NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

October 24, 1997

Ms Peggy Bradfield
Burlington Res O&G Co
PO Box 4289
Farmington NM 87499

Re: Canyon Largo Unit #400, O-30-25N-06W, API Not Yet Assigned

Dear Ms Bradfield:

Your application to directionally drill the proposed referenced well at a surface location of 790' FSL, 1755' FEL and a bottom hole location of 1000' FSL, 1850' FEL is hereby approved.

If you have any questions please contact me.

Yours truly,

Ernie Busch
District Geologist/Deputy O&G Inspector

EB/sfh

Xc: well file
Bureau of Land Management-Duane Spencer
NMOCD-Santa Fe

CLU400-DD

BURLINGTON RESOURCES

SAN JUAN DIVISION

October 23, 1997

RECEIVED
OCT 24 1997
OIL CON. DIV.
DIST. 3

HAND DELIVERED

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Att: Mr. Ernie Busch

Re: Canyon Largo Unit #400
790'FSL, 1755'FEL Section 30, T-25-N, R-6-W, Rio Arriba County, New Mexico
1000'FSL, 1850'FEL Section 30, T-25-N, R-6-W, Rio Arriba County, New Mexico
API # 30-039-(not yet assigned)

Dear Mr. Busch:

Burlington Resources is applying for administrative approval to directional drill the referenced well. This application is due to the presence of pipelines above the targeted bottom hole location.

The following attachments are for your review:

1. Application for Permit to Drill BLM Form 3160, and Operations Plan.

2. Completed C-102 at referenced location, showing both surface and bottom hole locations.

3. Plan views of the proposed well, well profile data, and proposed data as drilling progresses through the various formations.

We appreciate your earliest consideration of this application.

Sincerely,

Peggy Bradfield

Peggy Bradfield
Regulatory/Compliance Administrator

xc: Bureau of Land Management
NMOCD - Santa Fe

3535 East 30th St., 87402-8801, P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833

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-078875 **Unit Reporting Number**
1b.	**Type of Well** GAS	**6. If Indian, All. or Tribe**
2.	**Operator** BURLINGTON RESOURCES Oil & Gas Company	**7. Unit Agreement Name** Canyon Largo Unit
3.	**Address & Phone No. of Operator** PO Box 4289, Farmington, NM 87499 (505) 326-9700	**8. Farm or Lease Name** Canyon Largo Unit **9. Well Number** 400
4.	**Location of Well** 790'FSL, 1755'FEL - surface 1000'FSL, 1850'FEL - bottomhole Latitude 36° 22.0, Longitude 107° 30.2	**10. Field, Pool, Wildcat** Basin Dakota **11. Sec., Twn, Rge, Mer. (NMPM)** Sec 30,T-25-N,R-6-W **API # 30-039-**
14.	**Distance in Miles from Nearest Town** 14 miles to Counselors	**12. County** **13. State** Rio Arriba NM
15.	**Distance from Proposed Location to Nearest Property or Lease Line** 790'	
16.	**Acres in Lease**	**17. Acres Assigned to Well** E/2 320
18.	**Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease** 1000'	
19.	**Proposed Depth** 7410'	**20. Rotary or Cable Tools** Rotary
21.	**Elevations (DF, FT, GR, Etc.)** 6819'GR	**22. Approx. Date Work will Start**
23.	**Proposed Casing and Cementing Program** See Operations Plan attached	
24.	**Authorized by:** Peggy Bradfield Regulatory/Compliance Administrator	10-21-97 Date

PERMIT NO. _____ **APPROVAL DATE** _____

APPROVED BY _____ **TITLE** _____ **DATE** _____

Archaeological Report submitted Technical Report 1054 dated June 24, 1997 by Arboles Contract Archaeology
Threatened and Endangered Species Report submitted by Ecosphere dated June 1997
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

