

- 2 PENNSYLVANIA & VIRGINIA COAL & COKE CO. - 3 M20"-H BULL CREEK COAL LAND CO. 4000 ACRES 1.09 W. 1.39 S. Vol. XVI 1P.14 New Location X Drill Deeper 3 Ec (4-5) Vol. XVII, p. 63-65 Abandonment-STATE OF WEST VIRGINIA Company THE OHENS, LIBBEY-OWENS GAS DEPT DEPARTMENT OF MINES Address BOX 1375 CHARLESTON, W. VA. OIL AND GAS DIVISION Farm BULL CREEK COAL LAND CO. CHARLESTON Tract Acres 4000 Lease No. 16 WELL LOCATION MAP Well (Farms No. 15 Seria: No. 567 FILE NO 1300-462-D Elevation Spirit Level 942.0. Quadrangle PEYTONA - NW + Denotes location of well on United States County BOONE District PEYTONA Topographic Maps, sonie 1 to 52,500, latitude and longitude lines being represented Engineer TS. A. J. by border lines as shown Engineer's Registration No. 269 - Denotes one inch spaces on border line File No. Drawing No. of original tracing

5(M:10) 1250-4558 6-6 238 Doed Well

Scale / = 1000

5-24-40

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

API# 47-005-00462 W

January 5, 2001

Date:

# Well Operator's Report of Well Work

Farm name:	Dickinson Fuels			Operato	or Well No.	.: Bull C	creek #15	
LOCATION:	Elevation:	930'	Qu	adrangle:	Racine	2		
	District:	Peytona	_		County:	Boone		
	Latitude:	12,300'	feet South of	f 38° ]	DEG.	15' M	N. (	o" SEC.
	Longitude:	5500'	feet West of	81° ]	DEG.	40' M	N. (	o" SEC.
Company Cal	oot Oil & Gas Co	rnoration	1-	Casing	Us	ed T	Left	Cement
	Lee Street East,	-		&	i	i i	in	Fill up
	arleston, WV 253			Tubing	l l	ling	Well	Cu. Ft.
C and	AL ACOLO225 11 V 200	V.2		Size			, , , ,	
Agent:		John Abshir						
Inspector:	R	ichard Camp	bell					
Permit Issued:								
Well Work Cor	nmenced:	10/17/00						
Well Work Cor	npleted:	10/22/00		SEE EX		ECORD FO		3 DEPTHS
					AND	CEMEŅT F	ILL UP	
Verbal Pluggin	g							
Permission gra	nted on:							
Rotary X								The second secon
Total Depth (fe	et)							
Fresh Water D	epths (ft)		account of the second	2-3/8"			4581'	
				TUBING	•			
Salt Water Dep	oths (ft)			SET ON	ARROW N	M2 TENSIO	N PACKE	ER @ 4544'
Is coal being m	ined in area (Y /	N)?						
Coal Depths (ft	,		L	***************************************			1	RESERVED
OPEN FLOW	*			· · · · · · · · · · · · · · · · · · ·			74630-038	Office of CFA Gas
Producing forn		<i>i</i> /	Pa	y zone dep	th		- All Control	Permissag
	Dr. ish	4-4	(ft	-	45	-42-45	56	JAN 1 g 200
Gas: Initial op	en	MCF/d		Initial oper			Bbl/d	
flow				*				VVV Division of Environmental Protect
Final oper	n flow	MCF/d	]	Final open	flow		Bbl/d '-	
-	open flow betw				***************************************		Hours	
Static rock pre	*		face pressu	_			Hours	
Second produc	***************************************		-	y zone dep	oth .			
formation			(ft					
Gas: Initial op	en —	MCF/d	`	Initial ope	n flow		Bbl/d	
flow				-				
Final oper	n flow	MCF/d		Final open	n flow		Bbl/d	
Time of	open flow betw	veen initia	l and fina	ltests			Hours	
Static rock pre	ssure	psig (sur	face pressu	re after			Hours	
OR STIMULATI	K OF THIS FORM ING, PHYSICAL C RECORD OF ALL	HANGE, ET	C. 2). TH	IE WELL L	LOG WHIC	CH IS A SY	STEMATION	C DETAILED
			For:	CABOT OI	IL & GAS (	CORPORAL	ION	

Operations Manager

Top of existing packer @ 4635' GL. Pulled 25,000# on tbg, could not pull free. Shot tbg off @ 4615' GL. Pulled tubing out and ran back in hole with 2-3/8" tubing and Arrow M-2 Tension Packer @ 4544'. Perforated joint from 4548' to 4544'. SN @ 4544'. Packer set 13,000# over string weight. 35,000# setting in well head slips. Oriskany perfs: 4542' - 4556' KB.

**FORMATION** 

TOP

**BOTTOM** 

REMARKS

RECEIVED
Office of Oil & Gas
Permitting

JAN 1 8 2001

WV Division of Environmental Protection

tate of West Virginia C 3 DEPARTMENT OF ENERGY NEAGY Division of Oil and Gas Well Operator's Report of Well Work

Farm name: APPALACHIAN POWER CO.

Operator Well No.: BULL CREEK 15

Location: Elevation: 942.00

Quadrangle: PEYTONA

Deg.

District: PEYTONA

Longitude: 5580 Feet West of 81

Latitude: 12440 Feet South of 38

County: BOONE Deg.

15 Min. 0 Sec.

40 Min.

Company: CABOT OIL & GAS CORPORATION

P. O. Box 1473

Charleston, WV 25325

Agent: DAVID G. MCCLUSKEY

Inspector: <u>JERRY HOLCOMB</u>

Permit Issued: 4/26/89

Well Work Commenced: 6/21/89 Well Work Completed: 7/29/89

Verbal Plugging

Permission granted on:

Rotary \_\_\_\_ Cable \_\_ \_\_\_ Rig \_\_

Total Depth (feet) WORKOVER

Fresh water depths (ft)

Salt water depths (ft) \_

Is coal being mined in area (Y/N): YCoal Depths (ft): \_

Casing	Used in	Left	Cement !
&			Fill Up
Tubing	Drilling	in Well	Cu. Ft.
Size	1		
10'	255 <b>′</b>	255′	
			i
8-1/2"	1307′	1307′	
			1
6 5 40 5			
6-5/8"	4473′	4473′	
***************************************			100 sks
4-1/2"	5227.5′	5227.5′	CL-A
0.270#	50704	50104	
2-3/8"	5219′	5219′	
			1

OPEN FLOW DATA

	Newbi	ırg				52	04
Producing for	mation <u>Orisl</u>	kany	Pa	y zone dept	h (ft)	4542-4	4556
Gas: Initial	open flow0	MCF/d	Oil:	Initial ope	n flow	0	Bbl/d
Final o	pen flow 250	MCF/d		Final open	flow	0	Bbl/d
Time of	open flow between i	initial an	nd fina	l tests	4		Hours
Static rock P	ressure 460	psig (s	urface	pressure)	after _	192	Hours
Second Produc	ing formation		Pay	zone depth	(ft)		
	open flow						Bbl/d
Final o	pen flow	MCF/d		Final open	flow		Bbl/d
	open flow between i						Hours
Static rock P	ressure	_ psig (s	urface	pressure)	after _		Hours
					,		

NOTE: ON BACK OF THIS FORM BUT 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.

CABOT OIL & GAS CORPORATION

Date:

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

Set 4-1/2" Baker RBP @ 5000'. Perforate Oriskany 4542'-4556' 2 SPF. B/D Oriskany perfs w/ 500 gal 15% HCl & 50,000 scf N @ 20,000 scfm. BDP 4300#. ISIP 2900#. Treat w/ 25,000# sand in 75-65Q foam. Pulled RBP out of hole. Ran 5219' 2-3/8" tbg.

FORMATION

TOP

BOTTOM

WORKOVER



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

WELL RECORD								
Packers   Pack	Permit No. Bo	00-462-D		WELL 	RECORE	<b>)</b>	Oil or G	#3 17 CAL
Packers   Pack	Company_ OWEI	NS, LIBBEY-	owens cas dei	PARTMENT	Ci1		7 .54 :	
					Tubing			Packers
Wall No.   15   (Serial No. 567)   Elev. 942   18   18	Farm Bul	l Creek Coa	l Land Co. 🗓 c	res 4,000				
Description								
No.	Well No. 15	(Serial No	. 567) E	lev. 942	16			Kind of Packer
Mineral rights are sweed by   Bull Creek Coal Land Co.   44 Lyman Noad   Address Duffelo 26, N.Y.   5308 1°   5164   Pulled 25   10-21-61   2-3/8"   5227:5"   5227:	District Pey	tona	County Boons	<u> </u>	13			
Depth set   Dept	The surface of tra	ict is owned in	fee by	ACCURATION AND ADMINISTRATION OF THE ACCURATION AND ADMINISTRATION AND	10		·	Size of
### Lymsen Road Address Buffelo 26, N.Y.   530K.   1   516k'   Dullad   Decaphing   10-21-50     2-45"   522715'   522715'   Perf. top.   Decaphing   10-21-50     2-45"   155710'   Pulled   152710'   Perf. bottom.   Date Stot   From   To   2-36"   5125'   Perf. top.   Perf. top.   Date Stot   From   To   2-36"   5125'   Pulled   Perf. bottom.   Decaphing   Perf. bottom   Decaphing   Perf. bottom   Decaphing   Perf. bottom   Decaphing   Perf. bottom   Perf. bottom   Decaphing   Perf. bottom   Perf. bottom   Perf. bottom   Decaphing   Perf. bottom   Perf. bottom   Perf. bottom   Decaphing   Perf. bottom   Perf. bottom   Perf. bottom   Perf. bottom   Perf. bottom   Perf. bottom   Decaphing   Perf. bottom   Perf. bott								
	Mineral rights are	e owned byE	ull Creek Co	al Land Co.	65/8			Depth set
Despending   10-21-61   2-3-6    3-3-6    4557'9"   Pulled   2-3-6    5195'10"   Pulled   2-3-6    5195'10"   Pulled   2-3-6    5195'10"   Pulled   Perf. top.	44 Lyman 1	Road A	ddress Buffalo	26, N.Y.	5 3000 1"	5164'	Pulled	
Date Shot	<u> XXXIXIXX</u> commence	ed 9-11	_61	*	8 4돌"		5227'5"	Perf. top
Date Shot	Deepening kxwling completed	10-21	61		2-3/8"	4557'9"		Perf. bottom
Pert. bottom					2-3/0	1		Perf. top
Casing Cemented   Lime	With				2-3/8"	5212'2"	Pulled	Perf. bottom
Casing Cemented   Lime	Open Flow	/10ths Water in		Inch				
Volume   Col.   Ft.   Dowell Dumped & Sacks Aqua-gel, 1 sack gel flake   Rock Pressure   bs.   brs.   brs						1, 1 11		-11 - 22 25 (2 -
No.					CASING CE			*
District		k .			DOWGILL DO	imped o sacks	Aqua-gel,	I sack get Tlake
WELL ACIDIZED Dowell acidized Newberg Sand   FEET   INCHES   FEET   INCHES   INCHE	Oil		}	obls., 1st 24 hrs.	COAL WAS	ÉNCOUNTERED	AT	FEETINCHES
NCHES	WELL ACIDIZEI	Dowell ac	idized Newber	rg Sand	FE	ETINCF	HES	FEETINCHES
RESULT AFTER TREATMENT	11-27-61, 2-	1-62, 2-12-	62, & 4-25-69	2 See Re	marks FE	ETINCF	IES	FEETINCHES
RESULT AFTER TREATMENT								
Fresh Water	·							
Fresh Water	RESULT AFTER	TREATMENT	Estimated	360 MCF - 1	Vewberg Sand	<u>d</u>		
Fresh Water				)O# in 115 F	lours			
Color   Hard or Soft   Top   Bottom   Oil, Gas or Water   Depth   Remarks					Salt Water_		Feet	Ł
(as completed 8-19-40)  Lime Dark Hard 4561 4631 (as 4577' tubing.  Lime Dark Hard 4631 4839 (as 4577' (as 4588' 141 MCF)  Lime Dark Hard 4839 5036  Lime Dark Hard 5036 5082  Lime Blue Hard 5082 5094 Water 5082-5086' filled up to 4400'  Lime Dark Hard 5121 5128  Lime Dark Hard 5122 5128  Lime Dark Hard 5128 5182  Lime Dark Hard		•	Hard or			Oil, Gas		
Lime Dark Hard 4561 4631 Gas 4577' Gas 4588' 141 MCF Lime Dark Hard 4631 4839 Gas 4591' 143 MCF Lime Dark Hard 4631 4839 Gas 4736' 152 MCF Lime Dark Hard 5036 5082 Lime Blue Hard 5082 5094 Water 5082-5086' filled up to 4400' 160 MCF Lime Dark Hard 5094 5121 Sandy Lime Grey Hard 5121 5128 Lime Dark Hard 5182 5201 Newberg Sand 5201 5214 Gas 5208' Vibrating 140-222 MCF Lime Light Hard 5229  Total Depth 5229  Larkin Casing at 5160'10" set of 5160'10" set of 5160'10" set of 5160'10" li-9-61 & li-10-61 li-15-61 & li-16-61 li-15-61 & li-16-			SUIT			Of Water		
Lime Dark Hard 4561 4631 Gas 4577' 134 MCF Lime Dark Hard 4631 4839 Gas 4591' 143 MCF Lime Dark Hard 4631 4839 Gas 4776' 152 MCF Lime Dark Hard 5036 5082 Lime Blue Hard 5082 5094 Water 5082-5086' filled up to 4400' Gas .5086' Lime Dark Hard 5121 5128 Lime Dark Hard 5121 5128 Lime Dark Hard 5182 5201 Newberg Sand 5201 5214 5229 Total Depth 5229  T	(as comple	ted 8-19-40	) ·	a and a second	4561			
Lime Dark Hard 4561 4631 Gas 4577'  Lime Dark Hard 4631 4839 5036  Lime Dark Hard 5036 5082  Lime Blue Hard 5082 5094 Water 5082-5086' filled up to 4400'  Lime Dark Hard 5121 5128  Lime Dark Hard 5182 5201  Newberg Sand 5201 5214  Lime Light Hard 5214 5229  Total Depth 5229  Larkin Casing shoe with 5 centralizers						Pulled pack	dr and 455	
Lime Dark Hard 4631 4839 5036 Lime Dark Hard 5036 5082 Lime Dark Hard 5082 5094 Water 5082-5086' filled up to 4400' Lime Dark Hard 5128 5182 Total Depth 5229  Total Depth 5230  Lime Light Hard 5126 5182 Lime Light Hard 5126 5182 Lime Light Hard 5214 5229  Total Depth 5229  Total Depth 5229  Lime Light Hard 5126 5182 Lime Light Hard 5126 5201 Lime Light Hard 5214 5229  Total Depth 5229  Total Depth 5229  Lime Light Hard 5126 5182 Lime Light Hard 5126 5201 Lime Light Hard 5126 5201 Lime Light Hard 5214 5229  Total Depth 5229  Lime Light Hard 5126 5182 casing at 5160'10" set of 5160'10" Light Hard 5126 11-10-61 Light Ha		_					qu onto 477	7'9" of 2-3/8"
Lime Dark Hard 4631 4839 Gas 4591' 152 MCF  Lime Dark Hard 4839 5036  Lime Dark Hard 5036 5082  Lime Dark Hard 5082 5094 Water 5082-5086' filled up to 4400'  Lime Dark Hard 5121 5128  Lime Dark Hard 5128 5182  Lime Dark Hard 5182 5201  Newberg Sand 5201 5214  Lime Light Hard 5214 5229  Total Depth 5229  Total D	Lime	Dark	Lin wani	1.565	1.60	tubing.		
Lime Dark Hard 4631 4839 Gas 4736' Gas 4776'  Lime Dark Hard 5036 5082 Lime Blue Hard 5082 5094 Water 5082-5086' filled up to 4400' Lime Dark Hard 5121 5128 Sandy Lime Grey Hard 5128 5182 Lime Dark Hard 5128 5182 Lime Dark Hard 5128 5201 Newberg Sand 5201 5214 Lime Light Hard 5214 5229  Total Depth 523  Total Depth 5230  Total Depth 5230  Total Depth 5230  Total D		. 1	naru	4561	4631	tubing. Gas 4577'	dr wild +yy	134 MCF
Lime Dark Hard 5036 5082 Lime Blue Hard 5082 5094 Lime Dark Hard 5082 5094 Lime Dark Hard 5084 5121 Sandy Lime Grey Hard 5128 5182 Lime Dark Hard 5128 5182 Lime Dark Hard 5182 5201 Newberg Sand 5201 5214 Lime Light Hard 5214 5229  Total Depth 5239  Total Depth 5229	. 1	•	naru	4561	4631	tubing. Gas 4577' Gas 4588'		134 MCF 141 MCF
Lime Dark Hard 5036 5082 Lime Blue Hard 5082 5094 Lime Dark Hard 5082 5094 Lime Dark Hard 5094 5121 Sandy Lime Grey Hard 5121 5128 Lime Dark Hard 5128 5182 Lime Dark Hard 5182 5201 Wewberg Sand 5201 5214 Lime Light Hard 5214 5229  Total Depth 5229  Total Dep	Lime	Dark				tubing. Gas 4577' Gas 4588' Gas 4591'		134 MCF 141 MCF 143 MCF
Lime Dark Hard 5094 5121 5128 Sandy Lime Grey Hard 5128 5182 Lime Dark Hard 5128 5182 Lime Dark Hard 5128 5182 Lime Dark Hard 5182 5201 Newberg Sand 5201 5214 5229 Total Depth 5229  Tota	Lime	Dark				tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736'		134 MCF 141 MCF 143 MCF 152 MCF
Lime Dark Hard 5121 5128  Lime Dark Hard 5128 5182  Lime Dark Hard 5128 5182  Lime Dark Hard 5128 5201  Newberg Sand 5201 5214  Lime Light Hard 5214 5229  Total Depth 5			Hard	4631 4839	4839 5036	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736'		134 MCF 141 MCF 143 MCF 152 MCF
Lime   Dark   Hard   5094   5121   5128	Lime Lime	Dark Dark	Hard Hard Hard	4631 4839 5036	4839 5036 5082	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'		134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Sandy Lime Grey Hard 5121 5128 5182	Lime Lime	Dark Dark	Hard Hard Hard	4631 4839 5036	4839 5036 5082	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Lime Dark Hard 5128 5182 5201 Newberg Sand 5201 5214 5229  Total Depth 5229  T	Lime Lime Lime	Dark Dark Blue	Hard Hard Hard Hard	4631 4839 5036 5082	4839 5036 5082 5094	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Lime   Dark   Hard   5182   5201   5214   Gas 5208' Vibrating   140-222 MCF	Lime Lime Lime	Dark Dark Blue Dark	Hard Hard Hard Hard	4631 4839 5036 5082 5094	4839 5036 5082 5094 5121	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Total Depth 5229   Gas 5208' Vibrating   140-222 MCF	Lime Lime Lime Lime Sandy Lime	Dark Dark Blue Dark Grey	Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121	4839 5036 5082 5094 5121 5128	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Total Depth 5229  Total Depth 5229    10-30 & 31-61	Lime Lime Lime Lime Sandy Lime	Dark Dark Blue Dark Grey Dark	Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128	4839 5036 5082 5094 5121 5128 5182	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Installed 5½" casing at 5160'10" set of 5½" Hookwall Packer from 5156'6" to 5160'10"  11-9-61 & 11-10-61  Pulled 5164' of 5½" casing at 5228'5" set on Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime	Dark Dark Blue Dark Grey Dark Dark	Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182	4839 5036 5082 5094 5121 5128 5182 5201	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4776' Water 5082- Gas 5086'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
Installed 5½" casing at 5160'10" set of 5½" Hookwall Packer from 5156'6" to 5160'10"  11-9-61 & 11-10-61  Pulled 5164' of 5½" casing at 5228'5" set on Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Wewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201	4839 5036 5082 5094 5121 5128 5182 5201 5214	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4776' Water 5082- Gas 5086'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
5½   Hookwall Packer from 5156'6" to 5160'10"   11-9-61 & 11-10-61   Pulled 5164' of 5½ casing   11-15-61 & 11-16-61   Installed 4½ casing at 5228'5" set on Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Wewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776' Water 5082- Gas 5086'	5086' fill	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF
5160'10" 11-9-61 & 11-10-61 Pulled 5164' of 5½" casing 11-15-61 & 11-16-61 Installed 4½" casing at 5228'5" set or Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Wewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing.  Gas 4577'  Gas 4588'  Gas 4591'  Gas 4736'  Gas 4776'  Water 5082-  Gas 5086'	5086' fill Vibrating	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF Led up to 4400' 160 MCF
11-9-61 & 11-10-61 Pulled 5164' of 5½" casing 11-15-61 & 11-16-61 Installed 4½" casing at 5228'5" set or Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Wewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4776'  Water 5082- Gas 5086'  Gas 5208'  10-30 & 31-0 Installed 5	5086' fill Vibrating	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF Led up to 4400' 160 MCF
Pulled 5164' of 5½" casing  11-15-61 & 11-16-61  Installed 4½" casing at 5228'5" set on  Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing.  Gas 4577'  Gas 4588'  Gas 4591'  Gas 4776'  Water 5082-  Gas 5086'   10-30 & 31-0  Installed 5-5-5" Hookwal	5086' fill Vibrating	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF Led up to 4400' 160 MCF
Installed 4- casing at 5228'5" set or larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Wewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4776' Gas 4776'  Water 5082- Gas 5086'  Gas 5208'  10-30 & 31-6 Installed 5: 5½" Hookwal 5160'10"	Vibrating	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF Led up to 4400' 160 MCF
Installed 42" casing at 5228'5" set on Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'  Water 5082- Gas 5086'  10-30 & 31-6 Installed 5: 5:½" Hookwal 5160'10" 11-9-61 & 1	Vibrating Casing Packer f	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF Led up to 4400' 160 MCF
Larkin Casing shoe with 5 centralizers	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing. Gas 4577' Gas 4588' Gas 4591' Gas 4736' Gas 4776'  Water 5082-! Gas 5208'  10-30 & 31-0 Installed 5:5½" Hookwal 5160'10" 11-9-61 & 1 Pulled 5164 11-15-61 &	Vibrating Casing Packer f	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF  160 MCF  140-222 MCF  at 5160'10" set of the se
	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing.  Gas 4577'  Gas 4588'  Gas 4591'  Gas 4736'  Gas 4776'  Water 5082-  Gas 5086'   10-30 & 31-0  Installed 5  5½" Hookwal  5160'10"  11-9-61 & 1  Pulled 5164  11-15-61 &  Installed 4	Vibrating Casing Packer f 1-10-61 Of 5½" casing	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF  Led up to 4400' 160 MCF  140-222 MCF  at 5160'10" set of 5156'6" to casing at 5228'5" set or
	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing.  Gas 4577'  Gas 4588'  Gas 4591'  Gas 4736'  Gas 4776'  Water 5082-  Gas 5086'   10-30 & 31-0  Installed 5  5½" Hookwal  5160'10"  11-9-61 & 1  Pulled 5164  11-15-61 &  Installed 4	Vibrating Casing Packer f 1-10-61 Of 5½" casing	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF  Led up to 4400' 160 MCF  140-222 MCF  at 5160'10" set of 5156'6" to casing at 5228'5" set or
	Lime Lime Lime Sandy Lime Lime Lime Lime Mewberg San	Dark Dark Blue  Dark Grey Dark Dark	Hard Hard Hard Hard Hard Hard Hard	4631 4839 5036 5082 5094 5121 5128 5182 5201 5214	4839 5036 5082 5094 5121 5128 5182 5201 5214 5229	tubing.  Gas 4577'  Gas 4588'  Gas 4591'  Gas 4736'  Gas 4776'  Water 5082-  Gas 5086'   10-30 & 31-0  Installed 5  5½" Hookwal  5160'10"  11-9-61 & 1  Pulled 5164  11-15-61 &  Installed 4	Vibrating Casing Packer f 1-10-61 Of 5½" casing	134 MCF 141 MCF 143 MCF 152 MCF 154 MCF  Led up to 4400' 160 MCF  140-222 MCF  at 5160'10" set of 5156'6" to casing at 5228'5" set or

Formation	Color	Hard or Soft	Top Z	Bottom	Oil, Gas or Water	Depth Found	Remarka
÷	The state of the s				11-17-61		
	ALL PROPERTY.				Dowell Divi	sion cemente	4½" casing
				diditativeness	Pumped 8 so	ks Aqua-gel	, l sack of
		19	1.		gel flake a	hd 100 sacks	bulk cement.
						ks bulk ceme	nt pumped in
	hange (editores	*			hole.	Programme and the second	
	haligren				11-22-61		
	999				Schlumberge	r perforated	4년" casing from
						t. Used Tri	jet tool.
			*,		11-27-61		
					Dowett Di	vision acidi	zed well using
					1500 gals.	Mud acid and	3,000 gals.
					XAFM acid.	Flushed dis	placing acid.
					Total amoun	t acid and w	eter 216 bbls.
	•				12-2-61		-60
			٠.		Test 4:30 F	.M.	362 MCF
					1-15-62	0/011	
					Installed 2	-3/8" tubing	at 5192' with
					Baker cemen	t retainer s	et 5190'
					1-16-62		
			and the state of t		Dowell Divi	pion applied	a cement squeez
					Job through	perforation	$\sin 4\frac{1}{2}$ casing
					from 5200 f	eet up. Use	d 300 gals.
						atex cement)	
					Pulled 5195	'10" of 2-3/	β" tubing
			* *		1-31-62		
					Installed 2	-3/8" tubing	at 5214' to use
		garde de la minima de partir de	· · · · · · · · · · · · · · · · · · ·	1		on $4\frac{1}{2}$ " casin	<b>8</b>
					2-1-62	t, and the	
			e transfer and the second		Dowell Divi	sion perfora	ted $4\frac{1}{2}$ " casing .
	*		· v. ·		with abrasi	jet at 5204	The state of the s
				e	After perfo	rating casin	g, pumped 350
						inhibited HC	L acid into
				4.5	hole.		
Advances			,		2-2-62		
			A HOUSE AND A SECOND		Pulled 2-3/	B" tubing	
					2-6-62		
	~				Test 4:30 P	М.	125 MCF
the state of the s			and the second	l V	2-12-62		
		and			Dowell Divi	sion acidize	well 3rd time
		ruden Warrante			with 5,000	gals. XFL ac	id.
		eganezea			2-14-62	1.0	
	·				Test 8:30 A	.M.	360 MCF
			,		3-12-62	the second of th	e - Car
					Dovell Divi	sion water f	racced Newberg
		·			using 400#	<i>7-</i> 100, 3300#	12-20 walnut
			in an analysis		shells, 150	# 20-40 san	1, 23,520 gals.
.			To the second se		F-33 treate	d water; 560	bbls. water and
					60 bbl. flu	sh.	
					4-2-62		
					Test 3:15 P	.M.	63.6 MCF
					4-25-62		
					Dowell Divi	sion acidize	l Newberg Sand
					with 5000 g	els. 15% XFL	acid. Used
				-	80 barrels	of water to	flush.
					5-1-62		
					Test 4:30 P	М.	315 MCF
				.	-		•
Population					Final Open	Flow:	
-	~						
				1	Estim	ted 360 M	lewberg Sand
			and the second s				J
		- 1	-	An an annual and an			
•	•	i	1	1		ŧ	
as province about			į		· · · · · · · · · · · · · · · · · · ·		
	Mounts are annual		a community of the comm				

Date July 20 , 19 62

APPROVED CHENS, LIBBEY-OWERS GAS DEPAREMENT, Owner

### WEST VIRGINIA DEPARTMENT OF MINES OIL & GAS DIVISION WELL RECORD

Permit No. Boo-462 Peytona Quad. Gas Well

CASING & TUBING

열등 이 시 그리겠다. 사람이 사람이			CASING & TUBING
Company	The Owens, Libbey-Owe		10 255 255
Address	P. 0. Box 1375, Charle	그는 그는 이 그 없이 목록하는 사람들이 되었다. 그들은 그는 10년 기술을 하는 것 같다.	8=1/4 1307 1307
Farm	Bull Creek Coal Land (	Co. ACRES 4000	6-5/8 4473 4473
Location	Bull Creek		3 64 64
Well No.	567 ELEV. 947° DF		2 4552 4552
District	Peytona - Boone Count;		
Surface & Mineral	Bull Creek Coal Land (		Packer - Spang Anchor
Address	886 Ellicott Sq., Buf		Size - 6-5/8x2
Commenced	June 4, 1940		Depth set - 4488-4495
Completed	Aug. 9, 1940		Perf. top 3" - 4495
Open Flow	동생님 이 중심하고 있는 때문에 이 있다.	영화되었다. 항상 없다. 없다.	" bot 4458 ·
Volume	959,000 c.f.		" top 2" - 4540
Rock Pressure	1160 lbs. 35 hrs.		" bot - 4556
Fresh Water	100		
Salt Water	365, 582 and 590	가가 보고 있는 가장을 보고 들었다고 생활을 들었다. 그는 그를 취하고 소생한 때문에 되었다. 그는 모든 것이	Coal at:
		맛있다"라는 사고 전문하다 하다 하는데 있다고 "아이들의 취임사를 즐겁히다고 있다고 이 생생이.	136° 36"
		## 하는 이 사람들은 사람들이 있는 이 경험을 보고 있는 사람들이 없다. 나는 다른 사람들이 없는 것이다.	220 36 S
	O 15 RANGERS	A	
	The Thirty		
Surface			
Sand wh s	4 <b>15 / 25</b>	Slate It s	
Slate gr s	25 <b>11</b> 0	Shell dk P	。 1982年 - 1985年 - 1984年 - 1984年 - 1985年 - 198
Shell dk s	110 126	Shell bn h	
Slate dk s	, 126 136	Shale M bn s	
-veoal bk s	136 <b>139</b>	나는 아이들이 가는 그는 그들이 있는 것이 되었다. 그렇게 하는 것이 얼마나 아니는 그들은 사람들이 되었다. 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그 그	1 3143 3292
Slate wh s	139 146 · ·	Slate&Shells dk s	3292 3421
Sand wh s	146 182	Shale bn s	3421 3691
Slate&Shells dk s	182 220	Slate&Shells bn }	n 3691 3703
Coal bk s	220 223	Shells 3 lt 1	n 370 <b>3</b> 3727
Slate dk s	223 281	술의 그런 그는 남편 하는까지 한번째 원생생님 하는 말하면	3727 4103
Sand wh s	241 282	아이에는 그 없는 하는데 그렇게 가입하는 것이 되는 사람이 되어 가게 되어 있다. 그 아니라 아니다	s 4103 4146
Slate gr s	282 312	Shale bn :	
그 경우는 그는 그는 그는 그는 그는 그 사람들이 가장 모든 그는 그를 모든 것이 없는데 보이었다.		我想到了,我们们的自己的自己的,我们就是这个人的,我们还有一个人的,我们就是这个人的,不是一个人的,只是不是一个人	그 생님이 살아가 그는 그는 그 사람들은 사람들이 되었다. 그 그는 사람들이 함께 되었다면서 모든 중에 되었다.
wodilii - w Lb S	312 440	Shale dk :	4386 4442
Sand - It s	312 440 440 470	화고적 시작하다의 회의 회의 지수를 받는 때 적인을 받는다.	s 4386 4442 or h4442 4534
Slate dk s	440 470	Corniferous Lime	gr h4442 4534
Slate dk s Sand gr s	440 470 470 493	Corniferous Lime a	gr h4442 4534 n 4534 4548
Slate dk s Sand gr s Slate&Shells dk s	440 470 470 493 493 532	Corniferous Lime a Criskany Sand wh had Lime For the land	gr h4442 4534 n 4534 4548 n 4548 4558
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h	440 470 470 493 493 532 532 710	Corniferous Lime a	gr h4442 4534 n 4534 4548
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h Slate bk-s	440 470 470 493 493 532 532 710 710 736	Corniferous Lime a Criskany Sand wh had Lime For the land	gr h4442 4534 n 4534 4548 n 4548 4558
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h	440 470 470 493 493 532 532 710 710 736 736 832	Corniferous Lime a Criskany Sand wh he Lime For Received tan 1 Total Depth	gr h4442 4534 n 4534 4548 n 4548 4558 4558
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h Slate bk—s Sand lt h Sand dk h	440 470 470 493 493 532 532 710 710 736 736 832 832 879	Fresh Water 100*	r h4442 4534 n 4534 4548 n 4548 4558 4558 1-1/2 bailers per hr
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h Slate bk—s Sand lt h Sand dk h Sand lt h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093	Fresh Water 100*	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr.
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107	Fresh Water 100*  " " 219  Salt Water 365	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr.
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110	Fresh Water 100*  " " 219  Salt Water 365 " " 582	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr. 5 bailers per hr.
Slate dk s Sand gr s Slate&Shells dk s —8alt Sand wh h Slate bk—s Sand lt h Sand dk h Sand lt h Slate&Shells dk s —Red Rock rd s Slate&Shells lt s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131	Fresh Water 100*  " " 219  Salt Water 365 " " 582	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr.
Slate dk s Sand gr s Slate&Shells dk s -8alt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells gr s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171	Fresh Water 100*  Salt Water 365  " " 582 " " 590	r h4442 4534 n 4534 4548 n 4548 4558 4558 1-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr. 5 bailers per hr. hole full
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175	Fresh Water 100° 100° 100° 100° 100° 100° 100° 100	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr. 5 bailers per hr. hole full
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate Sand MAGGN wh h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 590  Gas 312 " 585	r h4442 4534 h 4534 4548 h 4548 4558 4558 l-1/2 bailers per hr. 4 bailers per hr. 3 bailers per hr. 5 bailers per hr. hole full
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate Sand MACON wh h Little Lime dk h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 590  Gas 312 " 585 " 1473	r h4442 4534 h 4534 4548 h 4548 4558 h 4558 l-1/2 bailers per hr. 4 bailers per hr. 5 bailers per hr. hole full show show 30,000 c.f.
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Sand MASIN wh h Little Lime dk h Slate dk s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Sand MARION wh h Little Lime dk h Slate v dk s Lime so dk	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 590  Gas 312 " 585 " 1473	r h4442 4534 h 4534 4548 h 4548 4558 h 4558 l-1/2 bailers per hr. 4 bailers per hr. 5 bailers per hr. hole full show show 30,000 c.f.
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Sand MARIN wh h Little Lime dk h Slate dk s Lime so dk h Big Lime wh h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Sand Marin wh h Little Lime dk h Slate wh h Little Lime dk s Lime wh h Little Sand wh h Slate wh h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453 1453 1493	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells gr s Slate&Shells gr s Slate gr s Sand MARIN wh h Little Lime dk h Slate wh h Slate wh h Shell dk h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453 1453 1493 1453 1493 1453 1502	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Slate gr s Slate gr s Slate dk h Little Lime dk h Slate wh h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453 1453 1493 1493 1502 1502 1910	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells lt s Slate&Shells gr s Slate gr s Slate gr s Slate dk h Little Lime dk h Slate dk s Lime dk h Slate dk s Lime dk h Slate bh s Shell dk s Shell dk s Shell dk s Shale bn s	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453 1493 1502 1502 1910 1910 1924	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
Slate dk s Sand gr s Slate&Shells dk s Salt Sand wh h Slate bk s Sand lt h Sand dk h Sand lt h Slate&Shells dk s Red Rock rd s Slate&Shells gr s Slate&Shells gr s Slate gr s Slate gr s Slate gr s Slate wh h Little Lime dk h Slate wh h Little Lime dk h Slate wh h Little Lime dk h Slate wh h Slate&Shells dk s Shell dk h Slate&Shells dk s Shell dk h Slate&Shells dk s Shale bn s Berea Sand lt h	440 470 470 493 493 532 532 710 710 736 736 832 832 879 879 1093 1093 1107 1107 1110 1110 1131 1131 1171 1171 1175 1175 1226 1226 1259 1259 1261 1261 1294 1294 1453 1453 1493 1493 1502 1502 1910 1910 1924 1924 1929	Fresh Water 100* " " 219 Salt Water 365 " " 582 " " 585 " 1473 " 2015	r h4442 4534 h 4534 4548 h 4548 4558 4558  l-1/2 bailers per hre 4 bailers per hre 5 bailers per hre hole full  show show 30,000 cefe 10,000 cefe
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EQI		VE	
APR	19	1989	رك

1) Date: <u>April 18, 1989</u>

2) Operator's well number

Bull Creek #15

API Well No: 47 - 005 - 0462-FRAC State - County - Permit

#### DIVISION OF OIL & GAS 3) DEPARTMENT OF ENERGY

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

	NOTICE AND APPLICATION FOR A	WELL WORK PERMIT
4)	Surface Owner(s) to be served: 5) (	a) Coal Operator:
~z )		Servoo Inc.
	Address Attn. Stan Buckus Addr	Servco, Inc. ess PO Box 6100
	1401 Kanawha Valley Bldg., Chas. WV	Huntington, WV 25770
	(b) Name(b)	Coal Owner(s) with Declaration
		Dickinson Fuel Co.
	Addr	ess Attn. Stan Buckus
		Kanawha Valley Bldg. Chas., WV
		25301
	Addr	ess
6)		
0)		
	Address RT. 2 Box 159 Hwy #34Name	
	Hamlin, WV 25523 Addr Telephone (304)- <u>824-5963</u>	<b>EDD</b>
	Telephone (304)-824-3963	
	TO THE PERSON(S) NAMED ABOVE T	AKE NOTICE THAT:
-	Included is the lease or leases or othe	r continuing contract or
	ntracts by which I hold the right to extra	
_X_	Included is the information required by	Chapter 22B, Article 1,
Sect	ction 8(d) of the Code of West Virginia (s	ee page 2)
er 1	I certify that as required under Chapte	r 22B of the West Virginia Code
	have served copies of this notice and appl	
acco:	companying documents pages 1 through o	
	Personal Service (Affidavit attach	
	Certified Mail (Postmarked postal	
	Publication (Notice of Publication	attached)
	T have week her her and a second	
	I have read and understand Chapter 22B	
LO L	the terms and conditions of any permit is	sued under this application.
fami	I certify under penalty of law that I h	ave personally examined and am
ramı	miliar with the information submitted on t	his application form and all
racn	tachments, and that based on my inquiry of	those individuals immediately
ie +	sponsible for obtaining the information, I true, accurate, and complete.	believe that the information
15 C		analhina fan anhaibhina fala.
info	I am aware that there are significant p	enaities for submitting raise
11110	formation, including the possibility of fi	
		dt Por k Gas Corporation
	By: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	the volume
		lling Superintendent
		Box 1473
	Tolophono	rleston, WV 25325
Subs		$4) \frac{347-1600}{\text{of } 000}$
$\mathcal{M}_{\mathcal{A}}$	G MO OO. OFFICIAL SEAL	
11 la	MULC TUNION NOTARY PUBLIC	Notary Public
Му с	commission expires MARYE MULLIN	A COOP STATE
	P. O. Box 1473	
	Charleston, WV 25325 My Commission Expires Nov. 2	1, 1995

A

005-0462-1= Dosued 4/26/89 Bypnis 4/26/91 Page\_of

#### STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS WELL WORK PERMIT APPLICATION

			144		(%)//=	67101
1) Well Ope	rator:	CABOT OI	L & GAS CC	RPORATION (	OF WV 8150	12/696
2) Operator	's Well 1	Number:	Bull Creek	#15	3) Ele	vation: 942
4) Well typ	e: (a) (	Dil_/	or Gas	<u>X</u> /		
			Deep		ound Storage Shallow	
5) Proposed	Target I	ormation	(s): Oris	kany (4534)	-4548")	
6) Proposed	Total De	epth:	5229	feet		
7) * Approxim	ate fresl	n water s	trata dept	hs: 100', 2	191	
8) * Approxim	ate salt	water de	pths: 365	', 582', 59	0 1	
9) * Approxim	ate coal	seam dep	ths: 136'	(3'), 220'	(3')	
10) Does lan				_		
ll) Proposed	Well Wor	ck: Cemen	t 4-1/2" c	sg across (	riskany. Ad	ditionally any/Newburg.
12)* From COG	C Well Re	ecords.		NG PROGRAM	ingled Offsk	.any/Newburg.
TYPE		PECIFICAT	IONS	FOOTAGE IN	ITERVALS	CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						r .
Fresh Water	10-3/4"			255'	255'	1 Juno
Coal	8-5/8"			1307'	1307'	AVV.
Intermediate	6-5/8"	NORMAN MATERIAL REPORT OF THE PROPERTY OF THE		4473	4473'	Comme
Production	4-1/2"	N-80	11.6	52281	5228'	92 sks
Tubing	2-3/8"			52051	5205'	
Liners						
	dN/A		Nada kantu kata kata kata kantu k			JE VE
	ths set				AP	R 0 5 1989
19209	F	or Diviso	n of Oil a	nd Gas Use	Only DEPARTA	N OF OIL & GAS
Fee(s)	ajg; V	Z ZAS Well W	ork Permit	Rec]	amation Fund	
Plat	WW-9	WW-	2B   1/21 E	sond Blank	# +	Agent
	b				Type)	