

UNIT PROPERTY NO. 147380
UNIT PROPERTY NO. 19686LICATE:
tions on
de)FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995DEPARTMENT
BUREAU OFPOOL CODE 17644
EXP. DATE 4/21/97
API NO. 30-025-33931

APPLICATION FOR PERMIT

1a. TYPE OF WORK

DRILL ☒

b. TYPE OF WELL

OIL
WELL ☒GAS
WELL ☐

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Penwell Energy, Inc.

3. ADDRESS AND TELEPHONE NO.

(915) 683-2534
600 N. Marienfeld, Ste. 1100, Midland, Tx. 79701

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

At surface

1980' FSL & 660' FEL

At proposed prod. zone

1980' FSL & 660' FEL

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

Approx. 30 miles SW of Eunice, N. M.

5. DISTANCE FROM PROPOSED*

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

660'

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

16. NO. OF ACRES IN LEASE

19. PROPOSED DEPTH

10,350'

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

3710' GR

23

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"	48#	550'	500 Sx Circ.'d to surface.
12 1/4"	K-55, 8 5/8"	24 & 32	4850'	1250 Sx Circ.'d to surface
7 7/8"	K-55&N-80 5 1/2"	17	10350'	650 Sx Est. TOC 7500'

Drill 17 1/2" hole to 550'. Run & set 550' of 13 3/8" 48#, K-55, 8rd ST&C csg. Cmt. w/300 sx Cl. "C" Light w/1/2# flocele/sx + 5# Gilsonite/sx + 2% CaCl, tail in with 200 sx Cl. "C" + 3% CaCl. Circ. to surface.

Drill 12 1/4" hole to 4850'. Run and set 2550' of 8 5/8" 32#, K-55, 8rd, ST&C 2300' of 8 5/8", 24#, K-55, 8rd ST&C csg. Cmt. w/1000 sx Cl. "C" Light + 1/2 flocele/sx + 5# Gilsonite/sx + 8% salt + 2% CaCl, tail in with 250 sx Cl. "C" 2% CaCl. Circ. cmt. to surface.

Drill 7 7/8" hole to 10,350'. Run & set 3200' of 5 1/2", N-80, 17#, 8rd, LT&C + 4900' of 5 1/2" K-55, 17#, 8rd, LT&C + 2250' of 5 1/2" N80, 17# 8-rd LT&C csg. Cmt. w/400 sx Cl. "H" Light + 1/4# flocele/sx + 1# Gilsonite/Sx + 5% Salt, tail in with 250 sx Cl. "H" + 5% Salt + .6% Halad 9 + .6% Halad 322. Est. TOC 7500'

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

APPROVED BY

Brenda Coffman

TITLE

Production Analyst

DATE August 2, 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:

APPROVED BY

Richard Mannis

TITLE

DATE

10/22/96

*See Instructions On Reverse Side

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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 3D-025-33932	Pool Code 17644	Pool Name Diamondtail Bone Springs
Property Code 1968D	Property Name Diamondtail "23" Federal	Well Number 1
OGRID No. 147380	Operator Name Penwell Energy Inc.	Elevation 3710'

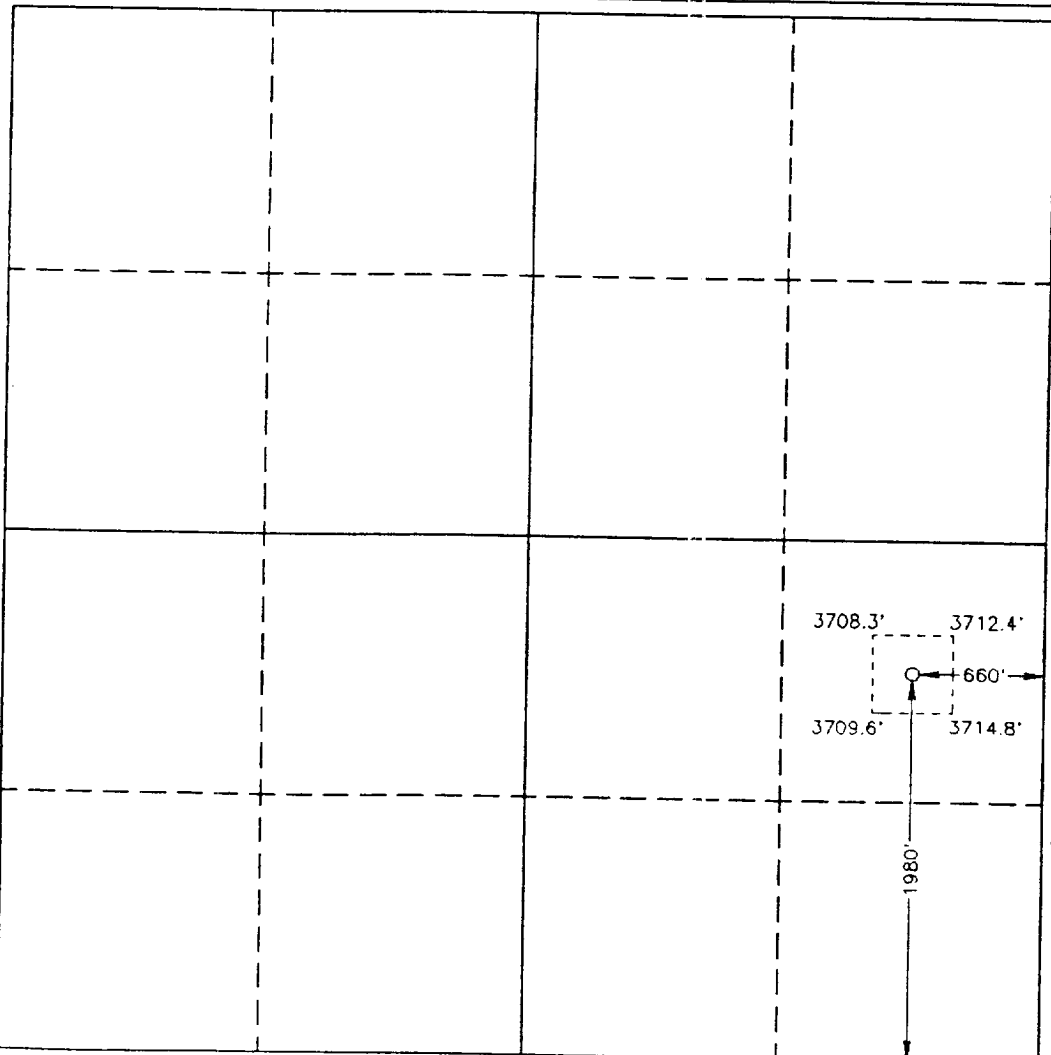
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	23	23 S	32 E		1980	South	660	East	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	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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>Brenda Coffman</i> Signature Brenda Coffman Printed Name Production Analyst Title September 11, 1996 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 belief. July 24, 1996 Date Surveyed Signature & Seal of Professional Surveyor <i>W. Q. No. 62894</i> Certificate No. Gary Jones 7977 BASIN SURVEYS

APPLICATION TO DRILL

PENWELL ENERGY, INC.
DIAMOND TAIL "23" FEDERAL 1
1980' FSL & 660' FEL
SECTION 23, T23S, R32E
LEA COUNTY, NEW MEXICO

1. LOCATION: 1980' FSL & 660' FEL, Sec. 23, T23S, R32E, Lea Co. NM.
2. ELEVATION ABOVE SEA LEVEL: 3710'.
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"	43 #	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 "23" FEDERAL 1
APPLICATION FOR PERMIT TO DRILL

PAGE 2

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 "23" FEDERAL #1

APPLICATION FOR PERMIT TO DRILL

PAGE 3

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:

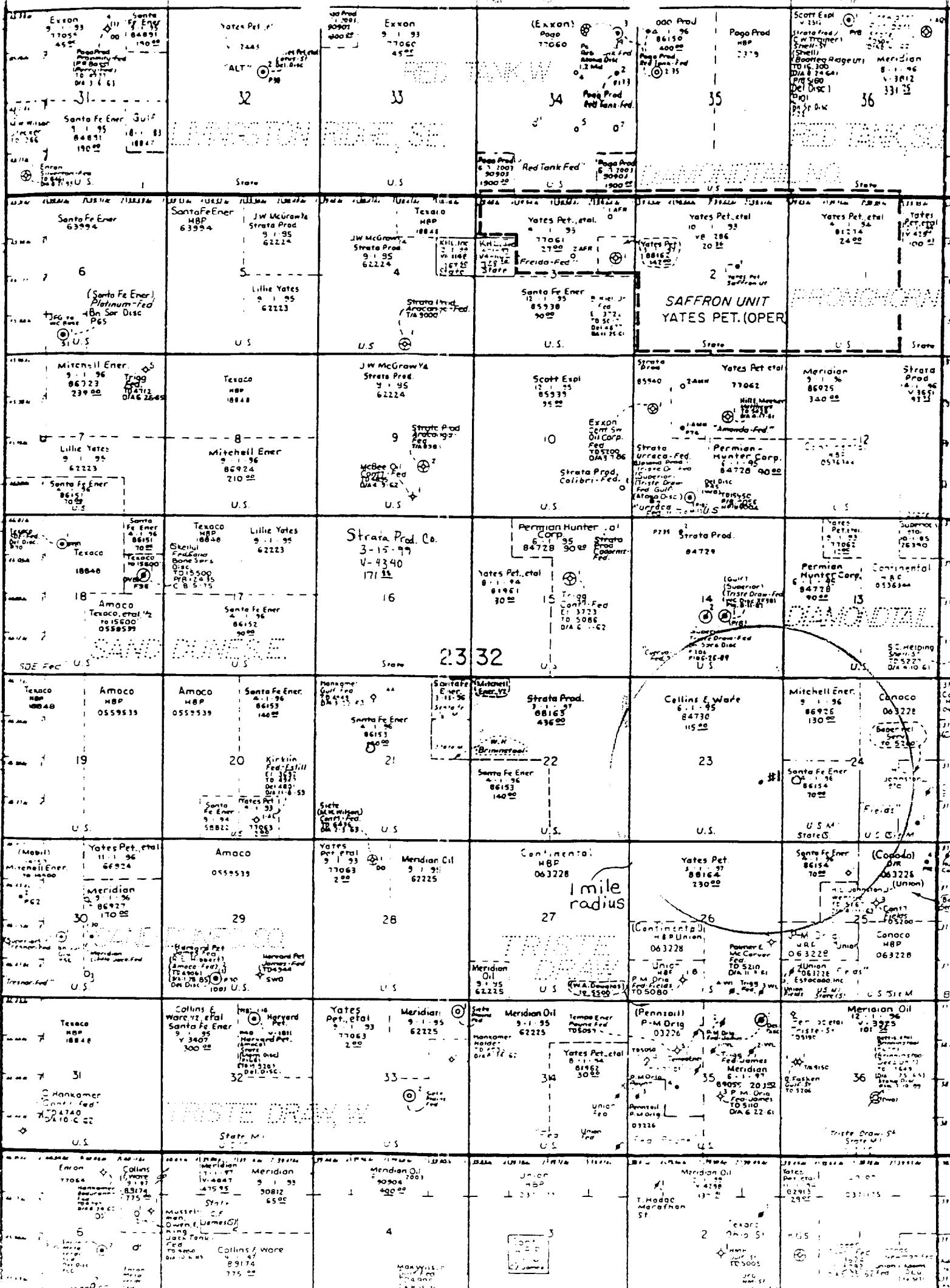
No abnormal pressures or temperatures are expected. Hydrogen Sulfide gas may be encountered, H₂S detectors will be in place to detect any presence. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used. Estimated BHP 2800 PSI, estimated BHT 125°.

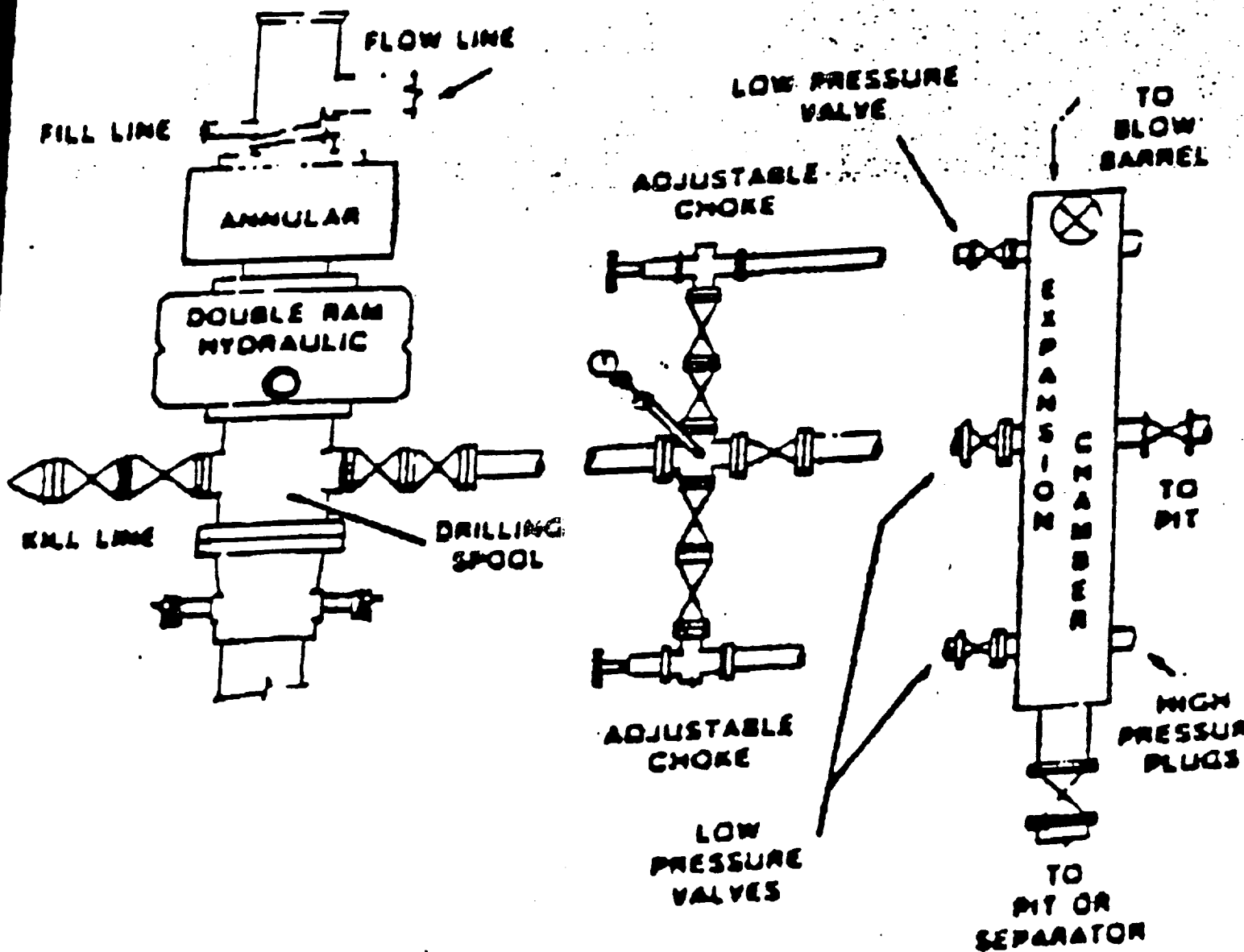
14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after BLM approval of APD. Anticipated spud date is September 1, 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