

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RCVD FEB21'07

OIL CONS. DIV.

DIST. 3

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 MAR 20 PM 2 48

1a. Type of Work DRILL	5. Lease Number NMSF-079519-A Unit Reporting Number NMNM-078411A-MV NMNM-078411B-DK
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name San Juan 28-5 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 28-5 9. Well Number #102N
4. Location of Well Unit O (SWSE), 830' FSL, 2475' FEL Surface Unit N (SESW), 1150' FSL, 1565' FWL Bottom Latitude 36° 40.2431'N Longitude 107° 18.4943'W	10. Field, Pool, Wildcat Blanco Mesaverde/ Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 12, T28N, R5W API # 30-039- 29855
14. Distance in Miles from Nearest Town 38 miles to Post Office in Blanco, NM	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 830'	17. Acres Assigned to Well 82 299.04 MV/DK 310.15 MV-299.04 All Sec 12
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 56' - San Juan 28-5 Unit #102E	
19. Proposed Depth 8729'	20. Rotary or Cable Tool 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 C104 FOR directional survey
24. Authorized by: <u>Amanda Sandover</u> Regulatory Compliance Assistant II	3-20-06 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
REQUIREMENTS.

NOTIFY AZTEC OCB 24 hrs
IN TIME TO WITNESS CS-g cement

NMMPN 2-23-07

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

DISTRICT II
611 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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

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 30-039- 29855	² Pool Code 72319 / 71599	³ Pool Name Blanco Mesaverde / Basin Dakota
⁴ Property Code 7460	⁵ Property Name SAN JUAN 28-5 UNIT	⁶ Well Number 102N
⁷ OGHD No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	⁹ Elevation 7305'

¹⁰ Surface Location

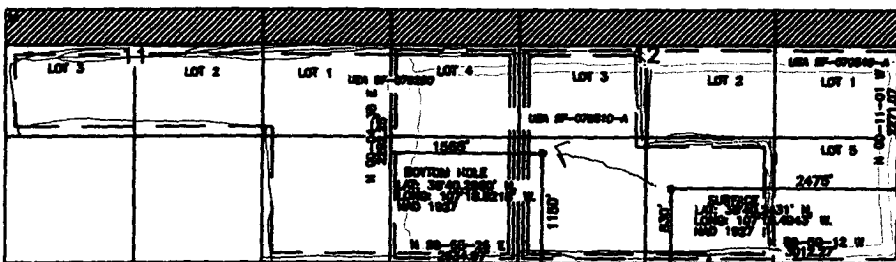
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	12	28-N	5-W		830'	SOUTH	2475'	EAST	RIO ARriba

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
N	12	28-N	5-W		1150'	SOUTH	1565'	WEST	RIO ARriba

¹² Dedicated Acres 310.11 OK-Sec 11, Lots 1, 2, 3 + P Sec 12, Lots 3, 4 + M, N, O MV 299.04 ac 299.04 ac 299.04 ac	¹³ Joint or Infill Not Sec 12	¹⁴ Consolidation Code	¹⁵ Order No. OK-R2448 Unit 5
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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.

Philana Thompson
Signature

Philana Thompson
Printed Name

Regulatory Assistant III
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 and Seal of Professional Surveyor:

Glenn J. Russell
Signature

Glenn J. Russell
15703
LICENSED 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

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.)		WELL API NO. 30-039- 29855
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator BURLINGTON RESOURCES OIL & GAS COMPANY LP		6. State Oil & Gas Lease No. NMSF-079519-A
3. Address of Operator 3401 E. 30TH STREET, FARMINGTON, NM 87402		7. Lease Name or Unit Agreement Name San Juan 28-5 Unit
4. Well Location Unit Letter <u>O</u> : <u>830</u> feet from the <u>South</u> line and <u>2475</u> feet from the <u>East</u> line Section <u>12</u> Township <u>28N</u> Rng <u>5W</u> NMPM County <u>Rio Arriba</u>		8. Well Number 102N
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 7305'		9. OGRID Number 14538
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		10. Pool name or Wildcat Blanco Mesaverde/ Basin Dakota
Pit type <u>new drill</u> Depth to Groundwater <u><50'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>200'</u> Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume <u> </u> bbls; Construction Material <u> </u>		

