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HOBBS OCD  
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State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised August 1, 2011

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

|  |  |   |
|--|--|---|
| SUNDRY NOTICES AND REPORTS ON WELLS<br>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) |  | WELL API NO.<br>30-025-06792  |
| 1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>   |  | 5. Indicate Type of Lease<br>STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> |
| 2. Name of Operator<br>CHEVRON U.S.A. INC.   |  | 6. State Oil & Gas Lease No.  |
| 3. Address of Operator<br>15 SMITH ROAD, MIDLAND, TEXAS 79705  |  | 7. Lease Name or Unit Agreement Name<br>S.J. SARKEYS 26   |
| 4. Well Location<br>Unit Letter D: 660 feet from the NORTH line and 660 feet from the WEST line<br>Section 26 Township 21-S Range 37-E NMPM County LEA   |  | 8. Well Number 2  |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.)   |  | 9. OGRID Number 4323  |
| 10. Pool name or Wildcat<br>PENROSE SKELLY   |  |   |

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

|  |  |
|--|--|
| <b>NOTICE OF INTENTION TO:</b><br>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/><br>TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/><br>PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/><br>DOWNHOLE COMMINGLE <input type="checkbox"/> | <b>SUBSEQUENT REPORT OF:</b><br>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/><br>COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/><br>CASING/CEMENT JOB <input type="checkbox"/> |
| OTHER: INTENT TO ACIDIZE & SCALE SQUEEZE, SWAB   | OTHER:   |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

CHEVRON U.S.A. INC. INTENDS TO ACIDIZE, SWAB, & SCALE SQUEEZE THE SUBJECT WELL.  
 PLEASE FIND ATTACHED, THE INTENDED PROCEDURE, WELLBORE DIAGRAM, & C-144 INFORMATION.

Spud Date:  Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE *Denise Pinkerton* TITLE: REGULATORY SPECIALIST DATE: 03-22-2013  
 Type or print name: DENISE PINKERTON Email address: leakejd@chevron.com PHONE: 432-687-7375  
 APPROVED BY *[Signature]* TITLE *Dist MGR* DATE *3-28-2013*  
 Conditions of Approval (if any):

MAR 28 2013



## Workover/ Completion Program

Well: S J SARKEYS 26 #2 03.08.2013  
Reservoir: Penrose Skelly- Grayburg  
Surface Location: D-26-21S-37E 660 FNL 660 FWL  
GPS (NAD27) – (Long, Lat): N 32° 27' 19.008", W -103° 8' 23.316" (NAD27)

Job: Sonic Hammer Acidize, Swab & Scale Squeeze

### PREWORK:

1. Utilize the rig move check list.
2. Check anchors and verify that pull test has been completed in the last 24 months.
3. Ensure location of & distance to power lines is in accordance with MCA SWP. Complete and electrical variance and electrical variance RUMS if necessary.
4. Ensure that location is of adequate build and construction.
5. Ensure that elevators and other lifting equipment are inspected. Calliper all lifting equipment at the beginning of each day or when sizes change.
6. When NU anything over and open wellhead (EPA, etc.) ensure the hole is covered to avoid dropping anything downhole.
7. For wells to be worked on or drilled in an H<sub>2</sub>S field/area, include the anticipated maximum amount of H<sub>2</sub>S that an individual could be exposed to along with the ROE calculations for 100 ppm and 500 ppm.

