

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

2002 SEP -3 PM 3:00

070 FARMINGTON, NM

5. Lease Serial No.
NMSF-078089

6. If Indian, Allottee or Tribe Name

N/A

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

N/A

8. Lease Name and Well No.

SCOTT FEDERAL #233

9. API Well No.

30-045- 31194

10. Field and Pool, or Exploratory

BASIN DAKOTA

11. Sec., T., R., M., or Bk. and Survey or Area

023-27n-11w NMPM

12. County or Parish

SAN JUAN

13. State

NM

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

4. Location of Well (Report location clearly and in accordance with any State requirements)

At surface **285' FSL & 1370' FEL**

At proposed prod. zone **SAME**

14. Distance in miles and direction from nearest town or post office*

11 AIR MILES S OF BLOOMFIELD

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

285'

16. No. of Acres in lease

2,560

17. Spacing Unit dedicated to this well

320 ACRES (E2)

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

741'

19. Proposed Depth

6,775'

20. BLM/BIA Bond No. on file

KA6084 (BLM - NATIONWIDE)

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

6,440' GL

22. Approximate date work will start*

JANUARY 6, 2003

23. Estimated duration

3 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.
2. A Drilling Plan.
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).

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

Comments

On site inspector: Roger Herrera
Archaeology report: CASA 02-83 (dated 8-8-02)

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

cc:BLM (&OCD), Pippin, Stowe

25. Signature

[Signature]

Name (Printed/Typed)

BRIAN WOOD

Date

8-17-02

Title

CONSULTANT

PHONE: 505 466-8120

FAX: 505 466-9682

Approved by (Signature)

[Signature]
David J. Markiewicz

Name (Printed/Typed)

MAR 12 2003

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 **N5L**

NMOCD

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

DISTRICT II
611 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 30-045-31194	² Pool Code 71599	³ Pool Name BASIN DAKOTA
⁴ Property Code 29140	⁵ Property Name SCOTT FEDERAL	⁶ Well Number 233
⁷ OGRID No. 193195	⁸ Operator Name MARKWEST RESOURCES, INC.	⁹ Elevation 6440'

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
0	23	27-N	11-W		285'	SOUTH	1370'	EAST	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			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. 26, 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 JULY 26, 2002 Signature and Seal of Professional Surveyor: Certificate Number		FD 2 1/2\"/>	

MarkWest Resources, Inc.
Scott Federal 233
285' FSL & 1370' FEL
Sec. 23, T. 27 N., R. 11 W.
San Juan County, New Mexico

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3. PRESSURE CONTROL

Maximum expected pressure is $\approx 1,000$ psi. The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. A typical 11" 3,000 psi model is on PAGE 3.

BOP equipment and all accessories will meet or exceed BLM requirements in 43 CFR Part 3160 for a 3,000 psi system. A 3,000 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". 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, 3,000 psi choke manifold with 2" adjustable and 2" positive chokes, and pressure gauge. BOPs will be tested every 24 hours. Tests will be recorded on 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>
12-1/4"	8-5/8"	24	K-55	New	ST & C	320'
7-7/8"	4-1/2"	11.6	N-80	New	ST & C	6,775'

Surface casing will be cemented to the surface with ≈ 265 cubic feet (≈ 225 sacks) Class B + 1/4 pond per sack cello-flake + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 200% excess. A guide shoe and insert float will be used. W. O. C. = 12 hours. Surface casing will be tested to 1,500 psi for 30 minutes.

Production casing will be cemented to the surface. Volumes are calculated at $\geq 25\%$ 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 2,000 psi.

MarkWest Resources, Inc.
Scott Federal 233
285' FSL & 1370' FEL
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Lead cement will be $\approx 1,760$ cubic feet ($\approx 1,129$ sacks) modified Super H cement at 61 #/sack and 22 #/sack blended silica light with 7 #/sack gilsonite + 1/4 pound per sack Flocele. Mixed to weight of 13 pounds per gallon for a yield of 1.56 cubic feet per sack. Mixed to weight of 8.5 pounds per gallon with 75-600 SCF/bbl N2.

Tail cement will be ≈ 230 cubic feet (≈ 176 sacks) 50/50 Class H Poz with 2% gel + 5 #/sack gilsonite + 1/4 #/sack Flocele + 0.4% Halad + 0.1% HR5. Yield = 1.31 cubic feet per sack. Weight = 13.5 pounds per gallon. No N2.

Cap cement down annulus with ≈ 160 cubic feet (≈ 137 sacks) Class B with 3% CaCl_2 .

Cementing equipment will include guide shoe, float collar and 24 centralizers. One centralizer each will be installed on the first three joints above the float, then one every second joint to 5,700' and one every fourth joint from 2,000' to surface.

5. MUD PROGRAM

<u>Range</u>	<u>Mud Type</u>	<u>Weight</u>
0' - 160'	Fresh-Spud	8.4
160' - 4,800'	LSND	8.6
4,800' - TD	LSND	8.8

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 Neutron Density will be run from TD to $\approx 5,700'$. The other logs will be run from TD to the base of the surface casing.