



39 19 35
81 22 30



ACCURACY: 1' / 200'

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

Formation GORDON
Est. Depth 2800'

Oil
Gas
Other

Source of Elevation BULL RUN (611')

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 BERE A OIL & GAS CORP
 Address BUFFALO, NY
 Surface Owner HILDA MUNSEE LIVINGSTON
 Mineral Owner " "
 Well No. 1 Acres 29
 Elevation 750' MARIETTA 15'
 Quadrangle VALLEY MILLS Series 7.5 5C
 County WOOD District UNION
 Date 4/9/80 Scale 1" = 500'

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

WELL LOCATION MAP
47 - 107 - 1000
STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
Engineer CHET WATERMAN
Engineer's Registration No. 3788 File No. 80-214

6-6 Waverly (71)

JUN 4 1980

IV-35
(REV 8-81)

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OIL AND GAS DIVISION
WV DEPARTMENT OF MINES



State of West Virginia
Department of Mines
Oil and Gas Division

"AMENDMENT"

Date April 19, 1982
Operator's
Well No. Livingston #1 ^{ston}
Farm Hilda Munsee & E.H. Living-
API No. 47 - 107 - 1000

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: 750' Watershed Bull Run
District: Union County Wood Quadrangle Valley Mills

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 Hilda Munsee & E.H. Livingston

ADDRESS Rt. 1, Box 94, St. Marys, 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 April 21, 1980

DRILLING COMMENCED 8/20/80

DRILLING COMPLETED 8/24/80

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

Casing & Tubing Size Cond.	Used in Drilling	Left in Well	Cement fill up Cu. ft.
20-16			
13-10"			
9 5/8			
8 5/8	254'	254'	90 sks.
7			
5 1/2			
4 1/2	2597'	2597'	240 sks.
3			
2			
Liners used	1 1/2"	2060'	

GEOLOGICAL TARGET FORMATION GORDON Depth 2600 feet

Depth of completed well 2608' feet Rotary X / Cable Tools

Water strata depth: Fresh 40' feet; Salt feet

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

OPEN FLOW DATA

Producing formation Berea Pay zone depth 2089-2105' feet

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

Final open flow 25 Mcf/d Final open flow 13.94 Bbl/d

Time of open flow between initial and final tests 4 hours

Static rock pressure 640 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

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

9/12/80 BEREA - Perf 2100-04'(6) 2090-98'(9)

Fraced w/500 sks 20/40 & 150 sks 80/100 sand in 841 BBLs.
fluid.

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	6	
Shale			6	112	
Sand & Shale			112	195	
Shale			195	212	
Sand & Shale			212	420	
Shale			420	480	
Sand			480	493	
Shale			493	528	
Sand & Shale			528	652	
Shale			652	730	
Sand			730	748	
Sand & Shale			748	940	
Shale			940	1185	
Sand			1185	1310	
Shale			1310	1347	
Sand & Shale			1347	1552	
Shale			1552	1605	
Big Injun			1605	1712	
Shale			1712	1742	
Squaw			1742	1750	
Shale			1750	2089	
Berea			2089	2105	
Sand & Shale			2105	2445	
Gordon			2445	2477	
Sand & Shale			2477	2608	T.D. 2608'

(Attach separate sheets as necessary)

BEREA OIL AND GAS CORPORATON

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 interval of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

WELL RECORD

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OIL & GAS DIVISION
DEPT. OF MINES

Quadrangle Valley Mills
Permit No. 47-107-1000

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

Company Berea Oil & Gas Corporation
Address 652 Empire Bk., Clarksburg, WV
Farm Livingston Acres 29
Location (waters) Bull Run
Well No. #1 Elev. 750'
District Union County Wood
The surface of tract is owned in fee by Hilda
Munsee & E. H. Livingston
Address Rt. 1, Box 94, St. Marys, WV
Mineral rights are owned by SAME
Address SAME
Drilling Commenced 8-20-80
Drilling Completed 8-24-80
Initial open flow ----- cu. ft. ----- bbls.
Final production 25.0mcf cu. ft. per day 13.94 bbls.
Well open 4 hrs. before test 640 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	254'	254'	90 sks.
7			
5 1/2			
4 1/2	2597'	2597'	240 sks.
3			
<input checked="" type="checkbox"/> 1 1/2"	2060'	2060'	
Liners Used			

Well treatment details:

Attach copy of cementing record.

9-12-80 Perf. Berea 2100-2104 (6 holes) 2090-2098 (9 holes) Fractured w/50,000# 20/40 and 15,000# 80/100 in 841 bbls. fluid.

1400 + 25 MCF

Coal was encountered at _____ Feet _____ Inches
Fresh water 40' Feet _____ Salt Water _____ Feet _____
Producing Sand Berea Depth 2100-2098

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand & Shale			0	1605		
Injun			1605	1712		
Sand & Shale			1712	2089		
Berea			2089	2105		
Sand & Shale			2105	2445		
Gordon			2445	2477		
Sand & Shale			2477	2608		
TOTAL DEPTH				2608		

(over)

* Indicates Electric Log tops in the remarks section.

DEC 5 1980



1) Date: July 9, 1986
 2) Operator's Well No. 2623
 3) API Well No. 47-109-1000
 State County Permit

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: Gas / Deep / Shallow /
 B (If "Gas", Production / Underground storage /
 5) LOCATION: Elevation: 2926 / Watershed: Milam Fork
 District: Barkers Ridge / County: Wyoming / Quadrangle: Crumpler 314
 6) WELL OPERATOR: CNG Development Co CODE: 10110 7) DESIGNATED AGENT Gary Nicholas
 Address: Crosswind Corporate Park
Rt. 2, Box 698, Bridgeport, WV 26330
 8) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Arthur St. Clair
 Address P.O. Box 468
Brenton, WV 24818
 9) DRILLING CONTRACTOR: Name Sam Jack Drilling Company
 Address P.O. Box 48
Buckhannon, WV 26201
 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, Weir 387
 12) Estimated depth of completed well, 4530 feet
 13) Approximate trata depths: Fresh, 294 feet; salt, _____ feet.
 14) Approximate coal seam depths: 455 Is coal being mined in the area? Yes / No

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling		
Conductor	16					20 - 30		Kinds By rule 15.05
Fresh water	11-3/4	H-40	42	X		40		Sizes By rule 15.05
Coal								Depths set By rule 15.01
Intermediate	8-5/8	X-42	23	X		1200	1200	Perforations: Top Bottom
Production	4-1/2	J-55	10.5	X		4530	4530	
Tubing	1-1/2	CN-55	2.75	X				
Lin...								

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-109-1000 Date August 26 19 86

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 August 26, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent: <u>ALB</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>14616</u>	WPCP: <u>AS</u>	S&E: <u>AS</u>	Other:
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[Signature]
Director, Division 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.



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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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 April 15, 1980

Surface Owner Hilda Munsee & E. H. Livingston Company Berea Oil & Gas Corp.

Address Route # 1, Box 94, St. Marys, W.Va/ Address see well operator below

Mineral Owner same Farm Livingston Acres 29

Address _____ Location (waters) Bull Run

Coal Owner same Well No. 1 Elevation 750'

Address _____ District Union County Wood

Coal Operator none Quadrangle Valley Mills

Address _____

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 12-30-80.

INSPECTOR
TO BE NOTIFIED Paul Goodnight

ADDRESS Smithville, W. Va.

PHONE 304-477-3660

Robert L. [Signature]
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 February 22 19 80 by Hilda Munsee & E. H. Livingston made to Energy Unlimited, Inc. and recorded on the 3rd day of March 19 80 in Wood County, Book 734 Page 468

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, Mark Schumacher

(Sign Name) [Signature]

Well Operator
652 Empire Bank Building
Fourth & Main Streets
Street

Clarksburg, W. Va.
City or Town

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.

BLANKET BOND

47-107-1000

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."

Signed by _____

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 Mark Schumacher
 ADDRESS _____ ADDRESS Clarksburg, W. Va.
 TELEPHONE _____ TELEPHONE 304-624-6429
 ESTIMATED DEPTH OF COMPLETED WELL: 2800' ROTARY _____ CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Gordoa?
 TYPE OF WELL: OIL _____ GAS _____ 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 XX	250'	250'	Surface
7			
5 1/2			
4 1/2 XX	T.D.	T.D.	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? 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