



New Location
 Drill Deeper
 Abandonment

Minimum Error of Closure METHODS USED SHOULD PRODUCE 1 IN 2500
 Source of Elevation U.S.G.S. TRIANGULATION STATION (McRAY ECCENTRIC 1957)
 WITH AN ELEVATION OF 1344
 "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." *Henry M. Parsons*

Company MOBAY CHEMICAL CORPORATION
 Address Pittsburgh PA 15205
NEW MARTINSVILLE, W.VA. 26155
 Farm EMCH
 Tract _____ Acres 50.63A UNIT Lease No. _____
 Well (Farm) No. EMCH # 2 Serial No. _____
 Elevation (Spirit Level) 1333 15' NF
 Quadrangle NEW MARTINSVILLE (1:2400)
 County WETZEL District PROCTOR
 SURVEYOR HENRY M. PARSONS
 SURVEYOR 98
 Engineer's Registration No. _____
 File No. _____ Drawing No. _____
 Date APRIL 16, 1977 Scale 1" = 1000'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
WELL LOCATION MAP
 FILE NO. WET-618

+ 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.

47-103
 JUN 14 1977



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

RECORDED
APR 26 1979

WELL RECORD

OIL & GAS DIVISION
DEPT. OF MINES
Rotary Cable _____ Gas _____
Recycling _____ Comb.
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Quadrangle New Martinsville
Permit No. Wet 618

Company <u>Mobay Chemical Corporation</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>Penn Lincoln Pkwy. W., Pittsburgh, PA</u>				
Farm <u>Hattie L. Emch</u> Acres <u>42</u>	Size			
Location (waters) <u>Haynes Run</u>	20-16			
Well No. <u>2</u> Elev. <u>1333</u>	Cond.			
District <u>Proctor</u> County <u>Wetzel</u>	13-10" 11 3/4	485	485	200 sx neat
The surface of tract is owned in fee by <u>Hattie L. Emch</u>	9 5/8			
Address <u>532 Briarcliff Court, New Martinsville, WV</u>	8 5/8	2378	2378	100 sx Neat + 4% gel to surface
Mineral rights are owned by <u>Same</u>	7			
Address <u>Same</u>	5 1/2			
Drilling Commenced <u>12/17/77</u>	4 1/2	3238	3238	200 sx RFC + Koli
Drilling Completed <u>12/30/77</u>	3			
Initial open flow <u>50M</u> cu. ft. _____ bbls.	2			
Final production <u>125M</u> cu. ft. per day <u>2</u> bbls.	Liners Used			
Well open <u>2</u> hrs. before test <u>650#</u> RP.				

Well treatment details:

Attach copy of cementing record.

Frac 4th (perf. 3093-94; 4 holes) & Gordon (perf. 2955-63; 11 holes) 600 BW, 110,000# sand, 15 Tons CO₂, ATP 2500 psi @ 20 BPM.
Frac Weir (perf. 2513-20, 2558-60; 23 holes) 875 BW, 110,000 # sand, 15 Tons CO₂, ATP 32 BPM @ 2,500 psi
Refrac Weir with 865 BW, 23,000# sand, 12 Tons CO₂

Coal was encountered at 1016-24 Feet _____ Inches _____
Fresh water 154 Feet _____ Salt Water 2220 Feet _____
Producing Sand 4th, Gordon, Weir Depth 3093, 2955, 2513

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
GL — KB			0	11		
Topsoil	brn	S	11	26		
SH & RR	gy-red	S	26	345		
SD & Sdy SH	gy	S	345	505		
SD	lt. gy	H	505	575		
Sdy. SH	gy	S	575	640		
SD	lt. gy	H	640	780		
Sdy. SH	gy	S-H	780	930		
SD	lt. gy	H	930	975		
Sdy. SH	gy	S	975	1055		
Coal	blk.	S	1016	1024		
SD	gy-wh	H	1055	1110		
SH	gy	S	1110	1330		
SD	gy	H	1330	1400		
Sdy. SH	gy & maroon	S	1400	1470		
Sdy. SH	lt.-m. gy	S	1470	1525		
SD	gy	H	1525	1545		
Sdy. SH	gy	S	1545	1570		
SD	gy	H	1570	1640		
Show Coal	blk	S	1635, 1670			
			1695, 1755			
Sdy SH & SD	gy	S-H	1645	1740		
SD, Shy. SD	gy	H	1740	1810		

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sdy SH	gy	S	1810	1850		
SD	gy	H	1850	1910		
SH, Sdy. SH	lt-m. gy	S	1910	1970		
SD	lt. gy	H	1970	2005		
Sdy. SH	lt. gy	S-H	2005	2074		
LS	tan	H	2074	2112		
SS	wh,gy	S-H	2112	2328	Greenbriar*	
SH, SLST	gy	S	2328	2468	Big Injun*	SG @ 2210'
SS, SLST, SH	gy	H	2468	2584	Weir*	
SH, SLST	gy	S	2584	2700		
SS	Reddish brn	H	2700	2716	Berea*	
SH, SLST	Reddish brn	S	2716	2950		
SS, SLST	gy	H	2950	3003	Gordon*	50 MCF
SH, SLST	gy	H	3003	3081		
SLST	gy	H	3081	3110	4th Sand?	
SLST, SH	gy	H	3110	3255		
		T.D.	3255			

Date September 14, 1978

APPROVED Mobay Chemical Corporation, Owner

By Michael F. Yarush, Geologist
(Tlic)



MAY 18 1977

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE 5/12/77

Surface Owner Hattie L. Emch
Address 532 Briarcliff Court
New Martinsville, WV 26155
Mineral Owner Hattie L. Emch
Address Same
Coal Owner Consolidation Coal Co.
Address Library, PA
Coal Operator Same
Address _____

Company Mobay Chemical Corporation
Address Penn Lincoln Parkway West
Pittsburgh, PA 15205
Farm Hattie Emch Acres 50.63
Location (waters) Haynes Run
Well No. 2 Elevation 1333
District Proctor County Wetzel
Quadrangle New Martinsville

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 9-26-77.

Robert T. [Signature]
Deputy Director - Oil & Gas Division

INSPECTOR TO BE NOTIFIED Phillip Tracy
PH: 758-4573 ADDRESS Middlebourn, W. Va.

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 May 10 1977 by Hattie L. Emch made to Mobay Chemical and recorded on the 11th day of May 1977, in Wetzel County, Book 57A Page 480

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 _____ 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

Address
of
Well Operator

Very truly yours, Mobay Chemical Corporation

(Sign Name) [Signature]

Well Operator
By HADDAD AND BROOKS, INC.
Penn Lincoln Parkway West
Street
Pittsburgh
City or Town
Pennsylvania 15205
State

BLANKET BOND

*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.

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b WET-618 PERMIT NUMBER and will carry out the specified requirements."
47-103

Signed by [Signature]

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

PROPOSED WORK ORDER TO X DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME S. Jack Drilling Co. NAME Mobay Chemical Corporation
 ADDRESS Indiana, PA 15701 ADDRESS New Martinsville, WV
 TELEPHONE 412-463-9191 TELEPHONE 304-455-4400
 ESTIMATED DEPTH OF COMPLETED WELL: 3300 ROTARY X CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordon
 TYPE OF WELL: OIL _____ GAS _____ COMB. X 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 11 3/4"	450'	450	cemented to surface
9 - 5/8			
8 - 5/8	2400'	2400'	cement w/75 sx & gel to surface
7			
5 1/2			
4 1/2 production			cemented as needed
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100' FEET 1150' 1850' SALT WATER 2240 FEET
 APPROXIMATE COAL DEPTHS 1075' Pgh. Coal
 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