



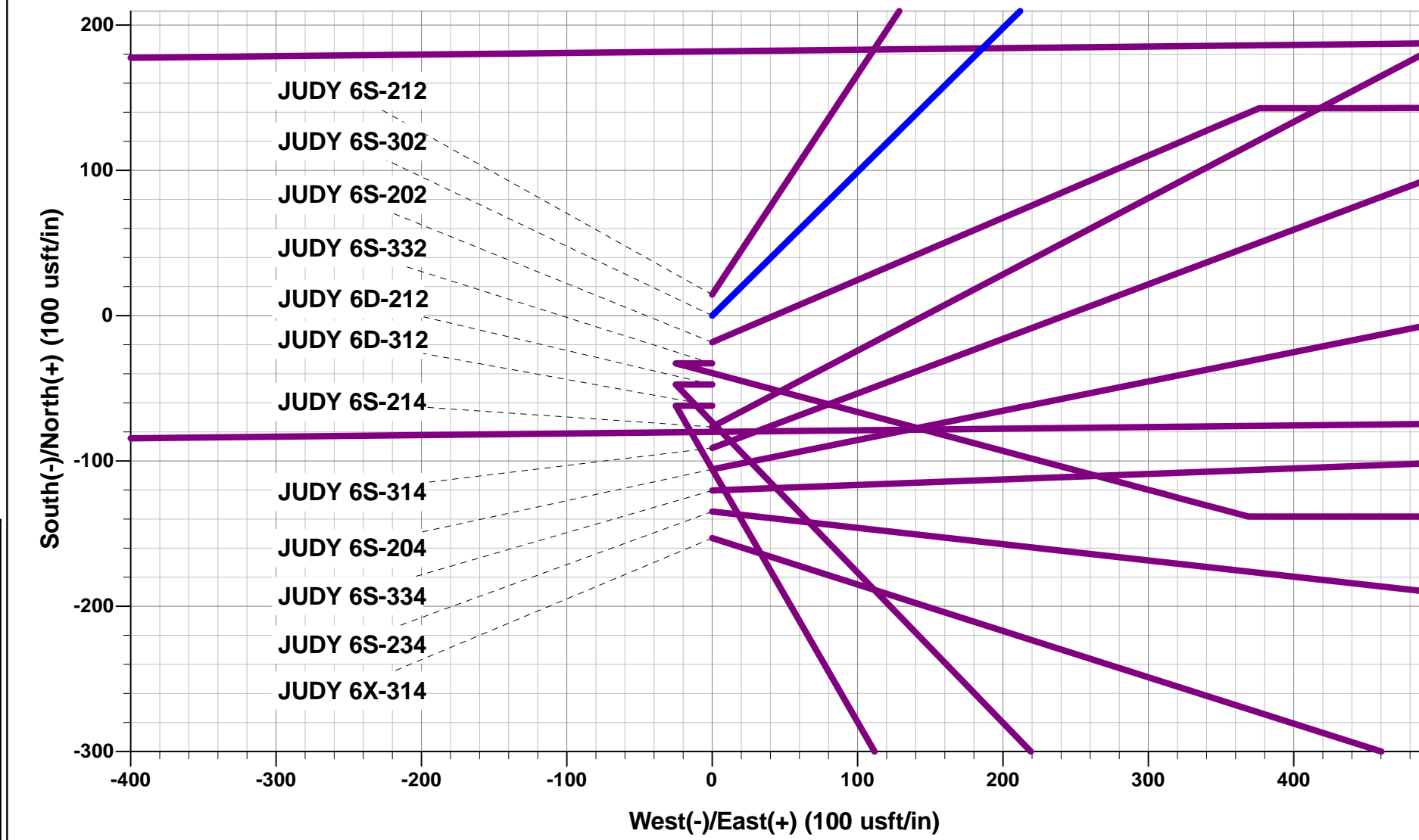
Project: WELD COUNTY, COLORADO
Site: NE SE SEC. 6 T4N R64W 6th P.M.
Well: JUDY 6S-302
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2399ft FSL & 940ft FEL of Sec 6
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
995.6	1000.0	12.00	45.29	44.0	44.5	46.1	62.6	EOB TO 12° INC
2955.2	3003.3	12.00	45.29	337.1	340.5	352.5	479.1	END OF TANGENT
3550.8	3603.3	0.00	0.00	381.1	385.0	398.5	541.7	EOD TO VERTICAL
6201.8	6254.3	0.00	0.00	381.1	385.0	398.5	541.7	KOP (8°/100ft BUR)
6907.1	7254.3	80.00	89.84	382.8	976.8	990.0	1133.5	80° INC: 2470ft FNL & 25ft FWL of Sec 5
6918.0	7384.2	90.39	89.84	383.2	1106.1	1119.2	1262.8	HZ LP: 2470ft FNL & 154.3ft FWL of Sec 5
