

AREA CODE 505
983-1228

BCO, Inc.
OIL WELL OPERATOR
135 GRANT
SANTA FE, N. M. 87501

OIL CONSERVATION DIVISION
RECEIVED

'91 DEC 2 AM 10 10

27 November 1991

Mr. Michael E. Stogner
Chief Engineer/Examiner
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Non-Standard Location Application
Federal "I" No. 6
1270' FNL x 640' FWL (UL "D") Sec 21 T23N R7W
Sandoval County, New Mexico
Lybrook Gallup Pool

Dear Michael:

BCO, Inc. requests OCD administrative approval to drill the above referenced Gallup oil well in an unorthodox location. A canyon and bedrock prevent us from selecting a legal site in Unit "D" and a mesa prevents us from selecting locations in Units "C", "E", or "F". (See attached maps.)

This application includes a copy of the APD which has been filed with the BLM. The APD was submitted before we found an archaeological site, hence the footages differ on the APD. The proposed wellsite was moved 121 feet southeast after archaeological review.

Also included are the exhibits required per the guidelines in Bill LeMay's Memorandum No. 1-90 dated 21 March 1990. For your convenience, a list which describes the nature and purpose of each exhibit follows this letter.

The new surface location has been recommended for clearance by our contract archaeologist. An on-site inspection of the original wellsite was performed by the Bureau of Land Management and the surface inspector does not plan to inspect the new site due to its close proximity to the original site.

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 know, beam pumping a deviated hole creates serious operational problems.

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,

A handwritten signature in dark ink, appearing to read 'Neel L. Duncan', followed by a long horizontal line extending to the right.

Neel L. Duncan
Petroleum Engineer & Production Manager

LIST OF EXHIBITS
Non-Standard Location Application
Federal "I" No. 6

<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 canyons and mesas.
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 SANTA FE, NEW MEXICO 87501

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 1100' FNL - 590' FWL
At proposed prod. zone 1100' FNL - 590' FWL
NEW LOCATION!
1270' FNL x 640' FWL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
1 MILE 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)
2600'

18. NO. OF ACRES IN LEASE
2080

19. PROPOSED DEPTH
5800'

20. ROTARY OR CABLE TOOLS
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
GL: 7265' KB: 7277'

22. APPROX. DATE WORK WILL START*
01 JANUARY 1992

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12.250"	8.625"	24#	360'	275 SX
7.875"	4.50"	11.6#	5800'	1550 SX

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 INTERVALS WILL BE OPENED AND STIMULATED AS NECESSARY.

EXHIBITS

- A - LOCATION PLAT (OCD FORM C-102)
B - TEN POINT COMPLIANCE PROGRAM - OPERATIONS
C - BLOWOUT PREVENTER DIAGRAM
D - MULTI-POINT REQUIREMENTS PROGRAM

- F - DRILLING RIG LAYOUT
G - COMPLETION RIG LAYOUT
H - LOCATION PROFILE PLAT
I - FACILITIES LAYOUT

P 757 734 234
Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)
Bureau of Land Management
1235 LaPlata Highway
Farmington, NM 87401

Postage	\$ 3.00
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	1.00
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$ 5.00
Postmark or Date	10/18/91

Check, give data on present productive zone and proposed new productive surface locations and measured and true vertical depths. Give blowout

PETROLEUM ENGINEER DATE OCTOBER 18, 1991

VAL DATE

DATE
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

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

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

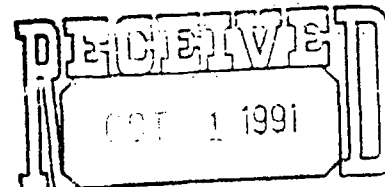
P.O. Drawer DD, Artesia, NM 88210

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



BCO, INC.

Operator BCO, Inc.		Lease Federal I		Well No. 6
Unit Letter D	Section 21	Township 23 North	Range 7 West NMPM	County Sandoval
Actual Footage Location of Well: 1160 feet from the North line and 590 feet from the West line				
Ground level Elev. 7265 Est.	Producing Formation		Pool	Dedicated Acreage: 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.

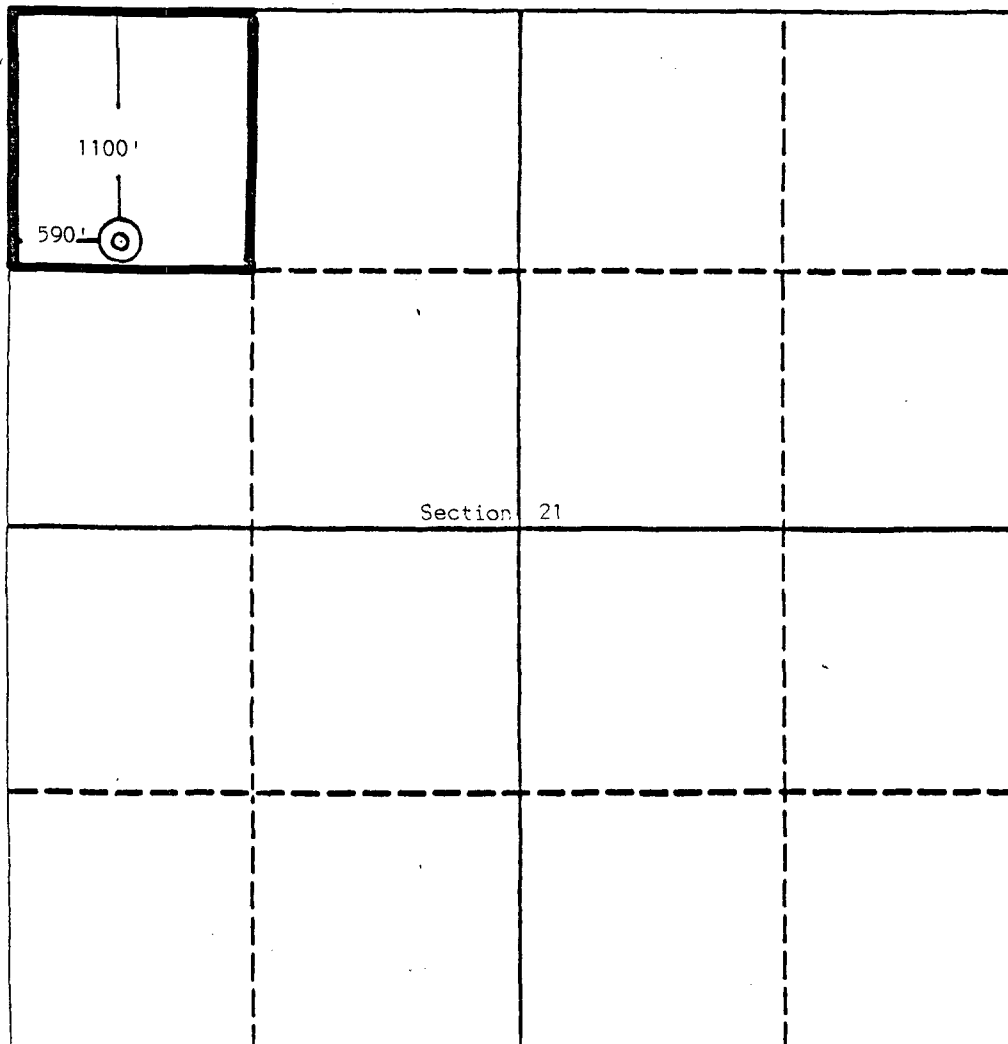
Signature _____
Printed Name
NEEL L. DUNCAN
Position
PETROLEUM ENGINEER
Company
BCO, INC.
Date
18 OCT 91

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
September 27, 1991

Signature & Seal of Professional Surveyor
Edgar L. Risenhoover
Certificate No. 5979
Edgar L. Risenhoover, P.S.



