NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

March 18, 1999



**Burlington Resources Oil & Gas Company**
**P. O. Box 4289**
**Farmington, New Mexico 87499-4289**
**Attention: Peggy Bradfield**

***Administrative Order NSL-4235***

Dear Ms. Bradfield:

Reference is made to your application submitted to the New Mexico Oil Conservation Division ("Division") on March 17, 1999 for an exception to the well location requirements provided within the "*Special Rules and Regulations for the Basin-Dakota Pool*," as promulgated by Division Order No. R-10987, for a non-standard Basin-Dakota infill gas well location in an existing standard 319.59-acre stand-up gas spacing and proration unit for the Basin-Dakota Pool comprising Lots 3 and 4, the S/2 NW/4, and SW/4 (W/2 equivalent) of Section 5, Township 27 North, Range 4 West, NMPM, Rio Arriba County, New Mexico. This unit is currently dedicated to Burlington's San Juan "27-4" Unit Well No. 39 (**API No. 30-039-20145**), located a standard gas well location 846 feet from the South line and 1693 feet from the West line (Unit N) of Section 5.

The application has been duly filed under the provisions of Division Rules 104.F and 605.B.

By the authority granted me under the provisions of Division Rule 104.F(2), the following described well to be drilled at an unorthodox infill gas well location in Section 5 is hereby approved:

**San Juan 27-4 Unit Well No. 39-M**
**2250' FNL & 910' FWL (Unit E).** – 5-27N-4W

Further, both of the aforementioned San Juan "27-4" Unit Well Nos. 39 and 39-M and existing gas spacing and proration unit will be subject to all existing rules, regulations, policies, and procedures applicable to prorated gas pools in Northwest, New Mexico.

Sincerely,

Lori Wrotenbery

Lori Wrotenbery
Director

LW/MES/kv

cc: New Mexico Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington

*BURLINGTON RESOURCES*

SAN JUAN DIVISION

Sent Federal Express

Mr. Michael Stogner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: San Juan 27-4 Unit #39M
2250'FNL, 910'FWL Section 5, T-27-N, R-4-W, Rio Arriba County
30-039-not assigned

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval of an unorthodox gas well location for the Dakota pool. This location is at the request of the Carson National Forest (see attached letter) and due to topography at a standard location. The Jicarilla Ranger Station of Carson National Forest states that both topography and minimizing surface disturbance are reasons for this location. This well is proposed to be drilled as a Mesa Verde-Dakota commingle. DHC-2226 has been issued for the commingling. Order R-10987A covers the location of the Mesa Verde portion of this well.

Production from the Dakota pool is to be included in a 319.59 acre gas spacing and proration unit for the west half (W/2) in Section 5. Production from the Dakota is to be dedicated to the San Juan 29-7 Unit #39 (30-039-20145) located at 846' FNL, 1693' FWL of Section 5. Production from the Mesa Verde pool is to be included in a 319.59 acre gas spacing and proration unit for the west half (W/2) in Section 5. Production from the Mesa Verde is to be dedicated to the San Juan 29-7 Unit #39 (30-039-20145) located at 846' FNL, 1693' FWL of Section 5.

The following attachments are for your review:

- Application for Permit to Drill.
- Completed C-102 at referenced location.
- Offset operators/owners plat – Burlington is the offsetting operator.
- Letter from Carson National Forest
- 7.5 minute topographic map.

We appreciate your earliest consideration of this application.

Sincerely,

Peggy Bradfield
Regulatory/Compliance Administrator

xc: NMOCD - Aztec District Office
Bureau of Land Management

3535 East 30th St., 87402-8801, P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833

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-080673
**Unit Reporting Number**

**1b. Type of Well**
GAS

**6. If Indian, All. or Tribe**

**2. Operator**
BURLINGTON RESOURCES Oil & Gas Company

**7. Unit Agreement Name**
San Juan 27-4 Unit

**3. Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499

(505) 326-9700

**8. Farm or Lease Name**
San Juan 27-4 Unit
**9. Well Number**
39M

**4. Location of Well**
2250'FNL, 910'FWL

Latitude 36° 36'10", Longitude 107° 16'43"

**10. Field, Pool, Wildcat**
Blanco MV/Basin DK
**11. Sec., Twn, Rge, Mer. (NMPM)**
Sec. 5, T-27-N, R-4-W
**API # 30-039-**

**14. Distance in Miles from Nearest Town**
68 miles to Bloomfield

**12. County** Rio Arriba **13. State** NM

**15. Distance from Proposed Location to Nearest Property or Lease Line**
910'

**16. Acres in Lease**

**17. Acres Assigned to Well**
319.59 W/2

**18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
1600'

**19. Proposed Depth**
8208'

**20. Rotary or Cable Tools**
Rotary

**21. Elevations (DF, FT, GR, Etc.)**
6876' GR

**22. Approx. Date Work will Start**

**23. Proposed Casing and Cementing Program**
See Operations Plan attached

**24. Authorized by:** _____
Regulatory/Compliance Administrator

10-23-98
Date

**PERMIT NO.** _____ **APPROVAL DATE** _____

**APPROVED BY** _____ **TITLE** _____ **DATE** _____

**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.

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer DD, Artesia, NM 87211-0719
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- | 71599/72319 | Basin Dakota/Blanco Mesaverde |

| 4 Property Code | 5 Property Name | 6 Well Number |
|---|---|---|
| 7452 | SAN JUAN 27-4 UNIT | # 39M |

| 7 OGRID No. | 8 Operator Name | 9 Elevation |
|---|---|---|
| 14538 | BURLINGTON RESOURCES OIL & GAS COMPANY | 6876 |

## 10 Surface Location

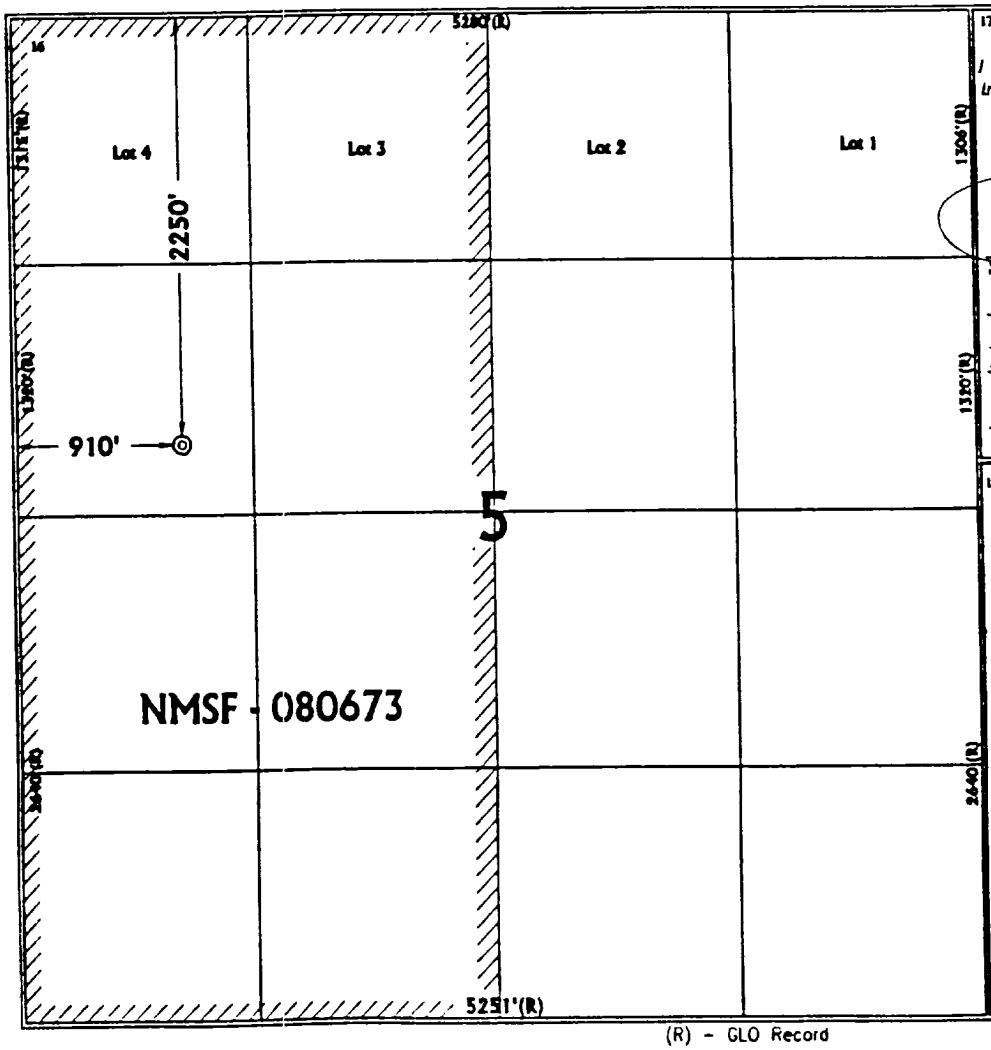
| UL or Lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| E | 5 | 27 N | 4 W | | 2250 | NORTH | 910 | WEST | RIO ARRIBA |

## 11 Bottom Hole Location If Different From Surface

| 7 UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| 12 Dedicated Acres | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---|---|---|---|
| DK:W/319.59<br>MV:W/319.59 | | | |

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTEREST 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.*

Signature

Peggy Bradfield
Printed Name

Regulatory Administrator
Title

10-25-98
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.*

August 11, 1998
Date of Survey

Signature and Seal of Professional Surveyor

GARY D. JOHNN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number

(R) - GLO Record

# OPERATIONS PLAN

***Well Name:*** San Juan 27-4 Unit #39M
***Location:*** 2250'FNL,910'FWL, Sec 5, T-27-N, R-4-W
Rio Arriba County, NM
Latitude 36° 36'10", Longitude 107° 16'43"
***Formation:*** Blanco Mesa Verde/Basin Dakota
***Elevation:*** 6876' GL

| ***Formation Tops:*** | ***Top*** | ***Bottom*** | ***Contents*** |
|---|---|---|---|
| Surface | San Jose | 3172' | |
| Ojo Alamo | 3172' | 3339' | aquifer |
| Kirtland | 3339' | 3397' | gas |
| Fruitland | 3397' | 3754' | gas |
| Pictured Cliffs | 3754' | 3865' | gas |
| Lewis | 3865' | 4333' | gas |
| **Intermediate TD** | **3965'** | | |
| Mesa Verde | 4333' | 4729' | gas |
| Chacra | 4729' | 5540' | gas |
| Massive Cliff House | 5540' | 5583' | gas |
| Menefee | 5583' | 5912' | gas |
| Massive Point Lookout | 5912' | 6469' | gas |
| Mancos | 6469' | 7101' | gas |
| Gallup | 7101' | 7877' | gas |
| Greenhorn | 7877' | 7938' | gas |
| Graneros | 7938' | 8093' | gas |
| Dakota | 8093' | | gas |
| **TD (4 1/2"liner)** | **8208'** | | |

***Logging Program:***
Cased hole - CBL - TD to 200' above TOC, GR/CNL across MV/DK

***Mud Program:***

| Interval | Type | Weight | Vis. | Fluid Loss |
|---|---|---|---|---|
| 0- 200' | Spud | 8.4-9.0 | 40-50 | no control |
| 200-3965' | LSND | 8.4-9.0 | 30-60 | no control |
| 3965-8208' | Gas | 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 | Depth Interval | Csg.Size | Wt. | Grade |
|---|---|---|---|---|
| 12 1/4" | 0' - 200' | 9 5/8" | 32.3# | K-55 |
| 8 3/4" | 0' - 3965' | 7" | 20.0# | J-55 |
| 6 1/4" | 3865' - 8208' | 4 1/2" | 10.5# | K-55 |

***Tubing Program:***

| | | | |
|---|---|---|---|
| 0' - 8208' | 2 3/8" | 4.70# | EUE |

*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.

**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 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 163 sx Class "B" cement with 1/4# flocele/sx and 2% 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/366 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride (1192 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 1983'. First stage: cement with 161 sx Class "B" cmt with 7 pps gilsonite, 1/2 pps cellophane, 3% sodium metasilicate. Tailed w/90 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 0.5 pps Cellophane. Second stage: 205 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (1192 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 3339'. Two turbolating centralizers at the base of the Ojo Alamo at 3339'. 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 50 sx 50/50 Class "B" Poz with 2% gel, 0.25 flocele/sx, 5# gilsonite/sx, and 0.3% fluid loss additive (668 cu.ft.), 50% 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: 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.
- 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.
- 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 and Mesa Verde formations will be completed and commingled.
- 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 |
| 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 5 is dedicated to the Mesa Verde and Dakota in this well.
- This gas is dedicated.

Drilling Engineer

10/26/98
Date

*BURLINGTON RESOURCES*

San Juan 27-4 Unit #39M
Multi-Point Surface Use Plan

1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.

2. Planned Access Road - Refer to Map No. 1. The required new access road is shown on Map No. 1. The gradient, shoulder, crowning and other design elements will meet or exceed those specified by the responsible government agency. The new access road surface will not exceed twenty feet (20') in width. No additional turnarounds or turnouts will be required. Upon completion of the project, the access road will be adequately drained to control soil erosion. Approximately 300' of access road will be constructed. Pipelines are indicated on Map No. 1A.

3. Location of Existing Wells - Refer to Map No. 1A.

4. Location of Existing and/or Proposed Facilities if Well is Productive -

   a. On the Well Pad - Refer to Plat No. 1, anticipated production facilities plat.

   b. Off the Well Pad - Anticipated pipeline facilities as shown on the attached plat from Williams Field Services.

5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained from 44 Crossing Water Hole located NE Section 18, T-27-N, R-4-W, New Mexico.

6. Source of Construction Materials - If construction materials are required for the proposed project, such materials will be obtained from a commercial quarry.

7. Methods of Handling Waste Materials - All garbage and trash materials will be removed from the site for proper disposal. A portable toilet will be provided for human waste and serviced in a proper manner. If liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying waste materials into the watershed. Reserve pits will be lined as needed with either 12 mil bio-degradable plastic liner or a bentonite liner. All earthen pits will be so constructed as to prevent leakage from occurring; no earthen pit will be located on natural drainage. Generation of hazardous waste is not anticipated. Federal regulations will be adhered to regarding handling and disposal of such waste if so generated.

8. Ancillary Facilities - None anticipated.

9. Wellsite Layout - Refer to the location diagram and to the wellsite cut and fill diagram (Figure No. 4). The blow pit will be constructed with a 2'/160' grade to allow positive drainage to the reserve pit and prevent standing liquids in the blow pit.

10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operations will be performed during the time period set forth by the responsible government agency. The permanent location facilities will be painted as designated by the responsible government agency.

11. Surface Ownership – Carson National Forest

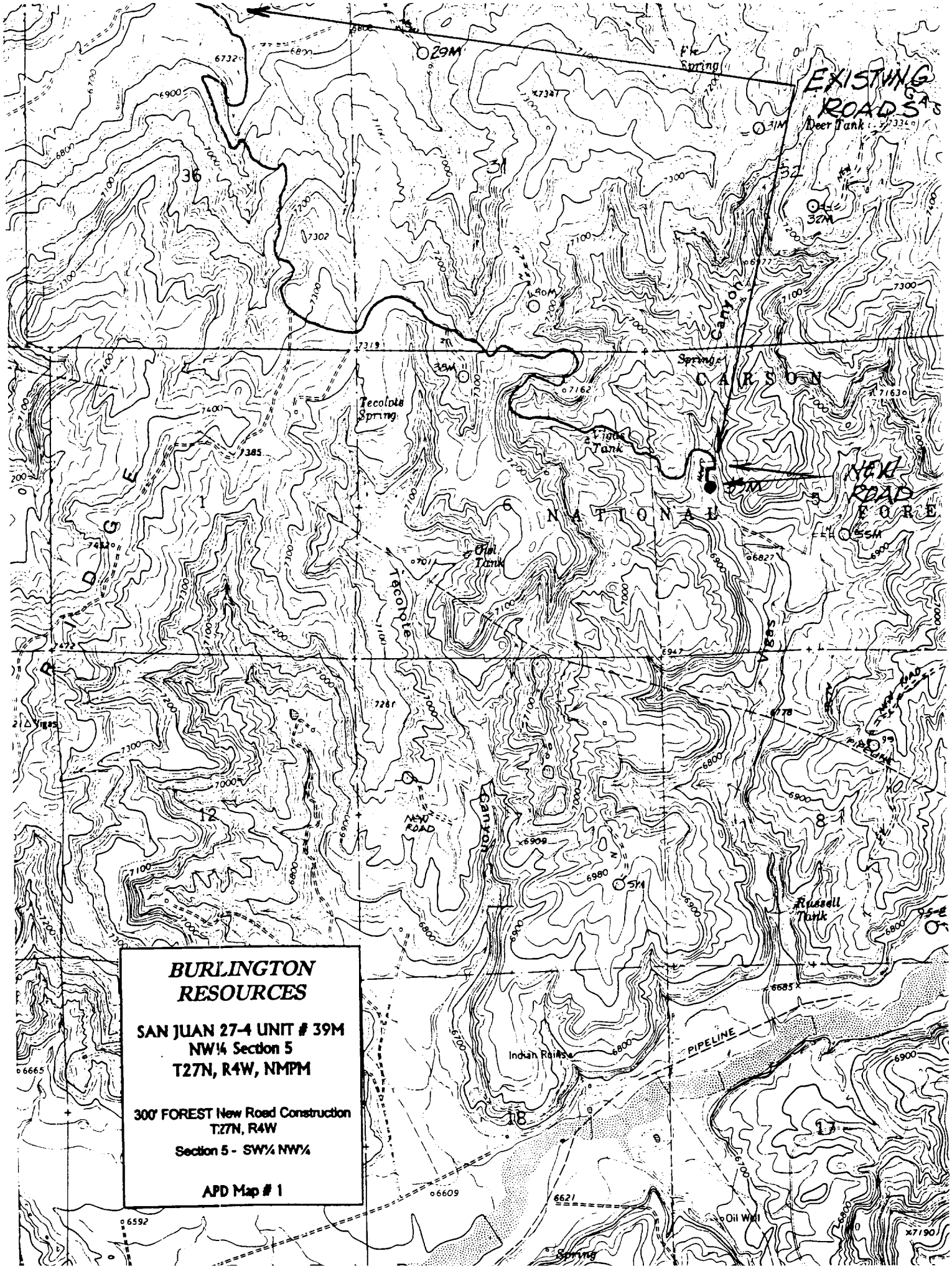
12. Other Information - Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

13. Operator's Representative and Certification - Burlington Resources Oil & Gas Company Regional Drilling Manager, Post Office Box 4289, Farmington, NM 87499, telephone (505) 326-9700. 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 presently exist; that the statements made in this plan, are to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Burlington Resources Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Peggy Bradfield 10-25-98

Regulatory/Compliance Administrator Date

pb




**BURLINGTON RESOURCES**

**SAN JUAN 27-4 UNIT # 39M**
**NW¼ Section 5**
**T27N, R4W, NMPM**

**300' FOREST New Road Construction**
**T27N, R4W**

**Section 5 - SW¼ NW¼**

**APD Map # 1**

*BURLINGTON RESOURCES OIL AND GAS COMPANY*

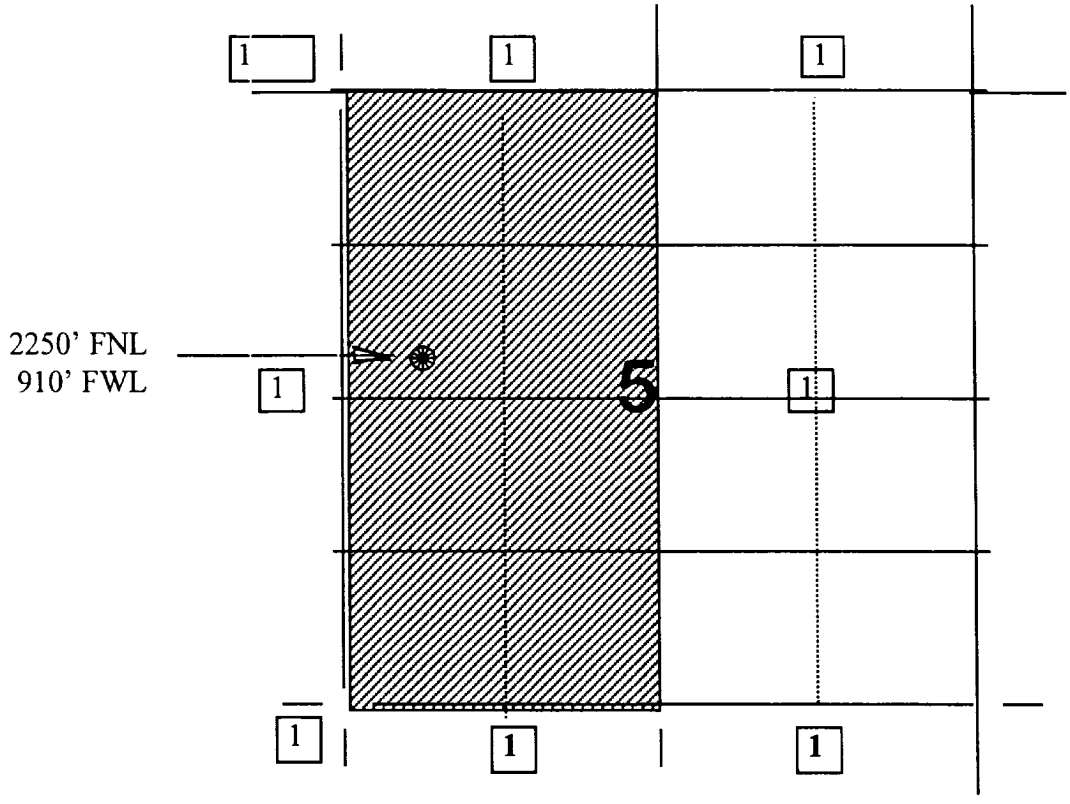
## San Juan 27-4 Unit #39M

## OFFSET OPERATOR/OWNER PLAT

### Mesaverde/Dakota Formations

### Down-hole Commingle

**Township 27 North, Range 4 West**




1) Burlington Resources

United States Department of Agriculture
Forest Service
Jicarilla Ranger District
664 East Broadway
Bloomfield, NM 87413
(505) 632-2956
Fax: (505) 632-3173

File Code: 2820

Date: 8/31/98

Chuck Smith
Burlington Resources
POB 4289
Farmington, NM 87499

RE: Unorthodox location for wells:
San Juan 27-4 #39M
San Juan 27-4 #46M
San Juan 27-4 #52M
Carson SRC #2A

Dear Mr. Smith,

The Jicarilla Ranger District, Carson National Forest is requesting you apply for an unorthodox location as follows, as discussed by your company representative and Camela Hooley of this office:

SJ 27-4 #39M, T27N R4W Sec.5, 2250'FNL/910'FWL
SJ 27-4 #46M, T27N R4W Sec.31, 1875'FN:/405'FWL
SJ 27-4 #52M, T27n R4W Sec.29, 1040'FNL/1370'FWL
Carson SRC #2A, T30N R5W Sec.1, 1850'FSL/1270'FEL

The mineral operator is required to comply with other other applicable regulations such as the Endangered Species Act and the Archeological Resources Protection Act under 36CFR228.112(c). The operator is also required under 36CFR228.108(c) to minimize or prevent damage to surface resources. The Carson National Forest Management Plan states that surface resource impacts will be minimized when administering mineral resources.

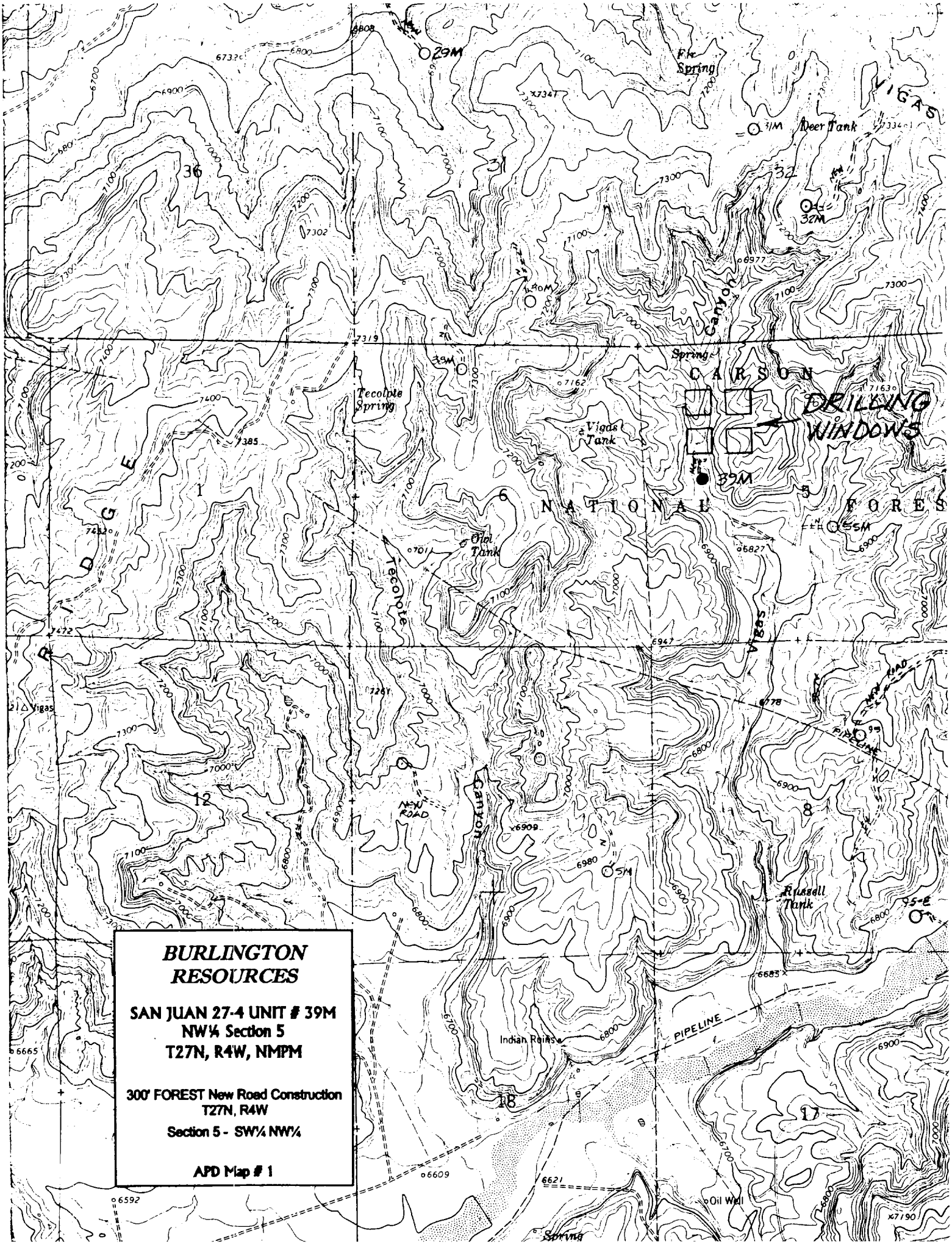
The following conditions apply which require an unorthodox location:

52M Archeological resources prevent locating the well in an orthodox location.
2A,
39M,46M Topography prevents locating the well in an orthodox location.

46M Threatened/endangered species concerns prevent locating the well in an orthodox location.
52M,
39M,46M Prevention of unneccesary resource damage requires the location be unorthodox. (Such as a previously disturbed area or existing road available outside the drilling window.)

Thank you for your cooperation in this matter.

Don Case
Acting District Ranger


BURLINGTON RESOURCES
SAN JUAN 27-4 UNIT # 39M
NW¼ Section 5
T27N, R4W, NMPM
300' FOREST New Road Construction
T27N, R4W
Section 5 - SW¼ NW¼
APD Map # 1
DRILLING WINDOWS
CARSON NATIONAL FOREST
Vigas
Deer Tank
Fir Spring
Canyon
Spring
Tecolote Spring
Vigas Tank
Tecolote
Oil Tank
Arroyo
Russell Tank
PIPELINE
NEW ROAD
Indian Ruins
Oil Well
29M
32M
39M
55M
5M
95-E