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 DRILL OR REENTER						5. Lease Serial No.		
la. Type of Work	X DRILL	REENTE	R		6.	If Indian, Al	lotee or 1	Tribe Name
1b. Type of Well	Oil Well X Gas Well	Other [	Single Zone	Multiple Zon	e 7.	Unit or CA	Agreeme	nt Name and No.
2. Name of Operato	or				8.	Lease Name	and Wel	l No.
	rces Corporation					Federal	26 #11	R
4. Location of Well	eld Highway Farmington (Report location clearly and in acc	, New Mexico 8 ordance with any Stat	7401	No (include area co 505) 325-6800	ý. 	API Well No	ol, or Ex	15 33025 ploratory
At proposed prod.	90' fnl, 820' fel		Od A w	005	11.	Basin Fr Sec., T., R.,		ilk. and Survey or Area
		10	4	**************************************		A S26,7		
	and direction from nearest town or p	Villa -		me of	12.	County or Pa	arish	13. State
	proximately 10.75 miles	north of The				n Juan		NM
15. Distance from prolocation to nearest property or lease (Also to nearest of	st	ī	16.No. of Acre	s in lease of the second secon	17. Spacin	ng Unit dedic	ated to the E 1/2	his well
18. Distance from pro	onosed location*		19. Proposed D	epth	20.BLM/	BIA Bond l	No. on fil	e
	rilling, completed,	c. 300'	3(	e74				
21. Elevations (Show	whether DF, KDB, RT, GL, etc.		22. Approxima	te date work will star	rt*	23. Estimat	ed durati	ion 🗢 .
,	792'			05/15/05				days
			<b>!</b>	00, 20, 00				Cays
		24	. Attachments					
The following, compl	eted in accordance with the require	ments of Onshore Oil a	and Gas Order No	o. 1, shall be attached	to this for	m:		
<ol> <li>A Drilling Plan</li> <li>A Surface Use P.</li> </ol>	d by a registered surveyor.  lan (if the location is on National Foled with the appropriate Forest Serv	•	Item 5. Oper 6. Such	I to cover the operati 20 above). ator certification. other site specific in orized officer.				
25. Signuature		N	ame (Printed/Typ	ped)			Date	<i>t</i>
110 8		,	Wathan Smith	,				4/11/05
Title Drilling E	ngineer	L*	aciali cana					4/11/03
Approved by (Signau	xeV///	IN	ame (Printed/Ty)	ped)		1	Date	
	Marking (						4	-25-05
Title /	AFM	0	office $\mathcal{H}$	5				
conduct operations th	does not warrant or certify that the ereon. al, if any, are attached.	e applicant holds lega	l or equitable titl	e to those rights in t	he subject	lease which	would e	ntitle the applicant to
Title 18 U.S.C. Section	on 1001 and Title 43 U.S.C. Section	1212, make it a crime	for any person l	nowlingly and willfu	lly to make	to any depa	rtment or	r agency of the United
States any false, fictit	ious or fraudulent statements or rep	resentations as to any	matter within its j	urisdiction.		0 	APR	
*(Instructions on pag	e 2) HCLD C104 P	onthany	c in st	ader to to	4/	RECEIVED ARMINGTON	12	
l		_	MOCD			NO.L.	An 11	
						200	0	

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

#### State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Santa Fe NM 87505

Form C-102

Revised June 10, 2003

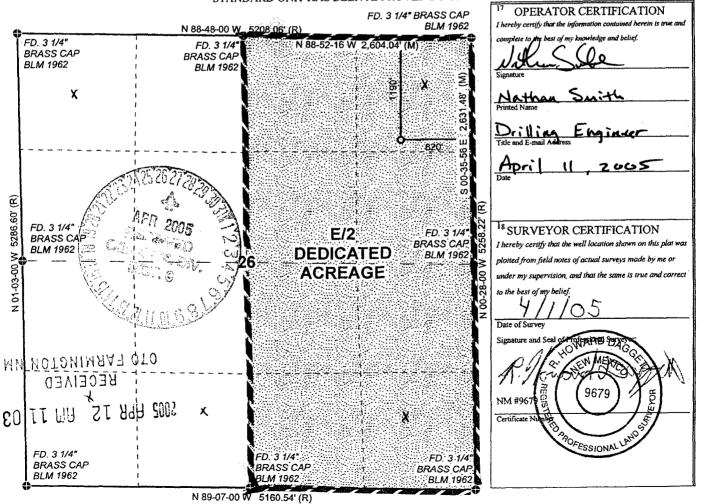
Submit to Appropriate District Office

State Lease - 4 Copies

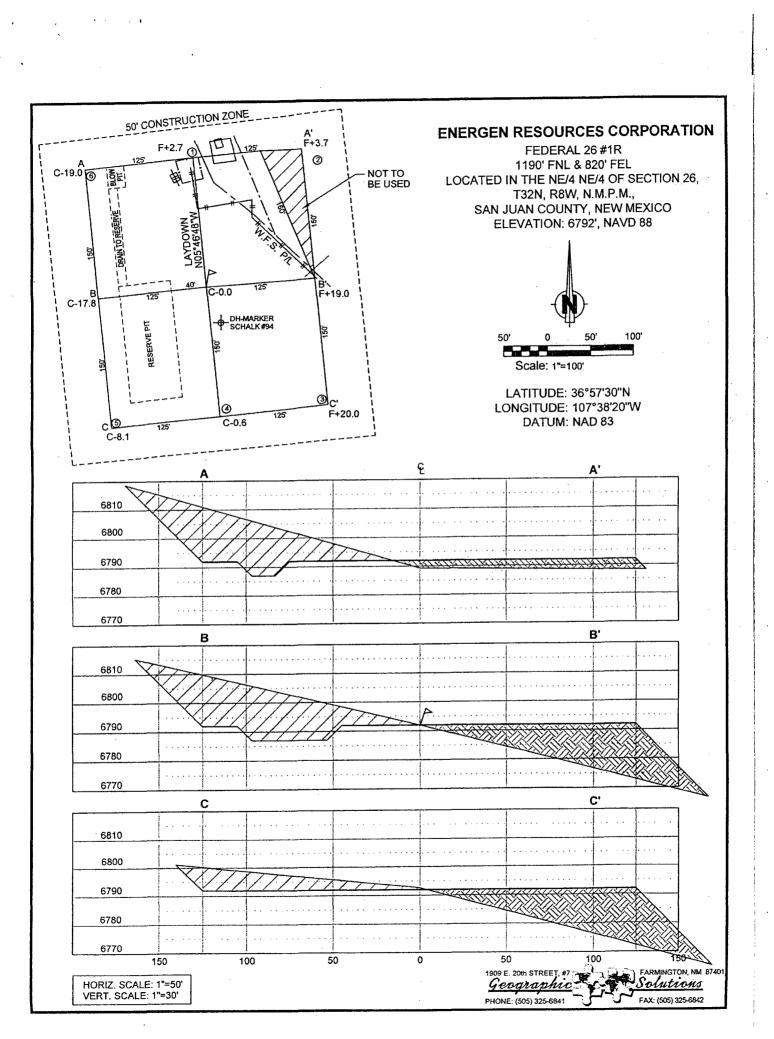
Fee Lease - 3 Copies

District IV					Sama 1°C, 14	141 07303		r		a mero peroopa
1220 S. St. Francis Dr., Santa Fe, NM 87505									☐ AMENDED REPORT	
		W	ELĻ LO	OCATIO:	N AND ACR	EAGE DEDIC				
30-045 330 25 Pool Code Busin 49 FRUITLAND COAL										
70-04.	3 5.	<u> </u>		1/02:	5 Property		<sup>6</sup> Well Number			
Property Name FEDERAL 26						·			1R	
OGRID No.    Operator Name   O							<sup>9</sup> Elevation 6792'			
10 Surface Location										
UL or lot no.	Section 26	Total National State of the Sta					County SAN JUAN			
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/We	est line	County
12 Dedicated Acres	s Doint o	r Infill 14 C	onsolidation	Code 15 Or	rder 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



