Form 3160-3
(July 1992)

N.M OPER. OGRID NO. 14738
P.O PROPERTY NO. 19680
POOL CODE 17644
EFF. DATE 10/29/96
API NO. 30-025-33653

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

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

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

2. NAME OF OPERATOR: Penwell Energy, Inc.

3. ADDRESS AND TELEPHONE NO.: 600 N. Marienfeld, Ste 1100, Midland, Tx. 79701 (915) 683-2534

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FNL & 660' FEL
At proposed prod. zone: 1980' FNL & 660' FEL Unit H

5. LEASE DESIGNATION AND SERIAL NO.: NM84730

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME, WELL NO.: Diamond Tail "23" Fed.# 2

9. API WELL NO.:

10. FIELD AND POOL, OR WILDCAT: Diamondtail Bone Spring

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 23, T23S, R32E

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

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): 660

16. NO. OF ACRES IN LEASE: 640

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: 10,350'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): ~~3710'~~ GR: 3716'

22. APPROX. DATE WORK WILL START*: Sept. 25, 1996

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 5½"	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/¼# flocele/sx + 5# Gilsonite/sx + 2% CaCl, tail in with 200 sx Cl. "C" + 3% CaCl. Circ. to surface.

Drill 12¼" 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/100 sx Cl. "C" Light + ¼ 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# 8rd, LT&C csg. Cmt. w/400 sx. Cl. "H" Light + ¼# 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.

SIGNED Brenda Coffman TITLE Production Analyst DATE August 2, 1996

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

General Requirements and Special Stipulations Attached

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 (ORIG. SGD.) RICHARD L. MANUS TITLE Area Manager DATE OCT 22 1996

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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

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

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

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

OIL CONSERVATION DIVISION

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-33653	17644	Diamondtail Bone Springs

Property Code	Property Name	Well Number
19680	Diamondtail "23" Federal	2

OGRID No.	Operator Name	Elevation
147380	Penwell Energy Inc.	3716'

Surface Location

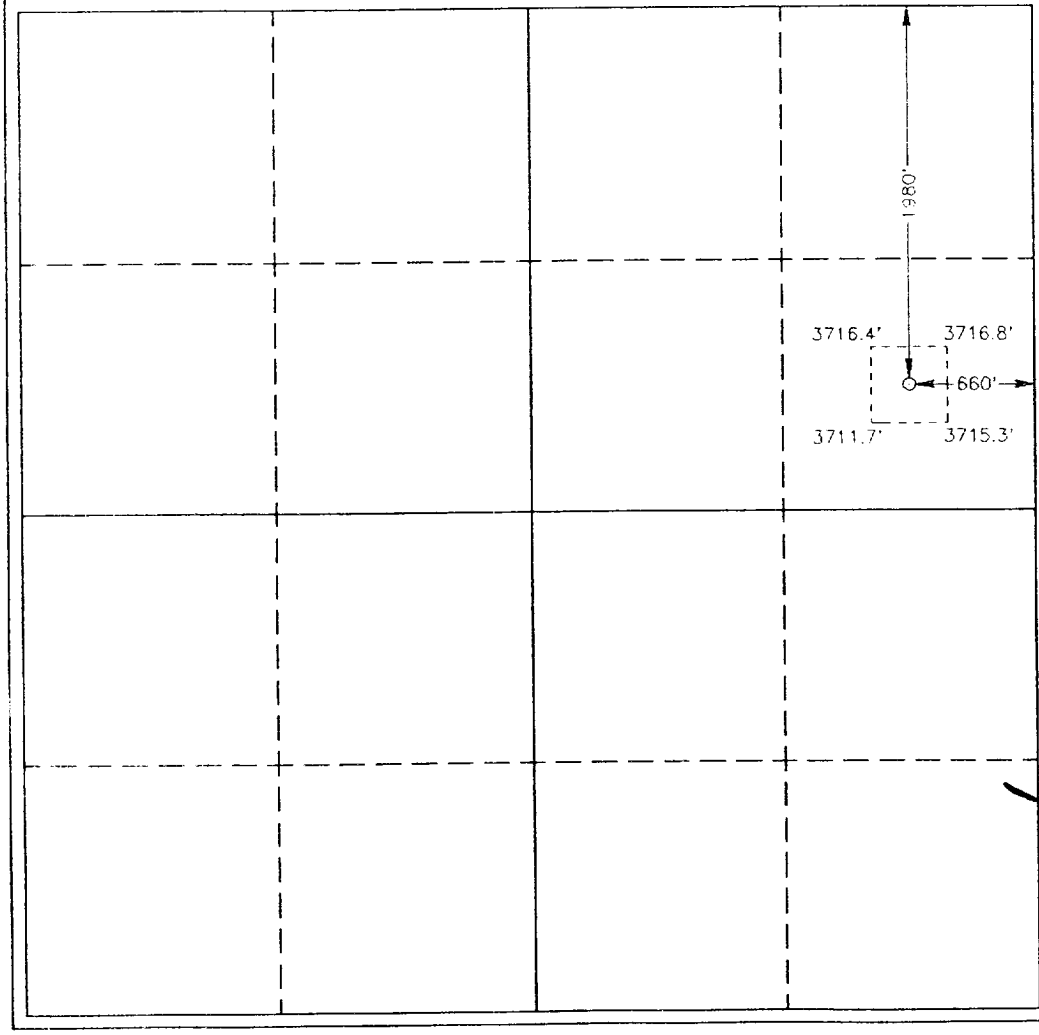
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	23	23 S	32 E		1980	North	660	East	Lea

