

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

API 47 - 103 - 02879 County Wetzel District Grant
Quad Pine Grove 7.5' Pad Name Long Field/Pool Name Willeyville
Farm name Francis D & Freeda M Brown (Surface Hole) Well Number 409 S 2H
Operator (as registered with the OOG) Ascent Resources - Marcellus, LLC
Address 3501 NW 63rd Street 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 4381635 Easting 527879
Landing Point of Curve Northing 4382133.6 Easting 528539.7
Bottom Hole Northing 4381174 Easting 529968

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)
Water based salt polymer mud

Date permit issued 5/28/2013 Date drilling commenced 6/29/2013 Date drilling ceased 11/7/2013
Date completion activities began 4/30/2014 Date completion activities ceased 6/25/2014
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

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Reviewed by:
JUL 05 2016

APPROVED

NAME: Jackie Shurton
DATE: 7/8/16

07/08/2016

API 47-103 - 02879 Farm name Francis D & Freeda M Brown (Surface Hole) Well number 409 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"	60'	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"	3402'	New	J-55/40	n/a	Cement to surface
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	14186'	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	505 lead/827 tail	14.6/15.6	1.37/1.18	1429	Surface	12
Coal							
Intermediate 1	Type 1	399 lead/662 tail	15.0	1.29	1370	Surface	12
Intermediate 2							
Intermediate 3							
Production	50/50 PNE/ASC 1	1568 lead/1064 tail	14.3/14.7	1.23/1.5	3586	Surface	12
Tubing							

Drillers TD (ft) 14201' Loggers TD (ft) 14201'
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 3700'

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 casing - Ran 20 (1 every 2 joints)
Intermediate casing - Ran 16 (1 every 5 joints)
Production casing - Ran 96 (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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JUL 05 2016

API 47- 103 - 02879 Farm name Francis D & Freeda M Brown (Surface Hole) Well number 409 S 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	5/19/2014	14083		50	Marcellus
2	5/19/2014	13853	14014	50	Marcellus
3	5/20/2014	13648	13789	50	Marcellus
4	5/21/2014	13443	13584	50	Marcellus
5	5/22/2014	13238	13379	50	Marcellus
6	5/23/2014	13033	13174	50	Marcellus
7	5/27/2014	12828	12969	50	Marcellus
8	5/28/2014	12623	12764	50	Marcellus
9	5/29/2014	12418	12559	50	Marcellus
10	5/30/2014	12213	12354	50	Marcellus
11	5/31/2014	12008	12149	50	Marcellus
12	6/5/2014	11803	11944	50	Marcellus
13	6/5/2014	11598	11739	50	Marcellus
14	6/6/2014	11393	11534	50	Marcellus
15	6/7/2014	11188	11329	50	Marcellus
	Con't	on	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 (bbbls)	Amount of Nitrogen/other (units)
1	5/19/14	85	7497	n/a	4080	237800	6099	n/a
2	5/19/14	89.1	8112	5527	3911	289400	6818	n/a
3	5/20/14	76.8	7835	6232	4392	345300	7911	n/a
4	5/21/14	81.7	8057	5845	4396	355600	7954	n/a
5	5/22/14	83.5	7703	5375	4534	355600	7751	n/a
6	5/23/14	77.9	7332	5713	4273	355600	7494	n/a
7	5/27/14	80.6	7638	5775	4145	278300	6574	n/a
8	5/28/14	81	7615	5735	4594	355600	7231	n/a
9	5/29/14	82.4	7793	5802	4827	355600	7090	n/a
10	5/30/14	79.5	7420	5687	4855	355600	7510	n/a
11	5/31/14	80.7	7314	5405	4943	355600	7423	n/a
12	6/5/14	77.3	7482	5770	4547	355600	7622	n/a
13	6/5/14	77.7	7225	5484	4521	355600	8693	n/a
14	6/6/14	81.5	7420	5634	5183	288500	7541	n/a
15	6/7/14	80.1	7222	5731	4170	355600	7279	n/a
	Con't	on	Page	4				

Please insert additional pages as applicable.

