



FILE NO. 70-59  
 DRAWING NO. 21097  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION U.S. GOV'T BM  
ELEV 945'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES

(SIGNED) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. 99 M/Y

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV B  
 (878) LAT: 38° 21' 13"  
 LONG: 81° 26' 49"



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE MAY 12, 19 82  
 OPERATOR'S WELL NO. 21097  
 API WELL NO. 47-039-4047  
 STATE 47 COUNTY 039 PERMIT 4047

WELL TYPE: OIL    GAS X LIQUID INJECTION    WASTE DISPOSAL     
 (IF "GAS") PRODUCTION X STORAGE    DEEP    SHALLOW   

LOCATION: ELEVATION 1369.63' WATER SHED CAMPBELLS CREEK  
 DISTRICT MALDEN 7 COUNTY KANAWHA  
 QUADRANGLE QUICK, W VA 563 CLENDENIN 029 Wc4

SURFACE OWNER UNION CARBIDE CORP ACREAGE 640  
 OIL & GAS ROYALTY OWNER UNION CARBIDE CORP LEASE ACREAGE 640 UNIT  
 LEASE NO. 190305-B

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 PUSCARORA ESTIMATED DEPTH 2,000'  
 WELL OPERATOR COL GAS TRANS. CORP. DESIGNATED AGENT J L WEEKLEY  
 ADDRESS CHARLESTON W. VA 175 ADDRESS S.M.

AUG 13 1984

6-6 Indian Creek well (358) deep well



RECEIVED  
APR 16 1985



IV-35  
(Rev 8-81)

Date April 2, 1985  
Operator's  
Well No. 21097  
Farm Union Carbide Corporation  
API No. 47 - 039 - 04047

RECEIVED  
MAY 2 - 1985

OIL & GAS DIVISION  
DEPT. OF MINES  
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: 1369.63 Watershed Campbells Creek  
District: Malden County Kanawha Quadrangle Quick

COMPANY Columbia Gas Transmission Corporation  
ADDRESS P. O. Box 1273, Charleston, WV  
DESIGNATED AGENT James L. Weckley  
ADDRESS P. O. Box 1273, Charleston, WV  
SURFACE OWNER Union Carbide Corporation  
ADDRESS \_\_\_\_\_  
MINERAL RIGHTS OWNER Union Carbide Corporation  
ADDRESS \_\_\_\_\_  
OIL AND GAS INSPECTOR FOR THIS WORK Rodney  
Dillon ADDRESS P.O. Box 30  
Scarbro, WV 25917  
PERMIT ISSUED 8/3/84  
DRILLING COMMENCED 9/18/84  
DRILLING COMPLETED 10/5/84

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.	48	48	30 sks.
13-10"	650.79	650.79	480 sks.
9 5/8	2476.85	2476.85	565 sks.
8 5/8			
7	5685	5685	200 sks.
5 1/2			
4 1/2	6980.55	6980.55	145 sks.
3			
2			
Liners used			

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

GEOLOGICAL TARGET FORMATION Tuscarora Depth 7000 feet  
Depth of completed well 7056 feet Rotary x / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh \_\_\_\_\_ feet; Salt 1250 feet  
Coal seam depths: 480-487 Is coal being mined in the area? \_\_\_\_\_

OPEN FLOW DATA

Producing formation Tuscarora Pay zone depth \_\_\_\_\_ feet  
Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 4300 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ hours  
Static rock pressure 1560 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 13 1985

(Continue on reverse side)

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

Open hole completion. No treatment.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
			0	40	
Sandy Shale			40	192	
Sand			192	457	
Sandy Shale			457	480	
Sand			480	487	
Coal			487	565	
Sandy Shale			565	826	
Shale			826	890	
Sand & Shale			890	926	
Shale			926	1226	
Sand & Shale			1226	1250	
Sand			1250	1539	
Sand and Shale			1539	1579	
Shale			1579	1693	
Ravencliff Sand			1693	1724	
Shale			1724	1745	
Pink Lime			1745	1820	
Maxon			1820	1980	
Big Lime			1980	2010	
Injun			2420	2435	
Berea			2435	5360	
Devonian Shale			5360	5460	
Onondaga			5460	5495	
Oriskany			6250	6275	
Williamsport			6500	6535	
Keefer			<u>6970</u>	<u>7045</u>	
<u>Tuscarora</u>			7046		
LTD			<u>7056</u>		
DTD					

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation

Well Operator

By: J. Weckley

Date: April 2, 1985

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: 7-5, 19 84  
 2) Operator's Well No. 21097  
 3) API Well No. 47 - 039 - 4047  
 State County Permit

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil  Gas   
 B (If "Gas", Production  Underground storage  Deep  Shallow   
 5) LOCATION: Elevation: 1369.63 Watershed: Campbells Creek (K49)  
 District: Malden County: Kanawha Quadrangle: Quick  
 6) WELL OPERATOR Columbia Gas Transmission Corp. 7) DESIGNATED AGENT J. L. Weekley  
 Address P. O. Box 1273 Address P. O. Box 1273  
Charleston, WV 25325 Charleston, WV 25325  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Rodney Dillon Name \_\_\_\_\_  
 Address P. O. Box 30 Address \_\_\_\_\_  
Scarbro, WV 25917  
 10) PROPOSED WELL WORK: Drill  / Drill deeper  / Redrill  / Stimulate   
 Plug off old formation  / Perforate new formation   
 Other physical change in well (specify) \_\_\_\_\_  
 11) GEOLOGICAL TARGET FORMATION, Tuscarora  
 12) Estimated depth of completed well, 7000 feet  
 13) Approximate strata depths: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.  
 14) Approximate coal seam depths: 600 Is coal being mined in the area? Yes

**RECEIVED**  
 JUL 17 1984

OIL & GAS DIVISION  
 DEPT. OF EX. MINES

CASING OR TUBING TYPE	Size	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
		Grade	Weight per ft.	New	Used	For drilling			Left in well
Conductor	20"			X		30	30	To surface	Kinds
Fresh water	13-3/8			X		650	650	To surface	by rule 15.05
Coal	9-5/8			X		2400	2400	To surface	Sizes
Intermediate	7"			X		5360	5360		
Production	4"			X		7000	7000		
Tubing									
Liners									

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-039-4047 August 3, 19 84  
 Date

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. 8) 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.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.  
 Permit expires August 3, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: BLANKET	Agent: <u>LS</u>	Plat: <u>MW</u>	Casing <u>MW</u>	Fee <u>4060-0904</u>
------------------	---------------------	--------------------	---------------------	-------------------------

Margaret J. Hass  
 Administrator, Office of Oil and Gas

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

See the reverse side of the APPLICANT'S COPY for instructions to the well operator. File