

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
E. , Minerals & Natural Resources Department

Form C-101  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

**OIL CONSERVATION DIVISION**  
**P.O. Box 2088**  
**Santa Fe, NM 87504-2088**

☐ AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

|                                                                                                                                                                                                |                                              |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------|
| <sup>1</sup> Operator name and Address<br><b>MOBIL EXPLORATION &amp; PRODUCING U.S. INC., AS AGENT FOR<br/>MOBIL PRODUCING TEXAS &amp; NEW MEXICO INC.<br/>P.O. BOX 633, MIDLAND, TX 79702</b> |                                              | <sup>2</sup> OGRID Number<br><b>15144</b>      |
| <sup>4</sup> Property Code<br><b>15396</b>                                                                                                                                                     | <sup>5</sup> Property Name<br><b>STATE O</b> | <sup>3</sup> API Number<br><b>30-025-326DD</b> |
|                                                                                                                                                                                                |                                              | <sup>6</sup> Well Number<br><b>3</b>           |

| <sup>7</sup> Surface Location |           |             |             |          |               |                  |               |                |            |
|-------------------------------|-----------|-------------|-------------|----------|---------------|------------------|---------------|----------------|------------|
| UL or lot no.                 | Section   | Township    | Range       | Lot. Idn | Feet from the | North/South Line | Feet from the | East/West line | County     |
| <b>L</b>                      | <b>33</b> | <b>17-S</b> | <b>35-E</b> |          | <b>1846</b>   | <b>SOUTH</b>     | <b>330</b>    | <b>WEST</b>    | <b>LEA</b> |

| <sup>8</sup> Proposed 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 |
|                                                                                |         |          |       |          |                               |                  |               |                |        |
| <sup>9</sup> Proposed Pool 1<br><b>Wildcat VAGUUM (DRINKARD) &lt;96036&gt;</b> |         |          |       |          | <sup>10</sup> Proposed Pool 2 |                  |               |                |        |

|                                          |                                             |                                               |                                                 |                                                     |
|------------------------------------------|---------------------------------------------|-----------------------------------------------|-------------------------------------------------|-----------------------------------------------------|
| <sup>11</sup> Work Type Code<br><b>N</b> | <sup>12</sup> Well Type Code<br><b>O</b>    | <sup>13</sup> Cable/Rotary<br><b>ROTARY</b>   | <sup>14</sup> Lease Type Code<br><b>S</b>       | <sup>15</sup> Ground Level Elevation<br><b>3951</b> |
| <sup>16</sup> Multiple<br><b>S</b>       | <sup>17</sup> Proposed Depth<br><b>8400</b> | <sup>18</sup> Formations<br><b>DRINKARD**</b> | <sup>19</sup> Contractor<br><b>TIMBER SHARP</b> | <sup>20</sup> Spud Date<br><b>08-22-94</b>          |

<sup>21</sup> Proposed Casing and Cement Program

| Hole Size    | Casing Size  | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|--------------|--------------|--------------------|---------------|-----------------|---------------|
| <b>11</b>    | <b>8-5/8</b> | <b>24</b>          | <b>1480</b>   | <b>550</b>      |               |
| <b>7-7/8</b> | <b>5-1/2</b> | <b>17</b>          | <b>7500</b>   | <b>920</b>      |               |
|              |              |                    |               |                 |               |
|              |              |                    |               |                 |               |
|              |              |                    |               |                 |               |

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

**SEE ATTACHED DRILLING PROGRAM SUMMARY  
ALSO ATTACHED IS THE BOP REQUIREMENTS**

**\*\*FORMATION DEPTHS ARE ON ATTACHED DRILLING PROGRAM SUMMARY**

**R**

Permit Expires 6 Months From Approval  
Date Unless Drilling Underway.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name:

**KAYE POLLOCK-LYON**

Title:

**ENV. & REG. TECHNICIAN**

Date:

**07-25-94**

Phone:

**915-688-2584**

**OIL CONSERVATION DIVISION**

Approved by:

**Orig. Signed by**

Title:

**Paul Kartz  
Geologist**

Approval Date:

**JUL 27 1994**

Expiration Date:

Conditions of Approval:

Attached ☐

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

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

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

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

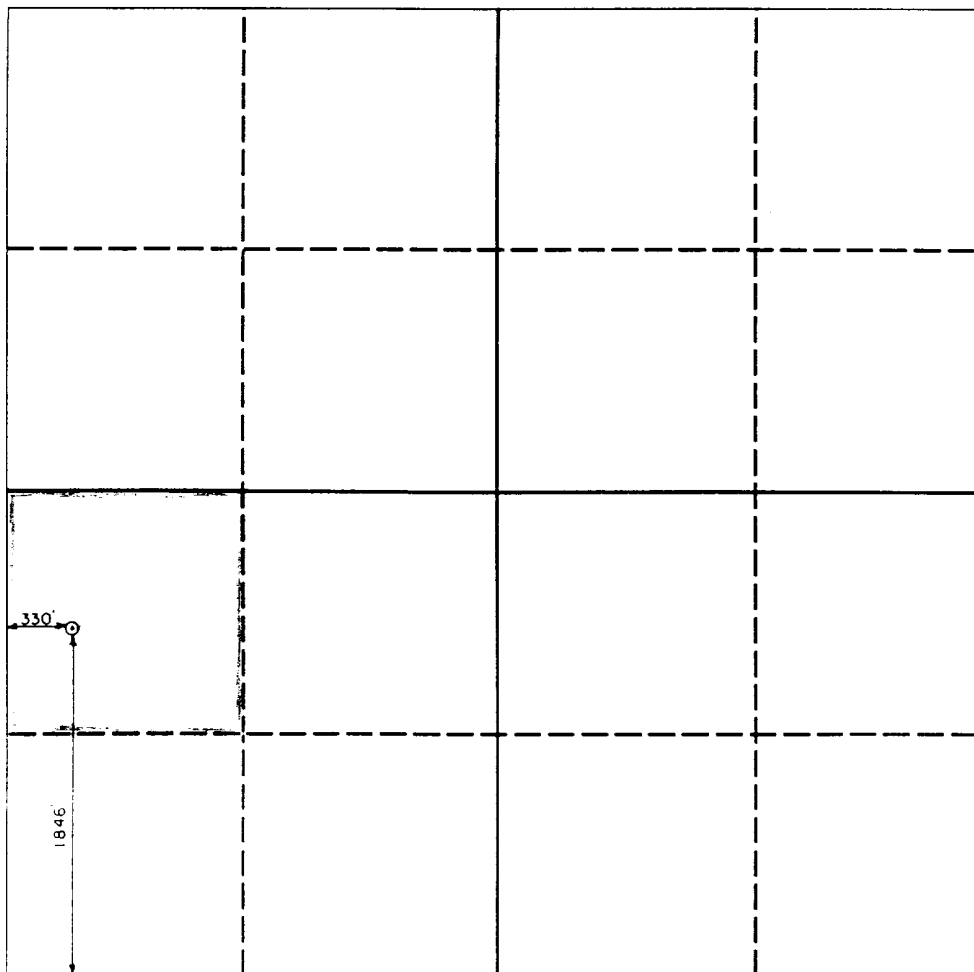
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

|                                                                                                   |                                 |                  |                    |                                |               |
|---------------------------------------------------------------------------------------------------|---------------------------------|------------------|--------------------|--------------------------------|---------------|
| Operator<br>Mobil Exploration & Producing US                                                      |                                 |                  | Lease<br>State "0" |                                | Well No.<br>3 |
| Unit Letter<br>L                                                                                  | Section<br>33                   | Township<br>17 S | Range<br>35 E      | County<br>Lea                  |               |
| Actual Footage Location of Well:<br>1846 feet from the South line and 330 feet from the West line |                                 |                  |                    |                                |               |
| Ground level Elev.<br>3951                                                                        | Producing Formation<br>Drinkard |                  | Pool<br>Vacuum     | Dedicated Acreage:<br>40 Acres |               |

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 interest 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 interest, has been approved by the Division.



|                                                                                                                                                                                                                                                              |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>OPERATOR CERTIFICATION</b><br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.                                                                                                         |  |
| Signature<br><i>Kaye Pollock-Lyon</i>                                                                                                                                                                                                                        |  |
| Printed Name<br>Kaye Pollock-Lyon                                                                                                                                                                                                                            |  |
| Position<br>Env. & Reg. Technician                                                                                                                                                                                                                           |  |
| Company<br>Mobil Producing TX & NM Inc.                                                                                                                                                                                                                      |  |
| Date<br>07-25-94                                                                                                                                                                                                                                             |  |
| <b>SURVEYOR CERTIFICATION</b><br>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. |  |
| Date Surveyed<br>July 21, 1994                                                                                                                                                                                                                               |  |
| Signature & Seal of<br>Professional Surveyor<br><i>J. N. Newton</i>                                                                                                                                                                                          |  |
| Certificate No.<br>5109                                                                                                                                                                                                                                      |  |

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

**MIDLAND DRILLING  
DRILLING PROGRAM SUMMARY**

DPS-MID(8/88)

|                 |                   |                       |       |                        |       |
|-----------------|-------------------|-----------------------|-------|------------------------|-------|
| <b>WELL:</b>    | State 110"        | <b>TD - PROPOSED:</b> | 8.200 | <b>AFE NUMBER:</b>     |       |
| <b>FIELD:</b>   | Vacuum            | <b>TD - PERMIT:</b>   | 8.400 | <b>AFE \$M - DRY:</b>  |       |
| <b>CNTY/ST:</b> | Lea -- New Mexico | <b>DAYS - DRY:</b>    | 13    | <b>AFE \$M - SUSP:</b> |       |
| <b>SECTION:</b> | 33                | <b>DAYS - SUSP:</b>   | 1     | <b>MOBIL W. I. %:</b>  | 87.5% |
| <b>BLK/TWP:</b> | 17-S              |                       |       |                        |       |
| <b>SVY/RNG:</b> | 35-E              |                       |       |                        |       |

**HOLE GEOMETRY & MUD PROGRAM:**

| Sect No. | Bit Size | Depth, Ft From | To     | Mud Type    | Mud Weight | Visc. secs | Fluid Loss | Mud pH | Survey Freq | Max Dev | Max Dogleg |
|----------|----------|----------------|--------|-------------|------------|------------|------------|--------|-------------|---------|------------|
| 1        | 11.0"    | 0'             | 1.480' | FW/Native   | 9.0        | 34-40      | NC         | 9.5+   | 500'        | 2.00    | 1.50       |
| 2        | 7.875"   | 1.480'         | 7.500' | Sat Brine   | <10.1      | 33-36      | NC         | 9.5+   | 500'        | 5.00    | 1.50       |
| 3        | 7.875"   | 7.500'         | 8.200' | mf55/Starch | <10.2      | 33-36      | NC         | 9.5+   | 500'        | 5.00    | 1.50       |

**CASING & BOP PROGRAM:**

| Sect No. | Csg Size | Depth, Ft From | To     | Section Length | Wt/Ft, Lbs | Sec Wt MLbs | Grade  | Conn Type | Size   | Stack | Rating |
|----------|----------|----------------|--------|----------------|------------|-------------|--------|-----------|--------|-------|--------|
| 1        | 8.625    | 0              | 1.480' | 1.480'         | 24.00      | 35.5        | USS-50 | STC       | 11.000 | SPRG  | 3.000  |
| 2        | 5.500    | 0              | 2.000' | 2.000'         | 17.00      | 34.0        | K-55   | STC       |        |       |        |
| 3        | 5.500    | 2.000          | 7.420' | 5.420'         | 15.50      | 34.0        | USS-50 | STC       |        |       |        |
| 4        | 5.500    | 7.420          | 7.500' | 30'            | 17.00      | 1.4         | L-80   | LTC       |        |       |        |

**CEMENTING PROGRAM:**

| Sect No. | Depth, Ft From | To     | Slurry Density | Slurry Yield | Volume CuFt | Slurry Sacks | Slurry Description                          |
|----------|----------------|--------|----------------|--------------|-------------|--------------|---------------------------------------------|
| 1        | 0              | 980'   | 13.5           | 1.74         | 609         | 350          | "C" + 4% D20 + 2% S1 + .25 pps D29          |
| 2        | 980'           | 1.480' | 14.8           | 1.32         | 264         | 200          | "C" + 2% S1 + .25 pps D29                   |
| 3        | 3.700'         | 6.850' | 12.8           | 1.96         | 1313        | 670          | 35/65 poz:H + 6% D20 + 5% D44 + .25 pps D29 |
| 4        | 6.850          | 7.500' | 16.4           | 1.06         | 265         | 250          | "H" + .25 pps D29                           |

**O. H. LOGGING PROGRAM:**

| Type of Log     | Depth, Ft From | To | FORMATION TOPS:   | Depth  | Remarks |
|-----------------|----------------|----|-------------------|--------|---------|
| GR-Spectroscopy | 6.000          | TD | Rustler Anhydrite | 1.475' |         |
| CNL-LDL-GR-Cal  | 2.000          | TD | Yates             | 2.895' |         |
|                 |                |    | Queen             | 3.819' |         |
|                 |                |    | San Andres        | 4.370' |         |
|                 |                |    | Glorietta         | 6.060' |         |
|                 |                |    | Tubb              | 7.550' |         |
|                 |                |    | Drinkard          | 7.700' |         |

**SAMPLE CATCHING/MUD LOGGING PROGRAM:**

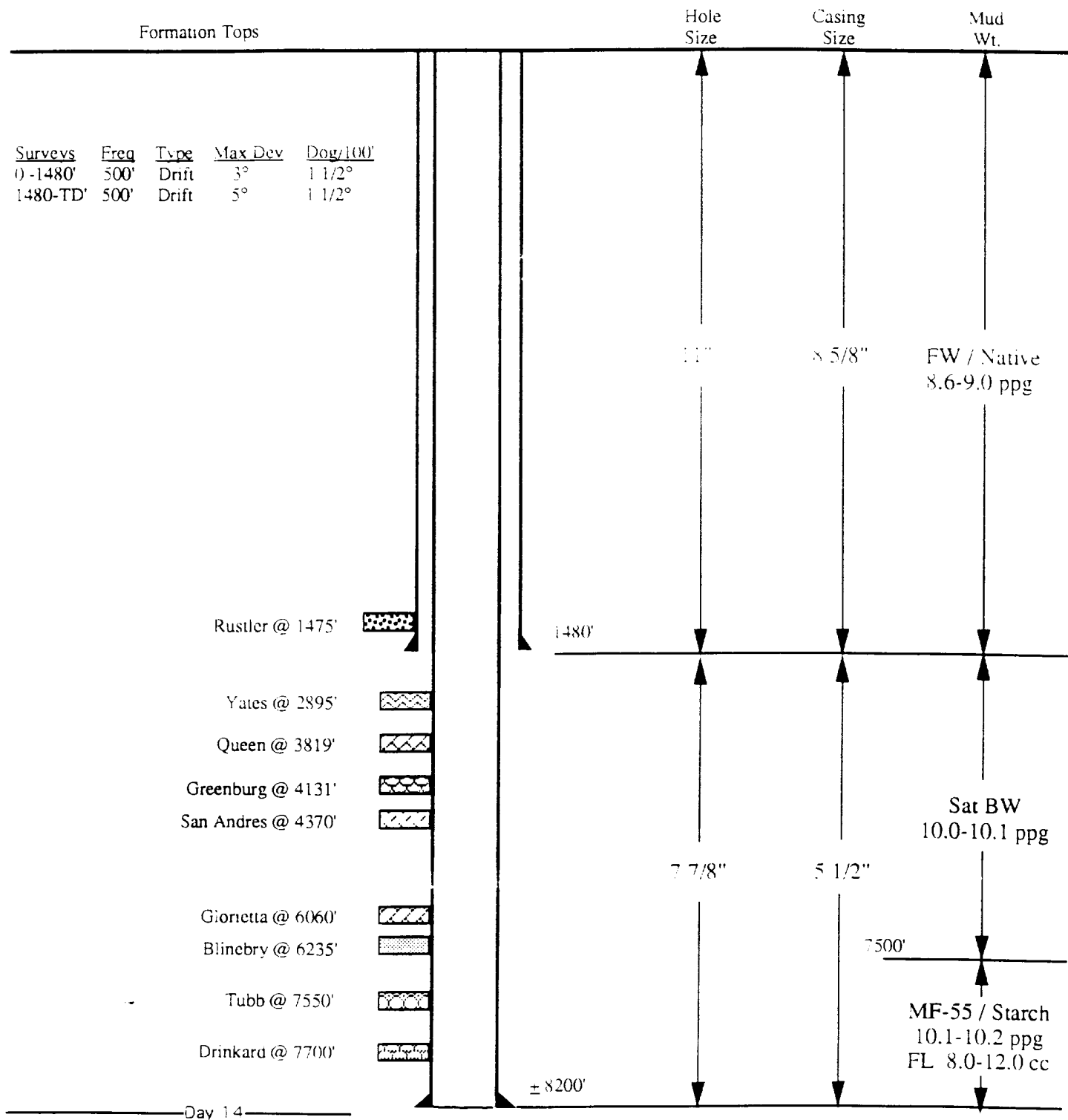
| Service Performed | Depth, Ft From | To | Freq, Ft. |
|-------------------|----------------|----|-----------|
| Sample Catching   |                |    |           |
| Drilling Time     |                |    |           |
| Mud Logging       | 5.000          | TD |           |

**REGULATORY REQUIREMENTS:**

**CORING PROGRAM:**

| Core Point | Formation | Core Type | Bit Size | Core Size | Core Length | DST PROGRAM: | Formation | Depth |
|------------|-----------|-----------|----------|-----------|-------------|--------------|-----------|-------|
|------------|-----------|-----------|----------|-----------|-------------|--------------|-----------|-------|

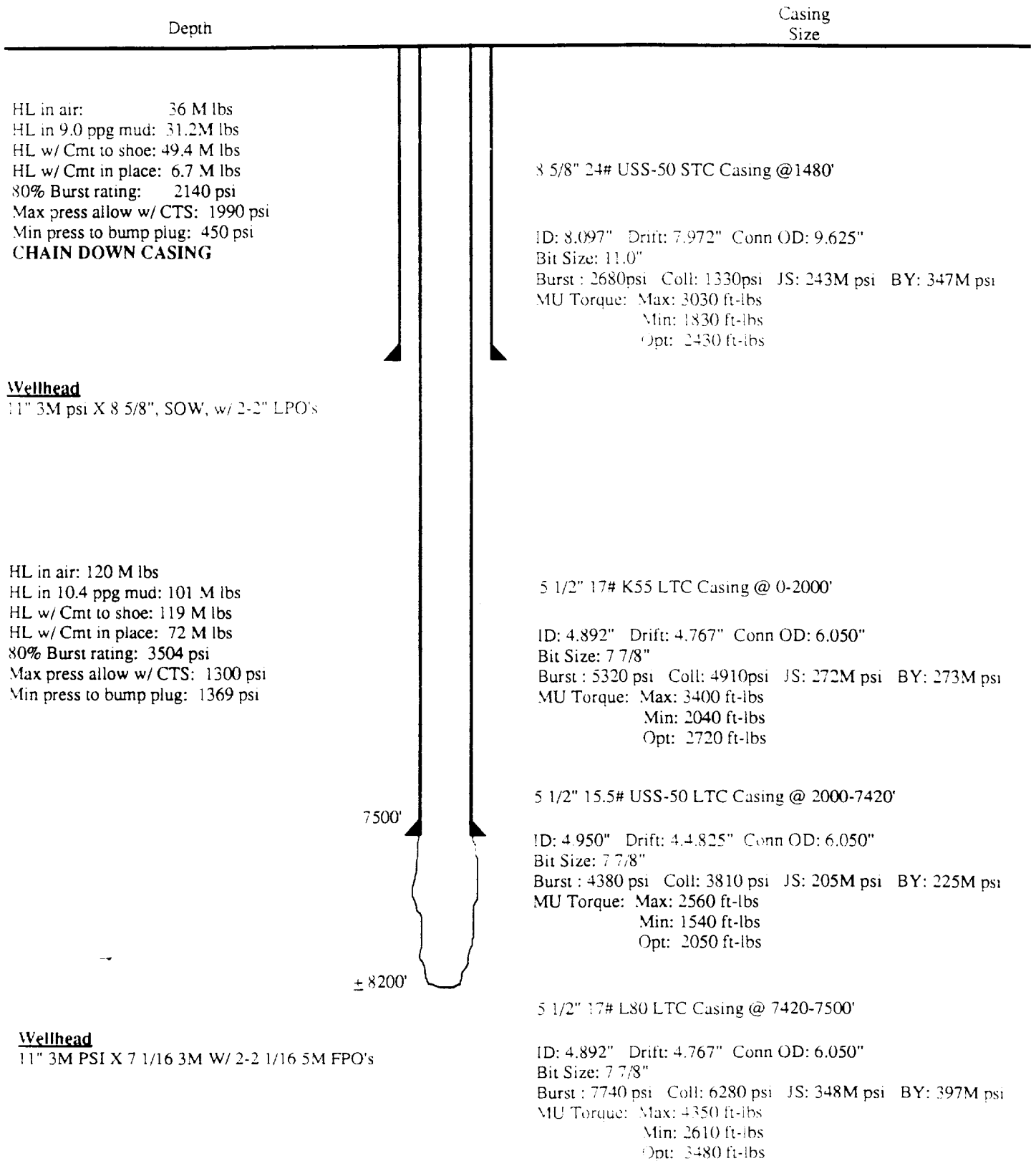
# DRILLING SUMMARY



| Log Type  | Interval |
|-----------|----------|
| CNL-ARI   | 0000-TD  |
| FMI       | 7700-TD  |
| Sonic-Cal | TD- Surf |

Mud Logger  
5000'-TD

# CASING DIAGRAM



# CEMENTING DETAIL

## SURFACE

8 5/8" 24# USS-50 STC Casing @ 1480'

### Casing Running Order

- Float Shoe
- 1 jt 8 5/8" casing
- Float Collar (Thread Lock from FC down)

### Centralizers:

- 1 - 5' above shoe
- 1 - 5' float collar
- 1 - every fourth collar to Surface
- Total: 11- centralizers
- 2-stop collars

## Surface

Spacer: 25 bbls FW

\*Lead: 350 sx "C" + 4% D20 + 2% S1 + 0.25 pps D29

\*Tail: 200 sx "C" + 2% S1 + 0.25 pps D29

|                        | <u>Lead</u> | <u>Tail</u> |
|------------------------|-------------|-------------|
| Weight (ppg)           | 13.5        | 14.8        |
| Yield (cf/sx)          | 1.74        | 1.32        |
| Mix Water (gps)        | 9.11        | 6.32        |
| Thick Time (hrs:min)   | ≥ 3:20      | ≥ 2:00      |
| Free Water (cc/30 min) | ≤ 1%        | ≤ 1%        |
| Fluid Loss (cc's)      | NC          | NC          |
| 12 Hr Comp Strength    | ≥ 500       | ≥ 700       |
| 72 Hr Comp Strength    | ≥ 1500      | ≥ 1500      |
| Top of Cement          | 0           | 500'        |

\* Est. volumes based on gauge hole + 100% excess.  
Run fluid or mechanical caliper to determine exact volumes.

- 1) Chain Down Casing
- 2) Circ. one hole vol. prior to cementing.
- 3) Displace cement w/ FW @ 6-7 bpm. **DO NOT OVERDISPLACE**
- 4) If cement does not circ. to surface, contact Drlg. Supt. and the NMOC.
- 5) Test casing to 1500 psi.
- 6) **WAIT MIN 8 HRS PRIOR TO DRILL OUT**

## PRODUCTION

5 1/2" 17 K55 LTC Casing @ 0-2000'

5 1/2" 15.5# USS50 STC Casing @ 2000-7420'

5 1/2" 17# L80 LTC Casing @ 7420-7500'

## Production

Spacer: 25 bbls FW

\*\*Lead: 670 sx 35/65 (Poz/H) + 6% D20 + 5% D44 + 0.25 pps D29

\*\*Tail: 250 sx "H" + .025 pps D29

### Casing Running Order

- Float Shoe
- 2 jts 5 1/2" casing
- Float Collar (Thread Lock from FC down)

### Centralizers:

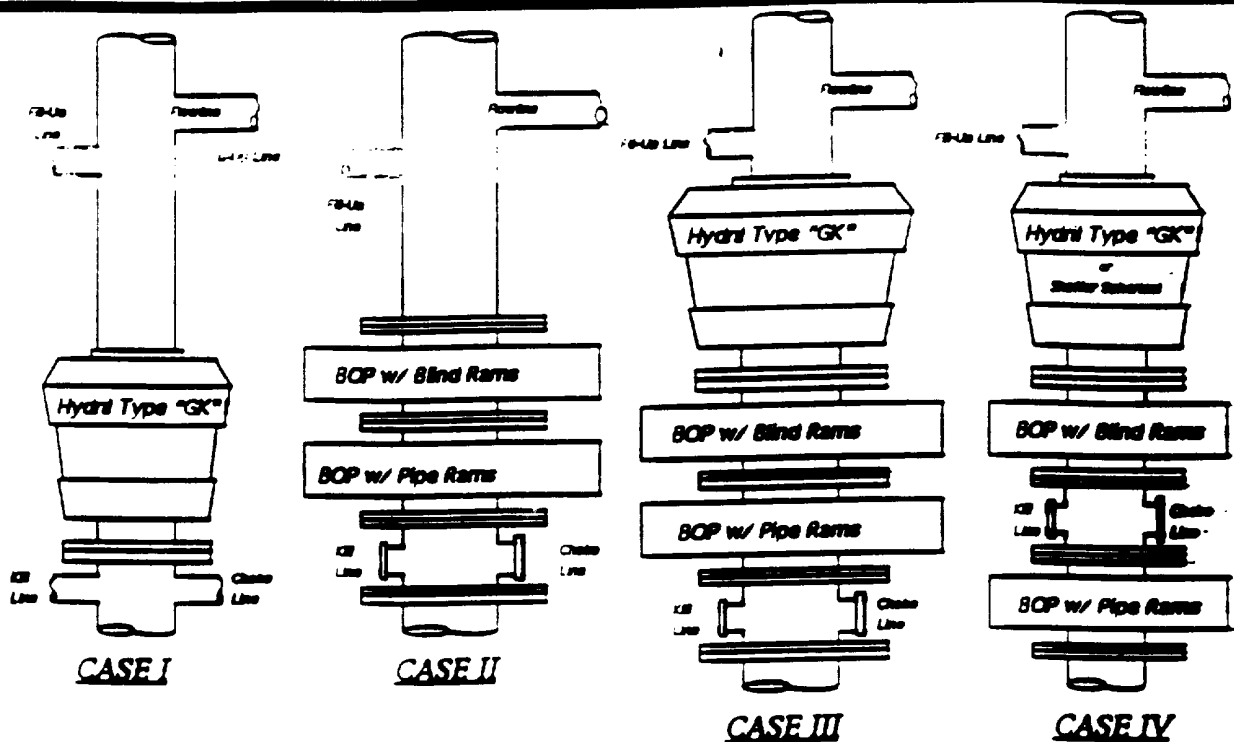
- 1 - 5' above shoe
- 1 - 5' above float collar
- 1 - every third collar
- Total: 27- centralizers
- 2- stop collars

|                        | <u>Lead</u> | <u>Tail</u> |
|------------------------|-------------|-------------|
| Weight (ppg)           | 12.8        | 16.4        |
| Yield (cf/sx)          | 1.96        | 1.06        |
| Mix Water (gps)        | 10.46       | 4.34        |
| Thick Time (hrs:min)   | ≥ 3:00      | ≥ 2:39      |
| Free Water (cc/30 min) | ≤ 1%        | ≤ 1%        |
| Fluid Loss (cc's)      | NC          | NC          |
| 12 Hr Comp Strength    | ≥ 400       | ≥ ***       |
| 72 Hr Comp Strength    | ≥ ***       | ≥ ***       |
| Top of Cement          | 3700'       | 7500'       |

\*\* Est volumes based on gauged hole size or 50% excess. Run log caliper for actual volumes. Use 25% excess for open hole x 5 1/2" casing annulus.

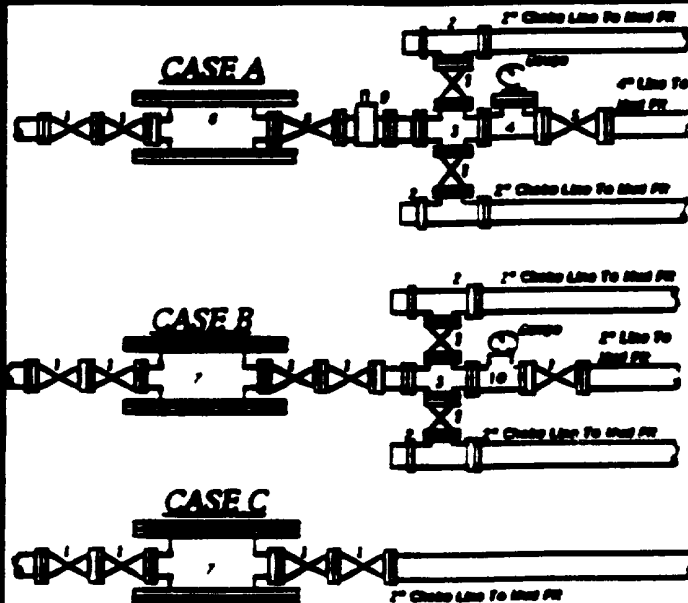
- 1) Reciprocate casing 15'-20' while conditioning hole
- 2) Circ. one hole vol. prior to cementing.
- 3) Displace cement w/ FW @ 4-6 bpm. **DO NOT OVERDISPLACE**
- 4) WOC 8 hrs. ND BOP & cut casing to install tubing head.
- 5) **Release rig. Move in Dowell pump truck and pump 400 sx "C" + 200 sx RFC Thixotropic cmt down backside until cmt returns to surface. Actual cement volumes will be determined by engineer from caliper log.**

# SCHEDULE B MINIMUM BLOWOUT PREVENTER REQUIREMENTS



A 1" valve will be installed on the closing line to the Hydri. This valve will be on a short nipple next to the Hydri. The Hydri closing line must be equipped w/ a 1" - 3000 psi WP plug valve on the nipple into the Hydri.

**CASE IV**



| BOP SIZE | BOP CASE | WORKING PRESSURE | CLOSING CASE |
|----------|----------|------------------|--------------|
| 11       | II       | 3000 psi         | B            |
|          |          |                  |              |

Bradenhead furnished by Mobil will be:

Mr: \_\_\_\_\_

Size: \_\_\_\_\_ Type: \_\_\_\_\_

## Notes

Close control may be located in any convenient position. Use of close control is required. Make BOP tests and shut down tests. The first testing will be performed on top of the components of the close control and the second equipment operation of the close. The close and all shut and strings must be at least connected to the test pressure of the pressure required. Independent closing control will with clearly marked control to be located on control their own other's position.

## Legend

1. 2" Rammed all steel valve must be either Cameron 1", Reducing Line Tee or similar Red-Red.
2. 2" Rammed adjustable closure, with 1" for opening & control or hard test.
3. 4" x 2" Rammed steel pipe.
4. 4" Rammed steel line.
5. 4" Rammed all steel valve (Type as in no. 1).
6. Drilling Spool or 2" x 4" Rammed center.
7. Drilling Spool or 2" x 2" Rammed center.
8. 2" x 2" Rammed steel pipe.
9. 4" Pressure control steel valve.
10. 2" Rammed steel line.