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API 47- 103 - 02879 Farm name Francis D & Freeda M Brown (Surface Hole) Well number 409S 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft	Perforated to MD ft	Number of Perforations	Formation(s)
16	6/9/2014	10958	11119	50	Marcellus
17	6/10/2014	10728	10889	50	Marcellus
18	6/11/2014	10498	10859	50	Marcellus
19	6/12/2014	10268	10429	50	Marcellus
20	6/13/2014	10038	10199	50	Marcellus
21	6/16/2014	9808	9969	50	Marcellus
22	6/17/2014	9578	9739	50	Marcellus
23	6/19/2014	9348	9509	50	Marcellus
24	6/20/2014	9118	9279	50	Marcellus
25	6/23/2014	8888	9049	50	Marcellus
26	6/24/2014	8658	8819	50	Marcellus

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)
16	6/9/14	78.4	7064	5568	4432	358500	7221	n/a
17	6/10/14	78.6	7242	5568	4385	358500	7015	n/a
18	6/11/14	78	7193	5590	4375	358500	7138	n/a
19	6/12/14	80.9	7100	5499	4356	358500	7268	n/a
20	6/13/14	76.8	6737	5462	5085	358500	7466	n/a
21	6/16/14	81.8	6386	5512	4342	358500	7333	n/a
22	6/17/14	76.5	6624	5482	4597	358500	7012	n/a
23	6/19/14	70.5	6651	5605	5044	358500	6806	n/a
24	6/20/14	73.7	6538	5370	4975	358500	6931	n/a
25	6/23/14	71.9	6623	5384	4150	358500	6990	n/a
26	6/24/14	74.9	6332	5435	4461	303500	6142	n/a

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Received
Office of Oil & Gas
JUL 05 2016

07/08/2016

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	7368'	TVD	14201' 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 230 mcfpd Oil 0 bpd NGL _____ bpd Water 13 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)
	0		0		
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'	7175'	3204'	8118'	
Tully Lime	7175'	7180'	8118'	8128'	
Hamilton Shale	7180'	7281'	8128'	8345'	
Marcellus Shale	7281'		8345'	14201'	

Please insert additional pages as applicable.

Drilling Contractor Dean Decker & Sons Inc
Address 11585 State Route 676 City Vincent State OH Zip 45784

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

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

Please insert additional pages as applicable.

Completed by April Brava Telephone 405-252-7642
Signature [Signature] Title Regulatory Analyst Date 2/22/2016

