

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) UNION DRILLING, INC.

Address P. O. Drawer 40
Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Elk

Estimated depth of completed well, 5200 feet Rotary x / Cable tools _____ /

Approximate water strata depths: Fresh, ? feet; salt, ? feet.

Approximate coal seam depths: ? Is coal being mined in the area? Yes _____ / No x /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			New	Used	FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft			For drilling	Left in well		
Conductor	11 3/4"			x		20'	20'		Kinds
Fresh Water									
Coal									Sizes
Intermediate	8 5/8"		20#	x		850'	850'	to surface	
Production	4 1/2"		10 1/2#	x			5100'	500 sks. or as needed	Depths set
Tubing									
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 9-22-81.

J. E. Huzzey
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 03/15/2024 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 _____

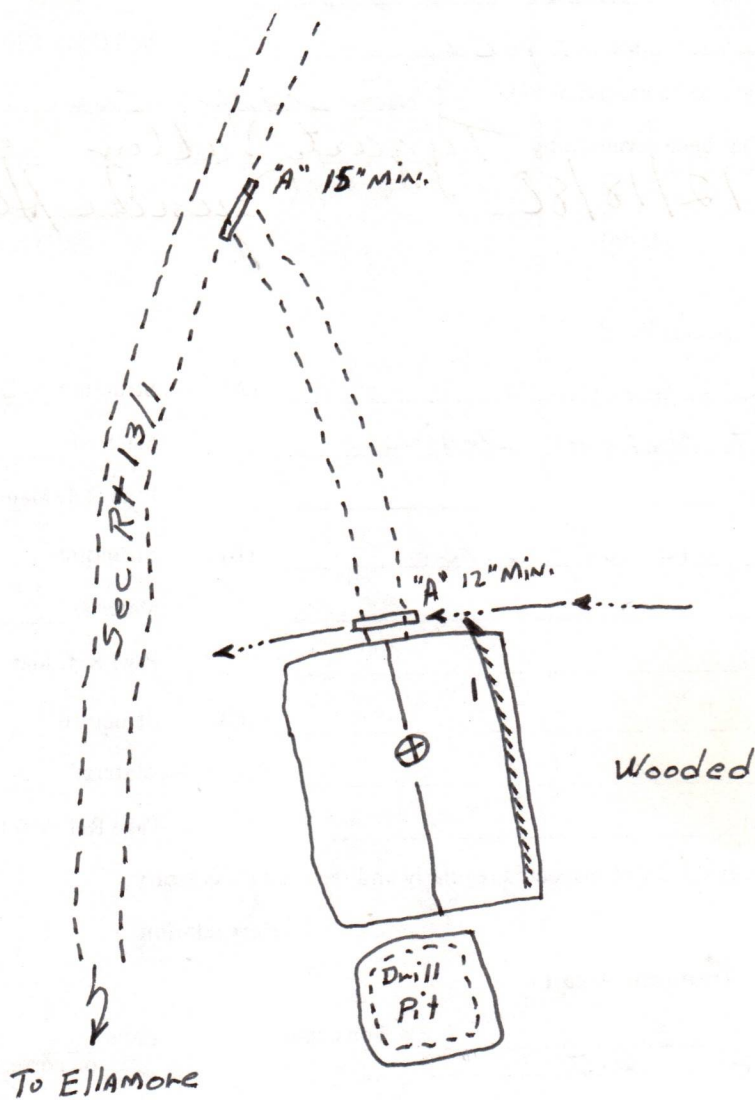
By _____

Its _____

Well Site Plan

- | | | | | |
|---------|-------------------|--|------------|--|
| Legend: | Property Boundary | | Diversion | |
| | Road | | Spring | |
| | Existing Fence | | Wet Spot | |
| | Planned Fence | | Building | |
| | Stream | | Drain Pipe | |
| | Open Ditch | | Waterway | |

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



Comments: All Commercial timber to be cut & stacked. All brush & small trees to be cut & disposed of before dirt work begins. All slopes to be 2:1 except in rock. Average roadway grade \pm 3%

Signature: Arville P. Wilt, P.O. Drawer 40, Buckhannon, W.Va. 472-4610
 Agent Address Phone Number

03/15/2024

Please request landowners cooperation to protect new seeding for one growing season.



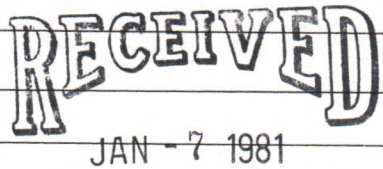
Date Dec. 17 19 80
 Well No. 1628
 API No. 47 - 083 - 0410
 State County Permit

Form IV-9
(01-80)

STATE OF WEST VIRGINIA
OFFICE OF OIL AND GAS

Company Name Union Drilling Inc Designated Agent Union Drilling Inc.
 Address P.O. Drawer 40, Buckhannon, W.Va. Address P.O. Drawer 40, Buckhannon, W.Va.
 Telephone 472-4610 Telephone 472-4610
 Landowner West Vaco Soil Cons. District Tygart's Valley
 Revegetation to be carried out by Union Drilling Inc. (Agent)
 This plan has been reviewed by Tygart's Valley SCD. All corrections and additions become a part
 of this plan. 12/18/80 (Date) Junia Hedrick Jean Freeman (SCD Agent)

Access Road	Location
Structure <u>Pipe Culverts</u> (A)	Structure <u>Diversion</u> (1)
Spacing <u>AT NATURAL DRAINS</u>	Material <u>Earthen</u>
Page Ref. Manual _____	Page Ref. Manual _____
Structure <u>Road way Ditch</u> (B)	Structure _____ (2)
Spacing _____	Material _____
Page Ref. Manual _____	Page Ref. Manual _____
Structure _____ (C)	Structure _____ (3)
Spacing _____	Material _____
Page Ref. Manual _____	Page Ref. Manual _____



All structures should be inspected regularly and repaired if necessary.

Revegetation

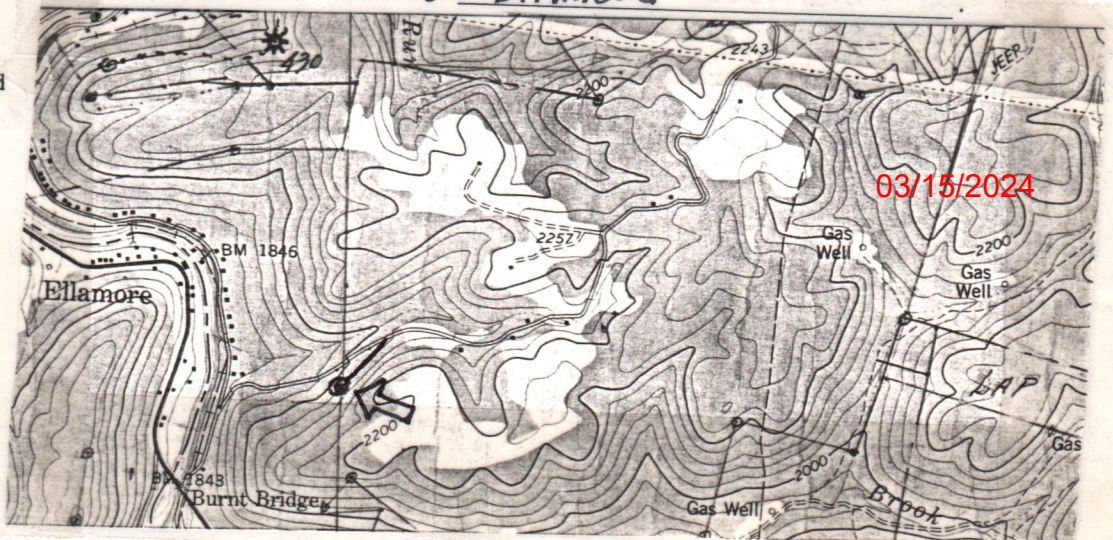
OIL & GAS DIVISION
DEPT. OF MINES

Treatment Area I		Treatment Area II	
Lime <u>3</u> Tons/acre	or correct to pH <u>6.5</u>	Lime <u>3</u> Tons/acre	or correct to pH <u>6.5</u>
Fertilizer <u>600</u> lbs/acre	(10-20-20 or equivalent)	Fertilizer <u>600</u> lbs/acre	(10-20-20 or equivalent)
Mulch <u>2</u> Tons/acre		Mulch <u>2</u> Tons/acre	
Seed* <u>Ky 31</u> <u>30</u> lbs/acre		Seed* <u>Ky 31</u> <u>30</u> lbs/acre	
<u>Birdsfoot</u> <u>10</u> lbs/acre		<u>Birdsfoot</u> <u>10</u> lbs/acre	
<u>Domestic Rye</u> <u>10</u> lbs/acre		<u>Domestic Rye</u> <u>10</u> lbs/acre	

*Inoculate all legumes such as vetch, trefoil and clovers with the proper bacterium. Inoculate with 3X recommended amount.

Attach or photocopy section of involved Topographic map. Quadrangle Ellamore

Legend: ⊕ Well Site
— Access Road



AMAX COAL COMPANY
A DIVISION OF AMAX INC.

105 SOUTH MERIDIAN STREET, INDIANAPOLIS, INDIANA 46225 • (317) 266-2626

January 13, 1981

Department of Mines
Oil and Gas Division
1615 Washington Street, East
Charleston, West Virginia 25311

Rev-410

RECEIVED

JAN 29 1981

Re: Union Drilling, Inc.
#13-1628-UC Harry McMullan, Jr. Estate
Roaring Creek District
Randolph County, West Virginia

OIL & GAS DIVISION
DEPT. OF MINES

Dear Sirs:

The AMAX Coal Company has received notification that a permit application is being filed to drill the above-mentioned well. The AMAX Coal Company will offer no objection to the drilling of this proposed well provided the applicant intends to drill the proposed well subject to the following conditions:

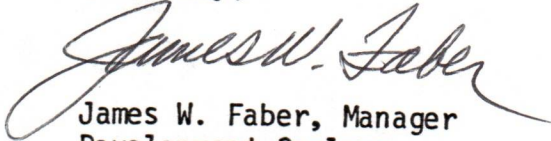
1. All drilling and casing of the well shall be done in compliance with the laws and regulations of the State of West Virginia for wells drilled through workable coal beds.
2. All workable coal seams regardless of depth shall be plugged in accordance with the rules and regulations of the State of West Virginia, specifically as outlined in Article 4, Chapter 22 of the West Virginia Code.
3. Union Drilling, Inc. - - will provide AMAX with a density and natural gamma ray log at a 5"=100' scale covering the interval from total depth to ground surface. In addition, one copy of any other geophysical log shall be sent to AMAX. However, AMAX Coal Company retains the option to run their own logs or have this service contracted out. Please contact Mr. David Darko (317/266-2633) for questions on this procedure.

03/15/2024

Department of Mines
Page Two
January 13, 1981

4. Copies of the completion report, OG-10, and plugging affidavit, OG-8, if applicable, shall be sent to AMAX Coal Company, Attention: James W. Faber.

Sincerely,



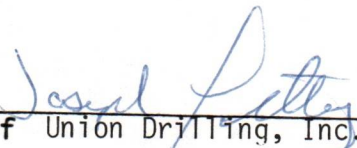
James W. Faber, Manager
Development Geology

JWF/mdt

Enclosures

cc: Union Drilling, Inc.
David A. Darko

The above stipulations are agreed to as a condition for obtaining a drilling permit.



Representative of Union Drilling, Inc.

1-28-81

(Date)

03/15/2024

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Clay & Shale			0	17		
Sand			17	142		
Coal			142	145	Coal @ 142-145'	
Sand & Shale			145	221		221-225'
Coal			221	225		408-413'
Sand & Shale			225	408		425-428'
Coal			408	413		518-521'
Sand & Shale			413	425		615-620'
Coal			425	428		
Sand & Shale			428	518		
Coal			518	521		
Sand & Shale			521	615		
Coal			615	620		
Sand & Shale			620	1108		
Big Injun			1108	1198		
Sand & Shale			1198	1648		
5th Sand			1648	1668		
Sand & Shale			1668	1688		
Bayard			1668	1798		
Sand & Shale			1798	1912		
1st Warren			1912	1922		
Sand & Shale			1922	3284		
Riley			3284	3380		
Sand & Shale			3380	3404		
Benson			3404	3472		
Sand & Shale			3472	3680		
Alexander			3680	4004		
Sand & Shale			4004	4554		
Elk			4554	4522		
Sand & Shale			4522	4750		
Elk			4750	4772		
Sand & Shale			4772	4924 TD		

03/15/2024

Date August 6, 19 81

APPROVED UNION DRILLING, INC. Owner

By Joseph C. Pettey
Joseph C. Pettey, Vice President -
Production

Date: August 6, 1981
Operator's Well No. 13A-1628
API Well No. 47-083-0410
Harry McMullan #13-A-1628

State of West Virginia
Department of Mines
Oil and Gas Division
WELL RECORD

Well Type: Oil / Gas XX / Liquid Injection / Waste Disposal /
(If "Gas", Production XX / Underground storage / Deep / Shallow XX /
Location: Elevation: 1995' Watershed Middle Fork River
District: Roaring Creek County: Randolph Quadrangle: Ellamore
Well Operator UNION DRILLING, INC. Designated Agent UNION DRILLING, INC.
Address P.O. Drawer 40 Buckhannon, WV 26201
Address P.O. Drawer 40 Buckhannon, WV 26201

Permitted Work: Drill XX / Covert / Drill deeper: / Redrill /
Fracture or stimulate XX / Plug off old formation /
Preforate new formation / Other physical change in well (specify)

Permit Issued on January 7, 1981
Oil & Gas Inspector for This Work:
Name: Robert Stewart
Address: P.O. Box 345
Jane Lew, WV 26378

Geological Target Formation: Elk Depth 5200 feet
Depth of completed well, 4924 feet Rotary XX / Cable Tools /
Water strata depth: Fresh 1/2'@30', 1'@170' feet; Salt; feet.
Coal seam depths: 142-145', 518-521', 615-620', 221-225', 408-413' Is coal being mined in the area? No
Work was commenced 4/06/81, and completed 4/11/81

Casing and Tubing Program

Casing or Tubing Type	Size	Specifications		Footage Intervals		Cement Fill-Up Or Sacks (cubic feet)	
		Grade	Weight per ft	New	Used		
Conductor	None						
Fresh Water							
Coal							
Intermediate	8 5/8"		20#	X	765.00'	765.00'	180 sks
Production	4 1/2"		10 1/2#	X	4877.05'	4877.05'	880 sks
Tubing							
Runners							

Well Treatment details: HALLIBURTON WATER FRACTURE 5/05/81
Riley ----- 3248/52 ----- 45,000# Sand ----- 370 bbls water
Benson ----- 3396/3400 ----- 45,000# Sand ----- 400 bbls water
Alexander ----- 3667/71 ----- 45,000# Sand ----- 371 bbls water
Alexander ----- 3810/2974 ----- 45,000# Sand ----- 365 bbls water

03/15/2024

Gas: Initial open flow, Show Mcf/d Oil: Initial open flow, Bbl/d
Final open flow, 919 mcf Mcf/d Final open flow, Bbl/d
Static Rock Pressure, 1450# psig (surface measurement) after 24 hours shut in.

(Well log on reverse side)

RECEIVED

NOV 24 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

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

INSPECTOR'S WELL REPORT

Permit No. 083-0410

Oil or Gas Well GAS
(KIND)

Company	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
<u>UNION DRILLING</u>	Size			
<u>BUCK HANNON</u>	16			Kind of Packer
<u>HARRY McMullen</u>	13			
<u>13-1628-UC</u>	10			Size of
<u>Roaring Creek</u> County <u>RANDOLPH</u>	8 1/4			
<u>4-6-81</u>	6%			Depth set
	5 3/16			
	3			Perf. top
	2			Perf. bottom
	Liners Used			Perf. top
				Perf. bottom

CASING CEMENTED _____ SIZE _____ No. FT. _____ Date _____

NAME OF SERVICE COMPANY _____

COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

_____ FEET _____ INCHES _____ FEET _____ INCHES

Drillers' Names _____

Remarks:

O.K. To Release

11-20-81
DATE

Robert Stewart 511
03/15/2024
DISTRICT WELL INSPECTOR



State of West Virginia

Department of Mines
Oil and Gas Division

Charleston 25305

THOMAS E. HUZZEY
Deputy Director

WALTER N. MILLER
DIRECTOR

January 26, 1982

Union Drilling, Inc.
P. O. Drawer 40
Buckhannon, West Virginia 26201

In Re: PERMIT NO RAN-0410
FARM H.McMullan/Westvaco
WELL NO 13-1628-UC
DISTRICT Roaring Creek
COUNTY Randolph

Gentlemen:

The Final Inspection Report for the above described well has been received in this office. Only the column checked 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.

XXXX 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,

Thomas E. Huzzey

TEH/Chm

PARTICIPANTS:

DATE: DEC 1 1981

BUYER-SELLER C

WELL OPERATOR: Union Drilling, Inc.

019434

FIRST PURCHASER: Columbia Gas Trans. Corp.

004030

OTHER: _____

W. Va. Department of Mines, Oil & Gas Division
 WELL DETERMINATION FILE NUMBER
81-08-24-103-083 = 0410
 Use Above File Number on all Communications
 Relating to Determination of this Well

CK. 1525

083-0147 = 2300'

083-0270 = 4100'

083-0226 = 4000'

Qualifies J. H. Huggins

CHECK EACH ITEM AS COMPLETE OR NOTE WHAT IS MISSING

ITEM NO.

- 1. FERC -121 Items not completed - Line No. 7.0 + 8.0 b,c
- 2. IV-1 Agent K. R. Ranson
- 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: 4-6-81 Date completed 4-11-81 Deepened
- (5) Production Depth: 3248-52; 3396-3400; 3667-71; 3810-3974
- (5) Production Formation: Riley; Benson; Alexander
- (5) Final Open Flow: 919 MCF
- (5) After Frac. R. P. 1450# 24 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 Rep
- (5) Oil Production: _____ From Completion Report _____
- 17. Does lease inventory indicate enhanced recovery being done NO
- 17. Is affidavit signed? Notarized?
- Does official well record with the Department confirm the submitted information? yes
- Additional information _____ Does computer program confirm? _____
- Does Determination Objected to _____ By Whom? _____

03/15/2024

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES,
OIL AND GAS DIVISION
WELL CLASSIFICATION FORM
NEW ONSHORE PRODUCTION WELL
NGPA Section 103

Date August 19, 19 81
Operator's Well No. 13A-1628-UC
API Well No. 47 - 083 - 0410
State _____ County _____ Permit _____

WELL OPERATOR UNION DRILLING, INC.
ADDRESS P. O. Drawer 40
Buckhannon, WV 26201
GAS PURCHASER Columbia Gas Transmission Corp.
ADDRESS P. O. Box 498
Washington, PA 15301

DESIGNATED AGENT UNION DRILLING, INC.
ADDRESS P. O. Drawer 40
Buckhannon, WV 26201
LOCATION: Elevation 1995'
Watershed Middle Fork River
Dist. Roaring Creek County Randolph Quad. Ellamore
Gas Purchase Contract No. _____
Meter Chart Code _____
Date of Contract _____

Date surface drilling was begun 4/06/81

Indicate the bottom hole pressure of the well and explain how this was calculated:
L = 3810' Avg T = .007L + 520°R G = 0.635
BHP = P₁ e GL/53.34T + 1575.4 PSI Bottom Hole Pressure

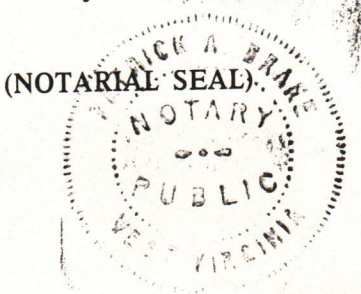
AFFIDAVIT

I, Joseph C. Pettey, having been first sworn according to law state that surface drilling of the well for which this determination is sought was begun on or after February 19, 1977; the well satisfies applicable state or federal well spacing requirements and the well is not within a proration unit, in existence at the time surface drilling began, which was applicable to the reservoir from which gas is or will be produced and which applied to any other well producing gas in commercial quantities or on which surface drilling began on or after February 19, 1977, and which was capable of producing gas in commercial quantities. I state, further, that I have concluded, to the best of my information, knowledge and belief, that the well for which this determination is sought is a new onshore production well and that I am not aware of any information not described in the application which is inconsistent with this conclusion.

Joseph C. Pettey
Joseph C. Pettey, Vice President for Production

STATE OF WEST VIRGINIA,
COUNTY OF Upshur, TO WIT

I, Patrick A. Brake, a Notary Public in and for the state and county aforesaid, do certify that Joseph C. Pettey, whose name is signed to the writing above, bearing date the 20th day of August, 19 81, has acknowledged the same before me, in my county aforesaid.
Given under my hand and official seal this 20th day of August, 19 81.
My term of office expires on the 3rd day of March, 19 91. 03/15/2024



Patrick A. Brake
Notary Public

03/15/2024