

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM0245247

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
MCELVAIN ENERGY INC. /Contact: TONY G COOPER
E-Mail: tony.cooper@mcelvain.com8. Well Name and No.
EK 29 BS2 FEDERAL COM 1H9. API Well No.
30-025-436873a. Address
1050 17TH ST STE. 2500
DENVER, CO 802653b. Phone No. (include area code)
Ph: 303-893-0933 Ext: 33110. Field and Pool or Exploratory Area
EK BONE SPRING4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 29 T18S R34E Mer NMP NWNE 235FNL 1420FEL
235 1420
240 124011. County or Parish, State
LEA COUNTY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

McElvain Energy Inc. is respectfully requesting to change the surface location of this well. The drilling rig that McElvain has retained needs the surface location changed so the rig can effectively be skidded from the 1H to the 2H well. I have attached the original plat and a revised plat of the well locations on the well pad.

Old Surface Footage - 370'FWL, 200'FSL, 130'FEL, 275'FNL

New Surface Footage - 160'FWL, 200'FSL, 340'FEL, 300'FNL

New SHL 235'FNL 1420'FEL

Eng okay 5/1/17 cwallis

From Pad edges
From Pad edgesSame GAD Apply
DOI-BLM - NM BLM 2017-0115-E
OK per Bob Ballard
NMP District 5-1-2017

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #373908 verified by the BLM Well Information System
For MCELVAIN ENERGY INC., sent to the Hobbs
Committed to AFMSS for processing by DEBORAH MCKINNEY on 04/26/2017 ()

Name (Printed/Typed) TONY G COOPER

Title SR EHS SPECIALIST

Signature (Electronic Submission)

Date 04/25/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Cody L. Layton

Title

far FIELD MANAGER

Date

05/03/17

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

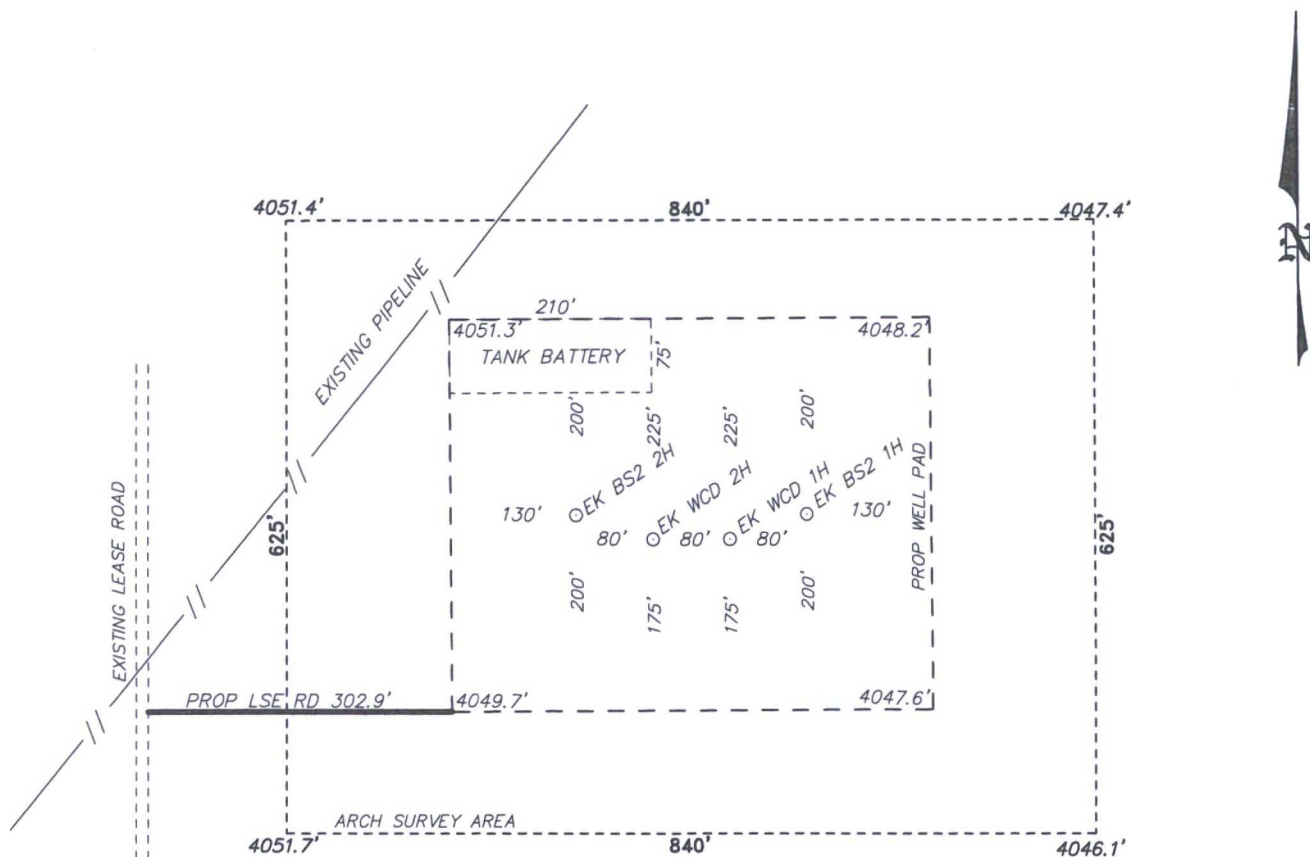
KSC

Additional data for EC transaction #373908 that would not fit on the form

32. Additional remarks, continued

Please contact me with any questions.

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



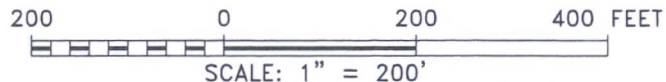
McELVAIN OIL&GAS PROPERTIES
EK 29 BS2 FEDERAL COM 1H

ELEV. - 4049'
Lat - N 32°43'31.42"
Long - W 103°34'40.24"
NMSPEC - N 628458.7
E 773670.6
(NAD-83)

Directions to Location:

FROM JUNCTION OF STATE ROAD 529 AND US
HIGHWAY 62-180 GO NORTHWEST ON 529 12.1
MILES TO LEASE ROAD; TURN SOUTHWEST ON LEASE
ROAD 0.2 MILES, THEN SOUTH 0.39 MILES TO
PROPOSED LEASE ROAD DUE EAST.

BUCKEYE, NM IS ±6 MILES TO THE NORTHEAST OF LOCATION.



McELVAIN OIL&GAS PROPERTIES

REF: EK 29 BS2 FEDERAL COM 1H / WELL PAD TOPO

THE EK 29 BS2 FEDERAL COM 1H LOCATED 210' FROM
THE NORTH LINE AND 1210' FROM THE EAST LINE OF
SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST.

N.M.P.M., LEA COUNTY, NEW MEXICO.



P.O. Box 1786 (575) 393-7316 - Office
1120 N West County Rd. (575) 392-2206 - Fax
Hobbs, New Mexico 88241 basinsurveys.com

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



McELVAIN OIL&GAS PROPERTIES

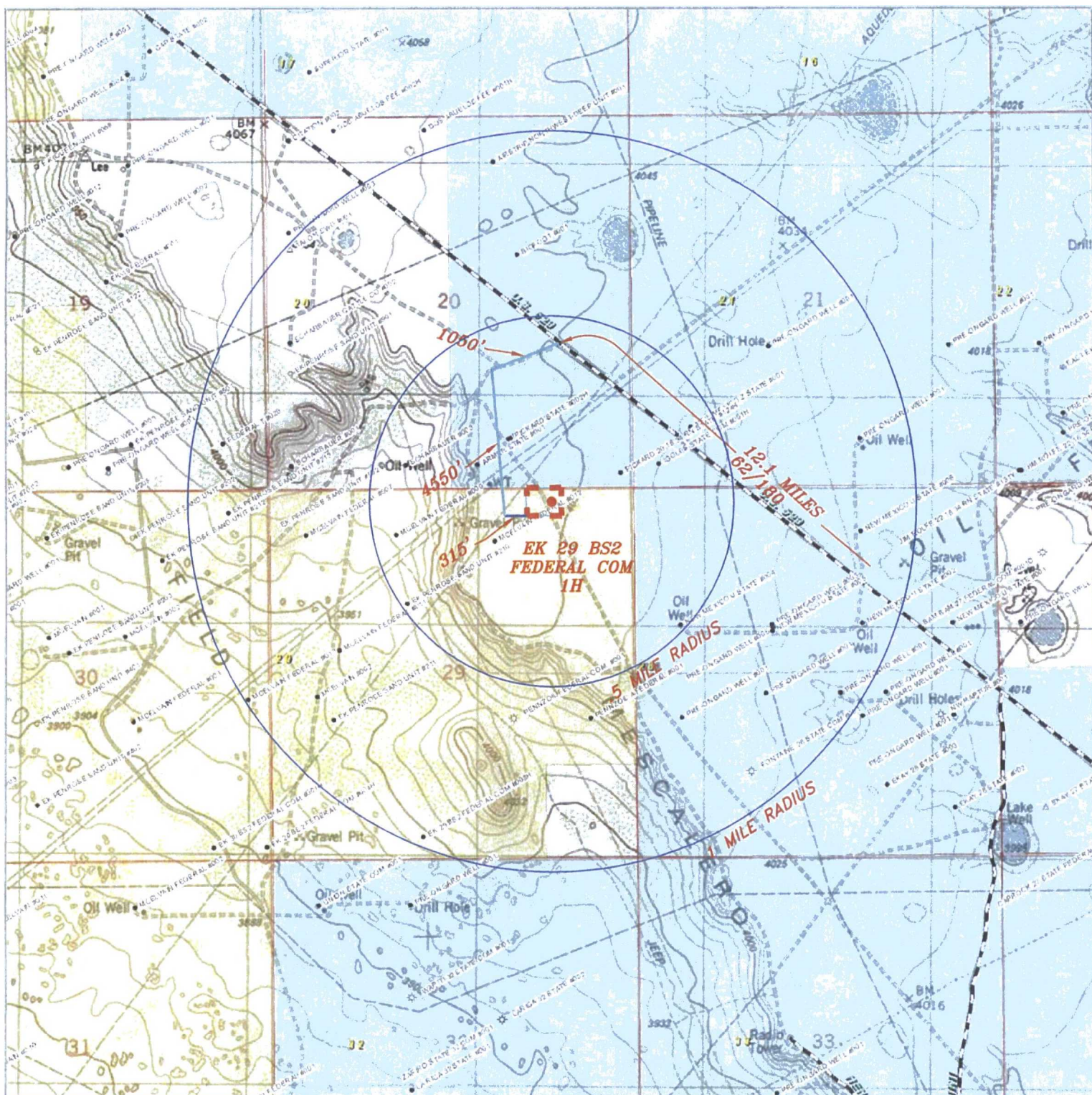
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EK 29 BS2 FEDERAL COM 1H

Located 210' FNL and 1210' FEL
 Section 29, Township 18 South, Range 34 East,
 N.M.P.M., Lea County, New Mexico.

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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

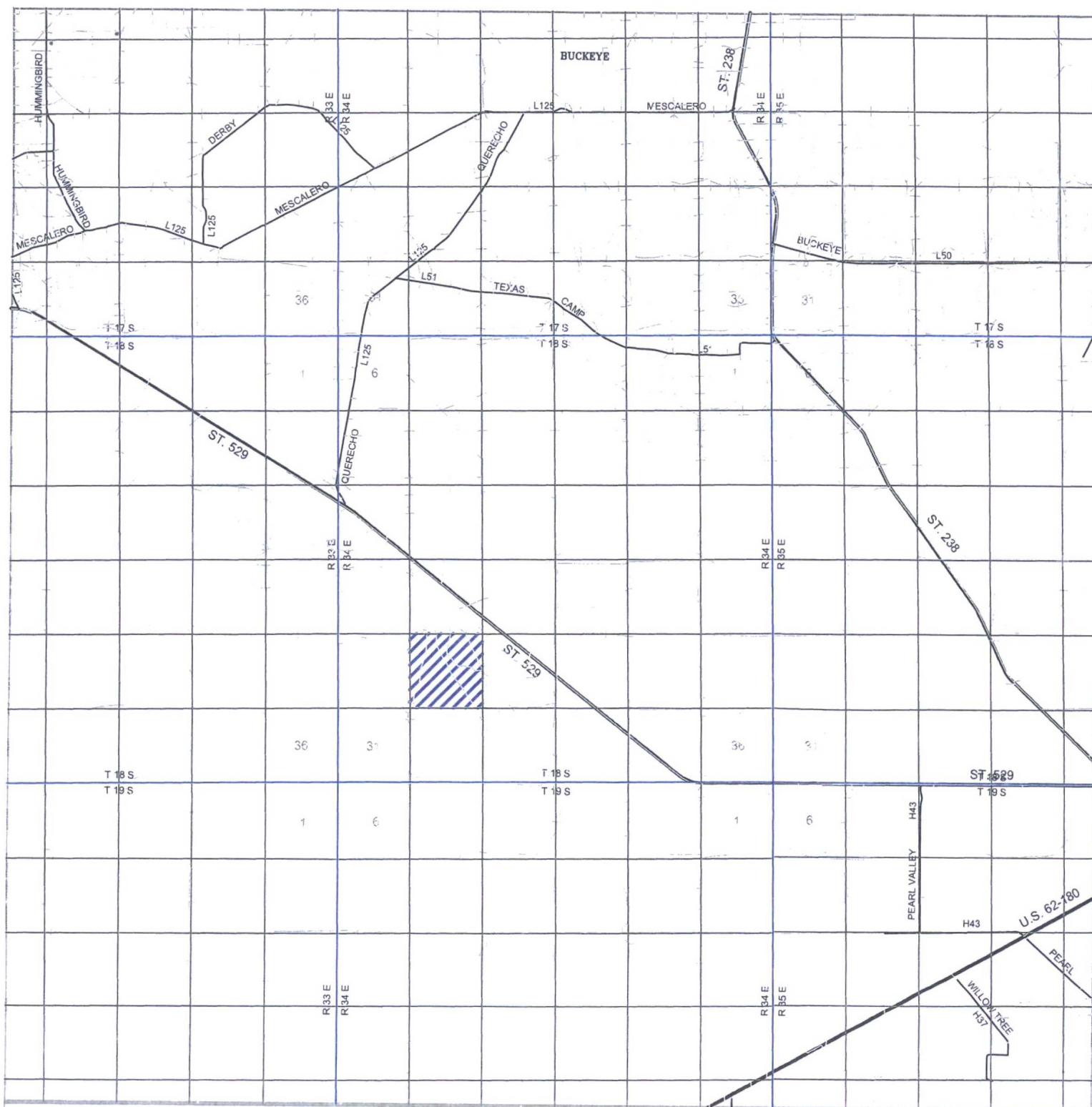
A.C. Number: KAN 3201

Survey Date: 10-20-2015

YELLOW TINT — USA LAND
 BLUE TINT — STATE LAND
 NATURAL COLOR — FEE LAND



McELVAIN
ENERGY, INC



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0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

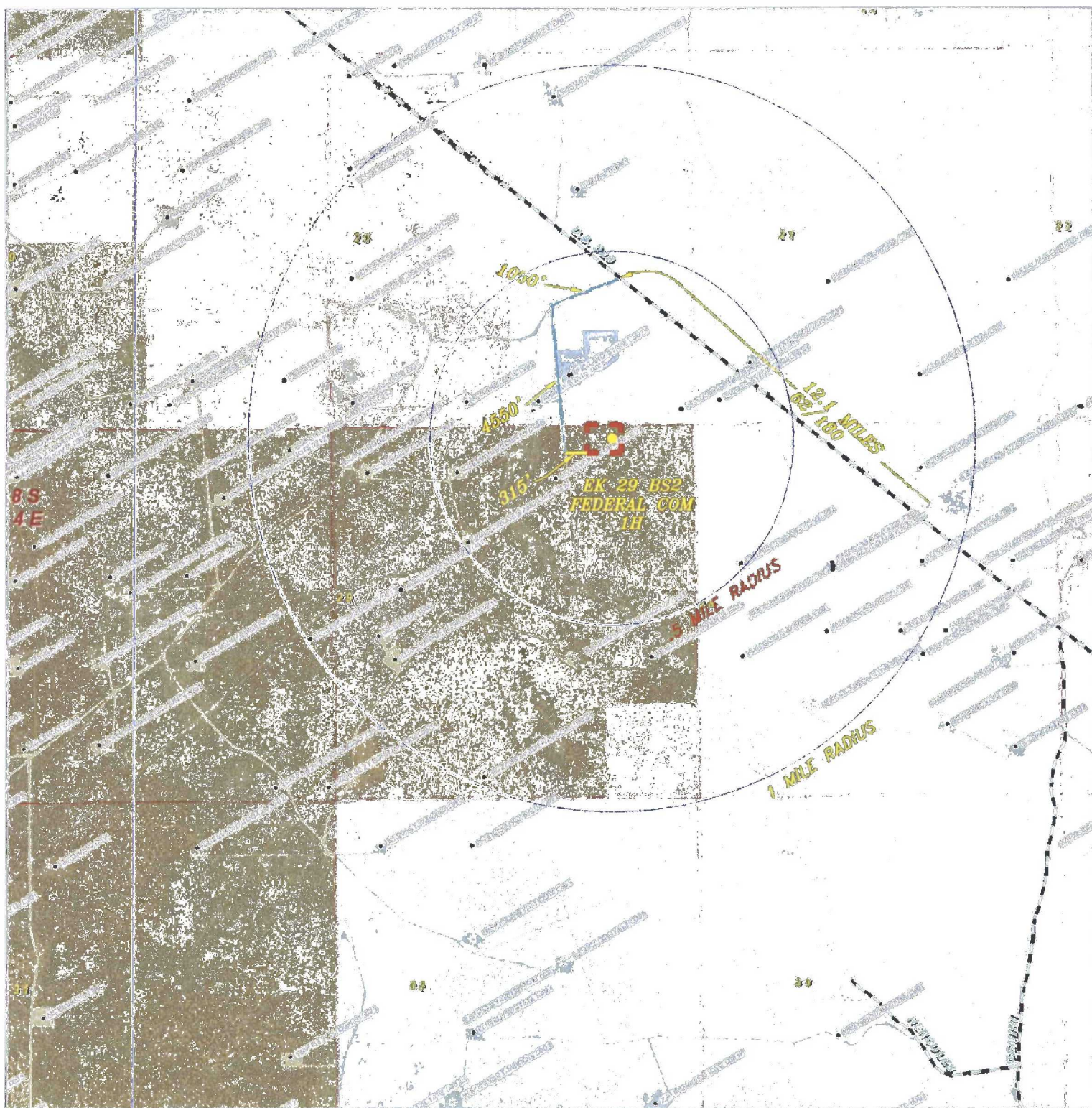
W.O. Number: KAN 32010

Survey Date: 10-20-2015

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



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EK 29 BS2 FEDERAL COM 1H

Located 210' FNL and 1210' FEL
 Section 29, Township 18 South, Range 34 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1766
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
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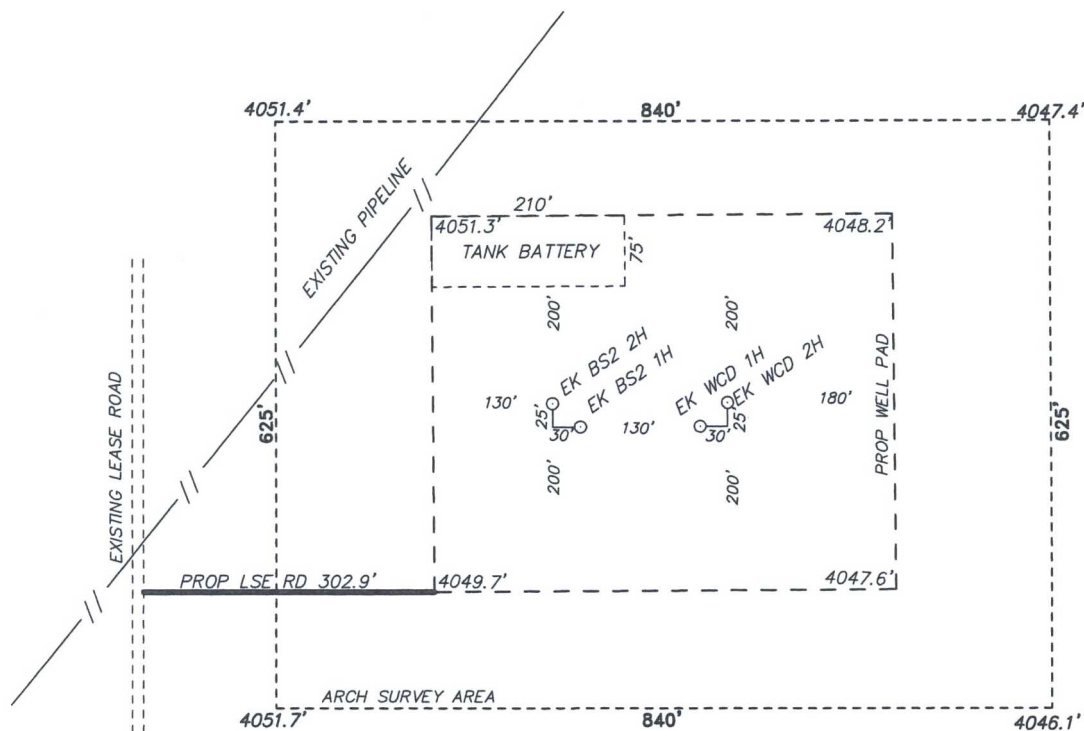
0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

W.C. Number: K/N 32010
 Survey Date: 10-20-2015
 YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



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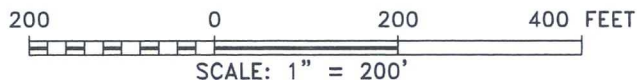
SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



McELVAIN OIL&GAS PROPERTIES
EK 29 BS2 FEDERAL COM 1H
ELEV. - 4050'

Lat - N 32°43'31.18"
Long - W 103°34'42.69"
NMSPCE- N 628432.5
E 773460.9
(NAD-83)

BUCKEYE, NM IS ±6 MILES TO THE NORTHEAST OF LOCATION.



Directions to Location:

FROM JUNCTION OF STATE ROAD 529 AND US HIGHWAY 62-180 GO NORTHWEST ON 529 12.1 MILES TO LEASE ROAD; TURN SOUTHWEST ON LEASE ROAD 0.2 MILES, THEN SOUTH 0.39 MILES TO PROPOSED LEASE ROAD DUE EAST.

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REF: EK 29 BS2 FEDERAL COM 1H / WELL PAD TOPO

THE EK 29 BS2 FEDERAL COM 1H LOCATED 235' FROM THE NORTH LINE AND 1420' FROM THE EAST LINE OF SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST.

N.M.P.M., LEA COUNTY, NEW MEXICO.

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W.O. Number: 32499

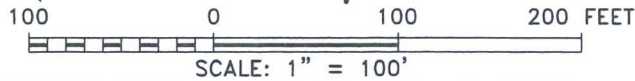
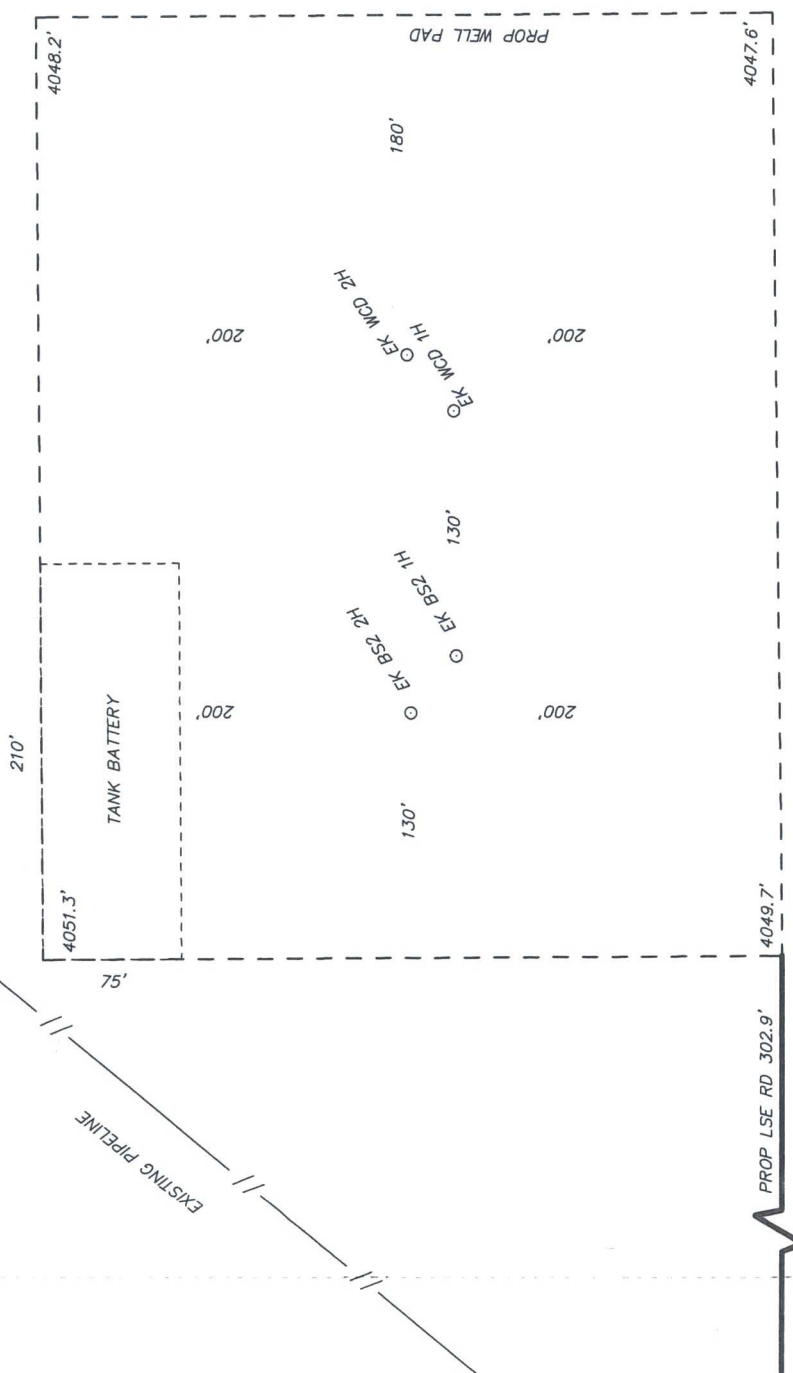
Drawn By: K. GOAD

Date: 10-05-2016

Survey Date: 10-04-2016

Sheet 1 of 1 Sheets

SECTION 29, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

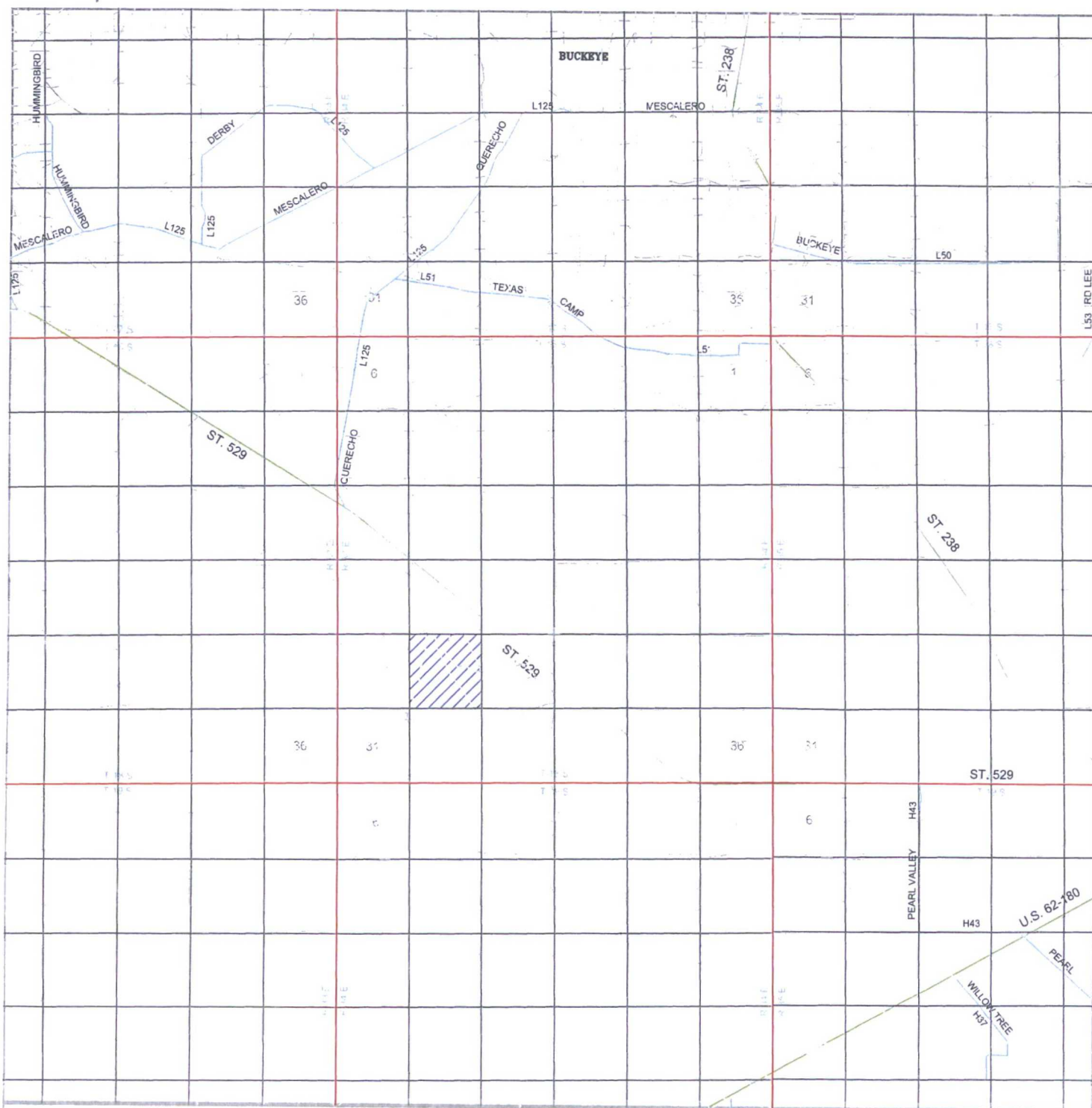
W.O. Number K-6 32499

Survey Date 10-14-2016

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



McELVAIN
ENERGY, INC



EK 29 BS2 FEDERAL COM 1H

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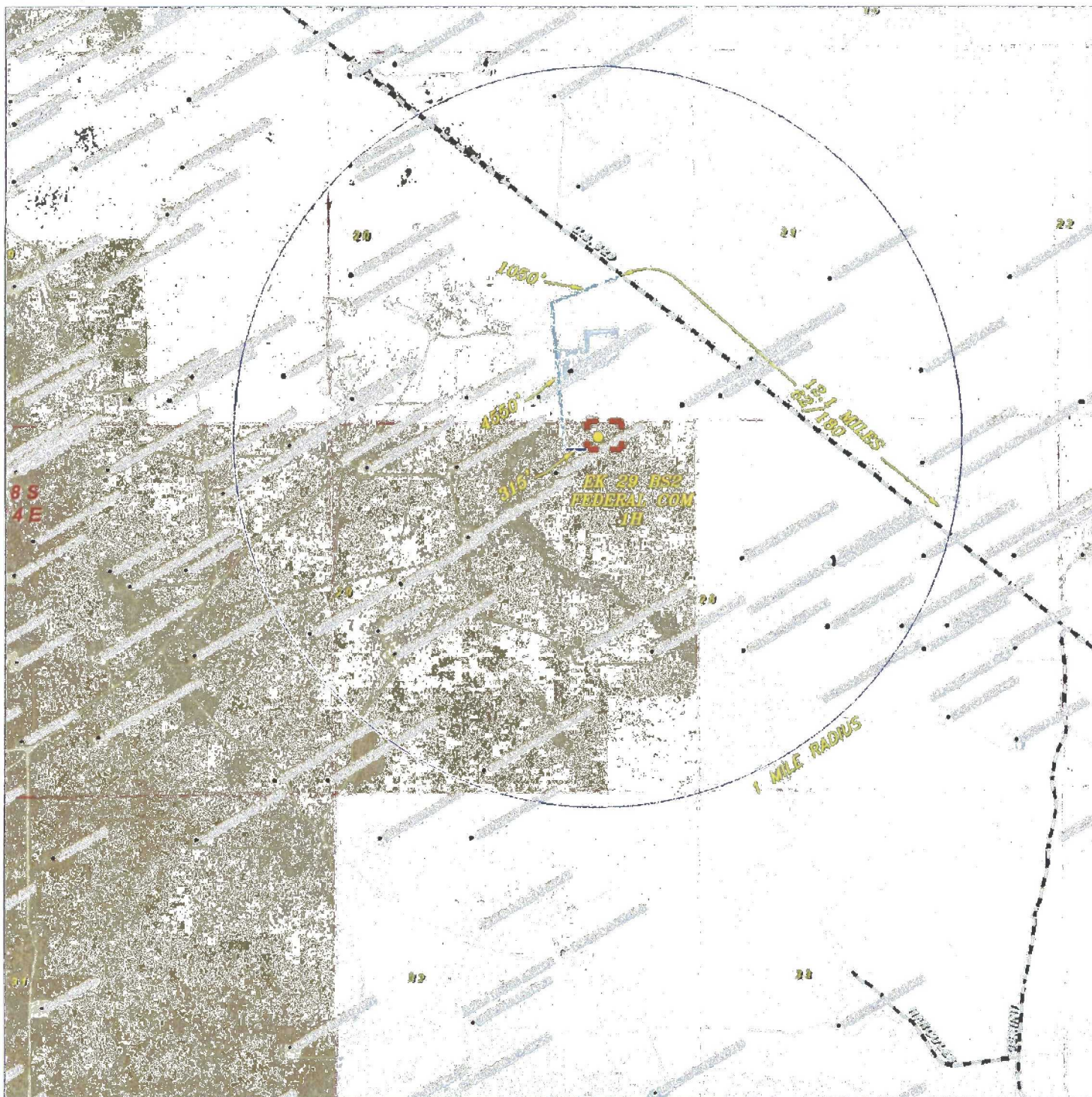
W.O. Number: KUG 52499

Survey Date: 10-04-2016

YELLOW TINT - USA LAND
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0' 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

W.O. Number: KJG 32499

Survey Date: 10-04-2016

YELLOW TINT - USA LAND
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McELVAIN
ENERGY, INC



McElvain Energy, Inc.

Sec. 29 T18S R34E

EK 29 Federal Com

EK 29 BS2 Fed Com 1H

Wellbore #1

Plan #5 Still in Zone 13Jan17 kjs

Anticollision Report

13 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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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 #5 Still in Zone 13Jan17 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 01/13/17			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	14,820.8	Plan #5 Still in Zone 13Jan17 kjs (Wellbor	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 2H - Wellbore #1 - Plan #3 09Jan1	1,900.0	1,900.0	39.2	30.9	4.734	CC, ES
EK 29 BS2 Fed Com 2H - Wellbore #1 - Plan #3 09Jan1	2,000.0	1,999.0	40.1	31.4	4.604	SF
EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15D	5,227.6	5,213.1	71.4	46.6	2.882	CC
EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15D	5,300.0	5,285.3	71.5	46.4	2.846	ES
EK 29 WCD Fed Com 1H - Wellbore #1 - Design #1 15D	5,500.0	5,485.0	73.0	47.0	2.808	SF
EK 29 WCD Fed Com 2H - Wellbore #1 - Plan #2 01Nov	3,150.4	3,147.4	39.4	25.6	2.847	CC, ES, SF
Pennzoil Federal Com 1 - Wellbore #1 - Wellbore #1	13,022.0	9,883.8	1,250.7	1,171.6	15.798	CC, ES
Pennzoil Federal Com 1 - Wellbore #1 - Wellbore #1	13,400.0	9,892.5	1,306.6	1,220.9	15.256	SF
Sun - Pennzoil A Fed 1 - Wellbore #1 - 0 Az	12,920.7	9,902.7	134.1	56.6	1.729	CC, ES, SF
Sun - Pennzoil A Fed 1 - Wellbore #2 - 180 Az	13,220.6	9,911.1	134.1	51.5	1.623	CC, ES, SF
Sun - Pennzoil A Fed 1 - Wellbore #3 - 90 Az	13,070.7	9,906.7	15.8	-64.2	0.197	Level 1, CC, ES, SF
Sun - Pennzoil A Fed 1 - Wellbore #4 - 270 Az	13,070.6	9,904.4	284.0	204.1	3.553	CC, ES
Sun - Pennzoil A Fed 1 - Wellbore #4 - 270 Az	13,100.0	9,905.2	285.5	205.1	3.550	SF

Offset Design EK 29 Federal Com - EK 29 BS2 Fed Com 2H - Wellbore #1 - Plan #3 09Jan17 kjs													
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning		Offset Site Error: 0.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Offset Well Error: 0.0 usft	
0.0	0.0	0.0	0.0	0.0	0.0	-50.29	25.0	-30.1	39.2	39.0	0.18	217.755	
100.0	100.0	100.0	100.0	0.1	0.1	-50.29	25.0	-30.1	39.2	38.5	0.63	62.216	
200.0	200.0	200.0	200.0	0.3	0.3	-50.29	25.0	-30.1	39.2	38.1	1.08	36.293	
300.0	300.0	300.0	300.0	0.5	0.5	-50.29	25.0	-30.1	39.2	37.6	1.53	25.618	
400.0	400.0	400.0	400.0	0.8	0.8	-50.29	25.0	-30.1	39.2	37.2	1.98	19.796	
500.0	500.0	500.0	500.0	1.0	1.0	-50.29	25.0	-30.1	39.2	36.7	2.43	16.130	
600.0	600.0	600.0	600.0	1.2	1.2	-50.29	25.0	-30.1	39.2	36.3	2.88	13.610	
700.0	700.0	700.0	700.0	1.4	1.4	-50.29	25.0	-30.1	39.2	35.8	3.33	11.771	
800.0	800.0	800.0	800.0	1.7	1.7	-50.29	25.0	-30.1	39.2	35.4	3.78	10.369	
900.0	900.0	900.0	900.0	1.9	1.9	-50.29	25.0	-30.1	39.2	34.9	4.23	9.266	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-50.29	25.0	-30.1	39.2	34.5	4.68	8.375	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-50.29	25.0	-30.1	39.2	34.0	5.12	7.641	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-50.29	25.0	-30.1	39.2	33.6	5.57	7.024	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-50.29	25.0	-30.1	39.2	33.1	6.02	6.500	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-50.29	25.0	-30.1	39.2				

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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 2H - Wellbore #1 - Plan #3 09Jan17 kjs														Offset Site Error:	0.0 usft
Survey Program: 0-MWD														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	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 +N/-S (usft)	Centre +E/-W (usft)							
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	-50.29	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	-50.29	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	-50.29	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	-50.29	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	-50.29	25.0	-30.1	39.2	30.9	8.27	4.734 CC, ES			
2,000.0	2,000.0	1,999.0	1,999.0	4.4	4.4	-77.61	25.5	-31.3	40.1	31.4	8.71	4.604 SF			
2,100.0	2,099.9	2,097.8	2,097.7	4.6	4.6	-83.89	27.0	-34.8	43.3	34.1	9.14	4.737			
2,200.0	2,199.7	2,196.4	2,196.2	4.8	4.8	-92.35	29.4	-40.7	49.5	39.9	9.57	5.170			
2,300.0	2,299.3	2,295.7	2,295.2	5.0	5.0	-101.30	32.1	-47.2	57.7	47.7	10.00	5.772			
2,400.0	2,398.6	2,394.8	2,394.0	5.3	5.2	-109.88	34.9	-53.8	67.9	57.4	10.44	6.502			
2,500.0	2,497.8	2,493.7	2,492.7	5.5	5.4	-116.65	37.6	-60.3	79.5	68.6	10.88	7.302			
2,600.0	2,597.1	2,592.7	2,591.4	5.8	5.7	-124.81	40.3	-66.8	91.9	80.6	11.33	8.117			
2,700.0	2,696.4	2,691.6	2,690.0	6.0	5.9	-140.07	43.0	-73.3	105.8	94.1	11.73	9.022			
2,800.0	2,795.8	2,790.4	2,788.6	6.2	6.1	-154.75	45.7	-79.8	121.0	108.9	12.13	9.979			
2,900.0	2,895.2	2,889.0	2,887.0	6.4	6.4	-168.05	48.5	-86.4	137.5	124.9	12.53	10.971			
3,000.0	2,994.5	2,987.4	2,985.1	6.6	6.6	-179.08	51.2	-92.8	155.1	142.1	12.92	11.999			
3,100.0	3,093.7	3,085.7	3,083.1	6.9	6.8	-178.20	53.9	-99.3	173.4	160.0	13.34	12.993			
3,200.0	3,193.0	3,183.9	3,181.1	7.1	7.1	-177.21	56.6	-105.8	191.7	178.0	13.78	13.916			
3,300.0	3,292.2	3,282.2	3,279.1	7.4	7.3	-176.40	59.3	-112.3	210.2	195.9	14.22	14.783			
3,400.0	3,391.4	3,380.4	3,377.1	7.6	7.5	-175.71	62.0	-118.8	228.6	214.0	14.66	15.599			
3,500.0	3,490.7	3,478.7	3,475.1	7.9	7.8	-175.13	64.7	-125.2	247.1	232.0	15.10	16.367			
3,600.0	3,589.9	3,576.9	3,573.1	8.2	8.0	-174.63	67.4	-131.7	265.6	250.1	15.54	17.091			
3,700.0	3,689.2	3,675.2	3,671.1	8.5	8.3	-174.19	70.1	-138.2	284.1	268.1	15.98	17.774			
3,800.0	3,788.4	3,773.4	3,769.1	8.7	8.5	-173.81	72.8	-144.7	302.6	286.2	16.43	18.419			
3,900.0	3,887.6	3,871.7	3,867.1	9.0	8.7	-173.47	75.5	-151.2	321.2	304.3	16.88	19.029			
4,000.0	3,986.9	3,969.9	3,965.1	9.3	9.0	-173.17	78.2	-157.6	339.7	322.4	17.33	19.607			
4,100.0	4,086.1	4,068.2	4,063.1	9.6	9.2	-172.90	80.9	-164.1	358.3	340.5	17.78	20.155			
4,200.0	4,185.4	4,166.4	4,161.1	9.9	9.5	-172.65	83.6	-170.6	376.9	358.6	18.23	20.675			
4,300.0	4,284.6	4,264.7	4,259.1	10.1	9.7	-172.43	86.3	-177.1	395.4	376.7	18.68	21.169			
4,400.0	4,383.9	4,362.9	4,357.1	10.4	10.0	-172.23	89.0	-183.6	414.0	394.9	19.13	21.639			
4,500.0	4,483.1	4,461.2	4,455.1	10.7	10.2	-172.05	91.7	-190.0	432.6	413.0	19.59	22.087			
4,600.0	4,582.3	4,559.4	4,553.1	11.0	10.4	-171.88	94.4	-196.5	451.2	431.1	20.04	22.514			
4,700.0	4,681.6	4,657.7	4,651.1	11.3	10.7	-171.72	97.1	-203.0	469.8	449.3	20.50	22.921			
4,800.0	4,780.8	4,755.9	4,749.1	11.6	10.9	-171.58	99.8	-209.5	488.4	467.4	20.95	23.310			
4,900.0	4,880.1	4,854.2	4,847.1	11.9	11.2	-171.44	102.5	-216.0	506.9	485.5	21.41	23.681			
5,000.0	4,979.3	4,952.4	4,945.1	12.2	11.4	-171.32	105.2	-222.4	525.5	503.7	21.86	24.037			
5,100.0	5,078.5	5,050.7	5,043.1	12.5	11.7	-171.21	107.9	-228.9	544.1	521.8	22.32	24.377			
5,200.0	5,177.8	5,148.9	5,141.1	12.8	11.9	-171.10	110.6	-235.4	562.7	540.0	22.78	24.703			
5,300.0	5,277.0	5,247.2	5,239.1	13.1	12.2	-171.00	113.3	-241.9	581.4	558.1	23.24	25.016			
5,400.0	5,376.3	5,345.4	5,337.1	13.4	12.4	-170.90	116.0	-248.4	600.0	576.3	23.70	25.317			
5,500.0	5,475.5	5,443.7	5,435.1	13.7	12.7	-170.81	118.7	-254.8	618.6	594.4	24.16	25.605			
5,600.0	5,574.7	5,541.9	5,533.1	14.0	12.9	-170.73	121.4	-261.3	637.2	612.6	24.62	25.883			
5,700.0	5,674.0	5,640.2	5,631.1	14.3	13.2	-170.65	124.1	-267.8	655.8	630.7	25.08	26.149			
5,800.0	5,773.2	5,738.4	5,729.1	14.6	13.4	-170.58	126.8	-274.3	674.4	648.9	25.54	26.406			
5,900.0	5,872.5	5,836.7	5,827.1	14.9	13.7	-170.51	129.5	-280.8	693.0	667.0	26.00	26.653			
6,000.0	5,971.7	5,934.9	5,925.1	15.2	13.9	-170.44	132.2	-287.2	711.6	685.2	26.46	26.892			
6,100.0	6,070.9	6,033.2	6,023.1	15.5	14.2	-170.38	134.9	-293.7	730.2	703.3	26.92	27.122			
6,200.0	6,170.2	6,131.4	6,121.1	15.8	14.4	-170.32	137.6	-300.2	748.8	721.5	27.39	27.343			
6,300.0	6,269.4	6,229.7	6,219.1	16.1	14.7	-170.26	140.3	-306.7	767.5	739.6	27.85	27.558			
6,400.0	6,368.7	6,327.9	6,317.1	16.4	14.9	-170.20	143.0	-313.2	786.1	757.8	28.31	27.764			
6,500.0	6,467.9	6,426.2	6,415.1	16.7	15.2	-170.15	145.7	-319.6	804.7	775.9	28.78	27.964			
6,600.0	6,567.1	6,524.4	6,513.1	17.0	15.4	-170.10	148.4	-326.1	823.3	794.1	29.24	28.158			

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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 2H - Wellbore #1 - Plan #3 09Jan17 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			
6,700.0	6,666.4	6,622.7	6,611.1	17.3	15.7	-170.05	151.1	-332.6	841.9	812.2	29.70	28.345			
6,800.0	6,765.6	6,720.9	6,709.1	17.7	15.9	-170.01	153.8	-339.1	860.5	830.4	30.17	28.526			
6,900.0	6,864.9	6,819.2	6,807.0	18.0	16.2	-169.97	156.5	-345.6	879.2	848.5	30.63	28.701			
7,000.0	6,964.1	6,917.4	6,905.0	18.3	16.4	-169.92	159.2	-352.1	897.8	866.7	31.10	28.871			
7,100.0	7,063.3	7,015.7	7,003.0	18.6	16.7	-169.88	161.9	-358.5	916.4	884.8	31.56	29.036			
7,200.0	7,162.6	7,113.9	7,101.0	18.9	16.9	-169.85	164.6	-365.0	935.0	903.0	32.03	29.196			
7,300.0	7,261.8	7,212.2	7,199.0	19.2	17.2	-169.81	167.3	-371.5	953.6	921.1	32.49	29.351			
7,400.0	7,361.1	7,310.4	7,297.0	19.5	17.4	-169.77	170.0	-378.0	972.3	939.3	32.96	29.501			
7,500.0	7,460.3	7,408.7	7,395.0	19.8	17.7	-169.74	172.7	-384.5	990.9	957.5	33.42	29.647			
7,600.0	7,559.5	7,506.9	7,493.0	20.1	17.9	-169.71	175.4	-390.9	1,009.5	975.6	33.89	29.789			
7,700.0	7,658.8	7,605.2	7,591.0	20.4	18.2	-169.67	178.1	-397.4	1,028.1	993.8	34.35	29.927			
7,800.0	7,758.0	7,703.4	7,689.0	20.7	18.4	-169.64	180.8	-403.9	1,046.7	1,011.9	34.82	30.061			
7,900.0	7,857.3	7,801.7	7,787.0	21.0	18.7	-169.61	183.5	-410.4	1,065.4	1,030.1	35.29	30.191			
8,000.0	7,956.5	7,899.9	7,885.0	21.4	18.9	-169.59	186.2	-416.9	1,084.0	1,048.2	35.75	30.318			
8,100.0	8,055.7	7,998.2	7,983.0	21.7	19.2	-169.56	188.9	-423.3	1,102.6	1,066.4	36.22	30.441			
8,200.0	8,155.0	8,096.4	8,081.0	22.0	19.4	-169.53	191.6	-429.8	1,121.2	1,084.5	36.69	30.561			
8,300.0	8,254.2	8,194.6	8,179.0	22.3	19.7	-169.51	194.3	-436.3	1,139.9	1,102.7	37.16	30.678			
8,400.0	8,353.5	8,292.9	8,277.0	22.6	19.9	-169.48	197.0	-442.8	1,158.5	1,120.9	37.62	30.792			
8,500.0	8,452.7	8,391.1	8,375.0	22.9	20.2	-169.46	199.7	-449.3	1,177.1	1,139.0	38.09	30.903			
8,600.0	8,552.0	8,489.4	8,473.0	23.2	20.4	-169.43	202.4	-455.7	1,195.7	1,157.2	38.56	31.011			
8,700.0	8,651.2	8,587.6	8,571.0	23.5	20.7	-169.41	205.1	-462.2	1,214.4	1,175.3	39.03	31.116			
8,800.0	8,750.4	8,685.9	8,669.0	23.8	20.9	-169.39	207.8	-468.7	1,233.0	1,193.5	39.49	31.219			
8,900.0	8,849.7	8,784.1	8,767.0	24.2	21.2	-169.37	210.5	-475.2	1,251.6	1,211.6	39.96	31.319			
9,000.0	8,948.9	8,882.4	8,865.0	24.5	21.5	-169.35	213.2	-481.7	1,270.2	1,229.8	40.43	31.417			
9,100.0	9,048.2	8,980.6	8,963.0	24.8	21.7	-169.33	215.9	-488.1	1,288.9	1,248.0	40.90	31.513			
9,200.0	9,147.4	9,078.9	9,061.0	25.1	22.0	-169.31	218.6	-494.6	1,307.5	1,266.1	41.37	31.606			
9,300.0	9,246.6	9,177.1	9,159.0	25.4	22.2	-169.29	221.3	-501.1	1,326.1	1,284.3	41.84	31.697			
9,400.0	9,345.9	9,275.4	9,257.0	25.7	22.5	-169.27	224.0	-507.6	1,344.7	1,302.4	42.31	31.786			
9,500.0	9,445.1	9,373.6	9,355.0	26.0	22.7	-172.17	226.7	-514.1	1,363.4	1,320.6	42.77	31.874			
9,600.0	9,543.8	9,471.7	9,452.8	26.3	23.0	120.84	229.2	-520.5	1,381.9	1,338.8	43.17	32.012			
9,700.0	9,638.5	9,574.6	9,554.6	26.5	23.2	104.32	217.7	-527.2	1,399.9	1,356.4	43.48	32.193			
9,800.0	9,725.1	9,662.4	9,656.1	26.6	23.3	97.80	182.7	-533.9	1,416.5	1,372.8	43.73	32.395			
9,900.0	9,799.8	9,735.5	9,751.3	26.8	23.4	94.25	122.4	-540.0	1,430.9	1,387.0	43.93	32.575			
10,000.0	9,859.4	9,793.7	9,832.8	26.9	23.5	92.10	37.3	-545.3	1,442.3	1,398.2	44.16	32.660			
10,100.0	9,901.1	10,036.2	9,892.6	27.1	23.7	90.80	-69.1	-549.0	1,450.2	1,405.7	44.55	32.552			
10,200.0	9,923.3	10,161.2	9,923.9	27.3	24.0	90.14	-189.8	-550.9	1,454.1	1,408.9	45.19	32.180			
10,300.0	9,928.2	10,270.4	9,929.1	27.6	24.4	90.04	-298.8	-551.0	1,454.4	1,408.4	46.02	31.604			
10,400.0	9,930.9	10,370.4	9,931.9	28.0	24.9	90.04	-398.8	-551.0	1,454.4	1,407.4	46.99	30.954			
10,500.0	9,933.7	10,470.4	9,934.6	28.5	25.5	90.04	-498.7	-551.0	1,454.4	1,406.2	48.21	30.168			
10,600.0	9,936.5	10,570.4	9,937.4	29.1	26.3	90.04	-598.7	-551.0	1,454.4	1,404.7	49.67	29.279			
10,700.0	9,939.3	10,670.4	9,940.2	29.7	27.1	90.04	-698.7	-551.0	1,454.4	1,403.1	51.36	28.320			
10,800.0	9,942.1	10,770.4	9,943.0	30.5	28.1	90.04	-798.6	-551.0	1,454.4	1,401.2	53.24	27.319			
10,900.0	9,944.9	10,870.4	9,945.8	31.3	29.1	90.04	-898.6	-551.0	1,454.4	1,399.1	55.30	26.301			
11,000.0	9,947.7	10,970.4	9,948.6	32.2	30.3	90.04	-998.5	-551.0	1,454.4	1,396.9	57.52	25.285			
11,100.0	9,950.5	11,070.4	9,951.4	33.2	31.4	90.04	-1,098.5	-551.0	1,454.4	1,394.5	59.88	24.288			
11,200.0	9,953.3	11,170.4	9,954.2	34.3	32.7	90.04	-1,198.5	-551.0	1,454.4	1,392.0	62.37	23.319			
11,300.0	9,956.1	11,270.4	9,957.0	35.4	34.0	90.04	-1,298.4	-551.0	1,454.4	1,389.4	64.97	22.386			
11,400.0	9,958.9	11,370.4	9,959.8	36.6	35.3	90.04	-1,398.4	-551.0	1,454.4	1,386.8	67.67	21.494			
11,500.0	9,961.7	11,470.4	9,962.6	37.8	36.7	90.04	-1,498.3	-551.0	1,454.4	1,384.0	70.45	20.644			
11,600.0	9,964.5	11,570.4	9,965.4	39.1	38.1	90.04	-1,598.3	-551.0	1,454.4	1,381.1	73.31	19.838			
11,700.0	9,967.3	11,670.4	9,968.2	40.4	39.6	90.04	-1,698.3	-551.0	1,454.4	1,378.2	76.24	19.076			
11,800.0	9,970.1	11,770.4	9,970.9	41.8	41.1	90.03	-1,798.2	-551.0	1,454.4	1,375.2	79.24	18.355			

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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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 2H - Wellbore #1 - Plan #3 09Jan17 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)			
11,900.0	9,972.9	11,870.4	9,973.7	43.2	42.6	90.03	-1,898.2	-551.0	1,454.4	1,372.1	82.28	17.676	
12,000.0	9,975.7	11,970.4	9,976.5	44.6	44.2	90.03	-1,998.1	-551.0	1,454.4	1,369.0	85.38	17.035	
12,100.0	9,978.4	12,070.4	9,979.3	46.1	45.7	90.03	-2,098.1	-551.0	1,454.4	1,365.9	88.51	16.431	
12,200.0	9,981.2	12,170.4	9,982.1	47.5	47.3	90.03	-2,198.1	-551.0	1,454.4	1,362.7	91.69	15.862	
12,300.0	9,984.0	12,270.4	9,984.9	49.1	48.9	90.03	-2,298.0	-551.0	1,454.4	1,359.5	94.90	15.325	
12,400.0	9,986.8	12,370.4	9,987.7	50.6	50.5	90.03	-2,398.0	-551.0	1,454.4	1,356.3	98.15	14.819	
12,500.0	9,989.6	12,470.4	9,990.5	52.1	52.1	90.03	-2,498.0	-551.0	1,454.4	1,353.0	101.42	14.341	
12,600.0	9,992.4	12,570.4	9,993.3	53.7	53.8	90.03	-2,597.9	-551.0	1,454.4	1,349.7	104.72	13.889	
12,700.0	9,995.2	12,670.4	9,996.1	55.3	55.4	90.03	-2,697.9	-551.0	1,454.4	1,346.4	108.04	13.462	
12,800.0	9,998.0	12,770.4	9,998.9	56.9	57.1	90.03	-2,797.8	-551.0	1,454.4	1,343.0	111.38	13.058	
12,900.0	10,000.8	12,870.4	10,001.7	58.5	58.8	90.03	-2,897.8	-551.0	1,454.4	1,339.7	114.74	12.675	
13,000.0	10,003.6	12,970.4	10,004.5	60.1	60.5	90.03	-2,997.8	-551.0	1,454.4	1,336.3	118.13	12.313	
13,100.0	10,006.4	13,070.4	10,007.2	61.7	62.1	90.03	-3,097.7	-551.0	1,454.4	1,332.9	121.52	11.968	
13,200.0	10,009.2	13,170.4	10,010.0	63.4	63.8	90.03	-3,197.7	-551.0	1,454.4	1,329.5	124.93	11.642	
13,300.0	10,012.0	13,270.4	10,012.8	65.0	65.5	90.03	-3,297.6	-551.0	1,454.4	1,326.1	128.36	11.331	
13,400.0	10,014.8	13,370.4	10,015.6	66.7	67.3	90.03	-3,397.6	-551.0	1,454.4	1,322.6	131.80	11.035	
13,500.0	10,017.6	13,470.4	10,018.4	68.4	69.0	90.03	-3,497.6	-551.0	1,454.4	1,319.2	135.25	10.754	
13,600.0	10,020.4	13,570.4	10,021.2	70.1	70.7	90.03	-3,597.5	-551.0	1,454.4	1,315.7	138.71	10.485	
13,700.0	10,023.2	13,670.4	10,024.0	71.8	72.4	90.03	-3,697.5	-551.0	1,454.4	1,312.2	142.18	10.229	
13,800.0	10,026.0	13,770.4	10,026.8	73.5	74.2	90.03	-3,797.4	-551.0	1,454.4	1,308.8	145.66	9.985	
13,900.0	10,028.8	13,870.4	10,029.6	75.2	75.9	90.03	-3,897.4	-551.0	1,454.4	1,305.3	149.15	9.751	
14,000.0	10,031.6	13,970.4	10,032.4	76.9	77.7	90.03	-3,997.4	-551.0	1,454.4	1,301.8	152.65	9.528	
14,100.0	10,034.4	14,070.4	10,035.2	78.6	79.4	90.03	-4,097.3	-551.0	1,454.4	1,298.3	156.15	9.314	
14,200.0	10,037.2	14,170.4	10,038.0	80.3	81.2	90.03	-4,197.3	-551.0	1,454.4	1,294.8	159.66	9.109	
14,300.0	10,040.0	14,270.4	10,040.7	82.0	82.9	90.03	-4,297.3	-551.0	1,454.4	1,291.2	163.18	8.913	
14,400.0	10,042.8	14,370.4	10,043.5	83.8	84.7	90.03	-4,397.2	-551.0	1,454.4	1,287.7	166.71	8.724	
14,500.0	10,045.6	14,470.4	10,046.3	85.5	86.4	90.03	-4,497.2	-551.0	1,454.4	1,284.2	170.24	8.543	
14,600.0	10,048.4	14,570.4	10,049.1	87.2	88.2	90.03	-4,597.1	-551.0	1,454.4	1,280.6	173.78	8.370	
14,700.0	10,051.2	14,670.4	10,051.9	89.0	90.0	90.03	-4,697.1	-551.0	1,454.4	1,277.1	177.32	8.202	
14,800.0	10,054.0	14,770.4	10,054.7	90.4	91.7	90.03	-4,797.1	-551.0	1,454.4	1,273.8	180.58	8.054	
14,807.9	10,054.2	14,778.3	10,054.9	90.6	91.9	90.03	-4,804.9	-551.0	1,454.4	1,273.6	180.83	8.043	
14,820.9	10,054.6	14,790.0	10,055.2	90.7	92.1	90.03	-4,816.6	-551.0	1,454.4	1,273.2	181.23	8.025	



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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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		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	
0.0	0.0	0.0	0.0	0.0	0.0	90.10	-0.2	129.9	129.9				
100.0	100.0	100.0	100.0	0.1	0.1	90.10	-0.2	129.9	129.9	129.7	0.18	722.427	
200.0	200.0	200.0	200.0	0.3	0.3	90.10	-0.2	129.9	129.9	129.3	0.63	206.408	
300.0	300.0	300.0	300.0	0.5	0.5	90.10	-0.2	129.9	129.9	128.8	1.08	120.405	
400.0	400.0	400.0	400.0	0.8	0.8	90.10	-0.2	129.9	129.9	128.4	1.53	84.992	
500.0	500.0	500.0	500.0	1.0	1.0	90.10	-0.2	129.9	129.9	127.9	1.98	65.675	
600.0	600.0	600.0	600.0	1.2	1.2	90.10	-0.2	129.9	129.9	127.5	2.43	53.513	
700.0	700.0	700.0	700.0	1.4	1.4	90.10	-0.2	129.9	129.9	127.0	2.88	45.152	
800.0	800.0	800.0	800.0	1.7	1.7	90.10	-0.2	129.9	129.9	126.6	3.33	39.505	
900.0	900.0	900.0	900.0	1.9	1.9	90.10	-0.2	129.9	129.9	126.1	3.78	34.401	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.10	-0.2	129.9	129.9	125.7	4.23	30.742	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	90.10	-0.2	129.9	129.9	125.2	4.68	27.786	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.10	-0.2	129.9	129.9	124.8	5.12	25.348	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.10	-0.2	129.9	129.9	124.3	5.57	23.304	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.10	-0.2	129.9	129.9	123.9	6.02	21.565	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	90.10	-0.2	129.9	129.9	123.4	6.47	20.067	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	90.10	-0.2	129.9	129.9	123.0	6.92	18.764	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	90.10	-0.2	129.9	129.9	122.5	7.37	17.620	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	90.10	-0.2	129.9	129.9	122.1	7.82	16.608	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	90.10	-0.2	129.9	129.9	121.6	8.27	15.705	
2,000.0	2,000.0	1,996.8	1,996.8	4.4	4.3	65.45	0.1	131.1	130.6	121.9	8.70	15.007	
2,100.0	2,099.9	2,093.6	2,093.5	4.6	4.5	66.49	1.1	134.6	132.6	123.5	9.12	14.543	
2,200.0	2,199.7	2,191.4	2,191.1	4.8	4.8	68.19	2.6	140.5	136.0	126.4	9.54	14.250	
2,300.0	2,299.3	2,291.1	2,290.6	5.0	5.0	70.77	4.4	146.9	139.1	129.1	9.98	13.941	
2,400.0	2,398.6	2,390.7	2,390.0	5.3	5.2	74.22	6.1	153.3	141.7	131.3	10.42	13.601	
2,500.0	2,497.8	2,490.3	2,489.3	5.5	5.4	77.80	7.9	159.7	144.8	133.9	10.88	13.307	
2,600.0	2,597.1	2,589.8	2,588.7	5.8	5.6	78.04	9.6	166.1	148.3	136.9	11.34	13.074	
2,700.0	2,596.4	2,589.5	2,588.1	6.0	5.9	68.64	11.4	172.5	150.6	138.8	11.77	12.800	
2,800.0	2,795.8	2,789.3	2,787.7	6.2	6.1	57.45	13.1	179.0	151.1	138.9	12.19	12.389	
2,900.0	2,895.2	2,889.2	2,887.4	6.4	6.3	45.92	14.9	185.4	149.5	136.8	12.62	11.844	
3,000.0	2,894.5	2,889.1	2,887.0	6.6	6.6	35.40	16.6	191.8	145.7	132.6	13.04	11.172	
3,100.0	3,093.7	3,088.9	3,086.6	6.9	6.8	36.20	18.4	198.3	140.7	127.2	13.49	10.430	
3,200.0	3,193.0	3,188.7	3,186.2	7.1	7.0	37.42	20.1	204.7	135.8	121.9	13.96	9.728	
3,300.0	3,292.2	3,288.6	3,285.9	7.4	7.3	38.73	21.8	211.1	131.0	116.6	14.44	9.073	
3,400.0	3,391.4	3,388.4	3,385.5	7.6	7.5	40.14	23.6	217.6	126.3	111.4	14.93	8.461	
3,500.0	3,490.7	3,488.3	3,485.1	7.9	7.7	41.66	25.3	224.0	121.6	106.2	15.42	7.889	
3,600.0	3,589.9	3,588.1	3,584.7	8.2	8.0	43.29	27.1	230.4	117.1	101.1	15.91	7.356	
3,700.0	3,689.2	3,687.9	3,684.3	8.5	8.2	45.06	28.8	236.9	112.6	96.2	16.42	6.857	
3,800.0	3,788.4	3,787.8	3,783.9	8.7	8.5	46.98	30.6	243.3	108.2	91.3	16.93	6.393	
3,900.0	3,887.6	3,887.6	3,883.6	9.0	8.7	49.05	32.3	249.7	104.0	86.6	17.45	5.960	
4,000.0	3,986.9	3,987.4	3,983.2	9.3	8.9	51.29	34.1	256.2	99.9	82.0	17.98	5.558	
4,100.0	4,086.1	4,087.3	4,082.8	9.6	9.2	53.72	35.8	262.6	96.0	77.5	18.52	5.185	
4,200.0	4,185.4	4,187.1	4,182.4	9.9	9.4	56.35	37.6	269.0	92.3	73.3	19.07	4.842	
4,300.0	4,284.6	4,287.0	4,282.0	10.1	9.7	59.19	39.3	275.5	88.8	69.2	19.62	4.526	
4,400.0	4,383.9	4,386.8	4,381.6	10.4	9.9	62.26	41.1	281.9	85.5	65.4	20.19	4.237	
4,500.0	4,483.1	4,486.6	4,481.2	10.7	10.2	65.56	42.8	288.3	82.5	61.8	20.76	3.976	
4,600.0	4,582.3	4,586.5	4,580.9	11.0	10.4	69.10	44.6	294.7	79.8	58.5	21.33	3.742	
4,700.0	4,681.6	4,686.3	4,680.5	11.3	10.7	72.86	46.3	301.2	77.4	55.5	21.90	3.536	
4,800.0	4,780.8	4,786.1	4,780.1	11.6	10.9	76.86	48.1	307.6	75.4	52.9	22.47	3.355	
4,900.0	4,880.1	4,886.0	4,879.7	11.9	11.1	81.04	49.8	314.0	73.8	50.7	23.03	3.202	
5,000.0	4,979.3	4,985.8	4,979.3	12.2	11.4	85.40	51.6	320.5	72.5	48.9	23.58	3.075	
5,100.0	5,078.5	5,085.7	5,078.9	12.5	11.6	89.88	53.3	326.9	71.7	47.6	24.11	2.974	

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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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		Minimum Separation		Separation Factor		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	5,177.8	5,185.5	5,178.5	12.8	11.9	94.43	55.0	333.3	71.4	46.7	24.62	2.899		
5,227.6	5,205.2	5,213.1	5,206.1	12.9	12.0	95.69	55.5	335.1	71.4	46.6	24.76	2.882 CC		
5,300.0	5,277.0	5,285.3	5,278.2	13.1	12.1	98.99	56.8	339.8	71.5	46.4	25.11	2.846 ES		
5,400.0	5,376.3	5,385.2	5,377.8	13.4	12.4	103.52	58.5	346.2	72.0	46.5	25.57	2.817		
5,500.0	5,475.5	5,485.0	5,477.4	13.7	12.6	107.95	60.3	352.6	73.0	47.0	26.01	2.808 SF		
5,600.0	5,574.7	5,584.8	5,577.0	14.0	12.9	112.23	62.0	359.1	74.4	48.0	26.42	2.817		
5,700.0	5,674.0	5,684.7	5,676.6	14.3	13.1	116.34	63.8	365.5	76.3	49.4	26.82	2.844		
5,800.0	5,773.2	5,784.5	5,776.2	14.6	13.4	120.23	65.5	371.9	78.5	51.3	27.21	2.884		
5,900.0	5,872.5	5,884.4	5,875.8	14.9	13.6	123.90	67.3	378.4	81.0	53.4	27.58	2.937		
6,000.0	5,971.7	5,984.2	5,975.5	15.2	13.9	127.33	69.0	384.8	83.8	55.9	27.95	3.000		
6,100.0	6,070.9	6,084.0	6,075.1	15.5	14.1	130.53	70.8	391.2	87.0	58.7	28.32	3.071		
6,200.0	6,170.2	6,183.9	6,174.7	15.8	14.4	133.49	72.5	397.7	90.4	61.7	28.69	3.150		
6,300.0	6,269.4	6,283.7	6,274.3	16.1	14.6	136.24	74.3	404.1	94.0	64.9	29.06	3.233		
6,400.0	6,368.7	6,383.5	6,373.9	16.4	14.9	138.77	76.0	410.5	97.8	68.3	29.43	3.321		
6,500.0	6,467.9	6,483.4	6,473.5	16.7	15.1	141.12	77.8	416.9	101.7	71.9	29.81	3.413		
6,600.0	6,567.1	6,583.2	6,573.1	17.0	15.4	143.28	79.5	423.4	105.9	75.7	30.20	3.506		
6,700.0	6,666.4	6,683.1	6,672.8	17.3	15.6	145.28	81.3	429.8	110.2	79.6	30.59	3.601		
6,800.0	6,765.6	6,782.9	6,772.4	17.7	15.9	147.13	83.0	436.2	114.6	83.6	30.99	3.698		
6,900.0	6,864.9	6,882.7	6,872.0	18.0	16.1	148.84	84.8	442.7	119.1	87.7	31.39	3.794		
7,000.0	6,964.1	6,982.6	6,971.6	18.3	16.4	150.42	86.5	449.1	123.7	91.9	31.79	3.891		
7,100.0	7,063.3	7,082.4	7,071.2	18.6	16.6	151.89	88.2	455.5	128.4	96.2	32.20	3.987		
7,200.0	7,162.6	7,182.2	7,170.8	18.9	16.9	153.25	90.0	462.0	133.2	100.6	32.62	4.083		
7,300.0	7,261.8	7,282.1	7,270.4	19.2	17.1	154.52	91.7	468.4	138.0	105.0	33.04	4.178		
7,400.0	7,361.1	7,381.9	7,370.1	19.5	17.4	155.70	93.5	474.8	142.9	109.5	33.46	4.272		
7,500.0	7,460.3	7,481.7	7,469.7	19.8	17.6	156.81	95.2	481.3	147.9	114.0	33.89	4.364		
7,600.0	7,559.5	7,581.6	7,569.3	20.1	17.9	157.84	97.0	487.7	152.9	118.6	34.32	4.456		
7,700.0	7,658.8	7,681.4	7,668.9	20.4	18.1	158.80	98.7	494.1	158.0	123.2	34.75	4.546		
7,800.0	7,758.0	7,781.3	7,768.5	20.7	18.4	159.71	100.5	500.6	163.1	127.9	35.19	4.635		
7,900.0	7,857.3	7,881.1	7,868.1	21.0	18.6	160.56	102.2	507.0	168.2	132.6	35.62	4.723		
8,000.0	7,956.5	7,980.9	7,967.8	21.4	18.9	161.36	104.0	513.4	173.4	137.4	36.06	4.809		
8,100.0	8,055.7	8,080.8	8,067.4	21.7	19.1	162.11	105.7	519.9	178.6	142.1	36.51	4.893		
8,200.0	8,155.0	8,180.6	8,167.0	22.0	19.4	162.82	107.5	526.3	183.9	146.9	36.95	4.976		
8,300.0	8,254.2	8,280.4	8,266.6	22.3	19.6	163.50	109.2	532.7	189.1	151.7	37.39	5.058		
8,400.0	8,353.5	8,380.3	8,366.2	22.6	19.9	164.13	111.0	539.1	194.4	156.6	37.84	5.138		
8,500.0	8,452.7	8,480.1	8,465.8	22.9	20.1	164.73	112.7	545.6	199.7	161.4	38.29	5.217		
8,600.0	8,552.0	8,580.0	8,565.4	23.2	20.4	165.30	114.5	552.0	205.1	166.3	38.74	5.294		
8,700.0	8,651.2	8,679.8	8,665.1	23.5	20.6	165.84	116.2	558.4	210.4	171.2	39.19	5.369		
8,800.0	8,750.4	8,779.6	8,764.7	23.8	20.9	166.35	118.0	564.9	215.8	176.2	39.64	5.444		
8,900.0	8,849.7	8,879.5	8,864.3	24.2	21.2	166.84	119.7	571.3	221.2	181.1	40.10	5.517		
9,000.0	8,948.9	8,979.3	8,963.9	24.5	21.4	167.31	121.4	577.7	226.6	186.0	40.55	5.588		
9,100.0	9,048.2	9,079.1	9,063.5	24.8	21.7	167.75	123.2	584.2	232.0	191.0	41.00	5.658		
9,200.0	9,147.4	9,179.0	9,163.1	25.1	21.9	168.18	124.9	590.6	237.4	196.0	41.46	5.727		
9,300.0	9,246.6	9,278.8	9,262.7	25.4	22.2	168.58	126.7	597.0	242.9	201.0	41.92	5.794		
9,400.0	9,345.9	9,378.7	9,362.4	25.7	22.4	168.97	128.4	603.5	248.3	206.0	42.37	5.861		
9,500.0	9,445.1	9,478.5	9,462.0	26.0	22.7	169.47	130.2	609.9	253.8	211.0	42.84	5.925		
9,600.0	9,543.8	9,577.6	9,560.8	26.3	22.9	169.92	131.9	616.3	255.5	212.3	43.21	5.913		
9,700.0	9,638.5	9,672.3	9,655.4	26.5	23.2	170.32	133.6	622.4	258.8	209.3	43.50	5.810		
9,756.3	9,686.5	9,722.2	9,705.1	26.6	23.3	170.67	134.4	625.6	251.8	208.0	43.75	5.755		
9,800.0	9,725.1	9,758.6	9,741.4	26.6	23.4	171.00	135.1	627.9	252.7	208.8	43.94	5.751		
9,900.0	9,799.8	9,832.5	9,815.2	26.8	23.6	171.29	136.4	632.7	265.6	221.4	44.12	6.019		
10,000.0	9,859.4	9,891.0	9,873.5	26.9	23.7	171.52	137.4	636.5	299.4	255.5	43.85	6.827		
10,100.0	9,901.1	9,931.4	9,913.8	27.1	23.8	171.71	138.1	639.1	355.2	311.2	43.96	8.079		

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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 Toothface (")	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)						
10,200.0	9,923.3	9,951.9	9,934.4	27.3	23.9	101.30	138.5	640.4	427.8	382.9	44.99	9.510		
10,300.0	9,928.2	9,955.0	9,937.5	27.6	23.9	94.68	138.5	640.6	510.3	464.8	45.54	11.205		
10,400.0	9,930.9	9,956.1	9,938.5	28.0	23.9	94.90	138.5	640.7	598.2	552.2	45.95	13.017		
10,500.0	9,933.7	9,957.1	9,939.5	28.5	23.9	95.13	138.6	640.7	689.4	642.9	46.50	14.826		
10,600.0	9,936.5	9,958.1	9,940.6	29.1	23.9	95.35	138.6	640.8	782.7	735.5	47.16	16.595		
10,700.0	9,939.3	9,959.2	9,941.6	29.7	23.9	95.58	138.6	640.9	877.5	829.5	47.94	18.303		
10,800.0	9,942.1	9,960.2	9,942.6	30.5	23.9	95.81	138.6	640.9	973.3	924.5	48.82	19.936		
10,900.0	9,944.9	9,961.3	9,943.7	31.3	23.9	96.03	138.6	641.0	1,069.9	1,020.1	49.79	21.487		
11,000.0	9,947.7	9,962.3	9,944.7	32.2	23.9	96.26	138.6	641.1	1,167.1	1,116.2	50.85	22.951		
11,100.0	9,950.5	9,963.3	9,945.7	33.2	23.9	96.48	138.7	641.1	1,264.7	1,212.7	51.98	24.331		
11,200.0	9,953.3	9,964.4	9,946.8	34.3	23.9	96.71	138.7	641.2	1,362.7	1,309.5	53.17	25.627		
11,300.0	9,956.1	9,965.4	9,947.8	35.4	23.9	96.93	138.7	641.3	1,460.9	1,406.5	54.42	26.843		
11,400.0	9,958.9	9,966.5	9,948.8	36.6	23.9	97.16	138.7	641.3	1,559.3	1,503.6	55.73	27.982		
11,500.0	9,961.7	9,967.5	9,949.9	37.8	23.9	97.38	138.7	641.4	1,658.0	1,600.9	57.07	29.050		



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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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		Separation Factor		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
0.0	0.0	0.0	0.0	0.0	0.0	81.16	24.9	159.8	161.7				
100.0	100.0	100.0	100.0	0.1	0.1	81.16	24.9	159.8	161.7	161.5	0.18	899.289	
200.0	200.0	200.0	200.0	0.3	0.3	81.16	24.9	159.8	161.7	161.1	0.63	256.940	
300.0	300.0	300.0	300.0	0.5	0.5	81.16	24.9	159.8	161.7	160.6	1.08	149.882	
400.0	400.0	400.0	400.0	0.8	0.8	81.16	24.9	159.8	161.7	160.2	1.53	105.799	
500.0	500.0	500.0	500.0	1.0	1.0	81.16	24.9	159.8	161.7	159.7	1.98	81.754	
600.0	600.0	600.0	600.0	1.2	1.2	81.16	24.9	159.8	161.7	159.3	2.43	66.614	
700.0	700.0	700.0	700.0	1.4	1.4	81.16	24.9	159.8	161.7	158.8	2.88	56.206	
800.0	800.0	800.0	800.0	1.7	1.7	81.16	24.9	159.8	161.7	158.4	3.33	48.610	
900.0	900.0	900.0	900.0	1.9	1.9	81.16	24.9	159.8	161.7	157.9	3.78	42.823	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	81.16	24.9	159.8	161.7	157.5	4.23	38.268	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	81.16	24.9	159.8	161.7	157.0	4.68	34.588	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	81.16	24.9	159.8	161.7	156.6	5.12	31.554	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	81.16	24.9	159.8	161.7	156.1	5.57	29.009	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	81.16	24.9	159.8	161.7	155.7	6.02	26.844	
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	81.16	24.9	159.8	161.7	155.2	6.47	24.980	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	81.16	24.9	159.8	161.7	154.8	6.92	23.358	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	81.16	24.9	159.8	161.7	154.3	7.37	21.934	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	81.16	24.9	159.8	161.7	153.9	7.82	20.673	
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	81.16	24.9	159.8	161.7	153.4	8.27	19.550	
2,000.0	2,000.0	2,004.1	2,004.1	4.4	4.4	56.41	25.1	158.4	159.7	151.0	8.72	18.324	
2,100.0	2,099.9	2,107.9	2,107.8	4.6	4.6	57.21	26.0	154.2	153.7	144.6	9.15	16.803	
2,200.0	2,199.7	2,210.2	2,209.8	4.8	4.8	58.67	27.4	147.5	143.9	134.3	9.58	15.021	
2,300.0	2,299.3	2,309.3	2,308.7	5.0	5.0	61.20	28.9	140.3	132.2	122.2	10.01	13.210	
2,400.0	2,398.6	2,408.2	2,407.3	5.3	5.2	65.24	30.3	133.1	119.7	109.2	10.44	11.460	
2,500.0	2,497.8	2,506.9	2,505.8	5.5	5.4	70.36	31.8	126.0	107.6	96.7	10.90	9.879	
2,600.0	2,597.1	2,605.7	2,604.2	5.8	5.7	73.45	33.3	118.8	96.6	85.2	11.35	8.507	
2,700.0	2,696.4	2,704.4	2,702.7	6.0	5.9	68.17	34.8	111.6	85.4	73.6	11.78	7.246	
2,800.0	2,795.8	2,803.0	2,801.1	6.2	6.1	62.81	36.3	104.4	73.4	61.2	12.21	6.013	
2,900.0	2,895.2	2,901.5	2,899.3	6.4	6.4	59.84	37.7	97.2	61.0	48.4	12.66	4.822	
3,000.0	2,994.5	2,999.8	2,997.3	6.6	6.6	62.73	39.2	90.1	48.9	35.8	13.12	3.730	
3,100.0	3,093.7	3,097.9	3,095.1	6.9	6.8	84.65	40.7	83.0	40.6	27.0	13.61	2.980	
3,150.4	3,143.8	3,147.4	3,144.5	7.0	6.9	98.28	41.4	79.4	39.4	25.6	13.84	2.847	CC, ES, SF
3,200.0	3,193.0	3,196.0	3,193.0	7.1	7.1	111.68	42.1	75.8	40.5	26.5	14.02	2.892	
3,300.0	3,292.2	3,294.1	3,290.8	7.4	7.3	134.00	43.6	68.7	48.8	34.5	14.34	3.405	
3,400.0	3,391.4	3,392.3	3,388.7	7.6	7.5	148.47	45.1	61.5	62.2	47.5	14.70	4.234	
3,500.0	3,490.7	3,490.4	3,486.5	7.9	7.8	157.52	46.5	54.4	78.1	63.0	15.09	5.178	
3,600.0	3,589.9	3,588.5	3,584.4	8.2	8.0	163.45	48.0	47.3	95.3	79.8	15.51	6.146	
3,700.0	3,689.2	3,686.6	3,682.2	8.5	8.3	167.55	49.5	40.1	113.2	97.2	15.93	7.102	
3,800.0	3,788.4	3,784.7	3,780.1	8.7	8.5	170.52	50.9	33.0	131.4	115.1	16.37	8.030	
3,900.0	3,887.6	3,882.9	3,877.9	9.0	8.7	172.77	52.4	25.9	150.0	133.2	16.81	8.923	
4,000.0	3,986.9	3,981.0	3,975.8	9.3	9.0	174.52	53.9	18.7	168.7	151.4	17.25	9.779	
4,100.0	4,086.1	4,079.1	4,073.6	9.6	9.2	175.92	55.4	11.6	187.5	169.8	17.69	10.597	
4,200.0	4,185.4	4,177.2	4,171.5	9.9	9.5	177.07	56.8	4.4	206.4	188.3	18.14	11.380	
4,300.0	4,284.6	4,275.3	4,269.3	10.1	9.7	178.02	58.3	-2.7	225.4	206.8	18.58	12.127	
4,400.0	4,383.9	4,373.5	4,367.1	10.4	10.0	178.83	59.8	-9.8	244.4	225.4	19.03	12.842	
4,500.0	4,483.1	4,471.6	4,465.0	10.7	10.2	179.51	61.2	-17.0	263.5	244.0	19.48	13.524	
4,600.0	4,582.3	4,569.7	4,562.8	11.0	10.5	-179.89	62.7	-24.1	282.6	262.6	19.93	14.177	
4,700.0	4,681.6	4,667.8	4,660.7	11.3	10.7	-179.37	64.2	-31.2	301.7	281.3	20.38	14.802	
4,800.0	4,780.8	4,765.9	4,758.5	11.6	11.0	-178.91	65.6	-38.4	320.9	300.0	20.83	15.400	
4,900.0	4,880.1	4,864.1	4,856.4	11.9	11.2	-178.50	67.1	-45.5	340.0	318.7	21.29	15.973	
5,000.0	4,979.3	4,962.2	4,954.2	12.2	11.5	-178.14	68.6	-52.7	359.2	337.5	21.74	16.522	

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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,078.5	5,060.3	5,052.1	12.5	11.7	-177.81	70.0	-59.8	378.4	356.2	22.19	17.049	
5,200.0	5,177.8	5,158.4	5,149.9	12.8	12.0	-177.52	71.5	-66.9	397.6	375.0	22.65	17.555	
5,300.0	5,277.0	5,256.5	5,247.8	13.1	12.2	-177.25	73.0	-74.1	416.8	393.7	23.10	18.041	
5,400.0	5,376.3	5,354.6	5,345.6	13.4	12.5	-177.01	74.4	-81.2	436.0	412.5	23.56	18.508	
5,500.0	5,475.5	5,452.8	5,443.5	13.7	12.7	-176.78	75.9	-88.3	455.3	431.2	24.02	18.957	
5,600.0	5,574.7	5,550.9	5,541.3	14.0	13.0	-176.58	77.4	-95.5	474.5	450.0	24.47	19.389	
5,700.0	5,674.0	5,649.0	5,639.2	14.3	13.2	-176.39	78.8	-102.6	493.7	468.8	24.93	19.806	
5,800.0	5,773.2	5,747.1	5,737.0	14.6	13.5	-176.21	80.3	-109.8	513.0	487.6	25.39	20.207	
5,900.0	5,872.5	5,845.2	5,834.9	14.9	13.7	-176.05	81.8	-116.9	532.2	506.4	25.84	20.594	
6,000.0	5,971.7	5,943.4	5,932.7	15.2	14.0	-175.90	83.3	-124.0	551.5	525.2	26.30	20.967	
6,100.0	6,070.9	6,041.5	6,030.6	15.5	14.2	-175.76	84.7	-131.2	570.7	544.0	26.76	21.328	
6,200.0	6,170.2	6,139.6	6,128.4	15.8	14.5	-175.63	86.2	-138.3	590.0	562.8	27.22	21.676	
6,300.0	6,269.4	6,237.7	6,226.3	16.1	14.7	-175.50	87.7	-145.4	609.3	581.6	27.68	22.012	
6,400.0	6,368.7	6,335.8	6,324.1	16.4	15.0	-175.39	89.1	-152.6	628.5	600.4	28.14	22.337	
6,500.0	6,467.9	6,434.0	6,422.0	16.7	15.2	-175.28	90.6	-159.7	647.8	619.2	28.60	22.652	
6,600.0	6,567.1	6,532.1	6,519.8	17.0	15.5	-175.18	92.1	-166.9	667.1	638.0	29.06	22.956	
6,700.0	6,666.4	6,630.2	6,617.7	17.3	15.7	-175.08	93.5	-174.0	686.3	656.8	29.52	23.251	
6,800.0	6,765.6	6,728.3	6,715.5	17.7	16.0	-174.99	95.0	-181.1	705.6	675.6	29.98	23.537	
6,900.0	6,864.9	6,826.4	6,813.4	18.0	16.2	-174.90	96.5	-188.3	724.9	694.4	30.44	23.814	
7,000.0	6,964.1	6,924.6	6,911.2	18.3	16.5	-174.82	97.9	-195.4	744.2	713.3	30.90	24.082	
7,100.0	7,063.3	7,022.7	7,009.0	18.6	16.7	-174.74	99.4	-202.5	763.4	732.1	31.36	24.342	
7,200.0	7,162.6	7,120.8	7,106.9	18.9	17.0	-174.67	100.9	-209.7	782.7	750.9	31.82	24.595	
7,300.0	7,261.8	7,218.9	7,204.7	19.2	17.3	-174.59	102.3	-216.8	802.0	769.7	32.29	24.840	
7,400.0	7,361.1	7,317.0	7,302.6	19.5	17.5	-174.53	103.8	-224.0	821.3	788.5	32.75	25.079	
7,500.0	7,460.3	7,415.2	7,400.4	19.8	17.8	-174.46	105.3	-231.1	840.6	807.3	33.21	25.310	
7,600.0	7,559.5	7,513.3	7,498.3	20.1	18.0	-174.40	106.8	-238.2	859.8	826.2	33.67	25.535	
7,700.0	7,658.8	7,611.4	7,596.1	20.4	18.3	-174.34	108.2	-245.4	879.1	845.0	34.14	25.754	
7,800.0	7,758.0	7,709.5	7,694.0	20.7	18.5	-174.29	109.7	-252.5	898.4	863.8	34.60	25.966	
7,900.0	7,857.3	7,807.6	7,791.8	21.0	18.8	-174.23	111.2	-259.6	917.7	882.6	35.06	26.173	
8,000.0	7,956.5	7,905.7	7,889.7	21.4	19.0	-174.18	112.6	-266.8	937.0	901.5	35.53	26.375	
8,100.0	8,055.7	8,003.9	7,987.5	21.7	19.3	-174.13	114.1	-273.9	956.3	920.3	35.99	26.571	
8,200.0	8,155.0	8,102.0	8,085.4	22.0	19.5	-174.08	115.6	-281.1	975.6	939.1	36.45	26.762	
8,300.0	8,254.2	8,200.1	8,183.2	22.3	19.8	-174.04	117.0	-288.2	994.8	957.9	36.92	26.948	
8,400.0	8,353.5	8,298.2	8,281.1	22.6	20.0	-173.99	118.5	-295.3	1,014.1	976.8	37.38	27.130	
8,500.0	8,452.7	8,396.3	8,378.9	22.9	20.3	-173.95	120.0	-302.5	1,033.4	995.6	37.85	27.307	
8,600.0	8,552.0	8,494.5	8,476.8	23.2	20.6	-173.91	121.4	-309.6	1,052.7	1,014.4	38.31	27.479	
8,700.0	8,651.2	8,592.6	8,574.6	23.5	20.8	-173.87	122.9	-316.7	1,072.0	1,033.2	38.77	27.647	
8,800.0	8,750.4	8,690.7	8,672.5	23.8	21.1	-173.83	124.4	-323.9	1,091.3	1,052.1	39.24	27.811	
8,900.0	8,849.7	8,788.8	8,770.3	24.2	21.3	-173.80	125.8	-331.0	1,110.6	1,070.9	39.70	27.971	
9,000.0	8,948.9	8,886.9	8,868.2	24.5	21.6	-173.76	127.3	-338.2	1,129.9	1,089.7	40.17	28.128	
9,100.0	9,048.2	8,985.1	8,966.0	24.8	21.8	-173.73	128.8	-345.3	1,149.2	1,108.5	40.63	28.280	
9,200.0	9,147.4	9,083.2	9,063.9	25.1	22.1	-173.69	130.2	-352.4	1,168.5	1,127.4	41.10	28.430	
9,300.0	9,246.6	9,181.3	9,161.7	25.4	22.3	-173.66	131.7	-359.6	1,187.8	1,146.2	41.57	28.575	
9,400.0	9,345.9	9,279.4	9,259.6	25.7	22.6	-173.63	133.2	-366.7	1,207.0	1,165.0	42.03	28.718	
9,500.0	9,445.1	9,377.5	9,357.4	26.0	22.8	-176.52	134.7	-373.8	1,226.3	1,183.8	42.50	28.857	
9,600.0	9,543.8	9,475.0	9,454.6	26.3	23.1	116.58	136.1	-380.9	1,244.8	1,201.8	42.95	28.981	
9,700.0	9,638.5	9,568.1	9,547.5	26.5	23.3	100.79	137.5	-387.7	1,261.6	1,218.2	43.36	29.095	
9,800.0	9,725.1	9,653.0	9,632.1	26.6	23.6	95.54	138.8	-393.9	1,277.4	1,233.7	43.70	29.230	
9,900.0	9,799.8	9,725.9	9,704.8	26.8	23.8	93.25	139.9	-399.2	1,293.7	1,249.7	44.00	29.403	
10,000.0	9,859.4	9,783.6	9,762.3	26.9	23.9	91.76	140.7	-403.4	1,311.8	1,267.5	44.28	29.625	
10,100.0	9,901.1	9,823.5	9,802.2	27.1	24.0	90.02	141.3	-406.3	1,333.2	1,288.6	44.57	29.914	
10,200.0	9,923.3	9,844.0	9,822.6	27.3	24.1	87.48	141.6	-407.8	1,358.2	1,313.4	44.80	30.317	

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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		Highside Toolface (')	Distance						Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
10,300.0	9,928.2	9,847.3	9,825.9	27.6	24.1	86.08	141.7	-408.0	1,387.2	1,342.2	45.05	30.792					
10,400.0	9,930.9	9,848.6	9,827.2	28.0	24.1	86.13	141.7	-408.1	1,422.3	1,376.9	45.44	31.298					
10,500.0	9,933.7	9,849.9	9,828.4	28.5	24.1	86.19	141.7	-408.2	1,463.4	1,417.5	45.97	31.833					
10,600.0	9,936.5	9,851.2	9,829.7	29.1	24.1	86.25	141.7	-408.3	1,510.1	1,463.4	46.62	32.387					
10,700.0	9,939.3	9,852.5	9,831.0	29.7	24.1	86.30	141.8	-408.4	1,561.7	1,514.3	47.39	32.951					
10,800.0	9,942.1	9,853.7	9,832.3	30.5	24.1	86.36	141.8	-408.5	1,617.9	1,569.6	48.27	33.518					
10,900.0	9,944.9	9,855.0	9,833.6	31.3	24.1	86.41	141.8	-408.6	1,678.1	1,628.9	49.24	34.082					



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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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			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	9,972.9	9,859.0	9,858.2	43.2	20.6	87.89	-3,020.5	-346.7	1,680.1	1,619.2	60.91	27.583			
12,000.0	9,975.7	9,861.2	9,860.3	44.6	20.6	87.99	-3,020.5	-346.8	1,615.0	1,552.6	62.45	25.863			
12,100.0	9,978.4	9,863.4	9,862.5	46.1	20.6	88.09	-3,020.5	-346.8	1,553.7	1,489.7	64.01	24.274			
12,200.0	9,981.2	9,865.6	9,864.7	47.5	20.6	88.19	-3,020.5	-346.9	1,496.6	1,431.0	65.59	22.817			
12,300.0	9,984.0	9,867.7	9,866.9	49.1	20.6	88.29	-3,020.5	-346.9	1,444.1	1,376.9	67.19	21.492			
12,400.0	9,986.8	9,869.9	9,869.1	50.6	20.6	88.39	-3,020.4	-346.9	1,396.8	1,328.0	68.81	20.300			
12,500.0	9,989.6	9,872.1	9,871.3	52.1	20.6	88.49	-3,020.4	-347.0	1,355.3	1,284.8	70.44	19.239			
12,600.0	9,992.4	9,874.4	9,873.5	53.7	20.6	88.59	-3,020.4	-347.0	1,320.0	1,247.9	72.09	18.310			
12,700.0	9,995.2	9,876.6	9,875.7	55.3	20.6	88.69	-3,020.4	-347.0	1,291.5	1,217.8	73.75	17.512			
12,800.0	9,998.0	9,878.8	9,878.0	56.9	20.6	88.80	-3,020.4	-347.1	1,270.3	1,194.9	75.42	16.842			
12,900.0	10,000.8	9,881.1	9,880.2	58.5	20.6	88.90	-3,020.4	-347.1	1,256.7	1,179.6	77.10	16.298			
13,000.0	10,003.6	9,883.3	9,882.5	60.1	20.6	89.00	-3,020.4	-347.2	1,250.9	1,172.1	78.80	15.876			
13,022.0	10,004.2	9,883.8	9,883.0	60.5	20.6	89.03	-3,020.4	-347.2	1,250.7	1,171.6	79.17	15.798	CC, ES		
13,100.0	10,006.4	9,885.6	9,884.8	61.7	20.6	89.11	-3,020.4	-347.2	1,253.2	1,172.7	80.50	15.568			
13,200.0	10,009.2	9,887.9	9,887.0	63.4	20.6	89.21	-3,020.4	-347.2	1,263.3	1,181.1	82.21	15.368			
13,300.0	10,012.0	9,890.2	9,889.3	65.0	20.6	89.32	-3,020.3	-347.3	1,281.3	1,197.3	83.92	15.267			
13,400.0	10,014.8	9,892.5	9,891.6	66.7	20.6	89.42	-3,020.3	-347.3	1,306.6	1,220.9	85.64	15.256	SF		
13,500.0	10,017.6	9,894.8	9,893.9	68.4	20.6	89.53	-3,020.3	-347.4	1,338.9	1,251.6	87.37	15.324			
13,600.0	10,020.4	9,897.1	9,896.3	70.1	20.6	89.63	-3,020.3	-347.4	1,377.8	1,288.7	89.11	15.462			
13,700.0	10,023.2	9,899.5	9,898.6	71.8	20.6	89.74	-3,020.3	-347.4	1,422.6	1,331.8	90.85	15.659			
13,800.0	10,026.0	9,901.8	9,900.9	73.5	20.6	89.85	-3,020.3	-347.5	1,472.9	1,380.3	92.59	15.907			
13,900.0	10,028.8	9,904.1	9,903.2	75.2	20.6	89.95	-3,020.3	-347.5	1,528.0	1,433.7	94.34	16.196			
14,000.0	10,031.6	9,906.5	9,905.6	76.9	20.7	90.06	-3,020.3	-347.6	1,587.6	1,491.5	96.10	16.520			
14,100.0	10,034.4	9,908.9	9,908.0	78.6	20.7	90.17	-3,020.3	-347.6	1,651.0	1,553.2	97.85	16.872			

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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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		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)					
11,300.0	9,956.1	9,871.5	9,870.2	35.4	20.6	76.93	-2,918.9	769.3	1,626.0	1,574.9	51.12	31.805			
11,400.0	9,958.9	9,873.4	9,872.1	36.6	20.6	77.71	-2,918.8	769.3	1,526.4	1,473.8	52.54	29.052			
11,500.0	9,961.7	9,875.3	9,874.1	37.8	20.6	78.49	-2,918.8	769.3	1,426.8	1,372.8	54.01	26.419			
11,600.0	9,964.5	9,877.3	9,876.0	39.1	20.6	79.28	-2,918.8	769.3	1,327.3	1,271.8	55.52	23.909			
11,700.0	9,967.3	9,879.2	9,877.9	40.4	20.6	80.08	-2,918.8	769.3	1,227.9	1,170.8	57.06	21.518			
11,800.0	9,970.1	9,881.1	9,879.8	41.8	20.6	80.87	-2,918.8	769.3	1,128.6	1,069.9	58.64	19.244			
11,900.0	9,972.9	9,883.0	9,881.8	43.2	20.6	81.67	-2,918.8	769.3	1,029.3	969.1	60.25	17.083			
12,000.0	9,975.7	9,885.0	9,883.7	44.6	20.6	82.48	-2,918.7	769.3	930.3	868.4	61.89	15.032			
12,100.0	9,978.4	9,886.9	9,885.6	46.1	20.6	83.29	-2,918.7	769.3	831.5	768.0	63.54	13.085			
12,200.0	9,981.2	9,888.8	9,887.5	47.5	20.6	84.10	-2,918.7	769.3	733.0	667.8	65.22	11.239			
12,300.0	9,984.0	9,890.7	9,889.5	49.1	20.6	84.91	-2,918.7	769.3	635.0	568.1	66.90	9.491			
12,400.0	9,986.8	9,892.6	9,891.4	50.6	20.6	85.73	-2,918.7	769.3	537.7	469.1	68.60	7.837			
12,500.0	9,989.6	9,894.6	9,893.3	52.1	20.6	86.55	-2,918.6	769.3	441.5	371.2	70.31	6.280			
12,600.0	9,992.4	9,896.5	9,895.2	53.7	20.6	87.37	-2,918.6	769.3	347.6	275.6	72.03	4.826			
12,700.0	9,995.2	9,898.4	9,897.2	55.3	20.6	88.19	-2,918.6	769.3	258.3	184.5	73.74	3.502			
12,800.0	9,998.0	9,900.3	9,899.1	56.9	20.6	89.01	-2,918.6	769.3	180.5	105.0	75.46	2.391			
12,900.0	10,000.8	9,902.3	9,901.0	58.5	20.6	89.83	-2,918.6	769.3	135.7	58.5	77.19	1.758			
12,920.7	10,001.4	9,902.7	9,901.4	58.8	20.6	90.00	-2,918.6	769.3	134.1	56.6	77.54	1.729 CC, ES, SF			
13,000.0	10,003.6	9,904.2	9,902.9	60.1	20.6	90.65	-2,918.6	769.3	155.8	76.9	78.90	1.974			
13,100.0	10,006.4	9,906.1	9,904.8	61.7	20.6	91.47	-2,918.5	769.3	223.8	143.2	80.62	2.776			
13,200.0	10,009.2	9,908.0	9,906.8	63.4	20.6	92.30	-2,918.5	769.3	309.7	227.4	82.33	3.762			
13,300.0	10,012.0	9,910.0	9,908.7	65.0	20.6	93.12	-2,918.5	769.3	402.2	318.1	84.04	4.786			
13,400.0	10,014.8	9,911.9	9,910.6	66.7	20.6	93.94	-2,918.5	769.3	497.6	411.8	85.73	5.804			
13,500.0	10,017.6	9,913.8	9,912.6	68.4	20.6	94.75	-2,918.5	769.3	594.5	507.0	87.42	6.800			
13,600.0	10,020.4	9,915.7	9,914.5	70.1	20.7	95.57	-2,918.5	769.3	692.2	603.1	89.09	7.770			
13,700.0	10,023.2	9,917.7	9,916.4	71.8	20.7	96.39	-2,918.4	769.3	790.6	699.8	90.76	8.710			
13,800.0	10,026.0	9,919.6	9,918.3	73.5	20.7	97.20	-2,918.4	769.3	889.2	796.8	92.41	9.623			
13,900.0	10,028.8	9,921.5	9,920.3	75.2	20.7	98.01	-2,918.4	769.3	988.2	894.1	94.05	10.507			
14,000.0	10,031.6	9,923.5	9,922.2	76.9	20.7	98.81	-2,918.4	769.3	1,087.3	991.7	95.67	11.366			
14,100.0	10,034.4	9,925.4	9,924.1	78.6	20.7	99.62	-2,918.4	769.3	1,186.6	1,089.3	97.28	12.198			
14,200.0	10,037.2	9,927.3	9,926.0	80.3	20.7	100.42	-2,918.4	769.3	1,286.0	1,187.1	98.87	13.008			
14,300.0	10,040.0	9,929.2	9,928.0	82.0	20.7	101.21	-2,918.3	769.3	1,385.5	1,285.0	100.44	13.794			
14,400.0	10,042.8	9,931.2	9,929.9	83.8	20.7	102.00	-2,918.3	769.3	1,485.0	1,383.0	101.99	14.560			
14,500.0	10,045.6	9,933.1	9,931.8	85.5	20.7	102.79	-2,918.3	769.3	1,584.6	1,481.1	103.53	15.306			

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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)			
11,600.0	9,964.5	9,851.6	9,850.3	39.1	20.5	66.11	-3,217.9	769.3	1,625.1	1,572.7	52.46	30.977	
11,700.0	9,967.3	9,855.3	9,854.0	40.4	20.5	67.43	-3,217.9	769.3	1,525.6	1,471.4	54.18	28.156	
11,800.0	9,970.1	9,858.9	9,857.7	41.8	20.6	68.78	-3,217.9	769.3	1,426.0	1,370.1	55.95	25.488	
11,900.0	9,972.9	9,862.6	9,861.3	43.2	20.6	70.15	-3,217.9	769.3	1,326.6	1,268.8	57.76	22.968	
12,000.0	9,975.7	9,866.3	9,865.0	44.6	20.6	71.55	-3,218.0	769.3	1,227.2	1,167.6	59.60	20.591	
12,100.0	9,978.4	9,869.9	9,868.7	46.1	20.6	72.97	-3,218.0	769.3	1,127.9	1,066.4	61.47	18.349	
12,200.0	9,981.2	9,873.6	9,872.3	47.5	20.6	74.41	-3,218.0	769.3	1,028.8	965.4	63.36	16.236	
12,300.0	9,984.0	9,877.3	9,876.0	49.1	20.6	75.87	-3,218.1	769.3	929.8	864.5	65.27	14.244	
12,400.0	9,986.8	9,880.9	9,879.7	50.6	20.6	77.35	-3,218.1	769.3	831.0	763.8	67.20	12.367	
12,500.0	9,989.6	9,884.6	9,883.3	52.1	20.6	78.85	-3,218.1	769.3	732.6	663.4	69.12	10.598	
12,600.0	9,992.4	9,888.3	9,887.0	53.7	20.6	80.37	-3,218.2	769.3	634.6	563.5	71.05	8.932	
12,700.0	9,995.2	9,892.0	9,890.7	55.3	20.6	81.90	-3,218.2	769.3	537.3	464.4	72.97	7.364	
12,800.0	9,998.0	9,895.6	9,894.4	56.9	20.6	83.44	-3,218.2	769.3	441.3	366.4	74.88	5.893	
12,900.0	10,000.8	9,899.3	9,898.0	58.5	20.6	84.99	-3,218.3	769.3	347.4	270.6	76.77	4.525	
13,000.0	10,003.6	9,903.0	9,901.7	60.1	20.6	86.55	-3,218.3	769.3	258.1	179.5	78.63	3.282	
13,100.0	10,006.4	9,906.6	9,905.4	61.7	20.7	88.11	-3,218.3	769.3	180.3	99.9	80.47	2.241	
13,200.0	10,009.2	9,910.3	9,909.0	63.4	20.7	89.68	-3,218.4	769.3	135.7	53.4	82.28	1.649	
13,220.6	10,009.8	9,911.1	9,909.8	63.7	20.7	90.00	-3,218.4	769.3	134.1	51.5	82.65	1.623 CC, ES, SF	
13,300.0	10,012.0	9,914.0	9,912.7	65.0	20.7	91.24	-3,218.4	769.3	155.8	71.7	84.05	1.853	
13,400.0	10,014.8	9,917.6	9,916.4	66.7	20.7	92.81	-3,218.4	769.3	223.8	138.0	85.78	2.609	
13,500.0	10,017.6	9,921.3	9,920.0	68.4	20.7	94.37	-3,218.5	769.3	309.7	222.2	87.47	3.540	
13,600.0	10,020.4	9,925.0	9,923.7	70.1	20.7	95.92	-3,218.5	769.3	402.1	313.0	89.11	4.512	
13,700.0	10,023.2	9,928.7	9,927.4	71.8	20.7	97.47	-3,218.5	769.3	497.4	406.7	90.70	5.484	
13,800.0	10,026.0	9,932.3	9,931.1	73.5	20.7	99.01	-3,218.6	769.3	594.3	502.0	92.23	6.443	
13,900.0	10,028.8	9,936.0	9,934.7	75.2	20.7	100.53	-3,218.6	769.3	692.0	598.3	93.72	7.384	
14,000.0	10,031.6	9,939.7	9,938.4	76.9	20.7	102.04	-3,218.6	769.3	790.3	695.1	95.14	8.306	
14,100.0	10,034.4	9,943.3	9,942.1	78.6	20.7	103.53	-3,218.7	769.3	888.9	792.4	96.52	9.210	
14,200.0	10,037.2	9,947.0	9,945.7	80.3	20.7	105.00	-3,218.7	769.3	987.8	890.0	97.83	10.097	
14,300.0	10,040.0	9,950.7	9,949.4	82.0	20.7	106.46	-3,218.7	769.3	1,086.9	987.8	99.09	10.969	
14,400.0	10,042.8	9,954.4	9,953.2	83.8	20.8	107.92	-3,218.7	769.3	1,186.1	1,085.9	100.28	11.829	
14,500.0	10,045.6	9,958.2	9,956.9	85.5	20.8	109.37	-3,218.8	769.3	1,285.5	1,184.1	101.41	12.677	
14,600.0	10,048.4	9,962.0	9,960.7	87.2	20.8	110.79	-3,218.8	769.3	1,384.9	1,282.4	102.48	13.514	
14,700.0	10,051.2	9,965.8	9,964.5	89.0	20.8	112.19	-3,218.8	769.3	1,484.4	1,380.9	103.49	14.343	#
14,800.0	10,054.0	9,969.6	9,968.3	90.4	20.8	113.57	-3,218.9	769.3	1,583.9	1,479.8	104.19	15.202	
14,820.9	10,054.6	9,970.4	9,969.1	90.7	20.8	113.86	-3,218.9	769.3	1,604.7	1,500.4	104.33	15.381	

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 1H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
 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
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)					
11,400.0	9,958.9	9,860.0	9,858.7	36.6	20.5	-18.19	-3,068.4	918.8	1,670.1	1,633.6	36.53	45.722	
11,500.0	9,961.7	9,862.8	9,861.5	37.8	20.6	-19.29	-3,068.4	918.8	1,570.1	1,532.6	37.54	41.829	
11,600.0	9,964.5	9,865.6	9,864.3	39.1	20.6	-20.52	-3,068.4	918.8	1,470.2	1,431.5	38.65	38.037	
11,700.0	9,967.3	9,868.4	9,867.1	40.4	20.6	-21.91	-3,068.4	918.9	1,370.2	1,330.3	39.89	34.351	
11,800.0	9,970.1	9,871.2	9,869.9	41.8	20.6	-23.48	-3,068.4	918.9	1,270.3	1,229.0	41.27	30.779	
11,900.0	9,972.9	9,874.0	9,872.7	43.2	20.6	-25.26	-3,068.4	918.9	1,170.3	1,127.5	42.83	27.327	
12,000.0	9,975.7	9,876.8	9,875.5	44.6	20.6	-27.32	-3,068.4	918.9	1,070.4	1,025.8	44.59	24.003	
12,100.0	9,978.4	9,879.6	9,878.3	46.1	20.6	-29.70	-3,068.4	919.0	970.4	923.8	46.61	20.820	
12,200.0	9,981.2	9,882.4	9,881.1	47.5	20.6	-32.48	-3,068.4	919.0	870.5	821.5	48.93	17.790	
12,300.0	9,984.0	9,885.2	9,883.9	49.1	20.6	-35.74	-3,068.4	919.0	770.5	718.9	51.61	14.929	
12,400.0	9,986.8	9,888.0	9,886.7	50.6	20.6	-39.60	-3,068.4	919.0	670.6	615.9	54.72	12.256	
12,500.0	9,989.6	9,890.8	9,889.5	52.1	20.6	-44.20	-3,068.4	919.0	570.7	512.4	58.29	9.791	
12,600.0	9,992.4	9,893.6	9,892.3	53.7	20.6	-49.69	-3,068.4	919.1	470.8	408.4	62.32	7.554	
12,700.0	9,995.2	9,896.4	9,895.1	55.3	20.6	-56.22	-3,068.4	919.1	370.9	304.1	66.73	5.557	
12,800.0	9,998.0	9,899.2	9,897.9	56.9	20.6	-63.89	-3,068.4	919.1	271.0	199.8	71.26	3.803	
12,900.0	10,000.8	9,901.9	9,900.7	58.5	20.6	-72.68	-3,068.4	919.1	171.3	95.9	75.44	2.271	
13,000.0	10,003.6	9,904.7	9,903.5	60.1	20.6	-82.37	-3,068.4	919.2	72.4	-6.2	78.63	0.921 Level 1	
13,070.7	10,005.6	9,906.7	9,905.5	61.3	20.6	-89.50	-3,068.4	919.2	15.8	-64.2	79.97	0.197 Level 1, CC, ES, SF	
13,100.0	10,006.4	9,907.5	9,906.3	61.7	20.6	-92.47	-3,068.4	919.2	33.3	-47.0	80.27	0.415 Level 1	
13,200.0	10,009.2	9,910.3	9,909.1	63.4	20.7	-102.40	-3,068.4	919.2	130.2	50.1	80.18	1.624	
13,300.0	10,012.0	9,913.1	9,911.9	65.0	20.7	-111.61	-3,068.4	919.2	229.8	151.1	78.65	2.922	
13,400.0	10,014.8	9,915.9	9,914.7	66.7	20.7	-119.76	-3,068.4	919.3	329.6	253.3	76.24	4.323	
13,500.0	10,017.6	9,918.7	9,917.5	68.4	20.7	-126.76	-3,068.4	919.3	429.4	355.9	73.51	5.842	
13,600.0	10,020.4	9,921.5	9,920.3	70.1	20.7	-132.66	-3,068.4	919.3	529.4	458.5	70.85	7.471	
13,700.0	10,023.2	9,924.3	9,923.1	71.8	20.7	-137.62	-3,068.4	919.3	629.3	560.8	68.48	9.189	
13,800.0	10,026.0	9,927.1	9,925.9	73.5	20.7	-141.77	-3,068.4	919.4	729.2	662.7	66.47	10.971	
13,900.0	10,028.8	9,929.9	9,928.7	75.2	20.7	-145.27	-3,068.4	919.4	829.2	764.3	64.82	12.792	
14,000.0	10,031.6	9,932.7	9,931.5	76.9	20.7	-148.24	-3,068.4	919.4	929.1	865.6	63.50	14.631	
14,100.0	10,034.4	9,935.5	9,934.3	78.6	20.7	-150.77	-3,068.4	919.4	1,029.0	966.6	62.49	16.468	
14,200.0	10,037.2	9,938.3	9,937.1	80.3	20.7	-152.96	-3,068.4	919.5	1,129.0	1,067.3	61.72	18.292	
14,300.0	10,040.0	9,941.1	9,939.9	82.0	20.7	-154.85	-3,068.4	919.5	1,228.9	1,167.8	61.17	20.092	
14,400.0	10,042.8	9,943.9	9,942.7	83.8	20.7	-156.51	-3,068.4	919.5	1,328.9	1,268.1	60.79	21.860	
14,500.0	10,045.6	9,946.7	9,945.5	85.5	20.7	-157.97	-3,068.4	919.5	1,428.9	1,368.3	60.57	23.591	
14,600.0	10,048.4	9,949.5	9,948.3	87.2	20.7	-159.26	-3,068.4	919.6	1,528.8	1,468.3	60.47	25.284	
14,700.0	10,051.2	9,952.3	9,951.1	89.0	20.7	-160.41	-3,068.4	919.6	1,628.8	1,568.3	60.47	26.935	

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 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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			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		
11,500.0	9,961.7	9,860.5	9,859.2	37.8	20.5	80.72	-3,068.4	619.8	1,595.5	1,541.3	54.23	29.422		
11,600.0	9,964.5	9,863.3	9,862.0	39.1	20.6	81.27	-3,068.4	619.8	1,497.2	1,441.5	55.69	26.883		
11,700.0	9,967.3	9,866.1	9,864.8	40.4	20.6	81.82	-3,068.4	619.8	1,399.2	1,342.0	57.20	24.462		
11,800.0	9,970.1	9,868.8	9,867.6	41.8	20.6	82.37	-3,068.4	619.7	1,301.5	1,242.7	58.74	22.158		
11,900.0	9,972.9	9,871.6	9,870.4	43.2	20.6	82.93	-3,068.4	619.7	1,204.1	1,143.8	60.30	19.967		
12,000.0	9,975.7	9,874.4	9,873.2	44.6	20.6	83.49	-3,068.4	619.7	1,107.2	1,045.3	61.90	17.888		
12,100.0	9,978.4	9,877.2	9,876.0	46.1	20.6	84.04	-3,068.4	619.7	1,010.9	947.4	63.52	15.917		
12,200.0	9,981.2	9,880.0	9,878.8	47.5	20.6	84.60	-3,068.4	619.6	915.4	850.3	65.15	14.051		
12,300.0	9,984.0	9,882.8	9,881.6	49.1	20.6	85.16	-3,068.4	619.6	821.0	754.2	66.81	12.289		
12,400.0	9,986.8	9,885.6	9,884.4	50.6	20.6	85.72	-3,068.4	619.6	728.0	659.6	68.48	10.632		
12,500.0	9,989.6	9,888.4	9,887.2	52.1	20.6	86.29	-3,068.4	619.6	637.2	567.0	70.16	9.082		
12,600.0	9,992.4	9,891.2	9,890.0	53.7	20.6	86.85	-3,068.4	619.5	549.5	477.7	71.85	7.648		
12,700.0	9,995.2	9,894.0	9,892.7	55.3	20.6	87.41	-3,068.4	619.5	466.8	393.2	73.55	6.346		
12,800.0	9,998.0	9,896.8	9,895.5	56.9	20.6	87.97	-3,068.4	619.5	392.2	316.9	75.26	5.211		
12,900.0	10,000.8	9,899.6	9,898.3	58.5	20.6	88.54	-3,068.4	619.5	331.3	254.3	76.98	4.303		
13,000.0	10,003.6	9,902.4	9,901.1	60.1	20.6	89.10	-3,068.4	619.4	292.6	213.9	78.70	3.718		
13,070.6	10,005.6	9,904.4	9,903.1	61.3	20.6	89.50	-3,068.4	619.4	284.0	204.1	79.92	3.553 CC, ES		
13,100.0	10,006.4	9,905.2	9,903.9	61.7	20.6	89.67	-3,068.4	619.4	285.5	205.1	80.43	3.550 SF		
13,200.0	10,009.2	9,908.0	9,906.7	63.4	20.6	90.23	-3,068.4	619.4	312.1	229.9	82.16	3.798		
13,300.0	10,012.0	9,910.8	9,909.5	65.0	20.7	90.79	-3,068.4	619.4	365.0	281.1	83.89	4.351		
13,400.0	10,014.8	9,913.6	9,912.3	66.7	20.7	91.36	-3,068.4	619.3	434.8	349.2	85.62	5.079		
13,500.0	10,017.6	9,916.4	9,915.1	68.4	20.7	91.92	-3,068.4	619.3	514.7	427.3	87.35	5.892		
13,600.0	10,020.4	9,919.2	9,917.9	70.1	20.7	92.48	-3,068.4	619.3	600.6	511.5	89.08	6.742		
13,700.0	10,023.2	9,922.0	9,920.7	71.8	20.7	93.05	-3,068.4	619.3	690.3	599.5	90.80	7.602		
13,800.0	10,026.0	9,924.8	9,923.5	73.5	20.7	93.61	-3,068.4	619.2	782.5	689.9	92.52	8.457		
13,900.0	10,028.8	9,927.6	9,926.3	75.2	20.7	94.17	-3,068.4	619.2	876.4	782.1	94.24	9.299		
14,000.0	10,031.6	9,930.4	9,929.1	76.9	20.7	94.73	-3,068.4	619.2	971.5	875.5	95.96	10.124		
14,100.0	10,034.4	9,933.2	9,931.9	78.6	20.7	95.29	-3,068.4	619.2	1,067.5	969.8	97.67	10.929		
14,200.0	10,037.2	9,936.0	9,934.7	80.3	20.7	95.85	-3,068.4	619.1	1,164.1	1,064.7	99.37	11.715		
14,300.0	10,040.0	9,938.8	9,937.5	82.0	20.7	96.41	-3,068.4	619.1	1,261.3	1,160.2	101.07	12.479		
14,400.0	10,042.8	9,941.6	9,940.3	83.8	20.7	96.96	-3,068.4	619.1	1,358.9	1,256.1	102.76	13.224		
14,500.0	10,045.6	9,944.4	9,943.1	85.5	20.7	97.52	-3,068.4	619.1	1,456.8	1,352.3	104.44	13.948		
14,600.0	10,048.4	9,947.2	9,945.9	87.2	20.7	98.07	-3,068.4	619.0	1,554.9	1,448.8	106.12	14.653		
14,700.0	10,051.2	9,950.0	9,948.7	89.0	20.7	98.63	-3,068.4	619.0	1,653.3	1,545.5	107.79	15.339		



Anticollision Report

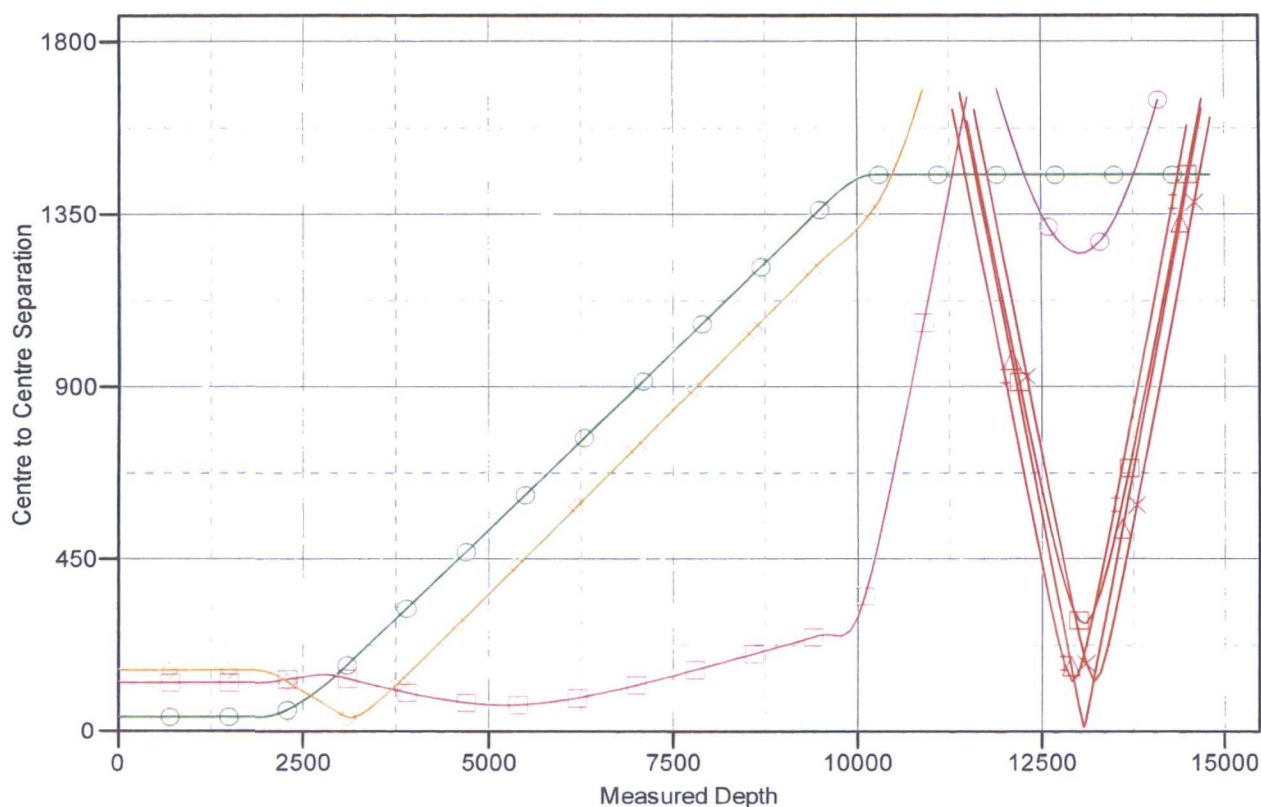
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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 Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: EK 29 BS2 Fed Com 1H - Slot WCD 1H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°

Ladder Plot



LEGEND

om 2H, Wellbore #1, Plan #3 09Jan17 kjs V0 Pennzoil Federal Com 1, Wellbore #1, Wellbore #1 V0 Sun - Pennzoil A Fed 1, Wellbore #3, 90°
 Com 1H, Wellbore #1, Design #1 15Dec15 kjs V0 Sun - Pennzoil A Fed 1, Wellbore #1, 0Az V0 Sun - Pennzoil A Fed 1, Wellbore #4, 270°
 Com 2H, Wellbore #1, Plan #2 01Nov16 kjs V0 Sun - Pennzoil A Fed 1, Wellbore #2, 180Az V0



Anticollision Report

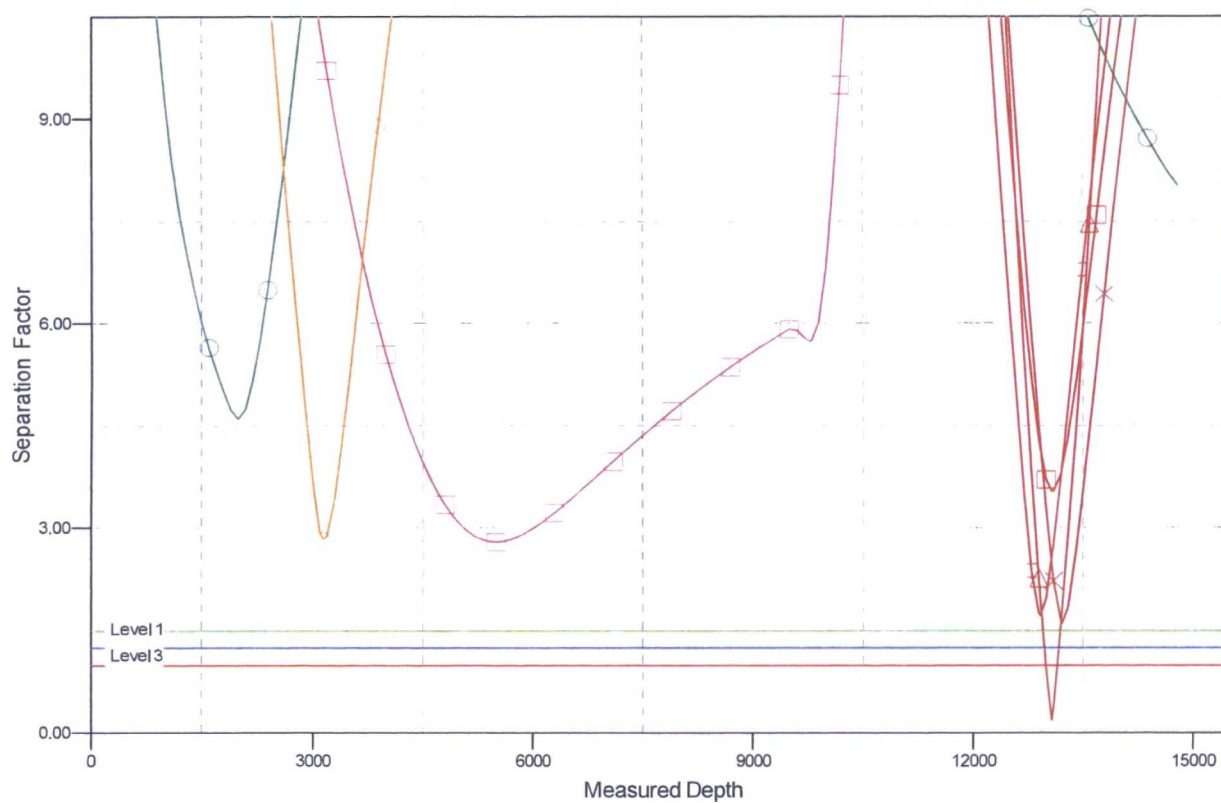
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Reference Site: EK 29 Federal Com
Site Error: 0.0 usft
Reference Well: EK 29 BS2 Fed Com 1H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
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 1H - Slot WCD 1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.41°

Separation Factor Plot



LEGEND

om 2H, Wellbore #1, Plan #3 09Jan17 kjs V0
Com 1H, Wellbore #1, Design #1 15Dec15 kjs V0
Com 2H, Wellbore #1, Plan #2 01Nov16 kjs V0

—○— Pennzoil Federal Com 1, Wellbore #1, Wellbore #1 V0
—●— Sun – Pennzoil A Fed 1, Wellbore #1, 0Az V0
—×— Sun – Pennzoil A Fed 1, Wellbore #2, 180Az V0

—▲— Sun – Pennzoil A Fed 1, Wellbore #3, 90° Az V0
—■— Sun – Pennzoil A Fed 1, Wellbore #4, 270° Az V0



McElvain Energy, Inc.

Sec. 29 T18S R34E

EK 29 Federal Com

EK 29 BS2 Fed Com 1H - Slot WCD 1H

Wellbore #1

Plan: Plan #5 Still in Zone 13Jan17 kjs

Standard Planning Report - Geographic

13 January, 2017



Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Site: EK 29 Federal Com
Well: EK 29 BS2 Fed Com 1H
Wellbore: Wellbore #1
Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	Sec. 29 T18S R34E		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	EK 29 Federal Com			
Site Position:		Northing:	628,457.30 usft	Latitude: 32° 43' 31.429 N
From:	Map	Easting:	773,430.60 usft	Longitude: 103° 34' 43.046 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.41 °

Well	EK 29 BS2 Fed Com 1H - Slot WCD 1H			
Well Position	+N/-S	0.0 usft	Northing:	628,432.50 usft
	+E/-W	0.0 usft	Easting:	773,460.90 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:	Ground Level: 4,050.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/15/15	7.07	60.53	48,461

Design	Plan #5 Still in Zone 13Jan17 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,371.3	7.07	25.00	2,370.1	26.3	12.3	1.50	1.50	0.00	25.00	
2,571.3	7.07	25.00	2,568.6	48.6	22.7	0.00	0.00	0.00	0.00	
3,003.1	7.07	79.66	2,997.6	77.5	60.1	1.50	0.00	12.66	117.18	
9,497.0	7.07	79.66	9,442.2	220.9	845.9	0.00	0.00	0.00	0.00	
10,244.3	88.40	180.00	9,926.6	-243.2	903.4	12.00	10.88	13.43	100.46	
14,720.9	88.40	180.00	10,051.8	-4,718.0	903.4	0.00	0.00	0.00	-180.00	
14,820.9	88.40	180.00	10,054.6	-4,817.9	903.4	0.00	0.00	0.00	0.00	



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 TVD Reference: WELL @ 4070.0usft (Original Well Elev)
 MD Reference: WELL @ 4070.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
200.0	0.00	0.00	200.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
400.0	0.00	0.00	400.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
600.0	0.00	0.00	600.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
800.0	0.00	0.00	800.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
1,870.0	0.00	0.00	1,870.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
Rustler									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	628,432.50	773,460.90	32° 43' 31.181 N	103° 34' 42.694 W
Start Build 1.50									
1,930.0	0.45	25.00	1,930.0	0.1	0.0	628,432.61	773,460.95	32° 43' 31.182 N	103° 34' 42.693 W
Salt									
2,000.0	1.50	25.00	2,000.0	1.2	0.6	628,433.69	773,461.44	32° 43' 31.193 N	103° 34' 42.687 W
2,200.0	4.50	25.00	2,199.7	10.7	5.0	628,443.21	773,465.80	32° 43' 31.287 N	103° 34' 42.635 W
2,371.3	7.07	25.00	2,370.1	26.3	12.3	628,458.91	773,472.98	32° 43' 31.441 N	103° 34' 42.550 W
Hold 7.07 Inc, 25 Az									
2,400.0	7.07	25.00	2,398.6	29.5	13.8	628,462.12	773,474.45	32° 43' 31.473 N	103° 34' 42.532 W
2,571.3	7.07	25.00	2,568.6	48.6	22.7	628,481.29	773,483.23	32° 43' 31.662 N	103° 34' 42.428 W
Begin 1.5/100 Turn									
2,600.0	6.88	28.19	2,597.1	51.7	24.2	628,484.42	773,484.76	32° 43' 31.693 N	103° 34' 42.410 W
2,800.0	6.29	54.07	2,795.8	68.7	38.8	628,501.52	773,499.18	32° 43' 31.861 N	103° 34' 42.240 W
3,000.0	7.04	79.32	2,994.5	77.4	59.7	628,510.37	773,520.04	32° 43' 31.947 N	103° 34' 41.995 W
3,003.1	7.07	79.66	2,997.6	77.5	60.1	628,510.44	773,520.42	32° 43' 31.948 N	103° 34' 41.990 W
Hold 79.66 Az									
3,200.0	7.07	79.66	3,193.0	81.9	83.9	628,514.96	773,544.21	32° 43' 31.991 N	103° 34' 41.711 W
3,400.0	7.07	79.66	3,391.4	86.3	108.1	628,519.55	773,568.38	32° 43' 32.035 N	103° 34' 41.428 W
3,408.6	7.07	79.66	3,400.0	86.5	109.1	628,519.75	773,569.42	32° 43' 32.037 N	103° 34' 41.416 W
9 5/8"									
3,426.3	7.07	79.66	3,417.6	86.9	111.3	628,520.15	773,571.56	32° 43' 32.040 N	103° 34' 41.391 W
Yates									
3,600.0	7.07	79.66	3,589.9	90.7	132.3	628,524.14	773,592.55	32° 43' 32.078 N	103° 34' 41.145 W
3,800.0	7.07	79.66	3,788.4	95.1	156.5	628,528.73	773,616.73	32° 43' 32.122 N	103° 34' 40.861 W
3,854.3	7.07	79.66	3,842.3	96.3	163.1	628,529.97	773,623.29	32° 43' 32.134 N	103° 34' 40.785 W
Seven Rivers									
4,000.0	7.07	79.66	3,986.9	99.5	180.7	628,533.32	773,640.90	32° 43' 32.166 N	103° 34' 40.578 W
4,200.0	7.07	79.66	4,185.4	103.9	204.9	628,537.90	773,665.07	32° 43' 32.210 N	103° 34' 40.295 W
4,400.0	7.07	79.66	4,383.9	108.4	229.1	628,542.49	773,689.24	32° 43' 32.253 N	103° 34' 40.011 W
4,600.0	7.07	79.66	4,582.3	112.8	253.3	628,547.08	773,713.41	32° 43' 32.297 N	103° 34' 39.728 W
4,634.8	7.07	79.66	4,616.8	113.5	257.5	628,547.88	773,717.61	32° 43' 32.305 N	103° 34' 39.679 W
Queen									
4,800.0	7.07	79.66	4,780.8	117.2	277.5	628,551.67	773,737.58	32° 43' 32.341 N	103° 34' 39.445 W
4,936.9	7.07	79.66	4,916.6	120.2	294.1	628,554.81	773,754.12	32° 43' 32.371 N	103° 34' 39.251 W
Penrose									
5,000.0	7.07	79.66	4,979.3	121.6	301.7	628,556.26	773,761.75	32° 43' 32.384 N	103° 34' 39.162 W
5,200.0	7.07	79.66	5,177.8	126.0	325.9	628,560.85	773,785.92	32° 43' 32.428 N	103° 34' 38.878 W
5,400.0	7.07	79.66	5,376.3	130.4	350.1	628,565.44	773,810.10	32° 43' 32.472 N	103° 34' 38.595 W
5,465.6	7.07	79.66	5,441.3	131.9	358.1	628,566.94	773,818.02	32° 43' 32.486 N	103° 34' 38.502 W
San Andres									
5,600.0	7.07	79.66	5,574.7	134.9	374.3	628,570.02	773,834.27	32° 43' 32.515 N	103° 34' 38.312 W



Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Site: EK 29 Federal Com
Well: EK 29 BS2 Fed Com 1H
Wellbore: Wellbore #1
Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,692.1	7.07	79.66	5,666.2	136.9	385.5	628,572.14	773,845.40	32° 43' 32.536 N	103° 34' 38.181 W
Delaware									
5,732.4	7.07	79.66	5,706.2	137.8	390.4	628,573.06	773,850.27	32° 43' 32.544 N	103° 34' 38.124 W
1st Delaware Sand									
5,800.0	7.07	79.66	5,773.2	139.3	398.5	628,574.61	773,858.44	32° 43' 32.559 N	103° 34' 38.028 W
5,893.5	7.07	79.66	5,866.1	141.3	409.9	628,576.76	773,869.74	32° 43' 32.580 N	103° 34' 37.896 W
2nd Delaware Sand									
6,000.0	7.07	79.66	5,971.7	143.7	422.7	628,579.20	773,882.61	32° 43' 32.603 N	103° 34' 37.745 W
6,200.0	7.07	79.66	6,170.2	148.1	446.9	628,583.79	773,906.78	32° 43' 32.646 N	103° 34' 37.462 W
6,400.0	7.07	79.66	6,368.7	152.5	471.2	628,588.38	773,930.95	32° 43' 32.690 N	103° 34' 37.178 W
6,600.0	7.07	79.66	6,567.1	156.9	495.4	628,592.97	773,955.12	32° 43' 32.734 N	103° 34' 36.895 W
6,648.8	7.07	79.66	6,615.6	158.0	501.3	628,594.09	773,961.02	32° 43' 32.745 N	103° 34' 36.826 W
Brushy Canyon									
6,800.0	7.07	79.66	6,765.6	161.4	519.6	628,597.56	773,979.29	32° 43' 32.778 N	103° 34' 36.612 W
7,000.0	7.07	79.66	6,964.1	165.8	543.8	628,602.15	774,003.46	32° 43' 32.821 N	103° 34' 36.328 W
7,200.0	7.07	79.66	7,162.6	170.2	568.0	628,606.73	774,027.64	32° 43' 32.865 N	103° 34' 36.045 W
7,400.0	7.07	79.66	7,361.1	174.6	592.2	628,611.32	774,051.81	32° 43' 32.909 N	103° 34' 35.762 W
7,600.0	7.07	79.66	7,559.5	179.0	616.4	628,615.91	774,075.98	32° 43' 32.952 N	103° 34' 35.478 W
7,800.0	7.07	79.66	7,758.0	183.4	640.6	628,620.50	774,100.15	32° 43' 32.996 N	103° 34' 35.195 W
7,882.4	7.07	79.66	7,839.8	185.3	650.5	628,622.39	774,110.11	32° 43' 33.014 N	103° 34' 35.078 W
Bone Spring									
8,000.0	7.07	79.66	7,956.5	187.9	664.8	628,625.09	774,124.32	32° 43' 33.040 N	103° 34' 34.912 W
8,200.0	7.07	79.66	8,155.0	192.3	689.0	628,629.68	774,148.49	32° 43' 33.083 N	103° 34' 34.628 W
8,400.0	7.07	79.66	8,353.5	196.7	713.2	628,634.27	774,172.66	32° 43' 33.127 N	103° 34' 34.345 W
8,600.0	7.07	79.66	8,552.0	201.1	737.4	628,638.86	774,196.83	32° 43' 33.171 N	103° 34' 34.062 W
8,800.0	7.07	79.66	8,750.4	205.5	761.6	628,643.44	774,221.01	32° 43' 33.215 N	103° 34' 33.778 W
9,000.0	7.07	79.66	8,948.9	209.9	785.8	628,648.03	774,245.18	32° 43' 33.258 N	103° 34' 33.495 W
9,116.0	7.07	79.66	9,064.1	212.5	799.8	628,650.69	774,259.20	32° 43' 33.284 N	103° 34' 33.331 W
1st Bone Spring Sand									
9,200.0	7.07	79.66	9,147.4	214.4	810.0	628,652.62	774,269.35	32° 43' 33.302 N	103° 34' 33.212 W
9,400.0	7.07	79.66	9,345.9	218.8	834.2	628,657.21	774,293.52	32° 43' 33.346 N	103° 34' 32.929 W
9,497.0	7.07	79.66	9,442.1	220.9	845.9	628,659.44	774,305.24	32° 43' 33.367 N	103° 34' 32.791 W
KOP 12/100									
9,600.0	13.04	148.46	9,543.8	212.1	858.3	628,650.72	774,317.67	32° 43' 33.280 N	103° 34' 32.646 W
9,729.7	27.45	166.63	9,665.2	170.3	873.0	628,609.02	774,332.62	32° 43' 32.866 N	103° 34' 32.475 W
2nd Bone Spring Sand									
9,800.0	35.66	170.42	9,725.1	134.2	880.1	628,573.01	774,340.05	32° 43' 32.509 N	103° 34' 32.391 W
10,000.0	59.32	176.05	9,859.4	-11.2	896.0	628,427.71	774,356.95	32° 43' 31.070 N	103° 34' 32.205 W
10,105.8	71.91	177.91	9,903.0	-107.2	901.0	628,331.68	774,362.62	32° 43' 30.120 N	103° 34' 32.147 W
POP - TOP TARGET WINDOW									
10,200.0	83.12	179.35	9,923.3	-199.0	903.2	628,239.94	774,365.44	32° 43' 29.212 N	103° 34' 32.122 W
10,244.3	88.40	180.00	9,926.6	-243.2	903.4	628,195.78	774,366.01	32° 43' 28.775 N	103° 34' 32.119 W
Landing Pt 88.4 Inc, 180 Az									
10,400.0	88.40	180.00	9,930.9	-398.8	903.4	628,040.15	774,367.11	32° 43' 27.235 N	103° 34' 32.119 W
10,600.0	88.40	180.00	9,936.5	-598.7	903.4	627,840.23	774,368.54	32° 43' 25.257 N	103° 34' 32.119 W
10,800.0	88.40	180.00	9,942.1	-798.6	903.4	627,640.32	774,369.96	32° 43' 23.279 N	103° 34' 32.119 W
11,000.0	88.40	180.00	9,947.7	-998.6	903.4	627,440.40	774,371.39	32° 43' 21.300 N	103° 34' 32.119 W
11,200.0	88.40	180.00	9,953.3	-1,198.5	903.4	627,240.48	774,372.81	32° 43' 19.322 N	103° 34' 32.119 W
11,400.0	88.40	180.00	9,958.9	-1,398.4	903.4	627,040.56	774,374.23	32° 43' 17.344 N	103° 34' 32.119 W
11,600.0	88.40	180.00	9,964.5	-1,598.3	903.4	626,840.65	774,375.66	32° 43' 15.366 N	103° 34' 32.119 W
11,800.0	88.40	180.00	9,970.1	-1,798.3	903.4	626,640.73	774,377.08	32° 43' 13.388 N	103° 34' 32.119 W
12,000.0	88.40	180.00	9,975.7	-1,998.2	903.4	626,440.81	774,378.51	32° 43' 11.410 N	103° 34' 32.119 W
12,200.0	88.40	180.00	9,981.2	-2,198.1	903.4	626,240.90	774,379.93	32° 43' 9.431 N	103° 34' 32.119 W



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Wellbore: Wellbore #1
Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,400.0	88.40	180.00	9,986.8	-2,398.0	903.4	626,040.98	774,381.35	32° 43' 7.453 N	103° 34' 32.119 W
12,600.0	88.40	180.00	9,992.4	-2,597.9	903.4	625,841.06	774,382.78	32° 43' 5.475 N	103° 34' 32.119 W
12,800.0	88.40	180.00	9,998.0	-2,797.9	903.4	625,641.15	774,384.20	32° 43' 3.497 N	103° 34' 32.119 W
13,000.0	88.40	180.00	10,003.6	-2,997.8	903.4	625,441.23	774,385.63	32° 43' 1.519 N	103° 34' 32.119 W
13,200.0	88.40	180.00	10,009.2	-3,197.7	903.4	625,241.31	774,387.05	32° 42' 59.541 N	103° 34' 32.120 W
13,400.0	88.40	180.00	10,014.8	-3,397.6	903.4	625,041.40	774,388.47	32° 42' 57.563 N	103° 34' 32.120 W
13,600.0	88.40	180.00	10,020.4	-3,597.5	903.4	624,841.48	774,389.90	32° 42' 55.584 N	103° 34' 32.120 W
13,800.0	88.40	180.00	10,026.0	-3,797.5	903.4	624,641.56	774,391.32	32° 42' 53.606 N	103° 34' 32.120 W
14,000.0	88.40	180.00	10,031.6	-3,997.4	903.4	624,441.65	774,392.75	32° 42' 51.628 N	103° 34' 32.120 W
14,200.0	88.40	180.00	10,037.2	-4,197.3	903.4	624,241.73	774,394.17	32° 42' 49.650 N	103° 34' 32.120 W
14,400.0	88.40	180.00	10,042.8	-4,397.2	903.4	624,041.81	774,395.59	32° 42' 47.672 N	103° 34' 32.120 W
14,600.0	88.40	180.00	10,048.4	-4,597.2	903.4	623,841.90	774,397.02	32° 42' 45.694 N	103° 34' 32.120 W
14,709.2	88.40	180.00	10,051.5	-4,706.3	903.4	623,732.73	774,397.80	32° 42' 44.613 N	103° 34' 32.120 W
TARGET CENTER LINE									
14,720.9	88.40	180.00	10,051.8	-4,718.0	903.4	623,721.05	774,397.88	32° 42' 44.498 N	103° 34' 32.120 W
TD at 14720.9									
14,800.0	88.40	180.00	10,054.0	-4,797.1	903.4	623,641.98	774,398.44	32° 42' 43.715 N	103° 34' 32.120 W
14,819.9	88.40	180.00	10,054.6	-4,817.0	903.4	623,622.09	774,398.58	32° 42' 43.519 N	103° 34' 32.120 W
End of 100' Rathole									
14,820.6	88.40	180.00	10,054.6	-4,817.7	903.4	623,621.34	774,398.59	32° 42' 43.511 N	103° 34' 32.120 W
TD / PBHL EK 29 BS2 Fed Com 1H									
14,820.9	88.40	180.00	10,054.6	-4,817.9	903.4	623,621.14	774,398.59	32° 42' 43.509 N	103° 34' 32.120 W

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
TD / PBHL EK 29 BS2 F	0.00	0.00	10,051.8	-4,817.8	768.9	623,620.30	774,264.10	32° 42' 43.510 N	103° 34' 33.694 W
- plan misses target center by 134.5usft at 14820.6usft MD (10054.6 TVD, -4817.7 N, 903.4 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
3,408.6	3,400.0	9 5/8"	9-5/8	12-1/4



Planning Report - Geographic

Database: EDM 5000.1 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 29 T18S R34E
Site: EK 29 Federal Com
Well: EK 29 BS2 Fed Com 1H
Wellbore: Wellbore #1
Design: Plan #5 Still in Zone 13Jan17 kjs

Local Co-ordinate Reference: Well EK 29 BS2 Fed Com 1H - Slot WCD 1H
TVD Reference: WELL @ 4070.0usft (Original Well Elev)
MD Reference: WELL @ 4070.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,870.0	1,870.0	Rustler		1.60	180.00
1,930.0	1,930.0	Salt		1.60	180.00
3,426.3	3,417.6	Yates		1.60	180.00
3,854.3	3,842.3	Seven Rivers		1.60	180.00
4,634.8	4,616.8	Queen		1.60	180.00
4,936.9	4,916.6	Penrose		1.60	180.00
5,465.6	5,441.3	San Andres		1.60	180.00
5,692.1	5,666.2	Delaware		1.60	180.00
5,732.4	5,706.2	1st Delaware Sand		1.60	180.00
5,893.5	5,866.1	2nd Delaware Sand		1.60	180.00
6,648.8	6,615.6	Brushy Canyon		1.60	180.00
7,882.4	7,839.8	Bone Spring		1.60	180.00
9,116.0	9,064.1	1st Bone Spring Sand		1.60	180.00
9,729.7	9,665.2	2nd Bone Spring Sand		1.60	180.00
10,105.8	9,903.0	TOP TARGET WINDOW		1.60	180.00
14,709.2	10,051.5	TARGET CENTER LINE		1.60	180.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,900.0	1,900.0	0.0	0.0	Start Build 1.50
2,371.3	2,370.1	26.3	12.3	Hold 7.07 Inc, 25 Az
2,571.3	2,568.6	48.6	22.7	Begin 1.5/100 Turn
3,003.1	2,997.6	77.5	60.1	Hold 79.66 Az
9,497.0	9,442.1	220.9	845.9	KOP 12/100
10,105.8	9,903.0	-107.2	901.0	POP
10,244.3	9,926.6	-243.2	903.4	Landing Pt 88.4 Inc, 180 Az
14,720.9	10,051.8	-4,718.0	903.4	TD at 14720.9
14,819.9	10,054.6	-4,817.0	903.4	End of 100' Rathole



Well Name: EK 29 BS2 Fed Com 1H
Surface Location: EK 29 Federal Com
North American Datum 1983
US State Plane 1983 New Mexico Eastern Zone
Ground Elevation: 4050.0
WELL @ 4070.0usft (Original Well Elev)

+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 628432.50 773460.90 32° 43' 31.181 N 103° 34' 42.694 W WCD 1H

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	0.0
2	1900.0	0.00	0.00	1900.0	0.0	0.0	0.00	0.00	0.0	0.0
3	2371.3	7.07	25.00	2370.1	26.3	12.3	1.50	25.00	-26.3	0.0
4	2571.3	7.07	25.00	2568.6	48.6	22.7	0.00	0.00	-48.6	0.0
5	3003.1	7.07	79.66	2997.6	77.5	60.1	1.50	117.18	-77.5	0.0
6	9497.0	7.07	79.66	9442.2	220.9	845.9	0.00	0.00	-220.9	0.0
7	10244.3	88.40	180.00	9926.6	-243.2	903.4	12.00	100.46	243.2	0.0
8	14720.9	88.40	180.00	10051.8	-4718.0	903.4	0.00	-180.00	4718.0	0.0
9	14820.9	88.40	180.00	10054.6	-4817.9	903.4	0.00	0.00	4817.9	0.0

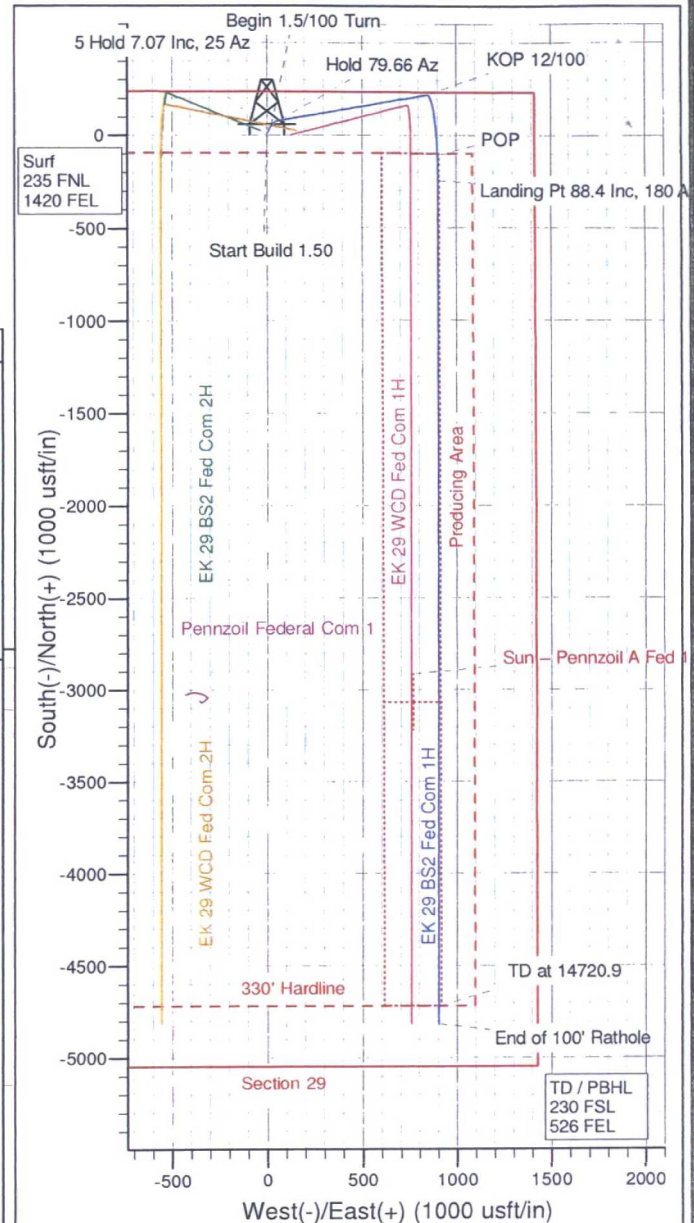
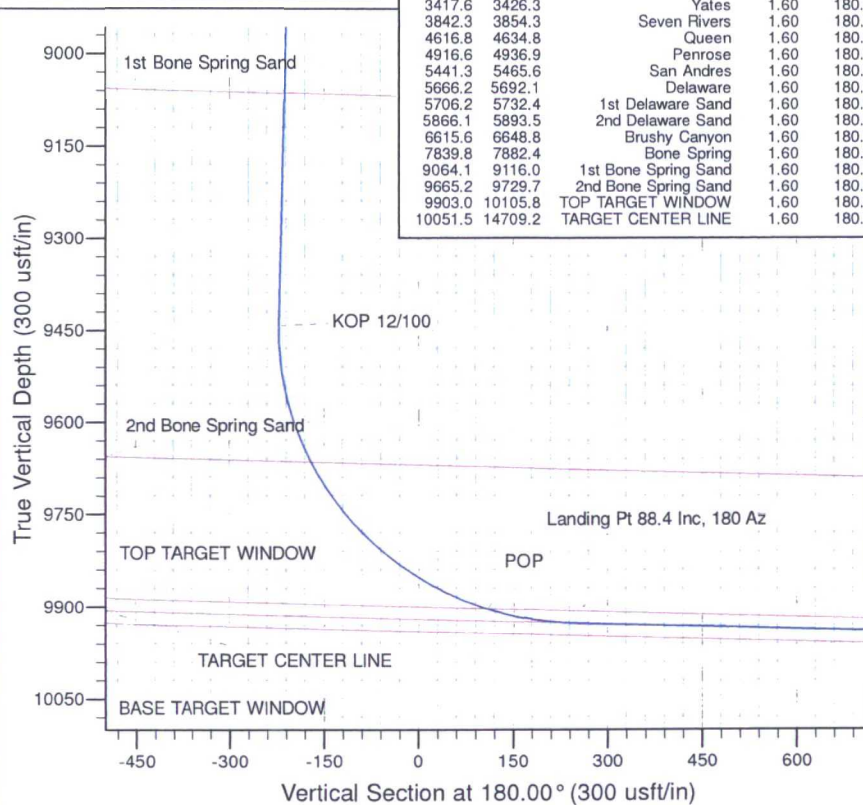
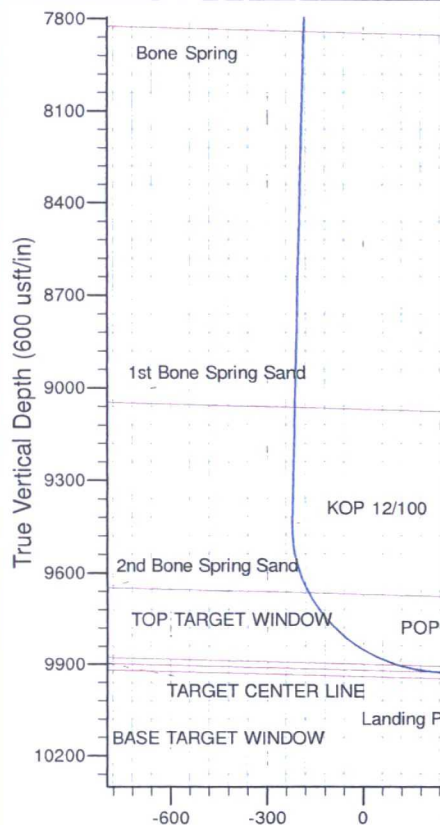
Project: Sec. 29 T18S R34E
Site: EK 29 Federal Com
Well: EK 29 BS2 Fed Com 1H
Wellbore: Wellbore #1
Design: Plan #5 Still in Zone 13Jan17 kjs

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1870.0	1870.0	Rustler	1.60	180.00
1930.0	1930.0	Salt	1.60	180.00
3417.6	3426.3	Yates	1.60	180.00
3842.3	3854.3	Seven Rivers	1.60	180.00
4616.8	4634.8	Queen	1.60	180.00
4916.6	4936.9	Penrose	1.60	180.00
5441.3	5465.6	San Andres	1.60	180.00
5666.2	5692.1	Delaware	1.60	180.00
5706.2	5732.4	1st Delaware Sand	1.60	180.00
5866.1	5893.5	2nd Delaware Sand	1.60	180.00
6615.6	6648.8	Brushy Canyon	1.60	180.00
7839.8	7882.4	Bone Spring	1.60	180.00
9064.1	9116.0	1st Bone Spring Sand	1.60	180.00
9665.2	9729.7	2nd Bone Spring Sand	1.60	180.00
9903.0	10105.8	TOP TARGET WINDOW	1.60	180.00
10051.5	14709.2	TARGET CENTER LINE	1.60	180.00

Azimuths to True North
Magnetic North: 7.07°

Magnetic Field
Strength: 48460.6snT
Dip Angle: 60.53°
Date: 12/15/2015
Model: IGRF2010



Vertical Section at 180.00° (600 usft/in)