

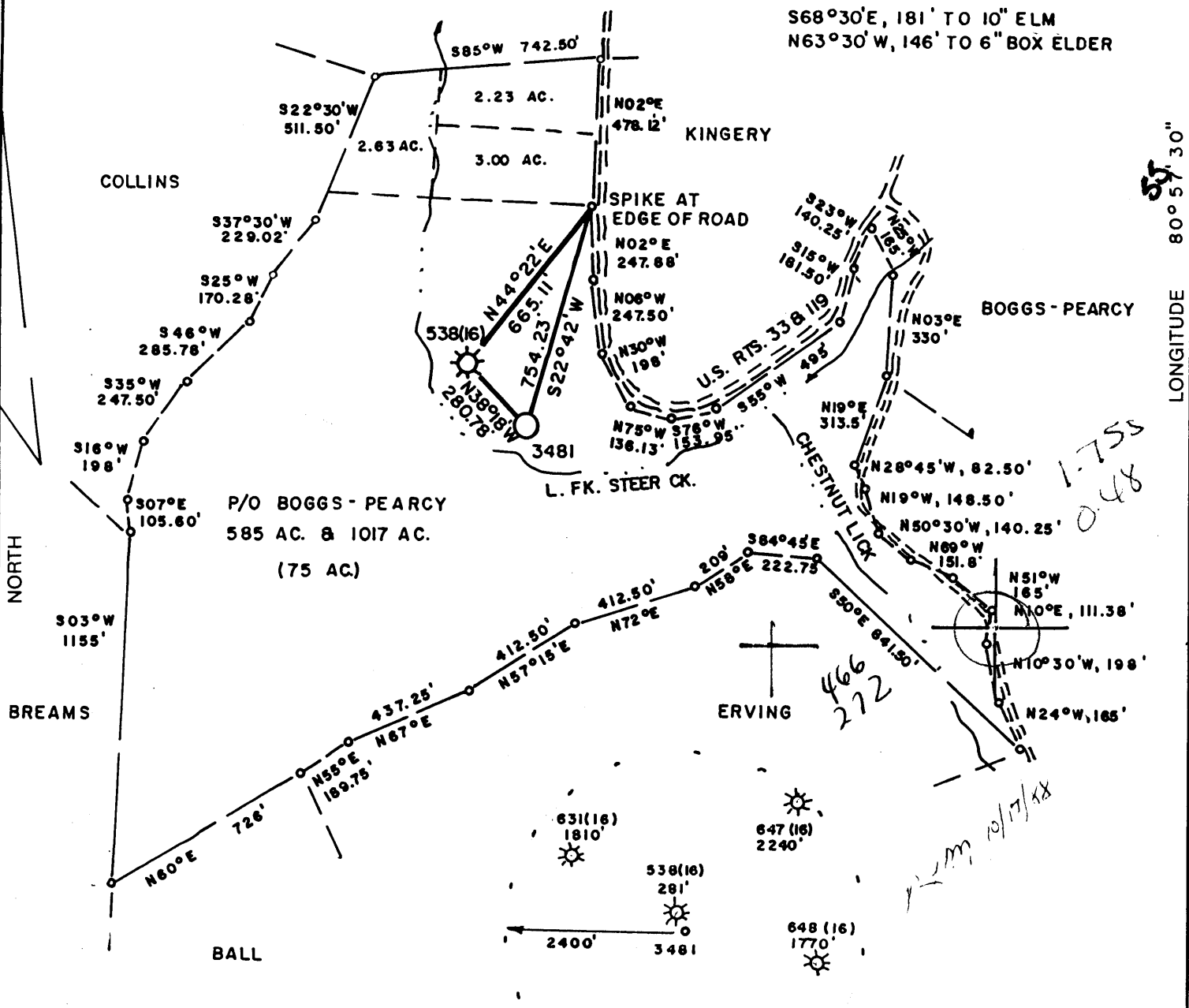
Janice 11/8/88

532580'

LATITUDE 38° 52' 30"

HOPE NAT. GAS CO.

WELL REFERENCES:  
S68°30'E, 181' TO 10" ELM  
N63°30'W, 146' TO 6" BOX ELDER



LONGITUDE 80° 57' 30"

LAND SURVEYING SERVICES  
21 CEDAR LANE  
BRIDGEPORT, WV 26330  
PHONE: 304-842-2018

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION EXIST. WELL 538  
 ELEV. - 718'

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) *Stephen D. Losh*  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 STEPHEN D. LOSH



PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE OCTOBER 03, 19 88  
 OPERATOR'S WELL NO. 3481  
 API WELL NO. \_\_\_\_\_

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

LOCATION: ELEVATION 720' WATER SHED LEFT FORK OF STEER CREEK  
 DISTRICT CENTER 1 COUNTY GILMER

QUADRANGLE NORMANTOWN 7.5 min. 514 0504 Glenville WC

SURFACE OWNER PEARL PEARCY ACREAGE 56.50  
 OIL & GAS ROYALTY OWNER BOGGS - PEARCY LEASE ACREAGE 1/2 OF 585, 1/2 OF 1017

LEASE NO. 28248, 28481

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 4500'

WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT RODNEY J. BIGGS  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698

PITTSBURGH, PA 15244 142 BRIDGEPORT, WV 26330

NOV 18 1988

COUNTY NAME PERMIT

FORM WW-6 H.T. HALL 48673

Sturtevant Normanton Shale (180)

WR 35  
**RECEIVED**  
JAN 25 1989

15-Nov-88  
API # 47-21-04741

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

**DIVISION OF OIL & GAS**  
**DEPARTMENT OF ENERGY**

Well Operator's Report of Well Work

Farm name: PEARCY, PEARL Operator Well No.: CNGD 3481

LOCATION: Elevation: 720.00 Quadrangle: NORMANTOWN  
Watershed: Left Fork of Steer Creek  
District: CENTER County: GILMER  
Latitude: 9300 Feet South of 38 Des. 52Min. 30 Sec.  
Longitude: 2580 Feet West of 80 Des. 57 Min. 30 Sec.

Company: CNG DEVELOPMENT CO., A DE  
P. O. BOX 15746  
PITTSBURGH, PA

Agent: RODNEY J. BIGGS

Inspector: CRAIG DUCKWORTH  
Permit Issued: 11/19/88  
Well work Commenced: 12/20/88  
Well work Completed: 12/29/88

Verbal Plugging  
Permission granted on: \_\_\_\_\_

Rotary X Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 4828  
Fresh water depths (ft) 50', 455', 850'

Salt water depths (ft) \_\_\_\_\_

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): \_\_\_\_\_

Size	Used in	Left	Cement
16"	21		Fill Up
11 3/4"	129	129	To Surf.
8 5/8"	1676	1676	To Surf.
4 1/2"	4845	4845	665 sks.
2 3/8"	4021	4021	

OPEN FLOW DATA

Producing formation Shale Pay zone depth (ft) 2088-2387  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 231 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 50 psig (surface pressure) after 1 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.

Rodney J. Biggs, Manager

For: CNG DEVELOPMENT CO., A DELAWARE CORP. FEB 3

By: *Rodney J. Biggs*  
Date: January 13, 1989

1989

432 434  
 Perf. 1st stage 3570 - 4149, 22 shots. Nowsco Foam Frac - Broke 1600#, ISIP 230#, Ave Rate 45 BPM, Downhole Ave Pres. 2380, Total Sand 50,000# 20/40, Total Nit. 358 MCFN<sub>2</sub> Total Fluid 139 bbl  
 427 432  
 2nd stage Perf. 2788-3072, 22 shots. Foam Frac - Broke @ 2000#, Ave Rate 45 BPM, downhole Ave Pr. 1980#, Total acid 500 gal, Total Sand 50,000# 20/40, Total N<sub>2</sub> 290.4 MCFN<sub>2</sub>, Total Fluid 139 bbl  
 413 419  
 3rd stage Perf. 2088 - 2387, 20 shots. Foam Frac - Broke @ 2000#, Displace ball & acid at 45 BPM, Ave Pr. 1780, Ave Rate 45 BPM, downhole total acid 500 gal, Total Sand 50,000# 20/40, Total N<sub>2</sub> 231,000 SCF, Total Fluid 163 bbl.

Clay	0	3	2" stream water @ 50'
Sd, Sh & RR	3	1392	1½" stream water @ 455'
Little Lime	1392	1416	1" stream water @ 850'
Sd & Sh	1416	1435	¾" - 1" stream oil @ 1190'
B.Lime & Injun	1435	1600	
Sd & Sh	1600	2360	
Lime	2360	2365	
Sd & Sh	2365	4828	

LOG TOPS

Maxton	1285	1364
Little Lime	1382	1408
Blue Monday	1410	1414
Pencil Cave	1414	1432
Big Lime	1440	1508
Big Injun	1508	1583
Weir	1802	1860
Devonian Shale	1896	
Warren	2787	2819
Devonian Shale		TD (4774)

**RECEIVED**  
 JAN 25 1989

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

404 1896  
 813 3100  
 822 4300  
 825 4500

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

- 1) Well Operator: CNG DEVELOPMENT COMPANY 10110, 1, 513
- 2) Operator's Well Number: CNGD 3481 3) Elevation: 720
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage   
 Deep  / Shallow   
 435
- 5) Proposed Target Formation(s): Devonian Shale
- 6) Proposed Total Depth: 4500 feet
- 7) Approximate fresh water strata depths: - 245, 130'
- 8) Approximate salt water depths: - OK possibility @ 1350-1450'
- 9) Approximate coal seam depths: - OK
- 10) Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work: Drill new well
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	
Conductor						
Fresh Water	11-3/4	H-40	42	120	120	To surface
Coal				<del>1650</del>	<del>1650</del>	To surface
Intermediate	8-5/8	X-42	23	1650	1650 OK	38CSR18-11.2.2 & 38CSR18-11.3
Production	4-1/2	J-55	10.5	4500	4500	200-400 sks 38CSR18-11.1
Tubing	1-1/2	CN-55	2.75			
Liners						

**RECEIVED**  
 NOV 03 1988

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

For Division of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond 50 Blanket  Agent

(Type)

026046  
 31

**RECEIVED**  
NOV 03 1988

1) Date: October 25, 1988  
2) Operator's well number  
CNGD 3481  
3) API Well No: 47 - 021 - 4741  
State - County - Permit

**DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY  
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 Pearl Percy  
Address Lockney, WV 25258  
  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
  
6) Inspector Craig Duckworth  
Address Box 107, Davisson Rt.  
Gassaway, WV 26624  
Telephone (304)-364-5942

Owner  
Operator:  
Name Heirs of Lelia H. Vandale  
Address c/o George A. Vandale  
Vandale Funeral Home, Box 200, Spencer, WV25276  
  
(b) Coal Owner(s) with Declaration  
Name Carol Luverna Gordon  
Address 438 Beresford Ave.  
Redwood City, CA 94061  
Name Heirs of Carrie P. Wittkamp  
Address c/o Mrs. Alfred Boggs  
P.O. Box 191, Culpepper, VA 22701  
  
(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  
 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 CNG Development Company  
By: [Signature]  
Its: Supervisor Purchasing/Production Services  
Address One Park Ridge Center, P.O. Box 15746  
Pittsburgh, PA 15244  
Telephone (412) 787-4117

**NOTARIAL SEAL**  
**SHARON L. BROWN, NOTARY PUBLIC**  
**FINDLAY TOWNSHIP, ALLEGHENY COUNTY**  
**MY COMMISSION EXPIRES JUNE 18, 1990**  
Member, Pennsylvania Association of Notaries

Subscribed and sworn before me this 25 day of October, 1988  
[Signature] Notary Public  
My commission expires June 18, 1990