

Jamie 6/23/89

Latitude 39°25'00"

10,000'

15'

1,000'

**MASTELLAR COAL CO.**  
(SURF. & MIN.)

7 1/2'

CORINNE ROBINETTE

**BENCH MARK**  
No 18 DISK IN TOP OF NORTH-WEST ABUTMENT OF CONCRETE BRIDGE OVER NEW CREEK. STAMPED N-18-1934. AT INTERSECTION OF ROUTES 50 & 220. (ELEVATION-996.133')

SET STONE #20  
WHITE OAK & HORNBEAM  
WITNESS (BLUE PAINT)

GENE A. BARKLEY

SET STONE IN STONE PILE, BELOW ROAD.  
TWO SASSAFRASS WITNESSES.

N86°45'E  
160'

20364-T

S58°45'W  
46'

E OF ROAD  
CHESTNUT OAK  
WITNESS.

S82°13'W  
854'

SET STONE IN FENCE  
CORNER. BLACK OAK  
WITNESS.

S53°45'W  
472'

SET STONE #18  
TWO BLACK OAKS  
& CHESTNUT OAK  
WITNESS.

BLACK OAK IN  
FENCE CORNER  
IN PAINTED LINE.

S38°28'W  
742'

SET STONE #19  
BLACK OAK, PINE, &  
LOCUST WITNESS  
(WHITE PAINT)

HERMAN WISE

S38°50'W

O.A. & E.R. TRENUM

JOHN F. HAMILTON

Longitude 79°00.61"

- New Location
- Storage
- Drill Deeper
- Abandonment
- Re-Drill/Fracture

"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 the rules and regulations of the oil and gas section of the mining laws of WEST VIRGINIA. Minimum degree of accuracy is one part in 200

ENGR. REG. NO 2330  
BOX 1273 CHARLESTON, W.VA.

Signed Adrian E. Hardman

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON, W.VA.  
 Farm MASTELLAR COAL COMPANY  
 Lease 40023 Acres 9,957.00  
 Well Farm No. 1 Ser. No. 20,364-T  
 Elevation - Spirit Level 1868.73' ELK GARDEN 15'  
 Quadrangle WESTERNPORT, W.VA. - MD.  
 Township or District NEW CREEK  
 County MINERAL  
 Sec., Lot, Qr. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_  
 Coordinates LONG. 79°02'08" LAT. 39°24'46"  
 File No. NC-3-SE Dwg. No. \_\_\_\_\_  
 Date 3-29-77 Scale 1"=400'

**WELL LOCATION MAP**

STATE OF WEST VIRGINIA

(+) Denotes Values Of Well On United States Topographic Maps

MIN-16

Scale 15'  7 1/2'

**CANCELLED**

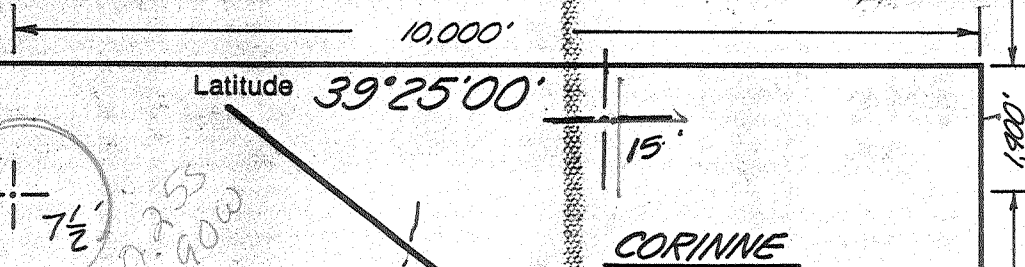
47-057

JUN 10 1997

MIN 16 FRAC

8500' Oriskany

Jamie 6/23/89



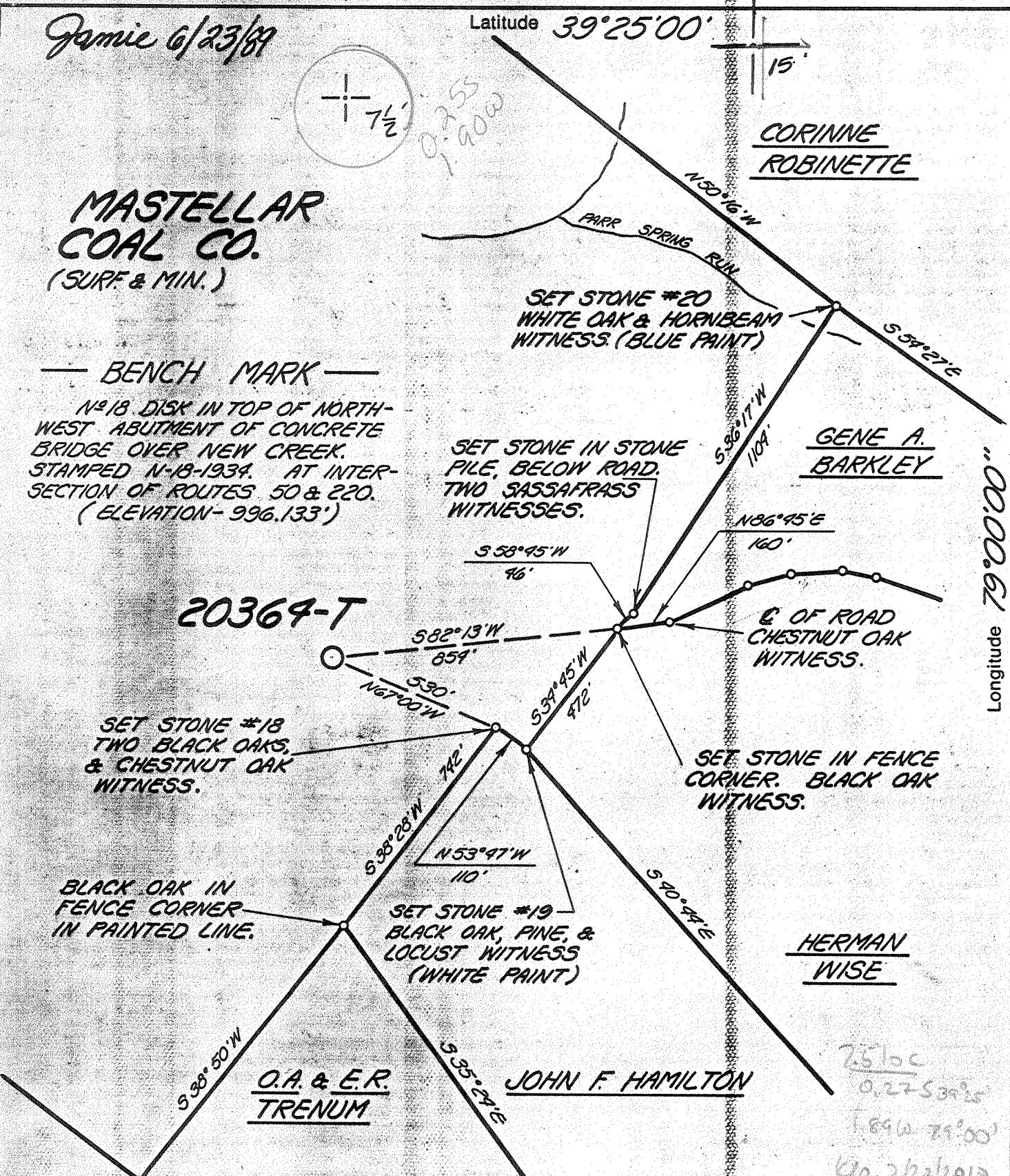
# MASTELLAR COAL CO.

(SURF. & MIN.)

## BENCH MARK

N<sup>o</sup> 18 DISK IN TOP OF NORTH-WEST ABUTMENT OF CONCRETE BRIDGE OVER NEW CREEK. STAMPED N-18-1934. AT INTERSECTION OF ROUTES 50 & 220. (ELEVATION- 996.133')

### 20364-T



CORINNE ROBINETTE

GENE A. BARKLEY

HERMAN WISE

O.A. & E.R. TRENUM

JOHN F. HAMILTON

- New Location
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Signed Carrie E. Harpman

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON, W.VA.  
 Farm MASTELLAR COAL COMPANY  
 Lease 40023 Acres 9,957.00  
 Well Farm No. 1 Ser. No. 20,364-T  
 Elevation - Spirit Level 1868.73' ELK GARDEN 15'  
 Quadrangle WESTERNPORT, W.VA. - MD.  
 Township or District NEW CREEK  
 County MINERAL  
 Sec., Lot, Qr.        T        R         
 Coordinates LONG. 79°02'08" LAT. 39°24'46"  
 File No. NC-3-5E Dwg. No.         
 Date 3-29-77 Scale 1"=400'

175

### WELL LOCATION MAP

STATE OF WEST VIRGINIA

(+) Denotes Values Of Well On United States Topographic Maps

MIN-16

Scale 15'  7 1/2'

47-057

JUN 30 1989

8500' Oriskany

10,000'

Latitude 39°25'00"

corrected location

15 392445  
790210

S 0.126

W 2.011

1.91W

CORINNE  
ROBINETTE

**MASTELLAR  
COAL CO.**  
(SURF & MIN.)

**BENCH MARK**

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WITNESSES.

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20364-T

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WITNESS.

BLACK OAK IN  
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IN PAINTED LINE.

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BLACK OAK, PINE, &  
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ENGR. REG. NO 2330  
BOX 1273 CHARLESTON, W.VA.

Signed William E. Hardman

Company COLUMBIA GAS TRANS. CORP.  
Address BOX 1273 CHARLESTON, W.VA.  
Farm MASTELLAR COAL COMPANY  
Lease 90023 Acres 4,957.00  
Well Farm No. 1 Ser. No. 20,364-T  
Elevation - Spirit Level 1868.73' ELK GARDEN 15'  
Quadrangle WESTERNPORT, W.VA. - MD.  
Township or District NEW CREEK  
County MINERAL  
Sec., Lot, Qr. T R  
Coordinates LONG. 79°02'08" LAT. 39°24'46"  
File No. NC-3-SE Dwg. No.   
Date 3-29-77 Scale 1"=400'

**WELL LOCATION MAP**

STATE OF WEST VIRGINIA

(+) Denotes Values Of Well On United States Topographic Maps

MIN-16

Scale 15'  7 1/2'

1-1 Keyser (365)

47-057 JUL 13 1978

Longitude 79°00'00"



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
Oil and Gas Division

1530  
DEPT. OF MINES

WELL RECORD

Quadrangle: Westernport, WV-Md

Permit No. Min. -16

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

Company <u>Columbia Gas Transmission Corp.</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Box 1273, Chas., WV 25314</u>				
Farm <u>Mastellar Coal Co.</u> Acres. <u>4957</u>				
Location (waters) <u>Parr Spring Branch</u>				
Well No. <u>20364-T</u> Elev. <u>1862.54</u>	Size 20-16			
District <u>New Creek</u> County <u>Mineral</u>	Cond. 20"	58'	58'	150 sacks
The surface of tract is owned in fee by <u>Mastellar Coal Co.</u>	13-10 13 3/8"	435'	435'	300 sacks
Address <u>R.F.D. 4, Keyser, WV 26726</u>	9 5/8	2,494'	2,494'	790 sacks
Mineral rights are owned by <u>Same as above</u>	8 5/8	8,312'	8,312'	135 sacks
Address _____	7			
Drilling Commenced <u>Sept. 22, 1978</u>	5 1/2			
Drilling Completed <u>Dec. 20, 1978</u>	4 1/2			
Initial open flow <u>4,440 M</u> cu. ft. _____ bbls.	3			
Final production <u>9,728 M</u> cu. ft. per day _____ bbls.	2 3/8 EUE		8,476'	not cemented
Well open <u>4</u> hrs. before test <u>3633</u> RP.	Liners Used 5 1/2"		362'	145 sacks

Well treatment details:

Attach copy of cementing record.

