

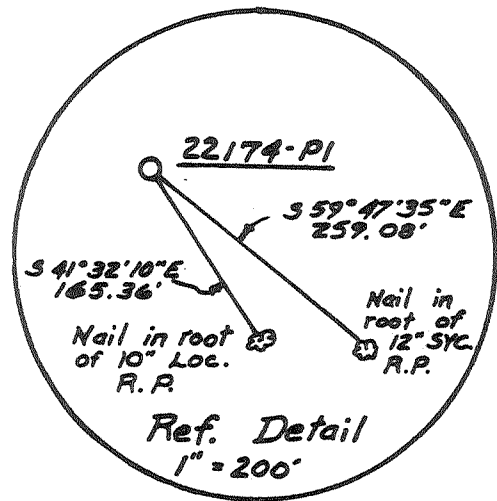
10,900'

LATITUDE 39° 07' 30"

Jamie 9/16/90  
" 6/11/91

NO WELLS  
which in  
No WELLS  
in the area

2400'  
22174 PI



LONGITUDE 79° 12' 30"

9,916'

22174-PI

DARRELL C. & CONNIE M.

HERRON

LEASE No. 178979  
MINERAL and SURFACE  
159.8 Ac.

Fnd. 28" W.O. Cor.  
in fence corner  
at call of W.O.

N 84° 37' 35" E  
1186.36'

N 49° 22' 58" W  
1276.82'

SOUTH  
N 12° 40' 33" E  
965.79'

H.G. MUNTZING  
330 Ac. Tr.

FORK OF LUNICE CK.

Fnd. 40" W.O. Cor.  
in field 30'± east of  
fence corner at call of W.O.

Fnd. 3/4" rebar;  
in stone pile;  
8" maple ptr.  
at call of set stone

N 64° 06' 39" E  
795.48'

Co-ord at Location  
Lat : 39° 05' 51"  
Long : 79° 14' 49"

REVISED : 8-31-90

NOTE : Coal Not Operated

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

NOTE BOOK 449-A Pg. 11  
LDR

FILE NO. \_\_\_\_\_  
 DRAWING NO. 22174-PI  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF  
 ACCURACY 1 IN 2500  
 PROVEN SOURCE OF  
 ELEVATION USGS 8M 1967  
ELEV. 1732' - on S.E. Wingwall  
of Convert

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 ENERGY.  
 (SIGNED) Jamie L. Browning  
 R.P.E. \_\_\_\_\_ L.L.S. 398

PLACE SEAL HERE

STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 OIL AND GAS DIVISION



DATE JUNE 26, 1990  
 OPERATOR'S WELL NO. 22174-PI  
 API WELL NO.

47 - 023 - 00029A  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP X SHALLOW \_\_\_

LOCATION: ELEVATION 1894.81' WATER SHED SOUTH FORK OF LUNICE CREEK

DISTRICT UNION COUNTY GRANT

QUADRANGLE MAYSVILLE

SURFACE OWNER DARRELL C. & CONNIE M. HERRON ACREAGE 159.8

OIL & GAS ROYALTY OWNER DARRELL & CONNIE HERRON LEASE ACREAGE 159.8

LEASE NO. 178979

PROPOSED WORK: DRILL X 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 ORISKANY ESTIMATED DEPTH 7905'

WELL OPERATOR COLUMBIA NATURAL RES., INC. DESIGNATED AGENT J.E. CAMPBELL

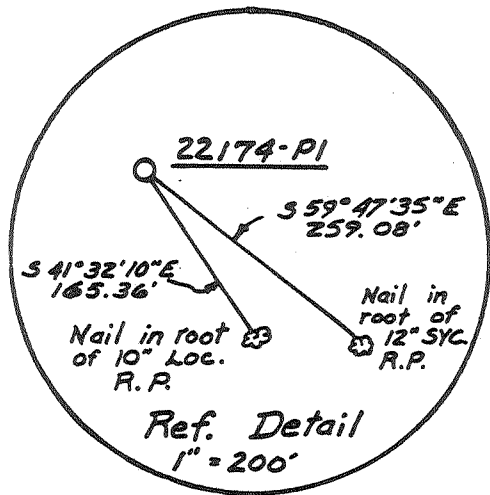
ADDRESS P.O. Box 6070 ADDRESS SAME

CHARLESTON WV 25362 6-0 (370)

COUNTY NAME

PERMIT

GRANT 00029



22174-PI

DARRELL C. & CONNIE M.

HERRON

LEASE No. 178979  
MINERAL and SURFACE  
159.8 Ac.

Fnd. 28" W.O. Cor. in fence corner at call of W.O.

