BCO, INC. OIL CONSERVATION DIVISION

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MAIN OFFICE 135 GRANT SANTA FE, NM 87501 (505) 983-1228

RECEIVED FIELD OFFICE

ROUTE 4 '93 DE: 7 - AM 8 54 NAGEEZI, NM 87037 (505) 568-4420

December 3, 1993

CERTIFIED RETURN RECEIPT REQUESTED P 326 823 059

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

Re: Non-Standard Location Application Federal "B" Number 13 1195 FSL & 445 FEL, Unit Letter (P) S22-T23N-R7W, Sandoval County, New Mexico Lybrook Gallup Pool

Dear Mr. Lemay:

BCO, INC. requests administrative approval to drill the above referenced Gallup Oil Well in an unorthodox location. A mesa with steep slopes, a narrow drainage canyon, and the presence of Ponderosa Pine trees prevent BCO, INC. from selecting a legal location within the proration unit.

This application includes a copy of the APD which has been filed with the BLM along with the required additional information.

Archaeological clearance has been recommended by M and M Geological Consultants. Bill Leiss of the BLM conducted a field inspection of the proposed well site on November 22, 1993 and has indicated approval.

Directional Drilling is not feasible to reach an orthodox bottom-hole location. Conventional drilling economics are marginally profitable and the additional \$60,000 in directional drilling costs would preclude the project.

Offset operators have been notified of this application. An affidavit of service, list of operators, and a sample letter are provided in Exhibit "H". From a practical stand point, the proposed location is unorthodox only to BCO, INC.

Sinceredy

Rick Wilcox Senior Field Engineer

BCO, INC.

cc: Frank T. Chavez (OCD, Aztec, NM)

## LIST OF EXHIBITS Non-Standard Location Application Federal B Number 13

- A) Copy of Application for Permit to Drill
- B) OCD Form C-102
- C) Ownership Plat, showing proposed wellsite, offset operators, and offset wells.
- D) A listing of working interest owners of offset wells.
- E) A topographic map showing the proposed location, orthodox windows, and terrain.
- F) An enlarged topographic map depicting the mesa slope, canyon, and Ponderosa Pine trees.
- G) A copy of the cover letter for the Archaeological report recommending clearance.
- H) An affidavit that notice has been sent to offset operators, a list of the offset operators and an example of the letter that was sent.

#### SUBMIT IN TRIPLICATE.

(Other instructions on reverse side)

Form approved. Budget Bureau No. 1004-0136 Expires: December 31, 1991

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#### State of New Mexico Energy, Minerais and Natural Resources Department

Ferm C-102

## DISTRICT | P.O. Box 1980, Hobbs, NIM 88240

### OIL CONSERVATION DIVISION P.O. Box 2088

Santa Fe, New Mexico 87504-2088

RECEEXHIBIT "A" BLM

DISTRICT II P.O. Drawer DD, Artesia, NM 18210

WELL LOCATION AND ACREAGE DEDICATION PLAT

DISTRICT III 1000 Rio Bear	os Rd., Azie	c. NM 87	410	WELL	LOC	ATION A	ND ACRE	AGE DEDIC or boundance o	ATION P		NZA DADA			
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#### EXHIBIT "B".

## Ten Point Compliance Program of NTL-6 Approval of Operations

- 1. The Geological Surface Formation is the Naciemento.
- The estimated tops of important geologic markers, measured in feet and at true vertical depth:

Ojo Alamo	1356 •	Cliffhouse	3533 °
Kirtland	1636-	Menefee	3556 <i>°</i>
Fruitland	1801.	Point Lookout	4348
Pictured Cliffs	1998-	Gallup	5206°
Chacra	2406.	Total Depth	5680 <i>°</i>

3. Estimated depths of anticipated water, oil, gas, or mineral bearing formations, measured in feet and at true vertical depth:

Pictured Cliffs	1998	Gas	and	Water
Chacra	2406	Gas	and	Water
Menefee	3556 <i>-</i>	Gas		
Point Lookout	4348.	Gas	and	Water
Gallup	5206 ·	Gas	and	Oil

4. The proposed casing program will be as follows:

Depth	Hole Size	Casing Size	Weight	
(Feet)	(Inches)	(Inches)	(Lbm/Ft)	Grade&Make
0 - 360-	12.250	8.625	24.00°	J-55 ST&C
0 - 200	7.875.	4.500.	11.60	N-80 LT&C
200-T.D.	7.875 <sup>-</sup>	4.500	11.60	J-55 LT&C

All casing will be new.

The proposed cement program will be as follows:

Surface Casing: Approximately 275 sacks of Class "B" with 0.25 lb/sx of Flocele and 3 percent Calcium Chloride, cement will be circulated to surface.

Production Casing: The production casing will be cemented in a single stage. The lead will consist of a 50 bbl chemical flush followed by 531 sacks of 65/35 Poz with 12% Bentonite, 6 lb/sx Gilsonite, 0.6% Halad-322, and 0.25 lb/sx Flocele. Cement will be mixed at 11.3 bl/gal for no free water and yield of 2.64 cubic feet per sack. The tail will consist of 158 sacks of Class "G" cement

with 8 lb/sx salt, 0.5 lb/sx Flocele and 6.25 lb/sx of Gilsonite. Cement will be mixed at 15.8 lb/gal and yield of 1.15 cubic feet per sack.

5. Operator's Minimum Specifications for Pressure Control.

A 200 PSIG ("2M") blowout preventor will be used for drilling operations under the surface casing. Prior to drilling out from under surface the blowout preventor will be pressure tested to 2000 PSIG. After having drilled out from under surface the pipe rams will be closed and opened daily and the operational check will be 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, Exhibit "C")
- 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 any necessary subs to fit any drill string in use will be kept on hand.
- f) A two inch fill-up line will be located above the upper ram.
- 6. Type and characteristics of the proposed drilling fluids

The drilling fluid will consist of a gel-chemical mixture and adequate stocks of adsorption agents on location to handle possible spills of fuel and oil at the surface. The drilling fluid will be maintained on location if abnormal pressures are encountered.

The drilling fluid from 0 to 370' will have a fluid density of 9.0 Pounds Per Gallon, a Marsh funnel viscosity of 50 seconds, there will be no chemical control of fluid loss, pH of 9.0 and no additional chemical additives.

The drilling fluid from 370' to Total Depth will have a density of 9.0 Pounds Per Gallon, a Marsh funnel viscosity of 38 to 50 seconds, fluid loss will be maintained at approximately 6.0 cc/30 minutes, pH of 9.0 and chemical additives will be used to control the fluid loss.

#### 7. Auxiliary equipment to be used is as follows:

- a) The use of a float above the drill bit will be determined by the drilling contractor.
- b) The drilling fluids will be monitored visually for signs of abnormal pressures.
- c) A sub with a full opening valve will be kept on the rig floor when the kelly is not in use.

#### 8. Testing, logging, and coring will be as follows:

- a) There is no proposed coring.
- b) There are no proposed Drill Stem Tests.
- c) Logging program will be cased-hole only and consist of a gamma ray from TD to surface with compensated neutron and cement bond logs over selected segments.

#### 9. Anticipated Abnormal Pressures and Temperatures

No abnormal pressures, temperatures, or hydrogen sulfide gas is anticipated. The maximum bottom hole pressure is expected to be less than or equal to 1800 PSIG.

#### 10. Anticipated Starting Date and Duration of Operations

The anticipated starting date of operations is January 1, 1994, or as soon as possible after examination and approval of drilling requirements. Operations are expected to last 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 diameter of the hole size will exceed the casing diameter by 1.5 inches or more, through usable water zones. An adequate spacer will be pumped ahead of the cement

slurry to help prevent the cement from becoming mud contaminated. An adequate number of casing centralizers will be run through usable water zones to ensure that the casing is properly centered. The number of centralizers will be determined by API specification 11-D. Centralizers which impart a swirling action such as the Halliburton Fluidmaster centralizer will be used just below and into the base of the lowest usable water zone. Centralizers such as these will promote mud displacement, increase cement bonding potential and help create an effective hydraulic seal. A chronological log will be kept which documents pump rate, pump pressure, slurry density, and slurry volume during cementing operations. The log will be sent to the BLM Farmington Resource Area after the completion of the job.

Addendum to Ten Point Compliance Plan:

A surface flow line for produced oil will be ran from the well head parallel to the access road, connecting to the flowline parallel to the access road of the Federal B Number 11.

Description as follows:

General: Surface line, buried only where required

Length: 2000 feet

Diameter: 2.375", 1.995" I.D. Type: 4.6 lb/ft oilfield tubing

Wall Thickness: 0.380"
Working Pressure: 6160 PSI
Operating Pressure: 100 PSI
Field Test Pressure: 1000 PSI

#### Exhibit "D"

Attachment to Form 3160-3
MULTI-POINT REQUIREMENTS TO ACCOMPANY APPLICATION FOR PERMIT
TO DRILL

#### 1.) Existing Roads

- a. The Operator plans to improve and or maintain existing roads as required. Application is being made for a right-of-way to an existing state or county road, a land use plat for ROW is included as Exhibit "J". The Operator intends to utilize ROW NMNM 86684 from State Highway 44 to the starting point of the new access road. BCO, INC. requests that NMNM 86684 be amended to include the new segment of the access road which originates 750 feet East of the Federal B Number 11 well pad and continues to the end of line at the Federal B Number 13 well pad.
- b. Directions: From Lybrook, New Mexico, turn South off of State Highway 44 at the first dirt road West of the Lybrook Elementary School. Proceed 1.3 miles and turn West, continue 1.2 miles and turn south at the beginning of the new access road and ending at the end of the line at the Federal B Number 13 well pad.
- 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 access road originates in the NW/4 of the NE/4 of S27-T23N-R7W and terminates in the SE/4 of the SE/4 of S27-T23N-R7W.

The new access road is 2000' in length and is shown on Exhibit "E". A surface ownership and ROW map is included in Exhibit "J". Form 2800-14 is attached with signature to this APD.

- b. The grade will be 10% or less, or consistent with local terrain.
- c. Turnouts will be constructed as required by the BLM.

- d. Water bars will be installed as necessary.
- e. Culverts will be installed as necessary. No major cuts or fills are planned on this segment of the access road.
- f. Only native materials will be used.
- g. Gates and or cattle guards will be installed where necessary.
- h. The new access road will be crowned and ditched.
- 3. The location of Existing Wells within a One Mile Radius are included in Exhibit "E".
  - a. Water wells-None
  - b. Abandoned wells-None
  - c. Temporarily Abandoned wells (TA)-None
  - d. Disposal Wells-None
  - e. Drilling wells-None
  - f. Producing wells-BCO, INC. 9 wells
  - q. Shut-in wells-None
  - h. Injection wells-None
  - i. Monitoring observation wells-none

#### 4. Location of Existing and/or Proposed Facilities:

- a. There are 4 production facilities (batteries) owned and controlled by the Operator within a one mile radius of the proposed well. Two additional facilities are applied for in a separate APD's for wells within a one mile radius.
- b. New facilities and existing facilities in the event of production are diagramed in Exhibit "I".

