



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

October 22, 1992

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

BCO, Inc.
135 Grant Avenue
Santa Fe, NM 87501

RECEIVED
OCT 26 1992
OIL CON. DIV.
DIST. 3

Attention: Neel L. Duncan

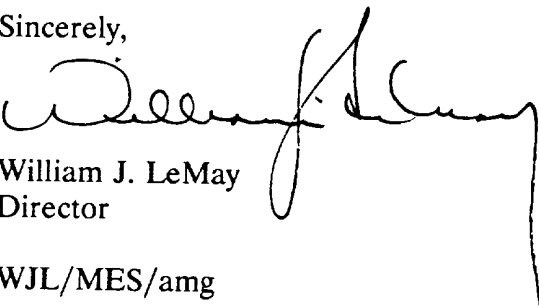
Administrative Order NSL-3182

Dear Mr. Duncan:

Reference is made to your application dated September 16, 1992 for a non-standard oil well location for Federal "B" Well No. 14 located 1152 feet from the North line and 420 feet from the East line (Unit A) of Section 27, Township 23 North, Range 7 West, NMPM, Undesignated Lybrook Gallup Oil Pool, Sandoval County, New Mexico. The NE/4 NE/4 of said Section 27 shall be dedicated to the well forming a standard 40-acre oil spacing and proration unit for said pool.

By the authority granted me under the provisions of General Rule 104F.(I) the above-described unorthodox oil well location is hereby approved.

Sincerely,


William J. LeMay
Director

WJL/MES/amg

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

JEFF CAPRUTHERS
GOVERNOR

1000 THE PLAZAS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-0170

Date: 9-18-92

Attn: Mike Stegner

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Re: Proposed HC _____
Proposed DHC _____
Proposed NSL X _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 9-17-92
for the B.C.O. Inc. Federal B #14
Operator Lease & Well No.

A-27-23N-7W and my recommendations are as follows:
Unit, S-T-R

Approve

Yours truly,

Ernest Bush

BCO, Inc.

OIL WELL OPERATOR
135 GRANT

SANTA FE, N. M. 87501

AREA CODE 505
983-1228

16 September 1992

Mr. William J. LeMay
Director
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RECEIVED
SEP 17 1992
OIL CON. DIV
DIST. 3

Re: Non-Standard Location Application
Federal "B" No. 14
1152' FNL x 420' FEL (UL "A") Sec 27 T23N R7W
Sandoval County, New Mexico
Lybrook Gallup Pool

Dear Mr. LeMay:

BCO, Inc. requests OCD administrative approval to drill the above referenced Gallup oil well in an unorthodox location. A mesa with steep slopes prevents us from selecting a legal location in the proration unit.


This application includes a copy of the APD which has been filed with the BLM. Also included are the exhibits required per the guidelines in OCD Memorandum 1-90 dated 21 March 1990. For your convenience, a list which describes the nature and purpose of each exhibit follows this letter.

Archaeological clearance has been recommended by the Division of Conservation Archaeology. Bill Leiss of the BLM made a field inspection of the site on September 8th, 1992 and has indicated approval.

Directional drilling is not feasible to reach a legal bottom-hole location. Straight hole drilling economics are marginally profitable (rate of return less than 15%) and an additional \$48,083 in horizontal displacement costs would kill the project by bringing the rate of return down below the cost of money. Additionally, the well will have to be produced on beam lift and as you are aware this creates serious operational problems in deviated holes.

Offset operators have been notified of our application. An affidavit of service, list of operators, and a sample letter are provided in Exhibit H. *Please note that the proposed location is unorthodox only with respect to our own acreage and the correlative rights of the offset operators are protected.*

Respectfully,


Neel L. Duncan
Petroleum Engineer & Production Manager

c: Frank T. Chavez - Aztec ✓

LIST OF EXHIBITS
Non-Standard Location Application
Federal "B" No. 14

<u>Exhibit</u>	<u>Description & Purpose</u>
A	Copy of Application for Permit to Drill
B	OCD Form C-102. Shows location & dedicated acreage.
C	Ownership Plat showing proposed wellsite, offset operators, and offset wells.
D	Listing of working interest owners for offset wells.
E	Topographic map showing proposed location, orthodox windows, and terrain features.
F	Enlarged topographic map showing details of the mesa and slope.
G	Copy of cover letter for archaeological report recommending clearance for the proposed wellsite.
H	Affidavit that notice has been sent & list of operators notified. Sample letter also attached.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

BCO, Inc.

3. ADDRESS OF OPERATOR

135 Grant Avenue, Santa Fe, New Mexico 87501

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

1152' FNL x 420' FEL Sec 27 T23N R7W

At proposed prod. zone

1152' FNL x 420' FEL Sec 27 T23N R7W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

2 miles South of Lybrook, New Mexico

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

16. NO. OF ACRES IN LEASE

2080

19. PROPOSED DEPTH

5800

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

GL: 7276

KB: 7288

22. APPROX. DATE WORK WILL START*

01 January 1993

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12.250	8.625"	24#	360'	275 Sacks
7.875	4.500"	11.6#	5800'	689 Sacks

Operator plans to drill from the surface through the Base of the Gallup Formation. If determined productive, production casing will be set and cemented. Potentially productive zones will be opened and stimulated as necessary.

Exhibits

- A - Location Plat - (OCD Form C-102)
- B - Ten Point Compliance Plan - Operations
- C - Blowout Preventer Diagram
- D - Multi-Point Requirements Program
- E - Topography Map Showing Roads

- F - Drilling Rig Layout
- G - Completion Rig Layout
- H - Location Profile Plat
- I - Facilities Layout
- J - Central Gathering Facility Layout
- K - R/W Land Use Plat

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

TITLE Petroleum Engineer

DATE September 10, 1992

(This space for Federal or State office use)

PERMIT NO.

APPRO

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

*** Note: A Form 2800-14 signed in blank accompa

*See Instructions On R

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly at United States any false, fictitious or fraudulent statements or

EXHIBIT "A"

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator B.C.O. INC.		Lease FEDERAL "B"		Well No. 14
Unit Letter A	Section 27	Township T.23 N.	Range R.7 W.	County SANDOVAL
Actual Footage Location of Well: 1152 feet from the NORTH line and 420 feet from the EAST line				
Ground level Elev. 7276'	Producing Formation GALLUP	Pool LYBROOK GALLUP	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

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

Signature

Printed Name

NEEL L. DUNCAN

Position

PETROLEUM ENGINEER

Company

BCO, Inc.

Date

10 SEP 92

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 knowledge and belief.

