

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-047020-B
1b. Type of Well GAS	Unit Reporting Number
2. Operator <b>BURLINGTON</b> RESOURCES Oil & Gas Company	6. If Indian, All or Tribe
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87498 (505) 326-9700	Unit Agreement Name
4. Location of Well 1635' FSL, 2125' FEL Latitude 36° 41.6586'N, Longitude 107° 57.5216'W	8. Farm or Lease Name Calvin 9. Well Number #1F
10. Field, Pool, Wildcat Basin Dakota	11. Sec., Twn, Rge, Mer. (NMPM) Sec. 26, T29N, R11W API # 30-045-33093
12. Distance in Miles from Nearest Town 4.0 miles to intersection Hwy 64 & 550	12. County San Juan
13. State NM	
15. Distance from Proposed Location to Nearest Property or Lease Line 1635'	
16. Acres in Lease	17. Acres Assigned to Well SESW, SE, NWSW, SWSW, 320 acres NWSW, 1/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 919'	
19. Proposed Depth 6549'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 5567' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Geni Clark</u> Regulatory Specialist	<u>1/5/05</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.

NO HPA NOTIFICATION NEEDED UNDER ORDER R-8768F.

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

NMOCD

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

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II  
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised June 10, 2003

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30--045- 33093		*Pool Code 71599	*Pool Name Basin Dakota
*Property Code 6883	*Property Name CALVIN		*Well Number 1F
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP		*Elevation 5567'

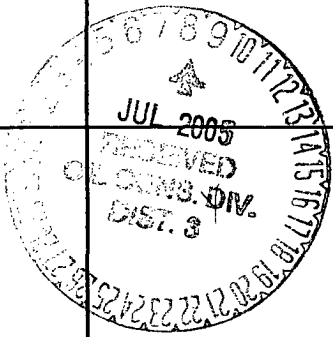
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	26	29-N	11-W		1635	SOUTH	2125	EAST	SAN JUAN


<sup>11</sup> 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
*Dedicated Acres 320 acres			*Joint or Infill		*Consolidation Code		*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		<b>RECEIVED</b> MAY 17 2005 Bureau of Land Management Farmington Field Office	
26		FOUND 3" BC LS9672	
LAT. 36°41.6586' N. (NAD 27) LONG. 107°57.5216 W. (NAD 27)		2125'	
DAVIS, AUSTIN A.	NM SF-047020-B	1635'	FOUND 3 1/4" B.L.M. BC 1999
		2606.33' (M)	FOUND 3 1/4" B.L.M. BC 1999
		S 89-53-08 W 2621.13' (M)	
		N 00-11-57 E	

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

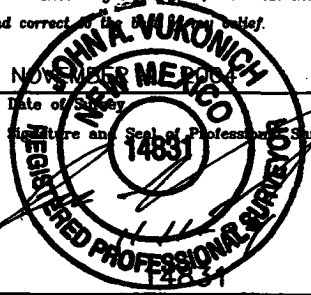
  
Signature

Joni Clark  
Printed Name

Regulatory Specialist  
Title

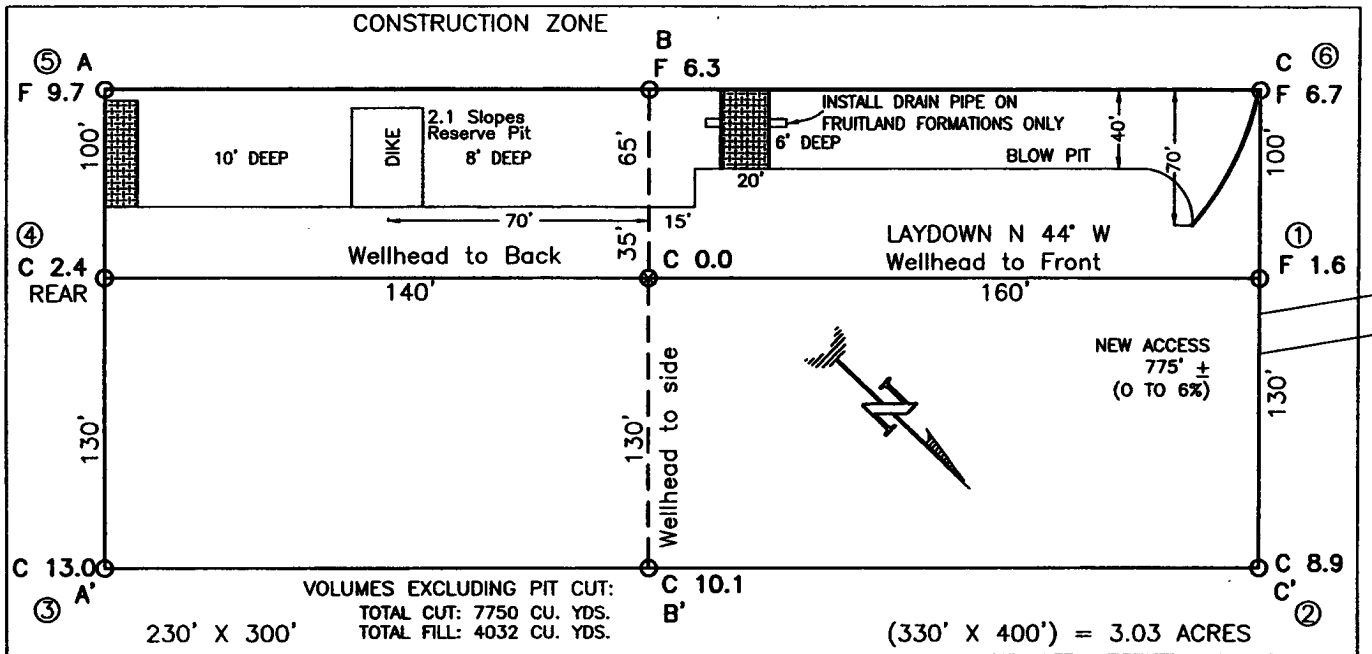
12/14/04  
Date

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 knowledge and belief.

  
Signature and Seal of Professional Surveyor

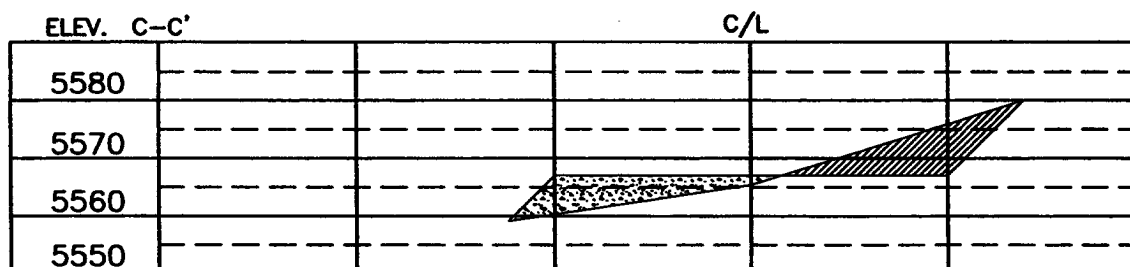
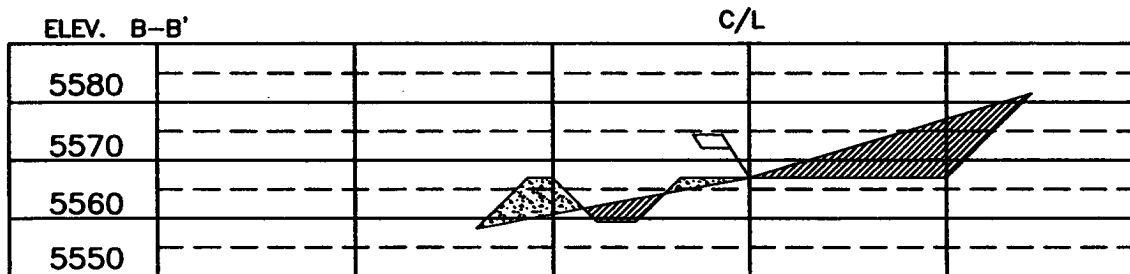
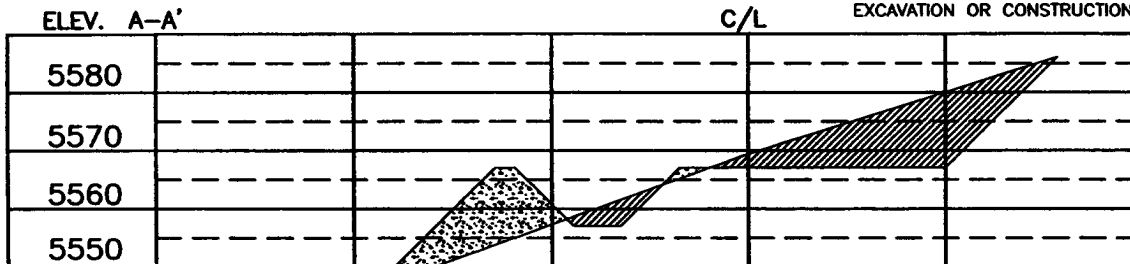
Certificate Number

