

Minimum Error of Closure 1 in 200'

Source of Elevation U.S.G.S. elev. at forks of road (shown) = 789'

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.

Fracture

New Location

Drill Deeper 7/14/76

Abandonment

Signed: Munhall J.
Squares: N S E W

Company CARNEGIE NATURAL GAS CO.
 Address Munhall, Penna.
 Farm A. J. & Mary I. Bates, Hrs.
 Tract Acres 115 Lease No. 5575
 Well (Farm) No. Three Serial No. 1747-1780
 Elevation (Spirit Level) 772
 Quadrangle Centerpoint
 County Doddridge District McClellan
 Engineer Munhall J.
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date June 23, 1973 Scale 1" = 500'

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

WELL LOCATION MAP

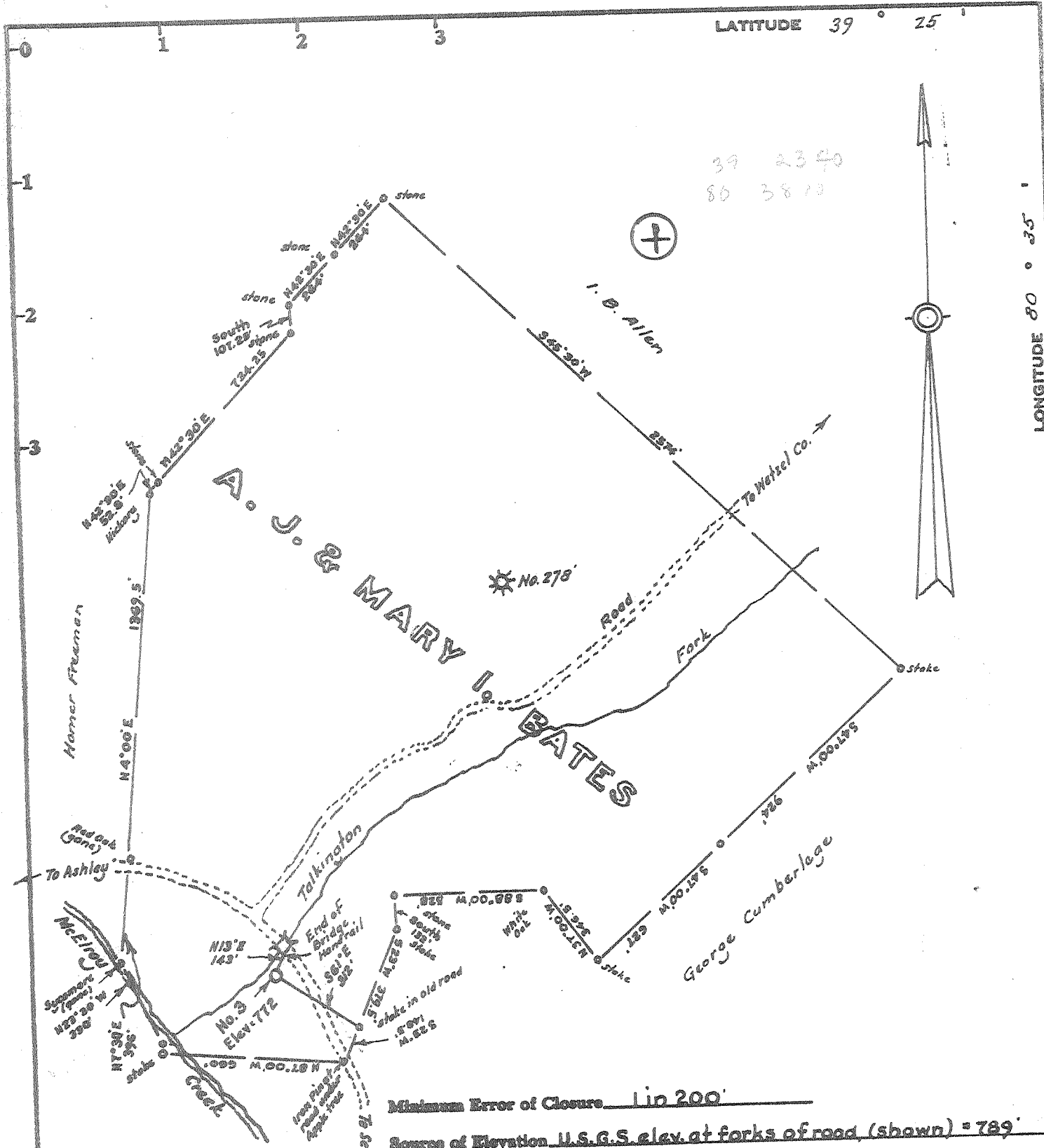
FILE NO. 1747-DD
 Corrected Serial No. 47 017

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown. JUL 26 1976

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

11/13/1973

LATITUDE 39° 25'



39 23 40
80 38 10

LONGITUDE 80° 35'

Minimum Error of Closure 1 in 200'

Source of Elevation U.S.G.S. elev. at forks of road (shown) = 789'

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.

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

Signed: W. S. [Signature]
Squares: N S E W

Map No.

Company CARNEGIE NATURAL GAS CO.
 Address Munhall, Penna.
 Farm A. J. & Mary I. Bates, Hrs.
 Tract _____ Acres 115 Lease No. 5575
 Well (Farm) No. Three Serial No. 1747-1780
 Elevation (Spirit Level) 772
 Quadrangle Centerpoint
 County Doddridge District McClellan
 Engineer [Signature]
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date June 23, 1973 Scale 1" = 500'

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

WELL LOCATION MAP

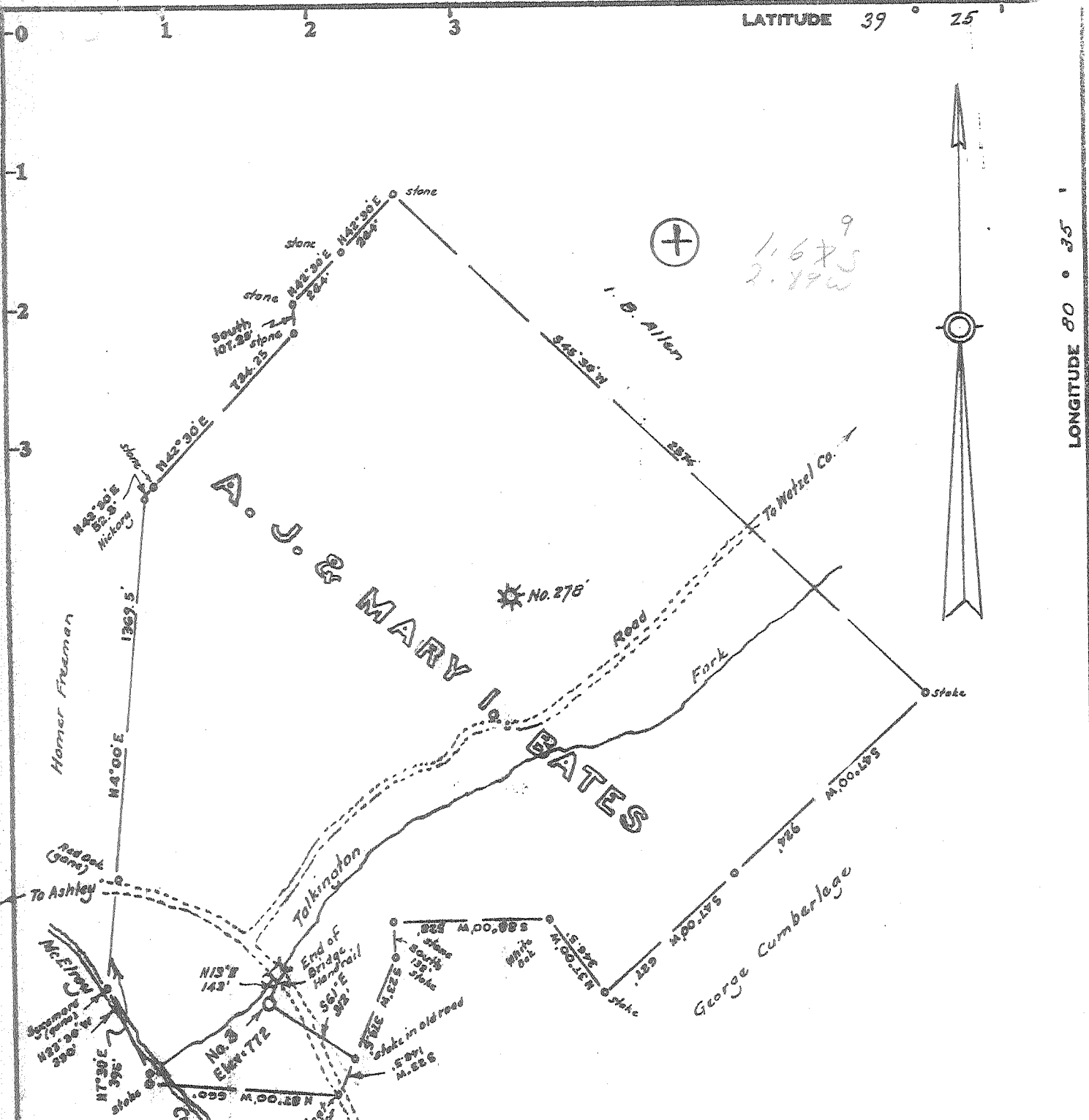
FILE NO. Doc-1747-DD
 Corrected Serial No. 47 017

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

LATITUDE 39° 25'

LONGITUDE 80° 35'



Minimum Error of Closure 1 in 200'

Source of Elevation U.S.G.S. elev. at forks of road (shown) = 769'

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: Walter J. [Signature]
Squares: N S E W

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

Map No.

Company CARNEGIE NATURAL GAS CO.
 Address Munhall, Penna.
 Farm A. J. & Mary I. Bates, Hrs.
 Tract _____ Acres 118 Lease No. 5575
 Well (Farm) No. Three Serial No. 1790 1780
 Elevation (Spirit Level) 772
 Quadrangle Centerpoint
 County Doddridge District McClellan
 Engineer Walter J. [Signature]
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date June 23, 1973 Scale 1" = 500'

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

WELL LOCATION MAP

FILE NO. Ad-1747
47 017

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

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



RECEIVED

DEC 17 1973

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD

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

Quadrangle Centerpoint NW

Permit No. DOD-1747

Company Carnegie Natural Gas Company
Address 390 1/2 Main St., Munhall, Pa.
Farm A. J. Bates Heirs Acres 115
Location (waters) Talkington Fork
Well No. 3-1780 Elev. 772'
District McClellan County Doddridge
The surface of tract is owned in fee by _____
James D. Jarrett
Address Centerpoint, W. Va.
Mineral rights are owned by A. J. Bates, Heirs
Address Centerpoint, W. Va.
Drilling Commenced August 2, 1973
Drilling Completed August 10, 1973
Initial open flow 368,000 cu. ft. _____ bbls.
Final production 368,000 cu. ft. per day _____ bbls.
Well open M hrs. before test 96# RP.
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 16"	23'	23'	
13-10" 10-3/4"	202'	202'	65 sacks
9 5/8			
8 5/8			
7	174 1/2'	174 1/2'	28 sacks
5 1/2			
4 1/2			
3			
2			
Liners Used			

Attach copy of cementing record.

Coal was encountered at _____ Feet _____ Inches
Fresh water 10' Feet _____ Salt Water 1175' Feet _____
Producing Sand Big Injun (Sand) Depth 1886-1888' (282 1/2'-25')

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Soil			0	10		
Gravel			10	25		
Sand			25	40		
Shale			40	55		
Sand			55	69		
Red Rock			69	76		
Shale			76	83		
Sand			83	157		
Shale			157	180		
Sand			180	200		
Shale			200	236		
Sand			236	278		
Shale			278	320		
Sand			320	340		
Shale			340	430		
Sand			430	450		
Shale			450	482		
Sand			482	487		
Shale			487	518		
Red Rock			518	532		
Shale			532	539		
Sand			539	548		
Red Rock			548	560		
Sand			560	580		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet /	Bottom Feet	Oil, Gas or Water	* Remarks
Red Rock			580	592		
Sand			592	605		
Shale			605	620		
Red Rock			620	627		
Sand			627	642		
Red Rock			642	660		
Sand			660	670		
Shale			670	749		
Sand			749	795		
Slate			795	803		
Sand			803	840		
Shale			840	870		
Sand			870	970		
Shale			970	984		
Sand			984	1048		
Shale			1048	1080		
Sand			1080	1104		
Shale			1104	1110		
Sand			1110	1148		
Shale			1148	1160		
Sand			1160	1270		
Shale			1270	1320		
Sand			1320	1455		
Shale			1455	1583		
Red Rock			1583	1589		
Sand			1589	1607		
Shale			1607	1637		
Red Rock			1637	1690		
Lime			1690	1704		
Slate			1704	1720		
Big Lime			1720	1812		
Sand - Injun			1812	1913	Gas 1886-88	
Shale			1913	1924		
Sand			1924	1932		
Shale			1932	2050		
Sand			2050	2070		
Shale			2070	2090		
Sand			2090	2115		
Shale			2115	2148		
Sand			2148	2150		
Shale			2150	2248		
Sand			2248	2293		
Shale			2293	2314		
Sand			2314	2325		
Shale			2325	2400		
Sand			2400	2424		
Shale			2424	2518		
Sand			2518	2527		
Slate and Shells			2527	2827	Gas 2824-25	Fifth sand show
Total Depth				2827		

Date December 13, 19 73

APPROVED CARNEGIE NATURAL GAS COMPANY, Owner

By Roger B. Ludwig
(Title)
GEOLOGIST

REC'D
ENGINEERING
DEPT.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Centerpoint NW

Permit No. DOD-1747-DD

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

Company Carnegie Natural Gas Company
Address 3904 Main St., Munhall, Pa. 15120
Farm A. J. Bates Heirs Acres 115
Location (waters) McClroy Cr. near Mouth of Talkington Fork
Well No. 3-1780 Elev. 772'
District McClellan County Doddridge
The surface of tract is owned in fee by James D. Jarrett

Address Centerpoint, W. Va.
Mineral rights are owned by A. J. Bates Heirs
Address Centerpoint, W. Va.
Deeper
Drilling Commenced August 5, 1976
Drilling Completed August 8, 1976
Initial open flow 60,000 cu. ft. _____ bbls.
Final production 184,000 cu. ft. per day _____ bbls.
Well open _____ hrs. before test 1620# 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			
7			
5 1/2			
4 1/2	4896	4896	45 sacks
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Perforated: 4847-4854' - 14 holes.

Fractured: Using 905 barrel of water, 40,000# 20-40 Sand, and 30 gallons of F-32 Foaming Agent to breakdown.

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Benson Sand Depth 4844-4857'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			2827	2855		
Shale			2855	3106		
Sand			3106	3111		
Shale			3111	3170		
Sand			3170	3200		
Shale			3200	3230		
Sand			3230	3434		
Shale			3434	3460		
Sand			3460	3518		
Shale			3518	3526		
Sand			3526	3590		
Shale			3590	3598		
Sand			3598	3625		
Shale			3625	4200		
Sand			4200	4220		
Shale			4220	4244		
Sand			4244	4280		
Shale			4280			
Benson 4844-57						
Total Depth				4943		
4943						
2827						
2116						
new ft. all exploratory						

(over)

* Indicates Electric Log tops in the remarks section.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED
JUL 23 1973
OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE July 23, 1973
Company Carnegie Natural Gas Company
Address 3904 Main St., Marshall, Pa. 15120
Farm A. J. Bates Gains Acres 115
Location (waters) McElroy Creek Near Mouth of Talkington Fork
Well No. 3-1790 Elevation 772'
District McClellan County Doddridge
Quadrangle Centerpoint SW

Surface Owner James D. Jarrett
Address Centerpoint, W. Va.
Mineral Owner A. J. Bates Heirs
Address Centerpoint, W. Va.
Coal Owner No commercial coal
Address _____
Coal Operator _____
Address _____

INSPECTOR TO BE NOTIFIED Wm. Blosser
Box 1897
Colfax, W.V. PH: 363-9105

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 11-23-73.

Robert S. Bell
Deputy Director - Oil & Gas Division

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 Sept. 17 1906 by A. J. Bates made to Carnegie Natural Gas Co. and recorded on the 21st day of April 1913, in Doddridge County, Book 27 Page 72
K
_____ 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) J. W. Sweeney
Well Operator Div. Eng.
P. O. Drawer No. 367

Address
of
Well Operator

Street
Mariontown
City or Town
W. Va.
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.

**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 Spencer Enterprises NAME J. V. Sheehey
 ADDRESS West Plains, W. Va. ADDRESS Hamington, W. Va.
 TELEPHONE 573-1602 TELEPHONE 916-2060
 ESTIMATED DEPTH OF COMPLETED WELL: 2800' ROTARY X CABLE TOOLS
 PROPOSED GEOLOGICAL FORMATION: Fifth
 TYPE OF WELL: OIL GAS X 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			
13 - 10	20'		
9 - 5/8	200'	200'	Cemented to surface.
8 - 5/8			
7	1760'		
5 1/2			
4 1/2	2800'	2800'	1000'
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



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JUL 14 1976

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE July 13, 1976

Surface Owner James D. Jarrett
Address Centerpoint, W. Va.

Company Carnegie Natural Gas Company
Address 3904 Main St., Monroeville, Pa. 15120

Mineral Owner A. J. Bates Heirs
Address Centerpoint, W. Va.

Farm A. J. Bates Heirs Acres 115
Location (waters) McClroy Cr. near south of
Washington Fork

Coal Owner _____
Address _____

Well No. 3-1780 Elevation 772'
District McClellan County Doddridge

Coal Operator No commercial coal.
Address _____

Quadrangle Centerpoint NW

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 deepening. This permit shall expire if
operations have not commenced by 11-14-76.

INSPECTOR
TO BE NOTIFIED Paul Garrett

ADDRESS 321 Beech St., Clarksburg, WV.

PHONE 622-3871

[Signature]
Deputy Director - Oil & Gas Division

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 Sept. 17 1906 by A. J. Bates made to Carnegie Natural Gas Co. and recorded on the 21st day of April 1913, in Doddridge County, Book 27 Page 72

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.

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

Very truly yours, Carnegie Natural Gas Company

(Sign Name) James C. Stephenson
Well Operator Div. Supt.

P. O. Drawer No. 307

Mannington

West Virginia

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.

BLANKET BOND

DOD-1747-DD.

PERMIT NUMBER

Blanket Bond

47 017

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 Hugh A. Spencer NAME J. G. Stephenson
 ADDRESS West Union, W. Va. ADDRESS Harrington, W. Va.
 TELEPHONE 873-1602 TELEPHONE 986-2060
 ESTIMATED DEPTH OF COMPLETED WELL: 4050' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Benson
 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 <u>16"</u>	<u>23'</u>	<u>23'</u>	
13 - 10 <u>10-3/4"</u>	<u>202'</u>	<u>202'</u>	
9 - 5/8			
8 - 5/8			
7 <u>7"</u>	<u>1741'</u>	<u>1741'</u>	
5 1/2			
4 1/2	<u>4050'</u>	<u>4050'</u>	<u>3130'</u>
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.

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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