

# **DORADO E&P PARTNERS**

**RENO COUNTY, KANSAS (NAD 27)**

**NW. 1/4 SECTION 2 T25S R10W**

**GASTON #25-10-2-1H**

**JOB # 2009-168**

**04 April, 2013**

**Survey: FINAL SURVEYS**





Project: RENO COUNTY, KANSAS (NAD 27)  
 Site: NW. 1/4 SECTION 2 T25S R10W  
 Well: GASTON #25-10-2-1H  
 Wellbore: JOB # 2009-168  
 Design: FINAL SURVEYS

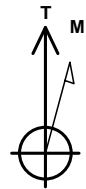
**ANNOTATIONS**

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
3354.4	3360.0	1.47	165.52	107.3	-8.1	-107.3	124.1	KOP
3854.0	4010.0	68.95	178.61	-244.5	-22.0	244.5	477.8	START OF TANGENT
3864.8	4041.0	71.05	178.07	-273.5	-21.2	273.5	506.9	END OF TANGENT
3893.9	4275.0	90.18	179.97	-504.5	-16.2	504.5	737.9	HZ LANDING POINT
3905.8	8526.0	89.47	180.70	-4753.4	14.4	4753.4	4988.6	EXTRAPOLATION TO TD



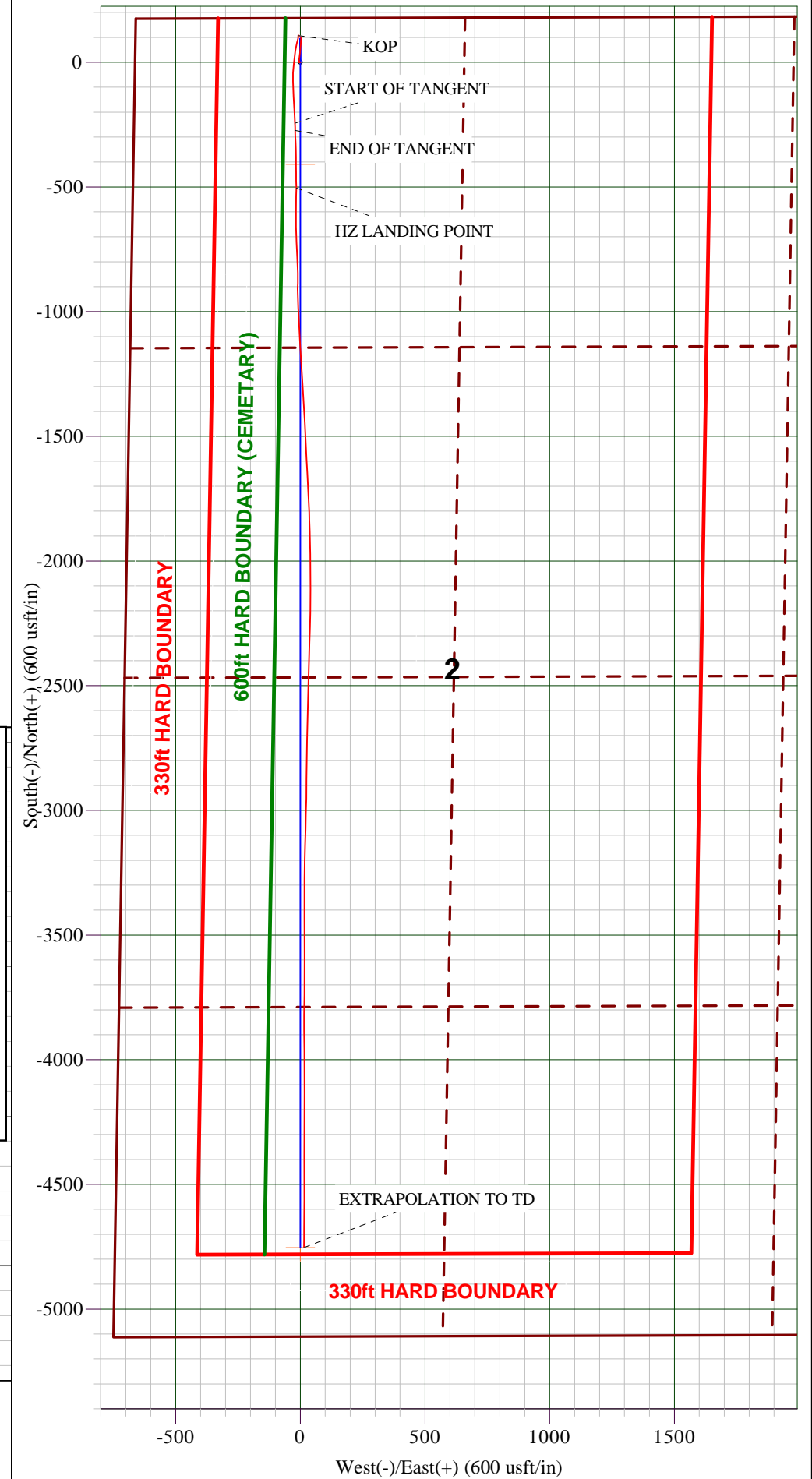
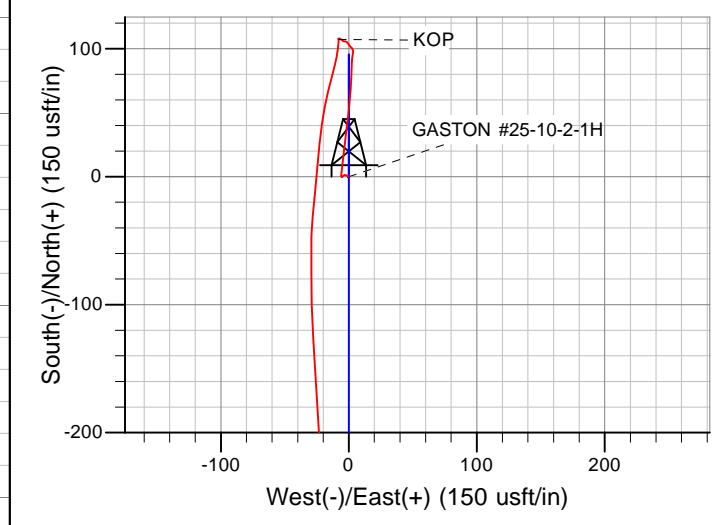
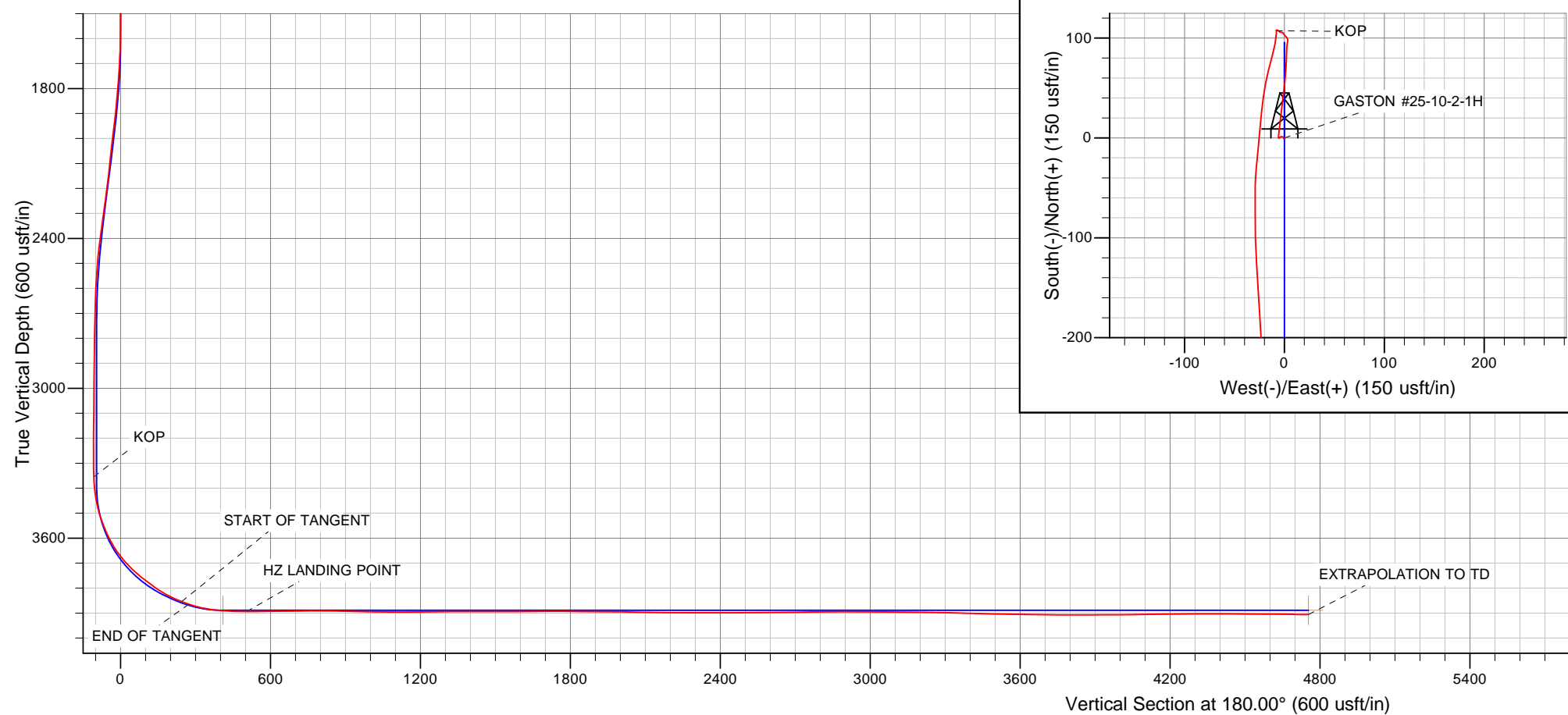
PROPOSED LOCAL COORDINATES:  
 SURF (SEC.2) 175' FNL 660' FWL

