

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMSF-078089
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator MARKWEST RESOURCES, INC.		7. If Unit or CA Agreement, Name and No. N/A 32168
3a. Address 155 INVERNESS DR., SUITE 200 ENGLEWOOD, CO. 80112		8. Lease Name and Well No. SCOTT FEDERAL #251
3b. Phone No. (include area code) (303) 290-8700		9. API Well No. 30-045- 31185
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2470' FNL & 1030' FWL At proposed prod. zone SAME		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* 12 AIR MILES S OF BLOOMFIELD		11. Sec., T., R., M., or Blk. and Survey or Area 25-27n-11w NMPM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1030'	16. No. of Acres in lease 2,560	12. County or Parish SAN JUAN
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 909'	17. Spacing Unit dedicated to this well 320 ACRES (N2)	13. State NM
19. Proposed Depth 2,100'	20. BLM/BIA Bond No. on file KA6084 (BLM - NATIONWIDE)	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,383' GL	22. Approximate date work will start* DECEMBER 26, 2002	23. Estimated duration 2 WEEKS

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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

Comments

On site inspector: Roger Herrera
Archaeology reports: CASA 02-33 & 02-71
Notice of Staking: "Scott Federal 25 #1"

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

070 FARMINGTON, NM

2002 AUG 21 PM 12:34

RECEIVED

cc:BLM (&OCD), Pippin, Stowe

25. Signature: 	Name (Printed/Typed) BRIAN WOOD	Date 8-17-02
Title CONSULTANT	PHONE: 505 466-8120	FAX: 505 466-9682
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	

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.

HOLD C104 FOR N/SL

NMOCD

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-31185	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 29140-32168	⁵ Property Name SCOTT FEDERAL	⁶ Well Number 251
⁷ GRID No. 193195	⁸ Operator Name MARKWEST RESOURCES, INC.	⁹ Elevation 6383'

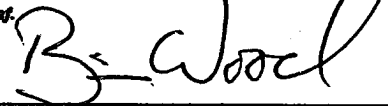
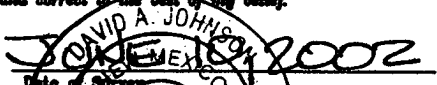
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	25	27-N	11-W		2470'	NORTH	1030'	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

¹⁶ FD 2 1/2" GLO BC 1913 2470' 1151' 1030' 292' 168' S 00-02-33 E 5276.5' FD 2 1/2" GLO BC 1913	LAT. 36°32'48"N LONG. 107°57'39"W	MAR 2003 OIL CONSV. DIV. DIST. 3	WITNESS COR. FD 2 1/2" GLO BC 1913 OFST. 48.2' CALC'D CORNER	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Printed Name BRIAN WOOD Title CONSULTANT Date AUG. 17, 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 of Survey 14827 Signature and Seal of Professional Surveyor: 14827 Certificate Number

MarkWest Resources, Inc.
Scott Federal 251
2470' FNL & 1030' FWL
Sec. 25, T. 27 N., R. 11 W.
San Juan County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>Depth from GL</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento Fm	000'	5'	+6,383'
Ojo Alamo Ss	921'	926'	+5,462'
Kirtland Sh	1,071'	1,076'	+5,312'
Fruitland Coal	1,695'	1,700'	+4,688'
Pictured Cliffs Ss	1,977'	1,982'	+4,406'
Total Depth*	2,100'	6,482'	+4,283'

* all elevations reflect the ungraded ground level of 6,383'.

2. NOTABLE ZONES

<u>Gas or Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Ojo Alamo	
	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

been awarded, thus the exact BOP model to be used is not yet known. A typical 8" double ram 2,000 psi model is on PAGE 3.

BOP equipment and all accessories will meet or exceed BLM requirements in 43

UNITED STATES
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FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

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.

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

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

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**SURFACE: 2470' FNL & 1030' FWL SEC. 25, T. 27 N., R. 11 W.
BHL: SAME**

5. Lease Serial No.

NMSF-078089

6. If Indian, Allottee or Tribe Name

N/A

7. If Unit or CA/Agreement, Name and/or No.

N/A

8. Well Name and No.

SCOTT FEDERAL 251

9. API Well No.

30-045-

10. Field and Pool, or Exploratory Area

BASIN FRUITLAND COAL

11. County or Parish, State

SAN JUAN COUNTY, 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 checked="" type="checkbox"/> Other _____
	<input 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 recomple 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 recomple 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 site is ready for final inspection.)

Will change surface casing hole diameter from 11" to 12-1/4".
Will change cement volume to 193 cubic feet (164 sacks).
No change in casing or cement composition.



cc: BLM (& OCD), Bush, Pippin

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

BRIAN WOOD

Title

CONSULTANT

(505) 466-8120

Signature

B. Wood

Date

2/8/03

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

/s/ David J. Mankiewicz

Title

Date

MAR 12 2003

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

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.

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CFR Part 3160 for a 2,000 psi system. A 2,000 psi double ram hydraulic BOP will be used. Accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill, kill, and choke manifold lines will be 2" screw connections. Accessories will include upper and lower Kelly cocks with handles, stabbing valve to fit drill pipe on floor at all times, string float at bit, 2000 psi choke manifold with 2" adjustable choke with screw connections, and pressure gauge. BOPs will be tested every 24 hours. Tests will be recorded on an I. A. D. C. log.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>Connection</u>	<u>GL Setting Depth</u>
11"	8-5/8"	24	K-55	New	ST & C	160'
6-1/4"	4-1/2"	10.5	K-55	New	ST & C	2,100'

Surface casing will be cemented to the surface with ≈ 118 cubic feet (≈ 100 sacks) Class B + 1/4 lb/sack cello-flake + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.6 pounds per gallon. Volume = 100% excess. A guide shoe and insert float will be used with 3 centralizers. W. O. C. = 12 hours. Surface casing will be tested to 500 psi for 30 minutes.

Production casing will be cemented to the surface. Total cement = 367 cubic feet. Volumes are calculated at 70% excess. 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 = 290 cubic feet (≈ 141 sacks) Class B cement with 2% SM, 3 pounds per sack gilsonite + 1/4 pound per sack cello-flake. Yield = 2.06 cubic feet per sack. Weight = 12.5 pounds per gallon.

Tail cement = 77 cubic feet (≈ 50 sacks) Class B + 4% gel + 1/4 pound per sack cello-flake + 2% CaCl_2 . Yield = 1.55 cubic feet per sack. Weight = 14.5 pounds per gallon.

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Cementing equipment will include guide shoe, float collar and 10 centralizers (one each on the first five joints above the float and then five at 160' intervals starting at $\approx 960'$).

5. MUD PROGRAM

<u>Range</u>	<u>Mud Type</u>	<u>Weight</u>
0' - 160'	Fresh-Spud	8.4
160' - TD	LSND	8.6

Lost circulation and absorption material will be on location.

6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. Open hole logs will include GR, Neutron-Density, and Induction. The Neuron Density will be run from TD to $\approx 1,000'$. The other logs will be run from TD to the base of the surface casing shoe.

7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be ≈ 200 psi.

8. OTHER INFORMATION

The anticipated spud date is December 16, 2002. It is expected it will take ≈ 6 days to drill and ≈ 8 days to complete the well. Completion will start about one month after the spud and will include hydraulic fracturing.