6848.0	17681.6	90.39	89.84	412.2	11403.1	11410.6	11559.9	BHL: 2470ft FNL & 100ft FEL of Sec 4

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - JUDY 6S-302	6201.8	381.1	385.0	40.341696	-104.585729
80° INC - JUDY 6S-302	6907.1	382.8	976.8	40.341701	-104.583606
BHL - JUDY 6S-302	6848.0	412.2	11403.1	40.341774	-104.546204
HZ LP *NEW* - JUDY 6S-302	6918.0	383.2	1106.1	40.341702	-104.583142



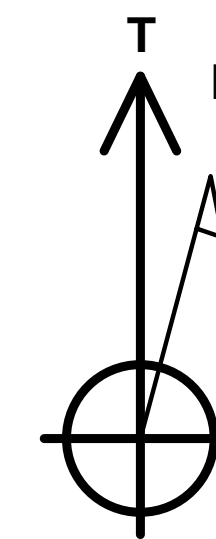
PROPOSED LOCAL COORDINATES:

SHL: 2399ft FSL & 940ft FEL of Sec 6

80° INC: 2470ft FNL & 25ft FWL of Sec 5

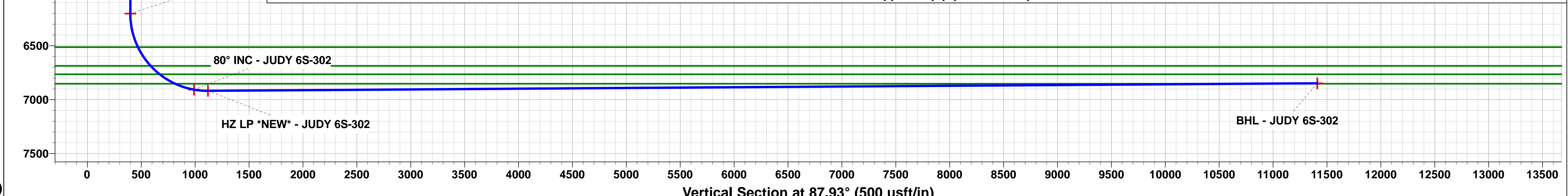
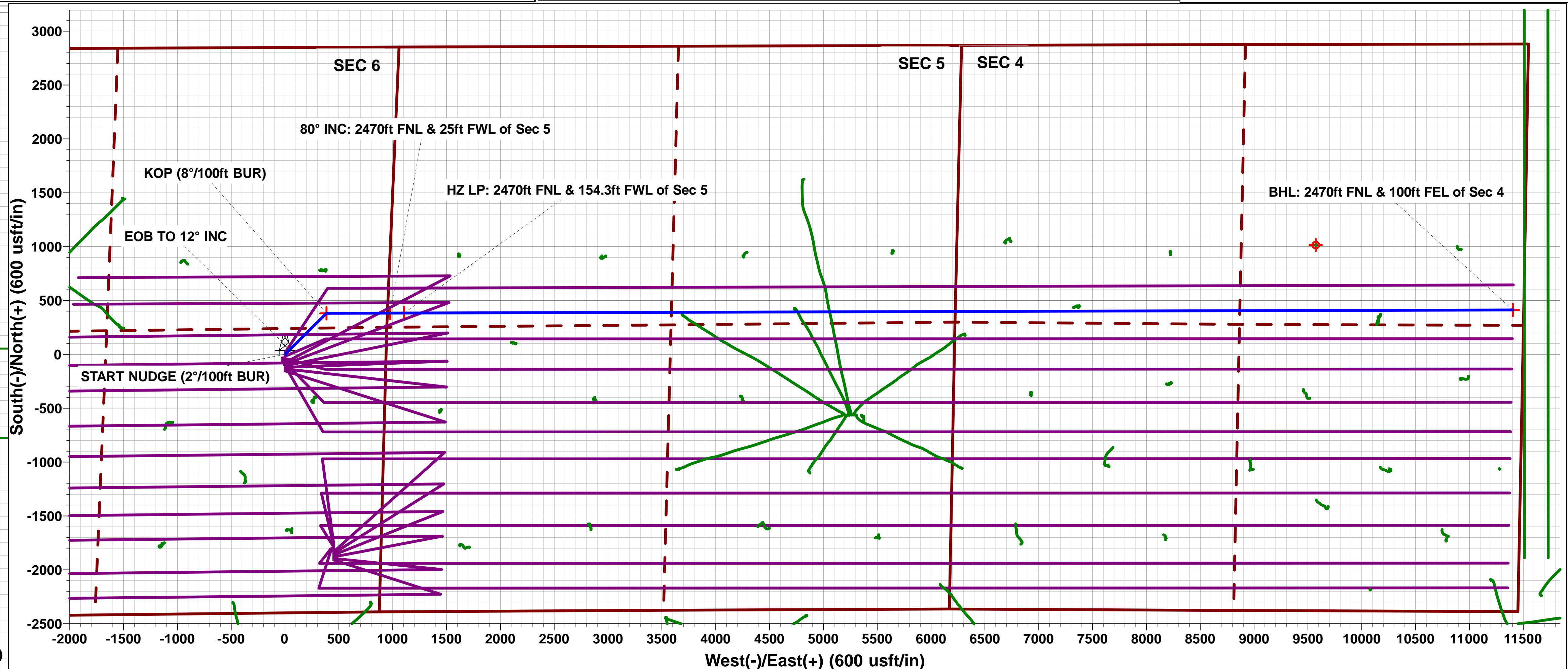
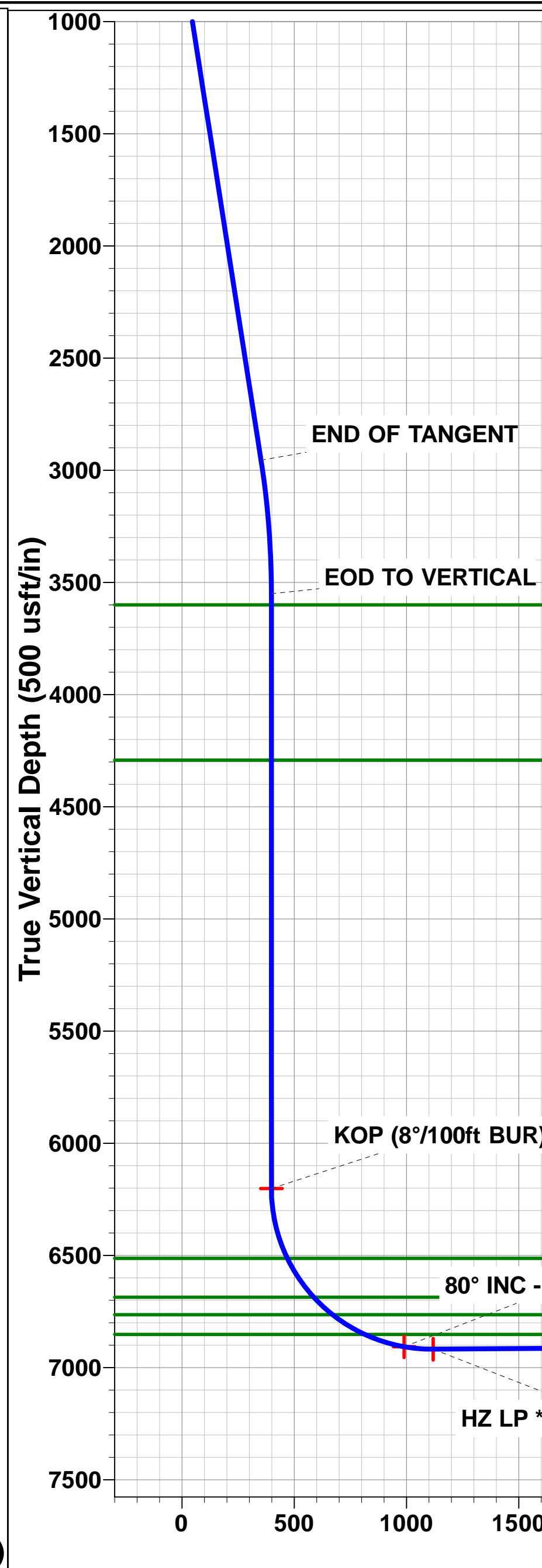
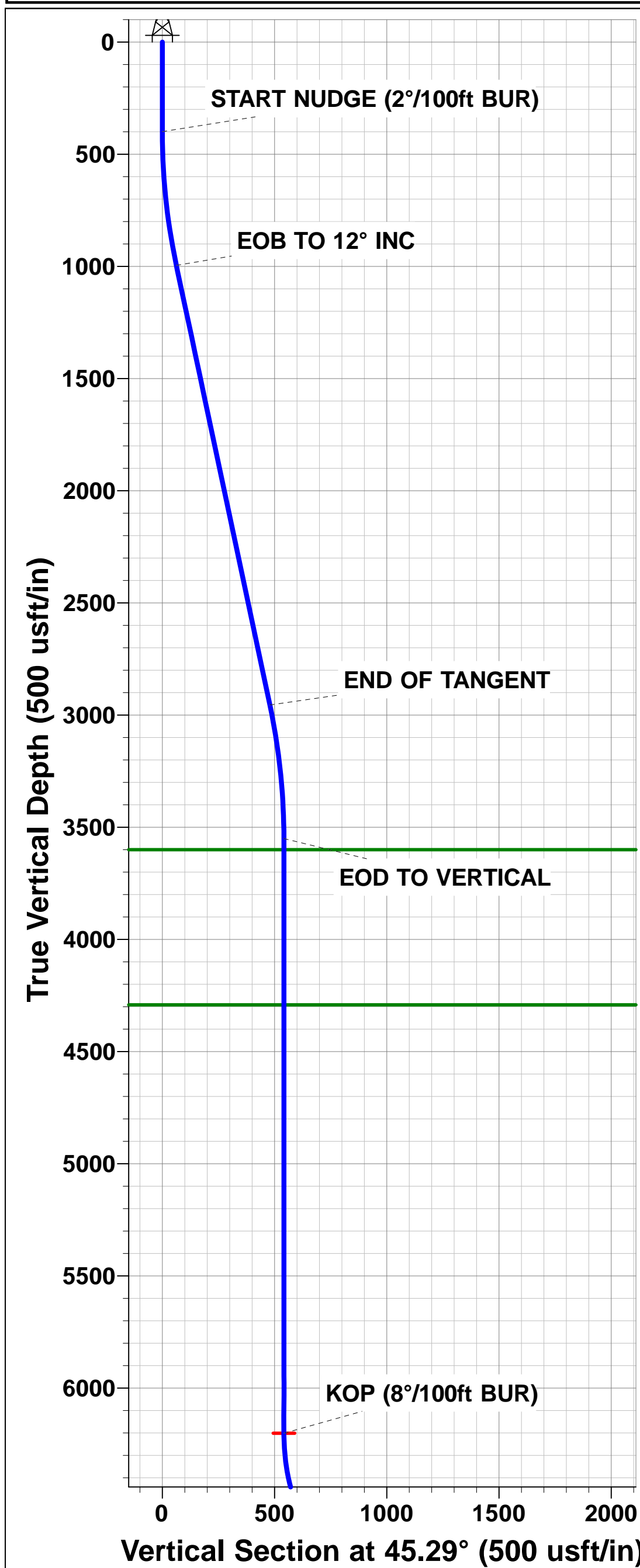
HZ LP *NEW*: 2470ft FNL & 154.3ft FWL of Sec 5

BHL: 2470ft FNL & 100ft FEL of Sec 4



Azimuths to True North
Magnetic North: 8.13°

Magnetic Field
Strength: 52403.4snT
Dip Angle: 66.84°
Date: 04/04/2017
Model: IGRF2015



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well JUDY 6S-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Reference Site:	NE SE SEC. 6 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	JUDY 6S-302	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 100.0usft	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	18/04/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	17,681.6	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 SE SEC. 6 T4N R64W 6th P.M.						
ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1	405.4	448.9	3,587.7	3,586.6	3,528.871	CC, ES
ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1	12,700.0	7,000.0	9,983.9	9,808.9	57.054	SF
ABDN VERT KUIS C5-7 - Wellbore #1 - Wellbore #1	10,571.5	6,793.6	554.5	439.0	4.801	CC
ABDN VERT KUIS C5-7 - Wellbore #1 - Wellbore #1	10,600.0	6,793.6	555.2	438.9	4.774	ES, SF
ABDN VERT LEY 2 - Wellbore #1 - Wellbore #1	100.0	84.3	517.5	517.4	5,980.383	CC, ES
ABDN VERT LEY 2 - Wellbore #1 - Wellbore #1	10,400.0	6,870.8	3,924.3	3,813.6	35.464	SF
ABDN VERT MCCLINTOCK 1 - Wellbore #1 - Wellbore #1	15,734.8	6,746.2	733.4	473.3	2.819	CC, ES
ABDN VERT MCCLINTOCK 1 - Wellbore #1 - Wellbore #1	15,800.0	6,746.2	736.3	474.4	2.811	SF
ABDN VERT NIKOLORIC C5-5 - Wellbore #1 - Wellbore #1	7,889.7	6,853.1	523.3	480.8	12.297	CC
ABDN VERT NIKOLORIC C5-5 - Wellbore #1 - Wellbore #1	7,900.0	6,853.0	523.4	480.6	12.224	ES
ABDN VERT NIKOLORIC C5-5 - Wellbore #1 - Wellbore #1	8,100.0	6,852.4	564.0	516.0	11.755	SF
EXIST DD ARD PC C6-18D - Wellbore #1 - Wellbore #1	5,381.1	5,454.9	2,162.6	2,136.9	84.063	CC
EXIST DD ARD PC C6-18D - Wellbore #1 - Wellbore #1	5,500.0	5,560.6	2,162.9	2,136.7	82.739	ES
EXIST DD ARD PC C6-18D - Wellbore #1 - Wellbore #1	14,700.0	7,172.3	9,972.5	9,725.4	40.357	SF
EXIST DD ARD PC C6-20D - Wellbore #1 - Wellbore #1	0.0	9.1	2,322.5			
EXIST DD ARD PC C6-20D - Wellbore #1 - Wellbore #1	6,254.3	6,260.6	3,233.6	3,200.6	98.059	SF
EXIST DD ARD PC C6-21D - Wellbore #1 - Wellbore #1	6,138.8	6,194.5	1,927.3	1,894.7	59.075	CC, ES
EXIST DD ARD PC C6-21D - Wellbore #1 - Wellbore #1	6,254.3	6,287.2	1,928.0	1,895.0	58.465	SF
EXIST DD BURMAN C4-32D - Wellbore #1 - Wellbore #1	12,594.2	7,019.6	219.3	25.0	1.129	Level 2, CC
EXIST DD BURMAN C4-32D - Wellbore #1 - Wellbore #1	12,600.0	7,019.5	219.3	24.9	1.128	Level 2, ES, SF
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	12,561.0	6,969.3	1,456.6	1,264.2	7.571	CC
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	12,600.0	6,969.3	1,457.2	1,263.7	7.531	ES
EXIST DD BURMAN C4-33D - Wellbore #1 - Wellbore #1	12,900.0	6,969.2	1,495.6	1,293.7	7.409	SF
EXIST DD BURMAN C5-17D - Wellbore #1 - Wellbore #1	11,089.6	7,298.7	1,226.2	1,076.6	8.193	CC
EXIST DD BURMAN C5-17D - Wellbore #1 - Wellbore #1	11,100.0	7,298.8	1,226.3	1,076.3	8.177	ES
EXIST DD BURMAN C5-17D - Wellbore #1 - Wellbore #1	11,400.0	7,300.4	1,264.9	1,106.6	7.990	SF
EXIST DD BURMAN C5-21D - Wellbore #1 - Wellbore #1	9,967.6	7,178.5	17.8	-112.2	0.137	Level 1, CC, ES, SF
EXIST DD BURMAN C5-22D - Wellbore #1 - Wellbore #1	11,027.3	6,993.5	13.8	-130.4	0.096	Level 1, CC, ES, SF
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	11,146.3	6,876.5	1,490.2	1,344.8	10.247	CC
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	11,200.0	6,876.9	1,491.2	1,344.3	10.149	ES
EXIST DD BURMAN C5-23D - Wellbore #1 - Wellbore #1	11,600.0	6,880.1	1,557.8	1,399.7	9.854	SF
EXIST DD BURMAN C5-24D - Wellbore #1 - Wellbore #1	9,916.5	7,126.0	1,458.1	1,329.9	11.379	CC, ES
EXIST DD BURMAN C5-24D - Wellbore #1 - Wellbore #1	10,400.0	7,127.0	1,536.1	1,394.6	10.854	SF
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	238.2	229.2	2,635.8	2,635.4	6,194.016	CC
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	400.0	382.6	2,636.1	2,635.1	2,714.556	ES
EXIST DD DIETRICH C7-27 - Wellbore #1 - Wellbore #1	15,400.0	6,829.9	9,982.3	9,731.7	39.835	SF
EXIST DD DIETRICH C8-30D - Wellbore #1 - Wellbore #1	7,045.4	7,201.1	2,680.6	2,630.1	53.112	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 JUDY 6S-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Reference Site:	NE SE SEC. 6 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	JUDY 6S-302	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 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 DD DIETRICH C8-30D - Wellbore #1 - Wellbore #	7,100.0	7,221.4	2,681.1	2,629.7	52.169	ES
EXIST DD DIETRICH C8-30D - Wellbore #1 - Wellbore #	11,600.0	7,258.4	5,266.8	5,095.9	30.822	SF
EXIST DD RUFF C8-27D - Wellbore #1 - Wellbore #1	11,116.2	6,902.0	2,820.3	2,675.2	19.438	CC
EXIST DD RUFF C8-27D - Wellbore #1 - Wellbore #1	11,200.0	6,902.2	2,821.5	2,674.1	19.139	ES
EXIST DD RUFF C8-27D - Wellbore #1 - Wellbore #1	12,700.0	6,904.4	3,234.6	3,045.3	17.087	SF
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	12,356.6	7,040.0	2,535.3	2,351.6	13.800	CC
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	12,400.0	7,039.1	2,535.7	2,350.7	13.712	ES
EXIST DD SLEDGE C9-30D - Wellbore #1 - Wellbore #1	13,300.0	7,020.0	2,705.0	2,495.0	12.877	SF
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	6,254.3	6,893.8	3,595.7	3,546.1	72.531	ES
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	6,347.8	6,935.8	3,591.4	3,548.4	83.515	CC
EXIST DD WRIGHT-GOIN C7-28D - Wellbore #1 - Wellb	14,100.0	7,560.0	9,937.0	9,685.9	39.577	SF
EXIST HZ COALVIEW G2-63-1HN - Wellbore #1 - Wellb	339.0	360.0	4,653.3	4,652.6	6,124.062	CC
EXIST HZ COALVIEW G2-63-1HN - Wellbore #1 - Wellb	400.0	412.3	4,653.4	4,652.4	4,591.026	ES
EXIST HZ COALVIEW G2-63-1HN - Wellbore #1 - Wellb	11,700.0	6,409.0	9,924.9	9,773.6	65.605	SF
EXIST HZ COALVIEW G2-64-1HN - Wellbore #1 - Wellb	436.4	508.2	4,646.2	4,644.9	3,588.714	CC, ES
EXIST HZ COALVIEW G2-64-1HN - Wellbore #1 - Wellb	11,900.0	6,375.0	9,956.5	9,811.8	68.809	SF
EXIST HZ COALVIEW G2-65-1HN - Wellbore #1 - Wellb	0.0	33.3	4,516.3			
EXIST HZ COALVIEW G2-65-1HN - Wellbore #1 - Wellb	400.0	418.7	4,516.8	4,515.8	4,438.350	ES
EXIST HZ COALVIEW G2-65-1HN - Wellbore #1 - Wellb	12,000.0	6,549.0	9,968.9	9,841.7	78.341	SF
EXIST HZ COALVIEW G2-66-1HN - Wellbore #1 - Wellb	0.0	32.7	4,517.3			
EXIST HZ COALVIEW G2-66-1HN - Wellbore #1 - Wellb	300.0	320.9	4,517.8	4,517.2	6,903.948	ES
EXIST HZ COALVIEW G2-66-1HN - Wellbore #1 - Wellb	7,300.0	6,460.0	5,267.0	5,229.1	138.917	SF
EXIST HZ LOWER LATHAM PC G12-69HN - Wellbore #	6,254.3	12,060.0	5,276.3	5,131.5	36.434	ES
EXIST HZ LOWER LATHAM PC G12-69HN - Wellbore #	6,358.2	12,060.0	5,269.0	5,167.0	51.673	CC
EXIST HZ LOWER LATHAM PC G12-69HN - Wellbore #	7,384.2	12,060.0	5,844.5	5,661.3	31.900	SF
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	11,112.1	6,325.0	3,065.5	2,924.0	21.666	CC
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	11,200.0	6,325.0	3,066.7	2,922.9	21.312	ES
EXIST HZ NORTHRUP C8-73HN - Wellbore #1 - Wellbo	12,900.0	6,293.0	3,548.0	3,357.9	18.662	SF
EXIST HZ NORTHRUP C8-75HN - Wellbore #1 - Wellbo	9,815.0	6,492.0	2,885.0	2,774.7	26.145	CC
EXIST HZ NORTHRUP C8-75HN - Wellbore #1 - Wellbo	9,900.0	6,492.0	2,886.3	2,773.6	25.619	ES
EXIST HZ NORTHRUP C8-75HN - Wellbore #1 - Wellbo	11,900.0	6,492.0	3,559.5	3,392.0	21.241	SF
EXIST HZ SCHMIDT PC C6-79HN - Wellbore #1 - Wellb	6,370.5	10,787.0	4,767.4	4,686.9	59.222	CC, ES
EXIST HZ SCHMIDT PC C6-79HN - Wellbore #1 - Wellb	11,900.0	11,303.3	9,906.3	9,737.5	58.670	SF
EXIST VERT COBB 6-1 - Wellbore #1 - Wellbore #1	371.9	367.9	2,353.0	2,352.1	2,739.627	CC
EXIST VERT COBB 6-1 - Wellbore #1 - Wellbore #1	400.0	394.8	2,353.0	2,352.0	2,477.200	ES
EXIST VERT COBB 6-1 - Wellbore #1 - Wellbore #1	14,100.0	7,200.0	9,935.9	9,741.7	51.156	SF
EXIST VERT COBB 6-23 - Wellbore #1 - Wellbore #1	458.9	515.1	3,638.6	3,637.5	3,327.371	CC, ES
EXIST VERT COBB 6-23 - Wellbore #1 - Wellbore #1	12,700.0	7,046.2	9,905.1	9,731.1	56.912	SF
EXIST VERT CONNELL C4-20 - Wellbore #1 - Wellbore #	13,603.2	6,770.7	32.1	-168.1	0.160	Level 1, CC, ES, SF
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	13,059.3	6,800.0	1,971.9	1,786.1	10.615	CC
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	13,100.0	6,800.0	1,972.3	1,785.4	10.552	ES
EXIST VERT CONNELL 14-4 - Wellbore #1 - Wellbore #	13,600.0	6,800.0	2,044.7	1,843.8	10.178	SF
EXIST VERT CONNELL 2 - Wellbore #1 - Wellbore #1	13,206.4	6,796.9	780.7	591.8	4.133	CC, ES
EXIST VERT CONNELL 2 - Wellbore #1 - Wellbore #1	13,300.0	6,796.5	786.3	594.8	4.106	SF
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	14,432.2	6,800.0	2,077.8	1,854.4	9.299	CC
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	14,500.0	6,800.0	2,078.9	1,853.6	9.226	ES
EXIST VERT CONNELL 3 - Wellbore #1 - Wellbore #1	15,000.0	6,800.0	2,154.0	1,914.7	8.999	SF
EXIST VERT CONNELL C 4-5 - Wellbore #1 - Wellbore #	12,970.0	6,779.9	633.4	451.1	3.474	CC
EXIST VERT CONNELL C 4-5 - Wellbore #1 - Wellbore #	13,000.0	6,779.4	634.1	451.0	3.462	ES, SF
EXIST VERT CONNELL C4-11 - Wellbore #1 - Wellbore	14,460.9	6,766.6	679.2	455.1	3.031	CC, ES
EXIST VERT CONNELL C4-11 - Wellbore #1 - Wellbore	14,500.0	6,765.8	680.3	455.1	3.022	SF
EXIST VERT CONNELL C4-25 - Wellbore #1 - Wellbore	13,964.8	6,800.0	1,266.2	1,055.6	6.014	CC
EXIST VERT CONNELL C4-25 - Wellbore #1 - Wellbore	14,000.0	6,800.0	1,266.6	1,055.1	5.989	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 JUDY 6S-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Reference Site:	NE SE SEC. 6 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	JUDY 6S-302	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 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 CONNELL C4-25 - Wellbore #1 - Wellbore	14,200.0	6,800.0	1,287.8	1,070.7	5.932	SF
EXIST VERT DIETRICH 6-10 - Wellbore #1 - Wellbore #	0.0	0.0	1,218.3			
EXIST VERT DIETRICH 6-10 - Wellbore #1 - Wellbore #	408.3	406.7	1,218.5	1,217.5	1,275.895	ES
EXIST VERT DIETRICH 6-10 - Wellbore #1 - Wellbore #	15,100.0	6,690.6	9,997.5	9,760.6	42.209	SF
EXIST VERT DIETRICH 6-16 - Wellbore #1 - Wellbore #	100.0	66.0	1,625.0	1,624.9	10,000.000	CC, ES
EXIST VERT DIETRICH 6-16 - Wellbore #1 - Wellbore #	16,100.0	6,700.0	9,965.7	9,696.9	37.073	SF
