



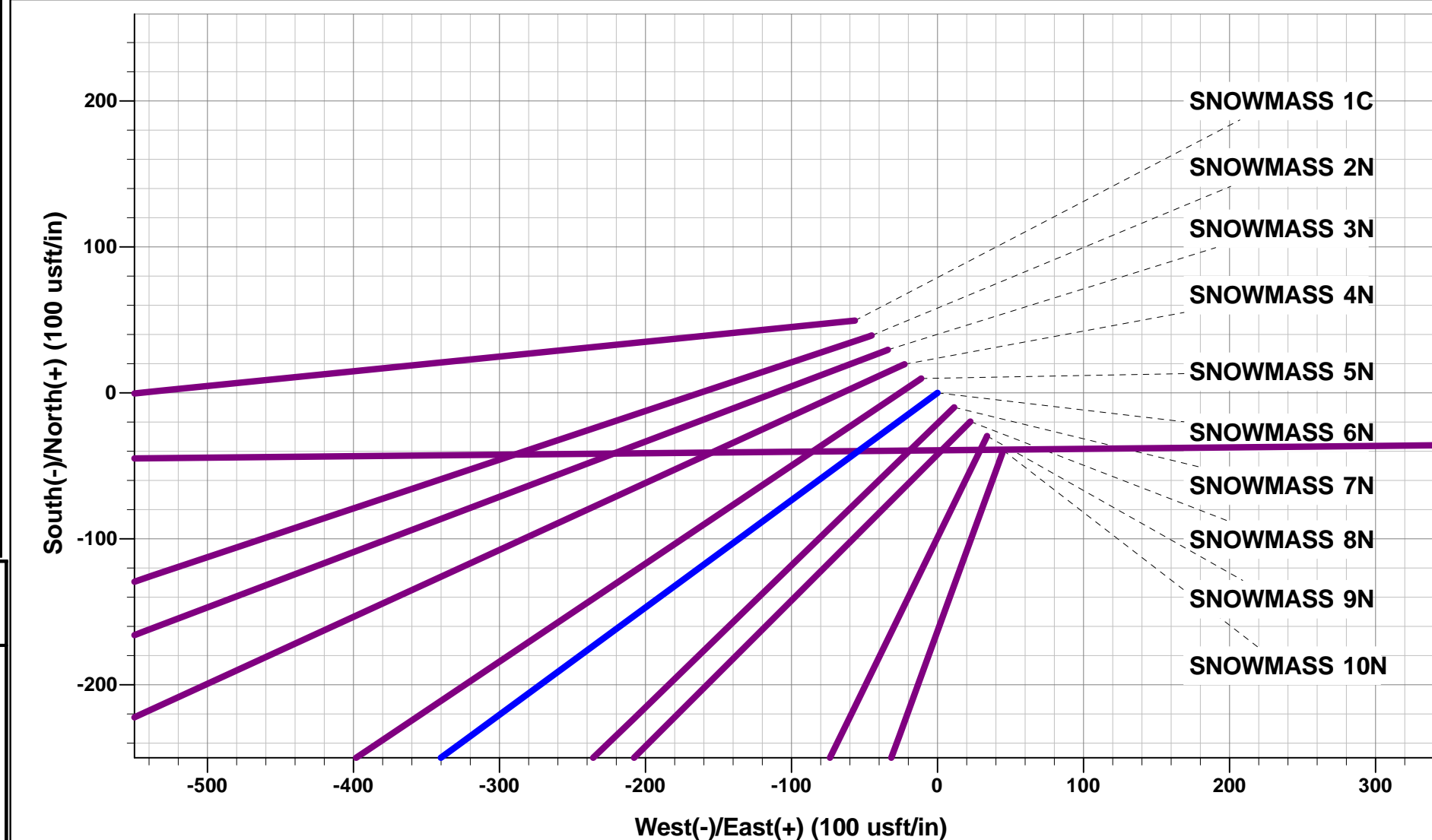
Project: WELD COUNTY, COLORADO
Site: NW NE SEC. 5 T5N R64W 6th P.M.
Well: SNOWMASS 6N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

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: 138ft FNL & 1776ft FEL of Sec 5
800.0	800.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2270.9	2344.7	30.89	233.68	-240.7	-327.5	-281.7	406.5	EOB TO 30.89° INC
4590.8	5048.2	30.89	233.68	-1062.9	-1446.0	-1243.6	1794.6	END OF TANGENT
6061.8	6592.9	0.00	233.68	-1303.6	-1773.5	-1525.3	2201.1	EOD TO VERTICAL
6091.8	6622.9	0.00	0.00	-1303.6	-1773.5	-1525.3	2201.1	KOP (8°/100ft BUR)
6808.0	7753.8	90.47	89.48	-1297.0	-1051.5	-815.0	2923.1	HZ LP *NEW*: 1435ft FNL & 2368ft FWL of Sec 5
6742.0	15878.1	90.46	89.48	-1223.4	7072.2	7177.3	11047.2	BHL: 1435ft FNL & 0ft FEL of Sec 4

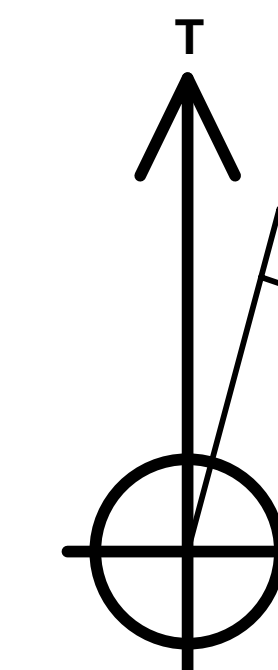
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SNOWMASS 6N (P2)	6091.8	-1303.6	-1773.5	40.431326	-104.577534
BHL - SNOWMASS 6N (P2)	6742.0	-1223.4	7072.3	40.431543	-104.545759
HZ LP *NEW* - SNOWMASS 6N (P2)	6808.0	-1297.0	-1051.5	40.431344	-104.574940



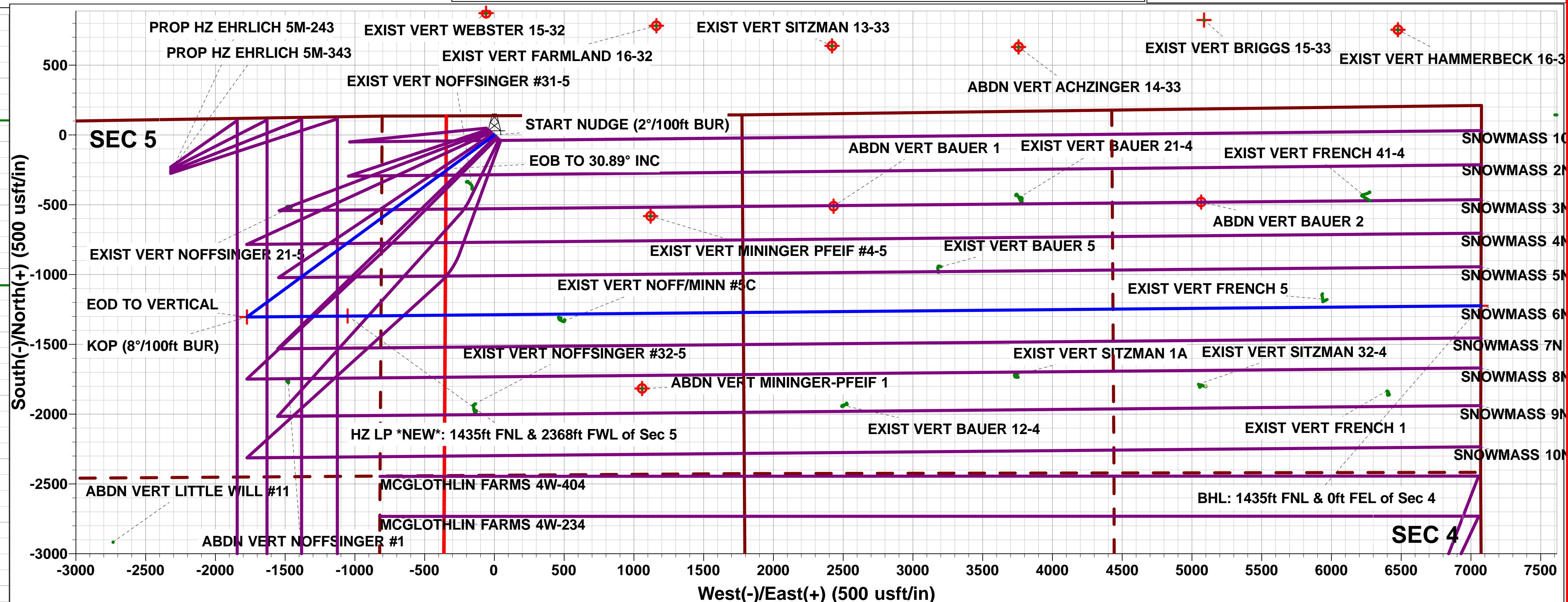
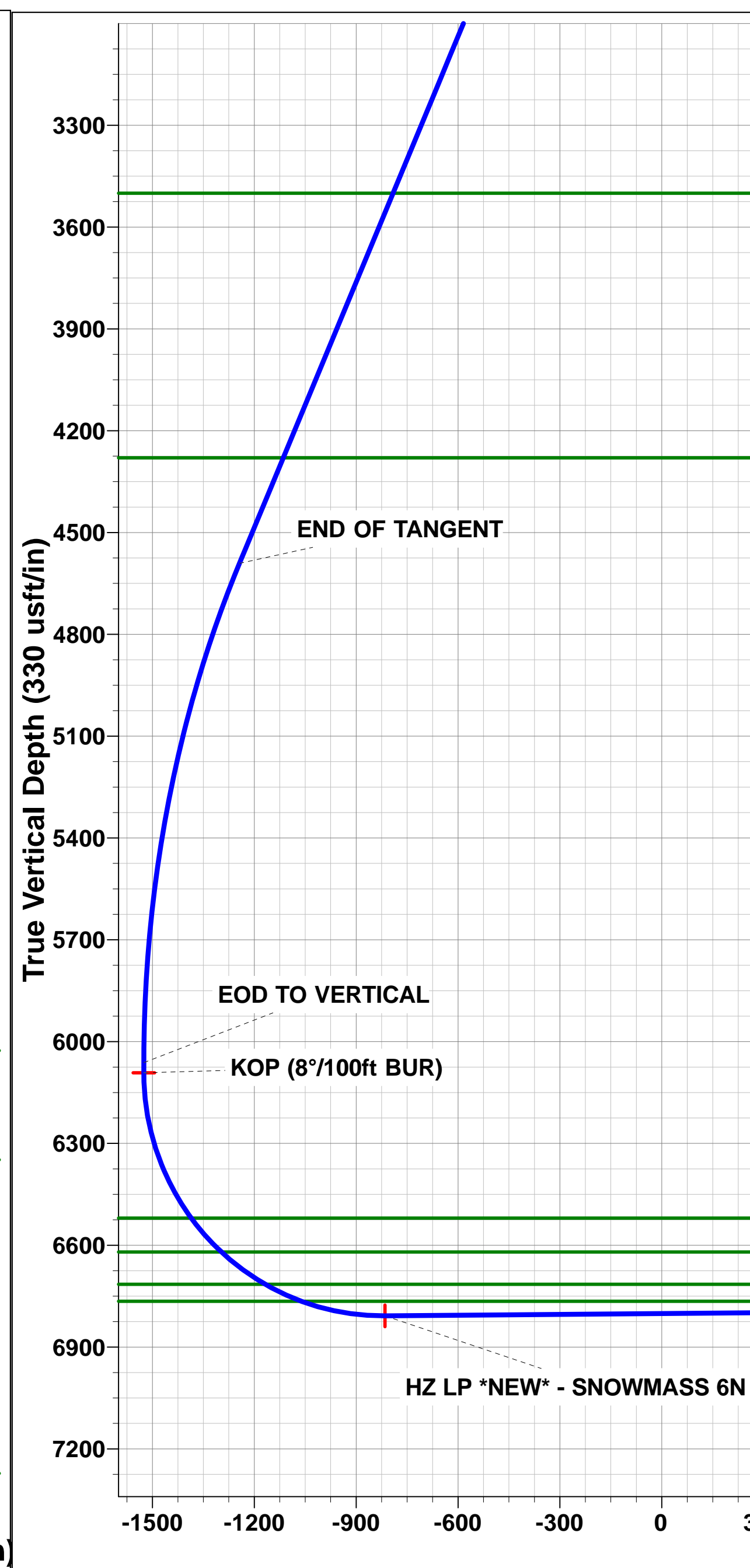
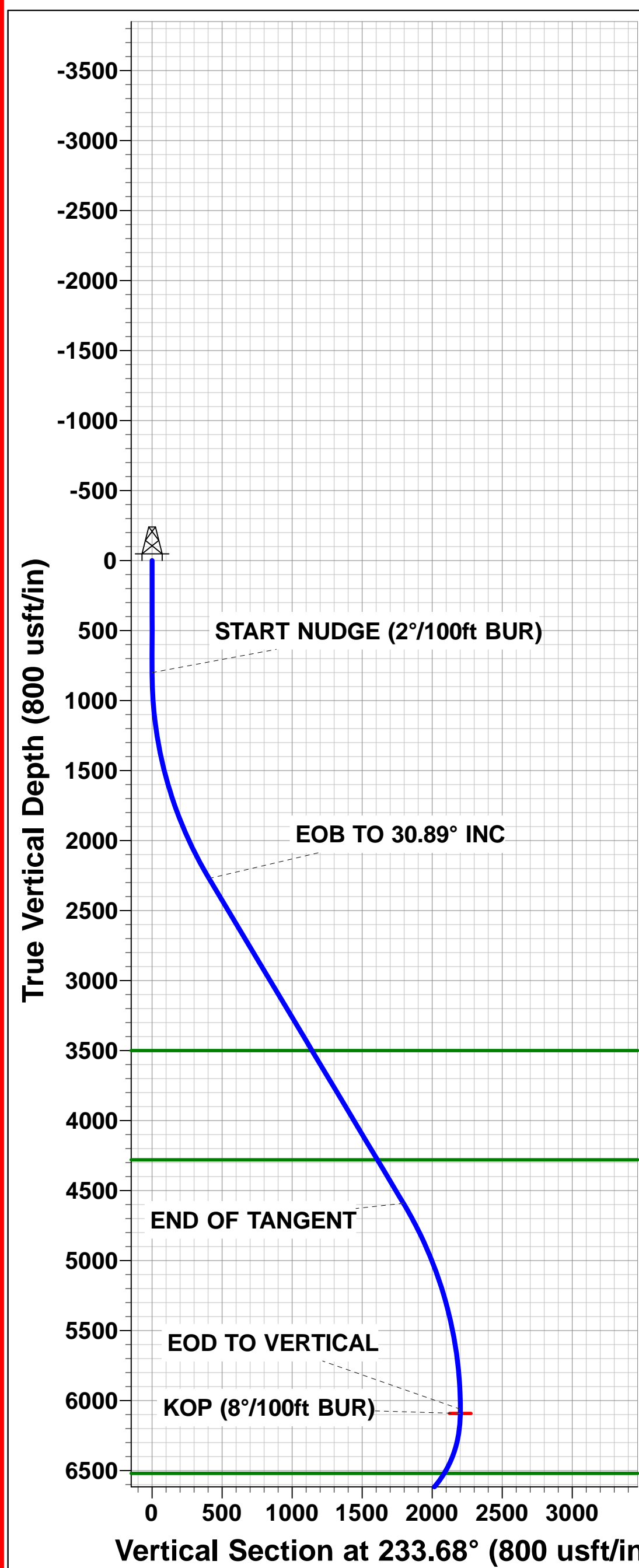
PROPOSED LOCAL COORDINATES:

SHL: 138ft FNL & 1776ft FEL of Sec 5
HZ LP *NEW*: 1435ft FNL & 2368ft FWL of Sec 5
BHL: 1435ft 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



BHL - SNOWMASS 6N (P2)

Vertical Section at 99.81° (330 usft/in)

PDC ENERGY

**WELD COUNTY, COLORADO
NW NE SEC. 5 T5N R64W 6th P.M.
