Form 3160-5 (August 2007)

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

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

5. Lease Serial No.

OCT 19 2011 SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an

NMSF - 078048 6. If Indian, Allottee or Tribe Name

| abandoned well. Use Fon | m 3160-3 (APD) for s | uch proposalsningt | on Field Office | | • |
|--|---|---|--|--|--|
| SUBMIT IN TRIPLICATE - Other instructions on page 2 | | | | 7. If Unit or CA/Agreement, Name and/or No | |
| 1. Type of Well Oit Well X Gas Well Other 2. Name of Operator | | | | Well Name and I | No. 15 |
| ENERGEN RESOURCES CORPORATION | Lai | | | API Well No. | |
| 3a. Address 2010 Afton Place. Farmington. NM 8 | | b. Phone No. (include ar | |)-039-06314 | , or Exploratory Area |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey 1 1.850' FNL, 1,850' FWL, T26N R7W Se | | Sc C1 | outh Blanco iffs | Pictured | |
| | | | | 11. County or Parish, State | |
| 12CHECK-APPROPRIATI | F_ROY(FS)_TO_INDIC | CATENATLIRE.OF.N | | io Arriba -OR-OTHER-E | NM NATA |
| TYPE OF SUBMISSION | E-BOX(ES)-TO-INDIC | | PE OF ACTION | , OR OTHER E | |
| X Notice of Intent | Acidize | Deepen | Production (Sta | art/Resume) | Water Shut-Off |
| Subsequent Report | Alter Casing X Casing Repair | Fracture Treat New Construction | Reclamation Recomplete | | Well Integrity Other |
| Final Abandonment Notice | Convert to Injection | Plug and Abandon Plug Back | Temporarily Al | | |
| Attach the Bond under which the work will be per following completion of the involved operations. It testing has been completed. Final Abandonment Metermined that the final site is ready for final insperence of the period of the period of the period of the period of the involved operations. It is to be performed that the final site is ready for final insperence of the period of | If the operation results in a Notices shall be filed only section.) r a leak in the Ca | multiple completion or re after all requirements, inc asing according t | ecompletion in a new cluding reclamation, I to the attache | interval, a Form have been compl | 3160-4 shall be filed once eted, and the operator has e. 125'11 5.DIV. |
| 14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Adam Klem | | Title Distri | ct Engineer | | |
| Signature Off | ·- | Date 10/18/11 | | | |
| THIS | SPACE FOR FEDER | AL OR STATE OFF | ICE USE | | |
| Approved by Original Signed: Stephen M | Mason | Title | | Date | OCT 1 9 2011 |
| Conditions of approval, if any, are attached. Approval of this noti the applicant holds legal or equitable title to those rights in the subsentitle the applicant to conduct operations thereon. | ice does not warrant or certify t | Office | | | |



Hughes #15

API #: 30-039-06314 / AFE #: SJ11-330 / DP: 3151155A **Pictured Cliffs** Rio Arriba County, New Mexico

CASING SQUEEZE PROCEDURE October 14, 2011

OBJECTIVE:

Squeeze casing leak from 1,340'-1,357'. 1.

2. Return well to production.

В. **WELL DATA:**

DATES:

Spud: 8/20/1957

Completed: 9/7/1957

DEPTHS:

TD: 2,300'

PBTD: 2,220'

ELEVATIONS:

GL: 6,311'

KB: 6,320' (9' KBM)

PERFORATIONS:

2,165'-2,192' w/ 4 SPF. Shot a total of 112 holes over the 27'.

STIMULATION:

Sand frac w/ 1,240 bbls of water carrying 50,000# of sand.

Refrac with 421 bbls of 20cp X-link carrying 5,000# 100 mesh and

80,000# 20/40.

SURFACE CASING:

8 5/8" J-55 24.00# ST&C casing set @ 102'.

Cemented in a single stage w/80 sacks, the cement was circulated

PRODUCTION CASING: 5 1/2" J-55 14.00# LT&C casing set @ 2,290'.

Cemented in a single stage w/ 100 sacks, the calculated TOC is @ 1,821'.

PRODUCTION TUBING: 68 joints of 2 3/8" J-55 4.70# tubing. The EOT is landed @ 2,168' w/ the

SN @ 2,152'.

Hughes #15 Casing Squeeze Procedure Page 2 of 3

C. PROCEDURE:

WATCH FOR EXCESSIVE USE OF THE THREAD COMPOUND. USE THREAD COMPOUND ONLY ON PIN ENDS. NEVER BOX ENDS. KEEP A TIW VALVE OPEN & ON THE RIG FLOOR @ ALL TIMES.

- 1. MIRUPU. Record casing, tubing and bradenhead pressures.
- 2. MI & set 1-400 barrel lined frac tanks filled w/ enough fresh water to satisfy all of the anticipated fluid requirements for this **casing squeeze** & 1-400 barrel test tank to flow back any fluids & circulated cement during this **CLOSED LOOP OPERATION**.
- 3. NU relief line and blow down well.
- 4. ND the wellhead, & NU a 3M# manual BOP w/ 2 3/8" & CSO rams. Function test BOP.
- 5. POOH, inspect & tally the tubing.
- 6. PU & TIH w/ a 5 1/2" RBP. Set RBP +/- 50' above top perf at 2,115'. POOH w/ the 2 3/8" tubing.
- 7. PU & TIH w/ a 5 1/2" x 2 3/8" production packer & a 2 3/8" SN on the 2 3/8" tubing above the RBP.
- 8. Set the production packer & pressure test BP to 2,500# for 5 minutes. Release the pressure, unset the packer & PUH to locate and isolate the casing leak.
- 9. Once casing leak is located, TOOH with tubing, RBP and packer.
- 10. MIRU wireline to run a CBL from 2,000' to surface to determine TOC.
- 11. PU and TIH with a 5 ½" CIBP on the 2 3/8" tubing with a packer. Set CIBP +/- 50' below bottom of casing leak at +/- 1,407'
- 12. Pressure test CIBP to 2,500#.
- 13. PU & TIH w/ a 5 1/2" x 2 3/8" cement retainer, an on/off tool, a 2 3/8" SN & the 2 3/8" tubing. Set the cement retainer @ +/- 1,280'. Load & pressure annulus to 500#
- 14. Pressure test all lines to 2,500#. Mix & pump cement & squeeze according to the service company's proposal. Max pressure 2,000#.
- 15. Sting out of cement retainer leaving 1 BBL of cement on top of the retainer & reverse circulate any excess cement to surface. POOH w/ the 2 3/8" tubing, SN & stinger. SION & WOC.
- Drill out the cement & the cement retainer down to the BP. Circulate one full hole volume. Load & pressure test casing to 500#. Re-squeeze as necessary.

- 17. If casing tests good, drill out CIBP and C/O to PBTD.
- 18. MIRU wireline. Run CBL from 1,800' to surface.
- 19. PU & RIH w/ the 2 3/8 tail joint, the 2 3/8" API SN & the 2 3/8" J-55 tubing. ND the BOP & NU the WH.

Note: Be sure to land SN in the bottom 1/3rd of the perfs.

20. Clean the location, RDMO the pulling unit & turn well over to the Production Group to place well on production.

D. ATTACHMENTS:

- 1. Hughes #15 Pertinent Well Data Sheet
- 2. Hughes #15 Production Graphs
- 3. Hughes #15 Wellbore Diagrams