State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach
Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 4-22-13
Well information;
Operator McElvain, Well Name and Number Riley Federal #1
API# 30-045-35471, Section 19, Township 27 (N)/S, Range 11 E/(W)

Conditions of Approval:
(See the below checked and handwritten conditions)

- X Notify Aztec OCD 24hrs prior to casing & cement.
- o Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- X Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charlie Perrin
NMOCD Approved by Signature

1-29-2015
Date

Form 3160-3
(March 2012)

RECEIVED

APR 21 2013

Farmington Field Office
Bureau of Land Management

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM029145

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: Riley Federal No. 1

2. Name of Operator: McElvain Energy, Inc.

9. API Well No.: 30045 35471

3a. Address: 1050 17th St, Suite 2500, Denver, CO 80265

3b. Phone No. *(include area code)*: 303-893-0933-330

10. Field and Pool, or Exploratory: Basin Fruitland Coal

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: F 1384' FNL-2497' FWL, Section 19, T27N, R11W, NMPM

At proposed prod. zone: same

11. Sec., T. R. M. or Blk. and Survey or Area: Section 19, T27N, R11W, NMPM

14. Distance in miles and direction from nearest town or post office*: 12 miles southwest of Bloomfield, NM

12. County or Parish: San Juan

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 104 feet / 1384 feet

16. No. of acres in lease: 318.13

17. Spacing Unit dedicated to this well: N/2-318.13 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 463

19. Proposed Depth: 1953 feet

20. BLM/BIA Bond No. on file: BLM:COB000010

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 6140' GL

22. Approximate date work will start*: 09/15/2013

23. Estimated duration: 21 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature: Robert E. Fielder — Name *(Printed/Typed)*: Robert E. Fielder — Date: 04/22/2013

Title: Agent

Approved by *(Signature)*: Matthew J. Kresse — Name *(Printed/Typed)*: — Date: 1/22/15

Title: AFM — Office: FFO

Application approval 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.
Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)

NMOCD

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JAN 26 2015
NMOCD
DISTRICT III

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

RECEIVED

APR 21 2013

Farmington Field Office
Bureau of Land Management

District I
1625 N. French Dr, Hobbs, NM 88240
Phone: (575)393-6161 Fax: (575)393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35471	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
314175	RILEY FEDERAL	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
22044	McELVAIN ENERGY, INC.	6140

[10] Surface Location

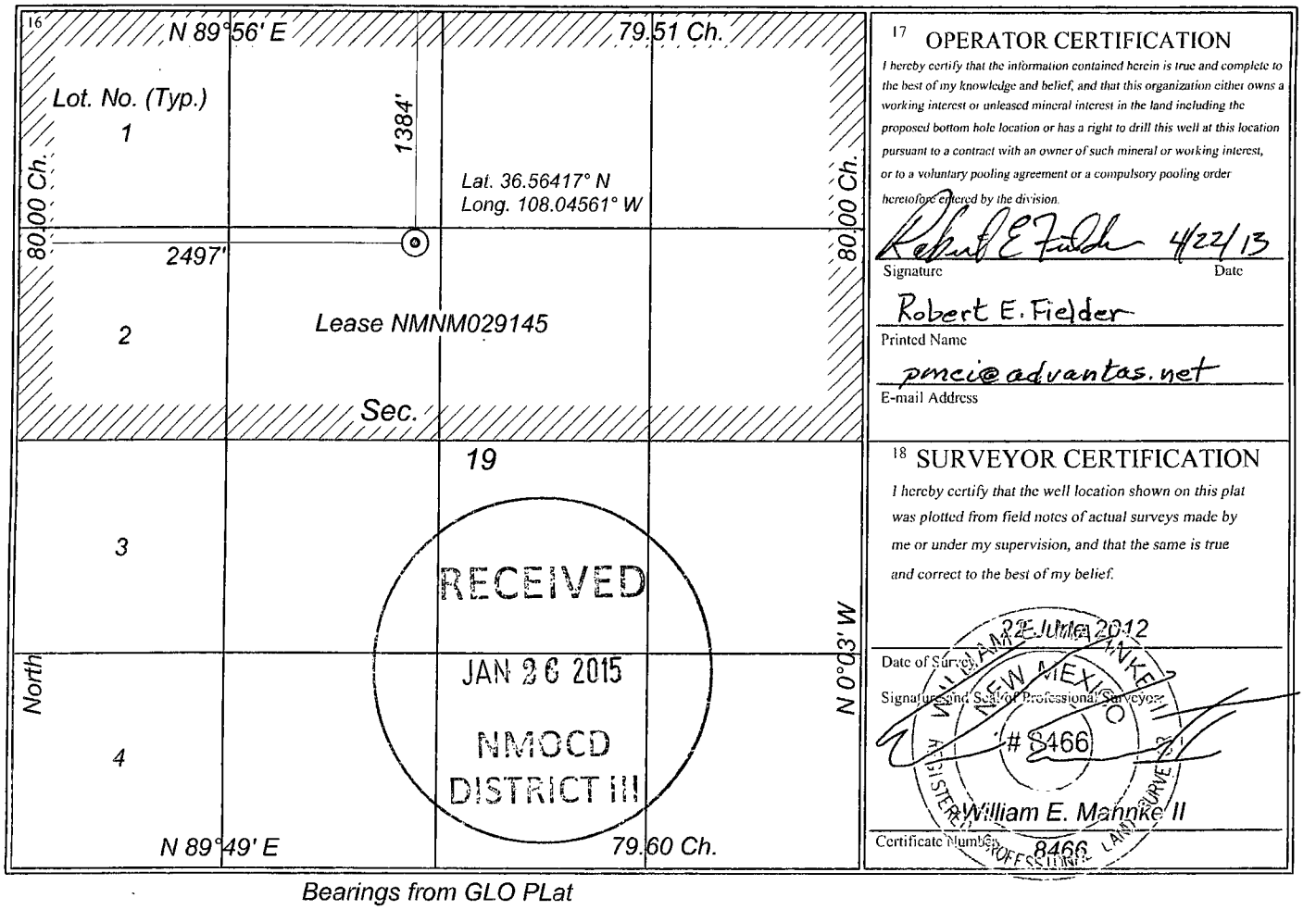
UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
F	19	27 N	11 W		1384	North	2497	West	San Juan

[11] 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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
318.13 (N/2)			

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.



Bearings from GLO PLat

[17] 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 4/22/13

Robert E. Fielder
Printed Name

pmci@advantas.net
E-mail Address

[18] 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.

Date of Survey: 22 June 2012

Signature and Seal of Professional Surveyor: WILLIAM E. MANNKE II, NEW MEXICO, # 8466, REGISTERED PROFESSIONAL LAND SURVEYOR

William E. Mannke II

Certificate Number: 8466

McElvain Energy, Inc.
Riley Federal No. 1
1384' FNL & 2497' FWL
Section 19, T27N, R11W, NMPM
San Juan County, New Mexico

TEN POINT DRILLING PROGRAM

1. **Surface Formation:** Nacimiento

2. **Surface Elevation:** 6140'GL.

3. **Estimated Formation Tops:**

Formation	Top - feet	Expected Production
Nacimiento	surface	
Ojo Alamo	606	WATER
Kirtland	733	
Fruitland	1514	GAS
Fruitland Coal	1602	GAS/WATER
Pictured Cliffs	1704	GAS
Lewis	1930	
TOTAL DEPTH	1953	

4. **Surface Hole Program:**

Bit: Drill an 12¼" hole to 300' using a retip mill tooth, IADC Class 115 or 116, bit. WOB: all. RPM: 70 - 100.
Mud: Use a fresh water base spud mud with the following properties:

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
0 - 300	8.6 or less	9.0-9.5	40 - 50	No Control

Casing and Cementing: A string of 8⅝" 24 ppf J-55 or K-55 ST&C casing will be set and cemented to the surface in a single stage with 190 sacks (266.0 cf) of ANSI Type III cement (yield = 1.40 cf/sk) containing 3% $CaCl_2$ and 1/4 lb/sack celloflake. Slurry volume assumes 100% excess over calculated hole volume. Slurry properties: weight- 14.6 ppg, yield - 1.4 cuft/sk, mix water - 6.68 gps. If cement does not circulate to surface, cement will be topped off using 1" pipe down the 12¼" by 8⅝" annulus. Minimum clearance between couplings and hole is 1.3125". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 600 psig. Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

WOC 12 HOURS. Nipple up 11" 2000# BOPE. Pressure test BOPE to full working pressure using a test plug. Drill out cement to within five feet of surface casing shoe. Test surface casing and BOPE to a minimum of 600 psig for 15 minutes.

Centralizers: Run four (4) 8⅝" X 12¼" regular bowspring centralizers. Install first one on stop ring in middle of shoe joint.

Float Equipment: Cement nose guide shoe thread locked. Self fill insert float valve run one joint above shoe. Also thread lock connection between first and second joint run.

