

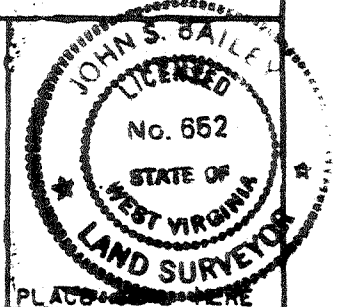
MAGNETIC REFERENCE TIES

CNGD 1835 TO 18" C.O. ON RIDGE N61°00'W 242.71'  
 CNGD 1835 TO 30" R.O. N44°54'W 238.42'

PREPARED BY MSES CONSULTANTS, INC.

FILE NO. MSES84-634  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 IN 200  
 PROVEN SOURCE OF ELEVATION EL. 841 ROAD JCT. RT. 19/11 & RT. 23/5

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)



DATE APRIL 16, 19 85  
 OPERATOR'S WELL NO. CNGD 1835  
 API WELL NO. \_\_\_\_\_  
47 - 017 - 3446  
 STATE COUNTY PERMIT

Department of Mines  
 Oil & Gas Division

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS", PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_ X)  
 LOCATION: ELEVATION 1162.21' WATER SHED SOUTH FORK HUGHES RIVER  
 DISTRICT SOUTHWEST COUNTY DODDRIDGE  
 QUADRANGLE OXFORD 7.5 (1976) 526 Holbrook 058 N23  
 SURFACE OWNER BEATRICE SCHWARTZMAN ACREAGE 4589.21  
 OIL & GAS ROYALTY OWNER W.B. MAXWELL LEASE ACREAGE 2400  
 LEASE NO. 41998  
 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 \_\_\_ 6-6 straight fork - Bluestone Creek  
 TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5375'  
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS ONE PARK RIDGE CENTER ADDRESS CROSSWIND CORPORATE PARK  
PITTSBURGH, PA 15219 BRIDGEPORT, W.V. 26330

SEP 04 1985



IV-35  
(Rev 8-81)

Date August 13, 1985  
Operator's  
Well No. CNGD WN 1835  
Farm Maxwell  
API No. 47 - 017 - 3446

State of West Virginia  
Department of Mines  
Oil and Gas Division

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: 1162 Watershed South Fork Hughes River  
District: Southwest 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 Beatrice Schwartzman  
ADDRESS 2520-30th Street, NW  
Washington, DC 20008  
MINERAL RIGHTS OWNER W. B. Maxwell  
ADDRESS c/o Katherine Johnson Hill  
37 W. 10th St., New York, NY 10011  
OIL AND GAS INSPECTOR FOR THIS WORK  
Mike Underwood ADDRESS Rt. 2, Box 114  
Salem, WV 26426  
PERMIT ISSUED July 3, 1985  
DRILLING COMMENCED July 18, 1985  
DRILLING COMPLETED July 26, 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.			
13-10"			
9 5/8			
8 5/8	1253	1253	To Surf.
7			
5 1/2			
4 1/2	5344	5344	550 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5375 feet  
Depth of completed well 5375 feet Rotary x / Cable Tools       
Water strata depth: Fresh      feet; Salt      feet  
Coal seam depths: 506 - 510 Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Alexander Benson & Riley Speechley & Warren Pay zone depth 5103 - 5144 4666 - 4840 3280 - 3394 feet  
Gas: Initial open flow      Mcf/d Oil: Initial open flow      Bbl/d  
Final open flow 474 Mcf/d Final open flow      Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 950 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

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

Perfco ran Corilog & Perf. Alexander 5103, 5105, 5109, 5111, 5112, 5120, 5122, 5124, 5133, 5134, 5143, 5144, with 2-1/8 Kleen Jet Strip, .39 holes  
Halliburton Foam Frac (75Q) Alexander - Break 2500, Avg TPSI 2420, Avg Rate 20 BPM, ISI 1700, used 500 gals 15% FE Acid & 65,000# 20/40 Sand & 603,000 SCFN<sub>2</sub>

Perfco Perforated Benson & Riley 4837 - 4840, 6 holes and 4666 - 4671, 6 holes, .39 HSC  
Halliburton Foam Frac (75Q) Benson & Riley - Break 1700, Avg TPSI 2594, Avg Rate 20 BPM, ISI 1010, used 750 gals 15% FE Acid & 30,000# 20/40 Sand & 303,000 SCFN<sub>2</sub>

Perfco Perforated Speechley & Warren 3390 - 3394, 6 holes, 3280 - 3284, 6 holes, .39 HSC  
Halliburton Foam Frac (75Q) Speechley & Warren - Break 3050, Avg TPSI 2622, Avg Rate 20 BPM, ISI 1460, used 750 gals 15% FE Acid & 45,000# 20/40 Sand & 432,000 SCFN<sub>2</sub>

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, Shale, Sand & RR			0	506	Coal 506 - 510
Coal			506	510	
Sand & Shale			510	1870	
Big Lime			1870	1990	
Sand & Shale			1990	5375	

from nearby 8-ray log:  $\leq$

Top Elev. 2490'  
base of Warren 3390'  
U. Speechley 3640  
Lw Speechley 3740  
Balltown 3915'  
Benson 5090  
Alexander 5290

T.D. Alexander

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY  
Well Operator

By: Gay A. Neuhoff

Date: August 13, 1985

Note: Regulation 2.02(i) provides as follows:  
"The term 'log' or 'well log' shall mean a systematic



1) Date: June 5, 19 85  
 2) Operator's Well No. 1917  
 3) API Well No. 47 -017-3446  
 State County Permit

JUN 11 1985

OIL & GAS DIVISION  
DEPT. OF MINES

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

- 4) WELL TYPE: A Oil        / Gas X /  
 B (If "Gas", Production X / Underground storage        / Deep        / Shallow X /)
- 5) LOCATION: Elevation: 1053 Watershed: Right Fork  
 District: West Union County: Doddridge Quadrangle: Oxford
- 6) WELL OPERATOR CNG Development Company (142)  
 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 X / Drill deeper        / Redrill        / Stimulate X /  
 Plug off old formation        / Perforate new formation         
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Alexander (439)
- 12) Estimated depth of completed well, 5250 feet
- 13) Approximate trata depths: Fresh, - feet; salt, 1400, 1450 feet.
- 14) Approximate coal seam depths: - Is coal being mined in the area? Yes        / No X

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									
Fresh water	1-3/4	H-40	42	X		160	160	To Surface	Kinds By Rule 15.05
Coal									Sizes
Intermediate	8-5/8	X-42	23	X		1650	1650	To Surface	By Rule 15.05
Production	4-1/2	J-55	10.5	X		5250	5250	200-400	Depths set By Rule 15.01
Tubing	1-1/2	CN-55	2.75	X					Perforations: Top Bottom
Liners									

OFFICE USE ONLY  
DRILLING PERMIT

Permit number 47-017-3446

Date July 3 19 85

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 July 3, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee
<u>28</u>	<u>A/B</u>	<u>MW</u>	<u>MW</u>	<u>8713</u>

Margaret J. Hesse  
 Administrator, Office of Oil and Gas

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