



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

DEP USE ONLY	
Site ID	Primary Fac ID
Client Id	Subfacility Id

## Well Record and Completion Report

Well Operator Range Resources - Appalachia, LLC		DEP ID# 141142	Well API# (Permit / Reg) <b>37125-24026</b>		Project Number	Acres 506
Address 380 Southpointe Blvd, Suite 300			Well Farm Name Huffy Family Unit		Well # 7H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Somerset		
Phone 724-743-6700	Fax 724-743-6790	USGS 7.5 min. quadrangle map Hackett				
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 the 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 3/30/10		Date Drilling Completed 7/28/10		Surface Elevation 1165 ft.	Total Depth - Driller 11741 ft.	Total Depth - Logger 11741 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"	108#	Thread	40'	Driven	-	26"	40'	3/30/10
24"	20"	94#	Thread	254'	Class A GB, 300 sx	GS	20"	254'	4/12/10
17-1/2"	13-3/8"	54.5#	Thread	400'	Glass Block, 900 sx	GS	13-3/8"	400'	4/14/10
12-1/4"	9-5/8"	36#	Thread	2119'	GasBlock w/cr3, 720 sx	GS	9-5/8"	2119'	4/18/10
8-3/4"	5-1/2"	20#	Thread	11739'	Extendacem 1075 sx	FS	5-1/2"	11739'	7/28/10
Hal Light, 410 sx, Fracem 480 sx									

### COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection Rate
9-20-10	11,644	7,749	9-24-10	Marcellus Shale	Slick H2O	129,778bbl	Sand	6,973k lb	63.2 bpm
Natural Open Flow			Natural Rock Pressure						
too small to measure			too small						
After Treatment Open Flow			After Treatment Rock Pressure						
Not determinable			Not determinable						

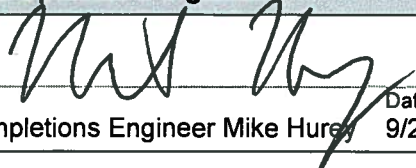
**Well Service Companies** -- Provide the name, address, and phone number of all well service companies involved.

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 814-850-1008

**LOG OF FORMATIONS**Well API#: **37-125-24026-***(If you will need more space than this page, please photocopy the blank form before filling it in.)*

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0'	40'				Drillers Log
Sand	40'	52'				Drillers Log
Sand and Shale	52'	142'				Drillers Log
Sand	142'	212'				Drillers Log
Sand and Shale	212'	283'				Drillers Log
Shale	283'	344'				Drillers Log
Coal	344'	350'				Drillers Log
Shale	350'	532'				Drillers Log
Sand and Shale	532'	562'				Drillers Log
Shale and Redrock	562'	712'				Drillers Log
Sand and Shale	712'	1312'				Drillers Log
Shale	1312'	1372'				Drillers Log
Sand and Shale	1372'	2580'				Drillers Log
Shale	2580'	3425'				Drillers Log
Sand	3425'	3550'				Drillers Log
Shale	3550'	3920'				Drillers Log
Sand and Shale	3920'	4010'				Drillers Log
Shale	4010'	4510'				Drillers Log
Sand and Shale	4510'	4540'				Drillers Log
Shale	4540'	4870'				Drillers Log
Sand and Shale	4870'	4900'				Drillers Log
Sand	4900'	5270'				Drillers Log
Shale	5270'	5400'				Drillers Log
Sand	3430'	3550'				Drillers Log
Sand and Shale	3550'	4000'				Drillers Log
Shale	4000'	4820'				Drillers Log
Sand and Shale	4820'	5270'				Drillers Log
Shale	5270'	5400'				Drillers Log
Sand and Shale	5400'	5740'				Drillers Log
Sand	5740'	5856'				Drillers Log
Shale	5856'	6300'				Drillers Log
Sand and Shale	6300'	6740'				Drillers Log
Shale	6740'	7027'				Drillers Log
Horizontal						
Shale	6700'	7024'				Drillers Log
Limestone	7024'	7104'				Drillers Log
Shale	7104'					Drillers Log
Drillers Total Depth		11741				Drillers Log

*I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record and Completion Report has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

**Well Operator's Signature**


Title: Completions Engineer Mike Hurey Date: 9/28/10

**DEP USE ONLY**

Reviewed by:

Date:

Comments:



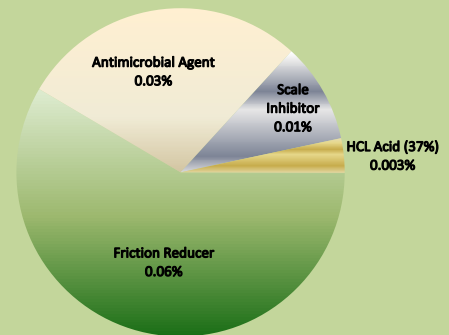
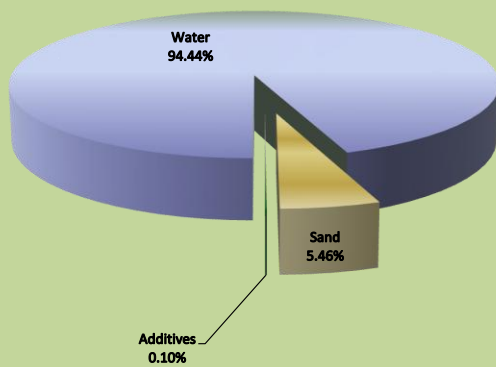
RANGE RESOURCES

Huffy Unit #7H  
Well API: 37-125-24026

Completion Date: September 20 - 24, 2010  
Township: Somerset

% 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	5,450,677 gal	94.44%	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	315,204 gal	5.46%	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	3,222 gal	0.06%	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	1,562 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	544 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)	187 gal	0.003%	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%	187.00	0.0032%	0.0013%
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	95.0%	0.00	0.0000%	0.0000%
			Propargyl Alcohol	Protects casing	5.0%	0.00	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	N/A
<b>TOTAL</b>							<b>0.0032%</b>	<b>0.0013%</b>

<b>Friction Reducer (FracTech)</b>	FRW-200	Friction Reducer	No hazardous ingredients	Reduce friction down casing	0.0%	N/A	N/A	N/A
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<b>Scale Inhibitor (Multichem)</b>	MX 588-2	Scale Inhibitor	No hazardous ingredients	prevents scale deposits	0.0%	N/A	N/A	N/A
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<b>Antibacterial Agent (Multichem)</b>	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	858.21	0.0149%	0.0137%
			3,4,4-Trimethyloxazolodine		5.0%	56.18	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	11.77	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	5.12	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	161.14	0.0028%	0.0038%
			Methanol		0.5%	1.61	0.0000%	0.0000%
<b>TOTAL</b>							<b>0.0190%</b>	<b>0.0187%</b>

<b>SUMMARY</b>	by vol %	by weight %
	<b>0.022%</b>	<b>0.020%</b>