

Verdad Oil & Gas Corporation

Well Name: **Pastelak 01N-64W-02-8N**

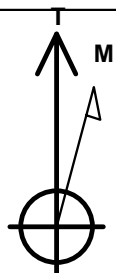
Surface Location: Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 5011.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1276066.68	3273371.90	40.087060	-104.522940	

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	-903.5	Polygon
460' Setback SHL	-2.0	-244.9	-903.5	Polygon
Sectionline	-2.0	215.1	-903.5	Polygon
SHL 215'FNL & 1361'FWL	1.0	0.1	0.0	Point
BHL 460'FSL & 1815'FWL	6924.0	-4586.4	559.7	Point



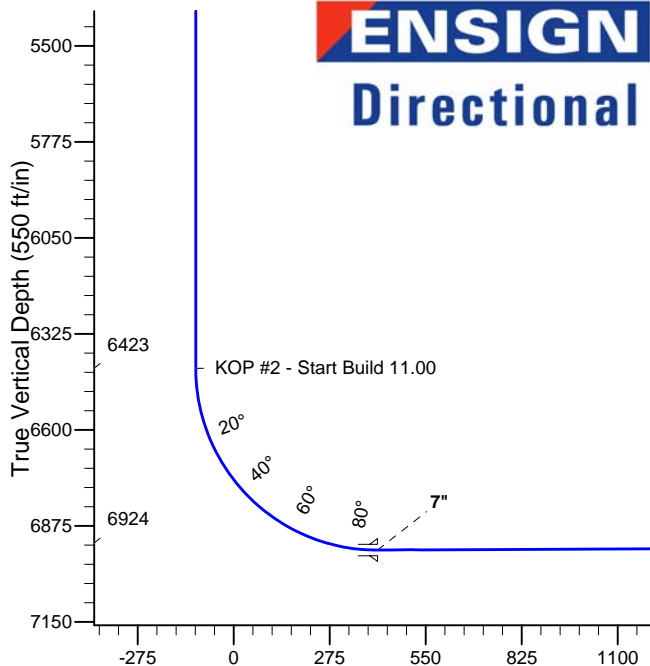
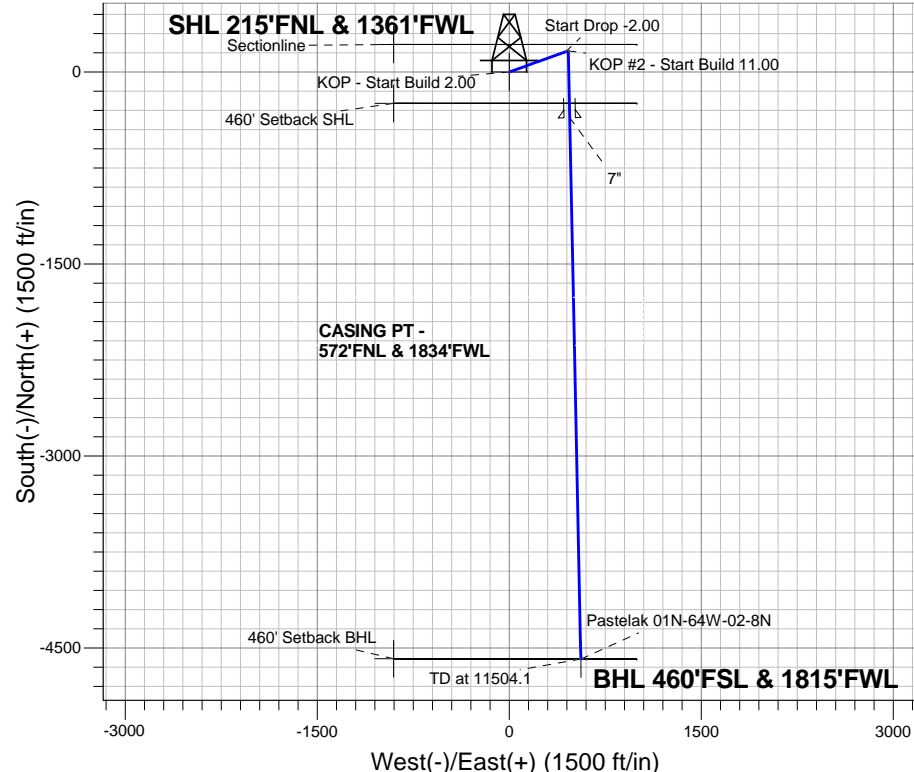
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
 Pastelak 01N-64W-02-8N
 Plan #1 (8-6-14)

Azimuths to True North
 Magnetic North: 8.28°

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

ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP - Start Build 2.00
4836.4	4865.7	Start Drop -2.00
6423.1	6453.3	KOP #2 - Start Build 11.00
6924.0	11504.1	TD at 11504.1



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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1364.5	7.29	70.22	1363.6	7.8	21.8	2.00	70.22	-5.1	
4	4865.7	7.29	70.22	4836.4	158.2	439.9	0.00	0.00	-103.7	
5	5230.3	0.00	0.00	5200.0	166.0	461.7	2.00	180.00	-108.8	
6	6453.3	0.00	0.00	6423.1	166.0	461.7	0.00	0.00	-108.8	
7	7274.0	90.27	178.82	6943.9	-357.2	472.5	11.00	178.82	411.8	
8	11504.1	90.27	178.82	6924.0	-4586.4	559.7	0.00	0.00	4620.4	BHL 460'FSL & 1815'FWL

BHL 460'FSL & 1815'FWL

TD at 11504.1

Vertical Section at 173.04° (550 ft/in)



Verdad Oil & Gas Corporation

SEC.2-T1N-R64W

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

Pastelak 01N-64W-02-8N

Wellbore #1

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

Standard Planning Report

08 August, 2014

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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:	1,276,065.60ft	Latitude:	40.087060
From:	Lat/Long	Easting:	3,273,268.38ft	Longitude:	-104.523310
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.63 °

Well	Pastelak 01N-64W-02-8N					
Well Position	+N-S	-0.1 ft	Northing:	1,276,066.68 ft	Latitude:	40.087060
	+E-W	103.5 ft	Easting:	3,273,371.90 ft	Longitude:	-104.522940
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	173.04

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,364.5	7.29	70.22	1,363.6	7.8	21.8	2.00	2.00	0.00	70.22	
4,865.7	7.29	70.22	4,836.4	158.2	439.9	0.00	0.00	0.00	0.00	
5,230.3	0.00	0.00	5,200.0	166.0	461.7	2.00	-2.00	0.00	180.00	
6,453.3	0.00	0.00	6,423.1	166.0	461.7	0.00	0.00	0.00	0.00	
7,274.0	90.27	178.82	6,943.9	-357.2	472.5	11.00	11.00	0.00	178.82	
11,504.1	90.27	178.82	6,924.0	-4,586.4	559.7	0.00	0.00	0.00	0.00	BHL 460'FSL & 181

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
1,100.0	2.00	70.22	1,100.0	0.6	1.6	-0.4	2.00	2.00	0.00
1,200.0	4.00	70.22	1,199.8	2.4	6.6	-1.5	2.00	2.00	0.00
1,300.0	6.00	70.22	1,299.5	5.3	14.8	-3.5	2.00	2.00	0.00
1,364.5	7.29	70.22	1,363.6	7.8	21.8	-5.1	2.00	2.00	0.00
1,400.0	7.29	70.22	1,398.7	9.4	26.0	-6.1	0.00	0.00	0.00
1,500.0	7.29	70.22	1,497.9	13.7	38.0	-9.0	0.00	0.00	0.00
1,600.0	7.29	70.22	1,597.1	17.9	49.9	-11.8	0.00	0.00	0.00
1,700.0	7.29	70.22	1,696.3	22.2	61.9	-14.6	0.00	0.00	0.00
1,800.0	7.29	70.22	1,795.5	26.5	73.8	-17.4	0.00	0.00	0.00
1,900.0	7.29	70.22	1,894.7	30.8	85.7	-20.2	0.00	0.00	0.00
2,000.0	7.29	70.22	1,993.9	35.1	97.7	-23.0	0.00	0.00	0.00
2,100.0	7.29	70.22	2,093.1	39.4	109.6	-25.8	0.00	0.00	0.00
2,200.0	7.29	70.22	2,192.3	43.7	121.6	-28.7	0.00	0.00	0.00
2,300.0	7.29	70.22	2,291.5	48.0	133.5	-31.5	0.00	0.00	0.00
2,400.0	7.29	70.22	2,390.6	52.3	145.4	-34.3	0.00	0.00	0.00
2,500.0	7.29	70.22	2,489.8	56.6	157.4	-37.1	0.00	0.00	0.00
2,600.0	7.29	70.22	2,589.0	60.9	169.3	-39.9	0.00	0.00	0.00
2,700.0	7.29	70.22	2,688.2	65.2	181.3	-42.7	0.00	0.00	0.00
2,800.0	7.29	70.22	2,787.4	69.5	193.2	-45.6	0.00	0.00	0.00
2,900.0	7.29	70.22	2,886.6	73.8	205.2	-48.4	0.00	0.00	0.00
3,000.0	7.29	70.22	2,985.8	78.1	217.1	-51.2	0.00	0.00	0.00
3,100.0	7.29	70.22	3,085.0	82.4	229.0	-54.0	0.00	0.00	0.00
3,200.0	7.29	70.22	3,184.2	86.6	241.0	-56.8	0.00	0.00	0.00
3,300.0	7.29	70.22	3,283.4	90.9	252.9	-59.6	0.00	0.00	0.00
3,400.0	7.29	70.22	3,382.6	95.2	264.9	-62.4	0.00	0.00	0.00
3,500.0	7.29	70.22	3,481.8	99.5	276.8	-65.3	0.00	0.00	0.00
3,600.0	7.29	70.22	3,580.9	103.8	288.8	-68.1	0.00	0.00	0.00
3,700.0	7.29	70.22	3,680.1	108.1	300.7	-70.9	0.00	0.00	0.00
3,800.0	7.29	70.22	3,779.3	112.4	312.6	-73.7	0.00	0.00	0.00
3,900.0	7.29	70.22	3,878.5	116.7	324.6	-76.5	0.00	0.00	0.00
4,000.0	7.29	70.22	3,977.7	121.0	336.5	-79.3	0.00	0.00	0.00
4,100.0	7.29	70.22	4,076.9	125.3	348.5	-82.2	0.00	0.00	0.00
4,200.0	7.29	70.22	4,176.1	129.6	360.4	-85.0	0.00	0.00	0.00
4,300.0	7.29	70.22	4,275.3	133.9	372.3	-87.8	0.00	0.00	0.00
4,400.0	7.29	70.22	4,374.5	138.2	384.3	-90.6	0.00	0.00	0.00
4,500.0	7.29	70.22	4,473.7	142.5	396.2	-93.4	0.00	0.00	0.00
4,600.0	7.29	70.22	4,572.9	146.8	408.2	-96.2	0.00	0.00	0.00
4,700.0	7.29	70.22	4,672.1	151.0	420.1	-99.0	0.00	0.00	0.00
4,800.0	7.29	70.22	4,771.2	155.3	432.1	-101.9	0.00	0.00	0.00
4,865.7	7.29	70.22	4,836.4	158.2	439.9	-103.7	0.00	0.00	0.00
Start Drop -2.00									
4,900.0	6.61	70.22	4,870.5	159.6	443.8	-104.6	2.00	-2.00	0.00

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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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-02-8N	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)	
5,000.0	4.61	70.22	4,970.0	162.9	453.0	-106.8	2.00	-2.00	0.00	
5,100.0	2.61	70.22	5,069.8	165.0	458.9	-108.2	2.00	-2.00	0.00	
5,200.0	0.61	70.22	5,169.7	165.9	461.5	-108.8	2.00	-2.00	0.00	
5,230.3	0.00	0.00	5,200.0	166.0	461.7	-108.8	2.00	-2.00	0.00	
5,300.0	0.00	0.00	5,269.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,369.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,469.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,569.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,669.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,769.7	166.0	461.7	-108.8	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,869.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,969.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,069.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,169.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,269.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,369.7	166.0	461.7	-108.8	0.00	0.00	0.00	
6,453.3	0.00	0.00	6,423.0	166.0	461.7	-108.8	0.00	0.00	0.00	
KOP #2 - Start Build 11.00										
6,500.0	5.13	178.82	6,469.7	163.9	461.7	-106.8	10.99	10.99	0.00	
6,600.0	16.13	178.82	6,567.8	145.5	462.1	-88.4	11.00	11.00	0.00	
6,700.0	27.13	178.82	6,660.6	108.7	462.9	-51.8	11.00	11.00	0.00	
6,800.0	38.13	178.82	6,744.7	54.9	464.0	1.8	11.00	11.00	0.00	
6,900.0	49.13	178.82	6,817.0	-14.0	465.4	70.3	11.00	11.00	0.00	
7,000.0	60.13	178.82	6,874.8	-95.4	467.1	151.3	11.00	11.00	0.00	
7,100.0	71.13	178.82	6,916.0	-186.4	469.0	241.8	11.00	11.00	0.00	
7,200.0	82.13	178.82	6,939.0	-283.5	471.0	338.4	11.00	11.00	0.00	
7,274.0	90.27	178.82	6,943.9	-357.2	472.5	411.8	11.00	11.00	0.00	
7"										
7,300.0	90.27	178.82	6,943.8	-383.2	473.0	437.7	0.00	0.00	0.00	
7,400.0	90.27	178.82	6,943.3	-483.2	475.1	537.2	0.00	0.00	0.00	
7,500.0	90.27	178.82	6,942.9	-583.2	477.2	636.7	0.00	0.00	0.00	
7,600.0	90.27	178.82	6,942.4	-683.2	479.2	736.2	0.00	0.00	0.00	
7,700.0	90.27	178.82	6,941.9	-783.1	481.3	835.7	0.00	0.00	0.00	
7,800.0	90.27	178.82	6,941.5	-883.1	483.3	935.2	0.00	0.00	0.00	
7,900.0	90.27	178.82	6,941.0	-983.1	485.4	1,034.7	0.00	0.00	0.00	
8,000.0	90.27	178.82	6,940.5	-1,083.1	487.5	1,134.1	0.00	0.00	0.00	
8,100.0	90.27	178.82	6,940.0	-1,183.1	489.5	1,233.6	0.00	0.00	0.00	
8,200.0	90.27	178.82	6,939.6	-1,283.0	491.6	1,333.1	0.00	0.00	0.00	
8,300.0	90.27	178.82	6,939.1	-1,383.0	493.6	1,432.6	0.00	0.00	0.00	
8,400.0	90.27	178.82	6,938.6	-1,483.0	495.7	1,532.1	0.00	0.00	0.00	
8,500.0	90.27	178.82	6,938.2	-1,583.0	497.8	1,631.6	0.00	0.00	0.00	
8,600.0	90.27	178.82	6,937.7	-1,682.9	499.8	1,731.1	0.00	0.00	0.00	
8,700.0	90.27	178.82	6,937.2	-1,782.9	501.9	1,830.6	0.00	0.00	0.00	
8,800.0	90.27	178.82	6,936.7	-1,882.9	504.0	1,930.1	0.00	0.00	0.00	
8,900.0	90.27	178.82	6,936.3	-1,982.9	506.0	2,029.6	0.00	0.00	0.00	
9,000.0	90.27	178.82	6,935.8	-2,082.9	508.1	2,129.1	0.00	0.00	0.00	
9,100.0	90.27	178.82	6,935.3	-2,182.8	510.1	2,228.6	0.00	0.00	0.00	
9,200.0	90.27	178.82	6,934.9	-2,282.8	512.2	2,328.0	0.00	0.00	0.00	
9,300.0	90.27	178.82	6,934.4	-2,382.8	514.3	2,427.5	0.00	0.00	0.00	
9,400.0	90.27	178.82	6,933.9	-2,482.8	516.3	2,527.0	0.00	0.00	0.00	
9,500.0	90.27	178.82	6,933.4	-2,582.7	518.4	2,626.5	0.00	0.00	0.00	
9,600.0	90.27	178.82	6,933.0	-2,682.7	520.5	2,726.0	0.00	0.00	0.00	
9,700.0	90.27	178.82	6,932.5	-2,782.7	522.5	2,825.5	0.00	0.00	0.00	
9,800.0	90.27	178.82	6,932.0	-2,882.7	524.6	2,925.0	0.00	0.00	0.00	

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-6-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,900.0	90.27	178.82	6,931.6	-2,982.6	526.6	3,024.5	0.00	0.00	0.00
10,000.0	90.27	178.82	6,931.1	-3,082.6	528.7	3,124.0	0.00	0.00	0.00
10,100.0	90.27	178.82	6,930.6	-3,182.6	530.8	3,223.5	0.00	0.00	0.00
10,200.0	90.27	178.82	6,930.1	-3,282.6	532.8	3,323.0	0.00	0.00	0.00
10,300.0	90.27	178.82	6,929.7	-3,382.6	534.9	3,422.4	0.00	0.00	0.00
10,400.0	90.27	178.82	6,929.2	-3,482.5	537.0	3,521.9	0.00	0.00	0.00
10,500.0	90.27	178.82	6,928.7	-3,582.5	539.0	3,621.4	0.00	0.00	0.00
10,600.0	90.27	178.82	6,928.3	-3,682.5	541.1	3,720.9	0.00	0.00	0.00
10,700.0	90.27	178.82	6,927.8	-3,782.5	543.1	3,820.4	0.00	0.00	0.00
10,800.0	90.27	178.82	6,927.3	-3,882.4	545.2	3,919.9	0.00	0.00	0.00
10,900.0	90.27	178.82	6,926.8	-3,982.4	547.3	4,019.4	0.00	0.00	0.00
11,000.0	90.27	178.82	6,926.4	-4,082.4	549.3	4,118.9	0.00	0.00	0.00
11,100.0	90.27	178.82	6,925.9	-4,182.4	551.4	4,218.4	0.00	0.00	0.00
11,200.0	90.27	178.82	6,925.4	-4,282.4	553.4	4,317.9	0.00	0.00	0.00
11,300.0	90.27	178.82	6,925.0	-4,382.3	555.5	4,417.4	0.00	0.00	0.00
11,400.0	90.27	178.82	6,924.5	-4,482.3	557.6	4,516.8	0.00	0.00	0.00
11,500.0	90.27	178.82	6,924.0	-4,582.3	559.6	4,616.3	0.00	0.00	0.00
11,504.1	90.27	178.82	6,924.0	-4,586.4	559.7	4,620.4	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,274.0	6,943.9	7"	7	7-1/2

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,000.0	1,000.0	0.0	0.0	KOP - Start Build 2.00
4,865.7	4,836.4	7.8	21.8	Start Drop -2.00
6,453.3	6,423.1	158.2	439.9	KOP #2 - Start Build 11.00
11,504.1	6,924.0	166.0	461.7	TD at 11504.1



Directional

Verdad Oil & Gas Corporation

SEC.2-T1N-R64W

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

Pastelak 01N-64W-02-8N

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-02-8N
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-02-8N	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	11,504.1	Plan #1 (8-6-14) (Wellbore #1)	MWD	MWD - Standard

Site Name	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	1,000.0	1,002.0	803.3	781.1	36.223	CC
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	1,100.0	1,102.0	805.0	780.6	33.020	ES
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	2,700.0	2,690.2	991.6	932.2	16.691	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	103.5	101.2	44.534	CC
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14)	600.0	602.9	103.5	101.1	41.768	ES
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	987.1	130.0	125.8	30.523	SF
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,002.0	89.5	85.3	20.944	CC, ES
Pastelak 01N-64W-02-2N - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,502.3	990.7	811.0	5.513	SF
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,002.0	72.7	68.5	17.017	CC, ES
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,489.3	825.6	645.9	4.594	SF
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,002.0	58.8	54.5	13.745	CC, ES
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,480.5	660.5	480.7	3.674	SF
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,001.0	44.8	40.5	10.478	CC, ES
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,675.1	534.2	364.7	3.152	SF
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,001.0	28.0	23.7	6.549	CC, ES
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,486.7	330.2	150.3	1.835	SF
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	1,001.0	14.0	9.7	3.274	CC
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,494.4	165.1	-14.5	0.919	Level 1, ES, SF
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14)	800.0	800.0	16.8	13.4	4.980	CC, ES
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14)	11,504.1	11,706.1	259.3	134.8	2.082	SF

