

(4456-5320) A-F SAMPles

DeepWell



STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

Quadrangle Charleston, S. W.

mpany_Colum	nbian Car	bon Compa	ny				(KIND)
ddress Box 8	73, Char	leston 23,	W. Va.	Casing and Tubing	Used in Drilling	Left in Well	Packers
			Acres 5350.	**************************************			
		Creek		Size			
ell No. I GW	-1306		Elev. 725. 04 G			29'4''	Kind of Packer
strict Loude		CountyKan			294'9"	294'9"	none
e surface of trace. #2, Box			Clements		12/01/11		Size of
			nd Company		4521'1"	1248'6" 4521'1"	***************************************
neral rights are 05 Odd Fell	owned by lows Bld:	Char	rleston 1, W. V	76% <u>(2311</u>		45211	Depth set
illing commence	/ ~	5-59		3			77. 6
illing completed.				23/8!!	51781	51781	Perf. top Perf. bottom
	ot From	n	ľo <u>v</u>	Liners Used W	/ cage at	2 20 00 8	Perf. top
	47			5-1/2!'15#	825'5"	825'5"	Perf. bottom
	4 14 4 4		Inch	from 44	444' to 526	2'	rerr. boccom
/:	10ths Merc.	in	Inch	CASING CEM	TO ALONGO TO	OTTO N	o. Ft
lume	W III OFIS	<u>kany</u>	Cu. Ft.			_sizeN re side	
			hrs.		•		EET 24 INC
TIT A ATTENT OF THE	- not aci	dized .	bbls., 1st 24 hrs.				EETINCI EETINCI
PLIL AUDIZED			u da	FEE	I VV INC	nesF	EETINC
ELL FRACTUR	_{ED} se	e reverse s	ide	FEE	IINC	HESF	EETINCI
LULULULULULULULULULULULULULULULULULULU	And the second			1.4			Andrews and the state of the st
			2/10 Mercury	7 2" = 539, (000 cu. ft.	(Oriskany)	-
CK PRESSURE	AFTER TE	FATMENT	5 days 5	511#			
esh Water 604	?	Feet		_Salt Water_89	91-8971	Feet	
		Hard or					
Formation	Color		Top	Bottom	Oil, Gas	Depth	Remarks
	Color	Soft	Top	Bottom	or Water	Depth	Remarks
	Color		10	10 30			Remarks
nd ite	Color		0 10 30	10 30 44	or Water		Remarks
l nd .te al	Color		0 10 30 44	10 30 44 46	or Water		. 25. 4
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Formation	Color	Hard or Soft	Тор В	Bottom	Oil, Gas or Water	Depth Found	Remarks
Red Rock			1098	1100			
Slate			1100	1108	The second of the second	La Cara Array (Array)	garantar a a area a a segunda esa general se a c
Red Rock			1108	1111	E		Management
Lime			1111	1128			
-Sand	THE REAL PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS OF THE PROPERTY AND ADDRESS OF THE PROPERTY ADDRESS		1128	1133 DL 1143 SL			
Lime and S	ells	1947 - F	1143	1162			
Slate		-	1162	1179			
-Lime			1179	1219			
Pencil Cave			1219	1222	www.	,	TOTAL CONTRACTOR CONTR
Big Lime		:	1222	1416	1240'DLM=	1240'SLM	TITA CARADOTTION
Sand			1416	1450	Gas	1397'-1409'	show
Slate			1450	1473	1438'DLM=	1438'SLM	Karoa.
Slate & Shel	Ls	•	1473	1850			
Black Shale			1850	1864	Name of the Contract of the Co		
Brown Shale			1864	1873	Name of the Control o		
-Berea	/		1873	1878	-		
Slate & Shel	r		1878	3432	BARROLINAGON		
Brown Shale	I -	Service Control of the Control of th	3432	3615	en-company and		
Slate & Shel	La		3615	4148	4006'DLM=	4033'SLM	
Brown Shale	e Rhinestrad		4148	4384			
White Slate		sandado-	4384	4409	:		
-Black Shale		-	4409	4469	,		and the second
-Corniferous	Lime		4469	4562		e Landersky	umpa gagy
Oriskany Sa	hd		4562	4624	Gas	45681	show
Lime		Option and the state of the sta	4624	5261	4575'DLM=		DITTO AA
Newburg San	hd	- Committee - Comm	5261	5282	5249 DLM=		No.
		· Company of the comp			001/ 22141-		1 1 7 4
Total depth-	the forms press there are a seed over the forms the	count touch court down court send apply much good court send	and the man has the total way	53271	Propagation	mar in period of the state of t	and the agreement of the rest of the entire section
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7-23-59	Ran 8-5/	8" casing w	th shoe 124	01DI.M-1240	IST M . 12	0 0 1 m 0 0 m 0 m	7
	30 sacks	cement. Pu	mned nlug t	h 12231	13 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10	acks Aquago	
	000000		inpod prag t	3 4443		n is in	111111111111111111111111111111111111
9-4-59	Ran 7" c	asing at 450	9'DLM - 11	sacks ceme	nt.		
						Mary Carry Part 62	
12-20-59	Ran 825	of 5-1/2" 1	5.5# liner w	ith Baker W	hirlpool Duj	lex Shoe on	bottom
	and Texa	s pattern sh	oe on top =	centralizers	on 1st and	4th joints fr	om bottom
	and on l	st, 4th and	7th joints fr	om top. Ra	n from 4444	to 52621.	emented
21 A 🐧	with 50 s	acks. Perfo	rated 5-1/2	from 4560	to 4571' wi	th 4 perfora	tions per
	foot and	from 4571' t	o 4587' with	2 perforati	ons per foot		ga i ga sama i saha ya sami
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See fracturing	ng record	on attached	sheet.	, a sala	1	1	
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APPROVED Columbian Carbon Company

