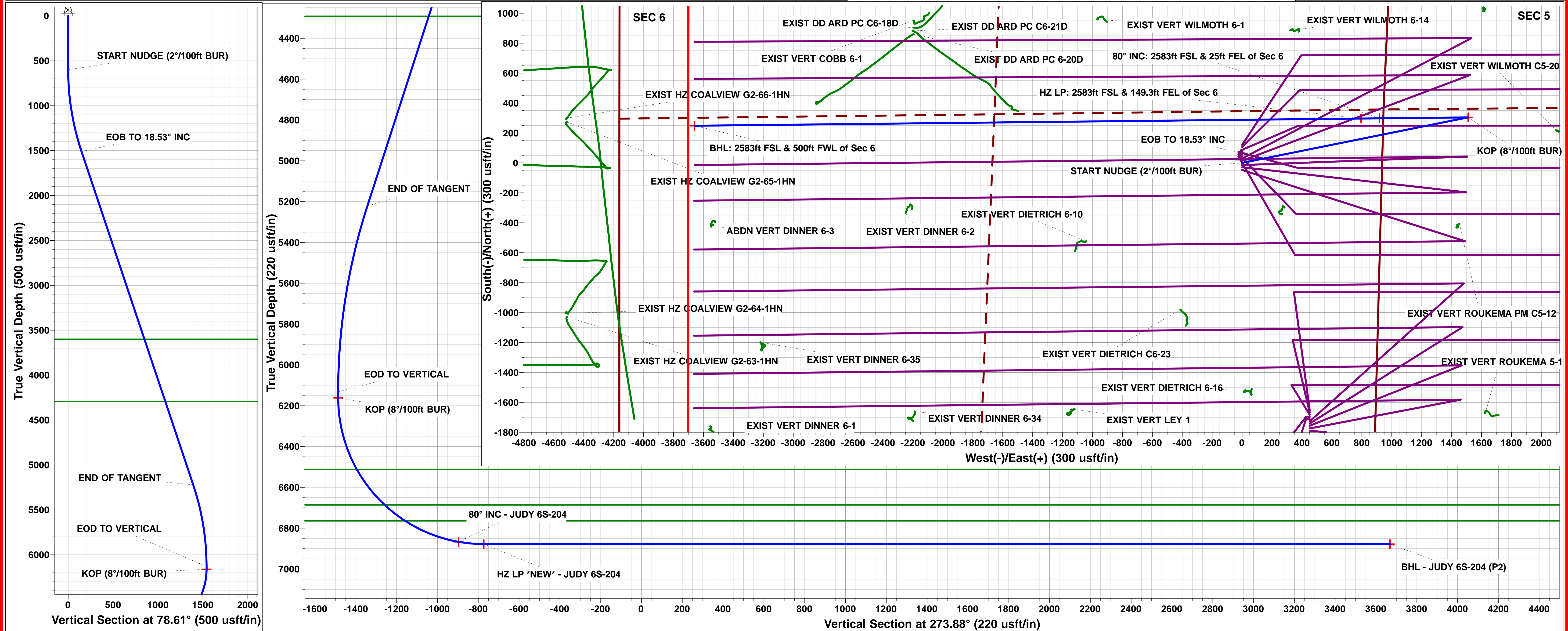


WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - JUDY 6S-204	6161.8	304.2	1510.7	40.341195	-104.581691
80° INC - JUDY 6S-204	6867.1	297.7	918.9	40.341177	-104.583814
BHL - JUDY 6S-204 (P2)	6878.0	248.0	-3660.2	40.341040	-104.600240
HZ LP *NEW* - JUDY 6S-204	6878.0	296.3	794.6	40.341173	-104.584260



# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NE SE SEC. 6 T4N R64W 6th P.M.  
JUDY 6S-204**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**26 June, 2017**



## Anticollision Report



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well JUDY 6S-204
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Reference Site:</b>	NE SE SEC. 6 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	JUDY 6S-204	<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 #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.0usft	<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> 26/06/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,976.9	PROPOSAL #2 (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 SE SEC. 6 T4N R64W 6th P.M.						
ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1	11,846.1	6,895.4	644.0	508.9	4.769	CC, ES
ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1	11,900.0	6,894.7	646.2	509.7	4.734	SF
ABDN VERT KUIS C5-7 - Wellbore #1 - Wellbore #1	6,328.4	5,957.4	2,869.7	2,851.3	155.888	CC
ABDN VERT KUIS C5-7 - Wellbore #1 - Wellbore #1	6,366.9	6,000.0	2,870.0	2,835.5	83.316	ES
ABDN VERT KUIS C5-7 - Wellbore #1 - Wellbore #1	11,976.9	6,716.8	7,992.1	7,853.9	57.821	SF
ABDN VERT LEY 2 - Wellbore #1 - Wellbore #1	1,691.0	1,659.6	382.7	376.7	63.441	CC
ABDN VERT LEY 2 - Wellbore #1 - Wellbore #1	1,700.0	1,668.1	382.7	376.7	62.854	ES
ABDN VERT LEY 2 - Wellbore #1 - Wellbore #1	8,200.0	6,869.5	606.2	563.0	14.040	SF
ABDN VERT MCCLINTOCK 1 - Wellbore #1 - Wellbore #1	6,364.4	6,009.1	7,964.0	7,943.9	396.508	CC
ABDN VERT MCCLINTOCK 1 - Wellbore #1 - Wellbore #1	6,396.9	6,040.7	7,964.1	7,930.1	234.550	ES
ABDN VERT MCCLINTOCK 1 - Wellbore #1 - Wellbore #1	8,800.0	6,700.0	9,954.6	9,898.8	178.476	SF
ABDN VERT NIKOLORIC C5-5 - Wellbore #1 - Wellbore #1	6,400.4	6,101.2	719.0	685.8	21.705	CC, ES, SF
EXIST DD ARD PC C6-18D - Wellbore #1 - Wellbore #1	9,801.1	7,023.0	1,276.1	1,178.3	13.043	CC, ES
EXIST DD ARD PC C6-18D - Wellbore #1 - Wellbore #1	10,200.0	7,013.8	1,337.0	1,228.8	12.353	SF
EXIST DD ARD PC C6-20D - Wellbore #1 - Wellbore #1	11,154.0	6,972.6	150.4	17.6	1.132	Level 2, CC, ES, SF
EXIST DD ARD PC C6-21D - Wellbore #1 - Wellbore #1	9,840.8	6,987.9	83.5	-15.0	0.848	Level 1, CC, ES, SF
EXIST DD BURMAN C4-32D - Wellbore #1 - Wellbore #1	5,656.5	4,387.0	4,754.7	4,723.1	150.503	CC, ES
EXIST DD BURMAN C4-32D - Wellbore #1 - Wellbore #1	6,396.9	6,213.5	4,797.0	4,741.6	86.671	SF
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	5,482.4	3,937.0	4,919.9	4,891.5	172.968	CC
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	6,396.9	6,274.0	4,936.2	4,882.1	91.212	ES
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	11,900.0	6,912.7	9,942.9	9,785.2	63.079	SF
EXIST DD BURMAN C5-17D - Wellbore #1 - Wellbore #1	6,067.6	5,870.7	3,556.3	3,500.6	63.929	CC, ES
EXIST DD BURMAN C5-17D - Wellbore #1 - Wellbore #1	11,976.9	7,175.0	8,595.1	8,437.0	54.375	SF
EXIST DD BURMAN C5-21D - Wellbore #1 - Wellbore #1	6,396.9	6,499.4	2,186.7	2,122.5	34.054	ES, SF
EXIST DD BURMAN C5-21D - Wellbore #1 - Wellbore #1	6,415.2	6,513.6	2,186.4	2,143.9	51.459	CC
EXIST DD BURMAN C5-22D - Wellbore #1 - Wellbore #1	6,328.2	6,150.0	3,233.1	3,193.9	82.448	CC
EXIST DD BURMAN C5-22D - Wellbore #1 - Wellbore #1	6,366.9	6,187.4	3,233.4	3,184.4	66.024	ES
EXIST DD BURMAN C5-22D - Wellbore #1 - Wellbore #1	11,976.9	6,882.0	8,412.4	8,273.6	60.612	SF
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	6,320.7	6,036.5	3,592.1	3,553.3	92.547	CC
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	6,366.9	6,082.0	3,592.4	3,549.9	84.530	ES
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	11,976.9	6,730.3	8,620.4	8,469.0	56.925	SF
EXIST DD BURMAN C5-24D - Wellbore #1 - Wellbore #1	6,400.3	6,402.2	2,473.1	2,420.5	47.050	CC, ES
EXIST DD BURMAN C5-24D - Wellbore #1 - Wellbore #1	11,976.9	7,003.6	7,401.2	7,232.4	43.843	SF
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	8,829.3	6,884.3	2,481.0	2,424.3	43.787	CC
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	8,900.0	6,900.0	2,482.0	2,423.8	42.578	ES
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	11,976.9	6,900.0	4,007.7	3,868.9	28.864	SF
EXIST DD DIETRICH C8-30D - Wellbore #1 - Wellbore #1	7,547.4	7,235.1	2,489.2	2,428.0	40.690	CC, ES

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



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well JUDY 6S-204
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Reference Site:</b>	NE SE SEC. 6 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	JUDY 6S-204	<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 #2	<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
NE SE SEC. 6 T4N R64W 6th P.M.						
