35	3.290	CC, ES, SF

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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	83.82	78.62	16.117	CC, ES
Tatanka Federal LD13-615 - OH - Plan #1	16,123.37	16,378.02	1,821.46	1,549.44	6.696	SF
Tatanka Federal LD13-625 - OH - Plan #1	500.00	500.00	55.75	50.55	10.721	CC, ES
Tatanka Federal LD13-625 - OH - Plan #1	16,123.37	16,309.33	1,245.33	974.44	4.597	SF
Tatanka Federal LD13-635 - OH - Plan #1	500.00	500.00	27.69	22.49	5.326	CC, ES
Tatanka Federal LD13-635 - OH - Plan #1	16,123.37	16,167.58	622.51	351.85	2.300	SF
Tatanka LD13-650 - OH - Plan #1	5,936.55	6,095.12	652.79	611.60	15.846	CC
Tatanka LD13-650 - OH - Plan #1	16,123.37	16,276.52	657.04	385.12	2.416	ES, SF
Tatanka LD13-660 - OH - Plan #1	5,936.55	6,027.32	1,272.43	1,236.63	35.541	CC
Tatanka LD13-660 - OH - Plan #1	16,123.37	16,203.62	1,275.31	1,004.03	4.701	ES, SF
Tatanka LD13-670 - OH - Plan #1	5,239.91	5,208.53	1,892.24	1,863.70	66.318	CC
Tatanka LD13-670 - OH - Plan #1	16,123.37	16,190.56	1,896.12	1,625.70	7.012	ES, SF
Tatanka LD13-685 - OH - Plan #1	697.92	629.96	1,954.93	1,948.60	308.897	CC
Tatanka LD13-685 - OH - Plan #1	700.00	631.21	1,954.93	1,948.59	308.572	ES
Tatanka LD13-685 - OH - Plan #1	16,123.37	16,377.82	2,698.15	2,426.84	9.945	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	5,519.00	5,472.00	5,472.00	21.12	218.88	90.00	-281.04	3,303.87	2,266.52	2,033.49	233.03	9.726				
6,600.00	5,519.00	5,472.00	5,472.00	21.95	218.88	90.00	-281.04	3,303.87	2,169.29	1,936.06	233.23	9.301				
6,700.00	5,519.00	5,472.00	5,472.00	22.82	218.88	90.00	-281.04	3,303.87	2,072.33	1,838.86	233.47	8.876				
6,800.00	5,519.00	5,472.00	5,472.00	23.73	218.88	90.00	-281.04	3,303.87	1,975.67	1,741.92	233.75	8.452				
6,900.00	5,519.00	5,472.00	5,472.00	24.67	218.88	90.00	-281.04	3,303.87	1,879.35	1,645.29	234.07	8.029				
7,000.00	5,519.00	5,472.00	5,472.00	25.64	218.88	90.00	-281.04	3,303.87	1,783.45	1,549.02	234.43	7.607				
7,100.00	5,519.00	5,472.00	5,472.00	26.64	218.88	90.00	-281.04	3,303.87	1,688.02	1,453.16	234.86	7.187				
7,200.00	5,519.00	5,472.00	5,472.00	27.65	218.88	90.00	-281.04	3,303.87	1,593.15	1,357.79	235.36	6.769				
7,300.00	5,519.00	5,472.00	5,472.00	28.69	218.88	90.00	-281.04	3,303.87	1,498.94	1,263.00	235.95	6.353				
7,400.00	5,519.00	5,472.00	5,472.00	29.75	218.88	90.00	-281.04	3,303.87	1,405.54	1,168.91	236.63	5.940				
7,500.00	5,519.00	5,472.00	5,472.00	30.82	218.88	90.00	-281.04	3,303.87	1,313.11	1,075.67	237.45	5.530				
7,600.00	5,519.00	5,472.00	5,472.00	31.91	218.88	90.00	-281.04	3,303.87	1,221.88	983.46	238.41	5.125				
7,700.00	5,519.00	5,472.00	5,472.00	33.01	218.88	90.00	-281.04	3,303.87	1,132.12	892.56	239.56	4.726				
7,800.00	5,519.00	5,472.00	5,472.00	34.12	218.88	90.00	-281.04	3,303.87	1,044.23	803.30	240.93	4.334				
7,900.00	5,519.00	5,472.00	5,472.00	35.24	218.88	90.00	-281.04	3,303.87	958.71	716.15	242.56	3.952				
8,000.00	5,519.00	5,472.00	5,472.00	36.37	218.88	90.00	-281.04	3,303.87	876.27	631.75	244.51	3.584				
8,100.00	5,519.00	5,472.00	5,472.00	37.50	218.88	90.00	-281.04	3,303.87	797.85	551.02	246.82	3.232				
8,200.00	5,519.00	5,472.00	5,472.00	38.65	218.88	90.00	-281.04	3,303.87	724.76	475.23	249.52	2.905				
8,300.00	5,519.00	5,472.00	5,472.00	39.80	218.88	90.00	-281.04	3,303.87	658.78	406.19	252.59	2.608				
8,400.00	5,519.00	5,472.00	5,472.00	40.96	218.88	90.00	-281.04	3,303.87	602.25	346.36	255.88	2.354				
8,497.04	5,519.00	5,472.00	5,472.00	42.09	218.88	90.00	-281.04	3,303.87	559.15	300.13	259.02	2.159				
8,500.00	5,519.00	5,472.00	5,472.00	42.12	218.88	90.02	-281.04	3,303.87	558.05	298.94	259.11	2.154				
8,512.08	5,518.96	5,471.96	5,471.96	42.26	218.88	90.11	-281.04	3,303.87	553.69	294.22	259.47	2.134				
8,600.00	5,518.50	5,471.50	5,471.50	43.29	218.86	90.06	-281.04	3,303.87	529.28	267.53	261.75	2.022				
8,700.00	5,517.97	5,470.97	5,470.97	44.46	218.84	90.00	-281.04	3,303.87	518.51	255.25	263.26	1.970	Collision Risk Procedures Req.			
8,706.43	5,517.94	5,470.94	5,470.94	44.53	218.84	90.00	-281.04	3,303.87	518.47	255.16	263.30	1.969	Collision Risk Procedures Req., CC			
8,800.00	5,517.45	5,470.45	5,470.45	45.63	218.82	89.95	-281.04	3,303.87	526.84	263.53	263.32	2.001				
8,900.00	5,516.92	5,469.92	5,469.92	46.82	218.80	89.89	-281.04	3,303.87	553.42	291.38	262.05	2.112				

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 LD13-645
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 LD13-645	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="3">Offset</th> <th colspan="2">Semi Major Axis</th> <th colspan="2">Offset Wellbore Centre</th> <th colspan="3">Rule Assigned:</th> <th>Offset Well Error:</th> <td>0.00 usft</td>		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		
9,000.00	5,516.40	5,469.40	5,469.40	48.00	218.78	89.83	-281.04	3,303.87	595.81	335.91	259.90	2.292			
9,100.00	5,515.87	5,468.87	5,468.87	49.19	218.75	89.77	-281.04	3,303.87	650.92	393.55	257.38	2.529			
9,200.00	5,515.35	5,468.35	5,468.35	50.38	218.73	89.71	-281.04	3,303.87	715.83	460.99	254.85	2.809			
9,300.00	5,514.82	5,467.82	5,467.82	51.57	218.71	89.66	-281.04	3,303.87	788.12	535.62	252.49	3.121			
9,400.00	5,514.30	5,467.30	5,467.30	52.77	218.69	89.60	-281.04	3,303.87	865.93	615.53	250.40	3.458			
9,500.00	5,513.77	5,466.77	5,466.77	53.97	218.67	89.54	-281.04	3,303.87	947.92	699.34	248.58	3.813			
9,600.00	5,513.25	5,466.25	5,466.25	55.17	218.65	89.48	-281.04	3,303.87	1,033.08	786.07	247.01	4.182			
9,700.00	5,512.72	5,465.72	5,465.72	56.37	218.63	89.42	-281.04	3,303.87	1,120.70	875.03	245.67	4.562			
9,800.00	5,512.20	5,465.20	5,465.20	57.58	218.61	89.37	-281.04	3,303.87	1,210.24	965.72	244.51	4.950			
9,900.00	5,511.67	5,464.67	5,464.67	58.79	218.59	89.31	-281.04	3,303.87	1,301.30	1,057.78	243.52	5.344			
10,000.00	5,511.15	5,464.15	5,464.15	59.99	218.57	89.25	-281.04	3,303.87	1,393.59	1,150.92	242.67	5.743			
10,100.00	5,510.62	5,463.62	5,463.62	61.21	218.54	89.19	-281.04	3,303.87	1,486.88	1,244.95	241.93	6.146			
10,200.00	5,510.10	5,463.10	5,463.10	62.42	218.52	89.13	-281.04	3,303.87	1,580.98	1,339.69	241.29	6.552			
10,300.00	5,509.57	5,462.57	5,462.57	63.63	218.50	89.08	-281.04	3,303.87	1,675.77	1,435.04	240.73	6.961			
10,400.00	5,509.05	5,462.05	5,462.05	64.85	218.48	89.02	-281.04	3,303.87	1,771.13	1,530.89	240.24	7.372			
10,500.00	5,508.52	5,461.52	5,461.52	66.06	218.46	88.96	-281.04	3,303.87	1,866.98	1,627.17	239.82	7.785			
10,600.00	5,508.00	5,461.00	5,461.00	67.28	218.44	88.90	-281.04	3,303.87	1,963.24	1,723.80	239.44	8.199			
10,700.00	5,507.47	5,460.47	5,460.47	68.50	218.42	88.84	-281.04	3,303.87	2,059.86	1,820.75	239.11	8.615			
10,800.00	5,506.95	5,459.95	5,459.95	69.72	218.40	88.79	-281.04	3,303.87	2,156.79	1,917.97	238.82	9.031			
10,900.00	5,506.42	5,459.42	5,459.42	70.94	218.38	88.73	-281.04	3,303.87	2,253.98	2,015.42	238.57	9.448			
11,000.00	5,505.90	5,458.90	5,458.90	72.16	218.36	88.67	-281.04	3,303.87	2,351.41	2,113.07	238.34	9.866			

