

Verdad Oil & Gas Corporation

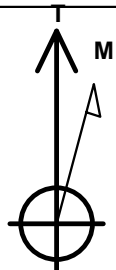
Well Name: **Pastelak 01N-64W-02-2N**

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1276065.73	3273282.37	40.087060	-104.523260	
Original Well Elev WELL @ 5026.0ft (Original Well Elev)						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
460' Setback BHL	0.0	-4582.8	-814.0	Polygon
460' Setback SHL	0.0	-245.0	-814.0	Polygon
Sectionline	0.0	215.0	-814.0	Polygon
Schweitzer 11-2 300' Circle	1.0	-440.8	-582.0	Circle (Radius: 300.0)
SHL 215'FNL & 1271'FWL	1.0	0.0	0.0	Point
BHL 460'FSL & 825'FWL	6927.0	-4582.8	-341.4	Point

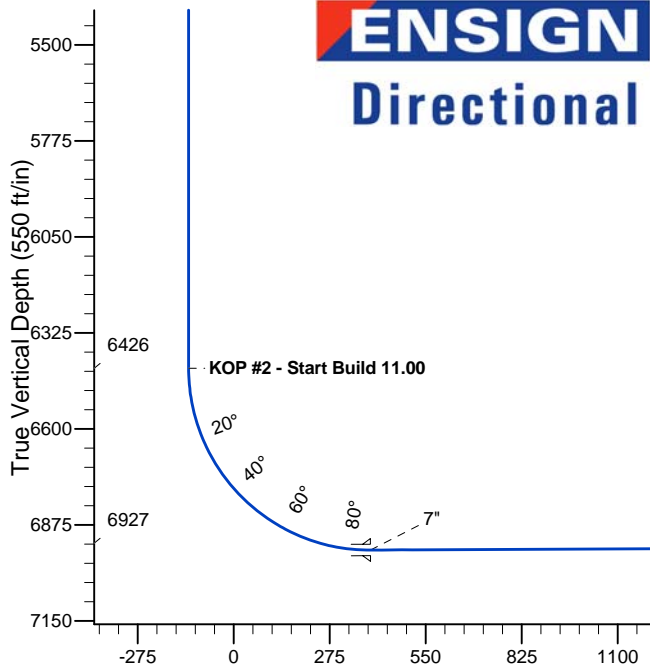
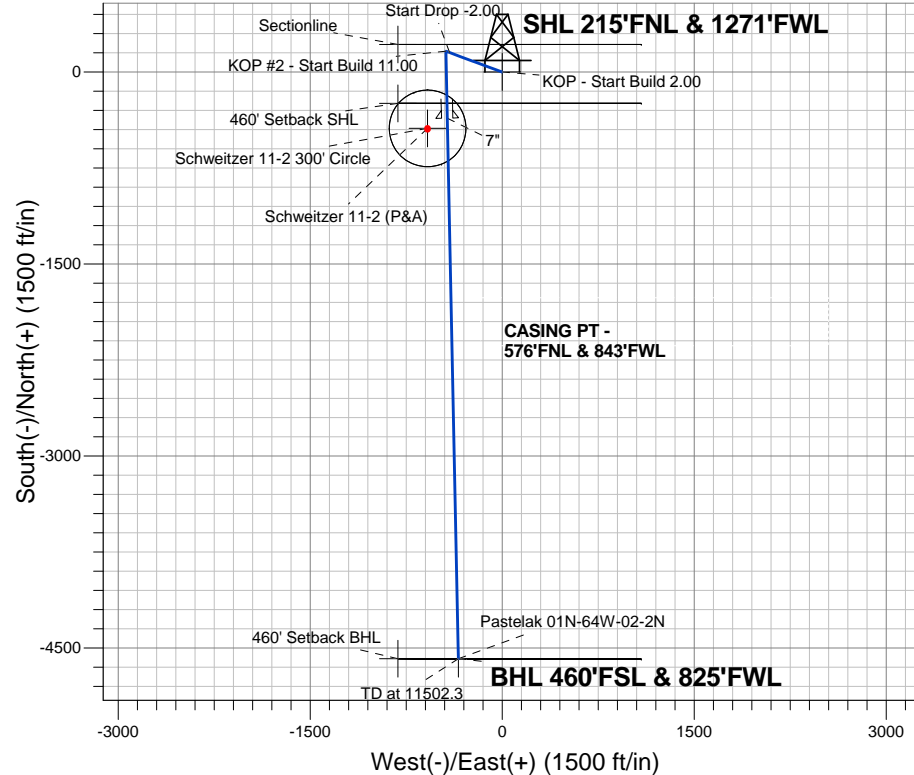


Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W
 Pastelak 01N-64W-02-2N
 Plan #1 (8-6-14)

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
1400.0	1400.0	KOP - Start Build 2.00
4582.7	4614.0	Start Drop -2.00
6426.0	6458.8	KOP #2 - Start Build 11.00
6927.0	11502.3	TD at 11502.3



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	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	1818.8	8.38	290.28	1817.3	10.6	-28.7	2.00	290.28	-8.4	
4	4614.0	8.38	290.28	4582.7	151.7	-410.6	0.00	0.00	-120.8	
5	5032.8	0.00	0.00	5000.0	162.3	-439.3	2.00	180.00	-129.2	
6	6458.8	0.00	0.00	6426.0	162.3	-439.3	0.00	0.00	-129.2	
7	7279.5	90.27	178.82	6946.9	-360.9	-428.5	11.00	178.82	391.8	
8	11502.3	90.27	178.82	6927.0	-4582.8	-341.4	0.00	0.00	4595.5	BHL 460'FSL & 825'FWL

Vertical Section at 184.26° (550 ft/in)



Verdad Oil & Gas Corporation

SEC.2-T1N-R64W

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

Pastelak 01N-64W-02-2N

Wellbore #1

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

Standard Planning Report

08 August, 2014

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Company:	Verdad Oil & Gas Corporation	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	North Reference:	True
Well:	Pastelak 01N-64W-02-2N	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-02-2N					
Well Position	+N/-S	0.0 ft	Northing:	1,276,065.73 ft	Latitude:	40.087060
	+E/-W	14.0 ft	Easting:	3,273,282.37 ft	Longitude:	-104.523260
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,013.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/6/2014	8.28	66.73	52,660

Design	Plan #1 (8-6-14)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	184.26

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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,818.8	8.38	290.28	1,817.3	10.6	-28.7	2.00	2.00	0.00	290.28	
4,614.0	8.38	290.28	4,582.7	151.7	-410.6	0.00	0.00	0.00	0.00	
5,032.8	0.00	0.00	5,000.0	162.3	-439.3	2.00	-2.00	0.00	180.00	
6,458.8	0.00	0.00	6,426.0	162.3	-439.3	0.00	0.00	0.00	0.00	
7,279.5	90.27	178.82	6,946.9	-360.9	-428.5	11.00	11.00	0.00	178.82	
11,502.3	90.27	178.82	6,927.0	-4,582.8	-341.4	0.00	0.00	0.00	0.00	BHL 460'FSL & 825

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

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
1,500.0	2.00	290.28	1,500.0	0.6	-1.6	-0.5	2.00	2.00	0.00
1,600.0	4.00	290.28	1,599.8	2.4	-6.5	-1.9	2.00	2.00	0.00
1,700.0	6.00	290.28	1,699.5	5.4	-14.7	-4.3	2.00	2.00	0.00
1,800.0	8.00	290.28	1,798.7	9.7	-26.2	-7.7	2.00	2.00	0.00
1,818.8	8.38	290.28	1,817.3	10.6	-28.7	-8.4	2.00	2.00	0.00
1,900.0	8.38	290.28	1,897.6	14.7	-39.8	-11.7	0.00	0.00	0.00
2,000.0	8.38	290.28	1,996.6	19.7	-53.4	-15.7	0.00	0.00	0.00
2,100.0	8.38	290.28	2,095.5	24.8	-67.1	-19.7	0.00	0.00	0.00
2,200.0	8.38	290.28	2,194.4	29.8	-80.8	-23.8	0.00	0.00	0.00
2,300.0	8.38	290.28	2,293.4	34.9	-94.4	-27.8	0.00	0.00	0.00
2,400.0	8.38	290.28	2,392.3	39.9	-108.1	-31.8	0.00	0.00	0.00
2,500.0	8.38	290.28	2,491.2	45.0	-121.8	-35.8	0.00	0.00	0.00
2,600.0	8.38	290.28	2,590.2	50.0	-135.4	-39.8	0.00	0.00	0.00
2,700.0	8.38	290.28	2,689.1	55.1	-149.1	-43.9	0.00	0.00	0.00
2,800.0	8.38	290.28	2,788.0	60.1	-162.7	-47.9	0.00	0.00	0.00
2,900.0	8.38	290.28	2,887.0	65.2	-176.4	-51.9	0.00	0.00	0.00
3,000.0	8.38	290.28	2,985.9	70.2	-190.1	-55.9	0.00	0.00	0.00
3,100.0	8.38	290.28	3,084.8	75.3	-203.7	-59.9	0.00	0.00	0.00
3,200.0	8.38	290.28	3,183.8	80.3	-217.4	-63.9	0.00	0.00	0.00
3,300.0	8.38	290.28	3,282.7	85.4	-231.1	-68.0	0.00	0.00	0.00
3,400.0	8.38	290.28	3,381.6	90.4	-244.7	-72.0	0.00	0.00	0.00
3,500.0	8.38	290.28	3,480.6	95.5	-258.4	-76.0	0.00	0.00	0.00
3,600.0	8.38	290.28	3,579.5	100.5	-272.1	-80.0	0.00	0.00	0.00
3,700.0	8.38	290.28	3,678.4	105.6	-285.7	-84.0	0.00	0.00	0.00
3,800.0	8.38	290.28	3,777.4	110.6	-299.4	-88.1	0.00	0.00	0.00
3,900.0	8.38	290.28	3,876.3	115.7	-313.1	-92.1	0.00	0.00	0.00
4,000.0	8.38	290.28	3,975.2	120.7	-326.7	-96.1	0.00	0.00	0.00
4,100.0	8.38	290.28	4,074.2	125.8	-340.4	-100.1	0.00	0.00	0.00
4,200.0	8.38	290.28	4,173.1	130.8	-354.1	-104.1	0.00	0.00	0.00
4,300.0	8.38	290.28	4,272.0	135.9	-367.7	-108.2	0.00	0.00	0.00
4,400.0	8.38	290.28	4,371.0	140.9	-381.4	-112.2	0.00	0.00	0.00
4,500.0	8.38	290.28	4,469.9	146.0	-395.1	-116.2	0.00	0.00	0.00
4,600.0	8.38	290.28	4,568.8	151.0	-408.7	-120.2	0.00	0.00	0.00
4,614.0	8.38	290.28	4,582.7	151.7	-410.6	-120.8	0.00	0.00	0.00
Start Drop -2.00									
4,700.0	6.66	290.28	4,667.9	155.6	-421.2	-123.9	2.00	-2.00	0.00
4,800.0	4.66	290.28	4,767.5	159.0	-430.4	-126.6	2.00	-2.00	0.00
4,900.0	2.66	290.28	4,867.2	161.2	-436.4	-128.4	2.00	-2.00	0.00

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Company:	Verdad Oil & Gas Corporation	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	North Reference:	True
Well:	Pastelak 01N-64W-02-2N	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	0.66	290.28	4,967.2	162.2	-439.1	-129.2	2.00	-2.00	0.00
5,032.8	0.00	0.00	5,000.0	162.3	-439.3	-129.2	2.00	-2.00	0.00
5,100.0	0.00	0.00	5,067.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,167.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,300.0	0.00	0.00	5,267.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,367.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,500.0	0.00	0.00	5,467.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,567.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,667.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,767.2	162.3	-439.3	-129.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,867.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,967.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,100.0	0.00	0.00	6,067.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,167.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,300.0	0.00	0.00	6,267.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,367.2	162.3	-439.3	-129.2	0.00	0.00	0.00
6,458.8	0.00	0.00	6,426.0	162.3	-439.3	-129.2	0.00	0.00	0.00
KOP #2 - Start Build 11.00									
6,500.0	4.53	178.82	6,467.2	160.7	-439.3	-127.6	10.99	10.99	0.00
6,600.0	15.53	178.82	6,565.5	143.3	-438.9	-110.3	11.00	11.00	0.00
6,700.0	26.53	178.82	6,658.7	107.5	-438.2	-74.6	11.00	11.00	0.00
6,800.0	37.53	178.82	6,743.3	54.5	-437.1	-21.9	11.00	11.00	0.00
6,900.0	48.53	178.82	6,816.3	-13.6	-435.7	45.9	11.00	11.00	0.00
7,000.0	59.53	178.82	6,875.0	-94.4	-434.0	126.4	11.00	11.00	0.00
7,100.0	70.53	178.82	6,917.1	-184.9	-432.1	216.5	11.00	11.00	0.00
7,200.0	81.53	178.82	6,941.2	-281.7	-430.1	312.9	11.00	11.00	0.00
7,279.5	90.27	178.82	6,946.9	-360.9	-428.5	391.8	11.00	11.00	0.00
7"									
7,300.0	90.27	178.82	6,946.8	-381.4	-428.1	412.2	0.00	0.00	0.00
7,400.0	90.27	178.82	6,946.3	-481.4	-426.0	511.7	0.00	0.00	0.00
7,500.0	90.27	178.82	6,945.9	-581.4	-424.0	611.3	0.00	0.00	0.00
7,600.0	90.27	178.82	6,945.4	-681.4	-421.9	710.8	0.00	0.00	0.00
7,700.0	90.27	178.82	6,944.9	-781.3	-419.8	810.4	0.00	0.00	0.00
7,800.0	90.27	178.82	6,944.4	-881.3	-417.8	909.9	0.00	0.00	0.00
7,900.0	90.27	178.82	6,944.0	-981.3	-415.7	1,009.5	0.00	0.00	0.00
8,000.0	90.27	178.82	6,943.5	-1,081.3	-413.6	1,109.0	0.00	0.00	0.00
8,100.0	90.27	178.82	6,943.0	-1,181.3	-411.6	1,208.6	0.00	0.00	0.00
8,200.0	90.27	178.82	6,942.6	-1,281.2	-409.5	1,308.1	0.00	0.00	0.00
8,300.0	90.27	178.82	6,942.1	-1,381.2	-407.5	1,407.7	0.00	0.00	0.00
8,400.0	90.27	178.82	6,941.6	-1,481.2	-405.4	1,507.2	0.00	0.00	0.00
8,500.0	90.27	178.82	6,941.1	-1,581.2	-403.3	1,606.8	0.00	0.00	0.00
8,600.0	90.27	178.82	6,940.7	-1,681.1	-401.3	1,706.3	0.00	0.00	0.00
8,700.0	90.27	178.82	6,940.2	-1,781.1	-399.2	1,805.9	0.00	0.00	0.00
8,800.0	90.27	178.82	6,939.7	-1,881.1	-397.2	1,905.4	0.00	0.00	0.00
8,900.0	90.27	178.82	6,939.3	-1,981.1	-395.1	2,005.0	0.00	0.00	0.00
9,000.0	90.27	178.82	6,938.8	-2,081.1	-393.0	2,104.5	0.00	0.00	0.00
9,100.0	90.27	178.82	6,938.3	-2,181.0	-391.0	2,204.1	0.00	0.00	0.00
9,200.0	90.27	178.82	6,937.8	-2,281.0	-388.9	2,303.6	0.00	0.00	0.00
9,300.0	90.27	178.82	6,937.4	-2,381.0	-386.8	2,403.2	0.00	0.00	0.00
9,400.0	90.27	178.82	6,936.9	-2,481.0	-384.8	2,502.7	0.00	0.00	0.00
9,500.0	90.27	178.82	6,936.4	-2,580.9	-382.7	2,602.2	0.00	0.00	0.00
9,600.0	90.27	178.82	6,936.0	-2,680.9	-380.7	2,701.8	0.00	0.00	0.00
9,700.0	90.27	178.82	6,935.5	-2,780.9	-378.6	2,801.3	0.00	0.00	0.00
9,800.0	90.27	178.82	6,935.0	-2,880.9	-376.5	2,900.9	0.00	0.00	0.00

Database:	landmark	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Company:	Verdad Oil & Gas Corporation	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Project:	SEC.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	North Reference:	True
Well:	Pastelak 01N-64W-02-2N	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	6,934.6	-2,980.9	-374.5	3,000.4	0.00	0.00	0.00	
10,000.0	90.27	178.82	6,934.1	-3,080.8	-372.4	3,100.0	0.00	0.00	0.00	
10,100.0	90.27	178.82	6,933.6	-3,180.8	-370.3	3,199.5	0.00	0.00	0.00	
10,200.0	90.27	178.82	6,933.1	-3,280.8	-368.3	3,299.1	0.00	0.00	0.00	
10,300.0	90.27	178.82	6,932.7	-3,380.8	-366.2	3,398.6	0.00	0.00	0.00	
10,400.0	90.27	178.82	6,932.2	-3,480.7	-364.2	3,498.2	0.00	0.00	0.00	
10,500.0	90.27	178.82	6,931.7	-3,580.7	-362.1	3,597.7	0.00	0.00	0.00	
10,600.0	90.27	178.82	6,931.3	-3,680.7	-360.0	3,697.3	0.00	0.00	0.00	
10,700.0	90.27	178.82	6,930.8	-3,780.7	-358.0	3,796.8	0.00	0.00	0.00	
10,800.0	90.27	178.82	6,930.3	-3,880.7	-355.9	3,896.4	0.00	0.00	0.00	
10,900.0	90.27	178.82	6,929.8	-3,980.6	-353.8	3,995.9	0.00	0.00	0.00	
11,000.0	90.27	178.82	6,929.4	-4,080.6	-351.8	4,095.5	0.00	0.00	0.00	
11,100.0	90.27	178.82	6,928.9	-4,180.6	-349.7	4,195.0	0.00	0.00	0.00	
11,200.0	90.27	178.82	6,928.4	-4,280.6	-347.7	4,294.6	0.00	0.00	0.00	
11,300.0	90.27	178.82	6,928.0	-4,380.5	-345.6	4,394.1	0.00	0.00	0.00	
11,400.0	90.27	178.82	6,927.5	-4,480.5	-343.5	4,493.7	0.00	0.00	0.00	
11,500.0	90.27	178.82	6,927.0	-4,580.5	-341.5	4,593.2	0.00	0.00	0.00	
11,502.3	90.27	178.82	6,927.0	-4,582.8	-341.4	4,595.5	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,279.5	6,946.9	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
1,400.0	1,400.0	0.0	0.0	KOP - Start Build 2.00	
4,614.0	4,582.7	10.6	-28.7	Start Drop -2.00	
6,458.8	6,426.0	151.7	-410.6	KOP #2 - Start Build 11.00	
11,502.3	6,927.0	162.3	-439.3	TD at 11502.3	



Directional

Verdad Oil & Gas Corporation

SEC.2-T1N-R64W

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

Pastelak 01N-64W-02-2N

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	11,502.3	Plan #1 (8-6-14) (Wellbore #1)	MWD	MWD - Standard

Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
Existing Wells Sec.2-T1N-64W						
Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	7,356.1	6,946.5	155.1	-1.3	0.992	Level 1, CC, ES, SF
Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W						
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14)	566.3	567.3	14.0	11.7	6.022	CC
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14)	600.0	601.0	14.0	11.5	5.654	ES
Pastelak 01N-64W-02-1C - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,709.6	258.6	133.9	2.074	SF
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14)	1,400.0	1,400.0	16.8	10.7	2.766	CC
Pastelak 01N-64W-02-3N - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,485.9	165.1	-14.2	0.921	Level 1, ES, SF
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14)	1,400.0	1,400.0	30.8	24.7	5.072	CC, ES
Pastelak 01N-64W-02-4N - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,473.7	330.2	150.9	1.842	SF
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14)	1,400.0	1,399.0	44.8	38.7	7.380	CC, ES
Pastelak 01N-64W-02-5C - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,665.6	533.7	364.9	3.160	SF
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14)	1,400.0	1,399.0	61.6	55.5	10.147	CC, ES
Pastelak 01N-64W-02-6N - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,469.4	660.2	481.0	3.684	SF
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14)	1,400.0	1,399.0	75.5	69.5	12.453	CC, ES
Pastelak 01N-64W-02-7N - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,473.7	825.3	646.4	4.613	SF
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14)	1,000.0	998.0	89.5	85.3	20.989	CC, ES
Pastelak 01N-64W-02-8N - Wellbore #1 - Plan #1 (8-6-14)	11,502.3	11,480.0	990.4	811.2	5.525	SF
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14)	800.0	798.0	106.3	103.0	31.579	CC, ES
Pastelak 01N-64W-02-9C - Wellbore #1 - Plan #1 (8-6-14)	1,200.0	1,182.4	132.1	127.0	25.768	SF

Offset Design	Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0ft	
Survey Program:	7690-UNKNOWN											Offset Well Error:	0.0ft	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis			Distance						Warning	
				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	-127.14	-440.8	-582.0	730.1					
100.0	100.0	100.0	100.0	0.1	2.0	-127.14	-440.8	-582.0	730.1	728.0	2.11	345.583		
200.0	200.0	200.0	200.0	0.3	4.0	-127.14	-440.8	-582.0	730.1	725.7	4.34	168.323		
300.0	300.0	300.0	300.0	0.6	6.0	-127.14	-440.8	-582.0	730.1	723.5	6.56	111.256		
400.0	400.0	400.0	400.0	0.8	8.0	-127.14	-440.8	-582.0	730.1	721.3	8.79	83.087		
500.0	500.0	500.0	500.0	1.0	10.0	-127.14	-440.8	-582.0	730.1	719.1	11.01	66.300		
600.0	600.0	600.0	600.0	1.2	12.0	-127.14	-440.8	-582.0	730.1	716.8	13.24	55.156		
700.0	700.0	700.0	700.0	1.5	14.0	-127.14	-440.8	-582.0	730.1	714.6	15.46	47.220		

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

Offset Design													Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	Offset Site Error:	0.0 ft
Survey Program: 7690-UNKNOWN														Offset Well Error:	0.0 ft
Reference		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			
800.0	800.0	800.0	800.0	1.7	16.0	-127.14	-440.8	-582.0	730.1	712.4	17.69	41.280			
900.0	900.0	900.0	900.0	1.9	18.0	-127.14	-440.8	-582.0	730.1	710.2	19.91	36.667			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	20.0	-127.14	-440.8	-582.0	730.1	707.9	22.14	32.982			
1,100.0	1,100.0	1,100.0	1,100.0	2.4	22.0	-127.14	-440.8	-582.0	730.1	705.7	24.36	29.970			
1,200.0	1,200.0	1,200.0	1,200.0	2.6	24.0	-127.14	-440.8	-582.0	730.1	703.5	26.58	27.462			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	26.0	-127.14	-440.8	-582.0	730.1	701.3	28.81	25.341			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	28.0	-127.14	-440.8	-582.0	730.1	699.0	31.03	23.525			
1,500.0	1,500.0	1,500.0	1,500.0	3.3	30.0	-57.55	-440.8	-582.0	729.1	695.9	33.24	21.933			
1,600.0	1,599.8	1,599.8	1,599.8	3.5	32.0	-57.94	-440.8	-582.0	726.3	690.9	35.43	20.499			
1,700.0	1,699.5	1,699.5	1,699.5	3.7	34.0	-58.60	-440.8	-582.0	721.7	684.1	37.61	19.189			
1,800.0	1,798.7	1,798.7	1,798.7	3.9	36.0	-59.54	-440.8	-582.0	715.4	675.7	39.79	17.983			
1,900.0	1,897.6	1,897.6	1,897.6	4.2	38.0	-60.57	-440.8	-582.0	708.1	666.1	42.00	16.860			
2,000.0	1,996.6	1,996.6	1,996.6	4.5	39.9	-61.60	-440.8	-582.0	701.0	656.8	44.24	15.845			
2,100.0	2,095.5	2,095.5	2,095.5	4.7	41.9	-62.65	-440.8	-582.0	694.2	647.7	46.49	14.930			
2,200.0	2,194.4	2,194.4	2,194.4	5.0	43.9	-63.71	-440.8	-582.0	687.5	638.8	48.76	14.102			
2,300.0	2,293.4	2,293.4	2,293.4	5.3	45.9	-64.80	-440.8	-582.0	681.2	630.1	51.03	13.349			
2,400.0	2,392.3	2,392.3	2,392.3	5.6	47.8	-65.91	-440.8	-582.0	675.0	621.7	53.31	12.663			
2,500.0	2,491.2	2,491.2	2,491.2	6.0	49.8	-67.04	-440.8	-582.0	669.2	613.6	55.60	12.036			
2,600.0	2,590.2	2,590.2	2,590.2	6.3	51.8	-68.19	-440.8	-582.0	663.6	605.7	57.89	11.463			
2,700.0	2,689.1	2,689.1	2,689.1	6.6	53.8	-69.36	-440.8	-582.0	658.2	598.1	60.19	10.936			
2,800.0	2,788.0	2,788.0	2,788.0	6.9	55.8	-70.54	-440.8	-582.0	653.2	590.7	62.50	10.452			
2,900.0	2,887.0	2,887.0	2,887.0	7.2	57.7	-71.74	-440.8	-582.0	648.4	583.6	64.81	10.005			
3,000.0	2,985.9	2,985.9	2,985.9	7.6	59.7	-72.96	-440.8	-582.0	644.0	576.9	67.13	9.594			
3,100.0	3,084.8	3,084.8	3,084.8	7.9	61.7	-74.20	-440.8	-582.0	639.8	570.4	69.45	9.213			
3,200.0	3,183.8	3,183.8	3,183.8	8.2	63.7	-75.45	-440.8	-582.0	636.0	564.2	71.77	8.861			
3,300.0	3,282.7	3,282.7	3,282.7	8.6	65.7	-76.71	-440.8	-582.0	632.4	558.3	74.10	8.535			
3,400.0	3,381.6	3,381.6	3,381.6	8.9	67.6	-77.99	-440.8	-582.0	629.2	552.8	76.43	8.232			
3,500.0	3,480.6	3,480.6	3,480.6	9.3	69.6	-79.28	-440.8	-582.0	626.3	547.5	78.76	7.952			
3,600.0	3,579.5	3,579.5	3,579.5	9.6	71.6	-80.58	-440.8	-582.0	623.7	542.6	81.10	7.691			
3,700.0	3,678.4	3,678.4	3,678.4	9.9	73.6	-81.89	-440.8	-582.0	621.5	538.1	83.43	7.449			
3,800.0	3,777.4	3,777.4	3,777.4	10.3	75.5	-83.21	-440.8	-582.0	619.6	533.8	85.77	7.224			
3,900.0	3,876.3	3,876.3	3,876.3	10.6	77.5	-84.54	-440.8	-582.0	618.0	529.9	88.10	7.015			
4,000.0	3,975.2	3,975.2	3,975.2	11.0	79.5	-85.87	-440.8	-582.0	616.8	526.3	90.44	6.820			
4,100.0	4,074.2	4,074.2	4,074.2	11.3	81.5	-87.21	-440.8	-582.0	615.9	523.1	92.77	6.639			
4,200.0	4,173.1	4,173.1	4,173.1	11.7	83.5	-88.55	-440.8	-582.0	615.3	520.2	95.10	6.470			
4,300.0	4,272.0	4,272.0	4,272.0	12.0	85.4	-89.89	-440.8	-582.0	615.1	517.7	97.44	6.313			
4,308.0	4,280.0	4,280.0	4,280.0	12.0	85.6	-90.00	-440.8	-582.0	615.1	517.5	97.62	6.301			
4,400.0	4,371.0	4,371.0	4,371.0	12.3	87.4	-91.23	-440.8	-582.0	615.3	515.5	99.76	6.167			
4,500.0	4,469.9	4,469.9	4,469.9	12.7	89.4	-92.58	-440.8	-582.0	615.8	513.7	102.09	6.032			
4,600.0	4,568.8	4,568.8	4,568.8	13.0	91.4	-93.91	-440.8	-582.0	616.6	512.2	104.41	5.906			
4,700.0	4,667.9	4,667.9	4,667.9	13.3	93.4	-95.15	-440.8	-582.0	617.7	511.0	106.69	5.789			
4,800.0	4,767.5	4,767.5	4,767.5	13.6	95.3	-96.07	-440.8	-582.0	618.6	509.7	108.90	5.681			
4,900.0	4,867.2	4,867.2	4,867.2	13.8	97.3	-96.67	-440.8	-582.0	619.4	508.3	111.09	5.575			
5,000.0	4,967.2	4,967.2	4,967.2	13.9	99.3	-96.95	-440.8	-582.0	619.7	506.4	113.25	5.472			
5,100.0	5,067.2	5,067.2	5,067.2	14.1	101.3	-166.69	-440.8	-582.0	619.7	504.3	115.41	5.370			
5,200.0	5,167.2	5,167.2	5,167.2	14.2	103.3	-166.69	-440.8	-582.0	619.7	502.1	117.58	5.270			
5,300.0	5,267.2	5,267.2	5,267.2	14.4	105.3	-166.69	-440.8	-582.0	619.7	500.0	119.76	5.175			
5,400.0	5,367.2	5,367.2	5,367.2	14.6	107.3	-166.69	-440.8	-582.0	619.7	497.8	121.93	5.083			
5,500.0	5,467.2	5,467.2	5,467.2	14.8	109.3	-166.69	-440.8	-582.0	619.7	495.6	124.11	4.993			
5,600.0	5,567.2	5,567.2	5,567.2	15.0	111.3	-166.69	-440.8	-582.0	619.7	493.4	126.29	4.907			
5,700.0	5,667.2	5,667.2	5,667.2	15.1	113.3	-166.69	-440.8	-582.0	619.7	491.3	128.46	4.824			
5,800.0	5,767.2	5,767.2	5,767.2	15.3	115.3	-166.69	-440.8	-582.0	619.7	489.1	130.65	4.744			

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

Offset Design													Existing Wells Sec.2-T1N-64W - Schweitzer 11-2 (P&A) - Wellbore #1 - Wellbore #1	Offset Site Error:	0.0 ft
Survey Program: 7690-UNKNOWN														Offset Well Error:	0.0 ft
Reference		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			
5,900.0	5,867.2	5,867.2	5,867.2	15.5	117.3	-166.69	-440.8	-582.0	619.7	486.9	132.83	4.666			
6,000.0	5,967.2	5,967.2	5,967.2	15.7	119.3	-166.69	-440.8	-582.0	619.7	484.7	135.01	4.590			
6,100.0	6,067.2	6,067.2	6,067.2	15.9	121.3	-166.69	-440.8	-582.0	619.7	482.5	137.19	4.517			
6,200.0	6,167.2	6,167.2	6,167.2	16.0	123.3	-166.69	-440.8	-582.0	619.7	480.3	139.38	4.446			
6,300.0	6,267.2	6,267.2	6,267.2	16.2	125.3	-166.69	-440.8	-582.0	619.7	478.2	141.56	4.378			
6,400.0	6,367.2	6,367.2	6,367.2	16.4	127.3	-166.69	-440.8	-582.0	619.7	476.0	143.75	4.311			
6,500.0	6,467.2	6,467.2	6,467.2	16.6	129.3	14.58	-440.8	-582.0	618.1	472.7	145.49	4.249			
6,600.0	6,565.5	6,565.5	6,565.5	16.7	131.3	15.49	-440.8	-582.0	601.3	458.3	143.05	4.204			
6,700.0	6,658.7	6,658.7	6,658.7	16.8	133.2	17.64	-440.8	-582.0	566.8	430.9	135.91	4.170			
6,800.0	6,743.3	6,743.3	6,743.3	16.8	134.9	21.67	-440.8	-582.0	516.1	390.6	125.50	4.112			
6,900.0	6,816.3	6,816.3	6,816.3	16.9	136.3	28.91	-440.8	-582.0	451.5	335.3	116.22	3.885			
7,000.0	6,875.0	6,875.0	6,875.0	17.0	137.5	41.70	-440.8	-582.0	376.7	258.2	118.45	3.180			
7,100.0	6,917.1	6,917.1	6,917.1	17.2	138.3	61.49	-440.8	-582.0	296.6	158.3	138.20	2.146			
7,200.0	6,941.2	6,941.2	6,941.2	17.6	138.8	81.58	-440.8	-582.0	219.9	66.4	153.52	1.432	Level 3		
7,300.0	6,946.8	6,946.8	6,946.8	18.2	138.9	90.10	-440.8	-582.0	165.0	9.1	155.85	1.058	Level 2		
7,356.1	6,946.5	6,946.5	6,946.5	18.6	138.9	90.00	-440.8	-582.0	155.1	-1.3	156.38	0.992	Level 1, CC, ES, SF		
7,400.0	6,946.3	6,946.3	6,946.3	19.0	138.9	89.92	-440.8	-582.0	161.2	4.4	156.79	1.028	Level 2		
7,500.0	6,945.9	6,945.9	6,945.9	20.0	138.9	89.75	-440.8	-582.0	211.6	53.7	157.87	1.340	Level 3		
7,600.0	6,945.4	6,945.4	6,945.4	21.2	138.9	89.58	-440.8	-582.0	289.0	129.9	159.08	1.817			
7,700.0	6,944.9	6,944.9	6,944.9	22.4	138.9	89.40	-440.8	-582.0	377.2	216.8	160.39	2.352			
7,800.0	6,944.4	6,944.4	6,944.4	23.8	138.9	89.23	-440.8	-582.0	470.2	308.4	161.78	2.906			
7,900.0	6,944.0	6,944.0	6,944.0	25.2	138.9	89.05	-440.8	-582.0	565.5	402.3	163.24	3.464			
8,000.0	6,943.5	6,943.5	6,943.5	26.7	138.9	88.88	-440.8	-582.0	662.3	497.5	164.76	4.020			
8,100.0	6,943.0	6,943.0	6,943.0	28.2	138.9	88.71	-440.8	-582.0	759.9	593.5	166.33	4.568			
8,200.0	6,942.6	6,942.6	6,942.6	29.8	138.9	88.53	-440.8	-582.0	858.0	690.1	167.94	5.109			
8,300.0	6,942.1	6,942.1	6,942.1	31.4	138.8	88.36	-440.8	-582.0	956.5	786.9	169.58	5.641			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	-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			
566.3	566.3	567.3	567.3	1.2	1.2	-89.93	0.0	-14.0	14.0	11.7	2.32	6.022	CC		
600.0	600.0	601.0	601.0	1.2	1.2	-89.93	0.0	-14.0	14.0	11.5	2.47	5.654	ES		
700.0	700.0	700.5	700.5	1.5	1.5	-88.23	0.5	-15.7	15.7	12.8	2.91	5.389			
800.0	800.0	800.0	799.8	1.7	1.7	-84.85	1.9	-20.7	20.8	17.5	3.35	6.212			
900.0	900.0	898.5	898.0	1.9	1.9	-81.88	4.1	-29.0	29.4	25.6	3.81	7.728			
1,000.0	1,000.0	996.6	995.3	2.1	2.2	-79.79	7.3	-40.4	41.5	37.2	4.28	9.680			
1,100.0	1,100.0	1,094.8	1,092.4	2.4	2.4	-78.43	11.2	-54.6	56.4	51.6	4.79	11.775			
1,200.0	1,200.0	1,193.6	1,190.1	2.6	2.7	-77.62	15.2	-69.1	71.6	66.3	5.31	13.489			
1,300.0	1,300.0	1,292.4	1,287.7	2.8	3.1	-77.09	19.2	-83.7	86.9	81.0	5.84	14.867			
1,400.0	1,400.0	1,391.3	1,385.4	3.0	3.4	-76.72	23.2	-98.3	102.2	95.8	6.39	15.993			
1,500.0	1,500.0	1,490.3	1,483.3	3.3	3.7	-6.80	27.2	-112.9	115.7	109.2	6.49	17.833			
1,600.0	1,599.8	1,589.8	1,581.6	3.5	4.1	-6.83	31.2	-127.5	125.8	118.9	6.93	18.171			
1,700.0	1,699.5	1,689.6	1,680.2	3.7	4.4	-7.03	35.3	-142.2	132.5	125.1	7.36	17.996			
1,800.0	1,798.7	1,789.5	1,779.0	3.9	4.8	-7.42	39.3	-157.0	135.7	127.9	7.80	17.401			
1,900.0	1,897.6	1,889.5	1,877.8	4.2	5.1	-7.92	43.4	-171.7	136.6	128.4	8.25	16.549			
2,000.0	1,996.6	1,989.5	1,976.6	4.5	5.5	-8.42	47.4	-186.4	137.5	128.7	8.72	15.765			
2,100.0	2,095.5	2,089.5	2,075.4	4.7	5.8	-8.92	51.5	-201.2	138.3	129.1	9.19	15.054			
2,200.0	2,194.4	2,189.5	2,174.2	5.0	6.2	-9.40	55.5	-215.9	139.2	129.5	9.66	14.408			
2,300.0	2,293.4	2,289.5	2,273.1	5.3	6.5	-9.89	59.6	-230.6	140.1	129.9	10.14	13.818			
2,400.0	2,392.3	2,389.4	2,371.9	5.6	6.9	-10.36	63.6	-245.4	140.9	130.3	10.61	13.278			
2,500.0	2,491.2	2,489.4	2,470.7	6.0	7.3	-10.83	67.7	-260.1	141.8	130.7	11.10	12.782			
2,600.0	2,590.2	2,589.4	2,569.5	6.3	7.6	-11.30	71.7	-274.8	142.7	131.2	11.58	12.326			
2,700.0	2,689.1	2,689.4	2,668.3	6.6	8.0	-11.76	75.8	-289.6	143.7	131.6	12.07	11.904			
2,800.0	2,788.0	2,789.4	2,767.1	6.9	8.4	-12.21	79.8	-304.3	144.6	132.0	12.56	11.513			
2,900.0	2,887.0	2,889.4	2,865.9	7.2	8.7	-12.66	83.9	-319.0	145.5	132.5	13.05	11.150			
3,000.0	2,985.9	2,989.4	2,964.8	7.6	9.1	-13.10	87.9	-333.8	146.4	132.9	13.54	10.812			
3,100.0	3,084.8	3,089.4	3,063.6	7.9	9.4	-13.54	92.0	-348.5	147.4	133.4	14.04	10.497			
3,200.0	3,183.8	3,189.4	3,162.4	8.2	9.8	-13.97	96.0	-363.2	148.4	133.8	14.54	10.202			
3,300.0	3,282.7	3,289.4	3,261.2	8.6	10.2	-14.39	100.1	-378.0	149.3	134.3	15.04	9.926			
3,400.0	3,381.6	3,389.3	3,360.0	8.9	10.5	-14.81	104.1	-392.7	150.3	134.8	15.55	9.667			
3,500.0	3,480.6	3,489.3	3,458.8	9.3	10.9	-15.23	108.2	-407.4	151.3	135.2	16.05	9.423			
3,600.0	3,579.5	3,589.3	3,557.6	9.6	11.3	-15.63	112.2	-422.2	152.3	135.7	16.56	9.193			
3,700.0	3,678.4	3,689.3	3,656.5	9.9	11.6	-16.04	116.3	-436.9	153.3	136.2	17.07	8.977			
3,800.0	3,777.4	3,789.3	3,755.3	10.3	12.0	-16.44	120.3	-451.6	154.3	136.7	17.59	8.772			
3,900.0	3,876.3	3,889.3	3,854.1	10.6	12.4	-16.83	124.4	-466.4	155.3	137.2	18.10	8.578			
4,000.0	3,975.2	3,989.3	3,952.9	11.0	12.7	-17.22	128.4	-481.1	156.3	137.7	18.62	8.394			
4,100.0	4,074.2	4,089.3	4,051.7	11.3	13.1	-17.60	132.5	-495.8	157.3	138.2	19.14	8.220			
4,200.0	4,173.1	4,189.3	4,150.5	11.7	13.5	-17.98	136.5	-510.6	158.4	138.7	19.66	8.054			
4,300.0	4,272.0	4,289.2	4,249.4	12.0	13.8	-18.35	140.6	-525.3	159.4	139.2	20.19	7.897			
4,400.0	4,371.0	4,389.2	4,348.2	12.3	14.2	-18.72	144.6	-540.0	160.5	139.7	20.71	7.747			
4,500.0	4,469.9	4,489.2	4,447.0	12.7	14.6	-19.08	148.7	-554.8	161.5	140.3	21.24	7.604			
4,600.0	4,568.8	4,589.2	4,545.8	13.0	14.9	-19.44	152.7	-569.5	162.6	140.8	21.77	7.467			
4,700.0	4,667.9	4,694.1	4,649.6	13.3	15.3	-19.78	156.6	-583.7	163.6	141.3	22.27	7.345			
4,800.0	4,767.5	4,799.9	4,754.9	13.6	15.5	-20.03	159.5	-594.3	164.4	141.7	22.69	7.246			
4,900.0	4,867.2	4,905.8	4,860.5	13.8	15.7	-20.19	161.4	-601.1	164.9	141.8	23.05	7.153			
5,000.0	4,967.2	5,011.7	4,966.3	13.9	15.9	-20.27	162.3	-604.2	165.1	141.7	23.37	7.065			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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			
5,100.0	5,067.2	5,113.5	5,068.2	14.1	16.0	-89.99	162.3	-604.4	165.1	141.5	23.63	6.986			
5,200.0	5,167.2	5,213.5	5,168.2	14.2	16.1	-89.99	162.3	-604.4	165.1	141.1	24.02	6.872			
5,300.0	5,267.2	5,313.5	5,268.2	14.4	16.3	-89.99	162.3	-604.4	165.1	140.7	24.42	6.761			
5,400.0	5,367.2	5,413.5	5,368.2	14.6	16.4	-89.99	162.3	-604.4	165.1	140.3	24.81	6.653			
5,500.0	5,467.2	5,513.5	5,468.2	14.8	16.6	-89.99	162.3	-604.4	165.1	139.9	25.21	6.548			
5,600.0	5,567.2	5,613.5	5,568.2	15.0	16.8	-89.99	162.3	-604.4	165.1	139.5	25.61	6.446			
5,700.0	5,667.2	5,713.5	5,668.2	15.1	16.9	-89.99	162.3	-604.4	165.1	139.1	26.01	6.346			
5,800.0	5,767.2	5,813.5	5,768.2	15.3	17.1	-89.99	162.3	-604.4	165.1	138.7	26.42	6.250			
5,900.0	5,867.2	5,913.5	5,868.2	15.5	17.2	-89.99	162.3	-604.4	165.1	138.3	26.82	6.155			
6,000.0	5,967.2	6,013.5	5,968.2	15.7	17.4	-89.99	162.3	-604.4	165.1	137.9	27.23	6.064			
6,100.0	6,067.2	6,113.5	6,068.2	15.9	17.6	-89.99	162.3	-604.4	165.1	137.5	27.63	5.974			
6,200.0	6,167.2	6,213.5	6,168.2	16.0	17.7	-89.99	162.3	-604.4	165.1	137.0	28.04	5.887			
6,300.0	6,267.2	6,313.5	6,268.2	16.2	17.9	-89.99	162.3	-604.4	165.1	136.6	28.45	5.803			
6,400.0	6,367.2	6,413.5	6,368.2	16.4	18.1	-89.99	162.3	-604.4	165.1	136.2	28.86	5.720			
6,443.5	6,410.7	6,457.0	6,411.7	16.5	18.1	91.45	162.3	-604.4	165.1	136.0	29.08	5.677			
6,500.0	6,467.2	6,513.5	6,468.2	16.6	18.2	91.75	162.3	-604.4	165.1	135.8	29.29	5.638			
6,600.0	6,565.5	6,611.8	6,566.5	16.7	18.4	97.46	162.3	-604.4	166.6	137.3	29.29	5.687			
6,700.0	6,658.7	6,709.8	6,664.4	16.8	18.6	107.68	160.5	-604.4	174.5	145.4	29.07	6.003			
6,800.0	6,743.3	6,818.7	6,771.2	16.8	18.7	117.79	140.2	-603.9	189.5	160.9	28.53	6.640			
6,900.0	6,816.3	6,938.1	6,880.6	16.9	18.7	126.07	93.0	-603.0	208.2	180.7	27.44	7.587			
7,000.0	6,875.0	7,069.6	6,985.1	17.0	18.8	132.39	13.8	-601.3	227.2	201.3	25.86	8.784			
7,100.0	6,917.1	7,213.5	7,072.9	17.2	18.9	136.75	-99.7	-599.0	243.0	218.8	24.23	10.029			
7,200.0	6,941.2	7,367.6	7,128.7	17.6	19.3	139.12	-242.6	-596.0	252.6	229.4	23.25	10.865			
7,300.0	6,946.8	7,511.5	7,141.7	18.2	20.0	139.59	-385.5	-593.1	254.6	231.1	23.54	10.814			
7,400.0	6,946.3	7,611.5	7,141.3	19.0	20.7	139.60	-485.5	-591.0	254.7	230.0	24.74	10.294			
7,500.0	6,945.9	7,711.5	7,141.0	20.0	21.6	139.62	-585.5	-589.0	254.8	228.6	26.17	9.735			
7,600.0	6,945.4	7,811.5	7,140.6	21.2	22.6	139.64	-685.5	-586.9	254.9	227.1	27.80	9.170			
7,700.0	6,944.9	7,911.5	7,140.3	22.4	23.8	139.66	-785.4	-584.8	255.0	225.4	29.58	8.620			
7,800.0	6,944.4	8,011.5	7,139.9	23.8	25.0	139.68	-885.4	-582.8	255.1	223.6	31.50	8.097			
7,900.0	6,944.0	8,111.5	7,139.6	25.2	26.4	139.69	-985.4	-580.7	255.2	221.6	33.53	7.610			
8,000.0	6,943.5	8,211.5	7,139.2	26.7	27.8	139.71	-1,085.4	-578.7	255.3	219.6	35.65	7.159			
8,100.0	6,943.0	8,311.5	7,138.9	28.2	29.3	139.73	-1,185.3	-576.6	255.4	217.5	37.85	6.746			
8,200.0	6,942.6	8,411.5	7,138.5	29.8	30.8	139.75	-1,285.3	-574.5	255.4	215.3	40.11	6.368			
8,300.0	6,942.1	8,511.5	7,138.2	31.4	32.4	139.76	-1,385.3	-572.5	255.5	213.1	42.43	6.023			
8,400.0	6,941.6	8,611.5	7,137.8	33.1	34.0	139.78	-1,485.3	-570.4	255.6	210.8	44.78	5.708			
8,500.0	6,941.1	8,711.5	7,137.5	34.8	35.6	139.80	-1,585.3	-568.4	255.7	208.5	47.18	5.420			
8,600.0	6,940.7	8,811.5	7,137.1	36.5	37.3	139.82	-1,685.2	-566.3	255.8	206.2	49.61	5.157			
8,700.0	6,940.2	8,911.5	7,136.8	38.2	39.0	139.83	-1,785.2	-564.2	255.9	203.9	52.06	4.915			
8,800.0	6,939.7	9,011.5	7,136.4	40.0	40.7	139.85	-1,885.2	-562.2	256.0	201.5	54.54	4.694			
8,900.0	6,939.3	9,111.5	7,136.1	41.7	42.5	139.87	-1,985.2	-560.1	256.1	199.1	57.04	4.490			
9,000.0	6,938.8	9,211.5	7,135.7	43.5	44.2	139.89	-2,085.1	-558.0	256.2	196.6	59.55	4.302			
9,100.0	6,938.3	9,311.5	7,135.4	45.3	46.0	139.90	-2,185.1	-556.0	256.3	194.2	62.08	4.128			
9,200.0	6,937.8	9,411.5	7,135.0	47.1	47.7	139.92	-2,285.1	-553.9	256.4	191.8	64.63	3.967			
9,300.0	6,937.4	9,511.5	7,134.7	48.9	49.5	139.94	-2,385.1	-551.9	256.5	189.3	67.18	3.818			
9,400.0	6,936.9	9,611.5	7,134.3	50.7	51.3	139.96	-2,485.1	-549.8	256.6	186.8	69.75	3.679			
9,500.0	6,936.4	9,711.5	7,134.0	52.5	53.1	139.97	-2,585.0	-547.7	256.7	184.3	72.32	3.549			
9,600.0	6,936.0	9,811.5	7,133.6	54.4	54.9	139.99	-2,685.0	-545.7	256.8	181.9	74.90	3.428			
9,700.0	6,935.5	9,911.5	7,133.3	56.2	56.8	140.01	-2,785.0	-543.6	256.9	179.4	77.49	3.315			
9,800.0	6,935.0	10,011.5	7,132.9	58.0	58.6	140.03	-2,885.0	-541.6	256.9	176.9	80.08	3.209			
9,900.0	6,934.6	10,111.5	7,132.6	59.9	60.4	140.04	-2,984.9	-539.5	257.0	174.4	82.68	3.109			
10,000.0	6,934.1	10,211.5	7,132.2	61.7	62.2	140.06	-3,084.9	-537.4	257.1	171.8	85.29	3.015			
10,100.0	6,933.6	10,311.5	7,131.9	63.6	64.1	140.08	-3,184.9	-535.4	257.2	169.3	87.89	2.927			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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		
10,200.0	6,933.1	10,411.5	7,131.5	65.4	65.9	140.10	-3,284.9	-533.3	257.3	166.8	90.51	2.843		
10,300.0	6,932.7	10,511.5	7,131.2	67.3	67.8	140.11	-3,384.9	-531.2	257.4	164.3	93.12	2.764		
10,400.0	6,932.2	10,611.5	7,130.8	69.2	69.6	140.13	-3,484.8	-529.2	257.5	161.8	95.74	2.690		
10,500.0	6,931.7	10,711.5	7,130.5	71.0	71.5	140.15	-3,584.8	-527.1	257.6	159.2	98.36	2.619		
10,600.0	6,931.3	10,811.5	7,130.1	72.9	73.4	140.17	-3,684.8	-525.1	257.7	156.7	100.98	2.552		
10,700.0	6,930.8	10,911.5	7,129.8	74.8	75.2	140.18	-3,784.8	-523.0	257.8	154.2	103.61	2.488		
10,800.0	6,930.3	11,011.5	7,129.4	76.7	77.1	140.20	-3,884.8	-520.9	257.9	151.7	106.23	2.428		
10,900.0	6,929.8	11,111.5	7,129.1	78.6	79.0	140.22	-3,984.7	-518.9	258.0	149.1	108.86	2.370		
11,000.0	6,929.4	11,211.5	7,128.7	80.4	80.8	140.23	-4,084.7	-516.8	258.1	146.6	111.49	2.315		
11,100.0	6,928.9	11,311.5	7,128.4	82.3	82.7	140.25	-4,184.7	-514.8	258.2	144.0	114.12	2.262		
11,200.0	6,928.4	11,411.5	7,128.0	84.2	84.6	140.27	-4,284.7	-512.7	258.3	141.5	116.75	2.212		
11,300.0	6,928.0	11,511.5	7,127.7	86.1	86.5	140.29	-4,384.6	-510.6	258.4	139.0	119.38	2.164		
11,400.0	6,927.5	11,611.5	7,127.3	88.0	88.4	140.30	-4,484.6	-508.6	258.5	136.4	122.02	2.118		
11,452.8	6,927.2	11,664.2	7,127.2	89.0	89.4	140.31	-4,537.4	-507.5	258.5	135.1	123.40	2.095		
11,500.0	6,927.0	11,709.6	7,127.0	89.9	90.2	140.32	-4,582.8	-506.5	258.6	133.9	124.62	2.075		
11,502.3	6,927.0	11,709.6	7,127.0	89.9	90.2	140.32	-4,582.8	-506.5	258.6	133.9	124.65	2.074 SF		