 July 21, 1997

OPERATIONS PLAN

Well Name: Canyon Largo Unit #400
Location: 790'FSL, 1755'FEL Section 30, T-25-N, R-6-W - surface
1000'FSL, 1850'FEL Section 30, T-25-N,R-6-W - bottom hole
Rio Arriba County, New Mexico
Latitude 36° 22.0, Longitude 107° 30.2
Formation: Basin Dakota
Elevation: 6819'GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	326'	aquifer
Nacimiento	326'	1993'	aquifer
Ojo Alamo	1993'	2114'	aquifer
Kirtland	2114'	2413'	
Fruitland	2413'	2637'	gas
Pictured Cliffs	2637'	2753'	gas
Lewis	2753'	2995'	gas
Huerfanito Bentonite	2995'	3461'	
Chacra	3461'	4171'	gas
Massive Cliff House	4171'	4236'	gas
Menefee	4236'	4886'	gas
Point Lookout	4886'	5173'	gas
Mancos	5173'	6021'	
Niobrara	6021'	6557'	gas
Juana Lopez	6557'	6874'	
Greenhorn	6874'	6943'	gas
Graneros	6943'	6982'	
Dakota	6982'		gas
Total Depth	**7410'**		

Logging Program:
Mud Logs/Coring/DST -
Mud logs - 3970' to TD
Coring - none
DST - none
Electric logs - DIL/SP/GR; CDL/CNL/GR; ML

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 320'	Spud	8.4-8.9	40-50	no control
320-7410'	LSND	8.4-9.1	30-60	no control

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program:

Hole Size	TVD Depth	MD	Csg.Size	Wt.	Grade
12 1/4"	0' - 320'		8 5/8"	23.0#	M-50
7 7/8"	0' - 6855'	6880'	4 1/2"	10.5#	J-55
7 7/8"	6855' - 7410'	7424'	4 1/2"	11.6#	J-55

Tubing Program: 0' - 7410' 2 3/8" 4.7# J-55 EUE 8rd

BOP Specifications, Wellhead and Tests:

Surface to TD -

11" 3000 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.

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

6" 3000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams and casing top will be tested to 3000 psi for 15 minutes.

Surface to Total Depth -

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Wellhead -

8 5/8" x 4 1/2" x 2 3/8" x 3000 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 drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

8 5/8" surface casing -

Cement to surface w/336 sx Class "B" cement w/3% calcium chloride and 1/4#/sx cellophane flakes (396 cu.ft. of slurry, 200% excess to circulate to surface.) WOC 12 hours prior to drilling out surface casing. Test casing to 600 psi for 30 min.

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

Production Casing - 4 1/2"

First Stage: Cement to circulate to stage tool @ 4071'. Lead w/941 sx 50/50 Class "B" Pozmix w/2% gel, 5#/sx gilsonite, 0.4% Halad-344, and 1/4#/sx cellophane flakes. Tail w/100 sx Class "B" cement with 5#/sx gilsonite and 0.25#/sx cellophane. WOC 4 hours prior to pumping second stage. (Slurry volume: 1369 cu.ft. Excess slurry 80%.)

Second Stage: Cement to circulate to surface. Lead w/839 sx 65/35 Class "B" Pozmix w/6% gel, 5#/sx gilsonite, and 1/4#/sx cellophane flakes. Tail w/100 sx Class "B" cement w/5#/sx gilsonite and 0.25#/sx cellophane. WOC a minimum of 18 hrs prior to cleanout.(Slurry volume:1669 cu.ft. Excess slurry: 80%)

Float shoe on bottom. Three centralizers run every other joint above shoe. Thirty-two centralizers - one every 4th joint to the base of the Ojo Alamo @ 2114'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2114'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

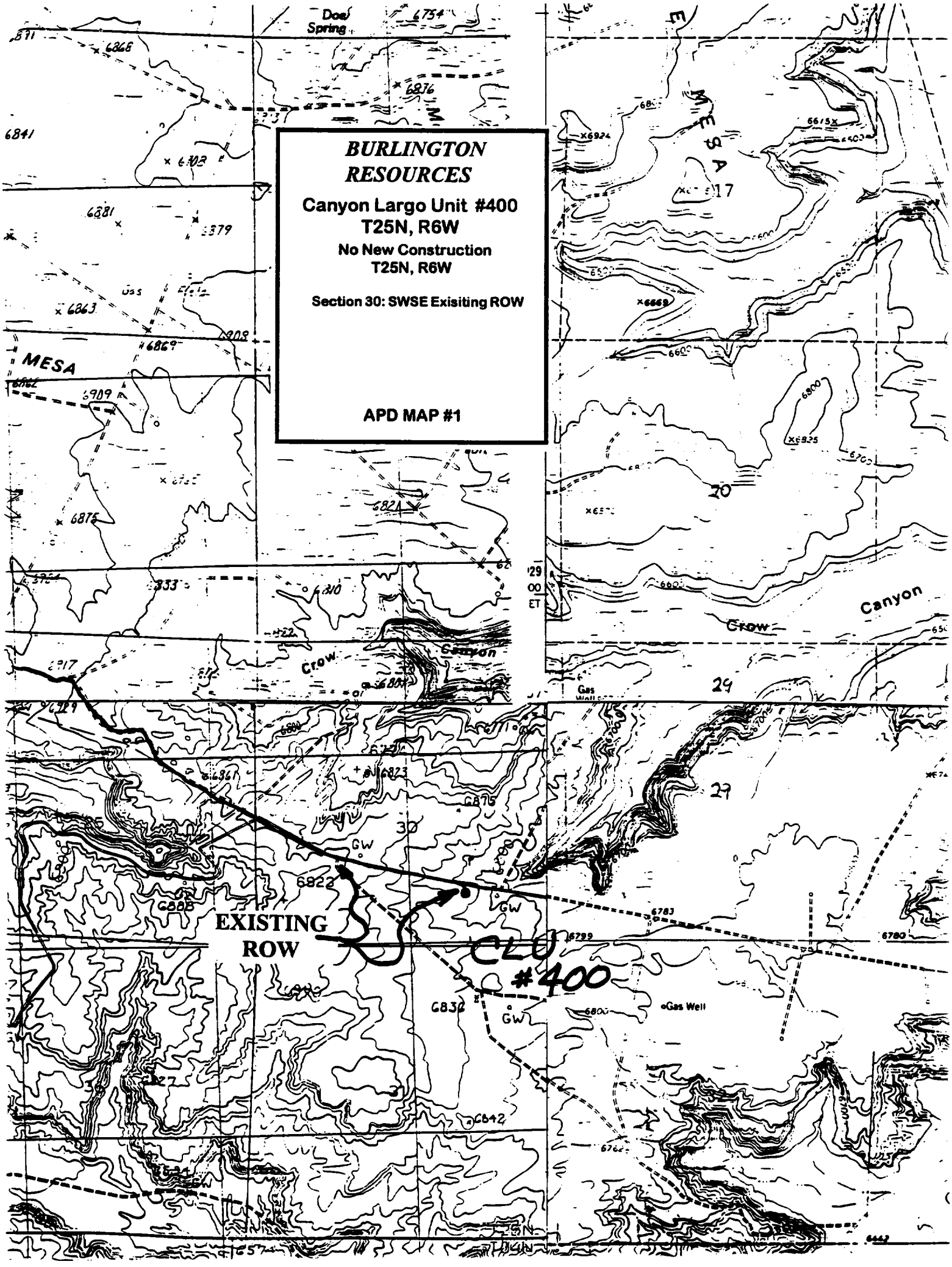
- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

Additional Information:

- The Dakota formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- 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 this section is dedicated to the Dakota.
- This gas is dedicated.
- New casing will be utilized.
- Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

Drilling Engineer

7/22/97
Date


BURLINGTON RESOURCES
Canyon Largo Unit #400
T25N, R6W
No New Construction
T25N, R6W
Section 30: SWSE Exisiting ROW
APD MAP #1
EXISTING ROW
CLU #400
MESA
Crow Canyon
Gas Well
Doe Spring

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-	71599	Basin Dakota

4 Property Code	5 Property Name	6 Well Number
6886	Canyon Largo Unit	400

7 OGRID No.	8 Operator Name	9 Elevation
	BURLINGTON RESOURCES OIL & GAS COMPANY	6819'

10 Surface Location

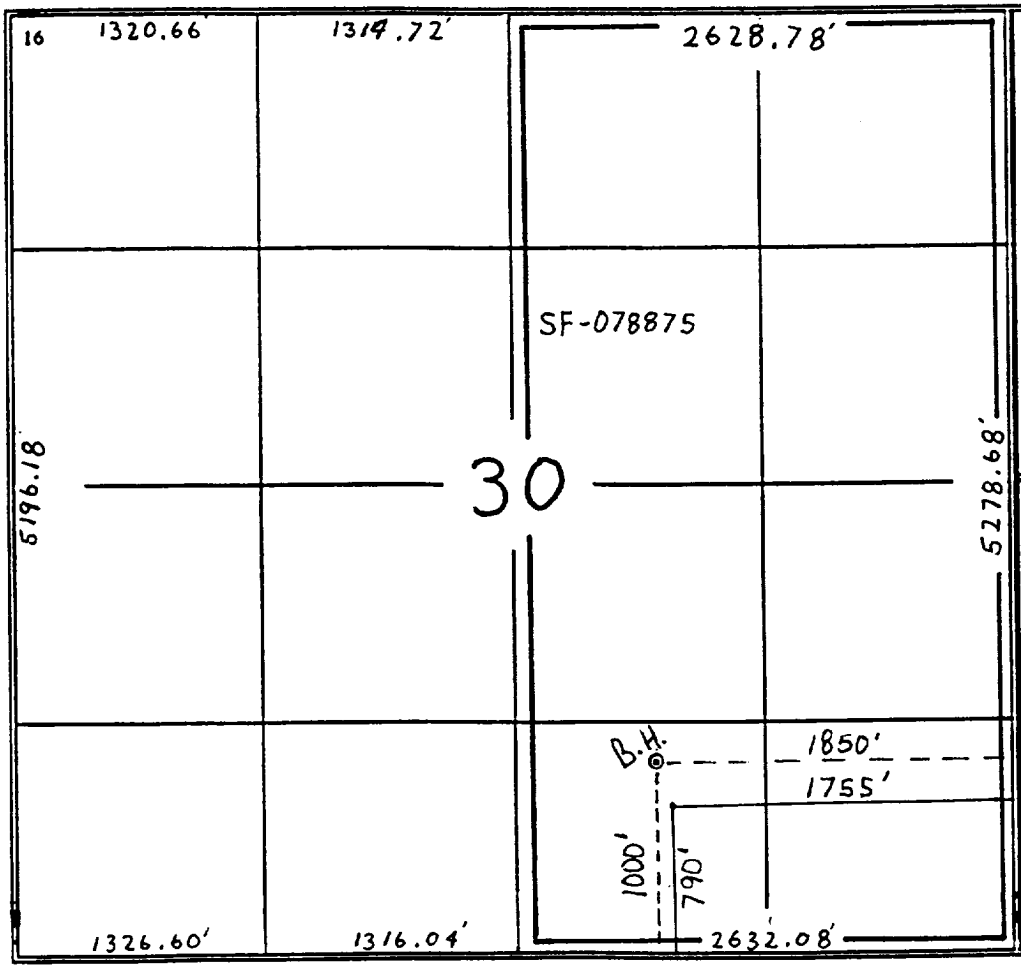
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	30	25-N	6-W		790	South	1755	East	R.A.

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
O	30	25-N	6-w		1000	South	1850	East	R.A.

12 Dedicated Acres	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



17 OPERATOR CERTIFICATION

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

Signature

Peggy Bradfield
Printed Name

Regulatory/Compliance
Title

10-23-97
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.

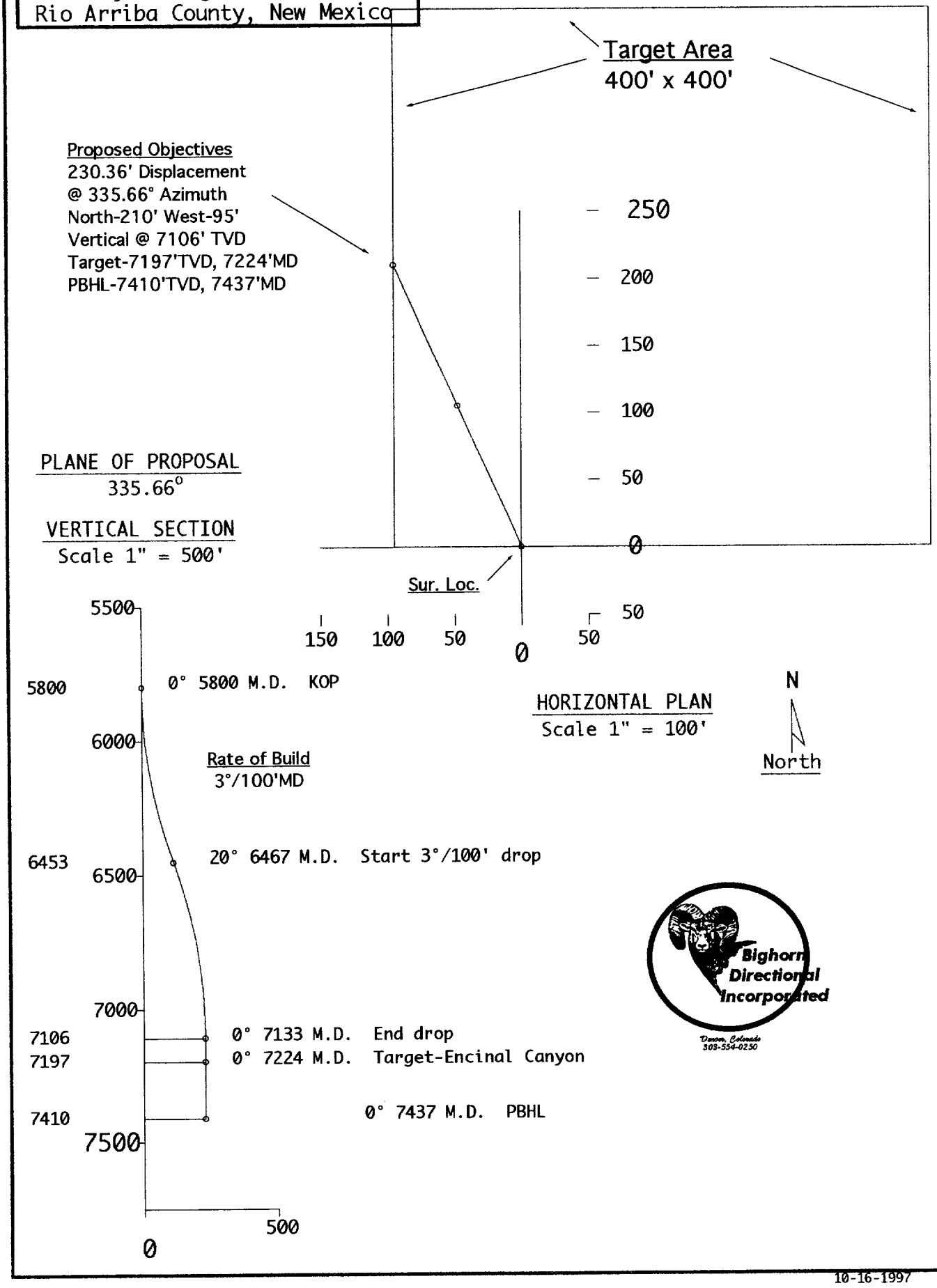
5/12/97
Date of Survey

Signature and Seal of Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

6857
Certificate Number

Burlington Resources
Canyon Largo Unit #400
Rio Arriba County, New Mexico



Bighorn Directional Incorporated
Denver, Colorado
303-554-0250

10-16-1997