

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

API 47 - 051 - 01829 County Marshall District Meade  
Quad Wileyville 7.5 Pad Name BONNETTE-MSH-PAD1 Field/Pool Name Victory Field  
Farm name BONNETTE, ROBERT & LINDA Well Number 10H  
Operator (as registered with the OOG) SWN PRODUCTION COMPANY LLC  
Address PO BOX 12359 City SPRING State TX Zip 77397-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4396893.262 Easting 524701.150  
Landing Point of Curve Northing 4397054.223 Easting 525254.952  
Bottom Hole Northing 4396394.071 Easting 526015.699

Elevation (ft) 1428 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)  
SOBM

Date permit issued 6/11/2015 Date drilling commenced 6/17/15 Date drilling ceased 10/7/15  
Date completion activities began 10/20/15 Date completion activities ceased 12/18/15  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 396 Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 1717 Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 1203 Cavern(s) encountered (Y/N) depths \_\_\_\_\_

Is coal being mined in area (Y/N) N

**APPROVED**  
NAME: Jacqueline Thronton  
DATE: 6/30/2016

RECEIVED  
Office of Oil and Gas  
Office of Oil and Gas  
N  
JUN 28 2016  
Reviewed by:  
WV Department of  
Environmental Protection  
11/04/2016  
AX 2BDMS  
11/03/16

API 47-051 - 01829 Farm name BONNETTE, ROBERT & LINDA Well number 10H

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	24	20	126	N	J-55/ 94#		Y
Surface	17.5	13.375	715	N	J-55/ 54.50#		Y
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2794	N	J-55/ 40#		Y
Intermediate 2							
Intermediate 3							
Production	8.75 TO 8.50	5.5	11130	N	P-110/20#		Y
Tubing		2.375	7669	N	L-80/4.70#		N
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	A	435	15.7	1.29	561	SURFACE	24
Surface	A	832	15.6	1.20	999	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	A	1116	15.6	1.19	1328	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	A	997/792	15.6	1.23/1.19	2169	SURFACE	24
Tubing							

Drillers TD (ft) 11130 Loggers TD (ft) 11130  
 Deepest formation penetrated MARCELLUS Plug back to (ft) NA  
 Plug back procedure NA

Kick off depth (ft) 6650

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 \_\_\_\_\_

ALL CASING STRINGS RAN WITH A CENTRALIZER AT A MINIMUM OF 1 PER EVERY 3RD JOINT OF CASING

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

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

JUN 28 2016

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

WV Department of  
Environmental Protection

11/04/2016

API 47- 051 - 01829 Farm name BONNETTE, ROBERT & LINDA Well number 10H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHED			

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)
		SEE	ATTACHED					

RECEIVED  
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JUN 28 2016

Please insert additional pages as applicable.

WV Department of Environmental Protection  
11/04/2016

API 47- 051 - 01829

Farm name BONNETTE, ROBERT & LINDA Well number 10H

PRODUCING FORMATION(S)	DEPTHS	
	TVD	MD
MARCELLUS	7111.05	7635.15

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1500 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 5129.674 mcfpd Oil 101.75 bpd NGL \_\_\_\_\_ bpd Water 61.99 bpd  
GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		

Please insert additional pages as applicable.

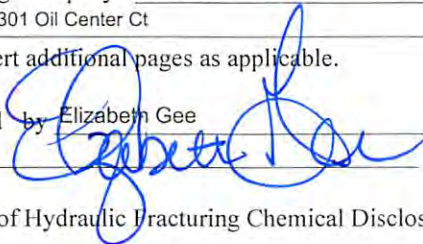
Drilling Contractor SWN Drilling Company  
Address 10000 Energy Drive City Spring State TX Zip 77389

Logging Company NINE ENERGY SERVICES  
Address 16945 NORTHCHASE DR, STE 1600 City HOUSTON State TX Zip 77060

Cementing Company SCHLUMBERGER WELL SERVICES  
Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478

Stimulating Company BAKER HUGHES  
Address 2301 Oil Center Ct City HOUSTON State TX Zip 77073

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-7632  
Signature  Title Sr. Regulatory Analyst Date 06/27/2016



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

11/04/2016

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	10/20/2015
Job End Date:	10/23/2015
State:	West Virginia
County:	Marshall
API Number:	47-051-01829-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	BONNETTE MSH 10H
Longitude:	-80.71179021
Latitude:	39.72155685
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,210
Total Base Water Volume (gal):	4,536,000
Total Base Non Water Volume:	0



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MAR 03 2016



## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier	Water	7732-18-5	100.00000	77.64610	
Sand, White, 40/70	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		7.86397	
DustPro Chemical Coating	Baker Hughes	Dust Suppression	MSDS and Non-MSDS Ingredients Listed Below	N/A		7.67875	
Sand, White, 100 mesh	Baker Hughes	Proppant	MSDS and Non-MSDS Ingredients Listed Below	N/A		5.30108	
HCl, 10.1 - 15%	Baker Hughes	Acidizing	MSDS and Non-MSDS Ingredients Listed Below	N/A		1.02353	SmartCare Product
MaxPerm-20A, 265 gallon tote	Baker Hughes	Friction Reducer	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.10129	SmartCare Product
Scaletrol 720	Baker Hughes	Scale Inhibitor	MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00981	SmartCare Product
Alpha 1427	Baker Hughes	Biocide					

			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00916	SmartCare Product
Ferrotrol 300L	Baker Hughes	Iron Control					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00678	SmartCare Product
CI-39	Baker Hughes	Corrosion Inhibitor					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00202	
GBW-5	Baker Hughes	Breaker					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00055	SmartCare Product
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Ingredients in Additive (s) (MSDS and non- MSDS)	Baker Hughes	See Trade Name(s) List					
			Crystalline Silica (Quartz)	14808-60-7	100.00000	13.10481	
			Non-hazardous acrylic polymer	NA	75.00000	5.73271	
			Propylene glycol	57-55-6	30.00000	2.29309	
			Water	7732-18-5	85.00000	0.94040	
			Hydrochloric Acid	7647-01-0	15.00000	0.15283	
			1-Propanesulfonic acid, 2- methyl-2-[(1-oxo-2-propen-1-yl) amino]-, polymer with 2- propenamido, sodium salt	83446-68-8	60.00000	0.06049	
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.03025	
			Sodium Chloride	7647-14-5	5.00000	0.00514	
			Polyoxyethylene sorbitan monooleate	9005-65-6	5.00000	0.00504	
			Sorbitan, mono-(9Z)-9- octadecenoate	1338-43-8	5.00000	0.00504	
			Oxyalkylated alcohol	78330-21-9	5.00000	0.00504	
			Ethylene Glycol	107-21-1	45.00000	0.00439	
			Citric Acid	77-92-9	60.00000	0.00405	
			Glutaraldehyde	111-30-8	30.00000	0.00274	
			2-Propenoic, Polymer with Sodium Phosphinate, Sodium Salt	71050-62-9	20.00000	0.00195	
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	10.00000	0.00091	
			Oxyalkylated Fatty Acid	61791-002	40.00000	0.00080	
			Tar Bases, Quinoline Derivs., Benzyl Chloride-Quaternized	72480-70-7	30.00000	0.00060	
			Formic Acid	64-18-6	30.00000	0.00060	
			Aldehyde	104-55-2	30.00000	0.00060	
			Quaternary Ammonium Compound	68424-85-1	5.00000	0.00056	
			Ammonium Persulphate	7727-54-0	100.00000	0.00055	
			Calcium Chloride	10043-52-4	5.00000	0.00049	
			Ethanol	64-17-5	5.00000	0.00046	
			Isopropanol	67-63-0	5.00000	0.00010	
			Sulfurized polyolefin	68037-13-8	5.00000	0.00010	
			Potassium Chloride	7447-40-7	1.00000	0.00010	

MAR 03 2015

		Potassium Iodide	7681-11-0	2.00000	0.00004
		Polyakylene	7756-94-7	1.00000	0.00002
		Potassium Acetate	127-08-2	0.50000	0.00001

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

Office of Environmental Health & Safety  
 Gas  
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### BONNETTE MSH 10H

LITHOLOGY/FORMATION	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, TVD (FT)	TOP DEPTH, MD (FT)	BOTTOM DEPTH, MD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	N.A.	396.00	N.A.	396.00	
Top of Salt Water	654.00	N.A.	654.00	N.A.	
Pittsburgh Coal	1202.84	1209.80	1204.00	1211.00	
Big Injun (ss)	2313.48	2936.97	2319.00	2945.00	
Berea (siltstone)	2936.97	6497.96	2945.00	6712.22	
Rhinestreet (shale)	6497.96	6778.20	6712.22	7037.27	
Cashaqua (shale)	6778.20	6882.72	7037.27	7180.96	
Middlesex (shale)	6882.72	6953.19	7180.96	7287.78	
Burket (shale)	6953.19	6987.92	7287.78	7345.34	
Tully (ls)	6987.92	7019.53	7345.34	7401.02	
Mahantango (shale)	7019.53	7111.05	7401.02	7635.15	
Marcellus (shale)	7111.05	N.A.	7635.15	N.A.	