Offset Design													Offset Site Error:	0.0 ft		
Survey Program: 7690-UNKNOWN													Offset Well Error:	0.0 ft		
Reference													Distance		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	2.0	2.0	0.0	0.0	-123.28	-440.7	-671.5	803.3	803.2	0.04	N/A				
100.0	100.0	102.0	102.0	0.1	2.0	-123.28	-440.7	-671.5	803.3	801.1	2.15	373.159				
200.0	200.0	202.0	202.0	0.3	4.0	-123.28	-440.7	-671.5	803.3	798.9	4.38	183.503				
300.0	300.0	302.0	302.0	0.6	6.0	-123.28	-440.7	-671.5	803.3	796.7	6.60	121.666				
400.0	400.0	402.0	402.0	0.8	8.0	-123.28	-440.7	-671.5	803.3	794.4	8.83	91.001				
500.0	500.0	502.0	502.0	1.0	10.0	-123.28	-440.7	-671.5	803.3	792.2	11.05	72.682				

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft		
Survey Program: 7690-UNKNOWN													Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1		Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
600.0	600.0	602.0	602.0	1.2	12.0	-123.28	-440.7	-671.5	803.3	790.0	13.28	60.502				
700.0	700.0	702.0	702.0	1.5	14.0	-123.28	-440.7	-671.5	803.3	787.8	15.50	51.819				
800.0	800.0	802.0	802.0	1.7	16.0	-123.28	-440.7	-671.5	803.3	785.5	17.73	45.315				
900.0	900.0	902.0	902.0	1.9	18.0	-123.28	-440.7	-671.5	803.3	783.3	19.95	40.262				
1,000.0	1,000.0	1,002.0	1,002.0	2.1	20.0	-123.28	-440.7	-671.5	803.3	781.1	22.18	36.223 CC				
1,100.0	1,100.0	1,102.0	1,102.0	2.4	22.0	166.52	-440.7	-671.5	805.0	780.6	24.38	33.020 ES				
1,200.0	1,199.8	1,201.8	1,201.8	2.6	24.0	166.58	-440.7	-671.5	810.0	783.5	26.54	30.523				
1,300.0	1,299.5	1,301.5	1,301.5	2.8	26.0	166.69	-440.7	-671.5	818.5	789.9	28.66	28.560				
1,400.0	1,398.7	1,400.7	1,400.7	3.0	28.0	166.84	-440.7	-671.5	830.2	799.4	30.78	26.972				
1,500.0	1,497.9	1,499.9	1,499.9	3.3	30.0	167.04	-440.7	-671.5	842.5	809.6	32.97	25.554				
1,600.0	1,597.1	1,599.1	1,599.1	3.6	32.0	167.23	-440.7	-671.5	854.9	819.8	35.17	24.312				
1,700.0	1,696.3	1,698.3	1,698.3	3.8	34.0	167.41	-440.7	-671.5	867.3	829.9	37.36	23.213				
1,800.0	1,795.5	1,797.5	1,797.5	4.1	36.0	167.59	-440.7	-671.5	879.7	840.1	39.56	22.236				
1,900.0	1,894.7	1,896.7	1,896.7	4.4	37.9	167.77	-440.7	-671.5	892.1	850.3	41.76	21.361				
2,000.0	1,993.9	1,995.9	1,995.9	4.7	39.9	167.94	-440.7	-671.5	904.5	860.5	43.97	20.573				
2,100.0	2,093.1	2,095.1	2,095.1	5.0	41.9	168.11	-440.7	-671.5	916.9	870.8	46.17	19.860				
2,200.0	2,192.3	2,194.3	2,194.3	5.3	43.9	168.27	-440.7	-671.5	929.4	881.0	48.37	19.212				
2,300.0	2,291.5	2,293.5	2,293.5	5.6	45.9	168.42	-440.7	-671.5	941.8	891.2	50.58	18.620				
2,400.0	2,390.6	2,392.6	2,392.6	5.9	47.9	168.58	-440.7	-671.5	954.2	901.4	52.79	18.077				
2,500.0	2,489.8	2,491.8	2,491.8	6.2	49.8	168.73	-440.7	-671.5	966.7	911.7	54.99	17.578				
2,600.0	2,589.0	2,591.0	2,591.0	6.6	51.8	168.87	-440.7	-671.5	979.1	921.9	57.20	17.118				
2,700.0	2,688.2	2,690.2	2,690.2	6.9	53.8	169.01	-440.7	-671.5	991.6	932.2	59.41	16.691 SF				

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	3.0	3.0	0.0	0.0	-89.97	0.1	-103.5	103.5	103.5	0.00	N/A			
100.0	100.0	103.0	103.0	0.1	0.1	-89.97	0.1	-103.5	103.5	103.3	0.23	447.191			
200.0	200.0	203.0	203.0	0.3	0.3	-89.97	0.1	-103.5	103.5	102.8	0.68	152.015			
300.0	300.0	303.0	303.0	0.6	0.6	-89.97	0.1	-103.5	103.5	102.4	1.13	91.572			
400.0	400.0	403.0	403.0	0.8	0.8	-89.97	0.1	-103.5	103.5	101.9	1.58	65.520			
500.0	500.0	503.0	503.0	1.0	1.0	-89.97	0.1	-103.5	103.5	101.5	2.03	51.009			
565.6	565.6	568.6	568.6	1.2	1.2	-89.97	0.1	-103.5	103.5	101.2	2.32	44.534 CC			
600.0	600.0	602.9	602.9	1.2	1.2	-89.97	0.1	-103.5	103.5	101.1	2.48	41.768 ES			
700.0	700.0	700.0	700.0	1.5	1.5	-89.72	0.5	-105.2	105.3	102.3	2.91	36.131			
800.0	800.0	795.9	795.7	1.7	1.7	-89.05	1.8	-110.0	110.2	106.9	3.34	32.963			
900.0	900.0	891.8	891.3	1.9	1.9	-88.06	4.0	-117.8	118.5	114.7	3.79	31.254			
1,000.0	1,000.0	987.1	985.9	2.1	2.1	-86.90	7.0	-128.7	130.0	125.8	4.26	30.523 SF			
1,100.0	1,100.0	1,083.3	1,081.1	2.4	2.4	-156.06	10.7	-142.4	146.1	141.4	4.67	31.300			
1,200.0	1,199.8	1,181.3	1,178.0	2.6	2.7	-155.60	14.7	-156.9	165.8	160.7	5.10	32.515			
1,300.0	1,299.5	1,278.7	1,274.2	2.8	3.0	-155.63	18.7	-171.2	188.6	183.1	5.53	34.116			
1,400.0	1,398.7	1,375.3	1,369.7	3.0	3.3	-156.03	22.6	-185.5	214.3	208.4	5.96	35.960			
1,500.0	1,497.9	1,471.8	1,465.0	3.3	3.7	-156.53	26.5	-199.7	240.7	234.3	6.40	37.588			
1,600.0	1,597.1	1,568.2	1,560.3	3.6	4.0	-156.93	30.4	-213.9	267.1	260.2	6.86	38.960			
1,700.0	1,696.3	1,664.6	1,655.6	3.8	4.3	-157.25	34.3	-228.1	293.5	286.2	7.31	40.147			
1,800.0	1,795.5	1,761.1	1,750.9	4.1	4.7	-157.53	38.2	-242.3	319.9	312.1	7.77	41.168			
1,900.0	1,894.7	1,857.5	1,846.2	4.4	5.0	-157.76	42.1	-256.5	346.3	338.1	8.23	42.056			
2,000.0	1,993.9	1,954.0	1,941.5	4.7	5.4	-157.96	46.0	-270.7	372.7	364.0	8.70	42.835			
2,100.0	2,093.1	2,050.4	2,036.8	5.0	5.7	-158.13	49.9	-284.9	399.1	390.0	9.17	43.523			
2,200.0	2,192.3	2,146.8	2,132.1	5.3	6.0	-158.28	53.8	-299.1	425.5	415.9	9.64	44.134			
2,300.0	2,291.5	2,243.3	2,227.4	5.6	6.4	-158.42	57.7	-313.4	452.0	441.9	10.12	44.679			
2,400.0	2,390.6	2,339.7	2,322.7	5.9	6.7	-158.54	61.6	-327.6	478.4	467.8	10.59	45.169			
2,500.0	2,489.8	2,436.2	2,418.0	6.2	7.1	-158.64	65.5	-341.8	504.8	493.8	11.07	45.611			
2,600.0	2,589.0	2,532.6	2,513.3	6.6	7.4	-158.74	69.5	-356.0	531.2	519.7	11.55	46.011			
2,700.0	2,688.2	2,629.0	2,608.7	6.9	7.8	-158.82	73.4	-370.2	557.7	545.7	12.03	46.375			
2,800.0	2,787.4	2,725.5	2,704.0	7.2	8.1	-158.90	77.3	-384.4	584.1	571.6	12.51	46.708			
2,900.0	2,886.6	2,821.9	2,799.3	7.5	8.5	-158.98	81.2	-398.6	610.5	597.6	12.99	47.013			
3,000.0	2,985.8	2,918.4	2,894.6	7.8	8.8	-159.04	85.1	-412.8	637.0	623.5	13.47	47.293			
3,100.0	3,085.0	3,014.8	2,989.9	8.1	9.2	-159.10	89.0	-427.0	663.4	649.5	13.95	47.552			
3,200.0	3,184.2	3,111.3	3,085.2	8.5	9.5	-159.16	92.9	-441.3	689.8	675.4	14.43	47.791			
3,300.0	3,283.4	3,207.7	3,180.5	8.8	9.9	-159.21	96.8	-455.5	716.3	701.4	14.92	48.013			
3,400.0	3,382.6	3,304.1	3,275.8	9.1	10.2	-159.26	100.7	-469.7	742.7	727.3	15.40	48.219			
3,500.0	3,481.8	3,400.6	3,371.1	9.4	10.6	-159.30	104.6	-483.9	769.2	753.3	15.89	48.411			
3,600.0	3,580.9	3,497.0	3,466.4	9.7	10.9	-159.35	108.5	-498.1	795.6	779.2	16.37	48.590			
3,700.0	3,680.1	3,593.5	3,561.7	10.1	11.3	-159.39	112.4	-512.3	822.0	805.2	16.86	48.758			
3,800.0	3,779.3	3,689.9	3,657.0	10.4	11.6	-159.42	116.3	-526.5	848.5	831.1	17.35	48.915			
3,900.0	3,878.5	3,786.3	3,752.4	10.7	12.0	-159.46	120.2	-540.7	874.9	857.1	17.83	49.063			
4,000.0	3,977.7	3,882.8	3,847.7	11.0	12.3	-159.49	124.1	-554.9	901.3	883.0	18.32	49.202			
4,100.0	4,076.9	3,979.2	3,943.0	11.3	12.7	-159.52	128.0	-569.2	927.8	909.0	18.81	49.333			
4,200.0	4,176.1	4,075.7	4,038.3	11.7	13.0	-159.55	132.0	-583.4	954.2	934.9	19.29	49.457			
4,300.0	4,275.3	4,172.1	4,133.6	12.0	13.4	-159.58	135.9	-597.6	980.7	960.9	19.78	49.573			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	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			
900.0	900.0	902.0	902.0	1.9	1.9	-89.98	0.0	-89.5	89.5	85.7	3.83	23.406			
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-89.98	0.0	-89.5	89.5	85.3	4.28	20.944 CC, ES			
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-160.56	0.0	-89.5	91.2	86.5	4.71	19.341			
1,200.0	1,199.8	1,201.8	1,201.8	2.6	2.6	-161.57	0.0	-89.5	96.1	91.0	5.14	18.690			
1,300.0	1,299.5	1,301.5	1,301.5	2.8	2.8	-163.03	0.0	-89.5	104.4	98.9	5.57	18.747			
1,400.0	1,398.7	1,400.0	1,400.0	3.0	3.0	-164.71	0.0	-89.5	115.9	109.9	6.00	19.329			
1,500.0	1,497.9	1,496.0	1,496.0	3.3	3.2	-165.84	0.6	-91.0	129.7	123.3	6.43	20.190			
1,600.0	1,597.1	1,590.5	1,590.4	3.6	3.4	-166.18	2.2	-95.5	146.5	139.7	6.85	21.386			
1,700.0	1,696.3	1,684.0	1,683.5	3.8	3.7	-165.97	4.9	-102.7	166.2	158.9	7.28	22.830			
1,800.0	1,795.5	1,776.3	1,775.2	4.1	3.9	-165.39	8.6	-112.7	188.7	181.0	7.71	24.473			
1,900.0	1,894.7	1,870.5	1,868.4	4.4	4.1	-164.61	13.2	-125.3	213.6	205.5	8.15	26.207			
2,000.0	1,993.9	1,967.2	1,964.1	4.7	4.4	-163.95	18.1	-138.5	238.9	230.3	8.60	27.793			
2,100.0	2,093.1	2,063.9	2,059.8	5.0	4.6	-163.41	23.0	-151.7	264.2	255.2	9.04	29.210			
2,200.0	2,192.3	2,160.6	2,155.5	5.3	4.9	-162.97	27.9	-164.9	289.5	280.0	9.50	30.480			
2,300.0	2,291.5	2,257.4	2,251.2	5.6	5.2	-162.60	32.8	-178.1	314.9	304.9	9.96	31.620			
2,400.0	2,390.6	2,354.1	2,346.9	5.9	5.5	-162.28	37.6	-191.3	340.2	329.8	10.42	32.653			
2,500.0	2,489.8	2,450.8	2,442.6	6.2	5.8	-162.01	42.5	-204.6	365.6	354.7	10.88	33.589			
2,600.0	2,589.0	2,547.5	2,538.2	6.6	6.1	-161.77	47.4	-217.8	390.9	379.6	11.35	34.441			
2,700.0	2,688.2	2,644.2	2,633.9	6.9	6.4	-161.56	52.3	-231.0	416.3	404.5	11.82	35.219			
2,800.0	2,787.4	2,740.9	2,729.6	7.2	6.7	-161.38	57.2	-244.2	441.7	429.4	12.29	35.933			
2,900.0	2,886.6	2,837.7	2,825.3	7.5	7.0	-161.21	62.1	-257.4	467.0	454.3	12.77	36.588			
3,000.0	2,985.8	2,934.4	2,921.0	7.8	7.4	-161.06	66.9	-270.6	492.4	479.2	13.24	37.192			
3,100.0	3,085.0	3,031.1	3,016.7	8.1	7.7	-160.93	71.8	-283.9	517.8	504.1	13.72	37.751			
3,200.0	3,184.2	3,127.8	3,112.4	8.5	8.0	-160.81	76.7	-297.1	543.2	529.0	14.19	38.268			
3,300.0	3,283.4	3,224.5	3,208.0	8.8	8.3	-160.70	81.6	-310.3	568.6	553.9	14.67	38.749			
3,400.0	3,382.6	3,321.3	3,303.7	9.1	8.6	-160.60	86.5	-323.5	594.0	578.8	15.15	39.197			
3,500.0	3,481.8	3,418.0	3,399.4	9.4	9.0	-160.51	91.4	-336.7	619.4	603.7	15.63	39.615			
3,600.0	3,580.9	3,514.7	3,495.1	9.7	9.3	-160.42	96.2	-350.0	644.8	628.6	16.12	40.005			
3,700.0	3,680.1	3,611.4	3,590.8	10.1	9.6	-160.34	101.1	-363.2	670.2	653.6	16.60	40.371			
3,800.0	3,779.3	3,708.1	3,686.5	10.4	10.0	-160.27	106.0	-376.4	695.5	678.5	17.08	40.715			
3,900.0	3,878.5	3,804.8	3,782.2	10.7	10.3	-160.20	110.9	-389.6	720.9	703.4	17.57	41.038			
4,000.0	3,977.7	3,901.6	3,877.9	11.0	10.6	-160.14	115.8	-402.8	746.3	728.3	18.05	41.342			
4,100.0	4,076.9	3,998.3	3,973.5	11.3	11.0	-160.08	120.7	-416.0	771.7	753.2	18.54	41.629			
4,200.0	4,176.1	4,095.0	4,069.2	11.7	11.3	-160.03	125.5	-429.3	797.1	778.1	19.02	41.900			
4,300.0	4,275.3	4,191.7	4,164.9	12.0	11.6	-159.97	130.4	-442.5	822.5	803.0	19.51	42.156			
4,400.0	4,374.5	4,288.4	4,260.6	12.3	12.0	-159.93	135.3	-455.7	847.9	827.9	20.00	42.399			
4,500.0	4,473.7	4,385.2	4,356.3	12.6	12.3	-159.88	140.2	-468.9	873.3	852.8	20.49	42.629			
4,600.0	4,572.9	4,481.9	4,452.0	13.0	12.6	-159.84	145.1	-482.1	898.7	877.8	20.97	42.848			
4,700.0	4,672.1	4,578.6	4,547.7	13.3	13.0	-159.80	150.0	-495.3	924.1	902.7	21.46	43.056			
4,800.0	4,771.2	4,703.0	4,670.9	13.6	13.3	-159.78	155.8	-511.1	948.6	926.6	22.00	43.126			
4,900.0	4,870.5	4,845.8	4,813.2	13.9	13.7	-159.92	160.2	-523.1	968.7	946.2	22.53	42.991			
5,000.0	4,970.0	4,991.5	4,958.7	14.1	13.9	-160.18	162.2	-528.6	981.6	958.6	23.05	42.590			
5,100.0	5,069.8	5,104.6	5,071.8	14.3	14.1	-160.36	162.3	-528.8	987.8	964.3	23.48	42.071			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,204.5	5,171.7	14.5	14.3	-160.43	162.3	-528.8	990.4	966.5	23.87	41.489			
5,300.0	5,269.7	5,304.5	5,271.7	14.6	14.4	-90.21	162.3	-528.8	990.5	966.3	24.26	40.834			
5,400.0	5,369.7	5,404.5	5,371.7	14.8	14.6	-90.21	162.3	-528.8	990.5	965.9	24.66	40.169			
5,500.0	5,469.7	5,504.5	5,471.7	15.0	14.8	-90.21	162.3	-528.8	990.5	965.5	25.06	39.524			
5,600.0	5,569.7	5,604.5	5,571.7	15.2	15.0	-90.21	162.3	-528.8	990.5	965.1	25.47	38.896			
5,700.0	5,669.7	5,704.5	5,671.7	15.3	15.1	-90.21	162.3	-528.8	990.5	964.7	25.87	38.286			
5,800.0	5,769.7	5,804.5	5,771.7	15.5	15.3	-90.21	162.3	-528.8	990.5	964.3	26.28	37.693			
5,900.0	5,869.7	5,904.5	5,871.7	15.7	15.5	-90.21	162.3	-528.8	990.5	963.9	26.69	37.116			
6,000.0	5,969.7	6,004.5	5,971.7	15.9	15.7	-90.21	162.3	-528.8	990.5	963.4	27.10	36.555			
6,100.0	6,069.7	6,104.5	6,071.7	16.0	15.9	-90.21	162.3	-528.8	990.5	963.0	27.51	36.008			
6,200.0	6,169.7	6,204.5	6,171.7	16.2	16.1	-90.21	162.3	-528.8	990.5	962.6	27.92	35.477			
6,300.0	6,269.7	6,304.5	6,271.7	16.4	16.2	-90.21	162.3	-528.8	990.5	962.2	28.33	34.959			
6,400.0	6,369.7	6,404.5	6,371.7	16.6	16.4	-90.21	162.3	-528.8	990.5	961.8	28.75	34.455			
6,500.0	6,469.7	6,506.0	6,473.2	16.8	16.6	90.97	160.2	-528.8	990.5	961.4	29.13	33.999			
6,600.0	6,567.8	6,609.3	6,574.5	16.9	16.7	90.95	140.7	-528.4	990.5	961.2	29.36	33.735			
6,700.0	6,660.6	6,712.5	6,669.8	17.0	16.8	90.89	101.8	-527.6	990.5	961.0	29.50	33.573			
6,800.0	6,744.7	6,815.3	6,755.4	17.0	16.8	90.79	45.0	-526.4	990.5	960.8	29.65	33.401			
6,900.0	6,817.0	6,917.8	6,827.9	17.1	16.9	90.67	-27.1	-524.9	990.5	960.5	29.94	33.082			
7,000.0	6,874.8	7,019.8	6,884.7	17.3	17.0	90.52	-111.6	-523.2	990.4	960.0	30.48	32.494			
7,100.0	6,916.0	7,121.2	6,923.8	17.6	17.3	90.35	-205.0	-521.3	990.4	959.1	31.37	31.572			
7,200.0	6,939.0	7,222.1	6,944.0	18.0	17.7	90.17	-303.6	-519.2	990.4	957.8	32.64	30.347			
7,300.0	6,943.8	7,322.3	6,946.7	18.7	18.4	90.05	-403.7	-517.2	990.4	956.1	34.26	28.912			
7,400.0	6,943.3	7,422.3	6,946.2	19.5	19.2	90.05	-503.6	-515.1	990.4	954.2	36.19	27.364			
7,500.0	6,942.9	7,522.3	6,945.8	20.5	20.3	90.05	-603.6	-513.0	990.4	952.0	38.42	25.779			
7,600.0	6,942.4	7,622.3	6,945.3	21.7	21.5	90.05	-703.6	-511.0	990.4	949.5	40.89	24.223			
7,700.0	6,941.9	7,722.3	6,944.8	22.9	22.7	90.05	-803.6	-508.9	990.4	946.8	43.56	22.739			
7,800.0	6,941.5	7,822.3	6,944.3	24.3	24.1	90.05	-903.5	-506.9	990.4	944.0	46.39	21.350			
7,900.0	6,941.0	7,922.3	6,943.9	25.7	25.5	90.05	-1,003.5	-504.8	990.4	941.0	49.36	20.064			
8,000.0	6,940.5	8,022.3	6,943.4	27.2	27.0	90.05	-1,103.5	-502.7	990.4	938.0	52.45	18.884			
8,100.0	6,940.0	8,122.3	6,942.9	28.7	28.6	90.05	-1,203.5	-500.7	990.4	934.8	55.63	17.804			
8,200.0	6,939.6	8,222.3	6,942.5	30.3	30.2	90.05	-1,303.5	-498.6	990.4	931.5	58.89	16.818			
8,300.0	6,939.1	8,322.3	6,942.0	31.9	31.8	90.05	-1,403.4	-496.5	990.4	928.2	62.22	15.919			
8,400.0	6,938.6	8,422.3	6,941.5	33.6	33.5	90.05	-1,503.4	-494.5	990.4	924.8	65.60	15.097			
8,500.0	6,938.2	8,522.3	6,941.0	35.2	35.2	90.05	-1,603.4	-492.4	990.4	921.4	69.03	14.346			
8,600.0	6,937.7	8,622.3	6,940.6	36.9	36.9	90.05	-1,703.4	-490.4	990.4	917.9	72.51	13.659			
8,700.0	6,937.2	8,722.3	6,940.1	38.7	38.6	90.05	-1,803.3	-488.3	990.4	914.4	76.02	13.028			
8,800.0	6,936.7	8,822.3	6,939.6	40.4	40.4	90.05	-1,903.3	-486.2	990.4	910.8	79.56	12.448			
8,900.0	6,936.3	8,922.3	6,939.2	42.2	42.1	90.05	-2,003.3	-484.2	990.4	907.3	83.13	11.914			
9,000.0	6,935.8	9,022.3	6,938.7	43.9	43.9	90.05	-2,103.3	-482.1	990.4	903.7	86.72	11.420			
9,100.0	6,935.3	9,122.3	6,938.2	45.7	45.7	90.05	-2,203.3	-480.0	990.4	900.1	90.34	10.963			
9,200.0	6,934.9	9,222.3	6,937.7	47.5	47.5	90.05	-2,303.2	-478.0	990.4	896.4	93.97	10.539			
9,300.0	6,934.4	9,322.3	6,937.3	49.3	49.3	90.05	-2,403.2	-475.9	990.4	892.8	97.62	10.146			
9,400.0	6,933.9	9,422.3	6,936.8	51.1	51.1	90.05	-2,503.2	-473.9	990.4	889.1	101.28	9.779			
9,500.0	6,933.4	9,522.3	6,936.3	53.0	52.9	90.05	-2,603.2	-471.8	990.4	885.4	104.96	9.436			
9,600.0	6,933.0	9,622.3	6,935.9	54.8	54.8	90.05	-2,703.1	-469.7	990.4	881.8	108.65	9.116			
9,700.0	6,932.5	9,722.3	6,935.4	56.6	56.6	90.05	-2,803.1	-467.7	990.4	878.1	112.35	8.815			
9,800.0	6,932.0	9,822.3	6,934.9	58.5	58.4	90.05	-2,903.1	-465.6	990.4	874.3	116.06	8.534			
9,900.0	6,931.6	9,922.3	6,934.4	60.3	60.3	90.05	-3,003.1	-463.5	990.4	870.6	119.77	8.269			
10,000.0	6,931.1	10,022.3	6,934.0	62.1	62.1	90.05	-3,103.1	-461.5	990.4	866.9	123.50	8.019			
10,100.0	6,930.6	10,122.3	6,933.5	64.0	64.0	90.05	-3,203.0	-459.4	990.4	863.2	127.23	7.784			
10,200.0	6,930.1	10,222.3	6,933.0	65.9	65.9	90.05	-3,303.0	-457.4	990.4	859.4	130.97	7.562			
10,300.0	6,929.7	10,322.3	6,932.6	67.7	67.7	90.05	-3,403.0	-455.3	990.4	855.7	134.72	7.352			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,400.0	6,929.2	10,422.3	6,932.1	69.6	69.6	90.05	-3,503.0	-453.2	990.4	851.9	138.47	7.152			
10,500.0	6,928.7	10,522.3	6,931.6	71.5	71.5	90.05	-3,602.9	-451.2	990.4	848.2	142.23	6.964			
10,600.0	6,928.3	10,622.3	6,931.1	73.3	73.3	90.05	-3,702.9	-449.1	990.4	844.4	145.99	6.784			
10,700.0	6,927.8	10,722.3	6,930.7	75.2	75.2	90.05	-3,802.9	-447.1	990.4	840.6	149.75	6.614			
10,800.0	6,927.3	10,822.3	6,930.2	77.1	77.1	90.05	-3,902.9	-445.0	990.4	836.9	153.52	6.451			
10,900.0	6,926.8	10,922.3	6,929.7	78.9	79.0	90.05	-4,002.9	-442.9	990.4	833.1	157.30	6.296			
11,000.0	6,926.4	11,022.3	6,929.3	80.8	80.9	90.05	-4,102.8	-440.9	990.4	829.3	161.07	6.149			
11,100.0	6,925.9	11,122.3	6,928.8	82.7	82.7	90.05	-4,202.8	-438.8	990.4	825.5	164.85	6.008			
11,200.0	6,925.4	11,222.3	6,928.3	84.6	84.6	90.05	-4,302.8	-436.7	990.4	821.8	168.64	5.873			
11,300.0	6,925.0	11,322.3	6,927.8	86.5	86.5	90.05	-4,402.8	-434.7	990.4	818.0	172.42	5.744			
11,400.0	6,924.5	11,422.3	6,927.4	88.4	88.4	90.05	-4,502.7	-432.6	990.4	814.2	176.21	5.621			
11,463.3	6,924.2	11,485.6	6,927.1	89.6	89.6	90.05	-4,566.1	-431.3	990.4	811.8	178.61	5.545			
11,500.0	6,924.0	11,502.3	6,927.0	90.3	89.9	90.05	-4,582.7	-431.0	990.6	811.0	179.62	5.515			
11,504.1	6,924.0	11,502.3	6,927.0	90.3	89.9	90.05	-4,582.7	-431.0	990.7	811.0	179.70	5.513 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference				Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	-89.98	0.0	-72.7	72.7	72.7	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	-89.98	0.0	-72.7	72.7	72.5	0.23	317.323		
200.0	200.0	202.0	202.0	0.3	0.3	-89.98	0.0	-72.7	72.7	72.1	0.68	107.175		
300.0	300.0	302.0	302.0	0.6	0.6	-89.98	0.0	-72.7	72.7	71.6	1.13	64.476		
400.0	400.0	402.0	402.0	0.8	0.8	-89.98	0.0	-72.7	72.7	71.2	1.58	46.107		
500.0	500.0	502.0	502.0	1.0	1.0	-89.98	0.0	-72.7	72.7	70.7	2.03	35.884		
600.0	600.0	602.0	602.0	1.2	1.2	-89.98	0.0	-72.7	72.7	70.3	2.48	29.371		
700.0	700.0	702.0	702.0	1.5	1.5	-89.98	0.0	-72.7	72.7	69.8	2.93	24.859		
800.0	800.0	802.0	802.0	1.7	1.7	-89.98	0.0	-72.7	72.7	69.4	3.38	21.549		
900.0	900.0	902.0	902.0	1.9	1.9	-89.98	0.0	-72.7	72.7	68.9	3.83	19.017		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-89.98	0.0	-72.7	72.7	68.5	4.28	17.017	CC, ES	
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-160.65	0.0	-72.7	74.4	69.7	4.71	15.780		
1,200.0	1,199.8	1,201.8	1,201.8	2.6	2.6	-161.87	0.0	-72.7	79.4	74.2	5.14	15.427		
1,300.0	1,299.5	1,301.5	1,301.5	2.8	2.8	-163.59	0.0	-72.7	87.7	82.1	5.57	15.739		
1,400.0	1,398.7	1,400.7	1,400.7	3.0	3.0	-165.51	0.0	-72.7	99.2	93.2	6.00	16.537		
1,500.0	1,497.9	1,499.9	1,499.9	3.3	3.3	-167.14	0.0	-72.7	111.6	105.1	6.44	17.323		
1,600.0	1,597.1	1,599.1	1,599.1	3.6	3.5	-168.44	0.0	-72.7	124.0	117.1	6.88	18.010		
1,700.0	1,696.3	1,694.7	1,694.7	3.8	3.7	-169.07	0.8	-74.1	137.7	130.4	7.32	18.821		
1,800.0	1,795.5	1,789.6	1,789.5	4.1	3.9	-168.83	3.1	-78.2	154.0	146.3	7.75	19.880		
1,900.0	1,894.7	1,883.5	1,883.0	4.4	4.1	-168.00	6.9	-85.0	172.9	164.8	8.18	21.136		
2,000.0	1,993.9	1,976.3	1,975.2	4.7	4.3	-166.80	12.1	-94.3	194.5	185.8	8.62	22.554		
2,100.0	2,093.1	2,073.6	2,071.6	5.0	4.6	-165.54	18.3	-105.4	217.4	208.3	9.07	23.954		
2,200.0	2,192.3	2,170.8	2,168.0	5.3	4.8	-164.52	24.5	-116.5	240.3	230.8	9.53	25.223		
2,300.0	2,291.5	2,268.0	2,264.5	5.6	5.1	-163.67	30.7	-127.7	263.3	253.4	9.99	26.370		
2,400.0	2,390.6	2,365.3	2,360.9	5.9	5.3	-162.97	36.9	-138.8	286.4	276.0	10.45	27.406		
2,500.0	2,489.8	2,462.5	2,457.3	6.2	5.6	-162.36	43.1	-149.9	309.5	298.6	10.92	28.353		
2,600.0	2,589.0	2,559.8	2,553.7	6.6	5.9	-161.85	49.3	-161.0	332.7	321.3	11.39	29.216		
2,700.0	2,688.2	2,657.0	2,650.1	6.9	6.2	-161.40	55.5	-172.1	355.8	344.0	11.86	30.005		
2,800.0	2,787.4	2,754.3	2,746.5	7.2	6.5	-161.00	61.7	-183.2	379.0	366.7	12.33	30.729		
2,900.0	2,886.6	2,851.5	2,842.9	7.5	6.7	-160.65	67.9	-194.4	402.2	389.4	12.81	31.396		
3,000.0	2,985.8	2,948.8	2,939.3	7.8	7.0	-160.34	74.1	-205.5	425.4	412.1	13.29	32.011		
3,100.0	3,085.0	3,046.0	3,035.7	8.1	7.3	-160.06	80.3	-216.6	448.6	434.8	13.77	32.580		
3,200.0	3,184.2	3,143.3	3,132.1	8.5	7.6	-159.81	86.5	-227.7	471.8	457.6	14.25	33.108		
3,300.0	3,283.4	3,240.5	3,228.5	8.8	7.9	-159.58	92.7	-238.8	495.0	480.3	14.73	33.599		
3,400.0	3,382.6	3,337.8	3,325.0	9.1	8.2	-159.37	98.9	-250.0	518.3	503.1	15.22	34.056		
3,500.0	3,481.8	3,435.0	3,421.4	9.4	8.5	-159.18	105.1	-261.1	541.5	525.8	15.70	34.483		
3,600.0	3,580.9	3,532.2	3,517.8	9.7	8.8	-159.01	111.3	-272.2	564.8	548.6	16.19	34.883		
3,700.0	3,680.1	3,629.5	3,614.2	10.1	9.1	-158.84	117.5	-283.3	588.0	571.3	16.68	35.257		
3,800.0	3,779.3	3,726.7	3,710.6	10.4	9.5	-158.70	123.7	-294.4	611.3	594.1	17.17	35.609		
3,900.0	3,878.5	3,824.0	3,807.0	10.7	9.8	-158.56	129.9	-305.5	634.5	616.9	17.66	35.940		
4,000.0	3,977.7	3,921.2	3,903.4	11.0	10.1	-158.43	136.1	-316.7	657.8	639.7	18.15	36.252		
4,100.0	4,076.9	4,018.5	3,999.8	11.3	10.4	-158.31	142.3	-327.8	681.1	662.4	18.64	36.546		
4,200.0	4,176.1	4,115.7	4,096.2	11.7	10.7	-158.20	148.5	-338.9	704.3	685.2	19.13	36.824		
4,300.0	4,275.3	4,232.8	4,212.5	12.0	11.0	-158.13	155.3	-351.1	726.7	707.0	19.64	37.007		
4,400.0	4,374.5	4,360.1	4,339.4	12.3	11.3	-158.24	160.1	-359.8	745.3	725.2	20.13	37.031		
4,500.0	4,473.7	4,489.0	4,468.2	12.6	11.5	-158.55	162.2	-363.6	760.1	739.5	20.61	36.885		
4,600.0	4,572.9	4,595.7	4,574.9	13.0	11.7	-158.91	162.3	-363.7	772.1	751.0	21.05	36.676		
4,700.0	4,672.1	4,694.9	4,674.1	13.3	11.9	-159.25	162.3	-363.7	783.9	762.4	21.50	36.459		
4,800.0	4,771.2	4,794.1	4,773.2	13.6	12.1	-159.57	162.3	-363.7	795.8	773.9	21.95	36.250		
4,900.0	4,870.5	4,893.3	4,872.5	13.9	12.2	-159.91	162.3	-363.7	807.6	785.1	22.42	36.022		
5,000.0	4,970.0	4,992.8	4,972.0	14.1	12.4	-160.20	162.3	-363.7	816.7	793.9	22.87	35.720		
5,100.0	5,069.8	5,092.6	5,071.8	14.3	12.6	-160.39	162.3	-363.7	822.7	799.4	23.28	35.332		

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,192.5	5,171.7	14.5	12.8	-160.47	162.3	-363.7	825.3	801.6	23.67	34.862			
5,300.0	5,269.7	5,292.5	5,271.7	14.6	13.0	-90.25	162.3	-363.7	825.5	801.4	24.08	34.286			
5,400.0	5,369.7	5,392.5	5,371.7	14.8	13.2	-90.25	162.3	-363.7	825.5	801.0	24.48	33.713			
5,500.0	5,469.7	5,492.5	5,471.7	15.0	13.4	-90.25	162.3	-363.7	825.5	800.6	24.89	33.158			
5,600.0	5,569.7	5,592.5	5,571.7	15.2	13.6	-90.25	162.3	-363.7	825.5	800.2	25.31	32.619			
5,700.0	5,669.7	5,692.5	5,671.7	15.3	13.8	-90.25	162.3	-363.7	825.5	799.7	25.72	32.096			
5,800.0	5,769.7	5,792.5	5,771.7	15.5	14.0	-90.25	162.3	-363.7	825.5	799.3	26.13	31.588			
5,900.0	5,869.7	5,892.5	5,871.7	15.7	14.2	-90.25	162.3	-363.7	825.5	798.9	26.55	31.094			
6,000.0	5,969.7	5,992.5	5,971.7	15.9	14.4	-90.25	162.3	-363.7	825.5	798.5	26.96	30.614			
6,100.0	6,069.7	6,092.5	6,071.7	16.0	14.6	-90.25	162.3	-363.7	825.5	798.1	27.38	30.148			
6,200.0	6,169.7	6,192.5	6,171.7	16.2	14.8	-90.25	162.3	-363.7	825.5	797.7	27.80	29.694			
6,300.0	6,269.7	6,292.5	6,271.7	16.4	15.0	-90.25	162.3	-363.7	825.5	797.2	28.22	29.253			
6,400.0	6,369.7	6,392.5	6,371.7	16.6	15.2	-90.25	162.3	-363.7	825.5	796.8	28.64	28.824			
6,500.0	6,469.7	6,493.8	6,472.9	16.8	15.4	90.92	160.1	-363.7	825.5	796.4	29.01	28.455			
6,600.0	6,567.8	6,596.4	6,573.4	16.9	15.5	90.89	140.7	-363.3	825.4	796.2	29.24	28.234			
6,700.0	6,660.6	6,698.8	6,668.1	17.0	15.6	90.82	102.1	-362.5	825.4	796.1	29.37	28.100			
6,800.0	6,744.7	6,801.0	6,753.3	17.0	15.7	90.72	45.9	-361.3	825.4	795.9	29.52	27.959			
6,900.0	6,817.0	6,902.8	6,825.6	17.1	15.7	90.60	-25.5	-359.9	825.4	795.6	29.80	27.694			
7,000.0	6,874.8	7,004.3	6,882.5	17.3	15.8	90.45	-109.3	-358.1	825.4	795.0	30.34	27.201			
7,100.0	6,916.0	7,105.3	6,921.9	17.6	16.1	90.29	-202.1	-356.2	825.4	794.1	31.23	26.428			
7,200.0	6,939.0	7,205.8	6,942.7	18.0	16.7	90.11	-300.3	-354.2	825.3	792.9	32.50	25.399			
7,300.0	6,943.8	7,305.9	6,945.7	18.7	17.4	89.99	-400.3	-352.1	825.3	791.2	34.11	24.196			
7,400.0	6,943.3	7,405.9	6,945.2	19.5	18.4	89.99	-500.2	-350.1	825.3	789.3	36.05	22.893			
7,500.0	6,942.9	7,505.9	6,944.8	20.5	19.5	89.99	-600.2	-348.0	825.3	787.1	38.28	21.558			
7,600.0	6,942.4	7,605.9	6,944.3	21.7	20.7	89.99	-700.2	-346.0	825.3	784.6	40.76	20.250			
7,700.0	6,941.9	7,705.9	6,943.8	22.9	22.1	89.99	-800.2	-343.9	825.3	781.9	43.43	19.004			
7,800.0	6,941.5	7,805.9	6,943.4	24.3	23.5	89.99	-900.1	-341.8	825.3	779.1	46.27	17.837			
7,900.0	6,941.0	7,905.9	6,942.9	25.7	24.9	89.99	-1,000.1	-339.8	825.3	776.1	49.25	16.759			
8,000.0	6,940.5	8,005.9	6,942.4	27.2	26.5	89.99	-1,100.1	-337.7	825.3	773.0	52.34	15.770			
8,100.0	6,940.0	8,105.9	6,941.9	28.7	28.0	89.99	-1,200.1	-335.6	825.3	769.8	55.52	14.865			
8,200.0	6,939.6	8,205.9	6,941.5	30.3	29.7	89.99	-1,300.1	-333.6	825.3	766.6	58.79	14.040			
8,300.0	6,939.1	8,305.9	6,941.0	31.9	31.3	89.99	-1,400.0	-331.5	825.3	763.2	62.12	13.287			
8,400.0	6,938.6	8,405.9	6,940.5	33.6	33.0	89.99	-1,500.0	-329.5	825.3	759.8	65.51	12.600			
8,500.0	6,938.2	8,505.9	6,940.1	35.2	34.7	89.99	-1,600.0	-327.4	825.3	756.4	68.94	11.972			
8,600.0	6,937.7	8,605.9	6,939.6	36.9	36.4	89.99	-1,700.0	-325.3	825.3	752.9	72.42	11.397			
8,700.0	6,937.2	8,705.9	6,939.1	38.7	38.2	89.99	-1,799.9	-323.3	825.3	749.4	75.93	10.869			
8,800.0	6,936.7	8,805.9	6,938.6	40.4	40.0	89.99	-1,899.9	-321.2	825.3	745.9	79.48	10.385			
8,900.0	6,936.3	8,905.9	6,938.2	42.2	41.7	89.99	-1,999.9	-319.1	825.3	742.3	83.05	9.938			
9,000.0	6,935.8	9,005.9	6,937.7	43.9	43.5	89.99	-2,099.9	-317.1	825.3	738.7	86.64	9.526			
9,100.0	6,935.3	9,105.9	6,937.2	45.7	45.3	89.99	-2,199.9	-315.0	825.3	735.1	90.26	9.144			
9,200.0	6,934.9	9,205.9	6,936.8	47.5	47.1	89.99	-2,299.8	-313.0	825.3	731.4	93.89	8.790			
9,300.0	6,934.4	9,305.9	6,936.3	49.3	49.0	89.99	-2,399.8	-310.9	825.3	727.8	97.54	8.461			
9,400.0	6,933.9	9,405.9	6,935.8	51.1	50.8	89.99	-2,499.8	-308.8	825.3	724.1	101.21	8.155			
9,500.0	6,933.4	9,505.9	6,935.3	53.0	52.6	89.99	-2,599.8	-306.8	825.3	720.4	104.89	7.869			
9,600.0	6,933.0	9,605.9	6,934.9	54.8	54.5	89.99	-2,699.7	-304.7	825.3	716.8	108.58	7.601			
9,700.0	6,932.5	9,705.9	6,934.4	56.6	56.3	89.99	-2,799.7	-302.6	825.3	713.1	112.28	7.351			
9,800.0	6,932.0	9,805.9	6,933.9	58.5	58.2	89.99	-2,899.7	-300.6	825.3	709.3	115.99	7.116			
9,900.0	6,931.6	9,905.9	6,933.5	60.3	60.0	89.99	-2,999.7	-298.5	825.3	705.6	119.70	6.895			
10,000.0	6,931.1	10,005.9	6,933.0	62.1	61.9	89.99	-3,099.7	-296.5	825.3	701.9	123.43	6.687			
10,100.0	6,930.6	10,105.9	6,932.5	64.0	63.7	89.99	-3,199.6	-294.4	825.3	698.2	127.17	6.490			
10,200.0	6,930.1	10,205.9	6,932.0	65.9	65.6	89.99	-3,299.6	-292.3	825.3	694.4	130.91	6.305			
10,300.0	6,929.7	10,305.9	6,931.6	67.7	67.5	89.99	-3,399.6	-290.3	825.3	690.7	134.65	6.129			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,400.0	6,929.2	10,405.9	6,931.1	69.6	69.3	89.99	-3,499.6	-288.2	825.3	686.9	138.40	5.963			
10,500.0	6,928.7	10,505.9	6,930.6	71.5	71.2	89.99	-3,599.5	-286.1	825.3	683.2	142.16	5.806			
10,600.0	6,928.3	10,605.9	6,930.2	73.3	73.1	89.99	-3,699.5	-284.1	825.3	679.4	145.92	5.656			
10,700.0	6,927.8	10,705.9	6,929.7	75.2	75.0	89.99	-3,799.5	-282.0	825.3	675.6	149.69	5.514			
10,800.0	6,927.3	10,805.9	6,929.2	77.1	76.9	89.99	-3,899.5	-279.9	825.3	671.9	153.46	5.378			
10,900.0	6,926.8	10,905.9	6,928.7	78.9	78.7	89.99	-3,999.4	-277.9	825.3	668.1	157.23	5.249			
11,000.0	6,926.4	11,005.9	6,928.3	80.8	80.6	89.99	-4,099.4	-275.8	825.3	664.3	161.01	5.126			
11,100.0	6,925.9	11,105.9	6,927.8	82.7	82.5	89.99	-4,199.4	-273.8	825.3	660.5	164.79	5.008			
11,200.0	6,925.4	11,205.9	6,927.3	84.6	84.4	89.99	-4,299.4	-271.7	825.3	656.7	168.58	4.896			
11,300.0	6,925.0	11,305.9	6,926.9	86.5	86.3	89.99	-4,399.4	-269.6	825.3	653.0	172.36	4.788			
11,400.0	6,924.5	11,405.9	6,926.4	88.4	88.2	89.99	-4,499.3	-267.6	825.3	649.2	176.15	4.685			
11,465.1	6,924.2	11,470.9	6,926.1	89.6	89.4	89.99	-4,564.4	-266.2	825.3	646.7	178.62	4.621			
11,500.0	6,924.0	11,489.3	6,926.0	90.3	89.8	89.99	-4,582.7	-265.9	825.5	645.9	179.63	4.596			
11,504.1	6,924.0	11,489.3	6,926.0	90.3	89.8	89.99	-4,582.7	-265.9	825.6	645.9	179.71	4.594 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	-89.95	0.1	-58.8	58.8	58.8	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	-89.95	0.1	-58.8	58.8	58.5	0.23	256.300		
200.0	200.0	202.0	202.0	0.3	0.3	-89.95	0.1	-58.8	58.8	58.1	0.68	86.565		
300.0	300.0	302.0	302.0	0.6	0.6	-89.95	0.1	-58.8	58.8	57.6	1.13	52.077		
400.0	400.0	402.0	402.0	0.8	0.8	-89.95	0.1	-58.8	58.8	57.2	1.58	37.240		
500.0	500.0	502.0	502.0	1.0	1.0	-89.95	0.1	-58.8	58.8	56.7	2.03	28.983		
600.0	600.0	602.0	602.0	1.2	1.2	-89.95	0.1	-58.8	58.8	56.3	2.48	23.723		
700.0	700.0	702.0	702.0	1.5	1.5	-89.95	0.1	-58.8	58.8	55.8	2.93	20.079		
800.0	800.0	802.0	802.0	1.7	1.7	-89.95	0.1	-58.8	58.8	55.4	3.38	17.405		
900.0	900.0	902.0	902.0	1.9	1.9	-89.95	0.1	-58.8	58.8	54.9	3.83	15.360		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-89.95	0.1	-58.8	58.8	54.5	4.28	13.745 CC, ES		
1,100.0	1,100.0	1,102.0	1,102.0	2.4	2.4	-160.72	0.1	-58.8	60.4	55.7	4.71	12.813		
1,200.0	1,199.8	1,201.8	1,201.8	2.6	2.6	-162.21	0.1	-58.8	65.4	60.2	5.14	12.708		
1,300.0	1,299.5	1,301.5	1,301.5	2.8	2.8	-164.23	0.1	-58.8	73.7	68.1	5.57	13.233		
1,400.0	1,398.7	1,400.7	1,400.7	3.0	3.0	-166.38	0.1	-58.8	85.3	79.3	6.00	14.217		
1,500.0	1,497.9	1,499.9	1,499.9	3.3	3.3	-168.13	0.1	-58.8	97.7	91.2	6.44	15.169		
1,600.0	1,597.1	1,599.1	1,599.1	3.6	3.5	-169.49	0.1	-58.8	110.1	103.3	6.88	16.002		
1,700.0	1,696.3	1,698.3	1,698.3	3.8	3.7	-170.57	0.1	-58.8	122.6	115.3	7.33	16.735		
1,800.0	1,795.5	1,797.5	1,797.5	4.1	3.9	-171.45	0.1	-58.8	135.2	127.4	7.78	17.384		
1,900.0	1,894.7	1,894.9	1,894.9	4.4	4.1	-171.77	0.9	-59.5	148.3	140.1	8.22	18.046		
2,000.0	1,993.9	1,991.9	1,991.8	4.7	4.4	-171.26	3.7	-61.9	162.7	154.0	8.66	18.785		
2,100.0	2,093.1	2,088.5	2,088.2	5.0	4.6	-170.15	8.3	-65.9	178.4	169.3	9.11	19.586		
2,200.0	2,192.3	2,184.4	2,183.8	5.3	4.8	-168.61	14.7	-71.4	195.4	185.8	9.56	20.445		
2,300.0	2,291.5	2,279.9	2,278.7	5.6	5.0	-166.77	22.9	-78.4	213.9	203.9	10.02	21.358		
2,400.0	2,390.6	2,377.8	2,375.8	5.9	5.3	-164.98	32.0	-86.3	233.2	222.7	10.49	22.239		
2,500.0	2,489.8	2,475.7	2,472.9	6.2	5.5	-163.47	41.1	-94.1	252.7	241.8	10.96	23.051		
2,600.0	2,589.0	2,573.6	2,570.1	6.6	5.8	-162.17	50.2	-102.0	272.4	260.9	11.45	23.796		
2,700.0	2,688.2	2,671.4	2,667.2	6.9	6.0	-161.04	59.3	-109.9	292.1	280.2	11.93	24.482		
2,800.0	2,787.4	2,769.3	2,764.3	7.2	6.3	-160.06	68.5	-117.7	312.0	299.5	12.42	25.115		
2,900.0	2,886.6	2,867.2	2,861.5	7.5	6.6	-159.20	77.6	-125.6	331.9	319.0	12.91	25.698		
3,000.0	2,985.8	2,965.1	2,958.6	7.8	6.8	-158.43	86.7	-133.5	351.9	338.5	13.41	26.238		
3,100.0	3,085.0	3,062.9	3,055.7	8.1	7.1	-157.74	95.8	-141.3	371.9	358.0	13.91	26.739		
3,200.0	3,184.2	3,160.8	3,152.9	8.5	7.4	-157.13	105.0	-149.2	392.0	377.6	14.41	27.204		
3,300.0	3,283.4	3,258.7	3,250.0	8.8	7.7	-156.58	114.1	-157.0	412.1	397.2	14.91	27.637		
3,400.0	3,382.6	3,356.6	3,347.1	9.1	8.0	-156.07	123.2	-164.9	432.3	416.9	15.42	28.041		
3,500.0	3,481.8	3,454.5	3,444.3	9.4	8.2	-155.61	132.3	-172.8	452.5	436.6	15.92	28.418		
3,600.0	3,580.9	3,553.5	3,542.5	9.7	8.5	-155.19	141.5	-180.7	472.7	456.3	16.43	28.772		
3,700.0	3,680.1	3,661.4	3,649.8	10.1	8.8	-154.93	150.2	-188.2	491.7	474.8	16.91	29.071		
3,800.0	3,779.3	3,770.1	3,758.2	10.4	9.0	-154.92	156.6	-193.7	508.7	491.4	17.38	29.271		
3,900.0	3,878.5	3,879.6	3,867.5	10.7	9.2	-155.16	160.6	-197.2	523.7	505.9	17.83	29.366		
4,000.0	3,977.7	3,989.5	3,977.5	11.0	9.4	-155.62	162.3	-198.6	536.7	518.5	18.28	29.365		
4,100.0	4,076.9	4,090.9	4,078.9	11.3	9.6	-156.18	162.4	-198.7	548.4	529.7	18.71	29.306		
4,200.0	4,176.1	4,190.1	4,178.1	11.7	9.8	-156.70	162.4	-198.7	560.0	540.9	19.16	29.224		
4,300.0	4,275.3	4,289.3	4,277.3	12.0	10.0	-157.20	162.4	-198.7	571.7	552.1	19.62	29.146		
4,400.0	4,374.5	4,388.5	4,376.5	12.3	10.2	-157.69	162.4	-198.7	583.4	563.4	20.07	29.074		
4,500.0	4,473.7	4,487.7	4,475.7	12.6	10.4	-158.15	162.4	-198.7	595.2	574.7	20.52	29.007		
4,600.0	4,572.9	4,586.9	4,574.9	13.0	10.6	-158.59	162.4	-198.7	607.0	586.1	20.97	28.944		
4,700.0	4,672.1	4,686.1	4,674.1	13.3	10.8	-159.02	162.4	-198.7	618.9	597.4	21.43	28.885		
4,800.0	4,771.2	4,785.3	4,773.2	13.6	11.0	-159.43	162.4	-198.7	630.8	608.9	21.88	28.830		
4,900.0	4,870.5	4,884.5	4,872.5	13.9	11.2	-159.85	162.4	-198.7	642.5	620.1	22.34	28.760		
5,000.0	4,970.0	4,984.0	4,972.0	14.1	11.4	-160.21	162.4	-198.7	651.7	628.9	22.78	28.610		
5,100.0	5,069.8	5,083.8	5,071.8	14.3	11.7	-160.44	162.4	-198.7	657.6	634.4	23.19	28.358		

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,183.8	5,171.7	14.5	11.9	-160.54	162.4	-198.7	660.2	636.6	23.57	28.009			
5,300.0	5,269.7	5,283.8	5,271.7	14.6	12.1	-90.32	162.4	-198.7	660.4	636.4	23.99	27.529			
5,400.0	5,369.7	5,383.8	5,371.7	14.8	12.3	-90.32	162.4	-198.7	660.4	636.0	24.40	27.062			
5,500.0	5,469.7	5,483.8	5,471.7	15.0	12.5	-90.32	162.4	-198.7	660.4	635.6	24.82	26.610			
5,600.0	5,569.7	5,583.8	5,571.7	15.2	12.7	-90.32	162.4	-198.7	660.4	635.1	25.23	26.171			
5,700.0	5,669.7	5,683.8	5,671.7	15.3	12.9	-90.32	162.4	-198.7	660.4	634.7	25.65	25.746			
5,800.0	5,769.7	5,783.8	5,771.7	15.5	13.1	-90.32	162.4	-198.7	660.4	634.3	26.07	25.333			
5,900.0	5,869.7	5,883.8	5,871.7	15.7	13.4	-90.32	162.4	-198.7	660.4	633.9	26.49	24.932			
6,000.0	5,969.7	5,983.8	5,971.7	15.9	13.6	-90.32	162.4	-198.7	660.4	633.5	26.91	24.543			
6,100.0	6,069.7	6,083.8	6,071.7	16.0	13.8	-90.32	162.4	-198.7	660.4	633.0	27.33	24.165			
6,200.0	6,169.7	6,183.8	6,171.7	16.2	14.0	-90.32	162.4	-198.7	660.4	632.6	27.75	23.797			
6,300.0	6,269.7	6,283.8	6,271.7	16.4	14.2	-90.32	162.4	-198.7	660.4	632.2	28.17	23.440			
6,400.0	6,369.7	6,383.8	6,371.7	16.6	14.4	-90.32	162.4	-198.7	660.4	631.8	28.60	23.093			
6,500.0	6,469.7	6,484.7	6,472.6	16.8	14.6	90.86	160.2	-198.6	660.4	631.4	28.96	22.803			
6,600.0	6,567.8	6,586.6	6,572.5	16.9	14.7	90.83	141.0	-198.2	660.4	631.2	29.19	22.626			
6,700.0	6,660.6	6,688.4	6,666.7	17.0	14.8	90.77	102.9	-197.4	660.4	631.0	29.33	22.518			
6,800.0	6,744.7	6,790.0	6,751.6	17.0	14.9	90.68	47.3	-196.3	660.3	630.9	29.47	22.404			
6,900.0	6,817.0	6,891.4	6,823.9	17.1	15.0	90.56	-23.5	-194.8	660.3	630.6	29.76	22.192			
7,000.0	6,874.8	6,992.5	6,881.0	17.3	15.1	90.42	-106.7	-193.1	660.3	630.0	30.29	21.797			
7,100.0	6,916.0	7,093.2	6,920.9	17.6	15.5	90.27	-199.0	-191.2	660.3	629.1	31.18	21.177			
7,200.0	6,939.0	7,193.6	6,942.3	18.0	16.2	90.11	-297.0	-189.2	660.3	627.8	32.44	20.351			
7,300.0	6,943.8	7,293.7	6,945.7	18.7	17.0	89.99	-396.9	-187.1	660.3	626.2	34.06	19.388			
7,400.0	6,943.3	7,393.7	6,945.3	19.5	18.0	89.99	-496.8	-185.1	660.3	624.3	36.00	18.339			
7,500.0	6,942.9	7,493.7	6,944.8	20.5	19.1	89.99	-596.8	-183.0	660.3	622.0	38.24	17.268			
7,600.0	6,942.4	7,593.7	6,944.3	21.7	20.4	89.99	-696.8	-180.9	660.3	619.6	40.71	16.218			
7,700.0	6,941.9	7,693.7	6,943.8	22.9	21.7	89.99	-796.8	-178.9	660.3	616.9	43.39	15.218			
7,800.0	6,941.5	7,793.7	6,943.4	24.3	23.1	89.99	-896.7	-176.8	660.3	614.1	46.23	14.283			
7,900.0	6,941.0	7,893.7	6,942.9	25.7	24.6	89.99	-996.7	-174.7	660.3	611.1	49.21	13.418			
8,000.0	6,940.5	7,993.7	6,942.4	27.2	26.2	89.99	-1,096.7	-172.7	660.3	608.0	52.30	12.625			
8,100.0	6,940.0	8,093.7	6,942.0	28.7	27.8	89.99	-1,196.7	-170.6	660.3	604.8	55.49	11.900			
8,200.0	6,939.6	8,193.7	6,941.5	30.3	29.4	89.99	-1,296.7	-168.6	660.3	601.5	58.75	11.238			
8,300.0	6,939.1	8,293.7	6,941.0	31.9	31.1	89.99	-1,396.6	-166.5	660.3	598.2	62.08	10.635			
8,400.0	6,938.6	8,393.7	6,940.5	33.6	32.8	89.99	-1,496.6	-164.4	660.3	594.8	65.47	10.085			
8,500.0	6,938.2	8,493.7	6,940.1	35.2	34.5	89.99	-1,596.6	-162.4	660.3	591.4	68.91	9.582			
8,600.0	6,937.7	8,593.7	6,939.6	36.9	36.2	89.99	-1,696.6	-160.3	660.3	587.9	72.39	9.121			
8,700.0	6,937.2	8,693.7	6,939.1	38.7	38.0	89.99	-1,796.5	-158.2	660.3	584.4	75.90	8.699			
8,800.0	6,936.7	8,793.7	6,938.7	40.4	39.7	89.99	-1,896.5	-156.2	660.3	580.8	79.45	8.311			
8,900.0	6,936.3	8,893.7	6,938.2	42.2	41.5	89.99	-1,996.5	-154.1	660.3	577.3	83.02	7.953			
9,000.0	6,935.8	8,993.7	6,937.7	43.9	43.3	89.99	-2,096.5	-152.0	660.3	573.7	86.62	7.623			
9,100.0	6,935.3	9,093.7	6,937.2	45.7	45.1	89.99	-2,196.5	-150.0	660.3	570.0	90.23	7.317			
9,200.0	6,934.9	9,193.7	6,936.8	47.5	47.0	89.99	-2,296.4	-147.9	660.3	566.4	93.87	7.034			
9,300.0	6,934.4	9,293.7	6,936.3	49.3	48.8	89.99	-2,396.4	-145.9	660.3	562.7	97.52	6.771			
9,400.0	6,933.9	9,393.7	6,935.8	51.1	50.6	89.99	-2,496.4	-143.8	660.3	559.1	101.18	6.525			
9,500.0	6,933.4	9,493.7	6,935.4	53.0	52.5	89.99	-2,596.4	-141.7	660.3	555.4	104.86	6.296			
9,600.0	6,933.0	9,593.7	6,934.9	54.8	54.3	89.99	-2,696.3	-139.7	660.3	551.7	108.55	6.082			
9,700.0	6,932.5	9,693.7	6,934.4	56.6	56.2	89.99	-2,796.3	-137.6	660.3	548.0	112.25	5.882			
9,800.0	6,932.0	9,793.7	6,933.9	58.5	58.0	89.99	-2,896.3	-135.5	660.3	544.3	115.96	5.694			
9,900.0	6,931.6	9,893.7	6,933.5	60.3	59.9	89.99	-2,996.3	-133.5	660.3	540.6	119.68	5.517			
10,000.0	6,931.1	9,993.7	6,933.0	62.1	61.7	89.99	-3,096.2	-131.4	660.3	536.8	123.41	5.350			
10,100.0	6,930.6	10,093.7	6,932.5	64.0	63.6	89.99	-3,196.2	-129.4	660.3	533.1	127.14	5.193			
10,200.0	6,930.1	10,193.7	6,932.1	65.9	65.5	89.99	-3,296.2	-127.3	660.3	529.4	130.89	5.045			
10,300.0	6,929.7	10,293.7	6,931.6	67.7	67.3	89.99	-3,396.2	-125.2	660.3	525.6	134.63	4.904			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,400.0	6,929.2	10,393.7	6,931.1	69.6	69.2	89.99	-3,496.2	-123.2	660.3	521.9	138.38	4.771			
10,500.0	6,928.7	10,493.7	6,930.7	71.5	71.1	89.99	-3,596.1	-121.1	660.3	518.1	142.14	4.645			
10,600.0	6,928.3	10,593.7	6,930.2	73.3	73.0	89.99	-3,696.1	-119.0	660.3	514.3	145.90	4.525			
10,700.0	6,927.8	10,693.7	6,929.7	75.2	74.9	89.99	-3,796.1	-117.0	660.3	510.6	149.67	4.411			
10,800.0	6,927.3	10,793.7	6,929.2	77.1	76.7	89.99	-3,896.1	-114.9	660.2	506.8	153.44	4.303			
10,900.0	6,926.8	10,893.7	6,928.8	78.9	78.6	89.99	-3,996.0	-112.8	660.2	503.0	157.21	4.200			
11,000.0	6,926.4	10,993.7	6,928.3	80.8	80.5	89.99	-4,096.0	-110.8	660.2	499.3	160.99	4.101			
11,100.0	6,925.9	11,093.7	6,927.8	82.7	82.4	89.99	-4,196.0	-108.7	660.2	495.5	164.77	4.007			
11,200.0	6,925.4	11,193.7	6,927.4	84.6	84.3	89.99	-4,296.0	-106.7	660.2	491.7	168.56	3.917			
11,300.0	6,925.0	11,293.7	6,926.9	86.5	86.2	89.99	-4,396.0	-104.6	660.2	487.9	172.34	3.831			
11,400.0	6,924.5	11,393.7	6,926.4	88.4	88.1	89.99	-4,495.9	-102.5	660.2	484.1	176.13	3.749			
11,466.6	6,924.2	11,460.3	6,926.1	89.6	89.4	89.99	-4,562.6	-101.2	660.2	481.6	178.66	3.696			
11,500.0	6,924.0	11,480.5	6,926.0	90.3	89.7	89.99	-4,582.7	-100.7	660.4	480.7	179.68	3.675			
11,504.1	6,924.0	11,480.5	6,926.0	90.3	89.7	89.99	-4,582.7	-100.7	660.5	480.7	179.75	3.674 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-89.94	0.0	-44.8	44.8	44.8	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-89.94	0.0	-44.8	44.8	44.5	0.23	197.209		
200.0	200.0	201.0	201.0	0.3	0.3	-89.94	0.0	-44.8	44.8	44.1	0.68	66.173		
300.0	300.0	301.0	301.0	0.6	0.6	-89.94	0.0	-44.8	44.8	43.6	1.13	39.757		
400.0	400.0	401.0	401.0	0.8	0.8	-89.94	0.0	-44.8	44.8	43.2	1.58	28.414		
500.0	500.0	501.0	501.0	1.0	1.0	-89.94	0.0	-44.8	44.8	42.7	2.03	22.107		
600.0	600.0	601.0	601.0	1.2	1.2	-89.94	0.0	-44.8	44.8	42.3	2.47	18.091		
700.0	700.0	701.0	701.0	1.5	1.5	-89.94	0.0	-44.8	44.8	41.8	2.92	15.310		
800.0	800.0	801.0	801.0	1.7	1.7	-89.94	0.0	-44.8	44.8	41.4	3.37	13.270		
900.0	900.0	901.0	901.0	1.9	1.9	-89.94	0.0	-44.8	44.8	40.9	3.82	11.710		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-89.94	0.0	-44.8	44.8	40.5	4.27	10.478	CC, ES	
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-160.89	0.0	-44.8	46.4	41.7	4.71	9.850		
1,200.0	1,199.8	1,200.8	1,200.8	2.6	2.6	-162.77	0.0	-44.8	51.4	46.2	5.14	9.995		
1,300.0	1,299.5	1,300.5	1,300.5	2.8	2.8	-165.20	0.0	-44.8	59.8	54.2	5.57	10.734		
1,400.0	1,398.7	1,399.7	1,399.7	3.0	3.0	-167.62	0.0	-44.8	71.4	65.4	6.00	11.908		
1,500.0	1,497.9	1,498.9	1,498.9	3.3	3.3	-169.48	0.0	-44.8	83.9	77.4	6.44	13.027		
1,600.0	1,597.1	1,598.1	1,598.1	3.6	3.5	-170.86	0.0	-44.8	96.4	89.5	6.88	14.007		
1,700.0	1,696.3	1,697.3	1,697.3	3.8	3.7	-171.92	0.0	-44.8	108.9	101.6	7.33	14.868		
1,800.0	1,795.5	1,796.5	1,796.5	4.1	3.9	-172.76	0.0	-44.8	121.5	113.7	7.77	15.630		
1,900.0	1,894.7	1,895.7	1,895.7	4.4	4.1	-173.44	0.0	-44.8	134.1	125.9	8.22	16.308		
2,000.0	1,993.9	1,994.9	1,994.9	4.7	4.4	-174.01	0.0	-44.8	146.7	138.0	8.67	16.915		
2,100.0	2,093.1	2,094.1	2,094.1	5.0	4.6	-174.48	0.0	-44.8	159.3	150.2	9.13	17.460		
2,200.0	2,192.3	2,193.3	2,193.3	5.3	4.8	-174.89	0.0	-44.8	172.0	162.4	9.58	17.953		
2,300.0	2,291.5	2,293.9	2,293.9	5.6	5.0	-174.90	1.2	-44.7	184.2	174.2	10.04	18.360		
2,400.0	2,390.6	2,394.8	2,394.7	5.9	5.3	-174.18	5.0	-44.4	195.7	185.2	10.49	18.652		
2,500.0	2,489.8	2,495.7	2,495.4	6.2	5.5	-172.82	11.5	-44.0	206.4	195.5	10.95	18.847		
2,600.0	2,589.0	2,596.4	2,595.7	6.6	5.7	-170.92	20.6	-43.4	216.6	205.2	11.42	18.964		
2,700.0	2,688.2	2,696.7	2,695.3	6.9	6.0	-168.56	32.2	-42.6	226.4	214.5	11.90	19.024		
2,800.0	2,787.4	2,795.7	2,793.5	7.2	6.2	-166.22	44.5	-41.8	236.4	224.0	12.39	19.077		
2,900.0	2,886.6	2,894.8	2,891.8	7.5	6.4	-164.07	56.9	-40.9	246.7	233.8	12.89	19.136		
3,000.0	2,985.8	2,993.8	2,990.1	7.8	6.7	-162.09	69.2	-40.1	257.4	244.0	13.40	19.201		
3,100.0	3,085.0	3,092.9	3,088.4	8.1	6.9	-160.27	81.5	-39.3	268.3	254.4	13.93	19.268		
3,200.0	3,184.2	3,191.9	3,186.6	8.5	7.2	-158.60	93.9	-38.4	279.5	265.1	14.46	19.336		
3,300.0	3,283.4	3,291.0	3,284.9	8.8	7.5	-157.05	106.2	-37.6	290.9	275.9	14.99	19.405		
3,400.0	3,382.6	3,390.0	3,383.2	9.1	7.7	-155.62	118.6	-36.8	302.5	287.0	15.54	19.473		
3,500.0	3,481.8	3,489.1	3,481.5	9.4	8.0	-154.30	130.9	-35.9	314.3	298.2	16.09	19.541		
3,600.0	3,580.9	3,588.4	3,580.0	9.7	8.3	-153.15	142.8	-35.1	326.2	309.6	16.62	19.629		
3,700.0	3,680.1	3,688.1	3,679.3	10.1	8.5	-152.47	152.5	-34.5	338.1	321.0	17.10	19.767		
3,800.0	3,779.3	3,788.0	3,779.0	10.4	8.7	-152.27	159.6	-34.0	349.8	332.3	17.57	19.914		
3,900.0	3,878.5	3,887.9	3,878.8	10.7	8.9	-152.50	164.0	-33.7	361.4	343.4	18.01	20.070		
4,000.0	3,977.7	3,987.8	3,978.6	11.0	9.1	-153.12	165.9	-33.6	372.8	354.4	18.42	20.235		
4,100.0	4,076.9	4,087.1	4,077.9	11.3	9.2	-153.97	165.9	-33.6	384.2	365.3	18.84	20.391		
4,200.0	4,176.1	4,186.3	4,177.1	11.7	9.5	-154.77	165.9	-33.6	395.6	376.4	19.28	20.522		
4,300.0	4,275.3	4,285.5	4,276.3	12.0	9.7	-155.53	165.9	-33.6	407.2	387.5	19.72	20.647		
4,400.0	4,374.5	4,384.6	4,375.5	12.3	9.9	-156.25	165.9	-33.6	418.8	398.6	20.16	20.770		
4,500.0	4,473.7	4,483.8	4,474.7	12.6	10.1	-156.93	165.9	-33.6	430.4	409.8	20.61	20.890		
4,600.0	4,572.9	4,583.0	4,573.9	13.0	10.3	-157.57	165.9	-33.6	442.2	421.1	21.05	21.006		
4,700.0	4,672.1	4,682.2	4,673.1	13.3	10.5	-158.18	165.9	-33.6	453.9	432.4	21.49	21.120		
4,800.0	4,771.2	4,781.4	4,772.2	13.6	10.7	-158.76	165.9	-33.6	465.7	443.8	21.94	21.231		
4,900.0	4,870.5	4,880.6	4,871.5	13.9	10.9	-159.33	165.9	-33.6	477.4	455.0	22.39	21.325		
5,000.0	4,970.0	4,980.1	4,971.0	14.1	11.2	-159.80	165.9	-33.6	486.6	463.8	22.81	21.332		
5,100.0	5,069.8	5,079.9	5,070.8	14.3	11.4	-160.10	165.9	-33.6	492.5	469.3	23.21	21.220		

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,179.9	5,170.7	14.5	11.6	-160.22	165.9	-33.6	495.1	471.5	23.58	20.995			
5,300.0	5,269.7	5,279.9	5,270.7	14.6	11.8	-90.01	165.9	-33.6	495.3	471.3	24.01	20.627			
5,400.0	5,369.7	5,379.9	5,370.7	14.8	12.0	-90.01	165.9	-33.6	495.3	470.8	24.43	20.276			
5,500.0	5,469.7	5,479.9	5,470.7	15.0	12.2	-90.01	165.9	-33.6	495.3	470.4	24.84	19.937			
5,600.0	5,569.7	5,579.9	5,570.7	15.2	12.4	-90.01	165.9	-33.6	495.3	470.0	25.26	19.608			
5,700.0	5,669.7	5,679.9	5,670.7	15.3	12.7	-90.01	165.9	-33.6	495.3	469.6	25.68	19.289			
5,800.0	5,769.7	5,779.9	5,770.7	15.5	12.9	-90.01	165.9	-33.6	495.3	469.2	26.10	18.979			
5,900.0	5,869.7	5,879.9	5,870.7	15.7	13.1	-90.01	165.9	-33.6	495.3	468.8	26.52	18.679			
6,000.0	5,969.7	5,979.9	5,970.7	15.9	13.3	-90.01	165.9	-33.6	495.3	468.3	26.94	18.387			
6,100.0	6,069.7	6,079.9	6,070.7	16.0	13.5	-90.01	165.9	-33.6	495.3	467.9	27.36	18.103			
6,200.0	6,169.7	6,179.9	6,170.7	16.2	13.8	-90.01	165.9	-33.6	495.3	467.5	27.78	17.828			
6,300.0	6,269.7	6,279.9	6,270.7	16.4	14.0	-90.01	165.9	-33.6	495.3	467.1	28.20	17.560			
6,400.0	6,369.7	6,379.9	6,370.7	16.6	14.2	-90.01	165.9	-33.6	495.3	466.6	28.63	17.300			
6,436.3	6,406.0	6,416.2	6,407.0	16.7	14.3	91.24	165.9	-33.6	495.3	466.5	28.75	17.228			
6,500.0	6,469.7	6,479.8	6,470.7	16.8	14.4	91.41	165.9	-33.6	495.3	466.3	29.02	17.071			
6,600.0	6,567.8	6,578.0	6,568.8	16.9	14.6	93.41	165.9	-33.6	496.1	466.7	29.40	16.875			
6,700.0	6,660.6	6,677.0	6,667.8	17.0	14.8	97.00	163.6	-33.5	499.5	469.8	29.71	16.810			
6,800.0	6,744.7	6,788.1	6,776.5	17.0	14.9	100.89	141.5	-33.1	505.5	475.7	29.84	16.941			
6,900.0	6,817.0	6,910.3	6,887.6	17.1	15.0	104.52	91.3	-32.0	513.2	483.4	29.81	17.219			
7,000.0	6,874.8	7,045.0	6,992.7	17.3	15.2	107.69	7.8	-30.3	521.3	491.5	29.79	17.498			
7,100.0	6,916.0	7,192.0	7,078.9	17.6	15.5	110.09	-110.6	-27.9	528.0	497.9	30.15	17.511			
7,200.0	6,939.0	7,348.3	7,130.6	18.0	16.3	111.36	-257.4	-24.8	531.8	500.5	31.31	16.986			
7,300.0	6,943.8	7,485.6	7,139.6	18.7	17.3	111.48	-394.1	-22.0	532.1	498.9	33.16	16.047			
7,400.0	6,943.3	7,585.6	7,139.3	19.5	18.3	111.49	-494.1	-20.0	532.2	497.2	34.99	15.208			
7,500.0	6,942.9	7,685.6	7,138.9	20.5	19.4	111.50	-594.1	-17.9	532.2	495.1	37.08	14.352			
7,600.0	6,942.4	7,785.6	7,138.6	21.7	20.6	111.51	-694.1	-15.8	532.2	492.8	39.40	13.510			
7,700.0	6,941.9	7,885.6	7,138.2	22.9	21.9	111.53	-794.0	-13.8	532.3	490.4	41.89	12.706			
7,800.0	6,941.5	7,985.6	7,137.9	24.3	23.3	111.54	-894.0	-11.7	532.3	487.8	44.55	11.950			
7,900.0	6,941.0	8,085.6	7,137.5	25.7	24.8	111.55	-994.0	-9.6	532.4	485.1	47.33	11.249			
8,000.0	6,940.5	8,185.6	7,137.2	27.2	26.4	111.56	-1,094.0	-7.6	532.4	482.2	50.21	10.603			
8,100.0	6,940.0	8,285.6	7,136.8	28.7	27.9	111.57	-1,193.9	-5.5	532.5	479.3	53.19	10.011			
8,200.0	6,939.6	8,385.6	7,136.5	30.3	29.6	111.59	-1,293.9	-3.5	532.5	476.3	56.24	9.469			
8,300.0	6,939.1	8,485.6	7,136.1	31.9	31.2	111.60	-1,393.9	-1.4	532.6	473.2	59.35	8.973			
8,400.0	6,938.6	8,585.6	7,135.8	33.6	32.9	111.61	-1,493.9	0.7	532.6	470.1	62.52	8.519			
8,500.0	6,938.2	8,685.6	7,135.4	35.2	34.6	111.62	-1,593.9	2.7	532.6	466.9	65.73	8.103			
8,600.0	6,937.7	8,785.6	7,135.1	36.9	36.4	111.64	-1,693.8	4.8	532.7	463.7	68.98	7.722			
8,700.0	6,937.2	8,885.6	7,134.7	38.7	38.1	111.65	-1,793.8	6.9	532.7	460.5	72.27	7.371			
8,800.0	6,936.7	8,985.6	7,134.4	40.4	39.9	111.66	-1,893.8	8.9	532.8	457.2	75.59	7.049			
8,900.0	6,936.3	9,085.6	7,134.0	42.2	41.7	111.67	-1,993.8	11.0	532.8	453.9	78.93	6.751			
9,000.0	6,935.8	9,185.6	7,133.7	43.9	43.4	111.68	-2,093.7	13.0	532.9	450.6	82.29	6.475			
9,100.0	6,935.3	9,285.6	7,133.3	45.7	45.3	111.70	-2,193.7	15.1	532.9	447.2	85.68	6.220			
9,200.0	6,934.9	9,385.6	7,133.0	47.5	47.1	111.71	-2,293.7	17.2	533.0	443.9	89.08	5.983			
9,300.0	6,934.4	9,485.6	7,132.6	49.3	48.9	111.72	-2,393.7	19.2	533.0	440.5	92.49	5.763			
9,400.0	6,933.9	9,585.6	7,132.3	51.1	50.7	111.73	-2,493.7	21.3	533.1	437.1	95.92	5.557			
9,500.0	6,933.4	9,685.6	7,131.9	53.0	52.6	111.75	-2,593.6	23.3	533.1	433.7	99.37	5.365			
9,600.0	6,933.0	9,785.6	7,131.6	54.8	54.4	111.76	-2,693.6	25.4	533.1	430.3	102.82	5.185			
9,700.0	6,932.5	9,885.6	7,131.2	56.6	56.2	111.77	-2,793.6	27.5	533.2	426.9	106.28	5.017			
9,800.0	6,932.0	9,985.6	7,130.9	58.5	58.1	111.78	-2,893.6	29.5	533.2	423.5	109.76	4.858			
9,900.0	6,931.6	10,085.6	7,130.5	60.3	60.0	111.79	-2,993.6	31.6	533.3	420.0	113.24	4.709			
10,000.0	6,931.1	10,185.6	7,130.2	62.1	61.8	111.81	-3,093.5	33.7	533.3	416.6	116.72	4.569			
10,100.0	6,930.6	10,285.6	7,129.9	64.0	63.7	111.82	-3,193.5	35.7	533.4	413.2	120.22	4.437			
10,200.0	6,930.1	10,385.6	7,129.5	65.9	65.5	111.83	-3,293.5	37.8	533.4	409.7	123.72	4.312			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,300.0	6,929.7	10,485.6	7,129.2	67.7	67.4	111.84	-3,393.5	39.8	533.5	406.2	127.22	4.193			
10,400.0	6,929.2	10,585.6	7,128.8	69.6	69.3	111.85	-3,493.4	41.9	533.5	402.8	130.73	4.081			
10,500.0	6,928.7	10,685.6	7,128.5	71.5	71.2	111.87	-3,593.4	44.0	533.6	399.3	134.25	3.974			
10,600.0	6,928.3	10,785.6	7,128.1	73.3	73.0	111.88	-3,693.4	46.0	533.6	395.8	137.77	3.873			
10,700.0	6,927.8	10,885.6	7,127.8	75.2	74.9	111.89	-3,793.4	48.1	533.6	392.4	141.29	3.777			
10,800.0	6,927.3	10,985.6	7,127.4	77.1	76.8	111.90	-3,893.4	50.2	533.7	388.9	144.82	3.685			
10,900.0	6,926.8	11,085.6	7,127.1	78.9	78.7	111.92	-3,993.3	52.2	533.7	385.4	148.35	3.598			
11,000.0	6,926.4	11,185.6	7,126.7	80.8	80.6	111.93	-4,093.3	54.3	533.8	381.9	151.88	3.515			
11,100.0	6,925.9	11,285.6	7,126.4	82.7	82.5	111.94	-4,193.3	56.3	533.8	378.4	155.41	3.435			
11,200.0	6,925.4	11,385.6	7,126.0	84.6	84.4	111.95	-4,293.3	58.4	533.9	374.9	158.95	3.359			
11,300.0	6,925.0	11,485.6	7,125.7	86.5	86.3	111.96	-4,393.2	60.5	533.9	371.4	162.49	3.286			
11,400.0	6,924.5	11,585.6	7,125.3	88.4	88.2	111.98	-4,493.2	62.5	534.0	367.9	166.03	3.216			
11,455.8	6,924.2	11,641.4	7,125.1	89.4	89.2	111.98	-4,549.0	63.7	534.0	366.0	168.01	3.178			
11,500.0	6,924.0	11,675.1	7,125.0	90.3	89.8	111.99	-4,582.7	64.4	534.1	364.7	169.39	3.153			
11,504.1	6,924.0	11,675.1	7,125.0	90.3	89.8	111.99	-4,582.7	64.4	534.2	364.7	169.46	3.152 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance			Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	1.0	1.0	0.0	0.0	-89.93	0.0	-28.0	28.0	28.0	0.00	N/A			
100.0	100.0	101.0	101.0	0.1	0.1	-89.93	0.0	-28.0	28.0	27.8	0.23	123.256			
200.0	200.0	201.0	201.0	0.3	0.3	-89.93	0.0	-28.0	28.0	27.3	0.68	41.358			
300.0	300.0	301.0	301.0	0.6	0.6	-89.93	0.0	-28.0	28.0	26.9	1.13	24.848			
400.0	400.0	401.0	401.0	0.8	0.8	-89.93	0.0	-28.0	28.0	26.4	1.58	17.759			
500.0	500.0	501.0	501.0	1.0	1.0	-89.93	0.0	-28.0	28.0	26.0	2.03	13.817			
600.0	600.0	601.0	601.0	1.2	1.2	-89.93	0.0	-28.0	28.0	25.5	2.47	11.307			
700.0	700.0	701.0	701.0	1.5	1.5	-89.93	0.0	-28.0	28.0	25.1	2.92	9.569			
800.0	800.0	801.0	801.0	1.7	1.7	-89.93	0.0	-28.0	28.0	24.6	3.37	8.294			
900.0	900.0	901.0	901.0	1.9	1.9	-89.93	0.0	-28.0	28.0	24.2	3.82	7.319			
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-89.93	0.0	-28.0	28.0	23.7	4.27	6.549	CC, ES		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-161.29	0.0	-28.0	29.6	24.9	4.71	6.288			
1,200.0	1,199.8	1,200.8	1,200.8	2.6	2.6	-164.04	0.0	-28.0	34.6	29.5	5.14	6.735			
1,300.0	1,299.5	1,300.5	1,300.5	2.8	2.8	-167.19	0.0	-28.0	43.1	37.5	5.57	7.736			
1,400.0	1,398.7	1,399.7	1,399.7	3.0	3.0	-169.94	0.0	-28.0	54.8	48.8	6.00	9.140			
1,500.0	1,497.9	1,498.9	1,498.9	3.3	3.3	-171.83	0.0	-28.0	67.3	60.9	6.44	10.464			
1,600.0	1,597.1	1,598.1	1,598.1	3.6	3.5	-173.12	0.0	-28.0	79.9	73.0	6.88	11.619			
1,700.0	1,696.3	1,699.3	1,699.3	3.8	3.7	-173.64	1.0	-27.1	91.5	84.2	7.32	12.491			
1,800.0	1,795.5	1,801.0	1,800.9	4.1	3.9	-173.23	3.8	-24.3	100.8	93.0	7.77	12.979			
1,900.0	1,894.7	1,903.1	1,902.8	4.4	4.2	-172.08	8.7	-19.7	107.9	99.7	8.22	13.137			
2,000.0	1,993.9	2,005.3	2,004.6	4.7	4.4	-170.28	15.5	-13.1	112.9	104.2	8.67	13.021			
2,100.0	2,093.1	2,105.5	2,104.2	5.0	4.6	-168.15	23.5	-5.5	116.6	107.5	9.13	12.771			
2,200.0	2,192.3	2,205.4	2,203.4	5.3	4.9	-166.16	31.4	2.1	120.5	110.9	9.60	12.546			
2,300.0	2,291.5	2,305.2	2,302.6	5.6	5.1	-164.28	39.3	9.8	124.5	114.4	10.08	12.346			
2,400.0	2,390.6	2,405.1	2,401.9	5.9	5.4	-162.53	47.2	17.4	128.6	118.0	10.57	12.165			
2,500.0	2,489.8	2,504.9	2,501.1	6.2	5.6	-160.88	55.2	25.0	132.8	121.7	11.07	12.002			
2,600.0	2,589.0	2,604.7	2,600.3	6.6	5.9	-159.34	63.1	32.6	137.1	125.6	11.57	11.853			
2,700.0	2,688.2	2,704.6	2,699.6	6.9	6.2	-157.89	71.0	40.2	141.6	129.5	12.08	11.718			
2,800.0	2,787.4	2,804.4	2,798.8	7.2	6.4	-156.53	78.9	47.8	146.1	133.5	12.60	11.593			
2,900.0	2,886.6	2,904.3	2,898.0	7.5	6.7	-155.26	86.9	55.5	150.6	137.5	13.12	11.479			
3,000.0	2,985.8	3,004.1	2,997.3	7.8	7.0	-154.05	94.8	63.1	155.3	141.6	13.65	11.373			
3,100.0	3,085.0	3,103.9	3,096.5	8.1	7.3	-152.92	102.7	70.7	160.0	145.8	14.19	11.276			
3,200.0	3,184.2	3,203.8	3,195.7	8.5	7.5	-151.86	110.7	78.3	164.8	150.0	14.73	11.185			
3,300.0	3,283.4	3,303.6	3,295.0	8.8	7.8	-150.85	118.6	85.9	169.6	154.3	15.28	11.102			
3,400.0	3,382.6	3,403.5	3,394.2	9.1	8.1	-149.90	126.5	93.5	174.5	158.7	15.83	11.024			
3,500.0	3,481.8	3,503.3	3,493.4	9.4	8.4	-149.00	134.4	101.2	179.4	163.0	16.38	10.951			
3,600.0	3,580.9	3,603.1	3,592.7	9.7	8.7	-148.15	142.4	108.8	184.4	167.4	16.94	10.883			
3,700.0	3,680.1	3,702.7	3,691.6	10.1	9.0	-147.36	150.2	116.3	189.4	171.9	17.50	10.823			
3,800.0	3,779.3	3,800.0	3,788.5	10.4	9.2	-147.01	156.9	122.7	195.2	177.3	17.98	10.857			
3,900.0	3,878.5	3,897.1	3,885.4	10.7	9.4	-147.28	161.7	127.3	202.4	184.0	18.43	10.981			
4,000.0	3,977.7	3,994.0	3,982.1	11.0	9.6	-148.11	164.7	130.3	210.9	192.0	18.84	11.191			
4,100.0	4,076.9	4,090.4	4,078.6	11.3	9.7	-149.41	166.0	131.5	220.8	201.6	19.22	11.487			
4,200.0	4,176.1	4,188.9	4,177.1	11.7	9.9	-150.98	166.0	131.5	231.8	212.2	19.59	11.831			
4,300.0	4,275.3	4,288.1	4,276.3	12.0	10.1	-152.43	166.0	131.5	243.0	223.0	19.99	12.157			
4,400.0	4,374.5	4,387.3	4,375.5	12.3	10.3	-153.75	166.0	131.5	254.3	233.9	20.39	12.473			
4,500.0	4,473.7	4,486.5	4,474.7	12.6	10.5	-154.96	166.0	131.5	265.8	245.0	20.79	12.780			
4,600.0	4,572.9	4,585.7	4,573.9	13.0	10.7	-156.07	166.0	131.5	277.3	256.1	21.21	13.078			
4,700.0	4,672.1	4,684.9	4,673.1	13.3	10.9	-157.09	166.0	131.5	289.0	267.4	21.62	13.366			
4,800.0	4,771.2	4,784.1	4,772.2	13.6	11.1	-158.03	166.0	131.5	300.7	278.7	22.04	13.645			
4,900.0	4,870.5	4,883.3	4,871.5	13.9	11.3	-158.91	166.0	131.5	312.4	289.9	22.46	13.905			
5,000.0	4,970.0	4,982.8	4,971.0	14.1	11.5	-159.60	166.0	131.5	321.5	298.6	22.86	14.064			
5,100.0	5,069.8	5,082.6	5,070.8	14.3	11.7	-160.02	166.0	131.5	327.4	304.2	23.24	14.089			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,182.6	5,170.7	14.5	11.9	-160.21	166.0	131.5	330.0	306.4	23.60	13.986			
5,300.0	5,269.7	5,282.6	5,270.7	14.6	12.1	-89.99	166.0	131.5	330.2	306.1	24.03	13.739			
5,400.0	5,369.7	5,382.6	5,370.7	14.8	12.4	-89.99	166.0	131.5	330.2	305.7	24.44	13.508			
5,500.0	5,469.7	5,482.6	5,470.7	15.0	12.6	-89.99	166.0	131.5	330.2	305.3	24.86	13.283			
5,600.0	5,569.7	5,582.6	5,570.7	15.2	12.8	-89.99	166.0	131.5	330.2	304.9	25.27	13.066			
5,700.0	5,669.7	5,682.6	5,670.7	15.3	13.0	-89.99	166.0	131.5	330.2	304.5	25.69	12.854			
5,800.0	5,769.7	5,782.6	5,770.7	15.5	13.2	-89.99	166.0	131.5	330.2	304.1	26.10	12.649			
5,900.0	5,869.7	5,882.6	5,870.7	15.7	13.4	-89.99	166.0	131.5	330.2	303.7	26.52	12.450			
6,000.0	5,969.7	5,982.6	5,970.7	15.9	13.6	-89.99	166.0	131.5	330.2	303.2	26.94	12.256			
6,100.0	6,069.7	6,082.6	6,070.7	16.0	13.8	-89.99	166.0	131.5	330.2	302.8	27.36	12.068			
6,200.0	6,169.7	6,182.6	6,170.7	16.2	14.1	-89.99	166.0	131.5	330.2	302.4	27.78	11.886			
6,300.0	6,269.7	6,282.6	6,270.7	16.4	14.3	-89.99	166.0	131.5	330.2	302.0	28.20	11.708			
6,400.0	6,369.7	6,382.6	6,370.7	16.6	14.5	-89.99	166.0	131.5	330.2	301.6	28.62	11.535			
6,500.0	6,469.7	6,483.2	6,471.3	16.8	14.7	91.18	163.9	131.6	330.2	301.2	28.97	11.399			
6,600.0	6,567.8	6,584.5	6,570.6	16.9	14.8	91.14	145.0	132.0	330.2	301.0	29.19	11.310			
6,700.0	6,660.6	6,685.7	6,664.4	17.0	14.9	91.06	107.3	132.7	330.2	300.8	29.33	11.256			
6,800.0	6,744.7	6,786.9	6,749.0	17.0	15.0	90.93	52.2	133.9	330.2	300.7	29.48	11.200			
6,900.0	6,817.0	6,887.8	6,821.4	17.1	15.0	90.77	-17.9	135.3	330.1	300.4	29.76	11.095			
7,000.0	6,874.8	6,988.6	6,878.7	17.3	15.2	90.59	-100.6	137.0	330.1	299.8	30.29	10.899			
7,100.0	6,916.0	7,089.1	6,919.0	17.6	15.6	90.38	-192.5	138.9	330.1	298.9	31.17	10.590			
7,200.0	6,939.0	7,189.4	6,940.9	18.0	16.3	90.15	-290.2	140.9	330.1	297.7	32.43	10.179			
7,241.8	6,943.5	7,231.2	6,944.4	18.3	16.6	89.98	-331.8	141.8	330.1	297.0	33.08	9.979			
7,300.0	6,943.8	7,289.4	6,944.8	18.7	17.1	89.99	-390.0	143.0	330.1	296.1	34.04	9.698			
7,400.0	6,943.3	7,389.4	6,944.3	19.5	18.0	89.99	-490.0	145.0	330.1	294.1	35.99	9.173			
7,500.0	6,942.9	7,489.4	6,943.8	20.5	19.2	89.99	-590.0	147.1	330.1	291.9	38.22	8.638			
7,600.0	6,942.4	7,589.4	6,943.4	21.7	20.4	89.99	-690.0	149.2	330.1	289.4	40.69	8.113			
7,700.0	6,941.9	7,689.4	6,942.9	22.9	21.7	89.99	-789.9	151.2	330.1	286.8	43.37	7.612			
7,800.0	6,941.5	7,789.4	6,942.4	24.3	23.1	89.99	-889.9	153.3	330.1	283.9	46.21	7.144			
7,900.0	6,941.0	7,889.4	6,942.0	25.7	24.6	89.99	-989.9	155.3	330.1	280.9	49.18	6.712			
8,000.0	6,940.5	7,989.4	6,941.5	27.2	26.2	89.99	-1,089.9	157.4	330.1	277.8	52.28	6.315			
8,100.0	6,940.0	8,089.4	6,941.0	28.7	27.8	89.99	-1,189.9	159.5	330.1	274.7	55.46	5.952			
8,200.0	6,939.6	8,189.4	6,940.5	30.3	29.4	89.99	-1,289.8	161.5	330.1	271.4	58.73	5.621			
8,300.0	6,939.1	8,289.4	6,940.1	31.9	31.1	89.99	-1,389.8	163.6	330.1	268.1	62.06	5.320			
8,400.0	6,938.6	8,389.4	6,939.6	33.6	32.8	89.99	-1,489.8	165.7	330.1	264.7	65.45	5.044			
8,500.0	6,938.2	8,489.4	6,939.1	35.2	34.5	89.99	-1,589.8	167.7	330.1	261.2	68.88	4.793			
8,600.0	6,937.7	8,589.4	6,938.7	36.9	36.2	89.99	-1,689.7	169.8	330.1	257.8	72.36	4.562			
8,700.0	6,937.2	8,689.4	6,938.2	38.7	38.0	89.99	-1,789.7	171.8	330.1	254.3	75.88	4.351			
8,800.0	6,936.7	8,789.4	6,937.7	40.4	39.7	89.99	-1,889.7	173.9	330.1	250.7	79.42	4.157			
8,900.0	6,936.3	8,889.4	6,937.2	42.2	41.5	89.99	-1,989.7	176.0	330.1	247.1	82.99	3.978			
9,000.0	6,935.8	8,989.4	6,936.8	43.9	43.3	89.99	-2,089.7	178.0	330.1	243.5	86.59	3.813			
9,100.0	6,935.3	9,089.4	6,936.3	45.7	45.1	89.99	-2,189.6	180.1	330.1	239.9	90.20	3.660			
9,200.0	6,934.9	9,189.4	6,935.8	47.5	47.0	89.99	-2,289.6	182.1	330.1	236.3	93.84	3.518			
9,300.0	6,934.4	9,289.4	6,935.4	49.3	48.8	89.99	-2,389.6	184.2	330.1	232.6	97.49	3.386			
9,400.0	6,933.9	9,389.4	6,934.9	51.1	50.6	89.99	-2,489.6	186.3	330.1	229.0	101.16	3.264			
9,500.0	6,933.4	9,489.4	6,934.4	53.0	52.4	89.99	-2,589.5	188.3	330.1	225.3	104.83	3.149			
9,600.0	6,933.0	9,589.4	6,933.9	54.8	54.3	89.99	-2,689.5	190.4	330.1	221.6	108.52	3.042			
9,700.0	6,932.5	9,689.4	6,933.5	56.6	56.1	89.99	-2,789.5	192.4	330.1	217.9	112.23	2.942			
9,800.0	6,932.0	9,789.4	6,933.0	58.5	58.0	89.99	-2,889.5	194.5	330.1	214.2	115.94	2.848			
9,900.0	6,931.6	9,889.4	6,932.5	60.3	59.9	89.99	-2,989.5	196.6	330.1	210.5	119.66	2.759			
10,000.0	6,931.1	9,989.4	6,932.1	62.1	61.7	89.99	-3,089.4	198.6	330.1	206.8	123.38	2.676			
10,100.0	6,930.6	10,089.4	6,931.6	64.0	63.6	89.99	-3,189.4	200.7	330.1	203.0	127.12	2.597			
10,200.0	6,930.1	10,189.4	6,931.1	65.9	65.5	89.99	-3,289.4	202.8	330.1	199.3	130.86	2.523			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,300.0	6,929.7	10,289.4	6,930.6	67.7	67.3	89.99	-3,389.4	204.8	330.1	195.5	134.60	2.453			
10,400.0	6,929.2	10,389.4	6,930.2	69.6	69.2	89.99	-3,489.3	206.9	330.1	191.8	138.36	2.386			
10,500.0	6,928.7	10,489.4	6,929.7	71.5	71.1	89.99	-3,589.3	208.9	330.1	188.0	142.11	2.323			
10,600.0	6,928.3	10,589.4	6,929.2	73.3	73.0	89.99	-3,689.3	211.0	330.1	184.3	145.88	2.263			
10,700.0	6,927.8	10,689.4	6,928.8	75.2	74.8	89.99	-3,789.3	213.1	330.2	180.5	149.64	2.206			
10,800.0	6,927.3	10,789.4	6,928.3	77.1	76.7	89.99	-3,889.3	215.1	330.2	176.7	153.41	2.152			
10,900.0	6,926.8	10,889.4	6,927.8	78.9	78.6	89.99	-3,989.2	217.2	330.2	173.0	157.19	2.100			
11,000.0	6,926.4	10,989.4	6,927.3	80.8	80.5	89.99	-4,089.2	219.2	330.2	169.2	160.96	2.051			
11,100.0	6,925.9	11,089.4	6,926.9	82.7	82.4	89.99	-4,189.2	221.3	330.2	165.4	164.75	2.004			
11,200.0	6,925.4	11,189.4	6,926.4	84.6	84.3	89.99	-4,289.2	223.4	330.2	161.6	168.53	1.959			
11,300.0	6,925.0	11,289.4	6,925.9	86.5	86.2	89.99	-4,389.1	225.4	330.2	157.8	172.32	1.916			
11,400.0	6,924.5	11,389.4	6,925.5	88.4	88.1	89.99	-4,489.1	227.5	330.2	154.1	176.11	1.875			
11,460.1	6,924.2	11,449.5	6,925.2	89.5	89.2	89.99	-4,549.2	228.7	330.2	151.8	178.38	1.851			
11,500.0	6,924.0	11,486.7	6,925.0	90.3	89.9	89.99	-4,586.4	229.5	330.2	150.3	179.85	1.836			
11,504.1	6,924.0	11,486.7	6,925.0	90.3	89.9	89.99	-4,586.4	229.5	330.2	150.3	179.92	1.835 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference				Offset			Semi Major Axis			Distance			Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-89.93	0.0	-14.0	14.0	14.0	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-89.93	0.0	-14.0	14.0	13.8	0.23	61.628		
200.0	200.0	201.0	201.0	0.3	0.3	-89.93	0.0	-14.0	14.0	13.3	0.68	20.679		
300.0	300.0	301.0	301.0	0.6	0.6	-89.93	0.0	-14.0	14.0	12.9	1.13	12.424		
400.0	400.0	401.0	401.0	0.8	0.8	-89.93	0.0	-14.0	14.0	12.4	1.58	8.879		
500.0	500.0	501.0	501.0	1.0	1.0	-89.93	0.0	-14.0	14.0	12.0	2.03	6.908		
600.0	600.0	601.0	601.0	1.2	1.2	-89.93	0.0	-14.0	14.0	11.5	2.47	5.653		
700.0	700.0	701.0	701.0	1.5	1.5	-89.93	0.0	-14.0	14.0	11.1	2.92	4.784		
800.0	800.0	801.0	801.0	1.7	1.7	-89.93	0.0	-14.0	14.0	10.6	3.37	4.147		
900.0	900.0	901.0	901.0	1.9	1.9	-89.93	0.0	-14.0	14.0	10.2	3.82	3.659		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-89.93	0.0	-14.0	14.0	9.7	4.27	3.274 CC		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-162.32	0.0	-14.0	15.6	10.9	4.71	3.320		
1,200.0	1,199.8	1,200.8	1,200.8	2.6	2.6	-166.70	0.0	-14.0	20.7	15.5	5.14	4.024		
1,300.0	1,299.5	1,300.5	1,300.5	2.8	2.8	-170.60	0.0	-14.0	29.2	23.7	5.57	5.252		
1,400.0	1,398.7	1,399.7	1,399.7	3.0	3.0	-173.31	0.0	-14.0	41.1	35.1	6.00	6.854		
1,500.0	1,497.9	1,500.3	1,500.3	3.3	3.3	-174.57	0.6	-12.8	52.5	46.0	6.43	8.160		
1,600.0	1,597.1	1,601.3	1,601.3	3.6	3.5	-174.83	2.5	-9.3	61.3	54.4	6.86	8.934		
1,700.0	1,696.3	1,702.8	1,702.5	3.8	3.7	-174.50	5.6	-3.4	67.5	60.2	7.30	9.254		
1,800.0	1,795.5	1,804.5	1,803.8	4.1	3.9	-173.71	10.1	4.9	71.2	63.5	7.74	9.198		
1,900.0	1,894.7	1,905.8	1,904.3	4.4	4.2	-172.47	15.6	15.4	72.5	64.3	8.19	8.847		
2,000.0	1,993.9	2,005.7	2,003.5	4.7	4.4	-171.15	21.4	26.3	73.2	64.5	8.64	8.466		
2,100.0	2,093.1	2,105.7	2,102.7	5.0	4.7	-169.85	27.2	37.2	73.9	64.8	9.10	8.122		
2,200.0	2,192.3	2,205.7	2,202.0	5.3	5.0	-168.59	33.0	48.1	74.7	65.2	9.57	7.810		
2,300.0	2,291.5	2,305.7	2,301.2	5.6	5.2	-167.35	38.8	59.0	75.6	65.5	10.04	7.527		
2,400.0	2,390.6	2,405.7	2,400.4	5.9	5.5	-166.14	44.6	69.9	76.4	65.9	10.51	7.268		
2,500.0	2,489.8	2,505.7	2,499.6	6.2	5.8	-164.95	50.4	80.8	77.3	66.3	11.00	7.030		
2,600.0	2,589.0	2,605.6	2,598.8	6.6	6.1	-163.80	56.2	91.7	78.2	66.8	11.49	6.812		
2,700.0	2,688.2	2,705.6	2,698.0	6.9	6.4	-162.67	62.0	102.6	79.2	67.2	11.98	6.611		
2,800.0	2,787.4	2,805.6	2,797.3	7.2	6.7	-161.57	67.8	113.5	80.2	67.7	12.48	6.426		
2,900.0	2,886.6	2,905.6	2,896.5	7.5	7.0	-160.49	73.6	124.4	81.2	68.2	12.98	6.254		
3,000.0	2,985.8	3,005.6	2,995.7	7.8	7.3	-159.45	79.3	135.3	82.3	68.8	13.50	6.095		
3,100.0	3,085.0	3,105.6	3,094.9	8.1	7.6	-158.43	85.1	146.2	83.3	69.3	14.01	5.946		
3,200.0	3,184.2	3,205.5	3,194.1	8.5	7.9	-157.43	90.9	157.1	84.4	69.9	14.53	5.808		
3,300.0	3,283.4	3,305.5	3,293.4	8.8	8.2	-156.46	96.7	168.1	85.5	70.5	15.06	5.679		
3,400.0	3,382.6	3,405.5	3,392.6	9.1	8.5	-155.52	102.5	179.0	86.7	71.1	15.60	5.559		
3,500.0	3,481.8	3,505.5	3,491.8	9.4	8.8	-154.60	108.3	189.9	87.9	71.7	16.13	5.446		
3,600.0	3,580.9	3,605.5	3,591.0	9.7	9.1	-153.71	114.1	200.8	89.1	72.4	16.68	5.340		
3,700.0	3,680.1	3,705.5	3,690.2	10.1	9.4	-152.84	119.9	211.7	90.3	73.0	17.22	5.241		
3,800.0	3,779.3	3,805.4	3,789.4	10.4	9.7	-151.99	125.7	222.6	91.5	73.7	17.78	5.147		
3,900.0	3,878.5	3,905.4	3,888.7	10.7	10.0	-151.16	131.5	233.5	92.8	74.4	18.33	5.059		
4,000.0	3,977.7	4,005.4	3,987.9	11.0	10.3	-150.36	137.3	244.4	94.0	75.1	18.89	4.976		
4,100.0	4,076.9	4,105.4	4,087.1	11.3	10.6	-149.58	143.1	255.3	95.3	75.9	19.46	4.898		
4,200.0	4,176.1	4,205.4	4,186.3	11.7	10.9	-148.82	148.8	266.2	96.6	76.6	20.03	4.824		
4,300.0	4,275.3	4,304.2	4,284.5	12.0	11.2	-148.25	154.4	276.6	98.3	77.7	20.57	4.777		
4,400.0	4,374.5	4,402.2	4,382.0	12.3	11.4	-148.54	158.8	284.9	101.7	80.7	21.02	4.839		
4,500.0	4,473.7	4,500.0	4,479.5	12.6	11.6	-149.66	162.0	291.0	107.2	85.8	21.41	5.006		
4,600.0	4,572.9	4,597.4	4,576.8	13.0	11.8	-151.42	164.1	294.9	114.7	92.9	21.74	5.275		
4,700.0	4,672.1	4,694.3	4,673.8	13.3	12.0	-153.63	165.0	296.5	124.4	102.3	22.03	5.645		
4,800.0	4,771.2	4,792.8	4,772.2	13.6	12.2	-155.97	165.0	296.6	135.8	113.5	22.33	6.082		
4,900.0	4,870.5	4,892.0	4,871.5	13.9	12.3	-157.97	165.0	296.6	147.3	124.6	22.66	6.500		
5,000.0	4,970.0	4,991.6	4,971.0	14.1	12.5	-159.38	165.0	296.6	156.4	133.4	22.99	6.802		
5,100.0	5,069.8	5,091.4	5,070.8	14.3	12.7	-160.20	165.0	296.6	162.3	139.0	23.33	6.957		

