

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	2005 MAR 4 PM 4 11 RECEIVED 070 FARMINGTON NM	5. Lease Number NMNM-111921 Unit Reporting Number MV-8910010510 DK-891001051B
1b. Type of Well GAS		6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company		7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name Negro Canyon 9. Well Number #102S
4. Location of Well 1320' FNL, 190' FEL surface <i>sect 2</i> 700' FNL, 700' FWL bottom hole Surface-Latitude 36°55.7499'N, Longitude 107°38.1542' W Bottom Hole-Lat. 36°55.8483'N, Longitude 107°37.9659' W		10. Field, Pool, Wildcat Basin Fruitland Coal 11. Sec., Twn, Rge, Mer. (NMPM) A Sec. 2 T31N, R08W API # 30-045- 32935
14. Distance in Miles from Nearest Town 30.2 miles to Blanco, NM Post Office	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 190'		
16. Acres in Lease	17. Acres Assigned to Well 299.36 N/2 <i>sect 1, 31N 8W</i>	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 2051'		
19. Proposed Depth 3923'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6938' GR	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <i>Joni Clark</i> Senior Regulatory Specialist	<i>3/3/05</i> 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.

procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

NMOCDD

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

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

DISTRICT II
811 South First, Artesia, N.M. 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-32935	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 34287	⁵ Property Name NEGRO CANYON	⁶ Well Number 102S
⁷ ORD No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	⁹ Elevation 6938'

¹⁰ Surface Location

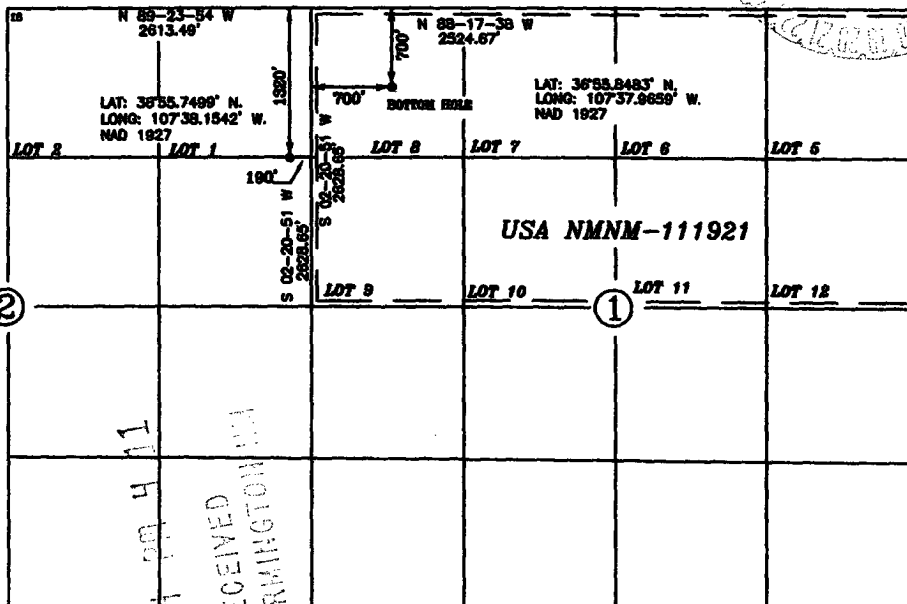
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	31-N	8-W		1320'	NORTH	190'	EAST	SAN JUAN

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
D	1	31-N	8-W		700'	NORTH	700'	WEST	SAN JUAN

¹² Dedicated Acres N/2 299.36 acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

Signature: Joni Clark
Printed Name: Joni Clark
Title: Regulatory Specialist
Date: 2-1-05

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.

Date of Survey: 2-20-05
Signature: [Signature]
Certificate Number: 15703

District I
1626 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-144
June 1, 2004

Oil Conservation Division

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

For drilling and production facilities, submit to
appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe
office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: BURLINGTON RESOURCES OIL & GAS COMPANY LP Telephone: 505-326-9700 e-mail address: jclark@br-inc.com
Address: 3401 E. 30TH STREET, FARMINGTON, NM 87402 Formation: _____
Facility or well name: Negro Canyon 102S API #: 30-045- U/L or Qtr/Qtr D Sec 2 T 31N R 8W
County: San Juan, NM Latitude 36.929165 Longitude 107.6359 NAD: 1927 ☒ 1983 ☐ Surface Owner Federal ☐ State ☒ Private ☐ Indian ☐

Pit

Type: Drilling ☒ Production ☐ Disposal ☐
Workover ☐ Emergency ☐
Lined ☐ Unlined ☒
Liner type: Synthetic ☐ Thickness _____ mil Clay ☐
Pit Volume _____ bbl

Below-grade tank

Volume: _____ bbl Type of fluid: _____
Construction material: _____
Double-walled, with leak detection? Yes ☐ If If not, explain why not.

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet
50 feet or more, but less than 100 feet
100 feet or more

(20 points)
(10 points)
(0 points) 0 points

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes
No

(20 points)
(0 points) 0 pointx

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet
200 feet or more, but less than 1000 feet
1000 feet or more

(20 points)
(10 points)
(0 points) 0 pointx

Ranking Score (Total Points)

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility _____. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒, or an (attached) alternative OCD-approved plan ☐.

Date: 3/2/2005

Printed Name/Title Joni Clark, Sr. Regulatory Specialist

Signature

Joni Clark

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title

Steve Hayden

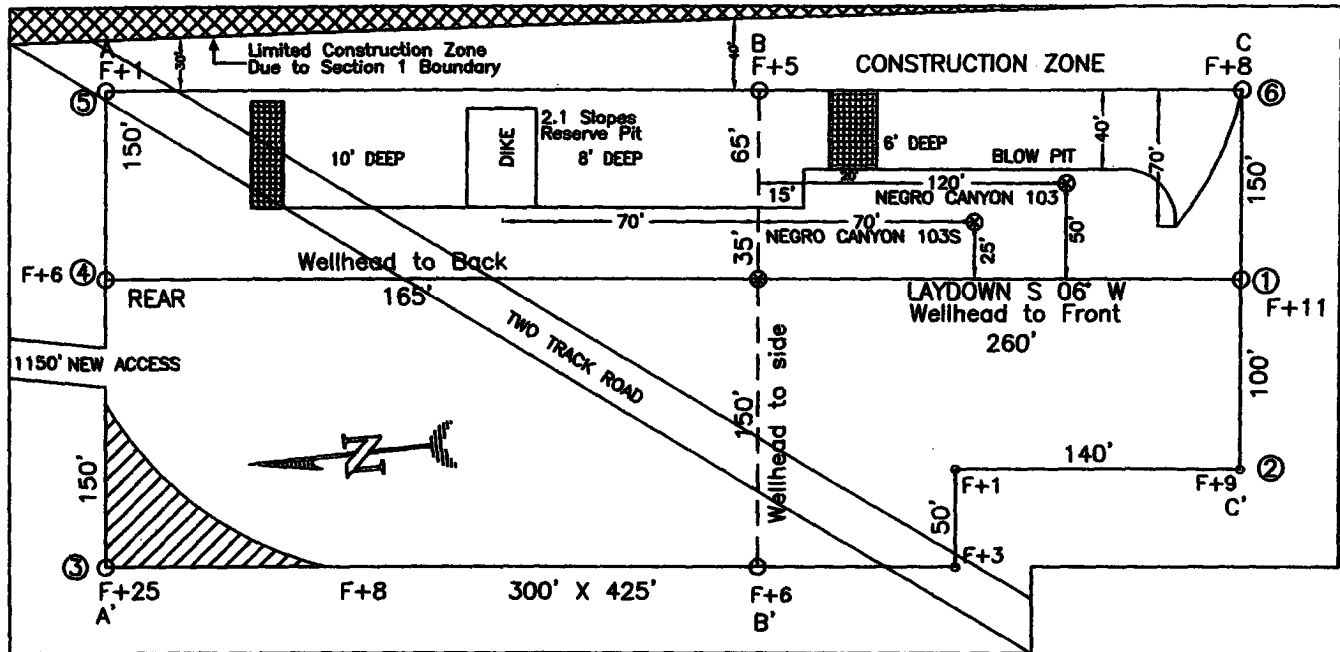
Signature

DEPUTY OIL & GAS INSPECTOR, DIST. 20
Steve Hayden

Date:

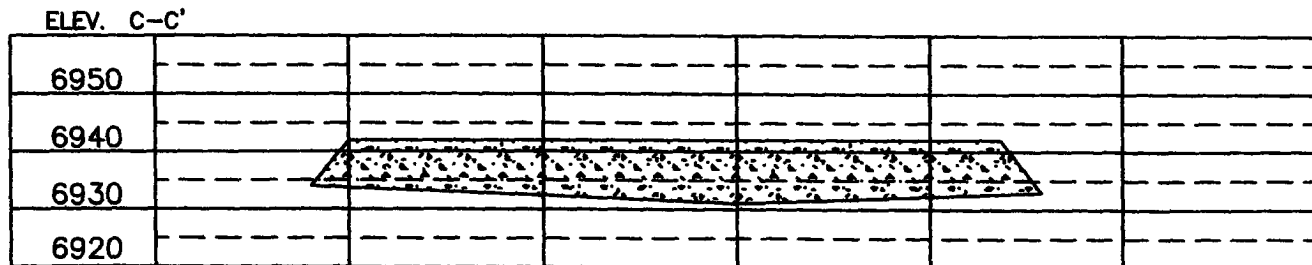
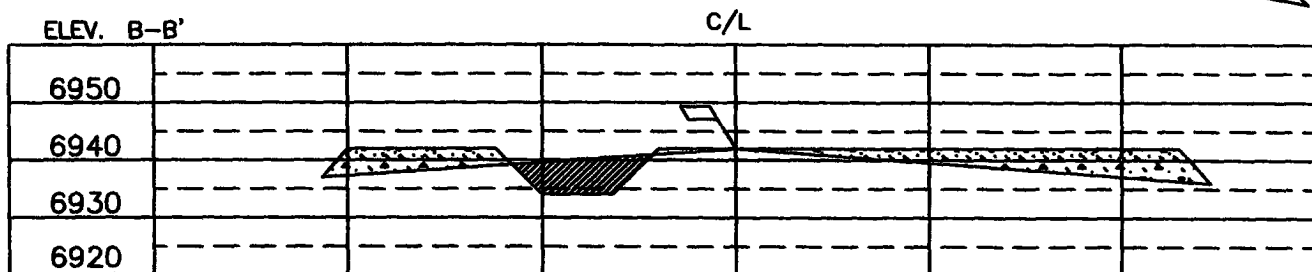
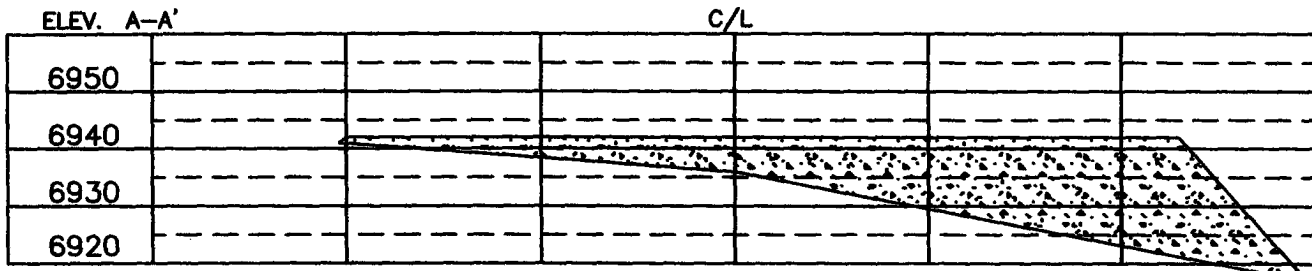
JUN -2 2005

BURLINGTON RESOURCES OIL & GAS COMPANY LP
NEGRO CANYON #102S, 1320' FNL & 190' FEL
SECTION 2, T-31-N, R-8-W, NMPM, SAN JUAN COUNTY, NM
GROUND ELEVATION: 6942', DATE: JANUARY 24, 2005



(400' X 525') = 4.58 ACRES

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.



