



ACCURACY: 1/200

New Location   
 Drill Deeper   
 Abandonment   
 Fracture   
 Redrill   
 Other

Formation MARCELLUS SHALE Oil   
 Est. Depth 4600' (2 & 4) Gas   
4700' (1 & 3) Other

Source of Elevation ROAD INT ON BULL RUN ROAD 660'

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.

*Chet Waterman*

Company ENERGY UNLIMITED  
 Address MARIETTA, OHIO  
 Surface Owner WESTVACO  
 Mineral Owner CORBIN HEIRS ET. AL.  
 Well No. 4 Acres 96.5  
 Elevation 740' marietta 15' sc  
 Quadrangle WILLOW ISLAND Series 7.5'  
 County WOOD District UNION  
 Date 3/25/81 Scale 1" = 500'

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

WELL LOCATION MAP  
47 - 107 - 1154  
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.  
 Engineer CHET WATERMAN  
 Engineer's Registration No. 3788 File No. 81-125



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Willow Island

Permit No. 47-107-1154

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

Company Energy Unlimited, Inc.  
Address 427 Second St. Marietta, OH 45750  
Farm Corbin Acres 96.5  
Location (waters) Bull Run  
Well No. #4 Elev. 740'  
District Union County Wood

The surface of tract is owned in fee by \_\_\_\_\_  
West Vaco

Address 1900 Blizzard Dr. Parkersburg, WV 26103

Mineral rights are owned by Bayles/Corbin Heirs et al

Address \_\_\_\_\_

Drilling Commenced 5/11/81

Drilling Completed 5/15/81

Initial open flow \_\_\_\_\_ cu. ft. \_\_\_\_\_ bbls.

Final production 20 cu. ft. per day 6.5 bbls

Well open 24 hrs. before test 485 RP.

Well treatment details:

Treated with 30,000 gals H2O, 50,000# sand, 100MSCF nitrogen at 38 BPM and 2050 PSIG

Attach copy of cementing record.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8		260	100 SX
7 1/2			
4 1/2		2595.46	250 SX
3			
2			
Liners Used			

Coal was encountered at none Feet \_\_\_\_\_ Inches \_\_\_\_\_  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water 1480 Feet \_\_\_\_\_  
Producing Sand Gordon Depth 2476'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand			1480'	1500'	salt water	Salt Sand
Shaly Sand			1540'	1556'	salt water	Maxton
Sand			1594'	1614'	salt water	Keener
Sand			1616'	1796'	salt water	Big Injun
Shaly Sand			2062'	2066'	little gas	Wells Stray
Sand	white	hard	2118'	2127'	fair show	Berea
Shaly Sand			2232'	2238'	of gas & oil	
Siltstone			2358'	2268'	little gas	Gantz
Siltstone	gray & brown	medium	2476'	2506'	little gas show of gas & oil	Thirty-foot Gordon

RECEIVED

SEP 11 1981

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

(over)

\* Indicates Electric Log tops in the remarks section.

SEP 28 1981

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks

Date 9-4-81

APPROVED [Signature] Owner

By [Signature]  
(Title)



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

**RECEIVED**

APR 1 1981

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 March 31, 1981

Surface Owner West Vaco  
Address 1900 Blizzard Dr. Parkersburg, WV  
Mineral Owner Bayles-Corbin Heirs etal  
Address N/A  
Coal Owner Same  
Address \_\_\_\_\_  
Coal Operator None  
Address \_\_\_\_\_

Company Energy Unlimited, Inc.  
Address 427 Second St. Marietta, OH 45750  
Farm Corbin Acres 96.5  
Location (waters) Bull Run  
Well No. #4 Elevation 4,600'  
District Union County Wood  
Quadrangle Willow Island

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 12-2-81.

INSPECTOR  
TO BE NOTIFIED Paul Goodnight  
ADDRESS Smithville, WV  
PHONE 477-2455

J. J. Murphy  
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 \_\_\_\_\_ 19\_\_\_\_ by Corbin Heirs etal made to Energy Unlimited, Inc. and recorded on the \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_, in Wood County, Book N/A Page N/A

XX 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, Energy Unlimited, Inc.  
(Sign Name) [Signature]  
Well Operator  
Douglas M. Galloway  
427 Second St.  
Street  
Marietta  
City or Town  
Ohio  
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.

"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 [Signature]

47-107-1154

PERMIT NUMBER

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

PROPOSED WORK ORDER TO XX DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) \_\_\_\_\_ RESPONSIBLE AGENT: \_\_\_\_\_  
 NAME N/A \_\_\_\_\_ NAME David C. Clovis \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ ADDRESS Union Trust Bldg. Parkersburg, WV \_\_\_\_\_  
 TELEPHONE \_\_\_\_\_ TELEPHONE 485-4403 \_\_\_\_\_  
 ESTIMATED DEPTH OF COMPLETED WELL: 4600' ROTARY XX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Marcellus \_\_\_\_\_  
 TYPE OF WELL: OIL X GAS X COMB. X 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 X	250'	250'	to surface
7			
5 1/2			460
4 1/2 X	TD	TD	200 sacks or so
3			Perf. Top <i>regd. by</i>
2			Perf. Bottom <i>rule (K.S.O.)</i>
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 150 FEET \_\_\_\_\_ SALT WATER 1,500 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