



McElvain Energy, Inc.

Sec. 29 T18S R34E

EK 29 Federal Com

EK 29 BS2 Fed Com 2H

Wellbore #1

Plan #3 09Jan17 kjs

HOBBS OCD

MAR 09 2017

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Anticollision Report

09 January, 2017



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference	Plan #3 09Jan17 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,682.5 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 01/09/17			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,789.8	Plan #3 09Jan17 kjs (Wellbore #1)	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						
EK 29 Federal Com						
EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov1	1,900.0	1,900.0	39.2	30.9	4.734	CC, ES
EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov1	2,000.0	2,000.2	40.1	31.4	4.605	SF
EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15D	1,900.0	1,900.0	162.0	153.7	19.586	CC, ES
EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15D	2,100.0	2,092.1	171.7	162.6	18.883	SF
EK 29 WCD Fed Com 2H - Wellbore #1 - Plan #2 01Nov	9,768.4	9,761.0	137.3	93.7	3.152	CC, ES, SF
Pennzoil Federal Com 1 - Wellbore #1 - Wellbore #1	12,993.0	9,909.5	203.4	122.5	2.514	CC, ES
Pennzoil Federal Com 1 - Wellbore #1 - Wellbore #1	13,000.0	9,909.7	203.6	122.5	2.511	SF
Sun - Pennzoil A Fed 1 - Wellbore #1 - 0 Az	12,891.2	9,903.5	1,320.3	1,241.2	16.680	CC
Sun - Pennzoil A Fed 1 - Wellbore #1 - 0 Az	12,900.0	9,903.7	1,320.3	1,241.0	16.649	ES
Sun - Pennzoil A Fed 1 - Wellbore #1 - 0 Az	13,300.0	9,911.4	1,382.1	1,295.9	16.038	SF
Sun - Pennzoil A Fed 1 - Wellbore #2 - 180 Az	13,191.1	9,911.9	1,320.3	1,236.0	15.659	CC
Sun - Pennzoil A Fed 1 - Wellbore #2 - 180 Az	13,200.0	9,912.2	1,320.3	1,235.9	15.631	ES
Sun - Pennzoil A Fed 1 - Wellbore #2 - 180 Az	13,600.0	9,926.9	1,382.1	1,290.7	15.115	SF
Sun - Pennzoil A Fed 1 - Wellbore #3 - 90 Az	13,040.8	9,894.9	1,470.2	1,388.6	18.028	CC, ES
Sun - Pennzoil A Fed 1 - Wellbore #3 - 90 Az	13,500.0	9,907.7	1,540.2	1,450.7	17.208	SF
Sun - Pennzoil A Fed 1 - Wellbore #4 - 270 Az	13,041.4	9,917.9	1,170.4	1,088.7	14.337	CC, ES
Sun - Pennzoil A Fed 1 - Wellbore #4 - 270 Az	13,300.0	9,925.1	1,198.6	1,112.5	13.922	SF

Offset Design													EK 29 Federal Com - EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov16 kjs		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	129.71	-25.0	30.1	39.2								
100.0	100.0	100.0	100.0	0.1	0.1	129.71	-25.0	30.1	39.2	39.0	0.18	217.755					
200.0	200.0	200.0	200.0	0.3	0.3	129.71	-25.0	30.1	39.2	38.5	0.63	62.216					
300.0	300.0	300.0	300.0	0.5	0.5	129.71	-25.0	30.1	39.2	38.1	1.08	36.293					
400.0	400.0	400.0	400.0	0.8	0.8	129.71	-25.0	30.1	39.2	37.6	1.53	25.618					
500.0	500.0	500.0	500.0	1.0	1.0	129.71	-25.0	30.1	39.2	37.2	1.98	19.796					
600.0	600.0	600.0	600.0	1.2	1.2	129.71	-25.0	30.1	39.2	36.7	2.43	16.130					
700.0	700.0	700.0	700.0	1.4	1.4	129.71	-25.0	30.1	39.2	36.3	2.88	13.610					
800.0	800.0	800.0	800.0	1.7	1.7	129.71	-25.0	30.1	39.2	35.8	3.33	11.771					
900.0	900.0	900.0	900.0	1.9	1.9	129.71	-25.0	30.1	39.2	35.4	3.78	10.369					
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	129.71	-25.0	30.1	39.2	34.9	4.23	9.266					

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
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North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov16 kjs												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	129.71	-25.0	30.1	39.2	34.5	4.68	8.375	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	129.71	-25.0	30.1	39.2	34.0	5.12	7.641	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	129.71	-25.0	30.1	39.2	33.6	5.57	7.024	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	129.71	-25.0	30.1	39.2	33.1	6.02	6.500	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	129.71	-25.0	30.1	39.2	32.7	6.47	6.049	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	129.71	-25.0	30.1	39.2	32.2	6.92	5.656	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	129.71	-25.0	30.1	39.2	31.8	7.37	5.311	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	129.71	-25.0	30.1	39.2	31.3	7.82	5.006	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	129.71	-25.0	30.1	39.2	30.9	8.27	4.734	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	129.71	-25.0	30.1	39.2	30.9	8.27	4.734 CC, ES	
2,000.0	2,000.0	2,000.2	2,000.2	4.4	4.4	-165.28	-23.8	30.7	40.1	31.4	8.71	4.605 SF	
2,100.0	2,099.9	2,100.2	2,100.1	4.6	4.6	-171.69	-20.3	32.3	43.3	34.2	9.13	4.746	
2,200.0	2,199.7	2,199.8	2,199.5	4.8	4.8	179.71	-14.4	35.1	49.6	40.0	9.55	5.191	
2,300.0	2,299.4	2,298.9	2,298.2	5.0	5.0	170.72	-6.2	38.9	57.9	47.9	9.99	5.794	
2,400.0	2,399.2	2,398.1	2,396.8	5.2	5.3	162.87	3.4	43.4	67.7	57.3	10.43	6.490	
2,500.0	2,498.9	2,497.2	2,495.4	5.4	5.5	157.06	13.0	47.8	78.5	67.6	10.88	7.213	
2,600.0	2,598.7	2,595.2	2,592.8	5.7	5.7	153.25	21.7	52.9	90.5	79.1	11.31	7.996	
2,700.0	2,698.4	2,692.8	2,690.0	5.9	5.9	151.51	28.4	59.5	104.1	92.4	11.72	8.880	
2,800.0	2,798.2	2,790.1	2,786.8	6.1	6.1	151.20	33.2	67.6	119.2	107.0	12.13	9.824	
2,900.0	2,897.9	2,887.4	2,883.6	6.4	6.3	151.82	36.2	77.3	135.6	123.0	12.54	10.811	
3,000.0	2,997.7	2,986.0	2,981.6	6.6	6.6	152.55	38.6	87.5	152.4	139.4	12.97	11.749	
3,100.0	3,097.4	3,084.5	3,079.6	6.9	6.8	153.13	40.9	97.8	169.3	155.9	13.41	12.626	
3,200.0	3,197.1	3,183.1	3,177.6	7.1	7.1	153.60	43.3	108.0	186.1	172.3	13.84	13.446	
3,300.0	3,296.9	3,281.6	3,275.6	7.3	7.3	154.00	45.7	118.2	203.0	188.7	14.28	14.214	
3,400.0	3,396.6	3,380.2	3,373.5	7.6	7.6	154.34	48.1	128.5	219.9	205.2	14.72	14.936	
3,500.0	3,496.4	3,478.7	3,471.5	7.8	7.8	154.63	50.5	138.7	236.8	221.6	15.16	15.614	
3,600.0	3,596.1	3,577.3	3,569.5	8.1	8.1	154.88	52.9	149.0	253.7	238.1	15.61	16.253	
3,700.0	3,695.9	3,675.9	3,667.5	8.3	8.3	155.09	55.3	159.2	270.6	254.5	16.05	16.855	
3,800.0	3,795.6	3,774.4	3,765.5	8.6	8.6	155.29	57.7	169.4	287.5	271.0	16.50	17.424	
3,900.0	3,895.4	3,873.0	3,863.5	8.8	8.8	155.46	60.1	179.7	304.4	287.4	16.95	17.962	
4,000.0	3,995.1	3,971.5	3,961.5	9.1	9.1	155.61	62.5	189.9	321.3	303.9	17.39	18.471	
4,100.0	4,094.8	4,070.1	4,059.5	9.3	9.4	155.75	64.9	200.2	338.2	320.4	17.84	18.953	
4,200.0	4,194.6	4,168.6	4,157.5	9.5	9.6	155.87	67.3	210.4	355.1	336.8	18.29	19.411	
4,300.0	4,294.3	4,267.2	4,255.5	9.8	9.9	155.99	69.7	220.5	372.0	353.3	18.75	19.846	
4,400.0	4,394.1	4,365.8	4,353.5	10.0	10.2	156.09	72.1	230.9	389.0	369.8	19.20	20.260	
4,500.0	4,493.8	4,464.3	4,451.5	10.3	10.5	156.19	74.5	241.1	405.9	386.2	19.65	20.654	
4,600.0	4,593.6	4,562.9	4,549.5	10.5	10.7	156.27	76.9	251.4	422.8	402.7	20.10	21.030	
4,700.0	4,693.3	4,661.4	4,647.5	10.8	11.0	156.35	79.3	261.6	439.7	419.1	20.56	21.388	
4,800.0	4,793.1	4,760.0	4,745.5	11.1	11.3	156.43	81.7	271.8	456.6	435.6	21.01	21.731	
4,900.0	4,892.8	4,858.5	4,843.5	11.3	11.6	156.50	84.1	282.1	473.5	452.1	21.47	22.058	
5,000.0	4,992.5	4,957.1	4,941.5	11.6	11.8	156.56	86.5	292.3	490.5	468.5	21.92	22.371	
5,100.0	5,092.3	5,055.6	5,039.4	11.8	12.1	156.62	88.9	302.6	507.4	485.0	22.38	22.671	
5,200.0	5,192.0	5,154.2	5,137.4	12.1	12.4	156.68	91.3	312.8	524.3	501.5	22.84	22.959	
5,300.0	5,291.8	5,252.8	5,235.4	12.3	12.7	156.73	93.6	323.0	541.2	517.9	23.29	23.235	
5,400.0	5,391.5	5,351.3	5,333.4	12.6	12.9	156.78	96.0	333.3	558.2	534.4	23.75	23.500	
5,500.0	5,491.3	5,449.9	5,431.4	12.8	13.2	156.83	98.4	343.5	575.1	550.9	24.21	23.754	
5,600.0	5,591.0	5,548.4	5,529.4	13.1	13.5	156.87	100.8	353.7	592.0	567.3	24.67	23.999	
5,700.0	5,690.8	5,647.0	5,627.4	13.3	13.8	156.91	103.2	364.0	608.9	583.8	25.13	24.234	
5,800.0	5,790.5	5,745.5	5,725.4	13.6	14.1	156.95	105.6	374.2	625.8	600.3	25.59	24.461	
5,900.0	5,890.2	5,844.1	5,823.4	13.8	14.3	156.99	108.0	384.5	642.8	616.7	26.05	24.679	
6,000.0	5,990.0	5,942.7	5,921.4	14.1	14.6	157.03	110.4	394.7	659.7	633.2	26.51	24.889	
6,100.0	6,089.7	6,041.2	6,019.4	14.3	14.9	157.06	112.8	404.9	676.6	649.7	26.97	25.092	

