

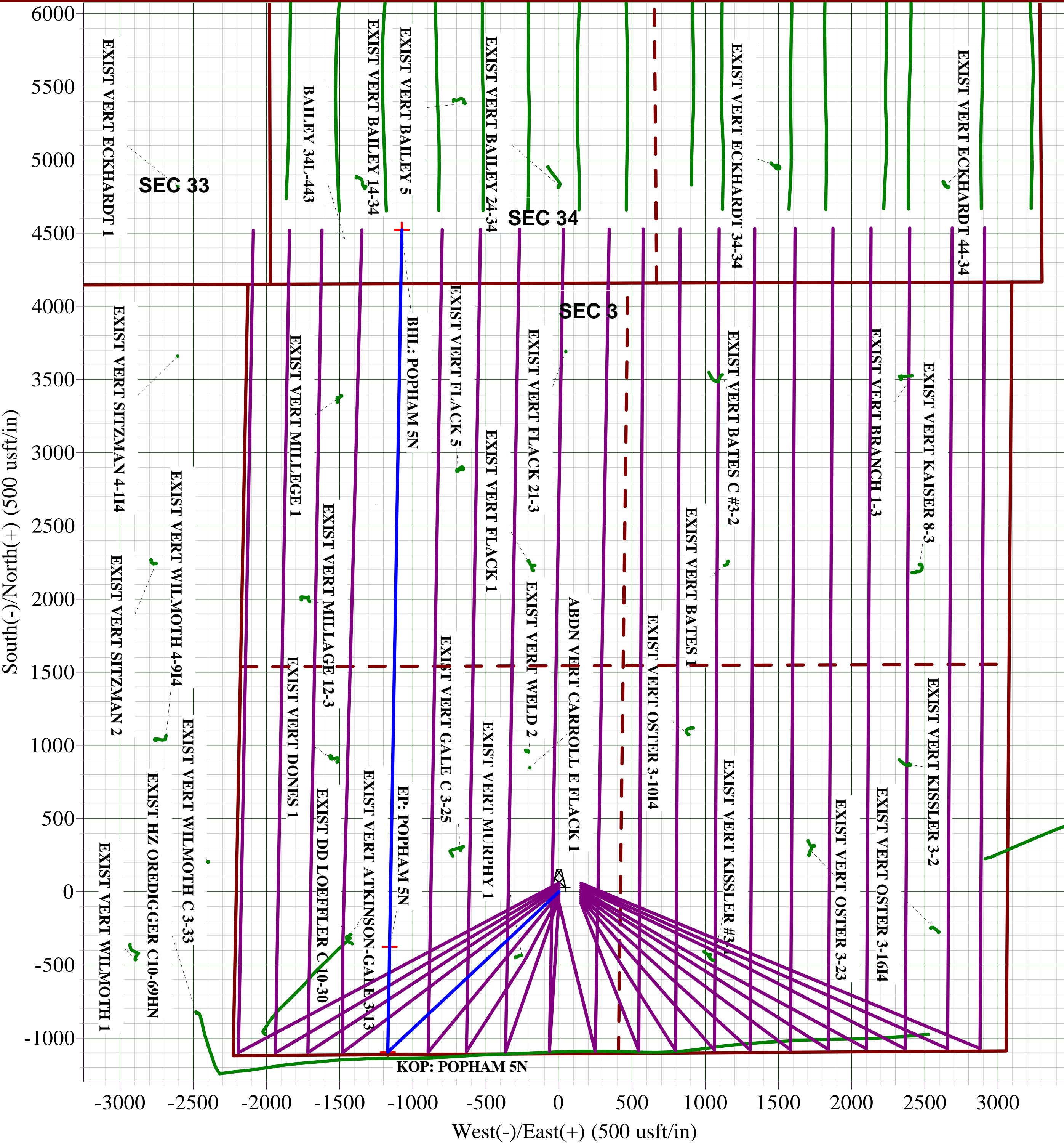
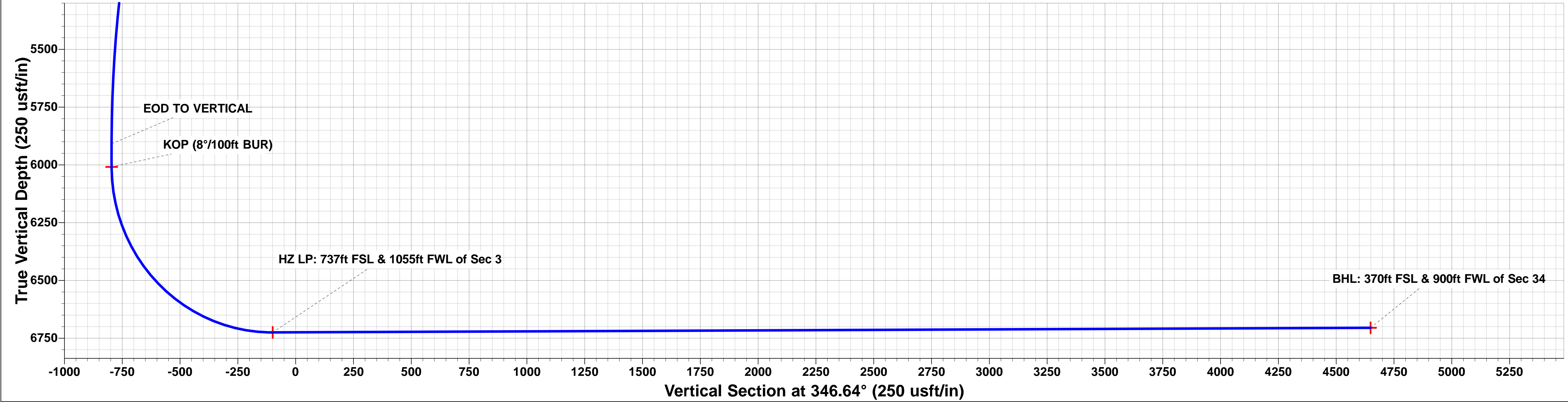
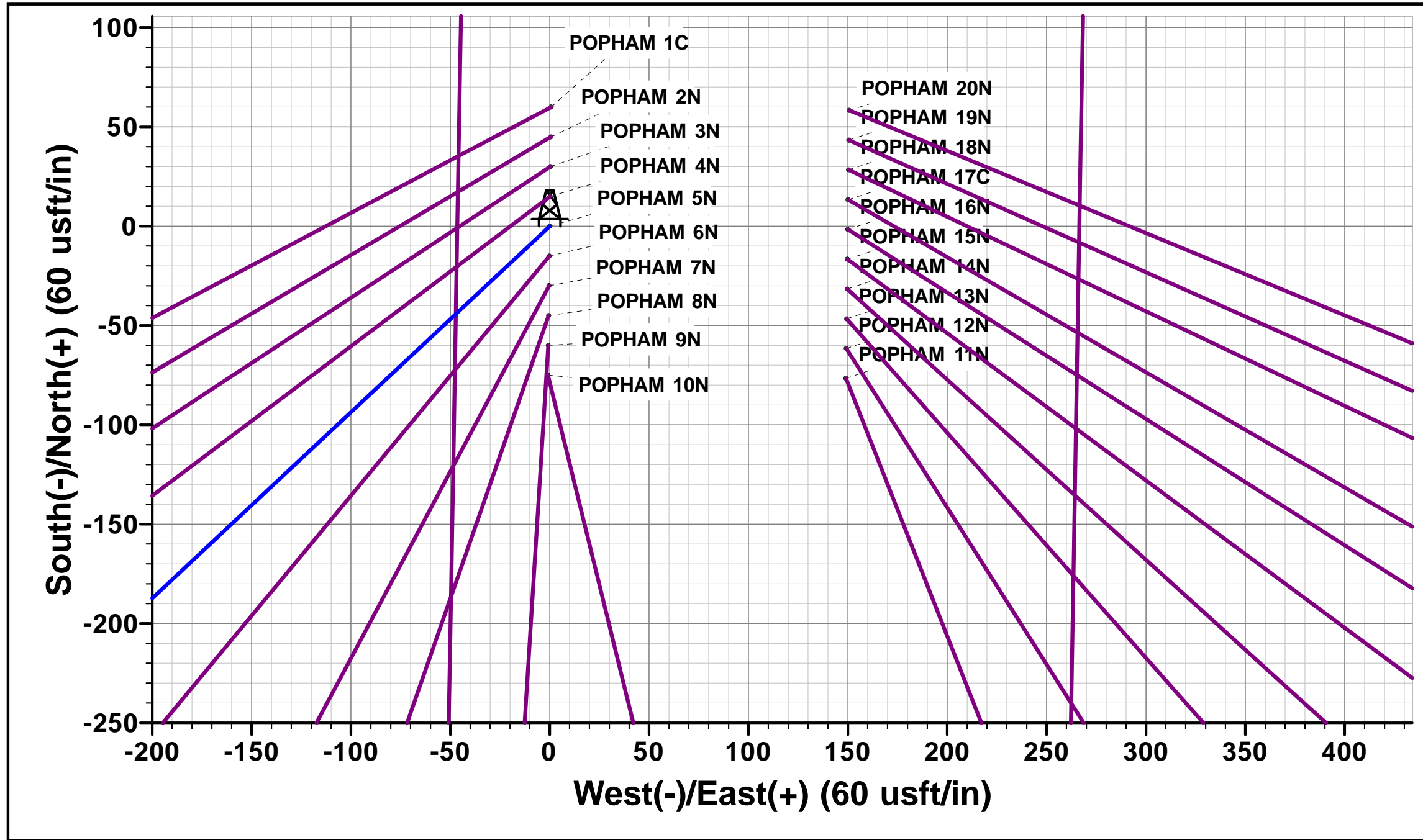
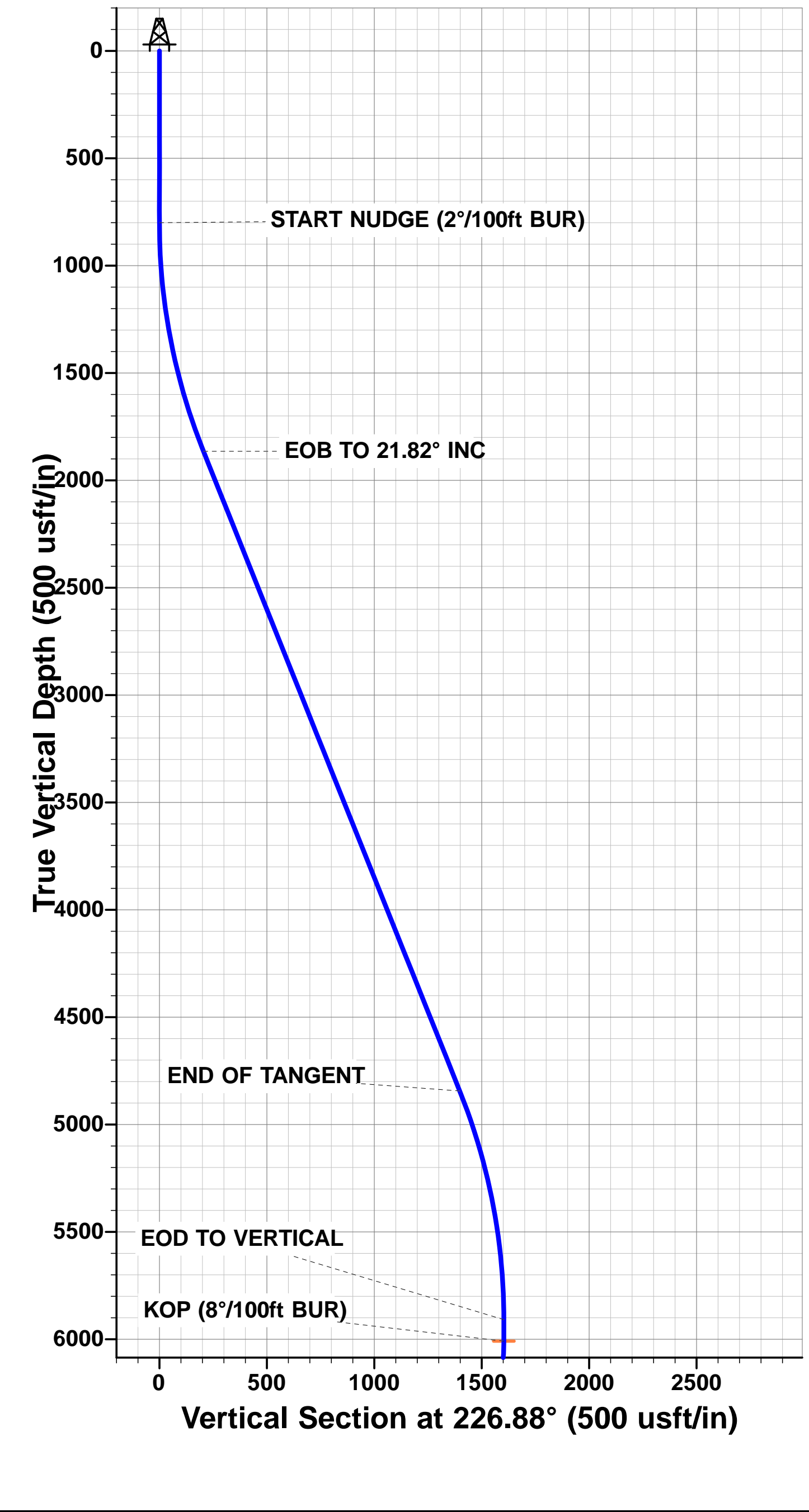


Project: WELD COUNTY, COLORADO
Site: SE SW SEC. 3 T4N R64W 6th P.M.
Well: POPHAM 5N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

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: 1107ft FSL & 2206ft FWL of Sec 3
800.0	800.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2"/100ft BUR)
1864.8	1891.0	21.82	226.88	-140.3	-149.8	-101.9	205.3	EOB TO 21.82° INC
4844.0	5100.1	21.82	226.88	-955.6	-1020.5	-693.9	1398.1	END OF TANGENT
5908.8	6191.1	0.00	0.00	-1095.9	-1170.3	-795.8	1603.3	EOD TO VERTICAL
6008.8	6291.1	0.00	0.00	-1095.9	-1170.3	-795.8	1603.3	KOP (8"/100ft BUR)
6725.0	7419.0	90.23	0.98	-376.9	-1158.0	-99.1	2322.4	HZ LP: 737ft FSL & 1055ft FWL of Sec 3
6705.0	12319.8	90.24	0.98	4523.2	-1074.3	4649.0	7223.2	BHL: 370ft FSL & 900ft FWL of Sec 34

PROPOSED LOCAL COORDINATES:	
SHL: 1107ft FSL & 2206ft FWL of Sec 3	
HZ LP: 737ft FSL & 1055ft FWL of Sec 3	
BHL: 370ft FSL & 900ft FWL of Sec 34	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: POPHAM 5N	6008.8	-1095.9	-1170.3	40.334154	-104.542245
EP: POPHAM 5N	6725.0	-376.9	-1158.0	40.336127	-104.542201
BHL: POPHAM 5N	6705.0	4523.2	-1074.3	40.349578	-104.541901



PDC ENERGY

**WELD COUNTY, COLORADO
SE SW SEC. 3 T4N R64W 6th P.M.
POPHAM 5N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

19 September, 2017



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 5N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 5N	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	12,319.8	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 #	300.0	300.0	75.0	73.9	69.931	CC, ES
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,062.8	1,419.1	1,234.8	7.701	SF
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	300.0	297.0	167.6	166.5	157.327	CC, ES
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,126.3	1,649.6	1,457.0	8.566	SF
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	400.0	398.0	161.5	160.0	106.429	CC, ES
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,087.2	1,904.0	1,715.1	10.083	SF
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	500.0	497.0	156.5	154.5	79.669	CC, ES
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,200.4	2,168.6	1,980.0	11.494	SF
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	600.0	597.0	152.9	150.5	63.350	CC, ES
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,193.6	2,413.6	2,229.2	13.085	SF
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	700.0	698.0	150.7	147.8	52.590	CC, ES
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,337.2	2,688.5	2,500.3	14.286	SF
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	150.0	146.6	45.234	CC, ES
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,392.5	2,948.3	2,759.6	15.624	SF
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	150.7	147.4	45.468	CC, ES
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,620.0	3,209.3	3,020.1	16.963	SF
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	153.0	149.7	46.148	CC, ES
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,627.0	3,473.3	3,280.3	17.995	SF
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	156.6	153.3	47.243	CC, ES
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,801.2	3,762.3	3,572.7	19.843	SF
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	60.0	56.7	18.068	CC, ES
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,832.6	1,021.8	846.8	5.836	SF
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	161.6	158.3	48.720	CC, ES
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	12,319.8	12,904.9	3,985.0	3,795.2	20.996	SF
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	44.9	41.6	13.532	CC, ES
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,551.9	771.0	586.0	4.167	SF
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	30.0	26.7	9.033	CC, ES
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,502.5	545.9	360.7	2.948	SF
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	15.0	11.7	4.523	CC, ES
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,369.5	281.8	99.2	1.543	SF
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	700.0	700.0	15.0	12.1	5.228	CC, ES
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,183.2	284.6	107.6	1.608	SF
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	600.0	600.0	30.0	27.6	12.385	CC, ES
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,192.8	537.8	351.1	2.880	SF
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	45.0	43.1	22.843	CC, ES
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,106.5	807.7	619.3	4.287	SF
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	400.0	399.0	60.0	58.5	39.490	CC, 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 5N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 5N	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 9N - ORIGINAL WELLBORE - PROPOSAL #1	12,319.8	12,115.0	1,104.5	914.5	5.813	SF

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 5N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 5N	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. (OFFSETS FOR POPHAM)						
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	2,536.4	2,431.2	2,004.0	1,992.6	175.822	CC
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	2,700.0	2,584.1	2,004.8	1,992.2	158.317	ES
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	6,350.0	6,028.7	2,273.9	2,241.4	69.978	SF
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	8,091.5	7,586.7	4,065.1	4,010.8	74.769	CC
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	8,100.0	7,586.7	4,065.2	4,010.7	74.685	ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	12,319.8	7,540.3	5,865.4	5,741.2	47.251	SF
EXIST HZ SUDEN 34M-223 - Wellbore #1 - Wellbore #1	12,319.8	11,092.0	2,197.3	2,023.1	12.614	CC, ES, SF
EXIST HZ SUDEN 34M-423 - Wellbore #1 - Wellbore #1	12,319.8	11,065.0	2,008.5	1,836.7	11.693	CC, ES, SF
EXIST HZ SUDEN 34R-203 - Wellbore #1 - Wellbore #1	12,319.8	11,081.0	2,902.6	2,728.7	16.691	CC, ES, SF
EXIST HZ SUDEN 34R-323 - Wellbore #1 - Wellbore #1	12,319.8	11,162.0	3,466.7	3,290.4	19.661	CC, ES, SF
EXIST HZ SUDEN 34R-343 - Wellbore #1 - Wellbore #1	12,319.8	11,135.0	2,650.1	2,475.9	15.210	CC, ES, SF
EXIST HZ SUDEN 34R-423 - Wellbore #1 - Wellbore #1	12,319.8	11,245.0	3,299.6	3,123.2	18.705	CC, ES, SF
EXIST HZ SUDEN 34U-243 - Wellbore #1 - Wellbore #1	12,319.8	11,118.0	3,964.8	3,788.5	22.496	CC, ES, SF
EXIST HZ SUDEN 34U-403 - Wellbore #1 - Wellbore #1	12,319.8	11,309.0	4,305.6	4,129.1	24.388	CC, ES, SF
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	10,091.9	6,671.5	2,271.0	2,217.0	42.082	CC
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	10,100.0	6,671.5	2,271.0	2,216.9	41.972	ES
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	11,900.0	6,665.9	2,902.9	2,816.0	33.427	SF
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,377.7	6,739.8	2,118.2	2,040.5	27.255	CC
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,400.0	6,741.0	2,118.3	2,040.2	27.113	ES
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	12,319.8	6,800.0	2,317.6	2,222.4	24.332	SF
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,364.6	6,648.9	3,432.9	3,355.9	44.590	CC
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,400.0	6,648.0	3,433.0	3,355.4	44.219	ES
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	12,319.8	6,620.9	3,563.2	3,468.5	37.638	SF
EXIST VERT ECKHARDT 34-34 - Wellbore #1 - Wellbor	12,319.8	6,475.0	2,571.1	2,476.9	27.289	CC, ES, SF
EXIST VERT ECKHARDT 44-34 - Wellbore #1 - Wellbor	12,319.8	6,300.0	3,731.8	3,637.8	39.681	CC, ES, SF
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,072.2	6,650.0	903.8	850.5	16.955	CC
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,100.0	6,650.0	904.2	850.4	16.809	ES
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,300.0	6,650.0	932.1	874.8	16.259	SF
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,675.5	6,700.0	404.1	339.8	6.284	CC, ES
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,700.0	6,700.0	404.9	340.1	6.252	SF
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	8,047.3	6,700.0	421.6	397.5	17.480	CC, ES
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	8,100.0	6,698.9	424.9	400.4	17.347	SF
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	802.3	777.9	3,326.5	3,324.4	1,553.898	CC, ES
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	12,319.8	6,750.0	4,201.1	4,106.3	44.323	SF
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	839.9	812.1	1,151.5	1,149.1	489.275	CC, ES
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	12,319.8	6,700.0	5,345.5	5,250.5	56.290	SF
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	100.0	46.6	2,545.9	2,545.7	10,000.000	CC, ES
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	12,319.8	6,800.0	4,969.6	4,874.6	52.314	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,665.4	2,560.7	134.9	122.7	11.004	CC, ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,700.0	2,592.6	135.6	123.0	10.822	SF
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	100.0	61.5	1,394.0	1,393.8	9,177.847	CC
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	809.3	779.7	1,395.2	1,393.0	647.886	ES
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	11,300.0	6,677.3	3,118.6	3,042.9	41.238	SF
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	218.8	161.8	2,610.7	2,610.1	4,872.192	CC
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	700.0	638.1	2,611.1	2,609.2	1,430.909	ES
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	12,319.8	6,600.0	5,989.0	5,894.3	63.258	SF
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	827.4	804.2	1,737.1	1,734.9	769.935	CC, ES
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	12,319.8	6,500.0	5,016.3	4,922.0	53.215	SF
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	8,780.1	6,700.0	914.8	882.5	28.281	CC
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	8,800.0	6,700.0	915.1	882.4	28.046	ES
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	9,200.0	6,700.0	1,006.6	967.9	26.026	SF

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 5N
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Reference Site:	SE SW SEC. 3 T4N R64W 6th P.M.	MD Reference:	KB-EST @ 4685.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	POPHAM 5N	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	800.0	794.0	871.0	854.5	52.614	CC
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	8,660.2	6,714.0	938.2	775.0	5.749	ES
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	8,700.0	6,713.8	939.1	775.3	5.735	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,350.0	6,176.3	858.3	812.1	18.577	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,700.0	6,502.7	846.0	803.2	19.758	ES
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,733.1	6,530.1	845.8	803.5	19.985	CC
EXIST HZ CHESNUT 27G-203 - Wellbore #1 - Wellbore	12,319.8	13,769.0	820.5	588.0	3.528	CC, ES, SF
EXIST HZ CHESNUT 27G-423 - Wellbore #1 - Wellbore	12,319.8	13,972.0	468.9	245.8	2.102	CC, ES, SF
EXIST HZ CHESNUT 27K-203 - Wellbore #1 - Wellbore	12,319.8	13,900.0	295.2	71.1	1.317	Level 3, CC, ES, SF
EXIST HZ CHESNUT 27K-323 - Wellbore #1 - Wellbore	12,319.8	14,120.0	873.1	652.2	3.953	CC, ES, SF
EXIST HZ CHESNUT 27K-343 - Wellbore #1 - Wellbore	12,319.8	13,920.0	166.6	-66.5	0.715	Level 1, CC, ES, SF
EXIST HZ CHESNUT 27K-403 - Wellbore #1 - Wellbore	12,319.8	14,160.0	581.8	364.0	2.671	CC, ES, SF
EXIST HZ CHESNUT 27O-243 - Wellbore #1 - Wellbore	12,319.8	14,066.0	1,222.1	1,001.2	5.534	CC, ES, SF
EXIST HZ CHESNUT 27O-303 - Wellbore #1 - Wellbore	12,319.8	14,196.0	1,540.3	1,318.1	6.932	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,750.0	7,550.7	258.2	209.3	5.278	SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,775.3	7,550.9	256.6	208.8	5.377	CC, ES
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	7,440.0	6,722.8	259.7	237.0	11.441	CC, ES, SF
EXIST VERT BAILEY 14-34 - Wellbore #1 - Wellbore #1	12,319.8	6,525.0	500.9	410.4	5.535	CC, ES, SF
EXIST VERT BAILEY 24-34 - Wellbore #1 - Wellbore #1	12,319.8	6,500.0	1,100.7	1,007.5	11.809	CC, ES, SF
EXIST VERT BAILEY 5 - Wellbore #1 - Wellbore #1	12,319.8	6,684.9	947.6	852.4	9.948	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	8,717.8	6,722.7	424.8	393.2	13.448	CC, ES
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	8,800.0	6,721.8	432.7	400.0	13.213	SF
EXIST VERT ECKHARDT 1 - Wellbore #1 - Design #1	12,319.8	6,703.0	1,558.2	1,331.6	6.875	CC, ES, SF
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,509.2	6,698.4	1,134.9	923.3	5.364	CC, ES
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,600.0	6,698.0	1,138.5	925.2	5.339	SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,779.1	6,730.6	645.3	596.7	13.289	CC
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,800.0	6,730.5	645.6	596.7	13.199	ES
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,900.0	6,730.0	656.5	605.9	12.963	SF
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,134.2	6,713.0	420.1	347.4	5.780	CC, ES
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,200.0	6,712.7	425.2	351.3	5.755	SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,020.6	6,525.0	1,684.9	1,631.8	31.716	CC, ES
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	11,000.0	6,525.0	1,948.9	1,878.3	27.633	SF
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,431.3	6,721.7	1,517.8	1,307.4	7.215	CC, ES
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,600.0	6,721.0	1,527.1	1,313.7	7.153	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,400.0	6,741.8	1,774.1	1,751.1	77.106	ES
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,406.8	6,742.1	1,774.1	1,751.1	77.179	CC
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	12,319.8	6,760.0	5,223.2	5,128.5	55.152	SF
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	8,809.0	6,758.4	1,607.7	1,574.7	48.689	CC, ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	10,300.0	6,726.3	2,192.4	2,134.7	37.964	SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	7,979.2	6,722.7	1,248.1	1,224.7	53.165	CC, ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	9,300.0	6,719.7	1,817.2	1,777.1	45.283	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		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
0.0	0.0	0.0	0.0	0.0	0.0	-179.32	-75.0	-0.9	75.0				
100.0	100.0	100.0	100.0	0.1	0.1	-179.32	-75.0	-0.9	75.0	74.8	0.17	433.210	
200.0	200.0	200.0	200.0	0.3	0.3	-179.32	-75.0	-0.9	75.0	74.4	0.62	120.423	
300.0	300.0	300.0	300.0	0.5	0.5	-179.32	-75.0	-0.9	75.0	73.9	1.07	69.931	CC, ES

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