

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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 ☐ Other

2. Name of Operator

MCELVAIN ENERGY INC

Contact: TONY G COOPER

E-Mail: tony.cooper@mcelvain.com

3a. Address

511 16TH STREET STE. 700
DENVER, CO 80202

3b. Phone No. (include area code)

Ph: 303-962-6489
Fx: 303-893-0914

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 31 T18S R34E Mer NMP 30FNL 1050FWL

8. Well Name and No.

EK 31 BS2 FEDERAL COM 4H

9. API Well No.

30-025-43149

10. Field and Pool or Exploratory Area

EK BONE SPRING

11. County or Parish, State

LEA 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 recompleat 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 recompleat 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 is respectfully requesting the following changes to this previously approved APD.

Old SHL - 80' FSL, 1050' FWL
New SHL - 30' FSL, 1050' FWL
Old BHL - 2705' FNL 660' FWL
New BHL - Same as Old
TMD 17,734 (Including RH)

Revised C-102 and Directional Plan attached.

11/16/2018: Engineering review completed by M Hague.

OK Per Bud Ballen 11-16-2018 Correct under Doc. BLM - NM P-25-2016-147. EA Same as 3/14/18. No New Surface Disturbance

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

Electronic Submission #443858 verified by the BLM Well Information System
For MCELVAIN ENERGY INC, sent to the Hobbs
Committed to AFMSS for processing by MUSTAFA HAQUE on 11/14/2018 ()

Name (Printed/Typed) TONY G COOPER

Title REGULATORY MANAGER

Signature (Electronic Submission)

Date 11/13/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

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

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 **

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6181 Fax: (575) 393-0720

DISTRICT II

811 S. First St., Artesia, NM 88210
Phone (575) 743-1263 Fax: (575) 748-0720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-5178 Fax: (505) 334-0170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-43149	Pool Code 21650	Pool Name E-K; BONE SPRING
Property Code 316077	Property Name EK 31 BS2 FEDERAL COM	Well Number 4H
GRID No. 22044	Operator Name McELVAIN ENERGY, INC	Elevation 3861'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	31	18 S	34 E		30	NORTH	1050	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 5	6	19 S	34 E		2705	NORTH	660	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
277.73			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SURFACE LOCATION
Lat - N 32.711381'
Long - W 103.604559'
NMSPC - N 623302.3
E 765489.7
(NAD-83)

FIRST TAKE POINT
100' FNL & 660' FWL
Lat - N 32.711189'
Long - W 103.605823'
NMSPC - N 623229.6
E 765101.4
(NAD-83)

LAST TAKE POINT
2630' FNL & 660' FWL
Lat - N 32.689717'
Long - W 103.605838'
NMSPC - N 615417.8
E 765150.3
(NAD-83)

BOTTOM HOLE LOCATION
Lat - N 32.689511'
Long - W 103.605839'
NMSPC - N 615342.8
E 765150.5
(NAD-83)

OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Tony Lopez 11-13-18
Signature Date

Tony Lopez
Printed Name

Tony C@mcElvain.com
Email Address

SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

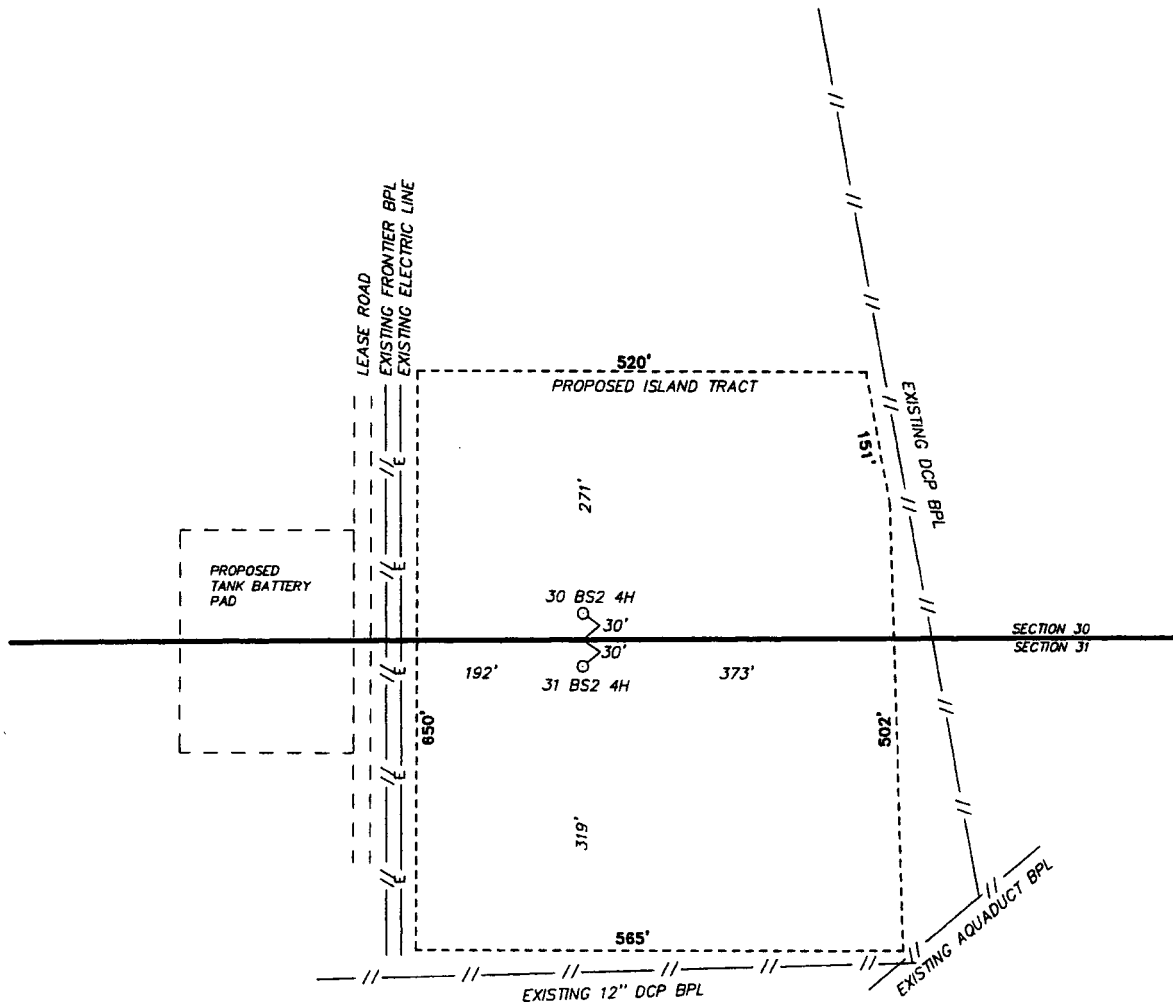
OCTOBER 31 2018
Date Surveyed

[Signature]
Signature & Seal of Professional Surveyor

7977
Certificate No. 7977

SCALE: 1" = 1000'
WD Num.: 34177

SECTIONS 30&31, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



McELVAIN ENERGY, INC
EK 31 BS2 FEDERAL COM 4H
ELEV. - 3861'

Lat - N 32.711381°
Long - W 103.604559°
NMSPCE- N 623302.3
E 765489.7
(NAD-83)

Directions to Location:

ON STATE HIGHWAY 529 GO 0.1 MILE WEST OF MILE
MARKER 17, GO SOUTH ON LEASE ROAD 2.9 MILES
TAKE CURVE EAST ANOTHER 1.0 MILES, THEN GO
SOUTH 0.1 MILES TO THE LOCATION.

MONUMENT, NM IS ±20 MILES TO THE SOUTHEAST OF LOCATION.

200 0 200 400 FEET
SCALE: 1" = 200'

McELVAIN ENERGY, INC

REF: EK 31 BS2 FEDERAL COM 4H / WELL PAD TOPO

THE EK 31 BS2 FEDERAL COM 4H LOCATED 30' FROM
THE NORTH LINE AND 1050' FROM THE WEST LINE OF
SECTION 31, TOWNSHIP 18 SOUTH, RANGE 34 EAST.

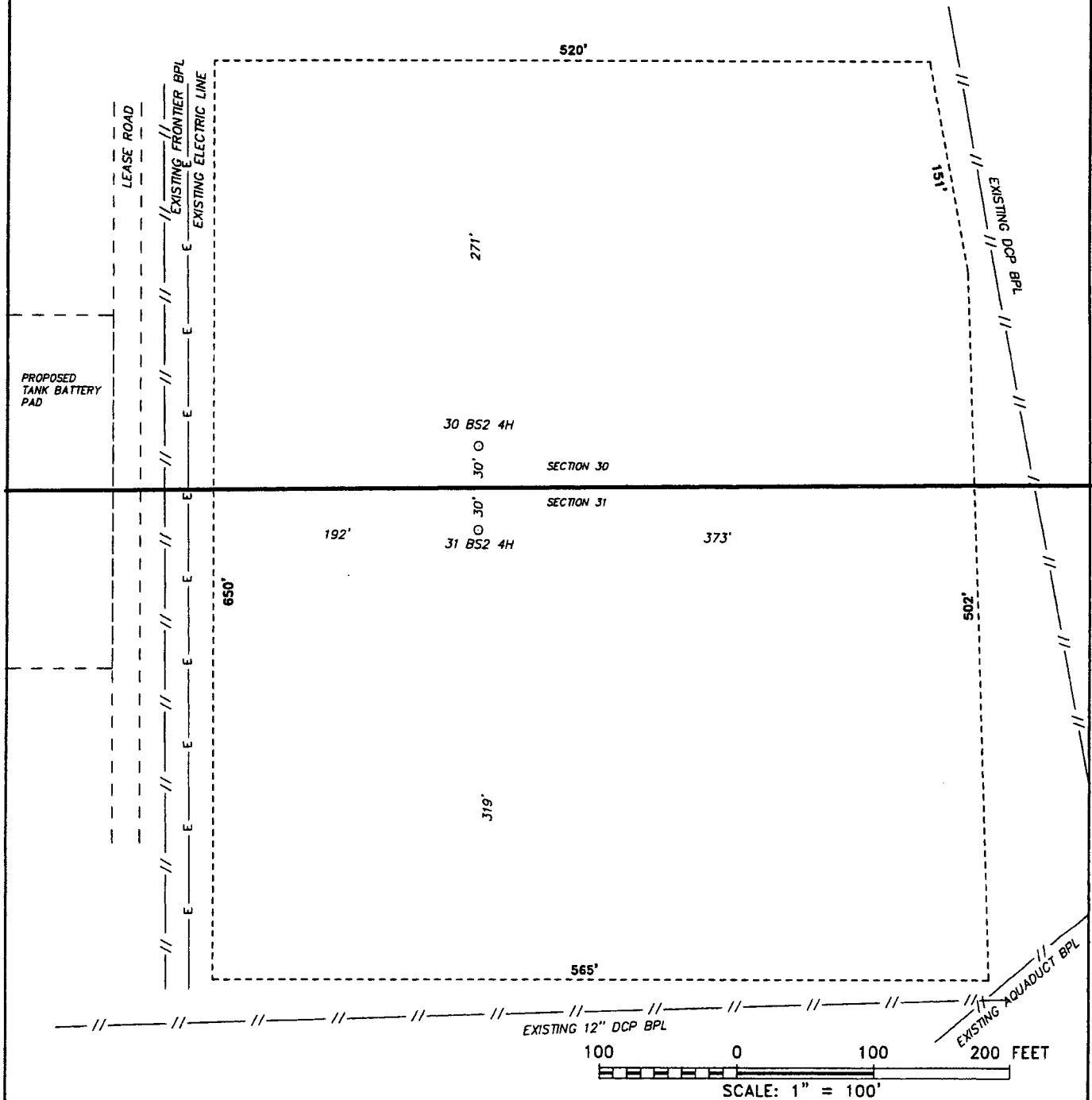
N.M.P.M., LEA COUNTY, NEW MEXICO.

basin
surveys
focused on excellence
in the oilfield

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

W.O. Number: 34177 Drawn By: K. GOAD Date: 11-02-2018 Survey Date: 10-31-2018 Sheet 1 of 1 Sheets

SECTION 30&31, TOWNSHIP 18 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

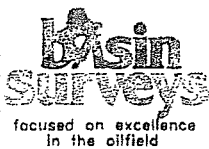


McELVAIN ENERGY, INC

REF: EK 31 BS2 FEDERAL COM 4H / WELL PAD TOPO

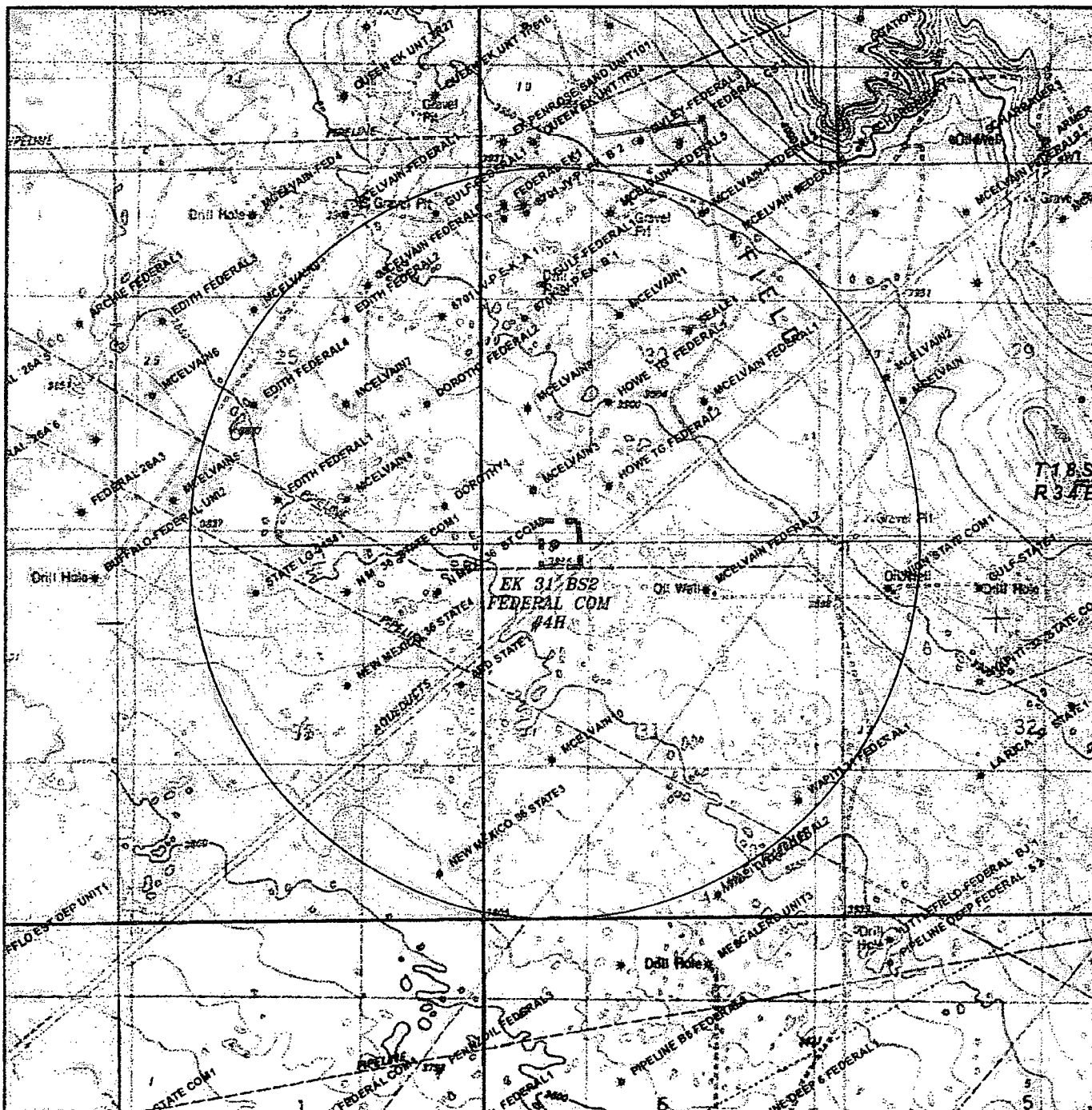
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THE NORTH LINE AND 1050' FROM THE WEST LINE OF
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N.M.P.M., LEA COUNTY, NEW MEXICO.

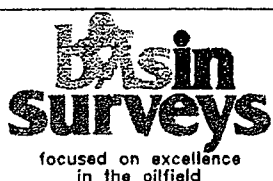


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W.O. Number: 34177 Drawn By: K. GOAD Date: 11-02-2018 Survey Date: 10-31-2018 Sheet 1 of 1 Sheets



EK 31 BS2 FEDERAL COM 4H
 Located 30' FNL and 1050' FWL
 Section 31, Township 18 South, Range 34 East,
 N.M.P.M., Lea County, New Mexico.



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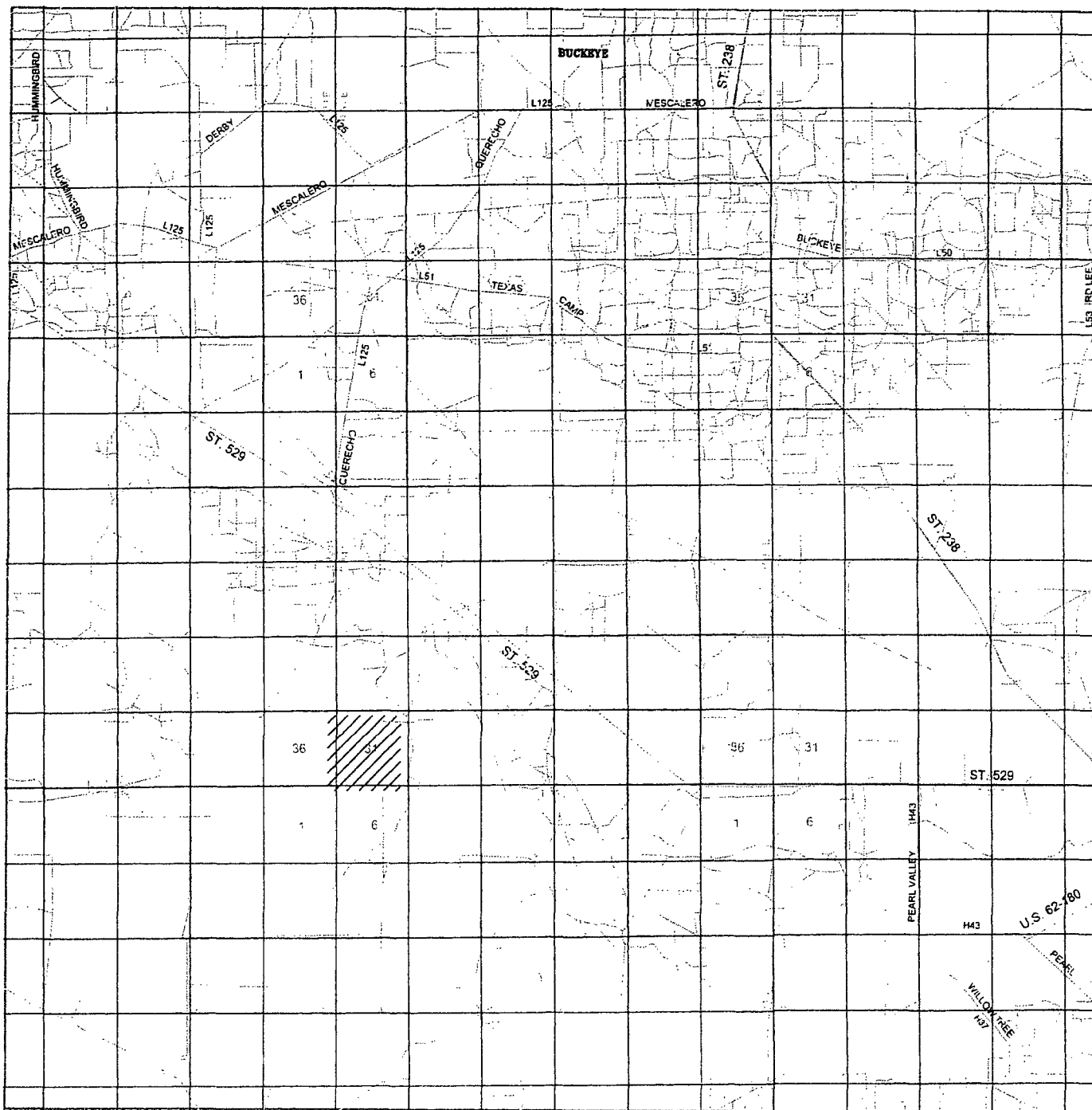
0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

W.O. Number: 34177

Survey Date: 10-31-2018

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

**McELVAIN
 ENERGY, INC**



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 Located 30' FNL and 1050' FWL
 Section 31, Township 18 South, Range 34 East,
 N.M.P.M., Lea County, New Mexico.



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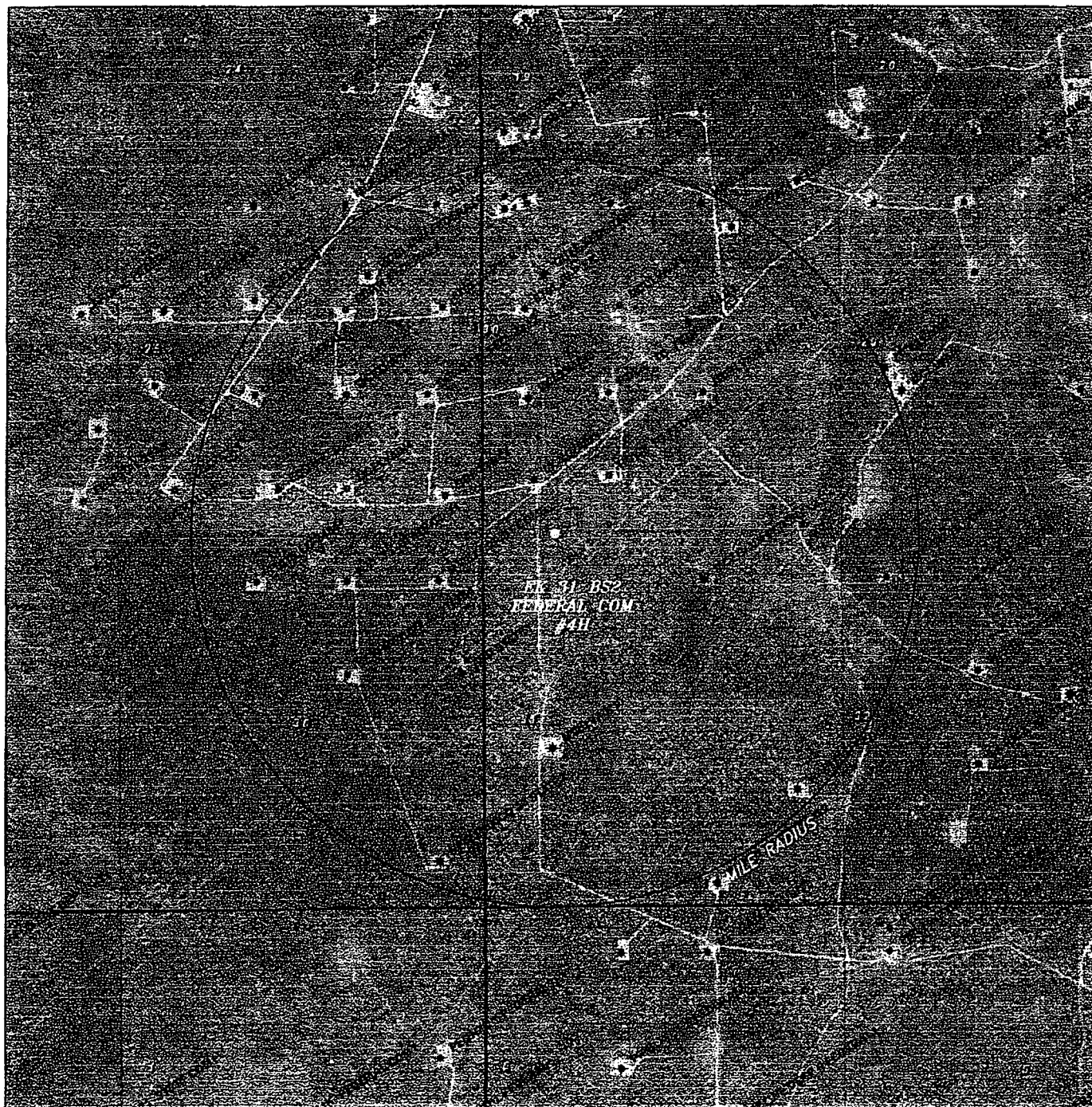
0 1 MI 2 MI 3 MI 4 MI
 SCALE: 1" = 2 MILES

W.O. Number: 34177
 Survey Date: 10-31-2018

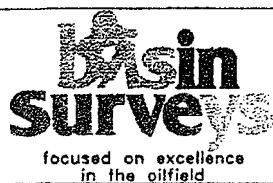
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ENERGY, INC**



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

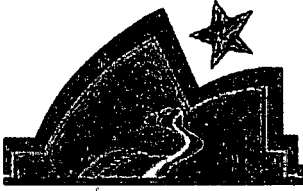
W.O. Number: 34177

Survey Date: 10-31-2018

YELLOW TINT - USA LAND
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 NATURAL COLOR - FEE LAND



**McELVAIN
 ENERGY, INC**



McElvain Energy, Inc.

Sec. 30 T18S R34E

EK 30 WCD Federal Com

EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H

Wellbore #1

Plan: Plan #5 07Nov18 kjs

Standard Planning Report - Geographic

07 November, 2018



Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H
Company:	McElvain Energy, Inc.	TVD Reference:	KB @ 3881.00usft
Project:	Sec. 30 T18S R34E	MD Reference:	KB @ 3881.00usft
Site:	EK 30 WCD Federal Com	North Reference:	Grid
Well:	EK 31 BS2 Federal Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 07Nov18 kjs		

Project	Sec. 30 T18S R34E, Lea County, NM		
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 30 WCD Federal Com			
Site Position:		Northing:	626,476.830 usft	Latitude:	32.720115
From:	Map	Easting:	765,038.760 usft	Longitude:	-103.605955
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H					
Well Position	+N/-S	0.00 usft	Northing:	623,302.300 usft	Latitude:	32.711381
	+E/-W	0.00 usft	Easting:	765,489.700 usft	Longitude:	-103.604559
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,861.00 usft

Wellbore	Wellbore #1					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
			(°)	(°)	(nT)	
	IGRF2010	7/29/2015	7.13	60.53	48,489.23449444	

Design	Plan #5 07Nov18 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	179.61

Plan Survey Tool Program		Date 11/7/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 0.00	17,734.91	Plan #5 07Nov18 kjs (Wellbore #	MWD	
			MWD - Standard	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,066.23	2.49	270.43	2,066.18	0.03	-3.62	1.50	1.50	0.00	270.43	
9,472.30	2.49	270.43	9,465.24	2.44	-325.81	0.00	0.00	0.00	0.00	
10,054.00	69.77	180.00	9,913.24	-310.00	-340.30	12.00	11.56	-15.55	-91.35	
10,209.22	88.39	179.99	9,942.52	-461.73	-340.29	12.00	12.00	0.00	-0.02	
17,634.91	88.39	179.99	10,151.00	-7,884.50	-339.40	0.00	0.00	0.00	0.00	TD / PBHL 31 BS2 4H
17,734.91	88.39	179.99	10,153.81	-7,984.46	-339.39	0.00	0.00	0.00	0.00	



Planning Report - Geographic

Database: EDM 5000.15 Single User Db

Local Co-ordinate Reference:

Well EK 31 BS2 Federal Com 4H - Slot 31
BS2 4H

Company: McElvain Energy, Inc.

