Verdad Oil & Gas Corporation

Well Name: **Pastelak 01N-64W-02-9C**

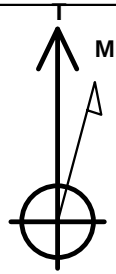
Surface Location: Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 5011.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1276066.87	3273388.69	40.087060	-104.522880	

Original Well Elev WELL @ 5024.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
460' Setback BHL	-2.0	-4582.7	-920.3	Polygon
460' Setback SHL	-2.0	-244.9	-920.3	Polygon
Sectionline	-2.0	215.1	-920.3	Polygon
SHL 215'FNL & 1376'FWL	1.0	0.1	0.0	Point
BHL 460'FSL & 1980'FWL	7124.0	-4586.4	708.0	Point



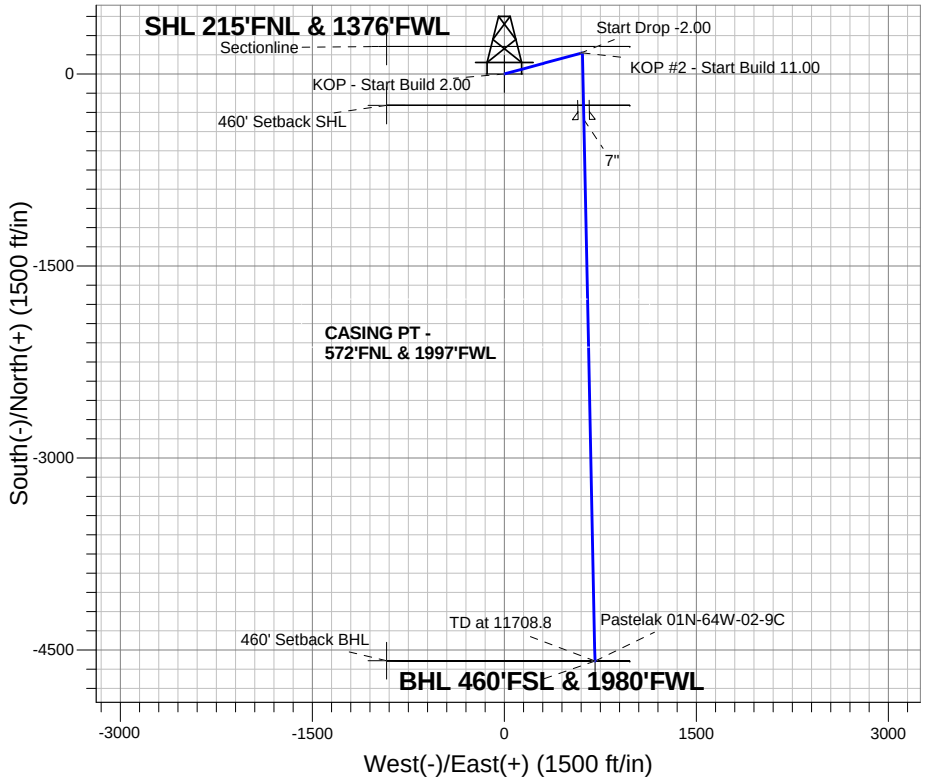
Azimuths to True North
Magnetic North: 8.28°

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-02-9C
Plan #1 (8-6-14)

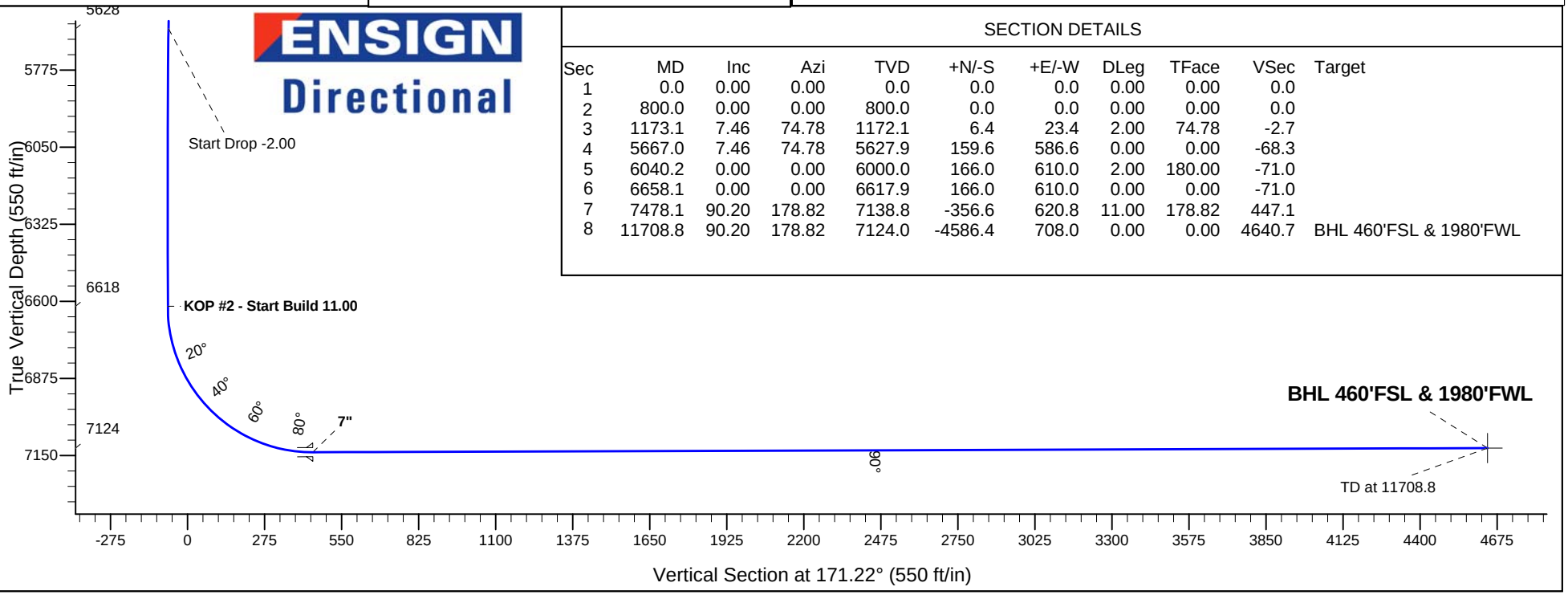
ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 2.00
5627.9	5667.0	Start Drop -2.00
6617.9	6658.1	KOP #2 - Start Build 11.00
7124.0	11708.8	TD at 11708.8



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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1173.1	7.46	74.78	1172.1	6.4	23.4	2.00	74.78	-2.7	
4	5667.0	7.46	74.78	5627.9	159.6	586.6	0.00	0.00	-68.3	
5	6040.2	0.00	0.00	6000.0	166.0	610.0	2.00	180.00	-71.0	
6	6658.1	0.00	0.00	6617.9	166.0	610.0	0.00	0.00	-71.0	
7	7478.1	90.20	178.82	7138.8	-356.6	620.8	11.00	178.82	447.1	
8	11708.8	90.20	178.82	7124.0	-4586.4	708.0	0.00	0.00	4640.7	BHL 460'FSL & 1980'FWL



Verdad Oil & Gas Corporation

SEC.2-T1N-R64W
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
Pastelak 01N-64W-02-9C

Wellbore #1

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

Standard Planning Report

08 August, 2014

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-9C	**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-02-9C

Well Position	**+N/-S**	-0.1 ft	**Northing:**	1,276,066.87 ft	**Latitude:**	40.087060
	+E/-W	120.3 ft	**Easting:**	3,273,388.69 ft	**Longitude:**	-104.522880
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,011.0 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	171.22

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,173.1	7.46	74.78	1,172.1	6.4	23.4	2.00	2.00	0.00	74.78	
5,667.0	7.46	74.78	5,627.9	159.6	586.6	0.00	0.00	0.00	0.00	
6,040.2	0.00	0.00	6,000.0	166.0	610.0	2.00	-2.00	0.00	180.00	
6,658.1	0.00	0.00	6,617.9	166.0	610.0	0.00	0.00	0.00	0.00	
7,478.1	90.20	178.82	7,138.8	-356.6	620.8	11.00	11.00	0.00	178.82	
11,708.8	90.20	178.82	7,124.0	-4,586.4	708.0	0.00	0.00	0.00	0.00	BHL 460'FSL & 198

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-9C	**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
KOP - Start Build 2.00									
900.0	2.00	74.78	900.0	0.5	1.7	-0.2	2.00	2.00	0.00
1,000.0	4.00	74.78	999.8	1.8	6.7	-0.8	2.00	2.00	0.00
1,100.0	6.00	74.78	1,099.5	4.1	15.1	-1.8	2.00	2.00	0.00
1,173.1	7.46	74.78	1,172.1	6.4	23.4	-2.7	2.00	2.00	0.00
1,200.0	7.46	74.78	1,198.7	7.3	26.8	-3.1	0.00	0.00	0.00
1,300.0	7.46	74.78	1,297.9	10.7	39.3	-4.6	0.00	0.00	0.00
1,400.0	7.46	74.78	1,397.0	14.1	51.8	-6.0	0.00	0.00	0.00
1,500.0	7.46	74.78	1,496.2	17.5	64.4	-7.5	0.00	0.00	0.00
1,600.0	7.46	74.78	1,595.3	20.9	76.9	-9.0	0.00	0.00	0.00
1,700.0	7.46	74.78	1,694.5	24.3	89.4	-10.4	0.00	0.00	0.00
1,800.0	7.46	74.78	1,793.6	27.7	102.0	-11.9	0.00	0.00	0.00
1,900.0	7.46	74.78	1,892.8	31.2	114.5	-13.3	0.00	0.00	0.00
2,000.0	7.46	74.78	1,991.9	34.6	127.0	-14.8	0.00	0.00	0.00
2,100.0	7.46	74.78	2,091.1	38.0	139.6	-16.2	0.00	0.00	0.00
2,200.0	7.46	74.78	2,190.2	41.4	152.1	-17.7	0.00	0.00	0.00
2,300.0	7.46	74.78	2,289.4	44.8	164.6	-19.2	0.00	0.00	0.00
2,400.0	7.46	74.78	2,388.6	48.2	177.2	-20.6	0.00	0.00	0.00
2,500.0	7.46	74.78	2,487.7	51.6	189.7	-22.1	0.00	0.00	0.00
2,600.0	7.46	74.78	2,586.9	55.0	202.2	-23.5	0.00	0.00	0.00
2,700.0	7.46	74.78	2,686.0	58.4	214.8	-25.0	0.00	0.00	0.00
2,800.0	7.46	74.78	2,785.2	61.9	227.3	-26.5	0.00	0.00	0.00
2,900.0	7.46	74.78	2,884.3	65.3	239.8	-27.9	0.00	0.00	0.00
3,000.0	7.46	74.78	2,983.5	68.7	252.4	-29.4	0.00	0.00	0.00
3,100.0	7.46	74.78	3,082.6	72.1	264.9	-30.8	0.00	0.00	0.00
3,200.0	7.46	74.78	3,181.8	75.5	277.4	-32.3	0.00	0.00	0.00
3,300.0	7.46	74.78	3,280.9	78.9	290.0	-33.7	0.00	0.00	0.00
3,400.0	7.46	74.78	3,380.1	82.3	302.5	-35.2	0.00	0.00	0.00
3,500.0	7.46	74.78	3,479.2	85.7	315.0	-36.7	0.00	0.00	0.00
3,600.0	7.46	74.78	3,578.4	89.1	327.5	-38.1	0.00	0.00	0.00
3,700.0	7.46	74.78	3,677.5	92.5	340.1	-39.6	0.00	0.00	0.00
3,800.0	7.46	74.78	3,776.7	96.0	352.6	-41.0	0.00	0.00	0.00
3,900.0	7.46	74.78	3,875.8	99.4	365.1	-42.5	0.00	0.00	0.00
4,000.0	7.46	74.78	3,975.0	102.8	377.7	-44.0	0.00	0.00	0.00
4,100.0	7.46	74.78	4,074.2	106.2	390.2	-45.4	0.00	0.00	0.00
4,200.0	7.46	74.78	4,173.3	109.6	402.7	-46.9	0.00	0.00	0.00
4,300.0	7.46	74.78	4,272.5	113.0	415.3	-48.3	0.00	0.00	0.00
4,400.0	7.46	74.78	4,371.6	116.4	427.8	-49.8	0.00	0.00	0.00
4,500.0	7.46	74.78	4,470.8	119.8	440.3	-51.2	0.00	0.00	0.00
4,600.0	7.46	74.78	4,569.9	123.2	452.9	-52.7	0.00	0.00	0.00
4,700.0	7.46	74.78	4,669.1	126.6	465.4	-54.2	0.00	0.00	0.00
4,800.0	7.46	74.78	4,768.2	130.1	477.9	-55.6	0.00	0.00	0.00
4,900.0	7.46	74.78	4,867.4	133.5	490.5	-57.1	0.00	0.00	0.00
5,000.0	7.46	74.78	4,966.5	136.9	503.0	-58.5	0.00	0.00	0.00
5,100.0	7.46	74.78	5,065.7	140.3	515.5	-60.0	0.00	0.00	0.00

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-9C	**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)
5,200.0	7.46	74.78	5,164.8	143.7	528.1	-61.5	0.00	0.00	0.00
5,300.0	7.46	74.78	5,264.0	147.1	540.6	-62.9	0.00	0.00	0.00
5,400.0	7.46	74.78	5,363.1	150.5	553.1	-64.4	0.00	0.00	0.00
5,500.0	7.46	74.78	5,462.3	153.9	565.7	-65.8	0.00	0.00	0.00
5,600.0	7.46	74.78	5,561.5	157.3	578.2	-67.3	0.00	0.00	0.00
5,667.0	7.46	74.78	5,627.9	159.6	586.6	-68.3	0.00	0.00	0.00
Start Drop -2.00									
5,700.0	6.80	74.78	5,660.6	160.7	590.5	-68.7	2.00	-2.00	0.00
5,800.0	4.80	74.78	5,760.1	163.4	600.3	-69.9	2.00	-2.00	0.00
5,900.0	2.80	74.78	5,859.9	165.1	606.7	-70.6	2.00	-2.00	0.00
6,000.0	0.80	74.78	5,959.8	165.9	609.7	-71.0	2.00	-2.00	0.00
6,040.2	0.00	0.00	6,000.0	166.0	610.0	-71.0	2.00	-2.00	0.00
6,100.0	0.00	0.00	6,059.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,159.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,259.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,359.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,459.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,559.8	166.0	610.0	-71.0	0.00	0.00	0.00
6,658.1	0.00	0.00	6,617.9	166.0	610.0	-71.0	0.00	0.00	0.00
KOP #2 - Start Build 11.00									
6,700.0	4.61	178.82	6,659.8	164.3	610.0	-69.3	11.01	11.01	0.00
6,800.0	15.61	178.82	6,758.1	146.8	610.4	-51.9	11.00	11.00	0.00
6,900.0	26.61	178.82	6,851.2	110.8	611.1	-16.3	11.00	11.00	0.00
7,000.0	37.61	178.82	6,935.8	57.8	612.2	36.3	11.00	11.00	0.00
7,100.0	48.61	178.82	7,008.7	-10.5	613.6	104.0	11.00	11.00	0.00
7,200.0	59.61	178.82	7,067.2	-91.3	615.3	184.1	11.00	11.00	0.00
7,300.0	70.61	178.82	7,109.2	-181.9	617.2	273.9	11.00	11.00	0.00
7,400.0	81.61	178.82	7,133.2	-278.8	619.2	370.0	11.00	11.00	0.00
7,478.1	90.20	178.82	7,138.8	-356.6	620.8	447.1	11.00	11.00	0.00
7"									
7,500.0	90.20	178.82	7,138.7	-378.5	621.2	468.9	0.00	0.00	0.00
7,600.0	90.20	178.82	7,138.3	-478.5	623.3	568.0	0.00	0.00	0.00
7,700.0	90.20	178.82	7,138.0	-578.5	625.4	667.1	0.00	0.00	0.00
7,800.0	90.20	178.82	7,137.6	-678.4	627.4	766.2	0.00	0.00	0.00
7,900.0	90.20	178.82	7,137.3	-778.4	629.5	865.3	0.00	0.00	0.00
8,000.0	90.20	178.82	7,136.9	-878.4	631.5	964.5	0.00	0.00	0.00
8,100.0	90.20	178.82	7,136.6	-978.4	633.6	1,063.6	0.00	0.00	0.00
8,200.0	90.20	178.82	7,136.2	-1,078.3	635.7	1,162.7	0.00	0.00	0.00
8,300.0	90.20	178.82	7,135.9	-1,178.3	637.7	1,261.8	0.00	0.00	0.00
8,400.0	90.20	178.82	7,135.5	-1,278.3	639.8	1,361.0	0.00	0.00	0.00
8,500.0	90.20	178.82	7,135.2	-1,378.3	641.9	1,460.1	0.00	0.00	0.00
8,600.0	90.20	178.82	7,134.9	-1,478.3	643.9	1,559.2	0.00	0.00	0.00
8,700.0	90.20	178.82	7,134.5	-1,578.2	646.0	1,658.3	0.00	0.00	0.00
8,800.0	90.20	178.82	7,134.2	-1,678.2	648.0	1,757.4	0.00	0.00	0.00
8,900.0	90.20	178.82	7,133.8	-1,778.2	650.1	1,856.6	0.00	0.00	0.00
9,000.0	90.20	178.82	7,133.5	-1,878.2	652.2	1,955.7	0.00	0.00	0.00
9,100.0	90.20	178.82	7,133.1	-1,978.2	654.2	2,054.8	0.00	0.00	0.00
9,200.0	90.20	178.82	7,132.8	-2,078.1	656.3	2,153.9	0.00	0.00	0.00
9,300.0	90.20	178.82	7,132.4	-2,178.1	658.4	2,253.1	0.00	0.00	0.00
9,400.0	90.20	178.82	7,132.1	-2,278.1	660.4	2,352.2	0.00	0.00	0.00
9,500.0	90.20	178.82	7,131.7	-2,378.1	662.5	2,451.3	0.00	0.00	0.00
9,600.0	90.20	178.82	7,131.4	-2,478.0	664.5	2,550.4	0.00	0.00	0.00
9,700.0	90.20	178.82	7,131.0	-2,578.0	666.6	2,649.5	0.00	0.00	0.00

Database:	landmark	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Company:	Verdad Oil & Gas Corporation	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**North Reference:**	True
Well:	Pastelak 01N-64W-02-9C	**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)
9,800.0	90.20	178.82	7,130.7	-2,678.0	668.7	2,748.7	0.00	0.00	0.00
9,900.0	90.20	178.82	7,130.3	-2,778.0	670.7	2,847.8	0.00	0.00	0.00
10,000.0	90.20	178.82	7,130.0	-2,878.0	672.8	2,946.9	0.00	0.00	0.00
10,100.0	90.20	178.82	7,129.6	-2,977.9	674.9	3,046.0	0.00	0.00	0.00
10,200.0	90.20	178.82	7,129.3	-3,077.9	676.9	3,145.2	0.00	0.00	0.00
10,300.0	90.20	178.82	7,128.9	-3,177.9	679.0	3,244.3	0.00	0.00	0.00
10,400.0	90.20	178.82	7,128.6	-3,277.9	681.0	3,343.4	0.00	0.00	0.00
10,500.0	90.20	178.82	7,128.2	-3,377.8	683.1	3,442.5	0.00	0.00	0.00
10,600.0	90.20	178.82	7,127.9	-3,477.8	685.2	3,541.6	0.00	0.00	0.00
10,700.0	90.20	178.82	7,127.5	-3,577.8	687.2	3,640.8	0.00	0.00	0.00
10,800.0	90.20	178.82	7,127.2	-3,677.8	689.3	3,739.9	0.00	0.00	0.00
10,900.0	90.20	178.82	7,126.8	-3,777.8	691.4	3,839.0	0.00	0.00	0.00
11,000.0	90.20	178.82	7,126.5	-3,877.7	693.4	3,938.1	0.00	0.00	0.00
11,100.0	90.20	178.82	7,126.1	-3,977.7	695.5	4,037.3	0.00	0.00	0.00
11,200.0	90.20	178.82	7,125.8	-4,077.7	697.5	4,136.4	0.00	0.00	0.00
11,300.0	90.20	178.82	7,125.4	-4,177.7	699.6	4,235.5	0.00	0.00	0.00
11,400.0	90.20	178.82	7,125.1	-4,277.6	701.7	4,334.6	0.00	0.00	0.00
11,500.0	90.20	178.82	7,124.7	-4,377.6	703.7	4,433.7	0.00	0.00	0.00
11,600.0	90.20	178.82	7,124.4	-4,477.6	705.8	4,532.9	0.00	0.00	0.00
11,700.0	90.20	178.82	7,124.0	-4,577.6	707.9	4,632.0	0.00	0.00	0.00
11,708.8	90.20	178.82	7,124.0	-4,586.4	708.0	4,640.7	0.00	0.00	0.00

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,478.1	7,138.8	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
800.0	800.0	0.0	0.0	KOP - Start Build 2.00
5,667.0	5,627.9	159.6	586.6	Start Drop -2.00
6,658.1	6,617.9	166.0	610.0	KOP #2 - Start Build 11.00
11,708.8	7,124.0	-4,586.4	708.0	TD at 11708.8

ENSIGN
Directional

Verdad Oil & Gas Corporation

SEC.2-T1N-R64W
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
Pastelak 01N-64W-02-9C

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	11,708.8	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	800.0	802.0	817.3	799.6	46.110	CC
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	900.0	902.0	819.0	799.1	41.094	ES
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	2,400.0	2,390.6	994.1	941.2	18.818	SF
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W						
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	565.6	568.6	120.3	118.0	51.756	CC
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	600.0	602.9	120.3	117.8	48.542	ES
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14	900.0	890.0	136.9	133.1	36.282	SF
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14	800.0	802.0	106.3	103.0	31.495	CC, ES
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14	1,100.0	1,101.5	121.5	116.9	25.990	SF
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14	800.0	802.0	89.5	86.2	26.522	CC, ES
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14	1,100.0	1,101.5	104.8	100.1	22.402	SF
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14	800.0	802.0	75.5	72.2	22.378	CC, ES
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14	11,708.8	11,480.5	849.5	674.2	4.846	SF
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14	800.0	801.0	61.6	58.2	18.246	CC, ES
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14	11,708.8	11,675.1	660.5	480.4	3.667	SF
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14	800.0	801.0	44.8	41.4	13.270	CC, ES
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14	11,708.8	11,486.7	534.2	366.1	3.177	SF
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14	800.0	801.0	30.8	27.4	9.123	CC, ES
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14	11,708.8	11,494.4	386.1	229.6	2.467	SF
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14	800.0	800.0	16.8	13.4	4.980	CC, ES
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14	11,708.8	11,504.1	259.4	134.8	2.082	SF

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
0.0	0.0	2.0	2.0	0.0	0.0	-122.63	-440.7	-688.3	817.3	817.3	0.04	N/A	
100.0	100.0	102.0	102.0	0.1	2.0	-122.63	-440.7	-688.3	817.3	815.2	2.15	379.704	
200.0	200.0	202.0	202.0	0.3	4.0	-122.63	-440.7	-688.3	817.3	813.0	4.38	186.721	
300.0	300.0	302.0	302.0	0.6	6.0	-122.63	-440.7	-688.3	817.3	810.7	6.60	123.800	
400.0	400.0	402.0	402.0	0.8	8.0	-122.63	-440.7	-688.3	817.3	808.5	8.83	92.597	
500.0	500.0	502.0	502.0	1.0	10.0	-122.63	-440.7	-688.3	817.3	806.3	11.05	73.957	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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
600.0	600.0	602.0	602.0	1.2	12.0	-122.63	-440.7	-688.3	817.3	804.1	13.28	61.564	
700.0	700.0	702.0	702.0	1.5	14.0	-122.63	-440.7	-688.3	817.3	801.8	15.50	52.728	
800.0	800.0	802.0	802.0	1.7	16.0	-122.63	-440.7	-688.3	817.3	799.6	17.73	46.110	CC
900.0	900.0	902.0	902.0	1.9	18.0	162.62	-440.7	-688.3	819.0	799.1	19.93	41.094	ES
1,000.0	999.8	1,001.8	1,001.8	2.1	20.0	162.70	-440.7	-688.3	824.0	801.9	22.10	37.285	
1,100.0	1,099.5	1,101.5	1,101.5	2.3	22.0	162.83	-440.7	-688.3	832.3	808.1	24.24	34.341	
1,200.0	1,198.7	1,200.7	1,200.7	2.6	24.0	163.02	-440.7	-688.3	843.9	817.5	26.36	32.009	
1,300.0	1,297.9	1,299.9	1,299.9	2.9	26.0	163.27	-440.7	-688.3	856.3	827.7	28.56	29.986	
1,400.0	1,397.0	1,399.0	1,399.0	3.1	28.0	163.52	-440.7	-688.3	868.8	838.0	30.76	28.248	
1,500.0	1,496.2	1,498.2	1,498.2	3.4	30.0	163.76	-440.7	-688.3	881.2	848.3	32.96	26.740	
1,600.0	1,595.3	1,597.3	1,597.3	3.7	31.9	163.99	-440.7	-688.3	893.7	858.6	35.16	25.419	
1,700.0	1,694.5	1,696.5	1,696.5	4.0	33.9	164.22	-440.7	-688.3	906.2	868.9	37.36	24.254	
1,800.0	1,793.6	1,795.6	1,795.6	4.3	35.9	164.44	-440.7	-688.3	918.7	879.2	39.57	23.217	
1,900.0	1,892.8	1,894.8	1,894.8	4.6	37.9	164.65	-440.7	-688.3	931.3	889.5	41.78	22.291	
2,000.0	1,991.9	1,993.9	1,993.9	5.0	39.9	164.86	-440.7	-688.3	943.8	899.8	43.99	21.457	
2,100.0	2,091.1	2,093.1	2,093.1	5.3	41.9	165.07	-440.7	-688.3	956.3	910.1	46.19	20.702	
2,200.0	2,190.2	2,192.2	2,192.2	5.6	43.8	165.26	-440.7	-688.3	968.9	920.5	48.40	20.017	
2,300.0	2,289.4	2,291.4	2,291.4	5.9	45.8	165.46	-440.7	-688.3	981.5	930.9	50.61	19.391	
2,400.0	2,388.6	2,390.6	2,390.6	6.2	47.8	165.64	-440.7	-688.3	994.1	941.2	52.82	18.818	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	3.0	3.0	0.0	0.0	-89.98	0.1	-120.3	120.3	120.3	0.00	N/A	
100.0	100.0	103.0	103.0	0.1	0.1	-89.98	0.1	-120.3	120.3	120.1	0.23	519.709	
200.0	200.0	203.0	203.0	0.3	0.3	-89.98	0.1	-120.3	120.3	119.6	0.68	176.667	
300.0	300.0	303.0	303.0	0.6	0.6	-89.98	0.1	-120.3	120.3	119.2	1.13	106.421	
400.0	400.0	403.0	403.0	0.8	0.8	-89.98	0.1	-120.3	120.3	118.7	1.58	76.145	
500.0	500.0	503.0	503.0	1.0	1.0	-89.98	0.1	-120.3	120.3	118.3	2.03	59.280	
565.6	565.6	568.6	568.6	1.2	1.2	-89.98	0.1	-120.3	120.3	118.0	2.32	51.756	CC
600.0	600.0	602.9	602.9	1.2	1.2	-89.98	0.1	-120.3	120.3	117.8	2.48	48.542	ES
700.0	700.0	700.0	700.0	1.5	1.5	-89.76	0.5	-122.0	122.0	119.1	2.91	41.891	
800.0	800.0	794.8	794.6	1.7	1.7	-89.18	1.8	-126.7	127.0	123.6	3.34	37.995	
900.0	900.0	890.0	889.5	1.9	1.9	-163.25	3.9	-134.5	136.9	133.1	3.77	36.282	SF
1,000.0	999.8	984.1	982.9	2.1	2.1	-162.68	6.9	-145.1	153.2	149.0	4.20	36.477	
1,100.0	1,099.5	1,078.5	1,076.3	2.3	2.4	-162.29	10.5	-158.5	175.7	171.1	4.64	37.891	
1,200.0	1,198.7	1,175.0	1,171.7	2.6	2.7	-162.24	14.5	-172.7	201.9	196.8	5.07	39.843	
1,300.0	1,297.9	1,271.3	1,266.8	2.9	3.0	-162.36	18.4	-186.9	228.9	223.4	5.50	41.596	
1,400.0	1,397.0	1,367.6	1,362.0	3.1	3.3	-162.45	22.3	-201.1	255.9	250.0	5.95	43.034	
1,500.0	1,496.2	1,463.8	1,457.1	3.4	3.6	-162.53	26.2	-215.3	282.9	276.5	6.40	44.230	
1,600.0	1,595.3	1,560.1	1,552.3	3.7	4.0	-162.60	30.1	-229.5	310.0	303.1	6.85	45.223	
1,700.0	1,694.5	1,656.4	1,647.4	4.0	4.3	-162.65	34.0	-243.7	337.0	329.7	7.31	46.081	
1,800.0	1,793.6	1,752.7	1,742.6	4.3	4.6	-162.70	37.9	-257.8	364.0	356.2	7.78	46.814	
1,900.0	1,892.8	1,848.9	1,837.7	4.6	5.0	-162.74	41.8	-272.0	391.0	382.8	8.24	47.447	
2,000.0	1,991.9	1,945.2	1,932.9	5.0	5.3	-162.77	45.7	-286.2	418.0	409.3	8.71	47.999	
2,100.0	2,091.1	2,041.5	2,028.0	5.3	5.7	-162.80	49.6	-300.4	445.1	435.9	9.18	48.484	
2,200.0	2,190.2	2,137.8	2,123.2	5.6	6.0	-162.83	53.5	-314.6	472.1	462.4	9.65	48.913	
2,300.0	2,289.4	2,234.1	2,218.3	5.9	6.4	-162.85	57.4	-328.8	499.1	489.0	10.12	49.295	
2,400.0	2,388.6	2,330.3	2,313.5	6.2	6.7	-162.87	61.3	-343.0	526.1	515.5	10.60	49.636	
2,500.0	2,487.7	2,426.6	2,408.6	6.5	7.0	-162.89	65.2	-357.2	553.1	542.1	11.08	49.943	
2,600.0	2,586.9	2,522.9	2,503.8	6.9	7.4	-162.91	69.1	-371.3	580.2	568.6	11.55	50.220	
2,700.0	2,686.0	2,619.2	2,598.9	7.2	7.7	-162.93	73.0	-385.5	607.2	595.2	12.03	50.472	
2,800.0	2,785.2	2,715.5	2,694.1	7.5	8.1	-162.94	76.9	-399.7	634.2	621.7	12.51	50.701	
2,900.0	2,884.3	2,811.7	2,789.2	7.8	8.4	-162.96	80.8	-413.9	661.2	648.2	12.99	50.911	
3,000.0	2,983.5	2,908.0	2,884.4	8.2	8.8	-162.97	84.7	-428.1	688.3	674.8	13.47	51.103	
3,100.0	3,082.6	3,004.3	2,979.5	8.5	9.1	-162.98	88.6	-442.3	715.3	701.3	13.95	51.280	
3,200.0	3,181.8	3,100.6	3,074.7	8.8	9.5	-162.99	92.5	-456.5	742.3	727.9	14.43	51.443	
3,300.0	3,280.9	3,196.9	3,169.8	9.1	9.8	-163.00	96.4	-470.7	769.3	754.4	14.91	51.594	
3,400.0	3,380.1	3,293.1	3,265.0	9.5	10.2	-163.01	100.3	-484.8	796.3	780.9	15.39	51.734	
3,500.0	3,479.2	3,389.4	3,360.1	9.8	10.5	-163.02	104.2	-499.0	823.4	807.5	15.88	51.864	
3,600.0	3,578.4	3,485.7	3,455.3	10.1	10.9	-163.03	108.1	-513.2	850.4	834.0	16.36	51.985	
3,700.0	3,677.5	3,582.0	3,550.4	10.5	11.2	-163.03	112.0	-527.4	877.4	860.6	16.84	52.099	
3,800.0	3,776.7	3,678.3	3,645.6	10.8	11.6	-163.04	115.9	-541.6	904.4	887.1	17.32	52.205	
3,900.0	3,875.8	3,774.5	3,740.7	11.1	11.9	-163.05	119.8	-555.8	931.5	913.6	17.81	52.304	
4,000.0	3,975.0	3,870.8	3,835.8	11.4	12.3	-163.05	123.7	-570.0	958.5	940.2	18.29	52.397	
4,100.0	4,074.2	3,967.1	3,931.0	11.8	12.6	-163.06	127.6	-584.2	985.5	966.7	18.78	52.485	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	2.0	2.0	0.0	0.0	-89.98	0.0	-106.3	106.3	106.3	0.00	N/A	
100.0	100.0	102.0	102.0	0.1	0.1	-89.98	0.0	-106.3	106.3	106.1	0.23	463.780	
200.0	200.0	202.0	202.0	0.3	0.3	-89.98	0.0	-106.3	106.3	105.6	0.68	156.641	
300.0	300.0	302.0	302.0	0.6	0.6	-89.98	0.0	-106.3	106.3	105.2	1.13	94.234	
400.0	400.0	402.0	402.0	0.8	0.8	-89.98	0.0	-106.3	106.3	104.7	1.58	67.387	
500.0	500.0	502.0	502.0	1.0	1.0	-89.98	0.0	-106.3	106.3	104.3	2.03	52.445	
600.0	600.0	602.0	602.0	1.2	1.2	-89.98	0.0	-106.3	106.3	103.8	2.48	42.927	
700.0	700.0	702.0	702.0	1.5	1.5	-89.98	0.0	-106.3	106.3	103.4	2.93	36.333	
800.0	800.0	802.0	802.0	1.7	1.7	-89.98	0.0	-106.3	106.3	103.0	3.38	31.495	CC, ES
900.0	900.0	902.0	902.0	1.9	1.9	-164.99	0.0	-106.3	108.0	104.2	3.82	28.309	
1,000.0	999.8	1,001.8	1,001.8	2.1	2.1	-165.65	0.0	-106.3	113.1	108.8	4.25	26.631	
1,100.0	1,099.5	1,101.5	1,101.5	2.3	2.4	-166.63	0.0	-106.3	121.5	116.9	4.68	25.990	SF
1,200.0	1,198.7	1,200.7	1,200.7	2.6	2.6	-167.80	0.0	-106.3	133.3	128.2	5.11	26.096	
1,300.0	1,297.9	1,299.9	1,299.9	2.9	2.8	-168.87	0.0	-106.3	146.0	140.5	5.55	26.315	
1,400.0	1,397.0	1,399.0	1,399.0	3.1	3.0	-169.78	0.0	-106.3	158.8	152.8	5.99	26.493	
1,500.0	1,496.2	1,493.1	1,493.1	3.4	3.2	-170.29	0.6	-107.7	173.0	166.6	6.42	26.932	
1,600.0	1,595.3	1,586.3	1,586.2	3.7	3.4	-170.30	2.1	-112.0	190.2	183.3	6.85	27.751	
1,700.0	1,694.5	1,678.5	1,678.1	4.0	3.6	-169.96	4.7	-119.0	210.2	202.9	7.28	28.859	
1,800.0	1,793.6	1,769.5	1,768.5	4.3	3.9	-169.35	8.3	-128.6	233.0	225.3	7.72	30.200	
1,900.0	1,892.8	1,862.4	1,860.4	4.6	4.1	-168.59	12.8	-140.9	258.4	250.2	8.16	31.671	
2,000.0	1,991.9	1,959.0	1,956.0	5.0	4.3	-167.90	17.7	-154.1	284.2	275.6	8.61	33.028	
2,100.0	2,091.1	2,055.5	2,051.5	5.3	4.6	-167.33	22.6	-167.3	310.1	301.0	9.06	34.239	
2,200.0	2,190.2	2,152.1	2,147.0	5.6	4.9	-166.84	27.4	-180.5	336.0	326.5	9.51	35.324	
2,300.0	2,289.4	2,248.6	2,242.5	5.9	5.2	-166.42	32.3	-193.7	361.9	351.9	9.97	36.294	
2,400.0	2,388.6	2,345.2	2,338.1	6.2	5.5	-166.06	37.2	-206.9	387.8	377.4	10.43	37.173	
2,500.0	2,487.7	2,441.7	2,433.6	6.5	5.8	-165.74	42.1	-220.1	413.7	402.8	10.90	37.969	
2,600.0	2,586.9	2,538.3	2,529.1	6.9	6.1	-165.47	46.9	-233.3	439.7	428.3	11.36	38.693	
2,700.0	2,686.0	2,634.8	2,624.6	7.2	6.4	-165.22	51.8	-246.5	465.6	453.8	11.83	39.354	
2,800.0	2,785.2	2,731.4	2,720.2	7.5	6.7	-165.00	56.7	-259.7	491.6	479.3	12.30	39.960	
2,900.0	2,884.3	2,827.9	2,815.7	7.8	7.0	-164.80	61.6	-272.9	517.6	504.8	12.77	40.516	
3,000.0	2,983.5	2,924.5	2,911.2	8.2	7.3	-164.62	66.4	-286.1	543.5	530.3	13.25	41.028	
3,100.0	3,082.6	3,021.1	3,006.7	8.5	7.6	-164.45	71.3	-299.3	569.5	555.8	13.72	41.502	
3,200.0	3,181.8	3,117.6	3,102.3	8.8	8.0	-164.30	76.2	-312.5	595.5	581.3	14.20	41.941	
3,300.0	3,280.9	3,214.2	3,197.8	9.1	8.3	-164.17	81.1	-325.7	621.5	606.8	14.68	42.348	
3,400.0	3,380.1	3,310.7	3,293.3	9.5	8.6	-164.04	85.9	-338.9	647.5	632.3	15.15	42.727	
3,500.0	3,479.2	3,407.3	3,388.8	9.8	8.9	-163.92	90.8	-352.1	673.5	657.8	15.63	43.081	
3,600.0	3,578.4	3,503.8	3,484.4	10.1	9.3	-163.82	95.7	-365.3	699.5	683.3	16.11	43.412	
3,700.0	3,677.5	3,600.4	3,579.9	10.5	9.6	-163.72	100.6	-378.4	725.5	708.9	16.59	43.722	
3,800.0	3,776.7	3,696.9	3,675.4	10.8	9.9	-163.62	105.4	-391.6	751.4	734.4	17.07	44.013	
3,900.0	3,875.8	3,793.5	3,770.9	11.1	10.3	-163.54	110.3	-404.8	777.4	759.9	17.56	44.286	
4,000.0	3,975.0	3,890.0	3,866.5	11.4	10.6	-163.46	115.2	-418.0	803.4	785.4	18.04	44.544	
4,100.0	4,074.2	3,986.6	3,962.0	11.8	10.9	-163.38	120.1	-431.2	829.4	810.9	18.52	44.786	
4,200.0	4,173.3	4,083.2	4,057.5	12.1	11.2	-163.31	124.9	-444.4	855.4	836.4	19.00	45.016	
4,300.0	4,272.5	4,179.7	4,153.0	12.4	11.6	-163.24	129.8	-457.6	881.5	862.0	19.49	45.233	
4,400.0	4,371.6	4,276.3	4,248.6	12.8	11.9	-163.18	134.7	-470.8	907.5	887.5	19.97	45.438	
4,500.0	4,470.8	4,372.8	4,344.1	13.1	12.3	-163.12	139.6	-484.0	933.5	913.0	20.46	45.633	
4,600.0	4,569.9	4,469.4	4,439.6	13.4	12.6	-163.06	144.4	-497.2	959.5	938.5	20.94	45.818	
4,700.0	4,669.1	4,565.9	4,535.1	13.7	12.9	-163.01	149.3	-510.4	985.5	964.1	21.43	45.994	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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-02-3N - 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	2.0	2.0	0.0	0.0	-89.98	0.0	-89.5	89.5	89.5	0.00	N/A	
100.0	100.0	102.0	102.0	0.1	0.1	-89.98	0.0	-89.5	89.5	89.3	0.23	390.552	
200.0	200.0	202.0	202.0	0.3	0.3	-89.98	0.0	-89.5	89.5	88.9	0.68	131.908	
300.0	300.0	302.0	302.0	0.6	0.6	-89.98	0.0	-89.5	89.5	88.4	1.13	79.355	
400.0	400.0	402.0	402.0	0.8	0.8	-89.98	0.0	-89.5	89.5	88.0	1.58	56.747	
500.0	500.0	502.0	502.0	1.0	1.0	-89.98	0.0	-89.5	89.5	87.5	2.03	44.164	
600.0	600.0	602.0	602.0	1.2	1.2	-89.98	0.0	-89.5	89.5	87.1	2.48	36.149	
700.0	700.0	702.0	702.0	1.5	1.5	-89.98	0.0	-89.5	89.5	86.6	2.93	30.596	
800.0	800.0	802.0	802.0	1.7	1.7	-89.98	0.0	-89.5	89.5	86.2	3.38	26.522	CC, ES
900.0	900.0	902.0	902.0	1.9	1.9	-165.04	0.0	-89.5	91.2	87.4	3.82	23.909	
1,000.0	999.8	1,001.8	1,001.8	2.1	2.1	-165.82	0.0	-89.5	96.3	92.0	4.25	22.678	
1,100.0	1,099.5	1,101.5	1,101.5	2.3	2.4	-166.95	0.0	-89.5	104.8	100.1	4.68	22.402	SF
1,200.0	1,198.7	1,200.7	1,200.7	2.6	2.6	-168.25	0.0	-89.5	116.5	111.4	5.11	22.816	
1,300.0	1,297.9	1,299.9	1,299.9	2.9	2.8	-169.42	0.0	-89.5	129.3	123.7	5.55	23.300	
1,400.0	1,397.0	1,399.0	1,399.0	3.1	3.0	-170.38	0.0	-89.5	142.1	136.1	5.99	23.705	
1,500.0	1,496.2	1,498.2	1,498.2	3.4	3.3	-171.19	0.0	-89.5	154.9	148.5	6.44	24.050	
1,600.0	1,595.3	1,597.3	1,597.3	3.7	3.5	-171.87	0.0	-89.5	167.8	160.9	6.89	24.345	
1,700.0	1,694.5	1,691.8	1,691.8	4.0	3.7	-172.14	0.7	-90.8	181.9	174.5	7.33	24.820	
1,800.0	1,793.6	1,785.4	1,785.3	4.3	3.9	-171.84	3.0	-94.8	198.6	190.8	7.76	25.585	
1,900.0	1,892.8	1,878.0	1,877.6	4.6	4.1	-171.10	6.6	-101.3	217.9	209.7	8.20	26.581	
2,000.0	1,991.9	1,969.5	1,968.5	5.0	4.3	-170.08	11.6	-110.3	239.8	231.2	8.64	27.767	
2,100.0	2,091.1	2,066.2	2,064.3	5.3	4.5	-168.96	17.8	-121.4	263.3	254.2	9.09	28.966	
2,200.0	2,190.2	2,163.2	2,160.6	5.6	4.8	-168.01	24.0	-132.5	286.9	277.3	9.54	30.053	
2,300.0	2,289.4	2,260.3	2,256.8	5.9	5.1	-167.21	30.2	-143.6	310.5	300.5	10.00	31.035	
2,400.0	2,388.6	2,357.4	2,353.0	6.2	5.3	-166.52	36.4	-154.7	334.2	323.7	10.47	31.919	
2,500.0	2,487.7	2,454.5	2,449.3	6.5	5.6	-165.92	42.5	-165.8	357.9	346.9	10.93	32.728	
2,600.0	2,586.9	2,551.6	2,545.5	6.9	5.9	-165.40	48.7	-176.9	381.6	370.2	11.40	33.464	
2,700.0	2,686.0	2,648.7	2,641.8	7.2	6.1	-164.93	54.9	-188.0	405.4	393.5	11.88	34.137	
2,800.0	2,785.2	2,745.7	2,738.0	7.5	6.4	-164.52	61.1	-199.1	429.2	416.8	12.35	34.754	
2,900.0	2,884.3	2,842.8	2,834.3	7.8	6.7	-164.15	67.3	-210.2	453.0	440.2	12.82	35.322	
3,000.0	2,983.5	2,939.9	2,930.5	8.2	7.0	-163.82	73.5	-221.3	476.8	463.5	13.30	35.846	
3,100.0	3,082.6	3,037.0	3,026.8	8.5	7.3	-163.52	79.7	-232.4	500.7	486.9	13.78	36.331	
3,200.0	3,181.8	3,134.1	3,123.0	8.8	7.6	-163.25	85.9	-243.5	524.5	510.3	14.26	36.781	
3,300.0	3,280.9	3,231.2	3,219.3	9.1	7.9	-163.00	92.1	-254.6	548.4	533.6	14.74	37.199	
3,400.0	3,380.1	3,328.3	3,315.5	9.5	8.2	-162.77	98.3	-265.7	572.3	557.0	15.22	37.589	
3,500.0	3,479.2	3,425.3	3,411.8	9.8	8.5	-162.56	104.4	-276.8	596.1	580.4	15.71	37.953	
3,600.0	3,578.4	3,522.4	3,508.0	10.1	8.8	-162.37	110.6	-287.9	620.0	603.8	16.19	38.293	
3,700.0	3,677.5	3,619.5	3,604.3	10.5	9.1	-162.19	116.8	-299.0	643.9	627.2	16.68	38.612	
3,800.0	3,776.7	3,716.6	3,700.5	10.8	9.4	-162.02	123.0	-310.1	667.8	650.7	17.16	38.912	
3,900.0	3,875.8	3,813.7	3,796.8	11.1	9.7	-161.87	129.2	-321.2	691.7	674.1	17.65	39.194	
4,000.0	3,975.0	3,910.8	3,893.0	11.4	10.0	-161.72	135.4	-332.3	715.6	697.5	18.14	39.460	
4,100.0	4,074.2	4,007.8	3,989.3	11.8	10.3	-161.59	141.6	-343.4	739.5	720.9	18.62	39.711	
4,200.0	4,173.3	4,104.9	4,085.5	12.1	10.7	-161.46	147.8	-354.5	763.5	744.3	19.11	39.948	
4,300.0	4,272.5	4,220.8	4,200.5	12.4	11.0	-161.35	154.7	-366.8	786.7	767.1	19.62	40.094	
4,400.0	4,371.6	4,351.5	4,330.8	12.8	11.3	-161.41	159.9	-376.2	806.3	786.2	20.12	40.077	
4,500.0	4,470.8	4,484.1	4,463.3	13.1	11.5	-161.65	162.2	-380.3	821.8	801.2	20.60	39.886	
4,600.0	4,569.9	4,592.7	4,571.9	13.4	11.7	-161.95	162.3	-380.5	834.3	813.3	21.05	39.635	
4,700.0	4,669.1	4,691.9	4,671.1	13.7	11.9	-162.22	162.3	-380.5	846.7	825.2	21.50	39.380	
4,800.0	4,768.2	4,791.0	4,770.2	14.1	12.0	-162.48	162.3	-380.5	859.1	837.1	21.95	39.134	
4,900.0	4,867.4	4,890.2	4,869.4	14.4	12.2	-162.74	162.3	-380.5	871.5	849.1	22.40	38.899	
5,000.0	4,966.5	4,989.4	4,968.5	14.7	12.4	-162.99	162.3	-380.5	883.9	861.0	22.86	38.672	
5,100.0	5,065.7	5,088.5	5,067.7	15.1	12.6	-163.23	162.3	-380.5	896.3	873.0	23.31	38.455	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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-02-3N - 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	5,164.8	5,187.7	5,166.8	15.4	12.8	-163.47	162.3	-380.5	908.8	885.0	23.76	38.246	
5,300.0	5,264.0	5,286.8	5,266.0	15.7	13.0	-163.70	162.3	-380.5	921.3	897.0	24.21	38.046	
5,400.0	5,363.1	5,386.0	5,365.1	16.0	13.2	-163.92	162.3	-380.5	933.7	909.1	24.67	37.852	
5,500.0	5,462.3	5,485.1	5,464.3	16.4	13.4	-164.14	162.3	-380.5	946.2	921.1	25.12	37.666	
5,600.0	5,561.5	5,584.3	5,563.5	16.7	13.6	-164.35	162.3	-380.5	958.7	933.2	25.58	37.487	
5,700.0	5,660.6	5,683.4	5,662.6	17.0	13.8	-164.58	162.3	-380.5	971.1	945.0	26.04	37.288	
5,800.0	5,760.1	5,782.9	5,762.1	17.2	14.0	-164.79	162.3	-380.5	980.8	954.3	26.49	37.022	
5,900.0	5,859.9	5,882.7	5,861.9	17.4	14.2	-164.92	162.3	-380.5	987.2	960.3	26.91	36.684	
6,000.0	5,959.8	5,982.7	5,961.8	17.6	14.4	-164.98	162.3	-380.5	990.3	963.0	27.30	36.276	
6,100.0	6,059.8	6,082.7	6,061.8	17.7	14.6	-90.21	162.3	-380.5	990.5	962.8	27.70	35.754	
6,200.0	6,159.8	6,182.7	6,161.8	17.9	14.8	-90.21	162.3	-380.5	990.5	962.4	28.11	35.235	
6,300.0	6,259.8	6,282.7	6,261.8	18.1	15.0	-90.21	162.3	-380.5	990.5	962.0	28.52	34.729	