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

EXHIBIT "B"

TEN POINT COMPLIANCE PROGRAM
OF NTL-6 APPROVAL OF OPERATIONS

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 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	1417	Cliffhouse	3519
Kirtland	1563	Menefee	3543
Fruitland	1739	Point Lookout	4387
Pictured Cliffs	1979	Gallup	5447
Chacra	2453	TD	5800

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

Substance	Formation	Anticipated Depth (feet, TVD)
Gas and Wtr	Pictured Cliffs	1979
Gas and Wtr	Chacra	2453
Gas	Menefee	3543
Gas and Wtr	Point Lookout	4387
Gas and Oil	Gallup	5447

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 - 80	7.875	4.500	11.60	N-80	LT&C	New
80 - 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: Cementing in two stages with stage tool at + 4900'

Stage I: 50 bbl chemical flush followed by 300 sx Class "G" with 8 lb/sx NaCl + 6 lb/sx Gilsonite + 1/2 lb/sx Flocele + 2% CaCl₂.

Stage II: 50 bbl chemical flush followed by 1200 sx 50/50 Class "G"/Poz + 2% gel + 6lb/sx gilsonite + 2% KCl by weight of water. Tail in with 50 sx class "G" neat.

TEN POINT COMPLIANCE PROGRAM
OF NTL-6 APPROVAL OF OPERATIONS

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

Note: Volumes will be adjusted after logging to ensure that casing will be covered from top to bottom.

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

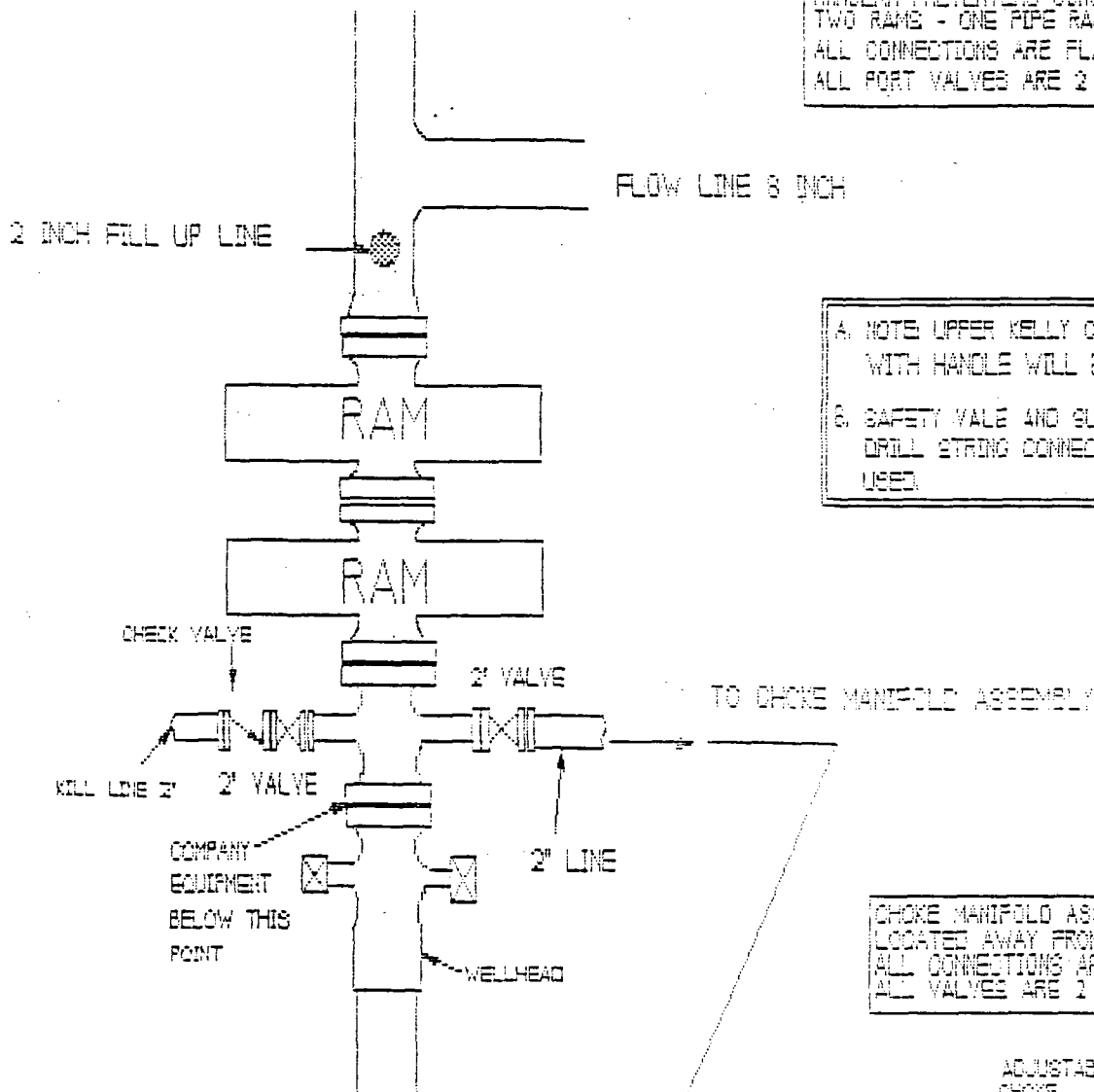
No abnormal pressures, temperatures, or presence of hydrogen sulfide gas is anticipated during the course of drilling to TD. The maximum bottom hole pressure to be expected is 1800 psig.

10. Anticipated Starting Date and Duration of Operations

The anticipated starting date is set for January 1st, 1992, 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.

