



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 600'  
 MINIMUM DEGREE OF ACCURACY 1' IN 200'  
 PROVEN SOURCE OF ELEVATION, EXISTING WELL 017-2430  
 ELEV. = 1011'

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) Quinn R. Shoberg  
 R.P.E. 8993 L.L.S. \_\_\_\_\_

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

DATE APRIL 25, 19 83  
 OPERATOR'S WELL NO. 43-1821  
 API WELL NO. \_\_\_\_\_  
47 STATE 017 COUNTY 3220 PERMIT \_\_\_\_\_

PLACE SEAL HERE



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1020 WATER SHED ELM RUN  
 DISTRICT SOUTHWEST COUNTY DODDRIDGE  
 QUADRANGLE OXFORD Holbrook 15' NE  
 SURFACE OWNER JUSTIN M. HENDERSON ACREAGE 1500  
 OIL & GAS ROYALTY OWNER LEEMAN MAXWELL HRS. LEASE ACREAGE 2164  
 LEASE NO. 6764

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 ALEXANDER ESTIMATED DEPTH 5300'  
 WELL OPERATOR CARNEGIE NATURAL GAS CO. DESIGNATED AGENT J.C. STEPHENSON, DIVISION SUPERINTENDENT  
 ADDRESS 800 REGIS AVENUE ADDRESS \_\_\_\_\_ P.O. BOX 387



**RECEIVED**

SEP 14 1983

State of West Virginia

Department of Mines

Oil and Gas Division

DEPT. OF MINES

WELL OPERATOR'S REPORT

OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

Date 8-22-83  
 Operator's Well No. 43-1821  
 Farm Leeman Maxwell  
 API No. 47-017-3220

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

LOCATION: Elevation: 1020' Watershed Elm Run  
 District: West Union County Doddridge Quadrangle Oxford

COMPANY Carnegie Natural Gas Company  
 ADDRESS 800 Regis Ave., Pittsburgh, PA 15236  
 DESIGNATED AGENT Jim Stephenson  
 ADDRESS Box 387, Mannington, WV 26582  
 SURFACE OWNER Justin M. Henderson  
 ADDRESS 108 Wood St., West Union, WV 26456  
 MINERAL RIGHTS OWNER Justin M. Henderson, etal  
 ADDRESS 108 Wood St., West Union, WV 26456  
 OIL AND GAS INSPECTOR FOR THIS WORK Steve Casey  
 ADDRESS Jane Lew, WV  
 PERMIT ISSUED June 1, 1983  
 DRILLING COMMENCED June 21, 1983  
 DRILLING COMPLETED June 28, 1983  
 IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Casing & Tubing	Used in Drilling in Well	Left in Well	Cement fill up Ca. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	1577	1577	1577'
7			
5 1/2			
4 1/2	-	5019	2300'
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5300 feet  
 Depth of completed well 5049 feet Rotary x / Cable Tools \_\_\_\_\_  
 Water strata depth: Fresh None feet; Salt \_\_\_\_\_ feet  
 Coal seam depths: None Is coal being mined in the area? No \_\_\_\_\_

OPEN FLOW DATA  
 Producing formation See fracture details Pay zone depth \_\_\_\_\_ feet  
 Gas: Initial open flow 72.5 Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow 500 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests 48 hours  
 Static rock pressure 1690 psig (surface measurement) after 120 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 repeat 1983c)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
Fractured by Halliburton on July 14, 1983

1st Stage Alexander 12 Bbls acid; 520 Bbls foam; 60,000#  
Perf: 4850-4932 w/ 15 holes;  
sand; 425,000 SCF N<sub>2</sub>.

2nd Stage Benson, Riley 8 Bbls acid; 498 Bbls foam; 40,000#  
Perf: 4594-4738, 4372-4520 w/ 15 holes;  
sand; 415,000 SCF N<sub>2</sub>.

3rd Stage Warren 5 Bbls acid; 533 Bbls foam; 50,000#  
Perf: 2941-3083 w/ 14 holes;  
sand; 455,000 SCF N<sub>2</sub>.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
Red Clay			0	5	Including indication of all fresh and salt water, coal, oil and gas  Damp @ 96'
Shale			5	15	
Red Rock			15	30	
Sand			30	50	
Red Rock			50	70	
Sand			70	165	
Red Rock			165	170	
Sand			170	175	
Red Rock			175	185	
Shale			185	244	
Sand			244	258	
Red Rock			258	270	
Shale			270	296	
Sand			296	300	
Red Rock Shale			300	429	
Red Rock			429	480	
Sand			480	510	
Red Rock			510	517	
Sand			517	553	
Shale			553	580	
Red Rock			580	600	
Shale			600	720	
Sand			720	797	
Shale			797	813	
Sand			813	830	
Shale			830	873	
Sand			873	900	
Shale			900	945	
Sand			945	1025	
Shale			1025	1060	
Sand			1060	1078	
Shale			1078	1103	
Sand			1103	1134	
Shale			1134	1170	
Sand			1170	1194	
Shale			1194	1212	
Sand			1212	1274	
Shale			1274	1283	

(Attach separate sheets as necessary)

CARNEGIE NATURAL GAS COMPANY  
Well Operator

By: Kenneth H. Dumas

Date: August 22, 1983

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 logs, encountered in the drilling of a well."

(REVISED)

Sheet 3 - Leeman Maxwell Well # 43-1821  
Permit No. 47-017-3220. West Union District, Doddridge County, WV  
METHODS OF PREPARED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

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OIL & GAS DIVISION  
DEPT. OF MINES

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
Sand			1283	1291	Including indication of all fresh and salt water, coal, oil and gas
Shale			1291	1298	
Sand			1298	1302	
Shale			1302	1330	
Sand			1330	1385	
Shale			1385	1400	
Sand			1400	1475	
Shale			1475	1509	
Red Rock			1509	1535	
Shale			1535	1555	
L. Lime			1555	1567	
Shale			1567	1572	
B. Lime			1572	1669	
Sand Big Injun			1669	1733	
Shale			1733	1910	
Sand			1910	2015	
Shale			2015	3180	
Sand			3180	3201	
Shale			3201	5050	
Total Depth				5050	Warren Benson, Riley, Alexander.

5050  
Alexander @ T.R.

(Attach separate sheets as necessary)

Carnegie Natural Gas Company  
Well Operator

By: Kenneth H. Deway

Date: August 22, 1983

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 ... encountered in the drilling of a well."

OCT 11 1983







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

OIL AND GAS WELL PERMIT APPLICATION

1) Date: May 24, 19 83  
 2) Operator's Well No. 43-1071  
 3) API Well No. 47 State 017 County 3320 Permit

DRILLING CONTRACTOR:

Spencer Enterprises

West Union, WV 26456

4) WELL TYPE: A Oil  Gas  B (If "Gas", Production  Underground storage  Deep  Shallow   
 Elevation: 1000 Watershed: Blue Run

5) LOCATION: District: Southeast County: Boothridge Quadrangle: Conford

6) WELL OPERATOR: Carver's Natural Gas Co. Designated Agent: J. C. Stephenson  
 Address: 100 Maple Avenue Address: Box 187  
Martinsburg, W. Va 26126 Hamilton, WV 26382

7) OIL & GAS ROYALTY OWNER: Justin B. Henderson Coal Operator: None  
 Address: 106 Wood Street Address: \_\_\_\_\_

8) SURFACE OWNER: Justin B. Henderson Coal Owner(s) with Declaration on Record:  
 Address: 106 Wood Street Name: Justin Henderson  
West Union, WV 26456 Address: \_\_\_\_\_

9) FIELD SALE (IF MADE) TO: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

10) OIL & GAS INSPECTOR TO BE NOTIFIED: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

11) DESIGNATED AGENT: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

12) COAL OPERATOR: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

13) COAL OWNER(S) WITH DECLARATION ON RECORD: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

14) COAL LESSEE WITH DECLARATION ON RECORD: Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

15) PROPOSED WORK: Drill  Drill deeper  Redrill  Fracture or stimulate   
 Plug off old formation  Perforate new formation

16) GEOLOGICAL TARGET FORMATION, Albatross  
 Other physical change in well (specify) \_\_\_\_\_

17) Estimated depth of completed well, 5350 feet  
 18) Approximate water strata depths: Fresh, 150 feet; salt, \_\_\_\_\_ feet.  
 19) Approximate coal seam depths: \_\_\_\_\_ Is coal being mined in the area? Yes  No

20) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	For drilling	Left in well		
Conductor							
Fresh water	8 7/8	J-50	62	200	200	200	Kinds
Coal							Sizes
Intermediate	8 7/8	J-33	24	1300	1300	1300	Depths set
Production	4 1/2	J-33	10.5	500	500	500	Perforations:
Tubing							Top
Liners							Bottom

21) EXTRACTION RIGHTS

Check and provide one of the following:  
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.  
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)

22) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes  No   
 If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

23) Required Copies (See reverse side.)  
 24) Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

Notary: \_\_\_\_\_ Signed: \_\_\_\_\_ President  
 My Commission Expires: \_\_\_\_\_ It: \_\_\_\_\_

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number \_\_\_\_\_ 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. 10) 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.)

Permit expires \_\_\_\_\_ unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing:	Fee:

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

Administrator, Office of Oil and Gas

Line Item Explanation

- 1) Date of Application
- 2) Your well name and number
- 3) To be filled out by office of oil & gas
- 4A) "Oil" means natural crude oil or petroleum and other hydrocarbons, regardless of gravity, which are produced at the well in liquid form by ordinary production methods and which are not the result of condensation of gas after it leaves underground reservoirs; "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.
- 4B) "Shallow well" means any well drilled and completed in a formation above the top of the uppermost member of the "Onondaga Group" or a depth less than six thousand feet, whichever is shallower.  
 "Deep well" means any well drilled and completed in a formation at or below the top of the uppermost member of the "Onondaga Group" or at a depth less than six thousand feet, whatever is shallower.
- 5) Where well is located
- 6) Before a permit can be issued in a corporation, company partnership, or fictitious name, the name must be registered with the Secretary of State Office
- 7) Use separate sheet if necessary
- 8) Present surface owner at time application is filed.
- 9) Optional
- 11) See Reg. 7.01 relating to code §22-4-1k
- 12) "Coal Operator" means any persons, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine. See Note 24
- 13 & 14) As per §22-4-20; See Note 24
- 15) Work that will be attempted—A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.
- 16) Anticipated formation for which well will be completed
- 17) Self explanatory
- 18) Depth to deepest freshwater, and shallowest salt water, taken from nearby wells corrected for differences in elevation
- 19) All coal seam depths
- 20) Proposed casing program and cementing refer to Code 22-4-5, 22-4-6, 22-4-7, 22-4-8, 22-4-8a Reg 9.01, 15.01, 15.02, 15.03, 15.04, 25.01, 25.02, 25.03, 25.04
- 21) Code 22-4-11(c) - In lieu of filing the lease or leases or other continuing contract or contracts, the applicant for a permit described herein may file the following:
  - (1) A brief description of the tract of land including the district and county wherein the tract is located;
  - (2) The identification of all parties to all leases or other continuing contractual agreements by which the right to extract, produce or market the oil or gas is claimed;
  - (3) The book and page number wherein each such lease or contract by which the right to extract, produce or market the oil or gas is recorded;
  - (4) A brief description of the royalty provisions of each such lease or contract.
- 22) Code 22-4-11(d) and 22-4-11(e).
- 23) Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code §22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code §22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code §22-4-12a, and (v) if applicable, the consent required by Code §22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.
- 24) **The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.**

.....  
 The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_, 19\_\_\_\_, By \_\_\_\_\_  
 Its \_\_\_\_\_