6,400.0	6,359.8	6,382.7	6,361.8	18.2	15.2	-90.21	162.3	-380.5	990.5	961.6	28.93	34.237	
6,500.0	6,459.8	6,483.8	6,463.0	18.4	15.4	-90.29	160.9	-380.5	990.5	961.2	29.32	33.780	
6,594.3	6,554.1	6,578.4	6,556.1	18.6	15.5	-91.18	145.6	-380.2	990.4	960.8	29.61	33.453	
6,600.0	6,559.8	6,583.9	6,561.4	18.6	15.5	-91.26	144.2	-380.2	990.4	960.8	29.62	33.437	
6,700.0	6,659.8	6,675.2	6,647.1	18.7	15.6	88.13	112.6	-379.5	991.0	961.2	29.83	33.222	
6,800.0	6,758.1	6,760.8	6,721.1	18.8	15.6	86.26	70.0	-378.6	992.8	962.8	29.98	33.115	
6,900.0	6,851.2	6,842.6	6,784.5	18.9	15.7	84.51	18.4	-377.6	995.4	965.3	30.11	33.054	
7,000.0	6,935.8	6,921.6	6,837.3	19.0	15.7	82.94	-40.2	-376.4	998.5	968.2	30.30	32.951	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	2.0	2.0	0.0	0.0	-89.96	0.1	-75.5	75.5	75.5	0.00	N/A	
100.0	100.0	102.0	102.0	0.1	0.1	-89.96	0.1	-75.5	75.5	75.3	0.23	329.528	
200.0	200.0	202.0	202.0	0.3	0.3	-89.96	0.1	-75.5	75.5	74.9	0.68	111.298	
300.0	300.0	302.0	302.0	0.6	0.6	-89.96	0.1	-75.5	75.5	74.4	1.13	66.956	
400.0	400.0	402.0	402.0	0.8	0.8	-89.96	0.1	-75.5	75.5	74.0	1.58	47.880	
500.0	500.0	502.0	502.0	1.0	1.0	-89.96	0.1	-75.5	75.5	73.5	2.03	37.264	
600.0	600.0	602.0	602.0	1.2	1.2	-89.96	0.1	-75.5	75.5	73.1	2.48	30.501	
700.0	700.0	702.0	702.0	1.5	1.5	-89.96	0.1	-75.5	75.5	72.6	2.93	25.816	
800.0	800.0	802.0	802.0	1.7	1.7	-89.96	0.1	-75.5	75.5	72.2	3.38	22.378	CC, ES
900.0	900.0	902.0	902.0	1.9	1.9	-165.07	0.1	-75.5	77.2	73.4	3.82	20.243	
1,000.0	999.8	1,001.8	1,001.8	2.1	2.1	-165.98	0.1	-75.5	82.3	78.1	4.25	19.383	
1,100.0	1,099.5	1,101.5	1,101.5	2.3	2.4	-167.28	0.1	-75.5	90.8	86.1	4.68	19.413	
1,200.0	1,198.7	1,200.7	1,200.7	2.6	2.6	-168.73	0.1	-75.5	102.6	97.5	5.11	20.083	
1,300.0	1,297.9	1,299.9	1,299.9	2.9	2.8	-169.99	0.1	-75.5	115.4	109.8	5.55	20.789	
1,400.0	1,397.0	1,399.0	1,399.0	3.1	3.0	-171.00	0.1	-75.5	128.2	122.2	5.99	21.385	
1,500.0	1,496.2	1,498.2	1,498.2	3.4	3.3	-171.82	0.1	-75.5	141.0	134.6	6.44	21.894	
1,600.0	1,595.3	1,597.3	1,597.3	3.7	3.5	-172.51	0.1	-75.5	153.9	147.0	6.89	22.333	
1,700.0	1,694.5	1,696.5	1,696.5	4.0	3.7	-173.09	0.1	-75.5	166.8	159.4	7.34	22.716	
1,800.0	1,793.6	1,795.6	1,795.6	4.3	3.9	-173.59	0.1	-75.5	179.7	171.9	7.79	23.051	
1,900.0	1,892.8	1,892.3	1,892.3	4.6	4.1	-173.73	0.9	-76.3	193.2	184.9	8.24	23.443	
2,000.0	1,991.9	1,988.5	1,988.5	5.0	4.4	-173.27	3.6	-78.6	208.0	199.3	8.69	23.950	
2,100.0	2,091.1	2,084.2	2,084.0	5.3	4.6	-172.35	8.1	-82.4	224.2	215.1	9.13	24.551	
2,200.0	2,190.2	2,179.3	2,178.7	5.6	4.8	-171.08	14.3	-87.8	241.8	232.3	9.58	25.235	
2,300.0	2,289.4	2,273.7	2,272.5	5.9	5.0	-169.56	22.3	-94.7	261.0	251.0	10.04	25.994	
2,400.0	2,388.6	2,371.4	2,369.5	6.2	5.2	-168.00	31.4	-102.6	281.0	270.5	10.51	26.732	
2,500.0	2,487.7	2,469.2	2,466.5	6.5	5.5	-166.66	40.5	-110.4	301.2	290.2	10.99	27.412	
2,600.0	2,586.9	2,566.9	2,563.4	6.9	5.7	-165.48	49.6	-118.3	321.5	310.1	11.47	28.033	
2,700.0	2,686.0	2,664.6	2,660.4	7.2	6.0	-164.45	58.7	-126.1	342.0	330.0	11.95	28.606	
2,800.0	2,785.2	2,762.3	2,757.4	7.5	6.3	-163.53	67.8	-134.0	362.5	350.1	12.44	29.132	
2,900.0	2,884.3	2,860.0	2,854.3	7.8	6.5	-162.70	76.9	-141.8	383.1	370.2	12.94	29.618	
3,000.0	2,983.5	2,957.7	2,951.3	8.2	6.8	-161.97	86.0	-149.7	403.8	390.4	13.43	30.068	
3,100.0	3,082.6	3,055.4	3,048.3	8.5	7.1	-161.30	95.1	-157.5	424.6	410.6	13.93	30.484	
3,200.0	3,181.8	3,153.1	3,145.2	8.8	7.4	-160.70	104.2	-165.4	445.4	430.9	14.43	30.872	
3,300.0	3,280.9	3,250.8	3,242.2	9.1	7.6	-160.15	113.3	-173.2	466.2	451.3	14.93	31.232	
3,400.0	3,380.1	3,348.6	3,339.2	9.5	7.9	-159.64	122.4	-181.0	487.1	471.7	15.43	31.568	
3,500.0	3,479.2	3,446.3	3,436.1	9.8	8.2	-159.18	131.6	-188.9	508.0	492.1	15.93	31.883	
3,600.0	3,578.4	3,544.3	3,533.5	10.1	8.5	-158.76	140.7	-196.8	528.9	512.5	16.44	32.177	
3,700.0	3,677.5	3,653.5	3,642.0	10.5	8.8	-158.44	149.6	-204.5	548.8	531.9	16.93	32.422	
3,800.0	3,776.7	3,763.7	3,751.8	10.8	9.0	-158.37	156.2	-210.2	566.6	549.3	17.39	32.576	
3,900.0	3,875.8	3,874.6	3,862.6	11.1	9.2	-158.51	160.5	-213.8	582.4	564.5	17.85	32.624	
4,000.0	3,975.0	3,986.1	3,974.1	11.4	9.4	-158.87	162.3	-215.4	596.1	577.8	18.30	32.575	
4,100.0	4,074.2	4,088.2	4,076.2	11.8	9.6	-159.32	162.4	-215.4	608.3	589.5	18.73	32.471	
4,200.0	4,173.3	4,187.3	4,175.3	12.1	9.8	-159.74	162.4	-215.4	620.4	601.3	19.18	32.343	
4,300.0	4,272.5	4,286.5	4,274.5	12.4	10.0	-160.15	162.4	-215.4	632.6	613.0	19.64	32.220	
4,400.0	4,371.6	4,385.7	4,373.6	12.8	10.2	-160.54	162.4	-215.4	644.9	624.8	20.09	32.103	
4,500.0	4,470.8	4,484.8	4,472.8	13.1	10.4	-160.92	162.4	-215.4	657.2	636.6	20.54	31.992	
4,600.0	4,569.9	4,584.0	4,571.9	13.4	10.6	-161.28	162.4	-215.4	669.5	648.5	20.99	31.887	
4,700.0	4,669.1	4,683.1	4,671.1	13.7	10.8	-161.63	162.4	-215.4	681.8	660.3	21.45	31.788	
4,800.0	4,768.2	4,782.3	4,770.2	14.1	11.0	-161.97	162.4	-215.4	694.1	672.2	21.90	31.693	
4,900.0	4,867.4	4,881.4	4,869.4	14.4	11.2	-162.29	162.4	-215.4	706.5	684.1	22.36	31.604	
5,000.0	4,966.5	4,980.6	4,968.5	14.7	11.4	-162.61	162.4	-215.4	718.9	696.1	22.81	31.518	
5,100.0	5,065.7	5,079.7	5,067.7	15.1	11.6	-162.91	162.4	-215.4	731.3	708.0	23.26	31.436	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	5,164.8	5,178.9	5,166.8	15.4	11.9	-163.21	162.4	-215.4	743.7	720.0	23.72	31.358	
5,300.0	5,264.0	5,278.0	5,266.0	15.7	12.1	-163.49	162.4	-215.4	756.2	732.0	24.17	31.284	
5,400.0	5,363.1	5,377.2	5,365.1	16.0	12.3	-163.76	162.4	-215.4	768.7	744.0	24.63	31.212	
5,500.0	5,462.3	5,476.3	5,464.3	16.4	12.5	-164.03	162.4	-215.4	781.1	756.1	25.08	31.144	
5,600.0	5,561.5	5,575.5	5,563.5	16.7	12.7	-164.29	162.4	-215.4	793.6	768.1	25.54	31.079	
5,700.0	5,660.6	5,674.7	5,662.6	17.0	12.9	-164.56	162.4	-215.4	806.0	780.0	26.00	30.997	
5,800.0	5,760.1	5,774.1	5,762.1	17.2	13.1	-164.80	162.4	-215.4	815.7	789.3	26.44	30.848	
5,900.0	5,859.9	5,873.9	5,861.9	17.4	13.3	-164.95	162.4	-215.4	822.1	795.3	26.86	30.614	
6,000.0	5,959.8	5,973.9	5,961.8	17.6	13.5	-165.02	162.4	-215.4	825.2	797.9	27.24	30.298	
6,100.0	6,059.8	6,073.9	6,061.8	17.7	13.8	-90.25	162.4	-215.4	825.5	797.8	27.65	29.852	
6,200.0	6,159.8	6,173.9	6,161.8	17.9	14.0	-90.25	162.4	-215.4	825.5	797.4	28.06	29.414	
6,300.0	6,259.8	6,273.9	6,261.8	18.1	14.2	-90.25	162.4	-215.4	825.5	797.0	28.48	28.987	
6,400.0	6,359.8	6,373.9	6,361.8	18.2	14.4	-90.25	162.4	-215.4	825.5	796.6	28.89	28.572	
6,500.0	6,459.8	6,474.8	6,462.7	18.4	14.6	-90.35	161.0	-215.4	825.4	796.2	29.28	28.188	
6,580.5	6,540.4	6,555.4	6,542.4	18.5	14.7	-91.18	149.0	-215.2	825.3	795.8	29.52	27.959	
6,600.0	6,559.8	6,574.2	6,560.6	18.6	14.7	-91.50	144.4	-215.1	825.4	795.8	29.57	27.915	
6,700.0	6,659.8	6,665.1	6,645.8	18.7	14.8	87.56	113.2	-214.4	826.2	796.5	29.75	27.771	
6,800.0	6,758.1	6,750.0	6,719.5	18.8	14.9	85.33	71.2	-213.6	828.4	798.5	29.88	27.722	
6,900.0	6,851.2	6,831.9	6,783.1	18.9	14.9	83.26	19.8	-212.5	831.6	801.6	30.01	27.712	
7,000.0	6,935.8	6,910.7	6,836.0	19.0	15.0	81.40	-38.5	-211.3	835.4	805.2	30.17	27.684	
7,100.0	7,008.7	6,987.3	6,878.5	19.1	15.1	79.80	-102.2	-210.0	839.2	808.8	30.44	27.568	
7,200.0	7,067.2	7,062.4	6,910.6	19.2	15.4	78.50	-169.9	-208.6	842.7	811.8	30.86	27.308	
7,300.0	7,109.2	7,136.3	6,932.4	19.5	15.8	77.53	-240.5	-207.1	845.5	814.0	31.49	26.853	
7,400.0	7,133.2	7,209.5	6,943.9	19.9	16.3	76.92	-312.7	-205.6	847.4	815.0	32.36	26.182	
7,500.0	7,138.7	7,291.5	6,945.7	20.5	17.0	76.71	-394.6	-204.0	848.1	814.4	33.63	25.220	
7,600.0	7,138.3	7,391.5	6,945.3	21.2	18.0	76.70	-494.6	-201.9	848.1	812.6	35.47	23.907	
7,700.0	7,138.0	7,491.5	6,944.8	22.1	19.1	76.69	-594.6	-199.8	848.1	810.5	37.60	22.553	
7,800.0	7,137.6	7,591.5	6,944.3	23.2	20.3	76.69	-694.5	-197.8	848.1	808.2	39.98	21.216	
7,900.0	7,137.3	7,691.5	6,943.9	24.3	21.7	76.68	-794.5	-195.7	848.2	805.6	42.55	19.935	
8,000.0	7,136.9	7,791.5	6,943.4	25.6	23.1	76.67	-894.5	-193.6	848.2	802.9	45.28	18.731	
8,100.0	7,136.6	7,891.5	6,942.9	27.0	24.6	76.66	-994.5	-191.6	848.2	800.1	48.16	17.614	
8,200.0	7,136.2	7,991.5	6,942.4	28.4	26.1	76.65	-1,094.5	-189.5	848.2	797.1	51.15	16.585	
8,300.0	7,135.9	8,091.5	6,942.0	29.8	27.7	76.65	-1,194.4	-187.4	848.3	794.0	54.23	15.642	
8,400.0	7,135.5	8,191.5	6,941.5	31.4	29.4	76.64	-1,294.4	-185.4	848.3	790.9	57.39	14.780	
8,500.0	7,135.2	8,291.5	6,941.0	32.9	31.0	76.63	-1,394.4	-183.3	848.3	787.7	60.63	13.993	
8,600.0	7,134.9	8,391.5	6,940.6	34.5	32.7	76.62	-1,494.4	-181.3	848.4	784.4	63.92	13.273	
8,700.0	7,134.5	8,491.5	6,940.1	36.2	34.4	76.61	-1,594.3	-179.2	848.4	781.1	67.25	12.615	
8,800.0	7,134.2	8,591.5	6,939.6	37.8	36.2	76.61	-1,694.3	-177.1	848.4	777.8	70.63	12.012	
8,900.0	7,133.8	8,691.5	6,939.1	39.5	37.9	76.60	-1,794.3	-175.1	848.4	774.4	74.05	11.458	
9,000.0	7,133.5	8,791.5	6,938.7	41.2	39.7	76.59	-1,894.3	-173.0	848.5	771.0	77.50	10.949	
9,100.0	7,133.1	8,891.5	6,938.2	42.9	41.5	76.58	-1,994.3	-170.9	848.5	767.5	80.97	10.479	
9,200.0	7,132.8	8,991.5	6,937.7	44.7	43.3	76.57	-2,094.2	-168.9	848.5	764.1	84.47	10.046	
9,300.0	7,132.4	9,091.5	6,937.3	46.4	45.1	76.57	-2,194.2	-166.8	848.6	760.6	87.99	9.644	
9,400.0	7,132.1	9,191.5	6,936.8	48.2	46.9	76.56	-2,294.2	-164.8	848.6	757.1	91.52	9.272	
9,500.0	7,131.7	9,291.5	6,936.3	50.0	48.7	76.55	-2,394.2	-162.7	848.6	753.5	95.08	8.925	
9,600.0	7,131.4	9,391.5	6,935.8	51.8	50.6	76.54	-2,494.1	-160.6	848.6	750.0	98.65	8.603	
9,700.0	7,131.0	9,491.5	6,935.4	53.6	52.4	76.53	-2,594.1	-158.6	848.7	746.4	102.23	8.302	
9,800.0	7,130.7	9,591.5	6,934.9	55.4	54.3	76.53	-2,694.1	-156.5	848.7	742.9	105.82	8.020	
9,900.0	7,130.3	9,691.5	6,934.4	57.2	56.1	76.52	-2,794.1	-154.4	848.7	739.3	109.43	7.756	
10,000.0	7,130.0	9,791.5	6,934.0	59.0	58.0	76.51	-2,894.1	-152.4	848.7	735.7	113.04	7.508	
10,100.0	7,129.6	9,891.5	6,933.5	60.8	59.8	76.50	-2,994.0	-150.3	848.8	732.1	116.66	7.275	
10,200.0	7,129.3	9,991.5	6,933.0	62.7	61.7	76.49	-3,094.0	-148.2	848.8	728.5	120.29	7.056	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	7,128.9	10,091.5	6,932.5	64.5	63.6	76.48	-3,194.0	-146.2	848.8	724.9	123.93	6.849	
10,400.0	7,128.6	10,191.5	6,932.1	66.3	65.4	76.48	-3,294.0	-144.1	848.9	721.3	127.57	6.654	
10,500.0	7,128.2	10,291.5	6,931.6	68.2	67.3	76.47	-3,393.9	-142.1	848.9	717.7	131.22	6.469	
10,600.0	7,127.9	10,391.5	6,931.1	70.0	69.2	76.46	-3,493.9	-140.0	848.9	714.0	134.88	6.294	
10,700.0	7,127.5	10,491.5	6,930.7	71.9	71.1	76.45	-3,593.9	-137.9	848.9	710.4	138.54	6.128	
10,800.0	7,127.2	10,591.5	6,930.2	73.8	72.9	76.44	-3,693.9	-135.9	849.0	706.8	142.20	5.970	
10,900.0	7,126.8	10,691.5	6,929.7	75.6	74.8	76.44	-3,793.8	-133.8	849.0	703.1	145.87	5.820	
11,000.0	7,126.5	10,791.5	6,929.2	77.5	76.7	76.43	-3,893.8	-131.7	849.0	699.5	149.54	5.677	
11,100.0	7,126.1	10,891.5	6,928.8	79.4	78.6	76.42	-3,993.8	-129.7	849.1	695.8	153.22	5.541	
11,200.0	7,125.8	10,991.5	6,928.3	81.2	80.5	76.41	-4,093.8	-127.6	849.1	692.2	156.90	5.412	
11,300.0	7,125.4	11,091.5	6,927.8	83.1	82.4	76.40	-4,193.8	-125.6	849.1	688.5	160.58	5.288	
11,400.0	7,125.1	11,191.5	6,927.4	85.0	84.3	76.40	-4,293.7	-123.5	849.1	684.9	164.27	5.169	
11,500.0	7,124.7	11,291.5	6,926.9	86.9	86.2	76.39	-4,393.7	-121.4	849.2	681.2	167.95	5.056	
11,600.0	7,124.4	11,391.5	6,926.4	88.7	88.0	76.38	-4,493.7	-119.4	849.2	677.6	171.65	4.947	
11,655.7	7,124.2	11,447.1	6,926.2	89.8	89.1	76.38	-4,549.4	-118.2	849.2	675.5	173.70	4.889	
11,700.0	7,124.0	11,480.5	6,926.0	90.6	89.7	76.37	-4,582.7	-117.5	849.3	674.2	175.14	4.849	
11,708.8	7,124.0	11,480.5	6,926.0	90.8	89.7	76.37	-4,582.7	-117.5	849.5	674.2	175.30	4.846	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	1.0	1.0	0.0	0.0	-89.96	0.0	-61.6	61.6	61.6	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-61.6	61.6	61.3	0.23	271.163	
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-61.6	61.6	60.9	0.68	90.988	
300.0	300.0	301.0	301.0	0.6	0.6	-89.96	0.0	-61.6	61.6	60.4	1.13	54.666	
400.0	400.0	401.0	401.0	0.8	0.8	-89.96	0.0	-61.6	61.6	60.0	1.58	39.069	
500.0	500.0	501.0	501.0	1.0	1.0	-89.96	0.0	-61.6	61.6	59.5	2.03	30.397	
600.0	600.0	601.0	601.0	1.2	1.2	-89.96	0.0	-61.6	61.6	59.1	2.47	24.875	
700.0	700.0	701.0	701.0	1.5	1.5	-89.96	0.0	-61.6	61.6	58.6	2.92	21.051	
800.0	800.0	801.0	801.0	1.7	1.7	-89.96	0.0	-61.6	61.6	58.2	3.37	18.246	CC, ES
900.0	900.0	901.0	901.0	1.9	1.9	-165.14	0.0	-61.6	63.2	59.4	3.81	16.586	
1,000.0	999.8	1,000.8	1,000.8	2.1	2.1	-166.24	0.0	-61.6	68.3	64.1	4.24	16.098	
1,100.0	1,099.5	1,100.5	1,100.5	2.3	2.4	-167.75	0.0	-61.6	76.8	72.1	4.67	16.433	
1,200.0	1,198.7	1,199.7	1,199.7	2.6	2.6	-169.38	0.0	-61.6	88.6	83.5	5.11	17.360	
1,300.0	1,297.9	1,298.9	1,298.9	2.9	2.8	-170.73	0.0	-61.6	101.4	95.9	5.55	18.288	
1,400.0	1,397.0	1,398.0	1,398.0	3.1	3.0	-171.78	0.0	-61.6	114.3	108.3	5.99	19.075	
1,500.0	1,496.2	1,497.2	1,497.2	3.4	3.3	-172.61	0.0	-61.6	127.1	120.7	6.44	19.749	
1,600.0	1,595.3	1,596.3	1,596.3	3.7	3.5	-173.30	0.0	-61.6	140.0	133.1	6.89	20.332	
1,700.0	1,694.5	1,695.5	1,695.5	4.0	3.7	-173.86	0.0	-61.6	152.9	145.6	7.34	20.840	
1,800.0	1,793.6	1,794.6	1,794.6	4.3	3.9	-174.34	0.0	-61.6	165.9	158.1	7.79	21.287	
1,900.0	1,892.8	1,893.8	1,893.8	4.6	4.1	-174.75	0.0	-61.6	178.8	170.5	8.25	21.683	
2,000.0	1,991.9	1,992.9	1,992.9	5.0	4.4	-175.11	0.0	-61.6	191.7	183.0	8.70	22.036	
2,100.0	2,091.1	2,092.1	2,092.1	5.3	4.6	-175.42	0.0	-61.6	204.7	195.5	9.16	22.352	
2,200.0	2,190.2	2,191.2	2,191.2	5.6	4.8	-175.69	0.0	-61.6	217.6	208.0	9.61	22.636	
2,300.0	2,289.4	2,291.8	2,291.8	5.9	5.0	-175.67	1.1	-61.5	230.3	220.2	10.07	22.861	
2,400.0	2,388.6	2,392.6	2,392.5	6.2	5.3	-175.04	4.9	-61.2	242.3	231.8	10.53	23.004	
2,500.0	2,487.7	2,493.4	2,493.1	6.5	5.5	-173.89	11.3	-60.8	253.8	242.8	11.00	23.076	
2,600.0	2,586.9	2,594.0	2,593.3	6.9	5.7	-172.27	20.3	-60.2	264.8	253.3	11.47	23.091	
2,700.0	2,686.0	2,694.0	2,692.7	7.2	5.9	-170.26	31.8	-59.4	275.5	263.6	11.95	23.064	
2,800.0	2,785.2	2,793.0	2,790.8	7.5	6.2	-168.24	44.2	-58.6	286.5	274.0	12.44	23.032	
2,900.0	2,884.3	2,891.9	2,888.9	7.8	6.4	-166.38	56.5	-57.7	297.7	284.8	12.94	23.010	
3,000.0	2,983.5	2,990.8	2,987.1	8.2	6.7	-164.64	68.8	-56.9	309.3	295.8	13.45	22.994	
3,100.0	3,082.6	3,089.7	3,085.2	8.5	6.9	-163.04	81.1	-56.1	321.1	307.1	13.97	22.983	
3,200.0	3,181.8	3,188.6	3,183.3	8.8	7.2	-161.54	93.5	-55.3	333.2	318.7	14.50	22.977	
3,300.0	3,280.9	3,287.5	3,281.5	9.1	7.5	-160.16	105.8	-54.4	345.4	330.4	15.03	22.975	
3,400.0	3,380.1	3,386.4	3,379.6	9.5	7.7	-158.86	118.1	-53.6	357.9	342.3	15.58	22.975	
3,500.0	3,479.2	3,485.3	3,477.7	9.8	8.0	-157.66	130.4	-52.8	370.5	354.4	16.12	22.979	
3,600.0	3,578.4	3,584.6	3,576.3	10.1	8.3	-156.58	142.4	-51.9	383.2	366.6	16.66	23.006	
3,700.0	3,677.5	3,684.5	3,675.7	10.5	8.5	-155.91	152.2	-51.3	395.9	378.8	17.14	23.093	
3,800.0	3,776.7	3,784.6	3,775.6	10.8	8.7	-155.65	159.4	-50.8	408.4	390.8	17.61	23.194	
3,900.0	3,875.8	3,884.8	3,875.7	11.1	8.9	-155.76	163.9	-50.5	420.6	402.6	18.05	23.304	
4,000.0	3,975.0	3,985.0	3,975.8	11.4	9.1	-156.21	165.9	-50.4	432.7	414.2	18.47	23.426	
4,100.0	4,074.2	4,084.3	4,075.2	11.8	9.2	-156.88	165.9	-50.4	444.6	425.7	18.89	23.537	
4,200.0	4,173.3	4,183.5	4,174.3	12.1	9.4	-157.52	165.9	-50.4	456.6	437.3	19.33	23.621	
4,300.0	4,272.5	4,282.6	4,273.5	12.4	9.7	-158.12	165.9	-50.4	468.6	448.9	19.77	23.700	
4,400.0	4,371.6	4,381.8	4,372.6	12.8	9.9	-158.70	165.9	-50.4	480.7	460.5	20.22	23.777	
4,500.0	4,470.8	4,480.9	4,471.8	13.1	10.1	-159.25	165.9	-50.4	492.9	472.2	20.66	23.852	
4,600.0	4,569.9	4,580.1	4,570.9	13.4	10.3	-159.77	165.9	-50.4	505.0	483.9	21.11	23.925	
4,700.0	4,669.1	4,679.2	4,670.1	13.7	10.5	-160.27	165.9	-50.4	517.3	495.7	21.56	23.997	
4,800.0	4,768.2	4,778.4	4,769.2	14.1	10.7	-160.74	165.9	-50.4	529.5	507.5	22.00	24.066	
4,900.0	4,867.4	4,877.6	4,868.4	14.4	10.9	-161.19	165.9	-50.4	541.8	519.3	22.45	24.134	
5,000.0	4,966.5	4,976.7	4,967.5	14.7	11.1	-161.62	165.9	-50.4	554.1	531.2	22.90	24.199	
