State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 9/15/11
API \#: 47-049-02146

Farm name: Zogol, John \& Rebecca
Operator Well No.: Zogol A 2H
LOCATION: Elevation: 1,233'
Quadrangle: Shinnston 7.5'

| District: Lincoln | County: Marion |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Latitude: 5,250 | Feet South of 39 | Deg. ${ }^{30}$ | Min. 001 | Sec. |
| Longitude $4,560^{\prime}$ | Feet West of 80 | Deg. ${ }^{\prime 0^{\prime}}$ | Min. ${ }^{00}$ | Sec. |

Company:

| Address: |  <br> Tubing | Used in drilling | Left in well | Cement fill up $\mathrm{Cu} . \mathrm{Ft}$. |
| :---: | :---: | :---: | :---: | :---: |
| XTO Energy, Inc., PO Box 1008, Jane Lew, WV 26378 | 20" | $120^{\prime}$ | $120^{\prime}$ | Screwed In |
| Agent: Gary Beall | 13 3/8" | 706 | 706 | 600 SKS - C.T.S. |
| Inspector: Tristan Jenkin | $95 / 8^{\prime \prime}$ | 2,989' | 2,989' | 815 SKS-C.T.S. |
| Date Permit Issued: 3/1/11 | $51 / 2$ " | 10,477 | 10,477 | 1,311 SKS |
| Date Well Work Commenced: 3/26/11 |  |  |  |  |
| Date Well Work Completed: 5/27/11 |  |  |  |  |
| Verbal Plugging: |  |  |  |  |
| Date Permission granted on: |  |  |  |  |
| Rotary X Cable Rig |  |  |  |  |
| Total Vertical Depth (fi): 7,478' |  |  |  |  |
| Total Measured Depth (ft): 10,477' |  |  |  |  |
| Fresh Water Depth (ft.): None Noted |  |  |  |  |
| Salt Water Depth (ft.): 2250' |  |  |  |  |
| Is coal being mined in area ( $\mathrm{N} / \mathrm{Y}$ )? N |  |  |  |  |
| Coal Depths (ft.): 460' - 500' |  |  |  |  |
| Void(s) encountered (N/Y) Depth(s) $N$ |  |  |  |  |

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)
Producing formation Marcellus
Pay zone depth ( ft$)^{1.457 \cdot-7,478 \cdot \mathrm{No}}$

Final open flow Show MCF/d Final open flow $\qquad$ $-\mathrm{Bbl} / \mathrm{d}$
Time of open flow between initial and final tests -------------Hours
Static rock Pressure $\qquad$ psig (surface pressure) after $\qquad$ RECENVD Office of Oif Gas

SEP 202011
Second producing formation $\qquad$ Pay zone depth ( ft ) ------------
Gas: Initial open flow $----\quad-\quad$ MCF/d Oil: Initial open flow $\qquad$
Final open flow $\qquad$ MCF/d Final open flow $\qquad$ Bbl/d

Time of open flow between initial and final tests ------------------ Hours
Static rock Pressure $\qquad$ psig (surface pressure) after $\qquad$
WV Leparment of Envionmental frocetion

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Were core samples taken? Yes $\qquad$ No N Were cuttings caught during drilling? Yes $\qquad$ No $\qquad$
Were $\frac{Y}{Y / N}$ Electrical, $\frac{Y}{Y / N}$ Mechanical, $\frac{Y}{Y / N}$ or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Stg 1 Marcellus; MD-10,234'-10,404'; 72 shots; Slick water frac; Avg treating 7185 psi@79 bpm; 74,900\#'s 100 mesh; 280,800\#'s 30/70 mesh; 8,199 bbl water, 501 bbl recycled water
Stg 2 Marcellus; MD-9,978-10,148'; 72 shots; Slick water frac; Avg treating 7481 psi@80 bpm; 78,300\#'s 100 mesh; 287,400\#'s 30/70 mesh; 8,893 bbl water, 490 bbl recycled water
Stg 3 Marcellus; MD-9,722'-9,892; 72 shots; Slick water frac; Avg treating 7083 psi@77 bpm; 74,900\#'s 100 mesh; 277,000\#'s $30 / 70$ mesh; 8,118 bbl water, 501 bbl recycled water Stg 4 Marcellus; MD-9,466'-9,636'; 72 shots; Slick water frac; Avg treating 7339 psi@81 bpm; 75,300\#'s 100 mesh; 254,400\#'s 30/70 mesh; 8,127 bbl water, 501 bbl recycled water Stg 5 Marcellus; MD-9,210'-9,380'; 72 shots; Slick water frac; Avg treating 7006 psi@ 80 bpm; 73,500\#'s 100 mesh; 288,400\#'s 30/70 mesh; 8 ,247 bbl water, 500 bbl recycled water Stg 6 Marcellus; MD- 8,954'-9,124'; 72 shots; Slick water frac; Avg treating 7277 psi@88 bpm; 76,000 \#'s 100 mesh; 353,000\#'s $30 / 50$ mesh; 7,957 bbl water, 507 bbl recycled water

Stg 7 Marcellus; MD- 8,698 '-8,868'; 72 shots; Slick water frac; Avg treating 6814 psi@80 bpm; 79,100\#'s 100 mesh; 289,600\#'s $30 / 50$ mesh; 8,403 bbl water, 211 bbl recycled water
See additional page

Formations Encountered: Top Depth $\qquad$ 1 Bottom Depth Surface:

See attached page
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| $\begin{aligned} & \text { 47-049-02146 } \\ & \text { Zogol A 2H } \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Top | Bottom | Water at |  |
| Formation Name or Type | (feet) | (feet) | (fresh / brine; ft.) |  |
| SH | 0 | 220 |  |  |
| SH | 220 | 460 |  |  |
| COAL | 460 | 500 |  |  |
| SH | 500 | 700 |  |  |
| SS | 700 | 730 |  |  |
| SH | 730 | 780 |  |  |
| SS | 780 | 820 |  |  |
| SS, SH | 820 | 1065 |  |  |
| SS | 1065 | 1100 |  |  |
| SS,SH | 1100 | 1325 |  |  |
| SH | 1325 | 1500 |  |  |
| SS,SH | 1500 | 1800 |  |  |
| SS | 1800 | 1962 |  |  |
| SH | 1962 | 2156 |  |  |
| SH, SS | 2156 | 2483 | @2250 |  |
| SS | 2483 | 2672 |  |  |
| SH | 2672 | 2797 |  |  |
| SS, SH | 2797 | 2991 |  |  |
| SS,SLTST | 2991 | 3300 |  |  |
| SLTST, SS,SH | 3300 | 3390 |  |  |
| SLTST, SS,SH | 3390 | 3630 |  |  |
| SLTST, SH | 3630 | 3750 |  |  |
| SS,. SLTST, TR SH,LS | 3750 | 3810 |  |  |
| SLTST, SS,SH | 3810 | 4110 |  |  |
| SLTST, SH | 4110 | 4200 |  |  |
| SS,SLTST, SH | 4200 | 4320 |  |  |
| SH, SLTST | 4320 | 4410 |  |  |
| SS, SLTSR | 4410 | 4530 |  |  |
| SH | 4530 | 4680 |  |  |
| SH, SLTST | 4680 | 4890 |  |  |
| SH,SLTST,SS | 4890 | 4980 |  |  |
| SH, SLTST | 4980 | 5010 |  |  |
| SH,SLTST,SS | 5010 | 5200 |  |  |
| SH,SLTST,SS | 5200 | 5460 |  |  |
| SS, SLTST | 5460 | 5680 |  |  |
| SH, SLTST | 5680 | 5730 |  |  |
| SS,SLTST | 5730 | 5910 |  |  |
| SH,SLTST,SS | 5910 | 6060 |  | Burkett 7,202' 7 , 242' TVD |
| SH | 6060 | 7350 |  | 7,302 / 7,367' MD |
| LS, SH | 7350 | 7470 |  | Tully 7,242' $/ 7,280$ ' TVD |
| SH | 7470 | 7800 |  | 7,367' / 7,431' MD |
| SH,LS | 7800 | 7825 |  | Hamiltion 7,280' 7 7,352' TVD |
| SH | 7825 | 8150 |  | 7,431 $/ 7,573^{\prime}$ MD |
| LS, SH | 8150 | 8580 |  | Marcellus 7,352' / 7,478' TVD |
| SH | 8580 | 10477 |  | 7,573' / 10,477' MD |

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Stg 8 Marcellus; MD- 8,442'-8,612'; 72 shots; Slick water frac; Avg treating 7281 psi@82 bpm;
75,600\#'s 100 mesh; 284,900\#'s 30/50 mesh; 8,820 bbl water
Stg 9 Marcellus; MD- 8,186'-8,356'; 72 shots; Slick water frac; Avg treating 7730 psi@80 bpm; 76,000\#'s 100 mesh; 282,300\#'s 30/50 mesh; 9,680 bbl water

Stg 10 Marcellus; MD-7,930'-8,100'; 72 shots; Slick water frac; Avg treating 6888 psi@81 bpm; $77,100 \#$ 's 100 mesh; $265,800 \#$ 's $30 / 50$ mesh; 8,748 bbl water

