



NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT

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

July 8, 1998

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

RECEIVED  
JUL 15 1998

# 30M  
31-28-4

OIL CON. DIV. Administrative Order NSL-4089  
DIST. 3

Dear Ms. Bradfield:

Reference is made to your application submitted to the New Mexico Oil Conservation Division ("Division") on July 1, 1998 for an exception to the well location requirements provided within the "Special Rules and Regulations for the Blanco-Mesaverde Pool/Special Rules and Regulations for the Basin-Dakota Pool," as promulgated by Division Order No. R-10987, for Burlington Resources Oil & Gas Company's ("Burlington") proposed San Juan "28-4" Unit Well No. 30-M to be drilled at an unorthodox infill gas well location in both the Blanco-Mesaverde and Basin-Dakota Pools 760 feet from the South line and 1910 feet from the East line (Unit O) of Section 31, Township 28 North, Range 4 West, NMPM, Rio Arriba County, New Mexico.

Gas production from the Blanco-Mesaverde Pool is to be included in an existing standard 319.82-acre lay-down gas spacing and proration unit comprising Lots 3 and 4, the E/2 SW/4, and the SE/4 (S/2 equivalent) of Section 31, which is currently dedicated to Burlington's San Juan "28-4" Unit Well No. 18 (API No. 30-039-07225), located at a standard gas well location 990 feet from the South and West lines (Lot 4/Unit M) of Section 31. Gas production from the Basin-Dakota Pool is to be included in an existing standard 320-acre stand-up gas spacing and proration unit comprising the E/2 of Section 31, which is currently dedicated to Burlington's San Juan "28-4" Unit Well No. 30 (API No. 30-039-20078), located at a standard gas well location 1565 feet from the North line and 1830 feet from the East line (Unit G) of Section 31.

The application has been duly filed under the provisions of Division Rules 104.F and 605.B of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division").

By the authority granted me under the provisions of Division Rule 104.F(2), the above-described unorthodox Basin-Dakota/Blanco-Mesaverde infill gas well location for the San Juan "28-4" Unit Well No. 30-M is hereby approved. All of the aforementioned wells and both spacing units will be subject to all existing rules, regulations, policies, and procedures applicable to prorated gas pools in Northwest, New Mexico.

Sincerely,

*Lori Wrotenbery / by MES*

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

Ms. Lori Wrotenbery, Director  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RECEIVED  
JUL 1 1998  
OIL CON. DIV.  
DIST. 3

Re: San Juan 28-4 Unit #30M  
760'FSL, 1910'FEL, Section 31, T-28-N, R-4-W, Rio Arriba County, NM  
30-039-not assigned

Dear Ms. Wrotenbery:

Burlington Resources is applying for administrative approval of an unorthodox gas well location for both the Mesa Verde and Dakota pools. This application for the referenced location is for topographic reasons, archaeology, and at the request of the Carson National Forest Service, especially Mexican Spotted Owl habitat.

Production from the Blanco Mesa Verde pool is to be included in a standard 319.82 acre gas spacing and proration unit comprising of the south half (S/2) of Section 31 which is currently dedicated to Burlington's San Juan 28-4 Unit #18 (API 30-039-07225), located at 990'FSL, 990'FWL of Section 31. Production from the Basin Dakota pool is to be included in a standard 320 acre gas spacing and proration unit comprising of the east half (E/2) of Section 31 which is currently dedicated to Burlington's San Juan 28-4 Unit #30 (API 30-039-20078), located at 1565'FNL, 1830'FEL of said Section 31.

The following attachments are for your review:

1. Application for Permit to Drill.
2. Completed C-102 at referenced location.
3. Offset operators/owners plat - Burlington is the operator of the unit.
4. 7.5 minute topographic map, and enlargement of the map to define topographic features.

We appreciate your earliest consideration of this application.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Administrator

xc: NMOCD - Aztec District Office  
Bureau of Land Management - Farmington District Office

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-079732 Unit Reporting Number 891000933B-Dk 8910998330-MV If Indian, All. or Tribe	
1b. Type of Well GAS	7. Unit Agreement Name San Juan 28-4 Unit	
2. Operator <b>BURLINGTON RESOURCES</b> Oil & Gas Company	8. Farm or Lease Name San Juan 28-4 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	9. Well Number 30M	
4. Location of Well 760' FSL, 1910' FEL Latitude 36° 36' 40", Longitude 107° 17' 24"	10. Field, Pool, Wildcat Blanco MV/Basin Dk 11. Sec., Twn, Rge, Mer. (NMPM) Sec 31, T-28-N, R-4-W API # 30-039-	
14. Distance in Miles from Nearest Town 60 miles to Bloomfield	12. County RA	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 760'	17. Acres Assigned to Well 320	
16. Acres in Lease	20. Rotary or Cable Tools Rotary	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 2500'	22. Approx. Date Work will Start	
19. Proposed Depth 8580'	23. Proposed Casing and Cementing Program See Operations Plan attached	
21. Elevations (DF, FT, GR, Etc.) 7239' GR	24. Authorized by <u><i>Danny Stark</i></u> Regulatory/Compliance Administrator	
	<u>5-30-98</u> 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 KK, 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

Form C-10  
Revised February 21, 199

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

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039-	<sup>2</sup> Pool Code 72319/71599	<sup>3</sup> Pool Name Blanco Mesaverde/Basin Dakota
<sup>4</sup> Property Code 7459	<sup>5</sup> Property Name SAN JUAN 28-4 UNIT	<sup>6</sup> Well Number # 30M
<sup>7</sup> OGRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	<sup>9</sup> Elevation 7239

<sup>10</sup> Surface Location

UL or Lot No. O	Section 31	Township 28 N	Range 4 W	Lot Idn	Feet from the 760	North/South line SOUTH	Feet from the 1910	East/West line EAST	County RIO ARriba
--------------------	---------------	------------------	--------------	---------	----------------------	---------------------------	-----------------------	------------------------	----------------------

<sup>11</sup> Bottom Hole Location If Different From Surface

<sup>1</sup> 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  
MV-S/319.82  
DK-E/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 INTEREST HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	5275'(R)	
Lot 1 RECEIVED JUL 1 1998		
Lot 2 OIL CON. DIV. DIST. 3	NMSF - 079732	
Lot 3	31	
Lot 4	NMSF - 079732	
5280'(R)	760'	1910'
	5277'(R)	

<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.

*Peggy Bradford*  
Signature  
Peggy Bradford  
Printed Name  
Regulatory Administrator  
Title  
5-30-98  
Date

<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.

February 19, 1998  
Date of Survey  
Signature and Seal of Professional Surveyor



7016  
Certificate Number

## OPERATIONS PLAN

**Well Name:** San Juan 28-4 Unit #30M  
**Location:** 760' FSL, 1910' FEL Sec 31, T-28-N, R-4-W  
Rio Arriba County, NM  
Latitude 36° 36' 40", Longitude 107° 17' 24"  
**Formation:** Blanco Mesa Verde/Basin Dakota  
**Elevation:** 7239' GL

<b><u>Formation Tops:</u></b>	<b><u>Top</u></b>	<b><u>Bottom</u></b>	<b><u>Contents</u></b>
Surface	San Jose	3543'	
Ojo Alamo	3543'	3708'	aquifer
Kirtland	3708'	3753'	
Fruitland	3753'	4123'	gas
Pictured Cliffs	4123'	4244'	gas
Lewis	4224'	4711'	gas
<b>Intermediate TD</b>	<b>4324'</b>		
Huerfano Bentonite	4711'	5101'	gas
Chacra	5101'	5911'	
Massive Cliff House	5911'	5959'	gas
Menefee	5959'	6283'	gas
Massive Point Lookout	6283'	6843'	gas
Mancos Shale	6843'	7475'	
Gallup	7475'	8240'	gas
Greenhorn	8240'	8300'	gas
Dakota	8300'		gas
<b>TD (4 1/2" liner)</b>	<b>8580'</b>		

### **Logging Program:**

Cased hole - CBL - TD to 200' above TOC, GR/CNL across MV/Dk

### **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
200-4324'	LSND	8.4-9.0	30-60	no control
4324-8580'	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):**

<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' - 4324'	7"	20.0#	J-55
6 1/4"	4224' - 8580'	4 1/2"	10.5#	J-55

### **Tubing Program:**

0' - 8580'      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/357 sx Class "B" w/3% metasilicate, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride, 2% gel, 1/2# flocele/sx, 10# gilsonite/sx (1137 cu.ft. of slurry, 75% 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.

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 3708'. Two turbolating centralizers at the base of the Ojo Alamo at 3708'. 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. Cement with 470 sx 50/50 Class "B" Poz with 2% gel, 1/4# flocele/sx, 5# gilsonite/sx, and 0.4% fluid loss additive (626 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: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. Instead, 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" CIBP will be set above the last fracturing job to cut and pull the 4 1/2" casing above the 7" casing shoe. The 4 1/2" bridge plug will then be milled and tubing will be run for completion.

Special Drilling Operations (Gas/Mist Drilling):

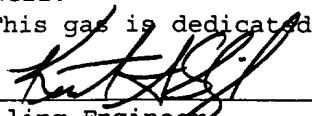
The following equipment will be operational while gas/mist drilling:

- 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 east half is dedicated to the Dakota and the Mesa Verde in this well.
- This gas is dedicated.

  
\_\_\_\_\_  
Drilling Engineer

5/5/98  
\_\_\_\_\_  
Date

# ***BURLINGTON RESOURCES***

## **San Juan 28-4 Unit #30M Multi-Point Surface Use Plan**

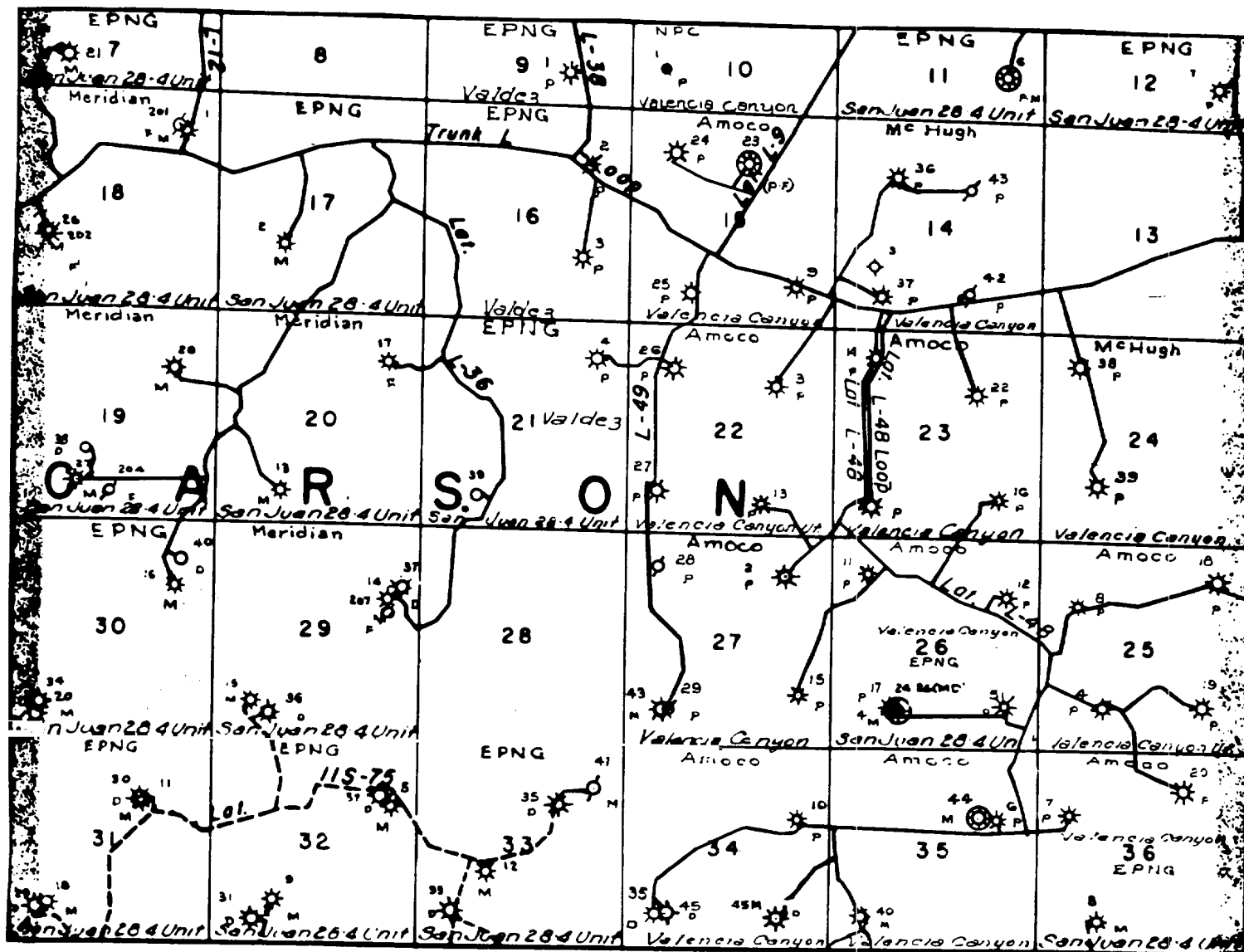
1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.
2. Planned Access Road - Refer to Map No. 1. The required new access 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 950' 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 Service.
5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained from San Juan 27-5 Water Well #1 located NE/4 Section 3, T-27-N, R-5-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 reseeded operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeded 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.

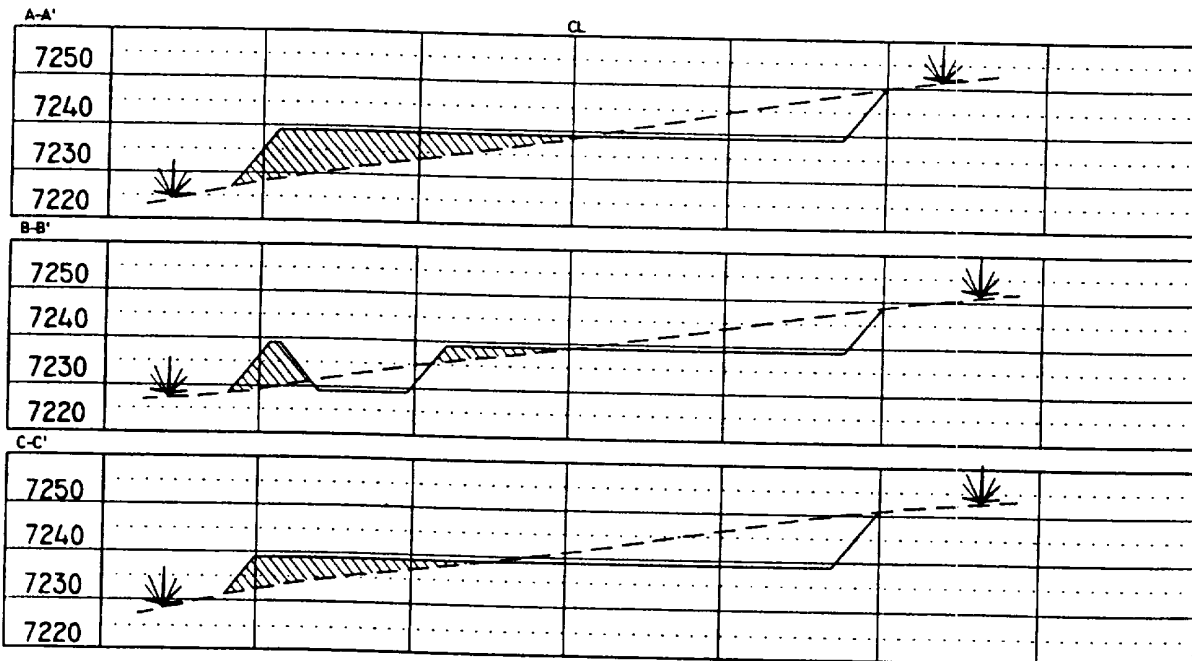
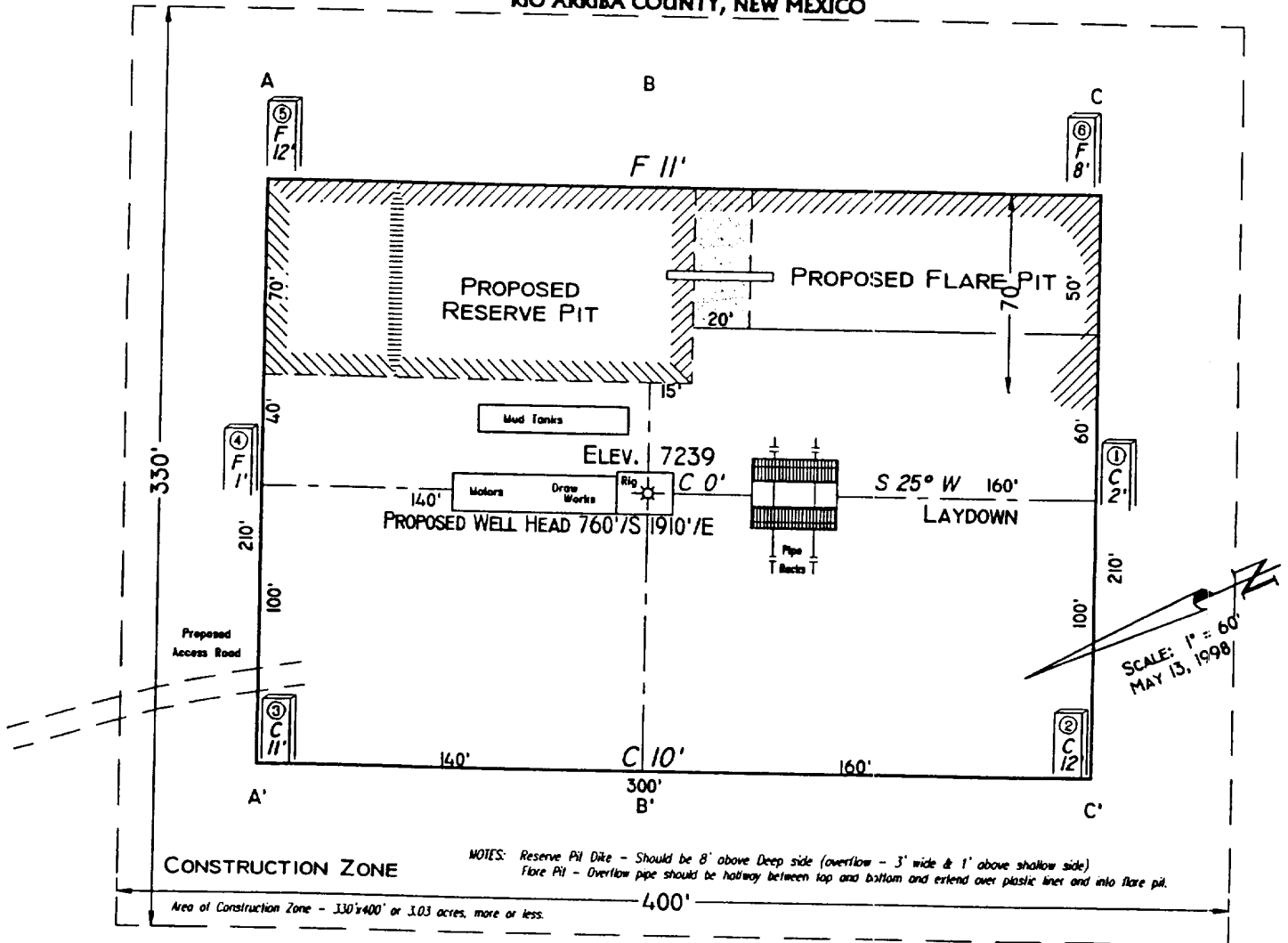
  
Regulatory/Compliance Administrator

5.30.98  
Date



MERIDIAN OIL INC.  
 Pipeline Map  
 T-28-N, R-04-W  
 Rio Arriba County, New Mexico  
 San Juan 28-4 Unit #30M  
 Map 1A

**PAD LAYOUT PLAN & PROFILE**  
**BURLINGTON RESOURCES OIL & GAS COMPANY**  
**SAN JUAN 28-4 UNIT 30M**  
**760' F/SL 1910' F/EL**  
**SEC. 31, T28N, R4W, N.M.P.M.**  
**RIO ARriba COUNTY, NEW MEXICO**



SCALE: 1"=60'-HORIZ.  
1"=40'-VERT.

NOTE: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction.

VANN SURVEYS  
 304 N. Locke  
 Farmington, NM

***BURLINGTON RESOURCES OIL AND GAS COMPANY***

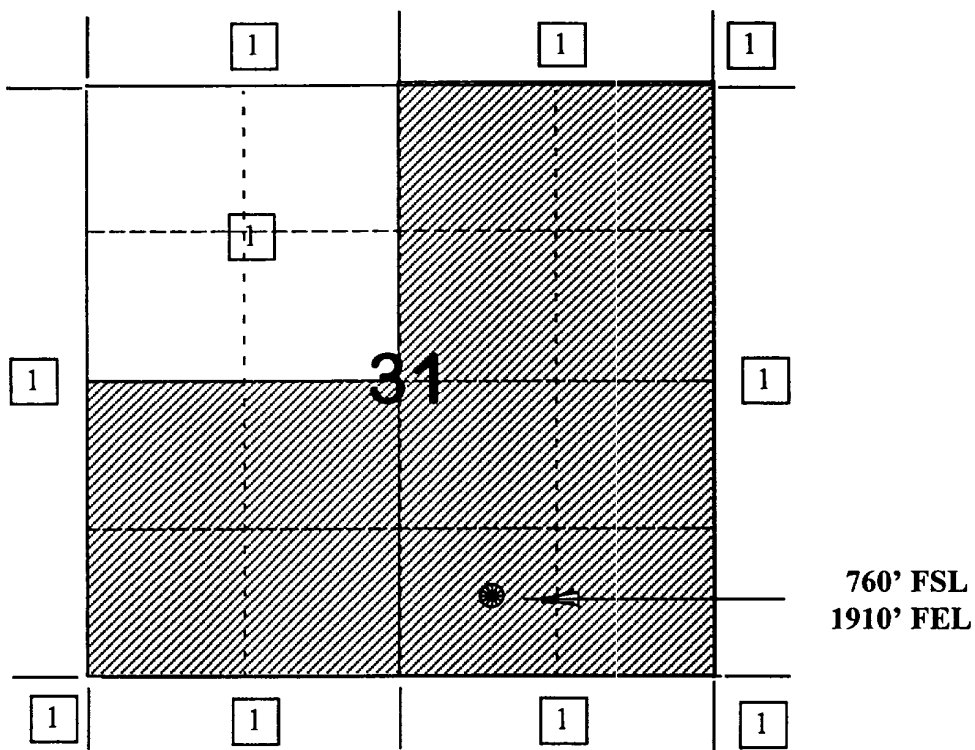
**San Juan 28-4 Unit #30M**

**OFFSET OPERATOR/OWNER PLAT**

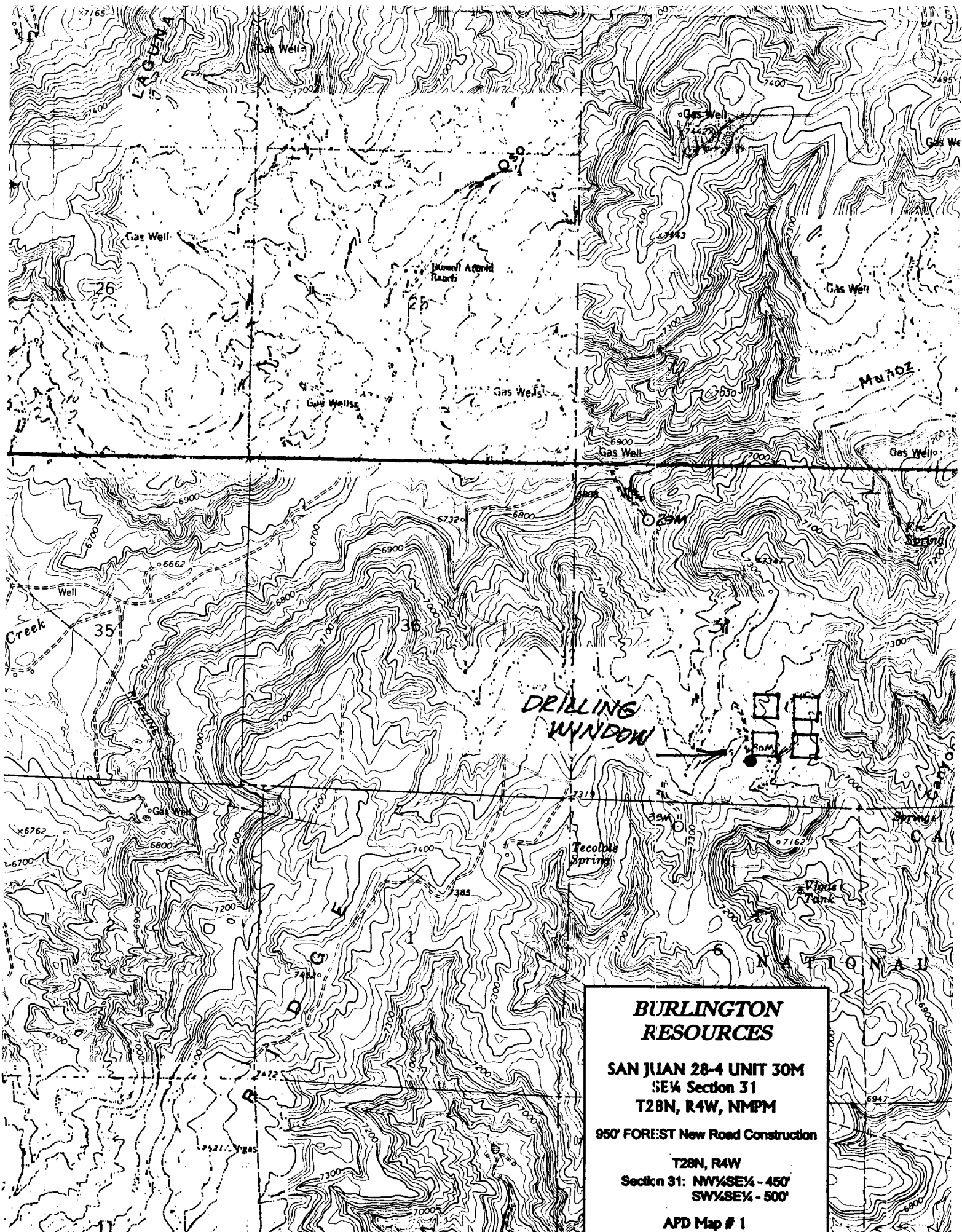
**Nonstandard Location**

**Mesaverde (S/2) / Dakota (E/2) Formations Well**

**Township 28 North, Range 4 West**



**1) Burlington Resources**



**BURLINGTON  
RESOURCES**

**SAN JUAN 28-4 UNIT 30M  
SE¼ Section 31  
T28N, R4W, NMPM**

**950' FOREST New Road Construction**

**T28N, R4W  
Section 31: NW¼SE¼ - 450'  
SW¼SE¼ - 500'**

**APD Map # 1**

