Family Name:
Operator

#### State of West Virginia

## Department of Environmental Protection

#### Office of Oil and Gas

# Well Operator's Report of Well Work

Farm Name: Operator Well No.:		Arthur, Richard A.				6/8/2011 47-3906277			
		Arthur #2							
LOCATIO	M					Table 1			
Elevation: 1087			Quadrangle:		Big Chimney				
District:	A State Control of the Control of th		County:	County:		Kanawha			
Latitude:	38.411789		NAD 27						
Longitude:	81.593451		NAD 27						
WELL IN	FORMATIO			14.500			32 7 11		
Company:	Reserve Oi	l and Gas, Inc.	Casing &	Used in	Left in	Cemen	t Fill up		
Address:	929 Charle	ston Road	Tubing:	Drilling:	Well:	Cu	. Ft.		
	Spencer, W	/V 25276	13 3/8"	21.00	21.00		ets		
Agent:	J. Scott Fre	shwater	9 5/8"	335.80	335,80		ets		
Inspector:	Terry Urba	n	7"	2065.15	2065.15		cts		
Date Permit	Issued:	11/10/2010	4 1/2"	4743.85	4743.85	13:	5 sks		
Date Work	Commenced:	11/22/2010							
Date Work	Completed:	2/2/2011							
Verbal Plug									
_	ssion Granted:								
Rotary Rig:		CSi Rig #2							
Cable Rig:									
Total Vertical Depth (FT):		4800	Total Measured Depth (FT): 4800						
Fresh Water Depth (FT):		46	<del></del>						
Salt Water		880	<del></del>						
	g mined in area (	The same of the sa	<del></del>						
Coal Depth	-	N/A	 Void(	s) Encounter	ed (N/Y) / Depth(s)	: N/A			
	OW DATA	CONTRACT CONTRACT TO	reprint the same				1960 T. 1 48 C		
Producing I		Devonian Shale	Pay Zone Dep	th (FT):	2928	3 to	4724		
Gas	Omation.	20,000	Oil	··· (• • ).					
	. Flow:	21	Initial Open Fi	low.	N/A				
Initial Open Flow: Final Open Flow:		435	Final Open Flow:		N/A		<del>-</del> :		
-		initial and final tests:	Timal Open Flow.			4 Hours.	-		
•		The state of the s	ace Pressure) after	•		Hours.			
Static Rock Pressure:		1310 (3011	Pay Zone Depth (FT):			to			
2nd Producing Formation:			<del></del> -	ui (F 1 ).		_ 10	<u> </u>		
Gas		Oil							
Initial Open Flow:			Initial Open Flow:						
Final Open Flow:		initial and Gual testas	Final Open Flow:			Hours.	- 6		
Time of open flow between initial and final tests:		D			Hours.	27			
Static Rock Pressure: PSIG (Surfa		ce Pressure) after:			_ Hours.	7			
C: d.	()	AAXA		Dotos	11/1/1	1			
Signed:		H Coott Fractive		Date:	0/0/	<del>)</del>	<del></del>		
By:		J. Scott Freshwater				-11 4144 - 1			
-	•	have personally examined and am							
and that, base	ed on my inquiry of the	hose individuals immediately respo	nsible for obtaining the	nformation I b	elieve that the information	on is true, accurate,			
and complete.									

### State of West Virginia

#### Department of Environmental Protection

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# Well Operator's Report of Well Work

Continued

Formation:   From   To   Sub   0   10   358     Sand & Shale   10   358   370     Shale   370   880   880   wet   salt water     Salt Sand   880   1680   1510 big water   salt water     Salt Sand   1680   1800   1840       Big Lime   1840   2000   2040     Shale   2040   2350   2370       Shale   2370   4800       Shale   2370   4800       Shale   2370   4800       FRACTURING   Formations:   Stimulation:     Stage 1:   Stage 1:   Stage 1:     Number of Perforations:   58   Remarks:     Depth From (FT):   3922   Total N2 = 1,000,965 SCF, total 15% HCL Treatment Fluid =     Perform (FT):   2928   Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid =     Stage 2:   Stage 2:   Stage 2:     Number of Perforations:   50   Remarks:     Stage 3:   Stage 4:   Stage 5:     Stage 4:   Stage 5:   Stage 6:     Stage 6:   Stage 7:   Stage 8:     Stage 8:   Stage 9:   Stage 9:     Stage 9:   Stage 9:   Stage 9:     Stage 9:   Stage 9:   Stage 9:   Stage 9:     Stage 9:   Stage 9:   Stage 9:   Stage 9:   Stage 9:     Stage 9:				<b>.</b>					
Sand & Shale	Formation:	From	То	_		<del></del>			
Red Rock   358   370   880   wet   salt water		100000	22222 9	<b>-</b>					
Salt Sand		3 3 3 3 3 3		4			The Later Control of Control of Control		
Salt Sand   880   1680   1800   Maxton   1680   1800   1840   Big Lime   1840   2000   Injun   2000   2040   Shale   2040   2350   Coffee Shale   2370   4800				<u> </u>	The second of the second of the second	No. 1 Total Control of the Control o	Manager and Company of the Company o		
Maxton		3 To 18 19		<u>.</u>	1510	big water	salt water		
Dittle Lime		2.00	1680						
Big Lime	Maxton	1680	1800	i.					
Injum	Little Lime	1800	1840						
Depth: Remarks:	Big Lime	1840	2000						
Coffee Shale	Injun	2000	2040			Gas C	Checks:		
Shale	Shale	2040	2350		Depth:		Remarks:		
Depth:   Remarks:	Coffee Shale	2350	2370	1					
Depth:   Remarks:	Shale	2370	4800						
Depth:   Remarks:			A STATE OF THE						
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FRACTURING  Perforations:  Stage 1:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Stage 2:  Number of Perforations:  Stage 2:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Stage 3:  Stage 4:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 3:  Number of Perforations:  More Core Samples Taken (N/Y):  Were Core Samples Taken (N/Y):  No  Were Core Samples Taken (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes				1	Oil Shows:				
FRACTURING  Perforations:  Stage 1:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Stage 2:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth To (FT):  No  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes				1	Depth: Rema		Remarks:		
Perforations:  Stage 1:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Stage 2:  Number of Perforations:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Stage 3:  Stage 4:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Stage 5:  Number of Perforations:  Depth From (FT):  Stage 6:  Number of Perforations:  Depth From (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Stage 2:  Number of Perforations:  Stage 2:  Number of Perforations:  Stage 3:  Number of Perforations:  Stage 3:  Number of Perforations:  Stage 4:  Number of Perforations:  Stage 5:  Number of Perforations:  Stage 2:  Number of Perforations:  Stage 3:  Number of Perforations:  Stage 2:  Number of Perforations:  Stage 3:  Number of Perfo				1					
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Stage 1:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Stage 2:  Number of Perforations:  Depth From (FT):  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 3:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 3:  Stage 2:  Number of Perforations:  Depth From (FT):  Depth From (FT):  Depth To (FT):  Stage 3:  Stage 2:  Number of Perforations:  Mo  Remarks:  Depth From (FT):  Stage 2:  Number of Perforations:  Mo  Remarks:  Depth From (FT):  Stage 2:  Number of Perforations:  Mo  Remarks:  Stage 3:  Notal N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9 stages  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  No  Were Geophysical Logs Recorded on This Well (N/Y):  No				Stimulation:					
Number of Perforations:  Depth From (FT):  Depth To (FT):  Total N2 = 1,000,965 SCF, total 15% HCL Treatment Fluid = 945 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 84 in 9 stages  Stage 2:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9 stages  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  No  Yes	Stage 1:								
Depth From (FT):  Depth To (FT):  Total N2 = 1,000,965 SCF, total 15% HCL Treatment Fluid = 945 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 84 in 9 stages  Stage 2:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Depth To (FT):  Stage 2:  Number of Perforations:  Output From (FT):  Depth From (FT):  Stage 2:  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9 stages  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  No  Yes		ıs:	58						
Depth To (FT):    4724									
Stage 2:  Number of Perforations:  Depth From (FT):  Depth To (FT):  Stage 2:  Remarks:  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9 stages  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  No  Were Geophysical Logs Recorded on This Well (N/Y):  Yes	· · ·	-	THE THE KIND AS A SECOND						
Number of Perforations:  Depth From (FT):  Depth To (FT):  Depth To (FT):  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Mo  Remarks:  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9  Stages  No  Were Core Samples Taken (N/Y):  No  Were Geophysical Logs Recorded on This Well (N/Y):  Yes	20pm 10 (11).	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	stages					
Number of Perforations:  Depth From (FT):  Depth To (FT):  Depth To (FT):  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Mo  Remarks:  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9  Stages  No  Were Core Samples Taken (N/Y):  No  Were Geophysical Logs Recorded on This Well (N/Y):  Yes	Stage 2:			Stage 2	' <u>.</u>		•		
Depth From (FT):  Depth To (FT):  Total N2 = 1,002,565 SCF, total 15% HCL Treatment Fluid = 974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9 stages  Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes					•				
Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes									
Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes				7974 gallons, total 7/8 inch 1.3 sp gr R ball sealers = 90 in 9					
Were Core Samples Taken (N/Y):  Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes	Depui To (TT).	• •	7,						
Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes				- · · · · · · · · · · · · · · · · · · ·			7		
Were Cuttings Caught During Drilling (N/Y):  Were Geophysical Logs Recorded on This Well (N/Y):  Yes	Wara Cara Samples Taken	(N/V),	No						
Were Geophysical Logs Recorded on This Well (N/Y): Yes	-			- No					
Electrical (14/1). 155	-			1 63	•				
Mechanical (N/Y): Yes									