Form 9-331C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Petroleum Exploration & Development Funds, Inc.

3. ADDRESS OF OPERATOR: P. O. Box 2412, Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FSL & 1980' FEL Section 15-T17S-R32E, Lea County, New Mexico
At proposed prod. zone: Strawn

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 2 miles South of Maljamar, New Mexico

5. LEASE DESIGNATION AND SERIAL NO.: ~~NM~~ LC-054687

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Hudson-Federal

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Maljamar Strawn

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: UNDESIGNATED 15-T17S-R32E

12. COUNTY OR PARISH: Lea — 13. STATE: N. M.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 660'

16. NO. OF ACRES IN LEASE: 400

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

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

19. PROPOSED DEPTH: 11,800

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 4021.3 GR

22. APPROX. DATE WORK WILL START*: December 15, 1976

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2 "	13 3/8"	48#	460'	475 sx.or circulate
11"	8 5/8"	32# & 24#	4650'	950 sx.(est. top at 2000')
7 7/8"	5 1/2"	17#	11,800'	550 sx.(est. top at 7000')

Detailed prognosis for NTL - 6 compliance attached.

APPROVED FOR CONDITIONS OF APPROVAL

have proval

3-20-77

SEE ATTACHED FOR CONDITIONS OF APPROVAL

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 J. L. Sutherland TITLE Vice President DATE 12-3-76

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED AS AMENDED
DEC 8 1976
BUREAU OF LAND MANAGEMENT
ACTING DISTRICT ENGINEER

*See Instructions On Reverse Side

IN COMPLIANCE WITH NTL-6 AND ATTACHED TO

PETROLEUM EXPLORATION & DEVELOPMENT FUNDS, INC.

FORM 9-331C FOR THE HUDSON FEDERAL NO. 1

1. The name of the surface formation is the Mescalero (Tertiary) Formation.

2. Estimated tops of Geologic markers: Yates 2140, San Andres 3900, Glorieta 5440, Tubb 6850, Abo 7570, Wolfcamp 9050, Cisco 10,370, Canyon 10,960, Strawn 11,450.

3. Estimates depths to anticipate Oil and Gas: 3950, 5540, 9000, 9750, 10,650, 11,400.
Estimated depths to anticipate Water: Possible shallow 600±, water zones in most cases approximately 50 feet below oil zones. Others unknown.

4. The proposed casing program is as follows:

Surface Casing	13 3/8", 48#, H-40, ST&C (new) @ 460'
Intermediate Casing	8 5/8", 32#, K-55, LT&C (new) and 8 5/8", 24#, K-55, ST&C (new) @ 4650'
Production Casing	5 1/2", 17#, N-80, LT&C (new) and 5 1/2", 17#, K-55, LT&C (new) @ 11,800' ±

5. The Blow-Out Prevention Program to be utilized in the drilling of this well is outlined as follows:

A double stack 10" 3000 psi B.O.P. and 3000 psi Hydril will be installed after setting the 8 5/8" intermediate casing. A remote accumulator of 80 gallon minimum capacity will be utilized. Accompanying the installation of the B.O.P. and Hydril, a flow manifold and 2 3/8" tubing kill line with valve will be laid to the end of the catwalk. Prior to drilling out the 8 5/8" intermediate casing shoe, Yellowjacket pressure tests will be conducted to 3000 psi on the B.O.P., Hydril, kellycock, kill line and manifold.

6. The type and characteristics of the proposed mud program are outlined as follows:

0 - 460' fresh water spud mud, aquagel flocculated with lime. Use paper, mica, and fiber to control loss circulation.
460' - 4650' Drill out 13 3/8" surface casing with brine water, circulate a controlled section of the lined reserve pit. Use paper to control seepage loss of fluid. Treat brine with lime to increase pH to 10+ to prevent

drill string corrosion.
4560' - 11,800' Drill out 8 5/8" casing with fresh water 9000' (approx. top of Wolfcamp). Add surfactant to improve sample quality thru the Clearfork, Tubb and Abo intervals. Add small amounts of paper for seepage loss. Mud up at 9000' with a fresh water, low solids type drilling fluid with the following characteristics:

M.W.	9.0-9.5 ppg
M.V.	34-38 sec./1000 cc
W.L.	10 cc or less
F.C.	1 - 2/32 or less
pH	9-11

This type fluid should be sufficient to drill to T. D. with the exception of weight which may have to be altered, depending on hole conditions.

7. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, will be installed and operative before drilling into the Wolfcamp formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:

   (1) A recording pit level indicator to determine pit volume gains and losses,

   (2) Mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips,

   (3) A flow sensor on the mud flow line to warn of any abnormal mud returns from the well.

   Additionally, if pressure contral becomes critical, a mud de-gasser and super choke control equipment will be installed.

8. Drill Stem tests anticipated at the following approximate zones: Paddock 5540, Abo 9000, Upper Wolfcamp 9750, Lower Wolfcamp 10,650, and Strawn at 11,400. No cores planned at this time. Electrical logs at total depth to probably include Gamma-Sonic, Induction-Self Potential. No hydrocarbon logging unit planned at this time.

9. There are no anticipated abnormal pressures or temperatures expected to be encountered in the drilling of this well. Additionally, there are no potential hazards of poisinous hydrogen sulfide gas expected in the drilling of this well.

10. The desired starting date based on the drilling contractors expected availability is December 13, 1976. It is expected to take 48 days to drill this well to a total depth of 11,800'.

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
PETROLEUM EXPLORATION & Dev.Funds, Inc.	Hudson-Federal	1

Unit Letter	Section	Township	Range	County
O	15	17 South	32 East	Lea

Actual Footage Location of Well:
660 feet from the south line and 1980 feet from the east line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4021.3	Strawn	UNDESIGNATED Maljamar Strawn	40

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

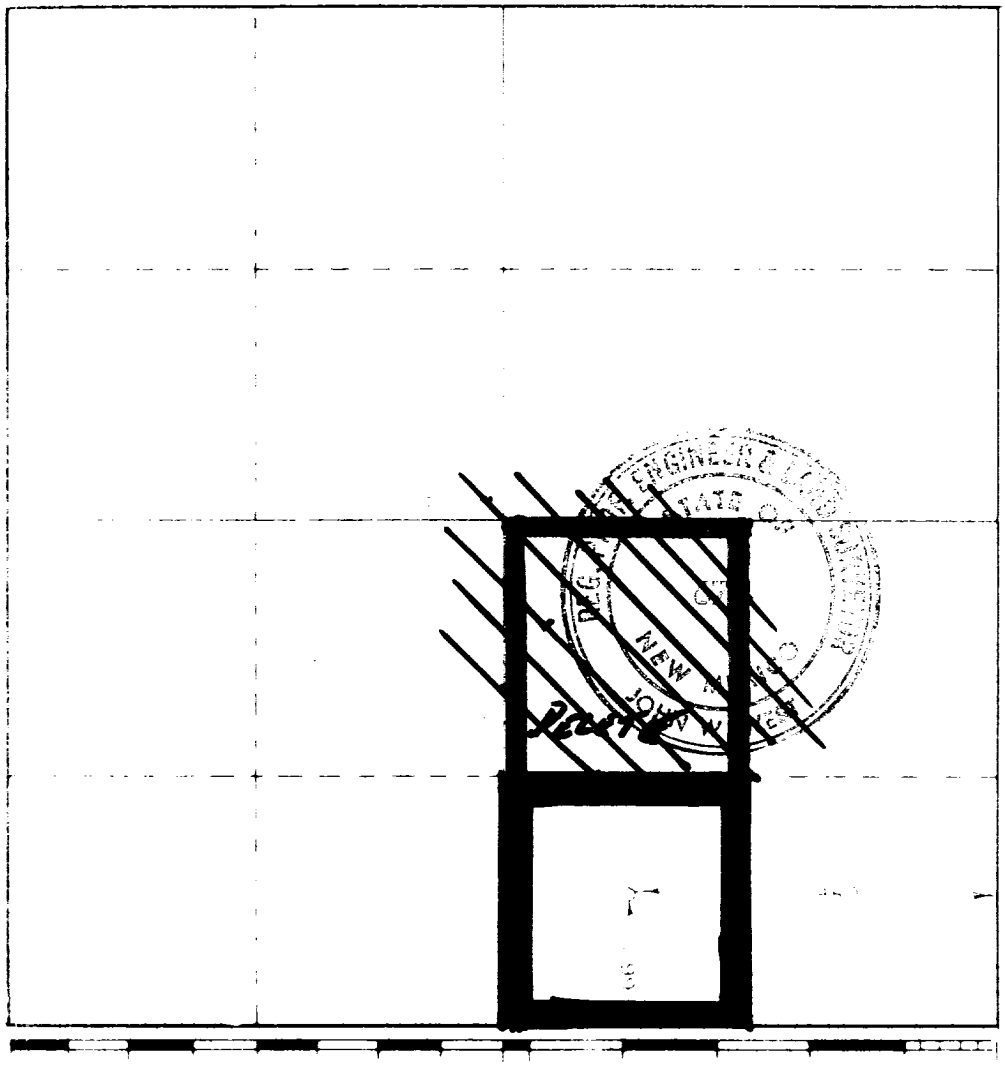
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests 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 interests, has been approved by the Commission.



