

059 9-2-66

6,150'

Latitude 37°45'00"

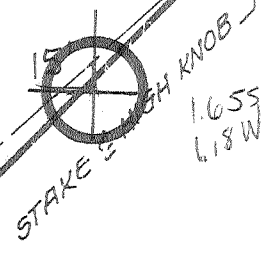
STAKE & RIDGE BETWEEN
2 CHESTNUT OAKS

54°15'W-646.0'

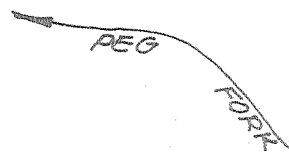
*20673

COTIGA DEVELOPMENT CO.
SURFACE & MINERAL

FARM MAP X



37 43 35
82 16 15



*20674

565°40'W-4,121.0'
562°00'W
14,988.0'



20258

COTIGA DEVELOPMENT CO.

N16°50'E 1269.0'

STAKE ON HILLSIDE
12" CHESTNUT OAK
AND 12" HICKORY WITNESS

N43°27'W-100.0'

24" RED OAK

N43°27'W-567.5'

STAKE ON HIGH KNOB
CHESTNUT OAK WITNESS

BENCH MARK DESCRIPTION

SQUARE CUT IN END OF SOUTHWEST
WINGWALL OF RAILROAD BRIDGE
N° 933 OVER MILLER CREEK
ELEVATION 647.59'

"I, the undersigned, hereby certify that this map is correct to the best of my knowl-
edge 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

Signed *[Signature]*

REG. LAND SURVEYOR N°16236E (PA.)
BOX 273 CHARLESTON, W. VA.

Company COLUMBIA GAS TRANS. CORP.
 Address BOX 1273 CHARLESTON, W. VA.
 Farm COTIGA DEVELOPMENT CO.
 Lease 50052 Acres 9,638.97'
 Well Farm No. _____ Ser. No. 20258
 Elevation - Spirit Level 1197.89'
 Quadrangle WILLIAMSON, W. VA. N2
 Township or District HARDEE
 County MINGO
 Sec., Lot, Qr. _____ T _____ R _____
 Coordinates LAT. 37°43'34" LONG. 82°16'17"
 File No. 26-15 Dwg. No. _____
 Date 7-8-80 Scale 1" = 2000'
Peep Well

FORM 1495 CE 4 CSD
(REV. 11-78)

COLUMBIA GAS SYSTEM
COLUMBIA GAS TRANSMISSION CORPORATION

WELL LOCATION MAP

STATE OF WEST VIRGINIA

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

059-0955

Scale 15' 7-1/2'

3-6 ~~Breeden Creek~~ (243)

4240 BEREA SHALE

OCT 10 1980

Longitude 82°15'00"

8700



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD

Quadrangle Williamson, WV

Permit No. Ming-0955

Rotary X Oil _____
Cable _____ Gas X
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Company <u>Columbia Gas Transmission Corporation</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box 1273 - Charleston, WV</u>	Size			
Farm <u>Cotiga Development Co. Acres 9639</u>	Cond.			
Location (waters) <u>Mill Fk. of Miller Creek</u>	13-10" 13 3/8	31	31	31' (18 sks)
Well No. <u>20258</u> Elev. <u>1198'</u>	9 5/8			
District <u>Hardee</u> County <u>Mingo</u>	8 5/8	2240.55	2240.55	2243' (585 sks)
The surface of tract is owned in fee by <u>Cotiga Development Co.</u>	7			
Address <u>Paoli, PA 19301</u>	5 1/2			
Mineral rights are owned by <u>Cotiga Development Co.</u> Address <u>Paoli, PA 19301</u>	4 1/2	4042.75	4042.75	446' (80 sks)
Drilling Commenced <u>October 16, 1980</u>	3			262' (50 sks)
Drilling Completed <u>October 25, 1980</u>	2 3/8	3832'	3832'	-----
Initial open flow <u>Show</u> cu. ft. _____ bbls.	Liners Used			
Final production <u>*See Below</u> cu. ft. per day _____ bbls.				
Well open <u>6</u> hrs. before test <u>*See Below</u> RP.				

Well treatment details: Attach copy of cementing record.
75 Q Foam fractured B. Shale with 500 gallons Mud Acid; 360,000 scf N₂; 30,000# 80/100; 30,000# 20/40 sand.

75 Q Foam fractured Injun with 12 bbls Mud Acid; 355,000 scf N₂; 21,000# 80/100 and 30,000# 20/40 sand.

* B. Shale - 60 mcf; 337# RP; Injun - 146 mcf; 332# RP (Sting-in Packer @ 3796')

Coal was encountered at NA Feet _____ Inches _____
Fresh water _____ Feet _____ Salt Water 1950-2035 Feet _____
Producing Sand B. Shale & Injun 206 mcf Depth 3818-4006; 2363-2368

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Top Soil and Sand			0	30		
Sand			30	390		
Shale and Sand			390	617		
Shale			617	800		
Shale and Sand			800	920		
Shale			920	1025		
Sand and Shale			1025	1143		
1st Salt Sand			1143	1374		
Sand and Shale			1374	1437		
2nd Salt Sand			1437	1968		Water @ 1950-2035
Shell			1968	1980		
Maxon			1980	2037		
Shale			2037	2150		
Big Lime			2150	2344		
Shale			2344	2364		
Injun			2364	2386		
Shale			2386	2422		
Shale			2422	2646		
Shale			2646	3012		
Berea			3012	3074		
Devonian Shale			3074	4419		
Corniferous			4418	4425		
T.D.				4425		

4425
4006

419.6ft
Exploratory footage

* Indicates Electric Log tops in the remarks section.

(over)

FEB 13 1981



RECEIVED

SEP 11 1980

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE September 8, 1980
Company Columbia Gas Transmission Corp.
Address P. O. Box 1273, Charleston, WV
Farm Cotiga Development Acres 9,638.97
Location (waters) Mill Fk. of Miller Creek
Well No. 20258 Elevation 1197.89
District Hardee County Mingo
Quadrangle Williamson

Surface Owner Cotiga Development Company
Address 25 Darby Road, Paoli, PA 19301
Mineral Owner Same as above
Address _____
Coal Owner Same as above
Address _____
Coal Lessee Marrowbone Development Co.
Address P. O. Box 445, Kermit, WV 25674

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 5-26-81.

INSPECTOR
TO BE NOTIFIED Arthur St. Clair
ADDRESS P. O. Box 157, Brenton, WV
PHONE 732-6227

Frank B. Bennett
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 1/29 1952 by _____ made to _____ and recorded on the _____ day of _____ 19__ in Mingo County, Book 36 Page 208
 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, [Signature]
(Sign Name) _____ Well Operator
Address _____
of _____
Well Operator _____
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.

47-059-0955 PERMIT NUMBER

"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 & Development

BLANKET BOND

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 Joe Campbell
 ADDRESS _____ ADDRESS P. O. Box 2946, Huntington
 TELEPHONE _____ TELEPHONE 529-4173
 ESTIMATED DEPTH OF COMPLETED WELL: 4240' ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Berea-Shale
 TYPE OF WELL: OIL _____ GAS X COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING - SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT PUT UP OR SACKS - CUBIC FT.
20 - 16			
13 - 12 3/8	60'		To surface
9 - 5/8			
8 - 5/8	2000'		To surface
7			
5 1/2			
4 1/2	4240'		
3			Perf. Top
2			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? Yes 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