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	90.01	0.0	16.8	16.8	16.8	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	90.01	0.0	16.8	16.8	16.6	0.22	74.693		
200.0	200.0	200.0	200.0	0.3	0.3	90.01	0.0	16.8	16.8	16.1	0.67	24.898		
300.0	300.0	300.0	300.0	0.6	0.6	90.01	0.0	16.8	16.8	15.7	1.12	14.939		
400.0	400.0	400.0	400.0	0.8	0.8	90.01	0.0	16.8	16.8	15.2	1.57	10.670		
500.0	500.0	500.0	500.0	1.0	1.0	90.01	0.0	16.8	16.8	14.8	2.02	8.299		
600.0	600.0	600.0	600.0	1.2	1.2	90.01	0.0	16.8	16.8	14.3	2.47	6.790		
700.0	700.0	700.0	700.0	1.5	1.5	90.01	0.0	16.8	16.8	13.9	2.92	5.746		
800.0	800.0	800.0	800.0	1.7	1.7	90.01	0.0	16.8	16.8	13.4	3.37	4.980		
900.0	900.0	900.0	900.0	1.9	1.9	90.01	0.0	16.8	16.8	13.0	3.82	4.394		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.01	0.0	16.8	16.8	12.5	4.27	3.931		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.01	0.0	16.8	16.8	12.1	4.72	3.557		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.01	0.0	16.8	16.8	11.6	5.17	3.248		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.01	0.0	16.8	16.8	11.2	5.62	2.988		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.01	0.0	16.8	16.8	10.7	6.07	2.766 CC		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	161.61	0.0	16.8	18.4	11.9	6.51	2.833		
1,600.0	1,599.8	1,599.8	1,599.8	3.5	3.5	165.62	0.0	16.8	23.5	16.5	6.93	3.385		
1,700.0	1,699.5	1,700.5	1,700.4	3.7	3.7	168.40	0.9	15.2	30.3	23.0	7.34	4.131		
1,800.0	1,798.7	1,801.3	1,801.2	3.9	3.9	169.32	3.4	10.6	37.4	29.6	7.74	4.827		
1,900.0	1,897.6	1,902.5	1,901.9	4.2	4.1	168.99	7.8	2.9	43.4	35.2	8.17	5.313		
2,000.0	1,996.6	2,003.5	2,002.2	4.5	4.4	167.30	13.8	-7.9	46.3	37.7	8.61	5.379		
2,100.0	2,095.5	2,103.5	2,101.3	4.7	4.6	165.40	20.1	-19.3	48.4	39.3	9.05	5.341		
2,200.0	2,194.4	2,203.5	2,200.4	5.0	4.9	163.65	26.5	-30.7	50.5	41.0	9.51	5.308		
2,300.0	2,293.4	2,303.4	2,299.5	5.3	5.2	162.05	32.9	-42.2	52.7	42.7	9.98	5.276		
2,400.0	2,392.3	2,403.4	2,398.6	5.6	5.4	160.57	39.3	-53.6	54.9	44.4	10.46	5.246		
2,500.0	2,491.2	2,503.4	2,497.7	6.0	5.7	159.21	45.6	-65.0	57.1	46.2	10.94	5.218		
2,600.0	2,590.2	2,603.3	2,596.8	6.3	6.0	157.95	52.0	-76.5	59.4	47.9	11.44	5.191		
2,700.0	2,689.1	2,703.3	2,696.0	6.6	6.3	156.79	58.4	-87.9	61.7	49.7	11.94	5.165		
2,800.0	2,788.0	2,803.3	2,795.1	6.9	6.6	155.71	64.7	-99.3	64.0	51.5	12.45	5.139		
2,900.0	2,887.0	2,903.2	2,894.2	7.2	6.9	154.70	71.1	-110.7	66.3	53.4	12.97	5.115		
3,000.0	2,985.9	3,003.2	2,993.3	7.6	7.2	153.77	77.5	-122.2	68.7	55.2	13.49	5.091		
3,100.0	3,084.8	3,103.2	3,092.4	7.9	7.5	152.89	83.9	-133.6	71.1	57.0	14.02	5.068		
3,200.0	3,183.8	3,203.1	3,191.5	8.2	7.8	152.08	90.2	-145.0	73.5	58.9	14.56	5.046		
3,300.0	3,282.7	3,303.1	3,290.6	8.6	8.1	151.31	96.6	-156.5	75.9	60.8	15.10	5.024		
3,400.0	3,381.6	3,403.1	3,389.7	8.9	8.4	150.59	103.0	-167.9	78.3	62.6	15.65	5.003		
3,500.0	3,480.6	3,503.0	3,488.8	9.3	8.7	149.92	109.4	-179.3	80.7	64.5	16.20	4.983		
3,600.0	3,579.5	3,603.0	3,587.9	9.6	9.1	149.28	115.7	-190.7	83.2	66.4	16.75	4.964		
3,700.0	3,678.4	3,703.0	3,687.0	9.9	9.4	148.68	122.1	-202.2	85.6	68.3	17.31	4.945		
3,800.0	3,777.4	3,802.9	3,786.1	10.3	9.7	148.12	128.5	-213.6	88.1	70.2	17.88	4.927		
3,900.0	3,876.3	3,902.9	3,885.2	10.6	10.0	147.58	134.9	-225.0	90.5	72.1	18.44	4.909		
4,000.0	3,975.2	4,002.9	3,984.3	11.0	10.3	147.08	141.2	-236.5	93.0	74.0	19.01	4.893		
4,100.0	4,074.2	4,102.8	4,083.4	11.3	10.6	146.60	147.6	-247.9	95.5	75.9	19.58	4.876		
4,200.0	4,173.1	4,201.4	4,181.2	11.7	10.9	146.37	153.6	-258.7	98.4	78.3	20.12	4.890		
4,300.0	4,272.0	4,298.7	4,278.1	12.0	11.2	147.29	158.1	-266.7	103.6	83.1	20.54	5.044		
4,400.0	4,371.0	4,395.5	4,374.7	12.3	11.3	149.23	161.0	-271.8	111.5	90.6	20.88	5.338		
4,500.0	4,469.9	4,491.7	4,470.9	12.7	11.5	151.84	162.2	-274.1	122.1	100.9	21.16	5.770		
4,600.0	4,568.8	4,589.7	4,568.8	13.0	11.7	154.69	162.3	-274.2	135.0	113.6	21.42	6.301		
4,700.0	4,667.9	4,688.8	4,667.9	13.3	11.9	156.98	162.3	-274.2	147.1	125.4	21.75	6.766		
4,800.0	4,767.5	4,788.3	4,767.5	13.6	12.0	158.46	162.3	-274.2	156.3	134.2	22.08	7.078		
4,900.0	4,867.2	4,888.1	4,867.2	13.8	12.2	159.33	162.3	-274.2	162.2	139.8	22.42	7.236		
5,000.0	4,967.2	4,988.0	4,967.2	13.9	12.4	159.70	162.3	-274.2	164.9	142.2	22.75	7.248		
5,100.0	5,067.2	5,088.0	5,067.2	14.1	12.6	90.00	162.3	-274.2	165.1	142.0	23.07	7.156		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,188.0	5,167.2	14.2	12.8	90.00	162.3	-274.2	165.1	141.6	23.48	7.031			
5,300.0	5,267.2	5,288.0	5,267.2	14.4	13.0	90.00	162.3	-274.2	165.1	141.2	23.89	6.910			
5,400.0	5,367.2	5,388.0	5,367.2	14.6	13.2	90.00	162.3	-274.2	165.1	140.8	24.31	6.792			
5,500.0	5,467.2	5,488.0	5,467.2	14.8	13.4	90.00	162.3	-274.2	165.1	140.4	24.72	6.678			
5,600.0	5,567.2	5,588.0	5,567.2	15.0	13.6	90.00	162.3	-274.2	165.1	140.0	25.14	6.567			
5,700.0	5,667.2	5,688.0	5,667.2	15.1	13.8	90.00	162.3	-274.2	165.1	139.5	25.56	6.460			
5,800.0	5,767.2	5,788.0	5,767.2	15.3	14.0	90.00	162.3	-274.2	165.1	139.1	25.97	6.356			
5,900.0	5,867.2	5,888.0	5,867.2	15.5	14.2	90.00	162.3	-274.2	165.1	138.7	26.39	6.255			
6,000.0	5,967.2	5,988.0	5,967.2	15.7	14.4	90.00	162.3	-274.2	165.1	138.3	26.81	6.157			
6,100.0	6,067.2	6,088.0	6,067.2	15.9	14.6	90.00	162.3	-274.2	165.1	137.9	27.24	6.061			
6,200.0	6,167.2	6,188.0	6,167.2	16.0	14.8	90.00	162.3	-274.2	165.1	137.4	27.66	5.969			
6,300.0	6,267.2	6,288.0	6,267.2	16.2	15.0	90.00	162.3	-274.2	165.1	137.0	28.08	5.879			
6,400.0	6,367.2	6,388.0	6,367.2	16.4	15.2	90.00	162.3	-274.2	165.1	136.6	28.51	5.792			
6,500.0	6,467.2	6,487.7	6,466.9	16.6	15.4	-88.79	160.6	-274.2	165.1	136.2	28.94	5.705			
6,600.0	6,565.5	6,587.1	6,564.5	16.7	15.5	-88.77	143.3	-273.8	165.1	135.9	29.16	5.662			
6,700.0	6,658.7	6,686.4	6,657.1	16.8	15.6	-88.79	107.7	-273.1	165.1	135.8	29.29	5.636			
6,800.0	6,743.3	6,785.7	6,741.3	16.8	15.6	-88.85	55.3	-272.0	165.1	135.7	29.42	5.611			
6,900.0	6,816.3	6,885.1	6,814.1	16.9	15.7	-88.96	-12.2	-270.6	165.1	135.4	29.67	5.564			
7,000.0	6,875.0	6,984.6	6,872.7	17.0	15.8	-89.10	-92.3	-269.0	165.1	134.9	30.15	5.475			
7,100.0	6,917.1	7,084.2	6,915.2	17.2	16.0	-89.28	-182.2	-267.1	165.1	134.1	30.96	5.331			
7,200.0	6,941.2	7,183.8	6,939.7	17.6	16.5	-89.48	-278.6	-265.1	165.1	132.9	32.15	5.134			
7,295.5	6,948.4	7,279.0	6,945.8	18.2	17.2	-89.12	-373.4	-263.2	165.1	131.5	33.60	4.913			
7,300.0	6,946.8	7,283.6	6,945.8	18.2	17.3	-89.66	-378.0	-263.1	165.1	131.4	33.69	4.899			
7,400.0	6,946.3	7,383.6	6,945.3	19.0	18.2	-89.66	-478.0	-261.0	165.1	129.5	35.58	4.639			
7,500.0	6,945.9	7,483.6	6,944.9	20.0	19.3	-89.66	-578.0	-258.9	165.1	127.3	37.76	4.371			
7,600.0	6,945.4	7,583.6	6,944.4	21.2	20.5	-89.66	-678.0	-256.9	165.1	124.9	40.19	4.107			
7,700.0	6,944.9	7,683.6	6,943.9	22.4	21.8	-89.66	-777.9	-254.8	165.1	122.2	42.83	3.854			
7,800.0	6,944.4	7,783.6	6,943.5	23.8	23.1	-89.66	-877.9	-252.8	165.1	119.4	45.64	3.616			
7,900.0	6,944.0	7,883.6	6,943.0	25.2	24.6	-89.66	-977.9	-250.7	165.1	116.5	48.60	3.397			
8,000.0	6,943.5	7,983.6	6,942.5	26.7	26.1	-89.66	-1,077.9	-248.6	165.1	113.4	51.67	3.195			
8,100.0	6,943.0	8,083.6	6,942.0	28.2	27.7	-89.66	-1,177.9	-246.6	165.1	110.2	54.84	3.010			
8,200.0	6,942.6	8,183.6	6,941.6	29.8	29.3	-89.66	-1,277.8	-244.5	165.1	107.0	58.09	2.842			
8,300.0	6,942.1	8,283.6	6,941.1	31.4	31.0	-89.66	-1,377.8	-242.4	165.1	103.7	61.41	2.688			
8,400.0	6,941.6	8,383.6	6,940.6	33.1	32.6	-89.66	-1,477.8	-240.4	165.1	100.3	64.79	2.548			
8,500.0	6,941.1	8,483.6	6,940.2	34.8	34.3	-89.66	-1,577.8	-238.3	165.1	96.9	68.22	2.420			
8,600.0	6,940.7	8,583.6	6,939.7	36.5	36.1	-89.66	-1,677.7	-236.2	165.1	93.4	71.69	2.303			
8,700.0	6,940.2	8,683.6	6,939.2	38.2	37.8	-89.66	-1,777.7	-234.2	165.1	89.9	75.19	2.195			
8,800.0	6,939.7	8,783.6	6,938.8	40.0	39.6	-89.66	-1,877.7	-232.1	165.1	86.3	78.73	2.097			
8,900.0	6,939.3	8,883.6	6,938.3	41.7	41.3	-89.66	-1,977.7	-230.1	165.1	82.8	82.30	2.006			
9,000.0	6,938.8	8,983.6	6,937.8	43.5	43.1	-89.66	-2,077.6	-228.0	165.1	79.2	85.89	1.922			
9,100.0	6,938.3	9,083.6	6,937.3	45.3	44.9	-89.66	-2,177.6	-225.9	165.1	75.6	89.50	1.844			
9,200.0	6,937.8	9,183.6	6,936.9	47.1	46.7	-89.66	-2,277.6	-223.9	165.1	71.9	93.14	1.772			
9,300.0	6,937.4	9,283.6	6,936.4	48.9	48.6	-89.66	-2,377.6	-221.8	165.1	68.3	96.78	1.706			
9,400.0	6,936.9	9,383.6	6,935.9	50.7	50.4	-89.66	-2,477.6	-219.7	165.1	64.6	100.45	1.643			
9,500.0	6,936.4	9,483.6	6,935.5	52.5	52.2	-89.66	-2,577.5	-217.7	165.1	60.9	104.12	1.585			
9,600.0	6,936.0	9,583.6	6,935.0	54.4	54.0	-89.66	-2,677.5	-215.6	165.1	57.3	107.81	1.531			
9,700.0	6,935.5	9,683.6	6,934.5	56.2	55.9	-89.66	-2,777.5	-213.6	165.1	53.6	111.51	1.480	Level 3		
9,800.0	6,935.0	9,783.6	6,934.0	58.0	57.7	-89.66	-2,877.5	-211.5	165.1	49.9	115.22	1.433	Level 3		
9,900.0	6,934.6	9,883.6	6,933.6	59.9	59.6	-89.66	-2,977.4	-209.4	165.1	46.1	118.94	1.388	Level 3		
10,000.0	6,934.1	9,983.6	6,933.1	61.7	61.5	-89.66	-3,077.4	-207.4	165.1	42.4	122.66	1.346	Level 3		
10,100.0	6,933.6	10,083.6	6,932.6	63.6	63.3	-89.66	-3,177.4	-205.3	165.1	38.7	126.39	1.306	Level 3		
10,200.0	6,933.1	10,183.6	6,932.2	65.4	65.2	-89.66	-3,277.4	-203.2	165.1	34.9	130.13	1.268	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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	6,932.7	10,283.6	6,931.7	67.3	67.1	-89.66	-3,377.4	-201.2	165.1	31.2	133.88	1.233	Level 2		
10,400.0	6,932.2	10,383.6	6,931.2	69.2	68.9	-89.66	-3,477.3	-199.1	165.1	27.4	137.63	1.199	Level 2		
10,500.0	6,931.7	10,483.6	6,930.7	71.0	70.8	-89.66	-3,577.3	-197.1	165.1	23.7	141.39	1.168	Level 2		
10,600.0	6,931.3	10,583.6	6,930.3	72.9	72.7	-89.66	-3,677.3	-195.0	165.1	19.9	145.15	1.137	Level 2		
10,700.0	6,930.8	10,683.6	6,929.8	74.8	74.6	-89.66	-3,777.3	-192.9	165.1	16.2	148.91	1.109	Level 2		
10,800.0	6,930.3	10,783.6	6,929.3	76.7	76.4	-89.66	-3,877.2	-190.9	165.1	12.4	152.68	1.081	Level 2		
10,900.0	6,929.8	10,883.6	6,928.9	78.6	78.3	-89.66	-3,977.2	-188.8	165.1	8.6	156.46	1.055	Level 2		
11,000.0	6,929.4	10,983.6	6,928.4	80.4	80.2	-89.66	-4,077.2	-186.7	165.1	4.8	160.23	1.030	Level 2		
11,100.0	6,928.9	11,083.6	6,927.9	82.3	82.1	-89.66	-4,177.2	-184.7	165.1	1.1	164.02	1.006	Level 2		
11,200.0	6,928.4	11,183.6	6,927.4	84.2	84.0	-89.66	-4,277.2	-182.6	165.1	-2.7	167.80	0.984	Level 1		
11,300.0	6,928.0	11,283.6	6,927.0	86.1	85.9	-89.66	-4,377.1	-180.6	165.1	-6.5	171.58	0.962	Level 1		
11,400.0	6,927.5	11,383.6	6,926.5	88.0	87.8	-89.66	-4,477.1	-178.5	165.1	-10.3	175.37	0.941	Level 1		
11,500.0	6,927.0	11,483.6	6,926.0	89.9	89.7	-89.66	-4,577.1	-176.4	165.1	-14.1	179.17	0.921	Level 1		
11,502.3	6,927.0	11,485.9	6,926.0	89.9	89.7	-89.66	-4,579.4	-176.4	165.1	-14.2	179.25	0.921	Level 1, ES, SF		

