Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 2003

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NMSF-078089

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1a. TYPE OF WORK: DRILL ☑ DEEPEN ☐

7. UNIT AGREEMENT NAME: N/A

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER — SINGLE ZONE ☑ MULTIPLE ZONE ☐

32627

8. FARM OR LEASE NAME, WELL NO.: Scott Fed. #223

2. NAME OF OPERATOR: ~~MarkWest Resources, Inc.~~ XTO ~~(303) 290-8700~~

9. API WELL NO.: 30045 31119

3. ADDRESS AND TELEPHONE NO.: ~~155 Inverness Dr. W, Suite 200, Englewood, Co. 80112~~

10. FIELD AND POOL, OR WILDCAT: Basin Fruit. Coal

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 790' FSL & 325' FEL

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

At proposed prod. zone: Same

P 22-27n-11w NMPM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10 air miles S of Bloomfield

12. COUNTY OR PARISH: San Juan

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
325'	2,560	S/2 320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
694'	2,150'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6,403' ungraded

22. APPROX. DATE WORK WILL START*: Nov. 7, 2002

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	K-55 8-5/8"	24	160'	≈118 cu. ft. & to surface
6-1/4"	K-55 4-1/2"	10.5	2,150'	≈376 cu. ft. & to surface

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

2003 MAY 23 PM 12 55

070 FARMINGTON NM

HOLD C104 FOR NSL

cc: BIA, BLM, NAPI, OCD (via BLM), Pippin, Stowe, Tribe

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED _____ TITLE Consultant (505) 466-8120 DATE 5-6-02

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval 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.

CONDITIONS OF APPROVAL, IF ANY:

/s/ David J. Mankiewicz

APPROVED BY _____ TITLE _____ DATE OCT 24 2003

NMOCD *See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, 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.

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	71629	BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
32627	SCOTT FEDERAL	223

[7] OGRID No.	[8] Operator Name	[9] Elevation
193195	~~MARKWEST RESOURCES, INC.~~ XTO	6403'

[10] Surface Location

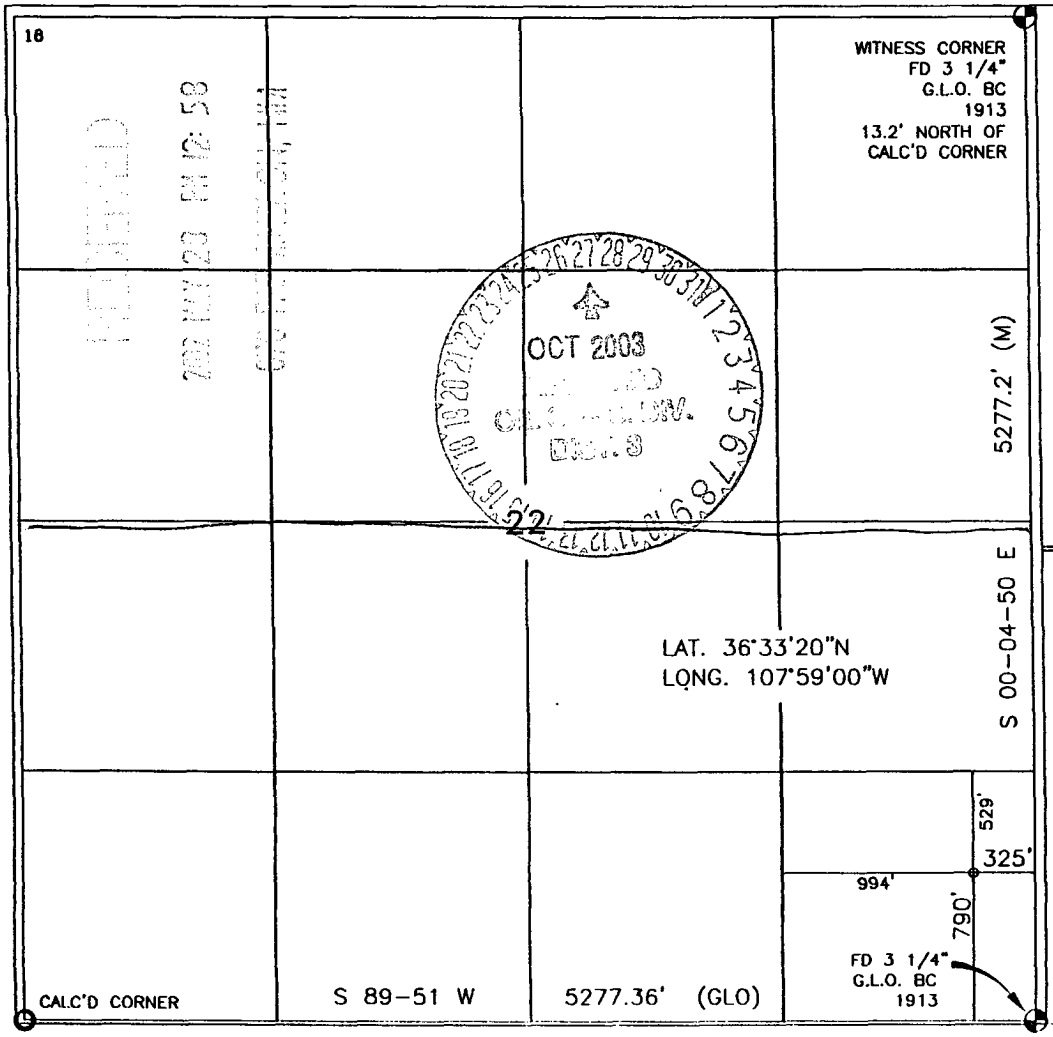
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	22	27-N	11-W		790	SOUTH	325	EAST	SAN JUAN

[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	[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

Printed Name: BRIAN WOOD

Title: CONSULTANT

Date: MAY 6, 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.

1-7-02

Date of Survey

Signature and Seal of Professional Surveyor:

ROY A. RUSH
NEW MEXICO
8894
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number 8894

MarkWest Resources, Inc.
Scott Federal #223
790' FSL & 325' FEL
Sec. 22, T. 27 N., R. 11 W.
San Juan County, New Mexico

Drilling Program

1. ESTIMATED FORMATION TOPS

Formation Name	GL Depth	KB Depth	Elevation
Nacimiento Fm	000'	5'	+6,403'
Ojo Alamo Ss	939'	944'	+5,464'
Kirtland Sh	1,047'	1,052'	+5,356'
Fruitland Coal	1,505'	1,510'	+4,898'
Pictured Cliffs Ss	2,009'	2,014'	+4,394'
Total Depth*	2,150'	2,155'	+4,253'

* all elevations reflect the ungraded ground level of 6,403'.

2. NOTABLE ZONES

Gas & Oil Zones	Water Zones	Coal Zone
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

Maximum expected pressure is ≈200 psi. The drilling contract has not yet 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 CFR Part 3160 for a 2000 psi system. A 2000 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 IADC log.

4. CASING & CEMENT

Hole Size	O. D.	Weight (lb/ft)	Grade	Age	Connection	GL Setting Depth
11"	8-5/8"	24	K-55	New	ST & C	160'
6-1/4"	4-1/2"	10.5	K-55	New	ST & C	2,150'

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 = 376 cubic feet. Volumes are calculated at 80% 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 = 299 cubic feet (≈145 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#/sack cello-flake + 2% $CaCl_2$. Yield = 1.55 cubic feet per sack. Weight = 14.5 #/gal.