

APR 04 2016

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NM-0245247

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
EK- 30 BS2 FEDERAL COM. #4H

9. API Well No.
30-025-43151

10. Field and Pool, or Exploratory
EK-BONE SPRING (21650)

11. Sec., T. R. M. or Blk. and Survey or Area
SECTION 30 T18S-R34E

12. County or Parish
LEA CO.

13. State
NEW MEXICO

1a. Type of work: DRILL REENTER **UNORTHODOX LOCATION**
1b. Type of Well: Oil Well Gas Well Other
1c. Type of Completion: Hydraulic Fracturing Single Zone Multiple Zone

2. Name of Operator
McELVAIN ENERGY, INC. (22044)

3a. Address 1050 17th ST. SUITE 2500
DENVER COLORADO 80265-2080
3b. Phone No. (include area code)
303-893-0933

4. Location of Well (Report location clearly and in accordance with any State requirements.)*
At surface 75.6' FSL & 1101' FWL SECTION 30 T18S-R34E
At proposed prod. zone 230' FNL & 660' FWL SECTION 30 T18S-R34E

14. Distance in miles and direction from nearest town or post office*
Approximately 28 miles West of Hobbs, New Mexico

15. Distance from proposed* location to nearest property or lease line, ft. 75.6'
(Also to nearest drig. unit line, if any)

16. No of acres in lease
1111

17. Spacing Unit dedicated to this well
160

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 24'

19. Proposed Depth
TVD- 9804'
MD-14,773

20. BLM/BIA Bond No. in file
COB#000010

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3863' - GL

22. Approximate date work will start*
WHEN APPROVED

23. Estimated duration
32 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be requested by the BLM. |

25. Signature: *Joe T. Janica*
Name (Printed/Typed): Joe T. Janica
Date: 10/21/15
Title: Permit Engineer

Approved by (Signature): *Steve Caffey*
Name (Printed/Typed): Steve Caffey
Date: APR 1 2016
Title: FIELD MANAGER
Office: CARLSBAD FIELD OFFICE

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.

APPROVAL FOR TWO YEARS

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.

Capitan Controlled Water Basin

Ke
04/06/16
**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Approval Subject to General Requirements
& Special Stipulations Attached

APR 14 2016

McELVAIN ENERGY, INC.
 EK-"30" BS2 FEDERAL COM. #4H
 UNIT "M" SECTION 30
 T18S-R34E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6, the following information on the above well is provided for your information.

1. LOCATION: SURFACE: 75.6' FSL & 1101' FWL SECTION 30 T18S-R34E LEA CO NEW MEXICO
 BHL: 230' FNL & 660' FWL SECTION 30 T18S-R34E LEA CO. NEW MEXICO
2. ELEVATION ABOVE SEA LEVEL: 3863' GL.
3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits.
4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using drilling mud as a circulating medium for solids removal from hole.
5. PROPOSED DRILLING DEPTH: TVD-9804'
 MD-14,773'
6. ESTIMATED TOPS OF GEOLOGICAL MARKERS:

Rustler Anhydrite	1683'	1st Delaware Sd.	5448'	2nd Bone Spring Sd	9508'
Salt	1743'	2nd Delaware Sd.	5733'	Top of Target wind.	9918'
Queen	4433'	Bone Spring	7623'		
Delaware	5408'	1st Bone Spring Sd.	8958'		
7. POSSIBLE MINERAL BEARING FORMATION:

Yates	O/G/W	1st Delaware Sd.	O/G/W	Bone Spring Sd.	O/G/W
Penrose	O/G/F	2nd Delaware Sd.	O/G/W	1st & 2nd Bone Sp. Sd.	O/G/W
8. CASING PROGRAM: See COA

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
26"	0-80'	20"	Conductor	NA	NA	New
17 1/2"	0- ¹⁷⁵⁰ 1710 '	13 3/8"	54.5#	8-R	ST&C	New
12 1/4"	0-4800'	9 5/8"	40#	8-R	LT&C	New
8 1/2"	0-14,773'	5 1/2"	17#	BPN	BPN Buttress	New

CASING SAFETY FACTORS: Collapse 1.125 Burst 1.00 Body Yield 1.5
 Joint Strength 8-R 1.8
 Buttress 1.6

9. CASING SETTING DEPTHS AND CEMENTING:

20"	Conductor	Set 80' of 20" conductor pipe and cement to surface with Redi-mix.
13 3/8"	Surface	Run and set ¹⁷⁵⁰ 1710' of 13 3/8" 54.5# J-55 ST&C casing cement with 990 Sx. of Class "C" Lead cement + 3% BWOC light weight additive. 8.88 gal mix water + 1% CaCl, Yield 1.68 ft ³ /Sx. 100% Excess, tail in with 545 Sx. of Class "C" cement + 1% CaCl, 6.43 gal/Sx. mix water. Yield 1.34 ft ³ /Sx. 100% Excess Top of cement surface.
9 5/8"	Intermediate	Run and set 4800' of 9 5/8" 40# L-80 LT&C casing. Cement with 975 Sx. of 35/65 Class "C" lead cement + 6% Gel, + 5% salt, + 0.4% Retarder, + LCM, + 10.00 gal/Sx mix water. 12.9ppg. Yield 1.69 ft ³ /Sx. 50% Excess, tail in with 190 Sx. of Class "C" cement + LCM, + 6.32 gal/Sx mix water, 14.8ppg. Yield 1.32 ft ³ /Sx. 50% Excess circulate cement to surface.
5 1/2"	Production	Run and set 14,798' of 5 1/2" 17# HCP-110 BNP casing. Cement with 590 Sx. of 50/50 Class "H" lead cement + 2% Gel, + fluid loss additive, 15.95 gal/Sx. mix water, Yield 2.67, tail in with 1225 Sx. of 50/50 POZC Class "H" cement + 2% Gel, fluid loss additive, thinners, and retarders 14.5#/gal. Yield 1.23 ft ³ /Sx. 25% Excess, top of cement 4300'.

Additional
Cement may be
required

See COA

10. PRESSURE CONTROL EQUIPMENT:

Exhibit "E" shows a 3000 PSI working pressure B.O.P. consisting of a packoff an annular bag type preventor, blind rams, and pipe rams. A 13 5/8" B.O.P. will be nipped up on the 13 3/8" surface casing and will remain on the hole till the 9 5/8" intermediate casing is run. It will be tested by a third party testing company to 2000 PSI. A 11" 5000PSI B.O.P. will be nipped up the hole for the drilling of the production hole. It will be tested by a third party testing company to 5000 PSI. The B.O.P.s will be operated at least once in each 24 hour period and the blind rams will be operated when the drill pipe is out of the hole. A full opening stabbing valve and an upper kelly cock will be available on the derrick floor at all times and will be compatible with the drill pipe that is in use while drilling this well. Exhibit "E-1" shows a 3" 5000 PSI choke manifold with a manual choke and a hydraulically operated remote choke. The choke manifold will be a rigid connection to the B.O.P.. No abnormal pressures or temperatures are expected while drilling of this well. Other wells drilled in this near vicinity have not encountered any abnormal pressures or temperatures. No H₂S is expected to be encountered.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
¹⁷⁵⁰ 0-1710'	9.4-9.4	30-36	NC	Fresh water spud mud. add paper to combat seepage, and use high viscosity sweeps to clean hole
1710-4800'	9.8-10.2	28-32	NC	Brine water use paper to control seepage and use paper to control seepage use high viscosity sweep to clean hole
4800-14,773'	8.7-9.2	28-32	12-15 cc	Cut Brine add Dynazan starch, HB-411 to control water loss and maintain hole stability.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's, open hole logs, cut cores, and run casing, the viscosity, water loss, and other properties may have to be altered to meet these requirements. Pit levels will be monitored visually, and an electronic pit level indicator will be employed.

THIS WELL BE DRILLED USING A CLOSED MUD SYSTRM

12. LOGGING, CORING, AND TESTING PROGRAM:

- See COA*
- A. Open hole logs: Dual Laterolog, SP, Gamma Ray, Caliper, Neutron Density, from 9455' back to 4800'. Gamma Ray Neutron back to surface.
 - B. Rig up mud logger on hole at 3500' and keep on hole to TD.
 - C. No DST's and no cores are planned at this time.

13. POTENTIAL HAZARDS:

See COA

No abnormal pressures or temperatures are expected. There is no known presence of H₂S in this area. If H₂S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No.6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated Bottom Hole Pressure 4250 PSI, and Estimated BHT 150°F.

14. ANTICIPATED STARTING AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date would be as soon as the location construction and a rig becomes available. Move in operation and drilling is expected to take 40 days. If production casing is run then an additional 40 days will be needed to complete the well and construction of production facilities, and lay flowlines to place well on production.

15. OTHER FACETS OF PRODUCTION:

McElvain Energy, Inc. plan on drilling eight wells off of a single drilling pad. There will be 4 horizontal wells in the Bone Spring formation and 4 wells in the Wolfcamp formation, these wells will conform with the New Mexico Oil Conservation Division rules. A combined tank battery will be constructed on the West side of the drilling pad that will satisfy both formation's production, when the drilling of wells has been completed reclamation on the North and the South side of the drilling pad of 100'X520' on the North and 100'X565' on the South will be constructed.

See COA

McElvain Energy, Inc. will apply for a Non-Standard Location with the NMOCD to comply with the subject well.

The plan for this well is to move in a spudder rig and drill conductor hole and 1750' cement conductor pipe in place. Then the rig would drill the surface hole to ~~710'~~ then run ^{TD} ~~TD~~ of 13 3/8" 54.5# J-55 ST&C casing. A cement company would be hired to cement the surface casing in place, the spudder rig would be kept over hole till it was sure the cement job meets all COA's per the APD. At this point MEI would weld a steel plate with a pressure gage to ensure that no debris can enter the hole and would allow the BLM personnel to inspect it to see that no pressure build up occurs. Then within 30-60 days a drilling rig would be moved and rigged up on the location and drill to TD, run casing and complete well for production.