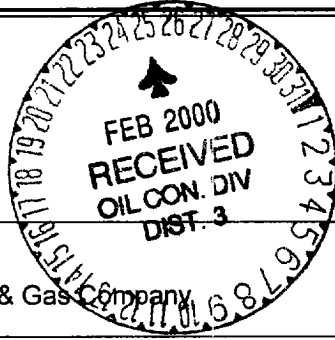


UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2000 JAN 18 PM 3:54
BVO FARMINGTON, NM



1a. Type of Work DRILL	5. Lease Number SF-078386-1 Unit Reporting Number
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 #3
4. Location of Well 930' FSL, 1700' FWL Latitude 36° 52.7, Longitude 107° 47.3	10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) N Sec. 21, T-31-N, R-9-W API # 30-045-30158
14. Distance in Miles from Nearest Town 6 mi from Navajo Dam P.O.	12. County San Juan 13. State New Mexico
15. Distance from Proposed Location to Nearest Property or Lease Line 930'	
16. Acres in Lease	17. Acres Assigned to Well 317.01 W/2
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 75'	
19. Proposed Depth 7700' This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6192' GR	22. Approx. Date Work will Start DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u><i>[Signature]</i></u> Regulatory/Compliance Administrator	<u>1-11-00</u> Date

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY /s/ Charlie Beecham TITLE _____ DATE FEB 23 2000

Archaeological Report to be submitted
Threatened and Endangered Species Report to be submitted
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.

chsc

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

Form C-102

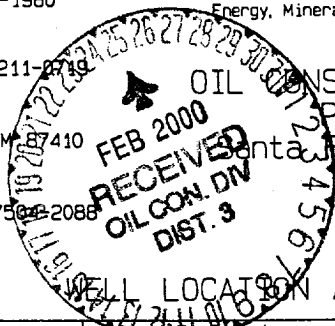
Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies



JAN 13 PM 3:54

☐ AMENDED REPORT

070 FARMINGTON, NM

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-30158		*County Code 71599	*Pool Name Basin Dakota
*Property Code 7569	*Property Name SUNRAY G		*Well Number 3
*OGFID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		*Elevation 6192'

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
N	21	31N	9W		930	SOUTH	1700	WEST	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

¹² Dedicated Acres W/317.01	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				¹⁷ OPERATOR CERTIFICATION			
LOT 4				I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief			
LOT 3				Signature <i>Peggy Cole</i>			
LOT 2				Printed Name Peggy Cole			
LOT 1				Regulatory Administrator Title			
SF-078386-A				Date 1-11-00			
LOT 5				¹⁸ SURVEYOR CERTIFICATION			
LOT 6				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.			
LOT 7				NOVEMBER 5, 1999			
LOT 8				Date of Survey			
LOT 11				Signature and Seal of Professional Surveyor			
LOT 10				NEALE C. EDWARDS			
LOT 9				NEW MEXICO			
LOT 12				6857			
LOT 13				Certificate			
LOT 14				6857			

OPERATIONS PLAN

Well Name: Sunray G #3
Location: 930' FSL, 1700' FWL, Sec 21, T-31-N, R-9-W
San Juan County, NM
Latitude 36° 52.7, Longitude 107° 47.3
Formation: Basin Dakota
Elevation: 6192' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1891'	
Ojo Alamo	1891'	2001'	aquifer
Kirtland	2001'	2636'	gas
Fruitland	2636'	3071'	gas
Pictured Cliffs	3071'	3221'	gas
Lewis	3221'	3553'	gas
Intermediate TD	3321'		
Mesa Verde	3553'	3953'	gas
Chacra	3953'	4844'	gas
Massive Cliff House	4844'	4901'	gas
Menefee	4901'	5324'	gas
Massive Point Lookout	5324'	5686'	gas
Mancos	5686'	6358'	gas
Gallup	6358'	7276'	gas
Greenhorn	7276'	7334'	gas
Graneros	7334'	7390'	gas
Dakota	7390'		gas
TD (4 1/2" liner)	7700'		

Logging Program:

Open hole - IEL-GR, CNL-CDL, Temp.
Cased hole - CBL-CCL-GR - TD to surface
Cores - none

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-9.0	40-50	no control
200- 3321'	LSND	8.4-9.0	30-60	no control
3321- 7700'	Gas	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

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

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csq. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 3321'	7"	20.0#	J-55
6 1/4"	3221' - 7700'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7700' 2 3/8" 4.7# J-55

BOP Specifications, Wellhead and Tests:

Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1).
After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1).
After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

9 5/8" surface casing - cement with 159 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi for 30 minutes.

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

7" intermediate casing -

Lead w/290 sx Class "B" w/3% sodium metasilicate, 5# gilsonite/sx and 1/4# flocele/sx. Tail w/90 sx Class "B" w/2% sodium metasilicate, 2% calcium chloride, 1/4# flocele (998 cu.ft. of slurry, 100% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar at 2536'. First stage: cement with w/137 sx Class "B" w/2% sodium metasilicate, 2% calcium chloride, 0.25 pps flocele. Second stage: 262 sx Class "B" with 3% sodium metasilicate, 1/4 pps flocele, 5 pps Gilsonite (998 cu.ft., 100% excess to circulate to surface).

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 2001'. Two turbolating centralizers at the base of the Ojo Alamo at 2001'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 499 sx 50/50 Class "H" Poz with 2% gel, 0.25# flocele/sx, 5# gilsonite/sx, 0.2% retardant and 0.4% fluid loss additive (644 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float shoe on bottom with float collar spaced on top of shoe joint.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.

Special Drilling Operations (Gas/Mist Drilling):

The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

- The Dakota formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The west half of Section 21 is dedicated to the Dakota in this well.
- This gas is dedicated.


Drilling Engineer

1/13/00
Date

930' FSL & 1700' FWL, SECTION 21, T31N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

NO NEW CONSTRUCTION
SE/SW SECTION 21, T31N, R9W

