

Static rock pressure

## State of West Virginia Division of Environmental Protection Section of Oil and Gas

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|------------|-------|
| Reviewed// | <br>* |

|  |   | Well Operator's  | Report of We          | l Work                     |                             |                    |                                       |   |
|--|---|--|-----------------------|----------------------------|-----------------------------|--------------------|---------------------------------------|---|
| Farm Name: Ford, Patricia A. Etal                            |   |  |                       | Operator Well No.:         |                             | 508302             |                                       | the transfer of                         |
| LOCATION:  | Elevation: 1                            | 542'   | Quadrangle:           | Dorothy                    |                             |                    |                                       |   |
|  | District: C                             | lear Fork  | County:               | Raleigh                    | Minutes                     | Seconds            |                                       |   |
|  | Latitude:<br>Longitude:                 | 14,080 Feet South of 1380 Feet West of                   | 38<br>81              | Deg.                       | 0<br>27                     | 30                 | · · · · · · · · · · · · · · · · · · · |   |
| Company:   |   | uction Company<br>1710 Pennsylvania Avenue<br>/ 25328    |                       | Casing<br>& Tubing<br>Size | Used<br>in<br>Drilling      | Left<br>In<br>Well | Cement<br>Fill Up<br>Cu. Ft.          |   |
| Agent:   | Stephen G. Per                          | due  |                       | 13 3/8"                    | 32'                         | 32'                | grouted                               |   |
| Inspector:<br>Permit Issued:                                 | Well work o                             | ommenced: 06/24/02                                       | _                     | 9 5/8"                     | 950'                        | 950'               | 389.2 ft <sup>6</sup>                 |   |
| Verbal Pluggir   | ıg ,                                    | granted on:  | • · · · · ·           | 7*                         | 2152'                       | 2152               | 414.3 ft                              |   |
| Rotary Rig<br>Total Depth<br>Fresh water de                  |   | Cable Rig<br>eet<br>60', 672'                            |                       | 4 1/2"                     | 5250'                       | 5250'              | 483.6 ft <sup>s</sup>                 |   |
| Salt water dep   | ths (ft)                                | 251'   |                       | 2 3/8"                     |                             | 5079               | · · · · · · · · · · · · · · · · · · · |   |
| Is coal being r<br>Coal Depths (<br>Open Mine<br>OPEN FLOW I | ft): 9<br>291'-294' <b>-</b><br>DATA    | 96'-99'; 177'-182'; 492'-496'                            | <b>-</b>              | <u> </u>                   |                             |                    |                                       | See Attach                              |
| Pro  | ducing formation L<br>Gas: Initial oper | .ower Shale; Upper Shale; Goi                            | rdon / Berea<br>MCF/d | Oil: Initial o             | open flow                   | Pay Zone           | Depth (ft):<br>Bbl/d                  | for details                             |
|  | Fir                                     | nal open flow: 1433<br>een flow between initial and fine | MCF/d<br>al tests     | Fi                         | nal open flow:              | Hours              |                                       |   |
| •  | Static rock press                       | Sure <u>675</u>  | psig (surfac          | ce pressure) af            | ter                         |                    | Hours                                 |   |
|  |   |  | MCF/d<br>MCF/d        | Oil: Initial o             | open flow<br>nal open flow: | • ·                | Depth (ft):<br>BbVd                   | RECEIVED Office of OII & Gas Permitting |

For: Equitable Production Company

psig (surface pressure) after

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

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WV Department of Environmental Protection

## EQUITABLE PRODUCTION COMPANY WR-35 COMPLETION REPORT - Attachment Well Treatment Summary

Well: WV-508302-KVB API# 47-081-01263

| Date                                  | 07/18/02           | 07/25/02          | 07/25/02            | ## 12 TEST   |   | 1000年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の  |
|---------------------------------------|--------------------|-------------------|---------------------|--|---|--|
|                                       | 0.5                | A Property of     |                     |  | participant and a second second         | and the state of t |
| liyoo frate<br>Acid, N₂, Foam , Water | (A)                |                   | Variable(0)<br>Foam |  |   |  |
| Zone Treated                          | Lower Shale        | Upper Shale       | Gordon<br>Berea     |  |   |  |
| # Perfs<br>From - To:                 | 60<br>4154'-5133'  | 30<br>4055'–3550' | 30<br>3235' – 3508' |  |   |  |
| BD Pressure @ psl                     | 2340               | 3070              | 210                 |  |   |  |
| ATP psi                               | 2598               | 2100              | 2375                |  |   |  |
| Avg. Rate, B=B/M, S= SCF/M            | 52,399 S           | 45,650 S          | 40 B (foam)         |  |   |  |
| Max. Treat Press psi                  | 2682               | 2170              | 2560                |  |   |  |
| ISIP psi                              | 1906               | 1420              | 60                  |  |   |  |
| Frac Gradient                         | .48                | .43               | .45                 |  |   |  |
| 10 min S-i Pressure                   | 1606               | 1350              | 1060                |  |   |  |
| Meifeileb Volume                      | Lets of the Shirts |                   | S. S. C.            | Control of the Contro |   |  |
| Sand-sks                              |                    |                   | 356                 |  | *************************************** |  |
| Water-bbl                             |                    |                   | 183                 |  | <u> </u>                                |  |
| SCF N <sub>2</sub>                    | 1,259,855          | 718,938           | 275,497             |  |   |  |
| Acid-gal                              | 750 gal 7 1/2%     | 500 gal 7 1/2%    | 500 gal 15%         |  |   |  |
| NOTES:                                |                    |                   |                     |  |   |  |

| TOP   | воттом | <b>FORMATION</b> | REMARKS  | The second s |
|-------|--------|------------------|--|--|
|       |        | Coal             | 96'-99'; 177'-182'; 492'-496' Open I   | Mine 291'-   |
|       |        |                  | 294' Water @ 60', 672' & 1251'   |  |
| 887'  | 1519'  | SALT SAND:       | GT @ 2164' = NS GT @ 2306' = N   | S  |
|       |        | LOWER            |  | •  |
| 2340' | 2362'  | MAXTON:          | •  |  |
| 2396' | 2465'  | LITTLE LIME:     |  | RECEIVED   |
| 2489' | 2788'  | BIG LIME:        | GT @ 2523' & 2709' = NS  | Office of Oil & Gas Permitting   |
| 2828' | 2859'  | BIG INJUN:       | GT @ 3079' = NS  | Permutung  |
| 2908' | 3043'  | WEIR:            | GT @ 3326' = NS  | 050 07 2002  |
| 3265' | 3283'  | SUNBURY:         | GT @ 3543' = NS  | SEP 2 7 2002   |
| 3283' | 3326'  | BEREA:           | GT @ 3820' = NS  |  |
| 3493' | 3510'  | GORDON:          | GT @ 4132' = NS  | W Department of  |
| 4413' | 5144'  | LOWER HURON:     | GT @ 4473' & 4751' = 59 mcfd   | Environmental Protection   |
| 5144' | •      | JAVA:            | The second secon |  |
|       | 5260'  | TD:              | GT @ TD = 145 mcfd   |  |
|       |        |                  | GT @ DC = 157 mcfd, after csg = 3  | 11 mcfd  |