



Project: WELD COUNTY, COLORADO
Site: SE NW SEC. 6 T3N R65W 6th P.M.
Well: VEGA 2N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

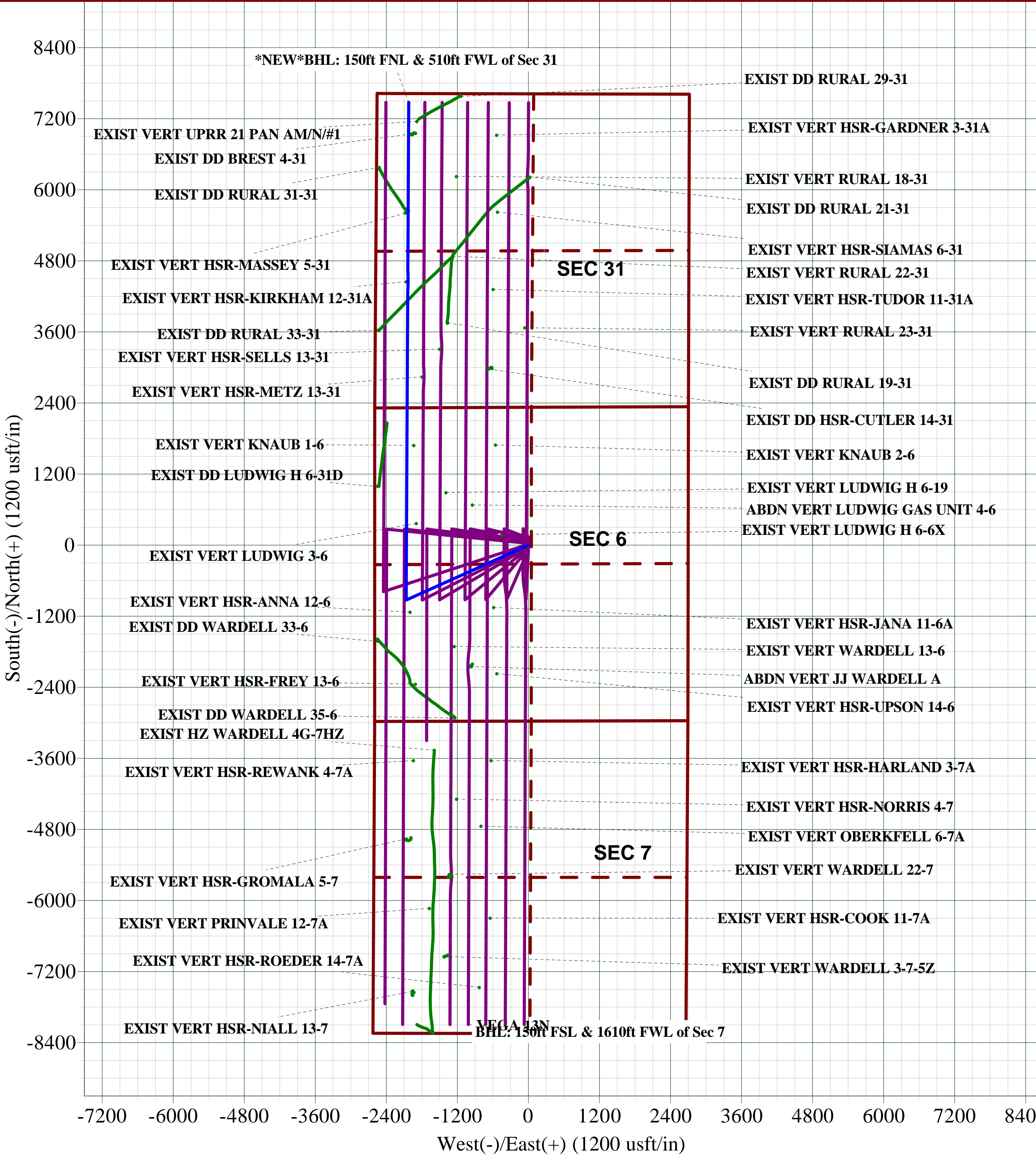
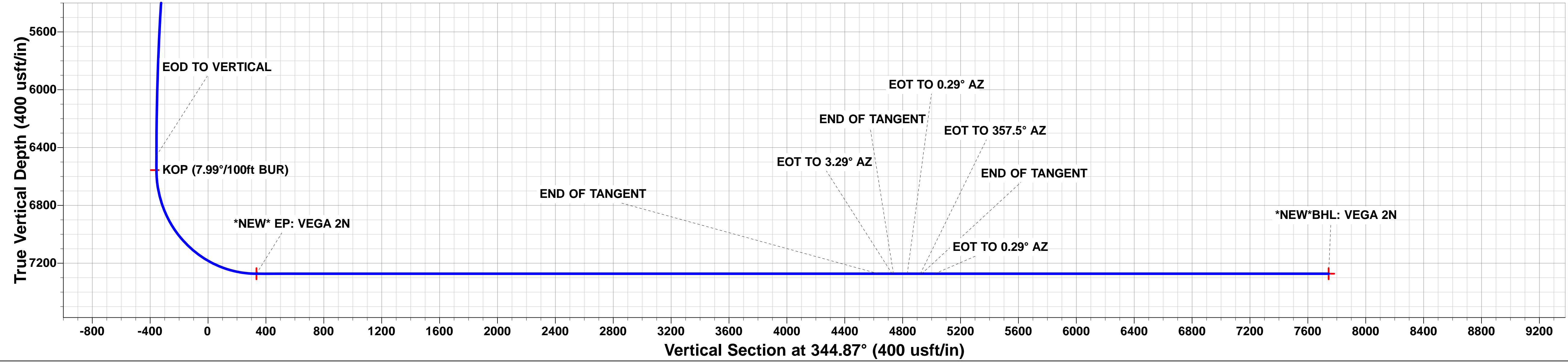
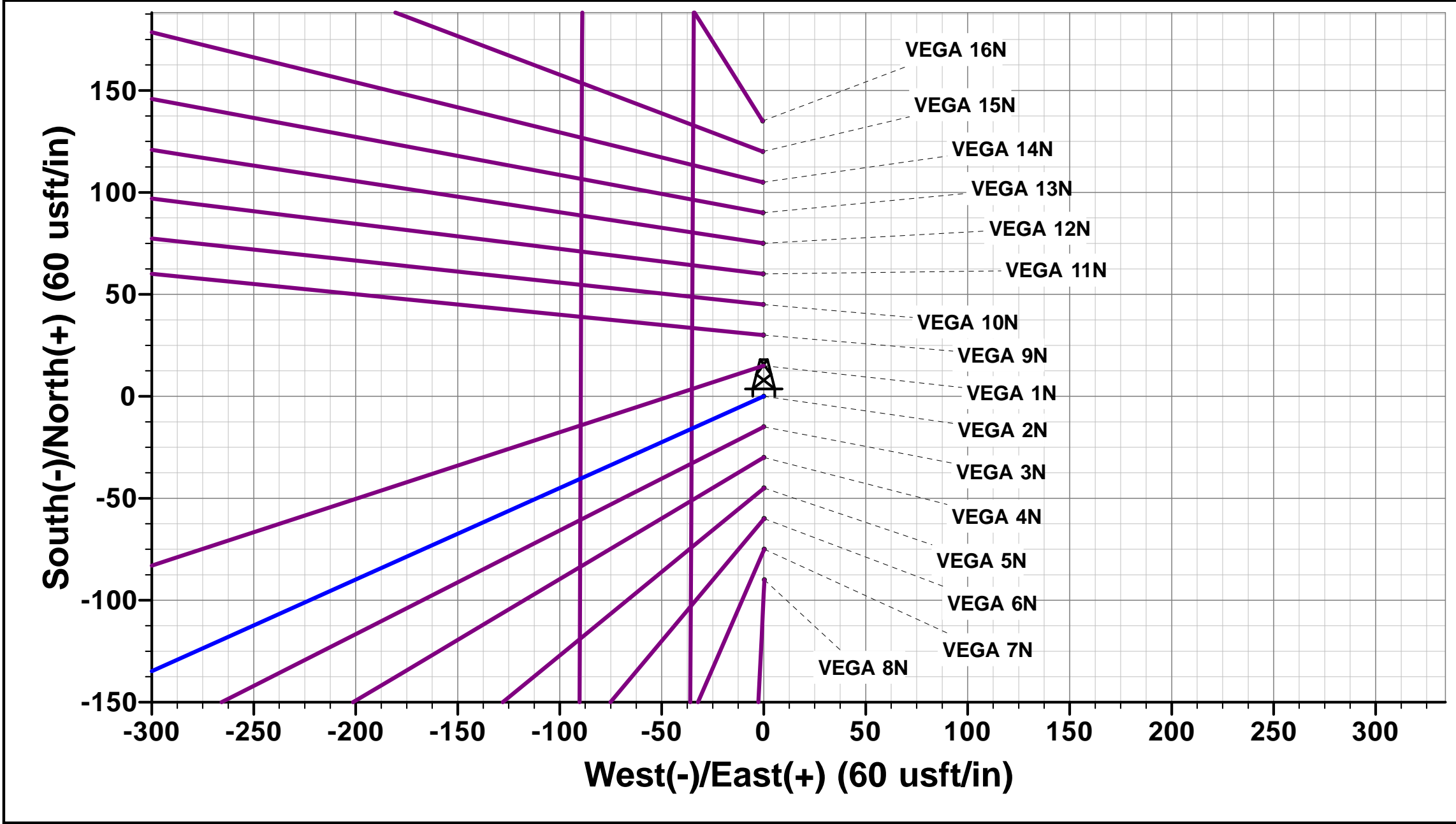
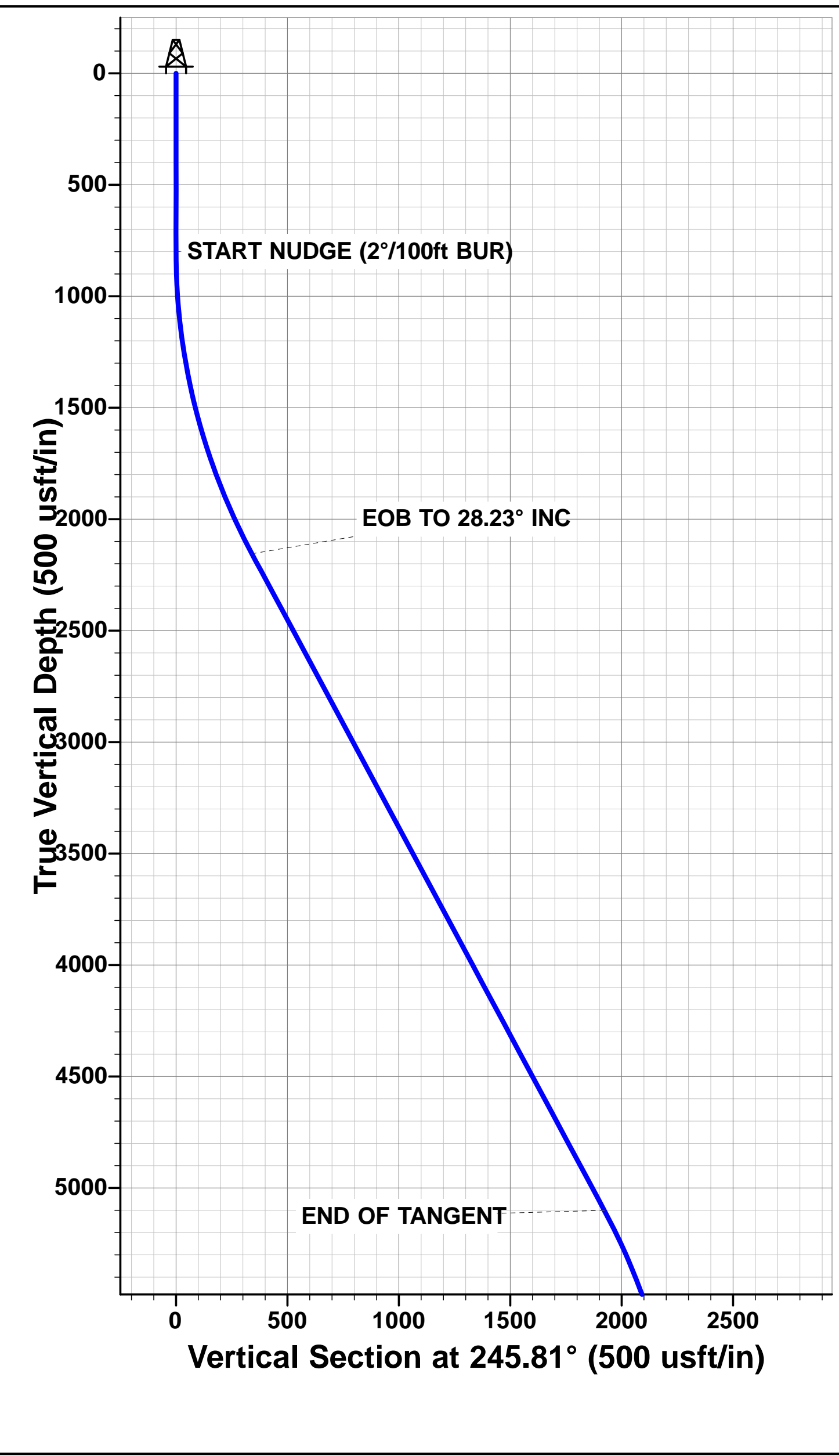
ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 2329ft FNL & 2596ft FWL of Sec 6	
800.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)	
2155.14	2211.57	28.23	245.81	-139.65	-310.86	-53.67	340.78	EOB TO 28.23° INC	
5100.96	5555.12	28.23	245.81	-787.80	-1753.56	-302.78	1922.40	END OF TANGENT	
6456.10	6966.69	0.00	0.00	-927.45	-2064.42	-356.45	2263.18	EOD TO VERTICAL	
6556.10	7066.69	0.00	0.00	-927.45	-2064.42	-356.45	2263.18	KOP (7.99°/100ft BUR)	
7273.00	8192.81	90.00	0.29	-210.55	-2060.80	334.65	2980.09	*NEW*EP: 2530ft FNL & 510ft FWL of Sec 6	
7272.95	12650.00	90.00	0.29	4246.59	-2038.29	4631.40	7437.29	END OF TANGENT	
7272.95	12750.02	90.00	3.29	4346.55	-2035.17	4727.09	7537.31	EOT TO 3.29° AZ	
7272.95	12760.02	90.00	3.29	4356.53	-2034.60	4736.57	7547.31	END OF TANGENT	
7272.94	12860.02	90.00	0.29	4456.47	-2031.47	4832.23	7647.31	EOT TO 0.29° AZ	
7272.94	12953.02	90.00	357.50	4549.45	-2033.27	4922.45	7740.31	EOT TO 357.5° AZ	
7272.94	12963.02	90.00	357.50	4559.44	-2033.70	4932.21	7750.31	END OF TANGENT	
7272.94	13055.99	90.00	0.29	4652.37	-2035.50	5022.39	7843.27	EOT TO 0.29° AZ	
7273.00	15879.05	90.00	0.29	7475.40	-2021.26	7743.84	10666.33	*NEW*BHL: 150ft FNL & 510ft FWL of Sec 31	

PROPOSED LOCAL COORDINATES:
SHL: 2329ft FNL & 2596ft FWL of Sec 6

*NEW*EP: 2530ft FNL & 510ft FWL of Sec 6

*NEW*BHL: 150ft FNL & 510ft FWL of Sec 31

