



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) 37125-23934		Project Number	Acres 506
Address 380 Southpointe Blvd, Suite 300			Well Farm Name Huffy Family Unit		Well # 4H	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: Original Well Record Original Completion Report Amended Well Record 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 1/19/10	Date Drilling Completed 6/15/10	Surface Elevation 1165 ft.	Total Depth - Driller 10673 ft.	Total Depth - Logger 10673 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'	1/19/10
24"	20"	94#	Thread	240'	Class A GB, 275 sx	GS 20" 240'	1/28/10
17-1/2"	13-3/8"	48#	Thread	401'	Class A GB, 320 sx	GS 13-3/8" 401'	1/29/10
12-1/4"	9-5/8"	36#	Thread	2111'	Gas Block, 700 sx	GS 9-5/8" 2111'	2/4/10
8-3/4"	5-1/2"	20#	Thread	10660'	Extendacem 1095 sx, Hal Light, 275 sx, Fracem 365 sx	FS 5-1/2" 10660'	6/15/10

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection Rate
8-30-10	10,541	7,699	9-1-10	Marcellus Shale	Slick H2O	90,446bbl	Sand	5,068k lb	67.1 bpm

Natural Open Flow	Too small to measure	Natural Rock Pressure	Too small	Hours	Days
After Treatment Open Flow	Not enough time to determine	After Treatment Rock Pressure	Not determinable	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

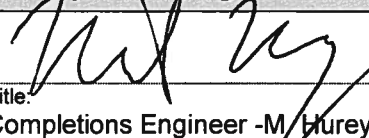
Well API#: 37-125-23934-

(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'	55'				Drillers Log
Sand and Shale	55'	91'				Drillers Log
Shale	91'	170'				Drillers Log
Sand and Shale	170'	281'				Drillers Log
Shale	281'	332'				Drillers Log
Sand and Shale	332'	432'				Drillers Log
Shale	432'	565'				Drillers Log
Sand and Shale	565'	850'				Drillers Log
Sand	850'	904'				Drillers Log
Shale	904'	958'				Drillers Log
Sand	958'	1171'				Drillers Log
Sand and Shale	1171'	1245'				Drillers Log
Shale	1245'	1312'				Drillers Log
Sand and Shale	1312'	1470'				Drillers Log
Sand	1470'	1642'				Drillers Log
Sand and Shale	1642'	1780'				Drillers Log
Sand	1780'	2052'				Drillers Log
Sand and Shale	2052'	2200'				Drillers Log
Shale	2200'	2320'				Drillers Log
Sand	2320'	2350'				Drillers Log
Sand and Shale	2350'	2552'				Drillers Log
Shale	2552'	3430'				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'	5432'				Drillers Log
Sand	5432'	5856'				Drillers Log
Sand and Shale	5856'	6320'				Drillers Log
Sand	6320'	6350'				Drillers Log
Shale	6350'	7700'				Drillers Log
Horizontal						
Shale	6800'	7170'				Drillers Log
Limestone	7170'	7328'				Drillers Log
Shale	7328'					Drillers Log
Drillers Total Depth		10673'				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 -M/ Hurey

Date: 9/27/10

DEP USE ONLY

Reviewed by:

Date:

Comments:



RANGE RESOURCES

Huffy Unit #4H

Well API: 37-125-23934

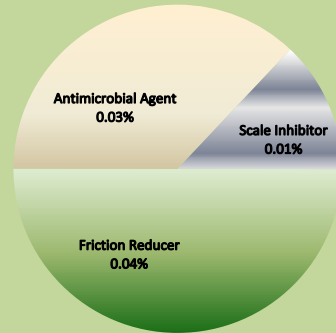
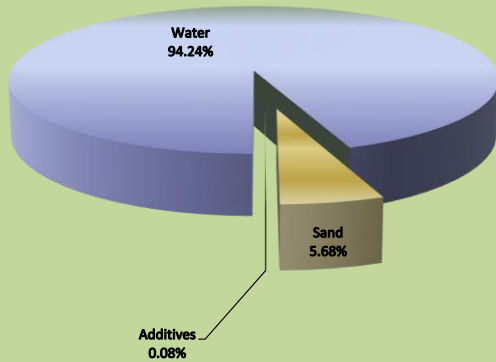
Completion Date: 8/30 - 9/1/2010

Township: Somerset

% 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	3,798,718 gal	94.24%	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	229,111 gal	5.68%	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	1,443 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	1,069 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	375 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%	587.34	0.0146%	0.0134%
			3,4,4-Trimethyloxazolidine		5.0%	38.45	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	8.06	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	3.51	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	60.0%	132.34	0.0033%	0.0045%
			Ethanol		1.0%	2.21	0.0001%	0.0001%
TOTAL							0.0192%	0.0191%
SUMMARY							by vol %	by weight %
							0.019%	0.019%