

05-Sep-95 API # 47- 17-03420 W

State of West Virginia JAN 17 1996 Division of Environmental Protection Section of Oil and Gas

Permitting Office of Oil & Gas Well Operator's Report of Well Work

Farm name: WILLIAMS, ROBERT C Operator Well No.: CNGP 476 w

LOCATION: Elevation: 991.30 Quadrangle: OXFORD

District: CENTRAL County: DODDRIDGE Latitude: 3250 Feet South of 39 Deg. 15Min. 0 Sec. Longitude 9500 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: CNG PRODUCING COMPANY

ROUTE 2, BOX 698 | Casing | Used in | Left | Cement |
BRIDGEPORT, WV 26330-0698 | & | Fill Up| Tubing | Drilling | in Well | Cu. Ft. | Agent: RODNEY J. BIGGS Size Inspector: MIKE UNDERWOOD Permit Issued: 09/07/95 Well work Commenced: 10/2/95 Well work Completed: 10/30/95 Verbal Plugging Permission granted on:

Rotary Cable Rig

Total Depth (feet) 5273'

Fresh water depths (ft) Re-Ran 1.5" Tbg. 5224' Salt water depths (ft) Is coal being mined in area (Y/N)?\_\_ Coal Depths (ft):

### OPEN FLOW DATA

Producing formation Balltown Pay zone depth (ft)  $_{3790-3841}$  Gas: Initial open flow  $_{N/A}$  Bbl/d Final open flow \*400 MCF/d Final open flow  $_{N/A}$  Bbl/d Time of open flow between initial and final tests 4 Hours Static rock Pressure 1180 psig (surface pressure) after 12 Hours \* Commingle with existing production Pay zone depth (ft)
Bbl/d 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: CNG PRODUCING COMPANY

By: Rodney J. Biggs, Production Manager, Appalachian Region Date: 01/15/96

10/2/95 - Pulled 1.5" Tubing

10/9/95 - Allegheny Perforated:

Balltown, 3790-3841, 30 holes

10/9/95 - Nowsco Fraced:

 Break
 2100#

 Avg. Psi
 2190#

 Avg. Rate
 24.1 bpm

 ISIP
 1550#

 Total Acid
 1000 gal.

 Total Water
 551 bbls.

 Total sand
 125 sks, 20/40

10/27/95 - Re-Ran 1.5" Tubing

10/27/95 - F. O. F. = 400 MCFD

10/30/95 - T.B.I.L.



## IV-35 (Rev 8-81)

MAY 15 1985

## State of Mest Airginia Pepartment of Mines Gil und Gas Pivision

Date	May 8,	1985	
Operat			
Well h	NO. CNGD	WN 476	
Farm_	H. B. Wi	lliams	
API N	0. <u>47</u> _	017	3420

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WELL OPER OR'S REPORT

OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

CATION: Elevation: 991.5 Watershed	Cabin Rur	3		
CATION: Elevation: County Doddri	idge	Quadrangle	Oxford	d, WV 7.5
P. O. Box 15746			T - 62	Cement
DDRESS Pittsburgh, PA 15744	Casing	Used in		fill up
ESIGNATED AGENT Gary A. Nicholas	Tubing	Drilling	IN METT	Cu. ft.
DDR <b>FSS</b> Rt. 2 Box 698 DDR <b>FSS</b> Bridgeport, WV 26330	Size 20-16	SECTION AND ASSESSMENT OF THE PROPERTY OF THE	Bergin Colonia	
URFACE OWNER Madge Williams	Cond.			
Rt. 1 Box 212 DDRESS W. Union, WV 26456	112-316X	240	240	To Surf.
W. H. Williams Estate	9 5/8		<u> </u>	
DDRESS West Union, WV 26456	8 5/8	1985	1985	To Surf.
OIL AND GAS INSPECTOR FOR THIS WORK	7			
like Underwood ADDRESS Salem. WV 26426	5 1/2			
PERMIT ISSUED 3-20-85	4 1/2	5377	5377	300 sks
DRILLING COMMENCED 4-16-85	3			
DRILLING COMPLETED 4-22-85	2			
IF APPLICABLE: PLUGGING OF DRY HOLE ON	Tinore			
CONTINUOUS PROCRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED	Liners used			
REWORKING. VERBALL PINCETTO				
GEOLOGICAL TARGET FORMATION Alexander		De	pth5400	feet
Depth of completed well 5401 feet	Rotary_	/ Cab	le Tools	
Water strata depth: Freshfeet;	; Salt	ree	: C	
Coal seam depths:	Is coa	l being mi	ned in t	he area? <u>No</u>
Coal Seam depart.	arze comcodo			
OPEN FLOW DATA	Ţ	eav zone de	epth 5228	- 5241 feet
OPEN Flow DATA  Producing formation Alexander		rnitial ope	en flow	BbL/d
Gas: Initial open flow Mcf/d  Final open flow 335 Mcf/d	i OTT	Final open	flow	Bb1/d
Final open flow 335 McI/O  Time of open flow between in	i See Initial	final tes	ts	hours
Time of open flow between in	III ar am	rement) af	ter 1	hours shut in
Static rock pressure 170		10,010, 01		
(If applicable due to multiple completi	ion)	Day zone d	epth	feet
Second producing formation  Cas: Initial open flow Mcf/c	2 0:3-	tojtial or	en flow	Bbl/d
MCI/O	d OTT:	Tirrer of		
Gas: Initial open from				
Final open flow Mcf/	d 011:	final to	 :ts	hours
Final open flow Mcf/o  Time of open flow between i  Static rock pressure psig(surf	nitial and	i final tes	5 CS	_180413

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Hitwell Surveys ran Corrlog & Perforated Alexander 5228 - 5231 (4 holes) and 5236 - 5241 (6 holes) (.49) HSC

Halliburton Foam Frac (75Q) Alexander - Break 2800, Avg. TPSI 3000, Avg Rate 16 BPM, ISI 1150, 5 min 1050, used 500 gals 15% HCL & 70,000# 20/40 Sand. 760,000 SCFN<sub>2</sub> Ran 1 Qt. of Radioactive Beads

### WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas		
Clay	0	10	Hole Damp @ 1540'		
Sand, Shale & RR	10	1956			
Lime & Shale	1956	1965			
Sand, Shale & Lime	1965	2005			
Big Lime & Injun	2005	2128			
Sand & Shale	2128	5401	ALX. @TD.		
LOG TOPS		Management of the Control of the Con			
Big Injun		. 2122			
Weir	2230	2418			
Berea	2478	2482			
Warren	3320	3450			
Speechley	3768	3825			
Balltown	4082	4200			
Bradford	4266	4440			
Benson	4510	4550			
Riley	4920	4924			
Leopold	5120	5128			
Alexander	5165	5252			
			Barrier Control of the Control of th		
	8	• •	*		

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY	
Well Operator	
By: Clary X Muster	
the state of the s	
Date: May 8, 1985	
Control of the Contro	Pa .

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including enal, encountered in the drilling of a well."

1)	Date:	February 20,	19_85_
2)	Operator's	476	

Well No. 476

3) API Well No. 47 - 017 - 3420
State County Permit

# STATE OF WEST VIRGINIA DEPARTMENT OF MINES, OIL AND GAS DIVISION APPLICATION FOR A WELL WORK PERMIT

4)	WELL TY	PE: A C	)il	/ G	as	<u>X</u> /		nd storage			
e,	I OCATIO					^			/ Deep	/ ShallowX	/)
رد	LOCATIO			Centra				: <u>Cabin Run</u>		O (	
٤١	WELL OP	a o m a a a	CNIC D-			200011	1201111	Doddridge			
U)	Address	EKAIUK.	Dark B	AGTODUG	16 00H	AFOR			AGENT Gary Ni		
	radii ess	D:+	tchurch	. PA 15:	24.4	THE P		Address		porate Park Rte 2 Bo	<u> </u>
8)	OIL & GA		Capargi	is IN IJ		INT			Bridgeport W.	VA 26330	
0)	NameN			DE NUII	FIED	$\mathcal{M}$			ONTRACTOR: Jack Drilling C		
	Address		2 Box	114		- Second Second	FEB 27	1965 Address		ompany	
	riuui 633			VA. 2642	26			Address	p.o. Box 48	14.0004	
10)	DDODOCE								Buckhannon. W.		
10)	PROPUSE	D WELL	WORK:	DnII	^	_/ Dni	oil & Bas e	HVIS!CNRedrill	/ Stimulate	·X	
				Plug o	ff old	iomate	PT OF	MINE Emation			
11)	CEO! OC!	C41 T47	CDT 5001					The state of the s			
11)	GEOLOGI				_	400				the state of the s	
	12) Estima						•	eet			
	13) Appro							salt,			
151	CASING A				***************************************			s coal being mined in the	area? Yes	/ No	
		n ND 1 ODI			_		**				
	ISING OR BING TYPE			CIFICATION Weight	5		FOOTA	GE INTERVALS	CEMENT FILL-UP OR SACKS	PACKERS	
	***************************************	Size	Grade	per ft.	New	Used	For dritting	Left in well	(Cubic feet)		
	ductor	11-3/4	U 40	42	X	-	29148	400		Kinds	
	h water	11-3/4	11-40	+ 42	<del>  ^</del>	-	X30**	22040	To Surface	By Rule 15.05	
Coal				-	-	-		-		Sizes	
	mediate	8-5/8	1	23	X		1925	1925	To Surface	By Rule 15.05	
	luction	4-1/2	1	10.5	X	1	5400	5400	200-400	Depths set	
Tubi		1 1/2	CN-55	2.75	X					By Rule 15,01	
Line	rs		-	1	-					Perforations:	
*			<del> </del>	-	-					Top Bottom	
		-	<u> </u>	-	<del>                                     </del>						
		<u> </u>	<u> </u>	1	<u> </u>	<u> </u>	<u>I</u>				
		***************************************			****						
		***************************************					OFFICE US	<del></del>			
	•						DRILLING	PERMII			
Регг	mit number_		47-01	7-3420					Mar	ch 20, 19	85
									Da		
This	permit cove	ring the w	ell operat	or and we	ll locati	on shows	below is eviden	ce of permission grante	d to drill in accorda	nce with the pertinent lega	l re-
quir	ements subje	ct to the c	onditions	contained	herein :	and on th	ie reverse hereof.	Notification must be	given to the District (	Dil and Gas Inspector, (Re	fer to
140	. 6) From to	the constr	uction of	rosas, ioci	inons 2	no pies ic	or any permitted work has comme	work, in addition, the we	ell operator or his con	ntractor shall notify the pro-	oper
	15 1				-			,	1:00		_
reve	rse hereof.				e and A	application	m, piat, and reci	amation plan, subject to	any modifications a	and conditions specified on	the
Perr	nit expires _	Marc	h 20,	1987			unless v	well work is commenced	prior to that date and	prosecuted with due dilige	nce
									prior to made date and	prosecuted with due dilige	nce.
- E	ond:	Agan		Diet	Casis		E			No.	
P	-/	Agen		Plat:	Casir	- 1	Fee	1		7	
	78	Barret Contract	1	27.0	M	0 6	966		10		
Permis	- I - I - I - I - I - I - I - I - I - I							VI IAMA	antel	Hasse	
								Admi	nistrator, Office of (	Oil and Gas	
NOT	ΓE: Keep o	ne copy of	this pern	nit posted	at the d	rilling lo	cation.	77			
		<del></del>								F	ile
			See	the revers	e side o	f the AP	PLICANT'S CO	PY for instructions to	the well operator.		

W Division of Environmental Protection

017-3420-W

FORM WW-2B	AUG 2 2				Рa	geo£
romin www. and	Pemitti O <del>lika di Oli</del>	STAT WELL W	TE OF WEST ENERGY, DIV ORK PERMIT	VIRGINIA VISION OF OI APPLICATION	L AND GAS O	spred 09/07/
.) Well O	perator:	CNG Produci	ng Company /0	110	526	,,,,,,
) Operat	or's Well	Number:_	CNGP 476W		3) El	evation:991.3'
) Well t	ype: (a)	0il_/	or Gas	5_X/		
	(b)	If Gas:	Deeg		ound Storag Shallo	
n Propos	ed Target	Formation	$n(s): \frac{430}{Ballt}$	own		
Propos	ed Total D	epth:376	58-3818	feet		
Approx	imate fres	h water	strata dept	:hs:		
Approx	imate salt	water de	epths:			
Approx	imate coal	seam de	pths:			
0) Does l	and contai	n coal se	eams tribut	ary to acti	ve mine? Y	es/ No/
l) Propos	ed Well Wo	rk: Sque	eze cement to co	ver interval. Perxisting production	erforate and Frac	zone. Clean well up
2)						D.K Mil
	_			NG PROGRAM		A
YPE	S	PECIFICA		FOOTAGE IN		CEMENT
	Size	Grade	Weight per ft.	4 :	Left in well	fill-up (cu. ft.)
onductor	11 3/4"	H-40		250 '	250'	to surface
resh Water					/`	38C5R18-11.3
oal						38581811.2.2
ntermediat	e 8 5/8"	X-42		1995'	1995'	to surface
roduction	4 1/2"	J-55		53781	5378'	300 sks.
ubing					(	BCSR18-11.1
iners			erene meneral staden			
ACKERS : K	ind	(C)	ridan siid haadayay aa gaa gaaya liigian aa gaayah siidda dhiid dhiid ah dhiid dhaarah dhiid dhiid dhiid dhiid			
S	izesepths set					
158	<del></del>		on of Oil	and Gas Use	Only	
1 /3 *						d   _   WPCP
						Agent
Plat	- WW-3	1 I M M	- 40 11	Bond		_ ''