EXIST DD DIETRICH C8-30D - Wellbore #1 - Wellbore #	11,200.0	7,222.6	4,420.1	4,275.8	30.635	SF
EXIST DD RUFF C8-27D - Wellbore #1 - Wellbore #1	6,328.9	6,066.4	4,239.3	4,197.5	101.472	CC, ES
EXIST DD RUFF C8-27D - Wellbore #1 - Wellbore #1	11,976.9	6,777.2	8,884.6	8,732.0	58.219	SF
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	6,396.9	6,421.4	5,154.5	5,103.6	101.283	ES
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	6,425.6	6,458.0	5,154.1	5,113.7	127.436	CC
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	11,900.0	7,098.0	9,934.2	9,779.4	64.156	SF
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	10,034.8	7,200.0	2,683.0	2,559.4	21.709	CC
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	10,100.0	7,197.5	2,683.8	2,558.5	21.422	ES
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	11,600.0	7,103.4	3,104.6	2,939.5	18.809	SF
EXIST HZ COALVIEW G2-63-1HN - Wellbore #1 - Wellb	11,976.9	6,624.4	1,774.7	1,626.8	11.999	CC, ES, SF
EXIST HZ COALVIEW G2-64-1HN - Wellbore #1 - Wellb	11,976.9	6,659.0	1,156.6	1,012.5	8.029	CC, ES, SF
EXIST HZ COALVIEW G2-65-1HN - Wellbore #1 - Wellb	11,976.9	6,739.0	684.5	560.1	5.502	CC, ES, SF
EXIST HZ COALVIEW G2-66-1HN - Wellbore #1 - Wellb	11,976.9	6,743.0	742.7	606.6	5.455	CC, ES, SF
EXIST HZ LOWER LATHAM PC G12-69HN - Wellbore #	11,976.9	12,060.0	2,599.7	2,308.5	8.927	CC, ES, SF
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	6,385.2	6,166.0	4,353.7	4,315.5	114.011	CC
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	6,400.0	6,166.0	4,353.7	4,312.1	104.725	ES
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	11,976.9	6,388.0	8,950.8	8,800.8	59.702	SF
EXIST HZ NORTHRUP C8-75HN - Wellbore #1 - Wellbo	6,319.9	6,115.6	3,332.9	3,287.2	72.942	CC, ES
EXIST HZ NORTHRUP C8-75HN - Wellbore #1 - Wellbo	11,976.9	6,461.0	7,669.4	7,515.9	49.973	SF
EXIST HZ SCHMIDT PC C6-79HN - Wellbore #1 - Wellb	11,976.9	10,611.4	681.7	592.5	7.645	CC, ES, SF
EXIST VERT COBB 6-1 - Wellbore #1 - Wellbore #1	10,419.4	6,868.6	720.1	623.7	7.468	CC, ES
EXIST VERT COBB 6-1 - Wellbore #1 - Wellbore #1	10,600.0	6,860.1	742.3	641.1	7.334	SF
EXIST VERT COBB 6-23 - Wellbore #1 - Wellbore #1	11,771.4	6,887.0	889.1	756.1	6.683	CC
EXIST VERT COBB 6-23 - Wellbore #1 - Wellbore #1	11,800.0	6,886.5	889.6	755.8	6.648	ES
EXIST VERT COBB 6-23 - Wellbore #1 - Wellbore #1	11,900.0	6,885.0	898.4	761.8	6.579	SF
EXIST VERT CONNELL C4-20 - Wellbore #1 - Wellbore #	6,353.6	5,986.5	5,821.1	5,802.1	306.299	CC
EXIST VERT CONNELL C4-20 - Wellbore #1 - Wellbore #	6,366.9	6,000.0	5,821.2	5,786.9	169.593	ES
EXIST VERT CONNELL C4-20 - Wellbore #1 - Wellbore #	10,900.0	6,792.1	9,912.1	9,803.3	91.072	SF
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	6,396.9	6,128.0	5,568.4	5,536.3	173.362	ES
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	6,400.3	6,131.8	5,568.4	5,544.9	236.723	CC
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	11,300.0	6,800.0	9,920.4	9,799.4	81.988	SF
EXIST VERT CONNELL 2 - Wellbore #1 - Wellbore #1	6,346.7	5,998.4	5,450.1	5,429.9	269.905	CC
EXIST VERT CONNELL 2 - Wellbore #1 - Wellbore #1	6,366.9	6,023.8	5,450.1	5,416.7	163.135	ES
EXIST VERT CONNELL 2 - Wellbore #1 - Wellbore #1	11,300.0	6,779.8	9,927.8	9,807.8	82.789	SF
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	6,396.9	6,200.0	6,921.5	6,889.5	215.997	ES
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	6,409.3	6,213.4	6,921.4	6,898.8	305.846	CC
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	9,900.0	6,800.0	9,915.3	9,832.3	119.515	SF
EXIST VERT CONNELL C 4-5 - Wellbore #1 - Wellbore #	6,343.1	5,965.2	5,240.7	5,222.0	281.241	CC
EXIST VERT CONNELL C 4-5 - Wellbore #1 - Wellbore #	6,366.9	5,983.3	5,240.8	5,206.3	151.860	ES
EXIST VERT CONNELL C 4-5 - Wellbore #1 - Wellbore #	11,500.0	6,800.0	9,912.6	9,787.2	79.037	SF
EXIST VERT CONNELL C4-11 - Wellbore #1 - Wellbore	6,366.1	6,027.3	6,693.0	6,673.2	337.991	CC
EXIST VERT CONNELL C4-11 - Wellbore #1 - Wellbore	6,396.9	6,058.6	6,693.1	6,659.4	198.727	ES
EXIST VERT CONNELL C4-11 - Wellbore #1 - Wellbore	10,100.0	6,800.0	9,977.1	9,889.1	113.387	SF
EXIST VERT CONNELL C4-25 - Wellbore #1 - Wellbore	6,268.9	5,752.5	6,231.0	6,209.8	295.001	CC
EXIST VERT CONNELL C4-25 - Wellbore #1 - Wellbore	6,366.9	5,809.4	6,232.9	6,199.9	189.002	ES
EXIST VERT CONNELL C4-25 - Wellbore #1 - Wellbore	10,500.0	6,200.0	9,916.7	9,826.4	109.728	SF
EXIST VERT DIETRICH 6-10 - Wellbore #1 - Wellbore #	9,442.9	6,847.1	863.8	792.6	12.137	CC, ES
EXIST VERT DIETRICH 6-10 - Wellbore #1 - Wellbore #	9,700.0	6,852.1	901.2	823.5	11.599	SF
EXIST VERT DIETRICH 6-16 - Wellbore #1 - Wellbore #	100.0	66.2	1,519.4	1,519.3	10,000.000	CC, ES
EXIST VERT DIETRICH 6-16 - Wellbore #1 - Wellbore #	10,500.0	6,700.0	2,868.4	2,770.1	29.189	SF
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	0.0	0.0	1,063.3			
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	400.0	393.8	1,063.9	1,063.0	1,081.647	ES
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	9,600.0	6,874.1	1,629.4	1,554.1	21.624	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 JUDY 6S-204
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Reference Site:</b>	NE SE SEC. 6 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	JUDY 6S-204	<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 #2	<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
NE SE SEC. 6 T4N R64W 6th P.M.						
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	11,873.1	6,880.0	2,045.5	1,909.5	15.043	CC
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	11,900.0	6,879.6	2,045.6	1,908.9	14.964	ES
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	11,976.9	6,878.6	2,048.1	1,909.3	14.755	SF
EXIST VERT DINNER 6-2 - Wellbore #1 - Wellbore #1	10,528.4	6,855.9	568.1	468.6	5.706	CC, ES
EXIST VERT DINNER 6-2 - Wellbore #1 - Wellbore #1	10,600.0	6,857.3	572.6	471.1	5.643	SF
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	10,537.1	6,847.5	1,988.9	1,889.2	19.944	CC
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	10,600.0	6,844.4	1,989.9	1,888.5	19.626	ES
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	11,600.0	6,787.8	2,254.7	2,126.4	17.585	SF
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	11,531.2	6,864.8	1,469.6	1,343.3	11.635	CC
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	11,600.0	6,864.2	1,471.2	1,343.0	11.478	ES
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	11,976.9	6,860.9	1,535.7	1,397.3	11.092	SF
EXIST VERT EHRlich 1 - Wellbore #1 - Wellbore #1	6,361.8	6,000.0	6,752.1	6,733.6	365.768	CC
EXIST VERT EHRlich 1 - Wellbore #1 - Wellbore #1	6,366.9	6,000.0	6,752.1	6,717.4	194.742	ES
EXIST VERT EHRlich 1 - Wellbore #1 - Wellbore #1	10,000.0	6,761.4	9,936.2	9,850.6	116.097	SF
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	6,331.4	6,019.1	1,507.5	1,482.6	60.401	CC
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	6,366.9	6,053.7	1,507.7	1,477.4	49.764	ES
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	11,976.9	6,654.6	6,578.3	6,443.0	48.616	SF
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	6,296.4	5,988.1	2,255.8	2,223.6	70.062	CC
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	6,300.0	5,991.5	2,255.8	2,223.6	70.051	ES
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	11,976.9	6,600.0	6,742.3	6,604.6	48.982	SF
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	6,340.5	6,037.5	3,490.0	3,462.7	128.156	CC
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	6,366.9	6,064.8	3,490.1	3,461.6	122.727	ES
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	11,976.9	6,737.1	8,345.4	8,207.1	60.345	SF
EXIST VERT LEY 1 - Wellbore #1 - Wellbore #1	9,474.4	6,924.4	1,930.1	1,858.1	26.826	CC
EXIST VERT LEY 1 - Wellbore #1 - Wellbore #1	9,500.0	6,924.0	1,930.3	1,857.7	26.591	ES
EXIST VERT LEY 1 - Wellbore #1 - Wellbore #1	10,900.0	6,893.9	2,399.3	2,290.0	21.955	SF
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellbore #1	6,396.9	6,192.0	8,221.9	8,189.1	250.489	ES
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellbore #1	6,409.0	6,203.5	8,221.8	8,200.0	377.146	CC
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellbore #1	8,600.0	6,700.0	9,978.0	9,926.8	194.896	SF
EXIST VERT OPDYKE/HINKLE 1 - Wellbore #1 - Wellbore #1	6,355.7	6,040.5	2,821.9	2,799.9	128.211	CC
EXIST VERT OPDYKE/HINKLE 1 - Wellbore #1 - Wellbore #1	6,366.9	6,050.4	2,822.0	2,789.4	86.657	ES
EXIST VERT OPDYKE/HINKLE 1 - Wellbore #1 - Wellbore #1	11,976.9	6,600.0	7,947.0	7,813.2	59.402	SF
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	6,351.7	6,039.4	4,418.3	4,393.0	174.931	CC
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	6,366.9	6,052.0	4,418.3	4,388.2	146.577	ES
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	11,976.9	6,850.0	9,352.7	9,214.0	67.458	SF
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	6,396.9	6,122.4	3,949.9	3,917.0	119.966	ES
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	6,402.0	6,126.6	3,949.9	3,928.0	180.160	CC
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	11,976.9	6,726.5	9,068.4	8,930.0	65.513	SF
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	5,309.7	5,057.3	1,989.0	1,958.2	64.652	CC
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	5,400.0	5,138.7	1,989.2	1,957.9	63.388	ES
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	11,976.9	6,799.6	5,710.6	5,572.1	41.236	SF
EXIST VERT ROUKEMA PM C5-12 - Wellbore #1 - Wellbore #1	5,158.6	4,892.6	690.5	660.9	23.319	CC
EXIST VERT ROUKEMA PM C5-12 - Wellbore #1 - Wellbore #1	5,200.0	4,932.3	690.7	660.8	23.085	ES
EXIST VERT ROUKEMA PM C5-12 - Wellbore #1 - Wellbore #1	5,800.0	5,509.3	713.7	680.8	21.730	SF
EXIST VERT SITZMAN 4-714 - Wellbore #1 - Design #1	6,396.9	6,049.8	8,102.9	7,950.7	53.237	CC, ES
EXIST VERT SITZMAN 4-714 - Wellbore #1 - Design #1	7,521.9	6,766.0	8,816.4	8,650.4	53.089	SF
EXIST VERT SITZMAN C4-22 - Wellbore #1 - Wellbore #1	6,396.9	6,056.8	8,642.5	8,608.3	252.651	ES
EXIST VERT SITZMAN C4-22 - Wellbore #1 - Wellbore #1	6,398.1	6,057.6	8,642.5	8,623.4	453.030	CC
EXIST VERT SITZMAN C4-22 - Wellbore #1 - Wellbore #1	8,100.0	6,750.0	9,935.5	9,894.2	240.313	SF
EXIST VERT SLEDGE C9-28 - Wellbore #1 - Design #1	6,396.9	6,081.8	7,810.7	7,661.8	52.448	CC, ES
EXIST VERT SLEDGE C9-28 - Wellbore #1 - Design #1	7,521.9	6,798.0	8,480.0	8,313.6	50.965	SF
EXIST VERT SLEDGE C9-29 - Wellbore #1 - Design #1	6,396.9	6,100.8	6,555.7	6,407.4	44.215	CC, ES
EXIST VERT SLEDGE C9-29 - Wellbore #1 - Design #1	7,521.9	6,817.0	7,208.6	7,042.0	43.274	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 JUDY 6S-204
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Reference Site:</b>	NE SE SEC. 6 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	JUDY 6S-204	<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 #2	<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
NE SE SEC. 6 T4N R64W 6th P.M.						
EXIST VERT SMITH-REEVES 42-5 - Wellbore #1 - Well	6,396.9	6,122.1	4,207.5	4,172.9	121.668	ES
EXIST VERT SMITH-REEVES 42-5 - Wellbore #1 - Well	6,403.6	6,127.6	4,207.5	4,189.1	229.149	CC
EXIST VERT SMITH-REEVES 42-5 - Wellbore #1 - Well	11,976.9	6,550.0	9,342.6	9,209.5	70.180	SF
EXIST VERT WILMOTH 6-1 - Wellbore #1 - Wellbore #1	9,213.1	6,868.5	666.8	601.4	10.196	CC, ES
EXIST VERT WILMOTH 6-1 - Wellbore #1 - Wellbore #1	9,400.0	6,858.7	692.4	622.4	9.884	SF
EXIST VERT WILMOTH 6-14 - Wellbore #1 - Wellbore #	7,930.7	6,861.1	588.1	549.7	15.293	CC, ES
EXIST VERT WILMOTH 6-14 - Wellbore #1 - Wellbore #	8,100.0	6,864.0	612.0	570.8	14.869	SF
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	6,396.9	6,189.9	8,766.1	8,732.9	263.933	ES
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	6,409.3	6,202.1	8,766.0	8,745.2	421.191	CC
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	8,000.0	6,800.0	9,932.8	9,893.1	250.493	SF
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	6,396.9	6,067.5	7,540.7	7,507.6	227.746	ES
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	6,397.6	6,067.9	7,540.7	7,519.5	354.379	CC
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	9,200.0	6,632.2	9,918.7	9,853.8	152.692	SF
EXIST VERT WILMOTH C5-20 - Wellbore #1 - Wellbore	6,356.0	6,053.1	638.3	617.3	30.386	CC
EXIST VERT WILMOTH C5-20 - Wellbore #1 - Wellbore	6,366.9	6,064.1	638.3	605.4	19.368	ES
EXIST VERT WILMOTH C5-20 - Wellbore #1 - Wellbore	6,396.9	6,094.4	638.4	605.4	19.350	SF
EXIST VERT WILMOTH C5-6 - Wellbore #1 - Wellbore #	6,350.4	6,020.5	1,630.8	1,610.9	81.839	CC
EXIST VERT WILMOTH C5-6 - Wellbore #1 - Wellbore #	6,366.9	6,036.9	1,630.9	1,597.1	48.288	ES
EXIST VERT WILMOTH C5-6 - Wellbore #1 - Wellbore #	6,396.9	6,066.7	1,631.0	1,597.2	48.255	SF
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	6,396.9	6,053.5	8,891.1	8,859.3	279.657	ES
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	6,397.9	6,054.6	8,891.1	8,868.7	397.741	CC
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	7,900.0	6,798.7	9,946.8	9,908.9	262.307	SF
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #	300.0	300.0	58.3	57.2	54.367	CC
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #	500.0	499.7	58.7	56.8	30.055	ES
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #	7,000.0	7,507.5	659.3	596.4	10.486	SF
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #	300.0	300.0	43.7	42.6	40.776	CC
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #	400.0	400.0	43.8	42.2	28.956	ES
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #	6,900.0	7,676.6	962.0	898.0	15.031	SF
JUDY 6S-202 - ORIGINAL WELLBORE - PROPOSAL #1	7,300.0	7,215.6	50.1	-7.8	0.865	Level 1, ES, SF
JUDY 6S-202 - ORIGINAL WELLBORE - PROPOSAL #1	7,302.2	7,213.5	50.1	-7.7	0.867	Level 1, CC
JUDY 6S-212 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	120.2	119.2	112.141	CC, ES
JUDY 6S-212 - ORIGINAL WELLBORE - PROPOSAL #1	7,200.0	7,320.6	423.0	364.2	7.190	SF
JUDY 6S-214 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	29.1	27.6	19.153	CC, ES
JUDY 6S-214 - ORIGINAL WELLBORE - PROPOSAL #2	11,976.9	12,041.6	561.1	287.8	2.053	SF
JUDY 6S-234 - ORIGINAL WELLBORE - PROPOSAL #2	366.3	367.3	29.1	27.8	21.237	CC
JUDY 6S-234 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.8	29.4	27.4	15.000	ES
JUDY 6S-234 - ORIGINAL WELLBORE - PROPOSAL #2	11,976.9	11,949.1	500.6	227.3	1.832	SF
JUDY 6S-302 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	105.6	104.1	69.430	CC, ES
JUDY 6S-302 - ORIGINAL WELLBORE - PROPOSAL #1	7,450.0	7,138.2	191.0	135.6	3.447	SF
JUDY 6S-314 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	14.6	12.6	7.393	CC, ES
JUDY 6S-314 - ORIGINAL WELLBORE - PROPOSAL #2	11,976.9	12,096.0	321.0	54.2	1.203	Level 2, SF
JUDY 6S-332 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	72.9	71.8	67.959	CC
JUDY 6S-332 - ORIGINAL WELLBORE - PROPOSAL #1	500.0	499.7	73.2	71.2	37.473	ES
JUDY 6S-332 - ORIGINAL WELLBORE - PROPOSAL #1	7,350.0	7,236.2	334.3	277.7	5.898	SF
JUDY 6S-334 - ORIGINAL WELLBORE - PROPOSAL #2	600.0	601.0	14.6	12.2	6.016	CC
JUDY 6S-334 - ORIGINAL WELLBORE - PROPOSAL #2	11,976.9	12,048.1	271.5	5.8	1.022	Level 2, ES, SF
JUDY 6X-314 - ORIGINAL WELLBORE - PROPOSAL #2	266.3	267.3	47.4	46.4	51.314	CC
JUDY 6X-314 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	301.0	47.4	46.3	44.091	ES
JUDY 6X-314 - ORIGINAL WELLBORE - PROPOSAL #2	11,976.9	11,996.4	829.1	556.7	3.044	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 JUDY 6S-204
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Reference Site:</b>	NE SE SEC. 6 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4818.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	JUDY 6S-204	<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 #2	<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
SE SE SEC. 6 T4N R64W 6th P.M.						
HAROLD 6X-202 - ORIGINAL WELLBORE - PROPOSA	6,750.0	7,694.3	1,217.5	1,153.0	18.894	SF
HAROLD 6X-202 - ORIGINAL WELLBORE - PROPOSA	7,250.0	7,326.8	1,163.8	1,109.3	21.378	ES
HAROLD 6X-202 - ORIGINAL WELLBORE - PROPOSA	7,401.3	7,187.4	1,162.5	1,110.4	22.321	CC
HAROLD 6X-204 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,883.5	1,107.4	835.4	4.071	CC, ES, SF
HAROLD 6X-232 - ORIGINAL WELLBORE - PROPOSA	1,976.5	2,037.4	1,549.4	1,537.4	129.458	CC
HAROLD 6X-232 - ORIGINAL WELLBORE - PROPOSA	2,000.0	2,052.4	1,549.4	1,537.3	127.552	ES
HAROLD 6X-232 - ORIGINAL WELLBORE - PROPOSA	6,600.0	7,709.5	1,851.4	1,786.0	28.315	SF
HAROLD 6X-234 - ORIGINAL WELLBORE - PROPOSA	7,564.5	7,364.7	1,656.6	1,599.4	28.965	CC
HAROLD 6X-234 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,776.6	1,657.5	1,386.3	6.113	ES, SF
HAROLD 6X-302 - ORIGINAL WELLBORE - PROPOSA	2,905.1	3,021.2	1,352.6	1,332.1	65.729	CC, ES
HAROLD 6X-302 - ORIGINAL WELLBORE - PROPOSA	6,700.0	7,764.5	1,555.3	1,490.7	24.056	SF
HAROLD 6X-304 - ORIGINAL WELLBORE - PROPOSA	6,951.5	6,826.9	1,400.7	1,345.9	25.557	CC
HAROLD 6X-304 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,879.0	1,403.7	1,132.6	5.177	ES, SF
HAROLD 6X-334 - ORIGINAL WELLBORE - PROPOSA	1,658.0	1,627.7	1,830.1	1,820.8	195.766	CC
HAROLD 6X-334 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,825.7	1,887.9	1,616.9	6.966	ES, SF
HAROLD 6Y-202 - ORIGINAL WELLBORE - PROPOSA	1,279.5	1,267.0	1,762.8	1,757.1	309.252	CC
HAROLD 6Y-202 - ORIGINAL WELLBORE - PROPOSA	1,400.0	1,383.4	1,763.0	1,756.5	271.279	ES
HAROLD 6Y-202 - ORIGINAL WELLBORE - PROPOSA	11,700.0	6,300.0	4,415.8	4,277.2	31.853	SF
HAROLD 6Y-214 - ORIGINAL WELLBORE - PROPOSA	400.0	392.0	1,844.9	1,843.4	1,226.904	CC, ES
HAROLD 6Y-214 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,751.0	2,196.7	1,925.8	8.108	SF
HAROLD 6Y-304 - ORIGINAL WELLBORE - PROPOSA	300.0	292.0	1,859.0	1,858.0	1,763.514	CC, ES
HAROLD 6Y-304 - ORIGINAL WELLBORE - PROPOSA	11,976.9	11,827.1	2,426.6	2,155.9	8.964	SF
HAROLD 6Y-312 - ORIGINAL WELLBORE - PROPOSA	1,291.7	1,278.8	1,748.5	1,742.7	302.789	CC
HAROLD 6Y-312 - ORIGINAL WELLBORE - PROPOSA	1,500.0	1,479.0	1,749.4	1,742.2	241.668	ES
HAROLD 6Y-312 - ORIGINAL WELLBORE - PROPOSA	10,500.0	6,400.0	3,316.4	3,208.3	30.683	SF

<b>Offset Design</b> NE SE SEC. 6 T4N R64W 6th P.M. - ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
<b>Survey Program:</b> 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	42.5	42.5	0.0	0.0	-96.84	-426.0	-3,548.7	3,574.2				
100.0	100.0	145.6	145.6	0.1	0.0	-96.84	-425.9	-3,548.5	3,574.0	3,573.9	0.09	N/A	
200.0	200.0	243.7	243.7	0.3	0.0	-96.84	-425.8	-3,548.4	3,573.8	3,573.5	0.33	N/A	
300.0	300.0	343.3	343.3	0.5	0.1	-96.84	-425.6	-3,548.2	3,573.6	3,573.0	0.65	5,491.486	
400.0	400.0	442.6	442.6	0.8	0.2	-96.83	-425.1	-3,548.2	3,573.6	3,572.5	1.00	3,562.199	
500.0	500.0	543.9	543.9	1.0	0.3	-96.83	-424.7	-3,548.0	3,573.4	3,572.0	1.31	2,724.599	
600.0	600.0	640.8	640.8	1.2	0.4	-96.82	-424.2	-3,548.0	3,573.3	3,571.7	1.60	2,229.152	
602.3	602.3	643.1	643.1	1.2	0.4	-175.43	-424.2	-3,548.0	3,573.3	3,571.7	1.59	2,240.696	
700.0	700.0	742.9	742.9	1.4	0.5	-175.43	-423.8	-3,547.9	3,574.9	3,573.0	1.87	1,916.349	
800.0	799.8	843.6	843.6	1.6	0.5	-175.42	-423.2	-3,547.8	3,579.9	3,577.8	2.14	1,673.592	
900.0	899.5	942.4	942.4	1.9	0.6	-175.40	-422.7	-3,547.8	3,588.5	3,586.1	2.42	1,483.665	
1,000.0	998.7	1,046.3	1,046.3	2.1	0.6	-175.39	-422.2	-3,547.6	3,600.5	3,597.8	2.71	1,330.690	
1,100.0	1,097.5	1,153.4	1,153.3	2.4	0.7	-175.38	-421.6	-3,547.3	3,615.7	3,612.7	3.00	1,205.807	
1,200.0	1,195.6	1,259.7	1,259.7	2.8	0.7	-175.37	-420.9	-3,546.7	3,634.1	3,630.8	3.30	1,102.081	
1,300.0	1,293.1	1,363.5	1,363.5	3.2	0.8	-175.35	-420.2	-3,546.0	3,655.7	3,652.1	3.60	1,014.322	
1,400.0	1,389.6	1,465.9	1,465.9	3.6	0.8	-175.34	-419.4	-3,545.1	3,680.6	3,676.7	3.92	939.015	
1,500.0	1,485.3	1,560.7	1,560.6	4.2	0.8	-175.31	-418.5	-3,544.2	3,708.8	3,704.5	4.24	873.856	
1,526.6	1,510.5	1,584.9	1,584.8	4.3	0.9	-175.30	-418.2	-3,544.0	3,716.8	3,712.5	4.33	857.967	
1,600.0	1,580.1	1,656.6	1,656.5	4.7	0.9	-175.32	-417.5	-3,543.3	3,739.4	3,734.8	4.56	820.488	

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