Form 3160-3 (July 1992)

# UNITED STATES DEPARTMENT OF THE INTERIOR

SUBMIT IN TRIPLICATE\*

(Other instructions on reverse side)

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

DEPARTMENT OF THE INTERIOR 5. LEASE DESIGNATION AND SERIAL NO. NM - 03380 **BUREAU OF LAND MANAGEMENT** 6. IF INDIAN, ALLOTTEE OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL OR DEEPEN 7. UNIT AGREEMENT NAME 1a. TYPE OF WORK DRILL X DEEPEN L b. TYPE OF WELL SINGLE MULTIPLE X GAS X 8. FARM OR LEASE NAME, WELL NO WFI L Florance #63F 2. NAME OF OPERATOR XTO Energy Inc. 9. API WELL NO. 3. ADDRESS AND TELEPHONE NO. 2700 Farmington Ave., Bldg. K. Ste 1 Farmington, NM 8**740**1 10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*) Basin Dakota / Otero Chacra 1805' FNL & 2400' FWL Sec 17, T27N, R08W 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA At proposed prod. zone Sec 17, T27N, 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\* 12. COUNTY OR PARISH 13. STATE Approx 24 air miles south down Largo Canyon from the Blanco NM Post Office San Juan NM 17. NO. OF ACRES ASSIGNED TO THIS WELL NO. DISTANCE FROM PROPOSED 16. NO. OF ACRES IN LEASE LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 320 DK MV (Also to nearest drlg, unit line, if any) 180' (Chacra) +-2880 DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, 19. PROPOSED DEPTH 20. ROTARY OR CABLE TOOLS 7.725 0'-7,725' w/Rotary Tools OR APPLIED FOR, ON THIS LEASE, FT. 22. APPROX. DATE WORK WILL START\* 21. ELEVATIONS (Show whether DF,RT, GR, etc.) Summer 2002 6.755' Ground level 23. PROPOSED CASING AND CEMENTING PROGRAM SIZE OF HOLE GRADE, SIZE OF CASINO WEIGHT PER FOOT SETTING DEPTH QUANTITY OF CEMENT 140 sx Class "B" 12-1/4" 9-5/8", H-40 32.3# 265 8-3/4" 7", J-55 20.0# 3,150 275 sx Liteweight cement 10.5# 7.725 435 sx Cl "H" / Liteweight Cement 6-1/4" 4-1/2", J-55 DRILLING OPERATIONS AUTHORIZE SUBJECT TO COMPLIAN This action is subject to technical and croced trail review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 "GENERAL REQUIR XTO Energy Inc. plans to drill the above mentioned well as described in Program. Please note that the attached APD also contains RECEIVED 6 2002 1 MENT IN ABOVE SPÄGEDESERRE FROM SELFRÖGRÄM: IN ABOVE SPACE PROCESSOR ROLL TO COMMITTEE T 24. ŧ. DATE 6/4/02 Drilling Engineer SIGNED (This space for Federal or Stale office use) APPROVAL DATE PERMIT NO. 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: /s/ Charlie Beecham ACTING AUG 29 APPROVED BY TTTLE DATE -\*See Instructions On Reverse Side

DISTRICT 1
1625 N. French Dr., Hobbs, N.M. 88240

#### State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

DISTRICT # 811 South First, Artesia, N.M. 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV 2040 South Pacheco, Santa Fe, NM 87505 OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505 Submit to Appropriate District Office State Lease — 4 Copies Fee Lease — 3 Copies

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

| 70GRID No. FLORANCE  | * Well Number<br>63F<br>* Elevation<br>6755* |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|
| 70GRID No. FLORANCE  | * Elevation                                  |  |  |  |  |  |  |  |  |  |  |
| Operator Name  | * Elevation                                  |  |  |  |  |  |  |  |  |  |  |
| (6704.7  | 67551  |  |  |  |  |  |  |  |  |  |  |
| /67067 XTO ENERGY INC.   | 0/00   |  |  |  |  |  |  |  |  |  |  |
| <sup>10</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                                       |  |  |  |  |  |  |  |  |  |  |
| F 17 27-N 8-W 1805' NORTH 2400' WEST   | SAN JUAN                                     |  |  |  |  |  |  |  |  |  |  |
| <sup>11</sup> Bottom Hole Location If Different From Surface   |  |  |  |  |  |  |  |  |  |  |  |
| UL or lot no. Section Township Range Lat Idn Feet from the North/South line Feet from the East/West line   | County                                       |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 22 Dedicated Acres 13 Joint or Infill 14 Consolidation Code 14 Order No.   |  |  |  |  |  |  |  |  |  |  |  |
| 320 7 <sub>2</sub>   I   I   |  |  |  |  |  |  |  |  |  |  |  |
| 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   | 00.1002.07.120                               |  |  |  |  |  |  |  |  |  |  |
| 16 S 89-14-41-É RIN 90 / 17 ODERATOR   |  |  |  |  |  |  |  |  |  |  |  |
| /B.L.M. /BC /2579.9' (xi) /   B.L.M / BC /   /     " UPERATOR  | CERTIFICATION                                |  |  |  |  |  |  |  |  |  |  |
| 1955  I heraby certify that the informal is true and complete to the best bellef   |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 471'   | $\wedge$                                     |  |  |  |  |  |  |  |  |  |  |
| X 1110' X 1AT: 36'34'37' N   | /)   |  |  |  |  |  |  |  |  |  |  |
| 2400'  | Patto_                                       |  |  |  |  |  |  |  |  |  |  |
| Signature  SEPTIEN N   | PATTA  |  |  |  |  |  |  |  |  |  |  |
| 180' Printed Name  | MILLO  |  |  |  |  |  |  |  |  |  |  |
| DRILLING E   | NIWEER                                       |  |  |  |  |  |  |  |  |  |  |
| 863' 17 Title 6-3-0  | 07   |  |  |  |  |  |  |  |  |  |  |
| 7 17 Dote  | <i>D C</i>                                   |  |  |  |  |  |  |  |  |  |  |
| 18 SURVEYOR O  | CERTIFICATION                                |  |  |  |  |  |  |  |  |  |  |
| I hereby certify that the well locat   | ion shown on this plat                       |  |  |  |  |  |  |  |  |  |  |
| was plotted from field notes of ec   | •  |  |  |  |  |  |  |  |  |  |  |
| and correct to the best of my bel  |  |  |  |  |  |  |  |  |  |  |  |
| SEP TO A LOW   | 2001_  |  |  |  |  |  |  |  |  |  |  |
| me or under my supervision, and ond correct to the best of my bell on corr | 1  |  |  |  |  |  |  |  |  |  |  |
|  | Oak adjara.                                  |  |  |  |  |  |  |  |  |  |  |
| [ ] [ [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [  | W. W. W.                                     |  |  |  |  |  |  |  |  |  |  |
|  | · [6]  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| B.L.M. BC  |  |  |  |  |  |  |  |  |  |  |  |
| 1955 Certificate Number  | J  |  |  |  |  |  |  |  |  |  |  |

DISTRICT 1 1625 N. French Dr., Hobbs, N.M. 88240

## State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

DISTRICT II 811 South First, Artesia, N.M. 88210

DISTRICT III 1000 Rio Brazos Rd., Aztec, N.M. 87410 OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505 Submit to Appropriate District Office State Lease — 4 Copies Fee Lease — 3 Copies

