

8000'

LATITUDE 39°47'30"

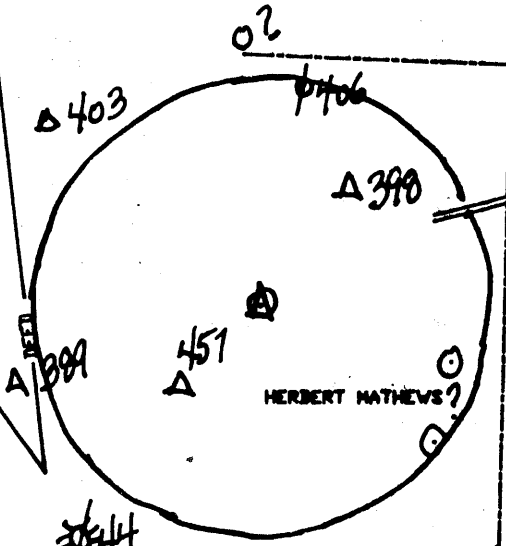
LONGITUDE 80°32'30"

Jamil  
6/29/93

(+) 7.5

0.30 S  
1.52 W

7.5



LARRY F. FURBEE

FISH RIDGE ROAD  
V. V. RT. 94

JOHN C. RICHARDS  
(SURF)  
W. B. 55 P. 526  
83 AC.

JAMES REID

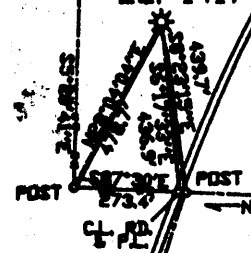
JOHN C. RICHARDS  
(O. & G.)  
LEASE 3032066  
86 AC.  
LEASE 3030513  
86 AC.

FISH RIDGE ROAD  
V. V. RT. 94

NORTH

L-4590  
EL. 1417'

WILLIAM E. CAIN



GENE RUSSELL

DONALD V. BAKER II

30104

LAT. 39°47'15"  
LONG. 80°34'13"

F. B. 1779N, P. 1 (K. M. L.)

MAP 4404/536

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

3.18  
372

(+) 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 E127 770.09'

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 MINES.

(SIGNED) Neil E. Spoon  
 R.P.E. \_\_\_\_\_ L.L.S. #945

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION



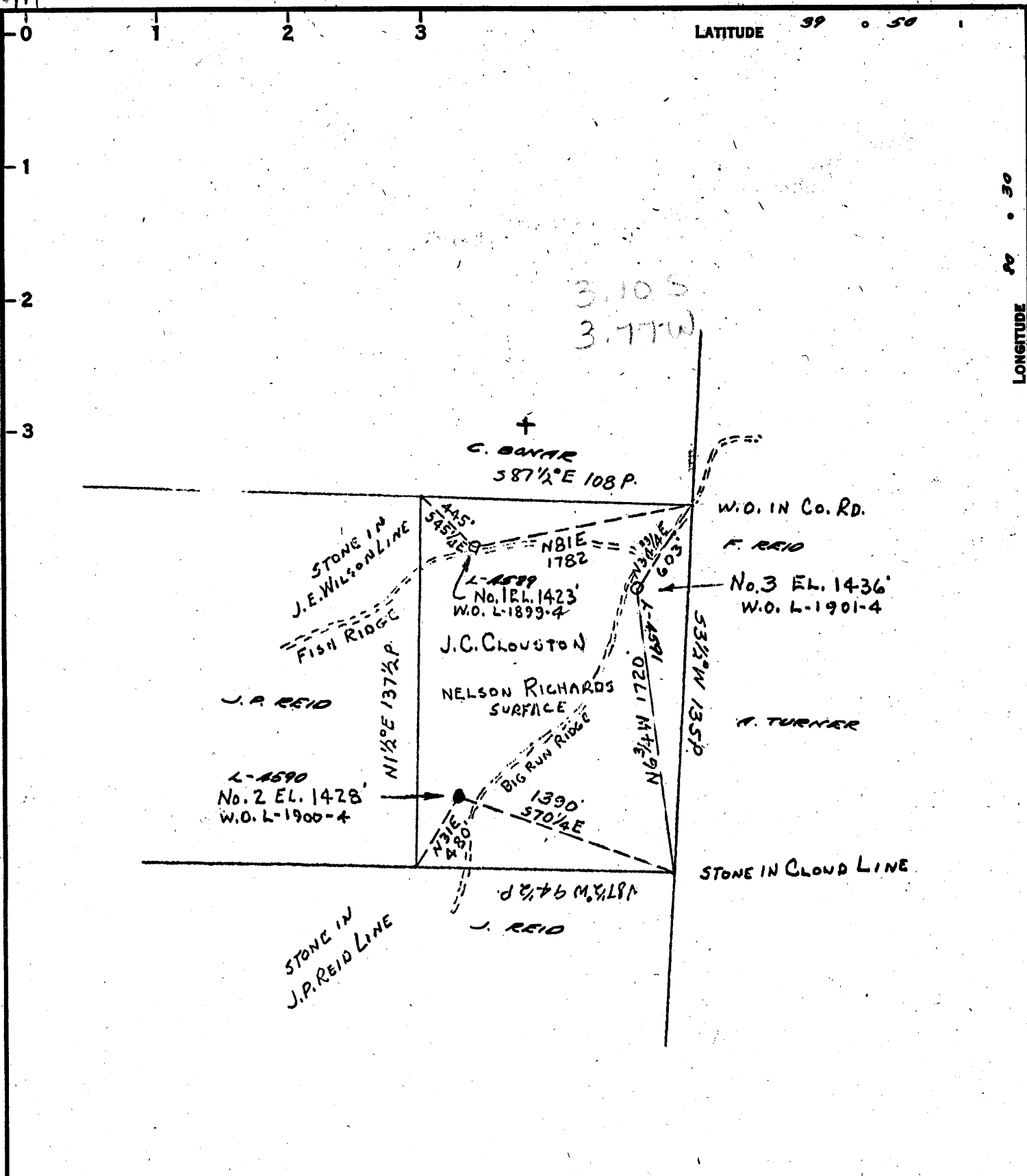
DATE JAN. 29, 19 93  
 OPERATOR'S WELL NO. L-4590  
 API WELL NO.

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 1417 WATERSHED CEDAR RUN  
 DISTRICT LIBERTY 4 COUNTY CAMERON COUNTY MARSHALL  
 QUADRANGLE CAMERON, W.V. SE  
 SURFACE OWNER JOHN C. RICHARDS ACREAGE 83  
 OIL & GAS ROYALTY OWNER JOHN RICHARDS LEASE ACREAGE 86

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH \_\_\_\_\_  
 WELL OPERATOR COLUMBIA GAS TRANS. CORP. DESIGNATED AGENT \_\_\_\_\_  
 JUL 2 1993  
 6-6 25

COUNTY NAME PERMIT



COAL OWNED BY REDRILL & RECONDITION

NEW LOCATION.....

DRILL DEEPER.....

ABANDONMENT.....

0-25-213

COMPANY THE MANUFACTURERS LIGHT & HEAT

ADDRESS 300 UNION TRUST BLDG. PGH. PA.

FARM J. C. CLOUSTON

TRACT \_\_\_\_\_ ACRES 86 LEASE No. 30513

WELL (FARM) No. 2 SERIAL No. 4590

ELEVATION (SPIRIT LEVEL) 1428'

QUADRANGLE CAMERON SE

COUNTY MARSHALL DISTRICT LIBERTY

ENGINEER Thomas E. Yergin M.

ENGINEER'S REGISTRATION No. 1503

FILE No. \_\_\_\_\_ DRAWING No. Y-25-213

DATE 17 AUG. 60 SCALE 1" = 800'

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

WELL LOCATION MAP

FILE No. MARS-397-R

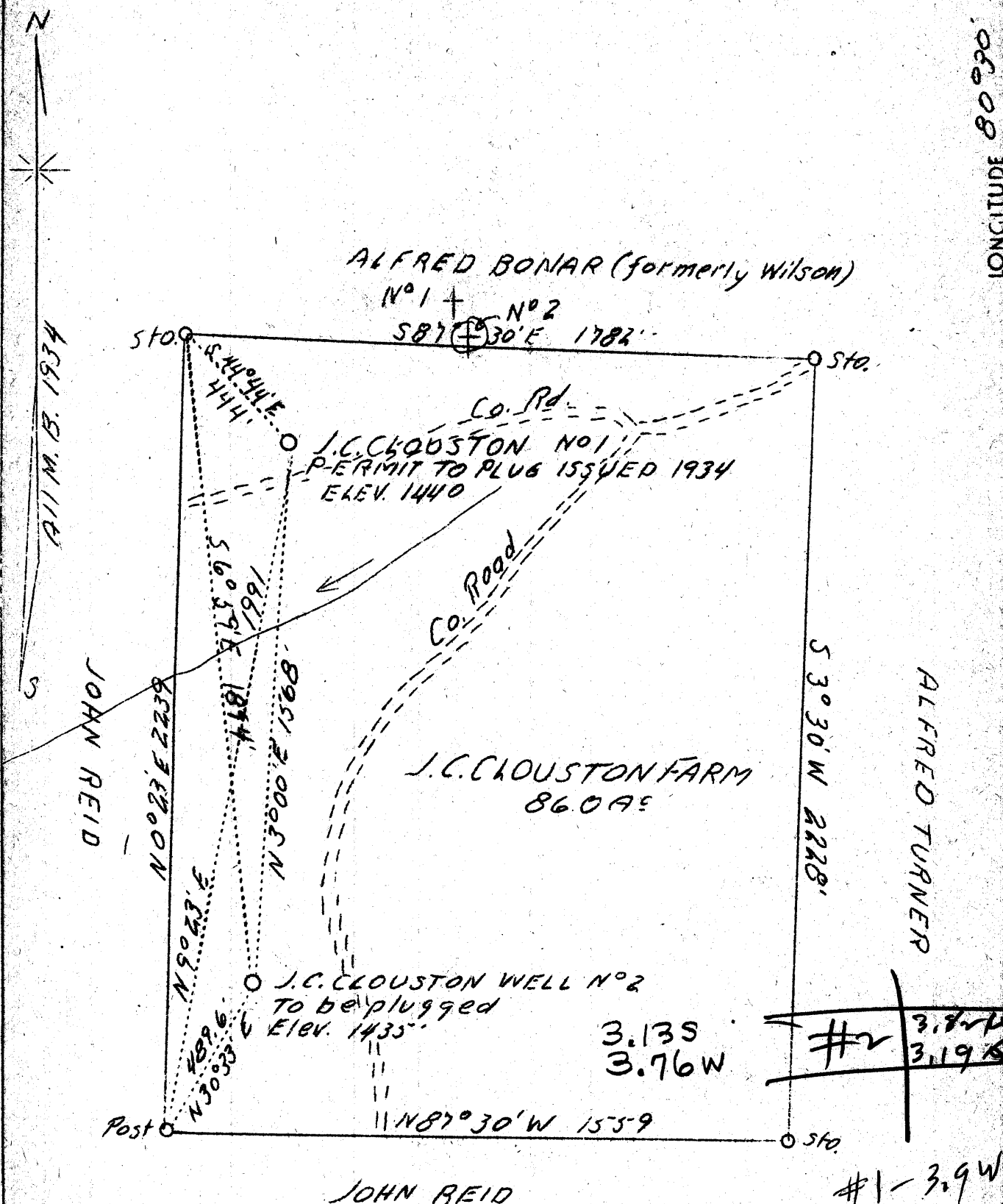
*Strayer*

+ 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.

LATITUDE 39° 50'

LONGITUDE 80° 30'



ALFRED BONAR (formerly Wilson)

No 1 + No 2  
S 87° 30' E 1782'

J.C. CLOUSTON NO 1  
PERMIT TO PLUG ISSUED 1934  
ELEV. 1440

J.C. CLOUSTON FARM  
86.0 AC

J.C. CLOUSTON WELL NO 2  
TO be plugged  
ELEV. 1435'

3.13S  
3.76W

#2 3.82W  
3.19W

#1 - 3.9W  
2.9W

JOHN REID

AUG 21 1939

ABD

Company Guy B. & A. G. Patterson  
 Address Cameron, W.Va.  
 Farm James C. Clouston  
 Tract 1  
 Acres 86  
 Well (Farm) No. 2  
 Quadrangle Cameron  
 County Marshall  
 District Liberty  
 Eng. Gordon W. Sammons  
 Eng. Reg. No. 509  
 Date 9/26/36  
 Scale 1" = 400'

SF

STATE OF WEST VIRGINIA  
 Department of Mines  
 OIL AND GAS DIVISION  
 Charleston

WELL LOCATION MAP  
 File No. MA15-104-A-9  
 399

x Denotes location of well on U.S. 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 map.

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: RICHARDS, JOHN & SONIA Operator Well No.: L-4590

LOCATION: Elevation: 1,417.00 Quadrangle: CAMERON

District: ~~PITTSBURGH~~ County: MARSHALL  
Latitude: 1510 Feet South of 39 Deg. 47Min. 30 Sec.  
Longitude 8000 Feet West of 80 Deg. 32 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: 07/02/93  
Well work Commenced: 9/21/93  
Well work Completed: 3/16/94  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 2416  
Fresh water depths (ft) \_\_\_\_\_  
NOT RECORDED BY DRILLER.  
Salt water depths (ft) 1270

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 10 <sup>3</sup> / <sub>4</sub> " OD	232'	232'	118
8 <sup>5</sup> / <sub>8</sub> " OD	1314'	1314'	295
7" OD	2205'	2205'	295
4 <sup>1</sup> / <sub>2</sub> " OD	2448'	2448'	185

Is coal being mined in area (Y/N)? NO  
Coal Depths (ft): PITTSBURGH 1067'-1072'

OPEN FLOW DATA

Producing formation BIG INJUN SAND Pay zone depth (ft) 2284  
Gas: Initial open flow 683 MCF/d Oil: Initial open flow — Bbl/  
Final open flow 550 MCF/d Final open flow — Bbl/  
Time of open flow between initial and final tests — Hour  
Static rock Pressure 800 psig (surface pressure) after — Hour

Second producing formation — Pay zone depth (ft) —  
Gas: Initial open flow — MCF/d Oil: Initial open flow — Bbl/  
Final open flow — MCF/d Final open flow — Bbl/  
Time of open flow between initial and final tests — Hour  
Static rock Pressure — psig (surface pressure) after — Hour

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATE 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 SEP 10 1994

By: Ronald A. Schoff  
Date: August 30, 1994

- 1/22/93 CLEANED OUT TO THE PLUGGED BACK TOTAL DEPTH = 2450' G.L.
- 9/24/93 RAN 2448' G.L. OF 4 1/2" OD, K-55, 11.6 gpp CASING AND HALLIBURTON CEMENTED IT IN PLACE WITH 150 SKS
- 9/27/93 INSTALLED A NEW 4 1/2" X 7", API 2000, ERC FLANGED WELLHEAD WITH 2-4 1/16", API 2000, FOSTER GATE VALVES.
- 3/14/94 ATLAS WIRELINE SERVICES PERFORATED THE 4 1/2" OD CASING FROM 2284' TO 2304' AND FROM 2330' TO 2342' AT 6 SHOTS/FT.
- 3/16/94 HALLIBURTON FRACTURED THE BIG INJUN SAND WITH 527 <sup>gals</sup> OF GELLED WATER, 5,000# OF 80/100 SAND AND 25,000# OF 20/40 SAND,

FORMATION DEPTHS (FROM SERVICE COMPANY LOGS RUN BY SCHLUMBERGER ON 9/23/93):

<u>FORMATION</u>	<u>FROM</u>	<u>TO</u>
PITTSBURGH COAL	1067'	1072'
BIG DUNKARD SAND	1567'	1605'
MAXTON SAND	2047'	2100'
LOWER MAXTON SAND	2133'	2155'
BIG LIME	2171'	2207'
BIG INJUN SAND	2212'	
TOTAL DEPTH	-	2450'
PLUGGED BACK TO	-	2416'



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

Quadrangle Cameron

Permit No. MARS-397-R

WELL RECORD

STORAGE  
Oil or Gas Well GAS  
(KIND)

Company The Manufacturers Light and Heat Company  
Address 800 Union Trust Bldg., Pittsburgh 19, Pa.  
Farm James Clouston Acres 86  
Location (waters) \_\_\_\_\_  
Well No. L-4590 Elev. 1428'  
District Liberty County Marshall  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_

Drilling commenced September 2, 1960  
Drilling completed December 10, 1960  
Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_  
With \_\_\_\_\_  
Open Flow \_\_\_\_\_ /10ths Water in \_\_\_\_\_ Inch  
\_\_\_\_\_ /10ths Merc. in \_\_\_\_\_ Inch  
Volume \_\_\_\_\_ Cu. Ft.  
Rock Pressure 155 lbs. 72 hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water \_\_\_\_\_ feet  
Salt water \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer _____
13			
10 3/4"	232'	232'	Size of _____
8 1/2 5/8"	1143'	1314'	
6 1/2 7"	2161'	2205'	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 1068 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		THICKNESS	1068	1074			
✓ Big Dunkard Sand		66	1568	1634			
✓ Maxton Sand		49	2054	2103			
✓ Big Lime			2202		2202		
✓ Big Injun Sand				2494	1428		
Old 7" Pipe Left in		44	2161	2205	774		
TOTAL DEPTH				2450			

FORM WW-2B JUN 16 93

051-0397-F  
Issued 07/02/93  
Expires 07/02/95  
Page 1 of 5

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

- 1) Well Operator: <sup>175</sup> COLUMBIA GAS TRANSMISSION CORP. 10450 (4) 278
- 2) Operator's Well Number: L-4590 3) Elevation: 1417'
- 4) Well type: (a) Oil \_\_\_ / or Gas X /  
(b) If Gas: Production \_\_\_ / Underground Storage X /  
Deep \_\_\_ / Shallow X /
- 5) Proposed Target Formation(s): BIG INJUN SAND
- 6) Proposed Total Depth: 2450 feet
- 7) Approximate fresh water strata depths: 170'
- 8) Approximate salt water depths: 1300'
- 9) Approximate coal seam depths: 1068-1074'
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No X /
- 11) Proposed Well Work: KILL WELL; CLEAN OUT TO 2450', RUN AND CEMENT 4-1/2" CASING THROUGH BIG INJUN SAND, PERFORATE AND FRACTURE.
- 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	<i>Existed from well records</i>				<i>No cement used in this well</i>	
Fresh Water	10-3/4"	H	32.75	<u>232'</u>	<u>232'</u>	125 SACKS
Coal	8-5/8"	K	24	<u>1314'</u>	<u>1314'</u>	250 SACKS
Intermediate	7"	K	20	<u>2205'</u>	<u>2205'</u>	250 SACKS
Production	4-1/2"	K	11.6		2450'	175 SACKS
Tubing	<i>→ Pipe to be run</i>			<i>→ 3805' @ 11.6 L</i>		
Liners						

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

For Division of Oil and Gas Use Only

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

17435

026920  
11

JUN 16 1993  
Permitting  
Office of Oil & Gas

- 1) Date: May 13, 1993
- 2) Operator's well number L-4590
- 3) API Well No: 47 - 051 - 0397-R-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 JOHN & SONIA RICHARDS  
Address 837 MCQUEEN BLVD.  
ST. ALBANS, WV 25177
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration  
Name CONSOLIDATION COAL CO.  
Address 1800 WASHINGTON ROAD  
PITTSBURGH, PA 15241
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector RANDAL MICK  
Address 111 BLACKSHERE DR.  
MANNINGTON, WV 26582  
Telephone (304) - 986-3324

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

*file in 605 Room*

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

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:

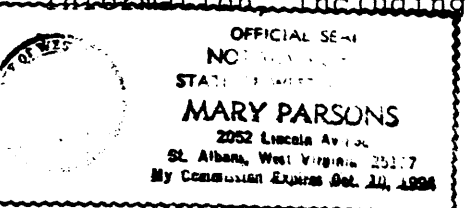
- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

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 9th day of June, 1993

Mary Parsons Notary Public  
My commission expires October 10, 1994