



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: 1122ft FSL & 2206ft FWL of Sec 3
900.0	900.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2230.4	2283.6	27.67	233.03	-197.1	-261.8	-113.8	327.7	EOB TO 27.67° INC
4508.4	4855.8	27.67	233.03	-915.4	-1216.1	-528.8	1522.2	END OF TANGENT
5838.8	6239.3	0.00	0.00	-1112.5	-1477.9	-642.6	1849.8	EOD TO VERTICAL
5938.8	6339.3	0.00	0.00	-1112.5	-1477.9	-642.6	1849.8	KOP (8°/100ft BUR)
6655.0	7467.2	90.23	0.00	-393.4	-1477.9	46.4	2568.9	HZ LP *NEW": 737ft FSL & 735ft FWL of Sec 3
6654.8	7518.3	90.23	1.53	-342.3	-1477.2	95.1	2620.0	EOT TO 1.53° AZ
6635.0	12369.5	90.23	1.53	4507.2	-1347.4	4704.2	7471.2	BHL: 370ft FSL & 627ft FWL of Sec 34

BHL: 370ft FSL & 627ft FWL of Sec 34

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: POPHAM 4N	5938.8	-1112.5	-1477.9	40.334149	-104.543347
EP*NEW*: POPHAM 4N	6655.0	-393.6	-1461.2	40.336123	-104.543288
BHL: POPHAM 4N	6635.0	4507.2	-1347.4	40.349575	-104.542881



PDC ENERGY

**WELD COUNTY, COLORADO
SE SW SEC. 3 T4N R64W 6th P.M.
POPHAM 4N**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

19 September, 2017



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 4N
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 4N	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	12,369.5	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	90.0	88.9	83.936	CC, ES
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,057.7	1,690.3	1,507.1	9.228	SF
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	300.0	297.0	174.8	173.7	164.071	CC, ES
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,124.2	1,923.8	1,732.6	10.061	SF
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	400.0	398.0	167.6	166.1	110.452	CC, ES
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,084.9	2,175.6	1,988.0	11.594	SF
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	500.0	497.0	161.4	159.4	82.165	CC, ES
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,198.2	2,442.6	2,255.2	13.037	SF
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	600.0	597.0	156.5	154.1	64.833	CC, ES
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,191.3	2,685.5	2,502.3	14.656	SF
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	700.0	698.0	152.9	150.0	53.347	CC, ES
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,334.9	2,962.0	2,775.2	15.850	SF
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	150.7	147.3	45.443	CC, ES
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,390.2	3,220.4	3,032.9	17.178	SF
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	900.0	898.0	149.9	146.2	39.826	CC, ES
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,617.5	3,485.0	3,297.1	18.552	SF
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	900.0	898.0	150.7	146.9	40.032	CC, ES
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,624.8	3,745.3	3,553.6	19.535	SF
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	900.0	898.0	152.9	149.2	40.621	CC, ES
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,798.9	4,035.5	3,847.2	21.424	SF
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	900.0	900.0	45.0	41.2	11.930	CC, ES
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,832.6	765.8	597.3	4.546	SF
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	900.0	898.0	156.6	152.8	41.575	CC, ES
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	12,369.5	12,902.7	4,257.2	4,068.6	22.576	SF
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	900.0	900.0	29.9	26.1	7.935	CC, ES
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,551.9	494.9	311.9	2.705	SF
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	900.0	900.0	15.0	11.2	3.973	CC
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	1,522.8	1,525.6	17.2	10.4	2.522	ES
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,502.5	281.8	105.3	1.596	SF
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	15.0	11.7	4.523	CC, ES
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,314.4	281.7	99.5	1.546	SF
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	700.0	700.0	30.0	27.2	10.459	CC, ES
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,178.0	548.8	367.4	3.025	SF
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	600.0	600.0	45.0	42.6	18.588	CC, ES
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,187.5	813.7	628.4	4.392	SF
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	60.0	58.1	30.460	CC, ES
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,101.5	1,077.5	889.6	5.734	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 POPHAM 4N
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 4N	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	400.0	399.0	75.0	73.5	49.372	CC, ES
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	12,369.5	12,109.7	1,379.2	1,190.6	7.313	SF
SE SW SEC. 3 T4N R64W 6th P.M. (OFFSETS FOR POPHAM)						
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	2,059.1	1,994.8	2,051.0	2,043.7	282.120	CC
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	2,100.0	2,031.1	2,051.1	2,043.5	270.816	ES
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	12,369.5	6,450.0	6,699.9	6,606.7	71.834	SF
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	3,326.9	5,738.0	4,333.6	4,300.7	131.760	CC, ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	12,369.5	7,481.7	6,054.7	5,931.6	49.193	SF
EXIST HZ SUDEN 34M-223 - Wellbore #1 - Wellbore #1	12,369.5	11,092.0	2,468.7	2,295.6	14.261	CC, ES, SF
EXIST HZ SUDEN 34M-423 - Wellbore #1 - Wellbore #1	12,369.5	11,065.0	2,283.4	2,112.9	13.394	CC, ES, SF
EXIST HZ SUDEN 34R-203 - Wellbore #1 - Wellbore #1	12,369.5	11,081.0	3,174.7	3,002.1	18.395	CC, ES, SF
EXIST HZ SUDEN 34R-323 - Wellbore #1 - Wellbore #1	12,369.5	11,162.0	3,740.2	3,565.3	21.380	CC, ES, SF
EXIST HZ SUDEN 34R-343 - Wellbore #1 - Wellbore #1	12,369.5	11,135.0	2,923.7	2,750.8	16.908	CC, ES, SF
EXIST HZ SUDEN 34R-423 - Wellbore #1 - Wellbore #1	12,369.5	11,245.0	3,575.1	3,400.1	20.428	CC, ES, SF
EXIST HZ SUDEN 34U-243 - Wellbore #1 - Wellbore #1	12,369.5	11,118.0	4,237.0	4,062.2	24.242	CC, ES, SF
EXIST HZ SUDEN 34U-403 - Wellbore #1 - Wellbore #1	12,369.5	11,309.0	4,580.5	4,405.5	26.178	CC, ES, SF
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	899.3	874.3	2,486.6	2,484.2	1,011.199	CC
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	900.0	875.0	2,486.6	2,484.2	1,010.445	ES
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	12,369.5	6,590.8	3,377.4	3,284.2	36.221	SF
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,452.8	6,672.6	2,401.7	2,324.8	31.237	CC
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,500.0	6,675.0	2,402.1	2,324.4	30.894	ES
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	12,369.5	6,723.2	2,570.3	2,476.4	27.373	SF
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,458.6	6,548.4	3,714.1	3,637.7	48.596	CC
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,500.0	6,545.8	3,714.4	3,637.2	48.123	ES
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	12,369.5	6,497.1	3,824.0	3,730.9	41.037	SF
EXIST VERT ECKHARDT 34-34 - Wellbore #1 - Wellbor	12,369.5	6,475.0	2,836.0	2,743.0	30.494	CC, ES, SF
EXIST VERT ECKHARDT 44-34 - Wellbore #1 - Wellbor	12,369.5	6,300.0	3,997.2	3,904.4	43.078	CC, ES, SF
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,138.7	6,650.0	1,196.0	1,143.2	22.637	CC, ES
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,600.0	6,649.1	1,281.9	1,220.9	21.028	SF
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,737.1	6,641.5	693.8	630.4	10.947	CC, ES
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,900.0	6,641.6	712.6	646.3	10.747	SF
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	2,354.3	2,272.1	622.2	612.7	65.279	CC
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	2,400.0	2,312.2	622.6	612.7	62.534	ES
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	8,300.0	6,616.8	757.5	732.1	29.795	SF
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	912.5	900.0	3,316.1	3,313.6	1,368.741	CC, ES
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	12,369.5	6,750.0	4,431.3	4,337.9	47.400	SF
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	917.0	886.3	1,157.1	1,154.5	451.676	CC, ES
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	12,369.5	6,700.0	5,456.6	5,362.9	58.227	SF
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	100.0	46.6	2,540.6	2,540.4	10,000.000	CC, ES
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	12,369.5	6,800.0	5,161.7	5,068.0	55.084	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,624.2	2,508.8	198.7	186.5	16.280	CC, ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,700.0	2,575.4	202.0	189.1	15.676	SF
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	100.0	61.6	1,382.3	1,382.1	9,101.781	CC
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	928.3	907.7	1,382.9	1,380.4	561.704	ES
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	12,369.5	6,603.8	4,088.3	3,995.2	43.897	SF
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	219.7	162.7	2,612.1	2,611.5	4,840.097	CC
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	700.0	638.2	2,612.5	2,610.6	1,431.180	ES
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	12,369.5	6,535.4	6,156.3	6,063.0	65.985	SF
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	916.0	887.7	1,734.0	1,731.5	695.866	CC, ES
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	12,369.5	6,500.0	5,169.7	5,076.7	55.571	SF
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	109.8	122.8	961.2	960.9	3,984.017	CC, ES
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	9,600.0	6,652.7	1,434.5	1,391.0	32.984	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 POPHAM 4N
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 4N	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	900.0	894.0	856.5	837.7	45.571	CC
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	1,100.0	1,093.8	859.3	836.1	37.035	ES
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	8,900.0	6,643.1	1,258.3	1,094.6	7.689	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,400.0	6,100.3	557.6	507.7	11.172	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,750.0	6,427.7	537.8	493.9	12.245	ES
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,796.3	6,467.1	537.2	494.5	12.581	CC
EXIST HZ CHESNUT 27G-203 - Wellbore #1 - Wellbore	12,369.5	13,769.0	559.5	328.3	2.420	CC, ES, SF
EXIST HZ CHESNUT 27G-423 - Wellbore #1 - Wellbore	12,369.5	13,972.0	292.8	135.0	1.856	CC, ES, SF
EXIST HZ CHESNUT 27K-203 - Wellbore #1 - Wellbore	12,369.5	13,900.0	542.9	312.3	2.354	CC, ES, SF
EXIST HZ CHESNUT 27K-323 - Wellbore #1 - Wellbore	12,369.5	14,120.0	1,145.8	926.5	5.225	CC, ES, SF
EXIST HZ CHESNUT 27K-343 - Wellbore #1 - Wellbore	12,369.5	13,920.0	221.7	2.3	1.011	Level 2, CC, ES, SF
EXIST HZ CHESNUT 27K-403 - Wellbore #1 - Wellbore	12,369.5	14,160.0	858.6	642.4	3.972	CC, ES, SF
EXIST HZ CHESNUT 27O-243 - Wellbore #1 - Wellbore	12,369.5	14,066.0	1,490.9	1,271.2	6.785	CC, ES, SF
EXIST HZ CHESNUT 27O-303 - Wellbore #1 - Wellbore	12,369.5	14,196.0	1,813.1	1,592.5	8.220	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,800.0	7,260.6	326.1	277.6	6.725	SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,850.0	7,260.3	317.0	271.0	6.883	ES
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,865.6	7,260.3	316.5	271.2	6.990	CC
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	7,496.3	6,645.0	58.3	35.1	2.514	CC, ES, SF
EXIST VERT BAILEY 14-34 - Wellbore #1 - Wellbore #1	12,369.5	6,525.0	371.1	302.6	5.416	CC, ES, SF
EXIST VERT BAILEY 24-34 - Wellbore #1 - Wellbore #1	12,369.5	6,500.0	1,345.7	1,253.1	14.518	CC, ES, SF
EXIST VERT BAILEY 5 - Wellbore #1 - Wellbore #1	12,369.5	6,613.1	1,080.8	987.0	11.516	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	8,772.3	6,646.4	118.6	87.7	3.837	CC, ES, SF
EXIST VERT ECKHARDT 1 - Wellbore #1 - Design #1	12,369.5	6,633.0	1,291.5	1,067.7	5.769	CC, ES, SF
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,578.3	6,628.2	1,415.5	1,206.3	6.766	CC
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,600.0	6,628.1	1,415.6	1,206.0	6.754	ES
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,800.0	6,627.3	1,432.7	1,219.5	6.718	SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,831.2	6,658.7	347.7	300.2	7.316	CC, ES
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,900.0	6,658.2	354.4	305.7	7.277	SF
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,188.3	6,647.0	135.3	63.8	1.894	CC, ES, SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,062.3	6,525.0	1,384.0	1,332.1	26.666	CC
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,100.0	6,525.0	1,384.6	1,332.0	26.347	ES
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,700.0	6,525.0	1,523.9	1,460.8	24.161	SF
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,474.6	6,651.6	1,236.3	1,028.8	5.957	CC
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,500.0	6,651.5	1,236.6	1,028.6	5.945	ES
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,600.0	6,651.1	1,242.6	1,032.8	5.922	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	6,400.0	5,984.8	1,622.2	1,585.0	43.610	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,477.3	6,669.9	1,454.8	1,431.4	62.149	CC, ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	8,852.9	6,682.2	1,302.3	1,270.1	40.498	CC, ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	9,800.0	6,668.6	1,610.2	1,563.2	34.261	SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	8,025.2	6,653.2	933.3	909.9	39.857	CC, ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	8,400.0	6,653.0	1,005.8	979.4	38.226	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	-179.29	-90.0	-1.1	90.0				
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.17	519.968	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.4	0.62	144.540	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.07	83.936	CC, ES

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