



- New Location
- Storage
- Drill Deeper
- Abandonment
- Re-Drill/Fracture

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by the rules and regulations of the oil and gas section of the mining laws of WEST VIRGINIA. Minimum degree of accuracy is one part in 200

ENGR. REG. NO. 2330
 BOX 1273 CHARLESTON, W.VA. Signed Arthur E. Anderson

Company COLUMBIA GAS TRANS. CORP.
 Address BOX 1273 CHARLESTON, W.VA.
 Farm L.W. HARLESS, ETAL
 Lease 48261 Acres 244
 Well Farm No. _____ Ser. No. 12076
 Elevation - Spirit Level 996.74' WC.
 Quadrangle BLUE CREEK, W.VA. Clenderin 15'
 Township or District ELK
 County KANAWHA
 Sec., Lot, Qr. _____ T _____ R _____
 Coordinates LAT. 38° 23' 50" LONG. 81° 26' 53"
 File No. 70-61 Dwg. No. _____
 Date 11-8-77 Scale 1" = 400'

FORM 1495 CE 4 CSD
 COLUMBIA GAS SYSTEM
 COLUMBIA GAS TRANSMISSION CORPORATION
 WELL LOCATION MAP
 STATE OF WEST VIRGINIA
 (+) Denotes Values Of Well On United States Topographic Maps
KAN-2811
 Scale 15' 7 1/2'
 JAN 13 1978
47-039

5222' Oriskany⁹⁻⁰ Blue Creek (217) Deep well

RECEIVED

FEB 20 1979



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

OIL & GAS DIVISION
DEPT. OF MINES

Spudder
Cable Tools
Storage

Oil or Gas Well Gas
(KIND)

WELL RECORD

Quadrangle Blue Creek
Permit No. Kan. 2811

Company Columbia Gas Trans. Corp.
Address P.O. Box 1273 Charleston, W.Va.
Farm F. H. Harless Acres 244
Location (waters) Blue Creek
Well No. 12076 Elev. 996
District Elk County Kanawha
The surface of tract is owned in fee by Goldie Thomas
Address -
Mineral rights are owned by L. W. Harless
Address Blue Creek, W.Va.
Drilling commenced 2-14-78
Drilling completed 2-28-78
Date Shot From To
With
Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume 14.7 million Cu. Ft.
Rock Pressure 1480 lbs. 72 hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) 1000 gal.
MCA 15%
WELL FRACTURED (DETAILS) 884 BBLs with 30,000 lbs. 20-40 mesh sand treating at 3142# pressure.

| Casing and Tubing | Used in Drilling | Left in Well | Packers |
|-------------------|------------------|--------------|----------------|
| Size | | | Kind of Packer |
| 16 | | | |
| 13 3/8" | 147 | 147 | Size of |
| 9-5/8" | 2038 | 2038 | Depth set |
| 7" | 5261 | 5261 | |
| 6" | | | |
| 5 3/16" | | | Perf. top |
| 4 1/2" | | | Perf. bottom |
| 3" | | | Perf. top |
| 2 3/8" | 5244 | 5244 | Perf. bottom |
| Liners Used | | | |

Attach copy of cementing record.
CASING CEMENTED 13-3/8" SIZE 147' No. Ft. 2-15-78 Date
Amount of cement used (bags) 200 sacks
Name of Service Co. Halliburton
COAL WAS ENCOUNTERED AT 95 FEET - INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.)
ROCK PRESSURE AFTER TREATMENT 1480 HOURS 72 hours
Fresh Water Feet Salt Water salt sand Feet 940
Producing Sand Oriskany Depth 5260 to 5300

| Formation | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth | Remarks |
|------------|-------|--------------|------|--------|-------------------|-------|---------|
| Clay | | | 0 | 10 | | | |
| Sand | | | 10 | 95 | | | |
| Coal | | | 95 | 98 | | | |
| Sand | | | 98 | 123 | | | |
| Sand | | | 123 | 126 | | | |
| Sand | | | 126 | 136 | | | |
| Shale | | | 136 | 885 | | | |
| Sand&Shale | | | 885 | 1410 | | | |
| Shale | | | 1410 | 1525 | | | |
| Sand | | | 1525 | 1610 | | | |
| Big Lime | | | 1610 | 1780 | | | |
| Injun | | | 1780 | 1835 | | | |
| Weir | | | 1835 | 2043 | | | |
| Shale | | | 2043 | 5130 | | | |
| Lime | | | 5130 | 5260 | | | |
| Oriskany | | | 5260 | 5300 | | | |

FEB 20 1979



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
DEC 23 1977

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

Surface Owner Goldie Thomas
Address _____
Mineral Owner L. W. Harless et.al.
Address _____
Coal Owner Same as Above
Address _____
Coal Operator Not Operated
Address _____

DATE December 20, 1977
Company Columbia Gas Transmission Corporation
Address P.O. Box 1273, Charleston, W. Va. 25325
Farm L. W. Harless Acres 244
Location (waters) Pigeon Roost Branch
Well No. 12076 Elevation 996.74
District Elk County Kanawha
Quadrangle Blue Creek

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22,
of the W. Va. Code, the location is hereby approved
for drilling. This permit shall expire if
operations have not commenced by 4-29-78.

Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Martin Nichols
ADDRESS P. O. Box 554, Clendenin, W. Va.
PHONE 548-6993

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated July 18, 1950 by _____ made to United Fuel Gas Company and recorded on the _____ day of _____ 19____, in Kanawha County, Book 124 Page 454

NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

W. VA. OIL & GAS CONSERVATION COMMISSION
1613 WASHINGTON STREET, EAST
CHARLESTON, WEST VIRGINIA 25311

Address
of
Well Operator

Very truly yours,
(Sign Name) [Signature]
Director Well Operator
Exploration and Development
P. O. Box 1273
Street
Charleston,
City or Town
West Virginia 25325
State

*SECTION 3 If no objections are filed or found by the Department of mines, 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.

BLANKET BOND

KAN-2811 PERMIT NUMBER
47-039

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by [Signature]
Director, Exploration and Development

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

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME _____ NAME Larry Friend
 ADDRESS _____ ADDRESS P. O. Box 610, Clendenin, W. Va.
 TELEPHONE _____ TELEPHONE (304) 965-3317
 ESTIMATED DEPTH OF COMPLETED WELL: 5222 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS _____ COMB. _____ STORAGE X DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

| CASING AND TUBING SIZE | USED FOR DRILLING | LEFT IN WELL | CEMENT FILL UP OR SACKS - CUBIC FT. |
|------------------------|-------------------|--------------|-------------------------------------|
| 20 - <u>1/4</u> | 30' | | |
| 13 - <u>1/4</u> 3/8 | 200' | | |
| 9 - 5/8 | 1950' | | |
| 8 - 5/8 | | | |
| 7 | 5130' | | |
| 5 1/2 | | | |
| 4 1/2 | | | |
| 3 | | | Perf. Top |
| 2 3/8 | 5147' | | Perf. Bottom |
| Liners | | | Perf. Top |
| | | | Perf. Bottom |

APPROXIMATE FRESH WATER DEPTHS _____ FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title