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**CALVIN NO. 1F, 1635 FSL 2125 FEL**  
**SECTION 26, T-29-N, R-11-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO**  
**GROUND ELEVATION: 5567, DATE: NOVEMBER 02, 2004**



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: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.



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.

REVISION:	DATE:	REVISION BY:	DATE:
1-CHANGED LOC. OF ACCESS	11-30-04	G.V.	

**Daggett Enterprises, Inc.**  
Surveying and Oil Field Services  
P. O. Box 15068 • Farmington, NM 87401  
Phone (505) 328-1772 • Fax (505) 328-6019  
NEW MEXICO L.S. No. 14831  
CADD FILE: BRES35CFB  
DATE: 11/10/04

DRAWN BY: G.V.  
ROW#: BRES35

## OPERATIONS PLAN

Well Name: CALVIN 1F  
Location: 1635' FSL & 2125' FEL, Section 26 T29N R11W  
San Juan County, New Mexico

Formation: Basin Dakota  
Elevation: 5567' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	506'	
Ojo Alamo	506'	689'	aquifer
Kirtland	689'	1576'	gas
Fruitland Coal	1576'	1754'	gas
Pictured Cliffs	1754'	1914'	gas
Lewis	1914'	2206'	
Huerfanito Bentonite	2206'		
Chacra	2731'	3304'	gas
Massive Cliff House	3304'	3399'	gas
Menefee	3399'	4046'	gas
<b>Intermediate 7"</b>	<b>3549'</b>		
Massive Point Lookout	4046'	4429'	gas
Mancos Shale	4429'	5304'	
Upper Gallup	5304'	6057'	gas
Greenhorn	6057'	6119'	gas
Graneros	6119'	6155'	gas
Two Wells	6155'	6234'	gas
Paguate	6234'	6295'	gas
Cubero	6295'	6361'	gas
Encinal	6361'	6417'	gas
Burro Canyon	6417'	6509'	gas
Morrison	6509'	6397'	gas
Topset TD:	6397'	6549'	gas
<b>Total Depth:</b>	<b>6549'</b>		gas

### Logging Program:

#### Mud Logs/Coring/DST

Mud logs - From 5857' to 6549'  
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 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120 - 3549'	LSND	8.4 - 9.0	30 - 60	no control
3549 - 6549'	Air/Air Mist/Nitrogen	n/a	n/a	no 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' - 120'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3549'	7"	20/23#	J-55
6 1/4"	0' - 6397'	4 1/2"	10.5#	J-55
3 7/8"	6397' - 6549'	open hole		

**Tubing Program:**

<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 6549'	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 -

**Pre-Set Drilled** - Cement with 23 sx Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (38 cu ft of slurry, bring cement to surface) Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

**Conventionally Drilled** - Cement with 88 sx Type III cement with 0.25 pps Celloflake, 2% CaCl. (113 cu ft of slurry, 200% excess, bring cement to surface) Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under 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. 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 with 317 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 (800 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 w/182 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 135 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (800 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 third joint off bottom, to the base of the Ojo Alamo @ 689'. Two turbolating centralizers at the base of the Ojo Alamo 689'. 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 w/199 sxs Premium Lite HS w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% fluid loss (393 cu.ft., 30% excess to achieve 100' overlap in 4-1/2" x 7" annulus). WOC a minimum of 18 hrs prior to completing.

