N22061

3 400 Gordon

#### DE

S',	PATE	4Q 3	WES'	T VI	RGIN	IIA	
EPARTMENT	OF	MINE	S, 1	OIL	AND	GAS	DIVISION

Date:-	November	29,		19_7
Operator	's		•	-

0p Well No

108-78

WELL TYPE: 011\_

WELL OPERATOR'S REPORT

(If "Gas", Production X / Underground storage / Deep / Shallow X /)

No.	_Jac	<u>k N</u>	<u>loor</u>	<u>e #1</u>

API Wel No. 47 - 103 - 1154 CHANGE : State County Permit DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

/ Gas X / Liquid Injection / Waste Disposal

LOCATION: E	Elevati	on:	1362'	4.6	Wa	tershed: H	aynes Run		
I	Distric	t:	Proctor	•	_ C	ounty: Wetz	el Q	uadrangle: <u>New</u>	Martinsville
WELL OPERATOR	Moba	y Che	mical (	Corpo	ratio	on D	ESIGNATED AG	ENT <u>Mobay Che</u> i	mical Corporation
Address	•							•	ville, WV 26155
	Pitt	sburg	h, PA	1520	5			***	C1511 (1218)
									960 V (Z
PERMITTED WOR									ture or stimulate
÷	P1	ng oft	old fo	rmati,	on	/ Perforat	e new format	ion/ 51	-C - 3 1979
	Ot	her ph	ysical	chang	e in	well (specify)			& GAS DIVISION
	•, •	<del>'11 - 1</del>	aut Necks				<del>, , , , , , , , , , , , , , , , , , , </del>		I. OF MINES
PERMIT ISSUE	D ON _	March	15		, 19_	79	OIL & GAS INS	SPECTOR FOR THIS	• •
(IF APPLICAT	BLE: PI	LUGGING	OF DRY	HOLE	ON		Name <u>Phi</u>	llip Tracy	
CONTINU REWORKI	OUS PRO NG. V	DGRESSI ERBAL I	ION FROM PERMISSI	ON DE	LING STAINE	OR D	Address	Middlebourn,	WV
			, 19						
GEOLOGICAL T	ARGET	FORMAT]	(ON;	llexa	nder		·	Depth 51	00 Feet
							ary_X_/	Cable Tools	
Water s	strata	depth:	Fresh	N	A_ree	et; salt,_	NA feet.		•
Coal se	am dep	ths: _	1047-10	0521	Pgs.	Coals coal be	ing mined in	the area? No	
Work wa	as comm	enced	•	June	19	, 19 <u>79</u> ,	and complete	d August 9	, 19 <u>79</u>
	•	•							
CASING AND	<b>TUBING</b>	PROGRA	M					•	•
CASING OR TUBING TYPE	11 .	1	IFICATI  Weight	1	1	FOOTAGE :	1	CEMENT FILL-UP OR SACKS	PACKERS
· · · · · · · · · · · · · · · · · · ·	Size	Grade	per ft	New	Used	For drilling	Left in well	(Cubic feet)	
Conductor	11 3/	<del> </del>	42	X	<u> </u>	250	250		Kinds
Fresh water	<b> </b>		<del> </del>		-17-05				
Coal		ļ <u>.</u>						75 sx Neat +	Sizes
Intermediate	8 5/8	<u>"</u>	24	X	ļ	2087	2087	CaCl-4% gel to	surf.
Production	4 1/2	1	10.5	X	ļ	3792	3792		OZ Depths set
Tubing	1 1/2	"	2.5	X	ļ	3650	3650		
Liners		ļ	<del> </del>	ļ	ļ				Perforations:
<del></del>	<u> </u>		ļ	<u> </u>	ļ.,,,				Top Bottom
				<u> </u>	<b></b>			<b></b>	
<del></del>		<u> </u>		<u> </u>	<u> </u>			<u> </u>	
OPEN FLOW DA	<b>ል</b> ጥል					•			
		mation	Weir S	SS/Go:	rdon	SS		Pav zone denth	1 2 <u>535-46/2979-9</u> 6feet
G	Na Na	tural	onen fl	O.M.	0./400	Mcf/d	Oil: Initia	l open flow,	Ph1/4
We	eir	nal on	en flow	· · · · · ·	570	Mc f/d)	Final	open flow,	501/d
								sts, NA hours	
			•			* .		after hours	
						etion]	meadar emetto)	not	119 SHAF TU
			•	. •				Pau zono dosti	3667.09
								l open flow,	3667-98 feet
	Ľ,					•		open flow,ests, NA hour	
•	+a+4~ =		•			•		after 1/ hour	

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforations - Warren: 3674-92.5, 18 holes Frac: HF acid 500 gal., CO<sub>2</sub> Frac, Breakdown pressure, 3,200 psi

Total Sand - 10,000# 80/100 mesh sand, 40,000# 20/40 mesh sand, 1,050 bbls. water, 20 tons CO<sub>2</sub> Perforations-Gordon: 2985.5-95.5, 12 holes Frac: Mod 202 acid 500 gal. Water frac, breakdown

Time, what are stade The lip , seek the wanters

pressure 1,200 psi

Total Sand - 16,000# 80/100 mesh sand, 37,500# 20/40 mesh sand, 935 bbls. water, 10 tons CO<sub>2</sub>.

Perforations-Weir: 2543-48, 11 holes & 2580-88, 10 holes Frac: Mod 202 500 gal. Water frac,
Breakdown pressure 1800 psi

Total Sand - 20,000# 80/100 mesh sand, 46,000# 20/40 mesh sand 1100 bbls. water, 30 tons CO2

WELL LOG

- the cornective  $\sqrt{-}$  department by side and that the database  $\sqrt{-}$  filled that

Ç-v: M°o≗

[250000000]

			Training)	live of each	ede trestando condes
FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, cil and gas
SH, SS Coal SS, SH LS SS SH SS, SLST SH, SLST SS SH SS, SLST SH SS, SLST SH, SLST, SS SS, SLST T.D.	Gy-Red Bl Lt. Gy-Gy Tan Wh-Gy Gy Wh-Gy L. Gy-L. H L. Br-Gy Wh-Gy Gy-Lt. Gy Wh-Gy	S-H S-H H S-H S-H S-H S-H S-H S-H	0 1047 1052 2091 2197 2362 2504 2596 2731 2746 2979 2997 3667	1047 1052 2091 2197 2362 2504 2596 2731 2746 2979 2997 3667 5107	Greenbriar Big Injun  100 100 100 100 100 100 100 100 100 10
5107	; ; ;			DEVSH	Worthware the second se
2997 2110EXP	LFT				Chadden C. Serin Call
			• · · · · · · · · · · · · · · · · · · ·		
	. 1				
				<u>.</u>	

(Attach separate sheets to complete as necessary)

Mobay Chemical Corporation
Well Operator

By Michael Larbon

Geologist

Its Agent, Haddad and Brooks, Inc.

NOTE: Regulation 2.02(i) provides as

"The term 'log' or 'well log' shall mean a systematic, detailed geologial record of all formations, including coal, encountered in the doilling of a well."





#### DEPARTMENT OF MINES

### Oil and Gas Division

## OIL & GAS DIVISION DEPT. OF MINES

## OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,	· · · · · · · · · · · · · · · · · · ·
Charleston, W. Va.	DATE September 29, 1977
Surface Owner Jack Moore	Company Mobay Chemical Corporation
R.D.#1, Box 34B  Address New Martinsville, WV 26155	Company Mobay Chemical Corporation Penn Lincoln Parkway West Address Pittsburgh, PA 15205
Mineral OwnerJack Moore	Jack Moore 82
Address	Farm Acres Acres Location (waters) Haynes Run
Coal Owner Consolidation Coal	
Library PA	Proctor
Address	DistrictCounty
Coal Operator Same Address	Quadrangle New Martinsville (1:2400)
THIS PERMIT MUST BE POSTED AT THE WELL SIT	<b>E</b>
All provisions being in accordance with Chapter 23 of the W. Va. Code, the location is hereby approved	
for <u>drilling</u> . This permit shall expire	INSPECTOR
operations have not commenced by 2-18-78	" TO BE NOTIFIED Phillip Tracy
Asher to so da	ADDRESS Middlebourn, W. Va.
Deputy Director - Oil & Gas Division	PHONE
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 lea	es dated July 12 10 74, Jack J.
Moore made to Mobay Chemical (	Company 5th August
19.74 in Wetzel County Book 55A	Company and recorded on the day of
37	
NEW WELLDRILL DEEPER _	REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRIL	LED BEFORE JUNE 5, 1969.
The enclosed plat was prepared by a registered engine have been notified as of the above date.	er or licensed land surveyor and all coal owners and/or operators
The above named coal owners and/or operator are here to make by Section 3 of the Code, must be received by,	eby notified that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days. *
Copies of this notice and the enclosed plat were mailed or coal owners at their above shown respective address	by registered mail, or delivered to the above named coal operators
same day with the mailing or delivery of this copy to the	Department of Mines at Charleston, West Virginia.
The form of the con-	Very truly yours, Mobay Chemical Corporation
PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:	(Sign Name) Shorts
GEOTHISICAL LOGS DIRECTLY 10:	Well Operator
WEST VIRGINIA GEOLOGICAL AND	by Haddad and Brooks, Inc. Penn Lincoln Parkway West
	dress Street
Well O	of perator Pittsburgh
MORGANTOWN, WEST VIRGINIA 26505 Well Of AC-304 - 292-6331	City or Town
	Pennsylvania 15205
	State
motive and part by the department of mines, to said proposed locali-	ne Department of mines, within said period of ten days from the receipt of on, the department shall forthwith issue to the well operator a permit reciting all operators or found thereto by the department and that the same is approved
and the well operator authorized to proceed.	· · · · · · · · · · · · · · · · · · ·
RIANNET BOALD	was:
BLANKET BOND	WET -638 PERMIT NUMBER
"I have read and understand the reclamation requirements as so Chapter 22, Article Section 12-b and will carry out the specified req	uirements."
Signed by	now: Wet-1154

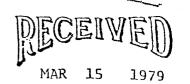


# THIS IS AN ESTIMATE ONLY ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

en de la companya de La companya de la co	v		•		
PROPOSED WORK ORDER T		DEEPEN	FRACTURE-STIMULATE .		
DRILLING CONTRACTOR: (	If Known)	RESPONSIBLE AGEN	T: pical Corporation		
NAME Delta Drilling 115 South 6th ADDRESS Indiana, PA	Street	NAME Mobay Chemical Corporation			
TELEPHONE (412) 465-5	657		cinsville, WV 26155		
			4) 455–4400		
ESTIMATED DEPTH OF COM	. Ca1	ROTARY X CABLE TOOLS			
PROPOSED GEOLOGICAL FO	RMATION:	v			
TYPE OF WELL: OIL	GAS C	OMB. X STORAC	E DISPOSAL		
•	RECYCLI	NG WATER FI	OODOTHER		
TENTATIVE CASING PROGRA		for			
CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP		
0 - 16		WELL	OR SACKS - CUBIC FT.		
3 - 10	450	450	cemented to surface		
- 5/8					
- 5/8	2450	2450	cemented w/75 sx and		
			gel to surfac		
1/2					
½ production	as needed		cemented as needed		
			Perf. Top		
in and the state of the state o		`	Perf. Bottom		
iners			Perf. Top		
			Perf. Bottom		
MUST ALSO BE SUBMITT  OFRACTURE - STIMULATE:  OIL AND/OR GAS WELL OBOND, PERMANENT PLAT  OIL AND/OR GAS WELL OIL AND/OR GAS WELL OIL AND/OR GAS WELL OIL AND/OR GAS WELL OIL ORIGINAL PERMIT NU	OF OG - 1, SHOWING ORIGINATED ORIGINALLY DRILLED BEFORE AND ORIGINAL WELL RECORDINALLY DRILLED ON AN JMBER, AND PERFORMANCE	PPY OF THE PLAT AND EE JUNE 5, 1929, FIVE (5) ORD. D/OR AFTER JUNE 5, 192 BOND.	ND PERFORMANCE BOND. ON THE ORIGINAL WELL RECORD  COPIES OG - 1, PERFORMANCE  29, FIVE COPIES OG - 1, SHOW-  Inspector to be notified twenty-		
			issued within ten days of receipt		
this lease have examin	ed and place on our mine map	os this proposed well locat			
We theproviding operator has a Code.	—————— Coal Company ha	ave no objections to said wations in Articles 4, 5, and	ell being drilled at this location, 7, Chapter 22 of the West Virginia		
	T = .:	Fe	or Coal Company		
	-		Official Title		
			Official Lift		



#### DEPARTMENT OF MINES



## 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 September 29, 1977
Surface Owner Jack Moore R.D.#1, Box 34B	Company Mobay Chemical Corporation
R.D.#1, BOX 34B  Address New Martinsville, WV 26155	Penn Lincoln Parkway West Address Pittsburgh, PA 15205
Mineral OwnerJack Moore	_ Jack Moore 82
Address Same	Location (waters) Haynes Run
Coal Owner Consolidation Coal	_
Address Library, PA	Proctor
Coal Operator Same	District County
	Quadrangle Quadrangle
THIS PERMIT MUST BE POSTED AT THE WELL SITE	<del></del>
All provisions being in accordance with Chapter 22	
of the W. Va. Code, the location is hereby approved	TNCDECTOR
for <u>drilling</u> . This permit shall expire if	INSPECTOR TO BE NOTIFIED Phillip Tracy
operations have not commenced by 11-16-79	
Specialists have not commenced by 12220-75	ADDRESS Middlebourn, W. Va.
Deputy Director - Oil & Gas Division	PHONE
GENTLEMEN:	
The undersigned well operator is entitled to drill upon	on the above named farm or tract of land for oil and gas, having for
Moore made to Mobay Chemical	Company and recorded on the day of August
19 74 in Wetzel County, Book 55A	Page 121
77	
NEW WELL DRILL DEEPER	REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRII	LLED BEFORE JUNE 5, 1969.
The enclosed plat was prepared by a registered engine have been notified as of the above date.	eer or licensed land surveyor and all coal owners and/or operator
The above named coal owners and/or operator are her to make by Section 3 of the Code, must be received by,	reby notified that any objection they wish to make, or are required or filed with the Department of Mines within ten (10) days.
or coal owners at their above shown respective address.	d by registered mail, or delivered to the above named coal operator
same day with the mailing or delivery of this copy to the	e Department of Mines at Charleston, West Virginia.
TYPICE CONTRACTOR OF ACT	Very truly yours, Mobay Chemical Corporation
PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:	(Sign Name) Short 2
obothibiona noop birdoini 10.	Well Operator by Haddad and Brooks, Inc. Penn Lincoln Parkway West
WEST VIRGINIA GEOLOGICAL AND	Penn Lincoln Parkway West
	ddress Street
P. O. BOX 879 MORGANTOWN, WEST VIRGINIA 26505 Well (	Operator Pittsburgh
AC-304 - 292-6331	City or Town
	Pennsylvania 15205
	State
notice and plat by the department of mines, to said proposed local	the Department of mines, within said period of ten days from the receipt ation, the department shall forthwith issue to the well operator a permit recitional operators or found thereto by the department and that the same is approved
BLANKET BSHD	REISSUED AS: 47-103-1154
DLAITHE I ESHU	WET-638 (Expired) PERMIT NUMBER
"I have read and understand the reclamation requirements as Chapter 22, Article 4, Section 12-b and will carry out the specified re	set forth in $47-103$

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

PROPOSED WORK ORDER TO	D. X DRILL	DEFPEN	FRACTION STIMILIANDS		
DRILLING CONTRACTOR: (I		D PODONICIPI D. A OFNI	·		
Delta Drilling		NAME Mobay Chemical Corporation ADDRESS New Martinsville, WV 26155			
ADDRESS Indiana, PA 1	Street 5701				
TELEPHONE (412) 465-56	57 4000	TELEPHONE (304	) 455-4400		
ESTIMATED DEPTH OF COMP	LETED WELL: 3400'	ROTARY	CABLE TOOLS		
PROPOSED GEOLOGICAL FOR		rever	10000		
	GAS	COMB X STOPAC	EDISPOSAL		
· VEDU. OID.			OOD OTHER		
TENTATIVE CASING PROGRA		LEFT IN	CEMENT FILL UP		
SIZE	DRILLING	WELL	OR SACKS - CUBIC FT.		
20 - 16					
13 - 10	450	450	cemented to surface		
9 - 5/8	·	. 2/60			
8 - 5/8	2450	2450	cemented w/75 sx and		
7			gel-to-surfa		
5 1/2					
4 ½ production	as needed		cemented as needed		
3			Perf. Top		
2			Perf. Bottom		
Liners			Perf. Top		
			Perf. Bottom		
OF PLAT.  TO DRILL DEEPER OR REDRI  SUBMIT FIVE (5) COPIES WELLS DRILLED PRIOR MUST ALSO BE SUBMITT  TO FRACTURE - STIMULATE: OIL AND/OR GAS WELL OBOND, PERMANENT PLAT OIL AND/OR GAS WELL OIL AND/OR GAS WEL	LL:  OF OG - 1, SHOWING ORIGINALLY DRILLED BEF ORIGINALLY DRILLED ON DRIGINALLY DRILLED ON DRIGINALLY DRILLED ON DRIGINALLY DRILLED ON DERFORMANCE Within ninety (90) days of	GINAL PERMIT NUMBER A COPY OF THE PLAT AND  ORE JUNE 5, 1929, FIVE (5) ECORD.  AND/OR AFTER JUNE 5, 19 EE BOND.	ND PERFORMANCE BOND. ON THE ORIGINAL WELL RECORD  COPIES OG - 1, PERFORMANCE  29, FIVE COPIES OG - 1, SHOW-  Inspector to be notified twenty-		
WAIVER: I the undersigned, Ag this lease have examin	ent for con our mine ned and place on our mine ned and place on our mine ned company	Coal Company, Owner maps this proposed well local have no objections to said well and the company of the compan	issued within ten days of receipt er or Operator of the coal under tion.  well being drilled at this location, 7, Chapter 22 of the West Virginia		
	1 <del>-</del> 9 <b>:</b>		For Coal Company		
	<del>-</del>		Official Title		