HARD BOUNDARIES:  
 BHL FALLS 30ft N of the 330ft HARD BOUNDARY



Azimuths to True North  
 Magnetic North: 4.74°

Magnetic Field  
 Strength: 52190.8snT  
 Dip Angle: 65.85°  
 Date: 04/03/2013  
 Model: IGRF2010



# Survey Report



<b>Company:</b>	DORADO E&P PARTNERS	<b>Local Co-ordinate Reference:</b>	Well GASTON #25-10-2-1H
<b>Project:</b>	RENO COUNTY, KANSAS (NAD 27)	<b>TVD Reference:</b>	KB-EST @ 1764.0usft
<b>Site:</b>	NW. 1/4 SECTION 2 T25S R10W	<b>MD Reference:</b>	KB-EST @ 1764.0usft
<b>Well:</b>	GASTON #25-10-2-1H	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009-168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

<b>Project</b> RENO COUNTY, KANSAS (NAD 27)			
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Kansas South 1502		Using geodetic scale factor

<b>Site</b> NW. 1/4 SECTION 2 T25S R10W			
<b>Site Position:</b>	<b>Northing:</b>	<b>Latitude:</b>	
<b>From:</b>	Lat/Long	453,218.35 usft	37° 54' 40.810 N
<b>Position Uncertainty:</b>	0.0 usft	<b>Easting:</b>	<b>Longitude:</b>
		2,029,926.28 usft	98° 23' 46.568 W
		<b>Slot Radius:</b>	<b>Grid Convergence:</b>
		13-3/16"	0.06 °

<b>Well</b> GASTON #25-10-2-1H			
<b>Well Position</b>	<b>+N-S</b>	<b>Northing:</b>	<b>Latitude:</b>
	0.0 usft	453,218.35 usft	37° 54' 40.810 N
	<b>+E-W</b>	<b>Easting:</b>	<b>Longitude:</b>
	0.0 usft	2,029,926.28 usft	98° 23' 46.568 W
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b>
		usft	1,752.0 usft

<b>Wellbore</b> JOB # 2009-168					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/03/2013	4.74	65.85	52,191

<b>Design</b> FINAL SURVEYS				
<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) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	180.00

<b>Survey Program</b>		<b>Date</b> 04/04/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
425.0	8,526.0	FINAL SURVEYS (JOB # 2009-168)	MWD	MWD - Standard	

<b>Survey</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	1,764.0	0.0	0.0	0.0	0.00	0.00	0.00
425.0	0.00	0.00	425.0	1,339.0	0.0	0.0	0.0	0.00	0.00	0.00
434.0	0.18	304.71	434.0	1,330.0	0.0	0.0	0.0	2.00	2.00	0.00
617.0	0.26	292.41	617.0	1,147.0	0.3	-0.6	-0.3	0.05	0.04	-6.72
810.0	0.44	300.32	810.0	954.0	0.9	-1.7	-0.9	0.10	0.09	4.10
995.0	0.57	274.74	995.0	769.0	1.3	-3.2	-1.3	0.14	0.07	-13.83
1,181.0	0.66	212.78	1,181.0	583.0	0.5	-4.7	-0.5	0.34	0.05	-33.31
1,367.0	0.00	94.74	1,367.0	397.0	-0.4	-5.3	0.4	0.35	-0.35	0.00
1,550.0	0.44	302.25	1,550.0	214.0	0.0	-5.9	0.0	0.24	0.24	0.00
1,611.0	1.36	6.67	1,611.0	153.0	0.8	-6.0	-0.8	2.03	1.51	105.61
1,675.0	2.77	11.16	1,674.9	89.1	3.1	-5.6	-3.1	2.22	2.20	7.02
1,737.0	4.39	5.88	1,736.8	27.2	6.9	-5.1	-6.9	2.66	2.61	-8.52
1,800.0	3.82	3.69	1,799.6	-35.6	11.4	-4.7	-11.4	0.94	-0.90	-3.48

# Survey Report



<b>Company:</b>	DORADO E&P PARTNERS	<b>Local Co-ordinate Reference:</b>	Well GASTON #25-10-2-1H
<b>Project:</b>	RENO COUNTY, KANSAS (NAD 27)	<b>TVD Reference:</b>	KB-EST @ 1764.0usft
<b>Site:</b>	NW. 1/4 SECTION 2 T25S R10W	<b>MD Reference:</b>	KB-EST @ 1764.0usft
<b>Well:</b>	GASTON #25-10-2-1H	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009-168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,862.0	5.23	5.18	1,861.4	-97.4	16.3	-4.3	-16.3	2.28	2.27	2.40
1,924.0	7.16	8.17	1,923.1	-159.1	22.9	-3.5	-22.9	3.16	3.11	4.82
1,986.0	6.72	7.03	1,984.6	-220.6	30.3	-2.5	-30.3	0.74	-0.71	-1.84
2,048.0	6.33	6.06	2,046.2	-282.2	37.3	-1.7	-37.3	0.65	-0.63	-1.56
2,110.0	6.15	5.88	2,107.9	-343.9	44.0	-1.0	-44.0	0.29	-0.29	-0.29
2,171.0	6.68	7.90	2,168.5	-404.5	50.8	-0.2	-50.8	0.94	0.87	3.31
2,233.0	7.69	5.00	2,230.0	-466.0	58.5	0.7	-58.5	1.73	1.63	-4.68
2,295.0	8.09	2.89	2,291.4	-527.4	67.0	1.3	-67.0	0.80	0.65	-3.40
2,357.0	7.69	3.51	2,352.8	-588.8	75.5	1.7	-75.5	0.66	-0.65	1.00
2,418.0	7.16	2.10	2,413.3	-649.3	83.4	2.1	-83.4	0.92	-0.87	-2.31
2,480.0	5.27	3.07	2,474.9	-710.9	90.1	2.4	-90.1	3.05	-3.05	1.56
2,542.0	4.04	9.49	2,536.7	-772.7	95.1	2.9	-95.1	2.15	-1.98	10.35
2,604.0	2.33	3.60	2,598.6	-834.6	98.5	3.4	-98.5	2.80	-2.76	-9.50
2,666.0	2.37	305.41	2,660.6	-896.6	100.5	2.4	-100.5	3.69	0.06	-93.85
2,728.0	2.24	321.06	2,722.5	-958.5	102.2	0.6	-102.2	1.03	-0.21	25.24
2,790.0	1.93	331.17	2,784.5	-1,020.5	104.0	-0.7	-104.0	0.77	-0.50	16.31
2,852.0	0.97	299.35	2,846.5	-1,082.5	105.2	-1.6	-105.2	1.96	-1.55	-51.32
2,913.0	1.14	295.57	2,907.5	-1,143.5	105.7	-2.6	-105.7	0.30	0.28	-6.20
2,975.0	0.93	247.93	2,969.5	-1,205.5	105.8	-3.7	-105.8	1.38	-0.34	-76.84
3,037.0	1.49	309.90	3,031.4	-1,267.4	106.1	-4.7	-106.1	2.15	0.90	99.95
3,099.0	1.36	317.19	3,093.4	-1,329.4	107.2	-5.9	-107.2	0.36	-0.21	11.76
3,161.0	0.97	295.13	3,155.4	-1,391.4	107.9	-6.8	-107.9	0.95	-0.63	-35.58
3,222.0	1.01	255.58	3,216.4	-1,452.4	108.0	-7.8	-108.0	1.10	0.07	-64.84
3,284.0	0.09	174.37	3,278.4	-1,514.4	107.8	-8.3	-107.8	1.61	-1.48	-130.98
