

# Extraction Oil & Gas

Well Name: **Diamond Valley East #12**

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

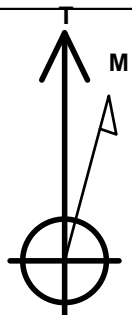
Ground Elevation: 4769.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1413912.09	3175340.01	40.467880	-104.869800	

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

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 976'FSL, 155'FWL, SEC.23	1.0	0.0	0.0	Point
BHL 2475'FSL, 460'FWL, SEC.21	6981.0	1546.8	-10074.5	Point
T2 2475'FSL, 460'FEL, SEC.22	6981.0	1497.4	-609.3	Point



Azimuths to True North  
Magnetic North: 8.52°

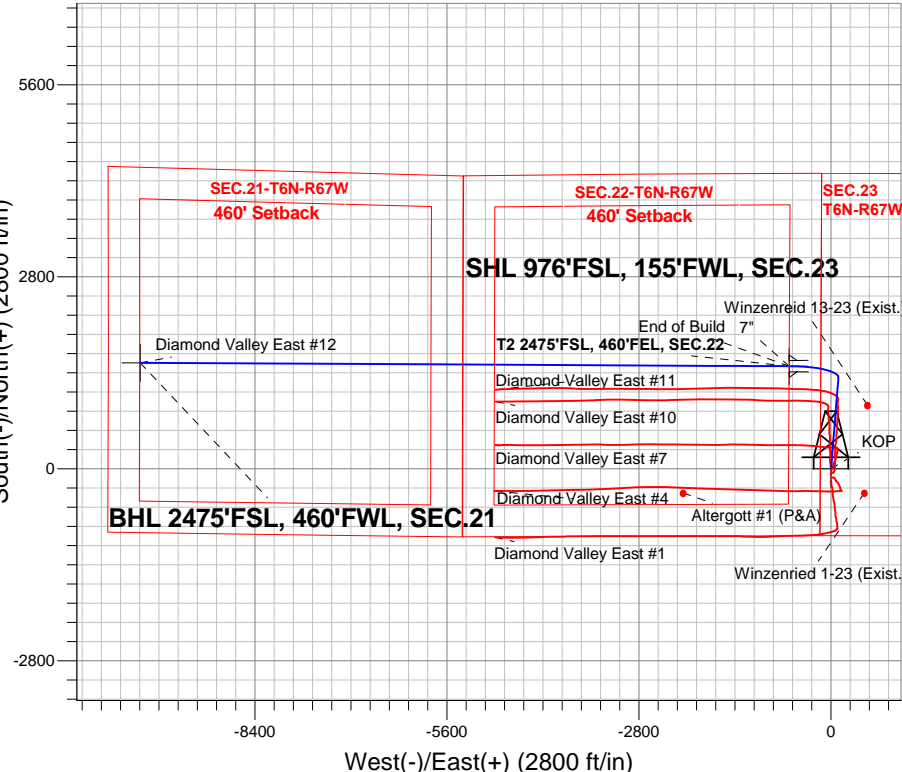
Magnetic Field  
Strength: 52834.9nT  
Dip Angle: 66.98°  
Date: 7/3/2014  
Model: IGRF2010

Diamond Valley East Pad Sec.23-T6N-R67W  
Diamond Valley East #12  
Plan #1 (6-23-14)  
11:19, July 03 2014

## ANNOTATIONS

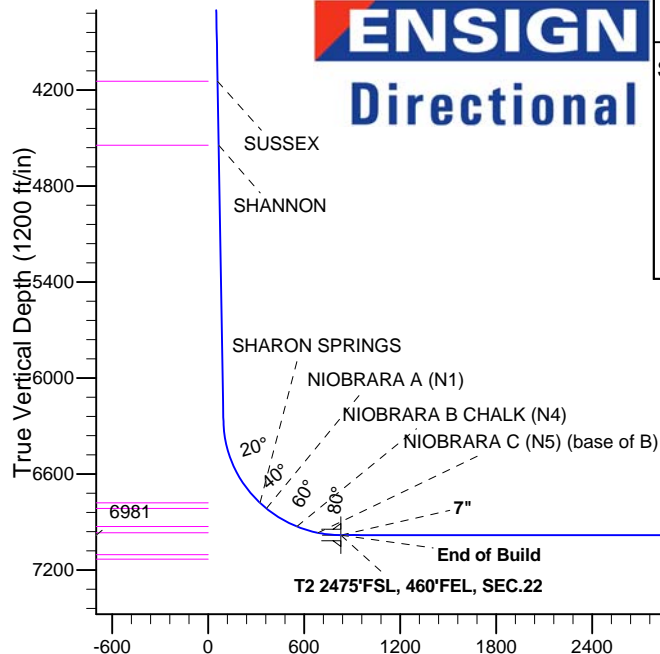
TVD	MD	Annotation
400.0	400.0	KOP
6981.0	7565.3	End of Build

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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1077.7	13.55	4.61	1071.4	79.5	6.4	2.00	4.61	5.7	
4	6426.3	13.55	4.61	6271.0	1329.0	107.3	0.00	0.00	95.7	
5	7565.3	90.00	269.82	6981.0	1497.4	-609.3	8.00	-94.66	829.5	T2 2475'FSL, 460'FEL, SEC.22
6	7589.3	90.00	270.30	6981.0	1497.4	-633.3	2.00	90.00	853.2	
7	17030.6	90.00	270.30	6981.0	1546.8	-10074.5	0.00	0.00	10192.6	BHL 2475'FSL, 460'FWL, SEC.21



Vertical Section at 278.73° (1200 ft/in)

BHL 2475'FSL, 460'FWL, SEC.21



## **Extraction Oil & Gas**

**SEC.23-T6N-R67W**

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

**Diamond Valley East #12**

**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 #12
<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 #12	<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

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

<b>Well</b>	Diamond Valley East #12			
<b>Well Position</b>	<b>+N/-S</b>	142.1 ft	<b>Northing:</b>	1,413,912.09 ft
	<b>+E/-W</b>	2.8 ft	<b>Easting:</b>	3,175,340.01 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	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	278.73

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,077.7	13.55	4.61	1,071.4	79.5	6.4	2.00	2.00	0.00	4.61	
6,426.3	13.55	4.61	6,271.0	1,329.0	107.3	0.00	0.00	0.00	0.00	
7,565.3	90.00	269.82	6,981.0	1,497.4	-609.3	8.00	6.71	-8.32	-94.66	T2 2475'FSL, 460'F
7,589.3	90.00	270.30	6,981.0	1,497.4	-633.3	2.00	0.00	2.00	90.00	
17,030.6	90.00	270.30	6,981.0	1,546.8	-10,074.5	0.00	0.00	0.00	0.00	BHL 2475'FSL, 460

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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 #12	<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
<b>KOP</b>									
500.0	2.00	4.61	500.0	1.7	0.1	0.1	2.00	2.00	0.00
600.0	4.00	4.61	599.8	7.0	0.6	0.5	2.00	2.00	0.00
700.0	6.00	4.61	699.5	15.6	1.3	1.1	2.00	2.00	0.00
800.0	8.00	4.61	798.7	27.8	2.2	2.0	2.00	2.00	0.00
900.0	10.00	4.61	897.5	43.4	3.5	3.1	2.00	2.00	0.00
1,000.0	12.00	4.61	995.6	62.4	5.0	4.5	2.00	2.00	0.00
1,077.7	13.55	4.61	1,071.4	79.5	6.4	5.7	2.00	2.00	0.00
1,100.0	13.55	4.61	1,093.1	84.7	6.8	6.1	0.00	0.00	0.00
1,200.0	13.55	4.61	1,190.3	108.1	8.7	7.8	0.00	0.00	0.00
1,300.0	13.55	4.61	1,287.5	131.5	10.6	9.5	0.00	0.00	0.00
1,400.0	13.55	4.61	1,384.7	154.8	12.5	11.1	0.00	0.00	0.00
1,500.0	13.55	4.61	1,481.9	178.2	14.4	12.8	0.00	0.00	0.00
1,600.0	13.55	4.61	1,579.1	201.5	16.3	14.5	0.00	0.00	0.00
1,700.0	13.55	4.61	1,676.4	224.9	18.2	16.2	0.00	0.00	0.00
1,800.0	13.55	4.61	1,773.6	248.3	20.0	17.9	0.00	0.00	0.00
1,900.0	13.55	4.61	1,870.8	271.6	21.9	19.5	0.00	0.00	0.00
2,000.0	13.55	4.61	1,968.0	295.0	23.8	21.2	0.00	0.00	0.00
2,100.0	13.55	4.61	2,065.2	318.4	25.7	22.9	0.00	0.00	0.00
2,200.0	13.55	4.61	2,162.4	341.7	27.6	24.6	0.00	0.00	0.00
2,300.0	13.55	4.61	2,259.7	365.1	29.5	26.3	0.00	0.00	0.00
2,400.0	13.55	4.61	2,356.9	388.4	31.4	28.0	0.00	0.00	0.00
2,500.0	13.55	4.61	2,454.1	411.8	33.2	29.6	0.00	0.00	0.00
2,600.0	13.55	4.61	2,551.3	435.2	35.1	31.3	0.00	0.00	0.00
2,700.0	13.55	4.61	2,648.5	458.5	37.0	33.0	0.00	0.00	0.00
2,800.0	13.55	4.61	2,745.7	481.9	38.9	34.7	0.00	0.00	0.00
2,900.0	13.55	4.61	2,842.9	505.2	40.8	36.4	0.00	0.00	0.00
3,000.0	13.55	4.61	2,940.2	528.6	42.7	38.0	0.00	0.00	0.00
3,100.0	13.55	4.61	3,037.4	552.0	44.6	39.7	0.00	0.00	0.00
3,200.0	13.55	4.61	3,134.6	575.3	46.4	41.4	0.00	0.00	0.00
3,300.0	13.55	4.61	3,231.8	598.7	48.3	43.1	0.00	0.00	0.00
3,400.0	13.55	4.61	3,329.0	622.1	50.2	44.8	0.00	0.00	0.00
3,500.0	13.55	4.61	3,426.2	645.4	52.1	46.5	0.00	0.00	0.00
3,547.1	13.55	4.61	3,472.0	656.4	53.0	47.2	0.00	0.00	0.00
<b>PARKMAN</b>									
3,600.0	13.55	4.61	3,523.4	668.8	54.0	48.1	0.00	0.00	0.00
3,700.0	13.55	4.61	3,620.7	692.1	55.9	49.8	0.00	0.00	0.00
3,800.0	13.55	4.61	3,717.9	715.5	57.8	51.5	0.00	0.00	0.00
3,900.0	13.55	4.61	3,815.1	738.9	59.6	53.2	0.00	0.00	0.00
4,000.0	13.55	4.61	3,912.3	762.2	61.5	54.9	0.00	0.00	0.00
4,100.0	13.55	4.61	4,009.5	785.6	63.4	56.5	0.00	0.00	0.00
4,200.0	13.55	4.61	4,106.7	808.9	65.3	58.2	0.00	0.00	0.00
4,238.3	13.55	4.61	4,144.0	817.9	66.0	58.9	0.00	0.00	0.00
<b>SUSSEX</b>									
4,300.0	13.55	4.61	4,203.9	832.3	67.2	59.9	0.00	0.00	0.00
4,400.0	13.55	4.61	4,301.2	855.7	69.1	61.6	0.00	0.00	0.00
4,500.0	13.55	4.61	4,398.4	879.0	71.0	63.3	0.00	0.00	0.00
4,600.0	13.55	4.61	4,495.6	902.4	72.8	64.9	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 #12	<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)
4,649.8	13.55	4.61	4,544.0	914.0	73.8	65.8	0.00	0.00	0.00
<b>SHANNON</b>									
4,700.0	13.55	4.61	4,592.8	925.8	74.7	66.6	0.00	0.00	0.00
4,800.0	13.55	4.61	4,690.0	949.1	76.6	68.3	0.00	0.00	0.00
4,900.0	13.55	4.61	4,787.2	972.5	78.5	70.0	0.00	0.00	0.00
5,000.0	13.55	4.61	4,884.4	995.8	80.4	71.7	0.00	0.00	0.00
5,100.0	13.55	4.61	4,981.7	1,019.2	82.3	73.4	0.00	0.00	0.00
5,200.0	13.55	4.61	5,078.9	1,042.6	84.2	75.0	0.00	0.00	0.00
5,300.0	13.55	4.61	5,176.1	1,065.9	86.0	76.7	0.00	0.00	0.00
5,400.0	13.55	4.61	5,273.3	1,089.3	87.9	78.4	0.00	0.00	0.00
5,500.0	13.55	4.61	5,370.5	1,112.6	89.8	80.1	0.00	0.00	0.00
5,600.0	13.55	4.61	5,467.7	1,136.0	91.7	81.8	0.00	0.00	0.00
5,700.0	13.55	4.61	5,564.9	1,159.4	93.6	83.4	0.00	0.00	0.00
5,800.0	13.55	4.61	5,662.2	1,182.7	95.5	85.1	0.00	0.00	0.00
5,900.0	13.55	4.61	5,759.4	1,206.1	97.4	86.8	0.00	0.00	0.00
6,000.0	13.55	4.61	5,856.6	1,229.5	99.2	88.5	0.00	0.00	0.00
6,100.0	13.55	4.61	5,953.8	1,252.8	101.1	90.2	0.00	0.00	0.00
6,200.0	13.55	4.61	6,051.0	1,276.2	103.0	91.8	0.00	0.00	0.00
6,300.0	13.55	4.61	6,148.2	1,299.5	104.9	93.5	0.00	0.00	0.00
6,400.0	13.55	4.61	6,245.5	1,322.9	106.8	95.2	0.00	0.00	0.00
6,426.3	13.55	4.61	6,271.0	1,329.0	107.3	95.7	0.00	0.00	0.00
6,500.0	14.31	340.14	6,342.6	1,346.2	104.9	100.6	8.00	1.03	-33.19
6,600.0	18.51	315.67	6,438.6	1,369.3	89.6	119.3	8.00	4.20	-24.47
6,700.0	24.62	301.44	6,531.6	1,391.5	60.6	151.2	8.00	6.11	-14.23
6,800.0	31.54	292.86	6,619.9	1,412.6	18.7	195.9	8.00	6.92	-8.58
6,900.0	38.85	287.18	6,701.5	1,432.0	-35.4	252.4	8.00	7.31	-5.69
7,000.0	46.35	283.07	6,775.1	1,449.5	-100.8	319.6	8.00	7.50	-4.11
7,007.1	46.89	282.82	6,780.0	1,450.7	-105.8	324.7	8.00	7.58	-3.54
<b>SHARON SPRINGS</b>									
7,060.4	50.94	281.06	6,815.0	1,458.9	-145.1	364.8	8.00	7.61	-3.29
<b>NIOBRARA A (N1)</b>									
7,100.0	53.97	279.88	6,839.1	1,464.6	-176.0	396.2	8.00	7.64	-2.97
7,200.0	61.66	277.27	6,892.4	1,477.2	-259.6	480.8	8.00	7.69	-2.62
7,281.4	67.95	275.40	6,927.0	1,485.3	-332.7	554.3	8.00	7.73	-2.29
<b>NIOBRARA B CHALK (N4)</b>									
7,300.0	69.39	275.00	6,933.8	1,486.8	-350.0	571.6	8.00	7.74	-2.15
7,400.0	77.15	272.96	6,962.5	1,493.4	-445.5	667.0	8.00	7.76	-2.04
7,421.4	78.81	272.54	6,967.0	1,494.5	-466.4	687.8	8.00	7.77	-1.95
<b>NIOBRARA C (N5) (base of B)</b>									
7,500.0	84.92	271.04	6,978.1	1,496.9	-544.1	765.0	8.00	7.77	-1.91
7,565.3	90.00	269.82	6,981.0	1,497.4	-609.3	829.5	8.00	7.78	-1.87
<b>End of Build - 7"</b>									
7,589.3	90.00	270.30	6,981.0	1,497.4	-633.3	853.2	2.00	0.00	2.00
7,600.0	90.00	270.30	6,981.0	1,497.4	-644.0	863.8	0.00	0.00	0.00
7,700.0	90.00	270.30	6,981.0	1,498.0	-744.0	962.7	0.00	0.00	0.00
7,800.0	90.00	270.30	6,981.0	1,498.5	-844.0	1,061.7	0.00	0.00	0.00
7,900.0	90.00	270.30	6,981.0	1,499.0	-944.0	1,160.6	0.00	0.00	0.00
8,000.0	90.00	270.30	6,981.0	1,499.5	-1,044.0	1,259.5	0.00	0.00	0.00
8,100.0	90.00	270.30	6,981.0	1,500.1	-1,144.0	1,358.4	0.00	0.00	0.00
8,200.0	90.00	270.30	6,981.0	1,500.6	-1,244.0	1,457.3	0.00	0.00	0.00
8,300.0	90.00	270.30	6,981.0	1,501.1	-1,344.0	1,556.2	0.00	0.00	0.00
8,400.0	90.00	270.30	6,981.0	1,501.6	-1,444.0	1,655.2	0.00	0.00	0.00
8,500.0	90.00	270.30	6,981.0	1,502.2	-1,544.0	1,754.1	0.00	0.00	0.00

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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 #12	<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)	
8,600.0	90.00	270.30	6,981.0	1,502.7	-1,644.0	1,853.0	0.00	0.00	0.00	
8,700.0	90.00	270.30	6,981.0	1,503.2	-1,744.0	1,951.9	0.00	0.00	0.00	
8,800.0	90.00	270.30	6,981.0	1,503.7	-1,844.0	2,050.8	0.00	0.00	0.00	
8,900.0	90.00	270.30	6,981.0	1,504.2	-1,944.0	2,149.8	0.00	0.00	0.00	
9,000.0	90.00	270.30	6,981.0	1,504.8	-2,044.0	2,248.7	0.00	0.00	0.00	
9,100.0	90.00	270.30	6,981.0	1,505.3	-2,144.0	2,347.6	0.00	0.00	0.00	
9,200.0	90.00	270.30	6,981.0	1,505.8	-2,244.0	2,446.5	0.00	0.00	0.00	
9,300.0	90.00	270.30	6,981.0	1,506.3	-2,344.0	2,545.4	0.00	0.00	0.00	
9,400.0	90.00	270.30	6,981.0	1,506.9	-2,444.0	2,644.4	0.00	0.00	0.00	
9,500.0	90.00	270.30	6,981.0	1,507.4	-2,544.0	2,743.3	0.00	0.00	0.00	
9,600.0	90.00	270.30	6,981.0	1,507.9	-2,644.0	2,842.2	0.00	0.00	0.00	
9,700.0	90.00	270.30	6,981.0	1,508.4	-2,744.0	2,941.1	0.00	0.00	0.00	
9,800.0	90.00	270.30	6,981.0	1,509.0	-2,844.0	3,040.0	0.00	0.00	0.00	
9,900.0	90.00	270.30	6,981.0	1,509.5	-2,944.0	3,139.0	0.00	0.00	0.00	
10,000.0	90.00	270.30	6,981.0	1,510.0	-3,044.0	3,237.9	0.00	0.00	0.00	
10,100.0	90.00	270.30	6,981.0	1,510.5	-3,144.0	3,336.8	0.00	0.00	0.00	
10,200.0	90.00	270.30	6,981.0	1,511.0	-3,244.0	3,435.7	0.00	0.00	0.00	
10,300.0	90.00	270.30	6,981.0	1,511.6	-3,344.0	3,534.6	0.00	0.00	0.00	
10,400.0	90.00	270.30	6,981.0	1,512.1	-3,444.0	3,633.6	0.00	0.00	0.00	
10,500.0	90.00	270.30	6,981.0	1,512.6	-3,544.0	3,732.5	0.00	0.00	0.00	
10,600.0	90.00	270.30	6,981.0	1,513.1	-3,644.0	3,831.4	0.00	0.00	0.00	
10,700.0	90.00	270.30	6,981.0	1,513.7	-3,744.0	3,930.3	0.00	0.00	0.00	
10,800.0	90.00	270.30	6,981.0	1,514.2	-3,844.0	4,029.2	0.00	0.00	0.00	
10,900.0	90.00	270.30	6,981.0	1,514.7	-3,944.0	4,128.2	0.00	0.00	0.00	
11,000.0	90.00	270.30	6,981.0	1,515.2	-4,044.0	4,227.1	0.00	0.00	0.00	
11,100.0	90.00	270.30	6,981.0	1,515.8	-4,144.0	4,326.0	0.00	0.00	0.00	
11,200.0	90.00	270.30	6,981.0	1,516.3	-4,244.0	4,424.9	0.00	0.00	0.00	
11,300.0	90.00	270.30	6,981.0	1,516.8	-4,344.0	4,523.8	0.00	0.00	0.00	
11,400.0	90.00	270.30	6,981.0	1,517.3	-4,444.0	4,622.8	0.00	0.00	0.00	
11,500.0	90.00	270.30	6,981.0	1,517.8	-4,544.0	4,721.7	0.00	0.00	0.00	
11,600.0	90.00	270.30	6,981.0	1,518.4	-4,644.0	4,820.6	0.00	0.00	0.00	
11,700.0	90.00	270.30	6,981.0	1,518.9	-4,744.0	4,919.5	0.00	0.00	0.00	
11,800.0	90.00	270.30	6,981.0	1,519.4	-4,844.0	5,018.4	0.00	0.00	0.00	
11,900.0	90.00	270.30	6,981.0	1,519.9	-4,944.0	5,117.4	0.00	0.00	0.00	
12,000.0	90.00	270.30	6,981.0	1,520.5	-5,044.0	5,216.3	0.00	0.00	0.00	
12,100.0	90.00	270.30	6,981.0	1,521.0	-5,144.0	5,315.2	0.00	0.00	0.00	
12,200.0	90.00	270.30	6,981.0	1,521.5	-5,244.0	5,414.1	0.00	0.00	0.00	
12,300.0	90.00	270.30	6,981.0	1,522.0	-5,344.0	5,513.0	0.00	0.00	0.00	
12,400.0	90.00	270.30	6,981.0	1,522.6	-5,444.0	5,612.0	0.00	0.00	0.00	
12,500.0	90.00	270.30	6,981.0	1,523.1	-5,544.0	5,710.9	0.00	0.00	0.00	
12,600.0	90.00	270.30	6,981.0	1,523.6	-5,644.0	5,809.8	0.00	0.00	0.00	
12,700.0	90.00	270.30	6,981.0	1,524.1	-5,744.0	5,908.7	0.00	0.00	0.00	
12,800.0	90.00	270.30	6,981.0	1,524.6	-5,844.0	6,007.6	0.00	0.00	0.00	
12,900.0	90.00	270.30	6,981.0	1,525.2	-5,944.0	6,106.6	0.00	0.00	0.00	
13,000.0	90.00	270.30	6,981.0	1,525.7	-6,043.9	6,205.5	0.00	0.00	0.00	
13,100.0	90.00	270.30	6,981.0	1,526.2	-6,143.9	6,304.4	0.00	0.00	0.00	
13,200.0	90.00	270.30	6,981.0	1,526.7	-6,243.9	6,403.3	0.00	0.00	0.00	
13,300.0	90.00	270.30	6,981.0	1,527.3	-6,343.9	6,502.2	0.00	0.00	0.00	
13,400.0	90.00	270.30	6,981.0	1,527.8	-6,443.9	6,601.2	0.00	0.00	0.00	
13,500.0	90.00	270.30	6,981.0	1,528.3	-6,543.9	6,700.1	0.00	0.00	0.00	
13,600.0	90.00	270.30	6,981.0	1,528.8	-6,643.9	6,799.0	0.00	0.00	0.00	
13,700.0	90.00	270.30	6,981.0	1,529.4	-6,743.9	6,897.9	0.00	0.00	0.00	
13,800.0	90.00	270.30	6,981.0	1,529.9	-6,843.9	6,996.8	0.00	0.00	0.00	
13,900.0	90.00	270.30	6,981.0	1,530.4	-6,943.9	7,095.8	0.00	0.00	0.00	

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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)	
14,000.0	90.00	270.30	6,981.0	1,530.9	-7,043.9	7,194.7	0.00	0.00	0.00	
14,100.0	90.00	270.30	6,981.0	1,531.4	-7,143.9	7,293.6	0.00	0.00	0.00	
14,200.0	90.00	270.30	6,981.0	1,532.0	-7,243.9	7,392.5	0.00	0.00	0.00	
14,300.0	90.00	270.30	6,981.0	1,532.5	-7,343.9	7,491.4	0.00	0.00	0.00	
14,400.0	90.00	270.30	6,981.0	1,533.0	-7,443.9	7,590.4	0.00	0.00	0.00	
14,500.0	90.00	270.30	6,981.0	1,533.5	-7,543.9	7,689.3	0.00	0.00	0.00	
14,600.0	90.00	270.30	6,981.0	1,534.1	-7,643.9	7,788.2	0.00	0.00	0.00	
14,700.0	90.00	270.30	6,981.0	1,534.6	-7,743.9	7,887.1	0.00	0.00	0.00	
14,800.0	90.00	270.30	6,981.0	1,535.1	-7,843.9	7,986.0	0.00	0.00	0.00	
14,900.0	90.00	270.30	6,981.0	1,535.6	-7,943.9	8,085.0	0.00	0.00	0.00	
15,000.0	90.00	270.30	6,981.0	1,536.2	-8,043.9	8,183.9	0.00	0.00	0.00	
15,100.0	90.00	270.30	6,981.0	1,536.7	-8,143.9	8,282.8	0.00	0.00	0.00	
15,200.0	90.00	270.30	6,981.0	1,537.2	-8,243.9	8,381.7	0.00	0.00	0.00	
15,300.0	90.00	270.30	6,981.0	1,537.7	-8,343.9	8,480.6	0.00	0.00	0.00	
15,400.0	90.00	270.30	6,981.0	1,538.2	-8,443.9	8,579.6	0.00	0.00	0.00	
15,500.0	90.00	270.30	6,981.0	1,538.8	-8,543.9	8,678.5	0.00	0.00	0.00	
15,600.0	90.00	270.30	6,981.0	1,539.3	-8,643.9	8,777.4	0.00	0.00	0.00	
15,700.0	90.00	270.30	6,981.0	1,539.8	-8,743.9	8,876.3	0.00	0.00	0.00	
15,800.0	90.00	270.30	6,981.0	1,540.3	-8,843.9	8,975.2	0.00	0.00	0.00	
15,900.0	90.00	270.30	6,981.0	1,540.9	-8,943.9	9,074.2	0.00	0.00	0.00	
16,000.0	90.00	270.30	6,981.0	1,541.4	-9,043.9	9,173.1	0.00	0.00	0.00	
16,100.0	90.00	270.30	6,981.0	1,541.9	-9,143.9	9,272.0	0.00	0.00	0.00	
16,200.0	90.00	270.30	6,981.0	1,542.4	-9,243.9	9,370.9	0.00	0.00	0.00	
16,300.0	90.00	270.30	6,981.0	1,543.0	-9,343.9	9,469.8	0.00	0.00	0.00	
16,400.0	90.00	270.30	6,981.0	1,543.5	-9,443.9	9,568.8	0.00	0.00	0.00	
16,500.0	90.00	270.30	6,981.0	1,544.0	-9,543.9	9,667.7	0.00	0.00	0.00	
16,600.0	90.00	270.30	6,981.0	1,544.5	-9,643.9	9,766.6	0.00	0.00	0.00	
16,700.0	90.00	270.30	6,981.0	1,545.1	-9,743.9	9,865.5	0.00	0.00	0.00	
16,800.0	90.00	270.30	6,981.0	1,545.6	-9,843.9	9,964.4	0.00	0.00	0.00	
16,900.0	90.00	270.30	6,981.0	1,546.1	-9,943.9	10,063.4	0.00	0.00	0.00	
17,000.0	90.00	270.30	6,981.0	1,546.6	-10,043.9	10,162.3	0.00	0.00	0.00	
17,030.6	90.00	270.30	6,981.0	1,546.8	-10,074.5	10,192.6	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,565.3	6,981.0	7"	7	7-1/2	



