

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RCVD FEB21'07

OIL CONS. DIV.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

DIST. 3

2006 MAR 20 PM 2 53

1a. Type of Work  
DRILL

5. Lease Number

NMSF-080516-B

Unit Reporting Number

NMNM-0784114-mv

6. If Indian, All. or Tribe

1b. Type of Well  
GAS

2. Operator

**BURLINGTON**

RESOURCES Oil & Gas Company, LP

7. Unit Agreement Name

San Juan 28-5 Unit

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. Farm or Lease Name

9. Well Number

#31B

4. Location of Well

Surf - Unit O (SWSE), 785' FSL & 2380' FEL  
Est. BH - Unit B (NWNE), 575' FNL & 2130' FEL,

Surf - Latitude 36° 40.2361'N

Longitude 107° 18.4747'W

Est. BH - Latitude - 36.40.0118'N

Longitude - 107.18.4229'W

10. Field, Pool, Wildcat

Basin DK / Blanco MV

11. Sec., Twn, Rge, Mer. (NMPM)

Surf - Sec. 12, T28N, R05W

Est. BH - Sec. 13, T28N, R05W

API # 30-039- 27823

14. Distance in Miles from Nearest Town

12. County

Rio Arriba

13. State

NM

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

575'

16. Acres in Lease

17. Acres Assigned to Well

See plat

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

48' SJ 28-5 #102E

19. Proposed Depth

Vertical Depth - 8808'

20. Rotary or Cable Tools

Rotary

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

7305' GL

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program

See Operations Plan attached

HOLD C1W4 FOR directional survey

24. Authorized by:

Patsy Clugst  
Sr. Regulatory Specialist

Date

3/20/06

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

NOTIFY AZTEC OGD  
IN TIME TO WITNESS

NOTIFY AZTEC OGD 24 HRS  
IN TIME TO WITNESS

B NMOCD

DISTRICT I  
1625 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  
811 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

OIL CONSERVATION DIVISION

2040 South Pacheco  
Santa Fe, NM 87505

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

2006 MAR 20 PM 2 53

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039- <b>27823</b>	<sup>2</sup> Pool Code 72319 / 71599	<sup>3</sup> Pool Name Blanco Mesaverde / Basin Dakota
<sup>4</sup> Property Code 7460	<sup>5</sup> Property Name SAN JUAN 28-5 UNIT	<sup>6</sup> Well Number 31B
<sup>7</sup> GRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	<sup>9</sup> Elevation 7305'

<sup>10</sup> Surface Location

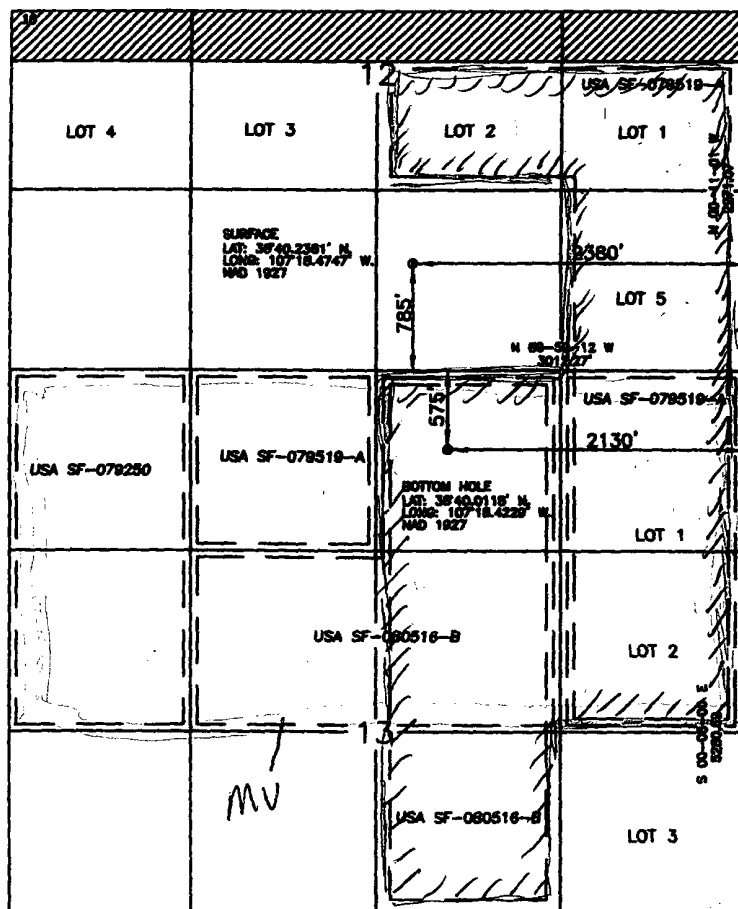
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	12	28-N	5-W		785'	SOUTH	2380'	EAST	RIO ARriba

<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	13	28-N	5-W		575'	NORTH	2130'	EAST	RIO ARriba

<sup>12</sup> Dedicated Acres MV - N/2 Sec 13 OK - 342.30 See attached	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. R-2948 - Unit 6 OK
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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



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  
2/14/2006  
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: 2-2-06  
Signature: *Allen H. Russell*  
NEW MEXICO  
LICENSED SURVEYOR  
15703  
Certificate Number: 15703

Office

Energy, Minerals and Natural Resources

May 27, 2004

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

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-039-

27823

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

Federal Lease - SF-080516-B

7. Lease Name or Unit Agreement Name

San Juan 28-5 Unit

8. Well Number

#31B

9. OGRID Number

14538

10. Pool name or Wildcat

Basin DK / Blanco MV

**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 &amp; GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter O : 758' feet from the South line and 2380' feet from the East line  
Section 12 Township 28N Rng 5W NMPM County Rio Arriba

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

5705'

Pit or Below-grade Tank Application

or Closure ☐

Pit type

New Drill

Depth to Groundwater

&lt;50'

Distance from nearest fresh water well

&gt;1000'

Distance from nearest surface water

>200'  
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 ☐TEMPORARILY ABANDON ☐PULL OR ALTER CASING ☐PLUG AND ABANDON ☐CHANGE PLANS ☐MULTIPLE COMPL ☐

OTHER:

New Drill ☒

## SUBSEQUENT REPORT OF:

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

Patsy Clugston

TITLE

Regulatory Assistant III

DATE

3/9/2006

Type or print name

Patsy Clugston

E-mail address:

pclugston@br-inc.com

Telephone No.

505-326-9518

For State Use Only

APPROVED BY

TITLE

DEPUTY OIL &amp; GAS INSPECTOR, DIST. #2

DATE

FEB 23 2007

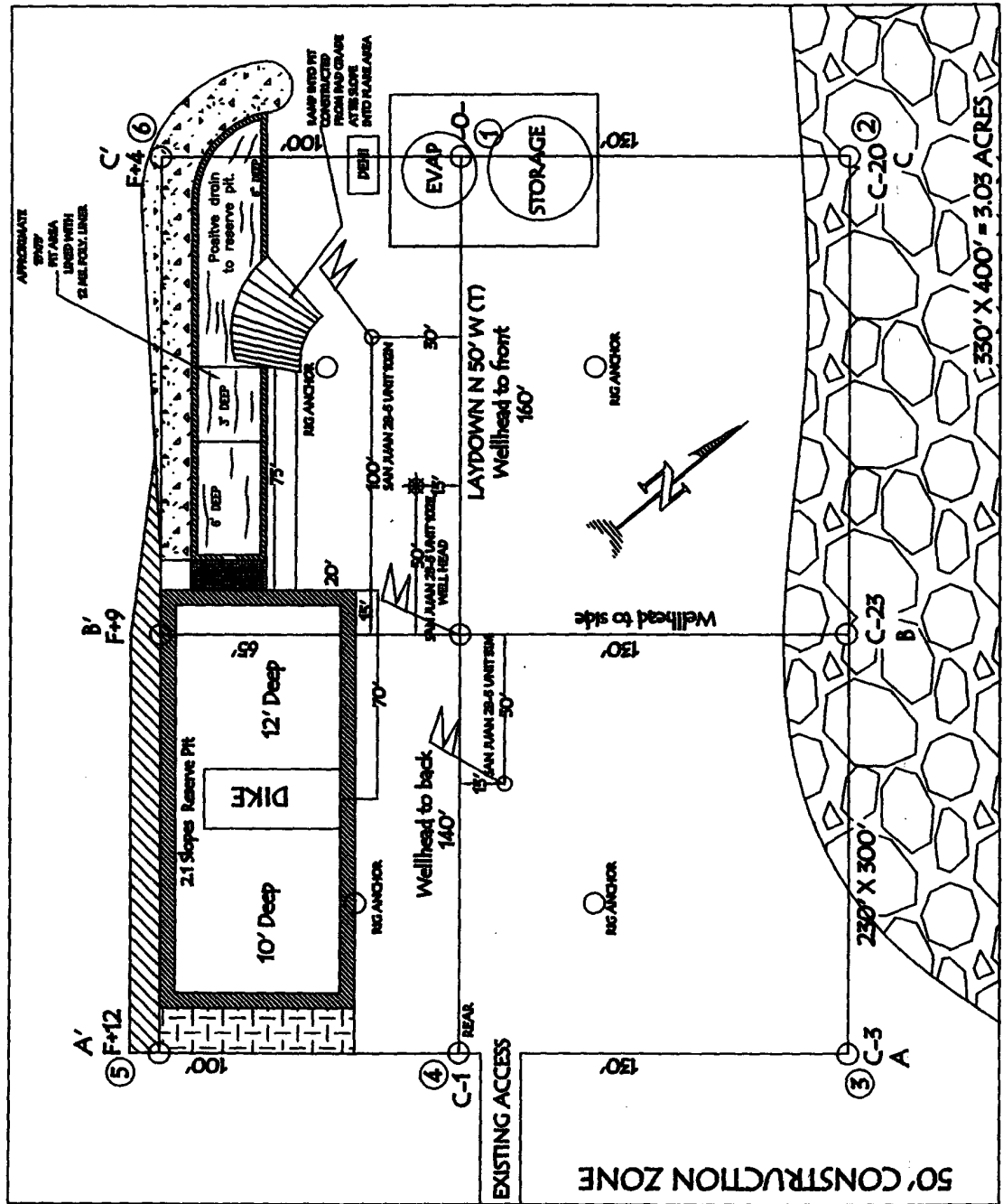
Conditions of Approval (if any):

