



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

August 8, 1997

RECEIVED  
AUG 18 1997  
OIL CON. DIV.  
DIST. 3

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

*Administrative Order NSL-3850*

Dear Ms. Bradfield:

Reference is made to your application dated August 7, 1997 for an unorthodox "infill" gas well location for both the Blanco-Mesaverde and Basin-Dakota Pools for the proposed San Juan "28-6" Unit Well No. 143-M to be drilled 525 feet from the North line and 2070 feet from the West line (Unit C) of Section 20, Township 28 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

Production from the Basin-Dakota Pool is to be included in an existing standard 320-acre gas spacing and proration unit comprising the W/2 of said Section 20 which is currently dedicated to your San Juan "28-6" Unit Well No. 143 (API No. 30-039-20156), located at a standard gas well location 1550 feet from the South line and 1600 feet from the West line (Unit K) of said Section 20 and production from the Blanco-Mesaverde Pool is to be included in an existing standard 320-acre gas spacing and proration unit that also comprises the W/2 of said Section 20 and is currently dedicated to Burlington's San Juan "28-6" Unit Well No. 87 (API No. 30-039-07346), located at a standard gas well location 800 feet from the South and West lines (Unit M) of said Section 20.

By the authority granted me under the provisions of Rule 2(d) of the "General Rules for the Prorated Gas Pools of New Mexico/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-8170, as amended, the above-described unorthodox "infill" gas well location for the San Juan "28-6" Unit Well No. 143-M is hereby approved.

Sincerely,

William J. LeMay  
Director

WJL/MES/kv

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

# BURLINGTON RESOURCES

SAN JUAN DIVISION

August 7, 1997

Sent Federal Express

Mr. William LeMay  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RECEIVED  
AUG - 7 1997

OIL CON. DIV.  
DIST. 3

Re: San Juan 28-6 Unit #143M  
525' FNL, 2070' FWL Section 20, T-28-N, R-6-W, Rio Arriba County, New Mexico  
API # 30-039-(not yet assigned)

Dear Mr. LeMay:

Burlington Resources is applying for administrative approval of a non-standard location for the above location in both the Mesa Verde and Dakota formations. This application for the referenced location is due to terrain, the presence of archaeology and at the request of the Bureau of Land Management.

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 offset operator
4. 7.5 minute topographic map showing the orthodox windows, and enlargement of the map to define topographic features.

We appreciate your earliest consideration of this application.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Administrator

xc: Bureau of Land Management  
NMOCD - Aztec 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	<b>RECEIVED</b> AUG - 7 1997 <b>OIL CON. DIV.</b> DIST. 3	5. Lease Number SF-079193 Unit Reporting Number 891001051B - Dk 8910010510 - MV
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 28-6 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name San Juan 28-6 Unit 9. Well Number 143M	
4. Location of Well 525' F NL, 2070' FWL  Latitude 36° 39.1, Longitude 107° 29.5	10. Field, Pool, Wildcat Blanco Mesa Verde Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec 20, T-28-N, R-6-W API # 30-039-	
14. Distance in Miles from Nearest Town 4 miles to Gobernador	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 525'	17. Acres Assigned to Well 320 W/2	
16. Acres in Lease		
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 1600'		
19. Proposed Depth 7825'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6533' GR	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u><i>Peggy Bradfield</i></u> Regulatory/Compliance Administrator	<u>7-3-97</u> Date	

PERMIT NO. \_\_\_\_\_

APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

Archaeological Report to be submitted

Threatened and Endangered Species Report to be submitted

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer 00, Artesa, 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  
Revised February 21  
Instructions on  
Submit to Appropriate District  
State Lease - 4  
Fee Lease - 3

☐ AMENDED RE

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-039-	72319/71599	Blanco Mesaverde/Basin Dakota
Property Code	Property Name	Well Number
7462	San Juan 28-6 Unit	143M
OGRID No.	Operator Name	Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6533'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
C	20	28-N	6-W		525	North	2070	West	R.A.

11 Bottom Hole Location if Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	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.
14-W/320			
14-W/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

16	5273.40'	17 OPERATOR CERTIFICATE
2070'	525'	I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.
		<i>Peggy Bradfield</i>
		Signature
		Peggy Bradfield
		Printed Name
		Regulatory Administrator
		Title
		Date 7-3-97
		18 SURVEYOR CERTIFICATE
		I hereby certify that the well location shown on this plat was plotted from field notes of actual survey made or under my supervision, and that the same is true and correct to the best of my belief.
		5/27/97
		Date of Survey
		Signature and Seal of Professional Surveyor
		NEALE C. EDWARDS
		NEW MEXICO
		6857
		Certificate Number

RECEIVED  
AUG - 7 1997  
OIL CON. DIV.  
DIST. 3

5280.00'

