

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1999 DEC -2 PM 1:2

070 FARMINGTON, NM

1a. Type of Work
DRILL

5. Lease Number
SF-079521
Unit Reporting Number

6. If Indian, All. or Tribe

Unit Agreement Name

1b. Type of Well
GAS

San Juan 28-5 Unit

2. Operator
BURLINGTON RESOURCES Oil & Gas Company

8. Farm or Lease Name
San Juan 28-5 Unit

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

9. Well Number
56M

(505) 326-9700

10. Field, Pool, Wildcat
Blanco MV/Basin DK

4. Location of Well
1650' FSL, 661' FEL

11. Sec., Twn, Rge, Mer. (NMPM)
I Sec. 32, T-28-N, R-5-W
API # 30-039- 26255

Latitude 36° 36.9, Longitude 107° 22.5

12. County
Rio Arriba

14. Distance in Miles from Nearest Town
40 miles from Blanco

13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
661'

16. Acres in Lease

17. Acres Assigned to Well
318.72 S/2

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

19. Proposed Depth
7728'

20. Rotary or Cable Tools
Rotary

22. Approx. Date Work will Start
**DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"**

21. Elevations (DF, FT, GR, Etc.)
6475' GR

23. Proposed Casing and Cementing Program
See Operations Plan attached

24. Authorized by: *Jeanne Cole*
Regulatory/Compliance Administrator

10-19-99
Date

PERMIT NO. _____

APPROVAL DATE _____

DATE FEB 24 2000

APPROVED BY /s/ Charlie Beecham

TITLE _____

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.

ohsc

NMOCD

OPERATIONS PLAN

Well Name: San Juan 28-5 Unit #56M
Location: 1650' FSL, 661' FEL, Sec 32, T-28-N, R-5-W
Rio Arriba County, NM
Latitude 36° 36.9, Longitude 107° 22.5
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6475' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2610'	
Ojo Alamo	2610'	2787'	aquifer
Kirtland	2787'	2918'	gas
Fruitland	2918'	3300'	gas
Pictured Cliffs	3300'	3402'	gas
Lewis	3402'	3886'	gas
Intermediate TD	3502'		
Mesa Verde	3886'	4252'	gas
Chacra	4252'	4976'	gas
Massive Cliff House	4976'	5140'	gas
Menefee	5140'	5468'	gas
Massive Point Lookout	5468'	5971'	gas
Mancos	5971'	6637'	gas
Gallup	6637'	7388'	gas
Greenhorn	7388'	7450'	gas
Graneros	7450'	7490'	gas
Dakota	7490'		gas
TD (4 1/2" liner)	7728'		

Logging Program:

Cased hole - CBL-CCL-GR - TD to surface

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- 3502'	LSND	8.4-9.0	30-60	no control
3502- 7728'	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' - 3502'	7"	20.0#	J-55
6 1/4"	3402' - 7728'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7728' 2 3/8" 4.7# J-55

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 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/319 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, 2% gel (1035 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 2818'. First stage: cement with w/106 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 0.5 pps Cellophane. Second stage: 291 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 10 pps Gilsonite (1035 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 2787'. Two turbolating centralizers at the base of the Ojo Alamo at 2787'. 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 474 sx 50/50 Class "H" Poz with 2% gel, 0.25# flocele/sx, 5# gilsonite/sx, 0.2% retardant and 0.4% fluid loss additive (622 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. 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):

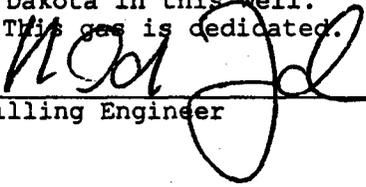
The following equipment will be operational while gas/mist drilling:

- An anchored bloopie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The bloopie 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 bloopie 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 south half of Section 32 is dedicated to the Mesaverde and the Dakota in this well.
- This gas is dedicated.


Drilling Engineer

10/20/99
Date

BURLINGTON RESOURCES OIL AND GAS COMPANY

SAN JUAN 28-5 UNIT No. 56M

SE/4 SEC. 32, T-28-N, R-5-W, N.M.P.M.

RIO ARriba COUNTY, NEW MEXICO

1650' FSL 661' FEL

