



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

### Completion Report

DEP USE ONLY	
Site ID	Primary Fac ID
Client	Subfacility Id

Well Information					
If you are submitting this Completion Report attached to the Well Record, you only need to enter the well API # in this section.					
Well Operator Range Resources-Appalachia,LLC	DEP ID# 141142	Well API # (Permit / Reg) 37 - 081-20329- -	Project Number	Acres 230	
Address 380 Southpointe Blvd, Suite 300		Well Farm Name Dog Run Hunting Club Unit	Well # 3H	Serial #	
City Canonsburg	State PA	Zip Code 15317	County Lycoming	Municipality Cummings	
Phone 817 869-4158	Fax 817 869-1458	Email mdennis@rangeresources.com	USGS 7.5 min. quadrangle map Waterville		
Check the appropriate submission: <input type="checkbox"/> Original Completion Report <input type="checkbox"/> Amended Completion Report					


STIMULATION BASE FLUID		
List Water Management Plan Approved Water Source(s) that were used	Water Management Plan ID No.	Volume (Gallons)
1. Jersey Shore Joint Water Authority	PADWIS ID# 4410156	1,397,353
2. Borough of Montoursville	PADWIS ID# 4175501	1,071,563
3. Williamsport Municipal Authority	PADWIS ID# 4189510	1,310,077
4.		
5.		
6.		
<b>Recycled Water Used</b>		
<b>Other Base Fluid(s)Components Used</b>		
1.		
2.		
<b>Total Base Fluid(s)/Components Used</b>		3,778,993 gallons

PERFORATION RECORD					
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation
1	2/26/2011	11,211'MD	11,031'MD	Horizontal	Marcellus Shale
2	3/11/2011	10,981'MD	10,751'MD	Horizontal	Marcellus Shale
3	3/13/2011	10,701'MD	10,471'MD	Horizontal	Marcellus Shale
4	3/13/2011	10,421'MD	10,191'MD	Horizontal	Marcellus Shale
5	3/24/2011	10,141'MD	9,911'MD	Horizontal	Marcellus Shale
6	3/25/2011	9,861'MD	9,631'MD	Horizontal	Marcellus Shale
7	3/26/2011	9,581'MD	9,351'MD	Horizontal	Marcellus Shale
8	3/26/2011	9,301'MD	9,071'MD	Horizontal	Marcellus Shale





<b>STIMULATION INFORMATION (WELL)</b>			
Open Flow Production: Omcfd @ 24hrs pos treatment	24 Hr. Open Flow Production: Omcfd @ 24hrs pos treatment	24 Hr. Shut-in Pressure: N/A @ 24hrs post treatment	Flow Back Date: 4/11/11
<b>STIMULATION INFORMATION (STAGE)</b>			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
<b>Stage No.:</b> 1	Stimulation Date: 3/11/2011	Pump Rate: 61.5	
Pressure (psi): 8,988	Shut-in Surface Pressure: 4,754	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 499,024	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 2	Stimulation Date: 3/12/2011	Pump Rate: 53.6	
Pressure (psi): 9,567	Shut-in Surface Pressure: 5,252	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 509,492	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 3	Stimulation Date: 3/13/2011	Pump Rate: 69.3	
Pressure (psi): 8,691	Shut-in Surface Pressure: 4,315	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 499,519	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 4	Stimulation Date: 3/19/2011	Pump Rate: 67.5	
Pressure (psi): 8,911	Shut-in Surface Pressure: 5,750	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 501,245	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 5	Stimulation Date: 3/24/2011	Pump Rate: 65	
Pressure (psi): 8,824	Shut-in Surface Pressure: 6,485	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 501,980	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 6	Stimulation Date: 3/26/2011	Pump Rate: 71.1	
Pressure (psi): 9,128	Shut-in Surface Pressure: 6,372	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 509,328	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)</b>			
Name <b>Frac Tech</b>	Name Multi-Chem	Name Cased Hole Solutions, Inc.	
Address 16858 IH 20	Address 2905 Southwest Blvd.	Address 1720 North Airport Rd.	
City - State - Zip Cisco, Texas 76437	City - State - Zip San Angelo, Texas 76904	City - State - Zip Weatherford, Oklahoma 73096	
Phone 817 850-1008	Phone 325 223-6200	Phone 580 772-3100	
<i>I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment..</i>			
<b>Well Operator's Signature</b>		<b>DEP USE ONLY</b>	
		Reviewed by:	Date:
Title: Regulatory Analyst	Date: 4/26/2011	Comments:	

