

RECEIVED JUN 15 1990

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

DIVISION OF OIL & GAS Well Operator's Report of Well Work DEPARTMENT OF ENERGY

Farm name: McCULLOUGH, RICHARD F. Operator Well No.: McCULLOUGH #2-1

LOCATION: Elevation: 790.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 7280 Feet South of 39 Deg. 20Min. 0 Sec.
Longitude 5600 Feet West of 80 Deg. 50 Min. 0 Sec.

Company:DEVONIAN APPALACHIAN COMP
ROUTE 1, BOX 114B
MINERALWELLS, WV 26150-0114

Agent: ROBERT A. ANDERSON

Inspector: MIKE UNDERWOOD
Permit Issued: 05/15/90
Well work Commenced: 5/17/90
Well work Completed: 5/23/90
Verbal Plugging
Permission granted on:
Rotary x Cable Rig
Total Depth (feet) 5157
Fresh water depths (ft) 30 & 140
Salt water depths (ft) N/A

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

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement Fill Up Cu. Ft. Rows include sizes 11-3/4, 8-5/8, and 4-1/2 with corresponding drilling and well lengths.

OPEN FLOW DATA

Producing formation Alexander, Benson, Riley Pay zone depth (ft)
Gas: Initial open flow 1,700 MCF/d Oil: Initial open flow 2 Bbl/d
Final open flow 1,450 MCF/d Final open flow 2 Bbl/d
Time of open flow between initial and final tests 4 Hours
Static rock Pressure 1600 psig (surface pressure) after 8 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: Robert A. Anderson, President
DEVONIAN APPALACHIAN COMPANY, INC.

By: Robert A. Anderson; Its' President
Date: June 14, 1990

JUN 25 1990

Perforate Alexander: 4962'-2 shots, 4956-59'-6 shots, 4945-52'-14 shots
Frac with 5,000# 80/100 Ottawa, 30,000# 20/40 Ottawa and 65 quality N2 foam

Perforate Benson: 4652-60'-16 shots
Frac the Benson with 5,000 80/100, 25,000# 20/40 Ottawa and 65 quality foam

Perforate the Riley 4273-76'-4 shots, 4252-54'-4 shots, 4247-51'-8 shots
4231-33'-4 shots and 4164-66' with 4 shots
Frac with 200,000 scf N2 and 1000 gal 28% HCl, followed with 5,000# 80/100
35,000# 20/40 Ottawa and 75 quality N2 foam.

<u>Interval</u>	<u>Strata</u>	<u>Indications</u>
0-1720	shale sand	none
1720-1780	lime	oil
1780-1832	Big Injun	oil and gas
1832-1990	shale	
1990-2100	Weir sand	oil and gas
2100-2180	shale	
2180-83	Berea	oil
2183-4247	sand and shale	
4247-4284	Riley	oil and gas
4284-4652	shale	
4652-4660	Benson	
4660-4944	shale	
4944-4974	Alexander	oil and gas

RECEIVED
JUN 15 1990

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

72701

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: McCULLOUGH, RICHARD ETUX Operator Well No.: McCULLOUGH #2-1

LOCATION: Elevation: 790.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 7280 Feet South of 39 Deg. 20Min. Sec.
Longitude 5575 Feet West of 80 Deg. 50 Min. Sec.

Company: DEVONIAN APPALACHIAN COMP
ROUTE 1, BOX 114B
MINERAL WELLS, WV 26150-0114

Agent: ROBERT A. ANDERSON

Inspector: MIKE UNDERWOOD
Permit Issued: 11/17/93
Well work Commenced: 11/09/93
Well work Completed: 11/24/93
Verbal Plugging _____
Permission granted on: _____
Rotary _____ Cable _____ Rig _____
Total Depth (feet) _____
Fresh water depths (ft) _____
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.
--- No Change in Casing RECOMPLETION! ---			

OPEN FLOW DATA

Producing formation 5th, 50', gantz Pay zone depth (ft) 2184-2610
Gas: Initial open flow 1025 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 500 MCF/d Final open flow tn Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 1000 psig (surface pressure) after 24 Hours

Second producing formation Weir Pay zone depth (ft) 1998-2100
Gas: Initial open flow 1025 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 500 MCF/d Final open flow tn Bbl/d
Time of open flow between initial and final tests 12 Hours
Static rock Pressure 1000 psig (surface pressure) after 24 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: DEVONIAN APPALACHIAN COMPANY, INC.

By: [Signature]
Date: 2/8/94

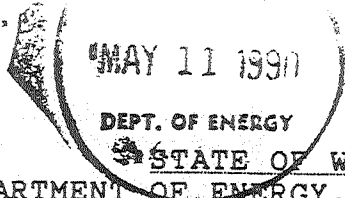
Perforations: 1st Stage, 2604-2610-6 holes, 2481-83 - 6, 2427-2, 2362-64-4 holes,
2300-2, 2283-2, 2271-2, 2184-86-4 holes. Frac with 500 gal 22% HCL, 50,000#
20/40 Ottawa sand, 723 bbl H2O, 94,000 scf N2

Secon Stage Perfs: 1998-2100 - 22 perfs. Frac with 550 gal 22% HCL, 40,000#
20/40 Ottawa sand, 601 bbl H2O and 86,000 scf N2.

Well logs are the same as original completion report!

See original wn-35

18105



017-3818
Issued 5/15/90

FORM WW-2B

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

Page 1 of 1
Expires 5/15/92

- 1) Well Operator: Devonian Appalachian Co., Inc. 13530 (1) 670
- 2) Operator's Well Number: McCullough #2-1 3) Elevation: 790'
- 4) Well type: (a) Oil / or Gas X /
(b) If Gas: Production X / Underground Storage /
Deep / Shallow X /
- 5) Proposed Target Formation(s): Alexander
- 6) Proposed Total Depth: 5800' feet
- 7) Approximate fresh water strata depths: 30'
- 8) Approximate salt water depths: 990'
- 9) Approximate coal seam depths:
- 10) Does land contain coal seams tributary to active mine? Yes / No X /
- 11) Proposed Well Work: Drill & Stimulate New Well
- 12)

CASING AND TUBING PROGRAM

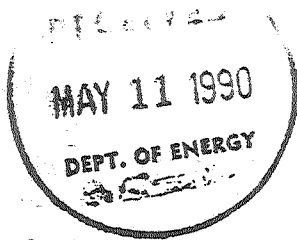
TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	<u>1 1/2"</u>	<u>H-40</u>	<u>27#</u>	<u>120'</u>	<u>120'</u>	<u>to surface</u>
Fresh Water	<u>11"</u>	<u>H 40</u>	<u>27#</u>	<u>120'</u>	<u>120'</u>	<u>to surface</u>
Coal						<u>3805718-11.3</u>
Intermediate	<u>8 5/8"</u>	<u>H 40</u>	<u>23#</u>	<u>1000'</u>	<u>1000'</u>	<u>to surface</u>
Production	<u>4 1/2"</u>	<u>J 55</u>	<u>10.5#</u>	<u>5100'</u>	<u>5100'</u>	<u>3805718-11.1</u> <u>370 sks.</u>
Tubing						
Liners						

PACKERS : Kind
Sizes
Depths set

For Division of Oil and Gas Use Only

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

2606



- 1) Date: May 8, 1990
- 2) Operator's well number McCullough #2-1
- 3) API Well No: 47 -017 - 3818
State - County - Permit

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

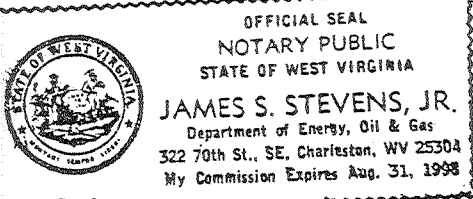
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Richard F. McCullough
Address Rt 1 Box 99
Greenwood, WV. 26360
 - (b) Name Sarahlene McCullough
Address same
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name _____ N/A
 - Address _____
 - (b) Coal Owner(s) with Declaration
 - Name _____
 - Address _____
 - (c) Coal Lessee with Declaration
 - Name _____
 - Address _____
- 6) Inspector Mike Undewood
Address Rt 2 Box 135
Salem, WV 26426
Telephone (304)-782-1043

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 _____ 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 Devonian Appalachian Co., Inc.
 By: Robert H. Anderson
 Its: President
 Address Rt. 1 Box 114 B
Mineral Wells, WV. 26150
 Telephone 304-489-9314

Subscribed and sworn before me this 16 day of MAY, 1990
James S. Stevens, Jr. Notary Public
 My commission expires Aug-31, 1998

017-3818 Frac.
 Issued 11/17/93
 Expires 11/17/95
 Page 1 of 1

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

- 1) Well Operator: 4518 Neonian Appalachia Co. Inc 13530 ① 471
- 2) Operator's Well Number: M^cCurlog L[#] 2-1 3) Elevation: 790'
- 4) Well type: (a) Oil / or Gas X
 (b) If Gas: Production X / Underground Storage
 Deep / Shallow X
- Proposed Target Formation(s): 427 Snow Vein, Aren, 30', Gordon, 5th, Warren
- Proposed Total Depth: existing feet
- Approximate fresh water strata depths: 30 ± 140
- 8) Approximate salt water depths: N/A
- 9) Approximate coal seam depths: N/A
- 10) Does land contain coal seams tributary to active mine? Yes / No X
- 11) Proposed Well Work: Temporary Plug, Squeeze & frac shallow zones
Knock out plug & commingle all production
- 12)

18105

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4"				110'	to surface
Fresh Water						
Coal	8"			<i>Production from well records</i>	275'	to surface
Intermediate	8 5/8"				975'	to surface
Production	4 1/2"				5043'	295 SK
Tubing						
Liners						

PACKERS : Kind N/A
 Sizes
 Depths set

RECEIVED
 WV Division of
 Environmental Protection
 OCT 12 93

For Division of Oil and Gas Use Only

Permitting
 Office of Oil & Gas

4991/22

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

Plat WW-9 WW-2B Bond CD Agent

1) Date: 9-28-93
2) Operator's well number
McCullough 2-1
3) API Well No: 47-017-3818 -FRAC
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 Richard McCullough
Address Rt 1 Box 99
Greenwood, WV. 26360
(b) Name _____
Address _____
(c) Name _____
Address _____
6) Inspector Mike Underwood
Address Rt 2 Box 135
Salem, W.V.
Telephone (304)- 782-1043

5) (a) Coal Operator:
Name N/A
Address _____
(b) Coal Owner(s) with Declaration
Name _____
Address _____
Name _____
Address OCT 1 2 93
(c) Coal Lessee with Declaration
Name _____
Address _____

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

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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 Devonian Appalachian Co. Inc
By: Robert E. Korman
Its: President
Address Rt 1 Box 114-B
Mineral Wells, WV. 26150
Telephone (304) 489-9314

Subscribed and sworn before me this _____ day of _____, 19____

Notary Public

My commission expires _____