

# Extraction Oil & Gas

Well Name: **Diamond Valley East #9**

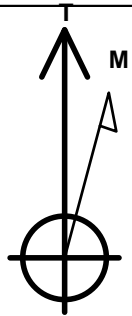
Surface Location: Diamond Valley East Pad Sec.23-T6N-R67W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4769.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1413879.32	3175340.24	40.467790	-104.869800	

Frontier 10 RKB - 22' WELL @ 4791.0ft (Frontier 10 RKB - 22')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 944'FSL, 155'FWL, SEC.23	1.0	0.0	0.0	Point
BHL 1815'FSL, 460'FWL, SEC.21	6975.0	920.1	-10074.8	Point
T2 1815'FSL, 460'FEL, SEC.22	6975.0	870.7	-612.1	Point



Azimuths to True North  
Magnetic North: 8.52°

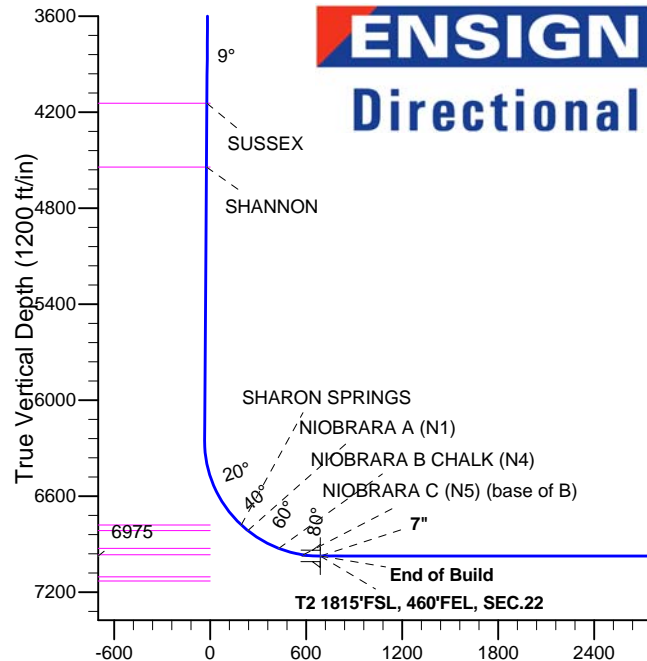
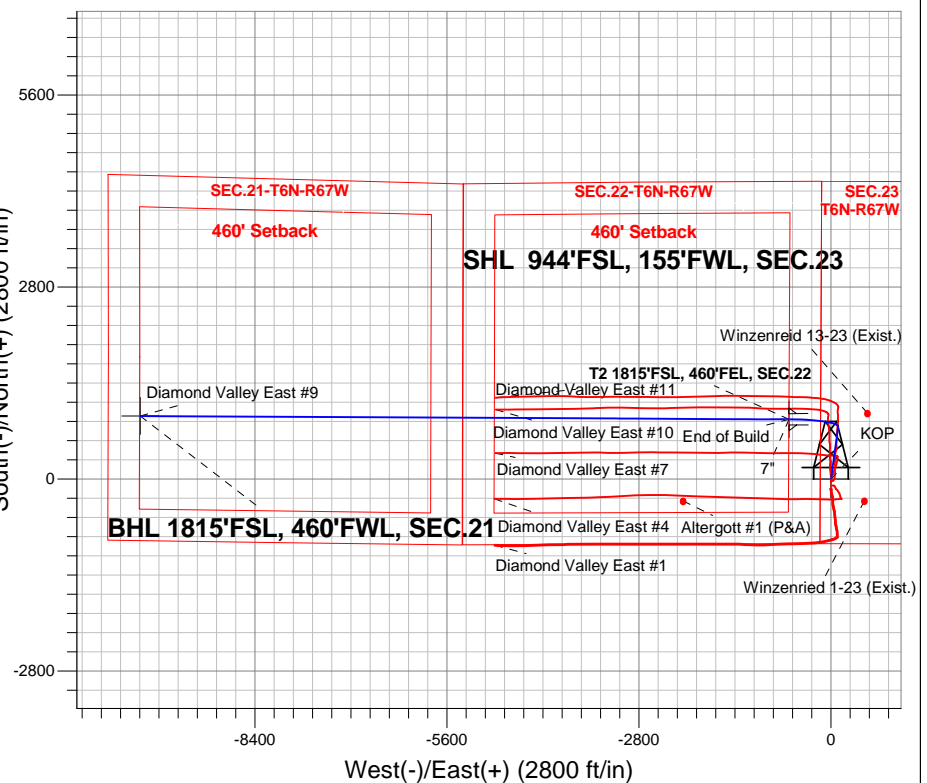
Magnetic Field  
Strength: 52834.8nT  
Dip Angle: 66.98°  
Date: 7/3/2014  
Model: IGRF2010

Diamond Valley East Pad Sec.23-T6N-R67W  
Diamond Valley East #9  
Plan #1 (6-23-14)  
12:25, July 03 2014

## ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP
6975.0	7449.8	End of Build

South(-)/North(+) (2800 ft/in)



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1435.1	8.70	7.78	1433.4	32.7	4.5	2.00	7.78	-1.5	
4	6309.8	8.70	7.78	6252.1	763.4	104.3	0.00	0.00	-34.4	
5	7449.8	90.00	269.82	6975.0	870.7	-612.1	8.00	-97.87	688.8	T2 1815'FSL, 460'FEL, SEC.22
6	7497.9	90.00	270.30	6975.0	870.8	-660.2	1.00	90.00	736.6	
7	16912.6	90.00	270.30	6975.0	920.1	-10074.8	0.00	0.00	10116.7	BHL 1815'FSL, 460'FWL, SEC.21

**BHL 1815'FSL, 460'FWL, SEC.21**

Vertical Section at 275.22° (1200 ft/in)



## **Extraction Oil & Gas**

**SEC.23-T6N-R67W**

**Diamond Valley East Pad Sec.23-T6N-R67W**

**Diamond Valley East #9**

**Wellbore #1**

**Plan: Plan #1 (6-23-14)**

## **Standard Planning Report**

**03 July, 2014**



<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Project:</b>	SEC.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

<b>Project</b>	SEC.23-T6N-R67W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Diamond Valley East Pad Sec.23-T6N-R67W											
Site Position:						Northing:			1,413,770.02 ft			Latitude:			40.467490		
From:			Lat/Long			Easting:			3,175,338.24 ft			Longitude:			-104.869810		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.41 °		

Well	Diamond Valley East #9					
Well Position	+N-S	109.3 ft	Northing:	1,413,879.32 ft	Latitude:	40.467790
	+E-W	2.8 ft	Easting:	3,175,340.24 ft	Longitude:	-104.869800
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,769.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/3/2014	8.52	66.98	52,835

<b>Design</b>	Plan #1 (6-23-14)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	275.22

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,435.1	8.70	7.78	1,433.4	32.7	4.5	2.00	2.00	0.00	7.78	
6,309.8	8.70	7.78	6,252.1	763.4	104.3	0.00	0.00	0.00	0.00	
7,449.8	90.00	269.82	6,975.0	870.7	-612.1	8.00	7.13	-8.59	-97.87	T2 1815'FSL, 460'F
7,497.9	90.00	270.30	6,975.0	870.8	-660.2	1.00	0.00	1.00	90.00	
16,912.6	90.00	270.30	6,975.0	920.1	-10,074.8	0.00	0.00	0.00	0.00	BHL 1815'FSL, 460

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
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<b>Project:</b>	SEC.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

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
<b>KOP</b>									
1,100.0	2.00	7.78	1,100.0	1.7	0.2	-0.1	2.00	2.00	0.00
1,200.0	4.00	7.78	1,199.8	6.9	0.9	-0.3	2.00	2.00	0.00
1,300.0	6.00	7.78	1,299.5	15.5	2.1	-0.7	2.00	2.00	0.00
1,400.0	8.00	7.78	1,398.7	27.6	3.8	-1.2	2.00	2.00	0.00
1,435.1	8.70	7.78	1,433.4	32.7	4.5	-1.5	2.00	2.00	0.00
1,500.0	8.70	7.78	1,497.6	42.4	5.8	-1.9	0.00	0.00	0.00
1,600.0	8.70	7.78	1,596.4	57.4	7.8	-2.6	0.00	0.00	0.00
1,700.0	8.70	7.78	1,695.3	72.4	9.9	-3.3	0.00	0.00	0.00
1,800.0	8.70	7.78	1,794.1	87.4	11.9	-3.9	0.00	0.00	0.00
1,900.0	8.70	7.78	1,893.0	102.4	14.0	-4.6	0.00	0.00	0.00
2,000.0	8.70	7.78	1,991.8	117.4	16.0	-5.3	0.00	0.00	0.00
2,100.0	8.70	7.78	2,090.7	132.3	18.1	-6.0	0.00	0.00	0.00
2,200.0	8.70	7.78	2,189.5	147.3	20.1	-6.6	0.00	0.00	0.00
2,300.0	8.70	7.78	2,288.4	162.3	22.2	-7.3	0.00	0.00	0.00
2,400.0	8.70	7.78	2,387.2	177.3	24.2	-8.0	0.00	0.00	0.00
2,500.0	8.70	7.78	2,486.1	192.3	26.3	-8.7	0.00	0.00	0.00
2,600.0	8.70	7.78	2,584.9	207.3	28.3	-9.3	0.00	0.00	0.00
2,700.0	8.70	7.78	2,683.8	222.3	30.4	-10.0	0.00	0.00	0.00
2,800.0	8.70	7.78	2,782.6	237.3	32.4	-10.7	0.00	0.00	0.00
2,900.0	8.70	7.78	2,881.5	252.3	34.5	-11.4	0.00	0.00	0.00
3,000.0	8.70	7.78	2,980.3	267.3	36.5	-12.0	0.00	0.00	0.00
3,100.0	8.70	7.78	3,079.2	282.2	38.6	-12.7	0.00	0.00	0.00
3,200.0	8.70	7.78	3,178.0	297.2	40.6	-13.4	0.00	0.00	0.00
3,300.0	8.70	7.78	3,276.9	312.2	42.6	-14.1	0.00	0.00	0.00
3,400.0	8.70	7.78	3,375.7	327.2	44.7	-14.7	0.00	0.00	0.00
3,497.4	8.70	7.78	3,472.0	341.8	46.7	-15.4	0.00	0.00	0.00
<b>PARKMAN</b>									
3,500.0	8.70	7.78	3,474.6	342.2	46.7	-15.4	0.00	0.00	0.00
3,600.0	8.70	7.78	3,573.4	357.2	48.8	-16.1	0.00	0.00	0.00
3,700.0	8.70	7.78	3,672.3	372.2	50.8	-16.8	0.00	0.00	0.00
3,800.0	8.70	7.78	3,771.1	387.2	52.9	-17.4	0.00	0.00	0.00
3,900.0	8.70	7.78	3,870.0	402.2	54.9	-18.1	0.00	0.00	0.00
4,000.0	8.70	7.78	3,968.8	417.2	57.0	-18.8	0.00	0.00	0.00
4,100.0	8.70	7.78	4,067.7	432.1	59.0	-19.5	0.00	0.00	0.00
4,177.2	8.70	7.78	4,144.0	443.7	60.6	-20.0	0.00	0.00	0.00
<b>SUSSEX</b>									
4,200.0	8.70	7.78	4,166.5	447.1	61.1	-20.2	0.00	0.00	0.00
4,300.0	8.70	7.78	4,265.4	462.1	63.1	-20.8	0.00	0.00	0.00
4,400.0	8.70	7.78	4,364.2	477.1	65.2	-21.5	0.00	0.00	0.00
4,500.0	8.70	7.78	4,463.0	492.1	67.2	-22.2	0.00	0.00	0.00
4,581.9	8.70	7.78	4,544.0	504.4	68.9	-22.7	0.00	0.00	0.00
<b>SHANNON</b>									

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
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<b>Project:</b>	SEC.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.0	8.70	7.78	4,561.9	507.1	69.3	-22.9	0.00	0.00	0.00
4,700.0	8.70	7.78	4,660.7	522.1	71.3	-23.5	0.00	0.00	0.00
4,800.0	8.70	7.78	4,759.6	537.1	73.4	-24.2	0.00	0.00	0.00
4,900.0	8.70	7.78	4,858.4	552.1	75.4	-24.9	0.00	0.00	0.00
5,000.0	8.70	7.78	4,957.3	567.1	77.5	-25.6	0.00	0.00	0.00
5,100.0	8.70	7.78	5,056.1	582.0	79.5	-26.2	0.00	0.00	0.00
5,200.0	8.70	7.78	5,155.0	597.0	81.5	-26.9	0.00	0.00	0.00
5,300.0	8.70	7.78	5,253.8	612.0	83.6	-27.6	0.00	0.00	0.00
5,400.0	8.70	7.78	5,352.7	627.0	85.6	-28.3	0.00	0.00	0.00
5,500.0	8.70	7.78	5,451.5	642.0	87.7	-28.9	0.00	0.00	0.00
5,600.0	8.70	7.78	5,550.4	657.0	89.7	-29.6	0.00	0.00	0.00
5,700.0	8.70	7.78	5,649.2	672.0	91.8	-30.3	0.00	0.00	0.00
5,800.0	8.70	7.78	5,748.1	687.0	93.8	-31.0	0.00	0.00	0.00
5,900.0	8.70	7.78	5,846.9	702.0	95.9	-31.6	0.00	0.00	0.00
6,000.0	8.70	7.78	5,945.8	717.0	97.9	-32.3	0.00	0.00	0.00
6,100.0	8.70	7.78	6,044.6	731.9	100.0	-33.0	0.00	0.00	0.00
6,200.0	8.70	7.78	6,143.5	746.9	102.0	-33.7	0.00	0.00	0.00
6,300.0	8.70	7.78	6,242.3	761.9	104.1	-34.3	0.00	0.00	0.00
6,309.8	8.70	7.78	6,252.1	763.4	104.3	-34.4	0.00	0.00	0.00
6,400.0	10.50	324.72	6,341.1	776.9	100.4	-29.4	8.00	1.99	-47.76
6,500.0	16.41	300.81	6,438.3	791.6	83.0	-10.7	8.00	5.91	-23.92
6,600.0	23.56	290.16	6,532.3	805.7	52.1	21.4	8.00	7.16	-10.65
6,700.0	31.11	284.36	6,621.1	819.0	8.2	66.3	8.00	7.55	-5.80
6,800.0	38.83	280.67	6,703.0	831.3	-47.7	123.1	8.00	7.72	-3.69
6,900.0	46.63	278.05	6,776.4	842.2	-114.6	190.7	8.00	7.80	-2.62
6,905.3	47.05	277.93	6,780.0	842.7	-118.5	194.6	8.00	7.83	-2.25
<b>SHARON SPRINGS</b>									
6,958.8	51.25	276.81	6,815.0	847.9	-158.6	235.1	8.00	7.84	-2.10
<b>NIOBRARA A (N1)</b>									
7,000.0	54.48	276.03	6,839.9	851.6	-191.2	267.9	8.00	7.86	-1.89
7,100.0	62.36	274.37	6,892.2	859.2	-276.0	353.0	8.00	7.87	-1.66
7,184.6	69.03	273.15	6,927.0	864.3	-352.9	430.0	8.00	7.89	-1.45
<b>NIOBRARA B CHALK (N4)</b>									
7,200.0	70.25	272.94	6,932.3	865.0	-367.3	444.4	8.00	7.90	-1.36
7,300.0	78.15	271.64	6,959.6	868.9	-463.3	540.5	8.00	7.90	-1.30
7,342.1	81.48	271.12	6,967.0	869.9	-504.8	581.8	8.00	7.91	-1.24
<b>NIOBRARA C (N5) (base of B)</b>									
7,400.0	86.06	270.42	6,973.3	870.6	-562.3	639.2	8.00	7.91	-1.21
7,449.8	90.00	269.82	6,975.0	870.7	-612.1	688.7	8.00	7.91	-1.20
<b>End of Build - 7"</b>									
7,497.9	90.00	270.30	6,975.0	870.8	-660.2	736.6	1.00	0.01	1.00
7,500.0	90.00	270.30	6,975.0	870.8	-662.3	738.7	0.00	0.00	0.00
7,600.0	90.00	270.30	6,975.0	871.3	-762.3	838.4	0.00	0.00	0.00
7,700.0	90.00	270.30	6,975.0	871.8	-862.3	938.0	0.00	0.00	0.00
7,800.0	90.00	270.30	6,975.0	872.4	-962.3	1,037.6	0.00	0.00	0.00
7,900.0	90.00	270.30	6,975.0	872.9	-1,062.3	1,137.2	0.00	0.00	0.00
8,000.0	90.00	270.30	6,975.0	873.4	-1,162.3	1,236.9	0.00	0.00	0.00
8,100.0	90.00	270.30	6,975.0	873.9	-1,262.3	1,336.5	0.00	0.00	0.00
8,200.0	90.00	270.30	6,975.0	874.5	-1,362.3	1,436.1	0.00	0.00	0.00
8,300.0	90.00	270.30	6,975.0	875.0	-1,462.3	1,535.8	0.00	0.00	0.00
8,400.0	90.00	270.30	6,975.0	875.5	-1,562.3	1,635.4	0.00	0.00	0.00
8,500.0	90.00	270.30	6,975.0	876.0	-1,662.3	1,735.0	0.00	0.00	0.00
8,600.0	90.00	270.30	6,975.0	876.6	-1,762.3	1,834.7	0.00	0.00	0.00

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<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

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)
8,700.0	90.00	270.30	6,975.0	877.1	-1,862.2	1,934.3	0.00	0.00	0.00
8,800.0	90.00	270.30	6,975.0	877.6	-1,962.2	2,033.9	0.00	0.00	0.00
8,900.0	90.00	270.30	6,975.0	878.1	-2,062.2	2,133.6	0.00	0.00	0.00
9,000.0	90.00	270.30	6,975.0	878.7	-2,162.2	2,233.2	0.00	0.00	0.00
9,100.0	90.00	270.30	6,975.0	879.2	-2,262.2	2,332.8	0.00	0.00	0.00
9,200.0	90.00	270.30	6,975.0	879.7	-2,362.2	2,432.5	0.00	0.00	0.00
9,300.0	90.00	270.30	6,975.0	880.2	-2,462.2	2,532.1	0.00	0.00	0.00
9,400.0	90.00	270.30	6,975.0	880.8	-2,562.2	2,631.7	0.00	0.00	0.00
9,500.0	90.00	270.30	6,975.0	881.3	-2,662.2	2,731.4	0.00	0.00	0.00
9,600.0	90.00	270.30	6,975.0	881.8	-2,762.2	2,831.0	0.00	0.00	0.00
9,700.0	90.00	270.30	6,975.0	882.3	-2,862.2	2,930.6	0.00	0.00	0.00
9,800.0	90.00	270.30	6,975.0	882.9	-2,962.2	3,030.3	0.00	0.00	0.00
9,900.0	90.00	270.30	6,975.0	883.4	-3,062.2	3,129.9	0.00	0.00	0.00
10,000.0	90.00	270.30	6,975.0	883.9	-3,162.2	3,229.5	0.00	0.00	0.00
10,100.0	90.00	270.30	6,975.0	884.4	-3,262.2	3,329.1	0.00	0.00	0.00
10,200.0	90.00	270.30	6,975.0	885.0	-3,362.2	3,428.8	0.00	0.00	0.00
10,300.0	90.00	270.30	6,975.0	885.5	-3,462.2	3,528.4	0.00	0.00	0.00
10,400.0	90.00	270.30	6,975.0	886.0	-3,562.2	3,628.0	0.00	0.00	0.00
10,500.0	90.00	270.30	6,975.0	886.5	-3,662.2	3,727.7	0.00	0.00	0.00
10,600.0	90.00	270.30	6,975.0	887.0	-3,762.2	3,827.3	0.00	0.00	0.00
10,700.0	90.00	270.30	6,975.0	887.6	-3,862.2	3,926.9	0.00	0.00	0.00
10,800.0	90.00	270.30	6,975.0	888.1	-3,962.2	4,026.6	0.00	0.00	0.00
10,900.0	90.00	270.30	6,975.0	888.6	-4,062.2	4,126.2	0.00	0.00	0.00
11,000.0	90.00	270.30	6,975.0	889.1	-4,162.2	4,225.8	0.00	0.00	0.00
11,100.0	90.00	270.30	6,975.0	889.7	-4,262.2	4,325.5	0.00	0.00	0.00
11,200.0	90.00	270.30	6,975.0	890.2	-4,362.2	4,425.1	0.00	0.00	0.00
11,300.0	90.00	270.30	6,975.0	890.7	-4,462.2	4,524.7	0.00	0.00	0.00
11,400.0	90.00	270.30	6,975.0	891.2	-4,562.2	4,624.4	0.00	0.00	0.00
11,500.0	90.00	270.30	6,975.0	891.8	-4,662.2	4,724.0	0.00	0.00	0.00
11,600.0	90.00	270.30	6,975.0	892.3	-4,762.2	4,823.6	0.00	0.00	0.00
11,700.0	90.00	270.30	6,975.0	892.8	-4,862.2	4,923.3	0.00	0.00	0.00
11,800.0	90.00	270.30	6,975.0	893.3	-4,962.2	5,022.9	0.00	0.00	0.00
11,900.0	90.00	270.30	6,975.0	893.9	-5,062.2	5,122.5	0.00	0.00	0.00
12,000.0	90.00	270.30	6,975.0	894.4	-5,162.2	5,222.2	0.00	0.00	0.00
12,100.0	90.00	270.30	6,975.0	894.9	-5,262.2	5,321.8	0.00	0.00	0.00
12,200.0	90.00	270.30	6,975.0	895.4	-5,362.2	5,421.4	0.00	0.00	0.00
12,300.0	90.00	270.30	6,975.0	896.0	-5,462.2	5,521.0	0.00	0.00	0.00
12,400.0	90.00	270.30	6,975.0	896.5	-5,562.2	5,620.7	0.00	0.00	0.00
12,500.0	90.00	270.30	6,975.0	897.0	-5,662.2	5,720.3	0.00	0.00	0.00
12,600.0	90.00	270.30	6,975.0	897.5	-5,762.2	5,819.9	0.00	0.00	0.00
12,700.0	90.00	270.30	6,975.0	898.1	-5,862.2	5,919.6	0.00	0.00	0.00
12,800.0	90.00	270.30	6,975.0	898.6	-5,962.2	6,019.2	0.00	0.00	0.00
12,900.0	90.00	270.30	6,975.0	899.1	-6,062.2	6,118.8	0.00	0.00	0.00
13,000.0	90.00	270.30	6,975.0	899.6	-6,162.2	6,218.5	0.00	0.00	0.00
13,100.0	90.00	270.30	6,975.0	900.2	-6,262.2	6,318.1	0.00	0.00	0.00
13,200.0	90.00	270.30	6,975.0	900.7	-6,362.2	6,417.7	0.00	0.00	0.00
13,300.0	90.00	270.30	6,975.0	901.2	-6,462.2	6,517.4	0.00	0.00	0.00
13,400.0	90.00	270.30	6,975.0	901.7	-6,562.2	6,617.0	0.00	0.00	0.00
13,500.0	90.00	270.30	6,975.0	902.3	-6,662.2	6,716.6	0.00	0.00	0.00
13,600.0	90.00	270.30	6,975.0	902.8	-6,762.2	6,816.3	0.00	0.00	0.00
13,700.0	90.00	270.30	6,975.0	903.3	-6,862.2	6,915.9	0.00	0.00	0.00
13,800.0	90.00	270.30	6,975.0	903.8	-6,962.2	7,015.5	0.00	0.00	0.00
13,900.0	90.00	270.30	6,975.0	904.4	-7,062.2	7,115.2	0.00	0.00	0.00
14,000.0	90.00	270.30	6,975.0	904.9	-7,162.2	7,214.8	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Project:</b>	SEC.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

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)	
14,100.0	90.00	270.30	6,975.0	905.4	-7,262.2	7,314.4	0.00	0.00	0.00	
14,200.0	90.00	270.30	6,975.0	905.9	-7,362.2	7,414.1	0.00	0.00	0.00	
14,300.0	90.00	270.30	6,975.0	906.4	-7,462.2	7,513.7	0.00	0.00	0.00	
14,400.0	90.00	270.30	6,975.0	907.0	-7,562.2	7,613.3	0.00	0.00	0.00	
14,500.0	90.00	270.30	6,975.0	907.5	-7,662.2	7,713.0	0.00	0.00	0.00	
14,600.0	90.00	270.30	6,975.0	908.0	-7,762.2	7,812.6	0.00	0.00	0.00	
14,700.0	90.00	270.30	6,975.0	908.5	-7,862.2	7,912.2	0.00	0.00	0.00	
14,800.0	90.00	270.30	6,975.0	909.1	-7,962.2	8,011.8	0.00	0.00	0.00	
14,900.0	90.00	270.30	6,975.0	909.6	-8,062.2	8,111.5	0.00	0.00	0.00	
15,000.0	90.00	270.30	6,975.0	910.1	-8,162.2	8,211.1	0.00	0.00	0.00	
15,100.0	90.00	270.30	6,975.0	910.6	-8,262.2	8,310.7	0.00	0.00	0.00	
15,200.0	90.00	270.30	6,975.0	911.2	-8,362.2	8,410.4	0.00	0.00	0.00	
15,300.0	90.00	270.30	6,975.0	911.7	-8,462.2	8,510.0	0.00	0.00	0.00	
15,400.0	90.00	270.30	6,975.0	912.2	-8,562.2	8,609.6	0.00	0.00	0.00	
15,500.0	90.00	270.30	6,975.0	912.7	-8,662.2	8,709.3	0.00	0.00	0.00	
15,600.0	90.00	270.30	6,975.0	913.3	-8,762.2	8,808.9	0.00	0.00	0.00	
15,700.0	90.00	270.30	6,975.0	913.8	-8,862.2	8,908.5	0.00	0.00	0.00	
15,800.0	90.00	270.30	6,975.0	914.3	-8,962.2	9,008.2	0.00	0.00	0.00	
15,900.0	90.00	270.30	6,975.0	914.8	-9,062.1	9,107.8	0.00	0.00	0.00	
16,000.0	90.00	270.30	6,975.0	915.4	-9,162.1	9,207.4	0.00	0.00	0.00	
16,100.0	90.00	270.30	6,975.0	915.9	-9,262.1	9,307.1	0.00	0.00	0.00	
16,200.0	90.00	270.30	6,975.0	916.4	-9,362.1	9,406.7	0.00	0.00	0.00	
16,300.0	90.00	270.30	6,975.0	916.9	-9,462.1	9,506.3	0.00	0.00	0.00	
16,400.0	90.00	270.30	6,975.0	917.5	-9,562.1	9,606.0	0.00	0.00	0.00	
16,500.0	90.00	270.30	6,975.0	918.0	-9,662.1	9,705.6	0.00	0.00	0.00	
16,600.0	90.00	270.30	6,975.0	918.5	-9,762.1	9,805.2	0.00	0.00	0.00	
16,700.0	90.00	270.30	6,975.0	919.0	-9,862.1	9,904.9	0.00	0.00	0.00	
16,800.0	90.00	270.30	6,975.0	919.6	-9,962.1	10,004.5	0.00	0.00	0.00	
16,900.0	90.00	270.30	6,975.0	920.1	-10,062.1	10,104.1	0.00	0.00	0.00	
16,912.6	90.00	270.30	6,975.0	920.1	-10,074.8	10,116.7	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,449.8	6,975.0	7"	7	7-1/2	

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Project:</b>	SEC.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-23-14)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,497.4	3,472.0	PARKMAN				
4,177.2	4,144.0	SUSSEX				
4,581.9	4,544.0	SHANNON				
6,905.3	6,780.0	SHARON SPRINGS				
6,958.8	6,815.0	NIOBRARA A (N1)				
7,184.6	6,927.0	NIOBRARA B CHALK (N4)				
7,342.1	6,967.0	NIOBRARA C (N5) (base of B)				
	7,104.0	FT HAYS LIMESTONE				
	7,131.0	CODELL SANDSTONE				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.0	1,000.0	0.0	0.0	KOP	
7,449.8	6,975.0	32.7	4.5	End of Build	





## **Extraction Oil & Gas**

**SEC.23-T6N-R67W**

**Diamond Valley East Pad Sec.23-T6N-R67W**

**Diamond Valley East #9**

**Wellbore #1**

**Plan #1 (6-23-14)**

## **Anticollision Report**

**03 July, 2014**



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (6-23-14)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 7/3/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	16,912.6	Plan #1 (6-23-14) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Diamond Valley East Pad Sec.23-T6N-R67W						
Altergott #1 (P&A) - Wellbore #1 - Wellbore #1						Out of range
Diamond Valley East #1 - Wellbore #1 - Wellbore #1	363.5	364.0	141.8	140.5	109.155	CC
Diamond Valley East #1 - Wellbore #1 - Wellbore #1	500.0	499.9	142.2	140.3	75.216	ES
Diamond Valley East #1 - Wellbore #1 - Wellbore #1	1,200.0	1,189.3	165.7	160.8	33.572	SF
Diamond Valley East #10 - Wellbore #1 - Wellbore #1	522.2	522.7	17.1	15.1	8.629	CC, ES
Diamond Valley East #10 - Wellbore #1 - Wellbore #1	11,721.3	11,841.0	215.3	53.3	1.329	Level 3, SF
Diamond Valley East #11 - Wellbore #1 - Wellbore #1	307.5	308.6	28.0	26.8	24.848	CC
Diamond Valley East #11 - Wellbore #1 - Wellbore #1	11,730.3	11,788.0	295.5	19.8	1.072	Level 2, ES, SF
Diamond Valley East #12 - Wellbore #1 - Plan #1 (6-23-1	400.0	400.0	32.8	31.2	20.835	CC, ES
Diamond Valley East #12 - Wellbore #1 - Plan #1 (6-23-1	16,912.6	17,027.4	659.4	93.3	1.165	Level 2, SF
Diamond Valley East #13 - Wellbore #1 - Plan #1 (10-03	200.0	200.0	51.0	50.3	75.635	CC, ES
Diamond Valley East #13 - Wellbore #1 - Plan #1 (10-03	16,912.6	17,207.8	835.4	280.1	1.505	SF
Diamond Valley East #2 - Wellbore #1 - Plan #1 (6-23-14	1,000.0	1,000.0	127.6	123.3	29.868	CC, ES
Diamond Valley East #2 - Wellbore #1 - Plan #1 (6-23-14	1,300.0	1,294.8	144.8	139.2	25.984	SF
Diamond Valley East #3 - Wellbore #1 - Plan #2 (6-23-14	1,000.0	1,000.0	109.3	105.1	25.602	CC, ES
Diamond Valley East #3 - Wellbore #1 - Plan #2 (6-23-14	1,300.0	1,299.5	124.9	119.3	22.291	SF
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	0.0	0.5	94.8			
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	700.0	701.2	96.2	93.3	33.392	ES
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	1,200.0	1,197.2	122.4	117.3	24.012	SF
Diamond Valley East #5 - Wellbore #1 - Plan #2 (6-23-14	1,000.0	1,000.0	76.6	72.3	17.929	CC, ES
Diamond Valley East #5 - Wellbore #1 - Plan #2 (6-23-14	9,900.0	9,828.4	999.9	826.3	5.760	SF
Diamond Valley East #6 - Wellbore #1 - Plan #1 (6-23-14	1,000.0	1,000.5	62.0	57.7	14.516	CC, ES
Diamond Valley East #6 - Wellbore #1 - Plan #1 (6-23-14	16,912.6	16,856.4	659.4	94.2	1.167	Level 2, SF
Diamond Valley East #7 - Wellbore #1 - Wellbore #1	1,027.6	1,029.0	41.7	37.6	10.127	CC, ES
Diamond Valley East #7 - Wellbore #1 - Wellbore #1	11,800.0	11,873.0	551.8	288.3	2.094	SF
Diamond Valley East #8 - Wellbore #1 - Plan #1 (6-23-14	1,000.0	1,000.5	14.8	10.6	3.474	CC
Diamond Valley East #8 - Wellbore #1 - Plan #1 (6-23-14	16,912.6	16,874.6	327.9	-237.2	0.580	Level 1, ES, SF
Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1	6,369.0	6,286.5	469.4	324.9	3.248	CC
Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1	6,400.0	6,317.1	469.4	324.3	3.235	ES, SF
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	1,000.0	976.0	581.6	559.9	26.856	CC
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	1,100.0	1,076.0	582.3	558.4	24.389	ES
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	5,200.0	5,131.0	999.4	884.2	8.677	SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #1 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 ft
Survey Program: 162-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	0.5	0.5	0.0	0.0	-178.88	-142.1	-2.8	142.1								
100.0	100.0	100.7	100.7	0.1	0.1	-178.91	-142.0	-2.7	142.0	141.8	0.23	629.577					
200.0	200.0	200.7	200.7	0.3	0.3	-179.01	-141.9	-2.5	141.9	141.3	0.60	236.722					
300.0	300.0	300.6	300.6	0.6	0.5	-179.00	-141.8	-2.5	141.8	140.8	1.03	138.000					
363.5	363.5	364.0	364.0	0.7	0.6	-178.88	-141.8	-2.8	141.8	140.5	1.30	109.155 CC					
400.0	400.0	400.2	400.2	0.8	0.7	-178.77	-141.8	-3.0	141.8	140.4	1.46	97.376					
500.0	500.0	499.9	499.9	1.0	0.9	-178.44	-142.1	-3.9	142.2	140.3	1.89	75.216 ES					
600.0	600.0	598.6	598.6	1.2	1.1	-178.22	-142.9	-4.5	143.0	140.7	2.33	61.484					
700.0	700.0	697.9	697.9	1.5	1.3	-177.96	-144.6	-5.1	144.7	141.9	2.76	52.399					
800.0	800.0	799.7	799.7	1.7	1.5	-177.91	-146.0	-5.3	146.1	142.9	3.20	45.698					
900.0	900.0	900.3	900.3	1.9	1.7	-178.71	-146.2	-3.3	146.2	142.6	3.63	40.274					
1,000.0	1,000.0	996.2	996.1	2.1	1.9	-179.69	-147.4	-0.8	147.5	143.4	4.06	36.314					
1,100.0	1,100.0	1,091.4	1,091.2	2.4	2.1	171.77	-151.8	1.4	153.8	149.3	4.50	34.207					
1,200.0	1,199.8	1,189.3	1,188.8	2.6	2.4	171.97	-158.4	1.5	165.7	160.8	4.94	33.572 SF					
1,300.0	1,299.5	1,289.6	1,288.9	2.8	2.6	172.32	-165.1	1.5	180.9	175.6	5.37	33.717					
1,400.0	1,398.7	1,382.1	1,381.1	3.1	2.8	172.58	-171.8	1.9	200.2	194.4	5.78	34.645					
1,500.0	1,497.6	1,472.1	1,470.6	3.3	3.0	172.70	-181.3	3.1	225.4	219.2	6.21	36.306					
1,600.0	1,596.4	1,569.6	1,567.4	3.6	3.3	172.72	-193.2	4.7	252.4	245.7	6.65	37.946					
1,700.0	1,695.3	1,662.1	1,659.2	3.9	3.5	172.66	-204.7	6.7	279.5	272.4	7.08	39.465					
1,800.0	1,794.1	1,753.6	1,749.7	4.2	3.8	172.57	-217.3	8.7	308.0	300.5	7.52	40.941					
1,900.0	1,893.0	1,858.1	1,853.2	4.5	4.1	172.28	-231.2	12.3	336.0	328.0	7.98	42.084					
2,000.0	1,991.8	1,945.6	1,939.8	4.8	4.3	171.79	-242.8	17.0	363.9	355.5	8.41	43.254					
2,100.0	2,090.7	2,037.3	2,030.4	5.2	4.6	171.37	-256.4	21.8	393.5	384.6	8.87	44.382					
2,200.0	2,189.5	2,136.0	2,128.0	5.5	4.9	171.46	-271.3	23.6	423.2	413.9	9.32	45.409					
2,300.0	2,288.4	2,237.8	2,228.8	5.8	5.2	171.78	-285.5	23.6	451.9	442.1	9.77	46.248					
2,400.0	2,387.2	2,341.9	2,332.0	6.1	5.5	172.02	-298.5	23.9	479.1	468.8	10.23	46.845					
2,500.0	2,486.1	2,437.6	2,427.1	6.5	5.8	172.20	-309.1	24.5	505.0	494.3	10.67	47.325					
2,600.0	2,584.9	2,517.7	2,506.5	6.8	6.0	172.40	-320.0	24.3	533.1	522.0	11.09	48.070					
2,700.0	2,683.8	2,613.2	2,601.0	7.2	6.3	172.63	-334.2	24.0	562.7	551.1	11.55	48.713					
2,800.0	2,782.6	2,714.3	2,701.0	7.5	6.6	172.84	-348.5	23.7	591.6	579.5	12.01	49.240					
2,900.0	2,881.5	2,807.5	2,793.3	7.8	6.9	172.89	-361.8	24.8	620.5	608.0	12.46	49.783					
3,000.0	2,980.3	2,912.0	2,896.8	8.2	7.2	172.82	-376.1	27.3	648.9	636.0	12.94	50.145					
3,100.0	3,079.2	3,011.5	2,995.5	8.5	7.5	172.68	-388.3	30.6	675.9	662.4	13.41	50.417					
3,200.0	3,178.0	3,098.0	3,081.1	8.9	7.8	172.63	-400.0	32.8	704.1	690.2	13.84	50.854					
3,300.0	3,276.9	3,202.6	3,184.8	9.2	8.1	172.53	-413.6	35.8	731.7	717.4	14.32	51.082					
3,400.0	3,375.7	3,299.6	3,280.9	9.6	8.4	172.51	-426.1	38.0	759.3	744.5	14.79	51.357					
3,500.0	3,474.6	3,397.9	3,378.6	9.9	8.7	172.43	-437.9	40.9	786.1	770.8	15.25	51.542					
3,600.0	3,573.4	3,487.4	3,467.2	10.3	9.0	172.31	-449.5	44.1	813.8	798.1	15.70	51.826					
3,700.0	3,672.3	3,584.3	3,563.2	10.6	9.3	172.18	-462.0	47.8	841.3	825.2	16.17	52.032					
3,800.0	3,771.1	3,672.5	3,650.6	11.0	9.6	172.20	-473.9	49.4	869.6	853.0	16.61	52.340					
3,900.0	3,870.0	3,768.6	3,745.8	11.3	9.9	172.26	-487.4	50.5	898.3	881.2	17.08	52.597					
4,000.0	3,968.8	3,874.0	3,850.2	11.7	10.2	172.30	-501.6	52.0	926.5	908.9	17.56	52.760					
4,100.0	4,067.7	3,977.6	3,953.0	12.0	10.5	172.31	-514.3	53.7	953.4	935.4	18.04	52.862					
4,200.0	4,166.5	4,062.5	4,037.2	12.4	10.7	172.38	-524.8	54.3	980.6	962.1	18.47	53.090					

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 173-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
0.0	0.0	0.5	0.5	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	
100.0	100.0	100.5	100.5	0.1	0.1	0.74	18.1	0.2	18.1	17.9	0.23	80.308	
200.0	200.0	200.5	200.5	0.3	0.3	2.87	17.8	0.9	17.9	17.3	0.59	30.388	
300.0	300.0	300.5	300.5	0.6	0.5	4.32	17.6	1.3	17.7	16.6	1.02	17.372	
400.0	400.0	400.6	400.6	0.8	0.7	6.12	17.3	1.9	17.4	15.9	1.45	11.993	
500.0	500.0	500.5	500.5	1.0	0.9	7.05	17.0	2.1	17.1	15.2	1.88	9.075	
522.2	522.2	522.7	522.7	1.1	0.9	6.84	16.9	2.0	17.1	15.1	1.98	8.629 CC, ES	
600.0	600.0	600.3	600.3	1.2	1.1	5.17	17.4	1.6	17.5	15.2	2.31	7.549	
700.0	700.0	699.9	699.8	1.5	1.3	3.30	19.8	1.1	19.8	17.1	2.75	7.214	
800.0	800.0	799.2	799.0	1.7	1.5	2.00	24.4	0.9	24.5	21.3	3.19	7.668	
900.0	900.0	898.3	897.9	1.9	1.7	-0.02	31.4	0.0	31.5	27.9	3.64	8.670	
1,000.0	1,000.0	996.8	995.9	2.1	2.0	-2.21	41.0	-1.6	41.3	37.2	4.08	10.114	
1,100.0	1,100.0	1,094.6	1,092.9	2.4	2.2	-11.59	53.4	-3.3	52.4	47.9	4.53	11.577	
1,200.0	1,199.8	1,192.4	1,189.5	2.6	2.5	-12.66	69.0	-4.5	63.2	58.3	4.97	12.718	
1,300.0	1,299.5	1,293.0	1,288.6	2.8	2.8	-14.41	85.6	-6.2	71.5	66.1	5.41	13.214	
1,400.0	1,398.7	1,392.1	1,386.5	3.1	3.1	-17.05	101.6	-8.6	76.0	70.2	5.85	13.007	
1,500.0	1,497.6	1,490.6	1,483.3	3.3	3.5	-20.15	118.8	-11.5	79.7	73.4	6.32	12.614	
1,600.0	1,596.4	1,590.8	1,581.9	3.6	3.8	-22.86	137.0	-14.2	83.9	77.1	6.80	12.340	
1,700.0	1,695.3	1,692.1	1,681.5	3.9	4.2	-24.31	154.9	-15.2	87.5	80.2	7.29	12.001	
1,800.0	1,794.1	1,793.7	1,781.9	4.2	4.5	-24.96	171.0	-14.4	88.6	80.8	7.78	11.391	
1,900.0	1,893.0	1,893.0	1,879.9	4.5	4.8	-25.39	186.8	-13.3	89.8	81.5	8.28	10.847	
2,000.0	1,991.8	1,992.8	1,978.4	4.8	5.2	-26.30	202.9	-13.2	91.5	82.7	8.79	10.406	
2,100.0	2,090.7	2,092.9	2,077.2	5.2	5.5	-27.45	218.9	-13.4	93.1	83.8	9.31	10.002	
2,200.0	2,189.5	2,192.4	2,175.3	5.5	5.8	-27.64	235.3	-12.3	94.9	85.0	9.83	9.653	
2,300.0	2,288.4	2,290.8	2,272.2	5.8	6.2	-28.03	252.4	-11.8	97.7	87.4	10.35	9.439	
2,400.0	2,387.2	2,390.0	2,369.7	6.1	6.6	-28.82	270.8	-12.6	102.1	91.2	10.90	9.366	
2,500.0	2,486.1	2,490.4	2,468.4	6.5	6.9	-29.88	289.1	-13.9	106.3	94.9	11.45	9.285	
2,600.0	2,584.9	2,590.9	2,567.3	6.8	7.3	-30.30	307.3	-14.0	110.1	98.1	11.99	9.178	
2,700.0	2,683.8	2,691.9	2,666.8	7.2	7.7	-31.47	324.3	-15.3	113.1	100.5	12.56	9.005	
2,800.0	2,782.6	2,791.3	2,764.8	7.5	8.0	-32.67	340.7	-16.6	115.9	102.8	13.14	8.824	
2,900.0	2,881.5	2,892.5	2,864.6	7.8	8.4	-33.02	357.9	-16.3	118.5	104.8	13.69	8.653	
3,000.0	2,980.3	2,993.8	2,964.6	8.2	8.7	-34.00	373.6	-16.7	120.0	105.7	14.27	8.408	
3,100.0	3,079.2	3,095.8	3,065.7	8.5	9.0	-35.70	387.3	-17.8	120.1	105.2	14.89	8.061	
3,200.0	3,178.0	3,196.4	3,165.5	8.9	9.3	-37.19	400.1	-18.0	119.1	103.6	15.51	7.676	
3,300.0	3,276.9	3,296.5	3,264.7	9.2	9.6	-38.10	413.3	-17.1	118.0	101.9	16.11	7.327	
3,400.0	3,375.7	3,396.0	3,363.5	9.6	9.9	-39.64	425.5	-17.1	116.8	100.0	16.75	6.971	
3,500.0	3,474.6	3,496.9	3,463.4	9.9	10.2	-41.25	438.5	-17.6	116.4	99.0	17.41	6.686	
3,600.0	3,573.4	3,597.0	3,562.9	10.3	10.5	-42.67	450.1	-16.6	114.1	96.0	18.07	6.314	
3,656.9	3,629.7	3,652.2	3,617.6	10.5	10.7	-42.94	457.7	-15.7	113.7	95.3	18.41	6.178	
3,700.0	3,672.3	3,694.7	3,659.5	10.6	10.9	-42.99	464.2	-14.9	113.8	95.2	18.66	6.100	
3,800.0	3,771.1	3,792.4	3,755.9	11.0	11.2	-42.79	480.1	-13.4	115.3	96.0	19.23	5.993	
3,900.0	3,870.0	3,890.2	3,852.1	11.3	11.6	-42.75	497.7	-13.4	118.8	99.0	19.81	5.998	
4,000.0	3,968.8	3,988.9	3,949.3	11.7	11.9	-44.19	514.6	-16.7	123.8	103.3	20.50	6.036	
4,100.0	4,067.7	4,089.5	4,048.5	12.0	12.3	-46.39	530.9	-21.7	129.1	107.8	21.28	6.067	
4,200.0	4,166.5	4,190.5	4,148.0	12.4	12.7	-47.57	547.8	-24.6	133.5	111.5	21.97	6.077	
4,300.0	4,265.4	4,292.0	4,248.0	12.7	13.0	-48.06	565.0	-25.7	137.0	114.4	22.62	6.058	
4,400.0	4,364.2	4,389.8	4,344.2	13.1	13.4	-47.85	582.6	-25.6	140.7	117.5	23.21	6.061	
4,500.0	4,463.0	4,491.4	4,444.2	13.4	13.8	-47.88	600.8	-26.1	144.6	120.8	23.82	6.070	
4,600.0	4,561.9	4,593.2	4,544.6	13.8	14.1	-48.23	617.5	-26.4	147.2	122.7	24.47	6.015	
4,700.0	4,660.7	4,692.2	4,642.2	14.1	14.5	-48.02	634.5	-25.5	149.6	124.5	25.05	5.972	
4,800.0	4,759.6	4,791.8	4,740.1	14.5	14.8	-47.50	652.3	-24.1	152.2	126.6	25.61	5.945	
4,900.0	4,858.4	4,890.2	4,836.8	14.8	15.2	-47.19	670.3	-23.9	156.0	129.8	26.18	5.959	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 173-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		
5,000.0	4,957.3	4,992.8	4,938.0	15.2	15.6	-47.74	687.3	-25.0	159.2	132.4	26.85	5.932		
5,100.0	5,056.1	5,095.4	5,039.6	15.5	15.9	-49.02	701.4	-26.5	160.5	132.9	27.59	5.817		
5,200.0	5,155.0	5,195.0	5,138.4	15.9	16.2	-50.51	713.9	-28.0	161.1	132.7	28.37	5.680		
5,300.0	5,253.8	5,293.8	5,236.3	16.2	16.5	-51.57	727.8	-29.1	162.6	133.5	29.10	5.588		
5,400.0	5,352.7	5,391.1	5,332.4	16.6	16.9	-52.22	742.7	-30.0	164.9	135.1	29.78	5.536		
5,500.0	5,451.5	5,488.6	5,428.5	17.0	17.2	-52.78	759.1	-32.2	169.2	138.7	30.47	5.553		
5,600.0	5,550.4	5,589.8	5,528.1	17.3	17.6	-53.14	776.8	-34.2	173.9	142.8	31.14	5.585		
5,700.0	5,649.2	5,692.0	5,629.0	17.7	17.9	-53.78	793.2	-36.0	177.3	145.5	31.85	5.567		
5,800.0	5,748.1	5,790.4	5,726.1	18.0	18.3	-54.36	808.7	-37.4	180.4	147.9	32.55	5.543		
5,900.0	5,846.9	5,890.7	5,825.0	18.4	18.6	-54.92	825.0	-39.3	184.1	150.9	33.25	5.538		
6,000.0	5,945.8	5,990.8	5,923.8	18.7	19.0	-55.23	841.5	-40.5	187.6	153.7	33.93	5.529		
6,100.0	6,044.6	6,091.6	6,023.2	19.1	19.3	-55.68	857.7	-41.8	190.7	156.1	34.62	5.510		
6,200.0	6,143.5	6,189.7	6,120.1	19.4	19.7	-56.15	873.5	-43.4	194.3	159.0	35.31	5.502		
6,300.0	6,242.3	6,292.6	6,221.4	19.8	20.1	-56.09	891.3	-43.7	197.5	161.6	35.95	5.495		
6,400.0	6,341.1	6,396.7	6,324.2	20.1	20.4	-12.06	908.3	-42.2	194.7	158.6	36.12	5.390		
6,500.0	6,438.3	6,496.5	6,422.8	20.4	20.8	16.38	922.9	-39.6	180.3	145.2	35.18	5.126		
6,600.0	6,532.3	6,587.2	6,512.4	20.7	21.1	36.00	936.7	-37.6	160.0	126.6	33.36	4.796		
6,700.0	6,621.1	6,674.1	6,598.2	20.9	21.4	55.25	950.2	-39.9	141.7	109.9	31.76	4.461		
6,800.0	6,703.0	6,760.0	6,682.5	21.2	21.7	75.50	963.1	-49.4	133.5	101.7	31.80	4.199		
6,800.2	6,703.1	6,760.1	6,682.7	21.2	21.7	75.53	963.2	-49.4	133.5	101.7	31.80	4.199		
6,900.0	6,776.4	6,848.3	6,767.4	21.5	22.0	94.51	977.2	-69.1	142.8	109.8	33.00	4.328		
7,000.0	6,839.9	6,950.8	6,860.9	21.9	22.4	110.65	993.4	-107.5	165.9	132.4	33.53	4.950		
7,100.0	6,892.2	7,075.8	6,961.7	22.4	22.9	122.61	1,009.7	-178.9	191.8	159.0	32.82	5.845		
7,200.0	6,932.3	7,208.3	7,046.6	23.2	23.5	130.18	1,019.3	-279.9	210.7	179.2	31.55	6.678		
7,300.0	6,959.6	7,337.9	7,110.0	24.3	24.3	135.52	1,024.4	-392.5	227.4	197.3	30.09	7.557		
7,400.0	6,973.3	7,498.5	7,147.9	25.6	25.9	138.15	1,026.9	-547.8	234.4	204.7	29.76	7.877		
7,500.0	6,975.0	7,609.1	7,153.7	27.3	27.3	139.09	1,025.1	-658.2	235.8	204.8	30.98	7.611		
7,600.0	6,975.0	7,707.6	7,156.4	29.1	28.8	139.64	1,025.0	-756.7	237.4	204.1	33.35	7.119		
7,700.0	6,975.0	7,809.2	7,157.9	31.1	30.6	139.75	1,026.2	-858.3	239.0	202.8	36.19	6.603		
7,800.0	6,975.0	7,908.1	7,158.9	33.3	32.6	139.70	1,027.8	-957.1	240.4	201.2	39.23	6.128		
7,900.0	6,975.0	8,003.5	7,158.8	35.5	34.6	139.05	1,031.9	-1,052.4	242.9	200.1	42.81	5.674		
8,000.0	6,975.0	8,099.0	7,160.4	37.8	36.7	138.31	1,038.0	-1,147.8	248.0	201.3	46.64	5.317		
8,100.0	6,975.0	8,203.4	7,162.6	40.2	39.1	137.76	1,043.8	-1,252.0	252.9	202.3	50.60	4.997		
8,200.0	6,975.0	8,310.5	7,164.5	42.7	41.7	137.81	1,045.8	-1,359.1	255.1	200.9	54.19	4.708		
8,300.0	6,975.0	8,416.4	7,164.3	45.2	44.2	137.81	1,046.1	-1,464.9	254.8	197.0	57.85	4.405		
8,400.0	6,975.0	8,517.2	7,162.2	47.7	46.7	137.53	1,046.4	-1,565.7	253.1	191.3	61.76	4.098		
8,500.0	6,975.0	8,616.3	7,159.3	50.3	49.1	136.96	1,047.7	-1,664.7	251.5	185.5	66.04	3.809		
8,600.0	6,975.0	8,714.2	7,158.3	52.8	51.6	136.83	1,048.0	-1,762.7	250.6	180.7	69.88	3.586		
8,700.0	6,975.0	8,814.5	7,158.5	55.4	54.2	137.04	1,047.5	-1,862.9	250.1	176.7	73.39	3.407		
8,800.0	6,975.0	8,914.9	7,159.1	58.1	56.8	137.42	1,046.3	-1,963.3	249.4	172.7	76.67	3.252		
8,900.0	6,975.0	9,016.2	7,160.0	60.7	59.4	138.00	1,044.3	-2,064.6	248.3	168.7	79.66	3.117		
9,000.0	6,975.0	9,117.5	7,161.1	63.4	62.0	138.82	1,041.1	-2,165.8	246.7	164.4	82.24	2.999		
9,100.0	6,975.0	9,216.7	7,162.6	66.0	64.6	139.77	1,037.5	-2,265.0	245.1	160.6	84.48	2.901		
9,200.0	6,975.0	9,316.7	7,163.3	68.7	67.2	140.44	1,034.8	-2,364.9	243.6	156.5	87.05	2.798		
9,300.0	6,975.0	9,416.6	7,163.5	71.4	69.9	140.87	1,033.1	-2,464.8	242.3	152.4	89.95	2.694		
9,400.0	6,975.0	9,516.1	7,162.7	74.1	72.5	141.01	1,032.3	-2,564.4	240.8	147.5	93.30	2.581		
9,492.1	6,975.0	9,605.4	7,162.0	76.6	74.9	140.92	1,032.7	-2,653.6	240.2	143.5	96.74	2.483		
9,500.0	6,975.0	9,612.9	7,161.9	76.8	75.1	140.90	1,032.8	-2,661.1	240.2	143.2	97.05	2.475		
9,600.0	6,975.0	9,709.1	7,161.8	79.5	77.7	140.58	1,034.9	-2,757.2	241.2	140.0	101.20	2.383		
9,700.0	6,975.0	9,805.7	7,162.9	82.3	80.4	140.33	1,037.7	-2,853.8	243.6	138.4	105.26	2.315		
9,800.0	6,975.0	9,904.2	7,165.6	85.0	83.0	140.31	1,040.6	-2,952.3	247.2	138.3	108.96	2.269		
9,900.0	6,975.0	10,003.4	7,169.3	87.7	85.7	140.61	1,042.5	-3,051.4	251.0	139.0	111.99	2.241		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 173-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	
10,000.0	6,975.0	10,109.7	7,173.5	90.5	88.6	141.17	1,043.3	-3,157.6	254.3	139.7	114.58	2.219	
10,100.0	6,975.0	10,217.7	7,176.2	93.2	91.6	142.19	1,040.2	-3,265.5	254.1	138.0	116.08	2.189	
10,200.0	6,975.0	10,322.8	7,175.6	96.0	94.4	142.77	1,037.0	-3,370.5	251.5	133.1	118.37	2.124	
10,300.0	6,975.0	10,424.1	7,173.7	98.7	97.1	143.27	1,033.4	-3,471.7	247.5	126.8	120.73	2.050	
10,400.0	6,975.0	10,523.0	7,172.2	101.5	99.8	143.90	1,029.5	-3,570.6	243.7	121.0	122.63	1.987	
10,500.0	6,975.0	10,623.6	7,170.1	104.2	102.6	144.34	1,026.2	-3,671.0	239.7	114.7	124.99	1.917	
10,600.0	6,975.0	10,721.2	7,167.9	107.0	105.2	144.58	1,023.9	-3,768.6	236.1	108.4	127.74	1.849	
10,700.0	6,975.0	10,818.1	7,166.8	109.7	107.9	144.93	1,021.9	-3,865.5	233.7	103.6	130.17	1.796	
10,800.0	6,975.0	10,914.6	7,167.1	112.5	110.5	145.35	1,020.5	-3,962.0	232.9	100.6	132.32	1.760	
10,820.1	6,975.0	10,934.2	7,167.3	113.1	111.1	145.45	1,020.2	-3,981.6	232.8	100.1	132.70	1.755	
10,900.0	6,975.0	11,013.1	7,168.5	115.3	113.2	145.90	1,019.3	-4,060.4	233.1	99.0	134.11	1.738	
11,000.0	6,975.0	11,113.4	7,169.7	118.0	116.0	146.24	1,018.9	-4,160.7	233.6	97.2	136.43	1.712	
11,100.0	6,975.0	11,216.4	7,169.8	120.8	118.9	146.34	1,019.1	-4,263.8	233.5	94.0	139.50	1.674	
11,200.0	6,975.0	11,320.0	7,167.9	123.6	121.7	146.18	1,019.1	-4,367.3	231.7	88.3	143.35	1.616	
11,300.0	6,975.0	11,421.0	7,165.3	126.4	124.5	146.08	1,018.4	-4,468.3	228.8	81.8	146.98	1.557	
11,400.0	6,975.0	11,522.5	7,162.7	129.1	127.3	146.14	1,016.9	-4,569.8	225.6	75.4	150.15	1.502	
11,500.0	6,975.0	11,622.3	7,159.7	131.9	130.1	146.15	1,015.3	-4,669.5	221.9	68.5	153.41	1.446	Level 3
11,600.0	6,975.0	11,721.7	7,156.6	134.7	132.8	146.05	1,014.2	-4,768.9	218.4	61.4	157.05	1.391	Level 3
11,700.0	6,975.0	11,819.7	7,154.0	137.5	135.5	145.85	1,013.9	-4,866.8	215.8	54.8	161.04	1.340	Level 3
11,721.3	6,975.0	11,841.0	7,153.5	138.1	136.1	145.80	1,013.9	-4,888.1	215.3	53.3	161.93	1.329	Level 3, SF
11,800.0	6,975.0	11,843.0	7,153.4	140.2	136.2	145.79	1,013.9	-4,890.1	226.7	63.4	163.30	1.388	Level 3
11,900.0	6,975.0	11,843.0	7,153.4	143.0	136.2	145.79	1,013.9	-4,890.1	275.1	110.2	164.97	1.668	
12,000.0	6,975.0	11,843.0	7,153.4	145.8	136.2	145.79	1,013.9	-4,890.1	346.4	179.8	166.65	2.079	
12,100.0	6,975.0	11,843.0	7,153.4	148.6	136.2	145.79	1,013.9	-4,890.1	429.3	261.0	168.32	2.550	
12,200.0	6,975.0	11,843.0	7,153.4	151.4	136.2	145.79	1,013.9	-4,890.1	518.3	348.3	170.00	3.049	
12,300.0	6,975.0	11,843.0	7,153.4	154.2	136.2	145.79	1,013.9	-4,890.1	610.6	439.0	171.68	3.557	
12,400.0	6,975.0	11,843.0	7,153.4	156.9	136.2	145.79	1,013.9	-4,890.1	705.1	531.8	173.35	4.067	
12,500.0	6,975.0	11,843.0	7,153.4	159.7	136.2	145.79	1,013.9	-4,890.1	800.9	625.9	175.03	4.576	
12,600.0	6,975.0	11,843.0	7,153.4	162.5	136.2	145.79	1,013.9	-4,890.1	897.6	720.9	176.71	5.080	
12,700.0	6,975.0	11,843.0	7,153.4	165.3	136.2	145.79	1,013.9	-4,890.1	995.0	816.6	178.39	5.578	



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 133-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	-174.55	-29.1	-2.8	29.3	29.3	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-174.81	-29.1	-2.6	29.3	29.0	0.23	129.520		
200.0	200.0	201.3	201.3	0.3	0.3	-176.31	-28.8	-1.9	28.9	28.3	0.64	45.193		
300.0	300.0	301.1	301.0	0.6	0.5	177.11	-27.9	1.4	28.0	26.9	1.09	25.625		
307.5	307.5	308.6	308.5	0.6	0.6	176.29	-27.9	1.8	28.0	26.8	1.13	24.848 CC		
400.0	400.0	400.6	400.3	0.8	0.8	163.93	-27.9	8.0	29.0	27.4	1.56	18.617		
500.0	500.0	500.1	499.4	1.0	1.0	149.45	-27.8	16.4	32.3	30.3	2.02	15.995		
600.0	600.0	600.2	599.2	1.2	1.3	137.43	-27.4	25.2	37.3	34.8	2.45	15.196		
700.0	700.0	701.4	699.8	1.5	1.5	124.52	-23.5	34.1	41.4	38.5	2.90	14.274		
800.0	800.0	802.2	800.0	1.7	1.8	109.54	-14.6	41.1	43.6	40.3	3.34	13.058		
900.0	900.0	902.0	899.1	1.9	2.0	94.24	-3.4	46.5	46.6	42.8	3.78	12.324		
1,000.0	1,000.0	1,001.2	997.2	2.1	2.3	78.34	10.5	51.0	52.3	48.0	4.23	12.359		
1,100.0	1,100.0	1,100.6	1,095.1	2.4	2.6	56.80	27.3	54.3	60.1	55.4	4.70	12.789		
1,200.0	1,199.8	1,199.8	1,192.6	2.6	3.0	46.96	45.5	56.1	67.8	62.7	5.16	13.158		
1,300.0	1,299.5	1,299.9	1,290.9	2.8	3.3	40.28	64.4	57.1	74.2	68.6	5.61	13.223		
1,400.0	1,398.7	1,400.5	1,389.9	3.1	3.6	36.24	82.5	57.5	77.4	71.4	6.06	12.765		
1,500.0	1,497.6	1,500.7	1,488.4	3.3	3.9	33.85	100.0	57.5	78.1	71.5	6.54	11.939		
1,600.0	1,596.4	1,600.9	1,587.1	3.6	4.3	30.60	118.1	56.5	78.5	71.5	7.02	11.180		
1,700.0	1,695.3	1,701.3	1,686.0	3.9	4.6	28.32	134.7	55.8	78.1	70.6	7.50	10.407		
1,708.4	1,703.6	1,709.5	1,694.1	3.9	4.6	28.21	136.0	55.8	78.1	70.5	7.54	10.350		
1,800.0	1,794.1	1,800.3	1,783.7	4.2	4.9	27.51	150.7	57.3	78.8	70.8	7.99	9.853		
1,900.0	1,893.0	1,899.9	1,881.9	4.5	5.3	26.06	167.7	58.3	79.9	71.4	8.49	9.414		
2,000.0	1,991.8	1,999.8	1,980.1	4.8	5.7	23.73	186.0	58.6	81.8	72.8	8.98	9.111		
2,100.0	2,090.7	2,099.6	2,078.1	5.2	6.0	20.61	204.7	57.7	83.6	74.2	9.45	8.852		
2,200.0	2,189.5	2,198.6	2,175.2	5.5	6.4	17.31	224.1	56.5	86.3	76.4	9.90	8.719		
2,300.0	2,288.4	2,296.7	2,271.2	5.8	6.8	15.00	244.0	57.0	90.6	80.3	10.37	8.745		
2,400.0	2,387.2	2,396.2	2,368.4	6.1	7.2	12.84	265.6	57.9	96.5	85.7	10.84	8.902		
2,500.0	2,486.1	2,495.9	2,465.7	6.5	7.6	10.77	287.2	58.5	102.5	91.2	11.32	9.061		
2,600.0	2,584.9	2,595.8	2,563.2	6.8	8.0	9.24	308.8	59.7	108.6	96.8	11.79	9.212		
2,700.0	2,683.8	2,698.1	2,663.3	7.2	8.4	7.88	329.7	60.7	113.6	101.4	12.27	9.263		
2,800.0	2,782.6	2,797.9	2,761.2	7.5	8.8	6.46	349.1	61.0	117.6	104.9	12.75	9.229		
2,900.0	2,881.5	2,897.0	2,858.4	7.8	9.2	5.39	368.7	61.9	122.1	108.8	13.23	9.227		
3,000.0	2,980.3	2,996.4	2,955.8	8.2	9.6	5.47	388.2	65.2	126.8	113.1	13.72	9.242		
3,100.0	3,079.2	3,093.8	3,051.0	8.5	10.0	6.37	408.0	70.6	133.0	118.8	14.23	9.346		
3,200.0	3,178.0	3,192.2	3,146.9	8.9	10.5	7.11	429.2	76.1	140.4	125.7	14.75	9.521		
3,300.0	3,276.9	3,290.7	3,242.6	9.2	10.9	6.67	452.5	79.2	149.2	134.0	15.25	9.783		
3,400.0	3,375.7	3,394.3	3,343.4	9.6	11.4	5.37	476.3	79.8	156.8	141.0	15.75	9.954		
3,500.0	3,474.6	3,496.2	3,443.1	9.9	11.8	3.79	497.6	78.8	162.0	145.7	16.23	9.978		
3,600.0	3,573.4	3,593.9	3,538.5	10.3	12.2	2.67	518.1	78.6	167.6	150.9	16.72	10.024		
3,700.0	3,672.3	3,691.1	3,633.3	10.6	12.6	2.19	539.8	80.5	174.8	157.6	17.21	10.155		
3,800.0	3,771.1	3,788.8	3,728.3	11.0	13.1	2.01	562.4	83.3	183.2	165.5	17.72	10.338		
3,900.0	3,870.0	3,888.7	3,825.2	11.3	13.5	1.87	586.4	86.4	192.4	174.2	18.23	10.554		
4,000.0	3,968.8	3,997.7	3,931.5	11.7	14.0	1.53	610.4	88.7	199.6	180.8	18.75	10.641		
4,100.0	4,067.7	4,105.0	4,037.2	12.0	14.4	0.38	629.1	87.3	201.4	182.2	19.25	10.462		
4,200.0	4,166.5	4,204.8	4,135.8	12.4	14.7	-0.55	644.8	86.1	201.8	182.0	19.73	10.224		
4,300.0	4,265.4	4,299.6	4,229.1	12.7	15.1	-1.16	660.9	86.1	203.5	183.3	20.21	10.070		
4,400.0	4,364.2	4,399.3	4,327.1	13.1	15.4	-1.60	679.4	87.0	207.0	186.3	20.71	9.995		
4,500.0	4,463.0	4,504.8	4,431.0	13.4	15.8	-1.92	697.5	88.2	209.1	187.9	21.21	9.858		
4,600.0	4,561.9	4,603.8	4,528.7	13.8	16.2	-2.14	713.3	89.5	210.0	188.3	21.70	9.679		
4,700.0	4,660.7	4,699.3	4,622.8	14.1	16.5	-2.27	729.8	91.2	212.3	190.1	22.18	9.571		
4,800.0	4,759.6	4,800.4	4,722.2	14.5	16.9	-2.42	748.0	93.0	215.3	192.6	22.68	9.495		
4,900.0	4,858.4	4,902.1	4,822.3	14.8	17.3	-2.63	765.8	94.5	217.8	194.6	23.17	9.398		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 133-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	
5,000.0	4,957.3	5,004.4	4,923.3	15.2	17.6	-2.92	782.4	95.6	218.9	195.2	23.67	9.249	
5,100.0	5,056.1	5,101.1	5,018.6	15.5	18.0	-3.14	798.5	96.9	220.5	196.4	24.15	9.130	
5,200.0	5,155.0	5,197.7	5,113.6	15.9	18.4	-3.16	816.0	99.0	223.7	199.1	24.64	9.080	
5,300.0	5,253.8	5,295.3	5,209.4	16.2	18.7	-3.47	834.9	100.1	228.1	203.0	25.14	9.073	
5,400.0	5,352.7	5,393.6	5,305.5	16.6	19.2	-4.00	855.1	100.4	233.6	207.9	25.65	9.105	
5,500.0	5,451.5	5,493.7	5,403.5	17.0	19.6	-4.73	875.6	99.8	239.0	212.9	26.17	9.133	
5,600.0	5,550.4	5,590.8	5,498.4	17.3	20.0	-5.36	895.9	99.4	244.9	218.2	26.69	9.177	
5,700.0	5,649.2	5,686.9	5,592.1	17.7	20.4	-5.66	917.5	100.3	252.5	225.3	27.20	9.283	
5,800.0	5,748.1	5,791.6	5,694.0	18.0	20.9	-6.21	941.4	100.2	260.4	232.6	27.74	9.386	
5,900.0	5,846.9	5,897.8	5,798.2	18.4	21.3	-6.96	962.1	99.0	264.8	236.6	28.29	9.363	
6,000.0	5,945.8	6,002.2	5,900.9	18.7	21.7	-7.46	981.0	98.9	268.0	239.2	28.81	9.302	
6,100.0	6,044.6	6,104.2	6,001.5	19.1	22.0	-8.05	997.9	98.2	269.6	240.3	29.34	9.191	
6,200.0	6,143.5	6,203.1	6,099.0	19.4	22.4	-8.24	1,014.3	99.3	271.2	241.3	29.84	9.089	
6,300.0	6,242.3	6,293.8	6,188.1	19.8	22.7	-8.02	1,030.8	102.2	274.5	244.2	30.31	9.057	
6,400.0	6,341.1	6,389.1	6,281.2	20.1	23.1	35.33	1,050.7	105.0	280.6	249.8	30.73	9.131	
6,500.0	6,438.3	6,480.5	6,369.9	20.4	23.5	59.88	1,071.9	98.8	289.2	258.1	31.10	9.298	
6,600.0	6,532.3	6,583.7	6,467.5	20.7	24.0	71.19	1,097.6	77.8	300.3	268.8	31.54	9.522	
6,700.0	6,621.1	6,695.5	6,568.9	20.9	24.4	77.25	1,120.2	36.9	307.2	275.1	32.09	9.574	
6,800.0	6,703.0	6,793.8	6,654.8	21.2	24.8	81.98	1,140.0	-6.6	315.3	282.6	32.77	9.623	
6,900.0	6,776.4	6,905.5	6,741.1	21.5	25.3	84.83	1,161.9	-73.5	324.3	290.5	33.79	9.599	
7,000.0	6,839.9	7,030.6	6,818.4	21.9	25.8	85.42	1,176.8	-170.4	326.7	291.4	35.30	9.253	
7,100.0	6,892.2	7,134.6	6,874.1	22.4	26.3	86.50	1,185.7	-257.7	327.5	290.3	37.21	8.801	
7,200.0	6,932.3	7,244.0	6,920.9	23.2	27.0	87.61	1,192.9	-356.2	328.3	288.5	39.73	8.263	
7,300.0	6,959.6	7,352.2	6,954.2	24.3	27.9	88.73	1,195.9	-459.1	327.1	284.4	42.73	7.656	
7,366.6	6,970.2	7,419.4	6,968.9	25.2	28.6	89.58	1,196.6	-524.6	326.4	281.5	44.87	7.274	
7,400.0	6,973.3	7,446.6	6,972.5	25.6	28.9	89.79	1,197.3	-551.5	326.8	281.0	45.85	7.128	
7,500.0	6,975.0	7,542.6	6,976.7	27.3	30.2	90.11	1,201.8	-647.3	331.3	281.7	49.60	6.680	
7,600.0	6,975.0	7,650.5	6,975.6	29.1	31.9	89.92	1,205.3	-755.1	334.0	280.0	53.99	6.187	
7,700.0	6,975.0	7,751.9	6,976.4	31.1	33.7	90.06	1,207.0	-856.5	335.2	276.8	58.44	5.736	
7,800.0	6,975.0	7,854.3	6,977.5	33.3	35.6	90.26	1,208.5	-958.9	336.2	273.1	63.09	5.328	
7,900.0	6,975.0	7,951.2	6,978.2	35.5	37.6	90.37	1,209.7	-1,055.8	336.9	269.1	67.78	4.970	
8,000.0	6,975.0	8,054.4	6,977.6	37.8	39.8	90.27	1,211.4	-1,159.0	338.0	265.3	72.77	4.645	
8,100.0	6,975.0	8,152.4	6,976.6	40.2	42.1	90.09	1,212.6	-1,257.0	338.7	261.0	77.73	4.357	
8,200.0	6,975.0	8,249.3	6,973.7	42.7	44.3	89.62	1,214.6	-1,353.8	340.2	257.4	82.77	4.110	
8,300.0	6,975.0	8,358.7	6,970.8	45.2	46.9	89.13	1,215.7	-1,463.2	340.7	252.5	88.19	3.864	
8,400.0	6,975.0	8,463.4	6,970.5	47.7	49.4	89.07	1,214.5	-1,567.9	339.0	245.5	93.50	3.626	
8,500.0	6,975.0	8,565.3	6,970.8	50.3	51.9	89.11	1,212.7	-1,669.8	336.8	238.0	98.79	3.409	
8,600.0	6,975.0	8,670.3	6,971.5	52.8	54.5	89.22	1,209.5	-1,774.7	333.2	229.0	104.18	3.198	
8,700.0	6,975.0	8,771.5	6,972.0	55.4	57.1	89.30	1,205.4	-1,875.8	328.6	219.1	109.50	3.001	
8,800.0	6,975.0	8,870.5	6,970.0	58.1	59.6	88.94	1,201.4	-1,974.7	324.0	209.2	114.83	2.822	
8,900.0	6,975.0	8,968.0	6,967.6	60.7	62.0	88.50	1,197.8	-2,072.1	320.0	199.8	120.14	2.663	
9,000.0	6,975.0	9,061.9	6,966.1	63.4	64.5	88.22	1,195.7	-2,165.9	317.2	191.8	125.36	2.530	
9,100.0	6,975.0	9,157.9	6,965.5	66.0	67.0	88.09	1,195.3	-2,261.9	316.3	185.7	130.66	2.421	
9,200.0	6,975.0	9,259.9	6,966.9	68.7	69.7	88.34	1,195.3	-2,364.0	315.8	179.6	136.13	2.320	
9,300.0	6,975.0	9,358.3	6,968.5	71.4	72.3	88.64	1,194.9	-2,462.3	314.8	173.2	141.52	2.224	
9,343.3	6,975.0	9,399.9	6,968.7	72.6	73.4	88.66	1,195.0	-2,503.9	314.6	170.8	143.83	2.187	
9,400.0	6,975.0	9,453.8	6,968.7	74.1	74.8	88.68	1,195.5	-2,557.8	314.9	168.0	146.85	2.144	
9,500.0	6,975.0	9,550.8	6,969.4	76.8	77.4	88.80	1,197.4	-2,654.8	316.3	164.1	152.23	2.078	
9,600.0	6,975.0	9,655.8	6,972.0	79.5	80.3	89.28	1,199.3	-2,759.8	317.5	159.7	157.82	2.012	
9,700.0	6,975.0	9,760.9	6,974.7	82.3	83.1	89.76	1,199.2	-2,864.8	316.9	153.5	163.41	1.939	
9,800.0	6,975.0	9,857.6	6,976.7	85.0	85.7	90.13	1,198.9	-2,961.5	316.1	147.3	168.78	1.873	
9,832.2	6,975.0	9,888.9	6,977.4	85.9	86.5	90.26	1,199.1	-2,992.8	316.0	145.5	170.52	1.853	

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 133-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	
9,900.0	6,975.0	9,954.8	6,978.4	87.7	88.3	90.44	1,199.6	-3,058.7	316.3	142.1	174.18	1.816	
10,000.0	6,975.0	10,054.3	6,979.1	90.5	91.0	90.56	1,201.0	-3,158.2	317.2	137.5	179.67	1.765	
10,100.0	6,975.0	10,161.0	6,980.9	93.2	93.9	90.88	1,201.0	-3,264.8	316.6	131.3	185.33	1.708	
10,200.0	6,975.0	10,261.9	6,982.4	96.0	96.7	91.17	1,200.0	-3,365.7	315.1	124.3	190.83	1.651	
10,300.0	6,975.0	10,364.5	6,982.8	98.7	99.5	91.25	1,198.5	-3,468.3	313.2	116.7	196.41	1.594	
10,400.0	6,975.0	10,459.2	6,982.9	101.5	102.0	91.28	1,196.8	-3,563.0	310.8	109.1	201.78	1.540	
10,417.6	6,975.0	10,474.4	6,982.7	101.9	102.5	91.23	1,196.8	-3,578.2	310.8	108.1	202.70	1.533	
10,500.0	6,975.0	10,545.8	6,980.5	104.2	104.4	90.82	1,198.5	-3,649.5	312.3	105.2	207.01	1.508	
10,600.0	6,975.0	10,639.1	6,978.2	107.0	107.0	90.40	1,204.0	-3,742.7	317.5	105.1	212.43	1.495 Level 3	
10,700.0	6,975.0	10,746.6	6,976.5	109.7	110.0	90.08	1,209.5	-3,850.0	322.1	103.9	218.21	1.476 Level 3	
10,800.0	6,975.0	10,862.4	6,976.4	112.5	113.2	90.07	1,211.4	-3,965.8	323.3	99.1	224.20	1.442 Level 3	
10,900.0	6,975.0	10,965.7	6,978.2	115.3	116.0	90.39	1,209.3	-4,069.0	320.8	91.0	229.80	1.396 Level 3	
11,000.0	6,975.0	11,061.9	6,978.1	118.0	118.6	90.37	1,207.8	-4,165.2	318.7	83.5	235.25	1.355 Level 3	
11,100.0	6,975.0	11,162.7	6,977.6	120.8	121.4	90.28	1,206.8	-4,266.0	317.2	76.3	240.84	1.317 Level 3	
11,200.0	6,975.0	11,264.1	6,977.2	123.6	124.2	90.22	1,205.4	-4,367.3	315.3	68.8	246.43	1.279 Level 3	
11,300.0	6,975.0	11,365.4	6,977.8	126.4	126.9	90.32	1,203.5	-4,468.7	312.9	60.8	252.02	1.241 Level 2	
11,400.0	6,975.0	11,467.0	6,977.8	129.1	129.7	90.34	1,201.3	-4,570.3	310.2	52.6	257.62	1.204 Level 2	
11,500.0	6,975.0	11,571.9	6,977.7	131.9	132.6	90.32	1,197.6	-4,675.1	306.1	42.8	263.31	1.163 Level 2	
11,600.0	6,975.0	11,672.0	6,978.2	134.7	135.3	90.43	1,193.1	-4,775.1	301.1	32.3	268.85	1.120 Level 2	
11,700.0	6,975.0	11,771.2	6,978.8	137.5	138.1	90.54	1,189.2	-4,874.1	296.6	22.2	274.37	1.081 Level 2	
11,730.3	6,975.0	11,788.0	6,978.9	138.3	138.5	90.56	1,188.5	-4,891.0	295.5	19.8	275.68	1.072 Level 2, ES, SF	
11,800.0	6,975.0	11,788.0	6,978.9	140.2	138.5	90.56	1,188.5	-4,891.0	303.6	26.0	277.62	1.094 Level 2	
11,900.0	6,975.0	11,788.0	6,978.9	143.0	138.5	90.56	1,188.5	-4,891.0	340.8	60.4	280.41	1.215 Level 2	
12,000.0	6,975.0	11,788.0	6,978.9	145.8	138.5	90.56	1,188.5	-4,891.0	400.1	116.9	283.20	1.413 Level 3	
12,100.0	6,975.0	11,788.0	6,978.9	148.6	138.5	90.56	1,188.5	-4,891.0	473.3	187.3	285.99	1.655	
12,200.0	6,975.0	11,788.0	6,978.9	151.4	138.5	90.56	1,188.5	-4,891.0	554.9	266.1	288.78	1.922	
12,300.0	6,975.0	11,788.0	6,978.9	154.2	138.5	90.56	1,188.5	-4,891.0	641.8	350.2	291.57	2.201	
12,400.0	6,975.0	11,788.0	6,978.9	156.9	138.5	90.56	1,188.5	-4,891.0	732.0	437.6	294.36	2.487	
12,500.0	6,975.0	11,788.0	6,978.9	159.7	138.5	90.56	1,188.5	-4,891.0	824.5	527.3	297.16	2.775	
12,600.0	6,975.0	11,788.0	6,978.9	162.5	138.5	90.56	1,188.5	-4,891.0	918.5	618.6	299.95	3.062	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	0.00	32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	32.8	0.0	32.8	32.6	0.22	145.842		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	32.8	0.0	32.8	32.1	0.67	48.614		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	32.8	0.0	32.8	31.7	1.12	29.168		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	32.8	0.0	32.8	31.2	1.57	20.835 CC, ES		
500.0	500.0	498.8	498.8	1.0	1.0	0.23	34.5	0.1	34.5	32.5	2.02	17.065		
600.0	600.0	597.4	597.3	1.2	1.2	0.79	39.6	0.5	39.7	37.2	2.48	16.020		
700.0	700.0	695.6	695.0	1.5	1.5	1.46	48.0	1.2	48.2	45.3	2.93	16.453		
800.0	800.0	793.0	791.8	1.7	1.7	2.08	59.6	2.2	60.2	56.8	3.39	17.757		
900.0	900.0	889.5	887.2	1.9	2.0	2.58	74.4	3.4	75.5	71.7	3.85	19.606		
1,000.0	1,000.0	985.0	980.9	2.1	2.3	2.98	92.1	4.8	94.2	89.9	4.32	21.808		
1,100.0	1,100.0	1,079.5	1,073.2	2.4	2.7	-4.54	112.7	6.5	114.4	109.6	4.77	23.965		
1,200.0	1,199.8	1,177.8	1,168.7	2.6	3.1	-4.44	135.7	8.3	132.7	127.5	5.24	25.346		
1,300.0	1,299.5	1,276.7	1,264.9	2.8	3.6	-4.47	158.8	10.2	147.6	141.9	5.70	25.890		
1,400.0	1,398.7	1,376.1	1,361.4	3.1	4.0	-4.60	182.0	12.0	159.0	152.9	6.17	25.759		
1,500.0	1,497.6	1,475.7	1,458.3	3.3	4.5	-4.80	205.3	13.9	167.7	161.1	6.66	25.193		
1,600.0	1,596.4	1,575.3	1,555.1	3.6	4.9	-4.99	228.6	15.8	176.3	169.1	7.16	24.616		
1,700.0	1,695.3	1,674.9	1,652.0	3.9	5.4	-5.16	251.8	17.7	184.8	177.1	7.66	24.106		
1,800.0	1,794.1	1,774.6	1,748.9	4.2	5.9	-5.32	275.1	19.6	193.3	185.1	8.17	23.649		
1,900.0	1,893.0	1,874.2	1,845.7	4.5	6.4	-5.46	298.4	21.4	201.8	193.1	8.68	23.240		
2,000.0	1,991.8	1,973.9	1,942.6	4.8	6.8	-5.59	321.7	23.3	210.3	201.1	9.20	22.870		
2,100.0	2,090.7	2,073.5	2,039.4	5.2	7.3	-5.72	344.9	25.2	218.8	209.1	9.71	22.534		
2,200.0	2,189.5	2,173.1	2,136.3	5.5	7.8	-5.83	368.2	27.1	227.3	217.1	10.23	22.229		
2,300.0	2,288.4	2,272.8	2,233.2	5.8	8.3	-5.93	391.5	29.0	235.8	225.1	10.74	21.951		
2,400.0	2,387.2	2,372.4	2,330.0	6.1	8.7	-6.03	414.8	30.8	244.3	233.1	11.26	21.695		
2,500.0	2,486.1	2,472.0	2,426.9	6.5	9.2	-6.12	438.0	32.7	252.9	241.1	11.78	21.460		
2,600.0	2,584.9	2,571.7	2,523.8	6.8	9.7	-6.21	461.3	34.6	261.4	249.1	12.30	21.244		
2,700.0	2,683.8	2,671.3	2,620.6	7.2	10.2	-6.29	484.6	36.5	269.9	257.1	12.83	21.043		
2,800.0	2,782.6	2,770.9	2,717.5	7.5	10.7	-6.36	507.9	38.3	278.4	265.0	13.35	20.857		
2,900.0	2,881.5	2,870.6	2,814.3	7.8	11.1	-6.43	531.2	40.2	286.9	273.0	13.87	20.684		
3,000.0	2,980.3	2,970.2	2,911.2	8.2	11.6	-6.50	554.4	42.1	295.4	281.0	14.40	20.523		
3,100.0	3,079.2	3,069.8	3,008.1	8.5	12.1	-6.56	577.7	44.0	303.9	289.0	14.92	20.372		
3,200.0	3,178.0	3,169.5	3,104.9	8.9	12.6	-6.62	601.0	45.9	312.5	297.0	15.44	20.231		
3,300.0	3,276.9	3,269.1	3,201.8	9.2	13.1	-6.68	624.3	47.7	321.0	305.0	15.97	20.099		
3,400.0	3,375.7	3,368.8	3,298.6	9.6	13.6	-6.73	647.5	49.6	329.5	313.0	16.50	19.974		
3,500.0	3,474.6	3,468.4	3,395.5	9.9	14.0	-6.78	670.8	51.5	338.0	321.0	17.02	19.857		
3,600.0	3,573.4	3,568.0	3,492.4	10.3	14.5	-6.83	694.1	53.4	346.5	329.0	17.55	19.747		
3,700.0	3,672.3	3,667.7	3,589.2	10.6	15.0	-6.87	717.4	55.3	355.1	337.0	18.08	19.642		
3,800.0	3,771.1	3,767.3	3,686.1	11.0	15.5	-6.92	740.6	57.1	363.6	345.0	18.60	19.543		
3,900.0	3,870.0	3,866.9	3,782.9	11.3	16.0	-6.96	763.9	59.0	372.1	353.0	19.13	19.450		
4,000.0	3,968.8	3,966.6	3,879.8	11.7	16.5	-7.00	787.2	60.9	380.6	361.0	19.66	19.361		
4,100.0	4,067.7	4,066.2	3,976.7	12.0	16.9	-7.03	810.5	62.8	389.1	368.9	20.19	19.276		
4,200.0	4,166.5	4,165.8	4,073.5	12.4	17.4	-7.07	833.7	64.7	397.7	376.9	20.72	19.196		
4,300.0	4,265.4	4,265.5	4,170.4	12.7	17.9	-7.11	857.0	66.5	406.2	384.9	21.24	19.120		
4,400.0	4,364.2	4,365.1	4,267.2	13.1	18.4	-7.14	880.3	68.4	414.7	392.9	21.77	19.047		
4,500.0	4,463.0	4,464.8	4,364.1	13.4	18.9	-7.17	903.6	70.3	423.2	400.9	22.30	18.977		
4,600.0	4,561.9	4,564.4	4,461.0	13.8	19.4	-7.20	926.9	72.2	431.7	408.9	22.83	18.910		
4,700.0	4,660.7	4,664.0	4,557.8	14.1	19.9	-7.23	950.1	74.0	440.3	416.9	23.36	18.847		
4,800.0	4,759.6	4,763.7	4,654.7	14.5	20.3	-7.26	973.4	75.9	448.8	424.9	23.89	18.786		
4,900.0	4,858.4	4,863.3	4,751.6	14.8	20.8	-7.29	996.7	77.8	457.3	432.9	24.42	18.727		
5,000.0	4,957.3	4,962.9	4,848.4	15.2	21.3	-7.31	1,020.0	79.7	465.8	440.9	24.95	18.671		
5,100.0	5,056.1	5,062.6	4,945.3	15.5	21.8	-7.34	1,043.2	81.6	474.3	448.9	25.48	18.617		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWDD												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	5,155.0	5,162.2	5,042.1	15.9	22.3	-7.36	1,066.5	83.4	482.9	456.8	26.01	18.566	
5,300.0	5,253.8	5,261.8	5,139.0	16.2	22.8	-7.39	1,089.8	85.3	491.4	464.8	26.54	18.516	
5,400.0	5,352.7	5,361.5	5,235.9	16.6	23.3	-7.41	1,113.1	87.2	499.9	472.8	27.07	18.468	
5,500.0	5,451.5	5,461.1	5,332.7	17.0	23.7	-7.43	1,136.3	89.1	508.4	480.8	27.60	18.422	
5,600.0	5,550.4	5,560.8	5,429.6	17.3	24.2	-7.45	1,159.6	91.0	516.9	488.8	28.13	18.378	
5,700.0	5,649.2	5,660.4	5,526.4	17.7	24.7	-7.47	1,182.9	92.8	525.5	496.8	28.66	18.335	
5,800.0	5,748.1	5,760.0	5,623.3	18.0	25.2	-7.49	1,206.2	94.7	534.0	504.8	29.19	18.293	
5,900.0	5,846.9	5,859.7	5,720.2	18.4	25.7	-7.51	1,229.4	96.6	542.5	512.8	29.72	18.254	
6,000.0	5,945.8	5,959.3	5,817.0	18.7	26.2	-7.53	1,252.7	98.5	551.0	520.8	30.25	18.215	
6,100.0	6,044.6	6,058.9	5,913.9	19.1	26.7	-7.55	1,276.0	100.4	559.5	528.8	30.78	18.178	
6,200.0	6,143.5	6,158.6	6,010.7	19.4	27.1	-7.57	1,299.3	102.2	568.1	536.8	31.31	18.142	
6,300.0	6,242.3	6,258.2	6,107.6	19.8	27.6	-7.58	1,322.6	104.1	576.6	544.7	31.84	18.107	
6,400.0	6,341.1	6,357.6	6,204.2	20.1	28.1	34.85	1,345.8	106.0	585.1	552.8	32.35	18.089	
6,500.0	6,438.3	6,456.4	6,300.3	20.4	28.6	59.22	1,368.9	107.2	594.1	561.3	32.76	18.136	
6,600.0	6,532.3	6,558.9	6,399.4	20.7	29.0	70.61	1,392.6	97.5	603.5	570.3	33.16	18.198	
6,700.0	6,621.1	6,665.0	6,499.6	20.9	29.4	77.07	1,416.6	72.3	613.2	579.5	33.66	18.218	
6,800.0	6,703.0	6,774.9	6,598.3	21.2	29.9	81.31	1,440.2	30.4	622.8	588.5	34.31	18.150	
6,900.0	6,776.4	6,888.7	6,692.7	21.5	30.3	84.34	1,462.7	-28.7	632.0	596.8	35.21	17.949	
7,000.0	6,839.9	7,006.4	6,779.5	21.9	30.7	86.58	1,483.3	-105.3	640.4	603.9	36.50	17.545	
7,100.0	6,892.2	7,127.7	6,855.0	22.4	31.2	88.25	1,501.2	-198.3	647.7	609.4	38.29	16.917	
7,200.0	6,932.3	7,252.1	6,915.5	23.2	31.8	89.43	1,515.4	-306.0	653.4	612.8	40.65	16.074	
7,300.0	6,959.6	7,379.0	6,957.6	24.3	32.5	90.18	1,525.1	-425.1	657.4	613.7	43.64	15.062	
7,400.0	6,973.3	7,507.4	6,978.7	25.6	33.5	90.51	1,529.8	-551.5	659.3	612.1	47.16	13.979	
7,500.0	6,975.0	7,614.8	6,981.0	27.3	34.5	90.52	1,530.3	-658.8	659.5	608.5	51.05	12.918	
7,600.0	6,975.0	7,714.8	6,981.0	29.1	35.7	90.52	1,530.8	-758.8	659.5	604.4	55.16	11.956	
7,700.0	6,975.0	7,814.8	6,981.0	31.1	37.1	90.52	1,531.4	-858.8	659.5	600.0	59.52	11.081	
7,800.0	6,975.0	7,914.8	6,981.0	33.3	38.7	90.52	1,531.9	-958.8	659.5	595.5	64.07	10.294	
7,900.0	6,975.0	8,014.8	6,981.0	35.5	40.5	90.52	1,532.4	-1,058.8	659.5	590.8	68.78	9.589	
8,000.0	6,975.0	8,114.8	6,981.0	37.8	42.4	90.52	1,532.9	-1,158.8	659.5	585.9	73.62	8.959	
8,100.0	6,975.0	8,214.8	6,981.0	40.2	44.4	90.52	1,533.4	-1,258.8	659.5	581.0	78.56	8.395	
8,200.0	6,975.0	8,314.8	6,981.0	42.7	46.6	90.52	1,534.0	-1,358.8	659.5	575.9	83.59	7.890	
8,300.0	6,975.0	8,414.8	6,981.0	45.2	48.8	90.52	1,534.5	-1,458.8	659.5	570.8	88.69	7.437	
8,400.0	6,975.0	8,514.8	6,981.0	47.7	51.1	90.52	1,535.0	-1,558.8	659.5	565.7	93.85	7.028	
8,500.0	6,975.0	8,614.8	6,981.0	50.3	53.4	90.52	1,535.5	-1,658.8	659.5	560.5	99.06	6.658	
8,600.0	6,975.0	8,714.8	6,981.0	52.8	55.8	90.52	1,536.1	-1,758.8	659.5	555.2	104.31	6.323	
8,700.0	6,975.0	8,814.8	6,981.0	55.4	58.3	90.52	1,536.6	-1,858.8	659.5	549.9	109.59	6.018	
8,800.0	6,975.0	8,914.8	6,981.0	58.1	60.8	90.52	1,537.1	-1,958.8	659.5	544.6	114.91	5.739	
8,900.0	6,975.0	9,014.8	6,981.0	60.7	63.3	90.52	1,537.6	-2,058.8	659.5	539.3	120.26	5.484	
9,000.0	6,975.0	9,114.8	6,981.0	63.4	65.8	90.52	1,538.2	-2,158.8	659.5	533.9	125.63	5.250	
9,100.0	6,975.0	9,214.8	6,981.0	66.0	68.4	90.52	1,538.7	-2,258.8	659.5	528.5	131.02	5.034	
9,200.0	6,975.0	9,314.8	6,981.0	68.7	71.0	90.52	1,539.2	-2,358.8	659.5	523.1	136.43	4.834	
9,300.0	6,975.0	9,414.8	6,981.0	71.4	73.6	90.52	1,539.7	-2,458.8	659.5	517.7	141.86	4.649	
9,400.0	6,975.0	9,514.8	6,981.0	74.1	76.2	90.52	1,540.2	-2,558.8	659.5	512.2	147.30	4.478	
9,500.0	6,975.0	9,614.8	6,981.0	76.8	78.8	90.52	1,540.8	-2,658.8	659.5	506.8	152.75	4.318	
9,600.0	6,975.0	9,714.8	6,981.0	79.5	81.5	90.52	1,541.3	-2,758.8	659.5	501.3	158.21	4.169	
9,700.0	6,975.0	9,814.8	6,981.0	82.3	84.1	90.52	1,541.8	-2,858.8	659.5	495.8	163.69	4.029	
9,800.0	6,975.0	9,914.8	6,981.0	85.0	86.8	90.52	1,542.3	-2,958.8	659.5	490.3	169.18	3.898	
9,900.0	6,975.0	10,014.8	6,981.0	87.7	89.5	90.52	1,542.9	-3,058.8	659.5	484.8	174.67	3.776	
10,000.0	6,975.0	10,114.8	6,981.0	90.5	92.2	90.52	1,543.4	-3,158.8	659.5	479.3	180.17	3.661	
10,100.0	6,975.0	10,214.8	6,981.0	93.2	94.8	90.52	1,543.9	-3,258.8	659.5	473.8	185.68	3.552	
10,200.0	6,975.0	10,314.8	6,981.0	96.0	97.5	90.52	1,544.4	-3,358.8	659.5	468.3	191.19	3.449	
10,300.0	6,975.0	10,414.8	6,981.0	98.7	100.2	90.52	1,545.0	-3,458.8	659.5	462.8	196.71	3.353	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													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	6,975.0	10,514.8	6,981.0	101.5	103.0	90.52	1,545.5	-3,558.8	659.5	457.3	202.24	3.261		
10,500.0	6,975.0	10,614.8	6,981.0	104.2	105.7	90.52	1,546.0	-3,658.8	659.5	451.7	207.77	3.174		
10,600.0	6,975.0	10,714.8	6,981.0	107.0	108.4	90.52	1,546.5	-3,758.8	659.5	446.2	213.31	3.092		
10,700.0	6,975.0	10,814.8	6,981.0	109.7	111.1	90.52	1,547.0	-3,858.8	659.5	440.7	218.85	3.014		
10,800.0	6,975.0	10,914.8	6,981.0	112.5	113.9	90.52	1,547.6	-3,958.8	659.5	435.1	224.39	2.939		
10,900.0	6,975.0	11,014.8	6,981.0	115.3	116.6	90.52	1,548.1	-4,058.8	659.5	429.6	229.94	2.868		
11,000.0	6,975.0	11,114.8	6,981.0	118.0	119.3	90.52	1,548.6	-4,158.8	659.5	424.0	235.49	2.801		
11,100.0	6,975.0	11,214.8	6,981.0	120.8	122.1	90.52	1,549.1	-4,258.8	659.5	418.5	241.04	2.736		
11,200.0	6,975.0	11,314.8	6,981.0	123.6	124.8	90.52	1,549.7	-4,358.8	659.5	412.9	246.60	2.674		
11,300.0	6,975.0	11,414.8	6,981.0	126.4	127.6	90.52	1,550.2	-4,458.8	659.5	407.3	252.16	2.615		
11,400.0	6,975.0	11,514.8	6,981.0	129.1	130.3	90.52	1,550.7	-4,558.8	659.5	401.8	257.72	2.559		
11,500.0	6,975.0	11,614.8	6,981.0	131.9	133.1	90.52	1,551.2	-4,658.8	659.5	396.2	263.29	2.505		
11,600.0	6,975.0	11,714.8	6,981.0	134.7	135.8	90.52	1,551.8	-4,758.8	659.5	390.6	268.85	2.453		
11,700.0	6,975.0	11,814.8	6,981.0	137.5	138.6	90.52	1,552.3	-4,858.8	659.5	385.1	274.42	2.403		
11,800.0	6,975.0	11,914.8	6,981.0	140.2	141.3	90.52	1,552.8	-4,958.8	659.5	379.5	280.00	2.355		
11,900.0	6,975.0	12,014.8	6,981.0	143.0	144.1	90.52	1,553.3	-5,058.8	659.5	373.9	285.57	2.309		
12,000.0	6,975.0	12,114.8	6,981.0	145.8	146.9	90.52	1,553.8	-5,158.8	659.5	368.3	291.14	2.265		
12,100.0	6,975.0	12,214.8	6,981.0	148.6	149.6	90.52	1,554.4	-5,258.8	659.5	362.8	296.72	2.223		
12,200.0	6,975.0	12,314.8	6,981.0	151.4	152.4	90.52	1,554.9	-5,358.8	659.5	357.2	302.30	2.182		
12,300.0	6,975.0	12,414.8	6,981.0	154.2	155.2	90.52	1,555.4	-5,458.7	659.5	351.6	307.88	2.142		
12,400.0	6,975.0	12,514.8	6,981.0	156.9	157.9	90.52	1,555.9	-5,558.7	659.5	346.0	313.46	2.104		
12,500.0	6,975.0	12,614.8	6,981.0	159.7	160.7	90.52	1,556.5	-5,658.7	659.5	340.4	319.04	2.067		
12,600.0	6,975.0	12,714.8	6,981.0	162.5	163.5	90.52	1,557.0	-5,758.7	659.5	334.9	324.63	2.032		
12,700.0	6,975.0	12,814.8	6,981.0	165.3	166.3	90.52	1,557.5	-5,858.7	659.5	329.3	330.21	1.997		
12,800.0	6,975.0	12,914.8	6,981.0	168.1	169.0	90.52	1,558.0	-5,958.7	659.5	323.7	335.80	1.964		
12,900.0	6,975.0	13,014.8	6,981.0	170.9	171.8	90.52	1,558.6	-6,058.7	659.5	318.1	341.38	1.932		
13,000.0	6,975.0	13,114.8	6,981.0	173.7	174.6	90.52	1,559.1	-6,158.7	659.5	312.5	346.97	1.901		
13,100.0	6,975.0	13,214.8	6,981.0	176.5	177.4	90.52	1,559.6	-6,258.7	659.5	306.9	352.56	1.871		
13,200.0	6,975.0	13,314.8	6,981.0	179.3	180.1	90.52	1,560.1	-6,358.7	659.5	301.3	358.15	1.841		
13,300.0	6,975.0	13,414.8	6,981.0	182.1	182.9	90.52	1,560.6	-6,458.7	659.5	295.7	363.74	1.813		
13,400.0	6,975.0	13,514.8	6,981.0	184.9	185.7	90.52	1,561.2	-6,558.7	659.5	290.1	369.33	1.786		
13,500.0	6,975.0	13,614.8	6,981.0	187.6	188.5	90.52	1,561.7	-6,658.7	659.5	284.5	374.93	1.759		
13,600.0	6,975.0	13,714.8	6,981.0	190.4	191.3	90.52	1,562.2	-6,758.7	659.5	279.0	380.52	1.733		
13,700.0	6,975.0	13,814.8	6,981.0	193.2	194.0	90.52	1,562.7	-6,858.7	659.5	273.4	386.12	1.708		
13,800.0	6,975.0	13,914.8	6,981.0	196.0	196.8	90.52	1,563.3	-6,958.7	659.5	267.8	391.71	1.684		
13,900.0	6,975.0	14,014.8	6,981.0	198.8	199.6	90.52	1,563.8	-7,058.7	659.5	262.2	397.31	1.660		
14,000.0	6,975.0	14,114.8	6,981.0	201.6	202.4	90.52	1,564.3	-7,158.7	659.5	256.6	402.90	1.637		
14,100.0	6,975.0	14,214.8	6,981.0	204.4	205.2	90.52	1,564.8	-7,258.7	659.5	251.0	408.50	1.614		
14,200.0	6,975.0	14,314.8	6,981.0	207.2	208.0	90.52	1,565.4	-7,358.7	659.5	245.4	414.10	1.593		
14,300.0	6,975.0	14,414.8	6,981.0	210.0	210.8	90.52	1,565.9	-7,458.7	659.5	239.8	419.70	1.571		
14,400.0	6,975.0	14,514.8	6,981.0	212.8	213.6	90.52	1,566.4	-7,558.7	659.5	234.2	425.29	1.551		
14,500.0	6,975.0	14,614.8	6,981.0	215.6	216.3	90.52	1,566.9	-7,658.7	659.5	228.6	430.89	1.530		
14,600.0	6,975.0	14,714.8	6,981.0	218.4	219.1	90.52	1,567.4	-7,758.7	659.5	223.0	436.49	1.511		
14,700.0	6,975.0	14,814.8	6,981.0	221.2	221.9	90.52	1,568.0	-7,858.7	659.5	217.4	442.09	1.492 Level 3		
14,800.0	6,975.0	14,914.8	6,981.0	224.0	224.7	90.52	1,568.5	-7,958.7	659.5	211.8	447.69	1.473 Level 3		
14,900.0	6,975.0	15,014.8	6,981.0	226.8	227.5	90.52	1,569.0	-8,058.7	659.5	206.2	453.30	1.455 Level 3		
15,000.0	6,975.0	15,114.8	6,981.0	229.6	230.3	90.52	1,569.5	-8,158.7	659.5	200.6	458.90	1.437 Level 3		
15,100.0	6,975.0	15,214.8	6,981.0	232.4	233.1	90.52	1,570.1	-8,258.7	659.5	195.0	464.50	1.420 Level 3		
15,200.0	6,975.0	15,314.8	6,981.0	235.2	235.9	90.52	1,570.6	-8,358.7	659.5	189.4	470.10	1.403 Level 3		
15,300.0	6,975.0	15,414.8	6,981.0	238.0	238.7	90.52	1,571.1	-8,458.7	659.5	183.7	475.70	1.386 Level 3		
15,400.0	6,975.0	15,514.8	6,981.0	240.8	241.5	90.52	1,571.6	-8,558.7	659.5	178.1	481.31	1.370 Level 3		
15,500.0	6,975.0	15,614.8	6,981.0	243.6	244.3	90.52	1,572.2	-8,658.7	659.4	172.5	486.91	1.354 Level 3		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #12 - Wellbore #1 - Plan #1 (6-23-												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
15,600.0	6,975.0	15,714.8	6,981.0	246.4	247.1	90.52	1,572.7	-8,758.7	659.4	166.9	492.52	1.339	Level 3
15,700.0	6,975.0	15,814.8	6,981.0	249.2	249.8	90.52	1,573.2	-8,858.7	659.4	161.3	498.12	1.324	Level 3
15,800.0	6,975.0	15,914.8	6,981.0	252.0	252.6	90.52	1,573.7	-8,958.7	659.4	155.7	503.73	1.309	Level 3
15,900.0	6,975.0	16,014.8	6,981.0	254.8	255.4	90.52	1,574.2	-9,058.7	659.4	150.1	509.33	1.295	Level 3
16,000.0	6,975.0	16,114.8	6,981.0	257.6	258.2	90.52	1,574.8	-9,158.7	659.4	144.5	514.94	1.281	Level 3
16,100.0	6,975.0	16,214.8	6,981.0	260.4	261.0	90.52	1,575.3	-9,258.7	659.4	138.9	520.54	1.267	Level 3
16,200.0	6,975.0	16,314.8	6,981.0	263.2	263.8	90.52	1,575.8	-9,358.7	659.4	133.3	526.15	1.253	Level 3
16,300.0	6,975.0	16,414.8	6,981.0	266.0	266.6	90.52	1,576.3	-9,458.7	659.4	127.7	531.75	1.240	Level 2
16,400.0	6,975.0	16,514.8	6,981.0	268.8	269.4	90.52	1,576.9	-9,558.7	659.4	122.1	537.36	1.227	Level 2
16,500.0	6,975.0	16,614.8	6,981.0	271.6	272.2	90.52	1,577.4	-9,658.7	659.4	116.5	542.97	1.215	Level 2
16,600.0	6,975.0	16,714.8	6,981.0	274.4	275.0	90.52	1,577.9	-9,758.7	659.4	110.9	548.57	1.202	Level 2
16,700.0	6,975.0	16,814.8	6,981.0	277.2	277.8	90.52	1,578.4	-9,858.7	659.4	105.3	554.18	1.190	Level 2
16,800.0	6,975.0	16,914.8	6,981.0	280.0	280.6	90.52	1,579.0	-9,958.7	659.4	99.6	559.79	1.178	Level 2
16,900.0	6,975.0	17,014.8	6,981.0	282.8	283.4	90.52	1,579.5	-10,058.7	659.4	94.0	565.40	1.166	Level 2
16,912.6	6,975.0	17,027.4	6,981.0	283.2	283.8	90.52	1,579.5	-10,071.3	659.4	93.3	566.11	1.165	Level 2, SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	0.00	51.0	0.0	51.0					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	51.0	0.0	51.0	50.8	0.22	226.904		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	51.0	0.0	51.0	50.3	0.67	75.635 CC, ES		
300.0	300.0	298.2	298.2	0.6	0.6	0.13	52.7	0.1	52.7	51.6	1.12	46.959		
400.0	400.0	396.2	396.1	0.8	0.8	0.49	57.7	0.5	57.8	56.3	1.58	36.629		
500.0	500.0	493.7	493.2	1.0	1.0	0.95	66.0	1.1	66.4	64.3	2.04	32.557		
600.0	600.0	590.6	589.4	1.2	1.3	1.43	77.5	1.9	78.3	75.8	2.50	31.296		
700.0	700.0	686.5	684.2	1.5	1.6	1.87	92.1	3.0	93.5	90.5	2.97	31.516		
800.0	800.0	781.4	777.4	1.7	1.9	2.24	109.6	4.3	112.0	108.6	3.44	32.595		
900.0	900.0	875.0	868.8	1.9	2.3	2.54	129.9	5.8	133.8	129.9	3.91	34.205		
1,000.0	1,000.0	970.6	961.5	2.1	2.8	2.79	153.0	7.5	158.0	153.6	4.39	35.981		
1,100.0	1,100.0	1,068.0	1,055.9	2.4	3.2	-4.81	176.7	9.2	180.7	175.8	4.84	37.301		
1,200.0	1,199.8	1,166.1	1,151.1	2.6	3.7	-4.75	200.6	10.9	199.9	194.6	5.32	37.604		
1,300.0	1,299.5	1,264.8	1,246.8	2.8	4.2	-4.79	224.6	12.7	215.8	210.0	5.80	37.235		
1,400.0	1,398.7	1,364.0	1,343.1	3.1	4.7	-4.89	248.7	14.4	228.2	221.9	6.28	36.332		
1,500.0	1,497.6	1,463.5	1,439.6	3.3	5.2	-5.05	272.9	16.2	237.9	231.1	6.78	35.084		
1,600.0	1,596.4	1,563.1	1,536.1	3.6	5.6	-5.22	297.1	18.0	247.4	240.1	7.29	33.935		
1,700.0	1,695.3	1,662.6	1,632.7	3.9	6.1	-5.37	321.3	19.8	256.9	249.1	7.80	32.923		
1,800.0	1,794.1	1,762.2	1,729.2	4.2	6.6	-5.50	345.5	21.5	266.4	258.1	8.32	32.025		
1,900.0	1,893.0	1,861.7	1,825.8	4.5	7.1	-5.63	369.7	23.3	275.9	267.0	8.83	31.225		
2,000.0	1,991.8	1,961.3	1,922.3	4.8	7.6	-5.76	394.0	25.1	285.3	276.0	9.35	30.507		
2,100.0	2,090.7	2,060.8	2,018.8	5.2	8.1	-5.87	418.2	26.8	294.8	285.0	9.87	29.859		
2,200.0	2,189.5	2,160.4	2,115.4	5.5	8.6	-5.97	442.4	28.6	304.3	293.9	10.40	29.273		
2,300.0	2,288.4	2,259.9	2,211.9	5.8	9.1	-6.07	466.6	30.4	313.8	302.9	10.92	28.740		
2,400.0	2,387.2	2,359.5	2,308.5	6.1	9.6	-6.17	490.8	32.1	323.3	311.9	11.44	28.252		
2,500.0	2,486.1	2,459.0	2,405.0	6.5	10.1	-6.26	515.0	33.9	332.8	320.8	11.97	27.806		
2,600.0	2,584.9	2,558.6	2,501.6	6.8	10.6	-6.34	539.2	35.7	342.3	329.8	12.49	27.395		
2,700.0	2,683.8	2,658.1	2,598.1	7.2	11.1	-6.42	563.4	37.4	351.8	338.8	13.02	27.016		
2,800.0	2,782.6	2,757.7	2,694.6	7.5	11.6	-6.49	587.6	39.2	361.3	347.7	13.55	26.665		
2,900.0	2,881.5	2,857.2	2,791.2	7.8	12.1	-6.56	611.8	41.0	370.8	356.7	14.08	26.339		
3,000.0	2,980.3	2,956.8	2,887.7	8.2	12.6	-6.63	636.0	42.7	380.3	365.7	14.61	26.036		
3,100.0	3,079.2	3,056.3	2,984.3	8.5	13.1	-6.70	660.2	44.5	389.8	374.6	15.14	25.753		
3,200.0	3,178.0	3,155.8	3,080.8	8.9	13.6	-6.76	684.5	46.3	399.3	383.6	15.66	25.488		
3,300.0	3,276.9	3,255.4	3,177.4	9.2	14.1	-6.82	708.7	48.1	408.8	392.6	16.19	25.241		
3,400.0	3,375.7	3,354.9	3,273.9	9.6	14.6	-6.87	732.9	49.8	418.3	401.5	16.73	25.008		
3,500.0	3,474.6	3,454.5	3,370.4	9.9	15.1	-6.92	757.1	51.6	427.8	410.5	17.26	24.789		
3,600.0	3,573.4	3,554.0	3,467.0	10.3	15.6	-6.98	781.3	53.4	437.3	419.5	17.79	24.583		
3,700.0	3,672.3	3,653.6	3,563.5	10.6	16.1	-7.02	805.5	55.1	446.8	428.4	18.32	24.389		
3,800.0	3,771.1	3,753.1	3,660.1	11.0	16.6	-7.07	829.7	56.9	456.3	437.4	18.85	24.205		
3,900.0	3,870.0	3,852.7	3,756.6	11.3	17.1	-7.12	853.9	58.7	465.8	446.4	19.38	24.031		
4,000.0	3,968.8	3,952.2	3,853.2	11.7	17.6	-7.16	878.1	60.4	475.3	455.3	19.91	23.866		
4,100.0	4,067.7	4,051.8	3,949.7	12.0	18.1	-7.20	902.3	62.2	484.8	464.3	20.45	23.709		
4,200.0	4,166.5	4,151.3	4,046.2	12.4	18.6	-7.24	926.5	64.0	494.3	473.3	20.98	23.560		
4,300.0	4,265.4	4,250.9	4,142.8	12.7	19.1	-7.28	950.7	65.7	503.8	482.3	21.51	23.418		
4,400.0	4,364.2	4,350.4	4,239.3	13.1	19.6	-7.31	974.9	67.5	513.3	491.2	22.04	23.283		
4,500.0	4,463.0	4,450.0	4,335.9	13.4	20.1	-7.35	999.2	69.3	522.8	500.2	22.58	23.154		
4,600.0	4,561.9	4,549.5	4,432.4	13.8	20.6	-7.38	1,023.4	71.1	532.3	509.2	23.11	23.031		
4,700.0	4,660.7	4,649.1	4,529.0	14.1	21.1	-7.42	1,047.6	72.8	541.8	518.1	23.64	22.913		
4,800.0	4,759.6	4,748.6	4,625.5	14.5	21.6	-7.45	1,071.8	74.6	551.3	527.1	24.18	22.800		
4,900.0	4,858.4	4,848.1	4,722.0	14.8	22.1	-7.48	1,096.0	76.4	560.8	536.1	24.71	22.692		
5,000.0	4,957.3	4,947.7	4,818.6	15.2	22.6	-7.51	1,120.2	78.1	570.3	545.0	25.25	22.589		
5,100.0	5,056.1	5,047.2	4,915.1	15.5	23.1	-7.54	1,144.4	79.9	579.8	554.0	25.78	22.490		

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWDD												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	5,155.0	5,146.8	5,011.7	15.9	23.6	-7.57	1,168.6	81.7	589.3	563.0	26.31	22.394	
5,300.0	5,253.8	5,246.3	5,108.2	16.2	24.1	-7.59	1,192.8	83.4	598.8	571.9	26.85	22.303	
5,400.0	5,352.7	5,345.9	5,204.7	16.6	24.6	-7.62	1,217.0	85.2	608.3	580.9	27.38	22.215	
5,500.0	5,451.5	5,445.4	5,301.3	17.0	25.1	-7.64	1,241.2	87.0	617.8	589.9	27.92	22.130	
5,600.0	5,550.4	5,545.0	5,397.8	17.3	25.6	-7.67	1,265.4	88.7	627.3	598.8	28.45	22.048	
5,700.0	5,649.2	5,644.5	5,494.4	17.7	26.1	-7.69	1,289.7	90.5	636.8	607.8	28.99	21.969	
5,800.0	5,748.1	5,744.1	5,590.9	18.0	26.6	-7.72	1,313.9	92.3	646.3	616.8	29.52	21.893	
5,900.0	5,846.9	5,843.6	5,687.5	18.4	27.1	-7.74	1,338.1	94.0	655.8	625.7	30.06	21.820	
6,000.0	5,945.8	5,943.2	5,784.0	18.7	27.6	-7.76	1,362.3	95.8	665.3	634.7	30.59	21.749	
6,100.0	6,044.6	6,042.7	5,880.5	19.1	28.1	-7.78	1,386.5	97.6	674.8	643.7	31.12	21.680	
6,200.0	6,143.5	6,142.3	5,977.1	19.4	28.6	-7.80	1,410.7	99.4	684.3	652.6	31.66	21.614	
6,300.0	6,242.3	6,241.8	6,073.6	19.8	29.1	-7.82	1,434.9	101.1	693.8	661.6	32.20	21.550	
6,400.0	6,341.1	6,341.1	6,170.0	20.1	29.6	34.44	1,459.1	102.9	703.3	670.6	32.72	21.498	
6,500.0	6,438.3	6,438.7	6,264.6	20.4	30.1	58.48	1,482.8	104.6	713.1	679.9	33.14	21.515	
6,600.0	6,532.3	6,532.7	6,355.8	20.7	30.6	70.07	1,505.7	106.3	723.9	690.4	33.54	21.585	
6,700.0	6,621.1	6,623.7	6,444.0	20.9	31.1	77.36	1,527.8	107.7	737.3	703.3	33.98	21.694	
6,800.0	6,703.0	6,729.1	6,545.8	21.2	31.5	83.03	1,553.3	99.5	753.4	718.8	34.58	21.788	
6,900.0	6,776.4	6,845.1	6,655.2	21.5	32.0	87.60	1,580.5	72.7	771.3	736.0	35.36	21.813	
7,000.0	6,839.9	6,974.4	6,770.4	21.9	32.5	91.50	1,609.2	21.8	790.1	753.7	36.37	21.722	
7,100.0	6,892.2	7,119.9	6,887.1	22.4	33.1	94.90	1,638.0	-59.7	808.3	770.6	37.67	21.459	
7,200.0	6,932.3	7,283.6	6,996.2	23.2	33.7	97.75	1,664.8	-178.2	824.3	784.8	39.44	20.898	
7,300.0	6,959.6	7,465.2	7,083.3	24.3	34.5	99.86	1,685.9	-335.7	836.1	794.1	42.00	19.906	
7,400.0	6,973.3	7,660.2	7,131.0	25.6	35.7	100.93	1,696.9	-523.8	842.1	796.5	45.60	18.465	
7,500.0	6,975.0	7,795.7	7,136.0	27.3	36.9	101.02	1,697.7	-659.1	842.4	792.9	49.57	16.994	
7,600.0	6,975.0	7,895.2	7,136.0	29.1	37.9	101.02	1,698.1	-758.6	842.4	788.8	53.57	15.725	
7,700.0	6,975.0	7,995.2	7,136.0	31.1	39.2	101.02	1,698.6	-858.6	842.3	784.5	57.82	14.567	
7,800.0	6,975.0	8,095.2	7,136.0	33.3	40.6	101.02	1,699.0	-958.6	842.2	779.9	62.27	13.525	
7,900.0	6,975.0	8,195.2	7,136.0	35.5	42.2	101.02	1,699.5	-1,058.6	842.1	775.3	66.88	12.592	
8,000.0	6,975.0	8,295.2	7,136.0	37.8	44.0	101.02	1,699.9	-1,158.6	842.1	770.4	71.62	11.758	
8,100.0	6,975.0	8,395.2	7,136.0	40.2	45.9	101.02	1,700.4	-1,258.6	842.0	765.5	76.46	11.012	
8,200.0	6,975.0	8,495.2	7,136.0	42.7	47.9	101.02	1,700.8	-1,358.6	841.9	760.5	81.39	10.344	
8,300.0	6,975.0	8,595.2	7,136.0	45.2	50.1	101.03	1,701.3	-1,458.6	841.8	755.4	86.39	9.744	
8,400.0	6,975.0	8,695.2	7,136.0	47.7	52.3	101.03	1,701.7	-1,558.6	841.8	750.3	91.45	9.204	
8,500.0	6,975.0	8,795.2	7,136.0	50.3	54.5	101.03	1,702.2	-1,658.6	841.7	745.1	96.56	8.716	
8,600.0	6,975.0	8,895.2	7,136.0	52.8	56.9	101.03	1,702.6	-1,758.6	841.6	739.9	101.72	8.274	
8,700.0	6,975.0	8,995.2	7,136.0	55.4	59.3	101.03	1,703.1	-1,858.6	841.5	734.6	106.91	7.872	
8,800.0	6,975.0	9,095.2	7,136.0	58.1	61.7	101.03	1,703.5	-1,958.5	841.5	729.3	112.13	7.504	
8,900.0	6,975.0	9,195.2	7,136.0	60.7	64.2	101.03	1,704.0	-2,058.5	841.4	724.0	117.38	7.168	
9,000.0	6,975.0	9,295.2	7,136.0	63.4	66.7	101.03	1,704.4	-2,158.5	841.3	718.7	122.65	6.859	
9,100.0	6,975.0	9,395.2	7,136.0	66.0	69.2	101.03	1,704.9	-2,258.5	841.2	713.3	127.94	6.575	
9,200.0	6,975.0	9,495.2	7,136.0	68.7	71.7	101.03	1,705.3	-2,358.5	841.2	707.9	133.26	6.312	
9,300.0	6,975.0	9,595.2	7,136.0	71.4	74.3	101.04	1,705.8	-2,458.5	841.1	702.5	138.58	6.069	
9,400.0	6,975.0	9,695.2	7,136.0	74.1	76.9	101.04	1,706.2	-2,558.5	841.0	697.1	143.93	5.843	
9,500.0	6,975.0	9,795.2	7,136.0	76.8	79.5	101.04	1,706.7	-2,658.5	840.9	691.7	149.28	5.633	
9,600.0	6,975.0	9,895.2	7,136.0	79.5	82.1	101.04	1,707.1	-2,758.5	840.9	686.2	154.65	5.437	
9,700.0	6,975.0	9,995.2	7,136.0	82.3	84.7	101.04	1,707.6	-2,858.5	840.8	680.8	160.03	5.254	
9,800.0	6,975.0	10,095.2	7,136.0	85.0	87.4	101.04	1,708.0	-2,958.5	840.7	675.3	165.41	5.082	
9,900.0	6,975.0	10,195.2	7,136.0	87.7	90.1	101.04	1,708.4	-3,058.5	840.6	669.8	170.81	4.922	
10,000.0	6,975.0	10,295.2	7,136.0	90.5	92.7	101.04	1,708.9	-3,158.5	840.6	664.4	176.21	4.770	
10,100.0	6,975.0	10,395.2	7,136.0	93.2	95.4	101.04	1,709.3	-3,258.5	840.5	658.9	181.62	4.628	
10,200.0	6,975.0	10,495.2	7,136.0	96.0	98.1	101.04	1,709.8	-3,358.5	840.4	653.4	187.04	4.493	
10,300.0	6,975.0	10,595.2	7,136.0	98.7	100.8	101.05	1,710.2	-3,458.5	840.3	647.9	192.46	4.366	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	6,975.0	10,695.2	7,136.0	101.5	103.5	101.05	1,710.7	-3,558.5	840.3	642.4	197.89	4.246		
10,500.0	6,975.0	10,795.2	7,136.0	104.2	106.2	101.05	1,711.1	-3,658.5	840.2	636.9	203.32	4.132		
10,600.0	6,975.0	10,895.2	7,136.0	107.0	108.9	101.05	1,711.6	-3,758.5	840.1	631.4	208.76	4.024		
10,700.0	6,975.0	10,995.2	7,136.0	109.7	111.6	101.05	1,712.0	-3,858.5	840.0	625.8	214.20	3.922		
10,800.0	6,975.0	11,095.2	7,136.0	112.5	114.3	101.05	1,712.5	-3,958.5	840.0	620.3	219.64	3.824		
10,900.0	6,975.0	11,195.2	7,136.0	115.3	117.0	101.05	1,712.9	-4,058.5	839.9	614.8	225.09	3.731		
11,000.0	6,975.0	11,295.2	7,136.0	118.0	119.8	101.05	1,713.4	-4,158.5	839.8	609.3	230.54	3.643		
11,100.0	6,975.0	11,395.2	7,136.0	120.8	122.5	101.05	1,713.8	-4,258.5	839.7	603.7	236.00	3.558		
11,200.0	6,975.0	11,495.2	7,136.0	123.6	125.2	101.05	1,714.3	-4,358.5	839.7	598.2	241.46	3.477		
11,300.0	6,975.0	11,595.2	7,136.0	126.4	128.0	101.06	1,714.7	-4,458.5	839.6	592.7	246.92	3.400		
11,400.0	6,975.0	11,695.2	7,136.0	129.1	130.7	101.06	1,715.2	-4,558.5	839.5	587.1	252.38	3.326		
11,500.0	6,975.0	11,795.2	7,136.0	131.9	133.4	101.06	1,715.6	-4,658.5	839.4	581.6	257.85	3.256		
11,600.0	6,975.0	11,895.2	7,136.0	134.7	136.2	101.06	1,716.1	-4,758.5	839.4	576.0	263.32	3.188		
11,700.0	6,975.0	11,995.2	7,136.0	137.5	138.9	101.06	1,716.5	-4,858.5	839.3	570.5	268.79	3.123		
11,800.0	6,975.0	12,095.2	7,136.0	140.2	141.7	101.06	1,717.0	-4,958.5	839.2	565.0	274.26	3.060		
11,900.0	6,975.0	12,195.2	7,136.0	143.0	144.4	101.06	1,717.4	-5,058.5	839.1	559.4	279.73	3.000		
12,000.0	6,975.0	12,295.2	7,136.0	145.8	147.2	101.06	1,717.8	-5,158.5	839.1	553.9	285.21	2.942		
12,100.0	6,975.0	12,395.2	7,136.0	148.6	150.0	101.06	1,718.3	-5,258.5	839.0	548.3	290.68	2.886		
12,200.0	6,975.0	12,495.2	7,136.0	151.4	152.7	101.06	1,718.7	-5,358.5	838.9	542.7	296.16	2.833		
12,300.0	6,975.0	12,595.2	7,136.0	154.2	155.5	101.07	1,719.2	-5,458.5	838.8	537.2	301.64	2.781		
12,400.0	6,975.0	12,695.2	7,136.0	156.9	158.2	101.07	1,719.6	-5,558.5	838.8	531.6	307.12	2.731		
12,500.0	6,975.0	12,795.2	7,136.0	159.7	161.0	101.07	1,720.1	-5,658.5	838.7	526.1	312.61	2.683		
12,600.0	6,975.0	12,895.2	7,136.0	162.5	163.8	101.07	1,720.5	-5,758.5	838.6	520.5	318.09	2.636		
12,700.0	6,975.0	12,995.2	7,136.0	165.3	166.5	101.07	1,721.0	-5,858.5	838.5	515.0	323.57	2.591		
12,800.0	6,975.0	13,095.2	7,136.0	168.1	169.3	101.07	1,721.4	-5,958.5	838.5	509.4	329.06	2.548		
12,900.0	6,975.0	13,195.2	7,136.0	170.9	172.1	101.07	1,721.9	-6,058.5	838.4	503.8	334.55	2.506		
13,000.0	6,975.0	13,295.2	7,136.0	173.7	174.9	101.07	1,722.3	-6,158.5	838.3	498.3	340.04	2.465		
13,100.0	6,975.0	13,395.2	7,136.0	176.5	177.6	101.07	1,722.8	-6,258.5	838.2	492.7	345.53	2.426		
13,200.0	6,975.0	13,495.2	7,136.0	179.3	180.4	101.07	1,723.2	-6,358.5	838.2	487.1	351.02	2.388		
13,300.0	6,975.0	13,595.2	7,136.0	182.1	183.2	101.08	1,723.7	-6,458.5	838.1	481.6	356.51	2.351		
13,400.0	6,975.0	13,695.2	7,136.0	184.9	186.0	101.08	1,724.1	-6,558.5	838.0	476.0	362.00	2.315		
13,500.0	6,975.0	13,795.2	7,136.0	187.6	188.7	101.08	1,724.6	-6,658.5	837.9	470.4	367.49	2.280		
13,600.0	6,975.0	13,895.2	7,136.0	190.4	191.5	101.08	1,725.0	-6,758.5	837.9	464.9	372.98	2.246		
13,700.0	6,975.0	13,995.2	7,136.0	193.2	194.3	101.08	1,725.5	-6,858.5	837.8	459.3	378.48	2.214		
13,800.0	6,975.0	14,095.2	7,136.0	196.0	197.1	101.08	1,725.9	-6,958.5	837.7	453.7	383.97	2.182		
13,900.0	6,975.0	14,195.2	7,136.0	198.8	199.9	101.08	1,726.4	-7,058.5	837.6	448.2	389.47	2.151		
14,000.0	6,975.0	14,295.2	7,136.0	201.6	202.6	101.08	1,726.8	-7,158.5	837.6	442.6	394.96	2.121		
14,100.0	6,975.0	14,395.2	7,136.0	204.4	205.4	101.08	1,727.3	-7,258.5	837.5	437.0	400.46	2.091		
14,200.0	6,975.0	14,495.2	7,136.0	207.2	208.2	101.08	1,727.7	-7,358.5	837.4	431.4	405.96	2.063		
14,300.0	6,975.0	14,595.2	7,136.0	210.0	211.0	101.09	1,728.1	-7,458.5	837.3	425.9	411.45	2.035		
14,400.0	6,975.0	14,695.2	7,136.0	212.8	213.8	101.09	1,728.6	-7,558.5	837.3	420.3	416.95	2.008		
14,500.0	6,975.0	14,795.2	7,136.0	215.6	216.6	101.09	1,729.0	-7,658.5	837.2	414.7	422.45	1.982		
14,600.0	6,975.0	14,895.2	7,136.0	218.4	219.3	101.09	1,729.5	-7,758.5	837.1	409.2	427.95	1.956		
14,700.0	6,975.0	14,995.2	7,136.0	221.2	222.1	101.09	1,729.9	-7,858.5	837.0	403.6	433.45	1.931		
14,800.0	6,975.0	15,095.2	7,136.0	224.0	224.9	101.09	1,730.4	-7,958.5	837.0	398.0	438.95	1.907		
14,900.0	6,975.0	15,195.2	7,136.0	226.8	227.7	101.09	1,730.8	-8,058.5	836.9	392.4	444.45	1.883		
15,000.0	6,975.0	15,295.2	7,136.0	229.6	230.5	101.09	1,731.3	-8,158.5	836.8	386.9	449.95	1.860		
15,100.0	6,975.0	15,395.2	7,136.0	232.4	233.3	101.09	1,731.7	-8,258.5	836.7	381.3	455.45	1.837		
15,200.0	6,975.0	15,495.2	7,136.0	235.2	236.1	101.09	1,732.2	-8,358.5	836.7	375.7	460.95	1.815		
15,300.0	6,975.0	15,595.2	7,136.0	238.0	238.9	101.10	1,732.6	-8,458.5	836.6	370.1	466.45	1.793		
15,400.0	6,975.0	15,695.2	7,136.0	240.8	241.7	101.10	1,733.1	-8,558.5	836.5	364.5	471.96	1.772		
15,500.0	6,975.0	15,795.2	7,136.0	243.6	244.4	101.10	1,733.5	-8,658.5	836.4	359.0	477.46	1.752		

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #13 - Wellbore #1 - Plan #1 (10-03)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
15,600.0	6,975.0	15,895.2	7,136.0	246.4	247.2	101.10	1,734.0	-8,758.5	836.4	353.4	482.96	1.732	
15,700.0	6,975.0	15,995.2	7,136.0	249.2	250.0	101.10	1,734.4	-8,858.5	836.3	347.8	488.47	1.712	
15,800.0	6,975.0	16,095.2	7,136.0	252.0	252.8	101.10	1,734.9	-8,958.5	836.2	342.2	493.97	1.693	
15,900.0	6,975.0	16,195.2	7,136.0	254.8	255.6	101.10	1,735.3	-9,058.5	836.1	336.7	499.47	1.674	
16,000.0	6,975.0	16,295.2	7,136.0	257.6	258.4	101.10	1,735.8	-9,158.5	836.1	331.1	504.98	1.656	
16,100.0	6,975.0	16,395.2	7,136.0	260.4	261.2	101.10	1,736.2	-9,258.5	836.0	325.5	510.48	1.638	
16,200.0	6,975.0	16,495.2	7,136.0	263.2	264.0	101.10	1,736.7	-9,358.5	835.9	319.9	515.99	1.620	
16,300.0	6,975.0	16,595.2	7,136.0	266.0	266.8	101.11	1,737.1	-9,458.5	835.8	314.3	521.49	1.603	
16,400.0	6,975.0	16,695.2	7,136.0	268.8	269.6	101.11	1,737.5	-9,558.5	835.8	308.8	526.99	1.586	
16,500.0	6,975.0	16,795.2	7,136.0	271.6	272.4	101.11	1,738.0	-9,658.5	835.7	303.2	532.50	1.569	
16,600.0	6,975.0	16,895.2	7,136.0	274.4	275.2	101.11	1,738.4	-9,758.5	835.6	297.6	538.01	1.553	
16,700.0	6,975.0	16,995.2	7,136.0	277.2	278.0	101.11	1,738.9	-9,858.5	835.5	292.0	543.51	1.537	
16,800.0	6,975.0	17,095.2	7,136.0	280.0	280.8	101.11	1,739.3	-9,958.5	835.5	286.4	549.02	1.522	
16,900.0	6,975.0	17,195.2	7,136.0	282.8	283.6	101.11	1,739.8	-10,058.5	835.4	280.9	554.52	1.506	
16,912.6	6,975.0	17,207.8	7,136.0	283.2	283.9	101.11	1,739.8	-10,071.1	835.4	280.1	555.22	1.505 SF	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	-178.75	-127.5	-2.8	127.6					
100.0	100.0	100.0	100.0	0.1	0.1	-178.75	-127.5	-2.8	127.6	127.3	0.22	567.494		
200.0	200.0	200.0	200.0	0.3	0.3	-178.75	-127.5	-2.8	127.6	126.9	0.67	189.165		
300.0	300.0	300.0	300.0	0.6	0.6	-178.75	-127.5	-2.8	127.6	126.4	1.12	113.499		
400.0	400.0	400.0	400.0	0.8	0.8	-178.75	-127.5	-2.8	127.6	126.0	1.57	81.071		
500.0	500.0	500.0	500.0	1.0	1.0	-178.75	-127.5	-2.8	127.6	125.5	2.02	63.055		
600.0	600.0	600.0	600.0	1.2	1.2	-178.75	-127.5	-2.8	127.6	125.1	2.47	51.590		
700.0	700.0	700.0	700.0	1.5	1.5	-178.75	-127.5	-2.8	127.6	124.6	2.92	43.653		
800.0	800.0	800.0	800.0	1.7	1.7	-178.75	-127.5	-2.8	127.6	124.2	3.37	37.833		
900.0	900.0	900.0	900.0	1.9	1.9	-178.75	-127.5	-2.8	127.6	123.7	3.82	33.382		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.75	-127.5	-2.8	127.6	123.3	4.27	29.868 CC, ES		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	173.56	-127.5	-2.8	129.3	124.6	4.72	27.396		
1,200.0	1,199.8	1,199.8	1,199.8	2.6	2.6	173.80	-127.5	-2.8	134.5	129.3	5.16	26.040		
1,300.0	1,299.5	1,294.8	1,294.8	2.8	2.8	174.01	-129.1	-2.5	144.8	139.2	5.57	25.984 SF		
1,400.0	1,398.7	1,388.4	1,388.3	3.1	2.9	174.06	-133.6	-1.7	161.7	155.7	5.96	27.134		
1,500.0	1,497.6	1,480.4	1,479.9	3.3	3.1	174.01	-141.0	-0.4	184.4	178.0	6.36	29.007		
1,600.0	1,596.4	1,573.4	1,572.4	3.6	3.3	173.83	-151.2	1.3	210.1	203.3	6.77	31.033		
1,700.0	1,695.3	1,669.9	1,668.2	3.9	3.5	173.66	-162.3	3.3	236.4	229.2	7.19	32.894		
1,800.0	1,794.1	1,766.4	1,764.0	4.2	3.7	173.52	-173.4	5.2	262.6	255.0	7.61	34.526		
1,900.0	1,893.0	1,862.9	1,859.9	4.5	4.0	173.41	-184.5	7.1	288.9	280.9	8.03	35.958		
2,000.0	1,991.8	1,959.4	1,955.7	4.8	4.2	173.31	-195.7	9.0	315.2	306.7	8.47	37.225		
2,100.0	2,090.7	2,055.8	2,051.5	5.2	4.5	173.23	-206.8	11.0	341.4	332.5	8.91	38.340		
2,200.0	2,189.5	2,152.3	2,147.3	5.5	4.7	173.16	-217.9	12.9	367.7	358.4	9.35	39.345		
2,300.0	2,288.4	2,248.8	2,243.2	5.8	5.0	173.10	-229.0	14.8	394.0	384.2	9.79	40.242		
2,400.0	2,387.2	2,345.3	2,339.0	6.1	5.3	173.05	-240.1	16.7	420.2	410.0	10.24	41.049		
2,500.0	2,486.1	2,441.8	2,434.8	6.5	5.5	173.00	-251.2	18.7	446.5	435.8	10.69	41.778		
2,600.0	2,584.9	2,538.3	2,530.6	6.8	5.8	172.96	-262.3	20.6	472.8	461.6	11.14	42.439		
2,700.0	2,683.8	2,634.8	2,626.5	7.2	6.1	172.93	-273.4	22.5	499.0	487.5	11.59	43.041		
2,800.0	2,782.6	2,731.3	2,722.3	7.5	6.4	172.89	-284.5	24.4	525.3	513.3	12.05	43.591		
2,900.0	2,881.5	2,827.7	2,818.1	7.8	6.7	172.86	-295.6	26.4	551.6	539.1	12.51	44.095		
3,000.0	2,980.3	2,924.2	2,914.0	8.2	7.0	172.84	-306.7	28.3	577.9	564.9	12.97	44.559		
3,100.0	3,079.2	3,020.7	3,009.8	8.5	7.3	172.81	-317.8	30.2	604.1	590.7	13.43	44.986		
3,200.0	3,178.0	3,117.2	3,105.6	8.9	7.5	172.79	-328.9	32.1	630.4	616.5	13.89	45.381		
3,300.0	3,276.9	3,213.7	3,201.4	9.2	7.8	172.77	-340.0	34.1	656.7	642.3	14.35	45.747		
3,400.0	3,375.7	3,310.2	3,297.3	9.6	8.1	172.75	-351.2	36.0	682.9	668.1	14.82	46.087		
3,500.0	3,474.6	3,406.7	3,393.1	9.9	8.4	172.73	-362.3	37.9	709.2	693.9	15.28	46.403		
3,600.0	3,573.4	3,503.2	3,488.9	10.3	8.7	172.71	-373.4	39.8	735.5	719.7	15.75	46.699		
3,700.0	3,672.3	3,599.6	3,584.7	10.6	9.0	172.70	-384.5	41.8	761.8	745.5	16.22	46.975		
3,800.0	3,771.1	3,696.1	3,680.6	11.0	9.3	172.68	-395.6	43.7	788.0	771.3	16.68	47.234		
3,900.0	3,870.0	3,792.6	3,776.4	11.3	9.6	172.67	-406.7	45.6	814.3	797.1	17.15	47.477		
4,000.0	3,968.8	3,889.1	3,872.2	11.7	9.9	172.66	-417.8	47.5	840.6	823.0	17.62	47.705		
4,100.0	4,067.7	3,985.6	3,968.0	12.0	10.2	172.65	-428.9	49.5	866.8	848.8	18.09	47.920		
4,200.0	4,166.5	4,082.1	4,063.9	12.4	10.5	172.64	-440.0	51.4	893.1	874.6	18.56	48.122		
4,300.0	4,265.4	4,178.6	4,159.7	12.7	10.8	172.62	-451.1	53.3	919.4	900.4	19.03	48.314		
4,400.0	4,364.2	4,275.0	4,255.5	13.1	11.1	172.61	-462.2	55.2	945.7	926.2	19.50	48.495		
4,500.0	4,463.0	4,371.5	4,351.3	13.4	11.4	172.61	-473.3	57.2	971.9	952.0	19.97	48.666		
4,600.0	4,561.9	4,468.0	4,447.2	13.8	11.7	172.60	-484.4	59.1	998.2	977.8	20.44	48.828		

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	-178.54	-109.3	-2.8	109.3					
100.0	100.0	100.0	100.0	0.1	0.1	-178.54	-109.3	-2.8	109.3	109.1	0.22	486.436		
200.0	200.0	200.0	200.0	0.3	0.3	-178.54	-109.3	-2.8	109.3	108.7	0.67	162.145		
300.0	300.0	300.0	300.0	0.6	0.6	-178.54	-109.3	-2.8	109.3	108.2	1.12	97.287		
400.0	400.0	400.0	400.0	0.8	0.8	-178.54	-109.3	-2.8	109.3	107.8	1.57	69.491		
500.0	500.0	500.0	500.0	1.0	1.0	-178.54	-109.3	-2.8	109.3	107.3	2.02	54.048		
600.0	600.0	600.0	600.0	1.2	1.2	-178.54	-109.3	-2.8	109.3	106.9	2.47	44.221		
700.0	700.0	700.0	700.0	1.5	1.5	-178.54	-109.3	-2.8	109.3	106.4	2.92	37.418		
800.0	800.0	800.0	800.0	1.7	1.7	-178.54	-109.3	-2.8	109.3	106.0	3.37	32.429		
900.0	900.0	900.0	900.0	1.9	1.9	-178.54	-109.3	-2.8	109.3	105.5	3.82	28.614		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.54	-109.3	-2.8	109.3	105.1	4.27	25.602 CC, ES		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	173.78	-109.3	-2.8	111.1	106.3	4.72	23.535		
1,200.0	1,199.8	1,199.8	1,199.8	2.6	2.6	174.04	-109.3	-2.8	116.3	111.1	5.16	22.513		
1,300.0	1,299.5	1,299.5	1,299.5	2.8	2.8	174.44	-109.3	-2.8	124.9	119.3	5.61	22.291 SF		
1,400.0	1,398.7	1,398.7	1,398.7	3.1	3.0	174.91	-109.3	-2.8	137.1	131.0	6.04	22.695		
1,500.0	1,497.6	1,497.6	1,497.6	3.3	3.3	175.40	-109.3	-2.8	151.9	145.5	6.48	23.437		
1,600.0	1,596.4	1,591.5	1,591.5	3.6	3.4	175.61	-110.7	-2.3	168.5	161.5	6.90	24.406		
1,700.0	1,695.3	1,684.2	1,684.1	3.9	3.6	175.41	-114.9	-0.8	187.9	180.6	7.31	25.721		
1,800.0	1,794.1	1,781.7	1,781.3	4.2	3.8	175.05	-121.0	1.3	209.0	201.3	7.72	27.079		
1,900.0	1,893.0	1,879.4	1,878.9	4.5	4.0	174.76	-127.1	3.4	230.1	222.0	8.13	28.292		
2,000.0	1,991.8	1,977.2	1,976.4	4.8	4.2	174.51	-133.2	5.5	251.2	242.7	8.55	29.367		
2,100.0	2,090.7	2,074.9	2,073.9	5.2	4.4	174.31	-139.3	7.6	272.3	263.4	8.98	30.325		
2,200.0	2,189.5	2,172.6	2,171.4	5.5	4.6	174.13	-145.4	9.7	293.4	284.0	9.41	31.182		
2,300.0	2,288.4	2,270.4	2,269.0	5.8	4.8	173.98	-151.5	11.9	314.6	304.7	9.85	31.949		
2,400.0	2,387.2	2,368.1	2,366.5	6.1	5.0	173.85	-157.6	14.0	335.7	325.4	10.28	32.643		
2,500.0	2,486.1	2,465.9	2,464.0	6.5	5.2	173.73	-163.7	16.1	356.8	346.1	10.72	33.271		
2,600.0	2,584.9	2,563.6	2,561.6	6.8	5.4	173.62	-169.8	18.2	377.9	366.8	11.17	33.840		
2,700.0	2,683.8	2,661.3	2,659.1	7.2	5.6	173.53	-175.9	20.3	399.0	387.4	11.61	34.359		
2,800.0	2,782.6	2,759.1	2,756.6	7.5	5.9	173.45	-182.0	22.5	420.2	408.1	12.06	34.834		
2,900.0	2,881.5	2,856.8	2,854.1	7.8	6.1	173.37	-188.1	24.6	441.3	428.8	12.51	35.269		
3,000.0	2,980.3	2,954.6	2,951.7	8.2	6.3	173.30	-194.2	26.7	462.4	449.5	12.96	35.669		
3,100.0	3,079.2	3,052.3	3,049.2	8.5	6.6	173.24	-200.3	28.8	483.5	470.1	13.42	36.038		
3,200.0	3,178.0	3,150.1	3,146.7	8.9	6.8	173.18	-206.4	30.9	504.7	490.8	13.87	36.379		
3,300.0	3,276.9	3,247.8	3,244.3	9.2	7.0	173.13	-212.5	33.0	525.8	511.5	14.33	36.695		
3,400.0	3,375.7	3,345.5	3,341.8	9.6	7.3	173.08	-218.6	35.2	546.9	532.1	14.79	36.988		
3,500.0	3,474.6	3,443.3	3,439.3	9.9	7.5	173.03	-224.7	37.3	568.0	552.8	15.24	37.262		
3,600.0	3,573.4	3,541.0	3,536.8	10.3	7.7	172.99	-230.8	39.4	589.2	573.5	15.70	37.517		
3,700.0	3,672.3	3,638.8	3,634.4	10.6	8.0	172.95	-236.9	41.5	610.3	594.1	16.16	37.755		
3,800.0	3,771.1	3,736.5	3,731.9	11.0	8.2	172.92	-243.0	43.6	631.4	614.8	16.63	37.978		
3,900.0	3,870.0	3,834.2	3,829.4	11.3	8.5	172.88	-249.1	45.8	652.6	635.5	17.09	38.188		
4,000.0	3,968.8	3,932.0	3,926.9	11.7	8.7	172.85	-255.2	47.9	673.7	656.1	17.55	38.385		
4,100.0	4,067.7	4,029.7	4,024.5	12.0	9.0	172.82	-261.3	50.0	694.8	676.8	18.01	38.570		
4,200.0	4,166.5	4,127.5	4,122.0	12.4	9.2	172.79	-267.4	52.1	715.9	697.5	18.48	38.745		
4,300.0	4,265.4	4,225.2	4,219.5	12.7	9.4	172.76	-273.5	54.2	737.1	718.1	18.94	38.910		
4,400.0	4,364.2	4,323.0	4,317.1	13.1	9.7	172.74	-279.6	56.3	758.2	738.8	19.41	39.066		
4,500.0	4,463.0	4,420.7	4,414.6	13.4	9.9	172.72	-285.7	58.5	779.3	759.5	19.87	39.214		
4,600.0	4,561.9	4,518.4	4,512.1	13.8	10.2	172.69	-291.8	60.6	800.5	780.1	20.34	39.354		
4,700.0	4,660.7	4,616.2	4,609.6	14.1	10.4	172.67	-297.9	62.7	821.6	800.8	20.81	39.487		
4,800.0	4,759.6	4,713.9	4,707.2	14.5	10.7	172.65	-304.0	64.8	842.7	821.4	21.27	39.613		
4,900.0	4,858.4	4,811.7	4,804.7	14.8	10.9	172.63	-310.1	66.9	863.9	842.1	21.74	39.733		
5,000.0	4,957.3	4,909.4	4,902.2	15.2	11.2	172.61	-316.2	69.1	885.0	862.8	22.21	39.847		
5,100.0	5,056.1	5,007.1	4,999.8	15.5	11.4	172.60	-322.3	71.2	906.1	883.4	22.68	39.956		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #3 - Wellbore #1 - Plan #2 (6-23-1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
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	Warning
5,200.0	5,155.0	5,104.9	5,097.3	15.9	11.7	172.58	-328.4	73.3	927.2	904.1	23.15	40.060	
5,300.0	5,253.8	5,202.6	5,194.8	16.2	11.9	172.56	-334.5	75.4	948.4	924.8	23.62	40.160	
5,400.0	5,352.7	5,300.4	5,292.3	16.6	12.2	172.55	-340.6	77.5	969.5	945.4	24.08	40.255	
5,500.0	5,451.5	5,398.1	5,389.9	17.0	12.4	172.53	-346.7	79.7	990.6	966.1	24.55	40.345	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 133-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	0.5	0.5	0.0	0.0	-178.32	-94.7	-2.8	94.8					
100.0	100.0	100.5	100.5	0.1	0.1	-178.28	-94.7	-2.8	94.8	94.5	0.23	420.478		
200.0	200.0	200.5	200.5	0.3	0.3	-178.60	-94.8	-2.3	94.8	94.2	0.62	151.864		
300.0	300.0	300.4	300.3	0.6	0.5	179.24	-94.9	1.3	94.9	93.8	1.06	89.523		
400.0	400.0	400.4	400.1	0.8	0.7	175.62	-94.9	7.3	95.1	93.6	1.52	62.772		
500.0	500.0	500.2	499.8	1.0	1.0	171.98	-94.8	13.4	95.8	93.8	1.97	48.671		
600.0	600.0	601.0	600.4	1.2	1.2	168.39	-94.2	19.4	96.2	93.8	2.42	39.722		
670.2	670.2	671.4	670.7	1.4	1.4	165.70	-93.2	23.8	96.2	93.4	2.74	35.065		
700.0	700.0	701.2	700.4	1.5	1.4	164.53	-92.7	25.7	96.2	93.3	2.88	33.392 ES		
800.0	800.0	799.0	798.0	1.7	1.7	160.69	-91.7	32.1	97.2	93.9	3.33	29.156		
900.0	900.0	897.1	895.8	1.9	1.9	157.39	-93.2	38.8	101.1	97.3	3.78	26.744		
1,000.0	1,000.0	995.8	994.2	2.1	2.1	154.77	-96.1	45.3	106.4	102.2	4.22	25.210		
1,100.0	1,100.0	1,096.5	1,094.8	2.4	2.4	146.13	-100.2	50.0	113.6	108.9	4.67	24.304		
1,200.0	1,199.8	1,197.2	1,195.3	2.6	2.6	147.24	-104.1	52.3	122.4	117.3	5.10	24.012 SF		
1,300.0	1,299.5	1,297.0	1,295.1	2.8	2.8	148.94	-107.4	54.4	133.7	128.1	5.52	24.199		
1,400.0	1,398.7	1,395.0	1,393.0	3.1	3.0	151.07	-110.4	56.1	147.7	141.7	5.95	24.835		
1,500.0	1,497.6	1,491.2	1,489.1	3.3	3.2	153.06	-113.9	58.6	165.3	158.9	6.38	25.894		
1,600.0	1,596.4	1,587.5	1,585.2	3.6	3.4	154.90	-119.1	61.3	184.8	178.0	6.83	27.068		
1,700.0	1,695.3	1,687.5	1,685.1	3.9	3.6	156.66	-124.6	63.2	204.3	197.1	7.28	28.086		
1,800.0	1,794.1	1,786.7	1,784.1	4.2	3.8	158.06	-129.1	65.0	223.1	215.4	7.72	28.894		
1,900.0	1,893.0	1,883.3	1,880.6	4.5	4.1	159.04	-133.3	67.5	242.0	233.9	8.17	29.624		
2,000.0	1,991.8	1,979.6	1,976.7	4.8	4.3	159.63	-138.3	71.3	262.0	253.4	8.62	30.385		
2,100.0	2,090.7	2,078.5	2,075.5	5.2	4.5	160.32	-143.4	74.3	281.9	272.8	9.08	31.036		
2,200.0	2,189.5	2,178.6	2,175.4	5.5	4.7	160.71	-148.1	78.4	301.5	291.9	9.55	31.580		
2,300.0	2,288.4	2,276.0	2,272.6	5.8	5.0	160.93	-151.8	82.9	320.4	310.3	10.01	32.005		
2,400.0	2,387.2	2,374.4	2,370.8	6.1	5.2	161.13	-156.3	87.5	340.0	329.5	10.48	32.451		
2,500.0	2,486.1	2,469.1	2,465.3	6.5	5.4	161.38	-160.4	91.5	359.3	348.4	10.93	32.867		
2,600.0	2,584.9	2,565.3	2,561.2	6.8	5.6	161.78	-166.2	94.7	380.1	368.7	11.39	33.374		
2,700.0	2,683.8	2,669.8	2,665.6	7.2	5.9	162.28	-171.7	97.2	400.1	388.2	11.86	33.742		
2,800.0	2,782.6	2,770.5	2,766.2	7.5	6.1	162.72	-175.6	99.4	418.6	406.3	12.32	33.987		
2,900.0	2,881.5	2,864.3	2,859.8	7.8	6.3	163.06	-179.5	101.7	437.5	424.7	12.77	34.270		
3,000.0	2,980.3	2,958.2	2,953.6	8.2	6.5	163.34	-184.3	104.4	457.5	444.3	13.22	34.617		
3,100.0	3,079.2	3,063.1	3,058.3	8.5	6.8	163.61	-189.7	107.6	477.4	463.7	13.69	34.875		
3,200.0	3,178.0	3,162.4	3,157.5	8.9	7.0	163.79	-193.4	110.9	496.1	482.0	14.15	35.056		
3,300.0	3,276.9	3,253.1	3,248.1	9.2	7.2	163.91	-197.5	114.2	515.5	500.9	14.60	35.306		
3,400.0	3,375.7	3,345.0	3,339.7	9.6	7.4	163.99	-202.7	118.2	536.3	521.2	15.06	35.617		
3,500.0	3,474.6	3,450.1	3,444.6	9.9	7.7	164.12	-208.9	122.2	557.1	541.5	15.54	35.858		
3,600.0	3,573.4	3,536.1	3,530.3	10.3	7.9	164.35	-214.1	124.3	577.9	562.0	15.97	36.191		
3,700.0	3,672.3	3,630.2	3,624.1	10.6	8.1	164.64	-221.5	126.1	600.4	584.0	16.42	36.569		
3,800.0	3,771.1	3,726.3	3,720.0	11.0	8.3	164.92	-229.2	128.0	623.1	606.2	16.87	36.933		
3,900.0	3,870.0	3,826.6	3,819.9	11.3	8.6	165.19	-237.1	129.9	645.7	628.3	17.33	37.258		
4,000.0	3,968.8	3,925.3	3,918.3	11.7	8.8	165.45	-244.6	131.7	667.9	650.1	17.79	37.553		
4,100.0	4,067.7	4,034.2	4,026.9	12.0	9.1	165.73	-251.9	133.4	689.3	671.1	18.26	37.748		
4,200.0	4,166.5	4,141.3	4,133.9	12.4	9.3	165.93	-257.4	135.6	709.2	690.5	18.74	37.854		
4,300.0	4,265.4	4,246.2	4,238.7	12.7	9.5	166.10	-261.5	137.8	728.0	708.8	19.21	37.903		
4,400.0	4,364.2	4,347.5	4,339.8	13.1	9.8	166.27	-264.9	139.7	746.1	726.5	19.67	37.931		
4,500.0	4,463.0	4,444.9	4,437.2	13.4	10.0	166.45	-268.0	141.1	764.2	744.0	20.13	37.971		
4,600.0	4,561.9	4,544.5	4,536.8	13.8	10.2	166.68	-271.5	141.9	782.4	761.8	20.58	38.014		
4,700.0	4,660.7	4,647.5	4,639.7	14.1	10.4	166.94	-274.4	142.1	799.9	778.9	21.04	38.019		
4,800.0	4,759.6	4,751.3	4,743.5	14.5	10.6	167.17	-276.9	142.7	817.1	795.6	21.50	38.003		
4,900.0	4,858.4	4,853.0	4,845.1	14.8	10.8	167.34	-278.6	143.8	833.6	811.6	21.96	37.957		
5,000.0	4,957.3	4,954.4	4,946.5	15.2	11.0	167.51	-280.1	144.9	849.9	827.5	22.42	37.906		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #4 - Wellbore #1 - Wellbore #1												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 133-MWD													
Reference		Offset		Semi Major Axis			Distance						
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	Warning
5,100.0	5,056.1	5,055.5	5,047.7	15.5	11.3	167.68	-281.2	145.7	865.8	842.9	22.88	37.839	
5,200.0	5,155.0	5,155.5	5,147.6	15.9	11.5	167.86	-282.1	146.2	881.6	858.2	23.34	37.774	
5,300.0	5,253.8	5,255.0	5,247.1	16.2	11.7	168.06	-283.0	146.4	897.2	873.4	23.79	37.713	
5,400.0	5,352.7	5,358.6	5,350.7	16.6	11.9	168.27	-283.5	146.4	912.6	888.3	24.25	37.634	
5,500.0	5,451.5	5,448.6	5,440.7	17.0	12.0	168.45	-284.2	146.3	928.1	903.4	24.68	37.606	
5,600.0	5,550.4	5,547.1	5,539.3	17.3	12.2	168.58	-285.4	147.2	944.2	919.1	25.13	37.571	
5,700.0	5,649.2	5,645.3	5,637.4	17.7	12.4	168.68	-286.5	148.6	960.3	934.7	25.58	37.535	
5,800.0	5,748.1	5,742.1	5,734.2	18.0	12.6	168.79	-287.8	149.8	976.5	950.5	26.03	37.508	
5,900.0	5,846.9	5,854.9	5,847.0	18.4	12.9	168.94	-288.5	150.5	992.0	965.5	26.52	37.411	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	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	-177.92	-76.5	-2.8	76.6					
100.0	100.0	100.0	100.0	0.1	0.1	-177.92	-76.5	-2.8	76.6	76.3	0.22	340.644		
200.0	200.0	200.0	200.0	0.3	0.3	-177.92	-76.5	-2.8	76.6	75.9	0.67	113.548		
300.0	300.0	300.0	300.0	0.6	0.6	-177.92	-76.5	-2.8	76.6	75.4	1.12	68.129		
400.0	400.0	400.0	400.0	0.8	0.8	-177.92	-76.5	-2.8	76.6	75.0	1.57	48.663		
500.0	500.0	500.0	500.0	1.0	1.0	-177.92	-76.5	-2.8	76.6	74.5	2.02	37.849		
600.0	600.0	600.0	600.0	1.2	1.2	-177.92	-76.5	-2.8	76.6	74.1	2.47	30.968		
700.0	700.0	700.0	700.0	1.5	1.5	-177.92	-76.5	-2.8	76.6	73.6	2.92	26.203		
800.0	800.0	800.0	800.0	1.7	1.7	-177.92	-76.5	-2.8	76.6	73.2	3.37	22.710		
900.0	900.0	900.0	900.0	1.9	1.9	-177.92	-76.5	-2.8	76.6	72.7	3.82	20.038		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-177.92	-76.5	-2.8	76.6	72.3	4.27	17.929 CC, ES		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	174.43	-76.5	-2.8	78.3	73.6	4.72	16.592		
1,200.0	1,199.8	1,199.8	1,199.8	2.6	2.6	174.77	-76.5	-2.8	83.5	78.3	5.16	16.170		
1,300.0	1,299.5	1,299.5	1,299.5	2.8	2.8	175.25	-76.5	-2.8	92.2	86.6	5.61	16.449		
1,400.0	1,398.7	1,398.7	1,398.7	3.1	3.0	175.78	-76.5	-2.8	104.3	98.3	6.04	17.276		
1,500.0	1,497.6	1,497.6	1,497.6	3.3	3.3	176.30	-76.5	-2.8	119.2	112.7	6.48	18.391		
1,600.0	1,596.4	1,596.4	1,596.4	3.6	3.5	176.72	-76.5	-2.8	134.3	127.4	6.93	19.371		
1,700.0	1,695.3	1,695.3	1,695.3	3.9	3.7	177.05	-76.5	-2.8	149.4	142.0	7.39	20.226		
1,800.0	1,794.1	1,794.1	1,794.1	4.2	3.9	177.32	-76.5	-2.8	164.5	156.7	7.84	20.977		
1,900.0	1,893.0	1,893.0	1,893.0	4.5	4.1	177.55	-76.5	-2.8	179.7	171.4	8.30	21.642		
2,000.0	1,991.8	1,991.8	1,991.8	4.8	4.4	177.74	-76.5	-2.8	194.8	186.0	8.76	22.235		
2,100.0	2,090.7	2,090.7	2,090.7	5.2	4.6	177.90	-76.5	-2.8	209.9	200.7	9.22	22.766		
2,200.0	2,189.5	2,189.5	2,189.5	5.5	4.8	178.04	-76.5	-2.8	225.0	215.3	9.68	23.245		
2,300.0	2,288.4	2,288.4	2,288.4	5.8	5.0	178.17	-76.5	-2.8	240.1	230.0	10.14	23.678		
2,400.0	2,387.2	2,387.2	2,387.2	6.1	5.3	178.27	-76.5	-2.8	255.3	244.7	10.60	24.072		
2,500.0	2,486.1	2,486.1	2,486.1	6.5	5.5	178.37	-76.5	-2.8	270.4	259.3	11.07	24.432		
2,600.0	2,584.9	2,584.9	2,584.9	6.8	5.7	178.46	-76.5	-2.8	285.5	274.0	11.53	24.762		
2,700.0	2,683.8	2,683.8	2,683.8	7.2	5.9	178.53	-76.5	-2.8	300.6	288.6	11.99	25.066		
2,800.0	2,782.6	2,782.6	2,782.6	7.5	6.1	178.61	-76.5	-2.8	315.8	303.3	12.46	25.346		
2,900.0	2,881.5	2,881.5	2,881.5	7.8	6.4	178.67	-76.5	-2.8	330.9	318.0	12.92	25.605		
3,000.0	2,980.3	2,980.3	2,980.3	8.2	6.6	178.73	-76.5	-2.8	346.0	332.6	13.39	25.846		
3,100.0	3,079.2	3,079.2	3,079.2	8.5	6.8	178.78	-76.5	-2.8	361.1	347.3	13.85	26.069		
3,200.0	3,178.0	3,178.0	3,178.0	8.9	7.0	178.83	-76.5	-2.8	376.3	361.9	14.32	26.278		
3,300.0	3,276.9	3,276.9	3,276.9	9.2	7.3	178.87	-76.5	-2.8	391.4	376.6	14.78	26.473		
3,400.0	3,375.7	3,375.7	3,375.7	9.6	7.5	178.92	-76.5	-2.8	406.5	391.3	15.25	26.656		
3,500.0	3,474.6	3,474.6	3,474.6	9.9	7.7	178.96	-76.5	-2.8	421.6	405.9	15.72	26.828		
3,600.0	3,573.4	3,573.4	3,573.4	10.3	7.9	178.99	-76.5	-2.8	436.8	420.6	16.18	26.990		
3,700.0	3,672.3	3,672.3	3,672.3	10.6	8.1	179.03	-76.5	-2.8	451.9	435.2	16.65	27.142		
3,800.0	3,771.1	3,771.1	3,771.1	11.0	8.4	179.06	-76.5	-2.8	467.0	449.9	17.12	27.285		
3,900.0	3,870.0	3,870.0	3,870.0	11.3	8.6	179.09	-76.5	-2.8	482.1	464.6	17.58	27.421		
4,000.0	3,968.8	3,968.8	3,968.8	11.7	8.8	179.11	-76.5	-2.8	497.3	479.2	18.05	27.549		
4,100.0	4,067.7	4,067.7	4,067.7	12.0	9.0	179.06	-76.7	-2.1	512.5	494.0	18.50	27.701		
4,200.0	4,166.5	4,166.5	4,166.5	12.4	9.2	178.68	-77.8	1.5	528.3	509.4	18.94	27.895		
4,300.0	4,265.4	4,265.4	4,265.4	12.7	9.4	178.21	-79.1	6.1	544.3	524.9	19.38	28.089		
4,400.0	4,364.2	4,359.4	4,359.0	13.1	9.6	177.77	-80.5	10.7	560.3	540.5	19.82	28.272		
4,500.0	4,463.0	4,458.0	4,457.6	13.4	9.8	177.35	-81.9	15.3	576.3	556.1	20.26	28.446		
4,600.0	4,561.9	4,556.6	4,556.1	13.8	10.0	176.96	-83.2	19.9	592.4	571.7	20.71	28.610		
4,700.0	4,660.7	4,655.2	4,654.6	14.1	10.2	176.59	-84.6	24.5	608.5	587.3	21.15	28.765		
4,800.0	4,759.6	4,753.8	4,753.1	14.5	10.4	176.24	-85.9	29.1	624.6	603.0	21.60	28.913		
4,900.0	4,858.4	4,852.5	4,851.6	14.8	10.6	175.90	-87.3	33.7	640.8	618.7	22.06	29.053		
5,000.0	4,957.3	4,951.1	4,950.1	15.2	10.8	175.58	-88.7	38.3	656.9	634.4	22.51	29.186		
5,100.0	5,056.1	5,049.7	5,048.6	15.5	11.0	175.28	-90.0	42.9	673.1	650.1	22.96	29.312		

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design				Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #5 - Wellbore #1 - Plan #2 (6-23-1								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	5,155.0	5,148.3	5,147.1	15.9	11.2	174.99	-91.4	47.5	689.3	665.9	23.42	29.432		
5,300.0	5,253.8	5,247.0	5,245.6	16.2	11.4	174.71	-92.7	52.1	705.5	681.6	23.88	29.546		
5,400.0	5,352.7	5,345.6	5,344.1	16.6	11.6	174.45	-94.1	56.7	721.7	697.4	24.34	29.655		
5,500.0	5,451.5	5,444.2	5,442.6	17.0	11.8	174.19	-95.5	61.3	738.0	713.2	24.80	29.759		
5,600.0	5,550.4	5,542.8	5,541.1	17.3	12.0	173.95	-96.8	65.9	754.2	729.0	25.26	29.858		
5,700.0	5,649.2	5,641.4	5,639.6	17.7	12.2	173.72	-98.2	70.5	770.5	744.8	25.72	29.952		
5,800.0	5,748.1	5,740.1	5,738.1	18.0	12.5	173.50	-99.5	75.1	786.8	760.6	26.19	30.043		
5,900.0	5,846.9	5,838.7	5,836.6	18.4	12.7	173.29	-100.9	79.7	803.1	776.4	26.65	30.129		
6,000.0	5,945.8	5,937.3	5,935.1	18.7	12.9	173.08	-102.3	84.3	819.4	792.3	27.12	30.212		
6,100.0	6,044.6	6,035.9	6,033.6	19.1	13.1	172.89	-103.6	88.9	835.7	808.1	27.59	30.291		
6,200.0	6,143.5	6,134.5	6,132.1	19.4	13.3	172.70	-105.0	93.5	852.0	824.0	28.06	30.366		
6,300.0	6,242.3	6,233.1	6,230.6	19.8	13.5	172.52	-106.3	98.0	868.4	839.8	28.53	30.440		
6,400.0	6,341.1	6,331.0	6,328.3	20.1	13.7	-143.81	-107.7	94.9	884.7	855.8	28.91	30.598		
6,500.0	6,438.3	6,428.9	6,424.8	20.4	13.9	-119.27	-109.0	78.4	900.7	871.4	29.28	30.761		
6,600.0	6,532.3	6,527.2	6,518.4	20.7	14.1	-108.08	-110.3	48.8	916.1	886.4	29.68	30.866		
6,700.0	6,621.1	6,625.7	6,607.3	20.9	14.2	-101.85	-111.5	6.6	930.7	900.5	30.17	30.844		
6,800.0	6,703.0	6,724.7	6,690.0	21.2	14.5	-97.86	-112.7	-47.7	944.0	913.2	30.85	30.598		
6,900.0	6,776.4	6,824.1	6,764.6	21.5	15.0	-95.10	-113.7	-113.2	956.0	924.1	31.84	30.025		
7,000.0	6,839.9	6,924.0	6,829.8	21.9	15.7	-93.11	-114.6	-188.7	966.2	933.0	33.26	29.050		
7,100.0	6,892.2	7,024.3	6,884.1	22.4	16.7	-91.69	-115.3	-273.0	974.6	939.4	35.22	27.672		
7,200.0	6,932.3	7,125.1	6,926.2	23.2	18.0	-90.71	-115.9	-364.5	981.0	943.2	37.76	25.978		
7,300.0	6,959.6	7,226.2	6,955.2	24.3	19.6	-90.11	-116.3	-461.3	985.2	944.3	40.86	24.114		
7,400.0	6,973.3	7,327.6	6,970.3	25.6	21.5	-89.86	-116.5	-561.5	987.2	942.8	44.40	22.232		
7,500.0	6,975.0	7,428.5	6,972.5	27.3	23.6	-89.85	-116.6	-662.3	987.4	939.0	48.40	20.400		
7,600.0	6,975.0	7,528.5	6,972.5	29.1	25.7	-89.86	-116.6	-762.3	987.9	935.2	52.67	18.755		
7,700.0	6,975.0	7,628.5	6,972.5	31.1	28.0	-89.86	-116.6	-862.3	988.4	931.2	57.18	17.285		
7,800.0	6,975.0	7,728.5	6,972.5	33.3	30.4	-89.86	-116.6	-962.3	988.9	927.1	61.87	15.984		
7,900.0	6,975.0	7,828.5	6,972.5	35.5	32.8	-89.86	-116.6	-1,062.3	989.5	922.8	66.70	14.834		
8,000.0	6,975.0	7,928.5	6,972.5	37.8	35.3	-89.86	-116.6	-1,162.3	990.0	918.3	71.65	13.817		
8,100.0	6,975.0	8,028.5	6,972.5	40.2	37.9	-89.86	-116.6	-1,262.3	990.5	913.8	76.69	12.915		
8,200.0	6,975.0	8,128.5	6,972.5	42.7	40.4	-89.86	-116.6	-1,362.3	991.0	909.2	81.81	12.114		
8,300.0	6,975.0	8,228.5	6,972.5	45.2	43.0	-89.86	-116.6	-1,462.3	991.6	904.6	86.99	11.399		
8,400.0	6,975.0	8,328.5	6,972.5	47.7	45.7	-89.86	-116.6	-1,562.3	992.1	899.9	92.21	10.758		
8,500.0	6,975.0	8,428.5	6,972.5	50.3	48.3	-89.86	-116.6	-1,662.3	992.6	895.1	97.49	10.182		
8,600.0	6,975.0	8,528.5	6,972.5	52.8	51.0	-89.86	-116.6	-1,762.3	993.1	890.3	102.80	9.661		
8,700.0	6,975.0	8,628.5	6,972.5	55.4	53.7	-89.86	-116.6	-1,862.2	993.7	885.5	108.14	9.189		
8,800.0	6,975.0	8,728.5	6,972.5	58.1	56.4	-89.86	-116.6	-1,962.2	994.2	880.7	113.50	8.759		
8,900.0	6,975.0	8,828.5	6,972.5	60.7	59.1	-89.86	-116.6	-2,062.2	994.7	875.8	118.90	8.366		
9,000.0	6,975.0	8,928.5	6,972.5	63.4	61.8	-89.86	-116.6	-2,162.2	995.2	870.9	124.31	8.006		
9,100.0	6,975.0	9,028.5	6,972.5	66.0	64.5	-89.86	-116.6	-2,262.2	995.8	866.0	129.73	7.675		
9,200.0	6,975.0	9,128.4	6,972.5	68.7	67.2	-89.86	-116.6	-2,362.2	996.3	861.1	135.18	7.370		
9,300.0	6,975.0	9,228.4	6,972.5	71.4	70.0	-89.86	-116.6	-2,462.2	996.8	856.2	140.64	7.088		
9,400.0	6,975.0	9,328.4	6,972.5	74.1	72.7	-89.86	-116.6	-2,562.2	997.3	851.2	146.11	6.826		
9,500.0	6,975.0	9,428.4	6,972.5	76.8	75.5	-89.86	-116.6	-2,662.2	997.8	846.3	151.59	6.583		
9,600.0	6,975.0	9,528.4	6,972.5	79.5	78.2	-89.86	-116.6	-2,762.2	998.4	841.3	157.08	6.356		
9,700.0	6,975.0	9,628.4	6,972.5	82.3	81.0	-89.86	-116.6	-2,862.2	998.9	836.3	162.58	6.144		
9,800.0	6,975.0	9,728.4	6,972.5	85.0	83.7	-89.86	-116.6	-2,962.2	999.4	831.3	168.08	5.946		
9,900.0	6,975.0	9,828.4	6,972.5	87.7	86.5	-89.86	-116.6	-3,062.2	999.9	826.3	173.60	5.760 SF		



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 1-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	0.5	0.5	0.0	0.0	-177.43	-61.9	-2.8	62.0					
100.0	100.0	100.5	100.5	0.1	0.1	-177.43	-61.9	-2.8	62.0	61.8	0.23	275.156		
200.0	200.0	200.5	200.5	0.3	0.3	-177.43	-61.9	-2.8	62.0	61.3	0.67	91.871		
300.0	300.0	300.5	300.5	0.6	0.6	-177.43	-61.9	-2.8	62.0	60.9	1.12	55.141		
400.0	400.0	400.5	400.5	0.8	0.8	-177.43	-61.9	-2.8	62.0	60.4	1.57	39.392		
500.0	500.0	500.5	500.5	1.0	1.0	-177.43	-61.9	-2.8	62.0	60.0	2.02	30.641		
600.0	600.0	600.5	600.5	1.2	1.2	-177.43	-61.9	-2.8	62.0	59.5	2.47	25.071		
700.0	700.0	700.5	700.5	1.5	1.5	-177.43	-61.9	-2.8	62.0	59.1	2.92	21.215		
800.0	800.0	800.5	800.5	1.7	1.7	-177.43	-61.9	-2.8	62.0	58.6	3.37	18.387		
900.0	900.0	900.5	900.5	1.9	1.9	-177.43	-61.9	-2.8	62.0	58.2	3.82	16.224		
1,000.0	1,000.0	1,000.5	1,000.5	2.1	2.1	-177.43	-61.9	-2.8	62.0	57.7	4.27	14.516 CC, ES		
1,100.0	1,100.0	1,100.5	1,100.5	2.4	2.4	174.93	-61.9	-2.8	63.7	59.0	4.72	13.504		
1,200.0	1,199.8	1,200.3	1,200.3	2.6	2.6	175.31	-61.9	-2.8	69.0	63.8	5.17	13.350		
1,300.0	1,299.5	1,300.0	1,300.0	2.8	2.8	175.82	-61.9	-2.8	77.6	72.0	5.61	13.851		
1,400.0	1,398.7	1,399.2	1,399.2	3.1	3.0	176.37	-61.9	-2.8	89.8	83.8	6.04	14.867		
1,500.0	1,497.6	1,498.1	1,498.1	3.3	3.3	176.88	-61.9	-2.8	104.7	98.2	6.48	16.148		
1,600.0	1,596.4	1,596.9	1,596.9	3.6	3.5	177.28	-61.9	-2.8	119.8	112.9	6.93	17.276		
1,700.0	1,695.3	1,695.8	1,695.8	3.9	3.7	177.58	-61.9	-2.8	134.9	127.5	7.39	18.260		
1,800.0	1,794.1	1,794.6	1,794.6	4.2	3.9	177.83	-61.9	-2.8	150.0	142.2	7.84	19.126		
1,900.0	1,893.0	1,893.5	1,893.5	4.5	4.1	178.03	-61.9	-2.8	165.2	156.9	8.30	19.894		
2,000.0	1,991.8	1,992.3	1,992.3	4.8	4.4	178.19	-61.9	-2.8	180.3	171.5	8.76	20.579		
2,100.0	2,090.7	2,097.5	2,097.5	5.2	4.6	178.19	-60.4	-2.1	193.9	184.7	9.23	21.008		
2,200.0	2,189.5	2,202.1	2,202.0	5.5	4.8	177.86	-55.5	0.1	204.2	194.5	9.70	21.053		
2,300.0	2,288.4	2,301.7	2,301.3	5.8	5.1	177.50	-49.9	2.5	213.5	203.4	10.16	21.008		
2,400.0	2,387.2	2,401.2	2,400.7	6.1	5.3	177.16	-44.3	5.0	222.8	212.2	10.63	20.964		
2,500.0	2,486.1	2,500.8	2,500.1	6.5	5.5	176.85	-38.7	7.5	232.2	221.1	11.10	20.923		
2,600.0	2,584.9	2,600.3	2,599.4	6.8	5.7	176.57	-33.1	10.0	241.5	229.9	11.57	20.883		
2,700.0	2,683.8	2,699.9	2,698.8	7.2	6.0	176.30	-27.5	12.5	250.9	238.8	12.03	20.845		
2,800.0	2,782.6	2,799.5	2,798.2	7.5	6.2	176.06	-21.9	15.0	260.2	247.7	12.50	20.808		
2,900.0	2,881.5	2,899.0	2,897.5	7.8	6.4	175.83	-16.3	17.5	269.6	256.6	12.98	20.773		
3,000.0	2,980.3	2,998.6	2,996.9	8.2	6.7	175.62	-10.7	20.0	278.9	265.5	13.45	20.740		
3,100.0	3,079.2	3,098.1	3,096.3	8.5	6.9	175.42	-5.1	22.4	288.3	274.4	13.92	20.707		
3,200.0	3,178.0	3,197.7	3,195.6	8.9	7.1	175.23	0.5	24.9	297.6	283.2	14.39	20.677		
3,300.0	3,276.9	3,297.2	3,295.0	9.2	7.4	175.06	6.1	27.4	307.0	292.1	14.87	20.647		
3,400.0	3,375.7	3,396.8	3,394.4	9.6	7.6	174.89	11.7	29.9	316.4	301.0	15.34	20.619		
3,500.0	3,474.6	3,496.4	3,493.7	9.9	7.8	174.74	17.3	32.4	325.7	309.9	15.82	20.592		
3,600.0	3,573.4	3,595.9	3,593.1	10.3	8.1	174.59	22.9	34.9	335.1	318.8	16.30	20.566		
3,700.0	3,672.3	3,695.5	3,692.5	10.6	8.3	174.45	28.5	37.4	344.5	327.7	16.77	20.540		
3,800.0	3,771.1	3,795.0	3,791.8	11.0	8.6	174.32	34.1	39.9	353.9	336.6	17.25	20.516		
3,900.0	3,870.0	3,894.6	3,891.2	11.3	8.8	174.20	39.7	42.3	363.3	345.5	17.73	20.493		
4,000.0	3,968.8	3,994.1	3,990.6	11.7	9.0	174.08	45.3	44.8	372.6	354.4	18.20	20.471		
4,100.0	4,067.7	4,093.7	4,089.9	12.0	9.3	173.96	50.9	47.3	382.0	363.3	18.68	20.449		
4,200.0	4,166.5	4,193.2	4,189.3	12.4	9.5	173.86	56.5	49.8	391.4	372.2	19.16	20.429		
4,300.0	4,265.4	4,292.8	4,288.7	12.7	9.8	173.76	62.1	52.3	400.8	381.2	19.64	20.409		
4,400.0	4,364.2	4,392.4	4,388.0	13.1	10.0	173.66	67.7	54.8	410.2	390.1	20.12	20.390		
4,500.0	4,463.0	4,491.9	4,487.4	13.4	10.2	173.57	73.3	57.3	419.6	399.0	20.60	20.371		
4,600.0	4,561.9	4,591.5	4,586.8	13.8	10.5	173.48	78.9	59.7	429.0	407.9	21.08	20.353		
4,700.0	4,660.7	4,691.0	4,686.1	14.1	10.7	173.39	84.5	62.2	438.3	416.8	21.56	20.336		
4,800.0	4,759.6	4,790.6	4,785.5	14.5	11.0	173.31	90.1	64.7	447.7	425.7	22.03	20.319		
4,900.0	4,858.4	4,890.1	4,884.9	14.8	11.2	173.23	95.7	67.2	457.1	434.6	22.52	20.303		
5,000.0	4,957.3	4,989.7	4,984.2	15.2	11.5	173.16	101.4	69.7	466.5	443.5	23.00	20.287		
5,100.0	5,056.1	5,089.3	5,083.6	15.5	11.7	173.08	107.0	72.2	475.9	452.4	23.48	20.272		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 1-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	5,155.0	5,188.8	5,183.0	15.9	12.0	173.02	112.6	74.7	485.3	461.3	23.96	20.258	
5,300.0	5,253.8	5,288.4	5,282.3	16.2	12.2	172.95	118.2	77.2	494.7	470.3	24.44	20.243	
5,400.0	5,352.7	5,387.9	5,381.7	16.6	12.4	172.88	123.8	79.6	504.1	479.2	24.92	20.230	
5,500.0	5,451.5	5,487.5	5,481.1	17.0	12.7	172.82	129.4	82.1	513.5	488.1	25.40	20.216	
5,600.0	5,550.4	5,587.0	5,580.4	17.3	12.9	172.76	135.0	84.6	522.9	497.0	25.88	20.203	
5,700.0	5,649.2	5,686.6	5,679.8	17.7	13.2	172.71	140.6	87.1	532.3	505.9	26.36	20.191	
5,800.0	5,748.1	5,786.1	5,779.2	18.0	13.4	172.65	146.2	89.6	541.7	514.8	26.84	20.179	
5,900.0	5,846.9	5,885.7	5,878.6	18.4	13.7	172.60	151.8	92.1	551.1	523.8	27.33	20.167	
6,000.0	5,945.8	5,985.3	5,977.9	18.7	13.9	172.54	157.4	94.6	560.5	532.7	27.81	20.155	
6,100.0	6,044.6	6,084.8	6,077.3	19.1	14.2	172.49	163.0	97.1	569.9	541.6	28.29	20.144	
6,200.0	6,143.5	6,184.4	6,176.7	19.4	14.4	172.45	168.6	99.5	579.3	550.5	28.77	20.133	
6,300.0	6,242.3	6,283.7	6,275.8	19.8	14.6	172.48	174.2	101.2	588.7	559.4	29.24	20.130	
6,400.0	6,341.1	6,382.1	6,373.6	20.1	14.8	-143.82	179.6	92.4	598.1	568.5	29.61	20.198	
6,500.0	6,438.3	6,479.8	6,468.6	20.4	15.0	-119.30	184.9	70.4	607.5	577.5	29.97	20.269	
6,600.0	6,532.3	6,576.9	6,559.1	20.7	15.1	-108.13	189.9	35.9	616.6	586.2	30.38	20.296	
6,700.0	6,621.1	6,673.5	6,643.7	20.9	15.3	-101.93	194.5	-10.2	625.2	594.3	30.90	20.233	
6,800.0	6,703.0	6,769.6	6,721.1	21.2	15.5	-97.97	198.7	-67.1	633.1	601.5	31.63	20.017	
6,900.0	6,776.4	6,865.4	6,789.9	21.5	16.0	-95.22	202.4	-133.5	640.2	607.5	32.67	19.595	
7,000.0	6,839.9	6,960.8	6,849.1	21.9	16.7	-93.26	205.5	-208.2	646.4	612.2	34.14	18.934	
7,100.0	6,892.2	7,056.1	6,897.7	22.4	17.7	-91.85	208.0	-290.0	651.4	615.3	36.10	18.046	
7,200.0	6,932.3	7,151.2	6,935.0	23.2	19.0	-90.88	209.8	-377.4	655.3	616.7	38.58	16.986	
7,300.0	6,959.6	7,246.3	6,960.5	24.3	20.5	-90.27	210.9	-468.9	657.9	616.4	41.55	15.833	
7,400.0	6,973.3	7,341.3	6,973.6	25.6	22.2	-90.01	211.4	-562.9	659.3	614.3	44.92	14.675	
7,500.0	6,975.0	7,444.1	6,975.5	27.3	24.3	-90.00	211.4	-665.7	659.4	610.5	48.93	13.478	
7,600.0	6,975.0	7,544.1	6,975.5	29.1	26.4	-90.00	211.9	-765.7	659.4	606.2	53.20	12.396	
7,700.0	6,975.0	7,644.1	6,975.5	31.1	28.7	-90.00	212.4	-865.7	659.4	601.7	57.68	11.431	
7,800.0	6,975.0	7,744.1	6,975.5	33.3	31.0	-90.00	213.0	-965.7	659.4	597.1	62.36	10.575	
7,900.0	6,975.0	7,844.1	6,975.5	35.5	33.4	-90.00	213.5	-1,065.7	659.4	592.2	67.17	9.817	
8,000.0	6,975.0	7,944.1	6,975.5	37.8	35.9	-90.00	214.0	-1,165.7	659.4	587.3	72.11	9.145	
8,100.0	6,975.0	8,044.1	6,975.5	40.2	38.4	-90.00	214.5	-1,265.7	659.4	582.3	77.13	8.549	
8,200.0	6,975.0	8,144.1	6,975.5	42.7	41.0	-90.00	215.1	-1,365.7	659.4	577.2	82.24	8.018	
8,300.0	6,975.0	8,244.1	6,975.5	45.2	43.6	-90.00	215.6	-1,465.7	659.4	572.0	87.41	7.544	
8,400.0	6,975.0	8,344.1	6,975.5	47.7	46.2	-90.00	216.1	-1,565.7	659.4	566.8	92.63	7.119	
8,500.0	6,975.0	8,444.1	6,975.5	50.3	48.8	-90.00	216.6	-1,665.7	659.4	561.5	97.89	6.736	
8,600.0	6,975.0	8,544.1	6,975.5	52.8	51.5	-90.00	217.2	-1,765.7	659.4	556.2	103.19	6.390	
8,700.0	6,975.0	8,644.1	6,975.5	55.4	54.1	-90.00	217.7	-1,865.7	659.4	550.9	108.53	6.076	
8,800.0	6,975.0	8,744.1	6,975.5	58.1	56.8	-90.00	218.2	-1,965.7	659.4	545.5	113.89	5.790	
8,900.0	6,975.0	8,844.1	6,975.5	60.7	59.5	-90.00	218.7	-2,065.7	659.4	540.1	119.27	5.529	
9,000.0	6,975.0	8,944.1	6,975.5	63.4	62.2	-90.00	219.2	-2,165.7	659.4	534.7	124.68	5.289	
9,100.0	6,975.0	9,044.1	6,975.5	66.0	64.9	-90.00	219.8	-2,265.7	659.4	529.3	130.10	5.068	
9,200.0	6,975.0	9,144.1	6,975.5	68.7	67.7	-90.00	220.3	-2,365.7	659.4	523.9	135.55	4.865	
9,300.0	6,975.0	9,244.1	6,975.5	71.4	70.4	-90.00	220.8	-2,465.7	659.4	518.4	141.00	4.677	
9,400.0	6,975.0	9,344.1	6,975.5	74.1	73.1	-90.00	221.3	-2,565.7	659.4	513.0	146.47	4.502	
9,500.0	6,975.0	9,444.1	6,975.5	76.8	75.9	-90.00	221.9	-2,665.7	659.4	507.5	151.94	4.340	
9,600.0	6,975.0	9,544.1	6,975.5	79.5	78.6	-90.00	222.4	-2,765.7	659.4	502.0	157.43	4.189	
9,700.0	6,975.0	9,644.1	6,975.5	82.3	81.4	-90.00	222.9	-2,865.7	659.4	496.5	162.93	4.047	
9,800.0	6,975.0	9,744.1	6,975.5	85.0	84.1	-90.00	223.4	-2,965.7	659.4	491.0	168.43	3.915	
9,900.0	6,975.0	9,844.1	6,975.5	87.7	86.9	-90.00	224.0	-3,065.7	659.4	485.5	173.95	3.791	
10,000.0	6,975.0	9,944.1	6,975.5	90.5	89.6	-90.00	224.5	-3,165.7	659.4	480.0	179.47	3.674	
10,100.0	6,975.0	10,044.1	6,975.5	93.2	92.4	-90.00	225.0	-3,265.7	659.4	474.4	184.99	3.565	
10,200.0	6,975.0	10,144.1	6,975.5	96.0	95.2	-90.00	225.5	-3,365.7	659.4	468.9	190.52	3.461	
10,300.0	6,975.0	10,244.1	6,975.5	98.7	97.9	-90.00	226.1	-3,465.7	659.4	463.4	196.06	3.363	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 1-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	6,975.0	10,344.1	6,975.5	101.5	100.7	-90.00	226.6	-3,565.7	659.4	457.8	201.60	3.271		
10,500.0	6,975.0	10,444.1	6,975.5	104.2	103.5	-90.00	227.1	-3,665.7	659.4	452.3	207.14	3.183		
10,600.0	6,975.0	10,544.1	6,975.5	107.0	106.3	-90.00	227.6	-3,765.7	659.4	446.7	212.69	3.100		
10,700.0	6,975.0	10,644.1	6,975.5	109.7	109.0	-90.00	228.2	-3,865.7	659.4	441.2	218.24	3.021		
10,800.0	6,975.0	10,744.1	6,975.5	112.5	111.8	-90.00	228.7	-3,965.7	659.4	435.6	223.80	2.946		
10,900.0	6,975.0	10,844.1	6,975.5	115.3	114.6	-90.00	229.2	-4,065.7	659.4	430.1	229.36	2.875		
11,000.0	6,975.0	10,944.1	6,975.5	118.0	117.4	-90.00	229.7	-4,165.7	659.4	424.5	234.92	2.807		
11,100.0	6,975.0	11,044.1	6,975.5	120.8	120.2	-90.00	230.3	-4,265.7	659.4	418.9	240.48	2.742		
11,200.0	6,975.0	11,144.1	6,975.5	123.6	122.9	-90.00	230.8	-4,365.7	659.4	413.4	246.05	2.680		
11,300.0	6,975.0	11,244.1	6,975.5	126.4	125.7	-90.00	231.3	-4,465.7	659.4	407.8	251.62	2.621		
11,400.0	6,975.0	11,344.1	6,975.5	129.1	128.5	-90.00	231.8	-4,565.7	659.4	402.2	257.19	2.564		
11,500.0	6,975.0	11,444.1	6,975.5	131.9	131.3	-90.00	232.4	-4,665.7	659.4	396.7	262.76	2.510		
11,600.0	6,975.0	11,544.1	6,975.5	134.7	134.1	-90.00	232.9	-4,765.7	659.4	391.1	268.34	2.457		
11,700.0	6,975.0	11,644.1	6,975.5	137.5	136.9	-90.00	233.4	-4,865.7	659.4	385.5	273.92	2.407		
11,800.0	6,975.0	11,744.1	6,975.5	140.2	139.7	-90.00	233.9	-4,965.7	659.4	379.9	279.49	2.359		
11,900.0	6,975.0	11,844.1	6,975.5	143.0	142.5	-90.00	234.5	-5,065.7	659.4	374.3	285.08	2.313		
12,000.0	6,975.0	11,944.1	6,975.5	145.8	145.2	-90.00	235.0	-5,165.7	659.4	368.8	290.66	2.269		
12,100.0	6,975.0	12,044.1	6,975.5	148.6	148.0	-90.00	235.5	-5,265.7	659.4	363.2	296.24	2.226		
12,200.0	6,975.0	12,144.1	6,975.5	151.4	150.8	-90.00	236.0	-5,365.7	659.4	357.6	301.83	2.185		
12,300.0	6,975.0	12,244.1	6,975.5	154.2	153.6	-90.00	236.6	-5,465.7	659.4	352.0	307.41	2.145		
12,400.0	6,975.0	12,344.1	6,975.5	156.9	156.4	-90.00	237.1	-5,565.7	659.4	346.4	313.00	2.107		
12,500.0	6,975.0	12,444.1	6,975.5	159.7	159.2	-90.00	237.6	-5,665.7	659.4	340.8	318.59	2.070		
12,600.0	6,975.0	12,544.1	6,975.5	162.5	162.0	-90.00	238.1	-5,765.7	659.4	335.2	324.18	2.034		
12,700.0	6,975.0	12,644.1	6,975.5	165.3	164.8	-90.00	238.6	-5,865.7	659.4	329.7	329.77	2.000		
12,800.0	6,975.0	12,744.1	6,975.5	168.1	167.6	-90.00	239.2	-5,965.6	659.4	324.1	335.36	1.966		
12,900.0	6,975.0	12,844.1	6,975.5	170.9	170.4	-90.00	239.7	-6,065.6	659.4	318.5	340.95	1.934		
13,000.0	6,975.0	12,944.1	6,975.5	173.7	173.2	-90.00	240.2	-6,165.6	659.4	312.9	346.54	1.903		
13,100.0	6,975.0	13,044.1	6,975.5	176.5	176.0	-90.00	240.7	-6,265.6	659.4	307.3	352.14	1.873		
13,200.0	6,975.0	13,144.1	6,975.5	179.3	178.8	-90.00	241.3	-6,365.6	659.4	301.7	357.73	1.843		
13,300.0	6,975.0	13,244.1	6,975.5	182.1	181.6	-90.00	241.8	-6,465.6	659.4	296.1	363.33	1.815		
13,400.0	6,975.0	13,344.1	6,975.5	184.9	184.4	-90.00	242.3	-6,565.6	659.4	290.5	368.93	1.787		
13,500.0	6,975.0	13,444.1	6,975.5	187.6	187.2	-90.00	242.8	-6,665.6	659.4	284.9	374.52	1.761		
13,600.0	6,975.0	13,544.1	6,975.5	190.4	190.0	-90.00	243.4	-6,765.6	659.4	279.3	380.12	1.735		
13,700.0	6,975.0	13,644.1	6,975.5	193.2	192.8	-90.00	243.9	-6,865.6	659.4	273.7	385.72	1.710		
13,800.0	6,975.0	13,744.1	6,975.5	196.0	195.6	-90.00	244.4	-6,965.6	659.4	268.1	391.32	1.685		
13,900.0	6,975.0	13,844.1	6,975.5	198.8	198.4	-90.00	244.9	-7,065.6	659.4	262.5	396.92	1.661		
14,000.0	6,975.0	13,944.1	6,975.5	201.6	201.2	-90.00	245.5	-7,165.6	659.4	256.9	402.52	1.638		
14,100.0	6,975.0	14,044.1	6,975.5	204.4	204.0	-90.00	246.0	-7,265.6	659.4	251.3	408.12	1.616		
14,200.0	6,975.0	14,144.1	6,975.5	207.2	206.8	-90.00	246.5	-7,365.6	659.4	245.7	413.72	1.594		
14,300.0	6,975.0	14,244.1	6,975.5	210.0	209.6	-90.00	247.0	-7,465.6	659.4	240.1	419.32	1.573		
14,400.0	6,975.0	14,344.1	6,975.5	212.8	212.4	-90.00	247.6	-7,565.6	659.4	234.5	424.92	1.552		
14,500.0	6,975.0	14,444.1	6,975.5	215.6	215.2	-90.00	248.1	-7,665.6	659.4	228.9	430.53	1.532		
14,600.0	6,975.0	14,544.1	6,975.5	218.4	218.0	-90.00	248.6	-7,765.6	659.4	223.3	436.13	1.512		
14,700.0	6,975.0	14,644.1	6,975.5	221.2	220.8	-90.00	249.1	-7,865.6	659.4	217.7	441.73	1.493 Level 3		
14,800.0	6,975.0	14,744.1	6,975.5	224.0	223.6	-90.00	249.7	-7,965.6	659.4	212.1	447.34	1.474 Level 3		
14,900.0	6,975.0	14,844.1	6,975.5	226.8	226.4	-90.00	250.2	-8,065.6	659.4	206.5	452.94	1.456 Level 3		
15,000.0	6,975.0	14,944.1	6,975.5	229.6	229.2	-90.00	250.7	-8,165.6	659.4	200.9	458.55	1.438 Level 3		
15,100.0	6,975.0	15,044.1	6,975.5	232.4	232.0	-90.00	251.2	-8,265.6	659.4	195.3	464.15	1.421 Level 3		
15,200.0	6,975.0	15,144.1	6,975.5	235.2	234.8	-90.00	251.8	-8,365.6	659.4	189.7	469.76	1.404 Level 3		
15,300.0	6,975.0	15,244.1	6,975.5	238.0	237.6	-90.00	252.3	-8,465.6	659.4	184.1	475.36	1.387 Level 3		
15,400.0	6,975.0	15,344.1	6,975.5	240.8	240.4	-90.00	252.8	-8,565.6	659.4	178.5	480.97	1.371 Level 3		
15,500.0	6,975.0	15,444.1	6,975.5	243.6	243.2	-90.00	253.3	-8,665.6	659.4	172.8	486.58	1.355 Level 3		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #6 - Wellbore #1 - Plan #1 (6-23-1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 1-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
15,600.0	6,975.0	15,544.1	6,975.5	246.4	246.0	-90.00	253.9	-8,765.6	659.4	167.2	492.18	1.340	Level 3
15,700.0	6,975.0	15,644.1	6,975.5	249.2	248.8	-90.00	254.4	-8,865.6	659.4	161.6	497.79	1.325	Level 3
15,800.0	6,975.0	15,744.1	6,975.5	252.0	251.6	-90.00	254.9	-8,965.6	659.4	156.0	503.40	1.310	Level 3
15,900.0	6,975.0	15,844.1	6,975.5	254.8	254.4	-90.00	255.4	-9,065.6	659.4	150.4	509.00	1.296	Level 3
16,000.0	6,975.0	15,944.1	6,975.5	257.6	257.2	-90.00	256.0	-9,165.6	659.4	144.8	514.61	1.281	Level 3
16,100.0	6,975.0	16,044.1	6,975.5	260.4	260.0	-90.00	256.5	-9,265.6	659.4	139.2	520.22	1.268	Level 3
16,200.0	6,975.0	16,144.1	6,975.5	263.2	262.8	-90.00	257.0	-9,365.6	659.4	133.6	525.83	1.254	Level 3
16,300.0	6,975.0	16,244.1	6,975.5	266.0	265.6	-90.00	257.5	-9,465.6	659.4	128.0	531.44	1.241	Level 2
16,400.0	6,975.0	16,344.1	6,975.5	268.8	268.5	-90.00	258.0	-9,565.6	659.4	122.4	537.05	1.228	Level 2
16,500.0	6,975.0	16,444.1	6,975.5	271.6	271.3	-90.00	258.6	-9,665.6	659.4	116.8	542.65	1.215	Level 2
16,600.0	6,975.0	16,544.1	6,975.5	274.4	274.1	-90.00	259.1	-9,765.6	659.4	111.2	548.26	1.203	Level 2
16,700.0	6,975.0	16,644.1	6,975.5	277.2	276.9	-90.00	259.6	-9,865.6	659.4	105.5	553.87	1.191	Level 2
16,800.0	6,975.0	16,744.1	6,975.5	280.0	279.7	-90.00	260.1	-9,965.6	659.4	99.9	559.48	1.179	Level 2
16,900.0	6,975.0	16,844.1	6,975.5	282.8	282.0	-90.00	260.7	-10,065.6	659.4	94.8	564.65	1.168	Level 2
16,902.7	6,975.0	16,846.9	6,975.5	282.9	282.1	-90.00	260.7	-10,068.3	659.4	94.6	564.78	1.168	Level 2
16,912.6	6,975.0	16,856.4	6,975.5	283.2	282.3	-90.00	260.7	-10,077.8	659.4	94.2	565.23	1.167	Level 2, SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 223-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	-176.64	-47.4	-2.8	47.4	47.4	0.00	N/A	
100.0	100.0	101.1	101.1	0.1	0.1	-176.75	-47.2	-2.7	47.3	47.1	0.23	209.152	
200.0	200.0	201.2	201.2	0.3	0.2	-177.09	-46.9	-2.4	46.9	46.4	0.56	83.289	
300.0	300.0	301.3	301.3	0.6	0.4	-177.86	-46.3	-1.7	46.4	45.4	0.99	47.024	
400.0	400.0	401.4	401.4	0.8	0.6	-178.78	-45.7	-1.0	45.7	44.3	1.42	32.236	
500.0	500.0	501.1	501.1	1.0	0.8	-179.05	-45.1	-0.7	45.1	43.3	1.84	24.560	
600.0	600.0	601.1	601.1	1.2	1.0	-179.85	-45.1	-0.1	45.1	42.8	2.27	19.825	
700.0	700.0	701.2	701.2	1.5	1.2	179.70	-44.6	0.2	44.6	41.9	2.71	16.486	
800.0	800.0	801.6	801.6	1.7	1.5	-179.99	-43.9	0.0	43.9	40.8	3.14	13.998	
900.0	900.0	901.4	901.4	1.9	1.7	-178.59	-42.5	-1.0	42.6	39.0	3.57	11.925	
1,000.0	1,000.0	1,001.4	1,001.4	2.1	1.9	-178.38	-41.8	-1.2	41.9	37.9	4.00	10.461	
1,027.6	1,027.6	1,029.0	1,029.0	2.2	1.9	173.31	-41.6	-0.8	41.7	37.6	4.12	10.127 CC, ES	
1,100.0	1,100.0	1,101.3	1,101.3	2.4	2.1	172.16	-41.0	0.3	42.7	38.3	4.44	9.633	
1,200.0	1,199.8	1,201.3	1,201.2	2.6	2.3	171.68	-40.3	1.4	47.2	42.3	4.87	9.693	
1,300.0	1,299.5	1,300.9	1,300.9	2.8	2.5	172.24	-39.5	2.1	55.0	49.7	5.30	10.389	
1,400.0	1,398.7	1,400.6	1,400.5	3.1	2.7	173.44	-38.5	2.3	66.1	60.4	5.72	11.554	
1,500.0	1,497.6	1,500.1	1,500.0	3.3	2.9	174.53	-37.1	2.5	79.6	73.5	6.15	12.941	
1,600.0	1,596.4	1,601.2	1,601.1	3.6	3.1	175.62	-34.1	2.4	91.8	85.2	6.59	13.916	
1,700.0	1,695.3	1,701.7	1,701.5	3.9	3.4	176.50	-29.5	2.2	102.3	95.3	7.04	14.531	
1,800.0	1,794.1	1,801.4	1,801.0	4.2	3.6	177.05	-24.2	2.5	112.2	104.7	7.49	14.981	
1,900.0	1,893.0	1,901.7	1,901.2	4.5	3.8	178.08	-18.8	1.5	122.0	114.0	7.94	15.370	
2,000.0	1,991.8	2,003.7	2,002.9	4.8	4.0	178.77	-11.8	1.2	130.4	122.0	8.39	15.533	
2,100.0	2,090.7	2,102.4	2,101.4	5.2	4.3	179.03	-4.1	1.8	137.8	128.9	8.84	15.578	
2,200.0	2,189.5	2,205.0	2,203.6	5.5	4.5	178.78	3.5	3.6	145.4	136.1	9.30	15.629	
2,300.0	2,288.4	2,305.5	2,303.7	5.8	4.7	178.33	12.8	6.2	151.1	141.3	9.76	15.481	
2,400.0	2,387.2	2,404.9	2,402.6	6.1	5.0	177.66	21.7	9.4	156.9	146.7	10.22	15.361	
2,500.0	2,486.1	2,504.5	2,501.7	6.5	5.2	176.55	30.4	14.0	163.0	152.4	10.68	15.272	
2,600.0	2,584.9	2,603.7	2,600.4	6.8	5.5	175.58	38.8	18.4	169.4	158.3	11.14	15.212	
2,700.0	2,683.8	2,703.4	2,699.8	7.2	5.7	175.24	47.2	21.1	175.9	164.3	11.60	15.171	
2,800.0	2,782.6	2,801.6	2,797.6	7.5	5.9	174.94	55.0	23.8	183.0	171.0	12.05	15.181	
2,900.0	2,881.5	2,901.1	2,896.8	7.8	6.2	174.55	62.5	26.7	190.5	178.0	12.52	15.219	
3,000.0	2,980.3	2,998.7	2,994.1	8.2	6.4	174.48	69.3	28.7	198.5	185.5	12.97	15.302	
3,100.0	3,079.2	3,094.8	3,090.1	8.5	6.6	174.22	74.4	31.2	208.2	194.8	13.43	15.507	
3,200.0	3,178.0	3,194.8	3,189.9	8.9	6.9	174.09	79.3	33.4	218.3	204.4	13.89	15.720	
3,300.0	3,276.9	3,294.8	3,289.8	9.2	7.1	174.35	84.1	34.1	228.6	214.3	14.35	15.936	
3,400.0	3,375.7	3,399.7	3,394.4	9.6	7.3	174.69	90.8	34.5	237.3	222.5	14.81	16.017	
3,500.0	3,474.6	3,504.2	3,498.6	9.9	7.6	174.73	99.6	36.2	244.0	228.7	15.29	15.957	
3,600.0	3,573.4	3,607.4	3,601.2	10.3	7.9	174.41	110.0	39.5	248.8	233.0	15.77	15.775	
3,700.0	3,672.3	3,705.7	3,698.9	10.6	8.1	173.98	120.4	43.2	253.2	236.9	16.24	15.587	
3,800.0	3,771.1	3,805.8	3,798.4	11.0	8.4	173.38	130.2	47.8	258.4	241.7	16.72	15.453	
3,900.0	3,870.0	3,901.6	3,893.6	11.3	8.6	172.77	139.5	52.5	263.7	246.5	17.20	15.335	
4,000.0	3,968.8	3,998.6	3,990.3	11.7	8.9	172.26	147.0	56.8	270.9	253.3	17.67	15.334	
4,100.0	4,067.7	4,096.6	4,088.0	12.0	9.1	172.03	154.2	59.9	278.7	260.5	18.14	15.365	
4,200.0	4,166.5	4,195.3	4,186.4	12.4	9.4	171.96	160.8	62.3	287.0	268.4	18.60	15.430	
4,300.0	4,265.4	4,294.5	4,285.3	12.7	9.6	171.90	167.2	64.7	295.5	276.5	19.06	15.502	
4,400.0	4,364.2	4,393.5	4,384.1	13.1	9.8	171.90	173.5	66.8	304.2	284.7	19.53	15.580	
4,500.0	4,463.0	4,493.2	4,483.6	13.4	10.1	172.03	179.7	68.2	313.0	293.0	19.99	15.660	
4,600.0	4,561.9	4,598.7	4,588.9	13.8	10.3	172.26	187.2	69.1	321.0	300.5	20.46	15.688	
4,700.0	4,660.7	4,701.0	4,690.7	14.1	10.6	172.18	195.9	71.7	327.5	306.6	20.94	15.642	
4,800.0	4,759.6	4,798.5	4,787.8	14.5	10.8	171.92	204.2	75.2	334.0	312.6	21.41	15.600	
4,900.0	4,858.4	4,892.8	4,881.8	14.8	11.1	171.81	211.1	77.8	341.7	319.8	21.87	15.625	
5,000.0	4,957.3	4,990.4	4,979.2	15.2	11.3	171.86	217.3	79.5	350.4	328.1	22.33	15.693	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 223-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	
5,100.0	5,056.1	5,087.3	5,075.9	15.5	11.5	172.04	222.5	80.5	360.0	337.2	22.78	15.802	
5,200.0	5,155.0	5,192.2	5,180.6	15.9	11.8	172.29	228.9	81.1	369.0	345.7	23.25	15.869	
5,300.0	5,253.8	5,293.4	5,281.7	16.2	12.0	172.48	235.9	81.8	377.1	353.4	23.71	15.905	
5,400.0	5,352.7	5,392.3	5,380.3	16.6	12.3	172.52	243.1	83.6	384.9	360.7	24.17	15.922	
5,500.0	5,451.5	5,486.6	5,474.3	17.0	12.5	172.60	248.8	85.0	393.9	369.2	24.62	15.996	
5,600.0	5,550.4	5,586.1	5,573.7	17.3	12.7	172.72	254.1	86.1	403.5	378.4	25.08	16.087	
5,700.0	5,649.2	5,692.8	5,680.2	17.7	13.0	172.77	260.6	87.8	412.5	386.9	25.56	16.138	
5,800.0	5,748.1	5,803.2	5,790.2	18.0	13.3	172.77	270.2	90.0	418.8	392.8	26.05	16.076	
5,900.0	5,846.9	5,899.7	5,886.2	18.4	13.5	172.79	279.7	91.8	424.0	397.5	26.51	15.992	
6,000.0	5,945.8	5,997.9	5,984.0	18.7	13.8	172.89	288.1	93.0	430.5	403.5	26.98	15.959	
6,100.0	6,044.6	6,102.6	6,088.3	19.1	14.0	172.98	297.6	94.4	436.4	409.0	27.45	15.897	
6,200.0	6,143.5	6,195.4	6,180.7	19.4	14.3	173.09	306.2	95.4	442.3	414.3	27.90	15.850	
6,300.0	6,242.3	6,290.3	6,275.3	19.8	14.5	173.28	313.3	95.7	449.8	421.5	28.35	15.866	
6,400.0	6,341.1	6,390.9	6,375.6	20.1	14.7	-144.23	320.5	96.6	457.6	428.9	28.79	15.896	
6,500.0	6,438.3	6,494.8	6,479.2	20.4	15.0	-122.48	328.0	95.6	465.4	436.2	29.25	15.910	
6,600.0	6,532.3	6,587.1	6,570.6	20.7	15.2	-114.19	336.9	86.2	471.5	441.9	29.66	15.899	
6,700.0	6,621.1	6,670.5	6,651.9	20.9	15.4	-110.38	340.2	68.1	483.5	453.5	30.01	16.113	
6,800.0	6,703.0	6,774.4	6,749.4	21.2	15.5	-109.02	342.4	32.6	497.5	467.1	30.41	16.360	
6,900.0	6,776.4	6,894.5	6,853.5	21.5	15.7	-108.73	344.8	-26.8	510.8	479.8	30.97	16.492	
7,000.0	6,839.9	7,035.5	6,963.5	21.9	16.1	-109.62	351.0	-114.6	521.1	489.2	31.91	16.329	
7,100.0	6,892.2	7,180.2	7,052.1	22.4	17.0	-110.23	364.0	-227.7	522.3	488.7	33.59	15.550	
7,200.0	6,932.3	7,295.7	7,103.8	23.2	18.3	-110.32	372.5	-330.5	522.5	486.6	35.94	14.539	
7,300.0	6,959.6	7,389.8	7,137.1	24.3	19.6	-110.65	376.8	-418.4	524.7	486.1	38.68	13.565	
7,400.0	6,973.3	7,526.2	7,162.8	25.6	21.9	-111.02	378.7	-551.9	526.9	484.2	42.73	12.331	
7,484.8	6,976.6	7,622.1	7,165.4	27.0	23.8	-110.89	379.3	-647.8	526.5	480.2	46.30	11.372	
7,500.0	6,975.0	7,636.6	7,165.4	27.3	24.1	-111.08	379.3	-662.3	526.8	479.9	46.86	11.241	
7,600.0	6,975.0	7,732.9	7,164.9	29.1	26.2	-110.98	378.7	-758.6	527.6	476.8	50.79	10.388	
7,700.0	6,975.0	7,836.9	7,163.2	31.1	28.5	-110.73	377.3	-862.5	528.7	473.6	55.14	9.588	
7,800.0	6,975.0	7,949.8	7,160.7	33.3	31.1	-110.48	377.9	-975.5	528.0	468.1	59.90	8.815	
7,900.0	6,975.0	8,058.8	7,158.0	35.5	33.8	-110.29	380.8	-1,084.4	525.1	460.4	64.72	8.114	
8,000.0	6,975.0	8,155.4	7,156.6	37.8	36.2	-110.27	384.4	-1,180.9	521.7	452.4	69.30	7.528	
8,100.0	6,975.0	8,248.0	7,156.4	40.2	38.6	-110.35	387.7	-1,273.4	518.7	444.9	73.84	7.025	
8,200.0	6,975.0	8,342.0	7,157.1	42.7	41.0	-110.51	390.2	-1,367.4	517.1	438.7	78.44	6.592	
8,212.9	6,975.0	8,351.6	7,157.3	43.0	41.2	-110.52	390.3	-1,377.0	517.1	438.1	78.98	6.547	
8,300.0	6,975.0	8,421.0	7,158.2	45.2	43.0	-110.58	389.6	-1,446.4	518.7	435.9	82.75	6.268	
8,400.0	6,975.0	8,511.5	7,158.8	47.7	45.3	-110.48	385.8	-1,536.8	523.3	435.9	87.44	5.985	
8,500.0	6,975.0	8,640.1	7,156.6	50.3	48.7	-110.07	381.7	-1,665.3	526.3	433.0	93.28	5.642	
8,600.0	6,975.0	8,746.6	7,153.9	52.8	51.5	-109.79	382.1	-1,771.8	525.6	427.0	98.59	5.331	
8,700.0	6,975.0	8,846.5	7,154.3	55.4	54.2	-109.90	384.5	-1,871.6	523.9	420.4	103.57	5.059	
8,779.3	6,975.0	8,919.1	7,156.2	57.5	56.1	-110.13	386.0	-1,944.2	523.5	416.2	107.29	4.879	
8,800.0	6,975.0	8,938.6	7,156.7	58.1	56.6	-110.20	386.3	-1,963.7	523.5	415.2	108.27	4.835	
8,900.0	6,975.0	9,034.3	7,159.0	60.7	59.2	-110.43	386.9	-2,059.3	524.2	411.1	113.09	4.635	
9,000.0	6,975.0	9,138.0	7,159.8	63.4	62.0	-110.49	386.6	-2,163.1	525.2	407.0	118.23	4.442	
9,100.0	6,975.0	9,243.0	7,160.2	66.0	64.9	-110.55	387.9	-2,268.1	524.7	401.3	123.42	4.251	
9,200.0	6,975.0	9,341.7	7,160.8	68.7	67.6	-110.64	389.1	-2,366.7	524.3	395.8	128.44	4.082	
9,300.0	6,975.0	9,441.2	7,161.4	71.4	70.3	-110.72	390.2	-2,466.2	524.0	390.5	133.50	3.925	
9,364.1	6,975.0	9,503.9	7,161.9	73.2	72.0	-110.78	390.8	-2,528.9	523.8	387.1	136.70	3.832	
9,400.0	6,975.0	9,538.3	7,162.4	74.1	72.9	-110.84	391.1	-2,563.3	523.9	385.4	138.46	3.783	
9,500.0	6,975.0	9,629.7	7,164.4	76.8	75.4	-111.04	391.4	-2,654.7	524.9	381.6	143.22	3.665	
9,600.0	6,975.0	9,723.6	7,166.5	79.5	78.0	-111.18	390.1	-2,748.6	527.5	379.4	148.08	3.562	
9,700.0	6,975.0	9,823.9	7,166.7	82.3	80.7	-111.07	387.3	-2,848.8	530.7	377.4	153.32	3.461	
9,800.0	6,975.0	9,925.6	7,166.0	85.0	83.5	-110.87	384.4	-2,950.5	533.5	374.8	158.71	3.362	

