Verdad Oil & Gas Corporation

Well Name: **Pastelak 01N-64W-02-3N**

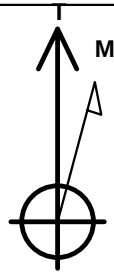
Surface Location: Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 5013.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1276065.91	3273299.16	40.087060	-104.523200	

Original Well Elev WELL @ 5026.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
460' Setback BHL	0.0	-4582.8	-830.8	Polygon
460' Setback SHL	0.0	-245.0	-830.8	Polygon
Sectionline	0.0	215.0	-830.8	Polygon
Schweitzer 11-2 300' Circle	1.0	-440.8	-598.8	Circle (Radius: 300.0)
SHL 215'FNL & 1286'FWL	1.0	0.0	0.0	Point
BHL 460'FSL & 990'FWL	6926.0	-4582.8	-193.1	Point



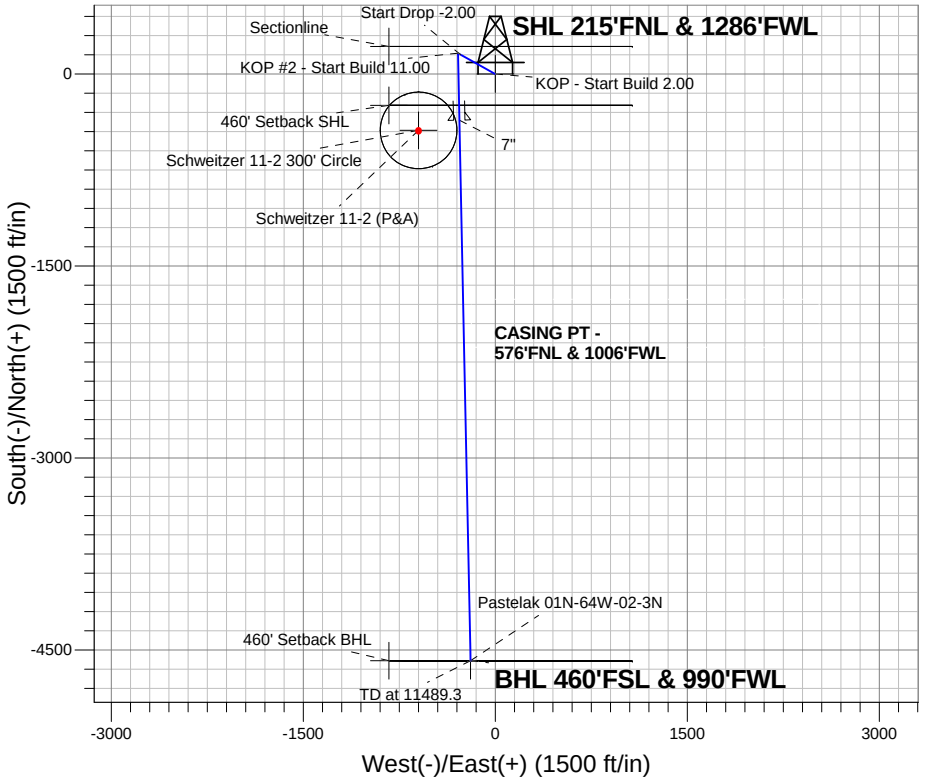
Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52659.7snT
Dip Angle: 66.73°
Date: 8/6/2014
Model: IGRF2010

Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
Pastelak 01N-64W-02-3N
Plan #1 (8-6-14)

ANNOTATIONS

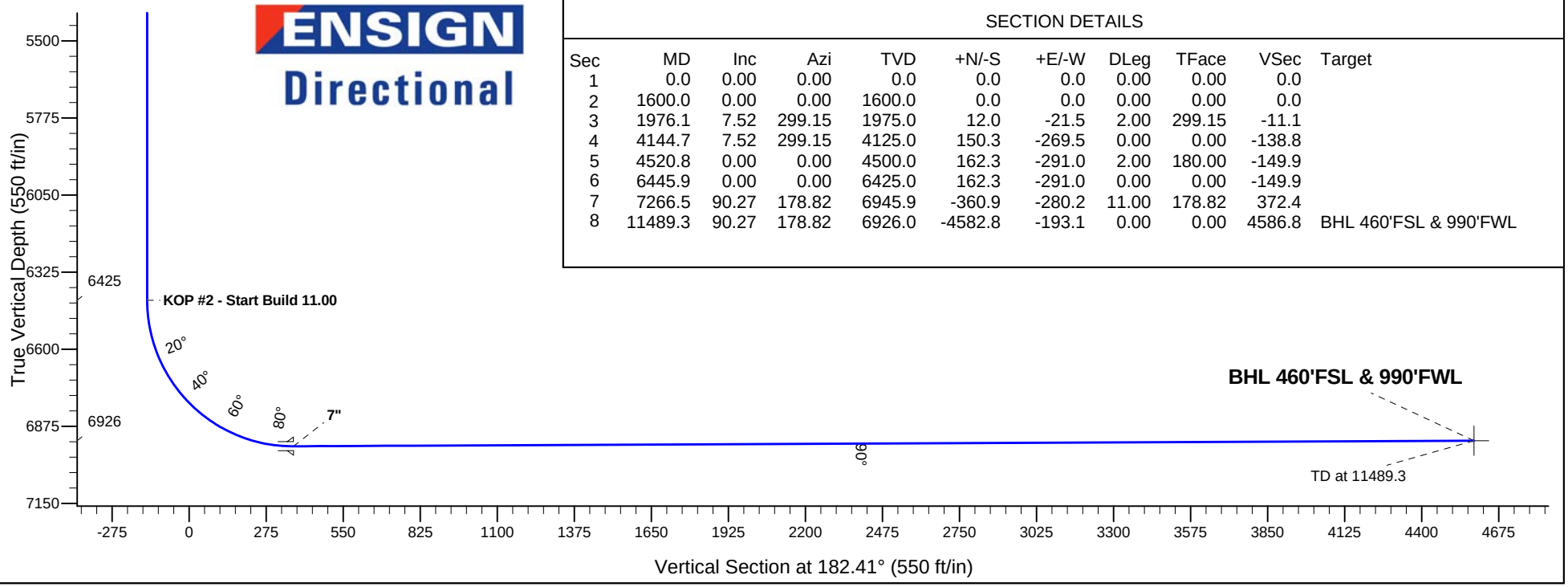
TVD	MD	Annotation
1600.0	1600.0	KOP - Start Build 2.00
4125.0	4144.7	Start Drop -2.00
6425.0	6445.9	KOP #2 - Start Build 11.00
6926.0	11489.3	TD at 11489.3



ENSIGN Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1600.0	0.00	0.00	1600.0	0.0	0.0	0.00	0.00	0.0	
3	1976.1	7.52	299.15	1975.0	12.0	-21.5	2.00	299.15	-11.1	
4	4144.7	7.52	299.15	4125.0	150.3	-269.5	0.00	0.00	-138.8	
5	4520.8	0.00	0.00	4500.0	162.3	-291.0	2.00	180.00	-149.9	
6	6445.9	0.00	0.00	6425.0	162.3	-291.0	0.00	0.00	-149.9	
7	7266.5	90.27	178.82	6945.9	-360.9	-280.2	11.00	178.82	372.4	
8	11489.3	90.27	178.82	6926.0	-4582.8	-193.1	0.00	0.00	4586.8	BHL 460'FSL & 990'FWL



Verdad Oil & Gas Corporation

SEC.2-T1N-R64W
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
Pastelak 01N-64W-02-3N

Wellbore #1

Plan: Plan #1 (8-6-14)

Standard Planning Report

08 August, 2014

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Project SEC.2-T1N-R64W, Weld County, CO

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W

Site Position:		**Northing:**	1,276,065.60 ft	**Latitude:**	40.087060
From:	Lat/Long	**Easting:**	3,273,268.38 ft	**Longitude:**	-104.523310
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.63 °

Well Pastelak 01N-64W-02-3N

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,276,065.91 ft	**Latitude:**	40.087060
	+E/-W	30.8 ft	**Easting:**	3,273,299.16 ft	**Longitude:**	-104.523200
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,013.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/6/2014	8.28	66.73	52,660

Design Plan #1 (8-6-14)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	182.41

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,976.1	7.52	299.15	1,975.0	12.0	-21.5	2.00	2.00	0.00	299.15	
4,144.7	7.52	299.15	4,125.0	150.3	-269.5	0.00	0.00	0.00	0.00	
4,520.8	0.00	0.00	4,500.0	162.3	-291.0	2.00	-2.00	0.00	180.00	
6,445.9	0.00	0.00	6,425.0	162.3	-291.0	0.00	0.00	0.00	0.00	
7,266.5	90.27	178.82	6,945.9	-360.9	-280.2	11.00	11.00	0.00	178.82	
11,489.3	90.27	178.82	6,926.0	-4,582.8	-193.1	0.00	0.00	0.00	0.00	BHL 460'FSL & 990

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
1,700.0	2.00	299.15	1,700.0	0.9	-1.5	-0.8	2.00	2.00	0.00
1,800.0	4.00	299.15	1,799.8	3.4	-6.1	-3.1	2.00	2.00	0.00
1,900.0	6.00	299.15	1,899.5	7.6	-13.7	-7.1	2.00	2.00	0.00
1,976.1	7.52	299.15	1,975.0	12.0	-21.5	-11.1	2.00	2.00	0.00
2,000.0	7.52	299.15	1,998.7	13.5	-24.3	-12.5	0.00	0.00	0.00
2,100.0	7.52	299.15	2,097.9	19.9	-35.7	-18.4	0.00	0.00	0.00
2,200.0	7.52	299.15	2,197.0	26.3	-47.1	-24.3	0.00	0.00	0.00
2,300.0	7.52	299.15	2,296.1	32.7	-58.6	-30.2	0.00	0.00	0.00
2,400.0	7.52	299.15	2,395.3	39.0	-70.0	-36.1	0.00	0.00	0.00
2,500.0	7.52	299.15	2,494.4	45.4	-81.4	-41.9	0.00	0.00	0.00
2,600.0	7.52	299.15	2,593.6	51.8	-92.9	-47.8	0.00	0.00	0.00
2,700.0	7.52	299.15	2,692.7	58.2	-104.3	-53.7	0.00	0.00	0.00
2,800.0	7.52	299.15	2,791.8	64.5	-115.7	-59.6	0.00	0.00	0.00
2,900.0	7.52	299.15	2,891.0	70.9	-127.2	-65.5	0.00	0.00	0.00
3,000.0	7.52	299.15	2,990.1	77.3	-138.6	-71.4	0.00	0.00	0.00
3,100.0	7.52	299.15	3,089.2	83.7	-150.0	-77.3	0.00	0.00	0.00
3,200.0	7.52	299.15	3,188.4	90.1	-161.5	-83.2	0.00	0.00	0.00
3,300.0	7.52	299.15	3,287.5	96.4	-172.9	-89.1	0.00	0.00	0.00
3,400.0	7.52	299.15	3,386.7	102.8	-184.3	-95.0	0.00	0.00	0.00
3,500.0	7.52	299.15	3,485.8	109.2	-195.8	-100.8	0.00	0.00	0.00
3,600.0	7.52	299.15	3,584.9	115.6	-207.2	-106.7	0.00	0.00	0.00
3,700.0	7.52	299.15	3,684.1	121.9	-218.6	-112.6	0.00	0.00	0.00
3,800.0	7.52	299.15	3,783.2	128.3	-230.1	-118.5	0.00	0.00	0.00
3,900.0	7.52	299.15	3,882.4	134.7	-241.5	-124.4	0.00	0.00	0.00
4,000.0	7.52	299.15	3,981.5	141.1	-252.9	-130.3	0.00	0.00	0.00
4,100.0	7.52	299.15	4,080.6	147.4	-264.4	-136.2	0.00	0.00	0.00
4,144.7	7.52	299.15	4,125.0	150.3	-269.5	-138.8	0.00	0.00	0.00
Start Drop -2.00									
4,200.0	6.42	299.15	4,179.8	153.6	-275.3	-141.8	2.00	-2.00	0.00
4,300.0	4.42	299.15	4,279.4	158.2	-283.6	-146.1	2.00	-2.00	0.00
4,400.0	2.42	299.15	4,379.2	161.1	-288.8	-148.8	2.00	-2.00	0.00
4,500.0	0.42	299.15	4,479.2	162.3	-290.9	-149.9	2.00	-2.00	0.00
4,520.8	0.00	0.00	4,500.0	162.3	-291.0	-149.9	2.00	-2.00	0.00
4,600.0	0.00	0.00	4,579.2	162.3	-291.0	-149.9	0.00	0.00	0.00
4,700.0	0.00	0.00	4,679.2	162.3	-291.0	-149.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,779.2	162.3	-291.0	-149.9	0.00	0.00	0.00

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
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Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,900.0	0.00	0.00	4,879.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,979.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,079.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,179.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,279.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,379.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,479.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,579.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,679.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,779.2	162.3	-291.0	-149.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,879.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,979.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,100.0	0.00	0.00	6,079.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,179.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,279.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,379.2	162.3	-291.0	-149.9	0.00	0.00	0.00
6,445.9	0.00	0.00	6,425.1	162.3	-291.0	-149.9	0.00	0.00	0.00
KOP #2 - Start Build 11.00									
6,500.0	5.96	178.82	6,479.1	159.5	-290.9	-147.1	11.01	11.01	0.00
6,600.0	16.96	178.82	6,576.9	139.7	-290.5	-127.3	11.00	11.00	0.00
6,700.0	27.96	178.82	6,669.2	101.5	-289.7	-89.2	11.00	11.00	0.00
6,800.0	38.96	178.82	6,752.5	46.5	-288.6	-34.3	11.00	11.00	0.00
6,900.0	49.96	178.82	6,823.8	-23.4	-287.2	35.5	11.00	11.00	0.00
7,000.0	60.96	178.82	6,880.4	-105.6	-285.5	117.6	11.00	11.00	0.00
7,100.0	71.96	178.82	6,920.3	-197.2	-283.6	208.9	11.00	11.00	0.00
7,200.0	82.96	178.82	6,942.0	-294.6	-281.6	306.2	11.00	11.00	0.00
7,266.5	90.27	178.82	6,945.9	-360.9	-280.2	372.4	11.00	11.00	0.00
7"									
7,300.0	90.27	178.82	6,945.7	-394.4	-279.5	405.8	0.00	0.00	0.00
7,400.0	90.27	178.82	6,945.3	-494.4	-277.5	505.6	0.00	0.00	0.00
7,500.0	90.27	178.82	6,944.8	-594.4	-275.4	605.4	0.00	0.00	0.00
7,600.0	90.27	178.82	6,944.3	-694.3	-273.3	705.2	0.00	0.00	0.00
7,700.0	90.27	178.82	6,943.9	-794.3	-271.3	805.0	0.00	0.00	0.00
7,800.0	90.27	178.82	6,943.4	-894.3	-269.2	904.8	0.00	0.00	0.00
7,900.0	90.27	178.82	6,942.9	-994.3	-267.1	1,004.6	0.00	0.00	0.00
8,000.0	90.27	178.82	6,942.4	-1,094.3	-265.1	1,104.4	0.00	0.00	0.00
8,100.0	90.27	178.82	6,942.0	-1,194.2	-263.0	1,204.2	0.00	0.00	0.00
8,200.0	90.27	178.82	6,941.5	-1,294.2	-261.0	1,304.1	0.00	0.00	0.00
8,300.0	90.27	178.82	6,941.0	-1,394.2	-258.9	1,403.9	0.00	0.00	0.00
8,400.0	90.27	178.82	6,940.6	-1,494.2	-256.8	1,503.7	0.00	0.00	0.00
8,500.0	90.27	178.82	6,940.1	-1,594.1	-254.8	1,603.5	0.00	0.00	0.00
8,600.0	90.27	178.82	6,939.6	-1,694.1	-252.7	1,703.3	0.00	0.00	0.00
8,700.0	90.27	178.82	6,939.1	-1,794.1	-250.6	1,803.1	0.00	0.00	0.00
8,800.0	90.27	178.82	6,938.7	-1,894.1	-248.6	1,902.9	0.00	0.00	0.00
8,900.0	90.27	178.82	6,938.2	-1,994.1	-246.5	2,002.7	0.00	0.00	0.00
9,000.0	90.27	178.82	6,937.7	-2,094.0	-244.4	2,102.5	0.00	0.00	0.00
9,100.0	90.27	178.82	6,937.3	-2,194.0	-242.4	2,202.3	0.00	0.00	0.00
9,200.0	90.27	178.82	6,936.8	-2,294.0	-240.3	2,302.1	0.00	0.00	0.00
9,300.0	90.27	178.82	6,936.3	-2,394.0	-238.3	2,401.9	0.00	0.00	0.00
9,400.0	90.27	178.82	6,935.8	-2,493.9	-236.2	2,501.7	0.00	0.00	0.00
9,500.0	90.27	178.82	6,935.4	-2,593.9	-234.1	2,601.5	0.00	0.00	0.00
9,600.0	90.27	178.82	6,934.9	-2,693.9	-232.1	2,701.3	0.00	0.00	0.00
9,700.0	90.27	178.82	6,934.4	-2,793.9	-230.0	2,801.1	0.00	0.00	0.00
9,800.0	90.27	178.82	6,934.0	-2,893.9	-227.9	2,900.9	0.00	0.00	0.00

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,900.0	90.27	178.82	6,933.5	-2,993.8	-225.9	3,000.7	0.00	0.00	0.00
10,000.0	90.27	178.82	6,933.0	-3,093.8	-223.8	3,100.5	0.00	0.00	0.00
10,100.0	90.27	178.82	6,932.5	-3,193.8	-221.8	3,200.3	0.00	0.00	0.00
10,200.0	90.27	178.82	6,932.1	-3,293.8	-219.7	3,300.1	0.00	0.00	0.00
10,300.0	90.27	178.82	6,931.6	-3,393.7	-217.6	3,399.9	0.00	0.00	0.00
10,400.0	90.27	178.82	6,931.1	-3,493.7	-215.6	3,499.7	0.00	0.00	0.00
10,500.0	90.27	178.82	6,930.7	-3,593.7	-213.5	3,599.5	0.00	0.00	0.00
10,600.0	90.27	178.82	6,930.2	-3,693.7	-211.4	3,699.3	0.00	0.00	0.00
10,700.0	90.27	178.82	6,929.7	-3,793.7	-209.4	3,799.1	0.00	0.00	0.00
10,800.0	90.27	178.82	6,929.2	-3,893.6	-207.3	3,898.9	0.00	0.00	0.00
10,900.0	90.27	178.82	6,928.8	-3,993.6	-205.3	3,998.7	0.00	0.00	0.00
11,000.0	90.27	178.82	6,928.3	-4,093.6	-203.2	4,098.5	0.00	0.00	0.00
11,100.0	90.27	178.82	6,927.8	-4,193.6	-201.1	4,198.3	0.00	0.00	0.00
11,200.0	90.27	178.82	6,927.4	-4,293.5	-199.1	4,298.1	0.00	0.00	0.00
11,300.0	90.27	178.82	6,926.9	-4,393.5	-197.0	4,397.9	0.00	0.00	0.00
11,400.0	90.27	178.82	6,926.4	-4,493.5	-194.9	4,497.7	0.00	0.00	0.00
11,489.3	90.27	178.82	6,926.0	-4,582.8	-193.1	4,586.8	0.00	0.00	0.00

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,266.5	6,945.9	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,600.0	1,600.0	0.0	0.0	KOP - Start Build 2.00
4,144.7	4,125.0	12.0	-21.5	Start Drop -2.00
6,445.9	6,425.0	150.3	-269.5	KOP #2 - Start Build 11.00
11,489.3	6,926.0	162.3	-291.0	TD at 11489.3

ENSIGN
Directional

Verdad Oil & Gas Corporation

SEC.2-T1N-R64W
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
Pastelak 01N-64W-02-3N

Wellbore #1
Plan #1 (8-6-14)

Anticollision Report

08 August, 2014

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (8-6-14)

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	**Error Surface:**	Elliptical Conic

