

FILE NO. 81-454
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1/200'
 PROVEN SOURCE OF ELEVATION RT. 31 (999')

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) [Signature]
 R.P.E. 3788 L.L.S. _____

PLACE SEAL HERE

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



DATE 8/26, 19 81
 OPERATOR'S WELL NO. 1
 API WELL NO. 47-107-1174
 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 920 WATER SHED RIGHT FORK BULL CREEK
 DISTRICT UNION COUNTY WOOD
 QUADRANGLE WILLOW ISLAND 7.5 Marietta 15' SC
 SURFACE OWNER KENNETH MCCAULE ACREAGE 81
 OIL & GAS ROYALTY OWNER " " LEASE ACREAGE 81
 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 GORDON ESTIMATED DEPTH 2800'
 WELL OPERATOR ENERGY UNLIMITED DESIGNATED AGENT DAVID CLOVIS
 ADDRESS 427-2ND ST. 6-6 MARIETTA, OH ADDRESS PARKERSBURG, WV HENDERSHOT-OGDIN
 SEP 2 1981
 72



REVISED

Date 4/29/82
Operator's
Well No. #1
Farm McCale
API No. 47 - 107 - 1174

RECEIVED

State of West Virginia
Department of Mines
Oil and Gas Division

MAY 17 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 920' Watershed Right Fork
District: Union County Wood Quadrangle Willow Island

COMPANY Energy Unlimited, Inc.
ADDRESS 427 Second St. Marietta, OH 45750
DESIGNATED AGENT Dave Clovis
ADDRESS Union Trust Bldg. P'Burg, WV 26101
SURFACE OWNER Kenneth McCale
ADDRESS 1810 Avery St. Parkersburg, WV 26101
MINERAL RIGHTS OWNER same
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Paul Goodnight ADDRESS Smithville, WV
PERMIT ISSUED 9/2/81
DRILLING COMMENCED 9/10/81
DRILLING COMPLETED 9/15/81
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	261	261	100 sx
7			
5 1/2			
4 1/2	2857	2857	250 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Gordon Depth 2691' - 2734' feet
Depth of completed well 2858' feet Rotary xx / Cable Tools _____
Water strata depth: Fresh 80' feet; Salt 1680' feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 2691-2734 feet
Gas: Initial open flow 25 Mcf/d Oil: Initial open flow 5 Bbl/d
Final open flow 20 Mcf/d Final open flow 2 Bbl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure 510 psig (surface measurement) after 12 hours shut in
(If applicable due to multiple completion--)
Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure _____ psig (surface measurement) after _____ hours shut in

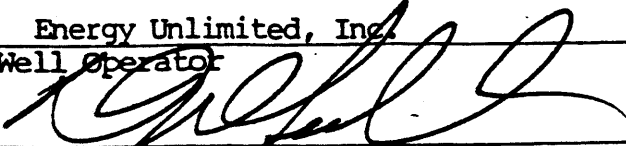
DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated with 14 - .5 holes from 2709' - 2732'
Fractured with 32,000 gals H2O with 50,000# sand at 25 BPM at 1600 PSIG

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
soil		soft	0	15	
shale		soft	15	80	
sand		hard	80	113	freshwater
shale		soft	113	220	
sand		hard	220	245	
sandy-shale		soft	245	436	
sand		hard	436	482	
shale		soft	482	690	
sand		hard	690	728	
silty-shale		soft	728	900	
sand		hard	900	922	
shale		soft	922	1173	
sand		hard	1173	1190	
shale		soft	1190	1400	
sand		hard	1400	1472	
shale		soft	1472	1488	
sand		hard	1488	1514	
shale		soft	1514	1546	
sand		hard	1546	1556	
shale		soft	1556	1680	
Maxton		hard	1680	1726	salt water
shale		soft	1726	1762	
Keener		hard	1762	1775	salt water
shale		soft	1775	1778	
Big Injun		hard	1778	2028	salt water
shale		soft	2028	2082	
Weir		medium	2082	2086	
shale		soft	2086	2246	
Well Stray		medium	2246	2252	
shale		soft	2252	2340	
Berea		medium	2340	2344	gas
silty shale		medium	2344	2454	
Gantz		medium	2454	2464	little gas
shale		soft	2464	2582	
Thirty-Foot		medium	2582	2590	little gas
shale		soft	2590	2690	
Gordon		medium	2690	2730	gas & oil
shale		soft	2730	T. D.	T. D. at 2859'

(Attach separate sheets as necessary)

Energy Unlimited, Inc.
Well Operator
By: 
Date: 4/29/82

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."

RECEIVED



IV-35
(Rev 8-81)

NOV 10 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

State of West Virginia

Department of Mines
Oil and Gas Division

Date 10/27/81
Operator's
Well No. #1
Farm McCale
API No. 47 - 107 - 1174

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

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

LOCATION: Elevation: 920' Watershed Right Fork
District: Union County Wood Quadrangle Willow Island

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DESIGNATED AGENT Dave Clovis
ADDRESS Union Trust Bldg. P'Burg, WV 26101
SURFACE OWNER Kenneth McCale
ADDRESS 1810 Avery St. Parkersburg, WV 26101
MINERAL RIGHTS OWNER same
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK Paul
Goodnight ADDRESS Smithville, WV
PERMIT ISSUED 9/2/81
DRILLING COMMENCED 9/10/81
DRILLING COMPLETED 9/15/81
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.
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2			
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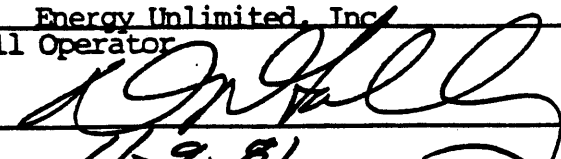
DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated with 14 - .5 holes from 2709' - 2732'
Fractured with 32,000 gals H2O with 50,000# sand at 25 BPM at 1600 PSIG

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	gray	soft	1350'	1400'	top logged interval 1350'
Sand	white	hard	1400'	1472'	
Shale	gray	soft	1472'	1488'	
Sand	white	hard	1488'	1514'	
Shale	gray	soft	1514'	1546'	
Sand	white	hard	1546'	1556'	
Shale	gray	soft	1556'	1680'	
Maxton	white	hard	1680'	1726'	salt water
Shale	gray	soft	1726'	1762'	
Keener	white	hard	1762'	1775'	salt water
Shale	gray	soft	1775'	1778'	
Big Injun	white	hard	1778'	2028'	salt water
Shale	gray	soft	2028'	2082'	
Weir	gray	medium	2082'	2086'	
Shale	gray	soft	2086'	2246'	
Well Stray	gray	medium	2246'	2252'	
Shale	gr-blach	soft	2252'	2340'	
Berea	lt-gray	medium	2340'	2344'	gas
Silty-Shale	gray	medium	2344'	2454'	
Gantz	gray	medium	2454'	2464'	little gas
Shale	gray	soft	2464'	2582'	
Thirty-foot	gray	medium	2582'	2590'	little gas
Shale	gray	soft	2590'	2690'	
Gordon	brown	medium	2690'	2730'	gas & oil
Shale	gray	soft	2730'	T. D.	T. D. at 2859'

(Attach separate sheets as necessary)

Energy Unlimited, Inc.
Well Operator
By: 
Date: 7-9-81

Note: Regulation 2.02(i) provides as follows:
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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

SEP - 2 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE Sept. 1, 1981
Company Energy Unlimited, Inc.
Address 427 Second St. Marietta, OH 45750
Farm McCale Acres 81
Location (waters) Right Fork
Well No. #1 Elevation 920'
District Union County Wood
Quadrangle Willow Island

Surface Owner Kenneth McCale
Address 1810 Avery St. Parkersburg, WV 26101
Mineral Owner same
Address same
Coal Owner same
Address none
Coal Operator none
Address none

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 5-4-82

INSPECTOR
TO BE NOTIFIED Paul Goodnight
ADDRESS Smithville, WV
PHONE 477-3660

Fred Russell
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 August 8, 1981 by Kenneth McCale made to Energy Unlimited, Inc. and recorded on the 14th day of August 1981, in Wood County, Book 759 P. 323
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.

Very truly yours, Energy Unlimited, Inc.

(Sign Name) Douglas M. Galloway
Well Operator
427 Second St.
Street
Marietta
City or Town
Ohio
State

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

*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

47-107-1174

PERMIT NUMBER

"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."

Security

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. P'Burg, WV _____
 TELEPHONE _____ TELEPHONE 485-4403 _____
 ESTIMATED DEPTH OF COMPLETED WELL: 2800' ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordon _____
 TYPE OF WELL: OIL X 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 X	250'	250'	to surface
7			
5 1/2			
4 1/2 X	TD	TD 2800	280 sacks or as
3			Perf. Top required by
2			Perf. Bottom rule 15.01
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 150 FEET _____ SALT WATER 1500 FEET _____
 APPROXIMATE COAL DEPTHS N/A _____
 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. COALS 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