

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	2006 JAN 9 AM 8 30 RECEIVED 070 FARMINGTON NM	5. Lease Number NM-03758 Unit Reporting Number
1b. Type of Well GAS		6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON</b> 14538 RESOURCES Oil & Gas Company	JAN 2006 RECEIVED OIL CONS. DIV. ST. 8	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name Sunray C 7565 9. Well Number 100
4. Location of Well Unit A (NENE), 940' FNL & 985' FEL,  Latitude 36° 50.7256'N Longitude 107° 56.1483'W	10. Field, Pool, Wildcat Basin FC / N. Aztec FS / Aztec PC 71629 71240 71280 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 1, T30N, R11W API # 30-045-33508	
14. Distance in Miles from Nearest Town	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 940'		
16. Acres in Lease	17. Acres Assigned to Well FC - 322.40 N/2; PC&FS-161.49 NE/4	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease Twinned w/Sundry C #1		
19. Proposed Depth 2792'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 5976' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Patsy Chis</u> Sr. Regulatory Specialist	Date <u>1/5/06</u>	

PERMIT NO.

APPROVAL DATE

APPROVED BY Jim Webb

TITLE Acting AAM

DATE 1/27/06

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.

Not an HPA FC Well

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

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

NMOC

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

DISTRICT II  
611 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

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

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

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045- <b>33508</b>	<sup>2</sup> Pool Code <b>71280</b> 71629 / 71240 /	<sup>3</sup> Pool Name <b>AZTEC PC</b> Basin Fruitland Coal / N. Aztec Fruitland Sands
<sup>4</sup> Property Code 7565 ✓	<sup>5</sup> Property Name SUNRAY C ✓	<sup>6</sup> Well Number 100 ✓
<sup>7</sup> OGRID No. 14538 ✓	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	<sup>9</sup> Elevation 5976' ✓

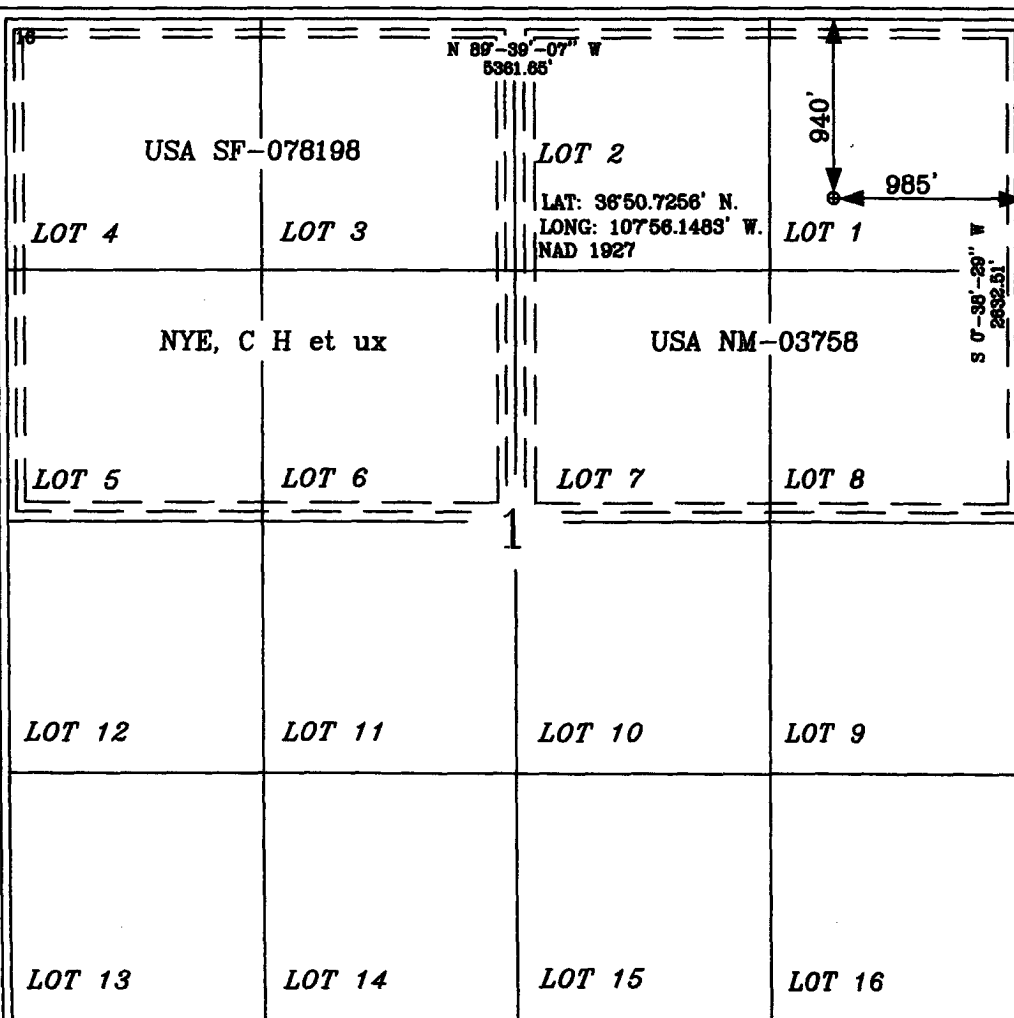
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	1	30-N	11-W		940'	NORTH	985'	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
A									
<sup>12</sup> Dedicated Acres PC&FS - 161.49 NE/4 FC - 322.340 N/2			<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



17 OPERATOR CERTIFICATION

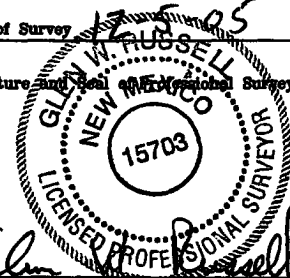
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

*Patsy Clugston*  
Signature  
Patsy Clugston  
Printed Name  
Sr. Regulatory Specialist  
Title  
12-15-05  
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.

12-15-05  
Date of Survey  
Signature and Seal of Professional Surveyor:  
*Glenn W. Russell*  
Certificate Number 15703



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

Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

May 27, 2004

WELL API NO.	30-045- <b>33508</b>
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	Federal Lease - NM-03758
7. Lease Name or Unit Agreement Name	Sunray C
8. Well Number	#100
9. OGRID Number	14538
10. Pool name or Wildcat	Basin FC/ Aztec PC/WC FS

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  
Unit Letter A : 940' feet from the North line and 985' feet from the East line  
Section 1 Township 30N Range 11W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
5976' GR

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: 12 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 ☐

OTHER: New Drill ☒

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, Lined:

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 will be a lined 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 lined 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 Philana Thompson TITLE Regulatory Associate II DATE 1/4/2006

Type or print name Philana Thompson E-mail address: pthompson@br-inc.com Telephone No. 505-326-9530  
For State Use Only

