

WR-35
Rev (9-11)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

DATE: _____
API #: 47-103-02639

Well Operator's Report of Well Work

DALLISON LUMBER, INC

Farm name: LS Hoyt Operator Well No.: 401-5H LS Hoyt 401 5H

LOCATION: Elevation: 1375' Quadrangle: PINE GROVE 7.5'

District: GRANT County: WETZEL
Latitude: 8252' Feet South of 37 Deg. 37 Min. 30 Sec.
Longitude: 5072 Feet West of 80 Deg. 37 Min. 30 Sec.

Company: HG ENERGY LLC

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>5260 DUPONT ROAD PARKERSBURG WV 26101</u>	<u>20" CASING</u>	<u>20'</u>	<u>20'</u>	<u>N/A</u>
Agent: <u>MIKE KIRSCH</u>	<u>94" H-40</u>			<u>DRILLED IN</u>
Inspector: <u>DEREK BAUGHT</u>				
Date Permit Issued: <u>7/18/2011</u>	<u>13 3/8" CASING</u>	<u>485.25'</u>	<u>485.25'</u>	<u>CEMENT TO SURFACE</u>
Date Well Work Commenced: <u>12/15/2011</u>	<u>5 1/2" J-55</u>			<u>450 SKS</u>
Date Well Work Completed: <u>4/21/2013</u>				
Verbal Plugging:	<u>9 7/8" CASING</u>	<u>3351.22'</u>	<u>3351.22'</u>	<u>CEMENT TO SURFACE</u>
Date Permission granted on:	<u>40" J-55</u>			<u>1210 SKS</u>
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): <u>7427.39</u>	<u>5 1/2" CASING</u>	<u>13,460'</u>	<u>13,460'</u>	<u>CEMENT TO SURFACE</u>
Total Measured Depth (ft): <u>13,527</u>	<u>20" P-110</u>			<u>2209 SKS</u>
Fresh Water Depth (ft.): <u>115', 415'</u>				
Salt Water Depth (ft.): <u>1915'</u>	<u>3 3/8" TUBING</u>	<u>7808.96'</u>	<u>7808.96'</u>	<u>N/A</u>
Is coal being mined in area (N/Y)? <u>NO</u>	<u>4 7/8" L-80</u>			
Coal Depths (ft.): <u>910', 1005', 1144'</u>				
Void(s) encountered (N/Y) Depth(s) <u>N, N/A</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus shale Pay zone depth (ft) 1427.39
Gas: Initial open flow 8.3 MCF/d Oil: Initial open flow 80 Bbl/d
Final open flow 8.0 MCF/d Final open flow 80 Bbl/d
Time of open flow between initial and final tests 24 Hours
Static rock Pressure 2,700 psig (surface pressure) after 24 Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

DCW for Josh Hunter
Signature

_____ Date

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Environmental Protection

APPROVED

NAME: Jacquelin Hunter
DATE: 3/28/2016

04/01/2016

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list MUD LOGS AND REAL TIME MUD GAMMA RAY logs while we drilled the CURVES AND LATERAL PORTIONS OF THE WELL.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

SEE ATTACHED SHEETS

Plug Back Details Including Plug Type and Depth(s):

**Formations Encountered:
Surface:**

Top Depth

Bottom Depth

	TVD TOPS	BOTTOM
BIG LIME	2367	2437
BIG INJUN	2437	2659
GORDON STRAY	3223	3254
GORDON	3254	3275
TULLY	7383	7419
HAMILTON	7419	7623
MARCELLUS	7623	TD

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LS HOYT 401 5H - FRAC SUMMARY 47-103-02639

Stage	# of Perfs	Total Acid (lb)	Total Water (bbl)	Total Sand (lb)	Total Slurry (bbl)	Prod Vol (bbl)	100 Mesh (lb)	40/70 Mesh (lb)	20/30 Mesh (lb)	ROP (psi)	ISIP (psi)	1 Min ISIP (psi)	2 Min ISIP (psi)	3 Min ISIP (psi)	ATP (psi)	Avg Rate (bbl/min)	PUMP DOWN (bbl)
1	N/A	1,000	8,154	420,900	8,852	999	120,000	150,200	150,700	N/A	4,109	3,554	3,379	3,170	7,158	63	N/A
2	60	1,000	8,231	420,700	8,931	742	120,000	150,000	150,700	5,697	4,251	3,752	3,571	3,338	7,107	65	364
3	60	1,000	7,818	397,700	8,468	730	120,200	150,200	127,300	5,678	4,785	4,958	4,142	3,708	7,055	63	305
4	60	1,000	7,899	421,600	8,605	742	120,200	150,700	150,700	5,429	5,133	4,603	4,333	4,037	5,843	64	254
5	60	1,000	2,205	23,100	2,366	754	23,100	-	-	5,310	N/A	N/A	N/A	N/A	6,987	52	531
6	60	1,000	7,950	421,100	8,632	728	120,200	150,200	150,700	N/A	3,919	3,609	3,482	3,334	6,745	66	216
7	60	1,000	7,438	359,100	8,066	777	120,200	149,900	89,000	5,858	4,041	3,809	3,671	3,601	6,445	59	229
8	60	1,000	8,173	352,800	8,808	795	120,200	149,900	82,700	5,643	4,319	3,874	3,682	3,485	6,431	65	219
9	60	1,000	7,839	358,900	8,456	953	120,200	149,900	88,800	N/A	4,150	3,807	3,652	3,466	6,695	67	179
10	60	1,000	7,627	374,900	8,289	959	120,200	149,900	104,800	5,149	4,141	3,883	3,650	3,457	6,189	70	169
11	60	1,000	7,820	420,800	8,519	970	120,200	149,900	150,700	N/A	3,745	3,546	3,455	3,332	5,812	63	143
12	60	1,000	7,648	419,600	8,344	713	144,000	149,900	128,700	6,109	3,550	3,476	3,399	3,299	5,981	68	109
13	60	1,000	7,965	444,600	8,678	687	144,000	149,900	150,700	N/A	3,969	3,840	3,516	3,353	5,915	73	87
14	60	1,000	8,158	449,600	8,890	796	144,000	149,900	155,700	5,513	3,974	3,599	3,470	3,316	6,444	66	70
15	60	1,000	8,335	319,900	8,945	717	144,000	105,000	70,900	N/A	4,075	3,696	3,554	3,392	6,260	69	61
16	60	1,000	7,412	357,500	8,031	698	138,900	149,900	68,700	5,850	4,388	4,019	3,788	3,474	6,312	72	38
TOTAL / AVG	900	16,000	120,734	5,962,800	130,841	12,640	1,839,600	2,206,400	1,817,800	5,625	4,171	3,816	3,654	3,451	6,545	65	2,974

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LS Hoyt 401 5H 47-103-02639 - Perforating Detail

Stage 1						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
N/A	13369	N/A	N/A	N/A	N/A	N/A
Stage 2						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13295	13245-46	13185-86	13125-26	13065-66	13005-06	PD
Stage 3						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12955	12905-06	12845-46	12785-86	12725-26	12665-66	PD
Stage 4						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12620	12565-66	12505-06	12445-46	12385-86	12325-26	PD
Stage 5						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12284	12225-26	12165-66	12105-06	12045-46	11985-86	PD
Stage 6						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
N/A	11885-86	11825-26	11765-66	11705-06	11645-46	PD
Stage 7						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11590	11545-46	11485-86	11425-26	11365-66	11305-06	PD
Stage 8						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11258	11235-36	11185-86	11135-36	11085-86	11035-36	PD
Stage 9						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10735	10685-86	10625-26	10565-66	10505-06	10445-46	PD
Stage 10						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10395	10345-46	10285-86	10225-26	10165-66	10105-06	PD
Stage 11						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10050	10005-06	9945-46	9885-86	9825-26	9765-66	PD
Stage 12						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9365	9315-16	9255-56	9195-96	9135-36	9075-76	PD
Stage 13						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9025	8975-76	8915-16	8855-56	8795-96	8735-36	PD
Stage 14						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
8685	8635-36	8575-76	8515-16	8455-56	8395-96	PD
Stage 15						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
8342	8295-96	8235-36	8175-76	8115-16	8055-56	PD
Stage 16						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
8000	7955-56	7895-96	7835-36	7775-76	7715-16	PD

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