TVD Reference:

KB @ 3881.00usft

Project: Sec. 30 T18S R34E

MD Reference:

KB @ 3881.00usft

Site: EK 30 WCD Federal Com

North Reference:

Grid

Well: EK 31 BS2 Federal Com 4H

Survey Calculation Method:

Minimum Curvature

Wellbore: Wellbore #1

Design: Plan #5 07Nov18 kjs

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
100.00	0.00	0.00	100.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
200.00	0.00	0.00	200.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
300.00	0.00	0.00	300.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
400.00	0.00	0.00	400.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
500.00	0.00	0.00	500.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
600.00	0.00	0.00	600.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
700.00	0.00	0.00	700.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
800.00	0.00	0.00	800.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
900.00	0.00	0.00	900.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,000.00	0.00	0.00	1,000.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,100.00	0.00	0.00	1,100.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,200.00	0.00	0.00	1,200.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,300.00	0.00	0.00	1,300.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,400.00	0.00	0.00	1,400.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,500.00	0.00	0.00	1,500.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,600.00	0.00	0.00	1,600.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,681.00	0.00	0.00	1,681.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
Rustier									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,741.00	0.00	0.00	1,741.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
Salt									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
1,900.00	0.00	0.00	1,900.00	0.00	0.00	623,302.300	765,489.700	32.711381	-103.604559
Start Build 1.50									
2,000.00	1.50	270.43	1,999.99	0.01	-1.31	623,302.310	765,488.391	32.711381	-103.604564
2,066.23	2.49	270.43	2,066.18	0.03	-3.62	623,302.328	765,486.083	32.711381	-103.604571
Hold 2.49 Inc, 270.43 Az									
2,100.00	2.49	270.43	2,099.92	0.04	-5.09	623,302.339	765,484.614	32.711382	-103.604576
2,200.00	2.49	270.43	2,199.82	0.07	-9.44	623,302.371	765,480.264	32.711382	-103.604590
2,300.00	2.49	270.43	2,299.73	0.10	-13.79	623,302.404	765,475.913	32.711382	-103.604604
2,400.00	2.49	270.43	2,399.63	0.14	-18.14	623,302.436	765,471.563	32.711382	-103.604618
2,500.00	2.49	270.43	2,499.54	0.17	-22.49	623,302.469	765,467.213	32.711382	-103.604633
2,600.00	2.49	270.43	2,599.44	0.20	-26.84	623,302.502	765,462.862	32.711382	-103.604647
2,700.00	2.49	270.43	2,699.35	0.23	-31.19	623,302.534	765,458.512	32.711383	-103.604661
2,800.00	2.49	270.43	2,799.25	0.27	-35.54	623,302.567	765,454.161	32.711383	-103.604675
2,900.00	2.49	270.43	2,899.16	0.30	-39.89	623,302.600	765,449.811	32.711383	-103.604689
3,000.00	2.49	270.43	2,999.06	0.33	-44.24	623,302.632	765,445.461	32.711383	-103.604703
3,100.00	2.49	270.43	3,098.97	0.36	-48.59	623,302.665	765,441.110	32.711383	-103.604717
3,200.00	2.49	270.43	3,198.87	0.40	-52.94	623,302.697	765,436.760	32.711383	-103.604732
3,257.16	2.49	270.43	3,255.98	0.42	-55.43	623,302.716	765,434.273	32.711384	-103.604740
Yates									
3,300.00	2.49	270.43	3,298.78	0.43	-57.29	623,302.730	765,432.410	32.711384	-103.604746
3,400.00	2.49	270.43	3,398.68	0.46	-61.64	623,302.763	765,428.059	32.711384	-103.604760
3,401.32	2.49	270.43	3,400.00	0.46	-61.70	623,302.763	765,428.002	32.711384	-103.604760
9 5/8"									
3,500.00	2.49	270.43	3,498.59	0.49	-65.99	623,302.795	765,423.709	32.711384	-103.604774
3,600.00	2.49	270.43	3,598.50	0.53	-70.34	623,302.828	765,419.358	32.711384	-103.604788
3,700.00	2.49	270.43	3,698.40	0.56	-74.69	623,302.861	765,415.008	32.711384	-103.604802
3,732.60	2.49	270.43	3,730.97	0.57	-76.11	623,302.871	765,413.590	32.711384	-103.604807
Seven Rivers									
3,800.00	2.49	270.43	3,798.31	0.59	-79.04	623,302.893	765,410.658	32.711384	-103.604816
3,900.00	2.49	270.43	3,898.21	0.63	-83.39	623,302.926	765,406.307	32.711385	-103.604831



Planning Report - Geographic

Database: EDM 5000.15 Single User Db
 Company: McElvain Energy, Inc.
 Project: Sec. 30 T18S R34E
 Site: EK 30 WCD Federal Com
 Well: EK 31 BS2 Federal Com 4H
 Wellbore: Wellbore #1
 Design: Plan #5 07Nov18 kjs

