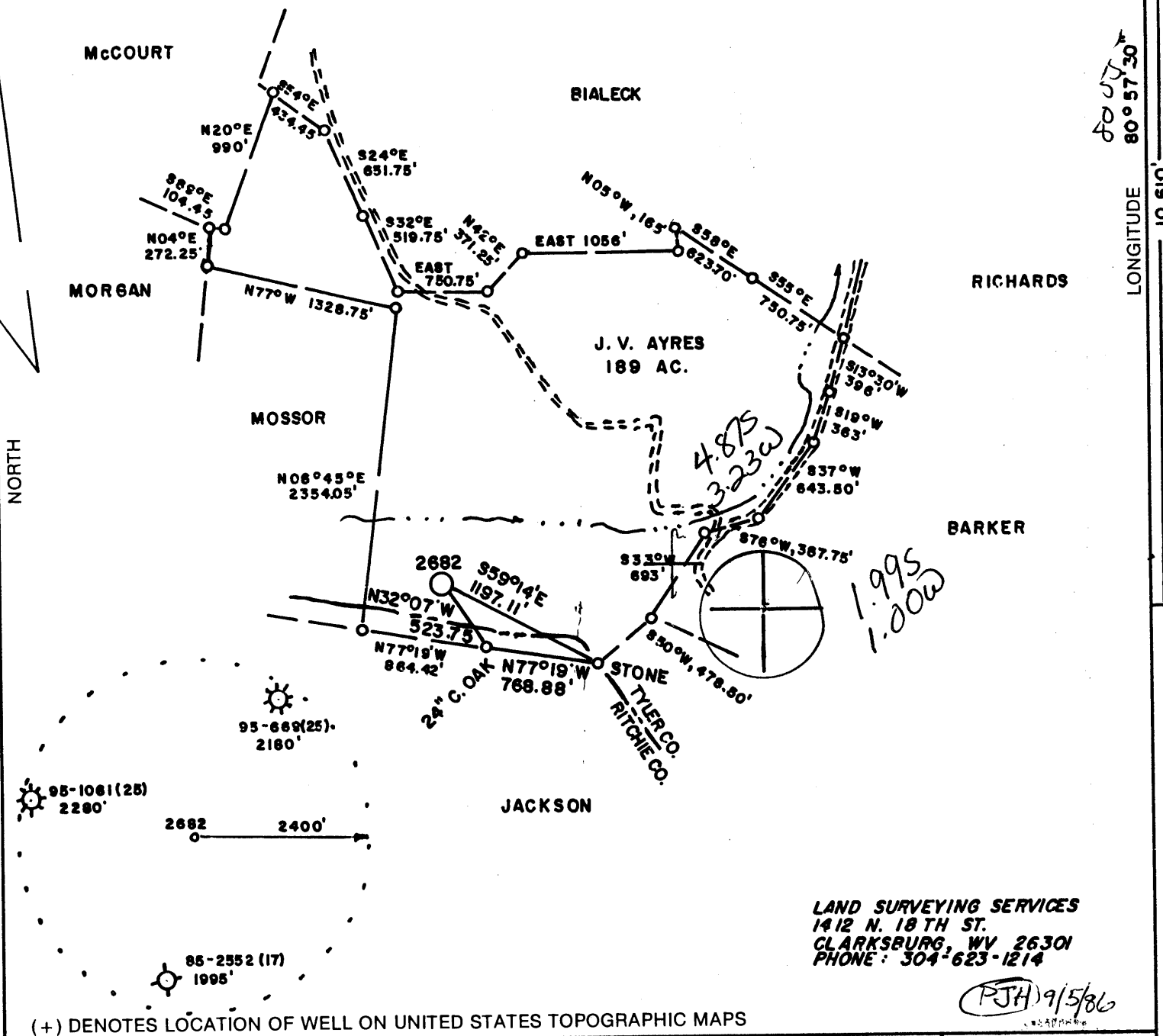


87B 9/19/86 ✓ ✓

5310 39.75  
 LATITUDE 39° 22' 30"

WELL REFERENCES:  
 N29°W, 132' TO 4" SASSAFRAS  
 N60°45'W, 117.50' TO 2" HICKORY



LAND SURVEYING SERVICES  
 1412 N. 18 TH ST.  
 CLARKSBURG, WV 26301  
 PHONE: 304-623-1214

(P.J.H.) 9/5/86

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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB 2900' S.W. OF LOCATION ELEV. - 1225'

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

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION  
 No. 574  
 PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE AUGUST 22, 1986  
 OPERATOR'S WELL NO. 2682  
 API WELL NO. 47-095-1162  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1156' WATERSHED JOSEPHS FORK  
 DISTRICT MEADE COUNTY TYLER  
 QUADRANGLE PENNSBORO 7.5 min. 539 103 WC of West Union  
 SURFACE OWNER VIRGINIA AYRES ACREAGE 189.50  
 OIL & GAS ROYALTY OWNER J. VICTOR AYRES LEASE ACREAGE 189  
 LEASE NO. 78429  
 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 BENSON ESTIMATED DEPTH 5450'  
 WELL OPERATOR CNG DEVELOPMENT COMPANY DESIGNATED AGENT GARY A. NICHOLAS  
 ADDRESS ONE PARK RIDGE CENTER 142 ADDRESS RT. 2, BOX 698  
 PITTSBURGH, PA 15244 6-6 unnamed (0) BRIDGEPORT, WV 26330

OCT 14 1986

FORM WW-6 H.T. HALL 4-8673

COUNTY NAME PERMIT



IV-35  
(Rev 8-81)

RECEIVED  
DEC 18 1986

State of West Virginia

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

Department of Mines  
Oil and Gas Division

Date December 1, 1986  
Operator's  
Well No. CNGD WN 2682  
Farm Ayres  
API No. 47 - 095 - 1162

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: 1156 Watershed Josephs Fork  
District: Meade County Tyler Quadrangle Pennsboro

COMPANY CNG Development Company  
ADDRESS P. O. Box 15746  
Pittsburgh, PA 15244  
DESIGNATED AGENT Gary A. Nicholas  
ADDRESS Rt. 2 Box 698  
Bridgport, WV 26330  
SURFACE OWNER Virginia Ayres  
ADDRESS 111 E. Tippen ST.  
Atrica, OH 44807  
MINERAL RIGHTS OWNER J. Victor Ayres  
ADDRESS   

OIL AND GAS INSPECTOR FOR THIS WORK  
Robert Lowther ADDRESS General Delivery  
Middlebourne, WV  
PERMIT ISSUED October 6, 1986  
DRILLING COMMENCED Oct. 27, 1986  
DRILLING COMPLETED Nov. 1, 1986

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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"			
9 5/8			
8 5/8	1355	1355	To Surf
7			
5 1/2			
4 1/2	5116	5116	125 sks
3			
2 1-1/2	4979	4979	---
Liners used			

GEOLOGICAL TARGET FORMATION Benson Depth 5450 feet  
Depth of completed well 5313 feet Rotary x / Cable Tools     
Water strata depth: Fresh 45 feet; Salt 1290 / 1630 feet  
Coal seam depths:    Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 5020-28 feet  
Gas: Initial open flow    Mcf/d Oil: Initial open flow    Bbl/d  
Final open flow 452 Mcf/d Final open flow    Bbl/d  
Time of open flow between initial and final tests 4 hours  
Static rock pressure 900 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

DEC 30 1986  
(Continue on reverse side)

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

Perforated Benson 5020-28, 24 holes, .39"

Breakdown 1670, Ave HHP 1880, Ave Rate 20, Ave Pres. 2750, Max Tr. Pres. 2960,  
Total Sand 80/100 6,000#, 20/40 81,000#, Max Conc. 7#/gal, Total Acid 500 gal,  
Total Fluid 316 bbl (clear), SL Fluid 195 bbl (clear), ISIP 1100, 5 min. 1050,  
Total Nit. 479,057 CF

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
KB to GL			0	10	1/2" stream water @ 45'
Soil, Shale & RR			10	1965	1/2" stream water @ 1290'
L. Lime			1965	1980	Hole Damp @ 1435'
Shale			1980	1995	Oil Odor @ 1520'
B. Lime			1995	2095	Hole Wet 1630' - Soap Hole
Sand & Shale			2095	5313 TD.	
<hr/> Log Tops. ✓					
Big Lime			1998	2100	
Big Injun			2100	2204	
Weir			2470	2520	
Berea			2614	2640	
4th Sand			3004	3020	
Warren			3572	3636	
Bradford			4548	4604	
Riley?			5022	5030	

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DEC 18 1986

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY  
Well Operator  
By: Gary A. Melolar  
Date: December 1, 1986

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  
minerals, encountered in the drilling of a well."

7/85



1) Date: Sept. 10, 1986  
 2) Operator's Well No. 2682  
 3) API Well No. 47 -095-1162  
 State County Permit

**RECEIVED**  
 SEP 17 1986

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

**APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil  / Gas  / B (If "Gas", Production  / Underground storage  / Deep  / Shallow )
- 5) LOCATION: Elevation: 1156 Watershed: Josephs Fork  
 District: Meade 1424 County: Tyler Quadrangle: Pennsboro 538
- 6) WELL OPERATOR CNG Development Co CODE: 10110 7) DESIGNATED AGENT Gary Nicholas  
 Address c/o Paul W. Garrett, P.O. Box 15746 Address Crosswind Corporate Park  
Pittsburgh, PA 15244 Rt. 2, Box 698, Bridgeport, WV 26330
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Robert Lowther Name Sam Jack Drilling Co.  
 Address General Delivery Address P.O. Box 48  
Middlebourne, WV 26149 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, Benson 405
- 12) Estimated depth of completed well, 5450 feet
- 13) Approximate strata depths: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.
- 14) Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes  / No  /
- 15) CASING AND TUBING PROGRAM OP.CH

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	11-3/4	H-40	42	X		40	40	To surface	By Rule 15.05
Coal									Sizes
Intermediate	8-5/8	X-42	23	X		<del>1850</del> 1350	<del>1850</del> 1350	To surface	By Rule 15.05
Production	4-1/2	J-55	10.5	X		5450	5450	200 - 400	Depths set
Tubing	1-1/2	CN-55	2.75	X					By Rule 15.01
Lin...									Perforations:
									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-095-1162 Date October 6 19 86

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 October 6, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>C</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>15309</u> <u>145</u>	WPCP: <u>[Signature]</u>	S&E: <u>[Signature]</u>	Other: <u>[Signature]</u>
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NOTE: Keep one copy of this permit posted at the drilling location.

[Signature]  
 Director, Division of Oil and Gas

File

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

7/86