

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL

1b. Type of Well
GAS

2. Operator
BURLINGTON
RESOURCES Oil & Gas Company

3. Address & Phone No. of Operator
PO Box 4289, Farmington, NM 87499

(505) 326-9700

4. Location of Well
Unit N (SESW), 1000' FSL, 2380' FWL

Latitude 36° 49.2897'N
Longitude 107° 55.4952'W

5. Lease Number
NMNM-03195
Unit Reporting Number
6. If Indian, All. or Tribe

7. Unit Agreement Name

8. Farm or Lease Name
Sunray J
9. Well Number
#1M

10. Field, Pool, Wildcat
Blanco Mesaverde/ Basin Dakota

11. Sec., Twn, Rge, Mer. (NMPM)
Sec. 7, T30N, R10W
N
API # 30-045-33694

14. Distance in Miles from Nearest Town
4.4 miles to Aztec, NM

12. County
San Juan
13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1000'

16. Acres in Lease

17. Acres Assigned to Well
S2 320.37 MV/DK

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease
1063' - Sunray J #1B

19. Proposed Depth
7331'

20. Rotary or Cable Tool
Rotary

21. Elevations (DF, FT, GR, Etc.)
6204' GL

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

24. Authorized by:

Amanda Sandoval
Regulatory Compliance Assistant III

APR 2008 4 10-06
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 3165.4

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

NMOCD

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

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045- 33094	² Pool Code 72319 / 71599	³ Pool Name Blanco Mesaverde / Basin Dakota
⁴ Property Code 7572 ✓	⁵ Property Name SUNRAY J	⁶ Well Number 1M ✓
⁷ GRID No. 14538 ✓	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP ✓	⁹ Elevation 6204 ✓

¹⁰ Surface Location

UL or lot no. N	Section 7	Township 30-N	Range 10-W	Lot Idn 18	Feet from the 1000	North/South line SOUTH	Feet from the 2380	East/West line WEST	County SAN JUAN ✓
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. N	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres HV/DK 320.37 ac S2		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

LOT 8 38.39	LOT 7 40.50	LOT 6 40.45	LOT 5 40.40
LOT 9 38.55	LOT 10 40.51	LOT 11 40.46	LOT 12 40.41
LOT 16 38.71	LOT 15 40.51	LOT 14 40.46	LOT 13 40.41
LOT 17 38.87	LOT 18 40.52	LOT 19 40.47	LOT 20 40.42

FD 2 1/2" BC
1967 BLM

N 01°42'18" E
2677.65' (M)

2380'

1000'

USA NM-03195

LAT: 36.82150' N. (NAD 83)
LONG: 107.92554' W. (NAD 83)
LAT: 36°49.2897' N. (NAD 27)
LONG: 107°55.4952' W. (NAD 27)

FD 3 1/4" BC
1967 BLM

N 89°09'09" W
2589.55' (M)

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 working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Amanda Sanoval 3-16-06
Signature Date
Amanda Sanoval
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.

MARCH 6, 2006
Date of Survey
Signature
JOPNA VUKONICH
REGISTERED PROFESSIONAL SURVEYOR
14831
Certificate Number

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.

30-045-

33694

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil & Gas Lease No.

NMNM-03195

7. Lease Name or Unit Agreement Name

Sunray J

8. Well Number

1M

9. OGRID Number

14538

10. Pool name or Wildcat

Blanco Mesaverde/ 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 N

:

1000

feet from the

South

line and

2380

feet from the

West

line

Section 7

Township

30N

Rng

10W

NMPM

County

San Juan

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

6204'

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:

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 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

TITLE

Regulatory Assistant III

DATE

4/406

Type or print name

Amanda Sandoval

E-mail address:

asandoval@br-inc.com

Telephone No.

505-326-9891

For State Use Only

APPROVED BY

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. 4

DATE

APR 24 2006

Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY LP

SUNRAY J No. 1M, 1000 FSL 2380 FWL

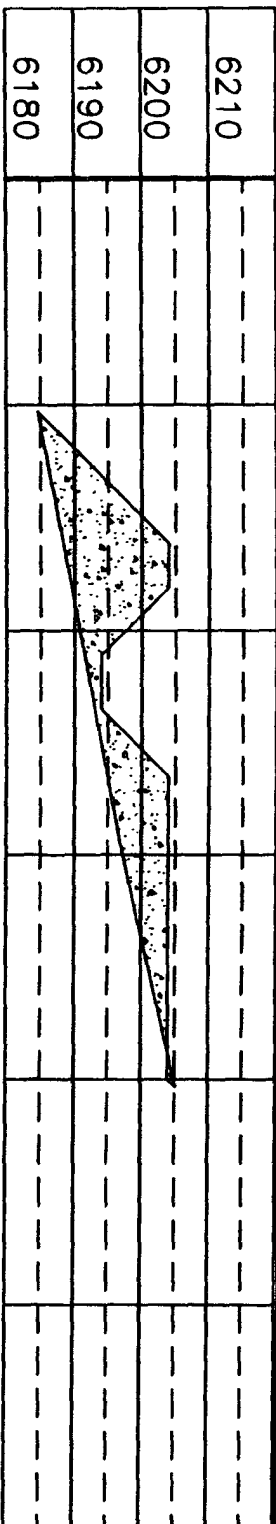
SECTION 7, T-30-N, R-10-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 6204, DATE: MARCH 6, 2006

NAD 83
LAT. = 36.82150° N
LONG. = 107.92554° W
NAD 27
LAT. = 36°49.2697' N
LONG. = 107°55.4952' W

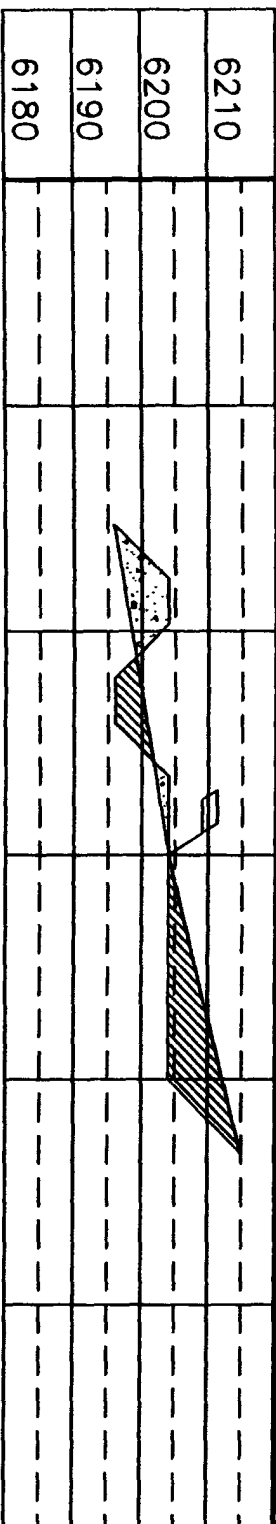
ELEV. A-A'

C/L



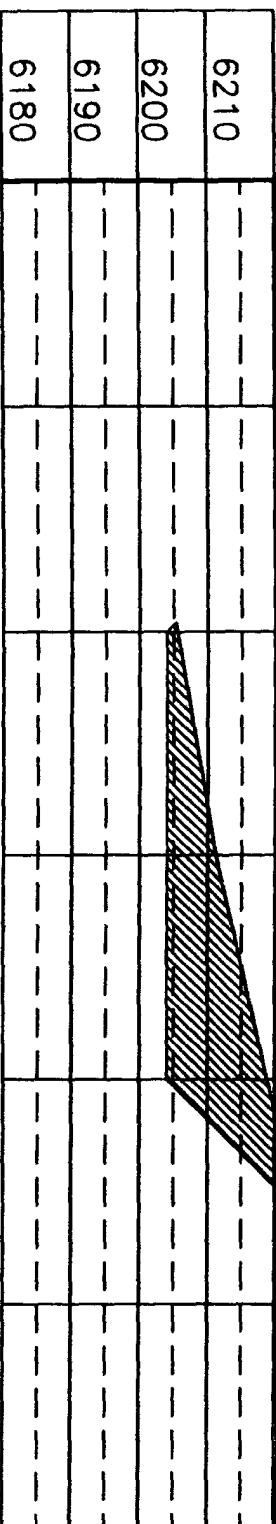
ELEV. B-B'

C/L




ELEV. C-C'

C/L



NOTE: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

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.



Doggett Enterprises, Inc.
Surveying and Oil Field Services
P. O. Box 15068 • Farmington, NM 87401
Phone (505) 326-1772 • Fax (505) 326-8019
NEW MEXICO U.S. 14831

DRAWN BY: A.G.	DATE: 03/10/06
PROJECT: BR623	REVISION: 01

BURLINGTON RESOURCES OIL & GAS COMPANY LP

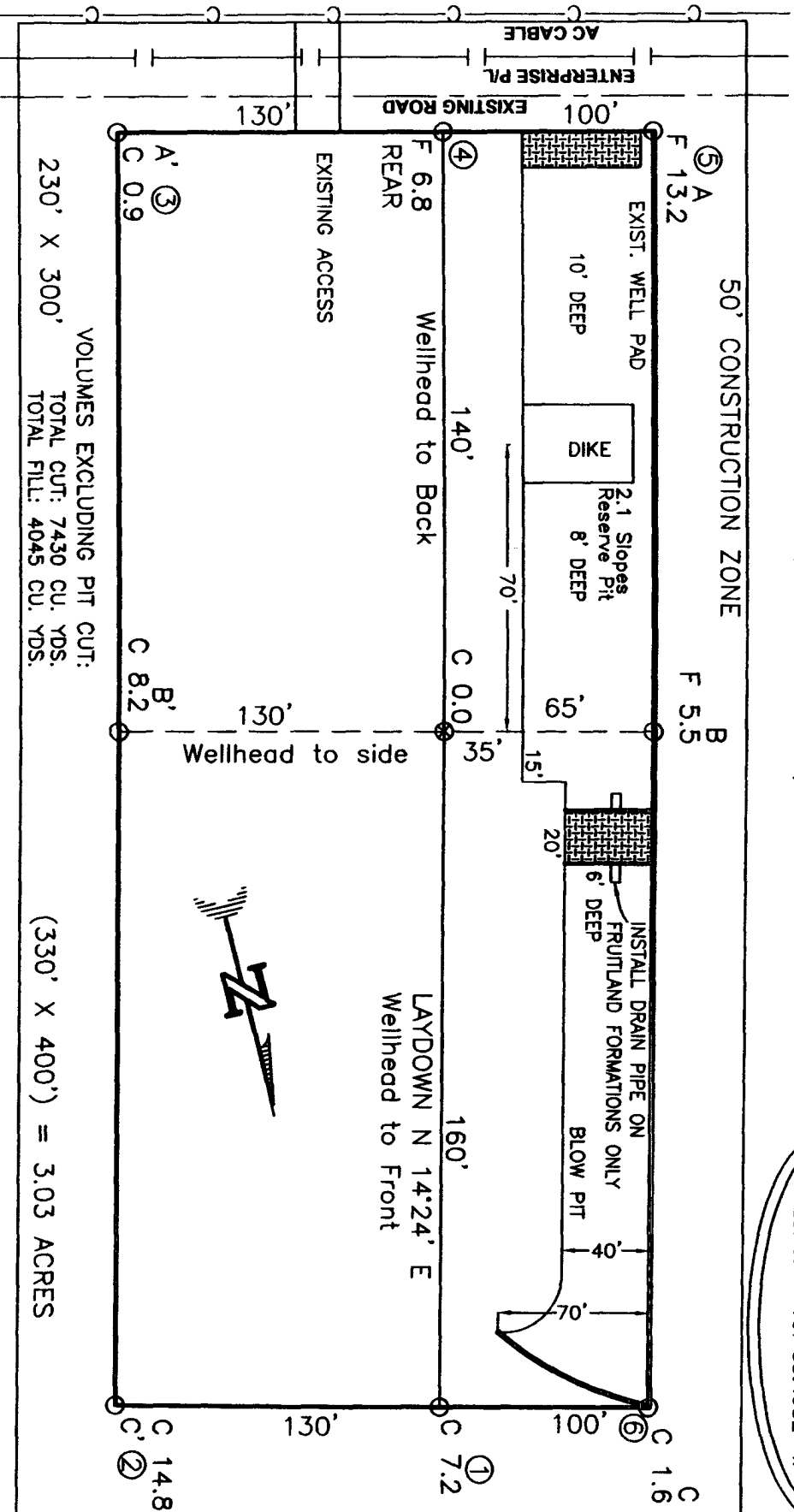
SUNRAY J No. 1M, 1000 FSL 2380 FWL

SECTION 7, T-30-N, R-10-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 6204, DATE: MARCH 6, 2006

NAD 83
LAT. = 36.82150° N
LONG. = 107.92554° W

NAD 27
LAT. = 36°49.2897' N
LONG. = 107°55.4952' W



NOTE: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

NOTE: ESTIMATED VOLUMES CALCULATED BY AVERAGE END AREA AT CROSS-SECTION SHOWN

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.

<p>Daggett Enterprises, Inc.</p> <p>Surveying and Oil Field Services</p> <p>P. O. Box 15068 • Farmington, NM 87401</p> <p>Phone (505) 326-1772 • Fax (505) 326-8019</p> <p>NEW MEXICO L.S. 14831</p>	<p>DATE: 03/10/06</p>

OPERATIONS PLAN

Well Name: SUNRAY J 1M
Location: 1000' FSL & 2380' FWL, Section 07 T30N R10W
San Juan County, New Mexico
Formation: Blanco Mesaverde/Basin Dakota
Elevation: 6204' GL

Surface	San Jose	1420'	
Surface	San Jose	1483'	aquifer
Ojo Alamo	1420'	2451'	gas
Kirtland	1483'	2765'	gas
Fruitland Coal	2451'	2911'	gas
Pictured Cliffs	2765'	3508'	
Lewis	2911'		
Huerfanito Bentonite	3508'		gas
Chacra	3803'	4376'	gas
Massive Cliff House	4376'	4547'	gas
Menefee	4547'	5023'	gas
Massive Point Lookout	5023'	5428'	
Mancos Shale	5428'	6284'	gas
Upper Gallup	6284'	7030'	gas
Greenhorn	7030'	7087'	gas
Graneros	7087'	7136'	gas
Two Wells	7136'	7224'	gas
Paguate	7224'	7269'	gas
Cubero	7269'	7331'	gas
Encinal	7331'		gas
Total Depth:	7331'		

Logging Program:

Mud Logs/Coring/DST

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

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0 - 120' 200	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120 - 3011'	LSND	8.4 - 9.0	30 - 60	no control
3011 - 7331'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

C. HARRADEN/ April 12, 2006 *CEH*

BURLINGTON RESOURCES/ Sunray J #1M APD

STIPULATION/CONDITION OF APPROVAL

This well is located within a 'vulnerable area'. In order to protect the integrity of the fresh water alluvium aquifer, a minimum surface csg. depth of 200' is stipulated as a condition of approval for this APD.

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' ²⁰⁰	9 5/8"	32.3#	H-40
8 3/4"	0' - 3011'	7"	20/23#	J-55
6 1/4"	0' - 7331'	4 1/2"	10.5#	J-55

Tubing Program:

<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 7331'	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.

BOP

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.

BOP

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 ~~200~~ 200 Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (~~On surface or casing~~ bring cement to surface) Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

186 **Conventionally Drilled** - Cement with 186 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 258 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 (124 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/33 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 sx Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 225 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (479 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 @ 1483'. Two turbolating centralizers at the base of the Ojo Alamo @ 1483'. 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 283 sx 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 (560 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:

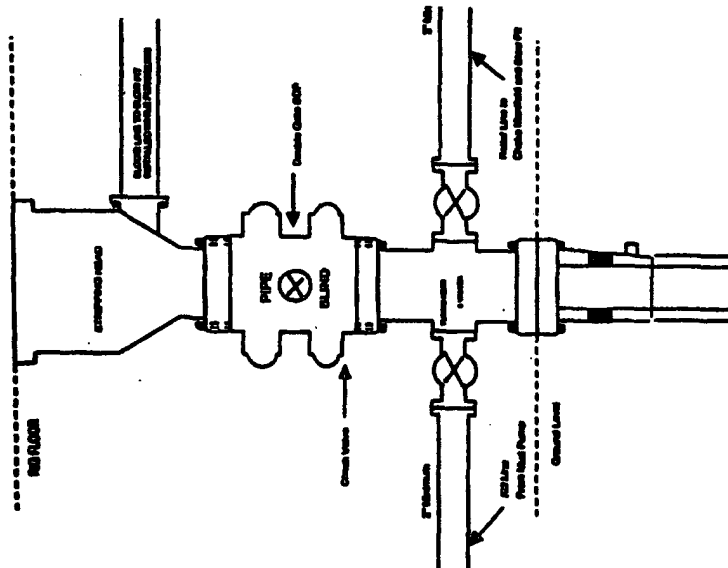
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2000 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The South half of Section 7 is dedicated to the Mesa Verde formation and Dakota formation.
- This gas is dedicated.


Drilling Engineer

4/5/06
Date

BURLINGTON RESOURCES

Completion/Workover Rig
BOP Configuration
2,000 psi System

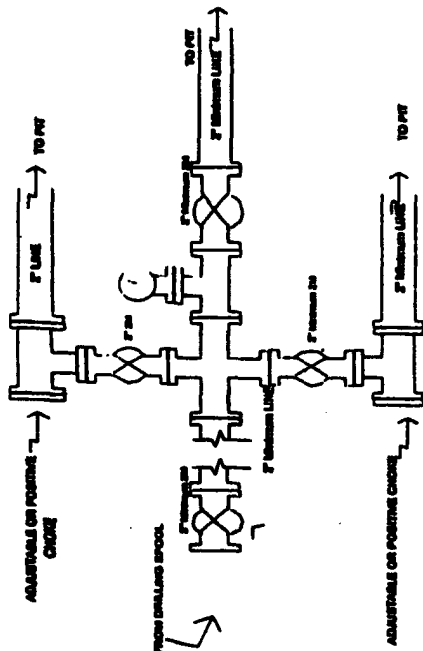


Minimum BOP Installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind end pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 800 psi stripping head.

Figure #2

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System

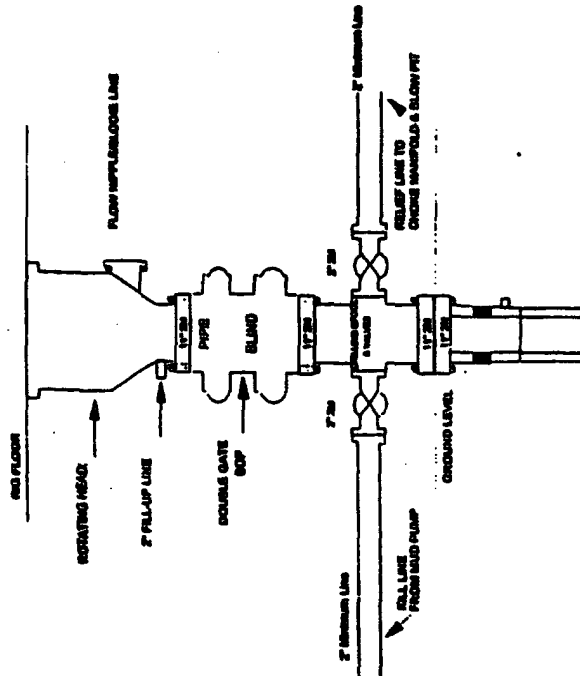


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

Burlington Resources

Drilling Rig
2000 psi System



BOP Installation from Surface Casing Point to Total Depth. 11" Bore 2000 psi minimum working pressure double gate BOP to be equipped with blind ram and pipe rams. A 800 psi stripping head on top of ram preventers. All BOP equipment is 2,000 psi working pressure.

Figure #1