3,315.0	0.31	155.56	3,309.4	-1,545.4	107.7	-8.3	-107.7	0.73	0.71	-60.68
3,347.0	0.62	149.50	3,341.4	-1,577.4	107.5	-8.2	-107.5	0.98	0.97	-18.94
<b>KOP</b>										
<b>3,360.0</b>	<b>1.47</b>	<b>165.52</b>	<b>3,354.4</b>	<b>-1,590.4</b>	<b>107.3</b>	<b>-8.1</b>	<b>-107.3</b>	<b>6.82</b>	<b>6.50</b>	<b>123.21</b>
3,378.0	2.68	170.59	3,372.4	-1,608.4	106.6	-8.0	-106.6	6.82	6.75	28.18
3,409.0	6.24	188.61	3,403.3	-1,639.3	104.3	-8.1	-104.3	12.20	11.48	58.13
3,440.0	10.24	183.07	3,434.0	-1,670.0	99.8	-8.5	-99.8	13.14	12.90	-17.87
3,471.0	12.66	192.83	3,464.3	-1,700.3	93.8	-9.4	-93.8	9.97	7.81	31.48
3,502.0	15.51	193.97	3,494.4	-1,730.4	86.4	-11.2	-86.4	9.24	9.19	3.68
3,533.0	19.03	194.50	3,524.0	-1,760.0	77.5	-13.4	-77.5	11.37	11.35	1.71
3,564.0	22.02	193.44	3,553.0	-1,789.0	67.0	-16.1	-67.0	9.72	9.65	-3.42
3,595.0	25.09	191.68	3,581.5	-1,817.5	54.9	-18.7	-54.9	10.16	9.90	-5.68
3,626.0	27.86	187.64	3,609.2	-1,845.2	41.3	-21.0	-41.3	10.65	8.94	-13.03
3,657.0	32.04	185.71	3,636.1	-1,872.1	25.9	-22.8	-25.9	13.84	13.48	-6.23
3,688.0	36.34	185.00	3,661.7	-1,897.7	8.6	-24.4	-8.6	13.93	13.87	-2.29
3,719.0	40.12	185.97	3,686.0	-1,922.0	-10.5	-26.3	10.5	12.35	12.19	3.13
3,750.0	44.30	185.09	3,709.0	-1,945.0	-31.3	-28.3	31.3	13.62	13.48	-2.84
3,781.0	46.58	180.52	3,730.8	-1,966.8	-53.3	-29.3	53.3	12.82	7.35	-14.74
3,811.0	50.10	179.29	3,750.7	-1,986.7	-75.7	-29.3	75.7	12.13	11.73	-4.10
3,842.0	53.88	179.03	3,769.8	-2,005.8	-100.1	-28.9	100.1	12.21	12.19	-0.84
3,873.0	53.13	176.57	3,788.2	-2,024.2	-125.0	-28.0	125.0	6.82	-2.42	-7.94
3,904.0	56.43	176.30	3,806.1	-2,042.1	-150.3	-26.4	150.3	10.67	10.65	-0.87
3,935.0	60.29	176.48	3,822.3	-2,058.3	-176.6	-24.7	176.6	12.46	12.45	0.58
3,966.0	64.07	177.36	3,836.8	-2,072.8	-204.0	-23.3	204.0	12.45	12.19	2.84
3,997.0	68.47	178.76	3,849.3	-2,085.3	-232.4	-22.3	232.4	14.78	14.19	4.52
<b>START OF TANGENT</b>										
<b>4,010.0</b>	<b>68.95</b>	<b>178.61</b>	<b>3,854.0</b>	<b>-2,090.0</b>	<b>-244.5</b>	<b>-22.0</b>	<b>244.5</b>	<b>3.83</b>	<b>3.68</b>	<b>-1.13</b>
4,028.0	69.61	178.41	3,860.4	-2,096.4	-261.3	-21.6	261.3	3.83	3.68	-1.13

# Survey Report



<b>Company:</b>	DORADO E&P PARTNERS	<b>Local Co-ordinate Reference:</b>	Well GASTON #25-10-2-1H
<b>Project:</b>	RENO COUNTY, KANSAS (NAD 27)	<b>TVL Reference:</b>	KB-EST @ 1764.0usft
<b>Site:</b>	NW. 1/4 SECTION 2 T25S R10W	<b>MD Reference:</b>	KB-EST @ 1764.0usft
<b>Well:</b>	GASTON #25-10-2-1H	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009-168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

## Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>END OF TANGENT</b>										
<b>4,041.0</b>	<b>71.05</b>	<b>178.07</b>	<b>3,864.8</b>	<b>-2,100.8</b>	<b>-273.5</b>	<b>-21.2</b>	<b>273.5</b>	<b>11.32</b>	<b>11.06</b>	<b>-2.58</b>
4,059.0	73.04	177.62	3,870.3	-2,106.3	-290.7	-20.6	290.7	11.32	11.07	-2.53
4,090.0	77.52	177.44	3,878.2	-2,114.2	-320.6	-19.3	320.6	14.46	14.45	-0.58
4,121.0	80.42	178.41	3,884.1	-2,120.1	-351.0	-18.2	351.0	9.85	9.35	3.13
4,152.0	84.02	178.85	3,888.3	-2,124.3	-381.7	-17.5	381.7	11.70	11.61	1.42
4,183.0	86.66	179.73	3,890.8	-2,126.8	-412.6	-17.1	412.6	8.97	8.52	2.84
4,214.0	87.93	179.29	3,892.3	-2,128.3	-443.6	-16.8	443.6	4.34	4.10	-1.42
4,245.0	87.85	179.29	3,893.4	-2,129.4	-474.5	-16.4	474.5	0.26	-0.26	0.00
<b>HZ LANDING POINT</b>										
<b>4,275.0</b>	<b>90.18</b>	<b>179.97</b>	<b>3,893.9</b>	<b>-2,129.9</b>	<b>-504.5</b>	<b>-16.2</b>	<b>504.5</b>	<b>8.10</b>	<b>7.77</b>	<b>2.26</b>
4,276.0	90.26	179.99	3,893.9	-2,129.9	-505.5	-16.2	505.5	8.10	7.77	2.26
4,307.0	90.53	180.70	3,893.7	-2,129.7	-536.5	-16.4	536.5	2.45	0.87	2.29
4,368.0	90.75	180.78	3,893.0	-2,129.0	-597.5	-17.2	597.5	0.38	0.36	0.13
4,430.0	90.31	179.03	3,892.5	-2,128.5	-659.5	-17.1	659.5	2.91	-0.71	-2.82
4,492.0	90.83	178.15	3,891.9	-2,127.9	-721.5	-15.6	721.5	1.65	0.84	-1.42
4,554.0	89.78	176.48	3,891.5	-2,127.5	-783.4	-12.7	783.4	3.18	-1.69	-2.69
4,616.0	89.96	179.29	3,891.7	-2,127.7	-845.4	-10.4	845.4	4.54	0.29	4.53
4,677.0	88.42	181.05	3,892.5	-2,128.5	-906.4	-10.6	906.4	3.83	-2.52	2.89
4,739.0	88.51	177.18	3,894.2	-2,130.2	-968.3	-9.6	968.3	6.24	0.15	-6.24
4,800.0	89.21	177.09	3,895.4	-2,131.4	-1,029.2	-6.6	1,029.2	1.16	1.15	-0.15
4,862.0	89.38	176.30	3,896.2	-2,132.2	-1,091.1	-3.0	1,091.1	1.30	0.27	-1.27
4,924.0	90.44	177.09	3,896.3	-2,132.3	-1,153.0	0.6	1,153.0	2.13	1.71	1.27
4,985.0	90.83	176.48	3,895.6	-2,131.6	-1,213.9	4.0	1,213.9	1.19	0.64	-1.00
5,047.0	91.10	176.30	3,894.5	-2,130.5	-1,275.8	7.9	1,275.8	0.52	0.44	-0.29
5,109.0	89.82	177.09	3,894.0	-2,130.0	-1,337.7	11.5	1,337.7	2.43	-2.06	1.27
5,171.0	89.95	176.21	3,894.2	-2,130.2	-1,399.6	15.1	1,399.6	1.43	0.21	-1.42
5,233.0	90.48	176.65	3,893.9	-2,129.9	-1,461.4	19.0	1,461.4	1.11	0.85	0.71
5,295.0	89.74	177.88	3,893.8	-2,129.8	-1,523.4	21.9	1,523.4	2.32	-1.19	1.98
5,359.0	90.22	177.01	3,893.8	-2,129.8	-1,587.3	24.8	1,587.3	1.55	0.75	-1.36
5,421.0	90.35	176.83	3,893.5	-2,129.5	-1,649.2	28.1	1,649.2	0.36	0.21	-0.29
5,482.0	90.48	176.92	3,893.1	-2,129.1	-1,710.1	31.4	1,710.1	0.26	0.21	0.15
5,544.0	89.74	177.44	3,893.0	-2,129.0	-1,772.1	34.5	1,772.1	1.46	-1.19	0.84
5,606.0	89.30	179.03	3,893.5	-2,129.5	-1,834.0	36.4	1,834.0	2.66	-0.71	2.56
5,668.0	89.69	177.62	3,894.0	-2,130.0	-1,896.0	38.2	1,896.0	2.36	0.63	-2.27
5,730.0	89.08	179.20	3,894.7	-2,130.7	-1,958.0	39.9	1,958.0	2.73	-0.98	2.55
5,792.0	88.95	180.52	3,895.8	-2,131.8	-2,019.9	40.1	2,019.9	2.14	-0.21	2.13
5,854.0	89.21	179.03	3,896.8	-2,132.8	-2,081.9	40.3	2,081.9	2.44	0.42	-2.40
5,916.0	89.17	180.26	3,897.6	-2,133.6	-2,143.9	40.7	2,143.9	1.98	-0.06	1.98
5,978.0	89.43	180.87	3,898.4	-2,134.4	-2,205.9	40.1	2,205.9	1.07	0.42	0.98
6,040.0	89.43	182.19	3,899.0	-2,135.0	-2,267.9	38.4	2,267.9	2.13	0.00	2.13
6,101.0	90.22	181.49	3,899.2	-2,135.2	-2,328.9	36.5	2,328.9	1.73	1.30	-1.15
6,163.0	90.26	181.14	3,898.9	-2,134.9	-2,390.8	35.1	2,390.8	0.57	0.06	-0.56
6,225.0	89.91	181.84	3,898.8	-2,134.8	-2,452.8	33.5	2,452.8	1.26	-0.56	1.13
6,287.0	90.57	181.40	3,898.6	-2,134.6	-2,514.8	31.7	2,514.8	1.28	1.06	-0.71
6,349.0	90.70	181.93	3,897.9	-2,133.9	-2,576.8	29.9	2,576.8	0.88	0.21	0.85
6,411.0	90.31	180.78	3,897.4	-2,133.4	-2,638.7	28.4	2,638.7	1.96	-0.63	-1.85
6,473.0	90.57	181.31	3,896.9	-2,132.9	-2,700.7	27.3	2,700.7	0.95	0.42	0.85
6,535.0	90.83	180.52	3,896.1	-2,132.1	-2,762.7	26.3	2,762.7	1.34	0.42	-1.27
6,602.0	90.31	180.70	3,895.5	-2,131.5	-2,829.7	25.6	2,829.7	0.82	-0.78	0.27
6,664.0	90.66	180.52	3,894.9	-2,130.9	-2,891.7	24.9	2,891.7	0.63	0.56	-0.29
6,725.0	90.00	181.40	3,894.6	-2,130.6	-2,952.7	23.9	2,952.7	1.80	-1.08	1.44
6,787.0	89.17	181.22	3,895.0	-2,131.0	-3,014.7	22.5	3,014.7	1.37	-1.34	-0.29