5,100.0	5,065.7	5,075.9	5,066.7	15.1	11.4	-162.04	165.9	-50.4	566.5	543.1	23.35	24.263	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	5,164.8	5,175.0	5,165.8	15.4	11.6	-162.43	165.9	-50.4	578.8	555.0	23.80	24.326	
5,300.0	5,264.0	5,274.2	5,265.0	15.7	11.8	-162.81	165.9	-50.4	591.2	567.0	24.25	24.386	
5,400.0	5,363.1	5,373.3	5,364.1	16.0	12.0	-163.18	165.9	-50.4	603.7	579.0	24.70	24.445	
5,500.0	5,462.3	5,472.5	5,463.3	16.4	12.2	-163.53	165.9	-50.4	616.1	591.0	25.15	24.502	
5,600.0	5,561.5	5,571.6	5,562.5	16.7	12.4	-163.86	165.9	-50.4	628.6	603.0	25.60	24.558	
5,700.0	5,660.6	5,670.8	5,661.6	17.0	12.6	-164.20	165.9	-50.4	640.9	614.9	26.05	24.599	
5,800.0	5,760.1	5,770.3	5,761.1	17.2	12.9	-164.50	165.9	-50.4	650.7	624.2	26.48	24.567	
5,900.0	5,859.9	5,870.1	5,860.9	17.4	13.1	-164.69	165.9	-50.4	657.0	630.2	26.89	24.439	
6,000.0	5,959.8	5,970.0	5,960.8	17.6	13.3	-164.77	165.9	-50.4	660.1	632.8	27.26	24.217	
6,100.0	6,059.8	6,070.0	6,060.8	17.7	13.5	-90.00	165.9	-50.4	660.4	632.7	27.68	23.855	
6,200.0	6,159.8	6,170.0	6,160.8	17.9	13.7	-90.00	165.9	-50.4	660.4	632.3	28.10	23.504	
6,300.0	6,259.8	6,270.0	6,260.8	18.1	14.0	-90.00	165.9	-50.4	660.4	631.8	28.51	23.163	
6,400.0	6,359.8	6,370.0	6,360.8	18.2	14.2	-90.00	165.9	-50.4	660.4	631.4	28.92	22.831	
6,500.0	6,459.8	6,470.0	6,460.8	18.4	14.4	-90.00	165.9	-50.4	660.4	631.0	29.34	22.508	
6,600.0	6,559.8	6,570.0	6,560.8	18.6	14.6	-90.00	165.9	-50.4	660.4	630.6	29.76	22.193	
6,700.0	6,659.8	6,671.1	6,661.9	18.7	14.8	91.17	164.2	-50.3	660.4	630.3	30.10	21.935	
6,800.0	6,758.1	6,773.7	6,762.7	18.8	14.9	91.13	145.7	-49.9	660.3	630.0	30.34	21.764	
6,900.0	6,851.2	6,876.2	6,857.8	18.9	15.0	91.05	108.0	-49.2	660.3	629.8	30.49	21.657	
7,000.0	6,935.8	6,978.4	6,943.4	19.0	15.1	90.93	52.5	-48.0	660.3	629.7	30.64	21.548	
7,100.0	7,008.7	7,080.3	7,016.4	19.1	15.2	90.77	-18.4	-46.6	660.3	629.4	30.92	21.353	
7,200.0	7,067.2	7,181.8	7,074.1	19.2	15.5	90.58	-101.7	-44.8	660.3	628.8	31.44	20.997	
7,300.0	7,109.2	7,282.9	7,114.4	19.5	15.9	90.38	-194.2	-42.9	660.2	627.9	32.30	20.440	
7,400.0	7,133.2	7,383.5	7,136.0	19.9	16.5	90.16	-292.2	-40.9	660.2	626.7	33.52	19.694	
7,476.8	7,140.0	7,460.3	7,139.7	20.3	17.1	89.89	-368.8	-39.3	660.2	625.5	34.70	19.026	
7,500.0	7,138.7	7,483.6	7,139.6	20.5	17.3	89.99	-392.1	-38.8	660.2	625.1	35.08	18.818	
7,600.0	7,138.3	7,583.6	7,139.3	21.2	18.3	89.99	-492.1	-36.8	660.2	623.2	36.98	17.855	
7,700.0	7,138.0	7,683.6	7,138.9	22.1	19.4	89.99	-592.1	-34.7	660.2	621.1	39.15	16.864	
7,800.0	7,137.6	7,783.6	7,138.6	23.2	20.6	89.99	-692.1	-32.7	660.2	618.7	41.57	15.883	
7,900.0	7,137.3	7,883.6	7,138.2	24.3	21.9	89.99	-792.0	-30.6	660.2	616.0	44.19	14.941	
8,000.0	7,136.9	7,983.6	7,137.9	25.6	23.3	89.99	-892.0	-28.5	660.2	613.2	46.98	14.054	
8,100.0	7,136.6	8,083.6	7,137.5	27.0	24.8	89.99	-992.0	-26.5	660.2	610.3	49.91	13.229	
8,200.0	7,136.2	8,183.6	7,137.2	28.4	26.3	89.99	-1,092.0	-24.4	660.2	607.3	52.96	12.467	
8,300.0	7,135.9	8,283.6	7,136.8	29.8	27.9	89.99	-1,191.9	-22.4	660.2	604.1	56.10	11.768	
8,400.0	7,135.5	8,383.6	7,136.5	31.4	29.5	89.99	-1,291.9	-20.3	660.2	600.9	59.33	11.128	
8,500.0	7,135.2	8,483.6	7,136.1	32.9	31.2	89.99	-1,391.9	-18.2	660.2	597.6	62.63	10.542	
8,600.0	7,134.9	8,583.6	7,135.8	34.5	32.9	89.99	-1,491.9	-16.2	660.2	594.2	65.99	10.005	
8,700.0	7,134.5	8,683.6	7,135.4	36.2	34.6	89.99	-1,591.9	-14.1	660.2	590.8	69.40	9.514	
8,800.0	7,134.2	8,783.6	7,135.1	37.8	36.3	89.99	-1,691.8	-12.0	660.2	587.4	72.85	9.063	
8,900.0	7,133.8	8,883.6	7,134.7	39.5	38.1	89.99	-1,791.8	-10.0	660.2	583.9	76.34	8.648	
9,000.0	7,133.5	8,983.6	7,134.4	41.2	39.8	89.99	-1,891.8	-7.9	660.2	580.4	79.87	8.267	
9,100.0	7,133.1	9,083.6	7,134.0	42.9	41.6	89.99	-1,991.8	-5.9	660.2	576.8	83.42	7.915	
9,200.0	7,132.8	9,183.6	7,133.7	44.7	43.4	89.99	-2,091.7	-3.8	660.2	573.2	87.00	7.589	
9,300.0	7,132.4	9,283.6	7,133.3	46.4	45.2	89.99	-2,191.7	-1.7	660.2	569.6	90.60	7.288	
9,400.0	7,132.1	9,383.6	7,133.0	48.2	47.0	89.99	-2,291.7	0.3	660.2	566.0	94.21	7.008	
9,500.0	7,131.7	9,483.6	7,132.6	50.0	48.8	89.99	-2,391.7	2.4	660.2	562.4	97.85	6.747	
9,600.0	7,131.4	9,583.6	7,132.3	51.8	50.7	89.99	-2,491.7	4.5	660.2	558.7	101.50	6.505	
9,700.0	7,131.0	9,683.6	7,132.0	53.6	52.5	89.99	-2,591.6	6.5	660.2	555.1	105.17	6.278	
9,800.0	7,130.7	9,783.6	7,131.6	55.4	54.4	89.99	-2,691.6	8.6	660.2	551.4	108.85	6.066	
9,900.0	7,130.3	9,883.6	7,131.3	57.2	56.2	89.99	-2,791.6	10.6	660.2	547.7	112.54	5.867	
10,000.0	7,130.0	9,983.6	7,130.9	59.0	58.1	89.99	-2,891.6	12.7	660.2	544.0	116.24	5.680	
10,100.0	7,129.6	10,083.6	7,130.6	60.8	59.9	89.99	-2,991.5	14.8	660.2	540.3	119.95	5.504	
10,200.0	7,129.3	10,183.6	7,130.2	62.7	61.8	89.99	-3,091.5	16.8	660.2	536.6	123.67	5.339	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	7,128.9	10,283.6	7,129.9	64.5	63.6	89.99	-3,191.5	18.9	660.2	532.8	127.39	5.183	
10,400.0	7,128.6	10,383.6	7,129.5	66.3	65.5	89.99	-3,291.5	21.0	660.2	529.1	131.12	5.035	
10,500.0	7,128.2	10,483.6	7,129.2	68.2	67.4	89.99	-3,391.5	23.0	660.2	525.4	134.86	4.896	
10,600.0	7,127.9	10,583.6	7,128.8	70.0	69.3	89.99	-3,491.4	25.1	660.2	521.6	138.61	4.763	
10,700.0	7,127.5	10,683.6	7,128.5	71.9	71.1	89.99	-3,591.4	27.1	660.2	517.9	142.36	4.638	
10,800.0	7,127.2	10,783.6	7,128.1	73.8	73.0	89.99	-3,691.4	29.2	660.2	514.1	146.11	4.519	
10,900.0	7,126.8	10,883.6	7,127.8	75.6	74.9	89.99	-3,791.4	31.3	660.2	510.4	149.87	4.405	
11,000.0	7,126.5	10,983.6	7,127.4	77.5	76.8	89.99	-3,891.4	33.3	660.2	506.6	153.64	4.297	
11,100.0	7,126.1	11,083.6	7,127.1	79.4	78.7	89.99	-3,991.3	35.4	660.2	502.8	157.41	4.194	
11,200.0	7,125.8	11,183.6	7,126.7	81.2	80.5	89.99	-4,091.3	37.5	660.2	499.1	161.18	4.096	
11,300.0	7,125.4	11,283.6	7,126.4	83.1	82.4	89.99	-4,191.3	39.5	660.2	495.3	164.96	4.003	
11,400.0	7,125.1	11,383.6	7,126.0	85.0	84.3	89.99	-4,291.3	41.6	660.2	491.5	168.73	3.913	
11,500.0	7,124.7	11,483.6	7,125.7	86.9	86.2	89.99	-4,391.2	43.6	660.2	487.7	172.52	3.827	
11,600.0	7,124.4	11,583.6	7,125.3	88.7	88.1	89.99	-4,491.2	45.7	660.2	483.9	176.30	3.745	
11,658.0	7,124.2	11,641.6	7,125.1	89.8	89.2	89.99	-4,549.2	46.9	660.2	481.7	178.50	3.699	
11,700.0	7,124.0	11,675.1	7,125.0	90.6	89.8	89.99	-4,582.7	47.6	660.3	480.4	179.93	3.670	
11,708.8	7,124.0	11,675.1	7,125.0	90.8	89.8	89.99	-4,582.7	47.6	660.5	480.4	180.09	3.667	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	1.0	1.0	0.0	0.0	-89.96	0.0	-44.8	44.8	44.8	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-44.8	44.8	44.5	0.23	197.209	
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-44.8	44.8	44.1	0.68	66.173	
300.0	300.0	301.0	301.0	0.6	0.6	-89.96	0.0	-44.8	44.8	43.6	1.13	39.757	
400.0	400.0	401.0	401.0	0.8	0.8	-89.96	0.0	-44.8	44.8	43.2	1.58	28.414	
500.0	500.0	501.0	501.0	1.0	1.0	-89.96	0.0	-44.8	44.8	42.7	2.03	22.107	
600.0	600.0	601.0	601.0	1.2	1.2	-89.96	0.0	-44.8	44.8	42.3	2.47	18.091	
700.0	700.0	701.0	701.0	1.5	1.5	-89.96	0.0	-44.8	44.8	41.8	2.92	15.310	
800.0	800.0	801.0	801.0	1.7	1.7	-89.96	0.0	-44.8	44.8	41.4	3.37	13.270	CC, ES
900.0	900.0	901.0	901.0	1.9	1.9	-165.29	0.0	-44.8	46.5	42.6	3.81	12.183	
1,000.0	999.8	1,000.8	1,000.8	2.1	2.1	-166.75	0.0	-44.8	51.5	47.3	4.24	12.144	
1,100.0	1,099.5	1,100.5	1,100.5	2.3	2.4	-168.62	0.0	-44.8	60.1	55.4	4.67	12.848	
1,200.0	1,198.7	1,199.7	1,199.7	2.6	2.6	-170.49	0.0	-44.8	71.9	66.8	5.11	14.086	
1,300.0	1,297.9	1,298.9	1,298.9	2.9	2.8	-171.94	0.0	-44.8	84.8	79.2	5.55	15.282	
1,400.0	1,397.0	1,398.0	1,398.0	3.1	3.0	-173.01	0.0	-44.8	97.6	91.6	5.99	16.299	
1,500.0	1,496.2	1,497.2	1,497.2	3.4	3.3	-173.83	0.0	-44.8	110.5	104.1	6.44	17.171	
1,600.0	1,595.3	1,596.3	1,596.3	3.7	3.5	-174.47	0.0	-44.8	123.5	116.6	6.89	17.927	
1,700.0	1,694.5	1,698.3	1,698.3	4.0	3.7	-174.70	0.9	-43.9	135.4	128.1	7.34	18.450	
1,800.0	1,793.6	1,800.9	1,800.8	4.3	3.9	-174.25	3.8	-41.1	145.2	137.4	7.79	18.641	
1,900.0	1,892.8	1,903.7	1,903.4	4.6	4.2	-173.23	8.7	-36.4	152.9	144.6	8.24	18.542	
2,000.0	1,991.9	2,006.8	2,006.0	5.0	4.4	-171.68	15.6	-29.8	158.5	149.8	8.71	18.202	
2,100.0	2,091.1	2,107.0	2,105.7	5.3	4.6	-169.89	23.6	-22.1	162.9	153.7	9.17	17.759	
2,200.0	2,190.2	2,206.8	2,204.8	5.6	4.9	-168.20	31.5	-14.5	167.5	157.8	9.65	17.358	
2,300.0	2,289.4	2,306.6	2,304.0	5.9	5.1	-166.60	39.4	-6.9	172.2	162.0	10.13	16.995	
2,400.0	2,388.6	2,406.4	2,403.2	6.2	5.4	-165.09	47.3	0.7	177.0	166.4	10.62	16.664	
2,500.0	2,487.7	2,506.1	2,502.3	6.5	5.6	-163.65	55.3	8.3	181.9	170.8	11.12	16.362	
2,600.0	2,586.9	2,605.9	2,601.5	6.9	5.9	-162.30	63.2	15.9	187.0	175.4	11.63	16.084	
2,700.0	2,686.0	2,705.7	2,700.7	7.2	6.2	-161.01	71.1	23.5	192.1	180.0	12.14	15.829	
2,800.0	2,785.2	2,805.5	2,799.9	7.5	6.4	-159.79	79.0	31.1	197.4	184.7	12.66	15.594	
2,900.0	2,884.3	2,905.2	2,899.0	7.8	6.7	-158.64	86.9	38.7	202.7	189.5	13.18	15.377	
3,000.0	2,983.5	3,005.0	2,998.2	8.2	7.0	-157.55	94.9	46.4	208.1	194.4	13.71	15.175	
3,100.0	3,082.6	3,104.8	3,097.4	8.5	7.3	-156.51	102.8	54.0	213.6	199.3	14.25	14.989	
3,200.0	3,181.8	3,204.6	3,196.5	8.8	7.5	-155.52	110.7	61.6	219.1	204.3	14.79	14.815	
3,300.0	3,280.9	3,304.4	3,295.7	9.1	7.8	-154.58	118.6	69.2	224.7	209.4	15.34	14.653	
3,400.0	3,380.1	3,404.1	3,394.9	9.5	8.1	-153.69	126.6	76.8	230.4	214.5	15.89	14.502	
3,500.0	3,479.2	3,503.9	3,494.0	9.8	8.4	-152.84	134.5	84.4	236.1	219.7	16.44	14.361	
3,600.0	3,578.4	3,603.7	3,593.2	10.1	8.7	-152.03	142.4	92.0	241.9	224.9	17.00	14.229	
3,700.0	3,677.5	3,703.0	3,692.0	10.5	9.0	-151.27	150.3	99.6	247.7	230.1	17.55	14.110	
3,800.0	3,776.7	3,800.0	3,788.5	10.8	9.2	-150.86	156.9	105.9	254.3	236.3	18.04	14.098	
3,900.0	3,875.8	3,896.0	3,884.3	11.1	9.4	-150.93	161.6	110.5	262.2	243.8	18.49	14.181	
4,000.0	3,975.0	3,992.2	3,980.3	11.4	9.6	-151.44	164.7	113.4	271.4	252.5	18.91	14.352	
4,100.0	4,074.2	4,087.9	4,076.1	11.8	9.7	-152.34	166.0	114.7	281.9	262.6	19.30	14.607	
4,200.0	4,173.3	4,186.2	4,174.3	12.1	9.9	-153.50	166.0	114.7	293.5	273.8	19.69	14.908	
4,300.0	4,272.5	4,285.3	4,273.5	12.4	10.1	-154.58	166.0	114.7	305.2	285.1	20.09	15.189	
4,400.0	4,371.6	4,384.5	4,372.6	12.8	10.3	-155.59	166.0	114.7	317.0	296.5	20.50	15.459	
4,500.0	4,470.8	4,483.6	4,471.8	13.1	10.5	-156.52	166.0	114.7	328.9	307.9	20.92	15.720	
4,600.0	4,569.9	4,582.8	4,570.9	13.4	10.7	-157.39	166.0	114.7	340.8	319.5	21.34	15.972	
4,700.0	4,669.1	4,681.9	4,670.1	13.7	10.9	-158.20	166.0	114.7	352.9	331.1	21.76	16.216	
4,800.0	4,768.2	4,781.1	4,769.2	14.1	11.1	-158.96	166.0	114.7	365.0	342.8	22.19	16.451	
4,900.0	4,867.4	4,880.2	4,868.4	14.4	11.3	-159.67	166.0	114.7	377.1	354.5	22.61	16.679	
5,000.0	4,966.5	4,979.4	4,967.5	14.7	11.5	-160.33	166.0	114.7	389.4	366.3	23.04	16.899	
5,100.0	5,065.7	5,078.5	5,066.7	15.1	11.7	-160.95	166.0	114.7	401.6	378.1	23.47	17.111	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	5,164.8	5,177.7	5,165.8	15.4	11.9	-161.54	166.0	114.7	413.9	390.0	23.90	17.316	
5,300.0	5,264.0	5,276.8	5,265.0	15.7	12.1	-162.09	166.0	114.7	426.3	401.9	24.34	17.514	
5,400.0	5,363.1	5,376.0	5,364.1	16.0	12.3	-162.61	166.0	114.7	438.7	413.9	24.78	17.705	
5,500.0	5,462.3	5,475.2	5,463.3	16.4	12.6	-163.10	166.0	114.7	451.1	425.9	25.21	17.891	
5,600.0	5,561.5	5,574.3	5,562.5	16.7	12.8	-163.57	166.0	114.7	463.5	437.9	25.65	18.070	
5,700.0	5,660.6	5,673.5	5,661.6	17.0	13.0	-164.03	166.0	114.7	475.8	449.7	26.10	18.233	
5,800.0	5,760.1	5,773.0	5,761.1	17.2	13.2	-164.41	166.0	114.7	485.6	459.1	26.51	18.317	
5,900.0	5,859.9	5,872.7	5,860.9	17.4	13.4	-164.65	166.0	114.7	492.0	465.1	26.89	18.292	
6,000.0	5,959.8	5,972.7	5,960.8	17.6	13.6	-164.76	166.0	114.7	495.0	467.7	27.25	18.163	
6,100.0	6,059.8	6,072.7	6,060.8	17.7	13.8	-90.00	166.0	114.7	495.3	467.6	27.68	17.890	
6,200.0	6,159.8	6,172.7	6,160.8	17.9	14.0	-90.00	166.0	114.7	495.3	467.2	28.09	17.629	
6,300.0	6,259.8	6,272.7	6,260.8	18.1	14.2	-90.00	166.0	114.7	495.3	466.8	28.51	17.374	
6,400.0	6,359.8	6,372.7	6,360.8	18.2	14.5	-90.00	166.0	114.7	495.3	466.4	28.92	17.126	
6,500.0	6,459.8	6,473.4	6,461.5	18.4	14.7	-90.15	164.7	114.8	495.2	465.9	29.31	16.899	
6,566.0	6,525.9	6,539.4	6,526.9	18.5	14.7	-91.18	155.8	114.9	495.2	465.7	29.48	16.798	
6,600.0	6,559.8	6,572.2	6,558.8	18.6	14.8	-92.05	148.3	115.1	495.2	465.7	29.54	16.763	
6,700.0	6,659.8	6,662.7	6,643.7	18.7	14.9	85.62	117.5	115.7	496.8	467.2	29.65	16.757	
6,800.0	6,758.1	6,750.0	6,719.5	18.8	14.9	81.87	74.2	116.6	500.7	470.9	29.74	16.835	
6,900.0	6,851.2	6,828.9	6,780.8	18.9	15.0	78.60	24.7	117.6	506.0	476.2	29.83	16.966	
7,000.0	6,935.8	6,907.5	6,833.8	19.0	15.1	75.63	-33.2	118.8	512.2	482.3	29.91	17.126	
7,100.0	7,008.7	6,984.0	6,876.5	19.1	15.2	73.13	-96.7	120.1	518.4	488.4	30.00	17.279	
7,200.0	7,067.2	7,059.0	6,908.8	19.2	15.5	71.14	-164.2	121.5	523.9	493.8	30.15	17.378	
7,300.0	7,109.2	7,132.9	6,930.9	19.5	15.9	69.69	-234.6	123.0	528.4	497.9	30.44	17.357	
7,400.0	7,133.2	7,200.0	6,942.1	19.9	16.3	68.83	-300.7	124.4	531.2	500.3	30.93	17.178	
7,500.0	7,138.7	7,287.2	6,944.8	20.5	17.0	68.51	-387.8	126.1	532.1	500.2	31.95	16.654	
7,600.0	7,138.3	7,387.2	6,944.3	21.2	18.0	68.50	-487.8	128.2	532.2	498.5	33.70	15.791	
7,700.0	7,138.0	7,487.2	6,943.8	22.1	19.1	68.49	-587.7	130.3	532.2	496.5	35.73	14.897	
7,800.0	7,137.6	7,587.2	6,943.4	23.2	20.4	68.48	-687.7	132.3	532.3	494.3	37.99	14.011	
7,900.0	7,137.3	7,687.2	6,942.9	24.3	21.7	68.47	-787.7	134.4	532.3	491.9	40.45	13.160	
8,000.0	7,136.9	7,787.2	6,942.4	25.6	23.1	68.45	-887.7	136.5	532.4	489.3	43.07	12.360	
8,100.0	7,136.6	7,887.2	6,942.0	27.0	24.6	68.44	-987.7	138.5	532.4	486.6	45.83	11.617	
8,200.0	7,136.2	7,987.2	6,941.5	28.4	26.1	68.43	-1,087.6	140.6	532.5	483.8	48.70	10.934	
8,300.0	7,135.9	8,087.2	6,941.0	29.8	27.7	68.42	-1,187.6	142.6	532.5	480.9	51.66	10.307	
8,400.0	7,135.5	8,187.2	6,940.5	31.4	29.4	68.41	-1,287.6	144.7	532.6	477.9	54.70	9.735	
8,500.0	7,135.2	8,287.2	6,940.1	32.9	31.0	68.39	-1,387.6	146.8	532.6	474.8	57.81	9.213	
8,600.0	7,134.9	8,387.2	6,939.6	34.5	32.7	68.38	-1,487.5	148.8	532.7	471.7	60.97	8.736	
8,700.0	7,134.5	8,487.2	6,939.1	36.2	34.4	68.37	-1,587.5	150.9	532.7	468.5	64.18	8.300	
8,800.0	7,134.2	8,587.2	6,938.7	37.8	36.2	68.36	-1,687.5	152.9	532.8	465.3	67.43	7.901	
8,900.0	7,133.8	8,687.2	6,938.2	39.5	37.9	68.34	-1,787.5	155.0	532.8	462.1	70.71	7.534	
9,000.0	7,133.5	8,787.2	6,937.7	41.2	39.7	68.33	-1,887.5	157.1	532.8	458.8	74.03	7.198	
9,100.0	7,133.1	8,887.2	6,937.2	42.9	41.5	68.32	-1,987.4	159.1	532.9	455.5	77.37	6.888	
9,200.0	7,132.8	8,987.2	6,936.8	44.7	43.3	68.31	-2,087.4	161.2	532.9	452.2	80.73	6.601	
9,300.0	7,132.4	9,087.2	6,936.3	46.4	45.1	68.30	-2,187.4	163.2	533.0	448.9	84.11	6.336	
9,400.0	7,132.1	9,187.2	6,935.8	48.2	46.9	68.28	-2,287.4	165.3	533.0	445.5	87.52	6.091	
9,500.0	7,131.7	9,287.2	6,935.4	50.0	48.7	68.27	-2,387.3	167.4	533.1	442.1	90.93	5.862	
9,600.0	7,131.4	9,387.2	6,934.9	51.8	50.6	68.26	-2,487.3	169.4	533.1	438.8	94.36	5.650	
9,700.0	7,131.0	9,487.2	6,934.4	53.6	52.4	68.25	-2,587.3	171.5	533.2	435.4	97.80	5.451	
9,800.0	7,130.7	9,587.2	6,934.0	55.4	54.3	68.24	-2,687.3	173.6	533.2	432.0	101.26	5.266	
9,900.0	7,130.3	9,687.2	6,933.5	57.2	56.1	68.22	-2,787.3	175.6	533.3	428.5	104.72	5.092	
10,000.0	7,130.0	9,787.2	6,933.0	59.0	58.0	68.21	-2,887.2	177.7	533.3	425.1	108.19	4.929	
10,100.0	7,129.6	9,887.2	6,932.5	60.8	59.8	68.20	-2,987.2	179.7	533.4	421.7	111.67	4.776	
10,200.0	7,129.3	9,987.2	6,932.1	62.7	61.7	68.19	-3,087.2	181.8	533.4	418.2	115.16	4.632	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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
10,300.0	7,128.9	10,087.2	6,931.6	64.5	63.5	68.17	-3,187.2	183.9	533.5	414.8	118.65	4.496	
10,400.0	7,128.6	10,187.2	6,931.1	66.3	65.4	68.16	-3,287.1	185.9	533.5	411.3	122.15	4.368	
10,500.0	7,128.2	10,287.2	6,930.7	68.2	67.3	68.15	-3,387.1	188.0	533.5	407.9	125.66	4.246	
10,600.0	7,127.9	10,387.2	6,930.2	70.0	69.2	68.14	-3,487.1	190.0	533.6	404.4	129.16	4.131	
10,700.0	7,127.5	10,487.2	6,929.7	71.9	71.0	68.13	-3,587.1	192.1	533.6	401.0	132.68	4.022	
