

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number NMSF-078884
1b. Type of Well GAS	Unit Reporting Number NMMN-078385D
2. Operator BURLINGTON RESOURCES Oil & Gas Company	6. If Indian, All. or Tribe
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	7. Unit Agreement Name Canyon Largo Unit
4. Location of Well Unit I (NESE), 1650' FSL, 1220' FEL Latitude 36° 23.8333'N Longitude 107° 26.9540'W	8. Farm or Lease Name
	9. Well Number #409E
	10. Field, Pool, Wildcat Basin Dakota
	11. Sec., Twn, Rge, Mer. (NMPM) TSec. 15, T25N, R6W API # 30-039-29959
14. Distance in Miles from Nearest Town 52 miles to Bloomfield, NM	12. County Rio Arriba
	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1220'	
16. Acres in Lease	17. Acres Assigned to Well 320 E2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 56' - Canyon Largo Unit #69	
19. Proposed Depth 6983'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6556' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Armando Sanchez</u> Regulatory Analyst	<u>6-14-06</u> 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.

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

NMOCDF

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-11
Revised October 12, 201

DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29959	² Pool Code 71599	³ Pool Name Basin Dakota
⁴ Property Code 6886	⁵ Property Name CANYON LARGO UNIT	⁶ Well Number 409E
⁷ OGRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	⁹ Elevation 6556'

¹⁰ Surface Location

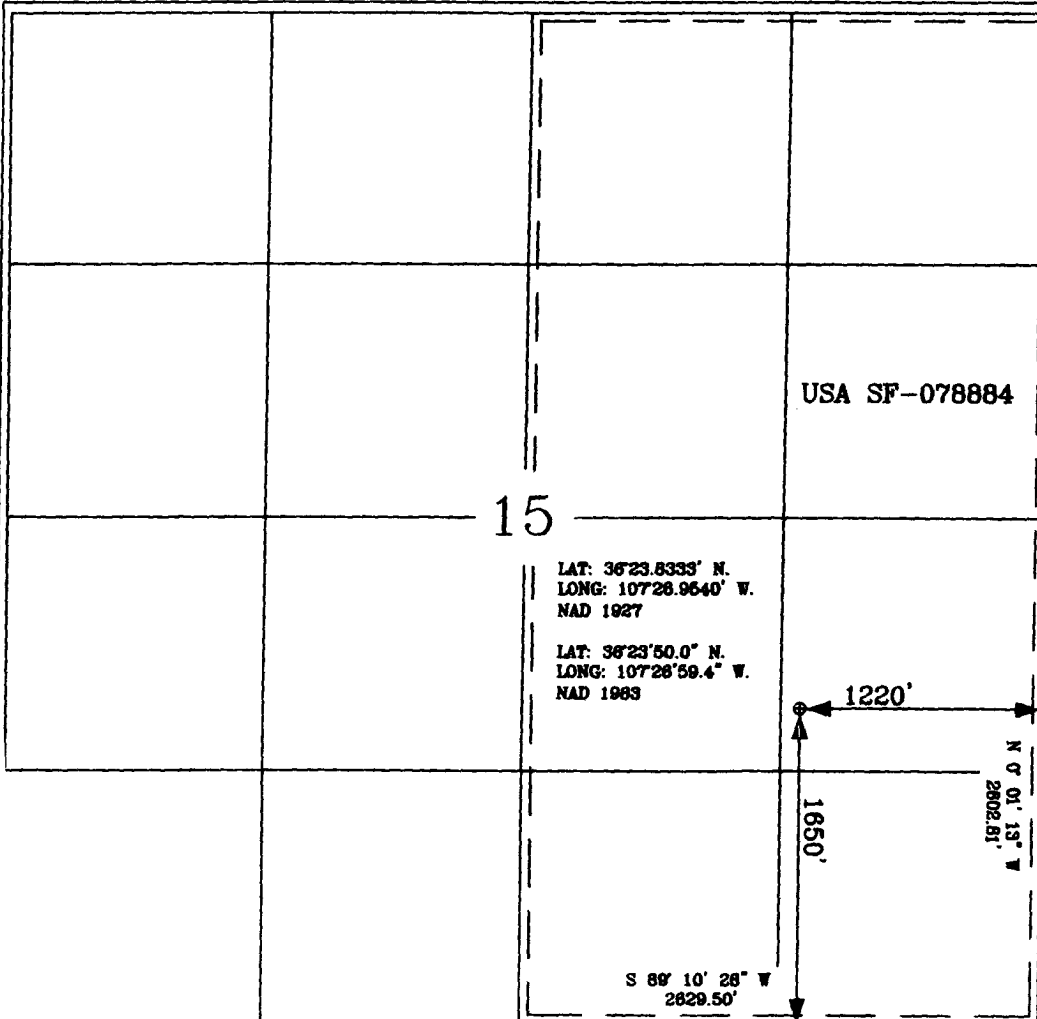
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	15	25-N	6-W		1650'	SOUTH	1220'	EAST	RIO ARriba

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 E2 320 DK			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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Amanda Sandoval
Signature
Amanda Sandoval
Printed Name

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.

5-24-06
Date of Survey
Signature Galen W. Russell
Professional Surveyor

Certificate Number 15703

Submit 3 Copies To Appropriate District

Office

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

State of New Mexico

Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-103

May 27, 2004

WELL API NO.

30-039- 29959

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

NMSF-078884

7. Lease Name or Unit Agreement Name

Canyon Largo Unit

8. Well Number

409E

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 I : 1650' feet from the South line and 1220' feet from the East line
Section 15 Township 25N Rng 6W NMPM County Rio Arriba

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

6556'

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

Pit Liner Thickness:

N/A

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 ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

COMMENCE DRILLING OPNS. ☐

CASING/CEMENT JOB ☐

ALTERING CASING ☐

P AND A ☐

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.

New Drill, Unlined:

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 NMOCD 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 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

Amanda Sanchez

TITLE

Regulatory Analyst

DATE

6/5/2006

Type or print name

Amanda Sanchez

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. 4

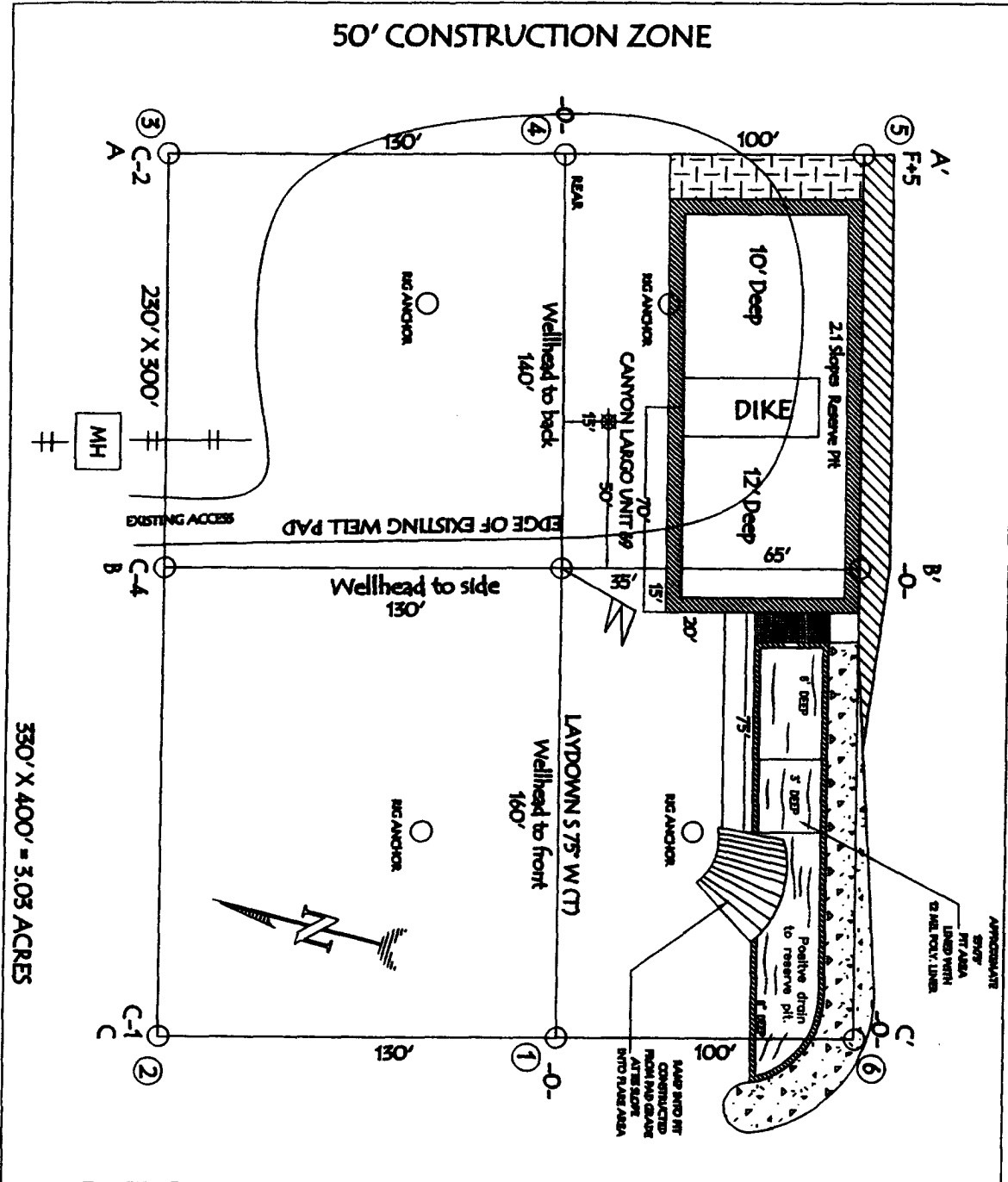
DATE

JUL 03 2006

Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY LP
CANYON LARGO UNIT 409E, 1650' FSL & 1220' FEL
SECTION 15, T-25-N, R-6-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 6556', DATE: MAY 15, 2006

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

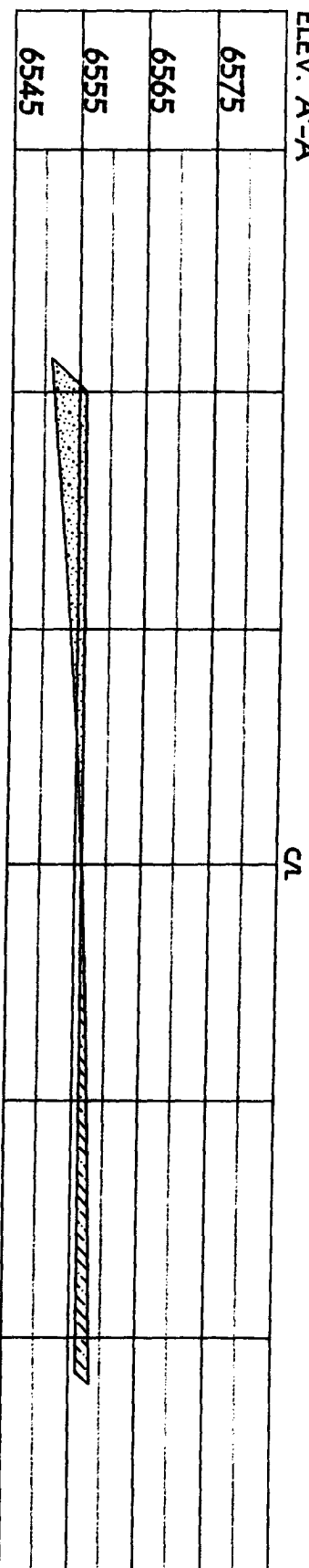


LATITUDE: 36° 25.8533' N LONGITUDE: 107° 26.9540' W NAD27

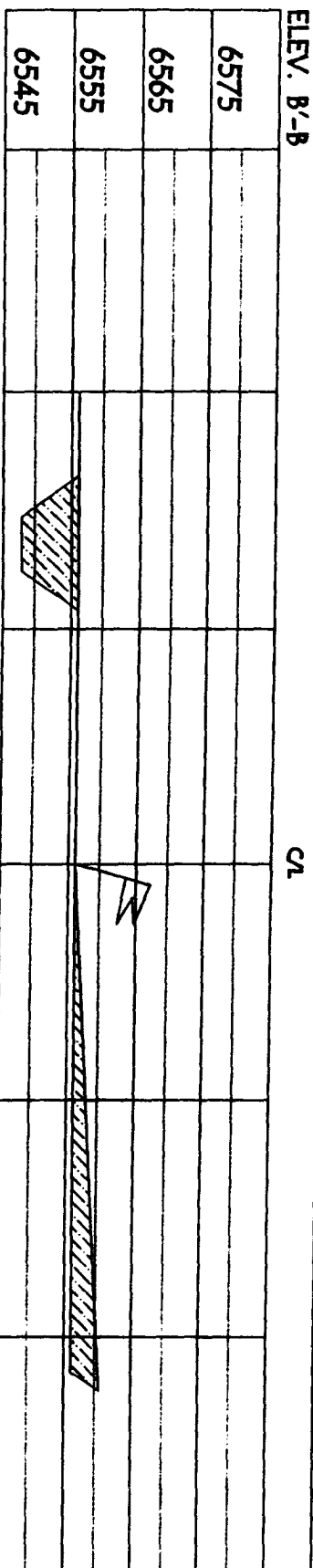
NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED
 PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

BURLINGTON RESOURCES OIL & GAS COMPANY LP
 CANYON LARGO UNIT 409E, 1650' FSL & 1220' FEL
 SECTION 15, T-25- N, R-6-W, NMPM, RIO ARRIBA COUNTY, NM
 GROUND ELEVATION: 6556', DATE: MAY 15, 2006

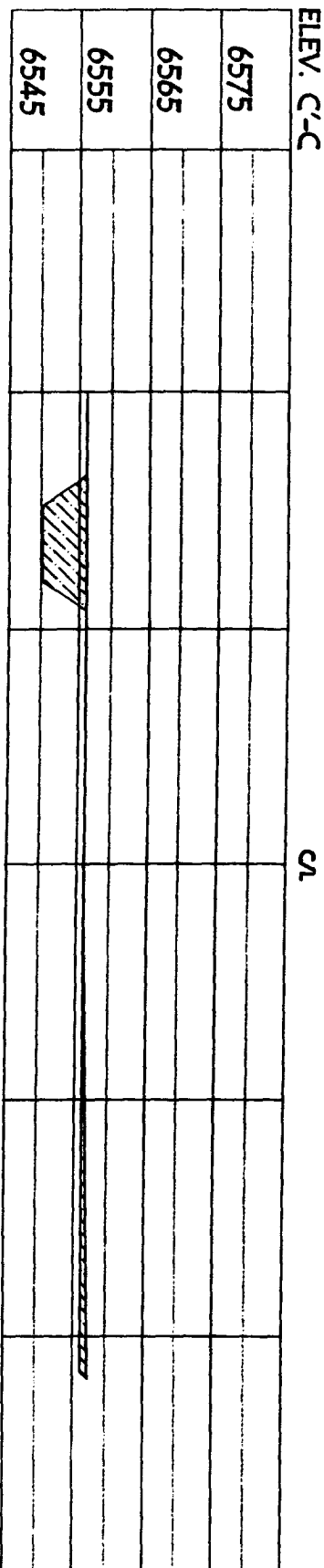
ELEV. A-A



ELEV. B-B



ELEV. C-C



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 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: Canyon Largo Unit 409E
Location: 1650' FSL, 1220' FEL, Section 15, T-25-N, R-6-W
Rio Arriba County, New Mexico
Latitude 36° 23.8333', Longitude 107° 26.9540'
Formation: Basin Dakota
Elevation: 6556' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2062'	
Ojo Alamo	2062'	2118'	aquifer
Kirtland	2118'	2396'	gas
Fruitland	2396'	2565'	gas
Pictured Cliffs	2565'	2607'	gas
Lewis	2607'	2931'	
Huerfanito Bentonite	2931'		
Chacra	3401'	4121'	gas
Cliff House	4121'	4159'	gas
Menefee	4159'	4743'	gas
Point Lookout	4743'	5154'	gas
Mancos	5154'	5804'	
Gallup	5804'	6696'	gas
Greenhorn	6696'	6751'	gas
Graneros	6751'	6806'	gas
Two Wells	6806'	6891'	gas
Upper Cubero	6891'	6925'	gas
Lower Cubero	6925'	6951'	gas
Oak Canyon	6951'	6993'	gas
Encinal	6993'	6983'	gas
TD	6983'		

Logging Program:

Mud Logs/Coring/DST -
Mud logs - none
Coring - none
DST - none
Open hole - none
Cased hole - Gamma Ray - surface to TD

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0 - 320'	Spud MUD/ Air/MS DST	8.4-9.0	40-50	no control
320' - 6983'	LSND	8.4-9.0	30-60	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>
12 1/4"	0' - 320'	8 5/8"	24.0#	J-55
7 7/8"	0' - 6983'	4 1/2"	10.5#	J-55

Tubing Program: 0' - 6983' 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, BOPE 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, BOPE 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 -

8 5/8" 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:

8 5/8" surface casing conventionally drilled -

Cement with 321 sacks Type III cement with 0.25 pps Celloflake, 3% calcium chloride. (200% excess, bring cement to 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.

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

4 1/2" Production Casing Two Stage -

570

Stage collar set @ 4593'. First Stage: Lead with w/264 sacks Premium Lite HS FM cmt w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. Second Stage: 496 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2356 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

Stage 1: 2.28 ft³/sk, 12.0 ppg Stage 2: 2.13 ft³/sk, 12.1 ppg
Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every fourth joint off bottom, to the base of the Ojo Alamo @ 2118'. Two turbolating centralizers at the base of the Ojo Alamo 2118'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

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

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.

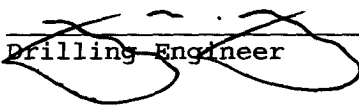
Special Drilling Operations (Air/Mist Drilling):

- 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:

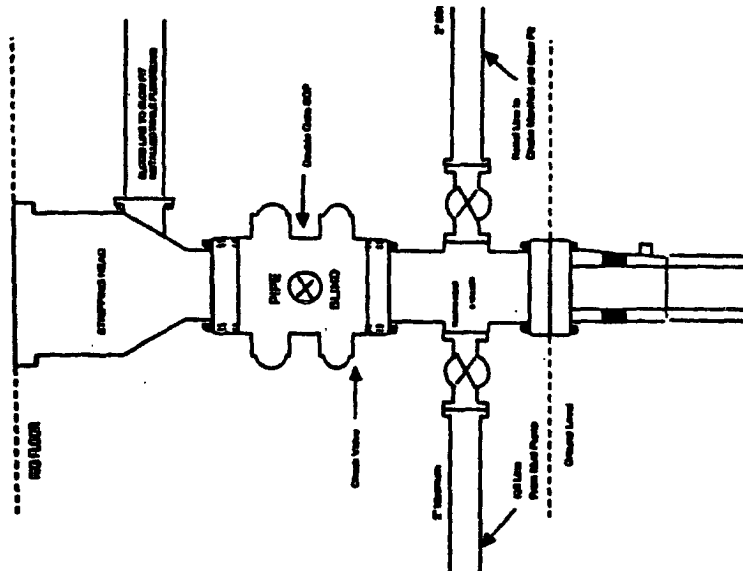
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The east half of Section 15 is dedicated to the Dakota formation.
- This gas is dedicated.


Drilling Engineer

6/12/06
Date

BURLINGTON RESOURCES

Completion/Workover Rig
BOP Configuration
2,000 psi System



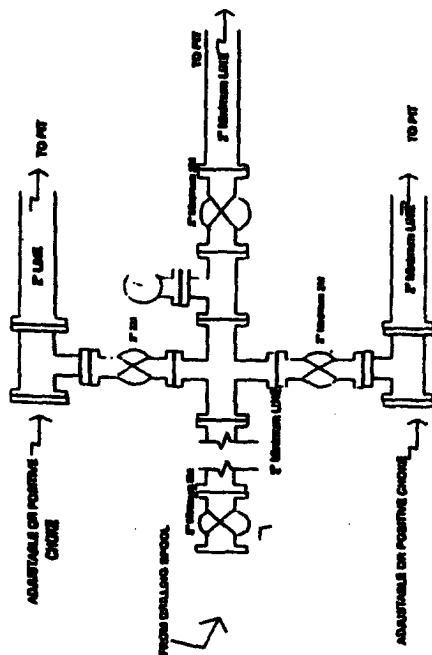
Minimum BOP installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 600 psi stripping head.

Figure #2

4-20-01

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System



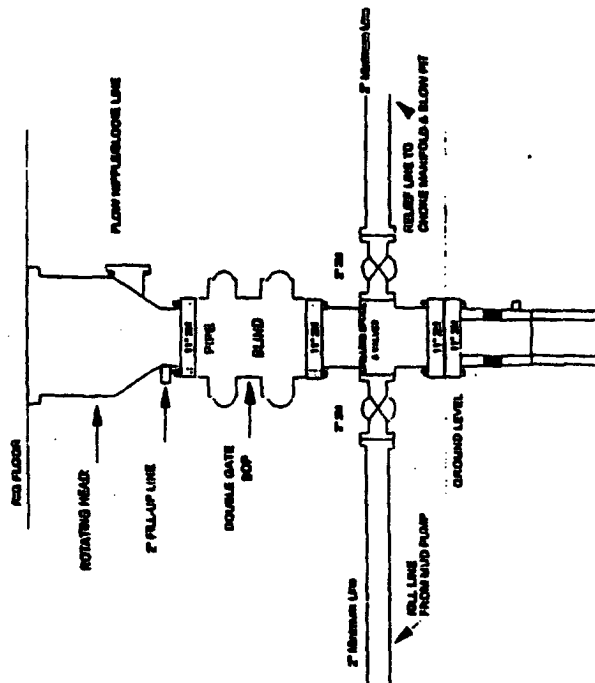
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

Burlington Resources

Drilling Rig
2000 psi System



BOP installation from Surface Casing Point to Total Depth. 1 1/2" Bore 10,000 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 is 2,000 psi working pressure or greater excluding 600 psi stripping head.

Figure #1