



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) 37-125-24111	Project Number	Acres 820
Address 380 Southpointe Blvd. Suite 300			Well Farm Name Bednarski Unit	Well # 9H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Hopewell	
Phone 724-743-6700	Fax 724-743-6790	USGS 7.5 min. quadrangle map Washington West			
Check all that apply: Original Well Record Original Completion Report <input type="checkbox"/> Amended Well Record <input checked="" 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	Date Drilling Completed	Surface Elevation	Total Depth – Driller	Total Depth - Logger		

Casing and Tubing

Cement returned on surface casing? Yes No
 Cement returned on coal protective casing? Yes No 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

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From To		Date	Interval Treated	Fluid Type Amount	Propping Agent Type Amount	Average Injection		
2-9-2011	10,362'MD 7,290'MD		2-21-2011	Marcellus Shale	Slick H2O 74,263bbl	Sand 3,348klb	68.0 bpm		
Natural Open Flow	Too small to measure		Natural Rock Pressure	Too small to measure		Hours	Days		
After Treatment Open Flow	Omc/d @ 24hrs pos treatment		After Treatment Rock Pressure	N/A @ 24hrs post treatment		Hours	Days		

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

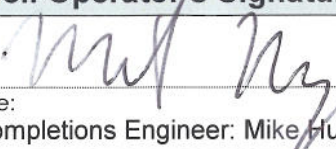
Name Patterson UTI	Name Universal Well Services	Name Frac Tech
Address 4501 Lamesa Highway	Address 730 Braddock View Dr	Address 16858 IH20
City - State - Zip Snyder, TX 79549	City - State - Zip Mt. Braddock, PA 15465	City - State - Zip Cisco, TX 76437
Phone 325-574-6300	Phone 724-430-6201	Phone 817-850-1008

LOG OF FORMATIONS

Well API#: 37-081-20164

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data

Please delete empty rows if necessary to make all of page 2 fit on one page.

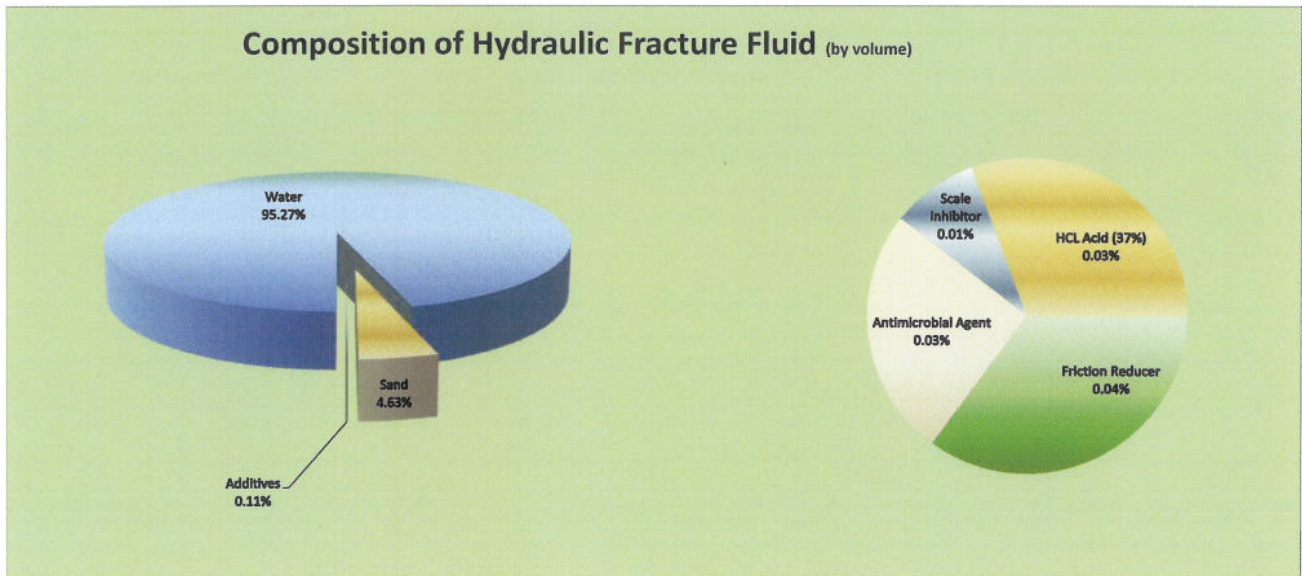
<p>Well Operator's Signature: </p> <p>Title: Completions Engineer: Mike Hurey Date: 3-18-2011</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center; padding: 5px;">DEP USE ONLY</th> </tr> <tr> <td style="width: 70%;">Reviewed by:</td> <td style="width: 30%;">Date:</td> </tr> <tr> <td colspan="2">Comments:</td> </tr> </table>	DEP USE ONLY		Reviewed by:	Date:	Comments:	
DEP USE ONLY							
Reviewed by:	Date:						
Comments:							



Bednarski Unit #9H
Well API: 37-125-24111

Completion Date: February 14 - 21, 2011
Township: Hopewell

% 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	3,115,570 gal	95.27%	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	151,373 gal	4.63%	Drinking water filtration, play sand
FRW-200 & FRW-300	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	1,212 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	0,881 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	0,307 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)	1,063 gal	0.03%	Swimming pool and household cleaner





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%	1063.42	0.0325%	0.0132%
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	95.0%	12.38	0.0004%	0.0003%
			Propargyl Alcohol	Protects casing	5.0%	0.53	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	
TOTAL							0.0329%	0.0135%

Friction Reducer (FracTech)	RW-200 & FRW-30	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)	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	484.05	0.0148%	0.0138%
			3,4,4-Trimethyloxazolidine		5.0%	31.69	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	6.64	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	2.89	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	90.89	0.0028%	0.0039%
			Methanol		0.5%	0.91	0.0000%	0.0000%
TOTAL							0.0189%	0.0189%

SUMMARY	by vol %	by weight %
	0.052%	0.032%