# Survey Report



<b>Company:</b>	DORADO E&P PARTNERS	<b>Local Co-ordinate Reference:</b>	Well GASTON #25-10-2-1H
<b>Project:</b>	RENO COUNTY, KANSAS (NAD 27)	<b>TVD Reference:</b>	KB-EST @ 1764.0usft
<b>Site:</b>	NW. 1/4 SECTION 2 T25S R10W	<b>MD Reference:</b>	KB-EST @ 1764.0usft
<b>Well:</b>	GASTON #25-10-2-1H	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009-168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,849.0	89.38	181.40	3,895.8	-2,131.8	-3,076.7	21.1	3,076.7	0.45	0.34	0.29
6,911.0	89.52	181.93	3,896.4	-2,132.4	-3,138.6	19.3	3,138.6	0.88	0.23	0.85
6,973.0	89.65	181.40	3,896.9	-2,132.9	-3,200.6	17.5	3,200.6	0.88	0.21	-0.85
7,035.0	88.46	180.17	3,897.9	-2,133.9	-3,262.6	16.6	3,262.6	2.76	-1.92	-1.98
7,097.0	88.77	180.43	3,899.4	-2,135.4	-3,324.6	16.3	3,324.6	0.65	0.50	0.42
7,159.0	88.33	179.82	3,900.9	-2,136.9	-3,386.5	16.2	3,386.5	1.21	-0.71	-0.98
7,220.0	88.73	179.64	3,902.5	-2,138.5	-3,447.5	16.5	3,447.5	0.72	0.66	-0.30
7,282.0	88.81	179.20	3,903.8	-2,139.8	-3,509.5	17.1	3,509.5	0.72	0.13	-0.71
7,344.0	89.21	180.52	3,904.9	-2,140.9	-3,571.5	17.2	3,571.5	2.22	0.65	2.13
7,406.0	89.25	180.25	3,905.7	-2,141.7	-3,633.5	16.8	3,633.5	0.44	0.06	-0.44
7,468.0	88.99	180.79	3,906.7	-2,142.7	-3,695.5	16.3	3,695.5	0.97	-0.42	0.87
7,529.0	89.47	180.61	3,907.5	-2,143.5	-3,756.5	15.5	3,756.5	0.84	0.79	-0.30
7,592.0	90.35	180.35	3,907.6	-2,143.6	-3,819.5	15.0	3,819.5	1.46	1.40	-0.41
7,653.0	90.35	179.03	3,907.2	-2,143.2	-3,880.5	15.3	3,880.5	2.16	0.00	-2.16
7,715.0	90.22	179.64	3,906.9	-2,142.9	-3,942.5	16.0	3,942.5	1.01	-0.21	0.98
7,777.0	90.31	179.55	3,906.6	-2,142.6	-4,004.5	16.5	4,004.5	0.21	0.15	-0.15
7,839.0	90.70	179.99	3,906.1	-2,142.1	-4,066.5	16.7	4,066.5	0.95	0.63	0.71
7,901.0	90.79	180.17	3,905.3	-2,141.3	-4,128.4	16.6	4,128.4	0.32	0.15	0.29
7,962.0	90.92	180.26	3,904.4	-2,140.4	-4,189.4	16.4	4,189.4	0.26	0.21	0.15
8,024.0	91.14	179.91	3,903.3	-2,139.3	-4,251.4	16.3	4,251.4	0.67	0.35	-0.56
8,086.0	89.65	179.91	3,902.8	-2,138.8	-4,313.4	16.4	4,313.4	2.40	-2.40	0.00
8,148.0	89.87	180.17	3,903.1	-2,139.1	-4,375.4	16.4	4,375.4	0.55	0.35	0.42
8,210.0	89.43	179.82	3,903.5	-2,139.5	-4,437.4	16.4	4,437.4	0.91	-0.71	-0.56
8,272.0	89.60	180.08	3,904.0	-2,140.0	-4,499.4	16.4	4,499.4	0.50	0.27	0.42
8,334.0	89.69	180.26	3,904.4	-2,140.4	-4,561.4	16.2	4,561.4	0.32	0.15	0.29
8,396.0	89.64	180.43	3,904.8	-2,140.8	-4,623.4	15.9	4,623.4	0.29	-0.08	0.27
8,458.0	89.52	180.70	3,905.2	-2,141.2	-4,685.4	15.3	4,685.4	0.48	-0.19	0.44
8,482.0	89.47	180.70	3,905.4	-2,141.4	-4,709.4	15.0	4,709.4	0.21	-0.21	0.00
<b>EXTRAPOLATION TO TD</b>										
<b>8,526.0</b>	<b>89.47</b>	<b>180.70</b>	<b>3,905.8</b>	<b>-2,141.8</b>	<b>-4,753.4</b>	<b>14.4</b>	<b>4,753.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

# Survey Report



<b>Company:</b>	DORADO E&P PARTNERS	<b>Local Co-ordinate Reference:</b>	Well GASTON #25-10-2-1H
<b>Project:</b>	RENO COUNTY, KANSAS (NAD 27)	<b>TVD Reference:</b>	KB-EST @ 1764.0usft
<b>Site:</b>	NW. 1/4 SECTION 2 T25S R10W	<b>MD Reference:</b>	KB-EST @ 1764.0usft
<b>Well:</b>	GASTON #25-10-2-1H	<b>North Reference:</b>	True
<b>Wellbore:</b>	JOB # 2009-168	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL SURVEYS	<b>Database:</b>	EDM 5000.1 Single User Db

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
HZ LANDING PNT - C	0.00	0.00	3,889.0	-409.3	0.0	452,809.08	2,029,926.74	37° 54' 36.763 N	98° 23' 46.568 W
- survey misses target center by 17.2usft at 4179.8usft MD (3890.6 TVD, -409.4 N, -17.1 E)									
- Point									
BHL - GASTON #25-1	0.00	0.00	3,889.0	-4,753.6	0.0	448,465.04	2,029,931.57	37° 53' 53.815 N	98° 23' 46.568 W
- survey misses target center by 22.2usft at 8526.0usft MD (3905.8 TVD, -4753.4 N, 14.4 E)									
- Point									

Survey Annotations					
	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	3,360.0	3,354.4	107.3	-8.1	KOP
	4,010.0	3,854.0	-244.5	-22.0	START OF TANGENT
	4,041.0	3,864.8	-273.5	-21.2	END OF TANGENT
	4,275.0	3,893.9	-504.5	-16.2	HZ LANDING POINT
	8,526.0	3,905.8	-4,753.4	14.4	EXTRAPOLATION TO TD

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