# BURLINGTON RESOURCES OIL & GAS COMPANY LP

## SAN JUAN 28-5 UNIT 31B, 785' FSL & 2380' FEL

### SECTION 12, T-28-N, R-5-W, NMPM, RIO ARriba COUNTY, NM

#### GROUND ELEVATION: 7305', DATE: JANURARY 16, 2006



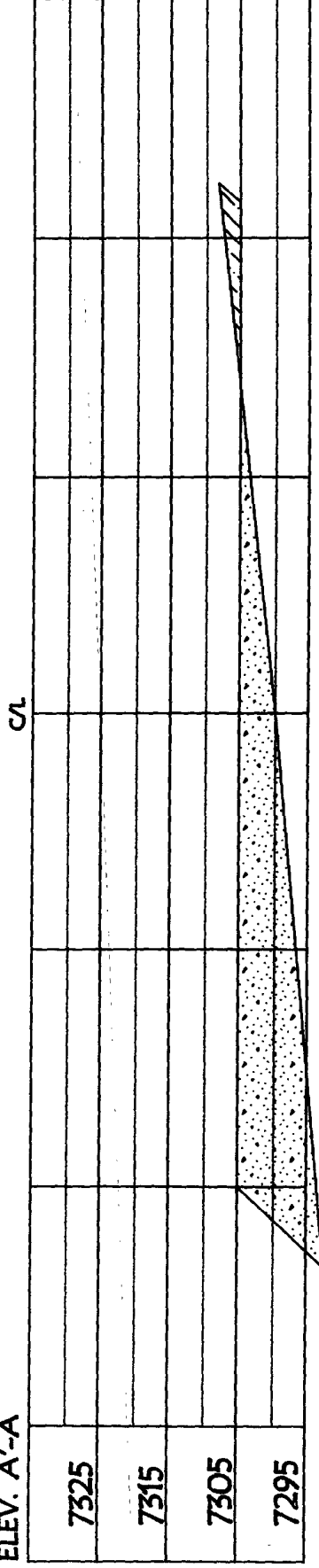
RESERVE PIT DIKE. TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).

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.

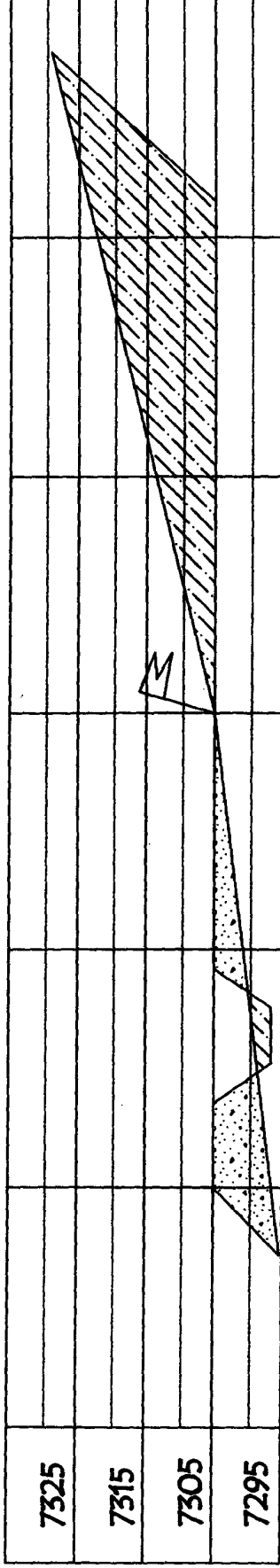
LATITUDE: 36° 40' 23.61" N LONGITUDE: 107° 18' 47.7" W NAD27

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**SAN JUAN 28-5 UNIT #31B, 785' FSL & 2380' FEL**  
**SECTION 12, T-28-N, R-5-W, NMMP, RIO ARriba COUNTY, NM**  
**GROUND ELEVATION: 7305', DATE: JANUARY 16, 2006**

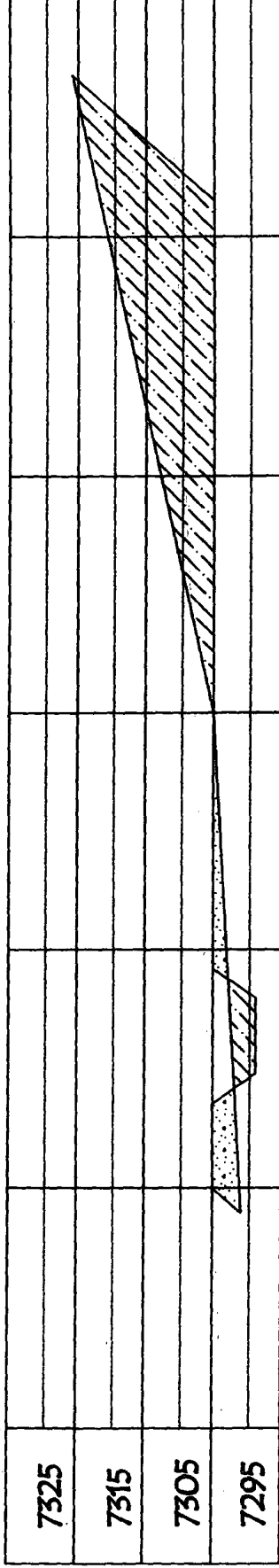
**ELEV. A'-A**



**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.

San Juan 28-5 Unit #31B  
Acres assigned to Well

Dakota – Section 13: W/2 NE/4, NW/4 SE/4 – 120 acres

Section 13: Lots 1 & 2

Section 12: Lots 1, 2 & 5 - 222.30 acres

342.30 total acres dedicated to Dakota

MV –Section 13 – Lots 1-2, & NENW – 143.07 acres

W2NW - 80.00 acres

W2NE, SENW 120.00 acres

343.07 acres

## SAN JUAN 28-5 UNIT #31B OPERATIONS PLAN

**Well Name:** San Juan 28-5 Unit #31B

**Location** Rio Arriba County, New Mexico  
Surface: 785' FSL, 2380' FEL, Section 12, T-28-N, R-5-W  
Latitude 36° 40.236'N, Longitude 107° 18.4746'W  
Bottom Hole: 575' FNL, 2130' FEL, Section 13, T-28-N, R-5-W  
Latitude 36° 40.046'N, Longitude 107° 18.423'W

