

LATITUDE 39°45'00"

*Janice*  
10/28/92

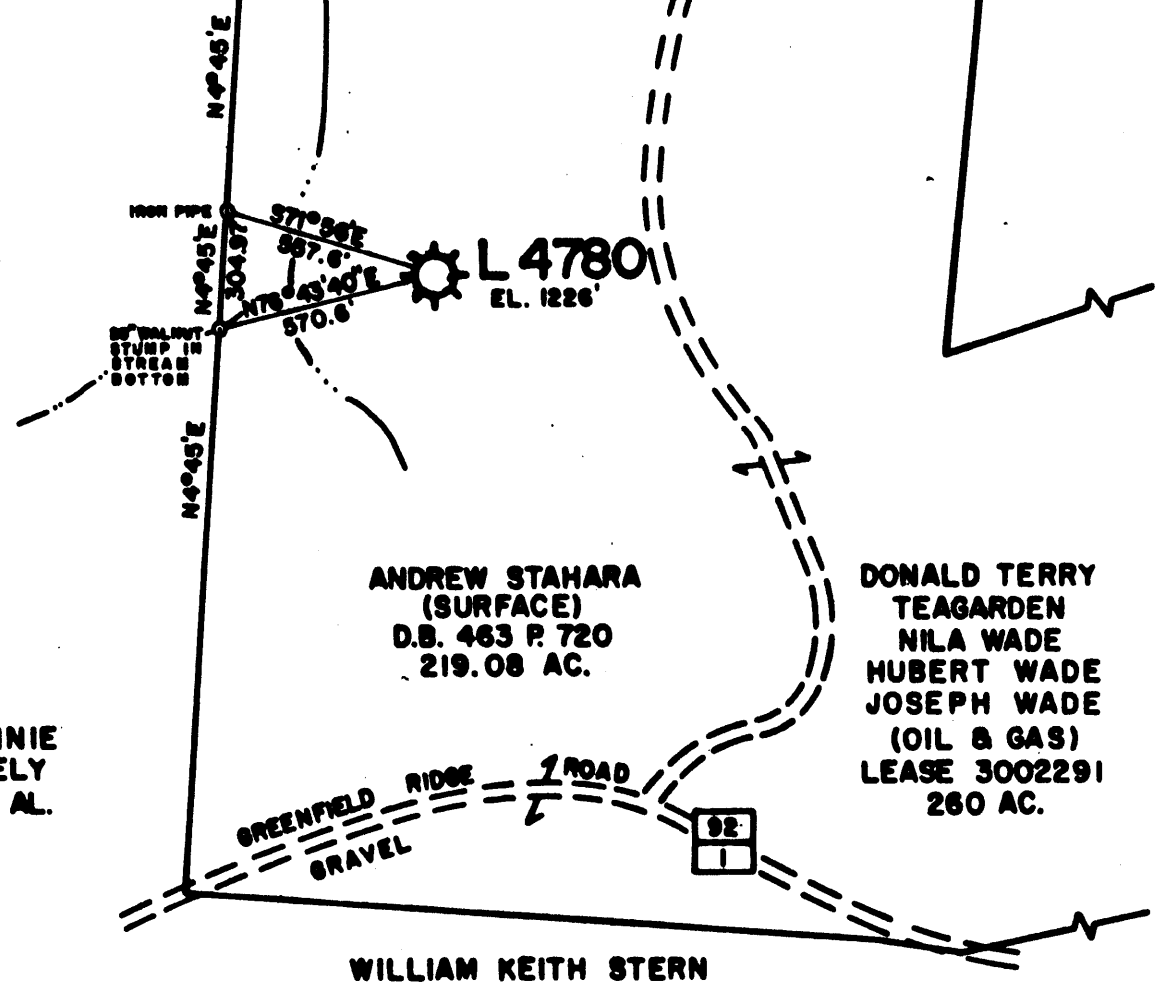
NORTH

HOY GLEN CROW

ANDREW STAHARA

0.58  
0.60

LONGITUDE 80°26'37.30"



ANDREW STAHARA  
(SURFACE)  
D.B. 463 P. 720  
219.08 AC.

DONALD TERRY  
TEAGARDEN  
NILA WADE  
HUBERT WADE  
JOSEPH WADE  
(OIL & GAS)  
LEASE 3002291  
260 AC.

CONNIE  
NEELY  
ET. AL.

ANDREW  
STAHARA

WILLIAM KEITH STERN

LAT. 39°44'30"  
LONG. 80°38'10"  
F.S. 1084N, P. 26 (J.L.F.)  
F.S. 1780N, P. 43 (K.M.L.)  
MAP 4396N 528E 17

0.57  
282

NOTE: THIS MAP IS FOR  
WELL LOCATION  
PURPOSES ONLY  
AND DOES NOT  
REPRESENT A  
COMPLETE BOUNDARY  
SURVEY

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

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1"=500'  
MINIMUM DEGREE OF  
ACCURACY 1/2500  
PROVEN SOURCE OF  
ELEVATION BM 8127 ELEV. 786'

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 H. ...*  
R.P.E. 9936 L.L.S. 798



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION



DATE SEPTEMBER 2, 1992  
OPERATOR'S WELL NO. L-4780  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
(IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW   
LOCATION: ELEVATION 1226' WATERSHED LAUREL RUN  
DISTRICT LIBERTY 4 COUNTY MARSHALL  
QUADRANGLE WILEYVILLE, WV Liberton N.C.

47 051 0511-04  
STATE COUNTY PERMIT

SURFACE OWNER ANDREW STAHARA ACREAGE 219.08  
OIL & GAS ROYALTY OWNER DONALD TERRY TEAGARDEN LEASE ACREAGE 260  
& NILA HUBERT & JOSEPH WADE LEASE NO. 3002291

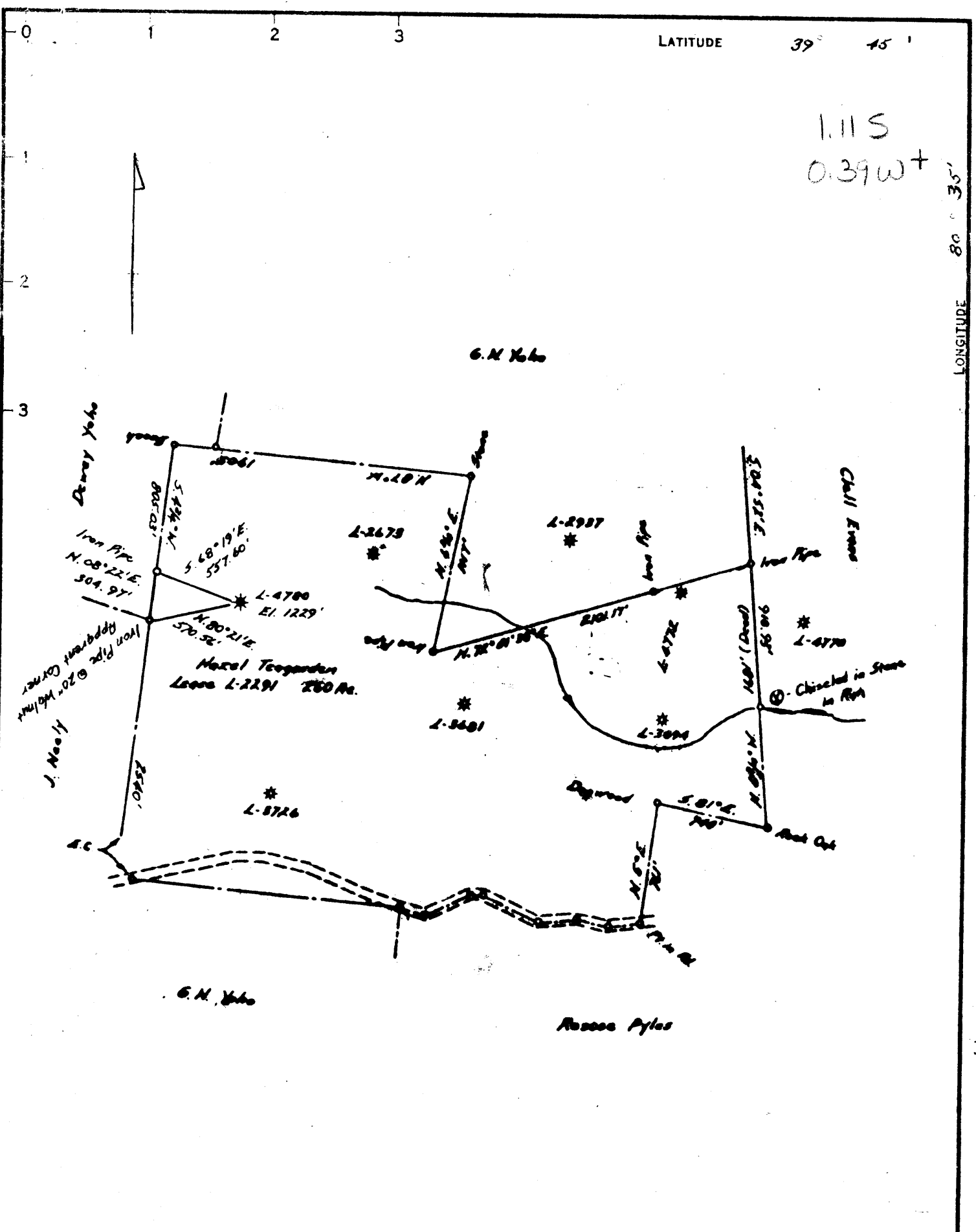
PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR  
STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW  
FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) STORAGE RECONDITION

PLUG AND ABANDON  CLEAN OUT AND REPLUG   
TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH \_\_\_\_\_  
WELL OPERATOR COLUMBIA GAS TRANS. CORP. DESIGNATED AGENT R.A. SCHOFF  
ADDRESS P.O. BOX 1273 CHARLESTON, WV 25325 ADDRESS P.O. BOX 498 WASHINGTON, PA 15301

OCT 25 1992

MARSHALL  
COUNTY NAME  
PERMIT 571

FORM WV-8



1.11 S  
0.39 W +

LONGITUDE 80° 35'

COAL OWNED BY M. A. Hanna Coal Company

- NEW LOCATION Storage
- RECONDITION
- 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."  
Minimum degree of accuracy is one part in 2500

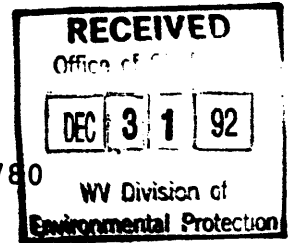
Signed Robert M. Hall 361-E (JF)

COMPANY	<u>The Manufacturers Light And Heat Company</u>		
ADDRESS	<u>800 Union Trust Bldg. Pittsburgh, Penna.</u>		
FARM	<u>Hazel Teagarden</u>		
MAP	<u>P-2513</u>	ACRES	<u>260</u>
		LEASE NO.	<u>2291</u>
WELL NO.	<u>6</u>	SERIAL NO.	<u>L-4780</u>
ELEVATION (SPIRIT LEVEL)	<u>1229'</u>		
QUADRANGLE	<u>Littleton</u>	<u>15'</u>	<u>NC</u>
COUNTY	<u>Marshall</u>	DISTRICT	<u>Liberty</u>
POINT OF PROVEN ELEVATION	<u>U.S.G.S. B.M. B-127</u>		
FILE NO.	<u>Y-25-774</u>	DRAWING NO.	<u>Y-25-774</u>
DATE	<u>June 14, 1963</u>	SCALE	<u>1" = 800'</u>

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON  
WELL LOCATION MAP  
FILE NO. MARS-511

+ 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  
Division of Environmental Protection  
Section of Oil and Gas



Well Operator's Report of Well Work

Farm name: STAHARA, ANDREW J Operator Well No.: L 4780

LOCATION: Elevation: 1226.00 Quadrangle: WILEYVILLE

District: LIBERTY County: MARSHALL  
Latitude: 3050 Feet South of 39 Deg. 45Min. 0 Sec.  
Longitude 3130 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: COLUMBIA GAS TRANSMISSION  
1700 MaccORKLE AVENUE S.E.  
CHARLESTON, WV 25314-0000

Agent: ROBERT C. WEIDNER

Inspector: RANDAL MICK  
Permit Issued: 10/22/92  
Well work Commenced: 11/13/92  
Well work Completed: 12/08/92  
Verbal Plugging \_\_\_\_\_  
Permission granted on: n/a  
Rotary Cable Rig \_\_\_\_\_  
Total Depth (feet) 2294'  
Fresh water depths (ft) \_\_\_\_\_  
not recorded  
Salt water depths (ft) \_\_\_\_\_  
+1200  
Is coal being mined in area (Y/N)? N  
Coal Depths (ft) 26 (PITTSBURGH COAL)

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-38"	30'	30'	30 SX
8-5/8"	995'	995'	550 SX
5-1/2"		2294'	600 SX

OPEN FLOW DATA  
STORAGE

~~XXXXXXXXXX~~ formation MAXTON SAND Pay zone depth (ft) 1948'  
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  
(OPEN FLOWS NOT TAKEN)  
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.

Reviewed TMB  
Recorded CH

By: R. Weidner, DR. DKG.  
Date: DEC 22 1992

**Activity:**

9/14/92 - Atlas Wireline perforated Maxton Sand 1952'-1976' (GR) with an additional 2 holes/ft., storage zone now has shot density of 6 holes/ft.

11/31/92 - Halliburton foam fractured Maxton Sand w/75 quality foam: breakdown was 2665 psig; used 43,000# 20/40 sand 207 bbl of water; Avg. treating pressure: 2550 psig; I.S.I.P: 1742 psig. .

note: Geological well log remains the same as previously submitted.

14388



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Littleton

Permit No. MARS-511

WELL RECORD

*Storage*  
GAS

Oil or Gas Well \_\_\_\_\_  
(KIND)

Company The Mfrs. Lt. and Ht. Co.  
Address 800 Union Trust Bldg., Pittsburgh 19, Pa.  
Farm Hazel Teagarden Acres 260  
Location (waters) \_\_\_\_\_  
Well No. 4780 Elev. 1229.00  
District Liberty County Marshall  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_  
Drilling commenced August 5, 1963  
Drilling completed August 14, 1963  
Date Shot 8/14/63 From Maxton To \_\_\_\_\_  
With Pitot Tube  
Open Flow 10ths Water in \_\_\_\_\_ Inch  
34 /10ths Merc. in 4 1/2 Inch  
Volume 3,550,000 *storage gas* Cu. Ft.  
Rock Pressure 530 lbs. 24 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			
16			Kind of Packer
18 3/8"	30'	30'	
10			Size of
8 1/2 5/8"	995'	995'	
6"			Depth set
5 1/2 1/2"	2304'	2304'	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_

COAL WAS ENCOUNTERED AT 926 FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
\_\_\_\_\_ FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Pittsburgh Coal			926	933			
Big Dunkard Sand			1410	1483			
First Salt Sand	<i>2nd CR.</i>		1615	1634			
Third Salt Sand			1827	1854			
Maxton Sand			1948	1976	Perforated	1952' to 1976'	
Big Lime			2052	2084			
Big Injun Sand			2086				
Total Depth				2294'			
5 1/2" Float Shoe @				2304'	<i>2052</i>		
5 1/2" Insert Float Check Valve @				2294'	<i>1229</i>		
					<i>823</i>		



51-0511W  
 issued 10/22/92  
 Page 1 of 1  
 Expires 10/22/94

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

- 1) Well Operator: COLUMBIA GAS TRANSMISSION CORP. 10450(4) 680
- 2) Operator's Well Number: L-4780 3) Elevation: 1226
- 4) Well type: (a) Oil   / or Gas X/
- (b) If Gas: Production   / Underground Storage X/
- Deep   / Shallow X/
- 5) ~~Proposed~~ Target Formation(s): Maxton Sand <sup>325</sup>
- 6) ~~Proposed~~ Total Depth: 2294 feet
- 7) Approximate fresh water strata depths: not recorded
- 8) Approximate salt water depths: + 1200'
- 9) Approximate coal seam depths: Pittsburgh Coal - 926'
- 10) Does land contain coal seams tributary to active mine? Yes   / No X
- 11) Proposed Well Work: Fracture the Maxton Sand to increase deliverability.
- 12)

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor	13-3/8"	H	48	30'	30'	30 sks.
Fresh Water						
Coal	8-5/8"	J	24	995'	995'	550 sks. (to surf.)
Intermediate						
Production	5-1/2"	J	17		2294'	600 sks. (to surf.)
Tubing						
Liners						

*Excluded from well records*

**RECEIVED**

WV Division of Environmental Protection

OCT 07 92

Permitting Office of Oil & Gas

**PACKERS** : Kind none  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

195617  
 34

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP

Plat  WW-9  WW-2B  Bond Blanket Sure  Agent

14338

RECEIVED

WV Dept. of Environmental Protection

Page 1 of 1  
Form WW2-A  
(09/87)  
File Copy

OCT 07 92

Permitting  
Office of Oil & Gas

1) Date: 9/21/92  
2) Operator's well number L-4780  
3) API Well No: 47 - 051 - 00511 - FRAC  
State - County - Permit

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 Andrew J. Stahara et aux  
Address RD 5, Box 174  
Cameron, WV 26033
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration  
Name Consolidation Coal  
Address Consol Plaza, 1800 Washington RD  
Pittsburgh, PA 15241
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Randal Mick  
Address Rt. 3, Box 248  
Weston, WV 26452  
Telephone (304)- 269-2335

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

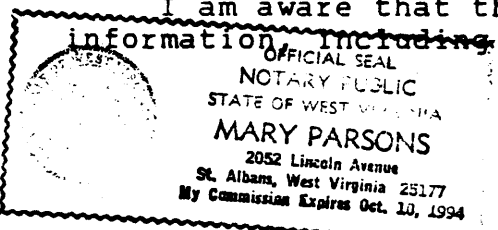
\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
x Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

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: [Signature]  
Its: Director, Drilling & Maintenance  
Address P. O. Box 1273  
Charleston, WV 25325-1273  
Telephone 304-357-2459

Subscribed and sworn before me this 21st day of September, 1992

[Signature] Notary Public  
My commission expires October 10, 1994