

UNITED STATES 2005 OCT 31 PM 1 51  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER NOTON NM

FORM APPROVED  
OMB No 1004-0136

Expires November 30, 2000

1a Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No <b>515077972</b> <b>I-149-IND8181</b>
b Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6 If Indian, Allottee or Tribe Name
2 Name of Operator <b>ENERGEN RESOURCES CORPORATION</b>		7. If Unit or CA Agreement, Name and No
3A Address <b>c/o Walsh Engineering, 7415 E. Main, Farmington, NM 87402</b>		8 Lease Name and Well No <b>Richardson #102</b>
3b. Phone No (include area code) <b>(505) 327-4892</b>		9. API Well No <b>30-045-33402</b>
4 Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>885' FSL and 920' FEL</b> At proposed prod. Zone		10. Field and Pool, or Exploratory <b>Basin Fruitland Coal</b>
14 Distance in miles and direction from nearest town or post office* <b>9 miles south of Farmington, NM</b>		11 Sec., T, R., M., or Blk, and Survey or Area <b>P Sec. 11, T27N, R13W</b>
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) <b>885'</b>	16. No. of Acres in lease <b>320+</b>	17. Spacing Unit dedicated to this well <b>320 acres (South half)</b>
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft <b>75'</b>	19. Proposed Depth <b>1545 +/-</b>	20 BLM/BIA Bond No on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5874' GL</b>	22. Approximate date work will start* <b>April 1, 2006</b>	23 Estimated duration <b>1 week</b>

24. Attachments

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

- |   |   |
|---|---|
| 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 shall be filed with the appropriate Forest Service Office. | 6. Such other site specific information and/or plans as may be required by the authorized office. |

RCVD OCT 15 '07

OIL CONS. DIV.

DIST. 3

25 Signature <i>Paul C. Thompson</i>	Name (Printed/Typed) <b>Paul C. Thompson, P.E.</b>	Date <b>10/21/2005</b>
Title		
Agent		
Approved by (Signature) <i>D. Manke</i>	Name (Printed/Typed)	Date <b>10/11/07</b>
Title <i>AFM</i>	Office <i>FFO</i>	

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.

\*(Instructions on reverse)

Obtain a pit permit from NMOCD  
prior to constructing location

NOTIFY AZTEC OOD 24 HRS.  
PRIOR TO CASING & CEMENT

NMOCD OCT 18 2007

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS". This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

2005 OCT 31 PM 1 51

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 71629		3 Pool Name BASIN FRUITLAND COAL	
4 Property Code 21370		5 Property Name RICHARDSON			6 Well Number 102
7 GRID No. 162928		8 Operator Name ENERGEN RESOURCES CORPORATION			9 Elevation 5874'

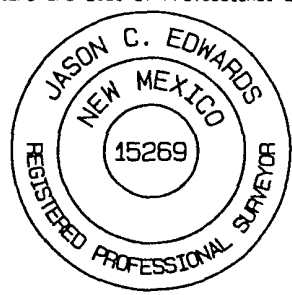
10 Surface Location

UL or lot no P	Section 11	Township 27N	Range 13W	Lot Idn	Feet from the 885	North/South line SOUTH	Feet from the 920	East/West line EAST	County SAN JUAN
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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 320.0 Acres - (S/2)					13 Joint or Infill Y	14 Consolidation Code	15 Order No.		

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

16	5281.32'	5280.00'	11	5282.64'	885'	920'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <i>Paul C. Thompson</i> Signature Doug Thomas Paul Thompson Printed Name Drilling Superintendant Title 10/24/05 Date
							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. Survey Date: FEBRUARY 25, 2004 Signature and Seal of Professional Surveyor  JASON C. EDWARDS Certificate Number 15269

ENERGEN RESOURCES CORP.  
OPERATIONS PLAN  
Richardson #102

I. Location: 885' FSL & 920' FEL Date: October 18, 2005  
Sec 11 T27N R13W  
San Juan County, NM

Field: Basin Fruitland Coal Elev: GL 5874'  
Surface: Navajo Tribal Trust  
Minerals: I - 149 - IND - 8181

II. Geology: Surface formation \_ Nacimiento

<u>A. Formation Tops</u>	<u>Depths</u>
Ojo Alamo	71'
Kirtland	171'
Fruitland	1151'
Pictured Cliffs	1345'
Total Depth	1545'

Estimated depths of anticipated water, oil, gas, and other mineral bearing formations which are expected to be encountered:

Water and gas - 1146' and 1341'.

B. Logging Program: Induction/GR and density logs at TD.

C. No over pressured zones are expected in this well. No H<sub>2</sub>S zones will be penetrated in this well. Max. BHP = 600 psig.

III. Drilling

A. Contractor:

B. Mud Program:

The surface hole will be drilled with a fresh water mud.

The production hole will be drilled with a fresh water polymer mud. The weighting material will be drill solids or if conditions dictate, barite. The maximum mud weight expected is 8.5 ppg.

C. Minimum Blowout Control Specifications:

Double ram type or annular type 2000 psi working pressure BOP with a rotating head. See the attached exhibit #1 for details on the BOP equipment. All ram type preventers and related equipment will be hydraulically tested at nipple-up and after any use under pressure to 1000 psi.

C. Cont.

The blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. The BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi.

IV. Materials

A. Casing Program:

Hole Size	Depth	Casing Size	Wt. & Grade
8-3/4"	120'	7"	20# K-55
6-1/4"	1545'	4-1/2"	10.5# K-55

B. Float Equipment:

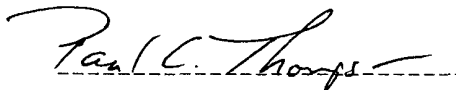
a) Surface Casing: ~~None~~

b) Production Casing: 4-1/2" cement guide shoe and self fill insert float collar. Place float one joint above shoe. Five centralizers spaced every other joint above shoe and five turbolizers every other joint from the top of the well.

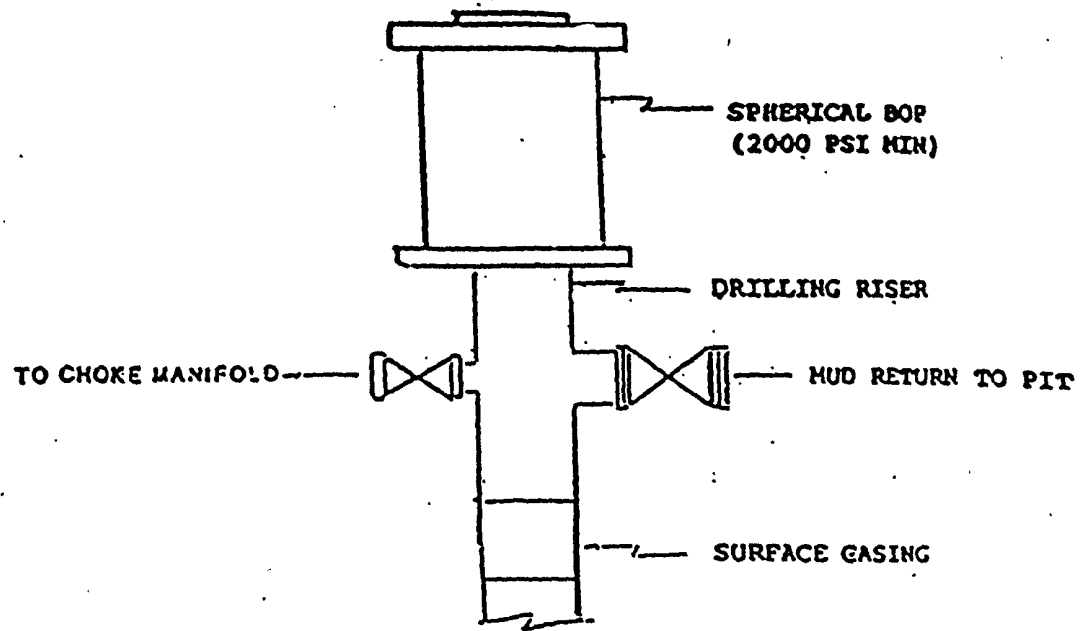
V. Cementing:

**Surface casing:** 7" - Use 50 sx (59 cu. ft.) of Cl "B" with ¼ #/sk celloflake and 2% CaCl<sub>2</sub> (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). 100% excess to circulate cement to surface. WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

**Production Casing:** 4-1/2" - Before cementing circulate hole with at least 1-1/2 hole volumes of mud. Precede cement with 30 bbls of fresh water. **Lead** with 100 sx (206 cu.ft) of Cl "B" with 2% metasilicate and ¼ #/sk celloflake. (Yield = 2.06 cu.ft./sk; slurry weight = 12.5 PPG). **Tail** with 100 sx (118 cu.ft.) of Cl "B" with ¼ #/sk celloflake (Yield = 1.18 cu. ft./sk; slurry weight = 15.6 PPG). Total cement volume is 324 cu.ft. (100% excess to circulate cement to surface).

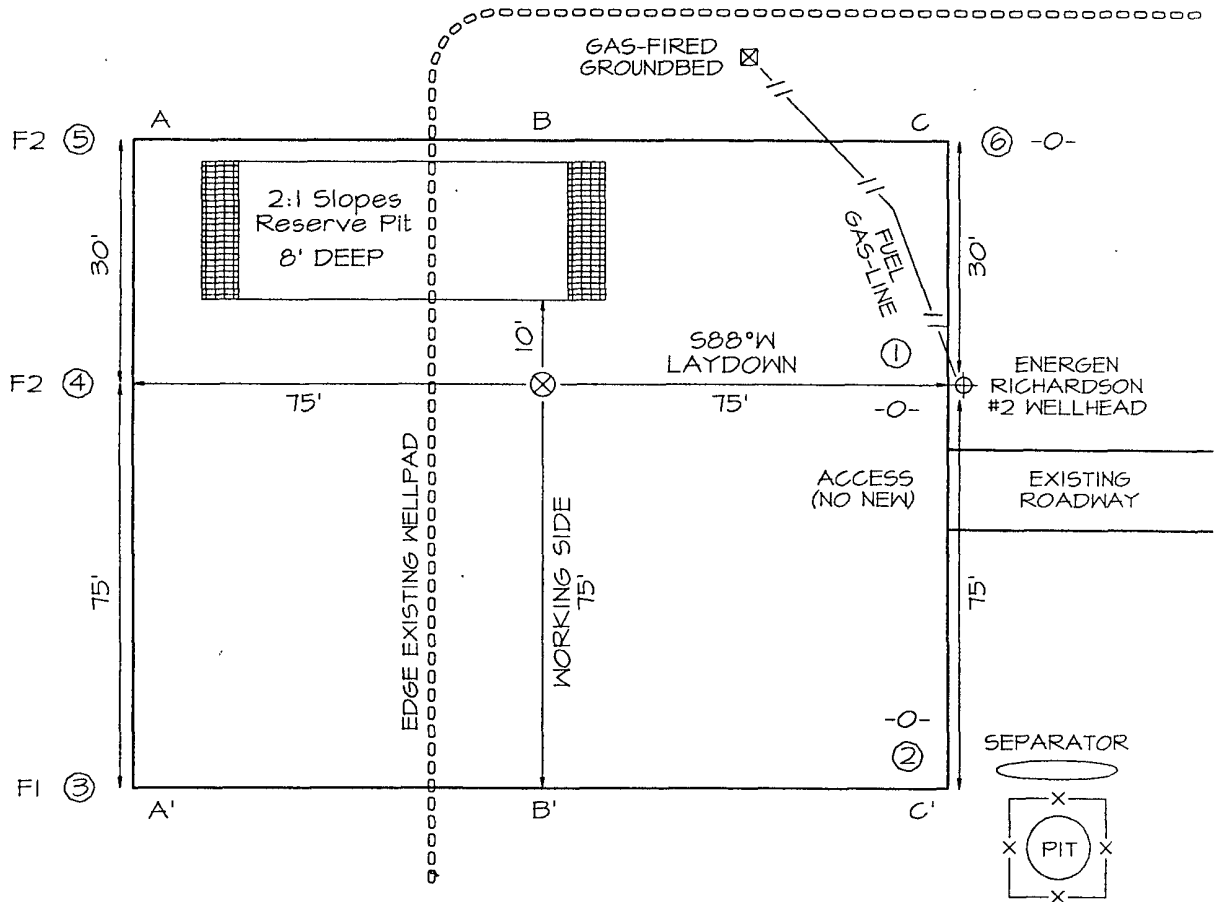
  
Paul C. Thompson, P.E.

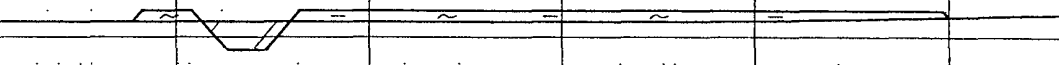
ANNULAR PREVENTER

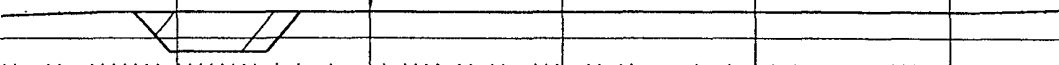


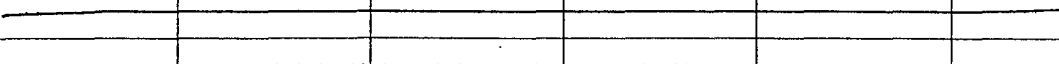
**ENERGEN RESOURCES CORPORATION RICHARDSON #102**  
**885' ASL & 920' FEL, SECTION 11, T. 12N, R13W, NMPM**  
**SAN JUAN COUNTY, NEW MEXICO GROUND ELEVATION: 5874'**

**LATITUDE: 36°35'06"**  
**LONGITUDE: 108°10'55"**  
 DATUM: NAD1927



A-A'						
5884'						
5874'						
5864'						

B-B'						
5884'						
5874'						
5864'						

C-C'						
5884'						
5874'						
5864'						

Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

EXHIBIT 71  
**Energen Resources, Inc.**

**Well Control Equipment Schematic for 2M Service**

Attachment to Drilling Technical Program

**Typical BOP setup**

Location: San Juan Basin, New Mexico

Date: March, 2003

By: John Thompson (Walsh E&P)

