



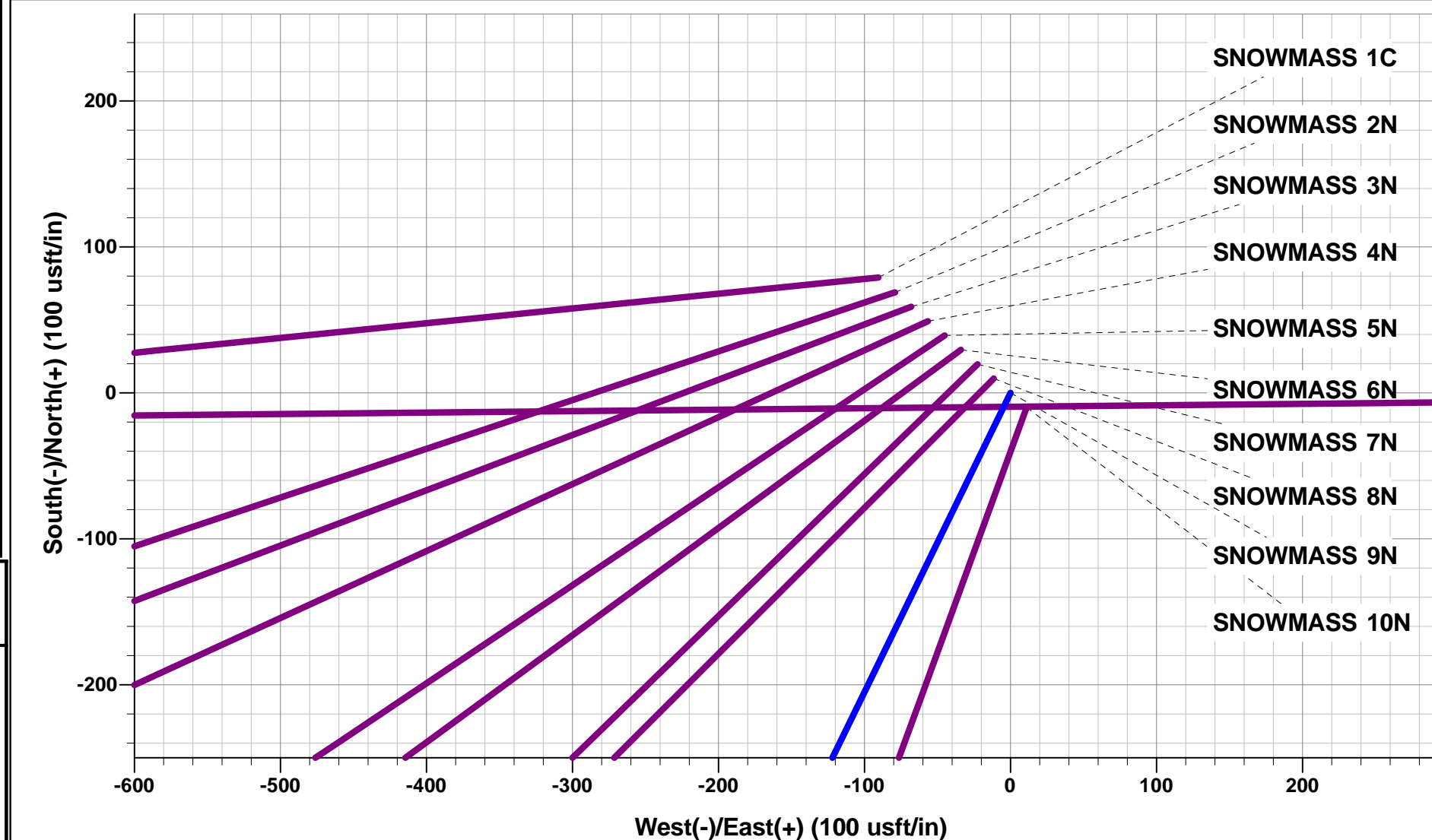
Project: WELD COUNTY, COLORADO
Site: NW NE SEC. 5 T5N R64W 6th P.M.
