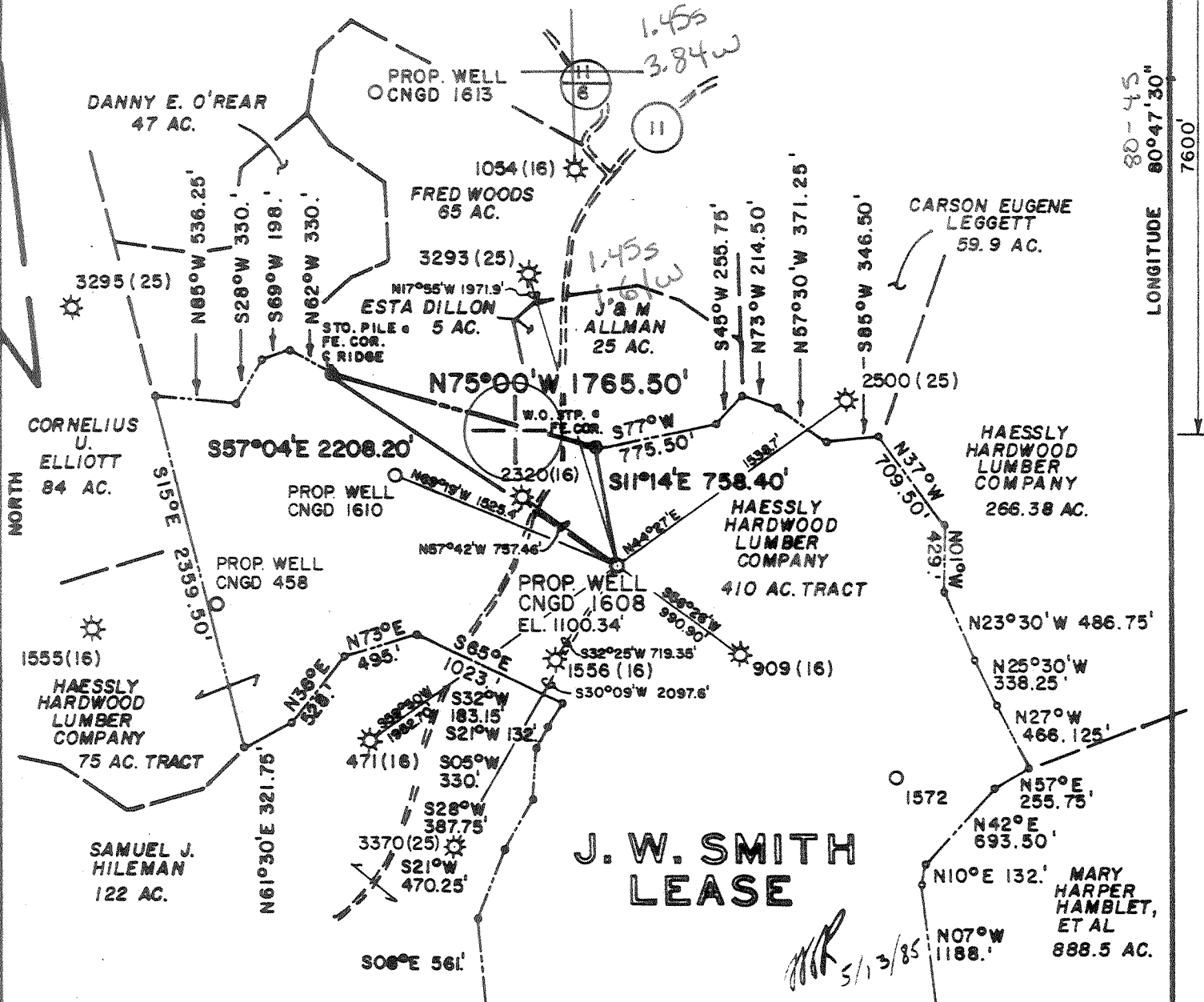


8475'

LATITUDE 39°15'00"

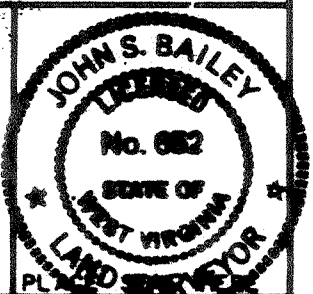
MAGNETIC REFERENCE TIES

CNGD 1608 TO 6" C.O. ON RIDGE N08°45'W 175.5'  
CNGD 1608 TO 15" R.O. N52°30'E 192.3



FILE NO. MSES 85-601  
 DRAWN BY SARC, TAL  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200  
 PROVEN SOURCE OF ELEVATION BM ON CO. RT. II; ELEV. 944'

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) John S. Bailey  
 R. P. E. \_\_\_\_\_ L. L. S. 652



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8-78)



Department of Mines  
 Oil & Gas Division

DATE JANUARY 10 19 85  
 OPERATOR'S WELL NO. CNGD 1608  
 API WELL NO. REVISED  
47-017-3435  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X)  
 LOCATION: ELEVATION 1100.34' WATER SHED RIGHT FORK  
 DISTRICT WEST UNION 8 COUNTY DODDRIDGE  
 QUADRANGLE OXFORD, WV 7.5' 526 Holbrook 058 NE 3  
 SURFACE OWNER HAESSLY HARDWOOD LUMBER SALES ACREAGE 485  
 OIL & GAS ROYALTY OWNER HAESSLY HARDWOOD LUMBER SALES LEASE ACREAGE 485  
 LEASE NO. 41979  
 PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUS OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5300'  
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS RT. 2, BOX 698  
PITTSBURGH, PA 15244 142 BRIDGEPORT, WV 26330

JUN 17 1985

IV-35  
(Rev 8-81)

**RECEIVED**  
JUL 31 1985



DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date July 9, 1985  
Operator's  
Well No. CNGD WN 1608  
Farm J. W. Smith  
API No. 47 - 017 - 3435

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production X / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 1100 Watershed Right Fork  
District: West Union County Doddridge Quadrangle Oxford

COMPANY CNG Development Company

ADDRESS P. O. Box 15746  
Pittsburgh, PA 15244

DESIGNATED AGENT Gary A. Nicholas

ADDRESS Rt. 2 Box 698  
Bridgeport, WV 26330

SURFACE OWNER Haessly Hardwood Lumber Sales

ADDRESS Rt. 1 Newport Pike  
Marietta, Oh 45750

MINERAL RIGHTS OWNER Haessly Hardwood Lbr Sales

ADDRESS Rt 1 Newport Pike  
Marietta, OH 45750

OIL AND GAS INSPECTOR FOR THIS WORK

Mike Underwood ADDRESS Rt 2 Box 114  
Salem, WV 26426

PERMIT ISSUED June 12, 1985

DRILLING COMMENCED June 17, 1985

DRILLING COMPLETED June 23, 1985

IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
<del>11 3/4</del> <del>13 1/8</del>	366	366	To Surf
9 5/8			
8 5/8	2001	2001	To Surf.
7			
5 1/2			
4 1/2	5304	5304	125 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5300 feet

Depth of completed well 5300 feet Rotary X / Cable Tools

Water strata depth: Fresh 255 feet; Salt 1740 feet

Coal seam depths: 1260 - 1265 Is coal being mined in the area? No  
1780 - 1790

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5122 - 5157 feet

Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow 1,113 Mcf/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 1200 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)

Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet

Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ Mcf/d Oil: Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ hours

Static rock pressure \_\_\_\_\_ psig (surface measurement) after \_\_\_\_\_ hours shut in

(Continue on reverse side)

AUG 19 1985

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Superior Perforated Alexander 5122 - 5157; 10 holes; .49  
Halliburton 75Q Foam Frac - Breakdown (psi) 2400, Ave. HHP 2, Ave. Rate (BPM) 20,  
Ave. Pres. (psi) 2820, Max. Treating Pres. (psi) 3110, 500 gal FE Acid, 55,000# 20/40 Sand,  
Max. Conc. (#/gal) 4, 679 BBL Total Fluid, 447 BBL S L Fluid, ISIP (psi) 1040, 5 min SIP  
(psi) 1000, 510,000 Total Nitrogen (SCF)

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Fill & Top Soil			0	20	1/4" Fresh Water @ 22'
Coal			20	23	1/2" Fresh Water @ 255'
Shale, Sand			23	1260	
Coal			1260	1265	1/2" Water at 1740'
Shale, Sand			1265	1780	
Coal			1780	1790	
Shale, Sand			1790	1800	
Lime			1800	1875	
Shale, Sand			1875	5300	
LOG TOPS					
Little Lime			1834	1882	
Big Lime			1885	1992	
Weir			2145	2266	
Sunbury			2312	2342	
Berea			2343	2346	
Warren			3188	3260	
Balltown			3932	4010	
Bradford			4094	4310	
Riley			4610	4720	
Benson			4818	4874	
Alexander			5103	5160	
Leopold			5036	5048	T.D.F.M. is Alexander!

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY

Well Operator

By:

*Gary A. Muller*

Date:

July 9, 1985

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: \_\_\_\_\_, 19\_\_\_\_  
 2) Operator's Well No. 1608  
 3) API Well No. 47 - 017-3435  
 State County Permit

**RECEIVED**

MAY 23 1985

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: Gas  / Gas  / DEPT. OF MINES (Production  / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow  / Elevation: 1100 / Watershed: Right Fork
- 5) LOCATION: District: West Union County: Doddridge Quadrangle: Oxford
- 6) WELL OPERATOR CNG Development Company  
 Address c/o Paul W. Garrett, P.O. Box 15746  
Pittsburgh, PA 15244 10110
- 7) DESIGNATED AGENT Gary Nicholas  
 Address Crosswind Corporate Park  
Rt. 2, Box 698, Bridgeport, WV 26330
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED  
 Name Mike Underwood  
 Address Route 2, Box 114  
Salem, WV 26426
- 9) DRILLING CONTRACTOR:  
 Name Sam Jack Drilling Co.  
 Address P.O. Box 48  
Buckhannon, WV 26201
- 10) PROPOSED WELL WORK: Drill  / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate  / Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_ / Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Alexander
- 12) Estimated depth of completed well, 5300 feet
- 13) Approximate strata depths: Fresh, 290 feet; salt, 1815, 1907 feet.
- 14) Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes \_\_\_\_\_ / No

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	1-3/4	H-40	42	x		350	350	To Surface	By Rule 15.05
Coal									Sizes
Intermediate	8-5/8	X-42	23	x		2000	2000	To Surface	By Rule 15.05
Production	4-1/2	J-55	10.5	x		5300	5300	200-400	Depths set
Tubing	1-1/2	CN-55	2.75	x					By Rule 15.01
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-017-3435

JUNE 12 1985  
 Date

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires June 12, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>28</u>	<u>AI13</u>	<u>MUNWU</u>		<u>8185</u>

*Margaret J. Hass*  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File