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.
40			

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

Brenda Coffman
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 supervison, and that the same is true and correct to the best of my belief

July 24, 1996
Date Surveyed

Signature & Seal of Professional Surveyor

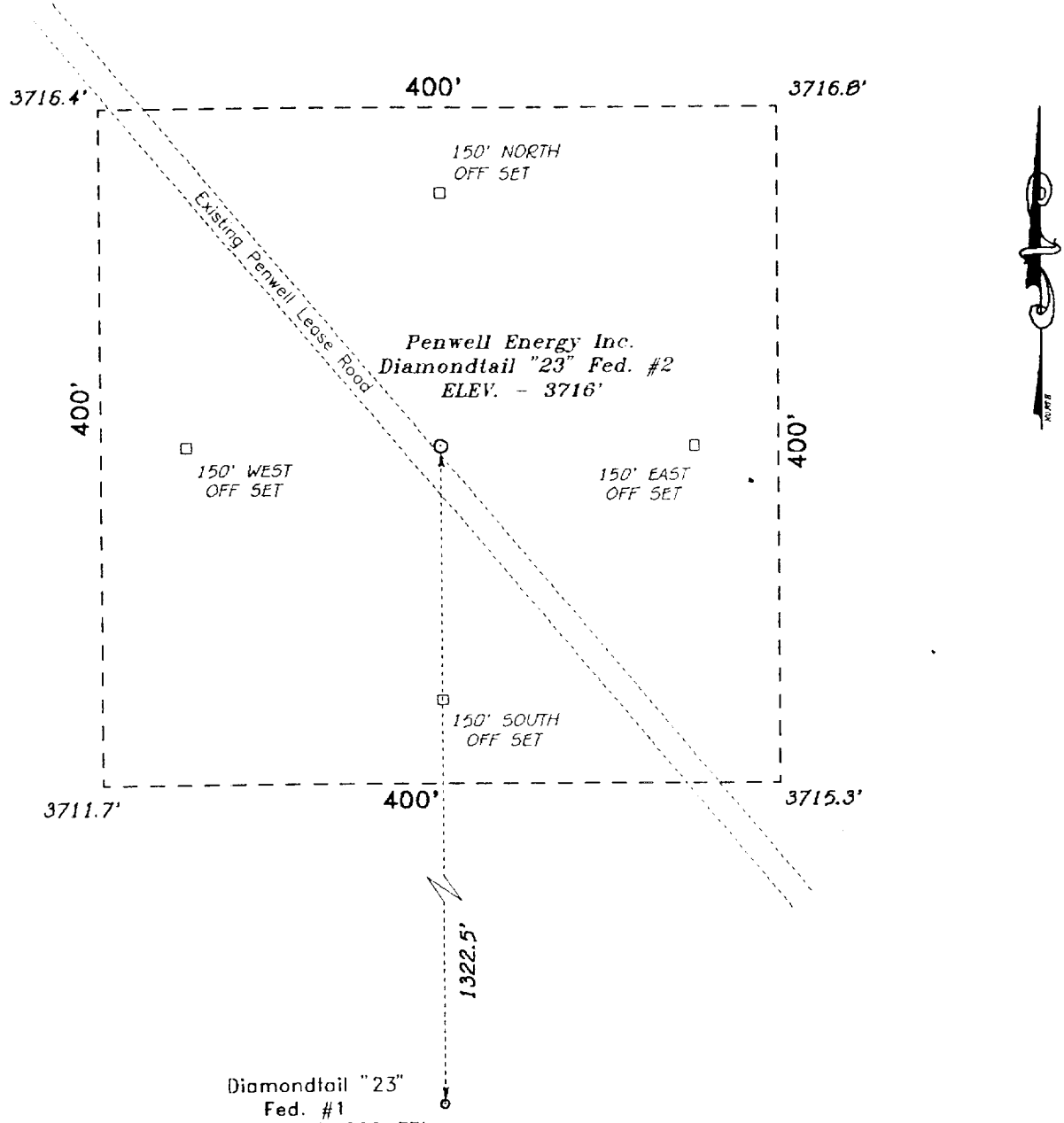
GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

W.O. No. 62895

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 23, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