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 223-MWD												<b>Offset Well Error:</b>	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	
9,900.0	6,975.0	10,034.2	7,165.1	87.7	86.5	-110.67	382.3	-3,059.0	535.5	371.3	164.28	3.260	
10,000.0	6,975.0	10,139.3	7,164.3	90.5	89.4	-110.55	381.8	-3,164.1	536.3	366.5	169.72	3.160	
10,100.0	6,975.0	10,258.9	7,163.8	93.2	92.7	-110.60	385.0	-3,283.7	534.0	358.6	175.38	3.045	
10,200.0	6,975.0	10,350.0	7,164.9	96.0	95.2	-110.85	389.1	-3,374.7	530.8	350.7	180.10	2.947	
10,243.9	6,975.0	10,384.1	7,165.8	97.2	96.2	-110.98	390.0	-3,408.8	530.4	348.4	181.99	2.914	
10,300.0	6,975.0	10,428.9	7,167.5	98.7	97.4	-111.14	390.3	-3,453.6	531.0	346.6	184.43	2.879	
10,400.0	6,975.0	10,516.7	7,168.5	101.5	99.8	-111.13	387.8	-3,541.2	534.5	345.2	189.31	2.823	
10,500.0	6,975.0	10,638.4	7,165.6	104.2	103.2	-110.68	384.3	-3,662.8	536.8	341.3	195.57	2.745	
10,600.0	6,975.0	10,746.1	7,162.0	107.0	106.2	-110.31	384.5	-3,770.5	536.0	334.6	201.41	2.661	
10,669.3	6,975.0	10,809.8	7,160.3	108.9	107.9	-110.13	384.6	-3,834.2	535.5	330.4	205.10	2.611	
10,700.0	6,975.0	10,835.7	7,159.8	109.7	108.6	-110.07	384.5	-3,860.0	535.6	329.0	206.64	2.592	
10,800.0	6,975.0	10,922.2	7,159.3	112.5	111.0	-109.93	382.6	-3,946.5	537.9	326.2	211.68	2.541	
10,900.0	6,975.0	11,022.6	7,159.2	115.3	113.8	-109.77	378.9	-4,046.9	541.9	324.7	217.12	2.496	
11,000.0	6,975.0	11,128.6	7,158.0	118.0	116.7	-109.54	376.3	-4,152.9	544.3	321.4	222.81	2.443	
11,100.0	6,975.0	11,256.0	7,156.3	120.8	120.3	-109.34	375.9	-4,280.2	544.8	315.8	229.05	2.379	
11,200.0	6,975.0	11,350.0	7,156.5	123.6	122.9	-109.44	378.6	-4,374.2	542.6	308.6	234.04	2.319	
11,277.6	6,975.0	11,418.3	7,157.8	125.7	124.8	-109.59	379.9	-4,442.5	542.1	304.4	237.68	2.281	
11,300.0	6,975.0	11,438.4	7,158.2	126.4	125.4	-109.64	380.1	-4,462.5	542.1	303.4	238.75	2.271	
11,400.0	6,975.0	11,546.5	7,159.4	129.1	128.4	-109.79	381.5	-4,570.7	541.8	297.7	244.03	2.220	
11,466.5	6,975.0	11,607.3	7,159.7	131.0	130.1	-109.83	382.3	-4,631.4	541.4	294.1	247.32	2.189	
11,500.0	6,975.0	11,633.0	7,159.9	131.9	130.8	-109.85	382.5	-4,657.1	541.5	292.7	248.86	2.176	
11,600.0	6,975.0	11,728.0	7,160.5	134.7	133.4	-109.85	381.2	-4,752.1	543.5	289.5	253.99	2.140	
11,700.0	6,975.0	11,825.2	7,159.9	137.5	136.1	-109.67	378.4	-4,849.2	546.5	287.1	259.43	2.106	
11,800.0	6,975.0	11,873.0	7,159.3	140.2	137.4	-109.56	376.9	-4,897.0	551.8	288.3	263.49	2.094 SF	
11,900.0	6,975.0	11,873.0	7,159.3	143.0	137.4	-109.56	376.9	-4,897.0	572.8	306.7	266.13	2.152	
12,000.0	6,975.0	11,873.0	7,159.3	145.8	137.4	-109.56	376.9	-4,897.0	609.6	340.9	268.77	2.268	
12,100.0	6,975.0	11,873.0	7,159.3	148.6	137.4	-109.56	376.9	-4,897.0	659.7	388.3	271.41	2.431	
12,200.0	6,975.0	11,873.0	7,159.3	151.4	137.4	-109.56	376.9	-4,897.0	720.3	446.2	274.05	2.628	
12,300.0	6,975.0	11,873.0	7,159.3	154.2	137.4	-109.56	376.9	-4,897.0	788.9	512.2	276.70	2.851	
12,400.0	6,975.0	11,873.0	7,159.3	156.9	137.4	-109.56	376.9	-4,897.0	863.7	584.4	279.34	3.092	
12,500.0	6,975.0	11,873.0	7,159.3	159.7	137.4	-109.56	376.9	-4,897.0	943.2	661.2	281.98	3.345	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 1-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	0.5	0.5	0.0	0.0	-169.19	-14.6	-2.8	14.8	14.8	0.00	N/A	
100.0	100.0	100.5	100.5	0.1	0.1	-169.19	-14.6	-2.8	14.8	14.6	0.23	65.859	
200.0	200.0	200.5	200.5	0.3	0.3	-169.19	-14.6	-2.8	14.8	14.2	0.67	21.990	
300.0	300.0	300.5	300.5	0.6	0.6	-169.19	-14.6	-2.8	14.8	13.7	1.12	13.198	
400.0	400.0	400.5	400.5	0.8	0.8	-169.19	-14.6	-2.8	14.8	13.3	1.57	9.429	
500.0	500.0	500.5	500.5	1.0	1.0	-169.19	-14.6	-2.8	14.8	12.8	2.02	7.334	
600.0	600.0	600.5	600.5	1.2	1.2	-169.19	-14.6	-2.8	14.8	12.4	2.47	6.001	
700.0	700.0	700.5	700.5	1.5	1.5	-169.19	-14.6	-2.8	14.8	11.9	2.92	5.078	
800.0	800.0	800.5	800.5	1.7	1.7	-169.19	-14.6	-2.8	14.8	11.5	3.37	4.401	
900.0	900.0	900.5	900.5	1.9	1.9	-169.19	-14.6	-2.8	14.8	11.0	3.82	3.883	
1,000.0	1,000.0	1,000.5	1,000.5	2.1	2.1	-169.19	-14.6	-2.8	14.8	10.6	4.27	3.474 CC	
1,100.0	1,100.0	1,100.5	1,100.5	2.4	2.4	-177.29	-14.6	-2.8	16.6	11.9	4.72	3.513	
1,200.0	1,199.8	1,200.3	1,200.3	2.6	2.6	-177.93	-14.6	-2.8	21.8	16.6	5.17	4.223	
1,300.0	1,299.5	1,301.0	1,301.0	2.8	2.8	-178.70	-12.8	-2.4	28.8	23.2	5.60	5.132	
1,400.0	1,398.7	1,401.9	1,401.7	3.1	3.0	-179.59	-7.6	-1.3	35.7	29.7	6.04	5.912	
1,500.0	1,497.6	1,502.9	1,502.3	3.3	3.3	179.44	1.0	0.6	41.9	35.4	6.48	6.465	
1,600.0	1,596.4	1,602.7	1,601.7	3.6	3.5	178.58	10.9	2.7	47.0	40.1	6.94	6.771	
1,700.0	1,695.3	1,702.6	1,701.0	3.9	3.7	177.89	20.8	4.8	52.1	44.7	7.40	7.037	
1,800.0	1,794.1	1,802.5	1,800.4	4.2	4.0	177.32	30.7	6.9	57.2	49.3	7.87	7.270	
1,900.0	1,893.0	1,902.3	1,899.7	4.5	4.3	176.84	40.5	9.0	62.3	54.0	8.34	7.475	
2,000.0	1,991.8	2,002.2	1,999.1	4.8	4.5	176.44	50.4	11.1	67.4	58.6	8.81	7.657	
2,100.0	2,090.7	2,102.1	2,098.4	5.2	4.8	176.10	60.3	13.2	72.6	63.3	9.28	7.819	
2,200.0	2,189.5	2,201.9	2,197.8	5.5	5.0	175.79	70.2	15.3	77.7	67.9	9.75	7.965	
2,300.0	2,288.4	2,301.8	2,297.2	5.8	5.3	175.53	80.1	17.4	82.8	72.6	10.23	8.095	
2,400.0	2,387.2	2,401.7	2,396.5	6.1	5.6	175.30	89.9	19.5	87.9	77.2	10.71	8.214	
2,500.0	2,486.1	2,501.5	2,495.9	6.5	5.8	175.09	99.8	21.7	93.1	81.9	11.18	8.321	
2,600.0	2,584.9	2,601.4	2,595.2	6.8	6.1	174.91	109.7	23.8	98.2	86.5	11.66	8.419	
2,700.0	2,683.8	2,701.3	2,694.6	7.2	6.4	174.74	119.6	25.9	103.3	91.2	12.14	8.509	
2,800.0	2,782.6	2,801.1	2,793.9	7.5	6.7	174.59	129.4	28.0	108.5	95.8	12.62	8.592	
2,900.0	2,881.5	2,901.0	2,893.3	7.8	7.0	174.45	139.3	30.1	113.6	100.5	13.10	8.668	
3,000.0	2,980.3	3,000.9	2,992.6	8.2	7.2	174.32	149.2	32.2	118.7	105.1	13.59	8.738	
3,100.0	3,079.2	3,100.8	3,092.0	8.5	7.5	174.21	159.1	34.3	123.9	109.8	14.07	8.803	
3,200.0	3,178.0	3,200.6	3,191.4	8.9	7.8	174.10	169.0	36.4	129.0	114.4	14.55	8.864	
3,300.0	3,276.9	3,300.5	3,290.7	9.2	8.1	174.01	178.8	38.5	134.1	119.1	15.04	8.920	
3,400.0	3,375.7	3,400.4	3,390.1	9.6	8.3	173.91	188.7	40.7	139.3	123.7	15.52	8.973	
3,500.0	3,474.6	3,500.2	3,489.4	9.9	8.6	173.83	198.6	42.8	144.4	128.4	16.00	9.022	
3,600.0	3,573.4	3,600.1	3,588.8	10.3	8.9	173.75	208.5	44.9	149.5	133.0	16.49	9.069	
3,700.0	3,672.3	3,700.0	3,688.1	10.6	9.2	173.68	218.3	47.0	154.7	137.7	16.97	9.112	
3,800.0	3,771.1	3,799.8	3,787.5	11.0	9.5	173.61	228.2	49.1	159.8	142.3	17.46	9.153	
3,900.0	3,870.0	3,899.7	3,886.8	11.3	9.8	173.55	238.1	51.2	164.9	147.0	17.94	9.191	
4,000.0	3,968.8	3,999.6	3,986.2	11.7	10.0	173.49	248.0	53.3	170.1	151.6	18.43	9.228	
4,100.0	4,067.7	4,099.4	4,085.6	12.0	10.3	173.43	257.8	55.4	175.2	156.3	18.92	9.262	
4,200.0	4,166.5	4,199.3	4,184.9	12.4	10.6	173.37	267.7	57.5	180.3	160.9	19.40	9.295	
4,300.0	4,265.4	4,299.2	4,284.3	12.7	10.9	173.32	277.6	59.7	185.5	165.6	19.89	9.326	
4,400.0	4,364.2	4,399.0	4,383.6	13.1	11.2	173.28	287.5	61.8	190.6	170.2	20.37	9.355	
4,500.0	4,463.0	4,498.9	4,483.0	13.4	11.5	173.23	297.4	63.9	195.7	174.9	20.86	9.383	
4,600.0	4,561.9	4,598.8	4,582.3	13.8	11.7	173.19	307.2	66.0	200.9	179.5	21.35	9.410	
4,700.0	4,660.7	4,698.6	4,681.7	14.1	12.0	173.15	317.1	68.1	206.0	184.2	21.84	9.435	
4,800.0	4,759.6	4,798.5	4,781.0	14.5	12.3	173.11	327.0	70.2	211.2	188.8	22.32	9.459	
4,900.0	4,858.4	4,898.4	4,880.4	14.8	12.6	173.07	336.9	72.3	216.3	193.5	22.81	9.482	
5,000.0	4,957.3	4,998.2	4,979.8	15.2	12.9	173.04	346.7	74.4	221.4	198.1	23.30	9.504	
5,100.0	5,056.1	5,098.1	5,079.1	15.5	13.2	173.00	356.6	76.5	226.6	202.8	23.79	9.525	

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



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 1-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	5,155.0	5,198.0	5,178.5	15.9	13.5	172.97	366.5	78.6	231.7	207.4	24.27	9.546	
5,300.0	5,253.8	5,297.8	5,277.8	16.2	13.7	172.94	376.4	80.8	236.8	212.1	24.76	9.565	
5,400.0	5,352.7	5,397.7	5,377.2	16.6	14.0	172.91	386.3	82.9	242.0	216.7	25.25	9.583	
5,500.0	5,451.5	5,497.6	5,476.5	17.0	14.3	172.88	396.1	85.0	247.1	221.4	25.74	9.601	
5,600.0	5,550.4	5,597.5	5,575.9	17.3	14.6	172.85	406.0	87.1	252.2	226.0	26.22	9.619	
5,700.0	5,649.2	5,697.3	5,675.3	17.7	14.9	172.83	415.9	89.2	257.4	230.7	26.71	9.635	
5,800.0	5,748.1	5,797.2	5,774.6	18.0	15.2	172.80	425.8	91.3	262.5	235.3	27.20	9.651	
5,900.0	5,846.9	5,897.1	5,874.0	18.4	15.5	172.78	435.6	93.4	267.7	240.0	27.69	9.666	
6,000.0	5,945.8	5,996.9	5,973.3	18.7	15.7	172.75	445.5	95.5	272.8	244.6	28.18	9.681	
6,100.0	6,044.6	6,096.8	6,072.7	19.1	16.0	172.73	455.4	97.6	277.9	249.3	28.67	9.695	
6,200.0	6,143.5	6,196.7	6,172.0	19.4	16.3	172.71	465.3	99.8	283.1	253.9	29.16	9.709	
6,300.0	6,242.3	6,296.4	6,271.3	19.8	16.6	172.77	475.1	101.5	288.2	258.6	29.64	9.725	
6,400.0	6,341.1	6,395.4	6,369.4	20.1	16.8	-143.48	484.9	93.4	293.4	263.4	30.01	9.778	
6,500.0	6,438.3	6,493.8	6,464.8	20.4	17.0	-118.95	494.3	72.1	298.6	268.3	30.38	9.831	
6,600.0	6,532.3	6,591.6	6,556.0	20.7	17.2	-107.80	503.2	38.0	303.7	272.9	30.80	9.862	
6,700.0	6,621.1	6,688.9	6,641.3	20.9	17.4	-101.62	511.6	-8.0	308.5	277.2	31.34	9.846	
6,800.0	6,703.0	6,785.8	6,719.3	21.2	17.7	-97.69	519.1	-64.8	313.0	280.9	32.08	9.756	
6,900.0	6,776.4	6,882.3	6,788.7	21.5	18.0	-94.99	525.8	-131.5	317.0	283.9	33.14	9.566	
7,000.0	6,839.9	6,978.5	6,848.4	21.9	18.4	-93.07	531.5	-206.6	320.5	285.9	34.61	9.261	
7,100.0	6,892.2	7,074.5	6,897.4	22.4	19.2	-91.71	536.1	-288.9	323.4	286.9	36.56	8.846	
7,200.0	6,932.3	7,170.2	6,935.0	23.2	20.3	-90.78	539.6	-376.8	325.6	286.6	39.02	8.345	
7,300.0	6,959.6	7,265.9	6,960.5	24.3	21.7	-90.22	541.8	-469.0	327.1	285.1	41.95	7.797	
7,400.0	6,973.3	7,361.6	6,973.7	25.6	23.3	-89.99	542.8	-563.6	327.8	282.5	45.27	7.242	
7,500.0	6,975.0	7,462.0	6,975.5	27.3	25.2	-90.00	542.9	-664.0	327.9	278.7	49.19	6.666	
7,600.0	6,975.0	7,562.0	6,975.5	29.1	27.3	-90.00	543.4	-764.0	327.9	274.5	53.44	6.136	
7,700.0	6,975.0	7,662.0	6,975.5	31.1	29.5	-90.00	544.0	-864.0	327.9	270.0	57.91	5.662	
7,800.0	6,975.0	7,762.0	6,975.5	33.3	31.7	-90.00	544.5	-964.0	327.9	265.3	62.57	5.241	
7,900.0	6,975.0	7,862.0	6,975.5	35.5	34.1	-90.00	545.0	-1,064.0	327.9	260.5	67.37	4.867	
8,000.0	6,975.0	7,962.0	6,975.5	37.8	36.5	-90.00	545.5	-1,164.0	327.9	255.6	72.29	4.536	
8,100.0	6,975.0	8,062.0	6,975.5	40.2	39.0	-90.00	546.0	-1,264.0	327.9	250.6	77.31	4.241	
8,200.0	6,975.0	8,162.0	6,975.5	42.7	41.5	-90.00	546.6	-1,364.0	327.9	245.5	82.40	3.979	
8,300.0	6,975.0	8,262.0	6,975.5	45.2	44.1	-90.00	547.1	-1,464.0	327.9	240.3	87.56	3.745	
8,400.0	6,975.0	8,362.0	6,975.5	47.7	46.7	-90.00	547.6	-1,564.0	327.9	235.1	92.77	3.534	
8,500.0	6,975.0	8,462.0	6,975.5	50.3	49.3	-90.00	548.1	-1,664.0	327.9	229.9	98.03	3.345	
8,600.0	6,975.0	8,562.0	6,975.5	52.8	51.9	-90.00	548.7	-1,764.0	327.9	224.6	103.33	3.173	
8,700.0	6,975.0	8,662.0	6,975.5	55.4	54.6	-90.00	549.2	-1,864.0	327.9	219.2	108.65	3.018	
8,800.0	6,975.0	8,762.0	6,975.5	58.1	57.2	-90.00	549.7	-1,964.0	327.9	213.9	114.01	2.876	
8,900.0	6,975.0	8,862.0	6,975.5	60.7	59.9	-90.00	550.2	-2,064.0	327.9	208.5	119.39	2.746	
9,000.0	6,975.0	8,962.0	6,975.5	63.4	62.6	-90.00	550.8	-2,164.0	327.9	203.1	124.79	2.628	
9,100.0	6,975.0	9,062.0	6,975.5	66.0	65.3	-90.00	551.3	-2,264.0	327.9	197.7	130.21	2.518	
9,200.0	6,975.0	9,162.0	6,975.5	68.7	68.0	-90.00	551.8	-2,364.0	327.9	192.2	135.65	2.417	
9,300.0	6,975.0	9,262.0	6,975.5	71.4	70.7	-90.00	552.3	-2,464.0	327.9	186.8	141.10	2.324	
9,400.0	6,975.0	9,362.0	6,975.5	74.1	73.4	-90.00	552.9	-2,564.0	327.9	181.3	146.56	2.237	
9,500.0	6,975.0	9,462.0	6,975.5	76.8	76.2	-90.00	553.4	-2,664.0	327.9	175.9	152.04	2.157	
9,600.0	6,975.0	9,562.0	6,975.5	79.5	78.9	-90.00	553.9	-2,764.0	327.9	170.4	157.52	2.082	
9,700.0	6,975.0	9,662.0	6,975.5	82.3	81.6	-90.00	554.4	-2,864.0	327.9	164.9	163.02	2.011	
9,800.0	6,975.0	9,762.0	6,975.5	85.0	84.4	-90.00	555.0	-2,964.0	327.9	159.4	168.52	1.946	
9,900.0	6,975.0	9,862.0	6,975.5	87.7	87.1	-90.00	555.5	-3,064.0	327.9	153.9	174.03	1.884	
10,000.0	6,975.0	9,962.0	6,975.5	90.5	89.9	-90.00	556.0	-3,164.0	327.9	148.3	179.55	1.826	
10,100.0	6,975.0	10,062.0	6,975.5	93.2	92.7	-90.00	556.5	-3,263.9	327.9	142.8	185.07	1.772	
10,200.0	6,975.0	10,162.0	6,975.5	96.0	95.4	-90.00	557.1	-3,363.9	327.9	137.3	190.60	1.720	
10,300.0	6,975.0	10,262.0	6,975.5	98.7	98.2	-90.00	557.6	-3,463.9	327.9	131.8	196.13	1.672	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 1-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	6,975.0	10,362.0	6,975.5	101.5	100.9	-90.00	558.1	-3,563.9	327.9	126.2	201.67	1.626		
10,500.0	6,975.0	10,462.0	6,975.5	104.2	103.7	-90.00	558.6	-3,663.9	327.9	120.7	207.21	1.582		
10,600.0	6,975.0	10,562.0	6,975.5	107.0	106.5	-90.00	559.2	-3,763.9	327.9	115.1	212.76	1.541		
10,700.0	6,975.0	10,662.0	6,975.5	109.7	109.2	-90.00	559.7	-3,863.9	327.9	109.6	218.31	1.502		
10,800.0	6,975.0	10,762.0	6,975.5	112.5	112.0	-90.00	560.2	-3,963.9	327.9	104.0	223.87	1.465 Level 3		
10,900.0	6,975.0	10,862.0	6,975.5	115.3	114.8	-90.00	560.7	-4,063.9	327.9	98.5	229.42	1.429 Level 3		
11,000.0	6,975.0	10,962.0	6,975.5	118.0	117.6	-90.00	561.3	-4,163.9	327.9	92.9	234.98	1.395 Level 3		
11,100.0	6,975.0	11,062.0	6,975.5	120.8	120.4	-90.00	561.8	-4,263.9	327.9	87.3	240.55	1.363 Level 3		
11,200.0	6,975.0	11,162.0	6,975.5	123.6	123.1	-90.00	562.3	-4,363.9	327.9	81.8	246.11	1.332 Level 3		
11,300.0	6,975.0	11,262.0	6,975.5	126.4	125.9	-90.00	562.8	-4,463.9	327.9	76.2	251.68	1.303 Level 3		
11,400.0	6,975.0	11,362.0	6,975.5	129.1	128.7	-90.00	563.4	-4,563.9	327.9	70.6	257.25	1.275 Level 3		
11,500.0	6,975.0	11,462.0	6,975.5	131.9	131.5	-90.00	563.9	-4,663.9	327.9	65.1	262.82	1.248 Level 2		
11,600.0	6,975.0	11,562.0	6,975.5	134.7	134.3	-90.00	564.4	-4,763.9	327.9	59.5	268.40	1.222 Level 2		
11,700.0	6,975.0	11,662.0	6,975.5	137.5	137.0	-90.00	564.9	-4,863.9	327.9	53.9	273.97	1.197 Level 2		
11,800.0	6,975.0	11,762.0	6,975.5	140.2	139.8	-90.00	565.4	-4,963.9	327.9	48.3	279.55	1.173 Level 2		
11,900.0	6,975.0	11,862.0	6,975.5	143.0	142.6	-90.00	566.0	-5,063.9	327.9	42.8	285.13	1.150 Level 2		
12,000.0	6,975.0	11,962.0	6,975.5	145.8	145.4	-90.00	566.5	-5,163.9	327.9	37.2	290.71	1.128 Level 2		
12,100.0	6,975.0	12,062.0	6,975.5	148.6	148.2	-90.00	567.0	-5,263.9	327.9	31.6	296.30	1.107 Level 2		
12,200.0	6,975.0	12,162.0	6,975.5	151.4	151.0	-90.00	567.5	-5,363.9	327.9	26.0	301.88	1.086 Level 2		
12,300.0	6,975.0	12,262.0	6,975.5	154.2	153.8	-90.00	568.1	-5,463.9	327.9	20.4	307.47	1.066 Level 2		
12,400.0	6,975.0	12,362.0	6,975.5	156.9	156.6	-90.00	568.6	-5,563.9	327.9	14.8	313.05	1.047 Level 2		
12,500.0	6,975.0	12,462.0	6,975.5	159.7	159.4	-90.00	569.1	-5,663.9	327.9	9.3	318.64	1.029 Level 2		
12,600.0	6,975.0	12,562.0	6,975.5	162.5	162.2	-90.00	569.6	-5,763.9	327.9	3.7	324.23	1.011 Level 2		
12,700.0	6,975.0	12,662.0	6,975.5	165.3	165.0	-90.00	570.2	-5,863.9	327.9	-1.9	329.82	0.994 Level 1		
12,800.0	6,975.0	12,762.0	6,975.5	168.1	167.7	-90.00	570.7	-5,963.9	327.9	-7.5	335.41	0.978 Level 1		
12,900.0	6,975.0	12,862.0	6,975.5	170.9	170.5	-90.00	571.2	-6,063.9	327.9	-13.1	341.00	0.962 Level 1		
13,000.0	6,975.0	12,962.0	6,975.5	173.7	173.3	-90.00	571.7	-6,163.9	327.9	-18.7	346.59	0.946 Level 1		
13,100.0	6,975.0	13,062.0	6,975.5	176.5	176.1	-90.00	572.3	-6,263.9	327.9	-24.3	352.19	0.931 Level 1		
13,200.0	6,975.0	13,162.0	6,975.5	179.3	178.9	-90.00	572.8	-6,363.9	327.9	-29.9	357.78	0.916 Level 1		
13,300.0	6,975.0	13,262.0	6,975.5	182.1	181.7	-90.00	573.3	-6,463.9	327.9	-35.5	363.38	0.902 Level 1		
13,400.0	6,975.0	13,362.0	6,975.5	184.9	184.5	-90.00	573.8	-6,563.9	327.9	-41.1	368.97	0.889 Level 1		
13,500.0	6,975.0	13,462.0	6,975.5	187.6	187.3	-90.00	574.4	-6,663.9	327.9	-46.7	374.57	0.875 Level 1		
13,600.0	6,975.0	13,562.0	6,975.5	190.4	190.1	-90.00	574.9	-6,763.9	327.9	-52.3	380.17	0.863 Level 1		
13,700.0	6,975.0	13,662.0	6,975.5	193.2	192.9	-90.00	575.4	-6,863.9	327.9	-57.9	385.76	0.850 Level 1		
13,800.0	6,975.0	13,762.0	6,975.5	196.0	195.7	-90.00	575.9	-6,963.9	327.9	-63.5	391.36	0.838 Level 1		
13,900.0	6,975.0	13,862.0	6,975.5	198.8	198.5	-90.00	576.5	-7,063.9	327.9	-69.1	396.96	0.826 Level 1		
14,000.0	6,975.0	13,962.0	6,975.5	201.6	201.3	-90.00	577.0	-7,163.9	327.9	-74.7	402.56	0.815 Level 1		
14,100.0	6,975.0	14,062.0	6,975.5	204.4	204.1	-90.00	577.5	-7,263.9	327.9	-80.3	408.16	0.803 Level 1		
14,200.0	6,975.0	14,162.0	6,975.5	207.2	206.9	-90.00	578.0	-7,363.9	327.9	-85.9	413.76	0.792 Level 1		
14,300.0	6,975.0	14,262.0	6,975.5	210.0	209.7	-90.00	578.6	-7,463.9	327.9	-91.5	419.36	0.782 Level 1		
14,400.0	6,975.0	14,362.0	6,975.5	212.8	212.5	-90.00	579.1	-7,563.9	327.9	-97.1	424.97	0.772 Level 1		
14,500.0	6,975.0	14,462.0	6,975.5	215.6	215.3	-90.00	579.6	-7,663.9	327.9	-102.7	430.57	0.762 Level 1		
14,600.0	6,975.0	14,562.0	6,975.5	218.4	218.1	-90.00	580.1	-7,763.9	327.9	-108.3	436.17	0.752 Level 1		
14,700.0	6,975.0	14,662.0	6,975.5	221.2	220.9	-90.00	580.7	-7,863.9	327.9	-113.9	441.78	0.742 Level 1		
14,800.0	6,975.0	14,762.0	6,975.5	224.0	223.7	-90.00	581.2	-7,963.9	327.9	-119.5	447.38	0.733 Level 1		
14,900.0	6,975.0	14,862.0	6,975.5	226.8	226.5	-90.00	581.7	-8,063.9	327.9	-125.1	452.98	0.724 Level 1		
15,000.0	6,975.0	14,962.0	6,975.5	229.6	229.3	-90.00	582.2	-8,163.9	327.9	-130.7	458.59	0.715 Level 1		
15,100.0	6,975.0	15,062.0	6,975.5	232.4	232.1	-90.00	582.8	-8,263.9	327.9	-136.3	464.19	0.706 Level 1		
15,200.0	6,975.0	15,162.0	6,975.5	235.2	234.9	-90.00	583.3	-8,363.9	327.9	-141.9	469.80	0.698 Level 1		
15,300.0	6,975.0	15,262.0	6,975.5	238.0	237.7	-90.00	583.8	-8,463.9	327.9	-147.5	475.40	0.690 Level 1		
15,400.0	6,975.0	15,362.0	6,975.5	240.8	240.5	-90.00	584.3	-8,563.9	327.9	-153.1	481.01	0.682 Level 1		
15,500.0	6,975.0	15,462.0	6,975.5	243.6	243.3	-90.00	584.8	-8,663.9	327.9	-158.7	486.61	0.674 Level 1		

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Diamond Valley East #8 - Wellbore #1 - Plan #1 (6-23-1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 1-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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	Warning
15,600.0	6,975.0	15,562.0	6,975.5	246.4	246.1	-90.00	585.4	-8,763.9	327.9	-164.3	492.22	0.666	Level 1
15,700.0	6,975.0	15,662.0	6,975.5	249.2	248.9	-90.00	585.9	-8,863.9	327.9	-169.9	497.83	0.659	Level 1
15,800.0	6,975.0	15,762.0	6,975.5	252.0	251.7	-90.00	586.4	-8,963.9	327.9	-175.5	503.43	0.651	Level 1
15,900.0	6,975.0	15,862.0	6,975.5	254.8	254.5	-90.00	586.9	-9,063.9	327.9	-181.1	509.04	0.644	Level 1
16,000.0	6,975.0	15,962.0	6,975.5	257.6	257.3	-90.00	587.5	-9,163.9	327.9	-186.8	514.65	0.637	Level 1
16,100.0	6,975.0	16,062.0	6,975.5	260.4	260.1	-90.00	588.0	-9,263.9	327.9	-192.4	520.26	0.630	Level 1
16,200.0	6,975.0	16,162.0	6,975.5	263.2	262.9	-90.00	588.5	-9,363.9	327.9	-198.0	525.87	0.624	Level 1
16,300.0	6,975.0	16,262.0	6,975.5	266.0	265.7	-90.00	589.0	-9,463.9	327.9	-203.6	531.47	0.617	Level 1
16,400.0	6,975.0	16,362.0	6,975.5	268.8	268.5	-90.00	589.6	-9,563.9	327.9	-209.2	537.08	0.611	Level 1
16,500.0	6,975.0	16,462.0	6,975.5	271.6	271.4	-90.00	590.1	-9,663.9	327.9	-214.8	542.69	0.604	Level 1
16,600.0	6,975.0	16,562.0	6,975.5	274.4	274.2	-90.00	590.6	-9,763.9	327.9	-220.4	548.30	0.598	Level 1
16,700.0	6,975.0	16,662.0	6,975.5	277.2	277.0	-90.00	591.1	-9,863.9	327.9	-226.0	553.91	0.592	Level 1
16,800.0	6,975.0	16,762.0	6,975.5	280.0	279.8	-90.00	591.7	-9,963.9	327.9	-231.6	559.52	0.586	Level 1
16,900.0	6,975.0	16,862.0	6,975.5	282.8	282.0	-90.00	592.2	-10,063.9	327.9	-236.6	564.51	0.581	Level 1
16,912.6	6,975.0	16,874.6	6,975.5	283.2	282.2	-90.00	592.3	-10,076.5	327.9	-237.2	565.10	0.580	Level 1, ES, SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 7315-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	
2,000.0	1,991.8	1,967.8	1,967.8	4.8	39.4	23.83	962.9	531.4	990.2	946.8	43.47	22.778	
2,100.0	2,090.7	2,066.7	2,066.7	5.2	41.3	24.19	962.9	531.4	976.4	930.7	45.69	21.370	
2,200.0	2,189.5	2,165.5	2,165.5	5.5	43.3	24.56	962.9	531.4	962.6	914.7	47.91	20.091	
2,300.0	2,288.4	2,264.4	2,264.4	5.8	45.3	24.94	962.9	531.4	948.8	898.7	50.13	18.926	
2,400.0	2,387.2	2,363.2	2,363.2	6.1	47.3	25.33	962.9	531.4	935.1	882.7	52.36	17.859	
2,500.0	2,486.1	2,462.1	2,462.1	6.5	49.2	25.73	962.9	531.4	921.4	866.8	54.59	16.880	
2,600.0	2,584.9	2,560.9	2,560.9	6.8	51.2	26.14	962.9	531.4	907.8	850.9	56.82	15.977	
2,700.0	2,683.8	2,659.8	2,659.8	7.2	53.2	26.57	962.9	531.4	894.2	835.1	59.05	15.143	
2,800.0	2,782.6	2,758.6	2,758.6	7.5	55.2	27.01	962.9	531.4	880.6	819.4	61.29	14.369	
2,900.0	2,881.5	2,857.5	2,857.5	7.8	57.1	27.46	962.9	531.4	867.2	803.6	63.52	13.651	
3,000.0	2,980.3	2,956.3	2,956.3	8.2	59.1	27.93	962.9	531.4	853.7	788.0	65.77	12.981	
3,100.0	3,079.2	3,055.2	3,055.2	8.5	61.1	28.41	962.9	531.4	840.4	772.3	68.01	12.356	
3,200.0	3,178.0	3,154.0	3,154.0	8.9	63.1	28.91	962.9	531.4	827.0	756.8	70.26	11.772	
3,300.0	3,276.9	3,252.9	3,252.9	9.2	65.1	29.42	962.9	531.4	813.8	741.3	72.51	11.223	
3,400.0	3,375.7	3,351.7	3,351.7	9.6	67.0	29.95	962.9	531.4	800.6	725.9	74.76	10.709	
3,500.0	3,474.6	3,450.6	3,450.6	9.9	69.0	30.50	962.9	531.4	787.5	710.5	77.02	10.225	
3,600.0	3,573.4	3,549.4	3,549.4	10.3	71.0	31.06	962.9	531.4	774.5	695.2	79.28	9.769	
3,700.0	3,672.3	3,648.3	3,648.3	10.6	73.0	31.65	962.9	531.4	761.5	680.0	81.54	9.339	
3,800.0	3,771.1	3,747.1	3,747.1	11.0	74.9	32.25	962.9	531.4	748.6	664.8	83.81	8.932	
3,900.0	3,870.0	3,846.0	3,846.0	11.3	76.9	32.88	962.9	531.4	735.8	649.7	86.08	8.548	
4,000.0	3,968.8	3,944.8	3,944.8	11.7	78.9	33.53	962.9	531.4	723.1	634.8	88.36	8.184	
4,100.0	4,067.7	4,043.7	4,043.7	12.0	80.9	34.20	962.9	531.4	710.5	619.9	90.64	7.839	
4,200.0	4,166.5	4,142.5	4,142.5	12.4	82.9	34.90	962.9	531.4	698.0	605.1	92.93	7.511	
4,300.0	4,265.4	4,241.4	4,241.4	12.7	84.8	35.62	962.9	531.4	685.6	590.4	95.22	7.200	
4,400.0	4,364.2	4,340.2	4,340.2	13.1	86.8	36.36	962.9	531.4	673.3	575.8	97.51	6.905	
4,500.0	4,463.0	4,439.0	4,439.0	13.4	88.8	37.14	962.9	531.4	661.2	561.3	99.82	6.624	
4,600.0	4,561.9	4,537.9	4,537.9	13.8	90.8	37.94	962.9	531.4	649.1	547.0	102.12	6.356	
4,700.0	4,660.7	4,636.7	4,636.7	14.1	92.7	38.77	962.9	531.4	637.2	532.7	104.44	6.101	
4,800.0	4,759.6	4,735.6	4,735.6	14.5	94.7	39.64	962.9	531.4	625.4	518.7	106.76	5.858	
4,900.0	4,858.4	4,834.4	4,834.4	14.8	96.7	40.53	962.9	531.4	613.8	504.7	109.08	5.627	
5,000.0	4,957.3	4,933.3	4,933.3	15.2	98.7	41.47	962.9	531.4	602.3	490.9	111.42	5.406	
5,100.0	5,056.1	5,032.1	5,032.1	15.5	100.6	42.43	962.9	531.4	591.0	477.2	113.76	5.195	
5,200.0	5,155.0	5,131.0	5,131.0	15.9	102.6	43.43	962.9	531.4	579.9	463.7	116.11	4.994	
5,300.0	5,253.8	5,229.8	5,229.8	16.2	104.6	44.48	962.9	531.4	568.9	450.4	118.46	4.802	
5,400.0	5,352.7	5,328.7	5,328.7	16.6	106.6	45.56	962.9	531.4	558.1	437.3	120.83	4.619	
5,500.0	5,451.5	5,427.5	5,427.5	17.0	108.6	46.68	962.9	531.4	547.6	424.4	123.20	4.445	
5,600.0	5,550.4	5,526.4	5,526.4	17.3	110.5	47.85	962.9	531.4	537.3	411.7	125.58	4.278	
5,700.0	5,649.2	5,625.2	5,625.2	17.7	112.5	49.06	962.9	531.4	527.2	399.2	127.97	4.120	
5,800.0	5,748.1	5,724.1	5,724.1	18.0	114.5	50.32	962.9	531.4	517.3	386.9	130.36	3.968	
5,900.0	5,846.9	5,822.9	5,822.9	18.4	116.5	51.62	962.9	531.4	507.7	374.9	132.77	3.824	
6,000.0	5,945.8	5,921.8	5,921.8	18.7	118.4	52.97	962.9	531.4	498.4	363.2	135.18	3.687	
6,100.0	6,044.6	6,020.6	6,020.6	19.1	120.4	54.38	962.9	531.4	489.4	351.8	137.61	3.556	
6,200.0	6,143.5	6,119.5	6,119.5	19.4	122.4	55.83	962.9	531.4	480.6	340.6	140.04	3.432	
6,300.0	6,242.3	6,218.3	6,218.3	19.8	124.4	57.34	962.9	531.4	472.2	329.8	142.47	3.315	
6,369.0	6,310.5	6,286.5	6,286.5	20.0	125.7	90.00	962.9	531.4	469.4	324.9	144.52	3.248 CC	
6,400.0	6,341.1	6,317.1	6,317.1	20.1	126.3	101.74	962.9	531.4	469.4	324.3	145.12	3.235 ES, SF	
6,500.0	6,438.3	6,414.3	6,414.3	20.4	128.3	127.13	962.9	531.4	480.0	334.7	145.35	3.302	
6,600.0	6,532.3	6,508.3	6,508.3	20.7	130.2	139.24	962.9	531.4	504.4	361.7	142.76	3.534	
6,700.0	6,621.1	6,597.1	6,597.1	20.9	131.9	146.29	962.9	531.4	542.6	405.3	137.28	3.953	
6,800.0	6,703.0	6,679.0	6,679.0	21.2	133.6	150.86	962.9	531.4	593.9	464.8	129.05	4.602	
6,900.0	6,776.4	6,752.4	6,752.4	21.5	135.0	153.85	962.9	531.4	657.2	538.7	118.51	5.546	
7,000.0	6,839.9	6,815.9	6,815.9	21.9	136.3	155.56	962.9	531.4	731.1	624.7	106.45	6.868	

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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Diamond Valley East Pad Sec.23-T6N-R67W - Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 7315-UNKNOWN												<b>Offset Well Error:</b>	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	
7,100.0	6,892.2	6,868.2	6,868.2	22.4	137.4	155.97	962.9	531.4	814.0	719.6	94.40	8.623	
7,200.0	6,932.3	6,908.3	6,908.3	23.2	138.2	154.51	962.9	531.4	904.0	818.4	85.64	10.556	
7,300.0	6,959.6	6,935.6	6,935.6	24.3	138.7	148.97	962.9	531.4	999.2	910.7	88.54	11.285	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 7232-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		
0.0	0.0	0.0	0.0	0.0	0.0	122.90	-315.9	488.3	582.1					
100.0	100.0	76.0	76.0	0.1	1.5	122.90	-315.9	488.3	581.6	579.9	1.63	356.226		
200.0	200.0	176.0	176.0	0.3	3.5	122.90	-315.9	488.3	581.6	577.7	3.86	150.769		
300.0	300.0	276.0	276.0	0.6	5.5	122.90	-315.9	488.3	581.6	575.5	6.08	95.620		
400.0	400.0	376.0	376.0	0.8	7.5	122.90	-315.9	488.3	581.6	573.3	8.31	70.010		
500.0	500.0	476.0	476.0	1.0	9.5	122.90	-315.9	488.3	581.6	571.0	10.53	55.221		
600.0	600.0	576.0	576.0	1.2	11.5	122.90	-315.9	488.3	581.6	568.8	12.76	45.590		
700.0	700.0	676.0	676.0	1.5	13.5	122.90	-315.9	488.3	581.6	566.6	14.98	38.820		
800.0	800.0	776.0	776.0	1.7	15.5	122.90	-315.9	488.3	581.6	564.4	17.21	33.800		
900.0	900.0	876.0	876.0	1.9	17.5	122.90	-315.9	488.3	581.6	562.1	19.43	29.930		
1,000.0	1,000.0	976.0	976.0	2.1	19.5	122.90	-315.9	488.3	581.6	559.9	21.66	26.856 CC		
1,100.0	1,100.0	1,076.0	1,076.0	2.4	21.5	115.26	-315.9	488.3	582.3	558.4	23.88	24.389 ES		
1,200.0	1,199.8	1,175.8	1,175.8	2.6	23.5	115.68	-315.9	488.3	584.6	558.5	26.09	22.407		
1,300.0	1,299.5	1,275.5	1,275.5	2.8	25.5	116.38	-315.9	488.3	588.4	560.1	28.29	20.797		
1,400.0	1,398.7	1,374.7	1,374.7	3.1	27.5	117.32	-315.9	488.3	593.9	563.5	30.49	19.481		
1,500.0	1,497.6	1,473.6	1,473.6	3.3	29.5	118.54	-315.9	488.3	601.0	568.3	32.70	18.378		
1,600.0	1,596.4	1,572.4	1,572.4	3.6	31.4	119.78	-315.9	488.3	608.4	573.5	34.94	17.415		
1,700.0	1,695.3	1,671.3	1,671.3	3.9	33.4	120.99	-315.9	488.3	616.1	579.0	37.18	16.573		
1,800.0	1,794.1	1,770.1	1,770.1	4.2	35.4	122.17	-315.9	488.3	624.1	584.7	39.42	15.832		
1,900.0	1,893.0	1,869.0	1,869.0	4.5	37.4	123.32	-315.9	488.3	632.4	590.7	41.67	15.175		
2,000.0	1,991.8	1,967.8	1,967.8	4.8	39.4	124.44	-315.9	488.3	640.9	597.0	43.92	14.591		
2,100.0	2,090.7	2,066.7	2,066.7	5.2	41.3	125.53	-315.9	488.3	649.6	603.5	46.17	14.069		
2,200.0	2,189.5	2,165.5	2,165.5	5.5	43.3	126.60	-315.9	488.3	658.6	610.2	48.42	13.601		
2,300.0	2,288.4	2,264.4	2,264.4	5.8	45.3	127.63	-315.9	488.3	667.8	617.1	50.67	13.179		
2,400.0	2,387.2	2,363.2	2,363.2	6.1	47.3	128.64	-315.9	488.3	677.2	624.3	52.92	12.797		
2,500.0	2,486.1	2,462.1	2,462.1	6.5	49.2	129.62	-315.9	488.3	686.8	631.6	55.17	12.450		
2,600.0	2,584.9	2,560.9	2,560.9	6.8	51.2	130.57	-315.9	488.3	696.6	639.2	57.41	12.134		
2,700.0	2,683.8	2,659.8	2,659.8	7.2	53.2	131.49	-315.9	488.3	706.6	647.0	59.66	11.845		
2,800.0	2,782.6	2,758.6	2,758.6	7.5	55.2	132.39	-315.9	488.3	716.8	654.9	61.90	11.581		
2,900.0	2,881.5	2,857.5	2,857.5	7.8	57.1	133.27	-315.9	488.3	727.2	663.0	64.14	11.338		
3,000.0	2,980.3	2,956.3	2,956.3	8.2	59.1	134.12	-315.9	488.3	737.7	671.3	66.37	11.114		
3,100.0	3,079.2	3,055.2	3,055.2	8.5	61.1	134.95	-315.9	488.3	748.3	679.7	68.61	10.907		
3,200.0	3,178.0	3,154.0	3,154.0	8.9	63.1	135.75	-315.9	488.3	759.2	688.3	70.84	10.716		
3,300.0	3,276.9	3,252.9	3,252.9	9.2	65.1	136.53	-315.9	488.3	770.1	697.1	73.07	10.539		
3,400.0	3,375.7	3,351.7	3,351.7	9.6	67.0	137.29	-315.9	488.3	781.2	705.9	75.30	10.375		
3,500.0	3,474.6	3,450.6	3,450.6	9.9	69.0	138.03	-315.9	488.3	792.5	715.0	77.53	10.222		
3,600.0	3,573.4	3,549.4	3,549.4	10.3	71.0	138.75	-315.9	488.3	803.9	724.1	79.76	10.079		
3,700.0	3,672.3	3,648.3	3,648.3	10.6	73.0	139.44	-315.9	488.3	815.3	733.4	81.98	9.946		
3,800.0	3,771.1	3,747.1	3,747.1	11.0	74.9	140.12	-315.9	488.3	827.0	742.8	84.20	9.821		
3,900.0	3,870.0	3,846.0	3,846.0	11.3	76.9	140.78	-315.9	488.3	838.7	752.3	86.42	9.704		
4,000.0	3,968.8	3,944.8	3,944.8	11.7	78.9	141.42	-315.9	488.3	850.5	761.9	88.64	9.595		
4,100.0	4,067.7	4,043.7	4,043.7	12.0	80.9	142.05	-315.9	488.3	862.4	771.6	90.86	9.492		
4,200.0	4,166.5	4,142.5	4,142.5	12.4	82.9	142.66	-315.9	488.3	874.5	781.4	93.08	9.395		
4,300.0	4,265.4	4,241.4	4,241.4	12.7	84.8	143.25	-315.9	488.3	886.6	791.3	95.29	9.304		
4,400.0	4,364.2	4,340.2	4,340.2	13.1	86.8	143.82	-315.9	488.3	898.8	801.3	97.51	9.218		
4,500.0	4,463.0	4,439.0	4,439.0	13.4	88.8	144.38	-315.9	488.3	911.1	811.4	99.72	9.137		
4,600.0	4,561.9	4,537.9	4,537.9	13.8	90.8	144.92	-315.9	488.3	923.5	821.6	101.93	9.060		
4,700.0	4,660.7	4,636.7	4,636.7	14.1	92.7	145.46	-315.9	488.3	936.0	831.8	104.14	8.987		
4,800.0	4,759.6	4,735.6	4,735.6	14.5	94.7	145.97	-315.9	488.3	948.5	842.2	106.35	8.918		
4,900.0	4,858.4	4,834.4	4,834.4	14.8	96.7	146.47	-315.9	488.3	961.1	852.6	108.56	8.853		
5,000.0	4,957.3	4,933.3	4,933.3	15.2	98.7	146.96	-315.9	488.3	973.8	863.1	110.77	8.791		
5,100.0	5,056.1	5,032.1	5,032.1	15.5	100.6	147.44	-315.9	488.3	986.6	873.6	112.98	8.733		

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

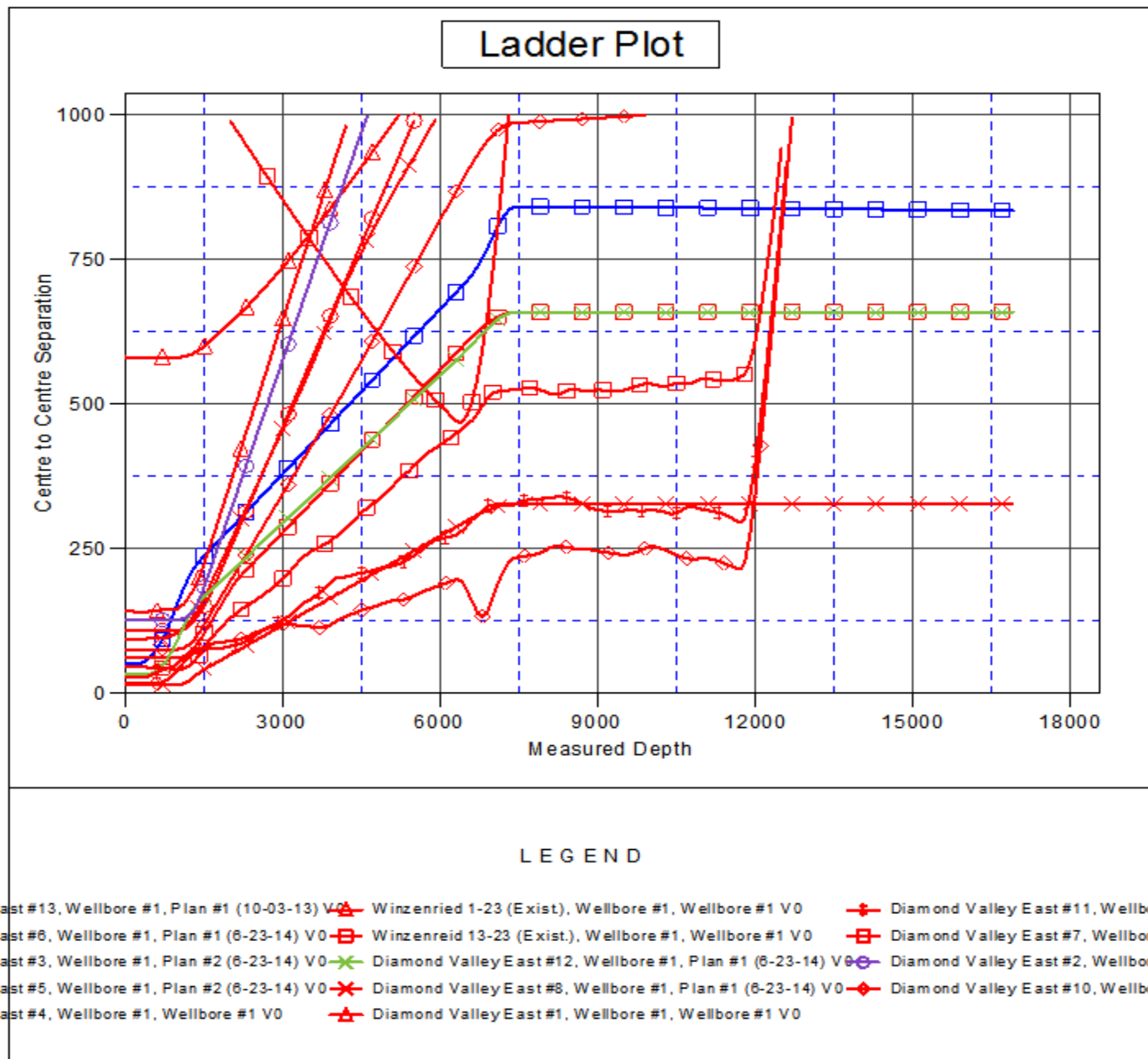


<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Diamond Valley East Pad Sec.23-T6N-R67W - Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 7232-UNKNOWN													
Reference		Offset		Semi Major Axis			Distance						
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	Warning
5,200.0	5,155.0	5,131.0	5,131.0	15.9	102.6	147.91	-315.9	488.3	999.4	884.2	115.19	8.677 SF	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4791.0ft (Frontier 10 RKB - Coordinates are relative to: Diamond Valley East #9  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.41°



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #9
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Reference Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Diamond Valley East #9	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (6-23-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4791.0ft (Frontier 10 RKB - Coordinates are relative to: Diamond Valley East #9  
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