5273.40'

OPERATIONS PLAN

Well Name: San Juan 28-6 Unit #143M  
Location: 525' FNL, 2070' FWL Sec 20, T-28-N, R-6-W  
 Rio Arriba County, NM  
 Latitude 36° 39.1, Longitude 107° 29.5  
Formation: Blanco Mesa Verde/Basin Dakota  
Elevation: 6533' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2550'	
Ojo Alamo	2550'	2955'	aquifer
Fruitland	2955'	3337'	gas
Pictured Cliffs	3337'	3475'	gas
Lewis	3475'	3890'	gas
Intermediate TD	3575'		
Mesa Verde	3890'	4290'	gas
Chacra	4290'	4999'	
Massive Cliff House	4999'	5170'	gas
Menefee	5170'	5512'	gas
Massive Point Lookout	5512'	6741'	gas
Gallup	6741'	7470'	gas
Greenhorn	7470'	7574'	gas
Graneros	7574'	7687'	gas
Dakota	7687'		gas
TD (4 1/2" liner)	7825'		

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
200-3575'	LSND	8.4-9.0	30-60	no control
3575-7825'	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' - 3575'	7"	20.0#	J-55
6 1/4"	3475' - 6855'	4 1/2"	10.5#	J-55
6 1/4"	6855' - 7825'	4 1/2"	11.6#	J-55

Tubing Program:

0' - 7825'	2 3/8"	4.70# EUE
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**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 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/302 sx Class "B" w/3% medisilicate, 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 (980 cu.ft. of slurry, 75% 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 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 2955'. Two turbolating centralizers at the base of the Ojo Alamo at 2955'. 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 95 sx 65/35 Class "B" poz with 6% gel, 5# gilsonite/sx and 1/4# flocele/sx. Tail with 305 sx 50/50 Class "B" Poz with 2% gel, 1/4# flocele/sx, 5# gilsonite/sx, and 0.4% fluid loss additive (582 cu.ft., 35% 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 liner top can then be pressure tested to ensure a seal between the liner top and the 7" casing has been achieved. The test pressure shall be the maximum anticipated pressure to which the seal will be exposed (700 psi for the Mesa Verde and 2500 psi for the Dakota). 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 is dedicated to the Mesa Verde and Dakota in this well.
- This gas is dedicated.

San Voeck  
Drilling Engineer

7/9/97  
Date



# **BURLINGTON RESOURCES**

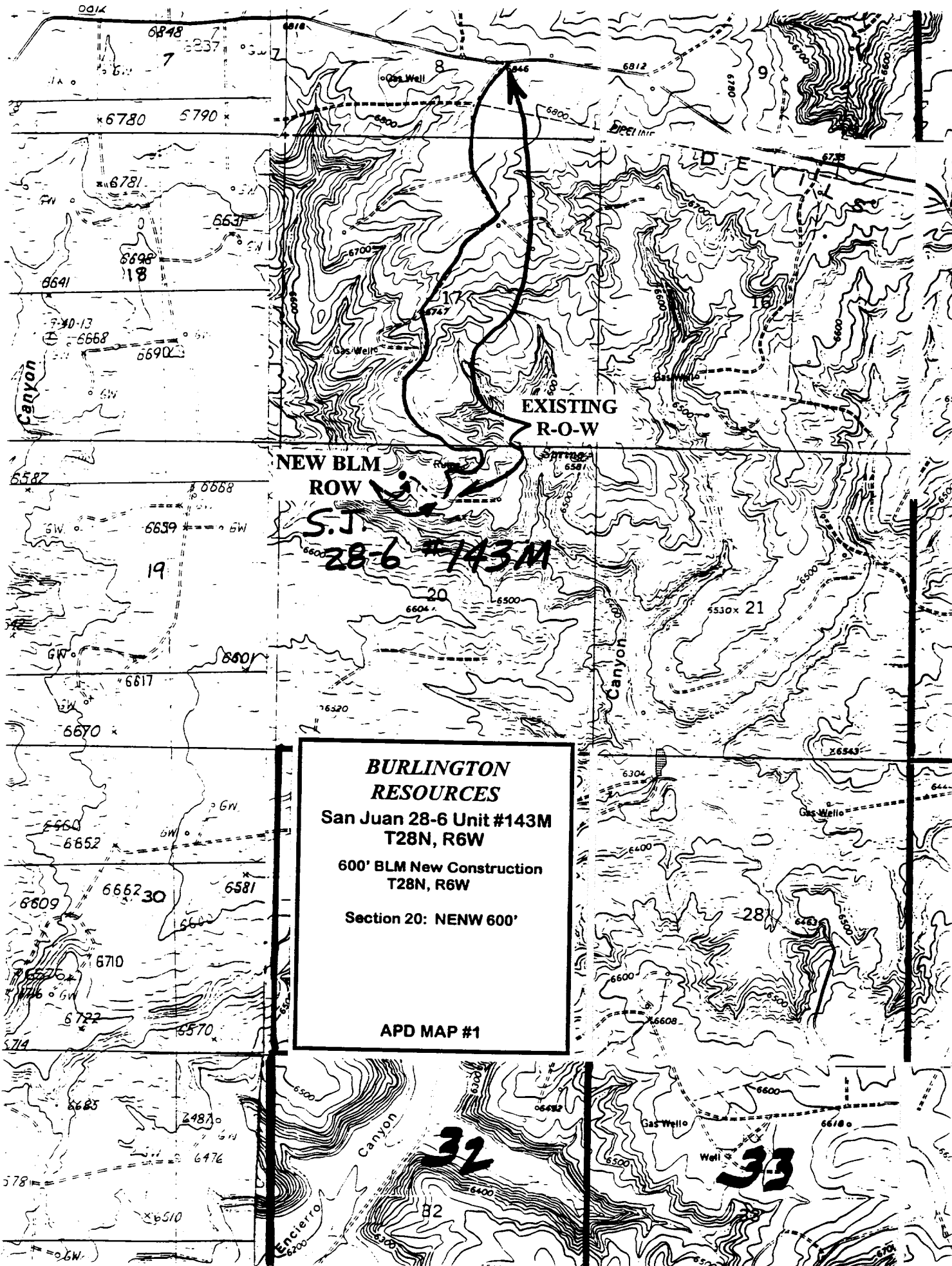
San Juan 28-6 Unit #143M  
Multi-Point Surface Use Plan

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 600' 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 29-6 Water Well #1 in located in SW/4 Section 28, T-29-N, R-6-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.
-

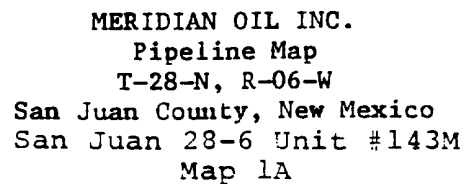
10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be 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 - Bureau of Land Management
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.

 7.3.97  
Regulatory/Compliance Administrator Date

pb



**BURLINGTON  
RESOURCES**  
San Juan 28-6 Unit #143M  
T28N, R6W  
600' BLM New Construction  
T28N, R6W  
Section 20: NENW 600'  
  
APD MAP #1

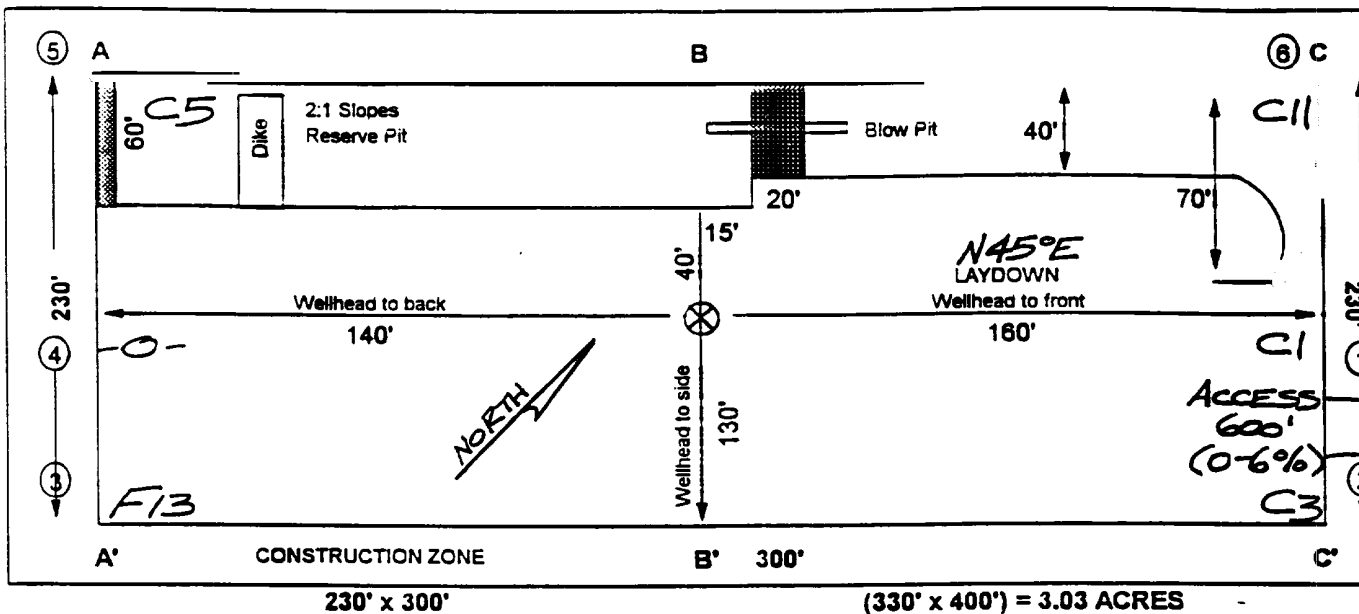


3/91 adw/mjt

# BURLINGTON RESOURCES

PLAT #1

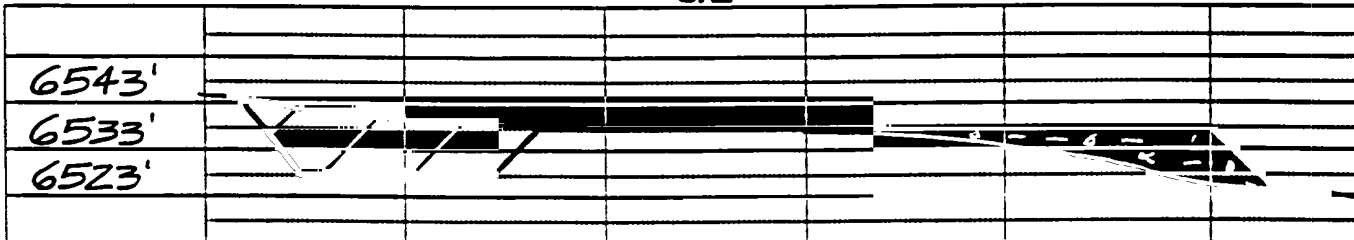
NAME: SAN JUAN 28-6 UNIT # 143M  
 FOOTAGE: 525' FNL 2070' FNL  
 SEC 20 TWN 28 N.R. 6 W NMPM  
 CO: RIO ARriba ST: NEW MEXICO  
 ELEVATION: 6533' DATE: 5/27/97



Reserve Pit Dike: to be 8' above Deep side (overflow - 3' wide and 1' above shallow side).  
 Blow Pit: overflow pipe halfway between top and bottom and to extend over plastic liner and into blow pit.

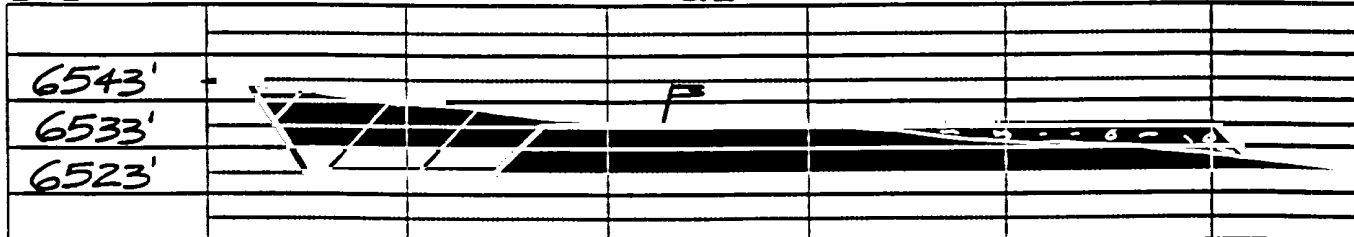
A - A'

C/L



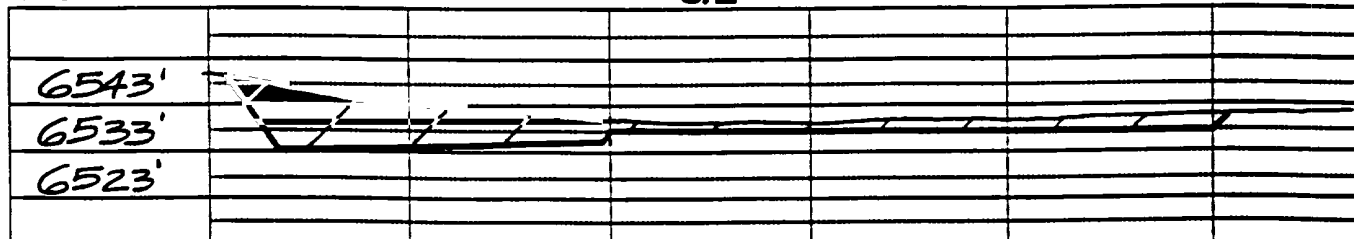
B - B'

C/L



C - C'

C/L



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

**San Juan 28-6 Unit #143M  
OFFSET OPERATOR \ OWNER PLAT  
Nonstandard Location  
Mesaverde/Dakota Formations Well**

**1) Burlington Resources Oil and Gas Company**