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: VEGA 2N	6556.10	-927.45	-2064.42	40.252737	-104.713752
NEW EP: VEGA 2N	7273.00	-210.55	-2060.80	40.254704	-104.713739
*NEW*BHL: VEGA 2N	7273.00	7475.40	-2021.26	40.275802	-104.713600



PDC ENERGY

**WELD COUNTY, COLORADO
SE NW SEC. 6 T3N R65W 6th P.M.
VEGA 2N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

24 January, 2018



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well VEGA 2N
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 2N	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	24/01/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,879.05	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
Offset Well - Wellbore - Design						
SE NW SEC. 6 T3N R65W 6th P.M.						
ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1	5,296.76	4,883.51	1,464.75	1,423.81	35.780	CC
ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1	5,400.00	4,979.49	1,465.34	1,423.38	34.927	ES
ABDN VERT JJ WARDELL A - Wellbore #1 - Wellbore #1	6,300.00	5,769.76	1,516.60	1,469.76	32.381	SF
ABDN VERT LUDWIG GAS UNIT 4-6 - Wellbore #1 - De	2,728.56	2,588.63	1,008.77	989.73	52.990	CC
ABDN VERT LUDWIG GAS UNIT 4-6 - Wellbore #1 - De	2,800.00	2,651.57	1,009.34	989.45	50.763	ES
ABDN VERT LUDWIG GAS UNIT 4-6 - Wellbore #1 - De	9,500.00	7,250.98	1,182.58	1,133.51	24.100	SF
EXIST DD BREST 4-31 - Wellbore #1 - Wellbore #1	15,346.45	7,105.21	41.24	-97.41	0.297	Level 1, CC, ES, SF
EXIST DD HSR-CUTLER 14-31 - Wellbore #1 - Wellbore	11,384.23	7,236.87	1,374.71	1,309.16	20.971	CC
EXIST DD HSR-CUTLER 14-31 - Wellbore #1 - Wellbore	11,400.00	7,236.84	1,374.80	1,308.97	20.883	ES
EXIST DD HSR-CUTLER 14-31 - Wellbore #1 - Wellbore	11,900.00	7,235.85	1,468.28	1,393.43	19.615	SF
EXIST DD LUDWIG H 6-31D - Wellbore #1 - Wellbore #1	9,390.82	7,370.21	485.19	429.76	8.752	CC
EXIST DD LUDWIG H 6-31D - Wellbore #1 - Wellbore #1	9,400.00	7,370.15	485.28	429.73	8.735	ES, SF
EXIST DD RURAL 19-31 - Wellbore #1 - Wellbore #1	12,159.83	7,313.21	679.93	577.65	6.648	CC, ES
EXIST DD RURAL 19-31 - Wellbore #1 - Wellbore #1	12,200.00	7,313.24	681.11	578.10	6.612	SF
EXIST DD RURAL 21-31 - Wellbore #1 - Wellbore #1	14,630.96	7,527.04	2,042.91	1,890.25	13.382	CC
EXIST DD RURAL 21-31 - Wellbore #1 - Wellbore #1	14,700.00	7,527.40	2,044.07	1,890.11	13.277	ES
EXIST DD RURAL 21-31 - Wellbore #1 - Wellbore #1	15,100.00	7,529.47	2,096.06	1,934.54	12.977	SF
EXIST DD RURAL 29-31 - Wellbore #1 - Wellbore #1	15,879.05	7,334.32	889.71	726.65	5.456	CC, ES, SF
EXIST DD RURAL 31-31 - Wellbore #1 - Wellbore #1	14,777.07	7,331.62	495.18	350.86	3.431	CC, ES
EXIST DD RURAL 31-31 - Wellbore #1 - Wellbore #1	14,800.00	7,331.81	495.71	350.96	3.425	SF
EXIST DD RURAL 33-31 - Wellbore #1 - Wellbore #1	12,028.51	7,481.98	498.69	394.67	4.794	CC, ES
EXIST DD RURAL 33-31 - Wellbore #1 - Wellbore #1	12,100.00	7,481.42	503.79	398.45	4.782	SF
EXIST DD WARDELL 33-6 - Wellbore #1 - Wellbore #1	6,906.08	6,475.78	821.44	771.95	16.598	CC, ES
EXIST DD WARDELL 33-6 - Wellbore #1 - Wellbore #1	7,066.69	6,636.49	823.84	773.90	16.498	SF
EXIST DD WARDELL 35-6 - Wellbore #1 - Wellbore #1	5,461.53	4,735.00	2,011.31	1,960.48	39.565	CC
EXIST DD WARDELL 35-6 - Wellbore #1 - Wellbore #1	5,500.00	4,762.52	2,011.46	1,960.08	39.148	ES
EXIST DD WARDELL 35-6 - Wellbore #1 - Wellbore #1	7,066.69	6,546.10	2,147.22	2,083.41	33.648	SF
EXIST HZ WARDELL 4G-7HZ - Wellbore #1 - Wellbore #	7,285.19	12,143.00	2,733.11	2,661.16	37.990	CC, ES
EXIST HZ WARDELL 4G-7HZ - Wellbore #1 - Wellbore #	8,192.81	12,143.00	3,299.67	3,200.83	33.383	SF
EXIST VERT HSR-ANNA 12-6 - Wellbore #1 - Design #1	7,066.69	6,534.10	214.22	151.68	3.425	CC, ES, SF
EXIST VERT HSR-COOK 11-7A - Wellbore #1 - Design #	7,066.69	6,534.10	5,551.77	5,489.53	89.197	CC, ES, SF
EXIST VERT HSR-FREY 13-6 - Wellbore #1 - Design #1	7,066.69	6,534.10	1,428.16	1,367.31	23.471	CC, ES, SF
EXIST VERT HSR-GARDNER 3-31A - Wellbore #1 - Des	15,335.59	7,250.99	1,487.12	1,334.75	9.760	CC, ES
EXIST VERT HSR-GARDNER 3-31A - Wellbore #1 - Des	15,600.00	7,250.99	1,510.44	1,353.07	9.598	SF
EXIST VERT HSR-GROMALA 5-7 - Wellbore #1 - Wellbo	7,066.69	6,597.24	4,043.02	3,996.58	87.067	ES, SF
EXIST VERT HSR-GROMALA 5-7 - Wellbore #1 - Wellbo	7,076.97	6,607.86	4,042.94	3,996.60	87.238	CC
EXIST VERT HSR-HARLAND 3-7A - Wellbore #1 - Desig	5,899.90	5,391.79	3,058.28	3,001.61	53.972	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 2N
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 2N	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 HSR-HARLAND 3-7A - Wellbore #1 - Desig	6,100.00	5,580.57	3,058.99	3,000.77	52.542	ES
EXIST VERT HSR-HARLAND 3-7A - Wellbore #1 - Desig	7,100.00	6,567.40	3,065.26	3,002.48	48.831	SF
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	3,533.46	3,297.78	717.23	688.48	24.945	CC
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	3,600.00	3,356.41	717.92	688.37	24.292	ES
EXIST VERT HSR-JANA 11-6A - Wellbore #1 - Design #1	4,100.00	3,796.93	765.66	731.11	22.160	SF
EXIST VERT HSR-KIRKHAM 12-31A - Wellbore #1 - Des	12,850.49	7,250.95	31.90	-74.24	0.301	Level 1, CC, ES, SF
EXIST VERT HSR-MASSEY 5-31 - Wellbore #1 - Wellbo	14,007.97	7,135.95	49.13	-64.11	0.434	Level 1, CC, ES, SF
EXIST VERT HSR-METZ 13-31 - Wellbore #1 - Design #	11,245.32	7,250.96	249.73	172.21	3.222	CC, ES, SF
EXIST VERT HSR-NIAL 13-7 - Wellbore #1 - Wellbore #	6,928.91	6,366.73	6,602.84	6,556.13	141.385	CC, ES
EXIST VERT HSR-NIAL 13-7 - Wellbore #1 - Wellbore #	7,066.69	6,478.47	6,603.72	6,556.85	140.902	SF
EXIST VERT HSR-SIAMAS 4-7 - Wellbore #1 - Design #	7,066.69	6,534.10	3,465.50	3,403.33	55.742	CC, ES, SF
EXIST VERT HSR-REWANK 4-7A - Wellbore #1 - Desig	7,066.69	6,534.10	2,711.96	2,651.97	45.210	CC, ES, SF
EXIST VERT HSR-ROEDER 14-7A - Wellbore #1 - Desig	7,066.69	6,534.10	6,653.47	6,591.80	107.882	CC, ES, SF
EXIST VERT HSR-SELLS 13-31 - Wellbore #1 - Design	11,716.76	7,250.96	546.00	460.03	6.351	CC, ES
EXIST VERT HSR-SELLS 13-31 - Wellbore #1 - Design	11,800.00	7,250.96	552.31	464.83	6.314	SF
EXIST VERT HSR-SIAMAS 6-31 - Wellbore #1 - Design	14,035.11	7,250.96	1,507.60	1,379.77	11.793	CC, ES
EXIST VERT HSR-SIAMAS 6-31 - Wellbore #1 - Design	14,400.00	7,250.97	1,551.13	1,416.43	11.515	SF
EXIST VERT HSR-TUDOR 11-31A - Wellbore #1 - Desig	12,786.14	7,250.95	1,439.09	1,334.99	13.824	CC
EXIST VERT HSR-TUDOR 11-31A - Wellbore #1 - Desig	12,800.00	7,250.95	1,439.21	1,334.65	13.764	ES
EXIST VERT HSR-TUDOR 11-31A - Wellbore #1 - Desig	12,963.02	7,250.94	1,457.99	1,348.58	13.326	SF
EXIST VERT HSR-UPSON 14-6 - Wellbore #1 - Design #	4,400.13	4,061.36	1,759.14	1,719.83	44.750	CC
EXIST VERT HSR-UPSON 14-6 - Wellbore #1 - Design #	4,500.00	4,149.35	1,759.77	1,719.24	43.421	ES
EXIST VERT HSR-UPSON 14-6 - Wellbore #1 - Design #	7,100.00	6,567.40	1,970.66	1,911.90	33.537	SF
EXIST VERT KNAUB 1-6 - Wellbore #1 - Design #1	10,089.81	7,250.98	115.93	58.08	2.004	CC, ES, SF
EXIST VERT KNAUB 2-6 - Wellbore #1 - Design #1	10,103.99	7,250.98	1,494.62	1,436.54	25.734	CC, ES
EXIST VERT KNAUB 2-6 - Wellbore #1 - Design #1	10,800.00	7,250.97	1,648.73	1,579.03	23.653	SF
EXIST VERT LUDWIG 3-6 - Wellbore #1 - Design #1	8,771.26	7,250.99	164.35	123.14	3.988	CC, ES, SF
EXIST VERT LUDWIG H 6-19 - Wellbore #1 - Design #1	9,293.61	7,250.99	662.20	615.80	14.272	CC
EXIST VERT LUDWIG H 6-19 - Wellbore #1 - Design #1	9,300.00	7,250.99	662.23	615.76	14.250	ES
EXIST VERT LUDWIG H 6-19 - Wellbore #1 - Design #1	9,400.00	7,250.99	670.69	622.95	14.049	SF
EXIST VERT LUDWIG H 6-6X - Wellbore #1 - Design #1	2,198.59	2,121.70	344.21	331.39	26.857	CC
EXIST VERT LUDWIG H 6-6X - Wellbore #1 - Design #1	2,211.57	2,133.14	344.26	331.30	26.560	ES
EXIST VERT LUDWIG H 6-6X - Wellbore #1 - Design #1	2,500.00	2,387.26	372.56	356.79	23.628	SF
EXIST VERT OBERKELL 6-7A - Wellbore #1 - Design #	7,066.69	6,534.10	4,019.95	3,957.38	64.248	CC, ES, SF
EXIST VERT PRINVALE 12-7A - Wellbore #1 - Design #	7,066.69	6,534.10	5,219.52	5,159.11	86.406	CC, ES, SF
EXIST VERT RURAL 18-31 - Wellbore #1 - Design #1	14,632.72	7,250.98	809.77	670.68	5.822	CC, ES
EXIST VERT RURAL 18-31 - Wellbore #1 - Design #1	14,700.00	7,250.98	812.56	672.20	5.789	SF
EXIST VERT RURAL 22-31 - Wellbore #1 - Design #1	13,285.60	7,250.95	754.26	640.47	6.628	CC
EXIST VERT RURAL 22-31 - Wellbore #1 - Design #1	13,300.00	7,250.95	754.40	640.34	6.614	ES
EXIST VERT RURAL 22-31 - Wellbore #1 - Design #1	13,400.00	7,250.95	762.89	646.96	6.581	SF
EXIST VERT RURAL 23-31 - Wellbore #1 - Design #1	12,084.61	7,250.95	1,978.63	1,885.97	21.353	CC
EXIST VERT RURAL 23-31 - Wellbore #1 - Design #1	12,100.00	7,250.95	1,978.69	1,885.75	21.290	ES
EXIST VERT RURAL 23-31 - Wellbore #1 - Design #1	12,953.02	7,250.94	2,157.56	2,048.32	19.751	SF
EXIST VERT UPRR 21 PAN AM/N#1 - Wellbore #1 - De	15,558.32	4,686.00	2,568.72	2,498.89	36.785	CC, ES
EXIST VERT UPRR 21 PAN AM/N#1 - Wellbore #1 - De	15,879.05	4,686.00	2,588.66	2,516.48	35.863	SF
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	5,385.79	4,929.77	1,046.43	995.07	20.376	CC
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	5,400.00	4,942.29	1,046.45	994.92	20.307	ES
EXIST VERT WARDELL 13-6 - Wellbore #1 - Design #1	7,100.00	6,567.40	1,128.43	1,068.33	18.774	SF
EXIST VERT WARDELL 22-7 - Wellbore #1 - Wellbore #	7,066.69	6,683.99	4,712.09	4,663.61	97.190	SF
EXIST VERT WARDELL 22-7 - Wellbore #1 - Wellbore #	7,089.62	6,711.11	4,711.74	4,663.33	97.323	CC, ES
EXIST VERT WARDELL 3-7-5Z - Wellbore #1 - Wellbore	6,802.94	6,166.56	6,060.11	6,012.53	127.369	CC, ES
EXIST VERT WARDELL 3-7-5Z - Wellbore #1 - Wellbore	7,066.69	6,495.38	6,062.54	6,014.64	126.570	SF
VEGA 10N - ORIGINAL WELLBORE - PROPOSAL #1	8,043.67	8,034.55	33.98	-11.85	0.741	Level 1, 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 VEGA 2N
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Reference Well:	VEGA 2N	Survey Calculation Method:	Minimum Curvature
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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.						
VEGA 10N - ORIGINAL WELLBORE - PROPOSAL #1	8,050.00	8,028.57	34.04	-12.85	0.726	Level 1, ES, SF
VEGA 11N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	800.00	60.00	56.68	18.074	CC, ES
VEGA 11N - ORIGINAL WELLBORE - PROPOSAL #1	7,550.00	8,190.95	380.17	318.92	6.207	SF
VEGA 12N - ORIGINAL WELLBORE - PROPOSAL #1	700.00	700.00	75.05	72.18	26.146	CC
VEGA 12N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	799.56	75.34	72.03	22.773	ES
VEGA 12N - ORIGINAL WELLBORE - PROPOSAL #1	7,500.00	8,191.23	822.86	763.69	13.906	SF
VEGA 13N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	600.00	90.02	87.60	37.187	CC
VEGA 13N - ORIGINAL WELLBORE - PROPOSAL #1	700.00	699.38	90.36	87.50	31.607	ES
VEGA 13N - ORIGINAL WELLBORE - PROPOSAL #1	2,000.00	1,978.57	232.81	220.70	19.232	SF
VEGA 14N - ORIGINAL WELLBORE - PROPOSAL #1	500.00	500.00	104.99	103.02	53.263	CC
VEGA 14N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	599.08	105.42	103.02	43.748	ES
VEGA 14N - ORIGINAL WELLBORE - PROPOSAL #1	2,100.00	2,068.45	287.10	273.62	21.308	SF
VEGA 15N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	400.00	120.00	118.48	78.862	CC, ES
VEGA 15N - ORIGINAL WELLBORE - PROPOSAL #1	2,300.00	2,244.76	394.06	378.17	24.806	SF
VEGA 16N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	135.01	133.94	125.928	CC, ES
VEGA 16N - ORIGINAL WELLBORE - PROPOSAL #1	1,900.00	1,886.18	374.83	365.40	39.744	SF
VEGA 1N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	800.00	15.05	11.73	4.532	CC, ES
VEGA 1N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,842.93	394.20	104.20	1.359	Level 3, SF
VEGA 3N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	800.00	14.94	11.62	4.499	CC
VEGA 3N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,686.35	285.86	7.01	1.025	Level 2, ES, SF
VEGA 4N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	600.00	29.95	27.53	12.371	CC, ES
VEGA 4N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,647.43	564.88	271.74	1.927	SF
VEGA 5N - ORIGINAL WELLBORE - PROPOSAL #1	600.00	600.00	44.99	42.57	18.586	CC, ES
VEGA 5N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,451.46	998.41	706.79	3.424	SF
VEGA 6N - ORIGINAL PROPOSAL - PROPOSAL #1	500.00	500.00	59.96	57.99	30.420	CC, ES
VEGA 6N - ORIGINAL PROPOSAL - PROPOSAL #1	15,879.05	15,467.86	1,344.72	1,051.33	4.583	SF
VEGA 7N - ORIGINAL WELLBORE - PROPOSAL #1	400.00	400.00	74.97	73.45	49.271	CC, ES
VEGA 7N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,358.08	1,701.77	1,409.42	5.821	SF
VEGA 8N - ORIGINAL WELLBORE - PROPOSAL #1	300.00	300.00	89.95	88.87	83.895	CC, ES
VEGA 8N - ORIGINAL WELLBORE - PROPOSAL #1	15,879.05	15,431.22	2,024.58	1,729.27	6.856	SF
VEGA 9N - ORIGINAL WELLBORE - PROPOSAL #1	800.00	800.00	30.02	26.70	9.042	CC, ES
VEGA 9N - ORIGINAL WELLBORE - PROPOSAL #1	7,900.00	8,192.36	338.40	285.92	6.448	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		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-154.83	-2,008.61	-944.08	2,219.49				
100.00	100.00	81.91	81.91	0.09	0.09	-154.82	-2,008.54	-944.18	2,219.39	2,219.22	0.17	N/A	
200.00	200.00	189.01	189.01	0.31	0.21	-154.81	-2,008.21	-944.43	2,219.22	2,218.69	0.52	4,242.285	
256.56	256.56	237.56	237.55	0.44	0.23	-154.81	-2,008.04	-944.51	2,219.08	2,218.41	0.67	3,296.698	
300.00	300.00	272.70	272.70	0.54	0.24	-154.81	-2,008.06	-944.63	2,219.17	2,218.39	0.78	2,845.551	
400.00	400.00	362.02	362.02	0.76	0.30	-154.80	-2,008.50	-945.13	2,219.84	2,218.79	1.06	2,097.140	
500.00	500.00	479.67	479.66	0.99	0.36	-154.79	-2,008.96	-945.93	2,220.52	2,219.18	1.34	1,653.543	
559.50	559.50	539.55	539.54	1.12	0.39	-154.78	-2,008.76	-946.27	2,220.48	2,218.98	1.51	1,473.625	
600.00	600.00	575.68	575.67	1.21	0.41	-154.77	-2,008.69	-946.55	2,220.54	2,218.92	1.62	1,372.078	
700.00	700.00	666.94	666.92	1.44	0.46	-154.75	-2,008.76	-947.36	2,220.99	2,219.11	1.89	1,177.848	
800.00	800.00	761.89	761.87	1.66	0.51	-154.75	-2,009.33	-947.86	2,221.76	2,219.61	2.15	1,033.184	
900.00	899.98	864.99	864.97	1.87	0.55	-40.59	-2,010.19	-948.09	2,221.29	2,218.89	2.40	926.425	

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