

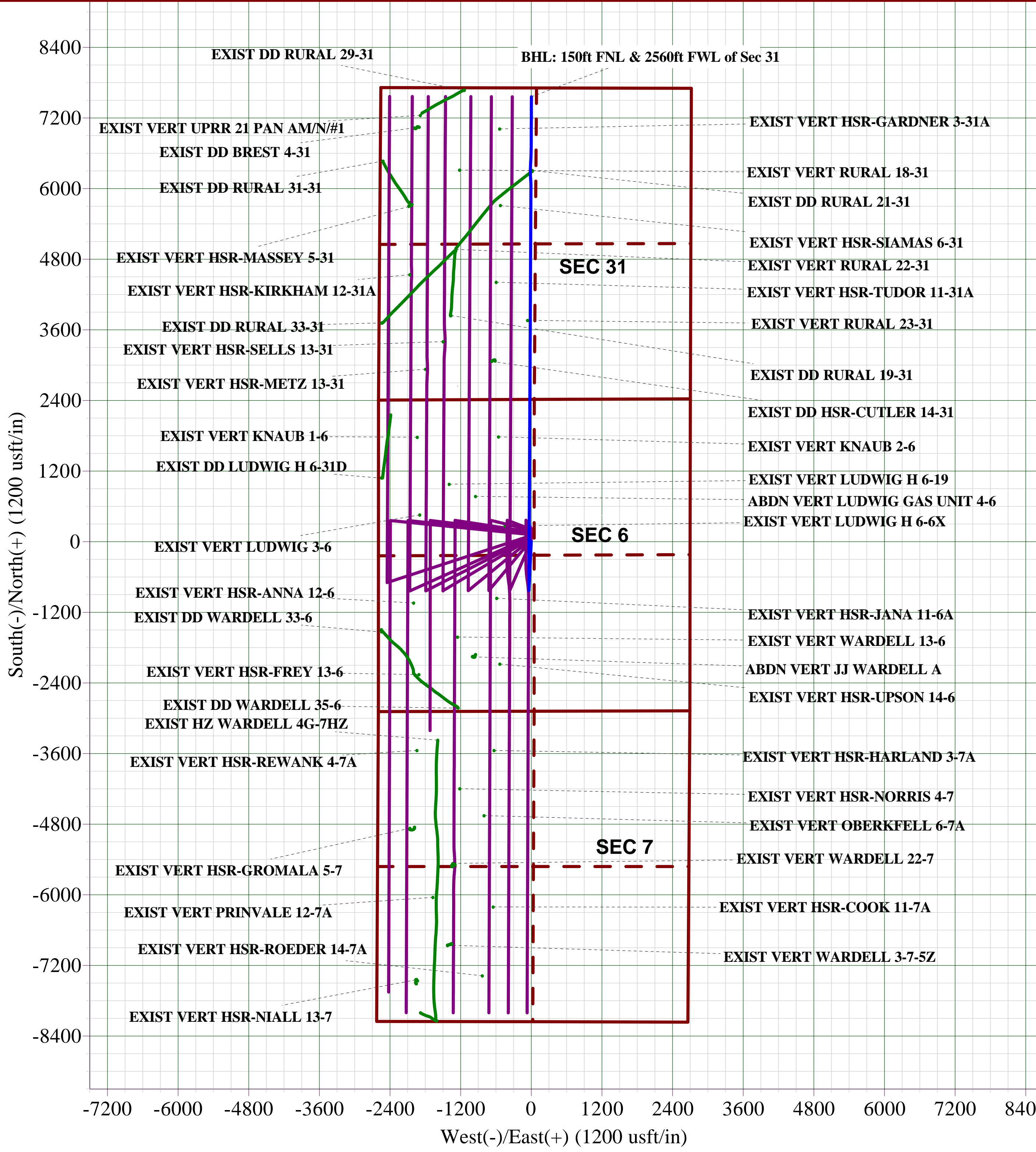
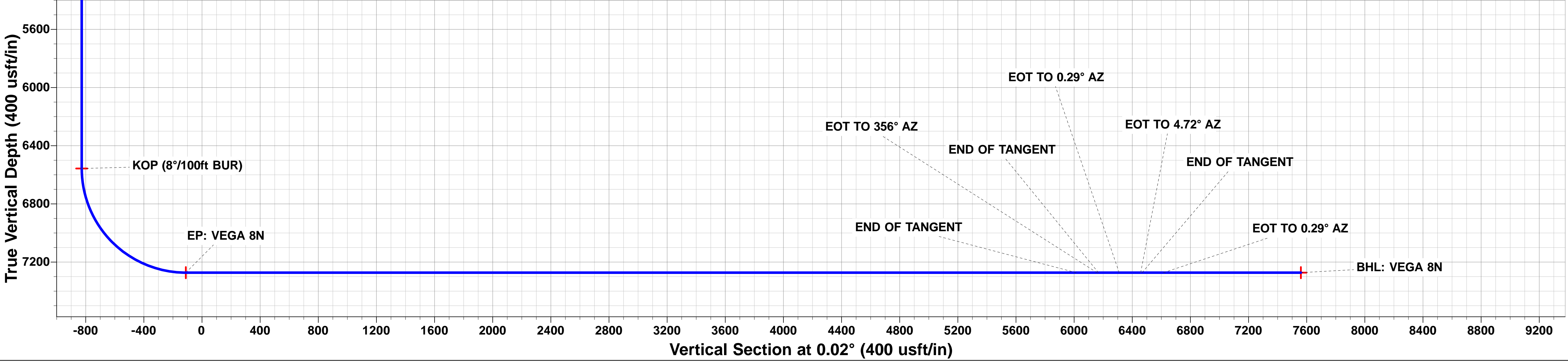
