

Form 3160-4  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

New Mexico Oil Conservation Division, District I  
1625 N. French Drive  
Hobbs, NM 88240

FORM APPROVED  
OMB NO. 1004-0137  
Expires: March 31, 2007

|                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                 |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other                                                                 |  | 5. Lease Serial No. NM94099                                                                                                                                                                                                                                                                                                     |  |
| b. Type of Completion: <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____ |  | 6. If Indian, Allottee or Tribe Name                                                                                                                                                                                                                                                                                            |  |
| 2. Name of Operator COG Operating LLC                                                                                                                                                                                       |  | 7. Unit or CA Agreement Name and No.                                                                                                                                                                                                                                                                                            |  |
| 3. Address 550 W. Texas, Suite 1300                                                                                                                                                                                         |  | 8. Lease Name and Well No. Jade Viper 33 Federal Com 1Y                                                                                                                                                                                                                                                                         |  |
| 3a. Phone No. (include area code) 432-685-4340                                                                                                                                                                              |  | 9. AFI Well No. 30-025-37085                                                                                                                                                                                                                                                                                                    |  |
| 4. Location of Well (Report location clearly and in accordance with Federal requirements)*<br>At surface 495' FNL & 1600' FEL<br>At top prod. interval reported below<br>At total depth 750.46 FNL & 1696.90 FEL            |  | 10. Field and Pool, or Exploratory Gem; Delaware                                                                                                                                                                                                                                                                                |  |
| 14. Date Spudded 02/04/2005                                                                                                                                                                                                 |  | 11. Sec., T., R., M., on Block and Survey or Area Sec 33, T19S, R33E                                                                                                                                                                                                                                                            |  |
| 15. Date T.D. Reached 03/23/2005                                                                                                                                                                                            |  | 12. County or Parish Lea                                                                                                                                                                                                                                                                                                        |  |
| 16. Date Completed 06/07/2005 <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.                                                                                                             |  | 13. State NM                                                                                                                                                                                                                                                                                                                    |  |
| 17. Elevations (DF, RKB, RT, GL)* 3555 (GL)                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                 |  |
| 18. Total Depth: MD 13,750 TVD                                                                                                                                                                                              |  | 19. Plug Back T.D.: MD 12,465 TVD                                                                                                                                                                                                                                                                                               |  |
| 20. Depth Bridge Plug Set: MD 12,500 TVD                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                 |  |
| 21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Neutron Density / Laterolog                                                                                                                             |  | 22. Was well cored? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis) Sidewall<br>Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report)<br>Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy) |  |

23. Casing and Liner Record (Report all strings set in well)

| Hole Size | Size/Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sks. & Type of Cement | Slurry Vol. (BBL) | Cement Top*   | Amount Pulled     |
|-----------|------------|-------------|----------|-------------|----------------------|------------------------------|-------------------|---------------|-------------------|
| 18-1/2    | 16         | 84          | Surface  | 1302        |                      | 985 C                        |                   | Surface       | Circ 158sx to pit |
| 14-3/4    | 11-3/4     | 65          | Surface  | 3215        |                      | 2400 C                       |                   | Surface       | Circ 319sx to pit |
| 10-5/8    | 8-5/8      | 32          |          | 5269        |                      | 855 C                        |                   | 550 temp surv |                   |
| 7-7/8     | 5-1/2      | 20 & 17     |          | 13,750      |                      | 1770 H                       |                   | Surface calc  | Circ 129 sx off   |
|           |            |             |          |             |                      |                              |                   |               | DV tool           |

24. Tubing Record

| Size  | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|-------|----------------|-------------------|------|----------------|-------------------|------|----------------|-------------------|
| 2-7/8 | 7883           | None              |      |                |                   |      |                |                   |

25. Producing Intervals

| Formation   | Top  | Bottom | Perforated Interval | Size | No. Holes | Perf. Status |
|-------------|------|--------|---------------------|------|-----------|--------------|
| A)          |      |        | 12,545 - 12,554     | .41  | 36        | Plugged      |
| B) Delaware | 5355 |        | 7933 - 7982         | .41  | 69        | Open         |
| C)          |      |        |                     |      |           |              |
| D)          |      |        |                     |      |           |              |

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

| Depth Interval | Amount and Type of Material                                                 |
|----------------|-----------------------------------------------------------------------------|
| 7993 - 7982    | Acidize Delaware perms w/ 1600 gal 90/10 7-1/2% HCl acid & 100 ball sealers |
| 7993 - 7982    | Frac Delaware perms w/ 37,000 gal X-linked gel w/ 61,000# 16/30 Ottawa sand |

28. Production - Interval A

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| 06/08/2005          | 06/09/2005           | 24           | →               | 60      | 20      | 231       | 36.1                  |             | Pumping           |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas/Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

28a. Production - Interval B

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas/Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

\*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD

AUG 16 2005

GARY GOURLEY  
PETROLEUM ENGINEER

KZ

## 28b. Production - Interval C

| Date First Produced | Test Date               | Hours Tested | Test Production<br>→ | Oil BBL | Gas MCF | Water BBL | Oil Gravity<br>Corr. API | Gas Gravity | Production Method |
|---------------------|-------------------------|--------------|----------------------|---------|---------|-----------|--------------------------|-------------|-------------------|
| Choke Size          | Tbg. Press.<br>Flwg. SI | Csg. Press.  | 24 Hr. Rate<br>→     | Oil BBL | Gas MCF | Water BBL | Gas/Oil Ratio            | Well Status |                   |

## 28c. Production - Interval D

| Date First Produced | Test Date               | Hours Tested | Test Production<br>→ | Oil BBL | Gas MCF | Water BBL | Oil Gravity<br>Corr. API | Gas Gravity | Production Method |
|---------------------|-------------------------|--------------|----------------------|---------|---------|-----------|--------------------------|-------------|-------------------|
| Choke Size          | Tbg. Press.<br>Flwg. SI | Csg. Press.  | 24 Hr. Rate<br>→     | Oil BBL | Gas MCF | Water BBL | Gas/Oil Ratio            | Well Status |                   |

## 29. Disposition of Gas (Sold, used for fuel, vented, etc.)

used for fuel

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

| Formation   | Top    | Bottom | Descriptions, Contents, etc. | Name | Top<br>Meas. Depth |
|-------------|--------|--------|------------------------------|------|--------------------|
| RUSTLER     | 1280   | 2870   |                              |      |                    |
| SALT YATES  | 3155   |        |                              |      |                    |
| DELAWARE    | 5355   |        |                              |      |                    |
| BONE SPRING | 8202   |        |                              |      |                    |
| WOLFCAMP    | 11,254 |        |                              |      |                    |
| PENN SHALE  | 11,818 |        |                              |      |                    |
| STRAWN      | 12,130 |        |                              |      |                    |
| ATOKA       | 12,400 | 13,057 |                              |      |                    |
| MORROW      | 13,057 |        |                              |      |                    |

## 32. Additional remarks (include plugging procedure):

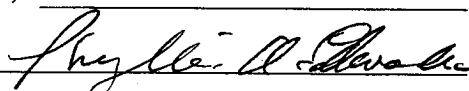
## 33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)    ☐ Geologic Report    ☐ DST Report    ☒ Directional Survey  
☐ Sundry Notice for plugging and cement verification    ☐ Core Analysis    ☒ Other: Sidewall Core Analysis

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Phyllis A. EdwardsTitle Regulatory Analyst

Signature


Date 08/12/2005

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OCD  
copy

# SIDEWALL CORE DEPTHS

Company : COG OPERATING LLC  
Well : JADE VIPER "33" FEDERAL COM NO. 1Y  
Location : 495' FNL & 1600' FEL, SEC. 33, T-19-S, R-33-E  
Co,State : LEA COUNTY, NEW MEXICO  
Field : GEM, EAST FIELD  
Formation : VARIOUS  
Coring Fluid : BRINE/BARITE  
Elevation : 3577' KB

Date : 3-29-05  
API No. : 30-025-37085

| SAMPLE<br>NUMBER | DEPTH |
|------------------|-------|
|                  | ft    |

| SAMPLE<br>NUMBER | DEPTH |
|------------------|-------|
|                  | ft    |

1 7605.0  
2 7625.0  
3 7642.0  
4 7658.0  
5 7669.0  
6 7684.0  
7 7736.0  
8 7743.0  
9 7940.0  
10 7948.0  
11 7954.0  
12 7974.0  
13 7980.0  
  
14 9194.0  
15 9199.0  
16 9240.0  
17 9245.0

18 12547.0  
19 12548.0  
20 12549.0  
  
21 13116.0  
22 13143.0  
23 13291.0  
24 13294.0  
25 13301.0  
26 13303.0  
27 13305.0  
28 13339.0  
29A 13340.9  
29B 13340.9  
30 13493.0  
31 13494.0  
32 13496.0  
33 13496.5  
34 13573.0  
35 13577.0