### Procedure:

**This procedure is meant to be followed. It is up to the WSM, Remedial Engineer and Production Engineer to make the decisions necessary to do SAFELY what is best for the well. In the extent that this procedure does not reflect actual operations, please contact RE, PE and Superintendent for MOC**

1. Verify that well does not have pressure or flow. If the well has pressure, note tubing and casing pressures on WellView report. Bleed down well; if necessary, kill with cut brine fluid (8.6 ppg).
2. MI & RU workover unit.
3. Unseat pump, POOH with rods and pump. Examine rods for wear/pitting/paraffin. Do not hot water unless necessary. ND wellhead, unset TAC, NU BOP. POOH and LD 1 jt. PU 5 ½" packer along with a joint of tubing and set ~ @ 25', test BOP pipe rams to 250 psi/1000 psi. Note testing pressures on WellView report. Release and LD packer.
4. PU 1 joints of tubing and tag for fill (TAC 3622-25', Top Perfs: 3,674', Bottom Perfs 3,876', EOT 4,007', PBTD 5,425'). **Do not push TAC into perfs.** POOH while scanning 2 7/8" prod tubing. LD all non-yellow band joints.

*If fill is tagged:*

- A. Above 4,050' contact remedial engineer and verify if the clean out is necessary. If so, continue with foam/air clean out per step 5.
- B. Below 4,050' clean out not needed, skip step 5.

**Note: Strap pipe out of the hole to verify depths and note them on Wellview report.**

Send scan log report to [drillin@chevron.com](mailto:drillin@chevron.com) (Jonathan Paschel).

5. PU and RIH with 4 3/4" MT bit, four (3 1/2") drill collars on 2 7/8" 6.5# L-80 WS. RU power swivel and clean out to 4,040' with foam/air unit (**continue to supplemental procedure and in accordance with attached SOG**). POOH with 2 7/8" WS and bit. LD bit & BHA.
6. Contact sonic tool rep to be on site during job. *Verify that WS is clean, inspect for excessive rust.* PU and RIH with Sonic Hammer tool, seat nipple, and work string to 3,880' or enough to cover the bottom perforations with a whole stand. Hydrotest tubing to 5,000 psi. Stand back tubing to top perforations. Install stripper head and stand pipe with sufficient treating line to move tools vertically ~ 65'. Rig up pressure gauges to allow monitoring of tubing and casing pressures.
7. MI & RU Petroplex and pressure test surface lines. Titrate acids and verify concentration (HCl ±1.5%) report results in daily work summary. If well will circulate proceed to step 7.b).
  - a) **Sonic Hammer for non circulating wells.** Treat all 5 intervals from 3,670' to 3,880' with the following procedure from the top interval to the bottom interval. Shut in the annulus. Do not exceed 5,000 psi tubing pressure.
    - i) While reciprocating over the perf interval, pump 30 bbls of cut brine, followed by 15% NEFE HCL, and then flush tubing with cut brine pumping at 5 BPM. Repeat with all intervals listed in Table A using the acid volumes listed for each interval.

**Table A: Perforation Intervals for acid.**

| Interval | Depth         | Interval (Ft.) | Acid Volume (gal) |
|----------|---------------|----------------|-------------------|
| 1        | 3670' - 3707' | 37             | 1,000             |
| 2        | 3707' - 3737' | 30             | 900               |
| 3        | 3755' - 3796' | 41             | 1,000             |
| 4        | 3796' - 3842' | 46             | 1,100             |
| 5        | 3842' - 3880' | 38             | 1,000             |
|          |               |                | 5,000             |

- ii) R/D Petroplex Acidizing, drop Sonic Hammer circulating port opening ball, shut in well for 1 hr for the acid to spend.
    - ❖ If WSM believes that the formation may take longer to spend the acid, wait until appropriate to open circulating ports and attempt swabbing.
  - iii) Pressure up the tubing to ~2000 psi to open the sonic hammer tool circulating port.
  - iv) R/U swab equipment and swab well back to flowback tank until the load is recovered or returns are produced fluid and no longer spent acid.
  - v) R/D swab equipment and POOH w/ tubing to top perf.
  - vi) Pump 40 bbls cut brine mixed w/ 3 drums Baker SCW-358 scale inhibitor down the tubing through the circulating ports on the Sonic Hammer at a max rate of 5 bpm. Displace scale squeeze w/ 110 bbls of cut brine.
  - vii) TOOH w/ sonic hammer. Proceed to step 8.
- b) Sonic Hammer treatment w/ a circulating well.**
- i) Treat interval #1 (referring to Table A) with 30 bbls of cut brine. Pump down Sonic Hammer tool at 5 BPM while reciprocating tool across intervals. Do not exceed 5,000 psi tubing pressure. Leave annulus open in circulation mode while treating.
  - ii) Pick up enough pipe to reach the next interval and repeat step 7.b)i) until all intervals are washed.