- 1. A central gathering facility will be utilized. The central gathering facility is currently in use and located on the Federal B Number 22 well pad located in the NE/4 of the SE/4 of S22-T23N-R7W. The central gathering facility is shown in Exhibit "I".
- 2. Surface flowlines will be constructed and will parallel road. Complete description of the line is provided in the addendum to the 10-Point Plan. ROW for the flowline is requested in this APD.
- 3. Only native materials will be used with the exception of gravel.
- 4. The wellhead will be fenced to keep domestic animals and wildlife out.
- 5. The reserve pit will be fenced and allowed to evaporate. In accordance with Onshore Oil and Gas Order Number 7, the operator requests approval in this APD to dispose of produced water in the reserve pit for ninety days. The surface rehabilitation will be made on all unused areas in accordance with BLM stipulations.

#### 5. Location and Type of Water Supply

- a. The water used for drilling operations will be provided by the Drilling Contractor. Walters Drilling, Inc. will use the Chapman water hole located in Lybrook, New Mexico for the water source.
- b. Water will be trucked to the location.
- c. No water well will be drilled.

#### 6. Source of Construction Materials

- a. Only native soils will be used.
- 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 used 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, water, or other production fluids will be cleaned up and removed.
- d. Chemical facilities will be provided for human waste.
- e. Garbage and non-flammable waste are to be contained in trash containers. Trash will be removed periodically and the refuse removed when drilling operations have been completed. The reserve pit will be fenced on three sides during drilling operations and the remaining side will be fenced when the drilling rig is moved off location.
- f. The reserve and mud pits will be allowed to dry after drilling and completion operations and then adequately filled and leveled.
- 8. Ancillary Facilities: None Required.

#### 9. Well Site Layout.

- a. The Wellsite layout and profile are shown in Exhibit "H".
- b. The Drilling Rig layout is shown in Exhibit "F".
- c. The Producing Well layout is shown in Exhibit "I".

#### 10. Plans for Restoration of the Surface:

- a. Restoration of the well site and access road will begin as soon as all pits have evaporated. If wells are economically productive, the unused area will be restored as soon as practicable.
- b. Should the well be abandoned, the drilling site will be reshaped as closely to the original contour as possible. The access road will be plowed and shaped. The road and location will have topsoil replaced and will be reseeded when germination is possible. The portion of the location needed for daily operations and access road will be kept in good repair and clean.

portion of the location needed for daily operations and access road will be kept in good repair and clean.

c. Regardless whether the well is economically productive, cleanup of the well site will include burning or removal of all waste, removal of accumulated oil on pits, fencing of pits until filled, and subsequent pit closure.

#### 11. Miscellaneous Information:

- a. General Topography is shown on Exhibit "E"
- b. There are no known archaeological or cultural sites near the proposed roadway or location.
- c. The animal life consists primarily of domestic livestock, Mule Deer, native rodents and scavengers.
- d. The closest occupied dwelling is .75 miles.
- e. The land is under the jurisdiction of the Bureau of Land Management, (Federal).
- f. There are no restrictions.
- g. The anticipated starting date of drilling operations is January 1, 1994, operations are expected to last approximately fifteen days.

#### 12. <u>Lessee's or Operators Representative:</u>

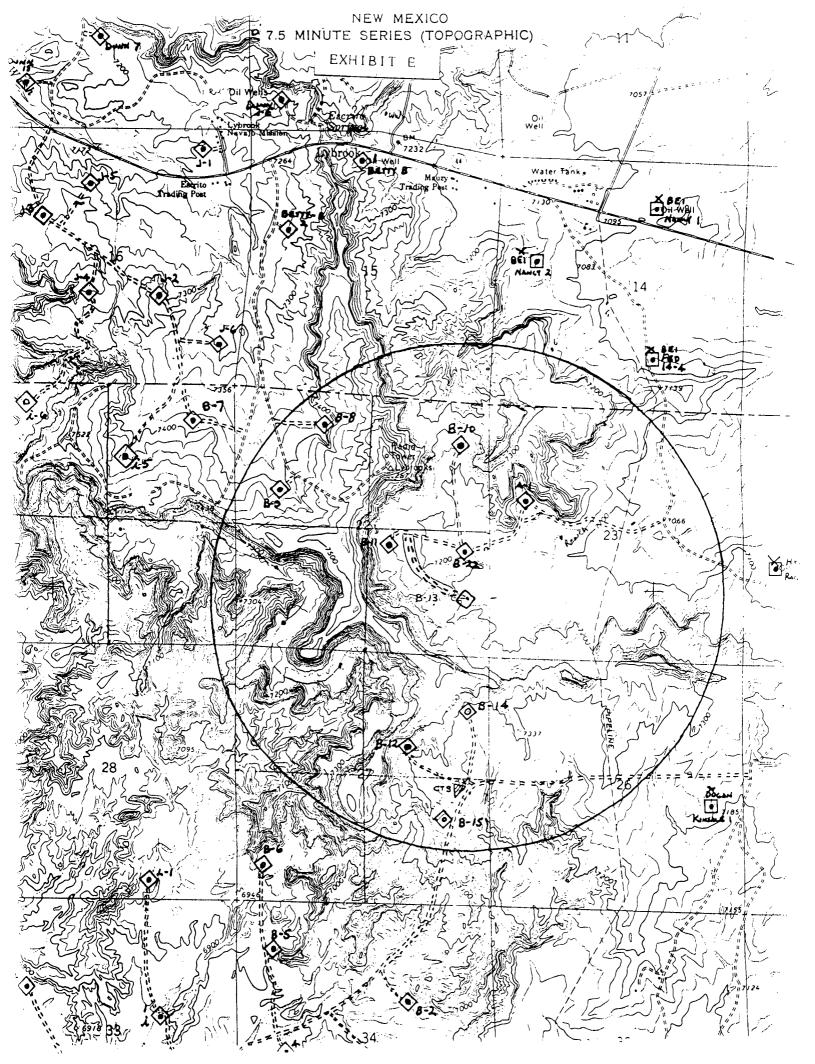
Rick Wilcox Senior Field Engineer 135 Grant Avenue Santa Fe, New Mexico 87501 Telephone: (505) 983-1228

