

CHARGE: Gen-Aux-Activ-Tr Crif
183-2000-W2913-2801

NOTES:
WELL 7420 TO CNR 2
S 77°52'04" W 1101.31'
WELL 7420 TO CNR 3
N 52°11'14" E 74.11'
WELL 7420 TO CNR 4
S 60°36'02" E 73.98'
WELL 7420 TO WELL 7365
S 67°21'37" W 1127.06'

NO COAL OPERATIONS
IN THIS AREA

Farm map #

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2')

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 500'
MINIMUM DEGREE OF
ACCURACY 1:200
PROVEN SOURCE OF
ELEVATION SEE ABOVE

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 ENERGY.
(SIGNED) Edward Nicholas
R.P.E. 9936 L.L.S. 798

PLACE SEAL HERE

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION		DATE <u>24 JAN</u> , 19 <u>95</u> OPERATOR'S WELL NO. <u>7420</u> API WELL NO. <u>47 077 00113-W</u>	
WELL TYPE: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> (IF "GAS,") PRODUCTION <input type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input type="checkbox"/>		STATE <u>47</u> COUNTY <u>077</u> PERMIT <u>00113-W</u>	
LOCATION: ELEVATION <u>2175.06</u> WATER SHED <u>SALT LICK CREEK</u> DISTRICT <u>UNION</u> COUNTY <u>PRESTON</u> QUADRANGLE <u>TERRA ALTA, W.V.</u> COORDINATES LAT: <u>39°24'31"</u> LONG: <u>79°35'24"</u>		COUNTY NAME PRESTON PERMIT 113	
SURFACE OWNER <u>CARL B. SMITH HEIRS</u> ACREAGE <u>74.5</u> OIL & GAS ROYALTY OWNER <u>CARL B. SMITH HEIRS</u> LEASE ACREAGE <u>74.5</u> COAL OWNER _____ LEASE NO. <u>90558 / 90392</u>			
PROPOSED WORK: DRILL <input type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUS OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> OTHER PHYSICAL CHANGE IN WELL (SPECIFY) <u>RECONDITION FOR STORAGE</u>			
PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> TARGET FORMATION <u>ORISKANY</u> ESTIMATED DEPTH <u>5230</u>			
WELL OPERATOR <u>Columbia Gas Transmission Corp</u> DESIGNATED AGENT <u>RICHARD L. COTY</u> ADDRESS <u>PO Box 1273, Charleston, W.V.</u> ADDRESS <u>PO Box 1273, Charleston, W.V.</u> <u>25325-1273</u> <u>25325-1273</u>		AUG 1 1995	

DEEP WELL

Latitude 39° 25'

Longitude 79° 35'

BENCH MARK DESCRIPTION

U. S. G. U. E. Spike in Root of double White Oak on north side of Road, about 800 feet below Kinsinger Run. Elevation 1676.70'

Accuracy of one part in 200

JAMES E. BISHOP, ET. UX.

584°30'W-43'

Stake, 2 Sumac wit. top of Ridge.

N 4°W-82' Large Dead Chestnut on Ridge. Chestnut and Dogwood ptrs.

7420

575°30'W-2020'

ARCHIE M. HAUGHT ET. AL.

Set Stone marked L3 on top of Ridge White Oak & Black Oak ptrs.

7365

Set Stone on Ridge, 2 Sassafras & Maple wit. marked by D.G.K.

ARCHIE M. HAUGHT ET. AL.

W.H. HARRIMAN SR. ET. AL.

Stake, 2 Spruce Pine wit. marked by D.G.K.

7385

0.58 S. of 39° 25'
0.38 W. of 79° 35'

5 NE (F-13)

New Location..
Drill Deeper.....
Abandonment.....

Seybert R. Howell

Company ATLANTIC SEABOARD CORP.
 Address CHARLESTON, W. VA.
 Farm ARCHIE M. HAUGHT, ET. AL.
 Tract _____ Acres 74 1/2 DEED AS-558 Lease No. AS-392
 Well (Farm) No. _____ Serial No. 7420
 Elevation (Spirit Level) 2162.20'
 Quadrangle KINGWOOD - C
 County PRESTON District UNION
 Engineer Seybert R. Howell
 Engineer's Registration No. 2529
 File No. 172-131 Drawing No. _____
 Date 4-17-63 Scale 1" = 400'

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

WELL LOCATION MAP
FILE NO. PRES-113

+ 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.

MI 23-A (Top)
DEEP WELL

Samples ~~4300-5300~~ (4050-5150)

RECEIVED

Environmental Protection

JAN 07 1997

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

Permitting
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: Smith, Carl and Chung Ja Operator well no.: 7420

LOCATION Elevation: 2175.06' Quadrangle: Terra Alta

District: Union County: Preston
Latitude: 10063 Feet South of 39 Deg. 25 Min. 0 Sec.
Longitude: 1800 Feet West of 79 Deg. 35 Min. 0 Sec.

Company: Columbia Gas Transmission
P.O. Box 1273
Charleston, WV 25325-1273

Agent: Richard L. Coty
Inspector: Phil Tracey
Permit Issued: 7/19/95
Well Work Commenced: 8/2/96
Well Work Completed: 10/9/96
Verbal Plugging
Permission granted on: N/A
Rotary Yes Cable _____ Rig
Total Depth (ft) 5297'(DPM)
Fresh water depths (ft) See previous records

Salt water depths (ft) See previous records

Is coal being mined in the 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"	34'	34'	26 sxs surf.
9 5/8"	1497'	1497'	255ft3LitPoz 275 sxs
7"	5020'	5020'	600ft3LitPoz 631sxs, 170 galClmt, Surf.
4 1/2"	605'	605'	Liner* 150 sxs

Open Flow Data

Producing formation	Chert	Pay zone depth (ft)	5014'-5028
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	Oriskany	Pay zone depth (ft)	5128'-5227
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

NOTE: On the 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.

Notes: * 4 1/2" liner run from 4663'-5293'

For: Columbia Gas Transmission Corp.

By:

Date:

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

Well Operator's Report of Well Work

Halliburton rigged up to the 2 3/8" tubing and killed the well with kill wt. fluid. Pulled out of the hole and retired 5141.06' of tubing. Atlas ran a Vertilog from 4900'-surface inside the 7" casing. The casing looked good. Atlas also ran a BAL from 4950' to surface and a gauge ring and junk basket to 4950'. Atlas wireline set a retrievable bridge plug at 4912'. Removed the old wellhead. Installed and tested a new 9 5/8" slip on weld head. Pressure tested the 7" casing by pressuring up on the casing at the surface with 750 psi for 30 minutes. Did not have any leakoff. Tripped in the hole with 3 1/2" drill pipe and recovered the retrievable bridge plug. Tripped in the hole with a 6 1/8" bit and tagged fill at 5113'. Drilled up fill down to original TD at 5230'. Drilled a new hole from 5230'-5297'. Atlas logged the hole with CIBL, DLL, ZDL, and Hex-Dip. Tripped in the hole with 19 jts. (605') of 4 1/2", 11.6 #/ft, N-80 LT&C casing liner and liner hanger/packer assembly. Set the hanger @ 4668'. The top of the liner was at 4663' and the bottom of the liner was at 5293'. Started to pump the spacer for the cement job and lost circulation. It appeared as if the packer on the top of the liner hanger/packer assembly had prematurely set. Left 4 1/2" in hole and pulled out of the hole with the 3 1/2" drill pipe and liner setting tool. Could not reestablish injection through the 4 1/2" shoe (plugged). Tripped in the hole with a 3 3/4" MT bit and drilled up the float collar in 4 1/2" liner. Reestablished injection. Atlas logged the hole with a GR/Neut/CCL. Atlas perforated the proposed bottom squeeze interval from 5266'-5268' with a 3 1/8" PPG, 4 SPF, 90 deg phased and 11.5 gram charges. Atlas perforated the proposed top squeeze interval from 4999'-5001' with the same type of gun. Atlas set a 4 1/2" EZSV cement retainer at 5258'. Lost the rope socket and setting tool in the hole. Tripped in the hole with the drill pipe and confirmed that the liner hanger/packer assembly was fully set. Tripped in the hole and recovered the lost fish. Tripped in the hole with the drill pipe and cement retainer stinger. Halliburton established circulation between the two sets of squeeze perforations and performed a suicide squeeze with 150 sxs of Standard cement with additives. Used a 6 1/8" bit to dress off the top of the liner. Used a 3 7/8" bit to clean out the 4 1/2" liner down to the EZSV at 5258'. Displaced all of the workover fluid out of the hole with treated fresh water. Atlas ran a GR/N/CCL from 5248' -surface and a SBT from 5244'-4644'. Atlas perforated the Chert from 5014'-5028' and the Oriskany from 5128'-5227'. All of the perforations were made with a 3 3/8" EHSC gun, 6 SPF, 60 deg phasing and 21 gram charges. Halliburton used 1 3/4" coiled tubing to pickle the 4 1/2" liner and hydroblast the perforations with 500 gals SWIC acid with additives. After hydroblasting, the Oriskany and Chert perforations were treated in 5' intervals with Halliburton's Selective Injection Packer and 100 gals/ft of perforations of 10% FE acid with additives. After removing the coil tubing from the 4 1/2" liner the well unloaded on its own. To clean up the well it was blown to a 500 bbl frac. tank. The well was placed back into service on 10/9/96.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Kingwood

Permit No. Pres. 113

WELL RECORD

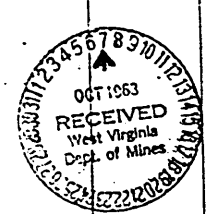
Oil or Gas Well Storage

Company Atlantic Seaboard Corporation
 Address Terra Alta, West Virginia
 Farm Archie M. Haught Rt. 1 Acres 74 1/2
 Location (waters) Salt Lick Creek
 Well No. 7420 Elev. 2162.20
 District Union County Preston
 The surface of tract is owned in fee by _____
 Address _____
 Mineral rights are owned by Archie M. Haught
R.F.D. #3 Address Waynesburg, Penna. S 3/16
 Drilling commenced July 3, 1963
 Drilling completed July 17, 1963
 Date Shot _____ From _____ To _____
 With _____
 Open Flow _____ /10ths Water in _____ Inch
 _____ /10ths Merc. in _____ Inch
 Volume See reverse Cu. Ft.
 Rock Pressure Storage lbs. _____ hrs.
 Oil _____ bbls. 1st 24 hrs.
 WELL ACIDIZED See reverse
 WELL FRACTURED _____
 RESULT AFTER TREATMENT See reverse
 ROCK PRESSURE AFTER TREATMENT Storage
 Fresh Water _____ Feet _____ Salt Water _____ Feet _____

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
13-3/8" 48#	34'	34'	
9-5/8" 32#	1497'	1497'	Size of
7" 23#	5020'	5020'	Depth set
6 1/2"			Perf. top
			Perf. bottom
			Perf. top
			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
See reverse
 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
Siltstone & Shale			0	4519			
Tully Lime			4519	4532			
Siltstone & Shale			4532	4968			
Onondaga Limestone			4968	4990			
Chert			4990	5130			
Shale			5130	5138			
Oriskany			5230				
Total Depth				5230			



(over)

Formation	Color	Hard or Soft	Top Log	Bottom	Oil Gas or Water	Depth Found	Remarks
Casing & Cement:							
13-3/8"							48#/ft. H-40 casing - 34' (threads on) set 634' Cemented 26 sacks regular cement - 7-1-63
9-5/8"							32#/ft. H-40 casing - 1497' (threads on) set 21498' (KB). Cemented 255 cu. ft. "Litepoz" and 255 sacks Class A cement tailed w/50 sacks regular cement, 1% "Wiac" and 3% Na Cl - 7-6-63 - Dowell.
7"							23#/ft. J-35 casing - 5020' (threads on) set 24989' (KB). Two stage cemented to surface. 1st stage - 100 cu. ft. "Litepoz" and 100 sacks Class A cement tailed w/170 gallons of "Cealment" (Latex Cement). 2nd stage - 500 cu. ft. "Litepoz" and 500 sacks Class A cement tailed w/31 sacks regular and 2% Ca Cl. 7-14-63 - Dowell.
Stimulation:							
	5000 gal. 15% retarded HCl Acid;						5000 gal. water overflush and 60,000 scf of N ₂ Regular HCl Acid; 7-23-63 - Dowell.
Production:							
	During Drilling:		Chert gas - 12,217 Mcf	7-16-63			
	Before Acid:		Chert & Driskany - 13,600 Mcf	7-17-63			
	After Acid:		95,000 Mcf @ 2350 psig	(Back pressure test)			7-26-63
	Final Shut-in:		7-23-63				

OCT 3 1963

Date _____ 19__

APPROVED ATLANTIC SEABOARD CORPORATION Owner

By *[Signature]* Supt



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION 20

Quadrangle Kingwood

WELL RECORD

Permit No. Pres. 113

Oil or Gas Well Storage
(KIND)

Company Atlantic Seaboard Corporation
Address Terra Alta, West Virginia
Farm Archie M. Haught Et Al Acres 74 1/2
Location (waters) Salt Lick Creek
Well No. 7420 Elev 2162.20
District Union County Preston
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by Archie M. Haught
R.F.D. #3 Address Waynesburg, Penna.
Drilling commenced July 3, 1963
Drilling completed July 17, 1963
Date Shot _____ From _____ To _____
With _____
Open Flow _____ /10ths Water in _____ Inch
_____ /10ths Merc. in _____ Inch
Volume See reverse Cu. Ft.
Rock Pressure Storage lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.
WELL ACIDIZED See reverse
WELL FRACTURED _____

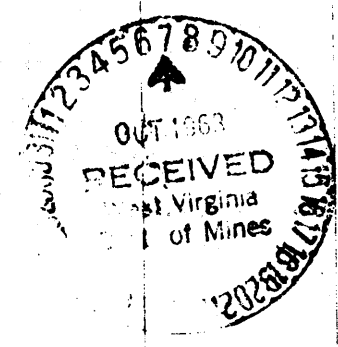
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13-3/8" 48#	34'	34'	
9-5/8" 32#	1497'	1497'	Size of
7" 23#	5020'	5020'	Depth set
6 3/4			
5 3/16			Perf. top
3			Perf. bottom
2			Perf. top
Liners Used			Perf. bottom

CASING CEMENTED _____ SIZE _____ No. Ft. _____
See reverse
COAL WAS ENCOUNTERED AT _____ FEET _____ INCH
_____ FEET _____ INCHES _____ FEET _____ INCH
_____ FEET _____ INCHES _____ FEET _____ INCH

RESULT AFTER TREATMENT See reverse
ROCK PRESSURE AFTER TREATMENT Storage
Fresh Water _____ Feet _____ Salt Water _____ Feet _____

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Siltstone & Shale			0	4519			
Tully Lime			4519	4532			
Siltstone & Shale			4532	4968			
Onondaga Lime			4968	4990			
Chert			4990	5130			
Shale			5130	5138			
Oriskany			5230				
Total Depth				5230			

4968
2162
2806



Formation	Color	Hard or Soft	Top 20	Bottom	Oil, Gas or Water	Depth Found	Remarks
Casing & Cement:							
13-3/8", 48#/ft. H-40 casing - 34' (threads on) set @34' Cemented 26 sacks regular cement - 7-3-63							
9-5/8", 32#/ft. H-40 casing - 1497' (threads on) set @1498' (KB). Cemented 255 cu. ft. "Litepoz" and 255 sacks Class A cement tailed w/50 sacks regular cement, 1% "Flac" and 3% Na Cl - 7-6-63 - Dowell.							
7", 23#/ft. J-55 casing - 5020' (threads on) set @4999' (KB). Two stage cemented to surface. 1st stage - 100 cu. ft. "Litepoz" and 100 sacks Class A cement tailed w/170 gallons of "Cealment" (Latex Cement). 2nd stage - 500 cu. ft. "Litepoz" and 500 sacks Class A cement tailed w/31 sacks regular and 2% Ca Cl. 7-14-63 - Dowell.							
Stimulation: 5000 gal. 15% Retarded HCl Acid; 5000 gal. 15% Regular HCl Acid; 5000 gal. water overflush and 60,000 scf of N ₂ 7-23-63 - Dowell.							
Production: During Drilling: Chert gas - 12,217 Mcf 7-16-63 Chert & Oriskany - 13,600 Mcf 7-17-63 Before Acid: No test After Acid: 95,000 Mcf @2350 psig (Back pressure test) 7-26-63 Final Shut-in: 7-26-63							

Date OCT 3 1963, 19

APPROVED ATLANTIC SEABOARD CORPORATION, Own

By *Almefford Supt*
(Title)

RECEIVED

WV Division of Environmental Protection
FORM WW-2B

077 (136)

Issued 6/19/95

Page 1 of 1

JUN 22 1995

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

Expires 07/19/97

WELL WORK PERMIT APPLICATION

Permitting
Office of Oil & Gas

20826

- 1) Well Operator: 175 COLUMBIA GAS TRANSMISSION CORP. 10450 ⑦ 637
- 2) Operator's Well Number: 7420 3) Elevation: 2175.06
- 4) Well type: (a) Oil / or Gas /
(b) If Gas: Production / Underground Storage /
Deep / Shallow 475
- 5) Proposed Target Formation(s): CHERT-ORISKANY (WORKOVER)
- 6) Proposed Total Depth: 5230 feet (ORIGINAL T.D.)
- 7) Approximate fresh water strata depths: EST. 300'
- 8) Approximate salt water depths: EST. 1200'
- 9) Approximate coal seam depths: NONE
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: KILL WELL; CLEAN OUT TO ORIGINAL T.D., STABILIZE OPENHOLE SECTION W/SANDLOCK 5; ACIDIZE; RUN NEW 2-3/8" TUBING; PARTIALLY REPLACE WELLHEAD.
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13-3/8"	H	48	34'	34'	26 SKS.
Fresh Water	9-5/8"	H	32	1497'	1497'	560 SKS.
Coal						
Intermediate						
Production	7"	J	23	5020'	5020'	(TO SURFACE) 1200 SKS.
Tubing	2-3/8"	J	4.7		5200'	
Liners						

PACKERS : Kind NONE
 Sizes _____
 Depths set _____

For Division of Oil and Gas Use Only

260/31 Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Blanket Agent
 (Type) SMC

RECEIVED
WV Division of
Environmental Protection

JUN 22 1995

- 1) Date: 03/16/95
- 2) Operator's well number 7420
- 3) API Well No: 47 - 077 - 00113
State - County - Permit

Permitting Office of Oil & Gas
STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name CARL B. & CHUNG JA KIM SMITH
Address 4505 BOXWOOD RD.
BETHESDA, MD 20816
 - (b) Name _____
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name _____
Address _____
 - (b) Coal Owner(s) with Declaration
Name CARL B. & CHUNG JA KIM SMITH
Address 4505 BOXWOOD RD.
BETHESDA, MD 20815
 - Name _____
Address _____
 - (c) Coal Lessee with Declaration
Name _____
Address _____
- 6) Inspector PHILLIP TRACY
Address ROUTE 2, BOX 37-A
MONTROSE, WV 26283
Telephone (304)- 636-8798

Copy of lease in column office

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

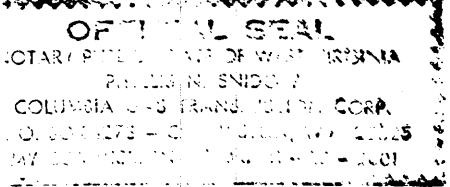
I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through _____ on the above named parties, by:

- _____ Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- _____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form 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.



Well Operator COLUMBIA GAS TRANSMISSION CORP.
By: Richard L. Coley
Its: MANAGER - WELL SERVICES
Address P. O. BOX 1273
CHARLESTON, WV 25325-1273
Telephone (304) 357-3034

Subscribed and sworn before me this 16th day of May, 1995

Phillip Tracy

Notary Public

My commission expires November 20, 2001