

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

API 47-103-02888 County Wetzel District Grant
Quad Pine Grove 7.5' Pad Name Long Field/Pool Name Wileyville
Farm name Francis D. & Freeda M. Brown Well Number 408 S-2H
Operator (as registered with the OOG) Ascent Resources - Marcellus, LLC
Address PO Box 13678 City Oklahoma City State OK Zip 73116

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,381,536 Easting 527,797
Landing Point of Curve Northing 4,381,205 Easting 527,822
Bottom Hole Northing 4,380,253 Easting 529,210

Elevation (ft) 1340' 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)
Synthetic Oil Based Mud

Date permit issued 07/02/2013 Date drilling commenced 9/11/2013 Date drilling ceased 05/03/2014
Date completion activities began 09/15/2014 Date completion activities ceased 10/04/2014
Verbal plugging (Y/N) N/A Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft 470' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2000' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1180' Cavern(s) encountered (Y/N) depths Received
Is coal being mined in area (Y/N) N

Office of Oil & Gas
Reviewed by:
JUL 05 2016

APPROVED

NAME: Jacqui Shumata
DATE: 7/5/2016

07/08/2016

API 47-103 02888

Farm name Francis D. & Freeda M. Brown Well number 408 S-2H

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"	100'	New	H40/94	n/a	No cement - drilled in
Surface	17-1/2"	13-3/8"	1308'	New	J-55/54.5	n/a	Cement to Surface
Coal							
Intermediate 1	12-1/4"	9-5/8"	3440'	New	J-55/40	n/a	Cement to Surface
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	13502'	New	P110/20	n/a	Cement to Surface
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Drilled in						
Surface	Class A	238 lead/832 tail	14.6/15.6	1.37/1.18	995	Surface	12
Coal							
Intermediate 1	Type 1+	363 lead/726 tail	15.0	1.29/1.3	1406	Surface	12
Intermediate 2							
Intermediate 3							
Production	50/50 PNE1/ASC	1414 lead/1226 tail	14.3/14.7	1.23/1.5	3602	Surface	12
Tubing							

Drillers TD (ft) 13541' Loggers TD (ft) 13541'

Deepest formation penetrated Marcellus Plug back to (ft) n/a

Plug back procedure n/a

Kick off depth (ft) 6,000' MD

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 _____

Surface - Ran 18 (1 every 2 joints)

Intermediate - Ran 20 (1 every 4 joints)

Productions - Ran 106 (1 every 3 joints)

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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API 47-103-02888 Farm name Francis D. & Freeda M. Brown Well number 408 S-2H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7,345'	TVD	13,541' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 599.76 mcfpd Oil 0.38 bpd NGL _____ bpd Water 2 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY FORMATION	TOP		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	
	NAME	TVD	MD	MD	
Sand/Shale	0	2305'	0	2305'	
Big Lime	2305'	2392'	2305'	2392'	
Big Injun	2392'	2590'	2392'	2590'	
Shale	2590'	3160'	2590'	3160'	
Gordon Sand	3160'	3204'	3160'	3204'	
Dev Shale	3204'	7193'	3204'	8444'	
Tully Lime	7160'		7540'		
Marcellus Shale	7256'		7729'	13541'	

Please insert additional pages as applicable.

Drilling Contractor HAD Drilling Contractors
Address 9797 Benner Rd City Rittman State OH Zip 44270

Logging Company ALS Empirca Surface Logging
Address 6360 W. Sam Houston Pkwy N, Suite 100 City Houston State TX Zip 77401

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

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

Please insert additional pages as applicable.

Completed by Ariel Brava Telephone 405-252-7642
Signature  Title Regulatory Analyst Date 2/22/2016
Received Office of Oil & Gas

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Register JUL 05 2016

Well Name	API	Property Number	Well Status	State	County	Well Spud Date	RR Date	Comp Date
LONG 408 S-2H	47103028880000	1470002	PRODUCTION	WEST VIRGINIA	WETZEL	10/15/2013	5/8/2014	
Well Treatment Summary								
Stage #	Start Date	Slurry Rate Avg (bbbl/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Prop Placed (lb)	Vol Slurry Total (bbl)	
1	9/15/2014	50	8,565	8,532	4,381	3,000	0.00	
2	9/15/2014	75	7,110	5,878	4,223	225,200	0.00	
3	9/16/2014	80	7,310	5,903	4,285	225,400	0.00	
4	9/16/2014	75	7,310	5,430	4,350	225,400	0.00	
5	9/17/2014	80	7,110	5,695	4,775	225,400	0.00	
6	9/17/2014	80	6,975	5,827	4,145	225,400	0.00	
7	9/17/2014	80	7,175	5,672	4,192	225,400	0.00	
8	9/18/2014	78	7,115	5,930	4,404	225,400	0.00	
9	9/18/2014	78	7,205	5,430	4,677	225,400	0.00	
10	9/18/2014	76	7,175	5,234	4,206	225,400	0.00	
11	9/19/2014	81	7,167	5,542	4,081	225,400	0.00	
12	9/19/2014	80	6,981	5,457	4,266	225,400	0.00	
13	9/19/2014	80	6,995	5,450	4,733	225,400	0.00	
14	9/22/2014	80	7,223	5,487	5,075	225,400	0.00	
15	9/22/2014	80	7,056	5,702	4,353	225,400	0.00	
16	9/22/2014	82	7,050	5,698	4,308	225,400	0.00	
17	9/23/2014	82	7,010	5,418	5,787	225,400	0.00	
18	9/23/2014	80	7,067	5,388	5,033	225,400	0.00	
19	9/23/2014	78	7,320	5,498	5,521	225,400	0.00	
20	9/24/2014	80	7,285	5,682	4,234	225,400	0.00	
21	9/24/2014	75	7,552	5,543	4,494	225,400	0.00	
22	9/24/2014	76	6,995	5,588	4,305	225,400	0.00	
23	9/25/2014	80	7,015	5,675	5,323	225,400	0.00	
24	9/25/2014	80	7,415	5,738	4,982	225,400	0.00	
25	9/26/2014	83	7,234	5,678	4,427	225,400	0.00	
26	9/26/2014	75	7,675	5,518	4,163	225,400	0.00	
27	9/29/2014	78	7,110	5,399	4,295	225,400	0.00	
28	9/29/2014	78	6,975	5,575	4,205	225,400	0.00	
29	9/30/2014	77	6,975	5,430	4,229	225,400	0.00	
30	9/30/2014	80	6,912	5,616	4,614	225,400	0.00	
31	10/1/2014	80	6,970	5,918	4,071	225,400	0.00	
32	10/1/2014	80	6,805	5,935	4,642	225,400	0.00	
33	10/2/2014	79	7,095	6,050	3,818	225,400	0.00	
34	10/2/2014	80	7,205	6,091	4,201	225,400	0.00	
35	10/3/2014	80	6,675	6,050	3,982	225,400	0.00	
36	10/3/2014	80	6,954	6,570	3,915	225,400	0.00	
37	10/4/2014	80	6,795	6,282	4,401	223,900	0.00	
38	10/4/2014	80	6,923	6,183	4,378	223,400	0.00	

