

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
May 27, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

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

|                                                                                                                     |  |                                         |
|---------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|
| <sup>1</sup> Operator Name and Address<br>ConocoPhillips Company<br>3300 N. "A" St., Bldg. 6 Midland, TX 79705-5490 |  | <sup>2</sup> OGRID Number<br>217817     |
| <sup>3</sup> Property Code<br>31257                                                                                 |  | <sup>4</sup> API Number<br>30.025-30505 |
| <sup>5</sup> Property Name<br>Vacuum Glorieta East Unit (Tract 42)                                                  |  | <sup>6</sup> Well No.<br>1              |
| <sup>7</sup> Proposed Pool 1<br>Vacuum; Glorieta                                                                    |  | <sup>8</sup> Proposed Pool 2            |

**Surface Location**

|                    |               |                 |              |         |                       |                           |                      |                        |               |
|--------------------|---------------|-----------------|--------------|---------|-----------------------|---------------------------|----------------------|------------------------|---------------|
| UL or lot no.<br>E | Section<br>33 | Township<br>17S | Range<br>35E | Lot Idn | Feet from the<br>1655 | North/South line<br>North | Feet from the<br>990 | East/West line<br>West | County<br>Lea |
|--------------------|---------------|-----------------|--------------|---------|-----------------------|---------------------------|----------------------|------------------------|---------------|

**Proposed Bottom Hole Location If Different From Surface**

|                    |               |                 |              |         |                      |                           |                       |                        |               |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|
| UL or lot no.<br>C | Section<br>33 | Township<br>17S | Range<br>35E | Lot Idn | Feet from the<br>165 | North/South line<br>North | Feet from the<br>2000 | East/West line<br>West | County<br>Lea |
|--------------------|---------------|-----------------|--------------|---------|----------------------|---------------------------|-----------------------|------------------------|---------------|

**Additional Well Information**

|                                                                                                                                                                               |                                                     |                                                  |                                    |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|------------------------------------|--------------------------------------------------|
| <sup>11</sup> Work Type Code<br>P                                                                                                                                             | <sup>12</sup> Well Type Code<br>O                   | <sup>13</sup> Cable/Rotary<br>R                  | <sup>14</sup> Lease Type Code<br>S | <sup>15</sup> Ground Level Elevation<br>3946' GR |
| <sup>16</sup> Multiple                                                                                                                                                        | <sup>17</sup> Proposed Depth<br>6052' TVD, 7755' MD | <sup>18</sup> Formation<br>Glorieta              | <sup>19</sup> Contract             | <sup>20</sup> Spud Date<br>Upon Approval         |
| Depth to Groundwater<br>75'                                                                                                                                                   |                                                     | Distance from nearest fresh water well<br>>1000' |                                    | Distance from nearest surface water<br>>1000'    |
| Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mil thick Clay <input type="checkbox"/> Pit Volume: 20910 bbls                                                   |                                                     |                                                  |                                    |                                                  |
| Closed-Loop System <input type="checkbox"/>                                                                                                                                   |                                                     |                                                  |                                    |                                                  |
| Drilling Method:<br>Fresh Water <input type="checkbox"/> Brine <input checked="" type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> |                                                     |                                                  |                                    |                                                  |

**Proposed Casing and Cement Program**

| Hole Size | Casing Size | Casing weight/foot | Setting Depth | Sacks of Cement | Estimated TOC |
|-----------|-------------|--------------------|---------------|-----------------|---------------|
| 12-1/4"   | 8-5/8"      | 24#                | 1586'         | 1200sx Cl "C"   | Surf.         |
| 7-7/8"    | 5-1/2"      | 15.5#              | 6350'         | 1800sx Cl "C"   | 1100'         |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |
|           |             |                    |               |                 |               |

<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.

Per the following Procedure, ConocoPhillips plans to drill a 1750' sidetrack within the existing cased hole. KOP @ 5941', penetration (formation entry) point location - 1536' FNL & 1122' FWL Sec. 33, schematic attached.

Permit Expires 1 Year From Approval  
Data Unload Pending Underway

- Set Cast Iron Bridge Plug in Vertical Wellbore
- Set Whipstock above Cast Iron Bridge Plug
- Mill a window in the 5-1/2" casing (window mill off the whipstock)
- Directionally drill 4-3/4" horizontal lateral hole using 10 ppg brine or alternatively a 9 ppg brine or Calcium Carbonate Drill-In Fluid
- Leave the horizontal lateral as an open hole - no casing to be run in it and no cementing in the horizontal lateral.
- Recover the Whipstock
- Drill out the Cast Iron Bridge Plug in the vertical wellbore and clean out the vertical wellbore as needed
- Complete the well with the pump (either beam pump or Electrical Submersible Pump) in the vertical wellbore. Commingle the production from the perforations in the vertical wellbore with the production from the horizontal lateral or abandon the perforations in the vertical wellbore and produce the horizontal lateral by itself as an option.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☒.

|                               |  |                              |  |                                                   |  |
|-------------------------------|--|------------------------------|--|---------------------------------------------------|--|
| Printed name: Celeste G. Dale |  | Title: Regulatory Specialist |  | E-mail Address: celeste.g.dale@conocophillips.com |  |
| Date: 04/13/2007              |  | Phone: (432)688-6884         |  | Condition                                         |  |

**OIL CONSERVATION DIVISION**

Approved by:

Title:

Approval Date:

Expiration Date:

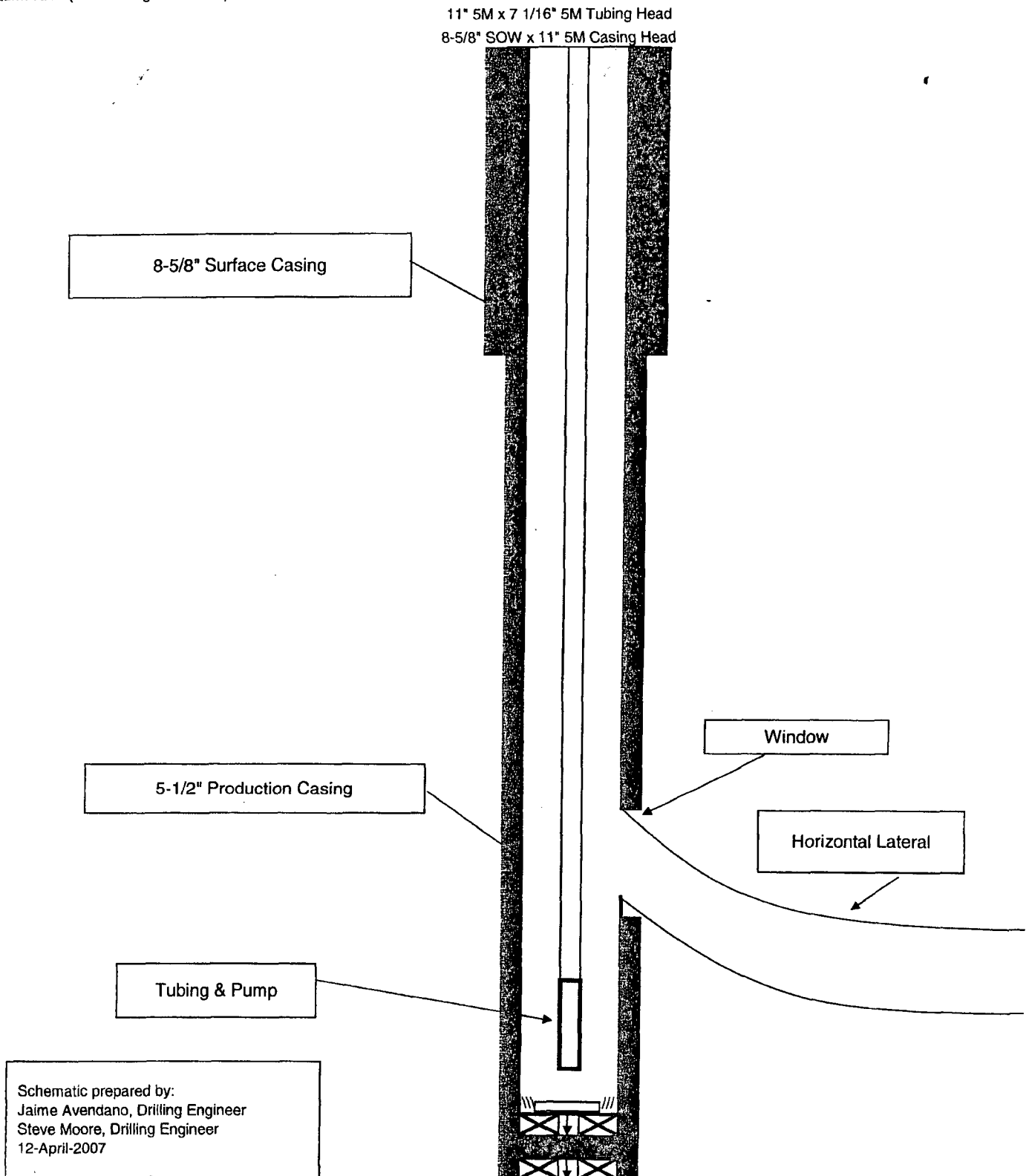
BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico  
Case No. 14562 Exhibit No. 4  
Submitted by:  
CONOCOPHILLIPS COMPANY  
Hearing Date: October 28, 2010

|                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div data-bbox="125 966 1053 1421"><div>16</div><div>B.H.L.</div><div>S.L.</div></div>                                 | <div data-bbox="1053 966 1490 1421"><div>17</div><div>OPERATOR CERTIFICATION</div><div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</div><div><div>Celeste G. Dale</div><div>Signature</div><div>04/13/2007</div><div>Date</div></div><div>Celeste G. Dale</div><div>Printed Name</div></div> |
| <div data-bbox="125 1421 1053 1875"><div>Received<br/>Hobbs<br/>OCD</div><div>123456789</div><div>100 2007</div></div> | <div data-bbox="1053 1421 1490 1875"><div>18</div><div>SURVEYOR CERTIFICATION</div><div>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</div><div>Date of Survey</div><div>Signature and Seal of Professional Surveyor:</div><div>Certificate Number</div></div>                                                                                                                                                                                                                                                                                                                           |

**Proposed Drilling Wellbore Schematic**  
**Vacuum Glorieta East Unit Horizontal Sidetrack Wells**

Datum: RKB (12' above ground level)



May 27, 2004

Unit

## Energy, Minerals and Natural Resources

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W. Grand Ave., Artesia, NM 88210

## District III

1000 Rio Brazos Rd., Aztec, NM 87410

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

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

WELL API NO.

30-025-30505

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil &amp; Gas Lease No.

B-2517

7. Lease Name or Unit Agreement Name  
Vacuum Glorieta East Unit  
(Tract 42)

8. Well Number

1

9. OGRID Number

217817

10. Pool name or Wildcat

Vacuum; Glorieta

## SUNDRY NOTICES AND REPORTS ON WELLS

(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.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐

2. Name of Operator

ConocoPhillips Company

3. Address of Operator

P. O. Box 51810  
Midland, TX 79710-1810

4. Well Location

Unit Letter E : 1655 feet from the North line and 990 feet from the West line  
Section 33 Township 17S Range 35E NMPM County Lea11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3946' GRPit or Below-grade Tank Application ☐ or Closure ☐Pit type Brine Depth to Groundwater 75' Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'Pit Liner Thickness: 12 mil Below-Grade Tank: Volume          bbls; Construction Material Synthetic

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

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☒ P AND A ☐  
CASING/CEMENT JOB ☐OTHER: ☐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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

08/06/07 - 08/31/07

08/09/07 - MIRU Nabors #441

08/12/07 - Notify OCD (Sylvia Dickey) spud lateral

08/15/07 - Set CIBP @ 5824', began milling window @ 5810-5824'

08/16/07 - Began slide drilling @ 5821'

08/18/07 - Drill curve 6026-6104'

08/19/07 - 08/27/07 Drill horizontal section to 7262'

08/31/07 - Rel rig @ 1900 hrs.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☒.

SIGNATURE

TITLE Regulatory Specialist

DATE 09/06/2007

Type or print name Celeste G. Dale

E-mail address: celeste.g.dale@conocophillips.com Telephone No. (432)688-6884

For State Use Only

APPROVED BY:

OC DISTRICT SUPERVISOR/GENERAL MANAGER

TITLE

DATE SEP 07 2007

Conditions of Approval (if any):

# WELL LOGS

|             |              |                                               |
|-------------|--------------|-----------------------------------------------|
| API number: | 30-025-30505 |                                               |
| OGRID:      |              | Operator: CONOCOPHILLPS COMPANY               |
|             |              | Property: VACUUM GLORIETA EAST UNIT TR 42 # 1 |

|         |        |   |      |     |     |     |     |
|---------|--------|---|------|-----|-----|-----|-----|
| surface | ULSTR: | E | 33   | T   | 17S | R   | 35E |
|         |        |   | 1655 | FNL | 990 | FWL |     |

|        |        |   |     |     |      |     |     |
|--------|--------|---|-----|-----|------|-----|-----|
| BH Loc | ULSTR: | C | 33  | T   | 17S  | R   | 35E |
|        |        |   | 496 | FNL | 1706 | FWL |     |

|               |      |     |      |     |      |  |
|---------------|------|-----|------|-----|------|--|
| Ground Level: | 3946 | DF: | 3956 | KB: | 3957 |  |
| Datum:        | KB   |     |      | TD: | 7246 |  |

|       |       |                       |           |
|-------|-------|-----------------------|-----------|
| Land: | STATE | Completion Date: (1)  | 1/6/2004  |
|       |       | Date Logs Received:   | 1/15/2004 |
|       |       | Date Logs Due in: (2) |           |

|               |     |  |           |           |
|---------------|-----|--|-----------|-----------|
| Confidential: | YES |  | Date out: | 4/15/2004 |
|---------------|-----|--|-----------|-----------|

Confidential period: 90 Days for State & Fee, 1 Year for federal

Date Due In: (1) is equal to Completion Date (1) + 20 days

| Logs        | Depth interval |      |                               |
|-------------|----------------|------|-------------------------------|
| TD LD CN/GR | 5400           | 6800 | Slim Acess Litho Density Tool |
| HRLA        | 5806           | 6773 | High Resolution Laterolog     |
|             |                |      |                               |
|             |                |      |                               |
|             |                |      |                               |
|             |                |      |                               |
|             |                |      |                               |

## K Z OCD TOPS

|            |           |           |  |  |
|------------|-----------|-----------|--|--|
| Rustler    |           | Strawn    |  |  |
| Tansill    |           | Atoka     |  |  |
| Yates      |           | Morrow    |  |  |
| 7 rvs      |           |           |  |  |
|            |           | Austin    |  |  |
|            |           | Chester   |  |  |
| Queen      |           | Miss Lime |  |  |
| Penrose    |           |           |  |  |
| Grayburg   |           |           |  |  |
| San Andres |           |           |  |  |
| Glorieta   | 5921/5931 |           |  |  |
| Paddock    | 6050/6407 |           |  |  |
| Blinbry    |           |           |  |  |
| Tubb       |           |           |  |  |
| Drinkard   |           |           |  |  |
| Abo        |           |           |  |  |
| Wolfcamp   |           |           |  |  |
|            |           |           |  |  |
|            |           |           |  |  |

## Results of Directional Survey

|             |              |           |                                     |
|-------------|--------------|-----------|-------------------------------------|
| API number: | 30-025-30505 |           |                                     |
| OGRID:      |              | Operator: | CONOCOPHILLPS COMPANY               |
|             |              | Property: | VACUUM GLORIETA EAST UNIT TR 42 # 1 |

|         |        |   |      |    |     |     |     |
|---------|--------|---|------|----|-----|-----|-----|
| surface | ULSTR: | E | 33   | T  | 17S | R   | 35E |
|         |        |   | 1655 | FN |     | 990 | FW  |

|        |        |   |     |    |     |      |     |
|--------|--------|---|-----|----|-----|------|-----|
| BH Loc | ULSTR: | C | 33  | T  | 17S | R    | 35E |
|        |        |   | 496 | FN |     | 1706 | FW  |

