

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <u>Deepen</u>	5. Lease Number SF-080675 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name San Juan 27-4 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 88409 (505) 326-9700	8. Farm or Lease Name San Juan 27-4 Unit 9. Well Number 120
4. Location of Well 1560' FSL, 1595' FWL Latitude 36° 31.61', Longitude 107° 14.48'	10. Field, Pool, Wildcat Blanco MV/Basin DK 11. Sec., Twn, Rge, Mer. (NMPM) K Sec. 34, T-27N, R-4-W API # 30-039-22122
14. Distance in Miles from Nearest Town 15 miles east of Lowry Camp, NM	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1560'	
16. Acres in Lease	17. Acres Assigned to Well 320 W/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease ½ mile	
19. Proposed Depth 8450'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 7251 GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Frances Bend</u> Regulatory Specialist	<u>5-3-05</u> Date

PERMIT NO.

APPROVED BY

APPROVAL DATE

TITLE

DATE

Archaeological Report Attached

Threatened and Endangered Species Report Attached

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

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV1220 S. St Francis Dr., Santa Fe, NM
87505

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

Form C-102

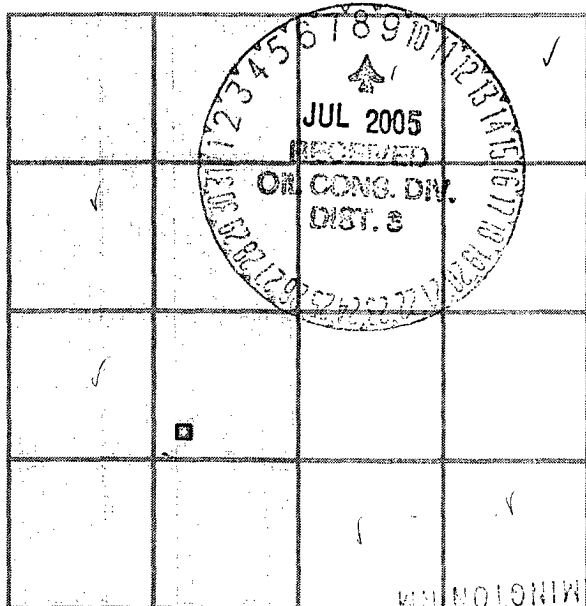
Permit 10672

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-039-22122	Pool Name BASIN DAKOTA (PRORATED GAS)	Pool Code 71599
Property Code 7452	Property Name SAN JUAN 27 4 UNIT	Well No. 120
OGRID No. 14538	Operator Name BURLINGTON RESOURCES OIL & GAS CO	Elevation 7251

Surface And Bottom Hole Location

UL or Lot K	Section 34	Township 27N	Range 04W	Lot Idn	Feet From 1560	N/S Line S	Feet From 1595	E/W Line W	County Rio Arriba
Dedicated Acres 320		Joint or Infill		Consolidation Code		Order No.			

**OPERATOR CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signed By: *Frances Bend*

Title: Regulatory Specialist

Date: May 3, 2005

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.

Surveyed By: David Vilven

Date of Survey: 05/15/1974

Certificate Number: 1760

RECEIVED
2005 MAY 3 PM 3 46

OPERATIONS PLAN FOR SAN JUAN 27-4 UNIT #120

Well: San Juan 27-4 Unit #120
Location: T-27-N, R-4-W, Sect. 34, Unit K; 1560' FSL, 1595' FWL
Rio Arriba County, NM
Latitude 36° 31.61' Longitude 107° 14.48'

Formation: Blanco Mesaverde and Basin Dakota

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose		----
Ojo Alamo	3524'	3716'	aquifer
Kirtland	3716'	3913'	gas
Fruitland	3913'	4057'	gas
Pictured Cliffs	4057'	4239'	gas
Lewis	4239'	4553'	gas
Huerfano Bentonite	4553'	5019'	gas
Chacra	5019'	5642'	gas
Upper Cliff House	5642'	5743'	gas
Massive Cliff House	5743'	5852'	gas
Menefee	5852'	6225'	gas
Massive Point Lookout	6225'	6724'	gas
Mancos	6724'	7362'	gas
Gallup	7362'	8167'	gas
Greenhorn	8167'	8228'	gas
Graneros	8228'	8252'	gas
Two Wells	8252'		gas
Total Depth	8450'		

Logging program:

Cased hole - CBL-CCL-GR - TD to 7000'

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
6667' - 8450'	Air/Nitrogen	n/a	n/a	n/a

Casing Program:

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
3-7/8"	~6550' - 8450'	3-1/2" Flush	9.3#/'	L-80

Tubing Program:

<u> tubing Program:</u>	<u>Tbg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' – total depth	2-1/16"	3.25#	J-55

Operations:

It is intended to deepen the subject well to the Dakota formation by the following procedure:

1. MIRU completion rig. TOOH with tubing.
2. Set retrievable bridge plug at +/- 5597'.
3. Pressure test casing to 1000 psi for 15 minutes. TOOH with bridge plug.
4. Lay in acid soluble cement across entire Mesaverde interval. WOC.
5. Drill out cement. Test casing to 500 psi for 15 minutes. Repeat cement work until pressure test holds.
6. Drill out shoe. Drill Dakota formation to approximately 8450' with mud logger to call final total depth. TOOH.
7. TIH with 3-1/2" flush joint pipe and set at total depth.
8. Cement with 26 sxs of type III cement (1.39 yield, 14.5 ppg). WOC. Run CBL. TOC @ 7052'.
9. Perforate and fracture stimulate the Dakota formation. Flow back Dakota.
10. Set composite plug 50' above top Dakota perforation.
11. Chemical cut 3-1/2" casing at +/- 6550'.
12. Acidize Mesaverde interval to restore production.

13. Drill out composite plug above the Dakota. Clean out to PBTD.
14. Land 2-1/16" IJ tubing.
15. RDMO rig. Return well to production as a commingled MV/DK producer.

BOP Specifications, Wellhead and Tests:

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 #4). 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 4 1/2" x 2 1/16" x 2000 psi tree assembly.

General Information:

- 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.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with hand wheels.

Cementing:

3-1/2" Production Liner

Cement to cover minimum of 1200' above the Dakota formation. Minimum TOC @ 7052'. 26 sxs type III cement (1.39 yield, 14.5 ppg). WOC a minimum of 18 hrs prior to completing.

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.
- 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 Mesaverde and/or Dakota formations will be completed and commingled if both formations are completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:
Dakota 1200 psi

Angela Ibara
Sr. Staff Engineer

4/25/05
Date

San Juan 27-4 Unit #120

1560' FSL , 1595' FWL
Unit K, Section 34, T27N, R04W
Rio Arriba County, NM

LAT: 36 deg 31.61 min

LONG: 107 deg 14.48 min

GL = 7,251'

KB= 7,263'

Current Wellbore Diagram

Surface Casing:

9-5/8" 36# K-55
Set @ 221'
TOC @ circ to surf

Intermediate Casing:

7" 23#/20# N-80/K-55
Set @ 4,413' Holes 1442' - 1459'
TOC @ 1,358' sqz Squeezed w/ 100 sxs

Window cut in 7" @ 3892' - 3900'

Tubing:

2-3/8" 4.7# J-55
Set @ 6319

Production Casing:

4-1/2" 10.5# K-55
Set @ 6,667'
TOC @ 2,850' CBL

Existing Stimulations:

Cliff House
5647' - 5899'
75000# sand, 70Q foamed 30# linear gel

Point Lookout
6299' - 6377'
33000# sand, 70Q foamed 30# linear gel

PBTD= 6,620'
TD= 6,670'

Ojo Alamo	3524
Kirtland	3716
Fruitland	3913
Pictured Cliffs	4057
Lewis	4239
Heur Bent.	4553
Chacra	5019
U Cliffhouse	5642
Cliffhouse	5743
Menefee	5852
Point Lookout	6225
Mancos	6724' est
Gallup	7362' est
Greenhorn	8167' est
Graneros	8228' est
Two Wells	8252' est

Main Hole P&A:

6 sqz holes @ 3933' w/ 200 sxs

Cement retainer @ 3936'
85 sxs below
TOC @ 5621'

PC 4060' - 4140'

Balanced plug 4219' - 4457', 24 sxs

Cement retainer @ 5687'
146 sxs below and 5 sxs on top
TOC @ 5621'

CH 5747' - 5853'
PLO 6184' - 6648'

Main Hole TD - 6704', PBTD - 6686'

CH: 38 holes from 5647' - 5899', actual depths unknown

PLO: 6229', 43', 50', 59', 72', 81', 89', 6305', 09', 15', 24', 34', 51', 57', 74', 77'

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TOC @ circ to surf

Intermediate Casing:

7" 23#/20# N-80/K-55
Set @ 4,413' Holes 1442' - 1459'
TOC @ 1,358' sqz Squeezed w/ 100 sxs

Window cut in 7" @ 3892' - 3900'

Tubing:

2-1/16" 3.25# J-55
Set @ TBD

Production Casing:

4-1/2" 10.5# K-55
Set @ 6,667'
TOC @ 2,850' CBL

Existing Stimulations:

Cliff House
5647' - 5899'
75000# sand, 70Q foamed 30# linear gel

Point Lookout

6299' - 6377'
33000# sand, 70Q foamed 30# linear gel

Proposed Stimulation:

Dakota
TBD
40000# TLC, Slickwater frac

Proposed Production Liner:

3-1/2" ULT FJ 9.2# L-80
Set @ 6550'-8450'
TOC @ 7052'

PBTD = 8448' est
TD = 8450' est

Ojo Alamo	3524
Kirtland	3716
Fruitland	3913
Pictured Cliffs	4057
Lewis	4239
Heur Bent.	4553
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Deepening Project

BURLINGTON RESOURCES

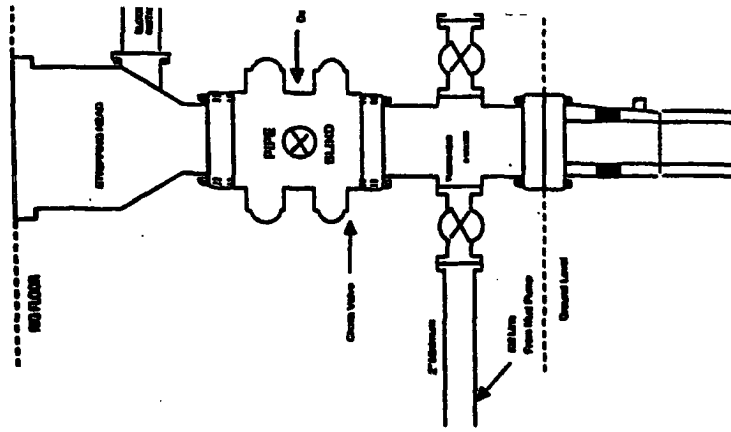
Completion/Worltover R/BOP Configuration
2,000 psi System

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System

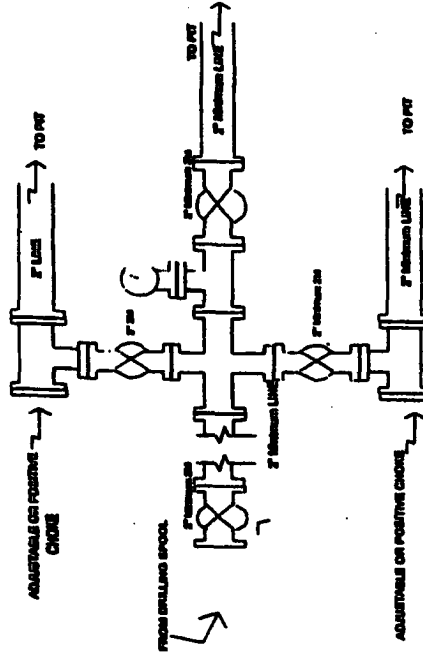
Burlington Resources

Drilling Rig
2000 psi System



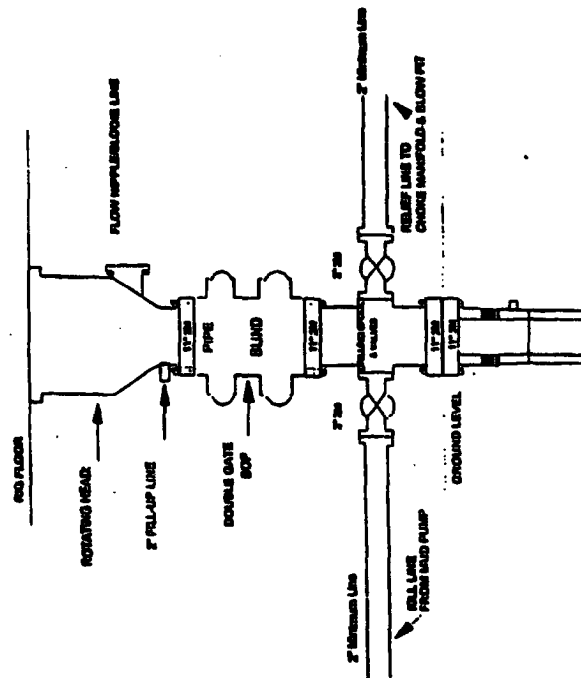
Minimum BOP Installation for all Completions Operations. 7-1/16" bore, 2000 psi minimum pressure double gate BOP to be equipped pipe rams. A stripping head to be installed the BOP. All BOP equipment is 2000 psi pressure or greater excluding 500 psi sh

Figure 1



Choke manifold Installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3



BOP Installation from Surface Casing Point to Total Depth. 11\"/>

Figure #1