BLOWOUT PREVENTER ASSEMBLY
 ANNULAR PREVENTERS CONSIST OF -
 TWO RAMS - ONE PIPE RAM AND ONE BLIND RAM
 ALL CONNECTIONS ARE FLANGED
 ALL PORT VALVES ARE 2 INCH



- A. NOTE UPPER KELLY COCK VALVE WITH HANDLE WILL BE AVAILABLE
- B. SAFETY VALVE AND GUES TO FIT ALL DRILL STRING CONNECTIONS WILL BE USED.

CHOKER MANIFOLD ASSEMBLY
 LOCATED AWAY FROM SUBSTRUCTURE
 ALL CONNECTIONS ARE FLANGED
 ALL VALVES ARE 2 INCH

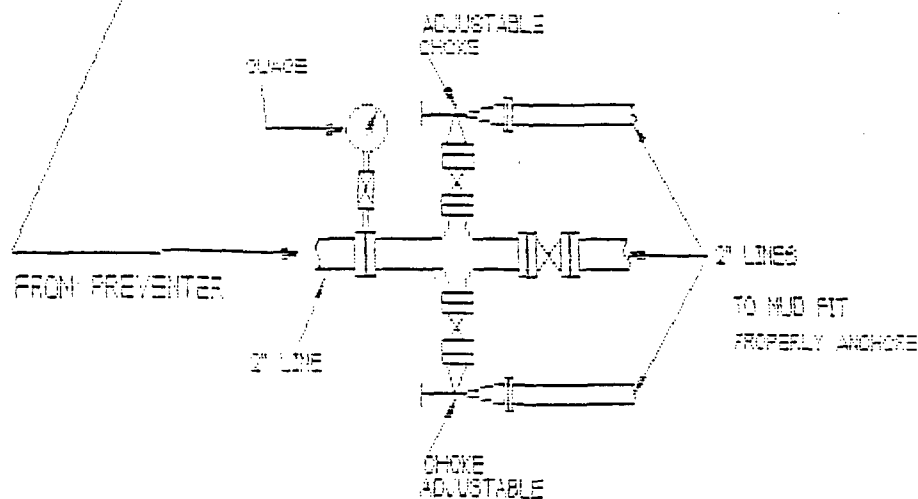


EXHIBIT "D"

Attachment to Form 3160-3

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 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.
- b. Directions: Turn right (south) off of State Highway 44 one half mile west of the Escrito Trading Post. Proceed 0.6 miles, passing through State "J" No. 3 well location. Turn right and proceed through State "J" No. 4 well location. Continue 0.7 miles on access road 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 to the location is shown on Exhibit "E".
- b. The grade will be 10% or less, or consistent with local terrain.
- c. No turnouts are planned.
- 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 only where necessary.
- h. The new access road and all existing roads will be flat bladed and upgraded as deemed necessary by the dirt contractor.

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 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 - 4 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 three production facilities (batteries) owned and controlled by the Operator within a mile radius of the proposed well.*
- b. New facilities contemplated in the event of production are shown approximately as **Exhibit "I"**.
 - 1. A tank battery will be required.
 - 2. Flowline on the well pad from the wellhead to the separator and from the separator to the tank(s) will be on the surface.
 - 3. Only native materials will be used except for gravel.
 - 4. An earthen berm will be built around tank battery. Tank and 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.

MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

6. A 3700' (approximate) buried natural gas pipeline will be constructed from the on-site meter to connect with the Operator's low pressure gathering system tie-in point at the State "J" No. 4 well location. The line will be on BLM land for the first 1700' and on State land for the remaining 2000'. The pipeline will follow the access road as shown in Exhibit "E"

Right-of-way for the State portion will be obtained from the New Mexico Commissioner for Public Lands. Right-of-way for the BLM portion of the pipeline/access is requested with this APD.

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.
- d. All major access roads are shown on Exhibit "E".

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 "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 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 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 "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 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 (Lybrook).
- 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, 1992 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: 20 October 1991



Neel L. Duncan
Petroleum Engineer & Production Manager

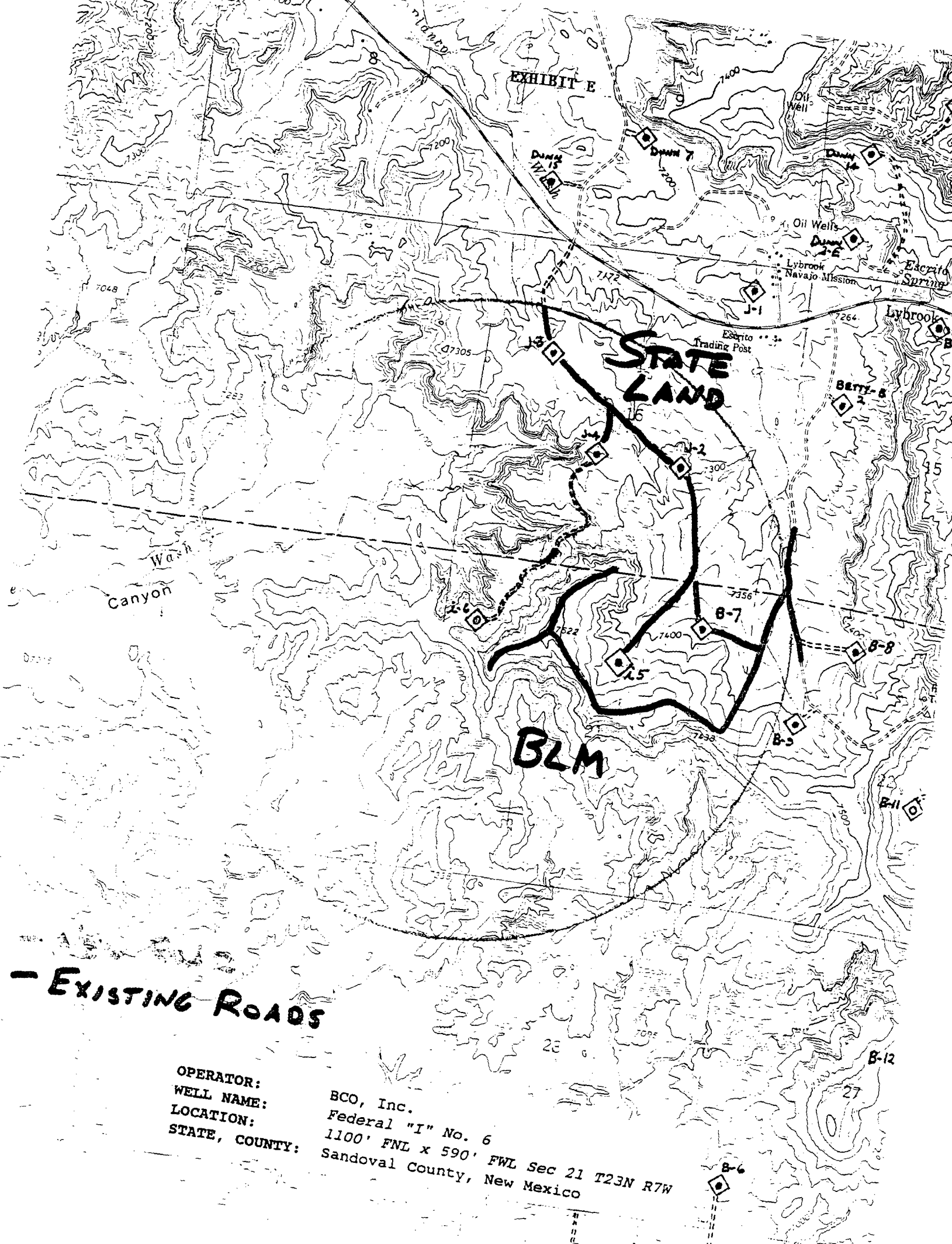


EXHIBIT E

STATE
LAND

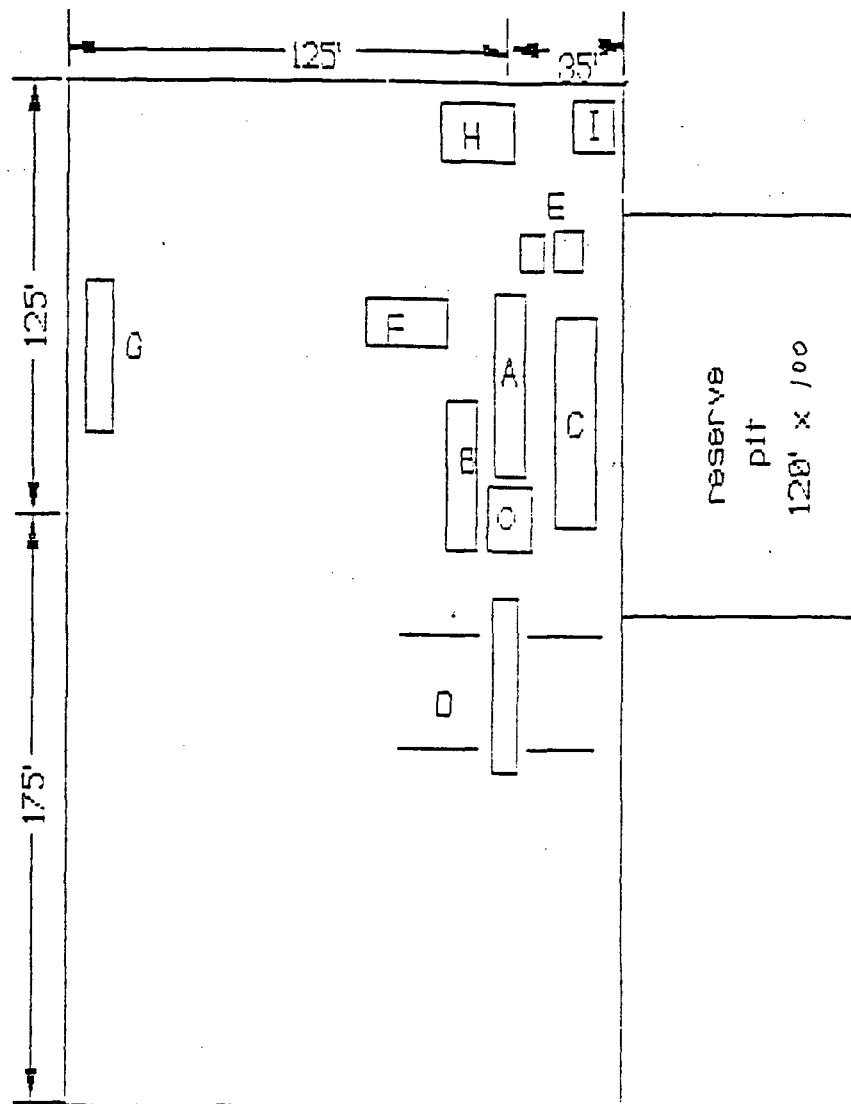
BLM

- EXISTING ROADS

OPERATOR: BCO, Inc.
WELL NAME: Federal "I" No. 6
LOCATION: 1100' FNL x 590' FWL Sec 21 T23N R7W
STATE, COUNTY: Sandoval County, New Mexico

EXHIBIT F
DRILLING RIG LAYOUT

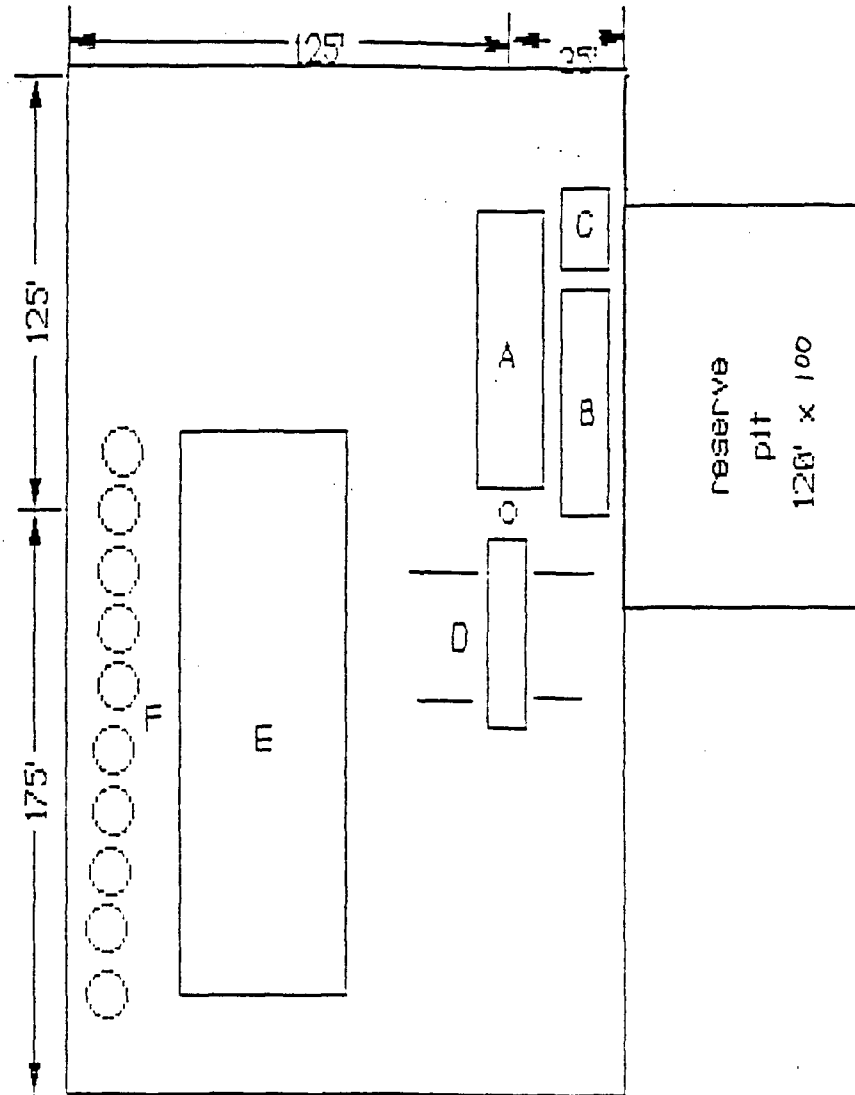
BCO, Inc.



- 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

EXHIBIT "H"

BCO, Inc.

OPERATOR

Federal I #6

WELL NAME and NUMBER

1160' F/NL 590' F/WL

FOOTAGES

21 23N 7W

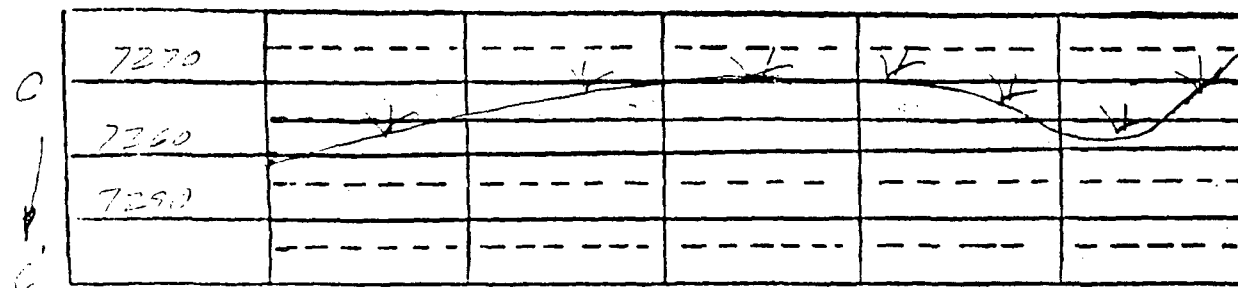
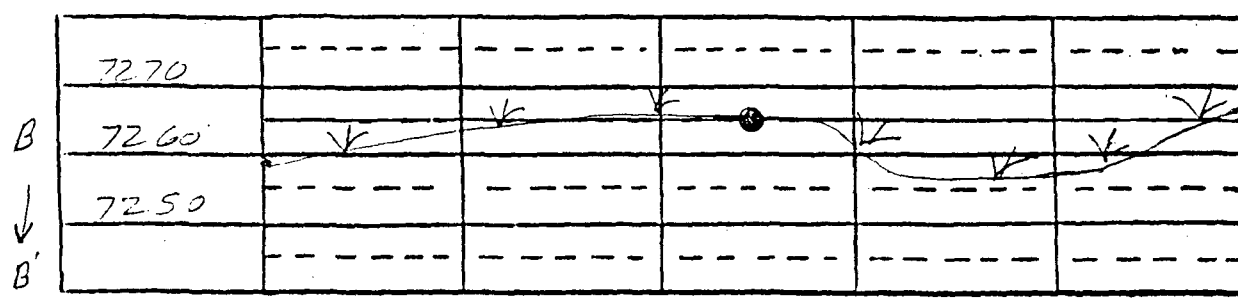
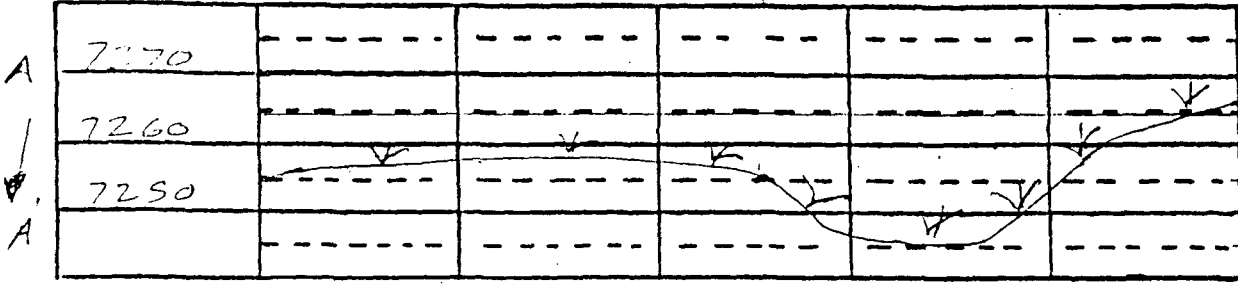
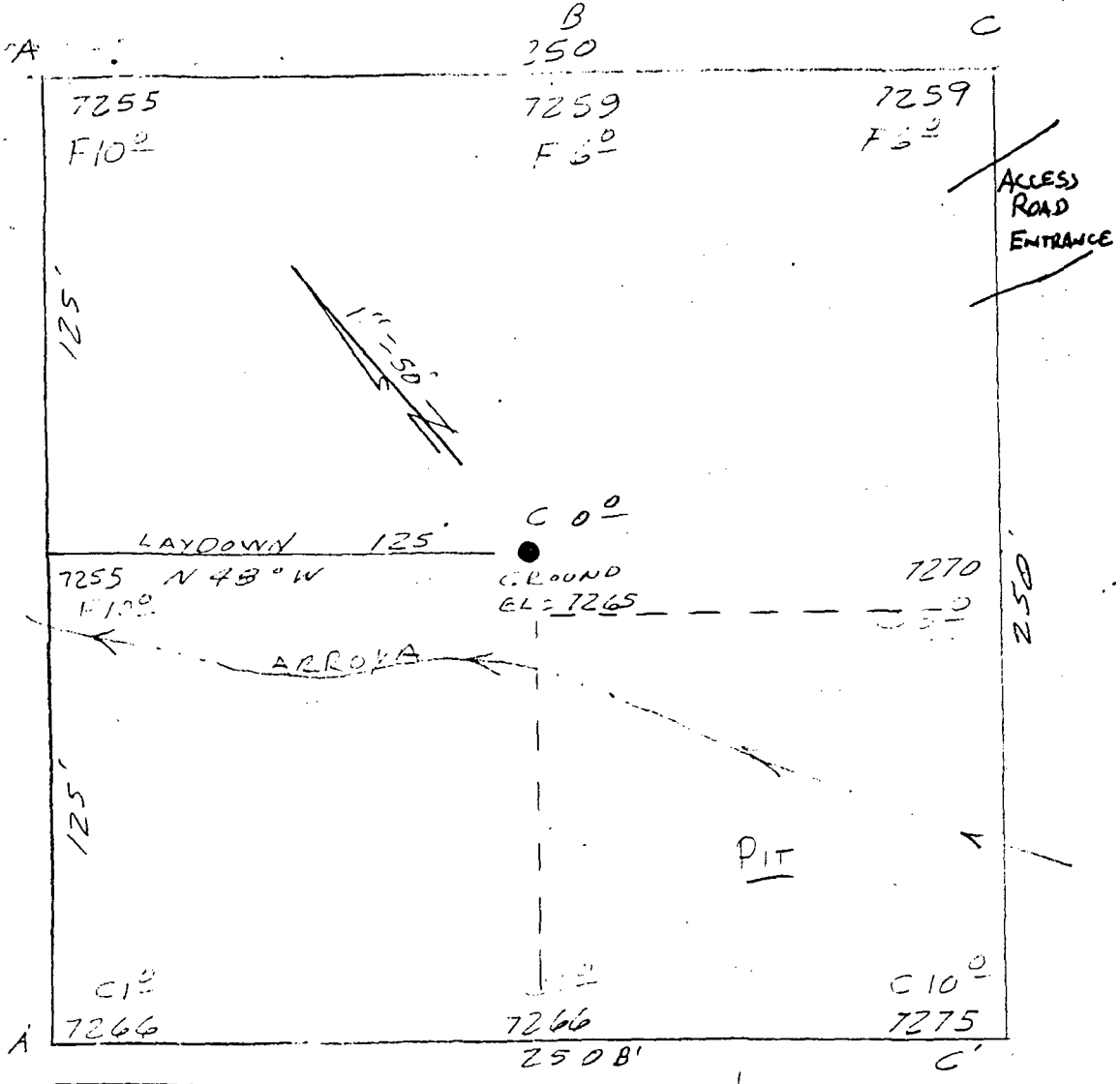
SEC. TWP. RGE.

