

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

FILE No 96
 DRAWING No. W-12092
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 : 200
 PROVEN SOURCE OF ELEVATION EXISTING WELL
API # 2832

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) Mark C. Shamblin
 R.P.E. _____ R.P.S. 827

MARK C. SHAMBLIN
 REGISTERED
 No. 827
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE NOVEMBER 19, 19 96
 OPERATOR'S WELL No. W-12092
 API WELL No. _____

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ STATE 47 COUNTY 015 PERMIT 02832
 (IF "GAS") PRODUCTION ___ STORAGE X DEEP ___ SHALLOW ___

LOCATION: ELEVATION 1045.29 WATER SHED BLUE CREEK
 DISTRICT ELK COUNTY KANAWHA
 QUADRANGLE BLUE CREEK, 7.5' COORDINATES Lat: 38-23-52 Long: 81-27-28

SURFACE OWNER BILLY E. & LOIS J. HARLESS ACREAGE 19 ACRES
 OIL & GAS ROYALTY OWNER GEORGE W. HARLESS LEASE ACREAGE 235 AC
 LEASE No. 48261

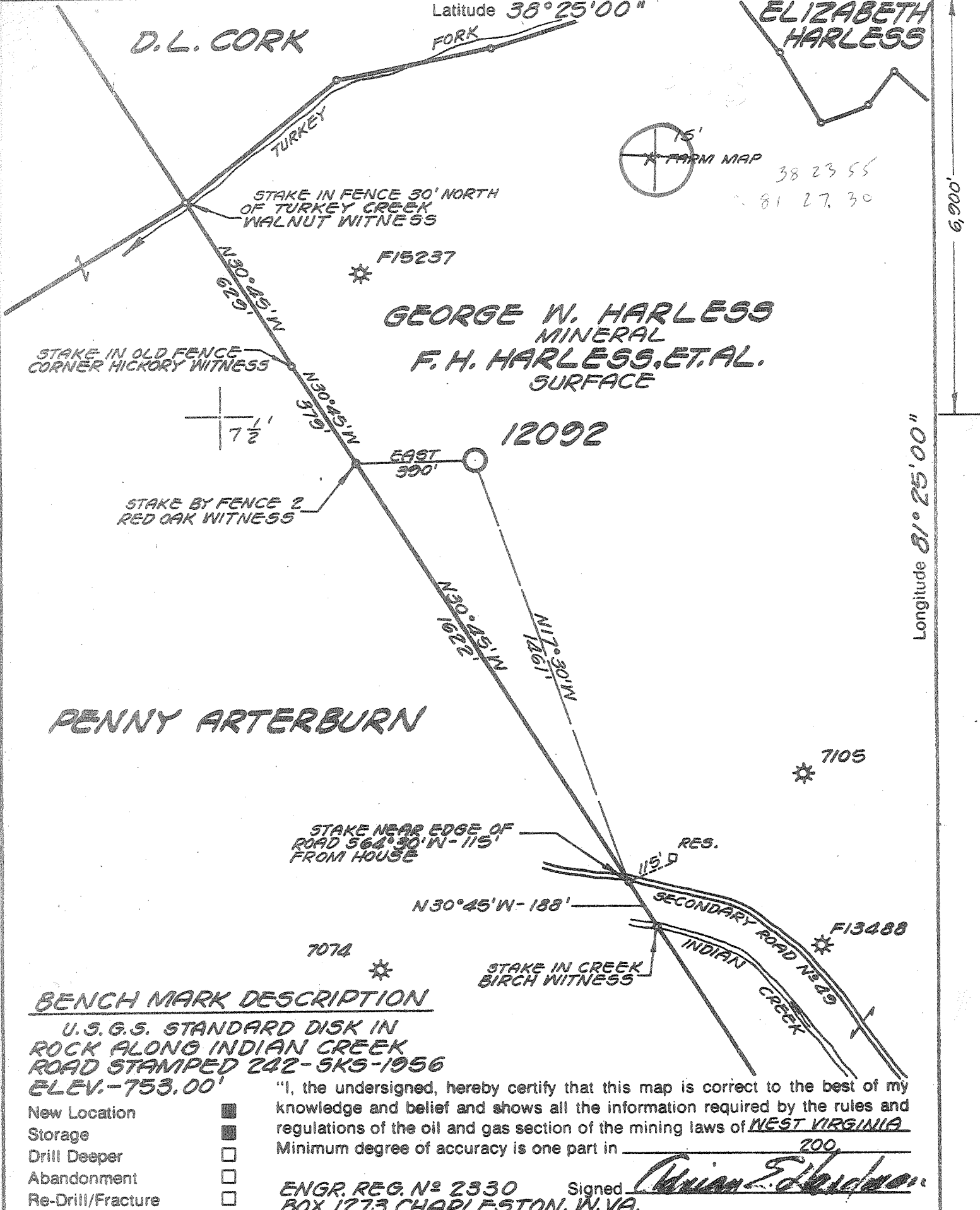
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) STORAGE RECONDITION

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ ESTIMATED DEPTH 5312'
 TARGET FORMATION ORISKANY
 WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP. DESIGNATED AGENT RICHARD L. COTY
 ADDRESS P.O. 1273 CHARLESTON, WV 25325 ADDRESS P.O. BOX 1723 CHARLESTON, WV 25325

DEEP WELL

FORM IV-6 (8-78)

FEB 20 1996



BENCH MARK DESCRIPTION

U.S.G.S. STANDARD DISK IN
 ROCK ALONG INDIAN CREEK
 ROAD STAMPED 242-5K5-1956
 ELEV.-753.00'

- 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 William E. [Signature]
 BOX 1273 CHARLESTON, W. VA.

Company COLUMBIA GAS TRANS. CORP.
 Address BOX 1273 CHARLESTON, IN. VA.
 Farm (G.W.) GEORGE W. HARLESS, F.H. HARLESS
 Lease 48261 Acres 244
 Well Farm No. _____ Ser. No. 12092
 Elevation - Spirit Level 1045.29' WC
 Quadrangle BLUE CREEK, CLENDENIN 15'
 Township or District ELK
 County KANAWHA
 Sec., Lot, Qr. _____ T _____ R _____
 Coordinates LAT. 38°23'51" LONG. 81°27'27"
 File No. 70-61 Dwg. No. _____
 Date 2-17-78 Scale 1" = 400'

WELL LOCATION MAP
 STATE OF WEST VIRGINIA

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

KAN - 2832
 Scale 15' □ 7 1/2' ■

47-039 MAR 29 1978

Deep Well 5390' ... 9-0 Blue Creek (217)



RECEIVED

FEB - 20 1979

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

OIL & GAS DIVISION
DEPT. OF MINES

- Rotary
- Spudder
- Cable Tools
- Storage

Quadrangle Blue Creek
Permit No. Kan. 2832

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Columbia Gas Transmission Corp.
Address P.O. Box 1273 Charleston, W. Va.
Farm L. W. Harless, et al. Acres 244
Location (waters) Indian Creek
Well No. 12092 Elev. 1045.29'
District Elk County Kanawha
The surface of tract is owned in fee by L. B. Harless
Address Pinch, W. Va.

Mineral rights are owned by L. B. Harless
Address Pinch, W. Va.

Drilling commenced 6-21-78
Drilling completed 7-2-78

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) 1000 GAL.
MCA 15%

WELL FRACTURED (DETAILS) 890 BBLs with 28,000# 20-40 mesh sand treating at 1750# pressure.

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 5 million MCF

ROCK PRESSURE AFTER TREATMENT 1470 HOURS 24

Fresh Water Sand & Shale Feet 190 Salt Water Feet

Producing Sand Oriskany Depth 5312' - 5356'

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13 3/8"	90.9	90.9	
XII 9-5/8"	2129	2129	Size of
XIII 7"	5345	5345	Depth set
6%			
5 3/16			
4 1/2			
3			Perf. top
2 3/8"	5293	5293	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Attach copy of cementing record.
CASING CEMENTED 13-3/8" SIZE 90.9 No. Ft. 6-22-78 Date
Amount of cement used (bags) 150 sacks - Neat Cement
Name of Service Co. Halliburton Services
COAL WAS ENCOUNTERED AT FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Clay			0	10			
Sand & Shale			10	940	Water	190	
Salt Sand			940	1465			
Sand & Shale			1465	1585			
Red Rock			1585	1590			
Big Lime			1590	1912			
Weir Sand			1912	2112			
Shale			2112	5198			
Lime			5198	5312			
Oriskany			5312	5356			
Heldeburg			5356	5388			

FEB 20 1979



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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MAR 14 1978

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE March 8, 1978

Surface Owner L. B. Harless, Agent

Company Columbia Gas Transmission Corporation

Address Box 36, Pinch, W. Va. 25156

Address P.O. Box 1273, Charleston, W. Va. 25325

Mineral Owner Same As Above

Farm L. W. Harless, et.al Acres 244

Address _____

Location (waters) Indian Creek

Coal Owner Same As Above

Well No. 12092 Elevation 1045.29'

Address _____

District Elk County Kanawha

Coal Operator Not Operated

Quadrangle Blue Creek

Address _____

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 7-14-78.

INSPECTOR
TO BE NOTIFIED Martin Nichols

ADDRESS P. O. Box 554, Clendenin, W. Va.

PHONE 548-6993

[Signature]
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 July 18 19 50 by L. W. Harless made to United Fuel Gas Co. and recorded on the _____ day of _____ 19 __, in Kanawha County, Book 124 Page 454

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

Address
of
Well Operator

Very truly yours,
(Sign Name) [Signature]
Director Well Operator
Exploration and 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

KAN-2832 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."

47-039

Signed by [Signature]
Director, Exploration and Development

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 Larry Friend
 ADDRESS _____ ADDRESS P.O. Box 610, Clendenin, W. Va.
 TELEPHONE _____ TELEPHONE 965-3317
 ESTIMATED DEPTH OF COMPLETED WELL: 5390 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Oriskany
 TYPE OF WELL: OIL _____ GAS _____ COMB. _____ STORAGE X DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING-SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - $\frac{1}{4}$ 3/8	150'		Cement to Surface
9 - 5/8	2140'		Cement to Surface
8 - 5/8			
7	5295'		
5 1/2			
4 1/2			
3			Perf. Top
2 3/8	5320'		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? No 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

WR-35

12-Feb-98
API # 47- 39-02832 F

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Reviewed AS

Well Operator's Report of Well Work

Farm name: HARLESS, G.W.EST./ MELTON Operator Well No.: 12092

LOCATION: Elevation: 1,045.29 Quadrangle: BLUE CREEK

District: ELK County: KANAWHA
Latitude: 6800 Feet South of 38 Deg. 25Min. 0 Sec.
Longitude 11710 Feet West of 81 Deg. 25 Min. 0 Sec.

Company: COLUMBIA GAS TRANSMISSION
P. O. BOX 1273
CHARLESTON, WV 25325-1273

Agent: RICHARD L. COTY

Inspector: CARLOS HIVELY
Permit Issued: 02/16/98
Well work Commenced: 08/18/98
Well work Completed: 09/04/98
Verbal Plugging
Permission granted on: _____
Rotary Cable Rig
Total Depth (feet) 5388'
Fresh water depths (ft) 190'
Salt water depths (ft) N/A

Is coal being mined in area (Y/N)? N
Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-3/8"		91'	150 sx to surface
9-5/8"		2129'	700 sx to surface
7"	231b, N-80	5314'	150 sx
2-3/8"	4.6 lb	5302'	

OPEN FLOW DATA

5312' - 5356'

Producing formation Oriskany Storage Pay zone depth (ft) _____
 Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d
 Final open flow N/A MCF/d Final open flow N/A Bbl/d
 Time of open flow between initial and final tests N/A Hours
 Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

RECEIVED
Division of Oil & Gas
Permitting

For: COLUMBIA GAS TRANSMISSION CORP.

MAR 01 1999

By: [Signature]
Date: 2/22/99

WV Division of
Environmental Protection

MAR 16 1999

KAN 2832 F

Pulled 5293' of 2-3/8", 4.6 lb tubing, cleaned out to TD, and re-ran 5302' of 2-3/8", 4.6 lb tubing.