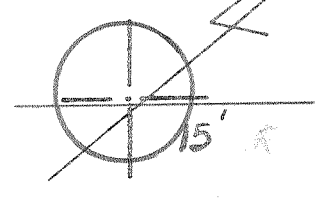


Latitude 37°45'00"

"T" RAIL ON RIDGE BY LARGE ROCKS. CHESTNUT OAK, LOCUST & GUM WITNESS.

8931



Corrected 15' location  
2.12S  
2.40W

COTIGA DEVELOPMENT CO.

20568

"T" RAIL ON RIDGE 10' SOUTH OF ROAD. LOCUST & HICKORY WITNESS.

37 43 10  
81 17 35

FARM MAP



W. H. BRONSON, ETAL (MINERAL)

JIM BUCK LAMBERT & RICHARD JUDE (SURFACE)

BENCH MARK DESCRIPTION

□ CUT ON END S.W. WINGWALL OF R.R. BRIDGE # 933 10' SOUTH OF SOUTH RAIL OVER MILLERS CREEK. ELEV. 647.59'

"T" RAIL. CALL CHESTNUT OAK. S

"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

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

ENGR. REG. NO. 2330  
BOX 1273 CHARLESTON, W.VA.

Signed *[Signature]*

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON, W.VA.  
 Farm W. H. BRONSON, ETAL. R. JUDE &  
 Lease 177726 Acres 800 J.C. LAMBERT  
 Well Farm No. \_\_\_\_\_ Ser. No. 20568  
 Elevation - Spirit Level 1325.72' NE  
 Quadrangle 15 WILLIAMSON-KY.-W.VA.  
 Township or District TUG RIVER & LEE  
 County MINGO  
 Sec., Lot, Qr. \_\_\_\_\_ T. \_\_\_\_\_ R. \_\_\_\_\_  
 Coordinates LAT: 37°43'10" LONG: 82°17'38"  
 File No. 26-15 Dwg. No. \_\_\_\_\_  
 Date 5-12-78 Scale 1"=800'

FORM 1495 CE 4 CSD  
COLUMBIA GAS SYSTEM  
COLUMBIA GAS TRANSMISSION CORPORATION  
WELL LOCATION MAP

**WEST VIRGINIA**

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

**MING - 914**

Scale 15'  7 1/2'

DEEP WELL

47-059

SEP 19 1978

11116-6133 TO REEDEN CREEK (243) 244



FEB - 1 1980

OIL & GAS DIVISION  
STATE OF WEST VIRGINIA  
DEPT. OF MINES  
OIL AND GAS DIVISION

- Rotary
- Spud
- Cable Tools
- Storage

Quadrangle Williamson, KY-WV

Permit No. Ming - 914

WELL RECORD

Oil or Gas Well GAS  
(KIND)

Company Columbia Gas Transmission Corporation  
Address P. O. Box 1273, Charleston, W. Va.  
Farm W. H. Bronson Acres 800  
Location (waters) Dan Branch of Tug River  
Well No. 20568 Elev. 1325.72  
District Tug River County Mingo  
The surface of tract is owned in fee by R. Jude and J. C. Lambert  
Address Williamson, WV  
Mineral rights are owned by Lois M. Bronson, Agent  
Address Williamson, WV

Drilling commenced March 16, 1979  
Drilling completed March 30, 1979  
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) "See attached sheet"

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16	86.80	86.80	
13			
10 11 3/4	209.73	209.73	Size of
8 1/2 5/8	2366.72	2366.72	
6 3/4			Depth set
5 3/16			
4 1/2	4432.66	4432.66	
3			Perf. top 3750
2 3/8	4418'	4418'	Perf. bottom 4437
Liners Used			Perf. top 3156
			Perf. bottom 3195

Attach copy of cementing record.  
CASING CEMENTED 8 5/8 SIZE 2367 No. Ft. 3/26/79 D:  
Amount of cement used (bags) 675 cu. ft. & 100 sks.  
Name of Service Co. Dowell  
COAL WAS ENCOUNTERED AT 633 FEET 48 INCH  
FEET INCHES FEET INCH  
FEET INCHES FEET INCH

RESULT AFTER TREATMENT (Initial open flow or bbls.) 270 m.c.f.  
ROCK PRESSURE AFTER TREATMENT 330# HOURS 48 hrs.  
Fresh Water                      Feet Salt Water                      Feet  
Producing Sand MARC Shale & Berea Depth 3108 - 3200; 3750 - 4437

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand			0	77	Water	90'	Lost Air 1
Shale			77	82			
Sand			82	273			
Sand & Shale			273	633			
Coal			633	637			
Sand & Shale			637	1204			
1st Salt Sand			1204	1511			
Sand & Shale			1511	1619			
2nd Salt Sand			1619	2064			
Sand & Shale			2064	2104			
Maxon			2104	2156			
Sand & Shale			2156	2266			
Little Lime			2266	2390			
Big Lime			2390	2523			
Keener			2523	2564			
Injun			2564	2590			
Shale			2590	2655			
Weir			2655	2761			
Shale			2761	3100			
Coffee Shale			3100	3113			
Berea			3113	3186			
Brown Shale	<u>Cleveland</u>		3186	3245			
Grey Shale			3245	3823			
Brown Shale	<u>Huron</u>		3823	4114			
White Slate			4114	4366			
Marcellus	<u>RHINECRAFT</u>		4366	4478	Gas show <u>Onondaga (top bit 4478)</u>		TD

4478  
4114  
364



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

AUG 21 1978

OIL & GAS DIVISION  
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE August 17, 1978

Surface Owner R. Jude & J. C. Lambert

Company Columbia Gas Transmission Corp.

Address \_\_\_\_\_

Address P. O. Box 1273, Charleston, W. Va.

Mineral Owner Lois M. Bronson, Agent

Farm W. H. Bronson et. al. Acres 800

Address Box 988, Williamson, W. Va. 25661

Location (waters) Dan Br. of Tug River

Coal Owner Same as above

Well No. 20568 Elevation 1325.72

Address \_\_\_\_\_

District Tug River Lee County Mingo

Coal Lessee Naugatuck Development Co.

Quadrangle Williamson

Address Lovely, Kentucky

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 TO BE NOTIFIED Arthur St. Clair

operations have not commenced by 1-5-79

ADDRESS P. O. Box 157, Brenton, W. Va.

*Robert H. Bell*

PHONE 732-6227

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 October 21, 1975 by W. H. Bronson made to Columbia Gas Trans. Corp. and recorded on the \_\_\_ day of \_\_\_ 19\_\_ in Mingo County, Book 53 Page 19

X 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:

WEST VIRGINIA GEOLOGICAL AND  
ECONOMIC SURVEY  
P. O. BOX 879  
MORGANTOWN, WEST VIRGINIA 26505  
AC-304 - 292-6331

Very truly yours,

(Sign Name)

*Robert H. Bell*  
Well Operator  
Director, Exploration & 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

MING- 914

PERMIT NUMBER

