



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: 1137ft FSL & 2206ft FWL of Sec 3
1000.0	1000.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (3°/100ft BUR)
1875.9	1909.9	27.30	236.66	-116.9	-177.7	-49.6	212.7	EOB TO 27.30° INC
5032.9	5462.6	27.30	236.66	-1012.3	-1538.9	-429.9	1842.0	END OF TANGENT
5908.8	6372.5	0.00	0.00	-1129.2	-1716.6	-479.6	2054.7	EOD TO VERTICAL
6008.8	6472.5	0.00	0.00	-1129.2	-1716.6	-479.6	2054.7	KOP (8°/100ft BUR)
6725.0	7600.4	90.23	0.98	-410.2	-1704.3	192.6	2773.8	HL LP: 737ft FSL & 509ft FWL of Sec 3
6705.0	12502.5	90.24	0.98	4491.1	-1620.5	4774.5	7675.9	BHL: 370ft FSL & 354ft FWL of Sec 34

SHL: 1137ft FSL & 2206ft FWL of Sec 3

HZ LP: 737ft FSL & 509ft FWL of Sec 3

BHL: 370ft FSL & 354ft FWL of Sec 34

Name	TVD	+N-S	+E-W	Latitude	Longitude
KOP: POPHAM 3N	6008.8	-1129.2	-1716.6	40.334145	-104.544203
EP: POPHAM 3N	6725.0	-410.2	-1704.3	40.336118	-104.544159
BHL: POPHAM 3N	6705.0	4491.1	-1620.5	40.349572	-104.543860



PDC ENERGY

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

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

19 September, 2017



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 3N
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 3N	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	12,502.5	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	105.0	103.9	97.902	CC, ES
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,051.4	1,964.4	1,781.0	10.711	SF
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	300.0	297.0	183.0	181.9	171.752	CC, ES
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,121.4	2,195.4	2,003.7	11.449	SF
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	400.0	398.0	174.8	173.3	115.221	CC, ES
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,082.1	2,449.5	2,261.5	13.028	SF
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	500.0	497.0	167.6	165.6	85.304	CC, ES
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,195.3	2,714.5	2,526.6	14.449	SF
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	600.0	597.0	161.5	159.1	66.890	CC, ES
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,188.5	2,959.3	2,775.6	16.116	SF
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	700.0	698.0	156.5	153.7	54.622	CC, ES
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,331.8	3,234.4	3,047.0	17.262	SF
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	800.0	798.0	152.9	149.6	46.119	CC, ES
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,387.4	3,494.0	3,306.1	18.599	SF
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	900.0	898.0	150.7	147.0	40.032	CC, ES
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,615.0	3,754.9	3,566.4	19.918	SF
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	1,000.0	998.0	150.0	145.8	35.591	CC, ES
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,621.9	4,019.0	3,826.8	20.914	SF
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	1,000.0	998.0	150.7	146.5	35.769	CC, ES
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,796.1	4,308.2	4,119.4	22.820	SF
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	1,000.0	1,000.0	30.0	25.8	7.109	CC, ES
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,832.6	484.0	314.7	2.859	SF
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	1,000.0	998.0	153.0	148.8	36.287	CC, ES
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	12,502.5	12,899.8	4,530.8	4,341.8	23.979	SF
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	1,000.0	1,000.0	14.9	10.7	3.540	CC, ES
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,551.9	232.7	51.2	1.282	Level 3, SF
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	900.0	900.0	15.0	11.2	3.973	CC
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	1,525.6	1,522.8	17.2	10.4	2.522	ES
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,360.9	281.6	104.9	1.594	SF
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	800.0	800.0	30.0	26.7	9.033	CC, ES
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,308.4	545.7	360.8	2.951	SF
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	700.0	700.0	45.0	42.1	15.676	CC, ES
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,171.9	824.6	643.8	4.561	SF
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	600.0	600.0	60.0	57.5	24.773	CC, ES
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,181.6	1,083.5	897.7	5.830	SF
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	75.0	73.0	38.056	CC, ES
POPHAM 8N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,095.1	1,352.2	1,164.3	7.195	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 3N
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 3N	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	90.0	88.5	59.227	CC, ES
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	12,502.5	12,103.8	1,650.3	1,461.2	8.728	SF

Company:	PDC ENERGY	Local Co-ordinate Reference:	Well POPHAM 3N
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 3N	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	1,671.7	1,627.2	2,074.0	2,068.9	409.342	CC
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	1,800.0	1,742.7	2,074.6	2,068.7	351.657	ES
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	12,502.5	6,450.0	6,801.6	6,707.9	72.609	SF
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	3,305.3	5,738.0	4,399.9	4,366.8	133.083	CC, ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	12,502.5	7,554.4	6,248.3	6,124.8	50.600	SF
EXIST HZ SUDEN 34M-223 - Wellbore #1 - Wellbore #1	12,502.5	11,092.0	2,742.1	2,568.6	15.805	CC, ES, SF
EXIST HZ SUDEN 34M-423 - Wellbore #1 - Wellbore #1	12,502.5	11,065.0	2,548.7	2,377.5	14.886	CC, ES, SF
EXIST HZ SUDEN 34R-203 - Wellbore #1 - Wellbore #1	12,502.5	11,081.0	3,448.0	3,274.8	19.909	CC, ES, SF
EXIST HZ SUDEN 34R-323 - Wellbore #1 - Wellbore #1	12,502.5	11,162.0	4,012.2	3,836.6	22.847	CC, ES, SF
EXIST HZ SUDEN 34R-343 - Wellbore #1 - Wellbore #1	12,502.5	11,135.0	3,195.4	3,021.9	18.414	CC, ES, SF
EXIST HZ SUDEN 34R-423 - Wellbore #1 - Wellbore #1	12,502.5	11,245.0	3,844.8	3,669.1	21.875	CC, ES, SF
EXIST HZ SUDEN 34U-243 - Wellbore #1 - Wellbore #1	12,502.5	11,118.0	4,510.3	4,334.8	25.697	CC, ES, SF
EXIST HZ SUDEN 34U-403 - Wellbore #1 - Wellbore #1	12,502.5	11,309.0	4,851.1	4,675.3	27.580	CC, ES, SF
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	899.4	874.4	2,473.2	2,470.8	1,004.550	CC
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	1,000.0	973.5	2,473.3	2,470.6	905.231	ES
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	12,502.5	6,660.2	3,584.3	3,490.4	38.159	SF
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,572.6	6,754.5	2,663.8	2,586.3	34.399	CC
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,600.0	6,756.1	2,663.9	2,586.0	34.180	ES
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	12,502.5	6,800.0	2,820.9	2,726.3	29.814	SF
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,558.8	6,645.0	3,978.6	3,902.0	51.927	CC
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,600.0	6,643.9	3,978.8	3,901.4	51.428	ES
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	12,502.5	6,617.1	4,088.9	3,995.0	43.528	SF
EXIST VERT ECKHARDT 34-34 - Wellbore #1 - Wellbor	12,502.5	6,475.0	3,109.0	3,015.5	33.257	CC, ES, SF
EXIST VERT ECKHARDT 44-34 - Wellbore #1 - Wellbor	12,502.5	6,300.0	4,273.9	4,180.6	45.819	CC, ES, SF
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,266.3	6,650.0	1,448.7	1,395.4	27.164	CC
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	10,300.0	6,650.0	1,449.1	1,395.2	26.880	ES
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	11,000.0	6,650.0	1,623.9	1,557.7	24.520	SF
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,869.6	6,700.0	949.9	885.8	14.815	CC
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,900.0	6,700.0	950.4	885.7	14.699	ES
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	11,100.0	6,700.0	977.4	909.2	14.324	SF
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	2,336.1	2,233.9	584.6	574.2	56.107	CC, ES
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	8,600.0	6,674.7	1,031.3	1,002.7	36.044	SF
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	991.7	964.8	3,305.7	3,303.1	1,265.757	CC
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	1,000.0	970.9	3,305.7	3,303.1	1,256.172	ES
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	12,502.5	6,750.0	4,663.1	4,569.0	49.555	SF
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	1,013.0	983.2	1,163.0	1,160.2	413.191	CC, ES
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	12,502.5	6,700.0	5,577.2	5,483.0	59.170	SF
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	100.0	46.6	2,535.4	2,535.3	10,000.000	CC, ES
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	12,502.5	6,800.0	5,356.5	5,262.2	56.780	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,492.1	2,368.9	240.5	228.4	19.973	CC
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,500.0	2,375.9	240.5	228.4	19.846	ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,600.0	2,464.9	245.6	232.6	18.886	SF
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	1,016.3	993.6	1,370.4	1,367.7	509.966	CC, ES
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	12,502.5	6,679.2	4,244.7	4,150.9	45.240	SF
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	220.7	163.7	2,613.6	2,613.1	4,811.206	CC
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	700.0	638.2	2,614.0	2,612.2	1,431.782	ES
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	12,502.5	6,588.2	6,332.1	6,238.2	67.415	SF
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	1,015.5	991.4	1,731.1	1,728.4	628.371	CC, ES
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	12,502.5	6,500.0	5,336.3	5,242.8	57.062	SF
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	109.3	122.3	946.6	946.3	3,945.138	CC, ES
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	10,100.0	6,700.0	1,844.0	1,793.5	36.482	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 3N
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 3N	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	1,000.0	994.0	842.0	820.9	40.030	CC
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	1,100.0	1,094.0	842.8	819.6	36.258	ES
ABDN VERT CARROLL E FLACK 1 - Wellbore #1 - Desi	9,000.0	6,713.3	1,491.1	1,325.1	8.983	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,550.0	6,186.2	329.2	272.6	5.814	SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,850.0	6,467.7	302.2	254.3	6.315	ES
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,916.2	6,523.1	299.9	255.2	6.707	CC
EXIST HZ CHESNUT 27G-203 - Wellbore #1 - Wellbore	12,502.5	13,769.0	329.9	101.4	1.444	Level 3, CC, ES, SF
EXIST HZ CHESNUT 27G-423 - Wellbore #1 - Wellbore	12,502.5	13,972.0	226.0	55.1	1.322	Level 3, CC, ES, SF
EXIST HZ CHESNUT 27K-203 - Wellbore #1 - Wellbore	12,502.5	13,900.0	813.7	583.4	3.533	CC, ES, SF
EXIST HZ CHESNUT 27K-323 - Wellbore #1 - Wellbore	12,502.5	14,120.0	1,415.3	1,195.1	6.428	CC, ES, SF
EXIST HZ CHESNUT 27K-343 - Wellbore #1 - Wellbore	12,502.5	13,920.0	459.0	226.6	1.975	CC, ES, SF
EXIST HZ CHESNUT 27K-403 - Wellbore #1 - Wellbore	12,502.5	14,160.0	1,114.9	895.2	5.074	CC, ES, SF
EXIST HZ CHESNUT 27O-243 - Wellbore #1 - Wellbore	12,502.5	14,066.0	1,764.8	1,544.6	8.012	CC, ES, SF
EXIST HZ CHESNUT 27O-303 - Wellbore #1 - Wellbore	12,502.5	14,196.0	2,084.7	1,863.3	9.413	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,900.0	6,996.3	289.2	241.1	6.013	SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,950.0	7,005.0	283.1	236.6	6.089	ES
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,950.5	7,005.0	283.1	236.7	6.091	CC
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	7,634.3	6,710.2	286.0	260.9	11.422	CC, ES, SF
EXIST VERT BAILEY 14-34 - Wellbore #1 - Wellbore #1	12,502.5	6,525.0	457.9	377.0	5.665	CC, ES, SF
EXIST VERT BAILEY 24-34 - Wellbore #1 - Wellbore #1	12,502.5	6,500.0	1,612.5	1,519.6	17.343	CC, ES, SF
EXIST VERT BAILEY 5 - Wellbore #1 - Wellbore #1	12,502.5	6,684.7	1,258.6	1,164.1	13.316	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	8,912.0	6,711.7	120.9	88.4	3.728	CC, ES, SF
EXIST VERT ECKHARDT 1 - Wellbore #1 - Design #1	12,502.5	6,703.0	1,028.1	802.2	4.551	CC, ES, SF
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,703.3	6,698.3	1,680.6	1,469.4	7.958	CC, ES
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,900.0	6,697.5	1,692.1	1,477.3	7.878	SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,973.2	6,730.5	99.5	50.8	2.044	CC, ES, SF
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,328.3	6,719.0	125.6	53.2	1.735	CC, ES, SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,214.7	6,525.0	1,144.6	1,090.8	21.287	CC, ES
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	10,600.0	6,525.0	1,207.7	1,147.4	20.024	SF
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,625.3	6,721.6	972.0	762.0	4.628	CC, ES
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,700.0	6,721.3	974.9	763.5	4.612	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	6,500.0	6,023.7	1,414.9	1,373.0	33.772	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,600.0	6,739.5	1,228.3	1,202.9	48.370	ES
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,600.7	6,739.5	1,228.3	1,202.9	48.375	CC
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	9,003.3	6,747.6	1,062.0	1,028.3	31.450	CC, ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	9,500.0	6,736.5	1,172.4	1,131.3	28.555	SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	8,173.3	6,722.7	702.3	677.0	27.743	CC, ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	8,300.0	6,722.4	713.7	687.6	27.386	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 (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-179.32	-105.0	-1.3	105.0						
100.0	100.0	100.0	100.0	0.1	0.1	-179.32	-105.0	-1.3	105.0	104.8	0.17	606.485			
200.0	200.0	200.0	200.0	0.3	0.3	-179.32	-105.0	-1.3	105.0	104.3	0.62	168.590			
300.0	300.0	300.0	300.0	0.5	0.5	-179.32	-105.0	-1.3	105.0	103.9	1.07	97.902	CC, ES		
400.0	400.0	396.5	396.5	0.8	0.7	-179.53	-106.5	-0.9	106.6	105.1	1.49	71.525			
500.0	500.0	492.9	492.7	1.0	0.9	179.85	-111.3	0.3	111.5	109.6	1.91	58.454			

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