DATE: //s/// API: 47-33-05399

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

Well Operator's Report of Well Work

Farm Name:	Cathers #4	Operator W	eli No.	EP0903	3		
LOCATION: Elevation:1048'		Quadrangle:		Salem			
	Sardis		county:	Harriso			
	5858' Feet S. of	80 Dea	30 Min	Se			
	4580' Feet W. of						
Longitude.		Ja Deg.	22 Min.	30Se	∋c.		
Company: Energy Pr	oduction, Inc.						
*	· 1	Casing &	Used in		Company full		
Address: PO Box 90	n7	Tubing	Drilling	Left in Well	Cement fill up Cu. Ft.		
	WV 26378	13 3/8	30'	30'	up ca. Ft.		
JANC LEW,	VVV 20370	9 5/8	160'	160'	To Surface		
Agent:	John Haskins		2315'	2315'	To Surface		
Inspector:	Tim Bennett	1	2313	5853'	246 sacs		
Date Permit Issued:	03/31/10	4.5		3655	240 sacs		
Date Well Work Com	menced: 03/31/10				-		
Date Well Work Com	T-191111						
Verbal Plugging:	p.101.04. 00/02/10				-		
Date Permission Grai	nted on:		L		-		
Rotary X Cable							
Total Depth (ft):	6800'						
Fresh Water Depth (f					<b> </b>		
Salt Water Depth (ft):							
Is coal being mined in the area (Y/N)? n Coal Depths (ft): 490'							
00511510115	*						
OPEN FLOW DATA	•						
Producing	formations Alexar	··-	Pay zone dept		390' - 5728'		
	Bens				972' - 5123'		
	Rile				516' - 4663'		
	Balltown/ S	<u> </u>		_	<u>511' - 4043'</u>		
	Gord				872' - 2926'		
	50'	-		_2	679' - 2704'		
Gae: Initia	al open flow odor	Mcf/d. Oil: Init	ial asas flave	NI/A DI	bl/d		
	•		nal open flow	****	bl/d		
	pen flow between initial a			Hours	J/(d		
	_	psig (surface )		•	ours		
Oldilo Tot	JK 1 1033410	paig (auriace )	press./ arter		Juis		
NOTE: On back of this form put 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 formation	ns, including coal encou	ntered by the v	vellbore.	90010	g. 3 <del></del> .		
Signed:							
By: Sour Haskins							
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## **HYDRAULIC FRACTURING DETAILS**

STAGE	FORMATION	PERFORATIONS	SAND 20/40	
		# of shots		
1st Stage	Alexander	12	25,000	
2nd Stage	Benson	10	30,000	
3rd Stage	Riley	10	20,000	
4th Stage	Balltown/ Speechley	12	30,000	
5th Stage	Gordon	12	35,000	
6th Stage	50'	12	35,000	

## **DRILLERS LOG**

DRILLERS LOG						
FORMATION	FROM	ТО				
Earth	Surface	3'				
Sand	3'	8'				
Sand & Shale	8'	32'				
Red Rock	32'	38'				
Sand & Shale	38'	2050'				
L.Lime	2050'	2067'				
Big Lime	2067'	2117'				
Sand	2117'	2162'				
lnjun	2162'	2211'				
Sand & Shale	2211'	2672'				
50'	2672'	2700'				
Sand & Shale	2700'	2770'				
30'	2770'	2840'				
Gordon	2840'	2870'				
Sand & Shale	2870'	5105'				
Benson	5105'	5490'				
Alexander	5490'	6700'				
Sand & Shale	6700'	T.D.				
		-				

## **ELECTRIC LOG**

LELVINO EOO							
FORMATION	FROM	ТО					
Alexander	5390'	5728'					
Benson	4972'	5123'					
Riley	4516'	4663'					
Balltown/ Speechly	3511'	4043'					
Gordon	2872'	2926'					
50'	2679'	2704'					
		- 1 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-					
	. ,						