Submit 3 Copies To Appropriate District Office Energy, Minerals and N		Form C-103
District	Natural Resources	May 27, 2004 WELL API NO.
1625 N. French Dr., Hobbs, NM 87240 District II OIL CONSERVAT	NOISIVIG NOI	
1301 W. Grand Ave., Artesia, NM 88210 District III 1220 South St		5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztec, NM 87410 Santa Fe, N	M 87505	STATE FEE
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		6. State Oil & Gas Lease No.
SUNDRY NOTICES AND REPORTS ON	WELLS	7. Lease Name or Unit Agreement Name:
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEP DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM PROPOSALS.)		Federal 26
1. Type of Well:		8. Well Number
Oil Well Gas Well Other		1R
2. Name of Operator  Energen Resources Corporation		9. OGRID Number 162928
3. Address of Operator		10. Pool name or Wildcat
2198 Bloomfield Highway, Farmington, NM 87401		Basin Fruitland Coal
4. Well Location		
Unit Letter A : 1190' feet from the	North line and	820' feet from the East line
Section 26 Township 32N		NMPM County San Juan
11. Elevation (Show whe	ther DR, RKB, RT, GR, e. 6792' GL	tc.)
Pit or Below-grade Tank Application X or Closure		
Pit typeDrill_ Depth to Groundwater>100' Distance from neares	t fresh water well <u>&gt;1000 '</u> Di	stance from nearest surface water <u>&gt;200 '</u>
Pit Liner Thickness: 12 mil Below-Grade Tank: Vo	lumebbls; Constructi	on Material
12. Check Appropriate Box to Indi NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK PLUG AND ABANDON FEMPORARILY ABANDON CHANGE PLANS	SUE	SEQUENT REPORT OF:  ALTERING CASING
PULL OR ALTER CASING MULTIPLE COMPLETION	CASING TEST AND CEMENT JOB	
OTHER: Build drilling pit	OTHER:	
13. Describe proposed or completed operations. (Clearly state a of starting any proposed work). SEE RULE 1103. For Mu or recompletion.	-	<u> </u>
Energen Resources plans to build a lined pit accissued on November 1,2004. Energen anticipates accordance with BIM and "OCD Pit and Below-grade	the submittal of a C	
hereby certify that the information above is true and complete to grade tank has been/will be constructed or closed according to NMOCD guid	tne best of my knowledg lelines X , a general permit	e and belief. I further certify that any pit or below- or an (attached) alternative OCD-approved plan
SIGNATURE VILLS FL		<u> </u>
Type or print name Nathan Smith	E-mail address:	nsmith@energen.com Telephone No. 505.325.6800
For State Use Only		∆ ከD የ የ 200€
APPROVED BY	TIPLETT OR & GAS IM	PECTOR DIST. SE DATE
Conditions of Approval, if any:		



form \$160-5	UN D STATES	1	FORM APPROVED			
(April 2004) DEPARTMENT OF THE INTERIOR			OMB NO. 1004-0137 Expires March 31, 2007			
	NU OF LAND MANAGEMENT	5. Lua	se Serial No.			
	TICES AND REPORTS ON WELLS	MM 68:				
Do not use this fo abandoned well. U	rm for proposals to drill or to re-enter an se Form 3160-3 (APD) for such proposal		lian, Allottee or Tribe Name			
	ATE - Other instructions on reverse side	7. If Un	it or CA/Agreement, Name and/or No.			
1. Type of Well Oil Well X Gas Well Other		'An ''	Name and No.			
2. Name of Operator		Federa	al 26 #1R			
Energen Resources Corporation 3a. Address	3b, Phone No. line	lude area code) 9. API	30045 33025			
2198 Bloomfield Highway, Farm		5-6800 10. Field	ld and Pool, or Exploratory Area			
4. Location of Well (Footage, Sec., T., R., M., or	Sillara	Basin	Fruitland Coal			
1190' FNL, 820' FEL - Sec.: NE/NE	26, T32N, R08W	J.	unty or Parish, State			
42 CUECK ADDROD	DIATE DOVIES TO INDICATE NATION		IAN NM			
	RIATE BOX(ES) TO INDICATE NATURE		ROTHERDATA			
TYPE OF SUBMISSION		TYPE OF ACTION	••======			
X Notice of Intent	Acidize Dospon  Alter Casing Free two Trees	Production (Start/Rest	water Shul-Off Well Integrity			
Subsequent Report	Alter Cusing Fractive Treature	=	Other			
Final Abandonacut Notice	Change Plans Mug and Aba	Temporarily Abandon Water Disposal				
following completion of the involved oper testing has been completed. Final Aband determined that the final site is ready for fi	r recomplete horbontally, give subsurface locations at all be performed or provide the Bond No. on file will actions. If the operation results in a multiple complete onment Notices shall be filed only after all requirement inspection.)  attion has been changed to 3674, ches	on or recompletion in a new uncry ints, metading reclamation, have b	at, a form \$100-9 shall be filed once een completed, and the operator has			
14. Thereby certify that the foregoing is true and	correct Title					
Name (Printed Typed)  Vicki Donagtvov		squiatory Analyst				
Yer Domakin	<i>Y</i>	21/05				
	THIS SPACE FOR FEDERAL OR STAT	E OFFICE USE	ID at a = i			
Approved by	Title	AM	Date 4-25-05			
Conditions of approval, if pay, are attached. A certify that the applicant holds legal or equital which would cutile the applicant to conduct or	The time to make delive in the suchan man	FFO	y department or necessy of the United			
Title 18 U.S.C. Section 1001, and Title 43 U.	secutions thereon.  5.C. Section 1212, makes it a crime for any person knowledge or representations as to any matter within its juries	Signal	· · · · · · · · · · · · · · · · · · ·			

# Drilling Plan April 11, 2005 Federal 26 #1R

## **General Information**

Location 1190' fsl, 0820' fel

nene S26, T32N, R08W

San Juan County, New Mexico

Elevations 6792' GL Total Depth 3724' (MD)

Formation Objective Basin Fruitland Coal

## **Formation Tops**

San Jose	Surface
Nacimiento	1094'
Ojo Alamo Ss	2444'
Kirtland Sh	2514'
Fruitland Fm	3274'
Top Coal Interval	3364'
Intermediate Casing	3434'
Top Main Coal	2474'
Base Coal Interval	3664'
Pictured Cliffs Ss	3674'
Total Depth	3724'

## **Drilling**

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 ¾" 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. The 6 ¼" wellbore will be drilled with air / mist from intermediate casing point to total depth. Blowout Control Specifications:

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. 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: None

Mud Logs: From Intermediate TD to total depth.

Coring: None

Natural Gauges: Surface casing point and/or every 500' to TD.

#### **Tubulars**

# Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-250'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	250'-3434'	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3434'-3724'	6 1/4"	5 ½"	15.5 ppf	J-55 LT&C
Tubing	0'-3724 +/-'		2 3/8"	4.7 ppf	J-55

# **Casing Equipment:**

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

Intermediate 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 and rigid centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

#### Wellhead

9 5/8" x 7" x 2 3/8" 3000 psi Flanged Wellhead.

# Cementing

Surface Casing: 150 sks Std (class B) with 1.0 % CaCl<sub>2</sub> and ¼ #/sk Flocele (15.6 ppg, 1.18 ft³/sk 177.0 ft³ of slurry, 115% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

Intermediate 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 450 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 125 sks of Standard (Class B) cement with 5 #/sk Gilsonite, and ½ #/sk Flocele (15.2 ppg, 1.24 ft³/sk). (1037 ft³ of slurry, 100 % excess to circulate to surface). WOC 12 hrs.

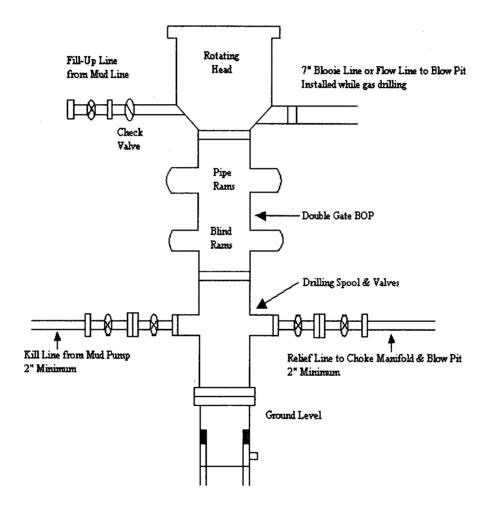
Liner: NO CEMENT

#### Other Information

- 1) This well will be cavitated with an open hole completion.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate 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 are anticipated, however reservoir pressures may be 1000 psi.
- 5) This gas is dedicated.

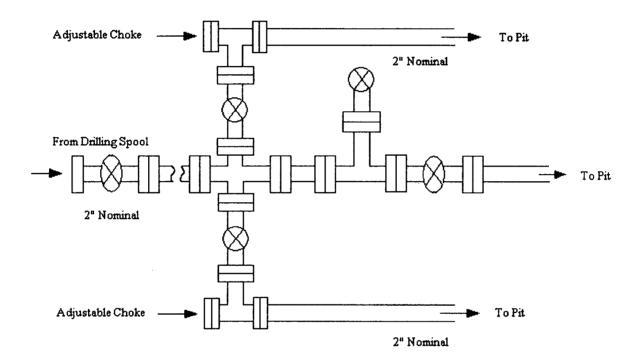
# **Energen Resources Corporation**

Typical BOP Configuration for Gas Drilling



# **Energen Resources Corporation**

Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD