

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., Asteo, 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

¹ API Number 30-045-31141		² Pool Code 71629		³ Pool Name BASIN FRUITLAND COAL	
⁴ Property Code 27395		⁵ Property Name FULLERTON FEDERAL			⁶ Well Number 111
⁷ OGRID No. 193195		⁸ Operator Name MARKWEST RESOURCES, INC.			⁹ Elevation 6004'

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
1	11	27-N	11-W		1635'	SOUTH	1020'	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

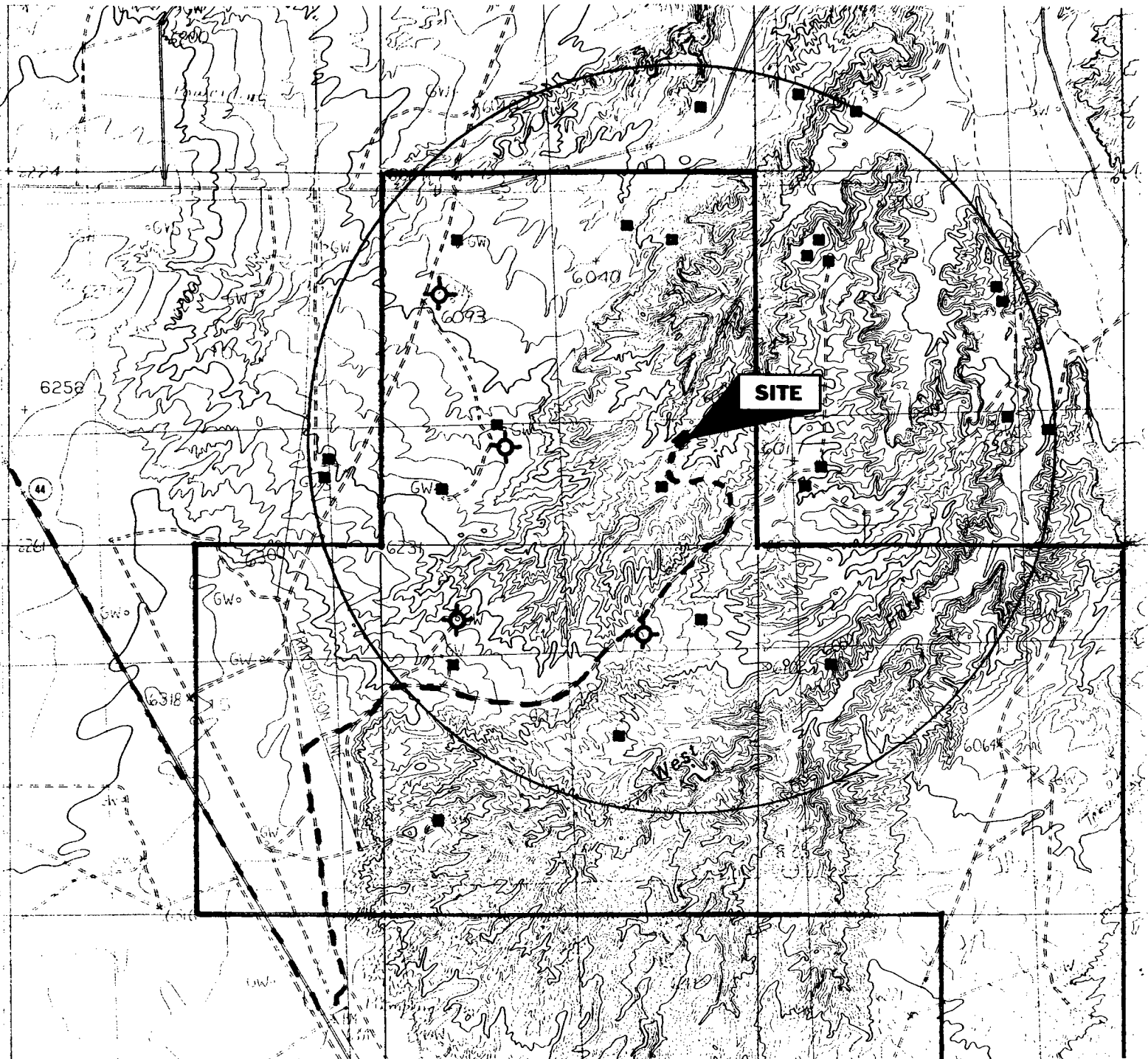
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.		

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

<div>16</div>	<div>17 OPERATOR CERTIFICATION</div> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Brian Wood</i> Signature</p> <p>Printed Name BRIAN WOOD</p> <p>Title CONSULTANT</p> <p>Date JULY 1, 2002</p>
	<div>18 SURVEYOR CERTIFICATION</div> <p>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.</p> <p>APRIL 10, 2002 Date of Survey</p> <p><i>D. A. Johnson</i> Signature and Seal of Professional Surveyor</p> <p>14827 Certificate Number</p>

MarkWest Resources, Inc.
Fullerton Federal 111
1635' FSL & 1020' FEL
Sec. 11, T. 27 N., R. 11 W.
San Juan County, New Mexico

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PROPOSED WELL: ◆
EXISTING WELL: ■
P & A WELL: ⊕

LEASE BOUNDARY: ┌
EXISTING ROAD: - - -

PERMITS WEST INC.
PROVIDING PERMITS FOR LAND USERS

MarkWest Resources, Inc.
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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Nacimiento Fm	000'	5'	+6,004'
Ojo Alamo Ss	699'	704'	+5,305'
Kirtland Sh	803'	808'	+5,201'
Fruitland Coal	1,419'	1,424'	+4,585'
Pictured Cliffs Ss	1,774'	1,779'	+4,230'
Total Depth (TD)*	1,900'	1,905'	+4,104'

* all elevations reflect the ungraded ground level of 6,004'

2. NOTABLE ZONES

Gas or Oil Zones

Fruitland
Pictured Cliffs

Water Zones

Nacimiento
Ojo Alamo
Kirtland
Fruitland

Coal Zone

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.

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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

<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	1,900'

Surface casing will be cemented to the surface with ≈118 cubic feet (≈100 sacks) Class B + 1/4 lb/sack cello-flake + 2% CaCl₂. 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 = 340 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 = 263 cubic feet (≈128 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% CaCl₂. Yield = 1.55 cubic feet per sack. Weight = 14.5 #/gallon.