

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 SF-078386-A Unit Reporting Number	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator BURLINGTON RESOURCES Oil & Gas Company, LP	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 #2B	
4. Location of Well Surf - Unit D (NWNW), 585' FNL & 210' FWL BH - Unit H (SENE), 1560' FNL & 710' FEL Surf - Latitude 36° 53.3540' Longitude 107° 46.5162'W	10. Field, Pool, Wildcat Basin Dakota / Blanco MV 11. Sec., Twn, Rge, Mer. (NMPM) Surf - Sec. 22, T31N, R09W BH - Sec. 21, T31N, R09W API # 30-045-33908	
14. Distance in Miles from Nearest Town	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line Surf - 585', BH - 710'	17. Acres Assigned to Well DK & MV - 314.96 E/2 sec 21.	
16. Acres in Lease		
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease Twinned with the Grenier #6A		
19. Proposed Depth 7671'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6247' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <i>Patsy Clust</i> Sr. Regulatory Specialist	Date	8/18/06

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".

NMCCD

This action is subject to technical and
procedural review pursuant to 43 CFR 3105.3
and appeal pursuant to 43 CFR 3105.4

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045- 33908		*Pool Code 72319/71599	*Pool Name Blanco Mesaverde/ Basin Dakota
*Property Code 7569	*Property Name SUNRAY G		*Well Number 28
*DERED No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP		*Elevation 6247'

¹⁰ Surface Location

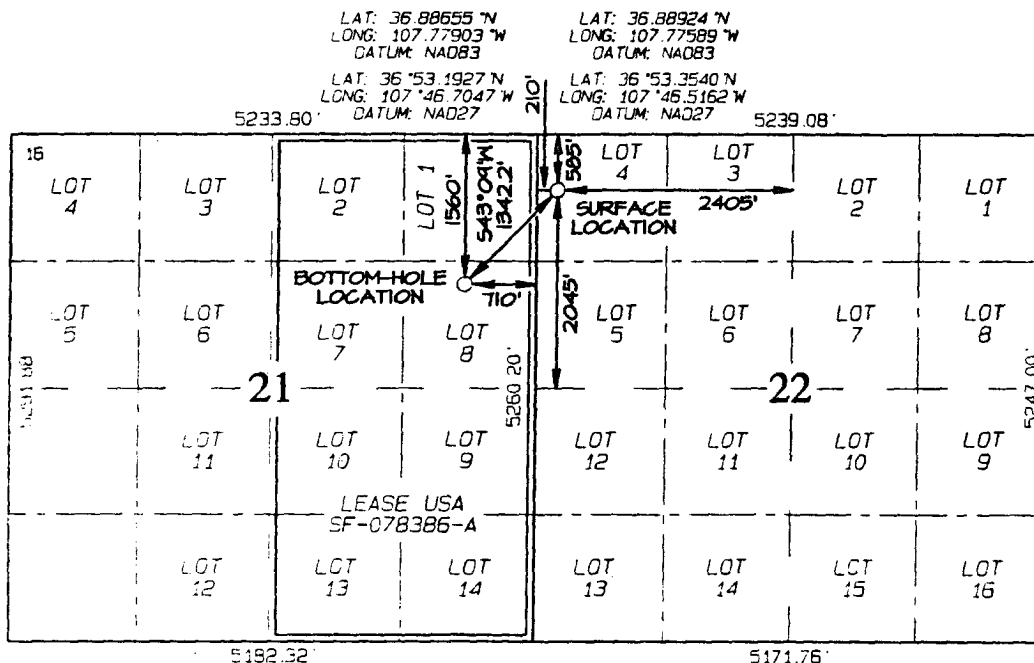
UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
D	22	31N	9W	4	585	NORTH	210	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
H	21	31N	9W	8	1560	NORTH	710	EAST	SAN JUAN

¹² Dedicated Wells E2 MV/DK 314.960	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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Amanda Sanchez
Signature

Amanda Sanchez

Printed Name

Regulatory Analyst

Title

6-12-06

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: **APRIL 12, 2006**

Signature and Seal of Professional Surveyor



JASON C. EDWARDS

Certificate Number

15269

1625 N. French Dr., Hobbs, NM 88240

1301 W. Grand Ave., Artesia, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

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

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.

30-045-

33908

5. Indicate Type of Lease

STATE ☐FEE ☒

6. State Oil & Gas Lease No.

NMSF-078386-A

7. Lease Name or Unit Agreement Name

Sunray G

8. Well Number

2B

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 D : 585' feet from the North line and 210' feet from the West line
Section 22 Township 31N Rng 9W NMPM County San Juan

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

6518' GL

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 Analyst

DATE

7/19/2006

Type or print name

Amanda Sanchez

E-mail address:

asanchez@br-inc.com

Telephone No.

505-326-9700

For State Use Only

APPROVED BY

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. 6

DATE

SEP 18 2006

Conditions of Approval (if any):

LATITUDE: 36.88924° N
LONGITUDE: 107.77589° W
DATUM: NAD:983

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.

SUNRAY G 2B OPERATIONS PLAN

Well Name: SUNRAY G 2B

Objective: Blanco Mesa Verde/Basin Dakota

Location: San Juan NM

Elevation: 6247'

Surface Coordinates/Footages

31' R - 9 W Sec.: 22
585' FNL 210' FWL
Latitude: 36° 53.3540' N
Longitude: 107° 46.5162' W

Bottom Hole Coordinates/Footages

T - 31 N R - 9 W Sec.: 21
1560' FNL 710' FEL
Latitude: 36° 53.1927' N
Longitude: 107° 46.7047' W

<u>Formation</u>	<u>Top (TMD)</u>	<u>Top (TVD)</u>	<u>Contents</u>
San Jose	0	0	
Ojo Alamo	2387'	2273'	aquifer
Kirtland	2548'	2421'	gas
Fruitland	2891'	2738'	gas
Pictured Cliffs	3290'	3106'	gas
Lewis	3477'	3279'	gas
Huerfanito Bentonite	4046'	3807'	gas
Chacra	4426'	4178'	gas
Upper Cliff House	4867'	4619'	gas
Massive Cliff House	5153'	4905'	gas
Menefee	5220'	4972'	gas
Massive Point Lookout	5563'	5315'	gas
Mancos Shale	5946'	5698'	gas
Upper Gallup	6676'	6428'	gas
Greenhorn	7606'	7358'	gas
Graneros	7654'	7406'	gas
Two Wells	7710'	7462'	gas
Paguate	7785'	7537'	gas
Main Body	7829'	7581'	gas
Oak Canyon	7909'	7661'	gas
Total Depth:	7919'	7671'	gas

Logging Program: Cased Hole: CBL-GR
Open Hole: None

<u>Mud Program:</u>	<u>Interval (TMD)</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Vis. (s/qt)</u>	<u>Fluid Loss (cc/30min)</u>
	0' - 320'	Spud	8.4-9.0	40-50	No control
	320' - 4626'	Non-dispersed	8.4-9.0	30-60	Less than 8
	4626' - 7919'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

<u>Casing program:</u>	<u>Interval (TMD)</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>
	0' - 320'	12 1/4"	9 5/8"	32.3#	H-40
	320' - 4626'	8 3/4"	7"	23.0#	L-80
	4626' - 7919'	6 1/4"	4 1/2"	11.6#	L-80

<u>Tubing program:</u>	<u>Interval (TMD)</u>	<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>
	0' - 7919'	Cased	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

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

Surface

Drill to surface casing point of 320' and set 9.625" casing.

Intermediate

Mud drill to kick off point of 400'. At this point the well will be directionally drilled by building 3 degrees per 100' with an azimuth of 223.23 degrees. The end of the build will be at a TVD of 1135', a TMD of 1154', a reach of 147', and an inclination of 22.63 degrees. This angle and azimuth will be held to a TVD of 3643', a TMD of 3872', and a reach of 1193'. At this point the well will be drilled with a drop of 3 degrees per 100'. The end of the drop will be at a TVD of 4378', a TMD of 4626', a reach of 1340', and an angle of 0.0 degrees. 7" casing will be set at this point.

Production

From the shoe of the intermediate string, the well will be drilled vertically with an air hammer to a TVD of 7671' (TMD of 7919'). 4.5" casing will be set at this point.

Cementing

9.625" surface casing conventionally drilled: **200%** excess cement to bring cement to surface.

Run 301 cu.ft. (235 sks) Type III cement with 3% CaCl₂ and 1/4 pps celloflake (1.28 sks/ cu.ft.). 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" intermediate casing: **50%** excess cement to bring cement to surface.

Lead with 919 cu.ft. (431 sks) Premium Lite w/ 3% CaCl₂, 0.25 pps Cello-Flake, 5 pps LCM-1, 0.4% FL-52 and 0.4% SMS (2.13 sks/ft³). Tail with 124 ft³ (90 sks) Type III cmt. w/ 1% CaCl₂, 0.25 pps Cello-Flake and 0.2% FL-52 (1.38 sks/ft³). If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC.

4.5" production casing: **30%** excess cement to achieve 100' overlap with intermediate casing.

Run 451 cu.ft. (228 sks) Premium Lite HS FM + 0.25pps Cello-Flake, 0.3% CD-32, 6.25pps LCM-1, 1% FL-52 (1.98 sks/ft³.)

BOP and Tests

Surface to Total Depth – 11", 2000 psi double gate BOP stack (Reference Figure #1).

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

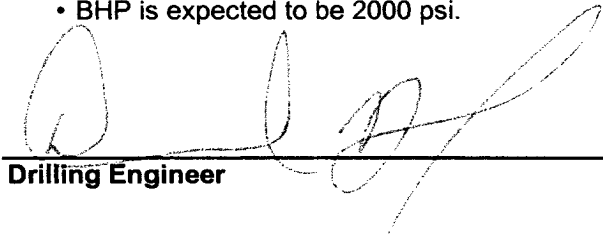
Prior to drilling out surface casing, test BOPE and casing to 600 psi for 30 minutes.

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:

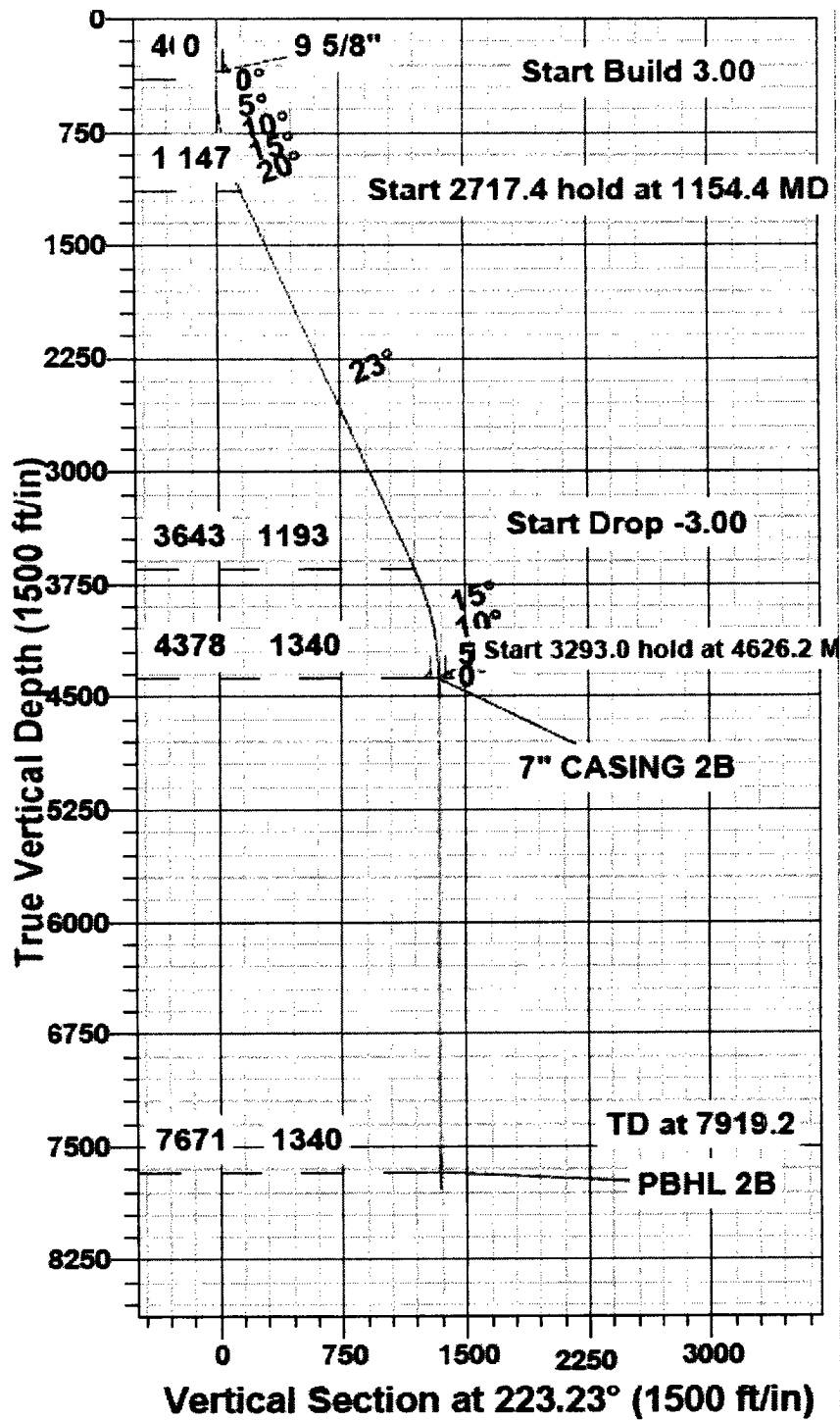
- This gas is dedicated to the West half of Section 1.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.
- BHP is expected to be 2000 psi.



Drilling Engineer

8/18/66

Date



Plot # 1: SUNRAY G 2B



Scientific Drilling

Project: Blanco Mesaverde/ Basin Dakota
Site: San Juan County, NM
Well: Sunray G 2B
Wellbore: Wellbore #1
Plan: Plan #1 (Sunray G 2B/Wellbore #1)

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
1154.4	22.63	223.23	1134.9	-107.2	-100.7	3.00	223.23	147.1	
3871.8	22.63	223.23	3643.1	-869.1	-817.0	0.00	0.00	1192.8	
4626.2	0.00	0.00	4378.0	-976.2	-917.7	3.00	180.00	1339.8	7" CASING 2B
7919.2	0.00	0.00	7671.0	-976.2	-917.7	0.00	0.00	1339.8	PBHL 2B

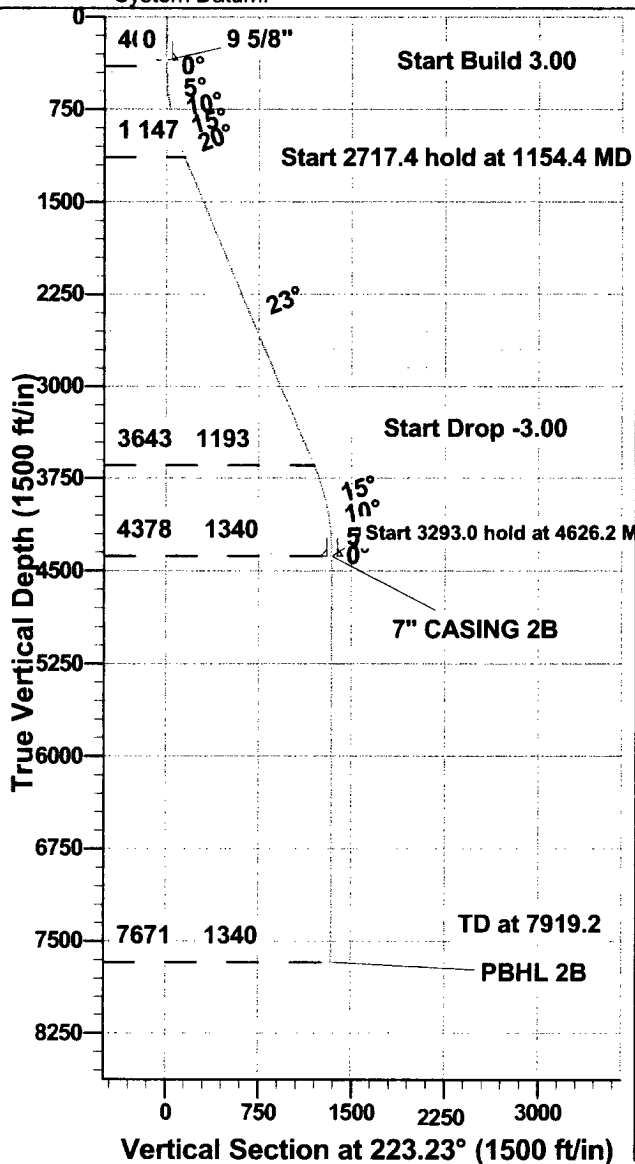
WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
7" CASING 2B	4378.0	-976.2	-917.7	2141972.05	516062.25	36° 53' 11.580 N 107° 46' 42.276 W		Point
PBHL 2B	7671.0	-976.2	-917.7	2141972.05	516062.25	36° 53' 11.580 N 107° 46' 42.276 W		Circle (Radius: 100.0)

PROJECT DETAILS: Blanco Mesaverde/ Basin Dakota

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



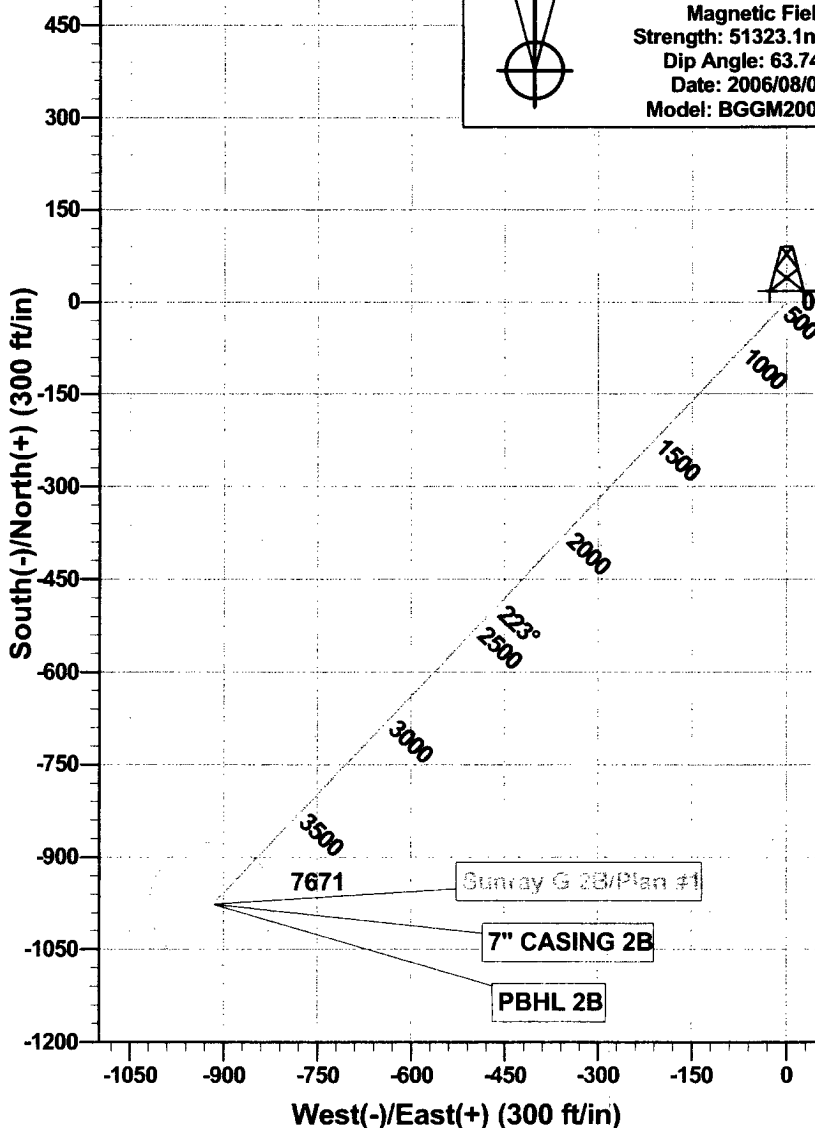
WELL DETAILS: Sunray G 2B

Ground Level:	6247.0
North	2142948.26
East	516979.94
Lat	36° 53' 21.228 N
Long	107° 46' 30.972 W



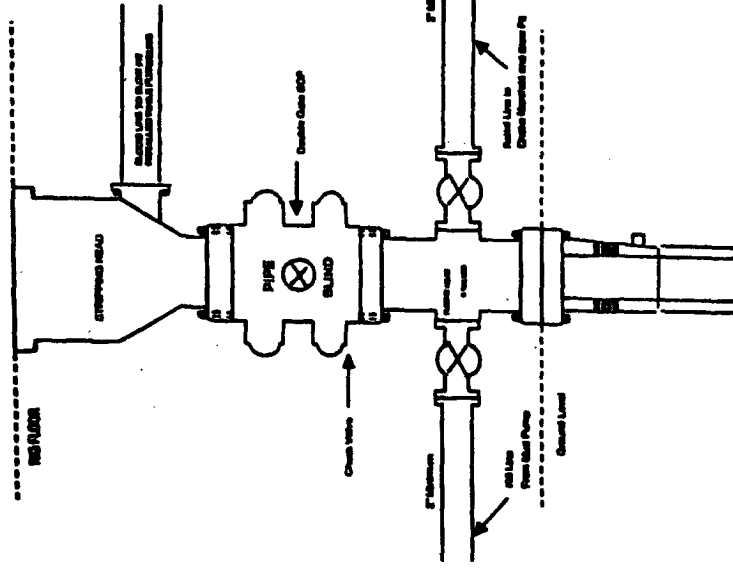
Azimuths to Grid North
True North: -0.03°
Magnetic North: 10.51°

Magnetic Field
Strength: 51323.1nT
Dip Angle: 63.74°
Date: 2006/08/07
Model: BGGM2005



BURLINGTON RESOURCES

Completion/Workover Rig
BOP Configuration
2,000 psi System

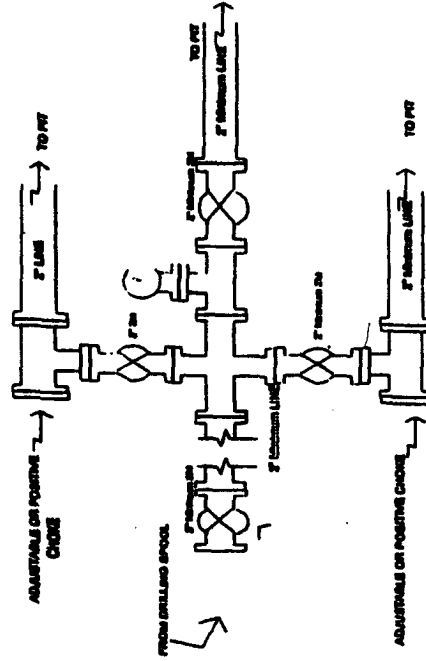


Minimum BOP Installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stopping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 800 psi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

Figure #2

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System

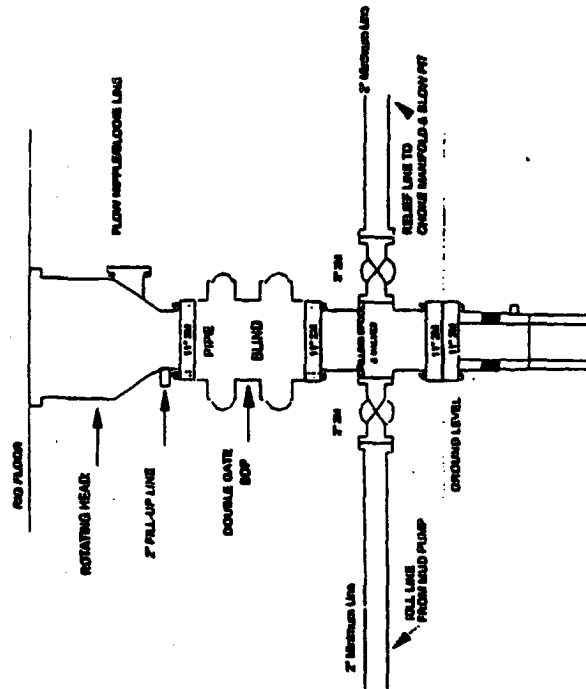


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

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 ram. A stopping head on top of ram preventer. All BOP equipment is 2,000 psi working pressure.

Figure #1