Treated with 15,000 gallons Mud Acid, by Halliburton on 9/7/79.

Treated at 3500# at rate of .8 BPM

9,728 MCF

Coal was encountered at None Feet \_\_\_\_\_ Inches \_\_\_\_\_

Fresh water \_\_\_\_\_ Feet \_\_\_\_\_ Salt Water \_\_\_\_\_ Feet \_\_\_\_\_

Producing Sand Oriskany Depth 8500-8506

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sandstone			0'	460'		
Shale			460	580		
Sandstone			580	590		
Shale			590	614		
Sandstone			614	626		
Shale			626	640		
Sandstone			640	710		
Shale			710	780		
Siltstone, Shale			780	920		
Sandstone			920	930		
Siltstone, Shale			930	1,160		
Shale			1,160	1,240		
Siltstone			1,240	1,800		
Sandstone			1,800	1,840		
Shale, Siltstone			1,840	1,865		
Sandstone, Siltstone			1,865	1,960		
Siltstone			1,960	1,990		
Shale			1,990	2,020		
Sandstone, Siltstone			2,020	2,272		
Sandstone			2,272	2,396		
Shale, Sandstone			2,396	2,510		
Sandstone, Siltstone			2,510	2,720		
Sandstone			2,720	2,870		
Siltstone, Sandstone			2,870	2,910		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet $\frac{1}{4}$	Bottom Feet	Oil, Gas or Water	* Remarks
Sandstone			2,910	3,000		
Siltstone			3,000	3,050		
Sandstone			3,050	3,460		
Silty Shale			3,460	3,700		
Siltstone			3,700	3,760		
Sandstone, Siltstone			3,760	4,164		
Sandstone			4,164	4,200		
Siltstone, Sandstone			4,200	4,360		
Sandstone			4,360	4,430		
Shale, Siltstone			4,430	5,140		
Sandstone			5,140	5,246		
Siltstone, Sandstone			5,246	5,292		
Shale, Siltstone			5,292	5,790		
Silty Shale			5,790	6,070		
Shale			6,070	6,590		
Silty Shale			6,590	6,920		
Shale			6,920	7,232		
Limestone			7,232	7,234		
Siltstone, Limestone			7,250	7,280		
Shale			7,282	7,365		
Siltstone, Shale			7,365	8,262		
Limestone			8,262	8,382		
Tioga			8,382	8,396		
Shale-Needmore			8,396	8,500		
Sandstone-Oriskany			8,500	8,732	Gas @ 8500'	
Helderburg			8,732			
		LTD		8,747		

D- APPC est. alt. yield

Date February 27, 19 80

APPROVED Richard L. Kisher Owner

By Manager, Drilling  
(Title)





STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

JUN 27 1978

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 June 27, 1978

Surface Owner Mastellar Coal Company

Company Columbia Gas Transmission Corporation

Address R.F.D. 4, Keyser, W. Va. 26726

Address P. O. Box 1273, Charleston, W. Va.

Mineral Owner Same as above

Farm Mastellar Coal Company Acres 4,957

Address \_\_\_\_\_

Location (waters) Parr Spring Branch

Coal Owner Same as above

Well No. 20364-T Elevation 1868.731

Address \_\_\_\_\_

District New Creek County Mineral

Coal Operator Unoperated

Quadrangle Westernport

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 10-28-78

INSPECTOR

TO BE NOTIFIED Robert Stewart

ADDRESS P. O. Box 345, Jane Lew, W. Va. 26378

PHONE 884-7782

Robert Stewart  
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 July 29 1971 by Mastellar Coal Company made to United Fuel Gas and recorded on the -- day of -- 19--, in Mineral County, Book 178 Page 95

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:

Very truly yours,

(Sign Name) \_\_\_\_\_

Robert Stewart  
Director, Exploration & Development  
P. O. Box 1273

W. VA. OIL & GAS CONSERVATION COMMISSION  
613 WASHINGTON STREET, EAST  
CHARLESTON, WEST VIRGINIA 25311

Address  
of  
Well Operator

Charleston

City or Town

West Virginia 25325

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

MIN-16

PERMIT NUMBER

47-057



Page 1 of \_\_\_\_\_  
Form WW2-A  
(09/87)  
File Copy

**RECEIVED**  
JUN 15 1989

DIVISION OF OIL & GAS <sup>3)</sup>  
DEPARTMENT OF ENERGY

Date: May 8, 1989  
Operator's well number  
20364-T-DD  
API Well No: 47 - 057 - 0016 -FRAC  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- |   |  |
|---|--|
| <p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Mastellar Coal Company</u><br/>Address <u>RFD 4</u><br/><u>Keyser, WV 26726</u></p> <p>(b) Name _____<br/>Address _____</p> <p>(c) Name _____<br/>Address _____</p> | <p>5) (a) Coal Operator:</p> <p>Name _____<br/>Address _____</p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name <u>Same</u><br/>Address _____</p> <p>Name _____<br/>Address _____</p> <p>(c) Coal Lessee with Declaration</p> <p>Name _____<br/>Address _____</p> |
| <p>6) Inspector <u>Phillip Tracy</u><br/>Address <u>Route 2, Box 37-A</u><br/><u>Montrose, WV 26283</u><br/>Telephone (304)- <u>636-8798</u></p>  |  |

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

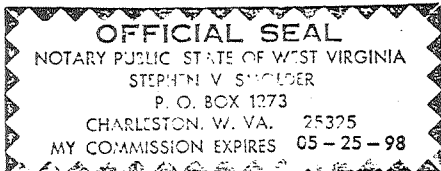
- \_\_\_\_\_ Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Columbia Natural Resources, Inc.  
By: [Signature]  
Its: Vice President, Drilling and Production Operations  
Address P. O. Box 1273  
Charleston, WV 25325  
Telephone 304/357-2000



Subscribed and sworn before me this 9 day of MAY, 1989

Stephen V. Snider Notary Public  
My commission expires May 25, 1998



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

- 1) Well Operator: Columbia Natural Resources, Inc. *GAS Transmission 10450, H, C666*
- 2) Operator's Well Number: 20364 3) Elevation: 1868.73
- 4) Well type: (a) Oil \_\_\_ / or Gas X /  
(b) If Gas: Production X / Underground Storage \_\_\_ /  
Deep X / Shallow \_\_\_ /
- 5) Proposed Target Formation(s): Oriskany Sandstone
- 6) Proposed Total Depth: 8747 feet
- 7) Approximate fresh water strata depths: -
- 8) Approximate salt water depths: -
- 9) Approximate coal seam depths: -
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No \_\_\_
- 11) Proposed Well Work: Workover, stimulate additional zone
- 12) *Fract Existing Well.*

CASING AND TUBING PROGRAM No Change

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	20"			58'	58'	150 SACKS
Fresh Water	13 3/8"			435'	435'	300 SACKS
Coal						
Intermediate	3 9 5/8"			2,494'	2,494'	790 SACKS
Production	8 5/8"			8,312'	8,312'	135 SACKS
Tubing						
Liners	5 1/2"			362'	145 SACKS	

**RECEIVED**  
JUN 15 1989

PACKERS : Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_  
DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

For Division of Oil and Gas Use Only

Fee(s) paid: Plat Well Work Permit Plat Reclamation Fund Plat WPCP Plat

Plat Plat WW-9 Plat WW-2B Plat Bond Blanket sure Agent Plat

(Type)

9052

5015634