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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				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	89.96	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.1	0.1	89.96	0.0	30.8	30.8	30.6	0.22	136.937		
200.0	200.0	200.0	200.0	0.3	0.3	89.96	0.0	30.8	30.8	30.1	0.67	45.646		
300.0	300.0	300.0	300.0	0.6	0.6	89.96	0.0	30.8	30.8	29.7	1.12	27.387		
400.0	400.0	400.0	400.0	0.8	0.8	89.96	0.0	30.8	30.8	29.2	1.57	19.562		
500.0	500.0	500.0	500.0	1.0	1.0	89.96	0.0	30.8	30.8	28.8	2.02	15.215		
600.0	600.0	600.0	600.0	1.2	1.2	89.96	0.0	30.8	30.8	28.3	2.47	12.449		
700.0	700.0	700.0	700.0	1.5	1.5	89.96	0.0	30.8	30.8	27.9	2.92	10.534		
800.0	800.0	800.0	800.0	1.7	1.7	89.96	0.0	30.8	30.8	27.4	3.37	9.129		
900.0	900.0	900.0	900.0	1.9	1.9	89.96	0.0	30.8	30.8	27.0	3.82	8.055		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.96	0.0	30.8	30.8	26.5	4.27	7.207		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.96	0.0	30.8	30.8	26.1	4.72	6.521		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.96	0.0	30.8	30.8	25.6	5.17	5.954		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.96	0.0	30.8	30.8	25.2	5.62	5.477		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.96	0.0	30.8	30.8	24.7	6.07	5.072 CC, ES		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	160.74	0.0	30.8	32.4	25.9	6.51	4.983		
1,600.0	1,599.8	1,599.8	1,599.8	3.5	3.5	163.36	0.0	30.8	37.4	30.5	6.93	5.396		
1,700.0	1,699.5	1,699.5	1,699.5	3.7	3.7	166.44	0.0	30.8	45.8	38.5	7.35	6.234		
1,800.0	1,798.7	1,798.7	1,798.7	3.9	3.9	169.23	0.0	30.8	57.7	50.0	7.76	7.438		
1,900.0	1,897.6	1,899.1	1,899.1	4.2	4.2	170.77	1.0	29.9	71.0	62.9	8.19	8.673		
2,000.0	1,996.6	2,000.1	2,000.0	4.5	4.4	170.71	4.0	27.4	82.4	73.7	8.63	9.549		
2,100.0	2,095.5	2,101.4	2,101.1	4.7	4.6	169.63	9.0	23.0	91.6	82.6	9.07	10.105		
2,200.0	2,194.4	2,203.0	2,202.3	5.0	4.8	167.74	16.1	16.9	98.9	89.4	9.52	10.391		
2,300.0	2,293.4	2,304.1	2,302.7	5.3	5.1	165.17	25.1	9.2	104.5	94.5	9.98	10.465		
2,400.0	2,392.3	2,403.9	2,401.7	5.6	5.3	162.68	34.4	1.2	109.8	99.3	10.46	10.497		
2,500.0	2,491.2	2,503.6	2,500.7	6.0	5.6	160.41	43.7	-6.8	115.3	104.4	10.95	10.532		
2,600.0	2,590.2	2,603.4	2,599.7	6.3	5.8	158.36	53.0	-14.9	121.0	109.5	11.45	10.567		
2,700.0	2,689.1	2,703.1	2,698.7	6.6	6.1	156.49	62.3	-22.9	126.8	114.8	11.96	10.601		
2,800.0	2,788.0	2,802.9	2,797.6	6.9	6.4	154.79	71.6	-30.9	132.7	120.2	12.48	10.632		
2,900.0	2,887.0	2,902.6	2,896.6	7.2	6.7	153.24	80.9	-38.9	138.7	125.7	13.01	10.661		
3,000.0	2,985.9	3,002.4	2,995.6	7.6	6.9	151.81	90.2	-46.9	144.9	131.3	13.56	10.687		
3,100.0	3,084.8	3,102.1	3,094.6	7.9	7.2	150.50	99.4	-54.9	151.1	137.0	14.11	10.711		
3,200.0	3,183.8	3,201.9	3,193.6	8.2	7.5	149.30	108.7	-62.9	157.4	142.7	14.66	10.732		
3,300.0	3,282.7	3,301.6	3,292.6	8.6	7.8	148.18	118.0	-71.0	163.7	148.5	15.23	10.751		
3,400.0	3,381.6	3,401.4	3,391.6	8.9	8.1	147.15	127.3	-79.0	170.1	154.3	15.80	10.768		
3,500.0	3,480.6	3,501.1	3,490.6	9.3	8.4	146.20	136.6	-87.0	176.6	160.2	16.38	10.784		
3,600.0	3,579.5	3,600.0	3,588.8	9.6	8.6	145.45	145.5	-94.6	183.3	166.4	16.93	10.826		
3,700.0	3,678.4	3,697.2	3,685.5	9.9	8.9	145.38	152.5	-100.7	191.1	173.7	17.41	10.972		
3,800.0	3,777.4	3,794.5	3,782.6	10.3	9.1	145.96	157.6	-105.1	200.0	182.1	17.86	11.196		
3,900.0	3,876.3	3,891.5	3,879.5	10.6	9.2	147.08	160.9	-107.9	210.1	191.9	18.27	11.499		
4,000.0	3,975.2	3,988.0	3,975.9	11.0	9.4	148.66	162.3	-109.1	221.6	202.9	18.65	11.880		
4,100.0	4,074.2	4,086.2	4,074.2	11.3	9.6	150.48	162.3	-109.1	234.1	215.1	19.02	12.308		
4,200.0	4,173.1	4,185.1	4,173.1	11.7	9.8	152.14	162.3	-109.1	247.0	227.5	19.42	12.718		
4,300.0	4,272.0	4,284.1	4,272.0	12.0	10.0	153.64	162.3	-109.1	260.0	240.1	19.82	13.115		
4,400.0	4,371.0	4,383.0	4,371.0	12.3	10.2	154.99	162.3	-109.1	273.1	252.9	20.23	13.500		
4,500.0	4,469.9	4,481.9	4,469.9	12.7	10.4	156.22	162.3	-109.1	286.4	265.8	20.64	13.874		
4,600.0	4,568.8	4,580.9	4,568.8	13.0	10.6	157.34	162.3	-109.1	299.8	278.8	21.06	14.235		
4,700.0	4,667.9	4,680.0	4,667.9	13.3	10.8	158.36	162.3	-109.1	312.1	290.6	21.49	14.524		
4,800.0	4,767.5	4,779.5	4,767.5	13.6	11.0	159.07	162.3	-109.1	321.3	299.4	21.89	14.680		
4,900.0	4,867.2	4,879.3	4,867.2	13.8	11.2	159.51	162.3	-109.1	327.3	305.0	22.27	14.695		
5,000.0	4,967.2	4,979.2	4,967.2	13.9	11.4	159.71	162.3	-109.1	330.0	307.4	22.64	14.578		
5,100.0	5,067.2	5,079.2	5,067.2	14.1	11.6	90.00	162.3	-109.1	330.2	307.2	22.98	14.371		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,179.2	5,167.2	14.2	11.9	90.00	162.3	-109.1	330.2	306.8	23.39	14.115			
5,300.0	5,267.2	5,279.2	5,267.2	14.4	12.1	90.00	162.3	-109.1	330.2	306.4	23.81	13.868			
5,400.0	5,367.2	5,379.2	5,367.2	14.6	12.3	90.00	162.3	-109.1	330.2	306.0	24.23	13.628			
5,500.0	5,467.2	5,479.2	5,467.2	14.8	12.5	90.00	162.3	-109.1	330.2	305.5	24.65	13.396			
5,600.0	5,567.2	5,579.2	5,567.2	15.0	12.7	90.00	162.3	-109.1	330.2	305.1	25.07	13.171			
5,700.0	5,667.2	5,679.2	5,667.2	15.1	12.9	90.00	162.3	-109.1	330.2	304.7	25.49	12.953			
5,800.0	5,767.2	5,779.2	5,767.2	15.3	13.1	90.00	162.3	-109.1	330.2	304.3	25.91	12.742			
5,900.0	5,867.2	5,879.2	5,867.2	15.5	13.3	90.00	162.3	-109.1	330.2	303.8	26.34	12.537			
6,000.0	5,967.2	5,979.2	5,967.2	15.7	13.6	90.00	162.3	-109.1	330.2	303.4	26.76	12.338			
6,100.0	6,067.2	6,079.2	6,067.2	15.9	13.8	90.00	162.3	-109.1	330.2	303.0	27.19	12.145			
6,200.0	6,167.2	6,179.2	6,167.2	16.0	14.0	90.00	162.3	-109.1	330.2	302.6	27.61	11.958			
6,300.0	6,267.2	6,279.2	6,267.2	16.2	14.2	90.00	162.3	-109.1	330.2	302.1	28.04	11.776			
6,400.0	6,367.2	6,379.2	6,367.2	16.4	14.4	90.00	162.3	-109.1	330.2	301.7	28.47	11.599			
6,500.0	6,467.2	6,478.7	6,466.6	16.6	14.6	-88.81	160.7	-109.1	330.2	301.3	28.89	11.428			
6,600.0	6,565.5	6,577.4	6,563.7	16.7	14.7	-88.82	143.5	-108.7	330.2	301.1	29.11	11.341			
6,700.0	6,658.7	6,676.1	6,655.8	16.8	14.8	-88.87	108.4	-108.0	330.2	300.9	29.25	11.289			
6,800.0	6,743.3	6,774.9	6,739.7	16.8	14.9	-88.96	56.6	-106.9	330.2	300.8	29.38	11.237			
6,900.0	6,816.3	6,873.9	6,812.4	16.9	15.0	-89.09	-10.3	-105.6	330.2	300.5	29.63	11.144			
7,000.0	6,875.0	6,972.9	6,871.2	17.0	15.1	-89.25	-89.8	-103.9	330.1	300.0	30.11	10.966			
7,100.0	6,917.1	7,072.2	6,914.1	17.2	15.4	-89.44	-179.2	-102.1	330.1	299.2	30.92	10.678			
7,200.0	6,941.2	7,171.7	6,939.2	17.6	16.0	-89.65	-275.3	-100.1	330.1	298.0	32.11	10.282			
7,292.1	6,948.4	7,263.5	6,945.9	18.1	16.7	-89.57	-366.7	-98.2	330.1	296.6	33.51	9.850			
7,300.0	6,946.8	7,271.4	6,945.8	18.2	16.8	-89.83	-374.6	-98.0	330.1	296.5	33.65	9.809			
7,400.0	6,946.3	7,371.4	6,945.4	19.0	17.8	-89.83	-474.6	-96.0	330.1	294.6	35.55	9.286			
7,500.0	6,945.9	7,471.4	6,944.9	20.0	18.9	-89.83	-574.6	-93.9	330.1	292.4	37.73	8.750			
7,600.0	6,945.4	7,571.4	6,944.4	21.2	20.1	-89.83	-674.6	-91.9	330.1	290.0	40.16	8.220			
7,700.0	6,944.9	7,671.4	6,943.9	22.4	21.4	-89.83	-774.5	-89.8	330.1	287.3	42.80	7.713			
7,800.0	6,944.4	7,771.4	6,943.5	23.8	22.8	-89.83	-874.5	-87.7	330.1	284.5	45.61	7.237			
7,900.0	6,944.0	7,871.4	6,943.0	25.2	24.3	-89.83	-974.5	-85.7	330.1	281.6	48.57	6.797			
8,000.0	6,943.5	7,971.4	6,942.5	26.7	25.8	-89.83	-1,074.5	-83.6	330.1	278.5	51.64	6.393			
8,100.0	6,943.0	8,071.4	6,942.1	28.2	27.4	-89.83	-1,174.4	-81.5	330.1	275.3	54.81	6.023			
8,200.0	6,942.6	8,171.4	6,941.6	29.8	29.0	-89.83	-1,274.4	-79.5	330.1	272.1	58.06	5.686			
8,300.0	6,942.1	8,271.4	6,941.1	31.4	30.7	-89.83	-1,374.4	-77.4	330.1	268.7	61.39	5.378			
8,400.0	6,941.6	8,371.4	6,940.7	33.1	32.4	-89.83	-1,474.4	-75.3	330.1	265.4	64.77	5.097			
8,500.0	6,941.1	8,471.4	6,940.2	34.8	34.1	-89.83	-1,574.4	-73.3	330.1	261.9	68.19	4.841			
8,600.0	6,940.7	8,571.4	6,939.7	36.5	35.8	-89.83	-1,674.3	-71.2	330.1	258.5	71.67	4.606			
8,700.0	6,940.2	8,671.4	6,939.2	38.2	37.6	-89.83	-1,774.3	-69.2	330.1	255.0	75.17	4.392			
8,800.0	6,939.7	8,771.4	6,938.8	40.0	39.4	-89.83	-1,874.3	-67.1	330.1	251.4	78.71	4.194			
8,900.0	6,939.3	8,871.4	6,938.3	41.7	41.1	-89.83	-1,974.3	-65.0	330.1	247.8	82.28	4.012			
9,000.0	6,938.8	8,971.4	6,937.8	43.5	42.9	-89.83	-2,074.2	-63.0	330.1	244.3	85.87	3.844			
9,100.0	6,938.3	9,071.4	6,937.4	45.3	44.7	-89.83	-2,174.2	-60.9	330.1	240.6	89.49	3.689			
9,200.0	6,937.8	9,171.4	6,936.9	47.1	46.6	-89.83	-2,274.2	-58.8	330.1	237.0	93.12	3.545			
9,300.0	6,937.4	9,271.4	6,936.4	48.9	48.4	-89.83	-2,374.2	-56.8	330.1	233.4	96.77	3.412			
9,400.0	6,936.9	9,371.4	6,935.9	50.7	50.2	-89.83	-2,474.2	-54.7	330.1	229.7	100.43	3.287			
9,500.0	6,936.4	9,471.4	6,935.5	52.5	52.0	-89.83	-2,574.1	-52.7	330.1	226.0	104.11	3.171			
9,600.0	6,936.0	9,571.4	6,935.0	54.4	53.9	-89.83	-2,674.1	-50.6	330.1	222.3	107.80	3.063			
9,700.0	6,935.5	9,671.4	6,934.5	56.2	55.7	-89.83	-2,774.1	-48.5	330.1	218.6	111.50	2.961			
9,800.0	6,935.0	9,771.4	6,934.1	58.0	57.6	-89.83	-2,874.1	-46.5	330.1	214.9	115.21	2.866			
9,900.0	6,934.6	9,871.4	6,933.6	59.9	59.5	-89.83	-2,974.0	-44.4	330.1	211.2	118.92	2.776			
10,000.0	6,934.1	9,971.4	6,933.1	61.7	61.3	-89.83	-3,074.0	-42.3	330.1	207.5	122.65	2.692			
10,100.0	6,933.6	10,071.4	6,932.6	63.6	63.2	-89.83	-3,174.0	-40.3	330.1	203.8	126.38	2.612			
10,200.0	6,933.1	10,171.4	6,932.2	65.4	65.1	-89.83	-3,274.0	-38.2	330.1	200.0	130.12	2.537			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	6,932.7	10,271.4	6,931.7	67.3	66.9	-89.83	-3,374.0	-36.1	330.1	196.3	133.87	2.466			
10,400.0	6,932.2	10,371.4	6,931.2	69.2	68.8	-89.83	-3,473.9	-34.1	330.1	192.5	137.62	2.399			
10,500.0	6,931.7	10,471.4	6,930.8	71.0	70.7	-89.83	-3,573.9	-32.0	330.1	188.8	141.38	2.335			
10,600.0	6,931.3	10,571.4	6,930.3	72.9	72.6	-89.83	-3,673.9	-30.0	330.1	185.0	145.14	2.275			
10,700.0	6,930.8	10,671.4	6,929.8	74.8	74.4	-89.83	-3,773.9	-27.9	330.2	181.2	148.91	2.217			
10,800.0	6,930.3	10,771.4	6,929.3	76.7	76.3	-89.83	-3,873.8	-25.8	330.2	177.5	152.68	2.162			
10,900.0	6,929.8	10,871.4	6,928.9	78.6	78.2	-89.83	-3,973.8	-23.8	330.2	173.7	156.45	2.110			
11,000.0	6,929.4	10,971.4	6,928.4	80.4	80.1	-89.83	-4,073.8	-21.7	330.2	169.9	160.23	2.061			
11,100.0	6,928.9	11,071.4	6,927.9	82.3	82.0	-89.83	-4,173.8	-19.6	330.2	166.1	164.01	2.013			
11,200.0	6,928.4	11,171.4	6,927.5	84.2	83.9	-89.83	-4,273.7	-17.6	330.2	162.4	167.79	1.968			
11,300.0	6,928.0	11,271.4	6,927.0	86.1	85.8	-89.83	-4,373.7	-15.5	330.2	158.6	171.58	1.924			
11,400.0	6,927.5	11,371.4	6,926.5	88.0	87.7	-89.83	-4,473.7	-13.5	330.2	154.8	175.37	1.883			
11,500.0	6,927.0	11,471.4	6,926.0	89.9	89.6	-89.83	-4,573.7	-11.4	330.2	151.0	179.16	1.843			
11,502.3	6,927.0	11,473.7	6,926.0	89.9	89.6	-89.83	-4,575.9	-11.3	330.2	150.9	179.24	1.842 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	89.98	0.0	44.8	44.8					
100.0	100.0	99.0	99.0	0.1	0.1	89.98	0.0	44.8	44.8	44.5	0.22	200.180		
200.0	200.0	199.0	199.0	0.3	0.3	89.98	0.0	44.8	44.8	44.1	0.67	66.616		
300.0	300.0	299.0	299.0	0.6	0.6	89.98	0.0	44.8	44.8	43.6	1.12	39.916		
400.0	400.0	399.0	399.0	0.8	0.8	89.98	0.0	44.8	44.8	43.2	1.57	28.495		
500.0	500.0	499.0	499.0	1.0	1.0	89.98	0.0	44.8	44.8	42.7	2.02	22.156		
600.0	600.0	599.0	599.0	1.2	1.2	89.98	0.0	44.8	44.8	42.3	2.47	18.124		
700.0	700.0	699.0	699.0	1.5	1.5	89.98	0.0	44.8	44.8	41.8	2.92	15.333		
800.0	800.0	799.0	799.0	1.7	1.7	89.98	0.0	44.8	44.8	41.4	3.37	13.288		
900.0	900.0	899.0	899.0	1.9	1.9	89.98	0.0	44.8	44.8	41.0	3.82	11.723		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.98	0.0	44.8	44.8	40.5	4.27	10.489		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.98	0.0	44.8	44.8	40.1	4.72	9.489		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.98	0.0	44.8	44.8	39.6	5.17	8.664		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	89.98	0.0	44.8	44.8	39.2	5.62	7.970		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	89.98	0.0	44.8	44.8	38.7	6.07	7.380 CC, ES		
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	160.44	0.0	44.8	46.4	39.9	6.50	7.135		
1,600.0	1,599.8	1,598.8	1,598.8	3.5	3.5	162.37	0.0	44.8	51.4	44.4	6.93	7.414		
1,700.0	1,699.5	1,698.5	1,698.5	3.7	3.7	164.86	0.0	44.8	59.7	52.4	7.35	8.129		
1,800.0	1,798.7	1,797.7	1,797.7	3.9	3.9	167.35	0.0	44.8	71.6	63.8	7.76	9.222		
1,900.0	1,897.6	1,896.6	1,896.6	4.2	4.2	169.46	0.0	44.8	85.8	77.6	8.19	10.473		
2,000.0	1,996.6	1,995.6	1,995.6	4.5	4.4	170.99	0.0	44.8	100.2	91.5	8.63	11.604		
2,100.0	2,095.5	2,094.5	2,094.5	4.7	4.6	172.13	0.0	44.8	114.6	105.5	9.07	12.627		
2,200.0	2,194.4	2,193.4	2,193.4	5.0	4.8	173.01	0.0	44.8	129.0	119.5	9.52	13.554		
2,300.0	2,293.4	2,293.0	2,293.0	5.3	5.0	173.28	1.1	44.8	143.3	133.3	9.97	14.378		
2,400.0	2,392.3	2,392.6	2,392.6	5.6	5.3	172.55	4.9	45.1	157.2	146.7	10.42	15.088		
2,500.0	2,491.2	2,492.3	2,492.0	6.0	5.5	171.07	11.2	45.5	170.7	159.8	10.87	15.701		
2,600.0	2,590.2	2,591.7	2,591.0	6.3	5.7	169.01	20.0	46.1	184.0	172.7	11.33	16.238		
2,700.0	2,689.1	2,690.8	2,689.4	6.6	5.9	166.49	31.4	46.9	197.4	185.6	11.81	16.720		
2,800.0	2,788.0	2,789.4	2,787.3	6.9	6.2	164.03	43.7	47.7	211.1	198.8	12.30	17.170		
2,900.0	2,887.0	2,888.1	2,885.2	7.2	6.4	161.87	56.0	48.5	225.2	212.4	12.80	17.596		
3,000.0	2,985.9	2,986.8	2,983.1	7.6	6.7	159.97	68.3	49.4	239.5	226.2	13.31	17.997		
3,100.0	3,084.8	3,085.5	3,081.0	7.9	6.9	158.28	80.6	50.2	254.0	240.2	13.83	18.374		
3,200.0	3,183.8	3,184.1	3,178.9	8.2	7.2	156.78	92.9	51.0	268.8	254.4	14.35	18.726		
3,300.0	3,282.7	3,282.8	3,276.8	8.6	7.5	155.43	105.2	51.9	283.7	268.8	14.89	19.056		
3,400.0	3,381.6	3,381.5	3,374.7	8.9	7.7	154.22	117.5	52.7	298.7	283.3	15.43	19.364		
3,500.0	3,480.6	3,480.1	3,472.6	9.3	8.0	153.12	129.8	53.5	313.9	297.9	15.97	19.652		
3,600.0	3,579.5	3,579.6	3,571.4	9.6	8.3	152.17	141.8	54.3	329.1	312.6	16.51	19.935		
3,700.0	3,678.4	3,680.2	3,671.5	9.9	8.5	151.67	151.8	55.0	343.9	326.9	17.00	20.234		
3,800.0	3,777.4	3,781.1	3,772.1	10.3	8.7	151.64	159.1	55.5	358.2	340.8	17.46	20.514		
3,900.0	3,876.3	3,882.0	3,872.9	10.6	8.9	152.01	163.8	55.8	372.0	354.1	17.91	20.774		
4,000.0	3,975.2	3,982.9	3,973.8	11.0	9.1	152.75	165.8	56.0	385.3	367.0	18.33	21.021		
4,100.0	4,074.2	4,082.3	4,073.2	11.3	9.2	153.70	165.9	56.0	398.4	379.6	18.75	21.244		
4,200.0	4,173.1	4,181.3	4,172.1	11.7	9.4	154.59	165.9	56.0	411.5	392.3	19.19	21.441		
4,300.0	4,272.0	4,280.2	4,271.0	12.0	9.7	155.43	165.9	56.0	424.8	405.1	19.64	21.628		
4,400.0	4,371.0	4,379.1	4,370.0	12.3	9.9	156.22	165.9	56.0	438.1	418.0	20.08	21.812		
4,500.0	4,469.9	4,478.1	4,468.9	12.7	10.1	156.97	165.9	56.0	451.5	430.9	20.53	21.990		
4,600.0	4,568.8	4,577.0	4,567.8	13.0	10.3	157.67	165.9	56.0	464.9	444.0	20.98	22.164		
4,700.0	4,667.9	4,676.1	4,666.9	13.3	10.5	158.35	165.9	56.0	477.3	455.8	21.44	22.261		
4,800.0	4,767.5	4,775.6	4,766.5	13.6	10.7	158.85	165.9	56.0	486.5	464.6	21.86	22.249		
4,900.0	4,867.2	4,875.4	4,866.2	13.8	10.9	159.16	165.9	56.0	492.4	470.1	22.27	22.114		
5,000.0	4,967.2	4,975.4	4,966.2	13.9	11.1	159.30	165.9	56.0	495.1	472.5	22.65	21.863		
5,100.0	5,067.2	5,075.4	5,066.2	14.1	11.4	89.58	165.9	56.0	495.3	472.3	23.00	21.533		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,175.4	5,166.2	14.2	11.6	89.58	165.9	56.0	495.3	471.9	23.42	21.149			
5,300.0	5,267.2	5,275.4	5,266.2	14.4	11.8	89.58	165.9	56.0	495.3	471.4	23.84	20.778			
5,400.0	5,367.2	5,375.4	5,366.2	14.6	12.0	89.58	165.9	56.0	495.3	471.0	24.26	20.418			
5,500.0	5,467.2	5,475.4	5,466.2	14.8	12.2	89.58	165.9	56.0	495.3	470.6	24.68	20.070			
5,600.0	5,567.2	5,575.4	5,566.2	15.0	12.4	89.58	165.9	56.0	495.3	470.2	25.10	19.733			
5,700.0	5,667.2	5,675.4	5,666.2	15.1	12.7	89.58	165.9	56.0	495.3	469.8	25.52	19.406			
5,800.0	5,767.2	5,775.4	5,766.2	15.3	12.9	89.58	165.9	56.0	495.3	469.3	25.95	19.090			
5,900.0	5,867.2	5,875.4	5,866.2	15.5	13.1	89.58	165.9	56.0	495.3	468.9	26.37	18.782			
6,000.0	5,967.2	5,975.4	5,966.2	15.7	13.3	89.58	165.9	56.0	495.3	468.5	26.79	18.484			
6,100.0	6,067.2	6,075.4	6,066.2	15.9	13.5	89.58	165.9	56.0	495.3	468.1	27.22	18.195			
6,200.0	6,167.2	6,175.4	6,166.2	16.0	13.7	89.58	165.9	56.0	495.3	467.6	27.65	17.914			
6,300.0	6,267.2	6,275.4	6,266.2	16.2	14.0	89.58	165.9	56.0	495.3	467.2	28.07	17.641			
6,400.0	6,367.2	6,375.4	6,366.2	16.4	14.2	89.58	165.9	56.0	495.3	466.8	28.50	17.377			
6,500.0	6,467.2	6,475.3	6,466.2	16.6	14.4	-89.43	165.9	56.0	495.3	466.3	28.95	17.107			
6,541.8	6,508.7	6,516.9	6,507.7	16.6	14.5	-90.00	165.9	56.0	495.2	466.1	29.10	17.016			
6,600.0	6,565.5	6,573.6	6,564.5	16.7	14.6	-91.38	165.9	56.0	495.4	466.1	29.33	16.891			
6,700.0	6,658.7	6,670.7	6,661.5	16.8	14.8	-95.00	164.2	56.0	497.4	467.8	29.65	16.776			
6,800.0	6,743.3	6,777.1	6,765.9	16.8	14.9	-98.93	144.8	56.4	502.2	472.4	29.80	16.851			
6,900.0	6,816.3	6,893.5	6,873.0	16.9	15.0	-102.69	99.8	57.3	509.1	479.3	29.81	17.081			
7,000.0	6,875.0	7,021.6	6,976.1	17.0	15.1	-106.10	24.2	58.9	517.1	487.3	29.80	17.355			
7,100.0	6,917.1	7,162.3	7,064.3	17.2	15.4	-108.91	-84.8	61.1	524.7	494.6	30.06	17.453			
7,200.0	6,941.2	7,314.1	7,123.1	17.6	16.1	-110.77	-224.1	64.0	530.0	499.1	30.99	17.103			
7,300.0	6,946.8	7,463.3	7,139.7	18.2	17.1	-111.38	-371.9	67.1	531.8	499.1	32.73	16.251			
7,400.0	6,946.3	7,563.3	7,139.4	19.0	18.1	-111.39	-471.9	69.1	531.9	497.4	34.51	15.413			
7,500.0	6,945.9	7,663.3	7,139.0	20.0	19.1	-111.41	-571.9	71.2	531.9	495.4	36.55	14.554			
7,600.0	6,945.4	7,763.3	7,138.7	21.2	20.3	-111.42	-671.8	73.2	532.0	493.2	38.82	13.703			
7,700.0	6,944.9	7,863.3	7,138.3	22.4	21.6	-111.43	-771.8	75.3	532.0	490.7	41.29	12.886			
7,800.0	6,944.4	7,963.3	7,138.0	23.8	23.0	-111.44	-871.8	77.4	532.1	488.2	43.91	12.117			
7,900.0	6,944.0	8,063.3	7,137.6	25.2	24.5	-111.46	-971.8	79.4	532.1	485.4	46.67	11.402			
8,000.0	6,943.5	8,163.3	7,137.3	26.7	26.0	-111.47	-1,071.7	81.5	532.2	482.6	49.53	10.743			
8,100.0	6,943.0	8,263.3	7,136.9	28.2	27.6	-111.48	-1,171.7	83.6	532.2	479.7	52.49	10.138			
8,200.0	6,942.6	8,363.3	7,136.6	29.8	29.2	-111.49	-1,271.7	85.6	532.2	476.7	55.53	9.584			
8,300.0	6,942.1	8,463.3	7,136.2	31.4	30.9	-111.50	-1,371.7	87.7	532.3	473.7	58.64	9.078			
8,400.0	6,941.6	8,563.3	7,135.9	33.1	32.5	-111.52	-1,471.7	89.7	532.3	470.5	61.79	8.615			
8,500.0	6,941.1	8,663.3	7,135.5	34.8	34.2	-111.53	-1,571.6	91.8	532.4	467.4	65.00	8.191			
8,600.0	6,940.7	8,763.3	7,135.2	36.5	36.0	-111.54	-1,671.6	93.9	532.4	464.2	68.25	7.802			
8,700.0	6,940.2	8,863.3	7,134.8	38.2	37.7	-111.55	-1,771.6	95.9	532.5	460.9	71.53	7.444			
8,800.0	6,939.7	8,963.3	7,134.5	40.0	39.5	-111.57	-1,871.6	98.0	532.5	457.7	74.84	7.116			
8,900.0	6,939.3	9,063.3	7,134.1	41.7	41.3	-111.58	-1,971.6	100.1	532.6	454.4	78.18	6.812			
9,000.0	6,938.8	9,163.3	7,133.8	43.5	43.0	-111.59	-2,071.5	102.1	532.6	451.1	81.54	6.532			
9,100.0	6,938.3	9,263.3	7,133.4	45.3	44.8	-111.60	-2,171.5	104.2	532.6	447.7	84.92	6.273			
9,200.0	6,937.8	9,363.3	7,133.1	47.1	46.7	-111.61	-2,271.5	106.2	532.7	444.4	88.32	6.032			
9,300.0	6,937.4	9,463.3	7,132.7	48.9	48.5	-111.63	-2,371.5	108.3	532.7	441.0	91.73	5.808			
9,400.0	6,936.9	9,563.3	7,132.4	50.7	50.3	-111.64	-2,471.4	110.4	532.8	437.6	95.16	5.599			
9,500.0	6,936.4	9,663.3	7,132.0	52.5	52.1	-111.65	-2,571.4	112.4	532.8	434.2	98.60	5.404			
9,600.0	6,936.0	9,763.3	7,131.7	54.4	54.0	-111.66	-2,671.4	114.5	532.9	430.8	102.05	5.222			
9,700.0	6,935.5	9,863.3	7,131.3	56.2	55.8	-111.68	-2,771.4	116.6	532.9	427.4	105.51	5.051			
9,800.0	6,935.0	9,963.3	7,131.0	58.0	57.7	-111.69	-2,871.4	118.6	533.0	424.0	108.98	4.890			
9,900.0	6,934.6	10,063.3	7,130.6	59.9	59.5	-111.70	-2,971.3	120.7	533.0	420.5	112.46	4.739			
10,000.0	6,934.1	10,163.3	7,130.3	61.7	61.4	-111.71	-3,071.3	122.7	533.1	417.1	115.95	4.597			
10,100.0	6,933.6	10,263.3	7,129.9	63.6	63.3	-111.72	-3,171.3	124.8	533.1	413.7	119.44	4.463			
10,200.0	6,933.1	10,363.3	7,129.6	65.4	65.1	-111.74	-3,271.3	126.9	533.1	410.2	122.94	4.337			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	6,932.7	10,463.3	7,129.2	67.3	67.0	-111.75	-3,371.2	128.9	533.2	406.7	126.45	4.217			
10,400.0	6,932.2	10,563.3	7,128.9	69.2	68.9	-111.76	-3,471.2	131.0	533.2	403.3	129.96	4.103			
10,500.0	6,931.7	10,663.3	7,128.5	71.0	70.8	-111.77	-3,571.2	133.0	533.3	399.8	133.47	3.995			
10,600.0	6,931.3	10,763.3	7,128.2	72.9	72.6	-111.79	-3,671.2	135.1	533.3	396.3	136.99	3.893			
10,700.0	6,930.8	10,863.3	7,127.8	74.8	74.5	-111.80	-3,771.2	137.2	533.4	392.9	140.51	3.796			
10,800.0	6,930.3	10,963.3	7,127.5	76.7	76.4	-111.81	-3,871.1	139.2	533.4	389.4	144.04	3.703			
