6,750 LATITUDE 39° 15'00" MAGNETIC REFERENCE TIES CNGD 1919 TO 16" C.O. N52°09'W 222.27' CNGD 1919 TO 14" R.O. S88°04'W 165.93 PROP. WELL OCNGD 1613 DANNY E. O'REAR 47 AC. 11 1054 (16) 💢 FRED WOODS CARSON EUGENE LEGGETT 198. 65 AC. 50 346. 3293 (25) 59.9 AC. 3295 (25) 1656(16) ESTA DILLON ⇔ STO. PILE a FE. COR. & RIDGE 5 AC. 11 N75°00'W 1765.50' 2500 (25) W.O. STP. & STTOWN CORNELIUS 775.50 199 ELLIOTT NOI°W 429. 2320(16) NOMTH 84 AC. PROP. WELL HAESSLY HARDWOOD LUMBER COMPANY 3409 N 23° 30'W CNGD 1608 PROP. WELL O CNGD 1917 N25°30'W \338.25' PROP. WELL CNGD,459 410 AC. TRACT N270W, N.R 7.5 909 💢 N730E \$650E 1023 1556 (16) 465,125 1555(16) 次 N31°E 2455 HAESSLY HARDWOOD // \$32°W / 183.15' | \$21°W 132', N57°E ,255.75 LUMBER 47i(16) \$05°W ,, 330. COMPANY N42°E 69 3.50 ' 75 AC. TRACT PROP. WELL CNGD 1918 O ³NIQ°E 132.' \$28°W \$387.75' 3370 (25) \$21°W 470.25' NO7°W SAMUEL HILEMAN 1188. AII88. MARI HARPER N.R. HAMBLET, N.R. Ø - N81010'W 122 AC. 1595. 5/13/85 PROP. WELL CNGD 1919 ELEV. 1192.91' \$00°30'W 2200 888.5 AC. \$74030'E 1423 (01) S08°E 561. 500°30'W 2200' 1876 (16) } OHNERS I THE UNDERSIGNED, HEREBY CERTIFY FILE NO. MSES 85 - 642 THIS PLAT IS CORRECT TO THE DRAWN BY SARC BEST OF MY KNOWLEDGE AND BELIEF AND 1"= 1000' THE INFORMATION REQUIRED SHOWS ALL No. 652 THE REGULATIONS ISSUED BY LAW AND MINIMUM DEGREE OF ACCURACY I PART IN 200 AND PRESCRIBED BY THE DEPARTMENT OF MINES. PROVEN SOURCE OF ELEVATION BM ON CO. RT. II; ELEV. 944!; 3500'NW OF L (SIGNED) 652 R. P.E. 3500'NW OF LOCA DATE APRIL 22 WEST VIRGINIA OPERATOR'S WELL DIVISION OF ENVIRONMENTAL PROTECTION API WELL NO. OFFICE OF OIL AND GAS 47 - 017 #10 McJUNKIN ROAD COUNTY STATE PERMIT NITRO, WEST VIRGINIA 25143-2506 DISTRICT WEST UNION _ COUNTY __ QUADRANGLE OXFORD, WV 7.5' SURFACE OWNER ___ HAESSLY HARDWOOD LUMBER SALES 485 ACREAGE . OIL & GAS ROYALTY OWNER HAESSLY HARDWOOD LUMBER SALES _ LEASE ACREAGE _ 41979 LEASE NO ._ DRILLX _ CONVERT_ DRILL DEEPER. FRACTURE PROPOSED WORK: DRILL A CONVERT DRILL DEEPER REDRILL FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW

FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG COMMISSION

TARGET FORMATION (ALEXANDER ESTIMATED DEPTH 5450

DESIGNATED AG

ADDRESS DRILL FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION WELL (SPECIFY)

FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION WELL (SPECIFY)

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STIMULATE PLUG OFF OLD FORMATION WELL (SPECIFY)

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FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION WELL (SPECIFY)

FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION DEPTH OFF OLD FORMATION

COMMISSION

DESIGNATED AG

ADDRESS DRIVEN

BUSINESS DRIVEN

BUSINESS DRIVEN

STATEMENT OF THE ORIGINAL OR

STATEMENT OFF OLD FORMATION WELL (SPECIFY)

FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION DEPTH OFF OLD FORMATION

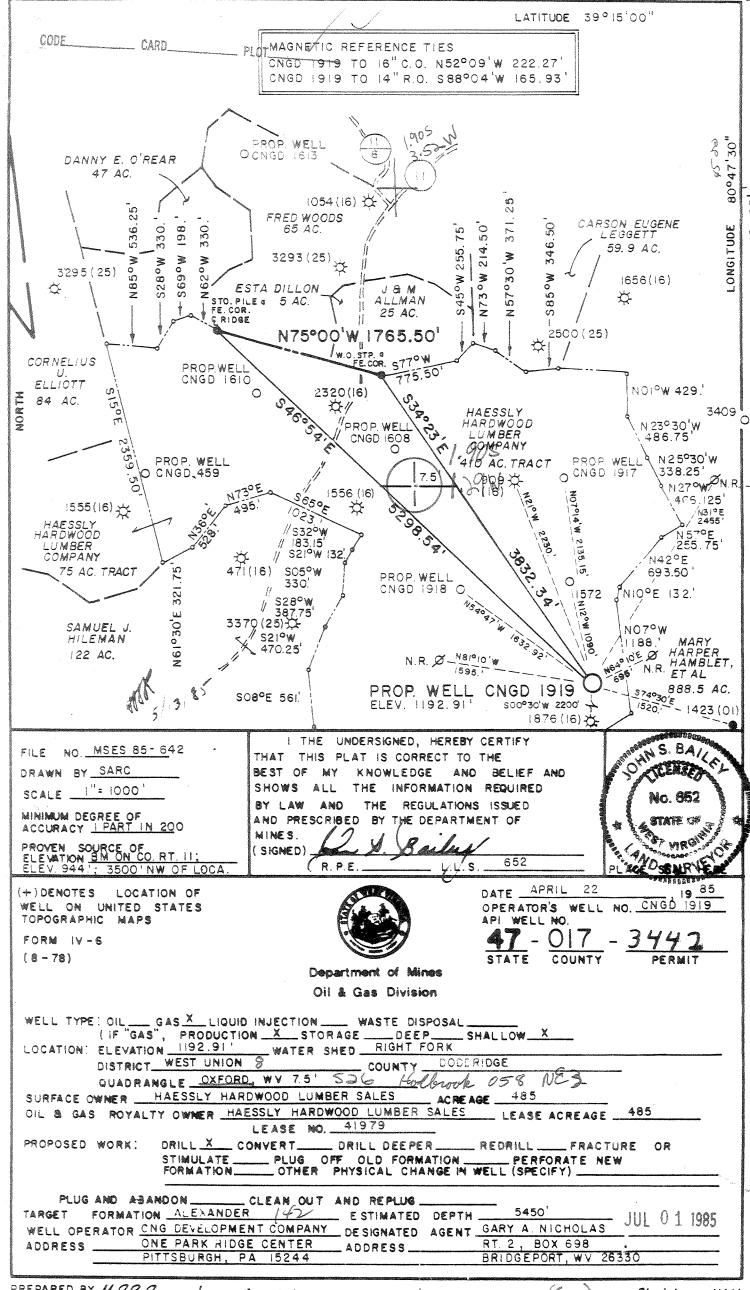
COMMISSION

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BUSINE

Section of the sectio



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

	Section of O							
	Well Operator's Re	eport of V	Well Work					
Farm name:	Hassley Hardwood Lumber	Operator	Well No.: W	VV01919				
LOCATION:	Elevation: 1,192.90 Quadrangle: OXFORD							
	District: WEST UNION Latitude: 10125 Feet Sout Longitude 6750 Feet West	Co th of 39 t of 80	ounty: DODDF Deg. 15Min. Deg. 47 Mir	RIDGE . 0 Sec. 1. 30 Sec	•			
RR	PRODUCING COMPANY 2 BOX 698 DGEPORT, WV 26330-0698		Used in Urilling		Fill Up			
Agent: ROD	NEY J. BIGGS	 Size	DI III	;				
Permit Issu Well work C Well work C Verbal Plug Permission Rotary	granted on: Cable Rig							
Salt water	depths (ft)	memoral desirence of the control of						
Is coal bei	ng mined in area (Y/N)?(ft):							
OPEN FLOW D	ATA ing formation Injun	:	Pay zone (denth (ft	1960-20201/20			
Gas: I F T	nitial open flow MCF inal open flow 84 MCF ime of open flow between i rock Pressure 60 psi producing formation nitial open flow MCF inal open flow MCF ime of open flow between i rock Pressure psi	/d F nitial an		low	Bbl/d Hours			
INTERVALS, LOG WHICH	CK OF THIS FORM PUT THE FRACTURING OR STIMULATING IS A SYSTEMATIC DETAILED COAL ENCOUNTERED BY THE WEL	, PHYSIC GEOLOGIC	AL CHANGE, AL RECORD	ETC. 2).	THE WELL			

For: CNG PRODUCING COMPANY

By: Rodney J Biggs, Production Manager, Appalachian Region Date:

Dogo 3442F

·08/31/98

CNGP WEWV01919

07/28/98 PULLED 152 JTS. 1 1/2" TUBING. CHECKED TD AT 5344".
07/29/98 MEEK'S SET SOLID PLUG AT 2060" AND PERFORATED INJUN AT 1956-2020",
20 HOLES. BJ FRAC W/X-LINK GEL AS FOLLOWS:
B.D. 1136 PSI, AVG RATE 21 BPM, AVG PRESS 2236 PSI, ISIP 2300#, TOT.
SAND 25,000#.

SAND 25,000#.

08/03/98 WELL FED 18 MCFD FROM WORKOVER ZONE. GAS TEST 84 MCFD.

DRILLING ON BRIDGE PLUG.

08/04/98 SAND PUMPING AND DRILLING ON BRIDGE PLUG.

08/05/98 DRILLED OUT BRIDGE PLUG. T.D. WELL AT 5320'.

08/06/98 T.B.I.L. MAKING 30 MCF/D.

FINAL REPORT



IV-35 (Rev 8-81) PRICEIVEDS OCT 27 1986

Sinds of Mest Airginia Pepartment of Mines Gil und Gas Pivision

Date October 14, 1986
Operator's
Well No. CNGD WN 1919
Farm J. W. Smith
API No. 47 - 017 3442

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT

OF

			ALC CO.			
DRILLING.	FRACTURING	AND/OR	STIMULATING,	OR	PHYSICAL	CHANGE

OCATION: Elevation: 1193 Watershed	Right For	e/ Deep		
District: West Union County Dodd		Quadrangle	Oxford	
OMPANY CNG Development Company				~
ADDRESS Pittsburgh, PA 15244	Caşing	Used in	Left	Cement fill up
PSIGNATED AGENT Gary A. Nicholas	Tubing	Drilling	in Well	Cu. ft.
ADDRESS Rt. 2 Box 698 Bridgeport, WV 26330	Size			
SURFACE OWNER Haessly Hardwood Lumber Sales	20-16 Cond.			
ADDRESS Rt. 1 Newport Pike ADDRESS Marietta OH 45750	13-10"	201	201	To Surf.
INERAL RIGHTS OWNER Haessly Hardwood Lbr.Sales	9 5/8			
ADDRESS Rt. 1, Newport Pike Marietta, OH 45750	8 5/8	1726	1726	To Surf.
OTL AND GAS INSPECTOR FOR THIS WORK	7			
Mike Underwood ADDRESS Rt. 2 Box 114 Salem. WV 26426	5 1/2			
PERMIT ISSUED June 18. 1985	4 1/2	5412	5412	800 sks
DRILLING COMMENCED Sept. 10, 1986	3			
DRILLING COMPLETED Sept. 16, 1986	2 1-3	5185	5185	
IF APPLICABLE: PLUGGING OF DRY HOLE ON				
CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED	Liners used			
REWORKING. VERBAL PERMISSION OBTAINED ON	useđ	Deg	oth 54	50 fee
REWORKING. VERBAL PERMISSION OBTAINED ON GEOLOGICAL TARGET FORMATIONAlexander	used	De _X / Cab		
REWORKING. VERBAL PERMISSION OBTAINED ON	used Rotary_	X / Cab.	le Tools_	
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 45 feet;	Rotary	x/ Cab.	le Tools_	
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0-	Rotary_Salt_Is coal	X / Cabi	le Tools_t med in th	e area? <u>No</u>
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Riley Producing formation Speechley	Rotary Salt Is coal	X / Cabi fee L being min	le Tools_t ned in th 5171- 4885- pth 4021-	e area? <u>No</u> 5210 4889 4054 fee
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Riley Producing formation Speechlev Gas: Initial open flow Mcf/d	Rotary_Salt_Is coal_Page Oil: It	x / Cab. fee L being min ay zone de nitial ope	le Tools_tened in the 5171-24855-pth 4021-	e area? <u>No</u> 5210 4889 4054 fee
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Producing formation Speechlev Gas: Initial open flow Mcf/d Final open flow 978 Mcf/d	Rotary Salt Is coal	x / Cab. fee L being min ay zone de nitial open inal open	le Tools t ned in th 5171- 4885- pth 4021- n flow flow	e area? No 5210 4889 4054 fee Bbl/
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Riley Speechlev Gas: Initial open flow Mcf/d Final open flow 978 Mcf/d Time of open flow between initial	Rotary Salt Is coal Oil: If	feed being mind ay zone denitial open final test	le Tools t ned in th 4885- pth 4021- n flow flow s }	e area? No 5210 4889 4054 fee Bbl/ Bbl/
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Riley Speechlev Gas: Initial open flow Mcf/d Final open flow 978 Mcf/d Time of open flow between initial	Rotary Salt Is coal Oil: If	feed being mind ay zone denitial open final test	le Tools t ned in th 4885- pth 4021- n flow flow s }	e area? No 5210 4889 4054 fee Bbl/ Bbl/
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Producing formation Speechlev Gas: Initial open flow Mcf/d Final open flow 978 Mcf/d Time of open flow between initiation of open flow between initiation of open flow strategy for the	Rotary Salt Is coal Oil: If Final and ce measur n)	x / Cab. feet l being min ay zone de nitial open inal open final test ement) aft	le Tools_t ned in th 5171- 4885- pth 4021- n flow_ flow_ sh	e area? No 5210 4889 4054 fee Bbl/ Bbl/ nours ours shut
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Producing formation Speechlev Gas: Initial open flow Mcf/d Final open flow 978 Mcf/d Time of open flow between initiate of open flow between in	Rotary Salt Is coal Oil: If tial and ce measur n)	feed being mind ay zone de nitial open final test ement) afte ay zone de ay zone ay zone de ay zone ay zon	le Tools_tened in the flow flow s her _ 1 here	e area? No 5210 4889 4054 fee Bbl/ Bbl/ nours ours shut
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Riley Producing formation Speechley Gas: Initial open flow Mcf/d Time of open flow between initial open flow between initial open flow between initial open flow between initial open flow multiple completion Second producing formation Gas: Initial open flow Mcf/d Gas: Initial open flow Mcf/d	Rotary Salt Is coal Oil: If tial and ce measur n)	feed being mind ay zone de nitial open final test ement) afte ay zone de nitial open final test ement) afte ay zone de nitial open final open final test ement) afte ay zone de nitial open finitial o	le Tools t ned in th \[\frac{5171-}{4885-} \] pth \[\frac{4021-}{4021-} \] n flow flow s h er 1 h epth en flow	e area? No 5210 4889 4054 fee Bbl/ Bbl/ nours purs shut i
CPOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Producing formation Speechlev Gas: Initial open flow Mcf/d Time of open flow between ini Static rock pressure 175 psig(surfation second producing formation Second producing formation Second producing formation Gas: Initial open flow Mcf/d Final open flow Mcf/d Final open flow Mcf/d Final open flow Mcf/d	Rotary Salt Is coal Oil: If tial and ce measur n) Oil: If Oil: If	feed being mind ay zone de nitial open final test ement) afte ay zone de nitial open final test ement) afte ay zone de nitial open final open f	le Tools t ned in th \[\frac{5171-}{4885-} \] pth \[\frac{4021}{4021-} \] n flow flow er 1 ho epth en flow flow	e area? No 5210 4889 4054 fee Bbl, Bbl, sours fee Bbl, Bbl
GEOLOGICAL TARGET FORMATION Alexander Depth of completed well 5458 feet Water strata depth: Fresh 820 feet; Coal seam depths: -0- OPEN FLOW DATA Alexander Benson Producing formation Speechlev Gas: Initial open flow Mcf/d Time of open flow between initial open flow between open flow second producing formation Gas: Initial open flow Mcf/d Gas: Initial open flow Mcf/d	Rotary Salt Is coal Properties and ce measure Oil: In tial and ce measure Oil: In tial and ce measure Oil: In tial and ce measure	feed being mind ay zone denitial open final test ay zone denitial open final test ay zone denitial open final open final open final test ay zone denitial open final open final test	le Tools_t ned in th 5171- 4885- pth 4021- n flow flow s	e area? No 5210 4889 4054 fee Bbl/ Bbl/ nours ours shut i

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

Perforate Alexander 5206-5210, 8 holes, 5195-5201, 8 holes, 5189-5193, 6 holes, 5171-5183, 20 holes (.39) HSC. Halliburton broke down Alexander 2200#, ISI 1000#, 13 BPM. Halliburton Foam Frac (70Q) Alexander - Break 2200, Avg TPSI 3475, Avg Rate 25 BPM, HHP used 1325, ISI 3800, screened off on flush, used 1000 gals 15% FE Acid, 9,000# 80/100 Sand, 133,000# 20/40 Sand, 935,000 SCFN2, Max Sand Conc. 7#/gal. Superior Perf. Benson Sand, 133,000# 20/40 Sand, 935,000 SCFN2, Max Sand Conc. 7#/gal. Superior Perf. Benson Sand, 138,000# 20/40 Sand, 935,000 SCFN2, Max Sand Conc. 7#/gal. Superior Frac (70Q) 4885 - 4889, 10 holes, and Riley 4724 - 4732, 10 holes, .39 HSC. Halliburton Foam Frac (70Q) Benson & Riley Break 3500, Avg TPSI 3078, Avg Rate 20 BPM, HHP used 1132, ISI 3600, used 1000 gals 15% FE acid, 9000# 80/100, 100,000# 20/40, 675,000 SCFN2, Max Sand Conc. 6#/ga Perf. Speechley 4048-4054, 12 holes, and 4021-4024, 9 holes (.39) HSC. Perf. Speechley 4048-4054, 12 holes, and 4021-4024, 9 holes (.39) HSC. Halliburton Foam Frac (70Q) Speechley - Break 2050, Avg TPSI 3300, Avg Rate 25 BPM, HHP used 1213, ISI 1050, 5 min 1050, used 500 gals 15% FE acid, 8000# 80/100 Sand, 80,000# 20/40 Sand, 570,000 SCFN2, Max Sand Conc. 6#/gal.

WELL LOC

	W	WEIL LOG						
FORMATION COLOR HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fres and salt water, coal, oil and ga					
Sh, Sand & RR Lime & Shale Sand & Shale	0 1845 1965	1845 1965 5458	Damp @ 45' " 820'					
Big Lime Big Injun Greenbrier Unconf. Weir Berea Gordon 4th Sand Warren Speechley Balltown Bradford Riley Benson Leopold Alexander	1881 1950 2030 2186 2386 2593 2760 3250 4020 4218 4438 4716 4880 5080 5140	1950 2030 2303 2390 2626 2769 3360 4070 4250 4734 4934 5094 5218						

(Attach separate sheets as necessary)

CNG DEVELOPMENT COMPANY	
Well Operator	
4 1 M	
By: Nos I whole	
Date: 0ct. 14, 1986	
Lace:	

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 and the drilling of a well."





1) Date:_ may 11,

2) Operator's 1919 Well No.

3) API Well No.

47 State

County Permit

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

APPLICATION FOR A WELL WORK PERMIT

	IL & GA	S DIVIS	ION		FEICAII	ON FUR A WELL	WURR PERMII		`
4) WHILL TY	PB: [A p	NF_M		., X	/				
Spirit Screens 1						/ Underground st	orage	_/ Deep	_/ Shallow <u>X</u> _/)
5) LOCATIO	N: Ele	vation: _	1193			Watershed:	Right Fo	rk	
	Dis	trict:	West	Uni	on	County:	Doddridge	Quadrangle:	Oxford
6) WELL OP	ERATOR_	CNG D	evelop	ment	Compa	ny :	7) DESIGNATED	AGENT Gary	Nicholas
Address	c/ <u>o P</u>	aul W.	Garre	tt,	P.O. B	0x 15746	Address	Crosswind	l Corporate Park
		Pitts	burgh,	PA	15244	10110	Rt. 2,	Box 698, Bri	dgeport, WV 26330
8) OIL & GA						Ģ) DRILLING CO		
Name		<u>Mike</u>	Underw	ood					Drilling Co.
Address		Route				and the second designations		P.O. Box	
		Salem	, WV	2642	6			Buckhanno	on, WV 26201
0) PROPOSE	D WELL	WORK:						/ StimulateX	/
							te new formation_		
1) GEOLOGI									
12) Estima						feet	3 / 50 3 / 00		
							1458, 1600		
						Is coa	being mined in the	area? Yes	/ No/
(5) CASING A	AND TUBI	NG PRO	GRAM						
CASING OR TUBING TYPE		SPEC	IFICATION! Weight)	St. Co. Co. Co. Co. Co. Co. Co. Co. Co. Co	FOOTAGE IN	TERVALS	CEMENT FILL-UP OR SACKS	PACKERS
	Size	Grade	per ft.	New	Used	For drilling	Left in well	(Cubic feet)	
Conductor									Kinds
Fresh water	11-3/4	H-40	42	Х		200200	160200	To Surface	By Rule 15.05
Coal									Sizes
Intermediate	1	X-42	1	X		1700	1700	To Surface	By Rule 15.05
Production	11	J-55	1	X		5450	5450	200-400	Depths set
Tubing	$\frac{ 1-1/2 }{ 1-1/2 }$	CN-55	2.75	X	1				By Rule 15.01
Liners			-	-	-				Perforations:
	#			ļ	1				Top Bottom
	li .		-	 	-				
	<u>.ll</u>	1	1	<u>{</u>					
						OFFICE USE O	NII V	·	
						PRILLING PE	···		
						MILLING I LI	FIARE E		June 18 , 85
Permit number_	47-		017	-344	2		***************************************		Julie 10 19 03
								Dat	
This permit cov	ering the w	ell operate	or and wel	l locati	on shown l	pelow is evidence o	f permission granted	d to drill in accordan	ice with the pertinent legal re-
vo. 8) Prior to t	he construc	ction of ro	comameu ads. locati	ons an	and on the d pits for a t	reverse nereor. Not ny permitted work.	In addition, the we	v en to the District Oil Il operator or his con	and Gas Inspector, (Refer to tractor shall notify the proper
district oil and g	as inspecto	or 24 hour	s before a	ctual p	ermitted wo	ork has commenced	.)	operator or mis con	aractor shan notify the proper
The permitted w	ork is as d	escribed in	the Notic	e and	Application	, plat, and reclama	tion plan, subject to	any modifications a	nd conditions specified on the
reverse hereof.					• •		, , , , , , , , , , , , , , , , , , , ,		in constitutions specified on the
Permit expires .	Jun	e 18,	1907			unless well	work is commenced p	prior to that date and	prosecuted with due diligence.
r									
Bond:	1 Agen	it:	Plat:	Casi	ng	Fee			
20	AIB	8_	1	100	1100	113			1
128	MIN		YIM	II)	~ 0	123	7 h	. 10	16.
							ara		passe_
NOTE: Vac	ane convict	f this mar-	uit mantad	at tha :	irillina la	tion	Adinfin	nistrator, Office of C	Pil and Gas
NOTE: Keep o	ліє сору ОІ	инь реги	ni posted	at the (mining 100a	civii.	//		File
		See	the revers	e side (of the APP	LICANT'S COPY	for instructions to t	he well operator.	A 225