

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on  
reverse side)

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

11-7-96

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.

NM 86154

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME (WELL NO.)

Diamond Tail  
Diamond Tail "24" Fed #3

9. API WELL NO.

10. FIELD AND POOL OR WILDCAT

Diamond Tail  
Diamond Tail Bone Spri

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

Sec. 24, T23S, R32E

12. COUNTY OR PARISH 13. STATE

Lea N.M.

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Penwell Energy, Inc. (915) 682-2534

3. ADDRESS AND TELEPHONE NO.

600 N. Marienfeld, Ste. 1100, Midland, Texas 79701

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

At surface

2310' FSL & 2310' FWL

At proposed prod. zone

2310' FSL & 2310' FWL

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

Approx. 30 miles SW of Eunice New Mexico

15. DISTANCE FROM PROPOSED\*

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

330

16. NO. OF ACRES IN LEASE

160

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.

1700'

19. PROPOSED DEPTH

10,350

20. ROTARY OR CABLE TOOLS

Rotary

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

3725' GR

22. APPROX. DATE WORK WILL START\*

Dec. 1, 1996

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	K-55, 13 3/8	54.5#	550'	500 sx. Cl. C + additives
12 1/4"	K-55, 8 5/8	24 & 32#	4850'	1000 sx. "C" Lite + additives
7 7/8"	N-80&J55 5 1/2	17#	10350'	250 sx. Cl. C Prem. + add.
				400 sx. Cl. H Lite + add.
				+ 250 sx. Cl. "H" + add.

OPER OGRID NO. 147380

PROPERTY NO. 18737

POOL CODE 17644

EFF. DATE 1/29/97

API NO. 30-025-33805

RECEIVED  
NOV 7 9 42 AM '96

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

Brenda Coffman

TITLE Production Analyst

DATE November 5, 1996

(This space for Federal or State office use)

PERMIT NO.

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:

ADM, MINERALS

APPROVED BY ORIG. SGD. JONY L. FERGUSON

TITLE

DATE

1/34/97

\*See Instructions On Reverse Side

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Rec 11-4-96  
Form C-102  
Revised February 10, 1994  
Instruction on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

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

## OIL CONSERVATION DIVISION

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

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

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-33805</b>	Pool Code <b>17644</b>	Pool Name <b>Diamondtail</b>
Property Code <b>18737</b>	Property Name <b>Diamondtail 24 Federal</b>	Well Number <b>3</b>
OGRID No. <b>147380</b>	Operator Name <b>Penwell Energy Inc.</b>	Elevation <b>3725'</b>

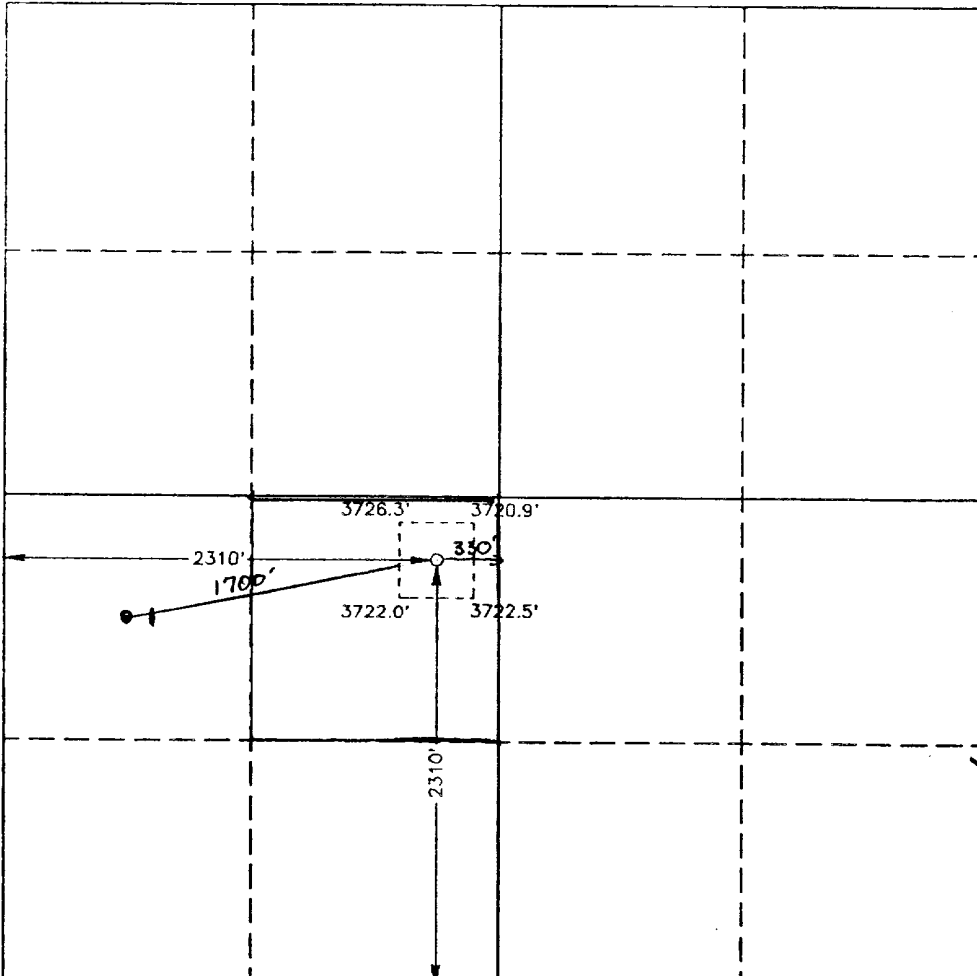
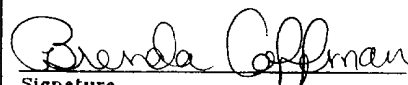
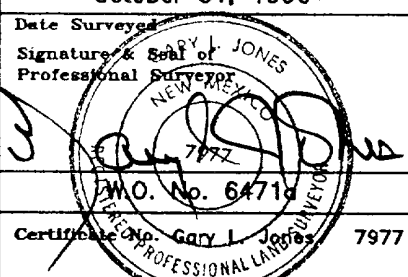
#### Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	24	23 S	32 E		2310	South	2310	West	Lea

#### 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
Dedicated Acres <b>40</b>	Joint or Infill	Consolidation Code	Order No.						

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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature Brenda Coffman Printed Name Production Analyst Title November 5, 1996 Date
	<b>SURVEYOR CERTIFICATION</b>  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 31, 1996 Date Surveyed
	 Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977
	<b>BASIC SURVEYS</b>

## APPLICATION TO DRILL

PENWELL ENERGY, INC.  
DIAMOND TAIL "24" FEDERAL 3  
2310' FSL & 2310' FWL  
SECTION 24, T23S, R32E  
LEA COUNTY, NEW MEXICO

1. LOCATION: 2310' FSL & 2310 FWL, Sec. 24, T23S, R32E, Lea Co. NM.
2. ELEVATION ABOVE SEA LEVEL: 3725'.
3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary Aeolian Deposits
4. DRILLING TOOLS AND ASSOCIATED EQUIPMENT: Conventional rotary drilling rig using mud for the circulation medium.
5. PROPOSED DRILLING DEPTH: 10,350'.
6. ESTIMATED GEOLOGICAL MARKER TOPS:

Lamar	5000'	Lower Brushy Canyon	8500'
Bell Canyon	5050	Avalon Sand	8950'
Manzanita	6150'	First Bone Spring Sand	9900'
Brushy Canyon	7500'		

7. POSSIBLE MINERAL BEARING FORMATION:

### OIL

Brushy Canyon	Avalon Sand
Lower Brushy Canyon	First Bone Spring Sand

### CASING PROGRAM:

Hole Size	Interval	OD Csg	Weight	Thread	Collar	Grade	Cond.
17 1/2"	0-550'±	13 3/8"	48#	8-R	ST&C	K-55	New
12 1/4"	0-4850'	8 5/8"	24 & 32#	8-R	ST&C	K-55	New
7 7/8"	0-10350'	5 1/2"	17#	8-R	LT&C	N-80 & J55	New

PENWELL ENERGY, INC.  
DIAMOND TAIL "24" FEDERAL 3  
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9. CASING CEMENTING & SETTING DEPTH:

13 3/8"	Surface	Set 550' of 13 3/8" K-55, 48# ST&C casing. Cement with 500 sacks Class "C" + additive, Circulate cement to surface.
8 5/8"	Intermediate	Set 4850 of 8 5/8" K-55 32 & 24# ST&C casing. Cement with 1000 sx "C" Lite + additives tail in with 250 sx Class "C" Premium + additives. Circulate cement to surface.
5 1/2"	Production	Set 10350' of 5 1/2" 17# , N-80 & K-55 17# LT&C casing. Cement with 400 sx Class "H" Lite + additives. Tail in with 250 Sx Class "H" + additives. Estimated top of cement @ 7,000'.

10. PRESSURE CONTROL EQUIPMENT: Exhibit "E". A Blow-out Preventer (no less than 900 Series 3000 PSI working pressure) consisting of double ram type preventer with bag type preventer. Units will be hydraulically operated. Exhibit "E-1" Choke Manifold and Closing Unit. Blind rams on top, pipe rams on bottom to correspond with size of drill pipe in use. BOP will be nipped up on 13 3/8" casing and remain on well until casing is run and cemented. BOP will be tested as well as choke manifold. BOP will be worked at least once each day while drilling & blind ram will be worked on trips when no drill pipe is in hole. Full opening stabbing valve and upper kelley cock will be utilized. Anticipated BHP 2800 PSI and 125° BHT.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD. WT.	MUD VISC.	FLUID LOSS	TYPE MUD
40'-550'	8.4 8.8	28-34	NC	Fresh water spud mud, use paper for seepage control .
550-4850'	10-10.8	28-30	NC	Brine water lime for pH control & paper for seepage.
4850-9000'	9.4-10	28-32	NC	Cut Brine lime for pH control and paper for seepage.
9000-10350'	9.4-9-8	32-38	10cc or less	Mud up with Drispac add starch for water loss.

Sufficient mud materials to maintain mud properties, meet lost circulation and weight increase requirements will be kept at wellsite at all times. In order to run casing and log well viscosity may have to be raised and water loss may have to be lowered.

PENWELL ENERGY, INC.  
DIAMOND TAIL "24" FEDERAL #3

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12. TESTING, LOGGING AND CORING PROGRAM:

- A. A two man mud logging unit on hole from 4700' to T.D.
- B. Cores to be taken (sidewall) in Delaware where shows occur from 5000-9000' and in Bone Spring from 9950-10200'.
- C. Open hole logs: CNL-LDT-Gamma Ray from TD to base of surface casing, AIT or Dual Laterlog MSFL from TD to base of surface casing with Gamma Ray Neutron back to surface.
- D. DST'S will be taken as shows dictates.

13. POTENTIAL HAZARDS:

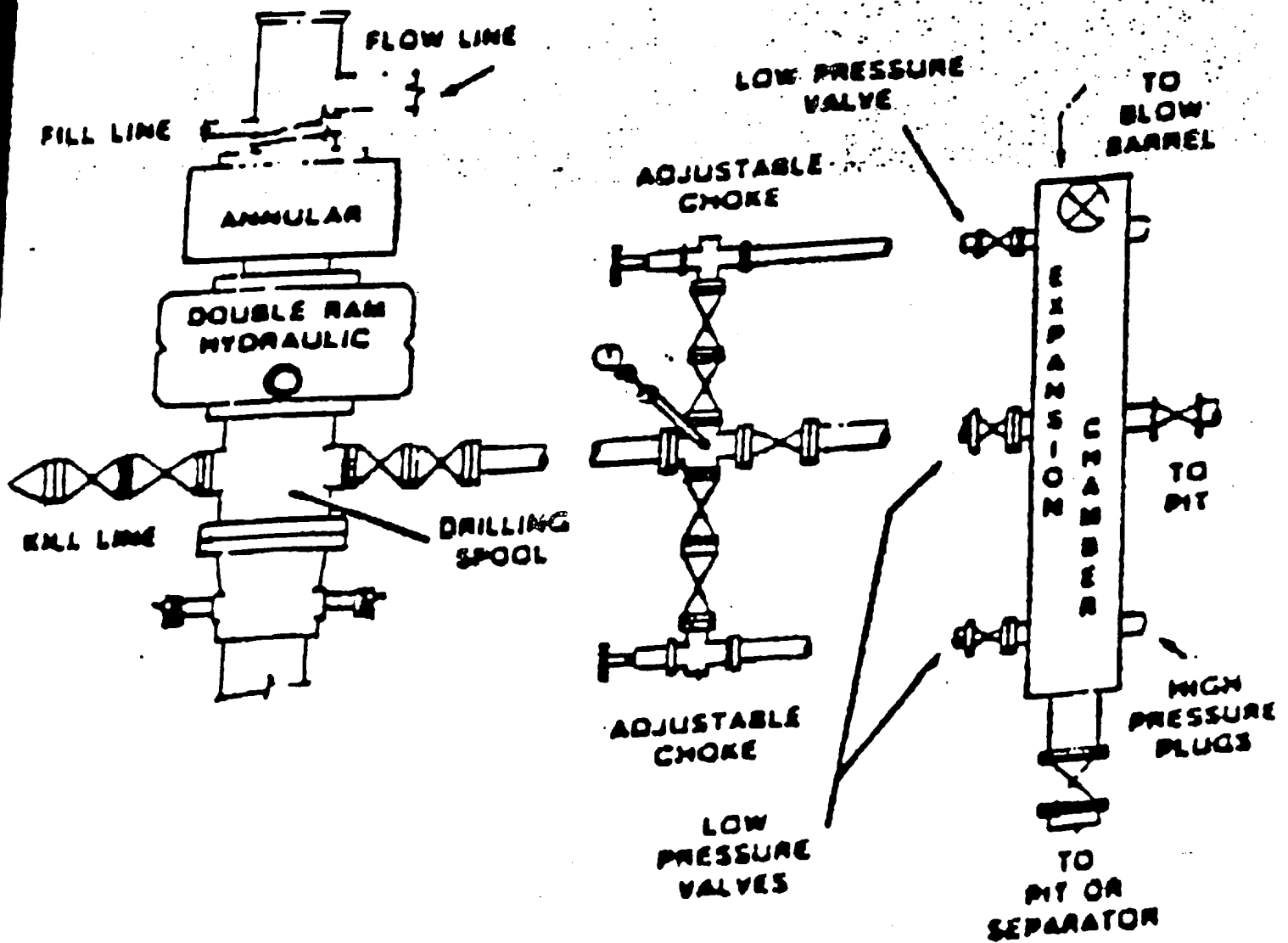
No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H<sub>2</sub>S detectors will be in place to detect any presence. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 2800 PSI, estimated BHT 125°.

14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after BLM approval of APD. Anticipated spud date is December 5, 1996. Drilling is expected to take 20 - 25 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals. The Bone Spring pay will be perforated and stimulated. The well will be swab tested and potentialized as an gas well.



**Standard Blowout Preventer Stack**