

*Final
12/2/96*

LATITUDE 38°47'30"

LONGITUDE 79°40'00"

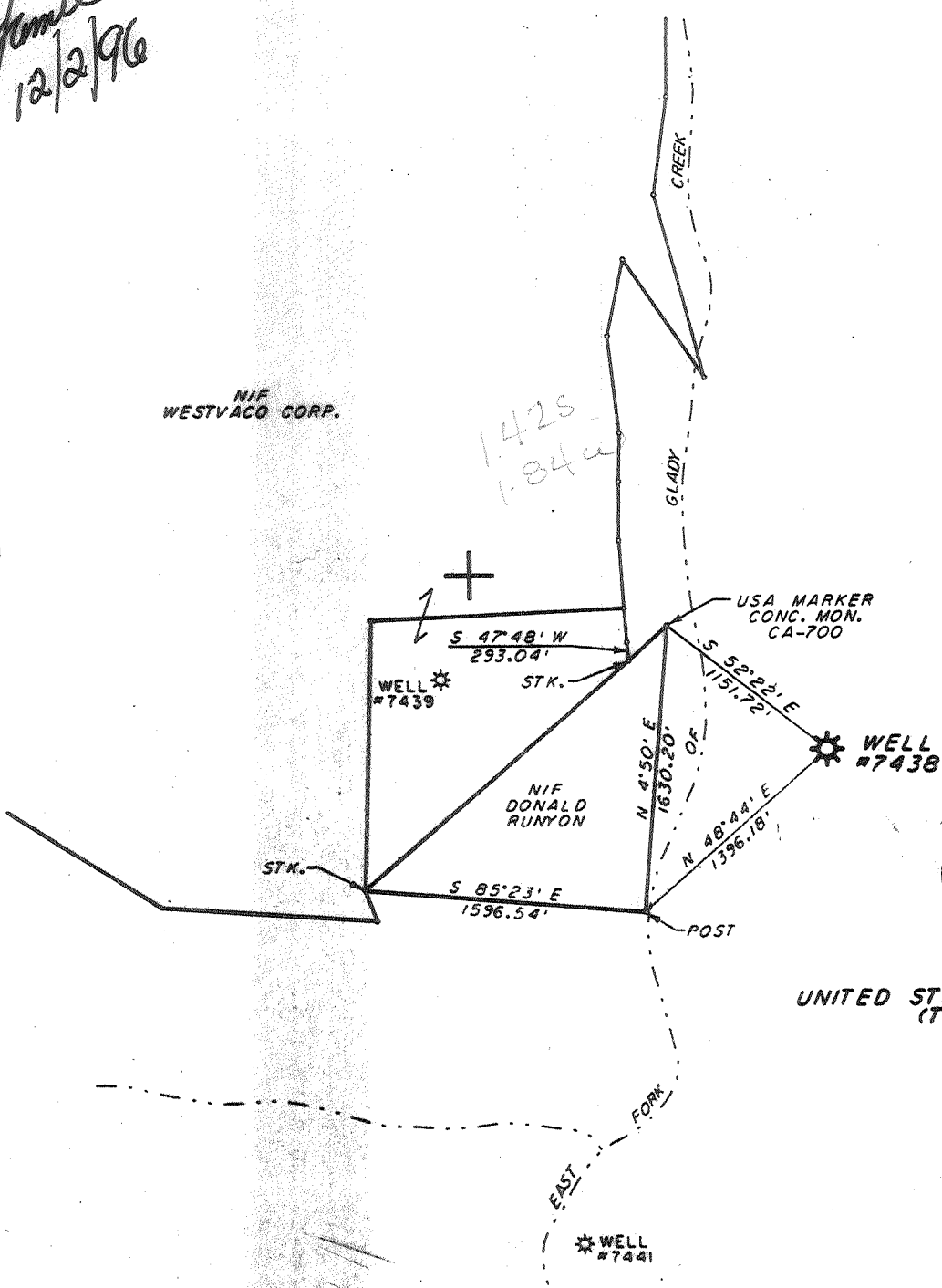
NIF WESTVACO CORP.

*1425
1840*

WELL #7436 00116

WELL #7437 00093

NORTH



UNITED STATES OF AMERICA (TRACT #17)

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

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION Elev. 2923.00'
USGS BM on cons. foundation of culvert over Gladly Creek at water's edge and at the mouth of Louk Run. Stamped 58 JEA

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

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE OCTOBER 25, 1996
 OPERATOR'S WELL NO. 7438
 API WELL NO.

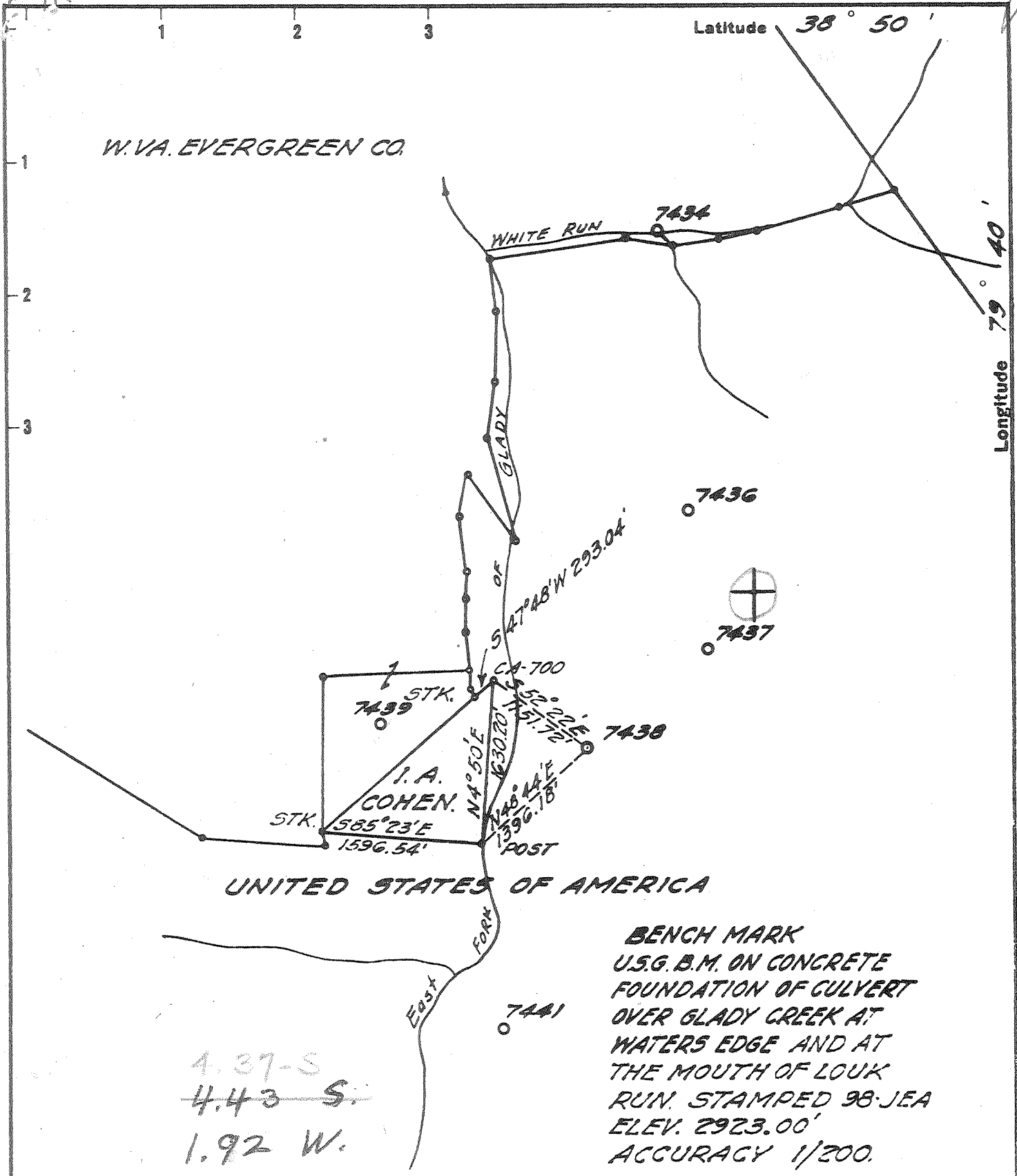
47 093 00117W

WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ STATE COUNTY PERMIT
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 3267' WATER SHED EAST FORK OF GLADLY CREEK
 DISTRICT DRY FORK COUNTY RANDOLPH
 QUADRANGLE GLADLY COORDINATES LAT. 38°46'15" LONG. 79°42'03"
 SURFACE OWNER UNITED STATES OF AMERICA DEPT. OF INTERIOR ACREAGE 1730.9±
 OIL & GAS ROYALTY OWNER USA DEPT OF INTERIOR LEASE ACREAGE 48212.33
 COAL OWNER _____ LEASE NO. 90700
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
 STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) STORAGE RECONDITION
Well drilled in 1965 by Atlantic Seaboard 70-5275'
 PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Chickens ESTIMATED DEPTH 5275' DEC 6 1996
 WELL OPERATOR COLUMBIA GAS TRANS. CORP. DESIGNATED AGENT RICHARD L. COTY
 ADDRESS P.O. BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON, WV
25325-1273 25325-1273

RANDOLPH COUNTY NAME PERMIT

FORM WW-6

D590 6/96



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.

New Location
 Drill Deeper
 Abandonment

9 SC (H43)

O. L. Spinks

Company ATLANTIC SEABOARD CORP.
 Address CHARLESTON, W.VA.
 Farm U.S.A. DEPT. OF INTERIOR
 Tract A032820 Acres 1730.90 Lease No. AS 700
 Well (Farm) No. X-777438 Serial No. 7438
 Elevation (Spirit Level) 3266.84
 Quadrangle HORTON - SW
 County RANDOLPH District DRY FORK
 Engineer O. L. Spinks
 Engineer's Registration No. 2712
 File No. 166-87 Drawing No. _____
 Date JUNE 9, 1964 Scale 1" = 1320'

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

WELL LOCATION MAP
 FILE NO. RAY-117

+ 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.

Samples?? 9-0 261 Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary X
Spudder
Cable Tools

Storage X

Oil or Gas Well Gas (KIND)

Quadrangle Horton
Permit No. Ran - 117

WELL RECORD 13

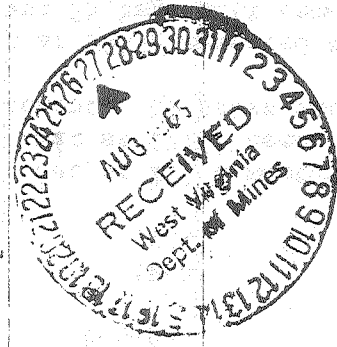
Company Atlantic Seaboard Corporation
Address Box 1273 Charleston, W. Va.
Bureau U.S. Dept. of Interior Acres 1730.90
Location (waters) East Fork of Glady Creek
Well No. X-77 7438 Elev. 3266.84
District Dry Fork County Randolph
The surface of tract is owned in fee by U.S. Dept. of Int.
Address Washington, D.C.
Mineral rights are owned by Same
Address
Drilling commenced June 14, 1965
Drilling completed August 6, 1965
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 See Back

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
10 3/8	21'	21'	
13 3/8	21'	21'	Size of
1 1/4 9 5/8	1211'	1211'	Depth set
1 5/8 7"	5073	5073	Perf. top
5 3/16			Perf. bottom
3			Perf. top
2 3/8	5273	5273	Perf. bottom
Liners Used			

CASING CEMENTED SIZE No. Ft Date
COAL WAS ENCOUNTERED AT FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

~~Producing Sand~~ Oriskany
RESULT AFTER TREATMENT
ROCK PRESSURE AFTER TREATMENT
Fresh Water 280' Feet 1443' Salt Water Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand & Shale			0	4492'	Fresh Water	280'	
Tully Lime			4492	4520'	Water	1443'	
Marcellus Shale			4520	4845			
Onondaga Lime			4845	4903			
Chert - HRVL			4903	4980			
Shale - NEEBMORE			4980	5038			
Oriskany Sand			5038	5245	Gas	5181'	
Helderberg Lime			5245	5275		5200'	
	T.D.		5275		All Gas	Est. 500m.	



Formation	Color	Hard or Soft	Top	Bottom 13	Oil, Gas or Water	Depth Found	Remarks
Logging:	- Basin Surveys Inc.		8-6-65				
	Gamma Ray	4850'		5264'			
	Temp.	5000'		5264'			
Casing:	133/8 - 48# -		Set at 21'				cemented to surface
	9 5/8 - 32# -		Set at 1211'				cemented to surface
	with 485 sacks bulk cement.		10 sacks cacl				and 61# Jel Flake.
	7" 23#		set at 5043'				cemented to surface with 438 sacks bulk cement with 250 gal. cealment and 25 bags neat cement - 1st stage.
	388 sacks bulk cement and 25 sacks neat cement - 2nd stage						
Stimulation:	Acidized 8-11-65 with 20,000 gal. 15% H. Cl. with 210 m std. cu. ft. of N2 added to acid and flush.						
	Test before acid 500M Est.						
	Test After Acid 5,500 M.C.F.						
	Rock Pressure: 1650#						

Date August 25, 1965

APPROVED Atlantic Seaboard Corp. Owner
 By Hornuffed Supt
 (Title)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

083 117 Frac.

22929

- 1) Well Operator: COLUMBIA GAS TRANSMISSION CORPORATION ¹⁷⁵ 10450 ³⁶⁹
- 2) Operator's Well Number: Glady Stg # 7438 (API 47-083-00117) 3) Elevation: 3,266.84 feet
- 4) Well type: (a) Oil / or Gas X /
(b) If Gas: Production / Underground Storage X /
Deep X / Shallow /
- 5) Proposed Target Formation (s): Oriskany ⁴⁷⁵
- 6) Proposed Total Depth: 5,275 feet
- 7) Approximate fresh water strata depths: 280', 1483'
- 8) Approximate salt water strata depths: 1200' (approx.)
- 9) Approximate coal seam depths: NONE
- 10) Does land contain coal seams tributary to active mine? Yes / No X /

Issued 12/04/96
Expires 12/04/98

RECEIVED
NOV 18 1996
Office of Oil & Gas
Permitting
Environmental Protection

11) Proposed Well Work: Columbia proposes to kill the well with a freshwater polymer based mud system. Remove the tubing and reconfigure or replace the wellhead. The well casing will be inspected with a casing inspection log and hydrostatically tested against a bridge plug. The wellbore will be cleaned out to the original TD and the open hole section logged. The well will be hydra-jetted with coiled tubing and acidized across the Oriskany section. The well will then be cleaned up, flow tested and placed back in service.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
conductor	13-3/8"	H-40	48#	21'	21'	Fill - up (cu. ft.) unknown cmtd to surf.
Fresh Water	9-5/8"	H-40	32#	1,211'	1,211'	cemented to surf. w/ 485 sks cmt
Coal						~4,044 cu ft litepoz cealment, neat
Intermediate						
Production	7"	J-55 & N-80	23#	5,073'	5,073'	
Tubing	2-3/8"	(TO BE RETIRED)	4.7#	5,273'	5,273'	
Liners						

Shotting from wellhead

PACKERS : Kind None
Sizes _____
Depths set _____

0162125/33

For Division of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP Agent
 Plat WW-9 WW-2B Bond

Office of Environmental Protection
Permitting
Office of Oil and Gas
NOV 18 1996

1) Date: 10/24/96
2) Operator's well number
GLADY WELL 7438
3) API Well No: 47 - 083 - 00117 - W
State - County - Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
a) Name United States Forest Service
Address Monongahela National Forest
P. O. Box 1548, Elkins, WV 26241
b) Name _____
Address _____
c) Name _____
Address _____

5) (a) Coal Operator:
Name _____
Address _____
(b) Coal Owner (s) with Declaration
Name United States Dept. Of Interior, Bureau Of Land Mgt.
Address P.O. Box 631
Milwaukee, WI 53201-0631 Attn: Tim Abing
Name _____
Address _____

6) Inspector Phillip Tracy
Address Route 2, Box 37-A
Montrose, WV 26283
Telephone (304) - 636-8798

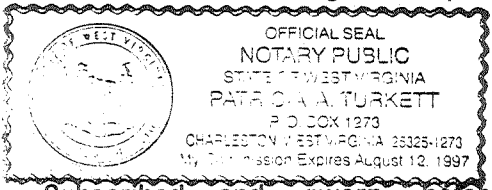
(c) Coal Lessee with Declaration
Name _____
Address _____

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 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22 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 22-6 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: W. Foraker
Its: Senior Storage Engineer / Well Services
Address Route 3, Box 216
Elkins, WV 26241
Telephone 304/636-8129
me this 4th day of November, 19 96



Subscribed and sworn before

Patricia A. Turkett
Notary Public

My commission expires August 12, 1997

WR-35

03-Dec-96

API # 47- 083-00117-W

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

Reviewed [Signature]

Well Operator's Report of Well Work

Farm name: U. S. FOREST SERVICE Operator Well No.: GLADY 7438

LOCATION: Elevation: 3,267.00 Quadrangle: GLADY

District: DRY FORK County: RANDOLPH
Latitude: 7450 Feet South of 38 Deg. 47 Min. 30 Sec.
Longitude: 9800 Feet West of 79 Deg. 40 Min. 0 Sec.

RECEIVED
Office of Oil & Gas
UIC Section
MAY 07 1999
WV Division of
Environmental Protection

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

Agent: RICHARD L. COTY
Inspector: PHILLIP TRACY
Permit Issued: 12/04/96
Well work Commenced: 06-27-97
Well work Completed: 09-08-97
Verbal Plugging
Permission granted on: _____
Rotary Cable Rig
Total Depth (feet) 5,275'
Fresh water depths (ft) See Original Records
Salt water depths (ft) See Previous
Is coal being mined in area (Y/N) ? N
Coal Depths (ft) : See Previous

Casing & Up Tubing Size	Used in Drilling	Left in Well	Cement Fill Cu. Ft.
PULLED & RETIRED EUE TUBING	5,273 FEET OF	2-3/8"	4.7 #/FT
STIMULATION; SEE BACK FOR DETAILS			

OPEN FLOW DATA

Producing formation ORISKANY Pay zone depth (ft) 5,038' - 5,245'
Gas : Initial open flow 7197 MCF/d Oil : Initial open flow _____ Bbl/d
Final open flow 6589 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 452 Days Hours
Static rock Pressure 1957 psig (surface pressure) after 4 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.

By : William H. Froker
Date : May 4, 1999

MAY 17 1999

RAN 0117-W

WR-35

03-Dec-96

API # 47- 083-00117-W

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

Well Operator's Report of Well Work

STIMULATION

- Acidized on 09-04-97
- Halliburton Foamed Acid Job.
- Pre-flushed with 2,000 gals equivalent 15% Halliburton 75 Quality FE Foamed Acid followed by 8,652 gals 75 Quality foamed H₂O
- Treat with 8,820 gals equivalent 20% Halliburton 75 Quality FE Foamed Acid followed by 9,870 gals equivalent 15% Halliburton 75 Quality FE Foamed Acid. Flushed with 17,976 gals equivalent 75 quality foam and 840 gals H₂O.
- Avg Rate Approx. 20 BPM @ 2100 PSIG
- Total acid 3,500 gallons 28% Halliburton FE acid (uncut).
- Total nitrogen 747,000 scf.
- Additives: 35 gals FE-2A; 21 gals-HAI-81; 10 gals-SCA-130; 3 gals-FE5A; 20 gals-HC2; 9 gals SSO-21; 18 lbs-BA-2.