Warning Levels Evaluated at: 2.00 **Sigma**

Survey Tool Program **Date** 8/8/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,489.3	Plan #1 (8-6-14) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Existing Wells Sec.2-T1N-64W						
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	7,339.8	6,945.6	320.2	163.9	2.049	CC, ES, SF
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W						
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	566.3	567.3	30.8	28.5	13.248	CC
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	600.0	601.0	30.8	28.3	12.438	ES
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,709.6	386.1	229.6	2.468	SF
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14	1,400.0	1,400.0	16.8	10.7	2.766	CC
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,502.3	165.1	-14.2	0.921	Level 1, ES, SF
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14	1,600.0	1,600.0	14.0	7.0	2.008	CC
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,477.1	165.1	-14.2	0.921	Level 1, ES, SF
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14	1,600.0	1,599.0	28.0	21.0	4.017	CC, ES
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,669.0	386.0	228.0	2.443	SF
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14	1,600.0	1,599.0	44.8	37.8	6.427	CC, ES
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,472.8	495.2	315.9	2.762	SF
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14	1,400.0	1,399.0	58.8	52.7	9.686	CC, ES
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,477.1	660.2	481.3	3.689	SF
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14	1,000.0	998.0	72.7	68.5	17.053	CC, ES
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14	11,489.3	11,483.4	825.3	646.0	4.603	SF
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14	800.0	798.0	89.5	86.2	26.593	CC, ES
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14	1,100.0	1,088.3	104.1	99.4	22.279	SF

Offset Design Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1

Survey Program: 7690-UNKNOWN

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-126.36	-440.8	-598.8	743.5				
100.0	100.0	100.0	100.0	0.1	2.0	-126.36	-440.8	-598.8	743.5	741.4	2.11	351.950	
200.0	200.0	200.0	200.0	0.3	4.0	-126.36	-440.8	-598.8	743.5	739.2	4.34	171.424	
300.0	300.0	300.0	300.0	0.6	6.0	-126.36	-440.8	-598.8	743.5	737.0	6.56	113.306	
400.0	400.0	400.0	400.0	0.8	8.0	-126.36	-440.8	-598.8	743.5	734.7	8.79	84.618	
500.0	500.0	500.0	500.0	1.0	10.0	-126.36	-440.8	-598.8	743.5	732.5	11.01	67.522	
600.0	600.0	600.0	600.0	1.2	12.0	-126.36	-440.8	-598.8	743.5	730.3	13.24	56.173	
700.0	700.0	700.0	700.0	1.5	14.0	-126.36	-440.8	-598.8	743.5	728.1	15.46	48.090	

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 7690-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
800.0	800.0	800.0	800.0	1.7	16.0	-126.36	-440.8	-598.8	743.5	725.8	17.69	42.040	
900.0	900.0	900.0	900.0	1.9	18.0	-126.36	-440.8	-598.8	743.5	723.6	19.91	37.343	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	20.0	-126.36	-440.8	-598.8	743.5	721.4	22.14	33.590	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	22.0	-126.36	-440.8	-598.8	743.5	719.2	24.36	30.522	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	24.0	-126.36	-440.8	-598.8	743.5	716.9	26.58	27.968	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	26.0	-126.36	-440.8	-598.8	743.5	714.7	28.81	25.808	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	28.0	-126.36	-440.8	-598.8	743.5	712.5	31.03	23.958	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	30.0	-126.36	-440.8	-598.8	743.5	710.3	33.26	22.355	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	32.0	-126.36	-440.8	-598.8	743.5	708.0	35.48	20.954	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	34.0	-65.64	-440.8	-598.8	742.8	705.1	37.70	19.704	
1,800.0	1,799.8	1,799.8	1,799.8	3.9	36.0	-66.05	-440.8	-598.8	740.7	700.8	39.90	18.565	
1,900.0	1,899.5	1,899.5	1,899.5	4.1	38.0	-66.73	-440.8	-598.8	737.2	695.1	42.09	17.514	
2,000.0	1,998.7	1,998.7	1,998.7	4.4	40.0	-67.66	-440.8	-598.8	732.4	688.2	44.29	16.538	
2,100.0	2,097.9	2,097.9	2,097.9	4.6	42.0	-68.60	-440.8	-598.8	727.5	681.0	46.52	15.640	
2,200.0	2,197.0	2,197.0	2,197.0	4.9	43.9	-69.56	-440.8	-598.8	722.8	674.1	48.76	14.825	
2,300.0	2,296.1	2,296.1	2,296.1	5.2	45.9	-70.53	-440.8	-598.8	718.3	667.3	51.00	14.084	
2,400.0	2,395.3	2,395.3	2,395.3	5.4	47.9	-71.52	-440.8	-598.8	714.0	660.8	53.26	13.407	
2,500.0	2,494.4	2,494.4	2,494.4	5.7	49.9	-72.51	-440.8	-598.8	710.0	654.4	55.52	12.787	
2,600.0	2,593.6	2,593.6	2,593.6	6.0	51.9	-73.52	-440.8	-598.8	706.1	648.3	57.79	12.218	
2,700.0	2,692.7	2,692.7	2,692.7	6.3	53.9	-74.53	-440.8	-598.8	702.5	642.4	60.07	11.695	
2,800.0	2,791.8	2,791.8	2,791.8	6.6	55.8	-75.56	-440.8	-598.8	699.1	636.7	62.35	11.212	
2,900.0	2,891.0	2,891.0	2,891.0	6.9	57.8	-76.59	-440.8	-598.8	695.9	631.3	64.63	10.767	
3,000.0	2,990.1	2,990.1	2,990.1	7.2	59.8	-77.64	-440.8	-598.8	692.9	626.0	66.92	10.354	
3,100.0	3,089.2	3,089.2	3,089.2	7.5	61.8	-78.69	-440.8	-598.8	690.2	621.0	69.21	9.972	
3,200.0	3,188.4	3,188.4	3,188.4	7.8	63.8	-79.75	-440.8	-598.8	687.8	616.3	71.51	9.618	
3,300.0	3,287.5	3,287.5	3,287.5	8.1	65.8	-80.82	-440.8	-598.8	685.5	611.7	73.81	9.288	
3,400.0	3,386.7	3,386.7	3,386.7	8.4	67.7	-81.89	-440.8	-598.8	683.6	607.4	76.11	8.981	
3,500.0	3,485.8	3,485.8	3,485.8	8.7	69.7	-82.97	-440.8	-598.8	681.8	603.4	78.41	8.695	
3,600.0	3,584.9	3,584.9	3,584.9	9.1	71.7	-84.06	-440.8	-598.8	680.3	599.6	80.72	8.429	
3,700.0	3,684.1	3,684.1	3,684.1	9.4	73.7	-85.15	-440.8	-598.8	679.1	596.1	83.02	8.180	
3,800.0	3,783.2	3,783.2	3,783.2	9.7	75.7	-86.24	-440.8	-598.8	678.1	592.8	85.33	7.947	
3,900.0	3,882.4	3,882.4	3,882.4	10.0	77.6	-87.34	-440.8	-598.8	677.4	589.7	87.63	7.729	
4,000.0	3,981.5	3,981.5	3,981.5	10.3	79.6	-88.43	-440.8	-598.8	676.9	586.9	89.94	7.526	
4,100.0	4,080.6	4,080.6	4,080.6	10.6	81.6	-89.53	-440.8	-598.8	676.6	584.4	92.25	7.335	
4,144.0	4,124.3	4,124.3	4,124.3	10.8	82.5	-90.00	-440.8	-598.8	676.6	583.4	93.25	7.256	
4,200.0	4,179.8	4,179.8	4,179.8	10.9	83.6	-90.59	-440.8	-598.8	676.6	582.1	94.53	7.158	
4,300.0	4,279.4	4,279.4	4,279.4	11.2	85.6	-91.39	-440.8	-598.8	676.8	580.1	96.74	6.996	
4,400.0	4,379.2	4,379.2	4,379.2	11.4	87.6	-91.89	-440.8	-598.8	677.0	578.0	98.94	6.843	
4,500.0	4,479.2	4,479.2	4,479.2	11.5	89.6	-92.10	-440.8	-598.8	677.1	576.0	101.11	6.697	
4,600.0	4,579.2	4,579.2	4,579.2	11.7	91.6	-152.96	-440.8	-598.8	677.1	573.8	103.27	6.556	
4,700.0	4,679.2	4,679.2	4,679.2	11.9	93.6	-152.96	-440.8	-598.8	677.1	571.6	105.46	6.420	
4,800.0	4,779.2	4,779.2	4,779.2	12.1	95.6	-152.96	-440.8	-598.8	677.1	569.4	107.65	6.290	
4,900.0	4,879.2	4,879.2	4,879.2	12.3	97.6	-152.96	-440.8	-598.8	677.1	567.2	109.84	6.164	
5,000.0	4,979.2	4,979.2	4,979.2	12.4	99.6	-152.96	-440.8	-598.8	677.1	565.0	112.03	6.044	
5,100.0	5,079.2	5,079.2	5,079.2	12.6	101.6	-152.96	-440.8	-598.8	677.1	562.8	114.22	5.928	
5,200.0	5,179.2	5,179.2	5,179.2	12.8	103.6	-152.96	-440.8	-598.8	677.1	560.6	116.42	5.816	
5,300.0	5,279.2	5,279.2	5,279.2	13.0	105.6	-152.96	-440.8	-598.8	677.1	558.5	118.61	5.708	
5,400.0	5,379.2	5,379.2	5,379.2	13.2	107.6	-152.96	-440.8	-598.8	677.1	556.3	120.81	5.604	
5,500.0	5,479.2	5,479.2	5,479.2	13.4	109.6	-152.96	-440.8	-598.8	677.1	554.1	123.01	5.504	
5,600.0	5,579.2	5,579.2	5,579.2	13.6	111.6	-152.96	-440.8	-598.8	677.1	551.9	125.20	5.408	
5,700.0	5,679.2	5,679.2	5,679.2	13.8	113.6	-152.96	-440.8	-598.8	677.1	549.7	127.40	5.314	
5,800.0	5,779.2	5,779.2	5,779.2	14.0	115.6	-152.96	-440.8	-598.8	677.1	547.5	129.60	5.224	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 7690-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,900.0	5,879.2	5,879.2	5,879.2	14.2	117.6	-152.96	-440.8	-598.8	677.1	545.3	131.80	5.137	
6,000.0	5,979.2	5,979.2	5,979.2	14.4	119.6	-152.96	-440.8	-598.8	677.1	543.1	134.00	5.053	
6,100.0	6,079.2	6,079.2	6,079.2	14.6	121.6	-152.96	-440.8	-598.8	677.1	540.9	136.20	4.971	
6,200.0	6,179.2	6,179.2	6,179.2	14.8	123.6	-152.96	-440.8	-598.8	677.1	538.7	138.40	4.892	
6,300.0	6,279.2	6,279.2	6,279.2	15.0	125.6	-152.96	-440.8	-598.8	677.1	536.5	140.61	4.815	
6,400.0	6,379.2	6,379.2	6,379.2	15.2	127.6	-152.96	-440.8	-598.8	677.1	534.3	142.81	4.741	
6,500.0	6,479.1	6,479.1	6,479.1	15.4	129.6	28.46	-440.8	-598.8	674.6	530.2	144.38	4.672	
6,600.0	6,576.9	6,576.9	6,576.9	15.5	131.5	30.25	-440.8	-598.8	657.2	514.8	142.38	4.616	
6,700.0	6,669.2	6,669.2	6,669.2	15.6	133.4	34.08	-440.8	-598.8	624.2	486.7	137.45	4.541	
6,800.0	6,752.5	6,752.5	6,752.5	15.7	135.1	40.58	-440.8	-598.8	577.6	445.0	132.61	4.356	
6,900.0	6,823.8	6,823.8	6,823.8	15.7	136.5	50.46	-440.8	-598.8	520.9	387.9	132.96	3.917	
7,000.0	6,880.4	6,880.4	6,880.4	15.8	137.6	63.52	-440.8	-598.8	458.8	317.7	141.09	3.252	
7,100.0	6,920.3	6,920.3	6,920.3	16.1	138.4	77.08	-440.8	-598.8	398.4	247.8	150.58	2.646	
7,200.0	6,942.0	6,942.0	6,942.0	16.6	138.8	86.94	-440.8	-598.8	349.3	194.5	154.79	2.256	
7,300.0	6,945.7	6,945.7	6,945.7	17.4	138.9	90.03	-440.8	-598.8	322.6	166.8	155.84	2.070	
7,339.8	6,945.6	6,945.6	6,945.6	17.8	138.9	90.00	-440.8	-598.8	320.2	163.9	156.22	2.049	CC, ES, SF
7,400.0	6,945.3	6,945.3	6,945.3	18.3	138.9	89.95	-440.8	-598.8	325.8	169.0	156.80	2.078	
7,500.0	6,944.8	6,944.8	6,944.8	19.4	138.9	89.86	-440.8	-598.8	358.0	200.1	157.91	2.267	
7,600.0	6,944.3	6,944.3	6,944.3	20.7	138.9	89.78	-440.8	-598.8	412.6	253.5	159.14	2.593	
7,700.0	6,943.9	6,943.9	6,943.9	22.0	138.9	89.70	-440.8	-598.8	482.0	321.5	160.47	3.004	
7,800.0	6,943.4	6,943.4	6,943.4	23.4	138.9	89.61	-440.8	-598.8	560.7	398.8	161.88	3.463	
7,900.0	6,942.9	6,942.9	6,942.9	24.8	138.9	89.53	-440.8	-598.8	645.3	481.9	163.36	3.950	
8,000.0	6,942.4	6,942.4	6,942.4	26.4	138.8	89.44	-440.8	-598.8	733.8	568.9	164.89	4.450	
8,100.0	6,942.0	6,942.0	6,942.0	28.0	138.8	89.36	-440.8	-598.8	824.9	658.4	166.48	4.955	
8,200.0	6,941.5	6,941.5	6,941.5	29.6	138.8	89.27	-440.8	-598.8	917.9	749.8	168.10	5.460	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-89.96	0.0	-30.8	30.8	30.8	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-30.8	30.8	30.6	0.23	135.581	
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-30.8	30.8	30.1	0.68	45.494	
300.0	300.0	301.0	301.0	0.6	0.6	-89.96	0.0	-30.8	30.8	29.7	1.13	27.333	
400.0	400.0	401.0	401.0	0.8	0.8	-89.96	0.0	-30.8	30.8	29.2	1.58	19.535	
500.0	500.0	501.0	501.0	1.0	1.0	-89.96	0.0	-30.8	30.8	28.8	2.03	15.198	
566.3	566.3	567.3	567.3	1.2	1.2	-89.96	0.0	-30.8	30.8	28.5	2.32	13.248	CC
600.0	600.0	601.0	601.0	1.2	1.2	-89.96	0.0	-30.8	30.8	28.3	2.47	12.438	ES
700.0	700.0	700.0	700.0	1.5	1.5	-89.15	0.5	-32.5	32.5	29.6	2.91	11.149	
800.0	800.0	798.6	798.5	1.7	1.7	-87.18	1.8	-37.4	37.5	34.2	3.35	11.204	
900.0	900.0	896.8	896.3	1.9	1.9	-84.87	4.1	-45.6	46.0	42.2	3.80	12.105	
1,000.0	1,000.0	994.4	993.1	2.1	2.1	-82.78	7.2	-56.9	57.9	53.6	4.27	13.559	
1,100.0	1,100.0	1,092.3	1,090.0	2.4	2.4	-81.13	11.1	-71.0	72.7	67.9	4.76	15.259	
1,200.0	1,200.0	1,191.1	1,187.6	2.6	2.7	-80.00	15.1	-85.6	87.9	82.6	5.28	16.664	
1,300.0	1,300.0	1,290.0	1,285.3	2.8	3.1	-79.21	19.1	-100.1	103.1	97.3	5.80	17.789	
1,400.0	1,400.0	1,388.8	1,383.0	3.0	3.4	-78.62	23.1	-114.7	118.4	112.0	6.33	18.706	
1,500.0	1,500.0	1,487.6	1,480.6	3.3	3.7	-78.16	27.1	-129.3	133.6	126.8	6.87	19.464	
1,600.0	1,600.0	1,586.4	1,578.3	3.5	4.1	-77.80	31.1	-143.8	148.9	141.5	7.41	20.099	
1,700.0	1,700.0	1,685.5	1,676.2	3.7	4.4	-16.75	35.1	-158.4	162.5	155.1	7.40	21.947	
1,800.0	1,799.8	1,785.0	1,774.5	3.9	4.8	-16.93	39.1	-173.1	172.8	164.9	7.85	22.015	
1,900.0	1,899.5	1,884.7	1,873.0	4.1	5.1	-17.42	43.2	-187.8	179.8	171.5	8.29	21.680	
2,000.0	1,998.7	1,984.6	1,971.8	4.4	5.5	-18.23	47.2	-202.5	183.5	174.8	8.74	21.002	
2,100.0	2,097.9	2,084.5	2,070.5	4.6	5.8	-19.12	51.3	-217.2	186.4	177.2	9.20	20.249	
2,200.0	2,197.0	2,184.4	2,169.2	4.9	6.2	-19.99	55.3	-231.9	189.3	179.6	9.67	19.563	
2,300.0	2,296.1	2,284.3	2,268.0	5.2	6.5	-20.82	59.4	-246.7	192.2	182.0	10.15	18.934	
2,400.0	2,395.3	2,384.3	2,366.7	5.4	6.9	-21.64	63.4	-261.4	195.2	184.5	10.63	18.358	
2,500.0	2,494.4	2,484.2	2,465.5	5.7	7.3	-22.43	67.5	-276.1	198.2	187.1	11.12	17.826	
2,600.0	2,593.6	2,584.1	2,564.2	6.0	7.6	-23.19	71.5	-290.8	201.2	189.6	11.61	17.336	
2,700.0	2,692.7	2,684.0	2,663.0	6.3	8.0	-23.93	75.6	-305.5	204.3	192.2	12.10	16.881	
2,800.0	2,791.8	2,783.9	2,761.7	6.6	8.3	-24.65	79.6	-320.3	207.4	194.8	12.60	16.460	
2,900.0	2,891.0	2,883.8	2,860.5	6.9	8.7	-25.35	83.6	-335.0	210.6	197.5	13.11	16.067	
3,000.0	2,990.1	2,983.8	2,959.2	7.2	9.1	-26.03	87.7	-349.7	213.8	200.2	13.62	15.701	
3,100.0	3,089.2	3,083.7	3,057.9	7.5	9.4	-26.68	91.7	-364.4	217.0	202.9	14.13	15.359	
3,200.0	3,188.4	3,183.6	3,156.7	7.8	9.8	-27.32	95.8	-379.2	220.2	205.6	14.64	15.038	
3,300.0	3,287.5	3,283.5	3,255.4	8.1	10.2	-27.94	99.8	-393.9	223.5	208.3	15.16	14.738	
3,400.0	3,386.7	3,383.4	3,354.2	8.4	10.5	-28.54	103.9	-408.6	226.8	211.1	15.69	14.455	
3,500.0	3,485.8	3,483.4	3,452.9	8.7	10.9	-29.13	107.9	-423.3	230.1	213.9	16.22	14.189	
3,600.0	3,584.9	3,583.3	3,551.7	9.1	11.2	-29.70	112.0	-438.1	233.4	216.7	16.75	13.938	
3,700.0	3,684.1	3,683.2	3,650.4	9.4	11.6	-30.25	116.0	-452.8	236.8	219.5	17.28	13.701	
3,800.0	3,783.2	3,783.1	3,749.2	9.7	12.0	-30.79	120.1	-467.5	240.2	222.3	17.82	13.478	
3,900.0	3,882.4	3,883.0	3,847.9	10.0	12.3	-31.31	124.1	-482.2	243.6	225.2	18.36	13.266	
4,000.0	3,981.5	3,982.9	3,946.6	10.3	12.7	-31.81	128.2	-496.9	247.0	228.1	18.90	13.065	
4,100.0	4,080.6	4,082.9	4,045.4	10.6	13.1	-32.31	132.2	-511.7	250.4	231.0	19.45	12.874	
4,200.0	4,179.8	4,182.8	4,144.1	10.9	13.4	-32.75	136.3	-526.4	254.3	234.3	19.99	12.725	
4,300.0	4,279.4	4,282.5	4,242.7	11.2	13.8	-32.84	140.3	-541.1	260.9	240.4	20.45	12.758	
4,400.0	4,379.2	4,382.1	4,341.1	11.4	14.2	-32.57	144.3	-555.8	270.4	249.5	20.86	12.961	
4,500.0	4,479.2	4,481.2	4,439.1	11.5	14.5	-31.97	148.4	-570.4	282.8	261.6	21.22	13.328	
4,600.0	4,579.2	4,580.1	4,536.8	11.7	14.9	-91.94	152.4	-584.9	297.3	275.8	21.51	13.820	
4,700.0	4,679.2	4,687.4	4,643.0	11.9	15.2	-91.09	156.4	-599.6	310.9	289.0	21.92	14.188	
4,800.0	4,779.2	4,798.6	4,753.6	12.1	15.5	-90.50	159.5	-610.9	321.1	298.8	22.31	14.394	
4,900.0	4,879.2	4,910.6	4,865.3	12.3	15.7	-90.14	161.5	-618.1	327.5	304.8	22.70	14.429	
5,000.0	4,979.2	5,023.0	4,977.7	12.4	15.9	-90.00	162.3	-621.1	330.1	307.0	23.09	14.297	

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,079.2	5,125.5	5,080.2	12.6	16.0	-90.00	162.3	-621.2	330.2	306.7	23.48	14.060	
5,200.0	5,179.2	5,225.5	5,180.2	12.8	16.2	-90.00	162.3	-621.2	330.2	306.3	23.88	13.824	
5,300.0	5,279.2	5,325.5	5,280.2	13.0	16.3	-90.00	162.3	-621.2	330.2	305.9	24.29	13.595	
5,400.0	5,379.2	5,425.5	5,380.2	13.2	16.5	-90.00	162.3	-621.2	330.2	305.5	24.69	13.373	
5,500.0	5,479.2	5,525.5	5,480.2	13.4	16.6	-90.00	162.3	-621.2	330.2	305.1	25.10	13.157	
5,600.0	5,579.2	5,625.5	5,580.2	13.6	16.8	-90.00	162.3	-621.2	330.2	304.7	25.50	12.947	
5,700.0	5,679.2	5,725.5	5,680.2	13.8	16.9	-90.00	162.3	-621.2	330.2	304.3	25.91	12.743	
5,800.0	5,779.2	5,825.5	5,780.2	14.0	17.1	-90.00	162.3	-621.2	330.2	303.9	26.32	12.545	
5,900.0	5,879.2	5,925.5	5,880.2	14.2	17.3	-90.00	162.3	-621.2	330.2	303.4	26.73	12.352	
6,000.0	5,979.2	6,025.5	5,980.2	14.4	17.4	-90.00	162.3	-621.2	330.2	303.0	27.14	12.164	
6,100.0	6,079.2	6,125.5	6,080.2	14.6	17.6	-90.00	162.3	-621.2	330.2	302.6	27.56	11.982	
6,200.0	6,179.2	6,225.5	6,180.2	14.8	17.7	-90.00	162.3	-621.2	330.2	302.2	27.97	11.804	
6,300.0	6,279.2	6,325.5	6,280.2	15.0	17.9	-90.00	162.3	-621.2	330.2	301.8	28.39	11.632	
6,400.0	6,379.2	6,425.5	6,380.2	15.2	18.1	-90.00	162.3	-621.2	330.2	301.4	28.80	11.463	
6,432.4	6,411.6	6,457.9	6,412.6	15.3	18.1	91.28	162.3	-621.2	330.2	301.2	28.98	11.394	
6,500.0	6,479.1	6,525.4	6,480.1	15.4	18.3	91.66	162.3	-621.2	330.2	301.0	29.22	11.303	
6,600.0	6,576.9	6,623.3	6,577.9	15.5	18.4	94.88	162.3	-621.2	331.4	302.1	29.35	11.292	
6,700.0	6,669.2	6,722.7	6,677.2	15.6	18.6	100.35	159.3	-621.1	336.4	307.1	29.31	11.479	
6,800.0	6,752.5	6,833.7	6,785.5	15.7	18.7	106.01	135.6	-620.6	345.3	316.1	29.11	11.859	
6,900.0	6,823.8	6,955.7	6,895.7	15.7	18.7	111.16	83.9	-619.6	356.4	327.7	28.76	12.392	
7,000.0	6,880.4	7,090.2	6,999.6	15.8	18.8	115.50	-0.9	-617.8	367.9	339.6	28.34	12.984	
7,100.0	6,920.3	7,237.0	7,084.1	16.1	19.0	118.70	-120.3	-615.4	377.5	349.4	28.10	13.432	
7,200.0	6,942.0	7,393.1	7,133.8	16.6	19.4	120.38	-267.6	-612.3	382.8	354.3	28.46	13.449	
7,300.0	6,945.7	7,527.9	7,141.6	17.4	20.1	120.55	-401.9	-609.5	383.3	353.7	29.64	12.934	
7,400.0	6,945.3	7,627.9	7,141.2	18.3	20.8	120.57	-501.9	-607.5	383.4	352.1	31.25	12.268	
7,500.0	6,944.8	7,727.9	7,140.9	19.4	21.7	120.58	-601.9	-605.4	383.5	350.3	33.14	11.572	
7,600.0	6,944.3	7,827.9	7,140.5	20.7	22.8	120.60	-701.8	-603.4	383.5	348.3	35.25	10.881	
7,700.0	6,943.9	7,927.9	7,140.2	22.0	24.0	120.61	-801.8	-601.3	383.6	346.0	37.54	10.217	
7,800.0	6,943.4	8,027.9	7,139.9	23.4	25.3	120.63	-901.8	-599.2	383.6	343.7	40.00	9.592	
7,900.0	6,942.9	8,127.9	7,139.5	24.8	26.6	120.65	-1,001.8	-597.2	383.7	341.1	42.58	9.012	
8,000.0	6,942.4	8,227.9	7,139.2	26.4	28.0	120.66	-1,101.7	-595.1	383.8	338.5	45.27	8.478	
8,100.0	6,942.0	8,327.9	7,138.8	28.0	29.5	120.68	-1,201.7	-593.1	383.8	335.8	48.04	7.989	
8,200.0	6,941.5	8,427.9	7,138.5	29.6	31.1	120.69	-1,301.7	-591.0	383.9	333.0	50.89	7.543	
8,300.0	6,941.0	8,527.9	7,138.1	31.2	32.7	120.71	-1,401.7	-588.9	384.0	330.2	53.81	7.136	
8,400.0	6,940.6	8,627.9	7,137.8	32.9	34.3	120.72	-1,501.7	-586.9	384.0	327.3	56.77	6.765	
8,500.0	6,940.1	8,727.9	7,137.4	34.6	35.9	120.74	-1,601.6	-584.8	384.1	324.3	59.78	6.426	
8,600.0	6,939.6	8,827.9	7,137.1	36.3	37.6	120.76	-1,701.6	-582.7	384.2	321.3	62.82	6.115	
8,700.0	6,939.1	8,927.9	7,136.7	38.1	39.3	120.77	-1,801.6	-580.7	384.2	318.3	65.90	5.830	
8,800.0	6,938.7	9,027.9	7,136.4	39.8	41.0	120.79	-1,901.6	-578.6	384.3	315.3	69.00	5.569	
8,900.0	6,938.2	9,127.9	7,136.0	41.6	42.7	120.80	-2,001.5	-576.6	384.3	312.2	72.13	5.328	
9,000.0	6,937.7	9,227.9	7,135.7	43.4	44.5	120.82	-2,101.5	-574.5	384.4	309.1	75.28	5.106	
9,100.0	6,937.3	9,327.9	7,135.3	45.2	46.3	120.83	-2,201.5	-572.4	384.5	306.0	78.45	4.901	
9,200.0	6,936.8	9,427.9	7,135.0	47.0	48.0	120.85	-2,301.5	-570.4	384.5	302.9	81.64	4.710	
9,300.0	6,936.3	9,527.9	7,134.6	48.8	49.8	120.86	-2,401.5	-568.3	384.6	299.8	84.84	4.533	
9,400.0	6,935.8	9,627.9	7,134.3	50.7	51.6	120.88	-2,501.4	-566.2	384.7	296.6	88.05	4.369	
9,500.0	6,935.4	9,727.9	7,133.9	52.5	53.4	120.90	-2,601.4	-564.2	384.7	293.5	91.27	4.215	
9,600.0	6,934.9	9,827.9	7,133.6	54.3	55.2	120.91	-2,701.4	-562.1	384.8	290.3	94.50	4.072	
9,700.0	6,934.4	9,927.9	7,133.2	56.2	57.1	120.93	-2,801.4	-560.1	384.9	287.1	97.75	3.937	
9,800.0	6,934.0	10,027.9	7,132.9	58.0	58.9	120.94	-2,901.4	-558.0	384.9	283.9	100.99	3.811	
9,900.0	6,933.5	10,127.9	7,132.5	59.9	60.7	120.96	-3,001.3	-555.9	385.0	280.7	104.25	3.693	
10,000.0	6,933.0	10,227.9	7,132.2	61.8	62.5	120.97	-3,101.3	-553.9	385.0	277.5	107.51	3.581	
10,100.0	6,932.5	10,327.9	7,131.8	63.6	64.4	120.99	-3,201.3	-551.8	385.1	274.3	110.78	3.476	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	6,932.1	10,427.9	7,131.5	65.5	66.2	121.00	-3,301.3	-549.8	385.2	271.1	114.06	3.377	
10,300.0	6,931.6	10,527.9	7,131.1	67.4	68.1	121.02	-3,401.2	-547.7	385.2	267.9	117.33	3.283	
10,400.0	6,931.1	10,627.9	7,130.8	69.2	69.9	121.03	-3,501.2	-545.6	385.3	264.7	120.62	3.194	
10,500.0	6,930.7	10,727.9	7,130.4	71.1	71.8	121.05	-3,601.2	-543.6	385.4	261.5	123.90	3.110	
10,600.0	6,930.2	10,827.9	7,130.1	73.0	73.7	121.07	-3,701.2	-541.5	385.4	258.2	127.19	3.030	
10,700.0	6,929.7	10,927.9	7,129.7	74.9	75.5	121.08	-3,801.2	-539.4	385.5	255.0	130.48	2.954	
10,800.0	6,929.2	11,027.9	7,129.4	76.7	77.4	121.10	-3,901.1	-537.4	385.6	251.8	133.78	2.882	
10,900.0	6,928.8	11,127.9	7,129.0	78.6	79.3	121.11	-4,001.1	-535.3	385.6	248.5	137.08	2.813	
11,000.0	6,928.3	11,227.9	7,128.7	80.5	81.2	121.13	-4,101.1	-533.3	385.7	245.3	140.38	2.748	
11,100.0	6,927.8	11,327.9	7,128.3	82.4	83.0	121.14	-4,201.1	-531.2	385.7	242.1	143.68	2.685	
11,200.0	6,927.4	11,427.9	7,128.0	84.3	84.9	121.16	-4,301.0	-529.1	385.8	238.8	146.98	2.625	
11,300.0	6,926.9	11,527.9	7,127.6	86.2	86.8	121.17	-4,401.0	-527.1	385.9	235.6	150.29	2.568	
11,400.0	6,926.4	11,627.9	7,127.3	88.1	88.7	121.19	-4,501.0	-525.0	385.9	232.3	153.59	2.513	
11,449.5	6,926.2	11,677.4	7,127.1	89.0	89.6	121.20	-4,550.5	-524.0	386.0	230.7	155.23	2.486	
11,489.3	6,926.0	11,709.6	7,127.0	89.8	90.2	121.20	-4,582.8	-523.3	386.1	229.6	156.42	2.468	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.99	0.0	-16.8	16.8	16.8	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	-89.99	0.0	-16.8	16.8	16.6	0.22	74.693	
200.0	200.0	200.0	200.0	0.3	0.3	-89.99	0.0	-16.8	16.8	16.1	0.67	24.898	
300.0	300.0	300.0	300.0	0.6	0.6	-89.99	0.0	-16.8	16.8	15.7	1.12	14.939	
400.0	400.0	400.0	400.0	0.8	0.8	-89.99	0.0	-16.8	16.8	15.2	1.57	10.670	
500.0	500.0	500.0	500.0	1.0	1.0	-89.99	0.0	-16.8	16.8	14.8	2.02	8.299	
600.0	600.0	600.0	600.0	1.2	1.2	-89.99	0.0	-16.8	16.8	14.3	2.47	6.790	
700.0	700.0	700.0	700.0	1.5	1.5	-89.99	0.0	-16.8	16.8	13.9	2.92	5.746	
800.0	800.0	800.0	800.0	1.7	1.7	-89.99	0.0	-16.8	16.8	13.4	3.37	4.980	
900.0	900.0	900.0	900.0	1.9	1.9	-89.99	0.0	-16.8	16.8	13.0	3.82	4.394	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.99	0.0	-16.8	16.8	12.5	4.27	3.931	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.99	0.0	-16.8	16.8	12.1	4.72	3.557	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.99	0.0	-16.8	16.8	11.6	5.17	3.248	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.99	0.0	-16.8	16.8	11.2	5.62	2.988	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.99	0.0	-16.8	16.8	10.7	6.07	2.766	CC
1,500.0	1,500.0	1,499.4	1,499.4	3.3	3.2	-88.13	0.6	-18.4	18.4	11.9	6.51	2.831	
1,600.0	1,600.0	1,598.6	1,598.4	3.5	3.5	-84.13	2.4	-23.2	23.4	16.5	6.94	3.372	
1,700.0	1,700.0	1,697.4	1,696.9	3.7	3.7	-20.48	5.4	-31.3	30.2	22.9	7.36	4.105	
1,800.0	1,799.8	1,796.1	1,794.8	3.9	3.9	-19.51	9.5	-42.4	37.2	29.4	7.78	4.782	
1,900.0	1,899.5	1,895.6	1,893.3	4.1	4.2	-19.78	14.5	-55.9	43.2	35.0	8.19	5.281	
2,000.0	1,998.7	1,995.5	1,992.1	4.4	4.4	-21.41	19.5	-69.6	46.2	37.6	8.61	5.368	
2,100.0	2,097.9	2,095.5	2,091.0	4.6	4.7	-23.32	24.6	-83.3	48.3	39.2	9.05	5.332	
2,200.0	2,197.0	2,195.5	2,189.9	4.9	5.0	-25.07	29.6	-96.9	50.4	40.9	9.51	5.298	
2,300.0	2,296.1	2,295.4	2,288.8	5.2	5.3	-26.68	34.7	-110.6	52.6	42.6	9.98	5.267	
2,400.0	2,395.3	2,395.4	2,387.7	5.4	5.6	-28.16	39.7	-124.2	54.8	44.3	10.46	5.238	
2,500.0	2,494.4	2,495.4	2,486.6	5.7	5.9	-29.53	44.8	-137.9	57.0	46.1	10.94	5.210	
2,600.0	2,593.6	2,595.3	2,585.5	6.0	6.3	-30.79	49.8	-151.6	59.3	47.8	11.44	5.183	
2,700.0	2,692.7	2,695.3	2,684.4	6.3	6.6	-31.96	54.8	-165.2	61.6	49.6	11.94	5.157	
2,800.0	2,791.8	2,795.3	2,783.3	6.6	6.9	-33.04	59.9	-178.9	63.9	51.4	12.45	5.132	
2,900.0	2,891.0	2,895.2	2,882.2	6.9	7.2	-34.05	64.9	-192.5	66.2	53.3	12.97	5.108	
3,000.0	2,990.1	2,995.2	2,981.1	7.2	7.6	-34.99	70.0	-206.2	68.6	55.1	13.49	5.085	
3,100.0	3,089.2	3,095.1	3,080.0	7.5	7.9	-35.86	75.0	-219.9	71.0	57.0	14.02	5.062	
3,200.0	3,188.4	3,195.1	3,178.9	7.8	8.2	-36.68	80.1	-233.5	73.4	58.8	14.56	5.040	
3,300.0	3,287.5	3,295.1	3,277.8	8.1	8.6	-37.45	85.1	-247.2	75.8	60.7	15.10	5.019	
3,400.0	3,386.7	3,395.0	3,376.7	8.4	8.9	-38.17	90.2	-260.9	78.2	62.5	15.64	4.998	
3,500.0	3,485.8	3,495.0	3,475.6	8.7	9.2	-38.84	95.2	-274.5	80.6	64.4	16.19	4.978	
3,600.0	3,584.9	3,595.0	3,574.5	9.1	9.6	-39.48	100.3	-288.2	83.1	66.3	16.75	4.959	
3,700.0	3,684.1	3,694.9	3,673.4	9.4	9.9	-40.08	105.3	-301.8	85.5	68.2	17.31	4.941	
3,800.0	3,783.2	3,794.9	3,772.3	9.7	10.3	-40.65	110.4	-315.5	88.0	70.1	17.87	4.923	
3,900.0	3,882.4	3,894.9	3,871.2	10.0	10.6	-41.18	115.4	-329.2	90.4	72.0	18.44	4.906	
4,000.0	3,981.5	3,994.8	3,970.1	10.3	10.9	-41.69	120.5	-342.8	92.9	73.9	19.01	4.889	
4,100.0	4,080.6	4,094.8	4,069.0	10.6	11.3	-42.17	125.5	-356.5	95.4	75.8	19.58	4.873	
4,200.0	4,179.8	4,194.8	4,167.9	10.9	11.6	-42.44	130.5	-370.1	98.3	78.2	20.13	4.882	
4,300.0	4,279.4	4,294.6	4,266.7	11.2	12.0	-41.56	135.6	-383.8	103.5	82.9	20.56	5.034	
4,400.0	4,379.2	4,394.2	4,365.3	11.4	12.3	-39.64	140.6	-397.4	111.4	90.5	20.89	5.333	
4,500.0	4,479.2	4,493.5	4,463.4	11.5	12.7	-37.01	145.6	-411.0	122.2	101.0	21.15	5.778	
4,600.0	4,579.2	4,592.4	4,561.3	11.7	13.0	-95.00	150.6	-424.5	135.2	113.8	21.33	6.336	
4,700.0	4,679.2	4,695.2	4,663.2	11.9	13.3	-92.69	155.4	-437.5	147.5	125.8	21.65	6.813	
4,800.0	4,779.2	4,799.9	4,767.3	12.1	13.6	-91.20	159.0	-447.2	156.7	134.7	21.98	7.128	
4,900.0	4,879.2	4,905.2	4,872.4	12.3	13.8	-90.35	161.3	-453.4	162.6	140.2	22.34	7.276	
5,000.0	4,979.2	5,010.8	4,978.0	12.4	13.9	-90.01	162.3	-456.0	165.0	142.3	22.72	7.263	
5,100.0	5,079.2	5,112.0	5,079.2	12.6	14.1	-90.00	162.3	-456.1	165.1	142.0	23.12	7.141	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,212.0	5,179.2	12.8	14.3	-90.00	162.3	-456.1	165.1	141.6	23.53	7.016	
5,300.0	5,279.2	5,312.0	5,279.2	13.0	14.4	-90.00	162.3	-456.1	165.1	141.1	23.94	6.895	
5,400.0	5,379.2	5,412.0	5,379.2	13.2	14.6	-90.00	162.3	-456.1	165.1	140.7	24.36	6.778	
5,500.0	5,479.2	5,512.0	5,479.2	13.4	14.8	-90.00	162.3	-456.1	165.1	140.3	24.77	6.664	
5,600.0	5,579.2	5,612.0	5,579.2	13.6	15.0	-90.00	162.3	-456.1	165.1	139.9	25.19	6.554	
5,700.0	5,679.2	5,712.0	5,679.2	13.8	15.2	-90.00	162.3	-456.1	165.1	139.5	25.61	6.447	
5,800.0	5,779.2	5,812.0	5,779.2	14.0	15.3	-90.00	162.3	-456.1	165.1	139.1	26.02	6.344	
5,900.0	5,879.2	5,912.0	5,879.2	14.2	15.5	-90.00	162.3	-456.1	165.1	138.6	26.44	6.243	
6,000.0	5,979.2	6,012.0	5,979.2	14.4	15.7	-90.00	162.3	-456.1	165.1	138.2	26.86	6.145	
6,100.0	6,079.2	6,112.0	6,079.2	14.6	15.9	-90.00	162.3	-456.1	165.1	137.8	27.29	6.050	
6,200.0	6,179.2	6,212.0	6,179.2	14.8	16.1	-90.00	162.3	-456.1	165.1	137.4	27.71	5.958	
6,300.0	6,279.2	6,312.0	6,279.2	15.0	16.3	-90.00	162.3	-456.1	165.1	137.0	28.13	5.868	
6,400.0	6,379.2	6,412.0	6,379.2	15.2	16.4	-90.00	162.3	-456.1	165.1	136.5	28.56	5.781	
6,500.0	6,479.1	6,512.3	6,479.4	15.4	16.6	91.21	159.6	-456.0	165.1	136.1	28.97	5.698	
6,600.0	6,576.9	6,613.0	6,578.0	15.5	16.7	91.23	139.7	-455.6	165.1	135.9	29.18	5.658	
6,700.0	6,669.2	6,713.7	6,670.8	15.6	16.8	91.21	101.2	-454.8	165.1	135.8	29.31	5.633	
6,800.0	6,752.5	6,814.4	6,754.6	15.7	16.8	91.14	45.6	-453.7	165.1	135.6	29.45	5.606	
6,900.0	6,823.8	6,915.0	6,826.1	15.7	16.9	91.03	-24.9	-452.2	165.1	135.4	29.73	5.554	
7,000.0	6,880.4	7,015.5	6,882.6	15.8	17.0	90.88	-107.8	-450.5	165.1	134.8	30.25	5.456	
7,100.0	6,920.3	7,115.9	6,922.2	16.1	17.2	90.69	-200.0	-448.6	165.1	133.9	31.13	5.303	
7,200.0	6,942.0	7,216.2	6,943.4	16.6	17.7	90.49	-297.8	-446.6	165.1	132.7	32.38	5.098	
7,292.6	6,947.9	7,308.9	6,946.8	17.3	18.3	89.61	-390.3	-444.7	165.1	131.2	33.89	4.871	
7,300.0	6,945.7	7,316.4	6,946.7	17.4	18.3	90.34	-397.8	-444.5	165.1	131.1	33.99	4.856	
7,400.0	6,945.3	7,416.4	6,946.3	18.3	19.2	90.34	-497.8	-442.5	165.1	129.1	35.92	4.595	
7,500.0	6,944.8	7,516.4	6,945.8	19.4	20.2	90.34	-597.8	-440.4	165.1	126.9	38.15	4.327	
7,600.0	6,944.3	7,616.4	6,945.3	20.7	21.4	90.34	-697.8	-438.3	165.1	124.4	40.61	4.064	
7,700.0	6,943.9	7,716.4	6,944.8	22.0	22.7	90.34	-797.7	-436.3	165.1	121.8	43.28	3.814	
7,800.0	6,943.4	7,816.4	6,944.4	23.4	24.0	90.34	-897.7	-434.2	165.1	118.9	46.12	3.579	
7,900.0	6,942.9	7,916.4	6,943.9	24.8	25.4	90.34	-997.7	-432.2	165.1	116.0	49.09	3.362	
8,000.0	6,942.4	8,016.4	6,943.4	26.4	26.9	90.34	-1,097.7	-430.1	165.1	112.9	52.18	3.163	
8,100.0	6,942.0	8,116.4	6,943.0	28.0	28.5	90.34	-1,197.6	-428.0	165.1	109.7	55.36	2.981	
8,200.0	6,941.5	8,216.4	6,942.5	29.6	30.1	90.34	-1,297.6	-426.0	165.1	106.4	58.63	2.815	
8,300.0	6,941.0	8,316.4	6,942.0	31.2	31.7	90.34	-1,397.6	-423.9	165.1	103.1	61.96	2.664	
8,400.0	6,940.6	8,416.4	6,941.5	32.9	33.4	90.34	-1,497.6	-421.9	165.1	99.7	65.35	2.526	
8,500.0	6,940.1	8,516.4	6,941.1	34.6	35.1	90.34	-1,597.6	-419.8	165.1	96.3	68.78	2.400	
8,600.0	6,939.6	8,616.4	6,940.6	36.3	36.8	90.34	-1,697.5	-417.7	165.1	92.8	72.26	2.284	
8,700.0	6,939.1	8,716.4	6,940.1	38.1	38.5	90.34	-1,797.5	-415.7	165.1	89.3	75.77	2.178	
8,800.0	6,938.7	8,816.4	6,939.7	39.8	40.2	90.34	-1,897.5	-413.6	165.1	85.8	79.32	2.081	
8,900.0	6,938.2	8,916.4	6,939.2	41.6	42.0	90.34	-1,997.5	-411.5	165.1	82.2	82.89	1.991	
9,000.0	6,937.7	9,016.4	6,938.7	43.4	43.8	90.34	-2,097.4	-409.5	165.1	78.6	86.48	1.909	
9,100.0	6,937.3	9,116.4	6,938.2	45.2	45.6	90.34	-2,197.4	-407.4	165.1	75.0	90.10	1.832	
9,200.0	6,936.8	9,216.4	6,937.8	47.0	47.4	90.34	-2,297.4	-405.4	165.1	71.3	93.73	1.761	
9,300.0	6,936.3	9,316.4	6,937.3	48.8	49.2	90.34	-2,397.4	-403.3	165.1	67.7	97.38	1.695	
9,400.0	6,935.8	9,416.4	6,936.8	50.7	51.0	90.34	-2,497.4	-401.2	165.1	64.0	101.05	1.634	
9,500.0	6,935.4	9,516.4	6,936.4	52.5	52.8	90.34	-2,597.3	-399.2	165.1	60.3	104.73	1.576	
9,600.0	6,934.9	9,616.4	6,935.9	54.3	54.7	90.34	-2,697.3	-397.1	165.1	56.7	108.42	1.523	
9,700.0	6,934.4	9,716.4	6,935.4	56.2	56.5	90.34	-2,797.3	-395.0	165.1	53.0	112.12	1.472	Level 3
9,800.0	6,934.0	9,816.4	6,934.9	58.0	58.3	90.34	-2,897.3	-393.0	165.1	49.2	115.83	1.425	Level 3
9,900.0	6,933.5	9,916.4	6,934.5	59.9	60.2	90.34	-2,997.2	-390.9	165.1	45.5	119.55	1.381	Level 3
10,000.0	6,933.0	10,016.4	6,934.0	61.8	62.0	90.34	-3,097.2	-388.9	165.1	41.8	123.27	1.339	Level 3
10,100.0	6,932.5	10,116.4	6,933.5	63.6	63.9	90.34	-3,197.2	-386.8	165.1	38.1	127.01	1.300	Level 3
10,200.0	6,932.1	10,216.4	6,933.1	65.5	65.8	90.34	-3,297.2	-384.7	165.1	34.3	130.75	1.263	Level 3

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-1 **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	6,931.6	10,316.4	6,932.6	67.4	67.6	90.34	-3,397.2	-382.7	165.1	30.6	134.49	1.227	Level 2
10,400.0	6,931.1	10,416.4	6,932.1	69.2	69.5	90.34	-3,497.1	-380.6	165.1	26.8	138.25	1.194	Level 2
10,500.0	6,930.7	10,516.4	6,931.6	71.1	71.4	90.34	-3,597.1	-378.5	165.1	23.1	142.00	1.162	Level 2
10,600.0	6,930.2	10,616.4	6,931.2	73.0	73.2	90.34	-3,697.1	-376.5	165.1	19.3	145.77	1.132	Level 2
10,700.0	6,929.7	10,716.4	6,930.7	74.9	75.1	90.34	-3,797.1	-374.4	165.1	15.5	149.53	1.104	Level 2
10,800.0	6,929.2	10,816.4	6,930.2	76.7	77.0	90.34	-3,897.0	-372.4	165.1	11.8	153.30	1.077	Level 2
10,900.0	6,928.8	10,916.4	6,929.8	78.6	78.9	90.34	-3,997.0	-370.3	165.1	8.0	157.08	1.051	Level 2
11,000.0	6,928.3	11,016.4	6,929.3	80.5	80.7	90.34	-4,097.0	-368.2	165.1	4.2	160.85	1.026	Level 2
11,100.0	6,927.8	11,116.4	6,928.8	82.4	82.6	90.34	-4,197.0	-366.2	165.1	0.4	164.64	1.003	Level 2
11,200.0	6,927.4	11,216.4	6,928.3	84.3	84.5	90.34	-4,297.0	-364.1	165.1	-3.3	168.42	0.980	Level 1
11,300.0	6,926.9	11,316.4	6,927.9	86.2	86.4	90.34	-4,396.9	-362.0	165.1	-7.1	172.21	0.959	Level 1
11,400.0	6,926.4	11,416.4	6,927.4	88.1	88.3	90.34	-4,496.9	-360.0	165.1	-10.9	176.00	0.938	Level 1
11,452.8	6,926.2	11,469.2	6,927.2	89.1	89.3	90.34	-4,549.7	-358.9	165.1	-12.9	178.00	0.927	Level 1
11,489.3	6,926.0	11,502.3	6,927.0	89.8	89.9	90.34	-4,582.8	-358.2	165.1	-14.2	179.32	0.921	Level 1, ES, SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.90	0.0	14.0	14.0	14.0	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	89.90	0.0	14.0	14.0	13.8	0.22	62.244	
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	14.0	14.0	13.3	0.67	20.748	
300.0	300.0	300.0	300.0	0.6	0.6	89.90	0.0	14.0	14.0	12.9	1.12	12.449	
400.0	400.0	400.0	400.0	0.8	0.8	89.90	0.0	14.0	14.0	12.4	1.57	8.892	
500.0	500.0	500.0	500.0	1.0	1.0	89.90	0.0	14.0	14.0	12.0	2.02	6.916	
600.0	600.0	600.0	600.0	1.2	1.2	89.90	0.0	14.0	14.0	11.5	2.47	5.659	
700.0	700.0	700.0	700.0	1.5	1.5	89.90	0.0	14.0	14.0	11.1	2.92	4.788	
800.0	800.0	800.0	800.0	1.7	1.7	89.90	0.0	14.0	14.0	10.6	3.37	4.150	
900.0	900.0	900.0	900.0	1.9	1.9	89.90	0.0	14.0	14.0	10.2	3.82	3.661	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.90	0.0	14.0	14.0	9.7	4.27	3.276	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.90	0.0	14.0	14.0	9.3	4.72	2.964	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.90	0.0	14.0	14.0	8.8	5.17	2.706	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.90	0.0	14.0	14.0	8.4	5.62	2.490	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.90	0.0	14.0	14.0	7.9	6.07	2.305	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.90	0.0	14.0	14.0	7.5	6.52	2.146	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	89.90	0.0	14.0	14.0	7.0	6.97	2.008	CC
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	153.88	0.0	14.0	15.5	8.1	7.41	2.097	
1,800.0	1,799.8	1,799.8	1,799.8	3.9	3.9	160.34	0.0	14.0	20.4	12.5	7.83	2.600	
1,900.0	1,899.5	1,900.1	1,900.0	4.1	4.2	164.67	1.0	13.1	27.7	19.4	8.25	3.353	
2,000.0	1,998.7	2,000.4	2,000.3	4.4	4.4	166.11	4.0	10.6	36.1	27.5	8.66	4.173	
2,100.0	2,097.9	2,101.0	2,100.7	4.6	4.6	165.43	9.0	6.3	43.4	34.3	9.09	4.776	
2,200.0	2,197.0	2,201.8	2,201.1	4.9	4.8	163.13	16.0	0.2	48.6	39.1	9.54	5.096	
2,300.0	2,296.1	2,302.4	2,301.0	5.2	5.1	159.55	24.9	-7.5	51.9	41.9	10.00	5.192	
2,400.0	2,395.3	2,402.3	2,400.1	5.4	5.3	155.98	34.2	-15.5	54.9	44.5	10.47	5.248	
2,500.0	2,494.4	2,502.2	2,499.3	5.7	5.6	152.79	43.5	-23.5	58.1	47.2	10.95	5.309	
2,600.0	2,593.6	2,602.1	2,598.4	6.0	5.8	149.94	52.9	-31.5	61.5	50.1	11.45	5.372	
2,700.0	2,692.7	2,702.0	2,697.6	6.3	6.1	147.40	62.2	-39.6	65.0	53.1	11.96	5.435	
2,800.0	2,791.8	2,801.9	2,796.7	6.6	6.4	145.12	71.5	-47.6	68.7	56.2	12.49	5.497	
2,900.0	2,891.0	2,901.8	2,895.8	6.9	6.7	143.07	80.8	-55.6	72.4	59.4	13.03	5.556	
3,000.0	2,990.1	3,001.7	2,995.0	7.2	6.9	141.22	90.1	-63.6	76.2	62.6	13.57	5.613	
3,100.0	3,089.2	3,101.6	3,094.1	7.5	7.2	139.55	99.4	-71.7	80.1	65.9	14.13	5.667	
3,200.0	3,188.4	3,201.5	3,193.3	7.8	7.5	138.04	108.7	-79.7	84.0	69.3	14.69	5.718	
3,300.0	3,287.5	3,301.4	3,292.4	8.1	7.8	136.66	118.0	-87.7	88.0	72.7	15.26	5.766	
3,400.0	3,386.7	3,401.3	3,391.5	8.4	8.1	135.40	127.3	-95.7	92.0	76.2	15.84	5.811	
3,500.0	3,485.8	3,501.2	3,490.7	8.7	8.4	134.25	136.6	-103.8	96.1	79.7	16.42	5.853	
3,600.0	3,584.9	3,600.0	3,588.8	9.1	8.6	133.45	145.5	-111.4	100.4	83.4	16.98	5.914	
3,700.0	3,684.1	3,699.3	3,687.6	9.4	8.9	133.89	152.6	-117.6	105.7	88.2	17.46	6.054	
3,800.0	3,783.2	3,797.9	3,785.9	9.7	9.1	135.48	157.8	-122.0	112.0	94.2	17.88	6.265	
3,900.0	3,882.4	3,896.1	3,884.1	10.0	9.3	137.98	161.0	-124.8	119.7	101.4	18.26	6.553	
4,000.0	3,981.5	3,993.9	3,981.8	10.3	9.4	141.13	162.3	-125.9	128.8	110.2	18.60	6.926	
4,100.0	4,080.6	4,092.7	4,080.6	10.6	9.6	144.48	162.3	-125.9	139.2	120.3	18.93	7.357	
4,200.0	4,179.8	4,191.9	4,179.8	10.9	9.8	147.33	162.3	-125.9	149.7	130.4	19.29	7.760	
4,300.0	4,279.4	4,291.4	4,279.4	11.2	10.0	149.26	162.3	-125.9	157.7	138.1	19.65	8.028	
4,400.0	4,379.2	4,391.3	4,379.2	11.4	10.2	150.38	162.3	-125.9	162.9	142.9	20.01	8.140	
4,500.0	4,479.2	4,491.2	4,479.2	11.5	10.4	150.83	162.3	-125.9	165.0	144.7	20.37	8.101	
4,600.0	4,579.2	4,591.2	4,579.2	11.7	10.6	89.99	162.3	-125.9	165.1	144.4	20.72	7.967	
4,700.0	4,679.2	4,691.2	4,679.2	11.9	10.8	89.99	162.3	-125.9	165.1	143.9	21.14	7.809	
4,800.0	4,779.2	4,791.2	4,779.2	12.1	11.0	89.99	162.3	-125.9	165.1	143.5	21.56	7.656	
4,900.0	4,879.2	4,891.2	4,879.2	12.3	11.3	89.99	162.3	-125.9	165.1	143.1	21.98	7.510	
5,000.0	4,979.2	4,991.2	4,979.2	12.4	11.5	89.99	162.3	-125.9	165.1	142.7	22.41	7.368	
5,100.0	5,079.2	5,091.2	5,079.2	12.6	11.7	89.99	162.3	-125.9	165.1	142.3	22.83	7.231	

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,191.2	5,179.2	12.8	11.9	89.99	162.3	-125.9	165.1	141.8	23.25	7.099	
5,300.0	5,279.2	5,291.2	5,279.2	13.0	12.1	89.99	162.3	-125.9	165.1	141.4	23.68	6.972	
5,400.0	5,379.2	5,391.2	5,379.2	13.2	12.3	89.99	162.3	-125.9	165.1	141.0	24.11	6.848	
5,500.0	5,479.2	5,491.2	5,479.2	13.4	12.5	89.99	162.3	-125.9	165.1	140.6	24.53	6.729	
5,600.0	5,579.2	5,591.2	5,579.2	13.6	12.7	89.99	162.3	-125.9	165.1	140.1	24.96	6.614	
5,700.0	5,679.2	5,691.2	5,679.2	13.8	12.9	89.99	162.3	-125.9	165.1	139.7	25.39	6.502	
5,800.0	5,779.2	5,791.2	5,779.2	14.0	13.2	89.99	162.3	-125.9	165.1	139.3	25.82	6.394	
5,900.0	5,879.2	5,891.2	5,879.2	14.2	13.4	89.99	162.3	-125.9	165.1	138.8	26.25	6.289	
6,000.0	5,979.2	5,991.2	5,979.2	14.4	13.6	89.99	162.3	-125.9	165.1	138.4	26.68	6.188	
6,100.0	6,079.2	6,091.2	6,079.2	14.6	13.8	89.99	162.3	-125.9	165.1	138.0	27.11	6.089	
6,200.0	6,179.2	6,191.2	6,179.2	14.8	14.0	89.99	162.3	-125.9	165.1	137.5	27.54	5.994	
6,300.0	6,279.2	6,291.2	6,279.2	15.0	14.2	89.99	162.3	-125.9	165.1	137.1	27.98	5.901	
6,400.0	6,379.2	6,391.2	6,379.2	15.2	14.4	89.99	162.3	-125.9	165.1	136.7	28.41	5.811	
6,500.0	6,479.1	6,490.9	6,478.7	15.4	14.6	-88.83	159.6	-125.9	165.1	136.3	28.81	5.731	
6,600.0	6,576.9	6,590.2	6,576.0	15.5	14.7	-88.88	140.0	-125.4	165.1	136.1	29.01	5.690	
6,700.0	6,669.2	6,689.6	6,667.8	15.6	14.8	-88.96	102.3	-124.7	165.1	135.9	29.14	5.665	
6,800.0	6,752.5	6,789.1	6,750.9	15.7	14.9	-89.09	47.8	-123.5	165.1	135.8	29.28	5.638	
6,900.0	6,823.8	6,888.6	6,822.1	15.7	15.0	-89.24	-21.4	-122.1	165.1	135.5	29.55	5.586	
7,000.0	6,880.4	6,988.3	6,879.0	15.8	15.1	-89.43	-103.0	-120.4	165.1	135.0	30.08	5.488	
7,100.0	6,920.3	7,088.0	6,919.3	16.1	15.5	-89.63	-194.1	-118.6	165.1	134.1	30.95	5.334	
7,200.0	6,942.0	7,187.9	6,941.6	16.6	16.2	-89.85	-291.2	-116.5	165.1	132.9	32.20	5.126	
7,245.0	6,946.2	7,232.9	6,945.4	17.0	16.5	-89.73	-336.1	-115.6	165.1	132.2	32.90	5.017	
7,300.0	6,945.7	7,287.8	6,945.8	17.4	17.0	-90.01	-391.0	-114.5	165.1	131.3	33.81	4.882	
7,400.0	6,945.3	7,387.8	6,945.3	18.3	17.9	-90.01	-491.0	-112.4	165.1	129.3	35.75	4.617	
7,500.0	6,944.8	7,487.8	6,944.8	19.4	19.1	-90.01	-591.0	-110.4	165.1	127.1	37.98	4.346	
7,600.0	6,944.3	7,587.8	6,944.3	20.7	20.3	-90.01	-690.9	-108.3	165.1	124.6	40.46	4.080	
7,700.0	6,943.9	7,687.8	6,943.9	22.0	21.6	-90.01	-790.9	-106.2	165.1	121.9	43.13	3.827	
7,800.0	6,943.4	7,787.8	6,943.4	23.4	23.0	-90.01	-890.9	-104.2	165.1	119.1	45.98	3.590	
7,900.0	6,942.9	7,887.8	6,942.9	24.8	24.5	-90.01	-990.9	-102.1	165.1	116.1	48.96	3.372	
8,000.0	6,942.4	7,987.8	6,942.5	26.4	26.1	-90.01	-1,090.9	-100.0	165.1	113.0	52.05	3.171	
8,100.0	6,942.0	8,087.8	6,942.0	28.0	27.7	-90.01	-1,190.8	-98.0	165.1	109.8	55.24	2.988	
8,200.0	6,941.5	8,187.8	6,941.5	29.6	29.3	-90.01	-1,290.8	-95.9	165.1	106.6	58.51	2.821	
8,300.0	6,941.0	8,287.8	6,941.0	31.2	31.0	-90.01	-1,390.8	-93.9	165.1	103.2	61.84	2.669	
8,400.0	6,940.6	8,387.8	6,940.6	32.9	32.7	-90.01	-1,490.8	-91.8	165.1	99.8	65.23	2.530	
8,500.0	6,940.1	8,487.8	6,940.1	34.6	34.4	-90.01	-1,590.7	-89.7	165.1	96.4	68.67	2.404	
8,600.0	6,939.6	8,587.8	6,939.6	36.3	36.1	-90.01	-1,690.7	-87.7	165.1	92.9	72.15	2.288	
8,700.0	6,939.1	8,687.8	6,939.2	38.1	37.9	-90.01	-1,790.7	-85.6	165.1	89.4	75.67	2.181	
8,800.0	6,938.7	8,787.8	6,938.7	39.8	39.6	-90.01	-1,890.7	-83.5	165.1	85.8	79.22	2.084	
8,900.0	6,938.2	8,887.8	6,938.2	41.6	41.4	-90.01	-1,990.7	-81.5	165.1	82.3	82.79	1.994	
9,000.0	6,937.7	8,987.8	6,937.7	43.4	43.2	-90.01	-2,090.6	-79.4	165.1	78.7	86.39	1.911	
9,100.0	6,937.3	9,087.8	6,937.3	45.2	45.0	-90.01	-2,190.6	-77.4	165.1	75.1	90.01	1.834	
9,200.0	6,936.8	9,187.8	6,936.8	47.0	46.9	-90.01	-2,290.6	-75.3	165.1	71.4	93.64	1.763	
9,300.0	6,936.3	9,287.8	6,936.3	48.8	48.7	-90.01	-2,390.6	-73.2	165.1	67.8	97.30	1.697	
9,400.0	6,935.8	9,387.8	6,935.9	50.7	50.5	-90.01	-2,490.5	-71.2	165.1	64.1	100.96	1.635	
9,500.0	6,935.4	9,487.8	6,935.4	52.5	52.3	-90.01	-2,590.5	-69.1	165.1	60.4	104.64	1.577	
9,600.0	6,934.9	9,587.8	6,934.9	54.3	54.2	-90.01	-2,690.5	-67.0	165.1	56.7	108.34	1.524	
9,700.0	6,934.4	9,687.8	6,934.4	56.2	56.0	-90.01	-2,790.5	-65.0	165.1	53.0	112.04	1.473	Level 3
9,800.0	6,934.0	9,787.8	6,934.0	58.0	57.9	-90.01	-2,890.4	-62.9	165.1	49.3	115.75	1.426	Level 3
9,900.0	6,933.5	9,887.8	6,933.5	59.9	59.8	-90.01	-2,990.4	-60.8	165.1	45.6	119.47	1.382	Level 3
10,000.0	6,933.0	9,987.8	6,933.0	61.8	61.6	-90.01	-3,090.4	-58.8	165.1	41.9	123.20	1.340	Level 3
10,100.0	6,932.5	10,087.8	6,932.6	63.6	63.5	-90.01	-3,190.4	-56.7	165.1	38.1	126.93	1.300	Level 3
10,200.0	6,932.1	10,187.8	6,932.1	65.5	65.4	-90.01	-3,290.4	-54.7	165.1	34.4	130.68	1.263	Level 3

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	6,931.6	10,287.8	6,931.6	67.4	67.2	-90.01	-3,390.3	-52.6	165.1	30.6	134.42	1.228	Level 2
10,400.0	6,931.1	10,387.8	6,931.1	69.2	69.1	-90.01	-3,490.3	-50.5	165.1	26.9	138.18	1.195	Level 2
10,500.0	6,930.7	10,487.8	6,930.7	71.1	71.0	-90.01	-3,590.3	-48.5	165.1	23.1	141.93	1.163	Level 2
10,600.0	6,930.2	10,587.8	6,930.2	73.0	72.9	-90.01	-3,690.3	-46.4	165.1	19.4	145.70	1.133	Level 2
10,700.0	6,929.7	10,687.8	6,929.7	74.9	74.7	-90.01	-3,790.2	-44.3	165.1	15.6	149.47	1.104	Level 2
10,800.0	6,929.2	10,787.8	6,929.3	76.7	76.6	-90.01	-3,890.2	-42.3	165.1	11.8	153.24	1.077	Level 2
10,900.0	6,928.8	10,887.8	6,928.8	78.6	78.5	-90.01	-3,990.2	-40.2	165.1	8.1	157.01	1.051	Level 2
11,000.0	6,928.3	10,987.8	6,928.3	80.5	80.4	-90.01	-4,090.2	-38.2	165.1	4.3	160.79	1.027	Level 2
11,100.0	6,927.8	11,087.8	6,927.9	82.4	82.3	-90.01	-4,190.2	-36.1	165.1	0.5	164.57	1.003	Level 2
11,200.0	6,927.4	11,187.8	6,927.4	84.3	84.2	-90.01	-4,290.1	-34.0	165.1	-3.3	168.36	0.981	Level 1
11,300.0	6,926.9	11,287.8	6,926.9	86.2	86.1	-90.01	-4,390.1	-32.0	165.1	-7.1	172.14	0.959	Level 1
11,400.0	6,926.4	11,387.8	6,926.4	88.1	88.0	-90.01	-4,490.1	-29.9	165.1	-10.9	175.93	0.938	Level 1
11,489.3	6,926.0	11,477.1	6,926.0	89.8	89.7	-90.01	-4,579.4	-28.1	165.1	-14.2	179.32	0.921	Level 1, ES, SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.97	0.0	28.0	28.0				
100.0	100.0	99.0	99.0	0.1	0.1	89.97	0.0	28.0	28.0	27.8	0.22	125.113	
200.0	200.0	199.0	199.0	0.3	0.3	89.97	0.0	28.0	28.0	27.3	0.67	41.635	
300.0	300.0	299.0	299.0	0.6	0.6	89.97	0.0	28.0	28.0	26.9	1.12	24.948	
400.0	400.0	399.0	399.0	0.8	0.8	89.97	0.0	28.0	28.0	26.4	1.57	17.809	
500.0	500.0	499.0	499.0	1.0	1.0	89.97	0.0	28.0	28.0	26.0	2.02	13.847	
600.0	600.0	599.0	599.0	1.2	1.2	89.97	0.0	28.0	28.0	25.5	2.47	11.327	
700.0	700.0	699.0	699.0	1.5	1.5	89.97	0.0	28.0	28.0	25.1	2.92	9.583	
800.0	800.0	799.0	799.0	1.7	1.7	89.97	0.0	28.0	28.0	24.6	3.37	8.305	
900.0	900.0	899.0	899.0	1.9	1.9	89.97	0.0	28.0	28.0	24.2	3.82	7.327	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.97	0.0	28.0	28.0	23.7	4.27	6.555	
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.97	0.0	28.0	28.0	23.3	4.72	5.931	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.97	0.0	28.0	28.0	22.8	5.17	5.415	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.97	0.0	28.0	28.0	22.4	5.62	4.982	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.97	0.0	28.0	28.0	21.9	6.07	4.612	
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	89.97	0.0	28.0	28.0	21.5	6.52	4.294	
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	89.97	0.0	28.0	28.0	21.0	6.97	4.017	CC, ES
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	152.45	0.0	28.0	29.5	22.1	7.41	3.986	
1,800.0	1,799.8	1,798.8	1,798.8	3.9	3.9	156.47	0.0	28.0	34.2	26.4	7.83	4.372	
1,900.0	1,899.5	1,898.5	1,898.5	4.1	4.2	161.12	0.0	28.0	42.4	34.1	8.25	5.136	
2,000.0	1,998.7	1,997.7	1,997.7	4.4	4.4	165.23	0.0	28.0	54.0	45.3	8.67	6.226	
2,100.0	2,097.9	2,096.9	2,096.9	4.6	4.6	168.10	0.0	28.0	66.7	57.6	9.11	7.327	
2,200.0	2,197.0	2,196.0	2,196.0	4.9	4.8	170.04	0.0	28.0	79.6	70.0	9.55	8.336	
2,300.0	2,296.1	2,295.8	2,295.8	5.2	5.0	170.73	1.2	28.1	92.2	82.2	9.99	9.226	
2,400.0	2,395.3	2,395.8	2,395.7	5.4	5.3	169.87	5.0	28.3	104.0	93.6	10.43	9.971	
2,500.0	2,494.4	2,495.8	2,495.5	5.7	5.5	167.92	11.4	28.8	115.3	104.4	10.89	10.594	
2,600.0	2,593.6	2,595.7	2,594.9	6.0	5.7	165.15	20.4	29.4	126.2	114.9	11.34	11.125	
2,700.0	2,692.7	2,695.2	2,693.8	6.3	6.0	161.77	32.0	30.1	137.0	125.2	11.82	11.592	
2,800.0	2,791.8	2,794.3	2,792.1	6.6	6.2	158.56	44.3	31.0	148.1	135.8	12.30	12.036	
2,900.0	2,891.0	2,893.3	2,890.4	6.9	6.4	155.80	56.6	31.8	159.6	146.8	12.80	12.465	
3,000.0	2,990.1	2,992.4	2,988.7	7.2	6.7	153.42	69.0	32.6	171.4	158.1	13.31	12.876	
3,100.0	3,089.2	3,091.5	3,087.0	7.5	6.9	151.35	81.3	33.5	183.5	169.7	13.83	13.266	
3,200.0	3,188.4	3,190.5	3,185.3	7.8	7.2	149.53	93.7	34.3	195.8	181.4	14.36	13.635	
3,300.0	3,287.5	3,289.6	3,283.6	8.1	7.5	147.93	106.0	35.1	208.3	193.4	14.90	13.983	
3,400.0	3,386.7	3,388.7	3,381.8	8.4	7.7	146.51	118.4	36.0	220.9	205.4	15.44	14.310	
3,500.0	3,485.8	3,487.7	3,480.1	8.7	8.0	145.25	130.7	36.8	233.6	217.6	15.98	14.618	
3,600.0	3,584.9	3,587.4	3,579.1	9.1	8.3	144.20	142.7	37.6	246.4	229.8	16.51	14.918	
3,700.0	3,684.1	3,687.9	3,679.1	9.4	8.5	143.77	152.4	38.3	258.7	241.7	17.00	15.222	
3,800.0	3,783.2	3,788.4	3,779.4	9.7	8.7	143.94	159.6	38.8	270.6	253.2	17.46	15.502	
3,900.0	3,882.4	3,889.0	3,879.8	10.0	8.9	144.62	164.0	39.1	282.1	264.2	17.90	15.760	
4,000.0	3,981.5	3,989.4	3,980.3	10.3	9.1	145.76	165.9	39.2	293.2	274.8	18.31	16.006	
4,100.0	4,080.6	4,088.8	4,079.6	10.6	9.3	147.14	165.9	39.2	304.1	285.4	18.73	16.234	
4,200.0	4,179.8	4,188.0	4,178.8	10.9	9.5	148.44	165.9	39.2	314.8	295.6	19.18	16.415	
4,300.0	4,279.4	4,287.6	4,278.4	11.2	9.7	149.40	165.9	39.2	322.8	303.3	19.59	16.479	
4,400.0	4,379.2	4,387.4	4,378.2	11.4	9.9	149.98	165.9	39.2	328.0	308.0	19.99	16.407	
4,500.0	4,479.2	4,487.3	4,478.2	11.5	10.1	150.22	165.9	39.2	330.1	309.8	20.37	16.204	
4,600.0	4,579.2	4,587.3	4,578.2	11.7	10.3	89.37	165.9	39.2	330.2	309.5	20.74	15.918	
4,700.0	4,679.2	4,687.3	4,678.2	11.9	10.5	89.37	165.9	39.2	330.2	309.0	21.16	15.602	
4,800.0	4,779.2	4,787.3	4,778.2	12.1	10.7	89.37	165.9	39.2	330.2	308.6	21.59	15.297	
4,900.0	4,879.2	4,887.3	4,878.2	12.3	11.0	89.37	165.9	39.2	330.2	308.2	22.01	15.004	
5,000.0	4,979.2	4,987.3	4,978.2	12.4	11.2	89.37	165.9	39.2	330.2	307.8	22.43	14.720	
5,100.0	5,079.2	5,087.3	5,078.2	12.6	11.4	89.37	165.9	39.2	330.2	307.3	22.86	14.447	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,187.3	5,178.2	12.8	11.6	89.37	165.9	39.2	330.2	306.9	23.28	14.183	
5,300.0	5,279.2	5,287.3	5,278.2	13.0	11.8	89.37	165.9	39.2	330.2	306.5	23.71	13.928	
5,400.0	5,379.2	5,387.3	5,378.2	13.2	12.0	89.37	165.9	39.2	330.2	306.1	24.14	13.681	
5,500.0	5,479.2	5,487.3	5,478.2	13.4	12.2	89.37	165.9	39.2	330.2	305.6	24.56	13.443	
5,600.0	5,579.2	5,587.3	5,578.2	13.6	12.5	89.37	165.9	39.2	330.2	305.2	24.99	13.212	
5,700.0	5,679.2	5,687.3	5,678.2	13.8	12.7	89.37	165.9	39.2	330.2	304.8	25.42	12.989	
5,800.0	5,779.2	5,787.3	5,778.2	14.0	12.9	89.37	165.9	39.2	330.2	304.3	25.85	12.773	
5,900.0	5,879.2	5,887.3	5,878.2	14.2	13.1	89.37	165.9	39.2	330.2	303.9	26.28	12.563	
6,000.0	5,979.2	5,987.3	5,978.2	14.4	13.3	89.37	165.9	39.2	330.2	303.5	26.71	12.360	
6,100.0	6,079.2	6,087.3	6,078.2	14.6	13.6	89.37	165.9	39.2	330.2	303.1	27.15	12.164	
6,200.0	6,179.2	6,187.3	6,178.2	14.8	13.8	89.37	165.9	39.2	330.2	302.6	27.58	11.973	
6,300.0	6,279.2	6,287.3	6,278.2	15.0	14.0	89.37	165.9	39.2	330.2	302.2	28.01	11.788	
6,400.0	6,379.2	6,387.3	6,378.2	15.2	14.2	89.37	165.9	39.2	330.2	301.8	28.45	11.608	
6,500.0	6,479.1	6,487.3	6,478.1	15.4	14.4	-89.93	165.9	39.2	330.2	301.3	28.88	11.435	
6,503.5	6,482.6	6,490.7	6,481.6	15.4	14.4	-90.00	165.9	39.2	330.2	301.3	28.89	11.430	
6,600.0	6,576.9	6,585.1	6,575.9	15.5	14.6	-93.22	165.9	39.2	330.8	301.5	29.25	11.310	
6,700.0	6,669.2	6,683.3	6,674.0	15.6	14.8	-98.78	163.0	39.2	334.7	305.2	29.51	11.344	
6,800.0	6,752.5	6,791.7	6,779.8	15.7	14.9	-104.53	140.4	39.7	342.7	313.2	29.50	11.616	
6,900.0	6,823.8	6,910.6	6,887.8	15.7	15.0	-109.83	91.2	40.7	353.4	324.1	29.21	12.095	
7,000.0	6,880.4	7,041.6	6,990.4	15.8	15.2	-114.42	10.2	42.4	365.0	336.2	28.82	12.663	
7,100.0	6,920.3	7,185.2	7,075.7	16.1	15.5	-117.96	-104.7	44.8	375.3	346.6	28.72	13.065	
7,200.0	6,942.0	7,339.3	7,128.8	16.6	16.2	-120.08	-248.7	47.7	381.9	352.5	29.42	12.981	
7,300.0	6,945.7	7,479.7	7,139.6	17.4	17.3	-120.55	-388.3	50.6	383.4	352.4	31.01	12.365	
7,400.0	6,945.3	7,579.7	7,139.3	18.3	18.2	-120.57	-488.3	52.7	383.5	350.8	32.71	11.723	
7,500.0	6,944.8	7,679.7	7,138.9	19.4	19.3	-120.58	-588.2	54.7	383.5	348.9	34.66	11.066	
7,600.0	6,944.3	7,779.7	7,138.6	20.7	20.5	-120.60	-688.2	56.8	383.6	346.8	36.81	10.420	
7,700.0	6,943.9	7,879.7	7,138.2	22.0	21.9	-120.62	-788.2	58.9	383.7	344.5	39.14	9.801	
7,800.0	6,943.4	7,979.7	7,137.9	23.4	23.3	-120.63	-888.2	60.9	383.7	342.1	41.62	9.220	
7,900.0	6,942.9	8,079.7	7,137.6	24.8	24.7	-120.65	-988.2	63.0	383.8	339.6	44.22	8.680	
8,000.0	6,942.4	8,179.7	7,137.2	26.4	26.3	-120.66	-1,088.1	65.0	383.8	336.9	46.91	8.182	
8,100.0	6,942.0	8,279.7	7,136.9	28.0	27.8	-120.68	-1,188.1	67.1	383.9	334.2	49.69	7.725	
8,200.0	6,941.5	8,379.7	7,136.5	29.6	29.5	-120.69	-1,288.1	69.2	384.0	331.4	52.55	7.307	
8,300.0	6,941.0	8,479.7	7,136.2	31.2	31.1	-120.71	-1,388.1	71.2	384.0	328.6	55.46	6.925	
8,400.0	6,940.6	8,579.7	7,135.8	32.9	32.8	-120.73	-1,488.0	73.3	384.1	325.7	58.42	6.575	
8,500.0	6,940.1	8,679.7	7,135.5	34.6	34.5	-120.74	-1,588.0	75.4	384.2	322.7	61.42	6.254	
8,600.0	6,939.6	8,779.7	7,135.1	36.3	36.3	-120.76	-1,688.0	77.4	384.2	319.8	64.46	5.960	
8,700.0	6,939.1	8,879.7	7,134.8	38.1	38.0	-120.77	-1,788.0	79.5	384.3	316.7	67.54	5.690	
8,800.0	6,938.7	8,979.7	7,134.4	39.8	39.8	-120.79	-1,888.0	81.5	384.3	313.7	70.64	5.441	
8,900.0	6,938.2	9,079.7	7,134.1	41.6	41.5	-120.80	-1,987.9	83.6	384.4	310.6	73.76	5.212	
9,000.0	6,937.7	9,179.7	7,133.7	43.4	43.3	-120.82	-2,087.9	85.7	384.5	307.6	76.90	4.999	
9,100.0	6,937.3	9,279.7	7,133.4	45.2	45.1	-120.84	-2,187.9	87.7	384.5	304.5	80.07	4.803	
9,200.0	6,936.8	9,379.7	7,133.0	47.0	47.0	-120.85	-2,287.9	89.8	384.6	301.3	83.25	4.620	
9,300.0	6,936.3	9,479.7	7,132.7	48.8	48.8	-120.87	-2,387.8	91.9	384.7	298.2	86.44	4.450	
9,400.0	6,935.8	9,579.7	7,132.3	50.7	50.6	-120.88	-2,487.8	93.9	384.7	295.1	89.64	4.292	
9,500.0	6,935.4	9,679.7	7,132.0	52.5	52.4	-120.90	-2,587.8	96.0	384.8	291.9	92.86	4.144	
9,600.0	6,934.9	9,779.7	7,131.6	54.3	54.3	-120.91	-2,687.8	98.0	384.8	288.8	96.09	4.005	
9,700.0	6,934.4	9,879.7	7,131.3	56.2	56.1	-120.93	-2,787.8	100.1	384.9	285.6	99.32	3.875	
9,800.0	6,934.0	9,979.7	7,130.9	58.0	58.0	-120.95	-2,887.7	102.2	385.0	282.4	102.57	3.753	
9,900.0	6,933.5	10,079.7	7,130.6	59.9	59.8	-120.96	-2,987.7	104.2	385.0	279.2	105.82	3.639	
10,000.0	6,933.0	10,179.7	7,130.2	61.8	61.7	-120.98	-3,087.7	106.3	385.1	276.0	109.07	3.531	
10,100.0	6,932.5	10,279.7	7,129.9	63.6	63.6	-120.99	-3,187.7	108.4	385.2	272.8	112.34	3.429	
10,200.0	6,932.1	10,379.7	7,129.5	65.5	65.4	-121.01	-3,287.6	110.4	385.2	269.6	115.60	3.332	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	6,931.6	10,479.7	7,129.2	67.4	67.3	-121.02	-3,387.6	112.5	385.3	266.4	118.88	3.241	
10,400.0	6,931.1	10,579.7	7,128.8	69.2	69.2	-121.04	-3,487.6	114.5	385.3	263.2	122.15	3.155	
10,500.0	6,930.7	10,679.7	7,128.5	71.1	71.1	-121.05	-3,587.6	116.6	385.4	260.0	125.43	3.073	
10,600.0	6,930.2	10,779.7	7,128.1	73.0	72.9	-121.07	-3,687.6	118.7	385.5	256.7	128.72	2.995	
10,700.0	6,929.7	10,879.7	7,127.8	74.9	74.8	-121.09	-3,787.5	120.7	385.5	253.5	132.01	2.921	
10,800.0	6,929.2	10,979.7	7,127.4	76.7	76.7	-121.10	-3,887.5	122.8	385.6	250.3	135.30	2.850	
10,900.0	6,928.8	11,079.7	7,127.1	78.6	78.6	-121.12	-3,987.5	124.8	385.7	247.1	138.59	2.783	
11,000.0	6,928.3	11,179.7	7,126.7	80.5	80.5	-121.13	-4,087.5	126.9	385.7	243.8	141.88	2.719	
11,100.0	6,927.8	11,279.7	7,126.4	82.4	82.4	-121.15	-4,187.5	129.0	385.8	240.6	145.18	2.657	
11,200.0	6,927.4	11,379.7	7,126.0	84.3	84.3	-121.16	-4,287.4	131.0	385.8	237.4	148.48	2.599	
11,300.0	6,926.9	11,479.7	7,125.7	86.2	86.1	-121.18	-4,387.4	133.1	385.9	234.1	151.78	2.543	
11,400.0	6,926.4	11,579.7	7,125.3	88.1	88.0	-121.20	-4,487.4	135.2	386.0	230.9	155.08	2.489	
11,489.3	6,926.0	11,669.0	7,125.0	89.8	89.7	-121.21	-4,576.6	137.0	386.0	228.0	158.03	2.443	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.99	0.0	44.8	44.8				
100.0	100.0	99.0	99.0	0.1	0.1	89.99	0.0	44.8	44.8	44.5	0.22	200.180	
200.0	200.0	199.0	199.0	0.3	0.3	89.99	0.0	44.8	44.8	44.1	0.67	66.616	
300.0	300.0	299.0	299.0	0.6	0.6	89.99	0.0	44.8	44.8	43.6	1.12	39.916	
400.0	400.0	399.0	399.0	0.8	0.8	89.99	0.0	44.8	44.8	43.2	1.57	28.495	
500.0	500.0	499.0	499.0	1.0	1.0	89.99	0.0	44.8	44.8	42.7	2.02	22.156	
600.0	600.0	599.0	599.0	1.2	1.2	89.99	0.0	44.8	44.8	42.3	2.47	18.124	
700.0	700.0	699.0	699.0	1.5	1.5	89.99	0.0	44.8	44.8	41.8	2.92	15.333	
800.0	800.0	799.0	799.0	1.7	1.7	89.99	0.0	44.8	44.8	41.4	3.37	13.288	
900.0	900.0	899.0	899.0	1.9	1.9	89.99	0.0	44.8	44.8	41.0	3.82	11.723	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.99	0.0	44.8	44.8	40.5	4.27	10.489	
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.99	0.0	44.8	44.8	40.1	4.72	9.489	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.99	0.0	44.8	44.8	39.6	5.17	8.664	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.99	0.0	44.8	44.8	39.2	5.62	7.970	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.99	0.0	44.8	44.8	38.7	6.07	7.380	
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	89.99	0.0	44.8	44.8	38.3	6.52	6.871	
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	89.99	0.0	44.8	44.8	37.8	6.97	6.427	CC, ES
1,700.0	1,700.0	1,698.1	1,698.1	3.7	3.7	150.74	0.9	45.6	47.2	39.8	7.40	6.376	
1,800.0	1,799.8	1,797.0	1,796.9	3.9	3.9	150.44	3.7	48.3	54.4	46.6	7.82	6.960	
1,900.0	1,899.5	1,895.2	1,894.9	4.1	4.1	150.05	8.2	52.7	66.5	58.2	8.23	8.072	
2,000.0	1,998.7	1,992.4	1,991.7	4.4	4.4	149.67	14.5	58.7	83.2	74.6	8.65	9.614	
2,100.0	2,097.9	2,090.1	2,088.9	4.6	4.6	149.04	22.2	66.1	102.1	93.0	9.10	11.226	
2,200.0	2,197.0	2,188.3	2,186.4	4.9	4.8	148.56	30.0	73.6	121.2	111.6	9.55	12.689	
2,300.0	2,296.1	2,286.5	2,284.0	5.2	5.1	148.21	37.8	81.1	140.2	130.2	10.01	14.011	
2,400.0	2,395.3	2,384.6	2,381.6	5.4	5.3	147.94	45.6	88.6	159.2	148.7	10.47	15.207	
2,500.0	2,494.4	2,482.8	2,479.2	5.7	5.6	147.73	53.4	96.1	178.2	167.3	10.94	16.294	
2,600.0	2,593.6	2,581.0	2,576.7	6.0	5.8	147.57	61.2	103.5	197.3	185.9	11.41	17.283	
2,700.0	2,692.7	2,679.2	2,674.3	6.3	6.1	147.43	69.0	111.0	216.3	204.4	11.89	18.187	
2,800.0	2,791.8	2,777.3	2,771.9	6.6	6.4	147.31	76.8	118.5	235.3	223.0	12.38	19.014	
2,900.0	2,891.0	2,875.5	2,869.4	6.9	6.6	147.21	84.6	126.0	254.4	241.5	12.86	19.774	
3,000.0	2,990.1	2,973.7	2,967.0	7.2	6.9	147.13	92.4	133.5	273.4	260.0	13.35	20.474	
3,100.0	3,089.2	3,071.8	3,064.6	7.5	7.2	147.05	100.1	141.0	292.4	278.6	13.85	21.120	
3,200.0	3,188.4	3,170.0	3,162.2	7.8	7.5	146.99	107.9	148.5	311.5	297.1	14.34	21.717	
3,300.0	3,287.5	3,268.2	3,259.7	8.1	7.7	146.93	115.7	156.0	330.5	315.7	14.84	22.272	
3,400.0	3,386.7	3,366.4	3,357.3	8.4	8.0	146.88	123.5	163.5	349.5	334.2	15.34	22.787	
3,500.0	3,485.8	3,464.5	3,454.9	8.7	8.3	146.83	131.3	170.9	368.6	352.7	15.84	23.267	
3,600.0	3,584.9	3,562.7	3,552.5	9.1	8.6	146.79	139.1	178.4	387.6	371.3	16.35	23.715	
3,700.0	3,684.1	3,660.9	3,650.0	9.4	8.8	146.75	146.9	185.9	406.7	389.8	16.85	24.134	
3,800.0	3,783.2	3,765.2	3,753.8	9.7	9.1	146.79	154.7	193.4	425.2	407.9	17.34	24.528	
3,900.0	3,882.4	3,872.8	3,861.1	10.0	9.3	147.07	160.6	199.1	441.8	424.0	17.80	24.818	
4,000.0	3,981.5	3,980.9	3,969.1	10.3	9.5	147.60	164.4	202.7	456.4	438.1	18.26	24.995	
4,100.0	4,080.6	4,089.5	4,077.7	10.6	9.7	148.35	166.0	204.2	469.0	450.2	18.70	25.073	
4,200.0	4,179.8	4,190.7	4,178.8	10.9	9.9	149.21	166.0	204.3	479.8	460.6	19.15	25.050	
4,300.0	4,279.4	4,290.3	4,278.4	11.2	10.1	149.85	166.0	204.3	487.9	468.3	19.59	24.910	
4,400.0	4,379.2	4,390.1	4,378.2	11.4	10.3	150.25	166.0	204.3	493.1	473.1	20.00	24.652	
4,500.0	4,479.2	4,490.0	4,478.2	11.5	10.5	150.42	166.0	204.3	495.2	474.8	20.39	24.284	
4,600.0	4,579.2	4,590.0	4,578.2	11.7	10.7	89.57	166.0	204.3	495.3	474.5	20.78	23.840	
4,700.0	4,679.2	4,690.0	4,678.2	11.9	10.9	89.57	166.0	204.3	495.3	474.1	21.19	23.371	
4,800.0	4,779.2	4,790.0	4,778.2	12.1	11.1	89.57	166.0	204.3	495.3	473.7	21.61	22.918	
4,900.0	4,879.2	4,890.0	4,878.2	12.3	11.3	89.57	166.0	204.3	495.3	473.3	22.03	22.482	
5,000.0	4,979.2	4,990.0	4,978.2	12.4	11.5	89.57	166.0	204.3	495.3	472.8	22.45	22.061	
5,100.0	5,079.2	5,090.0	5,078.2	12.6	11.7	89.57	166.0	204.3	495.3	472.4	22.87	21.654	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,190.0	5,178.2	12.8	12.0	89.57	166.0	204.3	495.3	472.0	23.30	21.261	
5,300.0	5,279.2	5,290.0	5,278.2	13.0	12.2	89.57	166.0	204.3	495.3	471.6	23.72	20.881	
5,400.0	5,379.2	5,390.0	5,378.2	13.2	12.4	89.57	166.0	204.3	495.3	471.1	24.14	20.513	
5,500.0	5,479.2	5,490.0	5,478.2	13.4	12.6	89.57	166.0	204.3	495.3	470.7	24.57	20.158	
5,600.0	5,579.2	5,590.0	5,578.2	13.6	12.8	89.57	166.0	204.3	495.3	470.3	25.00	19.814	
5,700.0	5,679.2	5,690.0	5,678.2	13.8	13.0	89.57	166.0	204.3	495.3	469.9	25.42	19.481	
5,800.0	5,779.2	5,790.0	5,778.2	14.0	13.2	89.57	166.0	204.3	495.3	469.4	25.85	19.159	
5,900.0	5,879.2	5,890.0	5,878.2	14.2	13.4	89.57	166.0	204.3	495.3	469.0	26.28	18.846	
6,000.0	5,979.2	5,990.0	5,978.2	14.4	13.6	89.57	166.0	204.3	495.3	468.6	26.71	18.543	
6,100.0	6,079.2	6,090.0	6,078.2	14.6	13.9	89.57	166.0	204.3	495.3	468.1	27.14	18.249	
6,200.0	6,179.2	6,190.0	6,178.2	14.8	14.1	89.57	166.0	204.3	495.3	467.7	27.57	17.964	
6,300.0	6,279.2	6,290.0	6,278.2	15.0	14.3	89.57	166.0	204.3	495.3	467.3	28.00	17.687	
6,400.0	6,379.2	6,390.0	6,378.2	15.2	14.5	89.57	166.0	204.3	495.3	466.8	28.43	17.419	
6,500.0	6,479.1	6,489.4	6,477.4	15.4	14.7	-89.25	163.3	204.3	495.3	466.5	28.81	17.191	
6,600.0	6,576.9	6,588.2	6,574.1	15.5	14.8	-89.28	143.9	204.7	495.3	466.3	29.02	17.068	
6,700.0	6,669.2	6,687.0	6,665.6	15.6	14.9	-89.34	106.7	205.5	495.3	466.1	29.14	16.994	
6,800.0	6,752.5	6,786.0	6,748.4	15.7	15.0	-89.41	52.8	206.6	495.3	466.0	29.28	16.913	
6,900.0	6,823.8	6,885.1	6,819.6	15.7	15.0	-89.52	-15.9	208.0	495.3	465.7	29.55	16.759	
7,000.0	6,880.4	6,984.4	6,876.7	15.8	15.2	-89.63	-97.0	209.7	495.2	465.2	30.07	16.468	
7,100.0	6,920.3	7,083.9	6,917.4	16.1	15.6	-89.77	-187.6	211.6	495.2	464.3	30.94	16.006	
7,200.0	6,942.0	7,183.6	6,940.2	16.6	16.2	-89.91	-284.5	213.6	495.2	463.0	32.19	15.385	
7,300.0	6,945.7	7,283.6	6,944.8	17.4	17.0	-90.01	-384.2	215.6	495.2	461.4	33.79	14.655	
7,400.0	6,945.3	7,383.6	6,944.3	18.3	18.0	-90.01	-484.2	217.7	495.2	459.5	35.74	13.858	
7,500.0	6,944.8	7,483.6	6,943.9	19.4	19.1	-90.01	-584.2	219.7	495.2	457.3	37.96	13.044	
7,600.0	6,944.3	7,583.6	6,943.4	20.7	20.3	-90.01	-684.1	221.8	495.2	454.8	40.44	12.247	
7,700.0	6,943.9	7,683.6	6,942.9	22.0	21.7	-90.01	-784.1	223.9	495.2	452.1	43.11	11.487	
7,800.0	6,943.4	7,783.6	6,942.5	23.4	23.1	-90.01	-884.1	225.9	495.2	449.3	45.95	10.777	
7,900.0	6,942.9	7,883.6	6,942.0	24.8	24.5	-90.01	-984.1	228.0	495.2	446.3	48.93	10.120	
8,000.0	6,942.4	7,983.6	6,941.5	26.4	26.1	-90.01	-1,084.1	230.0	495.2	443.2	52.03	9.519	
8,100.0	6,942.0	8,083.6	6,941.0	28.0	27.7	-90.01	-1,184.0	232.1	495.2	440.0	55.21	8.969	
8,200.0	6,941.5	8,183.6	6,940.6	29.6	29.3	-90.01	-1,284.0	234.2	495.2	436.7	58.48	8.468	
8,300.0	6,941.0	8,283.6	6,940.1	31.2	31.0	-90.01	-1,384.0	236.2	495.2	433.4	61.82	8.011	
8,400.0	6,940.6	8,383.6	6,939.6	32.9	32.7	-90.01	-1,484.0	238.3	495.2	430.0	65.21	7.594	
8,500.0	6,940.1	8,483.6	6,939.2	34.6	34.4	-90.01	-1,583.9	240.3	495.2	426.6	68.65	7.214	
8,600.0	6,939.6	8,583.6	6,938.7	36.3	36.1	-90.01	-1,683.9	242.4	495.2	423.1	72.13	6.866	
8,700.0	6,939.1	8,683.6	6,938.2	38.1	37.9	-90.01	-1,783.9	244.5	495.2	419.6	75.64	6.547	
8,800.0	6,938.7	8,783.6	6,937.7	39.8	39.6	-90.01	-1,883.9	246.5	495.2	416.0	79.19	6.253	
8,900.0	6,938.2	8,883.6	6,937.3	41.6	41.4	-90.01	-1,983.9	248.6	495.2	412.4	82.76	5.983	
9,000.0	6,937.7	8,983.6	6,936.8	43.4	43.2	-90.01	-2,083.8	250.6	495.2	408.8	86.36	5.734	
9,100.0	6,937.3	9,083.6	6,936.3	45.2	45.0	-90.01	-2,183.8	252.7	495.2	405.2	89.98	5.503	
9,200.0	6,936.8	9,183.6	6,935.9	47.0	46.8	-90.01	-2,283.8	254.8	495.2	401.6	93.62	5.290	
9,300.0	6,936.3	9,283.6	6,935.4	48.8	48.7	-90.01	-2,383.8	256.8	495.2	397.9	97.27	5.091	
9,400.0	6,935.8	9,383.6	6,934.9	50.7	50.5	-90.01	-2,483.7	258.9	495.2	394.3	100.94	4.906	
9,500.0	6,935.4	9,483.6	6,934.4	52.5	52.3	-90.01	-2,583.7	261.0	495.2	390.6	104.62	4.733	
9,600.0	6,934.9	9,583.6	6,934.0	54.3	54.2	-90.01	-2,683.7	263.0	495.2	386.9	108.31	4.572	
9,700.0	6,934.4	9,683.6	6,933.5	56.2	56.0	-90.01	-2,783.7	265.1	495.2	383.2	112.01	4.421	
9,800.0	6,934.0	9,783.6	6,933.0	58.0	57.9	-90.01	-2,883.6	267.1	495.2	379.5	115.72	4.279	
9,900.0	6,933.5	9,883.6	6,932.6	59.9	59.7	-90.01	-2,983.6	269.2	495.2	375.7	119.44	4.146	
10,000.0	6,933.0	9,983.6	6,932.1	61.8	61.6	-90.01	-3,083.6	271.3	495.2	372.0	123.17	4.020	
10,100.0	6,932.5	10,083.6	6,931.6	63.6	63.5	-90.01	-3,183.6	273.3	495.2	368.3	126.91	3.902	
10,200.0	6,932.1	10,183.6	6,931.1	65.5	65.3	-90.01	-3,283.6	275.4	495.2	364.5	130.65	3.790	
10,300.0	6,931.6	10,283.6	6,930.7	67.4	67.2	-90.01	-3,383.5	277.4	495.2	360.8	134.40	3.685	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,931.1	10,383.6	6,930.2	69.2	69.1	-90.01	-3,483.5	279.5	495.2	357.0	138.15	3.584	
10,500.0	6,930.7	10,483.6	6,929.7	71.1	71.0	-90.01	-3,583.5	281.6	495.2	353.3	141.91	3.489	
10,600.0	6,930.2	10,583.6	6,929.3	73.0	72.9	-90.01	-3,683.5	283.6	495.2	349.5	145.67	3.399	
10,700.0	6,929.7	10,683.6	6,928.8	74.9	74.7	-90.01	-3,783.4	285.7	495.2	345.7	149.44	3.314	
10,800.0	6,929.2	10,783.6	6,928.3	76.7	76.6	-90.01	-3,883.4	287.7	495.2	342.0	153.21	3.232	
10,900.0	6,928.8	10,883.6	6,927.8	78.6	78.5	-90.01	-3,983.4	289.8	495.2	338.2	156.98	3.154	
11,000.0	6,928.3	10,983.6	6,927.4	80.5	80.4	-90.01	-4,083.4	291.9	495.2	334.4	160.76	3.080	
11,100.0	6,927.8	11,083.6	6,926.9	82.4	82.3	-90.01	-4,183.4	293.9	495.2	330.6	164.54	3.009	
11,200.0	6,927.4	11,183.6	6,926.4	84.3	84.2	-90.01	-4,283.3	296.0	495.2	326.8	168.33	2.942	
11,300.0	6,926.9	11,283.6	6,926.0	86.2	86.1	-90.01	-4,383.3	298.1	495.2	323.0	172.12	2.877	
11,400.0	6,926.4	11,383.6	6,925.5	88.1	88.0	-90.01	-4,483.3	300.1	495.2	319.3	175.91	2.815	
11,489.3	6,926.0	11,472.8	6,925.1	89.8	89.7	-90.01	-4,572.6	302.0	495.2	315.9	179.29	2.762	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.01	0.0	58.8	58.8				
100.0	100.0	99.0	99.0	0.1	0.1	90.01	0.0	58.8	58.8	58.5	0.22	262.737	
200.0	200.0	199.0	199.0	0.3	0.3	90.01	0.0	58.8	58.8	58.1	0.67	87.433	
300.0	300.0	299.0	299.0	0.6	0.6	90.01	0.0	58.8	58.8	57.6	1.12	52.390	
400.0	400.0	399.0	399.0	0.8	0.8	90.01	0.0	58.8	58.8	57.2	1.57	37.400	
500.0	500.0	499.0	499.0	1.0	1.0	90.01	0.0	58.8	58.8	56.7	2.02	29.080	
600.0	600.0	599.0	599.0	1.2	1.2	90.01	0.0	58.8	58.8	56.3	2.47	23.788	
700.0	700.0	699.0	699.0	1.5	1.5	90.01	0.0	58.8	58.8	55.8	2.92	20.125	
800.0	800.0	799.0	799.0	1.7	1.7	90.01	0.0	58.8	58.8	55.4	3.37	17.440	
900.0	900.0	899.0	899.0	1.9	1.9	90.01	0.0	58.8	58.8	54.9	3.82	15.387	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.01	0.0	58.8	58.8	54.5	4.27	13.766	
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	90.01	0.0	58.8	58.8	54.0	4.72	12.455	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	90.01	0.0	58.8	58.8	53.6	5.17	11.371	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	90.01	0.0	58.8	58.8	53.1	5.62	10.461	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	90.01	0.0	58.8	58.8	52.7	6.07	9.686	CC, ES
1,500.0	1,500.0	1,497.7	1,497.6	3.3	3.2	89.45	0.6	59.9	59.9	53.4	6.51	9.204	
1,600.0	1,600.0	1,596.2	1,596.1	3.5	3.5	87.87	2.3	63.2	63.3	56.4	6.94	9.123	
1,700.0	1,700.0	1,694.3	1,694.0	3.7	3.7	147.13	5.3	68.8	70.6	63.2	7.37	9.586	
1,800.0	1,799.8	1,791.7	1,791.0	3.9	3.9	146.42	9.4	76.5	83.2	75.4	7.78	10.684	
1,900.0	1,899.5	1,888.4	1,887.1	4.1	4.1	146.35	14.6	86.3	100.9	92.7	8.20	12.298	
2,000.0	1,998.7	1,986.1	1,984.0	4.4	4.4	146.98	20.3	96.9	122.1	113.5	8.62	14.169	
2,100.0	2,097.9	2,083.6	2,080.8	4.6	4.6	147.78	25.9	107.6	144.3	135.2	9.06	15.929	
2,200.0	2,197.0	2,181.1	2,177.5	4.9	4.9	148.36	31.6	118.2	166.4	156.9	9.50	17.515	
2,300.0	2,296.1	2,278.6	2,274.3	5.2	5.2	148.81	37.2	128.8	188.6	178.6	9.95	18.947	
2,400.0	2,395.3	2,376.1	2,371.0	5.4	5.4	149.16	42.9	139.5	210.8	200.4	10.41	20.246	
2,500.0	2,494.4	2,473.6	2,467.8	5.7	5.7	149.45	48.5	150.1	232.9	222.1	10.87	21.426	
2,600.0	2,593.6	2,571.1	2,564.5	6.0	6.0	149.68	54.1	160.7	255.1	243.8	11.34	22.502	
2,700.0	2,692.7	2,668.6	2,661.3	6.3	6.3	149.88	59.8	171.3	277.3	265.5	11.81	23.486	
2,800.0	2,791.8	2,766.1	2,758.1	6.6	6.5	150.05	65.4	182.0	299.5	287.2	12.28	24.388	
2,900.0	2,891.0	2,863.6	2,854.8	6.9	6.8	150.20	71.1	192.6	321.7	308.9	12.76	25.218	
3,000.0	2,990.1	2,961.1	2,951.6	7.2	7.1	150.32	76.7	203.2	343.9	330.7	13.24	25.982	
3,100.0	3,089.2	3,058.6	3,048.3	7.5	7.4	150.43	82.4	213.9	366.1	352.4	13.72	26.689	
3,200.0	3,188.4	3,156.1	3,145.1	7.8	7.7	150.53	88.0	224.5	388.3	374.1	14.20	27.345	
3,300.0	3,287.5	3,253.6	3,241.8	8.1	8.0	150.62	93.7	235.1	410.5	395.8	14.68	27.953	
3,400.0	3,386.7	3,351.1	3,338.6	8.4	8.3	150.70	99.3	245.8	432.7	417.5	15.17	28.519	
3,500.0	3,485.8	3,448.6	3,435.4	8.7	8.6	150.77	105.0	256.4	454.9	439.2	15.66	29.047	
3,600.0	3,584.9	3,546.1	3,532.1	9.1	8.9	150.83	110.6	267.0	477.1	460.9	16.15	29.541	
3,700.0	3,684.1	3,643.6	3,628.9	9.4	9.2	150.89	116.3	277.7	499.3	482.6	16.64	30.003	
3,800.0	3,783.2	3,741.1	3,725.6	9.7	9.5	150.95	121.9	288.3	521.5	504.3	17.13	30.437	
3,900.0	3,882.4	3,838.6	3,822.4	10.0	9.8	151.00	127.6	298.9	543.7	526.1	17.63	30.844	
4,000.0	3,981.5	3,936.1	3,919.2	10.3	10.1	151.04	133.2	309.6	565.9	547.8	18.12	31.228	
4,100.0	4,080.6	4,033.7	4,015.9	10.6	10.4	151.08	138.9	320.2	588.1	569.5	18.62	31.589	
4,200.0	4,179.8	4,131.3	4,112.8	10.9	10.7	151.22	144.5	330.8	609.8	590.7	19.13	31.882	
4,300.0	4,279.4	4,229.4	4,210.2	11.2	11.0	151.27	150.2	341.5	628.9	609.3	19.61	32.063	
4,400.0	4,379.2	4,342.1	4,322.1	11.4	11.3	151.16	156.2	352.8	644.1	624.0	20.08	32.077	
4,500.0	4,479.2	4,459.1	4,438.7	11.5	11.6	150.97	160.8	361.5	653.6	633.1	20.50	31.885	
4,600.0	4,579.2	4,576.8	4,556.3	11.7	11.8	89.88	163.7	367.0	658.3	637.4	20.91	31.488	
4,700.0	4,679.2	4,694.8	4,674.2	11.9	12.0	89.77	164.9	369.3	660.3	639.0	21.33	30.963	
4,800.0	4,779.2	4,798.8	4,778.2	12.1	12.2	89.77	165.0	369.4	660.4	638.6	21.73	30.395	
4,900.0	4,879.2	4,898.8	4,878.2	12.3	12.4	89.77	165.0	369.4	660.4	638.2	22.14	29.829	
5,000.0	4,979.2	4,998.8	4,978.2	12.4	12.5	89.77	165.0	369.4	660.4	637.8	22.55	29.282	
5,100.0	5,079.2	5,098.8	5,078.2	12.6	12.7	89.77	165.0	369.4	660.4	637.4	22.97	28.753	

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,198.8	5,178.2	12.8	12.9	89.77	165.0	369.4	660.4	637.0	23.38	28.242	
5,300.0	5,279.2	5,298.8	5,278.2	13.0	13.1	89.77	165.0	369.4	660.4	636.6	23.80	27.746	
5,400.0	5,379.2	5,398.8	5,378.2	13.2	13.3	89.77	165.0	369.4	660.4	636.1	24.22	27.267	
5,500.0	5,479.2	5,498.8	5,478.2	13.4	13.5	89.77	165.0	369.4	660.4	635.7	24.64	26.802	
5,600.0	5,579.2	5,598.8	5,578.2	13.6	13.7	89.77	165.0	369.4	660.4	635.3	25.06	26.352	
5,700.0	5,679.2	5,698.8	5,678.2	13.8	13.9	89.77	165.0	369.4	660.4	634.9	25.48	25.916	
5,800.0	5,779.2	5,798.8	5,778.2	14.0	14.1	89.77	165.0	369.4	660.4	634.5	25.90	25.493	
5,900.0	5,879.2	5,898.8	5,878.2	14.2	14.3	89.77	165.0	369.4	660.4	634.0	26.33	25.083	
6,000.0	5,979.2	5,998.8	5,978.2	14.4	14.5	89.77	165.0	369.4	660.4	633.6	26.75	24.685	
6,100.0	6,079.2	6,098.8	6,078.2	14.6	14.7	89.77	165.0	369.4	660.4	633.2	27.18	24.299	
6,200.0	6,179.2	6,198.8	6,178.2	14.8	14.9	89.77	165.0	369.4	660.4	632.8	27.60	23.924	
6,300.0	6,279.2	6,298.8	6,278.2	15.0	15.1	89.77	165.0	369.4	660.4	632.3	28.03	23.560	
6,400.0	6,379.2	6,398.8	6,378.2	15.2	15.3	89.77	165.0	369.4	660.4	631.9	28.46	23.206	
6,500.0	6,479.1	6,497.7	6,477.0	15.4	15.4	-89.06	162.3	369.4	660.4	631.5	28.82	22.913	
6,600.0	6,576.9	6,595.6	6,572.9	15.5	15.6	-89.09	143.3	369.8	660.4	631.3	29.03	22.746	
6,700.0	6,669.2	6,693.7	6,663.8	15.6	15.6	-89.16	106.6	370.6	660.3	631.2	29.16	22.643	
6,800.0	6,752.5	6,792.0	6,746.2	15.7	15.7	-89.26	53.4	371.7	660.3	631.0	29.30	22.533	
6,900.0	6,823.8	6,890.5	6,817.4	15.7	15.8	-89.39	-14.4	373.1	660.3	630.7	29.58	22.326	
7,000.0	6,880.4	6,989.3	6,874.8	15.8	16.0	-89.53	-94.7	374.7	660.3	630.2	30.10	21.939	
7,100.0	6,920.3	7,088.5	6,916.0	16.1	16.3	-89.70	-184.7	376.6	660.3	629.3	30.96	21.327	
7,200.0	6,942.0	7,188.0	6,939.6	16.6	16.8	-89.88	-281.2	378.6	660.3	628.1	32.20	20.503	
7,300.0	6,945.7	7,287.9	6,944.8	17.4	17.5	-90.01	-380.8	380.6	660.3	626.5	33.80	19.533	
7,400.0	6,945.3	7,387.9	6,944.4	18.3	18.5	-90.01	-480.8	382.7	660.3	624.5	35.74	18.473	
7,500.0	6,944.8	7,487.9	6,943.9	19.4	19.5	-90.01	-580.8	384.7	660.3	622.3	37.97	17.391	
7,600.0	6,944.3	7,587.9	6,943.4	20.7	20.7	-90.01	-680.7	386.8	660.3	619.8	40.44	16.329	
7,700.0	6,943.9	7,687.9	6,942.9	22.0	22.0	-90.01	-780.7	388.9	660.3	617.2	43.11	15.317	
7,800.0	6,943.4	7,787.9	6,942.5	23.4	23.4	-90.01	-880.7	390.9	660.3	614.3	45.95	14.370	
7,900.0	6,942.9	7,887.9	6,942.0	24.8	24.9	-90.01	-980.7	393.0	660.3	611.3	48.92	13.496	
8,000.0	6,942.4	7,987.9	6,941.5	26.4	26.4	-90.01	-1,080.6	395.0	660.3	608.2	52.02	12.694	
8,100.0	6,942.0	8,087.9	6,941.1	28.0	28.0	-90.01	-1,180.6	397.1	660.3	605.1	55.20	11.961	
8,200.0	6,941.5	8,187.9	6,940.6	29.6	29.6	-90.01	-1,280.6	399.2	660.3	601.8	58.47	11.293	
8,300.0	6,941.0	8,287.9	6,940.1	31.2	31.2	-90.01	-1,380.6	401.2	660.3	598.5	61.80	10.684	
8,400.0	6,940.6	8,387.9	6,939.6	32.9	32.9	-90.01	-1,480.6	403.3	660.3	595.1	65.19	10.128	
8,500.0	6,940.1	8,487.9	6,939.2	34.6	34.6	-90.01	-1,580.5	405.4	660.3	591.6	68.63	9.621	
8,600.0	6,939.6	8,587.9	6,938.7	36.3	36.3	-90.01	-1,680.5	407.4	660.3	588.2	72.11	9.156	
8,700.0	6,939.1	8,687.9	6,938.2	38.1	38.1	-90.01	-1,780.5	409.5	660.3	584.6	75.63	8.731	
8,800.0	6,938.7	8,787.9	6,937.8	39.8	39.8	-90.01	-1,880.5	411.5	660.3	581.1	79.17	8.340	
8,900.0	6,938.2	8,887.9	6,937.3	41.6	41.6	-90.01	-1,980.4	413.6	660.3	577.5	82.74	7.979	
9,000.0	6,937.7	8,987.9	6,936.8	43.4	43.4	-90.01	-2,080.4	415.7	660.3	573.9	86.34	7.647	
9,100.0	6,937.3	9,087.9	6,936.3	45.2	45.2	-90.01	-2,180.4	417.7	660.3	570.3	89.96	7.340	
9,200.0	6,936.8	9,187.9	6,935.9	47.0	47.0	-90.01	-2,280.4	419.8	660.3	566.7	93.59	7.054	
9,300.0	6,936.3	9,287.9	6,935.4	48.8	48.8	-90.01	-2,380.4	421.9	660.3	563.0	97.25	6.789	
9,400.0	6,935.8	9,387.9	6,934.9	50.7	50.7	-90.01	-2,480.3	423.9	660.3	559.3	100.91	6.543	
9,500.0	6,935.4	9,487.9	6,934.5	52.5	52.5	-90.01	-2,580.3	426.0	660.3	555.7	104.59	6.313	
9,600.0	6,934.9	9,587.9	6,934.0	54.3	54.3	-90.01	-2,680.3	428.0	660.3	552.0	108.28	6.097	
9,700.0	6,934.4	9,687.9	6,933.5	56.2	56.2	-90.01	-2,780.3	430.1	660.3	548.3	111.99	5.896	
9,800.0	6,934.0	9,787.9	6,933.0	58.0	58.0	-90.01	-2,880.2	432.2	660.3	544.6	115.70	5.707	
9,900.0	6,933.5	9,887.9	6,932.6	59.9	59.9	-90.01	-2,980.2	434.2	660.3	540.8	119.42	5.529	
10,000.0	6,933.0	9,987.9	6,932.1	61.8	61.7	-90.01	-3,080.2	436.3	660.3	537.1	123.15	5.362	
10,100.0	6,932.5	10,087.9	6,931.6	63.6	63.6	-90.01	-3,180.2	438.4	660.3	533.4	126.88	5.204	
10,200.0	6,932.1	10,187.9	6,931.2	65.5	65.5	-90.01	-3,280.2	440.4	660.3	529.6	130.62	5.055	
10,300.0	6,931.6	10,287.9	6,930.7	67.4	67.3	-90.01	-3,380.1	442.5	660.2	525.9	134.37	4.914	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,931.1	10,387.9	6,930.2	69.2	69.2	-90.01	-3,480.1	444.5	660.2	522.1	138.12	4.780	
10,500.0	6,930.7	10,487.9	6,929.7	71.1	71.1	-90.01	-3,580.1	446.6	660.2	518.4	141.88	4.654	
10,600.0	6,930.2	10,587.9	6,929.3	73.0	72.9	-90.01	-3,680.1	448.7	660.2	514.6	145.64	4.533	
10,700.0	6,929.7	10,687.9	6,928.8	74.9	74.8	-90.01	-3,780.0	450.7	660.2	510.8	149.41	4.419	
10,800.0	6,929.2	10,787.9	6,928.3	76.7	76.7	-90.01	-3,880.0	452.8	660.2	507.1	153.18	4.310	
10,900.0	6,928.8	10,887.9	6,927.9	78.6	78.6	-90.01	-3,980.0	454.8	660.2	503.3	156.96	4.207	
11,000.0	6,928.3	10,987.9	6,927.4	80.5	80.5	-90.01	-4,080.0	456.9	660.2	499.5	160.73	4.108	
11,100.0	6,927.8	11,087.9	6,926.9	82.4	82.4	-90.01	-4,179.9	459.0	660.2	495.7	164.52	4.013	
11,200.0	6,927.4	11,187.9	6,926.4	84.3	84.3	-90.01	-4,279.9	461.0	660.2	491.9	168.30	3.923	
11,300.0	6,926.9	11,287.9	6,926.0	86.2	86.1	-90.01	-4,379.9	463.1	660.2	488.2	172.09	3.837	
11,400.0	6,926.4	11,387.9	6,925.5	88.1	88.0	-90.01	-4,479.9	465.2	660.2	484.4	175.88	3.754	
11,489.3	6,926.0	11,477.1	6,925.1	89.8	89.5	-90.01	-4,569.1	467.0	660.2	481.3	178.98	3.689 SF	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.02	0.0	72.7	72.8				
100.0	100.0	98.0	98.0	0.1	0.1	90.02	0.0	72.7	72.7	72.5	0.22	326.933	
200.0	200.0	198.0	198.0	0.3	0.3	90.02	0.0	72.7	72.7	72.1	0.67	108.614	
300.0	300.0	298.0	298.0	0.6	0.6	90.02	0.0	72.7	72.7	71.6	1.12	64.994	
400.0	400.0	398.0	398.0	0.8	0.8	90.02	0.0	72.7	72.7	71.2	1.57	46.371	
500.0	500.0	498.0	498.0	1.0	1.0	90.02	0.0	72.7	72.7	70.7	2.02	36.043	
600.0	600.0	598.0	598.0	1.2	1.2	90.02	0.0	72.7	72.7	70.3	2.47	29.478	
700.0	700.0	698.0	698.0	1.5	1.5	90.02	0.0	72.7	72.7	69.8	2.92	24.936	
800.0	800.0	798.0	798.0	1.7	1.7	90.02	0.0	72.7	72.7	69.4	3.37	21.607	
900.0	900.0	898.0	898.0	1.9	1.9	90.02	0.0	72.7	72.7	68.9	3.82	19.062	
1,000.0	1,000.0	998.0	998.0	2.1	2.1	90.02	0.0	72.7	72.7	68.5	4.27	17.053	CC, ES
1,100.0	1,100.0	1,095.7	1,095.7	2.4	2.3	89.61	0.5	74.3	74.3	69.6	4.70	15.800	
1,200.0	1,200.0	1,193.1	1,192.9	2.6	2.6	88.42	2.2	78.9	79.1	73.9	5.13	15.400	
1,300.0	1,300.0	1,290.1	1,289.6	2.8	2.8	86.74	4.9	86.6	87.1	81.5	5.57	15.625	
1,400.0	1,400.0	1,387.1	1,385.9	3.0	3.0	84.84	8.8	97.2	98.4	92.3	6.03	16.313	
1,500.0	1,500.0	1,486.3	1,484.3	3.3	3.3	83.19	13.0	109.1	110.7	104.2	6.51	17.017	
1,600.0	1,600.0	1,585.5	1,582.7	3.5	3.5	81.86	17.3	120.9	123.1	116.1	6.99	17.613	
1,700.0	1,700.0	1,684.5	1,680.9	3.7	3.8	141.92	21.5	132.8	136.9	129.6	7.33	18.687	
1,800.0	1,799.8	1,783.1	1,778.7	3.9	4.1	142.02	25.8	144.5	153.5	145.7	7.75	19.792	
1,900.0	1,899.5	1,881.2	1,876.0	4.1	4.4	142.75	30.0	156.2	172.7	164.6	8.18	21.121	
2,000.0	1,998.7	1,978.6	1,972.7	4.4	4.7	143.93	34.2	167.9	194.7	186.1	8.60	22.632	
2,100.0	2,097.9	2,075.9	2,069.1	4.6	4.9	145.19	38.3	179.5	217.6	208.6	9.05	24.045	
2,200.0	2,197.0	2,173.1	2,165.6	4.9	5.2	146.21	42.5	191.1	240.6	231.1	9.50	25.317	
2,300.0	2,296.1	2,270.4	2,262.1	5.2	5.5	147.05	46.7	202.7	263.6	253.7	9.96	26.466	
2,400.0	2,395.3	2,367.6	2,358.5	5.4	5.8	147.75	50.9	214.3	286.7	276.3	10.42	27.506	
2,500.0	2,494.4	2,464.9	2,455.0	5.7	6.1	148.35	55.1	225.9	309.8	298.9	10.89	28.452	
2,600.0	2,593.6	2,562.1	2,551.4	6.0	6.4	148.87	59.2	237.6	332.9	321.6	11.36	29.314	
2,700.0	2,692.7	2,659.4	2,647.9	6.3	6.7	149.32	63.4	249.2	356.1	344.3	11.83	30.102	
2,800.0	2,791.8	2,756.6	2,744.4	6.6	7.1	149.72	67.6	260.8	379.3	367.0	12.30	30.826	
2,900.0	2,891.0	2,853.9	2,840.8	6.9	7.4	150.07	71.8	272.4	402.4	389.7	12.78	31.491	
3,000.0	2,990.1	2,951.1	2,937.3	7.2	7.7	150.38	75.9	284.0	425.7	412.4	13.26	32.105	
3,100.0	3,089.2	3,048.3	3,033.8	7.5	8.0	150.66	80.1	295.6	448.9	435.1	13.74	32.672	
3,200.0	3,188.4	3,145.6	3,130.2	7.8	8.3	150.91	84.3	307.2	472.1	457.9	14.22	33.199	
3,300.0	3,287.5	3,242.8	3,226.7	8.1	8.6	151.14	88.5	318.9	495.3	480.6	14.70	33.688	
3,400.0	3,386.7	3,340.1	3,323.1	8.4	8.9	151.34	92.6	330.5	518.6	503.4	15.19	34.144	
3,500.0	3,485.8	3,437.3	3,419.6	8.7	9.2	151.53	96.8	342.1	541.8	526.1	15.67	34.569	
3,600.0	3,584.9	3,534.6	3,516.1	9.1	9.5	151.71	101.0	353.7	565.0	548.9	16.16	34.967	
3,700.0	3,684.1	3,631.8	3,612.5	9.4	9.8	151.87	105.2	365.3	588.3	571.6	16.65	35.340	
3,800.0	3,783.2	3,729.1	3,709.0	9.7	10.1	152.02	109.3	376.9	611.6	594.4	17.14	35.690	
3,900.0	3,882.4	3,826.3	3,805.4	10.0	10.5	152.15	113.5	388.5	634.8	617.2	17.62	36.019	
4,000.0	3,981.5	3,923.6	3,901.9	10.3	10.8	152.28	117.7	400.1	658.1	640.0	18.11	36.329	
4,100.0	4,080.6	4,020.8	3,998.4	10.6	11.1	152.40	121.9	411.8	681.3	662.7	18.60	36.622	
4,200.0	4,179.8	4,118.2	4,094.9	10.9	11.4	152.61	126.0	423.4	704.1	685.0	19.12	36.837	
4,300.0	4,279.4	4,216.1	4,192.1	11.2	11.7	152.77	130.2	435.1	724.2	704.6	19.60	36.943	
4,400.0	4,379.2	4,314.6	4,289.8	11.4	12.0	152.77	134.5	446.8	741.3	721.2	20.07	36.935	
4,500.0	4,479.2	4,413.6	4,388.0	11.5	12.4	152.63	138.7	458.7	755.3	734.7	20.51	36.822	
4,600.0	4,579.2	4,512.8	4,486.3	11.7	12.7	91.45	143.0	470.5	767.1	746.2	20.95	36.615	
4,700.0	4,679.2	4,612.0	4,584.7	11.9	13.0	91.12	147.2	482.3	779.0	757.6	21.40	36.395	
4,800.0	4,779.2	4,711.2	4,683.1	12.1	13.3	90.79	151.5	494.2	790.9	769.0	21.86	36.186	
4,900.0	4,879.2	4,810.3	4,781.5	12.3	13.6	90.47	155.8	506.0	802.8	780.5	22.31	35.986	
5,000.0	4,979.2	4,925.5	4,895.8	12.4	14.0	90.13	160.5	519.2	814.3	791.5	22.78	35.748	
5,100.0	5,079.2	5,061.9	5,031.7	12.6	14.3	89.86	164.3	529.8	822.1	798.8	23.24	35.365	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,198.9	5,168.7	12.8	14.5	89.75	165.9	534.3	825.3	801.6	23.70	34.828	
5,300.0	5,279.2	5,307.5	5,277.2	13.0	14.7	89.75	166.0	534.4	825.5	801.4	24.11	34.242	
5,400.0	5,379.2	5,407.5	5,377.2	13.2	14.8	89.75	166.0	534.4	825.5	800.9	24.52	33.671	
5,500.0	5,479.2	5,507.5	5,477.2	13.4	15.0	89.75	166.0	534.4	825.5	800.5	24.93	33.117	
5,600.0	5,579.2	5,607.5	5,577.2	13.6	15.2	89.75	166.0	534.4	825.5	800.1	25.34	32.580	
5,700.0	5,679.2	5,707.5	5,677.2	13.8	15.4	89.75	166.0	534.4	825.5	799.7	25.75	32.057	
5,800.0	5,779.2	5,807.5	5,777.2	14.0	15.5	89.75	166.0	534.4	825.5	799.3	26.16	31.550	
5,900.0	5,879.2	5,907.5	5,877.2	14.2	15.7	89.75	166.0	534.4	825.5	798.9	26.58	31.058	
6,000.0	5,979.2	6,007.5	5,977.2	14.4	15.9	89.75	166.0	534.4	825.5	798.5	26.99	30.579	
6,100.0	6,079.2	6,107.5	6,077.2	14.6	16.1	89.75	166.0	534.4	825.5	798.0	27.41	30.113	
6,200.0	6,179.2	6,207.5	6,177.2	14.8	16.2	89.75	166.0	534.4	825.5	797.6	27.83	29.661	
6,300.0	6,279.2	6,307.5	6,277.2	15.0	16.4	89.75	166.0	534.4	825.5	797.2	28.25	29.221	
6,400.0	6,379.2	6,407.5	6,377.2	15.2	16.6	89.75	166.0	534.4	825.5	796.8	28.67	28.793	
6,500.0	6,479.1	6,506.1	6,475.7	15.4	16.8	-89.08	163.3	534.5	825.5	796.4	29.03	28.438	
6,600.0	6,576.9	6,603.7	6,571.3	15.5	16.9	-89.11	144.4	534.9	825.4	796.2	29.24	28.228	
6,700.0	6,669.2	6,701.3	6,661.8	15.6	17.0	-89.18	108.1	535.6	825.4	796.1	29.38	28.099	
6,800.0	6,752.5	6,799.2	6,744.1	15.7	17.0	-89.28	55.3	536.7	825.4	795.9	29.52	27.960	
6,900.0	6,823.8	6,897.4	6,815.3	15.7	17.1	-89.40	-12.1	538.1	825.4	795.6	29.79	27.704	
7,000.0	6,880.4	6,995.9	6,872.7	15.8	17.3	-89.54	-91.9	539.8	825.4	795.1	30.31	27.227	
7,100.0	6,920.3	7,094.9	6,914.3	16.1	17.5	-89.70	-181.6	541.6	825.4	794.2	31.18	26.475	
7,200.0	6,942.0	7,194.3	6,938.2	16.6	18.0	-89.88	-277.8	543.6	825.3	792.9	32.41	25.463	
7,300.0	6,945.7	7,294.1	6,943.8	17.4	18.6	-90.01	-377.4	545.7	825.3	791.3	34.00	24.273	
7,400.0	6,945.3	7,394.1	6,943.4	18.3	19.5	-90.01	-477.4	547.7	825.3	789.4	35.93	22.971	
7,500.0	6,944.8	7,494.1	6,942.9	19.4	20.5	-90.01	-577.4	549.8	825.3	787.2	38.15	21.636	
7,600.0	6,944.3	7,594.1	6,942.4	20.7	21.6	-90.01	-677.3	551.8	825.3	784.7	40.61	20.325	
7,700.0	6,943.9	7,694.1	6,942.0	22.0	22.9	-90.01	-777.3	553.9	825.3	782.1	43.27	19.075	
7,800.0	6,943.4	7,794.1	6,941.5	23.4	24.2	-90.01	-877.3	556.0	825.3	779.2	46.10	17.903	
7,900.0	6,942.9	7,894.1	6,941.0	24.8	25.6	-90.01	-977.3	558.0	825.3	776.3	49.07	16.820	
8,000.0	6,942.4	7,994.1	6,940.5	26.4	27.1	-90.01	-1,077.2	560.1	825.3	773.2	52.15	15.825	
8,100.0	6,942.0	8,094.1	6,940.1	28.0	28.6	-90.01	-1,177.2	562.2	825.3	770.0	55.33	14.916	
8,200.0	6,941.5	8,194.1	6,939.6	29.6	30.2	-90.01	-1,277.2	564.2	825.3	766.7	58.59	14.086	
8,300.0	6,941.0	8,294.1	6,939.1	31.2	31.8	-90.01	-1,377.2	566.3	825.3	763.4	61.92	13.329	
8,400.0	6,940.6	8,394.1	6,938.7	32.9	33.5	-90.01	-1,477.1	568.3	825.3	760.0	65.31	12.638	
8,500.0	6,940.1	8,494.1	6,938.2	34.6	35.1	-90.01	-1,577.1	570.4	825.3	756.6	68.74	12.007	
8,600.0	6,939.6	8,594.1	6,937.7	36.3	36.8	-90.01	-1,677.1	572.5	825.3	753.1	72.21	11.429	
8,700.0	6,939.1	8,694.1	6,937.2	38.1	38.6	-90.01	-1,777.1	574.5	825.3	749.6	75.72	10.899	
8,800.0	6,938.7	8,794.1	6,936.8	39.8	40.3	-90.01	-1,877.1	576.6	825.3	746.1	79.27	10.412	
8,900.0	6,938.2	8,894.1	6,936.3	41.6	42.1	-90.01	-1,977.0	578.6	825.3	742.5	82.84	9.963	
9,000.0	6,937.7	8,994.1	6,935.8	43.4	43.8	-90.01	-2,077.0	580.7	825.3	738.9	86.43	9.549	
9,100.0	6,937.3	9,094.1	6,935.4	45.2	45.6	-90.01	-2,177.0	582.8	825.3	735.3	90.05	9.166	
9,200.0	6,936.8	9,194.1	6,934.9	47.0	47.4	-90.01	-2,277.0	584.8	825.3	731.7	93.68	8.810	
9,300.0	6,936.3	9,294.1	6,934.4	48.8	49.2	-90.01	-2,376.9	586.9	825.3	728.0	97.33	8.480	
9,400.0	6,935.8	9,394.1	6,933.9	50.7	51.0	-90.01	-2,476.9	589.0	825.3	724.3	100.99	8.172	
9,500.0	6,935.4	9,494.1	6,933.5	52.5	52.8	-90.01	-2,576.9	591.0	825.3	720.7	104.67	7.885	
9,600.0	6,934.9	9,594.1	6,933.0	54.3	54.7	-90.01	-2,676.9	593.1	825.3	717.0	108.36	7.617	
9,700.0	6,934.4	9,694.1	6,932.5	56.2	56.5	-90.01	-2,776.9	595.1	825.3	713.3	112.06	7.365	
9,800.0	6,934.0	9,794.1	6,932.1	58.0	58.3	-90.01	-2,876.8	597.2	825.3	709.6	115.77	7.129	
9,900.0	6,933.5	9,894.1	6,931.6	59.9	60.2	-90.01	-2,976.8	599.3	825.3	705.8	119.49	6.907	
10,000.0	6,933.0	9,994.1	6,931.1	61.8	62.0	-90.01	-3,076.8	601.3	825.3	702.1	123.21	6.698	
10,100.0	6,932.5	10,094.1	6,930.6	63.6	63.9	-90.01	-3,176.8	603.4	825.3	698.4	126.95	6.501	
10,200.0	6,932.1	10,194.1	6,930.2	65.5	65.7	-90.01	-3,276.7	605.5	825.3	694.6	130.69	6.315	
10,300.0	6,931.6	10,294.1	6,929.7	67.4	67.6	-90.01	-3,376.7	607.5	825.3	690.9	134.43	6.139	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,931.1	10,394.1	6,929.2	69.2	69.5	-90.01	-3,476.7	609.6	825.3	687.1	138.18	5.973	
10,500.0	6,930.7	10,494.1	6,928.8	71.1	71.3	-90.01	-3,576.7	611.6	825.3	683.4	141.94	5.815	
10,600.0	6,930.2	10,594.1	6,928.3	73.0	73.2	-90.01	-3,676.7	613.7	825.3	679.6	145.70	5.664	
10,700.0	6,929.7	10,694.1	6,927.8	74.9	75.1	-90.01	-3,776.6	615.8	825.3	675.9	149.47	5.522	
10,800.0	6,929.2	10,794.1	6,927.3	76.7	77.0	-90.01	-3,876.6	617.8	825.3	672.1	153.24	5.386	
10,900.0	6,928.8	10,894.1	6,926.9	78.6	78.8	-90.01	-3,976.6	619.9	825.3	668.3	157.01	5.256	
11,000.0	6,928.3	10,994.1	6,926.4	80.5	80.7	-90.01	-4,076.6	622.0	825.3	664.5	160.79	5.133	
11,100.0	6,927.8	11,094.1	6,925.9	82.4	82.6	-90.01	-4,176.5	624.0	825.3	660.8	164.57	5.015	
11,200.0	6,927.4	11,194.1	6,925.5	84.3	84.5	-90.01	-4,276.5	626.1	825.3	657.0	168.35	4.902	
11,300.0	6,926.9	11,294.1	6,925.0	86.2	86.4	-90.01	-4,376.5	628.1	825.3	653.2	172.14	4.794	
11,400.0	6,926.4	11,394.1	6,924.5	88.1	88.3	-90.01	-4,476.5	630.2	825.3	649.4	175.93	4.691	
11,489.3	6,926.0	11,483.4	6,924.1	89.8	89.9	-90.01	-4,565.7	632.0	825.3	646.0	179.31	4.603	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.02	0.0	89.5	89.6				
100.0	100.0	98.0	98.0	0.1	0.1	90.02	0.0	89.5	89.5	89.3	0.22	402.379	
200.0	200.0	198.0	198.0	0.3	0.3	90.02	0.0	89.5	89.5	88.9	0.67	133.679	
300.0	300.0	298.0	298.0	0.6	0.6	90.02	0.0	89.5	89.5	88.4	1.12	79.993	
400.0	400.0	398.0	398.0	0.8	0.8	90.02	0.0	89.5	89.5	88.0	1.57	57.072	
500.0	500.0	498.0	498.0	1.0	1.0	90.02	0.0	89.5	89.5	87.5	2.02	44.361	
600.0	600.0	598.0	598.0	1.2	1.2	90.02	0.0	89.5	89.5	87.1	2.47	36.281	
700.0	700.0	698.0	698.0	1.5	1.5	90.02	0.0	89.5	89.5	86.6	2.92	30.690	
800.0	800.0	798.0	798.0	1.7	1.7	90.02	0.0	89.5	89.5	86.2	3.37	26.593	CC, ES
900.0	900.0	895.1	895.1	1.9	1.9	89.76	0.4	91.1	91.1	87.3	3.80	23.969	
1,000.0	1,000.0	991.9	991.8	2.1	2.1	89.01	1.7	95.7	96.0	91.7	4.23	22.677	
1,100.0	1,100.0	1,088.3	1,087.8	2.4	2.3	87.91	3.8	103.5	104.1	99.4	4.67	22.279	SF
1,200.0	1,200.0	1,184.5	1,183.3	2.6	2.6	86.63	6.7	114.4	115.5	110.4	5.13	22.519	
1,300.0	1,300.0	1,283.6	1,281.6	2.8	2.8	85.44	10.1	126.8	128.3	122.6	5.61	22.857	
1,400.0	1,400.0	1,382.8	1,379.9	3.0	3.1	84.46	13.5	139.2	141.0	134.9	6.10	23.111	
1,500.0	1,500.0	1,481.9	1,478.3	3.3	3.4	83.65	16.9	151.6	153.9	147.3	6.60	23.305	
1,600.0	1,600.0	1,581.1	1,576.6	3.5	3.7	82.96	20.3	164.1	166.7	159.6	7.11	23.457	
1,700.0	1,700.0	1,680.0	1,674.7	3.7	4.0	143.39	23.6	176.5	181.0	173.6	7.33	24.697	
1,800.0	1,799.8	1,778.6	1,772.4	3.9	4.3	143.57	27.0	188.8	198.0	190.2	7.76	25.525	
1,900.0	1,899.5	1,876.5	1,869.5	4.1	4.6	144.22	30.3	201.1	217.8	209.6	8.18	26.621	
2,000.0	1,998.7	1,973.8	1,966.0	4.4	4.9	145.23	33.6	213.3	240.4	231.8	8.61	27.923	
2,100.0	2,097.9	2,070.9	2,062.3	4.6	5.2	146.35	37.0	225.5	263.9	254.8	9.06	29.134	
2,200.0	2,197.0	2,168.0	2,158.5	4.9	5.5	147.29	40.3	237.6	287.4	277.9	9.51	30.222	
2,300.0	2,296.1	2,265.1	2,254.8	5.2	5.8	148.09	43.6	249.8	311.0	301.1	9.97	31.202	
2,400.0	2,395.3	2,362.2	2,351.0	5.4	6.1	148.78	46.9	262.0	334.7	324.3	10.43	32.089	
2,500.0	2,494.4	2,459.3	2,447.3	5.7	6.4	149.38	50.2	274.1	358.4	347.5	10.90	32.893	
2,600.0	2,593.6	2,556.3	2,543.6	6.0	6.7	149.90	53.5	286.3	382.2	370.8	11.37	33.626	
2,700.0	2,692.7	2,653.4	2,639.8	6.3	7.0	150.36	56.8	298.5	406.0	394.1	11.84	34.296	
2,800.0	2,791.8	2,750.5	2,736.1	6.6	7.4	150.77	60.1	310.6	429.8	417.4	12.31	34.910	
2,900.0	2,891.0	2,847.6	2,832.4	6.9	7.7	151.14	63.4	322.8	453.6	440.8	12.79	35.475	
3,000.0	2,990.1	2,944.7	2,928.6	7.2	8.0	151.47	66.8	335.0	477.4	464.1	13.26	35.996	
3,100.0	3,089.2	3,041.8	3,024.9	7.5	8.3	151.77	70.1	347.1	501.2	487.5	13.74	36.477	
3,200.0	3,188.4	3,138.8	3,121.1	7.8	8.6	152.04	73.4	359.3	525.1	510.9	14.22	36.924	
3,300.0	3,287.5	3,235.9	3,217.4	8.1	8.9	152.29	76.7	371.5	549.0	534.3	14.70	37.339	
3,400.0	3,386.7	3,333.0	3,313.7	8.4	9.3	152.51	80.0	383.6	572.8	557.6	15.18	37.725	
3,500.0	3,485.8	3,430.1	3,409.9	8.7	9.6	152.72	83.3	395.8	596.7	581.0	15.67	38.086	
3,600.0	3,584.9	3,527.2	3,506.2	9.1	9.9	152.92	86.6	408.0	620.6	604.4	16.15	38.424	
3,700.0	3,684.1	3,624.3	3,602.5	9.4	10.2	153.10	89.9	420.1	644.5	627.9	16.64	38.740	
3,800.0	3,783.2	3,721.4	3,698.7	9.7	10.5	153.26	93.2	432.3	668.4	651.3	17.12	39.037	
3,900.0	3,882.4	3,818.4	3,795.0	10.0	10.8	153.42	96.6	444.5	692.3	674.7	17.61	39.316	
4,000.0	3,981.5	3,915.5	3,891.2	10.3	11.2	153.56	99.9	456.6	716.2	698.1	18.10	39.579	
4,100.0	4,080.6	4,012.6	3,987.5	10.6	11.5	153.70	103.2	468.8	740.1	721.5	18.58	39.827	
4,200.0	4,179.8	4,109.8	4,083.9	10.9	11.8	153.92	106.5	481.0	763.6	744.5	19.09	39.992	
4,300.0	4,279.4	4,207.6	4,180.9	11.2	12.1	154.10	109.8	493.2	784.3	764.7	19.58	40.048	
4,400.0	4,379.2	4,306.1	4,278.5	11.4	12.4	154.15	113.2	505.6	801.9	781.8	20.05	39.993	
4,500.0	4,479.2	4,404.9	4,376.5	11.5	12.8	154.06	116.6	518.0	816.4	795.9	20.49	39.837	
4,600.0	4,579.2	4,504.1	4,474.8	11.7	13.1	92.95	119.9	530.4	828.8	807.9	20.94	39.587	
4,700.0	4,679.2	4,603.2	4,573.1	11.9	13.4	92.68	123.3	542.8	841.2	819.8	21.39	39.330	
4,800.0	4,779.2	4,702.4	4,671.4	12.1	13.7	92.41	126.7	555.2	853.6	831.7	21.84	39.083	
4,900.0	4,879.2	4,801.5	4,769.8	12.3	14.1	92.15	130.1	567.7	866.0	843.7	22.29	38.846	
5,000.0	4,979.2	4,900.7	4,868.1	12.4	14.4	91.90	133.5	580.1	878.4	855.6	22.74	38.620	
5,100.0	5,079.2	4,999.9	4,966.4	12.6	14.7	91.65	136.8	592.5	890.8	867.6	23.20	38.402	

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

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W - Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,179.2	5,099.0	5,064.7	12.8	15.1	91.41	140.2	604.9	903.2	879.6	23.65	38.193	
5,300.0	5,279.2	5,198.2	5,163.0	13.0	15.4	91.18	143.6	617.4	915.7	891.6	24.10	37.992	
5,400.0	5,379.2	5,297.3	5,261.3	13.2	15.7	90.95	147.0	629.8	928.2	903.6	24.56	37.799	
5,500.0	5,479.2	5,396.5	5,359.6	13.4	16.0	90.73	150.4	642.2	940.7	915.7	25.01	37.613	
5,600.0	5,579.2	5,495.6	5,458.0	13.6	16.4	90.52	153.8	654.6	953.2	927.7	25.46	37.433	
5,700.0	5,679.2	5,594.8	5,556.3	13.8	16.7	90.31	157.1	667.1	965.7	939.8	25.92	37.261	
5,800.0	5,779.2	5,707.1	5,667.7	14.0	17.0	90.08	160.9	680.9	978.0	951.6	26.39	37.059	
5,900.0	5,879.2	5,856.0	5,816.0	14.2	17.4	89.88	164.4	693.8	986.7	959.8	26.88	36.706	
6,000.0	5,979.2	6,005.9	5,965.7	14.4	17.6	89.79	165.9	699.3	990.4	963.1	27.36	36.201	
6,100.0	6,079.2	6,117.3	6,077.2	14.6	17.8	89.79	166.0	699.5	990.5	962.8	27.78	35.663	
6,200.0	6,179.2	6,217.3	6,177.2	14.8	17.9	89.79	166.0	699.5	990.5	962.4	28.18	35.146	
6,300.0	6,279.2	6,317.3	6,277.2	15.0	18.1	89.79	166.0	699.5	990.5	962.0	28.59	34.643	
6,400.0	6,379.2	6,417.3	6,377.2	15.2	18.3	89.79	166.0	699.5	990.5	961.5	29.00	34.153	
6,500.0	6,479.1	6,517.3	6,477.1	15.4	18.4	-89.20	166.0	699.5	990.5	961.1	29.36	33.733	
6,578.4	6,556.1	6,594.3	6,554.1	15.5	18.6	-90.00	166.0	699.5	990.4	960.8	29.59	33.476	
6,600.0	6,576.9	6,615.1	6,574.9	15.5	18.6	-90.33	166.0	699.5	990.4	960.8	29.64	33.411	
6,700.0	6,669.2	6,711.7	6,671.5	15.6	18.7	-92.22	163.2	699.6	991.3	961.4	29.84	33.215	
6,800.0	6,752.5	6,816.7	6,774.1	15.7	18.8	-94.23	142.0	700.0	993.5	963.5	29.98	33.137	
6,900.0	6,823.8	6,931.6	6,879.0	15.7	18.9	-96.19	95.8	701.0	997.0	966.8	30.14	33.075	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5026.0ft (Original Well Elev) Coordinates are relative to: Pastelak 01N-64W-02-3N
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.63°

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-3N
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-3N	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	landmark
Reference Design:	Plan #1 (8-6-14)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5026.0ft (Original Well Elev) Coordinates are relative to: Pastelak 01N-64W-02-3N
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.63°