Form 3160-5 (August 2007)

#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

5. Lease Serial No.

FORM APPROVED OMB NO 1004-0137 Expires July 31, 2010

#### SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an

NOV 02 2011

NM-4461 6. If Indian, Allottee or Tribe Name

abandoned well. Use Form 3160-3 (APD) for such proposals. Quiteau UI Latiu iviailay 711 If Unit or CA/Agreement, Name and/or No SUBMIT IN TRIPLICATE - Other instructions on page 2 Elk Horn 1. Type of Well 8. Well Name and No. Oil Well X Gas Well Other Elk Horn 100 Name of Operator Energen Resources Corporation 9. API Well No. 3a. Address 3b. Phone No (include area code) 30-039-27337 505-325-6800 2010 Afton Place, Farmington, NM 87401 10. Field and Pool, or Exploratory Area 4 Location of Well (Footage, Sec., T, R., M., or Survey Description) Basin Fruitland Coal SHL: (M) Sec.29-T32N-R05W; 725'FSL, 800'FWL 11 County or Parish, State BHL: (C) Sec.29-T32N-R05W; 760'FNL, 1880'FWL Rio Arriba NM CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA 12 TYPE OF SUBMISSION TYPE OF ACTION Water Shut-Off X Notice of Intent Acidize Production (Start/Resume) Deepen Well Integrity Alter Casing Fracture Treat Reclamation Subsequent Report Casing Repair New Construction Recomplete Other Permission Change Plans Plug and Abandon Temporarily Abandon To Work in Closer Final Abandonment Notice Convert to Injection Plug Back Water Disposal Area Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA Required subsequent reports shall be filed within 30 days 13 following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.) Energen Resources requests an exception to proceed with completion operations for the Elk Horn #100 sidetrack in the winter closure area. See attached cover letter, procedure, and wellbore diagram for details.

### SEE ATTACHED FOR CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL Adhere to previously issued stipulations.

| 14 I hereby certify that the foregoing is true and correct Name (Printed/Typed)  |   |
|--|---|
| Kirt Snyder 1/1  | Title District Engineer   |
| Signature  | Date 11/2/2011  |
| THIS SPACE FOR FEDER   | AL OR STATE OFFICE USE  |
| Approved by (IWhilm)   | This July Manuar Rushus Pate 11/03/11                               |
| Conditions of approval if any, are attached. Approval of this notice does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would | at Office   |
| entitle the applicant to conduct operations thereon  | Alman   |
| Title 18 U S C Section 1001, and Title 43 U S C Section 1212, makes of the fictitious or fraudulent statements or representations as to any matter within its jurisdiction                     | to make to any department or agency of the United States any false, |

## Recommended Workover Procedure Elk Horn #100 SW/4 Section 29, T32N, R5W API# 30-039-27337

- 1. Check Anchors. Check Pressures. MIRU WSU. ND WH. NU BOP.
- 2. TOH w/ kill string tbg.
- 3. TIH w/ 2-3/8" PH-6 work string w/ MCL to correlate w/ pipe tally (get accurate tally on Work string). TOH.
- 4. TIH w/ 3-5/8" hydraulic cutting tool and cut liner 2' below bottom of window @ 3094' MD (Bottom of Window @ 3092' MD). TOH w/ cutting tool.
- 5. TIH w/ 4-1/2" casing spear and spear casing below 2510' MD (T Lock Swivel @ 2496' MD). TOH w/ fish.
- 6. TIH w/ 6-1/4" Junk Mill, Float Sub, and 2-3/8" work string to drill out composite plug @ 3100' (window f/ 3079' to 3092'). TOH. TIH w/ 6-1/4" junk mill, float sub and dual string mills to dress window.
- 7. MIRU Weatherford Wire Line and TIH w/ Multi Finger Caliper log from 3200' to 2200' (NU Wireline pack off and lubricator). RDMO Wireline. Evaluate log.
- 8. TIH with a 7" Tubing set RBP and mechanical collar locator and set RBP at approximately 3150'. Log collars coming out record at least 6 to 10 collars. Load 7" from top of RBP to bottom of window if fluid level requires.
- 9. PU lateral re-entry tool (Per Knight Oil Tool running procedure). Locate window. Orientate re-entry tool and set.
- 10. RU AFU and TIH w/ wash nozzle. Establish circulation before entering 4-1/2" sidetrack liner. Enter liner @ 60 ft intervals. Clean out lateral to bottom perf @ 6211' MD. (Record pressures, water volumes, and solids during all flow back operations)
- 11. TIH w/ work string and spot acid 2500 gal 15% HCl f/ 3500' to 6211' MD.
- 12. Flow acid back and clean up lateral until water is clear and pH has returned to normal. TIH to bottom perf @ 6211' MD to verify no fill has accumulated. TOH.
- 13. TIH and retrieve lateral re entry tool (Per Knight Oil Tool procedure). TOH.
- 14. TIH and retrieve RBP @ 3150'. TOH.

