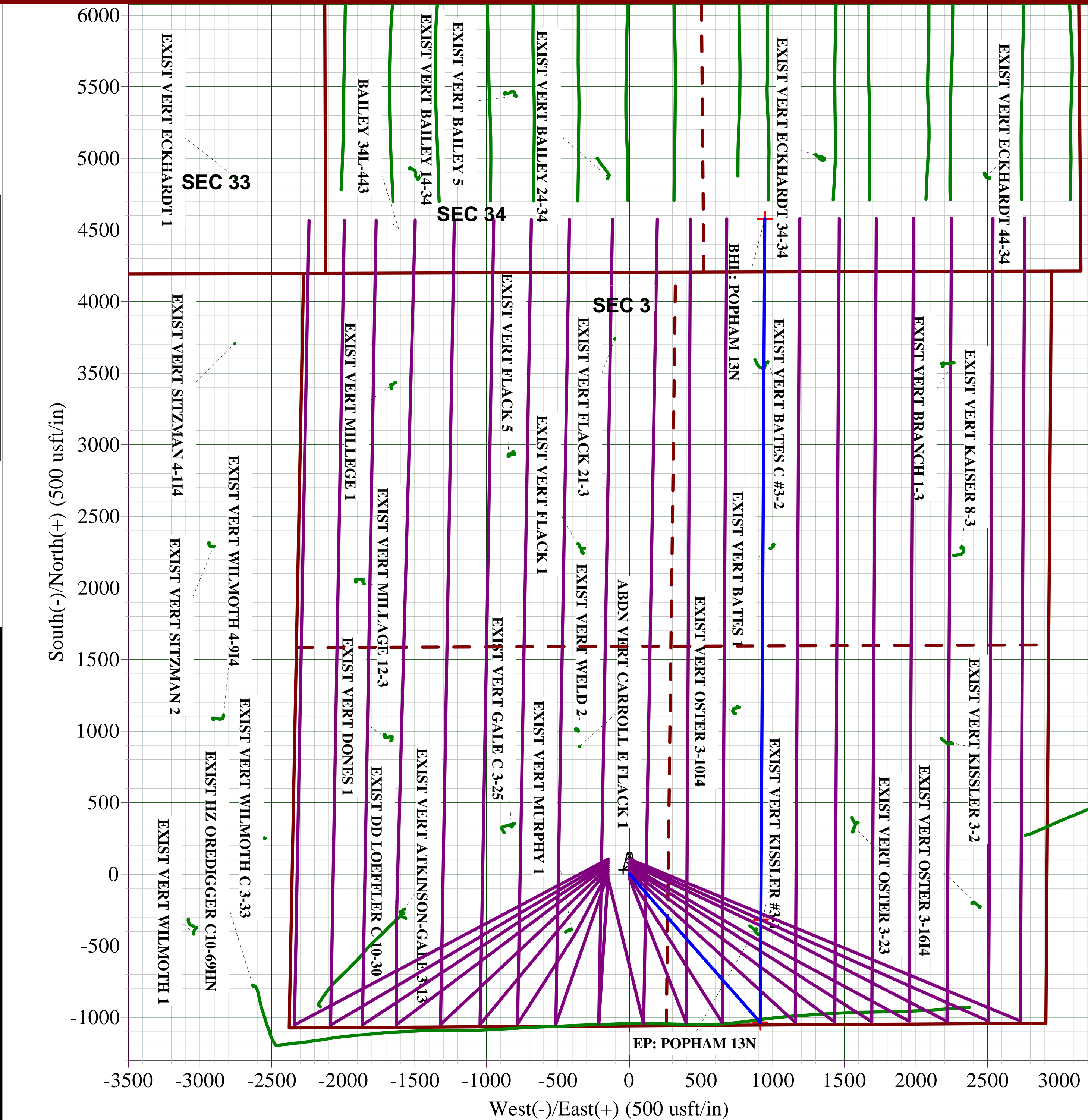
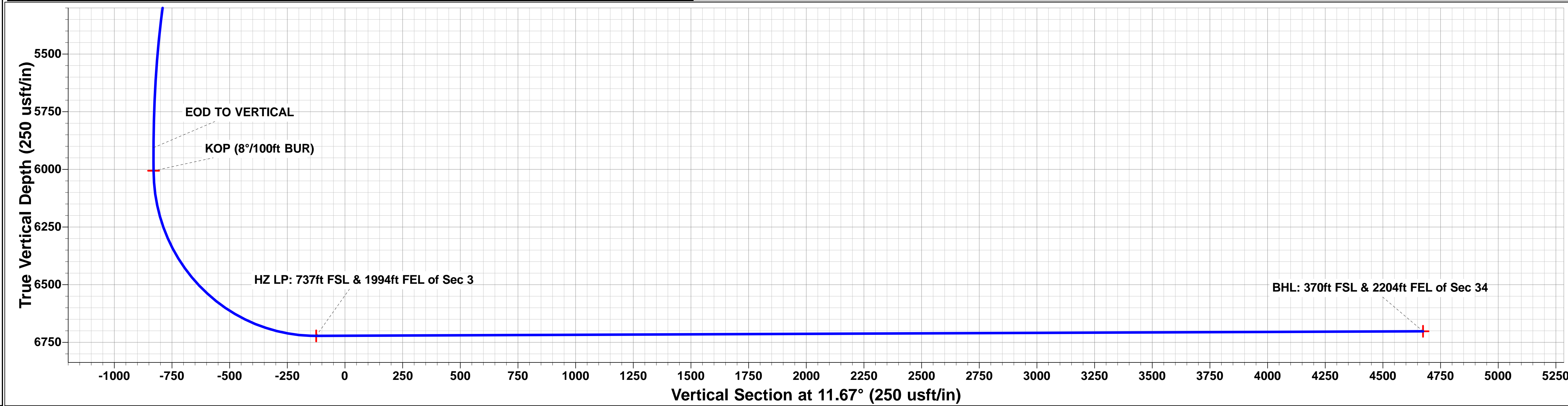
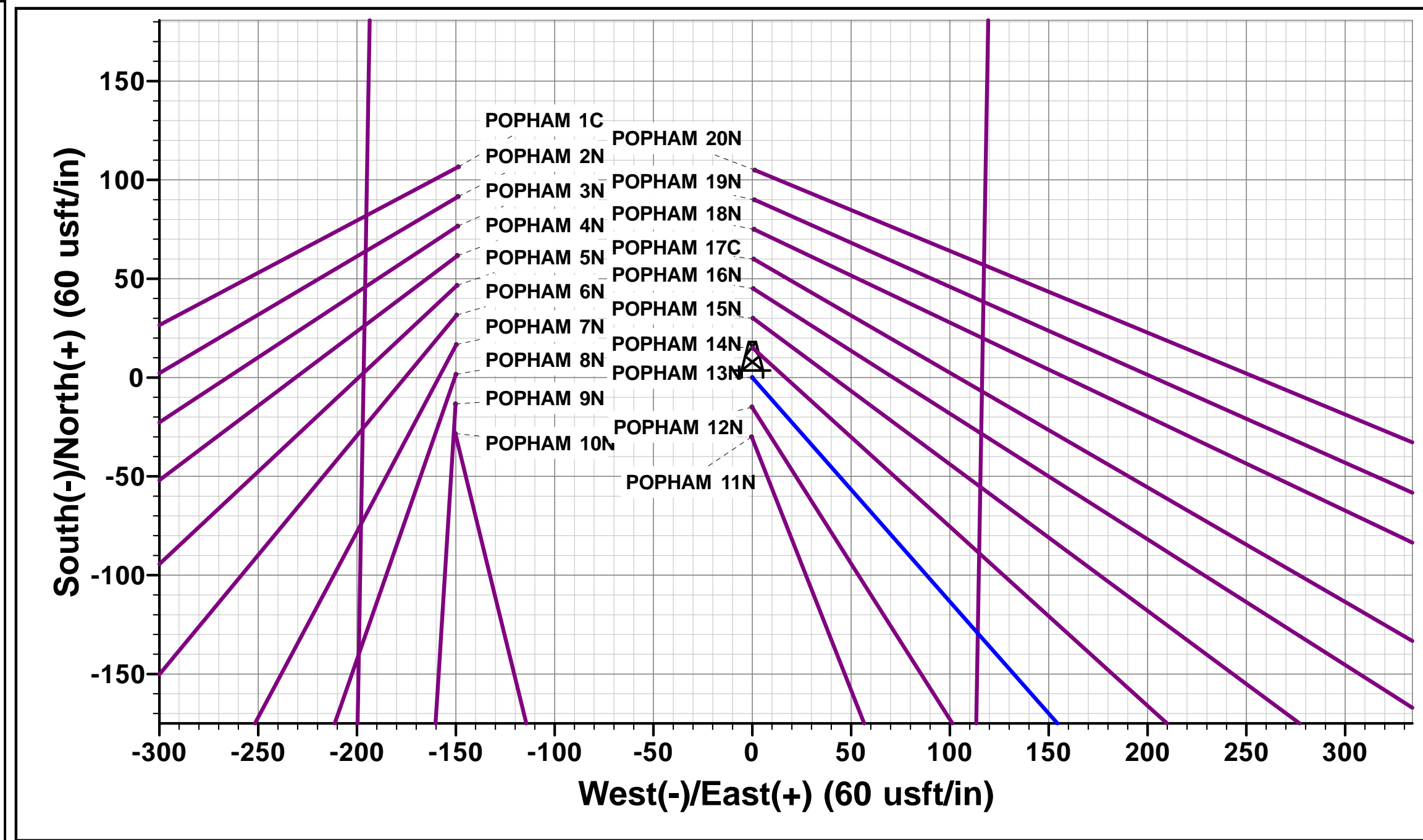
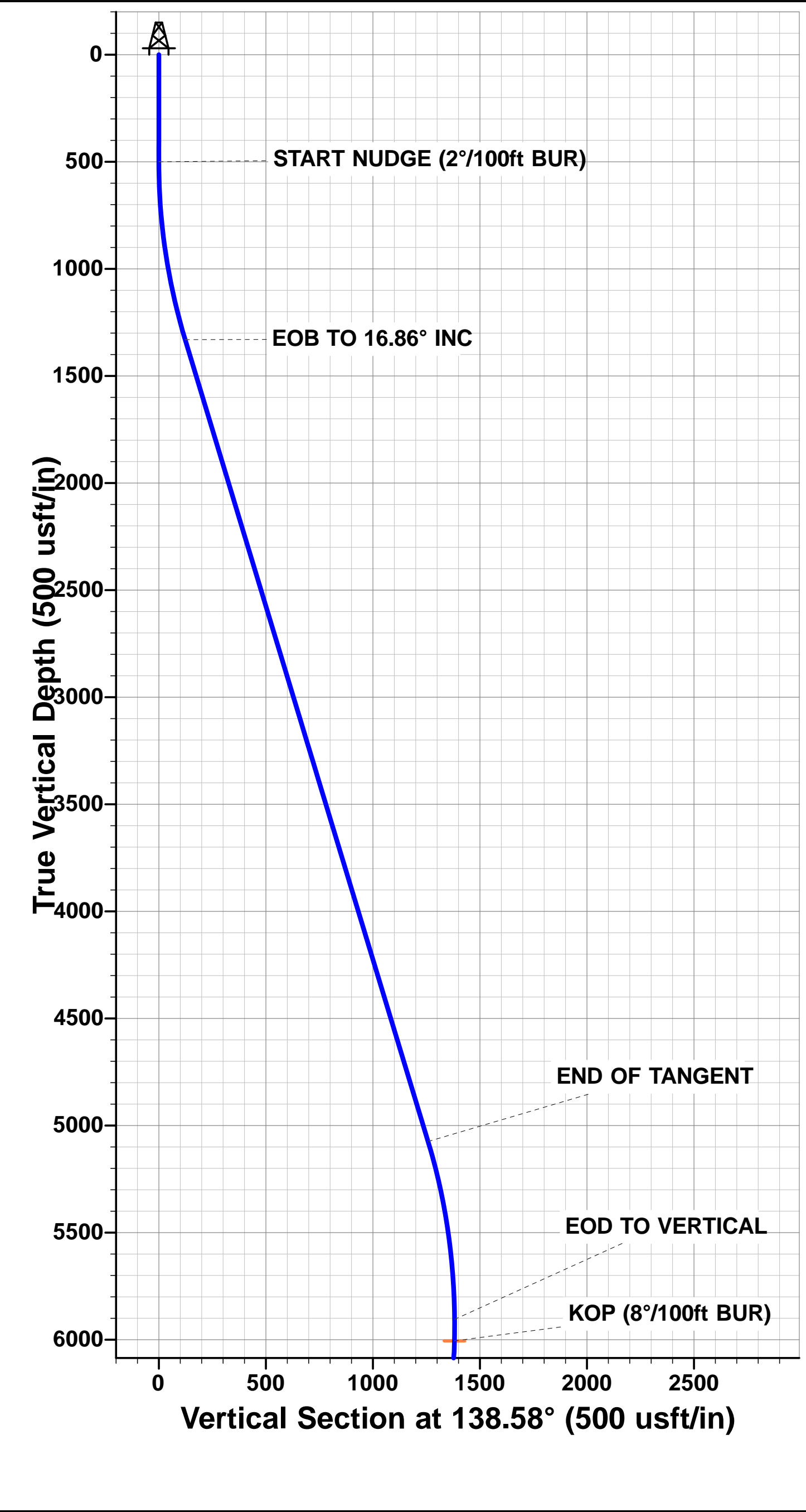




Project: WELD COUNTY, COLORADO
Site: SE SW SEC. 3 T4N R64W 6th P.M.
Well: POPHAM 13N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS								
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1059ft FSL & 2356ft FWL of Sec 3
500.0	500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1331.0	1343.1	16.86	138.58	-92.4	81.5	-74.0	123.2	EOB TO 16.86° INC
5074.8	5255.1	16.86	138.58	-943.3	832.1	-755.6	1257.9	END OF TANGENT
5905.8	6098.2	0.00	0.00	-1035.7	913.6	-829.6	1381.1	EOD TO VERTICAL
6005.8	6198.2	0.00	0.00	-1035.7	913.6	-829.6	1381.1	KOP (8°/100ft BUR)
6722.0	7326.1	90.23	0.32	-316.6	917.6	-124.6	2100.1	HZ LP: 737ft FSL & 1994ft FEL of Sec 3
6702.0	12220.4	90.24	0.32	4577.6	945.1	4674.1	6994.4	BHL: 370ft FSL & 2204ft FEL of Sec 34

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: POPHAM 13N	6005.8	-1035.7	913.6	40.334191	-104.534234
EP: POPHAM 13N	6722.0	-316.6	917.6	40.336165	-104.534220
BHL: POPHAM 13N	6702.0	4577.6	945.1	40.349599	-104.534121



PDC ENERGY

**WELD COUNTY, COLORADO
SE SW SEC. 3 T4N R64W 6th P.M.
POPHAM 13N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

19 September, 2017



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 13N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 13N	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 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	19/09/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,220.4	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 SW SEC. 3 T4N R64W 6th P.M.						
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	502.5	505.7	152.7	150.8	78.792	CC, ES
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,092.8	754.3	567.2	4.031	SF
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	300.0	300.0	30.0	28.9	28.001	CC, ES
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,141.3	519.1	323.2	2.651	SF
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	366.3	367.3	15.0	13.6	10.909	CC
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	400.0	401.0	15.0	13.5	9.827	ES
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,105.2	275.0	89.1	1.480	Level 3, SF
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	500.0	500.0	15.0	13.0	7.615	CC, ES
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,213.8	253.8	69.7	1.379	Level 3, SF
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	30.0	28.0	15.194	CC, ES
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,358.5	520.0	328.4	2.714	SF
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	45.0	43.0	22.800	CC, ES
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,412.5	782.0	589.9	4.070	SF
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	59.9	58.0	30.370	CC, ES
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,639.3	1,044.6	854.0	5.481	SF
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	75.0	73.0	37.995	CC, ES
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,646.9	1,306.2	1,109.6	6.645	SF
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	90.0	88.0	45.582	CC, ES
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,821.2	1,593.8	1,401.0	8.265	SF
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	182.9	180.9	92.480	CC, ES
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,832.6	3,185.8	3,005.1	17.637	SF
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	500.0	501.0	105.0	103.0	53.158	CC, ES
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	12,220.4	12,925.0	1,817.3	1,624.1	9.405	SF
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	174.7	172.7	88.333	CC, ES
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,551.9	2,937.4	2,749.4	15.627	SF
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	167.6	165.6	84.722	CC, ES
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,502.5	2,714.6	2,526.1	14.403	SF
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	161.4	159.4	81.605	CC, ES
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,369.5	2,442.7	2,254.7	12.996	SF
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	156.5	154.5	79.125	CC, ES
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,319.8	2,168.7	1,979.6	11.469	SF
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	152.9	150.9	77.288	CC, ES
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,189.4	1,894.1	1,707.9	10.171	SF
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	150.7	148.7	76.168	CC, ES
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,204.0	1,630.8	1,440.8	8.582	SF
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	465.6	468.6	149.9	148.1	82.226	CC
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	503.0	149.9	148.0	75.838	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 POPHAM 13N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 13N	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 SW SEC. 3 T4N R64W 6th P.M.						
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,123.9	1,365.7	1,173.2	7.096	SF
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	366.0	368.0	150.7	149.3	109.752	CC
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	501.2	151.0	149.1	77.555	ES
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	12,220.4	12,138.8	1,064.0	870.4	5.498	SF
SE SW SEC. 3 T4N R64W 6th P.M. (OFFSETS FOR POPHAM)						
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	6,200.0	5,977.3	671.3	645.7	26.133	SF
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	6,204.5	5,981.7	671.3	645.6	26.138	CC, ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	7,926.3	7,536.0	1,848.5	1,794.7	34.329	CC, ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	9,000.0	7,521.8	2,137.7	2,069.9	31.539	SF
EXIST HZ SUDEN 34M-223 - Wellbore #1 - Wellbore #1	12,220.4	11,092.0	150.0	56.4	1.602	CC, ES, SF
EXIST HZ SUDEN 34M-423 - Wellbore #1 - Wellbore #1	12,220.4	11,065.0	376.2	225.6	2.498	CC, ES, SF
EXIST HZ SUDEN 34R-203 - Wellbore #1 - Wellbore #1	12,220.4	11,081.0	744.1	567.1	4.205	CC, ES, SF
EXIST HZ SUDEN 34R-323 - Wellbore #1 - Wellbore #1	12,220.4	11,162.0	1,302.0	1,122.6	7.258	CC, ES, SF
EXIST HZ SUDEN 34R-343 - Wellbore #1 - Wellbore #1	12,220.4	11,135.0	495.8	318.5	2.797	CC, ES, SF
EXIST HZ SUDEN 34R-423 - Wellbore #1 - Wellbore #1	12,220.4	11,245.0	1,139.6	961.3	6.391	CC, ES, SF
EXIST HZ SUDEN 34U-243 - Wellbore #1 - Wellbore #1	12,220.4	11,118.0	1,799.2	1,619.6	10.018	CC, ES, SF
EXIST HZ SUDEN 34U-403 - Wellbore #1 - Wellbore #1	12,220.4	11,309.0	2,140.0	1,960.7	11.932	CC, ES, SF
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	9,946.6	6,689.0	76.7	21.5	1.389	Level 3, CC, ES, SF
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,231.4	6,684.9	60.7	-18.5	0.766	Level 1, CC, ES, SF
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,205.5	6,664.9	1,253.1	1,174.6	15.955	CC, ES
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,600.0	6,654.3	1,313.7	1,227.7	15.272	SF
EXIST VERT ECKHARDT 34-34 - Wellbore #1 - Wellbor	12,220.4	6,475.0	601.0	508.3	6.487	CC, ES, SF
EXIST VERT ECKHARDT 44-34 - Wellbore #1 - Wellbor	12,220.4	6,300.0	1,604.1	1,507.1	16.537	CC, ES, SF
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	9,942.6	6,650.0	1,294.6	1,239.7	23.573	CC, ES
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,500.0	6,650.0	1,409.5	1,344.4	21.653	SF
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,551.6	6,675.2	1,783.2	1,717.1	26.970	CC
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,600.0	6,675.3	1,783.9	1,716.8	26.619	ES
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	11,500.0	6,677.2	2,019.7	1,935.8	24.070	SF
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	515.3	507.5	886.7	885.2	609.355	CC, ES
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	11,700.0	6,593.3	4,181.0	4,093.7	47.857	SF
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	9,877.4	6,750.0	1,332.6	1,278.8	24.779	CC
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	9,900.0	6,750.0	1,332.7	1,278.6	24.597	ES
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	10,500.0	6,750.0	1,470.8	1,405.7	22.585	SF
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	7,281.1	6,690.9	76.9	53.8	3.330	CC, ES, SF
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	8,595.5	6,758.2	1,257.2	1,224.6	38.554	CC
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	8,600.0	6,758.5	1,257.2	1,224.5	38.481	ES
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	9,500.0	9,500.0	1,547.9	1,500.4	32.565	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	100.0	77.6	560.1	559.9	3,309.446	CC, ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	12,220.4	6,500.0	5,174.0	5,077.3	53.488	SF
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	8,807.6	6,689.2	157.0	121.2	4.389	CC, ES, SF
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	7,447.5	6,658.7	1,475.6	1,452.7	64.323	CC, ES
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	12,220.4	6,616.9	4,995.7	4,897.8	51.035	SF
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	8,043.2	6,500.0	659.9	632.6	24.185	CC, ES
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	8,200.0	6,500.0	678.3	649.4	23.492	SF
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	100.0	114.9	1,061.9	1,061.7	5,072.000	CC, ES
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	9,600.0	6,700.0	1,606.2	1,557.4	32.893	SF

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 13N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4682.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 13N	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						
SW SW SEC. 34 T5N R64W 6th P.M.						
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	500.0	497.0	960.0	950.1	97.078	CC
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	600.0	597.0	961.7	949.6	79.443	ES
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	8,700.0	6,713.4	1,283.7	1,117.3	7.714	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	508.6	522.2	1,623.5	1,622.0	1,073.748	CC, ES
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	12,220.4	6,760.4	6,316.8	6,202.9	55.461	SF
EXIST HZ CHESNUT 27G-203 - Wellbore #1 - Wellbore	12,220.4	13,769.0	2,967.0	2,731.3	12.591	CC, ES, SF
EXIST HZ CHESNUT 27G-423 - Wellbore #1 - Wellbore	12,220.4	13,972.0	2,603.4	2,366.5	10.991	CC, ES, SF
EXIST HZ CHESNUT 27K-203 - Wellbore #1 - Wellbore	12,220.4	13,900.0	1,921.1	1,686.1	8.175	CC, ES, SF
EXIST HZ CHESNUT 27K-323 - Wellbore #1 - Wellbore	12,220.4	14,120.0	1,311.4	1,087.4	5.853	CC, ES, SF
EXIST HZ CHESNUT 27K-343 - Wellbore #1 - Wellbore	12,220.4	13,920.0	2,277.8	2,041.5	9.641	CC, ES, SF
EXIST HZ CHESNUT 27K-403 - Wellbore #1 - Wellbore	12,220.4	14,160.0	1,622.5	1,398.7	7.251	CC, ES, SF
EXIST HZ CHESNUT 27O-243 - Wellbore #1 - Wellbore	12,220.4	14,066.0	969.3	745.9	4.339	CC, ES, SF
EXIST HZ CHESNUT 27O-303 - Wellbore #1 - Wellbore	12,220.4	14,196.0	647.4	422.2	2.874	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,700.0	9,814.9	223.2	133.7	2.495	ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,726.9	9,816.7	221.0	134.4	2.551	CC
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	501.4	494.8	1,590.9	1,589.5	1,129.894	CC, ES
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	12,220.4	6,700.0	5,490.5	5,392.8	56.215	SF
EXIST VERT BAILEY 14-34 - Wellbore #1 - Wellbore #1	12,220.4	6,525.0	2,510.5	2,413.0	25.747	CC, ES, SF
EXIST VERT BAILEY 24-34 - Wellbore #1 - Wellbore #1	12,220.4	6,500.0	1,257.6	1,161.0	13.022	CC, ES, SF
EXIST VERT BAILEY 5 - Wellbore #1 - Wellbore #1	12,220.4	6,685.9	2,014.9	1,916.7	20.517	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	0.0	0.0	1,909.2			
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	504.4	503.2	1,909.6	1,908.2	1,349.172	ES
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	12,220.4	6,724.2	4,474.8	4,377.1	45.809	SF
EXIST VERT ECKHARDT 1 - Wellbore #1 - Design #1	12,220.4	6,703.0	3,709.7	3,480.1	16.151	CC, ES, SF
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,376.9	6,698.5	1,043.1	829.5	4.883	CC
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,400.0	6,698.4	1,043.4	829.3	4.874	ES
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,500.0	6,698.0	1,050.4	834.4	4.864	SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	0.0	13.4	2,747.2			
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	12,220.4	6,713.2	3,821.1	3,723.4	39.105	SF
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,019.8	6,700.0	2,602.2	2,527.3	34.764	CC
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,100.0	6,700.0	2,603.4	2,527.1	34.095	ES
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	12,220.4	6,688.8	2,865.8	2,768.2	29.363	SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	500.7	510.7	3,697.9	3,696.5	2,673.784	CC, ES
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	12,220.4	6,525.0	4,504.6	4,407.2	46.242	SF
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,329.3	6,721.7	3,696.5	3,483.5	17.356	CC
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,400.0	6,721.4	3,697.2	3,482.9	17.251	ES
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	12,220.4	6,718.0	3,802.4	3,572.5	16.544	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	0.0	7.8	3,069.6			
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	12,220.4	6,760.0	6,334.0	6,236.2	64.744	SF
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	0.0	7.8	3,045.5			
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	501.1	511.2	3,046.6	3,045.2	2,169.029	ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	12,220.4	6,724.7	5,186.3	5,088.5	53.018	SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	504.4	510.4	2,561.8	2,560.4	1,822.534	CC, ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	12,220.4	6,714.6	5,559.1	5,461.8	57.139	SF

Offset Design											SE SW SEC. 3 T4N R64W 6th P.M. - POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #1		Offset Site Error:		0.0 usft	
Survey Program:		0-MWD										Offset Well Error:		0.0 usft		
Reference		Offset		Semi Major Axis			Distance									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)					

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