|              |      |         |        |         |
|--------------|------|---------|--------|---------|
|              | MD   | N/S     | E/W    | VD      |
|              | 5800 | 50.68   | 4.93   | 5798.68 |
| TOP PERFS/OH | 5810 | 51.07   | 4.83   | 5808.67 |
|              | 5810 | 51.07   | 4.83   | 5808.67 |
|              | 7187 | 1092.75 | 676.75 | 6064.09 |
| BOT PERFS/OH | 7264 | 1158.71 | 716.28 | 6059.95 |
|              | 7211 | 1113.31 | 689.07 | 6062.80 |

|              |      |         |        |         |
|--------------|------|---------|--------|---------|
| NEXT TO LAST | 7187 | 1092.75 | 676.75 | 6064.09 |
| LAST READING | 7211 | 1113.31 | 689.07 | 6062.80 |
| TD           | 7264 | 1158.71 | 716.28 | 6059.95 |

|                  |      |    |      |    |
|------------------|------|----|------|----|
| Surface Location | 1655 | FN | 990  | FW |
| Projected BHL    | 496  | FN | 1706 | FW |
| Location of      |      |    |      |    |
| Top Perfs/OH     | 1604 | FN | 995  | FW |
| Bottom Perfs/OH  | 496  | FN | 1706 | FW |

### SUMMARY of Subsurface Locations

|                  |              |      |    |      |    |             |
|------------------|--------------|------|----|------|----|-------------|
| Surface Location | E-33-17S-35E | 1655 | FN | 990  | FW | Vert. Depth |
|                  |              |      |    |      |    |             |
| Top Perfs/OH     | E-33-17S-35E | 1604 | FN | 995  | FW | 5808.67     |
| Bottom Perfs/OH  | C-33-17S-35E | 496  | FN | 1706 | FW | 6059.95     |
|                  |              |      |    |      |    |             |
| Projected TD     | C-33-17S-35E | 496  | FN | 1706 | FW | 6059.95     |



# Scientific Drilling International

## Survey Report

RECEIVED

JAN 16 2008

Company: CONOCOPHILLIPS Date: 09/07/2007 Time: 11:39:59 Page: 1  
Field: Vacuum Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North  
Site: Lea County, NM Vertical (TVD) Reference: SITE 0.0  
Well: VGEU #42-01 Section (VS) Reference: Well (0.00N,0.00E,33.00Azi)  
Wellpath: VH Job #32K0807693 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 08/15/07 Start Date: 08/15/2007  
KSRG 0'-5810'  
Company: Scientific Drilling Internatio Engineer: Guebara w/GeoGyro  
Tool: Keeper;Keeper Gyro Tied-to: From Surface

HOBBS OCD

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 0.00     | 0.00        | 359.53      | 0.00      | 0.00     | 0.00      | 0.00      | 0.00             | 0.00       | 0.00        |
| 100.00   | 0.40        | 247.06      | 100.00    | -0.29    | -0.14     | -0.32     | 0.40             | 0.35       | 247.06      |
| 200.00   | 0.59        | 235.52      | 200.00    | -1.05    | -0.56     | -1.07     | 0.21             | 1.21       | 242.16      |
| 300.00   | 0.43        | 239.14      | 299.99    | -1.87    | -1.05     | -1.81     | 0.16             | 2.09       | 239.99      |
| 400.00   | 0.35        | 236.30      | 399.99    | -2.48    | -1.41     | -2.39     | 0.08             | 2.77       | 239.47      |
| 500.00   | 0.38        | 251.56      | 499.99    | -3.02    | -1.68     | -2.96     | 0.10             | 3.40       | 240.36      |
| 600.00   | 0.30        | 262.54      | 599.99    | -3.45    | -1.82     | -3.53     | 0.10             | 3.98       | 242.71      |
| 700.00   | 0.24        | 242.43      | 699.98    | -3.81    | -1.95     | -3.98     | 0.11             | 4.43       | 243.84      |
| 800.00   | 0.21        | 208.29      | 799.98    | -4.17    | -2.21     | -4.25     | 0.14             | 4.79       | 242.51      |
| 900.00   | 0.21        | 215.91      | 899.98    | -4.54    | -2.52     | -4.45     | 0.03             | 5.11       | 240.43      |
| 1000.00  | 0.39        | 165.86      | 999.98    | -4.95    | -3.00     | -4.47     | 0.30             | 5.38       | 236.13      |
| 1100.00  | 0.51        | 175.37      | 1099.98   | -5.53    | -3.77     | -4.35     | 0.14             | 5.76       | 229.06      |
| 1200.00  | 0.53        | 172.24      | 1199.97   | -6.24    | -4.68     | -4.25     | 0.03             | 6.32       | 222.28      |
| 1300.00  | 0.77        | 175.87      | 1299.97   | -7.12    | -5.80     | -4.14     | 0.24             | 7.13       | 215.51      |
| 1400.00  | 0.86        | 176.35      | 1399.96   | -8.26    | -7.22     | -4.04     | 0.09             | 8.28       | 209.25      |
| 1500.00  | 0.90        | 170.06      | 1499.95   | -9.44    | -8.75     | -3.86     | 0.10             | 9.56       | 203.82      |
| 1600.00  | 0.94        | 175.67      | 1599.93   | -10.67   | -10.34    | -3.66     | 0.10             | 10.97      | 199.52      |
| 1700.00  | 0.91        | 173.15      | 1699.92   | -11.93   | -11.94    | -3.51     | 0.05             | 12.45      | 196.37      |
| 1800.00  | 0.93        | 167.91      | 1799.91   | -13.11   | -13.53    | -3.24     | 0.09             | 13.91      | 193.48      |
| 1900.00  | 0.81        | 160.18      | 1899.90   | -14.11   | -14.98    | -2.83     | 0.17             | 15.25      | 190.71      |
| 2000.00  | 0.87        | 146.86      | 1999.89   | -14.84   | -16.28    | -2.18     | 0.20             | 16.43      | 187.62      |
| 2100.00  | 0.88        | 127.39      | 2099.87   | -15.21   | -17.39    | -1.15     | 0.30             | 17.43      | 183.79      |
| 2200.00  | 0.82        | 123.56      | 2199.86   | -15.28   | -18.25    | 0.05      | 0.08             | 18.25      | 179.83      |
| 2300.00  | 0.94        | 120.00      | 2299.85   | -15.24   | -19.05    | 1.36      | 0.13             | 19.10      | 175.92      |
| 2400.00  | 1.01        | 97.50       | 2399.84   | -14.82   | -19.58    | 2.94      | 0.39             | 19.80      | 171.45      |
| 2500.00  | 1.06        | 82.59       | 2499.82   | -13.84   | -19.58    | 4.74      | 0.27             | 20.14      | 166.40      |
| 2600.00  | 1.08        | 67.83       | 2599.80   | -12.47   | -19.10    | 6.53      | 0.28             | 20.18      | 161.14      |
| 2700.00  | 1.26        | 67.67       | 2699.78   | -10.79   | -18.33    | 8.41      | 0.18             | 20.17      | 155.34      |
| 2800.00  | 1.04        | 51.56       | 2799.76   | -9.02    | -17.35    | 10.14     | 0.39             | 20.09      | 149.68      |
| 2900.00  | 0.92        | 21.14       | 2899.75   | -7.38    | -16.03    | 11.14     | 0.53             | 19.52      | 145.20      |
| 3000.00  | 0.67        | 12.27       | 2999.74   | -6.04    | -14.71    | 11.56     | 0.28             | 18.71      | 141.85      |
| 3100.00  | 0.53        | 355.10      | 3099.73   | -5.13    | -13.68    | 11.64     | 0.23             | 17.96      | 139.60      |
| 3200.00  | 0.55        | 350.33      | 3199.73   | -4.41    | -12.75    | 11.52     | 0.05             | 17.18      | 137.89      |
| 3300.00  | 0.49        | 328.21      | 3299.72   | -3.88    | -11.91    | 11.22     | 0.21             | 16.36      | 136.72      |
| 3400.00  | 0.80        | 315.16      | 3399.72   | -3.55    | -11.05    | 10.50     | 0.34             | 15.24      | 136.47      |
| 3500.00  | 0.78        | 325.72      | 3499.71   | -3.14    | -9.99     | 9.62      | 0.15             | 13.87      | 136.08      |
| 3600.00  | 0.94        | 321.03      | 3599.70   | -2.62    | -8.79     | 8.72      | 0.17             | 12.39      | 135.23      |
| 3700.00  | 0.96        | 335.55      | 3699.68   | -1.92    | -7.39     | 7.86      | 0.24             | 10.79      | 133.24      |
| 3800.00  | 1.03        | 327.55      | 3799.67   | -1.09    | -5.87     | 7.03      | 0.16             | 9.16       | 129.86      |
| 3900.00  | 1.06        | 337.25      | 3899.65   | -0.20    | -4.26     | 6.19      | 0.18             | 7.52       | 124.53      |
| 4000.00  | 1.04        | 339.78      | 3999.64   | 0.86     | -2.56     | 5.52      | 0.05             | 6.08       | 114.84      |
| 4100.00  | 1.00        | 346.80      | 4099.62   | 2.01     | -0.85     | 5.01      | 0.13             | 5.08       | 99.69       |
| 4200.00  | 1.02        | 340.18      | 4199.60   | 3.15     | 0.83      | 4.51      | 0.12             | 4.58       | 79.54       |
| 4300.00  | 0.93        | 340.59      | 4299.59   | 4.19     | 2.44      | 3.93      | 0.09             | 4.63       | 58.25       |
| 4400.00  | 1.05        | 351.20      | 4399.58   | 5.36     | 4.11      | 3.52      | 0.22             | 5.41       | 40.65       |
| 4500.00  | 1.19        | 15.57       | 4499.56   | 7.04     | 6.01      | 3.66      | 0.49             | 7.04       | 31.36       |
| 4600.00  | 1.09        | 34.77       | 4599.54   | 8.98     | 7.79      | 4.48      | 0.39             | 8.99       | 29.92       |
| 4700.00  | 1.46        | 63.55       | 4699.51   | 11.03    | 9.14      | 6.17      | 0.73             | 11.03      | 34.01       |
| 4800.00  | 1.89        | 18.14       | 4799.47   | 13.72    | 11.28     | 7.82      | 1.35             | 13.72      | 34.75       |



Scientific  
Drilling

# Scientific Drilling International Survey Report

|                                      |                                   |                                         |                   |
|--------------------------------------|-----------------------------------|-----------------------------------------|-------------------|
| <b>Company:</b> CONOCOPHILLIPS       | <b>Date:</b> 09/07/2007           | <b>Time:</b> 11:39:59                   | <b>Page:</b> 2    |
| <b>Field:</b> Vacuum                 | <b>Co-ordinate(NE) Reference:</b> | <b>Site:</b> Lea County, NM, Grid North |                   |
| <b>Site:</b> Lea County, NM          | <b>Vertical (TVD) Reference:</b>  | <b>SITE 0.0'</b>                        |                   |
| <b>Well:</b> VGEU #42-01             | <b>Section (VS) Reference:</b>    | <b>Well (0.00N,0.00E,33.00Azi)</b>      |                   |
| <b>Wellpath:</b> VH- Job #32K0807693 | <b>Survey Calculation Method:</b> | <b>Minimum Curvature</b>                | <b>Db:</b> Sybase |

## Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S*<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClbD<br>ft | ClbA<br>deg |
|----------|-------------|-------------|-----------|----------|------------|-----------|------------------|------------|-------------|
| 4900.00  | 1.93        | 4.72        | 4899.42   | 16.79    | 14.52      | 8.47      | 0.45             | 16.81      | 30.26       |
| 5000.00  | 1.97        | 359.11      | 4999.36   | 19.70    | 17.92      | 8.59      | 0.19             | 19.87      | 25.60       |
| 5100.00  | 2.10        | 357.61      | 5099.30   | 22.62    | 21.47      | 8.48      | 0.14             | 23.08      | 21.56       |
| 5200.00  | 2.36        | 355.99      | 5199.22   | 25.76    | 25.35      | 8.26      | 0.27             | 26.66      | 18.05       |
| 5300.00  | 2.43        | 355.15      | 5299.14   | 29.08    | 29.52      | 7.94      | 0.08             | 30.57      | 15.05       |
| 5400.00  | 2.52        | 353.35      | 5399.04   | 32.45    | 33.81      | 7.51      | 0.12             | 34.64      | 12.51       |
| 5500.00  | 2.61        | 352.34      | 5498.94   | 35.87    | 38.25      | 6.95      | 0.10             | 38.88      | 10.29       |
| 5600.00  | 2.36        | 351.38      | 5598.85   | 39.13    | 42.55      | 6.33      | 0.25             | 43.02      | 8.47        |
| 5700.00  | 2.44        | 350.78      | 5698.76   | 42.25    | 46.68      | 5.69      | 0.08             | 47.03      | 6.94        |
| 5800.00  | 2.22        | 347.75      | 5798.68   | 45.19    | 50.68      | 4.93      | 0.25             | 50.92      | 5.56        |
| 5810.00  | 2.39        | 343.33      | 5808.67   | 45.46    | 51.07      | 4.83      | 2.46             | 51.29      | 5.41        |

**RECEIVED**

JAN 16 2008

**HOBBS OCD**





Scientific  
Drilling

RECEIVED

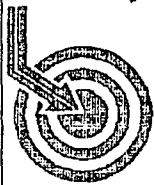
# Scientific Drilling International Survey Report

Company: CONOCOPHILLIPS Date: 09/12/2007 Time: 08:21:34 Page: 1  
Field: Vacuum Co-ordinate(NE) Reference: Site: Lea County, NM; Grid North  
Site: Lea County, NM Vertical (TVD) Reference: SITE 0.0  
Well: VGEU #42-01 Section (VS) Reference: Well (0.00N, 0.00E, 33.00Azi)  
Wellpath: DH - Job #32D088783 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 08/13/07-08/27/07 Start Date: 08/13/2007  
MWD 5867-7211'  
Company: Scientific Drilling Internatio Engineer: Barbre/Lopez/Boyd/Smith  
Tool: Keeper, Keeper Gyro Tied-to: From: Definitive Path

## Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 5810.00  | 2.39        | 343.33      | 5808.67   | 45.46    | 51.07     | 4.83      | 0.00             | 51.29      | 5.41        |
| 5867.00  | 14.45       | 34.99       | 5864.99   | 53.37    | 58.06     | 8.59      | 22.98            | 58.69      | 8.41        |
| 5888.00  | 19.99       | 37.14       | 5885.04   | 59.57    | 63.07     | 12.26     | 26.55            | 64.25      | 11.00       |
| 5920.00  | 28.29       | 39.22       | 5914.22   | 72.59    | 73.33     | 20.37     | 26.07            | 76.10      | 15.53       |
| 5952.00  | 36.40       | 40.78       | 5941.23   | 89.57    | 86.41     | 31.38     | 25.48            | 91.94      | 19.96       |
| 5984.00  | 44.29       | 41.31       | 5965.60   | 110.06   | 102.02    | 44.98     | 24.68            | 111.50     | 23.79       |
| 6012.00  | 51.76       | 41.25       | 5984.31   | 130.65   | 117.65    | 58.71     | 26.68            | 131.49     | 26.52       |
| 6044.00  | 56.70       | 40.70       | 6003.01   | 156.35   | 137.25    | 75.72     | 15.50            | 156.75     | 28.89       |
| 6076.00  | 60.77       | 40.50       | 6019.62   | 183.46   | 158.02    | 93.52     | 12.73            | 183.62     | 30.62       |
| 6108.00  | 66.62       | 40.38       | 6033.79   | 211.89   | 179.84    | 112.12    | 18.28            | 211.93     | 31.94       |
| 6139.00  | 72.40       | 39.30       | 6044.64   | 240.71   | 202.13    | 130.71    | 18.93            | 240.71     | 32.89       |
| 6171.00  | 77.38       | 36.73       | 6052.98   | 271.47   | 226.46    | 149.72    | 17.39            | 271.48     | 33.47       |
| 6203.00  | 83.12       | 34.74       | 6058.40   | 302.96   | 252.06    | 168.13    | 18.95            | 302.98     | 33.70       |
| 6235.00  | 88.92       | 33.67       | 6060.62   | 334.86   | 278.45    | 186.07    | 18.43            | 334.89     | 33.75       |
| 6266.00  | 89.76       | 33.66       | 6060.97   | 365.86   | 304.24    | 203.25    | 2.71             | 365.89     | 33.74       |
| 6298.00  | 89.80       | 33.10       | 6061.10   | 397.86   | 330.97    | 220.85    | 1.75             | 397.89     | 33.72       |
| 6330.00  | 85.52       | 31.62       | 6062.40   | 429.82   | 357.97    | 237.96    | 14.15            | 429.84     | 33.61       |
| 6361.00  | 85.69       | 31.69       | 6064.78   | 460.72   | 384.28    | 254.18    | 0.59             | 460.74     | 33.48       |
| 6393.00  | 85.66       | 31.71       | 6067.19   | 492.62   | 411.43    | 270.95    | 0.11             | 492.63     | 33.37       |
| 6425.00  | 85.89       | 31.64       | 6069.55   | 524.53   | 438.58    | 287.71    | 0.75             | 524.53     | 33.26       |
| 6457.00  | 85.83       | 31.87       | 6071.86   | 556.43   | 465.72    | 304.51    | 0.74             | 556.44     | 33.18       |
| 6489.00  | 86.03       | 31.88       | 6074.13   | 588.35   | 492.86    | 321.31    | 0.86             | 588.35     | 33.10       |
| 6520.00  | 86.64       | 31.72       | 6076.11   | 619.28   | 519.18    | 337.57    | 1.97             | 619.28     | 33.03       |
| 6552.00  | 87.28       | 31.84       | 6077.81   | 651.22   | 546.34    | 354.40    | 2.03             | 651.22     | 32.97       |
| 6584.00  | 88.18       | 31.76       | 6079.08   | 683.19   | 573.52    | 371.25    | 2.82             | 683.19     | 32.92       |
| 6616.00  | 88.92       | 32.40       | 6079.89   | 715.18   | 600.62    | 388.24    | 3.06             | 715.18     | 32.88       |
| 6645.00  | 89.53       | 31.27       | 6080.28   | 744.17   | 625.26    | 403.53    | 4.43             | 744.17     | 32.84       |
| 6676.00  | 89.83       | 30.21       | 6080.45   | 775.14   | 651.90    | 419.38    | 3.55             | 775.15     | 32.75       |
| 6708.00  | 89.66       | 29.58       | 6080.59   | 807.09   | 679.64    | 435.33    | 2.04             | 807.11     | 32.64       |
| 6740.00  | 89.40       | 28.58       | 6080.86   | 839.02   | 707.61    | 450.88    | 3.23             | 839.05     | 32.50       |
| 6773.00  | 89.39       | 28.86       | 6081.20   | 871.92   | 736.55    | 466.74    | 0.85             | 871.98     | 32.36       |
| 6805.00  | 89.60       | 28.30       | 6081.49   | 903.83   | 764.65    | 482.04    | 1.87             | 903.91     | 32.23       |
| 6837.00  | 91.18       | 29.90       | 6081.27   | 935.75   | 792.60    | 497.61    | 7.03             | 935.86     | 32.12       |
| 6869.00  | 92.19       | 30.30       | 6080.33   | 967.69   | 820.28    | 513.65    | 3.39             | 967.83     | 32.05       |
| 6900.00  | 92.42       | 30.64       | 6079.08   | 998.64   | 846.97    | 529.35    | 1.32             | 998.79     | 32.01       |
| 6932.00  | 92.52       | 31.22       | 6077.70   | 1030.59  | 874.40    | 545.79    | 1.84             | 1030.75    | 31.97       |
| 6964.00  | 92.59       | 31.34       | 6076.27   | 1062.54  | 901.72    | 562.38    | 0.43             | 1062.72    | 31.95       |
| 6995.00  | 93.03       | 31.26       | 6074.76   | 1093.49  | 928.18    | 578.47    | 1.44             | 1093.68    | 31.93       |
| 7027.00  | 93.47       | 31.07       | 6072.94   | 1125.42  | 955.51    | 595.00    | 1.50             | 1125.63    | 31.91       |
| 7059.00  | 93.97       | 30.52       | 6070.86   | 1157.33  | 982.94    | 611.35    | 2.32             | 1157.55    | 31.88       |
| 7090.00  | 93.84       | 30.29       | 6068.75   | 1188.23  | 1009.62   | 627.01    | 0.85             | 1188.47    | 31.84       |
| 7122.00  | 92.62       | 30.57       | 6066.95   | 1220.14  | 1037.17   | 643.19    | 3.91             | 1220.41    | 31.80       |
| 7155.00  | 92.35       | 31.32       | 6065.52   | 1253.09  | 1065.44   | 660.14    | 2.41             | 1253.38    | 31.78       |
| 7187.00  | 92.79       | 31.31       | 6064.09   | 1285.05  | 1092.75   | 676.75    | 1.38             | 1285.34    | 31.77       |
| 7211.00  | 93.36       | 30.53       | 6062.80   | 1309.00  | 1113.31   | 689.07    | 4.02             | 1309.30    | 31.75       |



Scientific  
Drilling

Field: Vacuum  
Site: Lea County, NM  
Well: VGEU #42-01  
Wellpath: DH - Job #32D0807683  
Survey: 08/13/07-08/27/07