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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
Survey Program: 6315-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)			
6,900.00	5,519.00	5,502.00	5,502.00	24.67	220.08	-90.00	1,711.85	3,270.36	2,315.41	2,079.67	235.73	9.822	
7,000.00	5,519.00	5,502.00	5,502.00	25.64	220.08	-90.00	1,711.85	3,270.36	2,239.21	2,002.47	236.75	9.458	
7,100.00	5,519.00	5,502.00	5,502.00	26.64	220.08	-90.00	1,711.85	3,270.36	2,164.96	1,927.10	237.86	9.102	
7,200.00	5,519.00	5,502.00	5,502.00	27.65	220.08	-90.00	1,711.85	3,270.36	2,092.85	1,853.77	239.08	8.754	
7,300.00	5,519.00	5,502.00	5,502.00	28.69	220.08	-90.00	1,711.85	3,270.36	2,023.12	1,782.72	240.40	8.416	
7,400.00	5,519.00	5,502.00	5,502.00	29.75	220.08	-90.00	1,711.85	3,270.36	1,956.01	1,714.18	241.83	8.088	
7,500.00	5,519.00	5,502.00	5,502.00	30.82	220.08	-90.00	1,711.85	3,270.36	1,891.81	1,648.46	243.35	7.774	
7,600.00	5,519.00	5,502.00	5,502.00	31.91	220.08	-90.00	1,711.85	3,270.36	1,830.83	1,585.85	244.98	7.473	
7,700.00	5,519.00	5,502.00	5,502.00	33.01	220.08	-90.00	1,711.85	3,270.36	1,773.39	1,526.69	246.69	7.189	
7,800.00	5,519.00	5,502.00	5,502.00	34.12	220.08	-90.00	1,711.85	3,270.36	1,719.85	1,471.36	248.49	6.921	
7,900.00	5,519.00	5,502.00	5,502.00	35.24	220.08	-90.00	1,711.85	3,270.36	1,670.58	1,420.23	250.35	6.673	
8,000.00	5,519.00	5,502.00	5,502.00	36.37	220.08	-90.00	1,711.85	3,270.36	1,625.98	1,373.73	252.26	6.446	
8,100.00	5,519.00	5,502.00	5,502.00	37.50	220.08	-90.00	1,711.85	3,270.36	1,586.44	1,332.25	254.19	6.241	
8,200.00	5,519.00	5,502.00	5,502.00	38.65	220.08	-90.00	1,711.85	3,270.36	1,552.34	1,296.23	256.11	6.061	
8,300.00	5,519.00	5,502.00	5,502.00	39.80	220.08	-90.00	1,711.85	3,270.36	1,524.06	1,266.06	258.00	5.907	
8,400.00	5,519.00	5,502.00	5,502.00	40.96	220.08	-90.00	1,711.85	3,270.36	1,501.91	1,242.09	259.82	5.781	
8,497.04	5,519.00	5,502.00	5,502.00	42.09	220.08	-90.00	1,711.85	3,270.36	1,486.54	1,225.06	261.48	5.685	
8,500.00	5,519.00	5,502.00	5,502.00	42.12	220.08	-90.01	1,711.85	3,270.36	1,486.17	1,224.64	261.52	5.683	
8,512.08	5,518.96	5,501.96	5,501.96	42.26	220.08	-90.04	1,711.85	3,270.36	1,484.71	1,222.99	261.72	5.673	
8,600.00	5,518.50	5,501.50	5,501.50	43.29	220.06	-90.02	1,711.85	3,270.36	1,477.05	1,213.98	263.07	5.615	
8,685.13	5,518.05	5,501.05	5,501.05	44.28	220.04	-90.00	1,711.85	3,270.36	1,474.59	1,210.33	264.26	5.580 CC	
8,700.00	5,517.97	5,500.97	5,500.97	44.46	220.04	-90.00	1,711.85	3,270.36	1,474.67	1,210.22	264.45	5.576 ES	
8,800.00	5,517.45	5,500.45	5,500.45	45.63	220.02	-89.98	1,711.85	3,270.36	1,479.06	1,213.42	265.64	5.568 SF	
8,900.00	5,516.92	5,499.92	5,499.92	46.82	220.00	-89.96	1,711.85	3,270.36	1,490.17	1,223.54	266.63	5.589	
9,000.00	5,516.40	5,499.40	5,499.40	48.00	219.98	-89.94	1,711.85	3,270.36	1,507.83	1,240.43	267.41	5.639	
9,100.00	5,515.87	5,498.87	5,498.87	49.19	219.95	-89.92	1,711.85	3,270.36	1,531.84	1,263.86	267.98	5.716	
9,200.00	5,515.35	5,498.35	5,498.35	50.38	219.93	-89.89	1,711.85	3,270.36	1,561.89	1,293.54	268.35	5.820	
9,300.00	5,514.82	5,497.82	5,497.82	51.57	219.91	-89.87	1,711.85	3,270.36	1,597.65	1,329.09	268.55	5.949	
9,400.00	5,514.30	5,497.30	5,497.30	52.77	219.89	-89.85	1,711.85	3,270.36	1,638.73	1,370.14	268.59	6.101	
9,500.00	5,513.77	5,496.77	5,496.77	53.97	219.87	-89.83	1,711.85	3,270.36	1,684.76	1,416.26	268.50	6.275	
9,600.00	5,513.25	5,496.25	5,496.25	55.17	219.85	-89.81	1,711.85	3,270.36	1,735.34	1,467.05	268.29	6.468	
9,700.00	5,512.72	5,495.72	5,495.72	56.37	219.83	-89.79	1,711.85	3,270.36	1,790.07	1,522.09	267.99	6.680	
9,800.00	5,512.20	5,495.20	5,495.20	57.58	219.81	-89.77	1,711.85	3,270.36	1,848.60	1,580.99	267.61	6.908	
9,900.00	5,511.67	5,494.67	5,494.67	58.79	219.79	-89.75	1,711.85	3,270.36	1,910.57	1,643.40	267.18	7.151	
10,000.00	5,511.15	5,494.15	5,494.15	59.99	219.77	-89.73	1,711.85	3,270.36	1,975.67	1,708.96	266.70	7.408	
10,100.00	5,510.62	5,493.62	5,493.62	61.21	219.74	-89.71	1,711.85	3,270.36	2,043.58	1,777.38	266.20	7.677	
10,200.00	5,510.10	5,493.10	5,493.10	62.42	219.72	-89.69	1,711.85	3,270.36	2,114.05	1,848.37	265.68	7.957	
10,300.00	5,509.57	5,492.57	5,492.57	63.63	219.70	-89.67	1,711.85	3,270.36	2,186.81	1,921.66	265.15	8.247	
10,400.00	5,509.05	5,492.05	5,492.05	64.85	219.68	-89.65	1,711.85	3,270.36	2,261.66	1,997.05	264.62	8.547	
10,500.00	5,508.52	5,491.52	5,491.52	66.06	219.66	-89.63	1,711.85	3,270.36	2,338.39	2,074.31	264.09	8.855	
10,600.00	5,508.00	5,491.00	5,491.00	67.28	219.64	-89.61	1,711.85	3,270.36	2,416.83	2,153.26	263.56	9.170	
10,700.00	5,507.47	5,490.47	5,490.47	68.50	219.62	-89.59	1,711.85	3,270.36	2,496.80	2,233.75	263.05	9.492	
10,800.00	5,506.95	5,489.95	5,489.95	69.72	219.60	-89.57	1,711.85	3,270.36	2,578.17	2,315.62	262.55	9.820	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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)	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	5,519.00	5,479.00	5,479.00	23.73	219.16	90.00	54.18	3,628.00	2,240.28	2,008.18	232.10	9.652	
6,900.00	5,519.00	5,479.00	5,479.00	24.67	219.16	90.00	54.18	3,628.00	2,140.63	1,908.46	232.17	9.220	
7,000.00	5,519.00	5,479.00	5,479.00	25.64	219.16	90.00	54.18	3,628.00	2,041.03	1,808.77	232.26	8.788	
7,100.00	5,519.00	5,479.00	5,479.00	26.64	219.16	90.00	54.18	3,628.00	1,941.46	1,709.10	232.36	8.355	
7,200.00	5,519.00	5,479.00	5,479.00	27.65	219.16	90.00	54.18	3,628.00	1,841.94	1,609.47	232.47	7.923	
7,300.00	5,519.00	5,479.00	5,479.00	28.69	219.16	90.00	54.18	3,628.00	1,742.48	1,509.88	232.60	7.491	
7,400.00	5,519.00	5,479.00	5,479.00	29.75	219.16	90.00	54.18	3,628.00	1,643.08	1,410.34	232.74	7.060	
7,500.00	5,519.00	5,479.00	5,479.00	30.82	219.16	90.00	54.18	3,628.00	1,543.76	1,310.85	232.90	6.628	
7,600.00	5,519.00	5,479.00	5,479.00	31.91	219.16	90.00	54.18	3,628.00	1,444.53	1,211.43	233.10	6.197	
7,700.00	5,519.00	5,479.00	5,479.00	33.01	219.16	90.00	54.18	3,628.00	1,345.42	1,112.09	233.32	5.766	
7,800.00	5,519.00	5,479.00	5,479.00	34.12	219.16	90.00	54.18	3,628.00	1,246.44	1,012.85	233.60	5.336	
7,900.00	5,519.00	5,479.00	5,479.00	35.24	219.16	90.00	54.18	3,628.00	1,147.65	913.73	233.93	4.906	
8,000.00	5,519.00	5,479.00	5,479.00	36.37	219.16	90.00	54.18	3,628.00	1,049.09	814.76	234.33	4.477	
8,100.00	5,519.00	5,479.00	5,479.00	37.50	219.16	90.00	54.18	3,628.00	950.82	715.98	234.84	4.049	
8,200.00	5,519.00	5,479.00	5,479.00	38.65	219.16	90.00	54.18	3,628.00	852.96	617.46	235.50	3.622	
8,300.00	5,519.00	5,479.00	5,479.00	39.80	219.16	90.00	54.18	3,628.00	755.66	519.29	236.37	3.197	
8,400.00	5,519.00	5,479.00	5,479.00	40.96	219.16	90.00	54.18	3,628.00	659.17	421.61	237.55	2.775	
8,497.04	5,519.00	5,479.00	5,479.00	42.09	219.16	90.00	54.18	3,628.00	566.69	327.53	239.16	2.370	
8,500.00	5,519.00	5,479.00	5,479.00	42.12	219.16	90.17	54.18	3,628.00	563.90	324.68	239.22	2.357	
8,512.08	5,518.96	5,478.96	5,478.96	42.26	219.16	90.85	54.18	3,628.00	552.50	313.04	239.46	2.307	
8,600.00	5,518.50	5,478.50	5,478.50	43.29	219.14	90.70	54.18	3,628.00	470.59	228.97	241.62	1.948	Collision Risk Procedures Req.
8,700.00	5,517.97	5,477.97	5,477.97	44.46	219.12	90.54	54.18	3,628.00	380.71	135.44	245.27	1.552	Collision Risk Procedures Req.
8,800.00	5,517.45	5,477.45	5,477.45	45.63	219.10	90.38	54.18	3,628.00	297.35	46.44	250.91	1.185	Collision Avoidance Req.
8,900.00	5,516.92	5,476.92	5,476.92	46.82	219.08	90.22	54.18	3,628.00	227.81	-31.32	259.12	0.879	No-Go Zone - Stop Drilling
9,000.00	5,516.40	5,476.40	5,476.40	48.00	219.06	90.05	54.18	3,628.00	188.08	-78.63	266.71	0.705	No-Go Zone - Stop Drilling
9,032.56	5,516.23	5,476.23	5,476.23	48.39	219.05	90.00	54.18	3,628.00	185.23	-82.15	267.38	0.693	No-Go Zone - Stop Drilling, CC, ES
9,100.00	5,515.87	5,475.87	5,475.87	49.19	219.03	89.89	54.18	3,628.00	197.11	-67.57	264.68	0.745	No-Go Zone - Stop Drilling
9,200.00	5,515.35	5,475.35	5,475.35	50.38	219.01	89.73	54.18	3,628.00	249.66	-6.31	255.97	0.975	No-Go Zone - Stop Drilling
9,300.00	5,514.82	5,474.82	5,474.82	51.57	218.99	89.57	54.18	3,628.00	325.28	76.65	248.63	1.308	Collision Avoidance Req.
9,400.00	5,514.30	5,474.30	5,474.30	52.77	218.97	89.40	54.18	3,628.00	411.44	167.61	243.82	1.687	Collision Risk Procedures Req.
9,500.00	5,513.77	5,473.77	5,473.77	53.97	218.95	89.24	54.18	3,628.00	502.75	262.01	240.74	2.088	
9,600.00	5,513.25	5,473.25	5,473.25	55.17	218.93	89.08	54.18	3,628.00	596.85	358.13	238.72	2.500	
9,700.00	5,512.72	5,472.72	5,472.72	56.37	218.91	88.92	54.18	3,628.00	692.61	455.26	237.35	2.918	
9,800.00	5,512.20	5,472.20	5,472.20	57.58	218.89	88.75	54.18	3,628.00	789.42	553.03	236.39	3.340	
9,900.00	5,511.67	5,471.67	5,471.67	58.79	218.87	88.59	54.18	3,628.00	886.93	651.23	235.70	3.763	
10,000.00	5,511.15	5,471.15	5,471.15	59.99	218.85	88.43	54.18	3,628.00	984.95	749.75	235.20	4.188	
10,100.00	5,510.62	5,470.62	5,470.62	61.21	218.82	88.27	54.18	3,628.00	1,083.33	848.49	234.83	4.613	
10,200.00	5,510.10	5,470.10	5,470.10	62.42	218.80	88.10	54.18	3,628.00	1,181.98	947.42	234.56	5.039	
10,300.00	5,509.57	5,469.57	5,469.57	63.63	218.78	87.94	54.18	3,628.00	1,280.84	1,046.49	234.35	5.465	
10,400.00	5,509.05	5,469.05	5,469.05	64.85	218.76	87.78	54.18	3,628.00	1,379.86	1,145.67	234.19	5.892	
10,500.00	5,508.52	5,468.52	5,468.52	66.06	218.74	87.62	54.18	3,628.00	1,479.01	1,244.94	234.08	6.319	
10,600.00	5,508.00	5,468.00	5,468.00	67.28	218.72	87.46	54.18	3,628.00	1,578.27	1,344.28	233.99	6.745	
10,700.00	5,507.47	5,467.47	5,467.47	68.50	218.70	87.29	54.18	3,628.00	1,677.62	1,443.70	233.93	7.172	
10,800.00	5,506.95	5,466.95	5,466.95	69.72	218.68	87.13	54.18	3,628.00	1,777.04	1,543.16	233.88	7.598	
10,900.00	5,506.42	5,466.42	5,466.42	70.94	218.66	86.97	54.18	3,628.00	1,876.53	1,642.67	233.86	8.024	
11,000.00	5,505.90	5,465.90	5,465.90	72.16	218.64	86.81	54.18	3,628.00	1,976.06	1,742.22	233.84	8.450	
11,100.00	5,505.37	5,465.37	5,465.37	73.39	218.61	86.65	54.18	3,628.00	2,075.64	1,841.80	233.84	8.876	
11,200.00	5,504.85	5,464.85	5,464.85	74.61	218.59	86.48	54.18	3,628.00	2,175.26	1,941.41	233.85	9.302	
11,300.00	5,504.32	5,464.32	5,464.32	75.84	218.57	86.32	54.18	3,628.00	2,274.91	2,041.05	233.86	9.728	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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: 5662-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)			
6,900.00	5,519.00	5,475.00	5,475.00	24.67	219.00	90.00	57.85	3,777.62	2,289.53	2,057.58	231.95	9.871	
7,000.00	5,519.00	5,475.00	5,475.00	25.64	219.00	90.00	57.85	3,777.62	2,189.86	1,957.83	232.03	9.438	
7,100.00	5,519.00	5,475.00	5,475.00	26.64	219.00	90.00	57.85	3,777.62	2,090.22	1,858.11	232.12	9.005	
7,200.00	5,519.00	5,475.00	5,475.00	27.65	219.00	90.00	57.85	3,777.62	1,990.63	1,758.41	232.21	8.572	
7,300.00	5,519.00	5,475.00	5,475.00	28.69	219.00	90.00	57.85	3,777.62	1,891.07	1,658.75	232.32	8.140	
7,400.00	5,519.00	5,475.00	5,475.00	29.75	219.00	90.00	57.85	3,777.62	1,791.56	1,559.12	232.44	7.707	
7,500.00	5,519.00	5,475.00	5,475.00	30.82	219.00	90.00	57.85	3,777.62	1,692.11	1,459.53	232.58	7.275	
7,600.00	5,519.00	5,475.00	5,475.00	31.91	219.00	90.00	57.85	3,777.62	1,592.73	1,359.99	232.75	6.843	
7,700.00	5,519.00	5,475.00	5,475.00	33.01	219.00	90.00	57.85	3,777.62	1,493.43	1,260.50	232.93	6.411	
7,800.00	5,519.00	5,475.00	5,475.00	34.12	219.00	90.00	57.85	3,777.62	1,394.24	1,161.09	233.15	5.980	
7,900.00	5,519.00	5,475.00	5,475.00	35.24	219.00	90.00	57.85	3,777.62	1,295.16	1,061.76	233.41	5.549	
8,000.00	5,519.00	5,475.00	5,475.00	36.37	219.00	90.00	57.85	3,777.62	1,196.24	962.53	233.72	5.118	
8,100.00	5,519.00	5,475.00	5,475.00	37.50	219.00	90.00	57.85	3,777.62	1,097.52	863.42	234.10	4.688	
8,200.00	5,519.00	5,475.00	5,475.00	38.65	219.00	90.00	57.85	3,777.62	999.05	764.48	234.57	4.259	
8,300.00	5,519.00	5,475.00	5,475.00	39.80	219.00	90.00	57.85	3,777.62	900.92	665.75	235.17	3.831	
8,400.00	5,519.00	5,475.00	5,475.00	40.96	219.00	90.00	57.85	3,777.62	803.25	567.29	235.95	3.404	
8,497.04	5,519.00	5,475.00	5,475.00	42.09	219.00	90.00	57.85	3,777.62	709.09	472.12	236.96	2.992	
8,500.00	5,519.00	5,475.00	5,475.00	42.12	219.00	90.22	57.85	3,777.62	706.23	469.23	237.00	2.980	
8,512.08	5,518.96	5,474.96	5,474.96	42.26	219.00	91.10	57.85	3,777.62	694.56	457.41	237.15	2.929	
8,600.00	5,518.50	5,474.50	5,474.50	43.29	218.98	90.96	57.85	3,777.62	610.17	371.74	238.43	2.559	
8,700.00	5,517.97	5,473.97	5,473.97	44.46	218.96	90.79	57.85	3,777.62	515.62	275.13	240.48	2.144	
8,800.00	5,517.45	5,473.45	5,473.45	45.63	218.94	90.63	57.85	3,777.62	423.57	180.02	243.55	1.739	Collision Risk Procedures Req.
8,900.00	5,516.92	5,472.92	5,472.92	46.82	218.92	90.47	57.85	3,777.62	336.10	87.82	248.28	1.354	Collision Avoidance Req.
9,000.00	5,516.40	5,472.40	5,472.40	48.00	218.90	90.30	57.85	3,777.62	257.91	2.35	255.56	1.009	Collision Avoidance Req.
9,100.00	5,515.87	5,471.87	5,471.87	49.19	218.87	90.14	57.85	3,777.62	200.16	-64.72	264.88	0.756	No-Go Zone - Stop Drilling
9,182.20	5,515.44	5,471.44	5,471.44	50.17	218.86	90.00	57.85	3,777.62	182.48	-86.49	268.97	0.678	No-Go Zone - Stop Drilling, CC, ES
9,200.00	5,515.35	5,471.35	5,471.35	50.38	218.85	89.97	57.85	3,777.62	183.34	-85.41	268.75	0.682	No-Go Zone - Stop Drilling
9,300.00	5,514.82	5,470.82	5,470.82	51.57	218.83	89.81	57.85	3,777.62	217.17	-44.40	261.57	0.830	No-Go Zone - Stop Drilling
9,400.00	5,514.30	5,470.30	5,470.30	52.77	218.81	89.64	57.85	3,777.62	284.10	31.47	252.63	1.125	Collision Avoidance Req.
9,500.00	5,513.77	5,469.77	5,469.77	53.97	218.79	89.48	57.85	3,777.62	366.42	120.04	246.38	1.487	Collision Avoidance Req.
9,600.00	5,513.25	5,469.25	5,469.25	55.17	218.77	89.31	57.85	3,777.62	455.86	213.47	242.39	1.881	Collision Risk Procedures Req.
9,700.00	5,512.72	5,468.72	5,468.72	56.37	218.75	89.15	57.85	3,777.62	548.96	309.14	239.81	2.289	
9,800.00	5,512.20	5,468.20	5,468.20	57.58	218.73	88.98	57.85	3,777.62	644.13	406.04	238.09	2.705	
9,900.00	5,511.67	5,467.67	5,467.67	58.79	218.71	88.82	57.85	3,777.62	740.57	503.67	236.91	3.126	
10,000.00	5,511.15	5,467.15	5,467.15	59.99	218.69	88.65	57.85	3,777.62	837.85	601.78	236.07	3.549	
10,100.00	5,510.62	5,466.62	5,466.62	61.21	218.66	88.49	57.85	3,777.62	935.70	700.24	235.46	3.974	
10,200.00	5,510.10	5,466.10	5,466.10	62.42	218.64	88.32	57.85	3,777.62	1,033.96	798.95	235.02	4.400	
10,300.00	5,509.57	5,465.57	5,465.57	63.63	218.62	88.16	57.85	3,777.62	1,132.53	897.85	234.68	4.826	
10,400.00	5,509.05	5,465.05	5,465.05	64.85	218.60	87.99	57.85	3,777.62	1,231.33	996.89	234.43	5.252	
10,500.00	5,508.52	5,464.52	5,464.52	66.06	218.58	87.83	57.85	3,777.62	1,330.30	1,096.06	234.25	5.679	
10,600.00	5,508.00	5,464.00	5,464.00	67.28	218.56	87.66	57.85	3,777.62	1,429.42	1,195.32	234.10	6.106	
10,700.00	5,507.47	5,463.47	5,463.47	68.50	218.54	87.50	57.85	3,777.62	1,528.66	1,294.66	234.00	6.533	
10,800.00	5,506.95	5,462.95	5,462.95	69.72	218.52	87.34	57.85	3,777.62	1,627.98	1,394.06	233.92	6.960	
10,900.00	5,506.42	5,462.42	5,462.42	70.94	218.50	87.17	57.85	3,777.62	1,727.39	1,493.52	233.86	7.386	
11,000.00	5,505.90	5,461.90	5,461.90	72.16	218.48	87.01	57.85	3,777.62	1,826.86	1,593.03	233.83	7.813	
11,100.00	5,505.37	5,461.37	5,461.37	73.39	218.45	86.84	57.85	3,777.62	1,926.38	1,692.58	233.81	8.239	
11,200.00	5,504.85	5,460.85	5,460.85	74.61	218.43	86.68	57.85	3,777.62	2,025.95	1,792.16	233.79	8.666	
11,300.00	5,504.32	5,460.32	5,460.32	75.84	218.41	86.51	57.85	3,777.62	2,125.57	1,891.77	233.79	9.092	
11,400.00	5,503.80	5,459.80	5,459.80	77.06	218.39	86.35	57.85	3,777.62	2,225.21	1,991.41	233.80	9.517	
11,500.00	5,503.27	5,459.27	5,459.27	78.29	218.37	86.19	57.85	3,777.62	2,324.89	2,091.07	233.82	9.943	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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:	0.00 usft
Survey Program: 6277-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		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,600.00	5,519.00	5,495.00	5,495.00	21.95	219.80	-90.00	1,149.32	3,285.95	2,286.97	2,055.44	231.54	9.877	
6,700.00	5,519.00	5,495.00	5,495.00	22.82	219.80	-90.00	1,149.32	3,285.95	2,195.63	1,963.72	231.91	9.468	
6,800.00	5,519.00	5,495.00	5,495.00	23.73	219.80	-90.00	1,149.32	3,285.95	2,105.07	1,872.71	232.36	9.060	
6,900.00	5,519.00	5,495.00	5,495.00	24.67	219.80	-90.00	1,149.32	3,285.95	2,015.41	1,782.51	232.90	8.654	
7,000.00	5,519.00	5,495.00	5,495.00	25.64	219.80	-90.00	1,149.32	3,285.95	1,926.77	1,693.23	233.54	8.250	
7,100.00	5,519.00	5,495.00	5,495.00	26.64	219.80	-90.00	1,149.32	3,285.95	1,839.29	1,605.00	234.28	7.851	
7,200.00	5,519.00	5,495.00	5,495.00	27.65	219.80	-90.00	1,149.32	3,285.95	1,753.15	1,517.99	235.15	7.455	
7,300.00	5,519.00	5,495.00	5,495.00	28.69	219.80	-90.00	1,149.32	3,285.95	1,668.55	1,432.40	236.16	7.065	
7,400.00	5,519.00	5,495.00	5,495.00	29.75	219.80	-90.00	1,149.32	3,285.95	1,585.75	1,348.44	237.31	6.682	
7,500.00	5,519.00	5,495.00	5,495.00	30.82	219.80	-90.00	1,149.32	3,285.95	1,505.05	1,266.42	238.63	6.307	
7,600.00	5,519.00	5,495.00	5,495.00	31.91	219.80	-90.00	1,149.32	3,285.95	1,426.78	1,186.66	240.12	5.942	
7,700.00	5,519.00	5,495.00	5,495.00	33.01	219.80	-90.00	1,149.32	3,285.95	1,351.39	1,109.59	241.80	5.589	
7,800.00	5,519.00	5,495.00	5,495.00	34.12	219.80	-90.00	1,149.32	3,285.95	1,279.38	1,035.71	243.67	5.250	
7,900.00	5,519.00	5,495.00	5,495.00	35.24	219.80	-90.00	1,149.32	3,285.95	1,211.34	965.60	245.74	4.929	
8,000.00	5,519.00	5,495.00	5,495.00	36.37	219.80	-90.00	1,149.32	3,285.95	1,148.00	900.00	248.00	4.629	
8,100.00	5,519.00	5,495.00	5,495.00	37.50	219.80	-90.00	1,149.32	3,285.95	1,090.16	839.73	250.42	4.353	
8,200.00	5,519.00	5,495.00	5,495.00	38.65	219.80	-90.00	1,149.32	3,285.95	1,038.74	785.78	252.96	4.106	
8,300.00	5,519.00	5,495.00	5,495.00	39.80	219.80	-90.00	1,149.32	3,285.95	994.75	739.20	255.56	3.892	
8,400.00	5,519.00	5,495.00	5,495.00	40.96	219.80	-90.00	1,149.32	3,285.95	959.21	701.11	258.10	3.716	
8,497.04	5,519.00	5,495.00	5,495.00	42.09	219.80	-90.00	1,149.32	3,285.95	933.70	673.30	260.40	3.586	
8,500.00	5,519.00	5,495.00	5,495.00	42.12	219.80	-90.01	1,149.32	3,285.95	933.07	672.60	260.47	3.582	
8,512.08	5,518.96	5,494.96	5,494.96	42.26	219.80	-90.06	1,149.32	3,285.95	930.59	669.86	260.74	3.569	
8,600.00	5,518.50	5,494.50	5,494.50	43.29	219.78	-90.03	1,149.32	3,285.95	917.15	654.63	262.52	3.494	
8,697.27	5,517.99	5,493.99	5,493.99	44.43	219.76	-90.00	1,149.32	3,285.95	911.98	647.86	264.12	3.453 CC	
8,700.00	5,517.97	5,493.97	5,493.97	44.46	219.76	-90.00	1,149.32	3,285.95	911.99	647.83	264.16	3.452 ES, SF	
8,800.00	5,517.45	5,493.45	5,493.45	45.63	219.74	-89.97	1,149.32	3,285.95	917.75	652.45	265.30	3.459	
8,900.00	5,516.92	5,492.92	5,492.92	46.82	219.72	-89.93	1,149.32	3,285.95	934.24	668.31	265.93	3.513	
9,000.00	5,516.40	5,492.40	5,492.40	48.00	219.70	-89.90	1,149.32	3,285.95	960.91	694.83	266.08	3.611	
9,100.00	5,515.87	5,491.87	5,491.87	49.19	219.67	-89.87	1,149.32	3,285.95	996.94	731.13	265.81	3.751	
9,200.00	5,515.35	5,491.35	5,491.35	50.38	219.65	-89.83	1,149.32	3,285.95	1,041.36	776.15	265.21	3.927	
9,300.00	5,514.82	5,490.82	5,490.82	51.57	219.63	-89.80	1,149.32	3,285.95	1,093.15	828.77	264.39	4.135	
9,400.00	5,514.30	5,490.30	5,490.30	52.77	219.61	-89.77	1,149.32	3,285.95	1,151.31	887.90	263.41	4.371	
9,500.00	5,513.77	5,489.77	5,489.77	53.97	219.59	-89.74	1,149.32	3,285.95	1,214.93	952.58	262.35	4.631	
9,600.00	5,513.25	5,489.25	5,489.25	55.17	219.57	-89.70	1,149.32	3,285.95	1,283.20	1,021.94	261.26	4.912	
9,700.00	5,512.72	5,488.72	5,488.72	56.37	219.55	-89.67	1,149.32	3,285.95	1,355.41	1,095.23	260.18	5.209	
9,800.00	5,512.20	5,488.20	5,488.20	57.58	219.53	-89.64	1,149.32	3,285.95	1,430.97	1,171.84	259.13	5.522	
9,900.00	5,511.67	5,487.67	5,487.67	58.79	219.51	-89.60	1,149.32	3,285.95	1,509.38	1,251.26	258.12	5.848	
10,000.00	5,511.15	5,487.15	5,487.15	59.99	219.49	-89.57	1,149.32	3,285.95	1,590.21	1,333.04	257.17	6.184	
10,100.00	5,510.62	5,486.62	5,486.62	61.21	219.46	-89.54	1,149.32	3,285.95	1,673.11	1,416.84	256.27	6.529	
10,200.00	5,510.10	5,486.10	5,486.10	62.42	219.44	-89.50	1,149.32	3,285.95	1,757.79	1,502.37	255.43	6.882	
10,300.00	5,509.57	5,485.57	5,485.57	63.63	219.42	-89.47	1,149.32	3,285.95	1,844.01	1,589.37	254.64	7.242	
10,400.00	5,509.05	5,485.05	5,485.05	64.85	219.40	-89.44	1,149.32	3,285.95	1,931.56	1,677.65	253.91	7.607	
10,500.00	5,508.52	5,484.52	5,484.52	66.06	219.38	-89.41	1,149.32	3,285.95	2,020.26	1,767.03	253.23	7.978	
10,600.00	5,508.00	5,484.00	5,484.00	67.28	219.36	-89.37	1,149.32	3,285.95	2,109.97	1,857.37	252.60	8.353	
10,700.00	5,507.47	5,483.47	5,483.47	68.50	219.34	-89.34	1,149.32	3,285.95	2,200.57	1,948.56	252.02	8.732	
10,800.00	5,506.95	5,482.95	5,482.95	69.72	219.32	-89.31	1,149.32	3,285.95	2,291.95	2,040.48	251.47	9.114	
10,900.00	5,506.42	5,482.42	5,482.42	70.94	219.30	-89.27	1,149.32	3,285.95	2,384.03	2,133.06	250.97	9.499	
11,000.00	5,505.90	5,481.90	5,481.90	72.16	219.28	-89.24	1,149.32	3,285.95	2,476.72	2,226.22	250.50	9.887	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	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)			Warning
6,400.00	5,519.00	5,482.00	5,482.00	20.35	219.28	-90.00	382.04	3,295.47	2,306.63	2,075.55	231.08	9.982	
6,500.00	5,519.00	5,482.00	5,482.00	21.12	219.28	-90.00	382.04	3,295.47	2,206.83	1,975.75	231.08	9.550	
6,600.00	5,519.00	5,482.00	5,482.00	21.95	219.28	-90.00	382.04	3,295.47	2,107.06	1,875.97	231.09	9.118	
6,700.00	5,519.00	5,482.00	5,482.00	22.82	219.28	-90.00	382.04	3,295.47	2,007.31	1,776.21	231.10	8.686	
6,800.00	5,519.00	5,482.00	5,482.00	23.73	219.28	-90.00	382.04	3,295.47	1,907.58	1,676.47	231.11	8.254	
6,900.00	5,519.00	5,482.00	5,482.00	24.67	219.28	-90.00	382.04	3,295.47	1,807.88	1,576.77	231.12	7.822	
7,000.00	5,519.00	5,482.00	5,482.00	25.64	219.28	-90.00	382.04	3,295.47	1,708.22	1,477.09	231.14	7.391	
7,100.00	5,519.00	5,482.00	5,482.00	26.64	219.28	-90.00	382.04	3,295.47	1,608.60	1,377.45	231.16	6.959	
7,200.00	5,519.00	5,482.00	5,482.00	27.65	219.28	-90.00	382.04	3,295.47	1,509.04	1,277.85	231.18	6.527	
7,300.00	5,519.00	5,482.00	5,482.00	28.69	219.28	-90.00	382.04	3,295.47	1,409.53	1,178.31	231.22	6.096	
7,400.00	5,519.00	5,482.00	5,482.00	29.75	219.28	-90.00	382.04	3,295.47	1,310.10	1,078.84	231.26	5.665	
7,500.00	5,519.00	5,482.00	5,482.00	30.82	219.28	-90.00	382.04	3,295.47	1,210.76	979.44	231.32	5.234	
7,600.00	5,519.00	5,482.00	5,482.00	31.91	219.28	-90.00	382.04	3,295.47	1,111.54	880.14	231.40	4.804	
7,700.00	5,519.00	5,482.00	5,482.00	33.01	219.28	-90.00	382.04	3,295.47	1,012.47	780.96	231.51	4.373	
7,800.00	5,519.00	5,482.00	5,482.00	34.12	219.28	-90.00	382.04	3,295.47	913.61	681.94	231.68	3.943	
7,900.00	5,519.00	5,482.00	5,482.00	35.24	219.28	-90.00	382.04	3,295.47	815.03	583.11	231.92	3.514	
8,000.00	5,519.00	5,482.00	5,482.00	36.37	219.28	-90.00	382.04	3,295.47	716.83	484.55	232.29	3.086	
8,100.00	5,519.00	5,482.00	5,482.00	37.50	219.28	-90.00	382.04	3,295.47	619.22	386.35	232.87	2.659	
8,200.00	5,519.00	5,482.00	5,482.00	38.65	219.28	-90.00	382.04	3,295.47	522.51	288.69	233.82	2.235	
8,300.00	5,519.00	5,482.00	5,482.00	39.80	219.28	-90.00	382.04	3,295.47	427.32	191.84	235.47	1.815	Collision Risk Procedures Req.
8,400.00	5,519.00	5,482.00	5,482.00	40.96	219.28	-90.00	382.04	3,295.47	334.93	96.49	238.45	1.405	Collision Avoidance Req.
8,497.04	5,519.00	5,482.00	5,482.00	42.09	219.28	-90.00	382.04	3,295.47	250.93	7.13	243.81	1.029	Collision Avoidance Req.
8,500.00	5,519.00	5,482.00	5,482.00	42.12	219.28	-90.08	382.04	3,295.47	248.52	4.49	244.03	1.018	Collision Avoidance Req.
8,512.08	5,518.96	5,481.96	5,481.96	42.26	219.28	-90.40	382.04	3,295.47	238.80	-6.17	244.97	0.975	No-Go Zone - Stop Drilling
8,600.00	5,518.50	5,481.50	5,481.50	43.29	219.26	-90.21	382.04	3,295.47	177.05	-76.93	253.98	0.697	No-Go Zone - Stop Drilling
8,700.00	5,517.97	5,480.97	5,480.97	44.46	219.24	-90.00	382.04	3,295.47	144.67	-118.92	263.59	0.549	No-Go Zone - Stop Drilling
8,702.09	5,517.96	5,480.96	5,480.96	44.48	219.24	-90.00	382.04	3,295.47	144.65	-119.00	263.65	0.549	No-Go Zone - Stop Drilling, CC, ES
8,800.00	5,517.45	5,480.45	5,480.45	45.63	219.22	-89.80	382.04	3,295.47	174.67	-84.23	258.90	0.675	No-Go Zone - Stop Drilling
8,900.00	5,516.92	5,479.92	5,479.92	46.82	219.20	-89.59	382.04	3,295.47	245.14	-5.27	250.41	0.979	No-Go Zone - Stop Drilling
9,000.00	5,516.40	5,479.40	5,479.40	48.00	219.18	-89.38	382.04	3,295.47	331.17	86.25	244.92	1.352	Collision Avoidance Req.
9,100.00	5,515.87	5,478.87	5,478.87	49.19	219.15	-89.17	382.04	3,295.47	423.38	181.74	241.64	1.752	Collision Risk Procedures Req.
9,200.00	5,515.35	5,478.35	5,478.35	50.38	219.13	-88.96	382.04	3,295.47	518.49	278.91	239.58	2.164	
9,300.00	5,514.82	5,477.82	5,477.82	51.57	219.11	-88.76	382.04	3,295.47	615.15	376.93	238.22	2.582	
9,400.00	5,514.30	5,477.30	5,477.30	52.77	219.09	-88.55	382.04	3,295.47	712.73	475.46	237.28	3.004	
9,500.00	5,513.77	5,476.77	5,476.77	53.97	219.07	-88.34	382.04	3,295.47	810.90	574.30	236.60	3.427	
9,600.00	5,513.25	5,476.25	5,476.25	55.17	219.05	-88.13	382.04	3,295.47	909.47	673.38	236.10	3.852	
9,700.00	5,512.72	5,475.72	5,475.72	56.37	219.03	-87.93	382.04	3,295.47	1,008.33	772.61	235.72	4.278	
9,800.00	5,512.20	5,475.20	5,475.20	57.58	219.01	-87.72	382.04	3,295.47	1,107.38	871.96	235.43	4.704	
9,900.00	5,511.67	5,474.67	5,474.67	58.79	218.99	-87.51	382.04	3,295.47	1,206.60	971.40	235.20	5.130	
10,000.00	5,511.15	5,474.15	5,474.15	59.99	218.97	-87.30	382.04	3,295.47	1,305.93	1,070.91	235.02	5.557	
10,100.00	5,510.62	5,473.62	5,473.62	61.21	218.94	-87.10	382.04	3,295.47	1,405.35	1,170.48	234.88	5.983	
10,200.00	5,510.10	5,473.10	5,473.10	62.42	218.92	-86.89	382.04	3,295.47	1,504.86	1,270.09	234.77	6.410	
10,300.00	5,509.57	5,472.57	5,472.57	63.63	218.90	-86.68	382.04	3,295.47	1,604.42	1,369.74	234.68	6.837	
10,400.00	5,509.05	5,472.05	5,472.05	64.85	218.88	-86.47	382.04	3,295.47	1,704.04	1,469.43	234.61	7.263	
10,500.00	5,508.52	5,471.52	5,471.52	66.06	218.86	-86.27	382.04	3,295.47	1,803.69	1,569.14	234.56	7.690	
10,600.00	5,508.00	5,471.00	5,471.00	67.28	218.84	-86.06	382.04	3,295.47	1,903.39	1,668.87	234.52	8.116	
10,700.00	5,507.47	5,470.47	5,470.47	68.50	218.82	-85.85	382.04	3,295.47	2,003.11	1,768.62	234.49	8.542	
10,800.00	5,506.95	5,469.95	5,469.95	69.72	218.80	-85.65	382.04	3,295.47	2,102.86	1,868.39	234.47	8.969	
10,900.00	5,506.42	5,469.42	5,469.42	70.94	218.78	-85.44	382.04	3,295.47	2,202.63	1,968.17	234.46	9.394	
11,000.00	5,505.90	5,468.90	5,468.90	72.16	218.76	-85.23	382.04	3,295.47	2,302.43	2,067.97	234.46	9.820	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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: 6302-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		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,300.00	5,519.00	5,515.00	5,515.00	39.80	220.60	-90.00	1,413.37	4,932.75	2,354.59	2,113.39	241.20	9.762	
8,400.00	5,519.00	5,515.00	5,515.00	40.96	220.60	-90.00	1,413.37	4,932.75	2,268.25	2,025.88	242.37	9.359	
8,497.04	5,519.00	5,515.00	5,515.00	42.09	220.60	-90.00	1,413.37	4,932.75	2,185.58	1,941.98	243.61	8.972	
8,500.00	5,519.00	5,515.00	5,515.00	42.12	220.60	-90.09	1,413.37	4,932.75	2,183.08	1,939.44	243.65	8.960	
8,512.08	5,518.96	5,514.96	5,514.96	42.26	220.60	-90.47	1,413.37	4,932.75	2,172.88	1,929.07	243.81	8.912	
8,600.00	5,518.50	5,514.50	5,514.50	43.29	220.58	-90.45	1,413.37	4,932.75	2,099.22	1,854.20	245.01	8.568	
8,700.00	5,517.97	5,513.97	5,513.97	44.46	220.56	-90.42	1,413.37	4,932.75	2,016.83	1,770.32	246.50	8.182	
8,800.00	5,517.45	5,513.45	5,513.45	45.63	220.54	-90.40	1,413.37	4,932.75	1,936.10	1,687.97	248.12	7.803	
8,900.00	5,516.92	5,512.92	5,512.92	46.82	220.52	-90.37	1,413.37	4,932.75	1,857.24	1,607.36	249.88	7.432	
9,000.00	5,516.40	5,512.40	5,512.40	48.00	220.50	-90.35	1,413.37	4,932.75	1,780.51	1,528.72	251.79	7.072	
9,100.00	5,515.87	5,511.87	5,511.87	49.19	220.47	-90.32	1,413.37	4,932.75	1,706.19	1,452.35	253.84	6.722	
9,200.00	5,515.35	5,511.35	5,511.35	50.38	220.45	-90.30	1,413.37	4,932.75	1,634.61	1,378.57	256.04	6.384	
9,300.00	5,514.82	5,510.82	5,510.82	51.57	220.43	-90.27	1,413.37	4,932.75	1,566.15	1,307.75	258.40	6.061	
9,400.00	5,514.30	5,510.30	5,510.30	52.77	220.41	-90.24	1,413.37	4,932.75	1,501.23	1,240.32	260.91	5.754	
9,500.00	5,513.77	5,509.77	5,509.77	53.97	220.39	-90.22	1,413.37	4,932.75	1,440.33	1,176.79	263.54	5.465	
9,600.00	5,513.25	5,509.25	5,509.25	55.17	220.37	-90.19	1,413.37	4,932.75	1,383.99	1,117.71	266.28	5.197	
9,700.00	5,512.72	5,508.72	5,508.72	56.37	220.35	-90.17	1,413.37	4,932.75	1,332.78	1,063.69	269.09	4.953	
9,800.00	5,512.20	5,508.20	5,508.20	57.58	220.33	-90.14	1,413.37	4,932.75	1,287.31	1,015.39	271.92	4.734	
9,900.00	5,511.67	5,507.67	5,507.67	58.79	220.31	-90.11	1,413.37	4,932.75	1,248.21	973.51	274.70	4.544	
10,000.00	5,511.15	5,507.15	5,507.15	59.99	220.29	-90.09	1,413.37	4,932.75	1,216.10	938.74	277.35	4.385	
10,100.00	5,510.62	5,506.62	5,506.62	61.21	220.26	-90.06	1,413.37	4,932.75	1,191.54	911.74	279.79	4.259	
10,200.00	5,510.10	5,506.10	5,506.10	62.42	220.24	-90.04	1,413.37	4,932.75	1,175.00	893.06	281.94	4.168	
10,300.00	5,509.57	5,505.57	5,505.57	63.63	220.22	-90.01	1,413.37	4,932.75	1,166.83	883.12	283.71	4.113	
10,345.68	5,509.33	5,505.33	5,505.33	64.19	220.21	-90.00	1,413.37	4,932.75	1,165.93	881.56	284.37	4.100 CC, ES	
10,400.00	5,509.05	5,505.05	5,505.05	64.85	220.20	-89.99	1,413.37	4,932.75	1,167.20	882.16	285.04	4.095 SF	
10,500.00	5,508.52	5,504.52	5,504.52	66.06	220.18	-89.96	1,413.37	4,932.75	1,176.10	890.19	285.91	4.113	
10,600.00	5,508.00	5,504.00	5,504.00	67.28	220.16	-89.93	1,413.37	4,932.75	1,193.35	907.02	286.33	4.168	
10,700.00	5,507.47	5,503.47	5,503.47	68.50	220.14	-89.91	1,413.37	4,932.75	1,218.58	932.27	286.31	4.256	
10,800.00	5,506.95	5,502.95	5,502.95	69.72	220.12	-89.88	1,413.37	4,932.75	1,251.32	965.41	285.91	4.377	
10,900.00	5,506.42	5,502.42	5,502.42	70.94	220.10	-89.86	1,413.37	4,932.75	1,290.99	1,005.79	285.20	4.527	
11,000.00	5,505.90	5,501.90	5,501.90	72.16	220.08	-89.83	1,413.37	4,932.75	1,336.98	1,052.75	284.24	4.704	
11,100.00	5,505.37	5,501.37	5,501.37	73.39	220.05	-89.81	1,413.37	4,932.75	1,388.66	1,105.57	283.09	4.905	
11,200.00	5,504.85	5,500.85	5,500.85	74.61	220.03	-89.78	1,413.37	4,932.75	1,445.42	1,163.60	281.82	5.129	
11,300.00	5,504.32	5,500.32	5,500.32	75.84	220.01	-89.75	1,413.37	4,932.75	1,506.68	1,226.20	280.48	5.372	
11,400.00	5,503.80	5,499.80	5,499.80	77.06	219.99	-89.73	1,413.37	4,932.75	1,571.93	1,292.82	279.11	5.632	
11,500.00	5,503.27	5,499.27	5,499.27	78.29	219.97	-89.70	1,413.37	4,932.75	1,640.67	1,362.95	277.73	5.908	
11,600.00	5,502.75	5,498.75	5,498.75	79.51	219.95	-89.68	1,413.37	4,932.75	1,712.50	1,436.14	276.36	6.197	
11,700.00	5,502.22	5,498.22	5,498.22	80.74	219.93	-89.65	1,413.37	4,932.75	1,787.04	1,512.01	275.04	6.497	
11,800.00	5,501.70	5,497.70	5,497.70	81.97	219.91	-89.62	1,413.37	4,932.75	1,863.97	1,590.21	273.76	6.809	
11,900.00	5,501.17	5,497.17	5,497.17	83.20	219.89	-89.60	1,413.37	4,932.75	1,943.00	1,670.47	272.53	7.130	
12,000.00	5,500.65	5,496.65	5,496.65	84.43	219.87	-89.57	1,413.37	4,932.75	2,023.88	1,752.53	271.35	7.458	
12,100.00	5,500.12	5,496.12	5,496.12	85.66	219.84	-89.55	1,413.37	4,932.75	2,106.41	1,836.17	270.24	7.795	
12,200.00	5,499.60	5,495.60	5,495.60	86.89	219.82	-89.52	1,413.37	4,932.75	2,190.39	1,921.21	269.18	8.137	
12,300.00	5,499.07	5,495.07	5,495.07	88.12	219.80	-89.50	1,413.37	4,932.75	2,275.67	2,007.48	268.18	8.486	
12,400.00	5,498.55	5,494.55	5,494.55	89.35	219.78	-89.47	1,413.37	4,932.75	2,362.10	2,094.86	267.24	8.839	
12,500.00	5,498.02	5,494.02	5,494.02	90.59	219.76	-89.44	1,413.37	4,932.75	2,449.56	2,183.22	266.35	9.197	
12,600.00	5,497.50	5,493.50	5,493.50	91.82	219.74	-89.42	1,413.37	4,932.75	2,537.95	2,272.45	265.50	9.559	
12,700.00	5,496.97	5,492.97	5,492.97	93.05	219.72	-89.39	1,413.37	4,932.75	2,627.18	2,362.47	264.71	9.925	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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
9,700.00	5,512.72	8,411.44	5,521.26	56.37	62.52	-158.04	276.19	6,275.36	1,981.81	1,905.40	76.41	25.937	
9,800.00	5,512.20	8,412.19	5,521.27	57.58	62.53	-158.77	275.44	6,275.38	1,881.85	1,805.33	76.52	24.593	
9,900.00	5,511.67	8,412.97	5,521.27	58.79	62.55	-159.54	274.66	6,275.39	1,781.90	1,705.26	76.64	23.252	
10,000.00	5,511.15	8,413.77	5,521.28	59.99	62.56	-160.33	273.86	6,275.40	1,681.95	1,605.19	76.76	21.913	
10,100.00	5,510.62	8,414.59	5,521.28	61.21	62.58	-161.16	273.04	6,275.42	1,582.00	1,505.12	76.89	20.576	
10,200.00	5,510.10	8,415.43	5,521.29	62.42	62.59	-162.02	272.20	6,275.43	1,482.06	1,405.04	77.02	19.242	
10,300.00	5,509.57	8,416.30	5,521.30	63.63	62.61	-162.90	271.33	6,275.45	1,382.13	1,304.96	77.17	17.910	
10,400.00	5,509.05	8,417.19	5,521.31	64.85	62.62	-163.83	270.44	6,275.46	1,282.21	1,204.88	77.33	16.581	
10,500.00	5,508.52	8,418.11	5,521.31	66.06	62.64	-164.79	269.52	6,275.48	1,182.31	1,104.80	77.50	15.255	
10,600.00	5,508.00	8,419.06	5,521.32	67.28	62.65	-165.79	268.57	6,275.49	1,082.41	1,004.72	77.69	13.932	
10,700.00	5,507.47	8,420.04	5,521.33	68.50	62.67	-166.82	267.59	6,275.51	982.54	904.64	77.91	12.612	
10,800.00	5,506.95	8,421.04	5,521.34	69.72	62.69	-167.90	266.59	6,275.53	882.70	804.55	78.15	11.295	
10,900.00	5,506.42	8,422.08	5,521.35	70.94	62.71	-169.02	265.55	6,275.55	782.90	704.46	78.44	9.981	
11,000.00	5,505.90	8,423.15	5,521.36	72.16	62.73	-170.18	264.48	6,275.57	683.15	604.36	78.79	8.671	
11,100.00	5,505.37	8,424.25	5,521.37	73.39	62.74	-171.39	263.38	6,275.59	583.49	504.25	79.23	7.364	
11,200.00	5,504.85	8,425.39	5,521.38	74.61	62.76	-172.65	262.24	6,275.61	483.96	404.13	79.83	6.062	
11,300.00	5,504.32	8,426.57	5,521.39	75.84	62.78	-173.96	261.06	6,275.63	384.67	303.97	80.70	4.767	
11,400.00	5,503.80	8,427.79	5,521.40	77.06	62.81	-175.31	259.84	6,275.66	285.87	203.76	82.11	3.481	
11,500.00	5,503.27	8,429.05	5,521.41	78.29	62.83	-176.72	258.58	6,275.68	188.35	103.52	84.82	2.220	
11,600.00	5,502.75	8,430.36	5,521.43	79.51	62.85	-178.18	257.27	6,275.71	96.02	5.45	90.57	1.060	Collision Avoidance Req.
11,700.00	5,502.22	8,431.71	5,521.44	80.74	62.87	-179.70	255.92	6,275.73	54.44	-27.53	81.97	0.664	No-Go Zone - Stop Drilling, CC, ES
11,700.38	5,502.22	8,431.72	5,521.44	80.75	62.87	-179.70	255.92	6,275.73	54.57	-27.43	82.00	0.665	No-Go Zone - Stop Drilling
11,800.00	5,501.70	8,433.11	5,521.46	81.97	62.90	-178.73	254.52	6,275.76	129.24	51.06	78.17	1.653	Collision Risk Procedures Req.
11,900.00	5,501.17	8,434.56	5,521.47	83.20	62.92	-177.11	253.07	6,275.79	224.58	148.54	76.05	2.953	
12,000.00	5,500.65	8,436.07	5,521.49	84.43	62.95	-175.43	251.56	6,275.82	322.75	246.78	75.97	4.248	
12,100.00	5,500.12	8,437.64	5,521.50	85.66	62.98	-173.69	250.00	6,275.85	421.78	345.52	76.26	5.531	
12,200.00	5,499.60	8,439.27	5,521.52	86.89	63.01	-171.90	248.37	6,275.89	521.17	444.59	76.58	6.805	
12,300.00	5,499.07	8,440.96	5,521.54	88.12	63.04	-170.06	246.68	6,275.93	620.75	543.87	76.88	8.074	
12,400.00	5,498.55	8,442.72	5,521.56	89.35	63.07	-168.17	244.92	6,275.96	720.45	643.29	77.16	9.338	
12,500.00	5,498.02	8,444.56	5,521.58	90.59	63.10	-166.22	243.08	6,276.00	820.21	742.81	77.41	10.596	
12,600.00	5,497.50	8,446.47	5,521.61	91.82	63.13	-164.23	241.17	6,276.05	920.03	842.39	77.64	11.850	
12,700.00	5,496.97	8,448.47	5,521.63	93.05	63.17	-162.19	239.17	6,276.09	1,019.87	942.02	77.85	13.100	
12,800.00	5,496.45	8,450.55	5,521.66	94.29	63.20	-160.12	237.09	6,276.14	1,119.74	1,041.69	78.06	14.345	
12,900.00	5,495.92	8,452.73	5,521.69	95.52	63.24	-158.01	234.91	6,276.19	1,219.63	1,141.38	78.26	15.585	
13,000.00	5,495.40	8,455.01	5,521.72	96.76	63.28	-155.87	232.63	6,276.25	1,319.54	1,241.09	78.45	16.820	
13,100.00	5,494.87	8,457.40	5,521.75	97.99	63.32	-153.70	230.24	6,276.31	1,419.45	1,340.81	78.64	18.051	
13,200.00	5,494.35	8,459.91	5,521.78	99.23	63.36	-151.52	227.73	6,276.37	1,519.37	1,440.55	78.82	19.276	
13,300.00	5,493.82	8,462.54	5,521.82	100.46	63.41	-149.32	225.10	6,276.43	1,619.30	1,540.30	79.00	20.496	
13,400.00	5,493.30	8,465.31	5,521.86	101.70	63.46	-147.12	222.33	6,276.51	1,719.24	1,640.05	79.19	21.711	
13,500.00	5,492.77	8,468.23	5,521.90	102.94	63.51	-144.91	219.42	6,276.58	1,819.17	1,739.81	79.37	22.921	
13,600.00	5,492.25	8,471.30	5,521.95	104.17	63.56	-142.72	216.35	6,276.67	1,919.12	1,839.56	79.55	24.124	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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													Offset Site Error: 0.00 usft
Survey Program: 350-MWD													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)			
3,600.00	3,594.26	8,422.99	5,628.93	13.13	56.56	-77.07	155.23	-320.92	1,999.71	1,962.19	37.52	53.298	
3,700.00	3,694.07	8,420.21	5,628.89	13.48	56.52	-75.90	158.01	-321.03	1,899.89	1,862.24	37.65	50.458	
3,800.00	3,793.88	8,417.41	5,628.85	13.83	56.47	-74.69	160.80	-321.13	1,800.09	1,762.30	37.79	47.632	
3,900.00	3,893.68	8,414.59	5,628.80	14.19	56.42	-73.45	163.62	-321.24	1,700.31	1,662.38	37.94	44.820	
4,000.00	3,993.49	8,411.75	5,628.76	14.54	56.37	-72.17	166.46	-321.35	1,600.55	1,562.46	38.09	42.023	
4,100.00	4,093.30	8,408.89	5,628.72	14.90	56.32	-70.86	169.32	-321.45	1,500.82	1,462.57	38.25	39.242	
4,200.00	4,193.11	8,406.01	5,628.68	15.25	56.28	-69.50	172.20	-321.56	1,401.12	1,362.70	38.41	36.475	
4,300.00	4,292.91	8,403.11	5,628.63	15.61	56.23	-68.11	175.10	-321.67	1,301.46	1,262.86	38.59	33.724	
4,400.00	4,392.72	8,400.18	5,628.59	15.96	56.18	-66.68	178.02	-321.79	1,201.84	1,163.06	38.78	30.989	
4,500.00	4,492.53	8,397.24	5,628.55	16.32	56.13	-65.22	180.96	-321.90	1,102.29	1,063.30	38.99	28.269	
4,600.00	4,592.34	8,394.27	5,628.50	16.67	56.08	-63.72	183.93	-322.01	1,002.82	963.59	39.22	25.566	
4,700.00	4,692.14	8,391.28	5,628.46	17.03	56.03	-62.18	186.92	-322.13	903.45	863.96	39.49	22.878	
4,780.22	4,772.21	8,388.87	5,628.43	17.30	55.99	-60.92	189.33	-322.22	823.85	784.11	39.74	20.733	
4,800.00	4,791.96	8,388.28	5,628.42	17.36	55.98	-82.65	189.92	-322.24	804.27	764.47	39.80	20.205	
4,850.00	4,841.89	8,386.86	5,628.40	17.49	55.95	-149.17	191.33	-322.30	755.27	715.24	40.03	18.867	
4,900.00	4,891.64	8,385.56	5,628.38	17.48	55.93	-166.72	192.63	-322.35	707.29	666.93	40.36	17.526	
4,950.00	4,940.96	8,384.37	5,628.36	17.41	55.91	-172.19	193.82	-322.40	660.80	619.98	40.82	16.186	
5,000.00	4,989.60	8,383.31	5,628.35	17.33	55.89	-174.65	194.88	-322.44	616.40	574.90	41.50	14.854	
5,050.00	5,037.34	8,382.38	5,628.34	17.24	55.88	-176.01	195.81	-322.47	574.80	532.35	42.45	13.541	
5,100.00	5,083.94	8,381.59	5,628.33	17.14	55.86	-176.86	196.60	-322.50	536.90	493.12	43.78	12.264	
5,150.00	5,129.18	8,380.94	5,628.32	17.05	55.85	-177.46	197.25	-322.53	503.72	458.15	45.57	11.053	
5,200.00	5,172.82	8,380.43	5,628.31	16.95	55.84	-177.90	197.76	-322.55	476.43	428.56	47.87	9.953	
5,250.00	5,214.67	8,380.07	5,628.30	16.87	55.84	-178.27	198.11	-322.56	456.24	405.61	50.63	9.011	
5,300.00	5,254.52	8,379.87	5,628.30	16.79	55.83	-178.58	198.32	-322.57	444.22	390.53	53.69	8.274	
5,350.00	5,292.16	8,379.81	5,628.30	16.72	55.83	-178.87	198.38	-322.57	441.10	384.32	56.77	7.769 CC	
5,350.01	5,292.18	8,379.81	5,628.30	16.72	55.83	-178.87	198.38	-322.57	441.10	384.32	56.77	7.769 ES	
5,400.00	5,327.43	8,379.91	5,628.30	16.67	55.83	-179.15	198.28	-322.57	447.07	387.47	59.60	7.501	
5,450.00	5,360.15	8,380.16	5,628.31	16.63	55.84	-179.44	198.03	-322.56	461.76	399.80	61.96	7.453 SF	
5,500.00	5,390.15	8,380.56	5,628.31	16.61	55.85	-179.76	197.63	-322.54	484.31	420.53	63.77	7.594	
5,550.00	5,417.29	8,381.10	5,628.32	16.62	55.85	-179.88	197.09	-322.52	513.58	448.50	65.08	7.891	
5,600.00	5,441.45	8,381.79	5,628.33	16.65	55.87	-179.44	196.39	-322.50	548.37	482.39	65.98	8.311	
5,650.00	5,462.49	8,382.63	5,628.34	16.70	55.88	-178.90	195.56	-322.46	587.54	520.97	66.57	8.826	
5,700.00	5,480.33	8,383.60	5,628.35	16.78	55.90	-178.18	194.59	-322.43	630.10	563.15	66.95	9.411	
5,750.00	5,494.87	8,384.69	5,628.37	16.89	55.92	-177.17	193.50	-322.38	675.23	608.03	67.20	10.048	
5,800.00	5,506.04	8,385.92	5,628.39	17.03	55.94	-175.63	192.28	-322.34	722.25	654.89	67.36	10.722	
5,850.00	5,513.78	8,387.26	5,628.40	17.19	55.96	-173.00	190.94	-322.28	770.60	703.14	67.46	11.422	
5,900.00	5,518.07	8,388.71	5,628.43	17.38	55.98	-167.54	189.49	-322.23	819.83	752.30	67.54	12.139	
5,936.55	5,519.00	8,389.83	5,628.44	17.54	56.00	-157.70	188.37	-322.18	856.16	788.59	67.57	12.670	
6,000.00	5,519.00	8,391.82	5,628.47	17.83	56.04	-156.23	186.38	-322.11	919.41	851.78	67.63	13.595	
6,100.00	5,519.00	8,394.94	5,628.51	18.36	56.09	-154.00	183.26	-321.99	1,019.13	951.43	67.71	15.052	
6,200.00	5,519.00	8,398.04	5,628.56	18.96	56.14	-151.87	180.16	-321.87	1,118.89	1,051.11	67.78	16.507	
6,300.00	5,519.00	8,401.12	5,628.60	19.62	56.19	-149.84	177.09	-321.75	1,218.69	1,150.83	67.86	17.960	
6,400.00	5,519.00	8,404.17	5,628.65	20.35	56.25	-147.90	174.03	-321.63	1,318.50	1,250.57	67.93	19.409	
6,500.00	5,519.00	8,407.21	5,628.69	21.12	56.30	-146.06	171.00	-321.52	1,418.34	1,350.33	68.01	20.856	
6,600.00	5,519.00	8,410.22	5,628.74	21.95	56.35	-144.31	167.99	-321.40	1,518.19	1,450.11	68.08	22.300	
6,700.00	5,519.00	8,413.22	5,628.78	22.82	56.40	-142.65	165.00	-321.29	1,618.05	1,549.90	68.16	23.740	
6,800.00	5,519.00	8,416.19	5,628.83	23.73	56.45	-141.07	162.03	-321.18	1,717.93	1,649.70	68.23	25.177	
6,900.00	5,519.00	8,419.14	5,628.87	24.67	56.50	-139.57	159.08	-321.07	1,817.81	1,749.50	68.31	26.611	
7,000.00	5,519.00	8,422.07	5,628.92	25.64	56.55	-138.14	156.15	-320.96	1,917.70	1,849.31	68.39	28.041	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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:	0.00 usft
Survey Program: 5631-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	5,519.00	5,472.00	5,472.00	21.95	218.88	90.00	-113.43	3,467.33	2,298.00	2,065.63	232.37	9.889	
6,700.00	5,519.00	5,472.00	5,472.00	22.82	218.88	90.00	-113.43	3,467.33	2,199.23	1,966.72	232.51	9.459	
6,800.00	5,519.00	5,472.00	5,472.00	23.73	218.88	90.00	-113.43	3,467.33	2,100.58	1,867.92	232.66	9.029	
6,900.00	5,519.00	5,472.00	5,472.00	24.67	218.88	90.00	-113.43	3,467.33	2,002.06	1,769.23	232.83	8.599	
7,000.00	5,519.00	5,472.00	5,472.00	25.64	218.88	90.00	-113.43	3,467.33	1,903.70	1,670.67	233.03	8.169	
7,100.00	5,519.00	5,472.00	5,472.00	26.64	218.88	90.00	-113.43	3,467.33	1,805.52	1,572.25	233.26	7.740	
7,200.00	5,519.00	5,472.00	5,472.00	27.65	218.88	90.00	-113.43	3,467.33	1,707.55	1,474.01	233.53	7.312	
7,300.00	5,519.00	5,472.00	5,472.00	28.69	218.88	90.00	-113.43	3,467.33	1,609.82	1,375.98	233.84	6.884	
7,400.00	5,519.00	5,472.00	5,472.00	29.75	218.88	90.00	-113.43	3,467.33	1,512.40	1,278.19	234.21	6.457	
7,500.00	5,519.00	5,472.00	5,472.00	30.82	218.88	90.00	-113.43	3,467.33	1,415.33	1,180.69	234.64	6.032	
7,600.00	5,519.00	5,472.00	5,472.00	31.91	218.88	90.00	-113.43	3,467.33	1,318.71	1,083.55	235.16	5.608	
7,700.00	5,519.00	5,472.00	5,472.00	33.01	218.88	90.00	-113.43	3,467.33	1,222.62	986.84	235.78	5.185	
7,800.00	5,519.00	5,472.00	5,472.00	34.12	218.88	90.00	-113.43	3,467.33	1,127.22	890.68	236.54	4.765	
7,900.00	5,519.00	5,472.00	5,472.00	35.24	218.88	90.00	-113.43	3,467.33	1,032.69	795.22	237.47	4.349	
8,000.00	5,519.00	5,472.00	5,472.00	36.37	218.88	90.00	-113.43	3,467.33	939.29	700.67	238.62	3.936	
8,100.00	5,519.00	5,472.00	5,472.00	37.50	218.88	90.00	-113.43	3,467.33	847.40	607.34	240.07	3.530	
8,200.00	5,519.00	5,472.00	5,472.00	38.65	218.88	90.00	-113.43	3,467.33	757.57	515.68	241.89	3.132	
8,300.00	5,519.00	5,472.00	5,472.00	39.80	218.88	90.00	-113.43	3,467.33	670.62	426.40	244.22	2.746	
8,400.00	5,519.00	5,472.00	5,472.00	40.96	218.88	90.00	-113.43	3,467.33	587.84	340.65	247.19	2.378	
8,497.04	5,519.00	5,472.00	5,472.00	42.09	218.88	90.00	-113.43	3,467.33	513.39	262.60	250.80	2.047	
8,500.00	5,519.00	5,472.00	5,472.00	42.12	218.88	90.06	-113.43	3,467.33	511.24	260.33	250.92	2.037	
8,512.08	5,518.96	5,471.96	5,471.96	42.26	218.88	90.31	-113.43	3,467.33	502.55	251.13	251.42	1.999	Collision Risk Procedures Req.
8,600.00	5,518.50	5,471.50	5,471.50	43.29	218.86	90.23	-113.43	3,467.33	444.06	188.68	255.39	1.739	Collision Risk Procedures Req.
8,700.00	5,517.97	5,470.97	5,470.97	44.46	218.84	90.15	-113.43	3,467.33	391.17	131.00	260.17	1.504	Collision Risk Procedures Req.
8,800.00	5,517.45	5,470.45	5,470.45	45.63	218.82	90.06	-113.43	3,467.33	358.93	94.91	264.02	1.359	Collision Avoidance Req.
8,870.91	5,517.08	5,470.08	5,470.08	46.47	218.80	90.00	-113.43	3,467.33	351.86	86.64	265.21	1.327	Collision Avoidance Req., CC, ES,
8,900.00	5,516.92	5,469.92	5,469.92	46.82	218.80	89.98	-113.43	3,467.33	353.06	87.84	265.22	1.331	Collision Avoidance Req.
9,000.00	5,516.40	5,469.40	5,469.40	48.00	218.78	89.89	-113.43	3,467.33	374.79	111.55	263.24	1.424	Collision Avoidance Req.
9,100.00	5,515.87	5,468.87	5,468.87	49.19	218.75	89.80	-113.43	3,467.33	419.86	160.50	259.36	1.619	Collision Risk Procedures Req.
9,200.00	5,515.35	5,468.35	5,468.35	50.38	218.73	89.72	-113.43	3,467.33	481.77	226.64	255.13	1.888	Collision Risk Procedures Req.
9,300.00	5,514.82	5,467.82	5,467.82	51.57	218.71	89.63	-113.43	3,467.33	554.90	303.54	251.37	2.208	
9,400.00	5,514.30	5,467.30	5,467.30	52.77	218.69	89.55	-113.43	3,467.33	635.40	387.13	248.27	2.559	
9,500.00	5,513.77	5,466.77	5,466.77	53.97	218.67	89.46	-113.43	3,467.33	720.80	475.00	245.80	2.932	
9,600.00	5,513.25	5,466.25	5,466.25	55.17	218.65	89.38	-113.43	3,467.33	809.55	565.71	243.84	3.320	
9,700.00	5,512.72	5,465.72	5,465.72	56.37	218.63	89.29	-113.43	3,467.33	900.66	658.38	242.27	3.718	
9,800.00	5,512.20	5,465.20	5,465.20	57.58	218.61	89.21	-113.43	3,467.33	993.48	752.45	241.02	4.122	
9,900.00	5,511.67	5,464.67	5,464.67	58.79	218.59	89.12	-113.43	3,467.33	1,087.57	847.56	240.01	4.531	
10,000.00	5,511.15	5,464.15	5,464.15	59.99	218.57	89.03	-113.43	3,467.33	1,182.63	943.44	239.19	4.944	
10,100.00	5,510.62	5,463.62	5,463.62	61.21	218.54	88.95	-113.43	3,467.33	1,278.45	1,039.94	238.51	5.360	
10,200.00	5,510.10	5,463.10	5,463.10	62.42	218.52	88.86	-113.43	3,467.33	1,374.86	1,136.91	237.95	5.778	
10,300.00	5,509.57	5,462.57	5,462.57	63.63	218.50	88.78	-113.43	3,467.33	1,471.75	1,234.26	237.49	6.197	
10,400.00	5,509.05	5,462.05	5,462.05	64.85	218.48	88.69	-113.43	3,467.33	1,569.03	1,331.93	237.10	6.618	
10,500.00	5,508.52	5,461.52	5,461.52	66.06	218.46	88.61	-113.43	3,467.33	1,666.64	1,429.86	236.77	7.039	
10,600.00	5,508.00	5,461.00	5,461.00	67.28	218.44	88.52	-113.43	3,467.33	1,764.51	1,528.01	236.50	7.461	
10,700.00	5,507.47	5,460.47	5,460.47	68.50	218.42	88.44	-113.43	3,467.33	1,862.60	1,626.34	236.27	7.883	
10,800.00	5,506.95	5,459.95	5,459.95	69.72	218.40	88.35	-113.43	3,467.33	1,960.89	1,724.82	236.07	8.306	
10,900.00	5,506.42	5,459.42	5,459.42	70.94	218.38	88.27	-113.43	3,467.33	2,059.35	1,823.44	235.90	8.730	
11,000.00	5,505.90	5,458.90	5,458.90	72.16	218.36	88.18	-113.43	3,467.33	2,157.94	1,922.18	235.76	9.153	
11,100.00	5,505.37	5,458.37	5,458.37	73.39	218.33	88.10	-113.43	3,467.33	2,256.66	2,021.02	235.65	9.577	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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:	0.00 usft
Survey Program: 6310-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		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,500.00	5,519.00	5,644.00	5,644.00	21.12	225.76	-90.00	1,056.05	3,287.07	2,345.35	2,108.27	237.08	9.893	
6,600.00	5,519.00	5,644.00	5,644.00	21.95	225.76	-90.00	1,056.05	3,287.07	2,251.91	2,014.58	237.33	9.489	
6,700.00	5,519.00	5,644.00	5,644.00	22.82	225.76	-90.00	1,056.05	3,287.07	2,159.06	1,921.43	237.64	9.085	
6,800.00	5,519.00	5,644.00	5,644.00	23.73	225.76	-90.00	1,056.05	3,287.07	2,066.88	1,828.86	238.02	8.684	
6,900.00	5,519.00	5,644.00	5,644.00	24.67	225.76	-90.00	1,056.05	3,287.07	1,975.46	1,736.98	238.47	8.284	
7,000.00	5,519.00	5,644.00	5,644.00	25.64	225.76	-90.00	1,056.05	3,287.07	1,884.90	1,645.88	239.02	7.886	
7,100.00	5,519.00	5,644.00	5,644.00	26.64	225.76	-90.00	1,056.05	3,287.07	1,795.36	1,555.68	239.67	7.491	
7,200.00	5,519.00	5,644.00	5,644.00	27.65	225.76	-90.00	1,056.05	3,287.07	1,706.97	1,466.52	240.44	7.099	
7,300.00	5,519.00	5,644.00	5,644.00	28.69	225.76	-90.00	1,056.05	3,287.07	1,619.93	1,378.58	241.35	6.712	
7,400.00	5,519.00	5,644.00	5,644.00	29.75	225.76	-90.00	1,056.05	3,287.07	1,534.47	1,292.07	242.40	6.330	
7,500.00	5,519.00	5,644.00	5,644.00	30.82	225.76	-90.00	1,056.05	3,287.07	1,450.88	1,207.25	243.63	5.955	
7,600.00	5,519.00	5,644.00	5,644.00	31.91	225.76	-90.00	1,056.05	3,287.07	1,369.48	1,124.45	245.04	5.589	
7,700.00	5,519.00	5,644.00	5,644.00	33.01	225.76	-90.00	1,056.05	3,287.07	1,290.71	1,044.06	246.65	5.233	
7,800.00	5,519.00	5,644.00	5,644.00	34.12	225.76	-90.00	1,056.05	3,287.07	1,215.05	966.57	248.48	4.890	
7,900.00	5,519.00	5,644.00	5,644.00	35.24	225.76	-90.00	1,056.05	3,287.07	1,143.15	892.61	250.54	4.563	
8,000.00	5,519.00	5,644.00	5,644.00	36.37	225.76	-90.00	1,056.05	3,287.07	1,075.75	822.91	252.84	4.255	
8,100.00	5,519.00	5,644.00	5,644.00	37.50	225.76	-90.00	1,056.05	3,287.07	1,013.74	758.39	255.34	3.970	
8,200.00	5,519.00	5,644.00	5,644.00	38.65	225.76	-90.00	1,056.05	3,287.07	958.18	700.15	258.03	3.713	
8,300.00	5,519.00	5,644.00	5,644.00	39.80	225.76	-90.00	1,056.05	3,287.07	910.24	649.43	260.81	3.490	
8,400.00	5,519.00	5,644.00	5,644.00	40.96	225.76	-90.00	1,056.05	3,287.07	871.19	607.62	263.58	3.305	
8,497.04	5,519.00	5,644.00	5,644.00	42.09	225.76	-90.00	1,056.05	3,287.07	842.97	576.87	266.10	3.168	
8,500.00	5,519.00	5,644.00	5,644.00	42.12	225.76	-90.01	1,056.05	3,287.07	842.27	576.10	266.17	3.164	
8,512.08	5,518.96	5,643.96	5,643.96	42.26	225.76	-90.07	1,056.05	3,287.07	839.51	573.05	266.46	3.151	
8,600.00	5,518.50	5,643.50	5,643.50	43.29	225.74	-90.04	1,056.05	3,287.07	824.53	556.14	268.39	3.072	
8,697.82	5,517.99	5,642.99	5,642.99	44.43	225.72	-90.00	1,056.05	3,287.07	818.71	548.62	270.08	3.031 CC	
8,700.00	5,517.97	5,642.97	5,642.97	44.46	225.72	-90.00	1,056.05	3,287.07	818.71	548.59	270.12	3.031 ES, SF	
8,800.00	5,517.45	5,642.45	5,642.45	45.63	225.70	-89.96	1,056.05	3,287.07	825.06	553.83	271.23	3.042	
8,900.00	5,516.92	5,641.92	5,641.92	46.82	225.68	-89.93	1,056.05	3,287.07	843.30	571.59	271.72	3.104	
9,000.00	5,516.40	5,641.40	5,641.40	48.00	225.66	-89.89	1,056.05	3,287.07	872.69	601.07	271.63	3.213	
9,100.00	5,515.87	5,640.87	5,640.87	49.19	225.63	-89.85	1,056.05	3,287.07	912.15	641.09	271.07	3.365	
9,200.00	5,515.35	5,640.35	5,640.35	50.38	225.61	-89.82	1,056.05	3,287.07	960.45	690.27	270.17	3.555	
9,300.00	5,514.82	5,639.82	5,639.82	51.57	225.59	-89.78	1,056.05	3,287.07	1,016.31	747.25	269.07	3.777	
9,400.00	5,514.30	5,639.30	5,639.30	52.77	225.57	-89.74	1,056.05	3,287.07	1,078.58	810.73	267.85	4.027	
9,500.00	5,513.77	5,638.77	5,638.77	53.97	225.55	-89.71	1,056.05	3,287.07	1,146.19	879.60	266.59	4.299	
9,600.00	5,513.25	5,638.25	5,638.25	55.17	225.53	-89.67	1,056.05	3,287.07	1,218.27	952.93	265.34	4.591	
9,700.00	5,512.72	5,637.72	5,637.72	56.37	225.51	-89.63	1,056.05	3,287.07	1,294.07	1,029.93	264.14	4.899	
9,800.00	5,512.20	5,637.20	5,637.20	57.58	225.49	-89.60	1,056.05	3,287.07	1,372.97	1,109.97	263.00	5.220	
9,900.00	5,511.67	5,636.67	5,636.67	58.79	225.47	-89.56	1,056.05	3,287.07	1,454.47	1,192.53	261.94	5.553	
10,000.00	5,511.15	5,636.15	5,636.15	59.99	225.45	-89.52	1,056.05	3,287.07	1,538.15	1,277.21	260.94	5.895	
10,100.00	5,510.62	5,635.62	5,635.62	61.21	225.42	-89.48	1,056.05	3,287.07	1,623.68	1,363.65	260.03	6.244	
10,200.00	5,510.10	5,635.10	5,635.10	62.42	225.40	-89.45	1,056.05	3,287.07	1,710.78	1,451.60	259.18	6.601	
10,300.00	5,509.57	5,634.57	5,634.57	63.63	225.38	-89.41	1,056.05	3,287.07	1,799.22	1,540.82	258.40	6.963	
10,400.00	5,509.05	5,634.05	5,634.05	64.85	225.36	-89.37	1,056.05	3,287.07	1,888.81	1,631.13	257.68	7.330	
10,500.00	5,508.52	5,633.52	5,633.52	66.06	225.34	-89.34	1,056.05	3,287.07	1,979.40	1,722.39	257.02	7.701	
10,600.00	5,508.00	5,633.00	5,633.00	67.28	225.32	-89.30	1,056.05	3,287.07	2,070.86	1,814.45	256.41	8.076	
10,700.00	5,507.47	5,632.47	5,632.47	68.50	225.30	-89.26	1,056.05	3,287.07	2,163.08	1,907.22	255.85	8.454	
10,800.00	5,506.95	5,631.95	5,631.95	69.72	225.28	-89.23	1,056.05	3,287.07	2,255.95	2,000.62	255.33	8.835	
10,900.00	5,506.42	5,631.42	5,631.42	70.94	225.26	-89.19	1,056.05	3,287.07	2,349.41	2,094.56	254.86	9.219	
11,000.00	5,505.90	5,630.90	5,630.90	72.16	225.24	-89.15	1,056.05	3,287.07	2,443.39	2,188.97	254.42	9.604	
11,100.00	5,505.37	5,630.37	5,630.37	73.39	225.21	-89.12	1,056.05	3,287.07	2,537.83	2,283.82	254.01	9.991	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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: 6218-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)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,700.00	5,502.22	5,443.22	5,443.22	80.74	217.73	-90.82	1,093.75	8,532.13	2,389.70	2,142.15	247.55	9.653	
11,800.00	5,501.70	5,442.70	5,442.70	81.97	217.71	-90.78	1,093.75	8,532.13	2,296.10	2,047.15	248.95	9.223	
11,900.00	5,501.17	5,442.17	5,442.17	83.20	217.69	-90.75	1,093.75	8,532.13	2,203.06	1,952.58	250.47	8.796	
12,000.00	5,500.65	5,441.65	5,441.65	84.43	217.67	-90.71	1,093.75	8,532.13	2,110.65	1,858.52	252.14	8.371	
12,100.00	5,500.12	5,441.12	5,441.12	85.66	217.64	-90.67	1,093.75	8,532.13	2,018.97	1,765.01	253.96	7.950	
12,200.00	5,499.60	5,440.60	5,440.60	86.89	217.62	-90.64	1,093.75	8,532.13	1,928.12	1,672.16	255.95	7.533	
12,300.00	5,499.07	5,440.07	5,440.07	88.12	217.60	-90.60	1,093.75	8,532.13	1,838.21	1,580.07	258.15	7.121	
12,400.00	5,498.55	5,439.55	5,439.55	89.35	217.58	-90.56	1,093.75	8,532.13	1,749.41	1,488.85	260.56	6.714	
12,500.00	5,498.02	5,439.02	5,439.02	90.59	217.56	-90.53	1,093.75	8,532.13	1,661.87	1,398.66	263.21	6.314	
12,600.00	5,497.50	5,438.50	5,438.50	91.82	217.54	-90.49	1,093.75	8,532.13	1,575.82	1,309.68	266.14	5.921	
12,700.00	5,496.97	5,437.97	5,437.97	93.05	217.52	-90.45	1,093.75	8,532.13	1,491.51	1,222.14	269.37	5.537	
12,800.00	5,496.45	5,437.45	5,437.45	94.29	217.50	-90.42	1,093.75	8,532.13	1,409.25	1,136.32	272.93	5.163	
12,900.00	5,495.92	5,436.92	5,436.92	95.52	217.48	-90.38	1,093.75	8,532.13	1,329.43	1,052.57	276.85	4.802	
13,000.00	5,495.40	5,436.40	5,436.40	96.76	217.46	-90.34	1,093.75	8,532.13	1,252.50	971.35	281.16	4.455	
13,100.00	5,494.87	5,435.87	5,435.87	97.99	217.43	-90.31	1,093.75	8,532.13	1,179.05	893.20	285.85	4.125	
13,200.00	5,494.35	5,435.35	5,435.35	99.23	217.41	-90.27	1,093.75	8,532.13	1,109.75	818.82	290.92	3.815	
13,300.00	5,493.82	5,434.82	5,434.82	100.46	217.39	-90.23	1,093.75	8,532.13	1,045.43	749.10	296.33	3.528	
13,400.00	5,493.30	5,434.30	5,434.30	101.70	217.37	-90.20	1,093.75	8,532.13	987.07	685.11	301.96	3.269	
13,500.00	5,492.77	5,433.77	5,433.77	102.94	217.35	-90.16	1,093.75	8,532.13	935.79	628.13	307.66	3.042	
13,600.00	5,492.25	5,433.25	5,433.25	104.17	217.33	-90.13	1,093.75	8,532.13	892.80	579.65	313.15	2.851	
13,700.00	5,491.72	5,432.72	5,432.72	105.41	217.31	-90.09	1,093.75	8,532.13	859.34	541.24	318.10	2.701	
13,800.00	5,491.20	5,432.20	5,432.20	106.65	217.29	-90.05	1,093.75	8,532.13	836.57	514.43	322.15	2.597	
13,900.00	5,490.67	5,431.67	5,431.67	107.88	217.27	-90.02	1,093.75	8,532.13	825.37	500.45	324.92	2.540	
13,943.08	5,490.45	5,431.45	5,431.45	108.42	217.26	-90.00	1,093.75	8,532.13	824.25	498.58	325.67	2.531	CC, ES, SF
14,000.00	5,490.15	5,431.15	5,431.15	109.12	217.25	-89.98	1,093.75	8,532.13	826.21	500.01	326.20	2.533	
14,100.00	5,489.62	5,430.62	5,430.62	110.36	217.22	-89.94	1,093.75	8,532.13	839.05	513.11	325.94	2.574	
14,200.00	5,489.10	5,430.10	5,430.10	111.60	217.20	-89.91	1,093.75	8,532.13	863.36	539.07	324.29	2.662	
14,300.00	5,488.57	5,429.57	5,429.57	112.84	217.18	-89.87	1,093.75	8,532.13	898.20	576.69	321.51	2.794	
14,400.00	5,488.05	5,429.05	5,429.05	114.08	217.16	-89.83	1,093.75	8,532.13	942.42	624.45	317.97	2.964	
14,500.00	5,487.52	5,428.52	5,428.52	115.32	217.14	-89.80	1,093.75	8,532.13	994.75	680.78	313.98	3.168	
14,600.00	5,487.00	5,428.00	5,428.00	116.56	217.12	-89.76	1,093.75	8,532.13	1,054.00	744.20	309.80	3.402	
14,700.00	5,486.47	5,427.47	5,427.47	117.79	217.10	-89.72	1,093.75	8,532.13	1,119.06	813.43	305.62	3.662	
14,800.00	5,485.95	5,426.95	5,426.95	119.03	217.08	-89.69	1,093.75	8,532.13	1,188.98	887.39	301.59	3.942	
14,900.00	5,485.42	5,426.42	5,426.42	120.27	217.06	-89.65	1,093.75	8,532.13	1,262.95	965.19	297.76	4.241	
15,000.00	5,484.90	5,425.90	5,425.90	121.51	217.04	-89.61	1,093.75	8,532.13	1,340.31	1,046.12	294.19	4.556	
15,100.00	5,484.37	5,425.37	5,425.37	122.76	217.01	-89.58	1,093.75	8,532.13	1,420.49	1,129.62	290.87	4.884	
15,200.00	5,483.85	5,424.85	5,424.85	124.00	216.99	-89.54	1,093.75	8,532.13	1,503.06	1,215.24	287.82	5.222	
15,300.00	5,483.32	5,424.32	5,424.32	125.24	216.97	-89.50	1,093.75	8,532.13	1,587.63	1,302.61	285.01	5.570	
15,400.00	5,482.80	5,423.80	5,423.80	126.48	216.95	-89.47	1,093.75	8,532.13	1,673.90	1,391.46	282.44	5.927	
15,500.00	5,482.27	5,423.27	5,423.27	127.72	216.93	-89.43	1,093.75	8,532.13	1,761.62	1,481.54	280.08	6.290	
15,600.00	5,481.75	5,422.75	5,422.75	128.96	216.91	-89.40	1,093.75	8,532.13	1,850.59	1,572.67	277.92	6.659	
15,700.00	5,481.22	5,422.22	5,422.22	130.20	216.89	-89.36	1,093.75	8,532.13	1,940.63	1,664.69	275.94	7.033	
15,800.00	5,480.70	5,421.70	5,421.70	131.44	216.87	-89.32	1,093.75	8,532.13	2,031.61	1,757.49	274.12	7.411	
15,900.00	5,480.17	5,421.17	5,421.17	132.69	216.85	-89.29	1,093.75	8,532.13	2,123.39	1,850.95	272.45	7.794	
16,000.00	5,479.65	5,420.65	5,420.65	133.93	216.83	-89.25	1,093.75	8,532.13	2,215.89	1,944.98	270.91	8.179	
16,100.00	5,479.12	5,420.12	5,420.12	135.17	216.80	-89.21	1,093.75	8,532.13	2,309.01	2,039.53	269.49	8.568	
16,123.37	5,479.00	5,420.00	5,420.00	135.46	216.80	-89.20	1,093.75	8,532.13	2,330.86	2,061.68	269.17	8.659	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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
0.00	0.00	0.00	0.00	0.00	0.00	52.16	1,023.08	1,317.16	1,667.98				
100.00	100.00	76.00	76.00	0.88	3.04	52.16	1,023.08	1,317.16	1,667.81	1,663.89	3.92	425.023	
200.00	200.00	176.00	176.00	1.50	7.04	52.16	1,023.08	1,317.16	1,667.81	1,659.27	8.54	195.243	
300.00	300.00	276.00	276.00	1.94	11.04	52.16	1,023.08	1,317.16	1,667.81	1,654.84	12.98	128.538	
400.00	400.00	376.00	376.00	2.29	15.04	52.16	1,023.08	1,317.16	1,667.81	1,650.48	17.33	96.235	
500.00	500.00	476.00	476.00	2.60	19.04	52.16	1,023.08	1,317.16	1,667.81	1,646.17	21.64	77.069	
600.00	599.98	575.98	575.98	3.05	23.04	97.42	1,023.08	1,317.16	1,668.04	1,642.12	25.92	64.354	
677.77	677.65	653.65	653.65	3.26	26.15	97.53	1,023.08	1,317.16	1,668.53	1,639.36	29.17	57.199	
700.00	699.84	675.84	675.84	3.29	27.03	97.58	1,023.08	1,317.16	1,668.71	1,638.64	30.07	55.494	
800.00	799.65	775.65	775.65	3.58	31.03	97.79	1,023.08	1,317.16	1,669.54	1,635.23	34.31	48.665	
900.00	899.46	875.46	875.46	3.88	35.02	98.00	1,023.08	1,317.16	1,670.39	1,631.86	38.53	43.354	
1,000.00	999.27	975.27	975.27	4.19	39.01	98.21	1,023.08	1,317.16	1,671.27	1,628.53	42.74	39.102	
1,100.00	1,099.07	1,075.07	1,075.07	4.50	43.00	98.42	1,023.08	1,317.16	1,672.17	1,625.22	46.94	35.621	
1,200.00	1,198.88	1,174.88	1,174.88	4.82	47.00	98.63	1,023.08	1,317.16	1,673.09	1,621.95	51.14	32.718	
1,300.00	1,298.69	1,274.69	1,274.69	5.15	50.99	98.84	1,023.08	1,317.16	1,674.03	1,618.71	55.32	30.258	
1,400.00	1,398.50	1,374.50	1,374.50	5.48	54.98	99.05	1,023.08	1,317.16	1,675.00	1,615.49	59.51	28.148	
1,500.00	1,498.30	1,474.30	1,474.30	5.82	58.97	99.26	1,023.08	1,317.16	1,675.99	1,612.30	63.68	26.317	
1,600.00	1,598.11	1,574.11	1,574.11	6.15	62.96	99.47	1,023.08	1,317.16	1,677.00	1,609.14	67.86	24.714	
1,700.00	1,697.92	1,673.92	1,673.92	6.49	66.96	99.68	1,023.08	1,317.16	1,678.03	1,606.01	72.03	23.298	
1,800.00	1,797.73	1,773.73	1,773.73	6.83	70.95	99.89	1,023.08	1,317.16	1,679.09	1,602.90	76.19	22.038	
1,900.00	1,897.53	1,873.53	1,873.53	7.18	74.94	100.09	1,023.08	1,317.16	1,680.16	1,599.81	80.35	20.910	
2,000.00	1,997.34	1,973.34	1,973.34	7.52	78.93	100.30	1,023.08	1,317.16	1,681.26	1,596.75	84.51	19.893	
2,100.00	2,097.15	2,073.15	2,073.15	7.87	82.93	100.51	1,023.08	1,317.16	1,682.39	1,593.71	88.67	18.973	
2,200.00	2,196.96	2,172.96	2,172.96	8.21	86.92	100.72	1,023.08	1,317.16	1,683.53	1,590.70	92.83	18.136	
2,300.00	2,296.76	2,272.76	2,272.76	8.56	90.91	100.92	1,023.08	1,317.16	1,684.70	1,587.71	96.98	17.371	
2,400.00	2,396.57	2,372.57	2,372.57	8.91	94.90	101.13	1,023.08	1,317.16	1,685.88	1,584.75	101.14	16.669	
2,500.00	2,496.38	2,472.38	2,472.38	9.26	98.90	101.33	1,023.08	1,317.16	1,687.09	1,581.80	105.29	16.023	
2,600.00	2,596.19	2,572.19	2,572.19	9.61	102.89	101.54	1,023.08	1,317.16	1,688.33	1,578.89	109.44	15.427	
2,700.00	2,695.99	2,671.99	2,671.99	9.96	106.88	101.75	1,023.08	1,317.16	1,689.58	1,575.99	113.59	14.874	
2,800.00	2,795.80	2,771.80	2,771.80	10.31	110.87	101.95	1,023.08	1,317.16	1,690.86	1,573.11	117.74	14.361	
2,900.00	2,895.61	2,871.61	2,871.61	10.66	114.86	102.16	1,023.08	1,317.16	1,692.15	1,570.26	121.89	13.882	
3,000.00	2,995.42	2,971.42	2,971.42	11.01	118.86	102.36	1,023.08	1,317.16	1,693.47	1,567.43	126.04	13.436	
3,100.00	3,095.22	3,071.22	3,071.22	11.36	122.85	102.57	1,023.08	1,317.16	1,694.81	1,564.63	130.19	13.018	
3,200.00	3,195.03	3,171.03	3,171.03	11.71	126.84	102.77	1,023.08	1,317.16	1,696.18	1,561.84	134.34	12.626	
3,300.00	3,294.84	3,270.84	3,270.84	12.07	130.83	102.97	1,023.08	1,317.16	1,697.56	1,559.08	138.49	12.258	
3,400.00	3,394.65	3,370.65	3,370.65	12.42	134.83	103.18	1,023.08	1,317.16	1,698.97	1,556.33	142.63	11.911	
3,500.00	3,494.45	3,470.45	3,470.45	12.77	138.82	103.38	1,023.08	1,317.16	1,700.39	1,553.61	146.78	11.584	
3,600.00	3,594.26	3,570.26	3,570.26	13.13	142.81	103.58	1,023.08	1,317.16	1,701.84	1,550.91	150.93	11.276	
3,700.00	3,694.07	3,670.07	3,670.07	13.48	146.80	103.79	1,023.08	1,317.16	1,703.31	1,548.23	155.08	10.983	
3,800.00	3,793.88	3,769.88	3,769.88	13.83	150.80	103.99	1,023.08	1,317.16	1,704.80	1,545.57	159.23	10.707	
3,900.00	3,893.68	3,869.68	3,869.68	14.19	154.79	104.19	1,023.08	1,317.16	1,706.31	1,542.94	163.38	10.444	
4,000.00	3,993.49	3,969.49	3,969.49	14.54	158.78	104.39	1,023.08	1,317.16	1,707.85	1,540.32	167.53	10.194	
4,100.00	4,093.30	4,069.30	4,069.30	14.90	162.77	104.59	1,023.08	1,317.16	1,709.40	1,537.72	171.68	9.957	
4,200.00	4,193.11	4,169.11	4,169.11	15.25	166.76	104.79	1,023.08	1,317.16	1,710.98	1,535.15	175.83	9.731	
4,300.00	4,292.91	4,268.91	4,268.91	15.61	170.76	104.99	1,023.08	1,317.16	1,712.57	1,532.59	179.98	9.515	
4,400.00	4,392.72	4,368.72	4,368.72	15.96	174.75	105.19	1,023.08	1,317.16	1,714.19	1,530.06	184.14	9.309	
4,500.00	4,492.53	4,468.53	4,468.53	16.32	178.74	105.39	1,023.08	1,317.16	1,715.83	1,527.54	188.29	9.113	
4,600.00	4,592.34	4,568.34	4,568.34	16.67	182.73	105.59	1,023.08	1,317.16	1,717.49	1,525.05	192.44	8.925	
4,700.00	4,692.14	4,668.14	4,668.14	17.03	186.73	105.79	1,023.08	1,317.16	1,719.17	1,522.57	196.60	8.745	
4,800.00	4,791.96	4,767.96	4,767.96	17.36	190.72	81.30	1,023.08	1,317.16	1,720.63	1,519.91	200.72	8.572	
4,850.00	4,841.89	4,817.89	4,817.89	17.49	192.72	10.55	1,023.08	1,317.16	1,718.75	1,516.03	202.72	8.479	

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 LD13-645
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 LD13-645	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:	
Survey Program: 6292-Unknown													Offset Well Error:	
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 (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
4,900.00	4,891.64	4,867.64	4,867.64	17.48	194.71	-9.35	1,023.08	1,317.16	1,713.82	1,509.12	204.70	8.372		
4,950.00	4,940.96	4,916.96	4,916.96	17.41	196.68	-16.49	1,023.08	1,317.16	1,705.86	1,499.20	206.66	8.255		
5,000.00	4,989.60	4,965.60	4,965.60	17.33	198.62	-20.36	1,023.08	1,317.16	1,694.92	1,486.34	208.58	8.126		
5,050.00	5,037.34	5,013.34	5,013.34	17.24	200.53	-23.07	1,023.08	1,317.16	1,681.07	1,470.61	210.46	7.987		
5,100.00	5,083.94	5,059.94	5,059.94	17.14	202.40	-25.32	1,023.08	1,317.16	1,664.39	1,452.09	212.30	7.840		
5,150.00	5,129.18	5,105.18	5,105.18	17.05	204.21	-27.43	1,023.08	1,317.16	1,644.97	1,430.89	214.09	7.684		
5,200.00	5,172.82	5,148.82	5,148.82	16.95	205.95	-29.56	1,023.08	1,317.16	1,622.95	1,407.14	215.81	7.520		
5,250.00	5,214.67	5,190.67	5,190.67	16.87	207.63	-31.83	1,023.08	1,317.16	1,598.46	1,380.99	217.47	7.350		
5,300.00	5,254.52	5,230.52	5,230.52	16.79	209.22	-34.32	1,023.08	1,317.16	1,571.66	1,352.61	219.05	7.175		
5,350.00	5,292.16	5,268.16	5,268.16	16.72	210.73	-37.08	1,023.08	1,317.16	1,542.73	1,322.17	220.56	6.995		
5,400.00	5,327.43	5,303.43	5,303.43	16.67	212.14	-40.18	1,023.08	1,317.16	1,511.86	1,289.88	221.98	6.811		
5,450.00	5,360.15	5,336.15	5,336.15	16.63	213.45	-43.66	1,023.08	1,317.16	1,479.26	1,255.94	223.32	6.624		
5,500.00	5,390.15	5,366.15	5,366.15	16.61	214.65	-47.55	1,023.08	1,317.16	1,445.16	1,220.60	224.56	6.436		
5,550.00	5,417.29	5,393.29	5,393.29	16.62	215.73	-51.86	1,023.08	1,317.16	1,409.79	1,184.09	225.71	6.246		
5,600.00	5,441.45	5,417.45	5,417.45	16.65	216.70	-56.56	1,023.08	1,317.16	1,373.42	1,146.66	226.76	6.057		
5,650.00	5,462.49	5,438.49	5,438.49	16.70	217.54	-61.58	1,023.08	1,317.16	1,336.31	1,108.60	227.71	5.868		
5,700.00	5,480.33	5,456.33	5,456.33	16.78	218.25	-66.83	1,023.08	1,317.16	1,298.73	1,070.17	228.56	5.682		
5,750.00	5,494.87	5,470.87	5,470.87	16.89	218.83	-72.16	1,023.08	1,317.16	1,260.98	1,031.66	229.32	5.499		
5,800.00	5,506.04	5,482.04	5,482.04	17.03	219.28	-77.40	1,023.08	1,317.16	1,223.35	993.38	229.97	5.320		
5,850.00	5,513.78	5,489.78	5,489.78	17.19	219.59	-82.38	1,023.08	1,317.16	1,186.14	955.61	230.53	5.145		
5,900.00	5,518.07	5,494.07	5,494.07	17.38	219.76	-86.96	1,023.08	1,317.16	1,149.65	918.65	231.00	4.977		
5,936.55	5,519.00	5,495.00	5,495.00	17.54	219.80	-90.00	1,023.08	1,317.16	1,123.60	892.33	231.28	4.858		
6,000.00	5,519.00	5,495.00	5,495.00	17.83	219.80	-90.00	1,023.08	1,317.16	1,079.86	848.09	231.77	4.659		
6,100.00	5,519.00	5,495.00	5,495.00	18.36	219.80	-90.00	1,023.08	1,317.16	1,015.16	782.42	232.74	4.362		
6,200.00	5,519.00	5,495.00	5,495.00	18.96	219.80	-90.00	1,023.08	1,317.16	956.56	722.60	233.96	4.089		
6,300.00	5,519.00	5,495.00	5,495.00	19.62	219.80	-90.00	1,023.08	1,317.16	905.24	669.84	235.40	3.846		
6,400.00	5,519.00	5,495.00	5,495.00	20.35	219.80	-90.00	1,023.08	1,317.16	862.50	625.48	237.02	3.639		
6,500.00	5,519.00	5,495.00	5,495.00	21.12	219.80	-90.00	1,023.08	1,317.16	829.68	590.93	238.74	3.475		
6,600.00	5,519.00	5,495.00	5,495.00	21.95	219.80	-90.00	1,023.08	1,317.16	807.97	567.51	240.46	3.360		
6,700.00	5,519.00	5,495.00	5,495.00	22.82	219.80	-90.00	1,023.08	1,317.16	798.29	556.24	242.05	3.298		
6,727.74	5,519.00	5,495.00	5,495.00	23.07	219.80	-90.00	1,023.08	1,317.16	797.81	555.35	242.46	3.290 CC, ES, SF		
6,800.00	5,519.00	5,495.00	5,495.00	23.73	219.80	-90.00	1,023.08	1,317.16	801.08	557.67	243.41	3.291		
6,900.00	5,519.00	5,495.00	5,495.00	24.67	219.80	-90.00	1,023.08	1,317.16	816.19	571.73	244.46	3.339		
7,000.00	5,519.00	5,495.00	5,495.00	25.64	219.80	-90.00	1,023.08	1,317.16	842.99	597.80	245.19	3.438		
7,100.00	5,519.00	5,495.00	5,495.00	26.64	219.80	-90.00	1,023.08	1,317.16	880.38	634.78	245.61	3.585		
7,200.00	5,519.00	5,495.00	5,495.00	27.65	219.80	-90.00	1,023.08	1,317.16	927.11	681.33	245.78	3.772		
7,300.00	5,519.00	5,495.00	5,495.00	28.69	219.80	-90.00	1,023.08	1,317.16	981.83	736.08	245.75	3.995		
7,400.00	5,519.00	5,495.00	5,495.00	29.75	219.80	-90.00	1,023.08	1,317.16	1,043.28	797.69	245.59	4.248		
7,500.00	5,519.00	5,495.00	5,495.00	30.82	219.80	-90.00	1,023.08	1,317.16	1,110.35	865.01	245.34	4.526		
7,600.00	5,519.00	5,495.00	5,495.00	31.91	219.80	-90.00	1,023.08	1,317.16	1,182.09	937.05	245.04	4.824		
7,700.00	5,519.00	5,495.00	5,495.00	33.01	219.80	-90.00	1,023.08	1,317.16	1,257.69	1,012.97	244.72	5.139		
7,800.00	5,519.00	5,495.00	5,495.00	34.12	219.80	-90.00	1,023.08	1,317.16	1,336.50	1,092.11	244.39	5.469		
7,900.00	5,519.00	5,495.00	5,495.00	35.24	219.80	-90.00	1,023.08	1,317.16	1,417.99	1,173.93	244.06	5.810		
8,000.00	5,519.00	5,495.00	5,495.00	36.37	219.80	-90.00	1,023.08	1,317.16	1,501.71	1,257.97	243.75	6.161		
8,100.00	5,519.00	5,495.00	5,495.00	37.50	219.80	-90.00	1,023.08	1,317.16	1,587.32	1,343.88	243.45	6.520		
8,200.00	5,519.00	5,495.00	5,495.00	38.65	219.80	-90.00	1,023.08	1,317.16	1,674.53	1,431.36	243.17	6.886		
8,300.00	5,519.00	5,495.00	5,495.00	39.80	219.80	-90.00	1,023.08	1,317.16	1,763.09	1,520.19	242.90	7.258		
8,400.00	5,519.00	5,495.00	5,495.00	40.96	219.80	-90.00	1,023.08	1,317.16	1,852.82	1,610.16	242.66	7.635		
8,497.04	5,519.00	5,495.00	5,495.00	42.09	219.80	-90.00	1,023.08	1,317.16	1,940.86	1,698.42	242.44	8.005		
8,500.00	5,519.00	5,495.00	5,495.00	42.12	219.80	-89.87	1,023.08	1,317.16	1,943.56	1,701.12	242.43	8.017		
8,512.08	5,518.96	5,494.96	5,494.96	42.26	219.80	-89.33	1,023.08	1,317.16	1,954.58	1,712.17	242.41	8.063		
8,600.00	5,518.50	5,494.50	5,494.50	43.29	219.78	-89.29	1,023.08	1,317.16	2,035.15	1,792.95	242.21	8.403		

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 LD13-645
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 LD13-645	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
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				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)	Minimum Separation (usft)	Separation Factor		
8,700.00	5,517.97	5,493.97	5,493.97	44.46	219.76	-89.26	1,023.08	1,317.16	2,127.51	1,885.51	242.00	8.792		
8,800.00	5,517.45	5,493.45	5,493.45	45.63	219.74	-89.22	1,023.08	1,317.16	2,220.53	1,978.73	241.80	9.183		
8,900.00	5,516.92	5,492.92	5,492.92	46.82	219.72	-89.18	1,023.08	1,317.16	2,314.13	2,072.51	241.62	9.578		
9,000.00	5,516.40	5,492.40	5,492.40	48.00	219.70	-89.14	1,023.08	1,317.16	2,408.24	2,166.79	241.45	9.974		

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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	178.86	-83.80	1.66	83.82				
100.00	100.00	100.00	100.00	0.88	0.88	178.86	-83.80	1.66	83.82	82.05	1.77	47.416	
200.00	200.00	200.00	200.00	1.50	1.50	178.86	-83.80	1.66	83.82	80.81	3.00	27.901	
300.00	300.00	300.00	300.00	1.94	1.94	178.86	-83.80	1.66	83.82	79.95	3.87	21.657	
400.00	400.00	400.00	400.00	2.29	2.29	178.86	-83.80	1.66	83.82	79.24	4.58	18.297	
500.00	500.00	500.00	500.00	2.60	2.60	178.86	-83.80	1.66	83.82	78.62	5.20	16.117	CC, ES
600.00	599.98	597.09	597.07	3.05	3.03	-136.53	-85.43	1.47	86.76	80.76	5.99	14.479	
677.77	677.65	672.24	672.14	3.26	3.33	-137.67	-88.94	1.06	93.12	86.65	6.48	14.378	
700.00	699.84	693.64	693.49	3.29	3.42	-138.07	-90.30	0.91	95.54	88.96	6.58	14.519	
800.00	799.65	789.42	788.93	3.58	3.80	-139.44	-98.31	-0.03	108.47	101.24	7.22	15.021	
900.00	899.46	884.32	883.17	3.88	4.19	-140.19	-109.37	-1.32	124.65	116.80	7.85	15.870	
1,000.00	999.27	978.13	975.92	4.19	4.57	-140.49	-123.34	-2.95	144.02	135.53	8.49	16.971	
1,100.00	1,099.07	1,070.68	1,066.92	4.50	4.97	-140.48	-140.07	-4.90	166.49	157.38	9.12	18.265	
1,200.00	1,198.88	1,161.81	1,155.94	4.82	5.36	-140.28	-159.39	-7.15	192.01	182.26	9.74	19.710	
1,300.00	1,298.69	1,251.36	1,242.78	5.15	5.76	-139.96	-181.11	-9.68	220.49	210.13	10.36	21.277	
1,400.00	1,398.50	1,339.22	1,327.26	5.48	6.15	-139.58	-205.02	-12.47	251.87	240.89	10.98	22.943	
1,500.00	1,498.30	1,425.25	1,409.25	5.82	6.52	-139.18	-230.93	-15.49	286.07	274.52	11.55	24.770	
1,600.00	1,598.11	1,516.74	1,495.84	6.15	6.85	-138.77	-260.25	-18.90	322.17	310.03	12.14	26.548	
1,700.00	1,697.92	1,609.95	1,584.05	6.49	7.24	-138.43	-290.17	-22.39	358.33	345.53	12.80	27.997	
1,800.00	1,797.73	1,703.16	1,672.26	6.83	7.63	-138.15	-320.10	-25.88	394.51	381.04	13.47	29.280	
1,900.00	1,897.53	1,796.37	1,760.47	7.18	8.04	-137.92	-350.02	-29.37	430.69	416.53	14.16	30.420	
2,000.00	1,997.34	1,889.59	1,848.68	7.52	8.45	-137.73	-379.95	-32.86	466.88	452.03	14.85	31.437	
2,100.00	2,097.15	1,982.80	1,936.89	7.87	8.88	-137.56	-409.87	-36.35	503.07	487.52	15.55	32.351	
2,200.00	2,196.96	2,076.01	2,025.10	8.21	9.30	-137.42	-439.80	-39.83	539.26	523.01	16.26	33.174	
2,300.00	2,296.76	2,169.22	2,113.30	8.56	9.73	-137.30	-469.72	-43.32	575.46	558.50	16.97	33.919	
2,400.00	2,396.57	2,262.43	2,201.51	8.91	10.17	-137.18	-499.65	-46.81	611.66	593.98	17.68	34.596	
2,500.00	2,496.38	2,355.65	2,289.72	9.26	10.61	-137.09	-529.57	-50.30	647.86	629.46	18.40	35.213	
2,600.00	2,596.19	2,448.86	2,377.93	9.61	11.06	-137.00	-559.50	-53.79	684.06	664.94	19.12	35.778	
2,700.00	2,695.99	2,542.07	2,466.14	9.96	11.51	-136.92	-589.43	-57.27	720.27	700.42	19.84	36.296	
2,800.00	2,795.80	2,635.28	2,554.35	10.31	11.96	-136.85	-619.35	-60.76	756.47	735.90	20.57	36.773	
2,900.00	2,895.61	2,728.49	2,642.56	10.66	12.41	-136.78	-649.28	-64.25	792.68	771.38	21.30	37.213	
3,000.00	2,995.42	2,821.71	2,730.77	11.01	12.86	-136.72	-679.20	-67.74	828.88	806.85	22.03	37.620	
3,100.00	3,095.22	2,914.92	2,818.97	11.36	13.32	-136.67	-709.13	-71.23	865.09	842.33	22.77	37.999	
3,200.00	3,195.03	3,008.13	2,907.18	11.71	13.78	-136.62	-739.05	-74.72	901.30	877.80	23.50	38.350	
3,300.00	3,294.84	3,101.34	2,995.39	12.07	14.24	-136.57	-768.98	-78.20	937.51	913.27	24.24	38.678	
3,400.00	3,394.65	3,194.55	3,083.60	12.42	14.70	-136.53	-798.90	-81.69	973.72	948.74	24.98	38.985	
3,500.00	3,494.45	3,287.77	3,171.81	12.77	15.17	-136.49	-828.83	-85.18	1,009.93	984.21	25.72	39.271	
3,600.00	3,594.26	3,380.98	3,260.02	13.13	15.63	-136.45	-858.75	-88.67	1,046.14	1,019.68	26.46	39.540	
3,700.00	3,694.07	3,474.19	3,348.23	13.48	16.10	-136.42	-888.68	-92.16	1,082.35	1,055.15	27.20	39.793	
3,800.00	3,793.88	3,567.40	3,436.43	13.83	16.56	-136.39	-918.61	-95.65	1,118.56	1,090.61	27.94	40.031	
3,900.00	3,893.68	3,660.61	3,524.64	14.19	17.03	-136.36	-948.53	-99.13	1,154.77	1,126.08	28.69	40.255	
4,000.00	3,993.49	3,753.83	3,612.85	14.54	17.50	-136.33	-978.46	-102.62	1,190.98	1,161.55	29.43	40.466	
4,100.00	4,093.30	3,847.04	3,701.06	14.90	17.97	-136.30	-1,008.38	-106.11	1,227.19	1,197.01	30.18	40.666	
4,200.00	4,193.11	3,940.25	3,789.27	15.25	18.44	-136.28	-1,038.31	-109.60	1,263.40	1,232.48	30.92	40.855	
4,300.00	4,292.91	4,033.46	3,877.48	15.61	18.91	-136.25	-1,068.23	-113.09	1,299.61	1,267.94	31.67	41.035	
4,400.00	4,392.72	4,126.67	3,965.69	15.96	19.38	-136.23	-1,098.16	-116.57	1,335.82	1,303.40	32.42	41.205	
4,500.00	4,492.53	4,219.89	4,053.90	16.32	19.86	-136.21	-1,128.08	-120.06	1,372.04	1,338.87	33.17	41.367	
4,600.00	4,592.34	4,313.10	4,142.10	16.67	20.33	-136.19	-1,158.01	-123.55	1,408.25	1,374.33	33.92	41.521	
4,700.00	4,692.14	4,406.31	4,230.31	17.03	20.80	-136.17	-1,187.93	-127.04	1,444.46	1,409.79	34.67	41.667	
4,800.00	4,791.96	4,499.52	4,318.52	17.36	21.28	-136.15	-1,217.86	-130.53	1,480.67	1,445.27	35.40	41.825	
4,850.00	4,841.89	4,546.03	4,362.53	17.49	21.51	126.43	-1,232.79	-132.27	1,498.69	1,462.90	35.79	41.873	

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 LD13-645
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 LD13-645	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		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.00	4,891.64	4,592.23	4,406.25	17.48	21.75	105.46	-1,247.62	-134.00	1,516.57	1,480.46	36.10	42.008	
4,950.00	4,940.96	4,637.89	4,449.46	17.41	21.98	97.59	-1,262.28	-135.71	1,534.25	1,497.89	36.36	42.201	
5,000.00	4,989.60	4,682.79	4,491.95	17.33	22.21	93.31	-1,276.70	-137.39	1,551.72	1,515.14	36.58	42.423	
5,050.00	5,037.34	4,726.72	4,533.52	17.24	22.43	90.52	-1,290.80	-139.03	1,568.98	1,532.20	36.77	42.666	
5,100.00	5,083.94	4,769.45	4,573.96	17.14	22.65	88.50	-1,304.52	-140.63	1,586.03	1,549.08	36.95	42.927	
5,150.00	5,129.18	4,810.78	4,613.07	17.05	22.86	86.95	-1,317.79	-142.18	1,602.92	1,565.82	37.10	43.206	
5,200.00	5,172.82	4,850.51	4,650.67	16.95	23.07	85.70	-1,330.54	-143.66	1,619.67	1,582.43	37.23	43.502	
5,250.00	5,214.67	4,888.45	4,686.57	16.87	23.26	84.65	-1,342.72	-145.08	1,636.33	1,598.98	37.35	43.815	
5,300.00	5,254.52	4,924.40	4,720.60	16.79	23.44	83.73	-1,354.27	-146.43	1,652.96	1,615.52	37.44	44.146	
5,350.00	5,292.16	4,958.21	4,752.58	16.72	23.62	82.90	-1,365.12	-147.69	1,669.62	1,632.09	37.52	44.494	
5,400.00	5,327.43	4,989.69	4,782.38	16.67	23.78	82.10	-1,375.22	-148.87	1,686.34	1,648.75	37.59	44.861	
5,450.00	5,360.15	5,018.69	4,809.83	16.63	23.92	81.32	-1,384.54	-149.96	1,703.20	1,665.56	37.64	45.249	
5,500.00	5,390.15	5,045.09	4,834.80	16.61	24.05	80.51	-1,393.01	-150.94	1,720.22	1,682.54	37.68	45.656	
5,550.00	5,417.29	5,079.38	4,867.27	16.62	24.22	79.99	-1,404.02	-151.85	1,737.41	1,699.61	37.79	45.971	
5,600.00	5,441.45	5,125.72	4,911.14	16.65	24.45	79.86	-1,418.88	-150.59	1,754.56	1,716.53	38.03	46.138	
5,650.00	5,462.49	5,178.74	4,961.11	16.70	24.70	79.94	-1,435.77	-145.48	1,771.56	1,733.23	38.33	46.218	
5,700.00	5,480.33	5,241.81	5,019.92	16.78	24.97	80.32	-1,455.60	-134.34	1,788.30	1,749.59	38.71	46.195	
5,750.00	5,494.87	5,320.86	5,091.96	16.89	25.26	81.14	-1,479.82	-112.74	1,804.60	1,765.42	39.18	46.057	
5,800.00	5,506.04	5,426.83	5,184.19	17.03	25.57	82.62	-1,510.70	-70.93	1,820.10	1,780.33	39.77	45.765	
5,850.00	5,513.78	5,580.76	5,305.53	17.19	25.89	85.06	-1,551.06	14.22	1,834.13	1,793.59	40.53	45.249	
5,900.00	5,518.07	5,781.60	5,432.85	17.38	26.21	87.87	-1,592.87	162.87	1,845.06	1,803.60	41.46	44.506	
5,936.55	5,519.00	6,030.32	5,529.36	17.54	26.68	90.32	-1,623.54	388.51	1,849.49	1,806.84	42.65	43.367	
6,000.00	5,519.00	6,254.71	5,551.00	17.83	27.37	90.99	-1,628.87	610.97	1,850.05	1,806.04	44.01	42.037	
6,100.00	5,519.00	6,354.70	5,551.00	18.36	27.77	90.99	-1,627.97	710.96	1,849.76	1,804.73	45.03	41.079	
6,200.00	5,519.00	6,454.70	5,551.00	18.96	28.22	90.99	-1,627.07	810.96	1,849.47	1,803.31	46.16	40.064	
6,300.00	5,519.00	6,554.70	5,551.00	19.62	28.73	90.99	-1,626.17	910.96	1,849.19	1,801.79	47.40	39.012	
6,400.00	5,519.00	6,654.70	5,551.00	20.35	29.27	90.99	-1,625.27	1,010.95	1,848.90	1,800.17	48.73	37.938	
6,500.00	5,519.00	6,754.70	5,551.00	21.12	29.86	90.99	-1,624.37	1,110.95	1,848.61	1,798.46	50.16	36.857	
6,600.00	5,519.00	6,854.70	5,551.00	21.95	30.49	90.99	-1,623.47	1,210.94	1,848.33	1,796.67	51.66	35.781	
6,700.00	5,519.00	6,954.70	5,551.00	22.82	31.16	90.99	-1,622.57	1,310.94	1,848.04	1,794.81	53.23	34.718	
6,800.00	5,519.00	7,054.70	5,551.00	23.73	31.86	90.99	-1,621.67	1,410.93	1,847.75	1,792.88	54.87	33.675	
6,900.00	5,519.00	7,154.70	5,551.00	24.67	32.60	90.99	-1,620.77	1,510.93	1,847.47	1,790.90	56.57	32.658	
7,000.00	5,519.00	7,254.70	5,551.00	25.64	33.36	90.99	-1,619.87	1,610.92	1,847.18	1,788.85	58.33	31.670	
7,100.00	5,519.00	7,354.70	5,551.00	26.64	34.15	90.99	-1,618.97	1,710.92	1,846.89	1,786.76	60.13	30.714	
7,200.00	5,519.00	7,454.70	5,551.00	27.65	34.97	90.99	-1,618.07	1,810.92	1,846.61	1,784.62	61.98	29.791	
7,300.00	5,519.00	7,554.70	5,551.00	28.69	35.81	90.99	-1,617.17	1,910.91	1,846.32	1,782.44	63.88	28.903	
7,400.00	5,519.00	7,654.70	5,551.00	29.75	36.68	90.99	-1,616.27	2,010.91	1,846.03	1,780.22	65.81	28.050	
7,500.00	5,519.00	7,754.70	5,551.00	30.82	37.56	90.99	-1,615.37	2,110.90	1,845.74	1,777.96	67.78	27.231	
7,600.00	5,519.00	7,854.70	5,551.00	31.91	38.47	90.99	-1,614.47	2,210.90	1,845.46	1,775.68	69.78	26.446	
7,700.00	5,519.00	7,954.70	5,551.00	33.01	39.39	90.99	-1,613.57	2,310.89	1,845.17	1,773.36	71.81	25.694	
7,800.00	5,519.00	8,054.70	5,551.00	34.12	40.33	90.99	-1,612.67	2,410.89	1,844.88	1,771.01	73.87	24.975	
7,900.00	5,519.00	8,154.70	5,551.00	35.24	41.29	90.99	-1,611.77	2,510.88	1,844.60	1,768.64	75.95	24.286	
8,000.00	5,519.00	8,254.70	5,551.00	36.37	42.26	90.99	-1,610.87	2,610.88	1,844.31	1,766.25	78.06	23.626	
8,100.00	5,519.00	8,354.70	5,551.00	37.50	43.24	90.99	-1,609.97	2,710.88	1,844.02	1,763.83	80.19	22.995	
8,200.00	5,519.00	8,454.70	5,551.00	38.65	44.24	90.99	-1,609.07	2,810.87	1,843.74	1,761.40	82.34	22.392	
8,300.00	5,519.00	8,554.70	5,551.00	39.80	45.25	90.99	-1,608.17	2,910.87	1,843.45	1,758.94	84.51	21.814	
8,400.00	5,519.00	8,654.70	5,551.00	40.96	46.27	90.99	-1,607.27	3,010.86	1,843.16	1,756.47	86.69	21.261	
8,497.04	5,519.00	8,751.74	5,551.00	42.09	47.27	90.99	-1,606.40	3,107.90	1,842.88	1,754.06	88.83	20.747	
8,500.00	5,519.00	8,754.70	5,551.00	42.12	47.30	91.00	-1,606.37	3,110.86	1,842.88	1,753.98	88.89	20.731	
8,512.08	5,518.96	8,766.78	5,551.00	42.26	47.43	91.00	-1,606.27	3,122.94	1,842.84	1,753.68	89.16	20.669	
8,600.00	5,518.50	8,854.69	5,551.00	43.29	48.34	91.01	-1,605.47	3,210.85	1,842.60	1,751.49	91.10	20.225	
8,700.00	5,517.97	8,954.69	5,551.00	44.46	49.39	91.03	-1,604.57	3,310.85	1,842.32	1,748.99	93.33	19.740	

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 LD13-645
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 LD13-645	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							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		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)					
8,800.00	5,517.45	9,054.69	5,551.00	45.63	50.45	91.04	-1,603.67	3,410.84	1,842.04	1,746.47	95.57	19.274	
8,900.00	5,516.92	9,154.69	5,551.00	46.82	51.52	91.06	-1,602.77	3,510.83	1,841.77	1,743.94	97.82	18.828	
9,000.00	5,516.40	9,254.69	5,551.00	48.00	52.60	91.08	-1,601.87	3,610.83	1,841.49	1,741.40	100.08	18.400	
9,100.00	5,515.87	9,354.68	5,551.00	49.19	53.68	91.09	-1,600.97	3,710.82	1,841.21	1,738.85	102.36	17.988	
9,200.00	5,515.35	9,454.68	5,551.00	50.38	54.77	91.11	-1,600.07	3,810.82	1,840.93	1,736.29	104.64	17.593	
9,300.00	5,514.82	9,554.68	5,551.00	51.57	55.87	91.13	-1,599.18	3,910.81	1,840.66	1,733.72	106.93	17.213	
9,400.00	5,514.30	9,654.68	5,551.00	52.77	56.97	91.14	-1,598.28	4,010.81	1,840.38	1,731.15	109.23	16.848	
9,500.00	5,513.77	9,754.68	5,551.00	53.97	58.08	91.16	-1,597.38	4,110.80	1,840.11	1,728.56	111.54	16.497	
9,600.00	5,513.25	9,854.68	5,551.00	55.17	59.19	91.18	-1,596.48	4,210.79	1,839.83	1,725.97	113.86	16.158	
9,700.00	5,512.72	9,954.67	5,551.00	56.37	60.31	91.19	-1,595.58	4,310.79	1,839.55	1,723.37	116.19	15.833	
9,800.00	5,512.20	10,054.67	5,551.00	57.58	61.44	91.21	-1,594.68	4,410.78	1,839.28	1,720.76	118.52	15.519	
9,900.00	5,511.67	10,154.67	5,551.00	58.79	62.57	91.23	-1,593.78	4,510.78	1,839.00	1,718.15	120.86	15.217	
10,000.00	5,511.15	10,254.67	5,551.00	59.99	63.70	91.24	-1,592.88	4,610.77	1,838.73	1,715.53	123.20	14.925	
10,100.00	5,510.62	10,354.67	5,551.00	61.21	64.84	91.26	-1,591.98	4,710.76	1,838.45	1,712.90	125.55	14.643	
10,200.00	5,510.10	10,454.66	5,551.00	62.42	65.98	91.28	-1,591.08	4,810.76	1,838.17	1,710.27	127.90	14.371	
10,300.00	5,509.57	10,555.08	5,550.58	63.63	67.13	91.28	-1,590.17	4,911.17	1,837.89	1,707.62	130.27	14.108	
10,400.00	5,509.05	10,655.08	5,549.57	64.85	68.27	91.26	-1,589.27	5,011.15	1,837.59	1,704.95	132.64	13.854	
10,500.00	5,508.52	10,755.07	5,548.56	66.06	69.43	91.25	-1,588.37	5,111.14	1,837.30	1,702.28	135.01	13.608	
10,600.00	5,508.00	10,855.07	5,547.56	67.28	70.58	91.23	-1,587.47	5,211.13	1,837.00	1,699.60	137.40	13.370	
10,700.00	5,507.47	10,955.07	5,546.55	68.50	71.74	91.22	-1,586.57	5,311.12	1,836.70	1,696.92	139.78	13.140	
10,800.00	5,506.95	11,055.07	5,545.54	69.72	72.90	91.21	-1,585.67	5,411.11	1,836.40	1,694.24	142.17	12.917	
10,900.00	5,506.42	11,155.07	5,544.53	70.94	74.07	91.19	-1,584.77	5,511.10	1,836.11	1,691.55	144.56	12.701	
11,000.00	5,505.90	11,255.07	5,543.53	72.16	75.23	91.18	-1,583.87	5,611.09	1,835.81	1,688.85	146.96	12.492	
11,100.00	5,505.37	11,355.07	5,542.52	73.39	76.40	91.16	-1,582.97	5,711.08	1,835.51	1,686.16	149.35	12.290	
11,200.00	5,504.85	11,455.06	5,541.51	74.61	77.57	91.15	-1,582.07	5,811.07	1,835.22	1,683.46	151.76	12.093	
11,300.00	5,504.32	11,555.06	5,540.50	75.84	78.75	91.13	-1,581.17	5,911.06	1,834.92	1,680.76	154.16	11.903	
11,400.00	5,503.80	11,655.06	5,539.50	77.06	79.93	91.12	-1,580.27	6,011.05	1,834.62	1,678.05	156.57	11.718	
11,500.00	5,503.27	11,755.06	5,538.49	78.29	81.10	91.10	-1,579.37	6,111.04	1,834.33	1,675.35	158.98	11.538	
11,600.00	5,502.75	11,855.06	5,537.48	79.51	82.29	91.09	-1,578.47	6,211.03	1,834.03	1,672.64	161.40	11.364	
11,700.00	5,502.22	11,955.06	5,536.48	80.74	83.47	91.07	-1,577.57	6,311.02	1,833.74	1,669.92	163.81	11.194	
11,800.00	5,501.70	12,055.05	5,535.47	81.97	84.65	91.06	-1,576.67	6,411.01	1,833.44	1,667.21	166.23	11.029	
11,900.00	5,501.17	12,155.05	5,534.46	83.20	85.84	91.04	-1,575.77	6,510.99	1,833.14	1,664.49	168.65	10.869	
12,000.00	5,500.65	12,255.05	5,533.45	84.43	87.03	91.03	-1,574.87	6,610.98	1,832.85	1,661.77	171.08	10.714	
12,100.00	5,500.12	12,355.05	5,532.45	85.66	88.22	91.01	-1,573.97	6,710.97	1,832.55	1,659.05	173.50	10.562	
12,200.00	5,499.60	12,455.05	5,531.44	86.89	89.41	91.00	-1,573.07	6,810.96	1,832.26	1,656.33	175.93	10.415	
12,300.00	5,499.07	12,554.73	5,530.86	88.12	90.60	90.99	-1,572.18	6,910.63	1,831.97	1,653.62	178.35	10.272	
12,400.00	5,498.55	12,654.73	5,530.86	89.35	91.79	91.01	-1,571.28	7,010.63	1,831.69	1,650.91	180.78	10.132	
12,500.00	5,498.02	12,754.72	5,530.86	90.59	92.99	91.03	-1,570.38	7,110.62	1,831.41	1,648.21	183.21	9.996	
12,600.00	5,497.50	12,854.72	5,530.87	91.82	94.18	91.05	-1,569.48	7,210.62	1,831.14	1,645.50	185.64	9.864	
12,700.00	5,496.97	12,954.72	5,530.87	93.05	95.38	91.06	-1,568.58	7,310.61	1,830.86	1,642.79	188.07	9.735	
12,800.00	5,496.45	13,054.72	5,530.87	94.29	96.58	91.08	-1,567.68	7,410.61	1,830.58	1,640.08	190.50	9.609	
12,900.00	5,495.92	13,154.72	5,530.88	95.52	97.78	91.10	-1,566.78	7,510.60	1,830.31	1,637.37	192.94	9.486	
13,000.00	5,495.40	13,254.71	5,530.88	96.76	98.99	91.11	-1,565.88	7,610.59	1,830.03	1,634.65	195.38	9.367	
13,100.00	5,494.87	13,354.71	5,530.89	97.99	100.19	91.13	-1,564.98	7,710.59	1,829.75	1,631.94	197.81	9.250	
13,200.00	5,494.35	13,454.71	5,530.89	99.23	101.39	91.15	-1,564.08	7,810.58	1,829.48	1,629.22	200.25	9.136	
13,300.00	5,493.82	13,554.71	5,530.89	100.46	102.60	91.16	-1,563.18	7,910.58	1,829.20	1,626.51	202.69	9.024	
13,400.00	5,493.30	13,654.71	5,530.90	101.70	103.81	91.18	-1,562.28	8,010.57	1,828.92	1,623.79	205.14	8.916	
13,500.00	5,492.77	13,754.71	5,530.90	102.94	105.01	91.20	-1,561.38	8,110.56	1,828.65	1,621.07	207.58	8.809	
13,600.00	5,492.25	13,854.70	5,530.90	104.17	106.22	91.21	-1,560.48	8,210.56	1,828.37	1,618.35	210.03	8.705	
13,700.00	5,491.72	13,954.70	5,530.91	105.41	107.43	91.23	-1,559.58	8,310.55	1,828.10	1,615.62	212.47	8.604	
13,800.00	5,491.20	14,054.70	5,530.91	106.65	108.64	91.25	-1,558.68	8,410.55	1,827.82	1,612.90	214.92	8.505	
13,900.00	5,490.67	14,154.70	5,530.92	107.88	109.85	91.26	-1,557.78	8,510.54	1,827.55	1,610.18	217.37	8.408	

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 LD13-645
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 LD13-645	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		0-MWD+IFR1+MS Offset		Semi Major Axis		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)	Major Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	5,490.15	14,254.70	5,530.92	109.12	111.07	91.28	-1,556.88	8,610.54	1,827.27	1,607.45	219.82	8.313	
14,024.79	5,490.02	14,279.48	5,530.92	109.43	111.37	91.28	-1,556.65	8,635.32	1,827.20	1,606.78	220.42	8.290	
14,100.00	5,489.62	14,354.69	5,530.92	110.36	112.28	91.30	-1,555.98	8,710.53	1,827.00	1,604.73	222.27	8.220	
14,124.73	5,489.49	14,379.43	5,530.92	110.67	112.58	91.30	-1,555.75	8,735.26	1,826.93	1,604.05	222.87	8.197	
14,200.00	5,489.10	14,454.69	5,530.93	111.60	113.49	91.31	-1,555.08	8,810.52	1,826.72	1,602.00	224.72	8.129	
14,224.68	5,488.97	14,479.37	5,530.93	111.90	113.79	91.32	-1,554.86	8,835.20	1,826.65	1,601.33	225.32	8.107	
14,300.00	5,488.57	14,554.69	5,530.93	112.84	114.71	91.33	-1,554.18	8,910.52	1,826.45	1,599.28	227.17	8.040	
14,324.63	5,488.44	14,579.32	5,530.93	113.14	115.01	91.33	-1,553.96	8,935.15	1,826.38	1,598.60	227.77	8.018	
14,400.00	5,488.05	14,654.69	5,530.93	114.08	115.92	91.35	-1,553.28	9,010.51	1,826.17	1,596.55	229.62	7.953	
14,424.58	5,487.92	14,679.27	5,530.94	114.38	116.22	91.35	-1,553.06	9,035.09	1,826.10	1,595.88	230.23	7.932	
14,500.00	5,487.52	14,754.69	5,530.94	115.32	117.14	91.36	-1,552.38	9,110.51	1,825.90	1,593.82	232.08	7.868	
14,524.53	5,487.39	14,779.22	5,530.94	115.62	117.44	91.37	-1,552.16	9,135.04	1,825.83	1,593.15	232.68	7.847	
14,600.00	5,487.00	14,854.69	5,530.94	116.56	118.36	91.38	-1,551.48	9,210.50	1,825.62	1,591.09	234.53	7.784	
14,624.49	5,486.87	14,879.17	5,530.94	116.86	118.65	91.38	-1,551.26	9,234.99	1,825.56	1,590.42	235.13	7.764	
14,700.00	5,486.47	14,954.68	5,530.95	117.79	119.57	91.40	-1,550.58	9,310.49	1,825.35	1,588.36	236.99	7.702	
14,724.44	5,486.34	14,979.13	5,530.95	118.10	119.87	91.40	-1,550.36	9,334.94	1,825.28	1,587.69	237.59	7.683	
14,800.00	5,485.95	15,054.68	5,530.95	119.03	120.79	91.41	-1,549.68	9,410.49	1,825.07	1,585.63	239.45	7.622	
14,824.40	5,485.82	15,079.08	5,530.95	119.34	121.09	91.42	-1,549.46	9,434.89	1,825.01	1,584.96	240.04	7.603	
14,900.00	5,485.42	15,154.68	5,530.95	120.27	122.01	91.43	-1,548.78	9,510.48	1,824.80	1,582.90	241.90	7.544	
14,924.36	5,485.30	15,179.04	5,530.95	120.58	122.31	91.43	-1,548.56	9,534.84	1,824.73	1,582.23	242.50	7.525	
15,000.00	5,484.90	15,254.68	5,530.96	121.51	123.23	91.45	-1,547.88	9,610.48	1,824.53	1,580.17	244.36	7.467	
15,024.31	5,484.77	15,278.99	5,530.96	121.82	123.53	91.45	-1,547.66	9,634.79	1,824.46	1,579.50	244.96	7.448	
15,100.00	5,484.37	15,354.68	5,530.96	122.76	124.45	91.46	-1,546.98	9,710.47	1,824.25	1,577.43	246.82	7.391	
15,124.27	5,484.25	15,378.95	5,530.96	123.06	124.75	91.47	-1,546.76	9,734.74	1,824.19	1,576.77	247.42	7.373	
15,200.00	5,483.85	15,454.67	5,530.96	124.00	125.67	91.48	-1,546.08	9,810.46	1,823.98	1,574.70	249.28	7.317	
15,224.23	5,483.72	15,478.91	5,530.97	124.30	125.97	91.49	-1,545.86	9,834.70	1,823.91	1,574.04	249.88	7.299	
15,300.00	5,483.32	15,554.67	5,530.97	125.24	126.89	91.50	-1,545.18	9,910.46	1,823.71	1,571.97	251.74	7.244	
15,324.20	5,483.20	15,578.87	5,530.97	125.54	127.19	91.50	-1,544.96	9,934.65	1,823.64	1,571.31	252.34	7.227	
15,400.00	5,482.80	15,654.67	5,530.97	126.48	128.11	91.51	-1,544.28	10,010.45	1,823.43	1,569.23	254.20	7.173	
15,424.16	5,482.67	15,678.83	5,530.97	126.78	128.41	91.52	-1,544.06	10,034.61	1,823.37	1,568.57	254.80	7.156	
15,500.00	5,482.27	15,754.67	5,530.98	127.72	129.33	91.53	-1,543.38	10,110.45	1,823.16	1,566.50	256.66	7.103	
15,524.12	5,482.15	15,778.79	5,530.98	128.02	129.63	91.54	-1,543.16	10,134.57	1,823.10	1,565.84	257.26	7.087	
15,600.00	5,481.75	15,854.67	5,530.98	128.96	130.56	91.55	-1,542.48	10,210.44	1,822.89	1,563.76	259.13	7.035	
15,624.08	5,481.62	15,878.75	5,530.98	129.26	130.85	91.55	-1,542.26	10,234.52	1,822.82	1,563.10	259.72	7.018	
15,700.00	5,481.22	15,954.67	5,530.98	130.20	131.78	91.57	-1,541.58	10,310.44	1,822.62	1,561.03	261.59	6.967	
15,724.05	5,481.10	15,978.71	5,530.98	130.50	132.07	91.57	-1,541.36	10,334.48	1,822.55	1,560.37	262.18	6.951	
15,800.00	5,480.70	16,054.66	5,530.99	131.44	133.00	91.58	-1,540.68	10,410.43	1,822.34	1,558.29	264.05	6.901	
15,824.01	5,480.57	16,078.68	5,530.99	131.74	133.30	91.59	-1,540.46	10,434.44	1,822.28	1,557.63	264.64	6.886	
15,900.00	5,480.17	16,154.66	5,530.99	132.69	134.23	91.60	-1,539.78	10,510.42	1,822.07	1,555.56	266.52	6.837	
15,923.98	5,480.05	16,178.64	5,530.99	132.98	134.52	91.60	-1,539.56	10,534.40	1,822.01	1,554.90	267.11	6.821	
16,000.00	5,479.65	16,254.66	5,531.00	133.93	135.45	91.62	-1,538.88	10,610.42	1,821.80	1,552.82	268.98	6.773	
16,023.95	5,479.52	16,278.61	5,531.00	134.22	135.75	91.62	-1,538.66	10,634.36	1,821.74	1,552.16	269.57	6.758	
16,100.00	5,479.12	16,354.66	5,531.00	135.17	136.68	91.63	-1,537.98	10,710.41	1,821.53	1,550.08	271.45	6.710	
16,105.61	5,479.09	16,360.26	5,531.00	135.24	136.75	91.63	-1,537.93	10,716.02	1,821.51	1,549.93	271.58	6.707	
16,123.37	5,479.00	16,378.02	5,531.00	135.46	136.96	91.64	-1,537.77	10,733.78	1,821.46	1,549.44	272.02	6.696 SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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 +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	178.86	-55.74	1.11	55.75				
100.00	100.00	100.00	100.00	0.88	0.88	178.86	-55.74	1.11	55.75	53.99	1.77	31.540	
200.00	200.00	200.00	200.00	1.50	1.50	178.86	-55.74	1.11	55.75	52.75	3.00	18.559	
300.00	300.00	300.00	300.00	1.94	1.94	178.86	-55.74	1.11	55.75	51.88	3.87	14.406	
400.00	400.00	400.00	400.00	2.29	2.29	178.86	-55.74	1.11	55.75	51.17	4.58	12.171	
500.00	500.00	500.00	500.00	2.60	2.60	178.86	-55.74	1.11	55.75	50.55	5.20	10.721	CC, ES
600.00	599.98	599.98	599.98	3.05	2.88	-137.14	-55.74	1.11	57.02	51.17	5.85	9.746	
677.77	677.65	676.30	676.29	3.26	3.15	-139.27	-56.61	0.93	60.71	54.40	6.31	9.625	
700.00	699.84	698.07	698.06	3.29	3.23	-139.94	-57.18	0.82	62.33	55.92	6.40	9.735	
800.00	799.65	795.73	795.61	3.58	3.55	-142.07	-61.47	-0.05	71.42	64.42	6.99	10.214	
900.00	899.46	892.84	892.45	3.88	3.88	-143.01	-68.57	-1.49	83.36	75.78	7.58	11.001	
1,000.00	999.27	989.25	988.33	4.19	4.23	-143.13	-78.39	-3.48	98.07	89.90	8.17	12.009	
1,100.00	1,099.07	1,084.78	1,083.02	4.50	4.58	-142.73	-90.85	-6.01	115.50	106.74	8.76	13.184	
1,200.00	1,198.88	1,179.31	1,176.29	4.82	4.94	-142.04	-105.84	-9.05	135.64	126.28	9.36	14.491	
1,300.00	1,298.69	1,272.67	1,267.95	5.15	5.27	-141.22	-123.23	-12.58	158.44	148.53	9.91	15.985	
1,400.00	1,398.50	1,369.30	1,362.50	5.48	5.59	-140.43	-142.75	-16.53	182.80	172.30	10.49	17.418	
1,500.00	1,498.30	1,466.26	1,457.38	5.82	5.95	-139.82	-162.34	-20.51	207.18	196.06	11.12	18.633	
1,600.00	1,598.11	1,563.22	1,552.26	6.15	6.32	-139.34	-181.93	-24.48	231.58	219.83	11.76	19.700	
1,700.00	1,697.92	1,660.18	1,647.14	6.49	6.71	-138.95	-201.52	-28.45	255.99	243.59	12.40	20.642	
1,800.00	1,797.73	1,757.14	1,742.01	6.83	7.10	-138.62	-221.11	-32.43	280.42	267.36	13.06	21.476	
1,900.00	1,897.53	1,854.10	1,836.89	7.18	7.50	-138.35	-240.70	-36.40	304.85	291.13	13.72	22.220	
2,000.00	1,997.34	1,951.06	1,931.77	7.52	7.90	-138.12	-260.29	-40.37	329.28	314.89	14.39	22.885	
2,100.00	2,097.15	2,048.03	2,026.65	7.87	8.31	-137.93	-279.88	-44.34	353.72	338.66	15.06	23.484	
2,200.00	2,196.96	2,144.99	2,121.53	8.21	8.73	-137.75	-299.48	-48.32	378.17	362.43	15.74	24.025	
2,300.00	2,296.76	2,241.95	2,216.40	8.56	9.15	-137.60	-319.07	-52.29	402.61	386.19	16.42	24.515	
2,400.00	2,396.57	2,338.91	2,311.28	8.91	9.57	-137.47	-338.66	-56.26	427.06	409.95	17.11	24.962	
2,500.00	2,496.38	2,435.87	2,406.16	9.26	10.00	-137.35	-358.25	-60.23	451.51	433.71	17.80	25.370	
2,600.00	2,596.19	2,532.83	2,501.04	9.61	10.43	-137.24	-377.84	-64.21	475.96	457.48	18.49	25.744	
2,700.00	2,695.99	2,629.79	2,595.91	9.96	10.86	-137.14	-397.43	-68.18	500.42	481.24	19.18	26.089	
2,800.00	2,795.80	2,726.75	2,690.79	10.31	11.30	-137.05	-417.02	-72.15	524.87	505.00	19.88	26.406	
2,900.00	2,895.61	2,823.71	2,785.67	10.66	11.74	-136.97	-436.62	-76.13	549.33	528.75	20.57	26.700	
3,000.00	2,995.42	2,920.67	2,880.55	11.01	12.17	-136.90	-456.21	-80.10	573.78	552.51	21.27	26.973	
3,100.00	3,095.22	3,017.63	2,975.42	11.36	12.61	-136.83	-475.80	-84.07	598.24	576.27	21.97	27.227	
3,200.00	3,195.03	3,114.59	3,070.30	11.71	13.05	-136.77	-495.39	-88.04	622.70	600.03	22.67	27.463	
3,300.00	3,294.84	3,211.55	3,165.18	12.07	13.50	-136.71	-514.98	-92.02	647.16	623.78	23.38	27.684	
3,400.00	3,394.65	3,308.51	3,260.06	12.42	13.94	-136.66	-534.57	-95.99	671.62	647.54	24.08	27.891	
3,500.00	3,494.45	3,405.48	3,354.94	12.77	14.38	-136.61	-554.16	-99.96	696.08	671.29	24.78	28.085	
3,600.00	3,594.26	3,502.44	3,449.81	13.13	14.83	-136.56	-573.75	-103.93	720.54	695.05	25.49	28.267	
3,700.00	3,694.07	3,599.40	3,544.69	13.48	15.28	-136.52	-593.35	-107.91	745.00	718.80	26.20	28.439	
3,800.00	3,793.88	3,696.36	3,639.57	13.83	15.72	-136.48	-612.94	-111.88	769.46	742.56	26.90	28.601	
3,900.00	3,893.68	3,793.32	3,734.45	14.19	16.17	-136.44	-632.53	-115.85	793.92	766.31	27.61	28.754	
4,000.00	3,993.49	3,890.28	3,829.32	14.54	16.62	-136.41	-652.12	-119.83	818.39	790.07	28.32	28.898	
4,100.00	4,093.30	3,987.24	3,924.20	14.90	17.07	-136.37	-671.71	-123.80	842.85	813.82	29.03	29.035	
4,200.00	4,193.11	4,084.20	4,019.08	15.25	17.52	-136.34	-691.30	-127.77	867.31	837.57	29.74	29.165	
4,300.00	4,292.91	4,181.16	4,113.96	15.61	17.97	-136.31	-710.89	-131.74	891.77	861.32	30.45	29.288	
4,400.00	4,392.72	4,278.12	4,208.83	15.96	18.42	-136.28	-730.49	-135.72	916.24	885.08	31.16	29.406	
4,500.00	4,492.53	4,375.08	4,303.71	16.32	18.87	-136.26	-750.08	-139.69	940.70	908.83	31.87	29.517	
4,600.00	4,592.34	4,472.04	4,398.59	16.67	19.32	-136.23	-769.67	-143.66	965.16	932.58	32.58	29.623	
4,700.00	4,692.14	4,569.00	4,493.47	17.03	19.78	-136.21	-789.26	-147.63	989.63	956.33	33.29	29.725	
4,800.00	4,791.96	4,686.78	4,609.57	17.36	20.14	-136.19	-808.85	-151.61	1,009.25	975.40	33.85	29.812	
4,900.00	4,891.77	4,782.59	4,705.38	17.69	20.50	-136.17	-828.44	-155.58	1,028.84	994.99	34.41	29.898	
4,850.00	4,841.89	4,714.34	4,635.68	17.49	20.45	127.21	-818.63	-153.59	1,026.24	991.88	34.36	29.868	

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 LD13-645
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 LD13-645	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)	Reference	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,900.00	4,891.64	4,762.39	4,682.70	17.48	20.68	106.89	-828.33	-155.56	1,038.30	1,003.65	34.65	29.968	
4,950.00	4,940.96	4,809.87	4,729.16	17.41	20.90	99.70	-837.93	-157.50	1,050.27	1,015.39	34.88	30.112	
5,000.00	4,989.60	4,856.56	4,774.85	17.33	21.12	96.13	-847.36	-159.42	1,062.17	1,027.10	35.08	30.280	
5,050.00	5,037.34	4,902.23	4,819.54	17.24	21.33	94.07	-856.59	-161.29	1,074.09	1,038.84	35.25	30.470	
5,100.00	5,083.94	4,946.66	4,863.01	17.14	21.54	92.80	-865.57	-163.11	1,086.09	1,050.69	35.40	30.682	
5,150.00	5,129.18	4,990.52	4,905.93	17.05	21.74	92.01	-874.43	-164.83	1,098.28	1,062.75	35.53	30.913	
5,200.00	5,172.82	5,038.04	4,952.46	16.95	21.94	91.56	-884.03	-164.54	1,110.63	1,074.95	35.68	31.127	
5,250.00	5,214.67	5,087.43	5,000.70	16.87	22.14	91.30	-893.96	-160.89	1,123.05	1,087.20	35.85	31.330	
5,300.00	5,254.52	5,138.95	5,050.63	16.79	22.33	91.18	-904.22	-153.49	1,135.46	1,099.44	36.01	31.529	
5,350.00	5,292.16	5,192.89	5,102.21	16.72	22.48	91.17	-914.79	-141.82	1,147.79	1,111.62	36.17	31.731	
5,400.00	5,327.43	5,249.59	5,155.33	16.67	22.61	91.26	-925.67	-125.33	1,159.95	1,123.63	36.33	31.931	
5,450.00	5,360.15	5,309.38	5,209.80	16.63	22.71	91.44	-936.78	-103.36	1,171.85	1,135.38	36.48	32.126	
5,500.00	5,390.15	5,372.65	5,265.27	16.61	22.80	91.69	-948.08	-75.14	1,183.37	1,146.74	36.64	32.302	
5,550.00	5,417.29	5,439.79	5,321.22	16.62	22.87	92.02	-959.43	-39.86	1,194.39	1,157.58	36.81	32.447	
5,600.00	5,441.45	5,511.16	5,376.88	16.65	22.94	92.41	-970.69	3.33	1,204.75	1,167.74	37.01	32.551	
5,650.00	5,462.49	5,587.09	5,431.17	16.70	23.01	92.84	-981.61	55.22	1,214.30	1,177.05	37.25	32.599	
5,700.00	5,480.33	5,667.78	5,482.63	16.78	23.09	93.30	-991.91	116.47	1,222.86	1,185.32	37.54	32.576	
5,750.00	5,494.87	5,753.27	5,529.42	16.89	23.20	93.76	-1,001.19	187.34	1,230.25	1,192.36	37.89	32.468	
5,800.00	5,506.04	5,843.31	5,569.41	17.03	23.35	94.19	-1,009.01	267.57	1,236.28	1,197.96	38.32	32.259	
5,850.00	5,513.78	5,937.36	5,600.31	17.19	23.56	94.55	-1,014.92	356.13	1,240.78	1,201.93	38.85	31.940	
5,900.00	5,518.07	6,034.52	5,620.03	17.38	23.83	94.83	-1,018.49	451.12	1,243.60	1,204.14	39.46	31.512	
5,901.45	5,518.14	6,037.38	5,620.42	17.39	23.84	94.83	-1,018.56	453.95	1,243.66	1,204.17	39.48	31.498	
5,936.55	5,519.00	6,106.80	5,626.44	17.54	24.08	94.95	-1,019.44	523.08	1,244.54	1,204.57	39.97	31.137	
5,938.97	5,519.00	6,111.62	5,626.61	17.55	24.09	94.96	-1,019.45	527.90	1,244.57	1,204.56	40.01	31.109	
6,000.00	5,519.00	6,185.99	5,626.81	17.83	24.38	94.97	-1,019.10	602.26	1,244.62	1,203.97	40.66	30.613	
6,021.25	5,519.00	6,207.24	5,626.73	17.94	24.47	94.97	-1,018.97	623.52	1,244.62	1,203.74	40.88	30.449	
6,100.00	5,519.00	6,285.99	5,626.42	18.36	24.83	94.95	-1,018.49	702.26	1,244.60	1,202.88	41.72	29.834	
6,121.25	5,519.00	6,307.24	5,626.34	18.49	24.93	94.95	-1,018.36	723.51	1,244.59	1,202.63	41.96	29.660	
6,200.00	5,519.00	6,385.99	5,626.03	18.96	25.33	94.93	-1,017.88	802.26	1,244.57	1,201.67	42.90	29.013	
6,221.25	5,519.00	6,407.24	5,625.94	19.10	25.44	94.93	-1,017.76	823.51	1,244.56	1,201.40	43.16	28.833	
6,300.00	5,519.00	6,485.99	5,625.63	19.62	25.88	94.92	-1,017.28	902.25	1,244.54	1,200.36	44.18	28.168	
6,321.25	5,519.00	6,507.24	5,625.55	19.78	26.00	94.91	-1,017.15	923.51	1,244.54	1,200.06	44.47	27.985	
6,400.00	5,519.00	6,585.99	5,625.24	20.35	26.48	94.90	-1,016.67	1,002.25	1,244.52	1,198.95	45.57	27.311	
6,421.25	5,519.00	6,607.24	5,625.16	20.51	26.61	94.89	-1,016.54	1,023.50	1,244.51	1,198.63	45.88	27.127	
6,500.00	5,519.00	6,685.99	5,624.85	21.12	27.12	94.88	-1,016.07	1,102.25	1,244.49	1,197.44	47.04	26.454	
6,521.25	5,519.00	6,707.24	5,624.77	21.30	27.26	94.88	-1,015.94	1,123.50	1,244.48	1,197.11	47.37	26.271	
6,600.00	5,519.00	6,785.99	5,624.46	21.95	27.81	94.86	-1,015.46	1,202.24	1,244.46	1,195.86	48.60	25.606	
6,621.25	5,519.00	6,807.24	5,624.37	22.13	27.96	94.86	-1,015.33	1,223.50	1,244.46	1,195.51	48.94	25.426	
6,700.00	5,519.00	6,885.99	5,624.06	22.82	28.53	94.84	-1,014.85	1,302.24	1,244.44	1,194.20	50.23	24.774	
6,721.25	5,519.00	6,907.24	5,623.98	23.01	28.69	94.84	-1,014.72	1,323.49	1,244.43	1,193.84	50.59	24.599	
6,800.00	5,519.00	6,985.98	5,623.67	23.73	29.29	94.82	-1,014.25	1,402.24	1,244.41	1,192.48	51.93	23.963	
6,821.25	5,519.00	7,007.24	5,623.59	23.93	29.45	94.82	-1,014.12	1,423.49	1,244.40	1,192.10	52.30	23.793	
6,900.00	5,519.00	7,085.98	5,623.28	24.67	30.07	94.81	-1,013.64	1,502.23	1,244.38	1,190.69	53.69	23.178	
6,921.25	5,519.00	7,107.24	5,623.19	24.87	30.25	94.80	-1,013.51	1,523.49	1,244.38	1,190.31	54.07	23.014	
7,000.00	5,519.00	7,185.98	5,622.88	25.64	30.89	94.79	-1,013.03	1,602.23	1,244.36	1,188.85	55.50	22.420	
7,021.25	5,519.00	7,207.24	5,622.80	25.85	31.07	94.79	-1,012.91	1,623.48	1,244.35	1,188.46	55.90	22.262	
7,100.00	5,519.00	7,285.98	5,622.49	26.64	31.74	94.77	-1,012.43	1,702.23	1,244.33	1,186.96	57.37	21.691	
7,121.25	5,519.00	7,307.24	5,622.41	26.85	31.92	94.77	-1,012.30	1,723.48	1,244.33	1,186.56	57.77	21.539	
7,200.00	5,519.00	7,385.98	5,622.10	27.65	32.61	94.75	-1,011.82	1,802.22	1,244.31	1,185.03	59.28	20.991	
7,221.25	5,519.00	7,407.24	5,622.02	27.87	32.80	94.75	-1,011.69	1,823.48	1,244.30	1,184.61	59.69	20.846	
7,300.00	5,519.00	7,485.98	5,621.71	28.69	33.51	94.73	-1,011.22	1,902.22	1,244.28	1,183.05	61.23	20.322	
7,321.25	5,519.00	7,507.24	5,621.62	28.92	33.70	94.73	-1,011.09	1,923.47	1,244.27	1,182.63	61.65	20.184	

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 LD13-645
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 LD13-645	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)					
7,400.00	5,519.00	7,585.98	5,621.31	29.75	34.42	94.72	-1,010.61	2,002.22	1,244.25	1,181.04	63.22	19.682	
7,421.25	5,519.00	7,607.23	5,621.23	29.98	34.62	94.71	-1,010.48	2,023.47	1,244.25	1,180.60	63.64	19.550	
7,500.00	5,519.00	7,685.98	5,620.92	30.82	35.36	94.70	-1,010.00	2,102.21	1,244.23	1,178.99	65.24	19.072	
7,521.25	5,519.00	7,707.23	5,620.84	31.05	35.56	94.69	-1,009.87	2,123.47	1,244.22	1,178.55	65.67	18.946	
7,600.00	5,519.00	7,785.98	5,620.53	31.91	36.32	94.68	-1,009.40	2,202.21	1,244.20	1,176.91	67.29	18.489	
7,621.25	5,519.00	7,807.23	5,620.44	32.14	36.52	94.68	-1,009.27	2,223.46	1,244.20	1,176.46	67.73	18.369	
7,700.00	5,519.00	7,885.98	5,620.13	33.01	37.29	94.66	-1,008.79	2,302.21	1,244.18	1,174.80	69.38	17.934	
7,721.25	5,519.00	7,907.23	5,620.05	33.24	37.50	94.66	-1,008.66	2,323.46	1,244.17	1,174.35	69.82	17.819	
7,800.00	5,519.00	7,985.98	5,619.74	34.12	38.28	94.64	-1,008.18	2,402.20	1,244.15	1,172.67	71.49	17.404	
7,821.25	5,519.00	8,007.23	5,619.66	34.36	38.49	94.64	-1,008.06	2,423.46	1,244.15	1,172.21	71.94	17.295	
7,900.00	5,519.00	8,085.98	5,619.35	35.24	39.28	94.63	-1,007.58	2,502.20	1,244.13	1,170.51	73.62	16.900	
7,921.25	5,519.00	8,107.23	5,619.27	35.48	39.50	94.62	-1,007.45	2,523.45	1,244.12	1,170.05	74.07	16.796	
8,000.00	5,519.00	8,185.98	5,618.96	36.37	40.30	94.61	-1,006.97	2,602.19	1,244.10	1,168.33	75.77	16.419	
8,021.25	5,519.00	8,207.23	5,618.87	36.61	40.52	94.60	-1,006.84	2,623.45	1,244.10	1,167.86	76.23	16.320	
8,100.00	5,519.00	8,285.97	5,618.56	37.50	41.33	94.59	-1,006.37	2,702.19	1,244.08	1,166.13	77.95	15.960	
8,121.25	5,519.00	8,307.23	5,618.48	37.75	41.55	94.59	-1,006.24	2,723.45	1,244.07	1,165.66	78.41	15.866	
8,200.00	5,519.00	8,385.97	5,618.17	38.65	42.37	94.57	-1,005.76	2,802.19	1,244.05	1,163.91	80.14	15.523	
8,221.25	5,519.00	8,407.23	5,618.09	38.89	42.59	94.57	-1,005.63	2,823.44	1,244.05	1,163.44	80.61	15.433	
8,300.00	5,519.00	8,485.97	5,617.78	39.80	43.42	94.55	-1,005.15	2,902.18	1,244.03	1,161.68	82.35	15.106	
8,321.25	5,519.00	8,507.23	5,617.69	40.05	43.64	94.55	-1,005.02	2,923.44	1,244.02	1,161.20	82.82	15.020	
8,400.00	5,519.00	8,585.97	5,617.38	40.96	44.48	94.54	-1,004.55	3,002.18	1,244.00	1,159.42	84.58	14.708	
8,420.63	5,519.00	8,606.60	5,617.30	41.20	44.70	94.53	-1,004.42	3,022.81	1,244.00	1,158.96	85.04	14.628	
8,497.04	5,519.00	8,683.01	5,617.00	42.09	45.52	94.52	-1,003.96	3,099.22	1,243.98	1,157.23	86.75	14.339	
8,500.00	5,519.00	8,685.97	5,616.99	42.12	45.55	94.52	-1,003.94	3,102.18	1,243.98	1,157.16	86.82	14.328	
8,502.67	5,518.99	8,688.64	5,616.98	42.15	45.58	94.52	-1,003.92	3,104.85	1,243.98	1,157.10	86.88	14.318	
8,505.84	5,518.99	8,691.81	5,616.97	42.19	45.62	94.52	-1,003.91	3,108.02	1,243.98	1,157.03	86.95	14.307	
8,512.08	5,518.96	8,698.05	5,616.94	42.26	45.68	94.52	-1,003.87	3,114.26	1,243.98	1,156.89	87.09	14.284	
8,512.14	5,518.96	8,698.11	5,616.94	42.26	45.68	94.52	-1,003.87	3,114.31	1,243.98	1,156.89	87.09	14.284	
8,600.00	5,518.50	8,785.97	5,616.60	43.29	46.63	94.52	-1,003.33	3,202.18	1,244.00	1,154.93	89.07	13.967	
8,600.01	5,518.50	8,785.98	5,616.60	43.29	46.63	94.52	-1,003.33	3,202.18	1,244.00	1,154.93	89.07	13.967	
8,700.00	5,517.97	8,885.97	5,616.21	44.46	47.72	94.53	-1,002.73	3,302.17	1,244.01	1,152.68	91.33	13.621	
8,700.01	5,517.97	8,885.98	5,616.21	44.46	47.72	94.53	-1,002.73	3,302.18	1,244.01	1,152.68	91.33	13.621	
8,800.00	5,517.45	8,985.97	5,615.81	45.63	48.82	94.54	-1,002.12	3,402.17	1,244.03	1,150.42	93.61	13.290	
8,800.01	5,517.45	8,985.98	5,615.81	45.63	48.82	94.54	-1,002.12	3,402.18	1,244.03	1,150.42	93.61	13.290	
8,900.00	5,516.92	9,085.97	5,615.42	46.82	49.92	94.54	-1,001.52	3,502.17	1,244.05	1,148.16	95.89	12.973	
8,900.01	5,516.92	9,085.98	5,615.42	46.82	49.92	94.54	-1,001.52	3,502.18	1,244.05	1,148.16	95.89	12.973	
9,000.00	5,516.40	9,185.97	5,615.03	48.00	51.03	94.55	-1,000.91	3,602.16	1,244.06	1,145.88	98.19	12.670	
9,000.01	5,516.40	9,185.98	5,615.03	48.00	51.03	94.55	-1,000.91	3,602.17	1,244.06	1,145.88	98.19	12.670	
9,100.00	5,515.87	9,285.97	5,614.63	49.19	52.15	94.55	-1,000.30	3,702.16	1,244.08	1,143.59	100.49	12.380	
9,100.01	5,515.87	9,285.98	5,614.63	49.19	52.15	94.55	-1,000.30	3,702.17	1,244.08	1,143.59	100.49	12.380	
9,200.00	5,515.35	9,385.97	5,614.24	50.38	53.27	94.56	-999.70	3,802.16	1,244.10	1,141.29	102.81	12.101	
9,200.01	5,515.35	9,385.98	5,614.24	50.38	53.27	94.56	-999.70	3,802.17	1,244.10	1,141.29	102.81	12.101	
9,300.00	5,514.82	9,485.97	5,613.85	51.57	54.40	94.57	-999.09	3,902.16	1,244.12	1,138.99	105.13	11.834	
9,300.01	5,514.82	9,485.98	5,613.85	51.57	54.40	94.57	-999.09	3,902.17	1,244.12	1,138.99	105.13	11.834	
9,400.00	5,514.30	9,585.97	5,613.46	52.77	55.53	94.57	-998.48	4,002.15	1,244.13	1,136.67	107.46	11.578	
9,400.01	5,514.30	9,585.98	5,613.46	52.77	55.53	94.57	-998.48	4,002.16	1,244.13	1,136.67	107.46	11.578	
9,500.00	5,513.77	9,685.97	5,613.06	53.97	56.67	94.58	-997.88	4,102.15	1,244.15	1,134.36	109.80	11.332	
9,500.01	5,513.77	9,685.98	5,613.06	53.97	56.67	94.58	-997.88	4,102.16	1,244.15	1,134.36	109.80	11.332	
9,600.00	5,513.25	9,785.97	5,612.67	55.17	57.81	94.58	-997.27	4,202.15	1,244.17	1,132.03	112.14	11.095	
9,600.01	5,513.25	9,785.98	5,612.67	55.17	57.81	94.58	-997.27	4,202.16	1,244.17	1,132.03	112.14	11.095	
9,700.00	5,512.72	9,885.97	5,612.28	56.37	58.96	94.59	-996.67	4,302.15	1,244.19	1,129.70	114.49	10.867	
9,700.01	5,512.72	9,885.98	5,612.28	56.37	58.96	94.59	-996.67	4,302.16	1,244.19	1,129.70	114.49	10.867	

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 LD13-645
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 LD13-645	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: Reference		0-MWD+IFR1+MS Offset		Semi Major Axis		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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,800.00	5,512.20	9,985.97	5,611.88	57.58	60.11	94.60	-996.06	4,402.14	1,244.20	1,127.36	116.85	10.648		
9,800.01	5,512.20	9,985.98	5,611.88	57.58	60.11	94.60	-996.06	4,402.15	1,244.20	1,127.36	116.85	10.648		
9,900.00	5,511.67	10,085.97	5,611.49	58.79	61.26	94.60	-995.45	4,502.14	1,244.22	1,125.01	119.21	10.437		
9,900.01	5,511.67	10,085.98	5,611.49	58.79	61.26	94.60	-995.45	4,502.15	1,244.22	1,125.01	119.21	10.437		
10,000.00	5,511.15	10,185.97	5,611.10	59.99	62.42	94.61	-994.85	4,602.14	1,244.24	1,122.66	121.57	10.234		
10,000.01	5,511.15	10,185.98	5,611.10	59.99	62.42	94.61	-994.85	4,602.15	1,244.24	1,122.66	121.57	10.234		
10,100.00	5,510.62	10,285.97	5,610.71	61.21	63.58	94.61	-994.24	4,702.13	1,244.25	1,120.31	123.95	10.039		
10,100.01	5,510.62	10,285.98	5,610.71	61.21	63.58	94.61	-994.24	4,702.14	1,244.25	1,120.31	123.95	10.039		
10,200.00	5,510.10	10,385.97	5,610.31	62.42	64.74	94.62	-993.63	4,802.13	1,244.27	1,117.95	126.32	9.850		
10,200.01	5,510.10	10,385.98	5,610.31	62.42	64.74	94.62	-993.63	4,802.14	1,244.27	1,117.95	126.32	9.850		
10,300.00	5,509.57	10,485.97	5,609.92	63.63	65.91	94.63	-993.03	4,902.13	1,244.29	1,115.59	128.70	9.668		
10,300.01	5,509.57	10,485.98	5,609.92	63.63	65.91	94.63	-993.03	4,902.14	1,244.29	1,115.59	128.70	9.668		
10,400.00	5,509.05	10,585.97	5,609.53	64.85	67.08	94.63	-992.42	5,002.13	1,244.31	1,113.22	131.09	9.492		
10,400.01	5,509.05	10,585.98	5,609.53	64.85	67.08	94.63	-992.42	5,002.14	1,244.31	1,113.22	131.09	9.492		
10,500.00	5,508.52	10,685.97	5,609.13	66.06	68.26	94.64	-991.82	5,102.12	1,244.32	1,110.85	133.48	9.322		
10,500.01	5,508.52	10,685.98	5,609.13	66.06	68.26	94.64	-991.82	5,102.13	1,244.32	1,110.85	133.48	9.322		
10,600.00	5,508.00	10,785.97	5,608.74	67.28	69.43	94.64	-991.21	5,202.12	1,244.34	1,108.47	135.87	9.158		
10,600.01	5,508.00	10,785.98	5,608.74	67.28	69.43	94.64	-991.21	5,202.13	1,244.34	1,108.47	135.87	9.158		
10,700.00	5,507.47	10,885.97	5,608.35	68.50	70.61	94.65	-990.60	5,302.12	1,244.36	1,106.09	138.27	9.000		
10,700.01	5,507.47	10,885.98	5,608.35	68.50	70.61	94.65	-990.60	5,302.13	1,244.36	1,106.09	138.27	9.000		
10,800.00	5,506.95	10,985.97	5,607.96	69.72	71.79	94.66	-990.00	5,402.12	1,244.38	1,103.71	140.67	8.846		
10,800.01	5,506.95	10,985.98	5,607.96	69.72	71.79	94.66	-990.00	5,402.13	1,244.38	1,103.71	140.67	8.846		
10,900.00	5,506.42	11,085.97	5,607.56	70.94	72.98	94.66	-989.39	5,502.11	1,244.39	1,101.32	143.07	8.698		
10,900.01	5,506.42	11,085.98	5,607.56	70.94	72.98	94.66	-989.39	5,502.12	1,244.39	1,101.32	143.07	8.698		
11,000.00	5,505.90	11,185.97	5,607.17	72.16	74.16	94.67	-988.78	5,602.11	1,244.41	1,098.93	145.48	8.554		
11,000.01	5,505.90	11,185.98	5,607.17	72.16	74.16	94.67	-988.78	5,602.12	1,244.41	1,098.93	145.48	8.554		
11,100.00	5,505.37	11,285.97	5,606.78	73.39	75.35	94.67	-988.18	5,702.11	1,244.43	1,096.54	147.89	8.415		
11,100.01	5,505.37	11,285.98	5,606.78	73.39	75.35	94.67	-988.18	5,702.12	1,244.43	1,096.54	147.89	8.415		
11,200.00	5,504.85	11,385.97	5,606.38	74.61	76.54	94.68	-987.57	5,802.11	1,244.45	1,094.15	150.30	8.280		
11,200.01	5,504.85	11,385.98	5,606.38	74.61	76.54	94.68	-987.57	5,802.12	1,244.45	1,094.15	150.30	8.280		
11,300.00	5,504.32	11,485.97	5,605.99	75.84	77.73	94.69	-986.97	5,902.10	1,244.46	1,091.75	152.71	8.149		
11,300.01	5,504.32	11,485.98	5,605.99	75.84	77.73	94.69	-986.97	5,902.11	1,244.46	1,091.75	152.71	8.149		
11,400.00	5,503.80	11,585.97	5,605.60	77.06	78.92	94.69	-986.36	6,002.10	1,244.48	1,089.35	155.13	8.022		
11,400.01	5,503.80	11,585.98	5,605.60	77.06	78.92	94.69	-986.36	6,002.11	1,244.48	1,089.35	155.13	8.022		
11,500.00	5,503.27	11,685.97	5,605.21	78.29	80.12	94.70	-985.75	6,102.10	1,244.50	1,086.95	157.55	7.899		
11,500.01	5,503.27	11,685.98	5,605.21	78.29	80.12	94.70	-985.75	6,102.11	1,244.50	1,086.95	157.55	7.899		
11,600.00	5,502.75	11,785.97	5,604.81	79.51	81.32	94.70	-985.15	6,202.09	1,244.52	1,084.54	159.97	7.780		
11,600.01	5,502.75	11,785.98	5,604.81	79.51	81.32	94.70	-985.15	6,202.10	1,244.52	1,084.54	159.97	7.780		
11,700.00	5,502.22	11,885.97	5,604.42	80.74	82.51	94.71	-984.54	6,302.09	1,244.53	1,082.14	162.40	7.664		
11,700.01	5,502.22	11,885.98	5,604.42	80.74	82.51	94.71	-984.54	6,302.10	1,244.53	1,082.14	162.40	7.664		
11,800.00	5,501.70	11,985.97	5,604.03	81.97	83.71	94.72	-983.93	6,402.09	1,244.55	1,079.73	164.82	7.551		
11,800.01	5,501.70	11,985.98	5,604.03	81.97	83.71	94.72	-983.93	6,402.10	1,244.55	1,079.73	164.82	7.551		
11,900.00	5,501.17	12,085.97	5,603.63	83.20	84.91	94.72	-983.33	6,502.09	1,244.57	1,077.32	167.25	7.441		
11,900.01	5,501.17	12,085.98	5,603.63	83.20	84.91	94.72	-983.33	6,502.10	1,244.57	1,077.32	167.25	7.441		
12,000.00	5,500.65	12,185.97	5,603.24	84.43	86.12	94.73	-982.72	6,602.08	1,244.59	1,074.91	169.68	7.335		
12,000.01	5,500.65	12,185.98	5,603.24	84.43	86.12	94.73	-982.72	6,602.09	1,244.59	1,074.91	169.68	7.335		
12,100.00	5,500.12	12,285.97	5,602.85	85.66	87.32	94.73	-982.12	6,702.08	1,244.60	1,072.49	172.11	7.231		
12,100.01	5,500.12	12,285.98	5,602.85	85.66	87.32	94.73	-982.12	6,702.09	1,244.60	1,072.49	172.11	7.231		
12,200.00	5,499.60	12,385.97	5,602.46	86.89	88.53	94.74	-981.51	6,802.08	1,244.62	1,070.08	174.55	7.131		
12,200.01	5,499.60	12,385.98	5,602.46	86.89	88.53	94.74	-981.51	6,802.09	1,244.62	1,070.08	174.55	7.131		
12,300.00	5,499.07	12,485.97	5,602.06	88.12	89.73	94.75	-980.90	6,902.08	1,244.64	1,067.66	176.98	7.033		
12,300.01	5,499.07	12,485.98	5,602.06	88.12	89.73	94.75	-980.90	6,902.09	1,244.64	1,067.66	176.98	7.033		

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 LD13-645
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 LD13-645	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+HFR1+MS		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	
12,400.00	5,498.55	12,585.97	5,601.67	89.35	90.94	94.75	-980.30	7,002.07	1,244.66	1,065.24	179.42	6.937		
12,400.01	5,498.55	12,585.98	5,601.67	89.36	90.94	94.75	-980.30	7,002.08	1,244.66	1,065.24	179.42	6.937		
12,500.00	5,498.02	12,685.97	5,601.28	90.59	92.15	94.76	-979.69	7,102.07	1,244.68	1,062.82	181.86	6.844		
12,500.01	5,498.02	12,685.98	5,601.28	90.59	92.15	94.76	-979.69	7,102.08	1,244.68	1,062.82	181.86	6.844		
12,600.00	5,497.50	12,785.97	5,600.88	91.82	93.36	94.76	-979.08	7,202.07	1,244.69	1,060.40	184.30	6.754		
12,600.01	5,497.50	12,785.98	5,600.88	91.82	93.36	94.76	-979.08	7,202.08	1,244.69	1,060.40	184.30	6.754		
12,700.00	5,496.97	12,885.97	5,600.49	93.05	94.57	94.77	-978.48	7,302.06	1,244.71	1,057.97	186.74	6.666		
12,700.01	5,496.97	12,885.98	5,600.49	93.05	94.57	94.77	-978.48	7,302.08	1,244.71	1,057.97	186.74	6.666		
12,800.00	5,496.45	12,985.97	5,600.10	94.29	95.78	94.78	-977.87	7,402.06	1,244.73	1,055.55	189.18	6.580		
12,800.01	5,496.45	12,985.98	5,600.10	94.29	95.78	94.78	-977.87	7,402.07	1,244.73	1,055.55	189.18	6.580		
12,900.00	5,495.92	13,085.97	5,599.71	95.52	96.99	94.78	-977.27	7,502.06	1,244.75	1,053.12	191.63	6.496		
12,900.01	5,495.92	13,085.98	5,599.71	95.52	96.99	94.78	-977.27	7,502.07	1,244.75	1,053.12	191.63	6.496		
13,000.00	5,495.40	13,185.97	5,599.31	96.76	98.21	94.79	-976.66	7,602.06	1,244.76	1,050.69	194.07	6.414		
13,000.01	5,495.40	13,185.98	5,599.31	96.76	98.21	94.79	-976.66	7,602.07	1,244.76	1,050.69	194.07	6.414		
13,100.00	5,494.87	13,285.97	5,598.92	97.99	99.42	94.79	-976.05	7,702.05	1,244.78	1,048.26	196.52	6.334		
13,100.01	5,494.87	13,285.98	5,598.92	97.99	99.42	94.79	-976.05	7,702.07	1,244.78	1,048.26	196.52	6.334		
13,200.00	5,494.35	13,385.97	5,598.53	99.23	100.64	94.80	-975.45	7,802.05	1,244.80	1,045.83	198.96	6.256		
13,200.01	5,494.35	13,385.98	5,598.53	99.23	100.64	94.80	-975.45	7,802.06	1,244.80	1,045.83	198.97	6.256		
13,300.00	5,493.82	13,485.97	5,598.13	100.46	101.85	94.81	-974.84	7,902.05	1,244.82	1,043.40	201.41	6.180		
13,300.01	5,493.82	13,485.98	5,598.13	100.46	101.85	94.81	-974.84	7,902.06	1,244.82	1,043.40	201.41	6.180		
13,400.00	5,493.30	13,585.97	5,597.74	101.70	103.07	94.81	-974.23	8,002.05	1,244.84	1,040.97	203.86	6.106		
13,400.01	5,493.30	13,585.98	5,597.74	101.70	103.07	94.81	-974.23	8,002.06	1,244.84	1,040.97	203.86	6.106		
13,500.00	5,492.77	13,685.97	5,597.35	102.94	104.29	94.82	-973.63	8,102.04	1,244.85	1,038.54	206.31	6.034		
13,500.01	5,492.77	13,685.98	5,597.35	102.94	104.29	94.82	-973.63	8,102.05	1,244.85	1,038.54	206.32	6.034		
13,600.00	5,492.25	13,785.97	5,596.96	104.17	105.51	94.82	-973.02	8,202.04	1,244.87	1,036.10	208.77	5.963		
13,600.01	5,492.25	13,785.98	5,596.96	104.17	105.51	94.82	-973.02	8,202.05	1,244.87	1,036.10	208.77	5.963		
13,700.00	5,491.72	13,885.97	5,596.56	105.41	106.73	94.83	-972.42	8,302.04	1,244.89	1,033.67	211.22	5.894		
13,700.01	5,491.72	13,885.98	5,596.56	105.41	106.73	94.83	-972.42	8,302.05	1,244.89	1,033.67	211.22	5.894		
13,800.00	5,491.20	13,985.97	5,596.17	106.65	107.95	94.84	-971.81	8,402.04	1,244.91	1,031.23	213.67	5.826		
13,800.01	5,491.20	13,985.98	5,596.17	106.65	107.95	94.84	-971.81	8,402.05	1,244.91	1,031.23	213.67	5.826		
13,900.00	5,490.67	14,085.97	5,595.78	107.88	109.17	94.84	-971.20	8,502.03	1,244.92	1,028.80	216.13	5.760		
13,900.01	5,490.67	14,085.98	5,595.78	107.88	109.17	94.84	-971.20	8,502.04	1,244.92	1,028.80	216.13	5.760		
14,000.00	5,490.15	14,185.97	5,595.38	109.12	110.39	94.85	-970.60	8,602.03	1,244.94	1,026.36	218.58	5.695		
14,000.01	5,490.15	14,185.98	5,595.38	109.12	110.39	94.85	-970.60	8,602.04	1,244.94	1,026.36	218.58	5.695		
14,100.00	5,489.62	14,285.97	5,594.99	110.36	111.61	94.86	-969.99	8,702.03	1,244.96	1,023.92	221.04	5.632		
14,100.01	5,489.62	14,285.98	5,594.99	110.36	111.61	94.86	-969.99	8,702.04	1,244.96	1,023.92	221.04	5.632		
14,200.00	5,489.10	14,385.97	5,594.60	111.60	112.83	94.86	-969.38	8,802.02	1,244.98	1,021.48	223.50	5.570		
14,200.01	5,489.10	14,385.98	5,594.60	111.60	112.83	94.86	-969.38	8,802.04	1,244.98	1,021.48	223.50	5.570		
14,300.00	5,488.57	14,485.97	5,594.21	112.84	114.05	94.87	-968.78	8,902.02	1,245.00	1,019.04	225.96	5.510		
14,300.01	5,488.57	14,485.98	5,594.21	112.84	114.06	94.87	-968.78	8,902.03	1,245.00	1,019.04	225.96	5.510		
14,400.00	5,488.05	14,585.97	5,593.81	114.08	115.28	94.87	-968.17	9,002.02	1,245.01	1,016.60	228.42	5.451		
14,400.01	5,488.05	14,585.98	5,593.81	114.08	115.28	94.87	-968.17	9,002.03	1,245.01	1,016.60	228.42	5.451		
14,500.00	5,487.52	14,685.97	5,593.42	115.32	116.50	94.88	-967.57	9,102.02	1,245.03	1,014.16	230.88	5.393		
14,500.01	5,487.52	14,685.98	5,593.42	115.32	116.50	94.88	-967.57	9,102.03	1,245.03	1,014.16	230.88	5.393		
14,600.00	5,487.00	14,785.97	5,593.03	116.56	117.73	94.89	-966.96	9,202.01	1,245.05	1,011.71	233.34	5.336		
14,600.01	5,487.00	14,785.98	5,593.03	116.56	117.73	94.89	-966.96	9,202.03	1,245.05	1,011.71	233.34	5.336		
14,700.00	5,486.47	14,885.97	5,592.63	117.79	118.95	94.89	-966.35	9,302.01	1,245.07	1,009.27	235.80	5.280		
14,700.01	5,486.47	14,885.98	5,592.63	117.79	118.95	94.89	-966.35	9,302.02	1,245.07	1,009.27	235.80	5.280		
14,800.00	5,485.95	14,985.97	5,592.24	119.03	120.18	94.90	-965.75	9,402.01	1,245.09	1,006.83	238.26	5.226		
14,800.01	5,485.95	14,985.98	5,592.24	119.03	120.18	94.90	-965.75	9,402.02	1,245.09	1,006.83	238.26	5.226		
14,900.00	5,485.42	15,085.97	5,591.85	120.27	121.40	94.90	-965.14	9,502.01	1,245.10	1,004.38	240.72	5.172		
14,900.01	5,485.42	15,085.98	5,591.85	120.27	121.40	94.90	-965.14	9,502.02	1,245.10	1,004.38	240.72	5.172		

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 LD13-645
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 LD13-645	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	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:	Distance	Between	Between	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)	Ellipses (usft)	Separation (usft)		
15,000.00	5,484.90	15,185.97	5,591.46	121.51	122.63	94.91	-964.53	9,602.00	1,245.12	1,001.94	243.18	5.120	
15,000.01	5,484.90	15,185.98	5,591.46	121.51	122.63	94.91	-964.53	9,602.01	1,245.12	1,001.94	243.18	5.120	
15,100.00	5,484.37	15,285.97	5,591.06	122.76	123.86	94.92	-963.93	9,702.00	1,245.14	999.49	245.65	5.069	
15,100.01	5,484.37	15,285.98	5,591.06	122.76	123.86	94.92	-963.93	9,702.01	1,245.14	999.49	245.65	5.069	
15,200.00	5,483.85	15,385.97	5,590.67	124.00	125.09	94.92	-963.32	9,802.00	1,245.16	997.05	248.11	5.019	
15,200.01	5,483.85	15,385.98	5,590.67	124.00	125.09	94.92	-963.32	9,802.01	1,245.16	997.05	248.11	5.019	
15,300.00	5,483.32	15,485.97	5,590.28	125.24	126.31	94.93	-962.72	9,901.99	1,245.18	994.60	250.58	4.969	
15,300.01	5,483.32	15,485.98	5,590.28	125.24	126.31	94.93	-962.72	9,902.01	1,245.18	994.60	250.58	4.969	
15,400.00	5,482.80	15,585.97	5,589.88	126.48	127.54	94.93	-962.11	10,001.99	1,245.19	992.15	253.04	4.921	
15,400.01	5,482.80	15,585.98	5,589.88	126.48	127.54	94.93	-962.11	10,002.00	1,245.19	992.15	253.04	4.921	
15,500.00	5,482.27	15,685.97	5,589.49	127.72	128.77	94.94	-961.50	10,101.99	1,245.21	989.70	255.51	4.873	
15,500.01	5,482.27	15,685.98	5,589.49	127.72	128.77	94.94	-961.50	10,102.00	1,245.21	989.70	255.51	4.873	
15,600.00	5,481.75	15,785.97	5,589.10	128.96	130.00	94.95	-960.90	10,201.99	1,245.23	987.26	257.97	4.827	
15,600.01	5,481.75	15,785.98	5,589.10	128.96	130.00	94.95	-960.90	10,202.00	1,245.23	987.26	257.97	4.827	
15,700.00	5,481.22	15,885.97	5,588.71	130.20	131.23	94.95	-960.29	10,301.98	1,245.25	984.81	260.44	4.781	
15,700.01	5,481.22	15,885.98	5,588.71	130.20	131.23	94.95	-960.29	10,302.00	1,245.25	984.81	260.44	4.781	
15,800.00	5,480.70	15,985.97	5,588.31	131.44	132.46	94.96	-959.68	10,401.98	1,245.27	982.36	262.91	4.736	
15,800.01	5,480.70	15,985.98	5,588.31	131.44	132.46	94.96	-959.68	10,401.99	1,245.27	982.36	262.91	4.736	
15,900.00	5,480.17	16,085.97	5,587.92	132.69	133.69	94.96	-959.08	10,501.98	1,245.29	979.91	265.38	4.693	
15,900.01	5,480.17	16,085.98	5,587.92	132.69	133.69	94.96	-959.08	10,501.99	1,245.29	979.91	265.38	4.693	
16,000.00	5,479.65	16,185.97	5,587.53	133.93	134.92	94.97	-958.47	10,601.98	1,245.30	977.46	267.85	4.649	
16,000.01	5,479.65	16,185.98	5,587.53	133.93	134.92	94.97	-958.47	10,601.99	1,245.30	977.46	267.85	4.649	
16,100.00	5,479.12	16,285.97	5,587.13	135.17	136.15	94.98	-957.87	10,701.97	1,245.32	975.01	270.31	4.607	
16,100.02	5,479.12	16,285.98	5,587.13	135.17	136.15	94.98	-957.87	10,701.99	1,245.32	975.01	270.31	4.607	
16,123.37	5,479.00	16,309.33	5,587.04	135.46	136.44	94.98	-957.72	10,725.34	1,245.33	974.44	270.89	4.597 SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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 LD13-635 - 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)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
							+N/-S (usft)	+E/-W (usft)							
0.00	0.00	0.00	0.00	0.00	0.00	178.85	-27.69	0.55	27.69						
100.00	100.00	100.00	100.00	0.88	0.88	178.85	-27.69	0.55	27.69	25.93	1.77	15.667			
200.00	200.00	200.00	200.00	1.50	1.50	178.85	-27.69	0.55	27.69	24.69	3.00	9.219			
300.00	300.00	300.00	300.00	1.94	1.94	178.85	-27.69	0.55	27.69	23.82	3.87	7.156			
400.00	400.00	400.00	400.00	2.29	2.29	178.85	-27.69	0.55	27.69	23.11	4.58	6.046			
500.00	500.00	500.00	500.00	2.60	2.60	178.85	-27.69	0.55	27.69	22.49	5.20	5.326 CC, ES			
600.00	599.98	599.98	599.98	3.05	2.88	-138.33	-27.69	0.55	28.97	23.12	5.85	4.950			
677.77	677.65	677.65	677.65	3.26	3.08	-142.80	-27.69	0.55	31.89	25.63	6.26	5.097			
700.00	699.84	699.84	699.84	3.29	3.13	-144.25	-27.69	0.55	33.00	26.66	6.34	5.206			
800.00	799.65	798.93	798.91	3.58	3.42	-148.33	-28.80	-0.08	39.13	32.24	6.89	5.681			
900.00	899.46	897.79	897.70	3.88	3.69	-149.04	-32.13	-1.99	47.24	39.83	7.41	6.375			
1,000.00	999.27	996.31	996.01	4.19	3.98	-147.74	-37.66	-5.15	57.20	49.27	7.93	7.215			
1,100.00	1,099.07	1,094.93	1,094.25	4.50	4.15	-145.53	-45.19	-9.46	68.94	60.61	8.33	8.275			
1,200.00	1,198.88	1,194.17	1,193.06	4.82	4.43	-143.77	-53.12	-14.00	81.07	72.22	8.85	9.163			
1,300.00	1,298.69	1,293.40	1,291.88	5.15	4.73	-142.47	-61.06	-18.54	93.26	83.88	9.38	9.942			
1,400.00	1,398.50	1,392.64	1,390.69	5.48	5.04	-141.47	-68.99	-23.08	105.48	95.56	9.92	10.631			
1,500.00	1,498.30	1,491.87	1,489.50	5.82	5.36	-140.67	-76.92	-27.62	117.73	107.26	10.47	11.243			
1,600.00	1,598.11	1,591.11	1,588.32	6.15	5.69	-140.03	-84.86	-32.16	130.00	118.97	11.03	11.788			
1,700.00	1,697.92	1,690.34	1,687.13	6.49	6.03	-139.50	-92.79	-36.70	142.28	130.69	11.59	12.277			
1,800.00	1,797.73	1,789.58	1,785.94	6.83	6.37	-139.05	-100.73	-41.25	154.57	142.42	12.16	12.717			
1,900.00	1,897.53	1,888.81	1,884.76	7.18	6.72	-138.67	-108.66	-45.79	166.87	154.15	12.73	13.114			
2,000.00	1,997.34	1,988.05	1,983.57	7.52	7.07	-138.34	-116.60	-50.33	179.18	165.88	13.30	13.473			
2,100.00	2,097.15	2,087.28	2,082.38	7.87	7.43	-138.05	-124.53	-54.87	191.49	177.61	13.87	13.801			
2,200.00	2,196.96	2,186.52	2,181.19	8.21	7.79	-137.80	-132.46	-59.41	203.80	189.35	14.45	14.100			
2,300.00	2,296.76	2,285.75	2,280.01	8.56	8.15	-137.58	-140.40	-63.95	216.12	201.08	15.03	14.375			
2,400.00	2,396.57	2,384.99	2,378.82	8.91	8.51	-137.38	-148.33	-68.49	228.44	212.82	15.62	14.627			
2,500.00	2,496.38	2,484.22	2,477.63	9.26	8.88	-137.20	-156.27	-73.03	240.76	224.56	16.20	14.859			
2,600.00	2,596.19	2,583.46	2,576.45	9.61	9.25	-137.04	-164.20	-77.57	253.09	236.30	16.79	15.075			
2,700.00	2,695.99	2,682.69	2,675.26	9.96	9.62	-136.89	-172.13	-82.11	265.42	248.04	17.38	15.274			
2,800.00	2,795.80	2,781.93	2,774.07	10.31	9.99	-136.76	-180.07	-86.65	277.75	259.78	17.97	15.460			
2,900.00	2,895.61	2,881.16	2,872.89	10.66	10.36	-136.64	-188.00	-91.19	290.08	271.52	18.56	15.633			
3,000.00	2,995.42	2,980.40	2,971.70	11.01	10.74	-136.52	-195.94	-95.73	302.41	283.26	19.15	15.794			
3,100.00	3,095.22	3,079.63	3,070.51	11.36	11.12	-136.42	-203.87	-100.27	314.74	295.00	19.74	15.945			
3,200.00	3,195.03	3,178.87	3,169.33	11.71	11.49	-136.32	-211.80	-104.82	327.07	306.74	20.33	16.087			
3,300.00	3,294.84	3,278.10	3,268.14	12.07	11.87	-136.24	-219.74	-109.36	339.41	318.48	20.92	16.220			
3,400.00	3,394.65	3,377.34	3,366.95	12.42	12.25	-136.15	-227.67	-113.90	351.74	330.22	21.52	16.346			
3,500.00	3,494.45	3,476.57	3,465.77	12.77	12.63	-136.08	-235.61	-118.44	364.08	341.96	22.11	16.464			
3,600.00	3,594.26	3,575.81	3,564.58	13.13	13.01	-136.00	-243.54	-122.98	376.41	353.70	22.71	16.576			
3,700.00	3,694.07	3,675.04	3,663.39	13.48	13.39	-135.94	-251.48	-127.52	388.75	365.45	23.30	16.681			
3,800.00	3,793.88	3,774.28	3,762.21	13.83	13.77	-135.87	-259.41	-132.06	401.09	377.19	23.90	16.782			
3,900.00	3,893.68	3,873.51	3,861.02	14.19	14.15	-135.81	-267.34	-136.60	413.43	388.93	24.50	16.877			
4,000.00	3,993.49	3,972.75	3,959.83	14.54	14.53	-135.76	-275.28	-141.14	425.76	400.67	25.09	16.967			
4,100.00	4,093.30	4,071.98	4,058.64	14.90	14.91	-135.71	-283.21	-145.68	438.10	412.41	25.69	17.053			
4,200.00	4,193.11	4,171.22	4,157.46	15.25	15.30	-135.66	-291.15	-150.22	450.44	424.15	26.29	17.134			
4,300.00	4,292.91	4,270.45	4,256.27	15.61	15.68	-135.61	-299.08	-154.76	462.78	435.89	26.89	17.212			
4,400.00	4,392.72	4,369.69	4,355.08	15.96	16.06	-135.56	-307.01	-159.30	475.12	447.63	27.49	17.286			
4,500.00	4,492.53	4,468.92	4,453.90	16.32	16.45	-135.52	-314.95	-163.84	487.46	459.37	28.08	17.357			
4,600.00	4,592.34	4,568.16	4,552.71	16.67	16.83	-135.48	-322.88	-168.38	499.80	471.12	28.68	17.425			
4,700.00	4,692.14	4,667.39	4,651.52	17.03	17.22	-135.44	-330.82	-172.93	512.14	482.86	29.28	17.490			
4,800.00	4,791.96	4,766.63	4,750.33	17.36	17.60	-135.41	-337.18	-176.57	522.04	492.29	29.75	17.547			
4,900.00	4,891.78	4,866.35	4,850.05	17.69	17.94	-135.38	-343.54	-180.11	531.94	501.19	30.22	17.604			
4,850.00	4,841.89	4,816.13	4,799.62	17.49	17.79	128.88	-342.71	-179.73	530.64	500.46	30.18	17.584			

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 LD13-645
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 LD13-645	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 LD13-635 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: 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)			
4,900.00	4,891.64	4,865.53	4,848.85	17.48	17.95	109.26	-346.65	-180.77	536.81	506.38	30.42	17.645	
4,950.00	4,940.96	4,915.31	4,898.41	17.41	18.08	102.59	-350.61	-178.41	542.98	512.35	30.63	17.726	
5,000.00	4,989.60	4,965.49	4,948.07	17.33	18.13	99.38	-354.55	-172.55	549.13	518.34	30.79	17.833	
5,050.00	5,037.34	5,016.08	4,997.62	17.24	18.13	97.53	-358.47	-163.12	555.23	524.32	30.91	17.965	
5,100.00	5,083.94	5,067.11	5,046.78	17.14	18.10	96.35	-362.34	-150.08	561.24	530.25	30.99	18.109	
5,150.00	5,129.18	5,118.57	5,095.31	17.05	18.05	95.54	-366.13	-133.40	567.13	536.06	31.06	18.257	
5,200.00	5,172.82	5,170.48	5,142.92	16.95	18.00	94.96	-369.84	-113.09	572.87	541.74	31.13	18.404	
5,250.00	5,214.67	5,222.84	5,189.34	16.87	17.94	94.54	-373.43	-89.15	578.42	547.23	31.19	18.545	
5,300.00	5,254.52	5,275.65	5,234.26	16.79	17.88	94.22	-376.88	-61.62	583.76	552.50	31.25	18.677	
5,350.00	5,292.16	5,328.91	5,277.40	16.72	17.83	93.98	-380.17	-30.58	588.84	557.51	31.33	18.795	
5,400.00	5,327.43	5,382.61	5,318.44	16.67	17.79	93.79	-383.27	3.89	593.65	562.23	31.42	18.894	
5,450.00	5,360.15	5,436.73	5,357.09	16.63	17.76	93.64	-386.17	41.65	598.15	566.61	31.53	18.969	
5,500.00	5,390.15	5,491.26	5,393.04	16.61	17.75	93.53	-388.83	82.55	602.31	570.63	31.67	19.016	
5,550.00	5,417.29	5,546.19	5,426.02	16.62	17.76	93.44	-391.24	126.39	606.10	574.25	31.85	19.031	
5,600.00	5,441.45	5,601.47	5,455.73	16.65	17.80	93.37	-393.37	172.94	609.50	577.44	32.06	19.009	
5,650.00	5,462.49	5,657.08	5,481.92	16.70	17.87	93.32	-395.21	221.95	612.49	580.16	32.33	18.947	
5,700.00	5,480.33	5,712.98	5,504.34	16.78	17.96	93.28	-396.74	273.12	615.04	582.41	32.64	18.845	
5,750.00	5,494.87	5,769.13	5,522.80	16.89	18.09	93.26	-397.94	326.12	617.14	584.15	33.00	18.703	
5,800.00	5,506.04	5,825.49	5,537.11	17.03	18.26	93.24	-398.79	380.61	618.78	585.37	33.41	18.522	
5,850.00	5,513.78	5,882.00	5,547.12	17.19	18.45	93.23	-399.30	436.21	619.93	586.06	33.87	18.304	
5,850.05	5,513.79	5,882.06	5,547.13	17.19	18.45	93.23	-399.30	436.27	619.93	586.06	33.87	18.304	
5,900.00	5,518.07	5,938.62	5,552.74	17.38	18.68	93.23	-399.46	492.53	620.60	586.22	34.37	18.054	
5,900.56	5,518.10	5,939.26	5,552.78	17.39	18.68	93.23	-399.46	493.17	620.60	586.22	34.38	18.051	
5,936.55	5,519.00	5,980.04	5,554.03	17.54	18.86	93.24	-399.34	533.93	620.77	586.01	34.77	17.854	
5,950.01	5,519.00	5,994.55	5,553.94	17.60	18.93	93.23	-399.26	548.44	620.77	585.86	34.92	17.779	
6,000.00	5,519.00	6,044.54	5,553.45	17.83	19.19	93.18	-398.96	598.42	620.75	585.28	35.47	17.500	
6,021.63	5,519.00	6,066.17	5,553.23	17.94	19.30	93.16	-398.83	620.05	620.74	585.01	35.73	17.375	
6,100.00	5,519.00	6,144.53	5,552.45	18.36	19.74	93.09	-398.35	698.41	620.70	584.02	36.68	16.921	
6,121.63	5,519.00	6,166.17	5,552.24	18.49	19.86	93.07	-398.22	720.04	620.69	583.73	36.97	16.791	
6,200.00	5,519.00	6,244.53	5,551.46	18.96	20.35	93.00	-397.74	798.40	620.66	582.64	38.02	16.324	
6,221.64	5,519.00	6,266.17	5,551.25	19.10	20.49	92.98	-397.61	820.04	620.65	582.32	38.33	16.192	
6,300.00	5,519.00	6,344.52	5,550.47	19.62	21.01	92.91	-397.14	898.39	620.61	581.14	39.47	15.723	
6,321.65	5,519.00	6,366.17	5,550.25	19.78	21.16	92.89	-397.01	920.03	620.60	580.80	39.80	15.592	
6,400.00	5,519.00	6,444.52	5,549.47	20.35	21.73	92.81	-396.53	998.37	620.57	579.55	41.02	15.127	
6,421.66	5,519.00	6,466.17	5,549.26	20.51	21.89	92.79	-396.40	1,020.03	620.56	579.19	41.38	14.998	
6,500.00	5,519.00	6,544.51	5,548.48	21.12	22.49	92.72	-395.93	1,098.36	620.53	577.86	42.67	14.544	
6,521.66	5,519.00	6,566.18	5,548.27	21.30	22.66	92.70	-395.80	1,120.02	620.52	577.48	43.04	14.419	
6,600.00	5,519.00	6,644.51	5,547.49	21.95	23.30	92.63	-395.32	1,198.35	620.49	576.10	44.39	13.978	
6,621.67	5,519.00	6,666.18	5,547.27	22.14	23.48	92.61	-395.19	1,220.02	620.48	575.71	44.77	13.858	
6,700.00	5,519.00	6,744.50	5,546.49	22.82	24.14	92.54	-394.71	1,298.34	620.45	574.27	46.18	13.435	
6,721.68	5,519.00	6,766.18	5,546.28	23.02	24.33	92.52	-394.58	1,320.02	620.44	573.86	46.58	13.319	
6,800.00	5,519.00	6,844.50	5,545.50	23.73	25.02	92.45	-394.11	1,398.33	620.42	572.37	48.04	12.915	
6,821.69	5,519.00	6,866.19	5,545.29	23.93	25.21	92.43	-393.98	1,420.02	620.41	571.95	48.45	12.804	
6,900.00	5,519.00	6,944.49	5,544.51	24.67	25.93	92.36	-393.50	1,498.31	620.38	570.43	49.95	12.419	
6,921.70	5,519.00	6,966.20	5,544.29	24.88	26.13	92.34	-393.37	1,520.01	620.37	570.00	50.38	12.315	
7,000.00	5,519.00	7,044.49	5,543.51	25.64	26.86	92.26	-392.90	1,598.30	620.35	568.43	51.92	11.949	
7,021.71	5,519.00	7,066.20	5,543.30	25.85	27.07	92.24	-392.76	1,620.01	620.34	567.99	52.35	11.850	
7,100.00	5,519.00	7,144.48	5,542.52	26.64	27.83	92.17	-392.29	1,698.29	620.32	566.39	53.93	11.503	
7,121.73	5,519.00	7,166.21	5,542.31	26.86	28.04	92.15	-392.16	1,720.02	620.31	565.94	54.37	11.409	
7,200.00	5,519.00	7,244.48	5,541.53	27.65	28.81	92.08	-391.68	1,798.28	620.29	564.31	55.97	11.082	
7,221.74	5,519.00	7,266.22	5,541.31	27.88	29.03	92.06	-391.55	1,820.02	620.28	563.85	56.42	10.993	

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 LD13-645
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 LD13-645	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 LD13-635 - 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)			
7,300.00	5,519.00	7,344.47	5,540.54	28.69	29.82	91.99	-391.08	1,898.27	620.26	562.20	58.06	10.684	
7,321.76	5,519.00	7,366.23	5,540.32	28.92	30.04	91.97	-390.95	1,920.02	620.25	561.74	58.52	10.600	
7,400.00	5,519.00	7,444.47	5,539.54	29.75	30.84	91.90	-390.47	1,998.26	620.23	560.06	60.17	10.307	
7,421.77	5,519.00	7,466.24	5,539.33	29.98	31.06	91.88	-390.34	2,020.03	620.23	559.59	60.64	10.228	
7,500.00	5,519.00	7,544.46	5,538.55	30.82	31.88	91.81	-389.87	2,098.24	620.21	557.89	62.32	9.952	
7,521.79	5,519.00	7,566.25	5,538.33	31.06	32.11	91.79	-389.73	2,120.03	620.20	557.41	62.79	9.878	
7,600.00	5,519.00	7,644.46	5,537.56	31.91	32.93	91.71	-389.26	2,198.23	620.18	555.69	64.49	9.617	
7,621.81	5,519.00	7,666.27	5,537.34	32.15	33.17	91.69	-389.13	2,220.04	620.18	555.21	64.96	9.546	
7,700.00	5,519.00	7,744.45	5,536.56	33.01	34.00	91.62	-388.65	2,298.22	620.16	553.48	66.68	9.300	
7,721.83	5,519.00	7,766.29	5,536.35	33.25	34.24	91.60	-388.52	2,320.05	620.16	552.99	67.16	9.234	
7,800.00	5,519.00	7,844.45	5,535.57	34.12	35.08	91.53	-388.05	2,398.21	620.14	551.24	68.90	9.001	
7,821.86	5,519.00	7,866.31	5,535.35	34.36	35.32	91.51	-387.92	2,420.06	620.14	550.75	69.38	8.938	
7,900.00	5,519.00	7,944.44	5,534.58	35.24	36.17	91.44	-387.44	2,498.20	620.12	548.99	71.13	8.718	
7,921.89	5,519.00	7,966.33	5,534.36	35.48	36.41	91.42	-387.31	2,520.08	620.12	548.50	71.62	8.658	
8,000.00	5,519.00	8,044.44	5,533.58	36.37	37.28	91.35	-386.84	2,598.19	620.10	546.72	73.38	8.451	
8,021.92	5,519.00	8,066.36	5,533.36	36.62	37.52	91.33	-386.70	2,620.10	620.10	546.22	73.88	8.394	
8,100.00	5,519.00	8,144.43	5,532.59	37.50	38.39	91.26	-386.23	2,698.17	620.09	544.44	75.65	8.197	
8,121.96	5,519.00	8,166.39	5,532.37	37.76	38.63	91.24	-386.10	2,720.13	620.09	543.94	76.15	8.143	
8,200.00	5,519.00	8,244.43	5,531.60	38.65	39.51	91.16	-385.62	2,798.16	620.07	542.15	77.93	7.957	
8,222.00	5,519.00	8,266.43	5,531.38	38.90	39.75	91.14	-385.49	2,820.16	620.07	541.64	78.43	7.906	
8,300.00	5,519.00	8,344.42	5,530.60	39.80	40.63	91.07	-385.02	2,898.15	620.06	539.84	80.22	7.729	
8,322.05	5,519.00	8,366.47	5,530.38	40.06	40.88	91.05	-384.88	2,920.20	620.06	539.33	80.73	7.681	
8,400.00	5,519.00	8,444.42	5,529.61	40.96	41.77	90.98	-384.41	2,998.14	620.05	537.52	82.53	7.513	
8,469.80	5,519.00	8,514.18	5,528.93	41.77	42.56	90.92	-383.99	3,067.90	620.04	535.90	84.14	7.369	
8,497.04	5,519.00	8,541.36	5,528.86	42.09	42.87	90.91	-383.82	3,095.07	620.05	535.27	84.77	7.314	
8,497.11	5,519.00	8,541.43	5,528.86	42.09	42.87	90.91	-383.82	3,095.14	620.05	535.27	84.77	7.314	
8,500.00	5,519.00	8,544.32	5,528.86	42.12	42.91	90.91	-383.81	3,098.03	620.05	535.21	84.84	7.308	
8,500.05	5,519.00	8,544.36	5,528.86	42.12	42.91	90.91	-383.81	3,098.08	620.05	535.20	84.84	7.308	
8,512.08	5,518.96	8,556.40	5,528.86	42.26	43.04	90.91	-383.73	3,110.11	620.05	534.93	85.12	7.284	
8,512.15	5,518.96	8,556.47	5,528.86	42.26	43.04	90.91	-383.73	3,110.18	620.05	534.93	85.12	7.284	
8,600.00	5,518.50	8,644.32	5,528.86	43.29	44.05	90.96	-383.20	3,198.03	620.06	532.90	87.16	7.114	
8,600.00	5,518.50	8,644.32	5,528.86	43.29	44.05	90.96	-383.20	3,198.03	620.06	532.90	87.16	7.114	
8,700.00	5,517.97	8,744.32	5,528.86	44.46	45.20	91.01	-382.59	3,298.03	620.08	530.59	89.49	6.929	
8,700.03	5,517.97	8,744.34	5,528.86	44.46	45.20	91.01	-382.59	3,298.05	620.08	530.59	89.49	6.929	
8,800.00	5,517.45	8,844.31	5,528.86	45.63	46.36	91.05	-381.99	3,398.02	620.09	528.26	91.83	6.753	
8,800.05	5,517.45	8,844.36	5,528.86	45.64	46.36	91.05	-381.99	3,398.07	620.09	528.26	91.83	6.752	
8,900.00	5,516.92	8,944.31	5,528.87	46.82	47.52	91.10	-381.38	3,498.02	620.11	525.93	94.18	6.584	
8,900.00	5,516.92	8,944.31	5,528.87	46.82	47.52	91.10	-381.38	3,498.02	620.11	525.93	94.18	6.584	
9,000.00	5,516.40	9,044.31	5,528.87	48.00	48.69	91.15	-380.78	3,598.02	620.13	523.59	96.54	6.424	
9,000.00	5,516.40	9,044.31	5,528.87	48.00	48.69	91.15	-380.78	3,598.02	620.13	523.59	96.54	6.424	
9,100.00	5,515.87	9,144.31	5,528.87	49.19	49.86	91.20	-380.17	3,698.01	620.15	521.25	98.90	6.271	
9,100.01	5,515.87	9,144.32	5,528.87	49.19	49.86	91.20	-380.17	3,698.02	620.15	521.25	98.90	6.271	
9,200.00	5,515.35	9,244.31	5,528.87	50.38	51.04	91.25	-379.56	3,798.03	620.16	518.90	101.27	6.124	
9,200.02	5,515.35	9,244.33	5,528.87	50.38	51.04	91.25	-379.56	3,798.03	620.16	518.90	101.27	6.124	
9,300.00	5,514.82	9,344.31	5,528.87	51.57	52.22	91.30	-378.96	3,898.01	620.18	516.54	103.64	5.984	
9,300.04	5,514.82	9,344.35	5,528.87	51.57	52.22	91.30	-378.96	3,898.05	620.18	516.54	103.64	5.984	
9,400.00	5,514.30	9,444.31	5,528.88	52.77	53.40	91.35	-378.35	3,998.00	620.20	514.18	106.02	5.850	
9,400.05	5,514.30	9,444.36	5,528.88	52.77	53.40	91.35	-378.35	3,998.06	620.20	514.18	106.03	5.850	
9,500.00	5,513.77	9,544.30	5,528.88	53.97	54.58	91.40	-377.75	4,098.00	620.22	511.81	108.41	5.721	
9,500.07	5,513.77	9,544.37	5,528.88	53.97	54.58	91.40	-377.75	4,098.07	620.22	511.81	108.41	5.721	
9,600.00	5,513.25	9,644.30	5,528.88	55.17	55.77	91.44	-377.14	4,198.00	620.24	509.44	110.80	5.598	
9,600.08	5,513.25	9,644.38	5,528.88	55.17	55.77	91.44	-377.14	4,198.07	620.24	509.44	110.80	5.598	

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 LD13-645
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 LD13-645	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 LD13-635 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: 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)			
9,700.00	5,512.72	9,744.30	5,528.88	56.37	56.96	91.49	-376.53	4,297.99	620.26	507.06	113.20	5.480	
9,700.09	5,512.72	9,744.39	5,528.88	56.37	56.96	91.49	-376.53	4,298.08	620.26	507.06	113.20	5.479	
9,800.00	5,512.20	9,844.30	5,528.88	57.58	58.15	91.54	-375.93	4,397.99	620.28	504.69	115.60	5.366	
9,800.10	5,512.20	9,844.40	5,528.88	57.58	58.15	91.54	-375.93	4,398.09	620.28	504.68	115.60	5.366	
9,900.00	5,511.67	9,944.30	5,528.88	58.79	59.35	91.59	-375.32	4,497.99	620.30	502.30	118.00	5.257	
9,900.11	5,511.67	9,944.41	5,528.88	58.79	59.35	91.59	-375.32	4,498.10	620.30	502.30	118.00	5.257	
10,000.00	5,511.15	10,044.30	5,528.89	59.99	60.55	91.64	-374.72	4,597.98	620.33	499.92	120.41	5.152	
10,000.12	5,511.15	10,044.42	5,528.89	60.00	60.55	91.64	-374.72	4,598.10	620.33	499.92	120.41	5.152	
10,100.00	5,510.62	10,144.30	5,528.89	61.21	61.74	91.69	-374.11	4,697.98	620.35	497.53	122.82	5.051	
10,100.13	5,510.62	10,144.42	5,528.89	61.21	61.75	91.69	-374.11	4,698.11	620.35	497.53	122.82	5.051	
10,200.00	5,510.10	10,244.29	5,528.89	62.42	62.95	91.74	-373.50	4,797.98	620.37	495.14	125.23	4.954	
10,200.14	5,510.10	10,244.43	5,528.89	62.42	62.95	91.74	-373.50	4,798.11	620.37	495.13	125.24	4.954	
10,300.00	5,509.57	10,344.29	5,528.89	63.63	64.15	91.78	-372.90	4,897.97	620.39	492.74	127.65	4.860	
10,300.15	5,509.57	10,344.44	5,528.89	63.63	64.15	91.78	-372.90	4,898.12	620.39	492.74	127.65	4.860	
10,400.00	5,509.05	10,444.29	5,528.89	64.85	65.36	91.83	-372.29	4,997.97	620.42	490.35	130.07	4.770	
10,400.15	5,509.05	10,444.44	5,528.89	64.85	65.36	91.83	-372.29	4,998.12	620.42	490.34	130.07	4.770	
10,500.00	5,508.52	10,544.29	5,528.90	66.06	66.56	91.88	-371.69	5,097.97	620.44	487.95	132.49	4.683	
10,500.16	5,508.52	10,544.45	5,528.90	66.07	66.56	91.88	-371.69	5,098.13	620.44	487.94	132.50	4.683	
10,600.00	5,508.00	10,644.29	5,528.90	67.28	67.77	91.93	-371.08	5,197.96	620.47	485.55	134.92	4.599	
10,600.17	5,508.00	10,644.46	5,528.90	67.28	67.77	91.93	-371.08	5,198.13	620.47	485.54	134.92	4.599	
10,700.00	5,507.47	10,744.29	5,528.90	68.50	68.98	91.98	-370.47	5,297.96	620.49	483.14	137.35	4.518	
10,700.17	5,507.47	10,744.46	5,528.90	68.50	68.98	91.98	-370.47	5,298.13	620.49	483.14	137.35	4.518	
10,800.00	5,506.95	10,844.29	5,528.90	69.72	70.19	92.03	-369.87	5,397.96	620.52	480.74	139.78	4.439	
10,800.18	5,506.95	10,844.47	5,528.90	69.72	70.19	92.03	-369.87	5,398.14	620.52	480.73	139.78	4.439	
10,900.00	5,506.42	10,944.28	5,528.90	70.94	71.40	92.08	-369.26	5,497.95	620.54	478.33	142.21	4.364	
10,900.19	5,506.42	10,944.47	5,528.90	70.94	71.41	92.08	-369.26	5,498.14	620.54	478.33	142.21	4.363	
11,000.00	5,505.90	11,044.28	5,528.91	72.16	72.62	92.12	-368.66	5,597.95	620.57	475.92	144.64	4.290	
11,000.19	5,505.90	11,044.47	5,528.91	72.17	72.62	92.12	-368.65	5,598.14	620.57	475.92	144.65	4.290	
11,100.00	5,505.37	11,144.28	5,528.91	73.39	73.83	92.17	-368.05	5,697.95	620.59	473.51	147.08	4.219	
11,100.20	5,505.37	11,144.48	5,528.91	73.39	73.84	92.17	-368.05	5,698.14	620.59	473.51	147.09	4.219	
11,200.00	5,504.85	11,244.28	5,528.91	74.61	75.05	92.22	-367.44	5,797.95	620.62	471.10	149.52	4.151	
11,200.20	5,504.85	11,244.48	5,528.91	74.61	75.05	92.22	-367.44	5,798.15	620.62	471.10	149.52	4.151	
11,300.00	5,504.32	11,344.28	5,528.91	75.84	76.27	92.27	-366.84	5,897.94	620.65	468.69	151.96	4.084	
11,300.21	5,504.32	11,344.49	5,528.91	75.84	76.27	92.27	-366.84	5,898.15	620.65	468.69	151.96	4.084	
11,400.00	5,503.80	11,444.28	5,528.91	77.06	77.49	92.32	-366.23	5,997.94	620.68	466.28	154.40	4.020	
11,400.21	5,503.80	11,444.49	5,528.91	77.06	77.49	92.32	-366.23	5,998.15	620.68	466.27	154.41	4.020	
11,500.00	5,503.27	11,544.28	5,528.91	78.29	78.71	92.37	-365.63	6,097.94	620.71	463.86	156.84	3.957	
11,500.22	5,503.27	11,544.49	5,528.91	78.29	78.71	92.37	-365.62	6,098.15	620.71	463.86	156.85	3.957	
11,600.00	5,502.75	11,644.28	5,528.92	79.51	79.93	92.42	-365.02	6,197.93	620.73	461.45	159.29	3.897	
11,600.22	5,502.75	11,644.49	5,528.92	79.52	79.93	92.42	-365.02	6,198.15	620.73	461.44	159.29	3.897	
11,700.00	5,502.22	11,744.27	5,528.92	80.74	81.15	92.46	-364.41	6,297.93	620.76	459.03	161.74	3.838	
11,700.22	5,502.22	11,744.50	5,528.92	80.75	81.15	92.46	-364.41	6,298.15	620.76	459.02	161.74	3.838	
11,800.00	5,501.70	11,844.27	5,528.92	81.97	82.37	92.51	-363.81	6,397.93	620.79	456.61	164.19	3.781	
11,800.23	5,501.70	11,844.50	5,528.92	81.97	82.37	92.51	-363.81	6,398.15	620.79	456.61	164.19	3.781	
11,900.00	5,501.17	11,944.27	5,528.92	83.20	83.59	92.56	-363.20	6,497.92	620.82	454.19	166.63	3.726	
11,900.23	5,501.17	11,944.50	5,528.92	83.20	83.60	92.56	-363.20	6,498.15	620.82	454.19	166.64	3.726	
12,000.00	5,500.65	12,044.27	5,528.92	84.43	84.82	92.61	-362.60	6,597.92	620.86	451.77	169.08	3.672	
12,000.24	5,500.65	12,044.50	5,528.92	84.43	84.82	92.61	-362.59	6,598.15	620.86	451.77	169.09	3.672	
12,100.00	5,500.12	12,144.27	5,528.93	85.66	86.04	92.66	-361.99	6,697.92	620.89	449.35	171.53	3.620	
12,100.24	5,500.12	12,144.51	5,528.93	85.66	86.04	92.66	-361.99	6,698.15	620.89	449.35	171.54	3.620	
12,200.00	5,499.60	12,244.27	5,528.93	86.89	87.27	92.71	-361.38	6,797.91	620.92	446.93	173.99	3.569	
12,200.24	5,499.60	12,244.51	5,528.93	86.89	87.27	92.71	-361.38	6,798.16	620.92	446.93	173.99	3.569	

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 LD13-645
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 LD13-645	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 LD13-635 - 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)			
12,300.00	5,499.07	12,344.27	5,528.93	88.12	88.49	92.76	-360.78	6,897.91	620.95	444.51	176.44	3.519	
12,300.25	5,499.07	12,344.51	5,528.93	88.13	88.49	92.76	-360.78	6,898.16	620.95	444.51	176.44	3.519	
12,400.00	5,498.55	12,444.26	5,528.93	89.35	89.72	92.80	-360.17	6,997.91	620.98	442.09	178.89	3.471	
12,400.25	5,498.55	12,444.51	5,528.93	89.36	89.72	92.80	-360.17	6,998.16	620.98	442.08	178.90	3.471	
12,500.00	5,498.02	12,544.26	5,528.93	90.59	90.95	92.85	-359.57	7,097.90	621.02	439.67	181.35	3.424	
12,500.25	5,498.02	12,544.51	5,528.93	90.59	90.95	92.85	-359.56	7,098.16	621.02	439.66	181.35	3.424	
12,600.00	5,497.50	12,644.26	5,528.93	91.82	92.17	92.90	-358.96	7,197.90	621.05	437.24	183.80	3.379	
12,600.26	5,497.50	12,644.52	5,528.93	91.82	92.18	92.90	-358.96	7,198.15	621.05	437.24	183.81	3.379	
12,700.00	5,496.97	12,744.26	5,528.94	93.05	93.40	92.95	-358.35	7,297.90	621.08	434.82	186.26	3.334	
12,700.26	5,496.97	12,744.52	5,528.94	93.06	93.41	92.95	-358.35	7,298.15	621.08	434.81	186.27	3.334	
12,800.00	5,496.45	12,844.26	5,528.94	94.29	94.63	93.00	-357.75	7,397.89	621.12	432.40	188.72	3.291	
12,800.26	5,496.45	12,844.52	5,528.94	94.29	94.63	93.00	-357.75	7,398.15	621.12	432.39	188.73	3.291	
12,900.00	5,495.92	12,944.26	5,528.94	95.52	95.86	93.05	-357.14	7,497.89	621.15	429.97	191.18	3.249	
12,900.26	5,495.92	12,944.52	5,528.94	95.53	95.86	93.05	-357.14	7,498.15	621.15	429.97	191.18	3.249	
13,000.00	5,495.40	13,044.26	5,528.94	96.76	97.09	93.10	-356.54	7,597.89	621.19	427.55	193.64	3.208	
13,000.27	5,495.40	13,044.52	5,528.94	96.76	97.09	93.10	-356.53	7,598.15	621.19	427.54	193.64	3.208	
13,100.00	5,494.87	13,144.25	5,528.94	97.99	98.32	93.14	-355.93	7,697.88	621.22	425.12	196.10	3.168	
13,100.27	5,494.87	13,144.52	5,528.94	97.99	98.32	93.14	-355.93	7,698.15	621.22	425.12	196.10	3.168	
13,200.00	5,494.35	13,244.25	5,528.95	99.23	99.55	93.19	-355.32	7,797.88	621.26	422.70	198.56	3.129	
13,200.27	5,494.35	13,244.52	5,528.95	99.23	99.56	93.19	-355.32	7,798.15	621.26	422.69	198.57	3.129	
13,300.00	5,493.82	13,344.25	5,528.95	100.46	100.78	93.24	-354.72	7,897.88	621.30	420.28	201.02	3.091	
13,300.27	5,493.82	13,344.53	5,528.95	100.47	100.79	93.24	-354.72	7,898.15	621.30	420.27	201.03	3.091	
13,400.00	5,493.30	13,444.25	5,528.95	101.70	102.02	93.29	-354.11	7,997.87	621.33	417.85	203.48	3.054	
13,400.28	5,493.30	13,444.53	5,528.95	101.70	102.02	93.29	-354.11	7,998.15	621.33	417.84	203.49	3.053	
13,500.00	5,492.77	13,544.25	5,528.95	102.94	103.25	93.34	-353.50	8,097.87	621.37	415.43	205.94	3.017	
13,500.28	5,492.77	13,544.53	5,528.95	102.94	103.25	93.34	-353.50	8,098.15	621.37	415.42	205.95	3.017	
13,600.00	5,492.25	13,644.25	5,528.95	104.17	104.48	93.39	-352.90	8,197.87	621.41	413.00	208.41	2.982	
13,600.28	5,492.25	13,644.53	5,528.95	104.18	104.48	93.39	-352.90	8,198.15	621.41	412.99	208.41	2.982	
13,700.00	5,491.72	13,744.25	5,528.96	105.41	105.71	93.43	-352.29	8,297.86	621.45	410.58	210.87	2.947	
13,700.28	5,491.72	13,744.53	5,528.96	105.41	105.72	93.43	-352.29	8,298.15	621.45	410.57	210.88	2.947	
13,800.00	5,491.20	13,844.24	5,528.96	106.65	106.95	93.48	-351.69	8,397.86	621.48	408.15	213.33	2.913	
13,800.28	5,491.20	13,844.53	5,528.96	106.65	106.95	93.48	-351.68	8,398.15	621.48	408.14	213.34	2.913	
13,900.00	5,490.67	13,944.24	5,528.96	107.88	108.18	93.53	-351.08	8,497.86	621.52	405.72	215.80	2.880	
13,900.29	5,490.67	13,944.53	5,528.96	107.89	108.19	93.53	-351.08	8,498.14	621.52	405.72	215.81	2.880	
14,000.00	5,490.15	14,044.24	5,528.96	109.12	109.42	93.58	-350.47	8,597.85	621.56	403.30	218.26	2.848	
14,000.29	5,490.15	14,044.53	5,528.96	109.13	109.42	93.58	-350.47	8,598.14	621.56	403.29	218.27	2.848	
14,100.00	5,489.62	14,144.24	5,528.96	110.36	110.65	93.63	-349.87	8,697.85	621.60	400.87	220.73	2.816	
14,100.29	5,489.62	14,144.53	5,528.96	110.36	110.65	93.63	-349.87	8,698.14	621.60	400.87	220.74	2.816	
14,200.00	5,489.10	14,244.24	5,528.96	111.60	111.89	93.68	-349.26	8,797.85	621.64	398.45	223.19	2.785	
14,200.29	5,489.10	14,244.53	5,528.96	111.60	111.89	93.68	-349.26	8,798.14	621.64	398.44	223.20	2.785	
14,300.00	5,488.57	14,344.24	5,528.97	112.84	113.12	93.73	-348.66	8,897.85	621.68	396.02	225.66	2.755	
14,300.29	5,488.57	14,344.53	5,528.97	112.84	113.12	93.73	-348.65	8,898.14	621.68	396.02	225.67	2.755	
14,400.00	5,488.05	14,444.24	5,528.97	114.08	114.36	93.77	-348.05	8,997.84	621.73	393.59	228.13	2.725	
14,400.30	5,488.05	14,444.53	5,528.97	114.08	114.36	93.77	-348.05	8,998.14	621.73	393.59	228.13	2.725	
14,500.00	5,487.52	14,544.23	5,528.97	115.32	115.59	93.82	-347.44	9,097.84	621.77	391.18	230.59	2.696	
14,500.30	5,487.52	14,544.53	5,528.97	115.32	115.60	93.82	-347.44	9,098.14	621.77	391.17	230.60	2.696	
14,600.00	5,487.00	14,644.23	5,528.97	116.56	116.83	93.87	-346.84	9,197.84	621.81	388.75	233.06	2.668	
14,600.30	5,487.00	14,644.53	5,528.97	116.56	116.83	93.87	-346.84	9,198.13	621.81	388.74	233.07	2.668	
14,700.00	5,486.47	14,744.23	5,528.97	117.79	118.07	93.92	-346.23	9,297.83	621.85	386.33	235.53	2.640	
14,700.30	5,486.47	14,744.53	5,528.97	117.80	118.07	93.92	-346.23	9,298.13	621.85	386.32	235.53	2.640	
14,800.00	5,485.95	14,844.23	5,528.98	119.03	119.30	93.97	-345.63	9,397.83	621.90	383.90	237.99	2.613	
14,800.30	5,485.95	14,844.53	5,528.98	119.04	119.31	93.97	-345.62	9,398.13	621.90	383.89	238.00	2.613	

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 LD13-645
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 LD13-645	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 LD13-635 - OH - Plan #1

Survey Program:		0-MWD+IFR1+MS						Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		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)	Minimum Separation (usft)	Separation Factor		
14,900.00	5,485.42	14,944.23	5,528.98	120.27	120.54	94.02	-345.02	9,497.83	621.94	381.48	240.46	2.586		
14,900.30	5,485.42	14,944.53	5,528.98	120.28	120.54	94.02	-345.02	9,498.13	621.94	381.47	240.47	2.586		
15,000.00	5,484.90	15,044.23	5,528.98	121.51	121.78	94.06	-344.41	9,597.82	621.98	379.05	242.93	2.560		
15,000.31	5,484.90	15,044.53	5,528.98	121.52	121.78	94.06	-344.41	9,598.13	621.98	379.05	242.94	2.560		
15,100.00	5,484.37	15,144.23	5,528.98	122.76	123.01	94.11	-343.81	9,697.82	622.03	376.63	245.40	2.535		
15,100.31	5,484.37	15,144.53	5,528.98	122.76	123.02	94.11	-343.81	9,698.13	622.03	376.62	245.41	2.535		
15,200.00	5,483.85	15,244.23	5,528.98	124.00	124.25	94.16	-343.20	9,797.82	622.07	374.21	247.87	2.510		
15,200.31	5,483.85	15,244.53	5,528.98	124.00	124.26	94.16	-343.20	9,798.12	622.07	374.20	247.87	2.510		
15,300.00	5,483.32	15,344.22	5,528.98	125.24	125.49	94.21	-342.60	9,897.81	622.12	371.78	250.33	2.485		
15,300.31	5,483.32	15,344.53	5,528.98	125.24	125.49	94.21	-342.59	9,898.12	622.12	371.78	250.34	2.485		
15,400.00	5,482.80	15,444.22	5,528.99	126.48	126.73	94.26	-341.99	9,997.81	622.16	369.36	252.80	2.461		
15,400.31	5,482.80	15,444.53	5,528.99	126.48	126.73	94.26	-341.99	9,998.12	622.16	369.35	252.81	2.461		
15,500.00	5,482.27	15,544.22	5,528.99	127.72	127.97	94.31	-341.38	10,097.81	622.21	366.94	255.27	2.437		
15,500.31	5,482.27	15,544.53	5,528.99	127.72	127.97	94.31	-341.38	10,098.12	622.21	366.93	255.28	2.437		
15,600.00	5,481.75	15,644.22	5,528.99	128.96	129.21	94.35	-340.78	10,197.80	622.26	364.52	257.74	2.414		
15,600.31	5,481.75	15,644.53	5,528.99	128.96	129.21	94.35	-340.78	10,198.12	622.26	364.51	257.75	2.414		
15,700.00	5,481.22	15,744.22	5,528.99	130.20	130.44	94.40	-340.17	10,297.80	622.30	362.10	260.21	2.392		
15,700.32	5,481.22	15,744.53	5,528.99	130.21	130.45	94.40	-340.17	10,298.12	622.31	362.09	260.22	2.391		
15,800.00	5,480.70	15,844.22	5,528.99	131.44	131.68	94.45	-339.57	10,397.80	622.35	359.67	262.68	2.369		
15,800.32	5,480.70	15,844.53	5,528.99	131.45	131.69	94.45	-339.56	10,398.11	622.35	359.67	262.69	2.369		
15,900.00	5,480.17	15,944.22	5,529.00	132.69	132.92	94.50	-338.96	10,497.79	622.40	357.25	265.15	2.347		
15,900.32	5,480.17	15,944.53	5,529.00	132.69	132.93	94.50	-338.96	10,498.11	622.40	357.25	265.15	2.347		
16,000.00	5,479.65	16,044.21	5,529.00	133.93	134.16	94.55	-338.35	10,597.79	622.45	354.83	267.62	2.326		
16,000.32	5,479.65	16,044.53	5,529.00	133.93	134.17	94.55	-338.35	10,598.11	622.45	354.83	267.62	2.326		
16,100.00	5,479.12	16,144.21	5,529.00	135.17	135.40	94.60	-337.75	10,697.79	622.50	352.41	270.08	2.305		
16,100.10	5,479.12	16,144.31	5,529.00	135.17	135.40	94.60	-337.75	10,697.89	622.50	352.41	270.09	2.305		
16,123.37	5,479.00	16,167.58	5,529.00	135.46	135.69	94.61	-337.61	10,721.15	622.51	351.85	270.66	2.300 SF		

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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)	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 Ellipses (usft)			
0.00	0.00	19.00	19.00	0.00	0.17	-1.03	1,870.48	-33.52	1,870.78			
100.00	100.00	119.00	119.00	0.88	1.00	-1.03	1,870.48	-33.52	1,870.78	1,868.90	1.89	992.371
200.00	200.00	219.00	219.00	1.50	1.58	-1.03	1,870.48	-33.52	1,870.78	1,867.69	3.09	606.141
300.00	300.00	319.00	319.00	1.94	2.00	-1.03	1,870.48	-33.52	1,870.78	1,866.84	3.94	475.103
400.00	400.00	419.00	419.00	2.29	2.35	-1.03	1,870.48	-33.52	1,870.78	1,866.14	4.64	403.212
500.00	500.00	552.60	552.60	2.60	2.83	-1.03	1,870.01	-33.62	1,870.61	1,865.18	5.43	344.635
600.00	599.98	778.26	777.80	3.05	3.76	44.26	1,856.93	-36.14	1,862.81	1,856.12	6.69	278.280
677.77	677.65	1,036.49	1,033.36	3.26	4.83	44.48	1,821.30	-43.04	1,848.76	1,840.86	7.90	234.155
700.00	699.84	1,094.95	1,090.68	3.29	5.09	44.49	1,810.04	-45.22	1,843.53	1,835.36	8.17	225.775
800.00	799.65	1,197.84	1,191.30	3.58	5.45	44.49	1,788.90	-49.31	1,818.71	1,809.93	8.78	207.150
900.00	899.46	1,294.71	1,286.02	3.88	5.80	44.49	1,768.98	-53.16	1,793.89	1,784.50	9.39	191.016
1,000.00	999.27	1,391.58	1,380.74	4.19	6.16	44.49	1,749.06	-57.02	1,769.06	1,759.05	10.02	176.596
1,100.00	1,099.07	1,488.45	1,475.46	4.50	6.53	44.49	1,729.14	-60.87	1,744.24	1,733.59	10.66	163.689
1,200.00	1,198.88	1,585.32	1,570.18	4.82	6.92	44.49	1,709.22	-64.72	1,719.42	1,708.11	11.30	152.106
1,300.00	1,298.69	1,682.19	1,664.90	5.15	7.31	44.49	1,689.30	-68.58	1,694.60	1,682.63	11.96	141.680
1,400.00	1,398.50	1,779.06	1,759.62	5.48	7.72	44.49	1,669.38	-72.43	1,669.77	1,657.15	12.62	132.265
1,500.00	1,498.30	1,875.93	1,854.35	5.82	8.12	44.49	1,649.46	-76.29	1,644.95	1,631.66	13.29	123.734
1,600.00	1,598.11	1,972.80	1,949.07	6.15	8.54	44.49	1,629.54	-80.14	1,620.13	1,606.16	13.97	115.979
1,700.00	1,697.92	2,069.67	2,043.79	6.49	8.95	44.49	1,609.62	-83.99	1,595.30	1,580.66	14.65	108.906
1,800.00	1,797.73	2,166.54	2,138.51	6.83	9.38	44.49	1,589.70	-87.85	1,570.48	1,555.15	15.33	102.434
1,900.00	1,897.53	2,263.41	2,233.23	7.18	9.80	44.49	1,569.78	-91.70	1,545.66	1,529.64	16.02	96.494
2,000.00	1,997.34	2,360.28	2,327.95	7.52	10.23	44.49	1,549.86	-95.56	1,520.84	1,504.13	16.71	91.026
2,100.00	2,097.15	2,457.15	2,422.67	7.87	10.66	44.49	1,529.94	-99.41	1,496.01	1,478.61	17.40	85.979
2,200.00	2,196.96	2,554.02	2,517.40	8.21	11.09	44.49	1,510.02	-103.26	1,471.19	1,453.10	18.09	81.307
2,300.00	2,296.76	2,650.89	2,612.12	8.56	11.53	44.49	1,490.10	-107.12	1,446.37	1,427.58	18.79	76.973
2,400.00	2,396.57	2,747.76	2,706.84	8.91	11.97	44.49	1,470.18	-110.97	1,421.54	1,402.06	19.49	72.941
2,500.00	2,496.38	2,844.63	2,801.56	9.26	12.41	44.49	1,450.26	-114.83	1,396.72	1,376.53	20.19	69.183
2,600.00	2,596.19	2,941.50	2,896.28	9.61	12.85	44.49	1,430.33	-118.68	1,371.90	1,351.01	20.89	65.673
2,700.00	2,695.99	3,038.37	2,991.00	9.96	13.29	44.49	1,410.41	-122.53	1,347.08	1,325.48	21.59	62.386
2,800.00	2,795.80	3,135.24	3,085.72	10.31	13.73	44.49	1,390.49	-126.39	1,322.25	1,299.96	22.30	59.303
2,900.00	2,895.61	3,232.11	3,180.45	10.66	14.18	44.49	1,370.57	-130.24	1,297.43	1,274.43	23.00	56.407
3,000.00	2,995.42	3,328.99	3,275.17	11.01	14.62	44.49	1,350.65	-134.10	1,272.61	1,248.90	23.71	53.680
3,100.00	3,095.22	3,425.86	3,369.89	11.36	15.07	44.49	1,330.73	-137.95	1,247.78	1,223.37	24.41	51.109
3,200.00	3,195.03	3,522.73	3,464.61	11.71	15.52	44.49	1,310.81	-141.80	1,222.96	1,197.84	25.12	48.681
3,300.00	3,294.84	3,619.60	3,559.33	12.07	15.97	44.49	1,290.89	-145.66	1,198.14	1,172.31	25.83	46.385
3,400.00	3,394.65	3,716.47	3,654.05	12.42	16.41	44.49	1,270.97	-149.51	1,173.32	1,146.78	26.54	44.210
3,500.00	3,494.45	3,813.34	3,748.77	12.77	16.86	44.49	1,251.05	-153.37	1,148.49	1,121.24	27.25	42.147
3,600.00	3,594.26	3,910.21	3,843.50	13.13	17.31	44.49	1,231.13	-157.22	1,123.67	1,095.71	27.96	40.189
3,700.00	3,694.07	4,007.08	3,938.22	13.48	17.76	44.49	1,211.21	-161.07	1,098.85	1,070.18	28.67	38.326
3,800.00	3,793.88	4,103.95	4,032.94	13.83	18.22	44.49	1,191.29	-164.93	1,074.02	1,044.64	29.38	36.553
3,900.00	3,893.68	4,200.82	4,127.66	14.19	18.67	44.49	1,171.37	-168.78	1,049.20	1,019.11	30.09	34.863
4,000.00	3,993.49	4,297.69	4,222.38	14.54	19.12	44.49	1,151.45	-172.64	1,024.38	993.57	30.81	33.251
4,100.00	4,093.30	4,394.56	4,317.10	14.90	19.57	44.49	1,131.53	-176.49	999.56	968.04	31.52	31.711
4,200.00	4,193.11	4,491.43	4,411.82	15.25	20.03	44.49	1,111.61	-180.35	974.73	942.50	32.23	30.239
4,300.00	4,292.91	4,588.30	4,506.55	15.61	20.48	44.49	1,091.69	-184.20	949.91	916.96	32.95	28.831
4,400.00	4,392.72	4,685.17	4,601.27	15.96	20.93	44.49	1,071.77	-188.05	925.09	891.43	33.66	27.482
4,500.00	4,492.53	4,782.04	4,695.99	16.32	21.39	44.49	1,051.85	-191.91	900.26	865.89	34.38	26.188
4,600.00	4,592.34	4,878.91	4,790.71	16.67	21.84	44.49	1,031.93	-195.76	875.44	840.35	35.09	24.947
4,700.00	4,692.14	4,975.54	4,886.21	17.03	22.28	44.58	1,011.85	-199.60	850.60	814.81	35.78	23.770
4,800.00	4,791.96	5,073.44	4,980.60	17.36	22.67	20.36	992.08	-199.39	830.61	794.33	36.28	22.893
4,850.00	4,841.89	5,120.88	5,026.19	17.49	22.82	-50.80	982.57	-180.74	813.32	776.63	36.69	22.167

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 LD13-645
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 LD13-645	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)	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)			
4,900.00	4,891.64	5,167.85	5,070.67	17.48	22.94	-70.94	973.30	-168.85	801.08	764.17	36.91	21.703	
4,950.00	4,940.96	5,214.41	5,113.92	17.41	23.04	-78.14	964.31	-154.16	789.02	751.94	37.07	21.283	
5,000.00	4,989.60	5,260.59	5,155.81	17.33	23.12	-81.87	955.62	-136.79	777.19	739.98	37.20	20.889	
5,050.00	5,037.34	5,306.45	5,196.24	17.24	23.19	-84.22	947.26	-116.84	765.64	728.32	37.32	20.517	
5,100.00	5,083.94	5,352.02	5,235.09	17.14	23.25	-85.89	939.24	-94.45	754.43	717.01	37.42	20.163	
5,150.00	5,129.18	5,397.33	5,272.27	17.05	23.29	-87.17	931.59	-69.72	743.60	706.09	37.51	19.825	
5,200.00	5,172.82	5,442.41	5,307.68	16.95	23.34	-88.19	924.33	-42.78	733.20	695.60	37.60	19.501	
5,250.00	5,214.67	5,487.31	5,341.23	16.87	23.38	-89.04	917.47	-13.75	723.28	685.59	37.69	19.190	
5,300.00	5,254.52	5,532.04	5,372.81	16.79	23.42	-89.75	911.04	17.25	713.87	676.08	37.79	18.890	
5,350.00	5,292.16	5,576.62	5,402.36	16.72	23.47	-90.37	905.04	50.09	705.01	667.11	37.90	18.602	
5,400.00	5,327.43	5,621.09	5,429.78	16.67	23.52	-90.90	899.51	84.65	696.75	658.72	38.03	18.322	
5,450.00	5,360.15	5,665.46	5,454.99	16.63	23.57	-91.36	894.44	120.79	689.11	650.94	38.17	18.052	
5,500.00	5,390.15	5,709.73	5,477.92	16.61	23.63	-91.76	889.87	158.38	682.14	643.79	38.34	17.790	
5,550.00	5,417.29	5,753.94	5,498.51	16.62	23.70	-92.09	885.80	197.28	675.85	637.31	38.54	17.535	
5,600.00	5,441.45	5,800.00	5,517.43	16.65	23.78	-92.37	882.09	239.10	670.28	631.52	38.76	17.291	
5,650.00	5,462.49	5,842.17	5,532.40	16.70	23.86	-92.61	879.20	278.41	665.44	626.41	39.04	17.046	
5,700.00	5,480.33	5,886.22	5,545.60	16.78	23.97	-92.80	876.70	320.36	661.37	622.03	39.34	16.813	
5,750.00	5,494.87	5,930.23	5,556.25	16.89	24.08	-92.94	874.74	363.00	658.07	618.40	39.67	16.589	
5,800.00	5,506.04	5,974.20	5,564.31	17.03	24.21	-93.03	873.32	406.20	655.56	615.53	40.04	16.374	
5,850.00	5,513.78	6,018.15	5,569.75	17.19	24.34	-93.08	872.46	449.79	653.85	613.42	40.44	16.169	
5,900.00	5,518.07	6,062.06	5,572.57	17.38	24.49	-93.09	872.15	493.61	652.95	612.08	40.87	15.977	
5,909.07	5,518.47	6,070.02	5,572.80	17.42	24.52	-93.09	872.16	501.57	652.87	611.92	40.95	15.943	
5,936.55	5,519.00	6,095.12	5,573.00	17.54	24.61	-93.07	872.28	526.67	652.79	611.60	41.20	15.846 CC	
5,936.84	5,519.00	6,095.42	5,573.00	17.54	24.62	-93.07	872.28	526.96	652.79	611.59	41.20	15.845	
6,000.00	5,519.00	6,158.58	5,573.00	17.83	24.88	-93.07	872.68	590.12	652.81	610.99	41.82	15.610	
6,000.41	5,519.00	6,158.99	5,573.00	17.83	24.88	-93.07	872.69	590.53	652.81	610.99	41.82	15.609	
6,100.00	5,519.00	6,258.58	5,573.00	18.36	25.33	-93.07	873.33	690.12	652.85	609.94	42.91	15.215	
6,100.41	5,519.00	6,258.99	5,573.00	18.36	25.33	-93.07	873.33	690.53	652.85	609.93	42.91	15.214	
6,200.00	5,519.00	6,358.58	5,573.00	18.96	25.83	-93.07	873.97	790.11	652.88	608.77	44.11	14.801	
6,200.41	5,519.00	6,358.99	5,573.00	18.96	25.84	-93.07	873.98	790.52	652.88	608.76	44.12	14.799	
6,300.00	5,519.00	6,458.58	5,573.00	19.62	26.39	-93.07	874.62	890.11	652.91	607.49	45.42	14.374	
6,300.41	5,519.00	6,458.99	5,573.00	19.63	26.39	-93.07	874.62	890.52	652.91	607.48	45.43	14.373	
6,400.00	5,519.00	6,558.58	5,573.00	20.35	26.99	-93.07	875.26	990.11	652.94	606.11	46.83	13.943	
6,400.41	5,519.00	6,558.99	5,573.00	20.35	26.99	-93.07	875.27	990.52	652.94	606.11	46.83	13.941	
6,500.00	5,519.00	6,658.58	5,573.00	21.12	27.63	-93.07	875.91	1,090.11	652.97	604.65	48.32	13.512	
6,500.41	5,519.00	6,658.99	5,573.00	21.13	27.63	-93.07	875.91	1,090.52	652.97	604.64	48.33	13.511	
6,600.00	5,519.00	6,758.58	5,573.00	21.95	28.31	-93.07	876.55	1,190.10	653.01	603.11	49.90	13.087	
6,600.41	5,519.00	6,758.99	5,573.00	21.95	28.32	-93.07	876.56	1,190.52	653.01	603.10	49.91	13.085	
6,700.00	5,519.00	6,858.58	5,573.00	22.82	29.03	-93.07	877.20	1,290.10	653.04	601.49	51.55	12.669	
6,700.41	5,519.00	6,858.99	5,573.00	22.82	29.04	-93.07	877.20	1,290.51	653.04	601.49	51.55	12.668	
6,800.00	5,519.00	6,958.58	5,573.00	23.73	29.79	-93.07	877.84	1,390.10	653.07	599.81	53.26	12.263	
6,800.41	5,519.00	6,958.99	5,573.00	23.73	29.79	-93.07	877.85	1,390.51	653.07	599.81	53.26	12.261	
6,900.00	5,519.00	7,058.58	5,573.00	24.67	30.57	-93.07	878.49	1,490.10	653.10	598.07	55.03	11.869	
6,900.41	5,519.00	7,058.99	5,573.00	24.67	30.58	-93.07	878.49	1,490.51	653.10	598.07	55.03	11.867	
7,000.00	5,519.00	7,158.58	5,573.00	25.64	31.39	-93.07	879.13	1,590.10	653.13	596.28	56.85	11.489	
7,000.41	5,519.00	7,158.99	5,573.00	25.64	31.39	-93.07	879.14	1,590.51	653.13	596.28	56.86	11.487	
7,100.00	5,519.00	7,258.58	5,573.00	26.64	32.23	-93.07	879.78	1,690.09	653.17	594.44	58.72	11.123	
7,100.41	5,519.00	7,258.99	5,573.00	26.64	32.24	-93.07	879.78	1,690.51	653.17	594.44	58.73	11.121	
7,200.00	5,519.00	7,358.58	5,573.00	27.65	33.10	-93.07	880.42	1,790.09	653.20	592.56	60.64	10.772	
7,200.41	5,519.00	7,358.99	5,573.00	27.66	33.11	-93.07	880.43	1,790.50	653.20	592.55	60.65	10.771	
7,300.00	5,519.00	7,458.58	5,573.00	28.69	33.99	-93.07	881.07	1,890.09	653.23	590.64	62.59	10.436	
7,300.41	5,519.00	7,458.99	5,573.00	28.70	34.00	-93.07	881.07	1,890.50	653.23	590.63	62.60	10.435	

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 LD13-645
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 LD13-645	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: 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)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
7,400.00	5,519.00	7,558.58	5,573.00	29.75	34.91	-93.07	881.71	1,990.09	653.26	588.68	64.59	10.115			
7,400.41	5,519.00	7,558.99	5,573.00	29.75	34.91	-93.07	881.72	1,990.50	653.26	588.67	64.59	10.113			
7,500.00	5,519.00	7,658.58	5,573.00	30.82	35.84	-93.07	882.36	2,090.09	653.29	586.68	66.61	9.808			
7,500.41	5,519.00	7,658.99	5,573.00	30.83	35.85	-93.07	882.36	2,090.50	653.29	586.67	66.62	9.807			
7,600.00	5,519.00	7,758.58	5,573.00	31.91	36.79	-93.07	883.00	2,190.08	653.32	584.66	68.66	9.515			
7,600.41	5,519.00	7,758.99	5,573.00	31.91	36.80	-93.07	883.01	2,190.50	653.32	584.65	68.67	9.514			
7,700.00	5,519.00	7,858.58	5,573.00	33.01	37.76	-93.07	883.65	2,290.08	653.36	582.61	70.75	9.235			
7,700.41	5,519.00	7,858.99	5,573.00	33.01	37.77	-93.07	883.65	2,290.49	653.36	582.60	70.76	9.234			
7,800.00	5,519.00	7,958.58	5,573.00	34.12	38.75	-93.07	884.29	2,390.08	653.39	580.53	72.86	8.968			
7,800.41	5,519.00	7,958.99	5,573.00	34.12	38.75	-93.07	884.30	2,390.49	653.39	580.52	72.86	8.967			
7,900.00	5,519.00	8,058.58	5,573.00	35.24	39.75	-93.07	884.94	2,490.08	653.42	578.43	74.99	8.714			
7,900.41	5,519.00	8,058.99	5,573.00	35.24	39.75	-93.07	884.94	2,490.49	653.42	578.43	75.00	8.713			
8,000.00	5,519.00	8,158.58	5,573.00	36.37	40.76	-93.07	885.58	2,590.08	653.45	576.31	77.14	8.471			
8,000.41	5,519.00	8,158.99	5,573.00	36.37	40.76	-93.07	885.59	2,590.49	653.45	576.31	77.15	8.470			
8,100.00	5,519.00	8,258.58	5,573.00	37.50	41.79	-93.07	886.23	2,690.07	653.48	574.17	79.31	8.240			
8,100.41	5,519.00	8,258.99	5,573.00	37.51	41.79	-93.07	886.23	2,690.48	653.48	574.16	79.32	8.239			
8,200.00	5,519.00	8,358.58	5,573.00	38.65	42.82	-93.07	886.87	2,790.07	653.52	572.02	81.50	8.019			
8,200.41	5,519.00	8,358.99	5,573.00	38.65	42.83	-93.07	886.88	2,790.48	653.52	572.01	81.51	8.018			
8,300.00	5,519.00	8,458.58	5,573.00	39.80	43.87	-93.07	887.52	2,890.07	653.55	569.84	83.71	7.808			
8,300.01	5,519.00	8,458.59	5,573.00	39.80	43.87	-93.07	887.52	2,890.08	653.55	569.84	83.71	7.808			
8,400.00	5,519.00	8,559.01	5,572.46	40.96	44.93	-93.02	888.17	2,990.50	653.55	567.62	85.93	7.606			
8,420.98	5,519.00	8,580.00	5,572.20	41.20	45.15	-93.00	888.30	3,011.48	653.54	567.15	86.39	7.565			
8,497.04	5,519.00	8,656.05	5,571.24	42.09	45.97	-92.92	888.79	3,087.53	653.52	565.43	88.09	7.419			
8,500.00	5,519.00	8,659.01	5,571.20	42.12	46.00	-92.91	888.81	3,090.48	653.52	565.36	88.16	7.413			
8,502.57	5,518.99	8,661.57	5,571.17	42.15	46.03	-92.91	888.83	3,093.05	653.52	565.31	88.21	7.408			
8,502.67	5,518.99	8,661.68	5,571.17	42.15	46.03	-92.91	888.83	3,093.16	653.52	565.30	88.21	7.408			
8,512.08	5,518.96	8,671.09	5,571.05	42.26	46.13	-92.90	888.89	3,102.56	653.52	565.09	88.42	7.391			
8,530.83	5,518.86	8,689.84	5,570.81	42.48	46.33	-92.89	889.01	3,121.31	653.52	564.67	88.84	7.356			
8,600.00	5,518.50	8,759.00	5,569.94	43.29	47.07	-92.85	889.46	3,190.47	653.51	563.11	90.40	7.229			
8,621.35	5,518.39	8,780.35	5,569.67	43.54	47.31	-92.83	889.59	3,211.82	653.51	562.63	90.88	7.191			
8,700.00	5,517.97	8,859.00	5,568.68	44.46	48.16	-92.78	890.10	3,290.46	653.51	560.85	92.66	7.053			
8,721.35	5,517.86	8,880.35	5,568.41	44.71	48.39	-92.77	890.24	3,311.80	653.51	560.37	93.14	7.016			
8,800.00	5,517.45	8,959.00	5,567.42	45.63	49.25	-92.72	890.75	3,390.45	653.50	558.58	94.93	6.884			
8,821.35	5,517.34	8,980.35	5,567.15	45.89	49.49	-92.70	890.88	3,411.79	653.50	558.09	95.41	6.849			
8,900.00	5,516.92	9,059.00	5,566.15	46.82	50.35	-92.65	891.39	3,490.43	653.50	556.30	97.21	6.723			
8,921.35	5,516.81	9,080.34	5,565.89	47.07	50.59	-92.64	891.53	3,511.78	653.50	555.81	97.69	6.689			
9,000.00	5,516.40	9,158.99	5,564.89	48.00	51.46	-92.59	892.04	3,590.42	653.50	554.00	99.50	6.568			
9,021.35	5,516.29	9,180.34	5,564.62	48.25	51.70	-92.57	892.17	3,611.77	653.50	553.51	99.99	6.536			
9,100.00	5,515.87	9,258.99	5,563.63	49.19	52.57	-92.52	892.68	3,690.41	653.50	551.70	101.80	6.420			
9,153.46	5,515.59	9,312.45	5,562.96	49.82	53.17	-92.49	893.03	3,743.86	653.50	550.47	103.03	6.343			
9,200.00	5,515.35	9,358.99	5,562.37	50.38	53.69	-92.46	893.33	3,790.39	653.50	549.40	104.10	6.277			
9,200.01	5,515.35	9,359.00	5,562.37	50.38	53.69	-92.46	893.33	3,790.40	653.50	549.40	104.10	6.277			
9,300.00	5,514.82	9,458.98	5,561.11	51.57	54.82	-92.39	893.97	3,890.38	653.50	547.08	106.42	6.141			
9,300.01	5,514.82	9,458.99	5,561.11	51.57	54.82	-92.39	893.97	3,890.39	653.50	547.08	106.42	6.141			
9,400.00	5,514.30	9,558.98	5,559.85	52.77	55.95	-92.33	894.62	3,990.37	653.50	544.76	108.75	6.009			
9,400.00	5,514.30	9,558.98	5,559.85	52.77	55.95	-92.33	894.62	3,990.37	653.50	544.76	108.75	6.009			
9,500.00	5,513.77	9,658.98	5,558.59	53.97	57.08	-92.26	895.26	4,090.36	653.50	542.43	111.08	5.883			
9,500.00	5,513.77	9,658.98	5,558.59	53.97	57.08	-92.26	895.26	4,090.36	653.50	542.43	111.08	5.883			
9,600.00	5,513.25	9,758.98	5,557.33	55.17	58.22	-92.20	895.91	4,190.34	653.51	540.09	113.42	5.762			
9,600.00	5,513.25	9,758.98	5,557.33	55.17	58.22	-92.20	895.91	4,190.34	653.51	540.09	113.42	5.762			
9,700.00	5,512.72	9,858.97	5,556.06	56.37	59.36	-92.13	896.55	4,290.33	653.51	537.75	115.76	5.645			
9,700.00	5,512.72	9,858.97	5,556.06	56.37	59.36	-92.13	896.55	4,290.33	653.51	537.75	115.76	5.645			

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 LD13-645
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 LD13-645	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance Between Centres		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)			
9,800.00	5,512.20	9,958.97	5,554.80	57.58	60.51	-92.07	897.20	4,390.32	653.52	535.40	118.11	5.533	
9,800.00	5,512.20	9,958.97	5,554.80	57.58	60.51	-92.07	897.20	4,390.32	653.52	535.40	118.11	5.533	
9,900.00	5,511.67	10,058.97	5,553.54	58.79	61.66	-92.01	897.84	4,490.31	653.52	533.05	120.47	5.425	
9,900.00	5,511.67	10,058.97	5,553.54	58.79	61.66	-92.01	897.84	4,490.31	653.52	533.05	120.47	5.425	
10,000.00	5,511.15	10,158.97	5,552.28	59.99	62.82	-91.94	898.49	4,590.29	653.53	530.70	122.83	5.321	
10,000.00	5,511.15	10,158.97	5,552.28	59.99	62.82	-91.94	898.49	4,590.29	653.53	530.70	122.83	5.321	
10,100.00	5,510.62	10,258.96	5,551.02	61.21	63.98	-91.88	899.13	4,690.28	653.54	528.34	125.20	5.220	
10,100.00	5,510.62	10,258.96	5,551.02	61.21	63.98	-91.88	899.13	4,690.28	653.54	528.34	125.20	5.220	
10,200.00	5,510.10	10,358.96	5,549.76	62.42	65.14	-91.81	899.78	4,790.27	653.55	525.97	127.57	5.123	
10,200.00	5,510.10	10,358.96	5,549.76	62.42	65.14	-91.81	899.78	4,790.27	653.55	525.97	127.57	5.123	
10,300.00	5,509.57	10,458.96	5,548.50	63.63	66.31	-91.75	900.42	4,890.25	653.55	523.61	129.95	5.029	
10,300.03	5,509.57	10,458.98	5,548.50	63.63	66.31	-91.75	900.42	4,890.28	653.55	523.61	129.95	5.029	
10,400.00	5,509.05	10,558.71	5,547.77	64.85	67.47	-91.73	901.06	4,990.00	653.58	521.26	132.32	4.939	
10,400.01	5,509.05	10,558.72	5,547.77	64.85	67.47	-91.73	901.06	4,990.01	653.58	521.26	132.32	4.939	
10,500.00	5,508.52	10,658.71	5,547.78	66.06	68.64	-91.78	901.71	5,090.00	653.63	518.91	134.72	4.852	
10,500.03	5,508.52	10,658.73	5,547.78	66.06	68.64	-91.78	901.71	5,090.02	653.63	518.91	134.72	4.852	
10,600.00	5,508.00	10,758.70	5,547.78	67.28	69.81	-91.82	902.35	5,189.99	653.68	516.57	137.11	4.767	
10,600.04	5,508.00	10,758.75	5,547.78	67.28	69.81	-91.82	902.35	5,190.03	653.68	516.56	137.11	4.767	
10,700.00	5,507.47	10,858.70	5,547.79	68.50	70.99	-91.87	903.00	5,289.99	653.73	514.22	139.51	4.686	
10,700.00	5,507.47	10,858.71	5,547.79	68.50	70.99	-91.87	903.00	5,289.99	653.73	514.21	139.51	4.686	
10,800.00	5,506.95	10,958.70	5,547.79	69.72	72.17	-91.91	903.64	5,389.98	653.78	511.86	141.91	4.607	
10,800.00	5,506.95	10,958.71	5,547.79	69.72	72.17	-91.91	903.64	5,389.99	653.78	511.86	141.91	4.607	
10,900.00	5,506.42	11,058.70	5,547.79	70.94	73.35	-91.96	904.29	5,489.98	653.83	509.51	144.32	4.530	
10,900.00	5,506.42	11,058.71	5,547.79	70.94	73.35	-91.96	904.29	5,489.99	653.83	509.51	144.32	4.530	
11,000.00	5,505.90	11,158.70	5,547.80	72.16	74.54	-92.01	904.93	5,589.98	653.88	507.15	146.73	4.456	
11,000.01	5,505.90	11,158.70	5,547.80	72.16	74.54	-92.01	904.93	5,589.98	653.88	507.15	146.73	4.456	
11,100.00	5,505.37	11,258.70	5,547.80	73.39	75.72	-92.05	905.58	5,689.97	653.93	504.79	149.14	4.385	
11,100.01	5,505.37	11,258.70	5,547.80	73.39	75.72	-92.05	905.58	5,689.98	653.93	504.79	149.14	4.385	
11,200.00	5,504.85	11,358.70	5,547.80	74.61	76.91	-92.10	906.22	5,789.97	653.98	502.42	151.55	4.315	
11,200.00	5,504.85	11,358.70	5,547.80	74.61	76.91	-92.10	906.22	5,789.98	653.98	502.42	151.55	4.315	
11,300.00	5,504.32	11,458.70	5,547.81	75.84	78.10	-92.15	906.87	5,889.97	654.03	500.06	153.97	4.248	
11,300.01	5,504.32	11,458.71	5,547.81	75.84	78.10	-92.15	906.87	5,889.98	654.03	500.06	153.97	4.248	
11,400.00	5,503.80	11,558.69	5,547.81	77.06	79.29	-92.19	907.51	5,989.96	654.08	497.69	156.39	4.182	
11,400.02	5,503.80	11,558.72	5,547.81	77.06	79.29	-92.19	907.51	5,989.99	654.08	497.69	156.39	4.182	
11,500.00	5,503.27	11,658.69	5,547.82	78.29	80.48	-92.24	908.16	6,089.96	654.13	495.32	158.81	4.119	
11,500.03	5,503.27	11,658.72	5,547.82	78.29	80.48	-92.24	908.16	6,089.99	654.13	495.32	158.81	4.119	
11,600.00	5,502.75	11,758.69	5,547.82	79.51	81.68	-92.28	908.80	6,189.96	654.19	492.95	161.23	4.057	
11,600.04	5,502.75	11,758.73	5,547.82	79.52	81.68	-92.28	908.80	6,190.00	654.19	492.95	161.23	4.057	
11,700.00	5,502.22	11,858.69	5,547.82	80.74	82.88	-92.33	909.45	6,289.95	654.24	490.58	163.66	3.998	
11,700.05	5,502.22	11,858.74	5,547.82	80.74	82.88	-92.33	909.45	6,290.00	654.24	490.58	163.66	3.998	
11,800.00	5,501.70	11,958.69	5,547.83	81.97	84.07	-92.38	910.09	6,389.95	654.29	488.21	166.09	3.939	
11,800.05	5,501.70	11,958.74	5,547.83	81.97	84.07	-92.38	910.10	6,390.00	654.29	488.21	166.09	3.939	
11,900.00	5,501.17	12,058.69	5,547.83	83.20	85.27	-92.42	910.74	6,489.95	654.35	485.83	168.52	3.883	
11,900.06	5,501.17	12,058.75	5,547.83	83.20	85.27	-92.42	910.74	6,490.01	654.35	485.83	168.52	3.883	
12,000.00	5,500.65	12,158.69	5,547.84	84.43	86.47	-92.47	911.38	6,589.94	654.40	483.45	170.95	3.828	
12,000.07	5,500.65	12,158.75	5,547.84	84.43	86.48	-92.47	911.39	6,590.01	654.40	483.45	170.95	3.828	
12,100.00	5,500.12	12,258.68	5,547.84	85.66	87.68	-92.51	912.03	6,689.94	654.46	481.08	173.38	3.775	
12,100.07	5,500.12	12,258.76	5,547.84	85.66	87.68	-92.51	912.03	6,690.01	654.46	481.08	173.38	3.775	
12,200.00	5,499.60	12,358.68	5,547.84	86.89	88.88	-92.56	912.67	6,789.94	654.51	478.70	175.81	3.723	
12,200.08	5,499.60	12,358.76	5,547.84	86.89	88.88	-92.56	912.68	6,790.02	654.51	478.70	175.82	3.723	
12,300.00	5,499.07	12,458.68	5,547.85	88.12	90.09	-92.61	913.32	6,889.93	654.57	476.32	178.25	3.672	
12,300.09	5,499.07	12,458.77	5,547.85	88.12	90.09	-92.61	913.32	6,890.02	654.57	476.32	178.25	3.672	

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 LD13-645
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 LD13-645	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance Between Centres (usft)		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)	Ellipses (usft)			
12,400.00	5,498.55	12,558.68	5,547.85	89.35	91.29	-92.65	913.96	6,989.93	654.62	473.94	180.69	3.623	
12,400.09	5,498.55	12,558.77	5,547.85	89.36	91.29	-92.65	913.97	6,990.02	654.62	473.93	180.69	3.623	
12,500.00	5,498.02	12,658.68	5,547.86	90.59	92.50	-92.70	914.61	7,089.93	654.68	471.56	183.13	3.575	
12,500.10	5,498.02	12,658.78	5,547.86	90.59	92.50	-92.70	914.61	7,090.02	654.68	471.55	183.13	3.575	
12,600.00	5,497.50	12,758.68	5,547.86	91.82	93.71	-92.75	915.25	7,189.92	654.74	469.17	185.57	3.528	
12,600.10	5,497.50	12,758.78	5,547.86	91.82	93.71	-92.75	915.26	7,190.03	654.74	469.17	185.57	3.528	
12,700.00	5,496.97	12,858.68	5,547.86	93.05	94.92	-92.79	915.90	7,289.92	654.80	466.79	188.01	3.483	
12,700.11	5,496.97	12,858.79	5,547.86	93.06	94.92	-92.79	915.90	7,290.03	654.80	466.79	188.01	3.483	
12,800.00	5,496.45	12,958.67	5,547.87	94.29	96.13	-92.84	916.54	7,389.92	654.85	464.40	190.45	3.438	
12,800.12	5,496.45	12,958.79	5,547.87	94.29	96.13	-92.84	916.55	7,390.03	654.85	464.40	190.45	3.438	
12,900.00	5,495.92	13,058.67	5,547.87	95.52	97.34	-92.88	917.19	7,489.91	654.91	462.02	192.89	3.395	
12,900.12	5,495.92	13,058.79	5,547.87	95.52	97.34	-92.88	917.19	7,490.03	654.91	462.02	192.90	3.395	
13,000.00	5,495.40	13,158.67	5,547.88	96.76	98.55	-92.93	917.83	7,589.91	654.97	459.63	195.34	3.353	
13,000.13	5,495.40	13,158.80	5,547.88	96.76	98.55	-92.93	917.84	7,590.03	654.97	459.63	195.34	3.353	
13,100.00	5,494.87	13,258.67	5,547.88	97.99	99.77	-92.98	918.48	7,689.90	655.03	457.25	197.78	3.312	
13,100.13	5,494.87	13,258.80	5,547.88	97.99	99.77	-92.98	918.48	7,690.03	655.03	457.24	197.79	3.312	
13,200.00	5,494.35	13,358.67	5,547.88	99.23	100.98	-93.02	919.12	7,789.90	655.09	454.86	200.23	3.272	
13,200.13	5,494.35	13,358.80	5,547.88	99.23	100.98	-93.02	919.13	7,790.04	655.09	454.86	200.23	3.272	
13,300.00	5,493.82	13,458.67	5,547.89	100.46	102.19	-93.07	919.77	7,889.90	655.15	452.47	202.68	3.232	
13,300.14	5,493.82	13,458.81	5,547.89	100.46	102.20	-93.07	919.77	7,890.04	655.15	452.47	202.68	3.232	
13,400.00	5,493.30	13,558.67	5,547.89	101.70	103.41	-93.11	920.41	7,989.89	655.21	450.08	205.13	3.194	
13,400.14	5,493.30	13,558.81	5,547.89	101.70	103.41	-93.11	920.42	7,990.04	655.21	450.08	205.13	3.194	
13,500.00	5,492.77	13,658.66	5,547.90	102.94	104.63	-93.16	921.06	8,089.89	655.27	447.70	207.57	3.157	
13,500.15	5,492.77	13,658.81	5,547.90	102.94	104.63	-93.16	921.06	8,090.04	655.27	447.69	207.58	3.157	
13,600.00	5,492.25	13,758.66	5,547.90	104.17	105.84	-93.21	921.70	8,189.89	655.33	445.31	210.02	3.120	
13,600.15	5,492.25	13,758.81	5,547.90	104.17	105.85	-93.21	921.71	8,190.04	655.33	445.30	210.03	3.120	
13,700.00	5,491.72	13,858.66	5,547.90	105.41	107.06	-93.25	922.35	8,289.88	655.39	442.92	212.48	3.085	
13,700.16	5,491.72	13,858.82	5,547.90	105.41	107.06	-93.25	922.35	8,290.04	655.39	442.91	212.48	3.085	
13,800.00	5,491.20	13,958.66	5,547.91	106.65	108.28	-93.30	922.99	8,389.88	655.46	440.53	214.93	3.050	
13,800.16	5,491.20	13,958.82	5,547.91	106.65	108.28	-93.30	923.00	8,390.04	655.46	440.53	214.93	3.050	
13,900.00	5,490.67	14,058.66	5,547.91	107.88	109.50	-93.34	923.64	8,489.88	655.52	438.14	217.38	3.016	
13,900.16	5,490.67	14,058.82	5,547.91	107.89	109.50	-93.34	923.64	8,490.04	655.52	438.14	217.38	3.015	
14,000.00	5,490.15	14,158.66	5,547.92	109.12	110.72	-93.39	924.28	8,589.87	655.58	435.75	219.83	2.982	
14,000.17	5,490.15	14,158.82	5,547.92	109.12	110.72	-93.39	924.29	8,590.04	655.58	435.75	219.84	2.982	
14,100.00	5,489.62	14,258.66	5,547.92	110.36	111.94	-93.44	924.93	8,689.87	655.64	433.36	222.29	2.950	
14,100.17	5,489.62	14,258.83	5,547.92	110.36	111.94	-93.44	924.93	8,690.04	655.64	433.36	222.29	2.950	
14,200.00	5,489.10	14,358.65	5,547.92	111.60	113.16	-93.48	925.57	8,789.87	655.71	430.97	224.74	2.918	
14,200.17	5,489.10	14,358.83	5,547.92	111.60	113.17	-93.48	925.58	8,790.04	655.71	430.96	224.74	2.918	
14,300.00	5,488.57	14,458.65	5,547.93	112.84	114.39	-93.53	926.22	8,889.86	655.77	428.58	227.19	2.886	
14,300.18	5,488.57	14,458.83	5,547.93	112.84	114.39	-93.53	926.22	8,890.04	655.77	428.57	227.20	2.886	
14,400.00	5,488.05	14,558.65	5,547.93	114.08	115.61	-93.57	926.86	8,989.86	655.84	426.19	229.65	2.856	
14,400.18	5,488.05	14,558.83	5,547.93	114.08	115.61	-93.57	926.87	8,990.04	655.84	426.18	229.65	2.856	
14,500.00	5,487.52	14,658.65	5,547.94	115.32	116.83	-93.62	927.51	9,089.86	655.90	423.79	232.11	2.826	
14,500.18	5,487.52	14,658.83	5,547.94	115.32	116.83	-93.62	927.51	9,090.04	655.90	423.79	232.11	2.826	
14,600.00	5,487.00	14,758.65	5,547.94	116.56	118.06	-93.67	928.15	9,189.85	655.97	421.41	234.56	2.797	
14,600.19	5,487.00	14,758.84	5,547.94	116.56	118.06	-93.67	928.16	9,190.04	655.97	421.40	234.57	2.797	
14,700.00	5,486.47	14,858.65	5,547.94	117.79	119.28	-93.71	928.80	9,289.85	656.03	419.02	237.02	2.768	
14,700.19	5,486.47	14,858.84	5,547.94	117.80	119.28	-93.71	928.80	9,290.04	656.03	419.01	237.02	2.768	
14,800.00	5,485.95	14,958.65	5,547.95	119.03	120.51	-93.76	929.44	9,389.85	656.10	416.63	239.48	2.740	
14,800.19	5,485.95	14,958.84	5,547.95	119.04	120.51	-93.76	929.45	9,390.04	656.10	416.62	239.48	2.740	
14,900.00	5,485.42	15,058.64	5,547.95	120.27	121.73	-93.80	930.09	9,489.84	656.17	414.23	241.93	2.712	
14,900.20	5,485.42	15,058.84	5,547.95	120.28	121.73	-93.80	930.09	9,490.04	656.17	414.23	241.94	2.712	

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 LD13-645
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 LD13-645	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						Rule Assigned:				Offset Well Error:	0.00 usft
Reference	Offset	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		Minimum Separation (usft)	Separation Factor
15,000.00	5,484.90	15,158.64	5,547.96	121.51	122.96	-93.85	930.73	9,589.84	656.23	411.84	244.39	2.685	
15,000.20	5,484.90	15,158.84	5,547.96	121.52	122.96	-93.85	930.74	9,590.04	656.23	411.84	244.40	2.685	
15,100.00	5,484.37	15,258.64	5,547.96	122.76	124.18	-93.90	931.38	9,689.83	656.30	409.45	246.85	2.659	
15,100.20	5,484.37	15,258.84	5,547.96	122.76	124.19	-93.90	931.38	9,690.04	656.30	409.45	246.85	2.659	
15,200.00	5,483.85	15,358.64	5,547.96	124.00	125.41	-93.94	932.02	9,789.83	656.37	407.06	249.31	2.633	
15,200.20	5,483.85	15,358.84	5,547.96	124.00	125.41	-93.94	932.03	9,790.03	656.37	407.06	249.31	2.633	
15,300.00	5,483.32	15,458.64	5,547.97	125.24	126.64	-93.99	932.67	9,889.83	656.44	404.67	251.77	2.607	
15,300.21	5,483.32	15,458.85	5,547.97	125.24	126.64	-93.99	932.67	9,890.03	656.44	404.67	251.77	2.607	
15,400.00	5,482.80	15,558.64	5,547.97	126.48	127.86	-94.03	933.31	9,989.82	656.51	402.28	254.23	2.582	
15,400.21	5,482.80	15,558.85	5,547.97	126.48	127.87	-94.03	933.32	9,990.03	656.51	402.28	254.23	2.582	
15,500.00	5,482.27	15,658.64	5,547.98	127.72	129.09	-94.08	933.96	10,089.82	656.58	399.89	256.68	2.558	
15,500.21	5,482.27	15,658.85	5,547.98	127.72	129.10	-94.08	933.96	10,090.03	656.58	399.89	256.69	2.558	
15,600.00	5,481.75	15,758.63	5,547.98	128.96	130.32	-94.12	934.60	10,189.82	656.65	397.50	259.14	2.534	
15,600.21	5,481.75	15,758.85	5,547.98	128.96	130.32	-94.12	934.61	10,190.03	656.65	397.50	259.15	2.534	
15,700.00	5,481.22	15,858.63	5,547.98	130.20	131.55	-94.17	935.25	10,289.81	656.72	395.11	261.60	2.510	
15,700.22	5,481.22	15,858.85	5,547.98	130.20	131.55	-94.17	935.25	10,290.03	656.72	395.11	261.61	2.510	
15,800.00	5,480.70	15,958.63	5,547.99	131.44	132.78	-94.22	935.89	10,389.81	656.79	392.72	264.06	2.487	
15,800.22	5,480.70	15,958.85	5,547.99	131.45	132.78	-94.22	935.90	10,390.03	656.79	392.72	264.07	2.487	
15,900.00	5,480.17	16,058.63	5,547.99	132.69	134.01	-94.26	936.54	10,489.81	656.86	390.33	266.52	2.465	
15,900.22	5,480.17	16,058.85	5,547.99	132.69	134.01	-94.26	936.54	10,490.03	656.86	390.33	266.53	2.464	
16,000.00	5,479.65	16,158.63	5,548.00	133.93	135.24	-94.31	937.18	10,589.80	656.93	387.94	268.99	2.442	
16,000.22	5,479.65	16,158.85	5,548.00	133.93	135.24	-94.31	937.19	10,590.03	656.93	387.94	268.99	2.442	
16,100.00	5,479.12	16,258.63	5,548.00	135.17	136.47	-94.35	937.83	10,689.80	657.00	385.56	271.45	2.420	
16,100.02	5,479.12	16,258.65	5,548.00	135.17	136.47	-94.35	937.83	10,689.82	657.00	385.56	271.45	2.420	
16,123.37	5,479.00	16,276.52	5,548.00	135.46	136.69	-94.36	937.95	10,707.69	657.04	385.12	271.92	2.416 ES, SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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								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		
0.00	0.00	19.00	19.00	0.00	0.17	-1.03	1,898.53	-34.08	1,898.84						
100.00	100.00	119.00	119.00	0.88	1.00	-1.03	1,898.53	-34.08	1,898.84	1,896.95	1.89	1,007.255			
200.00	200.00	219.00	219.00	1.50	1.58	-1.03	1,898.53	-34.08	1,898.84	1,895.75	3.09	615.233			
300.00	300.00	319.00	319.00	1.94	2.00	-1.03	1,898.53	-34.08	1,898.84	1,894.90	3.94	482.229			
400.00	400.00	419.00	419.00	2.29	2.35	-1.03	1,898.53	-34.08	1,898.84	1,894.20	4.64	409.259			
500.00	500.00	519.00	519.00	2.60	2.65	-1.03	1,898.53	-34.08	1,898.84	1,893.59	5.25	361.453			
600.00	599.98	633.92	633.92	3.05	2.98	44.23	1,898.40	-34.14	1,897.51	1,891.57	5.95	319.063			
677.77	677.65	772.53	772.47	3.26	3.40	44.39	1,895.05	-35.82	1,892.95	1,886.43	6.53	290.050			
700.00	699.84	812.02	811.91	3.29	3.52	44.41	1,893.27	-36.71	1,890.97	1,884.32	6.65	284.145			
800.00	799.65	978.34	977.72	3.58	3.95	44.45	1,881.81	-42.44	1,879.62	1,872.31	7.31	257.291			
900.00	899.46	1,077.51	1,076.44	3.88	4.22	44.45	1,873.35	-46.66	1,866.74	1,858.92	7.82	238.768			
1,000.00	999.27	1,176.68	1,175.16	4.19	4.53	44.45	1,864.89	-50.89	1,853.86	1,845.49	8.37	221.469			
1,100.00	1,099.07	1,275.84	1,273.87	4.50	4.85	44.45	1,856.43	-55.12	1,840.98	1,832.05	8.93	206.105			
1,200.00	1,198.88	1,375.01	1,372.59	4.82	5.18	44.44	1,847.97	-59.35	1,828.11	1,818.61	9.50	192.412			
1,300.00	1,298.69	1,474.18	1,471.30	5.15	5.52	44.44	1,839.50	-63.58	1,815.23	1,805.15	10.08	180.159			
1,400.00	1,398.50	1,573.34	1,570.02	5.48	5.86	44.44	1,831.04	-67.80	1,802.35	1,791.70	10.66	169.148			
1,500.00	1,498.30	1,672.51	1,668.73	5.82	6.22	44.44	1,822.58	-72.03	1,789.47	1,778.23	11.24	159.213			
1,600.00	1,598.11	1,771.68	1,767.45	6.15	6.57	44.44	1,814.12	-76.26	1,776.60	1,764.77	11.83	150.214			
1,700.00	1,697.92	1,870.85	1,866.16	6.49	6.93	44.44	1,805.66	-80.49	1,763.72	1,751.30	12.42	142.032			
1,800.00	1,797.73	1,970.01	1,964.88	6.83	7.30	44.43	1,797.20	-84.72	1,750.84	1,737.83	13.01	134.566			
1,900.00	1,897.53	2,069.18	2,063.59	7.18	7.66	44.43	1,788.74	-88.95	1,737.96	1,724.36	13.61	127.729			
2,000.00	1,997.34	2,168.35	2,162.31	7.52	8.03	44.43	1,780.28	-93.17	1,725.08	1,710.88	14.20	121.449			
2,100.00	2,097.15	2,267.52	2,261.02	7.87	8.40	44.43	1,771.82	-97.40	1,712.21	1,697.40	14.80	115.663			
2,200.00	2,196.96	2,366.68	2,359.74	8.21	8.78	44.43	1,763.36	-101.63	1,699.33	1,683.92	15.40	110.316			
2,300.00	2,296.76	2,465.85	2,458.45	8.56	9.15	44.42	1,754.90	-105.86	1,686.45	1,670.44	16.01	105.361			
2,400.00	2,396.57	2,565.02	2,557.17	8.91	9.53	44.42	1,746.44	-110.09	1,673.57	1,656.96	16.61	100.759			
2,500.00	2,496.38	2,664.19	2,655.88	9.26	9.90	44.42	1,737.98	-114.31	1,660.70	1,643.48	17.21	96.473			
2,600.00	2,596.19	2,763.35	2,754.60	9.61	10.28	44.42	1,729.52	-118.54	1,647.82	1,630.00	17.82	92.473			
2,700.00	2,695.99	2,862.52	2,853.31	9.96	10.66	44.41	1,721.06	-122.77	1,634.94	1,616.51	18.43	88.732			
2,800.00	2,795.80	2,961.69	2,952.03	10.31	11.04	44.41	1,712.60	-127.00	1,622.06	1,603.03	19.03	85.226			
2,900.00	2,895.61	3,060.85	3,050.74	10.66	11.42	44.41	1,704.13	-131.23	1,609.18	1,589.54	19.64	81.933			
3,000.00	2,995.42	3,160.02	3,149.46	11.01	11.81	44.41	1,695.67	-135.45	1,596.31	1,576.06	20.25	78.836			
3,100.00	3,095.22	3,259.19	3,248.18	11.36	12.19	44.41	1,687.21	-139.68	1,583.43	1,562.57	20.86	75.917			
3,200.00	3,195.03	3,358.36	3,346.89	11.71	12.57	44.40	1,678.75	-143.91	1,570.55	1,549.08	21.47	73.162			
3,300.00	3,294.84	3,457.52	3,445.61	12.07	12.96	44.40	1,670.29	-148.14	1,557.67	1,535.60	22.08	70.557			
3,400.00	3,394.65	3,556.69	3,544.32	12.42	13.34	44.40	1,661.83	-152.37	1,544.80	1,522.11	22.69	68.091			
3,500.00	3,494.45	3,655.86	3,643.04	12.77	13.73	44.40	1,653.37	-156.60	1,531.92	1,508.62	23.30	65.753			
3,600.00	3,594.26	3,755.03	3,741.75	13.13	14.11	44.39	1,644.91	-160.82	1,519.04	1,495.13	23.91	63.534			
3,700.00	3,694.07	3,854.19	3,840.47	13.48	14.50	44.39	1,636.45	-165.05	1,506.16	1,481.64	24.52	61.424			
3,800.00	3,793.88	3,953.36	3,939.18	13.83	14.89	44.39	1,627.99	-169.28	1,493.29	1,468.15	25.13	59.417			
3,900.00	3,893.68	4,052.53	4,037.90	14.19	15.27	44.38	1,619.53	-173.51	1,480.41	1,454.66	25.74	57.504			
4,000.00	3,993.49	4,151.70	4,136.61	14.54	15.66	44.38	1,611.07	-177.74	1,467.53	1,441.17	26.36	55.679			
4,100.00	4,093.30	4,250.86	4,235.33	14.90	16.05	44.38	1,602.61	-181.96	1,454.65	1,427.68	26.97	53.936			
4,200.00	4,193.11	4,350.03	4,334.04	15.25	16.44	44.38	1,594.15	-186.19	1,441.77	1,414.19	27.58	52.271			
4,300.00	4,292.91	4,449.20	4,432.76	15.61	16.82	44.37	1,585.69	-190.42	1,428.90	1,400.70	28.20	50.677			
4,400.00	4,392.72	4,548.36	4,531.47	15.96	17.21	44.37	1,577.23	-194.65	1,416.02	1,387.21	28.81	49.151			
4,500.00	4,492.53	4,647.53	4,630.19	16.32	17.60	44.37	1,568.77	-198.88	1,403.14	1,373.72	29.42	47.689			
4,600.00	4,592.34	4,746.70	4,728.90	16.67	17.99	44.36	1,560.30	-203.10	1,390.26	1,360.23	30.04	46.285			
4,700.00	4,692.14	4,845.87	4,827.62	17.03	18.37	44.36	1,551.84	-207.33	1,377.39	1,346.75	30.64	44.953			
4,780.22	4,772.21	4,926.90	4,908.32	17.30	18.63	44.50	1,544.95	-207.37	1,367.02	1,335.91	31.11	43.939			
4,800.00	4,791.96	4,946.79	4,928.10	17.36	18.69	19.69	1,543.27	-205.99	1,364.45	1,333.22	31.23	43.694			
4,850.00	4,841.89	4,996.82	4,977.59	17.49	18.75	-51.35	1,539.08	-200.12	1,357.97	1,326.46	31.52	43.086			

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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)			
4,900.00	4,891.64	5,046.51	5,026.23	17.48	18.76	-71.37	1,534.98	-190.86	1,351.54	1,319.83	31.71	42.626	
4,950.00	4,940.96	5,095.88	5,073.81	17.41	18.74	-78.44	1,531.00	-178.33	1,345.18	1,313.35	31.83	42.259	
5,000.00	4,989.60	5,144.95	5,120.13	17.33	18.71	-82.04	1,527.14	-162.65	1,338.92	1,307.00	31.93	41.938	
5,050.00	5,037.34	5,193.73	5,165.01	17.24	18.68	-84.28	1,523.43	-143.95	1,332.80	1,300.80	32.00	41.647	
5,100.00	5,083.94	5,242.23	5,208.28	17.14	18.64	-85.83	1,519.88	-122.36	1,326.84	1,294.78	32.07	41.375	
5,150.00	5,129.18	5,290.47	5,249.78	17.05	18.59	-86.99	1,516.49	-98.01	1,321.08	1,288.95	32.13	41.116	
5,200.00	5,172.82	5,338.46	5,289.36	16.95	18.56	-87.90	1,513.28	-71.06	1,315.53	1,283.33	32.19	40.864	
5,250.00	5,214.67	5,386.23	5,326.88	16.87	18.53	-88.65	1,510.27	-41.67	1,310.22	1,277.96	32.26	40.614	
5,300.00	5,254.52	5,433.79	5,362.21	16.79	18.50	-89.27	1,507.45	-9.97	1,305.18	1,272.85	32.34	40.362	
5,350.00	5,292.16	5,481.14	5,395.23	16.72	18.49	-89.80	1,504.85	23.86	1,300.44	1,268.01	32.43	40.102	
5,400.00	5,327.43	5,528.31	5,425.84	16.67	18.49	-90.25	1,502.47	59.66	1,296.00	1,263.47	32.54	39.830	
5,450.00	5,360.15	5,575.31	5,453.94	16.63	18.51	-90.64	1,500.31	97.26	1,291.90	1,259.23	32.67	39.541	
5,500.00	5,390.15	5,622.15	5,479.44	16.61	18.54	-90.97	1,498.39	136.49	1,288.16	1,255.32	32.84	39.231	
5,550.00	5,417.29	5,668.84	5,502.26	16.62	18.59	-91.25	1,496.70	177.18	1,284.78	1,251.75	33.03	38.898	
5,600.00	5,441.45	5,715.40	5,522.35	16.65	18.66	-91.48	1,495.26	219.15	1,281.79	1,248.53	33.26	38.540	
5,650.00	5,462.49	5,761.83	5,539.63	16.70	18.75	-91.67	1,494.06	262.22	1,279.19	1,245.66	33.53	38.155	
5,700.00	5,480.33	5,808.16	5,554.06	16.78	18.87	-91.82	1,493.11	306.22	1,277.00	1,243.17	33.83	37.745	
5,750.00	5,494.87	5,854.38	5,565.61	16.89	19.00	-91.93	1,492.42	350.97	1,275.24	1,241.06	34.18	37.312	
5,800.00	5,506.04	5,900.00	5,574.16	17.03	19.15	-92.01	1,491.98	395.77	1,273.89	1,239.33	34.56	36.859	
5,850.00	5,513.78	5,946.58	5,579.95	17.19	19.33	-92.04	1,491.78	441.97	1,272.99	1,238.00	34.99	36.387	
5,900.00	5,518.07	5,992.56	5,582.71	17.38	19.52	-92.04	1,491.84	487.87	1,272.51	1,237.07	35.44	35.904	
5,908.73	5,518.46	6,000.59	5,582.90	17.42	19.56	-92.04	1,491.88	495.89	1,272.47	1,236.95	35.52	35.820	
5,936.55	5,519.00	6,027.32	5,583.00	17.54	19.68	-92.03	1,492.05	522.62	1,272.43	1,236.63	35.80	35.541 CC	
5,936.77	5,519.00	6,027.54	5,583.00	17.54	19.68	-92.03	1,492.05	522.84	1,272.43	1,236.63	35.80	35.539	
6,000.00	5,519.00	6,090.77	5,583.00	17.83	19.99	-92.03	1,492.46	586.08	1,272.46	1,235.97	36.48	34.878	
6,000.30	5,519.00	6,091.07	5,583.00	17.83	19.99	-92.03	1,492.46	586.37	1,272.46	1,235.97	36.49	34.874	
6,100.00	5,519.00	6,190.77	5,583.00	18.36	20.54	-92.03	1,493.11	686.07	1,272.49	1,234.81	37.69	33.765	
6,100.30	5,519.00	6,191.07	5,583.00	18.36	20.54	-92.03	1,493.11	686.37	1,272.49	1,234.80	37.69	33.762	
6,200.00	5,519.00	6,290.77	5,583.00	18.96	21.14	-92.03	1,493.75	786.07	1,272.53	1,233.51	39.01	32.618	
6,200.30	5,519.00	6,291.07	5,583.00	18.96	21.14	-92.03	1,493.76	786.37	1,272.53	1,233.51	39.02	32.615	
6,300.00	5,519.00	6,390.77	5,583.00	19.62	21.80	-92.03	1,494.40	886.07	1,272.56	1,232.11	40.45	31.460	
6,300.30	5,519.00	6,391.07	5,583.00	19.63	21.80	-92.03	1,494.40	886.36	1,272.56	1,232.11	40.46	31.456	
6,400.00	5,519.00	6,490.77	5,583.00	20.35	22.51	-92.03	1,495.05	986.07	1,272.60	1,230.61	41.99	30.309	
6,400.30	5,519.00	6,491.07	5,583.00	20.35	22.51	-92.03	1,495.05	986.36	1,272.60	1,230.61	41.99	30.305	
6,500.00	5,519.00	6,590.77	5,583.00	21.12	23.26	-92.03	1,495.70	1,086.06	1,272.63	1,229.02	43.61	29.180	
6,500.30	5,519.00	6,591.07	5,583.00	21.13	23.26	-92.03	1,495.70	1,086.36	1,272.63	1,229.02	43.62	29.176	
6,600.00	5,519.00	6,690.77	5,583.00	21.95	24.06	-92.03	1,496.35	1,186.06	1,272.67	1,227.35	45.32	28.082	
6,600.30	5,519.00	6,691.07	5,583.00	21.95	24.06	-92.03	1,496.35	1,186.36	1,272.67	1,227.35	45.32	28.079	
6,700.00	5,519.00	6,790.77	5,583.00	22.82	24.89	-92.03	1,497.00	1,286.06	1,272.70	1,225.61	47.10	27.024	
6,700.30	5,519.00	6,791.07	5,583.00	22.82	24.89	-92.03	1,497.00	1,286.36	1,272.71	1,225.60	47.10	27.021	
6,800.00	5,519.00	6,890.77	5,583.00	23.73	25.75	-92.03	1,497.65	1,386.06	1,272.74	1,223.81	48.93	26.009	
6,800.30	5,519.00	6,891.07	5,583.00	23.73	25.76	-92.03	1,497.65	1,386.35	1,272.74	1,223.80	48.94	26.006	
6,900.00	5,519.00	6,990.77	5,583.00	24.67	26.65	-92.03	1,498.29	1,486.06	1,272.78	1,221.95	50.83	25.041	
6,900.30	5,519.00	6,991.07	5,583.00	24.67	26.65	-92.03	1,498.30	1,486.35	1,272.78	1,221.94	50.83	25.038	
7,000.00	5,519.00	7,090.77	5,583.00	25.64	27.57	-92.03	1,498.94	1,586.05	1,272.81	1,220.04	52.77	24.118	
7,000.30	5,519.00	7,091.07	5,583.00	25.64	27.58	-92.03	1,498.94	1,586.35	1,272.81	1,220.03	52.78	24.116	
7,100.00	5,519.00	7,190.77	5,583.00	26.64	28.52	-92.03	1,499.59	1,686.05	1,272.85	1,218.08	54.76	23.243	
7,100.30	5,519.00	7,191.07	5,583.00	26.64	28.52	-92.03	1,499.59	1,686.35	1,272.85	1,218.08	54.77	23.240	
7,200.00	5,519.00	7,290.77	5,583.00	27.65	29.49	-92.03	1,500.24	1,786.05	1,272.88	1,216.09	56.79	22.413	
7,200.30	5,519.00	7,291.07	5,583.00	27.66	29.50	-92.03	1,500.24	1,786.34	1,272.88	1,216.08	56.80	22.410	
7,300.00	5,519.00	7,390.77	5,583.00	28.69	30.49	-92.03	1,500.89	1,886.05	1,272.92	1,214.06	58.86	21.627	
7,300.30	5,519.00	7,391.07	5,583.00	28.70	30.49	-92.03	1,500.89	1,886.34	1,272.92	1,214.05	58.86	21.625	

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 LD13-645
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 LD13-645	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											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)	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 Ellipses (usft)			
7,400.00	5,519.00	7,490.77	5,583.00	29.75	31.50	-92.03	1,501.54	1,986.05	1,272.95	1,212.00	60.96	20.883
7,400.30	5,519.00	7,491.07	5,583.00	29.75	31.50	-92.03	1,501.54	1,986.34	1,272.95	1,211.99	60.96	20.881
7,500.00	5,519.00	7,590.77	5,583.00	30.82	32.53	-92.03	1,502.18	2,086.04	1,272.99	1,209.91	63.08	20.180
7,500.29	5,519.00	7,591.07	5,583.00	30.83	32.53	-92.03	1,502.19	2,086.34	1,272.99	1,209.90	63.09	20.178
7,600.00	5,519.00	7,690.77	5,583.00	31.91	33.57	-92.03	1,502.83	2,186.04	1,273.02	1,207.79	65.23	19.514
7,600.29	5,519.00	7,691.07	5,583.00	31.91	33.57	-92.03	1,502.83	2,186.34	1,273.02	1,207.78	65.24	19.513
7,700.00	5,519.00	7,790.77	5,583.00	33.01	34.63	-92.03	1,503.48	2,286.04	1,273.06	1,205.65	67.41	18.885
7,700.29	5,519.00	7,791.07	5,583.00	33.01	34.63	-92.03	1,503.48	2,286.33	1,273.06	1,205.64	67.42	18.883
7,800.00	5,519.00	7,890.77	5,583.00	34.12	35.70	-92.03	1,504.13	2,386.04	1,273.09	1,203.48	69.62	18.287
7,800.29	5,519.00	7,891.07	5,583.00	34.12	35.70	-92.03	1,504.13	2,386.33	1,273.09	1,203.48	69.62	18.287
7,900.00	5,519.00	7,990.77	5,583.00	35.24	36.78	-92.03	1,504.78	2,486.04	1,273.13	1,201.30	71.83	17.725
7,900.29	5,519.00	7,991.07	5,583.00	35.24	36.78	-92.03	1,504.78	2,486.33	1,273.13	1,201.30	71.83	17.723
8,000.00	5,519.00	8,090.77	5,583.00	36.37	37.87	-92.03	1,505.43	2,586.03	1,273.17	1,199.10	74.06	17.191
8,000.29	5,519.00	8,091.07	5,583.00	36.37	37.87	-92.03	1,505.43	2,586.33	1,273.17	1,199.10	74.07	17.189
8,100.00	5,519.00	8,190.77	5,583.00	37.50	38.97	-92.03	1,506.08	2,686.03	1,273.20	1,196.89	76.31	16.684
8,100.29	5,519.00	8,191.07	5,583.00	37.51	38.97	-92.03	1,506.08	2,686.33	1,273.20	1,196.88	76.32	16.682
8,200.00	5,519.00	8,290.77	5,583.00	38.65	40.08	-92.03	1,506.72	2,786.03	1,273.24	1,194.66	78.58	16.203
8,200.29	5,519.00	8,291.07	5,583.00	38.65	40.08	-92.03	1,506.73	2,786.32	1,273.24	1,194.65	78.59	16.202
8,300.00	5,519.00	8,390.77	5,583.00	39.80	41.20	-92.03	1,507.37	2,886.03	1,273.27	1,192.41	80.86	15.747
8,300.29	5,519.00	8,391.07	5,583.00	39.80	41.20	-92.03	1,507.37	2,886.32	1,273.27	1,192.41	80.87	15.745
8,400.00	5,519.00	8,490.77	5,583.00	40.96	42.32	-92.03	1,508.02	2,986.02	1,273.31	1,190.16	83.15	15.313
8,420.59	5,519.00	8,511.64	5,582.95	41.20	42.56	-92.02	1,508.16	3,006.89	1,273.31	1,189.69	83.63	15.226
8,497.04	5,519.00	8,588.41	5,581.99	42.09	43.42	-91.98	1,508.65	3,083.65	1,273.31	1,187.92	85.39	14.912
8,500.00	5,519.00	8,591.37	5,581.95	42.12	43.46	-91.98	1,508.67	3,086.61	1,273.31	1,187.85	85.46	14.900
8,502.67	5,518.99	8,594.04	5,581.92	42.15	43.49	-91.98	1,508.69	3,089.28	1,273.31	1,187.79	85.52	14.890
8,506.04	5,518.99	8,597.41	5,581.87	42.19	43.52	-91.98	1,508.71	3,092.65	1,273.31	1,187.71	85.59	14.876
8,512.08	5,518.96	8,603.45	5,581.79	42.26	43.59	-91.97	1,508.75	3,098.69	1,273.31	1,187.57	85.73	14.852
8,512.09	5,518.96	8,603.46	5,581.79	42.26	43.59	-91.97	1,508.75	3,098.70	1,273.31	1,187.57	85.73	14.852
8,600.00	5,518.50	8,691.37	5,580.61	43.29	44.60	-91.94	1,509.32	3,186.60	1,273.31	1,185.55	87.77	14.508
8,600.00	5,518.50	8,691.37	5,580.61	43.29	44.60	-91.94	1,509.32	3,186.60	1,273.31	1,185.55	87.77	14.508
8,700.00	5,517.97	8,791.36	5,579.27	44.46	45.74	-91.90	1,509.97	3,286.58	1,273.32	1,183.23	90.09	14.134
8,700.00	5,517.97	8,791.37	5,579.27	44.46	45.74	-91.90	1,509.97	3,286.58	1,273.32	1,183.23	90.09	14.134
8,800.00	5,517.45	8,891.36	5,577.93	45.63	46.89	-91.87	1,510.62	3,386.57	1,273.33	1,180.91	92.42	13.777
8,800.01	5,517.45	8,891.37	5,577.93	45.63	46.89	-91.87	1,510.62	3,386.58	1,273.33	1,180.91	92.42	13.777
8,900.00	5,516.92	8,991.36	5,576.58	46.82	48.05	-91.83	1,511.27	3,486.55	1,273.34	1,178.58	94.76	13.437
8,900.01	5,516.92	8,991.36	5,576.58	46.82	48.05	-91.83	1,511.27	3,486.56	1,273.34	1,178.58	94.76	13.437
9,000.00	5,516.40	9,091.35	5,575.24	48.00	49.20	-91.79	1,511.92	3,586.54	1,273.35	1,176.24	97.11	13.112
9,000.00	5,516.40	9,091.36	5,575.24	48.00	49.20	-91.79	1,511.92	3,586.54	1,273.35	1,176.24	97.11	13.112
9,100.00	5,515.87	9,191.35	5,573.90	49.19	50.37	-91.76	1,512.56	3,686.53	1,273.36	1,173.89	99.47	12.802
9,100.01	5,515.87	9,191.36	5,573.90	49.19	50.37	-91.76	1,512.56	3,686.53	1,273.36	1,173.89	99.47	12.802
9,200.00	5,515.35	9,291.35	5,572.56	50.38	51.54	-91.72	1,513.21	3,786.51	1,273.37	1,171.54	101.83	12.505
9,200.01	5,515.35	9,291.35	5,572.56	50.38	51.54	-91.72	1,513.21	3,786.52	1,273.37	1,171.54	101.83	12.505
9,300.00	5,514.82	9,391.34	5,571.22	51.57	52.71	-91.68	1,513.86	3,886.50	1,273.38	1,169.18	104.20	12.220
9,300.00	5,514.82	9,391.35	5,571.22	51.57	52.71	-91.68	1,513.86	3,886.50	1,273.38	1,169.18	104.20	12.220
9,400.00	5,514.30	9,491.34	5,569.88	52.77	53.88	-91.65	1,514.51	3,986.48	1,273.39	1,166.82	106.58	11.948
9,400.05	5,514.30	9,491.39	5,569.88	52.77	53.88	-91.65	1,514.51	3,986.53	1,273.39	1,166.81	106.58	11.948
9,500.00	5,513.77	9,591.34	5,568.53	53.97	55.06	-91.61	1,515.16	4,086.47	1,273.40	1,164.45	108.96	11.687
9,500.04	5,513.77	9,591.38	5,568.53	53.97	55.06	-91.61	1,515.16	4,086.51	1,273.40	1,164.45	108.96	11.687
9,600.00	5,513.25	9,691.33	5,567.19	55.17	56.24	-91.57	1,515.81	4,186.45	1,273.42	1,162.07	111.34	11.437
9,600.04	5,513.25	9,691.37	5,567.19	55.17	56.25	-91.57	1,515.81	4,186.49	1,273.42	1,162.07	111.34	11.437
9,700.00	5,512.72	9,791.33	5,565.85	56.37	57.43	-91.54	1,516.45	4,286.44	1,273.43	1,159.70	113.73	11.197
9,700.04	5,512.72	9,791.37	5,565.85	56.37	57.43	-91.54	1,516.45	4,286.47	1,273.43	1,159.70	113.73	11.197

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 LD13-645
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 LD13-645	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: 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)			
9,800.00	5,512.20	9,891.33	5,564.51	57.58	58.62	-91.50	1,517.10	4,386.42	1,273.44	1,157.32	116.13	10.966	
9,800.03	5,512.20	9,891.36	5,564.51	57.58	58.62	-91.50	1,517.10	4,386.46	1,273.44	1,157.31	116.13	10.966	
9,900.00	5,511.67	9,991.32	5,563.17	58.79	59.81	-91.46	1,517.75	4,486.41	1,273.46	1,154.93	118.53	10.744	
9,900.03	5,511.67	9,991.35	5,563.17	58.79	59.81	-91.46	1,517.75	4,486.44	1,273.46	1,154.93	118.53	10.744	
10,000.00	5,511.15	10,091.32	5,561.83	59.99	61.00	-91.43	1,518.40	4,586.40	1,273.47	1,152.54	120.93	10.530	
10,000.02	5,511.15	10,091.34	5,561.82	59.99	61.00	-91.43	1,518.40	4,586.42	1,273.47	1,152.54	120.93	10.530	
10,100.00	5,510.62	10,191.32	5,560.48	61.21	62.19	-91.39	1,519.05	4,686.38	1,273.49	1,150.15	123.34	10.325	
10,100.02	5,510.62	10,191.33	5,560.48	61.21	62.19	-91.39	1,519.05	4,686.40	1,273.49	1,150.15	123.34	10.325	
10,200.00	5,510.10	10,291.31	5,559.14	62.42	63.39	-91.35	1,519.70	4,786.37	1,273.50	1,147.75	125.75	10.127	
10,200.01	5,510.10	10,291.32	5,559.14	62.42	63.39	-91.35	1,519.70	4,786.38	1,273.50	1,147.75	125.75	10.127	
10,300.00	5,509.57	10,391.31	5,557.80	63.63	64.59	-91.31	1,520.34	4,886.35	1,273.52	1,145.36	128.16	9.937	
10,300.01	5,509.57	10,391.32	5,557.80	63.63	64.59	-91.31	1,520.34	4,886.36	1,273.52	1,145.36	128.16	9.937	
10,400.00	5,509.05	10,491.31	5,556.46	64.85	65.79	-91.28	1,520.99	4,986.34	1,273.54	1,142.96	130.58	9.753	
10,400.01	5,509.05	10,491.32	5,556.46	64.85	65.79	-91.28	1,520.99	4,986.35	1,273.54	1,142.96	130.58	9.753	
10,500.00	5,508.52	10,591.30	5,555.12	66.06	66.99	-91.24	1,521.64	5,086.32	1,273.56	1,140.55	133.00	9.575	
10,500.01	5,508.52	10,591.31	5,555.12	66.06	66.99	-91.24	1,521.64	5,086.33	1,273.56	1,140.55	133.00	9.575	
10,600.00	5,508.00	10,691.30	5,553.77	67.28	68.20	-91.20	1,522.29	5,186.31	1,273.57	1,138.15	135.43	9.404	
10,600.01	5,508.00	10,691.31	5,553.77	67.28	68.20	-91.20	1,522.29	5,186.31	1,273.57	1,138.15	135.43	9.404	
10,700.00	5,507.47	10,791.30	5,552.43	68.50	69.40	-91.17	1,522.94	5,286.29	1,273.59	1,135.74	137.85	9.239	
10,700.01	5,507.47	10,791.31	5,552.43	68.50	69.40	-91.17	1,522.94	5,286.30	1,273.59	1,135.74	137.85	9.239	
10,800.00	5,506.95	10,891.29	5,551.09	69.72	70.61	-91.13	1,523.59	5,386.28	1,273.61	1,133.33	140.28	9.079	
10,800.01	5,506.95	10,891.29	5,551.09	69.72	70.61	-91.13	1,523.59	5,386.28	1,273.61	1,133.33	140.28	9.079	
10,900.00	5,506.42	10,991.29	5,549.75	70.94	71.82	-91.09	1,524.23	5,486.27	1,273.63	1,130.92	142.71	8.924	
10,900.01	5,506.42	10,991.29	5,549.75	70.94	71.82	-91.09	1,524.23	5,486.27	1,273.63	1,130.92	142.71	8.924	
11,000.00	5,505.90	11,091.29	5,548.41	72.16	73.03	-91.06	1,524.88	5,586.25	1,273.65	1,128.51	145.15	8.775	
11,000.01	5,505.90	11,091.29	5,548.41	72.16	73.03	-91.06	1,524.88	5,586.25	1,273.65	1,128.51	145.15	8.775	
11,100.00	5,505.37	11,191.28	5,547.07	73.39	74.24	-91.02	1,525.53	5,686.24	1,273.67	1,126.09	147.58	8.630	
11,100.01	5,505.37	11,191.33	5,547.06	73.39	74.24	-91.02	1,525.53	5,686.28	1,273.67	1,126.09	147.58	8.630	
11,200.00	5,504.85	11,291.28	5,545.72	74.61	75.45	-90.98	1,526.18	5,786.22	1,273.69	1,123.67	150.02	8.490	
11,200.01	5,504.85	11,291.31	5,545.72	74.61	75.45	-90.98	1,526.18	5,786.26	1,273.69	1,123.67	150.02	8.490	
11,300.00	5,504.32	11,391.28	5,544.38	75.84	76.67	-90.95	1,526.83	5,886.21	1,273.71	1,121.26	152.46	8.354	
11,300.01	5,504.32	11,391.30	5,544.38	75.84	76.67	-90.95	1,526.83	5,886.23	1,273.71	1,121.26	152.46	8.354	
11,400.00	5,503.80	11,491.27	5,543.04	77.06	77.88	-90.91	1,527.48	5,986.19	1,273.74	1,118.83	154.91	8.223	
11,400.01	5,503.80	11,491.28	5,543.04	77.06	77.88	-90.91	1,527.48	5,986.22	1,273.74	1,118.83	154.91	8.223	
11,500.00	5,503.27	11,591.17	5,542.14	78.29	79.09	-90.89	1,528.12	6,086.09	1,273.77	1,116.43	157.34	8.096	
11,500.01	5,503.27	11,591.33	5,542.14	78.29	79.10	-90.89	1,528.13	6,086.25	1,273.77	1,116.42	157.34	8.096	
11,600.00	5,502.75	11,691.17	5,541.29	79.51	80.31	-90.88	1,528.77	6,186.08	1,273.80	1,114.01	159.79	7.972	
11,600.01	5,502.75	11,691.32	5,541.29	79.52	80.31	-90.88	1,528.77	6,186.23	1,273.80	1,114.01	159.79	7.972	
11,700.00	5,502.22	11,791.17	5,540.45	80.74	81.53	-90.86	1,529.42	6,286.07	1,273.83	1,111.59	162.23	7.852	
11,700.01	5,502.22	11,791.32	5,540.44	80.74	81.53	-90.86	1,529.42	6,286.22	1,273.83	1,111.59	162.24	7.852	
11,800.00	5,501.70	11,891.17	5,539.60	81.97	82.75	-90.85	1,530.07	6,386.07	1,273.86	1,109.18	164.68	7.735	
11,800.01	5,501.70	11,891.31	5,539.60	81.97	82.75	-90.85	1,530.07	6,386.20	1,273.86	1,109.17	164.68	7.735	
11,900.00	5,501.17	11,991.17	5,538.75	83.20	83.97	-90.84	1,530.72	6,486.19	1,273.89	1,106.75	167.13	7.622	
11,900.01	5,501.17	11,991.30	5,538.75	83.20	83.97	-90.84	1,530.72	6,486.19	1,273.89	1,106.75	167.13	7.622	
12,000.00	5,500.65	12,091.17	5,537.90	84.43	85.19	-90.82	1,531.37	6,586.06	1,273.92	1,104.34	169.58	7.512	
12,000.01	5,500.65	12,091.29	5,537.90	84.43	85.19	-90.82	1,531.37	6,586.17	1,273.92	1,104.33	169.59	7.512	
12,100.00	5,500.12	12,191.17	5,537.05	85.66	86.41	-90.81	1,532.02	6,686.05	1,273.95	1,101.91	172.04	7.405	
12,100.01	5,500.12	12,191.27	5,537.05	85.66	86.41	-90.81	1,532.02	6,686.15	1,273.95	1,101.91	172.04	7.405	
12,200.00	5,499.60	12,291.17	5,536.20	86.89	87.63	-90.79	1,532.66	6,786.04	1,273.98	1,099.49	174.49	7.301	
12,200.01	5,499.60	12,291.26	5,536.20	86.89	87.64	-90.79	1,532.66	6,786.14	1,273.98	1,099.49	174.49	7.301	
12,300.00	5,499.07	12,391.17	5,535.35	88.12	88.86	-90.78	1,533.31	6,886.04	1,274.01	1,097.07	176.95	7.200	
12,300.01	5,499.07	12,391.25	5,535.35	88.12	88.86	-90.78	1,533.31	6,886.12	1,274.01	1,097.06	176.95	7.200	

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 LD13-645
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 LD13-645	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: 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)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
12,400.00	5,498.55	12,491.17	5,534.50	89.35	90.08	-90.76	1,533.96	6,986.03	1,274.04	1,094.64	179.40	7.102		
12,400.07	5,498.55	12,491.24	5,534.50	89.36	90.08	-90.76	1,533.96	6,986.10	1,274.04	1,094.64	179.40	7.102		
12,500.00	5,498.02	12,591.17	5,533.66	90.59	91.31	-90.75	1,534.61	7,086.02	1,274.07	1,092.21	181.86	7.006		
12,500.06	5,498.02	12,591.23	5,533.66	90.59	91.31	-90.75	1,534.61	7,086.08	1,274.07	1,092.21	181.86	7.006		
12,600.00	5,497.50	12,691.17	5,532.81	91.82	92.53	-90.73	1,535.26	7,186.02	1,274.11	1,089.79	184.32	6.913		
12,600.05	5,497.50	12,691.22	5,532.81	91.82	92.53	-90.73	1,535.26	7,186.07	1,274.11	1,089.79	184.32	6.912		
12,700.00	5,496.97	12,791.17	5,531.96	93.05	93.76	-90.72	1,535.91	7,286.01	1,274.14	1,087.36	186.78	6.822		
12,700.04	5,496.97	12,791.20	5,531.96	93.05	93.76	-90.72	1,535.91	7,286.05	1,274.14	1,087.36	186.78	6.822		
12,800.00	5,496.45	12,891.17	5,531.11	94.29	94.98	-90.70	1,536.55	7,386.01	1,274.17	1,084.93	189.24	6.733		
12,800.02	5,496.45	12,891.19	5,531.11	94.29	94.99	-90.70	1,536.55	7,386.03	1,274.17	1,084.93	189.24	6.733		
12,900.00	5,495.92	12,991.17	5,530.26	95.52	96.21	-90.69	1,537.20	7,486.00	1,274.20	1,082.50	191.70	6.647		
12,900.01	5,495.92	12,991.17	5,530.26	95.52	96.21	-90.69	1,537.20	7,486.01	1,274.20	1,082.50	191.70	6.647		
13,000.00	5,495.40	13,091.17	5,529.41	96.76	97.44	-90.68	1,537.85	7,585.99	1,274.23	1,080.07	194.16	6.563		
13,000.00	5,495.40	13,091.17	5,529.41	96.76	97.44	-90.68	1,537.85	7,586.00	1,274.23	1,080.07	194.16	6.563		
13,100.00	5,494.87	13,191.17	5,528.56	97.99	98.67	-90.66	1,538.50	7,685.99	1,274.26	1,077.63	196.63	6.481		
13,100.01	5,494.87	13,191.17	5,528.56	97.99	98.67	-90.66	1,538.50	7,686.00	1,274.26	1,077.63	196.63	6.481		
13,200.00	5,494.35	13,291.16	5,527.72	99.23	99.90	-90.65	1,539.15	7,785.98	1,274.29	1,075.20	199.09	6.401		
13,200.00	5,494.35	13,291.17	5,527.72	99.23	99.90	-90.65	1,539.15	7,785.98	1,274.29	1,075.20	199.09	6.401		
13,300.00	5,493.82	13,391.16	5,526.87	100.46	101.13	-90.63	1,539.80	7,885.97	1,274.33	1,072.77	201.56	6.322		
13,300.05	5,493.82	13,391.21	5,526.87	100.46	101.13	-90.63	1,539.80	7,886.02	1,274.33	1,072.77	201.56	6.322		
13,400.00	5,493.30	13,491.16	5,526.02	101.70	102.36	-90.62	1,540.45	7,985.97	1,274.36	1,070.33	204.02	6.246		
13,400.03	5,493.30	13,491.19	5,526.02	101.70	102.36	-90.62	1,540.45	7,986.00	1,274.36	1,070.33	204.03	6.246		
13,500.00	5,492.77	13,591.16	5,525.17	102.94	103.59	-90.60	1,541.09	8,085.96	1,274.39	1,067.90	206.49	6.172		
13,500.01	5,492.77	13,591.18	5,525.17	102.94	103.59	-90.60	1,541.09	8,085.97	1,274.39	1,067.90	206.49	6.172		
13,600.00	5,492.25	13,691.16	5,524.32	104.17	104.82	-90.59	1,541.74	8,185.96	1,274.42	1,065.46	208.96	6.099		
13,600.00	5,492.25	13,691.17	5,524.32	104.17	104.82	-90.59	1,541.74	8,185.96	1,274.42	1,065.46	208.96	6.099		
13,700.00	5,491.72	13,791.16	5,523.47	105.41	106.05	-90.57	1,542.39	8,285.95	1,274.45	1,063.03	211.43	6.028		
13,700.00	5,491.72	13,791.17	5,523.47	105.41	106.05	-90.57	1,542.39	8,285.95	1,274.45	1,063.03	211.43	6.028		
13,800.00	5,491.20	13,891.16	5,522.62	106.65	107.28	-90.56	1,543.04	8,385.94	1,274.49	1,060.59	213.90	5.958		
13,800.00	5,491.20	13,891.16	5,522.62	106.65	107.28	-90.56	1,543.04	8,385.95	1,274.49	1,060.59	213.90	5.958		
13,900.00	5,490.67	13,991.16	5,521.78	107.88	108.51	-90.54	1,543.69	8,485.94	1,274.52	1,058.15	216.37	5.891		
13,900.03	5,490.67	13,991.19	5,521.78	107.88	108.51	-90.54	1,543.69	8,485.97	1,274.52	1,058.15	216.37	5.890		
14,000.00	5,490.15	14,091.16	5,520.93	109.12	109.75	-90.53	1,544.34	8,585.93	1,274.55	1,055.71	218.84	5.824		
14,000.01	5,490.15	14,091.17	5,520.93	109.12	109.75	-90.53	1,544.34	8,585.94	1,274.55	1,055.71	218.84	5.824		
14,100.00	5,489.62	14,191.16	5,520.08	110.36	110.98	-90.51	1,544.98	8,685.92	1,274.58	1,053.27	221.31	5.759		
14,100.00	5,489.62	14,191.16	5,520.08	110.36	110.98	-90.51	1,544.98	8,685.93	1,274.58	1,053.27	221.31	5.759		
14,200.00	5,489.10	14,291.16	5,519.23	111.60	112.21	-90.50	1,545.63	8,785.92	1,274.62	1,050.83	223.78	5.696		
14,200.01	5,489.10	14,291.17	5,519.23	111.60	112.21	-90.50	1,545.63	8,785.93	1,274.62	1,050.83	223.78	5.696		
14,300.00	5,488.57	14,391.16	5,518.38	112.84	113.45	-90.49	1,546.28	8,885.91	1,274.65	1,048.39	226.26	5.634		
14,300.03	5,488.57	14,391.19	5,518.38	112.84	113.45	-90.49	1,546.28	8,885.94	1,274.65	1,048.39	226.26	5.634		
14,400.00	5,488.05	14,491.16	5,517.53	114.08	114.68	-90.47	1,546.93	8,985.91	1,274.68	1,045.95	228.73	5.573		
14,400.00	5,488.05	14,491.16	5,517.53	114.08	114.68	-90.47	1,546.93	8,985.91	1,274.68	1,045.95	228.73	5.573		
14,500.00	5,487.52	14,591.16	5,516.68	115.32	115.91	-90.46	1,547.58	9,085.90	1,274.72	1,043.51	231.20	5.513		
14,500.00	5,487.52	14,591.16	5,516.68	115.32	115.91	-90.46	1,547.58	9,085.90	1,274.72	1,043.51	231.20	5.513		
14,600.00	5,487.00	14,691.16	5,515.84	116.56	117.15	-90.44	1,548.23	9,185.89	1,274.75	1,041.07	233.68	5.455		
14,600.04	5,487.00	14,691.20	5,515.83	116.56	117.15	-90.44	1,548.23	9,185.93	1,274.75	1,041.07	233.68	5.455		
14,700.00	5,486.47	14,791.16	5,514.99	117.79	118.38	-90.43	1,548.87	9,285.89	1,274.78	1,038.63	236.15	5.398		
14,700.00	5,486.47	14,791.16	5,514.99	117.79	118.38	-90.43	1,548.87	9,285.89	1,274.78	1,038.63	236.15	5.398		
14,800.00	5,485.95	14,891.16	5,514.14	119.03	119.62	-90.41	1,549.52	9,385.88	1,274.81	1,036.19	238.63	5.342		
14,800.01	5,485.95	14,891.16	5,514.14	119.03	119.62	-90.41	1,549.52	9,385.89	1,274.81	1,036.19	238.63	5.342		
14,900.00	5,485.42	14,991.16	5,513.29	120.27	120.85	-90.40	1,550.17	9,485.87	1,274.85	1,033.74	241.10	5.288		
14,900.03	5,485.42	14,991.18	5,513.29	120.27	120.85	-90.40	1,550.17	9,485.90	1,274.85	1,033.74	241.10	5.288		

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 LD13-645
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 LD13-645	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
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)	Factor
15,000.00	5,484.90	15,091.15	5,512.44	121.51	122.09	-90.38	1,550.82	9,585.87	1,274.88	1,031.30	243.58	5.234
15,000.00	5,484.90	15,091.16	5,512.44	121.51	122.09	-90.38	1,550.82	9,585.87	1,274.88	1,031.30	243.58	5.234
15,100.00	5,484.37	15,191.15	5,511.59	122.76	123.33	-90.37	1,551.47	9,685.86	1,274.91	1,028.86	246.06	5.181
15,104.44	5,484.35	15,195.59	5,511.55	122.81	123.38	-90.37	1,551.50	9,690.30	1,274.92	1,028.75	246.17	5.179
15,200.00	5,483.85	15,291.15	5,510.74	124.00	124.56	-90.35	1,552.12	9,785.86	1,274.95	1,026.41	248.53	5.130
15,204.39	5,483.82	15,295.54	5,510.71	124.05	124.62	-90.35	1,552.15	9,790.24	1,274.95	1,026.31	248.64	5.128
15,300.00	5,483.32	15,391.15	5,509.89	125.24	125.80	-90.34	1,552.77	9,885.85	1,274.98	1,023.97	251.01	5.079
15,304.33	5,483.30	15,395.49	5,509.86	125.29	125.85	-90.34	1,552.79	9,890.18	1,274.98	1,023.86	251.12	5.077
15,400.00	5,482.80	15,491.15	5,509.05	126.48	127.04	-90.33	1,553.41	9,985.84	1,275.01	1,021.52	253.49	5.030
15,404.27	5,482.78	15,495.43	5,509.01	126.53	127.09	-90.33	1,553.44	9,990.12	1,275.02	1,021.42	253.60	5.028
15,500.00	5,482.27	15,591.15	5,508.20	127.72	128.27	-90.31	1,554.06	10,085.84	1,275.05	1,019.08	255.97	4.981
15,504.21	5,482.25	15,595.36	5,508.16	127.77	128.32	-90.31	1,554.09	10,090.05	1,275.05	1,018.98	256.07	4.979
15,600.00	5,481.75	15,691.15	5,507.35	128.96	129.51	-90.30	1,554.71	10,185.83	1,275.08	1,016.63	258.45	4.934
15,604.14	5,481.73	15,695.29	5,507.31	129.01	129.56	-90.30	1,554.74	10,189.97	1,275.08	1,016.53	258.55	4.932
15,700.00	5,481.22	15,791.15	5,506.50	130.20	130.75	-90.28	1,555.36	10,285.83	1,275.12	1,014.19	260.93	4.887
15,704.06	5,481.20	15,795.21	5,506.47	130.25	130.80	-90.28	1,555.39	10,289.88	1,275.12	1,014.09	261.03	4.885
15,800.00	5,480.70	15,891.15	5,505.65	131.44	131.99	-90.27	1,556.01	10,385.82	1,275.15	1,011.74	263.41	4.841
15,803.97	5,480.68	15,895.12	5,505.62	131.49	132.03	-90.27	1,556.03	10,389.79	1,275.15	1,011.65	263.51	4.839
15,900.00	5,480.17	15,991.15	5,504.80	132.69	133.22	-90.25	1,556.66	10,485.81	1,275.18	1,009.30	265.89	4.796
15,903.88	5,480.15	15,995.03	5,504.77	132.73	133.27	-90.25	1,556.68	10,489.69	1,275.19	1,009.20	265.98	4.794
16,000.00	5,479.65	16,091.15	5,503.95	133.93	134.46	-90.24	1,557.30	10,585.81	1,275.22	1,006.85	268.37	4.752
16,003.77	5,479.63	16,094.92	5,503.92	133.97	134.51	-90.24	1,557.33	10,589.57	1,275.22	1,006.76	268.46	4.750
16,100.00	5,479.12	16,191.15	5,503.11	135.17	135.70	-90.22	1,557.95	10,685.80	1,275.25	1,004.40	270.85	4.708
16,100.01	5,479.12	16,191.16	5,503.11	135.17	135.70	-90.22	1,557.95	10,685.81	1,275.25	1,004.40	270.85	4.708
16,123.37	5,479.00	16,203.62	5,503.00	135.46	135.86	-90.22	1,558.03	10,698.27	1,275.31	1,004.03	271.28	4.701 ES, SF

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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 Site Error: 0.00 usft	
Reference Offset										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)												
0.00	0.00	19.00	19.00	0.00	0.17	-1.02	1,926.59	-34.35	1,926.90				
100.00	100.00	119.00	119.00	0.88	1.00	-1.02	1,926.59	-34.35	1,926.90	1,925.01	1.89	1,022.139	
200.00	200.00	219.00	219.00	1.50	1.58	-1.02	1,926.59	-34.35	1,926.90	1,923.81	3.09	624.323	
300.00	300.00	319.00	319.00	1.94	2.00	-1.02	1,926.59	-34.35	1,926.90	1,922.96	3.94	489.354	
400.00	400.00	419.00	419.00	2.29	2.35	-1.02	1,926.59	-34.35	1,926.90	1,922.26	4.64	415.307	
500.00	500.00	519.00	519.00	2.60	2.65	-1.02	1,926.59	-34.35	1,926.90	1,921.64	5.25	366.794	
600.00	599.98	614.28	614.28	3.05	2.92	44.23	1,926.61	-34.38	1,925.67	1,919.78	5.89	327.129	
677.77	677.65	672.75	672.74	3.26	3.11	44.30	1,927.03	-34.89	1,923.55	1,917.31	6.23	308.615	
700.00	699.84	700.00	699.99	3.29	3.20	44.32	1,927.43	-35.36	1,922.91	1,916.58	6.33	303.890	
800.00	799.65	764.73	764.68	3.58	3.40	44.35	1,928.87	-37.08	1,920.60	1,913.83	6.77	283.741	
900.00	899.46	846.35	846.18	3.88	3.59	44.36	1,931.62	-40.39	1,919.57	1,912.38	7.19	266.871	
1,000.00	999.27	946.34	946.01	4.19	3.84	44.36	1,935.32	-44.83	1,918.90	1,911.23	7.68	249.942	
1,100.00	1,099.07	1,046.34	1,045.84	4.50	4.13	44.36	1,939.02	-49.26	1,918.23	1,910.04	8.19	234.153	
1,200.00	1,198.88	1,146.34	1,145.67	4.82	4.43	44.36	1,942.72	-53.70	1,917.56	1,908.86	8.71	220.246	
1,300.00	1,298.69	1,246.34	1,245.50	5.15	4.74	44.36	1,946.42	-58.14	1,916.90	1,907.68	9.22	207.913	
1,400.00	1,398.50	1,346.33	1,345.33	5.48	5.05	44.36	1,950.12	-62.58	1,916.23	1,906.49	9.73	196.895	
1,500.00	1,498.30	1,446.33	1,445.16	5.82	5.37	44.35	1,953.82	-67.01	1,915.56	1,905.31	10.24	186.990	
1,600.00	1,598.11	1,546.33	1,545.00	6.15	5.69	44.35	1,957.52	-71.45	1,914.89	1,904.13	10.76	178.038	
1,700.00	1,697.92	1,646.33	1,644.83	6.49	6.01	44.35	1,961.22	-75.89	1,914.22	1,902.95	11.27	169.905	
1,800.00	1,797.73	1,746.33	1,744.66	6.83	6.34	44.35	1,964.92	-80.32	1,913.55	1,901.77	11.78	162.483	
1,900.00	1,897.53	1,846.32	1,844.49	7.18	6.67	44.35	1,968.62	-84.76	1,912.88	1,900.59	12.29	155.682	
2,000.00	1,997.34	1,946.32	1,944.32	7.52	7.00	44.35	1,972.32	-89.20	1,912.21	1,899.41	12.80	149.426	
2,100.00	2,097.15	2,046.32	2,044.15	7.87	7.34	44.35	1,976.02	-93.64	1,911.54	1,898.23	13.31	143.653	
2,200.00	2,196.96	2,146.32	2,143.98	8.21	7.67	44.34	1,979.72	-98.07	1,910.87	1,897.06	13.82	138.308	
2,300.00	2,296.76	2,246.31	2,243.81	8.56	8.01	44.34	1,983.43	-102.51	1,910.20	1,895.88	14.33	133.346	
2,400.00	2,396.57	2,346.31	2,343.64	8.91	8.35	44.34	1,987.13	-106.95	1,909.53	1,894.70	14.83	128.725	
2,500.00	2,496.38	2,446.31	2,443.47	9.26	8.69	44.34	1,990.83	-111.39	1,908.86	1,893.52	15.34	124.412	
2,600.00	2,596.19	2,546.31	2,543.30	9.61	9.03	44.34	1,994.53	-115.82	1,908.19	1,892.34	15.85	120.377	
2,700.00	2,695.99	2,646.31	2,643.13	9.96	9.37	44.34	1,998.23	-120.26	1,907.52	1,891.16	16.36	116.594	
2,800.00	2,795.80	2,746.30	2,742.96	10.31	9.71	44.34	2,001.93	-124.70	1,906.86	1,889.99	16.87	113.040	
2,900.00	2,895.61	2,846.30	2,842.79	10.66	10.05	44.33	2,005.63	-129.14	1,906.19	1,888.81	17.38	109.695	
3,000.00	2,995.42	2,946.30	2,942.62	11.01	10.40	44.33	2,009.33	-133.57	1,905.52	1,887.63	17.89	106.540	
3,100.00	3,095.22	3,046.30	3,042.46	11.36	10.74	44.33	2,013.03	-138.01	1,904.85	1,886.45	18.39	103.560	
3,200.00	3,195.03	3,146.29	3,142.29	11.71	11.09	44.33	2,016.73	-142.45	1,904.18	1,885.28	18.90	100.741	
3,300.00	3,294.84	3,246.29	3,242.12	12.07	11.43	44.33	2,020.43	-146.89	1,903.51	1,884.10	19.41	98.069	
3,400.00	3,394.65	3,346.29	3,341.95	12.42	11.78	44.33	2,024.13	-151.32	1,902.84	1,882.92	19.92	95.535	
3,500.00	3,494.45	3,446.29	3,441.78	12.77	12.12	44.33	2,027.83	-155.76	1,902.17	1,881.74	20.43	93.126	
3,600.00	3,594.26	3,546.29	3,541.61	13.13	12.47	44.32	2,031.53	-160.20	1,901.50	1,880.57	20.93	90.835	
3,700.00	3,694.07	3,646.28	3,641.44	13.48	12.82	44.32	2,035.23	-164.64	1,900.83	1,879.39	21.44	88.652	
3,800.00	3,793.88	3,746.28	3,741.27	13.83	13.16	44.32	2,038.93	-169.07	1,900.16	1,878.21	21.95	86.570	
3,900.00	3,893.68	3,846.28	3,841.10	14.19	13.51	44.32	2,042.63	-173.51	1,899.49	1,877.04	22.46	84.583	
4,000.00	3,993.49	3,946.28	3,940.93	14.54	13.86	44.32	2,046.33	-177.95	1,898.82	1,875.86	22.96	82.684	
4,100.00	4,093.30	4,046.27	4,040.76	14.90	14.20	44.32	2,050.03	-182.39	1,898.15	1,874.68	23.47	80.867	
4,200.00	4,193.11	4,146.27	4,140.59	15.25	14.55	44.32	2,053.73	-186.82	1,897.49	1,873.50	23.98	79.127	
4,300.00	4,292.91	4,246.27	4,240.42	15.61	14.90	44.31	2,057.43	-191.26	1,896.82	1,872.33	24.49	77.459	
4,400.00	4,392.72	4,346.27	4,340.25	15.96	15.25	44.31	2,061.13	-195.70	1,896.15	1,871.15	25.00	75.859	
4,500.00	4,492.53	4,446.26	4,440.09	16.32	15.60	44.31	2,064.83	-200.13	1,895.48	1,869.97	25.50	74.323	
4,600.00	4,592.34	4,546.26	4,539.92	16.67	15.94	44.31	2,068.53	-204.57	1,894.81	1,868.80	26.01	72.847	
4,700.00	4,692.14	4,646.26	4,639.75	17.03	16.29	44.31	2,072.23	-209.01	1,894.14	1,867.62	26.52	71.427	
4,800.00	4,791.96	4,746.26	4,739.57	17.36	16.64	19.60	2,075.93	-213.45	1,893.47	1,866.46	27.01	70.095	
4,850.00	4,841.89	4,796.15	4,789.38	17.49	16.82	-51.24	2,077.78	-215.66	1,893.17	1,865.85	27.32	69.294	

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 LD13-645
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 LD13-645	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													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	4,891.64	4,845.81	4,838.97	17.48	16.98	-71.17	2,079.61	-217.86	1,892.91	1,865.34	27.58	68.643	
4,950.00	4,940.96	4,897.31	4,890.42	17.41	17.11	-78.19	2,081.53	-218.06	1,892.72	1,864.88	27.84	67.997	
5,000.00	4,989.60	4,949.44	4,942.37	17.33	17.10	-81.76	2,083.50	-214.49	1,892.55	1,864.51	28.05	67.480	
5,050.00	5,037.34	5,002.21	4,994.56	17.24	17.03	-83.96	2,085.50	-207.04	1,892.43	1,864.24	28.19	67.138	
5,100.00	5,083.94	5,055.62	5,046.69	17.14	16.92	-85.47	2,087.52	-195.61	1,892.34	1,864.04	28.30	66.870	
5,121.54	5,103.61	5,078.84	5,069.05	17.10	16.88	-86.00	2,088.39	-189.43	1,892.31	1,863.97	28.34	66.770	
5,150.00	5,129.18	5,109.69	5,098.43	17.05	16.81	-86.60	2,089.55	-180.11	1,892.28	1,863.88	28.39	66.647	
5,168.26	5,145.31	5,129.59	5,117.16	17.01	16.77	-86.95	2,090.29	-173.42	1,892.26	1,863.84	28.42	66.574	
5,200.00	5,172.82	5,164.40	5,149.45	16.95	16.69	-87.49	2,091.58	-160.49	1,892.24	1,863.77	28.47	66.456	
5,216.01	5,186.43	5,182.05	5,165.57	16.92	16.65	-87.73	2,092.23	-153.34	1,892.24	1,863.74	28.50	66.399	
5,239.91	5,206.38	5,208.53	5,189.42	16.88	16.60	-88.07	2,093.20	-141.87	1,892.24	1,863.70	28.53	66.318 CC	
5,250.00	5,214.67	5,219.75	5,199.39	16.87	16.57	-88.20	2,093.60	-136.74	1,892.24	1,863.69	28.55	66.286	
5,260.26	5,223.02	5,231.18	5,209.47	16.85	16.55	-88.33	2,094.01	-131.36	1,892.24	1,863.68	28.56	66.251	
5,300.00	5,254.52	5,275.72	5,247.87	16.79	16.46	-88.80	2,095.59	-108.88	1,892.25	1,863.63	28.62	66.125	
5,350.00	5,292.16	5,332.28	5,294.51	16.72	16.35	-89.31	2,097.54	-76.95	1,892.28	1,863.59	28.69	65.960	
5,400.00	5,327.43	5,389.42	5,338.91	16.67	16.25	-89.74	2,099.43	-41.06	1,892.32	1,863.55	28.77	65.778	
5,450.00	5,360.15	5,447.09	5,380.68	16.63	16.16	-90.10	2,101.25	-1.37	1,892.37	1,863.50	28.86	65.563	
5,500.00	5,390.15	5,505.25	5,419.44	16.61	16.10	-90.42	2,102.98	41.94	1,892.41	1,863.43	28.98	65.294	
5,501.46	5,390.98	5,506.95	5,420.52	16.61	16.10	-90.42	2,103.03	43.25	1,892.41	1,863.43	28.99	65.284	
5,550.00	5,417.29	5,563.84	5,454.81	16.62	16.06	-90.68	2,104.60	88.60	1,892.45	1,863.32	29.13	64.955	
5,550.16	5,417.38	5,564.03	5,454.92	16.62	16.06	-90.68	2,104.61	88.76	1,892.45	1,863.32	29.14	64.953	
5,600.00	5,441.45	5,622.81	5,486.43	16.65	16.06	-90.90	2,106.11	138.34	1,892.49	1,863.16	29.33	64.532	
5,600.55	5,441.70	5,623.47	5,486.76	16.65	16.06	-90.90	2,106.12	138.90	1,892.49	1,863.16	29.33	64.526	
5,650.00	5,462.49	5,682.10	5,514.00	16.70	16.08	-91.08	2,107.48	190.79	1,892.51	1,862.95	29.56	64.014	
5,651.44	5,463.05	5,683.81	5,514.73	16.70	16.09	-91.08	2,107.52	192.33	1,892.51	1,862.94	29.57	63.997	
5,700.00	5,480.33	5,741.63	5,537.22	16.78	16.15	-91.21	2,108.70	245.57	1,892.52	1,862.66	29.85	63.393	
5,709.83	5,483.45	5,753.35	5,541.25	16.80	16.16	-91.23	2,108.92	256.57	1,892.52	1,862.60	29.92	63.260	
5,750.00	5,494.87	5,801.33	5,555.87	16.89	16.25	-91.31	2,109.76	302.25	1,892.51	1,862.31	30.20	62.668	
5,760.32	5,497.45	5,813.67	5,559.13	16.92	16.28	-91.33	2,109.96	314.15	1,892.50	1,862.22	30.28	62.496	
5,800.00	5,506.04	5,861.12	5,569.74	17.03	16.40	-91.37	2,110.66	360.39	1,892.48	1,861.87	30.61	61.833	
5,810.74	5,507.99	5,873.97	5,572.09	17.07	16.44	-91.38	2,110.83	373.01	1,892.47	1,861.76	30.70	61.638	
5,850.00	5,513.78	5,920.92	5,578.73	17.19	16.59	-91.39	2,111.38	419.49	1,892.43	1,861.36	31.07	60.911	
5,861.11	5,515.03	5,934.21	5,580.06	17.24	16.63	-91.39	2,111.51	432.70	1,892.41	1,861.23	31.18	60.693	
5,900.00	5,518.07	5,980.66	5,582.76	17.38	16.81	-91.38	2,111.92	479.07	1,892.36	1,860.78	31.58	59.914	
5,908.35	5,518.45	5,990.62	5,582.95	17.42	16.85	-91.38	2,111.99	489.03	1,892.35	1,860.67	31.68	59.742	
5,936.55	5,519.00	6,020.20	5,583.00	17.54	16.98	-91.36	2,112.18	518.60	1,892.32	1,860.33	31.99	59.145	
5,936.68	5,519.00	6,020.33	5,583.00	17.54	16.98	-91.36	2,112.18	518.73	1,892.32	1,860.33	32.00	59.142	
6,000.00	5,519.00	6,083.65	5,583.00	17.83	17.28	-91.36	2,112.59	582.06	1,892.34	1,859.60	32.74	57.791	
6,000.16	5,519.00	6,083.81	5,583.00	17.83	17.29	-91.36	2,112.59	582.21	1,892.34	1,859.60	32.75	57.787	
6,100.00	5,519.00	6,183.65	5,583.00	18.36	17.82	-91.36	2,113.24	682.05	1,892.38	1,858.32	34.06	55.567	
6,100.16	5,519.00	6,183.81	5,583.00	18.36	17.82	-91.36	2,113.24	682.21	1,892.38	1,858.32	34.06	55.563	
6,200.00	5,519.00	6,283.65	5,583.00	18.96	18.44	-91.36	2,113.89	782.05	1,892.42	1,856.92	35.49	53.315	
6,200.16	5,519.00	6,283.81	5,583.00	18.96	18.44	-91.36	2,113.89	782.21	1,892.42	1,856.92	35.50	53.311	
6,300.00	5,519.00	6,383.65	5,583.00	19.62	19.12	-91.36	2,114.54	882.05	1,892.45	1,855.40	37.05	51.083	
6,300.16	5,519.00	6,383.81	5,583.00	19.62	19.12	-91.36	2,114.54	882.21	1,892.45	1,855.40	37.05	51.080	
6,400.00	5,519.00	6,483.65	5,583.00	20.35	19.87	-91.36	2,115.19	982.05	1,892.49	1,853.79	38.70	48.905	
6,400.16	5,519.00	6,483.81	5,583.00	20.35	19.87	-91.36	2,115.19	982.20	1,892.49	1,853.79	38.70	48.901	
6,500.00	5,519.00	6,583.65	5,583.00	21.12	20.67	-91.36	2,115.83	1,082.05	1,892.52	1,852.09	40.44	46.804	
6,500.16	5,519.00	6,583.81	5,583.00	21.13	20.67	-91.36	2,115.84	1,082.20	1,892.52	1,852.08	40.44	46.801	
6,600.00	5,519.00	6,683.65	5,583.00	21.95	21.52	-91.36	2,116.48	1,182.04	1,892.56	1,850.31	42.25	44.795	
6,600.16	5,519.00	6,683.81	5,583.00	21.95	21.52	-91.36	2,116.48	1,182.20	1,892.56	1,850.30	42.25	44.792	
6,700.00	5,519.00	6,783.65	5,583.00	22.82	22.42	-91.36	2,117.13	1,282.04	1,892.59	1,848.46	44.13	42.887	

