

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 AUG 8 AM 8 13

1a. Type of Work DRILL	5. Lease Number NMSR-078386A Unit Reporting Number 010
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 Sunray G 9. Well Number #4
4. Location of Well Unit G (SWNE), 1595' FNL, 1620' FEL Latitude 36° 53.1855'N Longitude 107° 46.8908'W	10. Field, Pool, Wildcat Blanco Pictured Cliffs 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 21, T31N, R9W API # 30-045- 33885
14. Distance in Miles from Nearest Town 16 miles to Aztec, NM	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1595'	17. Acres Assigned to Well NE/4 157.88
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drlg. Compl. or Applied for on this Lease 50' - Sunray G #2	
19. Proposed Depth 3555'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6495' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Amanda Sainch</u> Regulatory Analyst	8-7-06 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.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3166.4

NMOCD

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045- 33885		*Pool Code 72359	*Pool Name Blanco Pictured Cliffs
*Property Code 7569	*Property Name SUNRAY G		*Well Number 4
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP		*Elevation 6495'

¹⁰ Surface Location

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	21	31N	9W	7	1595	NORTH	1620	EAST	SAN JUAN

¹¹Bottom 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
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¹² Dedicated Acres NE/4 157.88 ac.	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

16

5233.80'

LOT 4

LOT 3

LOT 2

LOT 1

LEASE
SF-078386
A

1545'

975'

1620'

LOT 5

LOT 6

LOT 7

LAT: 36°53.1855' N
LONG: 107°46.8908' W
DATUM: NAD27

LOT 8

LAT: 36.88643° N
LONG: 107.78213° W
DATUM: NAD83

1035'

5291.88'

21

5260.20'

LOT 11

LOT 10

LOT 9

LOT 12

LOT 13

LOT 14

5182.32'

17 OPERATOR CERTIFICATION

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

Joni Clark

Signature

Joni Clark

Printed Name

Title

6/7/06

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.

Date of Survey: MARCH 13, 2006

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
15269

JASON C. EDWARDS
Certificate Number 15269

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

WELL API NO.	30-045- 33885
5. Indicate Type of Lease	STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	SF-078386
7. Lease Name or Unit Agreement Name	Sunray G
8. Well Number	#4
9. OGRID Number	14538
10. Pool name or Wildcat	Blanco Pictured Cliffs

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 G : 1595 feet from the North line and 1620 feet from the East line
Section 21 Township 31N Rng 9W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6635'

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 Joni Clark TITLE Regulatory Analyst DATE 6/23/2006

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

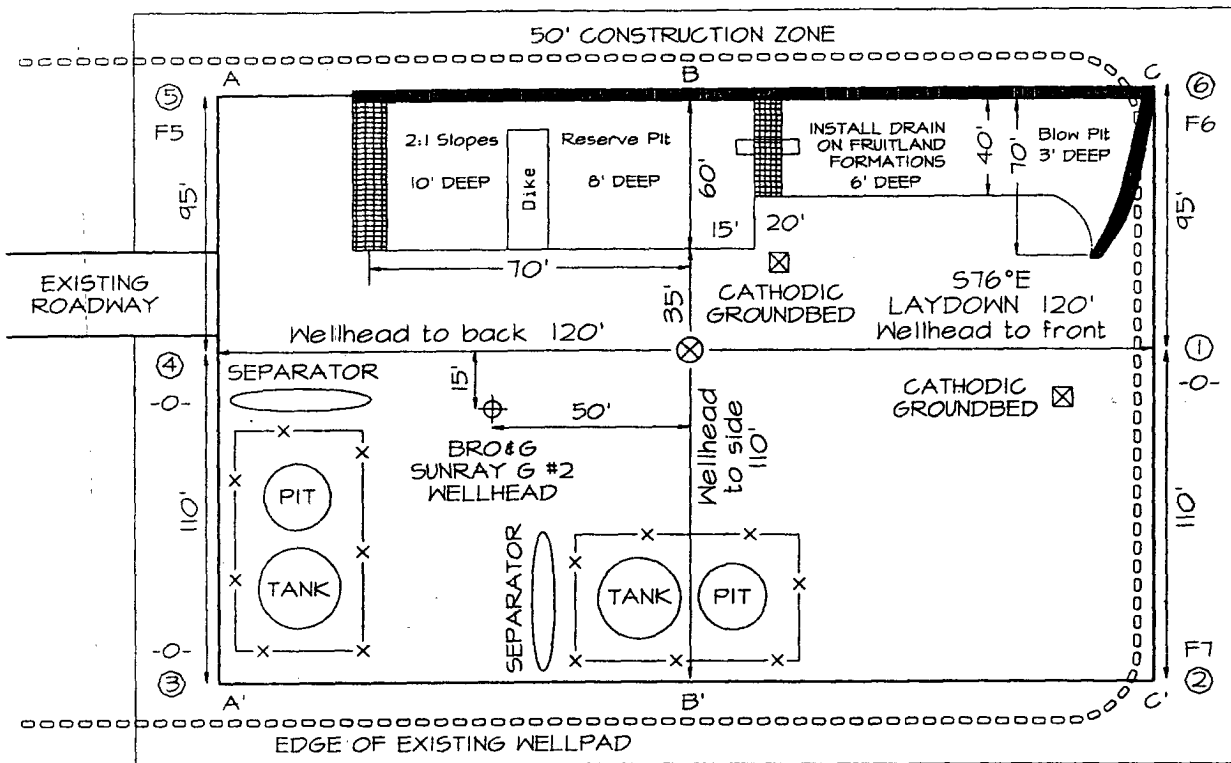
For State Use Only

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 3 DATE AUG 21 2006

Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY SUNRAY G #4
1595' FNL & 1620' FEL, SECTION 21, T31N, R9W, NMPM, SAN JUAN COUNTY, NM
GROUND ELEVATION: 6495' DATE: MARCH 13, 2006

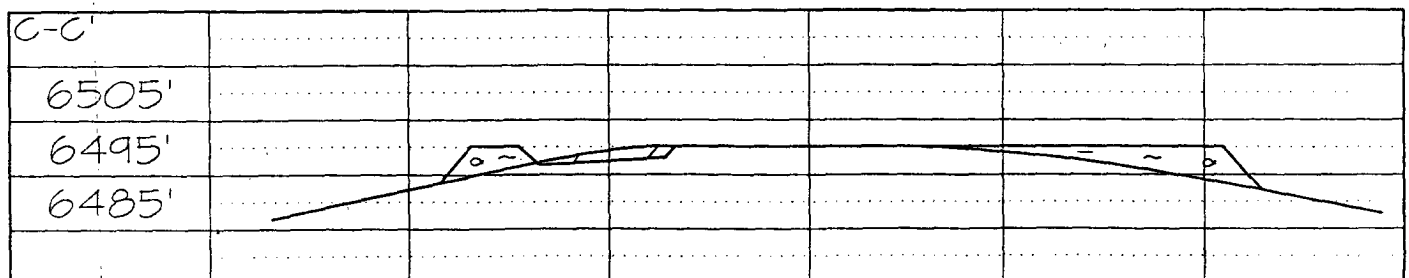
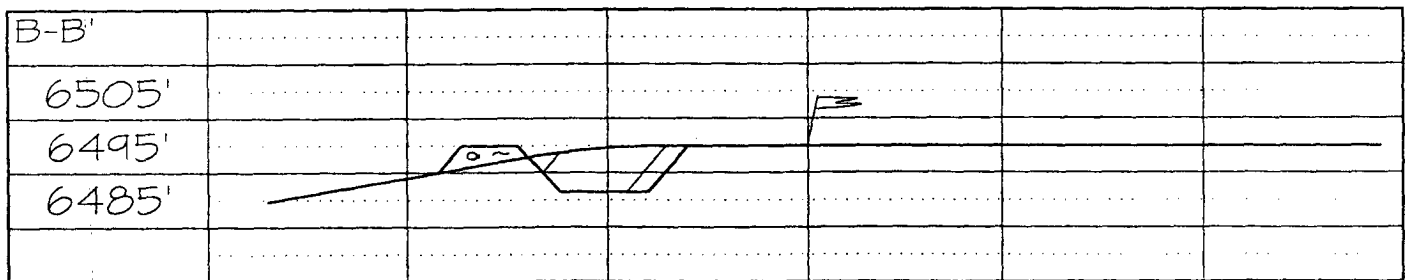
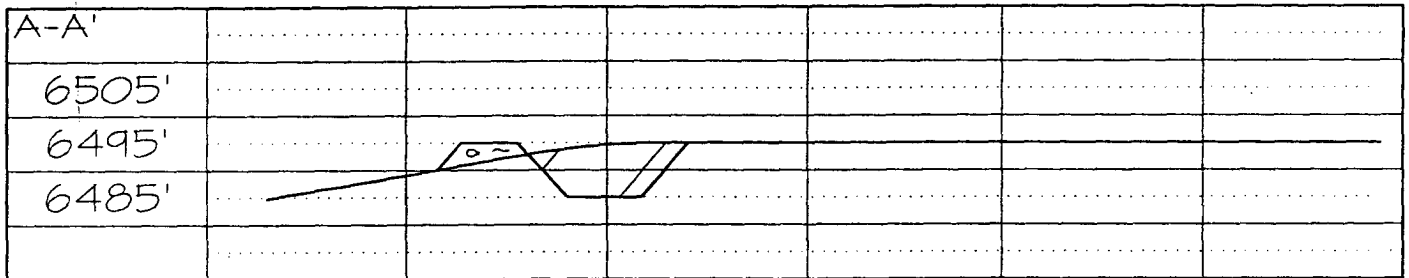
205' X 240' 305' X 340' = 2.38 ACRES



LATITUDE: 36.88643° N
LONGITUDE: 107.78213° W
 DATUM: NAD1983



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

OPERATIONS PLAN

Well Name: Sunray G #4
Location: 1595' FNL & 1620' FEL, Section 21 - T31N - R9W
San Juan County, New Mexico

Formation: Blanco Pictured Cliffs
Elevation: 6495' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2524'	
Ojo Alamo	2524'	2671'	aquifer
Kirtland	2671'	2988'	gas
Fruitland Coal	2988'	3355'	gas
Pictured Cliffs	3355'	3528'	gas
Lewis	3528'		
Total Depth:	3555'		gas

Logging Program:

Mudlog: none
Coring: none
Cased Hole: GR/CBL from TD to min operations depth

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
0 - 3555'	Polymer Mud/Polymer-Starch	8.4 - 9.0	40 - 50	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>
8 3/4"	0' - 120'	7"	32.3#	H-40
6 1/4"	0' - 3555'	4 1/2"	10.5#	J-55

Tubing Program:

<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 3555'	2 3/8"	4.7#	J-55

Float Equipment:

7" surface casing - guide shoe. Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - guide shoe and float collar.
Standard centralizers run every third joint above shoe. Two tubulizing type centralizers - one below and one into the base of the Ojo Alamo 2671'. 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" 2000 psi xmas tree assembly.

Cementing:

7" surface casing -

Pre-Set Drilled -

Cement with 34 sx Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (54 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 42 sacks Type III cement with 0.25 pps Celloflake, 3% CaCl. (54 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.

4 1/2" production casing -

Lead w/199 sacks Premium Lite with 3% calcium chloride, 5 ps 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 (547 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.

BOP and Tests:

Surface to Production TD -

11" 2000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test to 600 psi for 30 minutes.

↑
BOPE

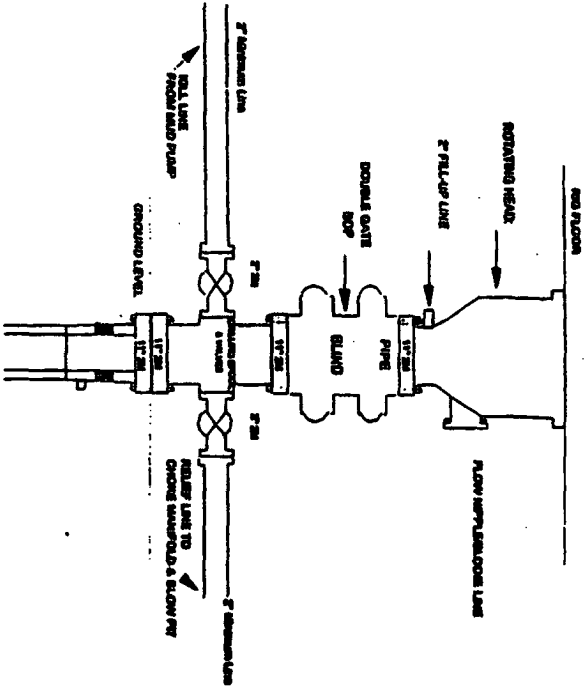
From Surface to Production TD -

a choke manifold will be installed in accordance with Onshore Order No. 2 (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.

Burlington Resources

Drilling Rig 2000 psi System

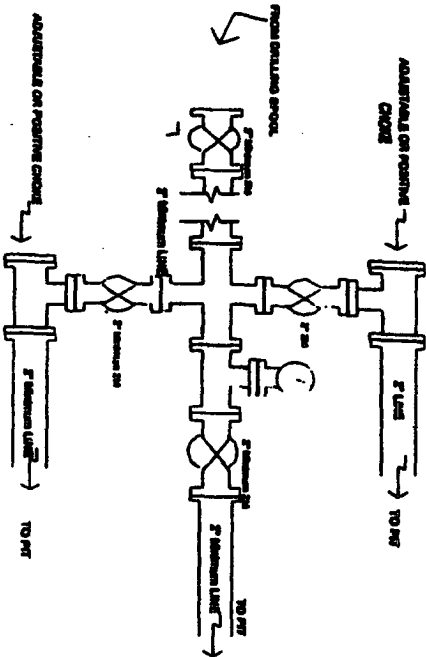


BOP Installation from Surface Casing Point to Total Depth, 11\"/>

Figure #1

BURLINGTON RESOURCES

Drilling Rig Choice Manifold Configuration 2000 psi System



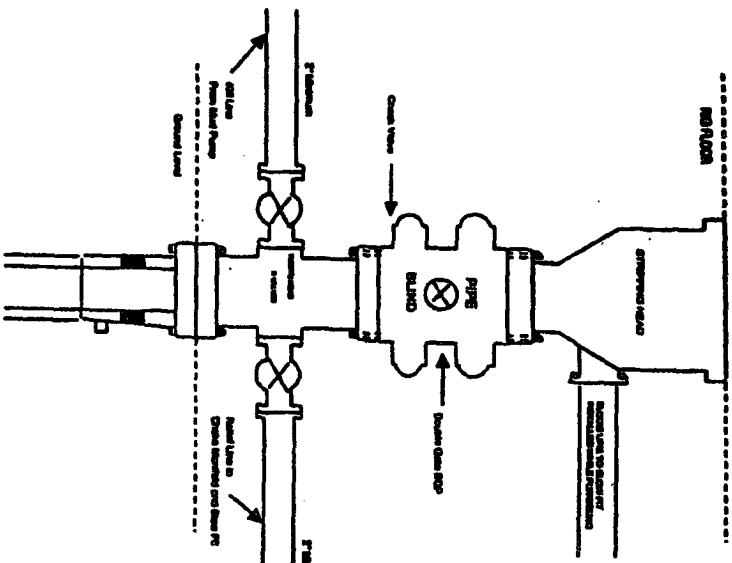
Choice manifold installation from Surface Casing Point to Total Depth, 2,000psi working pressure equipment with two choices.

Figure #3

4-20-01

BURLINGTON RESOURCES

Completion/Workover Rig BOP Configuration 2,000 psi System



Minimum BOP Installation for all Completion/Workover Operations, 7-1/16\"/>

Figure #2

4-20-01