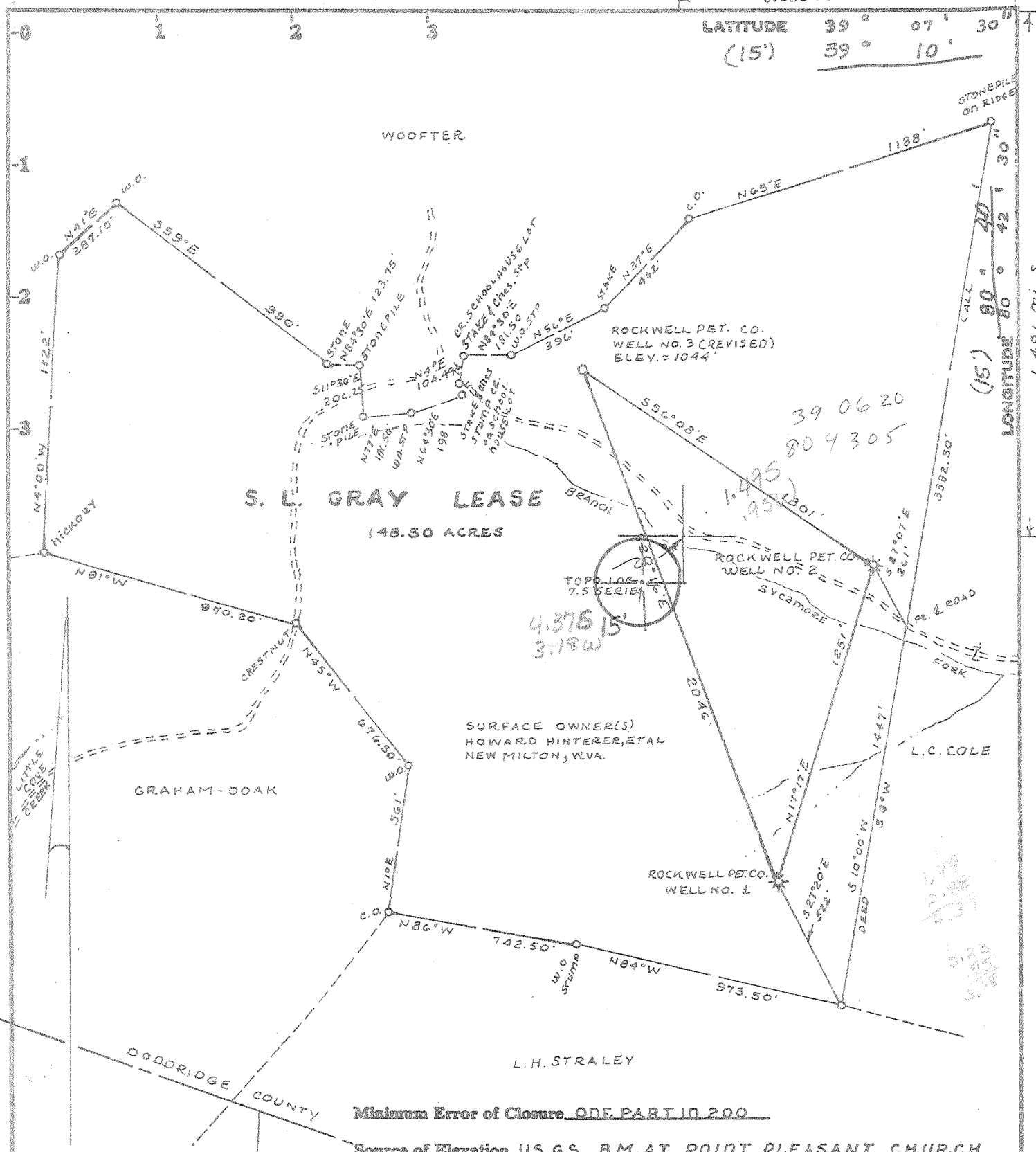


0.939 mi. W.

LATITUDE 39° 07' 30" (15') 39° 10'



Minimum Error of Closure ONE PART IN 200

Source of Elevation U.S.G.S. B.M. AT POINT PLEASANT CHURCH

WEST OF LOCATION 400', ELEVATION = 1030

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: Mark C. Echard

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

GILMER CO.  
LEWIS CO.

Map No.

Squares: N S E W

Company ROCKWELL PETROLEUM COMPANY  
 Address P.O. BOX 86, SANDFORK, W.VA. 26430  
 Farm S.L. GRAY LEASE  
 Tract \_\_\_\_\_ Acres 148.50 Lease No. \_\_\_\_\_  
 Well (Farm) No. THREE Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 1044'  
 Quadrangle VADIS 15' 7.5' WC  
 County DODDRIDGE District COVE  
 Surveyor MARK C. ECHARD  
 Surveyor's Registration No. 490  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date OCTOBER 25, 1978 Scale 1" = 500'

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

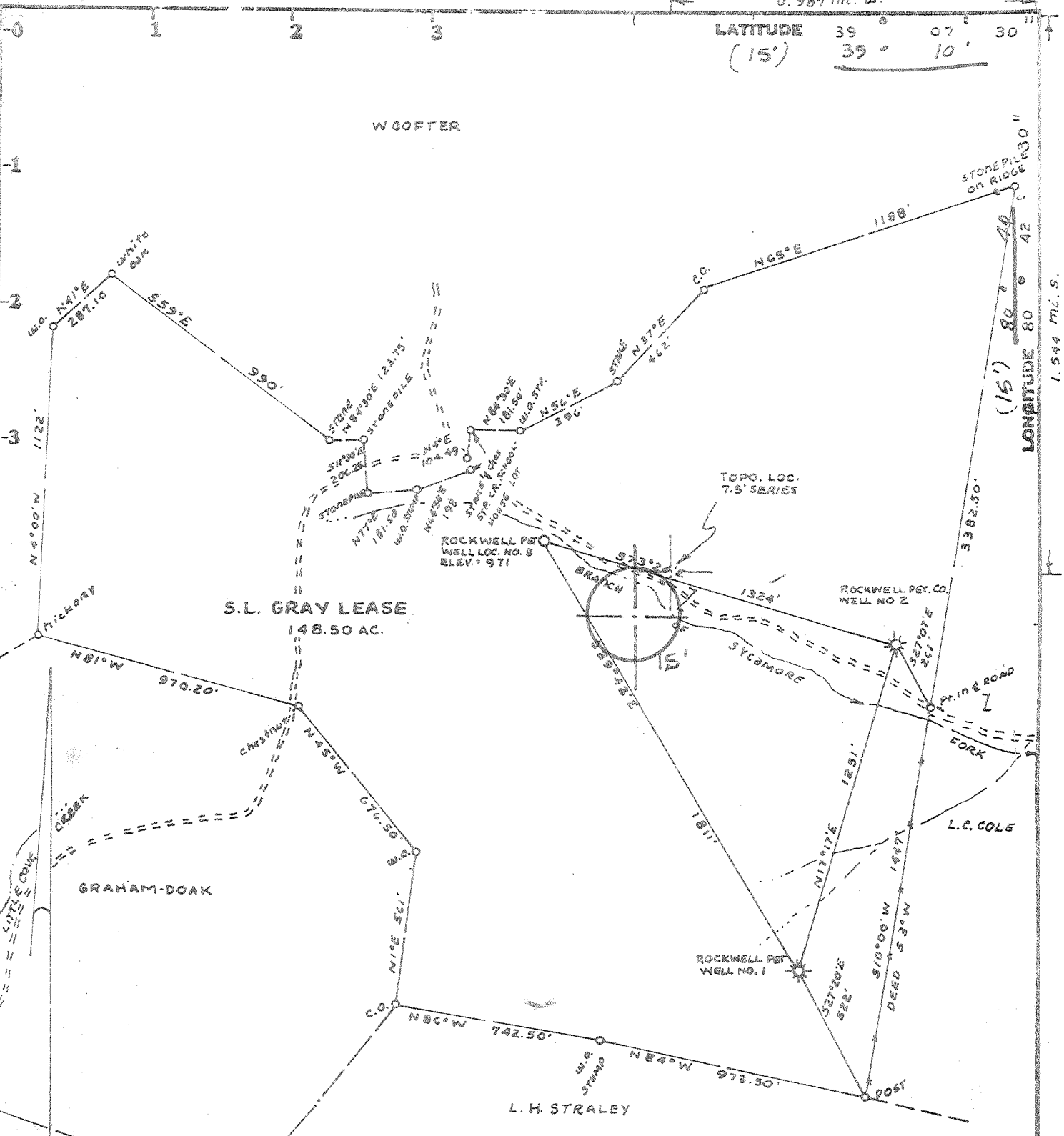
### WELL LOCATION MAP

FILE NO. DODD-2288-REV

+ Denotes location of well on United States Topographic Maps, scale 1 to 250,000, latitude and longitude lines being represented by border lines as shown.

