

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION  
 - Engineering Bureau -  
 2040 South Pacheco, Santa Fe, NM 87505



NO-31111/ADK

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

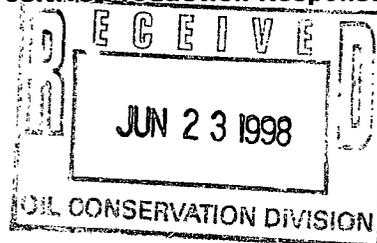
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Directional Drilling  
 NSL  NSP  DD  SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR



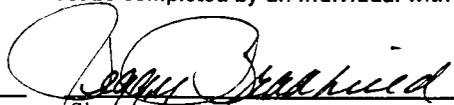
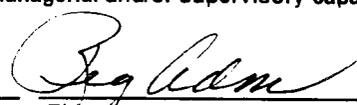
[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or  Does Not Apply

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Certification

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name \_\_\_\_\_ Signature  Title  Date \_\_\_\_\_

# BURLINGTON RESOURCES

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SAN JUAN DIVISION

June 22, 1998

Sent Federal Express

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

Re: San Juan 28-4 Unit #31M  
1620'FNL, 2010'FWL, Section 32, 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 the Blanco Mesa Verde and Basin Dakota pools. This application for the referenced location is for topographic and archaeological reasons, and especially at the request of the U.S. Forest Service that is the surface owner.

Production from the Blanco Mesa Verde pool is to be included in a standard 320-acre-gas-spacing and proration unit comprising of the north half (N/2) of Section 32 which is currently dedicated to the San Juan 28-4 Unit #5 (30-039-07255) located at 1700'FNL, 700'FEL of Section 32.

Production from the Basin Dakota is to be included in a standard 320 acre gas spacing and proration unit comprising of the west half (W/2) of Section 32 which is currently dedicated to the San Juan 28-4 Unit #31 (30-039-20084) located at 800'FSL, 1090'FWL of Section 32.

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.
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-079731 Unit Reporting Number 891009330-MV 89100933B-Dk	
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 28-4 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name San Juan 28-4 Unit 9. Well Number 31M	
4. Location of Well 1620' FNL, 2010' FWL  Latitude 36° 37' 09", Longitude 107° 16' 35"	10. Field, Pool, Wildcat Blanco MV/Basin Dk 11. Sec., Twn, Rge, Mer. (NMPM) Sec 32, 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 1620'	17. Acres Assigned to Well 320 W/2 Dk; 320 N/2 MV	
16. Acres in Lease	18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 4000'	
19. Proposed Depth 8714	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 7312' GR	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u><i>Joan Steadfield</i></u> Regulatory/Compliance Administrator	<u>5-20-98</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 KJK, 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  
 Revised February 21  
 Instructions o  
 Submit to Appropriate District  
 State Lease - 4  
 Fee Lease - 3

AMENDED RE

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number 30-039-		2 Pool Code 72319/71599		3 Pool Name Blanco Mesaverde/Basin Dakota	
4 Property Code 7459		5 Property Name SAN JUAN 28-4 UNIT			6 Well Number # 31M
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 7312

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
F	32	28 N	4 W		1620	NORTH	2010	WEST	RIO A

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 MV-N/320 DK-W/320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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 here is true and complete to the best of my knowledge

*Peggy Bradfield*  
 Signature  
 Peggy Bradfield  
 Printed Name  
 Regulatory Administrator  
 Title  
 5-20-98  
 Date

18 SURVEYOR CERTIFICATION  
 I hereby certify that the well location shown here was plotted from field notes of actual surveys or under my supervision, and that the same are correct to the best of my belief.

February 23, 1998  
 Date of Survey

*[Signature]*  
 Signature and Seal of Professional Surveyor

**NEW MEXICO**  
**REGISTERED PROFESSIONAL LAND SURVEYOR**  
 7016  
 Certificate Number

## OPERATIONS PLAN

**Well Name:** San Juan 28-4 Unit #31M  
**Location:** 1620' FNL, 2010' FWL Sec 32, T-28-N, R-4-W  
Rio Arriba County, NM  
Latitude 36° 37' 09", Longitude 107° 17' 35"  
**Formation:** Blanco Mesa Verde/Basin Dakota  
**Elevation:** 7312'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3688'	
Ojo Alamo	3688'	3806'	aquifer
Kirtland	3806'	3868'	
Fruitland	3868'	4252'	gas
Pictured Cliffs	4252'	4346'	gas
Lewis	4346'	4822'	gas
<b>Intermediate TD</b>	<b>4446'</b>		
Huerfanito Bentonite	4822'	5225'	gas
Chacra	5225'	6033'	
Massive Cliff House	6033'	6088'	gas
Menefee	6088'	6408'	gas
Massive Point Lookout	6408'	6985'	gas
Mancos Shale	6985'	7605'	
Gallup	7605'	8374'	gas
Greenhorn	8374'	8343'	gas
Dakota	8434'		gas
<b>TD (4 1/2" liner)</b>	<b>8714'</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
200-4446'	LSND	8.4-9.0	30-60	no control
4446-8714'	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>Csq. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 4446'	7"	20.0#	J-55
6 1/4"	4346' - 8714'	4 1/2"	10.5#	J-55

### Tubing Program:

0' - 8714'      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/367 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 (1169 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 3806'. Two turbolating centralizers at the base of the Ojo Alamo at 3806'. 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 503 sx 50/50 Class "B" Poz with 2% gel, 1/4# flocele/sx, 5# gilsonite/sx, and 0.4% fluid loss additive (613 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 west half is dedicated to the Dakota and the north half is dedicated to the Mesa Verde in this well.
- This gas is dedicated.

Frank A. Sudd  
Drilling Engineer

5/22/98  
Date

# ***BURLINGTON RESOURCES***

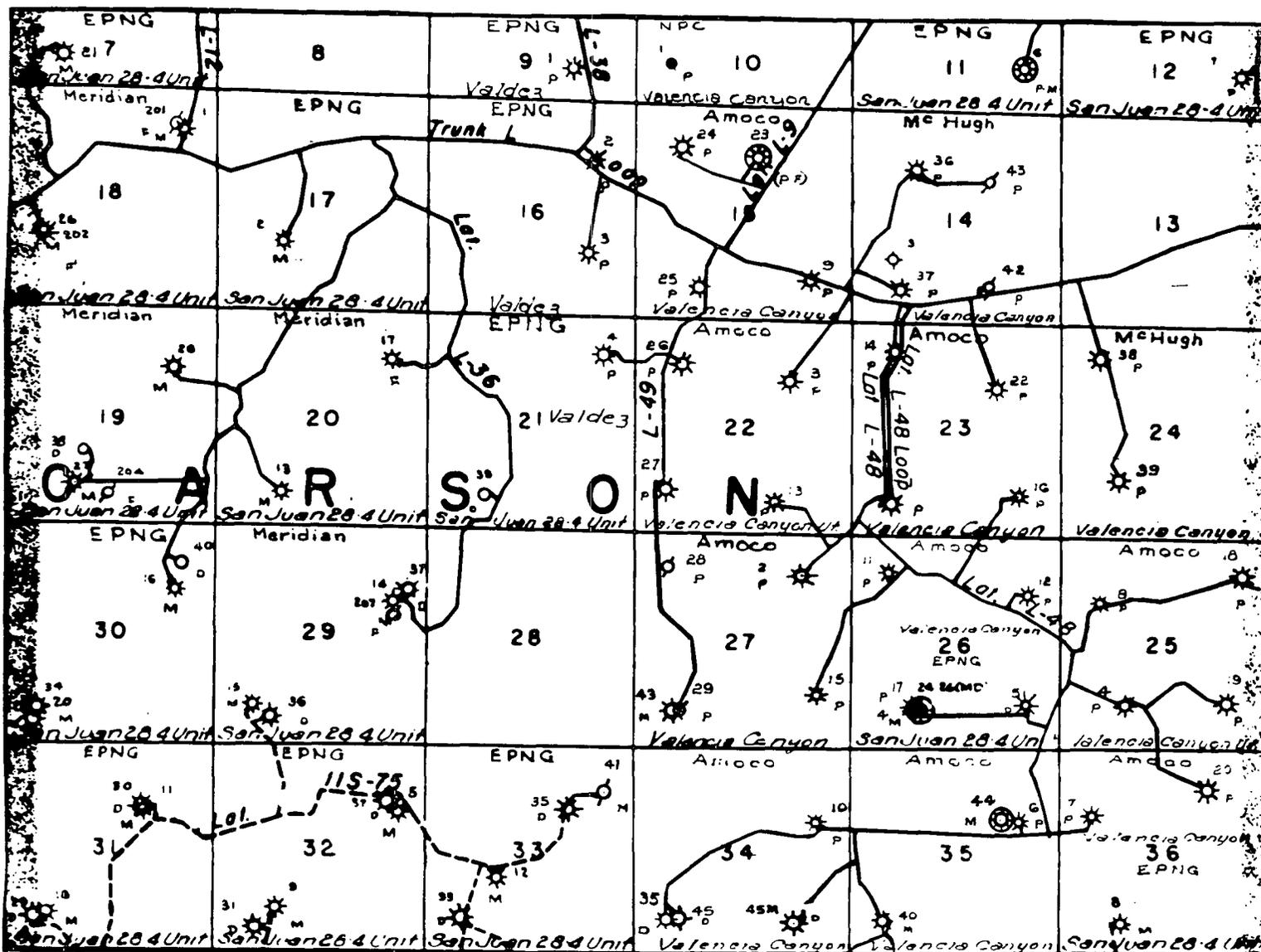
San Juan 28-4 Unit #31M  
Multi-Point Surface Use Plan

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 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 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.

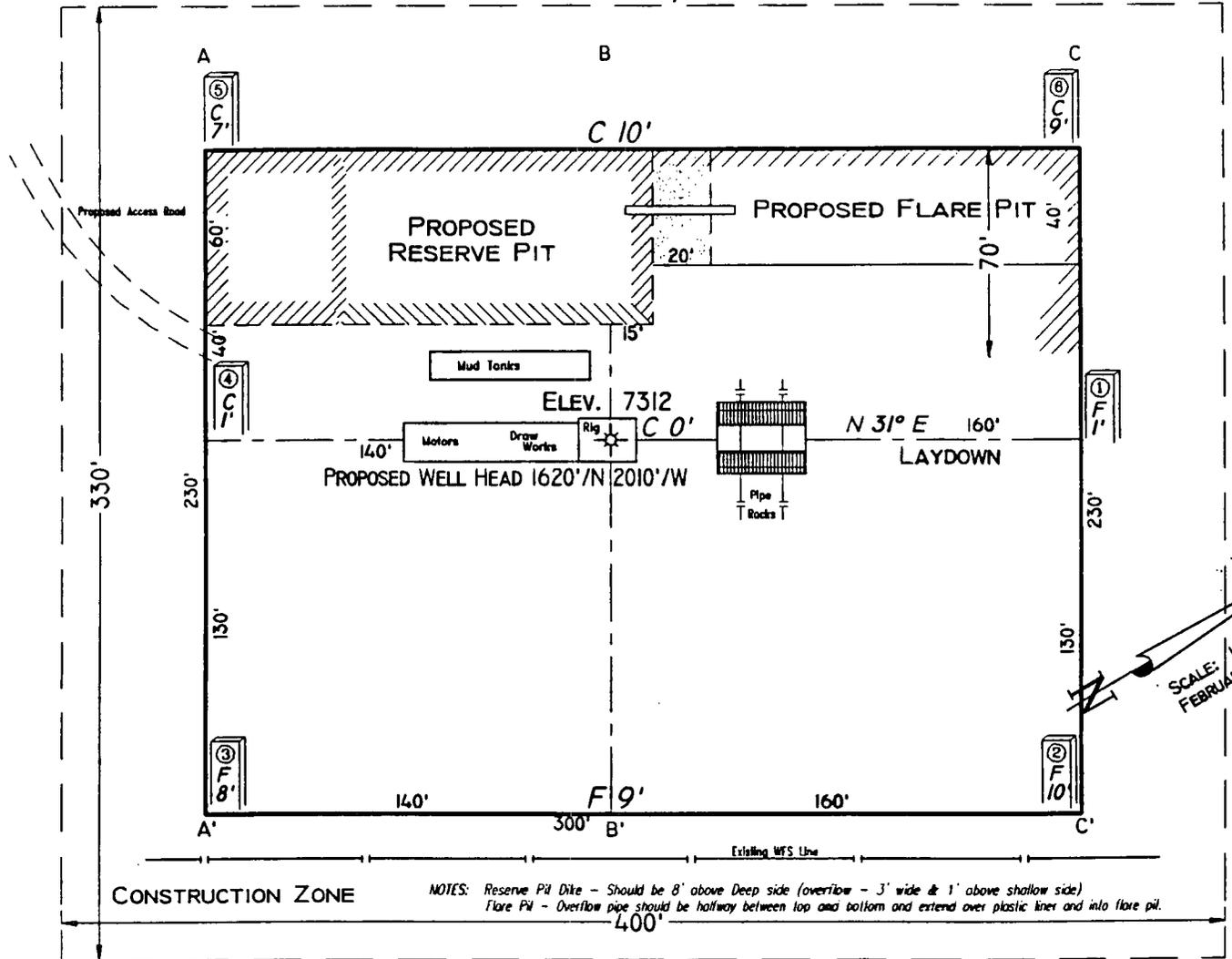
  
Regulatory/Compliance Administrator      5-20-98  
Date

pb



MERIDIAN OIL INC.  
 Pipeline Map  
 T-28-N, R-04-W  
 Rio Arriba County, New Mexico  
 San Juan 28-4 Unit #31M  
 Map 1A

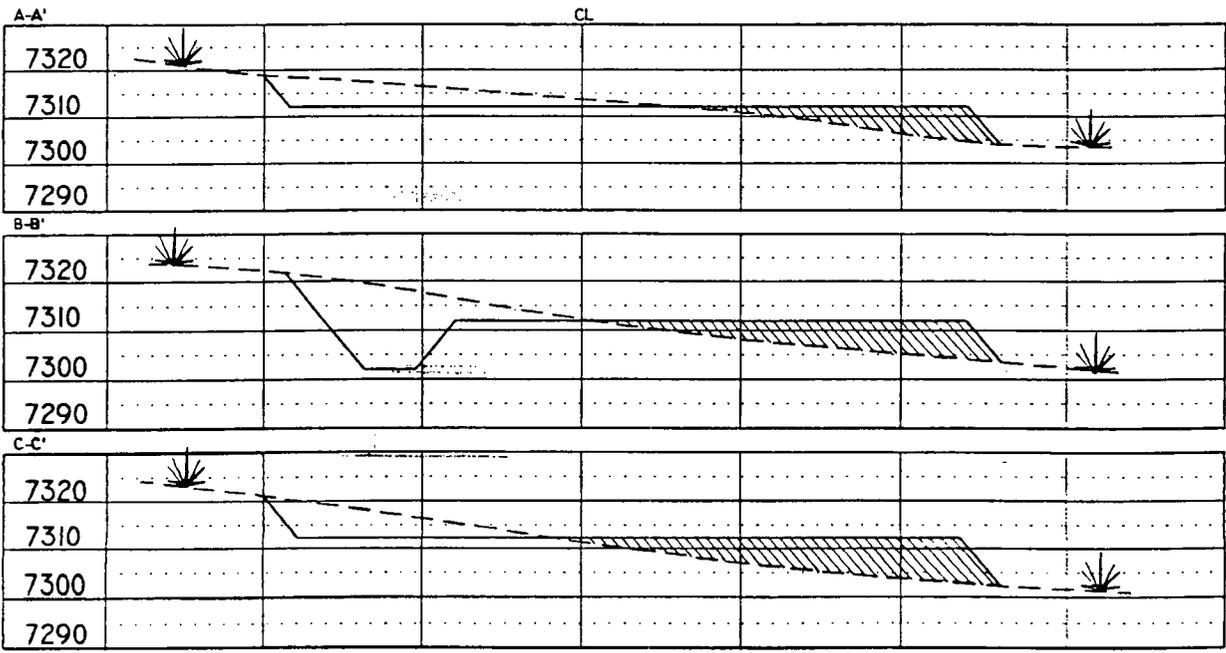
**PAD LAYOUT PLAN & PROFILE**  
**BURLINGTON RESOURCES OIL & GAS COMPANY**  
**SAN JUAN 28-4 UNIT 31M**  
**1620' F/NL 2010' F/WL**  
**SEC. 32, T28N, R4W, N.M.P.M.**  
**RIO ARriba COUNTY, NEW MEXICO**



SCALE: 1" = 60'  
 FEBRUARY 23, 1999

**CONSTRUCTION ZONE**

NOTES: Reserve Pit Dike - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)  
 Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit.



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

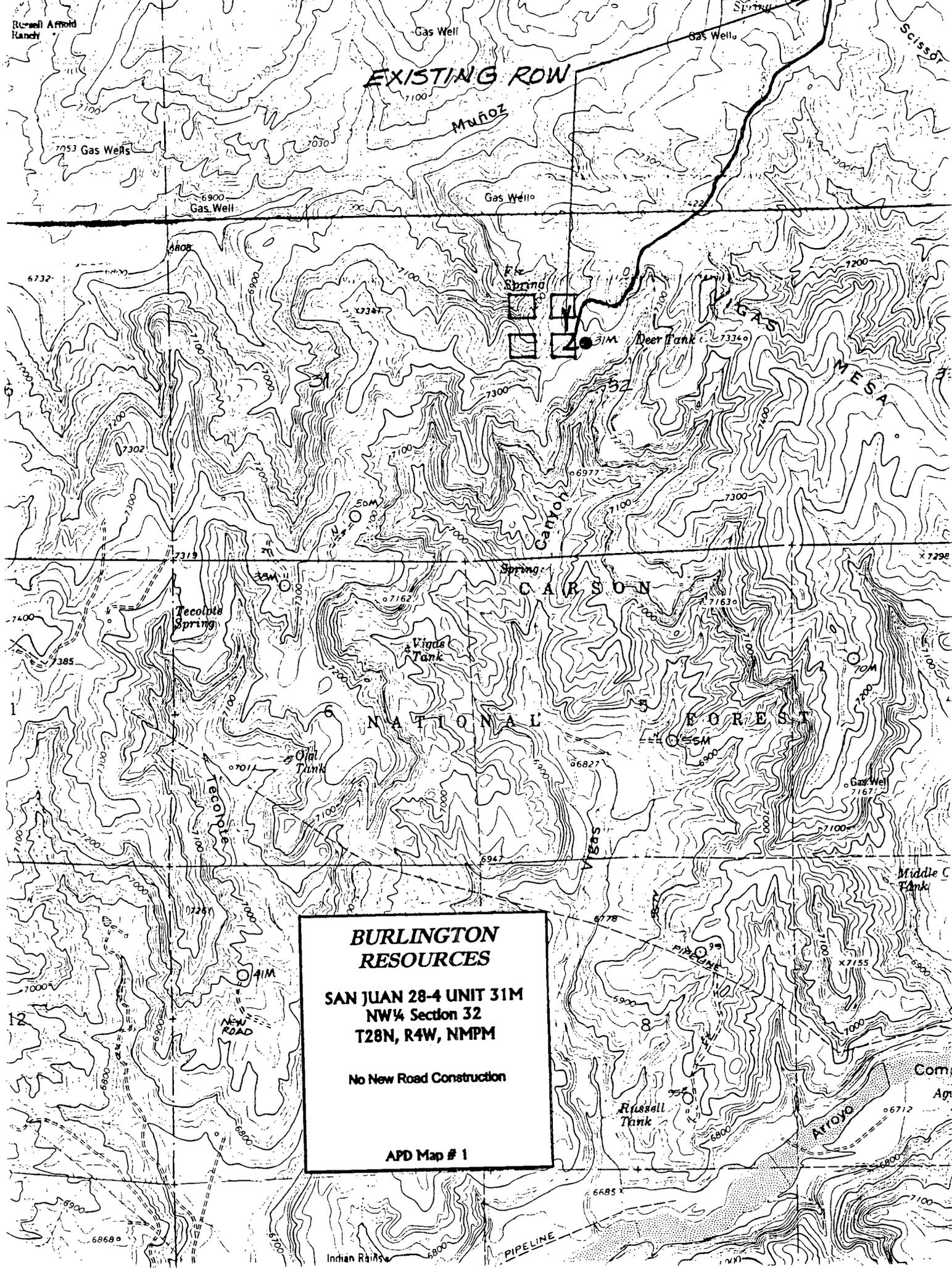
NOTE: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction.

VANN SURVEYS  
 304 N. Locke  
 Farmington, NM



**EXISTING ROW**

**BURLINGTON  
RESOURCES**  
SAN JUAN 28-4 UNIT 31M  
NW¼ Section 32  
T28N, R4W, NMPM  
No New Road Construction  
APD Map # 1



Bureau of Land Management

Gas Well

Gas Well

EXISTING ROW

Muñoz

7053 Gas Wells

7030

6900 Gas Well

Gas Well

7422

6732

6802

Spring

Deer Tank C. 7334

31M

7100

7100

7300

7300

7300

7300

7300

7300

7300

7300

7300

7300

7319

7319

7300

7300

7400

7385

Spring

CARSON

Tecolote Spring

Vigas Tank

7162

71630

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

Tecolote

Old Tank

NATIONAL

DEER

7100

7100

7100

7100

7100

7100

7100

7100

72261

6947

6827

BURLINGTON RESOURCES

41M

6778

PIPELINE