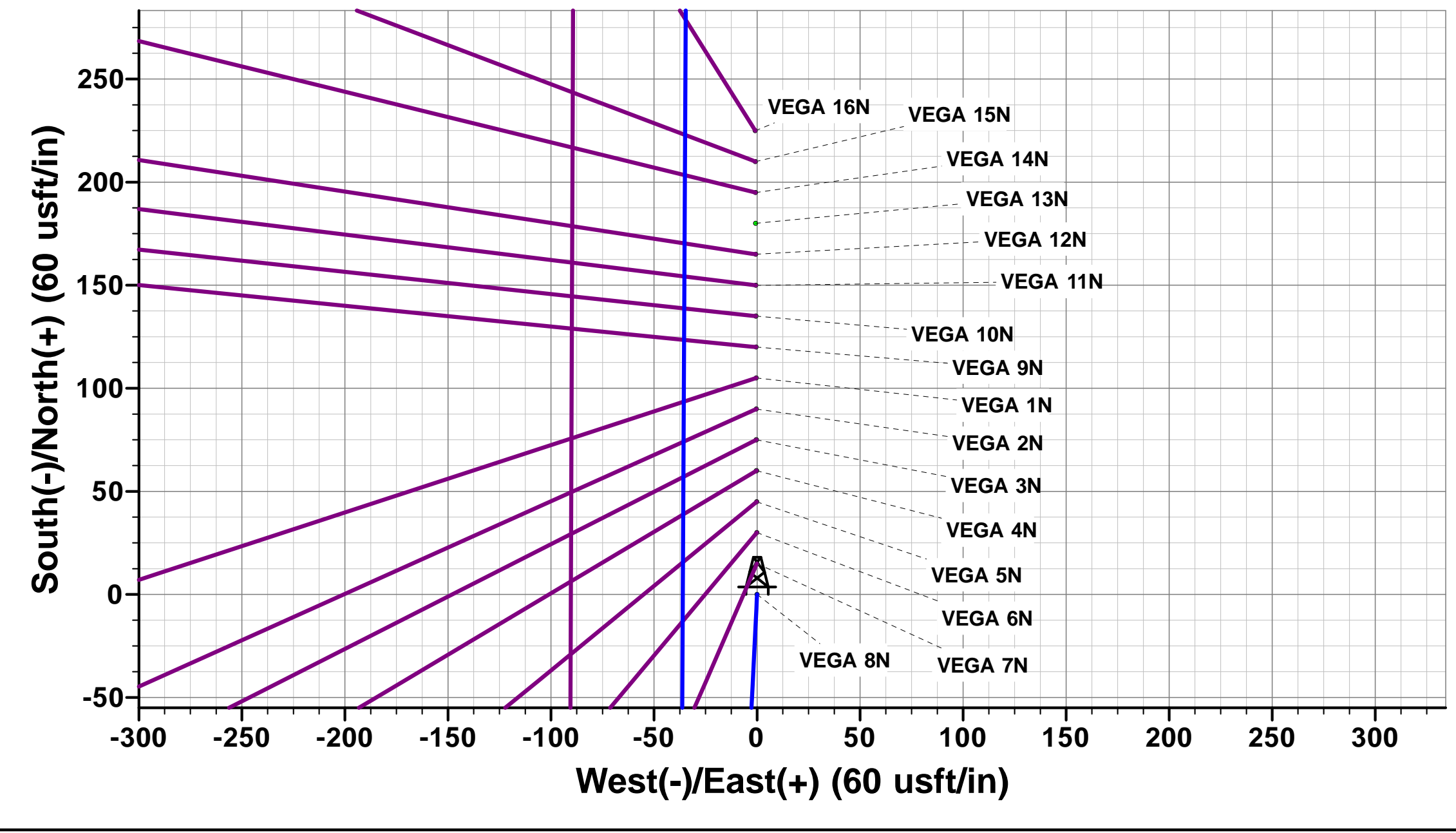
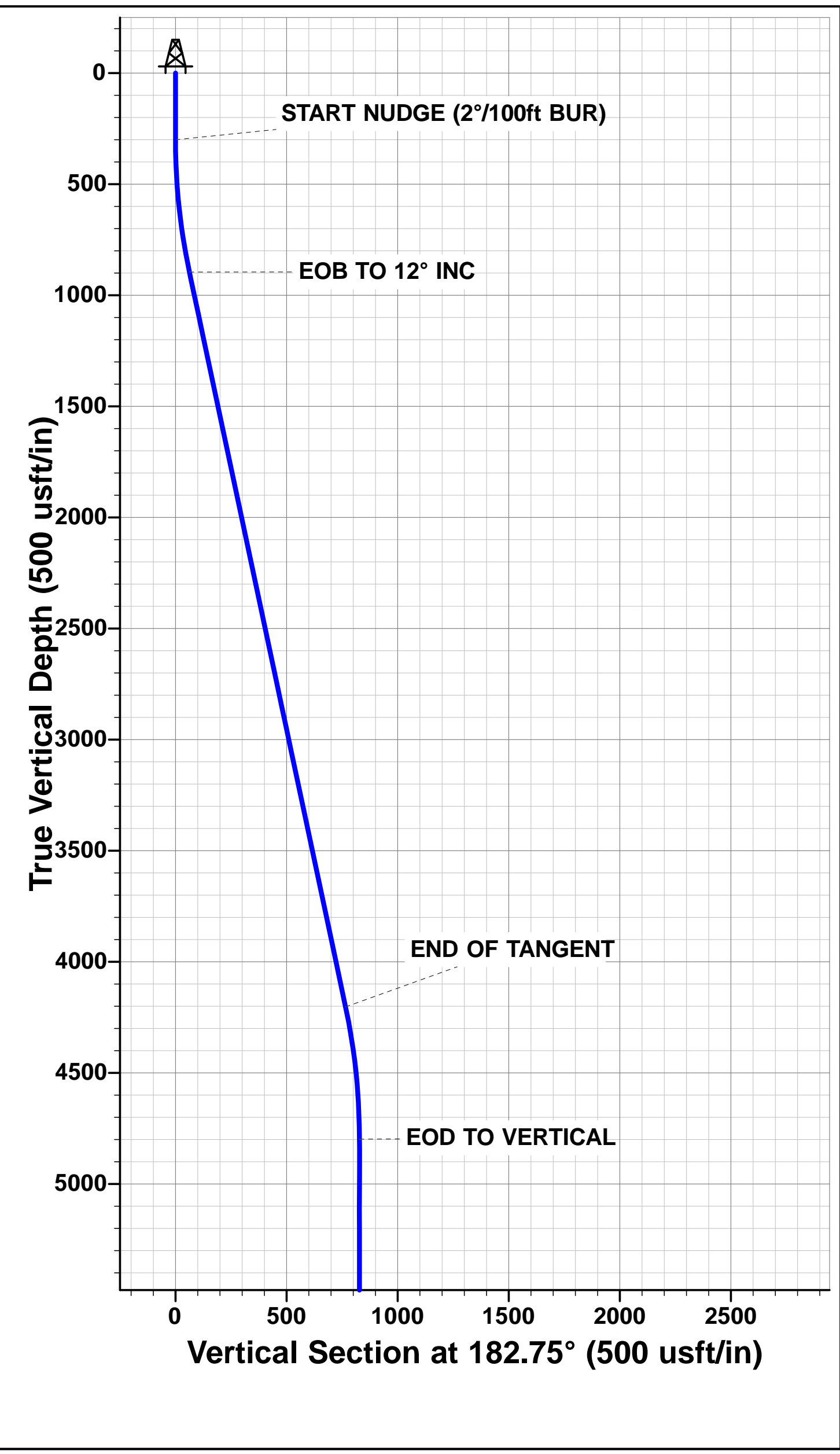


Project: WELD COUNTY, COLORADO
Site: SE NW SEC. 6 T3N R65W 6th P.M.
