

PDC ENERGY

**WELD COUNTY, COLORADO
NE SE SEC. 7 T6N R64W 6th P.M.
CARLSON 7S-212**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

04 March, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well CARLSON 7S-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4762.0usft
Reference Site:	NE SE SEC. 7 T6N R64W 6th P.M.	MD Reference:	KB-EST @ 4762.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	CARLSON 7S-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 98.4usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	04/03/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,523.0	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
NE NE SEC. 7 T6N R64W 6th P.M.						
BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL	7,479.4	7,410.4	421.2	367.2	7.804	CC
BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL	7,600.0	7,294.3	421.9	366.1	7.560	ES
BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL	7,775.6	7,143.9	431.1	372.4	7.338	SF
BISHOP 7C-232 - ORIGINAL WELLBORE - PROPOSAL	12,471.0	12,373.4	470.6	152.3	1.478	Level 3, CC
BISHOP 7C-232 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,425.3	470.7	149.4	1.465	Level 3, ES, SF
BISHOP 7C-332 - ORIGINAL WELLBORE - PROPOSAL	6,284.4	6,205.6	267.5	227.8	6.735	CC
BISHOP 7C-332 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,521.8	275.5	-36.6	0.883	Level 1, ES, SF
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,746.8	7,218.3	215.3	156.4	3.656	CC
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,775.6	7,193.8	215.8	156.2	3.623	ES
BISHOP 7C-334 - ORIGINAL WELLBORE - PROPOSAL	7,800.0	7,173.9	217.1	157.1	3.618	SF
BISHOP 7C-402 - ORIGINAL WELLBORE - PROPOSAL	6,372.9	6,257.0	689.3	660.0	23.551	CC
BISHOP 7C-402 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,542.8	711.2	399.7	2.283	ES, SF
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	7,819.0	7,154.0	640.7	580.9	10.707	CC
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	7,874.0	7,112.5	641.7	580.4	10.473	ES
BISHOP 7C-404 - ORIGINAL WELLBORE - PROPOSAL	8,070.8	6,992.8	664.6	598.7	10.092	SF
BISHOP 7S-214 - ORIGINAL WELLBORE - PROPOSAL	7,518.6	7,421.0	47.0	-8.1	0.853	Level 1, CC, ES, SF
NE SE SEC. 7 T6N R64W 6th P.M.						
CARLSON 7S-202 - ORIGINAL WELLBORE - PROPOS	1,145.2	1,144.2	30.0	25.2	6.169	CC
CARLSON 7S-202 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,198.9	30.1	25.0	5.887	ES
CARLSON 7S-202 - ORIGINAL WELLBORE - PROPOS	12,523.0	12,426.5	488.2	167.6	1.523	SF
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	1,144.6	1,144.6	29.8	24.9	6.112	CC
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	1,181.1	1,180.9	29.8	24.8	5.929	ES
CARLSON 7S-204 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,199.6	30.0	24.9	5.869	SF
CARLSON 7S-312 - ORIGINAL WELLBORE - PROPOS	1,245.1	1,244.1	15.0	9.7	2.825	CC
CARLSON 7S-312 - ORIGINAL WELLBORE - PROPOS	12,523.0	12,557.9	247.1	-64.1	0.794	Level 1, ES, SF
CARLSON 7S-314 - ORIGINAL WELLBORE - PROPOS	1,245.0	1,244.0	14.7	9.4	2.772	CC
CARLSON 7S-314 - ORIGINAL WELLBORE - PROPOS	1,279.5	1,278.4	14.8	9.3	2.703	ES
CARLSON 7S-314 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,298.8	15.0	9.4	2.690	SF
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	1,044.1	1,045.1	44.8	40.4	10.133	CC
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	1,082.7	1,083.3	44.9	40.3	9.778	ES
CARLSON 7S-404 - ORIGINAL WELLBORE - PROPOS	1,181.1	1,180.2	47.3	42.3	9.440	SF
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	1,045.9	1,043.9	45.1	40.6	10.192	CC
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	1,082.7	1,080.5	45.1	40.5	9.837	ES
CARLSON 7S-432 - ORIGINAL WELLBORE - PROPOS	12,523.0	12,543.4	881.1	566.0	2.796	SF

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well CARLSON 7S-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4762.0usft
Reference Site:	NE SE SEC. 7 T6N R64W 6th P.M.	MD Reference:	KB-EST @ 4762.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	CARLSON 7S-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	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.						
ABDN VERT DYER #42-7 - Wellbore #1 - Design #1	6,450.0	6,300.1	16.8	-126.5	0.117	Level 1, ES
ABDN VERT DYER #42-7 - Wellbore #1 - Design #1	6,470.1	6,319.6	16.1	-126.2	0.113	Level 1, CC, SF
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	2,351.4	2,292.9	2,440.9	2,389.4	47.397	CC
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	3,300.0	3,210.4	2,452.8	2,378.4	32.983	ES
ABDN VERT EHRlich #3 - Wellbore #1 - Design #1	6,350.0	6,179.5	2,603.7	2,457.4	17.802	SF
ABDN VERT GRADY #1 - Wellbore #1 - Design #1	8,210.6	6,877.4	23.4	-155.7	0.131	Level 1, CC, ES, SF
ELVERA 7D-212 - ORIGINAL WELLBORE - PROPOSAL	1,997.2	2,205.7	1,068.2	1,059.0	116.142	CC
ELVERA 7D-212 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,422.2	1,378.2	1,055.6	4.272	ES, SF
ELVERA 7D-312 - ORIGINAL WELLBORE - PROPOSAL	2,001.7	2,210.5	1,042.9	1,033.7	112.930	CC, ES
ELVERA 7D-312 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,476.8	1,663.6	1,342.1	5.174	SF
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	1,615.1	1,696.5	1,090.3	1,083.1	151.482	CC
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	1,673.2	1,765.2	1,090.6	1,083.0	144.818	ES
ELVERA 7D-314 - ORIGINAL WELLBORE - PROPOSAL	9,153.5	6,700.0	1,991.9	1,898.4	21.308	SF
ELVERA 7D-402 - ORIGINAL WELLBORE - PROPOSAL	1,982.0	2,182.8	1,019.4	1,010.2	111.417	CC, ES
ELVERA 7D-402 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,518.8	1,904.4	1,583.4	5.933	SF
ELVERA 7D-404 - ORIGINAL WELLBORE - PROPOSAL	1,519.7	1,566.4	1,088.8	1,082.1	162.687	CC, ES
ELVERA 7D-404 - ORIGINAL WELLBORE - PROPOSAL	9,350.4	6,700.0	2,275.1	2,175.4	22.821	SF
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	1,748.3	1,879.3	1,094.5	1,086.5	138.030	CC
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	1,800.0	1,944.6	1,094.6	1,086.4	132.836	ES
ELVERA 7S-234 - ORIGINAL WELLBORE - PROPOSAL	8,661.4	6,800.0	1,526.3	1,446.6	19.158	SF
ELVERA 7S-332 - ORIGINAL WELLBORE - PROPOSAL	2,095.2	2,339.3	1,084.7	1,075.0	111.277	CC
ELVERA 7S-332 - ORIGINAL WELLBORE - PROPOSAL	12,523.0	12,554.4	1,125.5	802.7	3.487	ES, SF
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	7,687.1	7,383.8	1,070.7	1,012.1	18.253	CC
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	7,775.6	7,307.6	1,071.5	1,011.1	17.726	ES
ELVERA 7S-334 - ORIGINAL WELLBORE - PROPOSAL	8,400.0	6,976.6	1,176.2	1,102.4	15.925	SF
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	1,360.0	1,305.0	1,033.0	1,004.2	35.848	CC
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	2,096.0	2,032.9	1,037.6	992.2	22.869	ES
EXIST VERT CARLSON #33-7 - Wellbore #1 - Design #1	6,400.0	6,216.0	1,485.8	1,341.7	10.313	SF
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	1,360.0	1,318.0	1,993.1	1,964.1	68.849	CC
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	1,476.4	1,434.3	1,994.6	1,963.1	63.241	ES
EXIST VERT CARLSON #34-7 - Wellbore #1 - Design #1	6,284.4	6,113.9	2,804.8	2,660.8	19.483	SF