By W. S. Moore, Mgr. of Production (Title)

224 5 250 - 5275"

Fracturing Record on GW-1306, The Courtland Company #1

10-30-59 Fractured the Oriskany. Pumped in 1 bbl. oil and 750 gallons MCA. Loaded hole with water and 3/4% Tergitol. Stated MCA. Started sand at 1/2#/gallon. Pressure dropped to 2800#. Pressured to 2750#. Increased sand to 1#/gallon. Pressure started up - at 3100# decreased sand to 3/4#/gallon - then to 1/2#/gallon at 3200#. At 3300# cut sand off. Flushed with 70 barrels water at 3300#. For breaking down and treating used 11, 200 gallons - injection rate 659 gpm. Flushed with 3,000 gallons - total fluid 16,050 gallons, 8,000# 20-40 sand, 110 gallons TMN - 110 gallons T-08. 10 minutes after breakdown 1600# pressure. Opened well-would not flow. Swabbed-before fracturing show of gas.

11-2-59 Released packer and pulled tubing. Bailed fluid and cleaned out. Drilled ahead to Newburg.

11-9-59 Ran Baker Model "A" packer on 3" tubing. Set packer in middle of 2nd joint off bottom. No gas from Newburg.

11-10-59 Attempted to fracture Newburg. Pumped in 1,000 gallons MCA-filled tubing. Started to breakdown. Pressure went to 3300#-dropped to zero. Reset packer-would not hold. Pulled tubing and found fifth joint from bottom split open.

11-13-59 Ran 3-1/2" 9. 2# tubing with Baker Model "A" packer set at 5217" - 5-1/2" liner - show of gas in tubing.

11-14-59 Fractured the Newburg. Pumped in 500 gallons MCA - loaded tubing with 1500 gallons water and tergitol - 1,000# pressure on tubing. Broke down formation at 4850#. Injection rate 7 bbls. per minute for 7 minutes. Started sand at 1/4#/gallon-increased to 3/4#. Used 171 barrels water and 6,000# 20-40 sand. Pressure started at 4650#- dropped to 4300#-went to 4800#-quit sand. Flushed with 60 barrels in 13 minutes-5100# maximum-4700# final. 10 minutes after shut down 3900#. Used 110 gallons TMN and 110 gallons T-08. Opened well-flowed gradually and died.

Released packer and pulled tubing. Swabbed hole-hole filling gradually with salt water. Test shows salt water coming from section below Oriskany horizon.

Ran 3-1/2" tubing with Baker Model "A" packer smaled at bottom set at 4646" to shut off area below Oriskany.

Pulled 3^{11} tubing and plugged to 5243^{1} . Ran $2-3/8^{11}$ tubing. Final open flow from Oriskany 12/10 M. $2^{11} = 539$ MCF- 5 day pressure 511 #.

