

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

API 47-103-02891 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-5H
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 4,381,584 Easting 527,784
Landing Point of Curve Northing 4380823.3 Easting 527474.2
Bottom Hole Northing 4,380,119 Easting 528,365

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 9/13/2013 Date drilling ceased 07/21/2014
Date completion activities began 08/11/2014 Date completion activities ceased 09/12/2014
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 _____
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas
Reviewed by
JOE 08 2016

APPROVED

AME: Jackie Thornton
ATE: 7/5/14

07/08/2016

API 47-103 - 02891

Fann name Francis D. & Freeda M. Brown Well number 408 S-5H

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"	1316'	New	J-55/54.5	n/a	Cement to Surface
Coal							
Intermediate 1	12-1/4"	9-5/8"	3454'	New	J-55/40	n/a	Cement to Surface
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	12852'	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+	369 lead/694 tail	15.0	1.29/1.3	1373	Surface	12
Intermediate 2							
Intermediate 3							
Production	50/50 PNE1/ASC	1611 lead/950 tail	14.3/14.7	1.23/1.5	3448	Surface	12
Tubing							

Drillers TD (ft) 12,882

Loggers TD (ft) 12,882

Deepest formation penetrated Marcellus

Plug back to (ft) n/a

Plug back procedure n/a

Kick off depth (ft) 3,500' 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 15 (1 every 4 joints)

Productions - Ran 101 (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 _____

Received
Office of Oil & Gas

JUL 05 2016

07/08/2016

API 47- 103 02891 Farm name Francis D. & Freeda M. Brown Well number 408 S-5H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	7,326'	TVD 12,882' 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 1232.498 mcfpd Oil 26.03 bpd NGL _____ bpd Water 2.15 bpd
 GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
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	7149'		8101'		
Marcellus Shale	7248'		8440'	12882'	

Please insert additional pages as applicable.

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

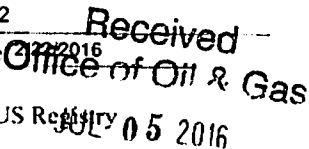
Logging Company ALS Empirca Surface Logging
 Address 6360 W. Sam Houston Pkwy N, Suite 100 City Houston State TX Zip 77401

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 Bravo Telephone 405-252-7642
 Signature *[Signature]* Title Regulatory Analyst Date 7/22/2016
 Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Report



Well Name	API	Property Number	Well Status	State	County	Well Spud Date	RR Date	Comp Date
LONG 408 S-5H	47103028910000	1470005	PRODUCTION	WEST VIRGINIA	WETZEL	10/2/2013	7/25/2014	
Well Treatment Summary								
Stage #	Start Date	Slurry Rate Avg (bbf/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Prop Placed (lb)	Vol Slurry Total (bbf)	
1	8/11/2014	72	7,074	7,330	4,440	151,300	0.00	
2	8/12/2014	73	7,080	5,933	5,083	224,800	0.00	
3	8/13/2014	72	6,715	5,234	4,700	224,900	0.00	
4	8/14/2014	77	7,010	5,660	6,108	178,700	0.00	
5	8/15/2014	80	6,985	5,695	4,640	224,900	0.00	
6	8/18/2014	75	7,550	5,640	5,169	224,900	0.00	
7	8/19/2014	78	7,101	5,632	4,196	191,400	0.00	
8	8/20/2014	78	7,285	5,491	4,889	224,900	0.00	
9	8/21/2014	80	7,495	5,563	4,618	224,900	0.00	
10	8/22/2014	80	7,225	5,714	5,130	224,900	0.00	
11	8/23/2014	80	7,175	5,520	4,942	224,900	0.00	
12	8/25/2014	80	7,156	5,511	4,935	224,900	0.00	
13	8/26/2014	76	7,325	5,572	5,476	224,900	0.00	
14	8/27/2014	80	7,250	5,682	4,213	224,900	0.00	
15	8/28/2014	73	7,377	5,806	5,396	224,900	0.00	
16	8/29/2014	80	7,305	5,515	5,741	224,900	0.00	
17	9/1/2014	80	7,030	5,584	5,035	224,900	0.00	
18	9/2/2014	76	7,165	5,488	3,993	224,900	0.00	
19	9/3/2014	75	7,230	5,302	4,056	213,600	0.00	
20	9/4/2014	80	6,915	5,680	4,661	224,900	0.00	
21	9/5/2014	79	6,910	5,805	4,898	224,900	0.00	
22	9/8/2014	81	6,825	5,726	4,710	224,900	0.00	
23	9/9/2014	80	7,062	6,052	4,612	224,900	0.00	
24	9/9/2014	82	6,850	6,033	4,664	224,900	0.00	
25	9/10/2014	75	6,875	5,541	4,685	224,900	0.00	
26	9/11/2014	80	7,275	5,673	4,998	224,900	0.00	
27	9/11/2014	80	6,875	5,933	5,304	224,900	0.00	
28	9/12/2014	77	6,885	5,951	4,516	224,900	0.00	
29	9/12/2014	80	6,825	5,665	4,280	224,900	0.00	

Received
Office of Oil & Gas
JUL 05 2016

07/08/2016

Perforations

Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
29	9/12/2014	8,616.0	8,618.0	5.0	10	Stg 29
29	9/12/2014	8,646.0	8,648.0	5.0	10	Stg 29
29	9/12/2014	8,676.0	8,678.0	5.0	10	Stg 29
29	9/12/2014	8,706.0	8,708.0	5.0	10	Stg 29
29	9/12/2014	8,736.0	8,738.0	5.0	10	Stg 29
28	9/11/2014	8,766.0	8,768.0	5.0	10	Stg 28
28	9/11/2014	8,796.0	8,798.0	5.0	10	Stg 28
28	9/11/2014	8,826.0	8,828.0	5.0	10	Stg 28
28	9/11/2014	8,856.0	8,858.0	5.0	10	Stg 28
28	9/11/2014	8,886.0	8,888.0	5.0	10	Stg 28
27	9/11/2014	8,916.0	8,918.0	5.0	10	Stg 27
27	9/11/2014	8,946.0	8,948.0	5.0	10	Stg 27
27	9/11/2014	8,976.0	8,978.0	5.0	10	Stg 27
27	9/11/2014	9,006.0	9,008.0	5.0	10	Stg 27
27	9/11/2014	9,036.0	9,038.0	5.0	10	Stg 27
26	9/10/2014	9,066.0	9,068.0	5.0	10	Stg 26
26	9/10/2014	9,096.0	9,098.0	5.0	10	Stg 26
26	9/10/2014	9,126.0	9,128.0	5.0	10	Stg 26
26	9/10/2014	9,156.0	9,158.0	5.0	10	Stg 26
26	9/10/2014	9,186.0	9,188.0	5.0	10	Stg 26
25	9/9/2014	9,216.0	9,218.0	5.0	10	Stg 25
25	9/9/2014	9,246.0	9,248.0	5.0	10	Stg 25
25	9/9/2014	9,276.0	9,278.0	5.0	10	Stg 25
25	9/9/2014	9,306.0	9,308.0	5.0	10	Stg 25
25	9/9/2014	9,336.0	9,338.0	5.0	10	Stg 25
24	9/8/2014	9,366.0	9,368.0	5.0	10	Stg 24
24	9/8/2014	9,396.0	9,398.0	5.0	10	Stg 24
24	9/8/2014	9,426.0	9,428.0	5.0	10	Stg 24
24	9/8/2014	9,456.0	9,458.0	5.0	10	Stg 24
24	9/8/2014	9,486.0	9,488.0	5.0	10	Stg 24
23	9/8/2014	9,516.0	9,518.0	5.0	10	Stg 23
23	9/8/2014	9,546.0	9,548.0	5.0	10	Stg 23
23	9/8/2014	9,576.0	9,578.0	5.0	10	Stg 23
23	9/8/2014	9,606.0	9,608.0	5.0	10	Stg 23
23	9/8/2014	9,636.0	9,638.0	5.0	10	Stg 23
22	9/5/2014	9,666.0	9,668.0	5.0	10	Stg 22
22	9/5/2014	9,696.0	9,698.0	5.0	10	Stg 22
22	9/5/2014	9,726.0	9,728.0	5.0	10	Stg 22
22	9/5/2014	9,756.0	9,758.0	5.0	10	Stg 22
22	9/5/2014	9,786.0	9,788.0	5.0	10	Stg 22
21	9/4/2014	9,816.0	9,818.0	5.0	10	Stg 21
21	9/4/2014	9,846.0	9,848.0	5.0	10	Stg 21
21	9/4/2014	9,876.0	9,878.0	5.0	10	Stg 21
21	9/4/2014	9,906.0	9,908.0	5.0	10	Stg 21
21	9/4/2014	9,936.0	9,938.0	5.0	10	Stg 21
20	9/3/2014	9,966.0	9,968.0	5.0	10	Stg 20
20	9/3/2014	9,996.0	9,998.0	5.0	10	Stg 20
20	9/3/2014	10,026.0	10,028.0	5.0	10	Stg 20
20	9/3/2014	10,056.0	10,058.0	5.0	10	Stg 20
20	9/3/2014	10,086.0	10,088.0	5.0	10	Stg 20
19	9/2/2014	10,116.0	10,118.0	5.0	10	Stg 19
19	9/2/2014	10,146.0	10,148.0	5.0	10	Stg 19
19	9/2/2014	10,176.0	10,178.0	5.0	10	Stg 19
19	9/2/2014	10,206.0	10,208.0	5.0	10	Stg 19
19	9/2/2014	10,236.0	10,238.0	5.0	10	Stg 19
18	9/1/2014	10,266.0	10,268.0	5.0	10	Stg 18
18	9/1/2014	10,296.0	10,298.0	5.0	10	Stg 18
18	9/1/2014	10,326.0	10,328.0	5.0	10	Stg 18
18	9/1/2014	10,356.0	10,358.0	5.0	10	Stg 18
18	9/1/2014	10,386.0	10,388.0	5.0	10	Stg 18
17	8/29/2014	10,416.0	10,418.0	5.0	10	Stg 17
17	8/29/2014	10,446.0	10,448.0	5.0	10	Stg 17
17	8/29/2014	10,476.0	10,478.0	5.0	10	Stg 17

Received
Office of Oil & Gas
Jul 15 2016

Perforations

Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
17	8/29/2014	10,506.0	10,508.0	5.0	10	Stg 17
17	8/29/2014	10,536.0	10,538.0	5.0	10	Stg 17
16	8/28/2014	10,566.0	10,568.0	5.0	10	Stg 16
16	8/28/2014	10,596.0	10,598.0	5.0	10	Stg 16
16	8/28/2014	10,626.0	10,628.0	5.0	10	Stg 16
16	8/28/2014	10,656.0	10,658.0	5.0	10	Stg 16
16	8/28/2014	10,686.0	10,688.0	5.0	10	Stg 16
15	8/27/2014	10,718.0	10,718.0	5.0	10	Stg 15
15	8/27/2014	10,746.0	10,748.0	5.0	10	Stg 15
15	8/27/2014	10,776.0	10,778.0	5.0	10	Stg 15
15	8/27/2014	10,806.0	10,808.0	5.0	10	Stg 15
15	8/27/2014	10,836.0	10,838.0	5.0	10	Stg 15
14	8/26/2014	10,986.0	10,988.0	5.0	10	Stg 14
14	8/26/2014	10,986.0	10,988.0	5.0	10	Stg 14
14	8/26/2014	10,986.0	10,988.0	5.0	10	Stg 14
14	8/26/2014	10,986.0	10,988.0	5.0	10	Stg 14
14	8/26/2014	10,986.0	10,988.0	5.0	10	Stg 14
13	8/25/2014	11,016.0	11,018.0	5.0	10	Stg 13
13	8/25/2014	11,046.0	11,048.0	5.0	10	Stg 13
13	8/25/2014	11,076.0	11,078.0	5.0	10	Stg 13
13	8/25/2014	11,106.0	11,108.0	5.0	10	Stg 13
13	8/25/2014	11,136.0	11,138.0	5.0	10	Stg 13
12	8/23/2014	11,166.0	11,168.0	5.0	10	Stg 12
12	8/23/2014	11,196.0	11,198.0	5.0	10	Stg 12
12	8/23/2014	11,226.0	11,228.0	5.0	10	Stg 12
12	8/23/2014	11,256.0	11,258.0	5.0	10	Stg 12
12	8/23/2014	11,286.0	11,288.0	5.0	10	Stg 12
11	8/22/2014	11,316.0	11,318.0	5.0	10	Stg 11
11	8/22/2014	11,346.0	11,348.0	5.0	10	Stg 11
11	8/22/2014	11,376.0	11,378.0	5.0	10	Stg 11
11	8/22/2014	11,406.0	11,408.0	5.0	10	Stg 11
11	8/22/2014	11,436.0	11,438.0	5.0	10	Stg 11
10	8/21/2014	11,466.0	11,468.0	5.0	10	Stg 10
10	8/21/2014	11,496.0	11,498.0	5.0	10	Stg 10
10	8/21/2014	11,526.0	11,528.0	5.0	10	Stg 10
10	8/21/2014	11,556.0	11,558.0	5.0	10	Stg 10
10	8/21/2014	11,586.0	11,588.0	5.0	10	Stg 10
9	8/20/2014	11,616.0	11,618.0	5.0	10	Stg 9
9	8/20/2014	11,646.0	11,648.0	5.0	10	Stg 9
9	8/20/2014	11,676.0	11,678.0	5.0	10	Stg 9
9	8/20/2014	11,706.0	11,708.0	5.0	10	Stg 9
9	8/20/2014	11,736.0	11,738.0	5.0	10	Stg 9
8	8/19/2014	11,766.0	11,768.0	5.0	10	Stg 8
8	8/19/2014	11,796.0	11,798.0	5.0	10	Stg 8
8	8/19/2014	11,826.0	11,828.0	5.0	10	Stg 8
8	8/19/2014	11,856.0	11,858.0	5.0	10	Stg 8
8	8/19/2014	11,886.0	11,888.0	5.0	10	Stg 8
7	8/18/2014	11,916.0	11,918.0	5.0	10	Stg 7
7	8/18/2014	11,946.0	11,948.0	5.0	10	Stg 7
7	8/18/2014	11,976.0	11,978.0	5.0	10	Stg 7
7	8/18/2014	12,006.0	12,008.0	5.0	10	Stg 7
7	8/18/2014	12,036.0	12,038.0	5.0	10	Stg 7
6	8/15/2014	12,066.0	12,068.0	5.0	10	Stg 6
6	8/15/2014	12,096.0	12,098.0	5.0	10	Stg 6
6	8/15/2014	12,126.0	12,128.0	5.0	10	Stg 6
6	8/15/2014	12,156.0	12,158.0	5.0	10	Stg 6
6	8/15/2014	12,186.0	12,188.0	5.0	10	Stg 6
5	8/14/2014	12,216.0	12,218.0	5.0	10	Stg 5
5	8/14/2014	12,246.0	12,248.0	5.0	10	Stg 5
5	8/14/2014	12,276.0	12,278.0	5.0	10	Stg 5
5	8/14/2014	12,306.0	12,308.0	5.0	10	Stg 5
5	8/14/2014	12,336.0	12,338.0	5.0	10	Stg 5
4	8/13/2014	12,366.0	12,368.0	5.0	10	Stg 4

Received
Office of Oil & Gas
05 2016

Perforations

Stage #	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Com
4	8/13/2014	12,396.0	12,398.0	5.0	10	Stg 4
4	8/13/2014	12,426.0	12,428.0	5.0	10	Stg 4
4	8/13/2014	12,456.0	12,458.0	5.0	10	Stg 4
4	8/13/2014	12,486.0	12,488.0	5.0	10	Stg 4
3	8/12/2014	12,516.0	12,518.0	5.0	10	Stg 3
3	8/12/2014	12,546.0	12,548.0	5.0	10	Stg 3
3	8/12/2014	12,576.0	12,578.0	5.0	10	Stg 3
3	8/12/2014	12,606.0	12,608.0	5.0	10	Stg 3
3	8/12/2014	12,636.0	12,638.0	5.0	10	Stg 3
2	8/11/2014	12,666.0	12,668.0	5.0	10	Stg 2
2	8/11/2014	12,696.0	12,698.0	5.0	10	Stg 2
2	8/11/2014	12,726.0	12,728.0	5.0	10	Stg 2
2	8/11/2014	12,756.0	12,758.0	5.0	10	Stg 2
2	8/11/2014	12,786.0	12,788.0	5.0	10	Stg 2
1	8/11/2014	12,816.0	12,820.0	1.0		SLB Rupture Disc Valve

Received
Office of Oil & Gas
JUL 05 2016

(BOTTOM HOLE: 60°39'56.9")

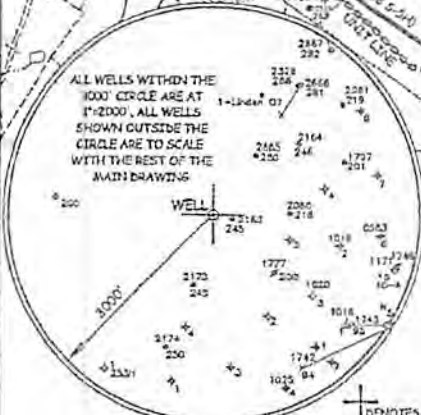
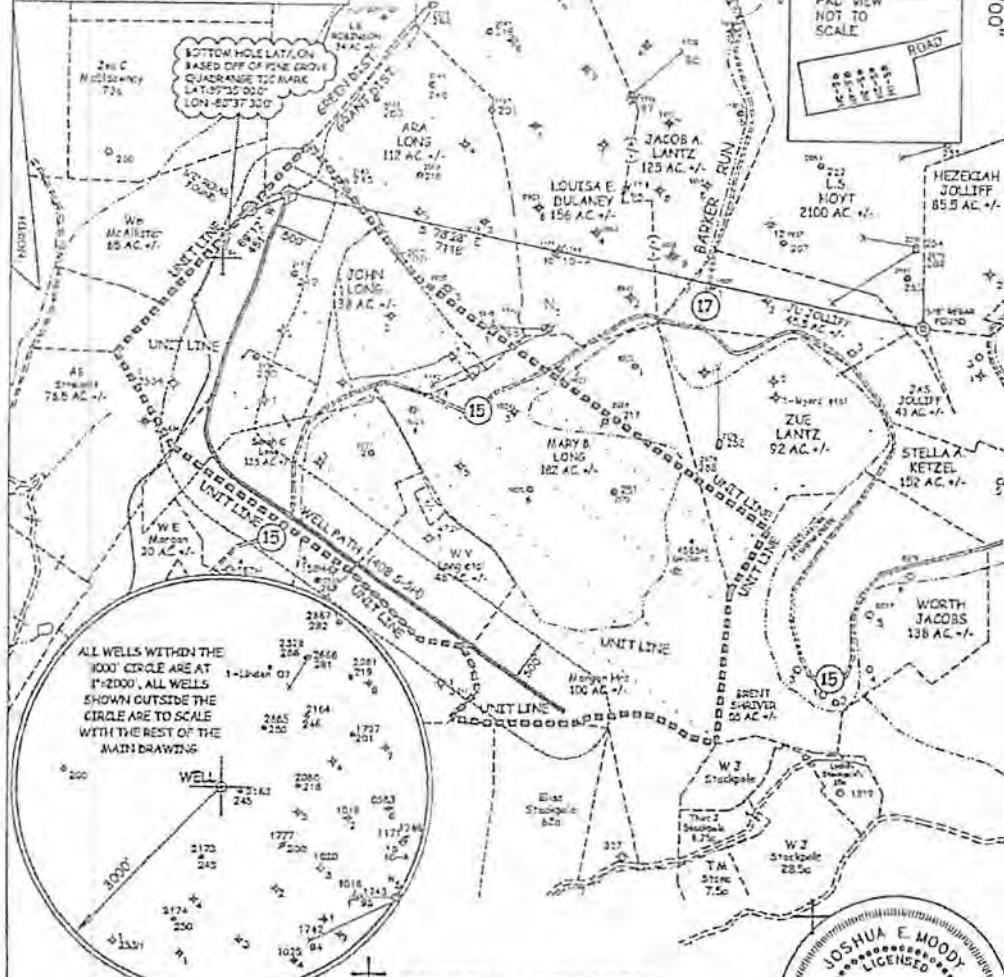
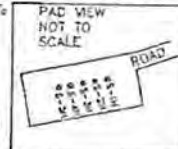
LON: -80°40'35.9"

2614'

- 1 - Well: The end Lathrod and Long-hole were measured by GPS (Global Positioning System) bearings are referenced to UTM Grid North (Zone 17 North - IAD 1927).
- 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 POINTS	UTM Coordinates (Zone 17N IAD 1983)	LOCATION REFERENCES
	Surface: N-4,381,584m E-527,784m	240 1983 N4159° E 184' SPIKE S 70°41' E 117' SPIKE
	Bottom: Hole: N-4,379,871m E-528,722m	

LAT: 39°37'30"
**MAP OF
 H.G. ENERGY, LLC
 -LONG 408 UNIT-**

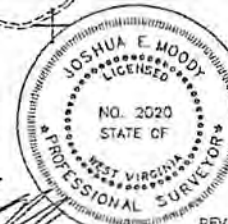


JOB # 12-025
 DRAWING # 12HG408FOLDER
 SCALE 1" = 1500'
 MINIMUM DEGREE OF ACCURACY SUB-METER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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-5H

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 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= 7,326.84' MD= 12,882'
 WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT DIANE WHITE
 ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD
 PARKERSBURG, WV 26101 PARKERSBURG, WV 26101
 LEASE # 31950-55 et al

FORM WW-6

Received
 Office of Oil & Gas
 12/15/2016

07/08/2016

(BOTTOM HOLE: 80°39'56.9")

LONG: -80°40'35.9"

2814'

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.

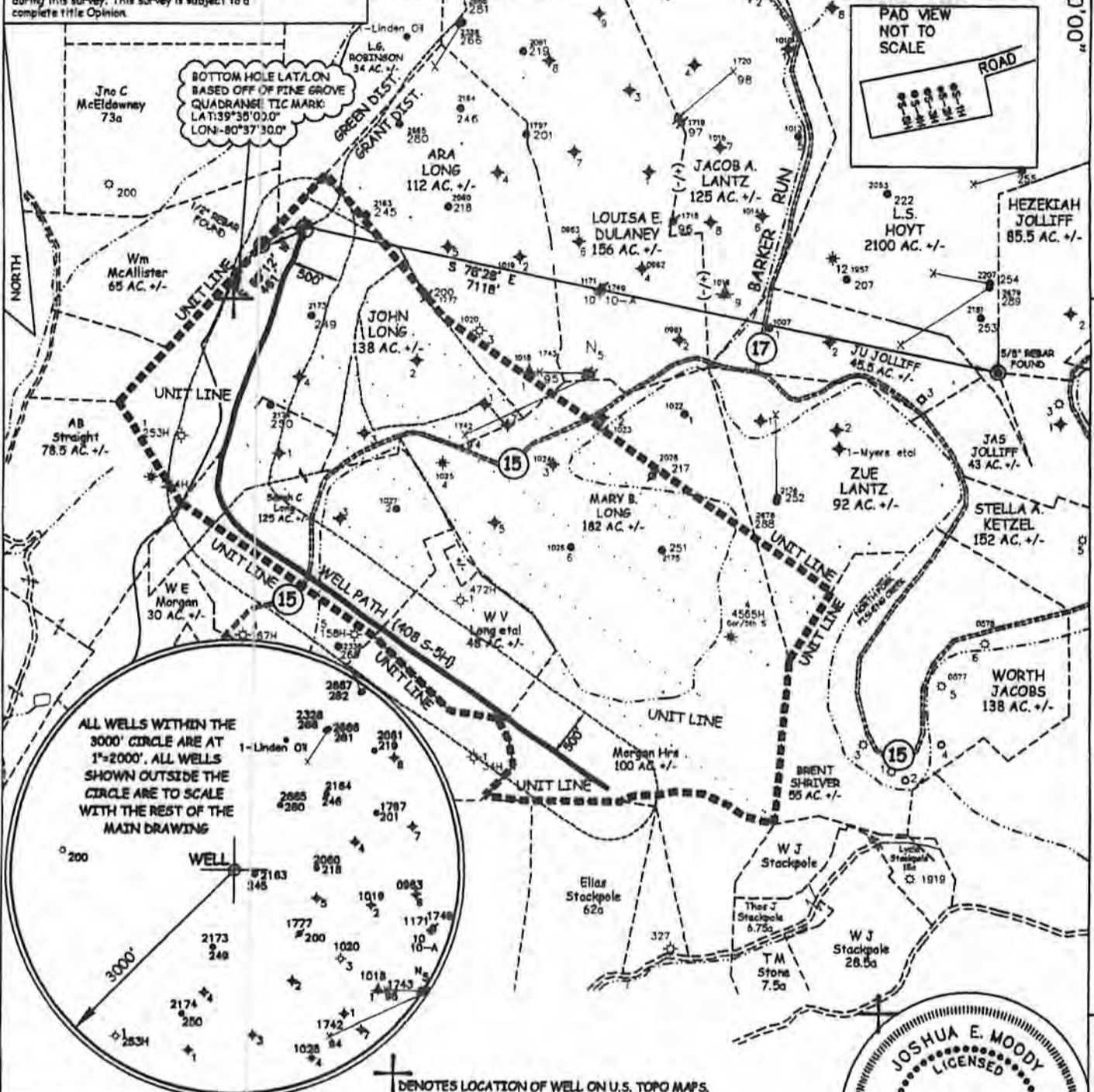
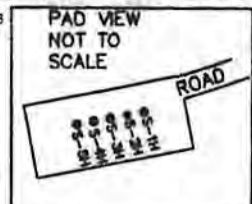
SURVEY NOTES

UTM Coordinates (Zone 17N-NAD 1983)	
Surface	N-4,381,584m. E-527,784m.
Bottom Hole	N-4,379,871m. E-528,722m.

LOCATION REFERENCES	
NAD 1983	N 41°00' E 184' SPIKE S 78°41' E 117' SPIKE

LAT: 39°37'30"

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

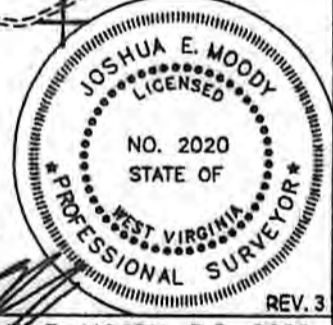


JOB # 12-025
DRAWING # 12HG408FOLDER
SCALE 1" = 1500'
MINIMUM DEGREE OF ACCURACY SUB-METER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

REV. 3
JOSHUA E. MOODY, P.S. 2020
DATE 12/08/14
OPERATOR'S WELL # 408 S-5H

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL HORIZONTAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1340' WATERSHED NORTH FOR, FISHING CREEK
DISTRICT GRANT COUNTY WETZEL API WELL # 47 - 103 - 02891/HG
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
WELL OPERATOR H.G. ENERGY, LLC
ADDRESS 5260 DuPONT ROAD PARKERSBURG, WV 26101
ESTIMATED DEPTH TVD= 7,326.84' MD= 12,882'
DESIGNATED AGENT DIANE WHITE
ADDRESS 5260 DuPONT ROAD PARKERSBURG, WV 26101

07/08/2016

LAT: 39°35'00.4" (BOTTOM HOLE: 39°34'04.7")