



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) 37-125-23596-00	Project Number	Acres 384.1662	
Address 380 Southpointe Blvd, Suite 300		Well Farm Name Painter	Well # #1H	Serial #	
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Chartiers	
Phone 724-743-6700	Fax 724-743-6490	Email		USGS 7.5 min. quadrangle map Midway	
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/Plum Road Meter Vault	Source 8	2,278,248
2.		
3.		
4.		
5.		
6.		
Recycled Water Used		437,136 gallons
Other Base Fluid(s)/Components Used		
1.		
2.		
Total Base Fluid(s)/Components Used		2,715,384 gallons

PERFORATION RECORD					
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation
1	6/15/11	9550'MD	9362'MD	Horizontal	Marcellus Shale
2	6/29/11	9568'MD	9080'MD	Horizontal	Marcellus Shale
3	6/30/11	8986'MD	8798'MD	Horizontal	Marcellus Shale
4	7/1/11	8704'MD	8516'MD	Horizontal	Marcellus Shale
5	7/1/11	8422'MD	8234'MD	Horizontal	Marcellus Shale
6	7/5/11	8140'MD	7952'MD	Horizontal	Marcellus Shale
7	7/5/11	7858'MD	7670'MD	Horizontal	Marcellus Shale
8	7/6/11	7576'MD	7388'MD	Horizontal	Marcellus Shale
9	7/7/11	7294'MD	7106'MD	Horizontal	Marcellus Shale
10					
11					
12					

STIMULATION FLUID ADDITIVES-Continued

Descriptive Additive Type	Chemical Component(s) listed on Material Safety Sheet of the Additive	CAS No. of Chemical Component	Chemical Component % By Volume in Additive	Chemical Component % By Volume used in Each Stage						
				Stage No. 7	Stage No. 8	Stage No. 9	Stage No. 10	Stage No. 11	Stage No. 12	
FR-200W	N/A	N/A	N/A	0.0299%	0.0274%	0.0269%				
FR-300W	N/A	N/A	N/A	0.0000%	0.0000%	0.0000%				
MX 588-2	N/A	N/A	N/A	0.0071%	0.0071%	0.0069%				
NE100	N/A	N/A	N/A	0.0003%	0.0003%	0.0003%				
FE100L	N/A	N/A	N/A	0.0010%	0.0010%	0.0009%				
37% HCL	HCL	7647-01-0	37%	0.0575%	0.0599%	0.0507%				
CI-100	Methanol	67-56-1	93%	0.0006%	0.0006%	0.0005%				
CI-100	Propargyl Alcohol	107-19-7	4%	0.0000%	0.0000%	0.0000%				
MC B-8650	Glutaraldehyde	111-30-8	49%	0.0036%	0.0036%	0.0036%				
MC B-8650	Methanol	67-56-1	1%	0.0001%	0.0001%	0.0001%				
MC B-8520	4,4-Dimethylloxazolidine	51200-87-4	77%	0.0149%	0.0150%	0.0147%				
MC B-8520	3,4,4-Trimethylloxazolidine	75673-43-7	5%	0.0010%	0.0010%	0.0010%				
MC B-8520	2-Amino-2-methyl-1-propanol	124-68-5	1%	0.0002%	0.0002%	0.0002%				
MC B-8520	Formaldehyde Amine	56652-26-7	0%	0.0001%	0.0001%	0.0001%				

Please insert additional copies of this page if additional rows/stages are needed.

STIMULATION INFORMATION (WELL)			
Open Flow Production: Omc/d @ 24hrs pos treatment	24 Hr. Open Flow Production: Omc/d @ 24hrs pos treatment	24 Hr. Shut-in Pressure: N/A @ 24hrs post treatment	Flow Back Date:
STIMULATION INFORMATION (STAGE)			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
Stage No.: 1	Stimulation Date: 6/29/11	Pump Rate: 66.7	
Pressure (psi): 7787	Shut-in Surface Pressure: 3733	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 307,373	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 2	Stimulation Date: 6/29/11	Pump Rate: 68	
Pressure (psi): 6592	Shut-in Surface Pressure: 3780	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 308,564	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 3	Stimulation Date: 6/30/11	Pump Rate: 68	
Pressure (psi): 5930	Shut-in Surface Pressure: 4068	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 306,315	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 4	Stimulation Date: 7/1/11	Pump Rate: 70	
Pressure (psi): 5883	Shut-in Surface Pressure: 3909	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 303,768	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 5	Stimulation Date: 7/1/11	Pump Rate: 65.5	
Pressure (psi): 6816	Shut-in Surface Pressure: 3956	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 259,557	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 6	Stimulation Date: 7/5/11	Pump Rate: 65.2	
Pressure (psi): 6419	Shut-in Surface Pressure: 4268	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 306,078	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
Stage No.: 7	Stimulation Date: 7/6/11	Pump Rate: 69.3	
Pressure (psi): 6176	Shut-in Surface Pressure: 4080	5 Minute Shut-in Surface Pressure: N/A	
Propping Agent Type: Sand	Propping Agent Amount: 305,252	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh	
WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)			
Name Frac Tech	Name Multi-Chem	Name CDK Perforating	
Address 16858 IH20	Address 200 Detroit Street	Address 427 Half Moon Way	
City - State - Zip Cisco, TX 76437	City - State - Zip Washington, PA	City - State - Zip Runaway Bay, TX 76426	
Phone 817-850-1008	Phone 325-486-7489	Phone (940)577-4300	
<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>			
Well Operator's Signature		DEP USE ONLY	
		Reviewed by:	Date:
Title: Completion Engineer: Mike Hurey		Comments:	
Date: 7/28/11			

STIMULATION INFORMATION (STAGE- Continued)

Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).

Stage No.: 8	Stimulation Date: 7/6/11	Pump Rate: 69.3
Pressure (psi): 5571	Shut-in Surface Pressure: 4215	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 305,588	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh
Stage No.: 9	Stimulation Date: 7/7/11	Pump Rate: 67.8
Pressure (psi): 5671	Shut-in Surface Pressure: 4461	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 305,051	Propping Agent Size: 100 Mesh, 30/50 Mesh, 40/70 Mesh
Stage No.: 10	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 11	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 12	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 13	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 14	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 15	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 16	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:
Stage No.: 17	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size:



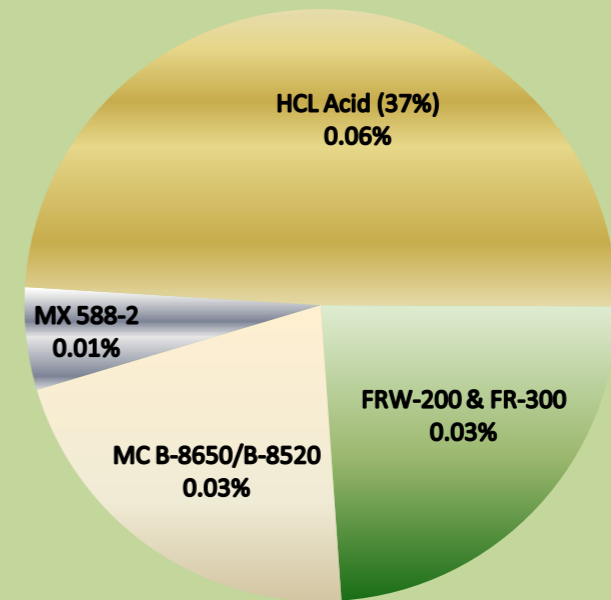
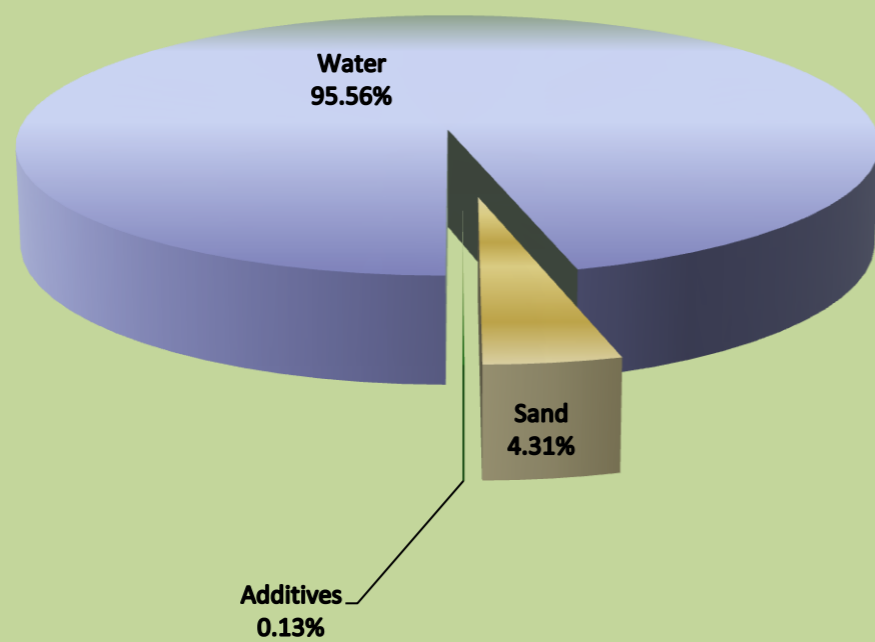
RANGE RESOURCES

Painter Unit #1H
Well API: 37-125-23596

Completion Date: June 29 - July 7, 2011
Township: Chartiers

% 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	2,712,549 gal	95.56%	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	122,381 gal	4.31%	Drinking water filtration, play sand
FRW-200 & FR-300	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	860 gal	0.03%	Water treatment; soil conditioner; some children's toys
MC B-8650/B-8520	Antimicrobial Agent	Eliminates bacteria in the water that produce corrosive byproducts	Diluted at one-half gallon per 1,000 gallons of water	776 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	202 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)	1,772 gal	0.06%	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	Hazardous Component CAS No.	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	7647-01-0	Cleans perforation	37.0%	1772.37	0.0624%	0.0256%
	CI-100	Corrosion Inhibitor	Methanol	67-56-1	Protects casing	95.0%	20.63	0.0007%	0.0005%
			Propargyl Alcohol	107-19-7	Protects casing	5.0%	0.89	0.0000%	0.0000%
	NE100	Non- Emulsifer	No hazardous ingredients	N/A	Prevents emulsions	0.0%	N/A	N/A	N/A
FE100L	Iron Chelator	No hazardous ingredients	N/A	Prevents precipitation	0.0%	N/A	N/A	N/A	
							TOTAL	0.0632%	0.0261%
Friction Reducer (FracTech)	FRW-200 & FR-300	Friction Reducer	No hazardous ingredients	N/A	Reduce friction down casing	0.0%	N/A	N/A	N/A
Scale Inhibitor (Multichem)	MX 588-2	Scale Inhibitor	No hazardous ingredients	N/A	prevents scale deposits	0.0%	N/A	N/A	N/A
Antibacterial Agent (Multichem)	MC B-8520	Antibacterial Agent	4,4-Dimethyloxazolidine	51200-87-4	eliminates bacteria in water	78.0%	426.36	0.0150%	0.0141%
			3,4,4-Trimethyloxazolodine	75673-43-7		5.0%	27.91	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol	124-68-5		1.0%	5.85	0.0002%	0.0002%
			Formaldehyde Amine	56652-26-7		0.5%	2.55	0.0001%	0.0001%
	MC B-8650	Antibacterial Agent	Glutaraldehyde	111-30-8	eliminates bacteria in water	50.0%	80.05	0.0028%	0.0039%
			Methanol	67-56-1		0.5%	0.80	0.0000%	0.0000%
							TOTAL	0.0191%	0.0192%
							SUMMARY	by vol %	by weight %
								0.082%	0.045%