



# STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

OIL AND GAS.

| Rotary      |   |
|-------------|---|
| Spudder     |   |
| Cable Tools | [ |
| Storage     |   |

Quadrangle St. Albans N.E.

Permit No. Put. 71/4

WELL RECORD

|     |    |     | The state of the s |
|-----|----|-----|--|
|     |    |     | Well (Gas)   |
| Oil | Or | Gas | Well ( Gas   |
|     |    |     | The same of the sa |
|     |    |     | (KIND)   |

|   | Box 11/33,                                    | Charleston,  | on<br>W. Va. 25325<br>Acres 200 Unit   | Casing and<br>Tubing   | Used in<br>Drilling  | Left in<br>Well   | Packers  |
|---|---|--|--|--|--|---|--|
| Location (waters) Well No766  | Little  | Hurricane (  | Creek<br>Elev. 904.9<br>tnam   | Size   | 551  | 55 <b>1</b>   | Kind of Packer   |
| The surface of tra  | et is owned in                                | fee by Gertru  | de E. Cyrus,<br>igh Street,<br>lbans, W. Va.   | oth 9-5/8"   | 1932!  | 1.932 1   | Size of  |
| Mineral rights ar   | e owned by 😚<br>                              | and  | e e e e e e e e e e e e e e e e e e e  | 2050000x11-1/  | 2" 4744  | 11711141  | Depth set  |
| Drilling commence Drilling complete   | ed Septem<br>d Novemb                         | ber 30, 196<br>er 13, 1968   | 8  | 2  | J <sub>4</sub> 700 °   | 1,700:  |  |
| With  | an anggan gga camanan an anggan 1922 dag tang | and the second desire to the s | 0  | The second secon | and a second contraction of the  | n annument orthography and the state of the second of   | Perf. top  |
| Volume  | /10ths Merc, in                               | 1bs  |  | CASING CEM<br>25 bags be<br>9-5/8" cas<br>COAL WAS F<br>FEE<br>FEE<br>s. Mud Acid  | ENTED hind the 13 ing. 60 ba ENCOUNTERED T INC   | SIZE Casing State | No. Ft. Date 100 bags behind the 1-1/2" casing FEET INCHES FEET INCHES and |
| RESULT AFTER  | TREATMENT                                     | oarrels Wate   | 000 cu. ft./   | 119  | McF  | Dri   | skany  |
| ROCK PRESSUR<br>Fresh Water.  | LOO TER TRI                                   | Feet.  |  | Salt Water   | 15/10  | Fe  | ct   |
| Formation   | Color   | Hard or<br>Soft  | Тор  | Bottom   | Oil, Gas<br>or Water   | Depth   | Remarks  |
| Surface Soil Sand Rock Shale Ped Rock Sand & Shale Red Rock Sand, Shale, Sand & Shale Sand & Shale Sand & Shale Sand & Shale Sand & Shale Sand & Shale Sand & Shale | IJME  |  | 0<br>28<br>71<br>85<br>9h<br>200<br>210<br>hh5<br>510<br>530<br>6h5<br>680<br>10h0<br>1065<br>1150<br>1150<br>165<br>237h<br>2396<br>h693<br>TOTAL DEPTH | 28<br>71<br>85<br>94<br>200<br>210<br>1/15<br>510<br>530<br>645<br>680<br>1040<br>1065<br>1150<br>11605<br>2374<br>2396<br>1606<br>1606<br>1603  | Water  Salt Wate   | ( 10 TO   |  |
|   |   |  |  |  | OB RICE OF THE PROPERTY OF THE | MIN M   |  |

Note PI Rpt 12/27/68 classifies

this as an outpost 5 but GSD classifies it as a Development well a

JAN 26 1969





DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

### State of Mest Wirginia

Bepartment of Mines noieiviC er dou lit

|        | January | 12,   | 1987  |   |
|--------|---------|-------|-------|---|
| Operat | tor's   |       |       | *************************************** |
| Well 1 | No. 76  | 6     |       |   |
| Farm_  | Gertrud | e Cyr | `us   |   |
| API N  | o. 47 – | 079   | - 744 |   |

WELL OPERATOR'S REPORT

OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

|   |                 | ge/Dee     |                |             |
|---|-----------------|------------|----------------|-------------|
| IOCATION: Elevation: 904.9 Watershed  |                 |            | ·····          | <del></del> |
| District: Scott County Pu   | tnam            | _Quadrangl | e <u>St. A</u> | Ibans       |
|   |                 |            |                |             |
| COMPANY Quinoco Petroleum, Inc.   | _               |            |                |             |
| ADDRESS P. O. Box 1433, Charleston, WV 25325                                  | Casing          | Used in    | Left           | Cemer       |
| DESIGNATED AGENT Bill W. Backus   | Tubing          | Drilling   | in Well        |             |
| ADDRESS P. O. Box 1433, Charleston, WV 25325                                  | Size            |            |                |             |
| SURFACE OWNER Paul E. Cyrus   | 20-16<br>Cond.  |            | -              |             |
| ADDRESS 624 High St., St. Albans, WV 25177                                    | 13-10"          | 55         | 55             |             |
| MINERAL RIGHTS OWNER Betty Meadows, et al                                     | 9 5/8           | 1932       | 1932           |             |
| ADDRESS Rt. 1, Winfield, WV 25213   | 8 5/8           |            |                |             |
| OIL AND GAS INSPECTOR FOR THIS WORK Martin                                    | 7               |            |                |             |
| Nichols ADDRESS Clendenin, WV   | 5 1/2           |            |                | 1           |
| PERMIT ISSUED 1/4/78  | 4 1/2           | 4744       | 4744           | <b>T</b>    |
| TURE 1/17/78  | 3               |            |                |             |
| TURE<br>XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX                                  | 2               | 4700       | 4700           |             |
| IF APPLICABLE: PLUGGING OF DRY HOLE ON  |                 |            | ,,,,,          |             |
| CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED | Liners<br>used  | -          |                | ļ           |
| ON _  |                 | <u> </u>   |                | <u> </u>    |
| GEOLOGICAL TARGET FORMATION Oriskany  |                 | Dept       | th4693         | 3           |
| Depth of completed well 4720 feet 1   | Rotary <u>x</u> | / Cable    | e T∞ls_        |             |
| Water strata depth: Fresh 100 feet;   | Salt 15         | 40 feet    |                |             |
| Coal seam depths: N/A   | Is coal         | being mine | ed in the      | area:       |
| OPEN FLOW DATA  |                 |            |                | *           |
| Producing formation Oriskany  | Pay             | zone dept  | th 470         | 08          |
| Gas: Initial open flow 0 Mcf/d  |                 |            |                |             |
| Final open flow 8 Mcf/d   |                 |            |                |             |
| Time of open flow between init  |                 |            |                |             |
| Static rock pressure 860 psig(surface   |                 | _          |                |             |
| (If applicable due to multiple completion                                     |                 |            |                |             |
| Second producing formation  |                 | zone dept  | th             |             |
|   |                 |            |                |             |
| Gas: Initial open flow McI/d  |                 |            |                |             |
| Gas: Initial open flow Mcf/d  Final open flow Mcf/d                           | Oil: Fir        | mal open f | LOW            | P           |

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, EIC.

Duckworth Rig #2. Rigged up Halliburton to frac Oriskany. Formation had 280 PSI before swabbing casing to TD. Loaded casing with 1,000 gal. 15% HCI- and 150 BBL pad with 40 MSCF to nitrogen. Treated with 575 BBL fluid, 115 MCF of nitrogen, 30,000 lbs. of 20/40 sand at an average rate of 17.9 BPM. Treatment started at 3200 PSI and finished at 4000 PSI with average pressure of 3579 PSI. Maximum sand concentration reached 1 3/4 #/gal. Flushed with 100 BBL of fluid. Instant shut-in pressure - 2000 PSI, 15 min. shut-in pressure - 1500 PSI. Opened well after 1 hour and allowed to flow.

#### WELL LOG

| FORMATION COLOR HARD OR SOFT | TOP FEET | BOTTOM FEET  | REMARKS Including indication of all freshand salt water, coal, oil and gas |
|------------------------------|----------|--|--|
| SEE ATTACHED FORM OG-10      |          |  |  |
|                              |          |  |  |
|                              |          |  | DECEIVED   |
|                              |          |  | JAN 15 1987  |
|                              |          |  | DIVISION OF OIL & GAS DEPARTMENT OF ENERGY DEPARTMENT OF ENERGY            |
|                              | ·        |  |  |
|                              |          |  |  |
|                              |          |  |  |
|                              |          | the control of the co |  |
|                              |          |  |  |
|                              |          |  |  |

(Attach separate sheets as necessary)

| QUINOCO    | PETROLEUM INC. |                            |
|------------|----------------|----------------------------|
| Well Opera | ator           |                            |
| By: Tolle  | W Dachuel      |                            |
| Date: Jan  | IUARY 13, 1987 | * 1.50<br>* 1.50<br>* 1.50 |

Note: Regulation 2.02(i) provides as follows:

[ Marthu term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including each, encountered in the chilling of a well."

JAN 10 1987





## OIL & GAS DIVISION DEPT. OF MINES

#### Oil and Gas Division

DEPARTMENT OF MINES

#### OIL AND GAS WELL PERMIT APPLICATION

| TO THE DEPARTMENT OF MINES,  Charleston, W. Va.   | January 3 To  | 70  |  |  |
|---|---|---|--|--|
| ,   | DATE January 3, 1978  Company DEVON CORPORATION                       |   |  |  |
| Surface Owner Gertrude E. Cyrus   | Company DEVUN CURPUR  | AIION   |  |  |
| Address 625 High Street, St. Albans, WV   |   | cleston, W. Va.                                 |  |  |
| Mineral Owner Same as above   |   | Acres200  |  |  |
| Address   | • • •   |   |  |  |
| Coal Owner  |   | Elevation 905                                   |  |  |
| Address   | District Scott  | County_Putnam_                                  |  |  |
| Coal Operator Not operated  | Quadrangle St. Albans   |   |  |  |
| Address   |   |   |  |  |
| HIS PERMIT MUST BE POSTED AT THE WELL SITE  |   |   |  |  |
| provision Theing in accordance with Chapter 22, INS the W. Va. Code, the location is hereby approved  | PECTOR TO BE NOTIFIED M   | artin Nichols<br>andenin WV                     |  |  |
| PH:   | 548-6993 ADDRESS C1   | See 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2         |  |  |
| perations have not commenced by 5-4-78  |   |   |  |  |
| seranous nave not commenced by 34476  |   |   |  |  |
| Johnt T. Elle   |   |   |  |  |
| Deputy Director - Oil & Gas Division  | •   |   |  |  |
| GENTLEMEN:  |   | • • • • • •                                     |  |  |
| The undersigned well operator is entitled to drill upon the   |   |   |  |  |
| G. E. Cyrus et al Commonwealth Gas Co   | ted <u>October 10 19</u>  | th . Octobor                                    |  |  |
| 19_62 in Putnam County, Book50  | Page 400  | day of Occober                                  |  |  |
| NEW WELLDRILL DEEPER  | REDRILL XXX FRAC  | CTURE OR STIMULATE                              |  |  |
| OIL AND GAS WELL ORIGINALLY DRILLED   |   |   |  |  |
| The enclosed plat was prepared by a registered engineer or have been notified as of the above date.   | licensed land surveyor and all coa                                    | d owners and/or operators                       |  |  |
| The above named coal owners and/or operator are hereby no to make by Section 3 of the Code, must be received by, or file  | otified that any objection they wished with the Department of Mines w | to make, or are required ithin ten (10) days. * |  |  |
| Copies of this notice and the enclosed plat were mailed by r or coal owners at their above shown respective addresssame day with the mailing or delivery of this copy to the Depa | day   | before, or on the                               |  |  |
| v   | ery truly yours, DEVON CORPO  | RATION  |  |  |
| (5  | Sign Name)  | Aause   |  |  |
|   | A. C. Youse, Dis<br>PO Box 14   | trict Geologist                                 |  |  |
| Address   | Street  |   |  |  |
| of<br>Well Operat   | or <u>Charlesto</u>   | า   |  |  |
|   | City or Town  |   |  |  |
|   | West Virg   | inia  |  |  |
|   | State   |   |  |  |
|   |   |   |  |  |

\*SECTION 3.... If no objections are filed or found by the Department of nines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANCET BOND

PUT 744 -FRAC PERMIT NUMBER

### THIS IS AN ESTIMATE ONLY ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

| PROPOSED WORK ORDER TO   | DRILL                          | DEEPEN XXX   | FRACTURE-STIMULATE   |  |  |
|--|--------------------------------|--|--|--|--|
| DRILLING CONTRACTOR: (If   | Known)                         | RESPONSIBLE AGENT:                                       |  |  |  |
| NAME Steve Duckworth   |                                | NAME Bill W. Backus ADDRESS Box 1433, Charleston, W. Va. |  |  |  |
| ADDRESS Sandyville, W. V   | Va.                            |  |  |  |  |
| TELEPHONE 273-4447   |                                | TELEPHONE 342-   | -3171  |  |  |
| ESTIMATED DEPTH OF COMPL   | ETED WELL: 4720'               | ROTARY   | _ CABLE TOOLS Completion   |  |  |
| PROPOSED GEOLOGICAL FORM   | MATION: <u>Oriskany</u>        |  |  |  |  |
|  |                                | COMB. STORAG   | GE DISPOSAL  |  |  |
|  |                                |  | LOODOTHER  |  |  |
|  |                                |  |  |  |  |
| TENTATIVE CASING PROGRAM   | : Casing presently i           | n hole.  |  |  |  |
|  |                                |  |  |  |  |
| CASING AND TUBING SIZE   | USED FOR<br>DRILLING           | LEFT IN WELL   | CEMENT FILL UP   |  |  |
| 20 - 16  | DIVIDATA                       | WELL   | OR SACKS - CUBIC FT.   |  |  |
| 13 - XX  |                                | 55'  |  |  |  |
| 9 - 5/8  |                                | 1932'  |  |  |  |
| 8 - 5/8  |                                |  |  |  |  |
| 7  |                                |  |  |  |  |
| 5 1/2  |                                |  |  |  |  |
| 4 ½  |                                | 4744'  | Perforations:  |  |  |
| 3  |                                |  | Perf. Top 4708) 16 Shots   |  |  |
| Liners   |                                |  |  |  |  |
|  |                                |  | Perf. Top Perf. Bottom   |  |  |
|  |                                |  |  |  |  |
| ADDDOVIMATE EDECH WATER  | DEMINO DEPART                  | for the state of   |  |  |  |
| APPROXIMATE FRESH WATER  | DEPTHS FEET                    | SALT WATE  | RFEET  |  |  |
| IS COAL DEING MINED IN THE   | No.                            | · · · · · · · · · · · · · · · · · · ·                    |  |  |  |
| IS COAL BEING MINED IN THI   | E AREA? NO                     | BY WHOM?   |  |  |  |
| TO DRILL:  |                                |  |  |  |  |
| SUBMIT FIVE (5) COPIES   | OF OG - 1, \$100.00 PERM       | IT FEE, PERFORMANCE                                      | BOND AND PERMANENT COPY  |  |  |
| OF PLAT.   |                                |  |  |  |  |
| TO DRILL DEEPER OR REDRIL  | L:                             |  |  |  |  |
| SUBMIT FIVE (5) COPIES (   | OF OG - 1, SHOWING ORIG        | INAL PERMIT NUMBER                                       | AND PERFORMANCE BOND. ON   |  |  |
| WELLS DRILLED PRIOR T  | O 1929, A PERMANENT C          | OPY OF THE PLAT AND                                      | THE ORIGINAL WELL RECORD   |  |  |
| MUST ALSO BE SUBMITTE  | D.                             | •  |  |  |  |
| TO FRACTURE - STIMULATE:   | Propose to reperfor            | ate, frac & test Or                                      | iskany Sand  |  |  |
| OIL AND/OR GAS WELL OF   | RIGINALLY DRILLED BEFO         | RE JUNE 5, 1929, FIVE (5                                 | O) COPIES OG - 1, PERFORMANCE  |  |  |
| BOND, PERMANENT PLAT   | AND ORIGINAL WELL RE           | CORD.  |  |  |  |
| OIL AND/OR GAS WELL OF   | RIGINALLY DIVILLED ON A        | ND/OR AFTER JUNE 5, 1                                    | 929, FIVE COPIES OG - 1, SHOW-   |  |  |
| ING ORIGINAL PERMIT NU   | MBER, AND PETFORMANCE          | BOND.  |  |  |  |
| Required forms must be filed   | I within ninety (90) days of   | completion for bond releas                               | e. Inspector to be notified twenty-  |  |  |
| four (24) hours in advance.  |                                |  | · · · · ·  |  |  |
|  |                                |  |  |  |  |
|  |                                |  |  |  |  |
|  |                                |  |  |  |  |
| TD1 C 12   |                                |  |  |  |  |
| the following waiver must be thereof.  | be completed by the coal op-   | erator if the permit is to b                             | e issued within ten days of receipt  |  |  |
| WAIVER: I the undersigned Age  | nt for                         | 0-1 0  | ner or Operator of the coal under  |  |  |
|  | ed and place on our mine m     |  |  |  |  |
|  |                                |  |  |  |  |
| we the   | Coal Company                   | have no objections to said                               | well being drilled at this location,   |  |  |
| providing operator has c   | omplied with all rules and reg | mations in Articles 4, 5, an                             | d 7, Chapter 22 of the West Virginia   |  |  |
| . Oue.   |                                |  | and the second of the second o |  |  |
|  |                                |  | and the second of the second o |  |  |
|  |                                |  | For Coal Company   |  |  |
|  |                                | · · ·  |  |  |  |
| A CONTRACTOR OF THE PROPERTY O |                                |  | Official Title   |  |  |