




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

DEP USE ONLY	
Site ID	Primary Fac ID
Client	Subfacility Id

Completion Report

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 - 081-20435- -		Project Number	Acre 211
Address 100 Throckmorton St., Suite 1200			Well Farm Name Paulhamus, Frederick Unit		Well # 5H	Serial #
City Fort Worth	State TX	Zip Code 76102	County Lycoming		Municipality Mifflin	
Phone 817 869-4158	Fax 817 869-1458	Email mdennis@rangeresources.com		USGS 7.5 min. quadrangle map Salladasburg		
Check the appropriate submission: <input checked="" 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. Montoursville Borough (Howard Ave and Pool Road)			PADWIS ID# 4175501		1,459,804	
2. Williamsport Water Authority @ Sanitary Plant			PADWIS ID# 4189510		792,802	
3. LHP Management @ Fishing Creek			SRBC Docket # 20090906		495,010	
4. Jersey Shore @ Larrys Creek and Pine Creek			PADWIS ID# 4410156		528,426	
5.						
6.						
Recycled Water Used						
Other Bass Fluid(s)Components Used						
1.						
2.						
Total Base Fluid(s)/Components Used					3,276,042 gallons	
PERFORATION RECORD						
Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation	
1	7/08/2011	9,754'MD	9,572'MD	Horizontal	Marcellus Shale	
2	7/27/2011	9,485'MD	9,302'MD	Horizontal	Marcellus Shale	
3	7/28/2011	9,215'MD	9,032'MD	Horizontal	Marcellus Shale	
4	7/28/2011	8,945'MD	8,762'MD	Horizontal	Marcellus Shale	
5	7/28/2011	8,675'MD	8,492'MD	Horizontal	Marcellus Shale	
6	7/28/2011	8,405'MD	8,222'MD	Horizontal	Marcellus Shale	
7	7/29/2011	8,135'MD	7,952'MD	Horizontal	Marcellus Shale	
8	7/29/2011	7,865'MD	7,682'MD	Horizontal	Marcellus Shale	

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: 8/8/2011
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: 7/27/2011	Pump Rate: 70.6	
Pressure (psi): 8,040	Shut-in Surface Pressure: 6,582	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 500,551	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 2	Stimulation Date: 7/28/2011	Pump Rate: 70.4	
Pressure (psi): 8,052	Shut-in Surface Pressure: 5,860	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 502,563	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 3	Stimulation Date: 7/28/2011	Pump Rate: 70.1	
Pressure (psi): 7,619	Shut-in Surface Pressure: 5,985	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 505,075	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 4	Stimulation Date: 7/28/2011	Pump Rate: 70.3	
Pressure (psi): 7,907	Shut-in Surface Pressure: 5,812	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 500,901	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 5	Stimulation Date: 7/28/2011	Pump Rate: 71.4	
Pressure (psi): 7,812	Shut-in Surface Pressure: 6,016	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 501,302	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 6	Stimulation Date: 7/29/2011	Pump Rate: 71.3	
Pressure (psi): 7,694	Shut-in Surface Pressure: 6,221	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 503,013	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 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 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	
Title: Regulatory Analyst Date: 8/24/2011		Reviewed by:	Date:
		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: 8/8/2011
STIMULATION INFORMATION (STAGE)			
Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).			
Stage No.: 7	Stimulation Date: 7/29/2011	Pump Rate: 40.4	
Pressure (psi): 7,566	Shut-in Surface Pressure: 6,457	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 499,812	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.: 8	Stimulation Date: 7/29/2011	Pump Rate: 69.7	
Pressure (psi): 7,893	Shut-in Surface Pressure: 6,567	5 Minute Shut-in Surface Pressure: NA	
Propping Agent Type: Sand	Propping Agent Amount: 519,479	Propping Agent Size: 100 mesh/30-50 Mesh	
Stage No.:	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:	
Stage No.:	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:	
Stage No.:	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:	
Stage No.:	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:	
WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)			
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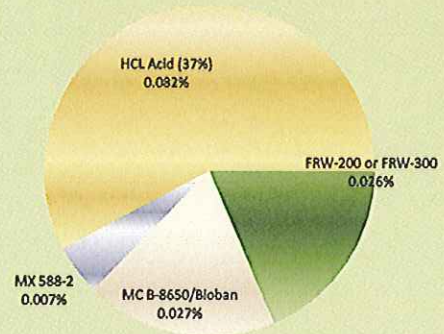
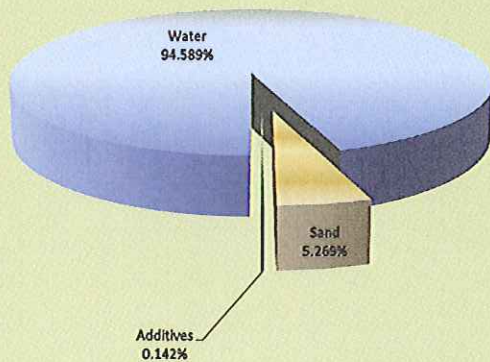
Frederick Paulhamus Unit 5-H
Well API: 37-081-20435

Completion Date: 7/29/2011
Township: Mifflin

% 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	3,272,034 gal	94.59%	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	182,278 gal	5.27%	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	0,904 gal	0.026%	Water treatment; soil conditioner; some children's toys
MC B-8650/Bloban	Antimicrobial Agent	Eliminates bacteria in the water that produce corrosive byproducts	Diluted at one-half gallon per 1,000 gallons of water	0,922 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	0,242 gal	0.007%	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)	2,836 gal	0.082%	Swimming pool and household cleaner

Composition of Hydraulic Fracture Fluid (by volume)





Wellname: Frederick Paulhamus L

WELL API#: 37-081-20435

Township: Mifflin

Completion Date: 7/29/2011

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%	2835.79	0.0820%	0.0331%
	CI-100	Corrosion Inhibitor	Methanol	Protects casing	95.0%	33.01	0.0010%	0.0007%
			Propargyl Alcohol	Protects casing	5.0%	1.42	0.00004%	0.00004%
	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							0.0830%	0.0338%

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%	506.57	0.0146%	0.0135%
			3,4,4-Trimethyloxazolidine		5.0%	33.16	0.0010%	0.0009%
			2-Amino-2-methyl-1-propanol		1.0%	6.95	0.0002%	0.0002%
			Formaldehyde Amine		0.5%	3.02	0.0001%	0.0001%
	BMC B-8650	Antibacterial Agent	Glutaraldehyde	eliminates bacteria in water	50.0%	95.12	0.0027%	0.0038%
			Methanol		0.5%	0.95	0.00003%	0.00004%
TOTAL							0.0187%	0.0185%

SUMMARY	by vol %	by weight %
	0.102%	0.052%