

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED

1a. Type of Work DRILL	5. Lease Number SF-080673
1b. Type of Well GAS	Unit Reporting Number 070 Farmington, NM
2. Operator BURLINGTON RESOURCES Oil & Gas Company	6. If Indian, All. or Tribe
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	7. Unit Agreement Name
4. Location of Well 2080' FSL, 2460' FEL Latitude 36° 35.1555'N, Longitude 107° 17.4317'W	8. Farm or Lease Name San Juan 27-4 Unit
	9. Well Number 5N
	10. Field, Pool, Wildcat Blanco MV/Basin DK
	11. Sec., Twn, Rge, Mer. (NMPM) J Sec. 7, T-27-N, R-4-W API # 30-045- 039 27632
14. Distance in Miles from Nearest Town Governador 18 Miles	12. County Rio Arriba
	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 2080'	
16. Acres in Lease	17. Acres Assigned to Well 320 E/A
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1400'	
19. Proposed Depth 8193	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6905 GR, 6917 KB	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Frances Bend</u> Regulatory/Compliance Assistant	<u>2-6-04</u> Date

PERMIT NO.

APPROVAL DATE

APPROVED BY

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.

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

NMOC

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

PD 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

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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

*API Number 30-039- 27632		*Pool Code 72319/71599	*Pool Name Blanco Mesaverde/Basin Dakota
*Property Code 7452	*Property Name SAN JUAN 27-4 UNIT		*Well Number 5N
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP		*Elevation 6905'

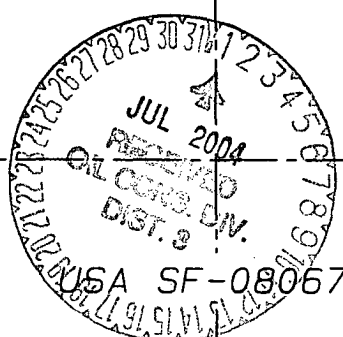
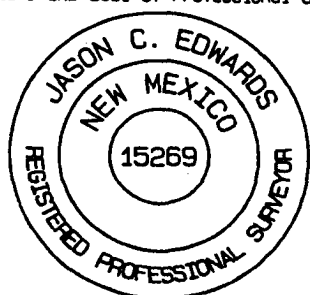
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	7	27N	4W		2080	SOUTH	2460	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 MV-E/320 DK-E/320					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.		

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 1338.48'	1320.00'	2640.00'	<div></div>	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <u>Nancy Oltmanns</u> Signature Nancy Oltmanns Printed Name Senior Staff Specialist Title <u>2-6-04</u> Date
LOT 1				
LOT 2				
LOT 3				
5280.00'				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. Survey Date: OCTOBER 3, 2003 Signature and Seal of Professional Surveyor <div></div> <u>JASON C. EDWARDS</u> Certificate Number 15269
LOT 4	1327.26'	1320.00'	2640.00'	

OPERATIONS PLAN

Well Name: San Juan 27-4 Unit #5N
Location: 2080' FSL, 2460' FEL, Section 7, T-27-N, R-4-W
Rio Arriba County, New Mexico
Latitude 36° 35.1555'N, Longitude 107° 17.4317'W
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6905' GR

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3152'	
Ojo Alamo	3152'	3322'	aquifer
Kirtland	3322'	3597'	gas
Fruitland	3597'	3777'	
Pictured Cliffs	3777'	3857'	gas
Lewis	3857'	4317'	gas
Intermediate TD	3957'		
Huerfanito Bentonite	4317'	4917'	gas
Chacra	5327'	5447'	gas
Cliff House	5447'	5577'	
Menefee	5577'	5917'	gas
Point Lookout	5917'	6454'	gas
Mancos	6454'	7097'	gas
Gallup	7097'	7861'	gas
Greenhorn	7861'	7927'	gas
Graneros	7927'	7962'	gas
Dakota	7962'	8077'	gas
T/Upper Cubero	8077'	8126'	gas
T/Lower Cubero	8126'	8178'	gas
T/Oak Canyon	8178'		
TD	8193'		

Logging Program:

Mud Logs/Coring/DST -
Mud logs - none
Coring - none
DST - none
Open hole - none
Cased hole - Gamma Ray, CBL - surface to TD

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud MUD/Air/Air Mist	8.4-9.0	40-50	no control
200- 3957'	LSND	8.4-9.0	30-60	no control
3957- 8193'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

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#	H-40
8 3/4"	0' - 3957'	7"	20.0#	J-55
6 1/4"	0' - 7800'	4 1/2"	10.5#	J-55
6 1/4"	7800' - 8193'	4 1/2"	11.6#	N-80

Tubing Program: 0' - 8193' 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 4 1/2" x 2 3/8" x 2000 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 drill crew.
- All BOP tests & 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 conventionally drilled -

Cement with 147 sacks Type III cement with 0.25 pps Celloflake, 3% calcium chloride. (188 cu ft, 200% excess, bring cement to surface). Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees F. prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -

Lead with 356 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (882 cu ft- 50% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar set 300' above the top of the Fruitland. First stage: Lead with 12 sacks Premium Lite cmt w/3% calcium chloride, 0.25 pps Celloflake, 0.4% fluid loss, 5 pps LCM-1, 0.4 sodium metasilicate. Tail with 90 sacks with Type III cement with 1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: Lead with 344 sacks with Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (882 cu. ft.-50% 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 @ 3322'. Two turbolating centralizers at the base of the Ojo Alamo 3322'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Cement with 291 sacks Premium Lite HS w/ 0.25 pps Celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. (577 cu ft. 30% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float collar stacked on top of float shoe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

- 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 (Air/Mist Drilling):

The following equipment will be operational while air/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.
- 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 Mesa Verde and Dakota formation will be completed and Commingled.
- 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 below the top of the Pictured Cliffs.
- The east half of Section 7 is dedicated to the Mesa Verde and the Dakota.
- This gas is dedicated.

Sean Corrigan
Drilling Engineer

February 20, 2004
Date

PLAT #1

BURLINGTON RESOURCES OIL & GAS COMPANY, LP

SAN JUAN 27-4 UNIT #5N, 2080' FSL & 2460' FEL

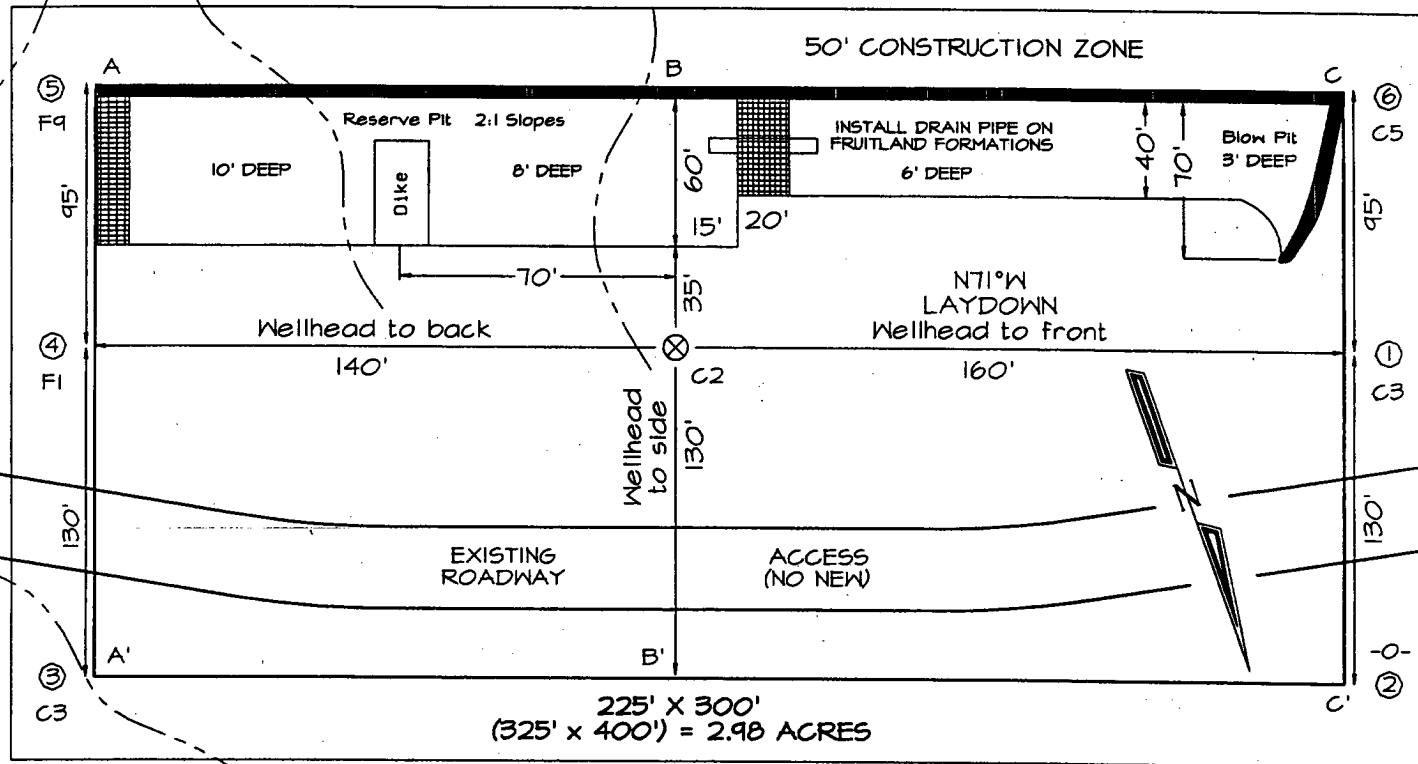
SECTION 7, T27N, R4W, NMPM, RIO ARriba COUNTY, NM

GROUND ELEVATION: 6905' DATE: OCTOBER 3, 2003

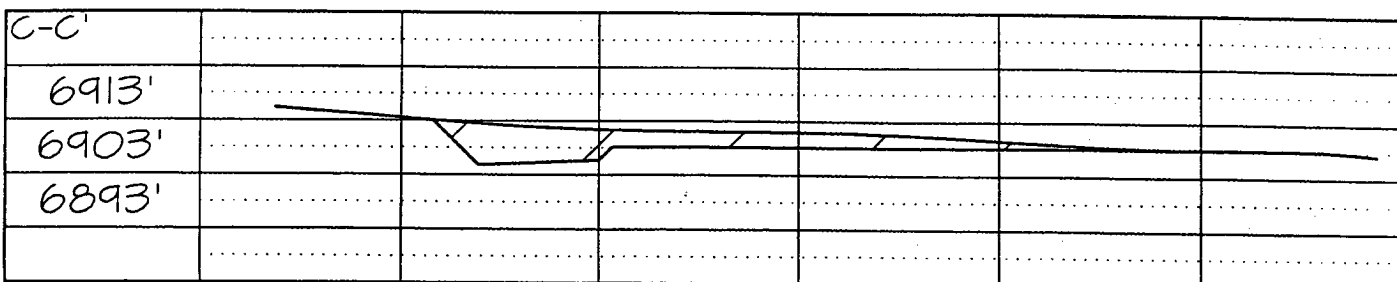
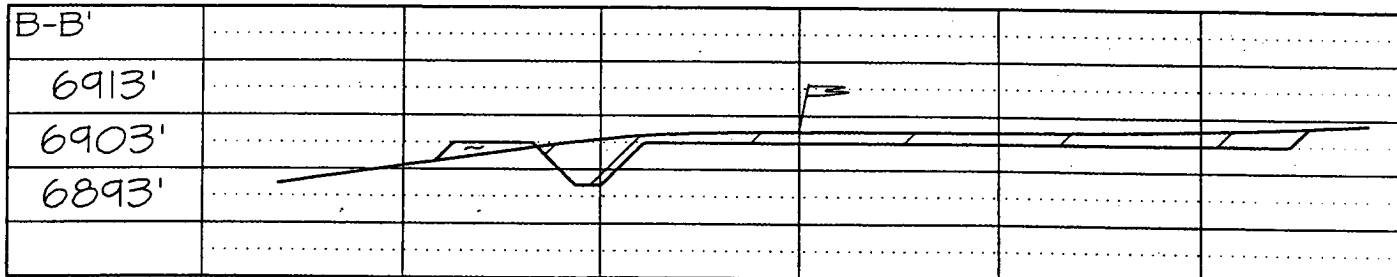
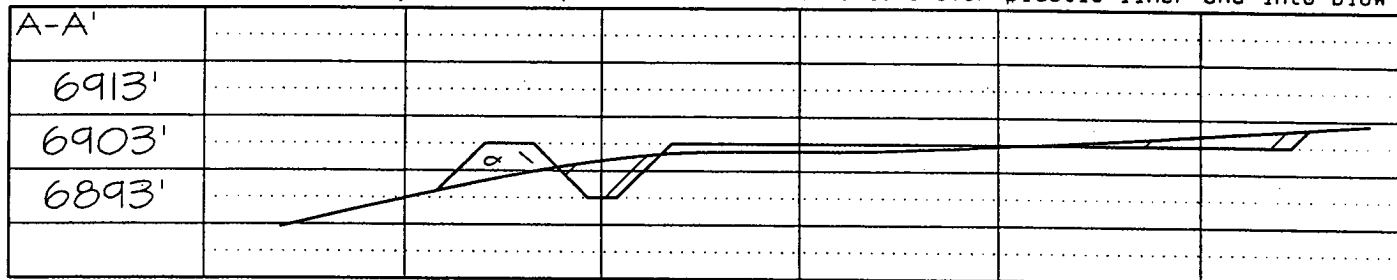
LATITUDE: 36°35'09"

LONGITUDE: 107°17'26"

DATUM: NAD1927



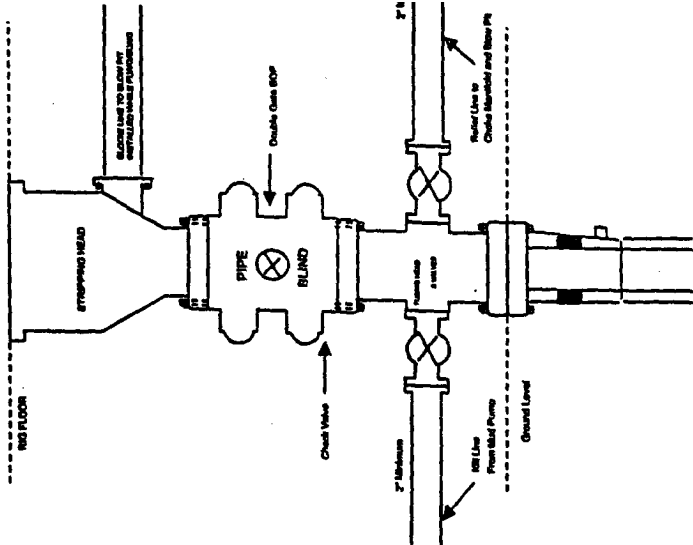
Reserve Pit Dike: to be 8' above Deep side* (overflow - 3' wide and 1' above shallow side).
Blow Pit: overflow pipe halfway between top and bottom and to extend over plastic liner and into blow pit.



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

BURLINGTON RESOURCES

Completion/Workover Rig
BOP Configuration
2,000 psi System



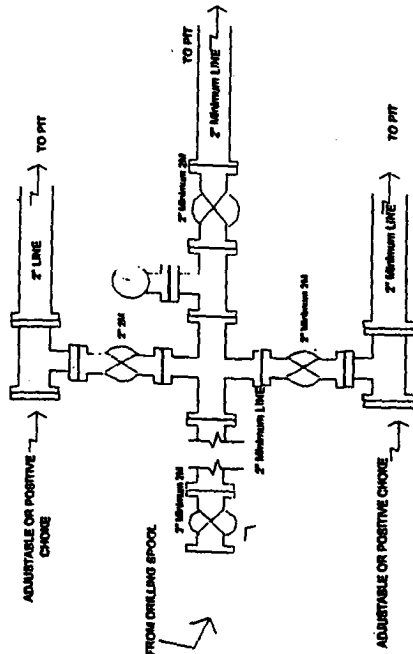
Minimum BOP Installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 500 psi stripping head.

Figure #2

4-20-01

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System



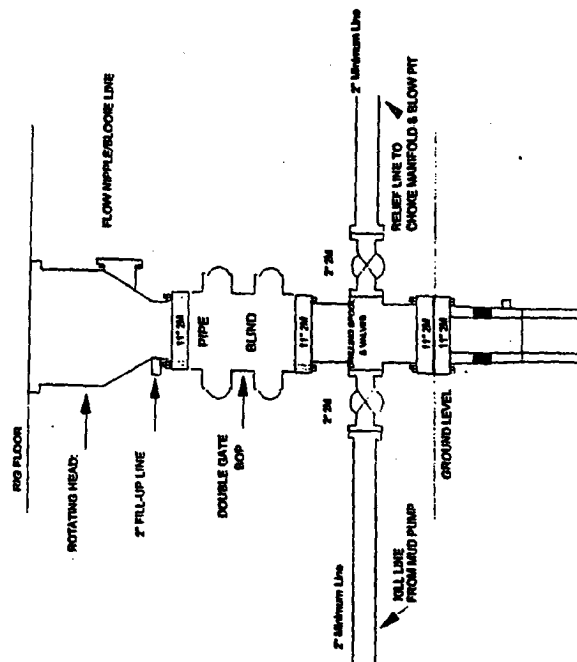
Choke manifold Installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

Burlington Resources

Drilling Rig
2000 psi System



BOP Installation from Surface Casing Point to Total Depth. 11" Bore 10" Nominal, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 500 psi rotating head on top of ram preventers. All BOP equipment is 2,000 psi working pressure

Figure #1

1-01