1)	Date:]	Febr	uary	8	, 19	84
2)	Operator's Well No. P	1um	#1			V-2(B).s	FORME
3)	API Well No.	47	-	73	-	1809	96194071
		State		Cou	inty		Permit

File

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

APPLICATION FOR A WELL WORK PERMIT

5) LOCATIO	The said of the said of	vation: _	Productio 96			Watershad:	Panther Ru	n Deep	_/ Shallow _X /)
3) LOCATIO		trict:						Quadrangle:	Ellenboro
6) WELL OP	ERATOR_								ıs H. Zehrbach
Address			Box :				Address	same	
ridares			antown	THE PARTY AND THE	26505	5	radicos		
8) OIL & GA	S INSPEC						9) DRILLING	CONTRACTOR:	
	r. Bob				4		Name		
Address	Gen	eral D	elive	ry			Address		COLUMN TOTAL AND AND LORSING PROPERTY.
	Mid	dlebou	rne, V	W 26	149			الرالالا	CELLARIA
10) PROPOSE	D WELL V	WORK:	Drill	x	/ Drill	deeper	/ Redrill	/ Stimulate	9000
10, 1101002						/ Perfor		18/10	עור
						well (specify)		Lough hands	MAR 9 - 1984
(I) GEOLOGI	CAL TAR	GET FOR	MATION		Marc	cellus Shale			
12) Estima					95	feet		OIL	& GAS DIVISION
13) Appro	ximate trata	a depths:	Fresh.			feet; salt,	1370	feet, DEP	T. OF MINES
14) Appro	ximate coal	seam dep	ths:	n	one			ne area? Yes	/ No X
5) CASING									
CASING OR		SPEC	IFICATION	S	- 11	FOOTAGE II	NTERVALS] CEMENT FILL-UP	PACKERS
TUBING TYPE	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well	OR SACKS (Cubic feet)	
Conductor	13				x	20	0	(Cubic reet)	Kinds
Fresh water	11.75			x		280	280	CTS 15.05	Kinds
Coal			and the state of				444	020 25100	Sizes
Intermediate	8.625			x		1879	1879	CTS	Sizes
Production	4.5			x		5995	5995	CTS or 15.01	Depths set
Tubing						E USE ONLY	DETRO TO T		
Liners									Perforations:
		2004109	oni du	unlin'	very her	A OCCUPENCION OF	Introduction and	All brober of at for	Top Bottom
7.0	ele(1						o ata	a l	Committee to the second
				(Anni	an pir	an aurallo I			
				Californ	(OFFICE USE C	NLY		
					I	DRILLING PE	RMIT		(ell work started
		47-0	73-180	9				Marc	th 13, 19 84
Permit number_		47 0	75 100	,					eilirib edislo moisemo
This permit cove	ring the we	ll operato	r and wel	1 locatio	n shown	below is evidence of	of permission gran		ce with the pertinent legal re-
uirements subje	ct to the co	nditions c	ontained	herein a	nd on the	reverse hereof. No	tification must be	given to the District Oil	and Gas Inspector, (Refer to
No. 8) Prior to t	he construc	tion of ro	ads, locat	ions and	d pits for a	any permitted work	In addition, the		tractor shall notify the proper
						ork has commenced			
	ork is as de	scribed in	the Notic	e and A	pplication	n, plat, and reclama	tion plan, subject	to any modifications ar	nd conditions specified on the
everse hereof.		Mar	ch 13,	198	6				
ermit expires _		nar	13,	170		unless well	work is commence	a prior to that date and	prosecuted with due diligence
			ī						THER INSPECTIONS
BOTH ANKET	Agent	:- F	Plat:	Casin	g	Fee			
	bo	" h	nII	m	11 0	100			Reason
	mx								

FILE COPY

2) Operator's Well No.

3) API Well No.





STATE OF WEST VIRGINIA

		OFFIC	E USE ONL	Y			
PERMIT MO	ODIFICATIONS	AND CONDITI	ONS (IF AN	Y) TO THE PI	ROPOSED	WELL WOR	WELLT X
Slightow X /		storage	A. Underground	- × 1	is", Production	io~10 a.	
		Panther Kur	Watershedt		A VERNEY	N: Elevatio	5) LOCATIO
Ellenboro		Pleasants	County:	The state of the s		District:	
s H. Zehrbach	AMEN) PAKE				.O. Box	ERATOR T	
	DIEDG	Address		. WV 26505			
		9) DRIELING CO					
						r. Bob Lo	
principle of the property of the principle of the princip		Address				Genera	
MIDAVAGO)				W 26149	bourne, i	Middle	
113	Williams S.			TUHO VENEZ	liha :>	DWELL WOR	O PROPOSE
Con a der	. 111			T old formation_	to sulq		
4864 - 1 375	d see		vell (specify)	hysical change in v			
& GAS DIVISION	110		reng anvis	Marce 5995	FORMATION	CALTARGET	DEOLOGI
		AFAR	feel	CERC		ited depith of gon	
T. OF MINES						ximate trata dep	
1 ON \						ximate coal-seam ND TUBING P	
	CEMENT RELEASE 1		HOOTAGE -		SPECIFICATIONS		CASHNG OR
	Cubit fully	How midtal	You Brilling	New Lygen	Weight etc per fit.		TUBING TYPE
			20	7	200	13 1	Conductor
	GES 15.05	280	280	X		at.it	Fresh water
	CIE	1879	1879	X		8,625	
fazientiaki-	CIS or 15.01	5995	5995	l x		5.5	10/14/2019
		OFFIC	E USE ONL	Y			gialdu l
Pertocations							
This part of Form IV-2(b) is to record the	dates of certain	occurrences	and any follow	-up inspecti	ons.	
		Data				D-4-	(-)
		Date			-	Date	(S)
Application received			Follow	up inspection(s)			
Application received			FIGE USE	in mspection(s)			
Well work started		TIME	RII, LING PE	id ,,			
18 PG 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							ermit number
Completion of the drilling	nga						
process managed and this as							
	iven to the District Off						
Well Record received				tual permitted wor			
Reclamation completed			plat, and reciam	and , polication,		ork is as describe	he permitted we
Reclamation completed					The State		
prosecuted, with due diligence.				·	1 U.S. 1 O T.B.		
OTHER INSPECTIONS	5						
Desco				Casing	Plat:	Ngent;	BOBLANKET
Reason:			10	THE	TYPH	will	
Reason:	I I have				1 1 1 1 1 1		
	distrator Office of O	Admi					

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

1) Date:

February 8,19 84

 Operator's Well No.

Plum #1

Well No. Pli

3) API Well No. 47 - 073 - 1809 State County Per

STATE OF WEST VIRGINIA
DEPARIMENT OF MINES, OFFICE OF OIL & GAS

NOTICE OF APPLICATION FOR A WELL WORK PERMIT

E) SURFACE OWNER(S) OF RECORD TO BE SERVED	5(i) COAL OPERATOR_
(i) Name L.W. Plum Estate	Address
Address RT 2 Box 117 St. Marys, WV 26170	5(ii) COAL OWNER(S) WITH DECLARATION ON RECORD Name
(ii) Name Address	Address
(iii) Name Address	NameAddress
	5(iii) COAL LESSEE WITH DECLARATION ON RECORD: Name Address

TO THE PERSON(S) NAMED ABOVE: You should have received this Form and the following documents:

(1) The Application for a Well Work Permit on Form IV-2(B) (or Form IV-4 if the well is to be plugged, which sets out the parties involved in the drilling or other work, and describes the well and its location and, if applicable, the proposed casing and cementing program;

(2) The plat (surveyor's map) showing the well location on Form IV-6; and

(3) The Construction and Reclamation Plan on Form IV-9)unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON THE REVERSE SIDE OF THE COPY OF THE APPLICATION (FORM IV-2(B) OR FORM 4, DESIGNATED FOR YOU. HOWEVER, YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Administrator of the Office of Oil and Gas, West Virginia Department of Mines, with respect to a well at the location described on attached Application and depicted on attached Form IV-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Administrator.

6) EXTRACTION RIGHTS

Check and provide one of the following:

Included is the lease or leases or other continuing contract or contracts by I hold the right to extract oil or gas.

The requirement of Code 22-4-1-(c)(1) through (4). (See reverse side for specifics.) WAR 0 - 1984

7) ROYALTY PROVISIONS

Is the right to extract, produce or market the oil or gas based upon a lease or lease OIL & GAS DIVISION or other contracts providing for flat well royalty or any similar provision

for compensation to the owner of the oil or gas in place which is not inherently related. OF WINES to the volume of oil or gas so extracted, produced or marketed? Yes No.

If the answer above is No, nothing additional is needed. If the answer is Yes,

See the reverse side for line item instructions, and for instructions concerning the required copies of the Notice and Application, plat, and Construction and Reclamation Plan.

The truth of the information on the Notice and Application is verified and sworn to and the Notice is signed on behalf of the Well Operator in my County and State by

this 18 th day of Sleptomber , 1983 My commission expires March 24, 1997

Notary Public, MAXION County, State of West VIRGINIA

OPERATOR Techwell, Inc.

Its Designated Agent
Address P.O. Box 796

Morgantown, WV 26505

Telephone 304/291-3843

INSTRUCTIONS TO APPLICANT

CONCERNING THE LINE ITEMS:

- 1) Date of Notice.
- 2) Your well name and number.
- 3) To be filled out by the Office of Oil & Gas.
- 4) & 5) Use separate sheet if necessary.
 - 4) Surface owner(s) of record to be served with Notice and Application. However, see also Code § 22-4-lb(b) if "more than three tenants in common or other co-owners of interest described in subsection (a) of this section hold interests in such lands".
 - 5(i) "Coal Operator" means any person, firm, partnership, partnership association or corporation that proposes to or does operate a coal mine.
- 5(ii, iii) See Code § 22-4-20.
 - 6) See Code § 22-4-11(c). However, in lieu of filing the lease(s) or other continuing contract(s), the Applicant may fill out the information in the space provided below.
 - 7) See Code § § 22-4-11(d, e).

CONCERNING THE REQUIRED COPIES FOR FILING AND SERVICE:

Filing. Code § 22-4-1k and Regulation 7.02 provide that the original and required copies of the Notice and Application must be filed with the Administrator, 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 § 22-4-1k(d) and the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fees required by Code § 22-4-8a from the owner of any water well on dwelling within 200 feet of the proposed well.

Service. In addition, service must be made on the surface owner(s) and the person(s) with an interest in the coal. See Code § § 22-4-lm, 22-4-2, 22-4-2a, and 22-4-2b.

INFORMATION SUPPLIED UNDER CODE § 22-4-11(d)

IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

- Under the oath required to make the verification on the obverse side of this Notice, I depose and say that I am the person who signed the Notice for the Applicant, and that-
- (1) the tract of land is the same tract described in the Application to which this Notice applies, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc. Grantee, lessee, etc. Royalty Book F	Page
--	------

IV-9 (Rev 8-81)

necessary for comments.

Starte of Mes

DATE 15 FEBRUARY, 1984
WELL NO. PLUM #1

API NO. 47 - 073

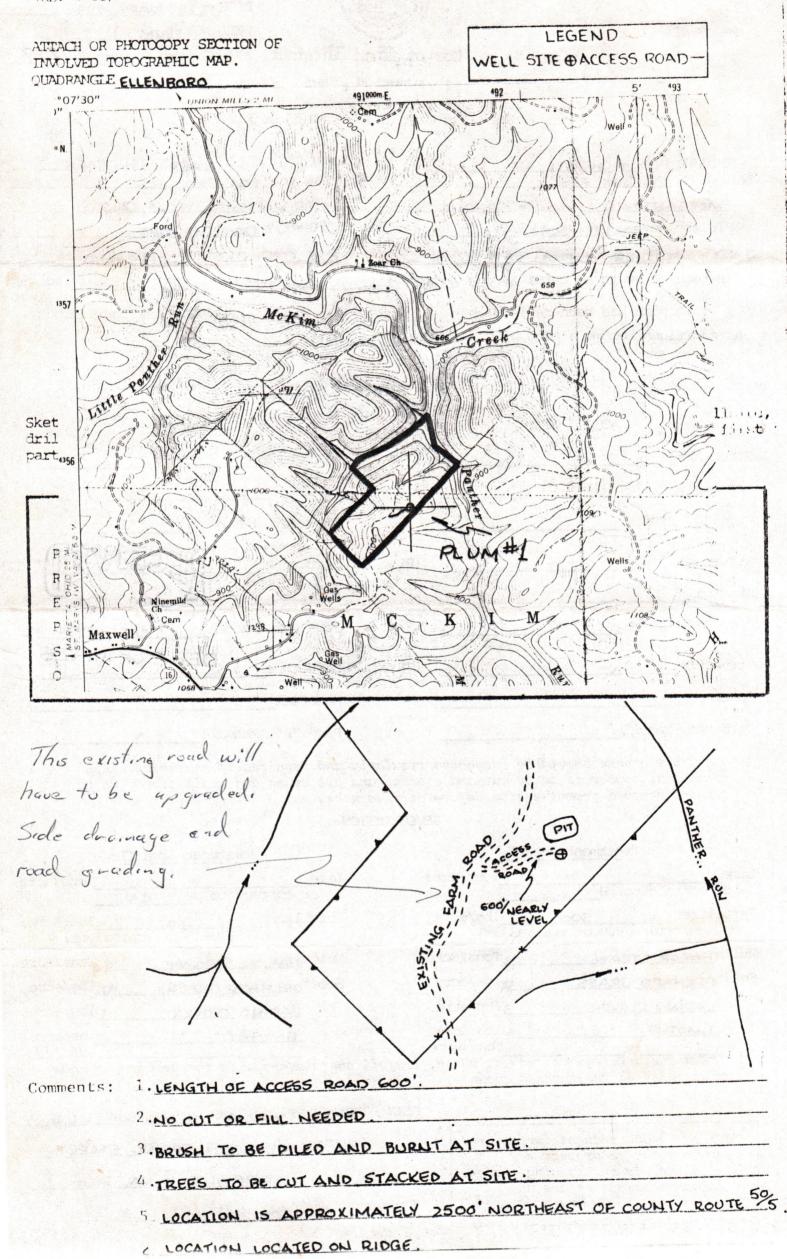
State of Mest Mirginia

Bepartment of Mines

Oil and Gas Division
Construction & Reclamation Plan

		ADDRESS P.O. BOX 796	
MORGANTOWN, W. VA. 26	.505	MORGANTOWN, W. VA. 265	05
Telephone (304) 291-3843		Telephone (304) 291-3843	
LANDOWNER LUTHER W. PLUM E		SOIL CONS. DISTRICTUPPER OH	10
Revegetation to be carrie	ed out by TECHWEL	L, INC.	(Agent)
This plan has been revi	ewed by U	oper Ohio SCD. All corn	rections
and additions become a part	of this plan:	3/1/89	
		(Date)	
		(SCD Agent)	
	· · · · · · · · · · · · · · · · · · ·	(SC) Agency	
ACCESS ROAD	Service Contraction of the Contr	LOCATION	
tructure	(A)	Structure	(1)
pacing		Material	
		racerrar_	
age Ref. Manual		Page Ref. Manual_	-
tructure	(B)	Structure DECEIV	लहान
		Structure NEGGA ((2
pacing		Material MAR 9 - 10	084
age Ref. Manual	<u> </u>	Page Ref. Manual GIL & GAS DIV	NOISIN
		DEPT. OF N	
tructure	(C)	Structure DLI 1. 01	13
pacing		Material_	
age Ref. Manual		Page Ref. Manual	
1/1 ctmiatings should be	e inspected regula	rly and repaired if necessary. A	22
commercial timber is to be	ant and stacked	and all hands and 17 1:1	•
commercial timber is to be cut and removed from the s	e cut and stacked	and all brush and small timber to	be
commercial timber is to be	e cut and stacked	and all brush and small timber to ork begins.	be
cut and removed from the s	e cut and stacked site before dirt w REVEGETA	and all brush and small timber to ork begins. TION	be
cut and removed from the s	e cut and stacked site before dirt w REVEGETA	and all brush and small timber to ork begins. TION Treatment Area II	be
cut and removed from the s	e cut and stacked site before dirt w REVEGETA	and all brush and small timber to ork begins. TION Treatment Area II Lime	be Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500	e cut and stacked site before dirt w REVEGETA Tons/acrelbs/acre	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5	be Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equiva	e cut and stacked site before dirt w REVEGETA Tons/acrelbs/acre	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5	Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalent by the service of	e cut and stacked site before dirt w REVEGETA Tons/acrelbs/acre	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equivalent)	Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalulch MAY or STRAW	e cut and stacked site before dirt w REVEGETA Tons/acrelbs/acre alent)	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY or STRAW 2	Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalulch MAY or STRAW	e cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) Tons/acre	and all brush and small timber to ork begins. TTON Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY OR STRAW 2 Seed*ORCHARD GRASS 12	Tons/acre lbs/acre lent) Tons/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalulch HAY OR STRAW eed*ORCHARD GRASS	E cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) 2 Tons/acre 2 lbs/acre 3 lbs/acre 6 lbs/acre	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY OR STRAW 2 Seed* ORCHARD GRASS 12 LADINO CLOVER 3	Tons/acre lbs/acre lons/acre lbs/acre lbs/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalulch HAY or STRAW eed* ORCHARD GRASS LADINO CLOVER TIMOTHY *Imoculate all legumes, suc	E cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) 2 Tons/acre 3 lbs/acre 6 lbs/acre lbs/acre ch as vetch, trefore	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY or STRAW 2 Seed*orchard GRASS 12 LADINO CLOVER 3 TIMOTHY 6	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalent Area) ed*orchard Grass LADINO CLOVER *Imoculate all legumes suc	E cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) 2 Tons/acre 3 lbs/acre 6 lbs/acre lbs/acre ch as vetch, trefore	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY OR STRAW 2 Seed* ORCHARD GRASS 12 LADINO CLOVER 3	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalent Area) ed*orchard Grass LADINO CLOVER *Imoculate all legumes suc	E cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) 2 Tons/acre 1 lbs/acre 6 lbs/acre lbs/acre as vetch, treford amount.	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY or STRAW 2 Seed* or CHARD GRASS 12 LADINO CLOVER 3 TIMOTHY 6	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre lbs/acre eterium.
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalulch HAY OR STRAW eed* ORCHARD GRASS LADINO CLOVER TIMOTHY *Invalide all legumes such coulate with 3X recommended	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre alent) Tons/acre plbs/acre alent, Tons/acre plbs/acre alent, plant PLAN I	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY OR STRAW 2 Seed* ORCHARD GRASS 12 LADINO CLOVER 3 TIMOTHY 6 PREPARED BY WILLIAM R. MOSSOR	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre lbs/acre lbs/acre terium.
Treatment Area ime or correct to pH 6.5 ertilizer 500 (10-20-20 or equivalent Area) ed*orchard Grass LADINO CLOVER *Imoculate all legumes suc	E cut and stacked site before dirt w REVEGETA I Tons/acre lbs/acre alent) 2 Tons/acre 3 lbs/acre 6 lbs/acre lbs/acre as vetch, treform amount. PLAN 1	and all brush and small timber to ork begins. TION Treatment Area II Lime or correct to pH 6.5 Fertilizer 500 (10-20-20 or equival Mulch HAY or STRAW 2 Seed* or CHARD GRASS 12 LADINO CLOVER 3 TIMOTHY 6	Tons/acre lbs/acre lbs/acre lbs/acre lbs/acre lbs/acre lbs/acre terium.

PHONE NO. (304) 643-4572



FORM IV-2(B) SURFACE OWNER'S COPY (Obverse) 7-83



1)	Date:	Feb	ruary 8	, 19
2)	Operator's Well No.	lum #1		
3)	API Well No.	47	73	
		State	County	Permit

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

4)	WELL TY		f "Gas",				Underground	storage	/ Deep	/ Shallow A A
5)	LOCATIO		vation:	Froductio				Panther Run	/ Deep	_/ Shallow/)
			strict:	McKi			County:	leasants	Quadrangle: _	Ellenboro
6)	WELL OP	ERATOR_	Tech	well,	Inc.		animi rafahi na	7) DESIGNATED	AGENT Dar	s H. Zehrbach
	Address			Box 7	96	00000		Address	same	
			Morgi	antown	, WV	26505	Marine In all des			
8)	OIL & GAS	THE RESIDENCE OF THE PARTY OF T	PROPERTY OF THE PARTY OF THE PA	The same of the same	The same of the same of			9) DRILLING CO	ONTRACTOR:	
	Name	0	Lowth		-4764	4		Name		
	Address		llabou	cliver		140		Address		CERTIFICATION
						LAY			1031	CELVISIN
10)	PROPOSE	D WELL '	WORK:	Drill		_/ Drill		/ Redrill	/ Stimulate	207-16
								ate new formation_	777	MAR 0 - 1084
	CEOL OCI	CAL TAR	CETEOR			change in w	rell (specify)			MAR (1) - 1904
	GEOLOGI 12) Estima				599	95	feet		Oll	L & GAS DIVISION
	13) Approx				55 8	\$ 250	feet; salt	1370	feet	N H . D I SHAP PAY
	14) Approx				Rolling Control	one		al being mined in the		T. OF MINES
	CASING A							ar being innied in the	arca: 1cs	
	SING OR			IFICATION	s		FOOTAGE I	NTERVALS	CEMENT FILL-UP	PACKERS
	BING TYPE	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well	OR SACKS (Cubic feet)	THERESE
Cond	uctor	13	Grade	per it.	New	X X	20	Left iii weii	(Cubic feet)	Kinds
A STATE OF	water	1.75			×		280	280	CTS 15.03	Kinds
Coal	water									Sizes
	nediate	.625			x		1879	1879	CTS	Sizes
Produ		5.5		0.000	X		5995	5995	CTS or 15.01	Depths set
Tubin										Deptils set
Liners										Perforations:
										Top Bottom
										1000 BBBB 2013BB 7558 1000 1000
			Territorial in		Ŋ		Karan Sana		THE WARRY	
on F	I hereby states of (1) a Noorm IV-6, and	the filing of on a facsing the that I have been depended as the control of the co	of the App mile of thi	lication if is surface e instruction for a Well in and Rec	voluments volume	ace owner(s) copy of the LUNTARY durface owner dermit on For on Plan on For	of record sign(s) Application. STATEMENT Of the reverse som IV-2(A), (2) at orm IV-9, all for	of the following "Volume of NO OBJECTION of this Application for a Volume of the proposed well work of the following "Volume of the following of the following of the following of the following "Volume of the following of the follow	on for a Well Work P Well Work Permit on I k on my surface land	
(For	I further staterials. execution by $\exists \omega$ By $\exists \omega$	y corporati	on, partne			ied work des		execution by natura		Date: 2/24/84
(For	execution by	y corporati	on, partne		·.)	ate 2/24		execution by natura		2/24/24

INSTRUCTIONS TO SURFACE OWNERS AND EXPLANATION OF METHODS AND TIME LIMITS TO COMMENT ON OIL AND GAS WELL WORK PERMIT

The well operator named in the Notice and this Application and the attached materials is applying for a permit from the State to do oil or gas well drilling or other well work. You are being served with these materials because surface owners have the right to file comments before the permit is issued. (NOTE: If the surface tract is owned by more than three persons, in multiple heirship for example, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22, Article 4 of the W. Va. Code. Permits are valid for 24 months.

If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator named in the materials and the Administrator of the Office of Oil and Gas in the West Virginia Department of Mines immediately.

NOTE: You are not required to file any comment at all.

Where to file comments and obtain additional information:

Administrator of the Office of Oil and Gas West Virginia Department of Mines 1615 Washington Street East Charleston, West Virginia 25311 (304) 348-2057

Who may file comments? If you wish to file comments, you must be an owner of record of (1) an interest in the surface tract on which the well already is or is about to be located, or (2) an interest in any other surface tract under the same oil or gas lease which will be utilized for roads or other land disturbances.

Time limits for comments. The law requires these materials to be delivered on or before the date the operator files his Application. You have FIFTEEN (15) DAYS after the filing date to file your comments as provided in Methods for Filing Comments below. You may call the Administrator's office at the above telephone number to be sure of the date. However, if you have been contacted by the well operator, and if you have signed a "voluntary statement of no objection" to any of the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number, and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Methods for filing comments. Comments must be filed in person or received in the mail at the Administrator's office by the time stated above. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling.

The Administrator for Oil and Gas has the power to deny or condition a well work permit based on your comments on the following grounds:

- "(1) The proposed well work will constitute a hazard to the safety of persons; or
- "(2) The plan for soil erosion and sediment control is not adequate or effective; or
- "(3) Damage would occur to publicly owned lands or resources; or
- "(4) The proposed well work fails to protect fresh water sources or supplies."

If you want a copy of the permit as it is finally issued, or a copy of the order denying the permit, you should request a copy from the Administrator.

List of Water Testing Laboratories. The Administrator maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Administrator's office or an Oil and Gas Inspector to obtain a copy of the list.

OIL AND GAS LEASE (Paid-up)

MARY ALICE PLU	ode this 8th doy of November IM, single; LORENE TEMPLETON and GUY EDWARD TEMPLETON, her	husband:
NORMAN A HORNER b	ETON and WILLIAM EUGENE TEMPLETON, her husband; BELVA M.	HORNER and
REBECCA TEMPLETON a	ner husband; PALMER G. PLUM and DOROTHY V. PLUM, his wife and LEROY TEMPLETON, her husband; EARL JOSEPH DEMOSS and I	SANDA D MOCC
his wife; LOUISE B	BILLS and LESTER BILLS, her husband; HAZEL DAVIS and JAME	S DAVIS,
her hughand	, whose p	
	(whether one or more) andTECHWELL INCORPORATED, herein	
WITNESSETH:		
1. For and in considera	ation ofTEN Dollars, receipt of which is hereby acknowledged, and of the cover	nents and careements
nerein contained, Lessor does	hereby grant, demise, lease, and let unto Lessee the lands hereinafter described, with the	ne exclusive rights of
onducting geological, geoph	ysical, and other exploratory work (including core drilling), and of exploring, drilling,	and operating wells
or oil and gas thereon, and	producing and transporting the oil and gas therein, together with the right to construct of	and maintain all pipe
as or water, or any one or	elephone lines that Les: ee may deem necessary or convenient for the production and more of them, from this and any other lands held by Lessee under oil and gas le	transportation of oil
ights of way over said premi	ises for the purposes aforesaid; said premises being that tract of land with any revers	ionary rights therein
ituated in MCK1	m District, Pleasants	County,
tote of West Virg	ginia, and bounded as follows:	
On the North by	Ralph E. Cox; Arthur C. Cox	
	W.B. Locke estate: Westward	
On the East by	W.B. Locke estate; Westvaco	
On the South by	Mabel Brammer	· and
On the West by	Leslie Hamlin, et al	
F	lighty-gaves	0.7
ontaining	Cighty-seven (87 acres
nore or less hereinofter o	called the "premises", and being the same land conveyed to Lessor bythe_Wi	(11 of
Luther W. Plum	by	
12 4 77 /		
doted 13 May 77 / pr	The state of the s	In the proper
office for the recordation of de	eeds of said County. Car was a first that the said the said County.	1 mp 20
office for the recordation of de	HOLD said premises for the purposes a foresaid during the term of many took years from the thereafter as drilling or rewarking operations for oil or one or conducted thereon or had	M/H.AT-

- oil or gas is produced therefrom, or this lease is extended by any subsequent provision hereof. It is understood and agreed that this is a fully paid-up lease and may be maintained during the entire primary term without further payment or drilling operations by Lessee.
- 3. Lessee agrees to deliver to Lessor, in tanks, tank cars, or pipe line, a royalty of one-eighth (1/8) of all oil produced and saved from the premises, and to pay to Lessor for gas produced from any oil well and used by Lessee for the monufacture of gasoline or any other product as royalty one-eighth ($\frac{1}{8}$) of the market value of such gas at the mouth of the well; if such gas is sold by the Lessee, then as royalty one-eighth (V_8) of the proceeds of the sale thereof at the mouth of the well. The Lessee shall pay Lessor as royalty one-eighth (V_8) of the proceeds from the sale of gas as such at the mouth of the well where gas, condensate, distillate or other gaseous substance is found. Provided, however, that if at any time during or after the primary term there is a gas well or wells on the premises or on lands pooled therewith, and gas is not being used or sold therefrom, Lessee, during such time that gas is not being used or sold therefrom, may at its option pay as shut-in royalty a sum equal to one dollar (\$1.00) per year per acre, on the number of acres subject to this lease at the time such payment is made. Such shut-in royalty shall be due on or before the end of each year that said gas well or wells are shut in (the first period commencing on the date of shut-in), and payment or tender of such shut-in-royalty shall have the same force and effect as production obtained from the premises under paragraph 2 hereof as to the extension of the term of this lease. Such shut-in royalty shall be paid to the royalty owners of the premises entitled thereto. No royalties shall be due on any gas produced by Lessee and injected into the subsurface strata for secondary recovery purposes through a well or wells located either on the premises or on lands pooled therewith.
- 4. If during the last year of or at the expiration of the primary term oil or gas is not produced on the premises and shut-in royalty is not being paid, but Lessee is engaged in drilling or reworking operations thereon, this lease shall continue in force so long as Lessee continues such operations without the lapse of more than ninety (90) days between the abondonment of work on one (1) well and the commencement of reworking operations or operations for the drilling of another well. If during the last year of or at or after the expiration of the primary term, all of the wells on the premises shall cease to be capable of producing oil or gas, then this lease shall continue in force for ninety (90) days from such date. Lessee may continue this lease in force beyond said ninety (90) days by either (a) restoring production or (b) tendering shut-in royalty payments or (c) commencing reworking operations or operations for the drilling of another well on or before the termination of ninety (90) days, and, in the event of reworking or other operations under (c) hereof, this lease shall continue so long as

		Each Individu	al Lessor	•••••••	. way it a s
					and sent by United St
I addressed to _	e despuide e sport	Each Lessor's	Address	8.	
•••••••••••••••••••••••••••••••••••••••					
	at	********************************			***********
such other addre	ess as Lessor may d	esignate in writing), or by	deposit to the credit o		
such other addre	ess as Lessor may d	esignate in writing), or by	deposit to the credit o	f	
such other addre	ess as Lessor may d	esignate in writing), or by	deposit to the credit o	f	
such other addre	ess as Lessor may d	esignate in writing), or by	deposit to the credit o	f	
such other addre	ess as Lessor may d	esignate in writing), or by	deposit to the credit o	f	

- Lessee shall be subrogated to all the rights of the holder or holders of such mortgages or other liens and encumbrances, with full right to enforce the same, or may retain for the payment of such taxes, mortgages or other liens and encumbrances the royalties accruing hereunder, upon giving notice to Lessor or the depository named in paragraph 5 herein of Lessee's intent to so retain such royalties.

 7. If Lessor owns a lesser interest in the oil and gas in the premises than the entire undivided fee simple estate, then the royalties
- 7. If Lessor owns a lesser interest in the oil and gas in the premises than the entire undivided fee simple estate, then the royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee; however, if title to any interest in the premises should become owned by or revert to Lessor, or his heirs, devisees, executors, administrators or his or their successors in interest, this lease shall cover such interest or reversion; and royalties (and shut-in royalties if payable) hereunder shall be increased upon Lessor's compliance with paragraph 16 hereof and with the effect as provided in paragraph 16. If the true acreage of the premises shall be found to be less than the number of acres above recited, the shut-in royalty hereunder shall be reduced proportionately, and the Lessor hereby releases Lessee from payment of shut-in royalty upon any acreage in excess of the true acreage of the premises.
- 8. In case of any controversy or dispute regarding title to the premises or any part thereof, or regarding the ownership of any sums payable hereunder, Lessee shall have the right to withhold and retain all sums payable hereunder which are subject to such controversy or dispute until the final determination of said controversy or dispute and then to distribute the same among those lawfully entitled thereto.
- 9. Lessee shall have the right to use, free of royalty or any other charge, gas, oil and water from the premises for drilling operations on the premises.
- 10. No well shall be drilled nearer than two hundred (200) feet to any house or barn now on the premises without Lessor's written consent. Lessee shall pay all damages caused by its operations to growing crops on the premises, and, when so requested by Lessor, shall bury all pipe lines on cultivated portions of the premises, except those used to conduct gas, oil, other liquid or gaseous hydrocarbons, or water to drilling wells.
- 11. Lessor may lay a line to any gas well on the premises and take gas produced from said well for light and heat in the one (1) principal dwelling house on the premises at Lessor's own risk, subject to the use and right of abandonment of said well by Lessee. The first one hundred fifty thousand (150,000) cubic feet taken in any calendar year shall be free, but all gas in excess of one hundred fifty thousand (150,000) cubic feet taken in each calendar year shall be paid for by Lessor at the then established rate of Lessee. Lessee shall install and maintain a meter for the measurement of gas taken by Lessor.
- 12. Lessee at its option may pool or combine the premises or any part thereof with other adjacent lands for a drilling unit or drilling units, each of which units shall be no more than six hundred (600) acres, each plus a tolerance of 10% thereof and on each of which units a well (or wells) has been or may be drilled. Notwithstanding anything to the contrary contained in this lease, the commencement of operations for the drilling of a well on any such drilling unit shall have the same force and effect in all respects as the commencement of operations for the drilling of a well on the premises hereby leased; and drilling or reworking operations conducted on any such drilling unit shall have the same force and effect as drilling or reworking operations conducted on or production obtained from the premises as to the extension of the term of this lease; provided, however, that in lieu of the royalties elsewhere herein specified and subject to the provisions of paragraph 7 hereof, Lessor shall receive from production from each unit so pooled only such portion of the royalties stipulated herein as the number of acres of the premises included in such unit bears to the total number of acres in such unit; provided, however, no reduction of shut-in royalties shall be made under this provision; provided further, Lessor may have only that portion of the quantity of free gas set forth in paragraph 11 hereof that the number of acres of the premises in such unit bears to the total number of acres in such unit. Lessor agrees to give free right of way over and through premises for service lines of all other members of the unit as all lines of Lessee.
- 13. Lessee shall have the right at any time and from time to time before or after expiration of this lease to remove all pipe lines, machinery, fixtures, equipment and other property placed by it on the premises, including the right to draw and remove casing.

- 14. This lease shall never be forfeited or terminated for failure of Lessee to perform in whole or in part any of its express or implied mants, conditions or obligations until it shall have been first finally judicially determined that such failure exists, and Lessee shall have given a reasonable time after such final determination within which to comply with any such covenants, conditions or obligations.
- 15. Lessor hereby generally warrants and agrees to defend the title to the premises, and covenants that Lessee shall have quiet possession of the premises.
- 16. This lease and all of the covenants and terms thereof shall extend to and bind the heirs, personal representatives, successors and assigns of Lessor and Lessee. The estate of either party hereto may be assigned in whole or in part. It is provided, however, that no change of ownership in the premises (however accomplished, including after acquired title or reversions) or in the royalties, or of the right to receive payments hereunder, whether by act of the parties or by operation of law, shall be binding on Lessee until thirty (30) days after Lessee has been furnished by Lessor, or Lessor's successor in interest, with evidence satisfactory to Lessee of such change of ownership or right to receive payments, including if effected by written instrument, the original recorded instrument or a copy thereof certified by the recording official. Evidence of change of ownership shall not affect or invalidate any prepayments or payments made in advance by Lessee whether or not such payments were due, or payments made within thirty (30) days after receipt of such evidence by Lessee, whether or not such payments were due, and Lessee shall be under no obligation for additional payments because of change of ownership. Notwithstanding the death of the Lessor, or his successor in interest, the payment or tender of royalties or other payments herein provided in the manner provided herein shall be binding on the heirs, devisees, executors and administrators of the Lessor and his successors in interest. Regardless of changes of ownership of the premises, or portions thereof, the premises may be developed and operated as one lease and Lessee shall have no obligation to offset wells on separate tracts into which the premises is now divided or hereafter may be divided by sale, devise, or otherwise, or to furnish separate measuring or receiving tanks or meters. In the event this lease is assigned as an entirety, or as to a part or as to parts of the premises, Lessee or any subsequent assignor shall be released from all liability hereunder arising or accruing subsequent to the date of such assignment as to the part or parts so assigned, and the assignee thereof shall thereupon be deemed to have assumed and shall be responsible for the covenants, conditions and obligations of this lease as to the part or parts so assigned. Should the holder or owner of this lease as to any part or parts of the premises fail or make a default in any of the covenants, conditions or obligations of this lease, express or implied, such failure or default shall not operate to affect this lease insofar as it covers a part or parts of said lease upon which Lessee or any subsequent assignee thereof shall comply with the terms and provisions of this lease.
- 17. In the event Lessee is rendered unable, in whole or in part, by a force majeure to carry out its obligations under this agreement, other than to make payments of amounts due hereunder, or should Lessee be prevented from conducting drilling or reworking operations on or from producing oil or gas from the premises by a force majeure or by any federal or state law or any order, rule or regulation of governmental authority, then while so prevented, Lessee's obligation to comply with such covenant shall be suspended, and Lessee shall not be liable in damages for failure to comply therewith; and this lease shall be extended while and so long as Lessee is prevented by any such cause from conducting drilling or reworking operations on or from producing oil or gas from the premises; and the time while Lessee is so prevented shall not be counted against Lessee, anything in this lease to the contrary notwithstanding. The term 'force majeure' as used herein shall be Acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, wars, blockades, riots, epidemics, lightning, earthquakes, explosions, accidents or repairs to machinery or pipes, delays of carriers, inability to obtain materials or rights of way on reasonable terms, acts of public or governmental authorities, or any other causes, whether or not of the same kind as enumerated herein, not within the control of the Lessee and which by the exercise of due diligence Lessee is unable to overcome.
- 18. Lessee may defer payment of any sum due lessor, or to any payee hereunder, until the total sum due to lessor or to such payee shall equal Three Dollars (\$3.00), whereupon payment shall promptly be made.
- 19. Lessee at any time and from time to time, may surrender this lease as to all or any part or parts of the premises by recording an appropriate instrument of surrender in the proper county, and thereupon this lease, and the rights and obligations of the parties hereunder, shall terminate as to the part or parts so surrendered. Upon each surrender as to any part or parts of the premises, the shut-in royalties specified above shall be proportionately reduced on a surface acreage basis, and Lessee shall have reasonable and convenient easements for pipe lines, pole lines, roadways, and other facilities through and over the portions of the premises surrendered for the purpose of continuing operations on the portions of the premises retained.
- 20. The term "gas" as used herein denotes gas in its natural state as produced from the well, including its content of liquid hydrocarbons and their constituent vapors, and all other gases.
- 21. All expressed or implied covenants of this lease shall be subject to all Federal and State laws, executive orders, rules or regulations, and this lease shall not be terminated in whole or in part, nor shall Lessee be held liable in damages, for failure to comply therewith if compliance is prevented by, or if such failure is the result of, any such law, order, rule or regulation.
- 22. The consideration paid for this lease and/or royalties or shut-in royalties paid by Lessee hereunder is accepted by Lessor as full and adequate consideration for all rights, options and privileges herein granted, including the right of surrender at any time and from time to time.
- 23. This lease states the entire contract between the parties, and no representation or promise, verbal or written, on behalf of either party shall be binding unless contained herein. This contract shall be binding upon each of the parties who shall execute the same, regardless of whether or not all of the parties named as Lessor shall execute it.

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this instrument as of the day and year first above written.

WITNESSES:	로마루이는 14 1812의 교육하는 18 기를 받는 <u>1</u> 18 12 12 12 12 12 12 12 12 12 12 12 12 12
	Mary alice Plumm
	Mary Alice Plum
	Lorene Templeton
	X Juy Edward Templeson
	* aller ta Jempleton
	Mulling Eugene Tompleto
	William Eugene Templeton

JOB SUMMARY

DIVISION PATTS ALLE SALES

HALLIBURTON LOCATION LEND Ohio

BILLED ON 795388

	-					WE	LL DATA		_	1			
FIELD					SEC.	TWP.	RNG.		COUNTY	MEASI	PUTS	STATE	wy.
FORMATIO	N NAME			TYPE				NEW	WEIGHT	SIZE	FROM	то	MAXIMUM PS ALLOWABLE
							CASING	11	4/2	113/4	KB	230	200
		6				MCFD							
						MCFD			1				
				PE			OPEN HOLE	E	7	113.19			SHOTS/FT.
				SET A			PERFORAT	IONS	Se in the			T. Zan	
				PRESSURE			PERFORAT						
			CARL STREET, SALES	TOTAL	THE RESERVE THE PARTY OF THE PA	PERSONAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN 2 ADDRESS OF THE PERSON NA	PERFORAT						
MISC. DAT	A DUNCE			IOTAL I	JEPIH_		B DATA						
		TOOLS A	ND ACC	CESSORIES			CALLED OL	UT	ON LOC	ATION	JOB STARTE	D 1	OB COMPLETED
	TYPE AN	ND SIZE		QTY.		MAKE	DATE 4/	lola	DATES	11/84	DATE 4 /11	184	ATE 1/11/84
FLOAT CO	LLAR						TIME 77 2			055	TIME 02		IME D2 43
FLOAT SH							1	73	A CONTRACTOR OF THE PARTY OF TH	ONNEL AN			
GUIDE SHO									NAME	OINICE AIL	UNIT NO. &		LOCATION
CENTRALI							presentant A	-		,	3/25	No.	LOCATION
							- U.N	- 48	AUGA			5 0	earn Ph
TOP PLUG	1121	pr		7	1.1				7 3 S		Prot 7	X IX	My many
	11 2/4	54		1812	Ha	ast O		A STATE					
HEAD	OMA	N.FOL ()	150	HOW	ve D			1000		PERM		
PACKER		A 10					HIW	MAN	JE 18		7005	and the same	in al
OTHER											61-6	· K	eno, 04
		M	ATERIA	ALS			<u> </u>			A Page 2			
TREAT. FL	.UID			DENSITY		_LB/GAL.OAPI							
DISPL. FL	סוע			DENSITY		LB/GAL.OAPI	3.0	RA	KE		5010	0	
PROP. TYP	E		SIZE_		LB.						7,0.	de	NO.04
			SIZE		LB.	and a second							
ACID TYPE			G	AL.		% garren mores		المساك					
				AL.		* DITTO	CEINV	15	IN I				
ACID TYPE				AL.		. 105	had been borned board	4	2000				
			HITCH STREET	AL.	The second	1 1 1 1 1 1	DEPARTMEN	VT.	JUJ/	EMEN	T		
NE AGENT	TYPE		G	AL.	IN	A	PESCRIPTIO	10.1					
FLUID LOS	S ADD.TYPE		GAL	-LB.	IN	OIL							
GELLING	GENT TYPE		GAL	LB.	IN	OIL	& GAS DIV	11310	EA	AENT	1/3/	4 CHS	irwa
				-LB.			- OF M	IIN	5				J
							IOR DONE	MDII.	UBING [ING D	ANNULUS [] TBG./ANN.
	AGENT TYPE						JOB DONE T	HRU: T	OBING L	A		LINGEUS L	J IBG./ANN. L
				G.			CUSTOMER		x/,)	OT.	-100		
	BALLS TYPE	60 1	06/	9·	тч	100	REPRESENT	ATIVE	NU	- M	Mar	1	
OTHER	MOU	ico C					HALLIBURTO	ON		· N	0.	COPIES	
OTHER						CEM	ENT DATA	and t	VVV	my / I .	1 money	REQUEST	E0
						CLIVI	LITTOATA					1	
STAGE	NUMBER OF SACKS	TYPE	CLASS	BRAND	BULK			ADDI	TIVES			CU.FT./S	
	190	6-A	^		12	7011	0.1011		11 14	yes 1	1	1	
	120	2712	fair,	full the is	0	3%	AL, CAL		14.	Florgi	12	1.18	15.6
								No.			100		
		POESSI	IDES IN	DCI		CURANA	DV			VOL !!	MES		
CIRCULAT	ING	PRESSU		I PSI		SUMMA	RY PRESLUSH: BE	91 -641		VOLU			
										the	TYPE	: BBLGAL	<
BREAKDO				MUMIXA						-9 6			724 13
AVERAGE	-		FRACT	TURE GRADIENT			TREATMENT:	BBLG	AL.	60	DIS	PL: BBLGA	ne. day by
SHUT-IN:	INSTANT	HVDBAIII	S-MIN.		15-MIN.		CEMENT SLUR	RY: BE	LGAL	25.	7		
		HYDRAUL		SEPOWER			TOTAL VOLUM	E: BBL	-GAL		WO.		
ORDERED		AVERAGE		S IN RPM	USED_					REMAR	KS		
		AVERAGE	MATE										
TREATING	2 2 2		ISPL.		VERALL		-		-	According to	-		
		CEMENT	LEFI	MPIPE					722	300	400		The state of the s

IV-35 (Rev 8-81) The state of the s

MAR 2 8 1986

State of Mest Birginia

Pepartment of Mines Wil und Gas Division

Date 1/14/85	. 3
Operator's Well No. Plum#1	
Farm L.W. Plum	1
API No. 47 - 073	- 1809

WELL OPERATOR'S REPORT

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

LOCATION: Elevation: 966' Watershed I District: McKim County Pleas	anther Rui ants	n Quadrangle	Ellenbo	ro
OCMPANY Techwell, Inc.				
ADDRESS P.O. Box 796 Morgantown, WV 26505 DESIGNATED AGENT Darus H. Zehrbach	Casing	Used in Drilling		Cement fill up Cu. ft.
ADDRESS same SURFACE OWNER Luther W. Plum Estate	Size 20-16 Cond.			
ADDRESS Ellenboro MENERAL RIGHTS OWNER same	9 5/8	250	all	cts
ADDRESS OIL AND GAS INSPECIOR FOR THIS WORK Bob	8 5/8	2014	all.	cts
Dermit issued 3/13/84	5 1/2	5970	all	cts
DRILLING COMMENCED 4/11/84 DRILLING COMPLETED 4/15/84	3			
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REVORKING. VERBAL PERMISSION OPTAINED ON	Liners used			
CODINGICAL TARGET FORMATION Marcellus Shale		Dep	oth 5950	feet
Depth of completed well 5970 feet Water strata Septh: Fresh 700 feet;	Rotary x	Cabl	le T∞ls_	
Water strate depth: Fresh 700 1001; Coal seam depths: 1560 & 1850	Salt 13	being mir	ed in th	e area? no
CPEN FLOW DATA Producing formation Marcellus Shale	Pä	ay zone dej	oth 5816	-5591 fee
Gas: Initial open flow 0 Mcf/d Final open flow 800 Mcf/d Time of open flow between initial open flow open flow between initial open flow open flow between initial open flow o	Fi	inal open :	flow 1	3 Bb1/
Static rock pressure 2600 psig(surface) (If applicable due to multiple completic	ce measure	ement) aft	er 48 ho	ours shut i
Second producing formation Hamilton		a) come de	Pul 4012	-2010 166

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

120 tons CO2, 375,000 SCF N2, 3000 gallons acid per stage

1st stage--5816-5808 15 shots 5772-5766 5 shots 5710-5704 5 shots 5655-5650 5 shots 5600-5591 5 shots 4070-4064 5 shots 3628-3618 10 shots

WELL LOG

FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all and salt water, coal, oil a
Overburden	0	25	
Shale	25	200	
Sandstone	200	250	
Shale & Sandstone	250	275	
Shale	275	350	
Sandstone	350	370	
Shale	370	480	
Shale & Sandstone	480	500	
Shale	500	700	
Sandstone	700	740	: · · · · · · · · · · · · · · · · · · ·
Shale & Siltstone	740	850	47.
Shale & Sandstone	850	950	£2.
Sandstone	950	990	
Shale	990	1050	Company of the second
Sandstone	1050	1070	
Shale	1070	1230	
Siltstone	1230	1340	
Siltstone & Shale	1340	1430	
Sandstone	1430	1520	
Shale	1520	1560	
Shale & Coal	1560	1570	
Sandstone	1570	1660	oil show
Shale and Siltstone	1660	1730	
Sandstone	1730	1750	
Shale	1750	1790	
Sandstone	1790	1850	oil show
Shale & Coal	1850	1860	
Shale	1860	1890	
Limestone	1890	1920	Big Lime
Sandstone	1920	1990	Big Injun oil show
Shale	1990	2010	Dig injuit oil blow
Sandstone	2010.	2080	
Shale & Siltstone	2080	2410	
Sandstone	2410	2430	
see attachment			

(Attach separate sheets as necessary)

Techwell, Inc.
Well Operator

By: W.M. Balfour, CPG E. Ray Garton-Geologist
Date: Jan. 14, 1985

Note: Regulation 2.02(i) provies as follows:

"The term 'log' or all log' all mean a systematic detailed g gical re of all formations, including ling of a well."

Plum #1 73-1809 log continued

Shale	2430	2640	
Shale & Sandstone	2640	2820	
Shale & Siltstone	2820	3300	DEV. Shales undiff.
Siltstone	3300	3360	
Shale	3360	4000	
Siltstone	4000	4020	
Shale	4020	4170	
Shale & Siltstone	4170	4330	
Shale	4330	5060	
Shale & Siltstone	5060	5120	
Shale	5120	5350	
Shale & Siltstone	5350	5410	
Shale	5410	5610	
Shale & Siltstone	5610	5650	
Shale	5650	5910	
Shale & Siltstone	5910	5950	prod. zone
Shale	5950	5970	TD

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S WELL REPORT

Permit No. <u>D 73-18</u>	209			Oil or	Gas Well
Company Techu	ell	CASING AND TUBING	USED IN DRILLING	LEFT IN WELL	PACKERS
Address Morga	ntoun will.	Size			
Farm Plum		16			Kind of Packer
Well No		10 11 3/4	232	232	Size of
District MCKem	Countyflesant	81/4			19 %
Drilling commenced 4	-9-841	6%	<u>भट्टाहा</u>	WEIN	Depth set
Drilling completed	Total depth 605	5 3/16	ADD 4		Perf. top
Date shot	Depth of shot	2	OIL & GAS	DIVISION	Perf. bottom
Initial open flow	/10ths Water inInch	Liners Used			Perf. top
Open flow after tubing	/10ths Merc. inInch				Perf. bottom
Volume	Cu. Ft.	CASING CEME	NTED 1/ 3	4 SIZE 23	2No, FT. 4-//- 84
Rock pressure	lbs,hrs.	NAME OF SER	RVICE COMPA	NY Hal	tiburton
Oil	bbls., 1st 24 hrs.	COAL WAS EN	COUNTERED	AT	FEETINCHES
Fresh water	feetfeet	FEET	INCH	IES	FEETINCHES
Salt water	feetfeet	FEET	INCH	IES	FEETINCHES
Drillers' Names					
	A .	,	0.0.4		, , , , , , , , , , , , , , , , , , ,
Remarks: Cement	ed with 120	SKS	Ita C	emen	7
warned t	ed with 120 o Install B-	lowout	Filere	enter	
			/		

apr 11-84

R.A. Louther
DISTRICT WELL INSPECTOR

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

Permit No				We	II No	
COMPANY			ADDRESS			×
ARM	Life of the Control	DISTRICT		OUNTY		
illing Material Used				CALLES	.010.	M
illing statemat Used.				N.	1	T _k
iner Lo	cation	Amount	Packer	Location		1
PLUGS USED	NO DEPTH PLACED		PRIDEES	CASIN	G AND TO	UBING
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LOCATION	RECOVERED	BIZE	LOS
	7,4714,753,753	-11.77227	· · · · · · · · · · · · · · · · · · ·	4-9-4		
		Carlo Real Leaf	C 2 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	NOVENIO PAD	\$ 10		ersett.		
	- HAIMLES	7007	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	1 3/ E					
	To the second					
TO TO THE						
	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10		•			
La Charles A						*
	Salame.					
rillers' Names						
Traines		-	Control to Specific the additional and the All published Control to the control to the	7		
emarks:		The second secon				
			1. 120 S.F.S			
			tall himm			
	151 1 JAK					
BATE	I hereby certify I v	isited the above	re well on this date.			

DISTRICT WELL INSPECTOR

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION



OIL & GAS DIVISION DEPT. OF MINES

INSPECTOR'S WELL REPORT

Permit No 0 7 3 - 1809	and the second second second		Oil or	Gas Well
Company Techwell	CASING AND TUBING	USED IN DRILLING	LEFT IN	PACKERS
Address Morgantoun wilks	Size	* activistics faces	60°	
Farm Plum	16			Kind of Packer
Well No.	13			
District McKim County Pleasant	81/4	2014	201K	Size of
Drilling commenced	6%	to grant and the same of the s		Depth set
Drilling completedTotal depth203#	5 3/16			
Date shotDepth of shot	2			Perf. top
Initial open flow/10ths Water inInch	Liners Used			Perf. top
Open flow after tubing/10ths Merc. inInch				Perf. bottom
VolumeCu. Ft.	CASING CEME	NTED 8 3	SIZE201	14 No. FT.4-12-84
lock pressurelbshrs.	NAME OF SER			Uhurton
Dilbbls., 1st 24 hrs.	COAL WAS EN	COUNTERED	AT	_FEETINCHES
Fresh waterfeetfeet	FEET_			_FEETINCHES
Salt waterfeetfeet	FEET_	INC	HES	_FEETINCHES
Drillers' Names				
	CANAL .	1		
Remarks: Cement Returned	tosur	facel		

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

CHAIM TO THE INSPECTOR'S PLUGGING REPORT

OMPANY			ADDRESS			
ARM	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DISTRICT		COUNTY	N. S.	1
illing Material Used				arllow	MAN	(
iner Lo	cation	Amount	Packer	Location	MENN	
PLUGS USED AND DEPTH PLACED			PAIDER	CASING	AND TU	BING
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LUCATION	RECOVERED	SIZE	Los
			\ \			
			20 zle			
			NC U Source			Table of P. I.
-				is Availa		
						English to
	76 10					
1 616	100 30					
the ton	Hat		200 x 1 x 1 x 1 x 1 x 1 x 1 x 1 x 1 x 1 x			
		monta o esta la				
31000	244046		1983			
illers' Names						
mers Names				-		
marks:						
		when	tuned to a	act Ri		

DISTRICT WELL INSPECTOS

UU-11

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES OIL AND GAS WELLS DIVISION



INSPECTOR'S WELL REPORT

OIL & GAS DIVISION
DEPT. OF MINES

Oil or Gas Well_

Permit No. 073-1809

	4			(KI	ND)	
Company Teck	well INC	CASING AND TUBING	USED IN DRILLING	LEFT IN	PACE	CERS
Address Morga	ntown w. Var	Size				1 27
Farm plum		16			Kind of Pac	ker
Well No.		13	43.4	78 - 18-7	Size of	
District Mc Kim	County Casant				Size of	
Drilling commenced		6%	1		Depth set_	
Drilling completed 4-/	5-84 Total depth 5985	5 3/16			Perf. top	
Date shot	Depth of shot	2			Perf. botton	
Initial open flow	/10ths Water inInch	Liners Used			Perf. top	
Open flow after tubing	/10ths Merc. inInch				Perf. bottom	1
Volume	Cu. Ft.	CASING CEME	NTED	SIZE	No. FT	Date
lock pressure	lbs,hrs.	NAME OF SER	VICE COMPA	NY		
Dil	bbls., 1st 24 hrs.	COAL WAS EN	COUNTERED	AT	_FEET	INCHES
Fresh water	feetfeet	FEET_	INCH	ES	_FEET	INCHES
Salt water	feetfeet	FEET_	INCH	ES	_FEET	INCHES
Orillers' Names				HAN TO A SHAPE OF STREET		

apr 16,1984

Remarks:

P.A. Low the DISTRICT WELL INSPECTOR

Form 26 2/16/82

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

INSPECTOR'S PLUGGING REPORT

FARMFilling Material Used		DISTRICT.)_c	OUNTY	35	
Filling Material Used						
and the second s			Lo Var	CALTURA		Mer
Land of the Section o					INO.	
Liner Location		Amount	Packer	Location		
PLUGS USED AND D	EPTH PLACED		DRIDGES	CASIN	G AND TU	BING
CEMENT-THICKNESS	WOOD-SIZE	LEAD	CONSTRUCTION-LUCATION	RECOVERED	SIZE	Los
and the second second						
			and a color	18-31	17	
			Service of the servic		1,0000	
			11/40	ŏ a=3		
			and the second			
as a time of the state of						
		0.50 (8.54 80 8.72				
				- I What was to some the same		
	and the second	neu-totto e a	7			
				-		
		eadoran, salas sur esta esta esta esta esta esta esta esta				
rillers' Names	and Ka					
			· · · · · · · · · · · · · · · · · · ·	7		
emarks:						

I hereby certify I visited the above well on this date.

BATE





State of West Virginia

Department of Mines Gil and Gas Division Charleston 25305

FINAL INSPECTION REPORT INSPECTORS COMPLIANCE REPORT

MAR 2 8 1986

Permit Issued: 2-08-84

- 1 11	TOJ. OKI
COMPANY Teckwell /NC	PERMIT NO 47-073-1809
P.D. Box 796	FARM & WELL NO Plum
morgantoun w. Va. 26 505	DIST. & COUNTY McKim Pleasa
	IN COMPLIANCE
RULE DESCRIPTION	YES NO
23.06 Notification Prior to Starting Work 25.04 Prepared before Drilling to Prevent Wa 25.03 High-Pressure Drilling 16.01 Required Permits at Wellsite 15.03 Adequate Fresh Water Casing 15.02 Adequate Coal Casing 15.01 Adequate Production Casing 15.04 Adequate Cement Strenght 15.05 Cement Type 23.02 Maintained Access Roads 25.01 Necessary Equipment to Prevent Waste 23.04 Reclaimed Drilling Pits 23.05 No Surface or Underground Pollution 23.07 Requirements for Production & Gatherin 16.01 Well Records on Site 16.02 Well Records Filed 7.05 Identification Markings	
I HAVE INSPECTED THE ABOVE CAPTIONED WELL AND R	SIGNED R.A. Towlife DATE May 26, 1986
Your well record was received and reclamation r with Chapter 22, Article 4, Section 2, the abov coverage for the life of the well.	equirements approved. In accordance
	Oil & Gas Division

April 16, 1986 DATE atalysell a elle de americans l'agrantical de l'agrantical de

and the same of th

Hatt. (971 - 14

All English

make you to see you attack the see in the

Strain Lingh

VI-27



Date: May 19, 1986 Well No:

API NO: 47 - 073 State County

MAR 2 1 1986

DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS NOTICE OF VIOLATION

STATE OF WEST VIRGINIA

Well TYPE:	Oil/ Gas/ Liquid Injection/ Waste Disposal/
	Of "Gas" - Production Storage / Deep / Shallow /
LOCATION:	Elevation: 966 Watershed: Panthle Run
45950	District: McKim County: pleasants Quadrangle: Ellenborg
	OR Techwell MC DESIGNATED AGENT Darus Zehrbach
	s P.D. Boz 796, Address same
	morgantoun4 b. 26505
	The above well is being posted this 9 day of May, 1986, for a
violation o	f Code 22B-1-16.03 nd/or Regulation, set forth in detail as follows:
- 1	(USE REVERSE SIDE OF THIS NOTICE IF NECESSARY)
adus ;	to File well Record (Form 10 35) within after completion of Drilling
D : 2	alta a solution of Dilling
) warp	yell conquerion of suming

A copy of this notice has been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated agent.

You are hereby granted until Mav 26, 1986, to abate this violation. Failure to abate the violation may result in action by the Department under Code 22B, Article 1.

Robert H. Lowther

Oil and Gas, Inspector

Address meddlebourne

Telephone: 758-4764

IV-27 9-83





STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Of "Gas" - Production V / Storage / Deep / Shallow V /

Date: Man	217,	1985
Well No:	1	Star Page
API NO: 47 -		1809
State	County	Permit

OIL & GAS DIVISION

DEPT. of MINESII and Gas Division NOTICE OF VIOLATION

WELL TYPE: 0il / Gas / Liquid Injection / Waste Disposal /

LOCATION: Elevation: 766 Watershed: Deal Cancel Russ	
District: MCKim County: pleasants Quadrangle: Elleybor	P
WELL OPERATOR Teckwell INC DESIGNATED AGENT Daries HZehrback	1 h
Address P.D. Box 796 Address Same	
morgantory w. Va. 26505	A CONTRACTOR
The above well is being posted this [7] day of Man, 1985, for	a
violation of Code 22-4-128 and/or Regulation 23,07, set forth in detail as follows	
Failure to Re Claim well gate within 6 months	
after completion of Drilling	
Failure to he claim well gate within 6 months after completion of Drilling Failure to hung oil & Gas Gathering Lines	
A copy of this notice has been posted at the well site and sent by certified or	
registered mail to the indicated well operator or his designated agent.	
You are hereby granted until $Man 24$, 1963 , to abate this violation	
Failure to abate the violation may result in action by the Department under	
Code 22-4-17 or Code 22-4-18.	
Robert A. Lowlher	
Oil and Gas Inspector	
Address Middlebourne	
Willar 26/49	
Telephone: 758-4764	

48450

OIL & GAS DIVISION DEPT. OF MINES I and Cos Division NOTICE OF VIOLATION

WELL TYPE: 0:1 say Gas L Liquid Injection / Waste Disposal / / / waste Disposal / / / / / / / / / / / / / / / / / / /	
Of "Gas" - Production & / Storage / Deep 10 Shallow & 1. LOCATION: Elevation: 100 Watershed: 610 Pout Com.	
District, MC Com County Dean Arch Quadrangle Lilly Milyer Q	
WELL OPERATOR TO A CONTROL OF STENATED LIGHT MODELLA HE CONTROLL OF STENATED LIGHT MODELLA HE CONTROLLED LIGHT MOD	
Address T. D. Good Tolk Address and	
Marca of Transport in the 1803 - 503	
The above well to being posted this [7] day of Mary 1185] for a	
violation of code 22-4-43 B and/or Regulation 23.07 . set forch in detail as follows:	
(USE REVERSE SIDE OF THIS NOTICE IF NECESSARY)	
Fortuna to Re Claim well get o welthing to months.	
The completion of preduct,	
count to hump on la face to thereby have	

A copy of this notice has been posted at the noft site and sent by contined

You are hereby granted until Many 34 . 1963, to abate this violation

Code 22-4-17 or Code 22-4-18.

Address Mid My Charach al Telephoner 758-4764

506

FORM IV-30 9-83



OIL & GAS DIVISION
DEPT. OF MINES

Date: Man 2 / 185
Operator's Well Number
API Well No.: No. 47 - 0 73 - 1809
State County Permit

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES OFFICE OF OIL AND GAS

ORDER FOR FAILURE TO ABATE VIOLATION

WELL TITE.	VVaste disposal
	Underground
	If "Gas" - Production Storage Deep Shallow
LOCATION:	Elevation: 966. Watershed: Dia Tankle Nuff
	District: Mr Kenny County: plasante Quadrangle: glenboro
WELL OPERATOR	
Address	s to Box 746 morgantoun will 26505
DESIGNATED AGE	INT: Vario H Zehrbeick IV
Addre	ess: James
Notice is here	eby given that the undersigned authorized oil and gas inspector has made a special inspection of the above-named well
	29, 1985.
The violation of	of Code 27-4-128 & 23; heretofore found to exist on Man 17, 1985 by Form IV-27, "Notice of
	, Form IV-28, "Imminent Danger Order" of that date has not been totally abated and it has been deter-
	her extension of time should be permitted for the following reasons:
minod that no rare	
. 1	(USE REVERSE SIDE OF THIS ORDER IF NECESSARY)
EII.	to Re claim well site within 6 months after
Tailure.	to re claim well see within a man agree
. // -//	
Complet	ion of Drilling
and the	
For-Vene	e to Bury oil & Gas bathering Lines h has been Done to abate these violations
1 auco	
	Il las but to the the
NO work	a has veen vone to abate these violations
T1 (
Therefore, in a	accordance with the provisions of Code 22-4-1g, the well operator is hereby ORDERED:
	To continue cessation of operations until the imminent danger is fully abated.
X	To cease further operations until the violation has been fully abated.
	with Code 22-4-1h, a well operator or complaining coal operator, owner, or lessee may apply for review of this Order within 15
days of the date of	f this Order.
	01.111 + 41.
	Kould It a forwhile
	Oly and Gas Inspector
PURCHASER:	Address: Mullbourd
Address	Willa 26/49
	Telephone: 758 - 4764

(Copies of this ORDER have been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated agent.)

OR-VI MAO-30



OIL & GAS DIVISION DEPT. OF MINES



STATE OF WEST VIRGINIA DEPARTMENT OF MINES OFFICE OF OIL AND GAS

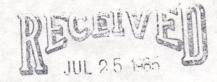
ORDER FOR FAILURE TO ABATE VIOLATION

WELL TYPE: Oil IV Cas Liquid injection Waste dispose
16 "Gas" Production L Storage Deep Strainer For The Rest Tocation The Rest Total Rest To
WELL OPERATOR TRUTTERED TWO COUNTY PROJECT OF COUNTY OF Address TILL FOR THE MATERIAL WILL SUSSE
DESIGNATED AGENT: VANICO PT ZITNIGHT W
Notice is nereby given that the unrefsigned authorized oil and gas inspected has made a special inspection of the above named well on MALLA 219 Permity 27, "Notice of The violation of Code 27 - 47/22 P. 7.3 Remark Danes Ouder" of the Code 27 - 47/22 P. 7.3 Remark Danes Ouder" of the Code 27 - 47/22 P. 7.4 Form ity 28, "Imminent Danes" Ouder" of the Code 27 - 47/24 P. 7.5 Remark Danes Ouder".
mines that no further extension of time should be permitted for the following reasons:
Tailing to Re claim well art within 6 months after
Factorie to Bary out I has bathering laise in work has been Done to about these valations
Over on the Nation and all all and all all and all all all all all all all all all al
Therefore in accordance with the provisions of Gode 22-4 (g), the well operator is hereby ORDERED. To continue cessation of operations until the imminent danger is fully abated. To cease further operations until the violation has been fully abated.
In accordance with Code 22 4-1h, a well operator or complaining coal operator, owner, or lessee may apply for review of this Order within 15 days of the date of this Order.
THURST TOWN
PURCHASER: Address M. C. C. M. C.
Address (D. 10) 10 10 14
Telephone:

(Cobies of this ORDER have been posted at the well site and sent by certified or registered mail to the lithlicated well operator or his designated agent.)

FORM IV-31 9-83

506



Date: July 24 1985

Operator's
Well Number

API Well No.: 47 - 273 - 1809
State County Permit

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES, OIL AND GAS DIVISION

NOTICE OF ABATEMENT

WELL TYPE:	Oil/ Gas/	Liquid Injection/ Underground	Waste disposal/		
LOCATION:	Elevation:	Watershed:		her Kup	2
WELL OPERATO Addres	OR Techwel	100 County:	DESIGNATED AGENT	Quadrangle: Effents Augs H Zeh	rback
on	n of Code § 22-8-1-3 Form IV-28, "Immir nger Order requiring operatio	heretofore found to ent Danger Order"/	exist on May 17 of that date has been totally	, 19 85, by Form IV abated. If the abated violation well operator is hereby notifie	V-27, ''Notice was found by
		for Do- promises 23.07 in	B-1-30. I to abate the ver	is abated violation y near f	lature
A copy of th agent.	nis notice has been posted a	t the well site and sent by ce	P.A.Z	ne indicated well operator or h	iis designated
			Address Telephone 75	8-4764	

FORM IV 31 9/83



Date Marie 1985

Operators

Wall Number

APT Wall No. 47 073 1809

State Color Permit

U880802

DIVISION OF OIL & GAS. DEPARTMENT OF ENERGY

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

NOTICE OF ABATEMENT

WELL TYPE OIL Gas Liquid Injection / Waste disposal/	
H "Gas" - Prophetion / Storage / Deep / Shallow / P	
LOCAFION Elevation: TWP Watershed Dica plant Kill New 1	
WILL OPERATOR TEXT SUPERIOR OF THE COUNTY DESIGNATED AGENT DOLLARS HE COUNTY TO THE COUNTY OF THE CO	
margantery 10. Va. 2 6505	
Notice is hereby given that the undersigned authorized oil and use inspector made a special inspection of the above named well	
The vidiation of code 133-10-17 22 herototore found to exist on Many 17 19 55 by Form IV-27, "Notice	
of Violation	
an imminent Danger Order requiring operations to cease, such requirement is hereby reconded, and the well operator is hereby notified that he may resume operations.	
O P O	
COMMENTS O O I I TRO- 12-1-30 es a la l	
o solations for one of the	
a so the har of to alkator solarisa	
I me in men men or provident out theortwo.	
company Has promised to aboth violation for 307 and the week was fallen	
month a I . and a and	
A grow of this notice has been posted at the well site and sent by certified or registered mail to the indicated well operator or his designated	
seeut.	
PH toget HI	
Oil and Clas Inspector	
Telephone 758-4764	
A. A. A. A. A. A. A. Subilday	

