District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

HOBBS OCD
JAN 23 2018
RECEIVED

# I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

| [1] Operator name and Address | [2] OGRID Number |
|---|---|
| McElvain Energy Inc<br>1050 17th St Ste 2500<br>Denver CO 80265 | 22044 |
| | [3] Reason for Filing Code/ Effective Date<br>NW |

| [4] API Number | [5] Pool Name | [6] Pool Code |
|---|---|---|
| 30 – 025- 43676 | EK Bone Spring | 21650 |

| [7] Property Code | [8] Property Name | [9] Well Number |
|---|---|---|
| 315045 | EK 29 BS2 Federal Com | 2H |

## II. [10] Surface Location

| Ul or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| B | 29 | 18S | 34E | | 210 | FNL | 1450 | FEL | LEA |

## [11] Bottom Hole Location

| UL or lot | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| O | 29 | 18S | 34E | | 186 | FSL | 1990 | FEL | LEA |

| [12] Lse Code | [13] Producing Method | [14] Gas Connection | [15] C-129 Permit Number | [16] C-129 Effective Date | [17] C-129 Expiration Date |
|---|---|---|---|---|---|
| NM245247 | GAS LIFT | 11/1/2017 | NA | | |

## III. Oil and Gas Transporters

| [18] Transporter OGRID | [19] Transporter Name and Address | [20] O/G/W |
|---|---|---|
| 902298 | SHELL TRADING COMPANY<br>100 MAIN, HOUSTON TX, 77002<br>PO BOX 4604<br>72210-4604 | O |
| | TARGA VERSADO LP<br>1000 LA ST STE. 4300<br>HOUSTON TX, 77002 | G |
| | | |
| | | |

## IV. Well Completion Data

| [21] Spud Date | [22] Ready Date | [23] TD | [24] PBTD | [25] Perforations | [26] DHC, MC |
|---|---|---|---|---|---|
| 6-21-2017 | 11-1-2017 | 14849 / 10108 | 14750 | 10101-14691 | |

| [27] Hole Size | [28] Casing & Tubing Size | [29] Depth Set | [30] Sacks Cement |
|---|---|---|---|
| 17.5 | 13.375" J55 | 1926 | 1780 |
| 12.25 | 9.625" L80 40# | 4976 | 1675 |
| 8.5 | 5.5 P110 20# | 14849 | 2205 |
| TUBING | 2.875 | 9909 | NA |

## V. Well Test Data

| [31] Date New Oil | [32] Gas Delivery Date | [33] Test Date | [34] Test Length | [35] Tbg. Pressure | [36] Csg. Pressure |
|---|---|---|---|---|---|
| 11/2/2017 | 11/2/2017 | 11/2/2017 | 24 | 540 | 0 |
| **[37] Choke Size** | **[38] Oil** | **[39] Water** | **[40] Gas** | | **[41] Test Method** |
| 24 | 255 | 1116 | 168 | | FLOW |

[42] I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Tony Cooper

Printed name: TONY G COOPER

Title: REGULATORY MGR

E-mail Address: TONY.COOPER@MCELVAIN.COM

Date: 12/5/2017

Phone: 303-962-6489

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date: 1-23-18

GCP 1.23.18

Pending BLM approvals will subsequently be reviewed and scanned

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Submitted in WIS on 12/4/17 Not approved yet.

# WELL COMPLETION OR RE-COMPLETION REPORT AND LOG

**Bold*** fields are required.

| Section 1 - Completed by Operator | |
|---|---|
| **1. BLM Office***<br>Hobbs, NM | **2. Well Type***<br>OIL |
| **3. Completion Type***<br>New Well | |

| Operating Company Information | |
|---|---|
| **4. Company Name***<br>MCELVAIN ENERGY INC. | |
| **5. Address***<br>1050 17TH STREET SUITE 2500<br>DENVER CO 80265 | **6. Phone Number***<br>303-893-0933 |

| Administrative Contact Information | |
|---|---|
| **7. Contact Name***<br>TONY _ COOPER | **8. Title***<br>REGULATORY MANAGER |
| **9. Address***<br>1050 17TH STREET SUITE 2500<br>DENVER CO 80265 | **10. Phone Number***<br>303-893-0933 __<br>11. Mobile Number<br>303-501-0004 |
| **12. E-mail***<br>TONYC@MCELVAIN.COM | 13. Fax Number<br>303-893-0914 |

| Technical Contact Information | |
|---|---|
| ☑ Check here if Technical Contact is the same as Administrative Contact. | |
| **14. Contact Name*** | **15. Title*** |
| **16. Address*** | **17. Phone Number*** |
| | 18. Mobile Number |
| **19. E-mail*** | 20. Fax Number |

| Surface Location |
|---|
| |

Pending BLM approvals will subsequently be reviewed and scanned

21. Specify location using one of the following methods:
a) State, County, Section, Township, Range, Meridian, N/S Footage, E/W Footage, with Qtr/Qtr, Lot, or Tract
b) State, County, Latitude, Longitude, Metes & Bounds description

| **State*** | **County or Parish*** | | | | |
|---|---|---|---|---|---|
| CO | LEA | | | | |
| Section | Township | Range | Meridian | | |
| 29 | 18S | 34E | NEW MEXICO PRINCIPAL | | |
| Qtr/Qtr | Lot # | Tract # | | N/S Footage | E/W Footage |
| NWNE | B | | | 210 FNL | 1450 FEL |
| Latitude | Longitude | Metes and Bounds | | | |
| | | | | | |

Producing Interval Location

22. Specify location or
☐ Check here if the producing hole location is the same as the surface location.

| **State*** | **County or Parish*** | | | | |
|---|---|---|---|---|---|
| NM | LEA | | | | |
| Section | Township | Range | Meridian | | |
| | | | | | |
| Qtr/Qtr | Lot # | Tract # | | N/S Footage | E/W Footage |
| | | | | | |
| Latitude | Longitude | Metes and Bounds | | | |
| | | | | | |

Bottom Location

23. Specify location or
☐ Check here if the bottom hole location is the same as the surface location.

| **State*** | **County or Parish*** | | | | |
|---|---|---|---|---|---|
| CO | LEA | | | | |
| Section | Township | Range | Meridian | | |
| 29 | 18S | 34E | NEW MEXICO PRINCIPAL | | |
| Qtr/Qtr | Lot # | Tract # | | N/S Footage | E/W Footage |
| | O | | | 186 FSL | 1990 FEL |
| Latitude | Longitude | Metes and Bounds | | | |
| | | | | | |

Lease and Agreement

| **24. Lease Serial Number*** | |
|---|---|
| NMNM0245247 | |
| 26. If Unit or CA/Agreement, Name and/or Number | **27. Field and Pool, or Exploratory Area*** |
| | EK BONE SPRING |

Well

| **28. Well Name*** | **29. Well Number*** | **30. API Number** |
|---|---|---|
| EK 29 BS2 FEDERAL COM | 2H | 30-025-43676 |

| 31. Date Spudded | 32. Date T.D. Reached | 33. Date Completed | 34. Elevations *(DF, RKB, RT, GL)* |
|---|---|---|---|
| 06/21/2017 | 08/23/2017 | 11/01/2017<br>☐ Dry & Abandoned<br>☑ Ready to Produce | 4050 Ground Level |

| 35. Total Depth: | 36. Plug Back Total Depth: | 37. Depth Bridge Plug Set: |
|---|---|---|
| MD 14849<br>TVD 10130 | 14750 MD ~~14849~~<br>TVD 10130 | MD ___<br>TVD ___ |

| 38. Type Electric & Other Mechanical Logs Run<br>*(Submit copy of each)* | 39. |
|---|---|
| CBL, DIRECTIONAL SURVEY | Was Well Cored? ◉No ○Yes *(Submit Analysis)*<br>Was DST run? ◉No ○Yes *(Submit Report)*<br>Directional Survey? ○No ◉Yes *(Submit Copy)* |

40. Casing and Liner Record *(Report all strings set in well)*

| Hole Size | Casing Size | Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sks. | Slurry Vol. (BBL) | Cement Top | Amount Pulled |
|---|---|---|---|---|---|---|---|---|---|---|
| 17.5 | 13.375 | J55 | 54.5 | 0 | 1926 | ___ | 1780 | ___ | 0 | ___ |
| 12.25 | 9.625 | L80 | 40 | 0 | 4976 | ___ | 1675 | ___ | 0 | ___ |
| 8.5 | 5.5 | HCP 110 | 20 | 0 | 14849 | ___ | 2205 | ___ | 0 | ___ |
| ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ |
| ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ |
| ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ |

41. Tubing Record

| Size | Depth Set (MD) | Packer Depth (MD) |
|---|---|---|
| 2.875 | 9914 | 9909 |
| ___ | ___ | ___ |
| ___ | ___ | ___ |

42. Producing Intervals

| Formation | Top (MD) | Bottom (MD) |
|---|---|---|
| A)BONE SPRING | 10101 | 14691 |
| B)_____ | ___ | ___ |
| C)_____ | ___ | ___ |
| D)_____ | ___ | ___ |

43. Perforation Record

| Top | Bottom | Size | No. Holes | Perf. Status |
|---|---|---|---|---|
| 10101 | 14691 | 0.32 | 623 | OPEN |
| ___ | ___ | ___ | ___ | _____ |
| ___ | ___ | ___ | ___ | _____ |
| ___ | ___ | ___ | ___ | _____ |

44. Acid, Fracture, Treatment, Cement Squeeze, etc.

| Top | Bottom | Amount and Type of Material |
|---|---|---|
| 10101 | 14691 | 69,000 GAL HCL, 3,470,971 LBS 100 MESH, 3,309,117 LBS 40/70, 223,358 BBLS SLICKWATER |
| ___ | ___ | _____ |

| | | |
|---|---|---|
| ___ | ___ | _____ |
| ___ | ___ | _____ |

45. Production Method and Well Status for Production Intervals

| Production Method | Well Status |
|---|---|
| Gas Lift | Producing Oil Well |

46. Production - Interval A

| Date First Produced | Test Date | Hours Tested | Test Production | Oil (BBL) | Gas (MCF) | Water (BBL) | Oil Gravity Corr. API | Gas Gravity |
|---|---|---|---|---|---|---|---|---|
| 11/01/2017 | 11/02/2017 | 24 | >>>>> | 255 | 168 | 1116 | 38 | .856 |
| Choke Size | Tubing Pressure Flowing / Shut In | Casing Pressure | 24 Hour Rate | Oil (BBL) | Gas (MCF) | Water (BBL) | Gas/Oil Ratio | |
| 24 | 540 ___ | 0 | >>>>> | 255 | 168 | 1116 | 658 | |

47. Production - Interval B

| Date First Produced | Test Date | Hours Tested | Test Production | Oil (BBL) | Gas (MCF) | Water (BBL) | Oil Gravity Corr. API | Gas Gravity |
|---|---|---|---|---|---|---|---|---|
| _____ | _____ | ___ | >>>>> | ___ | ___ | ___ | ___ | ___ |
| Choke Size | Tubing Pressure Flowing / Shut In | Casing Pressure | 24 Hour Rate | Oil (BBL) | Gas (MCF) | Water (BBL) | Gas/Oil Ratio | |
| ____ | ___ ___ | ___ | >>>>> | ___ | ___ | ___ | ___ | |

48. Production - Interval C

| Date First Produced | Test Date | Hours Tested | Test Production | Oil (BBL) | Gas (MCF) | Water (BBL) | Oil Gravity Corr. API | Gas Gravity |
|---|---|---|---|---|---|---|---|---|
| _____ | _____ | ___ | >>>>> | ___ | ___ | ___ | ___ | ___ |
| Choke Size | Tubing Pressure Flowing / Shut In | Casing Pressure | 24 Hour Rate | Oil (BBL) | Gas (MCF) | Water (BBL) | Gas/Oil Ratio | |
| ____ | ___ ___ | ___ | >>>>> | ___ | ___ | ___ | ___ | |

49. Production - Interval D

| Date First Produced | Test Date | Hours Tested | Test Production | Oil (BBL) | Gas (MCF) | Water (BBL) | Oil Gravity Corr. API | Gas Gravity |
|---|---|---|---|---|---|---|---|---|
| _____ | _____ | ___ | >>>>> | ___ | ___ | ___ | ___ | ___ |
| Choke Size | Tubing Pressure Flowing / Shut In | Casing Pressure | 24 Hour Rate | Oil (BBL) | Gas (MCF) | Water (BBL) | Gas/Oil Ratio | |
| ____ | ___ ___ | ___ | >>>>> | ___ | ___ | ___ | ___ | |

50. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
Sold

| 51. Summary of Porous Zones *(Include Aquifers)*:<br>Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries. | | | | 52. Formation (Log) Markers | |
|---|---|---|---|---|---|
| Formation | Top | Bottom | Descriptions, Contents, etc. | Name | |

| | | | | | Top (MD) |
|---|---|---|---|---|---|
| SAN ANDREAS | 5450 | 5675 | | SAN ANDREAS | 5450 |
| DELAWARE | 5675 | 5715 | | DELAWARE | 5675 |
| 1ST DELAWARE SAND | 5715 | 5875 | | 1ST DELAWARE SAND | 5715 |
| 2ND DELAWARE SAND | 5875 | 6625 | | 2ND DELAWARE SAND | 5875 |
| BRUSHY CANYON | 6625 | 7850 | | BRUSHY CANYON | 6625 |
| BONE SPRING | 7850 | 9075 | | BONE SPRING | 7850 |
| 1ST BONE SPRING SAND | 9075 | 9675 | | 1ST BONE SPRING SAND | 9075 |
| 2ND BONE SPRING SAND | 9675 | 9935 | | 2ND BONE SPRING SAND | 9675 |

53. Additional remarks (include plugging procedure):

54. Indicate which items have been attached by placing a check in the appropriate boxes:

☑ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☑ Directional Survey

☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

| **55. Name** | **56. Title** |
|---|---|
| TONY _ COOPER | REGULATORY MANAGER |
| **57. Date*** (MM/DD/YYYY) 12/04/2017 Today | **58. Signature*** *You have the ability to sign this form only if a SmartCard or digital certificate has been issued to you.* |

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.

| **Section 2 - System Receipt Confirmation** | | |
|---|---|---|
| 59. Transaction 396744 | 60. Date Sent 12/04/2017 | 61. Processing Office Hobbs, NM |

| **Section 3 - Internal Review #1 Status** | | |
|---|---|---|
| 62. Review Category _____ | 63. Date Completed _____ | 64. Reviewer Name _____ |
| 65. Comments | | |

| **Section 4 - Internal Review #2 Status** | | |
|---|---|---|
| 66. Review Category _____ | 67. Date Completed _____ | 68. Reviewer Name _____ |
| 69. Comments | | |

| **Section 5 - Internal Review #3 Status** | | |
|---|---|---|
| 70. Review Category _____ | 71. Date Completed _____ | 72. Reviewer Name _____ |

| 73. Comments |
|---|

| Section 6 - Internal Review #4 Status | | |
|---|---|---|
| 74. Review Category _____ | 75. Date Completed _____ | 76. Reviewer Name _____ |
| 77. Comments | | |

| Section 7 - Final Approval Status | | | |
|---|---|---|---|
| 78. Disposition _____ | 79. Date Completed _____ | 80. Reviewer Name _____ | 81. Reviewer Title _____ |
| 82. Comments | | | |

## INSTRUCTIONS

GENERAL: This form is designed for submitting a complete and correct well completion/recompletion report and log on all types of wellson Federal and Indian leases to a Federal agency, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal office.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, and all types electric), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal laws and regulations. All attachments should be listed on this form, see item 33.

ITEMS 24, 22, and 23: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal office for specific instructions.

ITEM 34: Indicate which reported elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

ITEM 40: Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bond log (CBL), or temperature survey (TS).

## PRIVACY ACT

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

30-025-43676

# McElvain Energy

**Lea County, NM (NAD 83)**
**EK 29 BS2 Federal Com**
**#2H**

**OH**



**Design: OH Surveys 125'-14808' PTB 14849'**

# Standard Survey Report

**23 August, 2017**

Provide signature page for directional survey

PRODIRECTIONAL

# Pro Directional
Survey Report

PRODIRECTIONAL

| | | | |
|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Project** Lea County, NM (NAD 83)

| | | | |
|---|---|---|---|
| **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 BS2 Federal Com

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 628,432.50 usft | **Latitude:** | 32.7253281 |
| **From:** | Map | **Easting:** | 773,460.90 usft | **Longitude:** | -103.5785260 |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.41 ° |

**Well** #2H

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 628,457.30 usft | **Latitude:** | 32.7253968 |
| | **+E/-W** | 0.00 usft | **Easting:** | 773,430.60 usft | **Longitude:** | -103.5786239 |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 4,050.00 usft |

**Wellbore** OH

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | HDGM | 6/21/2017 | 6.72 | 60.78 | 48,359.90 |

**Design** OH Surveys 125'-14808' PTB 14849'

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 1.0 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 180.00 |

**Survey Program** **Date** 8/23/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 125.00 | 1,845.00 | Gyro (OH) | GYRO-NS-CT | OWSG XYZ Accel with XY Static and Continuous |
| 1,956.00 | 14,849.00 | ProMWD (OH) | MWD+HDGM | OWSG MWD + HRGM |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 125.00 | 0.46 | 300.75 | 125.00 | 0.26 | -0.43 | -0.26 | 0.37 | 0.37 | 0.00 |
| 225.00 | 0.50 | 350.89 | 225.00 | 0.89 | -0.85 | -0.89 | 0.41 | 0.04 | 50.14 |
| 325.00 | 0.28 | 316.85 | 324.99 | 1.50 | -1.08 | -1.50 | 0.31 | -0.22 | -34.04 |
| 425.00 | 0.37 | 11.71 | 424.99 | 2.00 | -1.18 | -2.00 | 0.31 | 0.09 | 54.86 |
| 525.00 | 0.47 | 355.66 | 524.99 | 2.72 | -1.15 | -2.72 | 0.15 | 0.10 | -16.05 |
| 625.00 | 0.55 | 337.84 | 624.99 | 3.57 | -1.36 | -3.57 | 0.18 | 0.08 | -17.82 |
| 725.00 | 0.93 | 351.87 | 724.98 | 4.82 | -1.66 | -4.82 | 0.42 | 0.38 | 14.03 |
| 825.00 | 1.25 | 16.95 | 824.96 | 6.67 | -1.45 | -6.67 | 0.57 | 0.32 | 25.08 |
| 925.00 | 1.21 | 3.28 | 924.94 | 8.77 | -1.07 | -8.77 | 0.30 | -0.04 | -13.67 |

| | | | |
|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 1,025.00 | 1.40 | 3.73 | 1,024.91 | 11.04 | -0.93 | -11.04 | 0.19 | 0.19 | 0.45 |
| 1,125.00 | 1.36 | 1.01 | 1,124.88 | 13.45 | -0.83 | -13.45 | 0.08 | -0.04 | -2.72 |
| 1,225.00 | 0.88 | 4.98 | 1,224.86 | 15.40 | -0.75 | -15.40 | 0.49 | -0.48 | 3.97 |
| 1,325.00 | 0.95 | 35.04 | 1,324.85 | 16.84 | -0.20 | -16.84 | 0.48 | 0.07 | 30.06 |
| 1,425.00 | 0.53 | 29.36 | 1,424.84 | 17.92 | 0.50 | -17.92 | 0.43 | -0.42 | -5.68 |
| 1,525.00 | 0.83 | 12.79 | 1,524.83 | 19.03 | 0.89 | -19.03 | 0.36 | 0.30 | -16.57 |
| 1,625.00 | 0.34 | 6.21 | 1,624.83 | 20.03 | 1.08 | -20.03 | 0.49 | -0.49 | -6.58 |
| 1,725.00 | 0.52 | 7.96 | 1,724.83 | 20.78 | 1.17 | -20.78 | 0.18 | 0.18 | 1.75 |
| 1,825.00 | 0.42 | 334.40 | 1,824.82 | 21.56 | 1.08 | -21.56 | 0.29 | -0.10 | -33.56 |
| 1,845.00 | 0.45 | 352.03 | 1,844.82 | 21.70 | 1.03 | -21.70 | 0.68 | 0.15 | 88.15 |
| 1,956.00 | 0.10 | 338.70 | 1,955.82 | 22.22 | 0.94 | -22.22 | 0.32 | -0.32 | -12.01 |
| 2,009.00 | 0.10 | 292.10 | 2,008.82 | 22.28 | 0.88 | -22.28 | 0.15 | 0.00 | -87.92 |
| 2,103.00 | 1.20 | 306.00 | 2,102.81 | 22.89 | 0.01 | -22.89 | 1.17 | 1.17 | 14.79 |
| 2,198.00 | 2.60 | 314.40 | 2,197.76 | 24.99 | -2.34 | -24.99 | 1.50 | 1.47 | 8.84 |
| 2,293.00 | 4.50 | 316.00 | 2,292.57 | 29.17 | -6.47 | -29.17 | 2.00 | 2.00 | 1.68 |
| 2,388.00 | 5.70 | 319.00 | 2,387.19 | 35.42 | -12.15 | -35.42 | 1.29 | 1.26 | 3.16 |
| 2,482.00 | 7.00 | 309.60 | 2,480.62 | 42.59 | -19.63 | -42.59 | 1.77 | 1.38 | -10.00 |
| 2,577.00 | 8.50 | 301.20 | 2,574.75 | 49.92 | -30.09 | -49.92 | 1.97 | 1.58 | -8.84 |
| 2,671.00 | 8.20 | 289.10 | 2,667.76 | 55.71 | -42.37 | -55.71 | 1.89 | -0.32 | -12.87 |
| 2,766.00 | 7.30 | 273.90 | 2,761.90 | 58.34 | -54.80 | -58.34 | 2.35 | -0.95 | -16.00 |
| 2,861.00 | 6.30 | 254.30 | 2,856.25 | 57.34 | -65.84 | -57.34 | 2.64 | -1.05 | -20.63 |
| 2,955.00 | 5.20 | 235.80 | 2,949.78 | 53.55 | -74.33 | -53.55 | 2.28 | -1.17 | -19.68 |
| 3,050.00 | 4.30 | 249.40 | 3,044.46 | 49.88 | -81.22 | -49.88 | 1.51 | -0.95 | 14.32 |
| 3,145.00 | 3.90 | 256.20 | 3,139.21 | 47.85 | -87.69 | -47.85 | 0.66 | -0.42 | 7.16 |
| 3,239.00 | 4.00 | 279.00 | 3,233.00 | 47.60 | -94.04 | -47.60 | 1.66 | 0.11 | 24.26 |
| 3,334.00 | 4.00 | 286.10 | 3,327.76 | 49.04 | -100.49 | -49.04 | 0.52 | 0.00 | 7.47 |
| 3,428.00 | 4.30 | 289.10 | 3,421.52 | 51.10 | -106.97 | -51.10 | 0.39 | 0.32 | 3.19 |
| 3,523.00 | 4.90 | 288.10 | 3,516.21 | 53.53 | -114.19 | -53.53 | 0.64 | 0.63 | -1.05 |
| 3,618.00 | 4.30 | 288.00 | 3,610.91 | 55.89 | -121.44 | -55.89 | 0.63 | -0.63 | -0.11 |
| 3,712.00 | 4.00 | 287.60 | 3,704.66 | 57.97 | -127.91 | -57.97 | 0.32 | -0.32 | -0.43 |
| 3,807.00 | 4.00 | 286.90 | 3,799.43 | 59.93 | -134.24 | -59.93 | 0.05 | 0.00 | -0.74 |
| 3,901.00 | 4.70 | 286.00 | 3,893.16 | 61.95 | -141.08 | -61.95 | 0.75 | 0.74 | -0.96 |
| 3,996.00 | 5.00 | 287.10 | 3,987.82 | 64.24 | -148.78 | -64.24 | 0.33 | 0.32 | 1.16 |
| 4,090.00 | 5.30 | 285.10 | 4,081.44 | 66.57 | -156.89 | -66.57 | 0.37 | 0.32 | -2.13 |
| 4,185.00 | 5.30 | 282.90 | 4,176.03 | 68.70 | -165.40 | -68.70 | 0.21 | 0.00 | -2.32 |
| 4,279.00 | 5.10 | 285.10 | 4,269.64 | 70.75 | -173.67 | -70.75 | 0.30 | -0.21 | 2.34 |
| 4,374.00 | 4.60 | 285.80 | 4,364.30 | 72.89 | -181.41 | -72.89 | 0.53 | -0.53 | 0.74 |
| 4,469.00 | 5.20 | 286.70 | 4,458.96 | 75.17 | -189.20 | -75.17 | 0.64 | 0.63 | 0.95 |
| 4,563.00 | 5.80 | 284.40 | 4,552.52 | 77.57 | -197.88 | -77.57 | 0.68 | 0.64 | -2.45 |
| 4,658.00 | 5.60 | 280.00 | 4,647.05 | 79.57 | -207.09 | -79.57 | 0.51 | -0.21 | -4.63 |
| 4,752.00 | 4.50 | 279.30 | 4,740.69 | 80.96 | -215.25 | -80.96 | 1.17 | -1.17 | -0.74 |
| 4,847.00 | 4.80 | 278.20 | 4,835.37 | 82.13 | -222.86 | -82.13 | 0.33 | 0.32 | -1.16 |
| 4,926.00 | 5.00 | 278.40 | 4,914.08 | 83.11 | -229.54 | -83.11 | 0.25 | 0.25 | 0.25 |

