

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL OR DEEPEN

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

APACHE CORPORATION

(LANA WILLIAMS 918-491-4980) &lt;873&gt;

## 3. ADDRESS AND TELEPHONE NO.

6120 SOUTH YALE SUITE 1500 TULSA, OKLAHOMA 74136 (918-491-4980)

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

At surface

1190' FNL &amp; 1310' FEL SECTION 17 T21S-R37E LEA CO. NM

At proposed prod. zone SAME

CAPTAIN CONTROLLED WATER BASIN

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

2.5 Miles North of Eunice New Mexico.

## 15. DISTANCE FROM PROPOSED\*

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

1190'

## 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.

349'

## 19. PROPOSED DEPTH

6925'

## 20. ROTARY OR CABLE TOOLS

ROTARY

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

3482' GR.

22. APPROX. DATE WORK WILL START\*  
WHEN APPROVED

23.

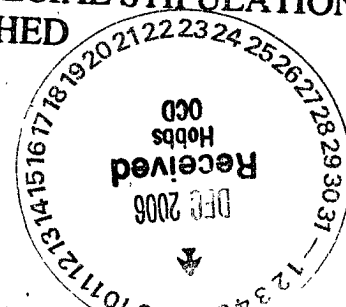
## PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT         |
|--------------|----------------------|-----------------|---------------|----------------------------|
| 26"          | Conductor 20"        | NA              | 40'           | Redi-mix cement to surface |
| 12 1/4"      | J-55 8 5/8"          | 24#             | 1300'         | 600 Sx. " " "              |
| 7 7/8"       | J-55 5 1/2"          | 17#             | 6925'         | 1400 Sx. " " "             |

NSL - 5684

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

SEE ATTACHED SHEETS FOR DETAIL.

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

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.

SIGNED

TITLE Agent

DATE 09/25/06

(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

/s/ James Stovall

TITLE

FIELD MANAGER

DATE

\*See Instructions On Reverse Side

DEC -4 2006

APPROVAL FOR 1 YEAR

## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

**Energy, Minerals and Natural Resources Department.**

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

Form C-102

Revised JUNE 10, 2003

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

# WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                            |                                     |                    |                                        |
|----------------------------|-------------------------------------|--------------------|----------------------------------------|
| API Number<br>30-025-38548 |                                     | Pool Code<br>22900 | Pool Name<br>Eunice Bl. Tr. Dr., North |
| Property Code<br>24430     | Property Name<br>LOCKHART A-17      |                    | Well Number<br>22                      |
| OGRID No.<br>873           | Operator Name<br>APACHE CORPORATION |                    | Elevation<br>3482'                     |

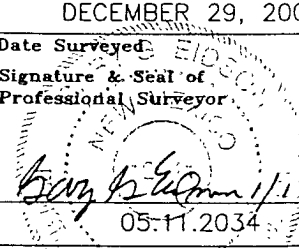
### Surface Location

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| A             | 17      | 21-S     | 37-E  |         | 1190          | NORTH            | 1310          | 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<br>40 | Joint or Infill | Consolidation Code |       | Order No.<br>NSL-5684 |               |                  |               |                |        |

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 information contained herein is true and complete to the best of my knowledge and belief.                                                                                               |       |
| <i>Lana Williams</i><br>Signature                                                                                                                                                                            |       |
| Lana Williams<br>Printed Name                                                                                                                                                                                |       |
| Eng. Tech<br>Title                                                                                                                                                                                           |       |
| 7/27/06<br>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. |       |
| DECEMBER 29, 2005                                                                                                                                                                                            |       |
| Date Surveyed:                                                                                                                                                                                               | RZB   |
| Signature & Seal of Professional Surveyor                                                                                                                                                                    |       |
|  <p style="position: absolute; bottom: 10px; right: 10px; font-size: small;">Gary K Eidson 1/17/06<br/>05-11-2034</p>   |       |
| Certificate No.: GARY EIDSON                                                                                                                                                                                 | 12641 |
| RONALD-J. EIDSON                                                                                                                                                                                             | 3239  |

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Energy, Minerals and Natural Resources Department

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Form C-102  
Revised JUNE 10, 2003  
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WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|               |                                     |                    |
|---------------|-------------------------------------|--------------------|
| API Number    | Pool Code                           | Pool Name          |
| Property Code | Property Name<br>LOCKHART A-17      | Well Number<br>22  |
| OGRID No.     | Operator Name<br>APACHE CORPORATION | Elevation<br>3482' |

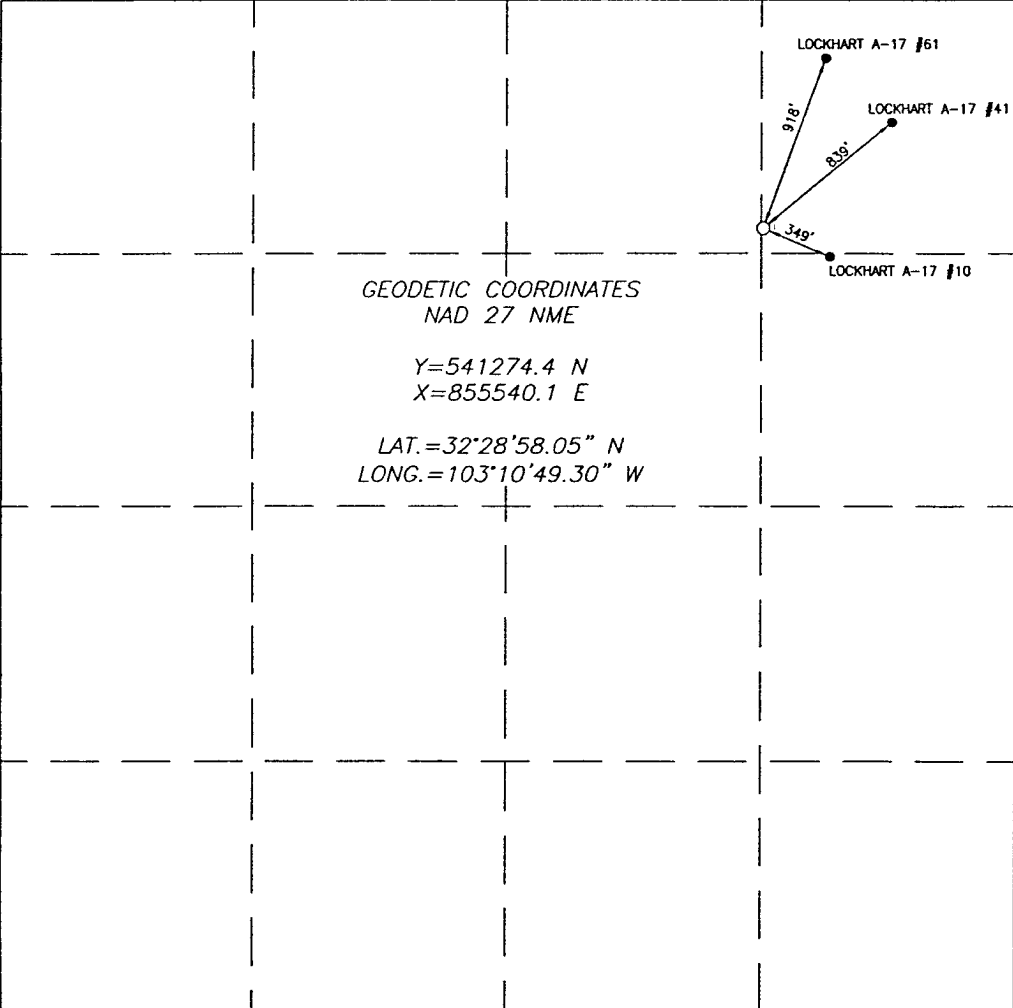
Surface Location

|               |         |          |       |         |               |                  |               |                |        |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
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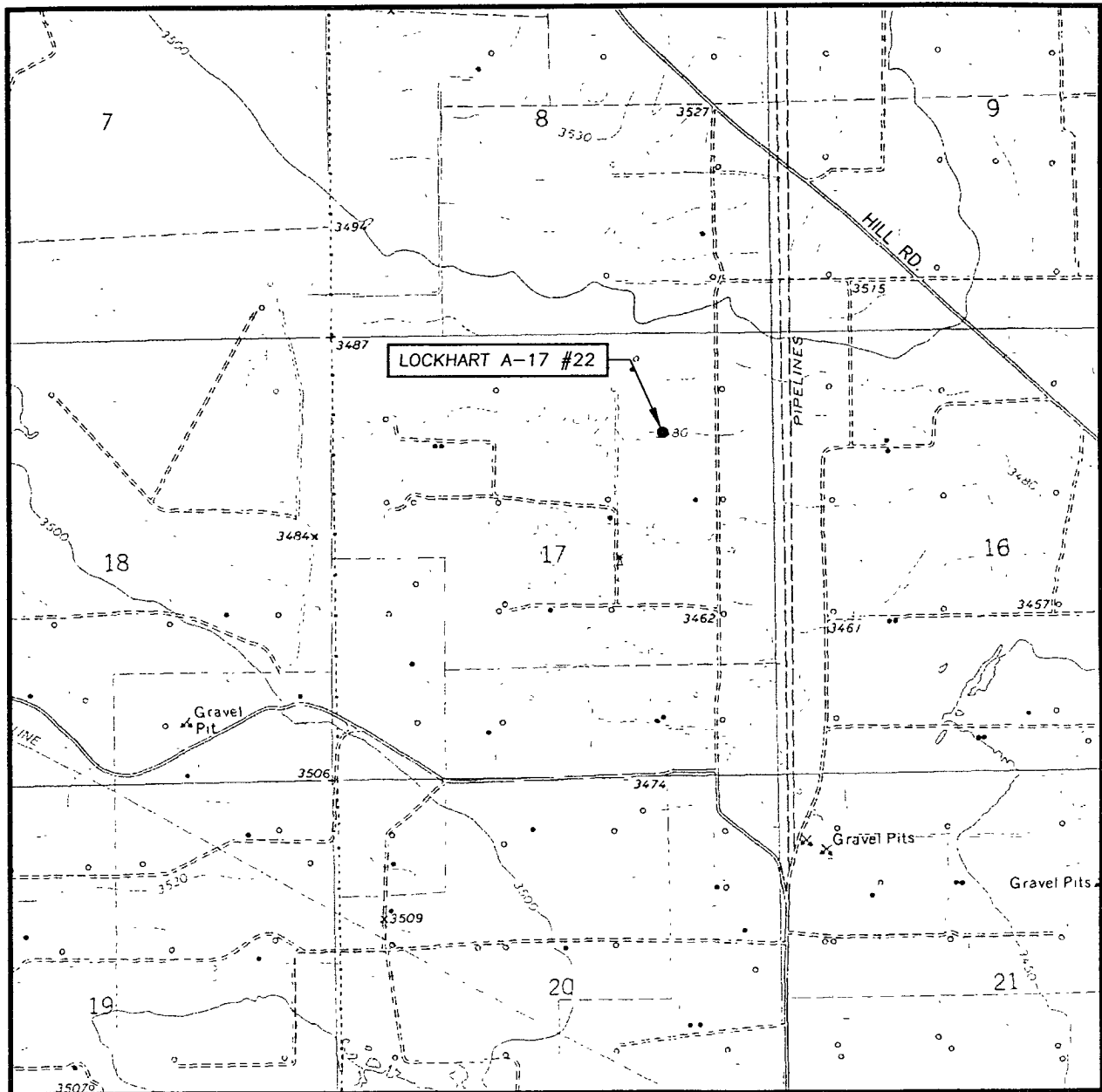
Bottom Hole Location If Different From Surface

|                 |                 |                    |           |         |               |                  |               |                |        |
|-----------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| 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. |         |               |                  |               |                |        |

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OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

|                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>GEODETIC COORDINATES<br/>NAD 27 NME<br/>Y=541274.4 N<br/>X=855540.1 E<br/>LAT.=32°28'58.05" N<br/>LONG.=103°10'49.30" W</p> | <p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Lana Williams</u><br/>Signature</p> <p><u>Lana Williams</u><br/>Printed Name</p> <p><u>Eng. Tech</u><br/>Title</p> <p><u>7/27/06</u><br/>Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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</p> <p>DECEMBER 29, 2005</p> <p>Date Surveyed RZB</p> <p>Signature &amp; Seal of Professional Surveyor</p> <p>05.11.2034</p> <p>Certificate No. GARY EIDSON 12841<br/>RONALD J. EIDSON 3239</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
EUNICE, N.M. - 10'

SEC. 17 TWP. 21-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1190' FNL & 1310' FEL

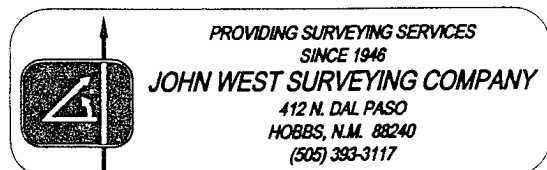
ELEVATION 3482'

OPERATOR APACHE CORPORATION

LEASE LOCKHART A-17

U.S.G.S. TOPOGRAPHIC MAP

EUNICE, N.M.



PROVIDING SURVEYING SERVICES  
SINCE 1946

**JOHN WEST SURVEYING COMPANY**

412 N. DAL PASO  
HOBBS, N.M. 88240  
(505) 393-3117

EXHIBIT "A"  
Lockhart A-17 #22  
**DRILLING PROGRAM**

- I. The geological surface formation is recent Permian with quaternary alluvium and other surficial deposits.  
II. Estimated Tops of Geological Markers:

| <u>FORMATION</u>     | <u>DEPTH</u> |
|----------------------|--------------|
| Quaternary alluvials | Surface      |
| Rustler              | 1251'        |
| Yates                | 2664'        |
| Queen                | 3420'        |
| Grayburg             | 3687'        |
| San Andres           | 3972'        |
| Glorieta             | 5177'        |
| Blinebry             | 5661'        |
| Tubb                 | 6161'        |
| Drinkard             | 6510'        |
| Abo                  | 6745'        |
| TD                   | 6925'        |

- III. Estimated depths at which water, oil, gas, or other mineral-bearing formations are expected to be encountered:

| <u>SUBSTANCE</u> | <u>DEPTH</u>                                    |
|------------------|-------------------------------------------------|
| Oil              | Blinebry@5661'<br>Tubb@6161'<br>Drinkard@ 6561' |
| Gas              | None anticipated                                |
| Fresh Water      | None anticipated                                |

All fresh water and prospectively valuable minerals (as described by BLM) encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows within zones of correlative rights will be tested to determine commercial potential.

- IV. A. Proposed Casing Program:

| <u>HOLE</u> | <u>CASING</u> |              | <u>WEIGHT</u> |              |              | <u>ESTIMATED TOC -</u>                                                                                              |
|-------------|---------------|--------------|---------------|--------------|--------------|---------------------------------------------------------------------------------------------------------------------|
| <u>SIZE</u> | <u>SIZE</u>   | <u>GRADE</u> | <u>PER</u>    | <u>DEPTH</u> | <u>SACKS</u> | <u>REMARKS</u>                                                                                                      |
|             | OD / ID       |              | FOOT          |              | CEMENT       |                                                                                                                     |
| 12 ¼"       | 8 5/8"        | J55 STC      | 24#           | 1300'        | 600          | TOC - Surface                                                                                                       |
|             | 8.097"        |              |               |              |              | 8.9 ppg Water-based<br>Mud;<br>89 ° F Est. Static<br>Temp;<br>83 ° F Est. Circ. Temp.                               |
| 7 7/8"      | 5 ½"          | J55 LTC      | 17#           | 6925'        | 1,400        | TOC – Surface                                                                                                       |
|             | 4.892"        |              |               |              |              | Float Collar set @<br>6880"/ 10.10 ppg<br>Brine Mud;<br>141 ° F Est. Static<br>Temp;<br>117 ° F Est. Circ.<br>Temp. |

V. A. Proposed Mud Program

| <u>DEPTH</u>  | <u>MUD PROPERTIES</u>                                                                           | <u>REMARKS</u>                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 – 1,300'    | Weight: 8.6 – 9.6 ppg<br>Viscosity: 34 – 36 sec/qt<br><br>pH: NC<br>Filtrate: NC                | Spud with a Conventional New Gel/Lime "Spud mud". Use NewGel and native solids to maintain a sufficient viscosity to keep the hole clean. Mix Paper one-two sacks every 100 feet drilled to minimize wall cake build up on water sands and to control seepage loss. At TD of interval, mix in pre-mix pit, 100 barrels of system fluid, NewGel viscosity of 60 sec/100cc, add 0.25 ppb of Super Sweep. |
| 1300' – 5600' | Weight: 9.9 – 10.1 ppg<br>Viscosity: 28 – 29 sec/qt<br><br>pH: 9-10<br>Filtrate: NC             | Drill out from under the surface casing with Brine Water. Paper should be added at 2 bags after every 100' drilled to control seepage losses. Use Lime to maintain pH at 9-10. Mix one gallon of New-55 at flowline every 250 feet drilled to promote solids settling. Sweep hole with 5-ppb of Super Sweep every 500 feet.                                                                            |
| 5600' – TD    | Weight: 9.9 – 10.1 ppg<br>Viscosity: 30 – 40 sec/qt<br><br>pH: 9-10<br>Filtrate: 8-15 cm/30 min | From 5600' to Total Depth, it is recommended the system be restricted to the working pits. Adjust and maintain pH with Caustic Soda. Treat system with Newcide to prevent dacterial degradation of organic materials. Mix Starch (yellow) to control API filtrate at <15cc.                                                                                                                            |

VI. Proposed Control Equipment:

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP and will test before drilling out of surface casing. **As expected pressures will not exceed 2000 psi, we request a waiver of the remote control requirement on the accumulator of the 3M BOP and a variance to run a 2M BOP, if available.** See Exhibit "H" for BOP layout.

VII. Auxiliary Equipment:

9" x 3000 psi double BOP/blind & pipe ram **(2M BOP if available)**  
41/2" x 3000 psi Kelly valve  
9" x 3000 psi mud cross – H<sub>2</sub>S detector on production hole  
Gate-type safety valve 3" choke line from BOP to manifold  
2" adjustable chokes – 3" blowdown line

VIII A. Testing Program: None planned

B. Logging Program: The following logs may be run:

CNL, LDT, GR, CAL, DLL, MSFL, NGT, Sonic from TD-1300'  
CNL, GR from TD-Surface

C. Coring Program: None planned

D. Mudlogging Program: None planned

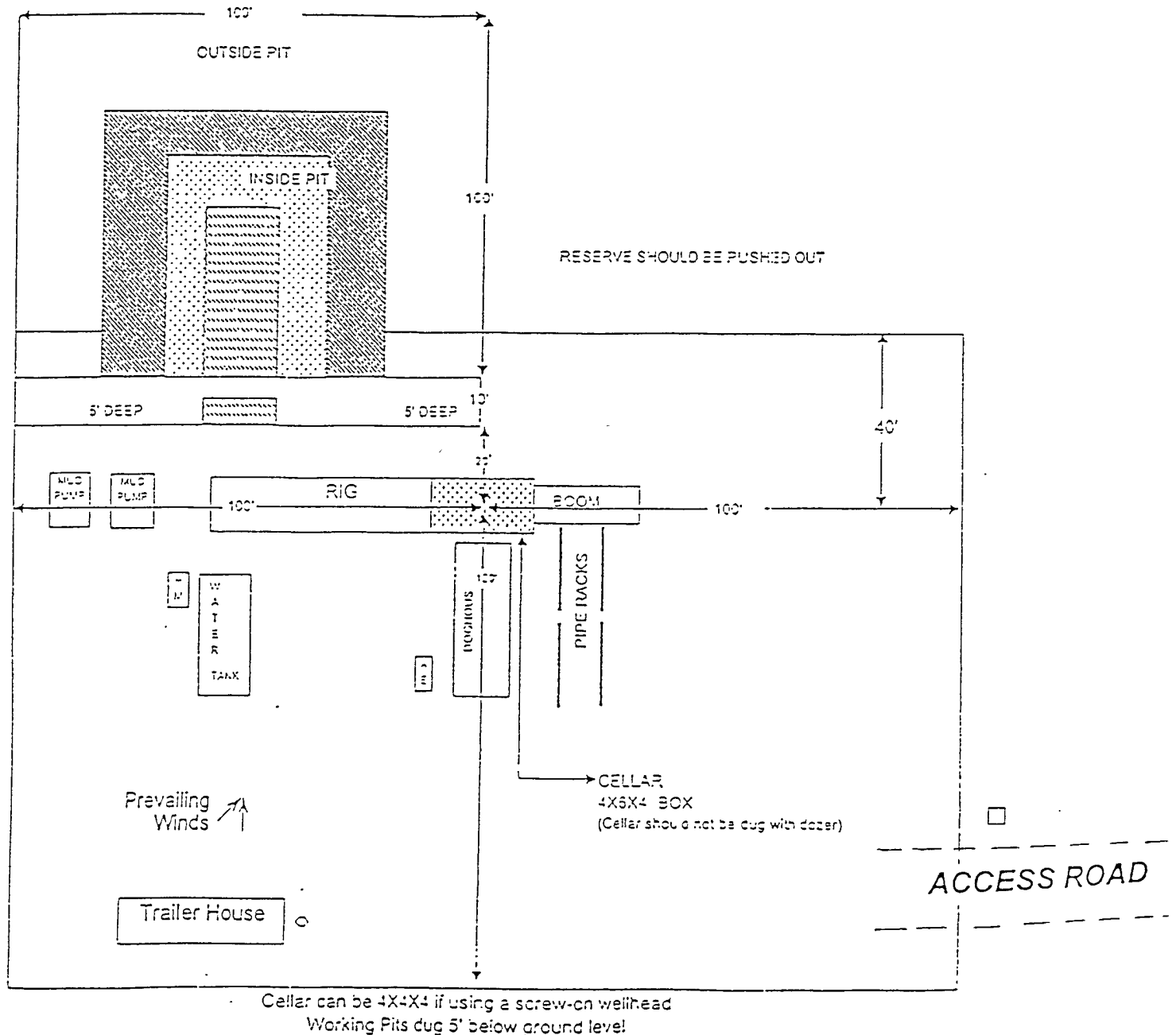
IX. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. The estimated maximum bottom hole pressure is 2400 psi.

EXHIBIT "B"  
Lockhart A-17 #22

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

No H<sub>2</sub>S is anticipated.

CapStar Drilling, Inc.  
LOCATION SPECIFICATIONS AND RIG LAYOUT  
FOR EARTH PITS



- Wind Direction Indicators  
(wind sock or streamers)
- △ H2S Monitors  
(alarms at bell nipple and shale shaker)
- Briefing Areas
- Remote BOP Closing Unit
- Sign and Condition Flags

Location Specs

EXHIBIT "G"  
RIG LAY OUT PLAT  
APACHE CORPORATION  
LOCKHART "A-17" # 22  
UNIT "A" SECTION 17  
T21S-R37E LEA CO. NM

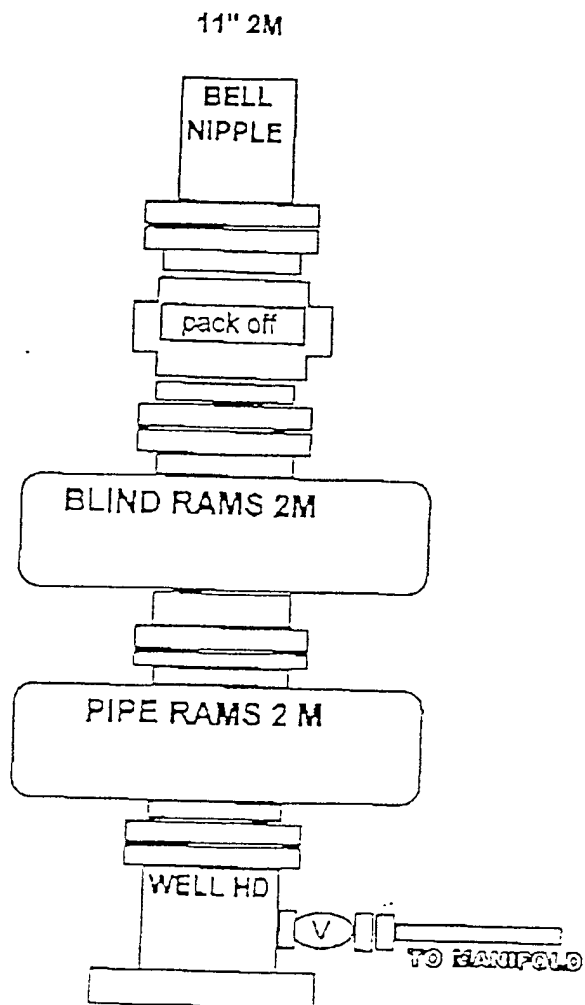


EXHIBIT "H"  
 SKETCH OF B.O.P. TO BE USED ON  
 APACHE CORPORATION  
 LOCKHART "A-17" # 22  
 UNIT "A" SECTION 17  
 T21S-R37E LEA CO. NM