<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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 (°)	
3,547.1	3,472.0	PARKMAN				
4,238.3	4,144.0	SUSSEX				
4,649.8	4,544.0	SHANNON				
7,007.1	6,780.0	SHARON SPRINGS				
7,060.4	6,815.0	NIOBRARA A (N1)				
7,281.4	6,927.0	NIOBRARA B CHALK (N4)				
7,421.4	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	
400.0	400.0	0.0	0.0	KOP	
7,565.3	6,981.0	79.5	6.4	End of Build	





## **Extraction Oil & Gas**

**SEC.23-T6N-R67W**

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

**Diamond Valley East #12**

**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 #12
<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 #12	<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	17,030.6	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
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	363.9	364.4	174.6	173.3	134.188	CC
Diamond Valley East #1 - Wellbore #1 - Wellbore #1	400.0	400.2	174.6	173.1	119.889	ES
Diamond Valley East #1 - Wellbore #1 - Wellbore #1	1,100.0	1,078.6	269.1	264.5	59.235	SF
Diamond Valley East #10 - Wellbore #1 - Wellbore #1	0.0	0.5	14.6	14.6	10,000.000	CC
Diamond Valley East #10 - Wellbore #1 - Wellbore #1	400.0	400.4	15.6	14.2	10.764	ES
Diamond Valley East #10 - Wellbore #1 - Wellbore #1	11,900.0	11,843.0	568.1	302.9	2.142	SF
Diamond Valley East #11 - Wellbore #1 - Wellbore #1	320.5	321.6	60.7	59.5	51.185	CC, ES
Diamond Valley East #11 - Wellbore #1 - Wellbore #1	11,800.0	11,726.7	361.6	88.5	1.324	Level 3, SF
Diamond Valley East #13 - Wellbore #1 - Plan #1 (10-03)	200.0	200.0	18.2	17.5	27.021	CC
Diamond Valley East #13 - Wellbore #1 - Plan #1 (10-03)	17,030.6	17,210.5	223.0	-193.1	0.536	Level 1, ES, SF
Diamond Valley East #2 - Wellbore #1 - Plan #1 (6-23-14)	400.0	400.0	160.3	158.8	101.901	CC, ES
Diamond Valley East #2 - Wellbore #1 - Plan #1 (6-23-14)	1,200.0	1,190.3	268.6	263.4	51.518	SF
Diamond Valley East #3 - Wellbore #1 - Plan #2 (6-23-14)	400.0	400.0	142.1	140.5	90.320	CC, ES
Diamond Valley East #3 - Wellbore #1 - Plan #2 (6-23-14)	1,000.0	995.6	204.6	200.3	47.651	SF
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	0.0	0.5	127.5			
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	400.0	400.4	127.9	126.3	84.332	ES
Diamond Valley East #4 - Wellbore #1 - Wellbore #1	900.0	893.2	173.0	169.2	45.066	SF
Diamond Valley East #5 - Wellbore #1 - Plan #2 (6-23-14)	400.0	400.0	109.3	107.8	69.488	CC, ES
Diamond Valley East #5 - Wellbore #1 - Plan #2 (6-23-14)	900.0	897.5	152.8	149.0	39.771	SF
Diamond Valley East #6 - Wellbore #1 - Plan #1 (6-23-14)	400.0	400.5	94.8	93.2	60.206	CC, ES
Diamond Valley East #6 - Wellbore #1 - Plan #1 (6-23-14)	900.0	898.0	138.2	134.4	35.976	SF
Diamond Valley East #7 - Wellbore #1 - Wellbore #1	420.8	422.4	78.4	76.9	52.059	CC, ES
Diamond Valley East #7 - Wellbore #1 - Wellbore #1	900.0	899.5	118.8	115.2	33.025	SF
Diamond Valley East #8 - Wellbore #1 - Plan #1 (6-23-14)	400.0	400.5	47.4	45.9	30.140	CC, ES
Diamond Valley East #8 - Wellbore #1 - Plan #1 (6-23-14)	17,030.6	16,875.8	987.3	422.0	1.746	SF
Diamond Valley East #9 - Wellbore #1 - Plan #1 (6-23-14)	400.0	400.0	32.8	31.2	20.835	CC, ES
Diamond Valley East #9 - Wellbore #1 - Plan #1 (6-23-14)	17,030.6	16,912.6	659.4	93.2	1.165	Level 2, SF
Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1	4,875.3	4,739.2	454.9	339.2	3.932	CC
Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1	5,100.0	4,957.7	457.9	336.9	3.784	ES
Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1	5,600.0	5,443.7	485.5	353.5	3.678	SF
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	400.0	376.0	600.0	591.7	72.230	CC
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	500.0	476.0	600.9	590.4	57.069	ES
Winzenried 1-23 (Exist.) - Wellbore #1 - Wellbore #1	3,000.0	2,916.2	983.9	917.8	14.878	SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.5	0.5	0.0	0.0	-179.09	-174.9	-2.8	174.9					
100.0	100.0	100.7	100.7	0.1	0.1	-179.12	-174.8	-2.7	174.8	174.6	0.23	774.669		
200.0	200.0	200.7	200.7	0.3	0.3	-179.19	-174.6	-2.5	174.7	174.1	0.60	291.365		
300.0	300.0	300.6	300.6	0.6	0.5	-179.18	-174.6	-2.5	174.6	173.6	1.03	169.881		
363.9	363.9	364.4	364.4	0.7	0.6	-179.09	-174.5	-2.8	174.6	173.3	1.30	134.188 CC		
400.0	400.0	400.2	400.2	0.8	0.7	-179.00	-174.6	-3.0	174.6	173.1	1.46	119.889 ES		
500.0	500.0	499.7	499.7	1.0	0.9	176.68	-174.9	-3.9	176.7	174.8	1.89	93.250		
600.0	599.8	597.9	597.9	1.2	1.1	176.95	-175.7	-4.4	182.7	180.4	2.34	78.141		
700.0	699.5	696.5	696.5	1.5	1.3	177.27	-177.3	-5.1	193.1	190.3	2.78	69.394		
800.0	798.7	798.0	798.0	1.7	1.5	177.46	-178.8	-5.3	206.7	203.5	3.22	64.112		
900.0	897.5	897.7	897.7	2.0	1.7	177.10	-179.0	-3.3	222.5	218.8	3.66	60.787		
1,000.0	995.6	989.7	989.6	2.4	1.9	176.72	-180.0	-1.0	242.6	238.5	4.09	59.239		
1,100.0	1,093.1	1,078.6	1,078.4	2.8	2.1	176.43	-183.8	1.2	269.1	264.5	4.54	59.235 SF		
1,200.0	1,190.3	1,170.6	1,170.2	3.2	2.3	176.63	-189.9	1.5	298.8	293.8	5.00	59.782		
1,300.0	1,287.5	1,267.8	1,267.2	3.7	2.5	176.84	-196.5	1.5	328.7	323.3	5.45	60.283		
1,400.0	1,384.7	1,357.3	1,356.4	4.1	2.7	176.97	-202.4	1.7	358.6	352.7	5.90	60.814		
1,500.0	1,481.9	1,440.4	1,439.2	4.6	2.9	176.95	-210.4	2.6	391.2	384.9	6.34	61.669		
1,600.0	1,579.1	1,530.0	1,528.1	5.1	3.2	176.87	-221.3	4.0	426.2	419.3	6.81	62.612		
1,700.0	1,676.4	1,622.4	1,619.8	5.5	3.4	176.74	-232.4	5.9	461.0	453.7	7.27	63.445		
1,800.0	1,773.6	1,708.7	1,705.4	6.0	3.7	176.62	-243.7	7.7	496.9	489.2	7.72	64.371		
1,900.0	1,870.8	1,805.1	1,800.8	6.5	3.9	176.44	-257.4	10.3	533.8	525.6	8.19	65.143		
2,000.0	1,968.0	1,899.3	1,894.1	6.9	4.2	176.12	-269.2	14.3	569.1	560.4	8.67	65.657		
2,100.0	2,065.2	1,982.4	1,976.2	7.4	4.5	175.74	-280.9	19.2	605.9	596.8	9.12	66.423		
2,200.0	2,162.4	2,072.8	2,065.5	7.9	4.7	175.52	-294.6	23.0	643.8	634.2	9.60	67.084		
2,300.0	2,259.7	2,171.8	2,163.4	8.4	5.0	175.62	-309.2	23.5	681.2	671.2	10.07	67.631		
2,400.0	2,356.9	2,275.9	2,266.5	8.9	5.3	175.76	-323.3	23.7	717.5	707.0	10.55	67.997		
2,500.0	2,454.1	2,381.7	2,371.6	9.4	5.6	175.86	-335.8	24.2	752.2	741.2	11.04	68.159		
2,600.0	2,551.3	2,461.6	2,450.9	9.8	5.8	175.93	-344.9	24.5	786.6	775.1	11.48	68.528		
2,700.0	2,648.5	2,538.2	2,526.8	10.3	6.1	176.04	-355.8	24.2	823.5	811.6	11.92	69.079		
2,800.0	2,745.7	2,633.5	2,621.0	10.8	6.4	176.15	-369.9	23.9	861.1	848.7	12.40	69.418		
2,900.0	2,842.9	2,731.1	2,717.7	11.3	6.7	176.25	-383.6	23.8	897.9	885.0	12.89	69.683		
3,000.0	2,940.2	2,823.0	2,808.7	11.8	7.0	176.24	-396.8	25.1	934.9	921.5	13.36	69.984		
3,100.0	3,037.4	2,931.3	2,915.9	12.3	7.3	176.16	-411.4	27.9	971.2	957.3	13.87	70.029		

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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		
0.0	0.0	0.5	0.5	0.0	0.0	180.00	-14.6	0.0	14.6	14.6	0.00	N/A CC		
100.0	100.0	100.5	100.5	0.1	0.1	179.08	-14.7	0.2	14.7	14.4	0.23	64.993		
200.0	200.0	200.5	200.5	0.3	0.3	176.57	-14.9	0.9	15.0	14.4	0.59	25.479		
300.0	300.0	300.5	300.5	0.6	0.5	174.99	-15.2	1.3	15.2	14.2	1.02	14.981		
400.0	400.0	400.4	400.4	0.8	0.7	173.18	-15.5	1.9	15.6	14.2	1.45	10.764 ES		
500.0	500.0	500.5	500.5	1.0	0.9	169.02	-15.8	2.1	17.7	15.8	1.89	9.368		
600.0	599.8	600.7	600.6	1.2	1.1	172.78	-15.4	1.6	22.4	20.0	2.33	9.615		
700.0	699.5	701.0	700.9	1.5	1.3	175.63	-12.9	1.1	28.6	25.8	2.76	10.358		
800.0	798.7	801.5	801.4	1.7	1.5	177.61	-8.2	0.8	36.1	32.9	3.20	11.279		
900.0	897.5	902.1	901.7	2.0	1.7	179.97	-1.0	-0.1	44.7	41.1	3.64	12.278		
1,000.0	995.6	1,003.0	1,002.0	2.4	2.0	-177.43	8.9	-1.7	54.2	50.1	4.10	13.239		
1,100.0	1,093.1	1,104.7	1,102.9	2.8	2.3	-175.37	22.2	-3.4	64.1	59.5	4.56	14.042		
1,200.0	1,190.3	1,205.9	1,202.8	3.2	2.6	-173.79	38.5	-4.7	71.9	66.8	5.06	14.202		
1,300.0	1,287.5	1,304.4	1,299.9	3.7	2.9	-172.14	54.6	-6.5	79.6	74.0	5.56	14.312		
1,400.0	1,384.7	1,404.8	1,398.9	4.1	3.2	-170.37	70.9	-9.0	87.7	81.6	6.09	14.407		
1,500.0	1,481.9	1,505.8	1,498.2	4.6	3.5	-168.37	88.8	-11.9	94.5	87.9	6.65	14.218		
1,600.0	1,579.1	1,605.5	1,596.4	5.1	3.9	-166.79	106.8	-14.5	101.0	93.8	7.21	14.009		
1,700.0	1,676.4	1,704.7	1,694.0	5.5	4.2	-166.45	124.3	-15.1	107.3	99.6	7.73	13.880		
1,800.0	1,773.6	1,803.5	1,791.5	6.0	4.5	-167.17	139.8	-14.3	115.1	106.9	8.24	13.980		
1,900.0	1,870.8	1,903.7	1,890.4	6.5	4.9	-167.83	155.8	-13.3	122.6	113.8	8.75	14.019		
2,000.0	1,968.0	2,002.9	1,988.3	6.9	5.2	-168.00	171.7	-13.2	130.2	120.9	9.27	14.050		
2,100.0	2,065.2	2,103.3	2,087.5	7.4	5.5	-168.08	187.8	-13.4	138.0	128.2	9.79	14.095		
2,200.0	2,162.4	2,204.2	2,186.9	7.9	5.9	-168.60	204.5	-12.2	144.9	134.6	10.31	14.056		
2,300.0	2,259.7	2,305.6	2,286.8	8.4	6.3	-168.63	222.3	-11.9	151.0	140.1	10.85	13.914		
2,400.0	2,356.9	2,404.5	2,383.9	8.9	6.6	-168.11	240.6	-12.9	156.6	145.1	11.42	13.715		
2,500.0	2,454.1	2,505.4	2,483.2	9.4	7.0	-167.63	259.0	-14.0	162.4	150.4	11.98	13.554		
2,600.0	2,551.3	2,603.6	2,579.8	9.8	7.4	-167.51	276.7	-14.1	168.3	155.7	12.53	13.434		
2,700.0	2,648.5	2,699.6	2,674.4	10.3	7.7	-167.15	292.7	-15.5	175.7	162.7	13.08	13.439		
2,800.0	2,745.7	2,803.0	2,776.4	10.8	8.1	-166.88	310.0	-16.6	183.2	169.5	13.65	13.422		
2,900.0	2,842.9	2,901.4	2,873.3	11.3	8.4	-167.05	326.6	-16.2	189.9	175.7	14.17	13.402		
3,000.0	2,940.2	2,996.4	2,967.2	11.8	8.7	-167.08	341.2	-16.7	198.4	183.7	14.69	13.505		
3,100.0	3,037.4	3,092.9	3,062.8	12.3	9.0	-167.14	354.2	-17.8	208.9	193.7	15.21	13.733		
3,200.0	3,134.6	3,193.1	3,162.2	12.7	9.3	-167.46	366.9	-18.0	219.9	204.2	15.71	13.996		
3,300.0	3,231.8	3,293.2	3,261.4	13.2	9.6	-167.99	380.0	-17.1	230.1	213.9	16.19	14.206		
3,400.0	3,329.0	3,390.6	3,358.1	13.7	9.9	-168.32	392.0	-17.0	241.3	224.7	16.69	14.462		
3,500.0	3,426.2	3,489.9	3,456.5	14.2	10.2	-168.47	404.9	-17.6	252.2	235.0	17.20	14.660		
3,600.0	3,523.4	3,590.9	3,556.8	14.7	10.5	-169.00	416.5	-16.6	264.0	246.3	17.68	14.934		
3,700.0	3,620.7	3,698.4	3,663.2	15.2	10.9	-169.50	432.0	-14.9	272.9	254.7	18.18	15.010		
3,800.0	3,717.9	3,803.6	3,766.9	15.7	11.3	-169.81	449.3	-13.3	279.7	261.0	18.70	14.957		
3,900.0	3,815.1	3,901.1	3,862.9	16.1	11.6	-169.68	466.8	-13.6	285.7	266.4	19.25	14.839		
4,000.0	3,912.3	3,994.5	3,954.9	16.6	12.0	-169.01	482.7	-16.9	293.3	273.5	19.84	14.783		
4,100.0	4,009.5	4,096.3	4,055.2	17.1	12.3	-168.11	499.3	-21.9	302.2	281.7	20.49	14.749		
4,200.0	4,106.7	4,197.6	4,155.0	17.6	12.7	-167.64	516.2	-24.7	310.0	288.9	21.09	14.699		
4,300.0	4,203.9	4,301.0	4,257.0	18.1	13.0	-167.49	533.8	-25.7	317.0	295.4	21.66	14.638		
4,400.0	4,301.2	4,405.2	4,359.3	18.6	13.4	-167.45	552.8	-25.6	322.6	300.3	22.23	14.513		
4,500.0	4,398.4	4,497.9	4,450.6	19.1	13.8	-167.34	569.1	-26.2	328.9	306.1	22.77	14.442		
4,600.0	4,495.6	4,597.6	4,549.0	19.5	14.1	-167.36	585.4	-26.4	336.3	313.0	23.31	14.430		
4,700.0	4,592.8	4,703.3	4,653.0	20.0	14.5	-167.53	603.7	-25.4	342.5	318.7	23.84	14.365		
4,800.0	4,690.0	4,803.8	4,751.9	20.5	14.9	-167.72	621.7	-24.0	348.0	323.7	24.37	14.283		
4,900.0	4,787.2	4,900.4	4,846.9	21.0	15.3	-167.68	639.4	-23.9	353.5	328.5	24.91	14.189		
5,000.0	4,884.4	4,990.4	4,935.6	21.5	15.6	-167.55	654.2	-25.0	361.1	335.7	25.45	14.191		
5,100.0	4,981.7	5,082.3	5,026.7	22.0	15.9	-167.50	666.9	-26.3	371.3	345.4	25.97	14.298		

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 #12
<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 #12	<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	
5,200.0	5,078.9	5,181.6	5,125.1	22.5	16.2	-167.50	679.4	-27.8	382.7	356.2	26.50	14.442	
5,300.0	5,176.1	5,287.9	5,230.4	23.0	16.5	-167.47	694.1	-29.1	392.9	365.8	27.06	14.520	
5,400.0	5,273.3	5,392.3	5,333.6	23.4	16.9	-167.44	710.1	-30.0	401.6	374.0	27.62	14.539	
5,500.0	5,370.5	5,498.0	5,437.7	23.9	17.3	-167.14	728.0	-32.4	409.1	380.8	28.24	14.487	
5,600.0	5,467.7	5,593.1	5,531.3	24.4	17.6	-166.88	744.6	-34.3	416.0	387.2	28.82	14.433	
5,700.0	5,564.9	5,690.4	5,627.4	24.9	17.9	-166.73	760.2	-36.0	424.3	394.9	29.39	14.435	
5,800.0	5,662.2	5,789.7	5,725.4	25.4	18.3	-166.63	775.8	-37.4	432.7	402.7	29.96	14.443	
5,900.0	5,759.4	5,893.5	5,827.8	25.9	18.7	-166.45	792.6	-39.4	440.7	410.2	30.55	14.426	
6,000.0	5,856.6	5,993.0	5,926.0	26.4	19.0	-166.35	809.1	-40.5	448.3	417.2	31.12	14.405	
6,100.0	5,953.8	6,088.3	6,020.0	26.9	19.3	-166.27	824.4	-41.7	456.4	424.7	31.67	14.410	
6,200.0	6,051.0	6,192.5	6,122.9	27.3	19.7	-166.13	841.2	-43.4	464.5	432.2	32.26	14.397	
6,300.0	6,148.2	6,298.4	6,227.1	27.8	20.1	-166.14	859.5	-43.6	471.0	438.2	32.83	14.347	
6,400.0	6,245.5	6,391.5	6,319.0	28.3	20.4	-166.35	874.7	-42.3	478.0	444.6	33.31	14.348	
6,500.0	6,342.6	6,488.0	6,414.4	28.8	20.7	-143.00	888.8	-39.8	485.0	451.2	33.76	14.365	
6,600.0	6,438.6	6,587.5	6,512.7	29.2	21.1	-121.48	903.9	-37.6	488.0	454.1	33.91	14.389	
6,700.0	6,531.6	6,675.4	6,599.5	29.6	21.4	-110.93	917.6	-40.0	489.1	455.1	33.99	14.390	
6,800.0	6,619.9	6,761.9	6,684.4	29.9	21.7	-106.49	930.6	-49.7	491.0	456.8	34.16	14.370	
6,900.0	6,701.5	6,856.8	6,775.4	30.3	22.0	-105.40	945.8	-71.6	493.0	458.5	34.53	14.277	
7,000.0	6,775.1	6,944.9	6,855.7	30.7	22.4	-105.40	959.7	-104.8	496.3	461.2	35.12	14.133	
7,100.0	6,839.1	7,038.3	6,933.5	31.1	22.8	-106.00	972.6	-154.7	501.3	465.4	35.97	13.939	
7,200.0	6,892.4	7,131.9	7,000.1	31.5	23.2	-106.39	982.1	-219.5	508.1	470.9	37.20	13.658	
7,300.0	6,933.8	7,224.9	7,055.9	32.1	23.6	-106.83	987.2	-293.5	517.3	478.4	38.91	13.296	
7,400.0	6,962.5	7,354.4	7,116.3	32.7	24.5	-108.17	992.3	-407.8	525.4	483.9	41.49	12.663	
7,500.0	6,978.1	7,468.0	7,144.3	33.5	25.5	-108.53	994.5	-517.5	529.7	484.9	44.75	11.837	
7,600.0	6,981.0	7,582.6	7,152.8	34.4	26.9	-108.75	992.7	-631.8	533.2	484.5	48.67	10.956	
7,700.0	6,981.0	7,693.4	7,156.0	35.5	28.6	-109.03	992.1	-742.5	535.1	482.5	52.59	10.174	
7,800.0	6,981.0	7,799.8	7,157.8	36.9	30.4	-109.23	993.3	-848.9	535.1	478.3	56.72	9.433	
7,900.0	6,981.0	7,907.6	7,158.9	38.5	32.5	-109.38	995.0	-956.6	534.4	473.4	61.09	8.749	
8,000.0	6,981.0	8,023.3	7,159.0	40.2	35.0	-109.57	1,000.3	-1,072.3	530.6	464.8	65.79	8.065	
8,100.0	6,981.0	8,122.3	7,160.9	42.1	37.3	-109.97	1,006.7	-1,171.0	525.6	455.5	70.18	7.490	
8,200.0	6,981.0	8,208.4	7,162.7	44.1	39.3	-110.31	1,011.2	-1,257.0	522.0	447.7	74.36	7.020	
8,300.0	6,981.0	8,299.0	7,164.4	46.2	41.4	-110.54	1,012.9	-1,347.5	521.4	442.6	78.74	6.621	
8,355.2	6,981.0	8,353.2	7,164.6	47.4	42.7	-110.57	1,013.3	-1,401.7	521.3	440.0	81.32	6.410	
8,400.0	6,981.0	8,396.2	7,164.5	48.4	43.7	-110.54	1,013.4	-1,444.8	521.4	438.0	83.42	6.250	
8,500.0	6,981.0	8,507.4	7,162.5	50.7	46.4	-110.32	1,013.5	-1,555.9	521.3	432.7	88.58	5.884	
8,600.0	6,981.0	8,603.4	7,159.6	53.1	48.8	-110.06	1,014.8	-1,651.9	519.4	425.9	93.47	5.557	
8,685.1	6,981.0	8,683.3	7,158.4	55.1	50.8	-109.93	1,015.2	-1,731.7	519.0	421.5	97.57	5.319	
8,700.0	6,981.0	8,697.4	7,158.3	55.5	51.2	-109.92	1,015.2	-1,745.8	519.0	420.7	98.29	5.280	
8,800.0	6,981.0	8,790.6	7,158.3	57.9	53.6	-109.89	1,015.0	-1,839.0	519.8	416.7	103.09	5.042	
8,900.0	6,981.0	8,888.9	7,158.9	60.4	56.1	-109.89	1,013.9	-1,937.3	521.5	413.5	108.04	4.827	
9,000.0	6,981.0	8,982.6	7,159.6	62.9	58.5	-109.89	1,012.4	-2,031.0	523.8	410.9	112.90	4.640	
9,100.0	6,981.0	9,077.3	7,160.7	65.4	60.9	-109.88	1,009.7	-2,125.7	527.3	409.5	117.80	4.476	
9,200.0	6,981.0	9,174.3	7,161.9	68.0	63.5	-109.86	1,006.2	-2,222.6	531.6	408.8	122.79	4.329	
9,300.0	6,981.0	9,283.2	7,163.2	70.6	66.3	-109.84	1,002.8	-2,331.4	535.4	407.3	128.11	4.180	
9,400.0	6,981.0	9,387.7	7,163.5	73.2	69.1	-109.78	1,000.8	-2,435.9	537.9	404.5	133.37	4.033	
9,500.0	6,981.0	9,494.7	7,162.9	75.8	71.9	-109.66	999.6	-2,542.9	539.2	400.5	138.76	3.886	
9,600.0	6,981.0	9,603.0	7,162.0	78.4	74.9	-109.55	999.8	-2,651.2	539.2	395.0	144.19	3.740	
9,700.0	6,981.0	9,708.6	7,161.8	81.1	77.7	-109.60	1,002.1	-2,756.8	537.6	388.1	149.46	3.597	
9,800.0	6,981.0	9,807.7	7,163.0	83.7	80.4	-109.80	1,005.0	-2,855.8	535.8	381.3	154.45	3.469	
9,900.0	6,981.0	9,901.8	7,165.5	86.4	83.0	-110.14	1,007.7	-2,949.8	534.4	375.2	159.20	3.357	
9,935.9	6,981.0	9,934.5	7,166.7	87.4	83.9	-110.27	1,008.4	-2,982.5	534.3	373.5	160.86	3.322	
10,000.0	6,981.0	9,997.8	7,169.1	89.1	85.6	-110.55	1,009.6	-3,045.7	534.4	370.5	163.91	3.260	

