



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OIL AND GAS MANAGEMENT PROGRAM

DEP USE ONLY	
Site ID	Primary Fac ID
Client	Subfacility Id

## Completion Report

Well Information					
If you are submitting this Completion Report attached to the Well Record, you only need to enter the well API # in this section.					
Well Operator Range Resources-Appalachia LLC	DEP ID# 141142	Well API # (Permit / Reg) 37-125-24017-00	Project Number	Acres 166	
Address 380 Southpointe Blvd, Suite 300		Well Farm Name Johnson,,Gerald Unit	Well # 1H	Serial #	
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality West Pike Run	
Phone 724-743-6700	Fax 724-743-6490	Email	USGS 7.5 min. quadrangle map California		
Check the appropriate submission: <input checked="" type="checkbox"/> Original Completion Report <input type="checkbox"/> Amended Completion Report					

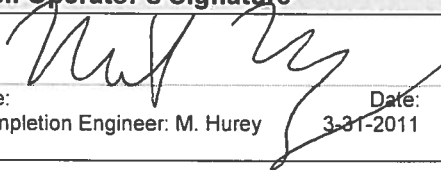
STIMULATION BASE FLUID		
List Water Management Plan Approved Water Source(s) that were used	Water Management Plan ID No.	Volume (Gallons)
1. PA American Water Company/Meter Vault Mt. Zion Rd.	Source 23	3,447,612
2.		
3.		
4.		
5.		
6.		
Recycled Water Used		0 gal
Other Base Fluid(s)/Components Used		
1.		
2.		
Total Base Fluid(s)/Components Used		3,447,612 gallons

PERFORATION RECORD					
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation
1	2-23-2011	10,548'MD	10,360'MD	Horizontal	Marcellus Shale
2	2-23-2011	10,266'MD	10,078'MD	Horizontal	Marcellus Shale
3	2-24-2011	9,984'MD	9,796'MD	Horizontal	Marcellus Shale
4	2-25-2011	9,702'MD	9,514'MD	Horizontal	Marcellus Shale
5	2-25-2011	9,420'MD	9,232'MD	Horizontal	Marcellus Shale
6	2-26-2011	9,138'MD	8,950'MD	Horizontal	Marcellus Shale
7	2-28-2011	8,856'MD	8,668'MD	Horizontal	Marcellus Shale
8	3-1-2011	8,574'MD	8,386'MD	Horizontal	Marcellus Shale
9	3-2-2011	8,292'MD	8,104'MD	Horizontal	Marcellus Shale
10					
11					
12					





<b>STIMULATION INFORMATION (WELL)</b>			
Open Flow Production: Omcf/d @ 24hrs pos treatment	24 Hr. Open Flow Production: Omcf/d @ 24hrs pos treatment	24 Hr. Shut-in Pressure: N/A @ 24hrs post treatment	Flow Back Date: 3/13/2011
<b>STIMULATION INFORMATION (STAGE)</b>			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
<b>Stage No.:</b> 1	Stimulation Date: 2-23-2011	Pump Rate: 65.8	
Pressure (psi): 8,814	Shut-in Surface Pressure: 5,754	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 507,365	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 2	Stimulation Date: 2-23-2011	Pump Rate: 68.0	
Pressure (psi): 6,265	Shut-in Surface Pressure: 6,207	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 503,624	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 3	Stimulation Date: 2-24-2011	Pump Rate: 66.8	
Pressure (psi): 8,099	Shut-in Surface Pressure: 5,100	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 502,784	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 4	Stimulation Date: 2-25-2011	Pump Rate: 64.0	
Pressure (psi): 7,819	Shut-in Surface Pressure: 5,329	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 500,809	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 5	Stimulation Date: 2-25-2011	Pump Rate: 67.6	
Pressure (psi): 7,906	Shut-in Surface Pressure: 5,027	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 501,338	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 6	Stimulation Date: 2-28-2011	Pump Rate: 68.9	
Pressure (psi): 7,502	Shut-in Surface Pressure: 5,751	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 453,315	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 7	Stimulation Date: 2-28-2011	Pump Rate: 68.0	
Pressure (psi): 7,868	Shut-in Surface Pressure: 5,900	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 497,585	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>Stage No.:</b> 8	Stimulation Date: 3-1-2011	Pump Rate: 69.6	
Pressure (psi): 7,662	Shut-in Surface Pressure: 5,685	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 497,710	Propping Agent Size: 100 Mesh 30/50 Mesh	

STIMULATION INFORMATION (STAGE- Continued)			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
Stage No.: 9	Stimulation Date: 3-1-2011	Pump Rate 69.7	
Pressure (psi): 7,620	Shut-in Surface Pressure: 5,581	5 Minute Shut-in Surface Pressure N/A	
Propping Agent Type: Sand	Propping Agent Amount: 500,746	Propping Agent Size: 100 Mesh 30/50 Mesh	
<b>WELL SERVICE COMPANIES</b> (Provide the name, address, and telephone number of all well service companies involved.)			
Name <b>Frac Tech</b>	Name <b>Multi-Chem</b>	Name <b>Universal Well Servi ces</b>	
Address 16858 IH20	Address	Address 730 Braddock View Drive	
City - State- Zip Cisco, TX 76437	City - State - Zip	City - State - Zip Mt Braddock, PA 15465	
Phone 817-850-1008	Phone	Phone 724-430-6201	
<i>I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.</i>			
<b>Well Operator's Signature</b>		<b>DEP USE ONLY</b>	
 Title: Completion Engineer: M. Hurey      Date: 3-31-2011		Reviewed by:	Date:
		Comments:	



RANGE RESOURCES

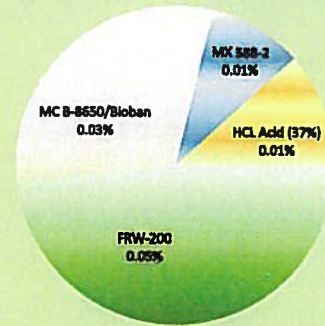
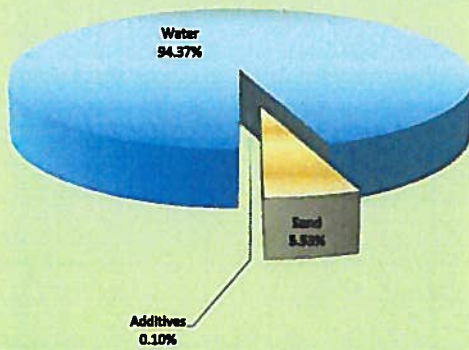
Gerald Johnson Unit #1H  
Well API: 37-125-24017-00

Completion Date: February 23- March 2, 2011  
Township: West Pike Run

**% Composition of Hydraulic Fracture Fluid (by volume)**

Product Name	Additive	Purpose	Use and Dillution	Volume	Overall %	Common Uses
Water	Carrier Fluid	Creates fracture network in shale and carry proppant to the formation	Primary constituent	3,445,116 gal	94.37%	Water is the most abundant molecule on the Earth's surface
Sand	Sand	Allows fractures to remain open so gas can escape	Second most common constituent, making up almost 6% of the fluid	201,830 gal	5.53%	Drinking water filtration, play sand
FRW-200	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	1,745 gal	0.05%	Water treatment; soil conditioner; some children's toys
MC B-8650/Bioban	Antimicrobial Agent	Eliminates bacteria in the water that produce corrosive byproducts	Diluted at one-half gallon per 1,000 gallons of water	1,111 gal	0.03%	Water treatment, disinfectant, sterilize medical and dental equipment and surfaces
MX 588-2	Scale Inhibitor	Prevents scaling in pipe	Diluted at one-tenth gallon per 1,000 gallons of water	345 gal	0.01%	Water treatment, household cleaners, de-icing agent
HCL Acid (37%)	Perf Clean-Up	Dissolves cement and minerals to help initiate fractures	177 gallons per stage if required (non-diluted chemicals)	425 gal	0.01%	Swimming pool and household cleaner

**Composition of Hydraulic Fracture Fluid (by volume)**





## Composition of Components in Marcellus Shale Hydraulic Fracturing Fluid

**RANGE RESOURCES**

Common Name & Supplier	Supplier Chemical Name	Common Description	Hazardous Component listed on MSDS	Purpose	MSDS Component Weight % of Chemical	Gallons MSDS Component in Well	Maximum Concentration of MSDS Component of Total Stage Fluid	
							% Vol	% Weight
7.5% HCl Mixture (FracTech)	37% HCL	concentrated HCl Acid	HCL	Cleans perforation	37.0%	424.91	0.0116%	0.0047%
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	85.0%	11.10	0.0003%	0.0002%
			Propargyl Alcohol	Protects casing	5.0%	0.04	0.0000%	0.0000%
	NE100	Non- Emulsifer	No hazardous ingredients	Prevents emulsions	0.0%	N/A	N/A	N/A
FE100L	Iron Chelator	No hazardous ingredients	Prevents precipitation	0.0%	N/A	N/A	N/A	
<b>TOTAL</b>							<b>0.0119%</b>	<b>0.0049%</b>

Friction Reducer (FracTech)	FRW-200	Friction Reducer	No hazardous ingredients	Reduce friction down casing	0.0%	N/A	N/A	N/A
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Scale Inhibitor (MultiChem)	MX 588-2	Scale Inhibitor	No hazardous ingredients	prevents scale deposits	0.0%	N/A	N/A	N/A
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Antibacterial Agent (MultiChem)	CS-1135	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	610.42	0.0187%	0.0154%
			3,4,4-Trimethyloxazolidine		5.0%	39.96	0.0011%	0.0010%
			2-Amino-2-methyl-1-propanol		1.0%	8.37	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	3.84	0.0001%	0.0001%
	BMC B-8850	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	114.81	0.0031%	0.0043%
			Methanol		0.5%	1.15	0.0000%	0.0000%
<b>TOTAL</b>							<b>0.0213%</b>	<b>0.0210%</b>

<b>SUMMARY</b>	by vol %	by weight %
	<b>0.033%</b>	<b>0.026%</b>