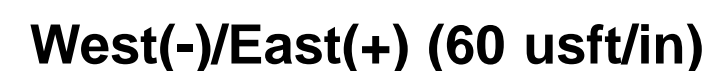


TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 1062ft FSL & 2206ft FWL of Sec 3
500.0	500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2"/100ft BUR)
1159.5	1165.4	13.31	199.15	-72.7	-25.2	-71.1	76.9	EOB TO 13.31° INC
5209.3	5327.1	13.31	199.15	-977.6	-339.6	-956.0	1034.9	END OF TANGENT
5868.8	5992.5	0.00	0.00	-1050.3	-364.8	-1027.1	111.8	EOD TO VERTICAL
5968.8	6092.5	0.00	0.00	-1050.3	-364.8	-1027.1	111.8	KOP (8"/100ft BUR)
6685.0	7224.7	90.58	0.98	-327.0	-352.4	-305.7	1835.3	HZ LP: 737ft FSL & 1860ft FWL of Sec 3
6635.0	12123.8	90.59	0.97	4571.2	-268.9	4579.1	6734.1	BHL: 370ft FSL & 1705ft FWL of Sec 34

**PROPOSED LOCAL COORDINATES:**  
**SHL: 1062ft FSL & 2206ft FWL of Sec 3**  
**HZ LP: 737ft FSL & 1860ft FWL of Sec 3**  
**BHL: 370ft FSL & 1705ft FWL of Sec 34**

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP: POPHAM 8N	5968.8	-1050.3	-364.8	40.334155	-104.539358
EP: POPHAM 8N	6685.0	-327.0	-352.4	40.336141	-104.539313
BHL: POPHAM 8N	6635.0	4571.2	-268.9	40.349586	-104.539014



# **PDC ENERGY**

**WELD COUNTY, COLORADO  
SE SW SEC. 3 T4N R64W 6th P.M.  
POPHAM 8N**

**ORIGINAL WELLBORE  
PROPOSAL #1**

## **Anticollision Report**

**19 September, 2017**



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well POPHAM 8N
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SW SEC. 3 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	POPHAM 8N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 100.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0 usft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	19/09/2017		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	12,123.5	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	29.9	28.9	27.933	CC, ES
POPHAM 10N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,080.1	612.7	424.0	3.247	SF
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	300.0	297.0	152.9	151.8	143.515	CC, ES
POPHAM 11N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,133.9	847.7	651.8	4.327	SF
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	400.0	398.0	150.7	149.2	99.332	CC, ES
POPHAM 12N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,095.1	1,097.9	905.0	5.690	SF
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	500.0	497.0	149.9	148.0	76.325	CC, ES
POPHAM 13N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,208.3	1,365.6	1,173.3	7.102	SF
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	500.0	497.0	150.7	148.8	76.738	CC, ES
POPHAM 14N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,201.5	1,607.8	1,419.3	8.532	SF
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	153.0	151.0	77.782	CC, ES
POPHAM 15N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,345.6	1,884.7	1,692.8	9.820	SF
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	156.6	154.6	79.634	CC, ES
POPHAM 16N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,400.3	2,142.7	1,950.0	11.122	SF
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	161.6	159.6	82.155	CC, ES
POPHAM 17C - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,627.3	2,409.4	2,217.0	12.522	SF
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	167.8	165.8	85.305	CC, ES
POPHAM 18N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,634.8	2,667.6	2,470.6	13.545	SF
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	175.0	173.0	88.972	CC, ES
POPHAM 19N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,809.1	2,957.9	2,764.6	15.297	SF
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	105.0	103.0	53.272	CC, ES
POPHAM 1C - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,832.6	1,829.5	1,650.0	10.192	SF
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	500.0	498.0	183.2	181.2	93.076	CC, ES
POPHAM 20N - ORIGINAL WELLBORE - PROPOSAL #	12,123.9	12,912.8	3,179.5	2,985.8	16.416	SF
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	90.0	88.0	45.632	CC, ES
POPHAM 2N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,551.9	1,572.7	1,384.3	8.348	SF
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	75.0	73.0	38.056	CC, ES
POPHAM 3N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,502.5	1,352.5	1,164.1	7.179	SF
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	60.0	58.1	30.460	CC, ES
POPHAM 4N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,369.5	1,077.8	889.3	5.718	SF
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	45.0	43.1	22.843	CC, ES
POPHAM 5N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,319.8	807.9	619.2	4.282	SF
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	30.0	28.0	15.230	CC, ES
POPHAM 6N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,189.4	528.9	342.0	2.830	SF
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	500.0	500.0	15.0	13.1	7.634	CC, ES
POPHAM 7N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,204.0	276.0	91.0	1.492	Level 3, SF
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	400.0	399.0	15.0	13.5	9.855	CC, ES

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



<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well POPHAM 8N
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SW SEC. 3 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	POPHAM 8N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SE SW SEC. 3 T4N R64W 6th P.M.						
POPHAM 9N - ORIGINAL WELLBORE - PROPOSAL #1	12,123.9	12,132.0	307.9	117.7	1.618	SF
SE SW SEC. 3 T4N R64W 6th P.M. (OFFSETS FOR POPHAM						
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	6,092.5	5,931.7	1,520.6	1,493.9	56.923	ES, SF
ABDN VERT HOFF 31-10 - Wellbore #1 - Wellbore #1	6,094.9	5,934.2	1,520.6	1,493.9	56.987	CC
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	7,878.5	7,532.4	3,261.8	3,208.2	60.844	CC
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	7,900.0	7,532.0	3,261.9	3,208.1	60.627	ES
EXIST DD HOFFMAN C 02-33D - Wellbore #1 - Wellbore	12,100.0	7,451.6	5,334.3	5,207.0	41.884	SF
EXIST HZ SUDEN 34M-223 - Wellbore #1 - Wellbore #1	12,123.9	11,092.0	1,393.6	1,215.4	7.819	CC, ES, SF
EXIST HZ SUDEN 34M-423 - Wellbore #1 - Wellbore #1	12,123.9	11,065.0	1,230.9	1,057.0	7.080	CC, ES, SF
EXIST HZ SUDEN 34R-203 - Wellbore #1 - Wellbore #1	12,123.9	11,081.0	2,098.3	1,920.5	11.802	CC, ES, SF
EXIST HZ SUDEN 34R-323 - Wellbore #1 - Wellbore #1	12,123.9	11,162.0	2,663.6	2,483.6	14.794	CC, ES, SF
EXIST HZ SUDEN 34R-343 - Wellbore #1 - Wellbore #1	12,123.9	11,135.0	1,848.2	1,670.3	10.387	CC, ES, SF
EXIST HZ SUDEN 34R-423 - Wellbore #1 - Wellbore #1	12,123.9	11,245.0	2,500.4	2,320.6	13.907	CC, ES, SF
EXIST HZ SUDEN 34U-243 - Wellbore #1 - Wellbore #1	12,123.9	11,118.0	3,159.9	2,979.8	17.547	CC, ES, SF
EXIST HZ SUDEN 34U-403 - Wellbore #1 - Wellbore #1	12,123.9	11,309.0	3,504.2	3,324.1	19.459	CC, ES, SF
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	9,879.0	6,622.0	1,465.8	1,410.0	26.274	CC
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	9,900.0	6,621.8	1,465.9	1,409.8	26.096	ES
EXIST VERT BATES 1 - Wellbore #1 - Wellbore #1	10,600.0	6,615.0	1,633.5	1,564.2	23.576	SF
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,160.3	6,651.1	1,315.2	1,234.8	16.359	CC
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,200.0	6,652.7	1,315.8	1,234.7	16.213	ES
EXIST VERT BATES C #3-2 - Wellbore #1 - Wellbore #1	11,600.0	6,669.1	1,386.7	1,297.8	15.607	SF
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,153.5	6,585.0	2,627.7	2,547.8	32.891	CC
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	11,200.0	6,582.3	2,628.1	2,547.3	32.534	ES
EXIST VERT BRANCH 1-3 - Wellbore #1 - Wellbore #1	12,123.9	6,530.7	2,800.8	2,702.4	28.443	SF
EXIST VERT ECKHARDT 34-34 - Wellbore #1 - Wellbor	12,123.9	6,475.0	1,781.3	1,683.1	18.130	CC, ES, SF
EXIST VERT ECKHARDT 44-34 - Wellbore #1 - Wellbor	12,123.9	6,300.0	2,927.6	2,829.6	29.848	CC, ES, SF
EXIST VERT FLACK 1 - Wellbore #1 - Wellbore #1	9,859.2	6,650.0	97.1	41.8	1.756	CC, ES, SF
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,462.4	6,636.8	399.7	333.1	5.999	CC, ES
EXIST VERT FLACK 5 - Wellbore #1 - Wellbore #1	10,500.0	6,636.6	401.5	334.2	5.962	SF
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	7,835.0	6,677.3	384.1	360.5	16.310	CC, ES
EXIST VERT GALE C 3-25 - Wellbore #1 - Wellbore #1	7,900.0	6,674.5	389.5	365.4	16.131	SF
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	9,823.2	6,750.0	2,723.9	2,669.1	49.687	CC
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	9,900.0	6,750.0	2,725.0	2,668.8	48.456	ES
EXIST VERT KAISER 8-3 - Wellbore #1 - Wellbore #1	12,100.0	6,750.0	3,550.2	3,452.0	36.175	SF
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	1,150.8	1,115.5	1,132.0	1,128.6	331.537	CC
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	1,200.0	1,162.7	1,132.1	1,128.4	311.549	ES
EXIST VERT KISSLER #3-1 - Wellbore #1 - Wellbore #1	12,100.0	6,700.0	5,069.9	4,971.5	51.534	SF
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	100.0	46.5	2,562.2	2,562.0	10,000.000	CC, ES
EXIST VERT KISSLER 3-2 - Wellbore #1 - Wellbore #1	12,100.0	6,800.0	4,443.5	4,345.3	45.218	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,858.7	2,787.4	122.8	110.9	10.322	CC, ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,900.0	2,827.4	123.2	111.2	10.228	SF
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	8,736.7	6,621.7	1,244.7	1,209.1	35.016	CC, ES
EXIST VERT OSTER 3-1014 - Wellbore #1 - Wellbore #1	9,500.0	6,621.3	1,460.1	1,411.4	29.978	SF
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	215.8	158.8	2,606.9	2,606.3	4,978.264	CC
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	508.3	453.2	2,607.2	2,605.9	1,955.696	ES
EXIST VERT OSTER 3-1614 - Wellbore #1 - Wellbore #1	12,100.0	6,543.9	5,521.9	5,423.8	56.264	SF
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	608.0	603.9	1,749.5	1,747.9	1,059.173	CC, ES
EXIST VERT OSTER 3-23 - Wellbore #1 - Wellbore #1	12,100.0	6,500.0	4,598.8	4,500.9	46.992	SF
EXIST VERT WELD 2 - Wellbore #1 - Wellbore #1	8,567.1	6,684.0	109.3	76.4	3.319	CC, ES, SF

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

<b>Company:</b>	PDC ENERGY	<b>Local Co-ordinate Reference:</b>	Well POPHAM 8N
<b>Project:</b>	WELD COUNTY, COLORADO	<b>TVD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Reference Site:</b>	SE SW SEC. 3 T4N R64W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4685.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	POPHAM 8N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #1	<b>Offset TVD Reference:</b>	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	8,447.3	6,666.6	133.4	-29.1	0.821	Level 1, CC, ES, SF
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	1,581.3	1,433.3	1,414.2	1,407.5	210.279	CC
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	1,600.0	1,445.6	1,414.2	1,407.4	206.824	ES
EXIST DD LOEFFLER C 10-30 - Wellbore #1 - Wellbore	6,200.0	6,198.8	1,658.0	1,616.4	39.893	SF
EXIST HZ CHESNUT 27G-203 - Wellbore #1 - Wellbore	12,123.9	13,769.0	1,609.0	1,372.5	6.803	CC, ES, SF
EXIST HZ CHESNUT 27G-423 - Wellbore #1 - Wellbore	12,123.9	13,972.0	1,257.2	1,022.5	5.357	CC, ES, SF
EXIST HZ CHESNUT 27Q-203 - Wellbore #1 - Wellbore	12,123.9	13,900.0	566.8	330.9	2.403	CC, ES, SF
EXIST HZ CHESNUT 27K-323 - Wellbore #1 - Wellbore	12,123.9	14,120.0	156.9	-3.1	0.981	Level 1, CC, ES, SF
EXIST HZ CHESNUT 27K-343 - Wellbore #1 - Wellbore	12,123.9	13,920.0	921.7	685.3	3.899	CC, ES, SF
EXIST HZ CHESNUT 27K-403 - Wellbore #1 - Wellbore	12,123.9	14,160.0	336.2	146.3	1.771	CC, ES, SF
EXIST HZ CHESNUT 27Q-243 - Wellbore #1 - Wellbore	12,123.9	14,066.0	428.3	203.2	1.903	CC, ES, SF
EXIST HZ CHESNUT 27O-303 - Wellbore #1 - Wellbore	12,123.9	14,196.0	743.2	517.9	3.299	CC, ES, SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,550.0	8,361.6	276.5	218.6	4.780	SF
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,600.0	8,363.9	265.9	210.8	4.831	ES
EXIST HZ OREDIGGER C10-69HN - Wellbore #1 - Well	6,617.1	8,364.8	265.1	211.1	4.907	CC
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	6,650.0	6,511.7	1,192.8	1,168.1	48.315	SF
EXIST VERT ATKINSON-GALE 3-13 - Wellbore #1 - We	7,227.2	6,700.0	1,065.2	1,043.9	49.906	CC, ES
EXIST VERT BAILEY 14-34 - Wellbore #1 - Wellbore #1	12,123.9	6,525.0	1,175.1	1,076.6	11.932	CC, ES, SF
EXIST VERT BAILEY 24-34 - Wellbore #1 - Wellbore #1	12,123.9	6,500.0	480.2	390.4	5.346	CC, ES, SF
EXIST VERT BAILEY 5 - Wellbore #1 - Wellbore #1	12,123.9	6,613.1	987.5	888.7	9.991	CC, ES, SF
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	8,504.9	6,691.3	1,230.5	1,198.5	38.472	CC, ES
EXIST VERT DONES 1 - Wellbore #1 - Wellbore #1	9,400.0	6,677.3	1,521.5	1,474.5	32.373	SF
EXIST VERT ECKHARDT 1 - Wellbore #1 - Design #1	12,123.9	6,633.0	2,353.0	2,123.9	10.274	CC, ES, SF
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,296.5	6,633.5	330.1	116.9	1.548	CC
EXIST VERT FLACK 21-3 - Wellbore #1 - Design #1	11,300.0	6,633.5	330.2	116.9	1.548	ES, SF
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,566.5	6,670.1	1,450.0	1,399.9	28.956	CC
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	9,600.0	6,669.6	1,450.4	1,399.7	28.618	ES
EXIST VERT MILLAGE 12-3 - Wellbore #1 - Wellbore #1	10,400.0	6,657.8	1,672.4	1,606.9	25.525	SF
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	10,921.7	6,650.0	1,224.3	1,149.0	16.255	CC, ES
EXIST VERT MILLEGE 1 - Wellbore #1 - Wellbore #1	11,300.0	6,645.7	1,281.5	1,198.9	15.519	SF
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,864.2	2,792.7	116.2	104.2	9.746	CC, ES
EXIST VERT MURPHY 1 - Wellbore #1 - Wellbore #1	2,900.0	2,827.3	116.5	104.4	9.670	SF
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	9,808.5	6,525.0	2,482.2	2,427.8	45.591	CC, ES
EXIST VERT SITZMAN 2 - Wellbore #1 - Wellbore #1	12,000.0	6,525.0	3,311.1	3,215.1	34.466	SF
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,218.7	6,657.3	2,322.5	2,110.5	10.955	CC
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,300.0	6,656.5	2,323.9	2,110.4	10.883	ES
EXIST VERT SITZMAN 4-114 - Wellbore #1 - Design #1	11,700.0	6,652.4	2,371.9	2,150.7	10.724	SF
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	7,193.2	6,704.9	2,579.1	2,557.6	119.793	CC, ES
EXIST VERT WILMOTH 1 - Wellbore #1 - Wellbore #1	12,100.0	6,760.0	5,543.1	5,445.0	56.469	SF
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	8,596.4	6,724.6	2,413.3	2,379.8	71.951	CC
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	8,600.0	6,724.5	2,413.3	2,379.7	71.834	ES
EXIST VERT WILMOTH 4-914 - Wellbore #1 - Wellbore #	12,100.0	6,656.9	4,253.4	4,155.2	43.307	SF
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	7,766.2	6,679.9	2,053.0	2,030.3	90.474	CC, ES
EXIST VERT WILMOTH C 3-33 - Wellbore #1 - Wellbore	12,100.0	6,651.1	4,795.3	4,697.6	49.087	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