

HOBBS OCD

NMOCD  
HobbsForm 3160-4  
(August 2007)

FEB 09 2017

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010WELL COMPLETION OR RECOMPLETION REPORT AND LOG  
RECEIVED

|                                                                                                                                                                                                                               |  |  |                                                                                                                                                                                                                                                                                                                              |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other                                                                   |  |  | 6. If Indian, Allottee or Tribe Name                                                                                                                                                                                                                                                                                         |  |  |
| 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.<br>Other _____ |  |  | 7. Unit or CA Agreement Name and No.                                                                                                                                                                                                                                                                                         |  |  |
| 2. Name of Operator<br>COG PRODUCTION LLC                                                                                                                                                                                     |  |  | Contact: STORMI DAVIS<br>E-Mail: sdavis@concho.com                                                                                                                                                                                                                                                                           |  |  |
| 3. Address 2208 W MAIN STREET<br>ARTESIA, NM 88210                                                                                                                                                                            |  |  | 3a. Phone No. (include area code)<br>Ph: 575-748-6946                                                                                                                                                                                                                                                                        |  |  |
| 4. Location of Well (Report location clearly and in accordance with Federal requirements)*<br>At surface SESW 210FSL 1780FWL<br>At top prod interval reported below SESW<br>At total depth NENW 50FNL 1650FWL                 |  |  | 8. Lease Name and Well No.<br>AZORES FEDERAL 8H                                                                                                                                                                                                                                                                              |  |  |
| 14. Date Spudded<br>07/04/2016                                                                                                                                                                                                |  |  | 15. Date T.D. Reached<br>07/15/2016                                                                                                                                                                                                                                                                                          |  |  |
| 16. Date Completed<br><input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.<br>12/14/2016                                                                                                         |  |  | 9. API Well No.<br>30-025-43212-00-S1                                                                                                                                                                                                                                                                                        |  |  |
| 18. Total Depth: MD 14035<br>TVD 9135                                                                                                                                                                                         |  |  | 19. Plug Back T.D.: MD 14033<br>TVD 9135                                                                                                                                                                                                                                                                                     |  |  |
| 20. Depth Bridge Plug Set: MD<br>TVD                                                                                                                                                                                          |  |  | 10. Field and Pool, or Exploratory<br>WC025G06S253206M-BONE SPRING                                                                                                                                                                                                                                                           |  |  |
| 21. Type Electric & Other Mechanical Logs Run (Submit copy of each)<br>NONE                                                                                                                                                   |  |  | 22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)<br>Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)<br>Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis) |  |  |
| 23. Casing and Liner Record (Report all strings set in well)                                                                                                                                                                  |  |  | 11. Sec., T., R., M., or Block and Survey<br>or Area Sec 29 T24S R32E Mer NMP                                                                                                                                                                                                                                                |  |  |
| 17. Elevations (DF, KB, RT, GL)*<br>3495 GL                                                                                                                                                                                   |  |  | 12. County or Parish<br>LEA                                                                                                                                                                                                                                                                                                  |  |  |
|                                                                                                                                                                                                                               |  |  | 13. State<br>NM                                                                                                                                                                                                                                                                                                              |  |  |

| Hole Size | Size/Grade  | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sk. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|-----------|-------------|-------------|----------|-------------|----------------------|-----------------------------|-------------------|-------------|---------------|
| 17.500    | 13.375 J-55 | 54.5        | 0        | 810         |                      | 660                         | 183               | 0           |               |
| 12.250    | 9.625 J-55  | 40.0        | 0        | 4534        |                      | 1470                        | 461               | 0           |               |
| 8.750     | 5.500 P-110 | 17.0        | 0        | 14035       |                      | 2090                        | 775               | 1740        |               |
|           |             |             |          |             |                      |                             |                   |             |               |
|           |             |             |          |             |                      |                             |                   |             |               |
|           |             |             |          |             |                      |                             |                   |             |               |
|           |             |             |          |             |                      |                             |                   |             |               |
|           |             |             |          |             |                      |                             |                   |             |               |

| Size  | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|-------|----------------|-------------------|------|----------------|-------------------|------|----------------|-------------------|
| 2.875 | 8583           | 8564              |      |                |                   |      |                |                   |

| Formation      | Top  | Bottom | Perforated Interval | Size | No. Holes | Perf. Status |
|----------------|------|--------|---------------------|------|-----------|--------------|
| A) BONE SPRING | 9290 | 13985  | 9290 TO 13985       | 0430 | 1364      | OPEN         |
| B)             |      |        |                     |      |           |              |
| C)             |      |        |                     |      |           |              |
| D)             |      |        |                     |      |           |              |

| Depth Interval | Amount and Type of Material |
|----------------|-----------------------------|
| 9290 TO 13985  | SEE ATTACHED                |
|                |                             |
|                |                             |
|                |                             |

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| 12/14/2016          | 12/14/2016           | 24           | →               | 197.0   | 504.0   | 3215.0    |                       |             | FLOWS FROM WELL   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
| 0.687500            | 650                  | 550.0        | →               | 197     | 504     | 3215      |                       | POW         |                   |

| 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 reverse side)

ELECTRONIC SUBMISSION #364520 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

RECLAMATION DUE:  
JUN 14 2017

DAVID R. GLASS

PETROLEUM ENGINEER

JAN 23 2017

KZ

**AZORES FEDERAL #8H (30-025-43212)**

| <u>Perfs</u>  | <u>7 1/2% Acid (Gal)</u> | <u>Sand (#)</u> | <u>Fluid (Gal)</u> |
|---------------|--------------------------|-----------------|--------------------|
| 1             | 4032                     | 296565          | 372414             |
| 2             | 2982                     | 300608          | 345534             |
| 3             | 3024                     | 300301          | 396648             |
| 4             | 3024                     | 304473          | 349356             |
| 5             | 3024                     | 300062          | 368382             |
| 6             | 3024                     | 253412          | 316890             |
| 7             | 3024                     | 301716          | 349020             |
| 8             | 3024                     | 300624          | 383082             |
| 9             | 3024                     | 301215          | 341922             |
| 10            | 3024                     | 297685          | 392112             |
| 11            | 3066                     | 301553          | 345702             |
| 12            | 3024                     | 300206          | 348852             |
| 13            | 3024                     | 301905          | 343476             |
| 14            | 3024                     | 302973          | 346584             |
| 15            | 3024                     | 299349          | 346332             |
| 16            | 3024                     | 299368          | 340620             |
| 17            | 3024                     | 300244          | 338394             |
| 18            | 3024                     | 300695          | 345576             |
| 19            | 3024                     | 299553          | 344358             |
| 20            | 3024                     | 300915          | 331590             |
| 21            | 3024                     | 300963          | 341628             |
| 22            | 3024                     | 301214          | 345240             |
| 23            | 3150                     | 300034          | 342594             |
| 24            | 3024                     | 281757          | 325038             |
| 25            | 3024                     | 298888          | 333438             |
| 26            | 3276                     | 298771          | 343056             |
| 27            | 2982                     | 298653          | 342216             |
| 28            | 2982                     | 298285          | 341754             |
| 29            | 3024                     | 300201          | 337596             |
| 30            | 3024                     | 300491          | 340704             |
| 31            | 3024                     | 300159          | 343434             |
| <b>Totals</b> | <b>95046</b>             | <b>9242838</b>  | <b>10783542</b>    |

**AZORES FEDERAL #8H**  
30-025-43212

|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|--------------------|--------------|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|-------------|--------------|------------------------|-------------|
| From Bottom to Top | Stage 1      | Distance Between Perfs | Shots       | Stage 2      | Distance Between Perfs | Shots       | Stage 3      | Distance Between Perfs | Shots       | Stage 4      | Distance Between Perfs | Shots       | Stage 5      | Distance Between Perfs | Shots       |
|                    | 13.985       | 38                     | 14          | 13.832       | 38                     | 14          | 13.881       | 38                     | 14          | 13.527       | 38                     | 14          | 13.374       | 38                     | 14          |
|                    | 13.947       | 38                     | 12          | 13.784       | 38                     | 12          | 13.841       | 38                     | 12          | 13.488       | 35                     | 12          | 13.336       | 38                     | 12          |
|                    | 13.909       | 38                     | 10          | 13.758       | 38                     | 10          | 13.803       | 38                     | 10          | 13.451       | 38                     | 10          | 13.298       | 31                     | 10          |
|                    | 13.870       | 8                      | 8           | 13.717       | 8                      | 8           | 13.565       | 8                      | 8           | 13.412       | 8                      | 8           | 13.267       | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 156                    | 44          | Plug to Plug | 153                    | 44          | Plug to Plug | 151                    | 44          | Plug to Plug | 158                    | 44          | Plug to Plug | 149                    | 44          |
|                    | Frac Plug    | 14,897                 | Total Shots | Frac Plug    | 13,851                 | Total Shots | Frac Plug    | 13,899                 | Total Shots | Frac Plug    | 13,548                 | Total Shots | Frac Plug    | 13,398                 | Total Shots |
| From Bottom to Top | Stage 6      | Distance Between Perfs | Shots       | Stage 7      | Distance Between Perfs | Shots       | Stage 8      | Distance Between Perfs | Shots       | Stage 9      | Distance Between Perfs | Shots       | Stage 10     | Distance Between Perfs | Shots       |
|                    | 13.222       | 45                     | 14          | 13.069       | 38                     | 14          | 12.918       | 38                     | 14          | 12.764       | 41                     | 14          | 12.610       | 38                     | 14          |
|                    | 13.183       | 38                     | 12          | 13.035       | 42                     | 12          | 12.879       | 38                     | 12          | 12.725       | 38                     | 12          | 12.574       | 38                     | 12          |
|                    | 13.145       | 38                     | 10          | 12.993       | 38                     | 10          | 12.840       | 35                     | 10          | 12.687       | 38                     | 10          | 12.535       | 38                     | 10          |
|                    | 13.107       | 8                      | 8           | 12.954       | 8                      | 8           | 12.805       | 8                      | 8           | 12.649       | 8                      | 8           | 12.498       | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 153                    | 44          | Plug to Plug | 160                    | 44          | Plug to Plug | 145                    | 44          | Plug to Plug | 153                    | 44          | Plug to Plug | 144                    | 44          |
|                    | Frac Plug    | 13,341                 | Total Shots | Frac Plug    | 13,888                 | Total Shots | Frac Plug    | 12,828                 | Total Shots | Frac Plug    | 12,783                 | Total Shots | Frac Plug    | 12,830                 | Total Shots |
| From Bottom to Top | Stage 11     | Distance Between Perfs | Shots       | Stage 12     | Distance Between Perfs | Shots       | Stage 13     | Distance Between Perfs | Shots       | Stage 14     | Distance Between Perfs | Shots       | Stage 15     | Distance Between Perfs | Shots       |
|                    | 12.658       | 40                     | 14          | 12.305       | 38                     | 14          | 12.160       | 31                     | 14          | 11.995       | 43                     | 14          | 11.847       | 38                     | 14          |
|                    | 12.620       | 41                     | 12          | 12.267       | 38                     | 12          | 12.115       | 38                     | 12          | 11.962       | 35                     | 12          | 11.809       | 38                     | 12          |
|                    | 12.579       | 35                     | 10          | 12.229       | 38                     | 10          | 12.076       | 38                     | 10          | 11.927       | 41                     | 10          | 11.771       | 38                     | 10          |
|                    | 12.544       | 8                      | 8           | 12.191       | 8                      | 8           | 12.038       | 8                      | 8           | 11.888       | 8                      | 8           | 11.733       | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 141                    | 44          | Plug to Plug | 153                    | 44          | Plug to Plug | 167                    | 44          | Plug to Plug | 138                    | 44          | Plug to Plug | 152                    | 44          |
|                    | Frac Plug    | 12,466                 | Total Shots | Frac Plug    | 12,325                 | Total Shots | Frac Plug    | 12,172                 | Total Shots | Frac Plug    | 12,065                 | Total Shots | Frac Plug    | 11,866                 | Total Shots |
| From Bottom to Top | Stage 16     | Distance Between Perfs | Shots       | Stage 17     | Distance Between Perfs | Shots       | Stage 18     | Distance Between Perfs | Shots       | Stage 19     | Distance Between Perfs | Shots       | Stage 20     | Distance Between Perfs | Shots       |
|                    | 11.895       | 38                     | 14          | 11.542       | 38                     | 14          | 11.389       | 38                     | 14          | 11.240       | 35                     | 14          | 11.084       | 38                     | 14          |
|                    | 11.857       | 38                     | 12          | 11.501       | 35                     | 12          | 11.351       | 38                     | 12          | 11.199       | 38                     | 12          | 11.046       | 37                     | 12          |
|                    | 11.818       | 38                     | 10          | 11.469       | 38                     | 10          | 11.313       | 38                     | 10          | 11.160       | 38                     | 10          | 11.009       | 40                     | 10          |
|                    | 11.580       | 8                      | 8           | 11.428       | 8                      | 8           | 11.275       | 8                      | 8           | 11.122       | 8                      | 8           | 10.969       | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 152                    | 44          | Plug to Plug | 154                    | 44          | Plug to Plug | 152                    | 44          | Plug to Plug | 153                    | 44          | Plug to Plug | 155                    | 44          |
|                    | Frac Plug    | 11,714                 | Total Shots | Frac Plug    | 11,582                 | Total Shots | Frac Plug    | 11,468                 | Total Shots | Frac Plug    | 11,258                 | Total Shots | Frac Plug    | 11,193                 | Total Shots |
| From Bottom to Top | Stage 21     | Distance Between Perfs | Shots       | Stage 22     | Distance Between Perfs | Shots       | Stage 23     | Distance Between Perfs | Shots       | Stage 24     | Distance Between Perfs | Shots       | Stage 25     | Distance Between Perfs | Shots       |
|                    | 10.901       | 38                     | 14          | 10.779       | 38                     | 14          | 10.626       | 38                     | 14          | 10.473       | 38                     | 14          | 10.321       | 44                     | 14          |
|                    | 10.893       | 38                     | 12          | 10.740       | 38                     | 12          | 10.585       | 35                     | 12          | 10.435       | 38                     | 12          | 10.282       | 38                     | 12          |
|                    | 10.855       | 40                     | 10          | 10.702       | 38                     | 10          | 10.550       | 38                     | 10          | 10.397       | 32                     | 10          | 10.244       | 38                     | 10          |
|                    | 10.815       | 8                      | 8           | 10.664       | 8                      | 8           | 10.511       | 8                      | 8           | 10.365       | 8                      | 8           | 10.208       | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 150                    | 44          | Plug to Plug | 153                    | 44          | Plug to Plug | 157                    | 44          | Plug to Plug | 148                    | 44          | Plug to Plug | 153                    | 44          |
|                    | Frac Plug    | 10,348                 | Total Shots | Frac Plug    | 10,786                 | Total Shots | Frac Plug    | 10,645                 | Total Shots | Frac Plug    | 10,488                 | Total Shots | Frac Plug    | 10,348                 | Total Shots |
| From Bottom to Top | Stage 26     | Distance Between Perfs | Shots       | Stage 27     | Distance Between Perfs | Shots       | Stage 28     | Distance Between Perfs | Shots       | Stage 29     | Distance Between Perfs | Shots       | Stage 30     | Distance Between Perfs | Shots       |
|                    | 10.188       | 38                     | 14          | 10.015       | 38                     | 14          | 9.864        | 38                     | 14          | 9.710        | 38                     | 14          | 9.557        | 38                     | 14          |
|                    | 10.133       | 41                     | 12          | 9.877        | 38                     | 12          | 9.824        | 38                     | 12          | 9.669        | 35                     | 12          | 9.518        | 38                     | 12          |
|                    | 10.092       | 38                     | 10          | 9.839        | 38                     | 10          | 9.786        | 38                     | 10          | 9.634        | 38                     | 10          | 9.481        | 38                     | 10          |
|                    | 10.053       | 8                      | 8           | 9.800        | 8                      | 8           | 9.748        | 8                      | 8           | 9.596        | 8                      | 8           | 9.441        | 8                      | 8           |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 161                    | 44          | Plug to Plug | 144                    | 44          | Plug to Plug | 151                    | 44          | Plug to Plug | 157                    | 44          | Plug to Plug | 158                    | 44          |
|                    | Frac Plug    | 18,187                 | Total Shots | Frac Plug    | 16,828                 | Total Shots | Frac Plug    | 9,882                  | Total Shots | Frac Plug    | 9,721                  | Total Shots | Frac Plug    | 9,374                  | Total Shots |
| From Bottom to Top | Stage 31     | Distance Between Perfs | Shots       | Stage 32     | Distance Between Perfs | Shots       | Stage 33     | Distance Between Perfs | Shots       | Stage 34     | Distance Between Perfs | Shots       | Stage 35     | Distance Between Perfs | Shots       |
|                    | 9.405        | 46                     | 14          |              | 9290                   |             |              | 0                      |             |              | 0                      |             |              | 0                      |             |
|                    | 9.366        | 38                     | 12          |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | 9.328        | 38                     | 10          |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | 9.290        | 8                      | 8           |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    |              |                        |             |              |                        |             |              |                        |             |              |                        |             |              |                        |             |
|                    | Plug to Plug | 134                    | 44          | Plug to Plug | 0                      | 0           | Plug to Plug | 0                      | 0           | Plug to Plug | 0                      | 0           | Plug to Plug | 0                      | 0           |
|                    | Frac Plug    | 9,434                  | Total Shots | Frac Plug    |                        | Total Shots | Frac Plug    |                        | Total Shots | Frac Plug    |                        | Total Shots | Frac Plug    |                        | Total Shots |



**McVAY DRILLING COMPANY**  
P.O. Box 2450  
Hobbs, New Mexico 88241  
(575) 397-3311  
FAX: 39-DRILL

Well Name and Num: Azores Fed #8 H  
Location: Sec 29, T24S, R32 E  
Operator: COG Operating  
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

| <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> | <u>Degrees @</u> | <u>Depth</u> |
|------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
| 0.90             | 190          | 2.30             | 5670         | 92.30            | 13355        |                  |              |
| 0.60             | 385          | 2.50             | 6142         | 89.40            | 13732        |                  |              |
| 1.60             | 679          | 2.30             | 6519         | 89.60            | 14016        |                  |              |
| 1.50             | 935          | 2.30             | 6819         |                  |              |                  |              |
| 1.70             | 1060         | 2.30             | 7274         |                  |              |                  |              |
| 2.20             | 1430         | 0.30             | 7652         |                  |              |                  |              |
| 1.10             | 1808         | 0.90             | 8029         |                  |              |                  |              |
| 2.40             | 2185         | 1.80             | 8407         |                  |              |                  |              |
| 2.40             | 2562         | 24.40            | 8787         |                  |              |                  |              |
| 1.80             | 2940         | 76.60            | 9290         |                  |              |                  |              |
| 0.80             | 3317         | 91.10            | 9762         |                  |              |                  |              |
| 0.90             | 3815         | 90.00            | 10139        |                  |              |                  |              |
| 1.20             | 4261         | 88.70            | 10517        |                  |              |                  |              |
| 0.70             | 4480         | 87.40            | 10989        |                  |              |                  |              |
| 0.50             | 4690         | 90.80            | 11461        |                  |              |                  |              |
| 2.50             | 4821         | 92.90            | 11933        |                  |              |                  |              |
| 2.50             | 5198         | 89.10            | 12877        |                  |              |                  |              |

By: Mario A. Bann

Subscribed and sworn to before me this 28th day of July, 2016

Tina Flemens  
Notary Public, Lea County, New Mexico



# SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



Company: COG

Well Name: Azores Federal 8H

Survey Instrument Type: North Seek Rate Gyro

Job #: 1610307

County/State: Lea/ NM

API # 30-025-43212

## TIE-IN DATA

| Measure<br>Depth (ft) | Vertical<br>Depth (ft) | Inclination<br>(°) | Azimuth (°) | N-S<br>Coordinates | E-W<br>Coordinates | Data Source |
|-----------------------|------------------------|--------------------|-------------|--------------------|--------------------|-------------|
| 0                     | 0                      | 0                  | 0           | 0                  | 0                  | Surface     |

## First Survey

| Date       | Depth (ft) | Inclination<br>(°) | Azimuth (°) |
|------------|------------|--------------------|-------------|
| 2016-07-05 | 0          | 0                  | 0           |

## Last Survey

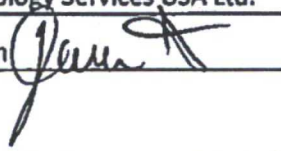
| Date       | Depth (ft) | Inclination<br>(°) | Azimuth (°) |
|------------|------------|--------------------|-------------|
| 2016-07-05 | 735        | 1.67               | 327.3       |

## Projected TD Survey

| Date | Depth (ft) | Inclination<br>(°) | Azimuth (°) |
|------|------------|--------------------|-------------|
| 0    | 0          | 0                  | 0           |

| Grid<br>Correction |
|--------------------|
| -0.34              |

Gyro Operator: Phoenix Technology Services USA Ltd.

Gyro Supervisor: Jaime Stephenson 

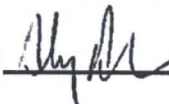
To the best of my knowledge I certify this survey data to be correct and true

Date:

7/7/16

Print Name: Andy Askew

Signature:





Company: COG  
 Well: Azores Federal 8H  
 Location: Lea Co., NM  
 Rig: McVay 8

Job Number: 1610307  
 Grid Corr.: -0.34  
 Lat: 32.18  
 Long: -103.69

Calculation Method: Minimum Curvature  
 Proposed Azimuth:             
 RKB - MSL in feet: 25  
 Tie Into: Surface

| Survey Tool Type               | Survey Depth (ft) | Inclination (deg) | Azimuth (deg) | Course Length (ft) | True Vertical Depth (ft) | Vertical Section (ft) | Coordinates                |        | Closure |       | Dogleg Severity (d/100') | Build Rate (d/100') | Walk Rate (d/100') |
|--------------------------------|-------------------|-------------------|---------------|--------------------|--------------------------|-----------------------|----------------------------|--------|---------|-------|--------------------------|---------------------|--------------------|
| Enter Tie-In Survey on Line 10 |                   |                   |               |                    |                          |                       | FIELD COPY, NON-DEFINITIVE |        |         |       |                          |                     |                    |
| TIE IN                         | 0                 |                   |               | 0                  | 0                        | 0                     | 0                          | 0      |         |       |                          |                     |                    |
| Gyro                           | 100.00            | 0.70              | 21.54         | 100                | 100.00                   | 0.57                  | 0.57 N                     | 0.22 E | 0.61    | 21.54 | 0.70                     | 0.70                | 21.54              |
|                                | 200.00            | 0.92              | 31.12         | 100                | 199.99                   | 1.82                  | 1.82 N                     | 0.86 E | 2.02    | 25.34 | 0.26                     | 0.22                | 9.58               |
|                                | 300.00            | 0.88              | 33.75         | 100                | 299.98                   | 3.15                  | 3.15 N                     | 1.71 E | 3.58    | 28.43 | 0.06                     | -0.04               | 2.63               |
|                                | 400.00            | 0.64              | 17.78         | 100                | 399.97                   | 4.32                  | 4.32 N                     | 2.30 E | 4.89    | 28.06 | 0.32                     | -0.24               | -15.97             |
|                                | 500.00            | 0.83              | 13.35         | 100                | 499.96                   | 5.56                  | 5.56 N                     | 2.64 E | 6.15    | 25.41 | 0.20                     | 0.19                | -4.43              |
|                                | 600.00            | 1.17              | 341.94        | 100                | 599.94                   | 7.23                  | 7.23 N                     | 2.49 E | 7.65    | 19.00 | 0.63                     | 0.34                | 328.59             |
|                                | 700.00            | 1.42              | 331.29        | 100                | 699.92                   | 9.29                  | 9.29 N                     | 1.58 E | 9.42    | 9.65  | 0.35                     | 0.25                | -10.65             |
|                                | 735.00            | 1.67              | 327.30        | 35                 | 734.91                   | 10.10                 | 10.10 N                    | 1.10 E | 10.16   | 6.19  | 0.78                     | 0.71                | -11.40             |