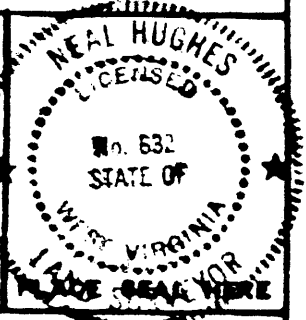


FILE NO. 4+M  
 DRAWING NO. 1  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROVEN SOURCE OF ELEVATION RD 1033

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) Neal Hughes  
 R.P.E. \_\_\_\_\_ L.L.S. 632



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



DATE JULY 7, 19 81  
 OPERATOR'S WELL NO. 1  
 API WELL NO. 47-073-1263  
 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 1000' WATER SHED SUGAR CREEK  
 DISTRICT LAFAYETTE COUNTY PLEASANTS  
 QUADRANGLE BENS RUN 7.5 Strong C  
 SURFACE OWNER WILLIAM HIGGINS MRS. ACREAGE 77.5  
 OIL & GAS ROYALTY OWNER E. BRADFORD + M. LOLKE LEASE ACREAGE 142  
 LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 4500'  
 WELL OPERATOR L & M PETROLEUM Co. DESIGNATED AGENT David Clovis  
 ADDRESS P.O. Box 89 ADDRESS P.O. Box 288  
6-6 Reno, OH 45713 Darkersburg W.Va. 26101  
 AUG 11 1981  
 FEDERAL

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JUN - 9 1983



State of West Virginia

OIL & GAS DIVISION  
DEPT. OF MINES

Department of Mines  
Oil and Gas Division

January 12, 1982  
Revised -- June 23/82  
Date Revised -- May 19/83

Operator's Well No. #1  
Farm Ella Bradfield  
API No. 47 - 073 - 1263

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 / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 1000. Watershed Sugar Creek  
District: Lafayette County Pleasants Quadrangle Bens Run

COMPANY Ridgewood Resources, Inc.  
ADDRESS P.O. Box 157, Reno, Ohio 45773  
DESIGNATED AGENT David Clovis  
ADDRESS P.O. Box 288, Parkersburg, WV 26101  
SURFACE OWNER William Higgins (Heirs)  
ADDRESS St. Marys, WV 26170  
MINERAL RIGHTS OWNER Ella Bradfield and Mary Ann Locke  
ADDRESS Route # 2, St. Marys, WV 26170  
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther  
ADDRESS P.O. Box 173 Middlebourne, WV  
PERMIT ISSUED 7-24-81  
DRILLING COMMENCED 8-24-81  
DRILLING COMPLETED 8-30-81  
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	1095.'	1095.'	320 Sx'S
-7			
5 1/2	4133.'	4133.'	451 Sx'S
4 1/2			
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 2487-4217 feet  
Depth of completed well 4217 feet Rotary XX / Cable Tools  
Water strata depth: Fresh --- feet; Salt --- feet  
Coal seam depths: --- Is coal being mined in the area? No

OPEN FLOW DATA  
Producing formation Huron Devonian Shale Pay zone depth 3630-4085 feet  
Gas: Initial open flow 100 Mcf/d Oil: Initial open flow --- Bbl/d  
Final open flow 85 Mcf/d Final open flow --- Bbl/d  
Time of open flow between initial and final tests 6 hours  
Static rock pressure 1190 psig (surface measurement) after 168 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

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

Selectivity perforated 23 holes from 4085' -- 3630.' K.B.  
 Acidized perforations with 1000 gals. 15% HCL & 196,000 SCF N<sub>2</sub>. Clean up well, then  
 frac with 1,304,000 scf N<sub>2</sub> at 55,000 scf/m.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fr and salt water, coal, oil and
Unconsolidated Gravel & Sand			0.	270.	this info not on original record
Pittsburgh Coal			275.	280.	
Carroll Sand			308.	360.	
Monongahela Shale			395.	640.	
Minshall Sand			806.	845.	
Murphy Sand			1017.	1080.	
First Cow Run Sand			1221.	1248.	
Second Cow Run Sand			1338.	1390.	
Second Salt Sand			1484.	1548.	
Ravencliff Formation?			1618.	1658.	
Third Salt Sand			1794.	1810.	
Maxton Sand			1820.	1875.	
Big Lime			1884.	1928.	
Big Injun Sand			1978.	2128.	Wet
Weir Sand			2197.	2269.	Tight
Berea Sand			2480.	2487.	Oil
Gantz			2488.	2502.	
30' Sand			2757.	2764.	Tight
Gordon Sand			2875.	2906.	Oil

Total Depth: 217.  
 2487  
 1730

Huron@TD

(Attach separate sheets as necessary)

RIDGEWOOD RESOURCES, INC.

Well Operator

By: [Signature] / Drilling & Production Sup

Date: May 19, 1983 "REVISED"

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



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STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

JAN 1 1982  
Oil and Gas Division

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

WELL RECORD

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

Quadrangle Bens Run

Permit No. 47-073-1202 **1263**

Company RIDGEWOOD RESOURCES, INC.  
Address P.O. Box 157  
Farm Ella Bradfield # 1 Acres 142  
Location (waters) Sugar Creek  
Well No. 1 Elev. 1000'  
District Lafayette County Pleasants  
The surface of tract is owned in fee by William Higgins Heirs  
Address St. Marvs, W. Va. 26170  
Mineral rights are owned by Ella Bradfield & Mary Ann Locke  
Address Rt. 2, St. Marvs, WV 26170  
Drilling Commenced 8-24-81  
Drilling Completed 8-30-81  
Initial open flow 100 cu. ft. 2 bbls.  
Final production 85 cu. ft. per day \_\_\_\_\_ bbls.  
Well open 6 hrs. before test \_\_\_\_\_ 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	1095'	1095'	320 sxs.
7			
5 1/2	4133'	4133'	451 sxs.
4 1/2			
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Selectively perforated 23 holes from 3085' to 3630' KB. Acidize perforations with 1000 gals. 15% HCl & 196,000 scf nitrogen. Clean up well, then frac with 1,304,000 scf nitrogen at 55,000 scf/m.

D.T.D. - 4217'

L.T.D. - 4207'

Coal was encountered at \_\_\_\_\_ Feet \_\_\_\_\_ Inches  
Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Devonian Shale Depth 2487 to T.D.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Big Lime			1884	1928		
Big Injun Sand			1978	2128		
Weir Sand			2197	2269		Wet Tight
Berea Sand			2480	2487	Oil	
Gantz			2484	2502		
30' Sand			2757	2764		Tight
Gordon Sand			2875	2906	Oil	

Total Depth - 4217' **DEV SH**

4217  
2487  
1730

( NOTE: No logs or samples were taken above these depths.)

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(over)

\* Indicates Electric Log tops in the remarks section.



Date: July 14, 19 81

Operator's Well No. Ella Bradfield #1

API Well No. 47 - 073 - 1263  
State County Permit

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

OIL AND GAS WELL PERMIT

WELL TYPE: Oil X / Gas X /  
(If "Gas", Production \_\_\_\_\_ / Underground storage \_\_\_\_\_ / Deep \_\_\_\_\_ / Shallow 0)  
LOCATION: Elevation: 1000' Watershed: Sugar Creek  
District: Lafayette County: Pleasants Quadrangle: Bens Run

WELL OPERATOR L & M Petroleum Co. DESIGNATED AGENT David Clovis  
Address P.O. Box 89 Address P.O. Box 288  
Reno, OH 45773 Parkersburg, WV 26101

OIL & GAS ROYALTY OWNER E. Bradfield & M. Locke  
Address Route 2  
St. Marys, WV 26170

COAL OPERATOR None  
Address \_\_\_\_\_

ACREAGE 142 acres  
SURFACE OWNER William Higgins Hrs.  
Address St. Marys, WV 26170  
ACREAGE 77.5 acres

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name None  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

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FIELD SALE (IF MADE) TO:  
Address N/A

COAL LESSEE WITH DECLARATION ON RECORD:  
Name N/A  
Address \_\_\_\_\_

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Phillip Lee Tracy  
Address Rt. 23  
Alma, WV

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed \_\_\_\_\_ / lease X other contract \_\_\_\_\_ / dated Sept. 1, 1971, to the undersigned well operator from Ella Bradfield

(If said deed, lease, or other contract has been recorded:)  
Recorded on Oct. 22, 1971, in the office of the Clerk of the County Commission of Pleasants County, West Virginia in Deed Book 131 at page 549. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper \_\_\_\_\_ / Redrill \_\_\_\_\_ / Fracture or stimulate \_\_\_\_\_ /  
Plug off old formation \_\_\_\_\_ / Perforate new formation \_\_\_\_\_ /  
Other physical change in well (specify) \_\_\_\_\_

—planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311  
TELEPHONE: (304) 348-3092

L & M Petroleum Co.  
Well Operator  
By [Signature]  
Its Vice-president

2000000000

Form IV-2  
(08-78)

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) N/A

Address \_\_\_\_\_

GEOLOGICAL TARGET FORMATION, Devonian Shale

Estimated depth of completed well, 4500 feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, N/A feet; salt, N/A feet.

Approximate coal seam depths: N/A Is coal being mined in the area? Yes \_\_\_\_\_ / No X /

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	Left in well		
Conductor	85/8			X		250'		<i>20 Sacks</i>	Kinds
Fresh Water									
Coal									Sizes
Intermediate									
Production	4.5			X		T.D.	T.D.	150 165 sacks	Depths set
Tubing								<i>according to Bull 1501</i>	
Liners									Perforations:
									Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

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 3-24-82.

*Judith Ruppel*  
Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_, 19\_\_\_\_

By \_\_\_\_\_

Its \_\_\_\_\_