

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

NOTES:  
 Gen-Aux-Activ-Tr Cntr  
 CHARGE: 107-00317-W2634-6422  
 FB: 1966 PG: 2-8, & 14  
 FB: 1769 PG: 1, 2, & 42  
 FARM MAP SQ: 172-131, X-76 STORAGE  
 REF: DWG H-1004  
 INV MAP #4360/620

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 400'  
 MINIMUM DEGREE OF ACCURACY 1/200'  
 PROVEN SOURCE OF ELEVATION U.S.G.U.E. Spike In Root Of Double White Oak On North Side Of Road 800' Below Kinsinger Run Elevation 1676.10'

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) Charles Joseph Davidson  
 R.P.E. \_\_\_\_\_ J.L.S. 812



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

DATE October 7, 1996  
 OPERATOR'S WELL NO. 7384  
 API WELL NO. 47 077 00059W

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

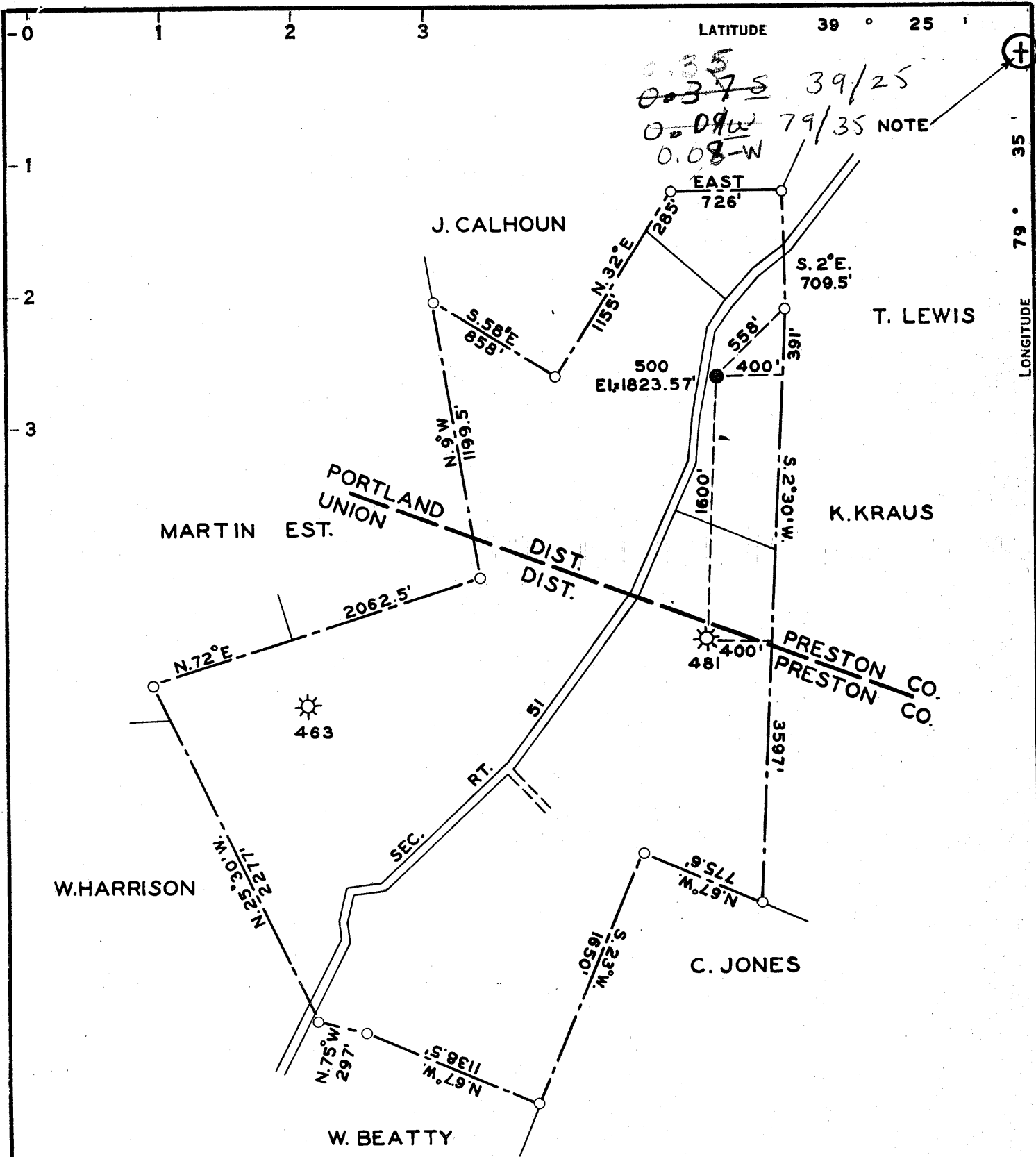
LOCATION: ELEVATION 1826' WATER SHED Little Bucklick Run Of Sallick Creek  
 DISTRICT Union COUNTY Preston  
 QUADRANGLE Terra Alta WV COORDINATES LAT: 39°24'45" LONG: 79°35'08"

SURFACE OWNER Ray and Tracy Starcher ACREAGE \_\_\_\_\_  
 OIL & GAS ROYALTY OWNER S. Thomas Haught heirs Etal. LEASE ACREAGE \_\_\_\_\_  
 COAL OWNER \_\_\_\_\_ LEASE NO. 90400

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 was drilled in 1953 by Cumberland and Allegheny Gas TO was 47440'

PLUG AND ABANDON CLEAN OUT AND REPLUG  
 TARGET FORMATION Chart. Oilshale ESTIMATED DEPTH 5050' DEC 6 1996  
 WELL OPERATOR COLUMBIA GAS TRANSMISSION CORP DESIGNATED AGENT RICHARD L COTY  
 ADDRESS PO Box 1273, Charleston, WV 25325-1273 ADDRESS P.O BOX 1273 CHARLESTON, WV 25325

PRESTON COUNTY NAME PERMIT 59



COAL OWNED BY \_\_\_\_\_

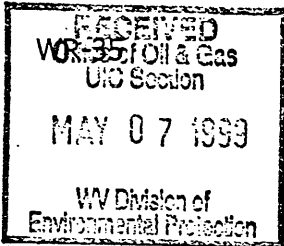
- NEW LOCATION
- DRILL DEEPER
- ABANDONMENT

COMPANY CUMBERLAND & ALLEGHENY GAS CO.  
 ADDRESS 800 UNION TRUST BLDG. PGH. PA.  
 FARM ARCHIE HAUGHT  
 TRACT \_\_\_\_\_ ACRES 246 LEASE No. 7676  
 WELL (FARM) No. 3 SERIAL No. 500  
 ELEVATION (SPIRIT LEVEL) 1823.57'  
 QUADRANGLE KINGWOOD - C  
 COUNTY PRESTON DISTRICT PORTLAND  
 ENGINEER Thomas E. Virgin J.O.M.  
 ENGINEER'S REGISTRATION No. 1503  
 FILE No. \_\_\_\_\_ DRAWING No. Y-13-821  
 DATE JAN. 16, 1953 SCALE 1" = 800'

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

**WELL LOCATION MAP**  
 FILE No. PRCS-59

+ 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.



04-Dec-96  
 API # 47- 077-00059-W  
 Reviewed AS

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

Well Operator's Report of Well Work

Farm name: STARCHER, RAY BELL Operator Well No.: TERRA ALTA 7384

LOCATION: Elevation: 1,823.57' Quadrangle: TERRA ALTA

District: PORTLAND County: PRESTON  
 Latitude: Feet South of 39 Deg. 24 Min. 45 Sec.  
 Longitude: Feet West of 79 Deg. 35 Min. 08 Sec.

Compay: 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: 07/23/97  
 Well work Completed: 09/03/97  
 Verbal Plugging  
 Permission granted on: \_\_\_\_\_  
 Rotary \_\_\_\_\_ Cable \_\_\_\_\_ Rig  
 Total Depth (feet) 5,050'  
 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.
	STIMULATION; SEE BACK FOR DETAILS		

OPEN FLOW DATA

Producing formation Chert & Oriskany Pay zone depth (ft) 4568'-4830', 4830'-4993'  
 Gas : Initial open flow 2317 MCF/d Oil : Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 5890 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ 338 Days Hours  
 Static rock Pressure 2089 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. Forker  
 Date : May 7, 1999

MAY 17 1999

7 1999

PRE 0059 W

WR-35

04-Dec-96

API # 47- 077-00059-W

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

Well Operator's Report of Well Work

**STIMULATION**

- Acidized on 08-14-97
- Halliburton Coiled Tubing Conveyed -Selective Injection Packer -Acid Job.
- Acidized with 3,738 gals 10% Halliburton FE Acid setting selective injection packer and treating with five foot intervals as follows:  
4,914'-4,919', 4,911'-4,914', 4,900'-4,905', 4,896'-4,900', 4,781'-4,783', 4,765'-4,770', 4,760'-4,765', 4,757'-4,760', 4,743'-4,748', 4,738'-4,743', 4,736'-4,738', 4,670'-4,672', 4,656'-4,658', 4,632'-4,634', 4,618'-4,619', 4,609'-4,614', 4,606'-4,609', 4,599'-4,604', 4,594'-4,599', 4,584'-4,589'.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
DRILL DEEPER  
**WELL RECORD**

Quadrangle Kingwood  
Permit No. PREJ. - 59-D

Oil or Gas Well Gas  
(KIND)

Company Atlantic Seaboard Corp.  
Address P.O. Box 1273; Charleston 25, W.Va.  
Farm Archie M. Haught Acres 141  
Location (waters) Saltlick Creek  
Well No. 7384 Elev. 1825.69  
District Portland County Preston  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by Archie M. Haught, Agt., E.T.  
R.F.D. #1 Address Waynesburg, Penna.  
Drilling commenced July 23, 1959  
Drilling completed July 26, 1959  
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 \_\_\_\_\_  
WELL FRACTURED \_\_\_\_\_

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer _____
16			Size of _____
13			Depth set _____
10			
8 3/4			
5 3/16		5050	Perf. top _____
4 1/2"			Perf. bottom _____
2			Perf. top _____
Liners Used			Perf. bottom _____

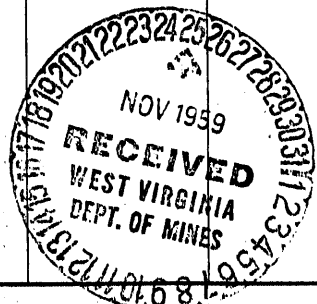
CASING CEMENTED Yes SIZE 4 1/2" No. Ft. \_\_\_\_\_ To Surface  
Date July 28, 1959  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES

RESULT AFTER TREATMENT Storage Well

ROCK PRESSURE AFTER TREATMENT \_\_\_\_\_

Fresh Water \_\_\_\_\_ Feet Salt Water \_\_\_\_\_ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Drill Deeper Record From 4757'							
Oriskany				4830			
Chert			4830	4851			
Shale			4851	4864			
Oriskany			4864	4993			
Helderberg			4993	-			
Total Depth				5050'			
Well Surveys Run							
Gamma Ray							
Laterolog							
Microlaterolog							
Gamma Gamma							
Temperature							
			4864				4864
			1826				1826
			7938				7938
				485			
					4522	4718	4993
					1826	1826	1826
					2696	2892	3167



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

*Kingwood*

WELL RECORD

Permit No. PRES-59

Oil or Gas Well Gas  
(KIND)

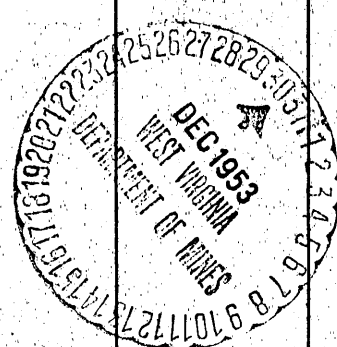
Company CUMBERLAND AND ALLEGHENY GAS COMPANY  
Address 800 Union Trust Building, Pgh., Penna.  
Farm Archie Haught Acres 246  
Location (waters) \_\_\_\_\_  
Well No. 3-500 Elev. 1823.57'  
District Portland County Preston  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_  
Drilling commenced April 7, 1953  
Drilling completed July 29, 1953  
Date Shot From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow 70/10ths Water in \_\_\_\_\_ Inch  
70/10ths Merc. in 2 1/2" Inch  
Volume 1,516,892 Cu. Ft.  
Rock Pressure 980 lbs. 48 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water \_\_\_\_\_ feet \_\_\_\_\_ feet  
Salt water \_\_\_\_\_ feet \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13	16'	16'	
10	450'	450'	Size of
8 3/4	1315'	1315'	
7	4580'	4580'	Depth set
5 3/16			
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

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

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Soil			0	16			
Lime			16	100	Water at 40'		
Slate			100	110			
Lime			110	150			
Slate			150	165			
Lime			165	318			
Slate			318	325			
Lime			325	350			
Slate			350	359			
Lime			359	370			
Slate			370	380			
Lime			380	400			
Slate			400	406			
Slate & Shells			406	882			
Lime			882	930			
Slate & Shells			930	955			
Gritty Lime			955	1059			
Slate & Shells			1059	1075			
Lime			1075	1095			
Benson Sand			1095	1130			
Lime			1130	1222			
Slate & Shells			1222	1305			
Lime			1305	1310			
Slate & Shells			1310	1437			
Lime			1437	1460			
Slate & Shells			1460	1604			
Lime			1604	1630			
Slate & Shells			1630	1830			
Lime			1830	1900			
Slate & Shells			1900	2853			
Brown Shale			2853	2918			
Slate & Shells			2918	3135			
Dark Lime			3135	3275			
Brown Shale			3275	3298			
Slate & Shells			3298	3575			
Brown Shale			3575	3952			
Lime			3952	3976			
Brown Shale			3976	4000			
Lime (Tully)			4000	4020			

4522  
1824  
- 2698



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Brown Shale			4020	4082			
Lime (Black)			4082	4101			
Brown Shale			4101	4200			
Black Shale	Maroon		4200	4519			
Brown Break			4519	4522			
Onondago Lime			4522	4545			
Chert Sand			4545	4675	No gas in Chert Sand		
Slate & Shell	Neon		4675	4718			
Oriskany Sand			4718	4740			
Total Depth			4740				
			475		Gas 4720-4723, 54/10M-2- $\frac{1}{2}$ "		
					Gas 4723-4726, 58/10M-2- $\frac{1}{2}$ "		
					Gas 4726-4728, 60/10M-2- $\frac{1}{2}$ "		
					Gas 4728-4733, 84/10M-2- $\frac{1}{2}$ "		
					Gas 4733-4734, 78/10M-2- $\frac{1}{2}$ "		
					Gas 4734-4737, 76/10M-2- $\frac{1}{2}$ "		
					Gas 4737-4738, 82/10M-2- $\frac{1}{2}$ "		
					Gas 4738-4739, 78/10M-2- $\frac{1}{2}$ "		
			4718		Final Test when shut in 70/10M-2- $\frac{1}{2}$ "		
			1824		Pick Up:		
			-2894		1 Min. 2 Min. 3 Min. 4 Min. 5 Min.		
					18# 33# 49# 64# 80#		

Date DECEMBER 28, 1953

CUMBERLAND AND ALLEGHENY GAS COMPANY

APPROVED BY [Signature] Owner

By [Signature] LAND AGENT

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

077 59 Frac.

1) Well Operator: 175 COLUMBIA GAS TRANSMISSION CORPORATION 10450 (7) 637

Operator's Well Number : Terra Alta Stg # 7384 (API 47-077-00059) 3) Elevation : 1,823.57 feet

Well type : (a) Oil / or Gas X /  
(b) If Gas : Production / Underground Storage X /  
Deep X / Shallow /

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

RECEIVED  
WV Division of  
Environmental Protection

NOV 18 1996  
Permitting  
Office of Oil & Gas

5) Proposed Target Formation (s) : Chert- Oriskany

6) Proposed Total Depth : 5,050 feet

7) Approximate fresh water strata depths ; 40'

8) Approximate salt water strata depths : NONE RECORDED

9) Approximate coal seam depths : NONE RECORDED

10) Does land contain coal seams tributary to active mine ? Yes / No X /

11) Proposed Well Work : Columbia proposes to clean the well out to total depth with coiled tubing. The well will be logged with cased and open hole logs. The well will be re-perforated, acidized or fractured depending on log results. Cleaned up, flow tested & place back in service.

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-40	48#	16'	16'	not recorded
	10-3/4"	J-55	40.50#	450'	450'	not recorded
Fresh Water	8-1/4"	J-55	25.55#	1,315'	1,315'	500 sks gel
Coal						
Intermediate	6-5/8" (7")	J-55	23#	4,580'	4,580'	170 sks cmt
Production	4-1/2"	J-55	12.6#	5,071'	5,071'	two stg 460 sks cmt
Tubing						
Liners						

*Justing from well logs*

*38059/11.1*

PACKERS : Kind None  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

*2016 2/25/98*

For Division of Oil and Gas Use Only  
 Fee(s) paid :  Well Work Permit  Reclamation Bond  WPCP  
 Flat  WW - 9  WW - 2B  Bond *Blanket*  Agent  
(Type)



WV Division of  
Environmental Protection  
NOV 18 1996

1) Date: 10/24/96  
2) Operator's well number  
TERRA ALTA WELL 7384  
3) API Well No: 47 - 077 - 00059 - W  
State - County - Permit

Permitting  
Office of Oil & Gas  
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 Ray Bell Starcher  
Address PO Box - 105  
Rowlesburg, WV 26425  
b) Name Tracy Rae Starcher (daughter)  
Address Same as above  
c) Name \_\_\_\_\_  
Address \_\_\_\_\_

5) (a) Coal Operator:  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(b) Coal Owner (s) with Declaration  
Name SEE ATTACHED  
Address \_\_\_\_\_  
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:

*Copy of lease  
in Col. W.T.  
Office in  
Komauch  
City.*

\_\_\_\_\_ 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)

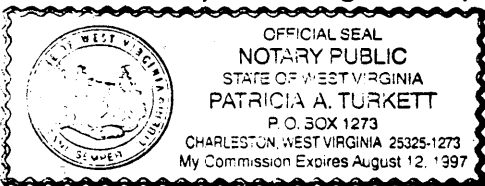
I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree  
to the terms and conditions of any permit issued under this application.

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. H. Fraker  
Its: Senior Storage Engineer / Well Services  
Address Route 3, Box 216  
Elkins, WV 26241

Telephone 304/636-8129  
me this 14th day of November, 1996



Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 1996  
Patricia A. Turkett Notary Public  
My commission expires August 12, 1997