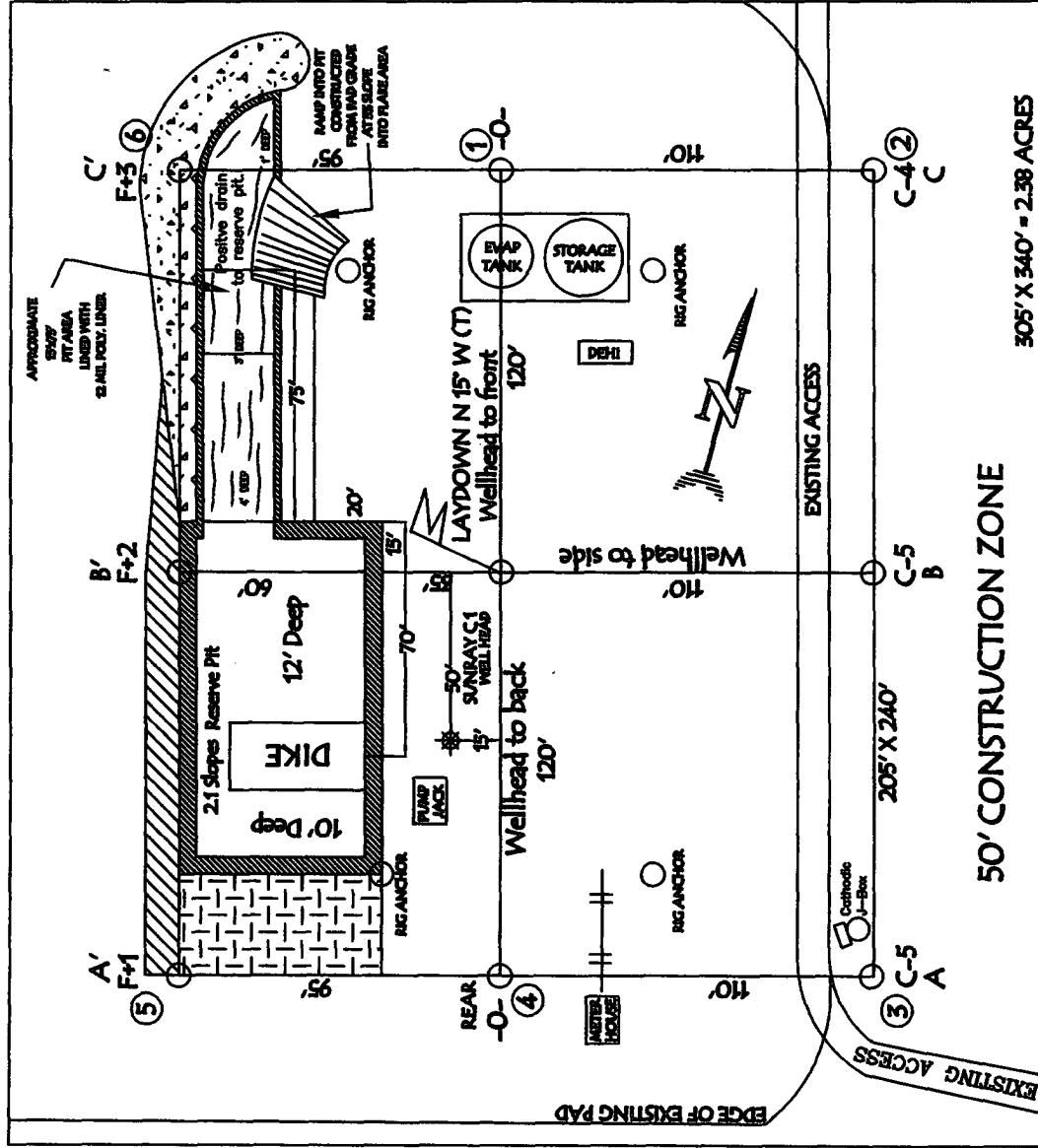
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 4 DATE JAN 30 2006  
Conditions of Approval (if any):

# BURLINGTON RESOURCES OIL & GAS COMPANY LP

## SUNRAY C100, 940' FNL & 985' FEL

### SECTION 1, T-30-N, R-11-W, NMPM, SAN JUAN COUNTY, NM

#### GROUND ELEVATION: 5976', DATE: NOVEMBER 29, 2005



RESERVE PIT DIKE, TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).

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.

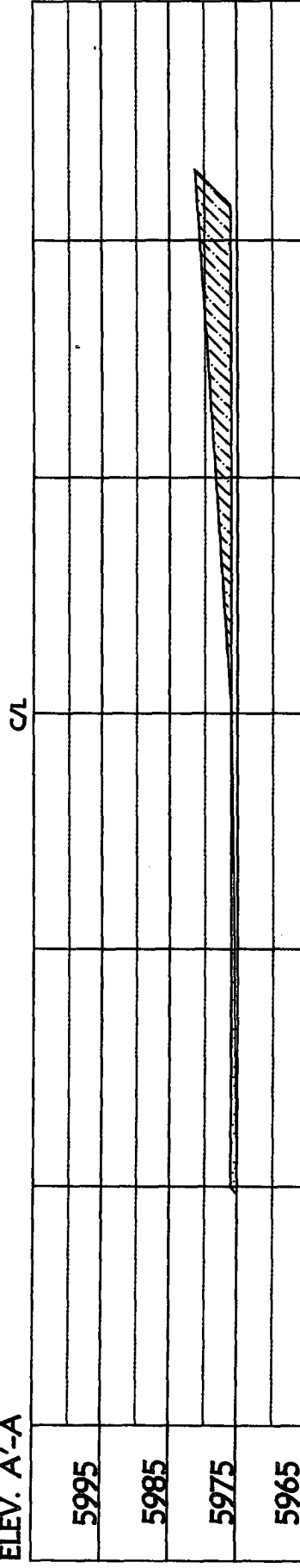
# BURLINGTON RESOURCES OIL & GAS COMPANY LP

SUNRAY C 100, 940' FNL & 985' FEL

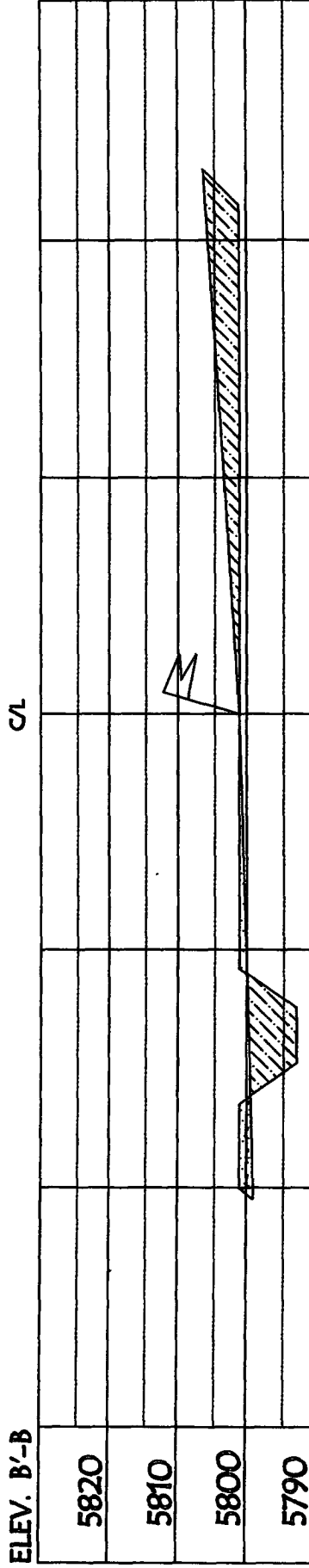
SECTION 1, T-30- N, R-11-W, NMPM, SAN JUAN COUNTY, NM

GROUND ELEVATION: 5976', DATE: NOVEMBER 29, 2005

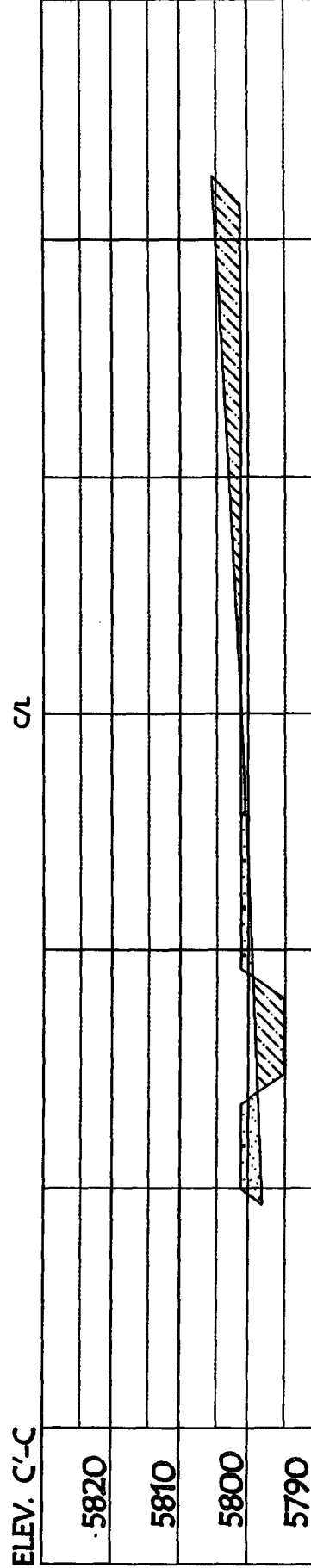
ELEV. A'-A



ELEV. B'-B



ELEV. C'-C



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:** Sunray C #100  
**Location:** Unit A (NENE), 940' FNL & 985' FEL, Section 1, T30N, R11W  
 San Juan County, New Mexico  
 Latitude 36° 50.7256'N Longitude 107° 56.1483' W  
**Formation:** Basin Fruitland Coal / Fruitland Sands & Pictured Cliffs  
**Elevation:** 5976' GR

Formation:	Top	Bottom	Contents
Ojo Alamo	1249'	1288'	aquifer
Kirtland	1288'	2228'	gas
T/Fruitland	2228'		gas
Pictured Cliffs	2592'		
Total Depth	2792'		

**Logging Program:** None

**Mud Program:**

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis. Fluid Loss</u>
0- 120'	Spud/Air/Air Mist	8.4-8.9	40-50 no control
120-2792'	Non-dispersed	8.4-9.5	30-60 no control

**Casing Program:**

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
8 $\frac{3}{4}$ "	0 - 120'	7"	20.0#	J-55
6 $\frac{1}{4}$ "	0 - 2792'	4 1/2"	10.5#	J/K-55

**Tubing Program:**

0 - 2792'	2 3/8"	4.7#	J-55
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**Float Equipment:** 7" surface casing - guide shoe. Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - float shoe and float collar on bottom. Centralizers run every third joint above shoe to the base of the Ojo Alamo @ 1288'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 1288'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

**Wellhead Equipment:** 7" x 4 1/2" x 2 3/8" x 11" 2000 psi xmas tree assembly.

December 13, 2005

**Cementing:**

7" surface casing Pre-Set Drilled - Cement with Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.28 cu ft per sack yield. (Bring cement to surface). Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

7" surface casing - Cement with 42 sx Type III cement with 0.25 pps Celloflake, 3% CaCl. (54 cu ft of slurry @ 1.28 yield). 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.**

4 1/2" production casing - Cement with 162 sx (345 cu ft of slurry @ 2.13 yield) 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 (124 cu ft of slurry @ 1.38 yield) Type III cmt with 1% calcium chloride, 1/4#/sack Celloflake and 0.2% FL-52. Total of 469 cf - 50% excess to circulate to surface.

**BOP and tests:**

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1 and #2). Prior to drilling out surface casing, test ~~rams~~ <sup>BOP</sup> to 600 psi/30 min.

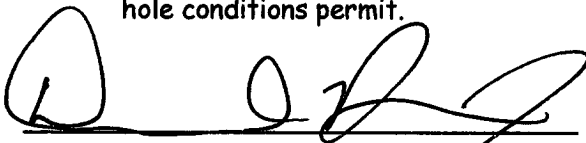
Completion - 6" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams and casing to 1500 psi/30 min.

From surface to TD - choke manifold (Reference Figure #3).

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:**

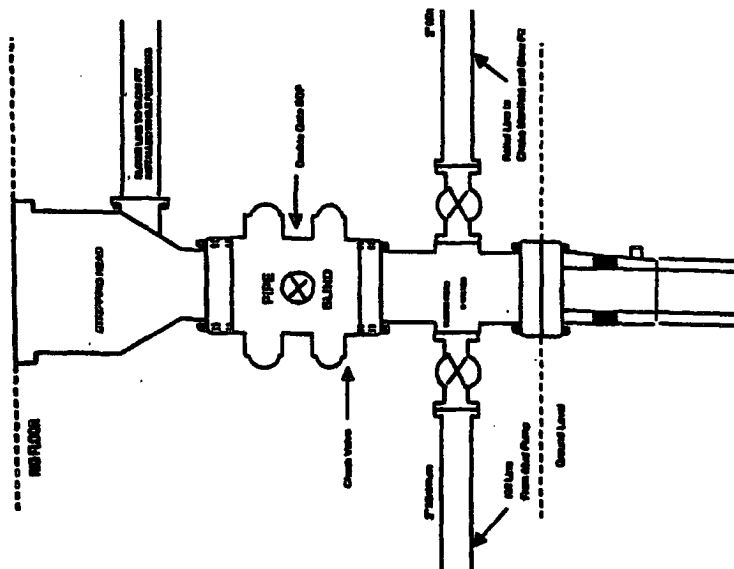
- \* The Fruitland Coal, Fruitland Sands and Pictured formations will be completed.
- \* Anticipated pore pressure for the Fruitland Coal is 600 - 700 psi.
- \* This gas is dedicated.
- \* The north half of the section is dedicated to the FC, and the NE/4 of the section is dedicated to the FS & PC for this well.
- \* New casing will be utilized.
- \* Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

  
Drilling Engineer

115/06  
Date

## BURLINGTON RESOURCES

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

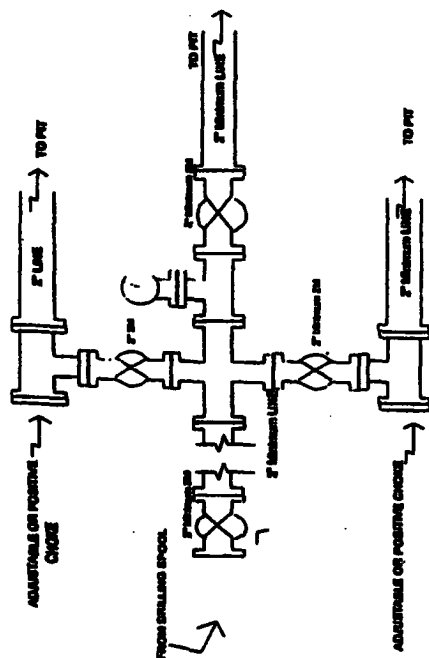


**Minimum BOP installation for all CompactionWorkover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment to 2000 psi working pressure or greater exceeding 500 psi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

Figure #2

## BURLINGTON RESOURCES

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

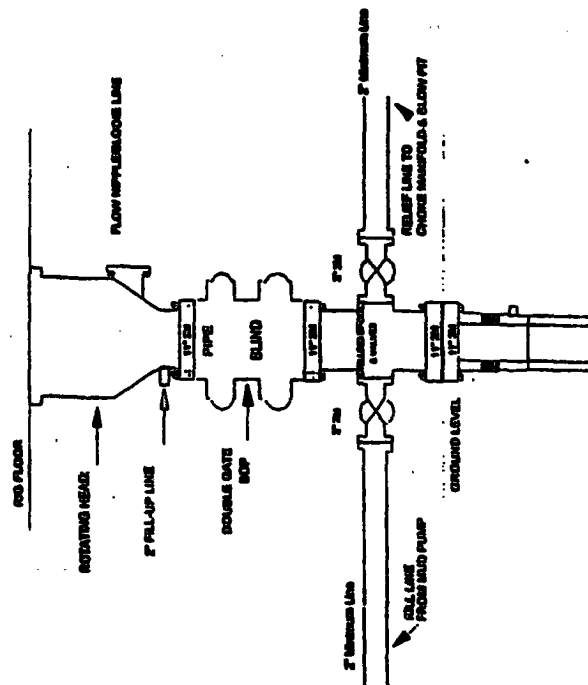


**Choice manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two choices.**

**Figure #3**

## Burlington Resources

**Drilling Rig  
2000 psi System**



**BOOP Installation from Surface Casing Point to Total Depth, 11" Bore 18" Nominal, 2000 psi working pressure double gate BOOP to be equipped with blind rams and pipe caps. A BOOP psi rating based on top of ram pressure. All BOOP equipment is 2,000 psi working pressure.**

**Figure #1**