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**BONNETTE MSH 10 - STIMULATION INFORMATION**

STAGE NUM	Stim 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
1	10/20/2015	2	7,755	8,022	4,323	502,720	7,477	
2	10/21/2015	2	7,848	8,123	4,573	497,769	7,416	
3	10/21/2015	2	7,624	8,251	4,838	503,239	7,169	
4	10/21/2015	2	7,101	8,323	4,902	501,892	7,041	
5	10/21/2015	2	7,940	8,313	4,610	500,606	10,095	
6	10/22/2015	2	8,102	8,927	4,602	477,178	8,934	
7	10/22/2015	2	8,026	8,633	4,688	500,185	10,437	
8	10/22/2015	2	7,914	8,206	4,970	500,871	8,721	
9	10/23/2015	2	7,759	7,982	5,172	500,506	7,239	
10	10/23/2015	2	7,642	8,648	4,762	500,847	8,442	
11	10/23/2015	2	7,572	8,234	4,806	500,442	8,968	
12	10/23/2015	2	7,590	8,266	4,767	500,433	8,080	
13	10/23/2015	2	7,443	8,416	5,069	500,482	7,981	
Grand total		2	7,717	8,927	4,776	6,487,170	108,000	

**Received**  
 Office of Oil & Gas  
 03 2016  
 11/04/2016

**BONNETTE MSH 10 - PERFORATION RECORD**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	10/20/2015	10,825	11,022	42
2	10/21/2015	10,565	10,762	42
3	10/21/2015	10,305	10,502	42
4	10/21/2015	10,045	10,242	42
5	10/21/2015	9,785	9,982	42
6	10/22/2015	9,525	9,722	42
7	10/22/2015	9,265	9,462	42
8	10/22/2015	9,005	9,202	42
9	10/23/2015	8,745	8,942	42
10	10/23/2015	8,485	8,682	42
11	10/23/2015	8,225	8,422	42
12	10/23/2015	7,965	8,162	42
13	10/23/2015	7,705	7,902	42

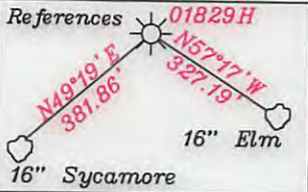
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MAR 03 2016

11/04/2016

Top Hole 1,165'

Bottom Hole 8,594'

LATITUDE 39-45-00 N



<b>Surface Hole</b>
UTM NAD 83(meters)-4396893.262 N. 524701.150 E
LP
UTM NAD 83(meters)-4397054.223 N. 525254.952 E
<b>Bottom Hole</b>
UTM NAD 83(meters)-4396394.071 N. 526015.699 E

Note: All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats and aerial photos.

Note: No water wells were found within 250' of well location.

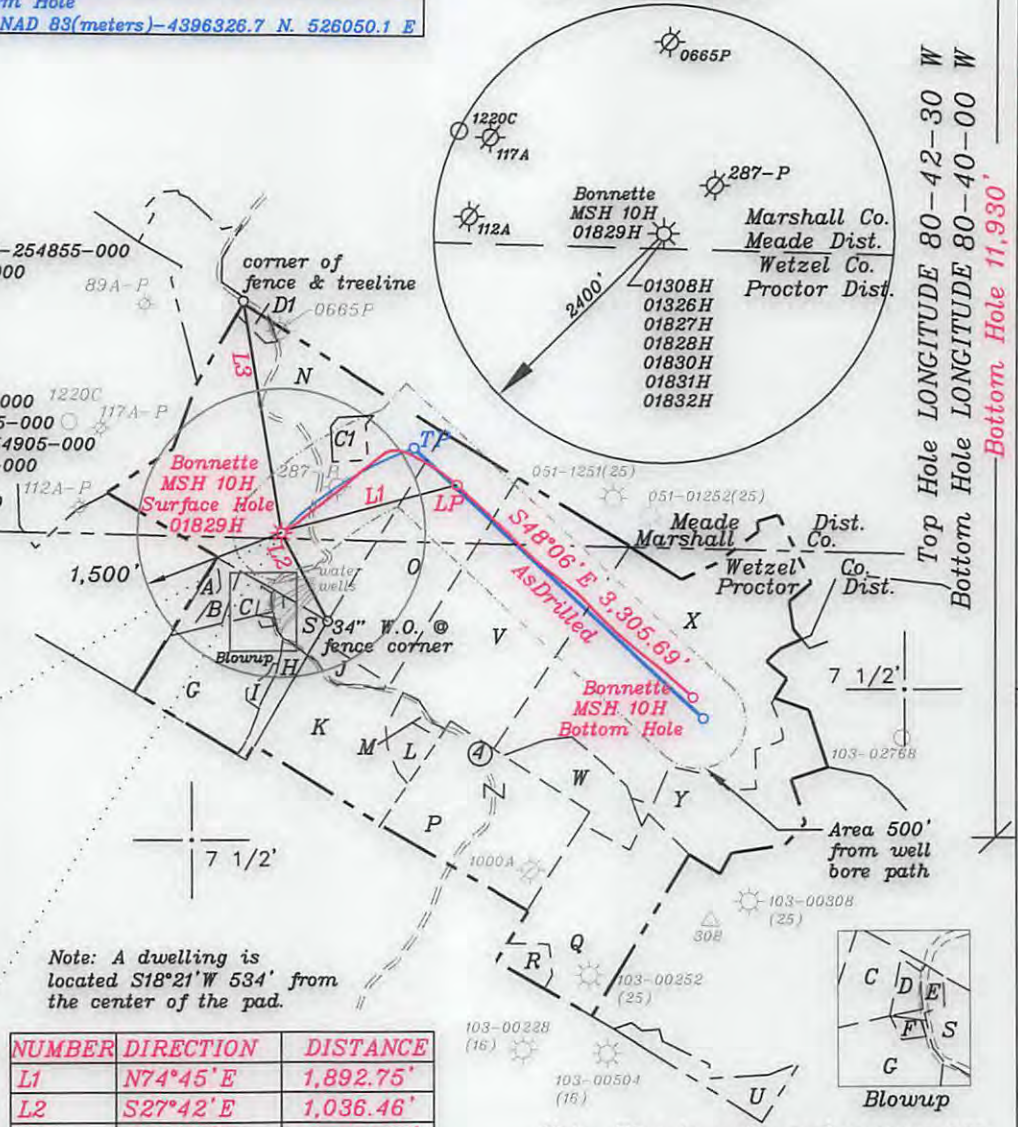
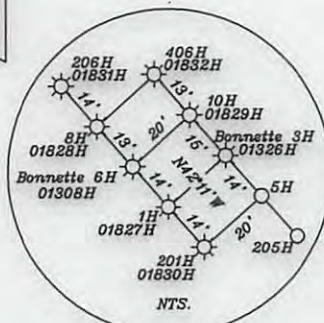
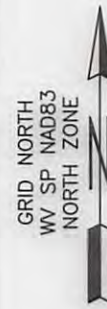
- A = Ries 3 Ac. T.M. 3/8
- B = Hohman 4.07 Ac. T.M. 3/8.3
- C = Hohman 4.12 Ac. T.M. 3/8.2&8.1
- D = B. Ferrell 1 Ac. T.M. 3/9
- E = B. Ferrell 0.54 Ac. T.M. 3/10.1
- F = B. Ferrell 0.33 Ac. T.M. 3/10.5
- G = J. Ferrell 28.97 Ac. T.M. 3/10.3
- H = Miller 5.02 Ac. T.M. 3/10.2
- I = Ferrell 1.29 Ac. T.M. 3/10.4
- J = Zombotti 4.34 Ac. T.M.3/11.2
- K = R. Yoho et al 38.59 Ac. T.M. 3/11
- L = Blatt 7.42 Ac. T.M 3/11.3
- M = Herrick 0.65 Ac. T.M. 3/11.1
- N = Bonnette 126.53 Ac. T.M. 22/8 Ls No. 1-254855-000
- O = Foz 56 Ac. T.M. 4/1 Ls No. 1-254904-000
- P = Dulaney 52 Ac. T.M. 4/12
- Q = Klug 48 Ac. T.M. 4/22
- R = Estep 3.45 Ac. T.M. 4/21
- S = Zombotti 4.15 Ac. T.M. 3/10
- U = Scheibelhood 9.8 Ac. T.M. 4/32
- V = Foz 74.7 Ac. T.M. 4/2 Ls No.1-254904-000
- W = Blatt 22.1 Ac. T.M. 4/13 Ls No.1-254905-000
- X = Blatt 106.83 Ac. T.M. 4/3&4 Ls No.1-254905-000
- Y = Blatt 37 Ac. T.M. 4/14 Ls No.1-254836-000
- C1 = The Co. Comm. of Marshall Co. 3.143 Ac. T.M.22-8.1 Ls No.1-254855-000
- D1 = Klug 1 Ac. T.M.22-7

<b>Top Hole</b>
UTM NAD 83(meters)-4396893.2 N. 524701.3 E
TP
UTM NAD 83(meters)-4397142.5 N. 525145.3 E
<b>Bottom Hole</b>
UTM NAD 83(meters)-4396326.7 N. 526050.1 E

**LEGEND**

As Drilled Leg (Red Text)

Permit Leg (Blue Text)



NUMBER	DIRECTION	DISTANCE
L1	N74°45'E	1,892.75'
L2	S27°42'E	1,036.46'
L3	N09°27'W	2,443.37'

Note: A dwelling is located S18°21'W 534' from the center of the pad.

Note: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.

FILE NO. \_\_\_\_\_

DRAWING NO. 1

SCALE 1" = 2000'

MINIMUM DEGREE OF ACCURACY 1 in 200

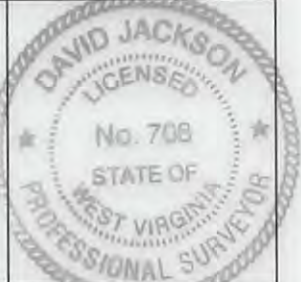
PROVEN SOURCE OF ELEVATION GPS

submeter unit

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

(SIGNED) David Jackson

R.P.E. \_\_\_\_\_ L.L.S. 708



STATE OF WEST VIRGINIA  
Division of Environmental Protection  
OFFICE OF OIL AND GAS

DATE March 1, 2016

OPERATOR'S WELL NO. Bonnette MSH 10H  
API WELL NO. \_\_\_\_\_

WELL TYPE: OIL GAS LIQUID INJECTION X WASTE DISPOSAL \_\_\_\_\_  
(IF "GAS") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: ELEVATION 1,427.5' WATER SHED Whetstone Creek  
DISTRICT Meade COUNTY Marshall  
QUADRANGLE Wileyville 7 1/2'

SURFACE OWNER Robert and Linda Bonnette ACREAGE 126.53 ac.  
OIL & GAS ROYALTY OWNER Robert and Linda Bonnette, Robert and Barbara Bias, & Larry and Glenda Kress LEASE ACREAGE 401/104/2016

LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As Drilled

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

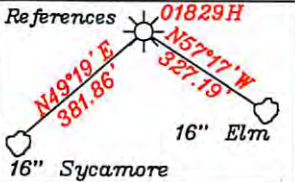
TARGET FORMATION Marcellus ESTIMATED DEPTH TVD=7,139'; TMD=11,130'

WELL OPERATOR SWN Production Co. LLC DESIGNATED AGENT Dee Southall  
ADDRESS P.O. Box 1300 Jane Lew, WV 26378 ADDRESS P.O. Box 1300 Jane Lew, WV 26378

Top Hole 1,165'

Bottom Hole 8,594'

LATITUDE 39-45-00 N



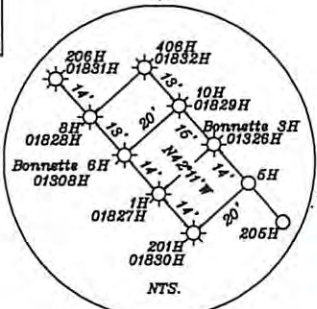
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- R = Estep 3.45 Ac. T.M. 4/21
- S = Zombotti 4.15 Ac. T.M. 3/10
- U = Scheibelhood 9.8 Ac. T.M. 4/32
- V = Fox 74.7 Ac. T.M. 4/2 Ls No.1-254904-000
- W = Blatt 22.1 Ac. T.M. 4/13 Ls No.1-254905-000
- X = Blatt 106.83 Ac. T.M. 4/3&4 Ls No.1-254906-000
- Y = Blatt 37 Ac. T.M. 4/14 Ls No.1-254836-000
- Cl = The Co. Comm. of Marshall Co. 3.143 Ac. T.M.22-8.1 Ls No.1-254855-000
- D1 = Klug 1 Ac. T.M.22-7

<b>Top Hole</b>
UTM NAD 83(meters)-4396893.2 N. 524701.3 E
<b>TP</b>
UTM NAD 83(meters)-4397142.5 N. 525145.3 E
<b>Bottom Hole</b>
UTM NAD 83(meters)-4396326.7 N. 526050.1 E



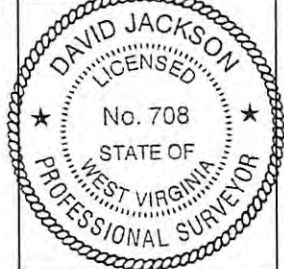
Note: A dwelling is located S18°21'W 534' from the center of the pad.

NUMBER	DIRECTION	DISTANCE
L1	N74°45'E	1,892.75'
L2	S27°42'E	1,036.46'
L3	N09°27'W	2,443.37'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. 1  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1 in 200  
 PROVEN SOURCE OF ELEVATION GPS  
submeter unit

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.  
 (SIGNED) David L Jackson  
 R.P.E. \_\_\_\_\_ L.L.S. 708



STATE OF WEST VIRGINIA  
 Division of Environmental Protection  
 OFFICE OF OIL AND GAS

DATE March 1, 2016  
 OPERATOR'S WELL NO. Bonnette MSH 10H  
 API WELL NO. AsDrilled

WELL TYPE: OIL GAS LIQUID INJECTION X WASTE DISPOSAL \_\_\_\_\_ STATE 47 COUNTY 051 PERMIT 01829H  
 (IF "GAS") PRODUCTION X STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW X

LOCATION: ELEVATION 1,427.5' WATER SHED Whetstone Creek  
 DISTRICT Meade COUNTY Marshall  
 QUADRANGLE Wileyville 7 1/2'

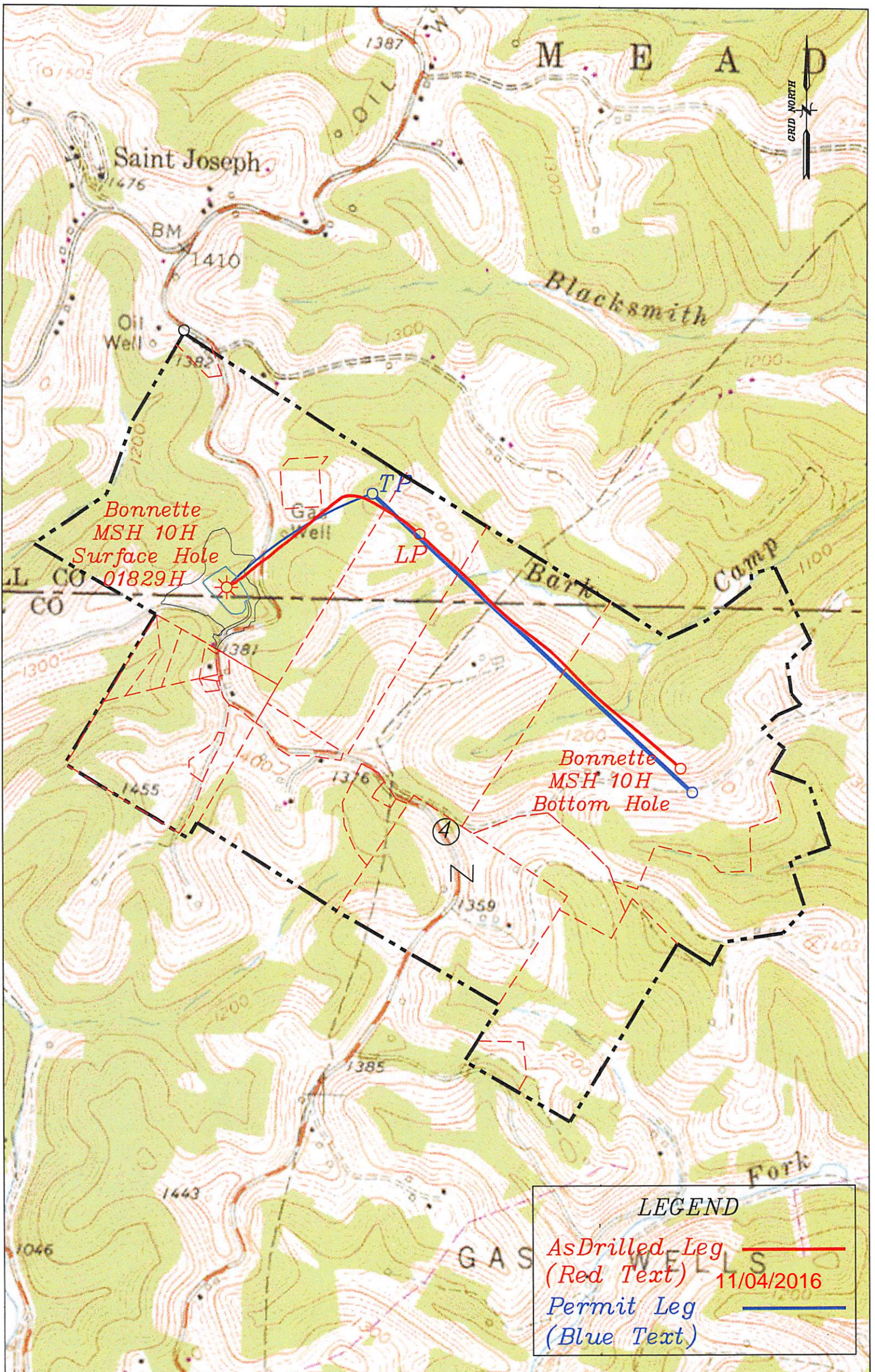
SURFACE OWNER Robert and Linda Bonnette ACREAGE 126.53 ac.  
 OIL & GAS ROYALTY OWNER Robert and Linda Bonnette, Robert and Barbara Bias, & Larry and Glenda Kress LEASE ACREAGE 404.203 ac.

LEASE NO. \_\_\_\_\_ 11/04/2016

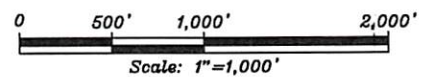
PROPOSED WORK: DRILL X CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AsDrilled

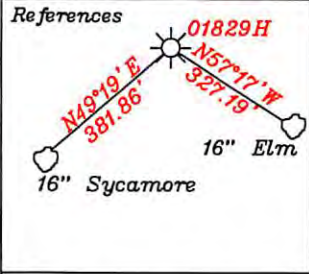
PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION Marcellus ESTIMATED DEPTH TV D=7,139'; TMD=11,130'

WELL OPERATOR SWN Production Co. LLC DESIGNATED AGENT Dee Southall  
 ADDRESS P.O. Box 1300 Jane Lew, WV 26378 ADDRESS P.O. Box 1300 Jane Lew, WV 26378



Well: Bonnette MSH 10H  
 Quad: Wileyville 7 1/2'  
 District: Meade  
 County: Marshall





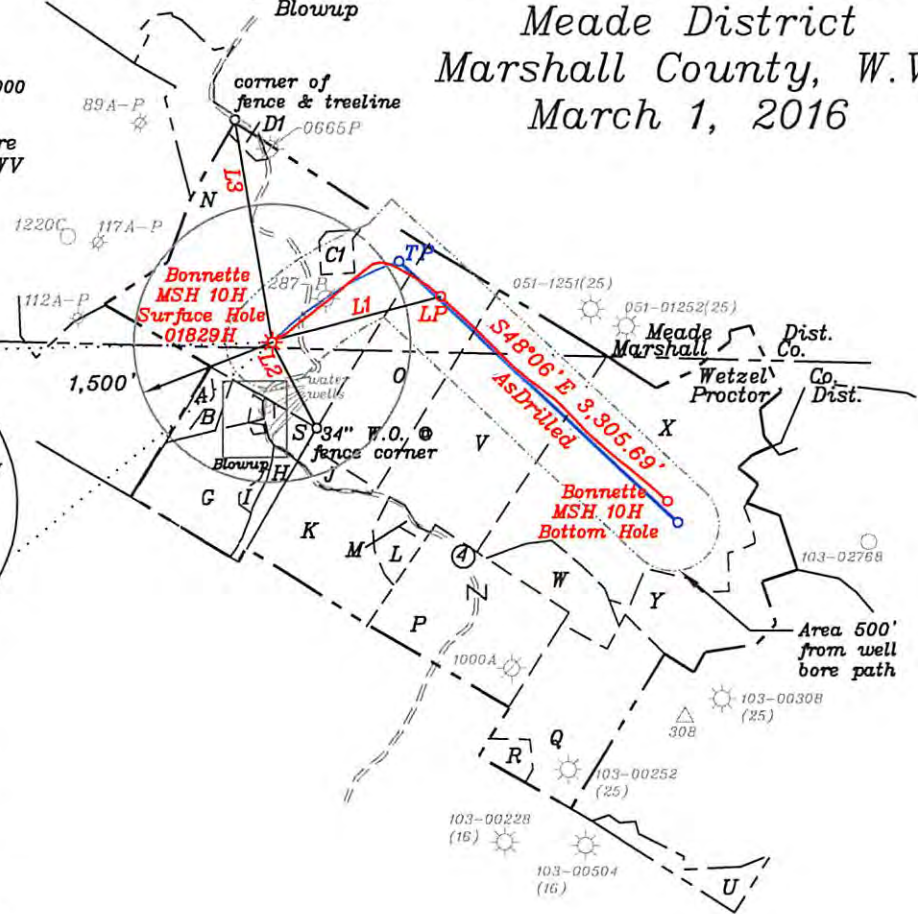
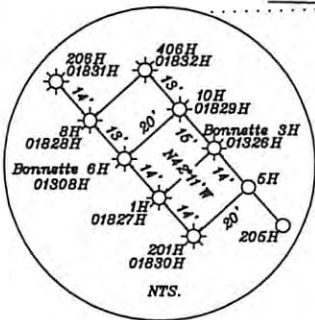
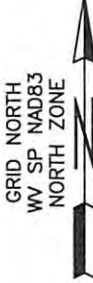
Note: A dwelling is located S18°21'W 534' from the center of the pad.



SWN Production Co. LLC  
AsDrilled  
Bonnette MSH 10H  
Meade District  
Marshall County, W.V.  
March 1, 2016

C1 = The Co. Comm. of Marshall Co. 3.143 Ac. T.M.22-B.1 Ls No.1-254855-000  
D1 = Klug 1 Ac. T.M.22-7

Note: Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.



- A = Ries 3 Ac. T.M. 3/8
- B = Hohman 4.07 Ac. T.M. 3/8.3
- C = Hohman 4.12 Ac. T.M. 3/8.2&8.1
- D = E. Ferrell 1 Ac. T.M. 3/9
- E = B. Ferrell 0.54 Ac. T.M. 3/10.1
- F = E. Ferrell 0.33 Ac. T.M. 3/10.5
- G = J. Ferrell 28.97 Ac. T.M. 3/10.3
- H = Miller 5.02 Ac. T.M. 3/10.2
- I = Ferrell 1.29 Ac. T.M. 3/10.4
- J = Zombotti 4.34 Ac. T.M.3/11.2
- K = R. Yoho et al 38.59 Ac. T.M. 3/11
- L = Blatt 7.42 Ac. T.M 3/11.3
- M = Herrick 0.65 Ac. T.M. 3/11.1
- N = Bonnette 126.53 Ac. T.M. 22/8 Ls No. 1-254855-000
- O = Fox 56 Ac. T.M. 4/1 Ls No. 1-254904-000
- P = Dulaney 52 Ac. T.M. 4/12
- Q = Klug 48 Ac. T.M. 4/22
- R = Estep 3.45 Ac. T.M. 4/21
- S = Zombotti 4.15 Ac. T.M. 3/10
- U = Scheibelhood 9.8 Ac. T.M. 4/32
- V = Fox 74.7 Ac. T.M. 4/2 Ls No.1-254904-000
- W = Blatt 22.1 Ac. T.M. 4/13 Ls No.1-254905-000
- X = Blatt 106.83 Ac. T.M. 4/3&4 Ls No.1-254905-000
- Y = Blatt 37 Ac. T.M. 4/14 Ls No.1-254836-000

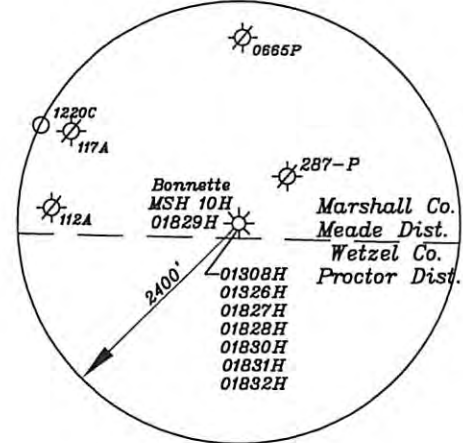
NUMBER	DIRECTION	DISTANCE
L1	N74°45'E	1,892.75'
L2	S27°42'E	1,036.46'
L3	N09°27'W	2,443.37'

LEGEND

AsDrilled Leg (Red Text) ———

Permit Leg (Blue Text) ———

NAD 83	
Surface Hole	UTM NAD 83(meters)-4396893.262 N, 524701.150 E Geo. NAD 83-39.721557 N, 80.711790 W UTM NAD 83(feet)-14425473.977 N, 1721457.024 E
LP	UTM NAD 83(meters)-4397054.223 N, 525254.952 E Geo. NAD 83-39.722991 N, 80.705322 W State Plane NAD 83-14426002.062 N, 1723273.956 E
Bottom Hole	UTM NAD 83(meters)-4396394.071 N, 526015.699 E Geo. NAD 83-39.717021 N, 80.696472 W UTM NAD 83(feet)-14423836.216 N, 1725769.838 E
NAD 83	
Top Hole	UTM NAD 83(meters)-4396893.2 N, 524701.3 E Geo. NAD 83-39.721557 N, 80.711789 W UTM NAD 83(feet)-14425473.7 N, 1721457.4 E
TP1	UTM NAD 83(meters)-4397142.5 N, 525145.3 E Geo. NAD 83-39.723790 N, 80.706599 W State Plane NAD 83-14426291.7 N, 1722914.1 E
Bottom Hole	UTM NAD 83(meters)-4396326.7 N, 526050.1 E Geo. NAD 83-39.716412 N, 80.696074 W UTM NAD 83(feet)-14423615.1 N, 1725882.6 E



11/04/2016

Jackson Surveying, Inc.  
677 West Main Street  
Clarksburg, WV 26301