WELL PAD SKETCH
NOT TO SCALE

NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
 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.

OPERATIONS PLAN

Well Name: Negro Canyon #102S
Location: Surface - 1320' FNL, 190' FEL, Section 2, T-31-N, R-8-W
Bottom Hole - 700' FNL, 700' FWL, Section 1, T-31-N, R-8-W
San Juan County, New Mexico
Surface - Latitude 36° 55.7499'N, Longitude 107° 38.1542'W
Bottom Hole - Latitude 36° 55.8483'N, Longitude 107° 37.9659'W
Formation: Basin Fruitland Coal
Elevation: 6938' GL

<u>Formation Tops:</u>	<u>TVD</u>	<u>TMD</u>	<u>TVD</u> <u>Bottom</u>	<u>Contents</u>
Surface		San Jose	2682'	
Ojo Alamo	2682'	2837'	2777'	aquifer
Kirtland	2777'	2939'	3323'	gas
Fruitland	3323'	3518'	3523'	
Intermediate TD	3483'	3683'		
T/Coal	3523'	3719'	3838'	
B/Coal	3838'	4034'	3839'	
Pictured Cliffs	3839'	4035'		
TD	3923'	4119'		

Burlington Resources requests a sump on this well

Logging Program:

Mudlog from 7" csg to 3923' (TVD).

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis</u>	<u>Fluid Loss</u>
0-200'	Spud Mud	8.4-9.0	40-50	no control
200' - 3483'	LSND	8.4-9.0	30-60	less than 12
3483' - 3923'	Air/Mist			

Drilling:

Surface Hole:

Drill to surface casing point of 200' and set 9 5/8" casing.

Intermediate Hole:

Mud drill to kick off point of 300'. At this point the well will be directionally drilled by building 5.0 degrees per 100' with an azimuth of 56.82 degrees. The end of the build will be at a TVD of 725', a TMD of 735', and an angle of 21.76 degrees. This angle and azimuth will be held to a total depth of 3058' TVD and 3248' TMD. To enter the productive interval vertical, the well will be dropped 5.0 degrees per 100'. The well will be vertical at 7" casing point of 3483' TVD and 3683' TMD.

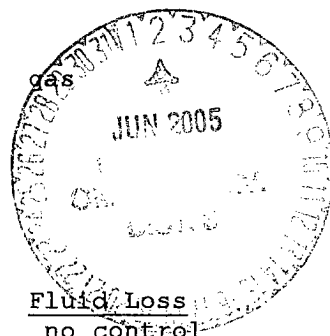
Production Hole:

Production hole will be drilled vertical from 3483' TVD to 3683' TMD.

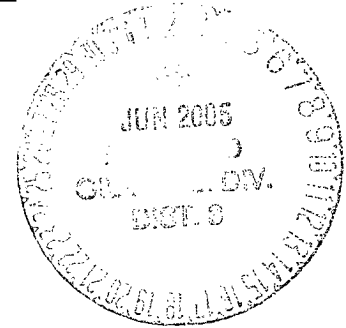
Materials:

Casing program: (as listed, the equivalent, or better)

<u>Hole Size</u>	<u>Interval</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>
	TOP	Bottom (TVD)		
12 1/4"	0'	200'	9 5/8"	32.3# H-40
8 3/4"	0'	3483'	7"	20#/23.0# J-55
6 1/4"	3383'	3923'	5 1/2"	15.5# J-55



<u>Casing program: (alternate)</u>					
Hole Size	Interval		Size	Weight	Grade
	TOP	Bottom (TVD)			
12 3/4"	0'	200'	9 5/8"	32.3#	H-40
8 3/4"	0'	3483'	7"	20#/23.0#	J-55
<u>Tubing Program:</u>					
6 1/4"	0'	3483'	2 3/8"	4.7#	J-55
<u>Tubing Program: (alternate)</u>					
6 1/4"	0'	3483'	2 7/8"	9.2#	J-55



Float Equipment: 9 5/8" surface casing - saw tooth guide shoe. Centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing - guide shoe and self-fill float collar. Standard centralizers run every other joint above shoe. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2777' (TVD). Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Wellhead Equipment

9 5/8" x 7" x 2 3/8" - 11" (2000 psi) wellhead assembly

Cementing:

9 5/8" surface casing -

Pre-Set Drilled Cement with 39 sxs Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (63 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 147 sxs Type III cement with 0.25 pps Celloflake, 3% CaCl. (188 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.

WOC until cement establishes 250 psi compressive strength prior to NU of BOPE.

7" intermediate casing - lead w/331 sacks Premium Lite with 3% calcium chloride, 5 pps LCM-1, and 1/4#/sack celloflake, 0.4% FL-52, & 0.4% SMS. Tail with 90 sacks Type III cmt with 1% calcium chloride, 1/4#/sack celloflake and 0.2% FL-52 (829 cu.ft., 50% excess to circulate to surface).

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

5 1/2" liner - will not be cemented if run.

BOP and tests:

Surface to intermediate TD - 11" 2000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test BOPE to 600 psi for 30 min.

Intermediate TD to Total Depth - 7 1/6" 2000 psi (minimum) completion BOP stack (Reference Figure #2) Prior to drilling out intermediate casing, test BOPE and casing to 1500 psi for 30 minutes.

From surface to 7" TD - a choke manifold will be installed in accordance with Onshore Order No. 2 (Reference Figure #3). When the cavitation completion rig drills the production hole, the completion rig configuration will be used (Reference Figure #4). ~~No choke manifold will be used on cavitation rig operations.~~

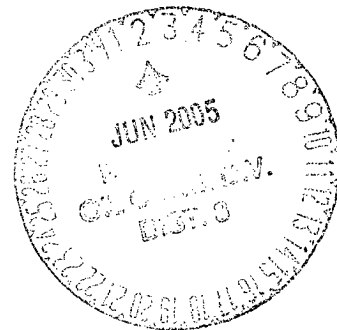
Pipe rams will be actuated at least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

Additional information:

- * The Fruitland Coal formation will be completed.
- * Anticipated pore pressure for the Fruitland is less than 1600 psi.
- * This gas is dedicated.
- * The north half of Section 1 is dedicated to the Fruitland Coal.

Jim McCauley
Drilling Engineer

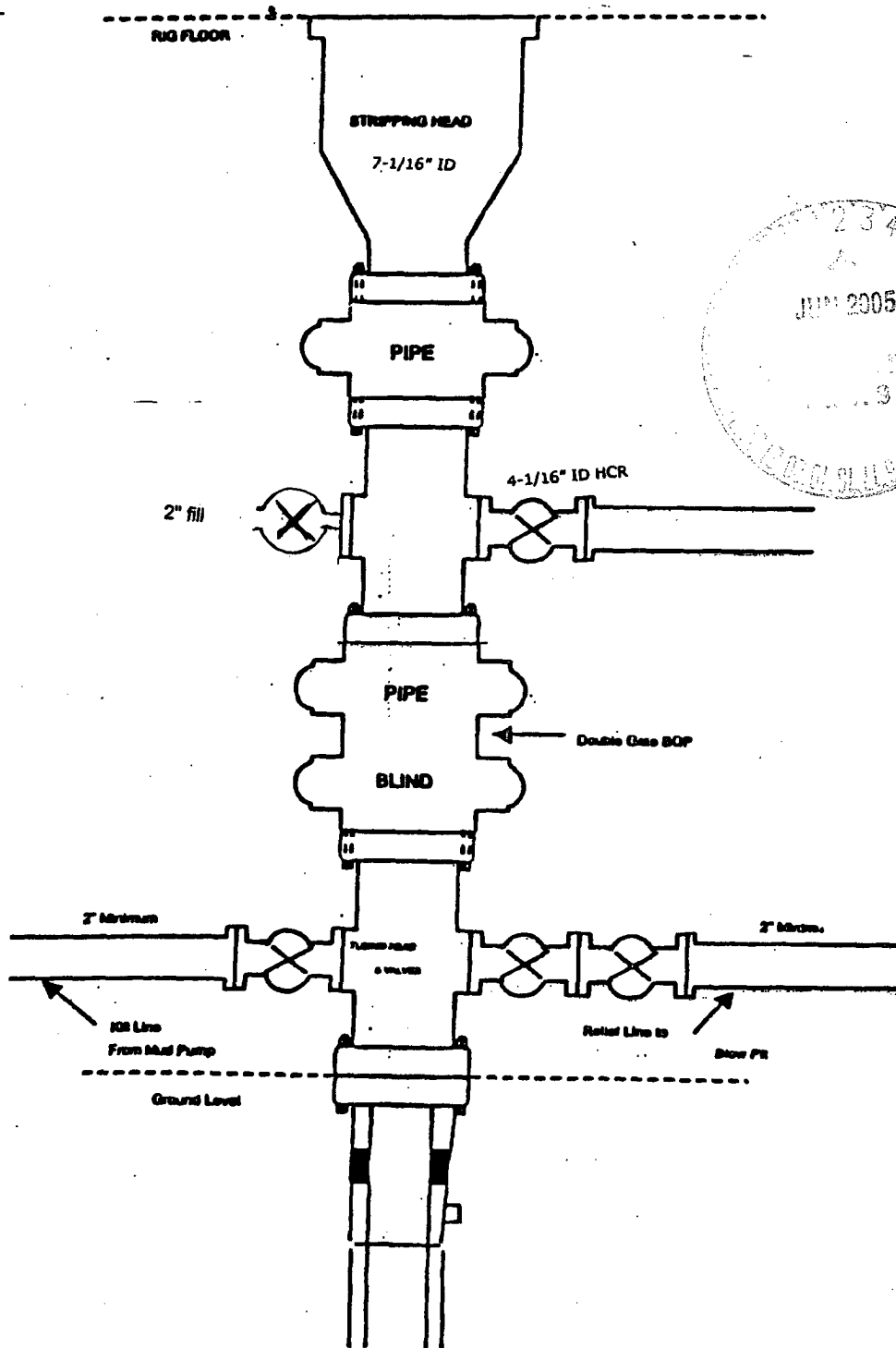
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Date



BURLINGTON RESOURCES

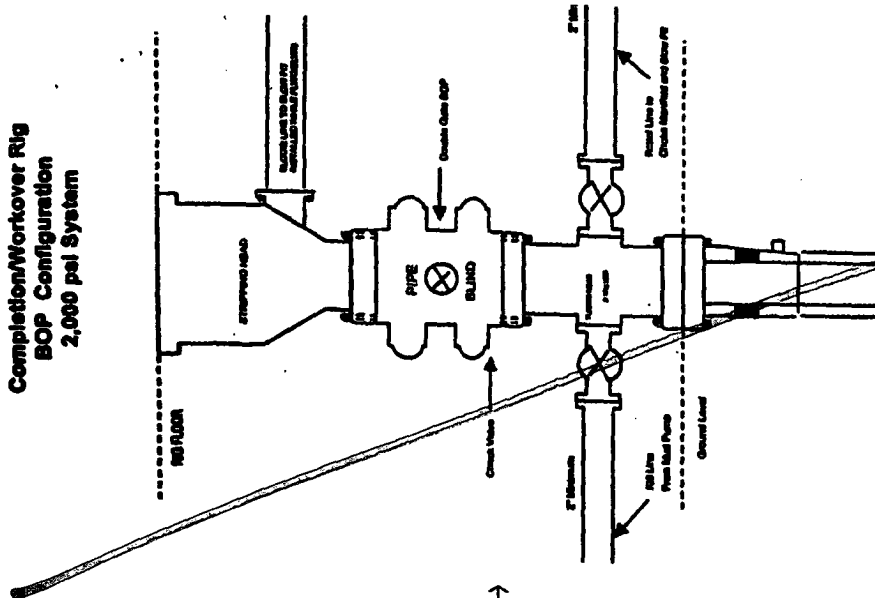
FIGURE #4

Cavitation Rig
BOP Configuration
2,000 psi Minimum System



BURLINGTON RESOURCES

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

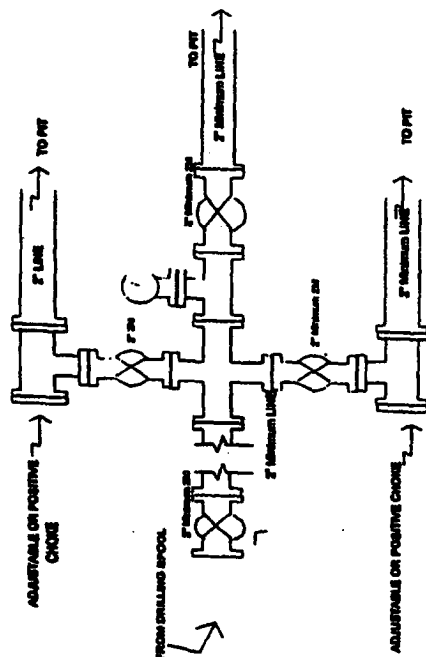


Minimum BOP insulation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 500 psi stripping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

Figure #2

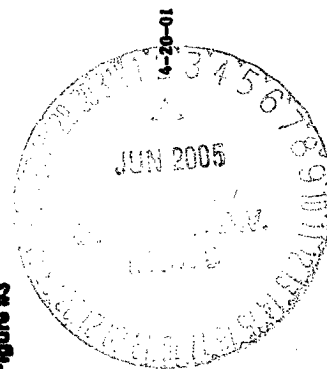
BURLINGTON RESOURCES

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



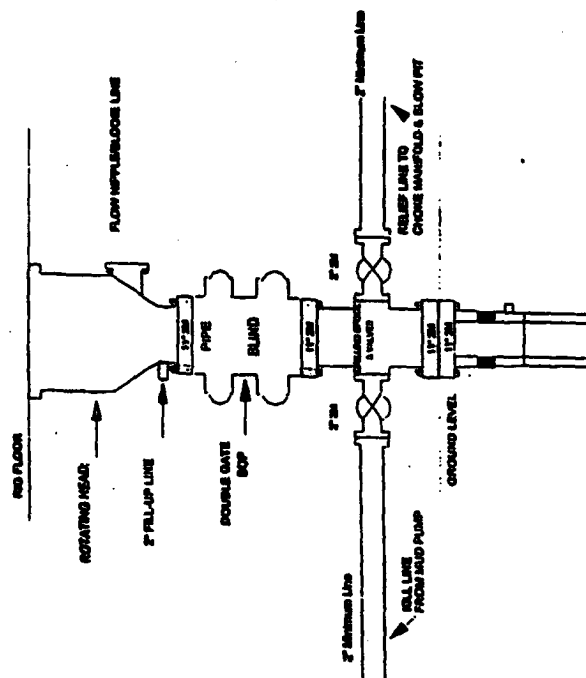
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3



Burlington Resources

Drilling Rig 2000 psi System



600 psi Insulation from Surface Casting Point to Total Depth. 11" Bore 10" Nominal, 2000 psi working pressure double gate SGP to be equipped with blind runs and pipe runs. A 500 psi working based on top of man preventers. All SGP equipment is 2,000 psi working pressure.

Flower #1