

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires March 31, 2007

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>I-149-IND-8182</b>	
1b Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name <b>Navajo</b>	
2. Name of Operator <b>Energen Resources Corporation</b>		7. Unit of CA Agreement Name and No. <b>2006-008-27 PM 12-13</b>	
3a Address <b>2198 Bloomfield Highway Farmington, New Mexico 87401</b>		8. Lease Name and Well No. <b>Charley Hosh #100S</b>	
3b. Phone No. (include area code) <b>(505) 325-6800</b>		9. API Well No. <b>30-045-33674</b>	
4 Location of Well (Report location clearly and in accordance with any State requirements)* At surface <b>1340' fsl, 1885' 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>Approximately 9.5 miles south southwest of Farmington</b>		11 Sec., T., R., M., or Blk. and Survey or Area <b>J S12, T27N, R13W</b>	
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) <b>1340'</b>		12 County or Parish <b>San Juan</b>	
16 No. of Acres in lease <b>320.00</b>		13 State <b>NM</b>	
17 Spacing Unit dedicated to this well <b>E 1/2</b>			
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>Approx. 1000'</b>		20. BLM/BIA Bond No. on file	
19 Proposed Depth <b>1459'</b>			
21 Elevations (Show whether DF, KDB, RT, GL, etc.) <b>GL 5793'</b>		22 Approximate date work will start* <b>08/15/06</b>	
		23 Estimated duration <b>8 days</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


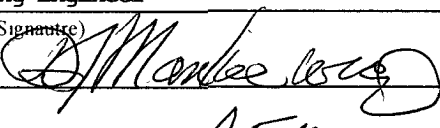
- 1 Well plat certified by a registered surveyor
- 2 A Drilling Plan
- 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)

- 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 authorized officer

RCVD DEC 14 '09

OIL CONS. DIV.

DIST. 3

25. Signature 	Name (Printed/Typed) <b>Nathan Smith</b>	Date <b>3/27/06</b>
Title <b>Drilling Engineer</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>AFM</b>	Date <b>12/1/09</b>
Title <b>FFO</b>		

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 page 2)

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

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

JAN 04 2010

NMOCD

A COMPLETE C-144 MUST BE SUBMITTED TO AND  
APPROVED BY THE NMOCD FOR: A PIT, CLOSED  
LOOP SYSTEM, BELOW GRADE TANK, OR  
PROPOSED ALTERNATIVE METHOD, PURSUANT TO  
NMOCD PART 19.15.17, PRIOR TO THE USE OR  
CONSTRUCTION OF THE ABOVE APPLICATIONS.

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

District II  
PO Drawer 00, 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

2006 MAR 27 PM 12 13 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT  
070 FARMINGTON NM

*API Number 30045-33674		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 37945	*Property Name CHARLIE HOSH		*Well Number 100S
*OGRIID No 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 5793'

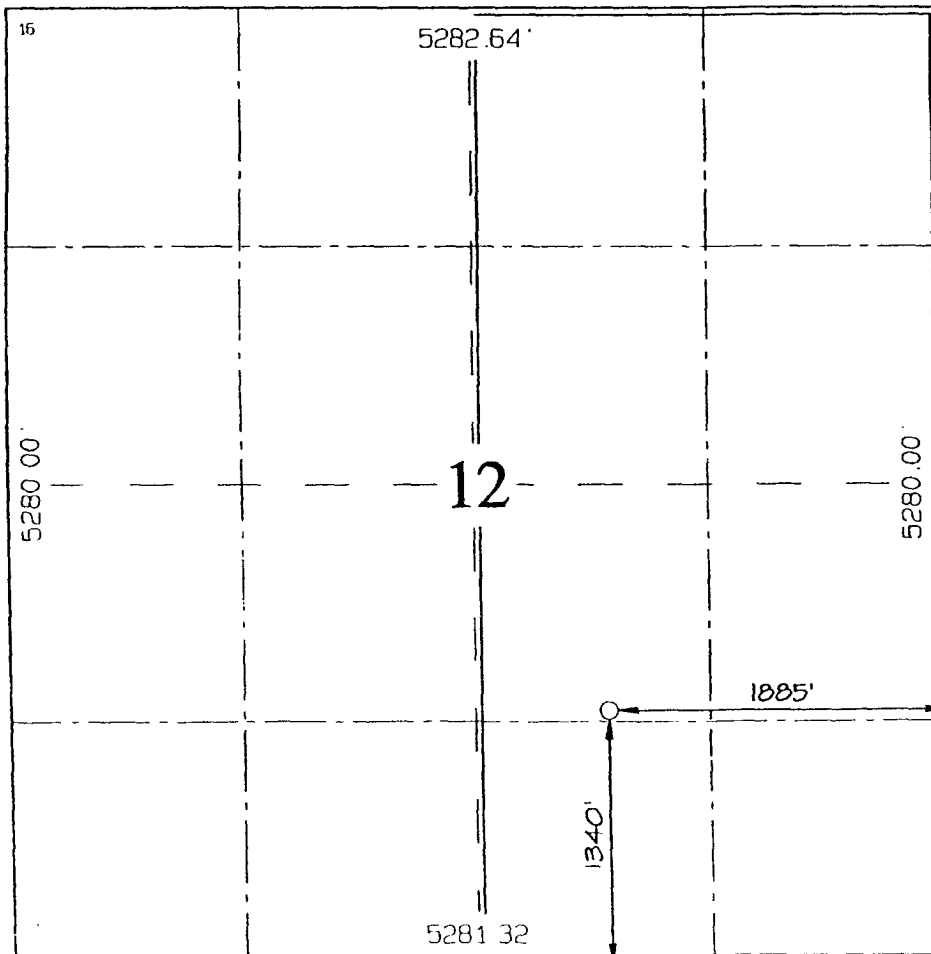
<sup>10</sup> Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	12	27N	13W		1340	SOUTH	1885	EAST	SAN JUAN

<sup>11</sup> 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
<sup>12</sup> Dedicated Acres 320.0 Acres ~ (E/2)					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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



<sup>17</sup> OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  
*Nathan Smith*  
Signature  
Nathan Smith  
Printed Name  
Drilling Engineer  
Title  
2/28/06  
Date

<sup>18</sup> 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 28, 2005  
Signature and Seal of Professional Surveyor  
  
JASON C. EDWARDS  
Certificate Number 15269

## Operations Plan

March 27, 2006

### **Charley Hosh #100S**

#### **General Information**

Location	1340' fsl, 1885' fel nwse S12, T27N, R13W San Juan County, New Mexico
Elevations	5792' GL
Total Depth	1459' (MD)
Formation Objective	Basin Fruitland Coal

#### **Formation Tops**

Nacimiento	Surface
Ojo Alamo Ss	44'
Kirtland Sh	194'
Fruitland Fm	944'
Top Coal	1194'
Bottom Coal	1259'
Pictured Cliffs Ss	1269'
<b>Total Depth</b>	<b>1459'</b>

#### **Drilling**

The 8 3/4" wellbore will be drilled with a fresh water mud system.

The 6 1/4" wellbore will be drilled with a low solids fresh water/polymer mud system. Weighting materials will be drill cuttings and, if needed, barite. Mud density is expected to range from 8.3 ppg to 8.9 ppg.

Blowout Control Specifications:

A 2000 psi minimum double ram or annulus BOP stack (figure 1) will be used following nipple up of casing head. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations.

Logging Program:

Open hole logs: Induction/Gamma Ray and Density Logs

Coring: None

Surveys: Surface and/or every 500' to TD

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-150'	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	150'-1459'	6 ¼"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-1350'		2 3/8"	4.7 ppf	J-55

### Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Production Casing: Depending on wellbore conditions, a Cement nose guide shoe with self fill insert float collar on top of bottom joint and casing centralization with standard bow spring centralizers to optimize standoff.

## Cementing

Surface Casing: 50 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 59 ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

Production Casing: Before cementing, circulate hole at least 1 ½ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 100 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 85 sks of Standard (Class B) cement with 5.0 #/sk Gilsonite, and ¼ #/sk Flocele (15.2ppg, 1.24 ft<sup>3</sup>/sk). (301 ft<sup>3</sup> of slurry, +100 % excess to circulate to surface).

