



FARM MAP

NOTE:  
 COAL OWNED & OPERATED BY  
 VALLEY CAMP COAL COMPANY.  
 NOT OPERATED AT PROPOSED  
 WELL LOCATION SITE.

OGIS  
 7.5      15'  
 2.015    4.888  
 .142      .142

FILE NO. 68-53  
 DRAWING NO. 21193  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF  
 ACCURACY 1 PART IN 2500  
 PROVEN SOURCE OF  
 ELEVATION U.S. GOV'T. BM-  
HUNT. TRIANG. STA. EL. 1625'

I THE UNDERSIGNED, HEREBY CERTIFY THAT  
 THIS PLAT IS CORRECT TO THE BEST OF MY  
 KNOWLEDGE AND BELIEF AND SHOWS ALL THE  
 INFORMATION REQUIRED BY LAW AND THE REGU-  
 LATIONS ISSUED AND PRESCRIBED BY THE DEPART-  
 MENT OF MINES  
 (SIGNED) Shay C. Hart  
 R.P.E. 7 L.L.S. 99



PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION  
 NB. 2463 PG. 1-6 (E. B. N.)  
 LAT: 38° 15' 51"  
 LONG: 81° 30' 09"



DATE MAY 24, 19 89  
 OPERATOR'S WELL NO. 21193  
 API WELL NO. \_\_\_\_\_  
47 - 039 - 3970  
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 1426.00' WATER SHED LEFT FORK OF WITCHER CREEK  
 DISTRICT CABIN CREEK COUNTY KANAWHA  
 QUADRANGLE CHARLESTON EAST Charleston 15' SE  
 SURFACE OWNER KANAWHA & HOCKING C. & C. COMPANY ACREAGE 14.128 AC  
 OIL & GAS ROYALTY OWNER KANAWHA & HOCKING C. & C. CO. LEASE ACREAGE 640 AC UNIT  
 LEASE NO. 9279  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR  
 STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW  
 FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION TUSCARORA ESTIMATED DEPTH 6820'  
 WELL OPERATOR COLUMBIA GAS TRANS. CORP. DESIGNATED AGENT J. L. WEEKLEY  
 ADDRESS P.O. BOX 1273 ADDRESS SAME  
CHARLESTON, WV 25325

IV-35  
(Rev 8-81)

**RECEIVED**  
APR 23 1984  
OIL & GAS DIVISION  
DEPT. OF MINES



Date April 17, 1984  
Operator's  
Well No. 21193  
Farm Kanawha & Hocking C&C  
API No. 47 - 039 - 039

State of West Virginia  
Department of Mines  
Oil and Gas Division

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil     / Gas X / Liquid Injection     / Waste Disposal     /  
(If "Gas," Production X / Underground Storage     / Deep X / Shallow     /)

LOCATION: Elevation: 1426' Watershed Left Fork of Witchers Creek  
District: Malden County Kanawha Quadrangle Charleston East

COMPANY Columbia Gas Transmission Corporation

ADDRESS P.O. Box 1273, Charleston, WV 25325

DESIGNATED AGENT James L. Weekley

ADDRESS P.O. Box 1273, Charleston, WV 25325

SURFACE OWNER Kanawha & Hocking Coal & Coke

ADDRESS P.O. Box 70194-T, Cleveland, Ohio 44190

MINERAL RIGHTS OWNER Kanawha & Hocking Coal & Coke

ADDRESS P.O. Box 70194-T, Cleveland, Ohio 44190

OIL AND GAS INSPECTOR FOR THIS WORK Craig Duckworth  
ADDRESS P.O. Box 454 Mt. Lookout, WV 26678

PERMIT ISSUED June 23, 1983

DRILLING COMMENCED July 9, 1983

DRILLING COMPLETED July 30, 1983

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON    

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	621.16	621.16	510 sacks
9 5/8	2488.42	2488.42	660 sacks
8 5/8			
7	5598.20	5598.20	250 sacks
5 1/2			
4 1/2	6854.65	6854.65	140 sacks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 6820 feet

Depth of completed well 6925 feet Rotary X / Cable Tools    

Water strata depth: Fresh 44';1340' feet; Salt     feet

Coal seam depths: 280-285;297-303;450-455; Is coal being mined in the area? Yes

OPEN FLOW DATA.

Producing formation Tuscarora Pay zone depth 6872-6886 feet

Gas: Initial open flow 1000 Mcf/d Oil: Initial open flow     Bbl/d

Final open flow 1384 Mcf/d Final open flow     Bbl/d

Time of open flow between initial and final tests     hours

Static rock pressure 1500 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation     Pay zone depth     feet

Gas: Initial open flow     Mcf/d Oil: Initial open flow     Bbl/d

Final open flow     Mcf/d Oil: Final open flow     Bbl/d

Time of open flow between initial and final tests     hours

Static rock pressure     psig (surface measurement) after     hours shut in

MAY 7 1984

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Open hole completion.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fres and salt water, coal, oil and ga
Sand				130	
Sandy Shale			130	160	
Sand			160	280	
Coal			280	285	
Shale			285	297	
Coal			297	303	
Sand			303	345	
Shale			345	430	
Sand			430	450	
Coal			450	455	
Sand			455	535	
Sandy Shale			535	635	
Shale			635	680	
Sand			680	725	
Shale			725	845	
Sand			845	1019	
Shale			1019	1057	
Sand			1057	1140	
Shale			1140	1177	
Sand			1177	1191	
Shale			1191	1217	
Sand			1217	1460	
Shale			1460	1474	
Sand			1474	1498	
Shale			1498	1545	
Sand			1545	1620	
Shale to reddish gray			1620	1659	
Sand			1659	1692	
Shale			1692	1752	
Sand			1752	1772	
Shale			1772	1805	
Lime			1805	1826	
Greenbrier			1830	2010	
Onondaga			5340	5440	
Williamsport			6150	6180	
Tuscarora			6840	6900	
LTD				6912	
DTD				6925	

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation

Well Operator

By:

*J. Weekley*

Date:

April 17, 1984

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: June 7, 19 83  
 2) Operator's Well No. 21193  
 3) API Well No. 47 State 039 County 0970 Permit

DRILLING CONTRACTOR:

Ray Resources Corporation

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil \_\_\_\_\_ / Gas X /  
 B (If "Gas", Production X / Underground storage \_\_\_\_\_ / Deep X / Shallow \_\_\_\_\_ /)
- 5) LOCATION: Elevation: 1426 Watershed: Left fork of Witches Creek  
 District: Malden County: Kanawha Quadrangle: Charleston East
- 6) WELL OPERATOR Columbia Gas Transmission Corp. 11) DESIGNATED AGENT J. L. Weekley  
 Address P. O. Box 1273 Address P. O. Box 1273  
Charleston, WV 25325 Charleston, WV 25325
- 7) OIL & GAS ROYALTY OWNER Kanawha & Hocking Coal & Coke 12) COAL OPERATOR Valley Camp Coal Co.  
 Address P. O. Box 70194-T Address 2971 Dupont Ave., East  
Cleveland, Ohio 44190 Shrewsbury, WV 25184
- 8) SURFACE OWNER Kanawha & Hocking Coal & Coke 13) COAL OWNER(S) WITH DECLARATION ON RECORD:  
 Name Kanawha & Hocking Coal & Coke  
 Address \_\_\_\_\_  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_
- 9) FIELD SALE (IF MADE) TO:  
 Address \_\_\_\_\_
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED 14) COAL LESSEE WITH DECLARATION ON RECORD:  
 Name Craig Duckworth Name Valley Camp Coal Co.  
 Address P. O. Box 454 Address \_\_\_\_\_  
Mt. Lookout, WV 26678
- 15) PROPOSED WORK: Drill X / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Fracture or stimulate \_\_\_\_\_ /  
 Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_ /  
 Other physical change in well (specify) \_\_\_\_\_
- 16) GEOLOGICAL TARGET FORMATION, Tuscarora  
 17) Estimated depth of completed well, 6820 feet  
 18) Approximate water strata depths: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.  
 19) Approximate coal seam depths: 500' 1140' Is coal being mined in the area? Yes \_\_\_\_\_ / No X /

20) 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	<u>20"</u>			<u>X</u>		<u>60'</u>	<u>60'</u>	<u>To surface</u>	Kinds
Fresh water	<u>13-3/8"</u>			<u>X</u>		<u>600'</u>	<u>600'</u>	<u>To surface</u>	
Coal	<u>9-5/8"</u>			<u>X</u>		<u>2450'</u>	<u>2450'</u>	<u>To surface</u>	Sizes
Intermediate	<u>7"</u>			<u>X</u>		<u>5400'</u>			
Production	<u>4-1/2"</u>			<u>X</u>		<u>6800'</u>			Depths set
Tubing									
Liners									Perforations: Top Bottom

- 21) EXTRACTION RIGHTS  
 Check and provide one of the following:  
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.  
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS  
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes  No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.
- 23) Required Copies (See reverse side.)
- 24) 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.

Notary: \_\_\_\_\_  
 My Commission Expires 3/1987

Signed: \_\_\_\_\_  
 Its: Director, Drilling & Operations

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-039-3970 Date June 23 19 83

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 10) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

Permit expires February 23, 1984 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond: <u>138</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>4060</u> <u>0874</u>
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Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

Line Item Explanation

- 1) Date of Application
- 2) Your well name and number
- 3) To be filled out by office of oil & gas
- 4A) "Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves underground reservoirs: "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.
- 4B) "Shallow well" means any well drilled and completed in a formation above the top of the uppermost member of the "Onondaga Group" or a depth less than six thousand feet, whichever is shallower.  
"Deep well" means any well drilled and completed in a formation at or below the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whatever is shallower.
- 5) Where well is located
- 6) Before a permit can be issued in a corporation, company partnership, or fictitious name, the name must be registered with the Secretary of State Office
- 7) Use separate sheet if necessary
- 8) Present surface owner at time application is filed.
- 9) Optional
- 11) See Reg. 7.01 relating to code §22-4-1k
- 12) "Coal Operator" means any persons, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine. See Note 24
- 13 & 14) As per §22-4-20; See Note 24
- 15) Work that will be attempted—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.
- 16) Anticipated formation for which well will be completed
- 17) Self explanatory
- 18) Depth to deepest freshwater, and shallowest salt water, taken from nearby wells corrected for differences in elevation
- 19) All coal seam depths
- 20) Proposed casing program and cementing refer to Code 22-4-5, 22-4-6, 22-4-7, 22-4-8, 22-4-8a Reg 9.01, 15.01, 15.02, 15.03, 15.04, 25.01, 25.02, 25.03, 25.04
- 21) Code 22-4-11(c) - In lieu of filing the lease or leases or other continuing contract or contracts, the applicant for a permit described herein may file the following:
  - (1) A brief description of the tract of land including the district and county wherein the tract is located;
  - (2) The identification of all parties to all leases or other continuing contractual agreements by which the right to extract, produce or market the oil or gas is claimed;
  - (3) The book and page number wherein each such lease or contract by which the right to extract, produce or market the oil or gas is recorded;
  - (4) A brief description of the royalty provisions of each such lease or contract.
- 22) Code 22-4-11(d) and 22-4-11(e).
- 23) 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 23, (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 dwelling within 200 feet of the proposed well.
- 24) **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.**

.....

The following waiver 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.

WAIVER

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 \_\_\_\_\_