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, 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 Amanda Sandoval

TITLE Regulatory Assistant III

DATE 3/20/2006

Type or print name
For State Use Only

Amanda Sandoval

E-mail address: asandoval@br-inc.com

Telephone No. 505-326-9700

APPROVED BY [Signature]

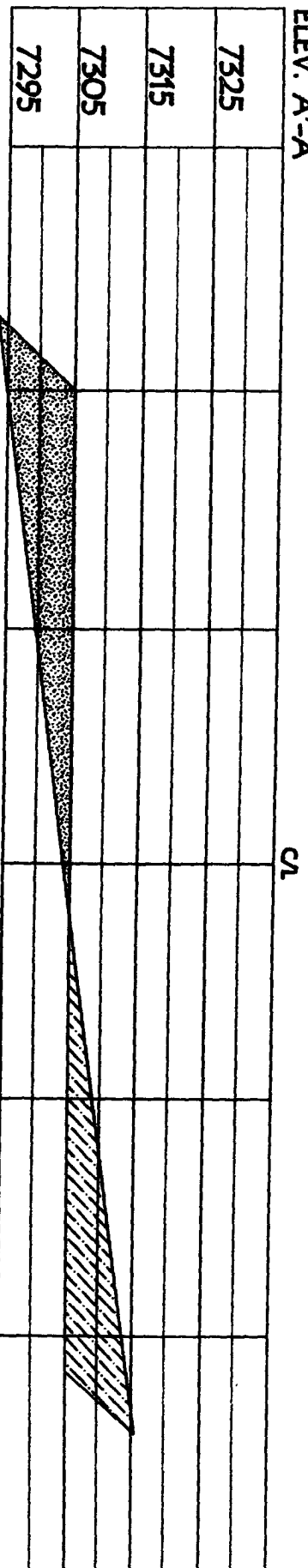
TITLE DEPUTY OIL & GAS INSPECTOR, DIST. III

DATE FEB 23 2007

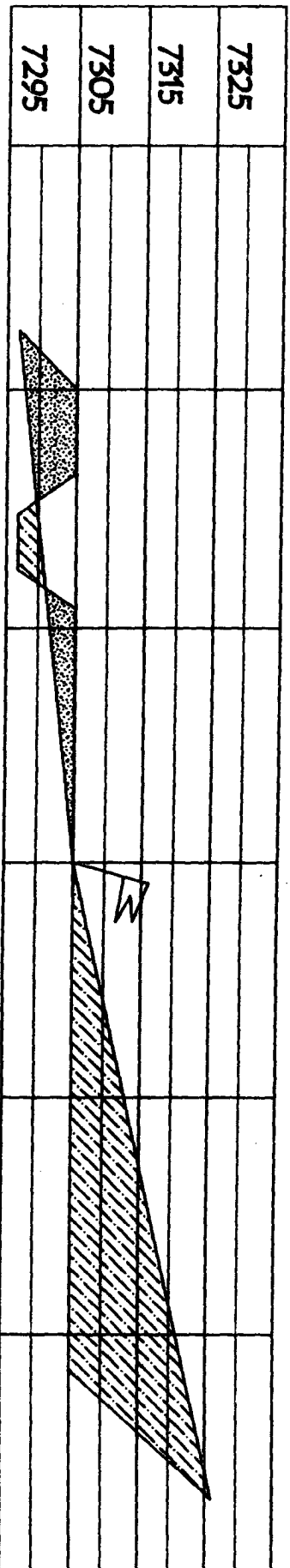
Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY LP
SAN JUAN 28-5 UNIT #102N, 830' FSL & 2475' FEL
SECTION 12, T-28-N, R-5-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 7305', DATE: JANUARY 16, 2006

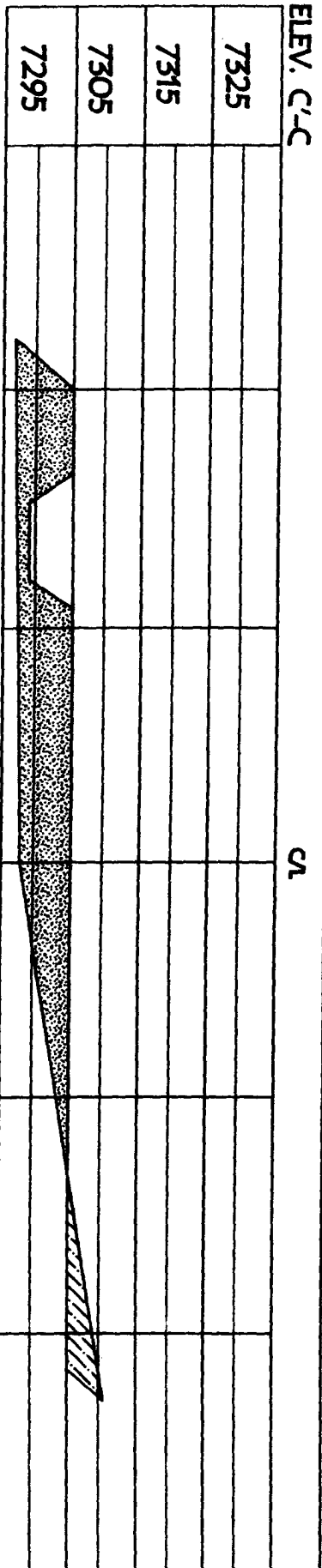
ELEV. A'-A



ELEV. B'-B



ELEV. C'-C



NOTE: VECTOR SURVEY 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 #102N OPERATIONS PLAN

Well Name: San Juan 28-5 Unit #102N

Location Rio Arriba County, New Mexico
Surface: 830' FSL, 2475' FEL, Section 12, T-28-N, R-5-W
Latitude 36° 40.2432'N, Longitude 107° 18.4944'W
Bottom Hole: 1150' FSL, 1565' FWL, Section 12, T-28-N, R-5-W
Latitude 36° 40.296'N, Longitude 107° 18.822'W

Formation Blanco Mesa Verde/Basin Dakota
Elevation 7305'GL

<u>Formation Tops</u>	<u>Top (TVD)</u>	<u>Top (TMD)</u>	<u>Contents</u>
Surface	San Jose		
Ojo Alamo	3390'	3559'	aquifer
Kirtland	3555'	3735'	gas
Fruitland	4064'	4278'	gas
Pictured Cliffs	4268'	4495'	gas
Lewis	4349'	4582'	gas
Huerfano Bentonite	4908'	5178'	gas
Chacra	5275'	5557'	gas
Massive Cliff House	6122'	6404'	gas
Menefee	6153'	6435'	gas
Massive Point Lookout	6448'	6730'	gas
Mancos	6949'	7231'	gas
Gallup	7677'	7959'	gas
Greenhorn	8414'	8696'	gas
Graneros	8475'	8757'	gas
Two Wells	8544'	8826'	gas
Upper Cubero	8587'	8869'	gas
Lower Cubero	8644'	8926'	gas
Oak Canyon	8714'	8996'	
TD	8729'	9011'	

Logging Program

Cased Hole – CBL-GR- TD to surface

Open Hole - None

Mud Program

<u>Interval (TMD)</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 350'	Spud	8.4-9.0	40-50	no control
350 - 5707'	Non-dispersed	8.4-9.0	30-60	less than 8
5707'- 9011'	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 500'. At this point the well will be directionally drilled by building 4.0 degrees per 100' with an azimuth of 281 degrees. The end of the build will be at a TVD of 997', a TMD of 1008', a reach of 89', and an angle of 20.31 degrees. This angle and azimuth will be held to a TVD of 4928', a TMD of 5199', and a reach of 1544'. 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 5425', a TMD of 5707', a reach of 1633', 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 9011' (TVD of 8729'). 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' - 5707'	7"	23#	L-80
6 1/4"	5707' - 9011' 5607'	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' - 9011'	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 ft³ (294 sks)** Type III cement with 3% CaCl₂ and 1/4 pps celloflake (1.28 sks/ft³). 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 **1162 ft³ (546 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 1/2" production casing: **30% excess cement to achieve 100' overlap with intermediate casing**

Run **452 ft³ (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).

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:

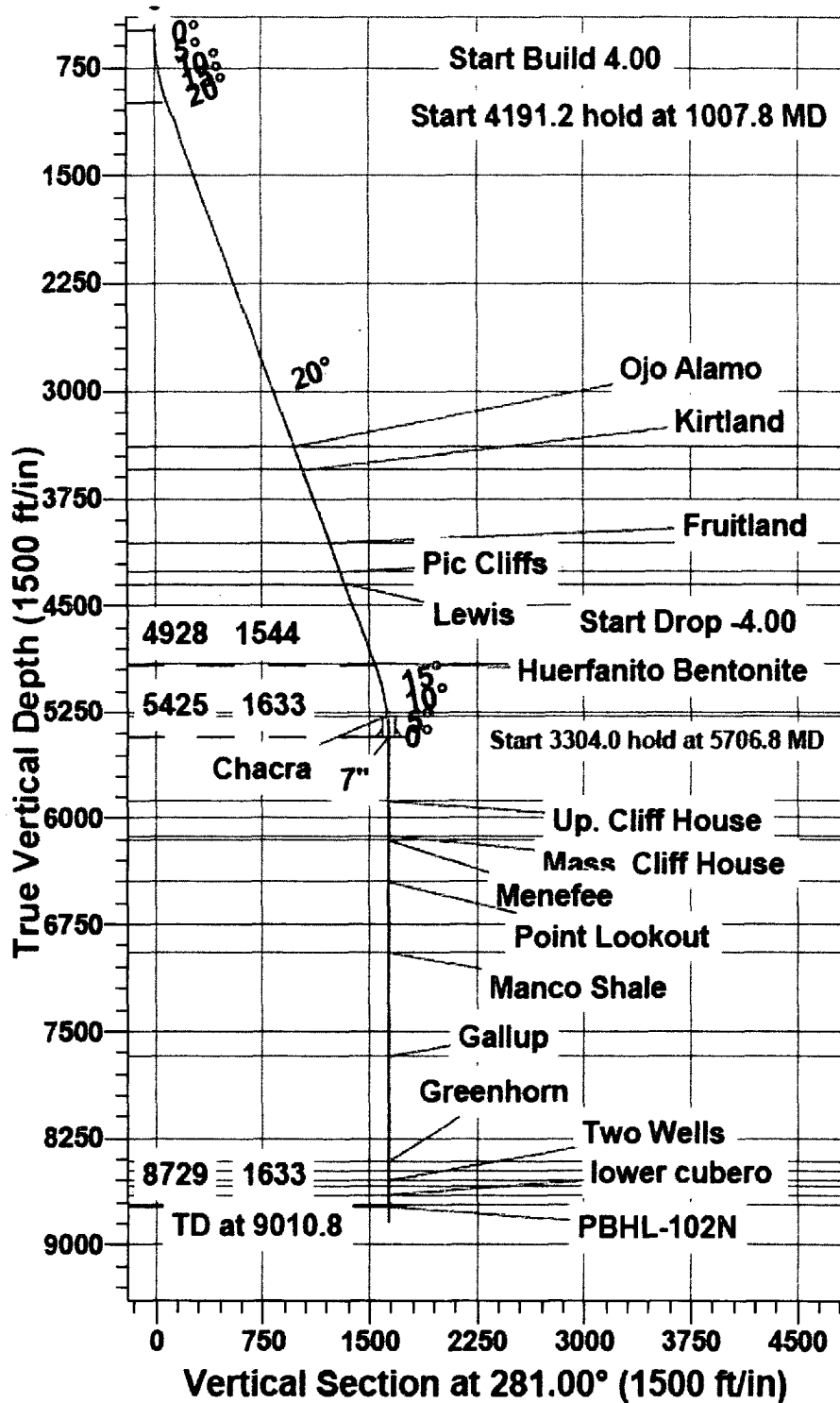
- This gas is dedicated.
- New casing will be utilized.
- Pipe movement (reciprocation) will be done if hole conditions permit.
- No abnormal pressure zones are expected.
- BHP is expected to be 2000 psi.



Drilling Engineer

3/20/06

Date



Plot 1: Directional plan for SJ 28-5 102N



Scientific Drilling

Project: SAN JUAN, NM
Site: SEC 12-T28N-R5W
Well: 28-5 UNIT #102N
Wellbore: OH
Plan: Plan #1 (28-5 UNIT #102N/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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
1007.8	20.31	281.00	997.2	17.0	-87.4	4.00	281.00	89.1	
5199.0	20.31	281.00	4927.8	294.6	-1515.6	0.00	0.00	1544.0	
5706.8	0.00	359.69	5425.0	311.6	-1603.0	4.00	180.00	1633.0	CASING PT.(102N)
9010.8	0.00	359.69	8729.0	311.6	-1603.0	0.00	359.69	1633.0	PBHL-102N

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CASING PT.(102N)	5425.0	311.6	-1603.0	2064128.34	652391.50	36° 40' 17.760 N	107° 18' 49.320 W	Point
PBHL-102N	8729.0	311.6	-1603.0	2064128.33	652391.48	36° 40' 17.760 N	107° 18' 49.320 W	Point

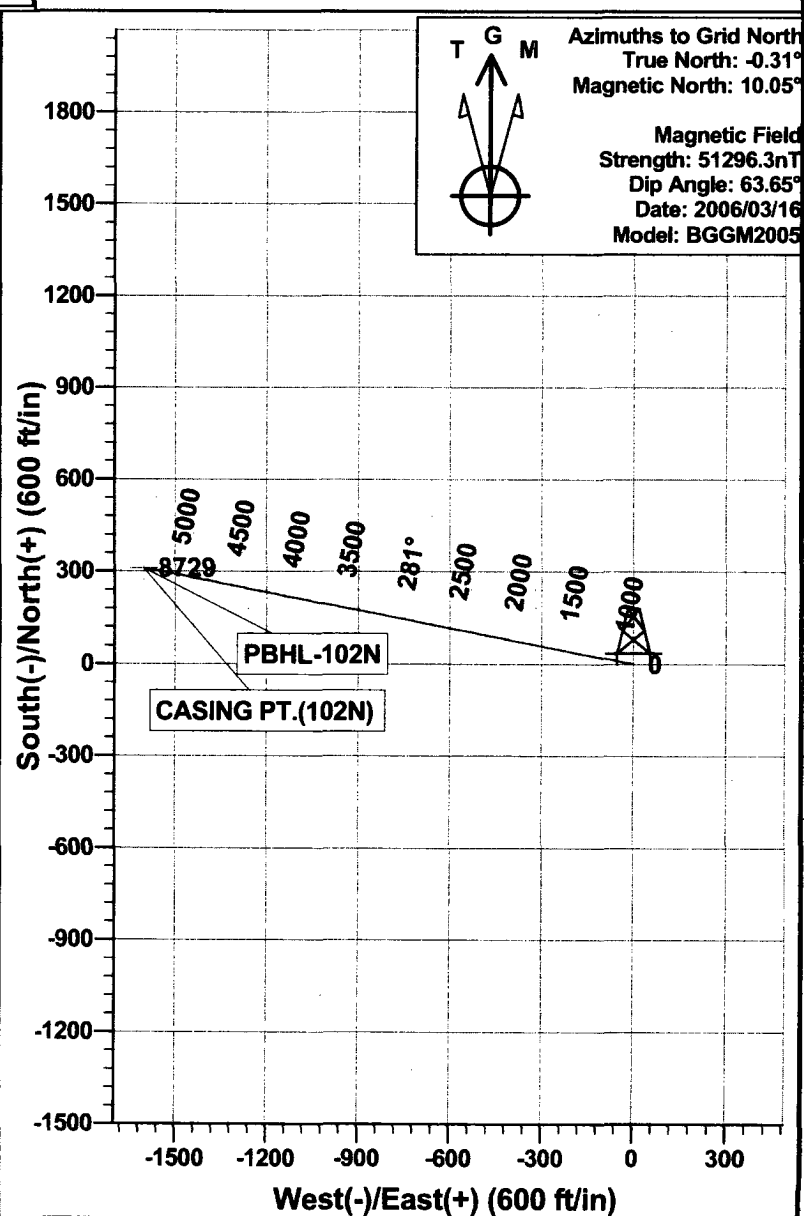
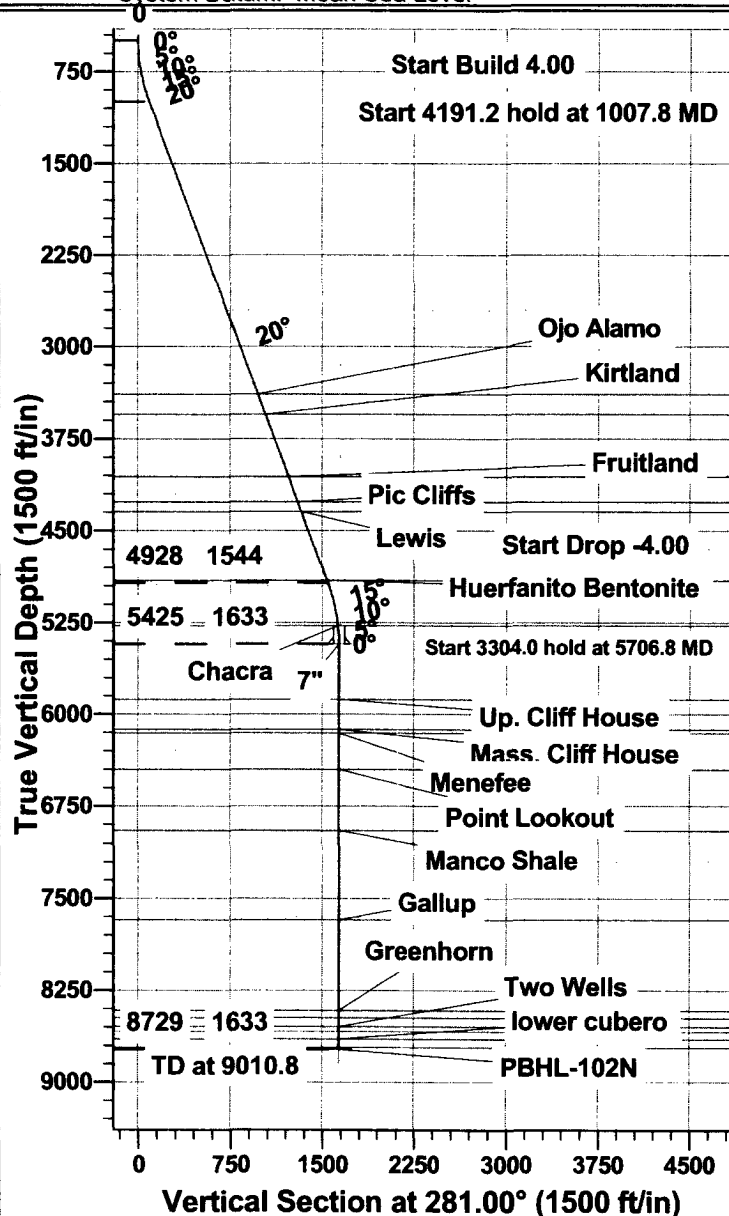
PROJECT DETAILS: SAN JUAN, NM

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 #102N

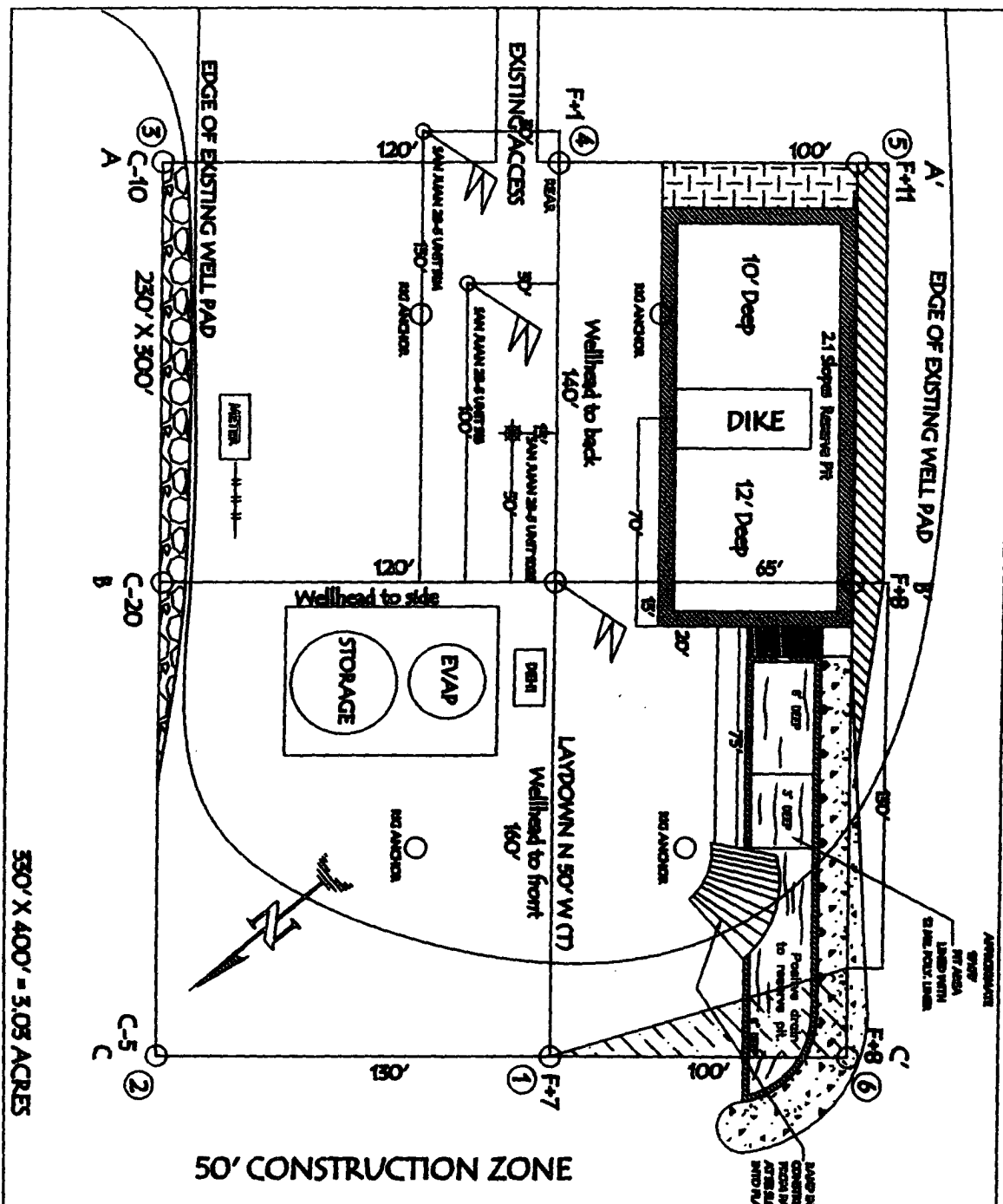
Ground Level: 7305.0
Northing: 2063816.70
Easting: 653994.51
Latitude: 36° 40' 14.592 N
Longitude: 107° 18' 29.664 W



BURLINGTON RESOURCES OIL & GAS COMPANY LP

SAN JUAN 28-5 UNIT 102N, 830' FSL & 2475' FEL
SECTION 12, T-28-N, R-5-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 7305', DATE: JANUARY 16, 2006

RESERVE PIT DIKE: TO BE 6' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).