Well: SNOWMASS 9N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #4

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: 168ft FNL & 1742ft FEL of Sec 5
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1383.6	1433.3	31.00	206.00	-245.2	-119.6	-51.2	272.8	EOB TO 31° INC
1726.5	1833.3	31.00	206.00	-430.3	-209.9	-89.9	478.8	END OF TANGENT
1978.8	2127.1	31.00	223.16	-553.8	-295.0	-139.7	629.4	EOT TO 223.16° AZ
4668.0	5264.5	31.00	223.16	-1732.6	-1400.4	-897.9	2245.4	END OF TANGENT
5651.8	6298.0	0.00	0.00	-1931.6	-1587.0	-1025.9	2518.2	EOD TO VERTICAL
6001.8	6648.0	0.00	0.00	-1931.6	-1587.0	-1025.9	2518.2	KOP (8°/100ft BUR)
6718.0	7778.4	90.44	89.85	-1929.7	-865.5	-330.1	3239.7	HZ LP: 2100ft FNL & 2588ft FWL of Sec 5
6658.0	15681.0	90.43	89.85	-1909.1	7036.8	7291.2	11142.1	BHL: 2150ft FNL & 0ft FEL of Sec 4

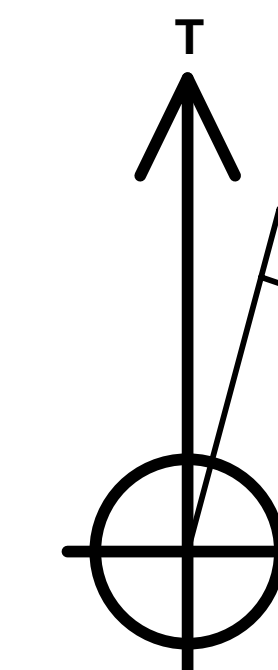
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - SNOWMASS 9N (P4)	6718.0	-1929.7	-865.5	40.429526	-104.574150
BHL - SNOWMASS 9N (P4)	6658.0	-1909.1	7036.8	40.429580	-104.545765
KOP - SNOWMASS 9N (P4)	6002.0	-1931.6	-1587.0	40.429521	-104.576741



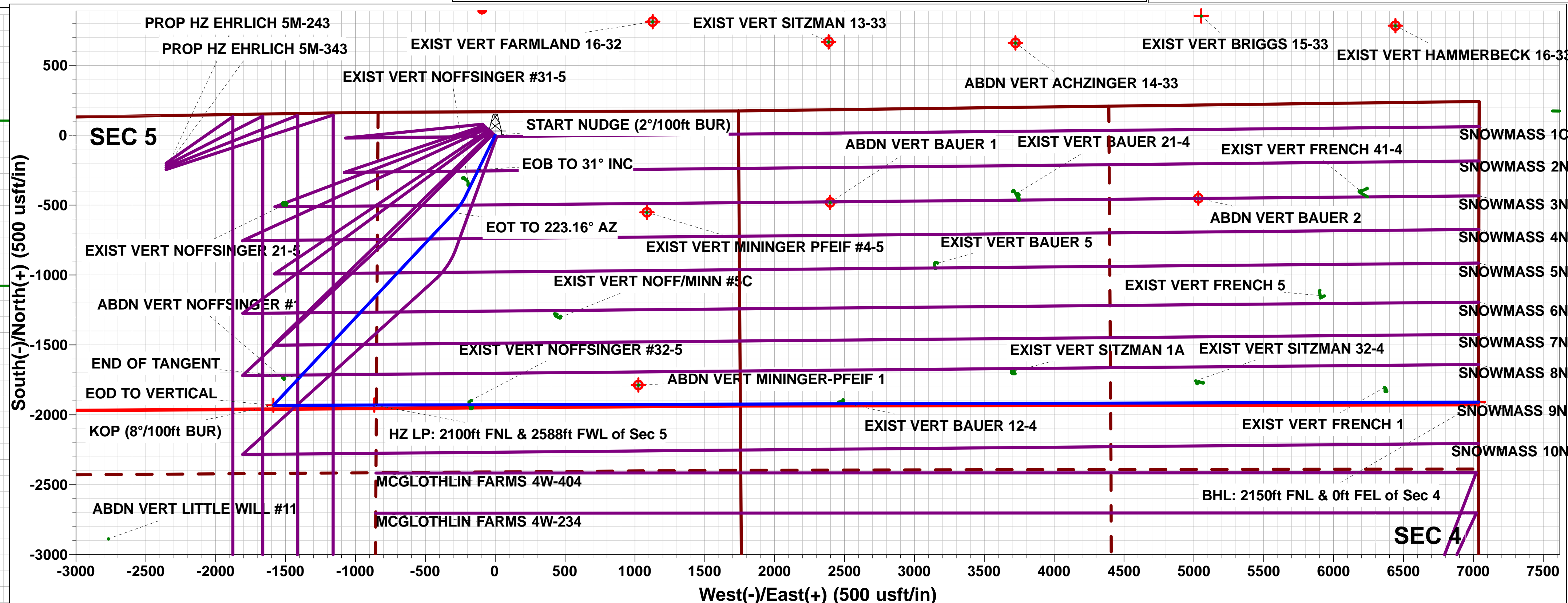
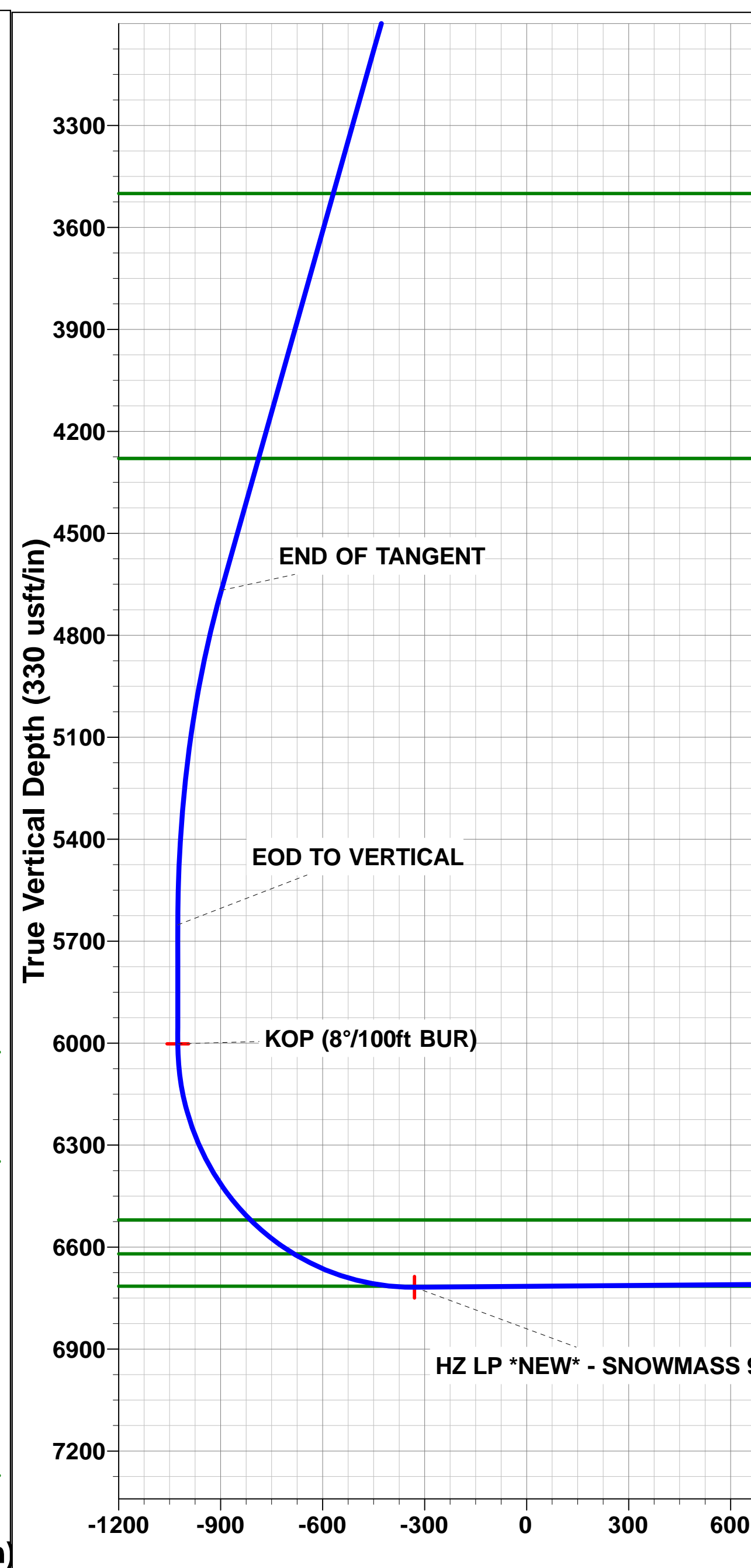
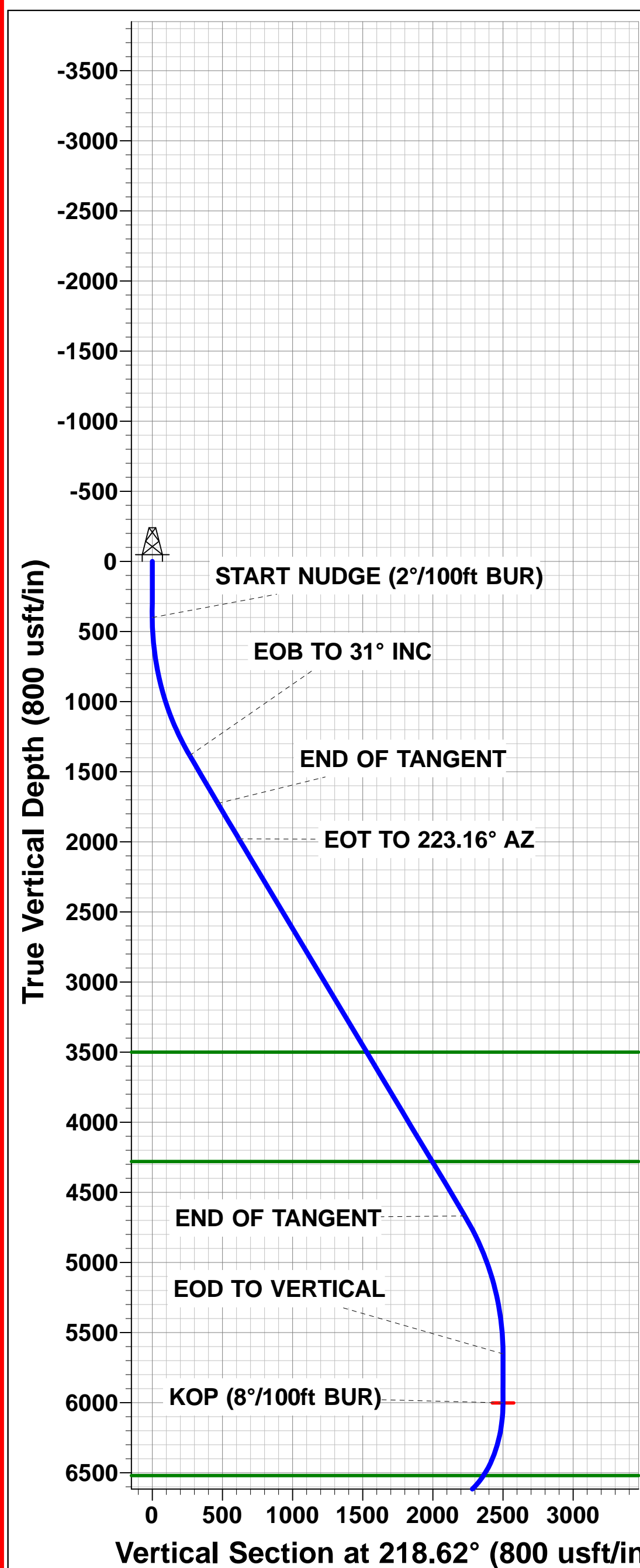
PROPOSED LOCAL COORDINATES:

SHL: 168ft FNL & 1742ft FEL of Sec 5
HZ LP *NEW*: 2100ft FNL & 2588ft FWL of Sec 5
BHL: 2150ft FNL & 0ft FEL of Sec 4



Azimuths to True North
Magnetic North: 8.16°

Magnetic Field
Strength: 52480.6snT
Dip Angle: 66.92°
Date: 13/01/2017
Model: IGRF2015



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SNOWMASS 9N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Reference Site:	NW NE SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SNOWMASS 9N	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 #4	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #4		
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 24/03/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,681.0	PROPOSAL #4 (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						
NW NE SEC. 5 T5N R64W 6th P.M.						