(Type)

Dage	1 of	DECEN/E	1	Date: 8/18/95 Operator's well number CNGP 476W API Well No: 47 - 017 - 3420W	
Form	WW2-A	RECEIVE WY Division of Environmental Protect	2)	Operator's well number	
(10-9	1)	Environmental Protect	tion	CNGP 476W	_
		AUG 2 2 199	3)	API Well No: 47 - 017 - 3420W	
		2 2 2 133	IJ	State - County - Permit	
		Permitting	STATE OF WEST	n utnatuta	
	DTUTCT	Afficant OUL G	STATE OF WEST	CTION, OFFICE OF OIL AND GAS	
	DIVIDI	ON OF THAT	CONTENTAL FROID	CIION, OFFICE OF OHE AND GAD	
	•	NOTICE AND	APPLICATION F	OR A WELL WORK PERMIT	
4)	Surface C	wner(s) to	be served:	5) (a) Coal Operator:	
	(a) Name	Robert C. Willia	26456	Name	
	Address _	Rt. 1, Box 212		Address	_
		West Union, WV 2	<u> </u>		_
	(b) Name			(b) Coal Owner(s) with Declaration	
	Address _			Name None	
	/al Nama			Address	-
	(C) Name		*	Namo	-
	vaaress -			Name Address	-
			· ,		
6)	Inspector	Mike Underwoo	odbo	(c) Coal Lessee with Declaration	**
	Address			Name	
				Address	_
	Telephone	e (304) – <u>288</u> -	-1604 (cellular)		_
		TO THE PER	SON(S) NAMED AL	BOVE TAKE NOTICE THAT:	
	Theluded	ic the less	ro or loscoc or	other continuing contract or	
CONF				extract oil and gas OR	
V				ed by Chapter 22B, Article 1,	
Sect				ia (see page 2)	
2000				Chapter 22B of the West Virginia Code	2
I ha				application, a location plat, and	_
				on the above named parties, by:	
·	Pers	sonal Servic	ce (Affidavit a	ttached)	
	_x Cert	ified Mail	(Postmarked po	estal receipt attached)	
	Publ	lication (No	otice of Public	ation attached)	
		**** **** **** **** ***	THE PARTY NAME WHEN THE PARTY WHEN T		
				22B and 38 CSR 11-18, and I agree	
to t				it issued under this application.	
£	T certify	under pena	itty or law tha	at I have personally examined and am	
Taunt.	rrar wren	the Informa	reton submitteed	on this application form and all ry of those individuals immediately	
				on, I believe that the information	
		ate, and co		OII, I DOITE AC CHIEC CHO INTOING CION	
and the same of the same of				ant penalties for submitting false	
info				of fine and imprisonment.	
		<b>-</b>	Well Operator		
			By: Rodney J. Bi	aas ATT Bea	_
			Its: Designated A	gent - Production Manager, Appalachian Region	_
				Box 698, Crosswind Corp. Park	
			·	ort, WV 26330	
C.L.	anibad	1		$\frac{14)}{12} \frac{623-8840}{624}$ day of <i>Quality</i> . 1998	₹
SUDS	cribed and	sworn ber	ore me this 184	ady of fulfiller, 1995	2
ن	Janes D	CADTON.		Nancy D. Colton	_
My C	ommission	expires	09-26-2003	NOTARY PUBLIC	
_		-			

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
NANCY D. COLTON
RT. 2, BOX 691D
SHINNSTON, WY 28431
My Commission Expires Sept. 26, 2003