

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

666 MAR 17 AM 8 43

1a. Type of Work  
DRILL

5. Lease Number

NMSF-079491-A

Unit Reporting Number

NMNM-078409B-MV NMNM-078409A-DK

1b. Type of Well  
GAS

6. If Indian, All. or Tribe

2. Operator  
**BURLINGTON**  
RESOURCES Oil & Gas Company

7. Unit Agreement Name

San Juan 27-5 Unit

3. Address & Phone No. of Operator  
PO Box 4289, Farmington, NM 87499  
(505) 326-9700

8. Farm or Lease Name

San Juan 27-5 Unit

9. Well Number  
#99M

4. Location of Well  
305' FNL, 1550' FWL surface C  
1660' FNL, 1977' FWL bottom hole F

10. Field, Pool, Wildcat

Blanco Mesaverde/Basin Dakota

Surface-Latitude 36°35.6765'N, Longitude 107°19.8573' W  
Bottom Hole-Lat. 36°35.4534'N, Longitude 107°19.7669' W

11. Sec., Twn, Rge, Mer. (NMPM)

Sec. 11, T27N, R05W

API # 30-039-29850

14. Distance in Miles from Nearest Town  
11 miles to Gobernador, NM Post Office

12. County  
Rio Arriba

13. State  
NM

15. Distance from Proposed Location to Nearest Property or Lease Line  
305'

16. Acres in Lease

17. Acres Assigned to Well

320 N/2 DK - W/2 320 MV

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease  
50'

19. Proposed Depth  
8007'

20. Rotary or Cable Tools  
Rotary

21. Elevations (DF, FT, GR, Etc.)  
6706' GR

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program  
See Operations Plan attached

24. Authorized by: Amanda Sandaval  
Regulatory Assistant III

3-16-06  
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.

HOLD C104 FOR Directional Survey

District I  
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

District II  
PO Drawer DD, Artesia, NM 88211-0719

# OIL CONSERVATION DIVISION

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

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

PO Box 2088  
Santa Fe, NM 87504-2088

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

2006 MAR 17 AM 8 ☒ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039- 29850	*Pool Code 71599/72319	*Pool Name Blanco Mesaverde/ Basin Dakota
*Property Code 7454	*Property Name SAN JUAN 27-5 UNIT	*Well Number 99M
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP	*Elevation 6706'

### 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
C	11	27N	5W		305	NORTH	1550	WEST	RIO ARriba

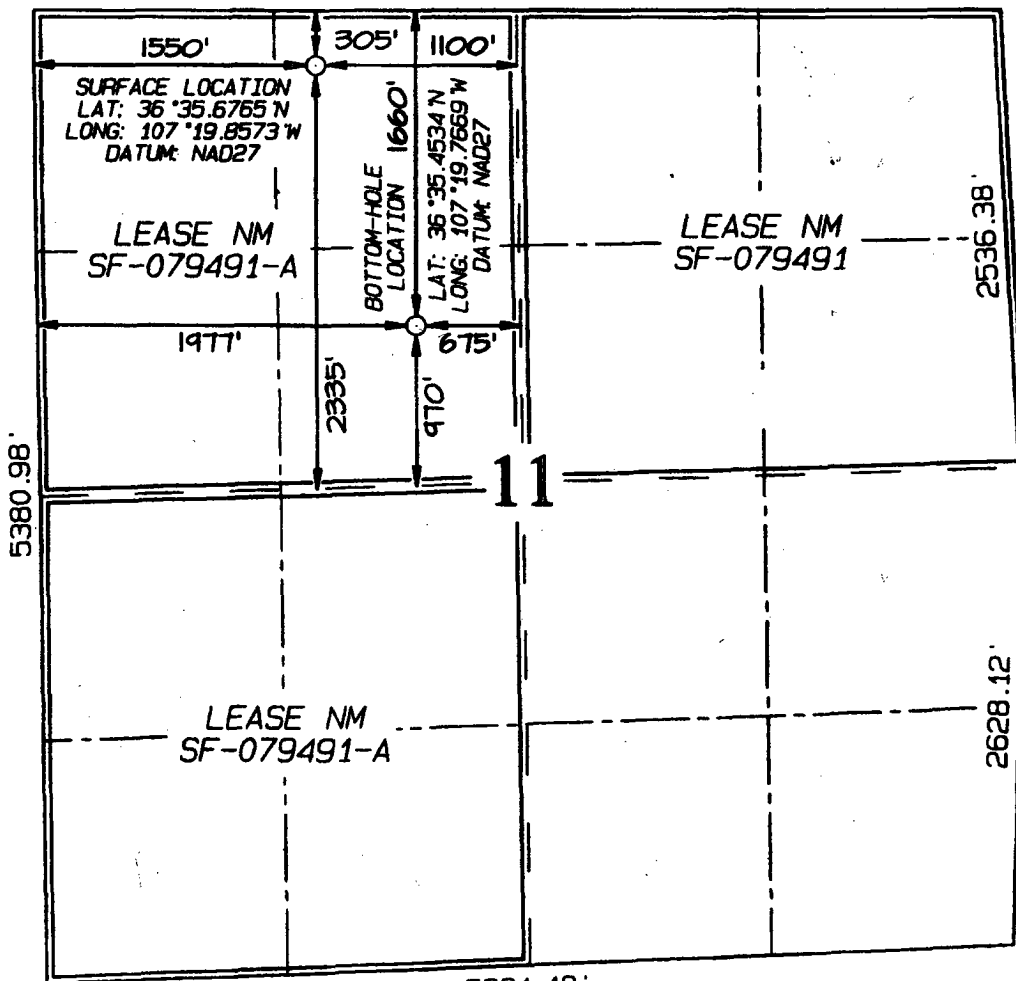
### 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	27N	5W		1660	NORTH	1977	WEST	RIO ARriba

* Dedicated Acres N2 320 DK W2 320 MV	* Joint or Infill	* Consolidation Code	* 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

5304.42'



### 17 OPERATOR CERTIFICATION

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

*Amanda Sandoval*  
Signature

Amanda Sandoval

Printed Name

Regulatory Assistant III

Title

3-16-06

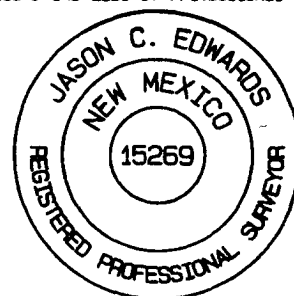
Date

### 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 belief.

Survey Date: SEPTEMBER 14, 2005

Signature and Seal of Professional Surveyor



*JASON C. EDWARDS*

Certificate Number

15269

Office

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 IV

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

## State of New Mexico

Energy, Minerals and Natural Resources

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-103

May 27, 2004

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-039- <u>29850</u>
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator BURLINGTON RESOURCES OIL & GAS COMPANY LP		6. State Oil & Gas Lease No. NMSF-079491-A
3. Address of Operator 3401 E. 30TH STREET, FARMINGTON, NM 87402		7. Lease Name or Unit Agreement Name San Juan 27-5 Unit
4. Well Location Unit Letter <u>C</u> : <u>305</u> feet from the <u>North</u> line and <u>1550</u> feet from the <u>West</u> line Section <u>11</u> Township <u>27N</u> Rng <u>5W</u> NMPM County <u>Rio Arriba Co.</u>		8. Well Number #99M
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6706'		9. OGRID Number 14538
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Blanco Mesaverde/Basin Dakota
Pit type <u>new drill</u> Depth to Groundwater <u>&gt;100'</u> Distance from nearest fresh water well <u>&gt;1000'</u> Distance from nearest surface water <u>&lt;1000'</u> Pit Liner Thickness: <u>n/a</u> mil Below-Grade Tank: Volume <u>bbbs</u> Construction Material		

## 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: New Drill Pit ☒

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS. ☐ P AND A ☐  
 CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

New Drill, Unlined:

Burlington Resources proposes to construct a new drilling pit and an associated vent/flame pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and vent/flame pit will be an unlined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD office. A portion of the vent/flame pit will be designed to manage fluids, and that portion will be unlined, as per the risk ranking criteria. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any 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 ☐.

SIGNATURE Joni Clark TITLE Sr. Regulatory Specialist DATE 2/15/2006

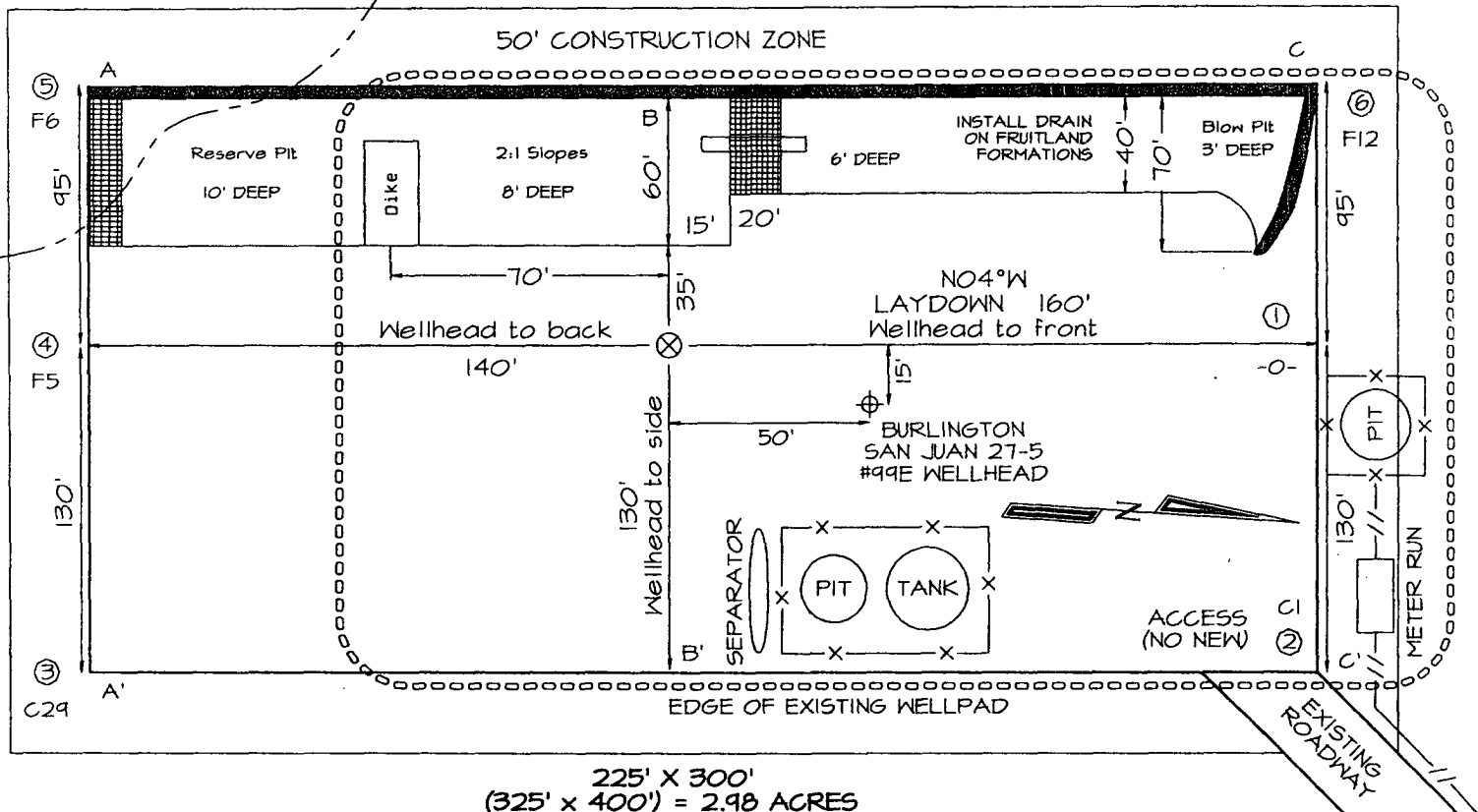
Type or print name Joni Clark E-mail address: jclark@br-inc.com Telephone No. 505-326-9701  
**For State Use Only**

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR DIST. IV DATE MAY 12 2006  
 Conditions of Approval (if any):

PLAT #1

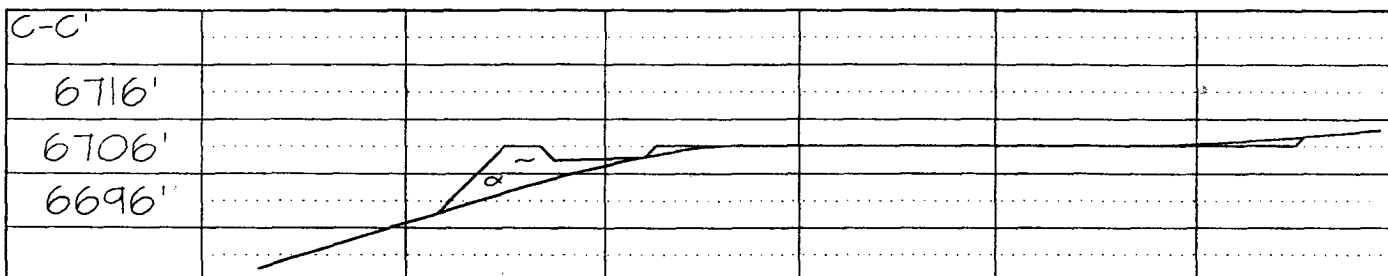
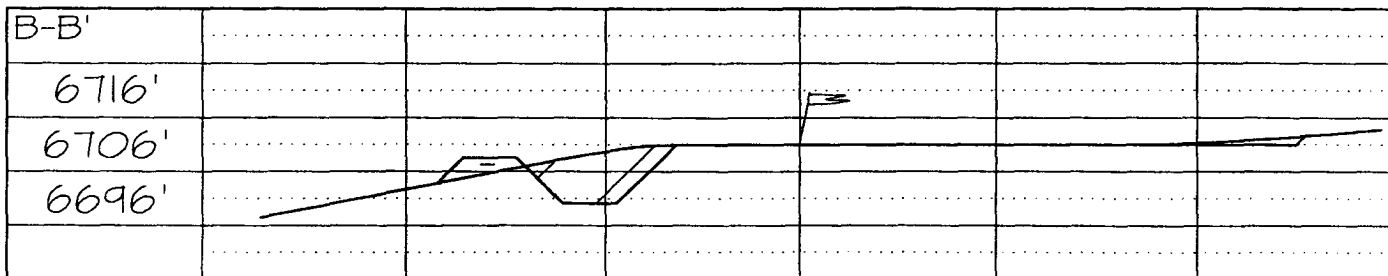
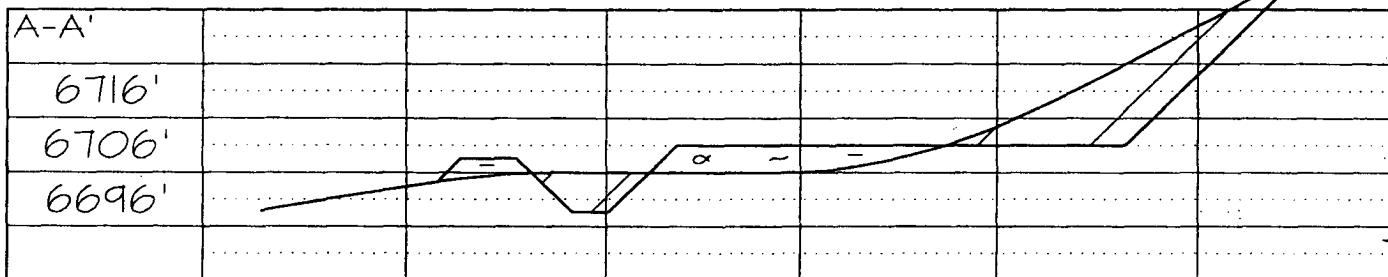
**BURLINGTON RESOURCES OIL & GAS COMPANY, LP**  
**SAN JUAN 27-5 UNIT #99M, 305' FNL & 1550' FWL**  
**SECTION 11, T27N, R5W, NMPM, RIO ARriba COUNTY, NM**  
**GROUND ELEVATION: 6706' DATE: SEPTEMBER 14, 2005**

**LATITUDE: 36°35'41"**  
**LONGITUDE: 107°19'51"**  
 DATUM: NAD1927



225' X 300'  
 (325' X 400') = 2.98 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.



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

## SAN JUAN 27- UNIT #99M OPERATIONS PLAN

**Well Name:** San Juan 27-5 Unit #99M

**Location** Rio Arriba County, New Mexico  
Surface: 305' FNL, 1977' FWL, Section 11, T-27-N, R-5-W  
Latitude 36° 35.6766'N, Longitude 107° 19.8576'W  
Bottom Hole: 1660' FNL, 1550' FWL, Section 11, T-27-N, R-5-W  
Latitude 36° 35.4534'N, Longitude 107° 19.7670'W

**Formation** Blanco Mesa Verde/Basin Dakota  
**Elevation** 6706'GL

<b><u>Formation Tops</u></b>	<b><u>Top (TVD)</u></b>	<b><u>Top (TMD)</u></b>	<b><u>Contents</u></b>
Surface	San Jose		
Ojo Alamo	2920'	3060'	aquifer
Kirtland	3087'	3238'	gas
Fruitland	3307'	3472'	gas
Pictured Cliffs	3559'	3740'	gas
Lewis	3750'	3944'	gas
Huerfano Bentonite	4085'	4300'	gas
Chacra	4500'	4730'	gas
<b>Intermediate set point: 150' into Chacra</b>			
Massive Cliff House	5327'	5557'	gas
Menefee	5365'	5595'	gas
Massive Point Lookout	5702'	5932'	gas
Mancos	6225'	6455'	gas
Gallup	6888'	7118'	gas
Greenhorn	7655'	7885'	gas
Graneros	7715'	7945'	gas
Two Wells	7745'	7975'	gas
Upper Cubero	7858'	8088'	gas
Lower Cubero	7905'	8135'	gas
Oak Canyon	7989'	8219'	
Encinal	8007'	8237'	
<b>TD</b>	<b>8007'</b>	<b>8237'</b>	

### **Logging Program**

Cased Hole – CBL-GR- TD to surface  
Open Hole - None

### **Mud Program**

<b><u>Interval (TMD)</u></b>	<b><u>Type</u></b>	<b><u>Weight</u></b>	<b><u>Vis.</u></b>	<b><u>Fluid Loss</u></b>
0- 350'	Spud	8.4-9.0	40-50	no control
350 - 4880'	Non-dispersed	8.4-9.0	30-60	less than 8
4880'- 8237'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

### **Drilling** (Reference Plot #1)

#### **Surface Hole**

Drill to surface casing point of 350' and set 9 5/8" casing.

#### **Intermediate Hole**

Mud drill to kick off point of 400'. At this point the well will be directionally drilled by building 4.0 degrees per 100' with an azimuth of 172.40 degrees. The end of the build will be at a TVD of 890', a TMD of 900', a reach of 87', and an angle of 20.01 degrees. This angle and azimuth will be held to a TVD of 4160', a TMD of 4380', and a reach of 1277'. At this point the well will be drilled with a drop of 4.0 degrees per 100'. The end of the drop will be at a TVD of 4650', a TMD of 4880', a reach of 1364', and an angle of 0.0 degrees. 7" casing will be set at this point.

#### **Production Hole**

From the shoe of the intermediate string, the well will be drilled vertically with an air hammer to a TMD of 8237' (TVD of 8007'). 4 1/2" casing will be set at this point.

## Materials

### Casing program

<u>Hole Size</u>	<u>Interval (TMD)</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 350'	9 5/8"	32.3#	H-40
8 3/4"	350' - 4880'	7"	23#	L-80
6 1/4"	4880' - 8237'	4 1/2"	11.6#	L-80

### Tubing Program

<u>Hole Size</u>	<u>Interval (TMD)</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>
2 3/8"	0' - 8237'	2 3/8"	4.7#	J-55

### Wellhead Equipment

9 5/8" x 7" X 4 1/2" x 2 3/8" - 11" (2000 psi) wellhead assembly

### Cementing:

9 5/8" surface casing conventionally drilled: **200% excess cement to bring cement to surface**

Run **376 ft<sup>3</sup> (294 sks)** Type III cement with 3% CaCl<sub>2</sub> and 1/4 pps celloflake (1.28 sks/ft<sup>3</sup>). Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60° 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.

7" production casing: **50% excess cement to bring cement to surface**

Lead with **976 ft<sup>3</sup> (458 sks)** Premium Lite w/ 3% CaCl<sub>2</sub>, 0.25 pps Cello-Flake, 5 pps LCM-1, 0.4% FL-52 and 0.4% SMS (2.13 sks/ft<sup>3</sup>). Tail with **124 ft<sup>3</sup> (90 sks)** Type III cmt. w/ 1% CaCl<sub>2</sub>, 0.25 pps Cello-Flake and 0.2% FL-52 (1.38 sks/ft<sup>3</sup>). If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC.

4 1/2" production casing: **30% excess cement to achieve 100' overlap with intermediate casing**

Run **459 ft<sup>3</sup> (232 sks)** Premium Lite HS FM + 0.25pps Cello-Flake, 0.3% CD-32, 6.25pps LCM-1, 1% FL-52 (1.98 sks/ft<sup>3</sup>).

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

### BOP and Tests:

Surface to production TD - 11", 2000 psi double gate BOP stack (Reference Figure #1).

Prior to drilling out surface casing, test BOPE and casing to 600 psi for 30 minutes.

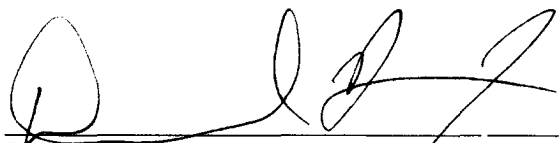
Surface to Total Depth - choke manifold (Reference Figure #2).

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

BOPE tests will be performed using an appropriately sized test plug and test pump and will be recorded using calibrated test gauges and a properly calibrated strip or chart recorder. The test will be recorded in the driller's log and will include a low pressure test requirement of 250 psig held for five minutes and a high pressure test requirement held for ten minutes as described in Onshore Order No. 2 or otherwise noted in the APD. A successful BOPE test using a test plug is considered when no pressure drop occurs over the duration of the test. Test gauges and recorders must be of the proper range and resolution commensurate with the authorized test pressure. Where the intermediate casing strings are used, only one BOPE test will be necessary contingent upon the test being conducted to the highest approved test pressure to which BOPE will be exposed. Casing pressure tests must be held for 30 minutes with no more than 10 percent pressure drop during the duration of the test.

### Additional Information:

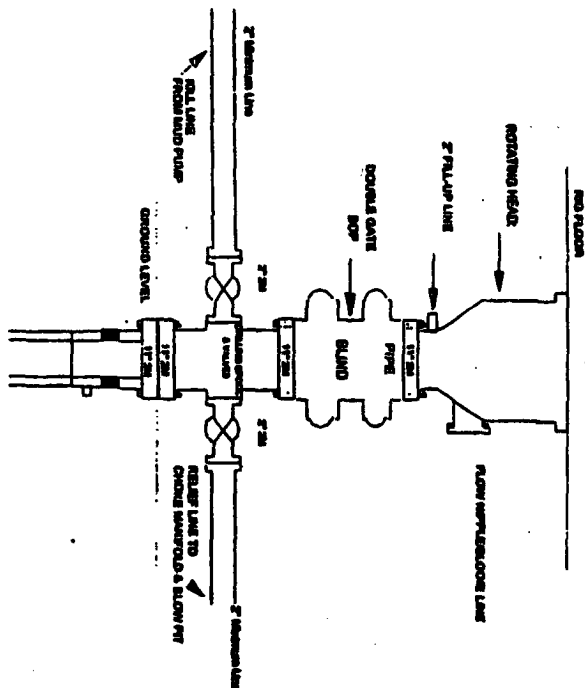
- This gas is dedicated.
- The North and West half of section 11 is dedicated to the Mesaverde and Dakota of this well.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.
- BHP is expected to be 2000 psi.

  
Drilling Engineer

3/16/06  
Date

# Burlington Resources

## Drilling Rig 2000 psi System

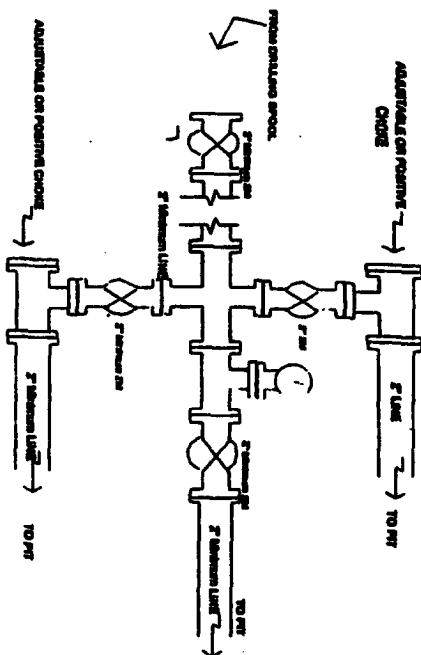


BCP installation from Surface Casing Point to Total Depth, 17\"/>

Figure #71

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System

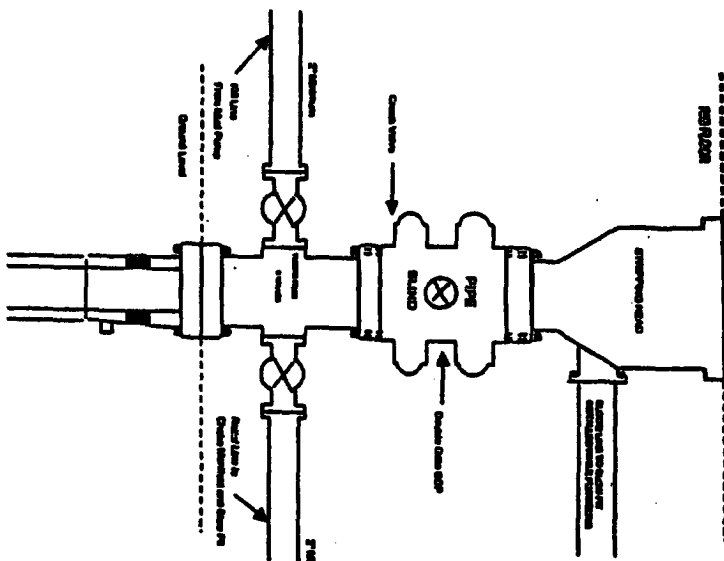


Choke manifold installation from Surface Casing Point to Total Depth, 2,000psi working pressure equipment with two chokes.

Figure #73

# BURLINGTON RESOURCES

## Completion/Workover Rig BCP Configuration 2,000 psi System



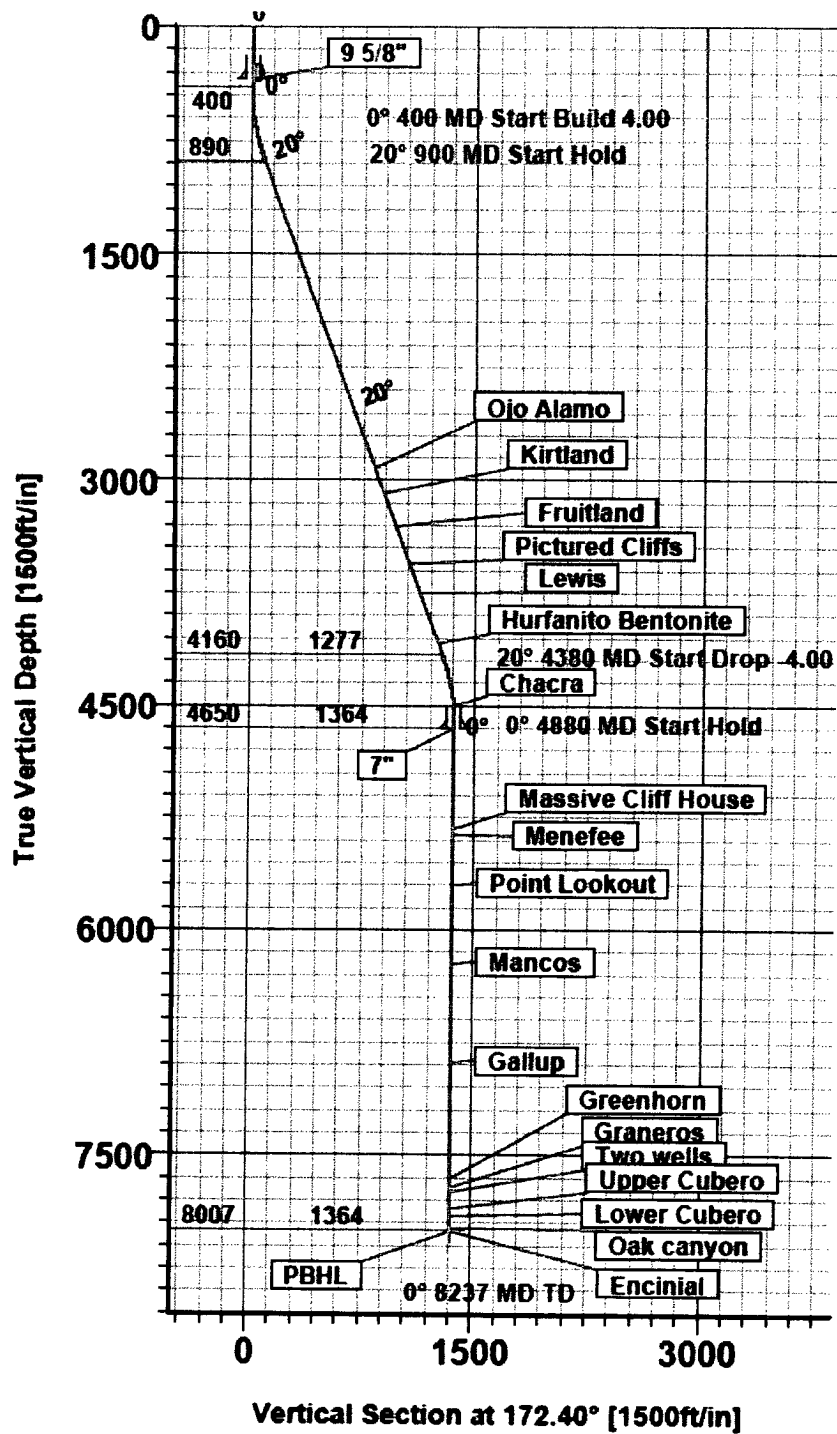
Minimum BCP installation for all Completion/Workover Operations, 7-1/8\"/>

Figure #72

4-20-01

4-20-01

11



Plot 1: Directional plan for SJ 27-5 99M 1





**Scientific Drilling**  
Directional Drilling Operations

Field: Rio Arriba, NM  
Site: SEC 11-T27N-R5W  
Well: SAN JUAN 27-5 #99M  
Wellpath: OH  
Plan: Plan #1

**BURLINGTON™**  
RESOURCES

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	900.34	20.01	172.40	890.23	-85.74	11.44	4.00	0.00	86.50	
4	4380.02	20.01	172.40	4159.77	-1266.17	168.94	0.00	0.00	1277.39	
5	4880.36	0.00	0.00	4650.00	-1351.91	180.38	4.00	180.00	1363.89	
6	8237.36	0.00	0.00	8007.00	-1351.91	180.38	0.00	0.00	1363.89	PBHL

#### WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
SAN JUAN 27-5 #99M	0.00	0.00	2036073.820	647746.310	36°35'40.582N	107°19'48.145W	N/A

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8007.00	-1351.91	180.38	2034721.910	647926.690	Circle (Radius: 100)