STIMULATION INFORMATION (WELL)			
Open Flow Production: 0mcf/d @ 24hrs pos treatment	24 Hr. Open Flow Production: 0mcf/d @ 24hrs pos treatment	24 Hr. Shut-in Pressure: N/A @ 24hrs post treatment	Flow Back Date: 4/11/11
STIMULATION INFORMATION (STAGE)			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
<b>Stage No.:</b> 7	Stimulation Date: 3/26/2011	Pump Rate: 69.9	
Pressure (psi): 8,361	Shut-in Surface Pressure: 6475	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 507,005	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b> 8	Stimulation Date: 3/27/2011	Pump Rate: 70.6	
Pressure (psi): 7,809	Shut-in Surface Pressure: 4,585	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 506,949	Propping Agent Size: 100 mesh/30-50 Mesh	
<b>Stage No.:</b>	Stimulation Date:	Pump Rate:	
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure:	
Propping Agent Type:	Propping Agent Amount:	Propping Agent Size:	
<b>Stage No.:</b>	Stimulation Date:	Pump Rate:	
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure:	
Propping Agent Type:	Propping Agent Amount:	Propping Agent Size:	
<b>Stage No.:</b>	Stimulation Date:	Pump Rate:	
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure:	
Propping Agent Type:	Propping Agent Amount:	Propping Agent Size:	
<b>Stage No.:</b>	Stimulation Date:	Pump Rate:	
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure:	
Propping Agent Type:	Propping Agent Amount:	Propping Agent Size:	
<b>WELL SERVICE COMPANIES</b> (Provide the name, address, and telephone number of all well service companies involved.)			
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<b>Well Operator's Signature</b>		<b>DEP USE ONLY</b>	
 Title: Regulatory Analyst                      Date: 4/26/2011		Reviewed by:	Date:
		Comments:	



Dog Run Hunting Club Unit #3H  
Well API: 37-081-20329

Completion Date: 3-28-11  
Township: Cummings

% 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	3,912,510 gal	95.44%	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	182,361 gal	4.45%	Drinking water filtration, play sand
FRW-200 or FRW-300	Friction Reducer	Reduces friction between fluid and pipe	Diluted at one-half gallon per 1,000 gallons of water	2,837 gal	0.07%	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	1,045 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	0,271 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)	0,400 gal	0.01%	Swimming pool and household cleaner

Composition of Hydraulic Fracture Fluid (by volume)





RANGE RESOURCES

## Composition of Components in Marcellus Shale Hydraulic Fracturing Fluid

Dog Run Hunting Club Unit #3H  
Well API: 37-081-20329

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%	399.85	0.0098%	0.0040%	
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	95.0%	33.01	0.0008%	0.0006%	
			Propargyl Alcohol	Protects casing	5.0%	1.42	0.00003%	0.00003%	
	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>0.0106%</b>	<b>0.0046%</b>

Friction Reducer (FracTech)	RW-200 or FRW-3	Friction Reducer	No hazardous ingredients	Reduce friction down casing	0.0%	N/A	N/A	N/A
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Scale Inhibitor (Multichem)	MX 588-2	Scale Inhibitor	No hazardous ingredients	prevents scale deposits	0.0%	N/A	N/A	N/A
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Antibacterial Agent (Multichem)	Bioban	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	574.15	0.0140%	0.0131%	
			3,4,4-Trimethyloxazolidine		5.0%	37.58	0.0009%	0.0008%	
			2-Amino-2-methyl-1-propanol		1.0%	7.88	0.0002%	0.0002%	
			Formaldehyde Amine		0.5%	3.43	0.0001%	0.0001%	
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	107.81	0.0026%	0.0037%	
			Methanol		0.5%	1.08	0.00003%	0.00004%	
<b>TOTAL</b>								<b>0.0179%</b>	<b>0.0179%</b>

<b>SUMMARY</b>	by vol %	by weight %
	<b>0.028%</b>	<b>0.023%</b>