

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-079391 Unit Reporting Number 891000950 |
| 1b. Type of Well GAS - | 6. If Indian, All. or Tribe |
| 2. Operator BURLINGTON RESOURCES Oil & Gas Company | 7. Unit Agreement Name San Juan 27-5 Unit |
| 3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700 | 8. Farm or Lease Name San Juan 27-5 Unit |
| 4. Location of Well 560' FNL, 305' FEL Latitude 36° 34.8, Longitude 107° 23.5 | 9. Well Number 137F |
| 10. Field, Pool, Wildcat Basin Dakota | 11. Sec., Twn, Rge, Mer. (NMPM) ★ Sec. 18, T-27-N, R-5-W API # 30-039-26627 |
| 14. Distance in Miles from Nearest Town 10 miles from Gobernador | 12. County Rio Arriba |
| 13. State NM | |
| 15. Distance from Proposed Location to Nearest Property or Lease Line 305' | |
| 16. Acres in Lease | 17. Acres Assigned to Well 320 E/2 |
| 18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 900' | |
| 19. Proposed Depth 7748' - | 20. Rotary or Cable Tools Rotary |
| 21. Elevations (DF, FT, GR, Etc.) 6535' GR - | 22. Approx. Date Work will Start 10-23-00 |
| 23. Proposed Casing and Cementing Program See Operations Plan attached | DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS" |
| 24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Supervisor | Date |

PERMIT NO. _____ APPROVAL DATE 6/1/01
APPROVED BY F. J. E. Powell TITLE Acting FM DATE 6/1/01

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.

NMCCB

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 30-039-26627 | | *Pool Code 71599 | *Pool Name Basin Dakota |
| *Property Code 7454 | *Property Name SAN JUAN 27-5 UNIT | | *Well Number 137F |
| *GRID No. 14538 | *Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY | | *Elevation 6535' |

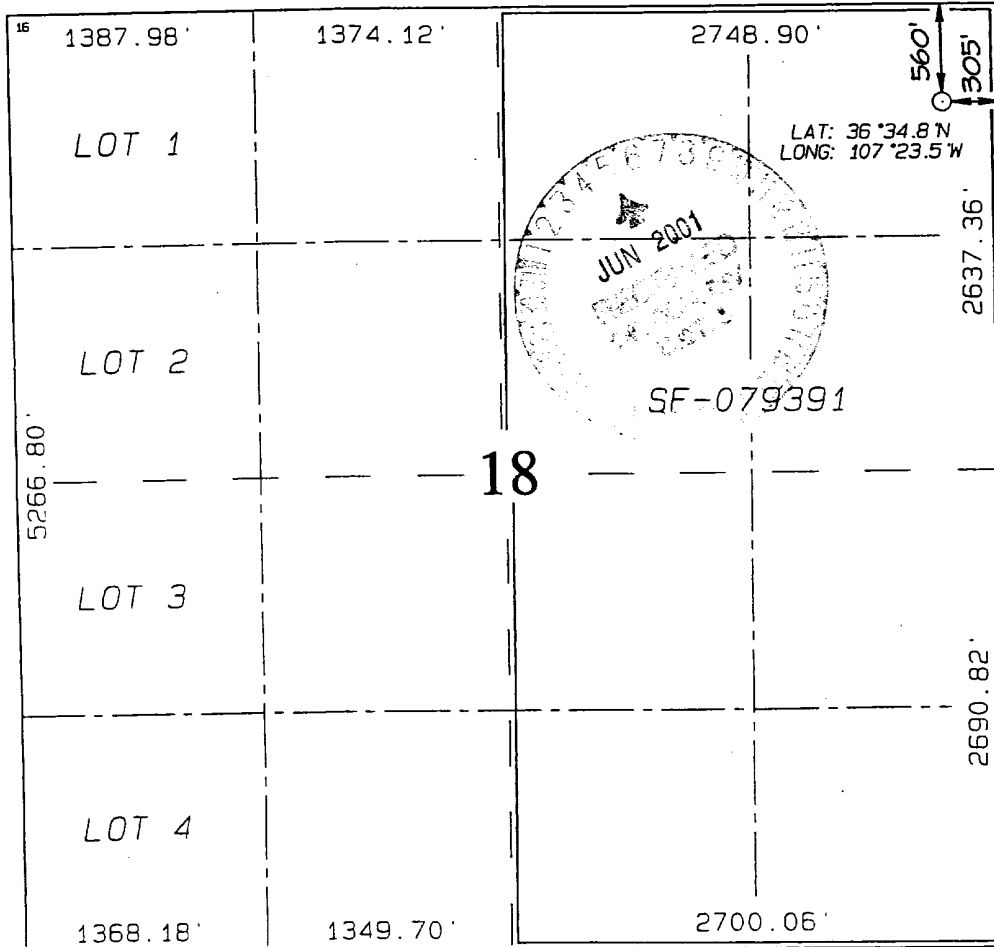
10-Surface Location

| U. or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| A | 18 | 27N | 5W | | 560 | NORTH | 305 | EAST | RIO ARriba |

