

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NE SE SEC. 7 T6N R64W 6th P.M.  
CARLSON 7S-312**

**ORIGINAL WELLBORE  
PROPOSAL #1**

## **Anticollision Report**

**04 March, 2016**



# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-312
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4761.0usft
<b>Reference Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4761.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CARLSON 7S-312	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 98.4usft	<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 10,000.0 us	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	04/03/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	12,557.8	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NE NE SEC. 7 T6N R64W 6th P.M.						
BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL	7,112.0	7,802.5	659.4	607.7	12.763	CC, ES
BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL	7,972.4	7,067.2	702.8	641.8	11.521	SF
BISHOP 7C-232 - ORIGINAL WELLBORE - PROPOSAL	6,231.4	6,180.9	708.8	674.5	20.618	CC
BISHOP 7C-232 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,422.9	711.8	391.6	2.223	ES, SF
BISHOP 7C-332 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,519.9	505.6	184.4	1.574	CC, ES, SF
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,571.8	7,446.2	453.5	398.7	8.278	CC
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,677.1	7,346.6	454.4	397.8	8.027	ES
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,874.0	7,185.3	467.8	407.8	7.798	SF
BISHOP 7C-402 - ORIGINAL WELLBORE - PROPOSAL	6,442.9	6,374.1	927.4	898.4	31.924	CC
BISHOP 7C-402 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,540.9	933.8	614.8	2.928	ES, SF
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	7,725.5	7,307.7	878.9	822.1	15.461	CC
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	7,800.0	7,243.3	879.6	821.1	15.035	ES
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	8,267.7	6,965.5	946.2	877.1	13.696	SF
BISHOP 7S-214 - ORIGINAL WELLBORE - PROPOSAL	7,125.7	7,840.4	191.2	139.2	3.679	CC, ES, SF
NE SE SEC. 7 T6N R64W 6th P.M.						
CARLSON 7S-202 - ORIGINAL WELLBORE - PROPOS	1,144.7	1,144.7	15.0	10.1	3.084	CC
CARLSON 7S-202 - ORIGINAL WELLBORE - PROPOS	12,557.9	12,426.5	259.7	-49.1	0.841	Level 1, ES, SF
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	1,143.9	1,144.9	44.8	39.9	9.198	CC
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	1,181.1	1,181.8	44.9	39.8	8.913	ES
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	7,086.6	7,785.9	300.2	251.3	6.137	SF
CARLSON 7S-212 - ORIGINAL WELLBORE - PROPOS	1,260.0	1,261.0	15.0	9.6	2.787	CC
CARLSON 7S-212 - ORIGINAL WELLBORE - PROPOS	12,557.9	12,521.1	247.1	-64.0	0.794	Level 1, ES, SF
CARLSON 7S-314 - ORIGINAL WELLBORE - PROPOS	1,260.0	1,260.0	29.8	24.4	5.524	CC
CARLSON 7S-314 - ORIGINAL WELLBORE - PROPOS	7,322.4	7,667.4	50.6	1.3	1.026	Level 2, ES, SF
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	1,043.4	1,045.4	59.8	55.4	13.534	CC
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	1,082.7	1,084.2	59.9	55.3	13.047	ES
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	8,000.0	7,034.9	597.6	538.8	10.163	SF
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	1,045.3	1,044.3	30.0	25.6	6.795	CC
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	1,082.7	1,081.5	30.1	25.5	6.559	ES
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	12,557.9	12,543.4	634.6	318.3	2.006	SF

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-312
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4761.0usft
<b>Reference Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4761.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CARLSON 7S-312	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
SE SE SEC. 7 T6N R64W 6th P.M.						
ABDN VERT DYER #42-7 - Wellbore #1 - Design #1	6,512.9	6,409.5	254.2	110.7	1.771	CC
ABDN VERT DYER #42-7 - Wellbore #1 - Design #1	6,550.0	6,444.9	254.5	110.3	1.765	ES
ABDN VERT DYER #42-7 - Wellbore #1 - Design #1	6,594.5	6,486.6	255.6	110.7	1.764	SF
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	2,765.5	2,700.3	2,418.2	2,356.8	39.378	CC
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	6,350.0	6,227.0	2,485.4	2,340.6	17.168	ES
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	6,397.6	6,274.4	2,488.7	2,343.6	17.141	SF
ABDN VERT GRADY #1 - Wellbore #1 - Design #1	8,246.6	6,956.1	261.6	80.9	1.448	Level 3, CC, ES, SF
ELVERA 7D-212 - ORIGINAL WELLBORE - PROPOSAL	4,684.1	4,884.9	1,052.1	1,028.7	44.866	CC
ELVERA 7D-212 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,422.2	1,141.9	819.9	3.546	ES, SF
ELVERA 7D-312 - ORIGINAL WELLBORE - PROPOSAL	3,219.8	3,417.2	1,041.4	1,025.8	66.454	CC
ELVERA 7D-312 - ORIGINAL WELLBORE - PROPOSAL	3,248.0	3,437.9	1,041.5	1,025.7	65.955	ES
ELVERA 7D-312 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,476.8	1,424.0	1,102.3	4.426	SF
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	1,394.8	1,430.4	1,094.5	1,088.4	181.080	CC
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	1,400.0	1,436.7	1,094.5	1,088.4	180.317	ES
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	8,759.8	6,800.0	1,594.6	1,513.3	19.605	SF
ELVERA 7D-402 - ORIGINAL WELLBORE - PROPOSAL	2,009.7	2,200.0	1,034.3	1,025.0	111.174	CC, ES
ELVERA 7D-402 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,518.8	1,661.5	1,339.9	5.167	SF
ELVERA 7D-404 - ORIGINAL WELLBORE - PROPOSAL	1,370.4	1,397.9	1,091.2	1,085.3	184.465	CC
ELVERA 7D-404 - ORIGINAL WELLBORE - PROPOSAL	1,400.0	1,431.1	1,091.3	1,085.3	179.983	ES
ELVERA 7D-404 - ORIGINAL WELLBORE - PROPOSAL	9,153.5	6,750.0	1,965.8	1,873.3	21.250	SF
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	7,050.0	7,895.1	1,088.7	1,036.6	20.898	ES
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	7,057.7	7,888.5	1,088.7	1,036.6	20.906	CC
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	8,464.5	6,900.0	1,245.0	1,172.7	17.235	SF
ELVERA 7S-332 - ORIGINAL WELLBORE - PROPOSAL	6,302.8	6,323.8	885.0	842.3	20.755	CC
ELVERA 7S-332 - ORIGINAL WELLBORE - PROPOSAL	12,557.9	12,554.4	885.1	562.0	2.739	ES, SF
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	7,295.4	7,820.8	832.5	780.0	15.841	CC
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	7,677.1	7,454.6	834.5	777.3	14.592	ES
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	8,169.3	7,122.8	894.1	827.8	13.500	SF
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	1,702.4	1,646.7	1,017.7	981.2	27.886	CC
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	2,263.8	2,196.6	1,023.9	974.4	20.724	ES
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	6,400.0	6,263.8	1,290.2	1,146.3	8.968	SF
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	1,260.0	1,219.0	1,983.6	1,956.8	74.205	CC
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	1,377.9	1,336.9	1,985.1	1,955.7	67.614	ES
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	6,594.5	6,464.6	2,605.3	2,460.2	17.956	SF
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	1,260.0	1,237.0	1,460.3	1,433.4	54.259	CC
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	1,300.0	1,277.0	1,460.6	1,432.8	52.528	ES
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	7,700.0	6,924.7	2,382.2	2,215.3	14.266	SF
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	6,996.4	6,801.4	1,575.2	1,422.2	10.294	CC
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	7,050.0	6,831.0	1,575.9	1,421.9	10.232	ES
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	7,381.9	6,933.5	1,615.2	1,454.5	10.051	SF
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	4,672.2	4,561.3	3,624.8	3,517.7	33.852	CC
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	6,350.0	6,223.0	3,629.7	3,484.8	25.045	ES
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	6,397.6	6,270.4	3,633.3	3,488.0	25.014	SF
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	1,260.0	1,206.0	3,986.9	3,960.3	149.885	CC
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	1,574.8	1,520.2	3,990.4	3,956.7	118.666	ES
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	6,400.0	6,263.8	4,233.5	4,088.8	29.246	SF
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	6,317.9	6,198.9	2,602.7	2,463.8	18.733	CC
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	6,350.0	6,231.0	2,603.4	2,458.5	17.963	ES
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	6,397.6	6,278.4	2,607.1	2,461.9	17.955	SF
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	1,260.0	1,209.0	2,953.7	2,927.1	110.918	CC
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	1,476.4	1,425.2	2,956.4	2,925.0	93.985	ES
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	6,450.0	6,316.2	3,326.5	3,182.0	23.015	SF
EXIST VERT EHRlich #32-7 - Wellbore #1 - Design #1	6,317.9	6,201.9	823.6	684.0	5.900	CC

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# Anticollision Report



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<b>Reference Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4761.0usft
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<b>Reference Well:</b>	CARLSON 7S-312	<b>Survey Calculation Method:</b>	Minimum Curvature
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<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SE SE SEC. 7 T6N R64W 6th P.M.						
EXIST VERT EHRlich #32-7 - Wellbore #1 - Design #1	6,350.0	6,234.0	824.3	679.8	5.705	ES, SF
EXIST VERT EHRlich #4 - Wellbore #1 - Design #1	6,317.9	6,195.9	3,438.8	3,299.4	24.666	CC
EXIST VERT EHRlich #4 - Wellbore #1 - Design #1	6,350.0	6,228.0	3,439.5	3,295.0	23.800	ES
EXIST VERT EHRlich #4 - Wellbore #1 - Design #1	6,397.6	6,275.4	3,443.2	3,298.4	23.784	SF
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,346.1	4,843.0	2,681.5	2,520.0	16.602	CC
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,400.0	4,843.0	2,682.1	2,519.6	16.505	ES
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,557.9	4,843.0	2,689.9	2,524.5	16.264	SF
EXIST VERT ERICKSON A #8-17 - Wellbore #1 - Design	11,887.1	6,961.9	968.8	689.9	3.474	CC
EXIST VERT ERICKSON A #8-17 - Wellbore #1 - Design	11,909.4	6,961.5	969.1	689.6	3.467	ES
EXIST VERT ERICKSON A #8-17 - Wellbore #1 - Design	12,000.0	6,959.9	975.3	693.4	3.459	SF
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	10,974.1	6,953.0	1,648.4	1,394.9	6.503	CC
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	11,023.6	6,952.1	1,649.2	1,394.3	6.471	ES
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	11,300.0	6,947.2	1,680.3	1,417.9	6.402	SF
EXIST VERT ERICKSON A #8-7 - Wellbore #1 - Design	11,171.8	6,948.5	333.3	74.4	1.287	Level 3, CC, ES, SF
EXIST VERT ERICKSON A #8-8 - Wellbore #1 - Design	12,502.2	6,963.0	345.2	49.3	1.166	Level 2, CC, ES, SF
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,522.6	6,949.6	1,229.9	1,015.3	5.731	CC
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,547.2	6,949.2	1,230.1	1,014.9	5.715	ES
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,700.0	6,946.5	1,242.6	1,023.2	5.664	SF
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	9,861.1	4,645.0	3,314.3	3,178.2	24.347	CC
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	9,940.9	4,645.0	3,315.2	3,177.4	24.051	ES
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	11,614.1	4,645.0	3,749.3	3,575.3	21.542	SF
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,162.3	6,948.6	1,775.7	1,597.2	9.952	CC
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,200.0	6,947.9	1,776.1	1,596.7	9.902	ES
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,600.0	6,940.9	1,828.8	1,639.1	9.641	SF
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,514.0	6,944.8	1,819.5	1,605.2	8.490	CC
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,547.2	6,944.2	1,819.8	1,604.6	8.456	ES
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,940.9	6,937.2	1,868.9	1,643.0	8.273	SF
EXIST VERT FRANCIS #22-8 - Wellbore #1 - Design #1	9,514.1	6,949.8	118.1	-96.2	0.551	Level 1, CC, ES, SF
EXIST VERT KREPS #1 - Wellbore #1 - Design #1	6,317.9	6,202.9	1,871.7	1,727.4	12.965	CC, ES, SF
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,317.9	6,215.9	3,866.0	3,724.4	27.296	CC
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,350.0	6,248.0	3,866.6	3,723.2	26.953	ES
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,397.6	6,295.4	3,870.0	3,726.2	26.909	SF
EXIST VERT KREPS #21-7 - Wellbore #1 - Design #1	6,317.9	6,219.9	2,900.8	2,758.1	20.321	CC, ES
EXIST VERT KREPS #21-7 - Wellbore #1 - Design #1	6,400.0	6,301.8	2,904.6	2,761.6	20.312	SF
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	1,260.0	1,272.0	1,929.1	1,901.8	70.736	CC
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	1,300.0	1,312.0	1,929.4	1,901.2	68.502	ES
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	8,956.7	6,937.6	2,256.0	2,056.8	11.329	SF
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	8,165.2	6,959.5	1,219.0	1,040.4	6.825	CC
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	8,200.0	6,958.9	1,219.5	1,040.1	6.795	ES
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	8,366.1	6,956.0	1,235.5	1,051.8	6.725	SF
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	8,757.7	6,959.1	1,689.0	1,494.9	8.704	CC
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	8,800.0	6,958.3	1,689.5	1,494.3	8.657	ES
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	9,153.5	6,952.1	1,734.7	1,530.1	8.479	SF
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	1,260.0	1,249.0	289.8	262.7	10.718	CC
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	1,300.0	1,289.0	290.0	262.1	10.385	ES
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	7,200.0	6,900.3	1,057.3	900.5	6.744	SF
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	11,035.8	6,942.9	1,207.8	954.7	4.772	CC
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	11,100.0	6,941.8	1,209.5	954.6	4.746	ES
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	11,200.0	6,940.0	1,218.9	961.3	4.732	SF
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,052.7	6,912.6	2,563.1	2,308.8	10.080	CC
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,122.0	6,911.4	2,564.0	2,307.8	10.009	ES
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,800.0	6,899.4	2,669.7	2,394.9	9.715	SF
EXIST VERT UHRICH #43-8 - Wellbore #1 - Design #1	12,557.9	6,941.0	1,196.6	901.3	4.052	CC, ES, SF

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

# Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-312
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4761.0usft
<b>Reference Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4761.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	CARLSON 7S-312	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SE SE SEC. 7 T6N R64W 6th P.M.						
EXIST VERT UHRICH #44-8 - Wellbore #1 - Design #1	12,349.0	6,917.7	2,562.8	2,273.6	8.861	CC
EXIST VERT UHRICH #44-8 - Wellbore #1 - Design #1	12,401.5	6,916.8	2,563.3	2,272.7	8.818	ES
EXIST VERT UHRICH #44-8 - Wellbore #1 - Design #1	12,557.9	6,914.0	2,571.3	2,276.3	8.716	SF

Offset Design NE NE SEC. 7 T6N R64W 6th P.M. - BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-2.47	1,888.3	-81.5	1,890.0					
98.4	98.4	94.4	94.4	0.1	0.1	-2.47	1,888.3	-81.5	1,890.0	1,889.9	0.17	N/A		
100.0	100.0	96.0	96.0	0.1	0.1	-2.47	1,888.3	-81.5	1,890.0	1,889.8	0.17	N/A		
196.8	196.8	192.8	192.8	0.3	0.3	-2.47	1,888.3	-81.5	1,890.0	1,889.4	0.60	3,152.912		
200.0	200.0	196.0	196.0	0.3	0.3	-2.47	1,888.3	-81.5	1,890.0	1,889.4	0.61	3,080.152		
295.3	295.3	291.3	291.3	0.5	0.5	-2.47	1,888.3	-81.5	1,890.0	1,889.0	1.04	1,814.004		
300.0	300.0	296.0	296.0	0.5	0.5	-2.47	1,888.3	-81.5	1,890.0	1,889.0	1.06	1,777.763		
393.7	393.7	389.7	389.7	0.7	0.7	-2.47	1,888.3	-81.5	1,890.0	1,888.5	1.48	1,273.292		
400.0	400.0	396.0	396.0	0.8	0.8	-2.47	1,888.3	-81.5	1,890.0	1,888.5	1.51	1,249.453		
492.1	492.1	488.1	488.1	1.0	1.0	-2.47	1,888.3	-81.5	1,890.0	1,888.1	1.93	980.906		
500.0	500.0	496.0	496.0	1.0	1.0	-2.47	1,888.3	-81.5	1,890.0	1,888.1	1.96	963.209		
590.5	590.5	586.5	586.5	1.2	1.2	-2.47	1,888.3	-81.5	1,890.0	1,887.6	2.37	797.725		
600.0	600.0	596.0	596.0	1.2	1.2	-2.47	1,888.3	-81.5	1,890.0	1,887.6	2.41	783.674		
689.0	689.0	685.0	685.0	1.4	1.4	-2.47	1,888.3	-81.5	1,890.0	1,887.2	2.81	672.195		
700.0	700.0	696.0	696.0	1.4	1.4	-2.47	1,888.3	-81.5	1,890.0	1,887.2	2.86	660.551		
787.4	787.4	783.4	783.4	1.6	1.6	-2.47	1,888.3	-81.5	1,890.0	1,886.8	3.25	580.800		
800.0	800.0	796.0	796.0	1.7	1.7	-2.47	1,888.3	-81.5	1,890.0	1,886.7	3.31	570.863		
885.8	885.8	881.8	881.8	1.9	1.8	-2.47	1,888.3	-81.5	1,890.0	1,886.3	3.70	511.283		
900.0	900.0	896.0	896.0	1.9	1.9	-2.47	1,888.3	-81.5	1,890.0	1,886.3	3.76	502.619		
984.2	984.2	980.2	980.2	2.1	2.1	-2.47	1,888.3	-81.5	1,890.0	1,885.9	4.14	456.629		
1,000.0	1,000.0	996.0	996.0	2.1	2.1	-2.47	1,888.3	-81.5	1,890.0	1,885.8	4.21	448.949		
1,082.7	1,082.7	1,078.7	1,078.7	2.3	2.3	-2.47	1,888.3	-81.5	1,890.0	1,885.4	4.58	412.531		
1,100.0	1,100.0	1,096.0	1,096.0	2.3	2.3	-2.47	1,888.3	-81.5	1,890.0	1,885.4	4.66	405.635		
1,181.1	1,181.1	1,177.1	1,177.1	2.5	2.5	-2.47	1,888.3	-81.5	1,890.0	1,885.0	5.02	376.200		
1,200.0	1,200.0	1,196.0	1,196.0	2.6	2.5	-2.47	1,888.3	-81.5	1,890.0	1,884.9	5.11	369.944		
1,260.0	1,260.0	1,256.0	1,256.0	2.7	2.7	-2.47	1,888.3	-81.5	1,890.0	1,884.6	5.38	351.392		
1,279.5	1,279.5	1,275.5	1,275.5	2.7	2.7	10.52	1,888.3	-81.5	1,890.0	1,884.5	5.47	345.743		
1,300.0	1,300.0	1,296.0	1,296.0	2.8	2.8	10.53	1,888.3	-81.5	1,889.7	1,884.2	5.56	339.998		
1,377.9	1,377.9	1,373.9	1,373.9	3.0	2.9	10.55	1,888.3	-81.5	1,887.6	1,881.7	5.91	319.609		
1,400.0	1,399.9	1,395.9	1,395.9	3.0	3.0	10.56	1,888.3	-81.5	1,886.7	1,880.7	6.00	314.249		
1,476.4	1,476.2	1,475.8	1,475.8	3.2	3.2	10.60	1,888.2	-81.4	1,882.0	1,875.6	6.35	296.552		
1,500.0	1,499.7	1,506.4	1,506.4	3.2	3.2	10.63	1,888.1	-81.1	1,880.0	1,873.6	6.46	291.081		
1,574.8	1,574.2	1,602.9	1,602.8	3.4	3.4	10.81	1,887.1	-78.1	1,872.1	1,865.3	6.80	275.163		
1,600.0	1,599.2	1,635.1	1,635.0	3.5	3.5	10.89	1,886.6	-76.4	1,868.8	1,861.8	6.92	270.016		
1,673.2	1,671.8	1,728.1	1,727.7	3.6	3.7	11.22	1,884.3	-69.6	1,857.4	1,850.1	7.26	255.685		
1,700.0	1,698.3	1,761.8	1,761.2	3.7	3.8	11.37	1,883.3	-66.4	1,852.6	1,845.2	7.39	250.659		
1,771.6	1,768.9	1,850.7	1,849.5	3.9	4.0	11.84	1,880.0	-56.2	1,838.1	1,830.3	7.74	237.562		
1,800.0	1,796.8	1,885.4	1,883.9	4.0	4.0	12.06	1,878.4	-51.5	1,831.7	1,823.8	7.87	232.610		
1,860.0	1,855.6	1,957.8	1,955.3	4.2	4.2	12.58	1,874.8	-40.5	1,817.0	1,808.8	8.18	222.170		
1,870.1	1,865.5	1,969.9	1,967.2	4.2	4.3	12.66	1,874.1	-38.5	1,814.3	1,806.1	8.23	220.353		

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