UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
MAR - 3 1997
OIL CON. DIV.
DIST. 3

1a. Type of Work
DRILL

1b. Type of Well
GAS

5. Lease Number
SF-078423 bottomhole
Unit Reporting Number
8910005380

6. If Indian, All. or Tribe

2. Operator
BURLINGTON RESOURCES Oil & Gas Company
14538

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
7465 San Juan 29-7 Unit
9. Well Number
64B

4. Location of Well
1510'FSL, 1640'FEL - surface
820'FSL, 150'FEL - bottomhole
Latitude 36° 44.3, Longitude 107° 32.2

10. Field, Pool, Wildcat
72319 Blanco Mesa Verde
11. Sec., Twn, Rge, Mer. (NMPM)
J Sec 11, T-29-N, R-7-W
API # 30-039-25649

14. Distance in Miles from Nearest Town
3 miles to Navajo City

12. County
Rio Arriba
13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1510'surface; 150' bottomhole

16. Acres in Lease

17. Acres Assigned to Well
320 E/2

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease
100'

19. Proposed Depth
5821'TVD

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6391'GR

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

24. Authorized by: Peggy Bradfield
Regulatory/Compliance Administrator

2-24-97
Date

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /S/ Duane W. Spencer TITLE _____ DATE FEB 28 1997

Archaeological Report submitted by Arboles Contract Archaeology Technical Report #926
Threatened and Endangered Species Report submitted by Ecosphere
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3
NOTE: Order R-10720 dated January 9, 1997 covers well density and well location requirements

R-10720 E

NMOCD

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

| ¹ API Number | ² Pool Code | ³ Pool Name |
|---|---|---|
| 30-039-25649 | 72319 | Blanco Mesaverde |

| ⁴ Property Code | ⁵ Property Name | ⁶ Well Number |
|---|---|---|
| 7465 | San Juan 29-7 Unit | 64B |

| ⁷ OGRID No. | ⁸ Operator Name | ⁹ Elevation |
|---|---|---|
| 14538 | BURLINGTON RESOURCES OIL AND GAS COMPANY | 6391' |

## ¹⁰ Surface Location

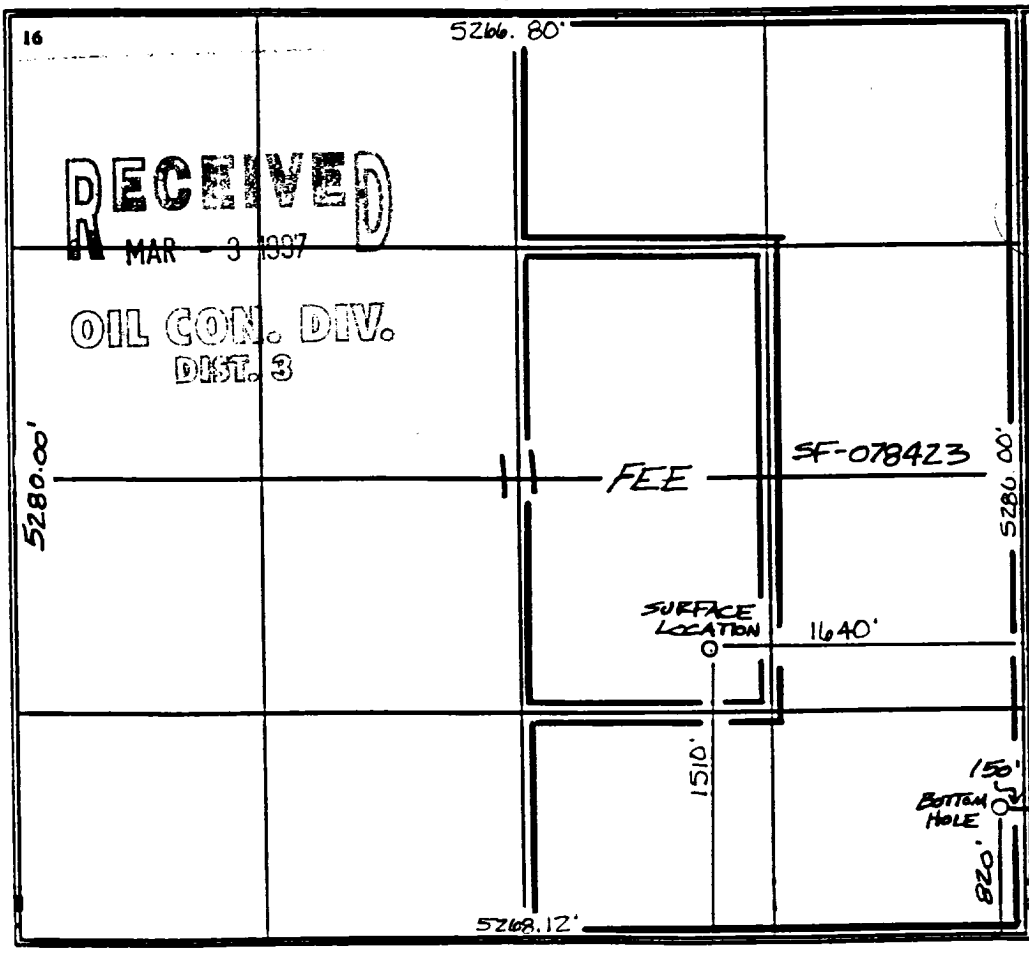
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| J | 11 | 29 N | 7 W | | 1510 | South | 1640 | East | R.A. |

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| P | 11 | 29 N | 7 W | | 820 | South | 150 | East | R.A. |

| ¹² Dedicated Acres | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|---|---|---|---|
| E/320 | | | |

**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 Bradfield
Signature

Peggy Bradfield
Printed Name

Regulatory Administrator
Title

2-24-97
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 belief.*

8-20-96
Date of Survey

Signature and Seal of Professional Surveyor:

NEW MEXICO
6857
REGISTERED LAND SURVEYOR

6857
Certificate Number

# OPERATIONS PLAN

***Well Name:*** San Juan 29-7 Unit #64B
***Surface Location:*** 1510'FSL, 1640'FEL Section 11, T-29-N, R-7-W
***Bottomhole Location:*** 820'FSL, 150'FEL Section 11, T-29-N, R-7-W
Rio Arriba County, New Mexico
Latitude 36° 44.3, Longitude 107° 32.2
***Formation:*** Blanco Mesa Verde
***Elevation:*** 6391'GL

| ***Formation Tops:*** | ***Top - TVD*** | ***Bottom*** | ***Contents*** |
|---|---|---|---|
| Surface | San Jose | 2331' | aquifer |
| Ojo Alamo | 2331' | 2861' | aquifer |
| Fruitland | 2861' | 3251' | gas |
| Pictured Cliffs | 3251' | 3441' | gas |
| Lewis | 3441' | 4001' | gas |
| **Intermediate TD** | **3541'** | | |
| Mesa Verde | 4001' | 4991' | gas |
| Massive Cliff House | 4991' | 5091' | gas |
| Menefee | 5091' | 5421' | gas |
| Point Lookout | 5421' | | gas |
| **Total Depth** | **5821'TVD** | | |

***Logging Program:***
Cased hole logging - Gamma Ray Neutron from 2800' to TD
Mud Logs/Coring/DST - none

***Mud Program:***

| Interval- MD | Type | Weight | Vis. | Fluid Loss |
|---|---|---|---|---|
| 0- 500' | Spud | 8.4-9.0 | 40-50 | no control |
| 500-3848' | LSND | 8.4-9.0 | 30-60 | no control |
| 3848-6211' | Gas/Mist | 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):***

| Hole Size | Measured Depth | TVD | Csg Size | Weight | Grade |
|---|---|---|---|---|---|
| 12 1/4" | 0' - 500' | 0- 500' | 9 5/8" | 32.3# | H-40 |
| 8 3/4" | 0' - 3848' | 0-3541' | 7" | 20.0# | J-55 |
| 6 1/4" | 3748' - 6211' | 3441-5821' | 4 1/2" | 10.5# | J-55 |

***Tubing Program:*** 0' - 5821' 2 3/8" 4.7# J-55

***BOP Specifications, Wellhead and Tests:***
**Surface to Intermediate TD -**
11" 2000 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.

***BOP Specifications, Wellhead and Tests (cont'd):***

**Intermediate TD to Total Depth -**

11" 2000 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, 2000 psi minimum choke manifold (Reference Figure #3).

**Completion Operations -**

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

**Wellhead -**

9 5/8" x 7" x 2 3/8" x 2000 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 drill crew.
- All BOP tests & drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

***Cementing:***

9 5/8" surface casing - cement with 409 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (470 cu.ft. of slurry, 200% excess to circulate to surface). WOC 12 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.

7" intermediate casing -

Lead w/441 sx Class "B" w/3% sodium metasilicate, 5# gilsonite/sx and 0.375# flocele/sx. Tail w/100 sx 50/50 Class "B" Poz w/2% calcium chloride, 5# gilsonite/sx and 0.25# flocele/sx (1158 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 12 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

Cement float shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom in the hold section, 2070'MD to 3848'MD. Bowspring centralizers on every joint in the build section, 1000' MD to 2070'MD. Bowspring centralizers spaced everyh 4th joint from 1000' MD to surface. Two cement baskets placed at the base of the Ojo Alamo at 2861' TVD.

4 1/2" Production Liner -
Cement to circulate liner top. Lead with 150 sx 65/35 Class "B" poz w/6% gel, 3# gilsonite/sx and 1/4# flocele/sx. Tail with 125 sx 50/50 Class "B" Poz w/1/4# flocele/sx, 5# gilsonite/sx and 0.3% fluid loss additive (444 cu.ft., 75% excess to circulate liner top). WOC a minimum of 18 hrs prior to completing.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff. Bowspring centralizers run every other joint off bottom to 7" casing shoe at 3848' MD.

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

***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.
- 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:***

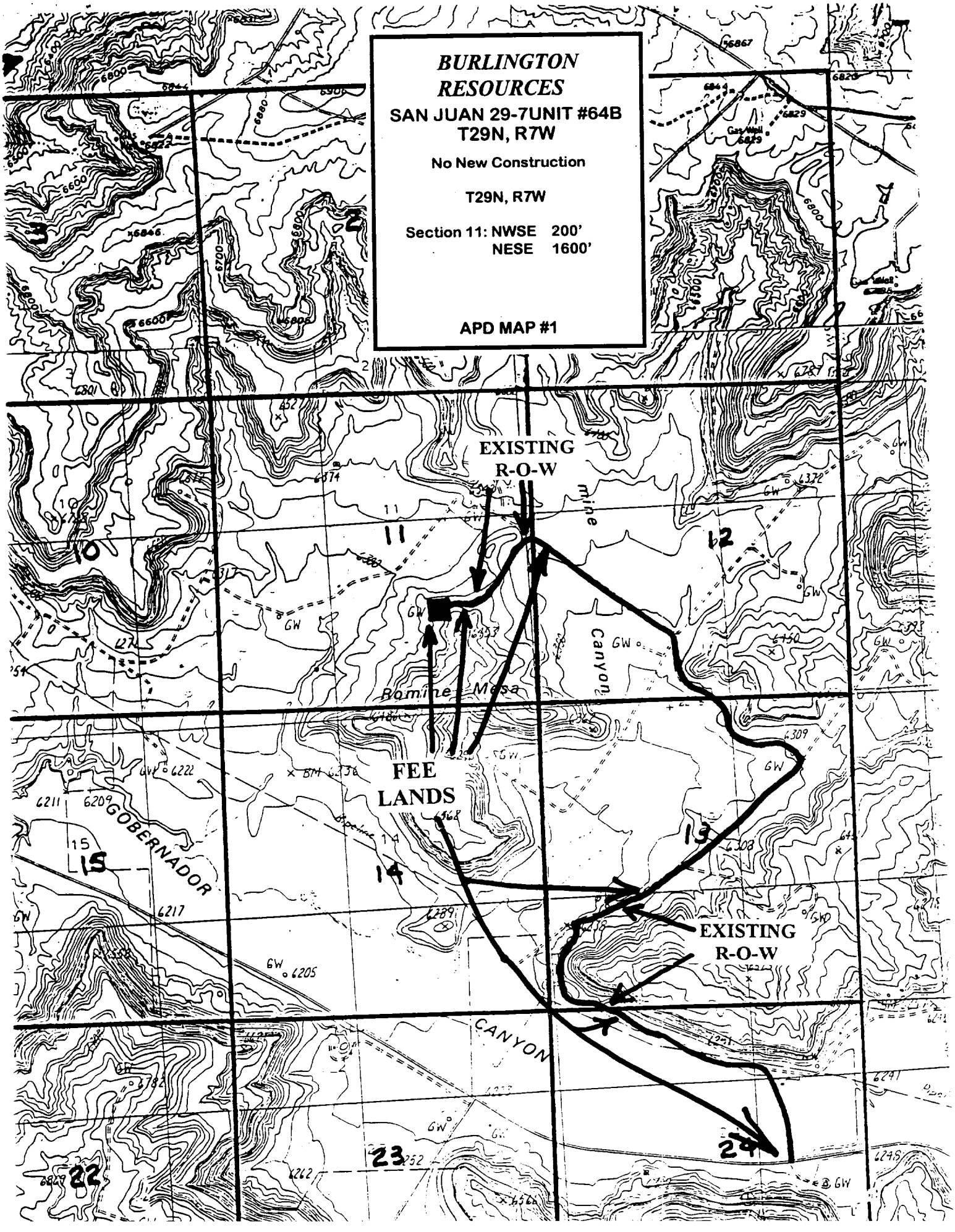
- The Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

| | |
|---|---|
| Fruitland Coal | 800 psi |
| Pictured Cliffs | 800 psi |
| Mesa Verde | 700 psi |

- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The east half is dedicated to the Mesa Verde.
- This gas is dedicated.

Drilling Engineer

2/24/97
Date


BURLINGTON
RESOURCES
SAN JUAN 29-7UNIT #64B
T29N, R7W
No New Construction
T29N, R7W
Section 11: NWSE 200'
NESE 1600'
APD MAP #1
EXISTING
R-O-W
FEE
LANDS
EXISTING
R-O-W
Romine Mesa
Canyon
GOBERNADOR
CANYON
mine