CERTIFICATION

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

J. R. Sutherland

J. R. Sutherland

Vice President
Petroleum Expl. & Dev. Funds, Inc.

December 3, 1976

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.

Nov. 27, 1976

Registered Professional Engineer and/or Land Surveyor

John W. West

676

MULTI-POINT SURFACE USE AND OPERATIONS PLAN
Petroleum Exploration & Development Funds, Inc.
Well No. 1, Hudson Federal
660' FSL and 1980' FEL Sec. 15-T17S-R32E
Lea County, New Mexico
Lease ~~New Mexico~~ L.C. 054687

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the enviromental effects associated with the operation.

1. EXISTING ROADS:

   A. Exhibit "A" is a portion of a topographic map showing the location of the proposed well as staked. One and one half miles south of Maljamar, New Mexico on State Highway 33 a lease road goes east, approximately 1000' north of the wellsite, to well No. 1

   B. Exhibit "B" is a plat showing all existing roads within a one mile radius of the wellsite, and the planned access road.

   C. A portion of the existing lease road, beginning at the west line of Section 15 and extending approximately 3/4 of mile east will be repaired where necessary. Repairs will consist of replacing the eroded caliche surface with a new caliche surface 6 inches deep and 12 feet wide, watered and compacted.

2. PLANNED ACCESS ROAD:

   A. Length and Width: New road required will be 12 feet wide and approximately 1000 feet long. This new road is labeled and color coded red on Exhibit "B". The center line of the proposed new road from the beginning of the wellsite has been staked and flagged with the stakes being visible from any one to the next.

   B. Surfacing Material: Six inches of caliche, water, compacted and graded.

   C. Maximum Grade: 3 percent.

D. Turnouts: None required because of relatively short distance of new road to be constructed.

E. Drainage Design: New road will have a drop of 6 inches from center line on each side.

F. Culverts: No culverts will be required.

G. Cuts and Fills: Minimum cut will be necessary because of the flat surface.

H. Gates, Cattleguards: No gates or cattleguards will be required.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a one mile radius are shown on Exhibit "B".

4. LOCATION OF PROPOSED FACILITIES:

A. Since this is our first well on this lease we have no existing tank battery or flowlines.

B. If this well is productive, the tank battery and flowline will be located on the well pad as shown on Exhibit "C" and no additional surface disturbance will occur.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. Water will be purchased and trucked to the wellsite over the existing and proposed roads shown on Exhibits "A" and "B".

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing the road and the well pad will be obtained from an existing pit approximately 1000' due north of the staked location wellsite. The existing pit is on Federal Land is shown on Exhibit "A" and "B".

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the drilling pits.

B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.

C. Water produced during drill stem or tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.

D. Current laws and requirements pertaining to the disposal of human waste will be complied with.

E. Trash, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trast pit is shown on Exhibit "C".

F. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLIARY FACILITIES:

A. None required.

9. WELLSITE LAYOUT:

A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pit, trash pit, and location of major rig components.

B. Only very minor levelling of the wellsite will be required. No significant cuts and fills will be necessary.

C. The reserve pit will be plastic lined.

D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations all equipment and other materials not needed for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. After abandonment of the well, surface restoration will be in accordance with any special rehabilitation and/or revegetation requirements of the surface management agency will be complied with and accomplished as expeditiously as possible. All pits should be filled and levelled within 90 days after abandoment.

11. OTHER INFORMATION:

A. Topography: Land surface is flat to gently rolling and duny. From an elevation of 4021 feet at the wellsite, the land surface slopes gently towards the south at about 35 feet per mile.

B. Soil: Soil is a deep fine sandy clay underlain by caliche.

C. Flora and Fauna: The vegatative cover is generally sparse and consists of yucca, sandsage, mesquite and perenial native grasses. Wildlife in the area is that of semi-arid desert land and includes coyotes, rabbits, rodents, dove, quail and an occasional antelope.

D. Ponds and Streams: There are no rivers, streams, lakes or ponds in the area.

E. Residences and Other Structures: The nearest occupied dwelling is a house approximately 2 miles northwest of the wellsite.

F. ARCHELOGICAL, HISTORICAL AND CULTURAL SITES: None observed in this area.

G. Land Use: Grazing and hunting in season.

H. Surface Ownership: Wellsite is on Federal surface.

12. OPERATOR'S REPRESENTATIVE:

The field representatives responsible for assuring compliance with the approved surface use and operations plan are as follows:

Don Ford
3308 Fannin
Midland, Texas 79701
Office Phone: 915-684-5741
Home Phone: 915-694-8361

Jim Sutherland
2502 W. Shandon
Midland, Texas 79701
Office Phone: 915-684-5741
Home Phone: 915-683-3519

13. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am 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 Petroleum Exploration & Development Funds, Inc., and its contractors and sub contractors in conformity with this plan and the terms and conditions under which it is approved.

Date 12-3-76

J. R. Sutherland
J. R. Sutherland
Vice President

U. S. GEOLOGICAL SURVEY
P. O. Box 1157
Hobbs, New Mexico 88240

HOBBS DISTRICT

Petroleum Exploration & Development Funds, Inc.
No. 1 Hudson-Federal
SW¼SE¼ sec. 15-17S-32E
Lea County, N. M.
Above Data Required on Well Sign

CONDITIONS OF APPROVAL

1. Drilling operations authorized are subject to the attached sheet for general requirements for drilling and producing operations.

2. Notify this office (telephone (505) 393-3612) when the well is spudded and in sufficient time for a representative to witness cementing operations.

3. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life.

4. Secure prior approval before changing the approved drilling program or commencing plugging operations, plug-back work, casing repair work, or corrective cementing operations.

5. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.

6. A kill-line is to be properly installed and is not to be used as a fill-up line.

7. Blowout preventers are to have proper casing rams when running casing.

8. Drill string safety valve(s) to fit all pipe in the drill string to be maintained on the rig floor while drilling operations are in progress.

9. Blowout prevention drills are to be conducted as necessary to assure that equipment is operational and that each crew is properly trained to carry out emergency duties. All BOP tests and drills are to be recorded on the driller's log.

10. Casing protec tors will be run on drill pipe while drilling through the 8-5/8" casing. Protectors will be of sufficient number and of sufficient outside diameter to protect the casing.

11. 13-3/8" surface casing should be set in the Rustler anhydrite formation and cement circulated to the surface. If surface casing is set at a lesser depth, the 8-5/8" casing must be cemented from the casing shoe to the surface, or cemented to the surface through a stage tool set at least 50 feet below the top of the Rustler, after cementing around the shoe with the specified amount of cement.

12. If, during operations, the operator or any person working in his behalf, discover any historic or prehistoric ruin, monument or site, or any object of antiquity subject to the Antiquities Act of June 8, 1906, (34 Stat. 225, 16 U.S.C. Secs. 431-433), and 43 CFR Part 3, then work will be suspended and the discovery promptly reported to the District Manager. The Bureau will then take such action as required under the Act and regulations thereunder. When directed by the District Manager, the operator will obtain, at his expense, a qualified archaeologist to examine and, if necessary, excavate or gather such ruins or objects.

13. All access roads constructed in conjunction with the drilling permit should be limited to 12 feet in width, along with turnouts. If well is a producer, all roads will be adequately drained to control runoff and soil erosion. Drainage facilities may include ditches, water bars, culverts and/or any other measure deemed necessary by the responsible BLM representative.

14. Materials removed during construction must be disposed of in such a manner that it does not detract from the aesthetics and does not accelerate erosion. When clearing the area of operations of vegetation other than grass, the vegetation removed will be placed in drainages, washes, gullies, etc., and "walked down" by crawler type tractor. If no drainages are in the immediate area, the vegetation will be "walked down" in place. After construction has been completed, the affected area will be left in as aesthetically pleasing condition as possible. All trash resultant from construction activities will be disposed of. Any large rocks left as a result of construction activities will not be piled or left in rolls but will be left so they do not detract from the scenic attributes of the area and will not hinder the movement of livestock or big game animals.

15. Any "available topsoil" encountered during the construction of the drill site area will be stockpiled and made available for re-surfacing of the reserve pit area (after pits are covered) after completion of the drilling operation.

16. "Caliche" for use in the construction of the drill pad and access road shall be obtained from existing authorized pits whenever possible, as determined by the responsible BLM representative. No new pits shall be opened without prior approval from the responsible BLM representative.

17. The "mud pits" shall be well constructed and under no circumstances will they be allowed to leak or be cut to drain. They shall not be located on natural drainages. Waste or discharge of any kind will not be allowed to enter any drainage. Any plastic material used to line pits and/or sumps shall be cut-off below ground level, as far down as possible, and disposed of before the pits are covered. All unattended pits, containing liquids, will be fenced and the liquid portion allowed to evaporate before the pits are broken.

18. All pits found to contain toxic liquids will be fenced and covered with a fine-mesh netting for the protection of wildlife as directed by the responsible BLM representative.

19. All waste associated with the drilling operation will be buried in place (in a separate trash pit) or removed and deposited in an approved sanitary landfill. All garbage (metal containers will be crushed) and debris left on site will be buried at least three feet deep. All trash and debris will be buried or removed from the site within one month after removal of the drill rig. The permittee will comply with all state laws and regulations pertaining to the disposal of human waste.

20. The well "site", if a producer, will be maintained and kept clean of all trash and litter or other foreign material which detracts from the surrounding environment. Maintenance shall also include measures necessary to stabilize soil conditions (other than reseeding) on the road and pad area, and maintenance of facilities associated with said well, to the satisfaction of the District Manager for the lifetime of the well.

21. In the event the oil or gas test results in a dry hole, the drill pad and access road will be ripped in accordance with "BLM Roswell Districts' Ripping Recommendations for Caliche or Compacted Drill Pads and Access Roads" (3109). (Reseeding of the affected areas may be required at the discretion of the District Manager).

22. All structures and pipelines above ground shall be painted a non-glare, non-reflective, non-chalking color that simulates the natural colors of the site. The Bureau will furnish the Federal Standard Number to be used. Fed. Stand. #595

Color: 30318

Special Stipulations: