



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) 37-125-23852	Project Number	Acres 441
Address 380 Southpointe Blvd. Suite 300			Well Farm Name Sierzega Unit	Well # 2H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Washington	Municipality Amwell	
Phone 724-743-6700	Fax 724-743-6790	USGS 7.5 min. quadrangle map Amity			

Check all that apply: Original Well Record Original Completion Report Amended Well Record 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 12/3/2009	Date Drilling Completed 5/24/2010	Surface Elevation 1147ft.	Total Depth – Driller 12000 ft	Total Depth - Logger 12000 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	32'	Driven	--- 26" 32'	12/3/09
24"	20"	81.3#	Thread	285'	Class A Gas Block, 270sx	GS 20" 285'	12/8/09
17-1/2"	13-3/8"	54.5#	Thread	1356"	Class A Gas Block 224 sx	GS 13-3/8" 1356'	12/12/09
12-1/4"	9-5/8"	40#	Thread	2954'	Class A Gas Block, 985 sx	GS 9-5/8" 2954'	5/10/10
8-3/4"	5-1/2"	20#	Thread	22593'	Extendacem, 1020 sx	FS 5-1/2" 11593"	5/25/10
Hal light, 380 sx, Fraccem 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
12-7-2010	11,475' MD	7,992' MD	12-18-2010	Marcellus Shale	Slick H2O	98,029 bbl	Sand	6,060 Klb	60.3 bpm
Natural Open Flow Too small to measure			Natural Rock Pressure		Too small to measure		Hours	Days	
After Treatment Open Flow Omcf/d @ 24hrs 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.

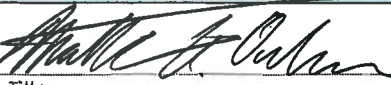
Name Patterson UTI	Name Universal Well Services	Name Frac Tech
Address 4501 Lamesa Highway	Address 730 Braddock View Dr	Address 16858 IH20
City - State - Zip Snyder, TX 79549	City - State - Zip Mt. Braddock, PA 15465	City - State - Zip Cisco, TX 76437
Phone 325-574-6300	Phone 724-430-6201	Phone 817-850-1008

LOG OF FORMATIONS

Well API#: 37-125-23852

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'	170'				Drillers Log
Shale	170'	230'				Drillers Log
Sand and Shale	230'	620'				Drillers Log
Shale	620'	690'				Drillers Log
Sand and Shale	690'	1000'				Drillers Log
Shale	1000'	1070'				Drillers Log
Sand and Shale	1070'	1130'				Drillers Log
Shale	1130'	1310'				Drillers Log
Sand and Shale	1310'	1480'				Drillers Log
Shale	1480'	1660'				Drillers Log
Sand and Shale	1660'	1770'				Drillers Log
Shale	1770'	1810'				Drillers Log
Sand and Shale	1810'	1830'				Drillers Log
Sand	1830'	2080'				Drillers Log
Shale	2080'	2170'				Drillers Log
Sand and Shale	2170'	2400'				Drillers Log
Sand	2400'	2510'				Drillers Log
Sand and Shale	2510'	2580'				Drillers Log
Sand	2580'	2660'				Drillers Log
Sand and Shale	2660'	2830'				Drillers Log
Shale	2830'	3120'				Drillers Log
Sand and Shale	3120'	3180'				Drillers Log
Shale	3180'	3730'				Drillers Log
Sand and Shale	3730'	4360'				Drillers Log
Shale	4360'	5100'				Drillers Log
Sand and Shale	5100'	5350'				Drillers Log
Shale	5350'	6390'				Drillers Log
Sandy Shale	6390'	7105'				Drillers Log
Limestone	7105'	7295'				Drillers Log
Horizontal						Drillers Log
Shale	6624'	7230'				Drillers Log
Limestone	7230'	7330'				Drillers Log
Shale	7330'					Drillers Log
Drillers Total Depth		12000'				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	
 Title: Completions Engineer: Matthew A. Ockree	Reviewed by: _____ Date: _____ Comments: _____	Date: January 3, 2011

