Form 3160-3 (April 2004)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB NO. 1004-0137 Expires March 31, 2007

APPLICATION FOR PERMIT TO DRIL	LOR REENTER	5. Lease Serial			
la. Type of Work DRILL REENTER			6. If Indian, Allotee or Tribe Name		
1b. Type of Well Oil Well Sas Well Other	Single Zone RECEIVED	Navajo 7. Unit or CA	Agreement Name and No.		
2. Name of Operator	OTO I ANDIMOTOR	8. Lease Name	and Well No.		
Energen Resources Corporation  3a. Address	3b. Phone No. (include area co		Post #2		
2198 Bloomfield Highway Farmington, New Mexico	i i	9. API Well N	945-33611		
4. Location of Well (Report location clearly and in accordance with any S		10. Field and Po	ool, or Exploratory		
At surface 1200' fsl, 660' fwl			ruitland Coal , M., or Bik. and Survey or Area		
At proposed prod. zone			•		
14. Distance in miles and direction from nearest town or post office*		12. County or P	P27N, R12W Parish 13. State		
Approximately 14.5 miles south	west of Bloomfield	San Juan	NM NM		
15. Distance from proposed* location to nearest	16.No. of Acres in lease	17. Spacing Unit dedic	cated to this well		
property or lease line, ft.  (Also to nearest drg. unit line, if any)	640	320	W 1/2		
18. Distance from proposed location*	19. Proposed Depth	20.BLM/BIA Bond	No. on file		
to nearest well, drilling, completed, applied for, on this lease, ft.	4.40.				
Approx. 1000'	1412'				
21. Elevations (Show whether DF, KDB, RT, GL, etc.	22. Approximate date work will star	t* 23 Estima	ted duration		
GL 5870¹	07/15/06		8 days		
	24. Attachments				
The following, completed in accordance with the requirements of Onshore O	Dil and Gas Order No. 1, shall be attached	to this form:	· <u>-</u>		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan</li> <li>A Surface Use Plan (if the location is on National Forest System Lands, SUPO shall be filed with the appropriate Forest Service Office).</li> </ol>	4. Bond to cover the operation litem 20 above). 5. Operator certification. 6. Such other site specific integration authorized officer.	·	-		
25. Signuature	Name (Printed/Typed)		Date		
John Sill	Nathan Smith		2/21/06		
Title					
Drilling Engineer	13.				
Approved by (Signature) Mondie wif	Name (Printed/Typed)		Date 5/7/07		
Title AFW	Office		•		
Application approval does not warrant or certify that the applicant holds keenduct operations thereon.  Conditions of approval, if any, are attached.	egal or equitable title to those rights in	the subject lease which	would entitle the applicant to		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cr States any false, fictitious or fraudulent statements or representations as to a		lly to make to any dep	artment or agency of the United		
*(Instructions on page 2)		045678	970		
PRIOR TO  PRIOR TO  ORILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED procedural review pursuant to "GENERAL REQUIREMENTS".  This action is subject to procedural review pursuant to	AZTEC OCD 24 H CASING & CEMI technical and Jant to 43 CFR 3185.3 43 CFR 3165.4 NMOCD	A RECEIVE OIL CONS. DIV.	DIST 8 TO THE PARTY OF THE PART		

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

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

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

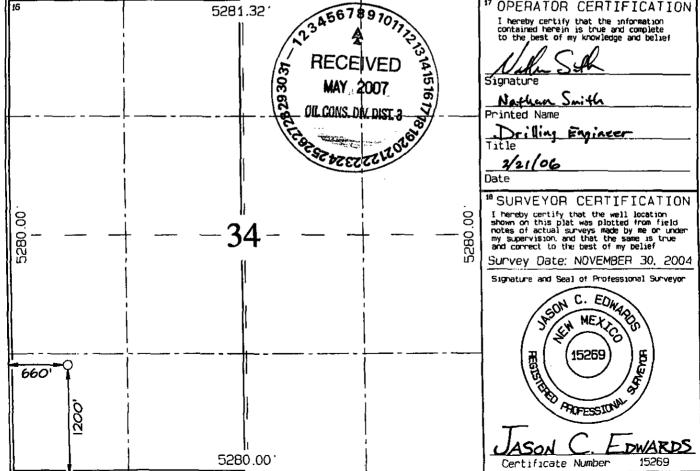
District IV PO Box 2088, Santa Fe, NM 87504-2088 State of New Mexico
Energy, Minerals & Natural Resources Department

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

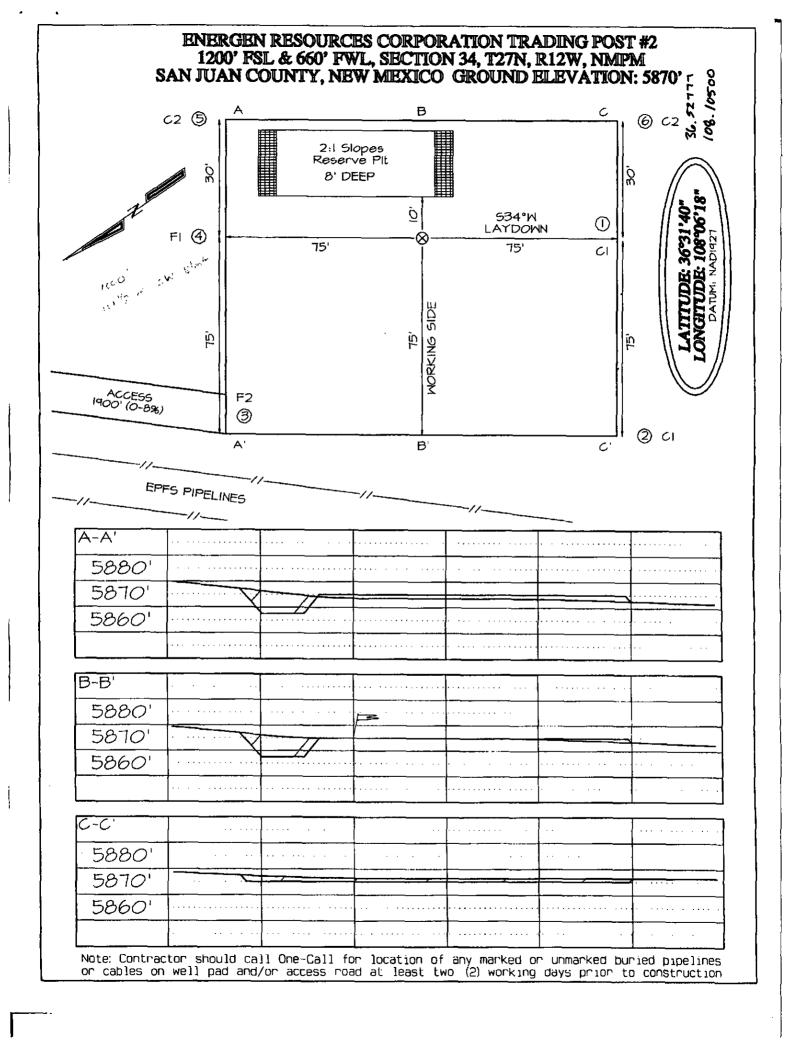
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
2005 FEB 23 Feb Lease 193 Copies

RECENTENDED REPORT

			WELL	LOCATION	ON AND A	CREAGE DED!	CATION PL	AT	
"API Number "Pool Code "Pool Name "API Number "Pool Name BASIN FRUITLAND COAL"									
Property	Code 44	*Property Name Well Number TRADING POST 2							
'0GATO 1 16292		*Operator Name *Elevation ENERGEN RESOURCES CORPORATION 5870							
		<del></del>		10	Surface	Location			
UL or lot no.	Section 34	Township 27N	Range 12W	Lot Idn	Feet from the	North/South line SOUTH	Feet from the	East/Nest line WEST	SAN JUAN
	<u> </u>	11 E	ottom	Hole Lo	ocation I	f Different	From Surf	ace	<del></del>
UL or let no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the East/Nest line County		County
12 Dedicated Acres		).O Acre	s - (W	/2)	<sup>35</sup> Joint or Infill	<sup>14</sup> Consoludation Code	<sup>15</sup> Order No.		<u> </u>
NO ALLOV	NABLE W			TANDADD I	INITE HAC DE	ON UNTIL ALL	DV THE DIVIS		INSOLIDATED
16			52	281.32	1234567 RECE	9707723 VED \$55 2007	I hereby containe to the t	certify that the d herein is true; sest of my knowled	IFICATION Information and complete ge and belief



Office Energy, Mineral	of New Mexico s and Natural Reso	urces		Form C-103 May 27, 2004		
1625 N. French Dr., Hobbs, NM 87240		!	WELL API			
1301 W Grand Ave. Artesia NM 88210 UIL CONSE.	W. Grand Ave., Artesia, NM 88210  1220 Gazeth St. Evensia Dr.			5. Indicate Type of Lease		
	Fe, NM 87505	•	STATE  FEE			
1220 S. St. Francis Dr., Santa Fe, NM 87505		:	6. State Oil USA NMN	& Gas Lease No. 1 33026		
SUNDRY NOTICES AND REPORT (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT"	O DEEPEN OR PLUG			me or Unit Agreement Name:		
PROPOSALS.) 1. Type of Well:			8. Well Nun	nber		
Oil Well Gas Well X Other			# 2			
Name of Operator     Energen Resources Corporation		1	9. OURID N	162928		
3. Address of Operator	<del></del>		10. Pool nai	me or Wildcat		
2198 Bloomfield Highway, Farmington, NM 4. Well Location	87401	<del></del>	Basin Frui	tland Coal		
Unit Letter <u>M</u> : 1200 feet from	the <u>South</u>	line and		eet from the West line		
Section 34 Township		12W	NMPM	County San Juan		
11. Elevation (Sh	ow whether DR, RKI 5870' GL	3, RT, GR, etc	c.)			
Pit or Below-grade Tank Application X or Closure	<u>50.10GB</u>			The second section of the second second section is a second section of the second section sect		
Pit type Drill Depth to Groundwater >100' Distance from	n nearest fresh water we	∥ <u>&gt;1000'</u> Dis	tance from near	est surface water <u>£250'</u>		
Pit Liner Thickness: 12 mil Below-Grade T	ınk: Volumebl	ols; Construction	n Material			
12. Check Appropriate Box t	o Indicate Nature	-	-			
NOTICE OF INTENTION TO:  PERFORM REMEDIAL WORK  PLUG AND ABAN	DON []   BEME	SUB DIAL WORK	SEQUENT	REPORT OF:  ALTERING CASING		
TEMPORARILY ABANDON CHANGE PLANS		ENCE DRILLI	L NG OPNS F	☐ PLUG AND ☐		
PULL OR ALTER CASING  MULTIPLE		3 TEST AND	110 O/ 110. [	ABANDONMENT		
COMPLETION	CEMEN		_	_		
OTHER: Build drilling pit	X OTHER	<u> </u>				
<ol> <li>Describe proposed or completed operations. (Clearly of starting any proposed work). SEE RULE 1103. or recompletion.</li> </ol>						
Energen Resources plans to build a lined prissued on November 1,2004. Energen anticaccordance with BIM and "OCD Pit and Below	pates the submit	tal of a C-	_			
Thousand south that the information charge is true and some	nlote to the best of	my knowlodge	and baliaf	South and the state of the stat		
I hereby certify that the information above is true and com grade tank has been/will be constructed or closed according to NMC						
SIGNATURE Islusith	TITLE	Drilling	Engineer	DATE02/22/06		
Type or print name Nathan Smith	E-mail addr	ess:	nsmith@en	ergen.com Telephone No. 505.325.6800		
For State Use Only	BEPY	TY OIL & GAS	INSPECTOR,	DIST. 🏂		
APPROVED BY Conditions of Approval, if any:	TITLE			DATE 5/10/07		



# Operations Plan

February 21, 2006

#### **Trading Post #2**

#### **General Information**

Location 1200' fsl 0660' fwl

swsw \$24, T27N, R12W

San Juan County, New Mexico

Elevations 5870' GL Total Depth 1412' (MD)

Formation Objective Basin Fruitland Coal

#### **Formation Tops**

Ojo Alamo Ss Surface
Kirtland Sh 152'
Fruitland Fm 917'
Top Coal 1067'
Bottom Coal 1212'
Pictured Cliffs Ss 1212'
Total Depth 1412'

#### **Drilling**

ABHPNGOOPTI

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	<b>Interval</b>	<b>Wellbore</b>	Casing	<b>Csg Wt</b>	<b>Grade</b>
Surface	0'-150'	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	150'-1412'	6 1/4"	4 ½"	11.6 ppf	J-55 LT&C
Tubing	0'-1375'		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 ft³/sk 59 ft³ 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 ft³/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 ft³/sk). (301 ft³ of slurry, 100 % excess to circulate to surface).

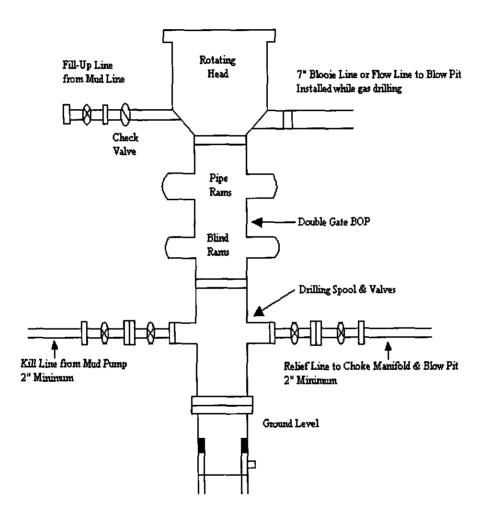
Pump a 10 bbls water, 20 bbls gelled water, 5 bbls water spacer ahead of cement

#### 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.

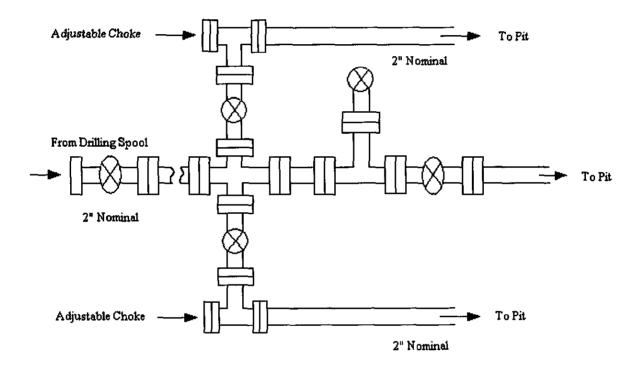
# Energen Resources Corporation

Typical BOP Configuration for Gas Drilling



# **Energen Resources Corporation**

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD