

# Extraction Oil & Gas

Well Name: **Diamond Valley East #3**

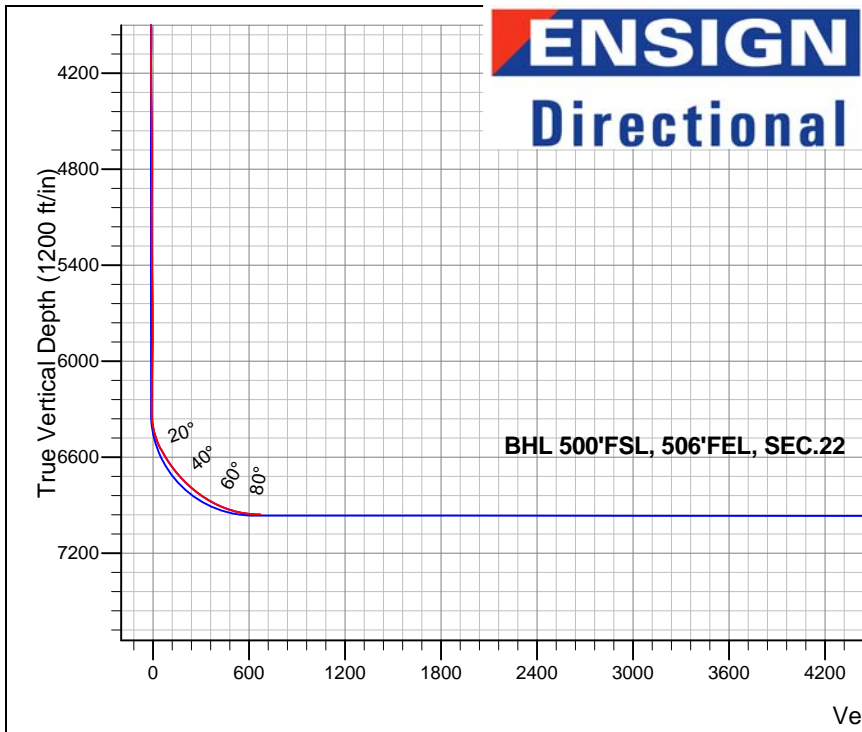
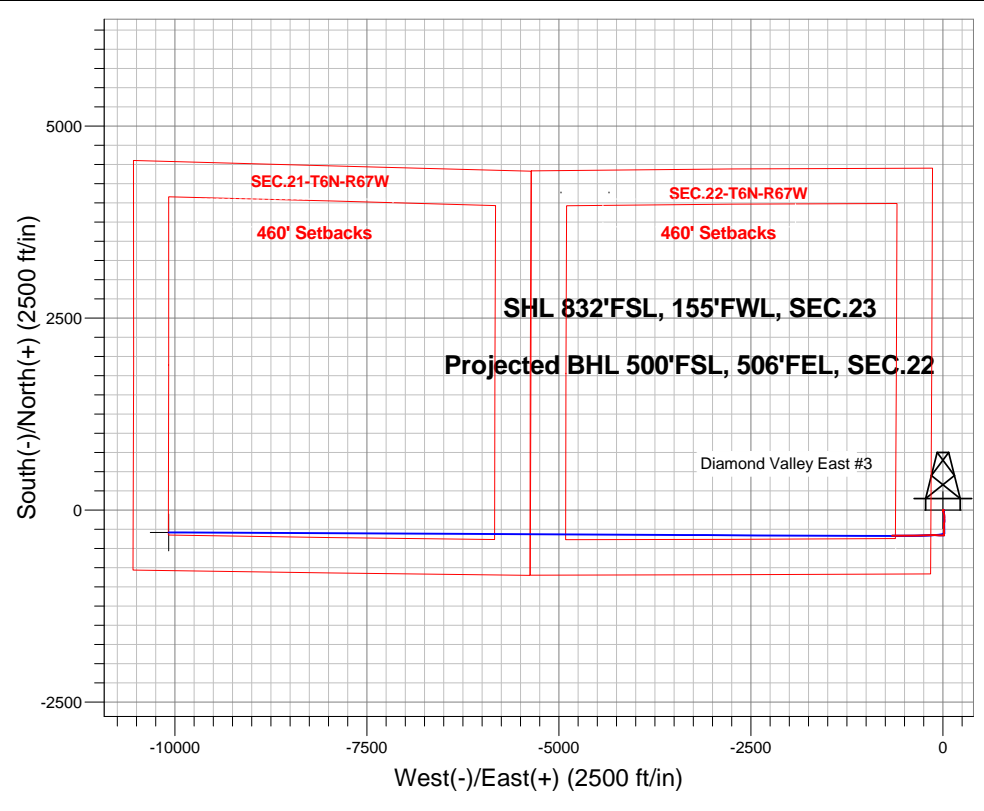
Surface Location: Diamond Valley East Pad Sec.23-T6N-R67W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4769.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1413770.00	3175338.24	40.467490	-104.869810	

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

## FINAL SURVEY

Projected Bottom Hole Location  
 7355'MD 6958'TVD 332'S & 661'W of SHL  
 89.0 degree Incl @ 271.0 degree AZM



Diamond Valley East Pad Sec.23-T6N-R67W  
 Diamond Valley East #3  
 13:45, September 03 2014  
 Wellbore #1

ANNOTATIONS  
 No annotation data is available.

LEGEND  
 ▲ Diamond Valley East #3, Wellbore #1, Plan #3 (8-8-14) V0  
 □ Wellbore #1  
 ○ Survey #1



## **Extraction Oil & Gas**

**SEC.23-T6N-R67W**

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

**Diamond Valley East #3**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**03 September, 2014**



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #3
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Well:</b>	Diamond Valley East #3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

<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 #3					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,413,770.00 ft	<b>Latitude:</b>	40.467490
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,175,338.24 ft	<b>Longitude:</b>	-104.869810
<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	7/24/2014	8.51	66.98	52,829

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	268.36	

<b>Survey Program</b>	<b>Date</b>	9/3/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
170.0	7,355.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.01	141.90	1.0	0.0	0.0	0.0	0.59	0.59	0.00	
<b>SHL 832'FSL, 155'FWL, SEC.23</b>										
170.0	1.00	141.90	170.0	-1.2	0.9	-0.9	0.59	0.59	0.00	
262.0	0.80	121.70	262.0	-2.1	2.0	-1.9	0.40	-0.22	-21.96	
354.0	1.00	138.80	354.0	-3.1	3.0	-2.9	0.36	0.22	18.59	
445.0	1.10	134.40	445.0	-4.3	4.2	-4.1	0.14	0.11	-4.84	
537.0	1.00	119.10	536.9	-5.3	5.5	-5.4	0.32	-0.11	-16.63	
629.0	1.00	113.80	628.9	-6.0	6.9	-6.8	0.10	0.00	-5.76	
720.0	1.10	123.00	719.9	-6.8	8.4	-8.2	0.22	0.11	10.11	
782.0	1.10	123.70	781.9	-7.5	9.4	-9.2	0.02	0.00	1.13	
812.0	1.10	111.70	811.9	-7.7	9.9	-9.7	0.77	0.00	-40.00	
903.0	1.90	27.90	902.9	-6.7	11.4	-11.2	2.30	0.88	-92.09	

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Diamond Valley East #3
<b>Project:</b>	SEC.23-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Site:</b>	Diamond Valley East Pad Sec.23-T6N-R67W	<b>MD Reference:</b>	WELL @ 4791.0ft (Frontier 10 RKB - 22')
<b>Well:</b>	Diamond Valley East #3	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

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)	
995.0	3.70	6.60	994.8	-2.4	12.5	-12.4	2.23	1.96	-23.15	
1,086.0	1.10	354.50	1,085.7	1.4	12.7	-12.8	2.90	-2.86	-13.30	
1,179.0	1.40	271.00	1,178.7	2.3	11.5	-11.6	1.81	0.32	-89.79	
1,271.0	0.70	238.60	1,270.6	2.0	9.9	-10.0	0.97	-0.76	-35.22	
1,364.0	0.60	249.50	1,363.6	1.5	9.0	-9.0	0.17	-0.11	11.72	
1,456.0	0.40	208.20	1,455.6	1.1	8.4	-8.4	0.43	-0.22	-44.89	
1,550.0	2.00	215.40	1,549.6	-0.5	7.3	-7.2	1.71	1.70	7.66	
1,642.0	3.30	191.20	1,641.5	-4.4	5.8	-5.7	1.83	1.41	-26.30	
1,734.0	4.60	179.60	1,733.3	-10.7	5.3	-5.0	1.65	1.41	-12.61	
1,825.0	6.00	162.90	1,823.9	-18.9	6.8	-6.2	2.27	1.54	-18.35	
1,917.0	5.50	161.30	1,915.4	-27.7	9.6	-8.8	0.57	-0.54	-1.74	
2,009.0	5.10	162.70	2,007.0	-35.8	12.2	-11.2	0.46	-0.43	1.52	
2,100.0	5.10	158.80	2,097.7	-43.4	14.9	-13.6	0.38	0.00	-4.29	
2,192.0	5.00	169.70	2,189.3	-51.2	17.1	-15.6	1.05	-0.11	11.85	
2,284.0	4.60	166.70	2,281.0	-58.7	18.6	-16.9	0.51	-0.43	-3.26	
2,375.0	4.60	179.90	2,371.7	-65.9	19.5	-17.6	1.16	0.00	14.51	
2,467.0	4.50	179.90	2,463.4	-73.2	19.5	-17.4	0.11	-0.11	0.00	
2,559.0	4.50	176.40	2,555.1	-80.4	19.7	-17.4	0.30	0.00	-3.80	
2,651.0	4.50	178.00	2,646.9	-87.6	20.1	-17.6	0.14	0.00	1.74	
2,742.0	3.80	185.90	2,737.6	-94.2	19.9	-17.2	0.99	-0.77	8.68	
2,834.0	4.10	181.80	2,829.4	-100.5	19.5	-16.6	0.45	0.33	-4.46	
2,926.0	4.60	175.20	2,921.1	-107.5	19.7	-16.6	0.77	0.54	-7.17	
3,017.0	4.20	177.60	3,011.9	-114.4	20.1	-16.8	0.48	-0.44	2.64	
3,109.0	3.70	180.80	3,103.7	-120.8	20.2	-16.8	0.59	-0.54	3.48	
3,201.0	3.30	174.50	3,195.5	-126.4	20.4	-16.8	0.60	-0.43	-6.85	
3,293.0	3.00	173.60	3,287.3	-131.4	21.0	-17.2	0.33	-0.33	-0.98	
3,384.0	2.80	172.00	3,378.2	-136.0	21.5	-17.6	0.24	-0.22	-1.76	
3,476.0	2.60	171.30	3,470.1	-140.3	22.2	-18.1	0.22	-0.22	-0.76	
3,567.0	3.70	195.90	3,561.0	-145.1	21.7	-17.5	1.89	1.21	27.03	
3,659.0	4.00	192.40	3,652.8	-151.1	20.2	-15.8	0.41	0.33	-3.80	
3,751.0	4.20	193.40	3,744.5	-157.5	18.7	-14.2	0.23	0.22	1.09	
3,843.0	4.40	189.90	3,836.3	-164.3	17.3	-12.6	0.36	0.22	-3.80	
3,934.0	4.20	190.30	3,927.0	-171.0	16.1	-11.2	0.22	-0.22	0.44	
4,026.0	2.60	163.90	4,018.9	-176.3	16.1	-11.0	2.39	-1.74	-28.70	
4,118.0	1.80	173.20	4,110.8	-179.8	16.8	-11.7	0.95	-0.87	10.11	
4,209.0	1.30	168.80	4,201.8	-182.2	17.2	-12.0	0.56	-0.55	-4.84	
4,303.0	3.20	190.80	4,295.7	-185.8	16.9	-11.6	2.18	2.02	23.40	
4,397.0	5.10	186.90	4,389.4	-192.5	15.9	-10.4	2.04	2.02	-4.15	
4,492.0	4.70	192.00	4,484.1	-200.5	14.6	-8.9	0.62	-0.42	5.37	
4,586.0	5.50	182.50	4,577.7	-208.8	13.6	-7.6	1.23	0.85	-10.11	
4,681.0	5.40	184.10	4,672.3	-217.8	13.1	-6.8	0.19	-0.11	1.68	
4,776.0	5.60	173.10	4,766.9	-226.9	13.3	-6.8	1.13	0.21	-11.58	
4,870.0	5.10	172.70	4,860.5	-235.6	14.4	-7.7	0.53	-0.53	-0.43	
4,964.0	4.60	171.60	4,954.1	-243.4	15.5	-8.5	0.54	-0.53	-1.17	
5,060.0	3.80	168.80	5,049.9	-250.4	16.7	-9.5	0.86	-0.83	-2.92	
5,154.0	4.40	189.20	5,143.6	-257.0	16.7	-9.3	1.67	0.64	21.70	
5,249.0	5.30	183.90	5,238.3	-265.0	15.8	-8.2	1.06	0.95	-5.58	
5,344.0	4.10	181.70	5,333.0	-272.7	15.4	-7.6	1.28	-1.26	-2.32	
5,440.0	3.10	177.30	5,428.8	-278.8	15.5	-7.4	1.08	-1.04	-4.58	
5,534.0	3.20	199.90	5,522.6	-283.8	14.7	-6.5	1.32	0.11	24.04	
5,629.0	4.10	191.50	5,617.4	-289.6	13.1	-4.8	1.10	0.95	-8.84	
5,723.0	5.20	179.20	5,711.1	-297.1	12.5	-4.0	1.57	1.17	-13.09	
5,819.0	4.10	177.30	5,806.8	-304.9	12.7	-4.0	1.16	-1.15	-1.98	
5,913.0	3.30	174.80	5,900.6	-311.0	13.1	-4.2	0.87	-0.85	-2.66	

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<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	Landmark

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)
6,007.0	3.10	165.10	5,994.5	-316.1	14.0	-4.9	0.61	-0.21	-10.32
6,102.0	2.60	160.70	6,089.4	-320.6	15.4	-6.2	0.57	-0.53	-4.63
6,197.0	2.10	154.20	6,184.3	-324.2	16.9	-7.5	0.60	-0.53	-6.84
6,292.0	1.80	150.40	6,279.2	-327.1	18.4	-9.0	0.34	-0.32	-4.00
6,386.0	4.80	267.30	6,373.1	-328.6	15.1	-5.7	6.21	3.19	124.36
6,480.0	17.50	270.40	6,465.1	-328.7	-3.0	12.4	13.52	13.51	3.30
6,575.0	28.80	272.40	6,552.4	-327.6	-40.3	49.6	11.92	11.89	2.11
6,669.0	33.90	271.10	6,632.6	-326.1	-89.1	98.4	5.47	5.43	-1.38
6,763.0	39.70	269.40	6,707.8	-326.0	-145.4	154.7	6.26	6.17	-1.81
6,856.0	48.80	269.60	6,774.4	-326.5	-210.2	219.5	9.79	9.78	0.22
6,951.0	54.30	268.00	6,833.4	-328.1	-284.6	293.9	5.94	5.79	-1.68
7,045.0	61.00	266.90	6,883.7	-331.7	-363.9	373.2	7.20	7.13	-1.17
7,140.0	69.90	270.30	6,923.2	-333.7	-450.1	459.5	9.92	9.37	3.58
7,235.0	78.70	270.10	6,948.8	-333.4	-541.5	550.9	9.27	9.26	-0.21
7,305.0	87.80	271.00	6,957.1	-332.7	-610.9	620.2	13.06	13.00	1.29
<b>T2 495'FSL, 460'FEL, SEC.22</b>									
7,355.0	89.00	271.00	6,958.5	-331.8	-660.9	670.2	2.40	2.40	0.00
<b>BHL 495'FSL, 460'FWL, SEC.21</b>									

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_