**Formation** Blanco Mesa Verde/Basin Dakota

**Elevation** 7305'GL

<b><u>Formation Tops</u></b>	<b><u>Top (TVD)</u></b>	<b><u>Top (TMD)</u></b>	<b><u>Contents</u></b>
Surface	San Jose		
Ojo Alamo	3616'	3755'	aquifer
Kirtland	3781'	3932'	gas
Fruitland	4086'	4257'	gas
Pictured Cliffs	4290'	4475'	gas
Lewis	4371'	4561'	gas
Huerfanito Bentonite	4915'	5142'	gas
Chacra	5282'	5520'	gas
Massive Cliff House	5869'	6348'	gas
Menefee	6140'	6379'	gas
Massive Point Lookout	6438'	6677'	gas
Mancos	6939'	7178'	gas
Gallup	7667'	7906'	gas
Greenhorn	8407'	8646'	gas
Graneros	8464'	8703'	gas
Two Wells	8529'	8768'	gas
Upper Cubero	8584'	8823'	gas
Lower Cubero	8634'	8873'	gas
Oak Canyon	8704'	8943'	
TD	8719'	8958'	

### **Logging Program**

Cased Hole - CBL-GR- TD to surface

Open Hole - None

### **Mud Program**

<b><u>Interval (TMD)</u></b>	<b><u>Type</u></b>	<b><u>Weight</u></b>	<b><u>Vis.</u></b>	<b><u>Fluid Loss</u></b>
0- 350'	Spud	8.4-9.0	40-50	no control
350 - 5670'	Non-dispersed	8.4-9.0	30-60	less than 8
5670'- 8958'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

### **Drilling** (Reference Plot #1)

#### **Surface Hole**

Drill to surface casing point of 350' and set 9 5/8" casing.

#### **Intermediate Hole**

Mud drill to kick off point of 1200'. At this point the well will be directionally drilled by building 4.0 degrees per 100' with an azimuth of 169.19 degrees. The end of the build will be at a TVD of 1700', a TMD of 1711', a reach of 90', and an angle of 20.44 degrees. This angle and azimuth will be held to a TVD of 4932', a TMD of 5160', and a reach of 1295'. At this point the well will be drilled with a drop of 4.0 degrees per 100'. The end of the drop will be at a TVD of 5432', a TMD of 5670', a reach of 1385', and an angle of 0.0 degrees. 7" casing will be set at this point.

#### **Production Hole**

From the shoe of the intermediate string, the well will be drilled vertically with an air hammer to a TMD of 8958' (TVD of 8719'). 4 1/2" casing will be set at this point.

### **Materials**

### Casing program

<u>Hole Size</u>	<u>Interval (TMD)</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 350'	9 5/8"	32.3#	H-40
8 3/4"	350' - 5670'	7"	23#	L-80
6 1/4"	<del>5670'</del> - 8958' 5670	4 1/2"	11.6#	L-80

### Tubing Program

<u>Hole Size</u>	<u>Interval (TMD)</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>
2 3/8"	0' - 8958'	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

### Cementing:

9 5/8" surface casing conventionally drilled: **200% excess cement to bring cement to surface**

Run **376 ft<sup>3</sup> (294 sks)** Type III cement with 3% CaCl<sub>2</sub> and 1/4 pps celloflake (1.28 sks/ft<sup>3</sup>). 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" production casing: **50% excess cement to bring cement to surface**

Lead with **1154 ft<sup>3</sup> (542 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 1/2" production casing: **30% excess cement to achieve 100' overlap with intermediate casing**

Run **450 ft<sup>3</sup> (227 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 production TD - 11", 2000 psi double gate BOP stack (Reference Figure #1).

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

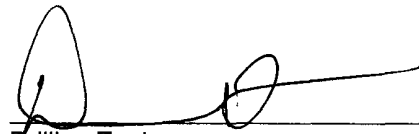
Surface to Total Depth - choke manifold (Reference Figure #2).

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.
- 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.

