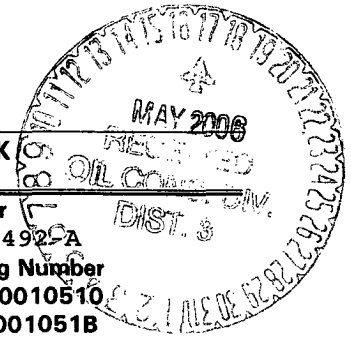


UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK



1a. Type of Work  
DRILL

5. Lease Number  
SF-079492A  
Unit Reporting Number  
MV-8910010510  
DK-891001051B  
6. If Indian, All. or Tribe

1b. Type of Well  
GAS

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  
#103M

4. Location of Well  
1965' FNL, 1410' FEL surface "G"  
865' FNL, 2180' FEL bottom "B"  
Latitude 36° 34.5452'N, Longitude 107° 19.3582'W  
Latitude 36° 34.7268'N, Longitude 107° 19.5480'W

10. Field, Pool, Wildcat  
Blanco Mesaverde/Basin Dakota  
11. Sec., Twn, Rge, Mer. (NMPM)  
Sec. 14, T27N, R05W  
API # 30-039-29865

14. Distance in Miles from Nearest Town  
14 mile to Gobernador Rio Arriba

12. County NM  
13. State

15. Distance from Proposed Location to Nearest Property or Lease Line  
1410'

16. Acres in Lease

17. Acres Assigned to Well  
MV & DK 320 ac E/2

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease  
250'

19. Proposed Depth  
8162' TMD

20. Rotary or Cable Tools  
Rotary

21. Elevations (DF, FT, GR, Etc.)  
6664' GR

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program  
See Operations Plan attached

24. Authorized by: Joni Clark  
Regulatory Specialist

3/30/06  
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.

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

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

HOLD G104 FOR directional survey

NMOCD

District I  
PO 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

State of New Mexico  
Energy, Minerals & Natural Resources Department

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

Form C-102  
Revised February 21, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

2006 MAR 30 PM 2 10

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-039-29865</b>		*Pool Code <b>71599/72319</b>	*Pool Name <b>Blanco Mesaverde/ Basin Dakota</b>
*Property Code <b>7454</b>	*Property Name <b>SAN JUAN 27-5 UNIT</b>		*Well Number <b>103M</b>
*OGRID No. <b>14538</b>	*Operator Name <b>BURLINGTON RESOURCES OIL &amp; GAS COMPANY, LP</b>		*Elevation <b>6664'</b>

<sup>10</sup> Surface Location

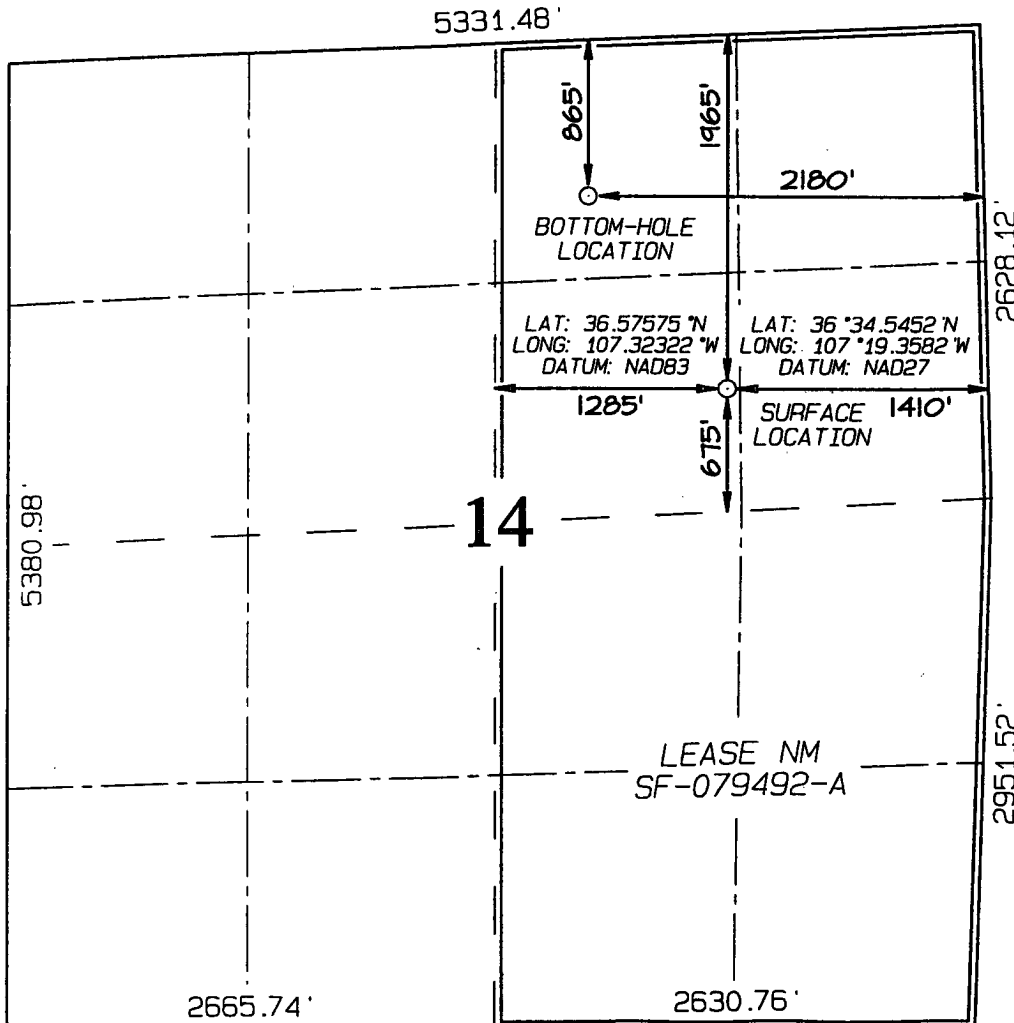
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	14	27N	5W		1965	NORTH	1410	EAST	RIO ARriba

<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
B	14	27N	5W		865	NORTH	2180	EAST	RIO ARriba

<sup>12</sup> Dedicated Acres <b>320 E2 MV/DK</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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



<sup>17</sup> 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

<sup>18</sup> 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: **DECEMBER 27, 2005**

Signature and Seal of Professional Surveyor



**JASON C. EDWARDS**  
Certificate Number 15269

District I

Energy, Minerals and Natural Resources

May 27, 2004

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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

WELL API NO.	30-039- 29865
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	SF-079492-A
7. Lease Name or Unit Agreement Name	San Juan 27-5 Unit
8. Well Number	#103M
9. OGRID Number	14538
10. Pool name or Wildcat	Blanco Mesaverde/Basin Dakota

SUNDRY NOTICES AND REPORTS ON WELLS  
(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.)

1. Type of Well:  
Oil Well ☐ Gas Well ☒ Other

2. Name of Operator  
BURLINGTON RESOURCES OIL & GAS COMPANY LP

3. Address of Operator  
3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location  
Section 14 : 1965 feet from the North line and 1410 feet from the East line  
Township 27N Rng 5W NMPM County Rio Arriba Co.

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
6706'

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type new drill Depth to Groundwater >100' Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'  
Pit Liner Thickness: n/a mil Below-Grade Tank: Volume bbls; 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 ☐

SUBSEQUENT REPORT OF:

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

OTHER: New Drill Pit ☒

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/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and vent/flare 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/flare 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 ☐.

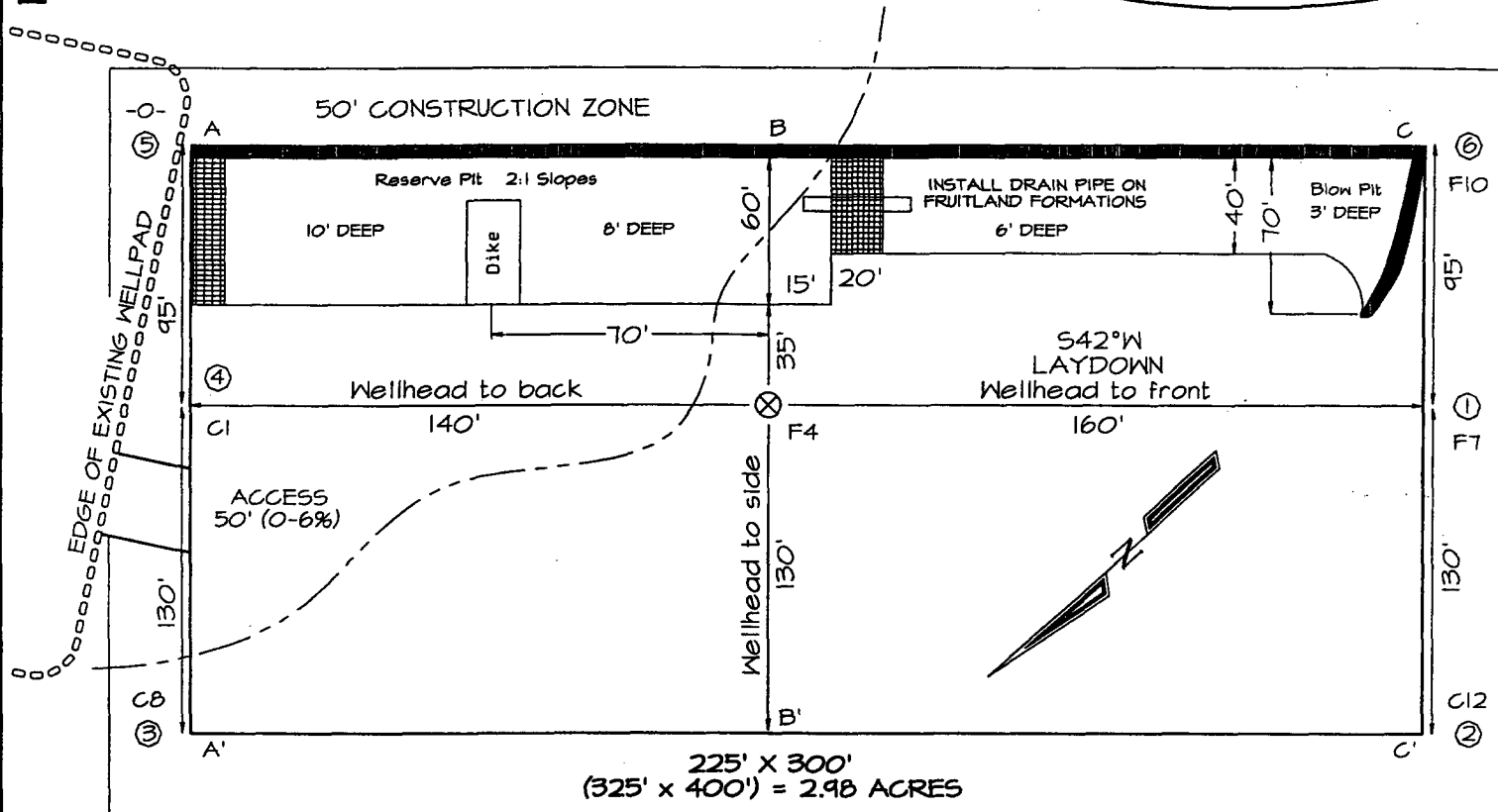
SIGNATURE Joni Clark TITLE Sr. Regulatory Specialist DATE 3/30/2006

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

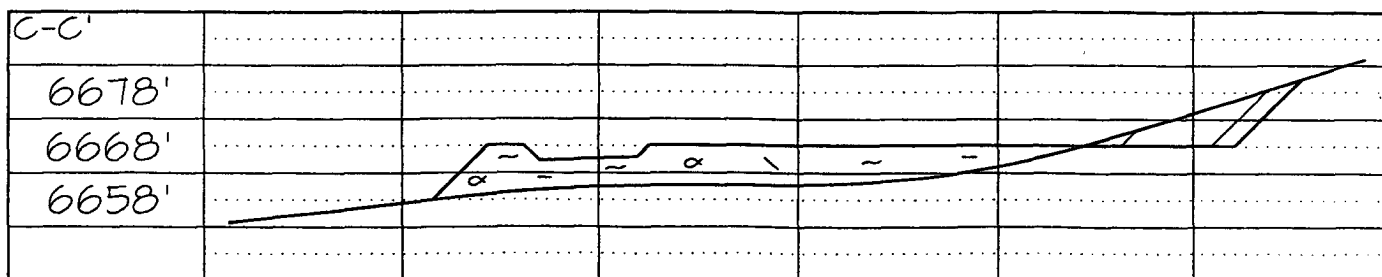
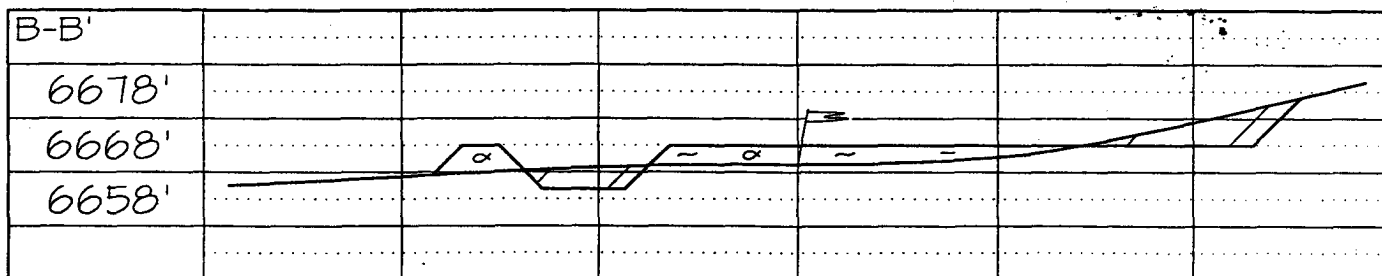
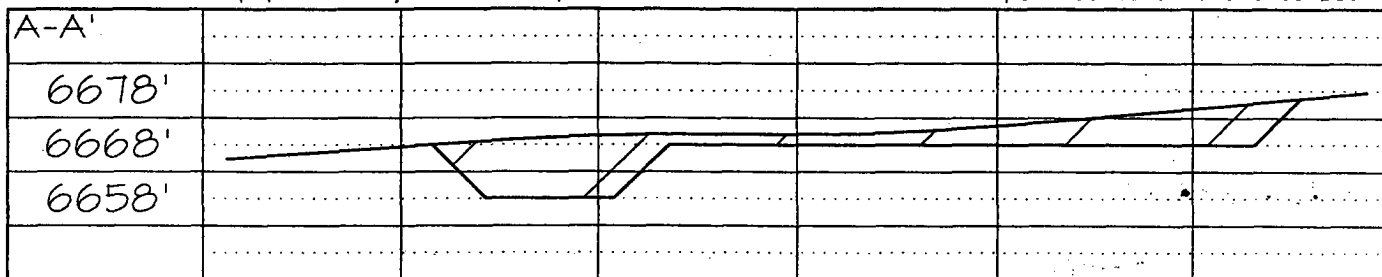
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST #7 DATE MAY 17 2006  
Conditions of Approval (if any):

**BURLINGTON RESOURCES OIL & GAS COMPANY, LP  
SAN JUAN 27-5 UNIT #103M, 1965' FNL & 1410' FEL  
SECTION 14, T27N, R5W, NMPM, RIO ARriba COUNTY, NM  
GROUND ELEVATION: 6664' DATE: DECEMBER 27, 2005**

**LATITUDE: 36°34'33"**  
**LONGITUDE: 107°19'21"**  
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

# SAN JUAN 27-5 #103M OPERATIONS PLAN

**Well Name:** SAN JUAN 27-5 #103M

**Objective:** Blanco Mesa Verde/Basin Dakota

**Location:** Rio Arriba NM

**Elevation:** 6664'

**Surface Coordinates/Footages**

T - 27 N R - 5 W Sec.: 14  
 1965' FNL 1410' FEL  
 Latitude: 36° 34.5452' N  
 Longitude: 107° 19.3582' W

**Bottom Hole Coordinates/Footages**

T - 27 N R - 5 W Sec.: 14  
 865' FNL 2180' FEL  
 Latitude: 36° 34.7268' N  
 Longitude: 107° 19.5480' W

<b><u>Formation</u></b>	<b><u>Top (TMD)</u></b>	<b><u>Top (TVD)</u></b>	<b><u>Contents</u></b>
Surface	San Jose	San Jose	
Ojo Alamo	3041'	2895'	aquifer
Kirtland	3199'	3049'	gas
Fruitland	3695'	4132'	gas
Pictured Cliffs	3895'	3514'	gas
Lewis	4142'	3701'	gas
Huerfanito Bentonite	4355'	3933'	gas
Chacra	4689'	4457'	gas
Upper Cliff House	5274'	5042'	gas
Massive Cliff House	5398'	5166'	gas
Menefee	5544'	5312'	gas
Massive Point Lookout	5890'	5658'	gas
Mancos Shale	6407'	6175'	gas
Upper Gallup	7062'	6830'	gas
Greenhorn	7831'	7599'	gas
Graneros	7890'	7658'	gas
Two Wells	7920'	7688'	gas
Upper Cubero	8033'	7801'	gas
Lower Cubero	8074'	7842'	gas
Oak Canyon	8143'	7911'	gas
Encinal	8162'	7930'	gas
<b>Total Depth:</b>	<b>8162'</b>	<b>7930'</b>	gas

**Logging Program:** Cased Hole: CBL-GR  
 Open Hole: None

<b><u>Mud Program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Type</u></b>	<b><u>Weight (ppg)</u></b>	<b><u>Vis. (s/qt)</u></b>	<b><u>Fluid Loss (cc/30min)</u></b>
	0' - 350'	Spud	8.4-9.0	40-50	No control
	350' - 4839'	Non-dispersed	8.4-9.0	30-60	Less than 8
	4839' - 8162'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

<b><u>Casing program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Hole Size</u></b>	<b><u>Casing Size</u></b>	<b><u>Weight</u></b>	<b><u>Grade</u></b>
	0' - 350'	12 1/4"	9 5/8"	32.3#	H-40
	350' - 4839'	8 3/4"	7"	23.0#	L-80
	4839' - 8162'	6 1/4"	4 1/2"	11.6#	L-80

<b><u>Tubing program:</u></b>	<b><u>Interval (TMD)</u></b>	<b><u>Hole Size</u></b>	<b><u>Casing Size</u></b>	<b><u>Weight</u></b>	<b><u>Grade</u></b>
	0' - 8162'	Cased	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

**Drilling:** See Plot #1

**Surface**

Drill to surface casing point of 350' and set 9.625" casing.

**Intermediate**

Mud drill to kick off point of 500'. At this point the well will be directionally drilled by building 4 degrees per 100' with an azimuth of 325.01 degrees. The end of the build will be at a TVD of 1002', a TMD of 1013', a reach of 91', and an inclination of 20.51 degrees. This angle and azimuth will be held to a TVD of 4105', a TMD of 4326', and a reach of 1252'. At this point the well will be drilled with a drop of 4 degrees per 100'. The end of the drop will be at a TVD of 4607', a TMD of 4839', a reach of 1343', and an angle of 0.0 degrees. 7" casing will be set at this point.

**Production**

From the shoe of the intermediate string, the well will be drilled vertically with an air hammer to a TVD of 7930' (TMD of 8162'). 4.5" casing will be set at this point.

**Cementing**

9.625" surface casing conventionally drilled: **200%** excess cement to bring cement to surface.

Run 329 cu.ft. (257 sks) Type III cement with 3% CaCl<sub>2</sub> and 1/4 pps celloflake (1.28 sks/ cu.ft.). 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" intermediate casing: **50%** excess cement to bring cement to surface.

Lead with 967 cu.ft. (454 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.

4.5" production casing: **30%** excess cement to achieve 100' overlap with intermediate casing.

Run 455 cu.ft. (230 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 Total Depth – 11", 2000 psi double gate BOP stack (Reference Figure #1).

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

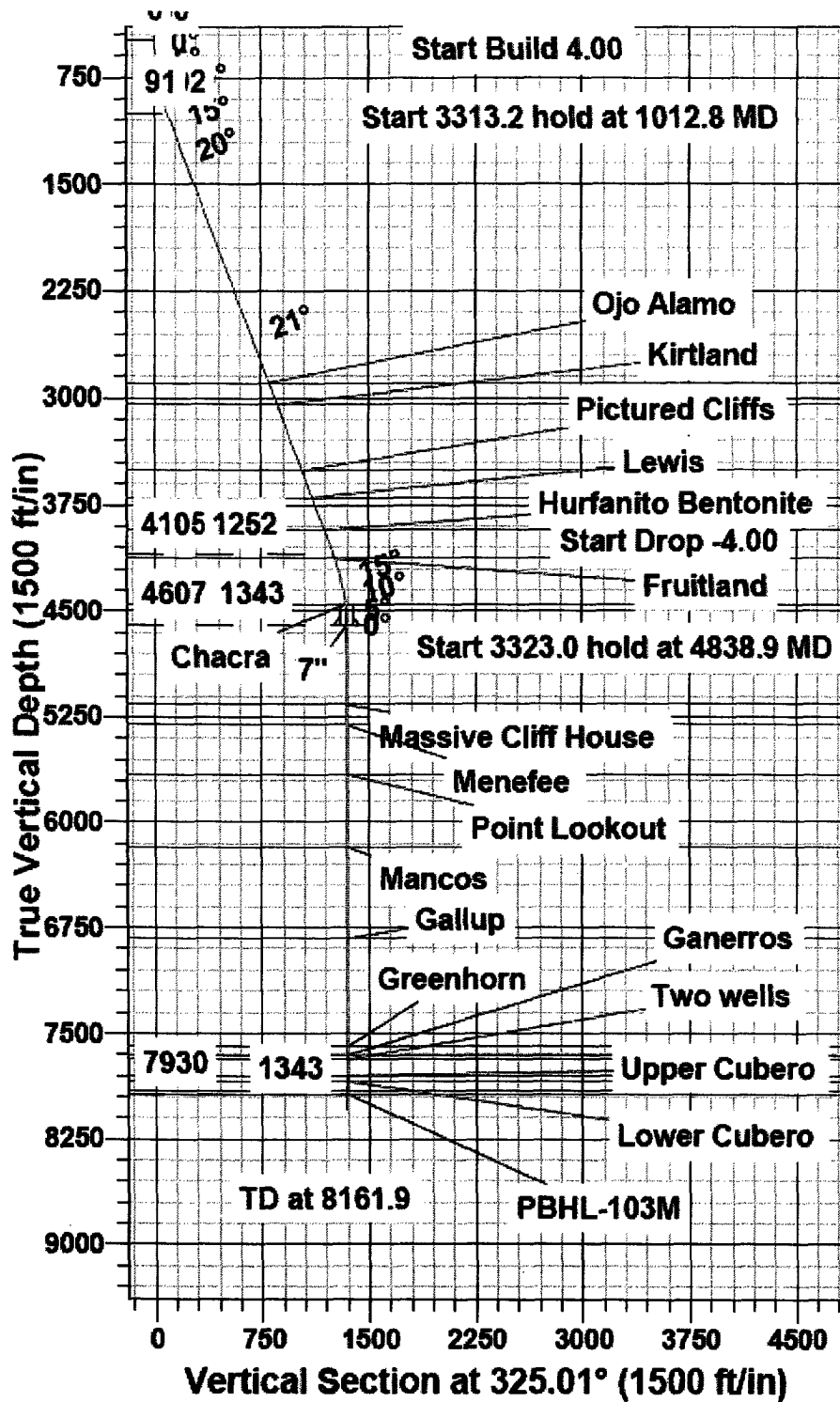
Prior to drilling out surface casing, test BOPE and casing to 600 psi for 30 minutes.

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 to the East half of section 14
- 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.



Plot # 1: San Jaun 27-5 Unit 103M

*[Signature]*  
Drilling Engineer

*3/30/06*  
Date



Scientific Drilling

Project: SAN JUAN , NM  
Site: SEC14-T27N-R5W  
Well: SAN JUAN UNIT #103M  
Wellbore: OH  
Plan: Plan #1 (SAN JUAN UNIT #103M/OH)

**BURLINGTON™**  
**RESOURCES**

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
1012.8	20.51	325.01	1002.0	74.4	-52.1	4.00	325.01	90.8	
4326.0	20.51	325.01	4105.0	1025.6	-717.9	0.00	0.00	1251.9	
4838.9	0.00	0.00	4607.0	1100.0	-770.0	4.00	180.00	1342.7	CSG.PT-103M
8161.9	0.00	0.00	7930.0	1100.0	-770.0	0.00	0.00	1342.7	PBHL-103M

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CSG.PT-103M	4607.0	1100.0	-770.0	2030320.00	649014.91	36° 34' 43.618 N	107° 19' 32.961 W	Point
PBHL-103M	7930.0	1100.0	-770.0	2030320.00	649014.91	36° 34' 43.618 N	107° 19' 32.961 W	Circle (Radius: 100.0)

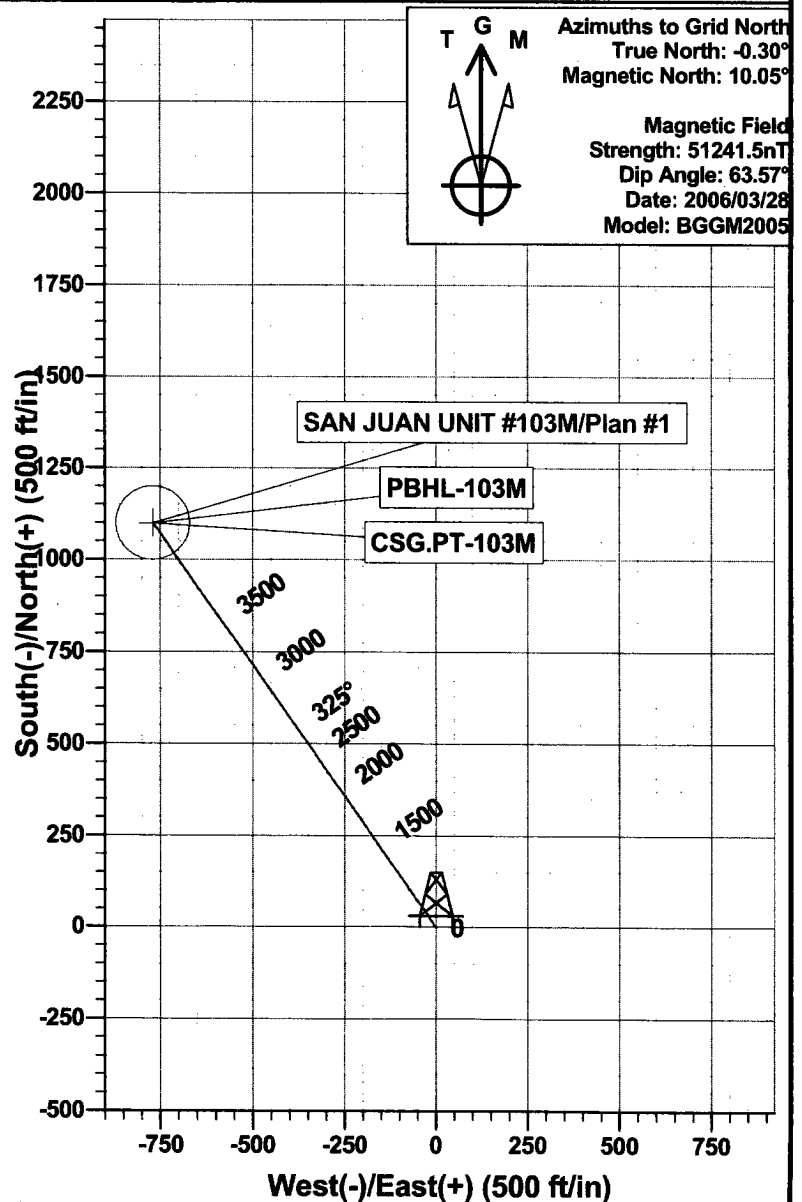
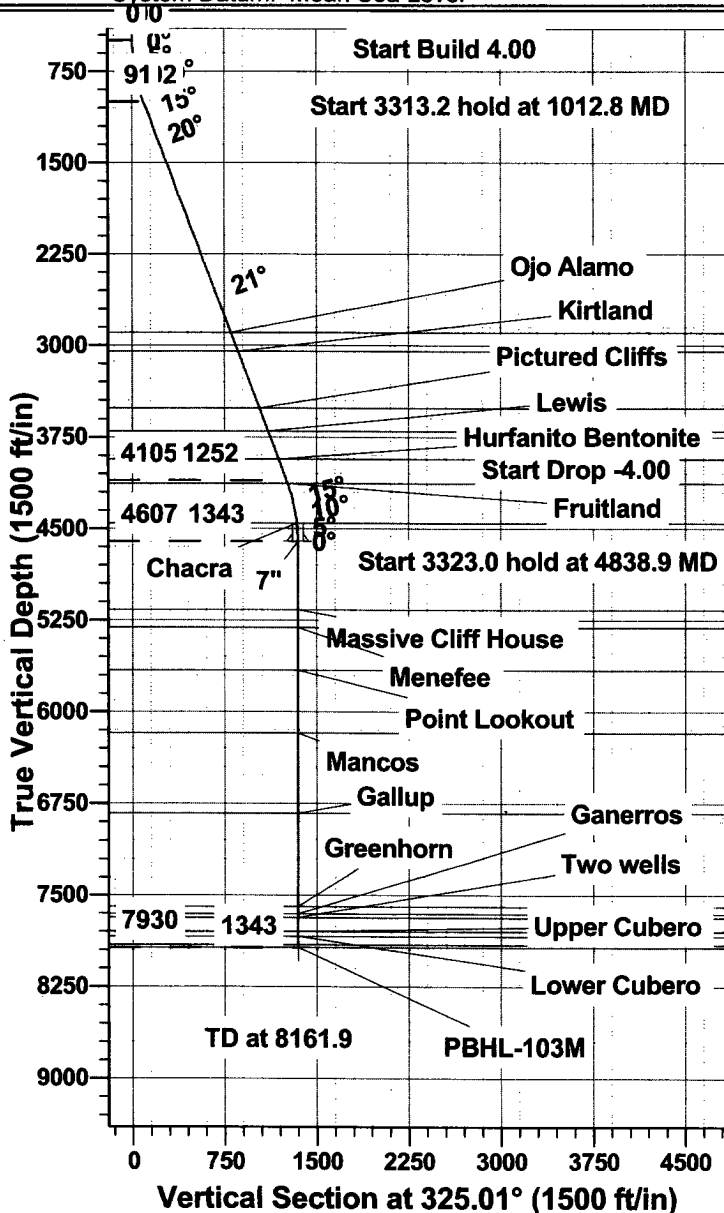
#### PROJECT DETAILS: SAN JUAN , NM

Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: New Mexico West 3003

System Datum: Mean Sea Level

#### WELL DETAILS: SAN JUAN UNIT #103M

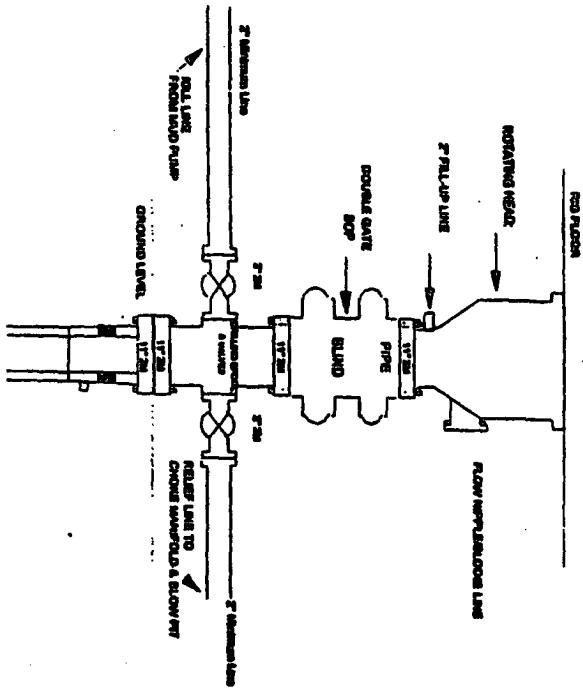
Ground Level:	6664.0
Northings	2029220.00
Easting	649784.91
Latitude	36° 34' 32.700 N
Longitude	107° 19' 23.592 W





# Burlington Resources

## Drilling Rig 2000 psi System



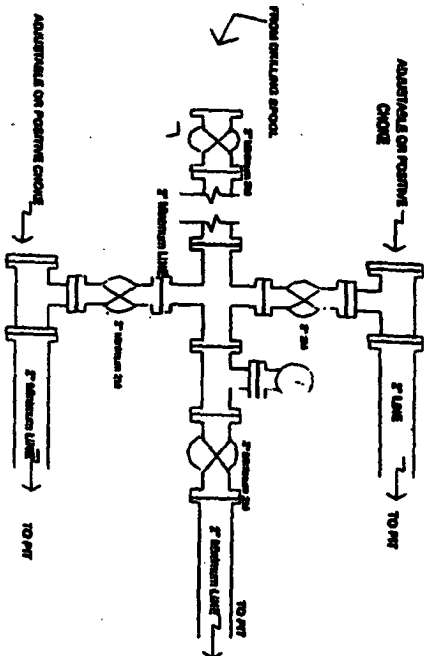
BOP installation from Surface Casing Point to Total Depth. 18\"/>

Figure #1

4-20-01

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System



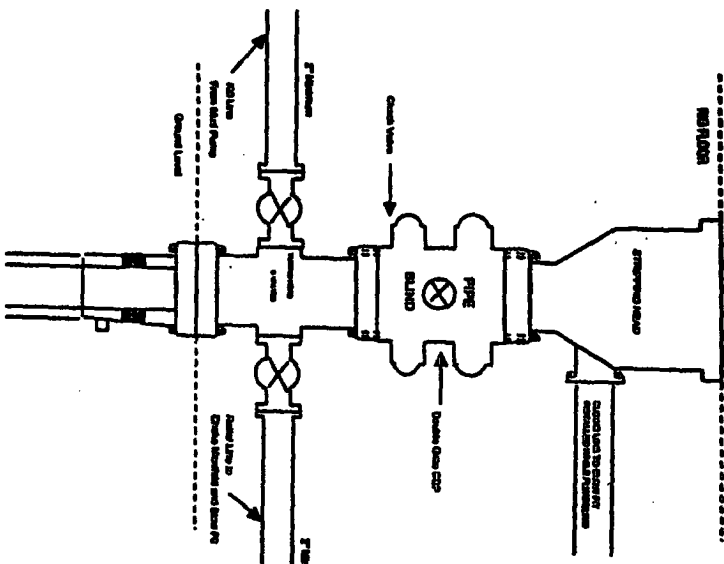
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

# BURLINGTON RESOURCES

## Completion/Workover Rig BOP Configuration 2000 psi System



Minimum BOP installation for all Completion/Workover Operations. 7-1/16\"/>

Figure #2

4-20-01