10,800.0	7,127.2	10,587.2	6,929.2	73.8	72.9	68.11	-3,687.0	194.2	533.7	397.5	136.20	3.918	
10,900.0	7,126.8	10,687.2	6,928.8	75.6	74.8	68.10	-3,787.0	196.2	533.7	394.0	139.72	3.820	
11,000.0	7,126.5	10,787.2	6,928.3	77.5	76.7	68.09	-3,887.0	198.3	533.8	390.5	143.24	3.726	
11,100.0	7,126.1	10,887.2	6,927.8	79.4	78.6	68.08	-3,987.0	200.3	533.8	387.1	146.77	3.637	
11,200.0	7,125.8	10,987.2	6,927.4	81.2	80.5	68.07	-4,087.0	202.4	533.9	383.6	150.30	3.552	
11,300.0	7,125.4	11,087.2	6,926.9	83.1	82.4	68.05	-4,186.9	204.5	533.9	380.1	153.84	3.471	
11,400.0	7,125.1	11,187.2	6,926.4	85.0	84.2	68.04	-4,286.9	206.5	534.0	376.6	157.37	3.393	
11,500.0	7,124.7	11,287.2	6,925.9	86.9	86.1	68.03	-4,386.9	208.6	534.0	373.1	160.91	3.319	
11,600.0	7,124.4	11,387.2	6,925.5	88.7	88.0	68.02	-4,486.9	210.7	534.1	369.6	164.45	3.247	
11,700.0	7,124.0	11,486.7	6,925.0	90.6	89.9	68.01	-4,586.4	212.7	534.1	366.1	167.99	3.179	
11,708.8	7,124.0	11,486.7	6,925.0	90.8	89.9	68.01	-4,586.4	212.7	534.2	366.1	168.14	3.177	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	1.0	1.0	0.0	0.0	-89.97	0.0	-30.8	30.8	30.8	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-89.97	0.0	-30.8	30.8	30.6	0.23	135.581	
200.0	200.0	201.0	201.0	0.3	0.3	-89.97	0.0	-30.8	30.8	30.1	0.68	45.494	
300.0	300.0	301.0	301.0	0.6	0.6	-89.97	0.0	-30.8	30.8	29.7	1.13	27.333	
400.0	400.0	401.0	401.0	0.8	0.8	-89.97	0.0	-30.8	30.8	29.2	1.58	19.535	
500.0	500.0	501.0	501.0	1.0	1.0	-89.97	0.0	-30.8	30.8	28.8	2.03	15.198	
600.0	600.0	601.0	601.0	1.2	1.2	-89.97	0.0	-30.8	30.8	28.3	2.47	12.438	
700.0	700.0	701.0	701.0	1.5	1.5	-89.97	0.0	-30.8	30.8	27.9	2.92	10.526	
800.0	800.0	801.0	801.0	1.7	1.7	-89.97	0.0	-30.8	30.8	27.4	3.37	9.123	CC, ES
900.0	900.0	901.0	901.0	1.9	1.9	-165.55	0.0	-30.8	32.5	28.7	3.81	8.514	
1,000.0	999.8	1,000.8	1,000.8	2.1	2.1	-167.52	0.0	-30.8	37.6	33.3	4.24	8.850	
1,100.0	1,099.5	1,100.5	1,100.5	2.3	2.4	-169.83	0.0	-30.8	46.1	41.4	4.67	9.864	
1,200.0	1,198.7	1,199.7	1,199.7	2.6	2.6	-171.91	0.0	-30.8	58.0	52.9	5.11	11.364	
1,300.0	1,297.9	1,298.9	1,298.9	2.9	2.8	-173.39	0.0	-30.8	70.9	65.4	5.55	12.785	
1,400.0	1,397.0	1,398.0	1,398.0	3.1	3.0	-174.41	0.0	-30.8	83.8	77.8	5.99	13.993	
1,500.0	1,496.2	1,499.6	1,499.5	3.4	3.3	-174.94	0.6	-29.6	95.5	89.1	6.43	14.853	
1,600.0	1,595.3	1,601.7	1,601.6	3.7	3.5	-174.90	2.5	-26.1	104.8	97.9	6.87	15.243	
1,700.0	1,694.5	1,704.2	1,703.9	4.0	3.7	-174.44	5.7	-20.1	111.4	104.1	7.32	15.226	
1,800.0	1,793.6	1,807.0	1,806.3	4.3	3.9	-173.60	10.2	-11.6	115.6	107.8	7.77	14.872	
1,900.0	1,892.8	1,908.9	1,907.4	4.6	4.2	-172.39	15.8	-1.0	117.3	109.1	8.23	14.263	
2,000.0	1,991.9	2,008.8	2,006.6	5.0	4.4	-171.15	21.6	9.9	118.7	110.0	8.69	13.660	
2,100.0	2,091.1	2,108.8	2,105.8	5.3	4.7	-169.93	27.4	20.8	120.1	110.9	9.15	13.115	
2,200.0	2,190.2	2,208.7	2,205.0	5.6	5.0	-168.75	33.2	31.7	121.5	111.9	9.63	12.621	
2,300.0	2,289.4	2,308.7	2,304.2	5.9	5.2	-167.59	39.0	42.6	123.0	112.9	10.10	12.170	
2,400.0	2,388.6	2,408.7	2,403.3	6.2	5.5	-166.46	44.8	53.5	124.5	113.9	10.59	11.758	
2,500.0	2,487.7	2,508.6	2,502.5	6.5	5.8	-165.35	50.6	64.4	126.1	115.0	11.08	11.381	
2,600.0	2,586.9	2,608.6	2,601.7	6.9	6.1	-164.28	56.3	75.3	127.7	116.2	11.58	11.033	
2,700.0	2,686.0	2,708.5	2,700.9	7.2	6.4	-163.23	62.1	86.2	129.4	117.3	12.08	10.713	
2,800.0	2,785.2	2,808.5	2,800.1	7.5	6.7	-162.21	67.9	97.1	131.1	118.5	12.59	10.417	
2,900.0	2,884.3	2,908.4	2,899.3	7.8	7.0	-161.21	73.7	108.0	132.9	119.8	13.10	10.142	
3,000.0	2,983.5	3,008.4	2,998.5	8.2	7.3	-160.24	79.5	118.9	134.7	121.0	13.62	9.887	
3,100.0	3,082.6	3,108.4	3,097.7	8.5	7.6	-159.30	85.3	129.8	136.5	122.4	14.14	9.650	
3,200.0	3,181.8	3,208.3	3,196.9	8.8	7.9	-158.39	91.1	140.7	138.4	123.7	14.67	9.429	
3,300.0	3,280.9	3,308.3	3,296.1	9.1	8.2	-157.49	96.9	151.6	140.3	125.1	15.21	9.223	
3,400.0	3,380.1	3,408.2	3,395.3	9.5	8.5	-156.62	102.7	162.5	142.2	126.5	15.75	9.029	
3,500.0	3,479.2	3,508.2	3,494.5	9.8	8.8	-155.78	108.5	173.4	144.2	127.9	16.29	8.848	
3,600.0	3,578.4	3,608.2	3,593.7	10.1	9.1	-154.96	114.3	184.3	146.2	129.3	16.84	8.678	
3,700.0	3,677.5	3,708.1	3,692.9	10.5	9.4	-154.16	120.0	195.2	148.2	130.8	17.40	8.519	
3,800.0	3,776.7	3,808.1	3,792.1	10.8	9.7	-153.38	125.8	206.1	150.2	132.3	17.95	8.368	
3,900.0	3,875.8	3,908.0	3,891.2	11.1	10.0	-152.62	131.6	217.0	152.3	133.8	18.52	8.227	
4,000.0	3,975.0	4,008.0	3,990.4	11.4	10.3	-151.89	137.4	227.9	154.4	135.4	19.08	8.093	
4,100.0	4,074.2	4,107.9	4,089.6	11.8	10.6	-151.17	143.2	238.8	156.6	136.9	19.65	7.967	
4,200.0	4,173.3	4,207.9	4,188.8	12.1	10.9	-150.47	149.0	249.7	158.7	138.5	20.23	7.848	
4,300.0	4,272.5	4,306.1	4,286.3	12.4	11.2	-149.91	154.5	260.0	161.2	140.5	20.77	7.763	
4,400.0	4,371.6	4,402.9	4,382.7	12.8	11.4	-149.92	158.8	268.2	165.5	144.2	21.24	7.791	
4,500.0	4,470.8	4,500.0	4,479.5	13.1	11.6	-150.48	162.0	274.2	171.6	149.9	21.66	7.923	
4,600.0	4,569.9	4,595.9	4,575.3	13.4	11.8	-151.52	164.1	278.0	179.6	157.6	22.03	8.153	
4,700.0	4,669.1	4,691.8	4,671.2	13.7	12.0	-152.94	165.0	279.7	189.6	167.2	22.36	8.479	
4,800.0	4,768.2	4,789.8	4,769.2	14.1	12.1	-154.58	165.0	279.8	201.2	178.5	22.68	8.869	
4,900.0	4,867.4	4,889.0	4,868.4	14.4	12.3	-156.08	165.0	279.8	213.0	190.0	23.04	9.246	
5,000.0	4,966.5	4,988.1	4,967.5	14.7	12.5	-157.42	165.0	279.8	224.9	201.5	23.40	9.612	
5,100.0	5,065.7	5,087.3	5,066.7	15.1	12.7	-158.62	165.0	279.8	237.0	213.2	23.78	9.967	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	5,164.8	5,186.4	5,165.8	15.4	12.9	-159.71	165.0	279.8	249.1	225.0	24.16	10.310	
5,300.0	5,264.0	5,285.6	5,265.0	15.7	13.1	-160.70	165.0	279.8	261.4	236.8	24.56	10.643	
5,400.0	5,363.1	5,384.7	5,364.1	16.0	13.3	-161.60	165.0	279.8	273.7	248.7	24.96	10.965	
5,500.0	5,462.3	5,483.9	5,463.3	16.4	13.5	-162.42	165.0	279.8	286.0	260.7	25.37	11.276	
5,600.0	5,561.5	5,583.0	5,562.5	16.7	13.7	-163.17	165.0	279.8	298.5	272.7	25.78	11.578	
5,700.0	5,660.6	5,682.2	5,661.6	17.0	13.9	-163.87	165.0	279.8	310.7	284.5	26.20	11.862	
5,800.0	5,760.1	5,781.7	5,761.1	17.2	14.0	-164.43	165.0	279.8	320.5	293.9	26.58	12.057	
5,900.0	5,859.9	5,881.5	5,860.9	17.4	14.2	-164.77	165.0	279.8	326.9	299.9	26.94	12.132	
6,000.0	5,959.8	5,981.4	5,960.8	17.6	14.4	-164.93	165.0	279.8	329.9	302.6	27.28	12.092	
6,100.0	6,059.8	6,081.4	6,060.8	17.7	14.6	-90.17	165.0	279.8	330.2	302.5	27.72	11.913	
6,200.0	6,159.8	6,181.4	6,160.8	17.9	14.8	-90.17	165.0	279.8	330.2	302.1	28.12	11.741	
6,300.0	6,259.8	6,281.4	6,260.8	18.1	15.0	-90.17	165.0	279.8	330.2	301.7	28.53	11.574	
6,400.0	6,359.8	6,381.4	6,360.8	18.2	15.2	-90.17	165.0	279.8	330.2	301.2	28.94	11.410	
6,500.0	6,459.8	6,481.8	6,461.2	18.4	15.4	-90.40	163.7	279.8	330.2	300.8	29.32	11.262	
6,540.9	6,500.7	6,522.6	6,501.7	18.5	15.5	-91.18	159.2	279.9	330.1	300.7	29.41	11.224	
6,600.0	6,559.8	6,579.8	6,557.7	18.6	15.5	-93.20	147.6	280.2	330.3	300.8	29.50	11.197	
6,700.0	6,659.8	6,669.7	6,642.2	18.7	15.6	82.80	117.2	280.8	333.1	303.5	29.57	11.267	
6,800.0	6,758.1	6,754.2	6,715.7	18.8	15.7	77.44	75.8	281.7	339.1	309.5	29.66	11.435	
6,900.0	6,851.2	6,835.2	6,779.0	18.9	15.8	72.65	25.4	282.7	347.2	317.5	29.72	11.681	
7,000.0	6,935.8	6,913.5	6,832.1	19.0	15.8	68.55	-32.1	283.9	356.1	326.5	29.66	12.009	
7,100.0	7,008.7	6,989.8	6,875.0	19.1	16.0	65.20	-95.1	285.2	364.9	335.5	29.45	12.392	
7,200.0	7,067.2	7,064.6	6,907.7	19.2	16.2	62.62	-162.3	286.6	372.7	343.5	29.16	12.782	
7,300.0	7,109.2	7,138.4	6,930.1	19.5	16.5	60.81	-232.5	288.0	378.6	349.7	28.93	13.088	
7,400.0	7,133.2	7,211.5	6,942.4	19.9	16.9	59.75	-304.5	289.5	382.3	353.3	28.97	13.197	
7,500.0	7,138.7	7,291.5	6,944.8	20.5	17.6	59.45	-384.4	291.2	383.4	353.8	29.61	12.948	
7,600.0	7,138.3	7,391.5	6,944.3	21.2	18.5	59.43	-484.4	293.2	383.4	352.2	31.21	12.285	
7,700.0	7,138.0	7,491.5	6,943.9	22.1	19.6	59.41	-584.3	295.3	383.5	350.4	33.08	11.592	
7,800.0	7,137.6	7,591.5	6,943.4	23.2	20.8	59.40	-684.3	297.3	383.6	348.4	35.18	10.903	
7,900.0	7,137.3	7,691.5	6,942.9	24.3	22.1	59.38	-784.3	299.4	383.6	346.2	37.47	10.239	
8,000.0	7,136.9	7,791.5	6,942.4	25.6	23.5	59.37	-884.3	301.5	383.7	343.8	39.91	9.614	
8,100.0	7,136.6	7,891.5	6,942.0	27.0	24.9	59.35	-984.3	303.5	383.7	341.3	42.48	9.033	
8,200.0	7,136.2	7,991.5	6,941.5	28.4	26.5	59.34	-1,084.2	305.6	383.8	338.6	45.16	8.499	
8,300.0	7,135.9	8,091.5	6,941.0	29.8	28.0	59.32	-1,184.2	307.6	383.9	335.9	47.93	8.009	
8,400.0	7,135.5	8,191.5	6,940.6	31.4	29.6	59.30	-1,284.2	309.7	383.9	333.2	50.77	7.562	
8,500.0	7,135.2	8,291.5	6,940.1	32.9	31.3	59.29	-1,384.2	311.8	384.0	330.3	53.68	7.154	
8,600.0	7,134.9	8,391.5	6,939.6	34.5	33.0	59.27	-1,484.1	313.8	384.1	327.4	56.63	6.781	
8,700.0	7,134.5	8,491.5	6,939.2	36.2	34.7	59.26	-1,584.1	315.9	384.1	324.5	59.64	6.441	
8,800.0	7,134.2	8,591.5	6,938.7	37.8	36.4	59.24	-1,684.1	318.0	384.2	321.5	62.68	6.130	
8,900.0	7,133.8	8,691.5	6,938.2	39.5	38.1	59.23	-1,784.1	320.0	384.2	318.5	65.75	5.844	
9,000.0	7,133.5	8,791.5	6,937.7	41.2	39.9	59.21	-1,884.1	322.1	384.3	315.5	68.85	5.582	
9,100.0	7,133.1	8,891.5	6,937.3	42.9	41.7	59.20	-1,984.0	324.1	384.4	312.4	71.97	5.340	
9,200.0	7,132.8	8,991.5	6,936.8	44.7	43.5	59.18	-2,084.0	326.2	384.4	309.3	75.12	5.118	
9,300.0	7,132.4	9,091.5	6,936.3	46.4	45.3	59.16	-2,184.0	328.3	384.5	306.2	78.28	4.912	
9,400.0	7,132.1	9,191.5	6,935.9	48.2	47.1	59.15	-2,284.0	330.3	384.6	303.1	81.46	4.721	
9,500.0	7,131.7	9,291.5	6,935.4	50.0	48.9	59.13	-2,383.9	332.4	384.6	300.0	84.66	4.543	
9,600.0	7,131.4	9,391.5	6,934.9	51.8	50.7	59.12	-2,483.9	334.5	384.7	296.8	87.87	4.378	
9,700.0	7,131.0	9,491.5	6,934.4	53.6	52.5	59.10	-2,583.9	336.5	384.7	293.7	91.09	4.224	
9,800.0	7,130.7	9,591.5	6,934.0	55.4	54.4	59.09	-2,683.9	338.6	384.8	290.5	94.31	4.080	
9,900.0	7,130.3	9,691.5	6,933.5	57.2	56.2	59.07	-2,783.9	340.6	384.9	287.3	97.55	3.945	
10,000.0	7,130.0	9,791.5	6,933.0	59.0	58.1	59.05	-2,883.8	342.7	384.9	284.1	100.80	3.819	
10,100.0	7,129.6	9,891.5	6,932.6	60.8	59.9	59.04	-2,983.8	344.8	385.0	281.0	104.05	3.700	
10,200.0	7,129.3	9,991.5	6,932.1	62.7	61.8	59.02	-3,083.8	346.8	385.1	277.8	107.31	3.588	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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
10,300.0	7,128.9	10,091.5	6,931.6	64.5	63.7	59.01	-3,183.8	348.9	385.1	274.6	110.57	3.483	
10,400.0	7,128.6	10,191.5	6,931.1	66.3	65.5	58.99	-3,283.7	350.9	385.2	271.4	113.84	3.384	
10,500.0	7,128.2	10,291.5	6,930.7	68.2	67.4	58.98	-3,383.7	353.0	385.3	268.1	117.12	3.289	
10,600.0	7,127.9	10,391.5	6,930.2	70.0	69.3	58.96	-3,483.7	355.1	385.3	264.9	120.40	3.200	
10,700.0	7,127.5	10,491.5	6,929.7	71.9	71.1	58.95	-3,583.7	357.1	385.4	261.7	123.68	3.116	
10,800.0	7,127.2	10,591.5	6,929.3	73.8	73.0	58.93	-3,683.7	359.2	385.4	258.5	126.96	3.036	
10,900.0	7,126.8	10,691.5	6,928.8	75.6	74.9	58.92	-3,783.6	361.3	385.5	255.3	130.25	2.960	
11,000.0	7,126.5	10,791.5	6,928.3	77.5	76.8	58.90	-3,883.6	363.3	385.6	252.0	133.55	2.887	
11,100.0	7,126.1	10,891.5	6,927.8	79.4	78.7	58.88	-3,983.6	365.4	385.6	248.8	136.84	2.818	
11,200.0	7,125.8	10,991.5	6,927.4	81.2	80.5	58.87	-4,083.6	367.4	385.7	245.6	140.14	2.752	
11,300.0	7,125.4	11,091.5	6,926.9	83.1	82.4	58.85	-4,183.5	369.5	385.8	242.3	143.43	2.689	
11,400.0	7,125.1	11,191.5	6,926.4	85.0	84.3	58.84	-4,283.5	371.6	385.8	239.1	146.73	2.629	
11,500.0	7,124.7	11,291.5	6,926.0	86.9	86.2	58.82	-4,383.5	373.6	385.9	235.9	150.04	2.572	
11,600.0	7,124.4	11,391.5	6,925.5	88.7	88.1	58.81	-4,483.5	375.7	386.0	232.6	153.34	2.517	
11,700.0	7,124.0	11,491.5	6,925.0	90.6	89.7	58.79	-4,583.4	377.8	386.0	229.7	156.33	2.469	
11,708.8	7,124.0	11,494.4	6,925.0	90.8	89.7	58.79	-4,586.4	377.8	386.1	229.6	156.52	2.467	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	-90.00	0.0	-16.8	16.8	16.8	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-16.8	16.8	16.6	0.22	74.693	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-16.8	16.8	16.1	0.67	24.898	
300.0	300.0	300.0	300.0	0.6	0.6	-90.00	0.0	-16.8	16.8	15.7	1.12	14.939	
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-16.8	16.8	15.2	1.57	10.670	
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-16.8	16.8	14.8	2.02	8.299	
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-16.8	16.8	14.3	2.47	6.790	
700.0	700.0	700.0	700.0	1.5	1.5	-90.00	0.0	-16.8	16.8	13.9	2.92	5.746	
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-16.8	16.8	13.4	3.37	4.980	CC, ES
900.0	900.0	900.0	900.0	1.9	1.9	-166.19	0.0	-16.8	18.5	14.7	3.81	4.849	
1,000.0	999.8	999.8	999.8	2.1	2.1	-169.21	0.0	-16.8	23.6	19.4	4.24	5.563	
1,100.0	1,099.5	1,100.5	1,100.5	2.3	2.4	-171.40	0.6	-15.1	30.5	25.8	4.66	6.542	
1,200.0	1,198.7	1,201.4	1,201.3	2.6	2.6	-172.33	2.4	-10.1	37.3	32.2	5.08	7.353	
1,300.0	1,297.9	1,302.7	1,302.2	2.9	2.8	-172.16	5.4	-1.8	41.6	36.1	5.51	7.559	
1,400.0	1,397.0	1,403.6	1,402.3	3.1	3.0	-171.06	9.5	9.7	42.7	36.8	5.95	7.186	
1,500.0	1,496.2	1,503.6	1,501.5	3.4	3.3	-169.82	13.8	21.6	43.3	36.9	6.40	6.759	
1,600.0	1,595.3	1,603.6	1,600.7	3.7	3.6	-168.60	18.1	33.6	43.8	36.9	6.86	6.385	
1,700.0	1,694.5	1,703.6	1,699.9	4.0	3.9	-167.41	22.4	45.5	44.3	37.0	7.32	6.054	
1,800.0	1,793.6	1,803.6	1,799.0	4.3	4.1	-166.25	26.7	57.4	44.9	37.1	7.79	5.760	
1,900.0	1,892.8	1,903.6	1,898.2	4.6	4.4	-165.11	31.0	69.4	45.5	37.2	8.27	5.497	
2,000.0	1,991.9	2,003.6	1,997.4	5.0	4.7	-164.01	35.3	81.3	46.0	37.3	8.75	5.262	
2,100.0	2,091.1	2,103.6	2,096.6	5.3	5.0	-162.94	39.6	93.3	46.7	37.4	9.24	5.049	
2,200.0	2,190.2	2,203.6	2,195.8	5.6	5.3	-161.89	43.9	105.2	47.3	37.6	9.74	4.857	
2,300.0	2,289.4	2,303.5	2,295.0	5.9	5.6	-160.87	48.2	117.1	47.9	37.7	10.24	4.682	
2,400.0	2,388.6	2,403.5	2,394.2	6.2	6.0	-159.88	52.4	129.1	48.6	37.8	10.75	4.522	
2,500.0	2,487.7	2,503.5	2,493.3	6.5	6.3	-158.92	56.7	141.0	49.3	38.0	11.26	4.376	
2,600.0	2,586.9	2,603.5	2,592.5	6.9	6.6	-157.98	61.0	153.0	49.9	38.2	11.78	4.242	
2,700.0	2,686.0	2,703.5	2,691.7	7.2	6.9	-157.07	65.3	164.9	50.6	38.3	12.30	4.118	
2,800.0	2,785.2	2,803.5	2,790.9	7.5	7.2	-156.18	69.6	176.8	51.4	38.5	12.83	4.004	
2,900.0	2,884.3	2,903.5	2,890.1	7.8	7.5	-155.32	73.9	188.8	52.1	38.7	13.36	3.898	
3,000.0	2,983.5	3,003.5	2,989.3	8.2	7.8	-154.48	78.2	200.7	52.8	38.9	13.90	3.800	
3,100.0	3,082.6	3,103.5	3,088.5	8.5	8.1	-153.66	82.5	212.7	53.6	39.1	14.44	3.709	
3,200.0	3,181.8	3,203.5	3,187.6	8.8	8.5	-152.87	86.8	224.6	54.3	39.3	14.99	3.624	
3,300.0	3,280.9	3,303.5	3,286.8	9.1	8.8	-152.10	91.1	236.6	55.1	39.5	15.54	3.545	
3,400.0	3,380.1	3,403.5	3,386.0	9.5	9.1	-151.35	95.4	248.5	55.9	39.8	16.10	3.470	
3,500.0	3,479.2	3,503.5	3,485.2	9.8	9.4	-150.62	99.7	260.4	56.6	40.0	16.66	3.401	
3,600.0	3,578.4	3,603.5	3,584.4	10.1	9.7	-149.91	104.0	272.4	57.4	40.2	17.22	3.336	
3,700.0	3,677.5	3,703.5	3,683.6	10.5	10.1	-149.22	108.3	284.3	58.2	40.5	17.79	3.275	
3,800.0	3,776.7	3,803.5	3,782.8	10.8	10.4	-148.55	112.6	296.3	59.1	40.7	18.36	3.217	
3,900.0	3,875.8	3,903.5	3,881.9	11.1	10.7	-147.90	116.8	308.2	59.9	40.9	18.93	3.163	
4,000.0	3,975.0	4,003.5	3,981.1	11.4	11.0	-147.26	121.1	320.1	60.7	41.2	19.51	3.112	
4,100.0	4,074.2	4,103.4	4,080.3	11.8	11.4	-146.64	125.4	332.1	61.5	41.4	20.09	3.063	
4,200.0	4,173.3	4,203.4	4,179.5	12.1	11.7	-146.04	129.7	344.0	62.4	41.7	20.67	3.017	
4,300.0	4,272.5	4,303.4	4,278.7	12.4	12.0	-145.46	134.0	356.0	63.2	42.0	21.26	2.974	
4,400.0	4,371.6	4,403.4	4,377.9	12.8	12.3	-144.89	138.3	367.9	64.1	42.2	21.85	2.933	
4,500.0	4,470.8	4,503.4	4,477.1	13.1	12.6	-144.33	142.6	379.8	64.9	42.5	22.44	2.894	
4,600.0	4,569.9	4,603.4	4,576.2	13.4	13.0	-143.79	146.9	391.8	65.8	42.8	23.03	2.857	
4,700.0	4,669.1	4,703.4	4,675.4	13.7	13.3	-143.27	151.2	403.7	66.7	43.0	23.63	2.822	
4,800.0	4,768.2	4,803.4	4,774.6	14.1	13.6	-142.76	155.5	415.7	67.6	43.3	24.23	2.788	
4,900.0	4,867.4	4,902.7	4,873.2	14.4	13.9	-142.39	159.7	427.3	68.6	43.8	24.80	2.767	
5,000.0	4,966.5	5,000.0	4,970.0	14.7	14.1	-143.49	162.9	436.2	71.7	46.6	25.17	2.851	
5,100.0	5,065.7	5,098.7	5,068.5	15.1	14.3	-146.12	165.0	442.1	77.5	52.2	25.36	3.057	

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-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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	5,164.8	5,196.0	5,165.7	15.4	14.5	-149.67	165.9	444.7	86.3	60.8	25.45	3.389	
5,300.0	5,264.0	5,294.3	5,264.0	15.7	14.6	-153.41	166.0	444.9	97.5	72.0	25.53	3.819	
5,400.0	5,363.1	5,393.4	5,363.1	16.0	14.8	-156.46	166.0	444.9	109.3	83.6	25.71	4.251	
5,500.0	5,462.3	5,492.6	5,462.3	16.4	15.0	-158.91	166.0	444.9	121.3	95.4	25.96	4.674	
5,600.0	5,561.5	5,591.7	5,561.5	16.7	15.1	-160.91	166.0	444.9	133.6	107.3	26.26	5.086	
5,700.0	5,660.6	5,690.9	5,660.6	17.0	15.3	-162.58	166.0	444.9	145.7	119.1	26.58	5.481	
5,800.0	5,760.1	5,790.4	5,760.1	17.2	15.5	-163.75	166.0	444.9	155.4	128.5	26.90	5.776	
5,900.0	5,859.9	5,890.2	5,859.9	17.4	15.7	-164.44	166.0	444.9	161.8	134.6	27.22	5.943	
6,000.0	5,959.8	5,990.1	5,959.8	17.6	15.9	-164.75	166.0	444.9	164.8	137.3	27.53	5.986	
6,100.0	6,059.8	6,090.1	6,059.8	17.7	16.0	-90.00	166.0	444.9	165.1	137.1	27.96	5.904	
6,200.0	6,159.8	6,190.1	6,159.8	17.9	16.2	-90.00	166.0	444.9	165.1	136.7	28.36	5.821	
6,300.0	6,259.8	6,290.1	6,259.8	18.1	16.4	-90.00	166.0	444.9	165.1	136.3	28.76	5.740	
6,400.0	6,359.8	6,390.1	6,359.8	18.2	16.6	-90.00	166.0	444.9	165.1	135.9	29.16	5.661	
6,500.0	6,459.8	6,490.3	6,460.0	18.4	16.7	-90.45	164.7	444.9	165.1	135.5	29.53	5.591	
6,522.6	6,482.5	6,512.9	6,482.5	18.4	16.8	-91.18	162.6	445.0	165.1	135.5	29.56	5.583	
6,600.0	6,559.8	6,587.9	6,556.2	18.6	16.9	-95.99	148.7	445.3	165.7	136.1	29.58	5.600	
6,700.0	6,659.8	6,677.5	6,640.3	18.7	16.9	75.13	118.5	445.9	171.5	141.8	29.71	5.773	
6,800.0	6,758.1	6,761.7	6,713.7	18.8	17.0	65.42	77.4	446.7	183.2	153.2	30.03	6.102	
6,900.0	6,851.2	6,842.5	6,777.0	18.9	17.1	57.56	27.3	447.8	197.9	167.9	30.06	6.584	
7,000.0	6,935.8	6,920.7	6,830.2	19.0	17.1	51.51	-29.9	449.0	213.3	183.9	29.45	7.243	
7,100.0	7,008.7	7,000.0	6,874.8	19.1	17.3	46.91	-95.4	450.3	227.7	199.4	28.22	8.067	
7,200.0	7,067.2	7,071.6	6,906.1	19.2	17.5	43.83	-159.8	451.6	239.7	213.1	26.56	9.024	
7,300.0	7,109.2	7,150.0	6,929.8	19.5	17.8	41.66	-234.4	453.2	248.7	223.8	24.90	9.986	
7,400.0	7,133.2	7,218.5	6,941.2	19.9	18.1	40.57	-301.8	454.6	253.9	230.2	23.70	10.715	
7,500.0	7,138.7	7,297.8	6,943.8	20.5	18.7	40.26	-381.0	456.2	255.4	231.8	23.59	10.827	
7,600.0	7,138.3	7,397.8	6,943.4	21.2	19.5	40.25	-481.0	458.3	255.5	230.7	24.80	10.302	
7,700.0	7,138.0	7,497.8	6,942.9	22.1	20.5	40.23	-580.9	460.3	255.6	229.3	26.23	9.742	
7,800.0	7,137.6	7,597.8	6,942.4	23.2	21.7	40.21	-680.9	462.4	255.7	227.8	27.86	9.176	
7,900.0	7,137.3	7,697.8	6,941.9	24.3	22.9	40.19	-780.9	464.4	255.8	226.1	29.65	8.627	
8,000.0	7,136.9	7,797.8	6,941.5	25.6	24.3	40.18	-880.9	466.5	255.8	224.3	31.57	8.105	
8,100.0	7,136.6	7,897.8	6,941.0	27.0	25.7	40.16	-980.9	468.6	255.9	222.3	33.59	7.619	
8,200.0	7,136.2	7,997.8	6,940.5	28.4	27.2	40.14	-1,080.8	470.6	256.0	220.3	35.71	7.169	
8,300.0	7,135.9	8,097.8	6,940.1	29.8	28.7	40.12	-1,180.8	472.7	256.1	218.2	37.90	6.757	
8,400.0	7,135.5	8,197.8	6,939.6	31.4	30.3	40.11	-1,280.8	474.8	256.2	216.1	40.16	6.380	
8,500.0	7,135.2	8,297.8	6,939.1	32.9	31.9	40.09	-1,380.8	476.8	256.3	213.8	42.47	6.036	
8,600.0	7,134.9	8,397.8	6,938.6	34.5	33.5	40.07	-1,480.7	478.9	256.4	211.6	44.82	5.721	
8,700.0	7,134.5	8,497.8	6,938.2	36.2	35.2	40.05	-1,580.7	480.9	256.5	209.3	47.21	5.434	
8,800.0	7,134.2	8,597.8	6,937.7	37.8	36.9	40.04	-1,680.7	483.0	256.6	207.0	49.62	5.171	
8,900.0	7,133.8	8,697.8	6,937.2	39.5	38.6	40.02	-1,780.7	485.1	256.7	204.6	52.07	4.930	
9,000.0	7,133.5	8,797.8	6,936.8	41.2	40.4	40.00	-1,880.7	487.1	256.8	202.2	54.54	4.708	
9,100.0	7,133.1	8,897.8	6,936.3	42.9	42.1	39.98	-1,980.6	489.2	256.9	199.9	57.03	4.504	
9,200.0	7,132.8	8,997.8	6,935.8	44.7	43.9	39.97	-2,080.6	491.2	257.0	197.4	59.54	4.316	
9,300.0	7,132.4	9,097.8	6,935.3	46.4	45.7	39.95	-2,180.6	493.3	257.1	195.0	62.06	4.142	
9,400.0	7,132.1	9,197.8	6,934.9	48.2	47.5	39.93	-2,280.6	495.4	257.2	192.6	64.59	3.981	
9,500.0	7,131.7	9,297.8	6,934.4	50.0	49.3	39.91	-2,380.5	497.4	257.3	190.1	67.14	3.832	
9,600.0	7,131.4	9,397.8	6,933.9	51.8	51.1	39.90	-2,480.5	499.5	257.3	187.7	69.69	3.693	
9,700.0	7,131.0	9,497.8	6,933.5	53.6	52.9	39.88	-2,580.5	501.6	257.4	185.2	72.26	3.563	
9,800.0	7,130.7	9,597.8	6,933.0	55.4	54.7	39.86	-2,680.5	503.6	257.5	182.7	74.83	3.442	
9,900.0	7,130.3	9,697.8	6,932.5	57.2	56.6	39.85	-2,780.4	505.7	257.6	180.2	77.41	3.328	
10,000.0	7,130.0	9,797.8	6,932.0	59.0	58.4	39.83	-2,880.4	507.7	257.7	177.7	79.99	3.222	
10,100.0	7,129.6	9,897.8	6,931.6	60.8	60.3	39.81	-2,980.4	509.8	257.8	175.2	82.58	3.122	
10,200.0	7,129.3	9,997.8	6,931.1	62.7	62.1	39.79	-3,080.4	511.9	257.9	172.7	85.18	3.028	