Well: VEGA 8N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS								
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 2419ft FNL & 2596ft FWL of Sec 6
300.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2"/100ft BUR)
895.59	899.97	12.00	182.78	-62.52	-3.04	-62.52	62.60	EOB TO 12° INC
4203.21	4281.47	12.00	182.78	-764.71	-37.18	-764.73	765.61	END OF TANGENT
4798.80	4881.44	0.00	0.00	-827.23	-40.21	-827.25	828.21	EOD TO VERTICAL
6556.80	6639.44	0.00	0.00	-827.23	-40.21	-827.25	828.21	KOP (8"/100ft BUR)
7273.00	7764.45	90.00	0.29	-111.04	-36.59	-111.05	1544.41	EP: 2530ft FNL & 2560ft FWL of Sec 6
7272.97	13890.00	90.00	0.29	6014.44	-5.61	6014.43	7669.97	END OF TANGENT
7272.97	14032.99	90.00	356.00	6157.32	-10.24	6157.32	7812.96	EOT TO 356° AZ
7272.97	14042.99	90.00	356.00	6167.30	-10.94	6167.29	7822.96	END OF TANGENT
7272.97	14185.99	90.00	0.29	6310.19	-15.57	6310.18	7965.96	EOT TO 0.29° AZ
7272.97	14333.66	90.00	4.72	6457.68	-9.12	6457.67	8113.63	EOT TO 4.72° AZ
7272.97	14343.66	90.00	4.72	6467.64	-8.29	6467.64	8123.63	END OF TANGENT
7272.97	14491.24	90.00	0.29	6615.05	-1.84	6615.05	8271.21	EOT TO 0.29° AZ
7273.00	15436.58	90.00	0.29	7560.38	2.99	7560.38	9216.55	BHL: 150ft FNL & 2560ft FWL of Sec 31

PROPOSED LOCAL COORDINATES:
SHL: 2419ft FNL & 2596ft FWL of Sec 6
EP: 2530ft FNL & 2560ft FWL of Sec 6
BHL: 150ft FNL & 2560ft FWL of Sec 31

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: VEGA 8N	6556.80	-827.23	-40.21	40.252765	-104.706499
EP: VEGA 8N	7273.00	-111.04	-36.59	40.254731	-104.706486
BHL: VEGA 8N	7273.00	7560.38	2.99	40.275789	-104.706344



PDC ENERGY

**WELD COUNTY, COLORADO
SE NW SEC. 6 T3N R65W 6th P.M.
VEGA 8N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

24 January, 2018



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well VEGA 8N
Project:	WELD COUNTY, COLORADO	TVD Reference:	WELL @ 4998.00usft (Original Well Elev)
Reference Site:	SE NW SEC. 6 T3N R65W 6th P.M.	MD Reference:	WELL @ 4998.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	VEGA 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 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 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	22/01/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,436.55	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
SE NW SEC. 6 T3N R65W 6th P.M.						
ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1	6,645.38	6,554.35	1,472.27	1,453.21	77.208	CC, ES
ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1	15,436.59	7,187.44	9,562.29	9,411.81	63.544	SF
ABDN VERT LUDWIG GAS UNIT 4-6 - Wellbore #1 - De	8,641.12	7,251.00	915.51	872.94	21.506	CC, ES
ABDN VERT LUDWIG GAS UNIT 4-6 - Wellbore #1 - De	8,900.00	7,250.99	951.41	905.07	20.531	SF
EXIST DD BREST 4-31 - Wellbore #1 - Wellbore #1	14,898.64	7,109.08	1,983.30	1,842.35	14.070	CC
EXIST DD BREST 4-31 - Wellbore #1 - Wellbore #1	14,900.00	7,109.09	1,983.30	1,842.32	14.068	ES
EXIST DD BREST 4-31 - Wellbore #1 - Wellbore #1	15,436.59	7,111.18	2,054.96	1,903.76	13.590	SF
EXIST DD HSR-CUTLER 14-31 - Wellbore #1 - Wellbore	10,936.03	7,258.72	649.66	582.19	9.629	CC, ES
EXIST DD HSR-CUTLER 14-31 - Wellbore #1 - Wellbore	11,100.00	7,258.38	670.04	599.54	9.504	SF
EXIST DD LUDWIG H 6-31D - Wellbore #1 - Wellbore #1	8,942.53	7,392.88	2,509.54	2,454.59	45.666	CC
EXIST DD LUDWIG H 6-31D - Wellbore #1 - Wellbore #1	9,000.00	7,392.58	2,510.20	2,454.36	44.951	ES
EXIST DD LUDWIG H 6-31D - Wellbore #1 - Wellbore #1	11,100.00	7,381.26	3,309.44	3,216.64	35.665	SF
EXIST DD RURAL 19-31 - Wellbore #1 - Wellbore #1	11,711.67	7,313.67	1,344.57	1,240.12	12.872	CC, ES
EXIST DD RURAL 19-31 - Wellbore #1 - Wellbore #1	12,000.00	7,313.88	1,375.14	1,265.29	12.518	SF
EXIST DD RURAL 21-31 - Wellbore #1 - Wellbore #1	14,182.79	7,511.84	30.64	-124.98	0.197	Level 1, CC, ES, SF
EXIST DD RURAL 29-31 - Wellbore #1 - Wellbore #1	15,436.59	7,312.00	1,145.19	979.79	6.924	CC, ES, SF
EXIST DD RURAL 31-31 - Wellbore #1 - Wellbore #1	14,247.88	7,352.01	2,509.73	2,364.22	17.247	CC, ES
EXIST DD RURAL 31-31 - Wellbore #1 - Wellbore #1	15,200.00	7,361.58	2,665.75	2,502.53	16.332	SF
EXIST DD RURAL 33-31 - Wellbore #1 - Wellbore #1	11,580.61	7,451.62	2,522.98	2,416.96	23.797	CC
EXIST DD RURAL 33-31 - Wellbore #1 - Wellbore #1	11,600.00	7,451.40	2,523.05	2,416.67	23.717	ES
EXIST DD RURAL 33-31 - Wellbore #1 - Wellbore #1	12,700.00	7,438.96	2,760.13	2,633.13	21.733	SF
EXIST DD WARDELL 33-6 - Wellbore #1 - Wellbore #1	4,091.62	3,805.94	2,466.70	2,440.20	93.085	CC
EXIST DD WARDELL 33-6 - Wellbore #1 - Wellbore #1	4,100.00	3,810.45	2,466.71	2,440.15	92.876	ES
EXIST DD WARDELL 33-6 - Wellbore #1 - Wellbore #1	15,436.59	7,107.33	9,432.36	9,264.96	56.348	SF
EXIST DD WARDELL 35-6 - Wellbore #1 - Wellbore #1	6,119.06	6,106.49	2,321.36	2,286.41	66.414	CC, ES
EXIST DD WARDELL 35-6 - Wellbore #1 - Wellbore #1	6,650.00	6,604.50	2,329.24	2,292.44	63.295	SF
EXIST HZ WARDELL 4G-7HZ - Wellbore #1 - Wellbore #	6,856.35	12,143.00	3,113.16	3,055.47	53.965	CC, ES
EXIST HZ WARDELL 4G-7HZ - Wellbore #1 - Wellbore #	7,764.45	12,143.00	3,624.10	3,522.52	35.678	SF
EXIST VERT HSR-ANNA 12-6 - Wellbore #1 - Design #1	6,639.44	6,534.80	1,970.39	1,935.29	56.139	CC
EXIST VERT HSR-ANNA 12-6 - Wellbore #1 - Design #1	6,650.00	6,545.36	1,970.39	1,935.25	56.068	ES
EXIST VERT HSR-ANNA 12-6 - Wellbore #1 - Design #1	13,890.00	7,250.97	7,331.95	7,194.67	53.408	SF
EXIST VERT HSR-COOK 11-7A - Wellbore #1 - Design #	6,639.44	6,534.80	5,412.38	5,383.00	184.170	CC, ES
EXIST VERT HSR-COOK 11-7A - Wellbore #1 - Design #	11,600.00	7,250.98	9,949.87	9,855.74	105.697	SF
EXIST VERT HSR-FREY 13-6 - Wellbore #1 - Design #1	6,639.44	6,534.80	2,352.25	2,319.27	71.327	CC
EXIST VERT HSR-FREY 13-6 - Wellbore #1 - Design #1	6,650.00	6,545.36	2,352.30	2,319.26	71.203	ES
EXIST VERT HSR-FREY 13-6 - Wellbore #1 - Design #1	15,400.00	7,251.00	9,965.74	9,801.32	60.610	SF
EXIST VERT HSR-GARDNER 3-31A - Wellbore #1 - Des	14,887.85	7,250.98	537.42	382.76	3.475	CC

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 VEGA 8N
Project:	WELD COUNTY, COLORADO	TVD Reference:	WELL @ 4998.00usft (Original Well Elev)
Reference Site:	SE NW SEC. 6 T3N R65W 6th P.M.	MD Reference:	WELL @ 4998.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	VEGA 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 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 NW SEC. 6 T3N R65W 6th P.M.						
