

NOTE:
No houses or water wells
are within 200'.

Jack Walters
DB 90 Pg. 297
WB 28 Pg. 284
Tax Map 308 P. 7

Lease
Kenneth Funkhouser
Lease No. 62456
236 Acres

Existing Location
Well No. 9373
(031-00017)

Surface Owner
Kenneth Funkhouser
WB 24 Pg. 581
DB 93 Pg. 475
Tax Map 308 P. 5

Jack Walters
DB 90 Pg. 297
WB 28 Pg. 284
Tax Map 308 P. 7

7.5' Topo Loc.

Coordinates Well No. 9373
WV-N Nad83 U.S. Feet
N 202,155.49
E 2,164,293.64

NOTE:
This map is for well location
only and does not represent
a complete property survey.

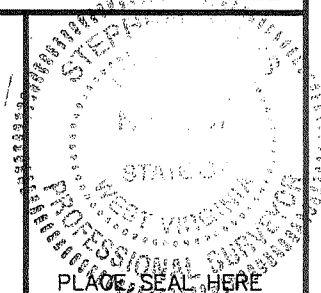
All wells within 1200' are as shown

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

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 400'
MINIMUM DEGREE OF
ACCURACY 1 in 200
PROVEN SOURCE OF
ELEVATION _____
GPS CP No. 27 Elevation 1761.86'

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 DIVISION OF ENVIRONMENTAL PROTECTION
(SIGNED) Stephen Parks

R.P.E. 8982 L.L.S. 1707



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



DATE Oct. 4 2004
OPERATOR'S WELL NO. 9373
API WELL NO. _____

47 - 031 - 00017-F
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 1638.18' WATER SHED Hell Run of Parker Hollow

DISTRICT Lost River COUNTY Hardy

QUADRANGLE Needmore

SURFACE OWNER Kenneth Funkhouser

ACREAGE 241.5

OIL & GAS ROYALTY OWNER Kenneth Funkhouser LEASE ACREAGE 236

LEASE NO. 62456

PROPOSED WORK: DRILL ___ CONVERT X 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 ___

TARGET FORMATION _____ ESTIMATED DEPTH _____

WELL OPERATOR Columbia Gas Transmission Corp. DESIGNATED AGENT Paul Amick

ADDRESS P.O. Box 1273

ADDRESS P.O. Box 1273

Charleston, WV 25325-1273

Charleston, WV 25325-1273

DEC 16 2005

Lost River 80 (328)

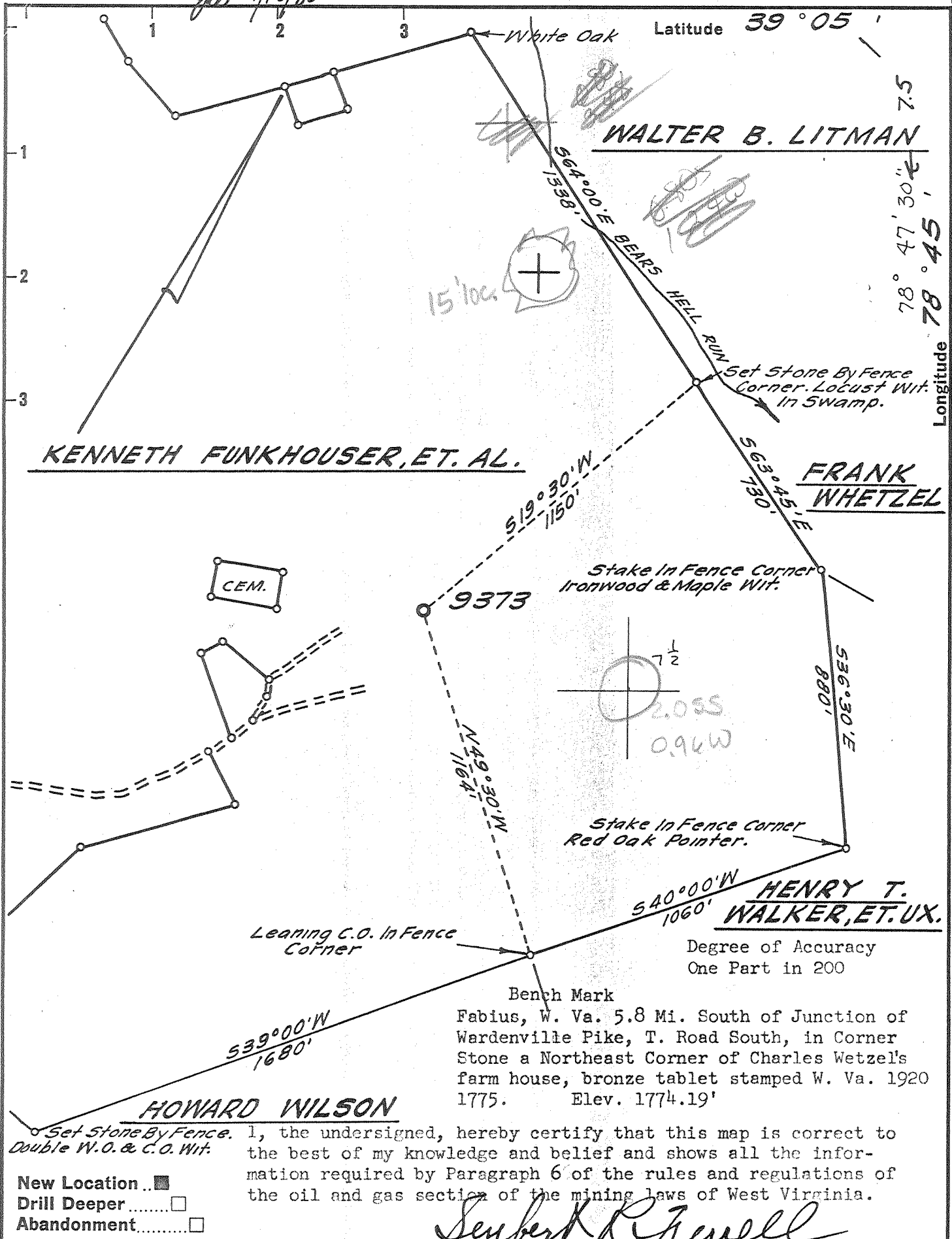
FORM WW-6

COUNTY NAME HARDY PERMIT 6017 F

Oct 4/8/65

5100
11-1-65-WV

1.5



- New Location
- Drill Deeper
- Abandonment

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 Paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Seybert R. Jewell

Company Columbia Gas Transmission Corp.
 Address CHARLESTON, W. VA.
 Farm KENNETH FUNKHOUSER ET AL.
 Tract _____ Acres 588 Lease No. 62456
 Well (Farm) No. _____ Serial No. 9373
 Elevation (Spirit Level) 1640.24'
 Quadrangle MOOREFIELD IS NEEDMORE
 County HARDY District LOST RIVER
 Engineer Seybert R. Jewell
 Engineer's Registration No. 2529
 File No. 214-107 Drawing No. _____
 Date OCT. 21 '65 Scale 1" = 400'

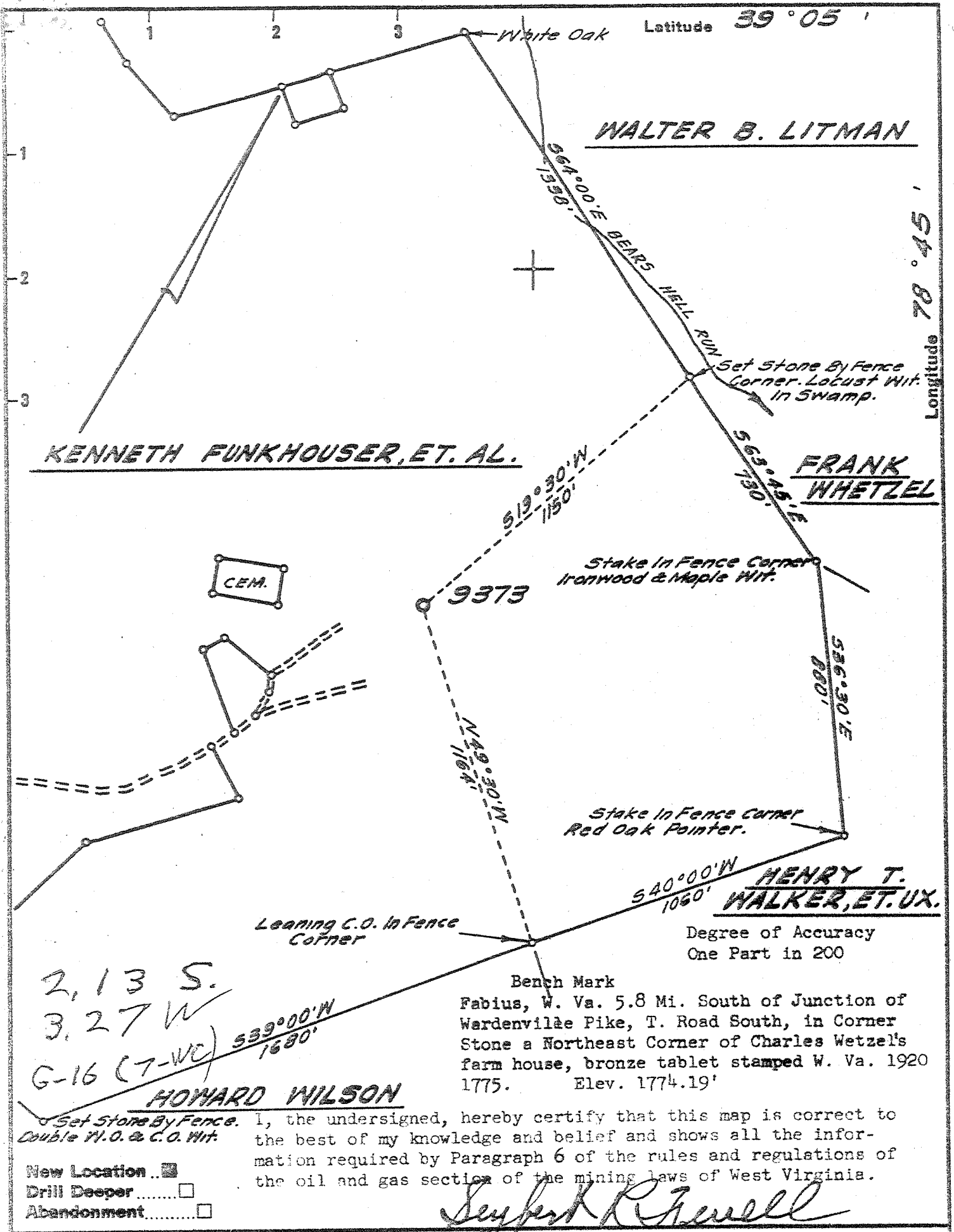
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. HARD-17-Frac.

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 MAY 13 1988

- Denotes one inch spaces on border line of original tracing.

47-031



2, 13 S.
3, 27 W
G-16 (T-WC)

HOWARD WILSON

Set Stone By Fence.
Double N.O. & C.O. Wit.
New Location
Drill Deeper
Abandonment

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 Paragraph 6 of the rules and regulations of the oil and gas sections of the mining laws of West Virginia.

Seibert R. Jewell

Company UNITED FUEL GAS CO.
 Address CHARLESTON, W. VA.
 Farm KENNETH FUNKHOUSER ET AL.
 Tract _____ Acres 588 Lease No. 62456
 Well (Farm) No. _____ Serial No. (9373)
 Elevation (Spirit Level) 1640.24'
 Quadrangle MOOREFIELD - SE
 County HARDY District SOUTH FORK
 Engineer Seibert R. Jewell
 Engineer's Registration No. 2529
 File No. 214-107 Drawing No. _____
 Date OCT. 21 '65 Scale 1" = 400'

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

WELL LOCATION MAP
 FILE NO. HARD-17

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary
Spudder
Cable Tools
Storage

1-28-66

Quadrangle Moorefield
Permit No. HARDY-17

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company <u>United Fuel Gas Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address <u>P. O. Box 1273 Charleston, W. Va. 25325</u>				
Farm <u>Kenneth Funkhouser, et al</u> Acres <u>62457 Merger</u>	Size			
Location (waters) <u>Baker Run</u>	20" 20"	28' Cemented to Surface		End of Packer
Well No. <u>9373</u> Elev. <u>1640.24'</u>	13 3/8"	184'	" "	
District <u>South Fork</u> County <u>Hardy</u>	10"			Size of
The surface of tract is owned in fee by	9-5/8" 9-5/8"	1799'	" "	
Address	7" 7"	6595'	" "	with 400 sacks
Mineral rights are owned by <u>Kenneth Funkhouser, et al</u>	5 3/16"			Depth set
Address <u>Baker, W. Va.</u>	4 1/2"			
Drilling commenced <u>Nov. 1, 1965</u>	3"			Perf. top
Drilling completed <u>Dec. 3, 1965</u>	2 3/8"		6915'	Perf. bottom
Date Shot From To	Liners Used			Perf. top
With				Perf. bottom

Open Flow 130 /10ths Water in 7 Inch
/10ths Merc. in _____ Inch

Volume 4,824 M - Oriskany Cu. Ft.

Rock Pressure 1440 lbs. 24 hrs.

Oil _____ bbls., 1st 24 hrs.

WELL ACIDIZED (DETAILS) _____

WELL FRACTURED (DETAILS) _____

Attach copy of cementing record.

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____

Amount of cement used (bags) _____

Name of Service Co. _____

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES FEET _____ INCHES

_____ FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) _____

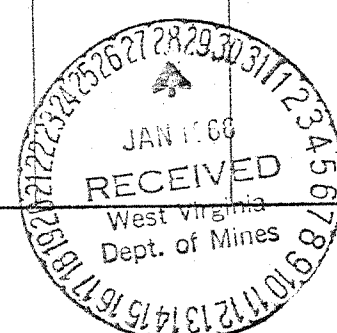
ROCK PRESSURE AFTER TREATMENT _____ HOURS

Fresh Water 20 Feet 105' ; 200' Salt Water _____ Feet

Producing Sand _____ Depth _____

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
<u>Chemung</u>			0	2200			
<u>Brallier</u>			2200	4750	Gas 6618, 6664', and 6786' all gas gauged 8/10 W 4" 474 M when drilling completed.		
<u>Gray Shale</u>			4750	5700			
<u>Marcellus Shale</u>			5700	6450	Acidized 12-5-65 with 20,000 gallons regular Hcl, 3,000 gallons over-flush, 110,000 standard cubic feet Nitrogen.		
<u>Metabentonite at</u>				6450			
<u>Needmore Shale</u>			6450	6587	Final open flow after acidized - 130/1 W 7" 4,824 M		
<u>Oriskany</u>			6587	6886			
<u>Helderberg</u>			6886	6927	Shut in 12-15-65 in 2-3/8" tubing.		
<u>Total Depth</u>			6927'		LOGS RUN: Gamma Ray Temperature		

485
6450
1640
4810



RECEIVED
APR 14 1988



**DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY**

- 1) Date: MARCH 17, 1988
 2) Operator's Well No. 9373 (W-135)
 3) SIC Code _____
 4) API Well NO. 47 - 031 - 0017 - FRA
 State County Permit
 5) UIC Permit No. WIC2D0310017

*Issued 5/6/88
Expired 5/6/90*

STATE OF WEST VIRGINIA
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

- 6) WELL TYPE: Liquid injection _____ / Gas injection (not storage) _____ / Waste disposal X _____
 7) LOCATION: Elevation: 1640.24' Watershed: Baker Run of Lost River *NEED MORE*
 District: Lost River *2* County: Hardy *031* Quadrangle: Moorefield
 8) WELL OPERATOR Columbia Gas Transmission *MS* 9) DESIGNATED AGENT R. C. Weidner
 Address PO Box 1273 *10450* Address PO Box 1273
Charleston, WV 25325 Charleston, WV
 10) OIL & GAS INSPECTOR TO BE NOTIFIED 11) DRILLING CONTRACTOR:
 Name Phillip L. Tracy Name N/A
 Address PO Box 2536 Address _____
Elkins, WV 26241
 12) PROPOSED WELL WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Stimulate X Treat to 1500
 Plug off old formation _____ / Perforate new formation _____ / Convert _____
 Other physical change in well (specify) Perforate the Same Formation. *psi*
 13) GEOLOGICAL TARGET FORMATION, Oriskany Sand *475* Depth 6587 feet (top) to 6886 feet (bottom)
 14) Estimated depth of completed well, (or actual depth of existing well) 6882 ft.
 15) Approximate water strata depths; Fresh, 20, 105, 200 feet; salt, N/A feet.
 16) Approximate coal seam depths: None
 17) Is coal being mined in the area? Yes _____ / No X _____
 18) Virgin reservoir pressure in target formation N/A psig. Source _____
 19) Estimated reservoir fracture pressure N/A psig (BHFP)
 20) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour: 5 to 10 bbls Bottom hole pressure 2900-3900 psig
 21) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES: Fluids collected from
Production, Underground Gas Storage & Transmission Facilities (Baroid B-1400
 22) FILTERS (IF ANY): 25-Micron Add: 10 Micron & Strainer Corrosion Inhibitor Micro
 23) SPECIFICATIONS FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL: Magnesium Anodes biostat
are bonded to all underground steel tanks.

24) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS						FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (Cubk feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well			
Conductor	20"					28'	28'	SURFACE	Kinds BAKER MODEL	
Fresh water	13-3/8"	4-40	48			184'	184'		R-3 DOUBLE-GRIP	
Coal									Sizes RETRIEVABLE	
Intermediate	9-5/8"	J-55	36			1203' / 591'	1794' / 1799'	SURFACE	2-7/8" x 7"	
Production	7"	J-55	23	X		6595'	6595'	1060 SACKS	Depths set 6529'	
Tubing	2-3/8"	J-55	4.7	X		6527'	6527'	(1440 cu. ft.)		
Liners									Perforations:	
									Top Bottom	
									OPEN HOLE	

- 25) APPLICANT'S OPERATING RIGHTS were acquired from KENNETH A. FUNKHOUSER
 by deed _____ / lease X / other contract _____ / dated JANUARY 14, 1977, of record in the
 County Clerk's office in VOL. 144 Book _____ at page 318

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

RECEIVED
APR 14 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

STATE OF WEST VIRGINIA

- 1) Date MARCH 17, 1988
- Operator's _____
- 2) Well No. 9373 (W-135)
- 3) SIC Code _____
- 4) API Well No. 47 - 031 - 0017

State County Permit
Frac.

NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION
for the

DIVISION OF OIL AND GAS, DEPARTMENT OF ENERGY

- 6) SURFACE OWNER(S) OF RECORD TO BE SERVED
 - (i) Name MR. KENNETH A. FUNKHOUSER
 - Address RT. 1, BOX 176
 - BAKER, WV 26801
 - (ii) Name _____
 - Address _____
 - (iii) Name _____
 - Address _____
- 7 (i) COAL OPERATOR NOT OPERATED
- Address _____
- 7 (ii) COAL OWNER(S) WITH DECLARATION ON RECORD:
- Name NOT OPERATED
- Address _____
- 7 (iii) COAL LESSEE WITH DECLARATION ON RECORD:
- Name NOT OPERATED
- Address _____

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work, and
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The anticipated date of resuming injection is 05-02-88.

The date proposed for the first injection or waste disposal ~~is~~ was Feb. 16, 1978.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM WW-3(B)) DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22B of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Director of the Division of Oil and Gas, West Virginia Department of Energy, with respect to a well at the location described on the attached Application and depicted on attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Director.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

COLUMBIA GAS TRANSMISSION CORP.

Well Operator
R. C. Weidner
By R. C. WEIDNER, DIRECTOR

Its DRILLING AND MAINTENANCE

Telephone (304) 357-2459

RECEIVED
APR 14 1988

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

RECEIVED
JUN 21 1988

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

DIVISION OF OIL & GAS Well Operator's Report of Well Work
DEPARTMENT OF ENERGY
Farm name: FUNKHOUSER, KENNETH, ETAL Operator Well No.: 9373 (W-135)

LOCATION: Elevation: 1640.24 Quadrangle: NEEDMORE
District: LOST RIVER County: HARDY
Latitude: 11000 Feet South of 39 Deg. 5 Min. 0 Sec.
Longitude: 5100 Feet West of 78 Deg. 47 Min. 30 Sec.

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

Agent: ROBERT E. WEIDNER

Inspector: PHILLIP TRACY
Permit Issued: 05/09/88
Well work Commenced: 05/19/88
Well work Completed: 05/20/88
Verbal Plugging
Permission granted on:
Rotary Cable Rig
Total Depth (feet) 6927'
Fresh water depths (ft) 20', 105'
and 200'
Salt water depths (ft) N/A

Size	Used in	Left	Cement
	Tubins	Drillings	Fill Up
		in Well	Cu. Ft.
20"	28'	28'	Surface
13-3/8"	184'	184'	Surface
9-5/8"	1,794'	1,799'	Surface
7"	6,595'	6,595'	1060 Sks 1440 CuFt
2-3/8"	6,527'	6,527'	Packer set @ 6,529'

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

OPEN FLOW DATA

Producing formation Oriskany Sandstone Pay zone depth (ft) 6587'-6886'
 Gas: Initial open flow 474 MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow 4,824 MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure 1440 psig (surface pressure) after 24 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.

For: COLUMBIA GAS TRANSMISSION CORP. JUN 27 1988
By: *[Signature]* R. C. Weidner
Date: JUN 20 1988

05-19-88

RECEIVED JUN 2 1988

Halliburton flushed 2-3/8" tubing with 500 gallons of 5% Fe Acid with 1% Musol A and CLA-STA XP. Displaced with 30 bbls of water. Pump pressure 1800 PSIG at 3 BPM. Annulus pressure during pumping 0 PSIG.

Logged well with Gamma-Ray Log from 6811' to 5700'.

Ran 50' strip of 1-11/16" Dyna Cap Perforating charges. Perforate open-hole section from 6700' - 6720', 20 shots, 1 shot/ft. and from 6652' - 6682', 30 shots, 1 shot/ft. First 20 shots possible misfire.

05-20-88

Perforated 6700' - 6720' with 1-9/16" Alpha Jets 40 Shots, 2 shots/ft.

Perforated 6652' - 6682' with 1-9/16" Alpha Jets 30 Shots, 1 shot/ft., 1 misfire.

Acidized well (Halliburton) with 1500 gallons 5% Fe Acid with 1% Musol A and CLA-STA XP, 500 gallons Claysol with CLA-STA XP, 500 gallons 5% Fe Acid with CLA-STA XP, 500 gallons Claysol with CLA-STA XP, 500 gallons 5% Fe Acid with CLA-STA XP, 500 Gallons Claysol with CLA-STA XP, and 1500 gallons 5% Fe Acid with CLA-STA XP. Displaced acid with 147 BBLS of water. Pump pressure 2100 PSIG at 3 BPM. Shut in Pressure 1600 PSIG. Annulus pressure during pumping 0 PSIG.

JUN 17 1988

[Handwritten signature]

WR-35
Rev (5-01)

DATE: 9/12/2007
API #: 47-031-00017 W

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Kenneth A. Funkhouser Operator Well No.: 9373

LOCATION: Elevation: 1638.18 ft Quadrangle: Needmore

District: Lost River County: Hardy
Latitude: 11.102 Feet South of 39 Deg. 05 Min. 00 Sec.
Longitude 5.439 Feet West of 78 Deg. 47 Min. 30 Sec.

Company: Columbia Gas Transmission Corp

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 1700 MacCorkle Ave SE Charleston, WV 25325-1273	4-1/2"	6565 ft	6861 ft	124 cu ft
Agent: Paul Amick	All other existing casing left in well.			
Inspector: Craig Duckworth				
Date Permit Issued: 12/16/05				
Date Well Work Commenced: 8/7/07				
Date Well Work Completed: 9/5/07				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 6927				
Fresh Water Depth (ft.): not applicable				
Salt Water Depth (ft.): not applicable				
Is coal being mined in area (N/Y)? no				
Coal Depths (ft.):				

OPEN FLOW DATA

Producing formation Oriskany Sand Pay zone depth (ft) 6587 - 6886
Gas: Initial open flow not applicable MCF/d Oil: Initial open flow not applicable Bbl/d
Final open flow 3,000 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests not applicable Hours
Static rock Pressure 2000 psig (surface pressure) after 72 Hours

Second Producing formation not applicable Pay zone depth (ft) not applicable
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.

Signed: James E. Amos
By: James E. Amos - Senior Storage Engineer - Columbia Gas Transmission Corp
Date: 9/12/07

NOV 21 2007

HAR 0017W

This is an existing production well that was converted to a natural gas storage well. Below is a summary of work performed.

- 1) Well was killed, tubing pulled, pipe inspected and cement bond logs ran, 4-1/2" casing ran and cemented, new API wellhead installed, and acid stimulation.
- 2) Baker Atlas ran Segmented Bond Log and MicroVertilog.

* Note that no earthen pit was utilized. Workover and flowback treatment fluids recovered via steel tanks and transported to LAD in Wheeling, WV for disposal/processing.

NOV 21 2007