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Anticollision Report

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 Reference Well: EK 29 BS2 Fed Com 2H
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 Reference Wellbore: Wellbore #1
 Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
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 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov16 kjs												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Warning					
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
6,200.0	6,189.5	6,139.8	6,117.4	14.6	15.2	157.09	115.2	415.2	693.5	666.1	27.43	25.288	
6,300.0	6,289.2	6,238.3	6,215.4	14.8	15.5	157.12	117.6	425.4	710.5	682.6	27.89	25.477	
6,400.0	6,389.0	6,336.9	6,313.4	15.1	15.7	157.15	120.0	435.7	727.4	699.1	28.35	25.660	
6,500.0	6,488.7	6,435.4	6,411.4	15.4	16.0	157.18	122.4	445.9	744.3	715.5	28.81	25.837	
6,600.0	6,588.5	6,534.0	6,509.4	15.6	16.3	157.21	124.8	456.1	761.2	732.0	29.27	26.008	
6,700.0	6,688.2	6,632.6	6,607.4	15.9	16.6	157.23	127.2	466.4	778.2	748.4	29.73	26.173	
6,800.0	6,787.9	6,731.1	6,705.3	16.1	16.9	157.26	129.6	476.6	795.1	764.9	30.19	26.333	
6,900.0	6,887.7	6,829.7	6,803.3	16.4	17.2	157.28	132.0	486.9	812.0	781.4	30.66	26.489	
7,000.0	6,987.4	6,928.2	6,901.3	16.6	17.4	157.30	134.4	497.1	829.0	797.8	31.12	26.639	
7,100.0	7,087.2	7,026.8	6,999.3	16.9	17.7	157.32	136.8	507.3	845.9	814.3	31.58	26.785	
7,200.0	7,186.9	7,125.3	7,097.3	17.1	18.0	157.34	139.2	517.6	862.8	830.8	32.04	26.926	
7,300.0	7,286.7	7,223.9	7,195.3	17.4	18.3	157.36	141.6	527.8	879.7	847.2	32.51	27.063	
7,400.0	7,386.4	7,322.4	7,293.3	17.7	18.6	157.38	144.0	538.0	896.7	863.7	32.97	27.197	
7,500.0	7,486.2	7,421.0	7,391.3	17.9	18.9	157.40	146.3	548.3	913.6	880.2	33.43	27.326	
7,600.0	7,585.9	7,519.6	7,489.3	18.2	19.2	157.42	148.7	558.5	930.5	896.6	33.90	27.452	
7,700.0	7,685.6	7,618.1	7,587.3	18.4	19.4	157.43	151.1	568.8	947.4	913.1	34.36	27.574	
7,800.0	7,785.4	7,716.7	7,685.3	18.7	19.7	157.45	153.5	579.0	964.4	929.5	34.82	27.693	
7,900.0	7,885.1	7,815.2	7,783.3	18.9	20.0	157.47	155.9	589.2	981.3	946.0	35.29	27.808	
8,000.0	7,984.9	7,913.8	7,881.3	19.2	20.3	157.48	158.3	599.5	998.2	962.5	35.75	27.920	
8,100.0	8,084.6	8,012.3	7,979.3	19.4	20.6	157.50	160.7	609.7	1,015.1	978.9	36.22	28.030	
8,200.0	8,184.4	8,110.9	8,077.3	19.7	20.9	157.51	163.1	620.0	1,032.1	995.4	36.68	28.136	
8,300.0	8,284.1	8,209.5	8,175.3	20.0	21.2	157.53	165.5	630.2	1,049.0	1,011.9	37.15	28.240	
8,400.0	8,383.8	8,308.0	8,273.2	20.2	21.4	157.54	167.9	640.4	1,065.9	1,028.3	37.61	28.341	
8,500.0	8,483.6	8,406.6	8,371.2	20.5	21.7	157.55	170.3	650.7	1,082.9	1,044.8	38.08	28.440	
8,600.0	8,583.3	8,505.1	8,469.2	20.7	22.0	157.56	172.7	660.9	1,099.8	1,061.2	38.54	28.536	
8,700.0	8,683.1	8,603.7	8,567.2	21.0	22.3	157.58	175.1	671.2	1,116.7	1,077.7	39.01	28.629	
8,800.0	8,782.8	8,702.2	8,665.2	21.2	22.6	157.59	177.5	681.4	1,133.6	1,094.2	39.47	28.720	
8,900.0	8,882.6	8,800.8	8,763.2	21.5	22.9	157.60	179.9	691.6	1,150.6	1,110.6	39.94	28.809	
9,000.0	8,982.3	8,899.4	8,861.2	21.8	23.2	157.61	182.3	701.9	1,167.5	1,127.1	40.40	28.896	
9,100.0	9,082.1	8,997.9	8,959.2	22.0	23.5	157.62	184.7	712.1	1,184.4	1,143.6	40.87	28.981	
9,200.0	9,181.8	9,096.5	9,057.2	22.3	23.7	157.63	187.1	722.4	1,201.4	1,160.0	41.33	29.064	
9,300.0	9,281.5	9,195.0	9,155.2	22.5	24.0	157.64	189.5	732.6	1,218.3	1,176.5	41.80	29.145	
9,400.0	9,381.3	9,293.6	9,253.2	22.8	24.3	157.65	191.9	742.8	1,235.2	1,192.9	42.27	29.224	
9,500.0	9,481.0	9,392.1	9,351.1	23.0	24.6	-135.25	194.3	753.1	1,252.1	1,209.4	42.73	29.304	
9,600.0	9,579.2	9,489.6	9,448.1	23.2	24.9	-101.50	196.6	763.2	1,268.8	1,225.6	43.13	29.414	
9,700.0	9,671.8	9,600.5	9,557.5	23.3	25.1	-95.26	184.5	774.1	1,284.5	1,241.0	43.43	29.572	
9,800.0	9,754.8	9,720.2	9,669.2	23.4	25.3	-92.67	143.5	784.3	1,298.2	1,254.5	43.63	29.755	
9,900.0	9,824.5	9,849.0	9,774.1	23.5	25.5	-91.32	69.8	792.6	1,309.0	1,265.2	43.79	29.895	
10,000.0	9,877.8	9,985.8	9,859.8	23.6	25.6	-90.57	-36.0	797.8	1,316.2	1,272.1	44.05	29.880	
10,100.0	9,912.5	10,115.8	9,910.7	23.8	25.8	-90.13	-155.2	799.0	1,319.1	1,274.6	44.54	29.616	
10,200.0	9,927.1	10,215.6	9,926.9	24.1	26.0	-90.00	-253.4	799.0	1,319.9	1,274.7	45.22	29.187	
10,300.0	9,929.9	10,315.6	9,929.9	24.5	26.3	-90.00	-353.4	799.0	1,319.9	1,273.8	46.15	28.599	
10,400.0	9,932.7	10,415.6	9,932.7	25.0	26.8	-90.00	-453.4	799.0	1,319.9	1,272.6	47.34	27.882	
10,500.0	9,935.5	10,515.6	9,935.5	25.7	27.4	-90.00	-553.3	799.0	1,319.9	1,271.1	48.77	27.063	
10,600.0	9,938.3	10,615.6	9,938.3	26.5	28.1	-90.00	-653.3	799.0	1,319.9	1,269.5	50.43	26.173	
10,700.0	9,941.1	10,715.6	9,941.1	27.4	29.0	-90.00	-753.2	799.0	1,319.9	1,267.6	52.29	25.240	
10,800.0	9,943.8	10,815.6	9,943.8	28.4	29.9	-90.00	-853.2	799.0	1,319.9	1,265.6	54.34	24.290	
10,900.0	9,946.6	10,915.6	9,946.6	29.5	30.9	-90.00	-953.2	799.0	1,319.9	1,263.4	56.55	23.340	
11,000.0	9,949.4	11,015.6	9,949.5	30.6	31.9	-90.00	-1,053.1	799.0	1,319.9	1,261.0	58.91	22.407	
11,100.0	9,952.2	11,115.6	9,952.2	31.8	33.1	-90.00	-1,153.1	799.0	1,319.9	1,258.5	61.39	21.501	
11,200.0	9,955.0	11,215.6	9,955.0	33.1	34.3	-90.00	-1,253.0	799.0	1,319.9	1,255.9	63.99	20.628	
11,300.0	9,957.8	11,315.6	9,957.8	34.4	35.5	-90.00	-1,353.0	799.0	1,319.9	1,253.2	66.68	19.794	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 BS2 Fed Com 1H - Wellbore #1 - Plan #3 01Nov16 kjs													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
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	
11,400.0	9,960.6	11,415.6	9,960.6	35.7	36.8	-90.00	-1,453.0	799.0	1,319.9	1,250.5	69.47	19.000	
11,500.0	9,963.4	11,515.6	9,963.4	37.1	38.2	-90.00	-1,552.9	799.0	1,319.9	1,247.6	72.33	18.248	
11,600.0	9,966.2	11,615.6	9,966.2	38.6	39.6	-90.00	-1,652.9	799.0	1,319.9	1,244.7	75.26	17.537	
11,700.0	9,969.0	11,715.6	9,969.0	40.0	41.0	-90.00	-1,752.9	799.0	1,319.9	1,241.7	78.26	16.866	
11,800.0	9,971.8	11,815.6	9,971.8	41.5	42.4	-90.00	-1,852.8	799.0	1,319.9	1,238.6	81.31	16.234	
11,900.0	9,974.6	11,915.6	9,974.6	43.1	43.9	-90.00	-1,952.8	799.0	1,319.9	1,235.5	84.41	15.638	
12,000.0	9,977.4	12,015.6	9,977.4	44.6	45.4	-90.00	-2,052.7	799.0	1,319.9	1,232.4	87.55	15.077	
12,100.0	9,980.1	12,115.6	9,980.1	46.2	46.9	-90.00	-2,152.7	799.0	1,319.9	1,229.2	90.73	14.548	
12,200.0	9,982.9	12,215.6	9,982.9	47.8	48.5	-90.00	-2,252.7	799.0	1,319.9	1,226.0	93.94	14.050	
12,300.0	9,985.7	12,315.6	9,985.7	49.4	50.1	-90.00	-2,352.6	799.0	1,319.9	1,222.7	97.19	13.581	
12,400.0	9,988.5	12,415.6	9,988.5	51.0	51.7	-90.00	-2,452.6	799.0	1,319.9	1,219.5	100.47	13.138	
12,500.0	9,991.3	12,515.6	9,991.3	52.6	53.3	-90.00	-2,552.5	799.0	1,319.9	1,216.2	103.77	12.720	
12,600.0	9,994.1	12,615.6	9,994.1	54.3	54.9	-90.00	-2,652.5	799.0	1,319.9	1,212.8	107.09	12.325	
12,700.0	9,996.9	12,715.6	9,996.9	55.9	56.5	-90.00	-2,752.5	799.0	1,319.9	1,209.5	110.44	11.951	
12,800.0	9,999.7	12,815.6	9,999.7	57.6	58.1	-90.00	-2,852.4	799.0	1,319.9	1,206.1	113.81	11.598	
12,900.0	10,002.5	12,915.6	10,002.5	59.3	59.8	-90.00	-2,952.4	799.0	1,319.9	1,202.7	117.19	11.263	
13,000.0	10,005.3	13,015.6	10,005.2	61.0	61.5	-90.00	-3,052.3	799.0	1,319.9	1,199.3	120.59	10.945	
13,100.0	10,008.1	13,115.6	10,008.0	62.6	63.1	-90.00	-3,152.3	799.0	1,319.9	1,195.9	124.01	10.644	
13,200.0	10,010.9	13,215.6	10,010.8	64.3	64.8	-90.00	-3,252.3	799.0	1,319.9	1,192.5	127.44	10.358	
13,300.0	10,013.7	13,315.6	10,013.6	66.1	66.5	-90.00	-3,352.2	799.0	1,319.9	1,189.0	130.88	10.085	
13,400.0	10,016.4	13,415.6	10,016.4	67.8	68.2	-90.00	-3,452.2	799.0	1,319.9	1,185.6	134.33	9.826	
13,500.0	10,019.2	13,515.6	10,019.2	69.5	69.9	-90.00	-3,552.2	799.0	1,319.9	1,182.1	137.79	9.579	
13,600.0	10,022.0	13,615.6	10,022.0	71.2	71.6	-90.00	-3,652.1	799.0	1,319.9	1,178.7	141.27	9.343	
13,700.0	10,024.8	13,715.6	10,024.8	72.9	73.3	-90.00	-3,752.1	799.0	1,319.9	1,175.2	144.75	9.119	
13,800.0	10,027.6	13,815.6	10,027.6	74.7	75.0	-90.00	-3,852.0	799.0	1,319.9	1,171.7	148.24	8.904	
13,900.0	10,030.4	13,915.6	10,030.3	76.4	76.8	-90.00	-3,952.0	799.0	1,319.9	1,168.2	151.74	8.698	
14,000.0	10,033.2	14,015.6	10,033.1	78.2	78.5	-90.00	-4,052.0	799.0	1,319.9	1,164.7	155.25	8.502	
14,100.0	10,036.0	14,115.6	10,035.9	79.9	80.2	-90.00	-4,151.9	799.0	1,319.9	1,161.2	158.77	8.314	
14,200.0	10,038.8	14,215.6	10,038.7	81.7	82.0	-90.00	-4,251.9	799.0	1,319.9	1,157.6	162.29	8.133	
14,300.0	10,041.6	14,315.6	10,041.5	83.4	83.7	-90.00	-4,351.8	799.0	1,319.9	1,154.1	165.81	7.960	
14,400.0	10,044.4	14,415.6	10,044.3	85.2	85.5	-90.00	-4,451.8	799.0	1,319.9	1,150.6	169.35	7.794	
14,500.0	10,047.2	14,515.6	10,047.1	86.9	87.2	-90.00	-4,551.8	799.0	1,319.9	1,147.0	172.89	7.635	
14,600.0	10,050.0	14,615.6	10,049.9	88.7	89.0	-90.00	-4,651.7	799.0	1,319.9	1,143.5	176.43	7.481	
14,700.0	10,052.7	14,715.6	10,052.7	90.5	90.7	-90.00	-4,751.7	799.0	1,319.9	1,139.9	179.98	7.334	
14,790.0	10,055.2	14,805.5	10,055.2	92.1	92.3	-90.00	-4,841.6	799.0	1,319.9	1,136.8	183.17	7.206	



Anticollision Report

Company: McElvain Energy, Inc.
 Project: Sec. 29 T18S R34E
 Reference Site: EK 29 Federal Com
 Site Error: 0.0 usft
 Reference Well: EK 29 BS2 Fed Com 2H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
 TVD Reference: WELL @ 4070.0usft (Original Well Elev)
 MD Reference: WELL @ 4070.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15Dec15 kjs													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	98.96	-25.2	160.0	162.0				
100.0	100.0	100.0	100.0	0.1	0.1	98.96	-25.2	160.0	162.0	161.8	0.18	900.950	
200.0	200.0	200.0	200.0	0.3	0.3	98.96	-25.2	160.0	162.0	161.4	0.63	257.415	
300.0	300.0	300.0	300.0	0.5	0.5	98.96	-25.2	160.0	162.0	160.9	1.08	150.159	
400.0	400.0	400.0	400.0	0.8	0.8	98.96	-25.2	160.0	162.0	160.5	1.53	105.994	
500.0	500.0	500.0	500.0	1.0	1.0	98.96	-25.2	160.0	162.0	160.0	1.98	81.905	
600.0	600.0	600.0	600.0	1.2	1.2	98.96	-25.2	160.0	162.0	159.6	2.43	66.737	
700.0	700.0	700.0	700.0	1.4	1.4	98.96	-25.2	160.0	162.0	159.1	2.88	56.309	
800.0	800.0	800.0	800.0	1.7	1.7	98.96	-25.2	160.0	162.0	158.7	3.33	48.700	
900.0	900.0	900.0	900.0	1.9	1.9	98.96	-25.2	160.0	162.0	158.2	3.78	42.902	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	98.96	-25.2	160.0	162.0	157.8	4.23	38.338	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	98.96	-25.2	160.0	162.0	157.3	4.68	34.652	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	98.96	-25.2	160.0	162.0	156.9	5.12	31.612	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	98.96	-25.2	160.0	162.0	156.4	5.57	29.063	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	98.96	-25.2	160.0	162.0	156.0	6.02	26.894	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	98.96	-25.2	160.0	162.0	155.5	6.47	25.026	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	98.96	-25.2	160.0	162.0	155.1	6.92	23.401	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	98.96	-25.2	160.0	162.0	154.6	7.37	21.974	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	98.96	-25.2	160.0	162.0	154.2	7.82	20.712	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	98.96	-25.2	160.0	162.0	153.7	8.27	19.586 CC, ES	
2,000.0	2,000.0	1,996.2	1,996.2	4.4	4.3	166.26	-24.9	161.2	164.4	155.7	8.69	18.918	
2,100.0	2,099.9	2,092.1	2,092.0	4.6	4.5	166.04	-24.0	164.7	171.7	162.6	9.09	18.883 SF	
2,200.0	2,199.7	2,188.7	2,188.5	4.8	4.7	165.73	-22.4	170.4	183.5	174.0	9.50	19.327	
2,300.0	2,299.4	2,287.9	2,287.4	5.0	5.0	165.46	-20.7	176.8	196.5	186.6	9.91	19.827	
2,400.0	2,399.2	2,387.0	2,386.3	5.2	5.2	165.23	-18.9	183.2	209.6	199.2	10.33	20.281	
2,500.0	2,498.9	2,486.2	2,485.2	5.4	5.4	165.02	-17.2	189.6	222.6	211.8	10.76	20.693	
2,600.0	2,598.7	2,585.3	2,584.2	5.7	5.6	164.84	-15.5	196.0	235.6	224.4	11.18	21.068	
2,700.0	2,698.4	2,684.5	2,683.1	5.9	5.8	164.67	-13.7	202.3	248.6	237.0	11.61	21.412	
2,800.0	2,798.2	2,783.6	2,782.0	6.1	6.1	164.53	-12.0	208.7	261.7	249.6	12.04	21.727	
2,900.0	2,897.9	2,882.8	2,880.9	6.4	6.3	164.39	-10.3	215.1	274.7	262.2	12.48	22.017	
3,000.0	2,997.7	2,981.9	2,979.9	6.6	6.5	164.27	-8.5	221.5	287.7	274.8	12.91	22.284	
3,100.0	3,097.4	3,081.0	3,078.8	6.9	6.8	164.16	-6.8	227.9	300.8	287.4	13.35	22.531	
3,200.0	3,197.1	3,180.2	3,177.7	7.1	7.0	164.06	-5.1	234.3	313.8	300.0	13.79	22.760	
3,300.0	3,296.9	3,279.3	3,276.6	7.3	7.2	163.97	-3.3	240.7	326.9	312.6	14.23	22.973	
3,400.0	3,396.6	3,378.5	3,375.6	7.6	7.5	163.88	-1.6	247.1	339.9	325.2	14.67	23.171	
3,500.0	3,496.4	3,477.6	3,474.5	7.8	7.7	163.80	0.1	253.4	352.9	337.8	15.11	23.356	
3,600.0	3,596.1	3,576.8	3,573.4	8.1	7.9	163.72	1.9	259.8	366.0	350.4	15.55	23.528	
3,700.0	3,695.9	3,675.9	3,672.3	8.3	8.2	163.66	3.6	266.2	379.0	363.0	16.00	23.690	
3,800.0	3,795.6	3,775.1	3,771.3	8.6	8.4	163.59	5.3	272.6	392.1	375.6	16.44	23.842	
3,900.0	3,895.4	3,874.2	3,870.2	8.8	8.7	163.53	7.1	279.0	405.1	388.2	16.89	23.984	
4,000.0	3,995.1	3,973.3	3,969.1	9.1	8.9	163.47	8.8	285.4	418.1	400.8	17.34	24.118	
4,100.0	4,094.8	4,072.5	4,068.0	9.3	9.1	163.42	10.6	291.8	431.2	413.4	17.78	24.245	
4,200.0	4,194.6	4,171.6	4,167.0	9.5	9.4	163.37	12.3	298.1	444.2	426.0	18.23	24.364	
4,300.0	4,294.3	4,270.8	4,265.9	9.8	9.6	163.32	14.0	304.5	457.3	438.6	18.68	24.477	
4,400.0	4,394.1	4,369.9	4,364.8	10.0	9.9	163.28	15.8	310.9	470.3	451.2	19.13	24.584	
4,500.0	4,493.8	4,469.1	4,463.7	10.3	10.1	163.24	17.5	317.3	483.4	463.8	19.58	24.685	
4,600.0	4,593.6	4,568.2	4,562.6	10.5	10.4	163.20	19.2	323.7	496.4	476.4	20.03	24.782	
4,700.0	4,693.3	4,667.4	4,661.6	10.8	10.6	163.16	21.0	330.1	509.4	489.0	20.48	24.873	
4,800.0	4,793.1	4,766.5	4,760.5	11.1	10.9	163.12	22.7	336.5	522.5	501.5	20.93	24.960	
4,900.0	4,892.8	4,865.7	4,859.4	11.3	11.1	163.09	24.4	342.9	535.5	514.1	21.38	25.043	
5,000.0	4,992.5	4,964.8	4,958.3	11.6	11.3	163.06	26.2	349.2	548.6	526.7	21.84	25.122	
5,100.0	5,092.3	5,063.9	5,057.3	11.8	11.6	163.02	27.9	355.6	561.6	539.3	22.29	25.197	

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



Anticollision Report

Company: McElvain Energy, Inc.
 Project: Sec. 29 T18S R34E
 Reference Site: EK 29 Federal Com
 Site Error: 0.0 usft
 Reference Well: EK 29 BS2 Fed Com 2H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
 TVD Reference: WELL @ 4070.0usft (Original Well Elev)
 MD Reference: WELL @ 4070.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15Dec15 kjs													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)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
5,200.0	5,192.0	5,163.1	5,156.2	12.1	11.8	162.99	29.6	362.0	574.7	551.9	22.74	25.269	
5,300.0	5,291.8	5,262.2	5,255.1	12.3	12.1	162.97	31.4	368.4	587.7	564.5	23.19	25.338	
5,400.0	5,391.5	5,361.4	5,354.0	12.6	12.3	162.94	33.1	374.8	600.7	577.1	23.65	25.404	
5,500.0	5,491.3	5,460.5	5,453.0	12.8	12.6	162.91	34.8	381.2	613.8	589.7	24.10	25.467	
5,600.0	5,591.0	5,559.7	5,551.9	13.1	12.8	162.89	36.6	387.6	626.8	602.3	24.56	25.527	
5,700.0	5,690.8	5,658.8	5,650.8	13.3	13.1	162.86	38.3	394.0	639.9	614.9	25.01	25.585	
5,800.0	5,790.5	5,758.0	5,749.7	13.6	13.3	162.84	40.0	400.3	652.9	627.5	25.46	25.641	
5,900.0	5,890.2	5,857.1	5,848.7	13.8	13.6	162.82	41.8	406.7	666.0	640.1	25.92	25.694	
6,000.0	5,990.0	5,956.3	5,947.6	14.1	13.8	162.80	43.5	413.1	679.0	652.6	26.37	25.746	
6,100.0	6,089.7	6,055.4	6,046.5	14.3	14.1	162.78	45.3	419.5	692.1	665.2	26.83	25.795	
6,200.0	6,189.5	6,154.5	6,145.4	14.6	14.3	162.76	47.0	425.9	705.1	677.8	27.28	25.843	
6,300.0	6,289.2	6,253.7	6,244.4	14.8	14.6	162.74	48.7	432.3	718.2	690.4	27.74	25.899	
6,400.0	6,389.0	6,352.8	6,343.3	15.1	14.8	162.72	50.5	438.7	731.2	703.0	28.20	25.933	
6,500.0	6,488.7	6,452.0	6,442.2	15.4	15.0	162.70	52.2	445.0	744.3	715.6	28.65	25.975	
6,600.0	6,588.5	6,551.1	6,541.1	15.6	15.3	162.69	53.9	451.4	757.3	728.2	29.11	26.017	
6,700.0	6,688.2	6,650.3	6,640.0	15.9	15.5	162.67	55.7	457.8	770.3	740.8	29.56	26.056	
6,800.0	6,787.9	6,749.4	6,739.0	16.1	15.8	162.65	57.4	464.2	783.4	753.4	30.02	26.095	
6,900.0	6,887.7	6,848.6	6,837.9	16.4	16.0	162.64	59.1	470.6	796.4	766.0	30.48	26.132	
7,000.0	6,987.4	6,947.7	6,936.8	16.6	16.3	162.62	60.9	477.0	809.5	778.5	30.93	26.168	
7,100.0	7,087.2	7,046.8	7,035.7	16.9	16.5	162.61	62.6	483.4	822.5	791.1	31.39	26.202	
7,200.0	7,186.9	7,146.0	7,134.7	17.1	16.8	162.59	64.3	489.8	835.6	803.7	31.85	26.236	
7,300.0	7,286.7	7,245.1	7,233.6	17.4	17.0	162.58	66.1	496.1	848.6	816.3	32.31	26.268	
7,400.0	7,386.4	7,344.3	7,332.5	17.7	17.3	162.57	67.8	502.5	861.7	828.9	32.76	26.300	
7,500.0	7,486.2	7,443.4	7,431.4	17.9	17.5	162.56	69.5	508.9	874.7	841.5	33.22	26.330	
7,600.0	7,585.9	7,542.6	7,530.4	18.2	17.8	162.54	71.3	515.3	887.8	854.1	33.68	26.360	
7,700.0	7,685.6	7,641.7	7,629.3	18.4	18.0	162.53	73.0	521.7	900.8	866.7	34.14	26.389	
7,800.0	7,785.4	7,740.9	7,728.2	18.7	18.3	162.52	74.8	528.1	913.9	879.3	34.59	26.417	
7,900.0	7,885.1	7,840.0	7,827.1	18.9	18.5	162.51	76.5	534.5	926.9	891.8	35.05	26.444	
8,000.0	7,984.9	7,939.2	7,926.1	19.2	18.8	162.50	78.2	540.9	939.9	904.4	35.51	26.470	
8,100.0	8,084.6	8,038.3	8,025.0	19.4	19.0	162.49	80.0	547.2	953.0	917.0	35.97	26.495	
8,200.0	8,184.4	8,137.4	8,123.9	19.7	19.3	162.48	81.7	553.6	966.0	929.6	36.43	26.520	
8,300.0	8,284.1	8,236.6	8,222.8	20.0	19.5	162.47	83.4	560.0	979.1	942.2	36.89	26.544	
8,400.0	8,383.8	8,335.7	8,321.8	20.2	19.8	162.46	85.2	566.4	992.1	954.8	37.34	26.568	
8,500.0	8,483.6	8,434.9	8,420.7	20.5	20.0	162.45	86.9	572.8	1,005.2	967.4	37.80	26.591	
8,600.0	8,583.3	8,534.0	8,519.6	20.7	20.3	162.44	88.6	579.2	1,018.2	980.0	38.26	26.613	
8,700.0	8,683.1	8,633.2	8,618.5	21.0	20.5	162.43	90.4	585.5	1,031.3	992.6	38.72	26.634	
8,800.0	8,782.8	8,732.3	8,717.5	21.2	20.8	162.42	92.1	591.9	1,044.3	1,005.1	39.18	26.655	
8,900.0	8,882.6	8,831.5	8,816.4	21.5	21.0	162.41	93.8	598.3	1,057.4	1,017.7	39.64	26.676	
9,000.0	8,982.3	8,930.6	8,915.3	21.8	21.3	162.40	95.6	604.7	1,070.4	1,030.3	40.10	26.696	
9,100.0	9,082.1	9,029.7	9,014.2	22.0	21.5	162.39	97.3	611.1	1,083.5	1,042.9	40.56	26.715	
9,200.0	9,181.8	9,128.9	9,113.1	22.3	21.8	162.39	99.0	617.5	1,096.5	1,055.5	41.02	26.734	
9,300.0	9,281.5	9,228.0	9,212.1	22.5	22.0	162.38	100.8	623.9	1,109.6	1,068.1	41.47	26.753	
9,400.0	9,381.3	9,327.2	9,311.0	22.8	22.3	162.37	102.5	630.3	1,122.6	1,080.7	41.93	26.771	
9,500.0	9,481.0	9,426.3	9,409.9	23.0	22.5	162.37	104.3	636.7	1,135.5	1,093.1	42.39	26.786	
9,600.0	9,579.2	9,523.6	9,506.9	23.2	22.8	162.37	106.0	642.9	1,146.8	1,104.0	42.79	26.801	
9,700.0	9,671.8	9,614.9	9,598.1	23.3	23.0	162.37	107.6	648.8	1,156.7	1,113.6	43.11	26.831	
9,800.0	9,754.8	9,696.4	9,679.4	23.4	23.2	162.37	109.0	654.1	1,166.7	1,123.4	43.38	26.898	
9,900.0	9,824.5	9,764.4	9,747.2	23.5	23.4	162.37	110.2	658.4	1,176.8	1,135.2	43.62	27.024	
10,000.0	9,877.8	9,815.9	9,798.6	23.6	23.5	162.37	111.1	661.8	1,184.9	1,141.0	43.89	27.225	
10,100.0	9,912.5	9,848.8	9,831.4	23.8	23.6	162.37	111.6	663.9	1,216.3	1,172.1	44.20	27.517	
10,200.0	9,927.1	9,861.5	9,844.1	24.1	23.6	162.37	111.9	664.7	1,243.4	1,198.9	44.49	27.946	
10,300.0	9,929.9	9,862.6	9,845.2	24.5	23.6	162.37	111.9	664.8	1,276.5	1,231.5	44.95	28.397	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15Dec15 kjs													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)			
10,400.0	9,932.7	9,863.6	9,846.2	25.0	23.6	-86.59	111.9	664.8	1,316.4	1,270.9	45.56	28.896	
10,500.0	9,935.5	9,864.6	9,847.2	25.7	23.6	-86.64	111.9	664.9	1,362.5	1,316.2	46.29	29.437	
10,600.0	9,938.3	9,865.7	9,848.3	26.5	23.6	-86.69	111.9	665.0	1,414.2	1,367.1	47.13	30.007	
10,700.0	9,941.1	9,866.7	9,849.3	27.4	23.6	-86.74	112.0	665.0	1,470.9	1,422.8	48.07	30.597	
10,800.0	9,943.8	9,867.7	9,850.3	28.4	23.6	-86.79	112.0	665.1	1,532.0	1,482.8	49.11	31.196	
10,900.0	9,946.6	9,868.8	9,851.4	29.5	23.6	-86.84	112.0	665.2	1,597.0	1,546.8	50.22	31.797	
11,000.0	9,949.4	9,869.8	9,852.4	30.6	23.7	-86.89	112.0	665.2	1,665.5	1,614.1	51.41	32.394	



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 WCD Fed Com 2H - Wellbore #1 - Plan #2 01Nov16 kjs													Offset Site Error: 0.0 usft
Survey Program: 0-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance		Minimum		Separation		Warning	
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)	Separation (usft)	Factor	
0.0	0.0	0.0	0.0	0.0	0.0	90.05	-0.2	189.9	189.9				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	-0.2	189.9	189.9	189.7	0.18	1,056.118	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	-0.2	189.9	189.9	189.3	0.63	301.748	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	-0.2	189.9	189.9	188.8	1.08	176.020	
400.0	400.0	400.0	400.0	0.8	0.8	90.05	-0.2	189.9	189.9	188.4	1.53	124.249	
500.0	500.0	500.0	500.0	1.0	1.0	90.05	-0.2	189.9	189.9	187.9	1.98	96.011	
600.0	600.0	600.0	600.0	1.2	1.2	90.05	-0.2	189.9	189.9	187.5	2.43	78.231	
700.0	700.0	700.0	700.0	1.4	1.4	90.05	-0.2	189.9	189.9	187.0	2.88	66.007	
800.0	800.0	800.0	800.0	1.7	1.7	90.05	-0.2	189.9	189.9	186.6	3.33	57.088	
900.0	900.0	900.0	900.0	1.9	1.9	90.05	-0.2	189.9	189.9	186.1	3.78	50.291	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.05	-0.2	189.9	189.9	185.7	4.23	44.941	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	90.05	-0.2	189.9	189.9	185.2	4.68	40.620	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.05	-0.2	189.9	189.9	184.8	5.12	37.057	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.05	-0.2	189.9	189.9	184.3	5.57	34.068	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.05	-0.2	189.9	189.9	183.9	6.02	31.526	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	90.05	-0.2	189.9	189.9	183.4	6.47	29.337	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.05	-0.2	189.9	189.9	183.0	6.92	27.432	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.05	-0.2	189.9	189.9	182.5	7.37	25.759	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	90.05	-0.2	189.9	189.9	182.1	7.82	24.279	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	90.05	-0.2	189.9	189.9	181.6	8.27	22.959	
2,000.0	2,000.0	2,005.1	2,005.1	4.4	4.4	157.49	0.1	188.5	189.8	181.1	8.71	21.790	
2,100.0	2,099.9	2,110.2	2,110.1	4.6	4.6	157.71	1.0	184.2	189.3	180.2	9.12	20.752	
2,200.0	2,199.7	2,213.8	2,213.5	4.8	4.8	158.07	2.4	177.4	188.7	179.2	9.54	19.781	
2,300.0	2,299.4	2,313.8	2,313.2	5.0	5.0	158.46	3.9	170.1	188.0	178.1	9.96	18.881	
2,400.0	2,399.2	2,413.8	2,412.9	5.2	5.2	158.84	5.4	162.9	187.4	177.0	10.38	18.049	
2,500.0	2,498.9	2,513.8	2,512.6	5.4	5.5	159.23	6.9	155.6	186.7	175.9	10.81	17.277	
2,600.0	2,598.7	2,613.8	2,612.3	5.7	5.7	159.62	8.4	148.3	186.1	174.9	11.24	16.561	
2,700.0	2,698.4	2,713.7	2,712.0	5.9	5.9	160.01	9.9	141.0	185.5	173.8	11.67	15.894	
2,800.0	2,798.2	2,813.7	2,811.7	6.1	6.2	160.41	11.4	133.8	184.9	172.8	12.10	15.273	
2,900.0	2,897.9	2,913.7	2,911.5	6.4	6.4	160.81	12.9	126.5	184.3	171.7	12.54	14.693	
3,000.0	2,897.7	3,013.7	3,011.2	6.6	6.6	161.21	14.4	119.2	183.7	170.7	12.98	14.152	
3,100.0	3,097.4	3,113.7	3,110.9	6.9	6.9	161.62	15.9	111.9	183.1	169.6	13.42	13.644	
3,200.0	3,197.1	3,213.7	3,210.6	7.1	7.1	162.03	17.4	104.7	182.5	168.6	13.86	13.168	
3,300.0	3,296.9	3,313.7	3,310.3	7.3	7.3	162.44	18.9	97.4	181.9	167.6	14.30	12.721	
3,400.0	3,396.6	3,413.7	3,410.0	7.6	7.6	162.85	20.4	90.1	181.4	166.6	14.74	12.301	
3,500.0	3,496.4	3,513.7	3,509.7	7.8	7.8	163.26	21.9	82.8	180.8	165.6	15.19	11.905	
3,600.0	3,596.1	3,613.7	3,609.4	8.1	8.1	163.68	23.4	75.6	180.3	164.6	15.63	11.531	
3,700.0	3,695.9	3,713.6	3,709.2	8.3	8.3	164.10	24.9	68.3	179.7	163.6	16.08	11.178	
3,800.0	3,795.6	3,813.6	3,808.9	8.6	8.6	164.53	26.4	61.0	179.2	162.7	16.52	10.844	
3,900.0	3,895.4	3,913.6	3,908.6	8.8	8.8	164.95	27.9	53.7	178.7	161.7	16.97	10.528	
4,000.0	3,995.1	4,013.6	4,008.3	9.1	9.1	165.38	29.4	46.5	178.2	160.8	17.42	10.228	
4,100.0	4,094.8	4,113.6	4,108.0	9.3	9.3	165.81	30.9	39.2	177.7	159.8	17.87	9.944	
4,200.0	4,194.6	4,213.6	4,207.7	9.5	9.6	166.24	32.4	31.9	177.2	158.9	18.32	9.674	
4,300.0	4,294.3	4,313.6	4,307.4	9.8	9.8	166.68	33.8	24.7	176.7	158.0	18.77	9.417	
4,400.0	4,394.1	4,413.6	4,407.2	10.0	10.1	167.11	35.3	17.4	176.3	157.0	19.22	9.172	
4,500.0	4,493.8	4,513.6	4,506.9	10.3	10.3	167.55	36.8	10.1	175.8	156.1	19.67	8.939	
4,600.0	4,593.6	4,613.6	4,606.6	10.5	10.6	168.00	38.3	2.8	175.4	155.2	20.12	8.716	
4,700.0	4,693.3	4,713.5	4,706.3	10.8	10.8	168.44	39.8	-4.4	174.9	154.4	20.57	8.504	
4,800.0	4,793.1	4,813.5	4,806.0	11.1	11.1	168.89	41.3	-11.7	174.5	153.5	21.02	8.301	
4,900.0	4,892.8	4,913.5	4,905.7	11.3	11.3	169.33	42.8	-19.0	174.1	152.6	21.48	8.106	
5,000.0	4,992.5	5,013.5	5,005.4	11.6	11.6	169.78	44.3	-26.3	173.7	151.8	21.93	7.921	
5,100.0	5,092.3	5,113.5	5,105.2	11.8	11.8	170.24	45.8	-33.5	173.3	150.9	22.38	7.743	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - EK 29 WCD Fed Com 2H - Wellbore #1 - Plan #2 01Nov16 kjs														Offset Site Error: 0.0 usft	
Survey Program: 0-MWD														Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
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			
5,200.0	5,192.0	5,213.5	5,204.9	12.1	12.1	170.69	47.3	-40.8	172.9	150.1	22.84	7.572			
5,300.0	5,291.8	5,313.5	5,304.6	12.3	12.4	171.15	48.8	-48.1	172.6	149.3	23.29	7.408			
5,400.0	5,391.5	5,413.5	5,404.3	12.6	12.6	171.61	50.3	-55.4	172.2	148.5	23.75	7.251			
5,500.0	5,491.3	5,513.5	5,504.0	12.8	12.9	172.07	51.8	-62.6	171.9	147.7	24.20	7.101			
5,600.0	5,591.0	5,613.5	5,603.7	13.1	13.1	172.53	53.3	-69.9	171.5	146.9	24.66	6.956			
5,700.0	5,690.8	5,713.4	5,703.4	13.3	13.4	172.99	54.8	-77.2	171.2	146.1	25.12	6.816			
5,800.0	5,790.5	5,813.4	5,803.2	13.6	13.6	173.46	56.3	-84.5	170.9	145.3	25.57	6.682			
5,900.0	5,890.2	5,913.4	5,902.9	13.8	13.9	173.92	57.8	-91.7	170.6	144.6	26.03	6.553			
6,000.0	5,990.0	6,013.4	6,002.6	14.1	14.1	174.39	59.3	-99.0	170.3	143.8	26.49	6.429			
6,100.0	6,089.7	6,113.4	6,102.3	14.3	14.4	174.86	60.8	-106.3	170.0	143.1	26.95	6.309			
6,200.0	6,189.5	6,213.4	6,202.0	14.6	14.7	175.34	62.3	-113.5	169.8	142.4	27.41	6.194			
6,300.0	6,289.2	6,313.4	6,301.7	14.8	14.9	175.81	63.8	-120.8	169.5	141.6	27.87	6.082			
6,400.0	6,389.0	6,413.4	6,401.4	15.1	15.2	176.28	65.3	-128.1	169.3	140.9	28.33	5.975			
6,500.0	6,488.7	6,513.4	6,501.1	15.4	15.4	176.76	66.8	-135.4	169.0	140.2	28.79	5.871			
6,600.0	6,588.5	6,613.4	6,600.9	15.6	15.7	177.24	68.3	-142.6	168.8	139.6	29.25	5.771			
6,700.0	6,688.2	6,713.3	6,700.6	15.9	16.0	177.72	69.8	-149.9	168.6	138.9	29.71	5.674			
6,800.0	6,787.9	6,813.3	6,800.3	16.1	16.2	178.20	71.3	-157.2	168.4	138.2	30.18	5.581			
6,900.0	6,887.7	6,913.3	6,900.0	16.4	16.5	178.68	72.8	-164.5	168.2	137.6	30.64	5.490			
7,000.0	6,987.4	7,013.3	6,999.7	16.6	16.7	179.16	74.3	-171.7	168.1	136.9	31.11	5.403			
7,100.0	7,087.2	7,113.3	7,099.4	16.9	17.0	179.64	75.7	-179.0	167.9	136.3	31.57	5.318			
7,200.0	7,186.9	7,213.3	7,199.1	17.1	17.2	-179.88	77.2	-186.3	167.7	135.7	32.04	5.236			
7,300.0	7,286.7	7,313.3	7,298.9	17.4	17.5	-179.39	78.7	-193.6	167.6	135.1	32.50	5.156			
7,400.0	7,386.4	7,413.3	7,398.6	17.7	17.8	-178.91	80.2	-200.8	167.5	134.5	32.97	5.080			
7,500.0	7,486.2	7,513.3	7,498.3	17.9	18.0	-178.42	81.7	-208.1	167.4	133.9	33.44	5.005			
7,600.0	7,585.9	7,613.3	7,598.0	18.2	18.3	-177.93	83.2	-215.4	167.3	133.4	33.91	4.933			
7,700.0	7,685.6	7,713.2	7,697.7	18.4	18.5	-177.45	84.7	-222.7	167.2	132.8	34.38	4.863			
7,800.0	7,785.4	7,813.2	7,797.4	18.7	18.8	-176.96	86.2	-229.9	167.1	132.3	34.85	4.795			
7,900.0	7,885.1	7,913.2	7,897.1	18.9	19.1	-176.47	87.7	-237.2	167.0	131.7	35.32	4.729			
8,000.0	7,984.9	8,013.2	7,996.9	19.2	19.3	-175.98	89.2	-244.5	167.0	131.2	35.79	4.665			
8,100.0	8,084.6	8,113.2	8,096.6	19.4	19.6	-175.49	90.7	-251.8	166.9	130.7	36.27	4.603			
8,200.0	8,184.4	8,213.2	8,196.3	19.7	19.8	-175.00	92.2	-259.0	166.9	130.2	36.74	4.543			
8,300.0	8,284.1	8,313.2	8,296.0	20.0	20.1	-174.52	93.7	-266.3	166.9	129.7	37.22	4.484			
8,380.1	8,364.0	8,393.3	8,375.9	20.2	20.3	-174.12	94.9	-272.1	166.9	129.3	37.60	4.439			
8,400.0	8,383.8	8,413.2	8,395.7	20.2	20.3	-174.03	95.2	-273.6	166.9	129.2	37.69	4.428			
8,500.0	8,483.6	8,513.2	8,495.4	20.5	20.6	-173.54	96.7	-280.8	166.9	128.7	38.17	4.372			
8,600.0	8,583.3	8,613.2	8,595.1	20.7	20.9	-173.05	98.2	-288.1	166.9	128.3	38.65	4.319			
8,700.0	8,683.1	8,713.1	8,694.8	21.0	21.1	-172.56	99.7	-295.4	167.0	127.8	39.13	4.267			
8,800.0	8,782.8	8,813.1	8,794.6	21.2	21.4	-172.07	101.2	-302.7	167.0	127.4	39.61	4.216			
8,900.0	8,882.6	8,913.1	8,894.3	21.5	21.6	-171.58	102.7	-309.9	167.1	127.0	40.09	4.167			
9,000.0	8,982.3	9,013.1	8,994.0	21.8	21.9	-171.10	104.2	-317.2	167.1	126.6	40.57	4.119			
9,100.0	9,082.1	9,113.1	9,093.7	22.0	22.2	-170.61	105.7	-324.5	167.2	126.2	41.06	4.073			
9,200.0	9,181.8	9,213.1	9,193.4	22.3	22.4	-170.12	107.2	-331.8	167.3	125.8	41.54	4.027			
9,300.0	9,281.5	9,313.1	9,293.1	22.5	22.7	-169.63	108.7	-339.0	167.4	125.4	42.03	3.983			
9,400.0	9,381.3	9,413.1	9,392.8	22.8	22.9	-169.15	110.2	-346.3	167.5	125.0	42.51	3.941			
9,500.0	9,481.0	9,513.0	9,492.5	23.0	23.2	-168.67	111.7	-353.6	166.6	123.6	42.95	3.879			
9,600.0	9,579.2	9,611.2	9,590.4	23.2	23.5	-168.18	113.1	-360.7	166.7	123.8	43.43	3.850			
9,700.0	9,671.8	9,703.4	9,682.4	23.3	23.7	-85.51	114.5	-367.4	142.2	99.1	43.13	3.297			
9,768.4	9,729.8	9,761.0	9,739.8	23.4	23.8	-97.10	115.4	-371.6	137.3	93.7	43.55	3.152 CC, ES, SF			
9,800.0	9,754.8	9,785.7	9,764.4	23.4	23.9	-102.81	115.7	-373.4	138.7	95.1	43.65	3.178			
9,900.0	9,824.5	9,854.4	9,833.0	23.5	24.1	-117.68	116.8	-378.4	165.5	122.6	42.89	3.858			
10,000.0	9,877.8	9,906.6	9,885.0	23.6	24.2	-123.92	117.6	-382.2	224.5	183.0	41.56	5.402			
10,100.0	9,912.5	9,940.0	9,918.3	23.8	24.3	-119.31	118.1	-384.6	304.6	262.5	42.05	7.243			

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
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		
10,200.0	9,927.1	9,953.1	9,931.3	24.1	24.3	-98.33	118.3	-385.6	395.6	350.8	44.75	8.839		
10,300.0	9,929.9	9,954.4	9,932.7	24.5	24.3	-96.73	118.3	-385.7	490.7	445.4	45.29	10.835		
10,400.0	9,932.7	9,955.7	9,934.0	25.0	24.4	-97.27	118.3	-385.8	587.4	541.5	45.89	12.801		
10,500.0	9,935.5	9,957.0	9,935.2	25.7	24.4	-97.81	118.3	-385.9	685.1	638.5	46.60	14.700		
10,600.0	9,938.3	9,958.3	9,936.5	26.5	24.4	-98.35	118.3	-386.0	783.3	735.9	47.43	16.516		
10,700.0	9,941.1	9,959.5	9,937.8	27.4	24.4	-98.89	118.3	-386.1	882.0	833.6	48.35	18.242		
10,800.0	9,943.8	9,960.8	9,939.1	28.4	24.4	-99.43	118.4	-386.2	980.9	931.5	49.35	19.876		
10,900.0	9,946.6	9,962.1	9,940.4	29.5	24.4	-99.97	118.4	-386.2	1,080.0	1,029.6	50.43	21.417		
11,000.0	9,949.4	9,963.4	9,941.7	30.6	24.4	-100.50	118.4	-386.3	1,179.3	1,127.7	51.57	22.868		
11,100.0	9,952.2	9,964.7	9,943.0	31.8	24.4	-101.04	118.4	-386.4	1,278.6	1,225.9	52.76	24.233		
11,200.0	9,955.0	9,966.0	9,944.2	33.1	24.4	-101.57	118.4	-386.5	1,378.1	1,324.1	54.01	25.517		
11,300.0	9,957.8	9,967.3	9,945.5	34.4	24.4	-102.11	118.5	-386.6	1,477.6	1,422.3	55.29	26.724		
11,400.0	9,960.6	9,968.6	9,946.8	35.7	24.4	-102.64	118.5	-386.7	1,577.2	1,520.6	56.61	27.861		
11,500.0	9,963.4	9,969.9	9,948.1	37.1	24.4	-103.17	118.5	-386.8	1,676.9	1,618.9	57.96	28.932		



Anticollision Report

Company: McElvain Energy, Inc.
 Project: Sec. 29 T18S R34E
 Reference Site: EK 29 Federal Com
 Site Error: 0.0 usft
 Reference Well: EK 29 BS2 Fed Com 2H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
 TVD Reference: WELL @ 4070.0usft (Original Well Elev)
 MD Reference: WELL @ 4070.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - Pennzoil Federal Com 1 - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 usft
Survey Program: 100-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)			
11,400.0	9,960.6	9,873.1	9,872.3	35.7	20.6	-80.87	-3,045.4	-316.9	1,605.5	1,550.9	54.66	29.374	
11,500.0	9,963.4	9,875.3	9,874.5	37.1	20.6	-81.47	-3,045.4	-316.9	1,506.4	1,450.3	56.16	26.825	
11,600.0	9,966.2	9,877.5	9,876.7	38.6	20.6	-82.08	-3,045.4	-316.9	1,407.4	1,349.7	57.69	24.395	
11,700.0	9,969.0	9,879.8	9,878.9	40.0	20.6	-82.69	-3,045.4	-317.0	1,308.6	1,249.3	59.26	22.083	
11,800.0	9,971.8	9,882.0	9,881.2	41.5	20.6	-83.31	-3,045.4	-317.0	1,209.9	1,149.1	60.85	19.883	
11,900.0	9,974.6	9,884.3	9,883.4	43.1	20.6	-83.93	-3,045.4	-317.0	1,111.5	1,049.0	62.47	17.793	
12,000.0	9,977.4	9,886.5	9,885.7	44.6	20.6	-84.56	-3,045.4	-317.1	1,013.4	949.3	64.10	15.809	
12,100.0	9,980.1	9,888.8	9,887.9	46.2	20.6	-85.19	-3,045.4	-317.1	915.7	849.9	65.76	13.925	
12,200.0	9,982.9	9,891.1	9,890.2	47.8	20.6	-85.82	-3,045.4	-317.2	818.5	751.1	67.42	12.139	
12,300.0	9,985.7	9,893.3	9,892.5	49.4	20.6	-86.46	-3,045.3	-317.2	722.1	653.0	69.11	10.449	
12,400.0	9,988.5	9,895.6	9,894.8	51.0	20.6	-87.10	-3,045.3	-317.2	626.8	556.0	70.80	8.853	
12,500.0	9,991.3	9,897.9	9,897.1	52.6	20.6	-87.75	-3,045.3	-317.3	533.2	460.7	72.50	7.355	
12,600.0	9,994.1	9,900.0	9,899.1	54.3	20.6	-88.33	-3,045.3	-317.3	442.5	368.3	74.20	5.963	
12,700.0	9,996.9	9,902.6	9,901.7	55.9	20.6	-89.05	-3,045.3	-317.4	356.7	280.7	75.91	4.698	
12,800.0	9,999.7	9,904.9	9,904.1	57.6	20.6	-89.71	-3,045.3	-317.4	280.4	202.8	77.62	3.612	
12,900.0	10,002.5	9,907.3	9,906.4	59.3	20.7	-90.38	-3,045.3	-317.4	223.7	144.4	79.34	2.819	
12,993.0	10,005.1	9,909.5	9,908.7	60.8	20.7	-91.01	-3,045.3	-317.5	203.4	122.5	80.93	2.514 CC, ES	
13,000.0	10,005.3	9,909.7	9,908.8	61.0	20.7	-91.06	-3,045.3	-317.5	203.6	122.5	81.05	2.511 SF	
13,100.0	10,008.1	9,912.1	9,911.3	62.6	20.7	-91.74	-3,045.3	-317.5	229.8	147.1	82.77	2.777	
13,200.0	10,010.9	9,914.6	9,913.7	64.3	20.7	-92.43	-3,045.3	-317.6	290.2	205.7	84.48	3.435	
13,300.0	10,013.7	9,917.0	9,916.2	66.1	20.7	-93.12	-3,045.2	-317.6	368.2	282.0	86.18	4.272	
13,400.0	10,016.4	9,919.5	9,918.7	67.8	20.7	-93.83	-3,045.2	-317.7	454.9	367.0	87.88	5.176	
13,500.0	10,019.2	9,922.1	9,921.2	69.5	20.7	-94.54	-3,045.2	-317.7	546.1	456.6	89.58	6.097	
13,600.0	10,022.0	9,924.6	9,923.8	71.2	20.7	-95.25	-3,045.2	-317.8	640.0	548.7	91.26	7.013	
13,700.0	10,024.8	9,927.2	9,926.3	72.9	20.7	-95.97	-3,045.2	-317.8	735.5	642.5	92.93	7.914	
13,800.0	10,027.6	9,929.8	9,928.9	74.7	20.7	-96.70	-3,045.2	-317.8	832.0	737.4	94.60	8.795	
13,900.0	10,030.4	9,932.5	9,931.6	76.4	20.7	-97.44	-3,045.2	-317.9	929.3	833.0	96.24	9.655	
14,000.0	10,033.2	9,935.1	9,934.3	78.2	20.7	-98.18	-3,045.2	-317.9	1,027.0	929.1	97.88	10.493	
14,100.0	10,036.0	9,937.8	9,937.0	79.9	20.7	-98.92	-3,045.2	-318.0	1,125.2	1,025.7	99.50	11.308	
14,200.0	10,038.8	9,940.5	9,939.7	81.7	20.7	-99.68	-3,045.2	-318.0	1,223.6	1,122.5	101.10	12.103	
14,300.0	10,041.6	9,943.3	9,942.4	83.4	20.7	-100.43	-3,045.2	-318.1	1,322.3	1,219.6	102.69	12.877	
14,400.0	10,044.4	9,946.1	9,945.2	85.2	20.7	-101.20	-3,045.2	-318.2	1,421.2	1,316.9	104.25	13.632	
14,500.0	10,047.2	9,948.9	9,948.0	86.9	20.7	-101.97	-3,045.2	-318.2	1,520.2	1,414.4	105.80	14.368	
14,600.0	10,050.0	9,951.8	9,950.9	88.7	20.7	-102.74	-3,045.1	-318.3	1,619.3	1,512.0	107.33	15.088	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - Sun - Pennzoil A Fed 1 - Wellbore #1 - 0 Az												Offset Site Error:	0.0 usft
Survey Program: 351-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
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	
11,900.0	9,974.5	9,884.5	9,883.2	43.1	20.6	-89.17	-2,943.8	799.4	1,650.9	1,588.0	62.82	26.280	
12,000.0	9,977.4	9,886.4	9,885.1	44.6	20.6	-89.26	-2,943.7	799.4	1,592.8	1,528.4	64.40	24.734	
12,100.0	9,980.1	9,888.3	9,887.1	46.2	20.6	-89.34	-2,943.7	799.4	1,539.1	1,473.1	66.00	23.320	
12,200.0	9,982.9	9,890.2	9,889.0	47.8	20.6	-89.42	-2,943.7	799.4	1,490.2	1,422.6	67.62	22.039	
12,300.0	9,985.7	9,892.2	9,890.9	49.4	20.6	-89.51	-2,943.7	799.4	1,446.6	1,377.3	69.25	20.888	
12,400.0	9,988.5	9,894.1	9,892.8	51.0	20.6	-89.59	-2,943.7	799.4	1,408.7	1,337.8	70.90	19.869	
12,500.0	9,991.3	9,896.0	9,894.7	52.6	20.6	-89.67	-2,943.7	799.4	1,377.0	1,304.5	72.56	18.978	
12,600.0	9,994.1	9,897.9	9,896.6	54.3	20.6	-89.76	-2,943.6	799.4	1,352.0	1,277.8	74.23	18.213	
12,700.0	9,996.9	9,899.8	9,898.6	55.9	20.6	-89.84	-2,943.6	799.4	1,334.1	1,258.2	75.91	17.573	
12,800.0	9,999.7	9,901.8	9,900.5	57.6	20.6	-89.92	-2,943.6	799.4	1,323.5	1,245.8	77.61	17.053	
12,891.2	10,002.2	9,903.5	9,902.2	59.1	20.6	-90.00	-2,943.6	799.4	1,320.3	1,241.2	79.16	16.680	CC
12,900.0	10,002.5	9,903.7	9,902.4	59.3	20.6	-90.01	-2,943.6	799.4	1,320.3	1,241.0	79.31	16.649	ES
13,000.0	10,005.3	9,905.6	9,904.3	61.0	20.6	-90.09	-2,943.6	799.4	1,324.8	1,243.8	81.01	16.352	
13,100.0	10,008.1	9,907.5	9,906.2	62.6	20.6	-90.17	-2,943.6	799.4	1,336.7	1,254.0	82.73	16.158	
13,200.0	10,010.9	9,909.4	9,908.2	64.3	20.6	-90.26	-2,943.5	799.4	1,355.9	1,271.5	84.45	16.056	
13,300.0	10,013.7	9,911.4	9,910.1	66.1	20.6	-90.34	-2,943.5	799.4	1,382.1	1,295.9	86.18	16.038	SF
13,400.0	10,016.4	9,913.3	9,912.0	67.8	20.6	-90.42	-2,943.5	799.4	1,414.9	1,327.0	87.91	16.094	
13,500.0	10,019.2	9,915.2	9,913.9	69.5	20.7	-90.51	-2,943.5	799.4	1,453.9	1,364.2	89.65	16.217	
13,600.0	10,022.0	9,917.1	9,915.8	71.2	20.7	-90.59	-2,943.5	799.4	1,498.5	1,407.1	91.40	16.395	
13,700.0	10,024.8	9,919.0	9,917.8	72.9	20.7	-90.67	-2,943.5	799.4	1,548.3	1,455.1	93.14	16.622	
13,800.0	10,027.6	9,921.0	9,919.7	74.7	20.7	-90.76	-2,943.4	799.4	1,602.8	1,507.9	94.90	16.890	
13,900.0	10,030.4	9,922.9	9,921.6	76.4	20.7	-90.84	-2,943.4	799.4	1,661.5	1,564.8	96.65	17.190	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - Sun - Pennzoil A Fed 1 - Wellbore #2 - 180 Az													Offset Site Error: 0.0 usft
Survey Program: 351-MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)			
12,200.0	9,982.9	9,875.6	9,874.3	47.8	20.6	-88.43	-3,243.1	799.4	1,650.5	1,583.0	67.57	24.428	
12,300.0	9,985.7	9,879.2	9,878.0	49.4	20.6	-88.58	-3,243.1	799.4	1,592.6	1,523.4	69.21	23.011	
12,400.0	9,988.5	9,882.9	9,881.6	51.0	20.6	-88.74	-3,243.1	799.4	1,538.9	1,468.1	70.86	21.717	
12,500.0	9,991.3	9,886.6	9,885.3	52.6	20.6	-88.90	-3,243.2	799.4	1,490.0	1,417.5	72.53	20.543	
12,600.0	9,994.1	9,890.2	9,889.0	54.3	20.6	-89.06	-3,243.2	799.4	1,446.4	1,372.2	74.21	19.491	
12,700.0	9,996.9	9,893.9	9,892.6	55.9	20.6	-89.22	-3,243.2	799.4	1,408.6	1,332.7	75.90	18.558	
12,800.0	9,999.7	9,897.5	9,896.3	57.6	20.6	-89.38	-3,243.3	799.4	1,377.0	1,299.4	77.60	17.744	
12,900.0	10,002.5	9,901.2	9,899.9	59.3	20.6	-89.54	-3,243.3	799.4	1,352.0	1,272.7	79.31	17.048	
13,000.0	10,005.3	9,904.9	9,903.6	61.0	20.7	-89.70	-3,243.3	799.4	1,334.1	1,253.0	81.02	16.465	
13,100.0	10,008.1	9,908.5	9,907.3	62.6	20.7	-89.86	-3,243.4	799.4	1,323.5	1,240.7	82.74	15.995	
13,191.1	10,010.6	9,911.9	9,910.6	64.2	20.7	-90.00	-3,243.4	799.4	1,320.3	1,236.0	84.32	15.659 CC	
13,200.0	10,010.9	9,912.2	9,910.9	64.3	20.7	-90.01	-3,243.4	799.4	1,320.3	1,235.9	84.47	15.631 ES	
13,300.0	10,013.7	9,915.9	9,914.6	66.1	20.7	-90.17	-3,243.4	799.4	1,324.8	1,238.6	86.21	15.368	
13,400.0	10,016.4	9,919.5	9,918.3	67.8	20.7	-90.33	-3,243.5	799.4	1,336.7	1,248.8	87.94	15.200	
13,500.0	10,019.2	9,923.2	9,921.9	69.5	20.7	-90.49	-3,243.5	799.4	1,355.9	1,266.2	89.69	15.118	
13,600.0	10,022.0	9,926.9	9,925.6	71.2	20.7	-90.65	-3,243.5	799.4	1,382.1	1,290.7	91.44	15.115 SF	
13,700.0	10,024.8	9,930.5	9,929.3	72.9	20.7	-90.81	-3,243.6	799.4	1,414.9	1,321.7	93.19	15.183	
13,800.0	10,027.6	9,934.2	9,932.9	74.7	20.7	-90.97	-3,243.6	799.4	1,453.8	1,358.8	94.94	15.312	
13,900.0	10,030.4	9,937.9	9,936.6	76.4	20.7	-91.13	-3,243.6	799.4	1,498.4	1,401.7	96.70	15.495	
14,000.0	10,033.2	9,941.5	9,940.3	78.2	20.7	-91.29	-3,243.6	799.4	1,548.1	1,449.6	98.46	15.723	
14,100.0	10,036.0	9,945.2	9,943.9	79.9	20.7	-91.44	-3,243.7	799.4	1,602.6	1,502.3	100.23	15.989	
14,200.0	10,038.8	9,948.8	9,947.6	81.7	20.7	-91.60	-3,243.7	799.4	1,661.2	1,559.2	102.00	16.287	

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



Anticollision Report

Company: McElvain Energy, Inc.
 Project: Sec. 29 T18S R34E
 Reference Site: EK 29 Federal Com
 Site Error: 0.0 usft
 Reference Well: EK 29 BS2 Fed Com 2H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
 TVD Reference: WELL @ 4070.0usft (Original Well Elev)
 MD Reference: WELL @ 4070.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - Sun - Pennzoil A Fed 1 - Wellbore #3 - 90 Az													Offset Site Error: 0.0 usft
Survey Program: 351-MWD													Offset Well Error: 0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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
12,300.0	9,985.7	9,874.2	9,872.9	49.4	20.6	-88.69	-3,093.4	949.0	1,646.1	1,577.0	69.06	23.835	
12,400.0	9,988.5	9,877.0	9,875.7	51.0	20.6	-88.80	-3,093.4	949.1	1,603.6	1,532.9	70.71	22.678	
12,500.0	9,991.3	9,879.8	9,878.5	52.6	20.6	-88.91	-3,093.4	949.1	1,566.4	1,494.0	72.38	21.642	
12,600.0	9,994.1	9,882.5	9,881.3	54.3	20.6	-89.02	-3,093.4	949.1	1,534.8	1,460.7	74.05	20.725	
12,700.0	9,996.9	9,885.3	9,884.1	55.9	20.6	-89.13	-3,093.4	949.1	1,509.1	1,433.4	75.74	19.925	
12,800.0	9,999.7	9,888.1	9,886.9	57.6	20.6	-89.24	-3,093.4	949.2	1,489.7	1,412.3	77.43	19.239	
12,900.0	10,002.5	9,890.9	9,889.7	59.3	20.6	-89.35	-3,093.4	949.2	1,476.9	1,397.7	79.14	18.662	
13,000.0	10,005.3	9,893.7	9,892.4	61.0	20.6	-89.46	-3,093.4	949.2	1,470.7	1,389.9	80.85	18.191	
13,040.8	10,006.4	9,894.9	9,893.6	61.6	20.6	-89.50	-3,093.4	949.2	1,470.2	1,388.6	81.55	18.028 CC, ES	
13,100.0	10,008.1	9,896.5	9,895.2	62.6	20.6	-89.56	-3,093.4	949.2	1,471.4	1,388.8	82.57	17.820	
13,200.0	10,010.9	9,899.3	9,898.0	64.3	20.6	-89.67	-3,093.4	949.2	1,478.8	1,394.5	84.29	17.543	
13,300.0	10,013.7	9,902.1	9,900.8	66.1	20.6	-89.78	-3,093.4	949.3	1,492.8	1,406.8	86.02	17.354	
13,400.0	10,016.4	9,904.9	9,903.6	67.8	20.6	-89.89	-3,093.4	949.3	1,513.4	1,425.6	87.76	17.245	
13,500.0	10,019.2	9,907.7	9,906.4	69.5	20.6	-90.00	-3,093.4	949.3	1,540.2	1,450.7	89.50	17.208 SF	
13,600.0	10,022.0	9,910.5	9,909.2	71.2	20.7	-90.11	-3,093.4	949.3	1,572.9	1,481.6	91.25	17.237	
13,700.0	10,024.8	9,913.3	9,912.0	72.9	20.7	-90.22	-3,093.4	949.4	1,611.1	1,518.1	93.00	17.324	
13,800.0	10,027.6	9,916.1	9,914.8	74.7	20.7	-90.33	-3,093.4	949.4	1,654.5	1,559.7	94.75	17.461	

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



Anticollision Report

Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design EK 29 Federal Com - Sun - Pennzoil A Fed 1 - Wellbore #4 - 270 Az												Offset Site Error:	0.0 usft
Survey Program: 351-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)			
11,900.0	9,974.6	9,886.0	9,884.8	43.1	20.6	-88.94	-3,093.5	649.7	1,634.5	1,571.8	62.68	26.075	
12,000.0	9,977.4	9,888.8	9,887.6	44.6	20.6	-89.08	-3,093.5	649.7	1,566.3	1,502.1	64.27	24.371	
12,100.0	9,980.1	9,891.6	9,890.4	46.2	20.6	-89.21	-3,093.5	649.7	1,501.8	1,435.9	65.88	22.797	
12,200.0	9,982.9	9,894.4	9,893.2	47.8	20.6	-89.35	-3,093.5	649.6	1,441.2	1,373.7	67.50	21.352	
12,300.0	9,985.7	9,897.2	9,895.9	49.4	20.6	-89.49	-3,093.5	649.6	1,385.3	1,316.1	69.14	20.037	
12,400.0	9,988.5	9,900.0	9,898.7	51.0	20.6	-89.62	-3,093.5	649.6	1,334.5	1,263.7	70.79	18.852	
12,500.0	9,991.3	9,902.8	9,901.5	52.6	20.6	-89.76	-3,093.5	649.6	1,289.4	1,217.0	72.45	17.797	
12,600.0	9,994.1	9,905.6	9,904.3	54.3	20.6	-89.90	-3,093.5	649.5	1,250.8	1,176.7	74.13	16.873	
12,700.0	9,996.9	9,908.4	9,907.1	55.9	20.6	-90.03	-3,093.5	649.5	1,219.1	1,143.3	75.81	16.081	
12,800.0	9,999.7	9,911.2	9,909.9	57.6	20.7	-90.17	-3,093.5	649.5	1,195.0	1,117.5	77.51	15.418	
12,900.0	10,002.5	9,914.0	9,912.7	59.3	20.7	-90.31	-3,093.5	649.5	1,178.9	1,099.7	79.21	14.883	
13,000.0	10,005.3	9,916.8	9,915.5	61.0	20.7	-90.44	-3,093.5	649.4	1,171.1	1,090.2	80.92	14.472	
13,041.4	10,006.4	9,917.9	9,916.6	61.7	20.7	-90.50	-3,093.5	649.4	1,170.4	1,088.7	81.63	14.337 CC. ES	
13,100.0	10,008.1	9,919.6	9,918.3	62.6	20.7	-90.58	-3,093.5	649.4	1,171.8	1,089.2	82.64	14.180	
13,200.0	10,010.9	9,922.3	9,921.1	64.3	20.7	-90.72	-3,093.5	649.4	1,181.1	1,096.7	84.36	14.000	
13,300.0	10,013.7	9,925.1	9,923.9	66.1	20.7	-90.85	-3,093.5	649.4	1,198.6	1,112.5	86.09	13.922 SF	
13,400.0	10,016.4	9,927.9	9,926.7	67.8	20.7	-90.99	-3,093.5	649.3	1,224.0	1,136.2	87.83	13.937	
13,500.0	10,019.2	9,930.7	9,929.5	69.5	20.7	-91.13	-3,093.5	649.3	1,256.9	1,167.4	89.57	14.033	
13,600.0	10,022.0	9,933.5	9,932.2	71.2	20.7	-91.26	-3,093.5	649.3	1,296.7	1,205.4	91.31	14.201	
13,700.0	10,024.8	9,936.3	9,935.0	72.9	20.7	-91.40	-3,093.5	649.3	1,342.8	1,249.8	93.06	14.429	
13,800.0	10,027.6	9,939.1	9,937.8	74.7	20.7	-91.54	-3,093.5	649.2	1,394.6	1,299.7	94.81	14.708	
13,900.0	10,030.4	9,941.9	9,940.6	76.4	20.7	-91.67	-3,093.5	649.2	1,451.3	1,354.8	96.57	15.029	
14,000.0	10,033.2	9,944.7	9,943.4	78.2	20.7	-91.81	-3,093.5	649.2	1,512.6	1,414.3	98.33	15.383	
14,100.0	10,036.0	9,947.5	9,946.2	79.9	20.7	-91.95	-3,093.5	649.2	1,577.8	1,477.7	100.09	15.764	
14,200.0	10,038.8	9,950.3	9,949.0	81.7	20.7	-92.08	-3,093.5	649.1	1,646.5	1,544.7	101.85	16.166	

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



Anticollision Report

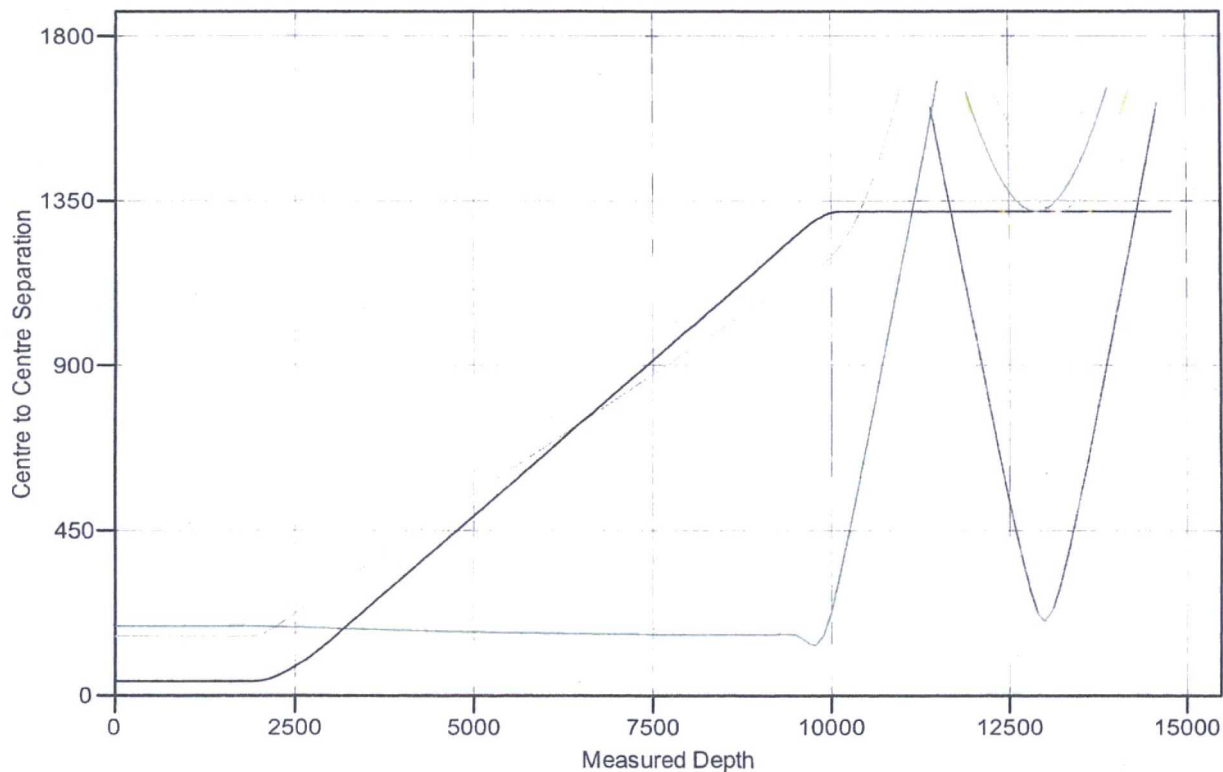
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4070.0usft (Original Well Ele)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: EK 29 BS2 Fed Com 2H - Slot WCD 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.41°

Ladder Plot



LEGEND

Com 1, Wellbore #1, Wellbore #1 V0	—●— EK 29 BS2 Fed Com 1H, Wellbore #1, Plan #3 01Nov16 kjs V0	—●— Sun - Pennzoil A Fed 1, Wellbore #4, 270
Com 1H, Wellbore #1, Design #1 15Dec15 kjs V0	—●— Sun - Pennzoil A Fed 1, Wellbore #2, 180 Az V0	—●— Sun - Pennzoil A Fed 1, Wellbore #1, 0 Az
Com 2H, Wellbore #1, Plan #2 01Nov16 kjs V0	—●— Sun - Pennzoil A Fed 1, Wellbore #3, 90 Az V0	

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



Anticollision Report

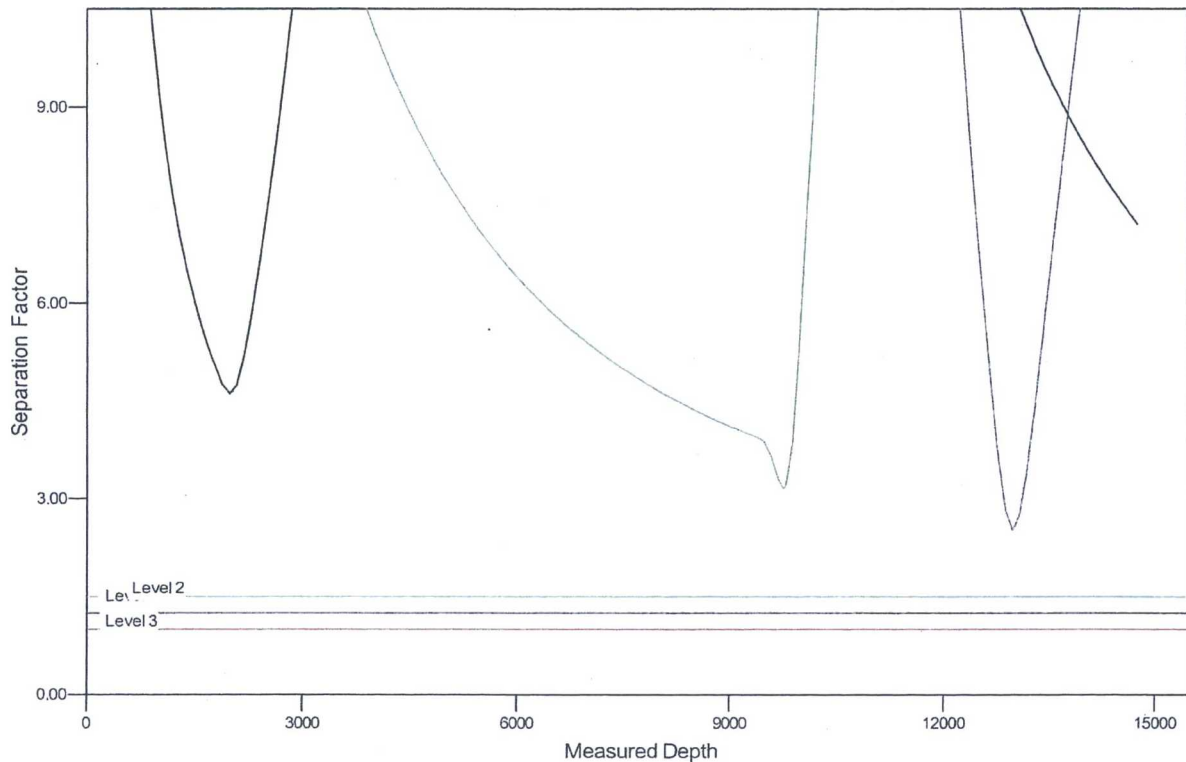
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 2H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #3 09Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 2H - Slot WCD 2H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4070.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: EK 29 BS2 Fed Com 2H - Slot WCD 2H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.41°

Separation Factor Plot



LEGEND

Com 1, Wellbore #1, Wellbore #1 V0 EK 29 BS2 Fed Com 1H, Wellbore #1, Plan #3 01Nov16 kjs V0 Sun - Pennzoil A Fed 1, Wellbore #4, 270
Com 1H, Wellbore #1, Design #1 15Dec15 kjs V0 Sun - Pennzoil A Fed 1, Wellbore #2, 180 Az V0 Sun - Pennzoil A Fed 1, Wellbore #1, 0 Az
Com 2H, Wellbore #1, Plan #2 01Nov16 kjs V0 Sun - Pennzoil A Fed 1, Wellbore #3, 90 Az V0

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