

CSD

11/26/79

Latitude 39° 20' 00"

13,160' SOUTH  
4,470' WEST

Longitude 81° 20' 00"

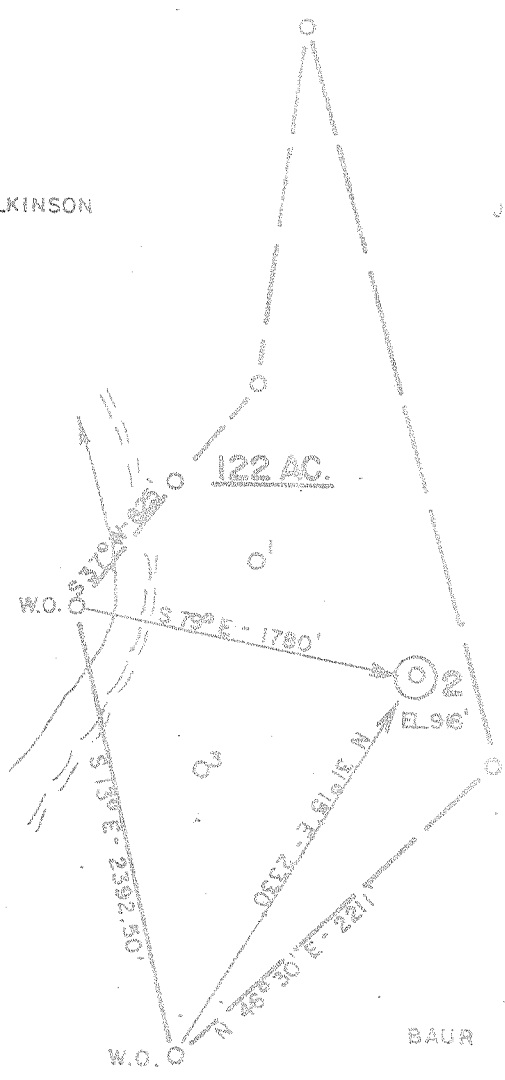
WILKINSON

JOHNSON

249<sup>S</sup>  
095<sup>N</sup>



39 17 50  
81 20 55



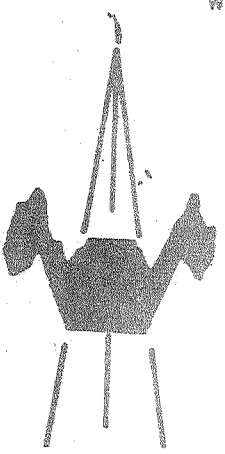
McCALE

WILKINSON

BAUR

7 1/2'

2.49 S  
0.85 W



ACCURACY: 1" / 200'

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill
- Other

Formation GORDON

Est. Depth 2700'

- Oil
- Gas
- Other

Source of Elevation KNOB SOUTH 1128'

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 BEREA OIL & GAS CORP  
 Address BUFFALO, NY  
 Surface Owner CLAUDE McCALE  
 Mineral Owner " " "  
 Well No. 2 Acres 122  
 Elevation 918' *SC*  
 Quadrangle WILLOW ISLAND Series 75'  
 County WOOD District UNION  
 Date 10/29/79 Scale 1" = 1000'

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

WELL LOCATION MAP  
47 - 107 - 1101  
STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.  
Engineer CHET WATERMAN

Engineer's Registration No. 3788 File No. 79-783

*6-0. Hendershot-Ogden (72)*

DEC 19 1979



"AMENDMENT"

IV-35  
(Rev 8-81)

RECEIVED

APR 23 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

State of West Virginia

Department of Mines

Oil and Gas Division

Date April 19, 1982  
Operator's Well No. McCale #2  
Farm Claude McCale  
API No. 47 - 107 - 1101

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: 918' Watershed Bull Creek  
District: Union County Wood Quadrangle Willow Island

COMPANY BEREA OIL AND GAS CORPORATION

ADDRESS One Berea Plaza, PO Box 299, Bridgeport WV

DESIGNATED AGENT Thomas E. Riley, P.E.

ADDRESS One Berea Plaza, PO Box 299, Bridgeport WV

SURFACE OWNER Claude McCale

ADDRESS Rt. 1, Waverly, WV

MINERAL RIGHTS OWNER same.

ADDRESS same.

OIL AND GAS INSPECTOR FOR THIS WORK    

Deo Mace ADDRESS Rt. 1, Box 65, Sandridge WV

PERMIT ISSUED Nov. 12, 1980

DRILLING COMMENCED 12/28/80

DRILLING COMPLETED 1/3/81

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	253'	253'	100 sks.
7			
5 1/2			
4 1/2	2771.66'	2771.66'	230 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION GORDON Depth 2700' feet

Depth of completed well 2777' feet Rotary X / Cable Tools    

Water strata depth: Fresh 40' feet; Salt     feet

Coal seam depths: None Is coal being mined in the area? No

TEST FLOW DATA

Producing formation Berea & Gordon Pay zone depth 2681-2732 feet  
2311-2429

Gas: Initial open flow --- Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow 22 Mcf/d Final open flow show Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 560 psig (surface measurement) after 72 hours shut in  
(if applicable due to multiple completion--)

Second producing formation N/A 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

MAY 3 1982 (continue on reverse side)

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

1/16/81 - GORDON 2318-32' (14 holes) fraced w/ 180,000 SCF N<sub>2</sub>, 450 sks 20/40  
& 150 sks 80/100 sand.

BEREA 2697-2710' (15) fraced w/ 140,000 SCF N<sub>2</sub>, 100 sks 20/40  
& 150 sks 80/100 sand in 375 Bbl. water.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Fill & Shale			0	25	
Shale			25	30	
Sand			30	75	
Shale & Red Rock			75	170	
Red Rock			170	180	
Sand & Shale			180	250	
Sand			250	265	
Sand & Shale			265	285	
Red Rock & Shale			285	340	
Sand, Shale & Red Rock			340	480	
Red Rock			480	504	
Sand & Shale			504	575	
Red Rock & Shale			575	800	
Sand			800	825	
Sand & Shale			825	930	
Shale			930	945	
Red Rock & Shale			945	1042	
Sand			1042	1062	
Sand & Shale			1062	1210	
Sand			1210	1264	
Sand & Shale			1264	1375	
Sand			1375	1485	
Shale			1485	1495	
Sand			1495	1530	
Sand & Shale			1530	1712	
Sand			1712	1720	
Shale			1720	1768	
Big Injun			1768	2012	
Shale			2012	2062	
Weir			2062	2082	
Shale			2082	2311	
Berea			2311	2429	
Sand & Shale			2429	2681	
Gordon			2681	2732	
Sand & Shale			2732	2777	T.D. 2777'

(Attach separate sheets as necessary)

BEREA OIL AND GAS CORPORATION

Well Operator

By: Thomas E. Riley Thomas E. Riley, P.E.

Date: April 19, 1982

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 course of a well."



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division  
WELL RECORD

RECEIVED  
 FEB 13 1981  
 DEPT. OF MINES  
 OIL & GAS DIVISION

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

Quadrangle Willow Island  
 Permit No. 47-107-1101 (Formerly: Wood-930)

Company Berea Oil & Gas Corporation  
 Address 652 Empire Bank Bldg., Clarksburg, WV  
 Farm McCale Acres 122  
 Location (waters) Bull Creek  
 Well No. 2 Elev. 918'  
 District Union County Wood  
 The surface of tract is owned in fee by Claude McCale

Address Rt. 31, Waverly, WV  
 Mineral rights are owned by same  
 Address \_\_\_\_\_  
 Drilling Commenced 12/28/80  
 Drilling Completed 1/3/81  
 Initial open flow --- cu. ft. --- bbls.  
 Final production 22 M cu. ft. per day show bbls.  
 Well open 4 hrs. before test 560 RP.

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	253'	253'	100 sks.
7			
5 1/2			
4 1/2	2771.66'	2771.66'	230 sks.
3			
2			
Liners Used			

Well treatment details: Attach copy of cementing record.  
1/16/81 1st-Gordon 2318-32' 14 holes. 180,000 Scf N<sub>2</sub>, 450 sks. 20/40 sand, 150 sks. 80/100 sand.  
2nd-Berea 2697-2710' 15 holes. 140,000 Scf N<sub>2</sub>, 375 bbl. water 150 sks. 80/100 sand, 100 sks. 20/40 sand.

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
 Fresh water 40 Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
 Producing Sand Gordon & Berea Depth 2318 - 2710'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Surface to Shale			Surface	1375		
Injun			1375	1530		
Sand and Shale			1530	2311		
Berea			2311	2429		
Sand and Shale			2429	2681		
Gordon ✓			2681	2732		
Sand and Shale			2732	2777	TD	

\* Indicates Electric Log tops in the remarks section.

(over)

MAR 23 1981



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED  
NOV 12 1980

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 November 3, 1980

Surface Owner Claude McCale  
Address Rt. 31, Waverly, W. Va.  
Mineral Owner Same  
Address \_\_\_\_\_  
Coal Owner Same  
Address \_\_\_\_\_  
Coal Operator \_\_\_\_\_  
Address \_\_\_\_\_

Company Berea Oil and Gas Corp.  
Address 652 Empire Bank, Clarksburg, W. Va.  
Farm McCale Acres 122  
Location (waters) Bull Creek  
Well No. #2 Elevation 918'  
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 7-17-81.

INSPECTOR Paul Goodnight  
TO BE NOTIFIED \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
PHONE 04-477-3660

*Paul W. Bennett*  
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 Sept. 22 1979 by Claude McCale made to Energy Unlimited Inc. and recorded on the 26 day of Sept. 1979, in Wood County, Book 728 Page 182  
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,  
(Sign Name) Mark V. Schumacher  
Mark V. Schumacher, P.E.  
Well Operator

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

Berea Oil and Gas, 652 Empire Bank  
Street  
Clarksburg,  
City or Town  
W. Va. 26301  
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.

(Formerly: WOOD-930)  
47-107-1101

BLANKET BOND

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 \_\_\_\_\_ NAME Mark V. Schumacher  
 ADDRESS \_\_\_\_\_ ADDRESS 652 Empire Bank, Clarksburg WV  
 TELEPHONE \_\_\_\_\_ TELEPHONE 304=624-6429  
 ESTIMATED DEPTH OF COMPLETED WELL: \_\_\_\_\_ 2700' ROTARY XX CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Gordon  
 TYPE OF WELL: OIL \_\_\_\_\_ GAS \_\_\_\_\_ COMB. \_\_\_\_\_ XX 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	250'	250'	surface
7			
5 1/2			
4 1/2	TD	TD	400'
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 150 FEET \_\_\_\_\_ SALT WATER 1500 FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS None \_\_\_\_\_  
 IS COAL BEING MINED IN THE AREA? \_\_\_\_\_ 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