SNOWMASS 6N**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

08 March, 2017



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well SNOWMASS 6N
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 6N	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 #2	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #2		
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	08/03/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,878.1	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
Offet Well - Wellbore - Design						
NW NE SEC. 5 T5N R64W 6th P.M.						
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	12,580.1	6,748.6	1,884.3	1,601.3	6.659	CC
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	12,600.0	6,748.5	1,884.4	1,600.9	6.647	ES
ABDN VERT ACHZINGER 14-33 - Wellbore #1 - Design	12,900.0	6,746.0	1,911.2	1,619.6	6.554	SF
ABDN VERT BAUER 1 - Wellbore #1 - Design #1	11,243.8	6,800.5	755.5	507.9	3.051	CC, ES
ABDN VERT BAUER 1 - Wellbore #1 - Design #1	11,300.0	6,800.0	757.6	508.5	3.041	SF
ABDN VERT BAUER 2 - Wellbore #1 - Design #1	13,878.6	6,738.1	761.6	443.3	2.393	CC
ABDN VERT BAUER 2 - Wellbore #1 - Design #1	13,900.0	6,737.9	761.9	443.0	2.389	ES, SF
EXIST HZ LUCCI STATE B3-69HNL - Wellbore #1 - Wel	15,878.1	17,000.0	1,467.4	933.3	2.747	CC, ES, SF
EXIST VERT BAUER 21-4 - Wellbore #1 - Wellbore #1	12,553.1	6,500.0	854.1	710.5	5.948	CC, ES
EXIST VERT BAUER 21-4 - Wellbore #1 - Wellbore #1	12,700.0	6,500.0	866.7	719.2	5.877	SF
EXIST VERT BAUER 5 - Wellbore #1 - Wellbore #1	12,010.6	6,700.0	317.2	184.1	2.383	CC, ES, SF
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	13,911.3	6,742.8	2,065.2	1,745.9	6.469	CC
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	14,000.0	6,742.1	2,067.1	1,745.4	6.426	ES
EXIST VERT BRIGGS 15-33 - Wellbore #1 - Design #1	14,300.0	6,739.7	2,101.4	1,771.6	6.370	SF
EXIST VERT FARMLAND 16-32 - Wellbore #1 - Design #	800.0	789.0	1,400.4	1,383.6	83.472	CC
EXIST VERT FARMLAND 16-32 - Wellbore #1 - Design #	900.0	889.0	1,402.1	1,383.1	73.859	ES
EXIST VERT FARMLAND 16-32 - Wellbore #1 - Design #	10,500.0	6,774.5	2,123.2	1,895.2	9.312	SF
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	15,083.7	6,400.0	875.8	670.2	4.259	CC
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	15,100.0	6,400.0	876.0	669.9	4.251	ES
EXIST VERT FRENCH 41-4 - Wellbore #1 - Wellbore #1	15,200.0	6,400.0	883.5	674.9	4.234	SF
EXIST VERT FRENCH 5 - Wellbore #1 - Wellbore #1	14,743.4	6,700.0	97.7	-108.9	0.473	Level 1, CC, ES, SF
EXIST VERT GRANADOS #4-3 - Wellbore #1 - Design #	15,878.1	6,717.0	921.1	547.9	2.468	CC, ES, SF
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Des	15,300.3	6,731.6	1,983.0	1,625.6	5.549	CC
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Des	15,400.0	6,730.8	1,985.5	1,625.4	5.513	ES