N 84° 37' 35" E 1186.36'

N 49° 22' 58" W 1276.82'

N 12° 40' 33" E 965.79'

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Co-ord at Location  
Lat: 39° 05' 51"  
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REVISED: 8-31-90

NOTE: Coal Not Operated

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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
DRAWING NO. 22174-PI  
SCALE 1" = 500'  
MINIMUM DEGREE OF ACCURACY 1 IN 2500  
PROVEN SOURCE OF ELEVATION USGS BM 1967  
ELEV. 1732' - on S.E. Wingwall of Culvert

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 ENERGY.

(SIGNED) James L. Browning  
P.P.E. \_\_\_\_\_ L.L.S. 398



STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY  
OIL AND GAS DIVISION



DATE JUNE 26, 1990  
OPERATOR'S WELL NO. 22174-PI  
API WELL NO. 47-023-00029  
STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
LOCATION: ELEVATION 1894.81' WATERSHED SOUTH FORK OF LUNICE CREEK  
DISTRICT UNION 3 COUNTY GRANT  
QUADRANGLE MAXSVILLE Greenland Gap  
SURFACE OWNER DARRELL C. & CONNIE M. HERRON ACREAGE 159.8  
OIL & GAS ROYALTY OWNER DARRELL & CONNIE HERRON LEASE ACREAGE 159.8  
LEASE NO. 178979

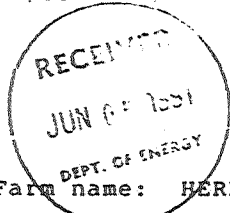
PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
TARGET FORMATION ORISKANY ESTIMATED DEPTH 7905'  
WELL OPERATOR COLUMBIA NATURAL RES., INC. DESIGNATED AGENT J.E. CAMPBELL  
ADDRESS P.O. Box 6070 1013 ADDRESS SAME  
CHARLESTON WV 25362

OCT 1 1990

COUNTY NAME PERMIT

22174-PI



State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm Name: HERRON, DARRELL & CONNIE Operator Well No.: 22174

LOCATION: Elevation: 1894.81 Quadrangle: MAYSVILLE

District: UNION County: GRANT  
Latitude: 9910 Feet South of 39 Deg. 7 Min. 30 Sec.  
Longitude 10900 Feet West of 79 Deg. 12 Min. 30 Sec.

Company: COLUMBIA NATURAL RESOURCE  
P.O. BOX 6070  
CHARLESTON, WV 25362-6070

Agent: JOSEPH E. CAMPBELL

Inspector: PHILLIP TRACY  
Permit Issued: 09/26/90  
Well work Commenced: 12/12/90  
Well work Completed: 02/17/90  
Verbal Plugging  
Permission granted on: 01/09/91  
Rotary X Cable Rig  
Total Depth (feet) 8437  
Fresh water depths (ft) 18'

Salt water depths (ft) -

Is coal being mined in area (Y/N)? N  
Coal Depths (ft):

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-3/8	88	88	61
9-5/8	2818	1967	876

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) 8437  
 Gas: Initial open flow - MCF/d Oil: Initial open flow - Bbl/d  
 Final open flow - MCF/d Final open flow - Bbl/d  
 Time of open flow between initial and final tests - Hours  
 Static rock Pressure - psig (surface pressure) after - Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
 Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours  
 Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

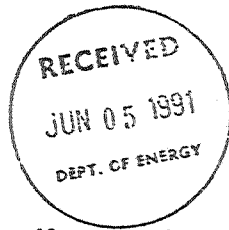
NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: COLUMBIA NATURAL RESOURCES, INC.

By: Joseph E. Campbell  
Date: 6-3-91

3/29/94

023 29



FORMATIONS

0 - 40	Limestone, water @ 18'
40 - 78	Sand
78 - 1035	Gray Shale
1035 - 3690	Sand/Shale
3690 - 5610	Brallier Sh
5610 - 5930	Harrell Sh
5930 - 6920 ?	Tully LS
6920 - 7100 ?	Mahantango
7100 - 7264	U. Marcellus
7264 - 7390	Purcell LS
7390 - 7460	L. Marcellus
7460 - 7470	Onondaga LS
7470 - 7500	Needmore Sh
7500 -	Fault
7500 - 7570	L. Marcellus
7570 - 7590	Tioga Metobt.
7590 - 7698	Onondaga LS
7698 - 7780	1st Oriskany
7780 -	Fault
7780 - 7858	Needmore Sh
7858 - 7990	2nd Oriskany
7990	DTD

3/29/94



STATE OF WEST VIRGINIA  
OIL AND GAS CONSERVATION COMMISSION  
CHARLESTON 25305

September 17, 1990

Oil and Gas Division  
Department of Energy

RE: APPLICATION FOR PERMIT #47 023 - 00029 TO DRILL DEEP WELL

COMPANY: Columbia Natural Resources, Inc.

FARM: Darrell & Connie Herron #22174

COUNTY: Grant DISTRICT: Union

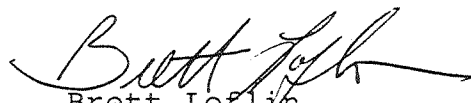
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The application of the above company is approved for Oriskany  
(APPROVED - DISAPPROVED)

Applicant has complied with the provisions of Chapter twenty-two, eight (§22-8), of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission, as follows:

1. *Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners;*      yes
2. *Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of the deep well, well name, and the name and address of the operator, and,*      none
3. *Provided a plat showing that the proposed location is a distance of 850 feet from the nearest unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location:*

Very truly yours,

  
Brett Loflin  
Petroleum Engineer

RECEIVED

Division of Energy

SEPT 10 90

Permitting  
Oil and Gas Section

Page 1 of 4  
Form WW2-A  
(09/87)

1) Date: August 27, 1990  
2) Operator's well number 22174  
3) API Well No: 47 - 023 - 00029  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
  - (a) Name Darrell C. Herron &  
Address Connie M. Herron  
Route 1, Box 83, Maysville, WV 26833
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:
  - Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Phillip Tracy  
Address Rt. 2 Box 37-A  
Montrose, WV 26283  
Telephone (304)- 636-8798

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  
 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 4 on the above named parties, by:

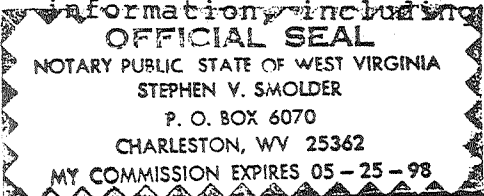
- \_\_\_\_\_ Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

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 6070  
Charleston, WV 25362  
Telephone 304/353-5000



Subscribed and sworn before me this 29 day of August, 1990

My commission expires \_\_\_\_\_  
Stephen V. Smolder Notary Public  
May 25, 1998

47-023-00029  
 Issued 9/26/90

FORM WW-2B

Page 3 of 4

Expires 9/26/92

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

- 1) Well Operator: Columbia Natural Resources, Inc. 10460 (3) 465
- 2) Operator's Well Number: 22174 3) Elevation: 1894.81
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow  /
- 5) Proposed Target Formation(s): Oriskany
- 6) Proposed Total Depth: 7905 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: Drill Gas Well/Stimulate
- 12)

RECEIVED  
 Division of  
 SEPT 10 1990  
 Permitting  
 Oil and Gas Section

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	13-3/8"	H	48	90	90	62
Fresh Water						
Coal						
Intermediate	9-5/8"	J	40	2800	2800	877
Production	5-1/2"	N	17	7905	7905	520
Tubing						
Liners						

PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

5018062  
 25

For Division of Oil and Gas Use Only

Fee(s) paid:     Well Work Permit     Reclamation Fund     WPCP  
 Plat     WW-9     WW-2B     Bond Surety     Agent  
(Type)

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

AFFIDAVIT OF PLUGGING AND FILLING WELL

AFFIDAVIT SHOULD BE IN TRIPLICATE, one copy mailed to the Division, one copy to be retained by the Well Operator and the third copy (and extra copies if required) should be mailed to each coal operator at their respective addresses.

Farm name: HERRON, DARRELL & CONNIE Operator Well No.:22174

LOCATION: Elevation: 1894.81 Quadrangle: MAYSVILLE  
District: UNION County: GRANT  
Latitude: 9910 Feet South of 39 Deg. 7 Min. 30 Sec.  
Longitude 10900 Feet West of 79 Deg. 12 Min. 30 Sec.

Well Type: OIL \_\_\_\_\_ GAS X

Company: Columbia Natural Resources, Inc.  
P. O. Box 6070  
Charleston, WV 25362-0070

Coal Operator N/A  
or Owner \_\_\_\_\_

Agent: Joseph E. Campbell  
Inspector: Phillip Tracy  
Permit Issued: 06/12/91 11/9/91

Coal Operator N/A  
or Owner \_\_\_\_\_

AFFIDAVIT

STATE OF WEST VIRGINIA,  
County of Kanawha ss:

Marvin Grayson and L. L. Friend being first duly sworn according to law depose and say that they are experienced in the work of plugging and filling oil and gas wells and were employed by Columbia Natural Resources, Inc., well operator, and participated in the work of plugging and filling the above well, that said work was commenced on the 9th day of January, 1991, and that the well was plugged and filled in the following manner:

TYPE	FROM	TO	PIPE REMOVED	LEFT
13-3/8 Csg.				88
9-5/8 Csg.			851	1967
Spotted 200' Cmt Plug	5800	6000		
Spotted 200' Cmt Plug	2700	2900		
Spotted 50' Cmt Plug	50'	Surface		

Description of monument: As required by law.

and that the work of plugging and filling said well was completed on the 10 day of January, 1991.

And further deponents saith not.

Marvin Grayson  
L. L. Friend  
Stepher V. Swolch  
Notary Public

Sworn and subscribe before me this 4 day of November, 1993  
My commission expires: May 28, 1998

NOV 5 1993