



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

Note: No water wells or dwellings within 2000' of well.

Source of Elevation U.S.G.S. BM on bridge over Bens Run on Arvilla Road, E131, El. 654.309

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.

Minimum accuracy, one part in 2500

Company **FMC CORPORATION** INDUSTRIAL CHEMICALS DIVN.
 Address P O Box 8127, South Charleston, W Va 25303
 Farm **FMC CORPORATION**
 Tract _____ Acres **372.76** Lease No. _____
 Well (Farm) No. **11** Serial No. _____
 Elevation (Spirit Level) **917.29**
 Quadrangle **Bens Run 7 1/2 Series; ST. MARYS 15'**
 County **Pleasants** District **Union**
 Surveyor or Engineer **Arden S. Marshall, L.S.**
 Surveyor's or Engineer's Registration No. **3**
 File No. _____ Drawing No. _____
 Date **Sept. 23, 1975** Scale **1" = 500 Ft.**

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

WELL LOCATION MAP
 FILE NO. **PLEAS - 694**

+ 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.

47-073 Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

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JUL 26 1976

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD

Quadrangle st. Marys 15'

Permit No. Pleas. - 694
47-073

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

Company <u>FMC Corporation, Industrial Chemical</u>	Div. <u>Casing and</u>	Used in	Left	Cement fill up
Address <u>P. O. Box 8127, So. Charleston, W. Va.</u>	Tubing	Drilling	in Well	Cu. ft. (Sks.)
Farm <u>FMC Corporation</u> Acres <u>372.76</u>	Size			
Location (waters) <u>Bens Run, Ohio River</u>	<u>20-16</u>			
Well No. <u>31</u> Elev. <u>917.29</u> G.L.	Cond. <u>16"</u>	<u>398.5'</u>	<u>392.7'</u>	<u>325 sacks (sur face)</u>
District <u>Union</u> County <u>Pleasants</u>	<u>13-10" 10-3/4"</u>	<u>2004.6'</u>	<u>1996.5'</u>	<u>745 sacks (surface)</u>
The surface of tract is owned in fee by _____	<u>9 5/8</u>			
<u>Same as above</u>	<u>8 5/8</u>			
Address _____	<u>7 7-5/8"</u>	<u>6699.2'</u>	<u>6688'</u>	<u>720 sacks (bot. to 4200')</u>
Mineral rights are owned by <u>Same as above</u>	<u>5 1/2</u>			
Address _____	<u>4 1/2</u>			
Drilling Commenced <u>February 3, 1976</u>	<u>3</u>			
Drilling Completed <u>April 27, 1976</u>	<u>2</u>			
Initial open flow _____ cu. ft. _____ bbls.	Liners Used			
Final production _____ cu. ft. per day _____ bbls.				
Well open _____ hrs. before test _____ RP.				

Well treatment details:

Attach copy of cementing record.

Drilling Media

0-2002' fluid

2002'-5925' - Air

5925'-6730' - fluid

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand <u>None</u> Depth _____

Formation	Color	Hard or Soft	(1) Top Feet (2)		Bottom Feet		Oil, Gas or Water	* Remarks
			Log	True	Log	True		
Pennsylvania (undivided)			0	0	1590	-		
Mauch Chunk			1590	-	1694	-		
Little Lime			1632	-	1650	-	LMS in mauch chunk	
Big Lime (Greenbrier)			1694	-	1756	-	Base mauch chunk	
Keener			1756	-	1780	-		
Big Injun			1780	-	1840	-		
Devonian Shales			1840	-	5666	5610		
Marcellus			5666	5610	5732	5676	Gas show	
Onondaga			5732	5676	5923	5867		
Oriskany			5923	5867	5987	5931		
Helderberg			5987	5931	6206	6150		
Salina			6206	6150	6678		Base not reached	
Salt Section			6779	6522	6707	6650		

*Tops from G-N log

(1) Log top

(2) Log top corrected for hole deviation

Handwritten notes: 4730, 5867, 5931, 5923, 5867, 5987, 5931, 6206, 6150, 6678, 6707, 6650

(over)

* Indicates Electric Log tops in the remarks section.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

OCT 28 1975

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 October 1, 1975
 Surface Owner FMC Corporation Company Industrial Chemical Division
Industrial Chemical Division
 Address P.O. Box 8127, So. Charleston, W. Va. 25303 Address P.O. Box 8127, So. Charleston, W. Va. 25303
 Mineral Owner FMC Corporation Farm FMC Corporation Acres 372.76
 Address Same as above Location (waters) Bons Run, Ohio River
 Coal Owner None Well No. 11 Elevation 917.29
 Address _____ District Union County Pleasants
 Coal Operator None Quadrangle St. Marys - Bons Run
 Address _____

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 2-29-76

Robert L. Wood
Deputy Director - Oil & Gas Division
GENTLEMEN:

INSPECTOR TO BE NOTIFIED Donald Connors
PH: 428-8172 ADDRESS Mineral Wells, W. Va.
salt

The undersigned well operator is entitled to drill upon the above named farm or tract of land ~~for~~ having fee title thereto, (or as the case may be) under ~~deed~~ dated April 10 1958 by Earl and Rosalene Wells made to Food Machinery & Chemical Corporation (now FMC Corporation) and recorded on the 24 day of April 1958, in Pleasants County, Book 147 Page 78

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, W. Va. 26505
AC 304-296-4461

Very truly yours, FMC Corporation, Industrial Chemical
(Sign Name) Douglas K. Hartwell Div.
Well Operator Project Engineer

Address P. O. Box 8127
of _____ Street
Well Operator South Charleston
City or Town
West Virginia 25303
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.

CASH DEPOSIT
HELD BY TREASURER

Pleas-694 PERMIT NUMBER
47-073

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 _____ NAME Mr. S. E. Fritchard
 ADDRESS _____ ADDRESS Box A, Bens Run, W. Va. 26135
 TELEPHONE _____ TELEPHONE 652-3731
 ESTIMATED DEPTH OF COMPLETED WELL: 6750 ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Salt - Silurian
 TYPE OF WELL: OIL _____ GAS _____ COMB. _____ STORAGE _____ DISPOSAL SALT
 RECYCLING _____ WATER FLOOD _____ OTHER ~~OTHER~~

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
X - 16"	400'	400'	315 cu.ft. (circulate to surface)
X - 10 - 3/4"	2000'	2000'	910 cu.ft. "
9 - 5/8"			
8 - 5/8"			
7 - 5/8"	6750'	6750'	920 cu.ft. (4000' fill up)
5 1/2"			
4 1/2"			
3"			Perf. Top
2"			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 300 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS 1100' (3 to 6 feet thick)
 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