

Latitude 38°22'30"  
38°25'

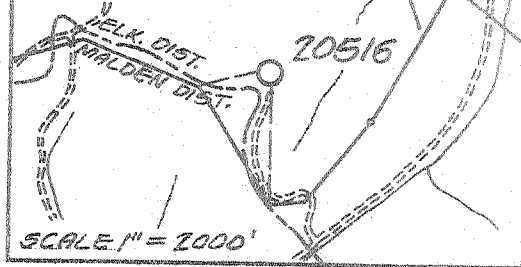
60

3,000'

FARM MAP  
X

F21445

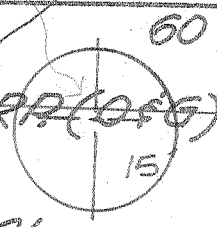
3.555  
1.30W



SCALE 1" = 2000'

corrected 15' location

S 3.46  
W 1.30



COLUMBIA GAS TRANS. CORP. (O&G)  
(413.40<sup>ac</sup>)  
SURFACE  
LOREN WESLEY O'DELL, ET AL.

38 21 55  
81 26 25

Longitude 81°25'00"

5501

STONE ON RIDGE  
MARKED "X" CHESTNUT  
OAK WITNESS PAINTED  
BLUE

9092

20516

N83°45'W 1275'  
N47°45'W 1267'

S83°45'E 789'

STONE ON RIDGE  
MARKED "X" DOUBLE  
BLACK OAK & WHITE  
OAK WITNESS PAINTED  
BLUE.

N11°00'W 1252'

N70°25'E 1452'

STAKE ON RIDGE

S46°25'W 620'  
S20°30'E 1060'  
N52°00'W 866'

STONE ON RIDGE MARKED "X"  
BLACK OAK & CHESTNUT OAK  
WITNESS PAINTED BLUE

OAK STUMP ON KNOB  
LARGE HICKORY WITNESS  
PAINTED BLUE

(226.60<sup>ac</sup>)

BENCH MARK

U.S. GOVERNMENT STANDARD DISK IN  
CONCRETE MONUMENT AT FORKS OF ROAD  
ALONG 5 MILE FORK OF CAMPBELL'S  
CREEK ELEVATION 944.60'

BLUE CREEK  
COAL & LAND CO.

- 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 Signed *Arthur E. Hardman*  
BOX 1273 CHARLESTON, W. VA.

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON, W. VA.  
 Farm COL. GAS TRANS. CORP. (O & G)  
 DEED 21002 ET. AL. Acres 640 (MERGER)  
 Well Farm No. 15 Ser. No. 20516  
 Elevation - Spirit Level 1314.97' WC  
 Quadrangle QUICK, CLENDENIN 15'  
 Township or District ELK  
 County KANAWHA  
 Sec., Lot, Qr. \_\_\_\_\_ T. \_\_\_\_\_ R. \_\_\_\_\_  
 Coordinates LAT. 38°22'00" LONG. 81°26'24"  
 File No. 72-59 Dwg. No. \_\_\_\_\_  
 Date 3-1-77 Scale 1" = 1000'

WELL LOCATION MAP  
STATE OF WEST VIRGINIA

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

47-039-3401

Scale 15'  7 1/2'

Indian Creek pool (358)  
MAY 8 1979

Deep well 7140' Tuscarora 66 Blue Creek (217)

RECEIVED

MAY - 8 1980

Form OG-10



OIL & GAS DIVISION  
DEPT. OF MINES

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

- Rotary
- Spudder
- Cable Tools
- Storage

Quadrangle Quick  
 Permit No. 47-039-3401

WELL RECORD

Oil or Gas Well Gas  
(KIND)

Company Columbia Gas Transmission Corp.  
 Address P.O. Box 1273 Charleston, WV 25325  
 Farm Loren Odell, et al Acres 640  
 Location (waters) Blue Creek  
 Well No. 20516 Elev. 1314.97  
 District Elk County Kanawha  
 The surface of tract is owned in fee by Loren Wesley  
 Address Charleston, WV  
 Mineral rights are owned by Columbia Gas Trans. Corp.  
 Address Charleston, WV  
 Drilling commenced July 18, 1979  
 Drilling completed August 4, 1979  
 Date Shot N/A From \_\_\_\_\_ To \_\_\_\_\_

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16.			TIW-SS
13. 3/8"	157	157	Size of 4 1/2"
10.			Depth set 6714'
XX 9-5/8"	2482	2482	
XX 7"	5549	3305	
5 3/16			Perf. top 7022
4 1/4	7070	1920	Perf. bottom 7028
3.			Perf. top _____
2. 3/8"	6693	6693	Perf. bottom _____
Liners Used			

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) 2000 Gal. HF Acid  
Broke Formation at 3100#  
 WELL FRACTURED (DETAILS) 26000# of 20/40 mesh sand using 886 bbl. of fluid injecting a total  
of 160,000 cu. ft. of nitrogen through out the fracturing process.  
 RESULT AFTER TREATMENT (Initial open Flow or bbls.) 1.8 MCF After 6 Hour Test  
 ROCK PRESSURE AFTER TREATMENT 1640 HOURS 24 hours  
 Fresh Water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water 1037 Feet  
 Producing Sand Clinton Depth 6955' to 7037'

Attach copy of cementing record.  
 CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
 Amount of cement used (bags) See Attached Copies  
 Name of Service Co. \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT 493 FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
 \_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand & Rock			0	487			
Coal			487	493			
Sand			493	1170	Water	1037	Salt
Salt Sand			1170	1535			
Shale			1535	1578			
Red Rock			1578	1640			
Shale			1640	1730			
Maxin Sand			1730	1761			
Little Lime			1761	1791			
Shale			1791	1795			
Big Lime			1795	1945			
Shale			1945	1970			
Injun Sand			1970	2015			
Shale			2015	2260			
Weir Sand			2260	2340			
Shale			2340	2410			
Sand			2410	2450			
Shale			2450	5360			
Lime			5360	5455			
Sand			5455	5517	Gas	5489	337 MCF
Lime			5517	6225			
Sand			6225	6546			
Shale			6546	6775			
Rose Hill			6775	6870			
Sand			6870	6955			
Clinton Sand			6955	7037			
Shale			7037	7061	Gas	7037	2468 MCF
Sand			7061	7099			

JUN 6 1980

RECEIVED

MAY - 5 1980



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

- Oil & Gas Well [X]
Storage [ ]

WELL RECORD

Oil or Gas Well Gas (KIND)

Form OG-16
Quadrangle Quick
Permit No. 47-039-3401

Company Columbia Gas Transmission Corp.
Address P.O. Box 1273 Charleston, WV 25325
Farm Loren Odell, et al Acres 640
Location (waters) Blue Creek
Well No. 20516 Elev. 1314.97
District Elk County Kanawha
The surface of tract is owned in fee by Loren Wesley
Address Charleston, WV
Mineral rights are owned by Columbia Gas Trans. Corp.
Address Charleston, WV

Drilling commenced July 18, 1979
Drilling completed August 4, 1979
Date Shot N/A From To
With

Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume Cu. Ft.
Rock Pressure lbs.
Oil bbls. per 24 hrs.

WELL ACIDIZED (DETAILS) 2000 Gal. HF Acid
Broke Formation at 3100'

WELL FRACTURED (DETAILS) 26000# of 20/40 mesh sand using 866 bbl. of fluid injecting a total of 160,000 cu. ft. of nitrogen through out the fracturing process.

RESULT AFTER TREATMENT (Initial open flow or bbls.) 1.8 MCF After 6 Hour Test 1,800 MCF
ROCK PRESSURE AFTER TREATMENT 1640 HOURS 24 hours

Fresh Water Feet Salt Water 1037 Feet
Producing Sand Clinton Inscara Depth 6955' to 7037'

Table with columns: Casing and Tubing, Used in Drilling, Left in Well, Packers. Rows include sizes like 16, 13 3/8", 10, 9 5/8", 7", 5 3/16", 4 1/2", 3, 2 3/8".

Attach copy of cementing record.
CASING CEMENTED SIZE No. Ft. Date
Amount of cement used (bags) See Attached Copies
Name of Service Co.
COAL WAS ENCOUNTERED AT 493 FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

Main well log table with columns: Formation, Color, Hard or Soft, Top, Bottom, Oil, Gas or Water, Depth, Remarks. Lists formations from Sand & Rock to Clinton Sand.

JUN 4 1980

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's  
Well No. 15-20516

API Well No. 47-039-3401  
State County Permi

WELL TYPE: Oil      / Gas X /  
(If "Gas", Production X / Underground storage      / Deep X / Shallow      /)

LOCATION: Elevation: 1314.97' Watershed: Right Fork of Blue Creek  
District: Elk County: Kanawha Quadrangle: Quick

WELL OPERATOR Columbia Gas Transmission Corp.  
Address P.O. Box 1273  
Charleston, WV 25325

DESIGNATED AGENT John R. Henning  
Address P.O. Box 1273  
Charleston, WV 25325

OIL & GAS  
ROYALTY OWNER Columbia Gas Transmission Corp.  
Address P.O. Box 1273  
Charleston, WV 25325

COAL OPERATOR Unoperated  
Address:                     

ACREAGE 640  
SURFACE OWNER Loren Wesley Odell, et al  
Address                       
ACREAGE                     

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name John W. Smallridge, Trustee  
Address 1009 Security Bldg.  
Charleston, WV 25301

FIELD SALE (IF MADE) TO:  
Name                       
Address                     

Name                       
Address                     

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Martin Nichols  
Address P.O. Box 554  
Clendenin, WV 25045

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address                     

Tele-548-6993

APR 12 1979  
OIL & GAS DIVISION  
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed      / lease      / other contract X / dated June 30, 1971, to the undersigned well operator from United Fuel Gas Company

[If said deed, lease, or other contract has been recorded:]

Recorded on     , 19    , in the office of the Clerk of the County Commission of Kanawha County, West Virginia, in Deed Book 1624 at page 662. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper      / Redrill      / Fracture or stimulate      /  
Plug off old formation      / Perforate new formation      /  
Other physical change in well (specify)                     

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code § 22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS  
CONSERVATION COMMISSION  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

BLANKET BOND

COLUMBIA GAS TRANSMISSION CORPORATION  
Well Operator  
By [Signature]  
Its Director, Exploration & Development

[08-78]

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY;  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Ray Resources Corp.  
Address 630 Commerce Square  
Charleston, WV 25301

GEOLOGICAL TARGET FORMATION, Tuscarora

Estimated depth of completed well, 7140 feet Rotary X / Cable tools      /

Approximate water strata depths: Fresh,      feet; salt,      feet.

Approximate coal seam depths:      Is coal being mined in the area? Yes      No X

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling	Left in well		
Conductor	20"			X		30'		To surface	Kinds
Fresh water	13-3/8	H-40	48	X		160'		To surface	
Coal	9-5/8	H-40	32.3	X		2530'		To surface	Sizes
Intermediate	7"	N-80	23	X		5550'			
Production	4-1/2	C-75	13.5	X		7140'		To 5250'	Depths set
Tubing	2-3/8	J-55	4.6	X		7140'			
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 33, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or drilling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.  
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 12-31-79

[Signature]  
Deputy Director, Oil & Gas Division  
must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator      / owner      / lessee      / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date:     , 19     

By     

Its