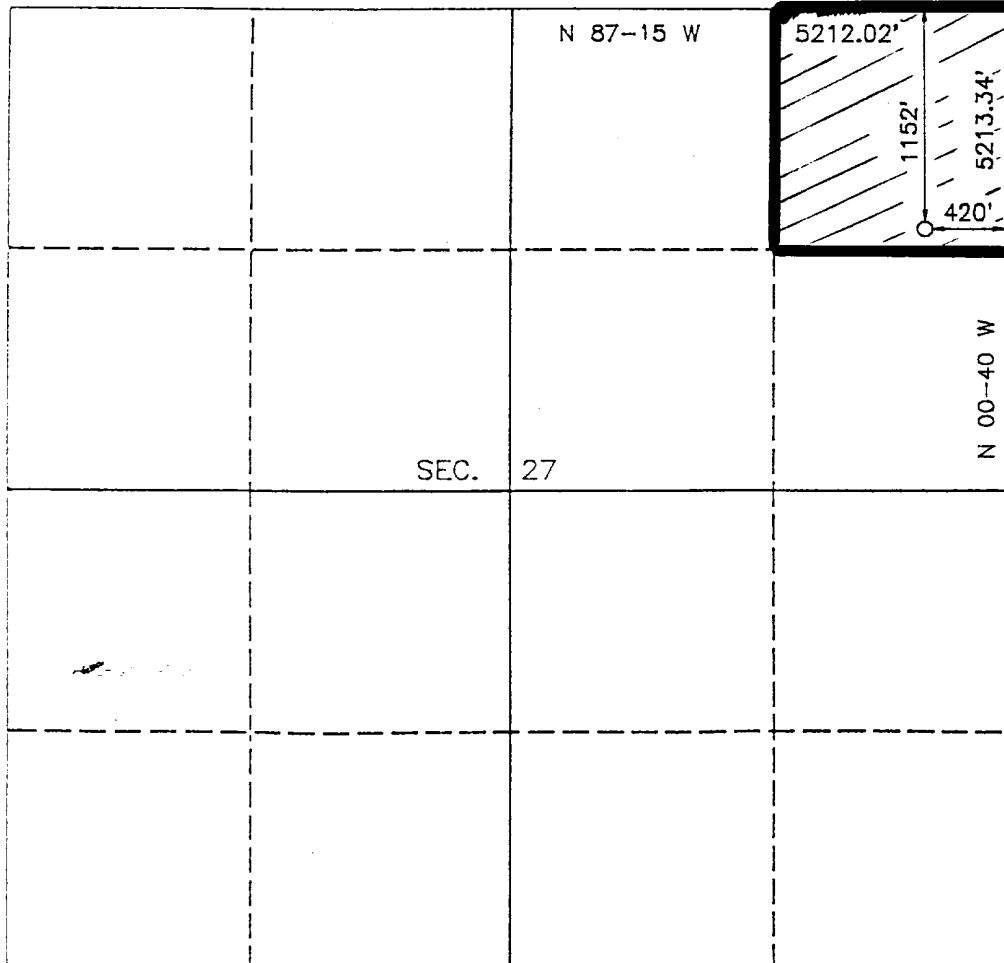
Date Surveyed

AUGUST 25, 1992

Signature & Seal of
Professional Surveyor

ROY A. RUSH
8894

Certificate No. **8894**



0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

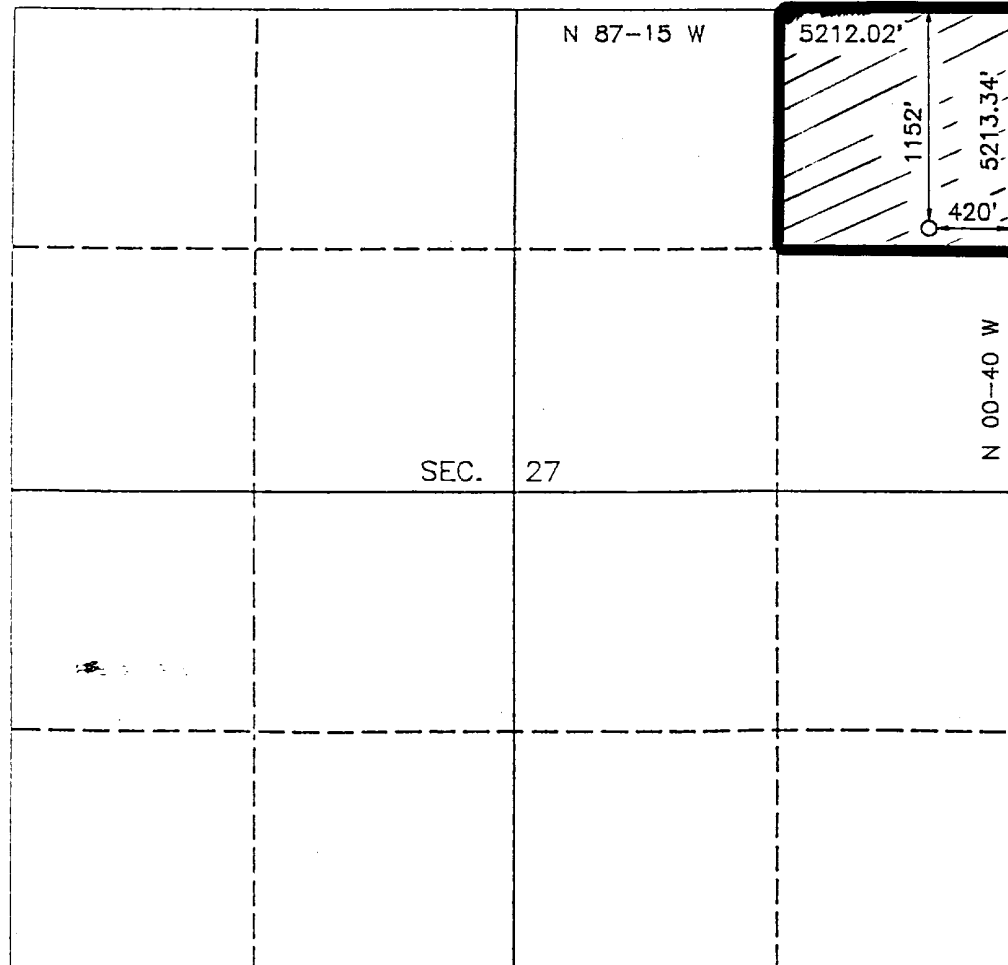
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator B.C.O. INC.		Lease FEDERAL "B"		Well No. 14
Unit Letter A	Section 27	Township T.23 N.	Range R.7 W.	County SANDOVAL
Actual Footage Location of Well: 1152 feet from the NORTH line and 420 feet from the EAST line				
Ground level Elev. 7276'	Producing Formation GALLUP	Pool LYBROOK GALLUP	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature

Printed Name

NEEL L. DUNCAN

Position

PETROLEUM ENGINEER

Company

B.C.O. INC.

Date

10 SEP 92

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 knowledge and belief.

Date Surveyed

AUGUST 25, 1992

Signature & Seal of
Professional Surveyor

ROY A. RUSH
8894

Certificate No. **8894**

EXHIBIT "B"

TEN POINT COMPLIANCE PROGRAM
OF NTL-6 APPROVAL OF OPERATIONS

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

1. The Geological Surface Formation is **NACIEMENTO**.
2. The Estimated Tops of Important Geologic Markers (feet, TVD):

Ojo Alamo	1396	Cliffhouse	3532
Kirtland	1676	Menefee	3582
Fruitland	1830	Point Lookout	4380
Pictured Cliffs	2036	Gallup	5244
Chacra	2442	TD	5800

3. Estimated Depths of Anticipated Water, Oil, Gas, or Minerals:

Substance	Formation	Anticipated Depth (feet, TVD)
Gas and Wtr	Pictured Cliffs	2036
Gas and Wtr	Chacra	2442
Gas	Menefee	3582
Gas and Wtr	Point Lookout	4380
Gas and Oil	Gallup	5244

4. The proposed casing program will be as follows:

Depth (feet)	Hole Size (inches)	Casing O.D. (inches)	Weight (lbm/ft)	Grade	Type	New/Used
0 - 360	12.250	8.625	24.00	J-55	ST&C	New
0 - 200	7.875	4.500	11.60	N-80	LT&C	New
200 - T.D.	7.875	4.500	11.60	J-55	LT&C	New

The proposed cement program will be as follows:

Surface: 275 sacks Class "B" with 0.25 lb/sx Flocele and 3% calcium chloride.

Production: Single Stage Cementing.

Lead: 50 bbl chemical flush followed by 531 sx 65/35 poz with 12% gel, 6 lb/sx gilsonite, 0.6% Halad-322, and 0.25 lb/sx flocele. Cement will be mixed at 11.3 lb/gal for zero free water and will yield 2.64 ft³/sx.

Tail: 158 sx Class "G" with 8 lb/sx salt, 0.5 lb/sx flocele and 6.25 lb/sx gilsonite. Cement will be mixed at 15.8 lb/gal to yield 1.15 ft³/sx.

TEN POINT COMPLIANCE PROGRAM
OF NTL-6 APPROVAL OF OPERATIONS

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

Note: Cement volumes will be adjusted after logging to ensure that all annular space behind 4-1/2" casing is full of cement.

5. Operator's Minimum Specifications for Pressure Control.

Exhibit "C" is a schematic of the blowout preventer equipment. A "2M" BOP system will be used. The BOP's will be hydraulically tested prior to drilling out from under surface and operational checks will be made daily thereafter and recorded in the drilling tour report. The following specifications will apply:

- a. The "2M" BOP system will consist of two rams, one pipe and one blind ram. All Connections subject to well pressure will be flanged. All lines and associated valves connecting to the BOP stack will be two inch (2"). (See attached BOP diagram.)
- b. A two inch kill line will be used.
- c. Two 2" kill line valves will be used. One of the valves will be a check valve.
- d. The choke manifold will contain two variable chokes and the manifold will be constructed of two inch (2") pipe. All connections will be flanged. A pressure gauge will be installed on the manifold.
- e. A safety valve and subs to fit all drill strings will be used.
- f. A two inch fill-up line above the uppermost preventer will be used.

6. Type and Characteristics of the Proposed Circulating Muds.

Mud system will be gel-chemical with adequate stocks of sorptive agents on location to handle possible spills of fuel and oil at the surface. Heavier muds will be made on location and added if pressure requires.

Interval (feet, MD)	Mud Weight (lbm/gal)	Viscosity (Marsh sec)	Fluid Loss (cc/30 min)	pH	Additives
0 - 370	9.0	50	---	9.0	None.
370 - T.D.	9.0	38 - 40	6.0	9.0	Chemicals

7. Auxiliary equipment to be used is as follows:

- a. Float above bit.

- b. Monitoring of mud system will be visual.
- c. A sub with a full opening valve will be on the floor when the kelly is not in use.
8. Testing, logging, and coring will be as follows:
- a. Cores - None will be cut.
 - b. Drill Stem Tests - None anticipated.
 - c. Logging - Formation Density and Compensated Neutron over Gallup formation and selected segments between Gallup and surface. Dual Induction, Gamma Ray, and Calliper from TD to surface.
9. Anticipated Abnormal Pressures and Temperatures
- No abnormal pressures, temperatures, or presence of hydrogen sulfide gas is anticipated during the course of drilling to TD. The maximum bottom hole pressure to be expected is 1800 psig.
10. Anticipated Starting Date and Duration of Operations
- The anticipated starting date is set for January 1st, 1993, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within 15 days.

Note: NTL FRA 90-1 will be complied with regarding cementing precautions for protection of fresh water sands, specifically the Ojo Alamo. The hole size is equal to or greater than 1.5 inches larger diameter than the casing outside diameter across usable water zones. An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement. An adequate number of casing centralizers will be run through usable water zones to ensure that casing is properly centered. The number of centralizers will be determined by API specification 11-D. Centralizers which impart a swirling action (Halliburton's Fluidmaster type) will be used just below and into the base of the lowest usable water zone. These devices will assist mud displacement, increase cement bonding potential and create an effective hydraulic seal. A chronological log will be kept which records pump rate, pump pressure, slurry density, and slurry volume for the cement job. The log will be sent to the BLM Farmington Resource Area after completion of the job.

Addendum to Ten Point Compliance Plan:

If productive, a flowline for produced fluids and gas will be run from wellhead to central tank battery at 2400' FSL x 650' FEL Sec 27 T23N R7W. Description as follows:

General: Surface line, buried only
where required.

Length: 1800'

Diameter: 2" I.D.

Type: 4.6 lb/ft oilfield tubing.

Wall: 0.380 inch

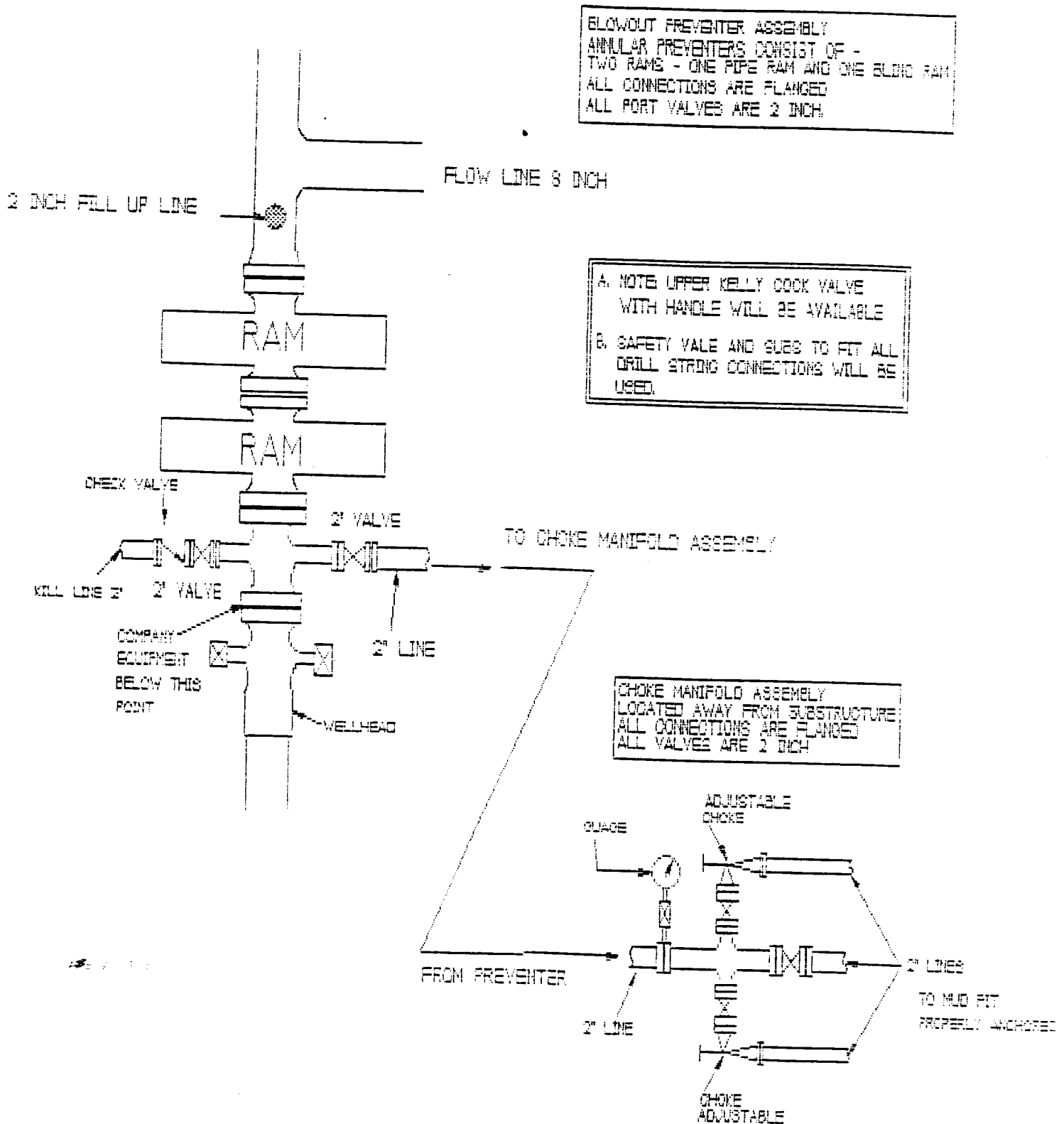
Working Pres: 6160 psi

Operating Pres: 100 psi

Test Pres: 1000 psi

BCO, Inc.

EXHIBIT "C"



"2-H" BOP SYSTEM

EXHIBIT "D"

Attachment to Form 3160-3

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

1. Existing Roads

- a. Plan to improve or maintain existing roads as required. Application is being made for right-of-way to an existing state or county road. Land use plat for R/W is included as Exhibit "K". Plan to utilize R/W NMNM 86682 from State Highway 44 to starting point of new access road. Request that NMNM 86682 be amended to include new access road in NE/4 SE/4 Sec 27 and SE/4 & NE/4 of NE/4 Sec 27 T23N R7W.
- b. Directions: From Farmington, turn right (south) off of State Highway 44 on west side of Lybrook Elementary School. Proceed 2.8 miles and turn right (west). Proceed 1.1 miles and turn right (north) onto new access road and follow to location.
- c. All existing roads within a one mile radius are shown in Exhibit "E".
- d. This is a development well.

2. Planned Access Roads

- a. The new access road is 1800' in length and is shown on Exhibit "E". Request that NMNM 86682 be amended to include new access road NE/4 SE/4 and SE/4 & NE/4 NE/4 Sec 27 T23N R7W. Attached to the Original APD is a form 2800-14 signed in blank. A surface ownership and right-of-way map is included as Exhibit "K".
- b. The grade will be 10% or less, or consistent with local terrain.
- c. Turnouts constructed as required by BLM.
- d. Any necessary water bars will be installed.
- e. Culverts will be installed as necessary. No major cuts and fills are planned on BLM land.
- f. Only native materials will be used.
- g. Gates or cattleguards will be installed where necessary.
- h. The new access road will be crowned and ditched.

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

3. Location of Existing Wells within a One Mile Radius (Refer to Exhibit "E")

- a. Water wells - none.
- b. Abandoned wells - None.
- c. Temporarily Abandoned (TA) wells - none.
- d. Disposal wells - none.
- e. Drilling wells - none.
- f. Producing wells - BCO, Inc - 7 wells
- g. Shut-in wells - none.
- h. Injection wells - none.
- i. Monitoring observation wells - none.

4. Location of Existing and/or Proposed Facilities

- a. There are four production facilities (batteries) owned and controlled by the Operator within a mile radius of the proposed well. One additional facility is applied for in a separate APD for a well within a one mile radius.
- b. New facilities contemplated in the event of production are shown approximately as Exhibit "I" and "J"

- 1. Central gathering facility will be required and will be located off of the well pad as shown on map Exhibit "E". A sketch of the facility is provided in Exhibit "J". Right of way for this on-lease facility, located in NE/4 SE/4 sec 22 T23N R7W is requested in this APD. Archaeological clearance has been recommended by the Division of Conservation Archaeology.