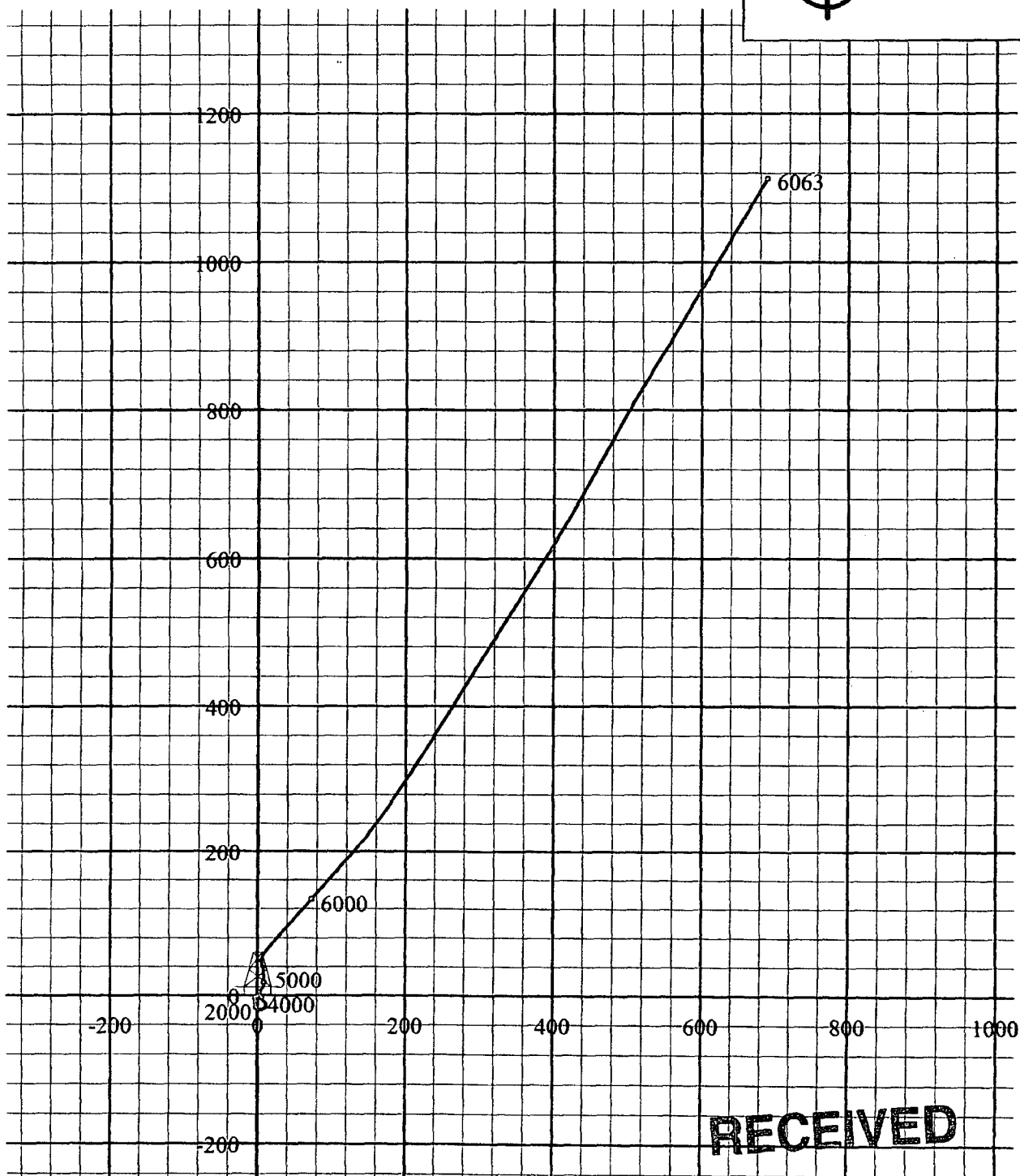
G/T/M

↑

Azimuths to Grid North  
True North: 0.00°  
Magnetic North: 0.00°

Magnetic Field  
Strength: 0nT  
Dip Angle: 0.00°  
Date: 09/12/2007  
Model: igrf2000

South(-)/North(+) [200ft/in]



RECEIVED

JAN 16 2008

West(-)/East(+) [200ft/in]

HOBBS OCD



# RECEIVED

**District I**

1625 N. French Dr., Hobbs, NM 88240

**District II**

1301 W. Grand Avenue, Artesia, NM 88210

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410

**District IV**

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department**OIL CONSERVATION DIVISION**1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|                            |  |                                                       |  |                               |                    |
|----------------------------|--|-------------------------------------------------------|--|-------------------------------|--------------------|
| API Number<br>30-025-30505 |  | Pool Code<br>62160                                    |  | Pool Name<br>Vacuum; Glorieta |                    |
| Property Code<br>31257     |  | Property Name<br>Vacuum Glorieta East Unit (Tract 42) |  |                               | Well Number<br>1   |
| OGRID No.<br>217817        |  | Operator Name<br>ConocoPhillips Company               |  |                               | Elevation<br>3946' |

**10 Surface Location**

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| E             | 33      | 17S      | 35E   |         | 1655'         | North            | 990'          | West           | Lea    |

**11 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 |
|------------------------|---------|-----------------|-------|--------------------|---------------|------------------|---------------|----------------|--------|
| C                      | 33      | 17S             | 35E   |                    | 1159'         | North            | 716.          | East           | Lea    |
| Dedicated Acres<br>160 |         | Joint or Infill |       | Consolidation Code |               | Order No.        |               |                |        |

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.

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div>16</div> <p>S.L. ●</p> <p>B.H.L. ●</p> | <b>17 OPERATOR CERTIFICATION</b><br><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or in a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i><br><br>Signature: <u>Gay Thomas</u> Date: <u>1/15/08</u><br>Printed Name: <u>Gay Thomas</u> |  |
|                                             | <b>18 SURVEYOR CERTIFICATION</b><br><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i>                                                                                                                                                                                                                                                                                                                                                                                       |  |
|                                             | Date of Survey<br>Signature and Seal of Professional Surveyor:<br><br>Certificate Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |