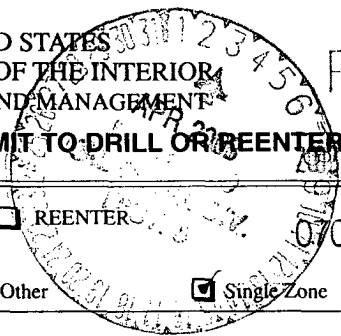


UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER



1a. Type of Work: DRILL REENTER

1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator
MARKWEST RESOURCES, INC.

3a. Address **155 INVERNESS DR., SUITE 200
ENGLEWOOD, CO. 80112** 3b. Phone No. (include area code)
(303) 290-8700

5. Lease Serial No.
NMSF-078213

6. If Indian, Allottee or Tribe
N/A

7. If Unit or CA Agreement
N/A

8. Lease Name and Well No. *Federal A*
LA-001111AS #102

9. API Well No.
30-045- 31298

10. Field and Pool, or Exploratory
BASIN FRUITLAND COAL GAS

11. Sec., T., R., M., or Blk. and Survey or Area
26-30n-13w NMPM

12. County or Parish
SAN JUAN

13. State
NM

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface **537' FSL & 2139' FWL**
At proposed prod. zone **SAME**

14. Distance in miles and direction from nearest town or post office*
3 AIR MILES NORTH OF FARMINGTON POST OFFICE

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **2,205'**

16. No. of Acres in lease **2,480**

17. Spacing Unit dedicated to this well
320 ACRES (W2)

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **1,117'**

19. Proposed Depth **1,900'**

20. BLM/BIA Bond No. on file
KA6084 (BLM - NATIONWIDE)

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5,784' GL

22. Approximate date work will start*
FEB. 15, 2003

23. Estimated duration
5 DAYS TO DRILL

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

24. Attachments
DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

- The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:
- Well plat certified by a registered surveyor.
 - A Drilling Plan.
 - A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
 - Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
 - Operator certification.
 - Such other site specific information and/or plans as may be required by the authorized officer.

Comments

HOLD C104 FOR NSL

cc:BLM (&OCD), Pippin, Stowe

25. Signature *Brian Wood* Name (Printed/Typed) **BRIAN WOOD** Date **12-21-02**

Title **CONSULTANT** PHONE: 505 466-8120 FAX: 505 466-9682

Approved by (Signature) *David J. Markiewicz* Name (Printed/Typed) _____ Date _____

Title _____ Office _____

MAR 31 2003

Application approval does not warrant or certify the 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.

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

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

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

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-31298		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL GAS
*Property Code 29790	*Property Name IS AT Federal A		*Well Number 102
*GRID No. 193195	*Operator Name MARKWEST RESOURCES, INC.		*Elevation 5784'

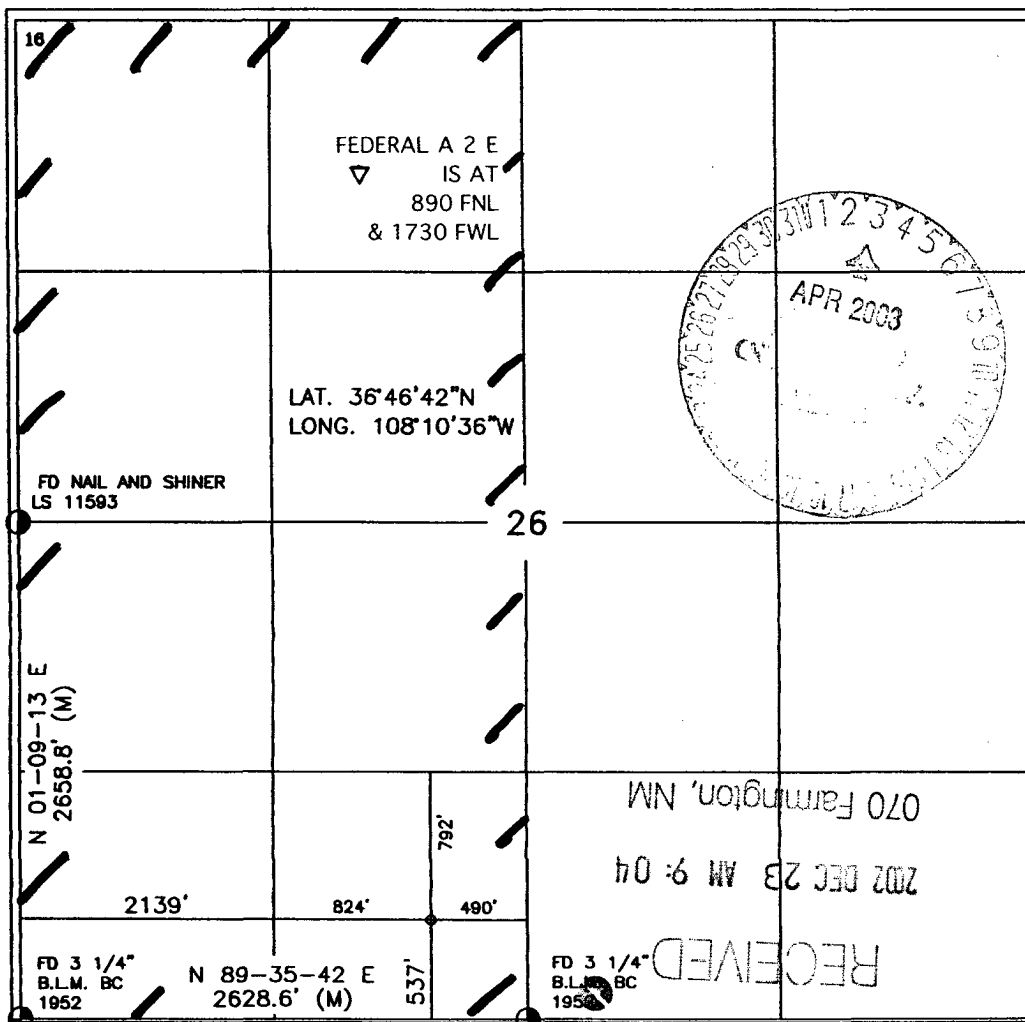
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	26	30-N	13-W		537'	SOUTH	2139'	WEST	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/West line	County
¹² Dedicated Acres 320 ¹³ Joint or Infill 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



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

Signature: Brian Wood

Printed Name: BRIAN WOOD

Title: CONSULTANT

Date: DEC. 21, 2002

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.

Date: OCT 29 2002

Signature: DAVID A. JOHNSON

Registered Professional Surveyor: 14837

NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
14837

MarkWest Resources, Inc.
Las Colinas #102
537' FSL & 2139' FWL
Sec. 26, T. 30 N., R. 13 W.
San Juan County, New Mexico

PAGE 1

Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Ojo Alamo Ss	000'	5'	+5,784'
Kirtland Sh	364'	369'	+5,420'
Fruitland Coal	1,414'	1,419'	+4,370'
Pictured Cliffs Ss	1,784'	1,789'	+4,000'
Total Depth (TD)*	1,900'	1,905'	+3,884'

* all elevations reflect the ungraded ground level of 5,784'

2. NOTABLE ZONES

<u>Gas & Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Ojo Alamo	Fruitland
Pictured Cliffs	Kirtland	
	Fruitland	

Water zones will be protected with casing, cement, and weighted mud. Fresh water found while drilling will be recorded. Oil or gas shows will be tested for commercial potential based on the geologist's recommendations.

3. PRESSURE CONTROL

Maximum expected bottom hole pressure is \approx 300 psi. The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. A typical 2,000 psi model is on PAGE 3. The well head, casing head, and all pipe, tubing, fittings, valves, and unions placed on or connected with BOP equipment will have a minimum working pressure of 2,000 psi. BOP equipment and all accessories will meet or exceed BLM requirements in 43

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CFR Part 3160 and API RP 53 for a 2,000 psi system.

A 2,000 psi double ram hydraulic BOP will be used. There will be one set of pipe rams and one set of blind rams. Sufficient valves will be installed to permit fluid circulation at the surface. Accumulator system capacity will be sufficient to close all BOP equipment with a 50% safety factor.

Accessories will include upper and lower Kelly cocks with handles, stabbing valve to fit drill pipe on the floor at all times, string float at bit, choke manifold with 2" adjustable and 2" positive chokes, and pressure gauge.

Fill, kill, and choke manifold lines will be 2". Choke and kill lines will be anchored, tied, or otherwise secured to prevent whipping if pressure surges.

BOP equipment will be inspected daily. Pressure testing of each component of the BOP equipment will be conducted before drilling out any casing string. A preventer operating test will be performed on each round trip of the pipe, but not more than once every 24 hours. BOPs will be tested every 24 hours. Tests will be recorded on the daily report or I. A. D. C. log.

Drilling or completion operations will not proceed until BOP equipment is found, upon testing, to be serviceable. If the blind rams are closed for any purpose, then the valves on the choke lines or relief lines below the blind rams will be opened prior to opening the rams to bleed off any pressure.

4. CASING & CEMENT

<u>Hole Size</u>	<u>Q. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connection</u>	<u>GL Setting Depth</u>
12-1/4"	8-5/8"	24	K-55	New	ST & C	400' 410'
6-1/4"	4-1/2"	10.5	K-55	New	ST & C	1,900'

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Surface casing will be cemented to the surface with ≈ 330 cubic feet (≈ 280 sacks) Class B + 1/4 lb/sk cello-flake + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. W. O. C. = 12 hours. Surface casing will be tested to 500 psi for 30 minutes.

An 8-5/8" notched regular pattern guide shoe with three centralizers will be used on the surface casing. Centralizers will be placed at 120' intervals, starting with the bottom joint. Will Baker Lock the collar to the pin or ring on the bottom joint. Will Baker Lock the shoe on the bottom. Will run a centralizer with a lock on the bottom joint and a centralizer on the second joint.

Production casing will be cemented to the surface. If cement does not circulate to surface, then a temperature survey will be run to determine the actual cement top as needed. W. O. C. = 12 hours. Test to 3,800 psi.

Lead cement will be ≈ 290 cubic feet (≈ 100 sacks) Class B light cement with 3% sodium metosilicate + 3 pounds per sack gilsonite + 1/4 #/sack Flocele. Yield = 2.9 cubic feet per sack. Weight = 11.5 pounds per gallon. Volume is calculated at 100% excess.

Tail cement will be ≈ 78 cubic feet (≈ 50 sacks) Class B with 4% gel + 2% CaCl_2 . + 1/4#/sk Flocele. Yield = 1.55 cubic feet per sack. Weight = 14.5 pounds per gallon. Used at 50% excess to cover 500' of formation.

The production casing will use a 4-1/2" cement nose guide shoe with a self fill insert float. The float will be placed one joint above the shoe. Five centralizers will be spaced on every other joint starting with the float collar. Turbulent will be placed at 120' intervals from 960' to the surface. A total of 13 centralizers will be used.