



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

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

WELL RECORD AND COMPLETION REPORT

Well Operator Range Resources – Appalachia, LLC		DEP ID# 141142	Well API # (Permit / Reg) 37-125-23883	Project Number	Acres 686
Address 380 Southpointe Blvd. Suite 300			Well Farm Name Miller John Unit	Well # 5H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Canton	
Phone 724-743-6700	Fax 724-743-6790	USGS 7.5 min. quadrangle map Washington West			
Check all that apply: <input checked="" type="checkbox"/> Original Well Record <input checked="" type="checkbox"/> Original Completion Report <input type="checkbox"/> Amended Well Record <input type="checkbox"/> Amended Completion Report					

WELL RECORD Also complete Log of Formations on back (page 2)

Well Type	<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Oil	<input type="checkbox"/> Combination Oil & Gas	<input type="checkbox"/> Injection	<input type="checkbox"/> Storage	<input type="checkbox"/> Disposal	
Drilling Method	<input type="checkbox"/> Rotary – Air	<input checked="" type="checkbox"/> Rotary – Mud	<input type="checkbox"/> Cable Tool				
Date Drilling Started 1/4/2010	Date Drilling Completed 8/18/2010	Surface Elevation 1238 ft.	Total Depth – Driller 10409 ft	Total Depth - Logger 10409 ft			
Casing and Tubing		Cement returned on surface casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cement returned on coal protective casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A					
Hole Size	Pipe Size	Wt.	Thread / Weld	Amount in Well (ft)	Material Behind Pipe Type and Amount	Packer / Hardware / Centralizers Type Size Depth	Date Run
30"	26"	106#	Thread	40'	Driven	--- 26" 40'	1/4/10
22"	20"	94#	Thread	240'	Class A GB, 270 sx	GS 20" 240'	1/19/10
17-1/2"	13-3/8"	48#	Thread	403'	Class A GB, 340 sx	GS 13-3/8" 403'	1/27/10
12-1/4"	9-5/8"	36#	Thread	2020'	Class A GB, 670 sx	FS 9-5/8" 2020'	2/1/10
8-3/4"	5-1/2"	20#	Thread	10391'	Hal light, 1660 sx	FS 5-1/2" 10391'	8/17/10
					Fracem 220 sx		

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
11-14-2010	10,266' MD	8,055' MD	11-19-2010	Marcellus Shale	Slick H2O	58,018 bbl	Sand	3,965 Klb	66.5 bpm
Natural Open Flow Too small to measure			Natural Rock Pressure Too small to measure						
After Treatment Open Flow Omcf/d @ 24hrs pos treatment			After Treatment Rock Pressure N/A @ 24hrs post treatment						

Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.

Name Patterson UTI	Name Universal Well Services	Name Frac Tech
Address 4501 Lamesa Highway	Address 730 Braddock View Dr	Address 16858 IH20
City - State - Zip Snyder, TX 79549	City - State - Zip Mt Braddock, PA 15465	City - State - Zip Cisco, TX 76437
Phone 325-574-6300	Phone 724-430-6201	Phone 817-850-1008



RANGE RESOURCES

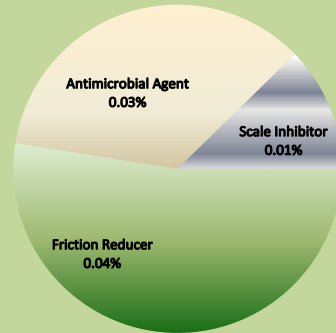
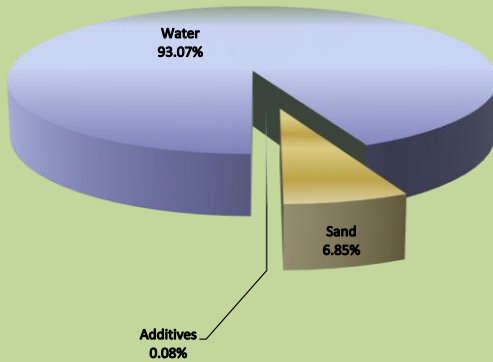
John Miller Unit #5H
Well API: 37-125-23883

Completion Date: November 14 - 19th , 2010
Township: Canton

% Composition of Hydraulic Fracture Fluid (by volume)

Product Name	Additive	Purpose	Use and Dilution	Volume	Overall %	Common Uses
Water	Carrier Fluid	Creates fracture network in shale and carry proppant to the formation	Primary constituent	2,434,801 gal	93.07%	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	179,232 gal	6.85%	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	1,033 gal	0.04%	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	0,692 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	243 gal	0.01%	Water treatment, household cleaners, de-icing agent

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
Friction Reducer (FracTech)	FRW-200	Friction Reducer	No hazardous ingredients	Reduce friction down casing	0.0%	N/A	N/A	N/A
Scale Inhibitor (Multichem)	MX 588-2	Scale Inhibitor	No hazardous ingredients	prevents scale deposits	0.0%	N/A	N/A	N/A
Antibacterial Agent (Multichem)	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	380.21	0.0145%	0.0131%
			3,4,4-Trimethyloxazolidine		5.0%	24.89	0.0010%	0.0008%
			2-Amino-2-methyl-1-propanol		1.0%	5.22	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	2.27	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	71.39	0.0027%	0.0037%
			Methanol		0.5%	0.71	0.0000%	0.0000%
TOTAL							0.0185%	0.0179%
SUMMARY							by vol %	by weight %
							0.019%	0.018%