10,900.0	6,929.8	11,063.3	7,127.1	78.6	78.3	-111.82	-3,971.1	141.3	533.5	385.9	147.57	3.615			
11,000.0	6,929.4	11,163.3	7,126.8	80.4	80.2	-111.83	-4,071.1	143.4	533.5	382.4	151.10	3.531			
11,100.0	6,928.9	11,263.3	7,126.4	82.3	82.1	-111.85	-4,171.1	145.4	533.6	378.9	154.64	3.450			
11,200.0	6,928.4	11,363.3	7,126.1	84.2	83.9	-111.86	-4,271.0	147.5	533.6	375.4	158.17	3.374			
11,300.0	6,928.0	11,463.3	7,125.7	86.1	85.8	-111.87	-4,371.0	149.5	533.6	371.9	161.71	3.300			
11,400.0	6,927.5	11,563.3	7,125.4	88.0	87.7	-111.88	-4,471.0	151.6	533.7	368.4	165.25	3.230			
11,500.0	6,927.0	11,663.3	7,125.0	89.9	89.6	-111.89	-4,571.0	153.7	533.7	364.9	168.80	3.162			
11,502.3	6,927.0	11,665.6	7,125.0	89.9	89.7	-111.90	-4,573.2	153.7	533.7	364.9	168.88	3.160 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	61.6	61.6					
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	61.6	61.6	61.3	0.22	275.248		
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	61.6	61.6	60.9	0.67	91.597		
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	61.6	61.6	60.4	1.12	54.885		
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	61.6	61.6	60.0	1.57	39.181		
500.0	500.0	499.0	499.0	1.0	1.0	90.00	0.0	61.6	61.6	59.5	2.02	30.464		
600.0	600.0	599.0	599.0	1.2	1.2	90.00	0.0	61.6	61.6	59.1	2.47	24.920		
700.0	700.0	699.0	699.0	1.5	1.5	90.00	0.0	61.6	61.6	58.6	2.92	21.083		
800.0	800.0	799.0	799.0	1.7	1.7	90.00	0.0	61.6	61.6	58.2	3.37	18.270		
900.0	900.0	899.0	899.0	1.9	1.9	90.00	0.0	61.6	61.6	57.7	3.82	16.120		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.00	0.0	61.6	61.6	57.3	4.27	14.422		
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	90.00	0.0	61.6	61.6	56.8	4.72	13.048		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	90.00	0.0	61.6	61.6	56.4	5.17	11.913		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	90.00	0.0	61.6	61.6	55.9	5.62	10.959		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	90.00	0.0	61.6	61.6	55.5	6.07	10.147 CC, ES		
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	160.26	0.0	61.6	63.2	56.7	6.50	9.716		
1,600.0	1,599.8	1,598.8	1,598.8	3.5	3.5	161.72	0.0	61.6	68.1	61.2	6.93	9.835		
1,700.0	1,699.5	1,697.2	1,697.2	3.7	3.7	162.98	0.9	62.4	77.3	69.9	7.34	10.524		
1,800.0	1,798.7	1,794.8	1,794.7	3.9	3.9	163.31	3.6	65.0	91.4	83.7	7.75	11.795		
1,900.0	1,897.6	1,891.5	1,891.2	4.2	4.1	162.93	8.0	69.3	109.4	101.2	8.17	13.379		
2,000.0	1,996.6	1,987.6	1,986.9	4.5	4.3	161.85	14.2	75.2	129.0	120.4	8.61	14.983		
2,100.0	2,095.5	2,084.5	2,083.3	4.7	4.6	160.48	21.8	82.5	150.0	140.9	9.06	16.561		
2,200.0	2,194.4	2,182.2	2,180.4	5.0	4.8	159.41	29.5	89.9	171.2	161.7	9.51	17.997		
2,300.0	2,293.4	2,279.9	2,277.5	5.3	5.1	158.57	37.3	97.4	192.4	182.4	9.97	19.294		
2,400.0	2,392.3	2,377.6	2,374.6	5.6	5.3	157.89	45.0	104.8	213.6	203.2	10.44	20.467		
2,500.0	2,491.2	2,475.3	2,471.7	6.0	5.6	157.34	52.8	112.3	234.9	224.0	10.91	21.533		
2,600.0	2,590.2	2,573.0	2,568.8	6.3	5.8	156.88	60.5	119.7	256.2	244.8	11.38	22.502		
2,700.0	2,689.1	2,670.7	2,665.9	6.6	6.1	156.49	68.3	127.2	277.5	265.6	11.86	23.387		
2,800.0	2,788.0	2,768.3	2,762.9	6.9	6.3	156.16	76.0	134.6	298.8	286.4	12.35	24.197		
2,900.0	2,887.0	2,866.0	2,860.0	7.2	6.6	155.87	83.8	142.1	320.1	307.3	12.83	24.940		
3,000.0	2,985.9	2,963.7	2,957.1	7.6	6.9	155.62	91.6	149.5	341.4	328.1	13.32	25.624		
3,100.0	3,084.8	3,061.4	3,054.2	7.9	7.1	155.39	99.3	157.0	362.7	348.9	13.82	26.256		
3,200.0	3,183.8	3,159.1	3,151.3	8.2	7.4	155.19	107.1	164.4	384.1	369.8	14.31	26.839		
3,300.0	3,282.7	3,256.8	3,248.4	8.6	7.7	155.02	114.8	171.9	405.4	390.6	14.81	27.381		
3,400.0	3,381.6	3,354.5	3,345.5	8.9	8.0	154.86	122.6	179.3	426.7	411.4	15.30	27.884		
3,500.0	3,480.6	3,452.2	3,442.6	9.3	8.2	154.71	130.3	186.8	448.1	432.3	15.80	28.353		
3,600.0	3,579.5	3,549.9	3,539.7	9.6	8.5	154.58	138.1	194.2	469.4	453.1	16.31	28.790		
3,700.0	3,678.4	3,647.6	3,636.8	9.9	8.8	154.46	145.8	201.7	490.8	474.0	16.81	29.199		
3,800.0	3,777.4	3,751.4	3,740.1	10.3	9.1	154.38	153.7	209.3	511.8	494.5	17.30	29.587		
3,900.0	3,876.3	3,860.8	3,849.1	10.6	9.3	154.51	160.1	215.3	530.9	513.1	17.77	29.880		
4,000.0	3,975.2	3,970.9	3,959.1	11.0	9.5	154.84	164.1	219.3	547.9	529.7	18.23	30.059		
4,100.0	4,074.2	4,081.7	4,069.9	11.3	9.7	155.38	165.9	221.0	562.8	544.1	18.68	30.135		
4,200.0	4,173.1	4,184.0	4,172.1	11.7	9.9	155.99	166.0	221.1	576.2	557.1	19.12	30.143		
4,300.0	4,272.0	4,282.9	4,271.0	12.0	10.1	156.57	166.0	221.1	589.6	570.0	19.57	30.129		
4,400.0	4,371.0	4,381.8	4,370.0	12.3	10.3	157.12	166.0	221.1	603.0	582.9	20.02	30.114		
4,500.0	4,469.9	4,480.8	4,468.9	12.7	10.5	157.64	166.0	221.1	616.4	596.0	20.48	30.102		
4,600.0	4,568.8	4,579.7	4,567.8	13.0	10.7	158.15	166.0	221.1	630.0	609.0	20.93	30.094		
4,700.0	4,667.9	4,678.8	4,666.9	13.3	10.9	158.67	166.0	221.1	642.3	620.9	21.41	29.998		
4,800.0	4,767.5	4,778.3	4,766.5	13.6	11.1	159.05	166.0	221.1	651.5	629.7	21.85	29.817		
4,900.0	4,867.2	4,878.1	4,866.2	13.8	11.3	159.29	166.0	221.1	657.5	635.2	22.26	29.530		
5,000.0	4,967.2	4,978.1	4,966.2	13.9	11.5	159.40	166.0	221.1	660.2	637.5	22.65	29.145		
5,100.0	5,067.2	5,078.1	5,066.2	14.1	11.7	89.68	166.0	221.1	660.4	637.3	23.02	28.686		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,178.1	5,166.2	14.2	11.9	89.68	166.0	221.1	660.4	636.9	23.43	28.179		
5,300.0	5,267.2	5,278.1	5,266.2	14.4	12.1	89.68	166.0	221.1	660.4	636.5	23.85	27.687		
5,400.0	5,367.2	5,378.1	5,366.2	14.6	12.3	89.68	166.0	221.1	660.4	636.1	24.27	27.212		
5,500.0	5,467.2	5,478.1	5,466.2	14.8	12.6	89.68	166.0	221.1	660.4	635.7	24.69	26.750		
5,600.0	5,567.2	5,578.1	5,566.2	15.0	12.8	89.68	166.0	221.1	660.4	635.3	25.11	26.304		
5,700.0	5,667.2	5,678.1	5,666.2	15.1	13.0	89.68	166.0	221.1	660.4	634.8	25.53	25.871		
5,800.0	5,767.2	5,778.1	5,766.2	15.3	13.2	89.68	166.0	221.1	660.4	634.4	25.95	25.450		
5,900.0	5,867.2	5,878.1	5,866.2	15.5	13.4	89.68	166.0	221.1	660.4	634.0	26.37	25.043		
6,000.0	5,967.2	5,978.1	5,966.2	15.7	13.6	89.68	166.0	221.1	660.4	633.6	26.79	24.647		
6,100.0	6,067.2	6,078.1	6,066.2	15.9	13.8	89.68	166.0	221.1	660.4	633.2	27.22	24.264		
6,200.0	6,167.2	6,178.1	6,166.2	16.0	14.0	89.68	166.0	221.1	660.4	632.7	27.64	23.891		
6,300.0	6,267.2	6,278.1	6,266.2	16.2	14.3	89.68	166.0	221.1	660.4	632.3	28.07	23.528		
6,400.0	6,367.2	6,378.1	6,366.2	16.4	14.5	89.68	166.0	221.1	660.4	631.9	28.49	23.176		
6,500.0	6,467.2	6,477.3	6,465.4	16.6	14.7	-89.14	164.4	221.1	660.4	631.5	28.90	22.851		
6,600.0	6,565.5	6,575.4	6,561.9	16.7	14.8	-89.15	147.4	221.4	660.4	631.2	29.12	22.675		
6,700.0	6,658.7	6,673.6	6,653.6	16.8	14.9	-89.19	112.7	222.2	660.4	631.1	29.26	22.571		
6,800.0	6,743.3	6,771.9	6,737.2	16.8	14.9	-89.26	61.4	223.2	660.3	631.0	29.39	22.470		
6,900.0	6,816.3	6,870.4	6,809.9	16.9	15.0	-89.36	-4.9	224.6	660.3	630.7	29.63	22.285		
7,000.0	6,875.0	6,969.1	6,868.9	17.0	15.2	-89.49	-83.8	226.2	660.3	630.2	30.11	21.933		
7,100.0	6,917.1	7,068.1	6,912.1	17.2	15.5	-89.63	-172.8	228.0	660.3	629.4	30.91	21.361		
7,200.0	6,941.2	7,167.5	6,937.8	17.6	16.1	-89.78	-268.5	230.0	660.3	628.2	32.10	20.572		
7,300.0	6,946.8	7,267.2	6,944.9	18.2	16.9	-89.92	-367.8	232.1	660.3	626.6	33.64	19.628		
7,400.0	6,946.3	7,367.2	6,944.4	19.0	17.8	-89.92	-467.8	234.1	660.3	624.8	35.54	18.581		
7,500.0	6,945.9	7,467.2	6,943.9	20.0	18.9	-89.92	-567.8	236.2	660.3	622.6	37.71	17.508		
7,600.0	6,945.4	7,567.2	6,943.5	21.2	20.1	-89.92	-667.8	238.2	660.3	620.1	40.14	16.448		
7,700.0	6,944.9	7,667.2	6,943.0	22.4	21.4	-89.92	-767.7	240.3	660.3	617.5	42.78	15.433		
7,800.0	6,944.4	7,767.2	6,942.5	23.8	22.8	-89.92	-867.7	242.4	660.3	614.7	45.60	14.481		
7,900.0	6,944.0	7,867.2	6,942.1	25.2	24.3	-89.92	-967.7	244.4	660.3	611.7	48.55	13.600		
8,000.0	6,943.5	7,967.2	6,941.6	26.7	25.8	-89.92	-1,067.7	246.5	660.3	608.7	51.62	12.791		
8,100.0	6,943.0	8,067.2	6,941.1	28.2	27.4	-89.92	-1,167.6	248.6	660.3	605.5	54.79	12.051		
8,200.0	6,942.6	8,167.2	6,940.6	29.8	29.0	-89.92	-1,267.6	250.6	660.3	602.2	58.04	11.376		
8,300.0	6,942.1	8,267.2	6,940.2	31.4	30.7	-89.92	-1,367.6	252.7	660.3	598.9	61.36	10.760		
8,400.0	6,941.6	8,367.2	6,939.7	33.1	32.4	-89.92	-1,467.6	254.7	660.3	595.5	64.74	10.198		
8,500.0	6,941.1	8,467.2	6,939.2	34.8	34.1	-89.92	-1,567.6	256.8	660.3	592.1	68.17	9.685		
8,600.0	6,940.7	8,567.2	6,938.8	36.5	35.8	-89.92	-1,667.5	258.9	660.3	588.6	71.64	9.216		
8,700.0	6,940.2	8,667.2	6,938.3	38.2	37.6	-89.92	-1,767.5	260.9	660.3	585.1	75.15	8.786		
8,800.0	6,939.7	8,767.2	6,937.8	40.0	39.4	-89.92	-1,867.5	263.0	660.3	581.6	78.69	8.391		
8,900.0	6,939.3	8,867.2	6,937.3	41.7	41.1	-89.92	-1,967.5	265.0	660.3	578.0	82.26	8.027		
9,000.0	6,938.8	8,967.2	6,936.9	43.5	42.9	-89.92	-2,067.4	267.1	660.3	574.4	85.85	7.691		
9,100.0	6,938.3	9,067.2	6,936.4	45.3	44.7	-89.92	-2,167.4	269.2	660.3	570.8	89.47	7.380		
9,200.0	6,937.8	9,167.2	6,935.9	47.1	46.5	-89.92	-2,267.4	271.2	660.3	567.2	93.10	7.092		
9,300.0	6,937.4	9,267.2	6,935.5	48.9	48.4	-89.92	-2,367.4	273.3	660.3	563.5	96.75	6.825		
9,400.0	6,936.9	9,367.2	6,935.0	50.7	50.2	-89.92	-2,467.4	275.3	660.3	559.9	100.41	6.576		
9,500.0	6,936.4	9,467.2	6,934.5	52.5	52.0	-89.92	-2,567.3	277.4	660.3	556.2	104.09	6.343		
9,600.0	6,936.0	9,567.2	6,934.0	54.4	53.9	-89.92	-2,667.3	279.5	660.3	552.5	107.77	6.126		
9,700.0	6,935.5	9,667.2	6,933.6	56.2	55.7	-89.92	-2,767.3	281.5	660.3	548.8	111.47	5.923		
9,800.0	6,935.0	9,767.2	6,933.1	58.0	57.6	-89.92	-2,867.3	283.6	660.3	545.1	115.18	5.732		
9,900.0	6,934.6	9,867.2	6,932.6	59.9	59.4	-89.92	-2,967.2	285.6	660.3	541.4	118.90	5.553		
10,000.0	6,934.1	9,967.2	6,932.2	61.7	61.3	-89.92	-3,067.2	287.7	660.3	537.6	122.63	5.384		
10,100.0	6,933.6	10,067.2	6,931.7	63.6	63.2	-89.92	-3,167.2	289.8	660.3	533.9	126.36	5.225		
10,200.0	6,933.1	10,167.2	6,931.2	65.4	65.0	-89.92	-3,267.2	291.8	660.3	530.2	130.10	5.075		
10,300.0	6,932.7	10,267.2	6,930.7	67.3	66.9	-89.92	-3,367.2	293.9	660.3	526.4	133.85	4.933		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	6,932.2	10,367.2	6,930.3	69.2	68.8	-89.92	-3,467.1	296.0	660.3	522.7	137.60	4.798			
10,500.0	6,931.7	10,467.2	6,929.8	71.0	70.7	-89.92	-3,567.1	298.0	660.3	518.9	141.35	4.671			
10,600.0	6,931.3	10,567.2	6,929.3	72.9	72.5	-89.92	-3,667.1	300.1	660.3	515.1	145.12	4.550			
10,700.0	6,930.8	10,667.2	6,928.9	74.8	74.4	-89.92	-3,767.1	302.1	660.3	511.4	148.88	4.435			
10,800.0	6,930.3	10,767.2	6,928.4	76.7	76.3	-89.92	-3,867.0	304.2	660.2	507.6	152.65	4.325			
10,900.0	6,929.8	10,867.2	6,927.9	78.6	78.2	-89.92	-3,967.0	306.3	660.2	503.8	156.43	4.221			
11,000.0	6,929.4	10,967.2	6,927.4	80.4	80.1	-89.92	-4,067.0	308.3	660.2	500.0	160.20	4.121			
11,100.0	6,928.9	11,067.2	6,927.0	82.3	82.0	-89.92	-4,167.0	310.4	660.2	496.3	163.98	4.026			
11,200.0	6,928.4	11,167.2	6,926.5	84.2	83.9	-89.92	-4,267.0	312.4	660.2	492.5	167.77	3.935			
11,300.0	6,928.0	11,267.2	6,926.0	86.1	85.8	-89.92	-4,366.9	314.5	660.2	488.7	171.55	3.849			
11,400.0	6,927.5	11,367.2	6,925.6	88.0	87.7	-89.92	-4,466.9	316.6	660.2	484.9	175.34	3.765			
11,500.0	6,927.0	11,467.2	6,925.1	89.9	89.5	-89.92	-4,566.9	318.6	660.2	481.1	179.13	3.686			
11,502.3	6,927.0	11,469.4	6,925.1	89.9	89.6	-89.92	-4,569.2	318.7	660.2	481.0	179.22	3.684 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	90.01	0.0	75.5	75.6						
100.0	100.0	99.0	99.0	0.1	0.1	90.01	0.0	75.5	75.5	75.3	0.22	337.804			
200.0	200.0	199.0	199.0	0.3	0.3	90.01	0.0	75.5	75.5	74.9	0.67	112.414			
300.0	300.0	299.0	299.0	0.6	0.6	90.01	0.0	75.5	75.5	74.4	1.12	67.358			
400.0	400.0	399.0	399.0	0.8	0.8	90.01	0.0	75.5	75.5	74.0	1.57	48.086			
500.0	500.0	499.0	499.0	1.0	1.0	90.01	0.0	75.5	75.5	73.5	2.02	37.388			
600.0	600.0	599.0	599.0	1.2	1.2	90.01	0.0	75.5	75.5	73.1	2.47	30.584			
700.0	700.0	699.0	699.0	1.5	1.5	90.01	0.0	75.5	75.5	72.6	2.92	25.875			
800.0	800.0	799.0	799.0	1.7	1.7	90.01	0.0	75.5	75.5	72.2	3.37	22.423			
900.0	900.0	899.0	899.0	1.9	1.9	90.01	0.0	75.5	75.5	71.7	3.82	19.783			
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.01	0.0	75.5	75.5	71.3	4.27	17.700			
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	90.01	0.0	75.5	75.5	70.8	4.72	16.013			
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	90.01	0.0	75.5	75.5	70.4	5.17	14.620			
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	90.01	0.0	75.5	75.5	69.9	5.62	13.450			
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	90.01	0.0	75.5	75.5	69.5	6.07	12.453 CC, ES			
1,500.0	1,500.0	1,497.2	1,497.2	3.3	3.2	159.73	0.6	76.6	78.3	71.8	6.49	12.058			
1,600.0	1,599.8	1,595.0	1,594.9	3.5	3.5	159.68	2.3	79.9	86.6	79.7	6.90	12.541			
1,700.0	1,699.5	1,692.0	1,691.7	3.7	3.7	159.61	5.2	85.4	100.3	93.0	7.31	13.725			
1,800.0	1,798.7	1,787.7	1,787.0	3.9	3.9	159.51	9.2	92.9	119.5	111.8	7.72	15.492			
1,900.0	1,897.6	1,882.3	1,881.0	4.2	4.1	159.38	14.2	102.4	143.0	134.9	8.14	17.568			
2,000.0	1,996.6	1,979.3	1,977.3	4.5	4.4	159.15	19.9	113.0	167.4	158.8	8.58	19.520			
2,100.0	2,095.5	2,076.3	2,073.5	4.7	4.6	158.98	25.5	123.5	191.8	182.8	9.02	21.271			
2,200.0	2,194.4	2,173.3	2,169.8	5.0	4.9	158.85	31.1	134.1	216.2	206.7	9.46	22.845			
2,300.0	2,293.4	2,270.2	2,266.0	5.3	5.1	158.74	36.7	144.7	240.6	230.7	9.92	24.258			
2,400.0	2,392.3	2,367.2	2,362.2	5.6	5.4	158.66	42.3	155.3	265.0	254.6	10.37	25.541			
2,500.0	2,491.2	2,464.2	2,458.5	6.0	5.7	158.59	48.0	165.8	289.4	278.5	10.84	26.703			
2,600.0	2,590.2	2,561.2	2,554.7	6.3	5.9	158.53	53.6	176.4	313.8	302.5	11.30	27.762			
2,700.0	2,689.1	2,658.2	2,650.9	6.6	6.2	158.47	59.2	187.0	338.2	326.4	11.77	28.729			
2,800.0	2,788.0	2,755.1	2,747.2	6.9	6.5	158.43	64.8	197.6	362.5	350.3	12.24	29.615			
2,900.0	2,887.0	2,852.1	2,843.4	7.2	6.8	158.39	70.4	208.1	386.9	374.2	12.72	30.429			
3,000.0	2,985.9	2,949.1	2,939.6	7.6	7.1	158.36	76.0	218.7	411.3	398.1	13.19	31.179			
3,100.0	3,084.8	3,046.1	3,035.9	7.9	7.4	158.33	81.7	229.3	435.7	422.1	13.67	31.872			
3,200.0	3,183.8	3,143.0	3,132.1	8.2	7.7	158.30	87.3	239.9	460.1	446.0	14.15	32.514			
3,300.0	3,282.7	3,240.0	3,228.4	8.6	8.0	158.27	92.9	250.4	484.5	469.9	14.63	33.109			
3,400.0	3,381.6	3,337.0	3,324.6	8.9	8.3	158.25	98.5	261.0	508.9	493.8	15.12	33.664			
3,500.0	3,480.6	3,434.0	3,420.8	9.3	8.6	158.23	104.1	271.6	533.3	517.7	15.60	34.181			
3,600.0	3,579.5	3,531.0	3,517.1	9.6	8.8	158.21	109.7	282.2	557.7	541.6	16.09	34.664			
3,700.0	3,678.4	3,627.9	3,613.3	9.9	9.1	158.20	115.4	292.7	582.1	565.5	16.58	35.116			
3,800.0	3,777.4	3,724.9	3,709.5	10.3	9.4	158.18	121.0	303.3	606.5	589.4	17.07	35.540			
3,900.0	3,876.3	3,821.9	3,805.8	10.6	9.7	158.17	126.6	313.9	630.9	613.3	17.55	35.939			
4,000.0	3,975.2	3,918.9	3,902.0	11.0	10.0	158.15	132.2	324.5	655.3	637.3	18.05	36.314			
4,100.0	4,074.2	4,015.9	3,998.2	11.3	10.3	158.14	137.8	335.0	679.7	661.2	18.54	36.668			
4,200.0	4,173.1	4,112.8	4,094.5	11.7	10.6	158.13	143.5	345.6	704.1	685.1	19.03	37.001			
4,300.0	4,272.0	4,209.8	4,190.7	12.0	10.9	158.12	149.1	356.2	728.5	709.0	19.52	37.317			
4,400.0	4,371.0	4,319.4	4,299.5	12.3	11.3	158.13	155.1	367.6	752.4	732.4	20.02	37.576			
4,500.0	4,469.9	4,438.3	4,417.9	12.7	11.5	158.26	160.1	376.9	773.8	753.3	20.51	37.733			
4,600.0	4,568.8	4,558.4	4,537.9	13.0	11.8	158.50	163.4	383.1	792.5	771.5	20.98	37.766			
4,700.0	4,667.9	4,679.9	4,659.3	13.3	12.0	158.91	164.9	386.0	807.2	785.7	21.49	37.569			
4,800.0	4,767.5	4,787.0	4,766.5	13.6	12.1	159.24	165.0	386.1	816.6	794.7	21.93	37.241			
4,900.0	4,867.2	4,886.8	4,866.2	13.8	12.3	159.44	165.0	386.1	822.6	800.2	22.35	36.812			
5,000.0	4,967.2	4,986.8	4,966.2	13.9	12.5	159.53	165.0	386.1	825.3	802.5	22.74	36.297			
5,100.0	5,067.2	5,086.8	5,066.2	14.1	12.7	89.81	165.0	386.1	825.5	802.3	23.11	35.711			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,186.8	5,166.2	14.2	12.9	89.81	165.0	386.1	825.5	801.9	23.52	35.092		
5,300.0	5,267.2	5,286.8	5,266.2	14.4	13.1	89.81	165.0	386.1	825.5	801.5	23.93	34.491		
5,400.0	5,367.2	5,386.8	5,366.2	14.6	13.3	89.81	165.0	386.1	825.5	801.1	24.34	33.909		
5,500.0	5,467.2	5,486.8	5,466.2	14.8	13.5	89.81	165.0	386.1	825.5	800.7	24.76	33.344		
5,600.0	5,567.2	5,586.8	5,566.2	15.0	13.7	89.81	165.0	386.1	825.5	800.3	25.17	32.797		
5,700.0	5,667.2	5,686.8	5,666.2	15.1	13.9	89.81	165.0	386.1	825.5	799.9	25.58	32.265		
5,800.0	5,767.2	5,786.8	5,766.2	15.3	14.1	89.81	165.0	386.1	825.5	799.5	26.00	31.749		
5,900.0	5,867.2	5,886.8	5,866.2	15.5	14.3	89.81	165.0	386.1	825.5	799.0	26.42	31.248		
6,000.0	5,967.2	5,986.8	5,966.2	15.7	14.5	89.81	165.0	386.1	825.5	798.6	26.83	30.761		
6,100.0	6,067.2	6,086.8	6,066.2	15.9	14.7	89.81	165.0	386.1	825.5	798.2	27.25	30.288		
6,200.0	6,167.2	6,186.8	6,166.2	16.0	14.8	89.81	165.0	386.1	825.5	797.8	27.67	29.828		
6,300.0	6,267.2	6,286.8	6,266.2	16.2	15.0	89.81	165.0	386.1	825.5	797.4	28.09	29.381		
6,400.0	6,367.2	6,386.8	6,366.2	16.4	15.2	89.81	165.0	386.1	825.5	796.9	28.52	28.947		
6,500.0	6,467.2	6,485.7	6,465.0	16.6	15.4	-89.00	163.4	386.2	825.5	796.5	28.91	28.553		
6,600.0	6,565.5	6,583.0	6,560.8	16.7	15.5	-89.02	146.7	386.5	825.4	796.3	29.14	28.331		
6,700.0	6,658.7	6,680.4	6,651.9	16.8	15.6	-89.08	112.5	387.2	825.4	796.2	29.28	28.196		
6,800.0	6,743.3	6,778.0	6,735.1	16.8	15.7	-89.17	61.9	388.3	825.4	796.0	29.41	28.066		
6,900.0	6,816.3	6,875.9	6,807.7	16.9	15.8	-89.28	-3.5	389.6	825.4	795.7	29.66	27.832		
7,000.0	6,875.0	6,974.1	6,867.0	17.0	15.9	-89.43	-81.7	391.2	825.4	795.2	30.13	27.393		
7,100.0	6,917.1	7,072.8	6,910.6	17.2	16.2	-89.59	-169.9	393.1	825.3	794.4	30.94	26.680		
7,200.0	6,941.2	7,171.9	6,937.0	17.6	16.7	-89.77	-265.3	395.0	825.3	793.2	32.12	25.699		
7,300.0	6,946.8	7,271.5	6,944.9	18.2	17.4	-89.94	-364.4	397.1	825.3	791.7	33.65	24.525		
7,400.0	6,946.3	7,371.5	6,944.4	19.0	18.3	-89.94	-464.4	399.1	825.3	789.8	35.54	23.220		
7,500.0	6,945.9	7,471.5	6,944.0	20.0	19.3	-89.94	-564.4	401.2	825.3	787.6	37.72	21.881		
7,600.0	6,945.4	7,571.5	6,943.5	21.2	20.5	-89.94	-664.3	403.3	825.3	785.2	40.15	20.558		
7,700.0	6,944.9	7,671.5	6,943.0	22.4	21.8	-89.94	-764.3	405.3	825.3	782.5	42.78	19.291		
7,800.0	6,944.4	7,771.5	6,942.5	23.8	23.2	-89.94	-864.3	407.4	825.3	779.7	45.59	18.103		
7,900.0	6,944.0	7,871.5	6,942.1	25.2	24.6	-89.94	-964.3	409.4	825.3	776.8	48.54	17.002		
8,000.0	6,943.5	7,971.5	6,941.6	26.7	26.2	-89.94	-1,064.3	411.5	825.3	773.7	51.61	15.991		
8,100.0	6,943.0	8,071.5	6,941.1	28.2	27.7	-89.94	-1,164.2	413.6	825.3	770.5	54.78	15.066		
8,200.0	6,942.6	8,171.5	6,940.7	29.8	29.3	-89.94	-1,264.2	415.6	825.3	767.3	58.03	14.222		
8,300.0	6,942.1	8,271.5	6,940.2	31.4	31.0	-89.94	-1,364.2	417.7	825.3	764.0	61.35	13.453		
8,400.0	6,941.6	8,371.5	6,939.7	33.1	32.6	-89.94	-1,464.2	419.7	825.3	760.6	64.73	12.751		
8,500.0	6,941.1	8,471.5	6,939.2	34.8	34.3	-89.94	-1,564.1	421.8	825.3	757.2	68.16	12.109		
8,600.0	6,940.7	8,571.5	6,938.8	36.5	36.1	-89.94	-1,664.1	423.9	825.3	753.7	71.63	11.522		
8,700.0	6,940.2	8,671.5	6,938.3	38.2	37.8	-89.94	-1,764.1	425.9	825.3	750.2	75.13	10.985		
8,800.0	6,939.7	8,771.5	6,937.8	40.0	39.6	-89.94	-1,864.1	428.0	825.3	746.7	78.67	10.490		
8,900.0	6,939.3	8,871.5	6,937.4	41.7	41.3	-89.94	-1,964.1	430.1	825.3	743.1	82.24	10.035		
9,000.0	6,938.8	8,971.5	6,936.9	43.5	43.1	-89.94	-2,064.0	432.1	825.3	739.5	85.83	9.616		
9,100.0	6,938.3	9,071.5	6,936.4	45.3	44.9	-89.94	-2,164.0	434.2	825.3	735.9	89.44	9.227		
9,200.0	6,937.8	9,171.5	6,935.9	47.1	46.7	-89.94	-2,264.0	436.2	825.3	732.2	93.08	8.867		
9,300.0	6,937.4	9,271.5	6,935.5	48.9	48.5	-89.94	-2,364.0	438.3	825.3	728.6	96.72	8.533		
9,400.0	6,936.9	9,371.5	6,935.0	50.7	50.4	-89.94	-2,463.9	440.4	825.3	724.9	100.39	8.221		
9,500.0	6,936.4	9,471.5	6,934.5	52.5	52.2	-89.94	-2,563.9	442.4	825.3	721.3	104.06	7.931		
9,600.0	6,936.0	9,571.5	6,934.1	54.4	54.0	-89.94	-2,663.9	444.5	825.3	717.6	107.75	7.659		
9,700.0	6,935.5	9,671.5	6,933.6	56.2	55.9	-89.94	-2,763.9	446.6	825.3	713.9	111.45	7.405		
9,800.0	6,935.0	9,771.5	6,933.1	58.0	57.7	-89.94	-2,863.9	448.6	825.3	710.2	115.16	7.167		
9,900.0	6,934.6	9,871.5	6,932.6	59.9	59.6	-89.94	-2,963.8	450.7	825.3	706.4	118.88	6.943		
10,000.0	6,934.1	9,971.5	6,932.2	61.7	61.4	-89.94	-3,063.8	452.7	825.3	702.7	122.60	6.732		
10,100.0	6,933.6	10,071.5	6,931.7	63.6	63.3	-89.94	-3,163.8	454.8	825.3	699.0	126.34	6.533		
10,200.0	6,933.1	10,171.5	6,931.2	65.4	65.1	-89.94	-3,263.8	456.9	825.3	695.2	130.08	6.345		
10,300.0	6,932.7	10,271.5	6,930.8	67.3	67.0	-89.94	-3,363.7	458.9	825.3	691.5	133.82	6.167		

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	6,932.2	10,371.5	6,930.3	69.2	68.9	-89.94	-3,463.7	461.0	825.3	687.7	137.57	5.999			
10,500.0	6,931.7	10,471.5	6,929.8	71.0	70.8	-89.94	-3,563.7	463.0	825.3	684.0	141.33	5.840			
10,600.0	6,931.3	10,571.5	6,929.3	72.9	72.6	-89.94	-3,663.7	465.1	825.3	680.2	145.09	5.688			
10,700.0	6,930.8	10,671.5	6,928.9	74.8	74.5	-89.94	-3,763.7	467.2	825.3	676.5	148.86	5.544			
10,800.0	6,930.3	10,771.5	6,928.4	76.7	76.4	-89.94	-3,863.6	469.2	825.3	672.7	152.63	5.407			
10,900.0	6,929.8	10,871.5	6,927.9	78.6	78.3	-89.94	-3,963.6	471.3	825.3	668.9	156.40	5.277			
11,000.0	6,929.4	10,971.5	6,927.5	80.4	80.2	-89.94	-4,063.6	473.4	825.3	665.1	160.18	5.153			
11,100.0	6,928.9	11,071.5	6,927.0	82.3	82.1	-89.94	-4,163.6	475.4	825.3	661.4	163.96	5.034			
11,200.0	6,928.4	11,171.5	6,926.5	84.2	83.9	-89.94	-4,263.5	477.5	825.3	657.6	167.74	4.920			
11,300.0	6,928.0	11,271.5	6,926.1	86.1	85.8	-89.94	-4,363.5	479.5	825.3	653.8	171.53	4.812			
11,400.0	6,927.5	11,371.5	6,925.6	88.0	87.7	-89.94	-4,463.5	481.6	825.3	650.0	175.32	4.708			
11,500.0	6,927.0	11,471.5	6,925.1	89.9	89.4	-89.94	-4,563.5	483.7	825.3	646.5	178.85	4.615			
11,502.3	6,927.0	11,473.7	6,925.1	89.9	89.4	-89.94	-4,565.7	483.7	825.3	646.4	178.93	4.613 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	0.0	0.0	0.0	0.0	90.02	0.0	89.5	89.6						
100.0	100.0	98.0	98.0	0.1	0.1	90.02	0.0	89.5	89.5	89.3	0.22	402.379			
200.0	200.0	198.0	198.0	0.3	0.3	90.02	0.0	89.5	89.5	88.9	0.67	133.679			
300.0	300.0	298.0	298.0	0.6	0.6	90.02	0.0	89.5	89.5	88.4	1.12	79.993			
400.0	400.0	398.0	398.0	0.8	0.8	90.02	0.0	89.5	89.5	88.0	1.57	57.072			
500.0	500.0	498.0	498.0	1.0	1.0	90.02	0.0	89.5	89.5	87.5	2.02	44.361			
600.0	600.0	598.0	598.0	1.2	1.2	90.02	0.0	89.5	89.5	87.1	2.47	36.281			
700.0	700.0	698.0	698.0	1.5	1.5	90.02	0.0	89.5	89.5	86.6	2.92	30.690			
800.0	800.0	798.0	798.0	1.7	1.7	90.02	0.0	89.5	89.5	86.2	3.37	26.593			
900.0	900.0	898.0	898.0	1.9	1.9	90.02	0.0	89.5	89.5	85.7	3.82	23.461			
1,000.0	1,000.0	998.0	998.0	2.1	2.1	90.02	0.0	89.5	89.5	85.3	4.27	20.989	CC, ES		
1,100.0	1,100.0	1,095.2	1,095.1	2.4	2.3	89.68	0.5	91.0	91.1	86.4	4.70	19.372			
1,200.0	1,200.0	1,192.1	1,191.9	2.6	2.5	88.72	2.1	95.6	95.8	90.7	5.13	18.668			
1,300.0	1,300.0	1,288.5	1,288.0	2.8	2.8	87.29	4.9	103.2	103.8	98.2	5.57	18.624			
1,400.0	1,400.0	1,385.1	1,383.9	3.0	3.0	85.64	8.7	113.8	115.0	109.0	6.03	19.071			
1,500.0	1,500.0	1,484.1	1,482.1	3.3	3.3	154.07	12.9	125.6	128.8	122.4	6.44	20.017			
1,600.0	1,599.8	1,582.6	1,579.9	3.5	3.5	153.60	17.2	137.4	145.8	138.9	6.86	21.264			
1,700.0	1,699.5	1,680.6	1,677.0	3.7	3.8	153.71	21.4	149.1	165.8	158.6	7.27	22.800			
1,800.0	1,798.7	1,777.8	1,773.5	3.9	4.1	154.21	25.5	160.7	188.9	181.3	7.69	24.579			
1,900.0	1,897.6	1,874.6	1,869.5	4.2	4.3	155.00	29.7	172.2	214.1	206.0	8.12	26.369			
2,000.0	1,996.6	1,971.3	1,965.4	4.5	4.6	155.66	33.9	183.8	239.4	230.9	8.56	27.959			
2,100.0	2,095.5	2,068.0	2,061.3	4.7	4.9	156.20	38.0	195.3	264.7	255.7	9.01	29.374			
2,200.0	2,194.4	2,164.7	2,157.3	5.0	5.2	156.64	42.2	206.9	290.1	280.6	9.47	30.641			
2,300.0	2,293.4	2,261.4	2,253.2	5.3	5.5	157.01	46.3	218.4	315.4	305.5	9.92	31.781			
2,400.0	2,392.3	2,358.2	2,349.2	5.6	5.8	157.33	50.5	230.0	340.7	330.4	10.39	32.809			
2,500.0	2,491.2	2,454.9	2,445.1	6.0	6.1	157.60	54.6	241.5	366.1	355.2	10.85	33.741			
2,600.0	2,590.2	2,551.6	2,541.0	6.3	6.4	157.84	58.8	253.1	391.5	380.1	11.32	34.589			
2,700.0	2,689.1	2,648.3	2,637.0	6.6	6.7	158.05	62.9	264.6	416.8	405.0	11.79	35.363			
2,800.0	2,788.0	2,745.0	2,732.9	6.9	7.0	158.23	67.1	276.2	442.2	429.9	12.26	36.071			
2,900.0	2,887.0	2,841.8	2,828.8	7.2	7.3	158.39	71.2	287.7	467.6	454.8	12.73	36.722			
3,000.0	2,985.9	2,938.5	2,924.8	7.6	7.6	158.54	75.4	299.3	493.0	479.7	13.21	37.322			
3,100.0	3,084.8	3,035.2	3,020.7	7.9	7.9	158.67	79.5	310.8	518.3	504.7	13.69	37.877			
3,200.0	3,183.8	3,131.9	3,116.6	8.2	8.2	158.79	83.7	322.4	543.7	529.6	14.16	38.390			
3,300.0	3,282.7	3,228.6	3,212.6	8.6	8.5	158.90	87.8	333.9	569.1	554.5	14.64	38.867			
3,400.0	3,381.6	3,325.3	3,308.5	8.9	8.9	159.00	92.0	345.5	594.5	579.4	15.12	39.311			
3,500.0	3,480.6	3,422.1	3,404.5	9.3	9.2	159.10	96.1	357.0	619.9	604.3	15.60	39.725			
3,600.0	3,579.5	3,518.8	3,500.4	9.6	9.5	159.18	100.3	368.6	645.3	629.2	16.09	40.112			
3,700.0	3,678.4	3,615.5	3,596.3	9.9	9.8	159.26	104.5	380.1	670.7	654.1	16.57	40.474			
3,800.0	3,777.4	3,712.2	3,692.3	10.3	10.1	159.33	108.6	391.7	696.1	679.0	17.05	40.814			
3,900.0	3,876.3	3,808.9	3,788.2	10.6	10.4	159.40	112.8	403.2	721.5	703.9	17.54	41.134			
4,000.0	3,975.2	3,905.7	3,884.1	11.0	10.7	159.46	116.9	414.8	746.9	728.8	18.03	41.435			
4,100.0	4,074.2	4,002.4	3,980.1	11.3	11.0	159.52	121.1	426.3	772.3	753.8	18.51	41.719			
4,200.0	4,173.1	4,099.1	4,076.0	11.7	11.3	159.58	125.2	437.9	797.7	778.7	19.00	41.987			
4,300.0	4,272.0	4,195.8	4,171.9	12.0	11.7	159.63	129.4	449.4	823.1	803.6	19.49	42.241			
4,400.0	4,371.0	4,292.5	4,267.9	12.3	12.0	159.68	133.5	461.0	848.5	828.5	19.97	42.481			
4,500.0	4,469.9	4,389.2	4,363.8	12.7	12.3	159.72	137.7	472.5	873.9	853.4	20.46	42.709			
4,600.0	4,568.8	4,486.0	4,459.7	13.0	12.6	159.77	141.8	484.1	899.3	878.3	20.95	42.925			
4,700.0	4,667.9	4,583.0	4,556.0	13.3	12.9	159.93	146.0	495.7	923.5	902.0	21.48	42.995			
4,800.0	4,767.5	4,680.7	4,652.9	13.6	13.2	160.01	150.2	507.3	944.5	922.6	21.97	42.991			
4,900.0	4,867.2	4,779.1	4,750.5	13.8	13.5	160.00	154.4	519.1	962.4	940.0	22.44	42.893			
5,000.0	4,967.2	4,883.7	4,854.3	13.9	13.9	159.89	158.9	531.5	977.0	954.1	22.89	42.689			
5,100.0	5,067.2	5,030.7	5,000.5	14.1	14.2	89.92	163.6	544.7	986.1	962.8	23.36	42.215			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	5,167.2	5,178.7	5,148.4	14.2	14.5	89.80	165.8	550.8	990.2	966.4	23.83	41.560			
5,300.0	5,267.2	5,295.5	5,265.2	14.4	14.6	89.79	166.0	551.2	990.5	966.3	24.24	40.863			
5,400.0	5,367.2	5,395.5	5,365.2	14.6	14.8	89.79	166.0	551.2	990.5	965.9	24.64	40.199			
5,500.0	5,467.2	5,495.5	5,465.2	14.8	15.0	89.79	166.0	551.2	990.5	965.5	25.04	39.553			
5,600.0	5,567.2	5,595.5	5,565.2	15.0	15.2	89.79	166.0	551.2	990.5	965.1	25.45	38.924			
5,700.0	5,667.2	5,695.5	5,665.2	15.1	15.3	89.79	166.0	551.2	990.5	964.7	25.85	38.314			
5,800.0	5,767.2	5,795.5	5,765.2	15.3	15.5	89.79	166.0	551.2	990.5	964.3	26.26	37.720			
5,900.0	5,867.2	5,895.5	5,865.2	15.5	15.7	89.79	166.0	551.2	990.5	963.9	26.67	37.142			
6,000.0	5,967.2	5,995.5	5,965.2	15.7	15.9	89.79	166.0	551.2	990.5	963.5	27.08	36.580			
6,100.0	6,067.2	6,095.5	6,065.2	15.9	16.0	89.79	166.0	551.2	990.5	963.1	27.49	36.033			
6,200.0	6,167.2	6,195.5	6,165.2	16.0	16.2	89.79	166.0	551.2	990.5	962.6	27.90	35.500			
6,300.0	6,267.2	6,295.5	6,265.2	16.2	16.4	89.79	166.0	551.2	990.5	962.2	28.32	34.982			
6,400.0	6,367.2	6,395.5	6,365.2	16.4	16.6	89.79	166.0	551.2	990.5	961.8	28.73	34.477			
6,500.0	6,467.2	6,494.2	6,463.8	16.6	16.8	-89.03	164.4	551.3	990.5	961.4	29.12	34.021			
6,600.0	6,565.5	6,591.1	6,559.2	16.7	16.9	-89.05	147.9	551.6	990.5	961.2	29.35	33.754			
6,700.0	6,658.7	6,688.1	6,649.9	16.8	16.9	-89.11	114.0	552.3	990.5	961.0	29.49	33.591			
6,800.0	6,743.3	6,785.3	6,733.0	16.8	17.0	-89.19	63.7	553.3	990.5	960.9	29.63	33.433			
6,900.0	6,816.3	6,882.9	6,805.5	16.9	17.1	-89.31	-1.3	554.7	990.5	960.6	29.88	33.154			
7,000.0	6,875.0	6,980.8	6,864.9	17.0	17.2	-89.45	-79.0	556.3	990.4	960.1	30.35	32.633			
7,100.0	6,917.1	7,079.2	6,908.8	17.2	17.5	-89.61	-166.9	558.1	990.4	959.3	31.15	31.792			
7,200.0	6,941.2	7,178.2	6,935.6	17.6	17.9	-89.79	-262.0	560.1	990.4	958.1	32.33	30.637			
7,300.0	6,946.8	7,277.7	6,943.9	18.2	18.5	-89.95	-361.0	562.1	990.4	956.5	33.86	29.254			
7,400.0	6,946.3	7,377.7	6,943.4	19.0	19.3	-89.95	-461.0	564.2	990.4	954.7	35.74	27.714			
7,500.0	6,945.9	7,477.7	6,943.0	20.0	20.3	-89.95	-561.0	566.2	990.4	952.5	37.90	26.131			
7,600.0	6,945.4	7,577.7	6,942.5	21.2	21.4	-89.95	-660.9	568.3	990.4	950.1	40.32	24.564			
7,700.0	6,944.9	7,677.7	6,942.0	22.4	22.7	-89.95	-760.9	570.4	990.4	947.5	42.95	23.061			
7,800.0	6,944.4	7,777.7	6,941.6	23.8	24.0	-89.95	-860.9	572.4	990.4	944.7	45.75	21.650			
7,900.0	6,944.0	7,877.7	6,941.1	25.2	25.4	-89.95	-960.9	574.5	990.4	941.7	48.69	20.341			
8,000.0	6,943.5	7,977.7	6,940.6	26.7	26.9	-89.95	-1,060.9	576.5	990.4	938.7	51.75	19.137			
8,100.0	6,943.0	8,077.7	6,940.1	28.2	28.4	-89.95	-1,160.8	578.6	990.4	935.5	54.91	18.036			
8,200.0	6,942.6	8,177.7	6,939.7	29.8	29.9	-89.95	-1,260.8	580.7	990.4	932.2	58.16	17.030			
8,300.0	6,942.1	8,277.7	6,939.2	31.4	31.6	-89.95	-1,360.8	582.7	990.4	928.9	61.47	16.112			
8,400.0	6,941.6	8,377.7	6,938.7	33.1	33.2	-89.95	-1,460.8	584.8	990.4	925.6	64.84	15.274			
8,500.0	6,941.1	8,477.7	6,938.3	34.8	34.9	-89.95	-1,560.7	586.9	990.4	922.1	68.27	14.508			
8,600.0	6,940.7	8,577.7	6,937.8	36.5	36.6	-89.95	-1,660.7	588.9	990.4	918.7	71.73	13.807			
8,700.0	6,940.2	8,677.7	6,937.3	38.2	38.3	-89.95	-1,760.7	591.0	990.4	915.2	75.24	13.164			
8,800.0	6,939.7	8,777.7	6,936.8	40.0	40.0	-89.95	-1,860.7	593.0	990.4	911.6	78.77	12.573			
8,900.0	6,939.3	8,877.7	6,936.4	41.7	41.8	-89.95	-1,960.7	595.1	990.4	908.1	82.33	12.029			
9,000.0	6,938.8	8,977.7	6,935.9	43.5	43.5	-89.95	-2,060.6	597.2	990.4	904.5	85.92	11.527			
9,100.0	6,938.3	9,077.7	6,935.4	45.3	45.3	-89.95	-2,160.6	599.2	990.4	900.9	89.53	11.062			
9,200.0	6,937.8	9,177.7	6,935.0	47.1	47.1	-89.95	-2,260.6	601.3	990.4	897.2	93.16	10.631			
9,300.0	6,937.4	9,277.7	6,934.5	48.9	48.9	-89.95	-2,360.6	603.3	990.4	893.6	96.81	10.231			
9,400.0	6,936.9	9,377.7	6,934.0	50.7	50.7	-89.95	-2,460.5	605.4	990.4	889.9	100.47	9.858			
9,500.0	6,936.4	9,477.7	6,933.5	52.5	52.5	-89.95	-2,560.5	607.5	990.4	886.3	104.14	9.510			
9,600.0	6,936.0	9,577.7	6,933.1	54.4	54.4	-89.95	-2,660.5	609.5	990.4	882.6	107.83	9.185			
9,700.0	6,935.5	9,677.7	6,932.6	56.2	56.2	-89.95	-2,760.5	611.6	990.4	878.9	111.52	8.881			
9,800.0	6,935.0	9,777.7	6,932.1	58.0	58.0	-89.95	-2,860.5	613.7	990.4	875.2	115.23	8.595			
9,900.0	6,934.6	9,877.7	6,931.7	59.9	59.9	-89.95	-2,960.4	615.7	990.4	871.5	118.95	8.326			
10,000.0	6,934.1	9,977.7	6,931.2	61.7	61.7	-89.95	-3,060.4	617.8	990.4	867.7	122.67	8.074			
10,100.0	6,933.6	10,077.7	6,930.7	63.6	63.6	-89.95	-3,160.4	619.8	990.4	864.0	126.40	7.835			
10,200.0	6,933.1	10,177.7	6,930.3	65.4	65.4	-89.95	-3,260.4	621.9	990.4	860.3	130.14	7.610			
10,300.0	6,932.7	10,277.7	6,929.8	67.3	67.3	-89.95	-3,360.3	624.0	990.4	856.5	133.88	7.397			

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-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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

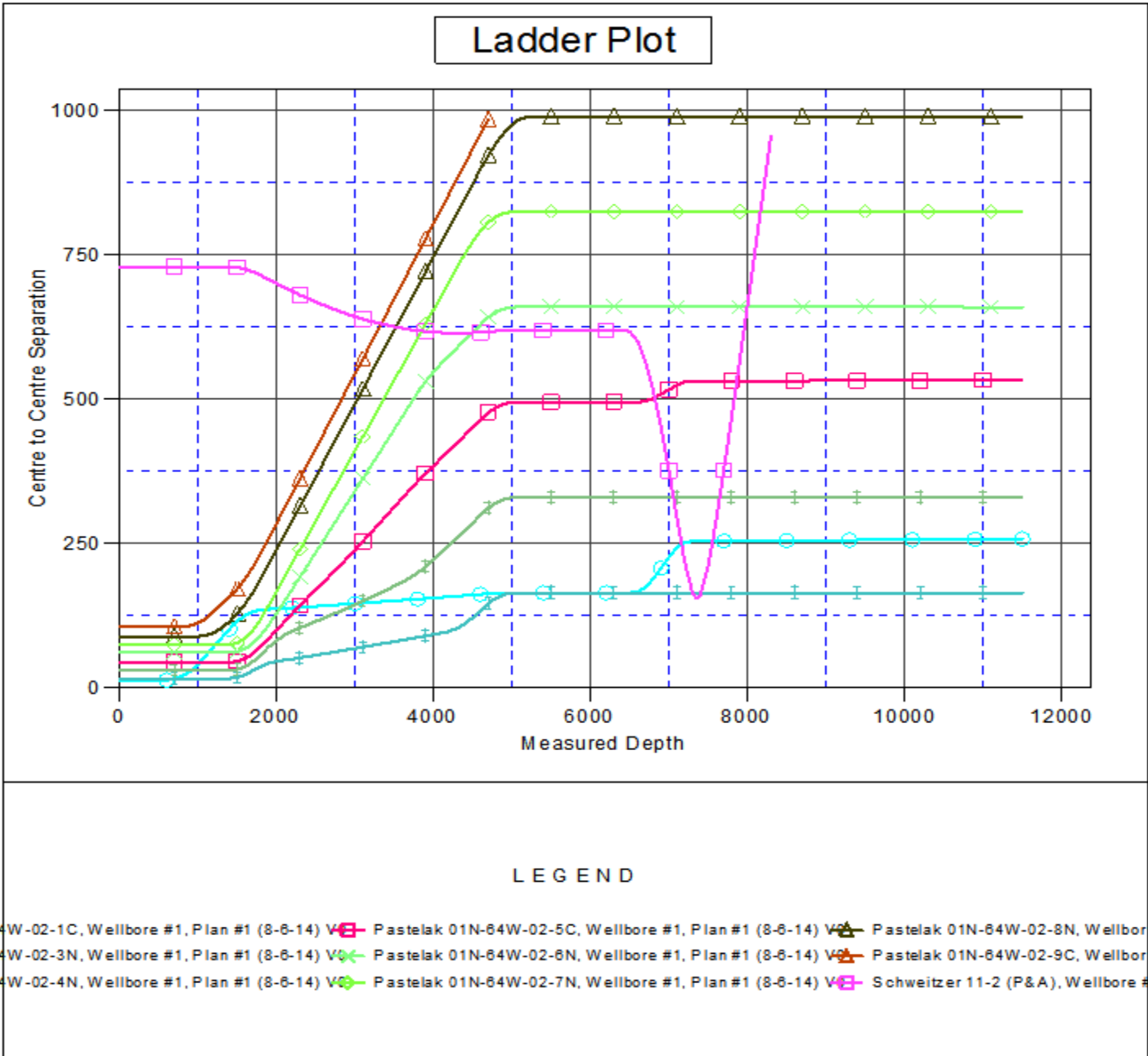
Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,400.0	6,932.2	10,377.7	6,929.3	69.2	69.2	-89.95	-3,460.3	626.0	990.4	852.8	137.63	7.196			
10,500.0	6,931.7	10,477.7	6,928.8	71.0	71.0	-89.95	-3,560.3	628.1	990.4	849.0	141.39	7.005			
10,600.0	6,931.3	10,577.7	6,928.4	72.9	72.9	-89.95	-3,660.3	630.2	990.4	845.3	145.15	6.823			
10,700.0	6,930.8	10,677.7	6,927.9	74.8	74.8	-89.95	-3,760.3	632.2	990.4	841.5	148.91	6.651			
10,800.0	6,930.3	10,777.7	6,927.4	76.7	76.7	-89.95	-3,860.2	634.3	990.4	837.7	152.68	6.487			
10,900.0	6,929.8	10,877.7	6,927.0	78.6	78.5	-89.95	-3,960.2	636.3	990.4	833.9	156.46	6.330			
11,000.0	6,929.4	10,977.7	6,926.5	80.4	80.4	-89.95	-4,060.2	638.4	990.4	830.2	160.23	6.181			
11,100.0	6,928.9	11,077.7	6,926.0	82.3	82.3	-89.95	-4,160.2	640.5	990.4	826.4	164.01	6.039			
11,200.0	6,928.4	11,177.7	6,925.5	84.2	84.2	-89.95	-4,260.1	642.5	990.4	822.6	167.79	5.902			
11,300.0	6,928.0	11,277.7	6,925.1	86.1	86.1	-89.95	-4,360.1	644.6	990.4	818.8	171.58	5.772			
11,400.0	6,927.5	11,377.7	6,924.6	88.0	87.9	-89.95	-4,460.1	646.7	990.4	815.0	175.37	5.648			
11,500.0	6,927.0	11,477.7	6,924.1	89.9	89.8	-89.95	-4,560.1	648.7	990.4	811.2	179.16	5.528			
11,502.3	6,927.0	11,480.0	6,924.1	89.9	89.9	-89.95	-4,562.3	648.8	990.4	811.2	179.24	5.525 SF			

Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Pastelak 01N-64W-02-2N	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	0.0	0.0	0.0	0.0	90.02	0.0	106.3	106.3					
100.0	100.0	98.0	98.0	0.1	0.1	90.02	0.0	106.3	106.3	106.1	0.22	477.825		
200.0	200.0	198.0	198.0	0.3	0.3	90.02	0.0	106.3	106.3	105.7	0.67	158.744		
300.0	300.0	298.0	298.0	0.6	0.6	90.02	0.0	106.3	106.3	105.2	1.12	94.991		
400.0	400.0	398.0	398.0	0.8	0.8	90.02	0.0	106.3	106.3	104.8	1.57	67.773		
500.0	500.0	498.0	498.0	1.0	1.0	90.02	0.0	106.3	106.3	104.3	2.02	52.679		
600.0	600.0	598.0	598.0	1.2	1.2	90.02	0.0	106.3	106.3	103.9	2.47	43.083		
700.0	700.0	698.0	698.0	1.5	1.5	90.02	0.0	106.3	106.3	103.4	2.92	36.445		
800.0	800.0	798.0	798.0	1.7	1.7	90.02	0.0	106.3	106.3	103.0	3.37	31.579 CC, ES		
900.0	900.0	894.6	894.6	1.9	1.9	89.80	0.4	107.8	107.9	104.1	3.80	28.391		
1,000.0	1,000.0	990.9	990.7	2.1	2.1	89.17	1.6	112.5	112.7	108.5	4.23	26.646		
1,100.0	1,100.0	1,086.7	1,086.3	2.4	2.3	88.22	3.7	120.2	120.8	116.1	4.67	25.863		
1,200.0	1,200.0	1,182.4	1,181.2	2.6	2.5	87.09	6.7	130.9	132.1	127.0	5.13	25.768 SF		
1,300.0	1,300.0	1,281.5	1,279.5	2.8	2.8	86.00	10.0	143.3	144.9	139.2	5.61	25.802		
1,400.0	1,400.0	1,380.7	1,377.9	3.0	3.1	85.08	13.4	155.7	157.6	151.5	6.11	25.792		
1,500.0	1,500.0	1,479.6	1,476.0	3.3	3.4	154.15	16.8	168.1	172.0	165.5	6.42	26.772		
1,600.0	1,599.8	1,578.1	1,573.6	3.5	3.7	154.03	20.1	180.5	189.4	182.6	6.85	27.662		
1,700.0	1,699.5	1,675.9	1,670.6	3.7	4.0	154.29	23.5	192.7	210.0	202.7	7.27	28.889		
1,800.0	1,798.7	1,773.0	1,766.9	3.9	4.3	154.83	26.8	204.9	233.6	225.9	7.68	30.401		
1,900.0	1,897.6	1,869.6	1,862.7	4.2	4.6	155.62	30.1	217.0	259.4	251.2	8.12	31.943		
2,000.0	1,996.6	1,966.2	1,958.4	4.5	4.9	156.30	33.4	229.1	285.2	276.6	8.56	33.298		
2,100.0	2,095.5	2,062.7	2,054.1	4.7	5.2	156.87	36.7	241.2	311.0	302.0	9.02	34.503		
2,200.0	2,194.4	2,159.3	2,149.9	5.0	5.5	157.36	40.0	253.3	336.9	327.5	9.47	35.579		
2,300.0	2,293.4	2,255.8	2,245.6	5.3	5.8	157.77	43.3	265.4	362.8	352.9	9.93	36.545		
2,400.0	2,392.3	2,352.4	2,341.3	5.6	6.1	158.13	46.6	277.5	388.8	378.4	10.39	37.416		
2,500.0	2,491.2	2,448.9	2,437.1	6.0	6.4	158.45	49.8	289.6	414.7	403.8	10.85	38.204		
2,600.0	2,590.2	2,545.5	2,532.8	6.3	6.7	158.72	53.1	301.7	440.6	429.3	11.32	38.921		
2,700.0	2,689.1	2,642.1	2,628.6	6.6	7.0	158.97	56.4	313.8	466.6	454.8	11.79	39.574		
2,800.0	2,788.0	2,738.6	2,724.3	6.9	7.3	159.19	59.7	325.9	492.6	480.3	12.26	40.172		
2,900.0	2,887.0	2,835.2	2,820.0	7.2	7.6	159.39	63.0	338.0	518.5	505.8	12.73	40.721		
3,000.0	2,985.9	2,931.7	2,915.8	7.6	7.9	159.57	66.3	350.1	544.5	531.3	13.21	41.226		
3,100.0	3,084.8	3,028.3	3,011.5	7.9	8.3	159.73	69.6	362.2	570.5	556.8	13.68	41.693		
3,200.0	3,183.8	3,124.8	3,107.2	8.2	8.6	159.88	72.9	374.3	596.5	582.3	14.16	42.126		
3,300.0	3,282.7	3,221.4	3,203.0	8.6	8.9	160.02	76.2	386.4	622.4	607.8	14.64	42.527		
3,400.0	3,381.6	3,317.9	3,298.7	8.9	9.2	160.14	79.5	398.5	648.4	633.3	15.11	42.900		
3,500.0	3,480.6	3,414.5	3,394.5	9.3	9.5	160.26	82.8	410.6	674.4	658.8	15.59	43.249		
3,600.0	3,579.5	3,511.0	3,490.2	9.6	9.8	160.37	86.1	422.7	700.4	684.3	16.07	43.574		
3,700.0	3,678.4	3,607.6	3,585.9	9.9	10.1	160.47	89.4	434.8	726.4	709.9	16.55	43.879		
3,800.0	3,777.4	3,704.2	3,681.7	10.3	10.5	160.56	92.7	446.9	752.4	735.4	17.04	44.165		
3,900.0	3,876.3	3,800.7	3,777.4	10.6	10.8	160.65	95.9	459.0	778.4	760.9	17.52	44.434		
4,000.0	3,975.2	3,897.3	3,873.1	11.0	11.1	160.73	99.2	471.1	804.4	786.4	18.00	44.686		
4,100.0	4,074.2	3,993.8	3,968.9	11.3	11.4	160.80	102.5	483.2	830.4	811.9	18.48	44.925		
4,200.0	4,173.1	4,090.4	4,064.6	11.7	11.7	160.88	105.8	495.3	856.4	837.4	18.97	45.150		
4,300.0	4,272.0	4,186.9	4,160.3	12.0	12.1	160.94	109.1	507.4	882.4	863.0	19.45	45.363		
4,400.0	4,371.0	4,283.5	4,256.1	12.3	12.4	161.01	112.4	519.5	908.4	888.5	19.94	45.565		
4,500.0	4,469.9	4,380.0	4,351.8	12.7	12.7	161.07	115.7	531.6	934.4	914.0	20.42	45.756		
4,600.0	4,568.8	4,476.6	4,447.6	13.0	13.0	161.12	119.0	543.7	960.4	939.5	20.91	45.938		
4,700.0	4,667.9	4,573.5	4,543.6	13.3	13.3	161.29	122.3	555.9	985.2	963.8	21.44	45.960		

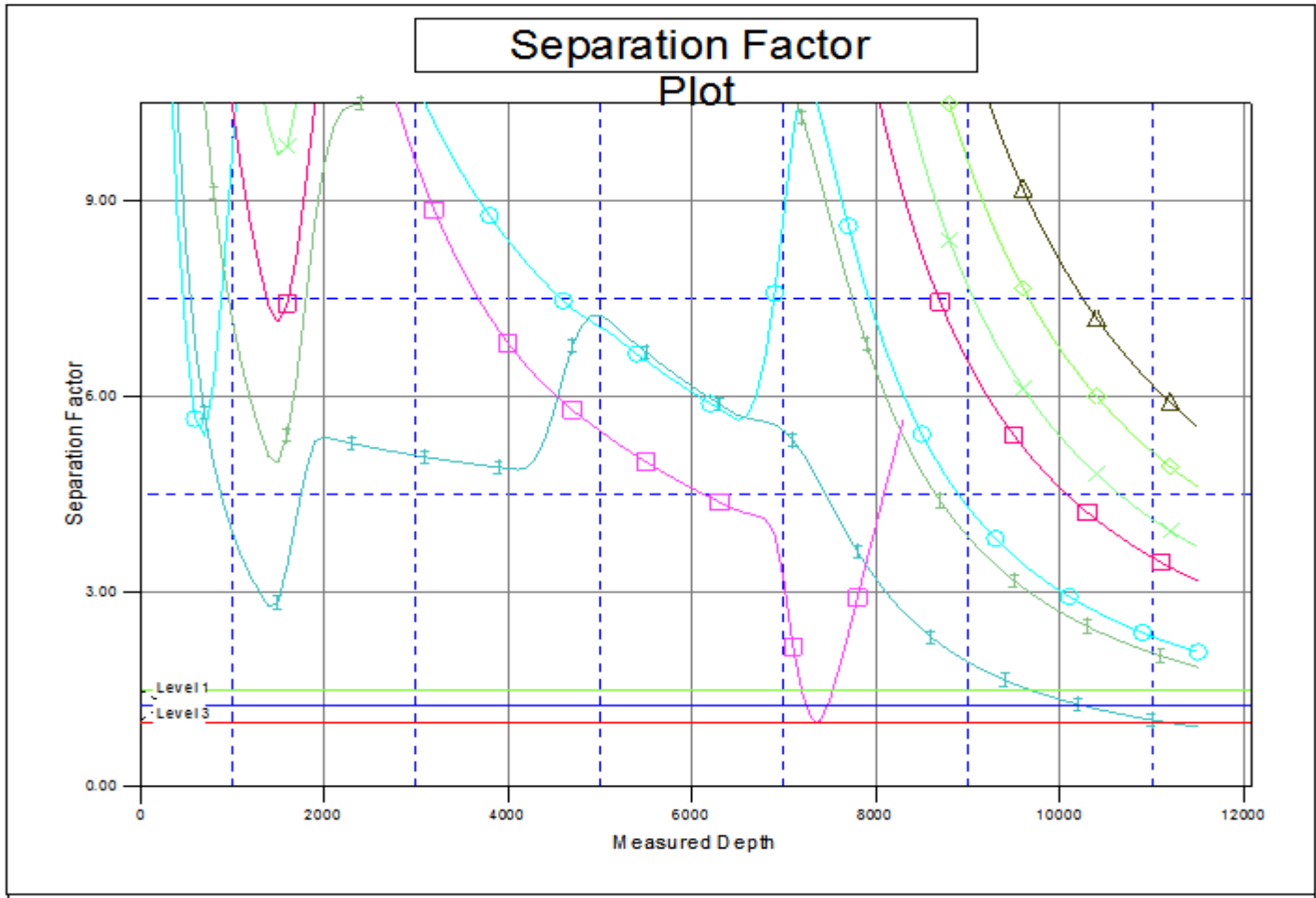
Company:	Verdad Oil & Gas Corporation	Local Co-ordinate Reference:	Well Pastelak 01N-64W-02-2N
Project:	SEC.2-T1N-R64W	TVD Reference:	WELL @ 5026.0ft (Original Well Elev)
Reference Site:	Pastelak 01N-64W-02 Pad Sec.2-T1N-R64W	MD Reference:	WELL @ 5026.0ft (Original Well Elev)
Site Error:	0.0ft	North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

Reference Depths are relative to WELL @ 5026.0ft (Original Well Elev) Coordinates are relative to: Pastelak 01N-64W-02-2N
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.63°



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

Reference Depths are relative to WELL @ 5026.0ft (Original Well Elev) Coordinates are relative to: Pastelak 01N-64W-02-2N
 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

- 84W-02-1C, Wellbore #1, Plan #1 (8-6-14) ■ Pastelak 01N-64W-02-5C, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-8N, Wellbore
- 84W-02-3N, Wellbore #1, Plan #1 (8-6-14) ○ Pastelak 01N-64W-02-6N, Wellbore #1, Plan #1 (8-6-14) ▲ Pastelak 01N-64W-02-9C, Wellbore
- 84W-02-4N, Wellbore #1, Plan #1 (8-6-14) ○ Pastelak 01N-64W-02-7N, Wellbore #1, Plan #1 (8-6-14) ■ Schweitzer 11-2 (P&A), Wellbore #1