



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>37125-23905</b>	Project Number	Acres 960
Address 380 Southpointe Blvd, Suite 300			Well Farm Name Chappel Unit	Well # 7H	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: <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 3/12/10	Date Drilling Completed 8/9/10	Surface Elevation 1140 ft.	Total Depth – Driller 11427 ft.	Total Depth - Logger 11427 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	37	Driven	---	26"	37	3/12/10
24"	20"	81#	Thread	245'	Uniblock, 300 sx	GS	20"	245'	4/6/10
12-1/4"	9-5/8"	36#	Thread	1839'	Uniblock, 800 sx	GS	9-5/8"	1839'	4/9/10
8 3/4"	5 1/2"	20#	Thread	11384'	Halliburton Light, 1400 sx	FS	5 1/2"	11384'	8/8/10
					Fraccem 510 sx				

### COMPLETION REPORT

Perforation Record			Stimulation Record							
Date	Interval Perforated From	To	Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate	
					Type	Amount	Type	Amount		
12-16-2010	11,284'MD	7,184'MD	1-3-2011	Marcellus Shale	Slick H2O	103,154 bbl	Sand	7,036Klb	65.5 bpm	
Natural Open Flow			Too small to measure		Natural Rock Pressure		Too sml to measure		Hours	Days
After Treatment Open Flow			Omcfd@24 hrs post 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#: 37-125-23905-

*(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'	310'				Drillers Log
Sand	310'	450'				Drillers Log
Shale	450'	760'				Drillers Log
Sand	760'	970'				Drillers Log
Shale and shale	970'	1000'				Drillers Log
Shale	1000'	1300'				Drillers Log
Sand	1300'	1390'				Drillers Log
Shale	1390'	1470'				Drillers Log
Sand and Shale	1470'	1520'				Drillers Log
Sand	1520'	1660'				Drillers Log
Sand and Shale	1660'	1730'				Drillers Log
Shale	1730'	6100'				Drillers Log
Limestone	6100'	6140'				Drillers Log
Shale	6140'	6540'				Drillers Log
Limestone	6540'	6547'				Drillers Log
Horizontal						
Shale	5300'	6530'				Drillers Log
Limestone	6530'	6590'				Drillers Log
Shale	6590'					Drillers Log
Drillers Total Depth		11427'				

*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.*

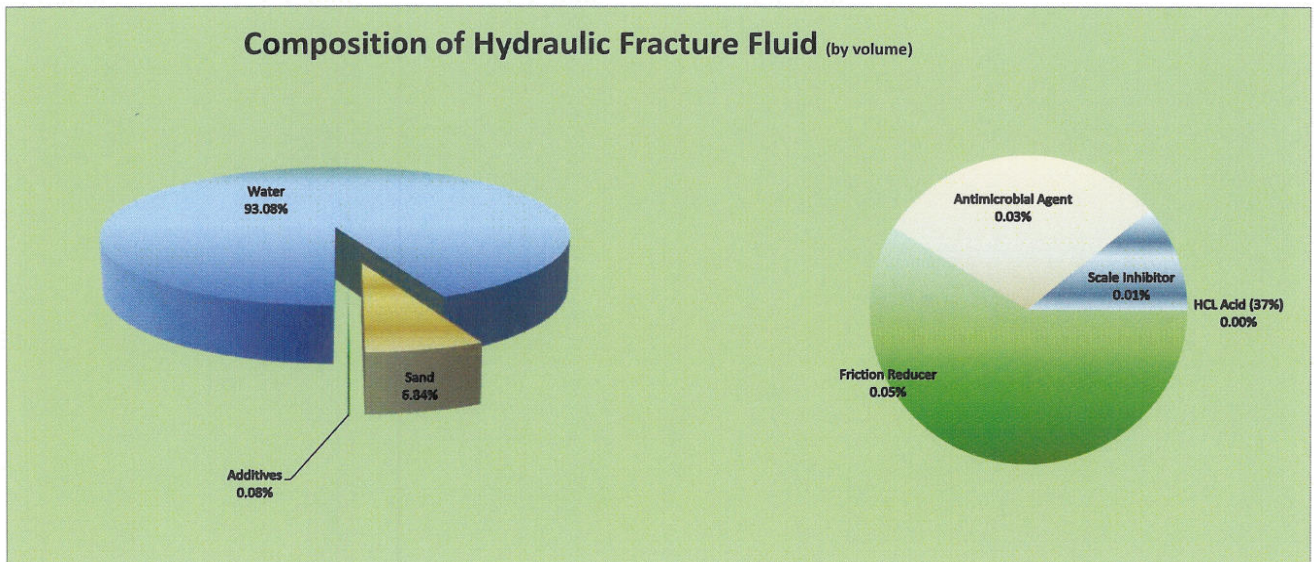
<b>Well Operator's Signature</b>	<b>DEP USE ONLY</b>
Title: Completions Engineer: R. Archibeque Date: 2-18-2011	Reviewed by: _____ Date: _____  Comments: _____



**Chappel Unit #7H**  
**Well API: 37-125-23905**

**Completion Date: February 3, 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	4,328,532 gal	93.08%	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	318,041 gal	6.84%	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	2,324 gal	0.05%	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	1,183 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	441 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)	0 gal	0.00%	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%	0.00	0.0000%	0.0000%
	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	
<b>TOTAL</b>							<b>0.0000%</b>	<b>0.0000%</b>

<b>Friction Reducer (FracTech)</b>	RW-200 & FRW-30	Friction Reducer	No hazardous ingredients	Reduce friction down casing	0.0%	N/A	N/A	N/A
------------------------------------	-----------------	------------------	--------------------------	-----------------------------	------	-----	-----	-----

<b>Scale Inhibitor (Multichem)</b>	MX 588-2	Scale Inhibitor	No hazardous ingredients	prevents scale deposits	0.0%	N/A	N/A	N/A
------------------------------------	----------	-----------------	--------------------------	-------------------------	------	-----	-----	-----

<b>Antibacterial Agent (Multichem)</b>	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	649.97	0.0140%	0.0126%
			3,4,4-Trimethyloxazolodine		5.0%	42.55	0.0009%	0.0008%
			2-Amino-2-methyl-1-propanol		1.0%	8.92	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	3.88	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	122.04	0.0026%	0.0035%
			Methanol		0.5%	1.22	0.0000%	0.0000%
<b>TOTAL</b>							<b>0.0178%</b>	<b>0.0172%</b>

<b>SUMMARY</b>	by vol %	by weight %
	<b>0.018%</b>	<b>0.017%</b>