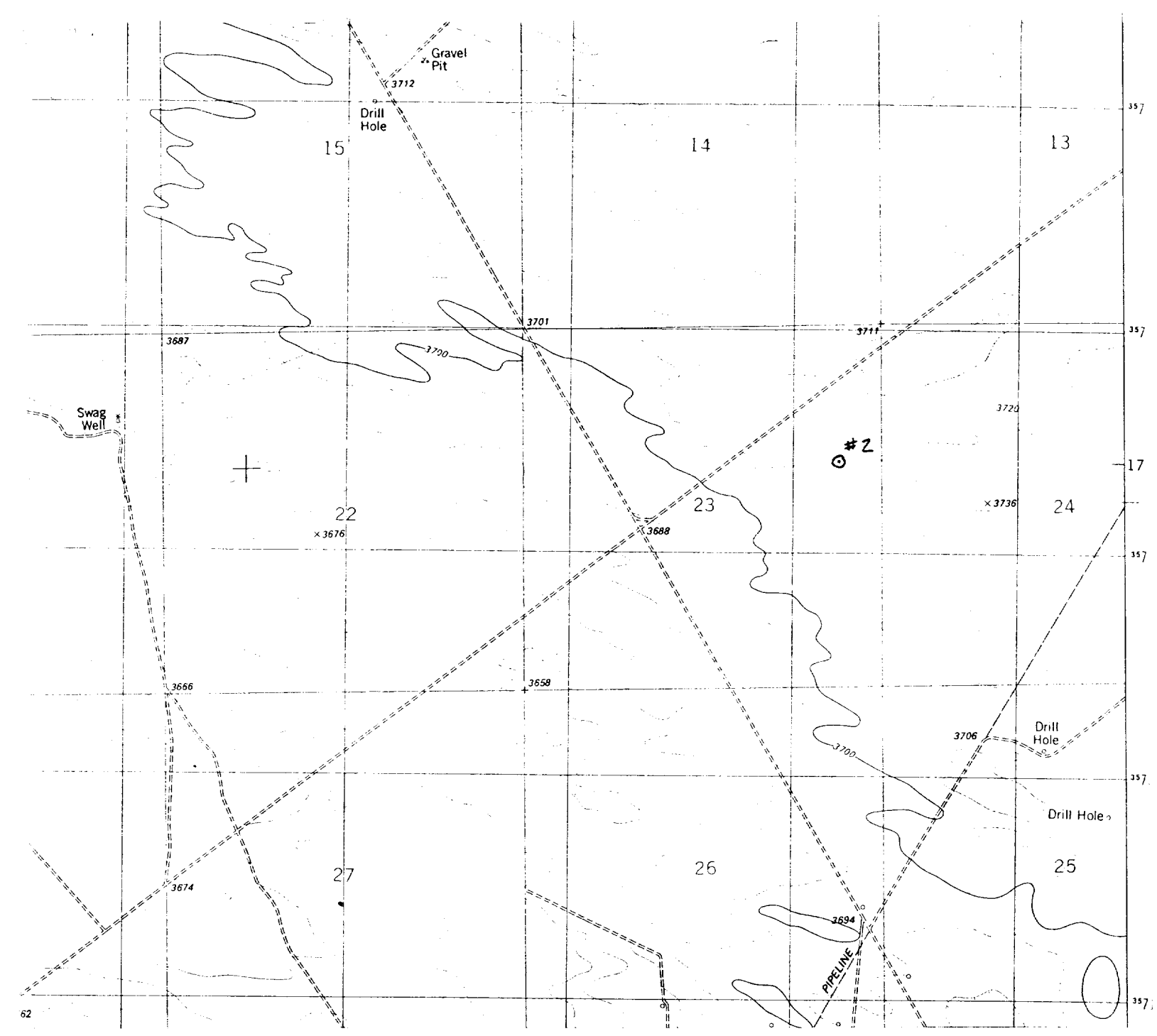
Penwell Energy Inc.

REF: Diamondtail "23" Federal No. 2 / Well Pad Topo

THE DIAMONDTAIL "23" FED. #2 LOCATED 1980' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 23, TOWNSHIP 23 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

W.O. Number: 6289	Drawn By: S.C. NICHOLS		
Date: 07-26-96	Disk: SCN #28 – 6289BB.DWG	Survey Date: 07-24-96	Sheet 1 of 1 Sheets



PENWELL ENERGY INC.
Diamondtail "23" Federal #2
1980' FNL & 660' FEL
Sec. 23, T-23-S, R-32-E,
Lea County, New Mexico.

N

SCALE: 1" = 2000'

2000' 0 2000' 4000 Feet

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 6289	Drawn By: S.C. Nichols	Survey Date: 7-24-96	Sheet 1 of 1 Sheets

APPLICATION TO DRILL

PENWELL ENERGY, INC.
DIAMOND TAIL "23" FEDERAL 2
1980' FNL & 660' FEL
SECTION 23, T23S, R32E
LEA COUNTY, NEW MEXICO

1. LOCATION: 1980' FNL & 660' FEL, Sec. 23, T23S, R32E, Lea Co. NM.

2. ELEVATION ABOVE SEA LEVEL: 3710'.

3. GEOLOGIC NAME OF SURFACE FORMATION: Quaternery 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 ½"	0-550'+-	13 3/8"	48#	8-R	ST&C	K-55	New
12 ¼"	0-4850'	8 5/8"	24 & 32#	8-R	ST&C	K-55	New
7 7/8"	0-10350'	5 ½"	17#	8-R	LT&C	N-80 & J55	New

PENWELL ENERGY, INC.
DIAMOND TAIL "23" FEDERAL 2
APPLICATION FOR PERMIT TO DRILL

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 ½"	Production	Set 10350' of 5 ½" 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 nippled 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.

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_2S 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 25, 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 potentialed as an gas well.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H_2S safety safety instructor to the following:

   A. Characteristics of H_2S
   B. Physical effects and hazards
   C. Proper use of safety equipment and life support systems.
   D. Principle and operation of H_2S detectors, warning system and briefing areas.
   E. Evacuation procedure, routes and first aid.
   F. Proper use of 30 minute pressure demand air pack.

2. H_2S DETECTION AND ALARM SYSTEMS

   A. H_2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3. WINDSOCK AND/OR WIND STREAMERS

   A. Windsock at mudpit area should be high enough to be visible.
   B. Windsock at briefing area should be high enough to be visible.
   C. There should be a windsock at entrance to location.

4. CONDITION FLAGS AND SIGNS

   A. Warning sign on access road to location.
   B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow H2S safety flag indicates potential pressure and danger. Red flag, danger, H_2S present in dangerous concentration. Only emergency personnel admitted to location.

5. WELL CONTROL EQUIPMENT

   A. See exhibit "E"

6. COMMUNICATION

   A. While working under masks chalkboards will be used for communication.
   B. Hand signals will be used where chalk board is inappropriate.
   C. Cellular telephones will be used to communicate off location in case emergency help is required.

7. DRILLSTEM TESTING

   A. Exhausts will be watered
   B. Flare line will be equipped with an electric ignitor, diesel pilot, or a propane pilot light in case gas reaches the surface.
   C. If location is near any dwelling a closed D.S.T. will be performed.

8. Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9. If H_2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers, if necessary.

SURFACE USE PLAN
PENWELL ENERGY INC.
DIAMOND TAIL "23" FEDERAL #2
1980' FNL & 660' FEL
SECTION 23, T-23-S, R-32-E
LEA COUNTY, NEW MEXICO

1. EXISTING ROADS: Area maps, Exhibit "B" is a reproduction of Lea Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing roads and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.

   A. Exhibit "A" shows the proposed well site as staked.

   B. From Intersection of State Hiway 128 and County Road C-29, go east on Hwy. 128 9.5 miles thence northwest on Transwestern Road 6.5 miles thence northeast on El Paso N.G. Road 0.5 miles thence south on lease road 0.3 miles.

2. PLANNED ACCESS ROADS: None.

   A. The access road will be crowned and ditched to a 12' wide travel surface with a 40' right-of-way.

   B. Gradient on all roads will be less than 1.00%.

   C. No turnouts will be necessary.

   D. If needed, road will be surfaced with a minimum of 6" of compacted caliche. This material will be obtained from a local source.

   E. Earthwork will be as required by field conditions.

   F. Culverts in the access road will not be used.

3. LOCATION OF EXISTING WELLS IN A ONE-MILE RADIUS EXHIBIT "A-1"

   A. Water wells - None known

   B. Disposal wells - None known

   C. Drilling wells - As shown on Exhibit "A-1"

   D. Producing wells - As shown on Exhibit "A-1

   E. Abandoned wells - As shown on Exhibit "A-1"If, upon completion this well is a producer , Penwell Energy Inc. will furnish maps and/or plats showing on site facilities or off site facilities if needed. This will be accompanied with a Sundry Notice.

4. LOCATION AND TYPE OF WATER SUPPLY

Water will be purchased locally from a private source and trucked over the access roads or piped in flexible lines laid on top of the ground.

5. SOURCE OF CONSTRUCTION MATERIALS

If needed, construction materials will be obtained from the drill site's excavations or from a local source. These materials will be transported over the access route as shown on Exhibit "A".

METHODS FOR HANDLING WASTE DISPOSAL

A. 1. Drill cuttings will be disposed of in the reserve pit.

2. Trash, waste paper, and garbage will either be contained in a fenced trash trailer or in a trash pit, fenced with mesh wire to prevent wind-scattering and will be buried at least 36" deep within a reasonable period of time.

3. Salts remaining after completion of the well will be picked up by the supplier, including broken sacks.

4. Sewage from trailer houses will drain into holes with minimum depth of 10'00". These holes will be covered during drilling and backfilled upon completion.

B. Remaining drilling fluids will be allowed to evaporate in the reserve pit until the pit is dry enough for backfilling.

Water produced during testing of the well will be disposed of in the reserve pit. Oil produced during testing of the well will be stored in test tanks until sold and hauled from the site.

6. ANCILLARY FACILITIES

No camps of airstrips will be constructed.

7. WELL SITE LAYOUT

A. Exhibit "D" shows the proposed well site layout.

B. This exhibit indicated proposed location of reserve and sump pits and living facilities.

C. Mud pits in the active circulating system will be steel pits and the reserve pit is proposed to be unlined unless subsurface condition encountered during pit construction indicate that lining is needed for lateral containment of fluids.

D. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.

E. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

8. PLANS FOR RESTORATION OF SURFACE

Rehabilitation of the location and reserve pit will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole. However, in either event, the reserve pit will be allowed to dry properly, and fluid removed and disposed of in accordance with Article 7.B as previously noted. The pit area will then be leveled and contoured as closley as possible to conform to the original and surrounding area. Drainage systems, if any, will be reshaped in the same manner with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be contoured as closely as possible to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be a producer, the previously noted procedures will apply to those areas which are not required for production facilities.

9. OTHER INFORMATION:

A. Topography: The proposed well site and access road consists of low lying sand dunes with native grasses and Mesquite with some small oak trees.

B. Surface is owned by The Department of Interior, BLM. The grazing leasee is Mr. Larry Bearden of Seminole Texas.

C. An archaeological study will be conducted on the location and road when completed it will be submitted separately to the BLM in Carlsbad, New Mexico.

D. There are no dwellings within 2 miles of location.

10. OPERATORS REPRESENTIVE:

PENWELL ENERGY, INC.
600 NORTH MARIENFELD, STE. 1100
MIDLAND, TEXAS 79701

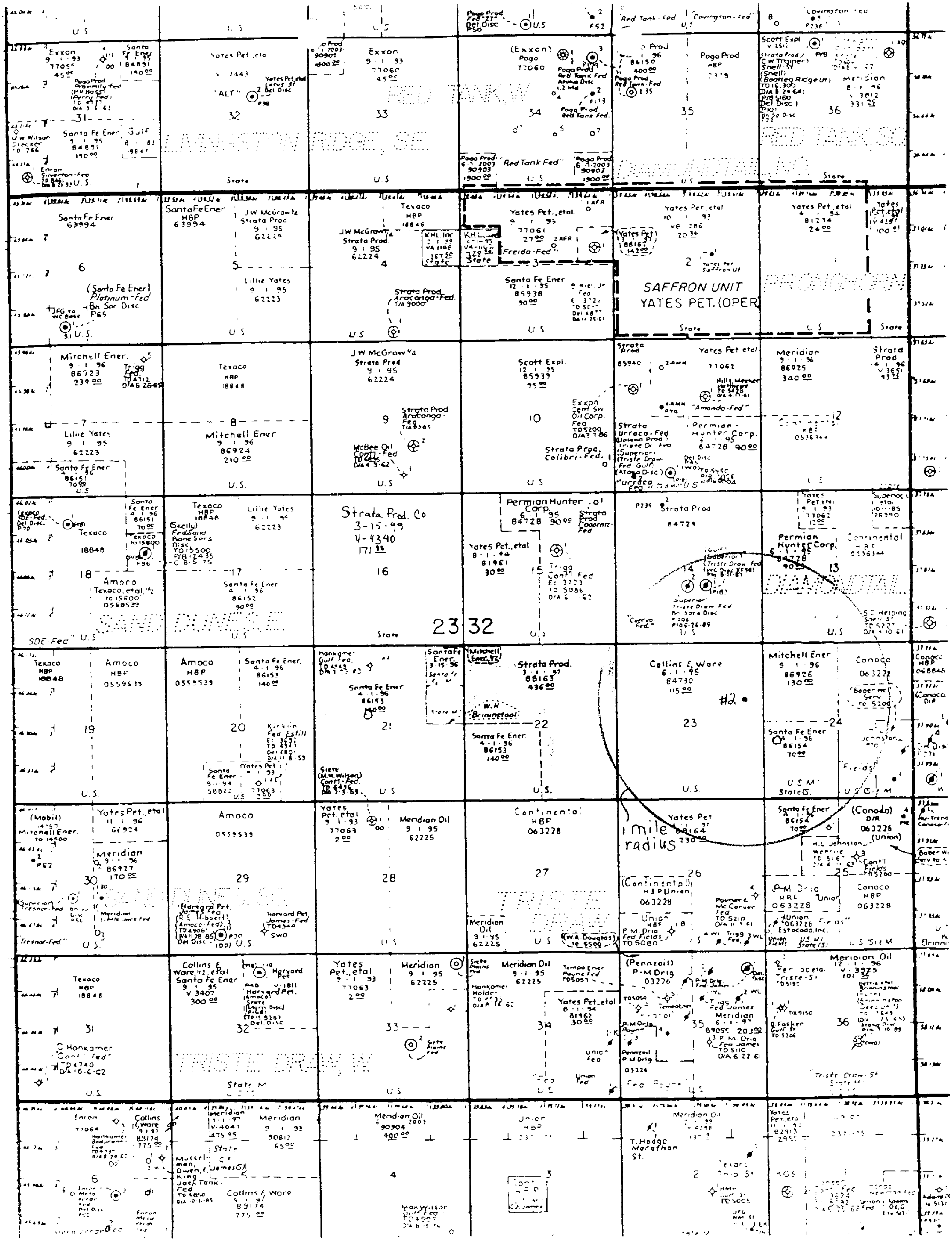
BILL PIERCE PHONE 915 683-2534

11. CERTIFICATION: - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently 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 Penwell Energy Inc., its contractors/subcontractors is in the conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provision of U.S.C. 1001 for the filing of a false statement.

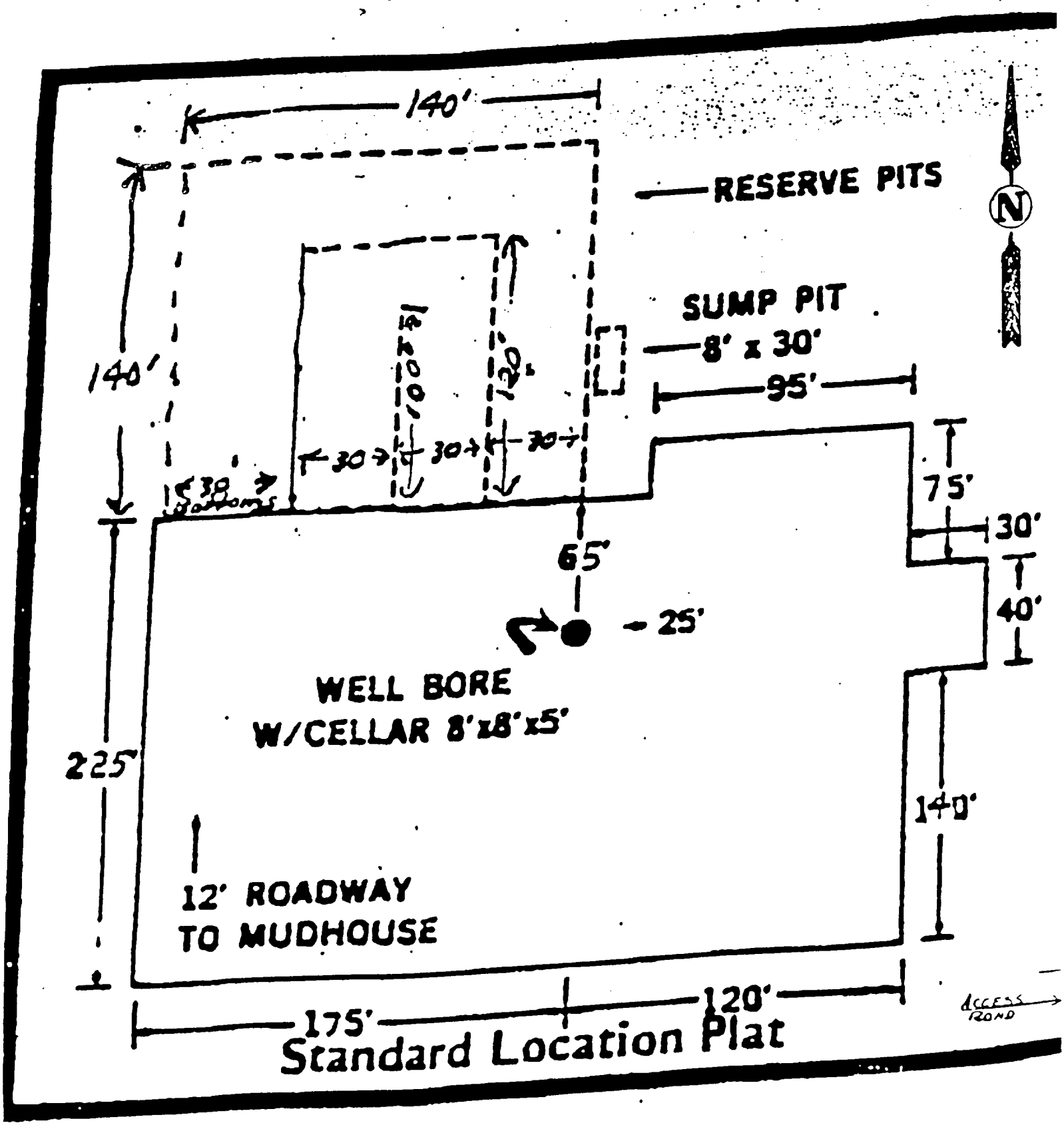
NAME : Bill Pierce
Bill Pierce

DATE : 9-11-96

TITLE :Engineer

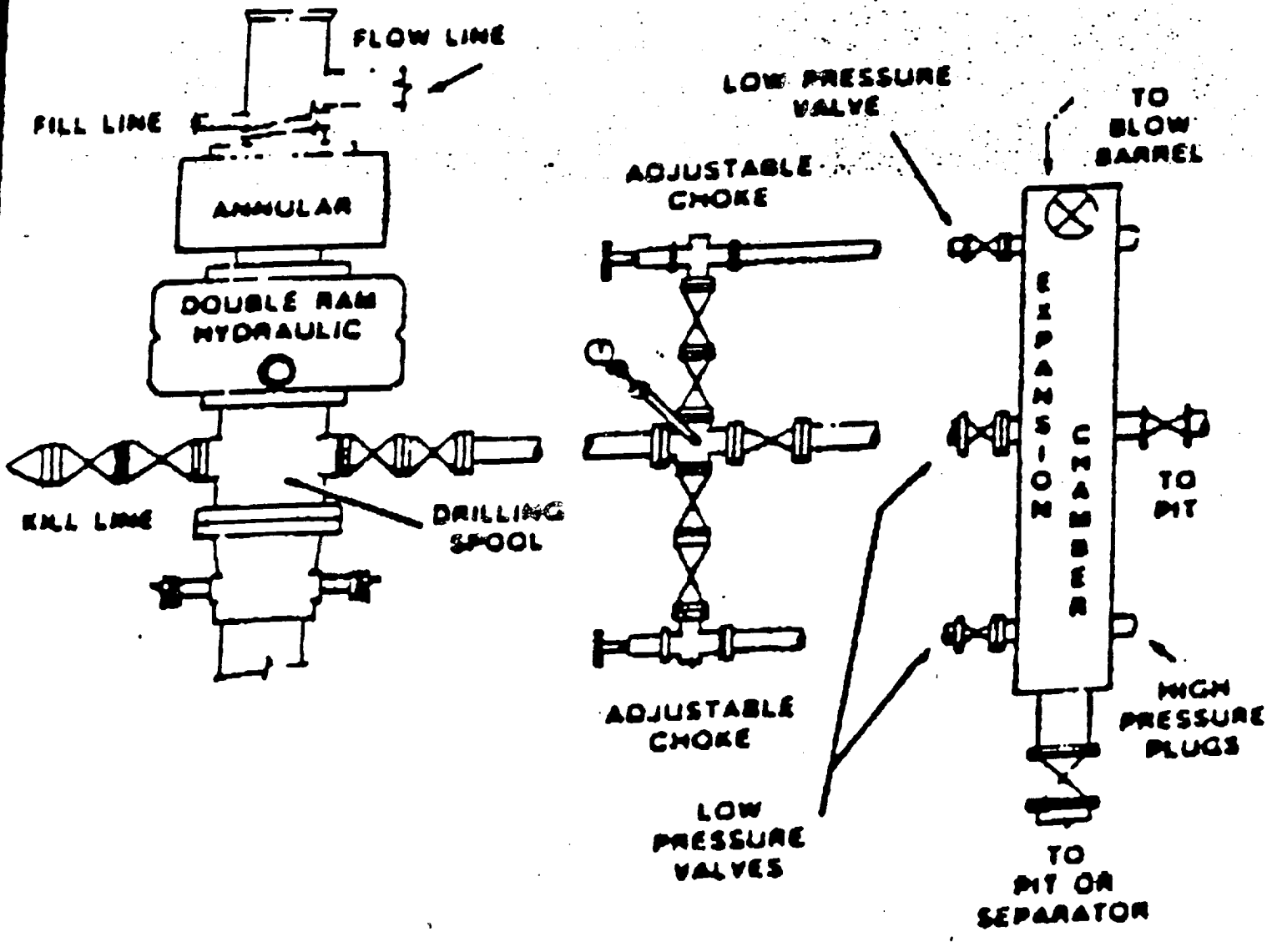


RED TANK, W
LIVINGSTON RIDGE, SE
RED TANK, SE
DIAMONDTAIL, NO
PRONGHORN
SAFFRON UNIT
YATES PET. (OPER)
SAND DUNES, S.E.
DIAMONDTAIL
SAND DUNES, SO
TRISTE DRAW
TRISTE DRAW, W
23 32
1 mile radius
#2
Strata Prod. Co.
3-15-99
V-4340
Strata Prod.
3-1-97
88163
Collins & Ware
6-1-95
84730
Exxon
Pogo Prod
Yates Pet., etal
Santa Fe Ener
Texaco
Amoco
Mitchell Ener.
Meridian Oil
Scott Expl
Lillie Yates
J W McGrow 1/4
Permian Hunter Corp.
Continental
Conoco
Union
Red Tank Fed
Frieda-Fed
U.S.
State



Standard Location Plat

EXHIBIT "D"



Standard Blowout Preventer Stack

EXHIBIT "E"
PENWELL ENERGY, INC.