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	12,374.3	6,662.9	2,578.1	2,304.6	9.427	CC
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	12,400.0	6,662.7	2,578.2	2,304.0	9.404	ES
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	13,000.0	6,658.1	2,652.9	2,362.4	9.132	SF
ABDN VERT BAUER 1 - Wellbore #1 - Design #1	11,045.2	6,714.0	1,440.7	1,202.5	6.048	CC
ABDN VERT BAUER 1 - Wellbore #1 - Design #1	11,100.0	6,713.6	1,441.7	1,202.1	6.016	ES
ABDN VERT BAUER 1 - Wellbore #1 - Design #1	11,300.0	6,712.0	1,463.0	1,218.1	5.973	SF
ABDN VERT BAUER 2 - Wellbore #1 - Design #1	13,680.0	6,653.0	1,463.7	1,154.6	4.735	CC
ABDN VERT BAUER 2 - Wellbore #1 - Design #1	13,700.0	6,652.9	1,463.9	1,154.2	4.727	ES
ABDN VERT BAUER 2 - Wellbore #1 - Design #1	13,900.0	6,651.4	1,480.2	1,165.0	4.697	SF
EXIST HZ LUCI STATE B3-69HNL - Wellbore #1 - Wel	15,681.0	17,000.0	2,149.7	1,622.6	4.078	CC, ES, SF
EXIST VERT BAUER 21-4 - Wellbore #1 - Wellbore #1	12,353.3	6,500.0	1,520.8	1,380.5	10.839	CC
EXIST VERT BAUER 21-4 - Wellbore #1 - Wellbore #1	12,400.0	6,500.0	1,521.5	1,379.9	10.747	ES
EXIST VERT BAUER 21-4 - Wellbore #1 - Wellbore #1	12,800.0	6,500.0	1,585.0	1,432.6	10.396	SF
EXIST VERT BAUER 5 - Wellbore #1 - Wellbore #1	11,814.4	6,656.1	1,005.0	878.5	7.942	CC, ES
EXIST VERT BAUER 5 - Wellbore #1 - Wellbore #1	12,000.0	6,655.5	1,022.0	890.4	7.768	SF
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	13,704.2	6,657.8	2,767.6	2,457.7	8.932	CC
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	13,800.0	6,657.1	2,769.2	2,456.8	8.863	ES
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	14,400.0	6,652.6	2,853.7	2,524.7	8.675	SF
EXIST VERT FARMLAND 16-32 - Wellbore #1 - Design #	400.0	389.0	1,389.4	1,381.6	178.383	CC, ES
EXIST VERT FARMLAND 16-32 - Wellbore #1 - Design #	10,700.0	6,684.6	2,887.9	2,659.1	12.623	SF
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	14,883.8	6,400.0	1,544.2	1,335.6	7.402	CC
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	14,900.0	6,400.0	1,544.3	1,335.2	7.387	ES
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	15,200.0	6,400.0	1,576.2	1,358.9	7.254	SF
EXIST VERT FRENCH 5 - Wellbore #1 - Wellbore #1	14,548.7	6,623.7	803.8	602.2	3.986	CC, ES
EXIST VERT FRENCH 5 - Wellbore #1 - Wellbore #1	14,600.0	6,623.6	805.5	602.4	3.966	SF
EXIST VERT GRANADOS #4-3 - Wellbore #1 - Design #	15,681.0	6,633.0	1,508.2	1,143.9	4.141	CC, ES, SF
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Desi	15,093.7	6,647.4	2,694.4	2,346.3	7.740	CC
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Desi	15,200.0	6,646.6	2,696.5	2,345.4	7.681	ES
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Desi	15,681.0	6,643.0	2,757.6	2,393.3	7.569	SF
EXIST VERT MININGER PFEIF #4-5 - Wellbore #1 - Des	672.0	654.1	1,217.7	1,203.9	88.256	CC
EXIST VERT MININGER PFEIF #4-5 - Wellbore #1 - Des	9,800.0	6,685.5	1,375.0	1,169.2	6.682	ES