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

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07/08/2016

Long 409 S #2H Frac Summary

Stage	# of Perfs	Total Acid (gal)	Total Water (bbl)	Total Sand (sks)	Total Slurry (bbl)	Pad Vol (bbl)	100 Mesh (sks)	40/70 White (sks)	40/70 CRCS (sks)	30/50 White (sks)	30/50 CRCS (sks)	20/40 White (sks)	20/40 CRCS (sks)	BOP (psi)	15IP (psi)	1 Min SIP (psi)	2 Min SIP (psi)	3 Min SP (psi)	ATP (psi)	Avg Rate (bbl/min)	PUMP DOWN (bbl)	Produced Water (bbl)
1	50	1500	6999	2378	6231	744	502	1076	0	0	0	0	0	N/A	4080	3023	3653	3428	7497	65	0	0
2	50	1500	6918	2894	7009	730	502	2362	0	0	0	0	0	5527	3511	3589	3445	3263	6112	89.1	365	2500
3	50	1500	7911	3453	8300	841	389	2503	551	0	0	0	0	6232	4302	3953	3827	3673	7835	76.0	341	620
4	50	1500	7054	3556	8019	894	502	2503	551	0	0	0	0	5845	4398	3870	3764	3524	6057	81.7	358	1250
5	50	1500	7751	3558	8108	839	502	2503	551	0	0	0	0	5375	4534	4050	3908	3689	7703	83.3	323	1130
6	50	1500	7494	3556	7893	810	502	2503	551	0	0	0	0	5713	4273	4004	3858	3667	7332	77.9	301	1880
7	50	1500	6574	2783	6849	838	502	2281	0	0	0	0	0	5775	4145	3927	3848	N/A	7638	80.6	296	1180
8	50	1500	7231	3556	7848	798	502	2503	551	0	0	0	0	5735	4594	4305	4125	3879	7615	81	276	1400
9	50	1500	7090	3556	7480	855	502	2503	551	0	0	0	0	5802	4827	4268	4115	3852	7703	82.4	267	1650
10	50	1500	7510	3555	7938	840	502	2503	551	0	0	0	0	5887	4855	4330	4120	3854	7470	79.5	250	0
11	50	1500	7423	3556	7760	835	502	2503	551	0	0	0	0	5405	4043	4471	4271	3930	7314	80.7	245	2708
12	50	1500	7822	3556	7932	897	502	2503	551	0	0	0	0	5770	4547	3994	3855	3889	7482	77.3	225	1500
13	50	1500	8693	3556	8050	839	502	2503	551	0	0	0	0	5484	4521	4397	4187	3910	7225	77.7	202	2000
14	50	1500	7541	2885	7785	854	502	2383	0	0	0	0	0	5834	5183	4470	4285	3949	7470	81.5	207	1540
15	50	1500	7279	3556	7841	861	502	2503	551	0	0	0	0	5731	4170	3875	3711	3435	7222	85.1	156	1870
16	50	1500	7221	3585	7847	877	502	2688	415	0	0	0	0	6588	4432	4218	4052	3770	7084	78.4	183	1506
17	50	1500	7016	3585	7389	900	502	2688	415	0	0	0	0	5560	4385	3903	3730	3509	7243	78.6	189	1319
18	50	1500	7138	3585	7418	874	502	2688	415	0	0	0	0	5590	4375	4128	3888	3783	7183	78	161	0
19	50	1500	7288	3585	7505	893	502	2688	415	0	0	0	0	5499	4356	3887	3719	3497	7100	80.9	148	0
20	50	1500	7468	3585	7720	909	502	2688	415	0	0	0	0	5482	5065	4778	4535	4159	8737	76.8	130	0
21	50	1500	7333	3585	7406	903	502	2688	415	0	0	0	0	5512	4342	4027	3884	3508	8388	81.8	130	0
22	50	1500	7012	3585	7410	872	502	2688	415	0	0	0	0	5482	4587	4304	4091	3704	8874	78.5	114	0
23	50	1500	8806	3585	7331	812	502	2688	415	0	0	0	0	5685	5044	4543	4309	3950	8851	78.5	104	0
24	50	1500	8031	3585	7551	970	502	2688	415	0	0	0	0	5370	4875	4458	4186	3814	8938	73.7	106	0
25	50	1500	8990	3585	7648	937	502	2688	415	0	0	0	0	6384	4180	3800	3843	3420	8823	71.0	81	1280
26	50	1500	8142	3095	8834	918	502	2331	0	0	0	0	0	5435	4461	3970	3807	3584	8332	74.0	72	0
TOTAL / AVG	1300	39000	188312	88838	197363	22480	12949	65878	10281	0	0	0	0	5607.6	4822.038	4123.085	3953.462	3701.12	7238.769	79.1077	5280	20115

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Long 409S 2H Perforating Detail

Perforating Detail

Stage	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
Stage 1						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
14083	N/A	N/A	N/A	N/A	N/A	PD
Stage 2						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
14053	14013-14	13973-74	13933-34	13893-84	13853-54	PD
Stage 3						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13823	13788-89	13753-54	13718-19	13683-84	13648-49	PD
Stage 4						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13618	13583-84	13548-49	13513-14	13478-79	13443-44	PD
Stage 5						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13413	13378-79	13343-44	13308-09	13273-74	13238-39	PD
Stage 6						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13208	13173-74	13138-39	13103-04	13068-69	13033-34	PD
Stage 7						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
13003	12968-69	12933-34	12898-99	12863-64	12828-29	PD
Stage 8						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12798	12763-64	12728-29	12693-94	12658-59	12623-24	PD
Stage 9						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12593	12558-59	12523-24	12488-89	12453-54	12418-19	PD
Stage 10						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12388	12353-54	12318-19	12283-84	12248-49	12213-14	PD
Stage 11						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
12183	12148-49	12113-14	12078-79	12043-44	12008-09	PD
Stage 12						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11978	11943-44	11908-09	11873-74	11838-39	11803-04	PD

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JUL 05 2016

Long 409S 2H

Stage 13						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11773	11738-39	11703-04	11666-69	11633-34	11598-99	PD
Stage 14						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11568	11533-34	11498-99	11463-64	11428-29	11393-94	PD
Stage 15						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11363	11328-29	11293-94	11258-59	11223-24	11188-89	PD
Stage 16						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
11158	11118-19	11078-79	11038-39	10998-99	10958-59	PD
Stage 17						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10920	10888-89	10848-49	10808-09	10768-69	10728-29	PD
Stage 18						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10698	10658-59	10618-19	10578-79	10538-39	10498-99	PD
Stage 19						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10466	10428-29	10388-89	10348-49	10308-09	10268-69	PD
Stage 20						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10236	10198-99	10158-59	10118-19	10078-79	10038-39	PD
Stage 21						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
10008	9968-69	9928-29	9888-89	9848-49	9808-09	PD
Stage 22						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9778	9738-39	9698-99	9658-59	9618-19	9578-79	PD
Stage 23						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9548	9508-09	9468-69	9428-29	9388-89	9348-49	PD
Stage 24						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9318	9278-79	9238-39	9198-99	9158-59	9118-19	PD
Stage 25						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
9088	9048-49	9008-09	8968-69	8928-29	8888-89	PD
Stage 26						
Plug Setting Depth	1st Cluster	2nd Cluster	3rd Cluster	4th Cluster	5th Cluster	Perf Method
8858	8818-19	8778-79	8738-39	8698-99	8658-59	PD

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(BOTTOM HOLE: 80°39'04.5")

LON: -80°40'31.9"

2500'

LAT: 39°37'30"

SURVEY NOTES

- 1 - Well Ties and Locations and Longitude were measured by GPS (Sub-meter Mapping Grade). Bearings are referred to the NAD 1983 datum (Zone 17 North - NAD 1983).
- 2 - Surface owners and adjacent owners were obtained from the Wetzel County Assessor's Tax Records.
- 3 - A North Datum was provided to the Surveyor during this survey. This survey is subject to a complete title opinion.

UTM Coordinates
(Zone 17N-NAD 1983)