5M BOP Specifications

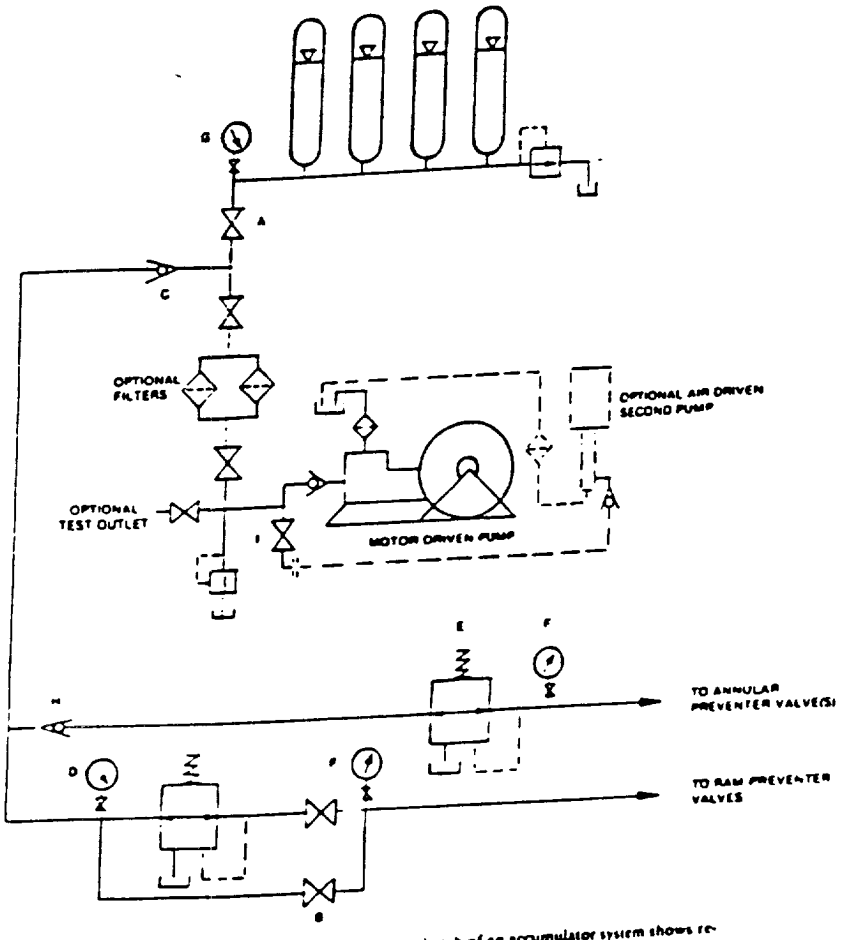


FIGURE K6-1. The schematic sketch of an accumulator system shows required and optional components.

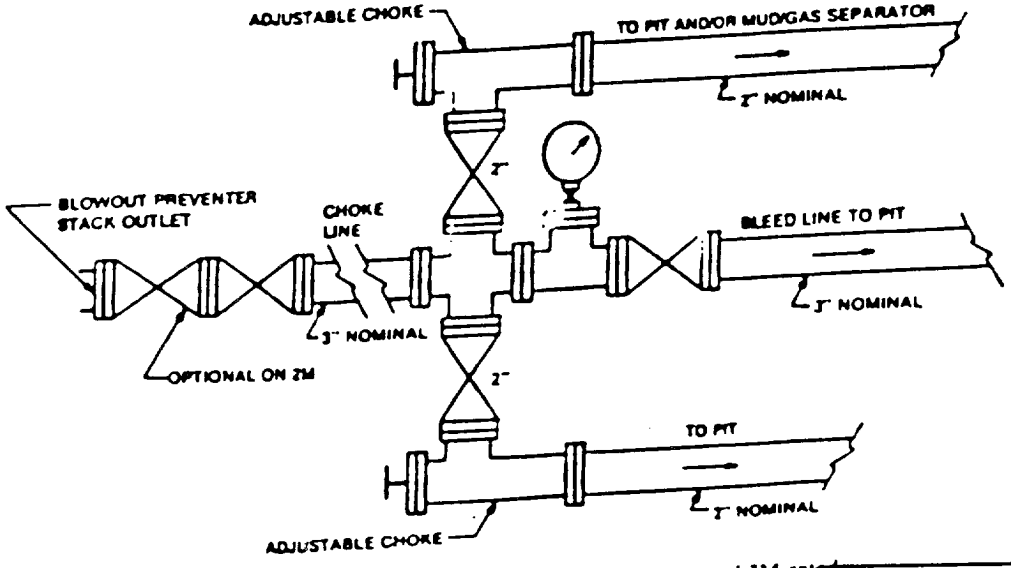


FIGURE K4-1. Typical choke manifold assembly for 2M and 3M rat working pressure service — surface installation.

EXHIBIT "1-E"
CHOKE MANIFOLD & CLOSING U
PENNELL ENERGY INC.