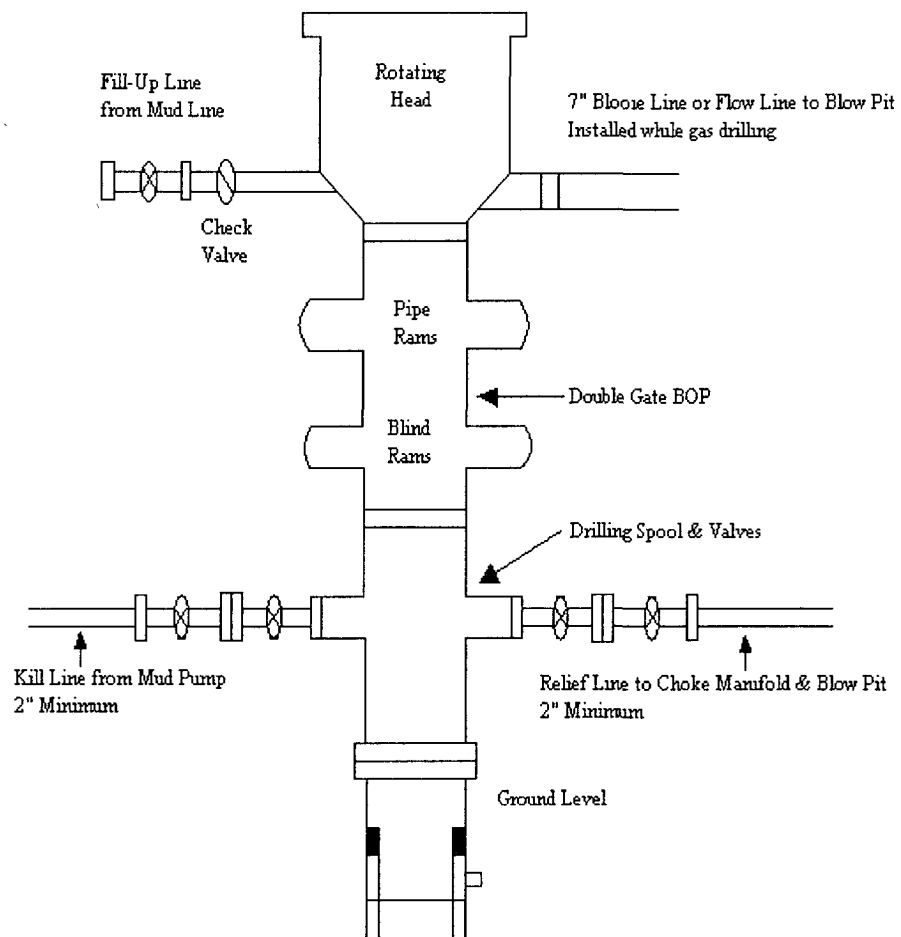
**Pump a 10 bbls water, 20 bbls gelled water, 5 bbls water spacer ahead of cement**

## Other Information

- 1) This well will be cased and the Basin Fruitland Coal fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures or pressures are anticipated.
- 5) This gas is dedicated.

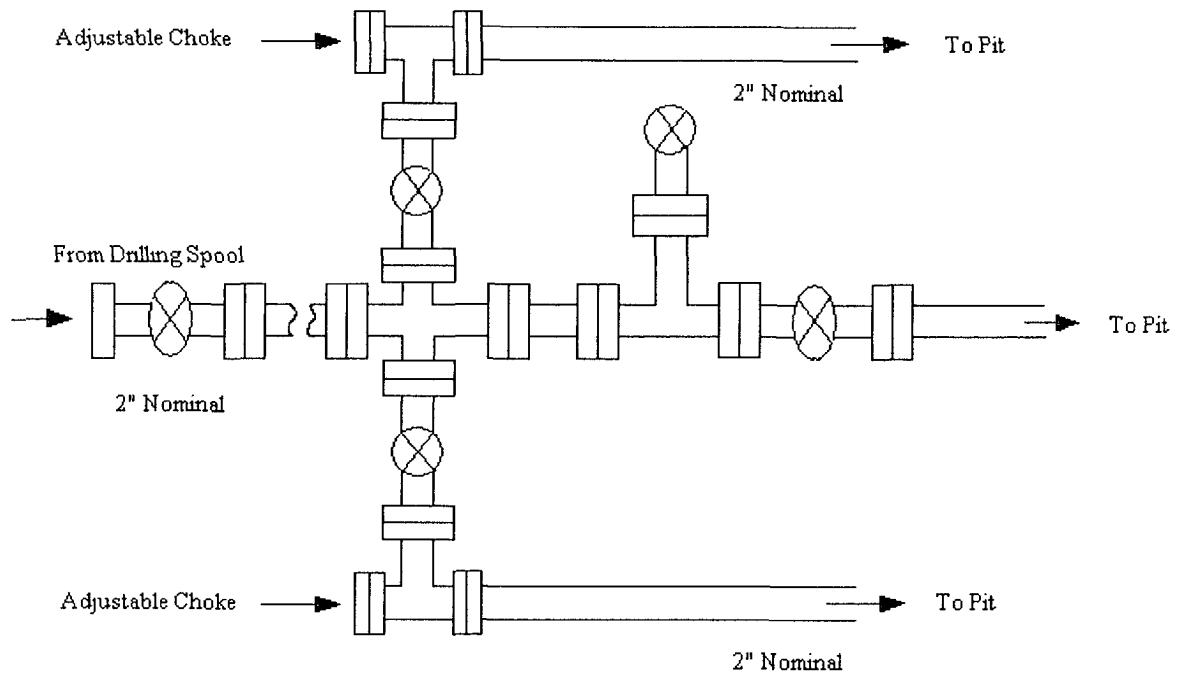
# Energen Resources Corporation

## Typical BOP Configuration for Gas Drilling



# Energen Resources Corporation

## Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD