



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 Albano
 R.P.E. _____ L.L.S. **551**

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)
 WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION ELEVATION **793'** WATER SHED **MIDDLE ISLAND CREEK**
 DISTRICT **ELLSWORTH** COUNTY **TYLER**
 QUADRANGLE **SHIRLEY 601 7 1/2' QUAD. / WEST UNION 15' QUAD. NC 2**
 SURFACE OWNER **LORETTA J. FULKS** ACREAGE **37 1/4**
 OIL & GAS ROYALTY OWNER **LORETTA J. FULKS** LEASE ACREAGE **32 1/4**
 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'**
 WELL OPERATOR **FRENCH CREEK DEVELOPMENT** AGENT **TOM ANDERSON**
 ADDRESS **P.O. Box 82 308 ST. MARYS, W.VA. 26130**

STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION
 DATE **18 MAY**, 19 **84**
 OPERATOR'S WELL NO. **E.C. 16**
 API WELL NO. **(FULKS #1)**
47 - 095 - 1073
 STATE COUNTY PERMIT
 ADDRESS **P.O. Box 82 308 ST. MARYS, W.VA. 26130**



IV-35
(Rev 8-81)

RECEIVED

FEB 19 1985

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 #84-16

Farm Loretta J. Fulks

API No. 47 - 095 - 1073

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

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

LOCATION: Elevation: 793' 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

DESIGNATED AGENT W.L. ANDERSON

ADDRESS P.O. Box 690, St. Marys, WV

SURFACE OWNER Loretta J. Fulks

ADDRESS Middleborne, WV

MINERAL RIGHTS OWNER Loretta J. Fulks

ADDRESS Middleborne, WV

OIL AND GAS INSPECTOR FOR THIS WORK Robert

Lowther ADDRESS Middlebourne, WV

PERMIT ISSUED May 18, 1984

DRILLING COMMENCED June 4, 1984

DRILLING COMPLETED July 1, 1984

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	945'	945'	290 sks.
7	1984'	1984'	327 cu.ft.
5 1/2			
4 1/2	5227'	5227'	862 cu.ft.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5990' feet

Depth of completed well 5227' feet Rotary / Cable Tools

Water strata depth: Fresh 80 feet; Salt 1805 feet

Coal seam depths: N/A Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Benson Pay zone depth 4643 feet

Gas: Initial open flow 61 Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 27 Mcf/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 2790 psig (surface measurement) after 12 hours shut in

(If applicable due to multiple completion--)

Second producing formation Berea, 50ft. 30ft. Gordon & 4th. Sand Pay zone depth 2288 - 2810 feet

Gas: Initial open flow 27 Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 3 Mcf/d Oil: Final open flow 0 Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 1075 psig (surface measurement) after _____ hours shut in

(Continue on reverse side)

MAR 04 1985

30 mcf
FOF

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

Perforated with 18 holes between 4633 and 4671. Stimulated with 500 gal 15% HCL.
Fractured with 800,000 SCF N₂.

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 -- 80ft.
Sand			201	205	Fresh Water
Shale, sand, silt stone			206	1080	
Salt Sand			1081	1120	Trace Gas
Shale, Silt Stone			1121	1144	
Salt Sand			1145	1179	
Shale, Silt Stone			1180	1201	
Salt Sand			1202	1210	
Shale, Silt Stone, Slat Sand			1211	1398	
Shale			1399	1420	
Salt Sand			1421	1429	
Shale			1430	1480	
Salt Sand, Silt Stone			1481	1505	
Shale			1506	1539	Trace of Gas
Shale, Silt Stone			1540	1568	Trace of Gas
Shale			1569	1590	
Silt Stone			1591	1622	Show of Gas
Big Lime			1623	1631	Gas
Kenner S.S.			1632	1804	Some Gas
Injun			1805	1919	Oil (Salt Water)
Shale, Silt Stone			1920	2252	Trace of Gas
Berea			2253	2430	Trace of Gas
Shale			2431	2478	Trace of Gas
Gantz			2479	2505	Trace of Gas
Shale			2506	2572	
Fifty Foot			2506	2572	
Shale			2585	2646	
Thirty Foot			2643	2685	Trace of Gas
Shale			2650	2696	
Gordon			2697	2716	
Shale			2717	2821	
Warrens			2822	2842	
Shale			2843	3582	Show of Gas
Speechly			3583	3617	Gas
Shale			3618	4014	Show of Gas
Benson			4015	4064	Show of Gas
Shale			4064	4794	
Elk			4795	4822	Show of Gas

(Attach separate sheets as necessary)

TD. 5227-Elk@

793
4434

FRENCH CREEK DEVELOPMENT, INC.

Well Operator

By:  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 18, 1984
 2) Operator's Well No. F.C.-84 #16
 3) API Well No. 47 --095 - 1073
 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: 793 Watershed: Middle Island Creek
 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 _____
 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

RECEIVED
 MAY 23 1984
 OIL & GAS DIVISION
 DEPT. OF MINES

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									Sizes
Coal									Depths set
Intermediate	8-5-8	RL		X		893	893'	By rule 1505	Perforations:
Production	4 1/2	RL		X		5990	5990	By rule 1501	Top Bottom
Tubing									
Liners									

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-095-1073 Date May 23, 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 May 23, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>BLANKET</u>	Agent: <u>LMH</u>	Plat: <u>MM</u>	Casing: <u>MM</u>	Fee: <u>1234</u>
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Margaret J. Hesse
 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