

OPER. OGRID NO. 6742
PROPERTY NO. 24123
WHITE POOL CODE 17647
DEPARTMENT OF ENERGY
BUREAU OF LANDS
EFF. DATE 12/28/99
APPROVAL NO. 30-025-34817

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☐

OTHER ☐

SINGLE ZONE ☐

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Echo Production, Inc.

3. ADDRESS AND TELEPHONE NO.

PO Box 1210, Graham, TX 76450 (940) 549-3292

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

At surface

1880' FSL & 1880' FEL

At proposed prod. zone

Unit J

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

45 miles west of Jal, New Mexico

15. DISTANCE FROM PROPOSED*

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

760'

16. NO. OF ACRES IN LEASE

480.00

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

1787'

19. PROPOSED DEPTH

9150'

17. NO. OF ACRES ASSIGNED TO THIS WELL

40.00

20. ROTARY OR CABLE TOOLS

rotary

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

3668' GR

22. APPROX. DATE WORK WILL START*

1/1/2000

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	600'	Circ to Surface
11"	8 5/8"	24# & 32#	4900'	Circ to Surface
7 7/8"	4 1/2"	11.6 & 10.5	9150'	600' above top of Delaware pay (+7600')

Echo Production, Inc. proposes to drill to a depth sufficient to test the Delaware formation. If Productive, 4 1/2" casing will be set. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal Regulations. Specific programs as set out in Onshore Oil and Gas Order #1 are outlined in the following attachments:

- NMOCD Form C-102 Well Location and Acreage Dedication Plat
- Hole Prognosis
- Surface Use and Operating Plan
- Exhibit "A" Equipment Description
- Exhibit "B" Planned Access Roads
- Exhibit "C" One Mile Radius Map
- Exhibit "D" Drilling Rig Layout Plan

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

Tom Gold

TITLE Operations Manager

DATE

11/1/99

(This space for Federal or State office use)

PERMIT NO.

Chris Williams

APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

/S/LARRY D. BRAY

Assistant Field Office Manager.
Lands and Minerals

APPROVED BY

TITLE

DATE

DEC 22 1999

*See Instructions On Reverse Side

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HOLE PROGNOSIS
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
ECHO PRODUCTION, INC.
AVION FEDERAL WELL #3
1880' FSL & 1880' FEL
SECTION 22-23S-32E
LEA COUNTY, NEW MEXICO

In conjunction with Form 3160-3 Application for Permit to Drill, Echo Production, Inc. submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

1. Geological Name of Surface Formation:

Permian

2. Estimated Tops of Geologic Markers:

Rustler	1200'	Cherry Canyon	6000'
T. Lamar	4890'	Bone Spring	8880'
Delaware	4930'	T.D.	9150'

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

Surface	150'	Fresh Water
Delaware	4930'-9150'	Oil or Gas

No other formations are expected to produce oil, gas or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8" casing at 600' and circulating cement back to surface. Any shallower zones above TD that contain commercial quantities of oil and/or gas will have cement circulated across the zone.

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HOLE PROGNOSIS
AON FEDERAL #3
PAGE 2

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OD Csg</u>	<u>Weight, Grade, JT. Cond, Type</u>
17 1/2"	0-600'	13 3/8"	48#, H-40, ST&C
11"	0-4900'	8 5/8"	24# & 32#, J-55, S-80, LT&C
7 7/8"	0-TD	4 1/2"	10.5 & 11.6#

5. Cementing Program:

Surface Casing: 13 3/8" casing will be set at approximately 600' and cemented with approximately 650 sacks of Premium Plus cement with 2% CaCl and additives. The amount may be adjusted depending upon the fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.

Intermediate Casing: 8 5/8" casing will be set at approximately 4900' and cemented with approximately 1500 sacks of 35/65 Poz "c" with additives. The amount may be adjusted dependent upon fluid caliper results, however, cement in sufficient quantities to circulate will be utilized.

Production Casing: If appropriate, 4 1/2" casing will be set at Total Depth. Echo will utilize cement in sufficient quantities to tie back 600' above any Delaware pay. Top of pay in #2 was ± 8160 . Well will be cemented w/appropriate number of sacks of 50/50 POZ 'H' w/ additives and 100 sacks of 'C' Neat.

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6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) show in Exhibit "A" will consist of a double ram-type (3000 psi WP) preventer and a bag-type (hydril) preventer (3000 psi WP). Both units will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. Both BOP's will be nipped up on the 13 3/8" surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 70% of rated working pressure (2100 psi).

7. Types and Characteristics of the Proposed Mud System:

O' to 600'	Fresh water with lime, gel paper and fiber will be used for drilling purposes. Weight 8.4 – 8.6, Vis 29-36, PH > 8.
600' to 4900'	Saturated brine water purchased from commercial sources with paper and fiber will be utilized. Weight 8.6-10.5, Vis 32-34, Ph 10.
4900' to 9150'	Brine and fresh water purchased from commercial sources with gel and starch, 3% KCl, 20-50 PPM Nitrates, Cl 30-75,000, caustic for control and paper for seepage will be utilized. Weight 8.5 – 8.9, Vis 29-34, Ph 9-10, WL 20-50.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be available at the well site at all times.

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HOLE PROGNOSIS
AVION FEDERAL #3
PAGE 4

8. Auxiliary Well Control and Monitoring Equipment:

- A. A kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

9. Testing, Logging and Coring Program:

A Mudlogging unit will be on location from top of Delaware formation to TD. Mudlogging unit will be employed from approximately 5050' (Top of Delaware) to 9150' (Total Depth).

If indicated, DLL-MSFL, CNL-Density, Gamma Ray logs and Caliper logs will be run at TD. The Gamma Ray Dual Laterolog will be run from TD back to the intermediate casing. The Gamma Ray Compensated Neutron Log will be run from TD back to surface. If indicated, Echo may elect to run rotary sidewall cores from selected intervals from approximately 5050' to 9150' dependent upon logging results.

10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. Anticipated bottomhole pressure is 3600# PSI.

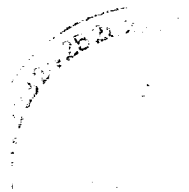
Loss of circulation is possible in the Delaware section of the hole, however, no major loss circulation zones have been reported in offsetting wells.

Six wells have been drilled and completed in the immediate area. To date, Hydrogen Sulfide has not been encountered. However, if Hydrogen Sulfide is encountered, a Hydrogen Sulfide training and appropriate breathing apparatus is located on site. If necessary, the well can be shut in utilizing the blow out preventer and other equipment to prevent the migration of Hydrogen Sulfide to the surface.

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11. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is January 1, 2000. Once commenced, the drilling operation will be completed in approximately 20 days. If the well is productive, an additional 15 days will be required for completion and testing before a decision is made to install permanent facilities. In conjunction with Form 3160-3, Application for Permit to Drill, Echo Production, Inc submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

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SURFACE USE AND OPERATING PLAN
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
ECHO PRODUCTION, INC.
AVION FEDERAL WELL #3
1880' FSL & 1880' FEL
SECTION 22-23S-32E
LEA COUNTY, NEW MEXICO

Submitted with Form 3160-5, Application For Permit to Drill covering the above proposed well. The purpose of the plan is to describe the location, the proposed construction activities, the operations, the surface disturbance involved, and the rehabilitation of the surface after completion of proposed well so that an appraisal can be made of the environment affected by the proposed well.

1. Existing Roads:

- A. The Well Location and Acreage Dedication Plat for the proposed wellsite was staked by Dan R. Reddy, Registered Professional Engineer, Carlsbad, New Mexico and is attached.
- B. All roads to the location are shown on Exhibit "B". The existing roads are illustrated in red and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be completed where necessary as determined during the on-site inspection.
- C. Directions to location: From Carlsbad; \pm 8 miles on Hwy 285 to Hwy 31, NW \pm 8 miles to 128, West \pm 18 miles to Pipeline Road & NE 5 $\frac{1}{2}$ miles to lease road at well #2 on left.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as operations continue on the lease.

2. Proposed Access Road:

A new access road of approximately 1800' will be required as illustrated in yellow on Exhibit "B".

- A. The average grade will be less than 5%.

SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 2

- B. No turnouts will be necessary.
- C. No culverts, gates, or low-water crossing will be necessary.
- D. Surfacing material will consist of native caliche. If required, road across pad will be surfaced with a minimum of 6" of caliche. Caliche will be obtained from the nearest BLM approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

3. Location of Existing Wells:

All existing wells within a one mile radius of proposed well are show on Exhibit "C".

4. Location of Existing and/or Proposed Facilities:

In the event the proposed well proves to be productive a flow line will be installed along the lease road to Echo's production facility located in the SE/4 SE/4 Sec 22. Only a pumping unit will be required at the Avion #3 location.

5. Location and Type of Water Supply:

The proposed well will be drilled with a combination of brine and fresh water mud systems as outlined in the Hole Prognosis. The water will be purchased from commercial water stations in the area and trucked to the location by transport over the existing and proposed access roads as indicated on Exhibit "B". No water well will be drilled on the location.

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SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 3

6. Source of Construction Materials:

All caliche required for construction of the drill pad will be obtained from a BLM approved caliche pit. All roads and pads will be constructed of 6" rolled and compacted caliche.

7. Methods of Handling Water Disposal:

- A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.
- B. Drilling fluids will be contained in steel mud tanks. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit approximately 150' x 150' x 6' deep and fenced on three sides prior to drilling. The fourth side will be fenced immediately following rig removal. The reserve pit will be plastic lined (5-7 mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water. Drilling fluids will be allowed to evaporate in the reserve pits until dry.
- C. Water produced from the proposed well during completion may be disposed into the reserve pit or a steel tank (depending upon rates). After the proposed well is permanently placed on production, produced water will be collected in a fiberglass tank at the Avion Federal #2 and piped to an approved disposal system down already existing line. Produced oil will be collected in steel tanks until sold at the Avion Federal #2 facility.
- D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations. Compliance with current laws and regulations will be followed pertaining to the disposal of human waste.
- E. Garbage and trash produced during drilling or completion operations will be disposed in a separate trash trailer on location. All waste material will be contained to prevent scattering by the wind. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by the operation.

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SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 4

- F. After the rig is moved out and the proposed well is either completed or abandoned, all waste materials will be removed within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and kept closed until dried. When the reserve pit is dry enough to breakout and fill and, as weather permits, the unused portion of the well site will be leveled and reseeded as per BLM specifications. Only that portion of the pad required for production operations will remain in use. In the event of a dry hole, only a dry hole marker will remain.

8. Ancillary Facilities:

No airstrip, campsite or other facility will be built as a result of the operations of the proposed well.

9. Well Site Layout:

- A. The drill pad layout with elevations, as staked by Dan R. Reddy, Registered Professional Engineer, is shown on Exhibit "D". Dimensions of the pad, pits and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. Since the pad is fairly level no major cuts will be required.
- B. Planned orientation for the rig and associated drilling equipment, reserve pit, pipe racks, turn-around and parking areas, and access road are shown on Exhibit "D". No permanent living facilities are planned, however, a temporary foreman/toolpusher's trailer will be on location during drilling operations.

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SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 5

- C. The reserve pit will be lined with a high quality plastic sheeting (5-7 mil thickness).

10. Plan for Restoration of the Surface:

- A. Upon completion of the proposed operations, should the proposed well be abandoned, the pit area, after allowed to dry, will be broken out and leveled. The original topsoil will be returned to the entire location, and leveled and contoured to the original topography as closely as possible.

All trash, garbage and pit lining will be removed in order to leave the location in an aesthetically pleasing condition. All pits will be filled and the location leveled with 120 days after abandonment.

- B. The disturbed area will be revegetated and reseeded during the proper growing season with a seed mixture of native grasses as recommended by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time the rig is removed, the reserve pit will be fence on the rig (fourth) side to prevent livestock or wildlife from becoming entrapped. The fencing will remain in place until the pit area is cleaned and leveled. No oil will be left on the surface of the fluid in the pit.
- D. Upon completion of the proposed operations, should the proposed well be productive, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from an area of the original drillsite not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank batter installation. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drillsite will be used to recontour the pit area and unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 6

11. Surface Ownership:

The wellsite and lease are located entirely on Federal surface.

12. Other Information:

- A. The topography around the wellsite is rolling terrain with vegetation of sagebrush and native grass. The vegetation cover consists of prairie grasses and flowers. Wildlife in the area includes those typical of semiarid desert land.
- B. The soils are clayey sand over caliche base.
- C. There is no permanent or live water in the immediate area.
- D. There are no residences and other structures in the area.
- E. The land in the area is used primarily for grazing purposes.
- F. An archaeological study has been conducted for the location and access road. The report has been submitted separately.

13. Lessee's and Operator's Representative:


Tom Golden
PO Box 1210
Graham, Texas 76450
Phone Number: (940) 549-3292 – office
(940) 521-1045 – cellular
(940) 549-3690 – home

SURFACE USE AND OPERATING PLAN
AVION FEDERAL #3
PAGE 7

14. Certification:

I hereby certify that I, or persons under my direct supervision have inspected the proposed drillsite which currently exists; that the statements made in the plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Echo Production, Inc. and its contractors and sub-contractors in conformity with the plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 USC 1001 for the filing of a false statement.

ECHO PRODUCTION, INC.



Tom Golden
Operations Manager

DATE: 11/19/99

EXHIBIT "A"

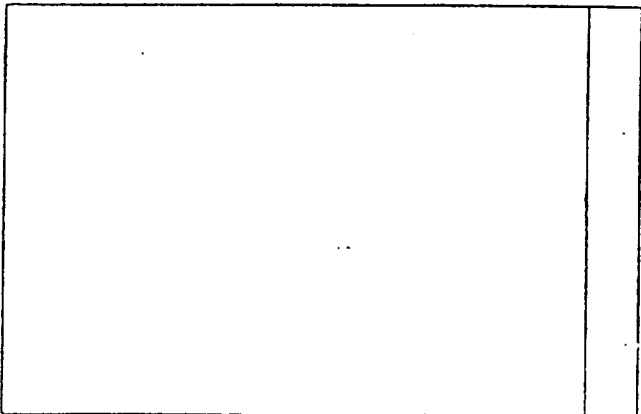
EQUIPMENT DESCRIPTION

All equipment should be at least 3,000 psi WP or higher unless otherwise specified.

1. Bell nipple
2. Hydril bag type preventer
3. Ram type pressure operated blowout preventer with blind rams.
4. Flanged spool with one 3" and one 2" (minimum) outlet.
5. 2" (minimum) flanged plug or gate valve.
6. 2"x 2"x 2" (minimum) flanged.
7. 3" gate valve.
8. Ram type pressure operated blowout preventer with pipe rams.
9. Flanged type casing head with one side outlet.
10. 2" threaded (or flanged) plug or gate valve. Flanged on 5000# WP, threaded on 3000# WP or less.
11. 3" flanged spacer spool.
12. 3"x 2"x 2"x 2" flanged cross.
13. 2" flanged plug or gate valve.
14. 2" flanged adjustable choke.
15. 2" threaded flange.
16. 2" XXH nipple.
17. 2" forged steel 90° Ell.
18. Cameron (or equal) threaded pressure gauge.
19. Threaded flange.
20. 2" flanged tee.
21. 2" flanged plug or gate valve.
22. 2 1/2" pipe, 300' to pit, anchored.
23. 2 1/2" SE valve.
24. 2 1/2" line to steel pit or separator.

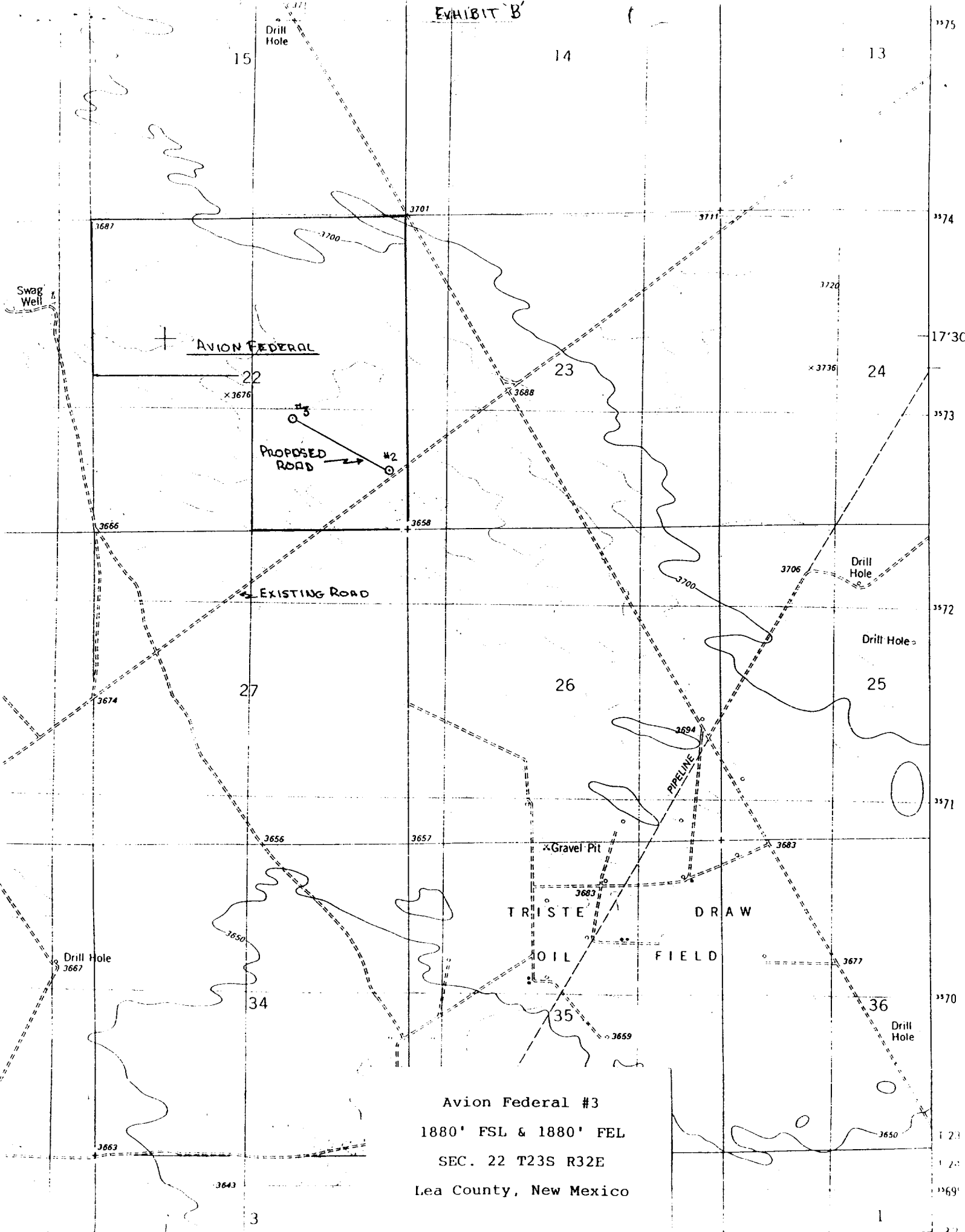
NOTES:

- 1). Items 3, 4 and 8 may be replaced with double ram type preventer with side outlets between the rams.
- 2). The two valves next to the stack on the fill and kill line to be closed unless drill string is being pulled.
- 3). Kill line is for emergency use only. This connection shall not be used for filling.
- 4). Replacement pipe rams and blind rams shall be on location at all times.
- 5). Only type U, LSW and QRC ram type preventers with secondary seals are acceptable for 5000 psi WP and higher BOP stacks.
- 6). Type E ram-type BOP's with factory modified side outlets may be used on 3000 psi or lower WP BOP stacks.

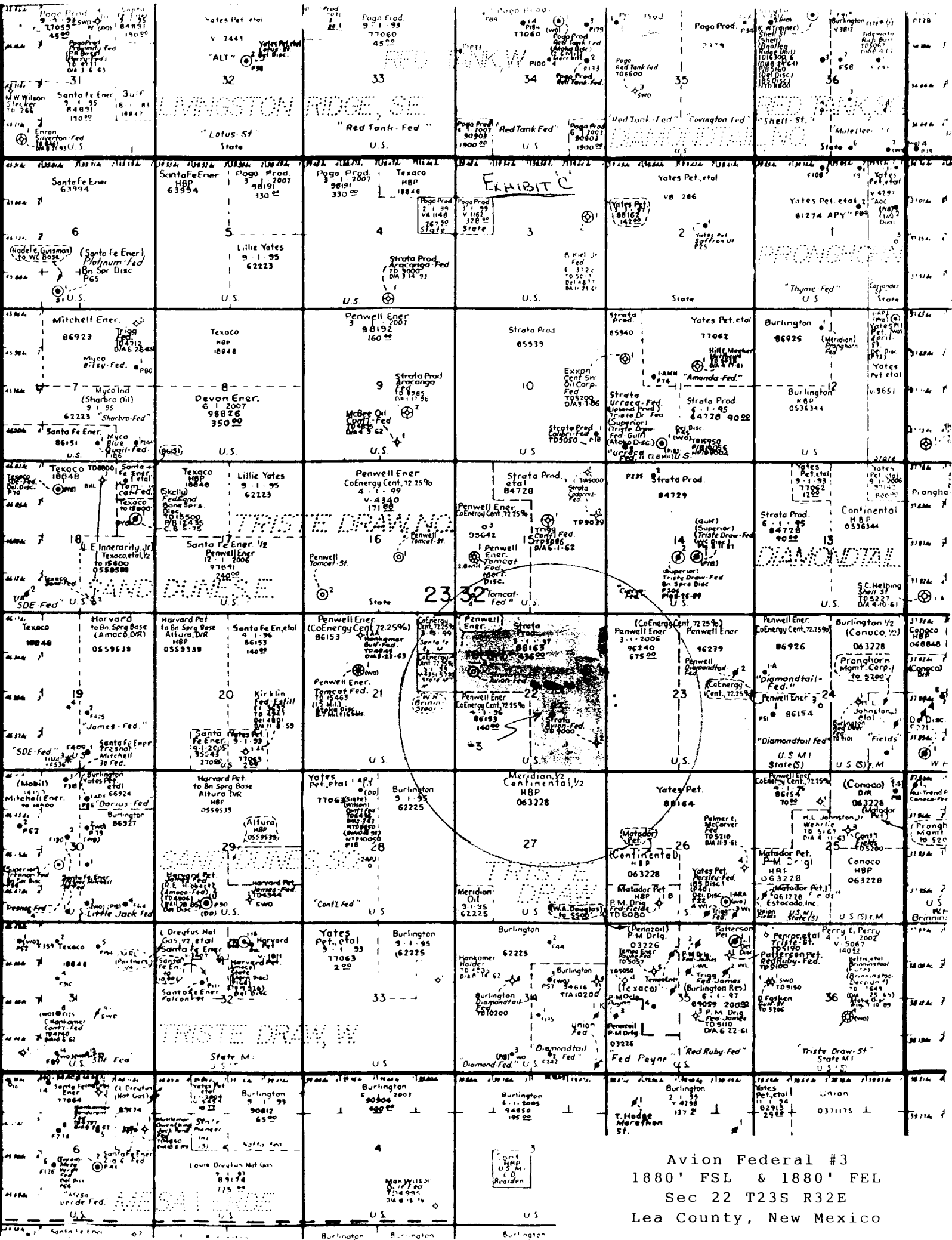


***To Include derrick floor mounted controls.**

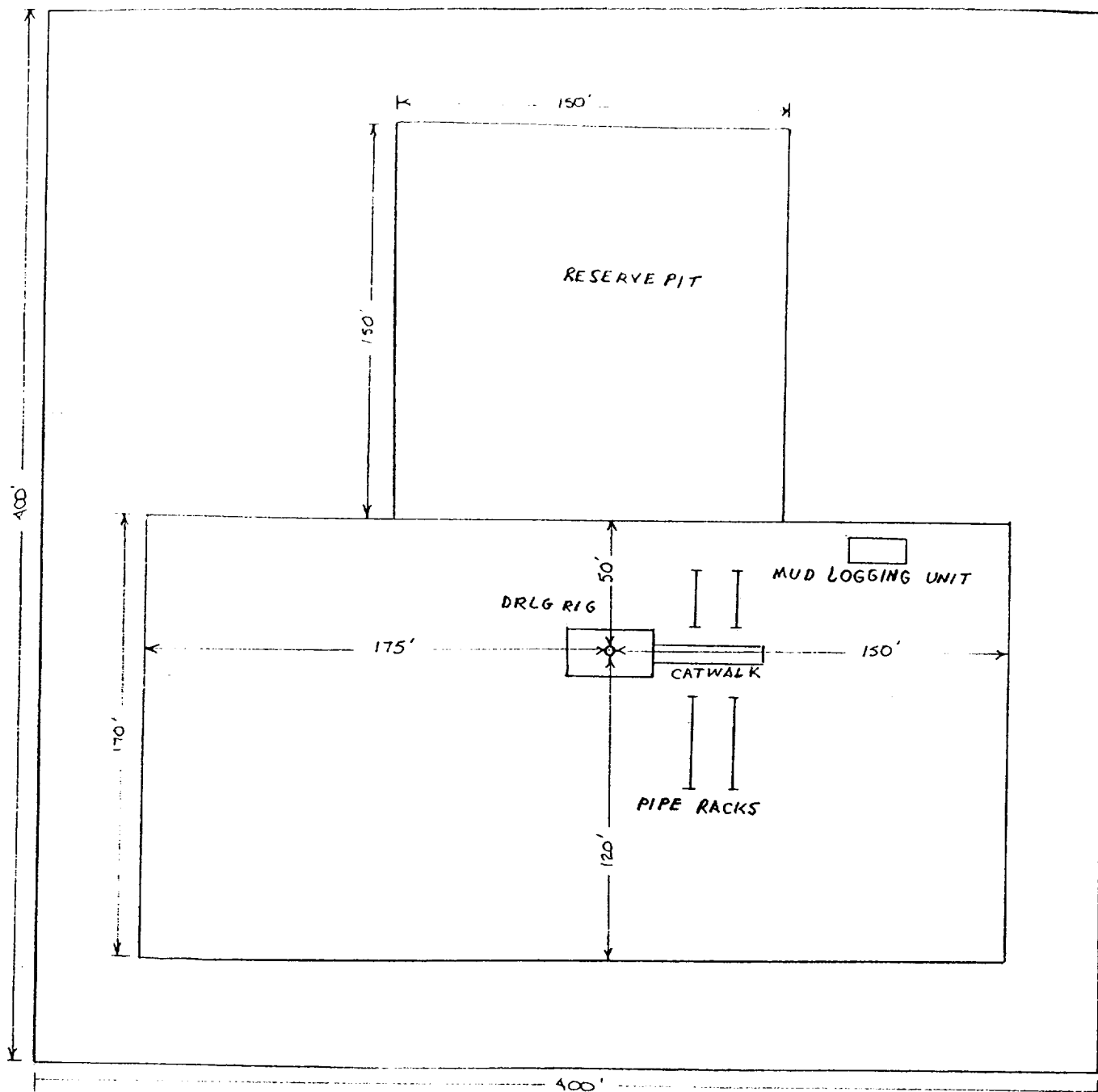
EXHIBIT 'B'



Avion Federal #3
 1880' FSL & 1880' FEL
 SEC. 22 T23S R32E
 Lea County, New Mexico



Avion Federal #3
1880' FSL & 1880' FEL
Sec 22 T23S R32E
Lea County, New Mexico



ECHO PRODUCTION, INC.

DRILLING RIG LAYOUT PLAN

AVION FEDERAL #3
 1880' FSL & 1880' FEL
 SEC. 22 T 23S R 32E
 LEA COUNTY, NEW MEXICO

EXHIBIT "D"

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District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural ResourcesOIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505Form C-102
Revised March 17, 1999Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-34817		² Pool Code 17647		³ Pool Name Diamondtail Delaware	
⁴ Property Code 24123		⁵ Property Name AVION FEDERAL			⁶ Well Number 3
⁷ OGRID No. 6742		⁸ Operator Name ECHO PRODUCTION, INC.			⁹ Elevation 3668.

¹⁰ Surface Location

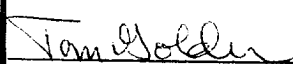
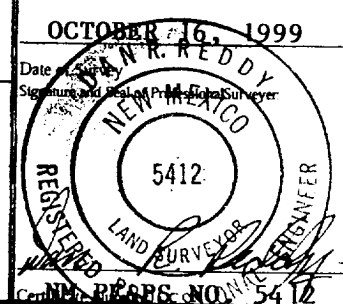
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	22	23-S	32-E		1880	SOUTH	1880	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A
NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16				¹⁷ 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 Tom Golden Title Operations Manager Date 11/19/99
				¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. OCTOBER 16, 1999 Date of Survey  Signature and Seal of Professional Surveyor REGISTERED LAND SURVEYOR NEW MEXICO 5412 REBBS, NO. 5412



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FBI - NEW YORK

ELF
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WILL BE RELEASED

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