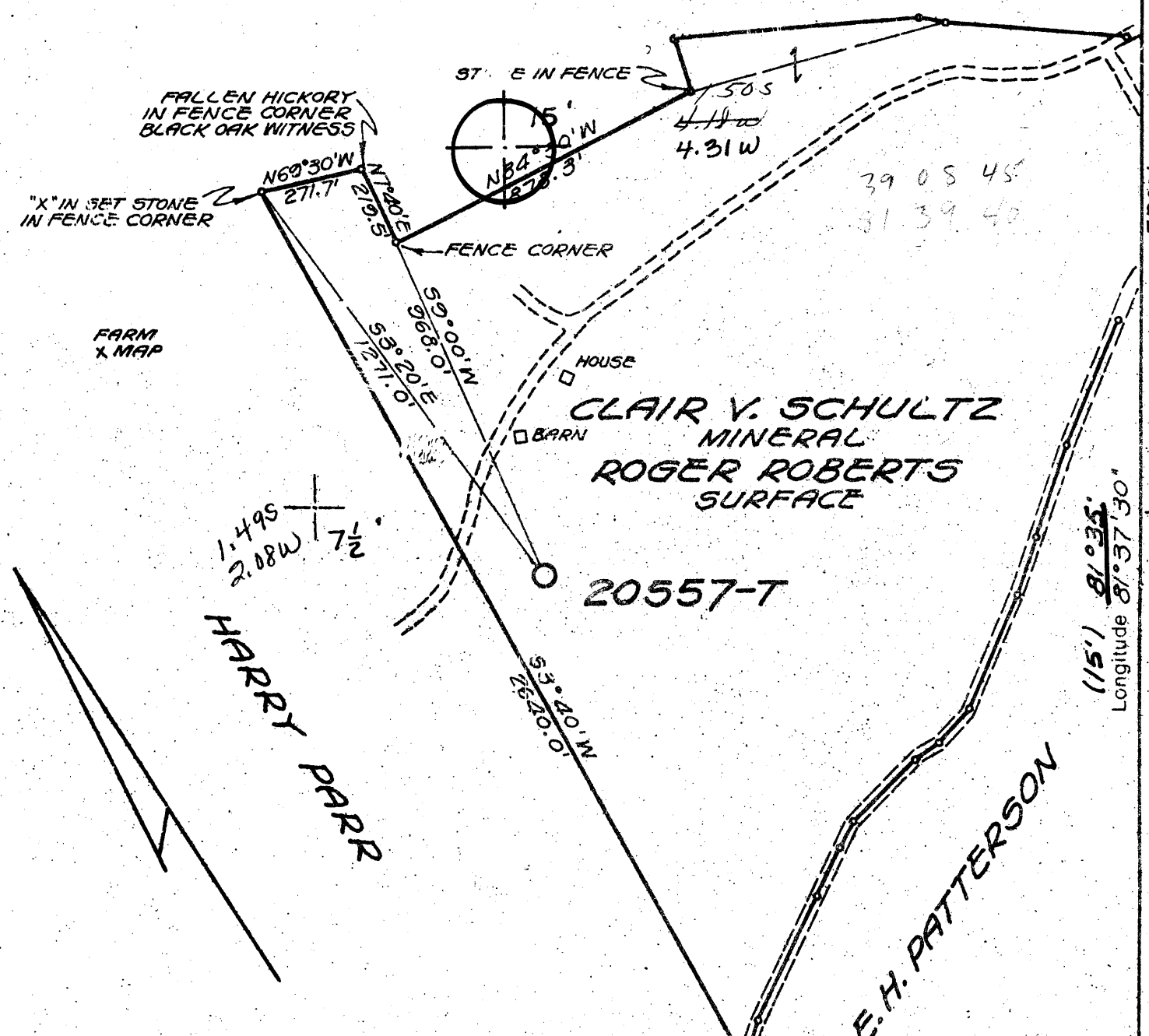


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**BENCH MARK DESCRIPTION**

C & G.S. DISK 0.55 MILE SOUTHWEST ALONG A GRAVEL ROAD FROM THE BRIDGE OVER NORTH FORK OF LEE CREEK AT WADEVILLE, ABOUT 0.25 MILE SOUTHWEST OF WADEVILLE SCHOOL, ABOUT 65 YARDS SOUTHWEST OF JUNCTION OF A ROAD WEST, ABOUT 0.65 MILE NORTHEAST OF THE TOP OF A GRADE, IN THE TOP OF AN 8 BY 5 BY 3-FOOT HIGH EMBEDDED BOULDER, 21 FT. NORTHWEST OF E. OF ROAD, 98 FT. NORTH OF CENTER OF A 10 FT. WOODEN BRIDGE OVER A CREEK BRANCH, 48 FT. EAST-SOUTHEAST OF A LONE 48" COTTONWOOD TREE, 4 FT. NORTHWEST OF A FENCE LINE, 18 FT. NORTH OF NORTHWEST END OF A 12" METAL PIPE CULVERT UNDER ROAD, AND ABOUT 3 1/2 FT. ABOVE LEVEL OF ROAD ELEVATION - 715.84'

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 Signed \_\_\_\_\_  
 BOX 1273 CHARLESTON, W. VA.

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON, W. VA.  
 Farm CLAIR V. SCHULTZ, ROGER Lee & Norma Roberts  
 Lease 63203-1 Acres 84  
 Well Farm No. \_\_\_\_\_ Ser. No. 20557-T  
 Elevation - Spirit Level 803.62'  
 Quadrangle LUBECK, W. VA. - OHIO, BELLEVILLE 15'  
 Township or District HARRIS  
 County WOOD  
 Sec., Lot, Qr. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_  
 Coordinates LAT. 39°08'22" LONG. 81°39'50"  
 File No. 60-113 Dwg. No. \_\_\_\_\_  
 Date 5-23-78 Scale 1" = 400'

COLUMBIA GAS SYSTEM  
 COLUMBIA GAS TRANSMISSION CORPORATION  
**WELL LOCATION MAP**  
**STATE OF WEST VIRGINIA**

(+) Denotes Values Of Well On United States Topographic Maps

**W00-819**  
 Scale 15' □ 7 1/2' ■

**47-107**

4550' Deep Well 1-1?



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Rotary   
Spudder   
Cable Tools   
Storage

Quadrangle LeBeck

Permit No. Woo-819 107

WELL RECORD

Oil or Gas Well  Gas   
(KIND)

Company Columbia Gas Transmission Corp.  
Address P.O. Box 610 Clendenin, WV  
Farm Roger & Norma Roberts Acres 84  
Location (waters) Middle Fork of Lee Creek  
Well No. 20557-T Elev. 803.62  
District Harris County Wood  
The surface of tract is owned in fee by Roger Lee & Norma Roberts  
Address Rt.2, Belkville, WV  
Mineral rights are owned by Roger Lee & Norma Roberts  
Address Rt.2, Belkville, WV  
Drilling commenced 7-24-78  
Drilling completed 8-15-78  
Date Shot From To  
With  
Open Flow /10ths Water in Inch  
/10ths Merc. in Inch  
Volume Cu. Ft.  
Rock Pressure lbs. hrs.  
Oil bbls., 1st 24 hrs.  
WELL ACIDIZED (DETAILS)  
WELL FRACTURED (DETAILS) Foam Frac. with 310 BBLs and 60,000# Sand

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13 3/8		61.40'	
10			Size of
8 5/8		2183.70'	
6 1/2			Depth set
5 3/16			
4 1/2		4593.30'	
3			Perf. top 4216
2			Perf. bottom 4389
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.  
CASING CEMENTED 13-3/8 SIZE 61.40' No. Ft. 7-23-78 Date  
Amount of cement used (bags) 100 sk. Neat  
Name of Service Co. Halliburton  
COAL WAS ENCOUNTERED AT FEET INCHES  
FEET INCHES FEET INCHES  
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 30 MCF  
ROCK PRESSURE AFTER TREATMENT HOURS  
Fresh Water Sand Feet 65' Salt Water Feet  
Producing Sand Dev Shale & Marcellus Depth 4216' to 4389'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Red Clay			0	55	Water		
Sand			55	65			
Red Rock & Shale			65	985			
Sand			985	1600			
Lime			1600	1630			
Sand			1630	2129			
Shale, Coffee			2129	2144			
Berea Sand			2144	2160			
Shale			2160	3880			
Black Shale			3880	4330			
Marcellus Shale			4330	4403			
Lime			4403	4502			
Oriskany			4502	4547			
Lime - <u>Helderberg</u>			4547	4580 TD			

CEMENT RECORD

8-5/8 Casing cemented to surface on 8-3-78 using 550 sks. cement; using Halliburton Services Co.  
4 1/2 casing cemented with 175 sks. neat cement by Halliburton on 8-6-78.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

JUL 13 1978

OIL & GAS DIVISION  
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE July 12, 1978

Surface Owner Roger Lee & Norma Roberts  
Address Rt. 2 Belleville, W. Va. 26133  
Mineral Owner Same as above  
Address \_\_\_\_\_  
Coal Owner Same as above  
Address \_\_\_\_\_  
Coal Operator Unoperated  
Address \_\_\_\_\_

Company Columbia Gas Transmission Corp.  
Address P. O. Box 1273, Charleston, W. Va.  
Farm Roger & Norma Roberts Acres 84  
Location (waters) Middle Fork of Lee Creek  
Well No. 20557-T Elevation 803.62  
District Harris County Wood  
Quadrangle Lebeck

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 11-14-78.

INSPECTOR  
TO BE NOTIFIED Paul Goodnight  
ADDRESS Smithville, W. Va. 26178  
PHONE 477-3660

  
Deputy Director - Oil & Gas Division

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 February 6 1978 by R. Roberts made to Columbia Gas Trans. Corp. and recorded on the -- day of -- 19--, in Wood County, Book 688 Page 162

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.

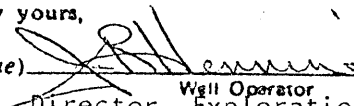
The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. \*

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 addresses \_\_\_\_\_ 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) \_\_\_\_\_  
Well Operator  
Director, Exploration & Development  
P. O. Box 1273  
Street  
Charleston  
City or Town  
West Virginia 25325  
State

BLANKET BOND

\*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.

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

PROPOSED WORK ORDER TO  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 965-3317  
 ESTIMATED DEPTH OF COMPLETED WELL: 4550' ROTARY  CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Oriskany  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS  COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

**TENTATIVE CASING PROGRAM:**

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT SET UP, OR SACKS - CUBIC FT.
<del>10 - 16</del>			
11 3/4	90'		To Surface
9 - 5/8			
8 - 5/8	2200'		To Surface
7			
5 1/2			
4 1/2	4550'		
3			
2 3/8	4450'		Perf. Top
			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