

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMM 29341
2. Name of Operator Energen Resources Corporation		6. If Indian, Allottee or Tribe Name
3a. Address 2198 Bloomfield Highway, Farmington, NM 87401	3b. Phone No. (include area code) 505.325.6800	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Surface: 1030' FNL, 1835' FEL NWNE S22, T32N, R5W Bottom: 1500' FNL, 760' FWL SWNW		8. Well Name and No. Carracas 22A #2
		9. API Well No. 30-039-27587
		10. Field and Pool, or Exploratory Area Basin Fruitland Coal
		11. County or Parish, State Rio Arriba NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Energen Resources would like to change the Carracas 22A #2 from a vertical drill and cavitaion well to a horizontal drill and open hole completion well with the following information:

- *Change the 7" casing setting depth to 4150' (MD), 3772' (TVD).
- *Change the setting depth of the liner to 6225' (MD), ~~3772'~~ (TVD). **3780'**
- *Change the production liner to a 4 1/2" 11.6 ppf pre-drilled liner.
- *Cement the 7" casing with 560 sks (1098 cuft) lead and 125 sks (155 cuft) tail.

Changes are noted on the attached revised C-102, Operations Plan, and Directional Planning Report.

HOLD C104 FOR

Directional Survey FEB 2006

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Nathan Smith

Title

Drilling Engineer

Date

2/13/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Pet. Eng

Date

2/23/06

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

FFO

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes 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.

NMDCD

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

Submit to Appropriate District Office:
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name CARRACAS 22A		*Well Number 2
*OGED No.	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7161'

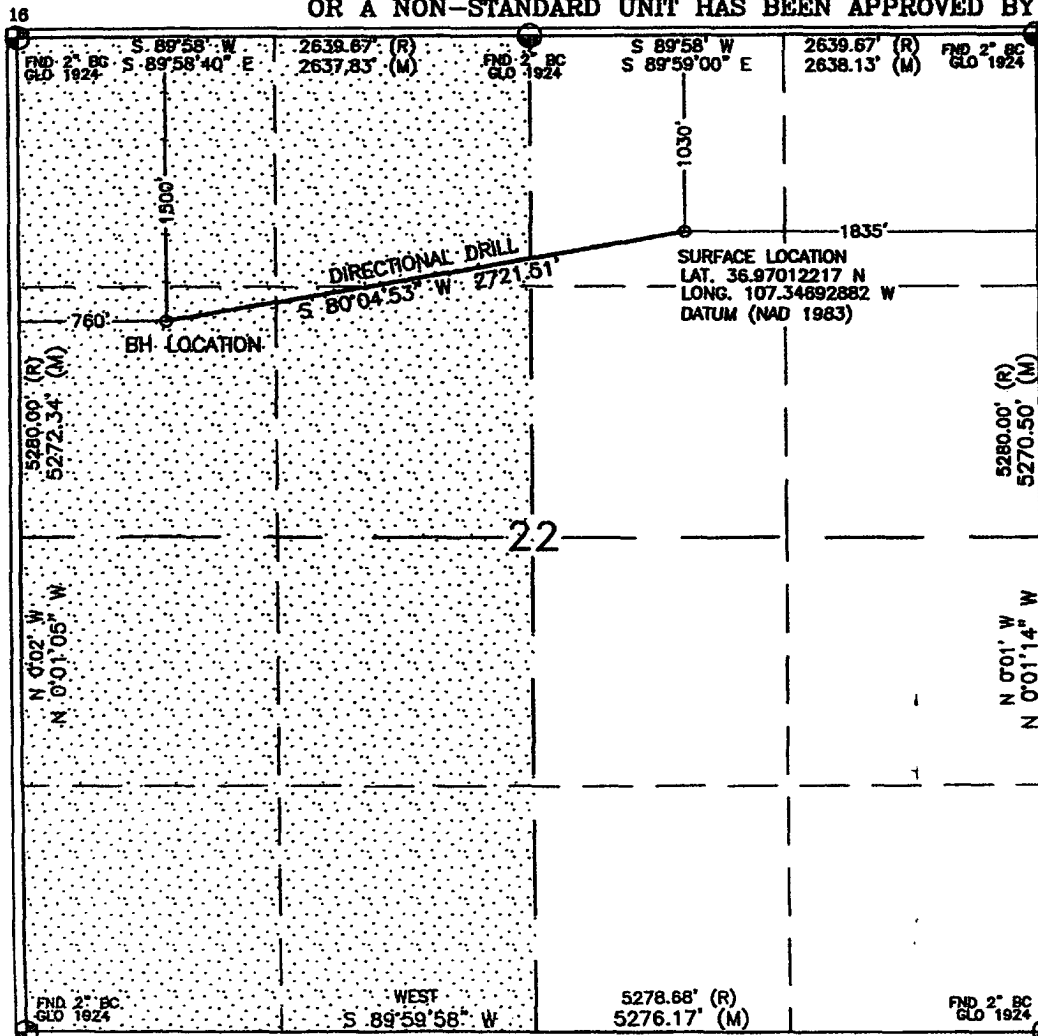
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	22	32N	5W		1030'	NORTH	1835'	EAST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no. E	Section 22	Township 32N	Range 5W	Lot Mn	Feet from the 1500'	North/South line NORTH	Feet from the 760'	East/West line WEST	County RIO ARRIBA
²² Dedicated Acres 319.26 Acres - (W/2)			²³ Joint or Infill		²⁴ Consolidation Code		²⁵ 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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

8 14 PM
RECEIVED
FARMINGTON

Nathaniel
Signature

Nathan Smith
Printed Name

Drilling Engineer


2/13/06

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plot 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.

~~FEBRUARY 2~~ 2006

Date of Survey: _____
Signature and Seal of Professional Surveyor: _____



 DAVID R. RUSSELL
 Notary Public, State of New York
 Certificate Number 10201

Operations Plan

Revised February 13, 2006

Carracas 22A #2

General Information

Location	1030' fnl, 1835' fel at surface 1500' fnl, 760' fwl at bottom nwne S22, T32N, R5W Rio Arriba County, New Mexico
Elevations	7161' GL
Total Depth	6226' (MD), 3772' (TVD)
Formation Objective	Basin Fruitland Coal

Formation Tops

San Jose	Surface
Nacimiento	1776' (TVD)
Ojo Alamo Ss	3101' (TVD)
Kirtland Sh	3231' (TVD)
Fruitland Fm	3636' (TVD), 3710' (MD)**
Top Coal	3762' (TVD), 3750' (MD)**
Bottom Coal	3783' (TVD)
Total Depth	3772' (TVD), 6226' (MD)
Pictured Cliffs Ss	3796' (TVD)

****Measured depths are approximations****

Drilling

The 12 ¼" 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 8.9 ppg to 9.5 ppg.

KOP is 3162' TVD with 9°/100' doglegs.

The 6 ¼" wellbore will be drilled with a fresh water or brine water system depending on reservoir characteristics.

Blowout Control Specifications:

A 2000 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: Gamma ray at the bit

Mud logs: From kick off point to TD

Surveys: Surface and a minimum of every 250' for directional or 500' up to kickoff point

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3772' (TVD) 4150' (MD)	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3762'-3783' (TVD) 4090'-6225' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-4000'		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.

Liner: Cement nose guide shoe on bottom of first joint. No centralizers.

Wellhead

3000 psi 11" x 9 5/8" casing head. 9 5/8" x 7"x 2 3/8" 3000 psi Flanged Wellhead .

Cementing

Surface Casing: 110 sks Std (class B) with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 130 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 600 psi for 30 min.

Intermediate Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 560 sks 65/35 Std (class B) with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 125 sks Sts (class B) with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (1252 ft³ of slurry, 100 % excess to circulate to surface). Test casing to 1200 psi for 30 min.

Other Information

- 1) This well will be 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 or pressures are anticipated. This gas is dedicated.

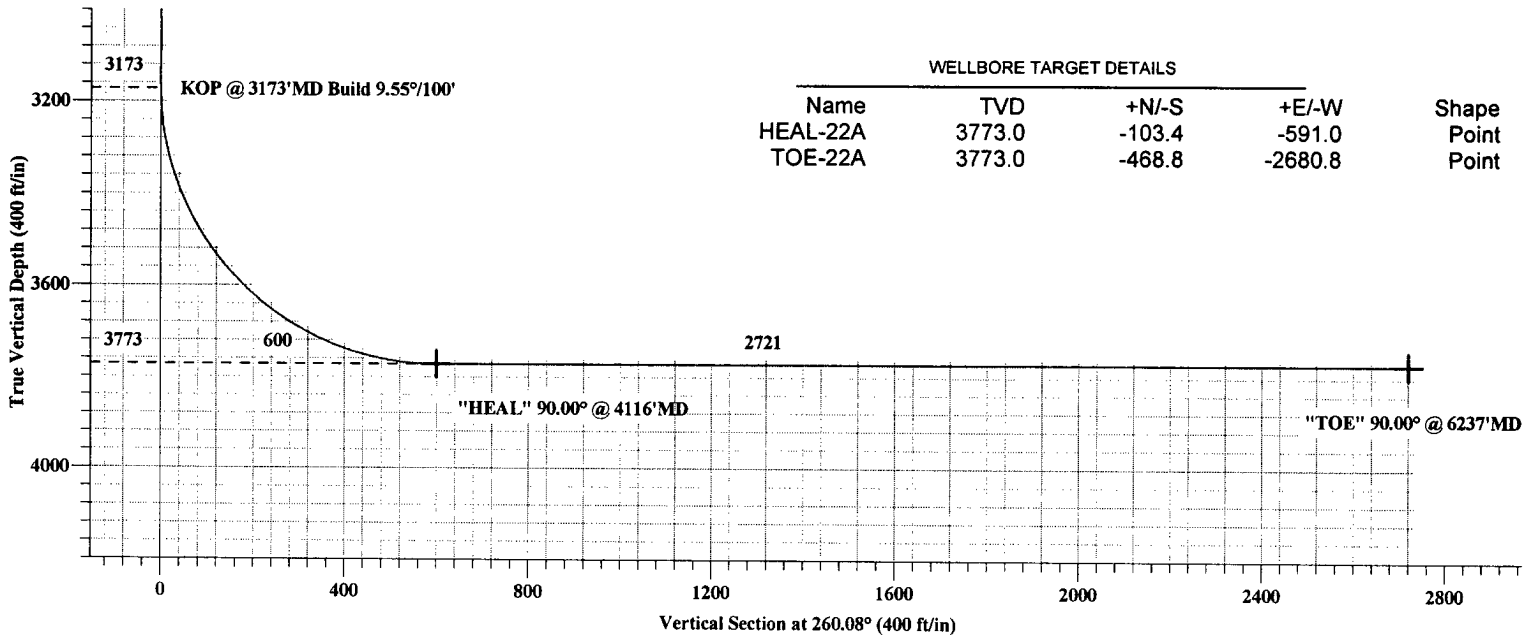
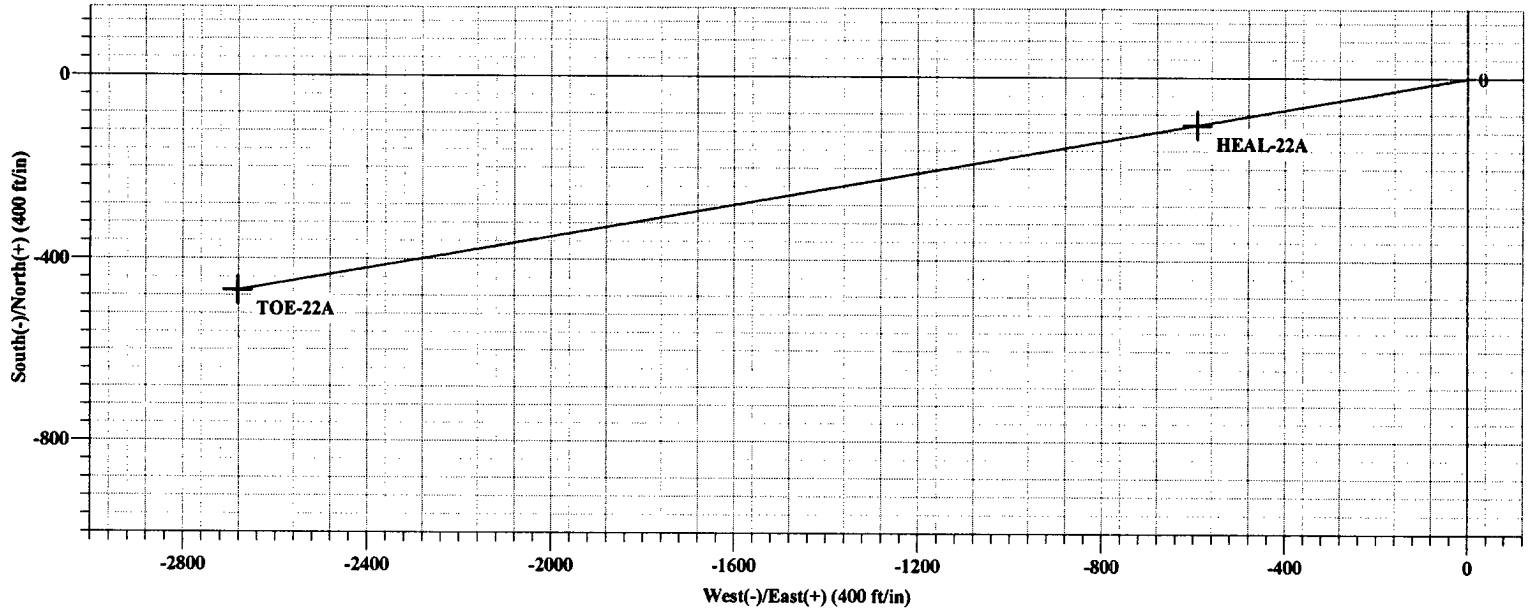
Energen Resources Corp



SURFACE LOCATION: Sec.22 T32N-R5W

1030'FNL 1835'FEL

Carracas 22A-2
Sec.22 T32N-R5W
Rio Arriba, NM



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HEAL-22A	3773.0	-103.4	-591.0	Point
TOE-22A	3773.0	-468.8	-2680.8	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0	
2	3173.0	0.00		3173.0	0.0	0.0	0.00	0.0	
3	4115.5	90.00	260.08	3773.0	-103.4	-591.0	9.55	260.08	HEAL-22A
4	6237.0	90.00	260.08	3773.0	-468.8	-2680.8	0.00	0.00	TOE-22A

Plan: Plan #1 (Carracas 22A-2/Wellbore #1)