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

47-017 NOV 21 1978



Minimum Error of Closure ONE PART IN 200

Source of Elevation U.S.G.S. B.M. AT POINT PLEASANT CHURCH

ELEVATION = 1030'

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.....

GILMER CO.  
LEWIS CO.

Map No.

Signed: Mark C. Echard

Squares: N S E W

Company ROCKWELL PETROLEUM COMPANY  
 Address P.O. BOX 86, SANDFORK, W.VA. 26430  
 Farm S.L. GRAY LEASE, Mr. Howard Hinterer  
 Tract \_\_\_\_\_ Acres 148.50 Lease No. \_\_\_\_\_  
 Well (Farm) No. THREE Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 971'  
 Quadrangle VADIS 7.5', 15'  
 County DODDRIDGE District COVE  
 Surveyor MARK C. ECHARD  
 Surveyor's Registration No. 490  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date AUGUST 8, 1978 Scale 1" = 500'

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

WELL LOCATION MAP  
 FILE NO. DODD-2288

+ Denotes location of well on United States Topographic Maps, scale 1 to 25,000, latitude and longitude lines being represented by border lines as shown.

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

47-017

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

Date January 29, 19 79

FORM IV-25  
(Obverse)

Operator's Well No. Three  
API Well No. 47 - 017 - 2288  
State County Permit

[08-78,

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_  
(If "Gas", Production \_\_\_ / Underground storage \_\_\_ / Deep \_\_\_ / Shallow X /)  
LOCATION: Elevation: 971' Watershed: Fallen Timber  
District: Cove County: Doddridge Quadrangle: Vadis

WELL OPERATOR Rockwell Petroleum Company DESIGNATED AGENT Robert R. Jones  
Address P. O. Box 86 Address P. O. Box 86  
Sand Fork, WV 26430 Sand Fork, WV 26430

PERMITTED WORK: Drill X / Convert \_\_\_ / Drill deeper \_\_\_ / Redrill \_\_\_ / Fracture or stimulate \_\_\_  
Plug off old formation \_\_\_ / Perforate new formation \_\_\_  
Other physical change in well (specify) \_\_\_\_\_

OIL & GAS DIVISION  
STATE OF WEST VIRGINIA

PERMIT ISSUED ON August 30, 19 78 OIL & GAS INSPECTOR FOR THIS WORK:

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED  
Name Paul Garrett  
Address Clarksburg, WV

GEOLOGICAL TARGET FORMATION: Big Injun Depth 2100 feet  
Depth of completed well, 5405 feet Rotary X / Cable Tools \_\_\_  
Water strata depth: Fresh, 99 feet; salt, \_\_\_ feet.  
Coal seam depths: ----- Is coal being mined in the area? No  
Work was commenced December 27, 19 78, and completed December 31, 19 78

GRADING AND TUBING PROGRAM

800 MCF

GRADING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water	8 5/8		20 lb	X		874	874	200 sks
Coal								Sizes
Intermediate								
Production	4 1/2		9.5	X			5313	225 sks
Tubing								
Liners								Perforations:
								Top Bottom

OPEN FLOW DATA

Producing formation Elk Pay zone depth 5154 - 5234 feet  
Gas: Initial open flow, show Mcf/d Oil: Initial open flow, 0 Bbl/d  
Final open flow, Not taken Mcf/d Final open flow, 0 Bbl/d  
Time of open flow between initial and final tests, \_\_\_ hours  
Static rock pressure, \_\_\_ psig (surface measurement) after \_\_\_ hours shut in

[If applicable due to multiple completion--]

Second producing formation Benson-Riley Pay zone depth 4460 - 4900 feet  
Gas: Initial open flow, show Mcf/d Oil: Initial open flow, \_\_\_ Bbl/d  
Total Final open flow, 800,000 Mcf/d Final open flow, \_\_\_ Bbl/d  
Time of open flow between initial and final tests, 6 hours  
Total Static rock pressure, 1600 psig (surface measurement) after 48 hours shut in

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

Fractured January 8, 1979

Benson & Riley -

586 bls water  
injection rate-27 BPM at 1950 lb.  
2500 lb. breakdown  
35,000 lb. 20/40 sand  
15,000 lb. 80/100 sand

Elk -

599 bls water  
injection rate-27 BPM at 1988 lb.  
1900 lb. breakdown  
35,000 lb. 20/40 sand  
15,000 lb. 20/40 sand

Perforations - 4460 - 4461.5 4 holes  
4899 - 4900 4 holes

5154, 5155, 5156, 5157, 5187,  
5198, 5224, 5234, 1 hole each

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet <sup>16</sup>	Bottom Feet	Remarks Including indication of all fresh and salt water, coal, oil and gas
Surface			0	95	
Sand			95	99	Water.
Shale			99	168	
Red Rock			168	179	
Shale			179	388	
Red Rock			388	405	
Shale			405	475	
Red Rock			475	493	
Shale			493	710	
Red Rock			710	744	
Shale			744	988	
Sand			988	1044	
Red Rock			1044	1052	
Shale			1052	1388	
Red Rock			1388	1401	
Shale			1401	1489	
Sand			1489	1503	
Shale			1503	1800	
Sand			1800	1840	
Shale			1840	1885	
Sand			1885	1900	
Shale			1900	1980	
Lime			1980	2000	
Sand			2000	2022	
Slate			2022	2038	
Lime			2038	2095	
Sandy Lime			2095	2138	
Sand			2138	2156	Gas 48/10 in 2"
Sandy Lime			2156	2190	
Sandy Shale			2190	2350	
Shale			2350	2445	
Sand			2445	2457	
Shale			2457	2565	
Sand			2565	2879	
Shale			2879	2975	
Sand			2975	3008	5405
Shale			3008	3345	2300

3105 Expl.  
Footage

ROCKWELL PETROLEUM COMPANY - 47-017-2288

Sand	3345	3370	
Shale	3370	4450	
Sand	4450	4470	
Shale	4470	4895	
Sand	4895	4903	
Shale	4903	5145	
Sandy Shale	5145	5255	Show gas
Shale	5255	5405	
Total Depth	5405		EIK



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

RECEIVED  
AUG 30 1978  
OIL & GAS DIVISION  
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

DATE August 11, 1978

Surface Owner Mr. Howard Hinterer  
Address New Milton, WV  
Mineral Owner Howard Hinterer & others  
Address New Milton, WV  
Coal Owner None  
Address  
Coal Operator None  
Address

Company Rockwell Petroleum Company  
Address P.O. Box 86, Sand Fork, WV 26430  
Farm S.L. Gray Acres 148.50  
Location (waters) Branch of Sycamore Fork  
Well No. Three Elevation 971'  
District Cove County Doddridge  
Quadrangle Vadis

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 12-31-78

INSPECTOR Paul Garrett  
TO BE NOTIFIED  
ADDRESS Clarksburg, W. Va.  
PHONE 622-3871

*Robert A. Pugh*  
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 October 5, 1977 by Howard Hinterer & others made to Rockwell Petroleum and recorded on the 25th day of October 1977, in Doddridge County, Book 103 Page 97

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,  
*Robert A. Pugh*  
(Sign Name) Rockwell Petroleum  
P.O. Box 86  
Street  
Sand Fork  
City or Town  
West Virginia 26430  
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

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 22-2-2 and will carry out the specified requirements."

Signed by *Robert A. Pugh*

DODD-2288 PERMIT NUMBER

47-017

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 Haught & Sons NAME Robert R. Jones  
 ADDRESS Smithville, WV ADDRESS P.O. Box 86, Sand Fork, WV 26430  
 TELEPHONE 477-3333 TELEPHONE 462-7389  
 ESTIMATED DEPTH OF COMPLETED WELL: 2100' ROTARY X CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Big Injun  
 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			
9 - 5/8			
8 - 5/8	210'	210'	To surface
7			
5 1/2			
4 1/2		2150'	110 sks Pozz
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 90 FEET SALT WATER FEET  
 APPROXIMATE COAL DEPTHS None  
 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