Local Co-ordinate Reference: Well EK 31 BS2 Federal Com 4H - Slot 31
 BS2 4H
 TVD Reference: KB @ 3881.00usft
 MD Reference: KB @ 3881.00usft
 North Reference: Grid
 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
4,000.00	2.49	270.43	3,998.12	0.66	-87.74	623,302.958	765,401.957	32.711385	-103.604845
4,100.00	2.49	270.43	4,098.02	0.69	-92.09	623,302.991	765,397.607	32.711385	-103.604859
4,200.00	2.49	270.43	4,197.93	0.72	-96.44	623,303.024	765,393.256	32.711385	-103.604873
4,300.00	2.49	270.43	4,297.83	0.76	-100.79	623,303.056	765,388.906	32.711385	-103.604887
4,400.00	2.49	270.43	4,397.74	0.79	-105.14	623,303.089	765,384.555	32.711385	-103.604901
4,433.25	2.49	270.43	4,430.96	0.80	-106.59	623,303.100	765,383.109	32.711386	-103.604906
Queen									
4,500.00	2.49	270.43	4,497.64	0.82	-109.49	623,303.122	765,380.205	32.711386	-103.604915
4,600.00	2.49	270.43	4,597.55	0.85	-113.84	623,303.154	765,375.855	32.711386	-103.604930
4,700.00	2.49	270.43	4,697.45	0.89	-118.20	623,303.187	765,371.504	32.711386	-103.604944
4,708.51	2.49	270.43	4,705.96	0.89	-118.57	623,303.190	765,371.134	32.711386	-103.604945
Penrose									
4,800.00	2.49	270.43	4,797.36	0.92	-122.55	623,303.219	765,367.154	32.711386	-103.604958
4,900.00	2.49	270.43	4,897.26	0.95	-126.90	623,303.252	765,362.804	32.711386	-103.604972
5,000.00	2.49	270.43	4,997.17	0.98	-131.25	623,303.285	765,358.453	32.711387	-103.604986
5,100.00	2.49	270.43	5,097.08	1.02	-135.60	623,303.317	765,354.103	32.711387	-103.605000
5,200.00	2.49	270.43	5,196.98	1.05	-139.95	623,303.350	765,349.752	32.711387	-103.605014
5,259.02	2.49	270.43	5,255.95	1.07	-142.51	623,303.369	765,347.185	32.711387	-103.605023
San Andres									
5,300.00	2.49	270.43	5,296.89	1.08	-144.30	623,303.383	765,345.402	32.711387	-103.605029
5,400.00	2.49	270.43	5,396.79	1.11	-148.65	623,303.415	765,341.052	32.711387	-103.605043
5,409.16	2.49	270.43	5,405.94	1.12	-149.05	623,303.418	765,340.653	32.711387	-103.605044
Delaware									
5,449.20	2.49	270.43	5,445.94	1.13	-150.79	623,303.431	765,338.911	32.711387	-103.605050
1st Delaware Sand									
5,500.00	2.49	270.43	5,496.70	1.15	-153.00	623,303.448	765,336.701	32.711387	-103.605057
5,600.00	2.49	270.43	5,596.60	1.18	-157.35	623,303.480	765,332.351	32.711388	-103.605071
5,700.00	2.49	270.43	5,696.51	1.21	-161.70	623,303.513	765,328.000	32.711388	-103.605085
5,734.46	2.49	270.43	5,730.94	1.22	-163.20	623,303.524	765,326.501	32.711388	-103.605090
2nd Delaware Sand									
5,800.00	2.49	270.43	5,796.41	1.25	-166.05	623,303.546	765,323.650	32.711388	-103.605099
5,900.00	2.49	270.43	5,896.32	1.28	-170.40	623,303.578	765,319.300	32.711388	-103.605113
6,000.00	2.49	270.43	5,996.22	1.31	-174.75	623,303.611	765,314.949	32.711388	-103.605128
6,100.00	2.49	270.43	6,096.13	1.34	-179.10	623,303.644	765,310.599	32.711388	-103.605142
6,200.00	2.49	270.43	6,196.03	1.38	-183.45	623,303.676	765,306.249	32.711389	-103.605156
6,300.00	2.49	270.43	6,295.94	1.41	-187.80	623,303.709	765,301.898	32.711389	-103.605170
6,400.00	2.49	270.43	6,395.84	1.44	-192.15	623,303.741	765,297.548	32.711389	-103.605184
6,500.00	2.49	270.43	6,495.75	1.47	-196.50	623,303.774	765,293.197	32.711389	-103.605198
6,600.00	2.49	270.43	6,595.66	1.51	-200.85	623,303.807	765,288.847	32.711389	-103.605212
6,700.00	2.49	270.43	6,695.56	1.54	-205.20	623,303.839	765,284.497	32.711389	-103.605227
6,800.00	2.49	270.43	6,795.47	1.57	-209.55	623,303.872	765,280.146	32.711390	-103.605241
6,900.00	2.49	270.43	6,895.37	1.60	-213.90	623,303.905	765,275.796	32.711390	-103.605255
7,000.00	2.49	270.43	6,995.28	1.64	-218.25	623,303.937	765,271.446	32.711390	-103.605269
7,100.00	2.49	270.43	7,095.18	1.67	-222.60	623,303.970	765,267.095	32.711390	-103.605283
7,200.00	2.49	270.43	7,195.09	1.70	-226.95	623,304.002	765,262.745	32.711390	-103.605297
7,300.00	2.49	270.43	7,294.99	1.73	-231.31	623,304.035	765,258.394	32.711390	-103.605311
7,400.00	2.49	270.43	7,394.90	1.77	-235.66	623,304.068	765,254.044	32.711391	-103.605326
7,500.00	2.49	270.43	7,494.80	1.80	-240.01	623,304.100	765,249.694	32.711391	-103.605340
7,600.00	2.49	270.43	7,594.71	1.83	-244.36	623,304.133	765,245.343	32.711391	-103.605354
7,601.20	2.49	270.43	7,595.91	1.83	-244.41	623,304.133	765,245.291	32.711391	-103.605354
Bone Spring									
7,700.00	2.49	270.43	7,694.61	1.87	-248.71	623,304.166	765,240.993	32.711391	-103.605368
7,800.00	2.49	270.43	7,794.52	1.90	-253.06	623,304.198	765,236.643	32.711391	-103.605382



Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H
Company:	McElvain Energy, Inc.	TVD Reference:	KB @ 3881.00usft
Project:	Sec. 30 T18S R34E	MD Reference:	KB @ 3881.00usft
Site:	EK 30 WCD Federal Com	North Reference:	Grid
Well:	EK 31 BS2 Federal Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 07Nov18 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,900.00	2.49	270.43	7,894.42	1.93	-257.41	623,304.231	765,232.292	32.711391	-103.605396
8,000.00	2.49	270.43	7,994.33	1.96	-261.76	623,304.263	765,227.942	32.711392	-103.605410
8,100.00	2.49	270.43	8,094.23	2.00	-266.11	623,304.296	765,223.591	32.711392	-103.605425
8,200.00	2.49	270.43	8,194.14	2.03	-270.46	623,304.329	765,219.241	32.711392	-103.605439
8,300.00	2.49	270.43	8,294.05	2.06	-274.81	623,304.361	765,214.891	32.711392	-103.605453
8,400.00	2.49	270.43	8,393.95	2.09	-279.16	623,304.394	765,210.540	32.711392	-103.605467
8,500.00	2.49	270.43	8,493.86	2.13	-283.51	623,304.427	765,206.190	32.711393	-103.605481
8,600.00	2.49	270.43	8,593.76	2.16	-287.86	623,304.459	765,201.840	32.711393	-103.605495
8,700.00	2.49	270.43	8,693.67	2.19	-292.21	623,304.492	765,197.489	32.711393	-103.605509
8,800.00	2.49	270.43	8,793.57	2.22	-296.56	623,304.524	765,193.139	32.711393	-103.605524
8,900.00	2.49	270.43	8,893.48	2.26	-300.91	623,304.557	765,188.788	32.711393	-103.605538
8,937.44	2.49	270.43	8,930.89	2.27	-302.54	623,304.569	765,187.159	32.711393	-103.605543
1st Bone Spring Sand									
9,000.00	2.49	270.43	8,993.38	2.29	-305.26	623,304.590	765,184.438	32.711393	-103.605552
9,100.00	2.49	270.43	9,093.29	2.32	-309.61	623,304.622	765,180.088	32.711394	-103.605566
9,200.00	2.49	270.43	9,193.19	2.35	-313.96	623,304.655	765,175.737	32.711394	-103.605580
9,300.00	2.49	270.43	9,293.10	2.39	-318.31	623,304.688	765,171.387	32.711394	-103.605594
9,400.00	2.49	270.43	9,393.00	2.42	-322.66	623,304.720	765,167.036	32.711394	-103.605608
9,472.30	2.49	270.43	9,465.24	2.44	-325.81	623,304.744	765,163.891	32.711394	-103.605619
KOP 12/100									
9,487.97	3.09	232.91	9,480.88	2.19	-326.49	623,304.492	765,163.214	32.711394	-103.605621
2nd Bone Spring Sand									
9,500.00	4.11	216.40	9,492.89	1.65	-327.00	623,303.950	765,162.700	32.711392	-103.605622
9,600.00	15.46	188.14	9,591.32	-14.49	-331.03	623,287.812	765,158.673	32.711348	-103.605636
9,700.00	27.37	183.90	9,684.25	-50.75	-334.49	623,251.549	765,155.209	32.711248	-103.605648
9,800.00	39.33	182.13	9,767.63	-105.55	-337.24	623,196.746	765,152.458	32.711098	-103.605658
9,900.00	51.31	181.08	9,837.82	-176.50	-339.16	623,125.798	765,150.541	32.710903	-103.605666
10,000.00	63.29	180.34	9,891.74	-260.49	-340.16	623,041.807	765,149.541	32.710672	-103.605671
10,054.00	69.77	180.00	9,913.24	-310.00	-340.30	622,992.300	765,149.400	32.710536	-103.605673
10,058.50	70.30	180.00	9,914.77	-314.22	-340.30	622,988.076	765,149.400	32.710524	-103.605673
POP - TOP TARGET WINDOW									
10,100.00	75.29	180.00	9,927.05	-353.86	-340.30	622,948.441	765,149.400	32.710415	-103.605674
10,200.00	87.29	179.99	9,942.17	-452.52	-340.29	622,849.776	765,149.408	32.710144	-103.605676
10,209.21	88.39	179.99	9,942.52	-461.73	-340.29	622,840.573	765,149.409	32.710119	-103.605676
LP 88.39 Inc, 180 Az									
10,300.00	88.39	179.99	9,945.07	-552.48	-340.28	622,749.819	765,149.420	32.709869	-103.605678
10,400.00	88.39	179.99	9,947.88	-652.44	-340.27	622,649.858	765,149.432	32.709595	-103.605680
10,500.00	88.39	179.99	9,950.68	-752.40	-340.26	622,549.898	765,149.444	32.709320	-103.605682
10,600.00	88.39	179.99	9,953.49	-852.36	-340.24	622,449.937	765,149.456	32.709045	-103.605685
10,700.00	88.39	179.99	9,956.30	-952.32	-340.23	622,349.976	765,149.468	32.708770	-103.605687
10,800.00	88.39	179.99	9,959.11	-1,052.28	-340.22	622,250.016	765,149.480	32.708496	-103.605689
10,900.00	88.39	179.99	9,961.91	-1,152.25	-340.21	622,150.055	765,149.492	32.708221	-103.605691
11,000.00	88.39	179.99	9,964.72	-1,252.21	-340.20	622,050.095	765,149.504	32.707946	-103.605693
11,100.00	88.39	179.99	9,967.53	-1,352.17	-340.18	621,950.134	765,149.516	32.707671	-103.605696
11,200.00	88.39	179.99	9,970.34	-1,452.13	-340.17	621,850.173	765,149.528	32.707397	-103.605698
11,300.00	88.39	179.99	9,973.14	-1,552.09	-340.16	621,750.213	765,149.540	32.707122	-103.605700
11,400.00	88.39	179.99	9,975.95	-1,652.05	-340.15	621,650.252	765,149.552	32.706847	-103.605702
11,500.00	88.39	179.99	9,978.76	-1,752.01	-340.14	621,550.292	765,149.564	32.706572	-103.605704
11,600.00	88.39	179.99	9,981.57	-1,851.97	-340.12	621,450.331	765,149.576	32.706298	-103.605707
11,700.00	88.39	179.99	9,984.37	-1,951.93	-340.11	621,350.371	765,149.588	32.706023	-103.605709
11,800.00	88.39	179.99	9,987.18	-2,051.89	-340.10	621,250.410	765,149.600	32.705748	-103.605711
11,900.00	88.39	179.99	9,989.99	-2,151.85	-340.09	621,150.449	765,149.612	32.705473	-103.605713
12,000.00	88.39	179.99	9,992.80	-2,251.81	-340.08	621,050.488	765,149.624	32.705199	-103.605715



Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H
Company:	McElvain Energy, Inc.	TVD Reference:	KB @ 3881.00usft
Project:	Sec. 30 T18S R34E	MD Reference:	KB @ 3881.00usft
Site:	EK 30 WCD Federal Com	North Reference:	Grid
Well:	EK 31 BS2 Federal Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 07Nov18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
12,100.00	88.39	179.99	9,995.60	-2,351.77	-340.06	620,950.527	765,149.636	32.704924	-103.605717
12,200.00	88.39	179.99	9,998.41	-2,451.73	-340.05	620,850.567	765,149.648	32.704649	-103.605720
12,300.00	88.39	179.99	10,001.22	-2,551.69	-340.04	620,750.606	765,149.660	32.704374	-103.605722
12,400.00	88.39	179.99	10,004.03	-2,651.65	-340.03	620,650.646	765,149.672	32.704100	-103.605724
12,500.00	88.39	179.99	10,006.83	-2,751.61	-340.02	620,550.685	765,149.684	32.703825	-103.605726
12,600.00	88.39	179.99	10,009.64	-2,851.58	-340.00	620,450.724	765,149.696	32.703550	-103.605728
12,700.00	88.39	179.99	10,012.45	-2,951.54	-339.99	620,350.764	765,149.708	32.703276	-103.605731
12,800.00	88.39	179.99	10,015.26	-3,051.50	-339.98	620,250.803	765,149.720	32.703001	-103.605733
12,900.00	88.39	179.99	10,018.06	-3,151.46	-339.97	620,150.843	765,149.732	32.702726	-103.605735
13,000.00	88.39	179.99	10,020.87	-3,251.42	-339.96	620,050.882	765,149.744	32.702451	-103.605737
13,100.00	88.39	179.99	10,023.68	-3,351.38	-339.94	619,950.922	765,149.756	32.702177	-103.605739
13,200.00	88.39	179.99	10,026.49	-3,451.34	-339.93	619,850.961	765,149.768	32.701902	-103.605742
13,300.00	88.39	179.99	10,029.29	-3,551.30	-339.92	619,751.000	765,149.780	32.701627	-103.605744
13,400.00	88.39	179.99	10,032.10	-3,651.26	-339.91	619,651.040	765,149.792	32.701352	-103.605746
13,500.00	88.39	179.99	10,034.91	-3,751.22	-339.90	619,551.079	765,149.804	32.701078	-103.605748
13,600.00	88.39	179.99	10,037.72	-3,851.18	-339.88	619,451.119	765,149.816	32.700803	-103.605750
13,700.00	88.39	179.99	10,040.52	-3,951.14	-339.87	619,351.158	765,149.828	32.700528	-103.605753
13,800.00	88.39	179.99	10,043.33	-4,051.10	-339.86	619,251.198	765,149.840	32.700253	-103.605755
13,900.00	88.39	179.99	10,046.14	-4,151.06	-339.85	619,151.237	765,149.852	32.699979	-103.605757
14,000.00	88.39	179.99	10,048.95	-4,251.02	-339.84	619,051.276	765,149.864	32.699704	-103.605759
14,100.00	88.39	179.99	10,051.76	-4,350.98	-339.82	618,951.316	765,149.876	32.699429	-103.605761
14,200.00	88.39	179.99	10,054.56	-4,450.94	-339.81	618,851.355	765,149.888	32.699154	-103.605763
14,300.00	88.39	179.99	10,057.37	-4,550.91	-339.80	618,751.395	765,149.900	32.698880	-103.605766
14,400.00	88.39	179.99	10,060.18	-4,650.87	-339.79	618,651.434	765,149.912	32.698605	-103.605768
14,500.00	88.39	179.99	10,062.99	-4,750.83	-339.78	618,551.474	765,149.924	32.698330	-103.605770
14,600.00	88.39	179.99	10,065.79	-4,850.79	-339.76	618,451.513	765,149.936	32.698055	-103.605772
14,700.00	88.39	179.99	10,068.60	-4,950.75	-339.75	618,351.552	765,149.948	32.697781	-103.605774
14,800.00	88.39	179.99	10,071.41	-5,050.71	-339.74	618,251.592	765,149.960	32.697506	-103.605777
14,900.00	88.39	179.99	10,074.22	-5,150.67	-339.73	618,151.631	765,149.972	32.697231	-103.605779
15,000.00	88.39	179.99	10,077.02	-5,250.63	-339.72	618,051.671	765,149.984	32.696957	-103.605781
15,100.00	88.39	179.99	10,079.83	-5,350.59	-339.70	617,951.710	765,149.996	32.696682	-103.605783
15,200.00	88.39	179.99	10,082.64	-5,450.55	-339.69	617,851.750	765,150.008	32.696407	-103.605785
15,300.00	88.39	179.99	10,085.45	-5,550.51	-339.68	617,751.789	765,150.020	32.696132	-103.605788
15,400.00	88.39	179.99	10,088.25	-5,650.47	-339.67	617,651.828	765,150.032	32.695858	-103.605790
15,500.00	88.39	179.99	10,091.06	-5,750.43	-339.66	617,551.868	765,150.044	32.695583	-103.605792
15,600.00	88.39	179.99	10,093.87	-5,850.39	-339.64	617,451.907	765,150.056	32.695308	-103.605794
15,700.00	88.39	179.99	10,096.68	-5,950.35	-339.63	617,351.947	765,150.068	32.695033	-103.605796
15,800.00	88.39	179.99	10,099.48	-6,050.31	-339.62	617,251.986	765,150.080	32.694759	-103.605798
15,900.00	88.39	179.99	10,102.29	-6,150.27	-339.61	617,152.025	765,150.092	32.694484	-103.605801
16,000.00	88.39	179.99	10,105.10	-6,250.23	-339.60	617,052.065	765,150.104	32.694209	-103.605803
16,100.00	88.39	179.99	10,107.91	-6,350.20	-339.58	616,952.104	765,150.116	32.693934	-103.605805
16,200.00	88.39	179.99	10,110.71	-6,450.16	-339.57	616,852.144	765,150.128	32.693660	-103.605807
16,300.00	88.39	179.99	10,113.52	-6,550.12	-339.56	616,752.183	765,150.140	32.693385	-103.605809
16,400.00	88.39	179.99	10,116.33	-6,650.08	-339.55	616,652.223	765,150.152	32.693110	-103.605812
16,500.00	88.39	179.99	10,119.14	-6,750.04	-339.54	616,552.262	765,150.164	32.692835	-103.605814
16,600.00	88.39	179.99	10,121.94	-6,850.00	-339.52	616,452.301	765,150.176	32.692561	-103.605816
16,700.00	88.39	179.99	10,124.75	-6,949.96	-339.51	616,352.341	765,150.188	32.692286	-103.605818
16,800.00	88.39	179.99	10,127.56	-7,049.92	-339.50	616,252.380	765,150.200	32.692011	-103.605820
16,900.00	88.39	179.99	10,130.37	-7,149.88	-339.49	616,152.420	765,150.212	32.691736	-103.605823
17,000.00	88.39	179.99	10,133.17	-7,249.84	-339.48	616,052.459	765,150.224	32.691462	-103.605825
17,100.00	88.39	179.99	10,135.98	-7,349.80	-339.46	615,952.499	765,150.236	32.691187	-103.605827
17,200.00	88.39	179.99	10,138.79	-7,449.76	-339.45	615,852.538	765,150.247	32.690912	-103.605829
17,300.00	88.39	179.99	10,141.60	-7,549.72	-339.44	615,752.577	765,150.259	32.690637	-103.605831
17,400.00	88.39	179.99	10,144.40	-7,649.68	-339.43	615,652.617	765,150.271	32.690363	-103.605834



Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H
Company:	McElvain Energy, Inc.	TVD Reference:	KB @ 3881.00usft
Project:	Sec. 30 T18S R34E	MD Reference:	KB @ 3881.00usft
Site:	EK 30 WCD Federal Com	North Reference:	Grid
Well:	EK 31 BS2 Federal Com 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 07Nov18 kjs		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
17,500.00	88.39	179.99	10,147.21	-7,749.64	-339.42	615,552.656	765,150.283	32.690088	-103.605836	
17,600.00	88.39	179.99	10,150.02	-7,849.60	-339.40	615,452.696	765,150.295	32.689813	-103.605838	
17,634.91	88.39	179.99	10,151.00	-7,884.50	-339.40	615,417.800	765,150.300	32.689717	-103.605839	
TD at 17634.91 - TD / PBHL 31 BS2 4H										
17,700.00	88.39	179.99	10,152.83	-7,949.56	-339.39	615,352.735	765,150.307	32.689539	-103.605840	
17,733.91	88.39	179.99	10,153.78	-7,983.46	-339.39	615,318.839	765,150.312	32.689445	-103.605841	
End of 100' Rathole										
17,734.91	88.39	179.99	10,153.81	-7,984.46	-339.39	615,317.839	765,150.312	32.689443	-103.605841	

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD / PBHL 31 BS2 4H	- plan hits target center	0.00	359.61	10,151.00	-7,884.50	-339.40	615,417.800	765,150.300	32.689717	-103.605839
	- Point									

Casing Points							Casing Diameter (")	Hole Diameter (")
Measured Depth (usft)	Vertical Depth (usft)	Name						
3,401.32	3,400.00	9 5/8"					9-5/8	12-1/4

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,681.00	1,681.00	Rustler		1.61	179.66	
1,741.00	1,741.00	Salt		1.61	179.66	
3,257.16	3,255.98	Yates		1.61	179.66	
3,732.60	3,730.97	Seven Rivers		1.61	179.66	
4,433.25	4,430.96	Queen		1.61	179.66	
4,708.51	4,705.96	Penrose		1.61	179.66	
5,259.02	5,255.95	San Andres		1.61	179.66	
5,409.16	5,405.94	Delaware		1.61	179.66	
5,449.20	5,445.94	1st Delaware Sand		1.61	179.66	
5,734.46	5,730.94	2nd Delaware Sand		1.61	179.66	
7,601.20	7,595.91	Bone Spring		1.61	179.66	
8,937.44	8,930.89	1st Bone Spring Sand		1.61	179.66	
9,487.97	9,480.88	2nd Bone Spring Sand		1.61	179.66	
10,058.50	9,914.77	TOP TARGET WINDOW		1.61	179.66	



Planning Report - Geographic

Database: EDM 5000.15 Single User Db
Company: McElvain Energy, Inc.
Project: Sec. 30 T18S R34E
Site: EK 30 WCD Federal Com
Well: EK 31 BS2 Federal Com 4H
Wellbore: Wellbore #1
Design: Plan #5 07Nov18 kjs

Local Co-ordinate Reference: Well EK 31 BS2 Federal Com 4H - Slot 31 BS2 4H
TVD Reference: KB @ 3881.00usft
MD Reference: KB @ 3881.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,900.00	1,900.00	0.00	0.00	Start Build 1.50
2,066.23	2,066.18	0.03	-3.62	Hold 2.49 Inc, 270.43 Az
9,472.30	9,465.24	2.44	-325.81	KOP 12/100
10,058.50	9,914.78	-314.23	-340.30	POP
10,209.21	9,942.52	-461.73	-340.29	LP 88.39 Inc, 180 Az
17,634.91	10,151.00	-7,884.50	-339.40	TD at 17634.91
17,733.91	10,153.78	-7,983.46	-339.39	End of 100' Rathole