



SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
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**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505

ABOVE THIS LINE FOR DIVISION USE ONLY

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

**[1] TYPE OF APPLICATION - Check Those Which Apply for [A]**

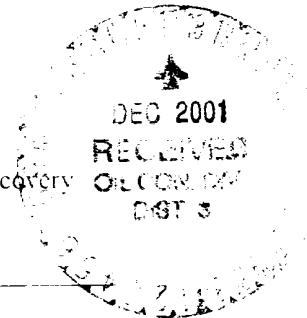
- [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
 DHC CTB PLC PC OLS OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX PMX SWD IPI EOR PPR

- [D] Other: Specify \_\_\_\_\_



*JK*  
*TYPE*

**[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or \_ Does Not Apply**

- [A] Working, Royalty or Overriding Royalty Interest Owners  
 [B] Offset Operators, Leaseholders or Surface Owner  
 [C] Application is One Which Requires Published Legal Notice  
 [D] Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E] For all of the above, Proof of Notification or Publication is Attached, and/or.  
 [F] Waivers are Attached

**[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

**[4] CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

Print or Type Name

BRIAN WOOD  
 (505) 466-8120  
 FAX 466-9682

Signature

Title

CONSULTANT

Date

11-13-01

e-mail Address

brian@permitswest.com

REQUEST FOR ADMINISTRATIVE APPROVAL FOR NON-STANDARD LOCATION  
FOR MARKWEST RESOURCES, INC.  
SCOTT FEDERAL 27-11 23-1 WELL  
1645' FNL & 360' FEL SEC. 23, T. 27 N., R. 11 W., SAN JUAN COUNTY, NM

- I. The well is on BLM surface and a BLM oil and gas lease (NMSF-078089). The proposed location is non-standard for the Basin Dakota. A standard location must be at least 660' from the quarter line. This well is staked 300' further east than is standard. (Closest standard location would be 1645' FNL and 660' FEL.) The APD is attached.
- II. A C-102 showing the well location and proration unit (E2 for the Basin Dakota) is attached. The lease (2,560 acres) is shown on the attached East Fork Kutz Canyon USGS topo map. The well encroaches on the N2 Section 24 Basin Dakota spacing unit which is dedicated to MarkWest's existing Hancock Federal #3 well (790' FNL & 990' FEL 24-27n-11w).
- III. According to NM Oil Conservation Division records reviewed in the Santa Fe office on October 10, 2001; the closest Dakota producer is MarkWest's Federal Scott 27-11 24 #13 well which is 2,393' southeast at 1600' FSL & 900' FWL 24-27n-11w. A copy of the East Fork Kutz Canyon 7.5' USGS map is attached showing the proposed well site, Dakota spacing units (dashed lines), and lease (solid line including all of Sections 23, east half of Section 24, et al). There is only one lease within a minimum 1,645' radius. Registered letters were sent on November 13 to all of the offset interest owners. A copy of the postal receipts and letters is attached.
- IV. A copy of the East Fork Kutz Canyon USGS map is attached. The proposed well site is marked. Proration unit for the Basin Dakota is the 320.00 acre east half of Section 23, Township 27 North, Range 11 West, NMPM, San Juan County, NM.
- V. MarkWest selected its location due to topography. The drilling window is in a very dissected badland area. There is 33' of cut at one place on the pad even at the proposed non-standard location. Bill Liess (505-599-6321) of the BLM agreed on the desirability of a non-standard location instead of a



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., Artec, 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

API Number		Pool Code	Pool Name	
		71599	BASIN DAKOTA	
Property Code	Property Name		Well Number	
	SCOTT FEDERAL 27-11		23-1	
OGRID No.	Operator Name		Elevation	
193195	MARKWEST RESOURCES, INC.		6133'	

<sup>10</sup> Surface Location

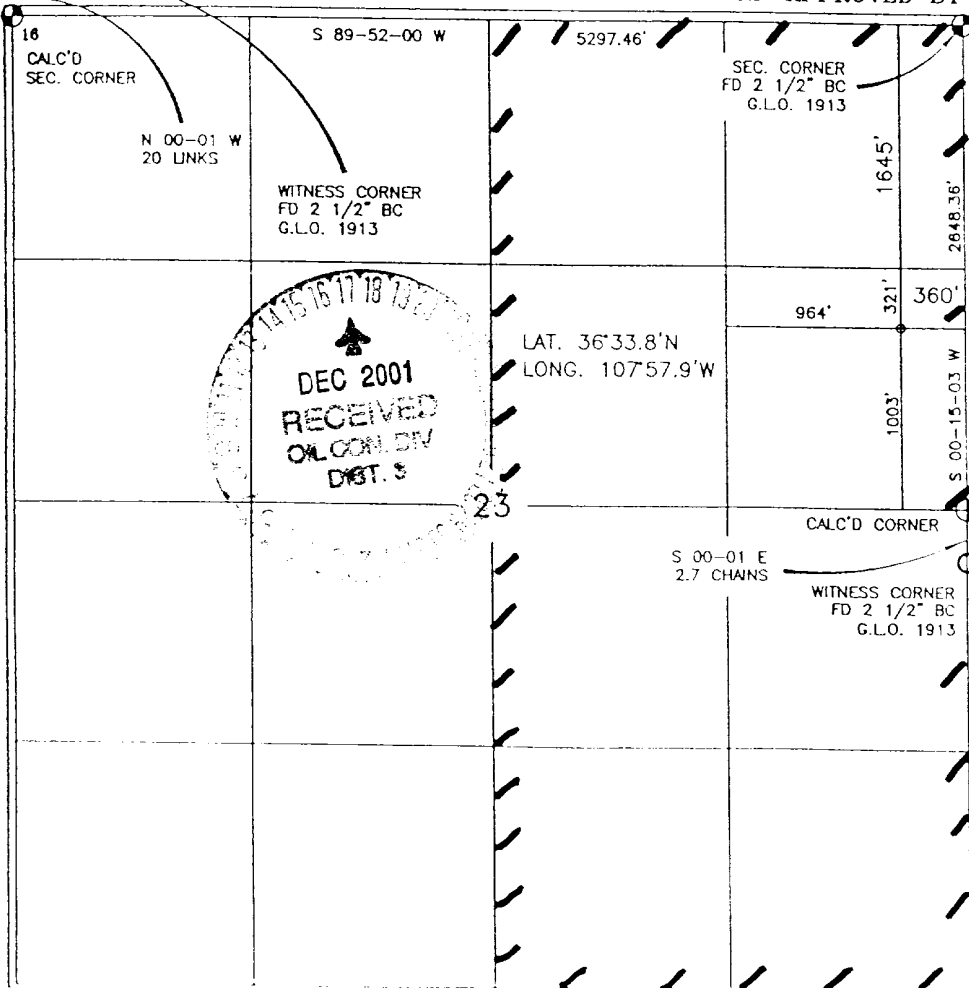
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	23	27-N	11-W		1645'	NORTH	360'	EAST	SAN JUAN

<sup>11</sup> 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

Dedicated Acres	Joint or Infill	Consolidation Code	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.

*Brian Wood*  
Signature

Printed Name: BRIAN WOOD  
 Title: CONSULTANT  
 Date: OCT. 28, 2001

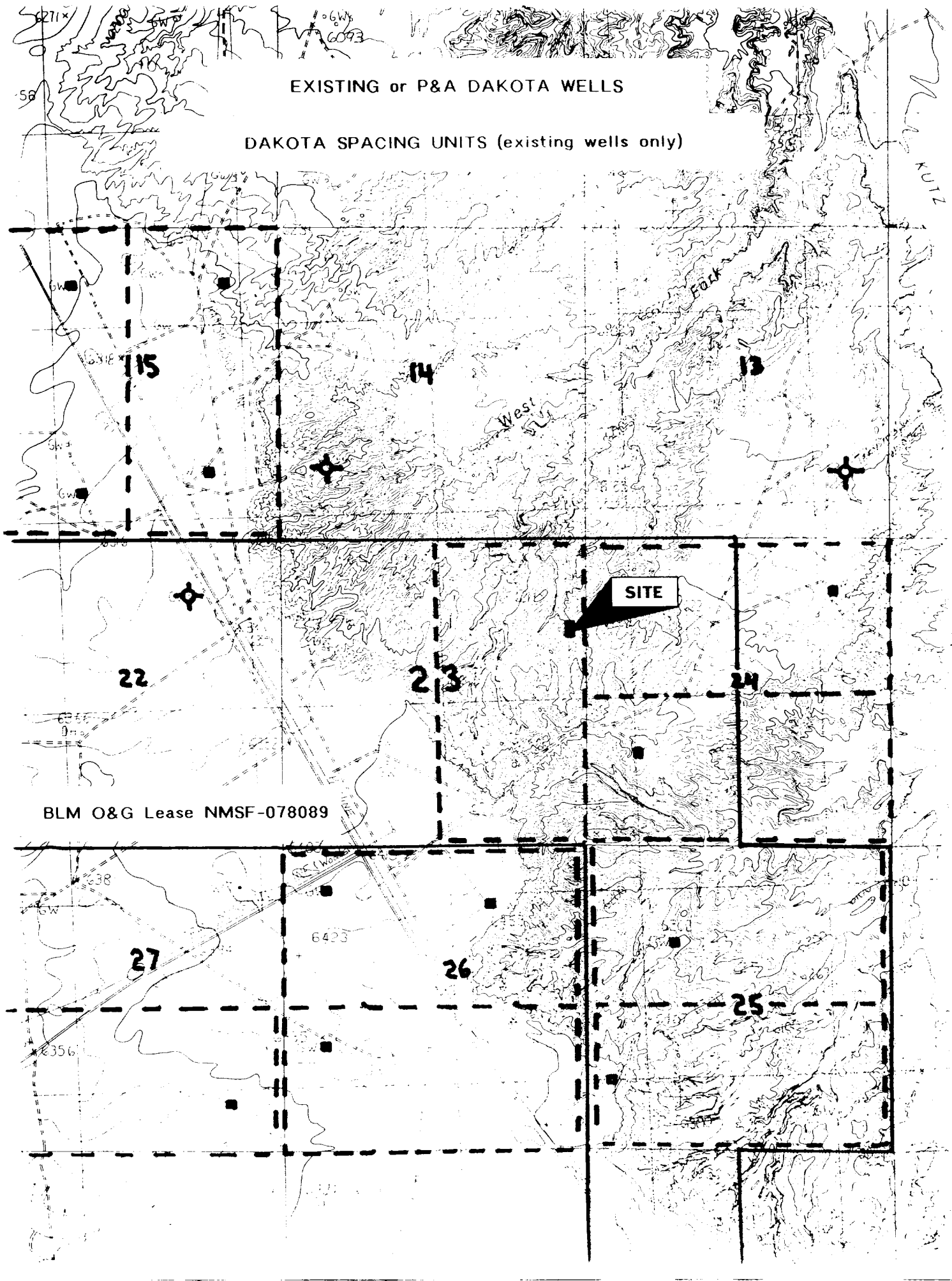
18 SURVEYOR CERTIFICATION

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: 7-1-01  
 Signature and Seal of Professional Surveyor: *[Signature]*  
 Certificate Number: 8894

EXISTING or P&A DAKOTA WELLS

DAKOTA SPACING UNITS (existing wells only)



# PERMITS WEST, INC.

PROVIDING PERMITS for the ENERGY INDUSTRY

37 Verano Loop, Santa Fe, New Mexico 87505 (505) 964-8120

466

November 11, 2001

Bill Liess  
BLM  
1235 LaPlata Highway  
Farmington, NM 87401

Dear Bill,

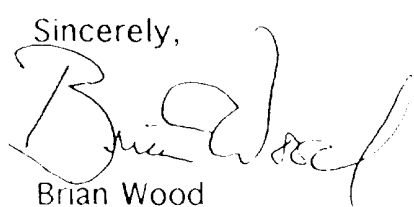
As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

MarkWest Resources, Inc. is applying to drill its Scott Federal 27-11 23-1 well. The minimum state distance for a Dakota gas well is 660' from a quarter section line. The proposed well is 300' further east than is standard. Thus, it is a non-standard location. The NSL is due to topography (see attached map). It is 1,645' from the closest lease boundary.

Well Name: Scott Federal 27-11 23-1 Total Depth: 6,470'  
Proposed NSL Producing Zone: Basin Dakota sandstone  
NSL Acreage Dedication: 320.00 ac. (E2 Sec. 23)  
Location: 1645' FNL & 360' FEL Sec. 23, T. 27 N., R. 11 W.,  
San Juan County, NM on Federal lease NMSF-078089  
Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM  
Applicant Name: MarkWest Resources, Inc. (303) 290-8700  
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico address is 1220 South St. Francis Dr. Santa Fe, NM. My phone number is (505) 476-3440.

questions.

Sincerely,  
  
Brian Wood

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

Postage		Postmark
Certified Fee		Time
Return Receipt Fee		
Enhancement Fee		
Restricted Delivery Fee		
Enhancement Fee		
Total Postage & Fees		
Post Office		
Post Office Address		

1235 LaPlata  
Farmington NM 87401



# PERMITS WEST, INC.

PROVIDING PERMITS for the ENERGY INDUSTRY

17 Morano Loop, Santa Fe, New Mexico 87505

(505) 964-8120

466

November 11, 2001

Bonneville Fuels Co.  
1600 Broadway, Suite 1110  
Denver, Co. 80202

As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

MarkWest Resources, Inc. is applying to drill its Scott Federal 27-11 23-1 well. The minimum state distance for a Dakota gas well is 660' from a quarter section line. The proposed well is 300' further east than is standard. Thus, it is a non-standard location. The NSL is due to topography (see attached map). It is 1,645' from the closest lease boundary.

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San Juan County, NM on Federal lease NMSF-078089

Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM

Applicant Name: MarkWest Resources, Inc. (303) 290-8700

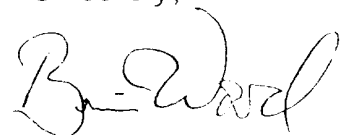
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

questions.

Sincerely,



Brian Wood

Postage & Fees		
Contract Fee		
Return Receipt Fee		
Endorsement Fee		
Restricted Delivery Fee		
Endorsement Fee		
Total Postage & Fees	53	

Bonneville Fuels  
1600 Broadway, Suite 1110  
Denver Co. 80202

NOV 14 2001



November 11, 2001

Bill Franklin  
Conoco Inc.  
600 N. Dairy Ashford  
Houston, Tx. 77079

Dear Bill,

As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

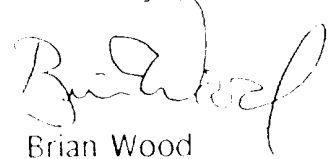
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San Juan County, NM on Federal lease NMSF-078089  
Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM  
Applicant Name: MarkWest Resources, Inc.      (303) 290-8700  
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

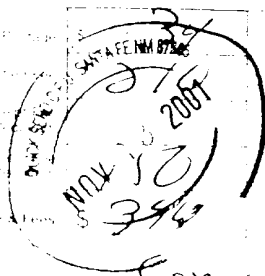
Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New address is 1220 South St. Francis Dr. Santa Fe, NM. My phone number is (505) 476-3440.

questions.

Sincerely,

  
Brian Wood

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)



Conoco  
600 N Dairy Ashford  
Houston Tx 77079

0298 5670 0012 5356 8830

# PERMITS WEST, INC.

PROVIDING PERMITS for the ENERGY INDUSTRY

37 Verano Loop, Santa Fe, New Mexico 87505

(505) 464-8120

466

November 11, 2001

Joe Hammond  
Louis Dreyfus Natural Gas Corp.  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, Ok. 73134-2600

Dear Joe,

As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

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Location: 1645' FNL & 360' FEL Sec. 23, T. 27 N., R. 11 W.,

San Juan County, NM on Federal lease NMSF-078089

Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM

Applicant Name: MarkWest Resources, Inc. (303) 290-8700

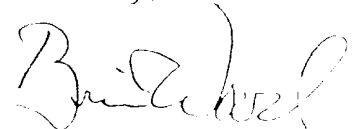
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New

on address is 1220 South St. Francis Dr. Santa  
mber is (505) 476-3440.

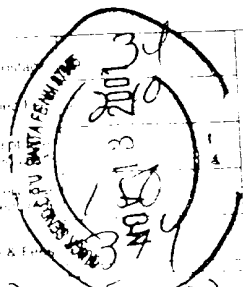
questions.

Sincerely,



Brian Wood

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)



Dreyfus Nat Gas  
14000 Quail Springs Pkwy 600  
OK 73134

**PERMITS WEST** INC.  
PROVIDING PERMITS for the ENERGY INDUSTRY  
37 Verano Loop, Santa Fe, New Mexico 87505 (505) 944-8120  
466

November 11, 2001

Jerry Fletcher  
Marathon Oil Company  
P. O. Box 552  
Midland, Tx. 79702-0552

Dear Jerry,

As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

MarkWest Resources, Inc. is applying to drill its Scott Federal 27-11 23-1 well. The minimum state distance for a Dakota gas well is 660' from a quarter section line. The proposed well is 300' further east than is standard. Thus, it is a non-standard location. The NSL is due to topography (see attached map). It is 1,645' from the closest lease boundary.

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Location: 1645' FNL & 360' FEL Sec. 23, T. 27 N., R. 11 W.,

San Juan County, NM on Federal lease NMSF-078089

Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM

Applicant Name: MarkWest Resources, Inc. (303) 290-8700

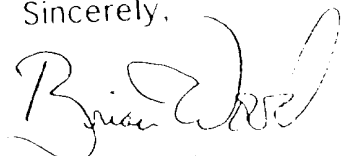
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New

address is 1220 South St. Francis Dr. Santa  
number is (505) 476-3440.

questions.

Sincerely,

  
Brian Wood

U.S. Postal Service  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

55 1670 0012-5353 7337

NOV 13 2001  
Marathon Oil  
P.O. Box 552

# PERMITS WEST, INC.

PROVIDING PERMITS for the ENERGY INDUSTRY

17 Verano Loop, Santa Fe, New Mexico 87505

(505) 476-8120

466

November 11, 2001

Jane Seiler  
Questar Expl. & Production Company  
1331 17th St., Suite 800  
Denver, Co. 80202

Dear Jane,

As required by New Mexico Oil Conservation Division Rules, I am notifying you of the following non-standard location (NSL) for a well. This letter is a notice only. No action is needed unless you have questions or objections.

MarkWest Resources, Inc. is applying to drill its Scott Federal 27-11 23-1 well. The minimum state distance for a Dakota gas well is 660' from a quarter section line. The proposed well is 300' further east than is standard. Thus, it is a non-standard location. The NSL is due to topography (see attached map). It is 1,645' from the closest lease boundary.

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NSL Acreage Dedication: 320.00 ac. (E2 Sec. 23)

Location: 1645' FNL & 360' FEL Sec. 23, T. 27 N., R. 11 W.,

San Juan County, NM on Federal lease NMSF-078089

Approximate Location: ≈10 air miles south-southeast of Bloomfield, NM

Applicant Name: MarkWest Resources, Inc. (303) 290-8700

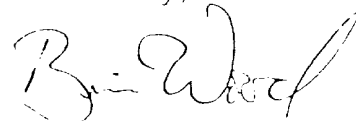
Applicant's Address: 155 Inverness Dr. W, Suite 200, Englewood, Co. 80112

Submittal Information: Application for a non-standard location will be filed with the NM Oil Conservation Division. If they determine the application complies with the regulations, then it will be approved. The New

address is 1220 South St. Francis Dr. Santa Fe, NM. My phone number is (505) 476-3440.

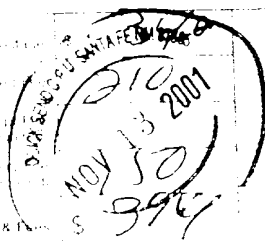
If you have any questions,

Sincerely,



Brian Wood

**U.S. Postal Service**  
**CERTIFIED MAIL RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)



Questar  
1331 17th St, #800  
Denver Co 80202

1300 4400 0012 555 2320



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**APPLICATION FOR PERMIT TO DRILL OR DEEPEN**

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

6. IF INDIAN ALLOTTEE OR TRIBE  
**N/A**

7. UNIT AGREEMENT NAME  
**N/A**

8. FARM OR LEASE NAME, ACRES, AND DATE  
**Scott Fed. 27-11 23-1**

9. AP WELL NO.

10. FIELD AND TOWN OR RANGE  
**Basin Dakota**

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA  
**23-27n-11w NMPM**

12. COUNTY OR PARISH 13. STATE  
**San Juan NM**

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

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any.)  
**1,645'**

16. NO. OF ACRES IN LEASE  
**2,560**

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**320**

18. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST WELL DRILLING COMPLETED OR APPLIED FOR ON THIS LEASE, FT.  
**39'**

19. PROPOSED DEPTH  
**6,470'**

20. ROTARY OR CABLE TOOLS  
**Rotary**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**6,133' ungraded**

22. APPROX. DATE WHEN WELL STARTS  
**Dec. 1, 2001**

1a. TYPE OF WORK  
DRILL  DEEPEN

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER \_\_\_\_\_

2. NAME OF OPERATOR  
**MarkWest Resources, Inc. (303) 290-8700**

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

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements\*)  
At surface  
**1645' FNL & 360' FEL**

At proposed prod. zone  
**Same**

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	K-55 8-5/8"	24	160'	≈118 cu. ft. & to surface
7-7/8"	N-80 4-1/2"	11.6	6,470'	≈2,046 cu. ft. & to surface

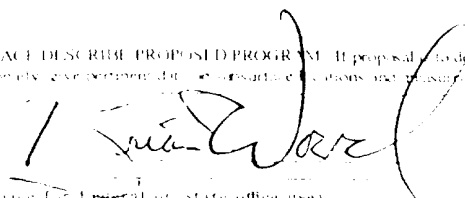
On sited with Bill Liese. Archaeology consultant: CASA

Only other well in quarter-quarter is a MarkWest well.

Will apply for NSL (due to terrain) from OCD.

cc: BLM, OCD (via BLM), Pippin, Stowe

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen, give data on present productive zone and proposed new productive zone. Give blowout prevention program, if any.

21.  Consultant (505) 466-8120 10-28-01

APPROVAL STATE (This space for Federal or state office use)

APPROVAL STATE

Acceptance by applicant warrants responsibility that the applicant holds a comparable title to those rights in the subject land which would entitle the applicant to drill for and produce oil or gas.

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  
811 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		*Pool Code	*Pool Name
		71599	BASIN DAKOTA
*Property Code	*Property Name		*Well Number
	SCOTT FEDERAL 27-11		23-1
*OCRID No	*Operator Name		*Elevation
193195	MARKWEST RESOURCES, INC.		6133'

<sup>10</sup> Surface Location

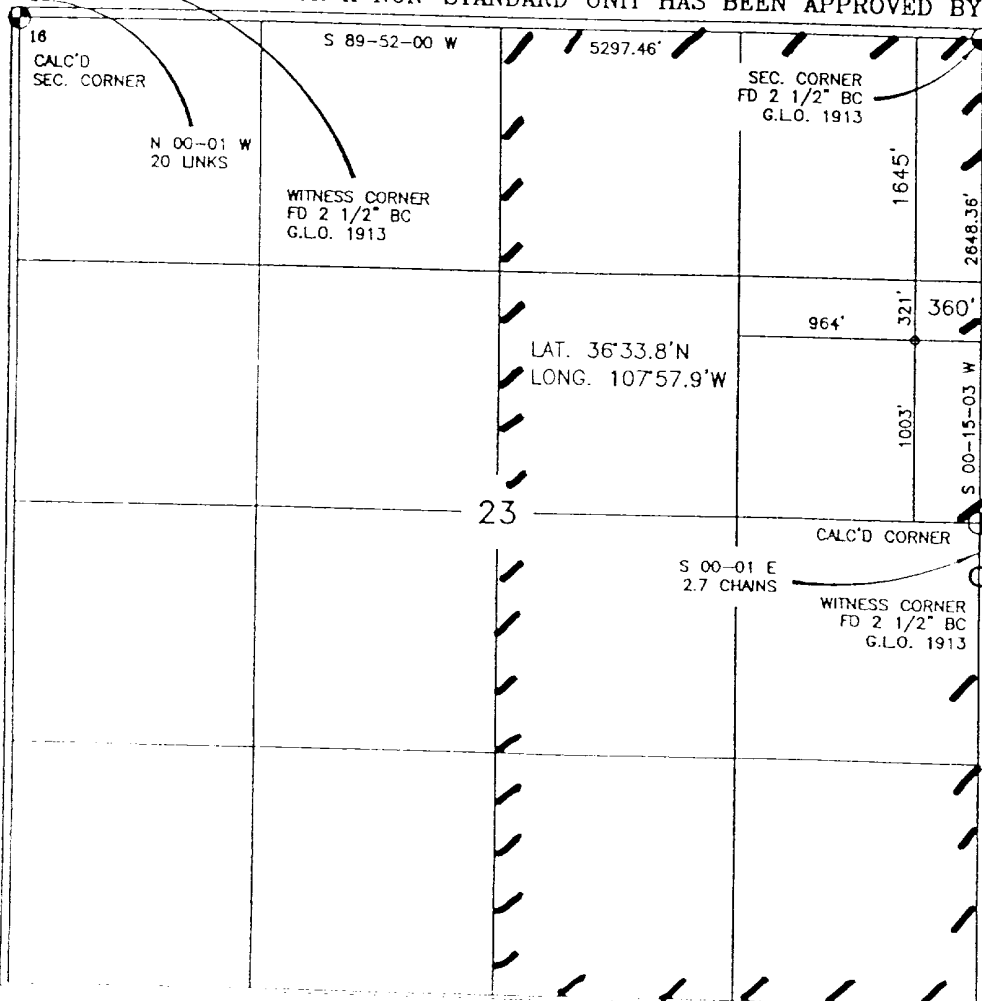
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	23	27-N	11-W		1645'	NORTH	360'	EAST	SAN JUAN

<sup>11</sup> 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

*Dedicated Acres	*Joint or Infill	*Consolidation Code	*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.

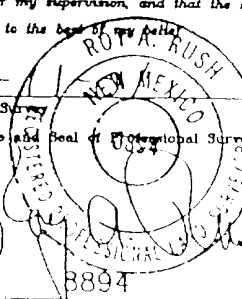
*Brian Wood*  
Signature

Printed Name  
**BRIAN WOOD**  
Title  
**CONSULTANT**  
Date  
**OCT. 28, 2001**

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.

7-11  
Date of Survey  
Signature and Seal of Professional Surveyor  
*[Signature]*  
Certificate Number  
**8894**



Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>Depth from GL</u>	<u>KB Depth</u>	<u>Subsea Elevation</u>
Nacimiento Fm	000'	12'	+6,133'
Ojo Alamo Ss	813'	825'	+5,320'
Kirtland Sh	852'	864'	+5,281'
Fruitland Coal	1,305'	1,317'	+4,828'
Pictured Cliffs Ss	1,804'	1,816'	+4,329'
Mesa Verde Ss	2,715'	2,727'	+3,418'
Point Lookout Ss	4,235'	4,247'	+1,898'
Gallup Ss	5,711'	5,723'	+422'
Dakota Ss	6,314'	6,326'	-181'
Total Depth*	6,470'	6,482'	-337'

\* all elevations reflect the ungraded ground level of 6,133'.

2. NOTABLE ZONES

<u>Gas or Oil Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Fruitland	Nacimiento	Fruitland
Pictured Cliffs	Ojo Alamo	
Gallup	Kirtland	
Dakota	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  $\approx$ 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.

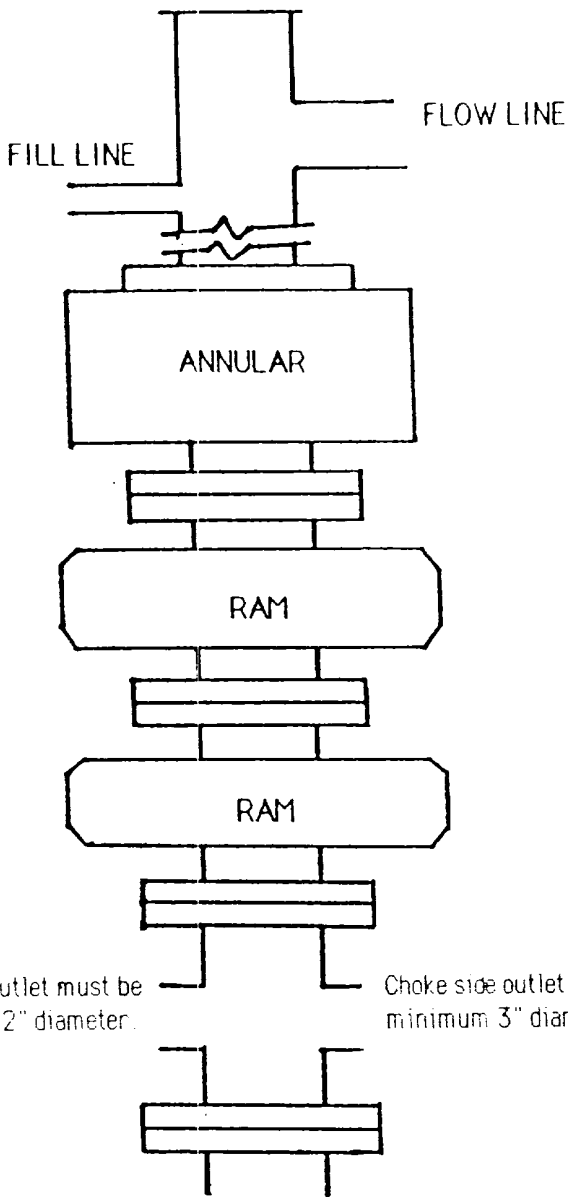
BOP equipment and all accessories will meet or exceed BLM requirements in 43 CFR Part 3160 for a 3,000 psi system. A 3,000 psi double ram hydraulic BOP will be used. Accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill, kill, and choke manifold lines will be 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 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>
12-1/4"	8-5/8"	24	K-55	New	ST&C	160'
7-7/8"	4-1/2"	11.6	N-80	New	ST&C	6,470'

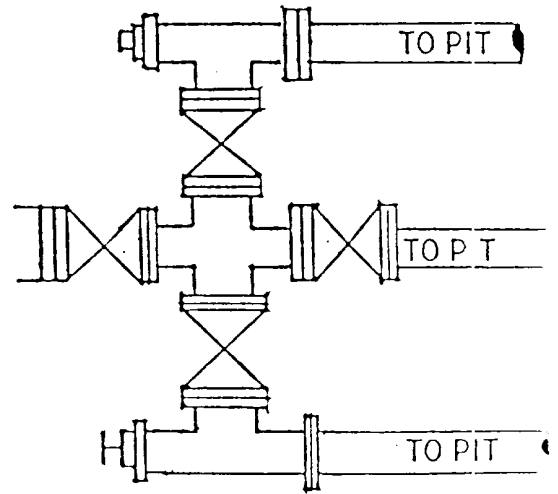
Surface casing will be cemented to the surface with  $\approx$ 118 cu. ft. ( $\approx$ 100 sx) Class B + 1/4 lb/sk cello-flake + 2% CaCl<sub>2</sub>. Yield = 1.18 cu. ft./sk. Weight = 15.2 lb/gal. Volume = 100% excess. A guide shoe and insert float will be used. WOC = 12 hours. Surface casing will be tested to 1,500 psi for 30 minutes.

Production casing will be cemented to the surface. Volumes are calculated at 28% excess. If cement does not circulate to surface, then a temperature survey will be run to determine the actual cement top as needed. WOC = 12 hours. Test to 2,000 psi.



TYPICAL BOP STACK  
& CHOKING MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve

Upper kelly cock will have handle available  
Safety valve and subs will fit all drill string connections in use  
All BOP/E connections subjected to well pressure will be flanged, welded, or clamped

Lead cement will be  $\approx 1,677$  cubic feet ( $\approx 1,075$  sx) modified Super H cement at 61 #/sack and 22 #/sack blended silica light with 7 #/sack gilsonite + 1/4 #/sack Flocele. Mixed to weight of 13 #/gal for a yield of 1.56 cubic feet per sack. Mixed to weight of 8.5 #/gal with 75-600 SCF/bbl N2.

Tail cement will be  $\approx 216$  cubic feet ( $\approx 165$  sx) 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 #/gal. No N2.

Cap cement down annulus with  $\approx 153$  cubic feet ( $\approx 130$  sx) Class B with 3% CaCl<sub>2</sub>.

Cementing equipment will include guide shoe, float collar and 23 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 DSTs 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.

MarkWest Resources, Inc.  
Scott Federal 27-11 23-1  
Surface: 1645' FNL & 360' FEL  
Sec. 23, T. 27 N., R. 11 W.  
San Juan County, New Mexico

7. DOWNHOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum pressure will be  $\approx$ 1,000 psi.

8. OTHER INFORMATION

The anticipated spud date is December 1, 2001. It is expected it will take about twelve days to drill and ten days to complete the well. Completion will start about one month after the spud and will include hydraulic fracturing.

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## Surface Use Plan

### 1. DIRECTIONS & EXISTING ROADS (See Pages 10 & 11)

From Bloomfield ...