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|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 5,025.00 | 5.50 | 280.20 | 5,012.67 | 84.58 | -238.47 | -84.58 | 0.53 | 0.51 | 1.82 |
| 5,119.00 | 5.50 | 282.40 | 5,106.24 | 86.34 | -247.31 | -86.34 | 0.22 | 0.00 | 2.34 |
| 5,214.00 | 5.40 | 282.90 | 5,200.81 | 88.32 | -256.11 | -88.32 | 0.12 | -0.11 | 0.53 |
| 5,308.00 | 5.40 | 284.00 | 5,294.39 | 90.37 | -264.71 | -90.37 | 0.11 | 0.00 | 1.17 |
| 5,403.00 | 5.60 | 299.20 | 5,388.96 | 93.72 | -273.10 | -93.72 | 1.54 | 0.21 | 16.00 |
| 5,497.00 | 5.60 | 302.50 | 5,482.51 | 98.42 | -280.97 | -98.42 | 0.34 | 0.00 | 3.51 |
| 5,592.00 | 5.70 | 304.50 | 5,577.05 | 103.58 | -288.77 | -103.58 | 0.23 | 0.11 | 2.11 |
| 5,687.00 | 5.70 | 305.40 | 5,671.58 | 108.99 | -296.50 | -108.99 | 0.09 | 0.00 | 0.95 |
| 5,781.00 | 4.80 | 293.10 | 5,765.19 | 113.23 | -303.92 | -113.23 | 1.53 | -0.96 | -13.09 |
| 5,876.00 | 4.80 | 291.80 | 5,859.85 | 116.27 | -311.27 | -116.27 | 0.11 | 0.00 | -1.37 |
| 5,970.00 | 4.80 | 291.50 | 5,953.52 | 119.17 | -318.58 | -119.17 | 0.03 | 0.00 | -0.32 |
| 6,064.00 | 4.70 | 292.00 | 6,047.20 | 122.06 | -325.81 | -122.06 | 0.12 | -0.11 | 0.53 |
| 6,159.00 | 4.70 | 291.40 | 6,141.88 | 124.93 | -333.04 | -124.93 | 0.05 | 0.00 | -0.63 |
| 6,253.00 | 4.70 | 293.20 | 6,235.56 | 127.86 | -340.17 | -127.86 | 0.16 | 0.00 | 1.91 |
| 6,348.00 | 4.50 | 293.00 | 6,330.26 | 130.85 | -347.18 | -130.85 | 0.21 | -0.21 | -0.21 |
| 6,443.00 | 4.50 | 293.10 | 6,424.97 | 133.76 | -354.04 | -133.76 | 0.01 | 0.00 | 0.11 |
| 6,537.00 | 4.50 | 289.70 | 6,518.68 | 136.45 | -360.90 | -136.45 | 0.28 | 0.00 | -3.62 |
| 6,632.00 | 4.70 | 291.30 | 6,613.37 | 139.12 | -368.03 | -139.12 | 0.25 | 0.21 | 1.68 |
| 6,727.00 | 4.50 | 289.70 | 6,708.06 | 141.79 | -375.17 | -141.79 | 0.25 | -0.21 | -1.68 |
| 6,821.00 | 4.30 | 285.40 | 6,801.79 | 143.97 | -382.04 | -143.97 | 0.41 | -0.21 | -4.57 |
| 6,916.00 | 3.80 | 285.90 | 6,896.55 | 145.78 | -388.50 | -145.78 | 0.53 | -0.53 | 0.53 |
| 7,010.00 | 3.60 | 283.70 | 6,990.35 | 147.33 | -394.36 | -147.33 | 0.26 | -0.21 | -2.34 |
| 7,104.00 | 3.50 | 283.30 | 7,084.17 | 148.69 | -400.02 | -148.69 | 0.11 | -0.11 | -0.43 |
| 7,199.00 | 3.40 | 284.80 | 7,179.00 | 150.08 | -405.57 | -150.08 | 0.14 | -0.11 | 1.58 |
| 7,293.00 | 3.40 | 283.20 | 7,272.84 | 151.43 | -410.98 | -151.43 | 0.10 | 0.00 | -1.70 |
| 7,388.00 | 3.50 | 281.50 | 7,367.66 | 152.65 | -416.56 | -152.65 | 0.15 | 0.11 | -1.79 |
| 7,482.00 | 3.30 | 286.80 | 7,461.50 | 154.00 | -421.96 | -154.00 | 0.40 | -0.21 | 5.64 |
| 7,576.00 | 3.30 | 286.30 | 7,555.34 | 155.54 | -427.15 | -155.54 | 0.03 | 0.00 | -0.53 |
| 7,671.00 | 3.00 | 297.40 | 7,650.20 | 157.46 | -431.98 | -157.46 | 0.71 | -0.32 | 11.68 |
| 7,765.00 | 2.70 | 299.50 | 7,744.08 | 159.68 | -436.09 | -159.68 | 0.34 | -0.32 | 2.23 |
| 7,860.00 | 2.80 | 301.60 | 7,838.97 | 162.00 | -440.01 | -162.00 | 0.15 | 0.11 | 2.21 |
| 7,954.00 | 2.50 | 299.90 | 7,932.87 | 164.22 | -443.75 | -164.22 | 0.33 | -0.32 | -1.81 |
| 8,049.00 | 2.30 | 299.30 | 8,027.79 | 166.19 | -447.21 | -166.19 | 0.21 | -0.21 | -0.63 |
| 8,143.00 | 2.20 | 300.40 | 8,121.72 | 168.02 | -450.41 | -168.02 | 0.12 | -0.11 | 1.17 |
| 8,238.00 | 2.30 | 299.80 | 8,216.64 | 169.89 | -453.63 | -169.89 | 0.11 | 0.11 | -0.63 |
| 8,332.00 | 2.00 | 295.80 | 8,310.58 | 171.54 | -456.75 | -171.54 | 0.36 | -0.32 | -4.26 |
| 8,427.00 | 1.70 | 292.30 | 8,405.53 | 172.80 | -459.54 | -172.80 | 0.34 | -0.32 | -3.68 |
| 8,522.00 | 1.50 | 306.30 | 8,500.49 | 174.07 | -461.85 | -174.07 | 0.46 | -0.21 | 14.74 |
| 8,616.00 | 0.70 | 276.30 | 8,594.47 | 174.86 | -463.41 | -174.86 | 1.02 | -0.85 | -31.91 |
| 8,710.00 | 0.70 | 251.90 | 8,688.47 | 174.75 | -464.53 | -174.75 | 0.31 | 0.00 | -25.96 |
| 8,805.00 | 0.60 | 222.20 | 8,783.46 | 174.20 | -465.41 | -174.20 | 0.37 | -0.11 | -31.26 |
| 8,900.00 | 1.70 | 179.60 | 8,878.44 | 172.42 | -465.74 | -172.42 | 1.39 | 1.16 | -44.84 |
| 8,994.00 | 1.90 | 179.70 | 8,972.40 | 169.47 | -465.72 | -169.47 | 0.21 | 0.21 | 0.11 |

| | | | |
|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 9,089.00 | 2.00 | 172.90 | 9,067.34 | 166.25 | -465.51 | -166.25 | 0.27 | 0.11 | -7.16 |
| 9,184.00 | 2.00 | 170.80 | 9,162.28 | 162.97 | -465.04 | -162.97 | 0.08 | 0.00 | -2.21 |
| 9,278.00 | 1.60 | 161.20 | 9,256.24 | 160.10 | -464.35 | -160.10 | 0.53 | -0.43 | -10.21 |
| 9,373.00 | 1.30 | 144.60 | 9,351.21 | 157.97 | -463.30 | -157.97 | 0.54 | -0.32 | -17.47 |
| 9,441.00 | 0.80 | 132.40 | 9,419.20 | 157.02 | -462.50 | -157.02 | 0.80 | -0.74 | -17.94 |
| 9,504.00 | 1.10 | 159.80 | 9,482.19 | 156.16 | -461.97 | -156.16 | 0.85 | 0.48 | 43.49 |
| 9,535.00 | 5.10 | 184.70 | 9,513.14 | 154.50 | -461.98 | -154.50 | 13.32 | 12.90 | 80.32 |
| 9,566.00 | 9.90 | 188.40 | 9,543.86 | 150.49 | -462.48 | -150.49 | 15.55 | 15.48 | 11.94 |
| 9,598.00 | 14.20 | 187.40 | 9,575.15 | 143.88 | -463.39 | -143.88 | 13.45 | 13.44 | -3.13 |
| 9,629.00 | 18.00 | 186.50 | 9,604.93 | 135.34 | -464.42 | -135.34 | 12.28 | 12.26 | -2.90 |
| 9,661.00 | 21.60 | 186.30 | 9,635.03 | 124.57 | -465.63 | -124.57 | 11.25 | 11.25 | -0.63 |
| 9,692.00 | 23.90 | 185.40 | 9,663.62 | 112.65 | -466.85 | -112.65 | 7.50 | 7.42 | -2.90 |
| 9,724.00 | 26.20 | 182.40 | 9,692.61 | 99.13 | -467.75 | -99.13 | 8.21 | 7.19 | -9.38 |
| 9,755.00 | 28.90 | 181.90 | 9,720.09 | 84.81 | -468.29 | -84.81 | 8.74 | 8.71 | -1.61 |
| 9,787.00 | 31.10 | 183.50 | 9,747.80 | 68.83 | -469.05 | -68.83 | 7.31 | 6.88 | 5.00 |
| 9,818.00 | 34.50 | 181.60 | 9,773.86 | 52.06 | -469.78 | -52.06 | 11.46 | 10.97 | -6.13 |
| 9,850.00 | 38.00 | 180.10 | 9,799.66 | 33.14 | -470.05 | -33.14 | 11.28 | 10.94 | -4.69 |
| 9,881.00 | 40.60 | 178.80 | 9,823.65 | 13.51 | -469.86 | -13.51 | 8.80 | 8.39 | -4.19 |
| 9,912.00 | 43.70 | 178.30 | 9,846.63 | -7.29 | -469.33 | 7.29 | 10.06 | 10.00 | -1.61 |
| 9,944.00 | 47.30 | 179.90 | 9,869.05 | -30.10 | -468.98 | 30.10 | 11.80 | 11.25 | 5.00 |
| 9,975.00 | 49.50 | 181.40 | 9,889.63 | -53.28 | -469.25 | 53.28 | 7.97 | 7.10 | 4.84 |
| 10,007.00 | 51.90 | 183.20 | 9,909.90 | -78.02 | -470.25 | 78.02 | 8.67 | 7.50 | 5.63 |
| 10,038.00 | 53.60 | 183.60 | 9,928.66 | -102.65 | -471.71 | 102.65 | 5.58 | 5.48 | 1.29 |
| 10,062.70 | 55.53 | 183.06 | 9,942.98 | -122.74 | -472.88 | 122.74 | 8.01 | 7.81 | -2.20 |
| **330' Hardline Entry:10062.70' MD, 9942.98' TVD** | | | | | | | | | |
| 10,070.00 | 56.10 | 182.90 | 9,947.09 | -128.77 | -473.19 | 128.77 | 8.01 | 7.82 | -2.14 |
| 10,102.00 | 60.40 | 182.40 | 9,963.92 | -155.95 | -474.45 | 155.95 | 13.50 | 13.44 | -1.56 |
| 10,133.00 | 64.50 | 181.90 | 9,978.26 | -183.41 | -475.48 | 183.41 | 13.30 | 13.23 | -1.61 |
| 10,164.00 | 67.10 | 181.70 | 9,990.96 | -211.67 | -476.37 | 211.67 | 8.41 | 8.39 | -0.65 |
| 10,196.00 | 71.30 | 181.90 | 10,002.32 | -241.56 | -477.31 | 241.56 | 13.14 | 13.13 | 0.63 |
| 10,227.00 | 75.50 | 181.60 | 10,011.18 | -271.25 | -478.21 | 271.25 | 13.58 | 13.55 | -0.97 |
| 10,259.00 | 79.40 | 182.30 | 10,018.13 | -302.46 | -479.28 | 302.46 | 12.37 | 12.19 | 2.19 |
| 10,354.00 | 86.40 | 182.00 | 10,029.87 | -396.60 | -482.81 | 396.60 | 7.38 | 7.37 | -0.32 |
| 10,386.00 | 86.30 | 181.60 | 10,031.90 | -428.52 | -483.81 | 428.52 | 1.29 | -0.31 | -1.25 |
| 10,481.00 | 86.60 | 181.00 | 10,037.78 | -523.32 | -485.96 | 523.32 | 0.71 | 0.32 | -0.63 |
| 10,513.00 | 87.00 | 180.80 | 10,039.57 | -555.26 | -486.46 | 555.26 | 1.40 | 1.25 | -0.63 |
| 10,575.00 | 87.80 | 180.50 | 10,042.38 | -617.19 | -487.17 | 617.19 | 1.38 | 1.29 | -0.48 |
| 10,670.00 | 87.40 | 179.40 | 10,046.36 | -712.11 | -487.08 | 712.11 | 1.23 | -0.42 | -1.16 |
| 10,764.00 | 87.70 | 178.40 | 10,050.38 | -806.00 | -485.28 | 806.00 | 1.11 | 0.32 | -1.06 |
| 10,859.00 | 88.80 | 179.10 | 10,053.28 | -900.93 | -483.21 | 900.93 | 1.37 | 1.16 | 0.74 |
| 10,953.00 | 89.00 | 178.20 | 10,055.09 | -994.89 | -481.00 | 994.89 | 0.98 | 0.21 | -0.96 |
| 11,048.00 | 88.00 | 178.70 | 10,057.57 | -1,089.82 | -478.43 | 1,089.82 | 1.18 | -1.05 | 0.53 |
| 11,143.00 | 88.20 | 179.60 | 10,060.72 | -1,184.76 | -477.02 | 1,184.76 | 0.97 | 0.21 | 0.95 |
| 11,237.00 | 88.40 | 182.10 | 10,063.51 | -1,278.70 | -478.41 | 1,278.70 | 2.67 | 0.21 | 2.66 |

| | | | |
|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 11,332.00 | 88.80 | 181.80 | 10,065.83 | -1,373.61 | -481.64 | 1,373.61 | 0.53 | 0.42 | -0.32 |
| 11,426.00 | 89.80 | 181.30 | 10,066.98 | -1,467.57 | -484.19 | 1,467.57 | 1.19 | 1.06 | -0.53 |
| 11,520.00 | 89.30 | 180.60 | 10,067.72 | -1,561.55 | -485.74 | 1,561.55 | 0.92 | -0.53 | -0.74 |
| 11,615.00 | 88.80 | 180.20 | 10,069.29 | -1,656.54 | -486.41 | 1,656.54 | 0.67 | -0.53 | -0.42 |
| 11,709.00 | 89.70 | 179.80 | 10,070.52 | -1,750.53 | -486.41 | 1,750.53 | 1.05 | 0.96 | -0.43 |
| 11,804.00 | 88.30 | 180.10 | 10,072.18 | -1,845.51 | -486.32 | 1,845.51 | 1.51 | -1.47 | 0.32 |
| 11,899.00 | 87.10 | 180.10 | 10,076.00 | -1,940.43 | -486.49 | 1,940.43 | 1.26 | -1.26 | 0.00 |
| 11,993.00 | 87.40 | 179.40 | 10,080.51 | -2,034.32 | -486.08 | 2,034.32 | 0.81 | 0.32 | -0.74 |
| 12,088.00 | 89.40 | 179.80 | 10,083.16 | -2,129.28 | -485.42 | 2,129.28 | 2.15 | 2.11 | 0.42 |
| 12,183.00 | 88.00 | 179.40 | 10,085.31 | -2,224.25 | -484.75 | 2,224.25 | 1.53 | -1.47 | -0.42 |
| 12,277.00 | 86.50 | 179.20 | 10,089.82 | -2,318.13 | -483.61 | 2,318.13 | 1.61 | -1.60 | -0.21 |
| 12,372.00 | 88.10 | 179.20 | 10,094.30 | -2,413.02 | -482.28 | 2,413.02 | 1.68 | 1.68 | 0.00 |
| 12,466.00 | 88.60 | 179.20 | 10,097.00 | -2,506.97 | -480.97 | 2,506.97 | 0.53 | 0.53 | 0.00 |
| 12,560.00 | 86.90 | 179.30 | 10,100.69 | -2,600.88 | -479.74 | 2,600.88 | 1.81 | -1.81 | 0.11 |
| 12,655.00 | 87.60 | 179.20 | 10,105.25 | -2,695.76 | -478.50 | 2,695.76 | 0.74 | 0.74 | -0.11 |
| 12,750.00 | 87.80 | 178.90 | 10,109.07 | -2,790.67 | -476.93 | 2,790.67 | 0.38 | 0.21 | -0.32 |
| 12,844.00 | 88.40 | 178.90 | 10,112.18 | -2,884.61 | -475.12 | 2,884.61 | 0.64 | 0.64 | 0.00 |
| 12,938.00 | 88.90 | 178.90 | 10,114.40 | -2,978.56 | -473.32 | 2,978.56 | 0.53 | 0.53 | 0.00 |
| 13,032.00 | 89.30 | 179.20 | 10,115.87 | -3,072.54 | -471.76 | 3,072.54 | 0.53 | 0.43 | 0.32 |
| 13,127.00 | 90.70 | 179.20 | 10,115.87 | -3,167.53 | -470.43 | 3,167.53 | 1.47 | 1.47 | 0.00 |
| 13,221.00 | 92.40 | 179.00 | 10,113.33 | -3,261.48 | -468.96 | 3,261.48 | 1.82 | 1.81 | -0.21 |
| 13,316.00 | 91.30 | 179.40 | 10,110.26 | -3,356.42 | -467.63 | 3,356.42 | 1.23 | -1.16 | 0.42 |
| 13,410.00 | 91.40 | 181.10 | 10,108.05 | -3,450.38 | -468.04 | 3,450.38 | 1.81 | 0.11 | 1.81 |
| 13,505.00 | 90.20 | 181.60 | 10,106.72 | -3,545.35 | -470.28 | 3,545.35 | 1.37 | -1.26 | 0.53 |
| 13,599.00 | 89.00 | 182.40 | 10,107.38 | -3,639.29 | -473.56 | 3,639.29 | 1.53 | -1.28 | 0.85 |
| 13,694.00 | 90.10 | 182.20 | 10,108.12 | -3,734.20 | -477.37 | 3,734.20 | 1.18 | 1.16 | -0.21 |
| 13,789.00 | 88.30 | 182.00 | 10,109.45 | -3,829.13 | -480.85 | 3,829.13 | 1.91 | -1.89 | -0.21 |
| 13,883.00 | 90.00 | 181.40 | 10,110.85 | -3,923.07 | -483.64 | 3,923.07 | 1.92 | 1.81 | -0.64 |
| 13,978.00 | 89.20 | 181.00 | 10,111.51 | -4,018.05 | -485.63 | 4,018.05 | 0.94 | -0.84 | -0.42 |
| 14,072.00 | 90.30 | 180.60 | 10,111.92 | -4,112.04 | -486.94 | 4,112.04 | 1.25 | 1.17 | -0.43 |
| 14,166.00 | 89.10 | 181.10 | 10,112.41 | -4,206.02 | -488.34 | 4,206.02 | 1.38 | -1.28 | 0.53 |
| 14,261.00 | 89.80 | 180.80 | 10,113.32 | -4,301.00 | -489.91 | 4,301.00 | 0.80 | 0.74 | -0.32 |
| 14,355.00 | 90.90 | 180.90 | 10,112.75 | -4,394.99 | -491.31 | 4,394.99 | 1.18 | 1.17 | 0.11 |
| 14,450.00 | 89.30 | 180.90 | 10,112.58 | -4,489.98 | -492.80 | 4,489.98 | 1.68 | -1.68 | 0.00 |
| 14,544.00 | 90.90 | 180.90 | 10,112.42 | -4,583.96 | -494.28 | 4,583.96 | 1.70 | 1.70 | 0.00 |
| 14,639.00 | 89.90 | 180.70 | 10,111.76 | -4,678.95 | -495.60 | 4,678.95 | 1.07 | -1.05 | -0.21 |
| 14,705.32 | 91.24 | 180.56 | 10,111.10 | -4,745.26 | -496.33 | 4,745.26 | 2.03 | 2.02 | -0.21 |
| **330' Hardline Exit:14705.32' MD, 10111.10' TVD** | | | | | | | | | |
| 14,733.00 | 91.80 | 180.50 | 10,110.36 | -4,772.93 | -496.59 | 4,772.93 | 2.03 | 2.02 | -0.21 |
| 14,808.00 | 90.70 | 179.40 | 10,108.72 | -4,847.91 | -496.52 | 4,847.91 | 2.07 | -1.47 | -1.47 |
| **Last Survey: 14808.00' MD, 10108.72' TVD** | | | | | | | | | |
| 14,849.00 | 90.70 | 179.40 | 10,108.22 | -4,888.90 | -496.09 | 4,888.90 | 0.00 | 0.00 | 0.00 |
| **PTB: 14849.00' MD, 10108.22' TVD** | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Company:** | McElvain Energy | **Local Co-ordinate Reference:** | Well #2H |
| **Project:** | Lea County, NM (NAD 83) | **TVD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Site:** | EK 29 BS2 Federal Com | **MD Reference:** | KB = 25' @ 4075.00usft (H&P 262) |
| **Well:** | #2H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | OH Surveys 125'-14808' PTB 14849' | **Database:** | WellPlanner1 |

**Design Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 10,062.70 | 9,942.98 | -122.74 | -472.88 | 330' Hardline Entry:10062.70' MD, 9942.98' TVD |
| 14,705.32 | 10,111.10 | -4,745.26 | -496.33 | 330' Hardline Exit:14705.32' MD, 10111.10' TVD |
| 14,808.00 | 10,108.72 | -4,847.91 | -496.52 | Last Survey: 14808.00' MD, 10108.72' TVD |
| 14,849.00 | 10,108.22 | -4,888.90 | -496.09 | PTB: 14849.00' MD, 10108.22' TVD |

Checked By: _____ Approved By: _____ Date: _____

# Radial Cement Gamma Ray/CCL Log

Company McElvain Energy
Well EK 29 BS2 Fed Com 2H
Field
County Lea State New Mexico

Location: API # :

SEC TWP RGE

Other Services

Elevation

Permanent Datum Ground Level Elevation
Log Measured From KB 27' APD K.B.
Drilling Measured From KB D.F.
G.L.

| | | | |
|---|---|---|---|
| Date | 09-06-2017 | | |
| Run Number | One | | |
| Depth Driller | 14843' | | |
| Depth Logger | 10000' | | |
| Bottom Logged Interval | 9998' | | |
| Top Log Interval | Surface | | |
| Open Hole Size | 8 1/2" | | |
| Type Fluid | Water | | |
| Density / Viscosity | - | | |
| Max. Recorded Temp. | - | | |
| Estimated Cement Top | | | |
| Time Well Ready | On Arrival | | |
| Time Logger on Bottom | See Log | | |
| Equipment Number | WL-826 | | |
| Location | Hobbs, New Mexico | | |
| Recorded By | C. Nelson | | |
| Witnessed By | Brian O'Dell | | |

| Borehole Record | | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | | | | |
| Prot. String | | | | |
| Production String | 5 1/2" | 20# | Surface | 14843' |
| Liner | | | | |

<<< Fold Here >>>



Comments

**********Thank You For Using Capitan Corporation**********

Hard copy continuous requested 9-23-18

Main Pass 5" = 100'