- 15. TIH and Clean out to PBTD @ 3535' (5-1/2" liner top @ 3216'). TOH.
- 16. TIH w/ production tbg according to production foreman specifications.
- 17. ND BOP. NU WH.
- 18. TIH w/ pump and rods according to production foreman specifications.
- 19. RDMO WSU.

## Workover Procedure 2 Elk Horn #100 SW/4 Section 29, T32N, R5W API# 30-039-27337

- 1. Check Anchors. Check Pressures. MIRU WSU. ND.WH. NU BOP.
- 2. TOH w/ kill string tbg.
- 3. TIH w/ 2-3/8" PH-6 work string w/ MCL to correlate w/ pipe tally (get accurate tally on Work string). TOH.
- 4. TIH w/ 3-5/8" hydraulic cutting tool and cut liner 2' below bottom of window @ 3094' MD (Bottom of Window @ 3092' MD). TOH w/ cutting tool.
- 5. TIH w/ 4-1/2" casing spear and spear casing below 2510' MD (T Lock Swivel @ 2496' MD). TOH w/ fish.
- 6. TIH w/ 6-1/4" Junk Mill, Float Sub, and 2-3/8" work string to drill out composite plug @ 3100' (window f/ 3079' to 3092'). TOH. TIH w/ 6-1/4" junk mill, float sub and dual string mills to dress window.
- 7. TIH and Q'lean out to PBTD @ 3535' (5-1/2" liner top @ 3216'). TOH.
- 8. TIH w/ production tbg according to production foreman specifications.
- 9. ND BOP. NU WH.
- 10/TIH w/ pump and rods according to production foreman specifications.

ľ1. RDMO WSU.

Note: Wo procedure # 2 was considered,
thousever, the better alternative to
maximize the resource recovery
while considering widlife impacts
of alternative # 1.

## Elk Horn #100

## **Energen Resources**

**Fruitland Coal** 725' FSL, 800' FWL Sec. 29-T32N-R5W

Rio Arriba, NM. API:30-039-27337

Surface Detail:

12 1/4" Hole 9 5/8" 32.30#, H-40 Casing set @ 215'

Cement with 176 ft^3 (Circulated to Surface)

Intermediate Detail:

8 3/4" Hole 7" 23.00# J-55

**Tubing Detail:** 

2-3/8" 4.7# J-55

Composite Bridge Plug in Mother Bore @ 3100'.

Horizontal Sidetrack Liner Pre-Drilled Perf Detail:

4 1/2" 11.6# J-55

Perfs from 2934' MD to 6211' MD.

**Original Cavitated Liner Detail:** 

Cavitated Hole 5 1/2" 15.5# J-55

Casing from 3216' to 3535'.

Perfs from 3374' -98', 3401-04', 3457-65'

152 total 0.45" diameter holes @ 4 spf

Date: 11/2/2011 Spud: 8/22/2003 Elevation: 6,682' GL KB Elevation: 15'

Casing set @ 3332'

Cement with 984 ft^3 (Circulated to Surface)

EOT @ 3142' MD SN @ 3108' MD

6 1/4" Hole

Casing from 2461' MD to 6317' MD. Window from 3079' MD to 3092' MD.

H-Latch Drop Off.



## United States Department of the Interior

## **BUREAU OF LAND MANAGEMENT**

Farmington Field Office 1235 La Plata Highway, Suite A Farmington, New Mexico 87401

IN REPLY REFER TO

Energen Resources Elk Horn #100

# Conditions of Approval:

# SEASONAL CLOSURE EXCEPTION and RECOMPLETION OPERATIONS:

As you are aware this well is currently under seasonal closure stipulations. This authorization is granted after considering the relevant facts and the conditions encountered in the well bore while drilling and the likely irretrievable loss of hydrocarbon resources if immediate action is not taken.

In future operations conducted in seasonal closure areas, you are cautioned to consider the degree of risk associated with your well development proposal in relation to the commencement of BLM's seasonal closure requirements, particularly when horizontal and directional technology applications are employed. Commencing operations within 30 days of the closure could create a seasonal closure jeopardy situation if well bore problems are encountered.

## This authorization is conditioned upon the following:

- 1. Authorized operations are granted until November 22, 2011. No additional exceptions will be granted. Authorized operations include your recompletion proposal and facilities installation (Including the ConocoPhillips Quintana Mesa #1 facility re-installation).
- 2. If casing repair operations are needed, obtain prior approval from this office before commencing repair operations.
- 3. A properly functioning BOP and related equipment must be installed prior to commencing recompletion operations.