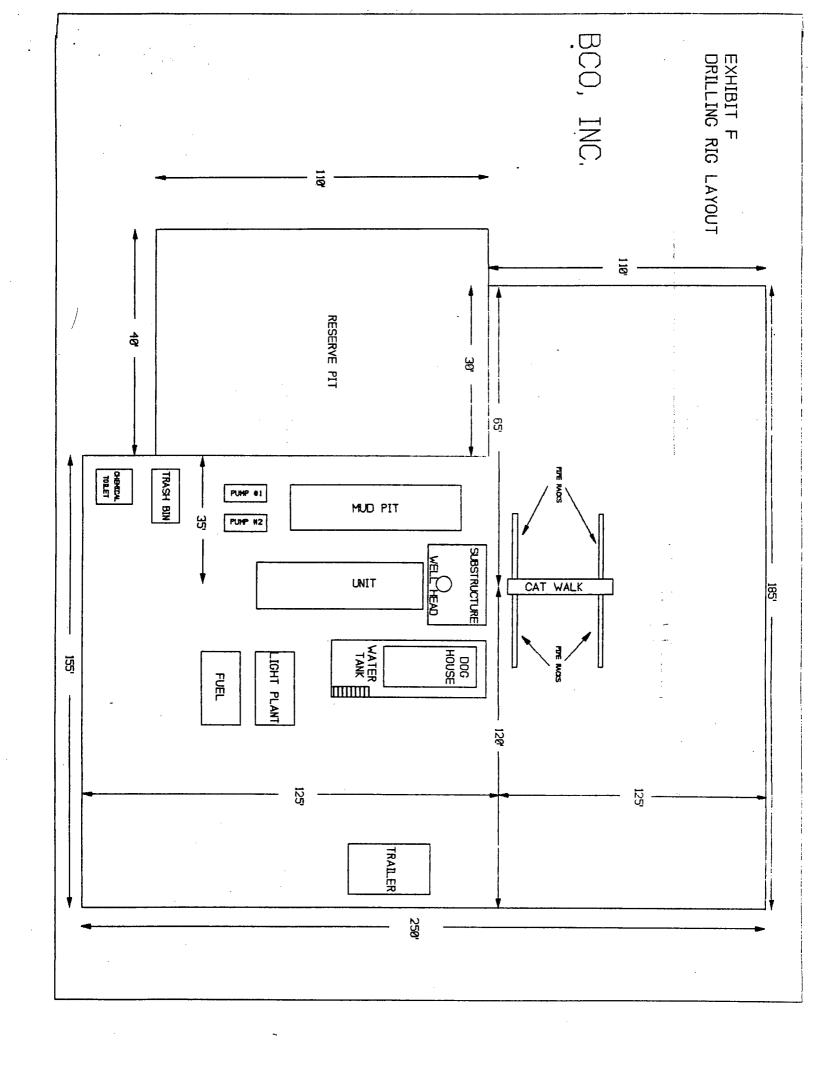
#### 13. Certification:

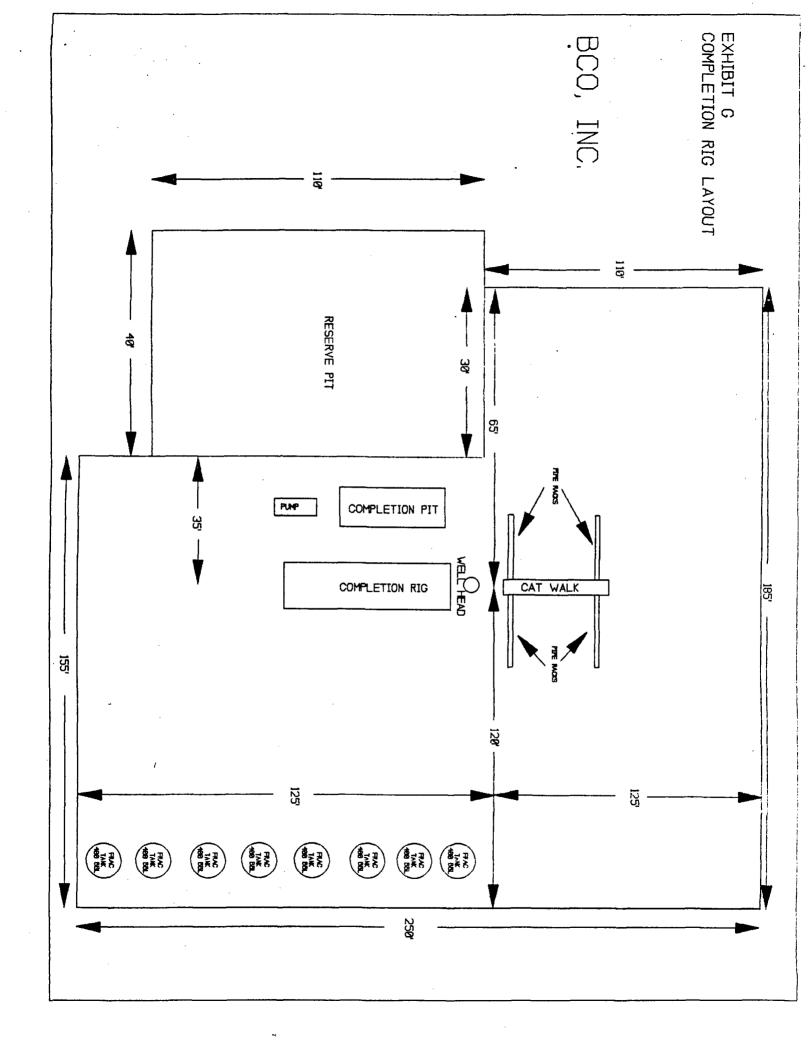
I hereby certify that I or someone under my direct supervision has inspected the proposed drilling site and access road; is familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the 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.

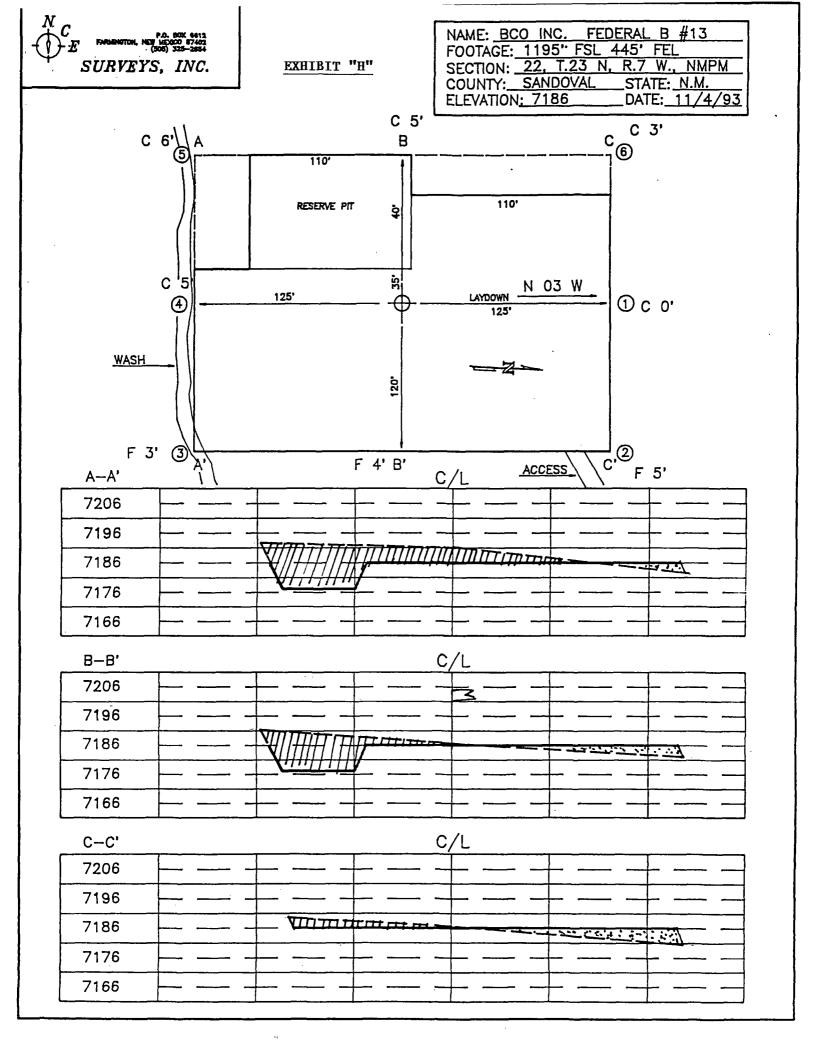
Date: <u>12-6-93</u> fits Wetcox

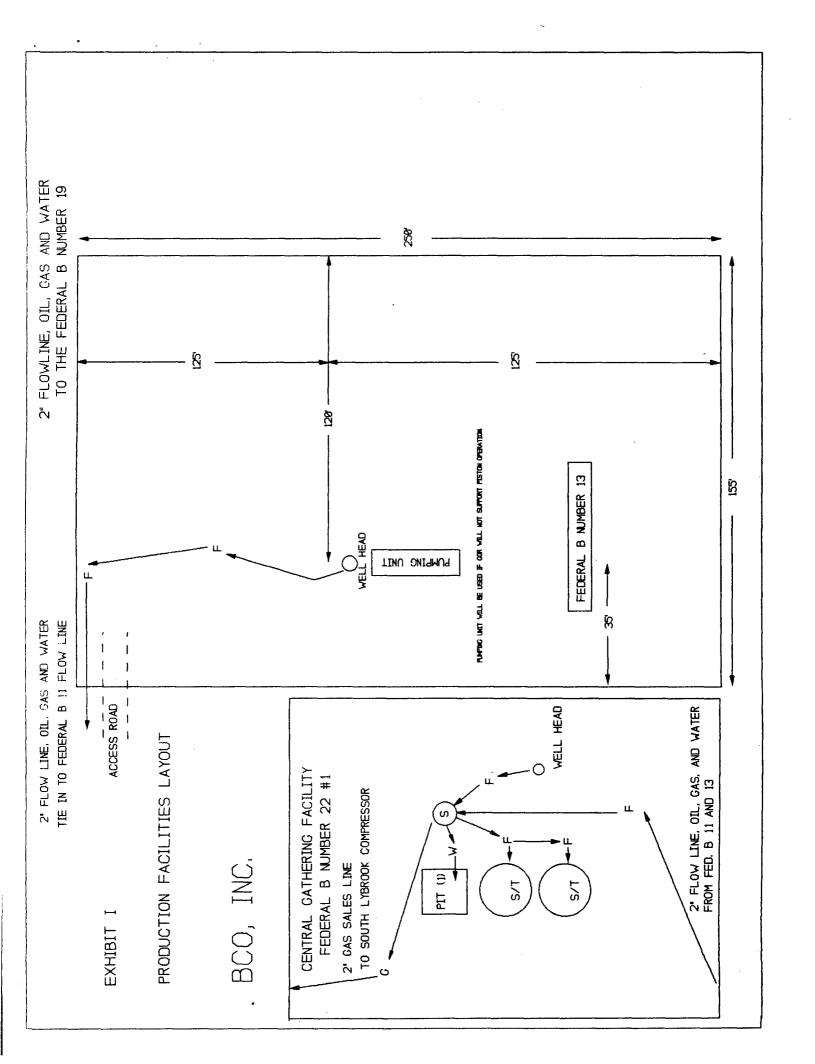
Rick Wilcox, Senior Field Engineer













## Schwist to Appropriate District Office State Lease - 4 copies Fire Lease - 3

## State of New Mexico Energy, Minerals and Natural Resources Department

Form C-102 Revised 1-1-89

DISTRICT I P.O. Box 1980, Hobbs, NM 85240

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

OIL CONSERVATION DIVISION,

DISTRICT II
P.O. Deserver DD, Artenia, NIM 88210

Exhibit B Federal B Number 13

DISTRICT III
1000 Rio Bernos RA., Amec, NM 87410

### WELL LOCATION AND ACREAGE DEDICATION PLAT

~		AI UEE	MUSIC DE				·	
Operator BCO				Fe	deral E	3		Well No. 13
Unix Letter P Section	22	Townsip 2.	3 North	Range 7	West		МРМ	Sandoval
Actual Footage Location of 1195 feet 6 Ground level Elev.	rom the	South	line and	445	,	feet	from t	East line
7186	Ga	lu p		Lybr	ook G	allup	ı	40 Acres
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			ļ				3	Rick Wilcox
	1				<u> </u>		Pi	Rick Wilcox  Seving Field Engineer
	- <u> </u>						P	
							ic	BCO, INC
	1						- ID	11-18-93
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4		-/	1			<u></u>	113:	SURVEYOR CERTIFICATION
<b>5</b>	i I			<i>:</i>			5	hereby certify that the well location shown in this plat was plotted from field notes of chall never made by me or taster my
	1							upernson, and that the same is true and orrect to the best of my snowledge and
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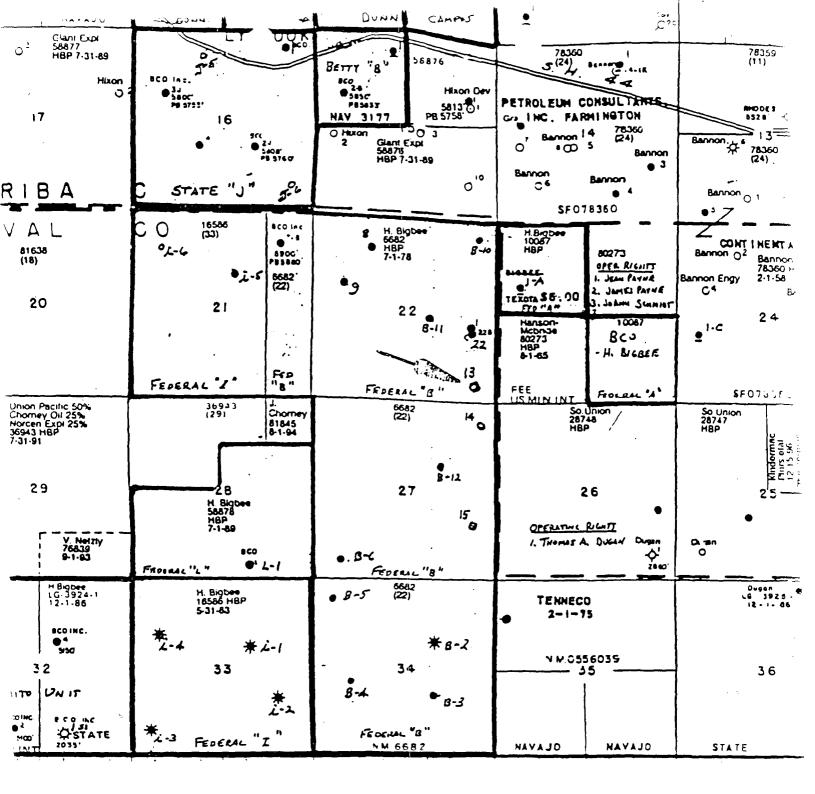


EXHIBIT C Ownership Plat

#### EXHIBIT "D"

#### Working Interest Owners of Offset Wells

Well Name and Number: Federal B Number 22

Location Of Well: NE/4 of the SE/4, S22-T23N-R7W, N.M.P.M.

County, State: Sandoval County, NM

Operator: BCO, INC.

Harry L. Bigbee Harry R. Bigbee Nancy P. Jenson Elanor M. Crout

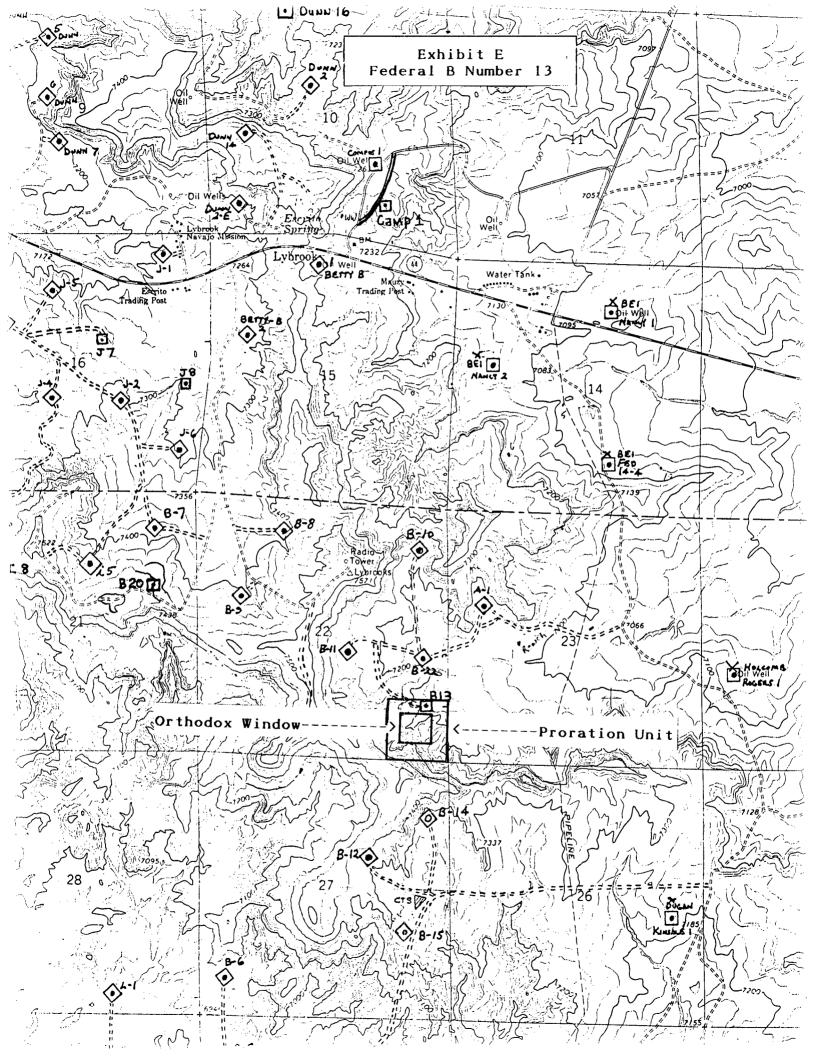
Well Name and Number: Federal B Number 11

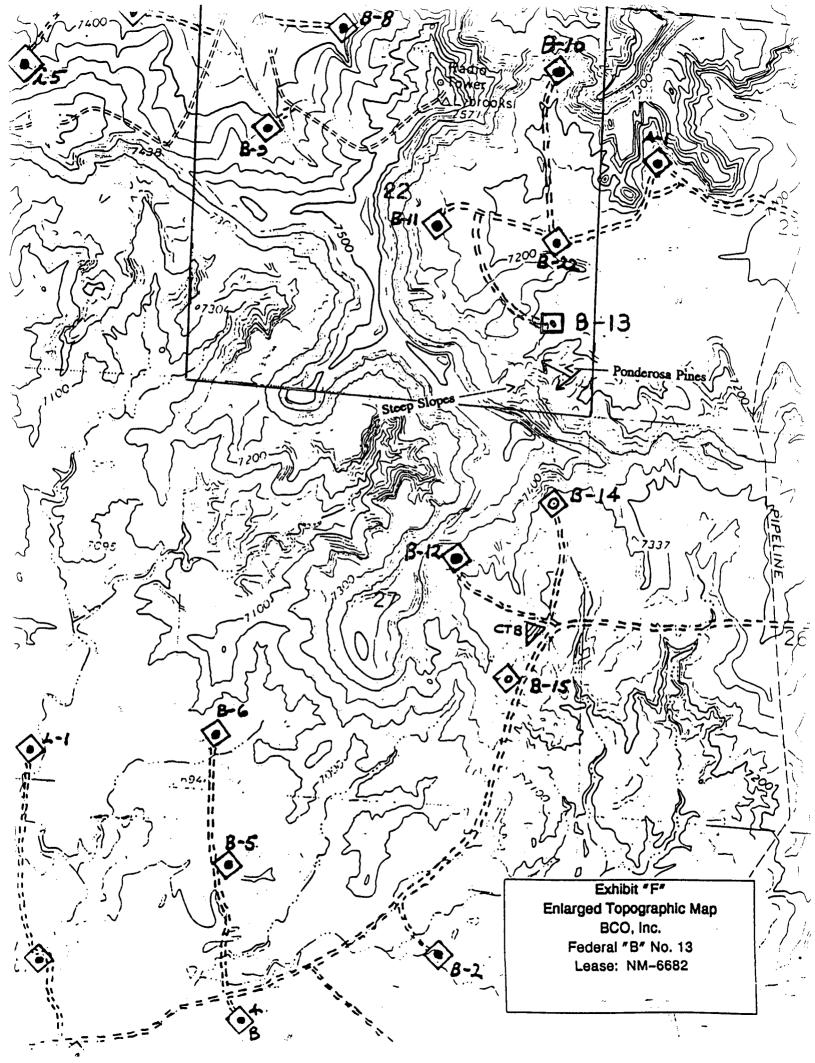
Location Of Well: NW/4 of the SE/4, S22-T23N-R7W, N.M.P.M.

County, State: Sandoval County, NM

Operator: BCO, INC.

Harry L. Bigbee Harry R. Bigbee Elizabeth B. Keeshan Nancy P. Jensen Donnan Stephenson





## Stephanie Sofranoff Matthews Consulting Archaeologist

P.O. Box 1027 Bayfield, CO 81122 (303) 884-9569

November 16, 1993

Rick Wilcox BCO, Inc. 300 Harbour Lane Farmington, NM 87401 Re: Archaeological Surveys for Federal B-13 Rstk, Dunn 16 Rstk, BCO Camp #1 and BCO Camp #2 Proposed Well Locations

Dear Mr. Wilcox:

Enclosed are copies of the archaeological survey report completed for the above proposed well locations and their associated access/pipeline ROWs.

Please be aware that, due to the effect of the new guidelines issued by the Farmington District BLM, your version of the report is missing several items which are forwarded exclusively to the BLM. The format is also drastically different from that used previously, as imposed by the new guidelines.

During the survey 1 site and 14 isolated objects were encountered. The site is partially within the access/pipeline ROW of the Federal B-13 Restake. As it is a surficial site, and field documentation has exhausted its research potential, as well as the research potential of all of the isolated objects, archaeological clearance is recommended for all four of the proposed well locations and their associated access/pipeline ROWs.

This report is subject to review by sponsoring state agencies before archaeological clearance is granted.

Also enclosed is a copy of my invoice, the original of which I have forwarded directly to the Santa Fe office as was done for previous surveys.

Sincerely,

Stephanie Sofrandff (Matthews

# EXHIBIT "H" CERTIFICATION OF SERVICE-OFFSET OPERATORS Non-Standard Location Application BCO, INC.

I certify that notice has been served to the following operators or lesees affected by BCO, INC.'s application for permit to drill the Federal B Number 13 well located 1195' FSL & 445' FEL of Section 22, Township 23 North Range 7 West, Lybrook Gallup Pool, Sandoval County, New Mexico.

- Dugan Production Corporation Attn. Mr. Jim Jacobs
   P.O. Box 420
   Farmington, New Mexico 87499
- 2.) Harold McBride P.O. Box 1515 Roswell, New Mexico 88201

Rick Wilcox

Senior Field Engineer

BCO, INC.

Date

MAIN OFFICE 135 GRANT SANTA FE, NM 87501 (505) 983-1228 FIELD OFFICE ROUTE 4 NAGEEZI, NM 87037 (505) 568-4420

November 22, 1993

CERTIFIED RETURN RECEIPT REQUESTED P 326 823 061

#### EXHIBIT H

Mr. Jim Jacobs

Dugan Production Corporation
P. O. Box 420

Farmington, New Mexico 87499-0420

Re: Non-Standard Location Application Federal "B" Number 13 1195 FSL & 445 FEL, Unit Letter (P) S22-T23N-R7W, Sandoval County, New Mexico Lybrook Gallup Pool

Dear Mr. Jacobs:

BCO, INC. has requested administrative approval to drill the above referenced Gallup Oil Well in an unorthodox location. A mesa with steep slopes, a narrow drainage canyon, and the presence of Ponderosa Pine trees prevent BCO, INC. from selecting a legal location within the proration unit. The location is unorthodox with respect to BCO, INC. acreage. Other operator's correlative rights should not be adversely affected.

Please contact me at (505) 568-4420 if you have any questions. Thank you for your consideration.

Sincerely,

Rick Wilcox Senior Field Engineer BCO, INC.

#### STATE OF NEW MEXICO

## ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION BEGGEVED

RECEIVED AZTEC DISTRICT OFFICE

193 DEE 15 AM 8 39 AZTEC, NEW MEXICO 87410 (505) 334-6178

Date: 12-13-73 atta. Mite Stogney Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87504-2088 Proposed DHC Proposed MC RE: Proposed SWD Proposed NSL Proposed WFX Proposed PMX Proposed NSP Proposed DD Gentlemen: I have examined the application received on\_ -07w and my recommendations are as follows: Yours truly,