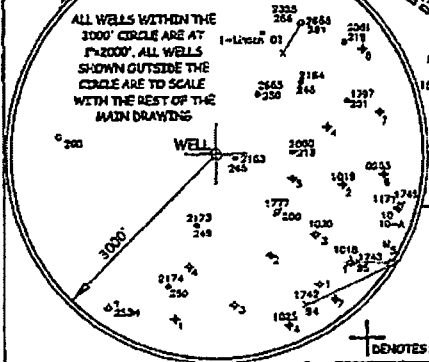
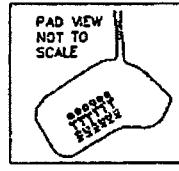
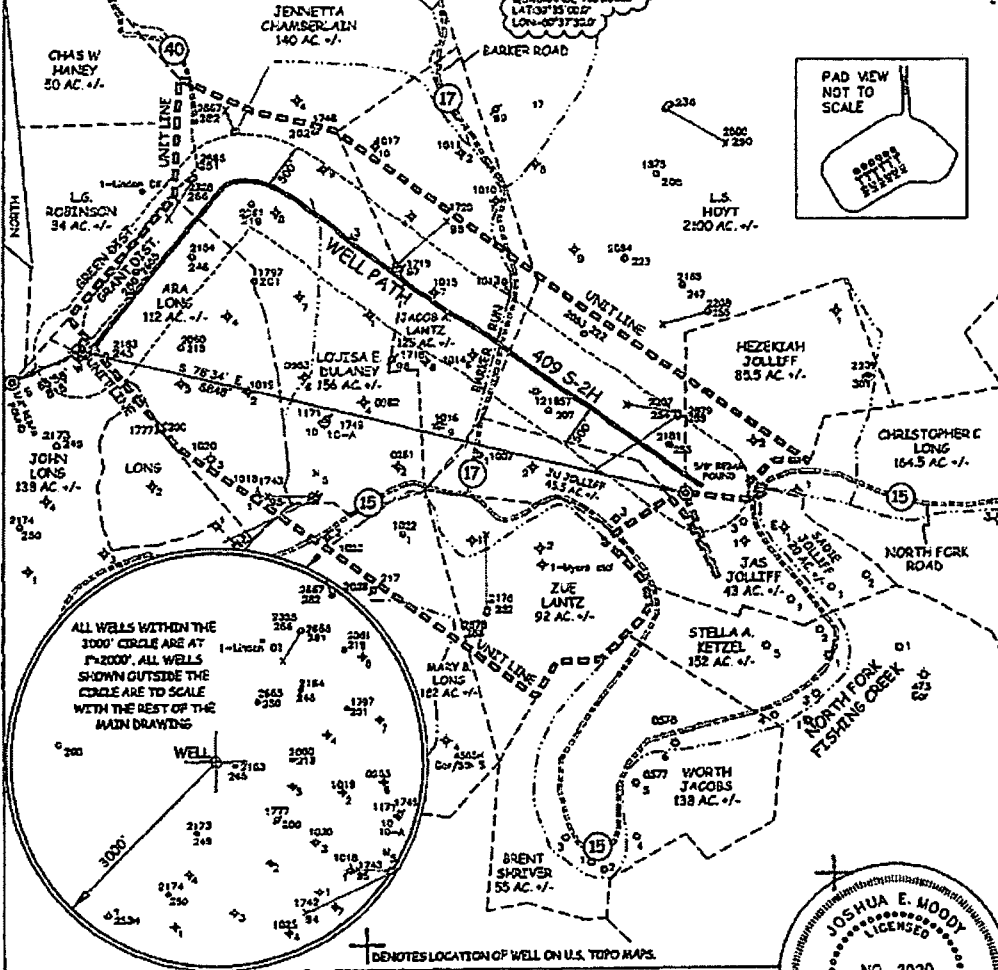
Surface N=4,381,635m.
E=527,875m.

Bottom N=4,381,173m.
E=528,967m.

LOCATION REFERENCES

NAD 1983
N 73°55' W 231' UTILITY POLE
N 48°10' E 251' SPICE

MAP OF H.G. ENERGY, LLC -LONG 409 UNIT-



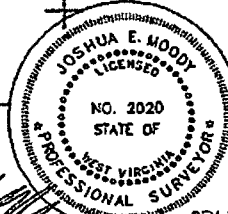
JOB # 12-025
DRAWING # 12HG409FOLDER
SCALE 1" = 1500'
MINIMUM DEGREE OF ACCURACY SUB-METER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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 #409 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 47 - 103 API WELL # _____
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 580 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= 7,368.55' MD= 14,201'

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 WW-6

COUNTY NAME PERMIT

LAT: 39°35'02.0" (BOTTOM HOLE: 39°34'46.8")

Received
Office of Oil & Gas

JUL 05 2016

07/08/2016

(BOTTOM HOLE: 80°39'04.5")

LON: -80°40'31.9"

2500'

LAT: 39°37'30"

LON: 80°40'00"

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 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 NOTES

UTM Coordinates
(Zone 17N-NAD 1983)

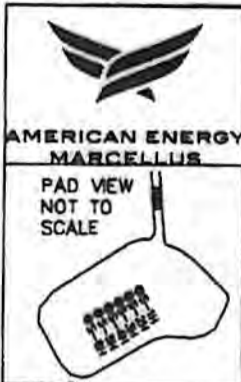
Surface N-4,381,635m.
E-527,879m.

Bottom Hole N-4,381,173m.
E-529,987m.

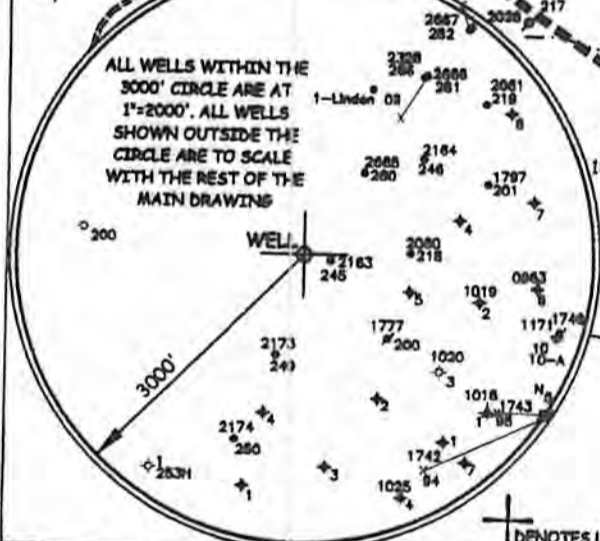
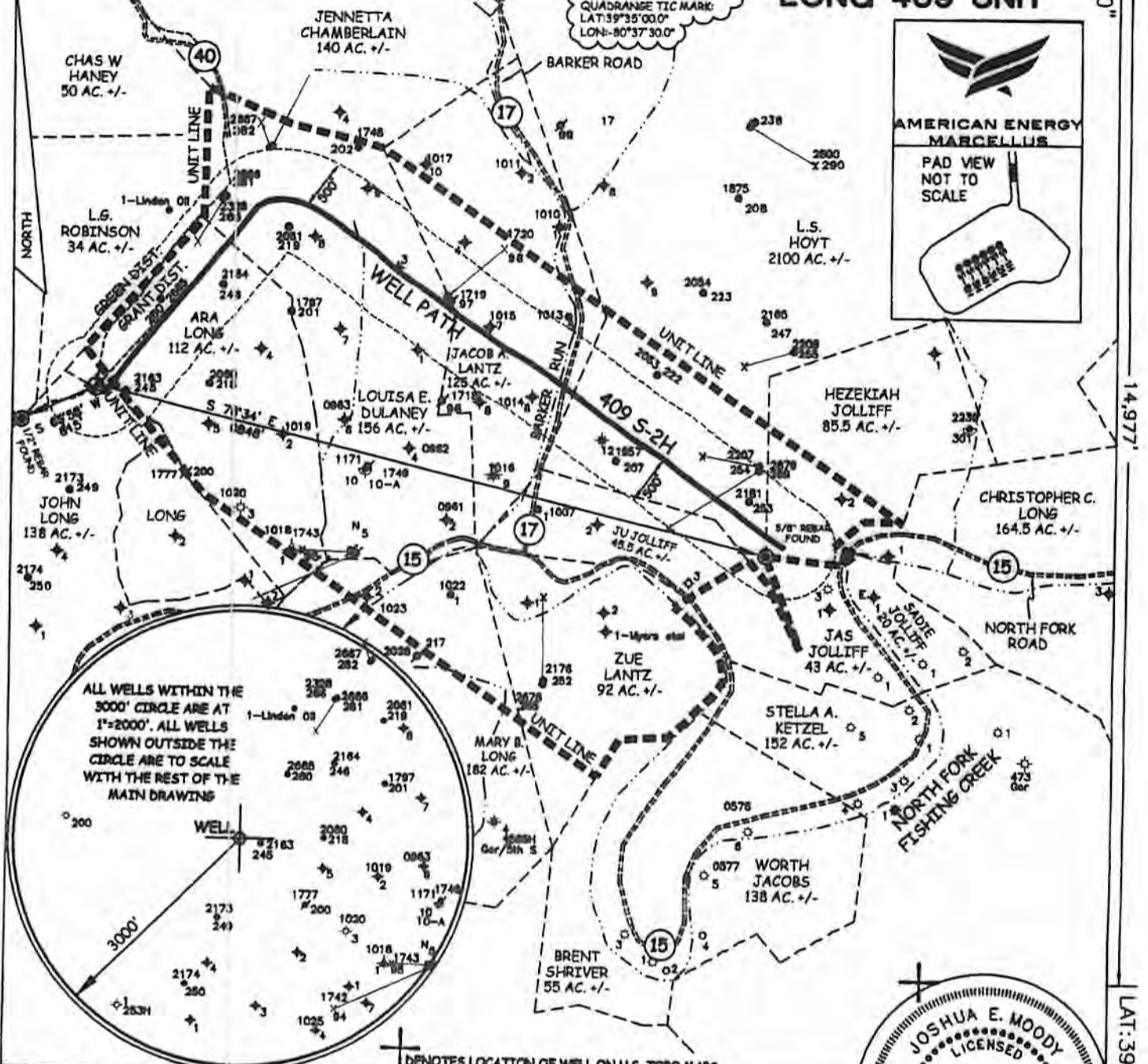
LOCATION REFERENCES

NAD 1983
N 75°55' W 238' UTILITY POLE
N 48°16' E 251' SPIKE

MAP OF H.G. ENERGY, LLC -LONG 409 UNIT-



BOTTOM HOLE LAT/LON
BASED OFF OF PINE GROVE
QUADRANGLE TIC MARK:
LAT: 39°35'00.0"
LON: -80°37'30.0"



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

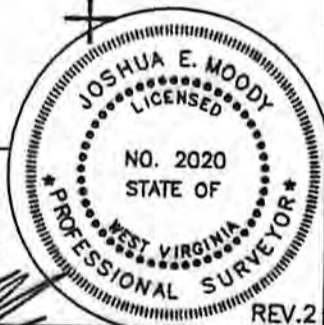
JOB # 12-025
DRAWING # 12HG409FOLDER
SCALE 1" = 1500'
MINIMUM DEGREE OF ACCURACY SUB-METER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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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

JOSHUA E. MOODY, P.S. 2020
DATE 12/08/14
OPERATOR'S WELL # 409 S-2H

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(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1340' WATERSHED NORTH FOR, FISHING CREEK API WELL # 47-103-02879 H6A
DISTRICT GRANT COUNTY WETZEL STATE 47 COUNTY 103 PERMIT 02879 H6A
QUADRANGLE PINE GROVE 7.5'

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OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED LOCATION
PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS
WELL OPERATOR AMERICAN ENERGY-MARCELLUS ESTIMATED DEPTH TVD= 7,368.55' MD= 14,201'
ADDRESS 3501 NW 63rd STREET DESIGNATED AGENT BRANDON MCKINLEY
OKLAHOMA CITY, OK 73116 ADDRESS 3501 NW 63rd STREET
OKLAHOMA CITY, OK 73116

07/08/2016

LAT: 39°35'02.0" (BOTTOM HOLE: 39°34'46.8")