

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NM-04209 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON RESOURCES</b> Oil & Gas Company	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Feuille 9. Well Number 3M
4. Location of Well 1495' FSL, 1745' FWL Latitude 36° 38.7, Longitude 107° 45.7	10. Field, Pool, Wildcat Blanco MV/Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) K Sec. 23, T-28-N, R-9-W API # 30-045-30416
14. Distance in Miles from Nearest Town 6 miles from Blanco	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1495'	17. Acres Assigned to Well 320 W/2
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 1000'	
19. Proposed Depth 7940'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 7003' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <i>[Signature]</i> Regulatory/Compliance Supervisor	Date 9-8-00

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_  
APPROVED BY /s/ Jim Lovato TITLE \_\_\_\_\_ DATE 2000-6

Archaeological Report to be submitted *TR 1766 dated 12-10-99 - Unkales*  
Threatened and Endangered Species Report to be submitted  
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3  
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 presentations as to any matter within its jurisdiction.

*This well was originally the Hancock Box 4M MV-DK*

NMOC

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-30416		*Pool Code 72319/71599		*Pool Name Blanco Mesaverde/Basin Dakota	
*Property Code 7014		*Property Name Feuille			*Well Number 3M
*OGRID No. 14538		*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			*Elevation 7003'

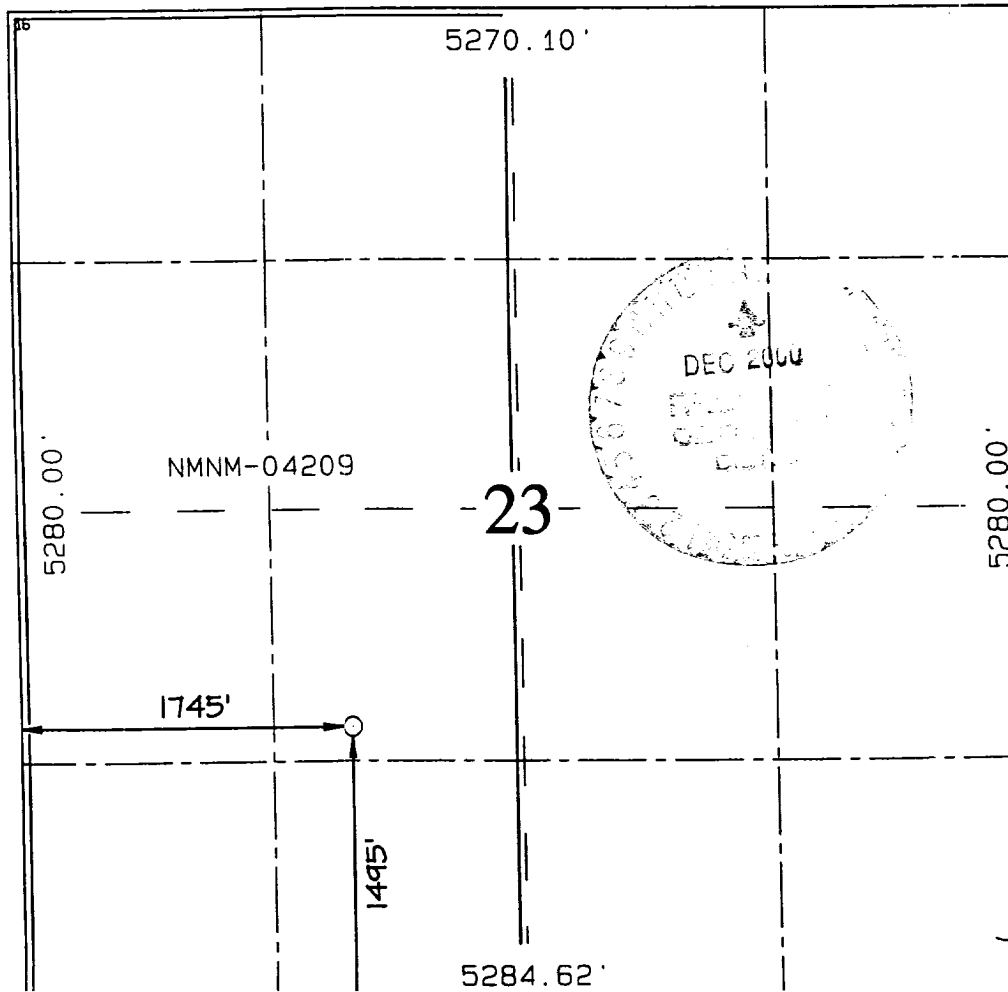
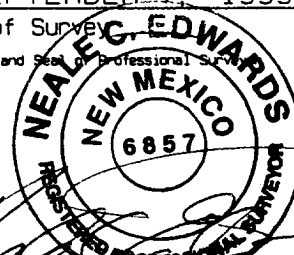
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	23	28N	9W		1495	SOUTH	1745	WEST	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
<sup>12</sup> Dedicated Acres W/320		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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

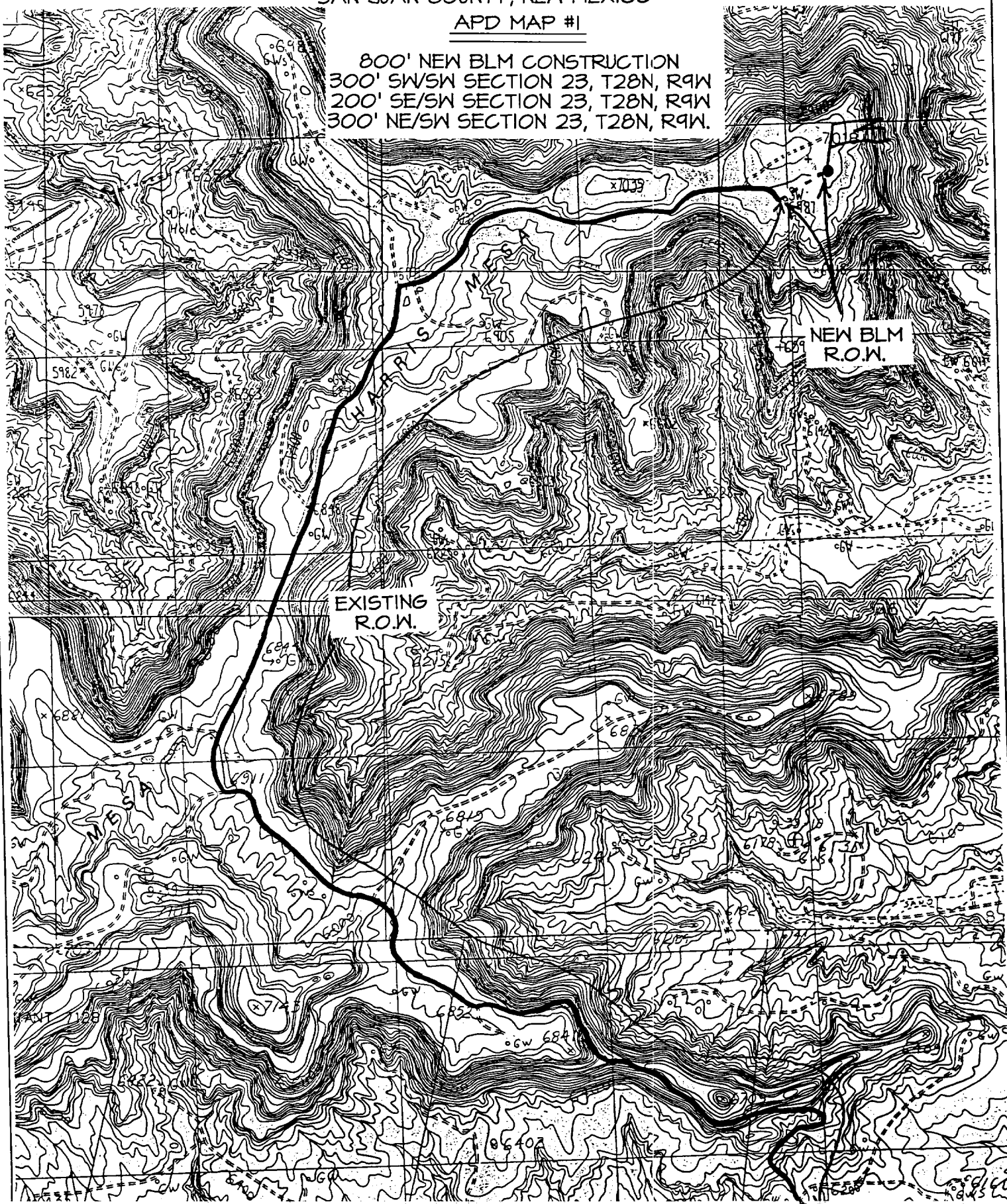
		<p><sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Peggy Cole</i> Signature Peggy Cole Printed Name Regulatory Supervisor Title 9-8-00 Date</p> <p><sup>18</sup> SURVEYOR CERTIFICATION I hereby 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.</p> <p>SEPTEMBER 7, 1999 Date of Survey <i>NEALEG EDWARDS</i> Signature and Seal of Professional Surveyor  Certificate Number 6857</p>
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BURLINGTON RESOURCES OIL & GAS COMPANY Feuille #3M

1495' FSL & 1745' FWL, SECTION 23, T28N, R9W, N.M.P.M.  
SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

800' NEW BLM CONSTRUCTION  
300' SW/SW SECTION 23, T28N, R9W  
200' SE/SW SECTION 23, T28N, R9W  
300' NE/SW SECTION 23, T28N, R9W.



## OPERATIONS PLAN

**Well Name:** Feuille #3M  
**Location:** 1495' FSL, 1745' FWL, Sec 23, T-28-N, R-9-W  
San Juan County, NM  
Latitude 36° 38.7, Longitude 107° 45.7  
**Formation:** Blanco Mesaverde/Basin Dakota  
**Elevation:** 7003' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2251'	
Ojo Alamo	2251'	2384'	aquifer
Kirtland	2384'	3010'	gas
Fruitland	3010'	3272'	gas
Pictured Cliffs	3272'	3376'	gas
Lewis	3376'	3838'	gas
<b>Intermediate TD</b>	<b>3476'</b>		
Mesa Verde	3838'	4230'	gas
Chacra	4230'	4932'	gas
Massive Cliff House	4932'	4968'	gas
Menefee	4968'	5532'	gas
Massive Point Lookout	5532'	5737'	gas
Mancos	5737'	6717'	gas
Gallup	6717'	7477'	gas
Greenhorn	7477'	7537'	gas
Graneros	7537'	7655'	gas
Dakota	7655'		gas
<b>TD</b>	<b>7940'</b>		

### Logging Program:

Cased hole - CBL-CCL-GR - TD to surface  
Open hole - Platform express, Density, GR-Neutron, CMR- TD to intermediate casing  
Cores - none

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-9.0	40-50	no control
200- 3476'	LSND	8.4-9.0	30-60	no control
3476- 7940'	Air/N2	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

### Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
14 3/4"	0' - 200'	11 3/4"	42.0#	H-40
10 5/8"	0' - 3476'	8 5/8"	32.0#	K-55
7 7/8"	3376' - 7940'	5 1/2"	15.5#	K-55

### Tubing Program:

0' - 5737'	1 1/2"	2.90#	J-55
0' - 7940'	1 1/2"	2.76#	J-55

### BOP Specifications, Wellhead and Tests:

#### Surface to Intermediate TD -

11" 3000 psi minimum double gate BOP stack (Reference Figure #1).  
After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

**Intermediate TD to Total Depth -**

11" 3000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

**Surface to Total Depth -**

2" nominal, 3000 psi minimum choke manifold (Reference Figure #2).

**Completion Operations -**

7 1/16" 3000 psi double gate BOP stack (Reference Figure #3). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 3000 psi for 15 minutes.

**Wellhead -**

11 3/4" x 8 5/8" x 1 1/2" x 1 1/2" x 3000 psi tree assembly.

**General -**

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

**Cementing:**

11 3/4" surface casing - cement with 221 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (260 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

**8 5/8" intermediate casing -**

Lead w/459 sx Class "B" w/3% Econolite, 10 pps gilsonite/sx and 0.5 pps flocele/sx. Tail w/95 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite/sx, 0.25 pps flocele/sx (1460 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

8 5/8" intermediate casing alternative two stage: Stage collar at 2910'. First stage: cement with w/179 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite/sx, 0.25 pps Flocele. Second stage: 420 sx Class "B" w/3% Econolite, 10 pps gilsonite/sx and 0.5 pps flocele/sx (1460 cu.ft. of slurry, 100% excess to circulate to surface.)

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 2384'. Two turbolating centralizers at the base of the Ojo Alamo at 2384'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

## 5 1/2" Production Liner -

Cement to cover minimum of 100' of 5 1/2" x 8 5/8" overlap. Lead with 753 sx 50/50 Class "B" Poz with 4% gel, 0.3% fluid loss, 0.3% dispersant, 0.25% retarder, 0.25# floccle/sx, 5# gilsonite/sx, (1091 cu.ft.), 40% excess to cement 5 1/2" x 8 5/8" overlap). WOC a minimum of 18 hrs prior to completing.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Cement float shoe on bottom with float collar spaced on top of shoe joint.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 5 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 5 1/2" x 8 5/8" casing strings. After completion of the well, a 5 1/2" retrievable bridge plug will be set below the top of cement in the 5 1/2" x 8 5/8" overlap. The 5 1/2" casing will then be backed off above the top of cement in the 5 1/2" x 8 5/8" overlap and laid down. The 5 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.

**Special Drilling Operations (Gas/Mist Drilling):**

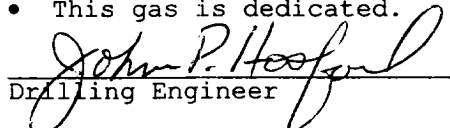
The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

**Additional Information:**

- The Mesaverde and Dakota formations will be completed and dualled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The west half of Section 23 is dedicated to the Mesaverde and Dakota in this well.
- This gas is dedicated.

  
Drilling Engineer

10/20/00  
Date