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 #12
<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 #12	<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	
10,100.0	6,981.0	10,087.0	7,172.7	91.8	88.0	-110.94	1,010.7	-3,134.9	535.2	366.8	168.45	3.177	
10,200.0	6,981.0	10,176.3	7,175.5	94.4	90.4	-111.13	1,008.8	-3,224.1	538.8	365.6	173.14	3.112	
10,300.0	6,981.0	10,284.0	7,176.3	97.1	93.3	-111.04	1,005.2	-3,331.8	542.7	364.1	178.57	3.039	
10,400.0	6,981.0	10,380.7	7,174.4	99.8	96.0	-110.74	1,002.5	-3,428.4	545.1	361.2	183.95	2.963	
10,500.0	6,981.0	10,479.0	7,172.9	102.6	98.6	-110.42	998.4	-3,526.5	549.0	359.6	189.40	2.899	
10,600.0	6,981.0	10,584.1	7,171.0	105.3	101.5	-110.08	994.6	-3,631.6	552.2	357.1	195.07	2.831	
10,700.0	6,981.0	10,689.8	7,168.5	108.0	104.4	-109.71	991.8	-3,737.2	554.4	353.6	200.82	2.761	
10,800.0	6,981.0	10,788.0	7,167.0	110.7	107.1	-109.48	989.7	-3,835.4	556.4	350.1	206.25	2.698	
10,900.0	6,981.0	10,888.8	7,166.9	113.5	109.8	-109.39	988.0	-3,936.2	558.4	346.8	211.59	2.639	
11,000.0	6,981.0	10,987.4	7,168.1	116.2	112.5	-109.45	986.8	-4,034.8	560.5	343.8	216.74	2.586	
11,100.0	6,981.0	11,094.1	7,169.5	118.9	115.5	-109.55	986.2	-4,141.5	562.0	339.9	222.05	2.531	
11,200.0	6,981.0	11,198.7	7,170.0	121.7	118.4	-109.58	986.3	-4,246.1	562.5	335.1	227.39	2.474	
11,300.0	6,981.0	11,299.9	7,168.4	124.4	121.2	-109.41	986.4	-4,347.3	562.4	329.5	232.88	2.415	
11,319.6	6,981.0	11,319.0	7,167.9	124.9	121.7	-109.36	986.3	-4,366.4	562.4	328.4	233.95	2.404	
11,400.0	6,981.0	11,396.3	7,165.9	127.2	123.8	-109.14	985.9	-4,443.6	562.6	324.2	238.37	2.360	
11,500.0	6,981.0	11,493.1	7,163.5	129.9	126.5	-108.85	984.6	-4,540.4	563.5	319.5	243.91	2.310	
11,600.0	6,981.0	11,594.6	7,160.5	132.7	129.3	-108.49	982.9	-4,641.8	564.6	314.9	249.67	2.261	
11,700.0	6,981.0	11,696.5	7,157.4	135.4	132.1	-108.13	981.7	-4,743.7	565.2	309.8	255.46	2.213	
11,800.0	6,981.0	11,800.8	7,154.5	138.2	135.0	-107.82	981.2	-4,847.9	565.4	304.1	261.27	2.164	
11,831.6	6,981.0	11,832.3	7,153.7	139.0	135.9	-107.74	981.2	-4,879.4	565.3	302.3	263.05	2.149	
11,900.0	6,981.0	11,843.0	7,153.4	140.9	136.2	-107.71	981.1	-4,890.1	568.1	302.9	265.19	2.142 SF	
12,000.0	6,981.0	11,843.0	7,153.4	143.7	136.2	-107.71	981.1	-4,890.1	586.6	318.7	267.85	2.190	
12,100.0	6,981.0	11,843.0	7,153.4	146.5	136.2	-107.71	981.1	-4,890.1	620.8	350.3	270.51	2.295	
12,200.0	6,981.0	11,843.0	7,153.4	149.2	136.2	-107.71	981.1	-4,890.1	668.4	395.2	273.17	2.447	
12,300.0	6,981.0	11,843.0	7,153.4	152.0	136.2	-107.71	981.1	-4,890.1	726.7	450.9	275.84	2.635	
12,400.0	6,981.0	11,843.0	7,153.4	154.8	136.2	-107.71	981.1	-4,890.1	793.4	514.9	278.50	2.849	
12,500.0	6,981.0	11,843.0	7,153.4	157.5	136.2	-107.71	981.1	-4,890.1	866.5	585.3	281.17	3.082	
12,600.0	6,981.0	11,843.0	7,153.4	160.3	136.2	-107.71	981.1	-4,890.1	944.5	660.7	283.83	3.328	



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-177.43	-61.9	-2.8	62.0	62.0	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-177.55	-61.9	-2.6	62.0	61.8	0.23	274.310	
200.0	200.0	201.6	201.6	0.3	0.3	-178.28	-61.6	-1.9	61.6	61.0	0.64	96.304	
300.0	300.0	301.3	301.2	0.6	0.5	178.66	-60.7	1.4	60.7	59.6	1.09	55.622	
320.5	320.5	321.6	321.5	0.6	0.6	177.58	-60.6	2.6	60.7	59.5	1.19	51.185 CC, ES	
400.0	400.0	400.5	400.2	0.8	0.8	172.47	-60.6	8.0	61.2	59.6	1.56	39.257	
500.0	500.0	500.0	499.3	1.0	1.0	160.74	-60.5	16.4	64.4	62.4	2.03	31.658	
600.0	599.8	600.6	599.6	1.2	1.3	155.13	-60.2	25.2	71.6	69.1	2.50	28.631	
700.0	699.5	704.3	702.8	1.5	1.5	150.57	-56.0	34.3	79.0	76.0	2.99	26.433	
800.0	798.7	807.2	805.0	1.7	1.8	147.72	-46.9	41.4	84.5	81.0	3.49	24.237	
900.0	897.5	909.4	906.4	2.0	2.1	146.63	-35.3	46.8	90.2	86.2	4.01	22.503	
1,000.0	995.6	1,012.5	1,008.3	2.4	2.4	146.34	-20.5	51.5	95.7	91.1	4.56	20.973	
1,100.0	1,093.1	1,114.7	1,109.0	2.8	2.7	147.16	-3.0	54.6	101.0	95.9	5.14	19.669	
1,200.0	1,190.3	1,216.2	1,208.7	3.2	3.0	148.55	15.9	56.3	105.2	99.5	5.72	18.407	
1,300.0	1,287.5	1,315.6	1,306.3	3.7	3.3	150.13	34.5	57.2	109.1	102.8	6.27	17.399	
1,400.0	1,384.7	1,414.9	1,404.0	4.1	3.7	152.08	52.3	57.5	113.4	106.7	6.79	16.715	
1,500.0	1,481.9	1,515.0	1,502.6	4.6	4.0	154.07	69.7	57.5	118.4	111.1	7.29	16.242	
1,600.0	1,579.1	1,614.9	1,600.8	5.1	4.3	156.34	87.8	56.3	122.3	114.5	7.77	15.741	
1,700.0	1,676.4	1,712.1	1,696.7	5.5	4.6	158.33	103.7	55.8	128.4	120.2	8.24	15.582	
1,800.0	1,773.6	1,812.4	1,795.7	6.0	5.0	159.33	120.0	57.5	135.3	126.6	8.76	15.448	
1,900.0	1,870.8	1,914.3	1,896.1	6.5	5.3	160.44	137.5	58.4	141.1	131.8	9.28	15.209	
2,000.0	1,968.0	2,015.4	1,995.4	6.9	5.7	161.65	156.1	58.5	145.6	135.8	9.78	14.888	
2,100.0	2,065.2	2,116.9	2,095.1	7.4	6.1	163.22	175.3	57.4	149.3	139.1	10.25	14.565	
2,200.0	2,162.4	2,216.8	2,193.0	7.9	6.5	164.54	194.9	56.5	152.5	141.8	10.73	14.213	
2,300.0	2,259.7	2,319.3	2,293.3	8.4	6.9	165.18	216.1	57.2	155.0	143.8	11.26	13.768	
2,400.0	2,356.9	2,419.8	2,391.4	8.9	7.3	165.70	237.9	58.0	156.5	144.7	11.79	13.271	
2,500.0	2,454.1	2,519.2	2,488.5	9.4	7.7	166.18	259.5	58.8	158.0	145.7	12.31	12.831	
2,600.0	2,551.3	2,618.4	2,585.3	9.8	8.1	166.52	280.8	60.0	159.8	147.0	12.84	12.448	
2,700.0	2,648.5	2,715.8	2,680.8	10.3	8.5	167.05	300.3	60.8	163.0	149.6	13.34	12.216	
2,800.0	2,745.7	2,816.1	2,779.1	10.8	8.9	167.81	320.0	61.1	166.6	152.8	13.84	12.042	
2,900.0	2,842.9	2,915.7	2,876.7	11.3	9.3	168.20	339.7	62.3	170.2	155.8	14.36	11.853	
3,000.0	2,940.2	3,015.4	2,974.4	11.8	9.7	167.73	359.1	66.1	174.3	159.4	14.94	11.664	
3,100.0	3,037.4	3,117.6	3,074.3	12.3	10.1	166.59	380.3	72.0	177.5	161.9	15.61	11.373	
3,200.0	3,134.6	3,221.6	3,175.5	12.7	10.6	165.58	403.2	77.4	179.4	163.1	16.29	11.012	
3,300.0	3,231.8	3,322.7	3,273.7	13.2	11.1	165.43	427.3	79.7	178.9	162.1	16.88	10.598	
3,311.5	3,242.9	3,333.9	3,284.5	13.3	11.1	165.46	429.9	79.8	178.9	162.0	16.95	10.559	
3,400.0	3,329.0	3,419.4	3,368.0	13.7	11.5	166.05	449.0	79.7	179.6	162.3	17.37	10.339	
3,500.0	3,426.2	3,518.4	3,464.8	14.2	11.9	167.11	469.4	78.6	181.9	164.1	17.82	10.208	
3,600.0	3,523.4	3,620.1	3,564.1	14.7	12.3	167.69	491.1	78.9	183.8	165.5	18.32	10.032	
3,700.0	3,620.7	3,721.6	3,663.0	15.2	12.7	167.60	514.0	81.3	184.7	165.8	18.90	9.770	
3,800.0	3,717.9	3,823.7	3,762.2	15.7	13.2	167.23	538.0	84.4	184.6	165.1	19.52	9.459	
3,870.5	3,786.4	3,893.1	3,829.5	16.0	13.5	166.94	554.6	86.6	184.3	164.4	19.95	9.237	
3,900.0	3,815.1	3,921.8	3,857.4	16.1	13.7	166.83	561.3	87.4	184.4	164.2	20.13	9.158	
4,000.0	3,912.3	4,014.3	3,947.8	16.6	14.0	167.10	580.8	88.7	186.7	166.0	20.63	9.047	
4,100.0	4,009.5	4,109.2	4,041.3	17.1	14.4	168.32	597.0	87.2	192.6	171.6	21.01	9.165	
4,200.0	4,106.7	4,208.7	4,139.5	17.6	14.7	169.45	612.6	86.1	200.0	178.5	21.42	9.337	
4,300.0	4,203.9	4,314.0	4,243.2	18.1	15.1	170.16	630.8	86.2	206.0	184.1	21.89	9.411	
4,400.0	4,301.2	4,412.7	4,340.3	18.6	15.5	170.53	649.1	87.1	210.9	188.5	22.39	9.417	
4,500.0	4,398.4	4,507.2	4,433.4	19.1	15.8	170.86	665.1	88.2	217.3	194.4	22.87	9.499	
4,600.0	4,495.6	4,608.0	4,532.8	19.5	16.2	171.16	681.2	89.6	224.8	201.4	23.37	9.616	
4,700.0	4,592.8	4,712.1	4,635.4	20.0	16.6	171.29	699.4	91.5	230.8	206.9	23.91	9.652	
4,800.0	4,690.0	4,810.8	4,732.5	20.5	16.9	171.42	717.1	93.2	236.3	211.8	24.42	9.673	

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 #12
<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 #12	<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:	0.0ft
Survey Program: 133-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
4,900.0	4,787.2	4,908.7	4,828.9	21.0	17.3	171.62	734.1	94.6	242.3	217.4	24.93	9.721	
5,000.0	4,884.4	5,006.3	4,925.1	21.5	17.6	171.92	749.9	95.6	249.6	224.2	25.42	9.821	
5,100.0	4,981.7	5,109.9	5,027.3	22.0	18.0	172.14	767.2	97.0	256.3	230.4	25.93	9.884	
5,200.0	5,078.9	5,213.7	5,129.3	22.5	18.4	172.14	786.3	99.3	261.4	235.0	26.48	9.873	
5,300.0	5,176.1	5,317.0	5,230.6	23.0	18.8	172.42	806.5	100.2	265.2	238.2	27.00	9.823	
5,400.0	5,273.3	5,418.0	5,329.4	23.4	19.3	172.83	827.3	100.3	268.0	240.5	27.50	9.744	
5,500.0	5,370.5	5,518.2	5,427.5	23.9	19.7	173.42	847.9	99.6	270.8	242.8	27.98	9.676	
5,600.0	5,467.7	5,622.6	5,529.5	24.4	20.1	173.85	870.1	99.5	272.8	244.3	28.50	9.574	
5,700.0	5,564.9	5,725.3	5,629.5	24.9	20.6	174.08	893.7	100.4	273.3	244.2	29.03	9.413	
5,800.0	5,662.2	5,816.5	5,718.4	25.4	21.0	174.55	913.7	99.9	274.7	245.1	29.51	9.308	
5,900.0	5,759.4	5,912.4	5,812.5	25.9	21.3	175.12	932.0	99.0	279.0	249.0	29.98	9.305	
6,000.0	5,856.6	6,007.5	5,906.0	26.4	21.7	175.53	949.1	98.8	284.5	254.0	30.46	9.340	
6,100.0	5,953.8	6,105.3	6,002.5	26.9	22.0	176.01	965.3	98.2	291.4	260.5	30.94	9.419	
6,200.0	6,051.0	6,206.4	6,102.3	27.3	22.4	176.14	982.0	99.4	298.4	267.0	31.46	9.486	
6,300.0	6,148.2	6,318.9	6,212.7	27.8	22.8	175.78	1,003.2	103.4	303.0	271.0	32.05	9.455	
6,400.0	6,245.5	6,424.7	6,315.9	28.3	23.3	176.07	1,025.9	103.8	305.0	272.5	32.58	9.362	
6,500.0	6,342.6	6,532.5	6,419.5	28.8	23.8	-158.07	1,052.1	90.4	304.1	271.1	33.03	9.207	
6,565.4	6,405.6	6,590.3	6,473.6	29.0	24.0	-139.99	1,066.4	75.8	303.2	269.8	33.33	9.095	
6,600.0	6,438.6	6,617.8	6,498.8	29.2	24.2	-132.49	1,072.4	66.7	303.5	270.0	33.51	9.058	
6,700.0	6,531.6	6,714.2	6,585.6	29.6	24.5	-117.19	1,091.2	29.2	306.6	272.4	34.16	8.974	
6,800.0	6,619.9	6,814.9	6,672.4	29.9	24.9	-108.63	1,111.5	-17.4	307.6	272.6	34.93	8.806	
6,851.1	6,662.5	6,862.8	6,710.1	30.1	25.1	-105.27	1,121.2	-45.1	307.4	272.0	35.41	8.680	
6,900.0	6,701.5	6,903.7	6,739.8	30.3	25.3	-102.34	1,128.8	-72.2	307.8	271.8	35.91	8.570	
7,000.0	6,775.1	6,980.3	6,789.6	30.7	25.6	-97.17	1,139.2	-129.5	311.9	274.8	37.08	8.411	
7,100.0	6,839.1	7,075.1	6,842.5	31.1	26.0	-92.82	1,148.0	-207.6	318.2	279.6	38.64	8.236	
7,200.0	6,892.4	7,169.0	6,890.8	31.5	26.5	-90.68	1,155.5	-287.7	322.9	282.6	40.29	8.015	
7,300.0	6,933.8	7,255.6	6,924.9	32.1	27.1	-89.08	1,160.6	-367.1	326.9	284.7	42.16	7.753	
7,400.0	6,962.5	7,347.7	6,953.0	32.7	27.8	-88.52	1,163.0	-454.7	330.7	286.3	44.42	7.445	
7,500.0	6,978.1	7,452.2	6,973.1	33.5	28.9	-88.86	1,164.7	-557.1	332.5	285.2	47.30	7.029	
7,600.0	6,981.0	7,553.3	6,976.7	34.4	30.3	-89.07	1,169.5	-658.0	328.3	277.5	50.82	6.460	
7,700.0	6,981.0	7,646.5	6,975.6	35.5	31.8	-88.87	1,172.4	-751.2	325.7	271.0	54.74	5.950	
7,800.0	6,981.0	7,744.9	6,976.3	36.9	33.5	-89.00	1,174.1	-849.5	324.5	265.5	59.04	5.496	
7,900.0	6,981.0	7,843.1	6,977.4	38.5	35.4	-89.18	1,175.6	-947.7	323.5	259.9	63.55	5.090	
8,000.0	6,981.0	7,945.4	6,978.2	40.2	37.5	-89.33	1,176.8	-1,050.0	322.8	254.5	68.31	4.725	
8,100.0	6,981.0	8,043.0	6,977.6	42.1	39.6	-89.22	1,178.5	-1,147.6	321.6	248.5	73.06	4.402	
8,200.0	6,981.0	8,144.1	6,976.7	44.1	41.9	-89.06	1,179.7	-1,248.7	321.0	243.0	77.99	4.116	
8,300.0	6,981.0	8,247.1	6,973.8	46.2	44.3	-88.53	1,181.7	-1,351.7	319.6	236.6	83.00	3.850	
8,400.0	6,981.0	8,343.0	6,971.1	48.4	46.5	-88.04	1,182.9	-1,447.5	318.9	231.0	87.90	3.628	
8,403.0	6,981.0	8,343.0	6,971.1	48.5	46.5	-88.04	1,182.9	-1,447.5	318.9	230.9	87.97	3.625	
8,500.0	6,981.0	8,436.0	6,970.4	50.7	48.8	-87.92	1,182.1	-1,540.5	320.2	227.4	92.83	3.450	
8,600.0	6,981.0	8,534.2	6,970.7	53.1	51.2	-87.99	1,180.5	-1,638.6	322.4	224.4	97.99	3.290	
8,700.0	6,981.0	8,628.9	6,971.1	55.5	53.5	-88.09	1,178.1	-1,733.3	325.4	222.3	103.09	3.156	
8,800.0	6,981.0	8,725.9	6,972.0	57.9	55.9	-88.25	1,174.5	-1,830.3	329.7	221.4	108.30	3.044	
8,900.0	6,981.0	8,826.0	6,971.1	60.4	58.4	-88.12	1,170.3	-1,930.3	334.4	220.8	113.57	2.944	
9,000.0	6,981.0	8,927.4	6,968.5	62.9	61.0	-87.72	1,166.4	-2,031.5	338.8	220.0	118.86	2.851	
9,100.0	6,981.0	9,033.0	6,966.5	65.4	63.7	-87.41	1,163.3	-2,137.1	342.4	218.1	124.30	2.755	
9,200.0	6,981.0	9,139.9	6,965.4	68.0	66.5	-87.24	1,162.5	-2,243.9	343.7	213.9	129.82	2.647	
9,300.0	6,981.0	9,239.4	6,966.5	70.6	69.1	-87.41	1,162.6	-2,343.4	344.1	208.8	135.24	2.544	
9,400.0	6,981.0	9,339.4	6,968.4	73.2	71.8	-87.73	1,162.1	-2,443.4	345.0	204.3	140.72	2.452	
9,500.0	6,981.0	9,444.3	6,968.7	75.8	74.6	-87.80	1,162.6	-2,548.3	345.1	198.8	146.30	2.359	
9,600.0	6,981.0	9,548.3	6,969.3	78.4	77.4	-87.89	1,164.6	-2,652.3	343.7	191.8	151.88	2.263	
9,700.0	6,981.0	9,644.0	6,971.6	81.1	79.9	-88.26	1,166.4	-2,747.9	342.2	184.9	157.29	2.176	

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 #12
<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 #12	<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 #11 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 133-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
9,736.2	6,981.0	9,678.0	6,972.8	82.0	80.9	-88.46	1,166.6	-2,781.9	342.1	182.9	159.25	2.148	
9,800.0	6,981.0	9,738.3	6,974.4	83.7	82.5	-88.72	1,166.6	-2,842.2	342.4	179.8	162.68	2.105	
9,900.0	6,981.0	9,840.4	6,976.2	86.4	85.2	-89.04	1,166.1	-2,944.3	343.4	175.1	168.27	2.041	
10,000.0	6,981.0	9,943.7	6,978.3	89.1	88.0	-89.38	1,166.7	-3,047.6	343.3	169.4	173.90	1.974	
10,100.0	6,981.0	10,045.3	6,979.1	91.8	90.8	-89.51	1,168.1	-3,149.2	342.5	163.0	179.47	1.908	
10,140.5	6,981.0	10,082.4	6,979.4	92.8	91.8	-89.56	1,168.5	-3,186.3	342.3	160.6	181.61	1.885	
10,200.0	6,981.0	10,137.3	6,980.4	94.4	93.3	-89.73	1,168.4	-3,241.2	342.7	157.9	184.78	1.855	
10,300.0	6,981.0	10,236.7	6,982.1	97.1	96.0	-90.02	1,167.5	-3,340.5	344.1	153.8	190.30	1.808	
10,400.0	6,981.0	10,334.6	6,982.7	99.8	98.6	-90.12	1,166.2	-3,438.4	345.9	150.1	195.77	1.767	
10,500.0	6,981.0	10,435.0	6,983.1	102.6	101.4	-90.19	1,164.2	-3,538.8	348.5	147.2	201.30	1.731	
10,600.0	6,981.0	10,556.3	6,980.2	105.3	104.7	-89.70	1,166.2	-3,660.0	347.4	140.0	207.36	1.675	
10,700.0	6,981.0	10,660.3	6,977.8	108.0	107.6	-89.30	1,172.4	-3,763.8	341.8	128.9	212.95	1.605	
10,800.0	6,981.0	10,752.8	6,976.4	110.7	110.1	-89.05	1,176.9	-3,856.1	337.5	119.3	218.24	1.547	
10,888.2	6,981.0	10,830.6	6,975.9	113.1	112.3	-88.97	1,178.7	-3,933.9	336.0	113.2	222.83	1.508	
10,900.0	6,981.0	10,840.7	6,976.0	113.5	112.6	-88.98	1,178.7	-3,944.0	336.0	112.6	223.44	1.504	
11,000.0	6,981.0	10,933.7	6,977.9	116.2	115.1	-89.31	1,177.2	-4,037.0	338.1	109.3	228.83	1.478	Level 3
11,100.0	6,981.0	11,036.3	6,978.2	118.9	117.9	-89.35	1,175.3	-4,139.6	340.5	106.0	234.45	1.452	Level 3
11,200.0	6,981.0	11,136.9	6,977.7	121.7	120.7	-89.28	1,174.3	-4,240.2	342.0	102.0	240.01	1.425	Level 3
11,300.0	6,981.0	11,235.5	6,977.2	124.4	123.4	-89.20	1,173.1	-4,338.8	343.8	98.3	245.50	1.400	Level 3
11,400.0	6,981.0	11,333.9	6,977.5	127.2	126.1	-89.25	1,171.4	-4,437.2	346.1	95.0	251.01	1.379	Level 3
11,500.0	6,981.0	11,433.2	6,977.9	129.9	128.8	-89.33	1,169.3	-4,536.5	348.6	92.1	256.56	1.359	Level 3
11,600.0	6,981.0	11,527.6	6,977.7	132.7	131.4	-89.30	1,166.6	-4,630.8	352.0	90.1	261.95	1.344	Level 3
11,700.0	6,981.0	11,624.3	6,977.9	135.4	134.0	-89.34	1,162.5	-4,727.4	356.8	89.4	267.41	1.334	Level 3
11,800.0	6,981.0	11,726.7	6,978.5	138.2	136.8	-89.45	1,158.1	-4,829.7	361.6	88.5	273.04	1.324	Level 3, SF
11,900.0	6,981.0	11,788.0	6,978.9	140.9	138.5	-89.51	1,155.7	-4,891.0	368.1	90.6	277.53	1.326	Level 3
12,000.0	6,981.0	11,788.0	6,978.9	143.7	138.5	-89.51	1,155.7	-4,891.0	395.6	115.3	280.31	1.411	Level 3
12,100.0	6,981.0	11,788.0	6,978.9	146.5	138.5	-89.51	1,155.7	-4,891.0	444.4	161.3	283.10	1.570	
12,200.0	6,981.0	11,788.0	6,978.9	149.2	138.5	-89.51	1,155.7	-4,891.0	508.4	222.5	285.88	1.778	
12,300.0	6,981.0	11,788.0	6,978.9	152.0	138.5	-89.51	1,155.7	-4,891.0	582.6	293.9	288.67	2.018	
12,400.0	6,981.0	11,788.0	6,978.9	154.8	138.5	-89.51	1,155.7	-4,891.0	663.6	372.2	291.46	2.277	
12,500.0	6,981.0	11,788.0	6,978.9	157.5	138.5	-89.51	1,155.7	-4,891.0	749.2	455.0	294.25	2.546	
12,600.0	6,981.0	11,788.0	6,978.9	160.3	138.5	-89.51	1,155.7	-4,891.0	838.1	541.0	297.04	2.821	
12,700.0	6,981.0	11,788.0	6,978.9	163.1	138.5	-89.51	1,155.7	-4,891.0	929.2	629.3	299.83	3.099	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	18.2	0.0	18.2	18.2	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	18.2	0.0	18.2	18.0	0.22	81.062	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.5	0.67	27.021 CC	
300.0	300.0	299.3	299.3	0.6	0.6	0.36	19.9	0.1	19.9	18.8	1.13	17.732	
400.0	400.0	398.4	398.3	0.8	0.8	1.14	25.1	0.5	25.1	23.6	1.58	15.864	
500.0	500.0	497.2	496.7	1.0	1.0	-2.84	33.6	1.1	32.0	30.0	2.04	15.730	
600.0	599.8	595.7	594.5	1.2	1.3	-2.47	45.4	2.0	38.9	36.4	2.49	15.606	
700.0	699.5	694.1	691.6	1.5	1.6	-2.25	60.6	3.1	45.7	42.7	2.95	15.476	
800.0	798.7	792.2	787.9	1.7	2.0	-2.11	79.0	4.4	52.4	49.0	3.42	15.328	
900.0	897.5	890.0	883.4	2.0	2.4	-2.04	100.7	6.0	59.1	55.2	3.90	15.155	
1,000.0	995.6	989.6	979.9	2.4	2.9	-2.03	124.9	7.8	64.5	60.1	4.39	14.683	
1,100.0	1,093.1	1,089.5	1,076.9	2.8	3.3	-2.12	149.2	9.6	66.5	61.6	4.90	13.578	
1,200.0	1,190.3	1,189.5	1,173.8	3.2	3.8	-2.25	173.5	11.3	67.5	62.1	5.43	12.429	
1,300.0	1,287.5	1,289.5	1,270.8	3.7	4.3	-2.37	197.8	13.1	68.5	62.5	5.96	11.479	
1,400.0	1,384.7	1,389.5	1,367.8	4.1	4.8	-2.49	222.1	14.9	69.4	62.9	6.51	10.670	
1,500.0	1,481.9	1,489.5	1,464.8	4.6	5.3	-2.61	246.4	16.7	70.4	63.4	7.05	9.983	
1,600.0	1,579.1	1,589.5	1,561.8	5.1	5.8	-2.72	270.8	18.5	71.4	63.8	7.60	9.391	
1,700.0	1,676.4	1,689.5	1,658.7	5.5	6.3	-2.83	295.1	20.2	72.4	64.2	8.15	8.876	
1,800.0	1,773.6	1,789.5	1,755.7	6.0	6.8	-2.94	319.4	22.0	73.4	64.7	8.71	8.425	
1,900.0	1,870.8	1,889.5	1,852.7	6.5	7.3	-3.04	343.7	23.8	74.3	65.1	9.26	8.026	
2,000.0	1,968.0	1,989.5	1,949.7	6.9	7.8	-3.15	368.0	25.6	75.3	65.5	9.82	7.671	
2,100.0	2,065.2	2,089.5	2,046.6	7.4	8.3	-3.24	392.3	27.3	76.3	65.9	10.38	7.353	
2,200.0	2,162.4	2,189.5	2,143.6	7.9	8.8	-3.34	416.7	29.1	77.3	66.4	10.94	7.067	
2,300.0	2,259.7	2,289.5	2,240.6	8.4	9.3	-3.43	441.0	30.9	78.3	66.8	11.50	6.809	
2,400.0	2,356.9	2,389.5	2,337.6	8.9	9.8	-3.53	465.3	32.7	79.3	67.2	12.06	6.573	
2,500.0	2,454.1	2,489.5	2,434.5	9.4	10.3	-3.62	489.6	34.4	80.2	67.6	12.62	6.359	
2,600.0	2,551.3	2,589.5	2,531.5	9.8	10.8	-3.70	513.9	36.2	81.2	68.0	13.18	6.162	
2,700.0	2,648.5	2,689.5	2,628.5	10.3	11.3	-3.79	538.3	38.0	82.2	68.5	13.74	5.981	
2,800.0	2,745.7	2,789.4	2,725.5	10.8	11.8	-3.87	562.6	39.8	83.2	68.9	14.31	5.815	
2,900.0	2,842.9	2,889.4	2,822.5	11.3	12.3	-3.95	586.9	41.6	84.2	69.3	14.87	5.660	
3,000.0	2,940.2	2,989.4	2,919.4	11.8	12.8	-4.03	611.2	43.3	85.2	69.7	15.44	5.517	
3,100.0	3,037.4	3,089.4	3,016.4	12.3	13.3	-4.11	635.5	45.1	86.1	70.1	16.00	5.384	
3,200.0	3,134.6	3,189.4	3,113.4	12.7	13.8	-4.18	659.8	46.9	87.1	70.6	16.57	5.259	
3,300.0	3,231.8	3,289.4	3,210.4	13.2	14.3	-4.26	684.2	48.7	88.1	71.0	17.13	5.143	
3,400.0	3,329.0	3,389.4	3,307.3	13.7	14.8	-4.33	708.5	50.4	89.1	71.4	17.70	5.034	
3,500.0	3,426.2	3,489.4	3,404.3	14.2	15.3	-4.40	732.8	52.2	90.1	71.8	18.26	4.932	
3,600.0	3,523.4	3,589.4	3,501.3	14.7	15.8	-4.47	757.1	54.0	91.1	72.2	18.83	4.836	
3,700.0	3,620.7	3,689.4	3,598.3	15.2	16.3	-4.54	781.4	55.8	92.0	72.7	19.40	4.745	
3,800.0	3,717.9	3,789.4	3,695.2	15.7	16.8	-4.61	805.7	57.5	93.0	73.1	19.97	4.660	
3,900.0	3,815.1	3,889.4	3,792.2	16.1	17.3	-4.67	830.1	59.3	94.0	73.5	20.53	4.579	
4,000.0	3,912.3	3,989.4	3,889.2	16.6	17.8	-4.73	854.4	61.1	95.0	73.9	21.10	4.502	
4,100.0	4,009.5	4,089.4	3,986.2	17.1	18.3	-4.80	878.7	62.9	96.0	74.3	21.67	4.430	
4,200.0	4,106.7	4,189.4	4,083.2	17.6	18.8	-4.86	903.0	64.7	97.0	74.7	22.24	4.361	
4,300.0	4,203.9	4,289.4	4,180.1	18.1	19.3	-4.92	927.3	66.4	98.0	75.2	22.81	4.295	
4,400.0	4,301.2	4,389.4	4,277.1	18.6	19.8	-4.98	951.6	68.2	98.9	75.6	23.38	4.233	
4,500.0	4,398.4	4,489.4	4,374.1	19.1	20.3	-5.03	976.0	70.0	99.9	76.0	23.95	4.173	
4,600.0	4,495.6	4,589.4	4,471.1	19.5	20.8	-5.09	1,000.3	71.8	100.9	76.4	24.52	4.116	
4,700.0	4,592.8	4,689.4	4,568.0	20.0	21.3	-5.15	1,024.6	73.5	101.9	76.8	25.09	4.062	
4,800.0	4,690.0	4,789.3	4,665.0	20.5	21.8	-5.20	1,048.9	75.3	102.9	77.2	25.66	4.010	
4,900.0	4,787.2	4,889.3	4,762.0	21.0	22.3	-5.25	1,073.2	77.1	103.9	77.6	26.23	3.961	
5,000.0	4,884.4	4,989.3	4,859.0	21.5	22.8	-5.31	1,097.5	78.9	104.9	78.1	26.80	3.913	
5,100.0	4,981.7	5,089.3	4,955.9	22.0	23.3	-5.36	1,121.9	80.6	105.8	78.5	27.37	3.868	

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 #12
<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 #12	<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	5,078.9	5,189.3	5,052.9	22.5	23.8	-5.41	1,146.2	82.4	106.8	78.9	27.94	3.824	
5,300.0	5,176.1	5,289.3	5,149.9	23.0	24.4	-5.46	1,170.5	84.2	107.8	79.3	28.51	3.782	
5,400.0	5,273.3	5,389.3	5,246.9	23.4	24.9	-5.50	1,194.8	86.0	108.8	79.7	29.08	3.742	
5,500.0	5,370.5	5,489.3	5,343.9	23.9	25.4	-5.55	1,219.1	87.8	109.8	80.1	29.65	3.703	
5,600.0	5,467.7	5,589.3	5,440.8	24.4	25.9	-5.60	1,243.5	89.5	110.8	80.6	30.22	3.665	
5,700.0	5,564.9	5,689.3	5,537.8	24.9	26.4	-5.64	1,267.8	91.3	111.8	81.0	30.80	3.629	
5,800.0	5,662.2	5,789.3	5,634.8	25.4	26.9	-5.69	1,292.1	93.1	112.8	81.4	31.37	3.595	
5,900.0	5,759.4	5,889.3	5,731.8	25.9	27.4	-5.73	1,316.4	94.9	113.7	81.8	31.94	3.561	
6,000.0	5,856.6	5,989.3	5,828.7	26.4	27.9	-5.78	1,340.7	96.6	114.7	82.2	32.51	3.529	
6,100.0	5,953.8	6,089.3	5,925.7	26.9	28.4	-5.82	1,365.0	98.4	115.7	82.6	33.09	3.497	
6,200.0	6,051.0	6,189.3	6,022.7	27.3	28.9	-5.86	1,389.4	100.2	116.7	83.0	33.66	3.467	
6,300.0	6,148.2	6,289.3	6,119.7	27.8	29.4	-5.90	1,413.7	102.0	117.7	83.5	34.23	3.438	
6,400.0	6,245.5	6,389.3	6,216.6	28.3	29.9	-5.94	1,438.0	103.7	118.7	83.9	34.80	3.410	
6,500.0	6,342.6	6,489.1	6,313.5	28.8	30.4	-5.98	1,462.3	105.5	119.6	84.4	35.19	3.399	
6,600.0	6,438.6	6,587.6	6,409.0	29.2	30.9	-6.02	1,486.6	107.3	120.6	84.8	35.73	3.413	
6,700.0	6,531.6	6,687.9	6,506.2	29.6	31.4	-6.06	1,510.6	109.0	121.6	85.2	36.27	3.427	
6,800.0	6,619.9	6,792.9	6,606.5	29.9	31.8	-6.10	1,535.6	110.7	122.6	85.6	36.81	3.441	
6,900.0	6,701.5	6,902.4	6,707.4	30.3	32.2	-6.14	1,560.7	112.4	123.6	86.0	37.35	3.455	
7,000.0	6,775.1	7,016.9	6,806.1	30.7	32.7	-6.18	1,585.2	114.1	124.6	86.4	37.89	3.469	
7,100.0	6,839.1	7,136.4	6,899.2	31.1	33.1	-6.22	1,608.2	115.8	125.6	86.8	38.43	3.483	
7,200.0	6,892.4	7,260.9	6,982.7	31.5	33.6	-6.26	1,628.7	117.5	126.6	87.2	38.97	3.497	
7,300.0	6,933.8	7,390.0	7,052.0	32.1	34.2	-6.30	1,645.6	119.2	127.6	87.6	39.51	3.511	
7,400.0	6,962.5	7,522.7	7,102.5	32.7	34.9	-6.34	1,657.6	120.9	128.6	88.0	40.05	3.525	
7,500.0	6,978.1	7,658.0	7,130.8	33.5	35.7	-6.38	1,664.1	122.6	129.6	88.4	40.59	3.539	
7,600.0	6,981.0	7,780.4	7,136.0	34.4	36.7	-6.42	1,664.9	124.3	130.6	88.8	41.13	3.553	
7,700.0	6,981.0	7,879.9	7,136.0	35.5	37.7	-6.46	1,665.3	126.0	131.6	89.2	41.67	3.567	
7,800.0	6,981.0	7,979.9	7,136.0	36.9	38.9	-6.50	1,665.7	127.7	132.6	89.6	42.21	3.581	
7,900.0	6,981.0	8,079.9	7,136.0	38.5	40.4	-6.54	1,666.2	129.4	133.6	90.0	42.75	3.595	
8,000.0	6,981.0	8,179.9	7,136.0	40.2	42.0	-6.58	1,666.6	131.1	134.6	90.4	43.29	3.609	
8,100.0	6,981.0	8,279.9	7,136.0	42.1	43.7	-6.62	1,667.1	132.8	135.6	90.8	43.83	3.623	
8,200.0	6,981.0	8,379.9	7,136.0	44.1	45.6	-6.66	1,667.5	134.5	136.6	91.2	44.37	3.637	
8,300.0	6,981.0	8,479.9	7,136.0	46.2	47.6	-6.70	1,668.0	136.2	137.6	91.6	44.91	3.651	
8,400.0	6,981.0	8,579.9	7,136.0	48.4	49.7	-6.74	1,668.4	137.9	138.6	92.0	45.45	3.665	
8,500.0	6,981.0	8,679.9	7,136.0	50.7	51.9	-6.78	1,668.9	139.6	139.6	92.4	45.99	3.679	
8,600.0	6,981.0	8,779.9	7,136.0	53.1	54.2	-6.82	1,669.3	141.3	140.6	92.8	46.53	3.693	
8,700.0	6,981.0	8,879.9	7,136.0	55.5	56.5	-6.86	1,669.8	143.0	141.6	93.2	47.07	3.707	
8,800.0	6,981.0	8,979.9	7,136.0	57.9	58.9	-6.90	1,670.2	144.7	142.6	93.6	47.61	3.721	
8,900.0	6,981.0	9,079.9	7,136.0	60.4	61.3	-6.94	1,670.7	146.4	143.6	94.0	48.15	3.735	
9,000.0	6,981.0	9,179.9	7,136.0	62.9	63.8	-6.98	1,671.1	148.1	144.6	94.4	48.69	3.749	
9,100.0	6,981.0	9,279.9	7,136.0	65.4	66.3	-7.02	1,671.6	149.8	145.6	94.8	49.23	3.763	
9,200.0	6,981.0	9,379.9	7,136.0	68.0	68.8	-7.06	1,672.0	151.5	146.6	95.2	49.77	3.777	
9,300.0	6,981.0	9,479.9	7,136.0	70.6	71.3	-7.10	1,672.5	153.2	147.6	95.6	50.31	3.791	
9,400.0	6,981.0	9,579.9	7,136.0	73.2	73.9	-7.14	1,672.9	154.9	148.6	96.0	50.85	3.805	
9,500.0	6,981.0	9,679.9	7,136.0	75.8	76.5	-7.18	1,673.4	156.6	149.6	96.4	51.39	3.819	
9,600.0	6,981.0	9,779.9	7,136.0	78.4	79.1	-7.22	1,673.8	158.3	150.6	96.8	51.93	3.833	
9,700.0	6,981.0	9,879.9	7,136.0	81.1	81.7	-7.26	1,674.3	160.0	151.6	97.2	52.47	3.847	
9,800.0	6,981.0	9,979.9	7,136.0	83.7	84.3	-7.30	1,674.7	161.7	152.6	97.6	53.01	3.861	
9,900.0	6,981.0	10,079.9	7,136.0	86.4	87.0	-7.34	1,675.1	163.4	153.6	98.0	53.55	3.875	
10,000.0	6,981.0	10,179.9	7,136.0	89.1	89.6	-7.38	1,675.6	165.1	154.6	98.4	54.09	3.889	
10,100.0	6,981.0	10,279.9	7,136.0	91.8	92.3	-7.42	1,676.0	166.8	155.6	98.8	54.63	3.903	
10,200.0	6,981.0	10,379.9	7,136.0	94.4	95.0	-7.46	1,676.5	168.5	156.6	99.2	55.17	3.917	
10,300.0	6,981.0	10,479.9	7,136.0	97.1	97.7	-7.50	1,676.9	170.2	157.6	99.6	55.71	3.931	

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 #12
<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 #12	<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:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.0	6,981.0	10,579.9	7,136.0	99.8	100.4	133.16	1,677.4	-3,443.2	226.6	82.9	143.71	1.577		
10,500.0	6,981.0	10,679.9	7,136.0	102.6	103.0	133.17	1,677.8	-3,543.2	226.5	78.7	147.83	1.532		
10,600.0	6,981.0	10,779.9	7,136.0	105.3	105.7	133.18	1,678.3	-3,643.2	226.5	74.5	151.95	1.491 Level 3		
10,700.0	6,981.0	10,879.9	7,136.0	108.0	108.5	133.20	1,678.7	-3,743.2	226.4	70.4	156.07	1.451 Level 3		
10,800.0	6,981.0	10,979.9	7,136.0	110.7	111.2	133.21	1,679.2	-3,843.2	226.4	66.2	160.20	1.413 Level 3		
10,900.0	6,981.0	11,079.9	7,136.0	113.5	113.9	133.22	1,679.6	-3,943.2	226.3	62.0	164.32	1.377 Level 3		
11,000.0	6,981.0	11,179.9	7,136.0	116.2	116.6	133.24	1,680.1	-4,043.2	226.3	57.8	168.45	1.343 Level 3		
11,100.0	6,981.0	11,279.9	7,136.0	118.9	119.3	133.25	1,680.5	-4,143.2	226.2	53.6	172.57	1.311 Level 3		
11,200.0	6,981.0	11,379.9	7,136.0	121.7	122.1	133.26	1,681.0	-4,243.2	226.2	49.5	176.70	1.280 Level 3		
11,300.0	6,981.0	11,479.9	7,136.0	124.4	124.8	133.28	1,681.4	-4,343.2	226.1	45.3	180.83	1.250 Level 3		
11,400.0	6,981.0	11,579.9	7,136.0	127.2	127.5	133.29	1,681.9	-4,443.2	226.1	41.1	184.96	1.222 Level 2		
11,500.0	6,981.0	11,679.9	7,136.0	129.9	130.3	133.30	1,682.3	-4,543.2	226.0	36.9	189.08	1.195 Level 2		
11,600.0	6,981.0	11,779.9	7,136.0	132.7	133.0	133.32	1,682.8	-4,643.2	225.9	32.7	193.21	1.169 Level 2		
11,700.0	6,981.0	11,879.9	7,136.0	135.4	135.8	133.33	1,683.2	-4,743.2	225.9	28.5	197.34	1.145 Level 2		
11,800.0	6,981.0	11,979.9	7,136.0	138.2	138.5	133.34	1,683.7	-4,843.2	225.8	24.4	201.47	1.121 Level 2		
11,900.0	6,981.0	12,079.9	7,136.0	140.9	141.3	133.36	1,684.1	-4,943.2	225.8	20.2	205.60	1.098 Level 2		
12,000.0	6,981.0	12,179.9	7,136.0	143.7	144.0	133.37	1,684.6	-5,043.2	225.7	16.0	209.72	1.076 Level 2		
12,100.0	6,981.0	12,279.9	7,136.0	146.5	146.8	133.38	1,685.0	-5,143.2	225.7	11.8	213.85	1.055 Level 2		
12,200.0	6,981.0	12,379.9	7,136.0	149.2	149.5	133.39	1,685.4	-5,243.2	225.6	7.6	217.98	1.035 Level 2		
12,300.0	6,981.0	12,479.9	7,136.0	152.0	152.3	133.41	1,685.9	-5,343.2	225.6	3.5	222.11	1.016 Level 2		
12,400.0	6,981.0	12,579.9	7,136.0	154.8	155.1	133.42	1,686.3	-5,443.2	225.5	-0.7	226.23	0.997 Level 1		
12,500.0	6,981.0	12,679.9	7,136.0	157.5	157.8	133.43	1,686.8	-5,543.2	225.4	-4.9	230.36	0.979 Level 1		
12,600.0	6,981.0	12,779.9	7,136.0	160.3	160.6	133.45	1,687.2	-5,643.2	225.4	-9.1	234.48	0.961 Level 1		
12,700.0	6,981.0	12,879.9	7,136.0	163.1	163.4	133.46	1,687.7	-5,743.2	225.3	-13.3	238.60	0.944 Level 1		
12,800.0	6,981.0	12,979.9	7,136.0	165.8	166.1	133.47	1,688.1	-5,843.2	225.3	-17.4	242.73	0.928 Level 1		
12,900.0	6,981.0	13,079.9	7,136.0	168.6	168.9	133.49	1,688.6	-5,943.2	225.2	-21.6	246.85	0.912 Level 1		
13,000.0	6,981.0	13,179.9	7,136.0	171.4	171.7	133.50	1,689.0	-6,043.2	225.2	-25.8	250.97	0.897 Level 1		
13,100.0	6,981.0	13,279.9	7,136.0	174.2	174.4	133.51	1,689.5	-6,143.2	225.1	-30.0	255.09	0.883 Level 1		
13,200.0	6,981.0	13,379.9	7,136.0	176.9	177.2	133.53	1,689.9	-6,243.2	225.1	-34.1	259.21	0.868 Level 1		
13,300.0	6,981.0	13,479.9	7,136.0	179.7	180.0	133.54	1,690.4	-6,343.2	225.0	-38.3	263.33	0.854 Level 1		
13,400.0	6,981.0	13,579.9	7,136.0	182.5	182.8	133.55	1,690.8	-6,443.2	225.0	-42.5	267.45	0.841 Level 1		
13,500.0	6,981.0	13,679.9	7,136.0	185.3	185.5	133.57	1,691.3	-6,543.2	224.9	-46.7	271.56	0.828 Level 1		
13,600.0	6,981.0	13,779.9	7,136.0	188.1	188.3	133.58	1,691.7	-6,643.2	224.8	-50.8	275.68	0.816 Level 1		
13,700.0	6,981.0	13,879.9	7,136.0	190.9	191.1	133.59	1,692.2	-6,743.2	224.8	-55.0	279.79	0.803 Level 1		
13,800.0	6,981.0	13,979.9	7,136.0	193.6	193.9	133.61	1,692.6	-6,843.2	224.7	-59.2	283.91	0.792 Level 1		
13,900.0	6,981.0	14,079.9	7,136.0	196.4	196.7	133.62	1,693.1	-6,943.2	224.7	-63.3	288.02	0.780 Level 1		
14,000.0	6,981.0	14,179.9	7,136.0	199.2	199.4	133.63	1,693.5	-7,043.2	224.6	-67.5	292.13	0.769 Level 1		
14,100.0	6,981.0	14,279.9	7,136.0	202.0	202.2	133.65	1,694.0	-7,143.2	224.6	-71.7	296.24	0.758 Level 1		
14,200.0	6,981.0	14,379.9	7,136.0	204.8	205.0	133.66	1,694.4	-7,243.2	224.5	-75.8	300.35	0.748 Level 1		
14,300.0	6,981.0	14,479.9	7,136.0	207.6	207.8	133.67	1,694.8	-7,343.2	224.5	-80.0	304.46	0.737 Level 1		
14,400.0	6,981.0	14,579.9	7,136.0	210.4	210.6	133.69	1,695.3	-7,443.2	224.4	-84.2	308.56	0.727 Level 1		
14,500.0	6,981.0	14,679.9	7,136.0	213.1	213.4	133.70	1,695.7	-7,543.2	224.4	-88.3	312.67	0.718 Level 1		
14,600.0	6,981.0	14,779.9	7,136.0	215.9	216.1	133.71	1,696.2	-7,643.2	224.3	-92.5	316.77	0.708 Level 1		
14,700.0	6,981.0	14,879.9	7,136.0	218.7	218.9	133.73	1,696.6	-7,743.2	224.2	-96.6	320.87	0.699 Level 1		
14,800.0	6,981.0	14,979.9	7,136.0	221.5	221.7	133.74	1,697.1	-7,843.2	224.2	-100.8	324.97	0.690 Level 1		
14,900.0	6,981.0	15,079.9	7,136.0	224.3	224.5	133.75	1,697.5	-7,943.2	224.1	-104.9	329.07	0.681 Level 1		
15,000.0	6,981.0	15,179.9	7,136.0	227.1	227.3	133.77	1,698.0	-8,043.2	224.1	-109.1	333.17	0.673 Level 1		
15,100.0	6,981.0	15,279.9	7,136.0	229.9	230.1	133.78	1,698.4	-8,143.2	224.0	-113.2	337.27	0.664 Level 1		
15,200.0	6,981.0	15,379.9	7,136.0	232.7	232.9	133.79	1,698.9	-8,243.2	224.0	-117.4	341.36	0.656 Level 1		
15,300.0	6,981.0	15,479.9	7,136.0	235.5	235.7	133.81	1,699.3	-8,343.2	223.9	-121.5	345.46	0.648 Level 1		
15,400.0	6,981.0	15,579.9	7,136.0	238.3	238.4	133.82	1,699.8	-8,443.2	223.9	-125.7	349.55	0.640 Level 1		
15,500.0	6,981.0	15,679.9	7,136.0	241.1	241.2	133.83	1,700.2	-8,543.2	223.8	-129.8	353.64	0.633 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 #12
<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 #12	<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 #13 - Wellbore #1 - Plan #1 (10-03)													Offset Site Error:	0.0 ft
Survey Program: 0-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	
15,600.0	6,981.0	15,779.9	7,136.0	243.8	244.0	133.85	1,700.7	-8,643.2	223.8	-134.0	357.73	0.625	Level 1	
15,700.0	6,981.0	15,879.9	7,136.0	246.6	246.8	133.86	1,701.1	-8,743.2	223.7	-138.1	361.82	0.618	Level 1	
15,800.0	6,981.0	15,979.9	7,136.0	249.4	249.6	133.87	1,701.6	-8,843.2	223.6	-142.3	365.90	0.611	Level 1	
15,900.0	6,981.0	16,079.9	7,136.0	252.2	252.4	133.89	1,702.0	-8,943.2	223.6	-146.4	369.99	0.604	Level 1	
16,000.0	6,981.0	16,179.9	7,136.0	255.0	255.2	133.90	1,702.5	-9,043.2	223.5	-150.5	374.07	0.598	Level 1	
16,100.0	6,981.0	16,279.9	7,136.0	257.8	258.0	133.91	1,702.9	-9,143.2	223.5	-154.7	378.15	0.591	Level 1	
16,200.0	6,981.0	16,379.9	7,136.0	260.6	260.8	133.93	1,703.4	-9,243.2	223.4	-158.8	382.24	0.585	Level 1	
16,300.0	6,981.0	16,479.9	7,136.0	263.4	263.6	133.94	1,703.8	-9,343.2	223.4	-162.9	386.31	0.578	Level 1	
16,400.0	6,981.0	16,579.9	7,136.0	266.2	266.4	133.95	1,704.3	-9,443.2	223.3	-167.1	390.39	0.572	Level 1	
16,500.0	6,981.0	16,679.9	7,136.0	269.0	269.2	133.97	1,704.7	-9,543.2	223.3	-171.2	394.47	0.566	Level 1	
16,600.0	6,981.0	16,779.9	7,136.0	271.8	272.0	133.98	1,705.1	-9,643.2	223.2	-175.3	398.54	0.560	Level 1	
16,700.0	6,981.0	16,879.9	7,136.0	274.6	274.7	133.99	1,705.6	-9,743.2	223.2	-179.5	402.62	0.554	Level 1	
16,800.0	6,981.0	16,979.9	7,136.0	277.4	277.5	134.01	1,706.0	-9,843.2	223.1	-183.6	406.69	0.549	Level 1	
16,900.0	6,981.0	17,079.9	7,136.0	280.2	280.3	134.02	1,706.5	-9,943.2	223.1	-187.7	410.76	0.543	Level 1	
17,000.0	6,981.0	17,179.9	7,136.0	283.0	283.1	134.03	1,706.9	-10,043.2	223.0	-191.8	414.83	0.538	Level 1	
17,030.6	6,981.0	17,210.5	7,136.0	283.8	284.0	134.04	1,707.1	-10,073.8	223.0	-193.1	416.07	0.536 Level 1, ES, SF		



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-179.01	-160.3	-2.8	160.3					
100.0	100.0	100.0	100.0	0.1	0.1	-179.01	-160.3	-2.8	160.3	160.1	0.22	713.308		
200.0	200.0	200.0	200.0	0.3	0.3	-179.01	-160.3	-2.8	160.3	159.7	0.67	237.769		
300.0	300.0	300.0	300.0	0.6	0.6	-179.01	-160.3	-2.8	160.3	159.2	1.12	142.662		
400.0	400.0	400.0	400.0	0.8	0.8	-179.01	-160.3	-2.8	160.3	158.8	1.57	101.901 CC, ES		
500.0	500.0	500.0	500.0	1.0	1.0	176.42	-160.3	-2.8	162.1	160.0	2.03	79.976		
600.0	599.8	599.8	599.8	1.2	1.2	176.52	-160.3	-2.8	167.3	164.8	2.48	67.407		
700.0	699.5	699.5	699.5	1.5	1.5	176.68	-160.3	-2.8	176.0	173.1	2.94	59.937		
800.0	798.7	798.7	798.7	1.7	1.7	176.89	-160.3	-2.8	188.2	184.8	3.39	55.510		
900.0	897.5	897.5	897.5	2.0	1.9	177.11	-160.3	-2.8	203.8	199.9	3.84	53.037		
1,000.0	995.6	995.6	995.6	2.4	2.1	177.34	-160.3	-2.8	222.8	218.5	4.29	51.891		
1,100.0	1,093.1	1,093.1	1,093.1	2.8	2.3	177.57	-160.3	-2.8	245.2	240.5	4.75	51.642		
1,200.0	1,190.3	1,190.3	1,190.3	3.2	2.6	177.78	-160.3	-2.8	268.6	263.4	5.21	51.518 SF		
1,300.0	1,287.5	1,279.6	1,279.6	3.7	2.7	177.89	-161.4	-2.6	293.3	287.6	5.65	51.888		
1,400.0	1,384.7	1,366.6	1,366.5	4.1	2.9	177.88	-165.1	-2.0	320.7	314.7	6.08	52.770		
1,500.0	1,481.9	1,452.1	1,451.8	4.6	3.1	177.78	-171.2	-0.9	351.0	344.5	6.50	53.973		
1,600.0	1,579.1	1,536.0	1,535.3	5.1	3.2	177.61	-179.7	0.6	384.1	377.1	6.94	55.361		
1,700.0	1,676.4	1,629.9	1,628.5	5.5	3.4	177.41	-190.5	2.5	418.5	411.1	7.38	56.717		
1,800.0	1,773.6	1,723.8	1,721.8	6.0	3.6	177.24	-201.3	4.3	452.8	445.0	7.82	57.899		
1,900.0	1,870.8	1,817.7	1,815.0	6.5	3.9	177.09	-212.1	6.2	487.2	478.9	8.27	58.915		
2,000.0	1,968.0	1,911.6	1,908.3	6.9	4.1	176.96	-222.9	8.1	521.6	512.9	8.72	59.793		
2,100.0	2,065.2	2,005.5	2,001.5	7.4	4.3	176.85	-233.7	9.9	556.0	546.8	9.18	60.554		
2,200.0	2,162.4	2,099.4	2,094.8	7.9	4.6	176.75	-244.6	11.8	590.4	580.7	9.64	61.220		
2,300.0	2,259.7	2,193.3	2,188.1	8.4	4.8	176.66	-255.4	13.7	624.8	614.6	10.11	61.806		
2,400.0	2,356.9	2,287.2	2,281.3	8.9	5.1	176.58	-266.2	15.6	659.1	648.6	10.58	62.323		
2,500.0	2,454.1	2,381.1	2,374.6	9.4	5.4	176.51	-277.0	17.4	693.5	682.5	11.05	62.783		
2,600.0	2,551.3	2,475.0	2,467.8	9.8	5.6	176.44	-287.8	19.3	727.9	716.4	11.52	63.194		
2,700.0	2,648.5	2,568.9	2,561.1	10.3	5.9	176.38	-298.6	21.2	762.3	750.3	11.99	63.562		
2,800.0	2,745.7	2,662.8	2,654.3	10.8	6.2	176.33	-309.4	23.1	796.7	784.2	12.47	63.893		
2,900.0	2,842.9	2,756.7	2,747.6	11.3	6.5	176.28	-320.2	24.9	831.1	818.2	12.95	64.191		
3,000.0	2,940.2	2,850.6	2,840.8	11.8	6.7	176.24	-331.0	26.8	865.5	852.1	13.43	64.462		
3,100.0	3,037.4	2,944.5	2,934.1	12.3	7.0	176.19	-341.8	28.7	899.9	886.0	13.91	64.708		
3,200.0	3,134.6	3,038.4	3,027.3	12.7	7.3	176.15	-352.6	30.6	934.3	919.9	14.39	64.933		
3,300.0	3,231.8	3,132.3	3,120.6	13.2	7.6	176.12	-363.5	32.4	968.7	953.8	14.87	65.138		



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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: 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
0.0	0.0	0.0	0.0	0.0	0.0	-178.88	-142.1	-2.8	142.1				
100.0	100.0	100.0	100.0	0.1	0.1	-178.88	-142.1	-2.8	142.1	141.9	0.22	632.242	
200.0	200.0	200.0	200.0	0.3	0.3	-178.88	-142.1	-2.8	142.1	141.4	0.67	210.747	
300.0	300.0	300.0	300.0	0.6	0.6	-178.88	-142.1	-2.8	142.1	141.0	1.12	126.448	
400.0	400.0	400.0	400.0	0.8	0.8	-178.88	-142.1	-2.8	142.1	140.5	1.57	90.320 CC, ES	
500.0	500.0	500.0	500.0	1.0	1.0	176.55	-142.1	-2.8	143.8	141.8	2.03	70.985	
600.0	599.8	599.8	599.8	1.2	1.2	176.66	-142.1	-2.8	149.1	146.6	2.48	60.066	
700.0	699.5	699.5	699.5	1.5	1.5	176.84	-142.1	-2.8	157.8	154.8	2.94	53.733	
800.0	798.7	798.7	798.7	1.7	1.7	177.05	-142.1	-2.8	169.9	166.6	3.39	50.136	
900.0	897.5	897.5	897.5	2.0	1.9	177.28	-142.1	-2.8	185.6	181.7	3.84	48.297	
1,000.0	995.6	995.6	995.6	2.4	2.1	177.52	-142.1	-2.8	204.6	200.3	4.29	47.651 SF	
1,100.0	1,093.1	1,093.1	1,093.1	2.8	2.3	177.75	-142.1	-2.8	227.0	222.3	4.75	47.809	
1,200.0	1,190.3	1,190.3	1,190.3	3.2	2.6	177.96	-142.1	-2.8	250.4	245.2	5.21	48.028	
1,300.0	1,287.5	1,287.5	1,287.5	3.7	2.8	178.14	-142.1	-2.8	273.9	268.2	5.69	48.172	
1,400.0	1,384.7	1,384.7	1,384.7	4.1	3.0	178.28	-142.1	-2.8	297.3	291.1	6.16	48.265	
1,500.0	1,481.9	1,481.9	1,481.9	4.6	3.2	178.41	-142.1	-2.8	320.7	314.1	6.64	48.325	
1,600.0	1,579.1	1,571.2	1,571.2	5.1	3.4	178.45	-142.9	-2.5	345.1	338.0	7.08	48.717	
1,700.0	1,676.4	1,657.5	1,657.4	5.5	3.6	178.33	-146.2	-1.4	372.1	364.6	7.51	49.518	
1,800.0	1,773.6	1,749.3	1,749.0	6.0	3.7	178.09	-151.7	0.6	401.2	393.3	7.95	50.458	
1,900.0	1,870.8	1,844.8	1,844.4	6.5	3.9	177.87	-157.7	2.6	430.6	422.2	8.39	51.314	
2,000.0	1,968.0	1,940.4	1,939.7	6.9	4.1	177.67	-163.7	4.7	459.9	451.1	8.84	52.053	
2,100.0	2,065.2	2,036.0	2,035.1	7.4	4.3	177.50	-169.6	6.8	489.3	480.0	9.29	52.694	
2,200.0	2,162.4	2,131.6	2,130.5	7.9	4.5	177.35	-175.6	8.9	518.6	508.9	9.74	53.254	
2,300.0	2,259.7	2,227.2	2,225.9	8.4	4.7	177.21	-181.6	10.9	548.0	537.8	10.20	53.744	
2,400.0	2,356.9	2,322.8	2,321.2	8.9	4.9	177.09	-187.5	13.0	577.4	566.7	10.66	54.175	
2,500.0	2,454.1	2,418.3	2,416.6	9.4	5.1	176.98	-193.5	15.1	606.7	595.6	11.12	54.557	
2,600.0	2,551.3	2,513.9	2,512.0	9.8	5.3	176.88	-199.5	17.1	636.1	624.5	11.59	54.897	
2,700.0	2,648.5	2,609.5	2,607.4	10.3	5.5	176.78	-205.4	19.2	665.5	653.4	12.06	55.199	
2,800.0	2,745.7	2,705.1	2,702.7	10.8	5.7	176.70	-211.4	21.3	694.8	682.3	12.53	55.471	
2,900.0	2,842.9	2,800.7	2,798.1	11.3	6.0	176.62	-217.3	23.4	724.2	711.2	13.00	55.714	
3,000.0	2,940.2	2,896.3	2,893.5	11.8	6.2	176.55	-223.3	25.4	753.6	740.1	13.47	55.933	
3,100.0	3,037.4	2,991.9	2,988.9	12.3	6.4	176.49	-229.3	27.5	782.9	769.0	13.95	56.132	
3,200.0	3,134.6	3,087.4	3,084.2	12.7	6.6	176.43	-235.2	29.6	812.3	797.9	14.43	56.312	
3,300.0	3,231.8	3,183.0	3,179.6	13.2	6.9	176.37	-241.2	31.6	841.7	826.8	14.90	56.476	
3,400.0	3,329.0	3,278.6	3,275.0	13.7	7.1	176.32	-247.2	33.7	871.1	855.7	15.38	56.625	
3,500.0	3,426.2	3,374.2	3,370.4	14.2	7.3	176.27	-253.1	35.8	900.4	884.6	15.86	56.761	
3,600.0	3,523.4	3,469.8	3,465.8	14.7	7.6	176.22	-259.1	37.9	929.8	913.5	16.35	56.887	
3,700.0	3,620.7	3,565.4	3,561.1	15.2	7.8	176.18	-265.1	39.9	959.2	942.4	16.83	57.002	
3,800.0	3,717.9	3,661.0	3,656.5	15.7	8.0	176.14	-271.0	42.0	988.6	971.3	17.31	57.107	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-178.75	-127.5	-2.8	127.5					
100.0	100.0	100.5	100.5	0.1	0.1	-178.72	-127.5	-2.8	127.5	127.3	0.23	565.886		
200.0	200.0	200.5	200.4	0.3	0.3	-178.96	-127.5	-2.3	127.6	126.9	0.62	204.397		
300.0	300.0	300.4	300.3	0.6	0.5	179.43	-127.6	1.3	127.6	126.6	1.06	120.473		
400.0	400.0	400.4	400.1	0.8	0.7	176.74	-127.6	7.3	127.9	126.3	1.52	84.332 ES		
500.0	500.0	500.2	499.8	1.0	1.0	169.54	-127.6	13.4	130.0	128.0	1.97	65.862		
600.0	599.8	601.3	600.7	1.2	1.2	167.36	-127.0	19.4	135.3	132.8	2.44	55.508		
700.0	699.5	701.5	700.7	1.5	1.4	165.50	-125.5	25.7	143.2	140.3	2.90	49.318		
800.0	798.7	797.7	796.6	1.7	1.7	164.13	-124.5	32.0	155.2	151.8	3.37	46.022		
900.0	897.5	893.2	891.9	2.0	1.9	163.35	-125.9	38.6	173.0	169.2	3.84	45.066 SF		
1,000.0	995.6	988.4	986.9	2.4	2.1	163.10	-128.6	44.8	195.3	191.0	4.31	45.326		
1,100.0	1,093.1	1,084.9	1,083.1	2.8	2.3	163.63	-132.5	49.6	221.7	216.9	4.77	46.474		
1,200.0	1,190.3	1,182.9	1,181.0	3.2	2.5	164.80	-136.4	52.0	248.5	243.2	5.23	47.548		
1,300.0	1,287.5	1,280.4	1,278.5	3.7	2.7	165.78	-139.6	54.1	274.7	269.0	5.68	48.349		
1,400.0	1,384.7	1,377.6	1,375.6	4.1	2.9	166.64	-142.6	55.8	300.7	294.6	6.14	48.958		
1,500.0	1,481.9	1,469.6	1,467.6	4.6	3.1	167.26	-145.8	57.9	327.2	320.6	6.60	49.553		
1,600.0	1,579.1	1,560.3	1,558.1	5.1	3.3	167.68	-150.3	60.7	355.3	348.2	7.07	50.263		
1,700.0	1,676.4	1,658.6	1,656.2	5.5	3.6	168.26	-155.9	62.6	384.0	376.4	7.54	50.918		
1,800.0	1,773.6	1,757.9	1,755.4	6.0	3.8	168.76	-160.6	64.5	411.7	403.7	8.01	51.396		
1,900.0	1,870.8	1,853.8	1,851.1	6.5	4.0	169.12	-164.8	66.6	439.2	430.7	8.48	51.782		
2,000.0	1,968.0	1,944.2	1,941.4	6.9	4.2	169.28	-169.2	69.9	467.3	458.3	8.95	52.203		
2,100.0	2,065.2	2,042.1	2,039.1	7.4	4.4	169.46	-174.3	73.2	495.7	486.3	9.44	52.536		
2,200.0	2,162.4	2,139.8	2,136.6	7.9	4.6	169.59	-179.2	76.7	523.9	513.9	9.92	52.810		
2,300.0	2,259.7	2,240.6	2,237.2	8.4	4.9	169.60	-183.2	81.3	551.2	540.7	10.42	52.906		
2,400.0	2,356.9	2,331.4	2,327.9	8.9	5.1	169.60	-187.1	85.5	578.9	568.0	10.90	53.121		
2,500.0	2,454.1	2,429.9	2,426.1	9.4	5.3	169.62	-191.3	89.9	606.4	595.0	11.39	53.232		
2,600.0	2,551.3	2,514.4	2,510.5	9.8	5.5	169.70	-195.8	93.1	635.0	623.2	11.85	53.568		
2,700.0	2,648.5	2,615.5	2,611.3	10.3	5.8	169.87	-201.9	95.9	664.1	651.7	12.35	53.792		
2,800.0	2,745.7	2,723.1	2,718.8	10.8	6.0	170.09	-206.6	98.3	691.6	678.8	12.84	53.851		
2,900.0	2,842.9	2,817.3	2,812.9	11.3	6.2	170.25	-210.2	100.5	718.6	705.3	13.32	53.960		
3,000.0	2,940.2	2,905.1	2,900.6	11.8	6.4	170.37	-214.3	102.9	746.4	732.6	13.78	54.162		
3,100.0	3,037.4	2,999.0	2,994.3	12.3	6.6	170.48	-219.4	105.6	775.0	760.8	14.26	54.358		
3,200.0	3,134.6	3,107.6	3,102.7	12.7	6.9	170.56	-224.1	109.1	802.6	787.8	14.77	54.352		
3,300.0	3,231.8	3,199.6	3,194.6	13.2	7.1	170.61	-227.7	112.2	829.7	814.5	15.24	54.434		
3,400.0	3,329.0	3,284.1	3,279.0	13.7	7.3	170.63	-231.9	115.5	857.9	842.2	15.71	54.618		
3,500.0	3,426.2	3,373.9	3,368.5	14.2	7.5	170.62	-237.3	119.4	887.2	871.0	16.19	54.811		
3,600.0	3,523.4	3,476.6	3,471.0	14.7	7.7	170.68	-243.1	122.9	916.0	899.3	16.69	54.892		
3,700.0	3,620.7	3,552.0	3,546.2	15.2	7.9	170.78	-248.1	124.6	945.7	928.6	17.12	55.226		
3,800.0	3,717.9	3,645.8	3,639.7	15.7	8.1	170.92	-255.5	126.4	976.6	959.0	17.60	55.488		

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	486.418		
200.0	200.0	200.0	200.0	0.3	0.3	-178.54	-109.3	-2.8	109.3	108.7	0.67	162.139		
300.0	300.0	300.0	300.0	0.6	0.6	-178.54	-109.3	-2.8	109.3	108.2	1.12	97.284		
400.0	400.0	400.0	400.0	0.8	0.8	-178.54	-109.3	-2.8	109.3	107.8	1.57	69.488 CC, ES		
500.0	500.0	500.0	500.0	1.0	1.0	176.89	-109.3	-2.8	111.1	109.0	2.03	54.811		
600.0	599.8	599.8	599.8	1.2	1.2	177.03	-109.3	-2.8	116.3	113.8	2.48	46.860		
700.0	699.5	699.5	699.5	1.5	1.5	177.22	-109.3	-2.8	125.0	122.1	2.94	42.572		
800.0	798.7	798.7	798.7	1.7	1.7	177.46	-109.3	-2.8	137.2	133.8	3.39	40.469		
900.0	897.5	897.5	897.5	2.0	1.9	177.71	-109.3	-2.8	152.8	149.0	3.84	39.771 SF		
1,000.0	995.6	995.6	995.6	2.4	2.1	177.95	-109.3	-2.8	171.9	167.6	4.29	40.025		
1,100.0	1,093.1	1,093.1	1,093.1	2.8	2.3	178.17	-109.3	-2.8	194.3	189.5	4.75	40.914		
1,200.0	1,190.3	1,190.3	1,190.3	3.2	2.6	178.37	-109.3	-2.8	217.7	212.5	5.21	41.751		
1,300.0	1,287.5	1,287.5	1,287.5	3.7	2.8	178.53	-109.3	-2.8	241.1	235.4	5.68	42.415		
1,400.0	1,384.7	1,384.7	1,384.7	4.1	3.0	178.66	-109.3	-2.8	264.6	258.4	6.16	42.953		
1,500.0	1,481.9	1,481.9	1,481.9	4.6	3.2	178.77	-109.3	-2.8	288.0	281.4	6.64	43.396		
1,600.0	1,579.1	1,579.1	1,579.1	5.1	3.4	178.86	-109.3	-2.8	311.4	304.3	7.12	43.765		
1,700.0	1,676.4	1,676.4	1,676.4	5.5	3.7	178.94	-109.3	-2.8	334.9	327.3	7.60	44.078		
1,800.0	1,773.6	1,773.6	1,773.6	6.0	3.9	179.01	-109.3	-2.8	358.3	350.2	8.08	44.345		
1,900.0	1,870.8	1,870.8	1,870.8	6.5	4.1	179.07	-109.3	-2.8	381.7	373.2	8.56	44.576		
2,000.0	1,968.0	1,968.0	1,968.0	6.9	4.3	179.12	-109.3	-2.8	405.2	396.1	9.05	44.778		
2,100.0	2,065.2	2,065.2	2,065.2	7.4	4.5	179.17	-109.3	-2.8	428.6	419.1	9.53	44.954		
2,200.0	2,162.4	2,162.4	2,162.4	7.9	4.7	179.22	-109.3	-2.8	452.0	442.0	10.02	45.111		
2,300.0	2,259.7	2,259.7	2,259.7	8.4	5.0	179.25	-109.3	-2.8	475.5	465.0	10.51	45.250		
2,400.0	2,356.9	2,356.9	2,356.9	8.9	5.2	179.29	-109.3	-2.8	498.9	487.9	11.00	45.374		
2,500.0	2,454.1	2,454.1	2,454.1	9.4	5.4	179.32	-109.3	-2.8	522.3	510.9	11.48	45.486		
2,600.0	2,551.3	2,551.3	2,551.3	9.8	5.6	179.35	-109.3	-2.8	545.8	533.8	11.97	45.588		
2,700.0	2,648.5	2,648.5	2,648.5	10.3	5.8	179.38	-109.3	-2.8	569.2	556.7	12.46	45.680		
2,800.0	2,745.7	2,745.7	2,745.7	10.8	6.1	179.40	-109.3	-2.8	592.6	579.7	12.95	45.763		
2,900.0	2,842.9	2,842.9	2,842.9	11.3	6.3	179.42	-109.3	-2.8	616.1	602.6	13.44	45.840		
3,000.0	2,940.2	2,940.2	2,940.2	11.8	6.5	179.45	-109.3	-2.8	639.5	625.6	13.93	45.910		
3,100.0	3,037.4	3,037.4	3,037.4	12.3	6.7	179.46	-109.3	-2.8	663.0	648.5	14.42	45.975		
3,200.0	3,134.6	3,134.6	3,134.6	12.7	6.9	179.48	-109.3	-2.8	686.4	671.5	14.91	46.034		
3,300.0	3,231.8	3,231.8	3,231.8	13.2	7.2	179.50	-109.3	-2.8	709.8	694.4	15.40	46.090		
3,400.0	3,329.0	3,329.0	3,329.0	13.7	7.4	179.52	-109.3	-2.8	733.3	717.4	15.89	46.141		
3,500.0	3,426.2	3,426.2	3,426.2	14.2	7.6	179.53	-109.3	-2.8	756.7	740.3	16.38	46.188		
3,600.0	3,523.4	3,523.4	3,523.4	14.7	7.8	179.55	-109.3	-2.8	780.1	763.3	16.87	46.233		
3,700.0	3,620.7	3,620.7	3,620.7	15.2	8.0	179.56	-109.3	-2.8	803.6	786.2	17.37	46.274		
3,800.0	3,717.9	3,717.9	3,717.9	15.7	8.2	179.57	-109.3	-2.8	827.0	809.2	17.86	46.313		
3,900.0	3,815.1	3,815.1	3,815.1	16.1	8.5	179.58	-109.3	-2.8	850.4	832.1	18.35	46.349		
4,000.0	3,912.3	3,912.3	3,912.3	16.6	8.7	179.59	-109.3	-2.8	873.9	855.0	18.84	46.383		
4,100.0	4,009.5	4,008.9	4,008.9	17.1	8.9	179.60	-109.3	-2.8	897.3	878.0	19.33	46.422		
4,200.0	4,106.7	4,100.0	4,100.0	17.6	9.1	179.50	-109.8	-1.1	921.2	901.4	19.79	46.538		
4,300.0	4,203.9	4,194.0	4,193.9	18.1	9.3	179.25	-111.0	3.0	945.5	925.3	20.25	46.693		
4,400.0	4,301.2	4,290.9	4,290.7	18.6	9.5	178.99	-112.3	7.5	970.0	949.3	20.71	46.828		
4,500.0	4,398.4	4,387.8	4,387.4	19.1	9.6	178.74	-113.7	12.0	994.5	973.3	21.18	46.953		

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-178.32	-94.7	-2.8	94.8					
100.0	100.0	100.5	100.5	0.1	0.1	-178.32	-94.7	-2.8	94.8	94.5	0.23	420.538		
200.0	200.0	200.5	200.5	0.3	0.3	-178.32	-94.7	-2.8	94.8	94.1	0.67	140.413		
300.0	300.0	300.5	300.5	0.6	0.6	-178.32	-94.7	-2.8	94.8	93.6	1.12	84.276		
400.0	400.0	400.5	400.5	0.8	0.8	-178.32	-94.7	-2.8	94.8	93.2	1.57	60.206 CC, ES		
500.0	500.0	500.5	500.5	1.0	1.0	177.12	-94.7	-2.8	96.5	94.5	2.03	47.608		
600.0	599.8	600.3	600.3	1.2	1.2	177.26	-94.7	-2.8	101.7	99.2	2.48	40.980		
700.0	699.5	700.0	700.0	1.5	1.5	177.47	-94.7	-2.8	110.4	107.5	2.94	37.604		
800.0	798.7	799.2	799.2	1.7	1.7	177.71	-94.7	-2.8	122.6	119.2	3.39	36.166		
900.0	897.5	898.0	898.0	2.0	1.9	177.96	-94.7	-2.8	138.2	134.4	3.84	35.976 SF		
1,000.0	995.6	996.1	996.1	2.4	2.1	178.19	-94.7	-2.8	157.3	153.0	4.29	36.630		
1,100.0	1,093.1	1,093.6	1,093.6	2.8	2.3	178.41	-94.7	-2.8	179.7	175.0	4.75	37.844		
1,200.0	1,190.3	1,190.8	1,190.8	3.2	2.6	178.59	-94.7	-2.8	203.1	197.9	5.21	38.956		
1,300.0	1,287.5	1,288.0	1,288.0	3.7	2.8	178.74	-94.7	-2.8	226.6	220.9	5.69	39.852		
1,400.0	1,384.7	1,385.2	1,385.2	4.1	3.0	178.86	-94.7	-2.8	250.0	243.8	6.16	40.588		
1,500.0	1,481.9	1,482.4	1,482.4	4.6	3.2	178.96	-94.7	-2.8	273.4	266.8	6.64	41.201		
1,600.0	1,579.1	1,579.6	1,579.6	5.1	3.4	179.04	-94.7	-2.8	296.9	289.8	7.12	41.719		
1,700.0	1,676.4	1,676.9	1,676.9	5.5	3.7	179.11	-94.7	-2.8	320.3	312.7	7.60	42.161		
1,800.0	1,773.6	1,774.1	1,774.1	6.0	3.9	179.17	-94.7	-2.8	343.7	335.7	8.08	42.543		
1,900.0	1,870.8	1,871.3	1,871.3	6.5	4.1	179.22	-94.7	-2.8	367.2	358.6	8.56	42.876		
2,000.0	1,968.0	1,968.5	1,968.5	6.9	4.3	179.27	-94.7	-2.8	390.6	381.6	9.05	43.168		
2,100.0	2,065.2	2,076.0	2,076.0	7.4	4.6	179.27	-93.8	-2.4	413.2	403.7	9.55	43.252		
2,200.0	2,162.4	2,188.1	2,187.9	7.9	4.8	179.07	-89.1	-0.3	432.4	422.4	10.06	42.966		
2,300.0	2,259.7	2,286.5	2,286.1	8.4	5.0	178.85	-83.6	2.2	450.2	439.7	10.56	42.653		
2,400.0	2,356.9	2,384.8	2,384.3	8.9	5.2	178.65	-78.0	4.6	468.0	457.0	11.05	42.358		
2,500.0	2,454.1	2,483.2	2,482.5	9.4	5.5	178.45	-72.5	7.1	485.8	474.3	11.54	42.084		
2,600.0	2,551.3	2,581.6	2,580.7	9.8	5.7	178.28	-67.0	9.5	503.6	491.6	12.04	41.831		
2,700.0	2,648.5	2,680.0	2,679.0	10.3	5.9	178.11	-61.4	12.0	521.4	508.9	12.54	41.593		
2,800.0	2,745.7	2,778.4	2,777.2	10.8	6.1	177.96	-55.9	14.5	539.2	526.2	13.03	41.371		
2,900.0	2,842.9	2,876.8	2,875.4	11.3	6.4	177.81	-50.3	16.9	557.0	543.5	13.53	41.164		
3,000.0	2,940.2	2,975.2	2,973.6	11.8	6.6	177.68	-44.8	19.4	574.8	560.8	14.03	40.969		
3,100.0	3,037.4	3,073.6	3,071.8	12.3	6.8	177.55	-39.3	21.8	592.6	578.1	14.53	40.786		
3,200.0	3,134.6	3,172.0	3,170.0	12.7	7.1	177.43	-33.7	24.3	610.5	595.4	15.03	40.614		
3,300.0	3,231.8	3,270.4	3,268.2	13.2	7.3	177.32	-28.2	26.7	628.3	612.7	15.53	40.452		
3,400.0	3,329.0	3,368.8	3,366.4	13.7	7.5	177.21	-22.7	29.2	646.1	630.1	16.03	40.298		
3,500.0	3,426.2	3,467.2	3,464.6	14.2	7.8	177.11	-17.1	31.7	663.9	647.4	16.53	40.153		
3,600.0	3,523.4	3,565.5	3,562.8	14.7	8.0	177.01	-11.6	34.1	681.8	664.7	17.04	40.015		
3,700.0	3,620.7	3,663.9	3,661.0	15.2	8.2	176.92	-6.0	36.6	699.6	682.0	17.54	39.885		
3,800.0	3,717.9	3,762.3	3,759.2	15.7	8.5	176.84	-0.5	39.0	717.4	699.4	18.04	39.761		
3,900.0	3,815.1	3,860.7	3,857.4	16.1	8.7	176.75	5.0	41.5	735.2	716.7	18.55	39.643		
4,000.0	3,912.3	3,959.1	3,955.6	16.6	9.0	176.68	10.6	44.0	753.1	734.0	19.05	39.531		
4,100.0	4,009.5	4,057.5	4,053.8	17.1	9.2	176.60	16.1	46.4	770.9	751.4	19.55	39.424		
4,200.0	4,106.7	4,155.9	4,152.0	17.6	9.4	176.53	21.6	48.9	788.7	768.7	20.06	39.321		
4,300.0	4,203.9	4,254.3	4,250.2	18.1	9.7	176.46	27.2	51.3	806.6	786.0	20.56	39.224		
4,400.0	4,301.2	4,352.7	4,348.4	18.6	9.9	176.40	32.7	53.8	824.4	803.4	21.07	39.130		
4,500.0	4,398.4	4,451.1	4,446.6	19.1	10.1	176.33	38.3	56.2	842.3	820.7	21.57	39.041		
4,600.0	4,495.6	4,549.5	4,544.9	19.5	10.4	176.27	43.8	58.7	860.1	838.0	22.08	38.955		
4,700.0	4,592.8	4,647.9	4,643.1	20.0	10.6	176.22	49.3	61.2	877.9	855.4	22.59	38.872		
4,800.0	4,690.0	4,746.3	4,741.3	20.5	10.9	176.16	54.9	63.6	895.8	872.7	23.09	38.793		
4,900.0	4,787.2	4,844.6	4,839.5	21.0	11.1	176.11	60.4	66.1	913.6	890.0	23.60	38.717		
5,000.0	4,884.4	4,943.0	4,937.7	21.5	11.3	176.06	65.9	68.5	931.5	907.4	24.10	38.644		
5,100.0	4,981.7	5,041.4	5,035.9	22.0	11.6	176.01	71.5	71.0	949.3	924.7	24.61	38.574		

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 #12
<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 #12	<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 #6 - Wellbore #1 - Plan #1 (6-23-1										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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
5,200.0	5,078.9	5,139.8	5,134.1	22.5	11.8	175.96	77.0	73.4	967.2	942.0	25.12	38.506					
5,300.0	5,176.1	5,238.2	5,232.3	23.0	12.1	175.92	82.6	75.9	985.0	959.4	25.62	38.441					

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-178.01	-80.1	-2.8	80.2	80.2	0.00	N/A		
100.0	100.0	101.2	101.2	0.1	0.1	-178.08	-80.0	-2.7	80.1	79.8	0.23	353.763		
200.0	200.0	201.4	201.4	0.3	0.2	-178.29	-79.7	-2.4	79.7	79.1	0.56	141.367		
300.0	300.0	301.5	301.5	0.6	0.4	-178.75	-79.1	-1.7	79.1	78.1	0.99	80.220		
400.0	400.0	401.6	401.6	0.8	0.6	-179.29	-78.4	-1.0	78.5	77.0	1.42	55.344		
420.8	420.8	422.4	422.4	0.8	0.7	176.05	-78.3	-0.9	78.4	76.9	1.51	52.059 CC, ES		
500.0	500.0	501.2	501.2	1.0	0.8	176.02	-77.9	-0.7	79.6	77.8	1.84	43.270		
600.0	599.8	601.0	601.0	1.2	1.0	175.84	-77.8	-0.1	84.8	82.5	2.28	37.115		
700.0	699.5	700.9	700.9	1.5	1.2	176.00	-77.4	0.2	93.0	90.3	2.72	34.158		
800.0	798.7	801.1	801.1	1.7	1.5	176.59	-76.7	0.0	104.5	101.4	3.16	33.066		
900.0	897.5	899.5	899.5	2.0	1.7	177.54	-75.3	-1.0	118.8	115.2	3.60	33.025 SF		
1,000.0	995.6	997.9	997.8	2.4	1.9	177.96	-74.7	-1.2	137.2	133.2	4.04	33.968		
1,100.0	1,093.1	1,095.4	1,095.4	2.8	2.1	177.72	-73.8	0.2	158.7	154.2	4.48	35.409		
1,200.0	1,190.3	1,192.9	1,192.8	3.2	2.3	177.67	-73.1	1.3	181.4	176.4	4.93	36.757		
1,300.0	1,287.5	1,290.2	1,290.1	3.7	2.5	177.74	-72.3	2.0	204.0	198.6	5.39	37.829		
1,400.0	1,384.7	1,388.5	1,388.4	4.1	2.7	177.91	-71.4	2.3	226.5	220.6	5.86	38.668		
1,500.0	1,481.9	1,486.5	1,486.5	4.6	2.9	178.08	-70.1	2.5	248.6	242.3	6.32	39.330		
1,600.0	1,579.1	1,590.5	1,590.4	5.1	3.1	178.30	-67.3	2.4	269.4	262.6	6.80	39.629		
1,700.0	1,676.4	1,692.0	1,691.8	5.5	3.3	178.53	-62.8	2.2	288.5	281.2	7.28	39.647		
1,800.0	1,773.6	1,791.3	1,790.9	6.0	3.6	178.65	-57.6	2.5	306.8	299.0	7.75	39.568		
1,900.0	1,870.8	1,891.1	1,890.6	6.5	3.8	178.96	-52.2	1.6	325.0	316.8	8.23	39.478		
2,000.0	1,968.0	1,995.9	1,995.1	6.9	4.0	179.18	-45.2	1.2	341.9	333.2	8.72	39.191		
2,100.0	2,065.2	2,093.0	2,091.9	7.4	4.2	179.24	-37.5	1.7	357.6	348.4	9.20	38.867		
2,200.0	2,162.4	2,197.3	2,195.9	7.9	4.5	179.10	-29.9	3.4	373.8	364.2	9.69	38.570		
2,300.0	2,259.7	2,298.9	2,297.1	8.4	4.7	178.86	-20.6	6.0	388.1	377.9	10.18	38.109		
2,400.0	2,356.9	2,396.5	2,394.2	8.9	5.0	178.56	-11.8	9.1	402.5	391.8	10.67	37.724		
2,500.0	2,454.1	2,494.7	2,492.0	9.4	5.2	178.09	-3.2	13.5	417.1	406.0	11.16	37.387		
2,600.0	2,551.3	2,592.4	2,589.2	9.8	5.4	177.65	5.1	18.0	432.0	420.4	11.65	37.097		
2,700.0	2,648.5	2,691.5	2,688.0	10.3	5.7	177.43	13.4	20.9	447.0	434.9	12.14	36.837		
2,800.0	2,745.7	2,786.0	2,782.1	10.8	5.9	177.30	21.1	23.2	462.4	449.8	12.62	36.658		
2,900.0	2,842.9	2,884.5	2,880.3	11.3	6.1	177.10	28.4	26.3	478.4	465.3	13.11	36.504		
3,000.0	2,940.2	2,981.0	2,976.5	11.8	6.4	177.01	35.4	28.4	494.7	481.1	13.59	36.403		
3,100.0	3,037.4	3,067.9	3,063.2	12.3	6.6	176.92	40.4	30.4	512.4	498.3	14.05	36.461		
3,200.0	3,134.6	3,167.6	3,162.7	12.7	6.8	176.79	45.2	33.0	531.0	516.5	14.54	36.511		
3,300.0	3,231.8	3,262.8	3,257.8	13.2	7.0	176.82	49.8	34.0	549.7	534.7	15.02	36.589		
3,400.0	3,329.0	3,375.1	3,370.0	13.7	7.3	176.96	56.3	34.4	567.4	551.9	15.54	36.521		
3,500.0	3,426.2	3,485.4	3,479.9	14.2	7.6	176.98	65.1	35.7	583.0	566.9	16.05	36.319		
3,600.0	3,523.4	3,594.0	3,587.9	14.7	7.8	176.82	75.8	39.0	596.5	579.9	16.57	35.996		
3,700.0	3,620.7	3,691.1	3,684.4	15.2	8.1	176.63	86.2	42.6	609.3	592.3	17.07	35.697		
3,800.0	3,717.9	3,788.3	3,781.0	15.7	8.4	176.37	95.6	47.0	623.1	605.5	17.57	35.461		
3,900.0	3,815.1	3,882.3	3,874.4	16.1	8.6	176.09	105.0	51.5	636.6	618.6	18.07	35.239		
4,000.0	3,912.3	3,971.4	3,963.1	16.6	8.8	175.86	112.2	55.7	652.0	633.5	18.55	35.151		
4,100.0	4,009.5	4,067.1	4,058.6	17.1	9.1	175.71	119.3	59.1	668.0	649.0	19.04	35.086		
4,200.0	4,106.7	4,162.2	4,153.4	17.6	9.3	175.65	125.8	61.5	684.7	665.2	19.53	35.065		
4,300.0	4,203.9	4,259.6	4,250.5	18.1	9.5	175.60	132.2	63.9	701.6	681.6	20.01	35.054		
4,400.0	4,301.2	4,356.8	4,347.5	18.6	9.8	175.57	138.4	66.1	718.7	698.2	20.50	35.052		
4,500.0	4,398.4	4,454.7	4,445.2	19.1	10.0	175.57	144.5	67.8	736.0	715.0	20.99	35.057		
4,600.0	4,495.6	4,551.9	4,552.2	19.5	10.2	175.66	151.5	68.6	752.9	731.4	21.50	35.020		
4,700.0	4,592.8	4,670.8	4,660.7	20.0	10.5	175.66	160.4	70.6	768.3	746.2	22.02	34.895		
4,800.0	4,690.0	4,767.9	4,757.3	20.5	10.8	175.54	168.9	74.1	783.1	760.6	22.51	34.783		
4,900.0	4,787.2	4,856.1	4,845.2	21.0	11.0	175.45	175.8	76.9	798.7	775.7	22.99	34.741		
5,000.0	4,884.4	4,947.8	4,936.7	21.5	11.2	175.43	181.9	78.9	815.6	792.1	23.47	34.752		

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 #12
<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 #12	<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 #7 - Wellbore #1 - Wellbore #1												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 223-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	4,981.7	5,039.2	5,027.9	22.0	11.4	175.47	187.3	80.1	833.2	809.2	23.94	34.797	
5,200.0	5,078.9	5,143.8	5,132.4	22.5	11.7	175.55	193.0	80.8	851.2	826.8	24.44	34.824	
5,300.0	5,176.1	5,248.4	5,236.8	23.0	11.9	175.64	199.9	81.4	868.1	843.1	24.94	34.803	
5,400.0	5,273.3	5,352.5	5,340.6	23.4	12.2	175.67	207.4	82.8	884.4	859.0	25.44	34.760	
5,500.0	5,370.5	5,437.8	5,425.6	23.9	12.4	175.67	213.2	84.4	901.1	875.2	25.91	34.782	
5,600.0	5,467.7	5,530.5	5,518.2	24.4	12.6	175.71	218.4	85.5	919.0	892.6	26.38	34.833	
5,700.0	5,564.9	5,632.7	5,620.2	24.9	12.8	175.74	224.0	86.7	937.0	910.1	26.88	34.860	
5,800.0	5,662.2	5,762.4	5,749.5	25.4	13.1	175.74	233.6	89.2	953.1	925.7	27.44	34.737	
5,900.0	5,759.4	5,867.9	5,854.5	25.9	13.4	175.72	243.9	91.3	966.8	938.8	27.95	34.587	
6,000.0	5,856.6	5,953.9	5,940.2	26.4	13.6	175.75	251.5	92.5	981.4	953.0	28.42	34.533	
6,100.0	5,953.8	6,061.0	6,046.8	26.9	13.9	175.78	260.9	93.8	996.2	967.3	28.93	34.433	



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	-176.64	-47.4	-2.8	47.4					
100.0	100.0	100.5	100.5	0.1	0.1	-176.64	-47.4	-2.8	47.4	47.2	0.23	210.532		
200.0	200.0	200.5	200.5	0.3	0.3	-176.64	-47.4	-2.8	47.4	46.8	0.67	70.294		
300.0	300.0	300.5	300.5	0.6	0.6	-176.64	-47.4	-2.8	47.4	46.3	1.12	42.191		
400.0	400.0	400.5	400.5	0.8	0.8	-176.64	-47.4	-2.8	47.4	45.9	1.57	30.140 CC, ES		
500.0	500.0	500.5	500.5	1.0	1.0	178.79	-47.4	-2.8	49.2	47.2	2.03	24.264		
600.0	599.8	600.3	600.3	1.2	1.2	178.91	-47.4	-2.8	54.4	51.9	2.48	21.921		
700.0	699.5	700.0	700.0	1.5	1.5	179.05	-47.4	-2.8	63.1	60.2	2.94	21.496		
800.0	798.7	799.2	799.2	1.7	1.7	179.20	-47.4	-2.8	75.3	71.9	3.39	22.216		
900.0	897.5	898.0	898.0	2.0	1.9	179.34	-47.4	-2.8	91.0	87.1	3.84	23.671		
1,000.0	995.6	996.1	996.1	2.4	2.1	179.45	-47.4	-2.8	110.0	105.7	4.29	25.623		
1,100.0	1,093.1	1,093.6	1,093.6	2.8	2.3	179.54	-47.4	-2.8	132.4	127.7	4.75	27.892		
1,200.0	1,190.3	1,190.8	1,190.8	3.2	2.6	179.61	-47.4	-2.8	155.9	150.7	5.21	29.895		
1,300.0	1,287.5	1,293.8	1,293.8	3.7	2.8	179.59	-45.9	-2.5	177.9	172.2	5.69	31.254		
1,400.0	1,384.7	1,398.9	1,398.7	4.1	3.0	179.43	-40.6	-1.3	196.4	190.2	6.17	31.809		
1,500.0	1,481.9	1,504.2	1,503.6	4.6	3.3	179.15	-31.6	0.6	211.3	204.7	6.66	31.717		
1,600.0	1,579.1	1,603.2	1,602.1	5.1	3.5	178.86	-21.8	2.7	224.9	217.7	7.15	31.438		
1,700.0	1,676.4	1,702.3	1,700.7	5.5	3.7	178.61	-12.0	4.8	238.5	230.8	7.65	31.183		
1,800.0	1,773.6	1,801.4	1,799.3	6.0	4.0	178.39	-2.2	6.9	252.1	244.0	8.15	30.950		
1,900.0	1,870.8	1,900.4	1,897.8	6.5	4.2	178.19	7.6	9.0	265.7	257.1	8.64	30.737		
2,000.0	1,968.0	1,999.5	1,996.4	6.9	4.5	178.01	17.4	11.0	279.3	270.2	9.15	30.541		
2,100.0	2,065.2	2,098.6	2,094.9	7.4	4.8	177.84	27.2	13.1	292.9	283.3	9.65	30.361		
2,200.0	2,162.4	2,197.6	2,193.5	7.9	5.0	177.70	37.0	15.2	306.5	296.4	10.15	30.194		
2,300.0	2,259.7	2,296.7	2,292.1	8.4	5.3	177.56	46.8	17.3	320.1	309.5	10.66	30.041		
2,400.0	2,356.9	2,395.8	2,390.6	8.9	5.6	177.43	56.6	19.4	333.7	322.6	11.16	29.899		
2,500.0	2,454.1	2,494.8	2,489.2	9.4	5.8	177.32	66.4	21.5	347.4	335.7	11.67	29.766		
2,600.0	2,551.3	2,593.9	2,587.7	9.8	6.1	177.21	76.2	23.6	361.0	348.8	12.18	29.644		
2,700.0	2,648.5	2,693.0	2,686.3	10.3	6.4	177.11	86.0	25.7	374.6	361.9	12.69	29.529		
2,800.0	2,745.7	2,792.0	2,784.8	10.8	6.6	177.02	95.8	27.8	388.2	375.0	13.19	29.422		
2,900.0	2,842.9	2,891.1	2,883.4	11.3	6.9	176.93	105.6	29.9	401.8	388.1	13.70	29.321		
3,000.0	2,940.2	2,990.1	2,982.0	11.8	7.2	176.85	115.4	32.0	415.4	401.2	14.21	29.227		
3,100.0	3,037.4	3,089.2	3,080.5	12.3	7.5	176.78	125.2	34.1	429.1	414.3	14.73	29.139		
3,200.0	3,134.6	3,188.3	3,179.1	12.7	7.8	176.71	135.0	36.2	442.7	427.5	15.24	29.055		
3,300.0	3,231.8	3,287.3	3,277.6	13.2	8.0	176.64	144.7	38.3	456.3	440.6	15.75	28.977		
3,400.0	3,329.0	3,386.4	3,376.2	13.7	8.3	176.58	154.5	40.4	469.9	453.7	16.26	28.902		
3,500.0	3,426.2	3,485.5	3,474.8	14.2	8.6	176.52	164.3	42.5	483.6	466.8	16.77	28.832		
3,600.0	3,523.4	3,584.5	3,573.3	14.7	8.9	176.46	174.1	44.5	497.2	479.9	17.28	28.765		
3,700.0	3,620.7	3,683.6	3,671.9	15.2	9.1	176.41	183.9	46.6	510.8	493.0	17.80	28.702		
3,800.0	3,717.9	3,782.7	3,770.4	15.7	9.4	176.36	193.7	48.7	524.4	506.1	18.31	28.642		
3,900.0	3,815.1	3,881.7	3,869.0	16.1	9.7	176.31	203.5	50.8	538.1	519.2	18.82	28.585		
4,000.0	3,912.3	3,980.8	3,967.5	16.6	10.0	176.27	213.3	52.9	551.7	532.3	19.34	28.531		
4,100.0	4,009.5	4,079.9	4,066.1	17.1	10.3	176.22	223.1	55.0	565.3	545.5	19.85	28.479		
4,200.0	4,106.7	4,178.9	4,164.7	17.6	10.6	176.18	232.9	57.1	578.9	558.6	20.36	28.429		
4,300.0	4,203.9	4,278.0	4,263.2	18.1	10.8	176.14	242.7	59.2	592.6	571.7	20.88	28.382		
4,400.0	4,301.2	4,377.1	4,361.8	18.6	11.1	176.11	252.5	61.3	606.2	584.8	21.39	28.337		
4,500.0	4,398.4	4,476.1	4,460.3	19.1	11.4	176.07	262.3	63.4	619.8	597.9	21.91	28.293		
4,600.0	4,495.6	4,575.2	4,558.9	19.5	11.7	176.04	272.1	65.5	633.4	611.0	22.42	28.252		
4,700.0	4,592.8	4,674.3	4,657.5	20.0	12.0	176.00	281.9	67.6	647.1	624.1	22.94	28.212		
4,800.0	4,690.0	4,773.3	4,756.0	20.5	12.2	175.97	291.7	69.7	660.7	637.2	23.45	28.174		
4,900.0	4,787.2	4,872.4	4,854.6	21.0	12.5	175.94	301.5	71.8	674.3	650.3	23.97	28.137		
5,000.0	4,884.4	4,971.5	4,953.1	21.5	12.8	175.91	311.3	73.9	687.9	663.5	24.48	28.102		
5,100.0	4,981.7	5,070.5	5,051.7	22.0	13.1	175.89	321.1	76.0	701.6	676.6	25.00	28.068		

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 #12
<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 #12	<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	5,078.9	5,169.6	5,150.3	22.5	13.4	175.86	330.9	78.0	715.2	689.7	25.51	28.035	
5,300.0	5,176.1	5,268.7	5,248.8	23.0	13.7	175.83	340.7	80.1	728.8	702.8	26.03	28.003	
5,400.0	5,273.3	5,367.7	5,347.4	23.4	13.9	175.81	350.5	82.2	742.5	715.9	26.54	27.973	
5,500.0	5,370.5	5,466.8	5,445.9	23.9	14.2	175.78	360.3	84.3	756.1	729.0	27.06	27.943	
5,600.0	5,467.7	5,565.9	5,544.5	24.4	14.5	175.76	370.1	86.4	769.7	742.1	27.57	27.915	
5,700.0	5,564.9	5,664.9	5,643.0	24.9	14.8	175.74	379.9	88.5	783.3	755.2	28.09	27.887	
5,800.0	5,662.2	5,764.0	5,741.6	25.4	15.1	175.72	389.7	90.6	797.0	768.4	28.61	27.861	
5,900.0	5,759.4	5,863.1	5,840.2	25.9	15.4	175.70	399.5	92.7	810.6	781.5	29.12	27.835	
6,000.0	5,856.6	5,962.1	5,938.7	26.4	15.6	175.68	409.3	94.8	824.2	794.6	29.64	27.810	
6,100.0	5,953.8	6,061.2	6,037.3	26.9	15.9	175.66	419.1	96.9	837.9	807.7	30.15	27.786	
6,200.0	6,051.0	6,160.3	6,135.8	27.3	16.2	175.64	428.9	99.0	851.5	820.8	30.67	27.763	
6,300.0	6,148.2	6,259.3	6,234.4	27.8	16.5	175.62	438.7	101.1	865.1	833.9	31.19	27.740	
6,400.0	6,245.5	6,357.3	6,331.7	28.3	16.7	175.93	448.3	98.1	878.8	847.1	31.65	27.765	
6,500.0	6,342.6	6,452.8	6,425.5	28.8	17.0	-158.57	457.6	82.6	892.7	860.7	32.03	27.873	
6,600.0	6,438.6	6,546.6	6,514.7	29.2	17.2	-133.11	466.4	55.2	906.7	874.2	32.46	27.933	
6,700.0	6,531.6	6,639.0	6,598.3	29.6	17.3	-118.03	474.6	17.1	920.3	887.3	33.02	27.876	
6,800.0	6,619.9	6,730.0	6,675.4	29.9	17.5	-108.77	482.1	-30.8	933.4	899.7	33.73	27.673	
6,900.0	6,701.5	6,820.1	6,745.0	30.3	17.8	-102.62	488.8	-87.4	945.6	911.0	34.65	27.291	
7,000.0	6,775.1	6,909.3	6,806.5	30.7	18.1	-98.28	494.7	-151.7	956.6	920.8	35.81	26.715	
7,100.0	6,839.1	7,000.0	6,860.3	31.1	18.6	-95.13	499.8	-224.5	966.2	929.0	37.28	25.920	
7,200.0	6,892.4	7,085.9	6,902.5	31.5	19.3	-92.85	503.8	-299.1	974.2	935.2	39.05	24.950	
7,300.0	6,933.8	7,173.5	6,936.1	32.1	20.3	-91.24	506.9	-380.0	980.4	939.2	41.18	23.808	
7,400.0	6,962.5	7,261.0	6,959.5	32.7	21.6	-90.22	509.0	-464.1	984.7	941.0	43.65	22.561	
7,500.0	6,978.1	7,350.0	6,972.8	33.5	23.1	-89.71	510.0	-552.1	986.9	940.5	46.44	21.252	
7,600.0	6,981.0	7,444.3	6,975.5	34.4	24.9	-89.65	510.1	-646.3	987.4	937.5	49.92	19.782	
7,700.0	6,981.0	7,547.2	6,975.5	35.5	27.0	-89.65	510.6	-749.2	987.4	933.3	54.09	18.257	
7,800.0	6,981.0	7,647.2	6,975.5	36.9	29.1	-89.65	511.1	-849.2	987.4	929.0	58.43	16.898	
7,900.0	6,981.0	7,747.2	6,975.5	38.5	31.4	-89.65	511.6	-949.2	987.4	924.4	62.98	15.678	
8,000.0	6,981.0	7,847.2	6,975.5	40.2	33.8	-89.65	512.1	-1,049.2	987.4	919.7	67.69	14.587	
8,100.0	6,981.0	7,947.2	6,975.5	42.1	36.2	-89.65	512.7	-1,149.2	987.4	914.9	72.53	13.613	
8,200.0	6,981.0	8,047.2	6,975.5	44.1	38.6	-89.65	513.2	-1,249.2	987.4	909.9	77.48	12.744	
8,300.0	6,981.0	8,147.2	6,975.5	46.2	41.2	-89.65	513.7	-1,349.2	987.4	904.9	82.51	11.967	
8,400.0	6,981.0	8,247.2	6,975.5	48.4	43.7	-89.65	514.2	-1,449.2	987.4	899.8	87.61	11.270	
8,500.0	6,981.0	8,347.2	6,975.5	50.7	46.3	-89.65	514.8	-1,549.2	987.4	894.6	92.78	10.643	
8,600.0	6,981.0	8,447.2	6,975.5	53.1	48.9	-89.65	515.3	-1,649.2	987.4	889.4	97.99	10.077	
8,700.0	6,981.0	8,547.2	6,975.5	55.5	51.5	-89.65	515.8	-1,749.2	987.4	884.2	103.25	9.564	
8,800.0	6,981.0	8,647.2	6,975.5	57.9	54.2	-89.65	516.3	-1,849.2	987.4	878.9	108.54	9.097	
8,900.0	6,981.0	8,747.2	6,975.5	60.4	56.8	-89.65	516.9	-1,949.2	987.4	873.6	113.86	8.672	
9,000.0	6,981.0	8,847.2	6,975.5	62.9	59.5	-89.65	517.4	-2,049.2	987.4	868.2	119.21	8.283	
9,100.0	6,981.0	8,947.2	6,975.5	65.4	62.2	-89.65	517.9	-2,149.2	987.4	862.8	124.59	7.926	
9,200.0	6,981.0	9,047.2	6,975.5	68.0	64.9	-89.65	518.4	-2,249.2	987.4	857.4	129.98	7.597	
9,300.0	6,981.0	9,147.2	6,975.5	70.6	67.6	-89.65	519.0	-2,349.2	987.4	852.0	135.39	7.293	
9,400.0	6,981.0	9,247.2	6,975.5	73.2	70.3	-89.65	519.5	-2,449.2	987.4	846.6	140.82	7.012	
9,500.0	6,981.0	9,347.2	6,975.5	75.8	73.0	-89.65	520.0	-2,549.2	987.4	841.1	146.27	6.751	
9,600.0	6,981.0	9,447.2	6,975.5	78.4	75.8	-89.65	520.5	-2,649.2	987.4	835.7	151.72	6.508	
9,700.0	6,981.0	9,547.2	6,975.5	81.1	78.5	-89.65	521.1	-2,749.2	987.4	830.2	157.19	6.282	
9,800.0	6,981.0	9,647.2	6,975.5	83.7	81.2	-89.65	521.6	-2,849.2	987.4	824.7	162.67	6.070	
9,900.0	6,981.0	9,747.2	6,975.5	86.4	84.0	-89.65	522.1	-2,949.2	987.4	819.2	168.16	5.872	
10,000.0	6,981.0	9,847.2	6,975.5	89.1	86.7	-89.65	522.6	-3,049.2	987.4	813.7	173.66	5.686	
10,100.0	6,981.0	9,947.2	6,975.5	91.8	89.5	-89.65	523.2	-3,149.2	987.4	808.2	179.16	5.511	
10,200.0	6,981.0	10,047.2	6,975.5	94.4	92.2	-89.65	523.7	-3,249.2	987.4	802.7	184.67	5.347	
10,300.0	6,981.0	10,147.2	6,975.5	97.1	95.0	-89.65	524.2	-3,349.2	987.4	797.2	190.19	5.192	

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 #12
<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 #12	<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						
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
10,400.0	6,981.0	10,247.2	6,975.5	99.8	97.8	-89.65	524.7	-3,449.2	987.4	791.7	195.71	5.045	
10,500.0	6,981.0	10,347.2	6,975.5	102.6	100.5	-89.65	525.3	-3,549.2	987.4	786.2	201.24	4.907	
10,600.0	6,981.0	10,447.2	6,975.5	105.3	103.3	-89.65	525.8	-3,649.2	987.4	780.6	206.77	4.775	
10,700.0	6,981.0	10,547.2	6,975.5	108.0	106.1	-89.65	526.3	-3,749.2	987.4	775.1	212.31	4.651	
10,800.0	6,981.0	10,647.2	6,975.5	110.7	108.8	-89.65	526.8	-3,849.2	987.4	769.5	217.85	4.532	
10,900.0	6,981.0	10,747.2	6,975.5	113.5	111.6	-89.65	527.3	-3,949.2	987.4	764.0	223.40	4.420	
11,000.0	6,981.0	10,847.2	6,975.5	116.2	114.4	-89.65	527.9	-4,049.2	987.4	758.4	228.95	4.313	
11,100.0	6,981.0	10,947.2	6,975.5	118.9	117.2	-89.65	528.4	-4,149.2	987.4	752.9	234.50	4.211	
11,200.0	6,981.0	11,047.2	6,975.5	121.7	119.9	-89.65	528.9	-4,249.2	987.4	747.3	240.05	4.113	
11,300.0	6,981.0	11,147.2	6,975.5	124.4	122.7	-89.65	529.4	-4,349.2	987.4	741.8	245.61	4.020	
11,400.0	6,981.0	11,247.2	6,975.5	127.2	125.5	-89.65	530.0	-4,449.1	987.4	736.2	251.18	3.931	
11,500.0	6,981.0	11,347.2	6,975.5	129.9	128.3	-89.65	530.5	-4,549.1	987.4	730.6	256.74	3.846	
11,600.0	6,981.0	11,447.2	6,975.5	132.7	131.1	-89.65	531.0	-4,649.1	987.4	725.1	262.31	3.764	
11,700.0	6,981.0	11,547.2	6,975.5	135.4	133.9	-89.65	531.5	-4,749.1	987.4	719.5	267.87	3.686	
11,800.0	6,981.0	11,647.2	6,975.5	138.2	136.6	-89.65	532.1	-4,849.1	987.4	713.9	273.44	3.611	
11,900.0	6,981.0	11,747.2	6,975.5	140.9	139.4	-89.65	532.6	-4,949.1	987.4	708.4	279.02	3.539	
12,000.0	6,981.0	11,847.2	6,975.5	143.7	142.2	-89.65	533.1	-5,049.1	987.4	702.8	284.59	3.469	
12,100.0	6,981.0	11,947.2	6,975.5	146.5	145.0	-89.65	533.6	-5,149.1	987.4	697.2	290.17	3.403	
12,200.0	6,981.0	12,047.2	6,975.5	149.2	147.8	-89.65	534.2	-5,249.1	987.4	691.6	295.75	3.339	
12,300.0	6,981.0	12,147.2	6,975.5	152.0	150.6	-89.65	534.7	-5,349.1	987.4	686.1	301.33	3.277	
12,400.0	6,981.0	12,247.2	6,975.5	154.8	153.4	-89.65	535.2	-5,449.1	987.4	680.5	306.91	3.217	
12,500.0	6,981.0	12,347.2	6,975.5	157.5	156.2	-89.65	535.7	-5,549.1	987.4	674.9	312.49	3.160	
12,600.0	6,981.0	12,447.2	6,975.5	160.3	159.0	-89.65	536.3	-5,649.1	987.4	669.3	318.07	3.104	
12,700.0	6,981.0	12,547.2	6,975.5	163.1	161.7	-89.65	536.8	-5,749.1	987.4	663.7	323.66	3.051	
12,800.0	6,981.0	12,647.2	6,975.5	165.8	164.5	-89.65	537.3	-5,849.1	987.4	658.1	329.24	2.999	
12,900.0	6,981.0	12,747.2	6,975.5	168.6	167.3	-89.65	537.8	-5,949.1	987.4	652.5	334.83	2.949	
13,000.0	6,981.0	12,847.2	6,975.5	171.4	170.1	-89.65	538.4	-6,049.1	987.4	646.9	340.42	2.900	
13,100.0	6,981.0	12,947.2	6,975.5	174.2	172.9	-89.65	538.9	-6,149.1	987.4	641.4	346.01	2.854	
13,200.0	6,981.0	13,047.2	6,975.5	176.9	175.7	-89.65	539.4	-6,249.1	987.4	635.8	351.60	2.808	
13,300.0	6,981.0	13,147.2	6,975.5	179.7	178.5	-89.65	539.9	-6,349.1	987.4	630.2	357.19	2.764	
13,400.0	6,981.0	13,247.2	6,975.5	182.5	181.3	-89.65	540.5	-6,449.1	987.4	624.6	362.78	2.722	
13,500.0	6,981.0	13,347.2	6,975.5	185.3	184.1	-89.65	541.0	-6,549.1	987.4	619.0	368.37	2.680	
13,600.0	6,981.0	13,447.2	6,975.5	188.1	186.9	-89.65	541.5	-6,649.1	987.4	613.4	373.97	2.640	
13,700.0	6,981.0	13,547.2	6,975.5	190.9	189.7	-89.65	542.0	-6,749.1	987.4	607.8	379.56	2.601	
13,800.0	6,981.0	13,647.2	6,975.5	193.6	192.5	-89.65	542.6	-6,849.1	987.4	602.2	385.16	2.564	
13,900.0	6,981.0	13,747.2	6,975.5	196.4	195.3	-89.65	543.1	-6,949.1	987.4	596.6	390.75	2.527	
14,000.0	6,981.0	13,847.2	6,975.5	199.2	198.1	-89.65	543.6	-7,049.1	987.4	591.0	396.35	2.491	
14,100.0	6,981.0	13,947.2	6,975.5	202.0	200.9	-89.65	544.1	-7,149.1	987.4	585.4	401.95	2.456	
14,200.0	6,981.0	14,047.2	6,975.5	204.8	203.7	-89.65	544.7	-7,249.1	987.4	579.8	407.54	2.423	
14,300.0	6,981.0	14,147.2	6,975.5	207.6	206.5	-89.65	545.2	-7,349.1	987.4	574.2	413.14	2.390	
14,400.0	6,981.0	14,247.2	6,975.5	210.4	209.3	-89.65	545.7	-7,449.1	987.4	568.6	418.74	2.358	
14,500.0	6,981.0	14,347.2	6,975.5	213.1	212.1	-89.65	546.2	-7,549.1	987.3	563.0	424.34	2.327	
14,600.0	6,981.0	14,447.2	6,975.5	215.9	214.9	-89.65	546.7	-7,649.1	987.3	557.4	429.94	2.296	
14,700.0	6,981.0	14,547.2	6,975.5	218.7	217.7	-89.65	547.3	-7,749.1	987.3	551.8	435.54	2.265	
14,800.0	6,981.0	14,647.2	6,975.5	221.5	220.5	-89.65	547.8	-7,849.1	987.3	546.2	441.14	2.238	
14,900.0	6,981.0	14,747.2	6,975.5	224.3	223.3	-89.65	548.3	-7,949.1	987.3	540.6	446.74	2.210	
15,000.0	6,981.0	14,847.2	6,975.5	227.1	226.1	-89.65	548.8	-8,049.1	987.3	535.0	452.35	2.183	
15,100.0	6,981.0	14,947.2	6,975.5	229.9	228.9	-89.65	549.4	-8,149.1	987.3	529.4	457.95	2.156	
15,200.0	6,981.0	15,047.2	6,975.5	232.7	231.7	-89.65	549.9	-8,249.1	987.3	523.8	463.55	2.130	
15,300.0	6,981.0	15,147.2	6,975.5	235.5	234.5	-89.65	550.4	-8,349.1	987.3	518.2	469.15	2.105	
15,400.0	6,981.0	15,247.2	6,975.5	238.3	237.3	-89.65	550.9	-8,449.1	987.3	512.6	474.76	2.080	
15,500.0	6,981.0	15,347.2	6,975.5	241.1	240.1	-89.65	551.5	-8,549.1	987.3	507.0	480.36	2.055	

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 #12
<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 #12	<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	6,981.0	15,447.2	6,975.5	243.8	242.9	-89.65	552.0	-8,649.1	987.3	501.4	485.97	2.032	
15,700.0	6,981.0	15,547.2	6,975.5	246.6	245.7	-89.65	552.5	-8,749.1	987.3	495.8	491.57	2.009	
15,800.0	6,981.0	15,647.2	6,975.5	249.4	248.5	-89.65	553.0	-8,849.1	987.3	490.2	497.18	1.986	
15,900.0	6,981.0	15,747.2	6,975.5	252.2	251.3	-89.65	553.6	-8,949.1	987.3	484.6	502.78	1.964	
16,000.0	6,981.0	15,847.2	6,975.5	255.0	254.1	-89.65	554.1	-9,049.1	987.3	478.9	508.39	1.942	
16,100.0	6,981.0	15,947.2	6,975.5	257.8	256.9	-89.65	554.6	-9,149.1	987.3	473.3	513.99	1.921	
16,200.0	6,981.0	16,047.2	6,975.5	260.6	259.7	-89.65	555.1	-9,249.1	987.3	467.7	519.60	1.900	
16,300.0	6,981.0	16,147.2	6,975.5	263.4	262.5	-89.65	555.7	-9,349.1	987.3	462.1	525.20	1.880	
16,400.0	6,981.0	16,247.2	6,975.5	266.2	265.3	-89.65	556.2	-9,449.1	987.3	456.5	530.81	1.860	
16,500.0	6,981.0	16,347.2	6,975.5	269.0	268.1	-89.65	556.7	-9,549.1	987.3	450.9	536.42	1.841	
16,600.0	6,981.0	16,447.2	6,975.5	271.8	270.9	-89.65	557.2	-9,649.1	987.3	445.3	542.03	1.822	
16,700.0	6,981.0	16,547.2	6,975.5	274.6	273.7	-89.65	557.8	-9,749.1	987.3	439.7	547.63	1.803	
16,800.0	6,981.0	16,647.2	6,975.5	277.4	276.5	-89.65	558.3	-9,849.1	987.3	434.1	553.24	1.785	
16,900.0	6,981.0	16,747.2	6,975.5	280.2	279.3	-89.65	558.8	-9,949.1	987.3	428.5	558.85	1.767	
17,000.0	6,981.0	16,847.2	6,975.5	283.0	281.7	-89.65	559.3	-10,049.1	987.3	423.3	563.99	1.751	
17,024.8	6,981.0	16,872.0	6,975.5	283.7	282.1	-89.65	559.5	-10,073.9	987.3	422.2	565.13	1.747	
17,030.6	6,981.0	16,875.8	6,975.5	283.8	282.2	-89.65	559.5	-10,077.7	987.3	422.0	565.37	1.746 SF	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	180.00	-32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-32.8	0.0	32.8	32.6	0.22	145.842		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-32.8	0.0	32.8	32.1	0.67	48.614		
300.0	300.0	300.0	300.0	0.6	0.6	180.00	-32.8	0.0	32.8	31.7	1.12	29.168		
400.0	400.0	400.0	400.0	0.8	0.8	180.00	-32.8	0.0	32.8	31.2	1.57	20.835 CC, ES		
500.0	500.0	500.0	500.0	1.0	1.0	175.62	-32.8	0.0	34.5	32.5	2.03	17.035		
600.0	599.8	599.8	599.8	1.2	1.2	176.19	-32.8	0.0	39.7	37.3	2.48	16.013		
700.0	699.5	699.5	699.5	1.5	1.5	176.86	-32.8	0.0	48.4	45.5	2.94	16.497		
800.0	798.7	798.7	798.7	1.7	1.7	177.48	-32.8	0.0	60.6	57.2	3.39	17.881		
900.0	897.5	897.5	897.5	2.0	1.9	177.99	-32.8	0.0	76.2	72.4	3.84	19.844		
1,000.0	995.6	995.6	995.6	2.4	2.1	178.38	-32.8	0.0	95.3	91.0	4.29	22.197		
1,100.0	1,093.1	1,097.0	1,097.0	2.8	2.4	178.63	-31.2	0.2	116.1	111.4	4.75	24.455		
1,200.0	1,190.3	1,199.8	1,199.6	3.2	2.6	178.69	-25.9	0.9	134.5	129.3	5.22	25.788		
1,300.0	1,287.5	1,303.8	1,303.3	3.7	2.8	178.64	-16.8	2.2	149.4	143.7	5.70	26.211		
1,400.0	1,384.7	1,408.9	1,407.5	4.1	3.1	178.48	-3.9	3.9	160.6	154.4	6.19	25.933		
1,500.0	1,481.9	1,510.0	1,507.4	4.6	3.4	178.27	11.1	6.0	169.2	162.5	6.69	25.295		
1,600.0	1,579.1	1,609.6	1,605.9	5.1	3.6	178.09	26.1	8.0	177.7	170.5	7.19	24.713		
1,700.0	1,676.4	1,709.2	1,704.4	5.5	3.9	177.92	41.0	10.1	186.2	178.5	7.70	24.195		
1,800.0	1,773.6	1,808.9	1,802.9	6.0	4.2	177.76	55.9	12.1	194.7	186.5	8.20	23.735		
1,900.0	1,870.8	1,908.5	1,901.4	6.5	4.5	177.62	70.9	14.2	203.2	194.5	8.72	23.319		
2,000.0	1,968.0	2,008.2	1,999.9	6.9	4.9	177.49	85.8	16.2	211.7	202.5	9.23	22.943		
2,100.0	2,065.2	2,107.8	2,098.4	7.4	5.2	177.37	100.7	18.2	220.3	210.5	9.74	22.604		
2,200.0	2,162.4	2,207.4	2,196.9	7.9	5.5	177.26	115.7	20.3	228.8	218.5	10.26	22.295		
2,300.0	2,259.7	2,307.1	2,295.4	8.4	5.8	177.15	130.6	22.3	237.3	226.5	10.78	22.012		
2,400.0	2,356.9	2,406.7	2,393.8	8.9	6.2	177.06	145.5	24.4	245.8	234.5	11.30	21.754		
2,500.0	2,454.1	2,506.3	2,492.3	9.4	6.5	176.97	160.5	26.4	254.3	242.5	11.82	21.516		
2,600.0	2,551.3	2,606.0	2,590.8	9.8	6.8	176.88	175.4	28.4	262.8	250.5	12.34	21.297		
2,700.0	2,648.5	2,705.6	2,689.3	10.3	7.2	176.81	190.3	30.5	271.3	258.5	12.86	21.094		
2,800.0	2,745.7	2,805.2	2,787.8	10.8	7.5	176.73	205.3	32.5	279.9	266.5	13.39	20.906		
2,900.0	2,842.9	2,904.9	2,886.3	11.3	7.9	176.66	220.2	34.6	288.4	274.5	13.91	20.731		
3,000.0	2,940.2	3,004.5	2,984.8	11.8	8.2	176.60	235.1	36.6	296.9	282.5	14.44	20.567		
3,100.0	3,037.4	3,104.2	3,083.3	12.3	8.5	176.54	250.1	38.6	305.4	290.5	14.96	20.415		
3,200.0	3,134.6	3,203.8	3,181.8	12.7	8.9	176.48	265.0	40.7	313.9	298.4	15.49	20.272		
3,300.0	3,231.8	3,303.4	3,280.2	13.2	9.2	176.42	280.0	42.7	322.4	306.4	16.01	20.138		
3,400.0	3,329.0	3,403.1	3,378.7	13.7	9.6	176.37	294.9	44.8	331.0	314.4	16.54	20.012		
3,500.0	3,426.2	3,502.7	3,477.2	14.2	9.9	176.32	309.8	46.8	339.5	322.4	17.06	19.894		
3,600.0	3,523.4	3,602.3	3,575.7	14.7	10.3	176.27	324.8	48.8	348.0	330.4	17.59	19.782		
3,700.0	3,620.7	3,702.0	3,674.2	15.2	10.6	176.23	339.7	50.9	356.5	338.4	18.12	19.676		
3,800.0	3,717.9	3,801.6	3,772.7	15.7	11.0	176.18	354.6	52.9	365.0	346.4	18.65	19.576		
3,900.0	3,815.1	3,901.2	3,871.2	16.1	11.3	176.14	369.6	55.0	373.6	354.4	19.17	19.482		
4,000.0	3,912.3	4,000.9	3,969.7	16.6	11.7	176.10	384.5	57.0	382.1	362.4	19.70	19.392		
4,100.0	4,009.5	4,100.5	4,068.2	17.1	12.0	176.07	399.4	59.0	390.6	370.4	20.23	19.306		
4,200.0	4,106.7	4,200.1	4,166.7	17.6	12.4	176.03	414.4	61.1	399.1	378.4	20.76	19.225		
4,300.0	4,203.9	4,299.8	4,265.1	18.1	12.7	175.99	429.3	63.1	407.6	386.3	21.29	19.148		
4,400.0	4,301.2	4,399.4	4,363.6	18.6	13.1	175.96	444.2	65.2	416.2	394.3	21.82	19.074		
4,500.0	4,398.4	4,499.1	4,462.1	19.1	13.4	175.93	459.2	67.2	424.7	402.3	22.35	19.003		
4,600.0	4,495.6	4,598.7	4,560.6	19.5	13.8	175.90	474.1	69.2	433.2	410.3	22.88	18.936		
4,700.0	4,592.8	4,698.3	4,659.1	20.0	14.1	175.87	489.1	71.3	441.7	418.3	23.41	18.872		
4,800.0	4,690.0	4,798.0	4,757.6	20.5	14.5	175.84	504.0	73.3	450.2	426.3	23.94	18.810		
4,900.0	4,787.2	4,897.6	4,856.1	21.0	14.8	175.81	518.9	75.4	458.8	434.3	24.47	18.751		
5,000.0	4,884.4	4,997.2	4,954.6	21.5	15.2	175.79	533.9	77.4	467.3	442.3	25.00	18.694		
5,100.0	4,981.7	5,096.9	5,053.1	22.0	15.5	175.76	548.8	79.4	475.8	450.3	25.53	18.640		

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 #12
<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 #12	<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	
5,200.0	5,078.9	5,196.5	5,151.5	22.5	15.9	175.74	563.7	81.5	484.3	458.3	26.06	18.587	
5,300.0	5,176.1	5,296.1	5,250.0	23.0	16.2	175.72	578.7	83.5	492.8	466.3	26.59	18.537	
5,400.0	5,273.3	5,395.8	5,348.5	23.4	16.6	175.69	593.6	85.6	501.4	474.2	27.12	18.489	
5,500.0	5,370.5	5,495.4	5,447.0	23.9	16.9	175.67	608.5	87.6	509.9	482.2	27.65	18.442	
5,600.0	5,467.7	5,595.1	5,545.5	24.4	17.3	175.65	623.5	89.6	518.4	490.2	28.18	18.397	
5,700.0	5,564.9	5,694.7	5,644.0	24.9	17.6	175.63	638.4	91.7	526.9	498.2	28.71	18.354	
5,800.0	5,662.2	5,794.3	5,742.5	25.4	18.0	175.61	653.3	93.7	535.4	506.2	29.24	18.312	
5,900.0	5,759.4	5,894.0	5,841.0	25.9	18.3	175.59	668.3	95.8	544.0	514.2	29.77	18.272	
6,000.0	5,856.6	5,993.6	5,939.5	26.4	18.7	175.57	683.2	97.8	552.5	522.2	30.30	18.233	
6,100.0	5,953.8	6,093.2	6,037.9	26.9	19.0	175.55	698.1	99.8	561.0	530.2	30.83	18.195	
6,200.0	6,051.0	6,192.9	6,136.4	27.3	19.4	175.54	713.1	101.9	569.5	538.2	31.36	18.158	
6,300.0	6,148.2	6,292.5	6,234.9	27.8	19.8	175.52	728.0	103.9	578.1	546.2	31.90	18.123	
6,400.0	6,245.5	6,391.5	6,332.7	28.3	20.1	175.96	742.8	101.3	586.6	554.2	32.37	18.121	
6,500.0	6,342.6	6,488.2	6,427.0	28.8	20.4	-158.42	757.1	85.8	595.5	562.7	32.75	18.180	
6,600.0	6,438.6	6,583.1	6,516.7	29.2	20.6	-132.94	770.6	58.3	604.5	571.3	33.21	18.204	
6,700.0	6,531.6	6,676.4	6,600.7	29.6	20.9	-117.85	783.2	19.7	613.6	579.8	33.81	18.151	
6,800.0	6,619.9	6,768.3	6,677.9	29.9	21.1	-108.59	794.7	-28.7	622.4	587.8	34.56	18.008	
6,900.0	6,701.5	6,859.1	6,747.5	30.3	21.4	-102.44	805.1	-86.0	630.6	595.1	35.52	17.756	
7,000.0	6,775.1	6,950.0	6,809.4	30.7	21.7	-98.10	814.3	-151.8	638.2	601.5	36.71	17.385	
7,100.0	6,839.1	7,037.8	6,861.0	31.1	22.1	-94.96	821.9	-222.4	644.8	606.6	38.16	16.899	
7,200.0	6,892.4	7,126.1	6,903.9	31.5	22.6	-92.68	828.2	-299.2	650.3	610.4	39.91	16.294	
7,300.0	6,933.8	7,213.9	6,936.9	32.1	23.3	-91.08	832.9	-380.4	654.6	612.7	41.98	15.593	
7,400.0	6,962.5	7,300.0	6,959.6	32.7	24.3	-90.06	836.1	-463.3	657.6	613.3	44.33	14.833	
7,500.0	6,978.1	7,388.6	6,972.4	33.5	25.5	-89.55	837.8	-551.0	659.2	612.2	47.02	14.020	
7,600.0	6,981.0	7,483.6	6,975.0	34.4	27.0	-89.48	837.9	-645.8	659.5	609.1	50.43	13.077	
7,700.0	6,981.0	7,585.2	6,975.0	35.5	28.8	-89.48	838.5	-747.5	659.5	605.0	54.54	12.093	
7,800.0	6,981.0	7,685.2	6,975.0	36.9	30.8	-89.48	839.0	-847.5	659.5	600.7	58.86	11.205	
7,900.0	6,981.0	7,785.2	6,975.0	38.5	32.9	-89.48	839.5	-947.5	659.5	596.2	63.39	10.405	
8,000.0	6,981.0	7,885.2	6,975.0	40.2	35.2	-89.48	840.0	-1,047.5	659.5	591.5	68.08	9.688	
8,100.0	6,981.0	7,985.2	6,975.0	42.1	37.5	-89.48	840.6	-1,147.5	659.5	586.6	72.90	9.048	
8,200.0	6,981.0	8,085.2	6,975.0	44.1	39.9	-89.48	841.1	-1,247.5	659.5	581.7	77.83	8.475	
8,300.0	6,981.0	8,185.2	6,975.0	46.2	42.3	-89.48	841.6	-1,347.5	659.5	576.7	82.84	7.961	
8,400.0	6,981.0	8,285.2	6,975.0	48.4	44.8	-89.48	842.1	-1,447.5	659.5	571.6	87.93	7.501	
8,500.0	6,981.0	8,385.2	6,975.0	50.7	47.3	-89.48	842.7	-1,547.5	659.5	566.5	93.08	7.086	
8,600.0	6,981.0	8,485.2	6,975.0	53.1	49.9	-89.48	843.2	-1,647.5	659.5	561.3	98.28	6.711	
8,700.0	6,981.0	8,585.2	6,975.0	55.5	52.5	-89.48	843.7	-1,747.5	659.5	556.0	103.53	6.371	
8,800.0	6,981.0	8,685.2	6,975.0	57.9	55.1	-89.48	844.2	-1,847.5	659.5	550.7	108.81	6.061	
8,900.0	6,981.0	8,785.2	6,975.0	60.4	57.7	-89.48	844.8	-1,947.5	659.5	545.4	114.12	5.779	
9,000.0	6,981.0	8,885.2	6,975.0	62.9	60.3	-89.48	845.3	-2,047.5	659.5	540.1	119.47	5.521	
9,100.0	6,981.0	8,985.2	6,975.0	65.4	63.0	-89.48	845.8	-2,147.5	659.5	534.7	124.83	5.283	
9,200.0	6,981.0	9,085.2	6,975.0	68.0	65.7	-89.48	846.3	-2,247.5	659.5	529.3	130.22	5.065	
9,300.0	6,981.0	9,185.2	6,975.0	70.6	68.3	-89.48	846.8	-2,347.5	659.5	523.9	135.63	4.863	
9,400.0	6,981.0	9,285.2	6,975.0	73.2	71.0	-89.48	847.4	-2,447.5	659.5	518.5	141.05	4.676	
9,500.0	6,981.0	9,385.2	6,975.0	75.8	73.7	-89.48	847.9	-2,547.5	659.5	513.0	146.49	4.502	
9,600.0	6,981.0	9,485.2	6,975.0	78.4	76.4	-89.48	848.4	-2,647.5	659.5	507.6	151.94	4.341	
9,700.0	6,981.0	9,585.2	6,975.0	81.1	79.1	-89.48	848.9	-2,747.5	659.5	502.1	157.41	4.190	
9,800.0	6,981.0	9,685.2	6,975.0	83.7	81.9	-89.48	849.5	-2,847.5	659.5	496.6	162.88	4.049	
9,900.0	6,981.0	9,785.2	6,975.0	86.4	84.6	-89.48	850.0	-2,947.5	659.5	491.2	168.36	3.917	
10,000.0	6,981.0	9,885.2	6,975.0	89.1	87.3	-89.48	850.5	-3,047.4	659.5	485.7	173.85	3.793	
10,100.0	6,981.0	9,985.2	6,975.0	91.8	90.1	-89.48	851.0	-3,147.4	659.5	480.2	179.35	3.677	
10,200.0	6,981.0	10,085.2	6,975.0	94.4	92.8	-89.48	851.6	-3,247.4	659.5	474.7	184.86	3.568	
10,300.0	6,981.0	10,185.2	6,975.0	97.1	95.6	-89.48	852.1	-3,347.4	659.5	469.1	190.38	3.464	

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 #12
<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 #12	<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	6,981.0	10,285.2	6,975.0	99.8	98.3	-89.48	852.6	-3,447.4	659.5	463.6	195.90	3.367	
10,500.0	6,981.0	10,385.2	6,975.0	102.6	101.1	-89.48	853.1	-3,547.4	659.5	458.1	201.42	3.274	
10,600.0	6,981.0	10,485.2	6,975.0	105.3	103.8	-89.48	853.7	-3,647.4	659.5	452.6	206.95	3.187	
10,700.0	6,981.0	10,585.2	6,975.0	108.0	106.6	-89.48	854.2	-3,747.4	659.5	447.0	212.49	3.104	
10,800.0	6,981.0	10,685.2	6,975.0	110.7	109.3	-89.48	854.7	-3,847.4	659.5	441.5	218.03	3.025	
10,900.0	6,981.0	10,785.2	6,975.0	113.5	112.1	-89.48	855.2	-3,947.4	659.5	435.9	223.57	2.950	
11,000.0	6,981.0	10,885.2	6,975.0	116.2	114.9	-89.48	855.8	-4,047.4	659.5	430.4	229.12	2.878	
11,100.0	6,981.0	10,985.2	6,975.0	118.9	117.6	-89.48	856.3	-4,147.4	659.5	424.8	234.67	2.810	
11,200.0	6,981.0	11,085.2	6,975.0	121.7	120.4	-89.48	856.8	-4,247.4	659.5	419.3	240.22	2.745	
11,300.0	6,981.0	11,185.2	6,975.0	124.4	123.2	-89.48	857.3	-4,347.4	659.5	413.7	245.78	2.683	
11,400.0	6,981.0	11,285.2	6,975.0	127.2	125.9	-89.48	857.9	-4,447.4	659.5	408.2	251.34	2.624	
11,500.0	6,981.0	11,385.2	6,975.0	129.9	128.7	-89.48	858.4	-4,547.4	659.5	402.6	256.90	2.567	
11,600.0	6,981.0	11,485.2	6,975.0	132.7	131.5	-89.48	858.9	-4,647.4	659.5	397.0	262.46	2.513	
11,700.0	6,981.0	11,585.2	6,975.0	135.4	134.3	-89.48	859.4	-4,747.4	659.5	391.5	268.03	2.461	
11,800.0	6,981.0	11,685.2	6,975.0	138.2	137.0	-89.48	860.0	-4,847.4	659.5	385.9	273.60	2.410	
11,900.0	6,981.0	11,785.2	6,975.0	140.9	139.8	-89.48	860.5	-4,947.4	659.5	380.3	279.17	2.362	
12,000.0	6,981.0	11,885.2	6,975.0	143.7	142.6	-89.48	861.0	-5,047.4	659.5	374.8	284.74	2.316	
12,100.0	6,981.0	11,985.2	6,975.0	146.5	145.4	-89.48	861.5	-5,147.4	659.5	369.2	290.32	2.272	
12,200.0	6,981.0	12,085.2	6,975.0	149.2	148.2	-89.48	862.1	-5,247.4	659.5	363.6	295.89	2.229	
12,300.0	6,981.0	12,185.2	6,975.0	152.0	151.0	-89.48	862.6	-5,347.4	659.5	358.0	301.47	2.188	
12,400.0	6,981.0	12,285.2	6,975.0	154.8	153.7	-89.48	863.1	-5,447.4	659.5	352.4	307.05	2.148	
12,500.0	6,981.0	12,385.2	6,975.0	157.5	156.5	-89.48	863.6	-5,547.4	659.5	346.9	312.63	2.109	
12,600.0	6,981.0	12,485.2	6,975.0	160.3	159.3	-89.48	864.2	-5,647.4	659.5	341.3	318.21	2.072	
12,700.0	6,981.0	12,585.2	6,975.0	163.1	162.1	-89.48	864.7	-5,747.4	659.5	335.7	323.80	2.037	
12,800.0	6,981.0	12,685.2	6,975.0	165.8	164.9	-89.48	865.2	-5,847.4	659.5	330.1	329.38	2.002	
12,900.0	6,981.0	12,785.2	6,975.0	168.6	167.7	-89.48	865.7	-5,947.4	659.5	324.5	334.97	1.969	
13,000.0	6,981.0	12,885.2	6,975.0	171.4	170.5	-89.48	866.2	-6,047.4	659.5	318.9	340.56	1.936	
13,100.0	6,981.0	12,985.2	6,975.0	174.2	173.3	-89.48	866.8	-6,147.4	659.5	313.3	346.14	1.905	
13,200.0	6,981.0	13,085.2	6,975.0	176.9	176.1	-89.48	867.3	-6,247.4	659.5	307.7	351.73	1.875	
13,300.0	6,981.0	13,185.2	6,975.0	179.7	178.9	-89.48	867.8	-6,347.4	659.5	302.2	357.32	1.846	
13,400.0	6,981.0	13,285.2	6,975.0	182.5	181.6	-89.48	868.3	-6,447.4	659.5	296.6	362.91	1.817	
13,500.0	6,981.0	13,385.2	6,975.0	185.3	184.4	-89.48	868.9	-6,547.4	659.5	291.0	368.51	1.790	
13,600.0	6,981.0	13,485.2	6,975.0	188.1	187.2	-89.48	869.4	-6,647.4	659.5	285.4	374.10	1.763	
13,700.0	6,981.0	13,585.2	6,975.0	190.9	190.0	-89.48	869.9	-6,747.4	659.5	279.8	379.69	1.737	
13,800.0	6,981.0	13,685.2	6,975.0	193.6	192.8	-89.48	870.4	-6,847.4	659.5	274.2	385.29	1.712	
13,900.0	6,981.0	13,785.2	6,975.0	196.4	195.6	-89.48	871.0	-6,947.4	659.5	268.6	390.88	1.687	
14,000.0	6,981.0	13,885.2	6,975.0	199.2	198.4	-89.48	871.5	-7,047.4	659.5	263.0	396.48	1.663	
14,100.0	6,981.0	13,985.2	6,975.0	202.0	201.2	-89.48	872.0	-7,147.4	659.5	257.4	402.07	1.640	
14,200.0	6,981.0	14,085.2	6,975.0	204.8	204.0	-89.48	872.5	-7,247.4	659.5	251.8	407.67	1.618	
14,300.0	6,981.0	14,185.2	6,975.0	207.6	206.8	-89.48	873.1	-7,347.4	659.5	246.2	413.27	1.596	
14,400.0	6,981.0	14,285.2	6,975.0	210.4	209.6	-89.48	873.6	-7,447.4	659.5	240.6	418.87	1.574	
14,500.0	6,981.0	14,385.2	6,975.0	213.1	212.4	-89.48	874.1	-7,547.4	659.5	235.0	424.46	1.554	
14,600.0	6,981.0	14,485.2	6,975.0	215.9	215.2	-89.48	874.6	-7,647.4	659.5	229.4	430.06	1.533	
14,700.0	6,981.0	14,585.2	6,975.0	218.7	218.0	-89.48	875.2	-7,747.4	659.5	223.8	435.66	1.514	
14,800.0	6,981.0	14,685.2	6,975.0	221.5	220.8	-89.48	875.7	-7,847.4	659.5	218.2	441.26	1.494 Level 3	
14,900.0	6,981.0	14,785.2	6,975.0	224.3	223.6	-89.48	876.2	-7,947.4	659.5	212.6	446.86	1.476 Level 3	
15,000.0	6,981.0	14,885.2	6,975.0	227.1	226.4	-89.48	876.7	-8,047.4	659.5	207.0	452.47	1.457 Level 3	
15,100.0	6,981.0	14,985.2	6,975.0	229.9	229.2	-89.48	877.3	-8,147.4	659.5	201.4	458.07	1.440 Level 3	
15,200.0	6,981.0	15,085.2	6,975.0	232.7	232.0	-89.48	877.8	-8,247.4	659.5	195.8	463.67	1.422 Level 3	
15,300.0	6,981.0	15,185.2	6,975.0	235.5	234.8	-89.48	878.3	-8,347.4	659.5	190.2	469.27	1.405 Level 3	
15,400.0	6,981.0	15,285.2	6,975.0	238.3	237.6	-89.48	878.8	-8,447.4	659.5	184.6	474.87	1.389 Level 3	
15,500.0	6,981.0	15,385.2	6,975.0	241.1	240.4	-89.48	879.4	-8,547.4	659.5	179.0	480.48	1.372 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 #12
<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 #12	<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: 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	6,981.0	15,485.2	6,975.0	243.8	243.2	-89.48	879.9	-8,647.4	659.5	173.4	486.08	1.357	Level 3
15,700.0	6,981.0	15,585.2	6,975.0	246.6	246.0	-89.48	880.4	-8,747.4	659.4	167.8	491.69	1.341	Level 3
15,800.0	6,981.0	15,685.2	6,975.0	249.4	248.8	-89.48	880.9	-8,847.4	659.4	162.2	497.29	1.326	Level 3
15,900.0	6,981.0	15,785.2	6,975.0	252.2	251.6	-89.48	881.5	-8,947.4	659.4	156.6	502.89	1.311	Level 3
16,000.0	6,981.0	15,885.2	6,975.0	255.0	254.4	-89.48	882.0	-9,047.4	659.4	150.9	508.50	1.297	Level 3
16,100.0	6,981.0	15,985.2	6,975.0	257.8	257.2	-89.48	882.5	-9,147.4	659.4	145.3	514.10	1.283	Level 3
16,200.0	6,981.0	16,085.2	6,975.0	260.6	260.0	-89.48	883.0	-9,247.4	659.4	139.7	519.71	1.269	Level 3
16,300.0	6,981.0	16,185.2	6,975.0	263.4	262.8	-89.48	883.6	-9,347.4	659.4	134.1	525.32	1.255	Level 3
16,400.0	6,981.0	16,285.2	6,975.0	266.2	265.6	-89.48	884.1	-9,447.4	659.4	128.5	530.92	1.242	Level 2
16,500.0	6,981.0	16,385.2	6,975.0	269.0	268.4	-89.48	884.6	-9,547.4	659.4	122.9	536.53	1.229	Level 2
16,600.0	6,981.0	16,485.2	6,975.0	271.8	271.2	-89.48	885.1	-9,647.4	659.4	117.3	542.14	1.216	Level 2
16,700.0	6,981.0	16,585.2	6,975.0	274.6	274.0	-89.48	885.6	-9,747.4	659.4	111.7	547.74	1.204	Level 2
16,800.0	6,981.0	16,685.2	6,975.0	277.4	276.8	-89.48	886.2	-9,847.4	659.4	106.1	553.35	1.192	Level 2
16,900.0	6,981.0	16,785.2	6,975.0	280.2	279.6	-89.48	886.7	-9,947.4	659.4	100.5	558.96	1.180	Level 2
17,000.0	6,981.0	16,885.2	6,975.0	283.0	282.4	-89.48	887.2	-10,047.4	659.4	94.9	564.56	1.168	Level 2
17,024.3	6,981.0	16,909.5	6,975.0	283.7	283.1	-89.48	887.3	-10,071.6	659.4	93.5	565.93	1.165	Level 2
17,030.6	6,981.0	16,912.6	6,975.0	283.8	283.2	-89.48	887.4	-10,074.8	659.4	93.2	566.19	1.165	Level 2, SF

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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	
1,100.0	1,093.1	1,069.1	1,069.1	2.8	21.4	27.87	930.1	531.4	994.9	971.5	23.41	42.495	
1,200.0	1,190.3	1,166.3	1,166.3	3.2	23.3	28.51	930.1	531.4	974.1	948.5	25.63	38.012	
1,300.0	1,287.5	1,263.5	1,263.5	3.7	25.3	29.18	930.1	531.4	953.5	925.6	27.85	34.230	
1,400.0	1,384.7	1,360.7	1,360.7	4.1	27.2	29.88	930.1	531.4	932.9	902.8	30.09	31.001	
1,500.0	1,481.9	1,457.9	1,457.9	4.6	29.2	30.60	930.1	531.4	912.5	880.2	32.34	28.214	
1,600.0	1,579.1	1,555.1	1,555.1	5.1	31.1	31.36	930.1	531.4	892.3	857.7	34.60	25.785	
1,700.0	1,676.4	1,652.4	1,652.4	5.5	33.0	32.16	930.1	531.4	872.2	835.3	36.88	23.653	
1,800.0	1,773.6	1,749.6	1,749.6	6.0	35.0	32.99	930.1	531.4	852.3	813.1	39.16	21.766	
1,900.0	1,870.8	1,846.8	1,846.8	6.5	36.9	33.86	930.1	531.4	832.6	791.1	41.45	20.085	
2,000.0	1,968.0	1,944.0	1,944.0	6.9	38.9	34.77	930.1	531.4	813.0	769.3	43.76	18.581	
2,100.0	2,065.2	2,041.2	2,041.2	7.4	40.8	35.73	930.1	531.4	793.7	747.6	46.07	17.227	
2,200.0	2,162.4	2,138.4	2,138.4	7.9	42.8	36.73	930.1	531.4	774.6	726.2	48.40	16.003	
2,300.0	2,259.7	2,235.7	2,235.7	8.4	44.7	37.78	930.1	531.4	755.8	705.0	50.75	14.893	
2,400.0	2,356.9	2,332.9	2,332.9	8.9	46.7	38.89	930.1	531.4	737.2	684.1	53.11	13.882	
2,500.0	2,454.1	2,430.1	2,430.1	9.4	48.6	40.05	930.1	531.4	718.9	663.4	55.48	12.958	
2,600.0	2,551.3	2,527.3	2,527.3	9.8	50.5	41.26	930.1	531.4	700.9	643.0	57.87	12.112	
2,700.0	2,648.5	2,624.5	2,624.5	10.3	52.5	42.54	930.1	531.4	683.2	623.0	60.27	11.336	
2,800.0	2,745.7	2,721.7	2,721.7	10.8	54.4	43.89	930.1	531.4	665.9	603.2	62.70	10.621	
2,900.0	2,842.9	2,818.9	2,818.9	11.3	56.4	45.30	930.1	531.4	649.0	583.9	65.14	9.964	
3,000.0	2,940.2	2,916.2	2,916.2	11.8	58.3	46.79	930.1	531.4	632.5	564.9	67.60	9.357	
3,100.0	3,037.4	3,013.4	3,013.4	12.3	60.3	48.35	930.1	531.4	616.5	546.4	70.08	8.796	
3,200.0	3,134.6	3,110.6	3,110.6	12.7	62.2	50.00	930.1	531.4	600.9	528.3	72.58	8.279	
3,300.0	3,231.8	3,207.8	3,207.8	13.2	64.2	51.72	930.1	531.4	585.8	510.7	75.10	7.801	
3,400.0	3,329.0	3,305.0	3,305.0	13.7	66.1	53.54	930.1	531.4	571.4	493.7	77.64	7.359	
3,500.0	3,426.2	3,402.2	3,402.2	14.2	68.0	55.44	930.1	531.4	557.5	477.3	80.20	6.951	
3,600.0	3,523.4	3,499.4	3,499.4	14.7	70.0	57.43	930.1	531.4	544.3	461.5	82.77	6.575	
3,700.0	3,620.7	3,596.7	3,596.7	15.2	71.9	59.51	930.1	531.4	531.8	446.4	85.37	6.229	
3,800.0	3,717.9	3,693.9	3,693.9	15.7	73.9	61.69	930.1	531.4	520.0	432.0	87.97	5.911	
3,900.0	3,815.1	3,791.1	3,791.1	16.1	75.8	63.96	930.1	531.4	509.1	418.5	90.59	5.620	
4,000.0	3,912.3	3,888.3	3,888.3	16.6	77.8	66.33	930.1	531.4	499.0	405.8	93.21	5.353	
4,100.0	4,009.5	3,985.5	3,985.5	17.1	79.7	68.78	930.1	531.4	489.8	394.0	95.84	5.111	
4,200.0	4,106.7	4,082.7	4,082.7	17.6	81.7	71.31	930.1	531.4	481.6	383.1	98.46	4.891	
4,300.0	4,203.9	4,179.9	4,179.9	18.1	83.6	73.93	930.1	531.4	474.4	373.3	101.08	4.694	
4,400.0	4,301.2	4,277.2	4,277.2	18.6	85.5	76.61	930.1	531.4	468.3	364.6	103.68	4.517	
4,500.0	4,398.4	4,374.4	4,374.4	19.1	87.5	79.35	930.1	531.4	463.3	357.0	106.26	4.360	
4,600.0	4,495.6	4,471.6	4,471.6	19.5	89.4	82.15	930.1	531.4	459.4	350.6	108.82	4.222	
4,700.0	4,592.8	4,568.8	4,568.8	20.0	91.4	84.98	930.1	531.4	456.7	345.4	111.34	4.102	
4,800.0	4,690.0	4,666.0	4,666.0	20.5	93.3	87.84	930.1	531.4	455.2	341.4	113.83	3.999	
4,875.3	4,763.2	4,739.2	4,739.2	20.9	94.8	90.00	930.1	531.4	454.9	339.2	115.67	3.932 CC	
4,900.0	4,787.2	4,763.2	4,763.2	21.0	95.3	90.71	930.1	531.4	454.9	338.6	116.27	3.913	
5,000.0	4,884.4	4,860.4	4,860.4	21.5	97.2	93.58	930.1	531.4	455.8	337.1	118.66	3.841	
5,100.0	4,981.7	4,957.7	4,957.7	22.0	99.2	96.42	930.1	531.4	457.9	336.9	121.01	3.784 ES	
5,200.0	5,078.9	5,054.9	5,054.9	22.5	101.1	99.24	930.1	531.4	461.2	337.9	123.31	3.740	
5,300.0	5,176.1	5,152.1	5,152.1	23.0	103.0	102.01	930.1	531.4	465.6	340.1	125.55	3.709	
5,400.0	5,273.3	5,249.3	5,249.3	23.4	105.0	104.73	930.1	531.4	471.2	343.4	127.75	3.688	
5,500.0	5,370.5	5,346.5	5,346.5	23.9	106.9	107.38	930.1	531.4	477.9	347.9	129.90	3.678	
5,600.0	5,467.7	5,443.7	5,443.7	24.4	108.9	109.95	930.1	531.4	485.5	353.5	132.02	3.678 SF	
5,700.0	5,564.9	5,540.9	5,540.9	24.9	110.8	112.45	930.1	531.4	494.2	360.1	134.09	3.686	
5,800.0	5,662.2	5,638.2	5,638.2	25.4	112.8	114.85	930.1	531.4	503.9	367.7	136.13	3.701	
5,900.0	5,759.4	5,735.4	5,735.4	25.9	114.7	117.17	930.1	531.4	514.4	376.2	138.14	3.724	
6,000.0	5,856.6	5,832.6	5,832.6	26.4	116.7	119.40	930.1	531.4	525.7	385.6	140.13	3.752	
6,100.0	5,953.8	5,929.8	5,929.8	26.9	118.6	121.53	930.1	531.4	537.9	395.8	142.10	3.785	

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 #12
<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 #12	<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

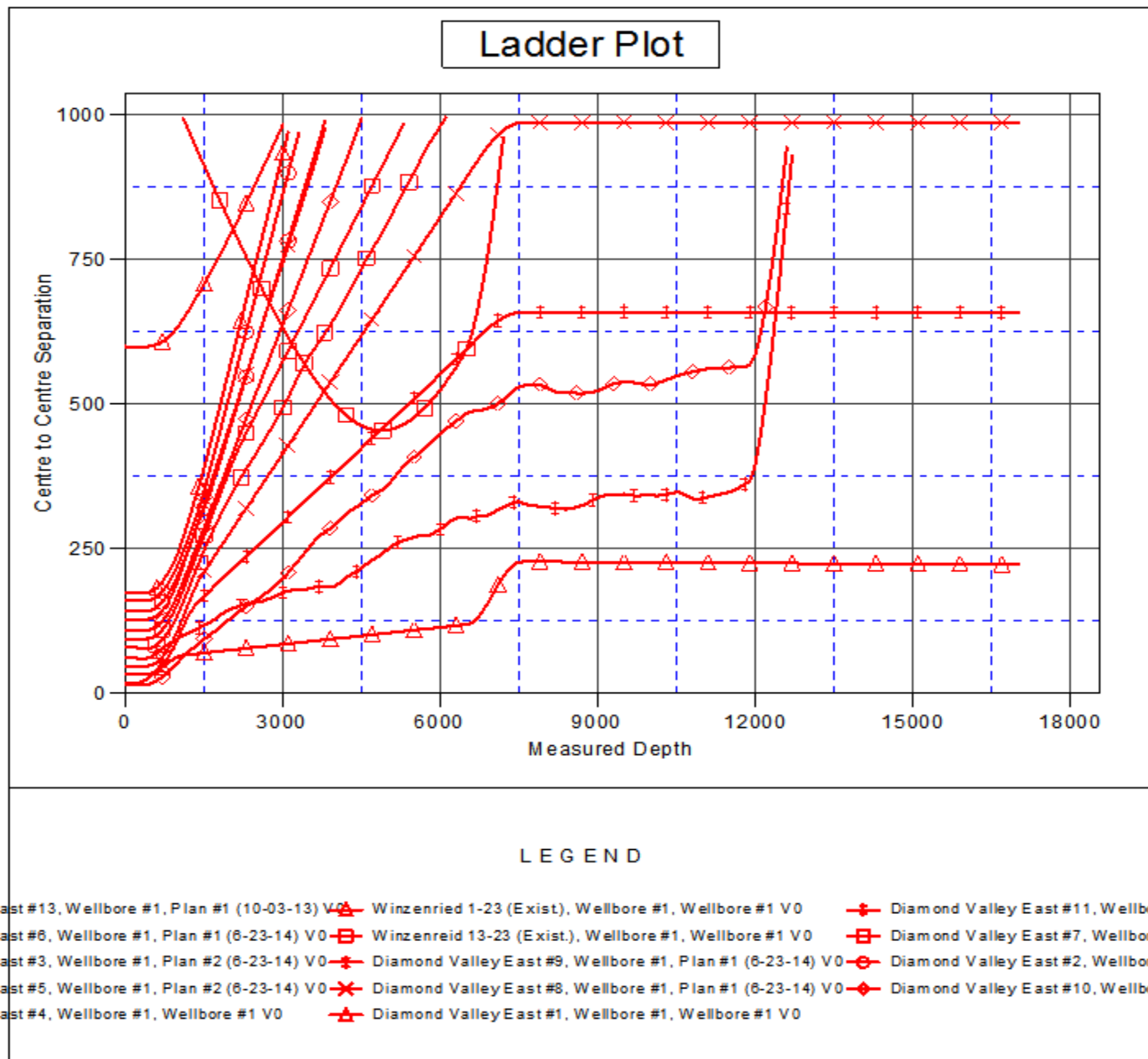
<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Diamond Valley East Pad Sec.23-T6N-R67W - Winzenreid 13-23 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 7315-UNKNOWN													
Reference		Offset		Semi Major Axis			Distance						
Measured 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
6,200.0	6,051.0	6,027.0	6,027.0	27.3	120.5	123.57	930.1	531.4	550.7	406.7	144.05	3.823	
6,300.0	6,148.2	6,124.2	6,124.2	27.8	122.5	125.51	930.1	531.4	564.3	418.3	145.98	3.865	
6,400.0	6,245.5	6,221.5	6,221.5	28.3	124.4	127.37	930.1	531.4	578.5	430.5	147.91	3.911	
6,500.0	6,342.6	6,318.6	6,318.6	28.8	126.4	153.44	930.1	531.4	595.9	448.1	147.85	4.031	
6,600.0	6,438.6	6,414.6	6,414.6	29.2	128.3	179.11	930.1	531.4	623.0	477.3	145.70	4.276	
6,700.0	6,531.6	6,507.6	6,507.6	29.6	130.2	-165.77	930.1	531.4	659.2	516.9	142.25	4.634	
6,800.0	6,619.9	6,595.9	6,595.9	29.9	131.9	-156.43	930.1	531.4	704.0	566.2	137.83	5.108	
6,900.0	6,701.5	6,677.5	6,677.5	30.3	133.6	-149.84	930.1	531.4	757.1	624.1	133.01	5.692	
7,000.0	6,775.1	6,751.1	6,751.1	30.7	135.0	-144.35	930.1	531.4	818.2	689.4	128.79	6.353	
7,100.0	6,839.1	6,815.1	6,815.1	31.1	136.3	-138.86	930.1	531.4	886.6	759.8	126.82	6.991	
7,200.0	6,892.4	6,868.4	6,868.4	31.5	137.4	-132.48	930.1	531.4	961.8	832.6	129.17	7.445	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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: 7232-UNKNOWN												<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
0.0	0.0	0.0	0.0	0.0	0.0	125.52	-348.6	488.3	600.5				
100.0	100.0	76.0	76.0	0.1	1.5	125.52	-348.6	488.3	600.0	598.4	1.63	367.518	
200.0	200.0	176.0	176.0	0.3	3.5	125.52	-348.6	488.3	600.0	596.1	3.86	155.548	
300.0	300.0	276.0	276.0	0.6	5.5	125.52	-348.6	488.3	600.0	593.9	6.08	98.651	
400.0	400.0	376.0	376.0	0.8	7.5	125.52	-348.6	488.3	600.0	591.7	8.31	72.230 CC	
500.0	500.0	476.0	476.0	1.0	9.5	121.04	-348.6	488.3	600.9	590.4	10.53	57.069 ES	
600.0	599.8	575.8	575.8	1.2	11.5	121.42	-348.6	488.3	603.6	590.9	12.75	47.352	
700.0	699.5	675.5	675.5	1.5	13.5	122.04	-348.6	488.3	608.2	593.3	14.96	40.648	
800.0	798.7	774.7	774.7	1.7	15.5	122.88	-348.6	488.3	614.8	597.6	17.18	35.787	
900.0	897.5	873.5	873.5	2.0	17.5	123.94	-348.6	488.3	623.5	604.1	19.40	32.144	
1,000.0	995.6	971.6	971.6	2.4	19.4	125.17	-348.6	488.3	634.4	612.8	21.61	29.356	
1,100.0	1,093.1	1,069.1	1,069.1	2.8	21.4	126.60	-348.6	488.3	647.8	624.0	23.83	27.180	
1,200.0	1,190.3	1,166.3	1,166.3	3.2	23.3	128.20	-348.6	488.3	662.3	636.2	26.10	25.374	
1,300.0	1,287.5	1,263.5	1,263.5	3.7	25.3	129.73	-348.6	488.3	677.3	648.9	28.37	23.874	
1,400.0	1,384.7	1,360.7	1,360.7	4.1	27.2	131.20	-348.6	488.3	692.7	662.1	30.63	22.613	
1,500.0	1,481.9	1,457.9	1,457.9	4.6	29.2	132.60	-348.6	488.3	708.6	675.7	32.90	21.542	
1,600.0	1,579.1	1,555.1	1,555.1	5.1	31.1	133.95	-348.6	488.3	724.9	689.8	35.15	20.624	
1,700.0	1,676.4	1,652.4	1,652.4	5.5	33.0	135.23	-348.6	488.3	741.6	704.2	37.40	19.830	
1,800.0	1,773.6	1,749.6	1,749.6	6.0	35.0	136.46	-348.6	488.3	758.7	719.0	39.64	19.139	
1,900.0	1,870.8	1,846.8	1,846.8	6.5	36.9	137.64	-348.6	488.3	776.0	734.2	41.88	18.532	
2,000.0	1,968.0	1,944.0	1,944.0	6.9	38.9	138.77	-348.6	488.3	793.7	749.6	44.11	17.996	
2,100.0	2,065.2	2,041.2	2,041.2	7.4	40.8	139.84	-348.6	488.3	811.7	765.4	46.33	17.520	
2,200.0	2,162.4	2,138.4	2,138.4	7.9	42.8	140.88	-348.6	488.3	830.0	781.4	48.55	17.096	
2,300.0	2,259.7	2,235.7	2,235.7	8.4	44.7	141.86	-348.6	488.3	848.5	797.7	50.76	16.715	
2,400.0	2,356.9	2,332.9	2,332.9	8.9	46.7	142.81	-348.6	488.3	867.2	814.3	52.97	16.372	
2,500.0	2,454.1	2,430.1	2,430.1	9.4	48.6	143.72	-348.6	488.3	886.2	831.0	55.17	16.062	
2,600.0	2,551.3	2,527.3	2,527.3	9.8	50.5	144.59	-348.6	488.3	905.4	848.0	57.37	15.781	
2,700.0	2,648.5	2,624.5	2,624.5	10.3	52.5	145.42	-348.6	488.3	924.8	865.2	59.57	15.525	
2,800.0	2,745.7	2,721.7	2,721.7	10.8	54.4	146.22	-348.6	488.3	944.3	882.6	61.76	15.290	
2,900.0	2,842.9	2,818.9	2,818.9	11.3	56.4	146.99	-348.6	488.3	964.1	900.1	63.95	15.076	
3,000.0	2,940.2	2,916.2	2,916.2	11.8	58.3	147.73	-348.6	488.3	983.9	917.8	66.13	14.878 SF	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #12
<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 #12	<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 #12  
 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 #12
<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 #12	<b>Survey Calculation Method:</b>	Minimum Curvature
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<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
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Reference Depths are relative to WELL @ 4791.0ft (Frontier 10 RKB - Coordinates are relative to: Diamond Valley East #12  
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