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	1,360.0	1,336.0	1,460.4	1,431.2	50.131	CC
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	1,400.0	1,376.0	1,460.6	1,430.6	48.650	ES
EXIST VERT CARLSON #44-7 - Wellbore #1 - Design #1	7,972.4	6,839.9	2,714.2	2,541.4	15.715	SF
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	6,959.9	6,718.6	1,337.1	1,185.3	8.812	CC
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	6,988.2	6,734.8	1,337.3	1,185.0	8.784	ES
EXIST VERT DYER #41-7 - Wellbore #1 - Design #1	7,250.0	6,837.4	1,362.6	1,205.4	8.668	SF
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	3,725.3	3,617.8	3,662.1	3,577.3	43.207	CC
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	6,299.2	6,124.7	3,703.2	3,557.0	25.328	ES
EXIST VERT EHRlich #1 - Wellbore #1 - Design #1	6,350.0	6,175.5	3,705.9	3,559.1	25.248	SF
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	1,360.0	1,305.0	4,000.7	3,971.9	138.829	CC
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	1,600.0	1,544.7	4,003.1	3,968.9	117.142	ES
EXIST VERT EHRlich #2 - Wellbore #1 - Design #1	6,397.6	6,213.7	4,381.5	4,235.7	30.054	SF
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	5,644.9	5,483.0	2,644.1	2,512.2	20.044	CC
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	6,299.2	6,132.7	2,645.0	2,498.6	18.064	ES
EXIST VERT EHRlich #22-7 - Wellbore #1 - Design #1	6,350.0	6,183.5	2,647.8	2,500.9	18.019	SF
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	1,360.0	1,308.0	2,966.6	2,937.8	102.838	CC
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	1,500.0	1,447.9	2,967.9	2,935.9	92.826	ES
EXIST VERT EHRlich #24-7 - Wellbore #1 - Design #1	6,400.0	6,219.0	3,500.7	3,355.7	24.154	SF
EXIST VERT EHRlich #32-7 - Wellbore #1 - Design #1	6,105.4	5,942.0	837.8	695.4	5.886	CC
EXIST VERT EHRlich #32-7 - Wellbore #1 - Design #1	6,299.2	6,135.7	837.9	691.5	5.721	ES
EXIST VERT EHRlich #32-7 - Wellbore #1 - Design #1	6,350.0	6,186.5	840.7	693.7	5.720	SF
EXIST VERT EHRlich #4 - Wellbore #1 - Design #1	6,284.4	6,114.9	3,433.7	3,295.6	24.870	CC

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well CARLSON 7S-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4762.0usft
Reference Site:	NE SE SEC. 7 T6N R64W 6th P.M.	MD Reference:	KB-EST @ 4762.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	CARLSON 7S-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

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 #4 - Wellbore #1 - Design #1	6,299.2	6,129.7	3,433.8	3,287.7	23.499	ES
EXIST VERT EHRlich #4 - Wellbore #1 - Design #1	6,350.0	6,180.5	3,436.7	3,290.1	23.441	SF
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,302.6	4,843.0	2,486.0	2,334.8	16.442	CC
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,303.1	4,843.0	2,486.0	2,334.8	16.441	ES
EXIST VERT ERICKSON A #8-1 - Wellbore #1 - Design	12,523.0	4,843.0	2,495.7	2,340.8	16.106	SF
EXIST VERT ERICKSON A #8-17 - Wellbore #1 - Design	11,850.9	6,893.9	730.6	453.2	2.634	CC, ES
EXIST VERT ERICKSON A #8-17 - Wellbore #1 - Design	11,900.0	6,893.2	732.3	453.5	2.627	SF
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	10,938.0	6,882.3	1,410.3	1,158.3	5.597	CC
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	11,000.0	6,881.4	1,411.6	1,157.9	5.564	ES
EXIST VERT ERICKSON A #8-2 - Wellbore #1 - Design	11,122.0	6,879.6	1,422.2	1,165.2	5.533	SF
EXIST VERT ERICKSON A #8-7 - Wellbore #1 - Design	11,135.7	6,878.4	95.1	-162.3	0.370	Level 1, CC, ES, SF
EXIST VERT ERICKSON A #8-8 - Wellbore #1 - Design	12,465.9	6,896.9	107.0	-187.5	0.363	Level 1, CC, ES, SF
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,486.5	6,874.6	1,468.0	1,255.0	6.892	CC
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,547.2	6,873.7	1,469.3	1,254.6	6.845	ES
EXIST VERT FRANCEN #23-8 - Wellbore #1 - Design #1	9,744.1	6,870.9	1,490.4	1,270.4	6.775	SF
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	1,360.0	1,243.0	3,369.6	3,342.4	123.930	CC
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	9,900.0	4,645.0	3,455.0	3,311.0	23.989	ES
EXIST VERT FRANCEN #24-8 - Wellbore #1 - Design #1	11,712.6	4,645.0	3,939.7	3,754.7	21.293	SF
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,126.2	6,869.6	1,537.5	1,360.6	8.693	CC
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,169.3	6,869.0	1,538.1	1,360.1	8.644	ES
EXIST VERT FRANCIS #11-8 - Wellbore #1 - Design #1	8,464.5	6,864.7	1,574.3	1,388.7	8.485	SF
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,477.9	6,869.8	1,581.3	1,368.6	7.433	CC
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,500.0	6,869.4	1,581.5	1,368.1	7.413	ES
EXIST VERT FRANCIS #21-8 - Wellbore #1 - Design #1	9,800.0	6,865.0	1,613.8	1,392.3	7.286	SF
EXIST VERT FRANCIS #22-8 - Wellbore #1 - Design #1	9,478.0	6,874.8	120.1	-92.7	0.564	Level 1, CC, ES, SF
EXIST VERT KREPS #1 - Wellbore #1 - Design #1	6,284.4	6,121.9	1,670.3	1,524.9	11.489	CC, ES, SF
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,284.4	6,134.9	3,775.6	3,634.7	26.786	CC
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,299.2	6,149.7	3,775.8	3,631.0	26.088	ES
EXIST VERT KREPS #11-7 - Wellbore #1 - Design #1	6,350.0	6,200.5	3,778.4	3,633.2	26.013	SF
EXIST VERT KREPS #21-7 - Wellbore #1 - Design #1	6,284.4	6,138.9	2,772.9	2,630.4	19.469	CC
EXIST VERT KREPS #21-7 - Wellbore #1 - Design #1	6,299.2	6,153.7	2,773.0	2,629.5	19.325	ES
EXIST VERT KREPS #21-7 - Wellbore #1 - Design #1	6,350.0	6,204.5	2,775.4	2,631.4	19.264	SF
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	1,360.0	1,371.0	1,918.7	1,889.2	65.065	CC
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	1,400.0	1,411.0	1,918.9	1,888.5	63.161	ES
EXIST VERT MHS #8-33 - Wellbore #1 - Design #1	9,100.0	6,858.3	2,538.6	2,336.3	12.546	SF
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	1,360.0	1,379.0	1,307.2	1,277.6	44.204	CC
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	1,500.0	1,518.9	1,308.8	1,276.1	40.038	ES
EXIST VERT MILE HIGH SHEEP #8-32 - Wellbore #1 - I	8,464.5	6,875.7	1,495.3	1,309.7	8.056	SF
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	8,721.7	6,881.9	1,927.1	1,734.7	10.013	CC
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	8,759.8	6,881.3	1,927.5	1,734.0	9.962	ES
EXIST VERT MILE HIGH SHEEP #8-35 - Wellbore #1 - I	9,251.9	6,874.1	1,998.8	1,792.1	9.673	SF
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	1,360.0	1,348.0	282.5	253.3	9.657	CC
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	1,400.0	1,388.0	282.8	252.6	9.380	ES
EXIST VERT ROY CARLSON #43-7 - Wellbore #1 - Des	1,870.1	1,855.4	325.8	285.8	8.137	SF
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	10,999.6	6,872.4	1,446.0	1,194.4	5.747	CC
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	11,023.6	6,872.1	1,446.2	1,193.9	5.733	ES
EXIST VERT UHRICH #33-8 - Wellbore #1 - Design #1	11,220.4	6,869.2	1,462.7	1,205.1	5.677	SF
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,016.6	6,842.2	2,801.2	2,548.5	11.083	CC
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,100.0	6,840.9	2,802.5	2,547.4	10.988	ES
EXIST VERT UHRICH #34-8 - Wellbore #1 - Design #1	11,900.0	6,829.2	2,937.2	2,660.1	10.600	SF
EXIST VERT UHRICH #43-8 - Wellbore #1 - Design #1	12,523.0	6,875.0	1,434.7	1,140.8	4.882	CC, ES, SF
EXIST VERT UHRICH #44-8 - Wellbore #1 - Design #1	12,312.8	6,851.1	2,801.0	2,513.2	9.733	CC
EXIST VERT UHRICH #44-8 - Wellbore #1 - Design #1	12,400.0	6,849.8	2,802.3	2,512.1	9.656	ES

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well CARLSON 7S-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4762.0usft
Reference Site:	NE SE SEC. 7 T6N R64W 6th P.M.	MD Reference:	KB-EST @ 4762.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	CARLSON 7S-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Site Name	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 UHRICH #44-8 - Wellbore #1 - Design #1	12,523.0	6,848.0	2,808.8	2,515.2	9.567	SF

Offset Design													Offset Site Error:	0.0 usft
NE NE SEC. 7 T6N R64W 6th P.M. - BISHOP 7C-204 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Well Error:	0.0 usft
Survey Program: 0-MWDD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-2.93	1,887.9	-96.5	1,890.4					
98.4	98.4	93.4	93.4	0.1	0.1	-2.93	1,887.9	-96.5	1,890.4	1,890.2	0.17	N/A		
100.0	100.0	95.0	95.0	0.1	0.1	-2.93	1,887.9	-96.5	1,890.4	1,890.2	0.17	N/A		
196.8	196.8	191.8	191.8	0.3	0.3	-2.93	1,887.9	-96.5	1,890.4	1,889.8	0.60	3,165.346		
200.0	200.0	195.0	195.0	0.3	0.3	-2.93	1,887.9	-96.5	1,890.4	1,889.7	0.61	3,092.031		
295.3	295.3	290.3	290.3	0.5	0.5	-2.93	1,887.9	-96.5	1,890.4	1,889.3	1.04	1,818.252		
300.0	300.0	295.0	295.0	0.5	0.5	-2.93	1,887.9	-96.5	1,890.4	1,889.3	1.06	1,781.849		
393.7	393.7	388.7	388.7	0.7	0.7	-2.93	1,887.9	-96.5	1,890.4	1,888.9	1.48	1,275.451		
400.0	400.0	395.0	395.0	0.8	0.7	-2.93	1,887.9	-96.5	1,890.4	1,888.8	1.51	1,251.537		
492.1	492.1	487.1	487.1	1.0	1.0	-2.93	1,887.9	-96.5	1,890.4	1,888.4	1.92	982.228		
500.0	500.0	495.0	495.0	1.0	1.0	-2.93	1,887.9	-96.5	1,890.4	1,888.4	1.96	964.487		
590.5	590.5	585.5	585.5	1.2	1.2	-2.93	1,887.9	-96.5	1,890.4	1,888.0	2.37	798.626		
600.0	600.0	595.0	595.0	1.2	1.2	-2.93	1,887.9	-96.5	1,890.4	1,887.9	2.41	784.545		
689.0	689.0	684.0	684.0	1.4	1.4	-2.93	1,887.9	-96.5	1,890.4	1,887.5	2.81	672.853		
700.0	700.0	695.0	695.0	1.4	1.4	-2.93	1,887.9	-96.5	1,890.4	1,887.5	2.86	661.189		
787.4	787.4	782.4	782.4	1.6	1.6	-2.93	1,887.9	-96.5	1,890.4	1,887.1	3.25	581.305		
800.0	800.0	795.0	795.0	1.7	1.6	-2.93	1,887.9	-96.5	1,890.4	1,887.0	3.31	571.354		
885.8	885.8	880.8	880.8	1.9	1.8	-2.93	1,887.9	-96.5	1,890.4	1,886.7	3.69	511.686		
900.0	900.0	895.0	895.0	1.9	1.9	-2.93	1,887.9	-96.5	1,890.4	1,886.6	3.76	503.010		
984.2	984.2	979.2	979.2	2.1	2.1	-2.93	1,887.9	-96.5	1,890.4	1,886.2	4.14	456.959		
1,000.0	1,000.0	995.0	995.0	2.1	2.1	-2.93	1,887.9	-96.5	1,890.4	1,886.1	4.21	449.270		
1,082.7	1,082.7	1,077.7	1,077.7	2.3	2.3	-2.93	1,887.9	-96.5	1,890.4	1,885.8	4.58	412.807		
1,100.0	1,100.0	1,095.0	1,095.0	2.3	2.3	-2.93	1,887.9	-96.5	1,890.4	1,885.7	4.66	405.904		
1,181.1	1,181.1	1,176.1	1,176.1	2.5	2.5	-2.93	1,887.9	-96.5	1,890.4	1,885.3	5.02	376.436		
1,200.0	1,200.0	1,195.0	1,195.0	2.6	2.5	-2.93	1,887.9	-96.5	1,890.4	1,885.2	5.11	370.173		
1,279.5	1,279.5	1,274.5	1,274.5	2.7	2.7	-2.93	1,887.9	-96.5	1,890.4	1,884.9	5.46	345.955		
1,300.0	1,300.0	1,295.0	1,295.0	2.8	2.8	-2.93	1,887.9	-96.5	1,890.4	1,884.8	5.56	340.224		
1,360.0	1,360.0	1,355.0	1,355.0	2.9	2.9	-2.93	1,887.9	-96.5	1,890.4	1,884.5	5.83	324.473		
1,377.9	1,377.9	1,372.9	1,372.9	3.0	2.9	7.84	1,887.9	-96.5	1,890.3	1,884.4	5.91	320.034		
1,400.0	1,400.0	1,395.0	1,395.0	3.0	3.0	7.84	1,887.9	-96.5	1,890.1	1,884.1	6.01	314.732		
1,476.4	1,476.3	1,474.9	1,474.9	3.2	3.2	7.85	1,887.9	-96.5	1,888.0	1,881.7	6.35	297.270		
1,500.0	1,499.9	1,505.8	1,505.8	3.2	3.2	7.87	1,887.8	-96.1	1,886.9	1,880.4	6.47	291.832		
1,574.8	1,574.6	1,603.4	1,603.3	3.4	3.4	8.00	1,886.8	-93.1	1,881.4	1,874.6	6.82	276.055		
1,600.0	1,599.7	1,636.1	1,636.0	3.5	3.5	8.08	1,886.2	-91.4	1,878.9	1,872.0	6.93	270.949		
1,673.2	1,672.6	1,730.5	1,730.1	3.6	3.7	8.35	1,883.9	-84.4	1,869.9	1,862.6	7.28	256.749		
1,700.0	1,699.2	1,764.7	1,764.1	3.7	3.8	8.48	1,882.8	-81.1	1,866.0	1,858.5	7.41	251.767		
1,771.6	1,770.2	1,855.2	1,854.0	3.9	4.0	8.90	1,879.4	-70.6	1,853.7	1,845.9	7.76	238.791		
1,800.0	1,798.3	1,890.6	1,889.0	3.9	4.0	9.09	1,877.8	-65.8	1,848.1	1,840.2	7.90	233.889		
1,870.1	1,867.4	1,976.9	1,974.1	4.1	4.3	9.64	1,873.4	-52.3	1,832.8	1,824.6	8.26	221.822		
1,900.0	1,896.8	2,013.1	2,009.7	4.2	4.4	9.91	1,871.3	-45.9	1,825.6	1,817.2	8.42	216.842		
1,968.5	1,963.9	2,094.6	2,089.5	4.4	4.6	10.59	1,866.0	-30.0	1,807.6	1,798.8	8.79	205.587		

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