EXIST VERT HAMMERBECK 16-33 - Wellbore #1 - Des	15,600.0	6,729.2	2,005.5	1,639.9	5.485	SF
EXIST VERT MININGER PFEIF #4-5 - Wellbore #1 - Des	9,931.7	6,773.2	696.6	482.9	3.260	CC, ES
EXIST VERT MININGER PFEIF #4-5 - Wellbore #1 - Des	10,000.0	6,772.6	700.0	484.6	3.250	SF
EXIST VERT NOFFSINGER/MINN #5C - Wellbore #1 - V	9,282.7	6,769.4	27.6	-36.9	0.428	Level 1, CC, ES, SF
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	11,243.2	6,759.5	1,903.9	1,656.6	7.701	CC
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	11,300.0	6,759.0	1,904.7	1,656.0	7.658	ES
EXIST VERT SITZMAN 13-33 - Wellbore #1 - Design #1	11,600.0	6,756.6	1,937.0	1,680.4	7.547	SF
EXIST VERT WEBSTER 15-32 - Wellbore #1 - Design #	800.0	786.0	874.5	857.8	52.223	CC
EXIST VERT WEBSTER 15-32 - Wellbore #1 - Design #	900.0	886.0	875.5	856.5	46.171	ES
EXIST VERT WEBSTER 15-32 - Wellbore #1 - Design #	9,300.0	6,781.3	2,225.5	2,026.8	11.197	SF
SNOWMASS 10N - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	59.8	58.8	55.822	CC, ES
SNOWMASS 10N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	16,156.5	1,010.3	533.7	2.120	SF
SNOWMASS 1C - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	75.2	74.1	70.096	CC, 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 SNOWMASS 6N
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 6N	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 #2	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
NW NE SEC. 5 T5N R64W 6th P.M.						
SNOWMASS 1C - ORIGINAL WELLBORE - PROPOSAL	15,878.1	14,772.5	1,258.6	802.8	2.761	SF
SNOWMASS 2N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	59.8	58.3	39.331	CC, ES
SNOWMASS 2N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	14,717.8	1,009.8	552.8	2.210	SF
SNOWMASS 3N - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	45.0	43.0	22.824	CC, ES
SNOWMASS 3N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	15,290.7	762.6	293.6	1.626	SF
SNOWMASS 4N - ORIGINAL WELLBORE - PROPOSAL	600.0	600.0	29.9	27.5	12.362	CC, ES
SNOWMASS 4N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	15,730.4	519.8	42.5	1.089	Level 2, SF
SNOWMASS 5N - ORIGINAL WELLBORE - PROPOSAL	700.0	700.0	14.9	12.0	5.176	CC
SNOWMASS 5N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	15,403.3	287.0	-172.4	0.625	Level 1, ES, SF
SNOWMASS 7N - ORIGINAL WELLBORE - PROPOSAL	800.0	800.0	15.1	11.7	4.539	CC
SNOWMASS 7N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	15,556.6	245.1	-201.9	0.548	Level 1, ES, SF
SNOWMASS 8N - ORIGINAL WELLBORE - PROPOSAL	800.0	800.0	29.9	26.6	9.014	CC
SNOWMASS 8N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	16,001.5	445.4	-32.4	0.932	Level 1, ES, SF
SNOWMASS 9N - ORIGINAL WELLBORE - PROPOSAL	400.0	400.0	45.0	43.5	29.567	CC, ES
SNOWMASS 9N - ORIGINAL WELLBORE - PROPOSAL	15,878.1	15,692.3	720.1	252.2	1.539	SF
NW NW SEC. 5 T5N R64W 6th P.M.						
ABDN VERT LITTLE WILL #11 - Wellbore #1 - Design #1	6,622.9	6,050.8	1,875.7	1,711.5	11.420	CC, ES, SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	7,050.0	6,400.0	489.4	445.1	11.059	SF
ABDN VERT NOFFSINGER #1 - Wellbore #1 - Wellbore	7,099.7	6,400.0	487.4	443.6	11.118	CC, ES
EHRlich 5J-223 - ORIGINAL WELLBORE - PROPOSAL	7,200.0	7,924.8	142.1	100.0	3.377	SF
EHRlich 5J-223 - ORIGINAL WELLBORE - PROPOSAL	7,223.5	7,924.5	139.7	98.7	3.405	CC, ES
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,100.0	7,977.7	352.8	306.9	7.675	SF
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,150.0	7,977.1	347.1	303.3	7.917	ES
EHRlich 5J-323 - ORIGINAL WELLBORE - PROPOSAL	7,152.1	7,977.1	347.1	303.3	7.933	CC
EHRlich 5M-243 - ORIGINAL WELLBORE - PROPOSAL	7,671.5	8,108.4	76.1	47.6	2.667	CC, ES, SF
EHRlich 5M-343 - ORIGINAL WELLBORE - PROPOSAL	7,443.3	8,071.8	69.3	37.0	2.148	CC, ES, SF
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	4,511.9	4,120.2	458.6	424.4	13.418	CC, ES
EXIST VERT NOFFSINGER #21-5 - Wellbore #1 - Wellbore	4,700.0	4,283.6	468.1	432.5	13.146	SF
EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore	2,233.4	2,152.6	158.9	149.6	17.126	CC, ES
EXIST VERT NOFFSINGER #31-5 - Wellbore #1 - Wellbore	2,300.0	2,210.6	162.2	152.4	16.458	SF
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	8,660.8	6,782.4	637.2	585.5	12.330	CC, ES
EXIST VERT NOFFSINGER #32-5 - Wellbore #1 - Wellbore	8,800.0	6,779.2	652.2	597.8	11.998	SF
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	7,100.0	6,557.7	1,817.6	1,779.0	47.083	ES
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	7,153.1	6,602.8	1,817.2	1,779.1	47.633	CC
EXIST VERT PLUMB #B5-11 - Wellbore #1 - Wellbore #	15,878.1	6,750.0	8,914.9	8,674.4	37.062	SF
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	7,200.0	6,483.0	3,017.2	2,977.8	76.532	ES
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	7,234.7	6,507.5	3,017.1	2,977.9	76.931	CC
EXIST VERT PLUMB B5-14 - Wellbore #1 - Wellbore #1	15,878.1	6,657.7	9,054.8	8,814.4	37.677	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 SNOWMASS 6N
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 6N	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 #2	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. 4 T5N R64W 6th P.M.						
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	9,947.8	6,775.2	1,779.0	1,698.9	22.199	CC
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	10,000.0	6,774.2	1,779.8	1,698.4	21.855	ES
ABDN VERT ACHZIGER B5-9 - Wellbore #1 - Wellbore #	11,000.0	6,754.8	2,066.8	1,959.7	19.290	SF
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	9,859.3	6,775.7	537.8	327.9	2.562	CC, ES
ABDN VERT MININGER-PFEIF 1 - Wellbore #1 - Design	9,900.0	6,775.4	539.3	328.4	2.557	SF
EXIST DD MILLAGE 13-3D - Wellbore #1 - Wellbore #1	15,878.1	6,740.9	1,870.6	1,618.1	7.408	CC, ES, SF
EXIST VERT ACHZINGER 1 - Wellbore #1 - Wellbore #1	10,990.1	6,753.9	1,801.0	1,694.1	16.851	CC
EXIST VERT ACHZINGER 1 - Wellbore #1 - Wellbore #1	11,000.0	6,753.7	1,801.0	1,693.9	16.811	ES
EXIST VERT ACHZINGER 1 - Wellbore #1 - Wellbore #1	11,800.0	6,740.5	1,974.7	1,846.3	15.375	SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,325.4	6,760.8	665.0	415.4	2.665	CC, ES
EXIST VERT BAUER 12-4 - Wellbore #1 - Design #1	11,400.0	6,760.2	669.2	417.6	2.660	SF
EXIST VERT BAUER 12-4 - Wellbore #1 - Wellbore #1	11,295.8	6,528.0	711.5	600.1	6.389	CC
EXIST VERT BAUER 12-4 - Wellbore #1 - Wellbore #1	11,300.0	6,528.0	711.5	600.0	6.383	ES
EXIST VERT BAUER 12-4 - Wellbore #1 - Wellbore #1	11,400.0	6,528.0	719.1	605.1	6.308	SF
EXIST VERT FLACK 5-3 - Wellbore #1 - Design #1	15,878.1	6,711.0	860.5	487.2	2.305	CC, ES, SF
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	15,202.6	6,711.4	631.1	409.4	2.847	CC, ES
EXIST VERT FRENCH 1 - Wellbore #1 - Wellbore #1	15,300.0	6,711.0	638.6	414.2	2.846	SF
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	13,830.6	6,738.3	1,893.2	1,709.4	10.302	CC
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	13,900.0	6,738.1	1,894.5	1,708.8	10.203	ES
EXIST VERT OGRADY 1 - Wellbore #1 - Wellbore #1	14,400.0	6,737.1	1,977.0	1,777.5	9.911	SF
EXIST VERT OGRADY 43-4 - Wellbore #1 - Wellbore #1	15,195.0	6,695.0	2,032.4	1,811.0	9.180	CC
EXIST VERT OGRADY 43-4 - Wellbore #1 - Wellbore #1	15,300.0	6,695.3	2,035.1	1,810.8	9.073	ES
EXIST VERT OGRADY 43-4 - Wellbore #1 - Wellbore #1	15,700.0	6,696.3	2,094.2	1,858.8	8.896	SF
EXIST VERT SITZMAN 1A - Wellbore #1 - Wellbore #1	12,556.8	6,700.0	484.0	335.2	3.253	CC, ES
EXIST VERT SITZMAN 1A - Wellbore #1 - Wellbore #1	12,600.0	6,700.0	486.0	336.0	3.240	SF
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	12,730.7	6,600.0	1,890.3	1,736.7	12.308	CC
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	12,800.0	6,600.0	1,891.6	1,736.1	12.167	ES
EXIST VERT SITZMAN 23-4 - Wellbore #1 - Wellbore #1	13,400.0	6,600.0	2,005.3	1,833.4	11.671	SF
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Design #1	13,900.9	6,734.9	555.0	235.9	1.739	CC, ES, SF
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Wellbore #1	13,849.9	6,475.0	602.9	432.2	3.532	CC, ES
EXIST VERT SITZMAN 32-4 - Wellbore #1 - Wellbore #1	13,900.0	6,475.0	605.0	433.1	3.518	SF
MCGLOTHLIN FARMS 4W-234 - ORIGINAL WELLBORI	7,972.4	14,507.5	1,441.4	1,187.3	5.673	CC, ES, SF
MCGLOTHLIN FARMS 4W-404 - ORIGINAL WELLBORI	7,977.4	14,720.3	1,150.7	896.2	4.521	CC, ES, SF

Offset Design											Offset Site Error:		0.0 usft
Survey Program: 0-INC											Offset Well Error:		0.0 usft
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	80.47	630.9	3,757.4	3,810.1				
100.0	100.0	80.0	80.0	0.1	0.7	80.47	630.9	3,757.4	3,810.0	3,809.3	0.76	5,029.498	
200.0	200.0	180.0	180.0	0.3	2.7	80.47	630.9	3,757.4	3,810.0	3,807.0	3.05	1,248.511	
300.0	300.0	280.0	280.0	0.5	4.9	80.47	630.9	3,757.4	3,810.0	3,804.6	5.42	703.290	
400.0	400.0	380.0	380.0	0.8	6.9	80.47	630.9	3,757.4	3,810.0	3,802.4	7.69	495.286	
500.0	500.0	480.0	480.0	1.0	9.0	80.47	630.9	3,757.4	3,810.0	3,800.1	9.95	382.959	
600.0	600.0	580.0	580.0	1.2	11.0	80.47	630.9	3,757.4	3,810.0	3,797.8	12.20	312.363	
700.0	700.0	680.0	680.0	1.4	13.0	80.47	630.9	3,757.4	3,810.0	3,795.6	14.44	263.817	
800.0	800.0	780.0	780.0	1.7	15.0	80.47	630.9	3,757.4	3,810.0	3,793.4	16.68	228.364	
900.0	900.0	880.0	880.0	1.9	17.0	-153.21	630.9	3,757.4	3,811.6	3,792.7	18.89	201.743	
1,000.0	999.8	979.8	979.8	2.1	19.1	-153.21	630.9	3,757.4	3,816.3	3,795.2	21.06	181.187	

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