Sandoval, New Mexico

COUNTY STATE

September 27, 1991

DATE



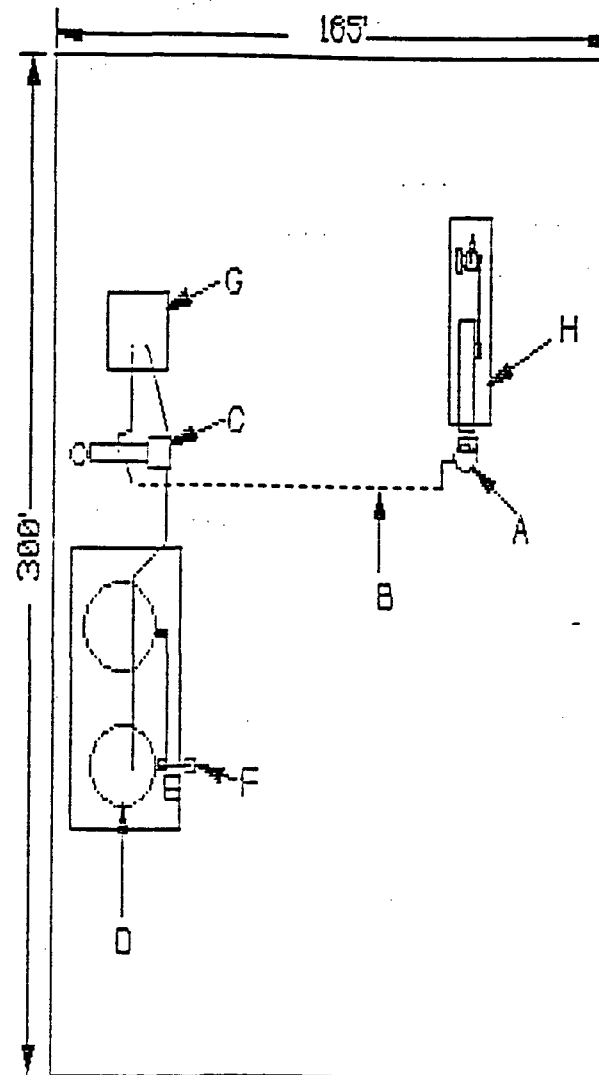
SCALE

Horiz. 1" = 50'

Vert. 1" = 30'

EXHIBIT 'T'
 PRODUCTION FACILITIES LAYOUT

BCO, Inc.



- A WELLHEAD
- B FLOWLINE
- C SEPERATOR
- D PRODUCTION TANK(S)
- E LOAD LINE(S)
- F LOAD VALVES (SEALABLE)
- G EVAPORATIVE PIT
- H PUMP JACK (if necessary)

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

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

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

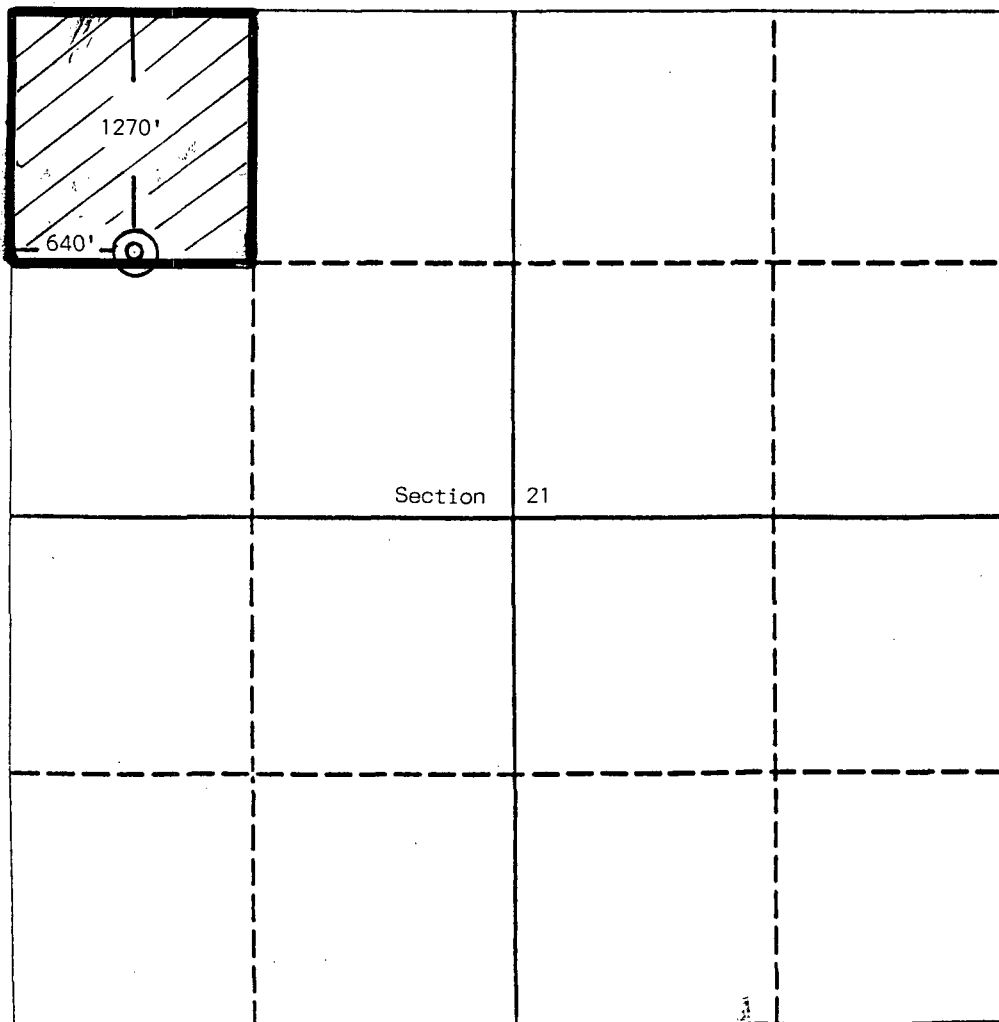
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator BCO, Inc.			Lease Federal I		Well No. 6
Unit Letter I	Section 21	Township 23 North	Range 7 West	County Sandoval	
Actual Footage Location of Well: 1270 feet from the North line and 640 feet from the West line					
Ground level Elev. 7270 Est.	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

Position

Company

Date

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

October 23, 1991

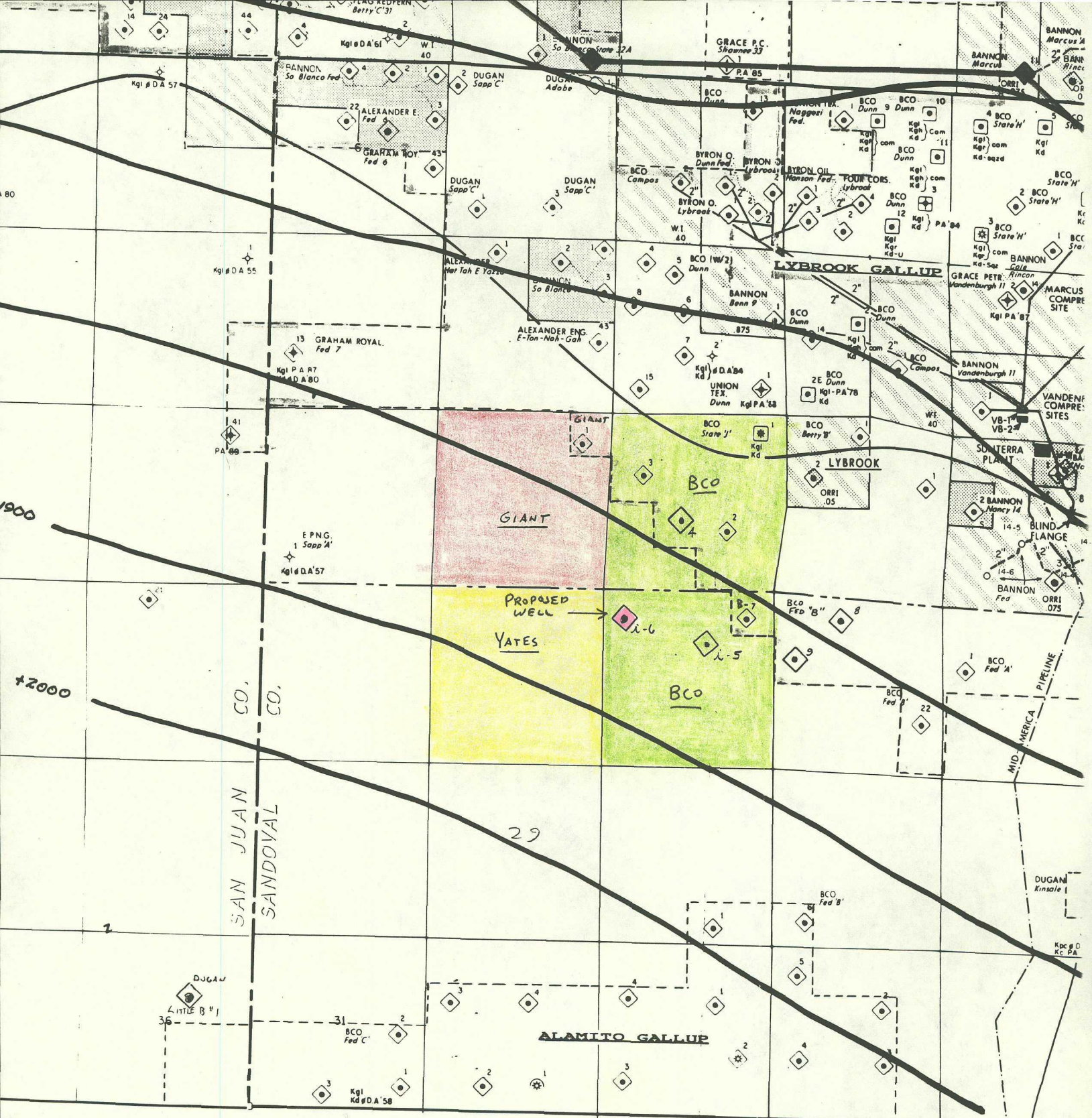
Signature & Seal of Professional Surveyor

Certificate No. 5979

Edgar L. Risenhoover, P.S.

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

EXHIBIT "B"



- GIANT EXPLORATION & PRODUCING
- YATES PETROLEUM
- BCO, INC.

ATION —

STATUS

WELL HISTORY

- T - TEMPORARILY ABANDONED
- A - PERMANENTLY ABANDONED
- D - DISCONNECTED
- S - SHUT IN
- U - UNREPORTED
- I - INPUT WELL
- X - INTENT TO ABANDON
- NP - NO PRODUCTION SHOWN

- 2 - PICTURED CLIFFS COMPLETED IN 1981
NP-B1 NO PRODUCTION SHOWN
- 7 - FRUITLAND & PICTURED CLIFFS PRODUCER
KF Kpc
- 1A - PICTURED CLIFFS DISCONNECTED &
MESAVEUR PRODUCER
Kpc-D Kmv
- 3 - GALLUP & DAKOTA PRODUCER
ENTRANCE TEST

R-7-W

EXHIBIT "C"
OWNERSHIP PLAT

EXHIBIT "D"
NON-STANDARD LOCATION APPLICATION
Offset Well WI Owners

Well: Federal "I" No. 5
Operator: BCO, Inc.

Location: SW/4 NE/4 Sec 21 T23N R7W
NM.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 **



ARRIBA CO
ANDOVER CO

40 ACRE PRORATION UNIT

ORTHODOX WINDOW

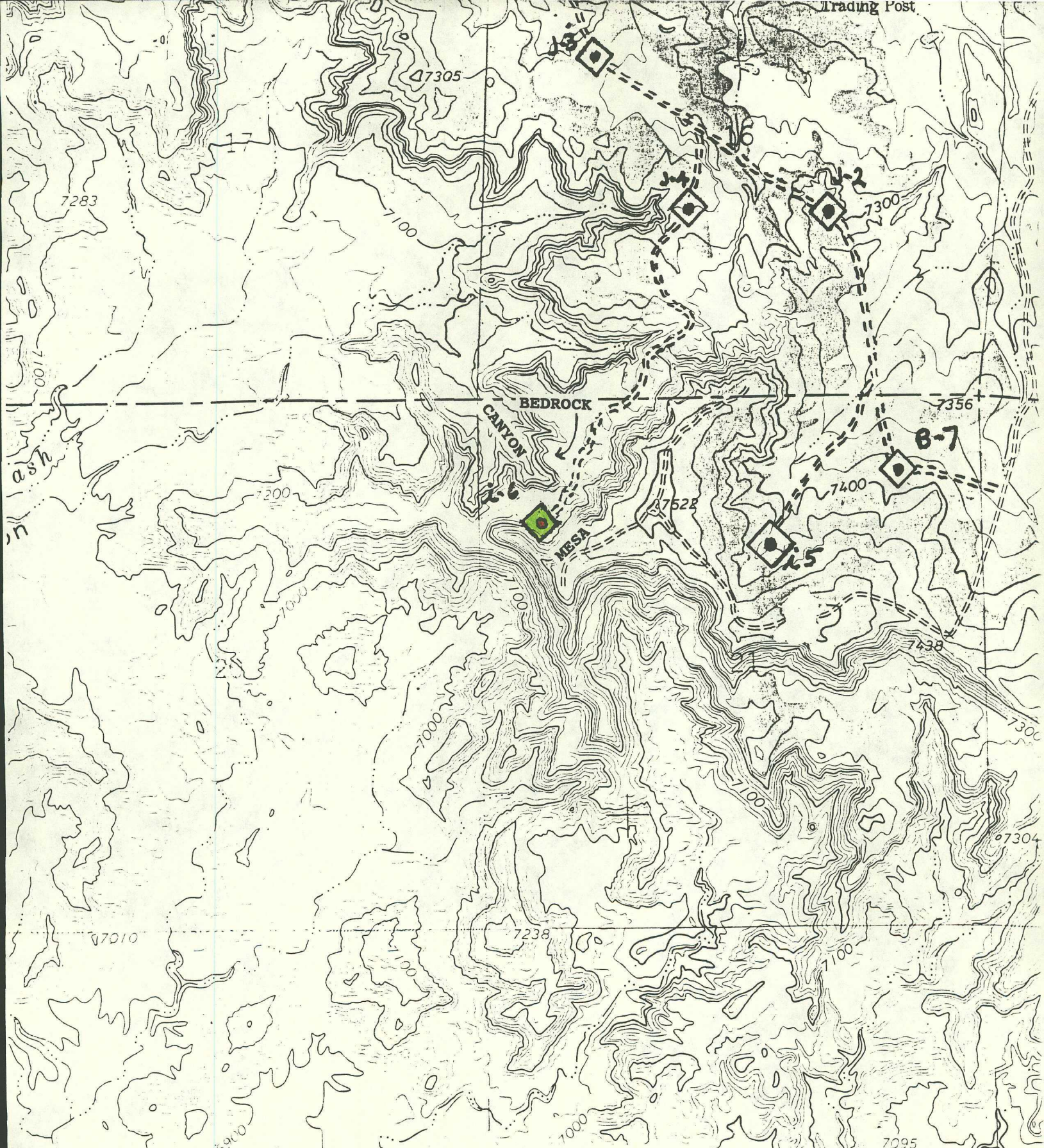
Wash
Canyon

Tosie
Hutton

FEDERAL "I" No. 6
NON-STANDARD LOCATION APPLICATION

BCO, INC.

EXHIBIT "E"



ENLARGED TOPOGRAPHICAL MAP

FEDERAL "I" No. 6
NON-STANDARD LOCATION APPLICATION

BCO, INC.

23
**EXHIBIT
"F"**



MOORE ANTHROPOLOGICAL RESEARCH

P.O. Box 1156, Aztec, New Mexico 87410

(505) 334-6675

November 12, 1991

Mr. Neel Duncan
BCO, Inc.
135 Grant
Santa Fe, NM 87501

Dear Mr. Duncan:

Enclosed you will find a copy of our report for the archaeological survey of two proposed well pads and one access road located near Lybrook in Sandoval and Rio Arriba Counties, New Mexico. Three archaeological sites and eight isolated loci were discovered.

We have recommended clearance with the stipulation that a barrier fence be placed along the northern edge of the proposed well pad Federal I No. 6 and along the northwest edge from the laydown stake to the northwestern corner stake, there should be no construction zone in either area. An archaeologist should monitor construction of the Federal I No. 6 and the fence construction. For proposed well Lybrook 22-2R, a barrier fence should be placed along the western staked boundary. The western construction zone should not be used. An archaeologist should monitor the fence construction. The Bureau of Land Management, Farmington Resource Area, will make the final clearance determination after reviewing our report and will notify you of their decision.

An invoice for our services is enclosed. We have enjoyed working with you on this project and look forward to serving you in the future. If you have any questions concerning this report feel free to contact us.

Sincerely,

Roger A. Moore
Principal Investigator

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

EXHIBIT "G"

EXHIBIT "H"
OFFSET OPERATOR NOTIFICATION
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 "I" No. 6 in a non-standard location at 1270' FNL x 640' FWL Sec 21 T23N R7W, Lybrook Gallup, Sandoval County, New Mexico:

1. Yates Petroleum
Attention: Janet Richardson
105 S. 4th Street
Artesia, New Mexico 88210
2. Giant Exploration & Producing
Attention: Charlie Foster
P.O. Box 2810
Farmington, New Mexico 87499-2810



Neel L. Duncan Date

BCO, Inc.

OIL WELL OPERATOR
135 GRANT

SANTA FE, N. M. 87501

AREA CODE 505
983-1228

04 November 1991

-CERTIFIED-
RETURN RECEIPT REQUESTED
P- _____

Ms. Janet Richardson
Yates Petroleum
105 S. 4th Street
Artesia, New Mexico 88210

SAMPLE LETTER

Re: Re-staking of Non-Standard Location
Federal "I" No. 6
1270' FNL x 640' FWL Sec 21 T23N R7W
Lybrook Gallup Pool
Sandoval County, New Mexico

Dear Janet:

We ran into some archaeological problems and had to re-stake the unorthodox location which we had notified you of previously. The location has moved about 121 feet southeast.

As with the previous location, the new location is unorthodox only with respect to BCO's acreage and the correlative rights of Yates Petroleum are not adversely affected.

Thank you for your consideration. I have enclosed additional copies of this letter which you may forward to partners.

Respectfully,

Neel L. Duncan
Petroleum Engineer & Production Manager

enclosed copies (2)

EXHIBIT "H"
PAGE 2