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	0.0	0.0	1,161.4			
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	400.0	393.1	1,162.1	1,161.1	1,183.065	ES
EXIST VERT DIETRICH C6-23 - Wellbore #1 - Wellbore	15,700.0	6,882.8	9,914.1	9,655.1	38.287	SF
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	341.0	357.1	4,013.7	4,012.9	5,216.574	CC
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	400.0	413.6	4,013.7	4,012.7	4,143.213	ES
EXIST VERT DINNER 6-1 - Wellbore #1 - Wellbore #1	12,400.0	7,000.0	9,924.8	9,758.1	59.514	SF
EXIST VERT DINNER 6-2 - Wellbore #1 - Wellbore #1	426.8	441.6	2,289.9	2,288.8	2,118.103	CC, ES
EXIST VERT DINNER 6-2 - Wellbore #1 - Wellbore #1	14,000.0	6,742.3	9,959.4	9,753.4	48.363	SF
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	0.0	8.6	2,812.6			
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	400.0	406.3	2,813.2	2,812.3	2,927.502	ES
EXIST VERT DINNER 6-34 - Wellbore #1 - Wellbore #1	13,800.0	6,950.0	9,972.2	9,766.4	48.458	SF
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	175.0	200.0	3,473.6	3,473.4	10,000.000	CC
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	400.0	424.3	3,474.3	3,473.3	3,461.581	ES
EXIST VERT DINNER 6-35 - Wellbore #1 - Wellbore #1	12,900.0	7,000.0	9,969.2	9,788.8	55.249	SF
EXIST VERT EHRlich 1 - Wellbore #1 - Wellbore #1	14,501.6	6,753.2	544.6	319.2	2.416	CC, ES, SF
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	9,171.1	6,815.9	828.5	751.7	10.782	CC
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	9,200.0	6,816.6	829.0	751.4	10.679	ES
EXIST VERT HINKLE 23-5 - Wellbore #1 - Wellbore #1	9,400.0	6,821.3	859.5	776.4	10.340	SF
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	9,115.3	6,600.0	2,033.8	1,959.0	27.182	CC
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	9,200.0	6,600.0	2,035.5	1,958.4	26.395	ES
EXIST VERT HINKLE 24-5 - Wellbore #1 - Wellbore #1	10,600.0	6,600.0	2,518.1	2,402.6	21.805	SF
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	10,771.6	6,850.0	2,006.1	1,885.1	16.578	CC
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	10,800.0	6,850.0	2,006.3	1,884.5	16.473	ES
EXIST VERT LEVI C5-15 - Wellbore #1 - Wellbore #1	11,700.0	6,850.0	2,210.5	2,063.6	15.051	SF
EXIST VERT LEY 1 - Wellbore #1 - Wellbore #1	424.4	447.7	2,078.9	2,077.9	1,929.075	CC, ES
EXIST VERT LEY 1 - Wellbore #1 - Wellbore #1	14,900.0	6,950.0	9,995.5	9,759.1	42.281	SF
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellb	15,850.0	6,700.0	1,759.0	1,496.1	6.689	CC
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellb	15,900.0	6,700.0	1,759.7	1,495.4	6.656	ES
EXIST VERT MCCLINTOCK C4-15 - Wellbore #1 - Wellb	16,200.0	6,700.0	1,793.5	1,520.7	6.575	SF
EXIST VERT OPDYKE/HINKLE 1 - Wellbore #1 - Wellbo	10,539.3	6,600.0	872.6	761.0	7.822	CC, ES
EXIST VERT OPDYKE/HINKLE 1 - Wellbore #1 - Wellbo	10,700.0	6,600.0	887.3	771.4	7.657	SF
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	11,786.7	6,850.0	2,069.7	1,920.3	13.850	CC
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	11,800.0	6,850.0	2,069.8	1,920.0	13.816	ES
EXIST VERT REISTAD 5-1 - Wellbore #1 - Wellbore #1	12,600.0	6,851.7	2,223.8	2,051.6	12.917	SF
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	11,651.0	6,814.0	1,028.8	882.8	7.046	CC
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	11,700.0	6,814.2	1,030.0	882.6	6.989	ES
EXIST VERT REISTAD C5-9 - Wellbore #1 - Wellbore #1	11,900.0	6,815.0	1,058.5	905.5	6.920	SF
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	7,985.5	6,842.6	2,175.6	2,130.5	48.273	CC
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	8,000.0	6,842.5	2,175.7	2,130.2	47.878	ES
EXIST VERT ROUKEMA 5-1 - Wellbore #1 - Wellbore #1	11,000.0	6,825.4	3,717.5	3,590.2	29.193	SF
EXIST VERT ROUKEMA PM C5-12 - Wellbore #1 - Wellb	7,707.8	6,866.1	921.8	883.6	24.188	CC, ES
EXIST VERT ROUKEMA PM C5-12 - Wellbore #1 - Wellb	8,300.0	6,856.8	1,095.6	1,042.2	20.540	SF
EXIST VERT SITZMAN 4-714 - Wellbore #1 - Design #1	15,852.5	6,748.4	607.5	212.7	1.539	CC, ES
EXIST VERT SITZMAN 4-714 - Wellbore #1 - Design #1	15,900.0	6,748.1	609.4	213.2	1.538	SF
EXIST VERT SITZMAN C4-22 - Wellbore #1 - Wellbore #	16,428.9	6,736.5	63.9	-215.4	0.229	Level 1, CC, ES, SF
EXIST VERT SLEDGE C9-28 - Wellbore #1 - Design #1	15,065.9	6,785.7	3,022.7	2,649.6	8.100	CC
EXIST VERT SLEDGE C9-28 - Wellbore #1 - Design #1	15,200.0	6,784.8	3,025.7	2,648.8	8.028	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 JUDY 6S-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Reference Site:	NE SE SEC. 6 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	JUDY 6S-302	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 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 SLEDGE C9-28 - Wellbore #1 - Design #1	15,700.0	6,781.4	3,088.5	2,697.7	7.902	SF
EXIST VERT SLEDGE C9-29 - Wellbore #1 - Design #1	13,727.8	6,813.8	2,961.1	2,625.1	8.811	CC
EXIST VERT SLEDGE C9-29 - Wellbore #1 - Design #1	13,800.0	6,813.3	2,962.0	2,624.0	8.761	ES
EXIST VERT SLEDGE C9-29 - Wellbore #1 - Design #1	14,500.0	6,808.6	3,060.2	2,702.6	8.558	SF
EXIST VERT SMITH-REEVES 42-5 - Wellbore #1 - Wellt	11,924.3	6,550.0	626.6	483.9	4.394	CC, ES
EXIST VERT SMITH-REEVES 42-5 - Wellbore #1 - Wellt	12,000.0	6,550.0	631.1	486.6	4.366	SF
EXIST VERT WILMOTH 6-1 - Wellbore #1 - Wellbore #1	458.6	415.4	1,290.1	1,288.9	1,074.520	CC
EXIST VERT WILMOTH 6-1 - Wellbore #1 - Wellbore #1	500.0	456.0	1,290.1	1,288.8	981.900	ES
EXIST VERT WILMOTH 6-1 - Wellbore #1 - Wellbore #1	15,300.0	6,900.0	9,933.6	9,686.0	40.126	SF
EXIST VERT WILMOTH 6-14 - Wellbore #1 - Wellbore #	4,580.4	4,489.2	394.5	381.4	30.017	CC
EXIST VERT WILMOTH 6-14 - Wellbore #1 - Wellbore #	4,600.0	4,508.1	394.6	381.4	29.930	ES
EXIST VERT WILMOTH 6-14 - Wellbore #1 - Wellbore #	6,750.0	6,633.4	434.4	413.9	21.249	SF
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	16,446.1	6,803.8	1,457.2	1,177.7	5.213	CC
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	16,500.0	6,801.9	1,458.2	1,177.2	5.188	ES
EXIST VERT WILMOTH C4-23 - Wellbore #1 - Wellbore	16,700.0	6,794.9	1,479.1	1,192.4	5.159	SF
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	15,243.5	6,784.9	1,384.2	1,138.0	5.623	CC
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	15,300.0	6,785.4	1,385.3	1,137.6	5.592	ES
EXIST VERT WILMOTH C4-24 - Wellbore #1 - Wellbore	15,500.0	6,787.2	1,407.7	1,154.4	5.557	SF
EXIST VERT WILMOTH C5-20 - Wellbore #1 - Wellbore	8,422.9	6,844.8	284.6	228.1	5.040	CC, ES
EXIST VERT WILMOTH C5-20 - Wellbore #1 - Wellbore	8,500.0	6,843.8	294.8	236.3	5.038	SF
EXIST VERT WILMOTH C5-6 - Wellbore #1 - Wellbore #	9,258.2	6,822.6	523.5	444.4	6.613	CC, ES
EXIST VERT WILMOTH C5-6 - Wellbore #1 - Wellbore #	9,400.0	6,822.3	542.4	459.4	6.531	SF
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	16,348.5	6,727.1	2,590.7	2,314.0	9.360	CC
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	16,400.0	6,726.6	2,591.3	2,313.0	9.313	ES
EXIST VERT WILMOTH C9-27 - Wellbore #1 - Wellbore	17,000.0	6,720.9	2,671.4	2,376.3	9.054	SF
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	47.4	46.3	44.174	CC
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	47.4	45.9	31.369	ES
JUDY 6D-212 - ORIGINAL WELLBORE - PROPOSAL #1	17,681.6	17,622.4	860.2	237.4	1.381	Level 3, SF
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	61.9	60.9	57.765	CC
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	62.0	60.4	41.010	ES
JUDY 6D-312 - ORIGINAL WELLBORE - PROPOSAL #1	17,681.6	17,716.0	1,130.4	505.3	1.808	SF
JUDY 6S-202 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	18.2	16.7	11.971	CC
JUDY 6S-202 - ORIGINAL WELLBORE - PROPOSAL #1	17,681.6	17,601.3	279.2	-321.3	0.465	Level 1, ES, SF
JUDY 6S-204 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	105.6	104.1	69.430	CC, ES
JUDY 6S-204 - ORIGINAL WELLBORE - PROPOSAL #1	7,150.0	7,439.3	191.1	135.5	3.439	SF
JUDY 6S-212 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	14.6	13.5	13.600	CC
JUDY 6S-212 - ORIGINAL WELLBORE - PROPOSAL #1	17,681.6	17,618.8	245.3	-349.0	0.413	Level 1, ES, SF
JUDY 6S-214 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	76.5	75.0	50.277	CC
JUDY 6S-214 - ORIGINAL WELLBORE - PROPOSAL #1	500.0	501.3	76.9	74.9	39.119	ES
JUDY 6S-214 - ORIGINAL WELLBORE - PROPOSAL #1	7,350.0	7,335.6	354.6	296.1	6.066	SF
JUDY 6S-234 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	134.8	133.3	88.583	CC, ES
JUDY 6S-234 - ORIGINAL WELLBORE - PROPOSAL #1	7,600.0	7,057.2	719.0	656.3	11.469	SF
JUDY 6S-314 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	91.1	89.6	59.853	CC
JUDY 6S-314 - ORIGINAL WELLBORE - PROPOSAL #1	7,350.0	7,358.0	96.0	36.7	1.620	ES, SF
JUDY 6S-332 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	32.8	31.7	30.582	CC
JUDY 6S-332 - ORIGINAL WELLBORE - PROPOSAL #1	17,681.6	17,674.3	548.5	-77.3	0.876	Level 1, ES, SF
JUDY 6S-334 - ORIGINAL WELLBORE - PROPOSAL #1	400.0	400.0	120.2	118.7	79.006	CC, ES
JUDY 6S-334 - ORIGINAL WELLBORE - PROPOSAL #1	7,500.0	7,183.6	457.2	395.6	7.421	SF
JUDY 6X-314 - ORIGINAL WELLBORE - PROPOSAL #1	300.0	300.0	153.0	151.9	142.715	CC, ES
JUDY 6X-314 - ORIGINAL WELLBORE - PROPOSAL #1	8,000.0	6,900.0	1,113.7	1,040.9	15.289	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 JUDY 6S-302
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Reference Site:	NE SE SEC. 6 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4818.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	JUDY 6S-302	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
Offset Well - Wellbore - Design						
SE SE SEC. 6 T4N R64W 6th P.M.						
HAROLD 6X-202 - ORIGINAL WELLBORE - PROPOSAL	6,486.1	6,516.0	1,351.3	1,320.1	43.246	CC
HAROLD 6X-202 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	17,644.4	1,381.7	762.8	2.232	ES, SF
HAROLD 6X-204 - ORIGINAL WELLBORE - PROPOSAL	7,186.5	7,313.0	1,299.5	1,251.1	26.842	CC
HAROLD 6X-204 - ORIGINAL WELLBORE - PROPOSAL	7,300.0	7,218.4	1,300.5	1,250.4	25.932	ES
HAROLD 6X-204 - ORIGINAL WELLBORE - PROPOSAL	8,400.0	6,700.0	1,539.7	1,465.4	20.722	SF
HAROLD 6X-232 - ORIGINAL WELLBORE - PROPOSAL	1,596.3	1,818.3	1,772.3	1,763.4	200.578	CC
HAROLD 6X-232 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	17,590.6	2,000.2	1,381.8	3.234	ES, SF
HAROLD 6X-234 - ORIGINAL WELLBORE - PROPOSAL	7,151.7	7,241.7	1,847.7	1,800.4	39.109	CC
HAROLD 6X-234 - ORIGINAL WELLBORE - PROPOSAL	7,300.0	7,122.1	1,849.0	1,799.5	37.346	ES
HAROLD 6X-234 - ORIGINAL WELLBORE - PROPOSAL	9,300.0	6,500.0	2,495.3	2,397.2	25.442	SF
HAROLD 6X-302 - ORIGINAL WELLBORE - PROPOSAL	2,743.8	2,976.3	1,635.2	1,619.1	101.949	CC
HAROLD 6X-302 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	17,685.9	1,698.3	1,078.7	2.741	ES, SF
HAROLD 6X-304 - ORIGINAL WELLBORE - PROPOSAL	7,291.1	7,207.2	1,590.7	1,541.0	31.995	CC
HAROLD 6X-304 - ORIGINAL WELLBORE - PROPOSAL	7,400.0	7,117.6	1,591.5	1,539.7	30.728	ES
HAROLD 6X-304 - ORIGINAL WELLBORE - PROPOSAL	9,000.0	6,600.0	2,095.9	2,005.4	23.149	SF
HAROLD 6X-334 - ORIGINAL WELLBORE - PROPOSAL	400.0	392.0	1,933.3	1,931.8	1,285.718	CC, ES
HAROLD 6X-334 - ORIGINAL WELLBORE - PROPOSAL	9,900.0	6,500.0	3,056.2	2,941.1	26.539	SF
HAROLD 6Y-202 - ORIGINAL WELLBORE - PROPOSAL	509.0	539.1	1,872.2	1,870.1	907.267	CC, ES
HAROLD 6Y-202 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	17,610.5	2,580.4	1,961.0	4.166	SF
HAROLD 6Y-214 - ORIGINAL WELLBORE - PROPOSAL	400.0	392.0	1,947.5	1,946.0	1,285.140	CC, ES
HAROLD 6Y-214 - ORIGINAL WELLBORE - PROPOSAL	10,600.0	6,400.0	3,791.8	3,658.1	28.362	SF
HAROLD 6Y-304 - ORIGINAL WELLBORE - PROPOSAL	300.0	292.0	1,961.7	1,960.6	1,860.888	CC, ES
HAROLD 6Y-304 - ORIGINAL WELLBORE - PROPOSAL	11,200.0	6,450.0	4,393.6	4,242.2	29.020	SF
HAROLD 6Y-312 - ORIGINAL WELLBORE - PROPOSAL	511.3	541.8	1,858.0	1,856.0	895.394	CC
HAROLD 6Y-312 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	17,687.9	2,350.8	1,731.3	3.795	ES, SF
SW SW SEC. 34 T5N R64W 6th P.M.						
BAILEY 34I-223 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	10,084.8	332.7	224.2	3.068	CC, ES, SF
BAILEY 34I-303 - ORIGINAL WELLBORE - PROPOSAL	17,681.6	10,176.5	106.9	-4.5	0.959	Level 1, CC, ES, SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	17,681.6	6,767.4	2,663.9	2,334.0	8.076	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Wellbore	17,681.6	6,838.3	2,894.3	2,563.4	8.747	CC, ES, SF
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - Wellbore	17,681.6	6,654.2	2,203.8	1,889.3	7.007	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	17,681.6	6,690.2	1,035.5	720.8	3.290	CC, ES, SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	17,681.6	6,730.5	599.4	285.0	1.906	CC, ES, SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	17,171.1	6,525.0	606.9	320.9	2.122	CC
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	17,200.0	6,525.0	607.6	320.8	2.119	ES, SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	17,018.5	6,760.0	2,037.5	1,741.5	6.883	CC
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	17,100.0	6,760.0	2,039.1	1,740.8	6.836	ES
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	17,400.0	6,760.0	2,072.9	1,766.2	6.758	SF
EXIST VERT WILMOTH 4-9I4 - Wellbore #1 - Wellbore #	17,211.6	6,715.5	638.1	336.9	2.118	CC, ES, SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	17,555.5	6,718.7	1,475.5	1,165.0	4.752	CC
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	17,600.0	6,718.4	1,476.2	1,164.4	4.735	ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	17,681.6	6,717.9	1,480.9	1,166.8	4.716	SF

Offset Design		NE SE SEC. 6 T4N R64W 6th P.M. - ABDN VERT DINNER 6-3 - Wellbore #1 - Wellbore #1										Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		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	Warning
0.0	0.0	42.5	42.5	0.0	0.0	-98.52	-531.6	-3,548.7	3,588.3				
100.0	100.0	145.7	145.7	0.1	0.0	-98.52	-531.6	-3,548.5	3,588.1	3,588.0	0.09	N/A	

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