**Table B: Perforation Intervals for acid.**

| Interval | Depth         | Interval (Ft.) | Acid Volume (gal) |
|----------|---------------|----------------|-------------------|
| 1        | 3670' - 3707' | 37             | 1,000             |
| 2        | 3707' - 3737' | 30             | 900               |
| 3        | 3755' - 3796' | 41             | 1,000             |
| 4        | 3796' - 3842' | 46             | 1,100             |
| 5        | 3842' - 3880' | 38             | 1,000             |
|          |               |                | 5,000             |

- iii) Starting at interval #5 fill tubing w/ acid and shut in backside. Pump the volume of acid specified in Table A at 5 BPM reciprocating over the perf interval. Flush tubing with cut brine. Casing pressure should not exceed 500 psi. If necessary, bleed off or slow pumping rate.
  - iv) TOOH w/ tubing to the next interval and repeat step 7.b)iii) acidizing each interval according to Table A.
  - v) Shut in well for 1 hr for the acid to spend. Monitor casing pressure to keep it below 500 psi. Bleed off excess pressure if necessary.
  - vi) Kill well and POOH Sonic Hammer Tool and WS. LD Sonic Hammer.
  - vii) PU & RIH with 5 1/2" packer and WS. Set treating packer at 3630', above the top perf.
  - viii) RU swab crew and flowback tank.
  - ix) Swab well until returns indicate formation fluid and not spent acid, or fluid level drops enough to make swabbing non productive.
  - x) Pump 40 bbls cut brine mixed with 3 drums of scale inhibitor (165 gals) Baker SCW-358 Scale Inhibitor Chemical down the packer. Pump at a max rate of 5 BPM.
  - xi) Displace scale squeeze with 110 bbls of cut brine.
  - xii) Do not exceed 500 psi casing pressure or 5 BPM while pumping scale squeeze or casing flush. Shut in well overnight.
  - xiii) Release packer. POOH packer and WS. LD 2 7/8" WS and packer.
8. RIH with 2 7/8" production tubing hydrotesting to 5,000 psi. Set TAC per ALCR recommendation. ND BOP. NU WH. RIH with rods and pump per ALCR. Hang well on. RD and release workover unit.
9. Turn well over to production.

## FOAM / AIR CLEANOUT PROCEDURE

- This procedure is an addition to the original procedure.
  1. Install flowback manifold with two chokes. All components on flowback manifold must be rated to at least 5,000 psi. If possible, flowback manifold components should be hydrotested before delivery. Hardline pipes from 2" casing valve to manifold to half pit with gas buster.
  2. Install flowback tank downwind from rig.
  3. Position Air unit upwind from Rig next to water tanks. Have vacuum truck on standby to empty halfpit. (if needed)
  4. RIH with 4 <sup>3</sup>/<sub>4</sub>" MT bit, four (3 <sup>1</sup>/<sub>2</sub>") drill collars on 2 <sup>7</sup>/<sub>8</sub>" 6.5# L-80 WS.
  5. NU stripper head with **NO Outlets** (Check stripper cap for thread type - course threads preferred). **Stripper head to be stump tested to 1,000 psi before being delivered to rig.** Check chart or test at rig.
  6. RU foam air unit. Make quality foam on surface before going down hole with foam/air. Install flapper float at surface before beginning to pump. Break circulation with foam/air. Evacuate fluid from well.

**Pump high quality foam at all times. Do not pump dry air at any time. Fluid injection rates will generally be above 12 gallons per minute**

**Whenever there is pressure on the stripper head, have a dedicated person continuously monitor pressure at choke manifold and have a dedicated person at accumulator ready to close annular BOP in case stripper leaks. Do not allow pressure on stripper head to exceed 500 psi. If pressure cannot be controlled below 500 psi, stop pumping, close BOP and bleed off pressure.**

7. Clean out fill to 4,040' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, pull above the perforations.
8. When tripping out of hole, have special float bleed off tool available to relieve trapped pressure below float.

**Ensure that high quality, stiff foam is pumped while circulating the fill. Stiff foam is required to prevent segregation while circulating. Monitor flow and pressures carefully when cleaning out.**

**Before rigging up power swivel to rotate, carefully inspect Kelly hose to ensure that it is in good condition. Ensure that swivel packing is in good condition.**

**Continue on with original procedure for completion.**





# S J SARKEYS 26 #2 (Wellbore Diagram)

## Eunice FMT - Penrose Skelly Field

D-26  
315 37E  
660N  
660W  
free-oil

| Well Data                      |                    |                                       |             | Casing and Liner Data |              |       |      |          |            |          |  |
|--------------------------------|--------------------|---------------------------------------|-------------|-----------------------|--------------|-------|------|----------|------------|----------|--|
| Well Type                      | Well #             | API No.                               | Reservoir   | Size (in)             | Wt (lb/ft)   | Grade | Top  | Bottom   | TOC        |          |  |
| Oil                            | S J SARKEYS 26 #2  | 30-025-06792                          | Grayburg    | 13 3/8                | 36           | -     | 8    | 290      | Circulated |          |  |
| First Completed                | Cost Center        | Chevron Ref. No.                      | WBS #       | 8 7/8                 | 32           | H-40  | 8    | 2799     | ?          |          |  |
| 25-Sep-47                      | UCU494200          | FA7889                                | UWDP5-R3059 | 5 1/2                 | 17           | J55   | 8    | 6559     | ?          |          |  |
| Plug Back-Depth(ft)            | Total Depth - (ft) | Production Method                     | Status      | Tubing Data           |              |       |      |          |            |          |  |
| 5025'-5029' (Cml. Cap)         | 6603               | Rod Pump                              | Online      | Size (in)             | Wt (lb/ft)   | Grade | Conn | Top (ft) | Bottom     | Comments |  |
| Location: 760' FNL & 1980' FWL |                    |                                       |             |                       |              |       |      |          | MD (ft)    | TVD (ft) |  |
| Field                          | County             | State                                 | Township    |                       |              |       |      |          |            |          |  |
| Penrose Skelly                 | Lea                | New Mexico                            | 21S         |                       |              |       |      |          |            |          |  |
| Range                          | Section            | GPS (NAD27) - (Long, Lat)             |             |                       |              |       |      |          |            |          |  |
| 37E                            | 26                 | N 32° 27' 19.008", W -103° 8' 23.316" |             |                       |              |       |      |          |            |          |  |
| Wellhead and Tree Data         |                    |                                       |             |                       |              |       |      |          |            |          |  |
| Item                           | Maker              | Type                                  | Size (in)   | Part No.              | Rating (psi) |       |      |          |            |          |  |

