UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. **Type of Work**
DRILL

1b. **Type of Well**
GAS

5. **Lease Number**
SF-079392
Unit Reporting Number
891000950

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
9. **Well Number**
138F

4. **Location of Well**
835' FNL, 660' FEL
Latitude 36° 33.9, Longitude 107° 23.6

10. **Field, Pool, Wildcat**
Basin Dakota
11. **Sec., Twn, Rge, Mer. (NMPM)**
Sec. 19, T-27-N, R-5-W
API # 30-039- 26625

14. **Distance in Miles from Nearest Town**
11 miles from Gobernador

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

15. **Distance from Proposed Location to Nearest Property or Lease Line**
660'

16. **Acres in Lease**

17. **Acres Assigned to Well**
320 E/2

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
1500'

19. **Proposed Depth**
7622'

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6391' GR

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

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

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

24. **Authorized by:** Peggy Cole
Regulatory/Compliance Supervisor

10-23-00
Date

MAY 2001 RECEIVED OIL CON. DIV. DIST. 3

PERMIT NO. _____ **APPROVAL DATE** 5/16/01

APPROVED BY /s/ Lee Otteni **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.

NMOCD

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

[1] API Number	[2] Pool Code	[3] Pool Name
30-039- 26625	71599	Basin Dakota

[4] Property Code	[5] Property Name	[6] Well Number
7454	SAN JUAN 27-5 UNIT	138F

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6391'

[10] Surface Location

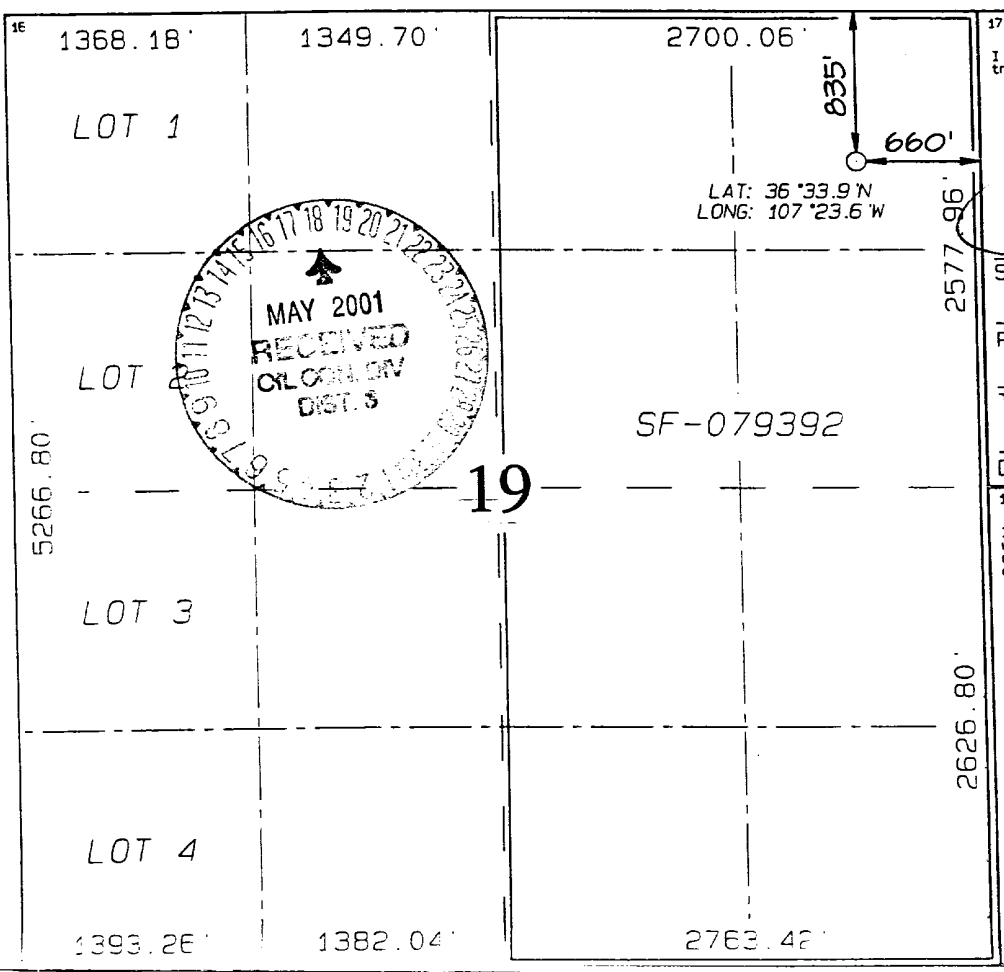
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	27N	5W		835	NORTH	660	EAST	RIO ARRIBA

[11] Bottom Hole Location If Different From Surface

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-E/320			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

[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.

SEPTEMBER 14, 2000
Date of Survey

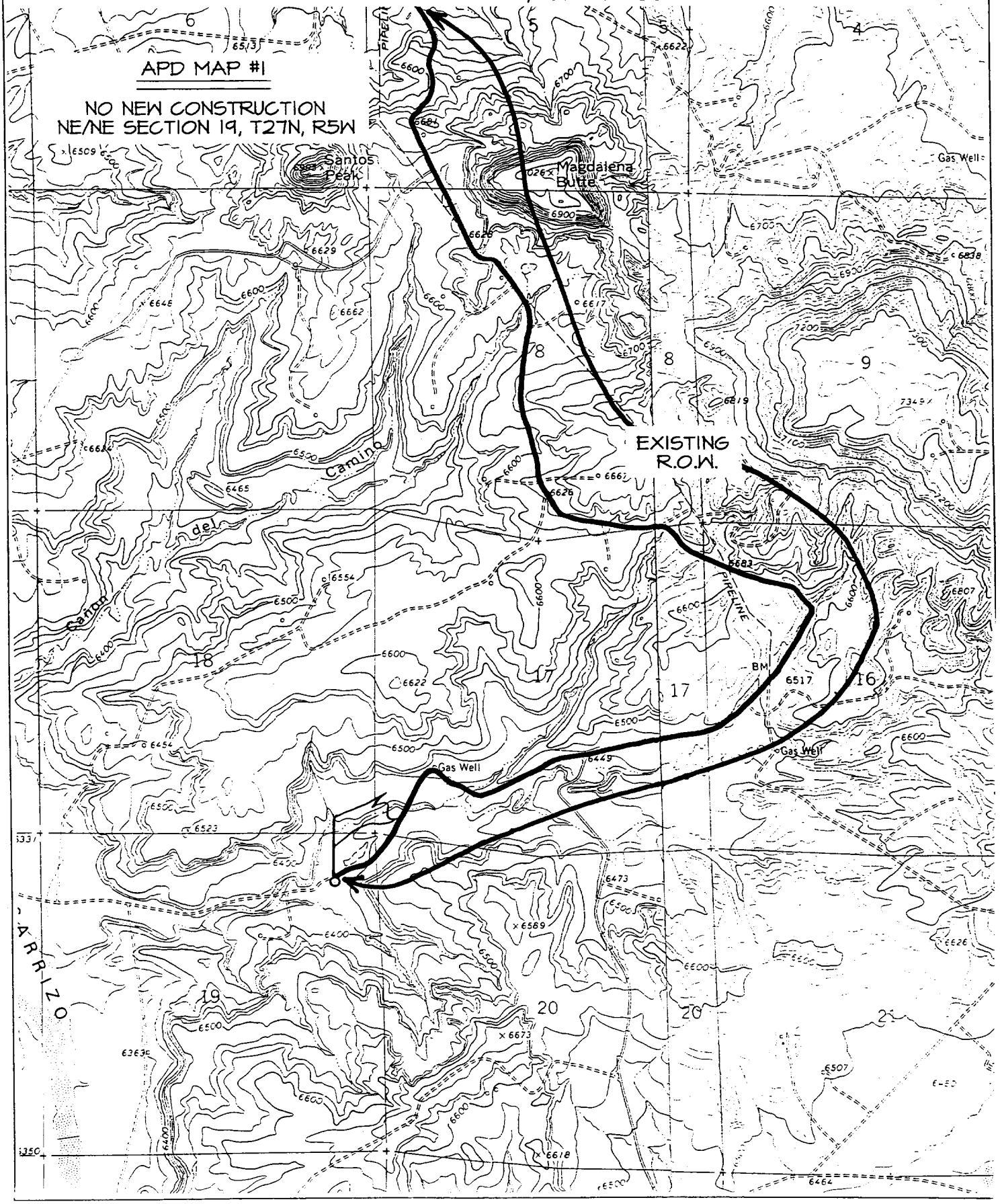
Signature and Seal of Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number 6857

BURLINGTON RESOURCES OIL & GAS COMPANY SAN JUAN 27-5 UNIT #138F

835' FNL & 660' FEL, SECTION 19, T27N, R5W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO



OPERATIONS PLAN

Well Name: San Juan 27-5 Unit #138F
Location: 835'FNL, 660'FEL, Sec 19, T-27-N, R-5-W
Rio Arriba County, NM
Latitude 36° 33.9 Longitude 107° 23.6
Formation: Basin Dakota
Elevation: 6391' GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	2535'	
Ojo Alamo	2535'	2698'	aquifer
Kirtland	2698'	2768'	gas
Fruitland	2768'	3179'	gas
Pictured Cliffs	3179'	3285'	gas
Lewis	3285'	3689'	gas
Intermediate TD	**3385'**		
Mesa Verde	3689'	4146'	gas
Chacra	4146'	4853'	gas
Massive Cliff House	4853'	4995'	gas
Menefee	4995'	5345'	gas
Massive Point Lookout	5345'	5850'	gas
Mancos	5850'	6718'	gas
Gallup	6718'	7283'	gas
Greenhorn	7283'	7372'	gas
Dakota	7372'		gas
TD	**7622'**		

Logging Program:
Cased hole - CBL-CCL-GR - TD to surface
Cores - none

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-9.0	40-50	no control
200- 3385'	LSND	8.4-9.0	30-60	no control
3385- 7622'	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):

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 3385'	7"	20.0#	J-55
6 1/4"	3285' - 7622'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7622'	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/306 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 (1019 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 2688'. First stage: cement with w/168 sx 50/50 Class "G" poz w/2% calcium chloride, 2% gel, 5 pps gilsonite, 0.25 pps Flocele. Second stage: 272 sx Class "G" with 3% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele (1019 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 433 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 (623 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 19 is dedicated to the Dakota in this well.
- This gas is dedicated.

John P. Hosford
Drilling Engineer

10/24/00
Date