



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 - 125 23894-0-0		Project Number	Acres 987
Address 380 Southpointe Blvd, Suite 300			Well Farm Name Drugmand Unit		Well # 8H	Serial #
City Canonsburg	State PA	Zip Code 15317	County Washington		Municipality Mt. Pleasant	
Phone 724-743-6700	Fax 724-743-6490	Email		USGS 7.5 min. quadrangle map Midway		
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. PA American Water Co Pgh/McMurray Ft Cherry Rd			Source 13		1,360,086	
2.						
3.						
4.						
5.						
6.						
Recycled Water Used					2,453,724	
Other Base Fluid(s)/Components Used						
1.						
2.						
Total Base Fluid(s)/Components Used						
PERFORATION RECORD						
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation	
1	3-2-2011	11,676'MD	11,482'MD	Horizontal	Marcellus Shale	
2	3-2-2011	11,361'MD	11,19'1'MD	Horizontal	Marcellus Shale	
3	3-3-2011	11,094'MD	10,900'MD	Horizontal	Marcellus Shale	
4	3-4-2011	10,803'MD	10,609'MD	Horizontal	Marcellus Shale	
5	3-5-2011	10,512'MD	10,318'MD	Horizontal	Marcellus Shale	
6	3-7-2011	10,221'MD	10,027'MD	Horizontal	Marcellus Shale	
7	3-8-2011	9,930'MD	9,736'MD	Horizontal	Marcellus Shale	
8	3-8-2011	9,639'MD	9,445'MD	Horizontal	Marcellus Shale	
9	3-9-2011	9,348'MD	9,154'MD	Horizontal	Marcellus Shale	
10	3-9-2011	9,057'MD	8,863'MD	Horizontal	Marcellus Shale	
11	3-10-2011	8,766'MD	8,572'MD	Horizontal	Marcellus Shale	
12	3-10-2011	8,475'MD	8,281'MD	Horizontal	Marcellus Shale	
13	3-11-2011	8,184'MD	7,990'MD	Horizontal	Marcellus Shale	

STIMULATION FLUID ADDITIVES

Note: Trade secret or confidential proprietary information should be clearly identified as such and should be submitted on a separate sheet attached to this report.

Descriptive Additive Type	Chemical Component(s) listed on Material Safety Data Sheet of the Additive	CAS No. of Chemical Component	Chemical Component % By Volume in Additive	Chemical Component % By Volume used in Each Stage					
				Stage No. 1	Stage No. 2	Stage No. 3	Stage No. 4	Stage No. 5	Stage No. 6
FR-200W	N/A	N/A	N/A	0.0000%	0.0456%	0.0424%	0.0439%	0.0436%	0.0297%
FR-300W	N/A	N/A	N/A	0.0307%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
MX 588-2	N/A	N/A	N/A	0.0096%	0.0094%	0.0094%	0.0097%	0.0071%	0.0073%
NE100	N/A	N/A	N/A	0.0003%	0.0000%	0.0000%	0.0003%	0.0003%	0.0003%
FE100L	N/A	N/A	N/A	0.0010%	0.0000%	0.0000%	0.0010%	0.0010%	0.0010%
37% HCL	HCL	7647-01-0	37.0%	0.0567%	0.0000%	0.0000%	0.0572%	0.0568%	0.0585%
CI-100	Methanol	67-56-1	92.5%	0.0006%	0.0000%	0.0000%	0.0006%	0.0006%	0.0006%
CI-100	Propargyl Alcohol	107-19-7	4.4%	0.00003%	0.00000%	0.00000%	0.00003%	0.00003%	0.0000%
BMC B-8650	Glutaraldehyde	111-30-8	48.8%	0.0037%	0.0036%	0.0037%	0.0038%	0.0037%	0.0036%
BMC B-8650	Methanol	67-56-1	0.7%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%
CS-1135	4,4-Dimethyloxazolidine	51200-87-4	76.5%	0.0150%	0.0147%	0.0149%	0.0153%	0.0151%	0.0148%
CS-1135	3,4,4-Trimethyloxazolidine	75673-43-7	5.0%	0.0010%	0.0010%	0.0010%	0.0010%	0.0010%	0.0010%
CS-1135	2-Amino-2-methyl-1-propanol	124-68-5	1.0%	0.0002%	0.0002%	0.0002%	0.0002%	0.0002%	0.0002%
CS-1135	Formaldehyde Amine	56652-26-7	0.5%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%	0.0001%

Please insert additional copies of this page if additional rows/stages are needed.

STIMULATION INFORMATION (WELL)

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:
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STIMULATION INFORMATION (STAGE)

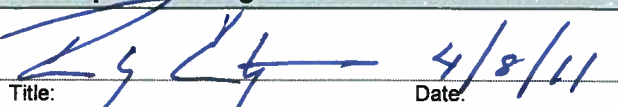
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).

Stage No.: 1	Stimulation Date: 3-2-2011	Pump Rate: 68.0
Pressure (psi): 7,592	Shut-in Surface Pressure: 3,303	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 302,621	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 2	Stimulation Date: 3-2-2011	Pump Rate: 66.3
Pressure (psi): 7,940	Shut-in Surface Pressure: 3,590	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 299,695	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 3	Stimulation Date: 3-3-2011	Pump Rate: 66.7
Pressure (psi): 7,261	Shut-in Surface Pressure: 3,536	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 304,316	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 4	Stimulation Date: 3-4-2011	Pump Rate: 67.1
Pressure (psi): 7,687	Shut-in Surface Pressure: 3,566	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 306,338	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 5	Stimulation Date: 3-7-2011	Pump Rate: 69.2
Pressure (psi): 6,819	Shut-in Surface Pressure: 3,588	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 301,872	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 6	Stimulation Date: 3-8-2011	Pump Rate: 70.0
Pressure (psi): 7,751	Shut-in Surface Pressure: 3,788	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 302,626	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 7	Stimulation Date: 3-8-2011	Pump Rate: 63.9
Pressure (psi): 7,757	Shut-in Surface Pressure: 3,498	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 301,887	Propping Agent Size: 100 Mesh 30/50 Mesh

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Name Frac Tech	Name Multi-Chem	Name Universal Well Servi ces
Address 16858 IH20	Address 200 Detroit Street	Address 730 Braddock View Drive
City - State- Zip Ciscok, TX 76437	City - State - Zip Washington, PA 15301	City - State - Zip Mt Braddock, PA 15465
Phone 817-850-1008	Phone 325-486-7489	Phone 724-430-6201

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.

Well Operator's Signature	DEP USE ONLY
	Reviewed by: _____ Date: _____
Title: Completion Engineer: F. Archibeque 4/8/2011	Comments: _____

STIMULATION INFORMATION (STAGE- Continued)

Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).

Stage No.: 8	Stimulation Date: 3-8-2011	Pump Rate: 66.0
Pressure (psi): 7,144	Shut-in Surface Pressure: 3,584	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 302,128	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 9	Stimulation Date: 3-9-2011	Pump Rate: 70.6
Pressure (psi): 6,881	Shut-in Surface Pressure: 3,632	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 300,055	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 10	Stimulation Date: 3-9-2011	Pump Rate: 67.8
Pressure (psi): 7,161	Shut-in Surface Pressure: 3,561	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 301,118	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 11	Stimulation Date: 3-10-2011	Pump Rate: 69.4
Pressure (psi): 7,113	Shut-in Surface Pressure: 3,618	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 303,661	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 12	Stimulation Date: 3-11-2011	Pump Rate: 69.7
Pressure (psi): 7,106	Shut-in Surface Pressure: 3,661	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 301,064	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 13	Stimulation Date: 3-12-2011	Pump Rate: 68.0
Pressure (psi): 6,350	Shut-in Surface Pressure: 3,642	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount: 302,450	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 14	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 15	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 16	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size: 100 Mesh 30/50 Mesh
Stage No.: 17	Stimulation Date:	Pump Rate:
Pressure (psi):	Shut-in Surface Pressure:	5 Minute Shut-in Surface Pressure: N/A
Propping Agent Type: Sand	Propping Agent Amount:	Propping Agent Size: 100 Mesh 30/50 Mesh

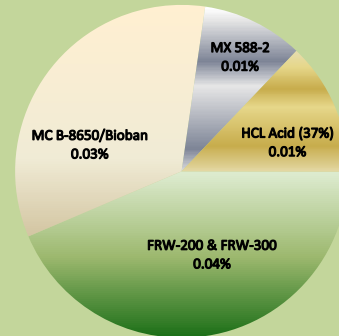
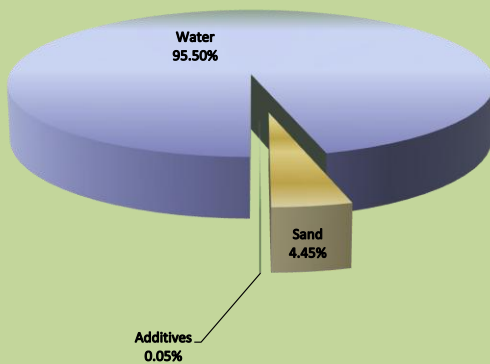


Drugmand Unit #8H
Well API: 37-125-23894

Completion Date: March 12th, 2011
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	3,811,672 gal	95.47%	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	177,628 gal	4.45%	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	1,407 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	1,087 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	0,318 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)	0,417 gal	0.01%	Swimming pool and household cleaner

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
7.5% HCl Mixture (FracTech)	37% HCL	concentrated HCl Acid	HCL	Cleans perforation	37.0%	417.42	0.0105%	0.0043%
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	85.0%	20.36	0.0005%	0.0004%
			Propargyl Alcohol	Protects casing	5.0%	0.04	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	N/A
TOTAL							0.0110%	0.0046%

Friction Reducer (FracTech)	RW-200 & FRW-30	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)	CS-1135	Antibacterial Agent	4,4-Dimethyloxazolidine	eliminates bacteria in water	78.0%	599.66	0.0150%	0.0140%
			3,4,4-Trimethyloxazolodine		5.0%	39.25	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	8.23	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	3.58	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	110.97	0.0028%	0.0039%
			Methanol		0.5%	1.11	0.0000%	0.0000%
TOTAL							0.0191%	0.0191%

SUMMARY	by vol %	by weight %
	0.030%	0.024%