

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2005 JUN 24 PM 2 17

| | | |
|--|---|-----------------|
| 1a. Type of Work DRILL | 5. Lease Number NMSF-079051B 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 San Juan 28-6 Unit | |
| 3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700 | 8. Farm or Lease Name 9. Well Number #105E | |
| 4. Location of Well Unit M (SWSW), 330' FSL, 900' FWL Latitude 36° 36.6750'N Longitude 107° 26.5064'W | 10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 35, T28N, R06W API # 30-039- 29571 | |
| 14. Distance in Miles from Nearest Town 30.10 miles from Post Office in Blanco, NM | 12. County Rio Arriba | 13. State NM |
| 15. Distance from Proposed Location to Nearest Property or Lease Line 900' | | |
| 16. Acres in Lease | 17. Acres Assigned to Well 325.52 S/2 | |
| 18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 1856' - San Juan 28-6 Unit #151N | | |
| 19. Proposed Depth 7728' | 20. Rotary or Cable Tools Rotary | |
| 21. Elevations (DF, FT, GR, Etc.) 6498' GL | 22. Approx. Date Work will Start | |
| 23. Proposed Casing and Cementing Program See Operations Plan attached | | |
| 24. Authorized by: <u>Amanda Sandora</u> Regulatory Compliance Assistant II | 6-23-05 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 3165.4

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

NMOC

DISTRICT I
1626 N. French Dr., Hobbs, N.M. 88240

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

DISTRICT II
611 South First, Artesia, N.M. 88210

DISTRICT III
1000 Edo Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 03-039-29571 | ² Pool Code 71599 | ³ Pool Name Basin Dakota |
| ⁴ Property Code 7462 | ⁵ Property Name SAN JUAN 28-6 UNIT | ⁶ Well Number 105E |
| ⁷ OGED No. 14538 | ⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP | ⁹ Elevation 6498' |

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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|------------|
| M | 35 | 28-N | 6-W | | 330' | SOUTH | 900' | 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 |
|---|---------|----------|-------|---------|-------------------------------|------------------|----------------------------------|----------------|-------------------------|
| ¹² Dedicated Acres S/2 325.52 acres | | | | | ¹³ Joint or Infill | | ¹⁴ Consolidation Code | | ¹⁵ 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

| | | | |
|--|-------|-------|-------|
| 16 | | | |
| 35 | | | |
| LAT: 36°36.6750' N. LONG: 107°28.5064' W. NAD 1927 | | | |
| NM SF-079051-B | | | |
| LOT 4 | LOT 3 | LOT 2 | LOT 1 |
| 900' | | | |
| 330' | | | |
| N 89°-44'-62" E 2846.75' | | | |

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

Sr. Regulatory Specialist

Title

5/25/05

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.

Date of Survey

Signature

15703

Certificate Number

15703

State of New Mexico

Energy, Minerals and Natural Resources

Form C-103

May 27, 2004

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-039-

29571

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil & Gas Lease No.

NMSF-079051B

7. Lease Name or Unit Agreement Name

San Juan 28-6 Unit

8. Well Number

105E

9. OGRID Number

14538

10. Pool name or Wildcat

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

Unit Letter M : 330 feet from the South line and 900 feet from the West lineSection 35 Township 28N Range 6W NMPM County San Juan

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

6496' 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:

na

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.

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 NMOCDD 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 NMOCDD 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 NMOCDD guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

Amanda Sandoval

TITLE

Regulatory Assistant II

DATE

6/6/2005

Type or print name

Amanda Sandoval

E-mail address:

asandoval@br-inc.com

Telephone No.

505-326-9700

For State Use Only

APPROVED BY

[Signature]

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. IV

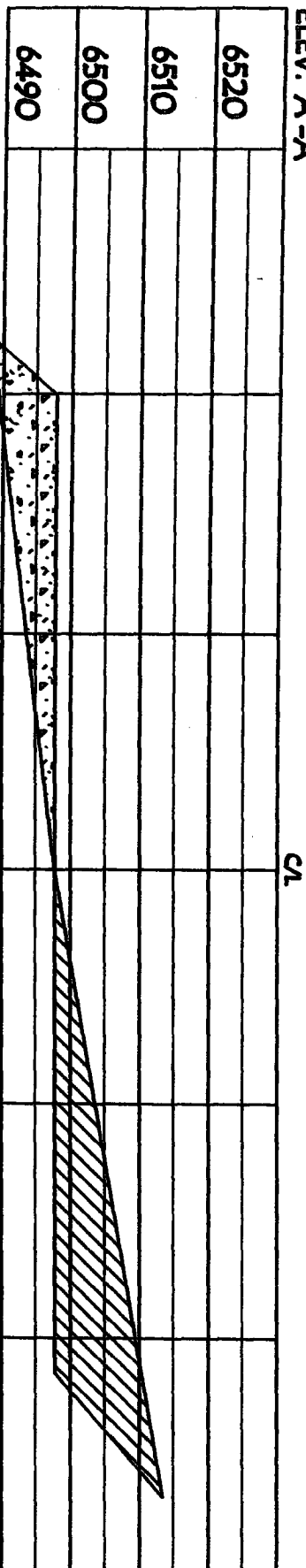
DATE

NOV 07 2005

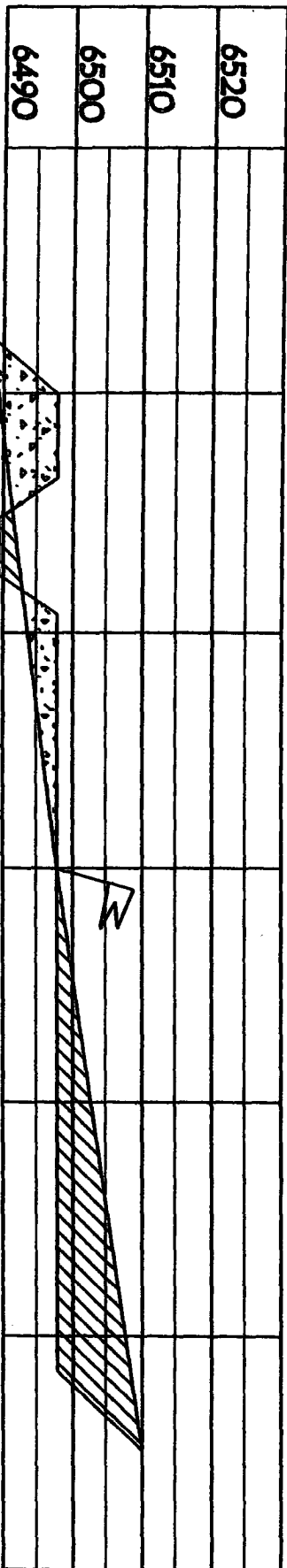
Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY LP
SAN JUAN 28-6 UNIT #105E, 330' FSL & 900' FWL
SECTION 35, T-28-N, R-6-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 6498', DATE: MAY 5, 2005

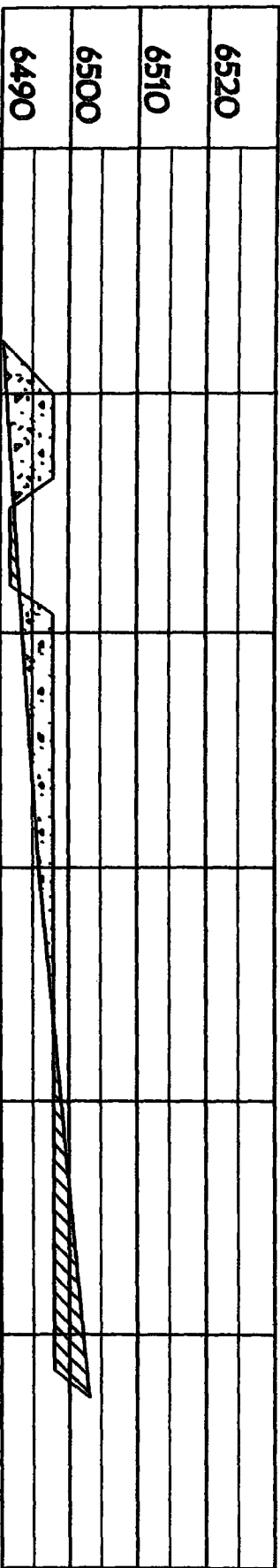
ELEV. A'-A



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: SAN JUAN 28-6 UNIT 105E
Location: 330' FSL & 900' FWL, Section Sec 35 T28N R06W
Rio Arriba County, New Mexico