The central facility will gather gas and oil for three wells (Federal B-12, B-14, and B-15). The purpose of central collection is to simplify operations, reduce road travel of oil trucks, and maximize the amount of well pad that can be re-vegetated.

- 2. A surface flowline to connect wellhead to the central gathering facility will be constructed and will parallel road. Complete description of the line is provided in the addendum to the

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

10-point plan. Right of way for the flowline is requested in this APD.

3. Only native materials will be used except for gravel.
 4. An earthen berm will be built around tanks. Wellhead will be fenced to keep domestic animals and wildlife out.
 5. The reserve pit will be fenced and allowed to dry. Rehabilitation, whether the well is productive or dry will be made on all unused areas in accordance with BLM stipulations.
5. Location and Type of Water Supply
- a. Water will be provided by the Drilling Contractor, Walters Drilling, Inc. Contractor's source of water will be the Chapman water hole.
 - b. Water will be trucked to the location over the roads.
 - c. No water well will be drilled.
6. Source of Construction Materials
- a. Only native soils will be utilized.
 - b. No construction materials will be taken off Federal or Indian lands.
 - c. Surface and subsoil materials in the immediate area will be utilized. Any gravel will be purchased from a commercial source.
7. Methods of Handling Waste Materials
- a. Drill cuttings are to be contained and buried in the reserve pit.
 - b. Drilling fluids are to be contained in the reserve pit.
 - c. The produced fluids will be stored in a production tank. Any spills of oil, gas, or water, or other production fluids will be cleaned up and removed.
 - d. Chemical facilities will be provided for human waste.

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

- e. Garbage and non-flammable waste are to be contained in trash containers. Trash will be removed periodically and the remains removed when the well is completed. The reserve pit will be fenced on three sides during drilling operations and the fourth side will be fenced when the rig is moved off location.
 - f. Reserve and mud pits will be allowed to dry after drilling and completion operations and then adequately filled and leveled.
8. Ancillary Facilities: Non Required.
9. Well Site Layout.
- a. Wellsite layout and Profile are shown in Exhibit "H".
 - b. Drilling Rig layout is shown in Exhibit "F".
 - c. Completion Rig layout is shown in Exhibit "G".
 - d. Final producing well layout is shown in Exhibit "I".
10. Plans for Restoration of Surface.
- a. Restoration of the well site and access road will begin as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.
 - b. Should the well be abandoned, the drilling site will be reshaped as closely to the original countour as possible. The access road will be plowed and shaped. Both road and location will have topsoil replaced and will be reseeded when germination can occur. The portion of the location needed for daily operations and access road will be kept in good repair and clean.
 - c. In either case, cleanup of the well site will include burning or removal of all waste, revoval of accumulated oil on pits, fencing of pits until filled, and filling of the pits.
11. Other Information
- a. General Topography is shown on Exhibit "E"

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "B" No. 14
LOCATION: 1152' FNL x 420' FEL Sec 27 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

- b. There are no known archaeological or cultural sites near the proposed roadway or location.
- c. Animal life: Domestic livestock, mule deer, and native rodents and scavengers.
- d. Dwellings - Closest occupied dwelling is 1 mile.
- e. Surface Owner - Federal Lands under jurisdiction of the Bureau of Land Management.
- f. Restrictions: None.
- g. Drilling is planned for on or about January 1st, 1993 and operations should be completed within 15 days of start-up.

12. Leesee's or Operator's Representative

Neel L. Duncan, Petroleum Engineer
135 Grant Ave.
Santa Fe, New Mexico 87501

Telephone: (505) 983-1228

13. CERTIFICATION

I hereby certify that I or someone under my direct supervision have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by the Operator, his contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date: 09 September 1992



Neel L. Duncan
Petroleum Engineer & Production Manager

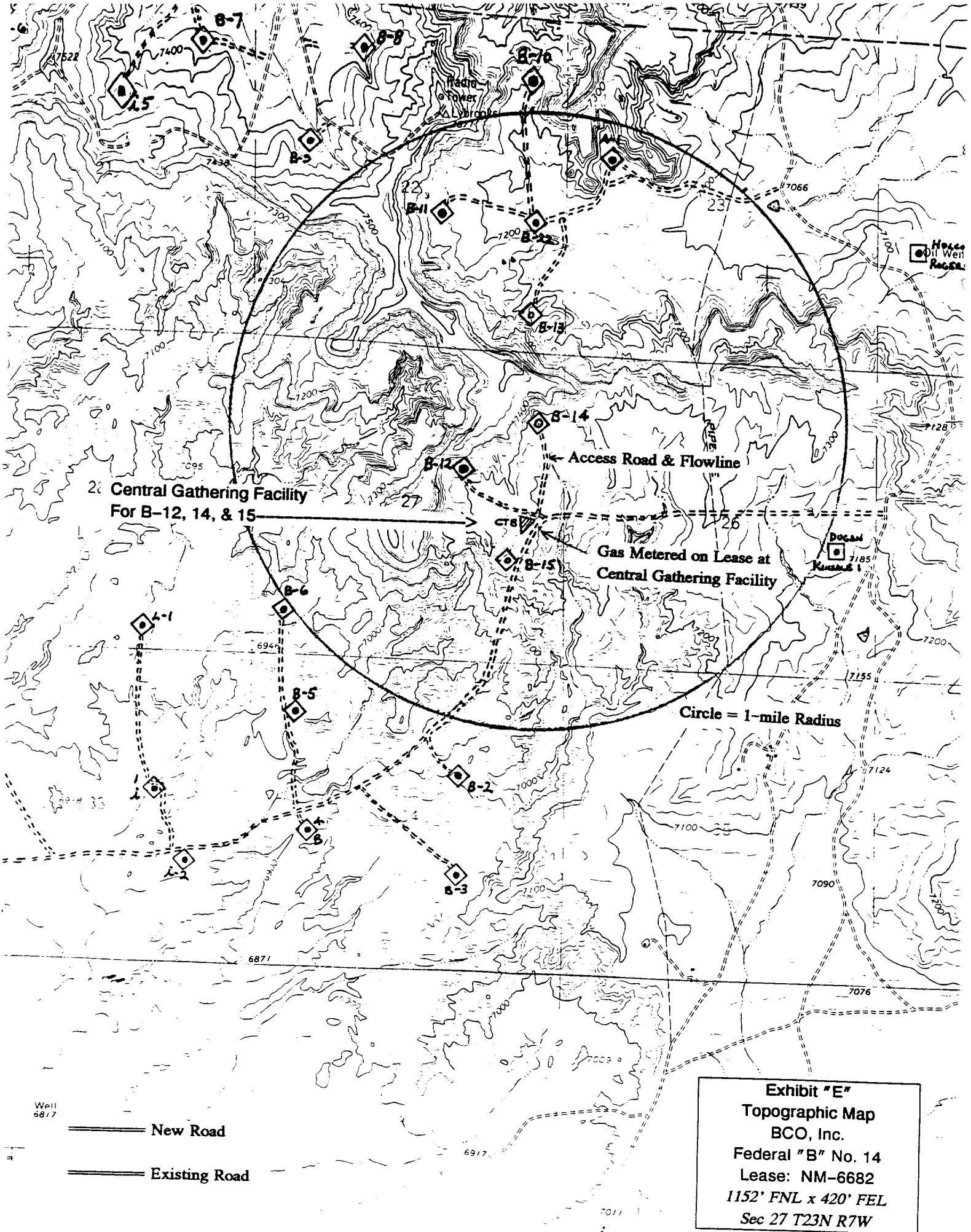
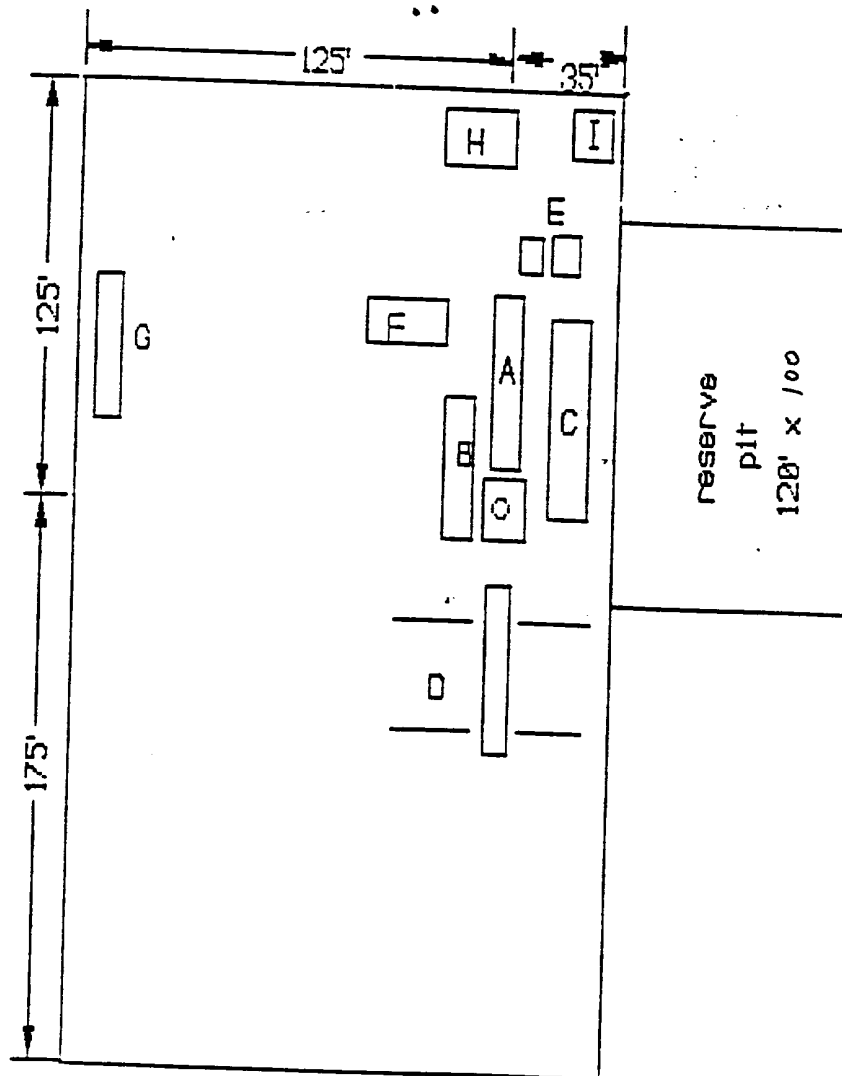


