

RECEIVED

JUL 21 1982



Date: July 7, 1982

Operator's Well No. Rollins #2

API Well No. 47 079 1088  
State County Permit

OIL & GAS DIVISION STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES, OIL AND GAS DIVISION  
DEPT. OF MINES  
OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil / Gas X /  
(If "Gas", Production X / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 1079' Watershed: Toney Branch, Trace Fork  
District: Curry County: Putnam Quadrangle: Garrett's Bend

WELL OPERATOR D. C. Malcolm, Inc. DESIGNATED AGENT D. C. Malcolm  
Address 1006 Commerce Square Address 1006 Commerce Square  
Charleston, W. Va. 25301 Charleston, W. Va. 25301

OIL & GAS ROYALTY OWNER Gladys Rollins, et al COAL OPERATOR not operated  
Address c/o David Rollins Address  
Box 169  
Charleston, W. Va. 25321

Acres 117  
SURFACE OWNER W. R. Burdette COAL OWNER(S) WITH DECLARATION ON RECORD:  
Address Route 3 Name Gladys Rollins, et al  
Hurricane, W. Va. Address

FIELD SALE (IF MADE) TO: Name  
Address

OIL & GAS INSPECTOR TO BE NOTIFIED Name  
Address

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 1-23, 1978, to the undersigned well operator from Gladys B. Rollins, et al  
(IF said deed, lease, or other contract has been recorded:)  
Recorded on April 11, 1978, in the office of the Clerk of the County Commission of Putnam County, West Va., in Book 60 at page 554. 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

D. C. Malcolm, Inc.  
Well Operator  
By [Signature]  
Its President

BLANKET BOND



**PROPOSED WORK ORDER**

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

DRILLING CONTRACTOR (IF KNOWN) \_\_\_\_\_  
Address \_\_\_\_\_

GEOLOGICAL TARGET FORMATION, Devonian Shale (Marcellus)

Estimated depth of completed well, 4100 feet Rotary X / Cable tools \_\_\_\_\_ /  
Approximate water strata depths: Fresh, 160 feet; salt, 600 feet.  
Approximate coal seam depths: \_\_\_\_\_ 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		Kinds	Sizes
Conductor										
Fresh Water	9 5/8"			X		250	250	surface		
Coal										
Intermediate	7"		17	X		2025	2025	35 sx		
Production										Depths set
Tubing	2 3/8"		46	X		4100	4100	--		
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,**  
**ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY**  
**APPROVED FOR \_\_\_\_\_ THIS PERMIT SHALL EXPIRE**  
**IF OPERATIONS HAVE NOT COMMENCED BY \_\_\_\_\_**  
**BY \_\_\_\_\_**

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 \_\_\_\_\_

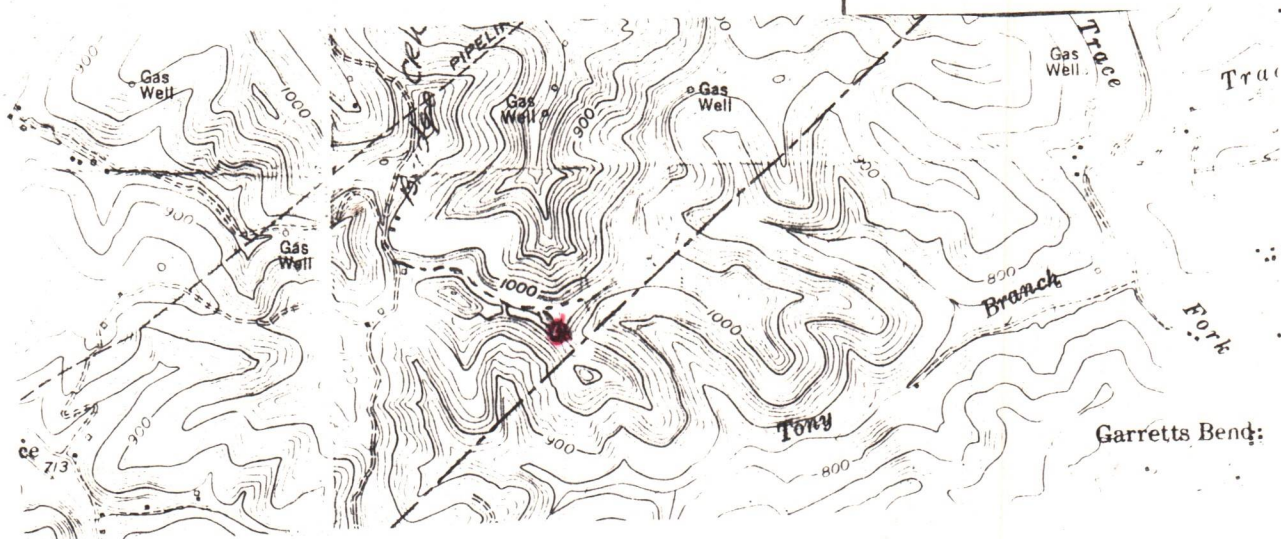


ATTACH OR PHOTOCOPY SECTION OF INVOLVED TOPOGRAPHIC MAP. QUADRANGLE Garrett's Bend

**LEGEND**

Well Site ⊕

Access Road ———



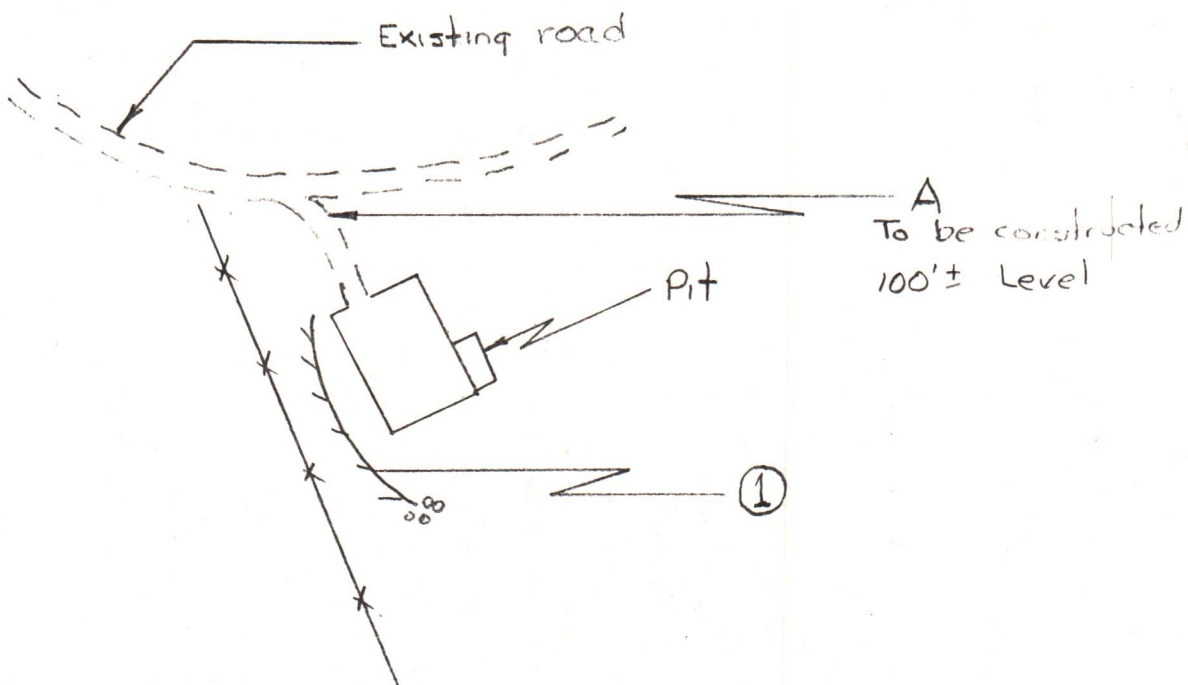
WELL SITE PLAN

Sketch to include well location, existing access road, roads to be constructed, wellsite, drilling pits and necessary structures numbered or lettered to correspond with the first part of this plan. Include all natural drainage.

**LEGEND**

- Property boundary ————
- Road = = = = =
- Existing fence — x — x —
- Planned fence — / — / —
- Stream ~ ~ ~ ~ ~
- Open ditch — ···· — ···· — ···· —

- Diversion // // // // //
- Spring ○ →
- Wet spot ☼
- Building ■
- Drain pipe — ○ — ○ — ○ —
- Waterway ← = = = = =





Rollins

WEST VIRGINIA  
DEPARTMENT OF AGRICULTURE

...ernum.

PLAN PREPARED BY D. C. Malcolm

ADDRESS 1006 Commerce Square  
Charleston, W. Va. 25301

PHONE NO. 343-9593

NOTES: Please request landowner's cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.



**PROPOSED WORK ORDER**

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

DRILLING CONTRACTOR (IF KNOWN) \_\_\_\_\_

Address \_\_\_\_\_

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Approximate water strata depths: Fresh, 160 feet; salt, 600 feet.

Approximate coal seam depths: \_\_\_\_\_ 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		Kinds	Sizes
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Coal										
Intermediate	7"		17	X		2025	2025	35 sx		
Production										Depths set
Tubing	2 3/8"		46	X		4100	4100	--		
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,**  
**ARTICLE 4 OF THE W. VA. CODE, THIS LOCATION IS HEREBY**  
 APPROVED FOR drilling. THIS PERMIT SHALL EXPIRE  
 IF OPERATIONS HAVE NOT COMMENCED BY 4-3-83  
 BY [Signature]

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 July 9, 1982

By [Signature]  
Its \_\_\_\_\_



15. This lease embodies the entire contract and agreement between Lessor and Lessee, and no warranties, representations, promises or inducements not herein expressed have been made or relied upon by either party. The terms, conditions and stipulations hereof shall extend to the respective heirs, executors, administrators, successors and assigns of the parties hereto.

Witness the hands and seals of the parties hereto the day and year first above written.

WITNESS:

*Phie M. Conley* (SEAL)  
*Walter T. Rollins* (SEAL)  
*Ray B. Rollins* (SEAL)  
*David H. Rollins* (SEAL)  
*Harvey T. Rollins* (SEAL)  
*Dorothy S. Rushman* (SEAL)

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA

COUNTY OF *Kanawha*

To-wit:

I, *David H. Rollins*, a Notary Public of said County, do hereby certify that *Phie M. Conley, Walter T. Rollins, Ray B. Rollins, David H. Rollins, Harvey T. Rollins, Dorothy S. Rushman* whose name ~~above~~ signed to the within writing bearing date the *23* day of *January*, 19*78* have this day acknowledged the same before me in my said County.

Given under my hand this *23* day of *January*, 19*78*.

*David H. Rollins*  
 Notary Public

My Commission expires *10-29-85*

WEST VIRGINIA ACKNOWLEDGMENT

STATE OF WEST VIRGINIA

COUNTY OF *Kanawha*

To-wit:

I, *David H. Rollins*, a Notary Public of said County, do hereby certify that *Walter T. Rollins* whose name ~~above~~ signed to the within writing bearing date the *23* day of *January*, 19*78* have this day acknowledged the same before me in my said County.

Given under my hand this *23rd* day of *January*, 19*78*.

*David H. Rollins*  
 Notary Public

My Commission expires *May 7, 1983*

OHIO ACKNOWLEDGMENT

STATE OF OHIO,

COUNTY OF \_\_\_\_\_

SS.

Before me, a Notary Public in and for said \_\_\_\_\_

STATE OF WEST VIRGINIA,  
 County of Putnam, to-wit

that *he* did sign the foregoing instrument whereof I have hereunto subscribed my name day of \_\_\_\_\_

I, J. M. LAKE, Clerk of the County Commission of said County, do hereby certify that the foregoing writing was this day produced to me in my said office, and together with the certificate thereto annexed, was duly admitted to record therein.

Given under my hand this *9th* day of *April*, 19*78*

*J. M. Lake*  
 Clerk

My Commission expires \_\_\_\_\_

Notary Public

Circle Form 100

Oil and Gas Lease

TO

D. C. Malcolm, Inc.

Date *January 23, 1978*

Acre *117*

Location *Toney Branch of Valley Fork*

*Dural & Curry Districts*

County *Lincoln, Putnam* State *W. Va.*

Term *Five Years*

RECORDING DATA:

APR 11 9 03 AM 1978  
 PUTNAM COUNTY, W. VA.  
 J. M. LAKE, CLERK

BOOK *60* PAGE *554*



**RECEIVED**

JUL 21 1982

OIL & GAS DIVISION  
DEPT. OF MINES



IV-35  
(Rev 8-81)

Date 9-7-82  
Operator's  
Well No. 2  
Farm Gladys Rollins  
API No. 047-079-1088

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 \_\_\_ / Gas X / Liquid Injection \_\_\_ / Waste Disposal \_\_\_ /  
(If "Gas," Production \_\_\_ / Underground Storage \_\_\_ / Deep \_\_\_ / Shallow X /)

LOCATION: Elevation: 1089 KB Watershed Toney Branch, Trace Fork  
District: Curry County Putnam Quadrangle Garrett's Bend

COMPANY D. C. Malcolm, Inc.  
ADDRESS 1006 Commerce Square  
DESIGNATED AGENT D. C. Malcolm  
ADDRESS 1006 Commerce Square  
SURFACE OWNER W. R. Burdette  
ADDRESS Rt. 3 Hurricane, WV  
MINERAL RIGHTS OWNER Gladys Rollins, et al  
ADDRESS Box 169 Charleston, WV  
OIL AND GAS INSPECTOR FOR THIS WORK Kenneth  
Butcher ADDRESS \_\_\_\_\_  
PERMIT ISSUED 7-22-82  
DRILLING COMMENCED 8-18-82  
DRILLING COMPLETED 8-24-82  
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	274'	274'	surface
8 5/8			
7	2094'	2094'	75 sx
5 1/2			
4 1/2	4036'	4036'	140 sx
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale (Marcellus) Depth 2444-4047 feet  
Depth of completed well 4047 feet Rotary X / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh 110 feet; Salt 520 feet  
Coal seam depths: None reported Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale (Marcellus) Pay zone depth 3586-3954 feet  
Gas: Initial open flow 335 Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 280 Mcf/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 36 hours  
Static rock pressure 550 psig (surface measurement) after 72 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

(Continue on reverse side)



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

Perforated 3586-3954 w/ 15 holes  
Foam Frac w/ 280 bbls water, 60,000# sand, 500 gals 15% HCl

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Sand & Shale			0	280	
Sand			280	460	
Shale			460	542	
Sand			542	736	
Sand & Shale			736	1136	
Sand			1136	1686	
Shale			1686	1724	
Lime (Little)			1724	1793	
Big Lime			1793	1936	
Sand (Injun)			1936	1986	
Sandy Shale			1986	2400	
Shale (Sunbury)			2400	2420	
Sand (Berea)			2420	2444	
Devonian Shale			2444	4047	
					T. D. Gas Gauged 40 Mcfpd

(Attach separate sheets as necessary)

D. C. Malcolm, Inc.

Well Operator

By: D. C. Malcolm President

Date: 9-7-82

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."

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

**RECEIVED**  
JUN 13 1984  
OIL & GAS DIVISION  
DEPT. OF MINES

FINAL INSPECTION REQUEST  
INSPECTOR'S COMPLIANCE REPORT

Permit No. 079-1088  
Company DC. MALEOLMINE.  
Inspector JERRY HOLCOMB  
Date JUNE 24 1983

County PUTNAM / CURRY  
Farm ROLLINS  
Well No. 2

RULE	DESCRIPTION	IN COMPLIANCE	
		Yes	No
23.06	Notification Prior to starting Work	_____	_____
25.04	Prepared before Drilling to prevent waste	_____	_____
25.03	High-Pressure Drilling	_____	_____
16.01	Required Permits at wellsite	_____	_____
15.03	Adequate Fresh Water Casing	_____	_____
15.02	Adequate Coal Casing	_____	_____
15.01	Adequate Production Casing	_____	_____
15.04	Adequate Cement Strength	_____	_____
23.02	Maintained Access Roads	✓	_____
25.01	Necessary Equipment to prevent Waste	✓	_____
23.03	Reclaimed Drilling Site	✓	_____
23.04	Reclaimed Drilling Pits	✓	_____
23.05	No surface or underground Pollution	✓	_____
7.03	Identification Markings	✓	_____

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I have inspected the above well and (HAVE/HAVE NOT) found it to be in compliance with all of the rules and regulations of the Office of Oil and Gas Department of Mines of the State of West Virginia.

SIGNED: Jerry Holcomb  
DATE: 6-8-84





State of West Virginia

Department of Mines

Oil and Gas Division

Charleston 25305

June 29, 1984

WALTER N. MILLER  
DIRECTOR

THEODORE M. STREIT  
ADMINISTRATOR

D C. Malcolm, Inc.  
1006 Commerce Square  
Charleston, W.Va. 25301

In Re: PERMIT NO: 079-1088  
FARM: Gladys Rollins etal.  
WELL NO: Two  
DISTRICT: Curry  
COUNTY Putnam

Gentlemen:

The FINAL INSPECTION REPORT for the above described well has been received in this office. Only the column check below applies:

- The well designated by the above permit number has been released under your Blanket Bond.
- Please return the enclosed cancelled single bond which covered the well designated by the above permit number to the surety company who executed said bond in your behalf, in order that they may give you credit on their records.
- Your well record was received and reclamation requirements approved. In accordance with Chapter 22, Article 4, Section 2, the above captioned well will remain under bond coverage for life of the well.

Very truly yours,

Theodore M. Streit, Administrator  
Office of Oil & Gas-Dept. Mines

TMS/ chm





PARTICIPANTS:

DATE: JAN 25 1983

BUYER-SELLER CODE

WELL OPERATOR: D.C. Malcolm, Inc.

011539

FIRST PURCHASER: Columbia Gas Trans.

004030

OTHER: \_\_\_\_\_

W. Va. Department of Mines, Oil & Gas Division  
 WELL DETERMINATION FILE NUMBER  
820913-107-079-1088  
 Use Above File Number on all Communications  
 Relating to Determination of this Well

QUALIFIED

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

- 1. FERC -121  Items not completed - Line No. 9.0 All
- 2. IV-1 Agent O. C. Malcolm
- 3. IV-2 Well Permit
- 4. IV-6 Well Plat
- 5. IV-35 Well Record  Drilling  Deepening
- 6. IV-36 Gas-Oil Test: Gas Only  Was Oil Produced?  Ratio
- 7. IV-39 Annual Production \_\_\_\_\_ years
- 8. IV-40 90 day Production \_\_\_\_\_ Days off line: \_\_\_\_\_
- 9. IV-48 Application for certification. Complete?
- 10-17. IV Form 51 - 52 - 53 - 54 - (55) - 56 - 57 - 58 Complete?  Affidavit Signed
- 18-28. Other: Survey \_\_\_\_\_ Logs \_\_\_\_\_ Geological Charts \_\_\_\_\_  
 Structure Map \_\_\_\_\_ 1: 4000 Map \_\_\_\_\_ Well Tabulations \_\_\_\_\_  
 Gas Analyses \_\_\_\_\_
- (5) Date commenced: 8-19-82 Date completed 8-24-82 Deepened
- (5) Production Depth: 3586.3954
- (5) Production Formation: Devonian Shale (Marcellus)
- (5) Final Open Flow: 280 MCF
- (5) After Frac. R. P. 550# 72 hrs.
- (6) Other Gas Test: \_\_\_\_\_
- (7) Avg. Daily Gas from Annual Production: \_\_\_\_\_
- (8) Avg. Daily Gas from 90-day ending w/1-120 days \_\_\_\_\_
- (8) Line Pressure: \_\_\_\_\_ PSIG from Daily Report \_\_\_\_\_
- (5) Oil Production: \_\_\_\_\_ From Completion Report \_\_\_\_\_
- 10-17. Does lease inventory indicate enhanced recovery being done NO
- 10-17. Is affidavit signed?  Notarized?
- Does official well record with the Department confirm the submitted information? yes
- Additional information \_\_\_\_\_ Does computer program confirm? \_\_\_\_\_
- Was Determination Objected to \_\_\_\_\_ By Whom? \_\_\_\_\_

7B





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

Date 9-7- 82  
Operator's Well No Rollins #2  
Well No 079 - 1088  
State WV

WELL CLASSIFICATION FORM  
HIGH COST GAS WELL - DEVONIAN SHALE  
MGA Section 107

WELL OPERATOR D. C. Malcolm, Inc.  
ADDRESS 1006 Commerce Square  
Charleston, WV 25301  
GAS PURCHASER Columbia Gas  
ADDRESS Box 1273  
Charleston, WV

DESIGNATED AGENT D. C. Malcolm  
ADDRESS 1006 Commerce Square  
Charleston, WV 25301  
LOCATION Elevation 1079  
Watershed Toney Branch, Trace Fork  
Dist Curry County Putnam Garrett's Bend  
Gas Purchase Contract No AP22922-WV  
Meter Chart Code 818648-1-1  
Date of Contract 9-25-78

Date surface drilling began: 8-18-82

Indicate the bottom hole pressure of the well and explain how this was calculated.

$$BHP = P_1 + P_2 (e^{GL/53.34T} - 1)$$

P = 550

BHP = 866

T = 100

G = 0.60

L = 4047

AFFIDAVIT

I, D. C. Malcolm, having been first sworn according to law, state that, I have calculated the percentage of footage of the producing interval which is not Devonian shale as indicated by a Gamma Ray index of less than 0.7 in a Gamma Ray log described subparagraph (3)(i) or (3)(ii)(A) has been filed, or as indicated by the report described in subparagraph (3)(ii)(B); I have demonstrated that the percentage of potentially disqualifying non-shale footage is equal to or less than five (5) percent of the gross Devonian age interval; and I have no knowledge of any information not described in the application which is inconsistent with a conclusion that the well qualifies as a high cost natural gas well.

D. C. Malcolm

STATE OF WEST VIRGINIA.

COUNTY OF Kanawha TO WIT

I, Mary E. Malcolm, a Notary Public in and for the state and county aforesaid do certify that D. C. Malcolm, whose name is signed to the writing above, bearing date the 7th day of September 19 82, has acknowledged the same before me, in my county aforesaid

Given under my hand and official seal this 7th day of Sept, 19 82  
My term of office expires on the 2nd day of Feb, 19 92

Mary E. Malcolm  
Notary Public

NOTARIAL SEAL,

M.S. 7/22/82

LATITUDE 38°20'

LONGITUDE 81°55'

NORTH

R.F. CARPENTER

W.L. ADSTIN

ROY B. ROLLINS - MIN.  
W.S. BURDETTE - SURF.

To Rt. 34  
558°35'W  
45.40'  
STK. -  
WCK. -  
COR.  
Obl. B.D.  
N77°00'W  
825'  
#2 LOC  
511°46'W  
+146'  
LOGUST ON TOP OF RIDGE  
S7°30'E  
54015'

J. K. YOUNG

W.O. STUMP on line

#1 P. 856

75100 Loc.

BRANCH OF TRACE FORK  
TONEY

FILE NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_  
SCALE 1" = 500'  
MINIMUM DEGREE OF  
ACCURACY 1 IN 200  
PROVEN SOURCE OF  
ELEVATION USGS El. 687 Road  
Intersection GARRETT'S BEND

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 REGU-  
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-  
MENT OF MINES.

(SIGNED) James D. Sefton  
R.R.E. \_\_\_\_\_ L.L.S. 149

PLACE SEAL HERE

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



DATE 6-12-82, 19\_\_\_\_  
OPERATOR'S WELL NO. \_\_\_\_\_  
API WELL NO. \_\_\_\_\_  
47 - 079 - 1088  
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 1079.0 WATER SHED TONEY BRANCH OF TRACE FORK  
DISTRICT CURRY COUNTY PUTNAM  
QUADRANGLE GARRETT'S BEND  
SURFACE OWNER W.S. BURDETTE ACREAGE 117.3  
OIL & GAS ROYALTY OWNER ROY B. ROLLINS LEASE ACREAGE 117.3  
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 Marcellus ESTIMATED DEPTH 4100'  
WELL OPERATOR D.C. MALCOLM INC. DESIGNATED AGENT D.C. MALCOLM  
ADDRESS 1006 COMMERCE SQ. ADDRESS 1006 COMMERCE SQ.  
CHARLESTON, WV. CHARLESTON, WV.







Rollins

PLAN PREPARED BY D. C. Malcolm

ADDRESS 1006 Commerce Square

Charleston, W. Va. 25301

PHONE NO. 343-9593

NOTES: Please request landowner's cooperation to protect new seedling for one growing season. Attach separate sheets as necessary for comments.



**PROPOSED WORK ORDER**

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

DRILLING CONTRACTOR (IF KNOWN) \_\_\_\_\_

Address \_\_\_\_\_

GEOLOGICAL TARGET FORMATION, Devonian Shale (Marcellus)

Estimated depth of completed well, 4100 feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, 160 feet; salt, 600 feet.

Approximate coal seam depths: \_\_\_\_\_ 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		Kinds	Sizes
Conductor										
Fresh Water	9 5/8"			X		250	250	surface		
Coal										
Intermediate	7"		17	X		2025	2025	35 sx		
Production										
Tubing	2 3/8"		46	X		4100	4100	--		
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,**  
**ARTICLE 4 OF THE W. VA. CODE, THE LOCATION IS HEREBY**  
 APPROVED FOR drilling. THIS PERMIT SHALL EXPIRE  
 IF OPERATIONS HAVE NOT COMMENCED BY 4-3-83  
 BY [Signature]

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 July 9, 1982

By [Signature]  
Its \_\_\_\_\_

1.0 API well number: (If not available, leave blank. 14 digits.)	<u>047-079-1088</u>																
2.0 Type of determination being sought: (Use the codes found on the front of this form)	<u>107</u> Section of NGPA <u>C-4</u> Category Code																
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	<u>4047</u> feet																
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	<u>D. C. Malcolm, Inc.</u> <span style="float: right;"><u>011539</u></span> Name <u>1006 Commerce Square</u> Street <u>Charleston, WV</u> <span style="float: right;"><u>25301</u></span> City <span style="float: right;">State</span> <span style="float: right;">Zip Code</span>																
5.0 Location of this well: [Complete (a) or (b)] (a) For onshore wells (35 letters maximum for field name)	<u>Burdette-St. Albans</u> Field Name <u>Putnam</u> <span style="float: right;"><u>WV</u></span> County <span style="float: right;">State</span>																
(b) For OCS wells	<u>N/A</u> Area Name <span style="float: right;">Block Number</span>  Date of Lease: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> </tr> <tr> <td style="text-align: center; font-size: 8px;">Mo.</td> <td style="text-align: center; font-size: 8px;">Day</td> <td style="text-align: center; font-size: 8px;">Yr.</td> <td colspan="5"></td> </tr> </table> <span style="float: right; margin-top: 10px;">OCS Lease Number</span>									Mo.	Day	Yr.					
Mo.	Day	Yr.															
(c) Name and identification number of this well: (35 letters and digits maximum)	<u>Gladys Rollins #2</u>																
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum)																	
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	<u>Columbia Gas Transmission</u> <span style="float: right;"><u>004030</u></span> Name <span style="float: right;">Block Number</span>																
(b) Date of the contract	<u>09, 21, 57, 8,</u> Mo. Day Yr.																
Estimated annual production	<u>35</u> MMBtu																
(a) Contract price (b) Maximum lawful rate	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width:25%;">(a) Base Price (\$/MMBTU)</th> <th style="width:25%;">(b) Tax</th> <th style="width:25%;">(c) All Other Prices [Indicate (+) or (-)]</th> <th style="width:25%;">(d) Total</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;"><u>5 3 2 4</u></td> <td style="text-align: left;"><u>Actual Reimb.</u></td> <td style="text-align: left;"><u>0 0 1 0</u></td> <td style="text-align: left;"><u>5 3 3 4</u></td> </tr> <tr> <td style="text-align: left;">-----</td> <td style="text-align: left;">-----</td> <td style="text-align: left;">-----</td> <td style="text-align: left;">-----</td> </tr> </tbody> </table>	(a) Base Price (\$/MMBTU)	(b) Tax	(c) All Other Prices [Indicate (+) or (-)]	(d) Total	<u>5 3 2 4</u>	<u>Actual Reimb.</u>	<u>0 0 1 0</u>	<u>5 3 3 4</u>	-----	-----	-----	-----				
(a) Base Price (\$/MMBTU)	(b) Tax	(c) All Other Prices [Indicate (+) or (-)]	(d) Total														
<u>5 3 2 4</u>	<u>Actual Reimb.</u>	<u>0 0 1 0</u>	<u>5 3 3 4</u>														
-----	-----	-----	-----														
7.0 Name of person responsible for this application	<u>D. C. Malcolm</u> <span style="float: right;"><u>President</u></span> Name <span style="float: right;">Title</span>  Signature <u>9-7-82</u> <span style="float: right;"><u>304-343-9593</u></span> Date Application is Completed <span style="float: right;">Phone Number</span>																

SEP 13 1982



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

Date 9-7 19 82

Operator's Well No. Rollins #2  
API Well No. 47 - 079 - 1088  
State \_\_\_\_\_ County \_\_\_\_\_ Permit \_\_\_\_\_

STATE APPLICATION FOR WELL CLASSIFICATION

Previous File No. \_\_\_\_\_  
(If Applicable)

WELL OPERATOR D. C. Malcolm, Inc.  
ADDRESS 1006 Commerce Square  
Charleston, WV 25301

DESIGNATED AGENT D. C. Malcolm  
ADDRESS 1006 Commerce Square  
Charleston, W. V. 25301

Gas Purchase Contract No. AP22922-WV and Date 9-25-78  
Meter Chart Code 818648-1-1 (Month, day and year)

Name of First Purchaser Columbia Gas Transmission  
Box 1273  
Charleston, WV 25325  
(City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip Code) \_\_\_\_\_

FERC Seller Code 011539 FERC Buyer Code 004030

TYPE OF DETERMINATION BEING SOUGHT:

- (1) Initial determination (See FERC Form 121.) 107 C-4  
Section of NGPA Category Code
- (2) Determination that increased production is the result of enhanced recovery technology.
- (3) Determination of a seasonally affected well.

D. C. Malcolm President  
Name (Print) Title  
[Signature]  
Signature  
1006 Commerce Square  
Street or P. O. Box  
Charleston, WV 25301  
City State (Zip Code)  
304-343-9593  
Area Code Phone Number

(Certificate of Proof of Service to Purchaser)

A copy of this filing has been hand-carried to Columbia

(All of the above to be completed by the Operator/Applicant)

(To be completed by Jurisdictional Agency. Executed copy to be returned to Operator/Applicant and purchaser, if known).

The Department of Mines has received a request,  for certification of the above described well as meeting the requirements of Section \_\_\_\_\_ under the Natural Gas Policy Act of 1975 (NGPA).  or for determination that increased production is the result of enhanced recovery technology under Section 108 of (NGPA);  or for determination of a seasonally affected well under Section 109 of (NGPA).

All interested parties are hereby notified that on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, at the office of the Oil and Gas Division in Charleston, West Virginia, or as soon thereafter as it may be heard, there will be a public hearing, if requested, or if objection is filed.

This Application is assigned File No. \_\_\_\_\_

Initial review of information submitted indicates the well  is.  is not entitled to certification as claimed under the Natural Gas Policy Act (NGPA). A review of this evidence and any additional evidence will be made at the time appointed for a public hearing or as soon thereafter as the matter may be heard.

Unless objections are timely filed or a request for a hearing is made within fifteen (15) days, a hearing will not be held except on ex parte motion of the department and the matter will go to determination.

WEST VIRGINIA DEPARTMENT OF MINES

SEP 13 1982

Date received by \_\_\_\_\_  
Jurisdictional Agency

By [Signature]  
Title \_\_\_\_\_

RECEIVED

JUL 21 1982



Rollins #2

OIL & GAS DIVISION  
DEPT. OF MINES

State of West Virginia  
Department of Mines  
Oil and Gas Division  
Charleston 25305

*Part-1088*

Yes \_\_\_ / No X / The right to extract, produce or market the oil or gas is based upon a lease or leases or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil and gas so extracted, produced or marketed.

If the answer to this question is yes, you may use this affidavit.

AFFIDAVIT

I, \_\_\_\_\_ (the above designated owner or operator, or authorized representative thereof), after being duly sworn, do depose and say that the undersigned is authorized by the owner of the working interest in the well to state that it shall tender to the owner of the oil and gas in place not less than one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced or marketed before deducting the amount to be paid to or set aside for the owner of the oil or gas in place, all such oil or gas to be extracted, produced or marketed from the well

Signed: *R. Malcom*

Taken, subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Signed: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_



**PROPOSED WORK ORDER**

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Address \_\_\_\_\_

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Coal										
Intermediate	7"		17	X		2025	2025	35 sx		
Production										Depths set
Tubing	2 3/8"		46	X		4100	4100	--		
Liners										Perforations:
										Top Bottom

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Date July 9, 1982

By [Signature]  
Its \_\_\_\_\_



# OIL AND GAS LEASE

BOOK **60** PAGE **554**

AGREEMENT made and entered into this 23rd day of January A. D. 19 78  
 by and between Phil Conley, Dorothy S. Reishman, Gladys T. Rollins,  
David H. Rollins, Haven T. Rollins, Roy B. Rollins, Jr.

of \_\_\_\_\_ party of the first part, hereinafter called Lessor (whether one or more),  
 and D. C. Malcolm, Inc. party of the second part, hereinafter called Lessee;

1. WITNESSETH: That the Lessor, in consideration of the sum of One Dollar, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, does hereby grant unto the Lessee all of the oil and gas and all of the constituents of either in and under the land hereinafter described, together with the exclusive right to drill for, produce and market oil and gas and their constituents and of storing gas of any kind in any formation underlying the land, and also the right to enter thereon at all times for the purpose of drilling and operating for oil, gas and water, laying pipe lines, erecting tanks, machinery, powers and structures, and to possess, use, and occupy so much of said premises as is necessary and convenient for said purposes and to convey

the above named products therefrom or thereto by pipe lines or otherwise; said land being situate in Duval & Curry District, County of Lincoln & Putnam State of West Virginia, and described as follows, to-wit: Bounded on the

NORTH by lands of R. F. Carpenter  
 EAST by lands of W. L. Austin  
 SOUTH by lands of J. S. Burdette  
 WEST by lands of J. S. Burdette

and containing One hundred seventeen ( 117 ) acres, more or less. It being the intention to describe herein all of the lands of the lessor located in the Township or District aforesaid.

2. It is agreed that this lease shall remain in force for a term of five years from this date and as long thereafter as operations for oil or gas are being conducted on the premises, or oil or gas is found in paying quantities thereon, or any formation underlying the herein leased land is used for storage of gas as provided under paragraph 7 hereof.

3. The Lessee shall deliver to the credit of the Lessor free of cost, in the pipe line to which he may connect his wells, an equal one-eighth (1/8) part of all oil produced and saved from the leased premises, and shall pay Lessor one eighth (1/8) of the gas price at the pipeline

for all gas produced and sold from the premises, payable quarterly; provided, Lessee shall pay Lessor a royalty at the rate of Fifty Dollars per year on each gas well while, through lack of market, gas therefrom is not sold or used off the premises, and while said royalty is so paid said well shall be held to be a paying well under paragraph 2 hereof.

4. The Lessee shall commence operations for a well on the premises on or before April 23, 19 78, or pay thereafter a rental of one dollar per acre for each 12 months that operations are delayed from the time above mentioned. The consideration first recited herein, the down payment, shall cover not only the privilege granted to the date when first said rental is payable as aforesaid, but also the Lessee's option of extending that period as aforesaid, and any and all other rights conferred. The drilling of a non-productive well shall be accepted by the Lessor in lieu of delay rental for a period of one year after its completion, and following the exhaustion or abandonment of all wells the Lessee shall have the right for a period of one year to resume the payment of delay rental or commence operations for another well. Upon the resumption of payment of rentals the provisions hereof governing such payment and the effect thereof shall continue in force as though they had not been interrupted.

5. All moneys coming due hereunder shall be paid or tendered to \_\_\_\_\_ direct, by check payable to his (or her) order mailed to \_\_\_\_\_ and no default shall be declared against the Lessee by the Lessor for failure of the Lessee to make any payment or perform any conditions provided for herein unless the Lessee shall refuse or neglect to pay or perform the same for ten days after having received written notice by registered mail from the Lessor of his intention to declare such default.

6. Lessor reserves 200,000 cubic feet of gas per annum for domestic use, to be taken through his own appliances at any producing gas well, and agrees to pay Lessee a fair domestic rate for any gas used in excess thereof. Lessor further covenants and agrees that his taking and use of gas shall be wholly at his own risk, the Lessee not to be held liable for any accident or damage caused thereby, nor shall Lessee be liable for any shortage or failure in the supply of gas for said domestic use.

7. Lessee shall have the right to use any formation underlying the leased premises for the storage of gas and shall have all rights and rights-of-way necessary to store and produce such stored gas. As full payment for such storage rights, the Lessee shall pay to the Lessor a rental at the rate of \$2.00 per acre per year, while the premises are so used, and so long as the storage payment is made, all provisions of this lease shall remain in full effect.

8. Lessor further grants to the Lessee, his heirs and assigns, the right to unitize this lease with other leases to form a drilling unit or units of any size up to 120 acres for development of the area. In the event this lease is so unitized, the Lessor agrees to accept, in lieu of the royalty hereinbefore recited, such proportion of the royalty above provided, as the acreage covered by this lease bears to the total acreage comprising the unit.

9. If said Lessor owns a less interest in the above described land than the undivided fee simple estate therein, then the royalties and rentals herein provided shall be paid the Lessor only in the proportion which his interest bears to the whole and undivided fee.

10. No well may be drilled nearer than 200 feet to the house or barn now on said premises without the written consent of Lessor. Lessee shall have and enjoy all rights and privileges necessary and convenient for the proper use and development of this lease, and shall have the right to use, free of cost, gas, oil and water produced on said land for its operations thereon, except water from wells of Lessor. Lessee shall also have the right at any time to remove all or any part of the machinery, fixtures or structures placed on said premises, including the right to draw and remove casing. Lessee shall pay for damages caused by its operations to growing crops on said lands, and, when requested by Lessor, shall bury its pipe lines below plow depth.

11. The interest or estate of either party hereto may be assigned, the privilege of assigning in whole or in part being expressly allowed. In event this lease shall be assigned as to any part or parts of the above described land and the assignee or assignees of such part or parts shall fail or make default in the payment of the proportionate part of the rents due from him or them, such default shall not operate to defeat or affect this lease insofar as it covers a part or parts of said land upon which the said Lessee or any assignee thereof shall make due payment of said rental. No change of ownership in the land or in the rentals or royalties shall be binding on the Lessee until after notice to the Lessee and it has been furnished with a written transfer or assignment or a certified copy thereof.

12. At any time, Lessee, its successors or assigns, shall have the right to surrender this lease or any part thereof for cancellation, after which all payments and liabilities hereunder thereafter shall cease and determine, and if the whole is surrendered, then this lease shall become absolutely null and void. This surrender may be made to the Lessor, or if more than one Lessor, then to any one of them, or to the heirs or assigns of any one of them by delivery of a duly executed surrender thereof in person or by mail addressed to the post office address of such person, or by recording a duly executed surrender thereof in the Recorder's office of the County in which the land is located.

13. Lessor hereby warrants and agrees to defend the title to the land herein described and agrees that the Lessee at its option may pay, discharge or redeem any taxes, mortgages, or other liens existing, levied, or assessed on or against the above described lands, and in event it exercises such option, it shall be subrogated to the rights of any holder or holders thereof and may reimburse itself by applying any royalty or rentals accruing hereunder to the discharge of any such taxes, mortgages or other liens.

14. It is expressly agreed that if the Lessee shall commence drilling operations at any time while this lease is in force, it shall remain in force and its terms continue so long as such operations are prosecuted, and if production results therefrom, then as long as production continues. If after the expiration of the term of this lease production from the leased premises shall cease from any cause, this lease shall not terminate provided Lessee resumes operations within sixty days from such cessation, and this lease shall remain in force during the prosecution of such operations, and, if production results therefrom, then as long as oil or gas is produced in paying quantities.

No. 351,32  
 Mailed to D. C. Malcolm, Inc.  
 Suite 1006, Commerce Square  
 Charleston, W. Va. 25301