



ACCURACY: 1/200'

New Location

Drill Deeper

Abandonment

Fracture

Redrill

Other

Formation GORDON

Est. Depth 2500'

Oil

Gas

Other

Source of Elevation BULL RUN ROAD & ROUTE #2 (620')

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 5 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Chet Waterman

Company BEREA OIL & GAS CORPORATION

Address BUFFALO, NY

Surface Owner CARL HOWARD

Mineral Owner CARL HOWARD

Well No. 3 Acres 125

Elevation 700'

Quadrangle MARIETTA 15'
VALLEY HILLS Series 6.5 SC

County WOOD District UNION

Date 9/4/77 Scale 1" = 500'

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

WELL LOCATION MAP
47 - 107 - 1030
STATE COUNTY PERMIT
FORMERLY 0909

+ Denotes location of well on United States Topographic Maps.
Engineer CHET WATERMAN
Engineer's Registration No. 3788 File No. 79-604

6-6 Waverly (71)

JUN 18 1980



"AMENDMENT"

IV-35
(Rev 8-81)

Date April 19, 1982
Operator's
Well No. Howard #3
Farm Carl S. Howard
API No. 47 - 107 - 1030

State of West Virginia
Department of Mines
Oil and Gas Division

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 Bull Creek
District: Union County Wood Quadrangle Valley Mills 7½'

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 Carl S. Howard

ADDRESS Box 322, Waverly, WV 26184

MINERAL RIGHTS OWNER same.

ADDRESS same.

OIL AND GAS INSPECTOR FOR THIS WORK

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

PERMIT ISSUED May 4, 1980

DRILLING COMMENCED 6/9/80

DRILLING COMPLETED 6/13/80

IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing & Tubing Size	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16 Cond.			
13-10"			
9 5/8			
8 5/8	251'	251'	90 sks
7			
5 1/2			
4 1/2	2568'	2568'	230 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Gordon Depth 2650' feet

Depth of completed well 2570' feet Rotary X / Cable Tools

Water strata depth: Fresh 40 feet; Salt feet

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

OPERATION DATA

Producing formation Berea Pay zone depth 2035-58' feet

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

Final open flow 250 Mcf/d Final open flow show Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 850 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: Initial 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.

7/22/80: Perf 2032-36 (3), 2043-52 (11). Frac w/ 150 sks 80/100 and 500 sks 20/40 in 857 BBLs fluid. (Berea)

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	10	
Shale			10	30	
Sand			30	90	
Shale & Red Rock			90	160	
Sand & Shale			160	240	
Red Rock & Sand			240	275	
Sand & Shale			275	300	
Red Rock & Shale			300	550	
Red Rock			550	575	
Sand & Shale			575	610	
Red Rock & Shale			610	815	
Shale			815	960	
Red Rock & Shale			960	1090	
Shale			1090	1250	
Sand & Shale			1250	1470	
Shale			1470	1500	
Sand			1500	1515	
Shale			1515	1555	
Injun			1555	1715	
Sand & Shale			1715	1788	
Weir			1788	1828	
Shale			1828	2035	
Berea Sandstone			2035	2058	
Sand & Shale			2058	2396	
Gordon Siltstone			2394	2425	
Sand & Shale			2425	2570	T.D. 2570'

(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 drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

JUL 28 1980

Oil and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

WELL RECORD

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

Quadrangle Valley Mills 7.5'

Permit No. 47-107-1030

Company Berea Oil & Gas Corporation
Address 652 Empire Bank, Clarksburg, WV
Farm C. Howard Acres 125
Location (waters) Bull Creek
Well No. #3 Elev. 700'
District Union County Wood
The surface of tract is owned in fee by Carl S. Howard

Address Box 322, Waverly, WV 26184
Mineral rights are owned by Same
Address Same

Drilling Commenced 6-9-80
Drilling Completed 6-13-80
Initial open flow _____ cu. ft. _____ bbls.
Final production 250 MCF cu. ft. per day show bbls.
Well open 4 hrs. before test 850 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu ft (Sks.)
Size 20-16			90 sks.
Cond. 13-10"			
5/8	251'	251'	230 sks.
5/8			
1/2			
1/2	2568'	2568'	
Liners Used			

Well treatment details:

Attach copy of cementing record.

7-22-80 Perf. 2032-36 (3 holes) 2043-2052 (11 holes) Frac w/15,000#
80/100 & 50,000# 20/40 in 8.7 bbls. fluid. - Berea Sand

250 MCF

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water _____ Feet _____
Producing Sand Berea Depth 2032-36, 2043-52

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand & Shale			0	1555		
Injun			1555	1715		
Sand & Shale			1715	2035		
Berea Sandstone			2035	2058		
Sand & Shale			2058	2394		
Gordon Siltstone			2394	2425		
Sand & Shale			2425	2570		
TOTAL DEPTH				2570		

AUG 11 1980



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

MAY 4 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.

Surface Owner Carl S. Howard
Address Box 322, Waverly, W. Va. 26184
Mineral Owner Same
Address _____
Coal Owner Same
Address _____
Coal Operator None
Address _____

DATE May 12, 1980
Company Berea Oil and Gas Corporation
Address See Well Operator Below
Farm Howard Acres 125
Location (waters) Bull Creek
Well No. #3 Elevation 700'
District Union County Wood
Quadrangle Valley Mills

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 1-23-81.

Robert H. ...

Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Paul Goodnight
ADDRESS Smithville, W. Va.
PHONE 477-3660

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 6 1979 by Carl S. Howard made to Energy Unlimited, Inc. and recorded on the 7th day of August 1979 in Wood County, Book 725 Page 368

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) *M. Schumacher*
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

652 Empire Bank Bldg. 4th & Main Sts.
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.

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

PROPOSED WORK ORDER ~~XX~~ XX DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____
 NAME N/A _____ NAME Mark Schumacher _____
 ADDRESS _____ ADDRESS 552 Empire Bank Bldg., Clarksburg, W. Va. _____
 TELEPHONE _____ TELEPHONE 304 624-6429 _____
 ESTIMATED DEPTH OF COMPLETED WELL: 2650' _____ ROTARY _____ CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordon _____
 TYPE OF WELL: OIL XX GAS XX 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 <u>XX</u>	250'	250'	Surface
7			
5 1/2			
4 1/2 <u>XX</u>	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 _____ 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