5. Production Hole Program:

Bit: Drill a 7⅞" hole to 1953' using a TCI, IADC Class 447 bit. WOB: 30-35K. RPM: 60 - 75. Hold RPM at 55 - 65 through Ojo Alamo.

Mud: Use a fresh water base polymer and water system to drill this section. If hole conditions dictate, mud up with a fresh water base LSND mud with the following properties:

Interval (ft)	Weight (ppg)	Ph	Vis(sec/qt)	Water Loss
300 - 1953	8.6 - 8.8	9.0-9.5	28 - 35	10 - 12

Fresh water will be used for dilution and building volume. Sufficient materials will be on location at all times to maintain mud properties and to control any lost circulation problem or unforeseen abnormal pressures. The mud volume in the surface pit will be visually monitored and recorded on a routine basis.

Note: If mud up is required, raise **viscosity** to 55 - 60 for logging. Thin to 40 - 45 viscosity to run casing.

pH is to be maintained with lime or caustic soda at the recommended levels to assure drill pipe corrosion protection.

Drispac will be used for control of fluid loss.

Lost Circulation can occur in the Fruitland Coal and Pictured Cliffs formation. Mud weights should be controlled as low as possible with water dilution.

Pressure Control: A 2M psi BOP well control system will be utilized. BOP's and choke manifold will be installed and pressure tested to full working pressure using a test plug. Surface casing and BOPE will be tested to a minimum of 600 psig before drilling out from under surface casing. Mechanical operation of pipe rams will be checked daily and blind rams will be checked on each trip out of hole. 5½" rams will be installed before running production casing.
A full opening internal blowout preventor or drill pipe safety valve will be on the drill floor at all times and will be capable of fitting all connections.

Logging Program: Dual Induction and Epithermal Neutron/Formation Density logs will be run from TD to the surface casing shoe.

Casing and Cementing Program: Run 5½" 15.5 ppf J-55 production casing from surface to TD and cement in a single stage with 150 sacks (382.5 cf) of ANSI Type III containing 3% sodium metasilicate extender, 5 pps Gilsonite and 1/8 pps Poly-E-Flake. Lead slurry mixed at 11.8 PPG to yield 2.55 cf/sk. Tail in with 80 sacks (116.0 cf) of ANSI Type III with 0.125 pps Poly-E-flake, 0.3% FLA and 3 pps gilsonite mixed at 14.3 PPG to yield 1.45 cf/sk.

5. **Production Hole Program:** -continued

Slurry volumes assume a 50% excess over gauge hole volume to circulate to surface. Minimum clearance between couplings and hole is 0.9125". Safety factors utilized in the design of this casing string were: burst = 1.1; collapse = 1.125; and tension = 1.8.

Centralizers: 5 - 5½" X 7⅞" bowspring centralizers will be run across all prospective pays and 3 - 5½" X 7⅞" turbolizers will be spaced such that one (1)is just below the base of the Fruitland coal, one just below the base of the Ojo Alamo and one (1) in the Ojo Alamo.

Float Equipment: Cement nose guide shoe, 1 joint 5½" casing, and float collar.

6. **Auxiliary Equipment:**

An upper kelly cock will be utilized. The handle will be available on rig floor at all times

7. **Logging Program:**

Dual Induction and Epithermal Neutron / Formation Density will be run from TD to surface casing shoe. Bulk density will be presented on a 5 " scale through the coals. Deep induction curve will be merged onto the porosity log.

Coring and Testing Program:

No cores or drill stem tests are planned.

8. **Abnormal Pressure:**

Although not expected, abnormal pressures are possible in the Fruitland formation.

Estimated Bottom Hole Pressure:

250 - 300 psig.

9. **Anticipated Starting Date:**

September 15, 2013

Duration of Operations: It is estimated a total of 6 days will be required for drilling operations, 5 days for the completion operation subject to availability of stimulation crews and 10 days to set surface facilities.

5. Location and Type of Water Supply:

A. Location: Hilltop water hole, NM

B. Supply Source: Commercial well

C. Transportation: Truck

D. Water wells to be drilled: None

6. Source of Construction Materials:

All construction materials will come from the location except for the gravel for tank bases and surface equipment, which will come from a commercial quarry. Any material needed for road base will come from a commercial quarry in the area.

7. Methods of Handling Waste Disposal:

A. Cuttings and drilling fluids: Drilling fluids will be stored in a lined reserve pit. Cuttings will be discharged into the reserve pit from the flow line during drilling. The drilling fluid will be hauled to a commercial disposal within 30 days of drilling rig release. The cuttings and drilling fluid solids will be sampled in accordance with NMOCD standards for onsite burial. If the results meet these standards the residue will be mixed at a 3:1 ratio with the dirt from the pit dirt stockpile. The liner will be cut above the mud line and disposed off at a permitted solid waste disposal facility in San Juan county. The remainder of the pit dirt stockpile will be used to fill the pit and recontour the pit area. If the test results do not meet the standards for onsite burial, a vacuum truck will be dispatched to pull the solid residue and haul to a permitted solid waste facility. The pit liner will be removed and disposed off. The soil below the liner will be tested if there are signs of leakage and appropriate remediation measures applied. The pit dirt stockpile will be pushed into the pit and topsoil spread over the pit area.

B. Produced Fluids: Tanks will be used for the storage of all produced liquids during testing and production. Oil will be retained in the tanks until it can be treated and sold. Water from testing operations will be stored in a flowback tank and hauled to a commercial liquid disposal facility upon completion of the testing operation. Produced water will be stored in a tank on location and hauled to a commercial disposal facility. Gas will be flared during testing and sold to EFS during production.

C. Sewage: Sewage will be contained in a portable latrine.

D. Garbage: Garbage will be contained in a trash basket. This will be hauled to the nearest dump facility and disposed upon completion of the well.

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
	RILEY FEDERAL	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
22044	McELVAIN OIL & GAS PROPERTIES, INC.	6139

[10] Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
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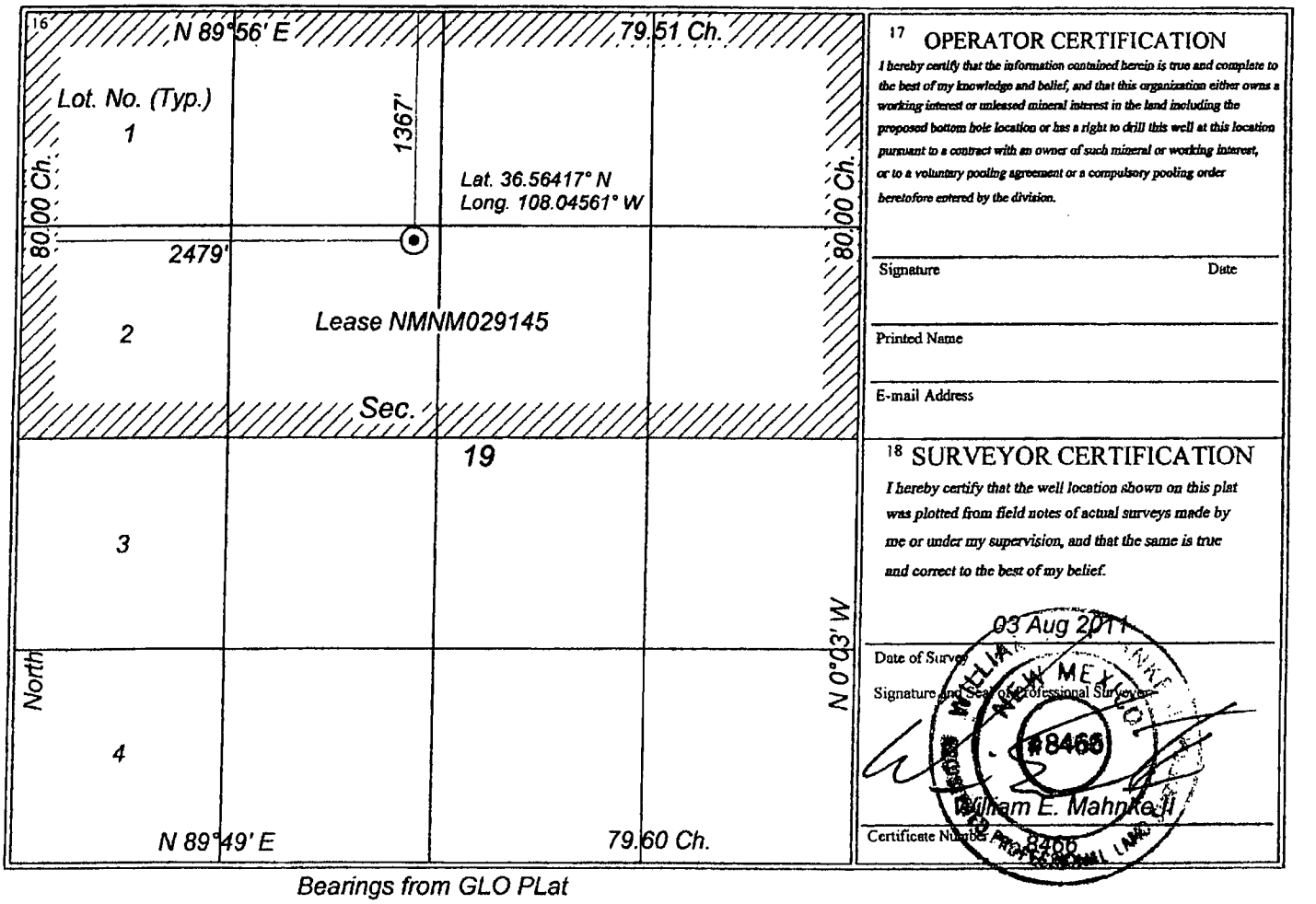
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
318.13 (N/2)			