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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

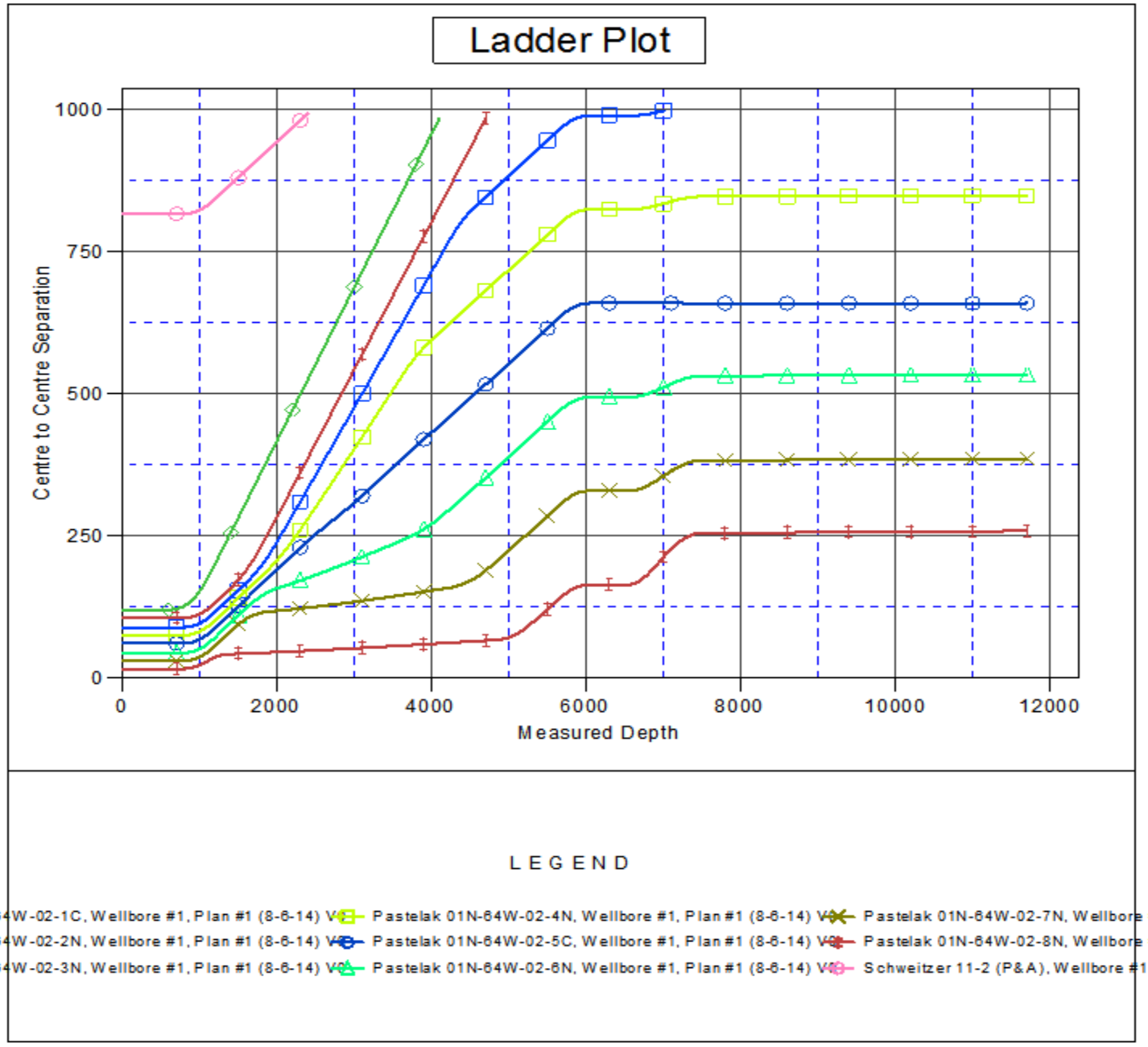
Offset Well Error: 0.0 ft

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
10,300.0	7,128.9	10,097.8	6,930.6	64.5	64.0	39.78	-3,180.4	513.9	258.0	170.2	87.77	2.939	
10,400.0	7,128.6	10,197.8	6,930.2	66.3	65.8	39.76	-3,280.3	516.0	258.1	167.7	90.38	2.856	
10,500.0	7,128.2	10,297.8	6,929.7	68.2	67.7	39.74	-3,380.3	518.1	258.2	165.2	92.98	2.777	
10,600.0	7,127.9	10,397.8	6,929.2	70.0	69.5	39.72	-3,480.3	520.1	258.3	162.7	95.59	2.702	
10,700.0	7,127.5	10,497.8	6,928.7	71.9	71.4	39.71	-3,580.3	522.2	258.4	160.2	98.20	2.631	
10,800.0	7,127.2	10,597.8	6,928.3	73.8	73.3	39.69	-3,680.2	524.2	258.5	157.7	100.81	2.564	
10,900.0	7,126.8	10,697.8	6,927.8	75.6	75.2	39.67	-3,780.2	526.3	258.6	155.1	103.43	2.500	
11,000.0	7,126.5	10,797.8	6,927.3	77.5	77.0	39.66	-3,880.2	528.4	258.7	152.6	106.05	2.439	
11,100.0	7,126.1	10,897.8	6,926.9	79.4	78.9	39.64	-3,980.2	530.4	258.8	150.1	108.67	2.381	
11,200.0	7,125.8	10,997.8	6,926.4	81.2	80.8	39.62	-4,080.2	532.5	258.9	147.6	111.28	2.326	
11,300.0	7,125.4	11,097.8	6,925.9	83.1	82.7	39.60	-4,180.1	534.6	259.0	145.0	113.91	2.273	
11,400.0	7,125.1	11,197.8	6,925.4	85.0	84.6	39.59	-4,280.1	536.6	259.0	142.5	116.53	2.223	
11,500.0	7,124.7	11,297.8	6,925.0	86.9	86.4	39.57	-4,380.1	538.7	259.1	140.0	119.15	2.175	
11,600.0	7,124.4	11,397.8	6,924.5	88.7	88.3	39.55	-4,480.1	540.7	259.2	137.5	121.77	2.129	
11,700.0	7,124.0	11,497.8	6,924.0	90.6	90.2	39.54	-4,580.0	542.8	259.3	134.9	124.40	2.085	
11,700.2	7,124.0	11,498.0	6,924.0	90.6	90.2	39.54	-4,580.3	542.8	259.3	134.9	124.40	2.085	
11,708.8	7,124.0	11,504.1	6,924.0	90.8	90.3	39.53	-4,586.4	542.9	259.4	134.8	124.59	2.082	SF

Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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 @ 5024.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Pastelak 01N-64W-02-9C
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.63°



Company:	Verdad Oil & Gas Corporation	**Local Co-ordinate Reference:**	Well Pastelak 01N-64W-02-9C
Project:	SEC.2-T1N-R64W	**TVD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	**MD Reference:**	WELL @ 5024.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pastelak 01N-64W-02-9C	**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 @ 5024.0ft (Original Well Elev) Coordinates are relative to: Pastelak 01N-64W-02-9C
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°