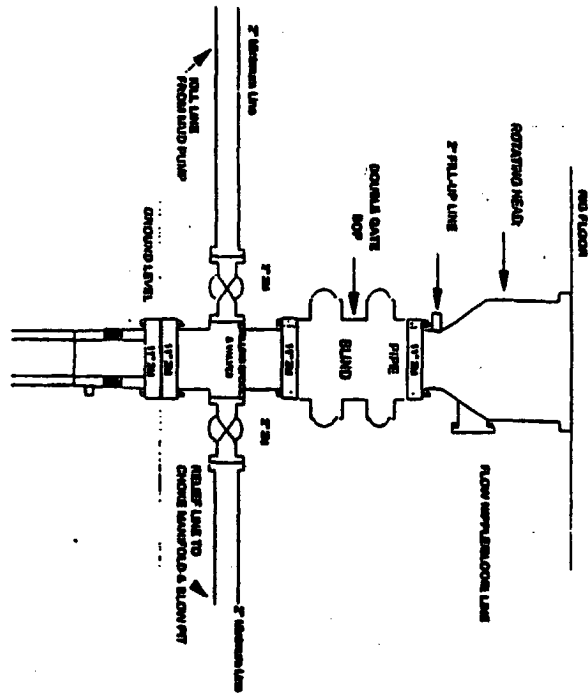
LATITUDE: 36° 40' 24.81" N LONGITUDE: 107° 18' 49.45" W NAD27

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.

11

Burlington Resources

Drilling Rig 2000 psi System

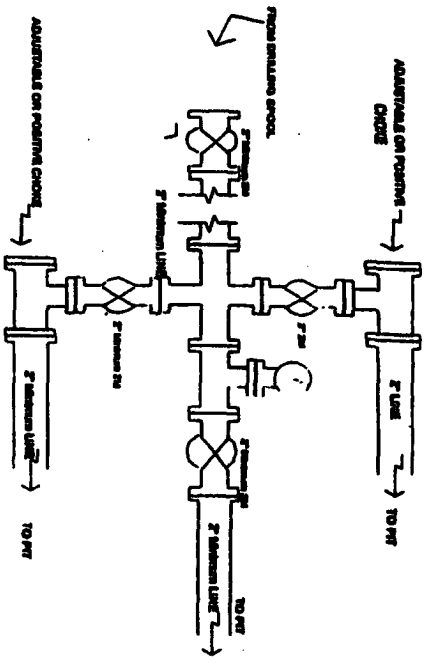


BCP installation from Surface Casing Point to Total Depth. 11\"/>

Figure #1

BURLINGTON RESOURCES

Drilling Rig Choke Manifold Configuration 2000 psi System

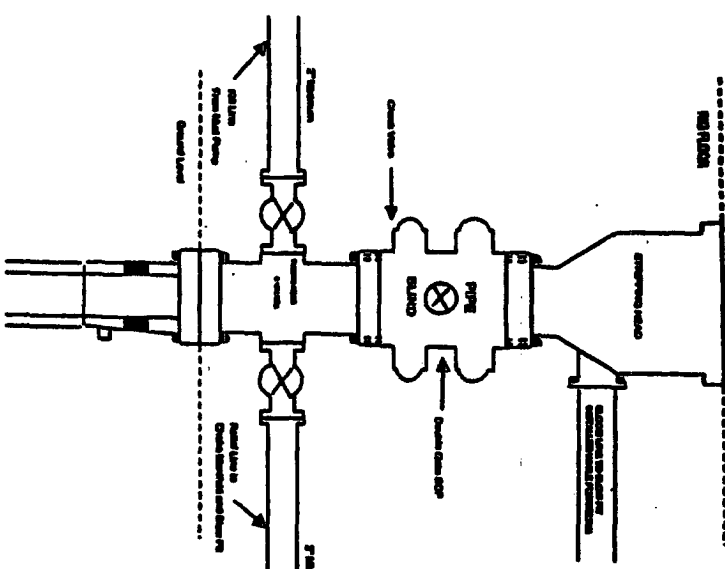


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

BURLINGTON RESOURCES

Completion/Workover Rig BOP Configuration 2000 psi System



Minimum BOP installation for all Completion/Workover Operations. 7-1/16\"/>

Figure #2