

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

Well Operator's Report of Well Work

farm name:	GEORGIA-PA	CIFIC CORP.	Operator	Well No.:	WYO. POCA	. 108
LOCATION:	Elevation:	1,828.00 Qua	drangle: M	icgraws		רי היום היום היום
	Latitude:	SLAB FORK 12600 Feet So 6225 Feet We	uth of 37	Deg. 45Min	Sec.	•
. 999	N VIRGINIA (EXEC. PARK GSPORT, TN	OIL AND GAS BLVD., STE. 3 37660-0000	00 Casing	Used in	Left	Cement
Agent: DAN	A BLACKSHIRE	:				
Permit Issue Well work Co	OFIE HELMICK ed: ommenced:	08/04/93	Size	 49'	49'	
Verhal Pluce	ompleted: _ ging granted on:	•	11-3/4"	941'	941'	614
Rotary Total Depth Fresh water	granted on:_ Cable_ (feet) <u>Plue</u> depths (ft)	Rig g at 3740'	8-5/8"	3187'	3187'	643
	depths (ft)		4-1/2"		Cut & Pulle @ 3150'	d 1021
Is coal bein Coal Depths	ng mined in (ft):	area (Y/N)?_	2-3/8" tbg	ı	3117'	
T1	ng formation itial open : nal open flo	ACHED COMPLETION flow MCF com MCF flow between in ce pai	/d Oil: In /d Fi nitial and	Pay zone d Itial open nal open fl final test	S	Bbl/d Bbl/d Hours Hours
Gas: In Fi Ti	itial open in nal open flo	ow MCF flow between i	/d Oil: In /d Fi nitial and	itial open nal open fl	flow ow	Bbl/d Bbl/d Hours Hours
NTERVALS, F LOG WHICH I	RACTURING (S A SYSTEM)	FORM PUT THE OR STIMULATING ATIC DETAILED RED BY THE WEL	, PHYSICA GEOLOGICA	L CHANGE,	ETC. 2). '	THE WELL
		For: PENN VI	RGINIA OIL	AND GAS CO	RPORATION	
		Date:			nff.	6 4 19 95

DATE: 2/20/95

PENN VIRGINIA COMPLETION/PRODUCTION SYNOPSIS

Y & O Coal No.108 (Recompletion)

Formation, Perforated Interval, Treatment, Pressure and Rate Data

Gordon

3640'-3664' (10 holes)

Treatment: 250 gals. of 15% HCl acid, breakdown with $N\bar{2}$, 250 MSCF of N2

treatment.

Pressure and rate data: No pressure data; 36 hour flow rate test of 277 MCFD

through 2".

Weir

3012'-3026' (11 holes)

Treatment: 500 gals. of 15% HCl acid, breakdown with treated water, frac with

23,000 gals. of 75 Quality foam, 40,000 lbs. of sand and 230 MCF of N2 pumped at

10 BPM.

Pressure and rate data: 610 psig in 48 hours, 4 hour flow test at 640 MSCF/D

through a 4 1/2" x 5 1/2" swedge.

Big Lime

2722'-2232' (5 holes)

Treatment: 500 gals. of 15% HCl acid, breakdown with treated water, acidized with 10,000 gals. of 75 Quality foam (2500 gals. 15% HCl and 125 MCF of N2)

displaced with N2.

Pressure and rate data: No pressure or

flow rate data.

2654'-2660'

(4 holes)

Treatment: 250 gals. of 15% HCl acid, break with treated water, acidize with 5,000 gals. 75 Quality foam (1250 gals.

15% HCl acid and 65 MCF N2) and

displaced with N2.

Pressure and rate data: 600 psig in 48 hours, and a 4 hr. flow test at 394

MCF/D through a 4 1/2" x 5 1/2" swedge.

PENN VIRGINIA COMPLETION/PRODUCTION SYNOPSIS

Y & O Coal No.108 (CONT.)

2502'-2506' (4 holes) 2520'-2522' (2 holes) Treatment: 250 gals. of 15% HCl, break with treated water, acidized with 5000 gals. of 75 Quality foam (1250 gals. of 15% HCl and 65 MCF of N2) displace with

Pressure and rate data: No pressure or
flow test data.

Composite open flow and pressure: All zones

310 psig in 48 hours, and a 4 hour flow rate at 837 MCFD

through a 2" nipple.

4095.

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

... Well Operator's Report of Well Work

Georgia - PACIFIC CORP.

Operator Well No.: Y & O 108

Elevation: 1828.00 Quadrangle: MCGRAWS

District: SLAB FORK County: WYOMING
Latitude: 12600 Feet South of 37 Deg. 45Min. 0 Sec.
Longitude 6225 Feet West of 81 Deg. 27 Min. 30 Sec.

•		=		
Company:SONAT EXPLORATION CO. P. O. BOX 766 CHARLESTON, WV 25323-0000	Casing & Tubing	Used in Drilling	Left	Cement Fill Up Cu. Ft.
Agent: DANA R. BLACKSHIRE				
Inspector: RODNEY G. DILLON	Size			
Permit Issued: 05/23/89 Well work Commenced: 9/7/89	16" cond.	49'	491	<u>i</u>
Well work Completed: 11/21/89 Verbal Plugging Permission granted on:	11-3/4"	941'	941'	 614
Rotary X Cable Rig Total Depth (feet) 7036' Fresh water depths (ft) 970'±	8-5/8"	3187'	3187 '	 643
Salt water depths (ft) 1220'±	4-1/2"	69901	 6990'	1021
Is coal being mined in area (Y/N)?_N Coal Depths (ft):900-905'	2-3/8" tb	, ?	 ₄₄₉₃ ,	

OPEN FLOW DATA

Producing formation Dev	vonian Shale	Pay zone dep	th (ft)*Se	e belo
Gas: Initial open flow	250 MCF/d Oil	: Initial open fl	ow . • . 0	Bb1/d
Final open flow	72 MCF/d	Final open flow	. 0	Bbl/d
Time of open flow	between initial	and final tests	192	Hours
Static rock Pressure	740 psig (sur	face pressure) af	ter <u>48</u>	Hours
Second producing format:	ion	Pay zone dep	th (ft)	
Gas: Initial open flow	MCF/d Oil	: Initial open fl	ow	Bb1/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 (sur	face preș s ure) a T	ter	_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		WELLBORE.	OF ALL	FORMATIONS
*Pay Zone Depths		0	lie Ward		
4900-5100'	For:	SONA"	EXPLORATION CO.		
5200 - 5512 '		•	,		
5916-615Ò'		By:	Julie Ward, Regulatory	Clerk	
6450-6600'		Date	December 27 , 1989		
6728-6806'					

1) Details of Perforated Intervals, Fracturing or Stimulating, Physical Change, etc.

Devonian: Perforated 6728-6806' & 6450-6600'. Pumped 500 gal 15% HCl acid + additives. Displaced acid with 200,000 SCF Nitrogen. Pumped approximately 236 bbls foam. Attempted to frac with 9900 gal 75-Quality Foam @ 50 BPM @ 4800 psi - well never broke down. Pumped 500 gal 15% HCl acid. Pumped 250 gal 15% HCl acid with 4 perfs balls. Displaced acid with Nitrogen. Pumped 150,000 SCF @ 28,000 SCFM.

Perforated 5916-6150'. Pumped 1000 gal 15% FE acid + additives. Displaced acid with 150,000 SCF Nitrogen. Pumped 1000 gal 25% Methanol prepad. Foam frac well using 253 bbls water + 780,000 SCF Nitrogen & 26,200 lbs 20/40 Mesh sand. Foam frac followed by 42,500 gals 75-Quality Foam.

Perforated 5200-5512'. Pumped 4 sx sand followed by 300 gal 15% FE acid + additives. Pumped additional 700 gals 15% FE acid + additives. Displaced with 129,000 SCF Nitrogen. Pumped 1000 gal Methanol prepad. Foam frac'd with 329 bbls water, 1,024,000 SCF Nitrogen & 40,300 lbs 20/40 mesh sand. Frac displaced with 80 bbls foam. Prepad followed with 55,272 gals 75-Quality Foam + sand.

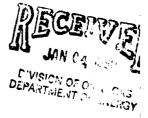
Perforated 4900-5100'. Pumped 1000 gal 15% FE acid + additives. Displaced with 108,000 SCF Nitrogen. Pumped 1000 gal 25% Methanol prepad. Frac'd with 68,880 gal 75-Quality Foam with 76,200 lbs 20/40 mesh sand. Frac displaced with 20 bbls 75-Quality Foam.



DEPARTMENT OF UNLEGY

2) The well log which is a systematic detailed geological record of all formations, including coal encountered by the wellbore.

<u>Formation</u>	Top Feet	Bottom Feet
sand	83	164
sand	173	178
sand	190	209
sand	209	221
sand	221	233
sand & shale	233	305
sand, shale, coal	305	351
sand	357	420
sand	420	469
sand	484	515
sand	515	586
sand & shale	652	745
sand	745	784
sand	800	838
sand	838	885
sand	885	900
coal	900	905
shale	905	919
shale	919	965
sand & shale	965	1083
sand & shale	1083	1241
sand	1241	1385
sand	1385	1507
*Ravencliff	1405	
*Avis	1456	
sand & shale	1642	1820
sand & shale	1820	2050
sand & shale	2050	2178
*Lower Maxon	2138	
sand & shale	2178	2290
*Little Lime	2260	
sand & shale	2290	2464
*Big Lime	2440	
sand .	2464	2504
sand	2520	
sand 🐔	2540	
sand & shale	2567	2629
sand	2682	2713
lime	2713	2774
sand & shale	2858	2894
sand & shale	2894	2937
shale	2937	2943
*Weir	2990	
shale	3135	3199
*Berea	3457	
*Gordon	3640	
sand & shale	3660	3896
sand & shale	3896	4111
sand & shale	4300 *	4514



Formation	Top Feet	Bottom Feet
sand & shale	4574	4730
shale	4880	5015
shale	5015	5103
shale	5103	5209
shale	5209	5243
shale	5243	5470
shale	5680	5920
shale	5976	6008
shale	6330	6596
shale	6596	6800
shale	6800	6990
shale	6990	7024
lime	7024	7036
TD	7036	

NOTE: *All depths from electric log. All other data from the driller's log.



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47-109-1094 Danued 5/23/89 Capures 5/23/91

	4		V	لالا	may 2152 10 ,	CF (20
FORM WW-2B	<u>DEP AR T</u>	MENT OF E		VISION OF O	IL AND GAS	ge 3 of 7
1) Well Op	erator:			APPLICATIO t Exploration	N 46600, 7	1, 4d6
•						
4) Well ty	pe: (a)	0il_/	or Gas	5 <u>X</u> /		
	(b)	If Gas:		n <u>X</u> / Underg	round Storag Shallo	
5) Propose	d Target	Formation	n(s):	Dev	onian Shale 🤟	
			6350			
7) Approxim	mate fres	h water s	strata dept	hs:	970	
			epths:		1220	
9) Approxi	mate coal	Seam der	oths: 296-	-298; 500	1-503/ -57	5-5791
10) Does la	nd contai	n coal se	ams tribut	cary to act	ive mine? Y	es/No_X_/
11) Proposed	d Well Wo				New Formation	
		CASIN	IG AND TUBI	NG PROGRAM		
TYPE	S	PECIFICAT	IONS	FOOTAGE I	NTERVALS	CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	16	-	-	30	sulad.	138CSP18-11.
Fresh Water	11 3/4	н40	42	1000 Car	1000	150-200
Coal						38CSR18+11.2
<u>Intermediate</u>	8 5/8	J55	24	3100	3100	250-300
Production	4 1/2	J55	11.6	7800	7800	393218-11-1
Tubing						
Liners	<u> </u>				(3.6.5)	FRANCE
PACKERS : Kin	ndb		By Rule	15.05		CIEUVE

Page	1	of	•
Form	W	/2-A	
(09/8	37)	
File	C	vac	

RE	C		V	
111	MAY	05	1989	الل

Date:	April 28, 1989	
Operator	's well number	
	Y & O Coal No. 108	
API Well	No: 47 - 109 -	1094

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY API Well No: 47 - 109 - 1094

State - County - Permit

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

1)

2)

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4)		wner(s) to be served:	5) (a) Coal Operator:
		Georgia-Pacific Corp.	Name Phillips Management Group, Inc.
	Address _	P. O. Box 105605	Address P. O. Box 1664
		Atlanta, GA 30348	Oak Hill, WV 25901
	(b) Name		(b) Coal Owner(s) with Declaration
	Address _		Name Youghiogheny & Ohio Coal Co.
			Address P. O. Box 1000
	(c) Name	·	St. Clairsville, Ohio 43950
	Address _		NameBellemead Coal Co.
			Address c/o Trust Dept./Charleston Nat'l Bar
			Charleston Nat'l.Plaza, Box 1113, Charleston, WV
6)		Rodney Dillon	(c) Coal Lessee with Declaration 25324
	Address _	P. O. Box 1526	NameRanger Fuel Corp.
		Sophia, WV 25921	Address P. O. Box 966
	Telephone	(304)- <u>683-3989</u>	Beckley, WV 25801
	,	TO THE PERSON(S) NAMED A	BOVE TAKE NOTICE THAT:
	Included	is the lease or leases or	r other continuing contract or
cont	racts by w	hich I hold the right to	extract oil and gas OR
X	Included	is the information requir	red by Chapter 22B, Article 1,
Sect	ion 8(d) c	f the Code of West Virgin	nia (see page 2)
	I certify	that as required under (Chapter 22B of the West Virginia Code
I ha	ve served	copies of this notice and	application, a location plat, and
acco	mpanying d	ocuments pages 1 through	7 on the above named parties, by:
	Pers	onal Service (Affidavit a	attached)
		ified Mail (Postmarked po	
	Publ	ication (Notice of Public	ration attached)
	I have re	ad and understand Chapter	r 22B and 38 CSR 11-18, and I agree
to t	he terms a	nd conditions of any per	mit issued under this application.
	I certify	under penalty of law tha	at I have personally examined and am
fami	liar with	the information submitted	on this application form and all
atta	chments a	nd that based on my inqui	iry of those individuals immediately
resp	onsible fo	r obtaining the informati	ion, I believe that the information
is t	rue accur	ate, and complete.	ion, I believe that the information
	T am awar	e that there are cignific	cant penalties for submitting false
info	rmation i	ngluding the negativities	ant penalties for submitting false
11110	Imacion, I	Wall one publication	of fine and imprisonment.
		Well Operator	Sonat/Exploration Company
		By:	10-1. Plackmino
		Its:	Designated Agent
	•	Address	P. O. Box 766
		<u> </u>	Charleston, WV 25323
C b	:	Telephone	(304) 925-0317
Subs	cribed and	sworn before me this _4	th day of May 1989
	9-	10 11 -	
(yamm	y as donorny	Tammy Lea Hovatter Notary Public
Му с	ommission/	expiresJune 7,	1993
	April 1		

JUL 1 9 93

109-1094- /= lesued 8/4/93 Page Of Expus 8/4/95 AND GAS

FORM WW-2B

Permitting

effice of Oil & STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

WELL WORK PERMIT APPLICATION

			<u> </u>	//59/	<u></u>	5	. 6
1)	Well Ope	rator:	PENN	VIRGINIA O	IL & GAS CORPO	DRATION 373	55 9 46
2)							evation: 1828
4)	Well typ	e: (a)	0il_/	or Gas	<u>x</u> /		
		(b)	If Gas: 1			ound Storage Shallov	
5)	Proposed	Target	Formation	(s): Maxons	Big Lime, We	ir and Gordon	
;)	Proposed	Total D	epth:		feet	~ /	•
')	Approxim	ate fres	h water s	trata dept		9/0	
.)	Approxim	ate salt	water de	pths:	10	20'	
1)	Approxim	ate coal	seam dep	ths:	100-905		
τ0)						ive mine? Ye	es/ No_X_/
11)	Proposed	Well Wo	rk: Re-wor	rk: Pull Tu	bing, Fractur	e or Stimulate,	Perforate
12)	Squeage	/给	hal New Casin	Formati G AND TUB!	ng program	re Tempera Commile W	iz flur. ak flustsiza z
TYPE		s i	PECIFICAT	IONS	FOOTAGE IN	NTERVALS	CEMENT
		Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Cond	uctor	16"	. +	WX 1	199'	49'	
	h Water)	1/3/1	GND	well +	941'	941'	614
Coal		,	MOT	(SA)			
	rmediate	85/8"	o kel	/	3187	3187	643
Prod	luction	4 1/2"			6990'	6990'	■ 1031
Tubi	ng	2 3/8	J - 55	4.7		6800	Z Q / ·
Line	ers				<i>j</i> ;;		
PACK	ERS : Kin		Com	ent tot on	42.3390		
. 1		ths set					
Tpo,	13	F	or Diviso	n of Oil a	and Gas Use	Only	\mathcal{L}
) / _ I	Yee(s)	aid:	Well W	ork Bermi	Rec	lamation Fund	WPCP L WPCP

| Bond

	Permitting	State - County - Permit
	Sffice of Oil & 🌤 🔻	
	Office of Oil 2.3. STATE OF WES	I VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS		
NOTICE AND APPLICATION FOR A WELL WORK PERMIT		
4)	Surface Owner(s) to be served:	5) (a) Coal Operator:
	(a) Name Georgia-Pacific Corp.	Name
	Address P.O. Box 105605 Atlanta, GA 30348	Address
	Atlanta, GA 30348	
	(b) Name	(b) Coal Owner(s) with Declaration
	Address	Name Wyoming Pocahontas Land Co., Inc.
		3 d d 00 D 1 : D1
	(c) Name	Beckley, WV 25801
	Address -	Name
		Address
6)	Inspector Rodney Dillon	(c) Coal Lessee with Declaration
	Inspector Rodney Dillon Address P.O. Box 131	Name
	Bradley, WV 25818-0131	Address
	Telephone (304)-877-2912	
TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:		
	Included is the lease or leases or	other continuing contract or
conti	racts by which I hold the right to	
Y	Included is the information requir	
Secti	ion 8(d) of the Code of West Virgin	ia (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 po	
Publication (Notice of Publication attached)		
rabitation (Notice of rabitation accadined)		
I have read and understand Chapter 22D and 20 CCD 11 10 and I agree		
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.		
T am aware that there are significant morelties for submitting folia-		
I am aware that there are significant—penalties for submitting false		
information, including the possibility of fine and imprisonment. Well Operator Penn Virginia Dil & Gas Corporation		
	By: Wha	Troole
Its: Vice President		
Address P.O. Box 386		
Duffield, VA 24244		
Telephone (703) 431-2831		
Subscribed and sworn before me this 13th day of Auly , 1993		
Wita Mil 2 - 2		
Notary Public		
My commission expires		
Ο ' .		

1) Date: <u>July 13, 1993</u>

Operator's well number

Y & O Coal #108

API Well No: 47 - 109 - 1094 - FRAC

2)

3)

RECE"

Environmenta (1)

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Page 1 of

Form WW2-A (10-91)