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State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work

API 47-103-02748 County Wetzel District Grant  
Quad Pine Grove 7.5' Pad Name L S Hoyt Unit 403 Field/Pool Name Wileyville  
Farm name Dallison Lumber, Inc Well Number L S Hoyt 403 S-6H  
Operator (as registered with the OOG) HG Energy, LLC  
Address 5260 DuPONT ROAD City PARKERSBURG State WV Zip 26101

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,382,698 Easting 529,413  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing 4,381,543 Easting 530,200

Elevation (ft) 1250 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine  
Mud Type(s) and Additive(s)  
Water based salt polymer mud

Date permit issued 04/10/2012 Date drilling commenced 1/11/2013 Date drilling ceased 5/18/2013  
Date completion activities began 9/25/2013 Date completion activities ceased 11/6/2013  
Verbal plugging (Y/N) n/a Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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Office of Oil and Gas

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

AUG 18 2014

Freshwater depth(s) ft 310', 1050' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 1550' Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 820', 910', 1050' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

WV Department of  
Environmental Protection

Reviewed by: \_\_\_\_\_

10/03/2014

API 47- 103 - 02748 Farm name Dallison Lumber, Inc Well number L S Hoyt 403 S-6H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	20"	20"	80'	New	H-40/ 40' /94#	n/a	n/a - Drilled in
Surface	17-1/2"	13-3/8"	1245'	New	AT-50/54.5/1245'	n/a	Cement to Surface
Coal							
Intermediate 1	12-1/4"	9-5/8"	3245'	New	J-55/40/3,245'	n/a	Cement to Surface
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	13776'	New	P-110/20/13,776'	n/a	Cement to Surface
Tubing		2-3/8"		New	L80/4.77/382.52'	n/a	n/a
Packer type and depth set		n/a					

Comment Details \_\_\_\_\_

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Drilled in						
Surface	Gas Block	1105	15.6	1.21	1333	Surface	12
Coal							
Intermediate 1	Gas Block(tall)/Type 1(Lead)	1109	1 - 15.0	1.3	1447	Surface	12
Intermediate 2			t - 14.8	1.33			
Intermediate 3							
Production	ASCA(tall)/50-60PNE(Lead)	2624	1 - 14.7	1.49	3614	Surface	12
Tubing			t - 14.3	1.23			

Drillers TD (ft) 13,814' Loggers TD (ft) 13,814'  
 Deepest formation penetrated Marcellus Plug back to (ft) n/a  
 Plug back procedure n/a

Kick off depth (ft) N/A

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surf - 15  
Int - 27  
Prod - 85

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	9/25/2013	13684		n/a	Marcellus
2	9/26/2013	13384	13585	50	Marcellus
2	9/26/2013	13409	13610	50	Marcellus
3	10/22/2013	13084	13285	50	Marcellus
4	10/22/2013	12784	12985	50	Marcellus
5	10/23/2013	12484	12685	50	Marcellus
6	10/23/2013	12184	12385	50	Marcellus
7	10/24/2013	11884	12085	50	Marcellus
8	10/24/2013	11584	11785	50	Marcellus
9	10/25/2013	11334	11485	50	Marcellus
10	10/25/2013	10984	11185	50	Marcellus
11	10/29/2013	10684	10885	50	Marcellus
12	10/30/2013	10384	10585	50	Marcellus
13	10/30/2013	10084	10285	50	Marcellus
14	10/31/2013	9784	9985	50	Marcellus
	See	Page	4		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	9/25/13	73.6	7294	8846	n/a	402200	8130	n/a
2	9/26/13	68.1	8036	n/a	5673	218500	8708	n/a
3	10/22/13	75.6	7604	5493	5604	425500	9205	n/a
4	10/22/13	76.8	7594	5495	4867	425500	9157	n/a
5	10/23/13	75.7	7598	5713	5169	425500	8989	n/a
6	10/23/13	77.3	7394	5833	4943	425500	8628	n/a
7	10/24/13	76.2	7603	5535	3873	425500	8785	n/a
8	10/24/13	79	7298	5578	4470	425500	8863	n/a
9	10/25/13	78	7448	5839	4142	425500	9015	n/a
10	10/25/13	74.7	7447	5478	5042	425500	11328	n/a
11	10/29/13	77.3	7150	5401	4976	425500	8531	n/a
12	10/30/13	78	7097	5309	4514	425500	8169	n/a
13	10/30/13	77.7	7213	5182	5230	425500	8691	n/a
14	10/31/13	76.9	7008	5094	4613	425500	8261	n/a
15	10/31/13	76	6906	5090	4779	425500	8643	n/a
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Please insert additional pages as applicable.



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**PRODUCING FORMATION(S)**

**DEPTHS**

Marcellus (LP - TD) 7247' - 7304' TVD 7505' - 13814' MD

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3500 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 10848 mcfpd Oil 0 bpd NGL 61 bpd Water 256 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION TOP DEPTH IN FT BOTTOM DEPTH IN FT TOP DEPTH IN FT BOTTOM DEPTH IN FT DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)

LITHOLOGY/ FORMATION	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	TOP DEPTH IN FT	BOTTOM DEPTH IN FT	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	NAME TVD	TVD	MD	MD	
Sand/Shale	0	0	0	0	
Pittsburgh Coal	n/a	n/a	n/a	n/a	
Sand/Shale	0	2242'	0	2242'	
Big Lime	2242'	2312'	2242'	2312'	
Big Injun	2312'	2534'	2312'	2534'	
Shale	2534'	3098'	2534'	3098'	
Fifty Foot					
Shale					
Sand					
Shale					
Fifth Sand	3098'	3150'	3098'	3150'	
Shale	3150'	7304'	3150'	13814'	
TD	7304'		13814'		

Please insert additional pages as applicable.

Drilling Contractor Dallas-Morris  
Address 103 South Kendall City Bradford State PA Zip 16701

Logging Company Empirica Surface Logging  
Address 85 Karago Ave, Suite 12 City Youngstown State OH Zip 44512

Cementing Company Baker Hughes  
Address PO Box 301057 City Dallas State TX Zip 75303-1057

Stimulating Company Producers Service Corporation  
Address PO Box 2277 City Zanesville State OH Zip 43702-2277

Please insert additional pages as applicable.

Completed by Joshua Hinton Telephone 304-420-1103  
Signature [Signature] Title Operations Manager Date 8-15-14

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry