

LEGEND

- Plotted from deed calls
- Surveyed or Calculated Lines
- * Active or Plugged Wells
- Well Location



Minimum Error of Closure 1 in 200

Source of Elevation Elev. Wall No. 1 - 1315

OWNERSHIP

No coal mined in this vicinity
 Surface: - Jack Weber, West Union, W.Va
 Minerals: F. M. Frum Hrs.

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: Mustaert
 Squares: N S E W

Map No. _____

Company CARNEGIE NATURAL GAS CO.
 Address Munhall, Penna.
 Farm F. M. Frum, Jack E. WEBBER
 Tract _____ Acres 85 Lease No. E-5867-18
 Well (Farm) No. 3 Serial No. 1822
 Elevation (Spirit Level) 992
 Quadrangle Smithburg 7 1/2
 County Doddridge District West Union
 Engineer Mustaert
 Engineer's Registration No. 1271
 File No. _____ Drawing No. _____
 Date March 28, 1979 Scale 1" = 500'

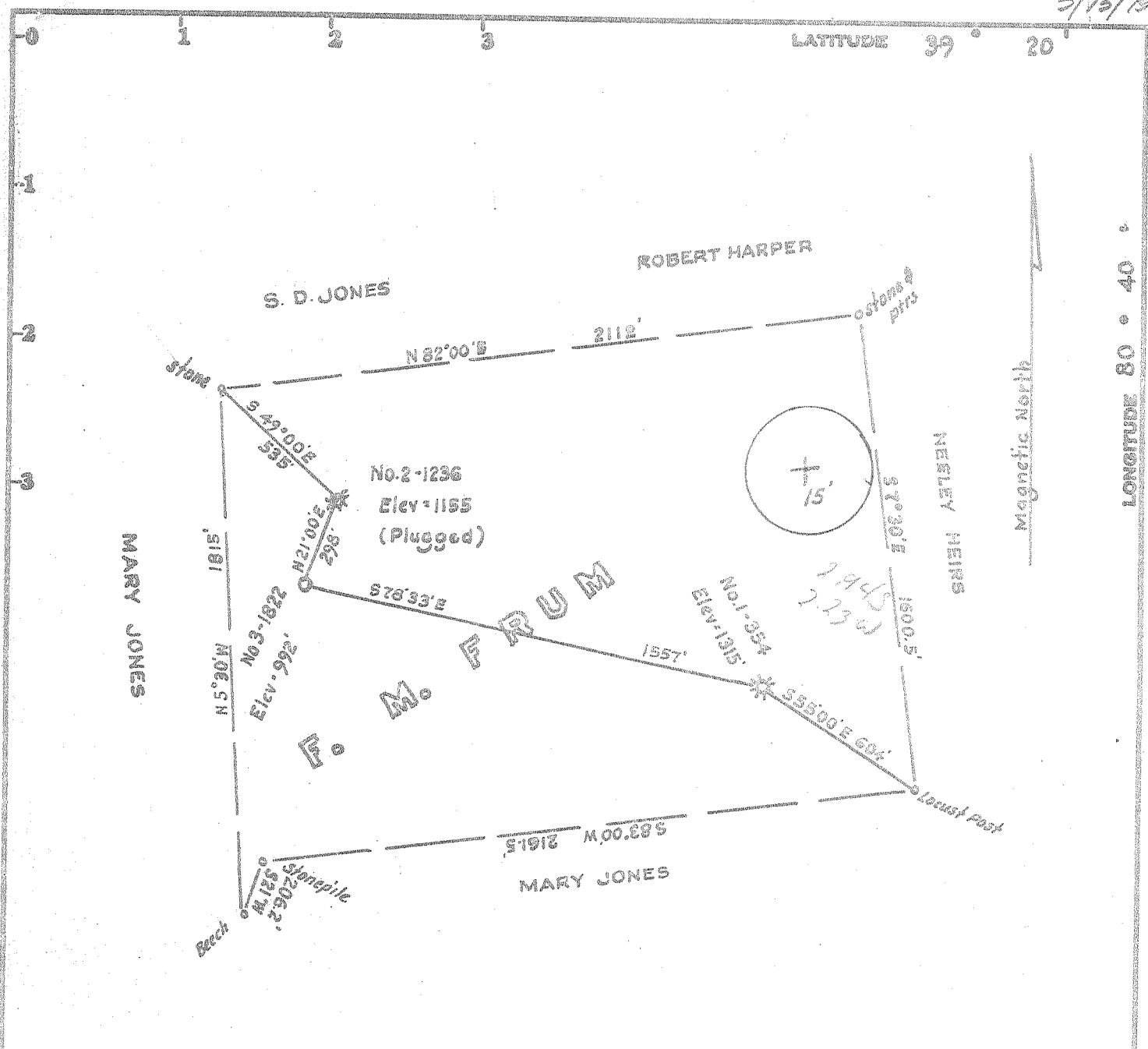
WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS
 #10 McJUNKIN ROAD
 NITRO, WEST VIRGINIA 25143-2506

WELL LOCATION MAP

APR 18 1979
47-017-02434-7
 Well was drilled in 1979
 TD - 5300' Production from
 Alexander & Cedar Creek
 Set temporary Plug Squeeze 4 1/2"
 free Well Bore, Gordon Square
 Big Spring & Minton for sample

JUL 18 1997

5/15/79



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Signed: [Signature]
 Squares: N S E W

Map No. _____

Company CARNegie NATURAL GAS CO.

Address Munhall, Penna.

Farm F.M. Frum, Jack E. Weber

Tract _____ Acres 85 Lease No. E-5867-1B

Well (Farm) No. 3 Serial No. 1822

Elevation (Spirit Level) 992 SW Q

Quadrangle Smithburg 7th Center Point 15'

County Doddridge District West Union

Engineer [Signature]

Engineer's Registration No. 1271

File No. _____ Drawing No. _____

Date March 28, 1979 Scale 1" = 300'

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

WELL LOCATION MAP
 FILE NO. 47-017-2434

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

MAY 28 1979

6-4 5300' SMITHTON-FLINT SEDALIA 99
 ALEXANDER



RECEIVED

NOV - 2 1979

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division
WELL RECORDS

OIL & GAS DIVISION
DEPT. OF MINES

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Quadrangle Centerpoint S.W.

Permit No. Dodd- 2434

Company Carnegie Natural Gas Company
Address 3904 Main Street, Munhall, Pa. 15120
Farm F. M. Frumm Acres 85
Location (waters) England Run
Well No. 3-1822 Elev. 992'
District West Union County Doddridge
The surface of tract is owned in fee by _____
Jack E. Webber
Address Smithburg, West Va. 26436
Mineral rights are owned by Appalachian Natural
Address Clarksburg, W. Va.
Drilling Commenced 7/27/79
Drilling Completed 8/2/79
Initial open flow 136,000 cu. ft. _____ bbls.
Final production 110,000 cu. ft. per day _____ bbls.
Well open _____ hrs. before test 1360 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8			
8 5/8	1260	1260	150
7			
5 1/2			
4 1/2	5305	5305	710
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Fractured by Halliburton on 8/23/79 first stage treated ⁵⁰⁰ ~~3,000~~ gal. acid.
500 bbls. of water and 29,000 of sand. Second stage treated 500 gal. acid.
1095 bbls of water and 109,000 of sand.

Coal was encountered at None 415-418 Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Cedar Creek & Alexander Depth 4991-5015 5079-5176

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Rock & Shale			0	45		
Sand			45	80		
Sand & Shale			80	90		
Sand			90	210		
Sand & Shale			210	235		
Red Rock & Shale			235	415		
Coal			415	418		
Sand & Shale			418	430		
Sand			430	450		
Sand & Shale			450	685		
Red Rock & Shale			685	935		
Sand			935	950		
Sand & Shale			950	960		
Sand			960	1000		
Shale			1000	1010		
Sand & Shale			1010	1105		
Sand			1105	1215		
Sand & Shale			1215	1305		
Black Shale			1305	1310		
Shale			1310	1315		
Sand			1315	1335		
Sand & Shale			1335	1345		
Sand & Lime			1345	1350		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand & Shale			1490	1600		
Black Shale & Shale			1600	1640		
Sand & Shale			1640	1683		
Sand			1683	1710		
Little Lime			-1710	1723		
Shale			1723	1737		
Sand			1737	1785		
Big Lime			-1785	1840		
Injun Sand			1840	1935		
Shale & Sand			1935	2030		
Sand			2030	2225		
Shale			2225	2300		
Sand & Shale			2300	2420		
Sand			2420	2480		
Sand & Shale			2480	4835		
Shale			-4835	4845		
Shale			4845	5105		
Sand ALEX.			5105	5210		
Sand & Shale			5210	5300		
T.D.				5300'		

Date September 6, 19 79

APPROVED George H. ... Owner

By Roger D. Ludwig
(Title) GEOLOGIST



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

MAY 15 1979

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

Surface Owner Jack E. Webber
Address Smithburg, West Va. 26136
Mineral Owner Appalachian Natural Resources Inc.
Address Clarksburg, West Va. 26302
Coal Owner _____
Address _____
Coal Operator _____
Address _____

DATE May 10, 1979
Company Carnegie Natural Gas Company
Address 3901 Main Street, Munhall, Pa. 15120
Farm F. H. Prumm Acres 85
Location (waters) Englands Run
Well No. 3-1822 Elevation 992'
District West Union County Doddridge
Quadrangle Centerpoint S.W.

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22 of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 1-15-80

[Signature]
Deputy Director [Signature] Gas Division

INSPECTOR TO BE NOTIFIED Paul Garrett
ADDRESS Clarksburg, W. VA.
PHONE 622-3871

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated April 18, 19 07 by Martha E. Prumm made to Carnegie Natural Gas Company recorded on the _____ day of _____ 19____, in Doddridge County, Book 8 Page 105
X NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours, Carnegie Natural Gas Company
(Sign Name) [Signature]
Well Operator Div. Supt.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

3901 Main Street,
Street
Munhall,
City or Town
Penna. 15120
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

47-017-2434 PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

BLANKET BOND

[Signature]

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME S. W. Jack Drilling Company NAME W. I. Yoho, Div. Supt.
 ADDRESS P.O. Box #18, Buckhannon, W.Va. 26201 ADDRESS Toll Gate, West Va. 26112
 TELEPHONE 304-472-2161 TELEPHONE 304-659-2921
 ESTIMATED DEPTH OF COMPLETED WELL: 5300' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Alexander
 TYPE OF WELL: OIL _____ GAS COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
18 - 16 11-3/4"	30'		
9 - 5/8			
8 - 5/8	1200'	1200'	to surface
7			
5 1/2			
4 1/2	5300'	5300'	600'
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS _____ FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS _____
 IS COAL BEING MINED IN THE AREA? no BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title

017 2434 Frac

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: ⁰¹⁵⁵ CARNEGIE NATURAL GAS COMPANY 865^v 611 (81)
- 2) Operator's Well Number: FRUM #1822 3) Elevation: 992'
- 4) Well type: (a) Oil___/ or Gas X / *Issued 07/14/97*
 (b) If Gas: Production X / Underground Storage ___ / *Expires 07/14/99*
 Deep ___ / Shallow X /
- Proposed Target Formation(s): WEIR, BEREA, GORDON, SQUAW, BIG INJUN, MAXTON SANDS
- EXISTING Proposed Total Depth: 5280 feet *419*
- Approximate fresh water strata depths: _____
- Approximate salt water depths: _____ *1097*
- Approximate coal seam depths: 415 - 418
- Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: STIMULATE ABOVE MENTIONED SANDS AND CO-MINGLE WITH EXISTING PRODUCTION
- 12) _____

RECEIVED
 Division of Environmental Protection

Permitting
 Office of Oil & Gas

ALL PIPE EXISTING

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor						MAY NEWS TO SG
Fresh Water						MAXTON -
Coal						O.K. Mingle.
Intermediate	8 5/8				1260	150 SKS
Production	4 1/2				5262	710 SKS
Tubing						
Liners						

Possible
 Survey job

PACKERS : Kind _____
 Sizes _____
 Depths set _____

For Office of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond _____ Agent
 (Type)

23732

FRUM WELL 1822

1. Load Hole and Run Bond Log
2. Set Plug at ?
3. Perforate at ?
4. Squeeze from ? to 1500'
5. Run Bond Log
6. Drill Out Cement and Plugs
7. Set Plug at 2560'
8. Perforate and Fracture Weir/Berea/Gordon Sands,
300 sks. EW/Crosslink
9. Set Plug at 1890'
10. Perforate and Fracture Squaw/Big Injun/Maxton Sands,
400 sks. EW/Crosslink

Top Of Existing Cement @ 1850' (?)

Top Existing Perforation - 4992'

RECEIVED
The Division of
Environmental Protection

JUL 17 1997

Permitting
Office of Oil & Gas

1) Date: MAY 12, 1997
2) Operator's well number
FRUM #1822
3) API Well No: 47 - 017 - 2434
State County Permit

Permitting
Office of Oil & Gas

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served: 5) (a) Coal Operator:
- (a) Name PALMER J. & GLORIA LAYTON Name NO COAL
 Address 205 SPOUT SPRING AVENUE Address _____
MT. HOLLY, NJ 08060
- (b) Name _____ (b) Coal Owner(s) with Declaration
 Address _____ Name _____
 Address _____
- (c) Name _____ Name _____
 Address _____ Address _____
- 6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration
 Address RT #2 BOX 135 Name _____
SALEM, WV 26426-0135 Address _____
 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 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 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 22-6 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 CARNEGIE NATURAL GAS COMPANY
 By: *Douglas R. May*
 Its: MANAGER OF PRODUCTION
 Address P. O. BOX 387
MANNINGTON, WV 26582
 Telephone 304-986-2060

Subscribed and sworn before me this 12TH day of MAY, 1997

My commission expires OCTOBER 26, 2001 *S. Wayne Jones* Notary Public