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Perforations						
Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
38	10/4/2014	7,916.0	7,918.0	5.0	10	Stg 38
38	10/4/2014	7,946.0	7,948.0	5.0	10	Stg 38
38	10/4/2014	7,976.0	7,978.0	5.0	10	Stg 38
38	10/4/2014	8,006.0	8,008.0	5.0	10	Stg 38
38	10/4/2014	8,036.0	8,038.0	5.0	10	Stg 38
37	10/3/2014	8,066.0	8,068.0	5.0	10	Stg 37
37	10/3/2014	8,096.0	8,098.0	5.0	10	Stg 37
37	10/3/2014	8,126.0	8,128.0	5.0	10	Stg 37
37	10/3/2014	8,156.0	8,158.0	5.0	10	Stg 37
37	10/3/2014	8,186.0	8,188.0	5.0	10	Stg 37
36	10/3/2014	8,216.0	8,218.0	5.0	10	Stg 36
36	10/3/2014	8,246.0	8,248.0	5.0	10	Stg 36
36	10/3/2014	8,276.0	8,278.0	5.0	10	Stg 36
36	10/3/2014	8,306.0	8,308.0	5.0	10	Stg 36
36	10/3/2014	8,336.0	8,338.0	5.0	10	Stg 36
35	10/2/2014	8,366.0	8,368.0	5.0	10	Stg 35
35	10/2/2014	8,396.0	8,398.0	5.0	10	Stg 35
35	10/2/2014	8,426.0	8,428.0	5.0	10	Stg 35
35	10/2/2014	8,456.0	8,458.0	5.0	10	Stg 35
35	10/2/2014	8,486.0	8,488.0	5.0	10	Stg 35
34	10/2/2014	8,516.0	8,518.0	5.0	10	Stg 34
34	10/2/2014	8,546.0	8,548.0	5.0	10	Stg 34
34	10/2/2014	8,576.0	8,578.0	5.0	10	Stg 34
34	10/2/2014	8,606.0	8,608.0	5.0	10	Stg 34
34	10/2/2014	8,636.0	8,638.0	5.0	10	Stg 34
33	10/1/2014	8,666.0	8,668.0	5.0	10	Stg 33
33	10/1/2014	8,696.0	8,698.0	5.0	10	Stg 33
33	10/1/2014	8,726.0	8,728.0	5.0	10	Stg 33
33	10/1/2014	8,756.0	8,758.0	5.0	10	Stg 33
33	10/1/2014	8,786.0	8,788.0	5.0	10	Stg 33
32	10/1/2014	8,816.0	8,818.0	5.0	10	Stg 32
32	10/1/2014	8,846.0	8,848.0	5.0	10	Stg 32
32	10/1/2014	8,876.0	8,878.0	5.0	10	Stg 32
32	10/1/2014	8,906.0	8,908.0	5.0	10	Stg 32
32	10/1/2014	8,936.0	8,938.0	5.0	10	Stg 32
31	9/30/2014	8,966.0	8,968.0	5.0	10	Stg 31
31	9/30/2014	8,996.0	8,998.0	5.0	10	Stg 31
31	9/30/2014	9,026.0	9,028.0	5.0	10	Stg 31
31	9/30/2014	9,056.0	9,058.0	5.0	10	Stg 31
31	9/30/2014	9,086.0	9,088.0	5.0	10	Stg 31
30	9/30/2014	9,116.0	9,118.0	5.0	10	Stg 30
30	9/30/2014	9,146.0	9,148.0	5.0	10	Stg 30
30	9/30/2014	9,176.0	9,178.0	5.0	10	Stg 30
30	9/30/2014	9,206.0	9,208.0	5.0	10	Stg 30
30	9/30/2014	9,236.0	9,238.0	5.0	10	Stg 30
29	9/29/2014	9,266.0	9,268.0	5.0	10	Stg 29
29	9/29/2014	9,296.0	9,298.0	5.0	10	Stg 29
29	9/29/2014	9,326.0	9,328.0	5.0	10	Stg 29
29	9/29/2014	9,356.0	9,358.0	5.0	10	Stg 29
29	9/29/2014	9,386.0	9,388.0	5.0	10	Stg 29
28	9/29/2014	9,416.0	9,418.0	5.0	10	Stg 28
28	9/29/2014	9,446.0	9,448.0	5.0	10	Stg 28
28	9/29/2014	9,476.0	9,478.0	5.0	10	Stg 28
28	9/29/2014	9,506.0	9,508.0	5.0	10	Stg 28
28	9/29/2014	9,536.0	9,538.0	5.0	10	Stg 28
27	9/26/2014	9,566.0	9,568.0	5.0	10	Stg 27
27	9/26/2014	9,596.0	9,598.0	5.0	10	Stg 27
27	9/26/2014	9,626.0	9,628.0	5.0	10	Stg 27
27	9/26/2014	9,656.0	9,658.0	5.0	10	Stg 27
27	9/26/2014	9,686.0	9,688.0	5.0	10	Stg 27
26	9/26/2014	9,716.0	9,718.0	5.0	10	Stg 26
26	9/26/2014	9,746.0	9,748.0	5.0	10	Stg 26
26	9/26/2014	9,776.0	9,778.0	5.0	10	Stg 26

Received
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JUL 29 2016

07/08/2016

Perforations

Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
26	9/26/2014	9,806.0	9,808.0	5.0	10	Stg 26
26	9/26/2014	9,836.0	9,838.0	5.0	10	Stg 26
25	9/25/2014	9,866.0	9,868.0	5.0	10	Stg 25
25	9/25/2014	9,896.0	9,898.0	5.0	10	Stg 25
25	9/25/2014	9,926.0	9,928.0	5.0	10	Stg 25
25	9/25/2014	9,956.0	9,958.0	5.0	10	Stg 25
25	9/25/2014	9,986.0	9,988.0	5.0	10	Stg 25
24	9/25/2014	10,016.0	10,018.0	5.0	10	Stg 24
24	9/25/2014	10,046.0	10,048.0	5.0	10	Stg 24
24	9/25/2014	10,076.0	10,078.0	5.0	10	Stg 24
24	9/25/2014	10,106.0	10,108.0	5.0	10	Stg 24
24	9/25/2014	10,136.0	10,138.0	5.0	10	Stg 24
23	9/24/2014	10,166.0	10,168.0	5.0	10	Stg 23
23	9/24/2014	10,196.0	10,198.0	5.0	10	Stg 23
23	9/24/2014	10,226.0	10,228.0	5.0	10	Stg 23
23	9/24/2014	10,256.0	10,258.0	5.0	10	Stg 23
23	9/24/2014	10,286.0	10,288.0	5.0	10	Stg 23
22	9/24/2014	10,316.0	10,318.0	5.0	10	Stg 22
22	9/24/2014	10,346.0	10,348.0	5.0	10	Stg 22
22	9/24/2014	10,376.0	10,378.0	5.0	10	Stg 22
22	9/24/2014	10,406.0	10,408.0	5.0	10	Stg 22
22	9/24/2014	10,436.0	10,438.0	5.0	10	Stg 22
21	9/24/2014	10,466.0	10,468.0	5.0	10	Stg 21
21	9/24/2014	10,496.0	10,498.0	5.0	10	Stg 21
21	9/24/2014	10,526.0	10,528.0	5.0	10	Stg 21
21	9/24/2014	10,556.0	10,558.0	5.0	10	Stg 21
21	9/24/2014	10,586.0	10,588.0	5.0	10	Stg 21
20	9/23/2014	10,616.0	10,618.0	5.0	10	Stg 20
20	9/23/2014	10,646.0	10,648.0	5.0	10	Stg 20
20	9/23/2014	10,676.0	10,678.0	5.0	10	Stg 20
20	9/23/2014	10,706.0	10,708.0	5.0	10	Stg 20
20	9/23/2014	10,736.0	10,738.0	5.0	10	Stg 20
19	9/23/2014	10,766.0	10,768.0	5.0	10	Stg 19
19	9/23/2014	10,796.0	10,798.0	5.0	10	Stg 19
19	9/23/2014	10,826.0	10,828.0	5.0	10	Stg 19
19	9/23/2014	10,856.0	10,858.0	5.0	10	Stg 19
19	9/23/2014	10,886.0	10,888.0	5.0	10	Stg 19
18	9/23/2014	10,916.0	10,918.0	5.0	10	Stg 18
18	9/23/2014	10,946.0	10,948.0	5.0	10	Stg 18
18	9/23/2014	10,976.0	10,978.0	5.0	10	Stg 18
18	9/23/2014	11,006.0	11,008.0	5.0	10	Stg 18
18	9/23/2014	11,036.0	11,038.0	5.0	10	Stg 18
17	9/22/2014	11,066.0	11,068.0	5.0	10	Stg 17
17	9/22/2014	11,096.0	11,098.0	5.0	10	Stg 17
17	9/22/2014	11,126.0	11,128.0	5.0	10	Stg 17
17	9/22/2014	11,156.0	11,158.0	5.0	10	Stg 17
17	9/22/2014	11,186.0	11,188.0	5.0	10	Stg 17
16	9/22/2014	11,216.0	11,218.0	5.0	10	Stg 16
16	9/22/2014	11,246.0	11,248.0	5.0	10	Stg 16
16	9/22/2014	11,276.0	11,278.0	5.0	10	Stg 16
16	9/22/2014	11,306.0	11,308.0	5.0	10	Stg 16
16	9/22/2014	11,336.0	11,338.0	5.0	10	Stg 16
15	9/22/2014	11,366.0	11,368.0	5.0	10	Stg 15
15	9/22/2014	11,396.0	11,398.0	5.0	10	Stg 15
15	9/22/2014	11,426.0	11,428.0	5.0	10	Stg 15
15	9/22/2014	11,456.0	11,458.0	5.0	10	Stg 15
15	9/22/2014	11,486.0	11,488.0	5.0	10	Stg 15
14	9/19/2014	11,516.0	11,518.0	5.0	10	Stg 14
14	9/19/2014	11,546.0	11,548.0	5.0	10	Stg 14
14	9/19/2014	11,576.0	11,578.0	5.0	10	Stg 14
14	9/19/2014	11,606.0	11,608.0	5.0	10	Stg 14
14	9/19/2014	11,636.0	11,638.0	5.0	10	Stg 14
13	9/19/2014	11,666.0	11,668.0	5.0	10	Stg 13

Received
Office of Oil & Gas
05 2016

Perforations						
Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
13	9/19/2014	11,696.0	11,698.0	5.0	10	Stg 13
13	9/19/2014	11,726.0	11,728.0	5.0	10	Stg 13
13	9/19/2014	11,756.0	11,758.0	5.0	10	Stg 13
13	9/19/2014	11,786.0	11,788.0	5.0	10	Stg 13
12	9/19/2014	11,816.0	11,818.0	5.0	10	Stg 12
12	9/19/2014	11,846.0	11,848.0	5.0	10	Stg 12
12	9/19/2014	11,876.0	11,878.0	5.0	10	Stg 12
12	9/19/2014	11,906.0	11,908.0	5.0	10	Stg 12
12	9/19/2014	11,936.0	11,938.0	5.0	10	Stg 12
11	9/18/2014	11,966.0	11,968.0	5.0	10	Stg 11
11	9/18/2014	11,996.0	11,998.0	5.0	10	Stg 11
11	9/18/2014	12,026.0	12,028.0	5.0	10	Stg 11
11	9/18/2014	12,056.0	12,058.0	5.0	10	Stg 11
11	9/18/2014	12,086.0	12,088.0	5.0	10	Stg 11
10	9/18/2014	12,116.0	12,118.0	5.0	10	Stg 10
10	9/18/2014	12,146.0	12,148.0	5.0	10	Stg 10
10	9/18/2014	12,176.0	12,178.0	5.0	10	Stg 10
10	9/18/2014	12,206.0	12,208.0	5.0	10	Stg 10
10	9/18/2014	12,236.0	12,238.0	5.0	10	Stg 10
9	9/18/2014	12,266.0	12,268.0	5.0	10	Stg 9
9	9/18/2014	12,296.0	12,298.0	5.0	10	Stg 9
9	9/18/2014	12,326.0	12,328.0	5.0	10	Stg 9
9	9/18/2014	12,356.0	12,358.0	5.0	10	Stg 9
9	9/18/2014	12,386.0	12,388.0	5.0	10	Stg 9
8	9/17/2014	12,416.0	12,418.0	5.0	10	Stg 8
8	9/17/2014	12,446.0	12,448.0	5.0	10	Stg 8
8	9/17/2014	12,476.0	12,478.0	5.0	10	Stg 8
8	9/17/2014	12,506.0	12,508.0	5.0	10	Stg 8
8	9/17/2014	12,536.0	12,538.0	5.0	10	Stg 8
7	9/17/2014	12,566.0	12,568.0	5.0	10	Stg 7
7	9/17/2014	12,596.0	12,598.0	5.0	10	Stg 7
7	9/17/2014	12,626.0	12,628.0	5.0	10	Stg 7
7	9/17/2014	12,656.0	12,658.0	5.0	10	Stg 7
7	9/17/2014	12,686.0	12,688.0	5.0	10	Stg 7
6	9/17/2014	12,716.0	12,718.0	5.0	10	Stg 6
6	9/17/2014	12,746.0	12,748.0	5.0	10	Stg 6
6	9/17/2014	12,776.0	12,778.0	5.0	10	Stg 6
6	9/17/2014	12,806.0	12,808.0	5.0	10	Stg 6
6	9/17/2014	12,836.0	12,838.0	5.0	10	Stg 6
5	9/16/2014	12,866.0	12,868.0	5.0	10	Stg 5
5	9/16/2014	12,896.0	12,898.0	5.0	10	Stg 5
5	9/16/2014	12,926.0	12,928.0	5.0	10	Stg 5
5	9/16/2014	12,956.0	12,958.0	5.0	10	Stg 5
5	9/16/2014	12,986.0	12,988.0	5.0	10	Stg 5
4	9/16/2014	13,016.0	13,018.0	5.0	10	Stg 4
4	9/16/2014	13,046.0	13,048.0	5.0	10	Stg 4
4	9/16/2014	13,076.0	13,078.0	5.0	10	Stg 4
4	9/16/2014	13,106.0	13,108.0	5.0	10	Stg 4
4	9/16/2014	13,136.0	13,138.0	5.0	10	Stg 4
3	9/15/2014	13,166.0	13,168.0	5.0	10	Stg 3
3	9/15/2014	13,196.0	13,198.0	5.0	10	Stg 3
3	9/15/2014	13,226.0	13,228.0	5.0	10	Stg 3
3	9/15/2014	13,256.0	13,258.0	5.0	10	Stg 3
3	9/15/2014	13,286.0	13,288.0	5.0	10	Stg 3
2	9/15/2014	13,316.0	13,318.0	5.0	10	Stg 2
2	9/15/2014	13,346.0	13,348.0	5.0	10	Stg 2
2	9/15/2014	13,376.0	13,378.0	5.0	10	Stg 2
2	9/15/2014	13,406.0	13,408.0	5.0	10	Stg 2
2	9/15/2014	13,436.0	13,438.0	5.0	10	Stg 2
1	9/15/2014	13,466.0	13,472.0	2.0	10	Stg 1

Received
 Office of Oil & Gas
 Stg 1 SLB Rupture Disc
 Valve
 JUL 06 2016

(BOTTOM HOLE: 80°39'36.3")

LON: -80°40'35.4"

2770'

1 - Well Ties and Lat/Longs and Longitude were measured by GPS (Sub-meter Mapping Grade) Recordings are not entered to UTM Grid (Zone 17 North - NAD 83 1983)

2 - Surface owners and adjacent landowners followed from the West Virginia Assessor's Tax records.

3 - No Title Opinions were provided to the Surveyor during this survey. The survey is subject to a complete Title Opinion.

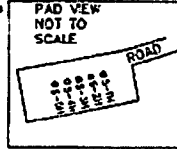
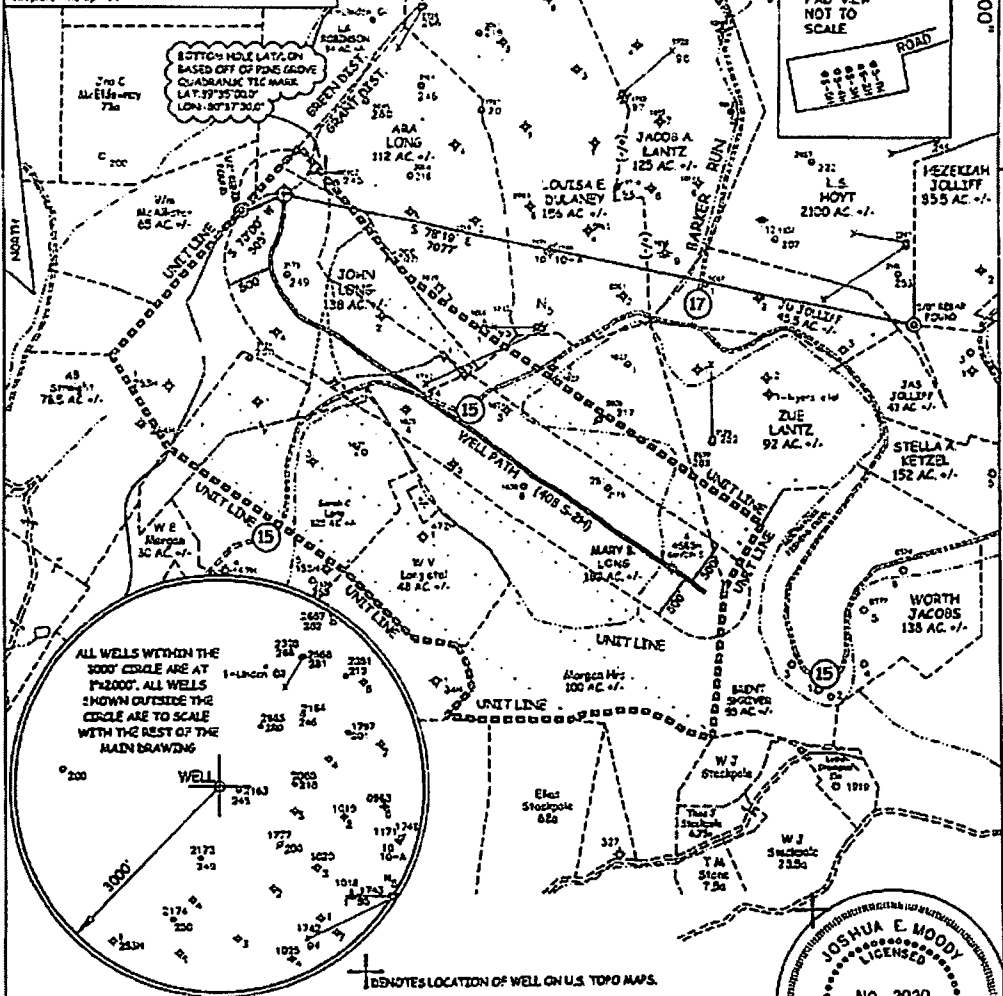
UTM Coordinates	
Zone 17 (NAD 83)	
Surface	N=4,381,538m. E=527,797m.
Bottom Hole	N=4,380,254m. E=529,211m.

LOCATION REFERENCES	
NAD 8303	
N 46°23' E 221.0722	
S 84°42' E 140.0722	

LAT: 39°37'30"

**MAP OF
H.G. ENERGY, LLC
-LONG 408 UNIT-**

LON: 80°40'00"

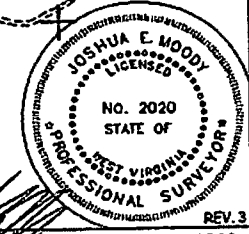


JOB # 12-025
DRAWING # 12HC408FOLDER
SCALE 1" = 1500'
MINIMUM DEGREE OF ACCURACY SUB-METER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERFORMED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
MOODY LAND SURVEYING, LLC
ST. MARYS, WV 26170



JOSHUA E. MOODY, P.S. 2020
DATE 12/08/14
OPERATOR'S WELL #408 S-2H

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL HORIZONTAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW API WELL # _____
 LOCATION: ELEVATION 1340' WATERSHED NORTH FOR FISHING CREEK 47 - 103 -
 DISTRICT GRANT COUNTY WETZEL STATE COUNTY PERMIT
 QUADRANGLE PINE GROVE 7.5'
 SURFACE OWNER FRANCIS D. & FREEDA M. BROWN (surface hole) ACREAGE 103 ACRES +/-
 OIL & GAS ROYALTY OWNER ROBERT B. MYERS ET AL LEASE ACREAGE 514.72 ACRES +/-
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ AS DRILLED LOCATION _____
 PLUG & ABANDON CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD= 7,344.81' MD= 13,541'
 WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT DIANE WHITE
 ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD
 PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

FORM WH-6

LEASE # 31950-50 et al

Received Office of Oil & Gas

JUL 05 2016

07/08/2016

(BOTTOM HOLE: 80°39'36.3")

LONG: -80°40'35.4"

2770'

1 - Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1983).

2 - Surface owners and adjacent information obtained from the Wetzel County Assessor's tax records.

3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.

SURVEY NOTES

UTM Coordinates (Zone 17N-NAD 1983)

Surface N-4,381,586m. E-527,797m.

Bottom Hole N-4,390,254m. E-529,211m.

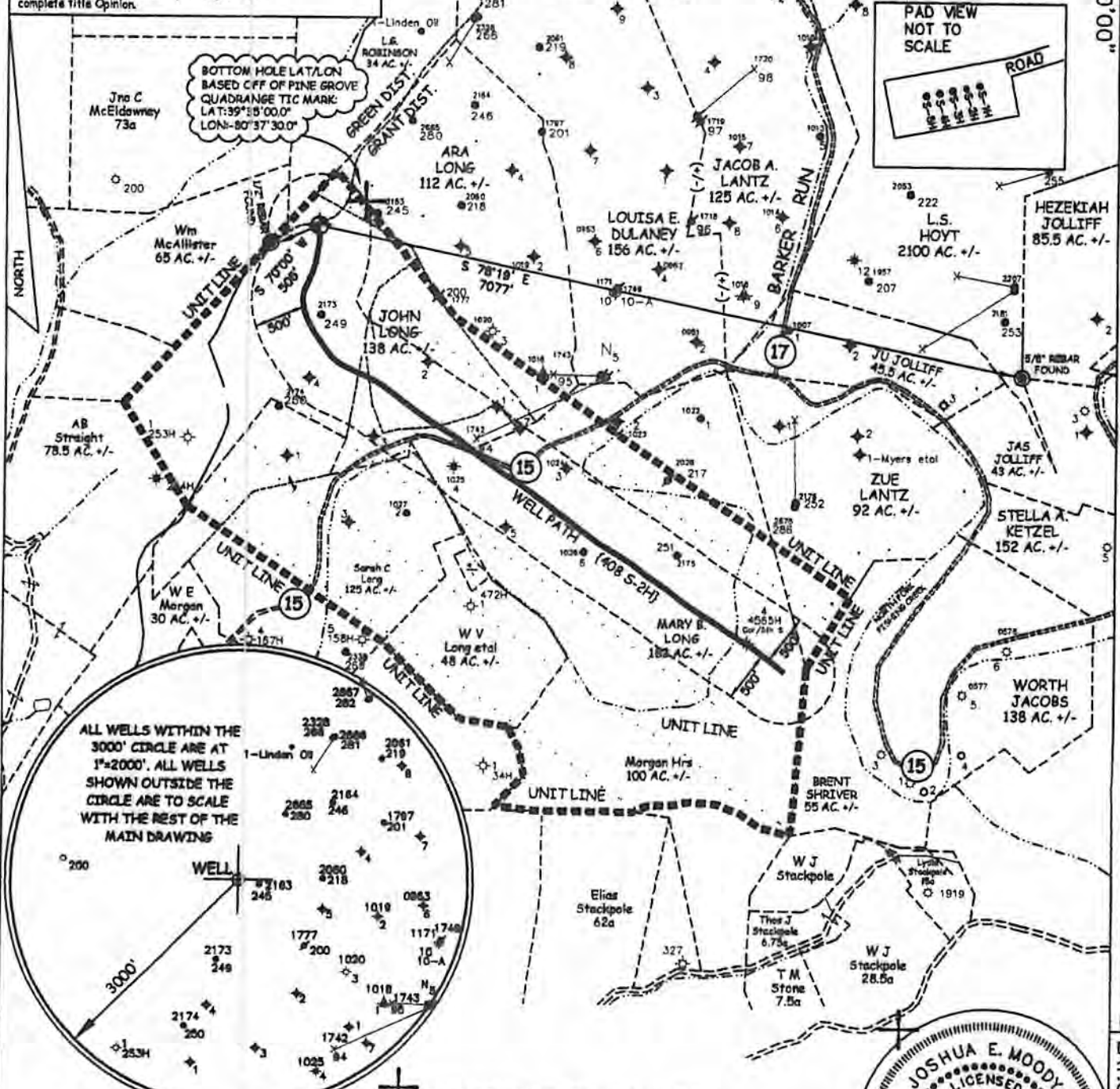
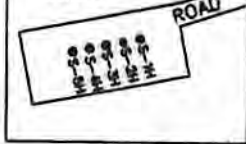
LOCATION REFERENCES

NAD 1983
N 48°21' E 221' SPIKE
S 84°48' E 360' SPIKE

LAT: 39°37'30"

MAP OF H.G. ENERGY, LLC -LONG 408 UNIT-

PAD VIEW NOT TO SCALE



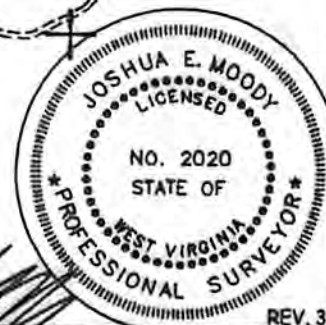
CROSSHAIR DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

JOB # 12-025
DRAWING # 12HG409FOLDER
SCALE 1" = 1500'
MINIMUM DEGREE OF ACCURACY SUB-METER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
MOODY LAND SURVEYING, LLC
ST. MARYS, WV 26170



JOSHUA E. MOODY, P.S. 2020
DATE 12/08/14
OPERATOR'S WELL # 408 S-2H

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL HORIZONTAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1340' WATERSHED NORTH FOR, FISHING CREEK API WELL #
DISTRICT GRANT COUNTY WETZEL 47 - 103 - 02888146
QUADRANGLE PINE GROVE 7.5' STATE COUNTY PERMIT

SURFACE OWNER FRANCIS D. & FREEDA M. BROWN (surface hole) ACREAGE 103 ACRES +/-
OIL & GAS ROYALTY OWNER ROBERT B. MYERS ET AL LEASE ACREAGE 514.72 ACRES +/-
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED LOCATION
PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH TVD= 7,344.81' MD= 13,541'
WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT DIANE WHITE
ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

07/08/2016

LAT: 39°35'00.5" (BOTTOM HOLE: 39°34'17.1")