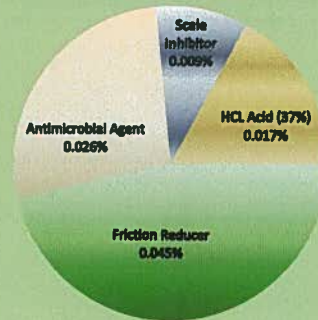
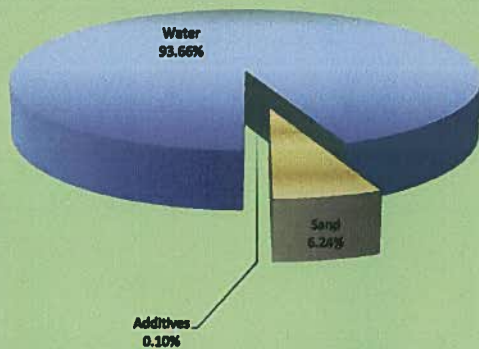


Slerzega Unit #2H
Well API: 37-125-23852

Completion Date: 12/07/10-12/18/10
Township: Amwell

% 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	4,112,935 gal	93.66%	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	273,938 gal	8.24%	Drinking water filtration, play sand
FRW-300	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	1,988 gal	0.045%	Water treatment; soil conditioner; some children's toys
MC B-8842	Antimicrobial Agent	Eliminates bacteria in the water that produce corrosive byproducts	Diluted at one-half gallon per 1,000 gallons of water	1,160 gal	0.028%	Water treatment, disinfectant, sterilize medical and dental equipment and surfaces
MC S-2510T	Scale Inhibitor	Prevents scaling in pipe	Diluted at one-tenth gallon per 1,000 gallons of water	408 gal	0.009%	Water treatment, household cleaners, de-icing agent
HCL Acid	Perf Clean-Up	Dissolves cement and minerals to help initiate fractures	139 gallons per stage (non-diluted chemicals)	736 gal	0.017%	Swimming pool and household cleaner

Composition of Hydraulic Fracture Fluid (by volume)





RANGE RESOURCES

Composition of Components in Marcellus Shale Hydraulic Fracturing Fluid

Common Name & Supplier	Supplier Chemical Name	Common Description	Hazardous Component listed on MSDS	Purpose	MSDS Component Weight % of Chemical	Specific Gravity of Additive	Specific Gravity of Component	Additive Conc (gal/1000 gal)	lbs Hazardous Component	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%	1.1852	1.1852	183.0	2688.90	736.10	0.0188%	0.0067%
	Cl-100	Corrosion inhibitor	Methanol	Protects casing	95.0%	0.86	0.792	2.0	149.72	22.89	0.0005%	0.0004%
			Propargyl Alcohol	Protects casing	5.0%	0.86	0.87	2.0	7.88	0.98	0.0000%	0.0000%
	NE100	Non-Emulsifier	No hazardous ingredients	Prevents emulsions	0.0%	0.97			1.0	N/A	N/A	N/A
FE100L	Iron Chelator	No hazardous ingredients	Prevents precipitation	0.0%	1.23			3.0	N/A	N/A	N/A	N/A
TOTAL											0.0173%	0.0071%

Friction Reducer (FracTech)	FRW-300	Friction Reducer	No hazardous ingredients	Reduces friction down casing	0.0%	0.99		0.5	N/A	N/A	N/A	N/A
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Scale inhibitor (MultiChem)	MC MS S-2510T	Scale inhibitor	Sodium hydroxide	prevents scale deposits in pipe and perforations	5.0%	1.12	1.53	0.1	190.32	14.93	0.0003%	0.0005%
			Ethylene Glycol		80.0%	1.12	1.13	0.1	2263.89	242.93	0.0055%	0.0057%
TOTAL											0.0058%	0.0061%

Antibacterial Agent (MultiChem)	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	0.9832	1.004	0.5	7410.36	886.06	0.0202%	0.0184%
			3,4,4-Trimethyloxazolidine		5.0%	0.985	0.985	0.5	475.89	58.00	0.0013%	0.0012%
			2-Amino-2-methyl-1-propanol		1.0%	0.985	0.94			0.00	0.0000%	0.0000%
			Formaldehyde Amine		0.5%	0.985	1.06	0.5	47.58	5.29	0.0001%	0.0001%
TOTAL											0.0216%	0.0197%

SUMMARY	by vol %	
	0.045%	0.033%