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FORM WW-2B

## STATE OF WEST VIRGINIA

DEPARTMENT	OF	ENER	GY,	DIV	ISIO!	V OF	OIL	AND	GAS
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		-	WELL WO	ORK PERMIT	APPLICATION	<u> </u>	, mł	
1)	Well Ope	rator: A	shland Exp	0043 loration, In	ic. 2750	(1)	228	
2)	Operator	's Well		.M. Ritter L 58, Serial #		3) El	evation: 1219.64	
4)	Well typ	e: (a)	0ii_/	or Gas	5 <u>X</u> /			
		(b)	If Gas:			ound Storag		
	_				P/		w <u>.X</u> /	
5')	Proposed	Target :	Formation	ı(s): <u>Devo</u>	nian Shale			
6)	) Proposed Total Depth: 5865'KB feet							
7)	Approximate fresh water strata depths: - 146, 326 10, 789							
8)	Approxim	ate salt	water de	epths: 132	U KB			
9)	Approxim	ate coal	seam dep	oths: Non	e Operated - S	Solid 992	9-831	
10)	Does lan	d contai:	n coal se	ams tribut	ary to acti	ve mine? Y	es/ No_X_/	
11)	Proposed	Well Wo:	rk: //		Vindeta	Nouville	<i>77</i>	
12)				/ '		The car it is		
					ING PROGRAM		•	
TYPE		S I	PECIFICAT	IONS	FOOTAGE IN	ITERVALS	CEMENT	
-		Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)	
Cond	ıctor	16	LS	42.0	30	30	CTS	
Fres	n Water						30-710-11-3	
Coal	**************************************						520SA/E-11.2.0	
Inte:	rmediate	8 5/8	J55	24.0	1370	1370	CTS	
Produ	uction	5 1/2	J55	15.5	5865	5865	As Needed	
Tubi	ng	1.9	J55	2.76		5815	Siphon	
Line	rs							
PACKI	ERS : Kin						CELVIE	
		ths set					IAR 0 7 1890 1	
6838		F	or Diviso	n of Oil a	and Gas Use	Only CIVIS	CN-OF OIL 2.03s	
-		aid:	 _  Well W	ork Permit	$=  \overline{z} $ Recl	amation Fun	THENT OF HERGY	
1 X	Plat	_  WW-9	1_1 ww-	2B    E	Sond $\int \mathcal{E}$	, (,	Agent	
1	(Type)							

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17 1990 1	)
C'VISION OF OF ENERGY	)
C'VISION ENT CO	,

Date: <u>March 5, 1990</u>		
Operator's well number		
W.M. Ritter Lumber Co. #258.	Se	rial #120341
API Well No: 47 - 109		
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 O	wner(s) to be served:	5) (a) Coal Operator:
- /	(a) Name	Georgia-Pacific Corp.	Name None
	Address	133 Peachtree	Address
		Atlanta, GA 30303	
	(b) Name		(b) Coal Owner(s) with Declaration
	Address _		Name Georgia-Pacific Corp.
	( - \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Address 133 Peachtree
	(C) Name		Atlanta, GA 30303
	Address _		NameAddress
			Address
6)	Inspector	Rodney Dillon	(c) Coal Lessee with Declaration
•		P.O. Box 1526	Name Virginia Crews Coal Co.
		Sophia, WV 25921	Address P.O. Box 727
	Telephone	(304)- <u>683-3989</u>	
		TO THE PERSON(S) NAMED AR	OVE TAKE NOTICE THAT:
	Included	is the lease or leases or	other continuing contract or
contr	acts by w	hich I hold the right to	extract oil and one OP
X	Included	is the information requir	ed by Chapter 22B, Article 1,
Secti	on 8(d) o	f the Code of West Virgin	ia (see page 2)
	I certify	that as required under C	chapter 22B of the West Virginia Code
I hav	ve served <sup>*</sup>	copies of this notice and	application, a location plat, and
accon	mpanying d	ocuments pages 1 through	2 on the above named parties, by:
	Pers	onal Service (Affidavit a	ttached)
		ified Mail (Postmarked po	
	Publ	ication (Notice of Public	ation attached)
	T have re	and and understand Observation	220 20 000 11 10
to th	r have re	nd conditions of any narm	22B and 38 CSR 11-18, and I agree at issued under this application.
·	I certify	under penalty of law tha	t I have personally examined and am
famil	iar with	the information submitted	on this application form and all
attac	hments, a	nd that based on my inqui	ty of those individuals immediately
respo	nsible fo	r obtaining the informati	on, I believe that the information
is tr	ue, accur	ate, and complete.	y a solitor ondo sino interpreta
	I am awar	e that there are signific	ant penalties for submitting false
infor	mation, i	ncluding the possibility	of fine and imprisonment.
		Well Operator	Ashland Exploration / Inc.
		##6Ву: <u>J. Т. Mel</u>	
		Its: <u>Manager E</u>	astern Region
		Address P.O. Bo	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
		Ashland	d. KY 41114
Subsc	rihed and	Telephone <u>606,</u> sworn before me this <u>5th</u>	/329-5450
~ ~ ~ ~ ~	1/. 0.	Sworn before me this <u>str</u>	n_day of <u>March</u> , 19 <u>90</u>
	Ulchi 1	1. Sonta	Notary Public
Му со	mmission	expires November 23, 1990	

Farm name:

LOCATION:

GEORGIA-PACIFIC CO.

Elevation: 1219.64

Operator Well No.: 258-S-120341

Quadrangle: BAILEYSVILLE

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

Well Operator's Report of Well Work

District: BAILEYSVILLE County: WYOMING Latitude: 2010 Feet South of 37 Deg. 35Min. 0 Sec. Longitude 3175 Feet West of 81 Deg. 42 Min. 30 Sec. Company: ASHLAND EXPLORATION, INC. P.O. BOX 391, A1-6 Casing | Used in Left ASHLAND, KY 41114-0391 |Fill Up| Tubing | Drilling | in Well|Cu. Ft. Agent: FORREST BURKETT Size Inspector: RODNEY G. DILLON Permit Issued: 03/23/90 16" 11.8 Well work Commenced: 4/12/90 Well work Completed: 7/12/90 Verbal Plugging 8 5/8" 1358 1358 590 Permission granted on: Rotary X Cable 5 1/2" 57801 57801 Total Depth (feet) 1289 Fresh water depths (ft)11/2" stream @ 92 & 320' and approximately 789 1.9" @ 5263' KB w/ADL 1 Pkr @ 1718' Salt water depths (ft) 1320' KB Is coal being mined in area (Y/N)? N Coal Depths (ft): Not noted while drl'g 1.9" @ 1654' KB OPEN FLOW DATA Producing formation Devonian Shale Pay zone depth (ft) 4612-5701 Gas: Initial open flow 66 MCF/d Oil: Initial open flow Bbl/d Final open flow 1192/1393MCF/d Final open flow Bbl/d Time of open flow between initial and final tests Hours Static rock Pressure 845 psig (surface pressure) after Second producing formation Ravenscliff Pay zone depth (ft) 1642-1660 Gas: Initial open flow 0 MCF/d Oil: Initial open flow Final open flow 201 MCF/d Final open flow Time of open flow between initial and final tests 3 Bbl/d Static rock Pressure 370 psig (surface pressure) after 72 Hours

JUL 20 1990
DEPT. OF ENERGY

INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: ASHLAND EXPLORATION, INC.

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,

By: James L. Stephens, Engr. Tech.

7/17/90

FORMATION OR ROCK TYPE		TOP	BASE
Sand & Shales Lower Lee Sand Sand & Shales Princeton Section		0 928 1316 1430	928 1316 1430 1474
Shales		1474	1597
Ravenscliff Avis LS		1597	1666
Shales		1666 1707	1707 1756
Stray Maxton		1756	1826
Shales		1826	1942
Upper Maxton		1942	1997
Shale		1997	2060
Middle Maxton Sand & Shales		2060	2144
Lower Maxton	3543	2144 2314	2314 2347
Shales		2347	2397
Little Lime	4600	2397	2477
Pencil Cave	550	2477	2507
Big Lime Shales	and and and	2507	2929
Weir Section		2929 3042	3042 3150
Shale	Andrew Control	3150	3474
Coffee Shale		3474	3495
Berea		3495	3543
Devonian Shale Onondaga LS		3543 5798	5798 TD

LTD 5817 DTD 5819

## WELL TREATMENT

Perf L. Devonian Shale 25H/5364-5701. N2 frac using 750 gal 16% Fe Inh. Fe acid, 1,000,006 SCF N2 @ 99,000 SCF/min. BD @ 2600#, ATP 3350#, ISIP 2300# & 15 min 1970#.

Perf U. Devonian Shale 25H/4612-5048. N2 frac using 1000 gal 7 1/2% Fe Inh. acid, 1,000,025 SCF N2 @ 90,000 SCF/min. BD @ 3800#, ATP 3150#, ISIP 2100# & 15 min 1970#.

Perf Berea Sands 45H/3512-3535. 75 Quality foam frac using 500 gal 15% Fe Inh. acid, 1000 gal 25% treated Methanol, 70,000# 20/40 sand & 411,000 SCF N2 @ 11,000 SCF/min. BD @ 1450#, ATP 1550# @ 25 bpm foam rate, MTP 1650#, ISIP  $1480\pi$  & TF 344 bbls. Berea was wet. The perforations were squeezed off after testing.

Perf Ravenscliff Sand 35H/1642-1660. 75 Quality foam frac using 500 gal 14% Fe Inj. aeid, 60,000#20/40 sand, and 680,000 SCF N2 @ 18,000 SCF/min. BD @ 3440#, ATP 2850# @ 25 bpm foam rate, MTP 3440#, ISIP 2140#, 15 min 2000# & TF 309 bbls.

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