

Fracture Before 6/5/27.....   
 New Location.....   
 Drill Deeper.....   
 Redrill.....

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 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.  
 The accuracy of this survey is within the limits and as prescribed in Paragraph 5 by the Oil and Gas Division of the Department of Mines, Regu-  
 VEN ELEVATION Well No. 635.69

Allied Signal, Inc.  
 P.o. Box J  
 Moundsville, WVa. 26041

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

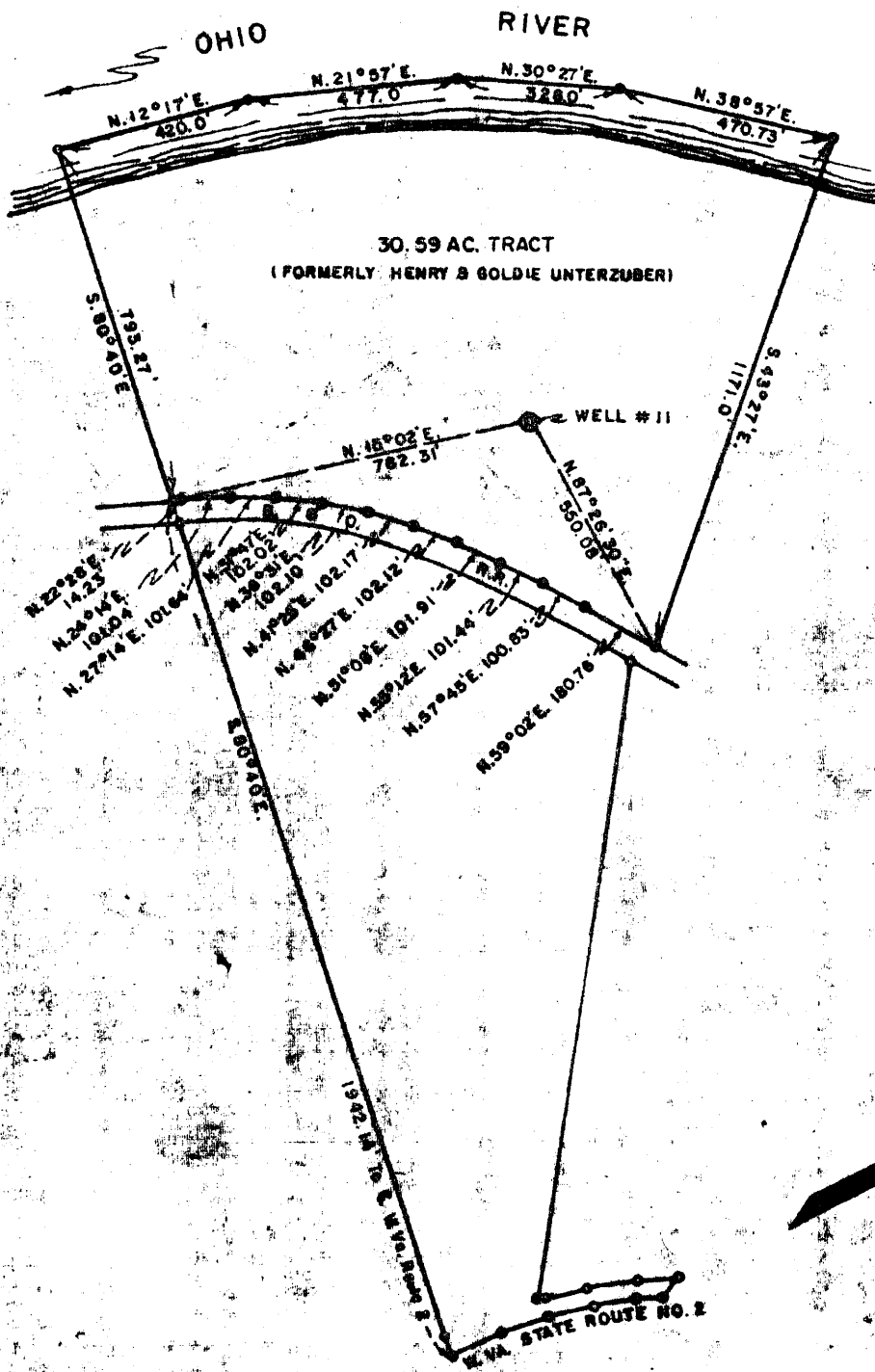
Farm (FORMERLY HENRY & SOLOME UINTERZUBER)  
 Tract \_\_\_\_\_ Acres 30.59 Lease No. OWNED  
 Well (Farm) No. 11 Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 635.69  
 Quadrangle CLARINGTON *Bushesburg*  
 County MARSHALL District CLAY  
 Engineer *J. James DeWitt*  
 Engineer's Registration No. 1673  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date 11/19/68 Scale 1" = 400'

**WELL LOCATION MAP**  
 FILE NO. *Mars-537-RD*

+ 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.

**47-051**



30.59 AC. TRACT  
(FORMERLY HENRY B GOLDIE UNTERZUBER)

0.335  
2.93W

Fracture	<input type="checkbox"/>
Before 6/5/27	<input type="checkbox"/>
New Location	<input checked="" type="checkbox"/>
Drill Deeper	<input type="checkbox"/>
Redrill	<input checked="" type="checkbox"/>
Abandonment	<input type="checkbox"/>

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PROVEN ELEVATION Well No. 63568

8/16/77

Company I.C. DIV., ALLIED CHEMICAL CORP.

Address MOUNDSVILLE, W. VA.

Farm ALLIED CHEMICAL CORP (FORMERLY HENRY B GOLDIE UNTERZUBER)

Tract \_\_\_\_\_ Acres 30.59 Lease No. OWNED

Well (Farm) No. 11 Serial No. \_\_\_\_\_

Elevation (Spirit Level) 635.68

Quadrangle CLARINGTON EC

County MARSHALL District CLAY

Engineer J. James Schellhaus

Engineer's Registration No. 1673

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date 11/19/68 Scale 1" = 400'

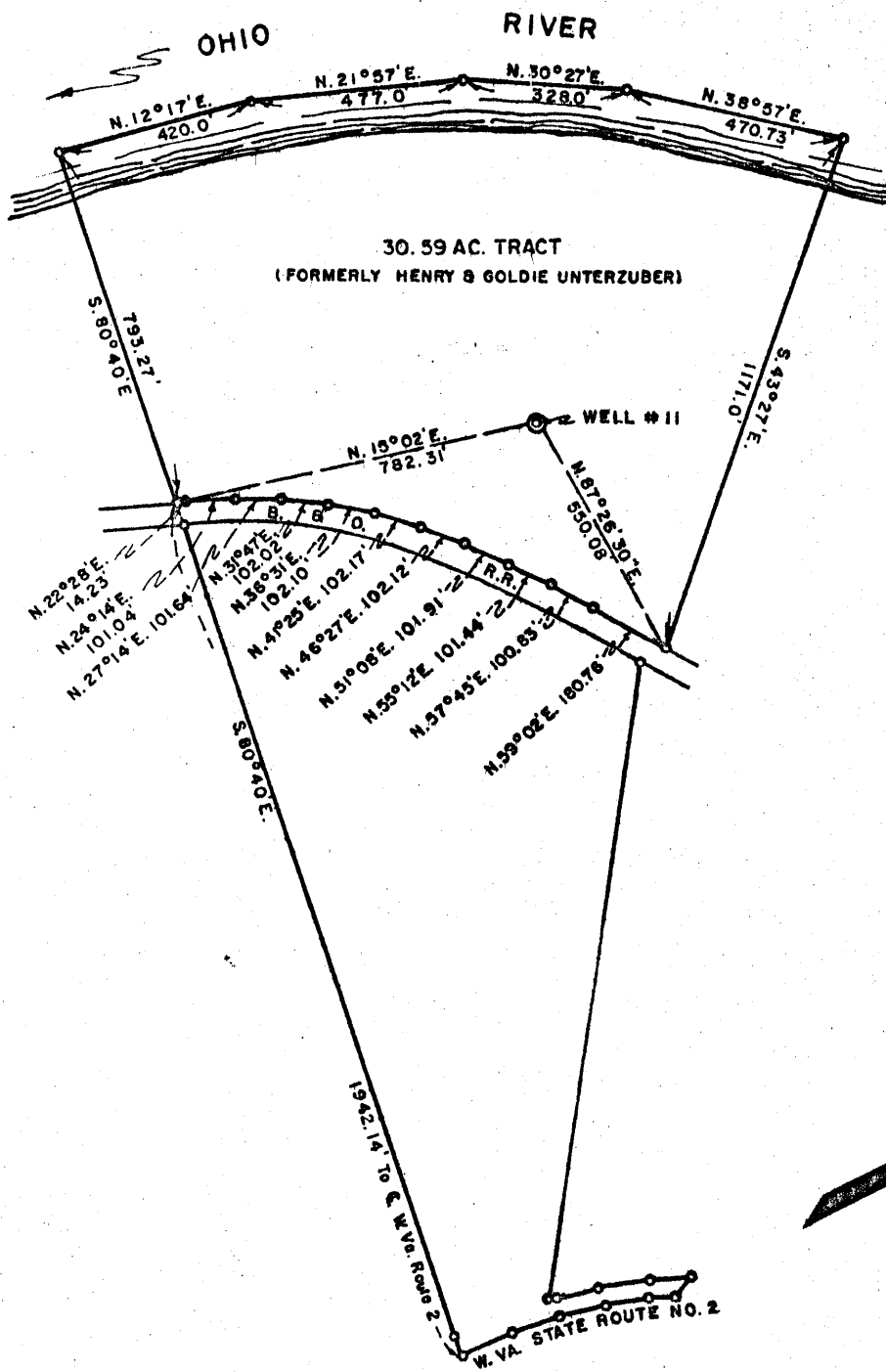
STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON

WELL LOCATION MAP  
FILE NO. Mars-537-RD

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47-051 SEP 21 1977



- Fracture Before 6/5/27
- New Location
- Drill Deeper
- Redrill
- 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 5 of the Rules and Regulations of the Oil and Gas Section of the Mining Laws of West Virginia.

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PROVEN ELEVATION Well Nail 635.68

Company I. C. DIV., ALLIED CHEMICAL CORP.

Address MOUNDSVILLE, W. VA.

Farm FORMERLY HENRY & GOLDIE UNTERZUBER

Tract \_\_\_\_\_ Acres 30.59 Lease No. OWNED

Well (Farm) No. 11 Serial No. \_\_\_\_\_

Elevation (Spirit Level) 635.68

Quadrangle CLARINGTON *EC*

County MARSHALL District CLAY

Engineer *J. James Schellhase*

Engineer's Registration No. 1673

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date 11/19/68 Scale 1" = 400'

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

WELL LOCATION MAP  
FILE NO. Mars-537

+ 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.

*1978 OWVO No charge*

*Deep Well (Salina) 9-89*



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

RECEIVED  
FEB 27 1978

OIL & GAS DIVISION  
DEPT. OF MINES

Quadrangle NE/4 Clarington 15'

Permit No. MARS 537 RED

Rotary  air Oil \_\_\_\_\_  
Cable \_\_\_\_\_ Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ Brine  
(Kind)

Company <u>Allied Chemical Corporation</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P. O. Box E, Moundsville, WV 26041</u>				
Farm <u>Allied Chem. Corp Acres 30.39</u>	Size			
Location (waters) <u>Ohio</u>	20-16			
Well No. <u>11</u> Elev. <u>635'</u>	Cond.			
District <u>Clay</u> County <u>Marshall</u>	13-10"	73'	73'	90 sx to surf.
The surface of tract is owned in fee by _____	9 5/8	1475	1475	500 sx to surf.
<u>Allied Chemical Corporation</u>	8 5/8			200 sx
Address <u>P. O. Drawer E, Moundsville, WV</u>		6515	6515	
Mineral rights are owned by <u>Allied Chemical Corp</u>				
Address <u>Same</u>	5 1/2			
Drilling Commenced <u>8-18-77</u>	4 1/2			
Drilling Completed <u>10-14-77</u>	3			
Initial open flow _____ cu. ft. _____ bbls.	2			
Final production _____ cu. ft. per day _____ bbls.	Liners Used			
Well open _____ hrs. before test _____ RP.				

Attach copy of cementing record.

Well treatment details:  
This well was fractured through the salt section at a depth of 6500' using fresh water. The connection was back to the old #11 cavity and thence to # 10 outlet well. Fresh water was injected for a period of 32 days to effect a washout of salt and achieve a low pressure connection. Brine returns from # 10 was used in plant production.

Coal was encountered at None. Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water None. Feet \_\_\_\_\_ Salt Water None. Feet \_\_\_\_\_  
Producing ~~Sand~~ Salt Depth 6400 to 6500

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
The formation drilled was the same as original well MARS - 537 - Bore hole traversed same general strata.						
NOTE - This well was directionally drilled to a point 350 ft. north and 60' east of the original bottom location to make a new cavity and in effect a new well.						

(over)

\* Indicates Electric Log tops in the remarks section.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION 18

Rotary   
Spudder   
Cable Tools   
Storage

Oil or Gas Well  **Salt Brine**  
(KIND)

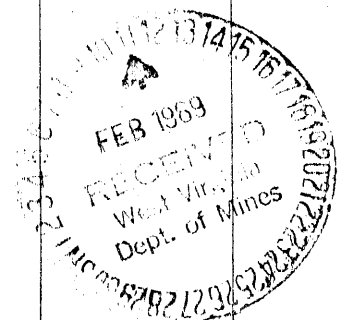
Quadrangle Businessburg, Ohio - W. Va.

**WELL RECORD**

Permit No. MARS-537

Company	Industrial Chemicals Div., Allied Chemical Corp.	Casing and Tubing	Used in Drilling	Left in Well	Packers
Address	Moundsville, West Virginia				
Farm	Allied Chemical Corp.	Acres 30.59			
Location (waters)	Ohio River				
Well No.	11	Elev. 635.5	85	85	Kind of Packer J-slot Hook wall
District	Clay	County Marshall	1,490	1,490	Size of O.D. 6-1/2" set in 7" 26 lbs.
The surface of tract is owned in fee by	Allied Chemical Corp.	8 1/4			Depth set 6250 ft.
	Address Moundsville, W. Va.	6 5/8" 7" O.D.	<del>XXXXXX</del>	6,500	
Mineral rights are owned by	Allied Chemical Corp.	5 3/16			
	Address Moundsville, W. Va.	4 1/2	<del>XXXXXX</del>	6,529	
Drilling commenced	November 1, 1968	3			Perf. top none
Drilling completed	November 21, 1968	2			Perf. bottom none
Date Shot	From To	Liners Used			Perf. top
With					Perf. bottom
Open Flow	/10ths Water in Inch	Attach copy of cementing record.			
	/10ths Merc. in Inch	CASING CEMENTED 13-3/8" 85 No. Ft. 11/1/68 Date			
Volume	Cu. Ft.	Amount of cement used (bags) 90 (See Remarks below for other strings.)			
Back Pressure	lbs. hrs.	Name of Service Co. Halliburton Company			
	bbls., 1st 24 hrs.	COAL WAS ENCOUNTERED AT FEET INCHES			
WELL ACIDIZED (DETAILS)		FEET INCHES FEET INCHES			
WELL FRACTURED (DETAILS)		FEET INCHES FEET INCHES			
RESULT AFTER TREATMENT (Initial open Flow or bbls.)					
BACK PRESSURE AFTER TREATMENT	HOURS				
Fresh Water	Feet	Salt Water	Feet		
Producing Sand	Depth				

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Gravel			0	79			
Gravel, Shale			79	85			13-3/8" - 85'
Shale			85	107	Water	104	90 sacks of Common Cement.
Shale, Red Rock			107	418			
Shale	Gray		418	438			
Red Rock			438	450			
Shale			450	555			
Sand	White		555	605			
Shale			605	630			
Shale & Sand			630	655			
Sand & Shale			655	759			
Sand			759	890			
Sand & Shale			890	980			
Sand	Gray		980	1025			
Sandy Shale		Broken	1025	1040			
Sand	White		1040	1065			
Sand and Shale			1065	1080			
Lime & Shale		Very Hard	1080	1120			
Shale & Sand			1120	1170			



Formation	Color	Hard or Soft	Top / 8	Bottom	Oil, Gas or Water	Depth Found	Remarks
Sand			1170	1425			9-5/8" Casing at 1,506'. Cemented with 500 sacks.
Shale			1425	1642			
Sand & Shale			1642	1685			7" O.D. Casing at 6,500'. Cemented with 285 sacks
Shale			1685	2045			
Sand & Shale			2045	2220			
Shale			2220	3843			
Sandy Shale			3843	3960			
Shale			3960	5150			
Lime & Shale			5150	5554	Gas Blow-outs	5480, 5500	
Chert on Hunt.			5554	5653			
Chert & Oriskany							
Sand			5653	5755			
Sand & Lime			5940	5978			
Lime & Shale			5978	6330			
Shale			6330	6365			
Sand & Shale			6365	6402			
Salt			6402	6496			
Anhydrite			6496	6508			
Salt	See line a		6508	6536			
Shale			6536	6548			
Total Depth				6548			4 1/2" Casing at 6,529'.

5554

Date December 12, 1968

APPROVED Allied Chemical Corp., Owner

By *[Signature]* President of  
(Title)  
Fox Rotary Drilling Corp.



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
Oil and Gas Division

RECEIVED

AUG 9 1977

OIL & GAS DIVISION  
DEPT. OF MINES

BRINE GAS WELL PERMIT APPLICATION

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

DATE August 3, 1977

Surface Owner ALLIED CHEMICAL CORPORATION  
Address P.O. Box E, Moundsville, W. Va.  
Mineral Owner Same  
Address Same  
Coal Owner Same  
Address Same  
Coal Operator Same  
Address \_\_\_\_\_

Company ALLIED CHEMICAL CORPORATION  
Address P.O. Box E, Moundsville, W. Va.  
Farm (Formerly Allied Chemical Corporation) Acres 30.59  
Location (waters) Ohio River  
Well No. 11 Elevation 635 ft.  
District Clay County Marshall  
Quadrangle Businessburg, Ohio - W. Va.  
NE/4 Clarrington 15' Quadrangle  
N 3952.5-W 8045/7.5

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 redrilling This permit shall expire 12-16-77 if operations have not commenced by 12-16-77

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

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 March 21 1952 by Henery Unterzuber UX ETI made to Allied Chemical and recorded on the 21 day of March 1952 in Marshall County, Book 283 Page 410

NEW WELL DRILL DEEPER XX REDRILL XX FRACTURE OR STIMULATE  
BRINE 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

Very truly yours,  
(Sign Name) John A. Runk  
Allied Chemical Corporation  
P.O. Drawer E  
Moundsville  
West Virginia 26041

Address of Well Operator

\*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.

Original Mars 537- Red PERMIT NUMBER

47-051

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 John A. Runk

*[Handwritten signature]*

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

PROPOSED WORK ORDER TO \_\_\_\_\_ DRILL XX DEEPEN XX FRACTURE-STIMULATE  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:  
 NAME S. W. Jack Drilling Co. NAME \_\_\_\_\_  
 ADDRESS P.O. Box 754, Indiana, PA 15701 ADDRESS \_\_\_\_\_  
 TELEPHONE 412-463-9191 TELEPHONE \_\_\_\_\_  
 ESTIMATED DEPTH OF COMPLETED WELL: 6500' ROTARY XXX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Salina  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS \_\_\_\_\_ COMB. \_\_\_\_\_ STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER Brine

**TENTATIVE CASING PROGRAM:**

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10		73	90 SX to Surf.
9 - 5/8		1475	500 SX to Surf.
8 - 5/8			
7		6500'	200 SX
5 1/2			
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 1200 FEET \_\_\_\_\_ SALT WATER None FEET \_\_\_\_\_

APPROXIMATE COAL DEPTHS 90' (3 ft.) \_\_\_\_\_

IS COAL BEING MINED IN THE AREA? Yes BY WHOM? Consolidation Coal Co.

\*No coal is being mined under or immediately adjacent to the Allied Chemical property herein TO DRILL: \_\_\_\_\_ described.

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.

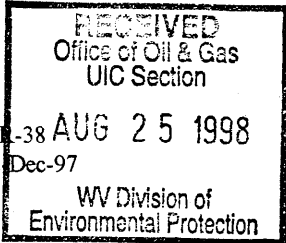
The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

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





WV-38  
12 Dec-97

API # 47-51-00537-P

STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
SECTION OF OIL AND GAS

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: HANLIN CHEMICALS Operator Well No.: 11

LOCATION: Elevation: 635.68 Quadrangle: BUSINESSBURG  
District: CLAY County: MARSHALL  
Latitude: 1650 Feet South of 39 Deg. 55 Min. 0 Sec.  
Longitude: 3000 Feet West of 80 Deg. 47 Min. 30 Sec.

Well Type: OIL \_\_\_\_\_ GAS \_\_\_\_\_ OTHER: BRINE

Company: Allied Signal Inc.  
PO Box J  
Moundsville, WV 26041

Coal Operator \_\_\_\_\_  
or Owner \_\_\_\_\_

Agent: Don P. DeNoon

Coal Operator \_\_\_\_\_  
or Owner \_\_\_\_\_

Permit Issued: 12/01/97

AFFIDAVIT

STATE OF WEST VIRGINIA,  
County of \_\_\_\_\_ ss:

Union Drilling and James R. Harry, Consultant being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by the above named operator, and participated in the work of plugging and filling the above well, and Michael W. Lewis Oil and Gas Inspector representing the Director, say that said work was commenced on the 2 day of December, 1997, and that the well was plugged and filled in the following manner:

Type	From	To	Pipe Removed	Left
Class A	5.623'	5.790'	13(3/8)" 0'	80'
6% Gel	5.475'	5.623'	9(5/8)" 0'	1.475'
Class A	4.975'	5.475'	7" 5.475'	1.015'
6% Gel	3.050'	4.975'	5(1/2)" 5.280'	510'
Class A	2.731'	3.050'		
6% Gel	2.300'	2.731'		
Class A	2.200'	2.300'		
6% Gel	1.775'	2.200'		
Class A	1.525'	1.775'		
6% Gel	0'	1.525'		

Bridge Plug 5790'

Description of monument: 9(5/8) welded pipe w/2" vent (5' length)  
and that the work of plugging and filling said well was completed on the 12 day of December, 1997.

and further deponents saith not.

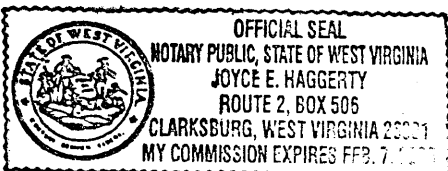
Will & Joan Union Drilling

James R. Harry, Consultant

Sworn and subscribe before me this 6 day of AUGUST, 1998  
My commission expires: 2-7-2006

Joyce E. Haggerty  
Notary Public

Oil and Gas Inspector: Michael W. Lewis



AUG 31 1998

MARS 0537-P