11-Bottom Hole Location If Different From Surface

| U. or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|--------------------------------|---------|--------------------|-------|-----------------------|---------------|-------------------------|---------------|----------------|--------|
| 12 Dedicated Acres DK-E/320 | | 13 Joint or Infill | | 14 Consolidation Code | | 15 Order No. R-11503 | | | |

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

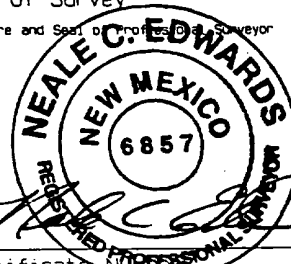
10-23-00
Date

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.

SEPTEMBER 20, 2000

Date of Survey
Signature and Seal of Professional Surveyor



Certificate Number 6857

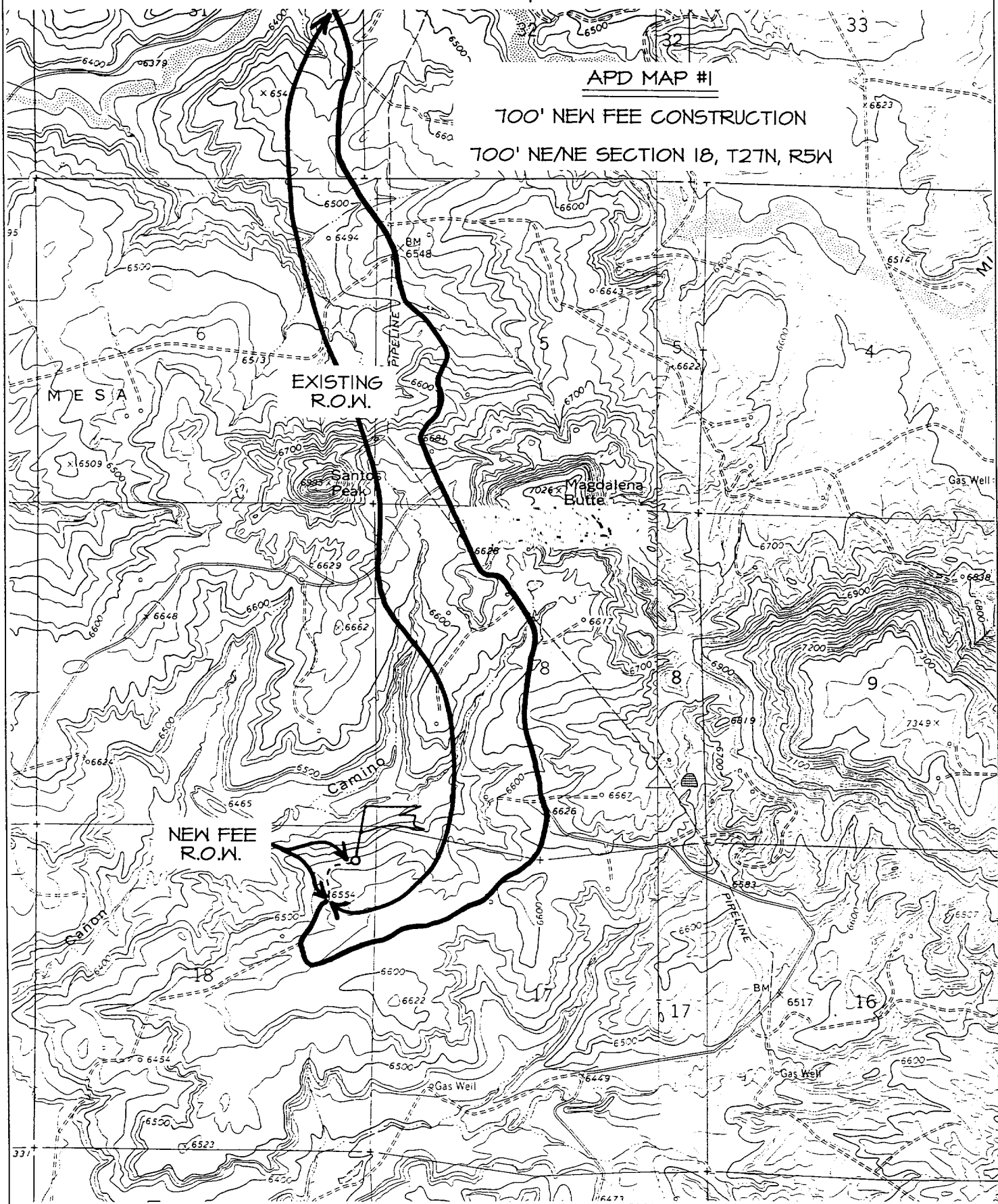
BURLINGTON RESOURCES OIL & GAS COMPANY SAN JUAN 27-5 UNIT #137F

560' FNL & 305' FEL, SECTION 18, T27N, R5W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO

APD MAP #1

700' NEW FEE CONSTRUCTION

700' NE/NE SECTION 18, T27N, R5W



FIELD SERVICES

BLANCO

GATHERING SYSTEM

DWG. NO. BLC64-17-1

LINE BURLINGTON RESOURCES O & G CO. - SAN JUAN 27-5 UNIT NO. 137F

WD NO. 34384

FROM 0+00 = 0+08.46 ON BURLINGTON RES. O & G CO. - SAN JUAN 27-5 UT. #63 (MV)

RW NO. 0070280

DATE 12/15/00

(BLC64-5-1, R/W No.)(MC #73211)

SCALE 1" = 1000'

SURVEYED 12/05/00

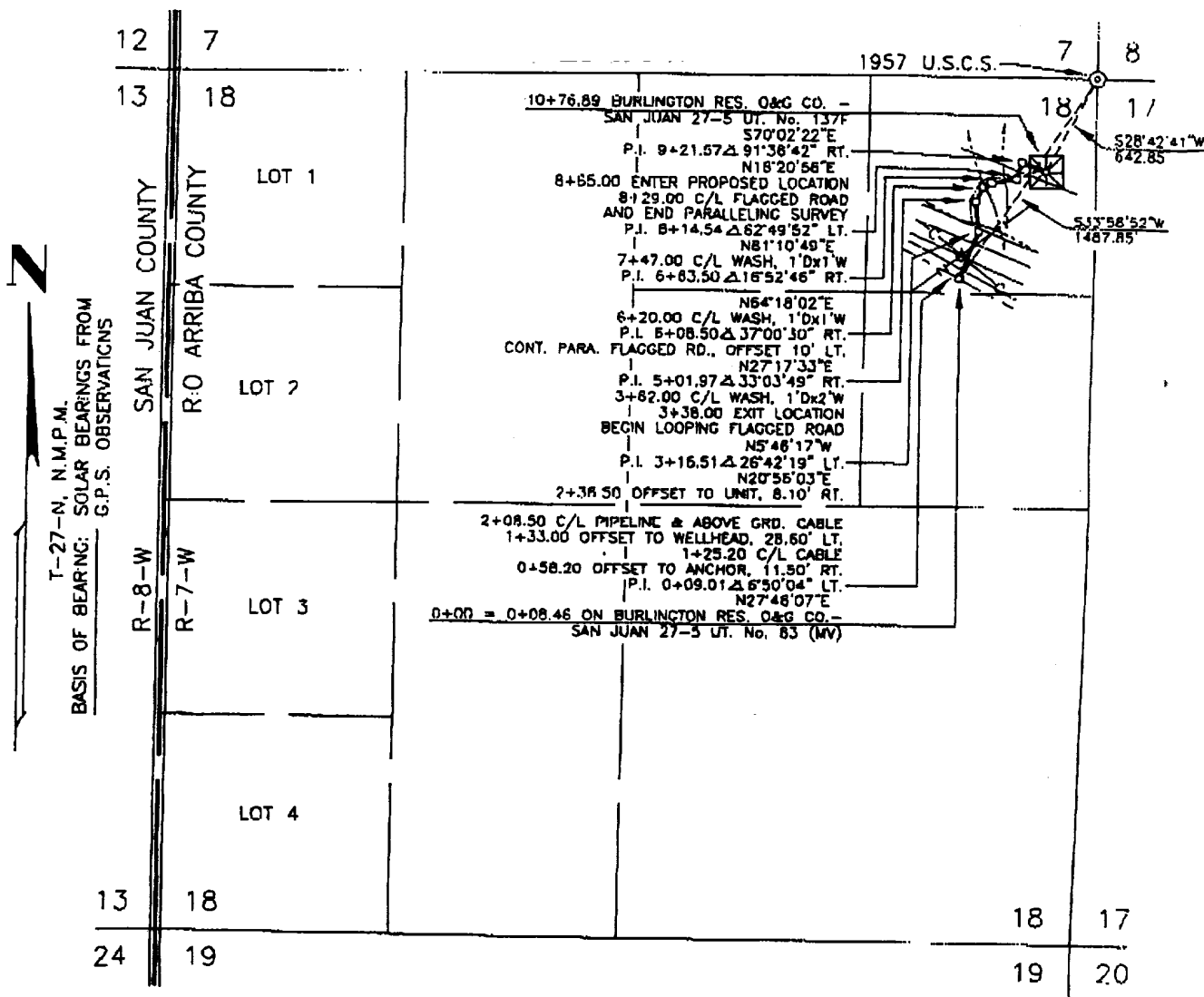
COUNTY RIO ARriba

STATE NEW MEXICO

SECTION 18

TOWNSHIP 27-N

RANGE 5-W, N.M.P.M.



DWN. BY MD

CONSTR. COMMENCED

APPL. DWG.

SLACK CHAIN

CKD. BY

CONSTR. COMPLETED

DATE

PIPE SIZE 4.50" O.D.

PRINT RECORD

PIPE DATA

MEIER STA. NO.

DK

6 SJ DIST. 12/18/00

2 EP DIST.

NOTE: WELL FLAG
SURVEY LOOPING FLAGGED ROAD

SUBDIVISION

OWNER

LESSEE

METER(S)

RODS

ACRE(S)

N/2NE/4, SEC. 18

NICK CANDELARIA

65.266

1.483

OWNERSHIP

REV.

OPERATIONS PLAN

Well Name: San Juan 27-5 Unit #137F
Location: 560' FNL, 305' FEL, Sec 18, T-27-N, R-5-W
Rio Arriba County, NM
Latitude 36° 34.8, Longitude 107° 23.5
Formation: Basin Dakota
Elevation: 6535' GL

| <u>Formation Tops:</u> | <u>Top</u> | <u>Bottom</u> | <u>Contents</u> |
|------------------------|--------------|---------------|-----------------|
| Surface | San Jose | 2602' | |
| Ojo Alamo | 2602' | 2824' | aquifer |
| Kirtland | 2824' | 2889' | gas |
| Fruitland | 2889' | 3318' | gas |
| Pictured Cliffs | 3318' | 3398' | gas |
| Lewis | 3398' | 3811' | gas |
| Intermediate TD | 3498' | | |
| Mesa Verde | 3811' | 4269' | gas |
| Chacra | 4269' | 4975' | gas |
| Massive Cliff House | 4975' | 5135' | gas |
| Menefee | 5135' | 5472' | gas |
| Massive Point Lookout | 5472' | 5968' | gas |
| Mancos | 5968' | 6965' | gas |
| Gallup | 6965' | 7414' | gas |
| Greenhorn | 7414' | 7498' | gas |
| Dakota | 7498' | | gas |
| TD | 7748' | | |

Logging Program:

Cased hole - CBL-CCL-GR - TD to surface
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- 3498' | LSND | 8.4-9.0 | 30-60 | no control |
| 3498- 7748' | Air/Mist/N2* | n/a | n/a | n/a |

*Nitrogen might be used in conjunction with or instead of air to prevent a down hole fire.

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> |
|------------------|-----------------------|------------------|------------|--------------|
| 12 1/4" | 0' - 200' | 9 5/8" | 32.3# | WC-50 |
| 8 3/4" | 0' - 3498' | 7" | 20.0# | J-55 |
| 6 1/4" | 3398' - 7748' | 4 1/2" | 10.5# | K-55 |

Tubing Program:

0' - 7748' 2 3/8" 4.7# 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 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" 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:

9 5/8" surface casing - cement with 159 sx Class "B" cement with 1/4# flocele/sx 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.

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

7" intermediate casing -

Lead w/318 sx Class "G" cement 3% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite and 0.5 pps flocele. Tail w/90 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.25 pps Flocele (1053 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.

7" intermediate casing alternative two stage: Stage collar at 2789'. First stage: cement with w/167 sx 50/50 Class "G" poz w/2% calcium chloride, 2% gel, 5 pps gilsonite, 0.25 pps Flocele. Second stage: 284 sx Class "G" with 3% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele (1053 cu.ft., 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 3020'. Two turbolating centralizers at the base of the Ojo Alamo at 3020'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 434 sx 50/50 Class "G" Poz with 5% gel, 0.25 pps flocele, 5 pps Gilsonite 0.1% retardant and 0.25% fluid loss additive (625 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 shoe joint.

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

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 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 Dakota formation will be completed.
- 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 east half of Section 18 is dedicated to the Dakota in this well.
- This gas is dedicated.

John P. Hasford
Drilling Engineer

10/24/00
Date