Certificate Number

☐ AMENDED REPORT

DISTRICT IV 2040 South Pacheco, Santa Fe, NM 87505

1955

| Jumber 3/    | 1/27                        | T   |  |  |   |   |   |   |  |  |  |
|--------------|-----------------------------|---|--|--|---|---|---|---|--|--|--|
| 5- <i>5/</i> | 1/                          |   | Pool Code  | ,  | •   | $\wedge$  | TERU  | Pool Name   | RRA  |  | •  |
| a 1          | 101                         | 1   | 8232°  |  | verty No  |   | 1 LICC  | LIII  | T  | <sup>6</sup> We  | I Number   |
| 16           | *Property Name FLORANCE 63F |   |  |  |   |   |   |   |  |  | 63F  |
| 0            | _                           |   |  |  | rator No  |   |   |   |  | • [  | <b>Jevation</b>  |
| 67           |                             | •   |  | XTO E  |   |   |   |   |  | (  | 6755 <b>'</b>  |
|              |                             |   |  |  |   | Location  |   | <del></del>   | = 1 A  |  | T  |
| Section      | Township                    | Range   | Lot Idn  | Feet from  |   | North/South line  |   | rom the   | . East/Wes<br>WF   |  | SAN JUAN   |
| 17           | 27-N                        |   |  |  |   |   |   |   | ""   | <del></del>  | - Sat Conti  |
|              |                             | "Botte  |  |  |   |   |   |   | F> A4  | A Bas  | 10   |
| Section      | Township                    | Ronge   | Lot Idn  | Feet from  | the   | North/South line  | Feet 1  | rom the   | East/Wes   | it ine   | County   |
| L            | 1                           | <sup>13</sup> Joint or k  | nfil   | <sup>34</sup> Consolida  | otion Co  | de  | * Orde  | r No.   |  |  | <u> </u>   |
| NU           | 1/ <sub>A</sub>             |   |  |  |   | •   |   | -   |  |  |  |
| ABLE V       | VILL BE A                   | SSIGNE  | D TO TH  | S COMP   | PLETICAS B  | ON UNTIL ALL  | INTER   | RESTS H   | IAVE B   | EEN CO   | ONSOLIDATE   |
|              |                             | <del></del>   | 0  |  | <del></del> T   |   | <del>-  </del>  |   |  |  |  |
| 257          | 9.9' (M)                    | 13000   | 1955   | BC   |   |   |   | I hereby co   | ertify that th   | nformation   | contained herein                                       |
| 2400         | 1110.                       | 863   | 180'   | LAT:<br>LON  | 36°3<br>G: 10   | 4'37" N.<br>7'42'19" W.   |   | Printed<br>Title  | JEFR<br>Nome<br>DRIL   | LNUG E   | WINEER   |
| -            |                             |   |  |  |   |   |   | 18 cross plotted me or unde and correct  Date of Signature  | tify that the from field nor my supervisto the best  | well location otes of octuo sion, and that of my belief.  MEX. Profession  | shown on this plot is surveys mode by the same is true |
|              | ABLE V                      | 17 27-N  Section Township  N W A  ABLE WILL BE A  OR A N  5.89-14-41 E  2579.9' (M) | 17 27-N 8-W  11 Bott  Section Township Range  N W A Solid or I  ABLE WILL BE ASSIGNE OR A NON-ST  S 89-14-41 E 2579.9' (M)  1110' 2400 | 17 27-N 8-W  11 Bottom Hole  Section Township Range Lot Idn    N | 17 27-N 8-W 1805  1805  1805  19 Bottom Hole Locat  Section Township Range Lot Idn Feet from  N W Solint or Infil | 17 27-N 8-W 1805'  1805'  19 Bottom Hole Location I  Section Township Range Lat Idn Feet from the  NULL BE ASSIGNED TO THIS COMPLETION OR A NON-STANDARD UNIT HAS B  S 89-14-41 E 2579.9' (M)  1110'  1110'  LAT: 36'3 LONG: 10 | 17 27-N 8-W 1805' NORTH  18 Ottom Hole Location If Different From the North/South line    N   W   A   B   B   B   B   B   B   B   B   B | 17 27-N 8-W 1805' NORTH 24  1805' NORTH 24  19 Bottom Hole Location If Different From S  Section Township Range Lot Idn Feet from the North/South line Feet in S  ABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTER OR A NON-STANDARD UNIT HAS BEEN APPROVED BY  S 89-14-41 E 2579.9' (M)  1110' LAT: 36'34'37" N. LONG: 107'42'19" W. | 17 27-N 8-W 1805' NORTH 2400'  18 Bottom Hole Location If Different From Surface  Section Township Range Lat Idn Feet from the North/South line Feet from t | 17 27-N 8-W 1805' NORTH 2400' WES  "Bottom Hole Location If Different From Surface  Section Township Ronge Lot Idn Feet from the North/South line Feet from the East/Wes  N W 4 Soint or Infil | 17 27-N 8-W 1805' NORTH 2400' WEST  18 Detail Mode     |

DISTRICT I 1625 N. French Dr., Hobbs, N.M. 88240 State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

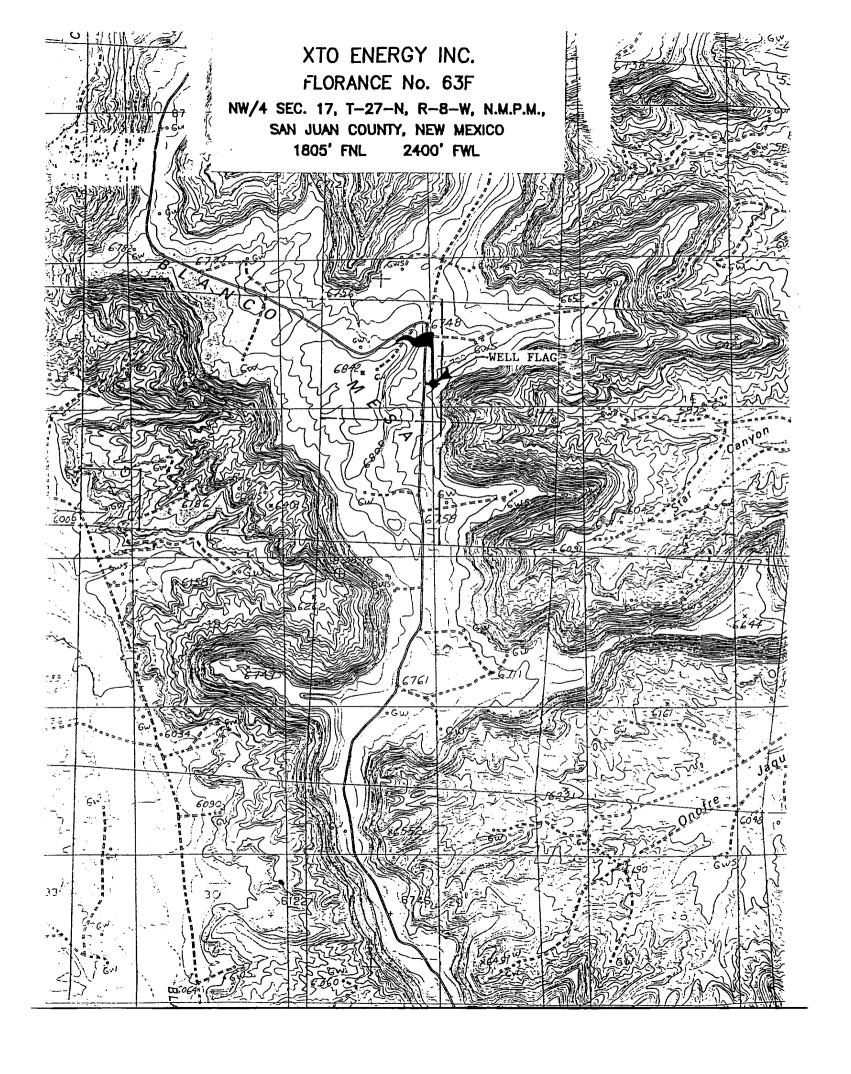
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☐ AMENDED REPORT

# DISTRICT IV 2040 South Pocheco, Sonto Fe, NM 87505

|  |                        | W                       | ELL L          | OCATIO              | N AND AC                      | REAGE DED               | ICATI        | ON PL  | AT   |                  |                                       |  |
|--|------------------------|-------------------------|----------------|---------------------|-------------------------------|-------------------------|--------------|--|--|------------------|---------------------------------------|--|
| 20-0U                                  | Homber S               | 112.7                   |                | *Pool Code<br>72319 |                               | [                       | SLAVO        | Pool Name  | SHUEI  | enf              |                                       |  |
| <sup>4</sup> Property Coo              | de d                   | 70.7                    |                | 12011               | <sup>8</sup> Property N       |                         | <u> </u>     | 1111   | - 1000   |                  | il Number                             |  |
| 2260                                   | 8                      |                         |                | •                   | FLORANG                       |                         |              |  |  |                  | 63F                                   |  |
| 7 OGRID No.                            |                        |                         |                |                     |                               |                         |              |  |  |                  |                                       |  |
| 1670                                   | 67                     | 7 XTO ENERGY INC. 6755' |                |                     |                               |                         |              |  |  |                  |                                       |  |
|  |                        |                         |                |                     |                               | Location                |              |  |  |                  |                                       |  |
| UL or lot no.                          | Section                | Township                | Ronge          | Lot Idn             | Feet from the                 | North/South line        | 1            | from the   | . East/Wes   |                  | County                                |  |
| F                                      | 17                     | 27-N                    | 8-W            | <u> </u>            | 1805'                         | NORTH                   | <del>'</del> | 400'   | WE:  | <u> </u>         | SAN JUAN                              |  |
|  |                        |                         |                | om Hole             |                               | If Different Fr         |              |  | ···  |                  |                                       |  |
| UL or lot no.                          | Section                | Township                | Ronge          | Lot Idn             | Feet from the                 | North/South line        | Feet         | from the   | East/Wes   | st line          | County                                |  |
| Dedicated Acres                        | W                      |                         | 13 Joint or la | กลิเ                | <sup>14</sup> Consolidation C | ode                     | * Orde       | r No.  | L  | <del></del>      |                                       |  |
| 32.0                                   | <i>\(\)</i>            | Z                       | I              | <del>-</del>        |                               |                         |              | -  |  |                  |                                       |  |
| NO ALLOW                               | ABLE V                 |                         |                |                     |                               | ON UNTIL ALL            |              |  |  | EEN CO           | NSOLIDATED                            |  |
|  |                        | OR A N                  | ION-ST         | ANDARD              | UNIT HAS B                    | EEN APPROVE             | D BY         | THE DI   | VISION   |                  | · · · · · · · · · · · · · · · · · · · |  |
| B.L.M. BC<br>1955                      | \$ 89-<br>257<br>2400' | 1110' N                 | 863,<br>1ABA   | B.L.M.<br>1955      |                               | 4'37" N.<br>7'42'19" W. |              | Signature Printed Title Date 18 C I hereby certwas plotted me or under | e  JKFC R  Norme  Diklik  G-  SURVEY   | TOR CEI          |                                       |  |
| S 00-26-27<br>S 17.8<br>S 23.36.4* (M) |                        |                         |                |                     |                               |                         |              | and correct  | to the best of the | MEXICAL BOOK 827 | 2001                                  |  |



## **XTO ENERGY INC.**

Florance #63F APD Data June 3, 2002

Surface Location: 1,805' FNL & 2,400' FWL, Sec 17, T27N, R08W County: San Juan State: New Mexico

TOTAL DEPTH:  $\pm 7,725'$ 

GR ELEV: 6,755'

OBJECTIVE: <u>Dakota/Mesaverde/Chacra</u>

Est KB ELEV: 6,768' (13' AGL)

#### 1. MUD PROGRAM:

| INTERVAL   | 0' to 265'    | 265' to 3,150' | 3,150' to TD |
|------------|---------------|----------------|--------------|
| HOLE SIZE  | 12-1/4"       | 8-3/4"         | 6-1/4"       |
| MUD TYPE   | FW/Native Mud | FW/Polymer     | Air/Foam     |
| WEIGHT     | 8.6-8.8       | 8.6-9.0        |              |
| VISCOSITY  | 28-32         | 29-34          |              |
| WATER LOSS | NC            | NC             |              |

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. RU air compressors after setting the intermediate csg. Drill with air or foam to TD.

#### 2. CASING PROGRAM:

Surface Casing: 9-5/8" casing to be set at  $\pm 265$ ' in 8.6 ppg mud

|          |        |       |      |      | Coll   | Burst  |         |       |       |      |       |       |
|----------|--------|-------|------|------|--------|--------|---------|-------|-------|------|-------|-------|
| 1        |        |       |      |      | Rating | Rating | Jt Str  | ID    | Drift | SF   | SF    | SF    |
| Interval | Length | Wt    | Gr   | Cplg | (psi)  | (psi)  | (M-lbs) | (in)  | (in)  | Coll | Burst | Ten   |
| 0'-265'  | 265'   | 32.3# | H-40 | STC  | 1370   | 2270   | 254     | 9.001 | 8.972 | 5.98 | 5.68  | 15.73 |

Intermediate Casing: 7" casing to be set at  $\pm 3,150$ ' in 9.0 ppg mud.

| III COLLING | mate Cushii | <i>5</i> ' |      | <del>-</del> | 7 2 2 7 4 7 7 |        | TFO     |       |       |      |       |      |
|-------------|-------------|------------|------|--------------|---------------|--------|---------|-------|-------|------|-------|------|
|             |             |            |      |              | Coll          | Burst  |         |       |       |      |       |      |
|             | l           |            |      |              | Rating        | Rating | Jt Str  | ID    | Drift | SF   | SF    | SF   |
| Interval    | Length      | Wt         | Gr   | Cplg         | (psi)         | (psi)  | (M-lbs) | (in)  | (in)  | Coll | Burst | Ten  |
| 0'-         | 3,150'      | 20.0#      | J-55 | STC          | 2257          | 3740   | 234     | 6.456 | 6.331 | 1.15 | 1.31  | 2.57 |
| 3,150'      |             |            |      |              |               |        |         |       |       |      |       |      |

Production Casing: 4-1/2" casing to be set at 7,725' in air.

| Interval | Length | Wt<br>10.5# | Gr<br>J-55 | Cplg<br>STC | Coll<br>Rating<br>(psi)<br>4010 | Burst<br>Rating<br>(psi)<br>4790 | Jt Str<br>(M-lbs) | ID<br>(in)<br>4.052 | Drift<br>(in)<br>3.927 | SF<br>Coll | SF<br>Burst<br>1.20 | SF<br>Ten |
|----------|--------|-------------|------------|-------------|---------------------------------|----------------------------------|-------------------|---------------------|------------------------|------------|---------------------|-----------|
| 0'-      | 7,725  | 10.5#       | J-55       |             | 4010                            | 4790                             | 132               | 4.052               | 3.927                  | 1.33       | 1.20                | 1.90      |
| 7,725'   |        |             |            |             |                                 |                                  |                   |                     |                        | <u> </u>   |                     |           |

#### 3. WELLHEAD:

A. Bradenhead:

9-5/8" x 7" 2,000 psig WP (4,000 psig test).

Casinghead:

7" x 4-1/2" 3,000 psig WP (6,000 psig test).

# 4. <u>CEMENT PROGRAM (Slurry design may change slightly, but the plan is to circulate cement to surface on both casing strings):</u>

A. Surface:

9-5/8", 32.3#, H-40, STC casing to be set at  $\pm$  265'.

<u>Lead:</u> 140 sx of Class "B" (Standard) cement containing 2% CaCl<sub>2</sub>, ¼ pps celloflake, mixed at 15.6 ppg, 1.18 ft<sup>3</sup>/sk, & 5.20 gal wtr/sk.

Total slurry volume is 166 ft<sup>3</sup>, 100% excess of calculated annular volume to 265'.

B. Intermediate:

7", 20.0#, J-55, STC casing to be set at  $\pm 3,150$ '.

<u>Lead:</u> 225 sx of Class "B" (Standard) cement containing ±3% extender, ¼ pps celloflake and 2% CaCl2 mixed at 11.4 ppg, 2.88 ft<sup>3</sup>/sk, 17.89 gal wtr/sx.

Tail: 50 sx of Class "B" (Standard) cement containing ¼ pps celloflake and 2% CaCl2 mixed at 15.6 ppg, 1.18 ft<sup>3</sup>/sk, 5.20 gal wtr/sx.

Total slurry volume is 707 ft<sup>3</sup>, circulated to surface. This value is 50% (excess) over gage hole volume.

C: <u>Production:</u>

4-1/2". 10.5#, J-55, STC casing to be set at  $\pm 7,725$ '. DV Tool @  $\pm 4,250$ '.

#### First Stage:

<u>Lead:</u> 135 sx of Class "H" Premium Lite High Strength (65/35/6), ½ pps celloflake, 2% KCl, 0.5% fluidloss, 0.2% dispersant & 2% Phenoseal mixed at 12.5 ppg, 2.01 ft<sup>3</sup>/sk, 10.12 gal wtr/sx.

<u>Tail:</u> 150 sx of Class "H" Premium cement containing 4% gel (extender), ¼ pps celloflake, 0.5% fluidloss, 0.2% dispersant and 2% Phenoseal mixed at 14.7 ppg, 1.38 ft<sup>3</sup>/sk, 6.70 gal wtr/sx..

#### **Second Stage:**

<u>Lead:</u> 50 sx of Class "B" cement containing 3% extender & ¼ pps celloflake mixed at 11.4 ppg, 2.82 ft<sup>3</sup>/sk, 17.5 gal wtr/sx.

<u>Tail:</u> 100 sx of Class "B" cement containing ¼ pps celloflake and 2% Phenoseal mixed at 15.6 ppg, 1.18 ft<sup>3</sup>/sk, 5.20 gal wtr/sx..

Total estimated slurry volume for the 4-1/2" production casing is 736 ft<sup>3</sup> for  $\pm 5,075'$  of fill. Est. TOC should be @  $\pm 2,650'$ . 35% (excess) over gage hole volume has been added to the number of sacks indicated..

Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined for the caliper logs plus 35%..

#### 5. LOGGING PROGRAM:

- A. Mud Logger: A two man mud logging crew will come on the hole @ 4,300' and remain on the hole until TD.
- B. Open Hole Logs as follows: Run Dual Induction/MSFL/GR/CAL/SP/CNL/LDT (lithodensity) from TD to the bottom of the intermediate csg (@ $\pm 3,150$ ' MD). Run cased hole GR/CCL from TD to surface.

#### 6. FORMATION TOPS:

| Formation              | Subsea Depth | Well Depth (MD) |
|------------------------|--------------|-----------------|
| Ojo Alamo SS           | +4746'       | 2024'           |
| Kirtland Shale         | +4689'       | 2081'           |
| Farmington Sanstone    | +4590'       | 2180'           |
| Fruitland Formation    | +4150'       | 2620'           |
| Lower Fruitland Coal   | +3964'       | 2806'           |
| Pictured Cliffs SS     | +3881'       | 2889'           |
| Lewis Shale            | +3722'       | 3048'           |
| Chacra Sandstone       | +2980'       | 3790'           |
| Cliffhouse SS          | +2307'       | 4463'           |
| Menefee                | +2138'       | 4632'           |
| Point Lookout SS       | +1618'       | 5152'           |
| Mancos Shale           | +1292'       | 5478'           |
| Gallup Sandstone       | +444'        | 6326'           |
| Greenhorn Limestone    | -347'        | 7117'           |
| Graneros Shale         | -398'        | 7168'           |
| 1 <sup>st</sup> Dakota | -434'        | 7204'           |
| 2 <sup>nd</sup> Dakota | -454'        | 7224'           |
| 3 <sup>rd</sup> Dakota | -504'        | 7274'           |
| 4 <sup>th</sup> Dakota | -567'        | 7337'           |
| 5 <sup>th</sup> Dakota | -591'        | 7361'           |
| 6 <sup>th</sup> Dakota | -638'        | 7408'           |
| Burro Canyon Ss        | -681'        | 7451'           |
| Morrison               | -733'        | 7503'           |
| Projected TD           | -955'        | 7725'           |