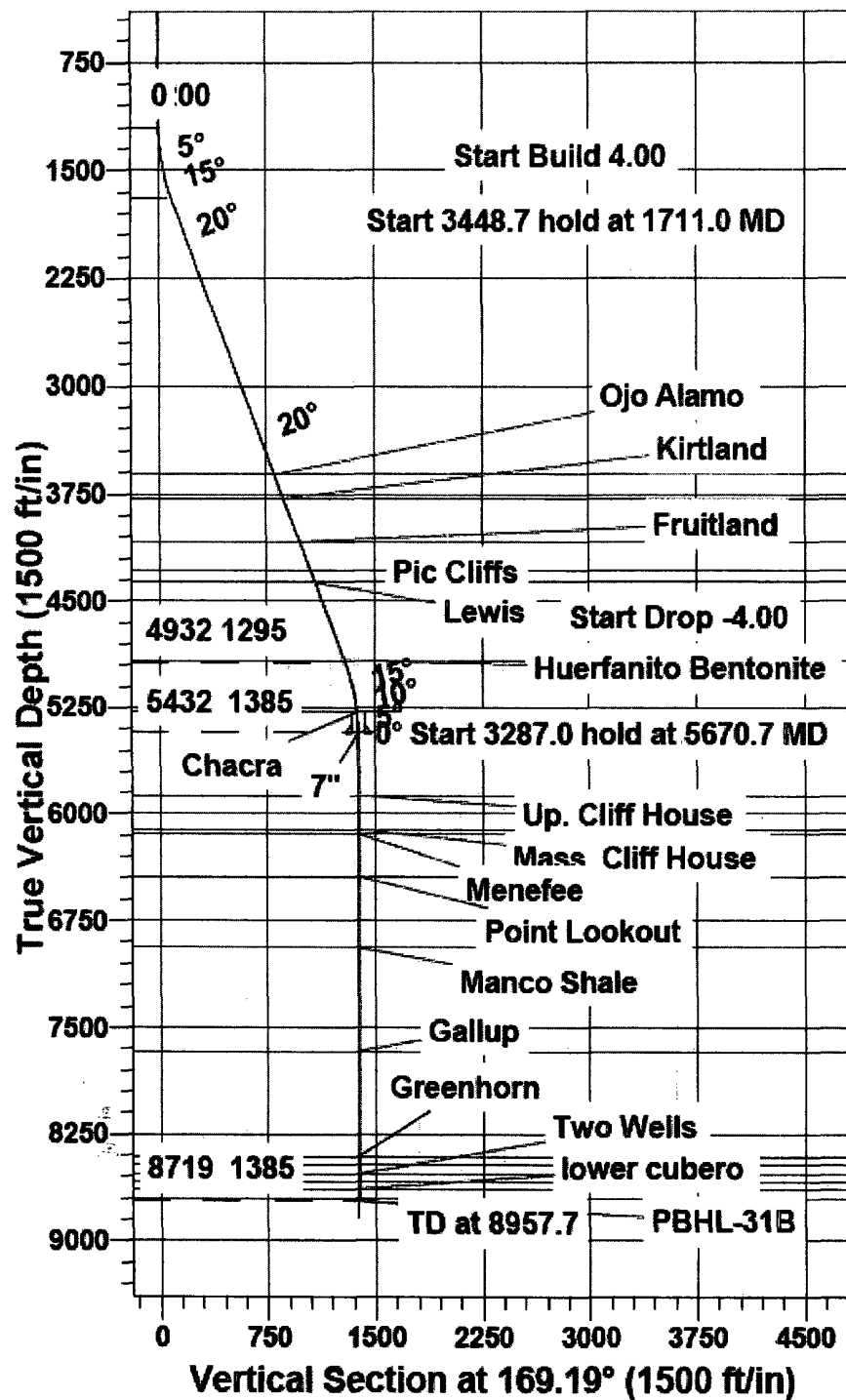


Drilling Engineer

3/20/04

Date





Plot 1: Directional plan for SJ 28-5 #31B 1



Scientific Drilling

Project: SAN JUAN, NM  
Site: SEC 12-T28N-R5W  
Well: 28-5 UNIT #31B  
Wellbore: OH  
Plan: Plan #1 (28-5 UNIT #31B/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	
1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
1711.0	20.44	169.19	1700.2	-88.6	16.9	4.00	169.19	90.2	
5159.7	20.44	169.19	4931.8	-1271.6	242.8	0.00	0.00	1294.5	
5670.7	0.00	359.69	5432.0	-1360.2	259.7	4.00	180.00	1384.7	CSG. PT. 31B
8957.7	0.00	359.69	8719.0	-1360.2	259.7	0.00	359.69	1384.7	PBHL-31B

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CSG. PT. 31B	5432.0	-1360.2	259.7	2062413.40	654351.21	36° 40' 0.696 N	107° 18' 25.380 W	Point
PBHL-31B	8719.0	-1360.2	259.7	2062413.35	654351.18	36° 40' 0.695 N	107° 18' 25.380 W	Point

#### 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: 28-5 UNIT #31B

Northing	Ground Level:	7305.0	Latitude	Longitude
2063773.55	Easting	654091.53	36° 40' 14.160 N	107° 18' 28.476 W

