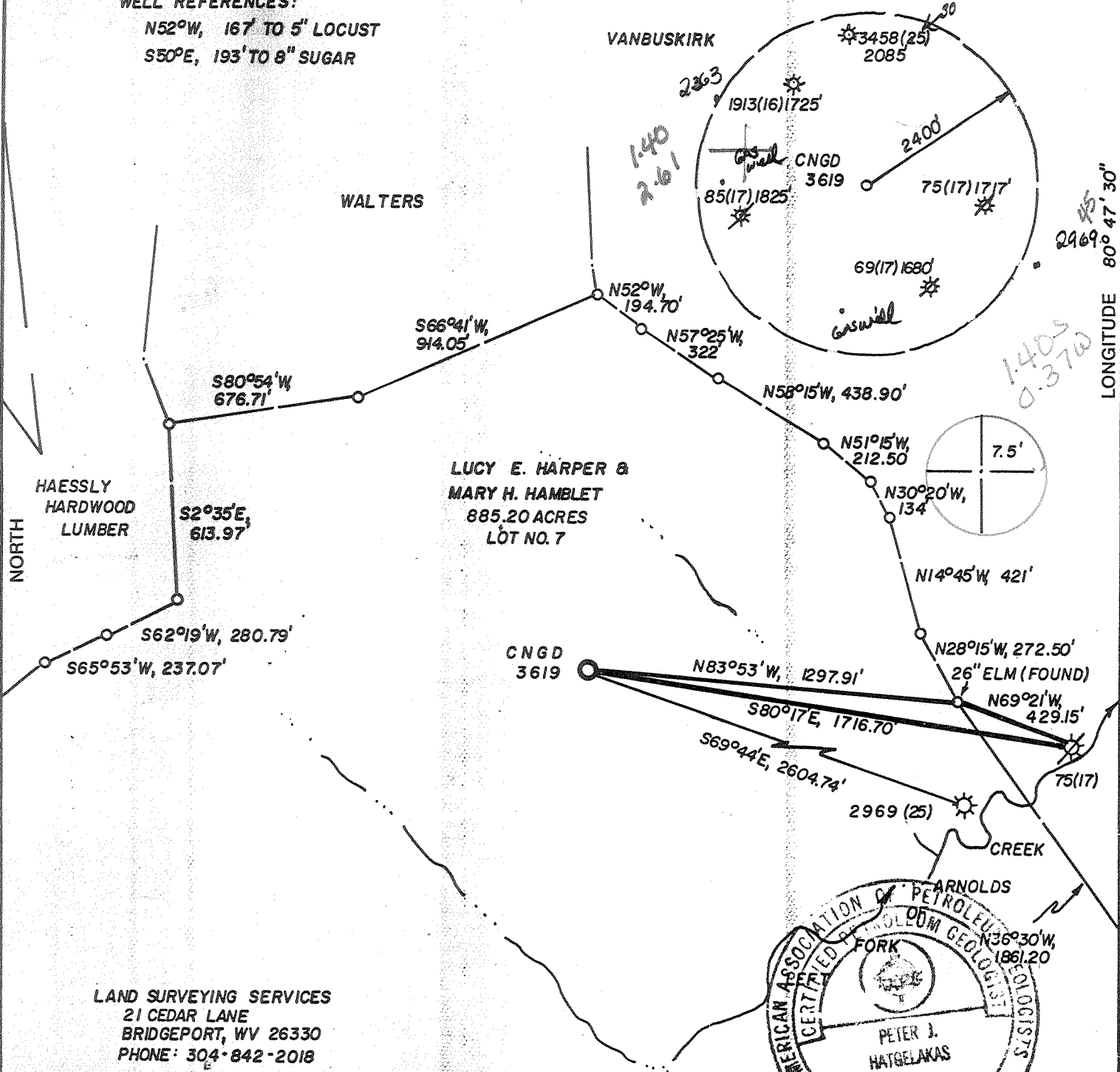


Janie 3/07/89

LATITUDE 39° 15' 00"

WELL REFERENCES:

N52°W, 167 TO 5' LOCUST  
S50°E, 193 TO 8" SUGAR



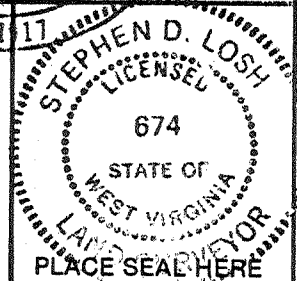
LAND SURVEYING SERVICES  
21 CEDAR LANE  
BRIDGEPORT, WV 26330  
PHONE: 304-842-2018

(+) 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 WELL 2969 2605 FT SE OF LOC. AT ELEV. 936'

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) [Signature]  
 R.P.E. \_\_\_\_\_ L.L.S. NO. 674  
 STEPHEN D. LOSH



STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE FEB 9, 19 89  
 OPERATOR'S WELL NO. CNGD 3619  
 API WELL NO. \_\_\_\_\_

WELL TYPE: OIL \_\_\_\_\_ GAS X LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1184' WATERSHED LEFT FORK OF ARNOLDS CREEK  
 DISTRICT WEST UNION 8 COUNTY DODDRIDGE  
 QUADRANGLE OXFORD 7.5 526 0583 Holbrook NE  
 SURFACE OWNER LUCY E. HARPER, ET. AL. ACREAGE 885.20  
 OIL & GAS ROYALTY OWNER LEWIS MAXWELL, HRS. LEASE ACREAGE 1600.  
 LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL X 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 ALEXANDER ESTIMATED DEPTH 5375'  
 WELL OPERATOR CNG DEVELOPMENT CO. DESIGNATED AGENT RODNEY J. BIGGS  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698  
PITTSBURGH, PA 15244 BRIDGEPORT, WV 26330

MAR 24 1989

6-6 Straight Fork-Bluestone Creek (133)

H.T. HALL 48673 FORM WW-6

COUNTY NAME PERMIT

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

Well Operator's Report of Well Work

Farm name: HARPER, LUCY

Operator Well No.: CNGD 3619

LOCATION: Elevation: 1184.00 Quadrangle: WEST UNION

District: WESTUNION County: DODDRIDGE  
Latitude: 7400 Feet South of 39 Deg. 15Min. 0 Sec.  
Longitude 1975 Feet West of 80 Deg. 47 Min. 30 Sec.

Company: CNG DEVELOPMENT CO., A DE  
P. O. BOX 15746  
PITTSBURGH, PA 15244-0000

Agent: RODNEY J. BIGGS

Inspector: MIKE UNDERWOOD  
Permit Issued: 03/23/89  
Well work Commenced: 06/08/89  
Well work Completed: 06/13/89  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 5390  
Fresh water depths (ft) 50', 350' damp,  
512' damp  
Salt water depths (ft) \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	177	177	To Surf.
8 5/8"	1529	1529	To Surf.
4 1/2"	5365	5365	550 sks

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

OPEN FLOW DATA

Producing formation Alexander Pay zone depth (ft) 5198-5121  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 1538 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock Pressure 1250 psig (surface pressure) after 24 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: Rodney J. Biggs, Manager  
CNG DEVELOPMENT CO., A DELAWARE CORP.

By: Rod Biggs  
Date: June 28, 1989

JUL 14 1989

Perforated Alexander with 3 1/8 HSC (.39) 5196 - 5198, 2 holes; 5183 - 5187, 4 holes; 5168 - 5177, 9 holes; 5149 - 5160, 11 holes; 5121 - 5125, 4 holes

Foam Frac (70Q) Alexander - Break 1050, Avg TPSI 2858, Avg Rate 20 BPM, HHP used 1051, ISI 1330, Used 500 gals 15% HCL, 5000# 80/100, 120,000# 20/40 Sand and 781,000 SCF Max Sand Conc. 6#/gal

Clay	0	3	1/2" stream water at 50'
Sd, Sh, RR	3	1817	350' damp
L. Lime	1817	1842	512' damp
Sd & Sh	1842	1856	
B. Lime	1856	1934	
Sd & Sh	1934	1940	
Injun	1940	2000	
Sd & Sh	2000	5390	

LOG TOPS

Big Lime	1850	1924
Big Injun	1924	2004
Weir	2158	2270
Berea	2358	2366
Warren	3224	3278
U. Speechley	3296	3390
Speechley	3700	3788
Balltown	4190	4244
Riley	4656	4810
Benson	4814	4944
Alexander	5110	5226

8397

JUL 14 1989

017-3701  
 Issued 3/23/89 Expired 3/23/91  
 Page 1 of 1

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

- 1) Well Operator: CNG DEVELOPMENT COMPANY 10110, 8, 670
- 2) Operator's Well Number: CNGD 3619 3) Elevation: 1184
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow  /
- 5) Proposed Target Formation(s): Alexander
- 6) Proposed Total Depth: 5375 feet
- 7) Approximate fresh water strata depths: 27, 402, 502
- 8) Approximate salt water depths: -
- 9) Approximate coal seam depths: -
- 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	Fill-up (cu. ft.)
Conductor						
Fresh Water	11-3/4	H-40	42	200	200	To surface
Coal						To surface
Intermediate	8-5/8	X-42	23	1550	1550	38CSR18 11.2.2 & 38CSR18 11.3
Production	4-1/2	J-55	10.5	5375	5375	200-400 sks 38CSR18-11.1
Tubing	1-1/2	CN-55	2.75	5275	5275	
Liners						

**RECEIVED**  
 MAR 27 1989

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

For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

5 Fee(s) paid: Plat WW-9 WW-2B Bond Blanket WPCP Agent

(Type)

017

**RECEIVED**  
MAR 07 1989

- 1) Date: March 1, 1989
- 2) Operator's well number  
CNGD 3619
- 3) API Well No: 47 - 017 - 3701  
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 Lucy Harper  
Address 511 Boca Ciega Point Blvd.  
St. Petersburg, FL 33708
  - (b) Name Mary Harper Hamblett  
Address 15 North Wirt Street  
Leesburg, VA 22075
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration  
Name Robert L. Holland, Jr. Agent  
Address Lewis Maxwell Heirs  
105 High St., Box 425, West Union, WV 26456  
Name State of West Virginia  
Address State Auditor, Capitol Complex  
Charleston, WV 25305
  - (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Mike Underwood  
Address Route 2, Box 135  
Salem, WV 26426  
Telephone (304)-782-1043

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 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

Subscribed and sworn before me this 1 day of March, 1989

[Signature]  
My commission expires 5/21/90

NOTARIAL SEAL  
SHEILA L. MIRICH, NOTARY PUBLIC  
FINDLAY TOWNSHIP, ALLEGHENY COUNTY  
MY COMMISSION EXPIRES MAY 21, 1990

Notary Public