**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 Dakota formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

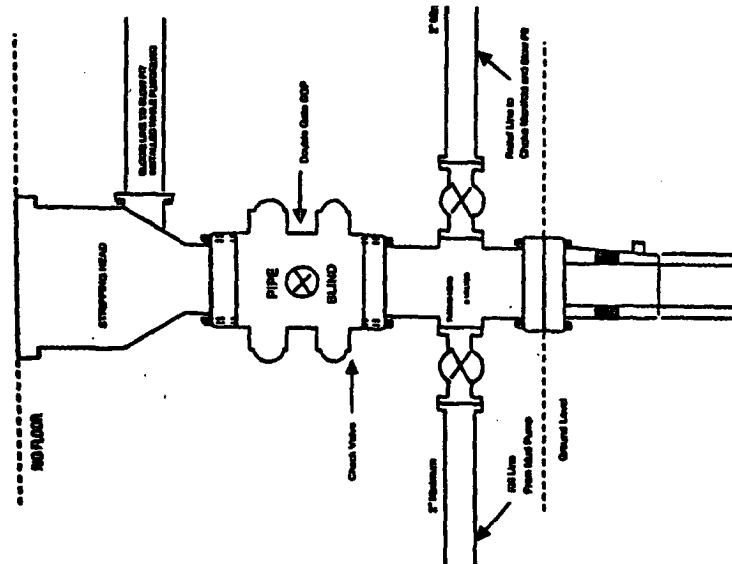
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2000 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The SESW, SE, NWSW, SWSW of Section 26 is dedicated to the Dakota formation.
- This gas is dedicated.

  
Drilling Engineer

1-5-05  
Date

## BURLINGTON RESOURCES

**Completion/Workover Rig  
BOP Configuration  
2,000 psi System**

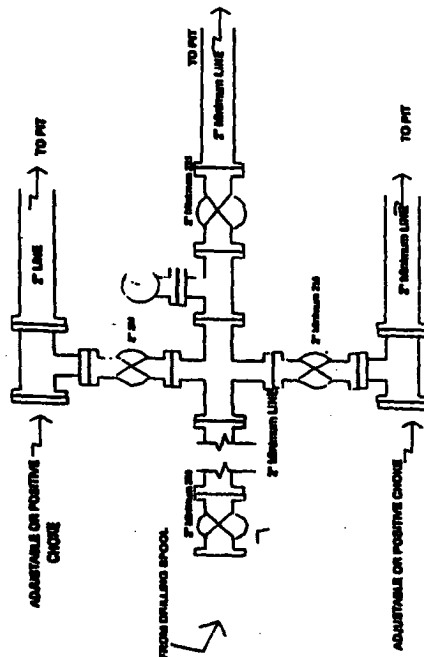


**Minimum BOP installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment to 2000 psi working pressure or greater excluding 500 psi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

Figure #2

## BURLINGTON RESOURCES

**Drilling Rig  
Choke Manifold Configuration  
2000 psi System**



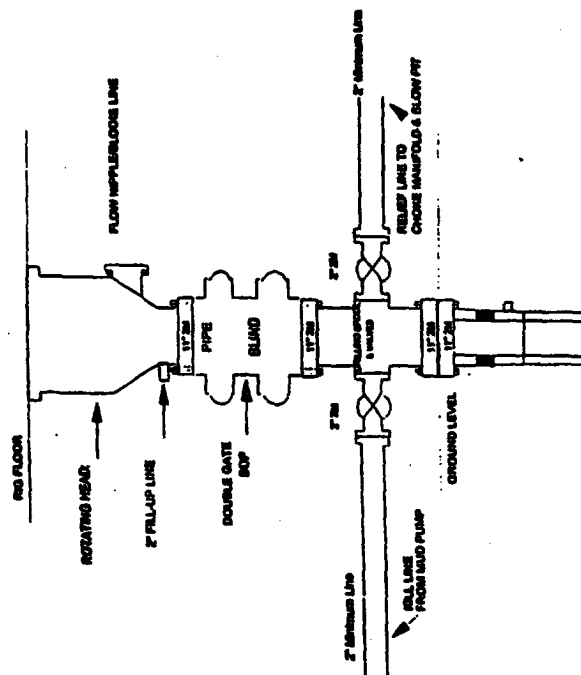
**Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.**

**Figure #3**

## Burlington Resources

## Drilling Rig

## 2000 per System



**BOP Installation from Surface Casing Point to Total Depth, 11" Bore 10" Norelth, 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