EXHIBIT F

DRILLING RIG LAYOUT

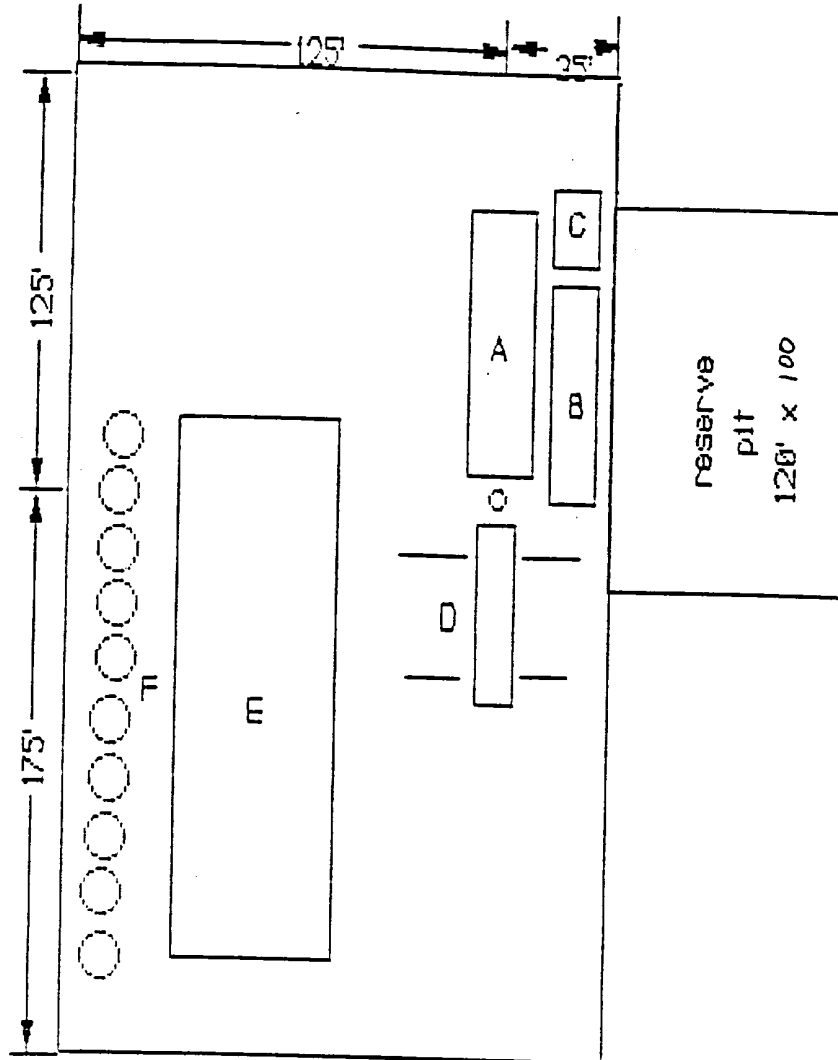
BCO, Inc.



- A RIG
- B DOG HOUSE AND WATER
- C MUD PIT
- D PIPE RACKS
- E MUD PUMPS
- F LIGHT PLANT
- G TRAILER HOUSE
- H TRASH BIN
- I TOILET

EXHIBIT G
COMPLETION RIG LAYOUT

BCO, Inc.



- A COMPLETION RIG
- B CIRCULATING PIT
- C PUMP
- D PIPE RACKS
- E FRAC EQUIPMENT AREA
- F FRAC TANKS

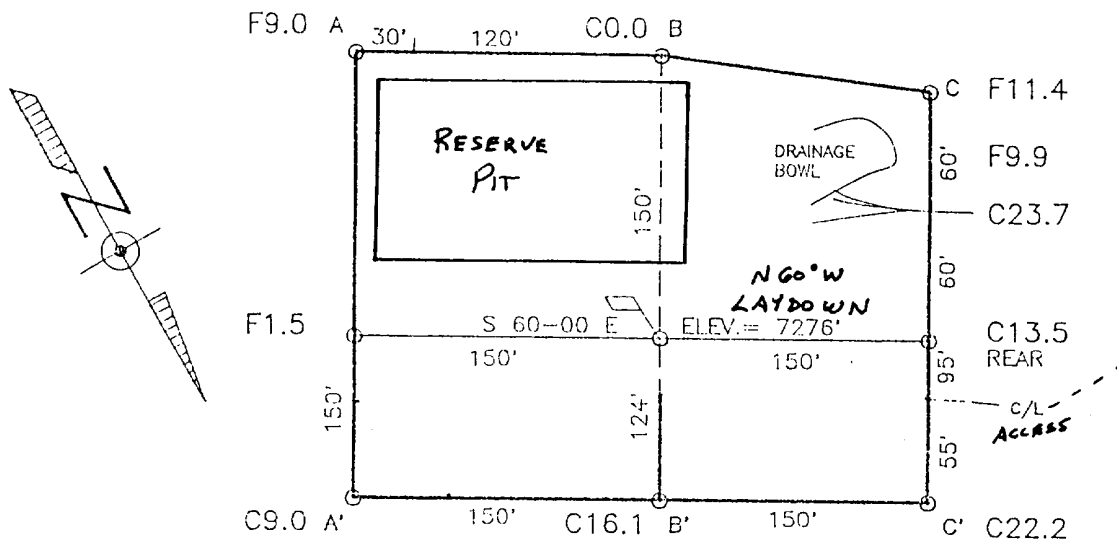
COMPANY: B.C.O. INC.

LEASE: FEDERAL B-14

FOOTAGE: 1152 FNL, 420 FEL

SEC.: 27, TWN: T.23 N., RNG: R.7 W., NMPM

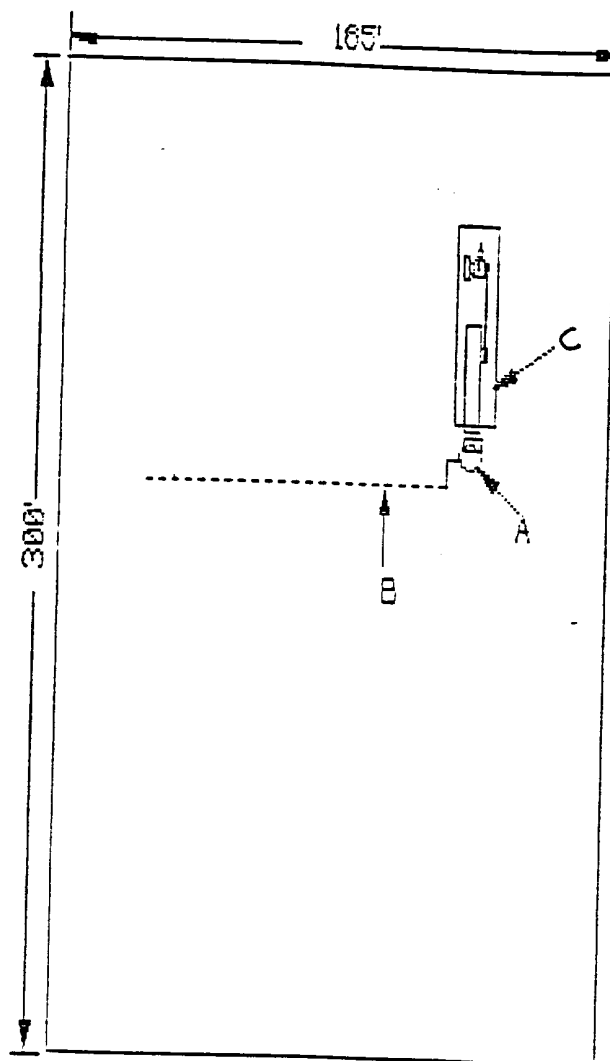
ELEVATION: 7276'



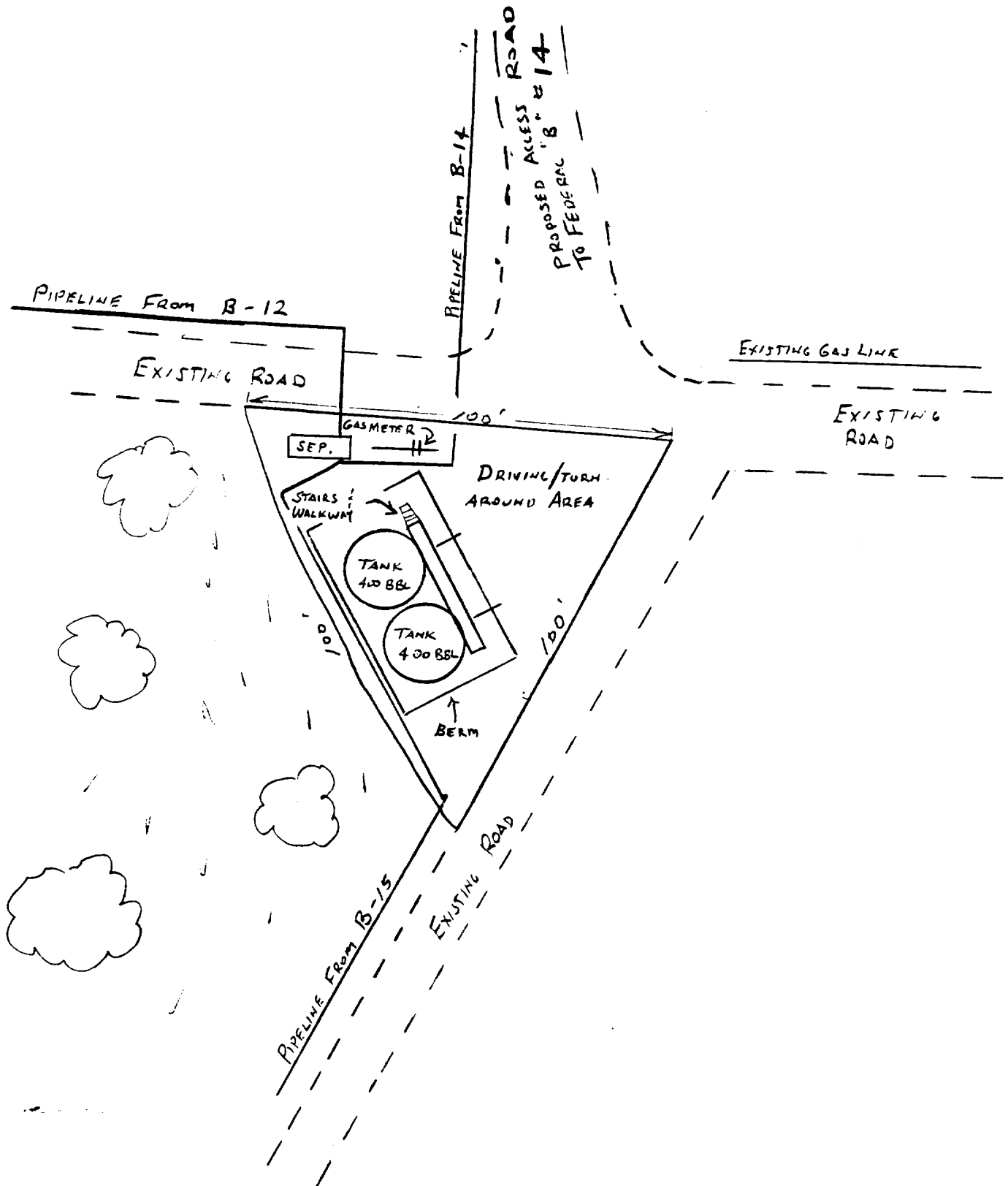
ELEV.	A-A'	C/L
7300		
7290		
7280		
7270		
7260		
7250		

EXHIBIT 'T'
PRODUCTION FACILITIES LAYOUT

BCO, Inc.



A WELLHEAD
B FLOWLINE - TO OFF-SITE FACILITY
C PUMPJACK (IF NECESSARY)



<p>Exhibit "J"</p> <p>Central Facility Layout</p> <p>Federal "B" No. 12, 14, & 15</p> <p>2400' FSL x 650' FEL</p> <p>Sec 27 T23N R7W</p> <p>Sandoval County, NM</p>

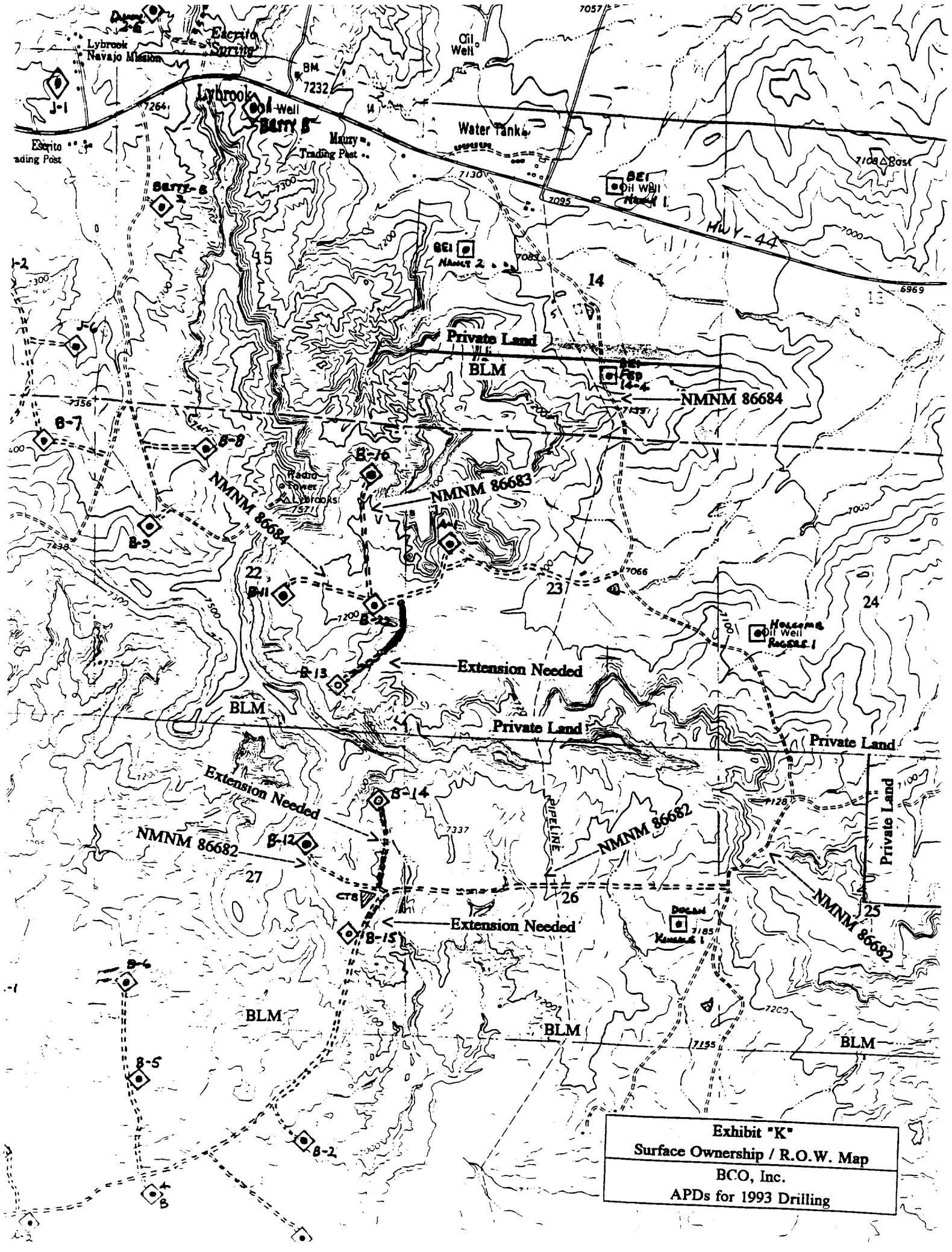


Exhibit "K"
Surface Ownership / R.O.W. Map
BCO, Inc.
APDs for 1993 Drilling

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

Issuing Office

Serial Number

1. A (right-of-way) (permit) is hereby granted pursuant to:

- a. ☐ Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- b. ☐ Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185);
- c. ☐ Other (describe) _____

2. Nature of Interest:

- a. By this instrument, the holder _____ receives a right to construct, operate, maintain, and terminate a _____ on public lands (or Federal land for MLA Rights-of-Way) described as follows:

- b. The right-of-way or permit area granted herein is _____ feet wide, _____ feet long and contains _____ acres, more or less. If a site type facility, the facility contains _____ acres.
- c. This instrument shall terminate on _____ years from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument ☐ may ☐ may not be renewed. If renewed, the right-of-way or permit shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.
- e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

4. Terms and Conditions:

- a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880.
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within _____ days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued pursuant to the authority of paragraph (1)(a) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.

- d. The stipulations, plans, maps, or designs set forth in Exhibit(s) _____, dated _____, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.

- e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof.
- f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.

(Signature of Holder)

09/04/92

(Title)

(Date)

(Title)

(Effective Date of Grant)

(Signature of Authorized Officer)

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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

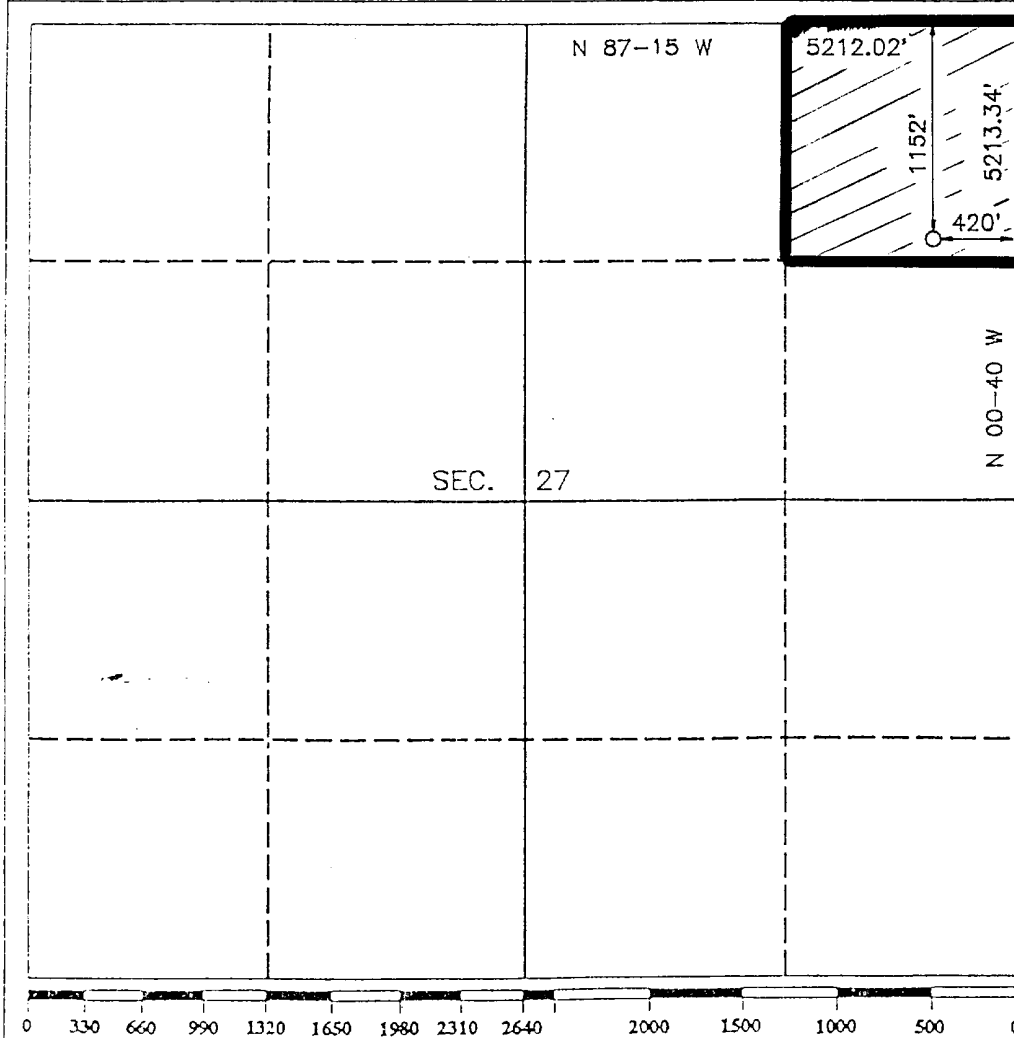
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator B.C.O. INC.		Lease FEDERAL "B"		Well No. 14
Unit Letter A	Section 27	Township T.23 N.	Range R.7 W.	County SANDOVAL
Actual Footage Location of Well: 1152 feet from the NORTH line and 420 feet from the EAST line				
Ground level Elev. 7276'	Producing Formation GALLUP	Pool LYBROOK GALLUP	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____
No allowable will be assigned to the well until all interests have been consolidated (by communization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature

Printed Name

NEEL L. DUNCAN

Position

PETROLEUM ENGINEER

Company

BCO, INC.

Date

10 SEP 92

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 knowledge and belief.

Date Surveyed

Signature & Seal of Professional Surveyor

Certificate No.

8894

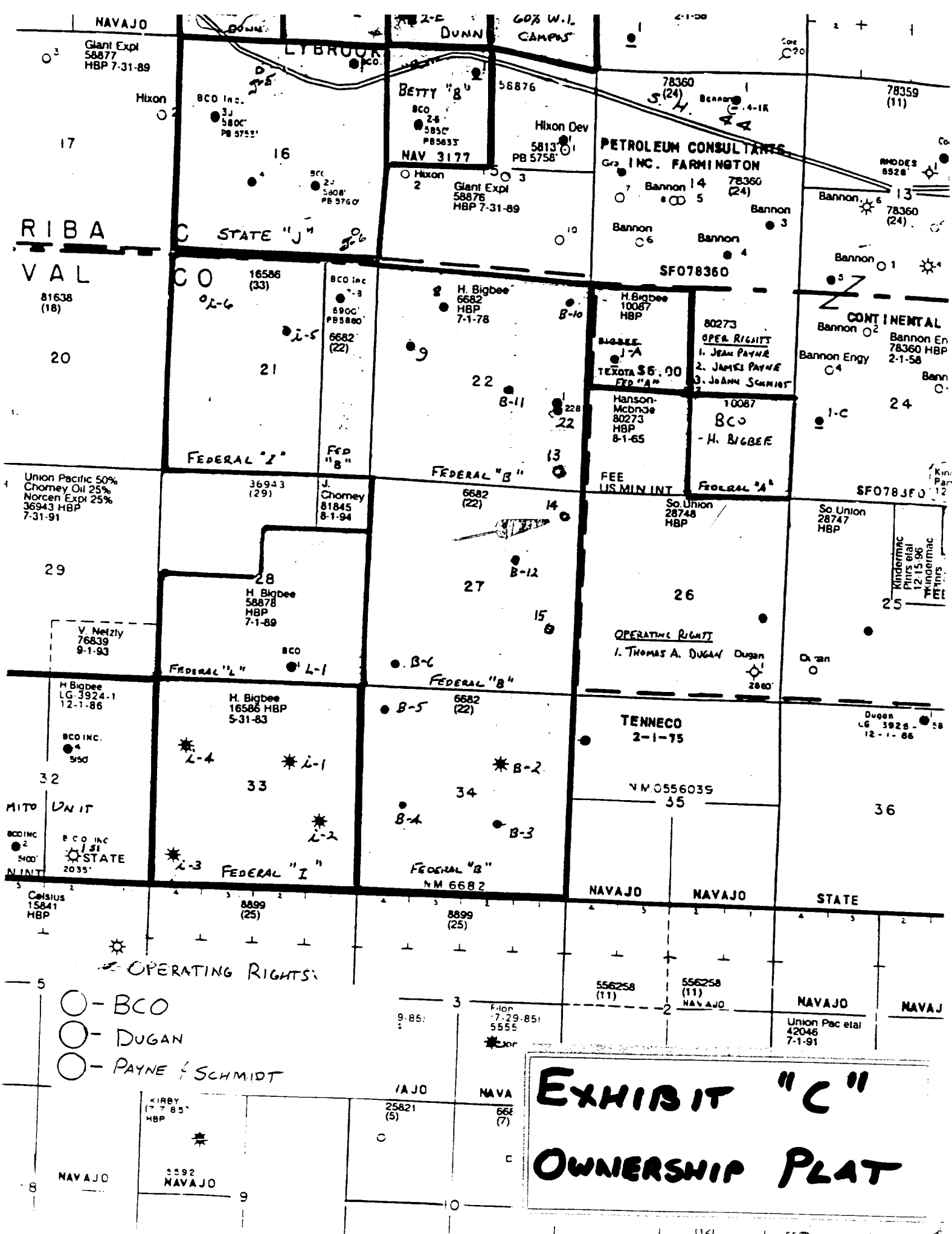


EXHIBIT "D"
NON-STANDARD LOCATION APPLICATION
Offset Well WI Owners
to Proposed Federal "B" No. 14

Well: Federal "B" No. 12
Operator: BCO, Inc.

Location: SW/4 NE/4 Sec 27 T23N R7W
N.M.P.M. Sandoval Co., NM

1. Harry L. Bigbee
2. Harry R. Bigbee
3. Nancy P. Bigbee
4. Elizabeth B. Keeshan
5. Donnan Stephenson

** No other wells within proximity **

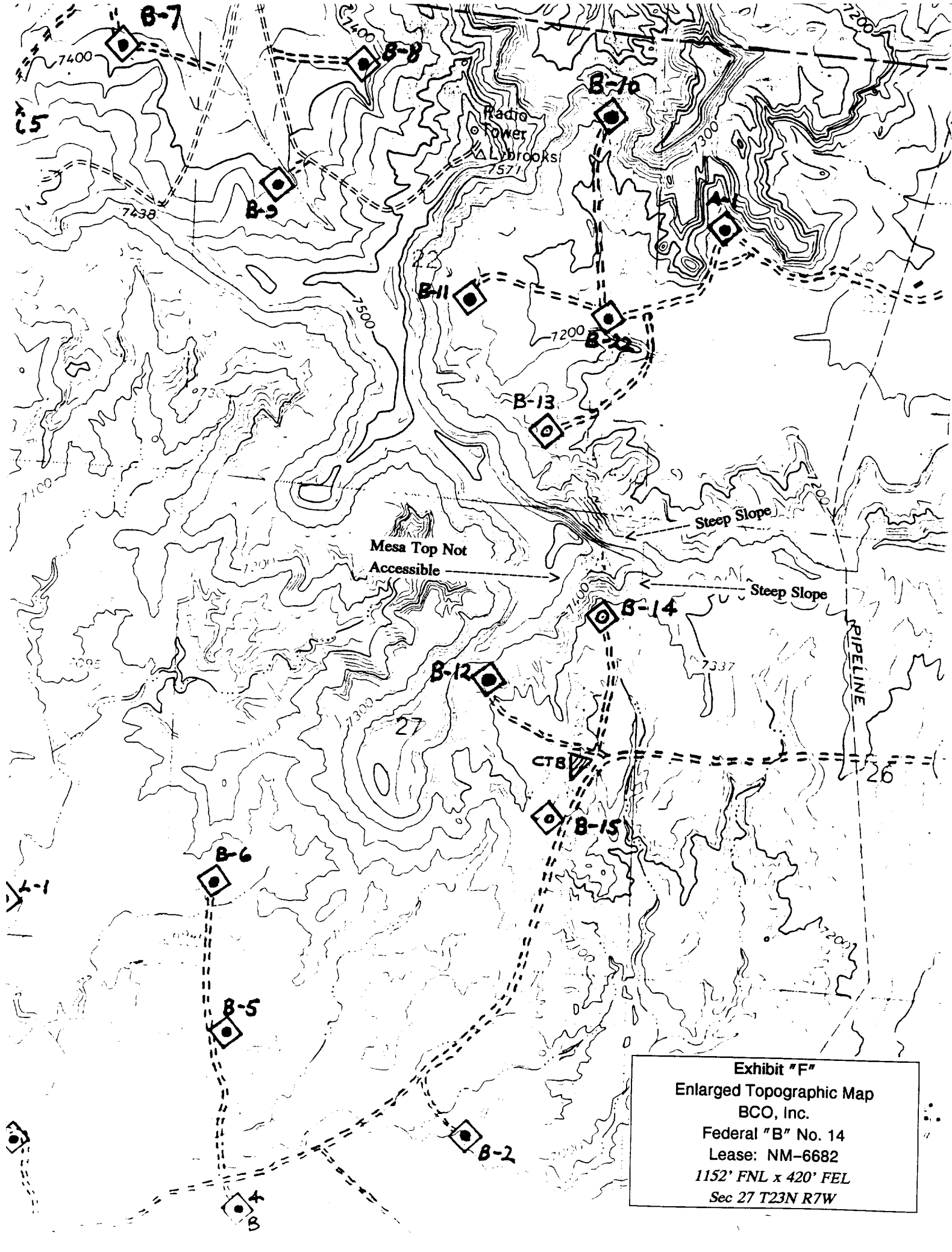


Exhibit "F"
Enlarged Topographic Map
BCO, Inc.
Federal "B" No. 14
Lease: NM-6682
1152' FNL x 420' FEL
Sec 27 T23N R7W



DIVISION OF CONSERVATION ARCHAEOLOGY

San Juan County
Museum Association

September 14, 1992

Neel L. Duncan
BCO, Inc.
135 Grant Avenue
Santa Fe, New Mexico 87501

Dear Mr. Duncan:

Our report on the archaeological survey of three proposed well pads (Federal "B" 13, 14 and 15), access roads and pipelines and the proposed Federal "B" 12, 14 and 15 Central Tank Battery is enclosed.

Six isolates were located during the survey. These are discussed in the Cultural Resources section of the report.

We have recommended clearance with the stipulations as discussed in the Recommendations section of the report.

The Bureau of Land Management will review this report and make the final decision on archaeological clearance for your project.

Also enclosed is an invoice for our services. Please contact us if you have any questions concerning the report or invoice.

Sincerely,

Deborah V. Gibson
Deborah V. Gibson
Staff Archaeologist

cc: Resource Area Manager, Bureau of Land Management, Farmington (2)


EXHIBIT "G"

FEDERAL "B" #14

Exhibit "H"
CERTIFICATE OF SERVICE - OFFSET OPERATORS
Non-Standard Location Application
BCO, Inc.

I certify that notice has been served to the following operators of BCO Inc.'s application for permit to drill Federal "B" No. 14 in a non-standard location at 1152' FNL x 420' FEL Sec 27 T23N R7W, Lybrook Gallup, Sandoval County, New Mexico.

1. Dugan Production Corporation
Attn: Thomas A. Dugan
P.O. Box 420
Farmington, New Mexico 87499
2. Southern Union Exploration, Inc.
Attn: Martin Boggs
324 Hwy 64 NBU 3001
Farmington, New Mexico 87401

 16 SEP 92

Neel L. Duncan Date
Petroleum Engineer
& Production Manager

BCO, Inc.

OIL WELL OPERATOR

135 GRANT

SANTA FE, N. M. 87501

AREA CODE 505
983-1228

-CERTIFIED-
RETURN RECEIPT REQUESTED
P-757-735-334

15 September 1992

Mr. Thomas A. Dugan
President
Dugan Production Corp.
P.O. Box 420
Farmington, New Mexico 87499-0420

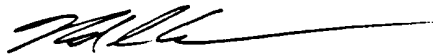
Re: Notice of Non-Standard Location
Federal "B" No. 14
1152' FNL x 420' FEL Sec 27 T23N R7W
Lybrook Gallup Pool
Sandoval County, New Mexico

Dear Tom:

Please be advised that BCO, Inc. has made application to drill Federal "B" No. 14 in the non-standard location referenced above due to extensive topographical constraints. The location is unorthodox with respect to our own acreage and your correlative rights should not be adversely affected.

Please call me at (505) 983-1228 if you have any questions. Thank you for your consideration.

Respectfully,



Neel L. Duncan
Petroleum Engineer & Production Manager