

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 SF-078399 Unit Reporting Number MV - 8910016500 DK - 891001650A
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON RESOURCES</b> Oil & Gas Company	7. Unit Agreement Name San Juan 29-7 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 29-7 Unit
4. Location of Well 2065' FNL, 2240' FWL Latitude 36° 42.8, Longitude 107° 33.6 Bottom Hole Location: 2000' FNL, 400' FWL - U-E	9. Well Number 66M
10. Field, Pool, Wildcat Blanco MV/Basin DK	11. Sec., Twn, Rge, Mer. (NMPM) F Sec. 22, T-29-N, R-7-W
12. County Rio Arriba	13. State NM
14. Distance in Miles from Nearest Town 17.6 miles from Blanco	15. Distance from Proposed Location to Nearest Property or Lease Line 2065'
16. Acres in Lease	17. Acres Assigned to Well 320 W/2
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 75'	19. Proposed Depth TVD: 8056' MD: 8513'
20. Rotary or Cable Tools Rotary	21. Elevations (DF, FT, GR, Etc.) 6794' GR
22. Approx. Date Work will Start	23. Proposed Casing and Cementing Program See Operations Plan attached. is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.
24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Supervisor	25. Date 8-21-01

PERMIT NO.

APPROVAL DATE

11/14/01

APPROVED BY

TITLE

AFM

DATE

11/14/01

Archaeological Report to be submitted

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.

HOLD C104 FOR Directional Survey & NSL San Basin Dakota

DISTRICT I  
1825 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

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 30-039- <b>26806</b>		*Pool Code 72319/71599	*Pool Name Blanco MV/Basin DK
*Property Code 7465	*Property Name SAN JUAN 29-7 UNIT		*Well Number 66M
*OGED No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS, INC.		*Elevation 6794'

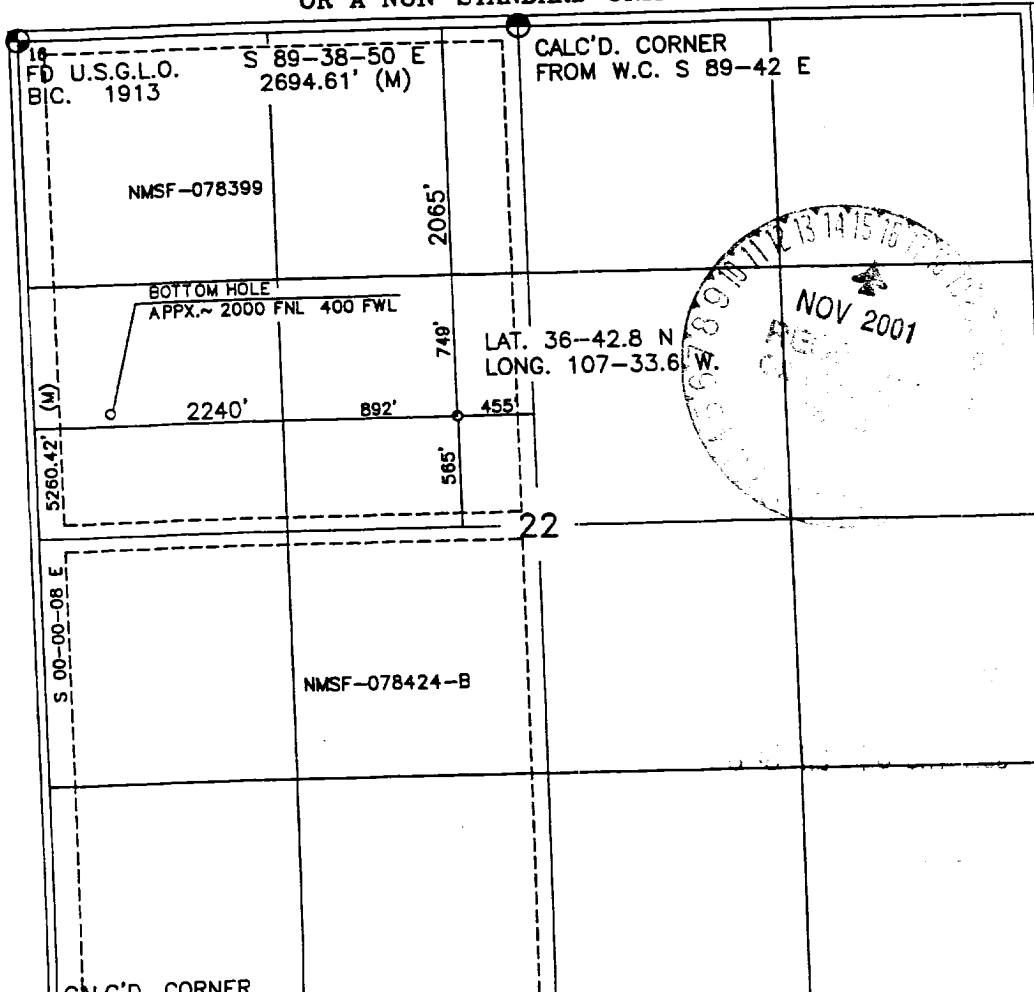
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	22	29-N	7-W		2065	NORTH	2240	WEST	RIO ARRIBA

<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
E	22	29-N	7-W		2000	NORTH	400	WEST	RIO ARRIBA
*Dedicated Acres MV W/320 DK W/320			*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.

*Peggy Cole*  
Signature

Peggy Cole  
Printed Name

Regulatory Supervisor  
Title

8-21-01  
Date

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 knowledge and belief.

4-26-01  
Date of Survey

Signature and Seal of Professional Surveyor

*John A. B. Smith*  
8894  
Certificate Number

BURLINGTON RESOURCES OIL & GAS, INC.

SAN JUAN 29-7 UNIT No. 66M

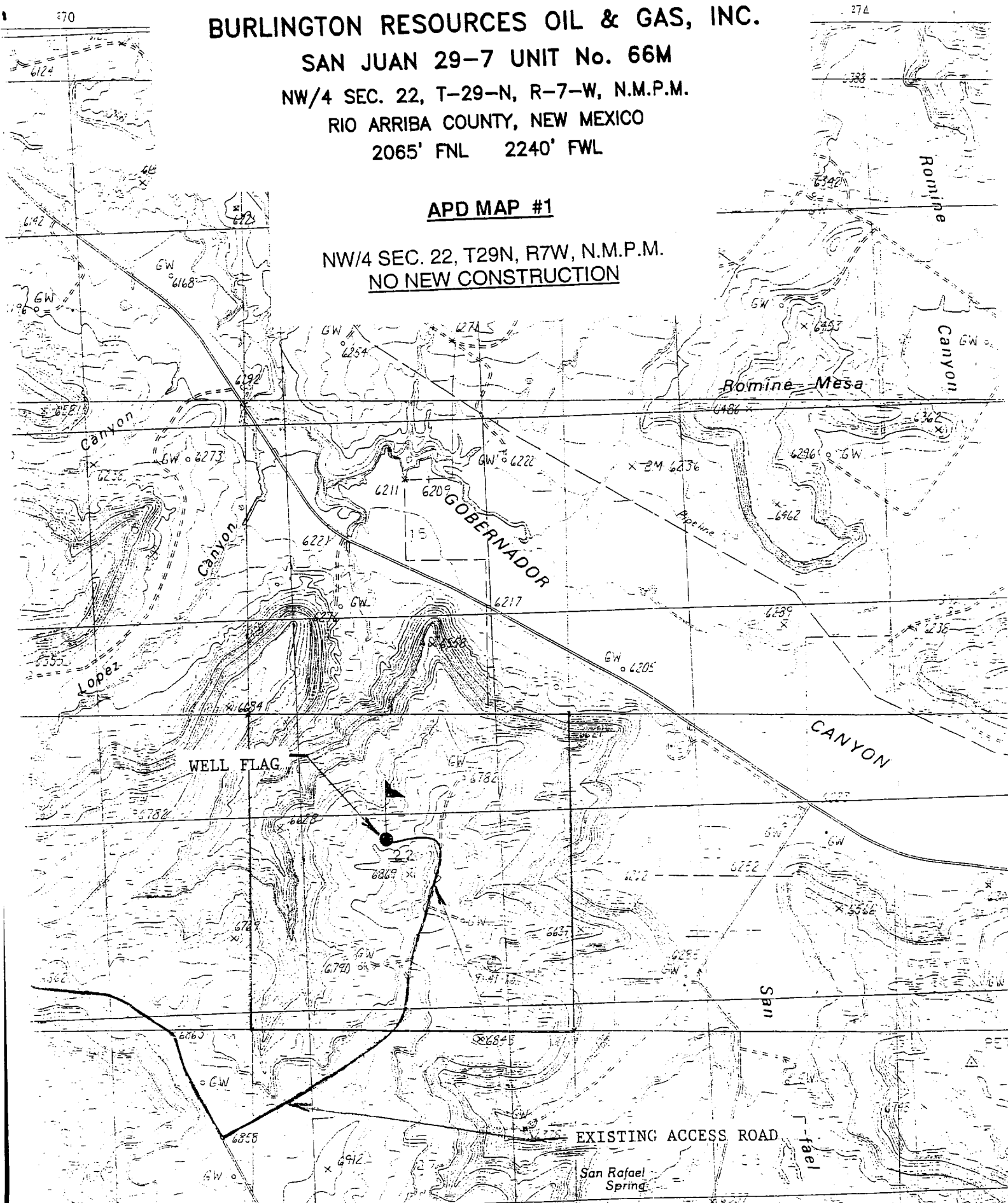
NW/4 SEC. 22, T-29-N, R-7-W, N.M.P.M.

RIO ARRIBA COUNTY, NEW MEXICO

2065' FNL 2240' FWL

APD MAP #1

NW/4 SEC. 22, T29N, R7W, N.M.P.M.  
NO NEW CONSTRUCTION



## OPERATIONS PLAN

**Well Name:** San Juan 29-7 Unit #66M  
**Location:** 2065'FNL, 2240'FWL, Section 22, T-29-N, R-7-W  
Rio Arriba County, New Mexico  
Latitude 36° 42.8, Longitude 107° 33.6  
**Bottom hole Location:** 2000'FNL, 400'FWL, Section 22, T-29-N, R-7-W  
**Formation:** Blanco Mesaverde/Basin Dakota  
**Elevation:** 6794'GL

<u>Formation Tops:</u>	<u>Measured Depth</u>	<u>Top True Vertical Depth</u>	<u>Bottom True Vertical Depth</u>	<u>Contents</u>
Surface	San Jose	San Jose	2656'	
Ojo Alamo	2970'	2656'	2796'	aquifer
Kirtland	3140'	2796'	3173'	gas
Fruitland	3590'	3173'	3591'	gas
Pictured Cliffs	4042'	3591'	3756'	gas
Lewis	4211'	3756'	4221'	gas
Intermediate casing	4311'			
Huerfano Bentonite	4678'	4221'	4576'	gas
Chacra	5033'	4576'	5326'	gas
Cliff House	5783'	5326'	5426'	gas
Menefee	5883'	5426'	5746'	gas
Point Lookout	6203'	5746'	6156'	gas
Mancos	6613'	6156'	7021'	gas
Gallup	7478'	7021'	7722'	gas
Greenhorn	8179'	7722'	7786'	gas
Graneros	8243'	7786'	7832'	gas
Dakota	8289'			gas
<b>Total Depth</b>	<b>8513' MD</b>	<b>8056' TVD</b>		

### Logging Program:

Cased hole - CBL-GR - TD to surface

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>V.s.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-8.9	40-50	no control
0- 4311' MD	Non-dispersed	8.4-9.0	30-60	less than 8
4311- 8513' MD	air/mist	n/a	n/a	n/a

### Drilling:

Surface:

Drill to surface casing point of 200' and set 9 5/8" casing.

Intermediate:

Mud drill to the kick off point of 400'. At this point, the well will be directionally drilled by building 3.0 degrees per 100' with an azimuth of 272.05 degrees. The end of the build will be at a TVD of 1475.3', a MD of 1542.17', VS of 331.47', and an angle of 34.27 degrees. This angle will be held at an azimuth of 312.4 degrees until 3012.35' TVD, and 3402.02' MD. The angle will then be dropped at 3.0 degrees per 100' to 4210.86' MD, 3756' TVD and 10 degrees. The angle will then be dropped at 2 degrees per 100' at an azimuth of 271.68 until intermediate casing point of 3856' TVD, 4311' MD, and 8 degrees inclination.

## Production Hole:

The production hole will be drilled with an air hammer. It will drill out at intermediate casing point and fall at approximately 2 to 3 degrees per 100 feet and be vertical at a TD of 8056' TVD and 8513' TMD.

**Materials:**

## Casing Program:

<u>Hole Size</u> <u>(inches)</u>	<u>Measured</u> <u>Depth (ft)</u>	<u>TVD (ft)</u>	<u>Casing</u> <u>Size (in)</u>	<u>Weight</u> <u>(lbs/ft)</u>	<u>Grade</u>
12 1/4"	200'	200'	9 5/8"	32.3	H-40
8 3/4"	4311'	3856'	7"	20.0	J-55
6 1/4"	8513'	8056'	4 1/2"	10.5	J-55

## Casing Equipment:

9 5/8" surface casing - sawtooth guide shoe.

7" intermediate casing - cement nose guide shoe on bottom, float collar one joint off bottom. Centralizers spaced as follows: (25) spaced every fourth joint from bottom to surface. Two turbolizing type centralizers, one below and one into the Ojo Alamo at 3140' TMD.

4 1/2" production casing - float shoe on bottom, float collar, 8513' of 4 1/2" 10.5# J-55 ST&C csg.

## Tubing:

8513' of 2 3/8", 4.7#, J-55 8rd EUE tubing with seating nipple one joint off bottom and an expendable check valve on bottom.

## Wellhead Equipment:

9 5/8" x 7" x 2 3/8" - 11" (2000 psi) wellhead assembly.

**Cementing**

9 5/8" surface casing - cement with 159 sx Class "B" cement with 0.25 pps cellophane and 3% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

## 7" intermediate casing -

Lead w/458 sx Class "G" 50/50 poz TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Celloflake. Tail w/90 sx Class "G" 50/50 poz 2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.25 pps Celloflake, 0.1% antifoam (1296 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.

See attached alternative intermediate lead slurry.

7" intermediate casing alternative two stage: Stage collar 3490'. First stage: cement with w/193 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 0.25 pps Celloflake, 5 pps Gilsonite, 0.1% antifoam. Second stage: cement with 407 sx Class "G" 50/50 poz TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Cellflake (1295 cu.ft., 100% excess to circulate to surface).

4 1/2" production casing - cement with 429 sx Class "G" 50/50 poz w/5% gel, 0.25% fluid loss, 0.15% dispersant, 5 pps gilsonite, 0.25% Celloflake, 0.15% dispersant, 0.1% retarder, 0.1% antifoam (618 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

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

#### BOP and Tests

Surface to intermediate TD - 11", 3000 psi double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams and casing to 700 psi for 30 minutes.

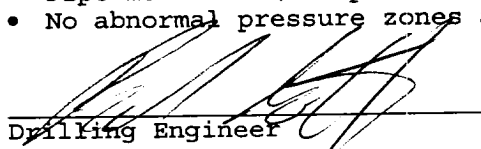
Intermediate TD to Total Depth - 10" nominal, 3000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out intermediate casing, test rams and casing to 1500 psi (minimum) for 30 minutes.

Surface to Total Depth - choke manifold (Reference Figure #2).

Pipe rams will be actuated at least once each day and blind rams will be actuated once each trip to test proper functioning. A kelly cock valve and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

#### Additional Information

- This gas is dedicated.
- The west half of Section 22 is dedicated to the Mesaverde and Dakota of this well.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.

  
Drilling Engineer

2/13/01  
Date