EXIST VERT MININGER PFEIF #4-5 - Wellbore #1 - Des	10,000.0	6,683.9	1,399.0	1,188.2	6.638	SF
EXIST VERT NOFFSINGER/MINN #5C - Wellbore #1 - V	9,088.7	6,690.2	646.0	589.1	11.343	CC
EXIST VERT NOFFSINGER/MINN #5C - Wellbore #1 - V	9,100.0	6,690.3	646.1	588.9	11.296	ES
EXIST VERT NOFFSINGER/MINN #5C - Wellbore #1 - V	9,300.0	6,690.7	679.7	618.0	11.005	SF
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	400.0	380.0	2,478.2	2,470.5	322.149	CC
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	11,100.0	6,672.6	2,589.8	2,350.6	10.825	ES

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

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SNOWMASS 9N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Reference Site:	NW NE SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SNOWMASS 9N	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 #4	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
NW NE SEC. 5 T5N R64W 6th P.M.						
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	11,800.0	6,667.2	2,699.0	2,441.1	10.464	SF
EXIST VERT WEBSTER 15-32 - Wellbore #1 - Design #1	400.0	386.0	906.8	899.1	116.908	CC, ES
EXIST VERT WEBSTER 15-32 - Wellbore #1 - Design #1	9,700.0	6,689.2	3,051.3	2,847.9	15.006	SF
SNOWMASS 10N - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	14.9	13.8	13.858	CC
SNOWMASS 10N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	16,156.5	303.8	-151.8	0.667	Level 1, ES, SF
SNOWMASS 1C - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	120.1	119.1	112.060	CC, ES
SNOWMASS 1C - ORIGINAL WELLBORE - PROPOSAL	15,681.0	14,764.3	1,978.3	1,530.3	4.416	SF
SNOWMASS 2N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	104.8	103.3	68.898	CC, ES
SNOWMASS 2N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	14,709.9	1,727.0	1,277.8	3.845	SF
SNOWMASS 3N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	90.0	88.5	59.134	CC, ES
SNOWMASS 3N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,283.2	1,475.2	1,011.9	3.184	SF
SNOWMASS 4N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	74.9	73.4	49.233	CC, ES
SNOWMASS 4N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,723.1	1,237.8	768.7	2.638	SF
SNOWMASS 5N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	59.8	58.3	39.331	CC, ES
SNOWMASS 5N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,395.9	995.1	531.5	2.147	SF
SNOWMASS 6N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	45.0	43.5	29.567	CC, ES
SNOWMASS 6N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,870.9	720.0	252.4	1.540	SF
SNOWMASS 7N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	29.9	28.4	19.665	CC
SNOWMASS 7N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,551.3	484.9	20.9	1.045	Level 2, ES, SF
SNOWMASS 8N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	15.1	13.5	9.902	CC
SNOWMASS 8N - ORIGINAL WELLBORE - PROPOSAL	15,681.0	15,999.2	279.4	-178.3	0.610	Level 1, ES, SF
NW NW SEC. 5 T5N R64W 6th P.M.						
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	6,298.0	5,610.8	1,517.7	1,356.2	9.397	CC
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	6,648.2	5,961.0	1,517.7	1,348.9	8.996	ES, SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	5,439.2	4,790.6	85.0	36.9	1.766	CC, ES, SF
EHRlich 5J-223 - ORIGINAL WELLBORE - PROPOSAL	7,100.0	8,585.2	368.2	303.2	5.663	SF
EHRlich 5J-223 - ORIGINAL WELLBORE - PROPOSAL	7,150.0	8,584.8	357.5	295.3	5.745	ES
EHRlich 5J-223 - ORIGINAL WELLBORE - PROPOSAL	7,177.1	8,584.6	356.0	295.3	5.871	CC
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,000.0	8,637.8	595.9	526.2	8.550	SF
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,100.0	8,637.0	571.5	506.8	8.837	ES
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,129.5	8,636.8	570.1	507.1	9.047	CC
EHRlich 5M-243 - ORIGINAL WELLBORE - PROPOSAL	7,500.0	8,771.4	61.3	18.9	1.445	Level 3, ES, SF
EHRlich 5M-243 - ORIGINAL WELLBORE - PROPOSAL	7,500.6	8,771.4	61.3	18.9	1.446	Level 3, CC
EHRlich 5M-343 - ORIGINAL WELLBORE - PROPOSAL	7,300.0	8,733.9	256.9	203.2	4.786	SF
EHRlich 5M-343 - ORIGINAL WELLBORE - PROPOSAL	7,345.0	8,733.6	251.6	200.8	4.955	CC, ES
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	3,669.4	3,286.5	942.0	912.2	31.638	CC
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	3,700.0	3,313.1	942.1	912.1	31.339	ES
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	4,300.0	3,834.7	993.1	958.5	28.689	SF
EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore	1,626.8	1,527.7	67.0	58.3	7.764	CC, ES, SF
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	8,472.7	6,689.6	30.9	-13.7	0.693	Level 1, CC, ES, SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1	6,648.2	6,009.4	1,178.8	1,134.2	26.427	ES, SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #1	6,871.1	6,222.6	1,174.1	1,140.4	34.821	CC
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	6,296.7	5,597.8	2,345.0	2,306.9	61.581	CC
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	6,298.0	5,600.0	2,345.0	2,303.7	56.799	ES
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	15,681.0	6,555.0	8,834.1	8,601.0	37.913	SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SNOWMASS 9N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Reference Site:	NW NE SEC. 5 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4657.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	SNOWMASS 9N	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 #4	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. 4 T5N R64W 6th P.M.						
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	9,766.8	6,686.9	1,102.7	1,029.9	15.158	CC
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	9,800.0	6,686.1	1,103.2	1,029.6	14.995	ES
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	10,200.0	6,676.0	1,184.7	1,100.9	14.149	SF
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	9,669.1	6,688.5	138.5	-62.1	0.691	Level 1, CC, ES, SF
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	15,681.0	6,663.0	1,223.5	978.5	4.993	CC, ES, SF
EXIST VERT ACHZIGER 1 - Wellbore #1 - Wellbore #1	10,808.4	6,664.4	1,116.8	1,017.2	11.212	CC, ES
EXIST VERT ACHZIGER 1 - Wellbore #1 - Wellbore #1	11,100.0	6,660.7	1,154.2	1,046.9	10.752	SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,136.1	6,674.3	20.7	-219.6	0.086	Level 1, CC, ES, SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Wellbore #1	11,105.7	6,528.0	147.9	102.7	3.270	CC, ES, SF
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	15,681.0	6,627.0	685.4	321.2	1.882	CC, ES, SF
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	15,012.6	6,624.9	79.3	-135.3	0.369	Level 1, CC, ES, SF
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	13,648.6	6,650.3	1,191.2	1,014.4	6.739	CC
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	13,700.0	6,650.3	1,192.3	1,014.1	6.692	ES
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	13,900.0	6,650.4	1,217.4	1,033.7	6.627	SF
EXIST VERT OGRADY 43-4 - Wellbore #1 - Wellbore #1	15,013.6	6,616.7	1,320.9	1,106.4	6.158	CC, ES
EXIST VERT OGRADY 43-4 - Wellbore #1 - Wellbore #1	15,200.0	6,617.1	1,334.0	1,114.3	6.072	SF
EXIST VERT SITZMAN 1A - Wellbore #1 - Wellbore #1	12,363.5	6,659.5	211.8	70.2	1.496	Level 3, CC, ES, SF
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	12,548.5	6,600.0	1,191.5	1,044.8	8.123	CC
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	12,600.0	6,600.0	1,192.6	1,044.5	8.054	ES
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	12,800.0	6,600.0	1,217.8	1,064.2	7.931	SF
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	13,710.7	6,649.8	147.4	-162.7	0.475	Level 1, CC, ES, SF
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Wellbore #1	13,658.9	6,475.0	237.0	109.8	1.862	CC, ES, SF
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	7,787.3	14,507.5	773.4	523.9	3.099	CC, ES, SF
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	7,788.6	14,720.3	500.4	258.0	2.064	CC
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	15,548.5	6,907.8	504.3	257.1	2.040	ES
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	15,600.0	6,877.5	505.9	257.5	2.037	SF

Offset Design NW NE SEC. 5 T5N R64W 6th P.M. - ABDN VERT ACHZIGER 14-33 - Wellbore #1 - Design #1											
Survey Program: 0-INC											
Reference											
Offset											
Semi Major Axis											
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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)
0.0	0.0	0.0	0.0	0.0	0.0	79.94	660.4	3,723.5	3,781.6		
100.0	100.0	80.0	80.0	0.1	0.7	79.94	660.4	3,723.5	3,781.6	3,780.8	0.76 4,991.945
200.0	200.0	180.0	180.0	0.3	2.7	79.94	660.4	3,723.5	3,781.6	3,778.5	3.05 1,239.189
300.0	300.0	280.0	280.0	0.5	4.9	79.94	660.4	3,723.5	3,781.6	3,776.2	5.42 698.039
400.0	400.0	380.0	380.0	0.8	6.9	79.94	660.4	3,723.5	3,781.6	3,773.9	7.69 491.588
500.0	500.0	480.0	480.0	1.0	9.0	-126.05	660.4	3,723.5	3,783.1	3,773.2	9.92 381.388
600.0	599.6	579.6	579.6	1.2	11.0	-126.04	660.4	3,723.5	3,787.8	3,775.6	12.12 312.571
700.0	698.8	678.8	678.8	1.4	13.0	-126.01	660.4	3,723.5	3,795.5	3,781.2	14.32 265.000
800.0	797.1	777.1	777.1	1.7	15.0	-125.96	660.4	3,723.5	3,806.3	3,789.8	16.54 230.146
900.0	894.3	874.3	874.3	2.2	16.9	-125.90	660.4	3,723.5	3,820.3	3,801.5	18.77 203.530
1,000.0	990.2	970.2	970.2	2.7	18.9	-125.81	660.4	3,723.5	3,837.4	3,816.3	21.02 182.584
1,100.0	1,084.4	1,064.4	1,064.4	3.3	20.8	-125.70	660.4	3,723.5	3,857.6	3,834.3	23.28 165.728
1,200.0	1,176.8	1,156.8	1,156.8	4.0	22.6	-125.54	660.4	3,723.5	3,881.1	3,855.5	25.55 151.925
1,300.0	1,267.1	1,247.1	1,247.1	4.8	24.4	-125.35	660.4	3,723.5	3,907.7	3,879.9	27.82 140.461
1,400.0	1,354.9	1,334.9	1,334.9	5.7	26.2	-125.11	660.4	3,723.5	3,937.6	3,907.5	30.10 130.823
1,433.3	1,383.7	1,363.7	1,363.7	6.0	26.8	-125.01	660.4	3,723.5	3,948.3	3,917.5	30.86 127.947
1,500.0	1,440.8	1,420.8	1,420.8	6.6	27.9	-125.38	660.4	3,723.5	3,970.1	3,937.7	32.47 122.268
1,600.0	1,526.5	1,506.5	1,506.5	7.6	29.7	-125.93	660.4	3,723.5	4,003.2	3,968.3	34.89 114.746

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