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 LD13-645
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 LD13-645	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												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)			
6,700.16	5,519.00	6,783.81	5,583.00	22.82	22.42	-91.36	2,117.13	1,282.20	1,892.59	1,848.46	44.13	42.884	
6,800.00	5,519.00	6,883.65	5,583.00	23.73	23.35	-91.36	2,117.78	1,382.04	1,892.63	1,846.56	46.07	41.082	
6,800.16	5,519.00	6,883.81	5,583.00	23.73	23.36	-91.36	2,117.78	1,382.20	1,892.63	1,846.55	46.07	41.079	
6,900.00	5,519.00	6,983.65	5,583.00	24.67	24.32	-91.36	2,118.43	1,482.04	1,892.66	1,844.60	48.06	39.378	
6,900.16	5,519.00	6,983.81	5,583.00	24.67	24.32	-91.36	2,118.43	1,482.19	1,892.66	1,844.60	48.06	39.378	
7,000.00	5,519.00	7,083.65	5,583.00	25.64	25.32	-91.36	2,119.08	1,582.03	1,892.70	1,842.60	50.10	37.780	
7,000.16	5,519.00	7,083.81	5,583.00	25.64	25.32	-91.36	2,119.08	1,582.19	1,892.70	1,842.60	50.10	37.778	
7,100.00	5,519.00	7,183.65	5,583.00	26.64	26.34	-91.36	2,119.72	1,682.03	1,892.73	1,840.56	52.17	36.277	
7,100.16	5,519.00	7,183.81	5,583.00	26.64	26.34	-91.36	2,119.73	1,682.19	1,892.73	1,840.56	52.18	36.275	
7,200.00	5,519.00	7,283.65	5,583.00	27.65	27.38	-91.36	2,120.37	1,782.03	1,892.77	1,838.48	54.29	34.866	
7,200.16	5,519.00	7,283.81	5,583.00	27.66	27.38	-91.36	2,120.37	1,782.19	1,892.77	1,838.48	54.29	34.864	
7,300.00	5,519.00	7,383.65	5,583.00	28.69	28.44	-91.36	2,121.02	1,882.03	1,892.80	1,836.37	56.43	33.542	
7,300.16	5,519.00	7,383.81	5,583.00	28.69	28.44	-91.36	2,121.02	1,882.18	1,892.80	1,836.37	56.43	33.540	
7,400.00	5,519.00	7,483.65	5,583.00	29.75	29.52	-91.36	2,121.67	1,982.03	1,892.84	1,834.24	58.61	32.297	
7,400.16	5,519.00	7,483.81	5,583.00	29.75	29.52	-91.36	2,121.67	1,982.18	1,892.84	1,834.23	58.61	32.297	
7,500.00	5,519.00	7,583.65	5,583.00	30.82	30.61	-91.36	2,122.32	2,082.02	1,892.87	1,832.07	60.80	31.133	
7,500.16	5,519.00	7,583.81	5,583.00	30.82	30.61	-91.36	2,122.32	2,082.18	1,892.87	1,832.07	60.80	31.131	
7,600.00	5,519.00	7,683.65	5,583.00	31.91	31.71	-91.36	2,122.97	2,182.02	1,892.91	1,829.89	63.02	30.037	
7,600.16	5,519.00	7,683.81	5,583.00	31.91	31.71	-91.36	2,122.97	2,182.18	1,892.91	1,829.89	63.02	30.035	
7,700.00	5,519.00	7,783.65	5,583.00	33.01	32.83	-91.36	2,123.62	2,282.02	1,892.95	1,827.69	65.26	29.007	
7,700.16	5,519.00	7,783.81	5,583.00	33.01	32.83	-91.36	2,123.62	2,282.18	1,892.95	1,827.68	65.26	29.005	
7,800.00	5,519.00	7,883.65	5,583.00	34.12	33.95	-91.36	2,124.26	2,382.02	1,892.98	1,825.46	67.52	28.037	
7,800.16	5,519.00	7,883.81	5,583.00	34.12	33.96	-91.36	2,124.26	2,382.17	1,892.98	1,825.46	67.52	28.036	
7,900.00	5,519.00	7,983.65	5,583.00	35.24	35.09	-91.36	2,124.91	2,482.02	1,893.02	1,823.22	69.79	27.124	
7,900.16	5,519.00	7,983.81	5,583.00	35.24	35.09	-91.36	2,124.91	2,482.17	1,893.02	1,823.22	69.79	27.123	
8,000.00	5,519.00	8,083.65	5,583.00	36.37	36.23	-91.36	2,125.56	2,582.01	1,893.05	1,820.97	72.08	26.263	
8,000.16	5,519.00	8,083.81	5,583.00	36.37	36.23	-91.36	2,125.56	2,582.17	1,893.05	1,820.97	72.08	26.262	
8,100.00	5,519.00	8,183.65	5,583.00	37.50	37.38	-91.36	2,126.21	2,682.01	1,893.09	1,818.70	74.38	25.451	
8,100.16	5,519.00	8,183.81	5,583.00	37.51	37.38	-91.36	2,126.21	2,682.17	1,893.09	1,818.70	74.39	25.449	
8,200.00	5,519.00	8,283.65	5,583.00	38.65	38.54	-91.36	2,126.86	2,782.01	1,893.12	1,816.42	76.70	24.683	
8,200.16	5,519.00	8,283.81	5,583.00	38.65	38.54	-91.36	2,126.86	2,782.17	1,893.12	1,816.42	76.70	24.682	
8,300.00	5,519.00	8,383.65	5,583.00	39.80	39.70	-91.36	2,127.51	2,882.01	1,893.16	1,814.13	79.02	23.957	
8,300.16	5,519.00	8,383.81	5,583.00	39.80	39.70	-91.36	2,127.51	2,882.16	1,893.16	1,814.13	79.03	23.956	
8,400.00	5,519.00	8,483.65	5,583.00	40.96	40.87	-91.36	2,128.15	2,982.01	1,893.19	1,811.83	81.36	23.269	
8,400.48	5,519.00	8,484.13	5,583.00	40.96	40.88	-91.36	2,128.16	2,982.49	1,893.19	1,811.82	81.37	23.266	
8,497.04	5,519.00	8,581.25	5,582.17	42.09	42.01	-91.34	2,128.79	3,079.60	1,893.21	1,809.57	83.64	22.635	
8,497.11	5,519.00	8,581.33	5,582.17	42.09	42.01	-91.34	2,128.79	3,079.67	1,893.21	1,809.56	83.64	22.634	
8,500.00	5,519.00	8,584.21	5,582.13	42.12	42.05	-91.34	2,128.81	3,082.56	1,893.21	1,809.50	83.71	22.616	
8,500.06	5,519.00	8,584.27	5,582.13	42.12	42.05	-91.34	2,128.81	3,082.62	1,893.21	1,809.50	83.71	22.616	
8,512.08	5,518.96	8,596.29	5,581.98	42.26	42.19	-91.33	2,128.88	3,094.64	1,893.21	1,809.22	83.99	22.540	
8,512.11	5,518.96	8,596.32	5,581.98	42.26	42.19	-91.33	2,128.88	3,094.67	1,893.21	1,809.22	83.99	22.540	
8,600.00	5,518.50	8,684.21	5,580.87	43.29	43.22	-91.31	2,129.45	3,182.55	1,893.23	1,807.16	86.07	21.997	
8,600.00	5,518.50	8,684.21	5,580.87	43.29	43.22	-91.31	2,129.45	3,182.55	1,893.23	1,807.16	86.07	21.997	
8,700.00	5,517.97	8,784.21	5,579.61	44.46	44.40	-91.29	2,130.10	3,282.53	1,893.24	1,804.81	88.43	21.409	
8,700.01	5,517.97	8,784.21	5,579.61	44.46	44.40	-91.29	2,130.10	3,282.54	1,893.24	1,804.81	88.43	21.409	
8,800.00	5,517.45	8,884.20	5,578.35	45.63	45.59	-91.27	2,130.75	3,382.52	1,893.26	1,802.46	90.81	20.849	
8,800.00	5,517.45	8,884.20	5,578.35	45.63	45.59	-91.27	2,130.75	3,382.52	1,893.26	1,802.46	90.81	20.849	
8,900.00	5,516.92	8,984.20	5,577.09	46.82	46.78	-91.25	2,131.40	3,482.51	1,893.28	1,800.09	93.19	20.317	
8,900.01	5,516.92	8,984.21	5,577.09	46.82	46.78	-91.25	2,131.40	3,482.51	1,893.28	1,800.09	93.19	20.317	
9,000.00	5,516.40	9,084.20	5,575.83	48.00	47.97	-91.22	2,132.05	3,582.50	1,893.30	1,797.73	95.58	19.810	
9,000.01	5,516.40	9,084.21	5,575.83	48.00	47.97	-91.22	2,132.05	3,582.50	1,893.30	1,797.73	95.58	19.809	
9,100.00	5,515.87	9,184.20	5,574.57	49.19	49.16	-91.20	2,132.70	3,682.48	1,893.32	1,795.35	97.97	19.326	

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 LD13-645
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 LD13-645	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											Offset Site Error: 0.00 usft		
Survey Program: Reference		Offset		Semi Major Axis		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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,100.00	5,515.87	9,184.20	5,574.57	49.19	49.16	-91.20	2,132.70	3,682.49	1,893.32	1,795.35	97.97	19.326	
9,200.00	5,515.35	9,284.19	5,573.30	50.38	50.36	-91.18	2,133.34	3,782.47	1,893.34	1,792.97	100.37	18.864	
9,200.01	5,515.35	9,284.20	5,573.30	50.38	50.36	-91.18	2,133.34	3,782.48	1,893.34	1,792.97	100.37	18.864	
9,300.00	5,514.82	9,384.19	5,572.04	51.57	51.56	-91.16	2,133.99	3,882.46	1,893.36	1,790.59	102.77	18.423	
9,300.00	5,514.82	9,384.19	5,572.04	51.57	51.56	-91.16	2,133.99	3,882.46	1,893.36	1,790.59	102.77	18.423	
9,400.00	5,514.30	9,484.19	5,570.78	52.77	52.77	-91.13	2,134.64	3,982.44	1,893.38	1,788.20	105.18	18.002	
9,400.44	5,514.30	9,484.63	5,570.78	52.77	52.77	-91.13	2,134.64	3,982.89	1,893.38	1,788.19	105.19	18.000	
9,500.00	5,513.77	9,584.18	5,569.52	53.97	53.97	-91.11	2,135.29	4,082.43	1,893.40	1,785.81	107.59	17.598	
9,500.44	5,513.77	9,584.62	5,569.52	53.97	53.98	-91.11	2,135.29	4,082.87	1,893.40	1,785.80	107.60	17.596	
9,600.00	5,513.25	9,684.18	5,568.26	55.17	55.18	-91.09	2,135.94	4,182.42	1,893.42	1,783.42	110.01	17.212	
9,600.43	5,513.25	9,684.61	5,568.25	55.17	55.18	-91.09	2,135.94	4,182.85	1,893.43	1,783.41	110.02	17.210	
9,700.00	5,512.72	9,784.18	5,567.00	56.37	56.39	-91.07	2,136.59	4,282.41	1,893.45	1,781.02	112.43	16.841	
9,700.42	5,512.72	9,784.60	5,566.99	56.38	56.39	-91.07	2,136.59	4,282.83	1,893.45	1,781.01	112.44	16.840	
9,800.00	5,512.20	9,884.18	5,565.74	57.58	57.60	-91.05	2,137.23	4,382.39	1,893.47	1,778.61	114.85	16.486	
9,800.41	5,512.20	9,884.59	5,565.73	57.58	57.60	-91.05	2,137.24	4,382.81	1,893.47	1,778.60	114.86	16.485	
9,900.00	5,511.67	9,984.17	5,564.48	58.79	58.81	-91.02	2,137.88	4,482.38	1,893.49	1,776.21	117.28	16.145	
9,900.41	5,511.67	9,984.58	5,564.47	58.79	58.81	-91.02	2,137.89	4,482.79	1,893.49	1,776.20	117.29	16.144	
10,000.00	5,511.15	10,084.17	5,563.21	59.99	60.02	-91.00	2,138.53	4,582.37	1,893.51	1,773.80	119.71	15.817	
10,000.40	5,511.15	10,084.57	5,563.21	60.00	60.03	-91.00	2,138.53	4,582.76	1,893.51	1,773.79	119.72	15.816	
10,100.00	5,510.62	10,184.17	5,561.95	61.21	61.24	-90.98	2,139.18	4,682.36	1,893.54	1,771.39	122.15	15.502	
10,100.39	5,510.62	10,184.56	5,561.95	61.21	61.24	-90.98	2,139.18	4,682.74	1,893.54	1,771.38	122.16	15.501	
10,200.00	5,510.10	10,284.17	5,560.69	62.42	62.45	-90.96	2,139.83	4,782.34	1,893.56	1,768.98	124.58	15.199	
10,200.38	5,510.10	10,284.54	5,560.69	62.42	62.46	-90.96	2,139.83	4,782.72	1,893.56	1,768.97	124.59	15.198	
10,300.00	5,509.57	10,384.16	5,559.43	63.63	63.67	-90.93	2,140.48	4,882.33	1,893.58	1,766.56	127.02	14.908	
10,300.37	5,509.57	10,384.53	5,559.43	63.64	63.68	-90.93	2,140.48	4,882.70	1,893.58	1,766.55	127.03	14.907	
10,400.00	5,509.05	10,484.16	5,558.17	64.85	64.89	-90.91	2,141.12	4,982.32	1,893.60	1,764.14	129.46	14.627	
10,400.02	5,509.05	10,484.18	5,558.17	64.85	64.89	-90.91	2,141.12	4,982.34	1,893.60	1,764.14	129.46	14.627	
10,500.00	5,508.52	10,583.83	5,557.68	66.06	66.10	-90.91	2,141.77	5,081.99	1,893.64	1,761.75	131.90	14.357	
10,500.00	5,508.52	10,583.83	5,557.68	66.06	66.10	-90.91	2,141.77	5,081.99	1,893.64	1,761.75	131.90	14.357	
10,600.00	5,508.00	10,683.83	5,557.51	67.28	67.33	-90.92	2,142.42	5,181.98	1,893.68	1,759.35	134.33	14.097	
10,600.01	5,508.00	10,683.84	5,557.51	67.28	67.33	-90.92	2,142.42	5,181.99	1,893.68	1,759.35	134.33	14.097	
10,700.00	5,507.47	10,783.83	5,557.34	68.50	68.55	-90.93	2,143.07	5,281.98	1,893.72	1,756.95	136.77	13.846	
10,700.01	5,507.47	10,783.84	5,557.34	68.50	68.55	-90.93	2,143.07	5,281.99	1,893.72	1,756.95	136.77	13.846	
10,800.00	5,506.95	10,883.83	5,557.16	69.72	69.77	-90.94	2,143.72	5,381.98	1,893.76	1,754.55	139.22	13.603	
10,800.00	5,506.95	10,883.84	5,557.16	69.72	69.77	-90.94	2,143.72	5,381.98	1,893.76	1,754.55	139.22	13.603	
10,900.00	5,506.42	10,983.83	5,556.99	70.94	71.00	-90.95	2,144.36	5,481.97	1,893.81	1,752.14	141.66	13.369	
10,900.00	5,506.42	10,983.83	5,556.99	70.94	71.00	-90.95	2,144.36	5,481.98	1,893.81	1,752.14	141.66	13.369	
11,000.00	5,505.90	11,083.83	5,556.82	72.16	72.22	-90.97	2,145.01	5,581.97	1,893.85	1,749.74	144.11	13.142	
11,000.01	5,505.90	11,083.84	5,556.82	72.16	72.22	-90.97	2,145.01	5,581.98	1,893.85	1,749.74	144.11	13.142	
11,100.00	5,505.37	11,183.83	5,556.65	73.39	73.45	-90.98	2,145.66	5,681.97	1,893.89	1,747.33	146.55	12.923	
11,100.01	5,505.37	11,183.84	5,556.65	73.39	73.45	-90.98	2,145.66	5,681.97	1,893.89	1,747.33	146.55	12.923	
11,200.00	5,504.85	11,283.83	5,556.47	74.61	74.68	-90.99	2,146.31	5,781.97	1,893.93	1,744.93	149.00	12.711	
11,200.01	5,504.85	11,283.84	5,556.47	74.61	74.68	-90.99	2,146.31	5,781.98	1,893.93	1,744.93	149.00	12.711	
11,300.00	5,504.32	11,383.83	5,556.30	75.84	75.91	-91.00	2,146.96	5,881.96	1,893.97	1,742.52	151.45	12.505	
11,300.02	5,504.32	11,383.85	5,556.30	75.84	75.91	-91.00	2,146.96	5,881.98	1,893.97	1,742.52	151.45	12.505	
11,400.00	5,503.80	11,483.83	5,556.13	77.06	77.13	-91.01	2,147.61	5,981.96	1,894.01	1,740.11	153.91	12.306	
11,400.03	5,503.80	11,483.86	5,556.13	77.06	77.14	-91.01	2,147.61	5,981.99	1,894.01	1,740.11	153.91	12.306	
11,500.00	5,503.27	11,583.83	5,555.95	78.29	78.36	-91.02	2,148.25	6,081.96	1,894.05	1,737.69	156.36	12.113	
11,500.03	5,503.27	11,583.86	5,555.95	78.29	78.36	-91.02	2,148.25	6,081.99	1,894.05	1,737.69	156.36	12.113	
11,600.00	5,502.75	11,683.83	5,555.78	79.51	79.59	-91.03	2,148.90	6,181.95	1,894.10	1,735.28	158.81	11.926	
11,600.04	5,502.75	11,683.87	5,555.78	79.52	79.60	-91.03	2,148.90	6,181.99	1,894.10	1,735.28	158.82	11.926	
11,700.00	5,502.22	11,783.83	5,555.61	80.74	80.83	-91.04	2,149.55	6,281.95	1,894.14	1,732.87	161.27	11.745	

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 LD13-645
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 LD13-645	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											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)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
11,700.05	5,502.22	11,783.87	5,555.61	80.74	80.83	-91.04	2,149.55	6,282.00	1,894.14	1,732.87	161.27	11.745			
11,800.00	5,501.70	11,883.82	5,555.44	81.97	82.06	-91.05	2,150.20	6,381.95	1,894.18	1,730.45	163.73	11.569			
11,800.00	5,501.70	11,883.83	5,555.44	81.97	82.06	-91.05	2,150.20	6,381.95	1,894.18	1,730.45	163.73	11.569			
11,900.00	5,501.17	11,983.82	5,555.26	83.20	83.29	-91.06	2,150.85	6,481.95	1,894.22	1,728.03	166.19	11.398			
11,900.00	5,501.17	11,983.82	5,555.26	83.20	83.29	-91.06	2,150.85	6,481.95	1,894.22	1,728.03	166.19	11.398			
12,000.00	5,500.65	12,083.82	5,555.09	84.43	84.52	-91.07	2,151.50	6,581.94	1,894.26	1,725.62	168.65	11.232			
12,000.01	5,500.65	12,083.83	5,555.09	84.43	84.52	-91.07	2,151.50	6,581.95	1,894.26	1,725.62	168.65	11.232			
12,100.00	5,500.12	12,183.82	5,554.92	85.66	85.75	-91.08	2,152.14	6,681.94	1,894.30	1,723.20	171.11	11.071			
12,100.00	5,500.12	12,183.83	5,554.92	85.66	85.75	-91.08	2,152.14	6,681.94	1,894.30	1,723.20	171.11	11.071			
12,200.00	5,499.60	12,283.82	5,554.75	86.89	86.99	-91.09	2,152.79	6,781.94	1,894.35	1,720.78	173.57	10.914			
12,200.01	5,499.60	12,283.83	5,554.75	86.89	86.99	-91.09	2,152.79	6,781.94	1,894.35	1,720.78	173.57	10.914			
12,300.00	5,499.07	12,383.82	5,554.57	88.12	88.22	-91.10	2,153.44	6,881.93	1,894.39	1,718.36	176.03	10.762			
12,300.00	5,499.07	12,383.83	5,554.57	88.12	88.22	-91.10	2,153.44	6,881.94	1,894.39	1,718.36	176.03	10.762			
12,400.00	5,498.55	12,483.82	5,554.40	89.35	89.46	-91.11	2,154.09	6,981.93	1,894.43	1,715.94	178.49	10.613			
12,400.01	5,498.55	12,483.83	5,554.40	89.36	89.46	-91.11	2,154.09	6,981.94	1,894.43	1,715.94	178.49	10.613			
12,500.00	5,498.02	12,583.82	5,554.23	90.59	90.69	-91.13	2,154.74	7,081.93	1,894.47	1,713.52	180.96	10.469			
12,500.01	5,498.02	12,583.83	5,554.23	90.59	90.69	-91.13	2,154.74	7,081.93	1,894.47	1,713.52	180.96	10.469			
12,600.00	5,497.50	12,683.82	5,554.06	91.82	91.93	-91.14	2,155.39	7,181.93	1,894.52	1,711.09	183.42	10.329			
12,600.00	5,497.50	12,683.82	5,554.06	91.82	91.93	-91.14	2,155.39	7,181.93	1,894.52	1,711.09	183.42	10.329			
12,700.00	5,496.97	12,783.82	5,553.88	93.05	93.16	-91.15	2,156.03	7,281.92	1,894.56	1,708.67	185.89	10.192			
12,700.01	5,496.97	12,783.83	5,553.88	93.05	93.16	-91.15	2,156.03	7,281.93	1,894.56	1,708.67	185.89	10.192			
12,800.00	5,496.45	12,883.82	5,553.71	94.29	94.40	-91.16	2,156.68	7,381.92	1,894.60	1,706.24	188.36	10.059			
12,800.01	5,496.45	12,883.83	5,553.71	94.29	94.40	-91.16	2,156.68	7,381.93	1,894.60	1,706.24	188.36	10.059			
12,900.00	5,495.92	12,983.82	5,553.54	95.52	95.63	-91.17	2,157.33	7,481.92	1,894.64	1,703.82	190.82	9.929			
12,900.02	5,495.92	12,983.83	5,553.54	95.52	95.63	-91.17	2,157.33	7,481.93	1,894.64	1,703.82	190.82	9.929			
13,000.00	5,495.40	13,083.82	5,553.36	96.76	96.87	-91.18	2,157.98	7,581.91	1,894.69	1,701.39	193.29	9.802			
13,000.02	5,495.40	13,083.84	5,553.36	96.76	96.87	-91.18	2,157.98	7,581.93	1,894.69	1,701.39	193.29	9.802			
13,100.00	5,494.87	13,183.82	5,553.19	97.99	98.11	-91.19	2,158.63	7,681.91	1,894.73	1,698.97	195.76	9.679			
13,100.03	5,494.87	13,183.84	5,553.19	97.99	98.11	-91.19	2,158.63	7,681.94	1,894.73	1,698.97	195.76	9.679			
13,200.00	5,494.35	13,283.82	5,553.02	99.23	99.34	-91.20	2,159.28	7,781.91	1,894.77	1,696.54	198.23	9.558			
13,200.03	5,494.35	13,283.85	5,553.02	99.23	99.34	-91.20	2,159.28	7,781.94	1,894.77	1,696.54	198.23	9.558			
13,300.00	5,493.82	13,383.82	5,552.85	100.46	100.58	-91.21	2,159.92	7,881.90	1,894.81	1,694.11	200.70	9.441			
13,300.04	5,493.82	13,383.85	5,552.85	100.46	100.58	-91.21	2,159.93	7,881.94	1,894.81	1,694.11	200.70	9.441			
13,400.00	5,493.30	13,483.81	5,552.67	101.70	101.82	-91.22	2,160.57	7,981.90	1,894.86	1,691.69	203.17	9.326			
13,400.04	5,493.30	13,483.86	5,552.67	101.70	101.82	-91.22	2,160.57	7,981.94	1,894.86	1,691.69	203.17	9.326			
13,500.00	5,492.77	13,583.81	5,552.50	102.94	103.06	-91.23	2,161.22	8,081.90	1,894.90	1,689.26	205.64	9.215			
13,500.05	5,492.77	13,583.86	5,552.50	102.94	103.06	-91.23	2,161.22	8,081.94	1,894.90	1,689.26	205.64	9.215			
13,600.00	5,492.25	13,683.81	5,552.33	104.17	104.30	-91.24	2,161.87	8,181.90	1,894.94	1,686.83	208.11	9.105			
13,600.05	5,492.25	13,683.86	5,552.33	104.17	104.30	-91.24	2,161.87	8,181.95	1,894.94	1,686.83	208.11	9.105			
13,700.00	5,491.72	13,783.81	5,552.16	105.41	105.53	-91.25	2,162.52	8,281.89	1,894.99	1,684.40	210.58	8.999			
13,700.00	5,491.72	13,783.82	5,552.16	105.41	105.53	-91.25	2,162.52	8,281.90	1,894.99	1,684.40	210.58	8.999			
13,800.00	5,491.20	13,883.81	5,551.98	106.65	106.77	-91.26	2,163.17	8,381.89	1,895.03	1,681.97	213.06	8.894			
13,800.01	5,491.20	13,883.82	5,551.98	106.65	106.77	-91.26	2,163.17	8,381.90	1,895.03	1,681.97	213.06	8.894			
13,900.00	5,490.67	13,983.81	5,551.81	107.88	108.01	-91.27	2,163.82	8,481.89	1,895.07	1,679.54	215.53	8.793			
13,900.00	5,490.67	13,983.81	5,551.81	107.88	108.01	-91.27	2,163.82	8,481.89	1,895.07	1,679.54	215.53	8.793			
14,000.00	5,490.15	14,083.81	5,551.64	109.12	109.25	-91.28	2,164.46	8,581.88	1,895.11	1,677.11	218.00	8.693			
14,000.01	5,490.15	14,083.82	5,551.64	109.12	109.25	-91.28	2,164.46	8,581.89	1,895.11	1,677.11	218.00	8.693			
14,100.00	5,489.62	14,183.81	5,551.47	110.36	110.49	-91.30	2,165.11	8,681.88	1,895.16	1,674.68	220.48	8.596			
14,100.00	5,489.62	14,183.81	5,551.47	110.36	110.49	-91.30	2,165.11	8,681.88	1,895.16	1,674.68	220.48	8.596			
14,200.00	5,489.10	14,283.81	5,551.29	111.60	111.73	-91.31	2,165.76	8,781.88	1,895.20	1,672.25	222.95	8.500			
14,200.01	5,489.10	14,283.82	5,551.29	111.60	111.73	-91.31	2,165.76	8,781.88	1,895.20	1,672.25	222.95	8.500			
14,300.00	5,488.57	14,383.81	5,551.12	112.84	112.97	-91.32	2,166.41	8,881.88	1,895.24	1,669.82	225.43	8.407			

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 LD13-645
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 LD13-645	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: 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	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
				(usft)	(usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
14,300.01	5,488.57	14,383.82	5,551.12	112.84	112.97	-91.32	2,166.41	8,881.89	1,895.24	1,669.82	225.43	8.407				
14,400.00	5,488.05	14,483.81	5,550.95	114.08	114.21	-91.33	2,167.06	8,981.87	1,895.29	1,667.39	227.90	8.316				
14,400.00	5,488.05	14,483.81	5,550.95	114.08	114.21	-91.33	2,167.06	8,981.88	1,895.29	1,667.39	227.90	8.316				
14,500.00	5,487.52	14,583.81	5,550.77	115.32	115.45	-91.34	2,167.71	9,081.87	1,895.33	1,664.95	230.38	8.227				
14,500.01	5,487.52	14,583.82	5,550.77	115.32	115.45	-91.34	2,167.71	9,081.88	1,895.33	1,664.95	230.38	8.227				
14,600.00	5,487.00	14,683.81	5,550.60	116.56	116.69	-91.35	2,168.35	9,181.87	1,895.38	1,662.52	232.86	8.140				
14,600.00	5,487.00	14,683.81	5,550.60	116.56	116.69	-91.35	2,168.35	9,181.87	1,895.38	1,662.52	232.86	8.140				
14,700.00	5,486.47	14,783.81	5,550.43	117.79	117.93	-91.36	2,169.00	9,281.86	1,895.42	1,660.09	235.33	8.054				
14,700.01	5,486.47	14,783.81	5,550.43	117.79	117.93	-91.36	2,169.00	9,281.87	1,895.42	1,660.09	235.33	8.054				
14,800.00	5,485.95	14,883.81	5,550.26	119.03	119.18	-91.37	2,169.65	9,381.86	1,895.46	1,657.65	237.81	7.971				
14,800.01	5,485.95	14,883.81	5,550.26	119.03	119.18	-91.37	2,169.65	9,381.87	1,895.46	1,657.65	237.81	7.971				
14,900.00	5,485.42	14,983.81	5,550.08	120.27	120.42	-91.38	2,170.30	9,481.86	1,895.51	1,655.22	240.29	7.889				
14,900.00	5,485.42	14,983.81	5,550.08	120.27	120.42	-91.38	2,170.30	9,481.86	1,895.51	1,655.22	240.29	7.889				
15,000.00	5,484.90	15,083.80	5,549.91	121.51	121.66	-91.39	2,170.95	9,581.86	1,895.55	1,652.79	242.76	7.808				
15,000.01	5,484.90	15,083.81	5,549.91	121.51	121.66	-91.39	2,170.95	9,581.86	1,895.55	1,652.79	242.76	7.808				
15,100.00	5,484.37	15,183.80	5,549.74	122.76	122.90	-91.40	2,171.60	9,681.85	1,895.59	1,650.35	245.24	7.729				
15,100.01	5,484.37	15,183.81	5,549.74	122.76	122.90	-91.40	2,171.60	9,681.86	1,895.59	1,650.35	245.24	7.729				
15,200.00	5,483.85	15,283.80	5,549.57	124.00	124.14	-91.41	2,172.24	9,781.85	1,895.64	1,647.92	247.72	7.652				
15,200.01	5,483.85	15,283.82	5,549.57	124.00	124.14	-91.41	2,172.24	9,781.86	1,895.64	1,647.92	247.72	7.652				
15,300.00	5,483.32	15,383.80	5,549.39	125.24	125.38	-91.42	2,172.89	9,881.85	1,895.68	1,645.48	250.20	7.577				
15,300.02	5,483.32	15,383.82	5,549.39	125.24	125.38	-91.42	2,172.89	9,881.86	1,895.68	1,645.48	250.20	7.577				
15,400.00	5,482.80	15,483.80	5,549.22	126.48	126.63	-91.43	2,173.54	9,981.84	1,895.73	1,643.05	252.68	7.503				
15,400.02	5,482.80	15,483.82	5,549.22	126.48	126.63	-91.43	2,173.54	9,981.86	1,895.73	1,643.05	252.68	7.503				
15,500.00	5,482.27	15,583.80	5,549.05	127.72	127.87	-91.44	2,174.19	10,081.84	1,895.77	1,640.61	255.16	7.430				
15,500.02	5,482.27	15,583.83	5,549.05	127.72	127.87	-91.44	2,174.19	10,081.86	1,895.77	1,640.61	255.16	7.430				
15,600.00	5,481.75	15,683.80	5,548.88	128.96	129.11	-91.45	2,174.84	10,181.84	1,895.82	1,638.18	257.64	7.359				
15,600.03	5,481.75	15,683.83	5,548.88	128.96	129.11	-91.45	2,174.84	10,181.87	1,895.82	1,638.18	257.64	7.358				
15,700.00	5,481.22	15,783.80	5,548.70	130.20	130.35	-91.47	2,175.49	10,281.84	1,895.86	1,635.74	260.12	7.289				
15,700.03	5,481.22	15,783.83	5,548.70	130.20	130.35	-91.47	2,175.49	10,281.87	1,895.86	1,635.74	260.12	7.289				
15,800.00	5,480.70	15,883.80	5,548.53	131.44	131.60	-91.48	2,176.13	10,381.83	1,895.90	1,633.31	262.60	7.220				
15,800.03	5,480.70	15,883.83	5,548.53	131.44	131.60	-91.48	2,176.13	10,381.87	1,895.90	1,633.31	262.60	7.220				
15,900.00	5,480.17	15,983.80	5,548.36	132.69	132.84	-91.49	2,176.78	10,481.83	1,895.95	1,630.87	265.08	7.152				
15,900.04	5,480.17	15,983.84	5,548.36	132.69	132.84	-91.49	2,176.78	10,481.87	1,895.95	1,630.87	265.08	7.152				
16,000.00	5,479.65	16,083.80	5,548.18	133.93	134.08	-91.50	2,177.43	10,581.83	1,895.99	1,628.44	267.56	7.086				
16,000.04	5,479.65	16,083.84	5,548.18	133.93	134.08	-91.50	2,177.43	10,581.87	1,895.99	1,628.44	267.56	7.086				
16,100.00	5,479.12	16,183.80	5,548.01	135.17	135.32	-91.51	2,178.08	10,681.82	1,896.04	1,626.00	270.04	7.021				
16,100.01	5,479.12	16,183.81	5,548.01	135.17	135.32	-91.51	2,178.08	10,681.84	1,896.04	1,626.00	270.04	7.021				
16,123.37	5,479.00	16,190.56	5,548.00	135.46	135.41	-91.51	2,178.12	10,688.59	1,896.12	1,625.70	270.42	7.012 ES, SF				



Altitude Energy Partners

Anticollision Report



Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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 LD13-645	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

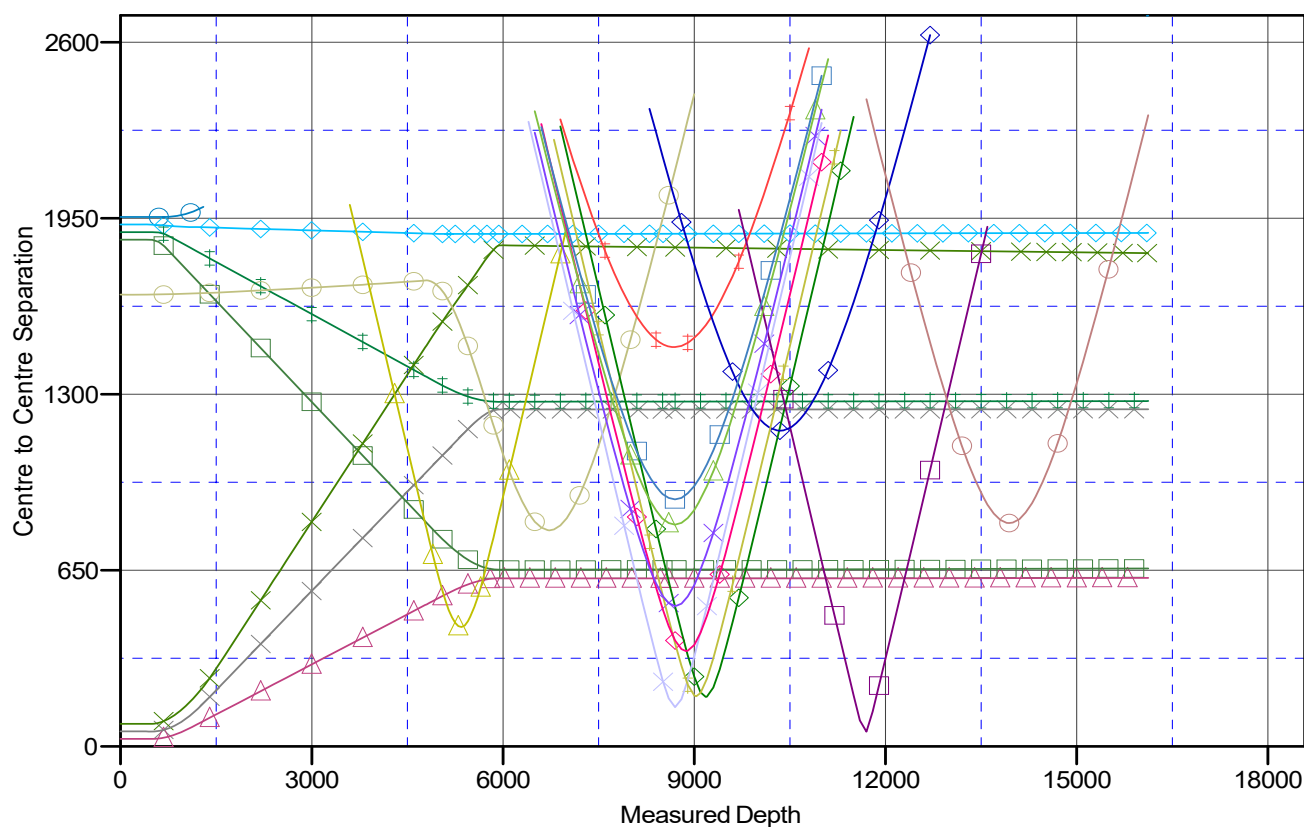
Offset Design: Tatanka Pads - Tatanka LD13-685 - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Rule Assigned:		Distance		Warning	
Measured Depth (usft)	Vertical 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	1,954.64	-34.91	1,954.96				
100.00	100.00	119.00	119.00	0.88	1.00	-1.02	1,954.64	-34.91	1,954.96	1,953.07	1.89	1,037.023	
200.00	200.00	219.00	219.00	1.50	1.58	-1.02	1,954.64	-34.91	1,954.96	1,951.87	3.09	633.415	
300.00	300.00	319.00	319.00	1.94	2.00	-1.02	1,954.64	-34.91	1,954.96	1,951.02	3.94	496.480	
400.00	400.00	419.00	419.00	2.29	2.35	-1.02	1,954.64	-34.91	1,954.96	1,950.32	4.64	421.354	
408.85	408.85	427.85	427.85	2.32	2.38	-1.02	1,954.64	-34.91	1,954.96	1,950.26	4.69	416.435	
500.00	500.00	500.00	500.00	2.60	2.60	-1.02	1,954.64	-34.91	1,955.05	1,949.85	5.20	375.948	
600.00	599.98	571.30	571.30	3.05	2.92	44.19	1,955.51	-35.10	1,955.16	1,949.27	5.88	332.330	
677.77	677.65	600.00	599.98	3.26	3.05	44.21	1,956.35	-35.29	1,955.11	1,948.92	6.19	315.931	
686.96	686.83	623.40	623.36	3.27	3.15	44.23	1,957.24	-35.48	1,954.94	1,948.65	6.29	310.625	
697.92	697.77	629.96	629.92	3.29	3.18	44.24	1,957.52	-35.55	1,954.93	1,948.60	6.33	308.897 CC	
700.00	699.84	631.21	631.16	3.29	3.18	44.24	1,957.58	-35.56	1,954.93	1,948.59	6.34	308.572 ES	
800.00	799.65	700.00	699.84	3.58	3.47	44.31	1,961.46	-36.42	1,956.03	1,949.15	6.89	284.060	
900.00	899.46	750.97	750.65	3.88	3.68	44.35	1,965.37	-37.29	1,959.12	1,951.76	7.36	266.353	
1,000.00	999.27	800.00	799.45	4.19	3.89	44.38	1,969.97	-38.30	1,964.33	1,956.52	7.81	251.449	
1,100.00	1,099.07	870.38	869.35	4.50	4.18	44.42	1,977.99	-40.08	1,971.48	1,963.12	8.36	235.800	
1,200.00	1,198.88	929.82	928.21	4.82	4.43	44.45	1,986.07	-41.87	1,980.71	1,971.85	8.86	223.512	
1,300.00	1,298.69	1,000.00	997.47	5.15	4.73	44.47	1,997.14	-44.33	1,992.01	1,982.60	9.41	211.639	
16,100.00	5,479.12	16,377.82	5,623.00	135.17	137.10	-92.65	2,977.83	10,676.60	2,698.04	2,427.03	271.00	9.956	
16,100.99	5,479.12	16,377.82	5,623.00	135.18	137.10	-92.65	2,977.83	10,676.60	2,698.04	2,427.02	271.02	9.955	
16,123.37	5,479.00	16,377.82	5,623.00	135.46	137.10	-92.65	2,977.83	10,676.60	2,698.15	2,426.84	271.31	9.945 SF	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
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Reference Site:	Tatanka Pads	MD Reference:	KB=23' @ 4684.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Tatanka Federal LD13-645	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 LD13-645
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.07°

Ladder Plot



LEGEND

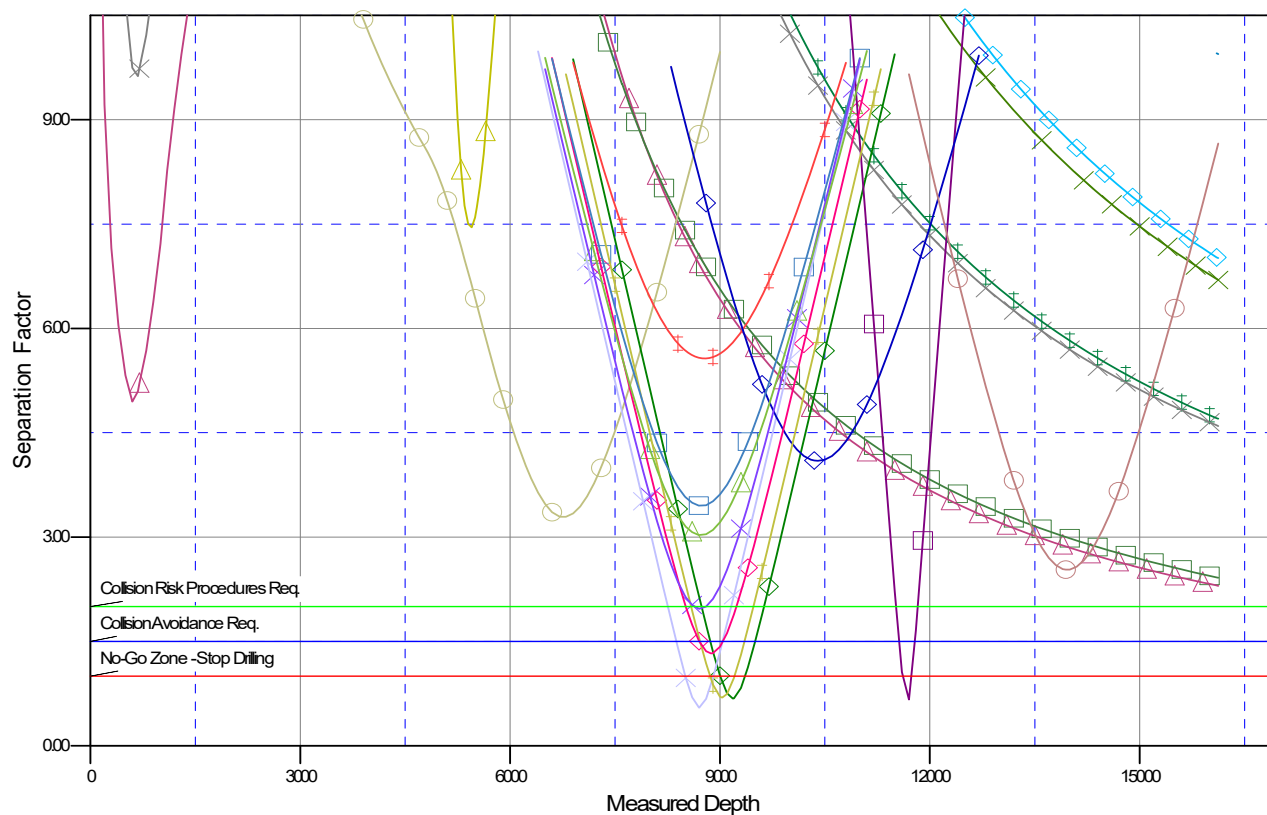
Tatanka Federal LD13-625, OH, Plan #1 V0	Zmith #1 (D&A), OH, OH V0	Rauth #1 (D&A), OH, OH V0
Tatanka Federal LD13-635, OH, Plan #1 V0	Alice Nay #2 (D&A), OH, OH V0	Alice Nay #1 (D&A), OH, OH V0
Tatanka LD13-660, OH, Plan #1 V0	Alice Nay #1 (D&A), OH, OH V0	Modemott #14 (P&A), OH, OH V0
Tatanka LD13-650, OH, Plan #1 V0	Castor Federal LD15-72HN, OH, OH V0	Alice Nay (OWP) #1-A (T&A), OH, OH V0
Tatanka Federal LD13-615, OH, Plan #1 V0	Alice Nay #1 (2) (D&A), OH, OH V0	Alice G Nay #1 (P&A), OH, OH V0
Tatanka LD13-685, OH, Plan #1 V0	Castor Federal LD13-78HN, OH, OH V0	Nay (OWP) #1 (D&A), OH, OH V0
Tatanka LD13-670, OH, Plan #1 V0	Brady #1 (D&A), OH, OH V0	

Company:	Bison Oil & Gas II, LLC	Local Co-ordinate Reference:	Well Tatanka Federal LD13-645
Project:	Weld Co., CO (NAD-83)	TVD Reference:	KB=23' @ 4684.00usft
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Reference Well:	Tatanka Federal LD13-645	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 LD13-645
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 #G (D&A), OH, OH V0
Tatanka Federal LD13-635, OH, Plan #1 V0	Alice Nay #2 (D&A), OH, OH V0	Alice Nay #1 (D&A), OH, OH V0
Tatanka LD13-660, OH, Plan #1 V0	Alice Nay 1 (D&A), OH, OH V0	Modemott #1-14 (P&A), OH, OH V0
Tatanka LD13-690, OH, Plan #1 V0	Castor Federal LD15-72HN, OH, OH V0	Alice Nay (OWP) #1-A (T&A), OH, OH V0
Tatanka Federal LD13-615, OH, Plan #1 V0	Alice Nay #1 (2) (D&A), OH, OH V0	Alice G Nay #1 (P&A), OH, OH V0
Tatanka LD13-685, OH, Plan #1 V0	Castor Federal LD13-78HN, OH, OH V0	Nay (OWP) #1 (D&A), OH, OH V0
Tatanka LD13-670, OH, Plan #1 V0	Brady #1 (D&A), OH, OH V0	