



FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE **1" = 500'**  
 MINIMUM DEGREE OF ACCURACY **1:200**  
 PROVEN SOURCE OF ELEVATION **ROAD INT. ELEV. 742'**

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.  
 (SIGNED) William R. Mosser  
 R.P.E. \_\_\_\_\_ L.L.S. **551**

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



DATE **21 MAY** 19 **84**  
 OPERATOR'S WELL NO. **F.C. 18**  
 API WELL NO. **(N. WADE #1)**  
**47 - 095 - 1084**  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
 LOCATION: ELEVATION **700'** WATER SHED **MIDDLE ISLAND CREEK**  
 DISTRICT **ELLSWORTH** COUNTY **TYLER**  
 QUADRANGLE **SHIRLEY 7 1/2' QUAD. / WEST UNION 15' QUAD.** NC2  
 SURFACE OWNER **NORMAN WADE** ACREAGE **31 AC. 26 P.**  
 OIL & GAS ROYALTY OWNER **NORMAN WADE** LEASE ACREAGE **31 AC. 26 P.**  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION **MARCELLUS SHALE** ESTIMATED DEPTH **5990'** JUN 25 1984  
 WELL OPERATOR **FRENCH CREEK DEVELOPMENT** AGENT **TOM ANDERSON**  
 ADDRESS **P.O. Box 82** ADDRESS **P.O. Box 82**  
**ST. MARYS, W.VA. 26170** **ST. MARYS, W.VA. 26170**



IV-35  
(Rev 8-81)

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OIL & GAS DIVISION  
**DEPT. OF MINES**

State of West Virginia

Department of Mines  
Oil and Gas Division

Date July 19, 1984

Operator's

Well No. FC #84-18

Farm Norman Wade

API No. 47 - 095 - 1084

WELL OPERATOR'S REPORT  
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil x / Gas x / Liquid Injection    / Waste Disposal    /  
(If "Gas," Production x / Underground Storage    / Deep    / Shallow x /)

LOCATION: Elevation: 700' Watershed Middle Island Creek  
District: Ellsworth County Tyler Quadrangle Shirley 7 1/2 West Union 15'

COMPANY FRENCH CREEK DEVELOPMENT, INC.  
ADDRESS P.O. Box 690 St. Marys, WV 26170  
DESIGNATED AGENT W. T. Anderson  
ADDRESS PO, Box 690, St. Marys  
SURFACE OWNER NORMAN WADE  
ADDRESS Middlebourne, WV 26149  
MINERAL RIGHTS OWNER See Attached Sheet  
ADDRESS     
OIL AND GAS INSPECTOR FOR THIS WORK Robert  
Lowther ADDRESS Middlebourne, WV  
PERMIT ISSUED June 14, 1984  
DRILLING COMMENCED 6-22-84  
DRILLING COMPLETED 6-26-84  
IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON   

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8	800	800	132 cu. ft.
7			
5 1/2			
4 1/2	5990	5990	988 cu. ft.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5990 feet  
Depth of completed well 5990 feet Rotary    / Cable Tools     
Water strata depth: Fresh 80 feet; Salt 0 feet  
Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 4570-4610 feet  
Gas: Initial open flow 64 Mcf/d Oil: Initial open flow 0 Bbl/d  
Final open flow 15 Mcf/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 2790 psig (surface measurement) after 12 hours shut in  
(If applicable due to multiple completion--)

Second producing formation Speckly - Balltown Pay zone depth 3481/3661 feet

Gas: Initial open flow 20 Mcf/d Oil: Initial open flow 0 Bbl/d  
Final open flow 10 Mcf/d Oil: Final open flow 0 Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 950 psig (surface measurement) after 12 hours shut in

(Continue on reverse side)

POF:  
25 Mcf

MAR 04 1985

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
 Perforated with 18 holes between 4570 and 4610. Stimulated with 500 gal., 15% HCL.  
 Fractured with 800,000 SCF N<sub>2</sub>. *Alex.*

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale, Brown, Red, Gray, Soft			0	200	Fresh Water -- 80'
Sand			201	205	Fresh Water
Shale, Sand, Siltstone			206	1610	
Big Lime			1611	1662	Some Gas
Salt Sand			1663	1724	Some Gas
Silt Sand			1725	1740	
Kenner S.S.			1741	1765	Trace of Gas
Silt Stone, Salt Sand			1766	1862	Trace of Gas
Injun			1863	1880	
Shale, Silt Stone, Salt Sand			1881	2060	Show of Gas
Shale, Silt Stown			2061	2559	Gas
Gantz			2560	2578	Show of Gas
Shale, Gray, firm			2579	2601	
50 Foot			2602	2621	
Shale, Gray, Firm			2622	2648	Trace of Gas
30 Foot			2649	2666	Trace of Gas
Shale			2667	2746	
Gordon 2747			2756		
Shale			2757	3008	
Warrens			3009	3023	
Shale			3024	3468	
Speechly			3469	3481	Gas
Shale			3482	3660	Gas
Balltown			3661	3684	Show of Gas
Shale			3685	4079	Show of Gas
Benson			4080	4092	Gas
Shale			4093	4555	
Alexander			4556	4573	Some Gas
Shale			4574	5230	
Hamilton ?			5231	5284	
Shale			5248	5605	
Marcellus ?			5606	5618	Gas, Show of Oil
Shale			5619	5990	

#D Rhinestreet @ TD  
 5990  
 100  
 5290

(Attach separate sheets as necessary)

FRENCH CREEK DEVELOPMENT, Inc  
 Well Operator

By: [Signature] Pres

Date: Oct 23, 1984

Note: Regulation 2.02(i) provides as follows:  
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: May 21, \_\_\_\_\_, 1984  
 2) Operator's Well No. F.C.-84 #18  
 3) API Well No. 47 --095 - 1084  
 State \_\_\_\_\_ County \_\_\_\_\_ Permit \_\_\_\_\_

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES, OIL AND GAS DIVISION  
**APPLICATION FOR A WELL WORK PERMIT**

- 4) WELL TYPE: A Oil  / Gas   
 B (If "Gas", Production  / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow )
- 5) LOCATION: Elevation: 700 Watershed: Middle Island Creek (0-58)  
 District: Ellsworth County: Tyler Quadrangle: Shirley 7 1/2 West Union 15'
- 6) WELL OPERATOR French Creek Development, Inc. 7) DESIGNATED AGENT W.T. Anderson  
 Address P.O. Box 82 Address P.O. Box 82  
St. Marys, WV 26170 St. Marys, WV 26170
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Kenneth R. Mason Robert Lowther Name Unknown  
 Address Middleburn, WV Address \_\_\_\_\_  
758-4764
- 10) PROPOSED WELL WORK: Drill  / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Stimulate   
 Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_  
 Other physical change in well (specify) \_\_\_\_\_
- 11) GEOLOGICAL TARGET FORMATION, Marcellus Shale
- 12) Estimated depth of completed well, 5990' feet
- 13) Approximate strata depths: Fresh, \_\_\_\_\_ feet; salt, \_\_\_\_\_ feet.
- 14) Approximate coal seam depths: None Is coal being mined in the area? Yes \_\_\_\_\_ / No XX

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 JUN 13 1984  
 OIL & GAS DIVISION  
 DEPT. OF MINES

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water									
Coal									
Intermediate	<u>8-5-8</u>	<u>RL</u>		<input checked="" type="checkbox"/>		<u>800</u>	<u>800'</u>	<u>to surface</u>	Sizes by <u>Case No.</u>
Production	<u>4 1/2</u>	<u>RL</u>		<input checked="" type="checkbox"/>		<u>5990</u>	<u>5990</u>	<u>By rule 1501</u>	<u>WOC = 18 hours</u>
Tubing									Depths set
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-095-1084 Date June 13, 1984

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires June 13, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>MARKET</u>	Agent: <u>[Signature]</u>	Plat: <u>[Signature]</u>	Casing: <u>[Signature]</u>	Fee: <u>1262</u>
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[Signature]  
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File