Go SE 12 mi. on US 550/NM 44 to the equivalent of Milepost 140.7  
Then turn left at the brown metal building and go NE 0.1 mi. on a dirt road  
Then turn right and go SE 0.6 mi. on a dirt road  
Then turn left and go NE 0.2 mi. on a dirt road to a well  
Then turn right and go SE 0.3 mi. on a dirt road past a well  
Then turn left and go downhill 0.7 mi. on a dirt road to a junction  
Then turn left and go N 0.5 mi. on a dirt road to a junction  
Then turn left and go SW 0.3 mi. on a dirt road to the well

Roads will be maintained to a standard at least equal to their present condition.

### 2. ROAD TO BE BUILT OR UPGRADED

No new road will be built. This well pad will overlap MarkWest's existing 27-11 23-42 well.

### 3. EXISTING WELLS (See Page 11)

There are twenty oil or gas wells within a mile radius according to NM Oil Conservation Division records in Santa Fe reviewed on August 23, 2001. There are no water or injection wells within a mile.

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#### 4. PROPOSED PRODUCTION FACILITIES

A ≈300 barrel steel tank, ≈60 barrel fiberglass open top tank, ≈50 hp compressor, meter run, and separator will be installed on the pad. All surface equipment will be painted a flat Carlsbad tan color.

A 4,752' long steel ≈4" gas pipeline will be laid to MarkWest's existing Central Delivery Point #3. All of the route parallels an existing road and an existing MarkWest 2" line. It will be buried 36" deep. Wall thickness = 0.216". Maximum operating pressure = 200 psi. Test pressure = 1,600 psi. Test water will be discharged into the reserve pit.

#### 5. WATER SUPPLY

Water will be trucked from Bloomfield.

#### 6. CONSTRUCTION MATERIALS & METHODS

NM One Call (1-800-321-ALERT) and BLM will be notified before construction starts. There is no topsoil. A diversion ditch will be cut south of the pad.

#### 7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the county landfill. There will be no trash burning. Once dry, contents of the reserve pit will be buried in place. Human waste will be disposed of in chemical toilets and hauled to an approved dump station.

#### 8. ANCILLARY FACILITIES

MarkWest Resources, Inc.  
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There will be no air strips or camps. Camper trailers will be on location for the company man, tool pusher, or mud logger.

#### 9. WELL SITE LAYOUT

See Pages 12 and 13 for depictions of the well pad, cross section, cut and fill diagram, reserve pit, trash cage, access onto the location, parking, living facilities, and rig orientation.

#### 10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for a reserve pit to fully evaporate, at which point it will be backfilled. The pad and backfilled pit will be recontoured to a natural appearance. Disturbed areas will be ripped or harrowed. A BLM or BIA approved seed mix will be drilled between July 1 and September 15. If broadcast, the rate will be doubled. A harrow or cable will be dragged over the area to assure seed cover.

If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed as previously described.

#### 11. SURFACE OWNER

All construction is on lease and on BLM.

#### 12. OTHER INFORMATION

The nearest hospital is a 45 minute drive away in southwest Farmington.

MarkWest Resources, Inc.  
Scott Federal 27-11 23-1  
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13. REPRESENTATION

Anyone having questions concerning the APD should call:

Brian Wood, Consultant  
Permits West, Inc.  
37 Verano Loop  
Santa Fe, NM 87508  
(505) 466-8120      FAX: (505) 466-9682      Cellular: (505) 699-2276

Field representative will be:

Mike Pippin  
3104 N. Sullivan  
Farmington, NM 87401  
(505) 327-4573      Cellular: (505) 330-0495

MarkWest Resources, Inc. has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by MarkWest Resources, Inc.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by MarkWest Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

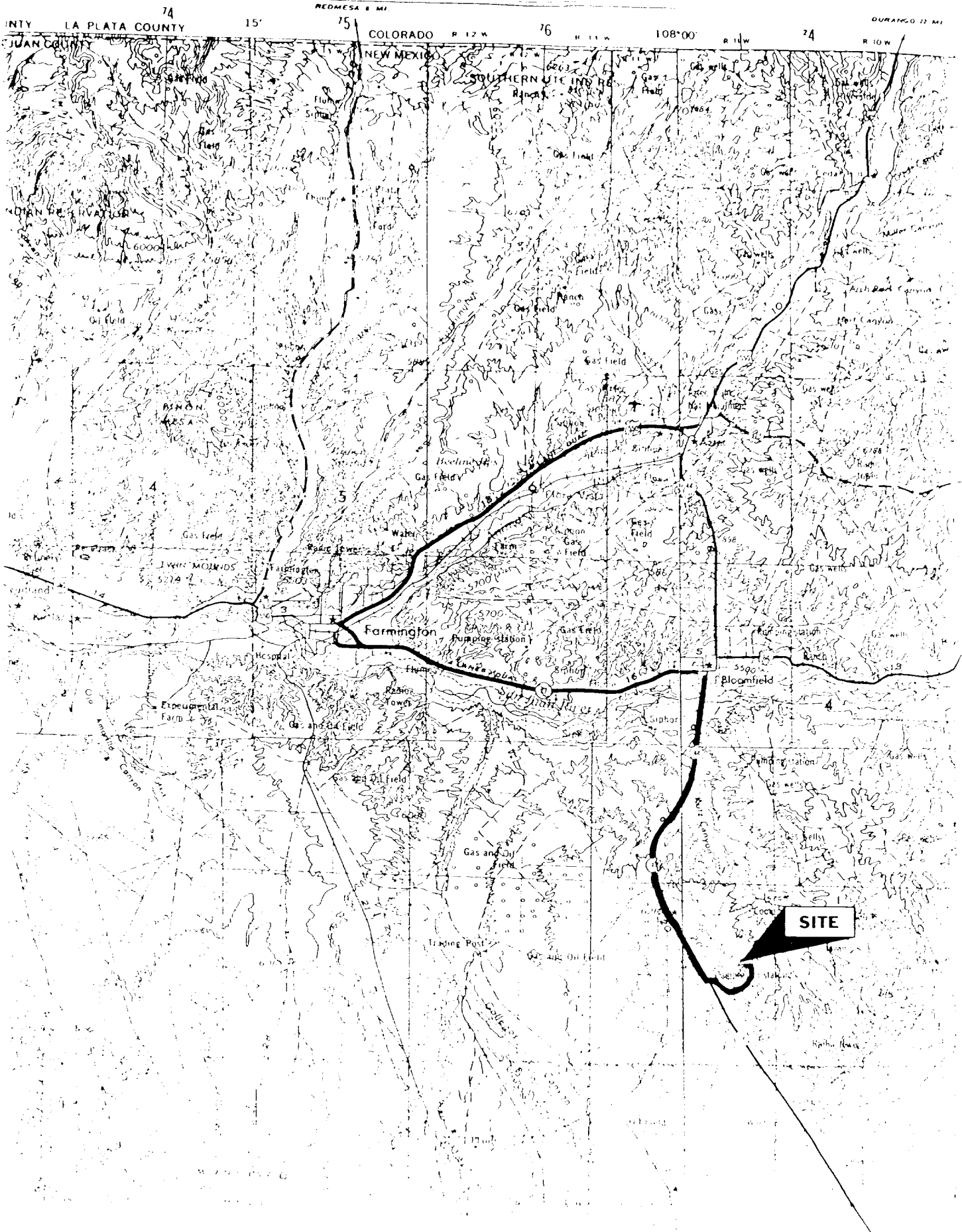


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Brian Wood, Consultant

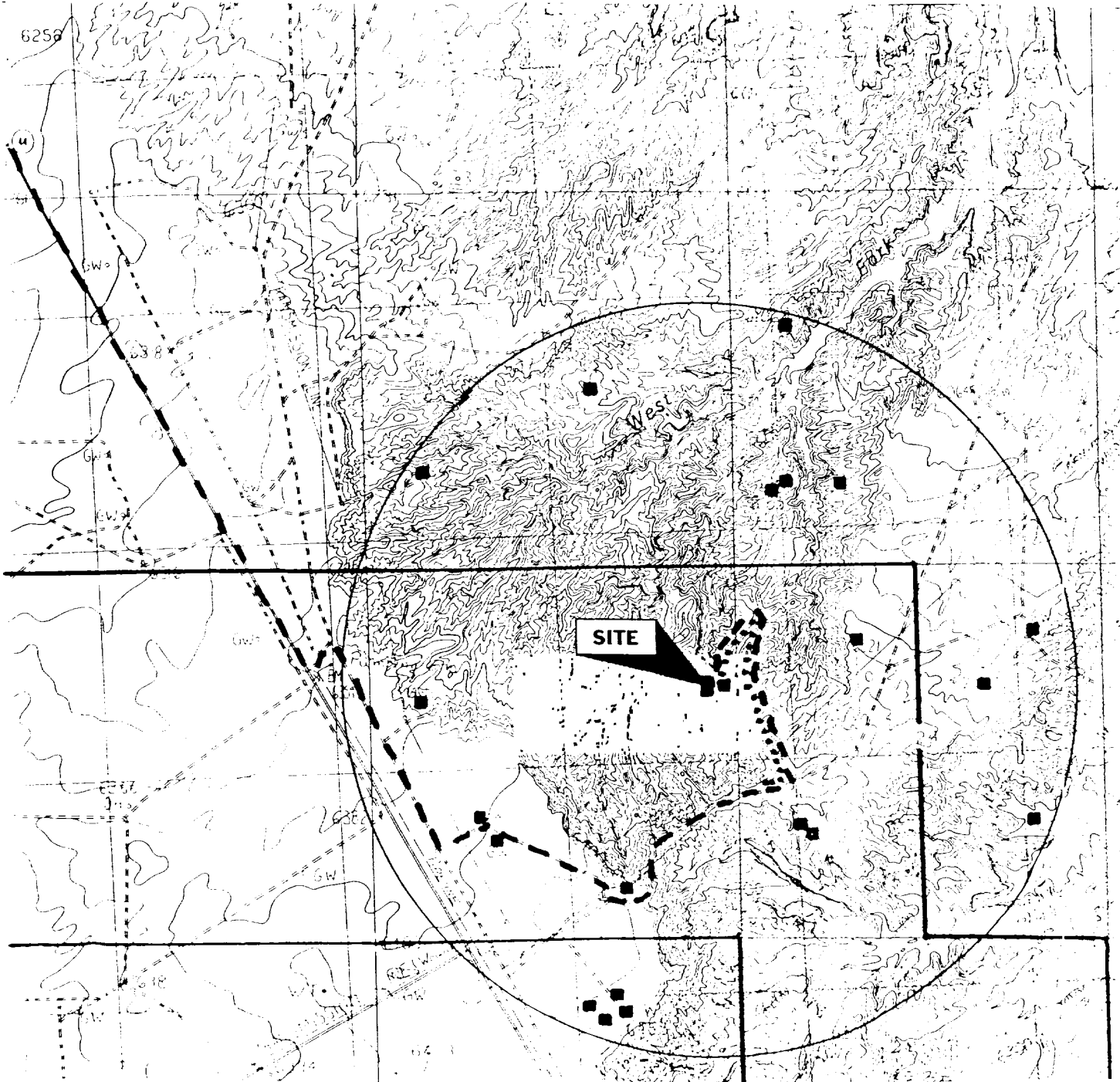
October 28, 2001  
Date

**PERMITS WEST** INC.



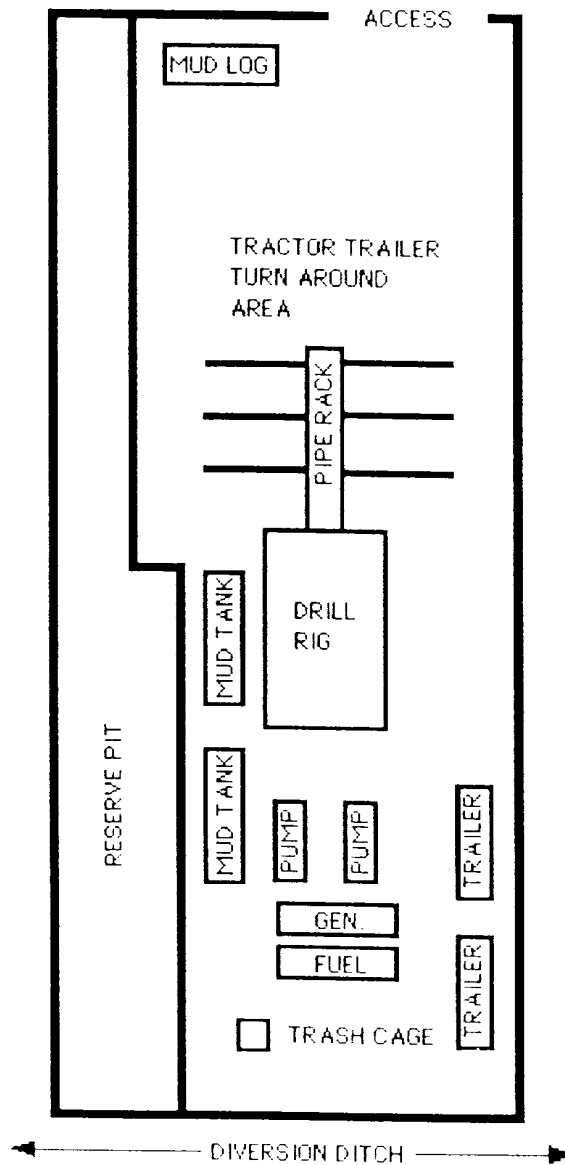


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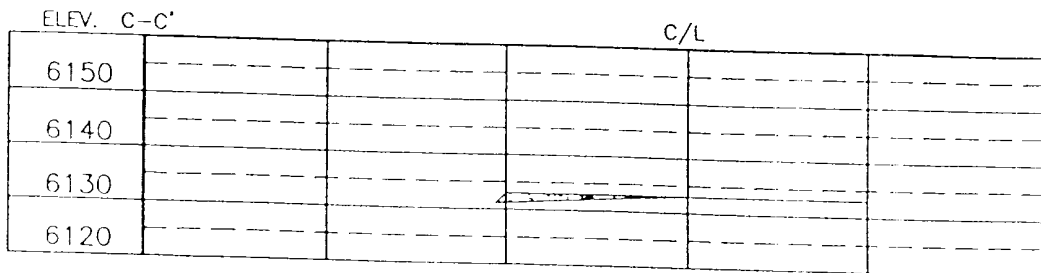
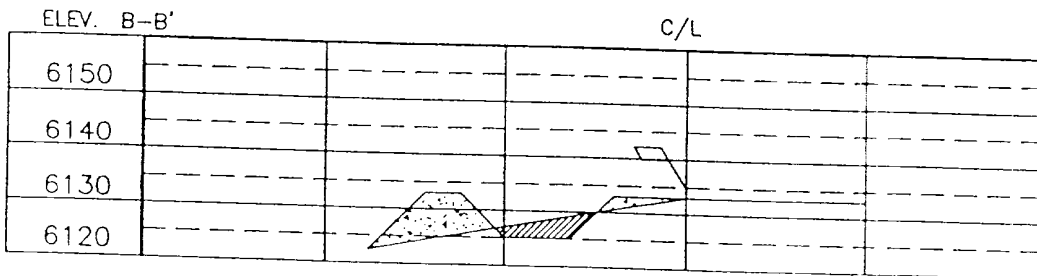
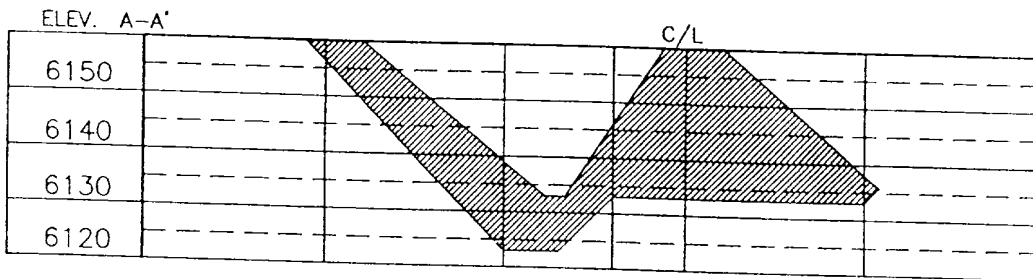
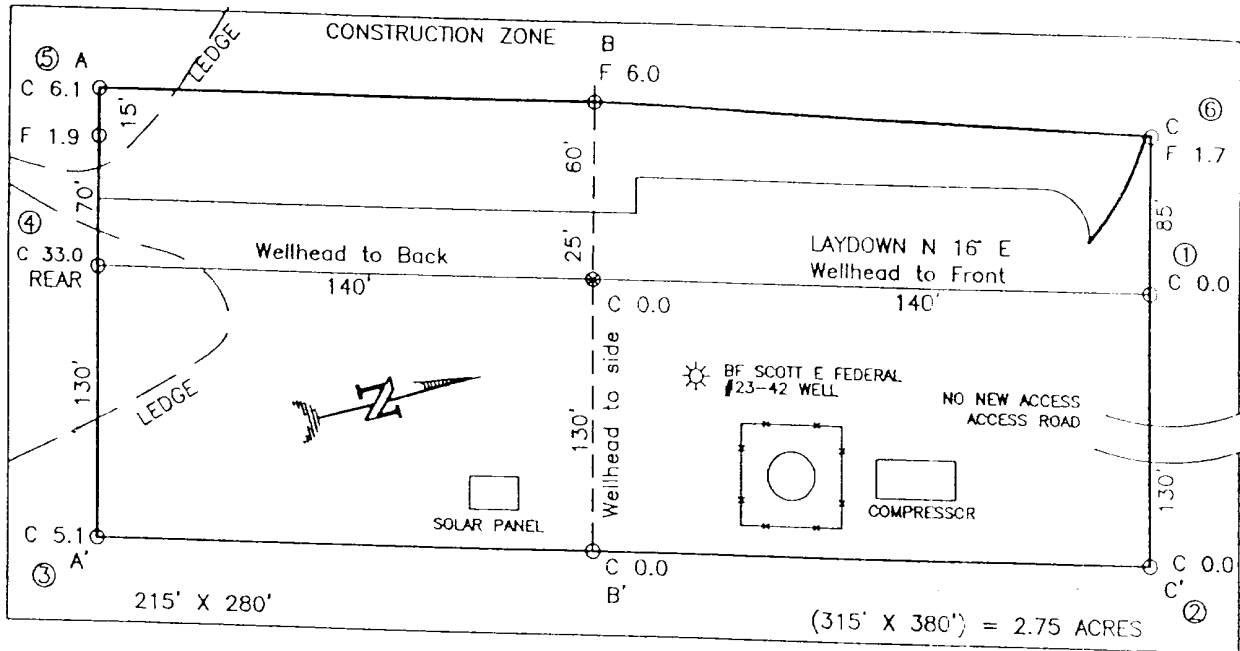


- |                  |                        |
|------------------|------------------------|
| PROPOSED WELL: ■ | PROPOSED GAS LINE: ··· |
| EXISTING WELL: ■ | EXISTING ROAD: - - -   |
| LEASE: ┌         |                        |

MarkWest Resources, Inc.  
Scott Federal 27-11 23-1  
Surface: 1645' FNL & 360' FEL  
Sec. 23, T. 27 N., R. 11 W.  
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MARKWEST RESOURCES, INC.  
 SCOTT FEDERAL 27-11 #23-1, 1645' FNL 360' FEL  
 SECTION 23, T-27-N, R-11-W, N.M.P.M., SAN JUAN COUNTY, N. M.  
 GROUND ELEVATION: 6133', DATE: DECEMBER 14, 2000



NOTE: CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

DRAWN BY: B.S. ROW#: MW003 CADFILE: MW003CFB DATE: 12/19/00

Daggett Enterprises, Inc.  
 Surveying and Oil Field Services  
 P. O. Box 15068 Formington, NM 87401  
 Phone (505) 326-1772 Fax (505) 326-6019

REVISED: NAME CHANGE BY: B.L. DATE: 7/11/01