Formation: Basin Dakota
Elevation: 6498' GL

| <u>Formation Tops:</u> | <u>Top</u> | <u>Bottom</u> | <u>Contents</u> |
|------------------------|------------|---------------|-----------------|
| Surface | San Jose | 2608' | |
| Ojo Alamo | 2608' | 2680' | aquifer |
| Kirtland | 2680' | 3064' | gas |
| Fruitland Coal | 3064' | 3277' | gas |
| Pictured Cliffs | 3277' | 3419' | gas |
| Lewis | 3419' | 3834' | |
| Huerfanito Bentonite | 3834' | | |
| Chacra | 4214' | 4921' | gas |
| Massive Cliff House | 4921' | 5046' | gas |
| Menefee | 5046' | 5435' | gas |
| Massive Point Lookout | 5435' | 5937' | gas |
| Mancos Shale | 5937' | 6640' | |
| Upper Gallup | 6640' | 7388' | gas |
| Greenhorn | 7388' | 7451' | gas |
| Graneros | 7451' | 7482' | gas |
| Two Wells | 7482' | 7603' | gas |
| Upper Cubero | 7603' | 7641' | gas |
| Lower Cubero | 7641' | 7718' | gas |
| Oak Canyon | 7718' | 7728' | gas |
| Encinal | 7728' | 7728' | gas |
| Total Depth: | 7728' | | gas |

Logging Program:

Mud Logs/Coring/DST

Mud logs - none
Coring - none
DST - none
Open hole - none
Cased hole - Gamma Ray, CCL, CBL - surface to TD

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 . |
| 120 - 3519' | LSND | 8.4 - 9.0 | 30 - 60 | no control |
| 3519 - 7728' | Air/Air Mist/Nitrogen | n/a | n/a | n/a |

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> |
|------------------|-----------------------|-----------------|------------|--------------|
| 12 1/4" | 0' - 120' | 9 5/8" | 32.3# | H-40 |
| 8 3/4" | 0' - 3519' | 7" | 20/23# | J-55 |
| 6 1/4" | 0' - 7728' | 4 1/2" | 10.5# | J-55 |

Tubing Program:

| <u>Depth Interval</u> | <u>Csg.Size</u> | <u>Wt.</u> | <u>Grade</u> |
|-----------------------|-----------------|------------|--------------|
| 0' - 7728' | 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 4 1/2" x 2 3/8" x 2000 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 drill crew.
- All BOP tests & 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 -

Pre-Set Drilled - Cement with 23 sx Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (38 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 88 sx Type III cement with 0.25 pps Celloflake, 2% CaCl. (113 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. Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees 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. 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 with 311 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (787 cu ft 50% excess to circulate to surface). WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage -

Stage collar set 300' above the top of the Fruitland. First stage: Lead w/22 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 290 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (787 cu ft - 50% 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 @ 2680'. Two turbolating centralizers at the base of the Ojo Alamo @ 2680'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Pump 290 sxs Premium Lite HS FM w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% fluid loss, 6% gel, 7 pps CSE (573 cu.ft., 30% excess to achieve 100' overlap in 4-1/2" x 7" annulus). WOC a minimum of 18 hrs prior to completing.

Cementing: Continued

Cement float collar stacked on top of float shoe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

- 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 (Air/Mist Drilling):

The following equipment will be operational while air/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.
- 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 Mesa Verde and Dakota formations will be completed and commingled.
- 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 | 2000 psi |
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The south half of Section 35 is dedicated to the Dakota formation.
- This gas is dedicated.


Drilling Engineer

6/18/05
Date