EXIST VERT HSR-GARDNER 3-31A - Wellbore #1 - Des	14,900.00	7,250.98	537.56	382.67	3.470	ES, SF
EXIST VERT HSR-GROMALA 5-7 - Wellbore #1 - Wellbo	6,651.36	6,619.87	4,529.38	4,511.82	257.888	CC, ES
EXIST VERT HSR-GROMALA 5-7 - Wellbore #1 - Wellbo	12,700.00	7,400.00	9,908.80	9,808.48	98.772	SF
EXIST VERT HSR-HARLAND 3-7A - Wellbore #1 - Desig	6,639.44	6,534.80	2,783.22	2,753.68	94.216	CC, ES
EXIST VERT HSR-HARLAND 3-7A - Wellbore #1 - Desig	14,200.00	7,250.97	9,890.19	9,747.80	69.463	SF
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	6,639.44	6,534.80	563.35	528.54	16.185	CC
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	6,650.00	6,545.36	563.37	528.51	16.162	ES
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	6,700.00	6,595.29	563.97	528.98	16.118	SF
EXIST VERT HSR-KIRKHAM 12-31A - Wellbore #1 - Des	12,402.39	7,250.98	2,050.67	1,941.50	18.784	CC, ES
EXIST VERT HSR-KIRKHAM 12-31A - Wellbore #1 - Des	13,100.00	7,250.97	2,166.08	2,043.76	17.708	SF
EXIST VERT HSR-MASSEY 5-31 - Wellbore #1 - Wellbo	13,559.36	7,148.91	2,072.87	1,955.91	17.722	CC
EXIST VERT HSR-MASSEY 5-31 - Wellbore #1 - Wellbo	13,600.00	7,147.71	2,073.27	1,955.53	17.610	ES
EXIST VERT HSR-MASSEY 5-31 - Wellbore #1 - Wellbo	14,185.99	7,130.74	2,154.41	2,026.30	16.816	SF
EXIST VERT HSR-METZ 13-31 - Wellbore #1 - Design #	10,797.16	7,250.99	1,774.76	1,695.49	22.390	CC
EXIST VERT HSR-METZ 13-31 - Wellbore #1 - Design #	10,800.00	7,250.99	1,774.76	1,695.44	22.375	ES
EXIST VERT HSR-METZ 13-31 - Wellbore #1 - Design #	11,500.00	7,250.98	1,908.86	1,816.59	20.687	SF
EXIST VERT HSR-NIAL 13-7 - Wellbore #1 - Wellbore #	5,704.67	5,605.34	6,880.50	6,865.25	450.945	CC
EXIST VERT HSR-NIAL 13-7 - Wellbore #1 - Wellbore #	5,900.00	5,785.24	6,880.70	6,865.10	440.967	ES
EXIST VERT HSR-NIAL 13-7 - Wellbore #1 - Wellbore #	10,200.00	7,219.66	9,960.33	9,906.19	183.965	SF
EXIST VERT HSR-NORRIS 4-7 - Wellbore #1 - Design #	6,639.44	6,534.80	3,569.20	3,539.30	119.395	CC, ES
EXIST VERT HSR-NORRIS 4-7 - Wellbore #1 - Design #	13,600.00	7,250.97	9,995.12	9,863.34	75.844	SF
EXIST VERT HSR-REWANK 4-7A - Wellbore #1 - Desig	6,639.44	6,534.80	3,318.24	3,287.03	106.341	CC, ES
EXIST VERT HSR-REWANK 4-7A - Wellbore #1 - Desig	14,100.00	7,250.97	9,959.20	9,818.51	70.788	SF
EXIST VERT HSR-ROEDER 14-7A - Wellbore #1 - Desig	6,639.44	6,534.80	6,595.84	6,566.45	224.390	CC, ES
EXIST VERT HSR-ROEDER 14-7A - Wellbore #1 - Desig	10,400.00	7,250.99	9,932.89	9,860.87	137.920	SF
EXIST VERT HSR-SELLS 13-31 - Wellbore #1 - Design	11,268.60	7,250.98	1,478.49	1,390.52	16.806	CC
EXIST VERT HSR-SELLS 13-31 - Wellbore #1 - Design	11,300.00	7,250.98	1,478.83	1,390.27	16.700	ES
EXIST VERT HSR-SELLS 13-31 - Wellbore #1 - Design	11,700.00	7,250.98	1,540.15	1,444.14	16.043	SF
EXIST VERT HSR-SIAMAS 6-31 - Wellbore #1 - Design	13,586.78	7,250.97	516.17	384.63	3.924	CC
EXIST VERT HSR-SIAMAS 6-31 - Wellbore #1 - Design	13,600.00	7,250.97	516.34	384.55	3.918	ES, SF
EXIST VERT HSR-TUDOR 11-31A - Wellbore #1 - Desig	12,282.23	7,250.98	582.16	475.25	5.445	CC
EXIST VERT HSR-TUDOR 11-31A - Wellbore #1 - Desig	12,300.00	7,250.98	582.43	475.18	5.431	ES, SF
EXIST VERT HSR-UPSON 14-6 - Wellbore #1 - Design #	6,639.44	6,534.80	1,345.50	1,315.45	44.776	CC, ES
EXIST VERT HSR-UPSON 14-6 - Wellbore #1 - Design #	6,650.00	6,545.36	1,345.57	1,315.49	44.721	SF
EXIST VERT KNAUB 1-6 - Wellbore #1 - Design #1	9,641.64	7,250.99	1,908.55	1,850.01	32.601	CC
EXIST VERT KNAUB 1-6 - Wellbore #1 - Design #1	9,700.00	7,250.99	1,909.44	1,849.89	32.062	ES
EXIST VERT KNAUB 1-6 - Wellbore #1 - Design #1	10,800.00	7,250.99	2,232.57	2,153.25	28.147	SF
EXIST VERT KNAUB 2-6 - Wellbore #1 - Design #1	9,655.84	7,250.99	529.86	471.07	9.013	CC, ES
EXIST VERT KNAUB 2-6 - Wellbore #1 - Design #1	9,700.00	7,250.99	531.70	472.15	8.928	SF
EXIST VERT LUDWIG 3-6 - Wellbore #1 - Design #1	8,323.09	7,251.00	1,860.12	1,821.54	48.218	CC, ES
EXIST VERT LUDWIG 3-6 - Wellbore #1 - Design #1	10,100.00	7,250.99	2,572.44	2,505.82	38.616	SF
EXIST VERT LUDWIG H 6-19 - Wellbore #1 - Design #1	8,845.44	7,251.00	1,362.28	1,316.76	29.927	CC, ES
EXIST VERT LUDWIG H 6-19 - Wellbore #1 - Design #1	9,600.00	7,250.99	1,557.29	1,499.47	26.932	SF
EXIST VERT LUDWIG H 6-6X - Wellbore #1 - Design #1	8,140.18	7,251.00	411.98	375.22	11.207	CC, ES
EXIST VERT LUDWIG H 6-6X - Wellbore #1 - Design #1	8,200.00	7,251.00	416.30	379.01	11.163	SF
EXIST VERT OBERKFELL 6-7A - Wellbore #1 - Design #	6,639.44	6,534.80	3,902.19	3,872.69	132.259	CC, ES
EXIST VERT OBERKFELL 6-7A - Wellbore #1 - Design #	13,100.00	7,250.97	9,910.44	9,788.11	81.018	SF
EXIST VERT PRINVALE 12-7A - Wellbore #1 - Design #	6,639.44	6,534.80	5,463.96	5,434.18	183.462	CC, ES
EXIST VERT PRINVALE 12-7A - Wellbore #1 - Design #	11,600.00	7,250.98	9,905.65	9,811.51	105.227	SF
EXIST VERT RURAL 18-31 - Wellbore #1 - Design #1	14,185.18	7,250.97	1,202.56	1,060.41	8.460	CC
EXIST VERT RURAL 18-31 - Wellbore #1 - Design #1	14,200.00	7,250.97	1,202.71	1,060.33	8.447	ES
EXIST VERT RURAL 18-31 - Wellbore #1 - Design #1	14,300.00	7,250.97	1,211.46	1,067.74	8.429	SF
EXIST VERT RURAL 22-31 - Wellbore #1 - Design #1	12,837.26	7,250.98	1,269.50	1,152.13	10.817	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 VEGA 8N
Project:	WELD COUNTY, COLORADO	TVD Reference:	WELL @ 4998.00usft (Original Well Elev)
Reference Site:	SE NW SEC. 6 T3N R65W 6th P.M.	MD Reference:	WELL @ 4998.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	VEGA 8N	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SE NW SEC. 6 T3N R65W 6th P.M.						