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.



Bearings from GLO PLat

[17] OPERATOR CERTIFICATION

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Signature Date

Printed Name

E-mail Address

[18] 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.

03 Aug 2011
Date of Survey

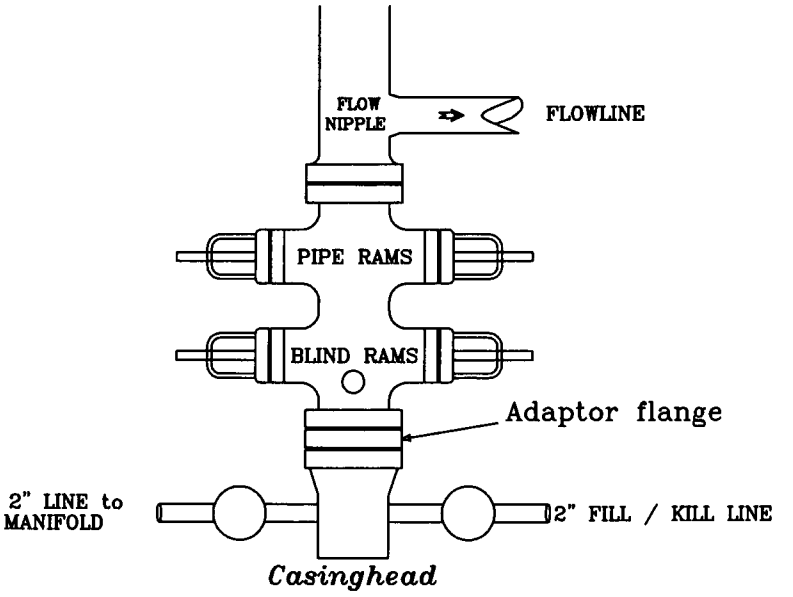
Signature and Seal of Professional Surveyor

William E. Mahnke II

Certificate Number 8466

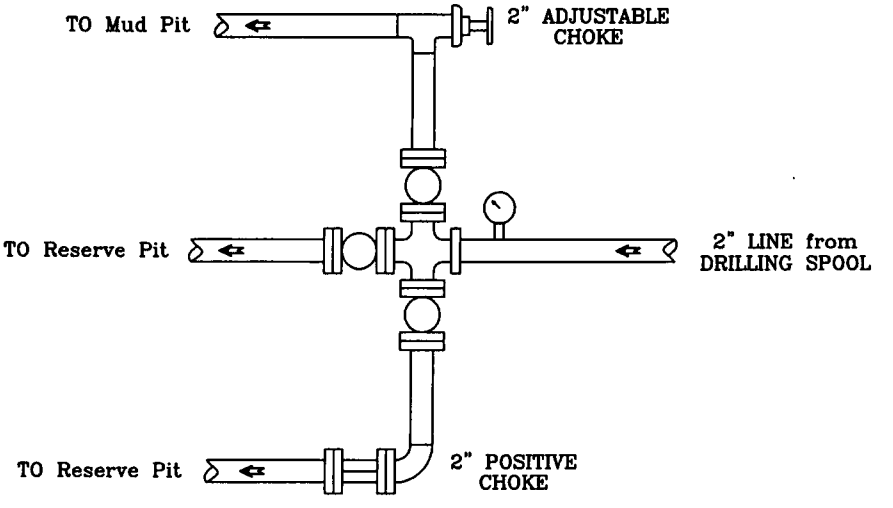
PRESSURE CONTROL

Wellhead Assembly



Preventer and Spools are to have a
6" Bore or larger and a 2000 PSI
or higher Pressure Rating

Choke Manifold



McElvain Energy, Inc.

Riley Federal No. 1

1384' FNL – 2497' FWL

Section 19, T27N, R11W, NMPM

San Juan County, New Mexico