



**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) 37-003-21982	Project Number	Acres 408
Address 380 Southpointe Blvd. Suite 300			Well Farm Name Yute	Well # 4H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Allegheny	Municipality Frazer	
Phone 724-743-6700	Fax 724-743-6790	USGS 7.5 min. quadrangle map New Kensington West			
Check all that apply: <input type="checkbox"/> Original Well Record <input checked="" type="checkbox"/> Original Completion Report <input checked="" 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 12/20/08	Date Drilling Completed 11/5/10	Surface Elevation 1265 ft.	Total Depth – Driller 9850 Ft	Total Depth - Logger 9850 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	52'	Driven	--- 26" 52'	12/20/08
17-1/2"	13-3/8"	54.50#	Thread	654'	Class A Cement, 500 sx	GS 13-3/8" 654'	2/8/09
12-1/4"	9-5/8"	36#	Thread	2047'	50/50 POZ, 365 sxs, Class A 196 sx,	GS 9-5/8" 2047'	2/12/09
8-3/4"	5-1/2"	20#	Thread	9793'	HLC 1390 sx	FS 5-1/2" 9793'	11/5/10
					Varicem 660 sx		

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
12-1-2010	9,591	7,097	12-7-2010	Marcellus Shale	Slick H2O	74,243 bbl	Sand	4,792 K lb	65.3 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

LOG OF FORMATIONS

Well API#: 37-003-21982-

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0'	65'				Drillers Log
Shale	65'	155'			½" @ 80'	Drillers Log
Red Rock	155'	185'				Drillers Log
Sand	185'	257'				Drillers Log
Red Rock	257'	320'				Drillers Log
Sandy Shale	320'	350'				Drillers Log
Sand	350'	370'				Drillers Log
Redrock	370'	445'				Drillers Log
Sand	445'	460'				Drillers Log
Shale	460'	475'				Drillers Log
Sand	475'	520'				Drillers Log
Red Rock	520'	550'				Drillers Log
Shale	550'	600'				Drillers Log
Redrock/Shale	600'	615'				Drillers Log
Sandy Shale/Coal (5")	615'	625'				Drillers Log
Redrock	625'	640'				Drillers Log
Shale	640'	660'				Drillers Log
Redrock	660'	680'				Drillers Log
Sand	680'	735'				Drillers Log
Shale	735'	760'				Drillers Log
Sand and Shale	760'	2260'			Wtr@1840'	Drillers Log
Sand	2260'	2400'				Drillers Log
Shale	2400'	2530'				Drillers Log
Sand	2530'	2770'				Drillers Log
Sandy Shale	2770'	3080'				Drillers Log
Shale	3080'	3340'				Drillers Log
Sand	3340'	3420'				Drillers Log
Shale	3420'	3665'				Drillers Log
Sand	3665'	3790'				Drillers Log
Shale	3790'	4255'				Drillers Log
Sand	4255'	4300'				Drillers Log
Shale	4300'	5900'				Drillers Log
Sand	5900'	6100'				Drillers Log
Shale	6100'	6370'				Drillers Log
Sand	6370'	6774'				Drillers Log
Limestone	6774'	6918'				Drillers Log
Shale	6918'	7020'				Drillers Log
Limestone	7020'	7182'				Drillers Log
Horizontal						Drillers Log
Shale	6250'	6980'				Drillers Log
Limestone	6900'	7030"				Drillers Log
Shale	6920'					Drillers Log
Drillers Total Depth		9850'				Drillers Log

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

Well Operator's Signature:

DEP USE ONLY



Reviewed by:

Date:

 Title: Completion Engineer: Matthew Ockree
 Date: 12-13-2010

Comments:

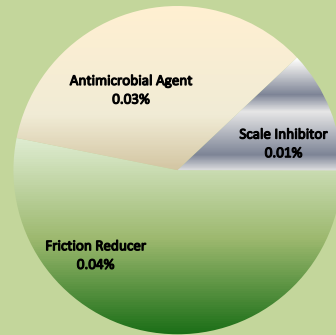
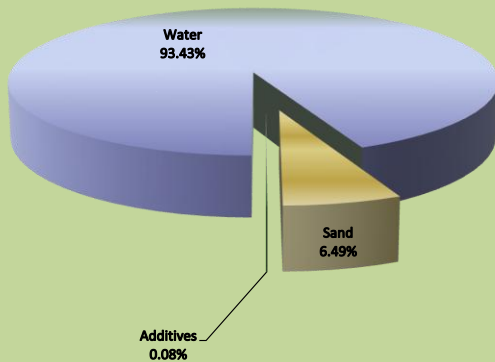


Yute Unit #4H
Well API: 37-003-21982

Completion Date: 11/29/10 - 12/7/10
Township: Frazier

% 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	3,115,601 gal	93.427%	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	216,599 gal	6.495%	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	1,377 gal	0.041%	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	0,903 gal	0.027%	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	313 gal	0.009%	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%	496.13	0.0149%	0.0135%
			3,4,4-Trimethyloxazolidine		5.0%	32.48	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	6.81	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	2.96	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	93.16	0.0028%	0.0038%
			Methanol		0.5%	0.93	0.0000%	0.0000%
TOTAL							0.0190%	0.0184%
SUMMARY							by vol %	by weight %
							0.019%	0.018%