EXIST VERT RURAL 22-31 - Wellbore #1 - Design #1	13,100.00	7,250.97	1,296.40	1,174.08	10.598	SF
EXIST VERT RURAL 23-31 - Wellbore #1 - Design #1	11,636.42	7,250.98	45.87	-48.95	0.484	Level 1, CC, ES, SF
EXIST VERT UPRR 21 PAN AM/N#1 - Wellbore #1 - De	15,110.46	4,686.00	3,183.92	3,079.52	30.496	CC, ES
EXIST VERT UPRR 21 PAN AM/N#1 - Wellbore #1 - De	15,436.59	4,686.00	3,200.58	3,092.04	29.486	SF
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	6,639.44	6,534.80	1,447.83	1,414.45	43.371	CC
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	6,650.00	6,545.36	1,447.88	1,414.44	43.297	ES
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	6,700.00	6,595.29	1,449.25	1,415.69	43.195	SF
EXIST VERT WARDELL 22-7 - Wellbore #1 - Wellbore #	6,670.09	6,770.76	4,846.30	4,829.45	287.491	CC, ES
EXIST VERT WARDELL 22-7 - Wellbore #1 - Wellbore #	12,300.00	7,300.00	9,978.77	9,885.90	107.451	SF
EXIST VERT WARDELL 3-7-5Z - Wellbore #1 - Wellbore	4,877.75	4,768.72	6,169.67	6,156.22	459.014	CC, ES
EXIST VERT WARDELL 3-7-5Z - Wellbore #1 - Wellbore	10,900.00	7,300.00	9,980.28	9,912.97	148.262	SF
VEGA 10N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	134.98	133.90	125.894	CC, ES
VEGA 10N - ORIGINAL WELLBORE - PROPOSAL #1	10,200.00	7,200.00	2,920.41	2,848.39	40.547	SF
VEGA 11N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	149.95	148.88	139.859	CC, ES
VEGA 11N - ORIGINAL WELLBORE - PROPOSAL #1	6,700.00	8,333.17	1,761.51	1,714.71	37.640	SF
VEGA 12N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	164.99	163.92	153.893	CC, ES
VEGA 12N - ORIGINAL WELLBORE - PROPOSAL #1	6,900.00	8,253.69	1,336.48	1,291.96	30.018	SF
VEGA 14N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	194.94	193.87	181.824	CC, ES
VEGA 14N - ORIGINAL WELLBORE - PROPOSAL #1	7,300.00	7,930.64	667.29	628.04	17.001	SF
VEGA 15N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	209.95	208.88	195.823	CC, ES
VEGA 15N - ORIGINAL WELLBORE - PROPOSAL #1	7,251.82	7,889.59	361.77	321.74	9.039	SF
VEGA 16N - ORIGINAL WELLBORE - PROPOSAL #1	7,613.25	7,594.53	53.96	17.54	1.482	Level 3, CC, ES, SF
VEGA 1N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	104.99	103.92	97.929	CC, ES
VEGA 1N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,842.93	2,411.01	2,116.15	8.177	SF
VEGA 2N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	89.95	88.87	83.895	CC, ES
VEGA 2N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,879.05	2,024.59	1,729.17	6.853	SF
VEGA 3N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	75.01	73.94	69.964	CC, ES
VEGA 3N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,687.04	1,753.72	1,458.42	5.939	SF
VEGA 4N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	60.00	58.93	55.964	CC, ES
VEGA 4N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,648.91	1,459.71	1,164.08	4.938	SF
VEGA 5N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	44.96	43.88	41.931	CC, ES
VEGA 5N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,454.20	1,033.30	738.02	3.499	SF
VEGA 6N - ORIGINAL PROPOSAL - PROPOSAL #1	300.00	300.00	29.98	28.91	27.965	CC, ES
VEGA 6N - ORIGINAL PROPOSAL - PROPOSAL #1	15,436.59	15,471.60	679.87	383.95	2.297	SF
VEGA 7N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	14.97	13.90	13.966	CC, ES
VEGA 7N - ORIGINAL WELLBORE - PROPOSAL #1	15,436.59	15,362.81	335.87	47.89	1.166	Level 2, SF
VEGA 9N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	119.97	118.89	111.894	CC, ES
VEGA 9N - ORIGINAL WELLBORE - PROPOSAL #1	11,100.00	7,200.00	3,794.32	3,705.09	42.521	SF

Offset Design		SE NW SEC. 6 T3N R65W 6th P.M. - ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1										Offset Site Error:		0.00 usft	
Survey Program:		100-GYD_CT										Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
							+N/-S (usft)	+E/-W (usft)							
0.00	0.00	0.00	0.00	0.00	0.00	-153.79	-1,918.66	-944.41	2,138.58						
100.00	100.00	81.76	81.76	0.09	0.09	-153.79	-1,918.59	-944.52	2,138.48	2,138.31	0.17	N/A			
200.00	200.00	188.56	188.56	0.31	0.21	-153.78	-1,918.27	-944.76	2,138.31	2,137.79	0.52	4,121.582			
256.04	256.04	237.04	237.04	0.44	0.23	-153.78	-1,918.10	-944.85	2,138.18	2,137.52	0.67	3,206.503			
300.00	300.00	272.86	272.86	0.54	0.24	-153.77	-1,918.11	-944.97	2,138.27	2,137.49	0.77	2,762.640			
400.00	399.98	362.54	362.54	0.74	0.30	23.48	-1,918.56	-945.47	2,137.35	2,136.32	1.04	2,061.791			

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