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,191.3	5,170.7	14.5	12.9	-160.55	165.0	296.6	164.9	141.3	23.66	6.971			
5,300.0	5,269.7	5,291.3	5,270.7	14.6	13.1	-90.34	165.0	296.6	165.1	141.0	24.10	6.851			
5,400.0	5,369.7	5,391.3	5,370.7	14.8	13.3	-90.34	165.0	296.6	165.1	140.6	24.50	6.737			
5,500.0	5,469.7	5,491.3	5,470.7	15.0	13.5	-90.34	165.0	296.6	165.1	140.2	24.91	6.627			
5,600.0	5,569.7	5,591.3	5,570.7	15.2	13.7	-90.34	165.0	296.6	165.1	139.8	25.32	6.520			
5,700.0	5,669.7	5,691.3	5,670.7	15.3	13.9	-90.34	165.0	296.6	165.1	139.4	25.73	6.416			
5,800.0	5,769.7	5,791.3	5,770.7	15.5	14.1	-90.34	165.0	296.6	165.1	139.0	26.14	6.315			
5,900.0	5,869.7	5,891.3	5,870.7	15.7	14.3	-90.34	165.0	296.6	165.1	138.5	26.55	6.217			
6,000.0	5,969.7	5,991.3	5,970.7	15.9	14.5	-90.34	165.0	296.6	165.1	138.1	26.97	6.122			
6,100.0	6,069.7	6,091.3	6,070.7	16.0	14.7	-90.34	165.0	296.6	165.1	137.7	27.38	6.029			
6,200.0	6,169.7	6,191.3	6,170.7	16.2	14.9	-90.34	165.0	296.6	165.1	137.3	27.80	5.939			
6,300.0	6,269.7	6,291.3	6,270.7	16.4	15.1	-90.34	165.0	296.6	165.1	136.9	28.22	5.851			
6,400.0	6,369.7	6,391.3	6,370.7	16.6	15.3	-90.34	165.0	296.6	165.1	136.5	28.63	5.765			
6,500.0	6,469.7	6,491.5	6,470.9	16.8	15.4	90.84	162.9	296.7	165.1	136.1	28.97	5.700			
6,600.0	6,567.8	6,592.0	6,569.4	16.9	15.6	90.81	144.3	297.0	165.1	135.9	29.20	5.655			
6,700.0	6,660.6	6,692.4	6,662.6	17.0	15.6	90.75	107.2	297.8	165.1	135.7	29.34	5.626			
6,800.0	6,744.7	6,792.8	6,746.9	17.0	15.7	90.66	52.9	298.9	165.1	135.6	29.49	5.597			
6,900.0	6,817.0	6,893.2	6,819.2	17.1	15.8	90.55	-16.4	300.4	165.1	135.3	29.78	5.544			
7,000.0	6,874.8	6,993.4	6,876.8	17.3	16.0	90.42	-98.2	302.0	165.1	134.8	30.31	5.446			
7,100.0	6,916.0	7,093.6	6,917.7	17.6	16.3	90.27	-189.5	303.9	165.1	133.9	31.19	5.293			
7,200.0	6,939.0	7,193.7	6,940.4	18.0	16.8	90.11	-286.8	305.9	165.1	132.6	32.45	5.088			
7,273.4	6,945.3	7,267.1	6,944.9	18.5	17.4	89.53	-360.0	307.4	165.1	131.5	33.59	4.915			
7,300.0	6,943.8	7,293.7	6,944.8	18.7	17.6	89.99	-386.6	308.0	165.1	131.0	34.05	4.848			
7,400.0	6,943.3	7,393.7	6,944.3	19.5	18.5	89.99	-486.6	310.0	165.1	129.1	35.99	4.586			
7,500.0	6,942.9	7,493.7	6,943.9	20.5	19.6	89.99	-586.6	312.1	165.1	126.9	38.22	4.319			
7,600.0	6,942.4	7,593.7	6,943.4	21.7	20.8	89.99	-686.6	314.2	165.1	124.4	40.69	4.057			
7,700.0	6,941.9	7,693.7	6,942.9	22.9	22.1	89.99	-786.5	316.2	165.1	121.7	43.36	3.807			
7,800.0	6,941.5	7,793.7	6,942.4	24.3	23.5	89.99	-886.5	318.3	165.1	118.9	46.20	3.573			
7,900.0	6,941.0	7,893.7	6,942.0	25.7	25.0	89.99	-986.5	320.4	165.1	115.9	49.18	3.357			
8,000.0	6,940.5	7,993.7	6,941.5	27.2	26.5	89.99	-1,086.5	322.4	165.1	112.8	52.26	3.158			
8,100.0	6,940.0	8,093.7	6,941.0	28.7	28.1	89.99	-1,186.5	324.5	165.1	109.6	55.45	2.977			
8,200.0	6,939.6	8,193.7	6,940.6	30.3	29.7	89.99	-1,286.4	326.5	165.1	106.4	58.71	2.812			
8,300.0	6,939.1	8,293.7	6,940.1	31.9	31.3	89.99	-1,386.4	328.6	165.1	103.0	62.04	2.661			
8,400.0	6,938.6	8,393.7	6,939.6	33.6	33.0	89.99	-1,486.4	330.7	165.1	99.6	65.43	2.523			
8,500.0	6,938.2	8,493.7	6,939.1	35.2	34.7	89.99	-1,586.4	332.7	165.1	96.2	68.87	2.397			
8,600.0	6,937.7	8,593.7	6,938.7	36.9	36.4	89.99	-1,686.3	334.8	165.1	92.7	72.34	2.282			
8,700.0	6,937.2	8,693.7	6,938.2	38.7	38.2	89.99	-1,786.3	336.9	165.1	89.2	75.86	2.176			
8,800.0	6,936.7	8,793.7	6,937.7	40.4	39.9	89.99	-1,886.3	338.9	165.1	85.7	79.40	2.079			
8,900.0	6,936.3	8,893.7	6,937.3	42.2	41.7	89.99	-1,986.3	341.0	165.1	82.1	82.97	1.990			
9,000.0	6,935.8	8,993.7	6,936.8	43.9	43.5	89.99	-2,086.3	343.0	165.1	78.5	86.57	1.907			
9,100.0	6,935.3	9,093.7	6,936.3	45.7	45.3	89.99	-2,186.2	345.1	165.1	74.9	90.18	1.830			
9,200.0	6,934.9	9,193.7	6,935.8	47.5	47.1	89.99	-2,286.2	347.2	165.1	71.3	93.82	1.760			
9,300.0	6,934.4	9,293.7	6,935.4	49.3	48.9	89.99	-2,386.2	349.2	165.1	67.6	97.47	1.694			
9,400.0	6,933.9	9,393.7	6,934.9	51.1	50.8	89.99	-2,486.2	351.3	165.1	63.9	101.13	1.632			
9,500.0	6,933.4	9,493.7	6,934.4	53.0	52.6	89.99	-2,586.1	353.4	165.1	60.3	104.81	1.575			
9,600.0	6,933.0	9,593.7	6,934.0	54.8	54.4	89.99	-2,686.1	355.4	165.1	56.6	108.50	1.521			
9,700.0	6,932.5	9,693.7	6,933.5	56.6	56.3	89.99	-2,786.1	357.5	165.1	52.9	112.20	1.471 Level 3			
9,800.0	6,932.0	9,793.7	6,933.0	58.5	58.1	89.99	-2,886.1	359.5	165.1	49.2	115.91	1.424 Level 3			
9,900.0	6,931.6	9,893.7	6,932.5	60.3	60.0	89.99	-2,986.1	361.6	165.1	45.4	119.63	1.380 Level 3			
10,000.0	6,931.1	9,993.7	6,932.1	62.1	61.8	89.99	-3,086.0	363.7	165.1	41.7	123.36	1.338 Level 3			
10,100.0	6,930.6	10,093.7	6,931.6	64.0	63.7	89.99	-3,186.0	365.7	165.1	38.0	127.09	1.299 Level 3			
10,200.0	6,930.1	10,193.7	6,931.1	65.9	65.6	89.99	-3,286.0	367.8	165.1	34.2	130.83	1.262 Level 3			

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,300.0	6,929.7	10,293.7	6,930.7	67.7	67.4	89.99	-3,386.0	369.8	165.1	30.5	134.58	1.227	Level 2		
10,400.0	6,929.2	10,393.7	6,930.2	69.6	69.3	89.99	-3,485.9	371.9	165.1	26.7	138.33	1.193	Level 2		
10,500.0	6,928.7	10,493.7	6,929.7	71.5	71.2	89.99	-3,585.9	374.0	165.1	23.0	142.09	1.162	Level 2		
10,600.0	6,928.3	10,593.7	6,929.2	73.3	73.1	89.99	-3,685.9	376.0	165.1	19.2	145.85	1.132	Level 2		
10,700.0	6,927.8	10,693.7	6,928.8	75.2	74.9	89.99	-3,785.9	378.1	165.1	15.5	149.62	1.103	Level 2		
10,800.0	6,927.3	10,793.7	6,928.3	77.1	76.8	89.99	-3,885.9	380.2	165.1	11.7	153.39	1.076	Level 2		
10,900.0	6,926.8	10,893.7	6,927.8	78.9	78.7	89.99	-3,985.8	382.2	165.1	7.9	157.16	1.050	Level 2		
11,000.0	6,926.4	10,993.7	6,927.4	80.8	80.6	89.99	-4,085.8	384.3	165.1	4.1	160.94	1.026	Level 2		
11,100.0	6,925.9	11,093.7	6,926.9	82.7	82.5	89.99	-4,185.8	386.3	165.1	0.4	164.72	1.002	Level 2		
11,200.0	6,925.4	11,193.7	6,926.4	84.6	84.4	89.99	-4,285.8	388.4	165.1	-3.4	168.50	0.980	Level 1		
11,300.0	6,925.0	11,293.7	6,925.9	86.5	86.3	89.99	-4,385.7	390.5	165.1	-7.2	172.29	0.958	Level 1		
11,400.0	6,924.5	11,393.7	6,925.5	88.4	88.1	89.99	-4,485.7	392.5	165.1	-11.0	176.08	0.938	Level 1		
11,500.0	6,924.0	11,493.7	6,925.0	90.3	89.7	89.99	-4,585.7	394.6	165.1	-14.5	179.53	0.920	Level 1		
11,504.1	6,924.0	11,494.4	6,925.0	90.3	89.7	89.99	-4,586.4	394.6	165.1	-14.5	179.62	0.919	Level 1, ES, SF		

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference				Offset		Semi Major Axis			Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	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	899.4	899.4	1.9	1.9	88.59	0.5	18.5	18.5	14.7	3.81	4.846		
1,000.0	1,000.0	998.6	998.4	2.1	2.1	85.59	1.8	23.4	23.5	19.3	4.25	5.544		
1,100.0	1,100.0	1,097.4	1,096.9	2.4	2.3	13.16	4.0	31.7	30.4	25.7	4.67	6.509		
1,200.0	1,199.8	1,196.3	1,195.1	2.6	2.6	12.21	7.2	43.1	37.2	32.1	5.09	7.306		
1,300.0	1,299.5	1,296.2	1,294.1	2.8	2.9	12.34	10.6	55.6	41.5	36.0	5.50	7.546		
1,400.0	1,398.7	1,396.2	1,393.2	3.0	3.1	13.40	14.0	68.2	42.7	36.8	5.94	7.200		
1,500.0	1,497.9	1,496.2	1,492.4	3.3	3.4	14.65	17.4	80.7	43.2	36.8	6.38	6.771		
1,600.0	1,597.1	1,596.2	1,591.5	3.6	3.7	15.87	20.8	93.2	43.8	36.9	6.84	6.395		
1,700.0	1,696.3	1,696.2	1,690.7	3.8	4.0	17.06	24.2	105.7	44.3	37.0	7.31	6.063		
1,800.0	1,795.5	1,796.2	1,789.8	4.1	4.3	18.23	27.6	118.3	44.9	37.1	7.78	5.768		
1,900.0	1,894.7	1,896.2	1,889.0	4.4	4.6	19.36	31.0	130.8	45.4	37.2	8.25	5.505		
2,000.0	1,993.9	1,996.2	1,988.1	4.7	4.9	20.46	34.4	143.3	46.0	37.3	8.74	5.268		
2,100.0	2,093.1	2,096.2	2,087.3	5.0	5.3	21.54	37.8	155.9	46.6	37.4	9.23	5.055		
2,200.0	2,192.3	2,196.1	2,186.4	5.3	5.6	22.58	41.3	168.4	47.3	37.5	9.72	4.862		
2,300.0	2,291.5	2,296.1	2,285.6	5.6	5.9	23.60	44.7	180.9	47.9	37.7	10.22	4.686		
2,400.0	2,390.6	2,396.1	2,384.7	5.9	6.2	24.60	48.1	193.5	48.6	37.8	10.73	4.526		
2,500.0	2,489.8	2,496.1	2,483.9	6.2	6.5	25.56	51.5	206.0	49.2	38.0	11.24	4.380		
2,600.0	2,589.0	2,596.1	2,583.0	6.6	6.9	26.50	54.9	218.5	49.9	38.2	11.76	4.245		
2,700.0	2,688.2	2,696.1	2,682.2	6.9	7.2	27.41	58.3	231.1	50.6	38.3	12.28	4.121		
2,800.0	2,787.4	2,796.1	2,781.3	7.2	7.5	28.30	61.7	243.6	51.3	38.5	12.81	4.007		
2,900.0	2,886.6	2,896.1	2,880.5	7.5	7.8	29.16	65.1	256.1	52.1	38.7	13.34	3.901		
3,000.0	2,985.8	2,996.1	2,979.6	7.8	8.2	30.00	68.5	268.7	52.8	38.9	13.88	3.803		
3,100.0	3,085.0	3,096.1	3,078.8	8.1	8.5	30.82	72.0	281.2	53.5	39.1	14.42	3.711		
3,200.0	3,184.2	3,196.1	3,177.9	8.5	8.8	31.62	75.4	293.7	54.3	39.3	14.97	3.626		
3,300.0	3,283.4	3,296.1	3,277.0	8.8	9.1	32.39	78.8	306.2	55.1	39.5	15.52	3.547		
3,400.0	3,382.6	3,396.1	3,376.2	9.1	9.5	33.14	82.2	318.8	55.8	39.8	16.08	3.472		
3,500.0	3,481.8	3,496.1	3,475.3	9.4	9.8	33.87	85.6	331.3	56.6	40.0	16.64	3.403		
3,600.0	3,580.9	3,596.1	3,574.5	9.7	10.1	34.58	89.0	343.8	57.4	40.2	17.20	3.338		
3,700.0	3,680.1	3,696.1	3,673.6	10.1	10.4	35.27	92.4	356.4	58.2	40.4	17.77	3.276		
3,800.0	3,779.3	3,796.1	3,772.8	10.4	10.8	35.94	95.8	368.9	59.0	40.7	18.34	3.219		
3,900.0	3,878.5	3,896.0	3,871.9	10.7	11.1	36.59	99.2	381.4	59.8	40.9	18.91	3.164		
4,000.0	3,977.7	3,996.0	3,971.1	11.0	11.4	37.23	102.6	394.0	60.7	41.2	19.49	3.113		
4,100.0	4,076.9	4,096.0	4,070.2	11.3	11.8	37.85	106.1	406.5	61.5	41.4	20.07	3.064		
4,200.0	4,176.1	4,196.0	4,169.4	11.7	12.1	38.45	109.5	419.0	62.3	41.7	20.65	3.019		
4,300.0	4,275.3	4,296.0	4,268.5	12.0	12.4	39.04	112.9	431.6	63.2	42.0	21.24	2.975		
4,400.0	4,374.5	4,396.0	4,367.7	12.3	12.7	39.61	116.3	444.1	64.0	42.2	21.83	2.934		
4,500.0	4,473.7	4,496.0	4,466.8	12.6	13.1	40.16	119.7	456.6	64.9	42.5	22.42	2.895		
4,600.0	4,572.9	4,596.0	4,566.0	13.0	13.4	40.70	123.1	469.2	65.8	42.8	23.01	2.858		
4,700.0	4,672.1	4,696.0	4,665.1	13.3	13.7	41.23	126.5	481.7	66.6	43.0	23.61	2.823		
4,800.0	4,771.2	4,796.0	4,764.3	13.6	14.1	41.74	129.9	494.2	67.5	43.3	24.21	2.789		
4,900.0	4,870.5	4,896.0	4,863.4	13.9	14.4	42.13	133.3	506.7	68.6	43.8	24.79	2.766		
5,000.0	4,970.0	4,995.9	4,962.5	14.1	14.7	41.07	136.7	519.3	71.6	46.5	25.16	2.847		
5,100.0	5,069.8	5,095.7	5,061.4	14.3	15.0	38.46	140.1	531.8	77.4	52.1	25.35	3.055		

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

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0ft	
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,200.0	5,169.7	5,195.2	5,160.0	14.5	15.4	34.90	143.5	544.2	86.2	60.8	25.40	3.395			
5,300.0	5,269.7	5,294.3	5,258.4	14.6	15.7	101.36	146.9	556.7	97.5	72.0	25.57	3.814			
5,400.0	5,369.7	5,393.5	5,356.7	14.8	16.0	98.32	150.3	569.1	109.3	83.6	25.74	4.247			
5,500.0	5,469.7	5,492.6	5,455.0	15.0	16.4	95.87	153.7	581.5	121.3	95.4	25.98	4.671			
5,600.0	5,569.7	5,591.8	5,553.3	15.2	16.7	93.87	157.1	593.9	133.6	107.3	26.26	5.086			
5,700.0	5,669.7	5,692.2	5,652.9	15.3	17.0	92.19	160.5	606.4	145.8	119.2	26.58	5.486			
5,800.0	5,769.7	5,796.9	5,757.0	15.5	17.2	91.00	163.3	616.8	155.7	128.8	26.90	5.787			
5,900.0	5,869.7	5,902.3	5,862.2	15.7	17.4	90.31	165.1	623.6	162.1	134.8	27.25	5.948			
6,000.0	5,969.7	6,008.1	5,967.9	15.9	17.6	90.02	166.0	626.6	164.9	137.3	27.62	5.972			
6,100.0	6,069.7	6,109.9	6,069.7	16.0	17.8	90.00	166.0	626.8	165.1	137.1	28.00	5.895			
6,200.0	6,169.7	6,209.9	6,169.7	16.2	17.9	90.00	166.0	626.8	165.1	136.7	28.40	5.813			
6,300.0	6,269.7	6,309.9	6,269.7	16.4	18.1	90.00	166.0	626.8	165.1	136.3	28.80	5.732			
6,400.0	6,369.7	6,409.9	6,369.7	16.6	18.2	90.00	166.0	626.8	165.1	135.9	29.20	5.653			
6,500.0	6,469.7	6,509.8	6,469.7	16.8	18.4	-89.55	166.0	626.8	165.1	135.6	29.48	5.599			
6,512.9	6,482.5	6,522.7	6,482.5	16.8	18.4	-90.00	166.0	626.8	165.1	135.6	29.50	5.596			
6,600.0	6,567.8	6,608.0	6,567.8	16.9	18.6	-95.69	166.0	626.8	165.9	136.5	29.49	5.627			
6,700.0	6,660.6	6,705.6	6,665.3	17.0	18.7	-106.28	163.8	626.8	173.0	143.7	29.33	5.899			
6,800.0	6,744.7	6,813.2	6,770.7	17.0	18.8	-116.64	143.1	627.3	187.4	158.5	28.90	6.483			
6,900.0	6,817.0	6,931.2	6,878.7	17.1	18.9	-125.21	96.0	628.2	206.0	178.1	27.88	7.388			
7,000.0	6,874.8	7,061.2	6,982.0	17.3	19.0	-131.81	17.7	629.8	225.3	199.0	26.32	8.561			
7,100.0	6,916.0	7,203.8	7,069.1	17.6	19.2	-136.43	-94.6	632.2	241.9	217.3	24.58	9.839			
7,200.0	6,939.0	7,357.2	7,125.2	18.0	19.7	-139.07	-236.8	635.1	252.6	229.1	23.43	10.778			
7,300.0	6,943.8	7,502.0	7,138.7	18.7	20.5	-139.74	-380.5	638.1	255.4	231.8	23.61	10.819			
7,400.0	6,943.3	7,602.0	7,138.3	19.5	21.2	-139.75	-480.5	640.1	255.5	230.7	24.82	10.294			
7,500.0	6,942.9	7,702.0	7,138.0	20.5	22.2	-139.77	-580.5	642.2	255.6	229.3	26.26	9.733			
7,600.0	6,942.4	7,802.0	7,137.6	21.7	23.2	-139.79	-680.4	644.3	255.7	227.8	27.89	9.168			
7,700.0	6,941.9	7,902.0	7,137.3	22.9	24.4	-139.81	-780.4	646.3	255.8	226.1	29.68	8.618			
7,800.0	6,941.5	8,002.0	7,136.9	24.3	25.6	-139.82	-880.4	648.4	255.8	224.3	31.60	8.097			
7,900.0	6,941.0	8,102.0	7,136.6	25.7	27.0	-139.84	-980.4	650.4	255.9	222.3	33.63	7.611			
8,000.0	6,940.5	8,202.0	7,136.2	27.2	28.4	-139.86	-1,080.4	652.5	256.0	220.3	35.75	7.163			
8,100.0	6,940.0	8,302.0	7,135.9	28.7	29.9	-139.88	-1,180.3	654.6	256.1	218.2	37.94	6.751			
8,200.0	6,939.6	8,402.0	7,135.5	30.3	31.4	-139.89	-1,280.3	656.6	256.2	216.0	40.20	6.374			
8,300.0	6,939.1	8,502.0	7,135.2	31.9	33.0	-139.91	-1,380.3	658.7	256.3	213.8	42.50	6.031			
8,400.0	6,938.6	8,602.0	7,134.8	33.6	34.6	-139.93	-1,480.3	660.8	256.4	211.6	44.86	5.716			
8,500.0	6,938.2	8,702.0	7,134.5	35.2	36.2	-139.95	-1,580.2	662.8	256.5	209.3	47.24	5.429			
8,600.0	6,937.7	8,802.0	7,134.1	36.9	37.8	-139.96	-1,680.2	664.9	256.6	206.9	49.66	5.167			
8,700.0	6,937.2	8,902.0	7,133.8	38.7	39.5	-139.98	-1,780.2	666.9	256.7	204.6	52.11	4.926			
8,800.0	6,936.7	9,002.0	7,133.4	40.4	41.2	-140.00	-1,880.2	669.0	256.8	202.2	54.58	4.705			
8,900.0	6,936.3	9,102.0	7,133.1	42.2	43.0	-140.02	-1,980.2	671.1	256.9	199.8	57.07	4.501			
9,000.0	6,935.8	9,202.0	7,132.8	43.9	44.7	-140.03	-2,080.1	673.1	257.0	197.4	59.58	4.313			
9,100.0	6,935.3	9,302.0	7,132.4	45.7	46.5	-140.05	-2,180.1	675.2	257.1	195.0	62.10	4.140			
9,200.0	6,934.9	9,402.0	7,132.1	47.5	48.2	-140.07	-2,280.1	677.3	257.2	192.5	64.63	3.979			
9,300.0	6,934.4	9,502.0	7,131.7	49.3	50.0	-140.09	-2,380.1	679.3	257.3	190.1	67.18	3.830			
9,400.0	6,933.9	9,602.0	7,131.4	51.1	51.8	-140.10	-2,480.0	681.4	257.4	187.6	69.73	3.691			
9,500.0	6,933.4	9,702.0	7,131.0	53.0	53.6	-140.12	-2,580.0	683.4	257.4	185.1	72.30	3.561			
9,600.0	6,933.0	9,802.0	7,130.7	54.8	55.4	-140.14	-2,680.0	685.5	257.5	182.7	74.87	3.440			
9,700.0	6,932.5	9,902.0	7,130.3	56.6	57.2	-140.16	-2,780.0	687.6	257.6	180.2	77.45	3.327			
9,800.0	6,932.0	10,002.0	7,130.0	58.5	59.0	-140.17	-2,880.0	689.6	257.7	177.7	80.03	3.220			
9,900.0	6,931.6	10,102.0	7,129.6	60.3	60.9	-140.19	-2,979.9	691.7	257.8	175.2	82.62	3.121			
10,000.0	6,931.1	10,202.0	7,129.3	62.1	62.7	-140.21	-3,079.9	693.8	257.9	172.7	85.22	3.027			
10,100.0	6,930.6	10,302.0	7,128.9	64.0	64.5	-140.22	-3,179.9	695.8	258.0	170.2	87.82	2.938			
10,200.0	6,930.1	10,402.0	7,128.6	65.9	66.4	-140.24	-3,279.9	697.9	258.1	167.7	90.42	2.855			

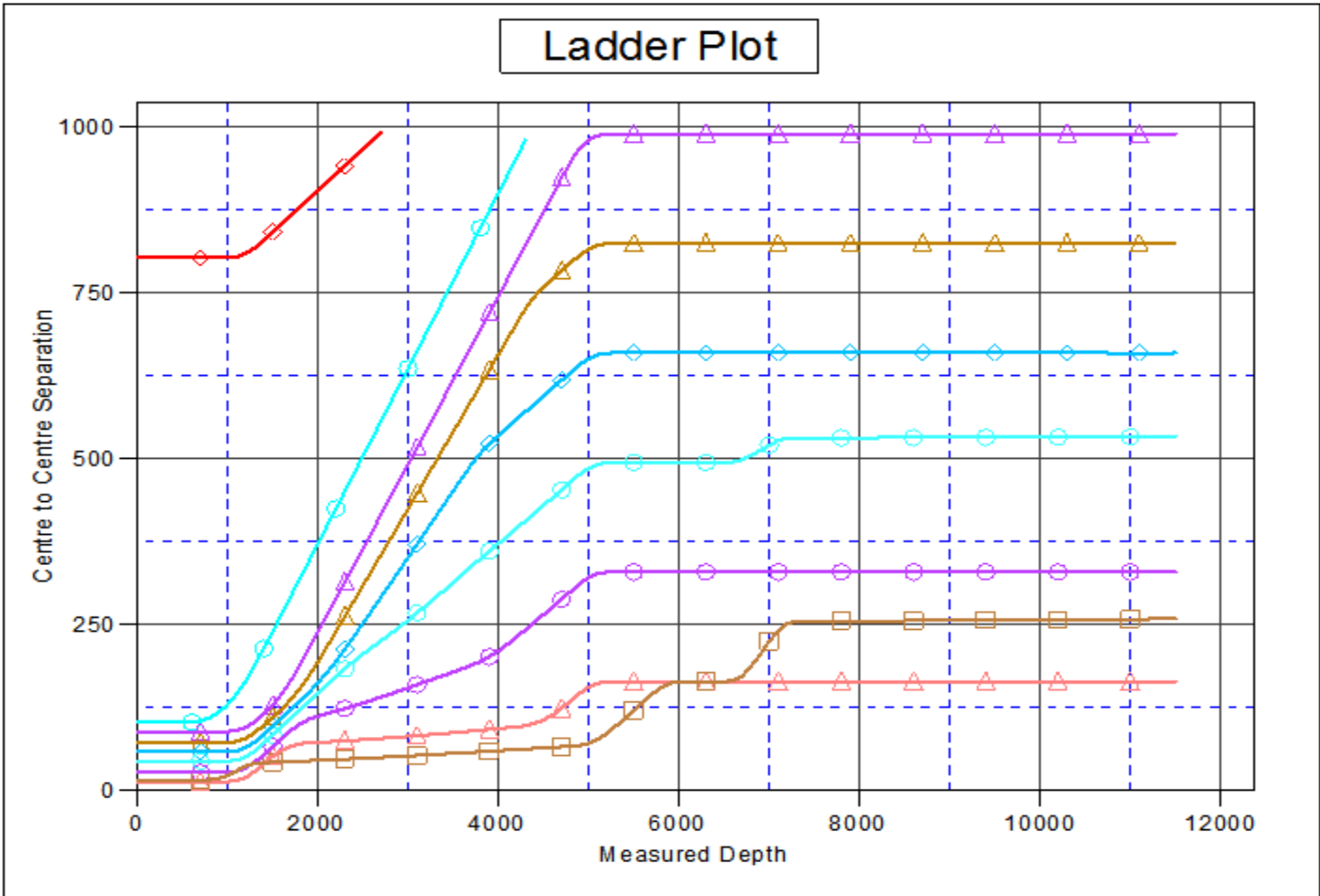
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.0	6,929.7	10,502.0	7,128.2	67.7	68.2	-140.26	-3,379.8	699.9	258.2	165.2	93.02	2.776		
10,400.0	6,929.2	10,602.0	7,127.9	69.6	70.1	-140.28	-3,479.8	702.0	258.3	162.7	95.63	2.701		
10,500.0	6,928.7	10,702.0	7,127.5	71.5	71.9	-140.29	-3,579.8	704.1	258.4	160.1	98.24	2.630		
10,600.0	6,928.3	10,802.0	7,127.2	73.3	73.8	-140.31	-3,679.8	706.1	258.5	157.6	100.86	2.563		
10,700.0	6,927.8	10,902.0	7,126.8	75.2	75.7	-140.33	-3,779.8	708.2	258.6	155.1	103.47	2.499		
10,800.0	6,927.3	11,002.0	7,126.5	77.1	77.5	-140.34	-3,879.7	710.3	258.7	152.6	106.09	2.438		
10,900.0	6,926.8	11,102.0	7,126.1	78.9	79.4	-140.36	-3,979.7	712.3	258.8	150.1	108.71	2.380		
11,000.0	6,926.4	11,202.0	7,125.8	80.8	81.3	-140.38	-4,079.7	714.4	258.9	147.5	111.33	2.325		
11,100.0	6,925.9	11,302.0	7,125.4	82.7	83.1	-140.40	-4,179.7	716.4	259.0	145.0	113.95	2.273		
11,200.0	6,925.4	11,402.0	7,125.1	84.6	85.0	-140.41	-4,279.7	718.5	259.0	142.5	116.57	2.222		
11,300.0	6,925.0	11,502.0	7,124.7	86.5	86.9	-140.43	-4,379.6	720.6	259.1	140.0	119.19	2.174		
11,400.0	6,924.5	11,602.0	7,124.4	88.4	88.8	-140.45	-4,479.6	722.6	259.2	137.4	121.81	2.128		
11,500.0	6,924.0	11,702.0	7,124.0	90.3	90.7	-140.46	-4,579.6	724.7	259.3	134.9	124.44	2.084		
11,504.1	6,924.0	11,706.1	7,124.0	90.3	90.7	-140.47	-4,583.7	724.8	259.3	134.8	124.54	2.082 SF		

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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-02-8N
 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°

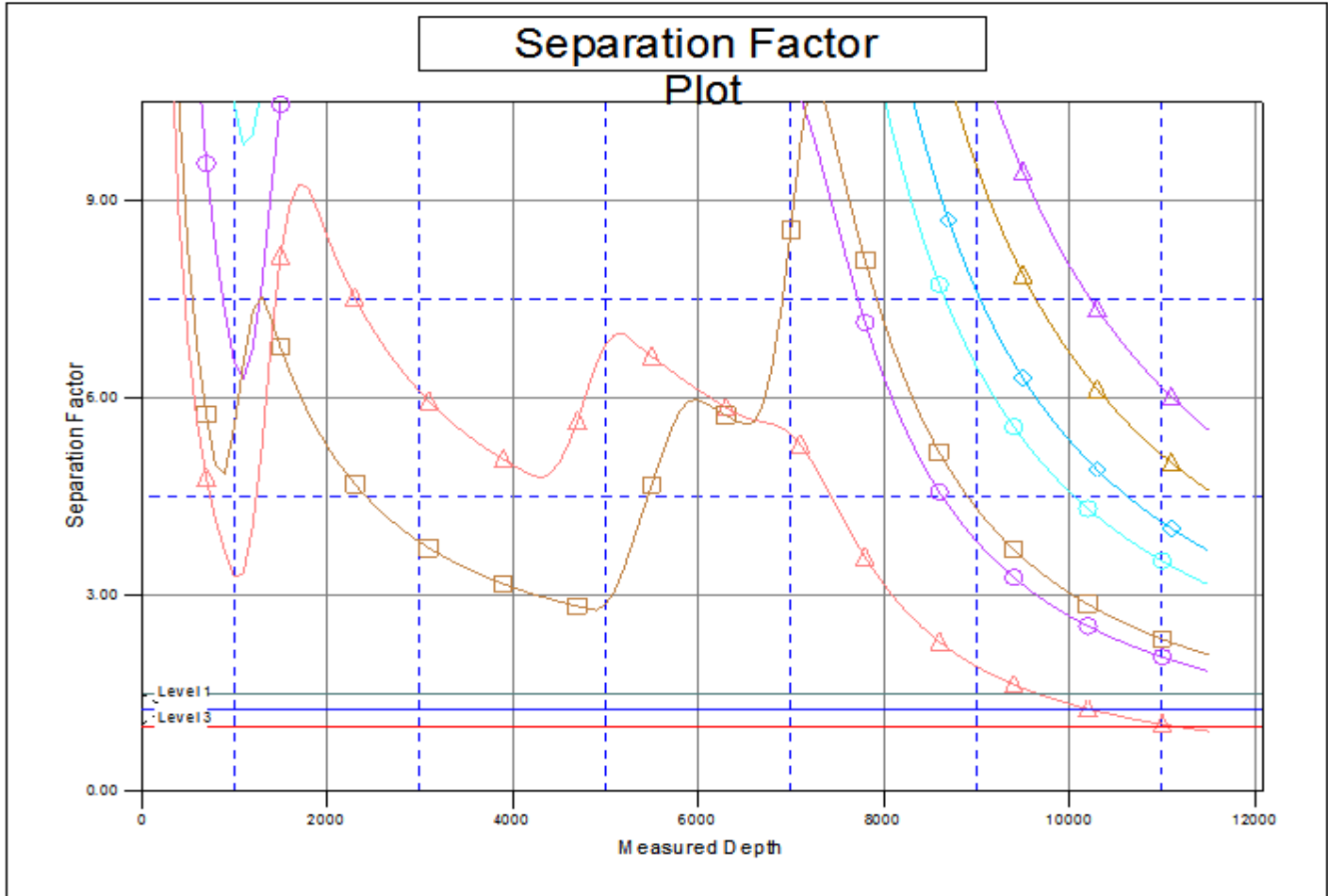


LEGEND

- 64W-02-1C, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-4N, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-7N, Wellbore #1, Plan #1 (8-6-14) ▲
- 64W-02-2N, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-5C, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-9C, Wellbore #1, Plan #1 (8-6-14) ▲
- 64W-02-3N, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-6N, Wellbore #1, Plan #1 (8-6-14) ▲ Schweitzer 11-2 (P&A), Wellbore #1, Plan #1 (8-6-14) ▲

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-8N
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-02-8N	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-02-8N
 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°



LEGEND

- 64W-02-1C, Wellbore #1, Plan #1 (8-6-14) ◆ Pastelak 01N-64W-02-4N, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-7N, Wellbore #1, Plan #1 (8-6-14) ◆
- 64W-02-2N, Wellbore #1, Plan #1 (8-6-14) ◆ Pastelak 01N-64W-02-5C, Wellbore #1, Plan #1 (8-6-14) ■ Pastelak 01N-64W-02-9C, Wellbore #1, Plan #1 (8-6-14) ▲
- 64W-02-3N, Wellbore #1, Plan #1 (8-6-14) ◆ Pastelak 01N-64W-02-6N, Wellbore #1, Plan #1 (8-6-14) ▲ Schweitzer 11-2 (P&A), Wellbore #1, Plan #1 (8-6-14) ▲