| MDBRT (ft)   | TVDBRT (ft) | Well Schematic          | Description  | Min ID (")  | Max OD (")   | Drift (") | Length | Comments   |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|--------------|-------------|-------------------------|--|---|--|-----------|--------|------------|--|--------|------|--------|-------------|-------------|------|-------------|----------|-------|-------------|---|------|-------------|----------|-------|-------------|---|------|-------------|----------|-------|-------------|--|------|------------|----------|------|------------|---|------|------------|----------|-------|------------|---|------|------------|----------|-------|------------|--|------|-------|-------|-------|----|--|---|--|--|--|---|---|---|-------|-------|-------|---|---|---|-------|-------|-------|----|--|---|--|--|--|----|---|---|--|--|--|---|--|---|--|--|--|--|
| 290          |             |                         | Hole Size: 17 1/4", 13 3/8", 36#, (300 sks- Circulated)  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2799         |             |                         | Hole Size: 11", 8 5/8", 32#, H-40 Csg w/ 1400 sks  | 7.921   | 9.625  | 7.796     | 2791   |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | <table border="1"> <thead> <tr> <th>ID</th> <th>OD</th> <th>Drift</th> <th>Length</th> <th>Description</th> <th>QTY</th> </tr> </thead> <tbody> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>3295</td> <td>J-55 6.5# T&amp;C External Upset (8'-3303')</td> <td>105</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>4</td> <td>J-55 6.5# T&amp;C External Upset(3303'-3307')</td> <td>1</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>315</td> <td>J-55 6.5# T&amp;C External Upset (3307'-3622')</td> <td>10</td> </tr> <tr> <td></td> <td></td> <td></td> <td>3</td> <td>Tbg Anchor/Catcher - 2 7/8" - (3622'-3625')</td> <td>1</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>248</td> <td>J-55 6.5# T&amp;C External Upset(3625'-3873')</td> <td>8</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>33</td> <td>J-55 6.5# T&amp;C External Upset-IPC-TK-99 (3873'-3906')</td> <td>1</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>12</td> <td>J-55 6.50# T&amp;C External Upset-IPC-99 (3906'-3918')</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>Seat Nipple- Heavy Duty (2.875") Cup Type (3918'-3919')</td> <td>1</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>4</td> <td>J-55 6.5# T&amp;C External Upset(3918'-3923')</td> <td>1</td> </tr> <tr> <td>2.441</td> <td>2 7/8</td> <td>2.347</td> <td>20</td> <td>Cavins Desander 2 7/8"x20" D-2707 GF PC(3923'-3943')</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td>63</td> <td>J-55 6.5# T&amp;C External Upset(3943'-4006')</td> <td>2</td> </tr> <tr> <td></td> <td></td> <td></td> <td>1</td> <td>Cavins Dump Valve (2.875") (4006'-4007')</td> <td>1</td> </tr> </tbody> </table> |   |  |           |        |            |  | ID     | OD   | Drift  | Length      | Description | QTY  | 2.441       | 2 7/8    | 2.347 | 3295        | J-55 6.5# T&C External Upset (8'-3303') | 105  | 2.441       | 2 7/8    | 2.347 | 4           | J-55 6.5# T&C External Upset(3303'-3307') | 1    | 2.441       | 2 7/8    | 2.347 | 315         | J-55 6.5# T&C External Upset (3307'-3622') | 10   |            |          |      | 3          | Tbg Anchor/Catcher - 2 7/8" - (3622'-3625') | 1    | 2.441      | 2 7/8    | 2.347 | 248        | J-55 6.5# T&C External Upset(3625'-3873') | 8    | 2.441      | 2 7/8    | 2.347 | 33         | J-55 6.5# T&C External Upset-IPC-TK-99 (3873'-3906') | 1    | 2.441 | 2 7/8 | 2.347 | 12 | J-55 6.50# T&C External Upset-IPC-99 (3906'-3918') | 1 |  |  |  | 1 | Seat Nipple- Heavy Duty (2.875") Cup Type (3918'-3919') | 1 | 2.441 | 2 7/8 | 2.347 | 4 | J-55 6.5# T&C External Upset(3918'-3923') | 1 | 2.441 | 2 7/8 | 2.347 | 20 | Cavins Desander 2 7/8"x20" D-2707 GF PC(3923'-3943') | 1 |  |  |  | 63 | J-55 6.5# T&C External Upset(3943'-4006') | 2 |  |  |  | 1 | Cavins Dump Valve (2.875") (4006'-4007') | 1 |  |  |  |  |
| ID           | OD          |                         | Drift  | Length  | Description  | QTY       |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       |                         | 2.347  | 3295  | J-55 6.5# T&C External Upset (8'-3303')              | 105       |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       |                         | 2.347  | 4   | J-55 6.5# T&C External Upset(3303'-3307')            | 1         |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       |                         | 2.347  | 315   | J-55 6.5# T&C External Upset (3307'-3622')           | 10        |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         |  | 3   | Tbg Anchor/Catcher - 2 7/8" - (3622'-3625')          | 1         |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       |                         | 2.347  | 248   | J-55 6.5# T&C External Upset(3625'-3873')            | 8         |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       |                         | 2.347  | 33  | J-55 6.5# T&C External Upset-IPC-TK-99 (3873'-3906') | 1         |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       | 2.347                   | 12   | J-55 6.50# T&C External Upset-IPC-99 (3906'-3918')      | 1  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | 1  | Seat Nipple- Heavy Duty (2.875") Cup Type (3918'-3919') | 1  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       | 2.347                   | 4  | J-55 6.5# T&C External Upset(3918'-3923')               | 1  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 2.441        | 2 7/8       | 2.347                   | 20   | Cavins Desander 2 7/8"x20" D-2707 GF PC(3923'-3943')    | 1  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | 63   | J-55 6.5# T&C External Upset(3943'-4006')               | 2  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | 1  | Cavins Dump Valve (2.875") (4006'-4007')                | 1  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3650         |             |                         | Squeezed perforation (8 hole - 385 sks)<br>Returns to surface but no cmt -12/14/2006   |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | <table border="1"> <thead> <tr> <th>Perfs:</th> <th>Zone</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>3674 -3679</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3690 -3693</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3698 -3707</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3710 -3718</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3730 -3732</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3760 -3768</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3778 -3786</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3792 -3796</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3804 -3810</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3816 -3824</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3832 -3842</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3846 -3856</td><td>Grayburg</td><td>Open</td></tr> <tr><td>3866 -3876</td><td>Grayburg</td><td>Open</td></tr> </tbody> </table>  |   |  |           |        |            |  | Perfs: | Zone | Status | 3674 -3679  | Grayburg    | Open | 3690 -3693  | Grayburg | Open  | 3698 -3707  | Grayburg                                | Open | 3710 -3718  | Grayburg | Open  | 3730 -3732  | Grayburg                                  | Open | 3760 -3768  | Grayburg | Open  | 3778 -3786  | Grayburg                                   | Open | 3792 -3796 | Grayburg | Open | 3804 -3810 | Grayburg                                    | Open | 3816 -3824 | Grayburg | Open  | 3832 -3842 | Grayburg                                  | Open | 3846 -3856 | Grayburg | Open  | 3866 -3876 | Grayburg   | Open |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| Perfs:       | Zone        | Status                  |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3674 -3679   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3690 -3693   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3698 -3707   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3710 -3718   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3730 -3732   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3760 -3768   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3778 -3786   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3792 -3796   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3804 -3810   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3816 -3824   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3832 -3842   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3846 -3856   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 3866 -3876   | Grayburg    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 4007         |             |                         | End of Tubing  | 1.75  |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 4010         |             |                         | Squeezed perforation (8 hole - 150 sks)<br>Not Circulated -12/12/2006  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5425         |             |                         | 5425-5429 CIBP- Unknown Cmt  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | <table border="1"> <thead> <tr> <th>Perfs:</th> <th>Zone</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>5519'-5529'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5532'-5551'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5554'-5558'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5742'-5749'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5766'-5771'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5782'-5789'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5807'-5814'</td><td>Blinebry</td><td>Open</td></tr> <tr><td>5822'</td><td>Blinebry</td><td>Open</td></tr> </tbody> </table>   |   |  |           |        |            |  | Perfs: | Zone | Status | 5519'-5529' | Blinebry    | Open | 5532'-5551' | Blinebry | Open  | 5554'-5558' | Blinebry                                | Open | 5742'-5749' | Blinebry | Open  | 5766'-5771' | Blinebry                                  | Open | 5782'-5789' | Blinebry | Open  | 5807'-5814' | Blinebry                                   | Open | 5822'      | Blinebry | Open |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| Perfs:       | Zone        | Status                  |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5519'-5529'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5532'-5551'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5554'-5558'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5742'-5749'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5766'-5771'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5782'-5789'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5807'-5814'  | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 5822'        | Blinebry    | Open                    |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6275         |             |                         | 35' of cmt on top of CIBP ( 6275'-6310')<br>CIBP (6310' - 6314')   |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6310         |             |                         | <table border="1"> <thead> <tr> <th>Perfs:</th> <th>Zone</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>6416'-6480'</td><td>Drinkard</td><td></td></tr> </tbody> </table>   |   |  |           |        |            |  | Perfs: | Zone | Status | 6416'-6480' | Drinkard    |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| Perfs:       | Zone        | Status                  |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6416'-6480'  | Drinkard    |                         |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6320         |             |                         | Baker Model D Prk (6320'-6323')  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6505         |             |                         | 15' of cmt on top of CIBP (6505'-6520')<br>(6520' - 6524') CIBP  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6520         |             |                         | <table border="1"> <thead> <tr> <th>Perfs:</th> <th>Zone</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>6532'-6554'</td><td>Drinkard</td><td></td></tr> </tbody> </table>   |   |  |           |        |            |  | Perfs: | Zone | Status | 6532'-6554' | Drinkard    |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| Perfs:       | Zone        | Status                  |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6532'-6554'  | Drinkard    |                         |  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6559         |             |                         | 5 1/2", 17#, J-55 Csg seg w/500 sks  | 4.892   | 7.656  | 4.767     |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
|              |             |                         | (6559 - 6603) Open Hole Size: 4 3/4",  |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| 6603         |             |                         | TD   |   |  |           |        |            |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |
| Prepared by: |             | Prasanna Kumar Chandran |  | Checked By:   |  | 7-Mar-13  |        | Version: 1 |  |        |      |        |             |             |      |             |          |       |             |   |      |             |          |       |             |   |      |             |          |       |             |  |      |            |          |      |            |   |      |            |          |       |            |   |      |            |          |       |            |  |      |       |       |       |    |  |   |  |  |  |   |   |   |       |       |       |   |   |   |       |       |       |    |  |   |  |  |  |    |   |   |  |  |  |   |  |   |  |  |  |  |

This wellbore diagram is based on the most recent information regarding wellbore configuration and equipment that could be found in the Midland Office well files and computer databases as of the update date below. Verify what is in the hole with the well file in the Eunice Field Office. Discuss w/ WEO Engineer, WQ Rep, OS, ALS, & FS prior to rigging up on well regarding any hazards or unknown issues pertaining to the well.

Hole Size: 7 7/8"  
44 ft Open Hole

## H<sub>2</sub>S Radius of Exposure Calculations

Expected H<sub>2</sub>S ROE that could be encountered while working on a well

Example: 100 PPM ROE =  $0.001589 * 250 \text{ PPM} * 275 \text{ MCF}^{0.6258} = 19 \text{ FEET}$

Example: 500 PPM ROE =  $0.0004546 * 250 \text{ PPM} * 275 \text{ MCF}^{0.6258} = 9 \text{ FEET}$

Well:

Enter H2S Concentration:  PPM 0.41 % H2S

Enter Max. Escape Volume:  MCF/D 200,000 CF/D

100 PPM Radius of Exposure:  Feet (only for H2S concentrations less than 10%)

500 PPM Radius of Exposure:  Feet (only for H2S concentrations less than 10%)

H2S in lbs/day:  lb/day

H2S in lbs/hr:  lb/hr

SO2 in lbs/hr:  lb./hr

SO2 in 2000-lb tons/day:  tons/day

SO2 in 2000-lb tons/yr:  tons/yr

These radius of exposures are possible only if the well bore is evacuated of fluid and there is an uncontrolled release of gas at the surface.