

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

API 47-051-02172 County MARSHALL District MEADE
Quad WILEYVILLE, WV Pad Name ARTHUR WARYCK MSH PAD Field/Pool Name VICTORY FIELD WET
Farm name A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK Well Number ARTHUR WARYCK MSH 401H
Operator (as registered with the OOG) SWN PRODUCTION COMPANY, LLC
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,397,191.859 Easting 528,106.149
Landing Point of Curve Northing 4,396,894.411 Easting 527,362.905
Bottom Hole Northing 4,398,824.564 Easting 525,223.272

Elevation (ft) 1,326' 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 5/22/2019 Date drilling commenced 09/06/2019 Date drilling ceased 09/21/2019
Date completion activities began 01/20/2020 Date completion activities ceased 03/22/2020
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 557' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 892' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1,147' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
Jim Nicholson
7/6/2020

API 47-051 - 02172 Farm name A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK Well number ARTHUR WARYCK MSH 401H

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	NEW	J-55/94#		Y
Surface	17.5	13.375	663	NEW	J-55/54.50#		Y, 35
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25	9.625	2,740	NEW	J-55/36#		Y, 58
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	17,517	NEW	P-110/20#		Y, 18
Tubing		2.875	8,044	NEW	P-110/6.50#		N
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	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	682	15.60	1.19	811.58	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	1,103	16.00	1.12	1,235.36	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	3,093	15.60	1.18	3,649.74	SURFACE	24
Tubing							

Drillers TD (ft) 17,517' Loggers TD (ft) 17,517'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6,880'

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: 7 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 PRODUCTION: 181 CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

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 _____

WR-35
Rev. 8/23/13

API 47- 051 - 02172

Farm name A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK Well number ARTHUR WARYCK MSH 401H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>7,077'</u>	<u>TVD</u>	<u>7,878'</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2,697 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 7,329 mcfpd Oil 161 bpd NGL _____ bpd Water 252 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 ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
	<u>SEE</u>	<u>ATTACHMENT</u>	<u>3</u>		

Please insert additional pages as applicable.

Drilling Contractor SWN DRILLING COMPANY
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

Logging Company BAKER HUGHES
Address 9110 GROGANS MILL RD City THE WOODLANDS State TX Zip 77380

Cementing Company BJ SERVICES
Address 11211 FM 2920 City TOMBALL State TX Zip 77377

Stimulating Company SWN WELL SERVICES
Address PO BOX 12359 City SPRING State TX Zip 77391

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-2873
Signature  Title Staff Regulatory Analyst Date 06/19/2020

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

**ARTHUR WARYCK MSH 401H
ATTACHMENT 2
STIM REPORT**

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
1	2/26/2020	58	7,837	8,094	3,861	160,500	10,422	0
2	2/26/2020	86.9	8,119	6,145	4,543	320,000	8,680	0
3	2/27/2020	83.5	8,074	6,118	4,519	320,360	8,299	0
4	2/27/2020	84.3	8,045	6,187	4,765	323,840	8,366	0
5	2/28/2020	77.9	8,275	6,066	4,804	322,680	8,415	0
6	2/28/2020	86	8,092	6,578	4,625	317,460	8,182	0
7	2/29/2020	85.9	8,488	8,095	4,687	315,740	8,161	0
8	2/29/2020	85.8	8,487	8,497	4,884	316,200	7,690	0
9	2/29/2020	85.8	8,206	5,085	4,986	319,640	7,490	0
10	3/1/2020	88.4	8,136	5,797	4,769	318,160	7,525	0
11	3/1/2020	85	8,592	7,238	4,731	317,140	7,894	0
12	3/1/2020	85.5	8,226	5,878	4,966	320,740	7,625	0
13	3/2/2020	87.6	8,460	6,022	4,875	322,880	7,800	0
14	3/2/2020	82.4	8,301	6,823	4,792	315,880	7,817	0
15	3/2/2020	89.4	8,184	5,824	4,746	322,180	7,387	0
16	3/3/2020	86.3	8,184	6,023	4,827	323,220	7,565	0
17	3/3/2020	88.1	8,450	5,930	4,929	301,720	7,504	0
18	3/4/2020	83.2	8,227	6,081	5,162	293,200	7,708	0
19	3/4/2020	89.3	8,316	5,878	4,898	321,400	7,845	0
20	3/5/2020	85.2	7,972	8,364	4,849	318,920	7,604	0
21	3/5/2020	87.2	8,273	6,078	4,643	320,160	7,833	0
22	3/6/2020	89.7	8,311	6,052	4,995	318,240	7,886	0
23	3/6/2020	74.7	8,233	6,093	4,410	284,880	7,434	0
24	3/7/2020	91	8,230	5,543	4,597	325,780	7,868	0
25	3/7/2020	86.1	8,065	5,976	4,459	316,780	7,622	0
26	3/7/2020	87	8,041	5,913	4,364	321,080	7,789	0
27	3/8/2020	89.4	8,171	8,059	4,363	319,620	7,975	0
28	3/9/2020	92	8,243	6,078	4,066	322,180	7,821	0
29	3/9/2020	90.6	8,106	8,258	4,224	323,220	8,203	0
30	3/9/2020	95	8,105	7,391	4,473	320,780	7,716	0
31	3/10/2020	93	7,840	5,053	4,463	322,340	7,622	0
32	3/11/2020	90.2	7,581	5,931	4,403	324,540	7,864	0
33	3/11/2020	96.6	8,025	5,711	8,231	321,640	7,620	0
34	3/11/2020	85.7	7,758	5,904	4,346	323,180	7,518	0
35	3/12/2020	92	7,795	5,747	4,235	323,740	7,451	0
36	3/12/2020	96.1	7,789	5,604	4,124	322,500	7,621	0
37	3/13/2020	88.7	7,756	6,066	4,314	320,160	7,458	0
38	3/13/2020	93.5	7,894	6,618	4,323	319,580	7,697	0
39	3/14/2020	98.3	7,849	6,108	4,315	313,880	7,502	0
40	3/14/2020	95.2	7,778	6,231	4,534	317,600	7,307	0
41	3/15/2020	96	7,972	5,969	4,554	319,660	7,312	0
42	3/15/2020	91.6	7,692	6,052	4,080	318,560	7,431	0
43	3/15/2020	99	7,694	6,143	4,672	318,980	7,464	0
44	3/16/2020	94.7	7,758	5,970	4,381	320,620	7,328	0
45	3/16/2020	85.2	7,112	6,229	4,695	321,560	7,305	0
46	3/17/2020	86	6,889	6,282	4,386	319,060	7,814	0

**ARTHUR WARYCK MSH 401H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	2/26/2020	17,367	17,354	18
2	2/26/2020	17,344	17,172	36
3	2/26/2020	17,134	16,957	36
4	2/27/2020	16,921	16,747	36
5	2/28/2020	16,714	16,537	36
6	2/28/2020	16,504	16,327	36
7	2/29/2020	16,294	16,117	36
8	2/29/2020	16,084	15,907	36
9	2/29/2020	15,874	15,696	36
10	3/1/2020	15,664	15,487	36
11	3/1/2020	15,451	15,277	36
12	3/1/2020	15,244	15,067	36
13	3/2/2020	15,034	14,857	36
14	3/2/2020	14,822	14,647	36
15	3/2/2020	14,614	14,434	36
16	3/2/2020	14,404	14,227	36
17	3/3/2020	14,198	14,017	36
18	3/3/2020	13,984	13,807	36
19	3/4/2020	13,774	13,597	36
20	3/4/2020	13,564	13,387	36
21	3/5/2020	13,354	13,177	36
22	3/5/2020	13,144	12,967	36
23	3/6/2020	12,934	12,754	36
24	3/6/2020	12,726	12,547	36
25	3/7/2020	12,509	12,337	36
26	3/7/2020	12,304	12,127	36
27	3/8/2020	12,094	11,917	36
28	3/9/2020	11,884	11,707	36
29	3/9/2020	11,674	11,497	36
30	3/9/2020	11,464	11,287	36
31	3/10/2020	11,254	11,077	36
32	3/10/2020	11,044	10,867	36
33	3/11/2020	10,834	10,657	36
34	3/11/2020	10,644	10,447	36
35	3/12/2020	10,414	10,237	36
36	3/12/2020	10,204	10,027	36
37	3/13/2020	9,994	9,817	36
38	3/13/2020	9,784	9,607	36
39	3/14/2020	9,574	9,397	36
40	3/14/2020	9,364	9,187	36
41	3/14/2020	9,154	8,977	36
42	3/15/2020	8,944	8,772	30
43	3/15/2020	8,734	8,557	36
44	3/16/2020	8,524	8,347	36
45	3/16/2020	8,314	8,137	36
46	3/16/2020	8,104	7,927	36



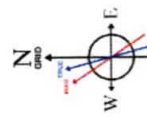
Well Name: Arthur Waryck MSH 401H 47051021720000

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	0.00	0.00	557.00	557.00	
Top of Salt Water	892.00	892.00	NA	NA	
Pittsburgh Coal	1147.00	1147.00	1208.00	1208.00	
Pottsville (ss)	1208.00	1208.00	1672.00	1673.00	
Raven Cliff (ss)	1672.00	1673.00	2089.00	2089.00	
Maxton (ss)	2089.00	2089.00	2249.00	2249.00	
Big Injun (ss)	2249.00	2249.00	2906.00	2904.00	
Berea (siltstone)	2906.00	2904.00	6544.00	6462.00	
Rhinestreet (shale)	7021.00	6471.00	7380.00	6760.00	
Cashaqua (shale)	7380.00	6760.00	7521.00	6866.00	
Middlesex (shale)	7521.00	6866.00	7641.00	6951.00	
Burket (shale)	7641.00	6951.00	7672.00	6971.00	
Tully (ls)	7672.00	6971.00	7708.00	6994.00	
Mahantango (shale)	7708.00	6994.00	7878.00	7077.00	
Marcellus (shale)	7878.00	7077.00	NA	NA	GAS

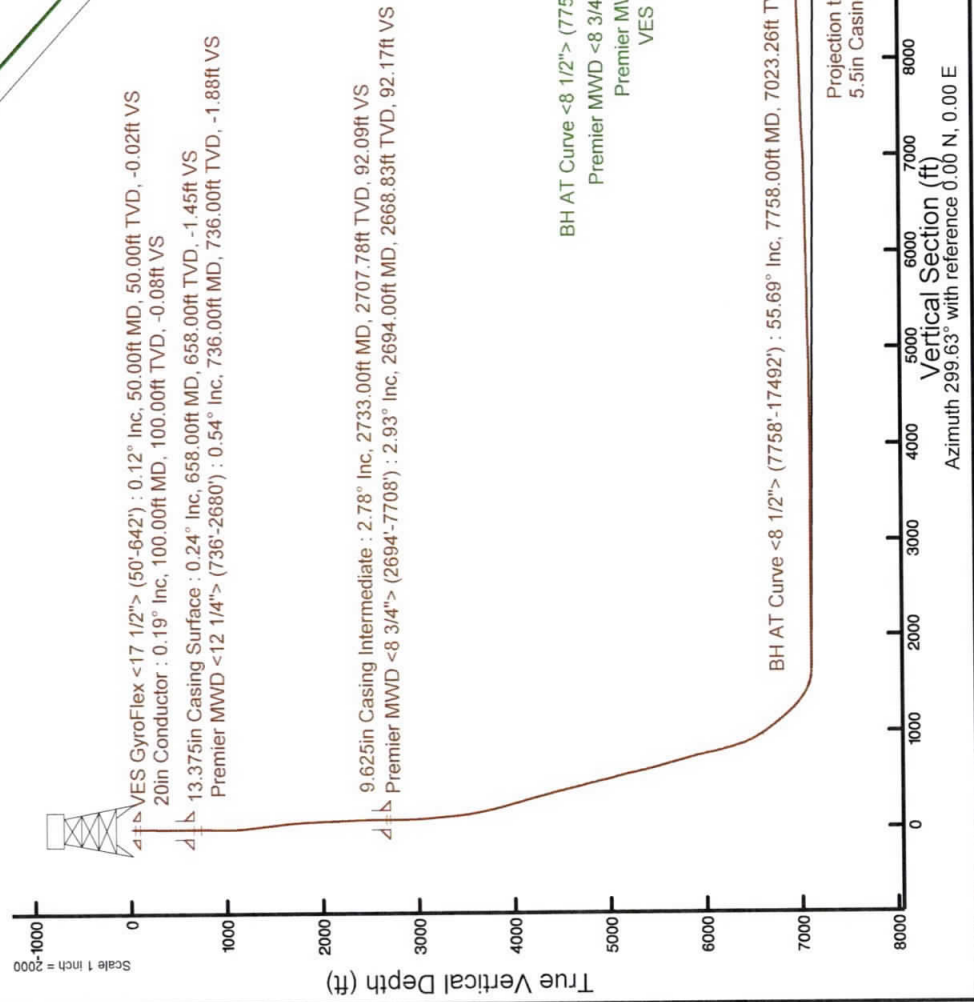
SOUTHWESTERN ENERGY

Location: Marshall County, WV Slot: 401H
 Well: Arthur Waryck MSH 401H
 Field: Marshall Wellbore: Arthur Waryck MSH 401H PWB
 Facility: Arthur Waryck MSH Pad

Plot reference wellpath is Arthur Waryck MSH 401H PWP Rev-B.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 46 (KB)	North Reference: Grid north
Measured depths are referenced to SDC 46 (KB)	Scale: True distance
SDC 46 (KB) to Mean Sea Level: 1352 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: Slot 401H): -1326 feet	Created by: atenjen on 2019-09-20
Coordinates are in feet referenced to Slot	Database: WA_MPL_EASTERNUS_Defn



User specified Dip: 66.74° Field: 52251 nT
 Magnetic North is 66.74 degrees West of True North (at 12/Sept2019)
 Grid North is 0.21 degrees East of True North
 To correct azimuth from Magnetic to Grid subtract 66.74 degrees
 To correct azimuth from Magnetic to Grid subtract 66.74 degrees



Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Arthur Waryck MSH Pad	1732651.719	14426411.271	39°43'26.493"N	80°40'19.078"W
Slot	Local E (ft)	Grid North (US ft)	Latitude	Longitude
Slot 401H	42.38	17326528.260	39°43'26.913"N	80°40'19.376"W
SDC 46 (KB) to Mud line (At Slot: Slot 401H)			26ft	
Mean Sea Level to Mud line (At Slot: Slot 401H)			-1326ft	
SDC 46 (KB) to Mean Sea Level			1352ft	

Comments

API: 47-051-02172-0000
 BH Job #: 109995123A
 Rig: SDC 46
 Duration: 09/14/2019 - 09/19/2019



Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/25/2020
Job End Date:	3/17/2020
State:	West Virginia
County:	Marshall
API Number:	47-051-02172-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Arthur Waryck MSH 401H
Latitude:	39.72414200
Longitude:	-80.67204900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,052
Total Base Water Volume (gal):	14,968,537
Total Base Non Water Volume:	0



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
Fresh Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	86.64922	Density = 8.34
Produced Water	Halliburton	Base Fluid					
			Water	7732-18-5	100.00000	2.73344	Density = 8.50



Ingredients	Listed Above	Listed Above						
			Water	7732-18-5	100.00000	0.11273		
Sand-Premium White-40/70	Halliburton	Proppant						
FSTI-IC-001	FSTI	Iron Control Agent		Listed Below				
FSTI HCl	FSTI	Acid		Listed Below				
LD-2950	MultiChem	Friction Reducer		Listed Below				
MC MX 8-4743	MultiChem	Additive						
LEGEND(TM) LD-7750W	MultiChem	Scale Control		Listed Below				
Sand-Common White-100 Mesh, SSA-2	Halliburton	Proppant		Listed Below				
FSTI-CI-01	FSTI	Acid Corrosion Inhibitor		Listed Below				

			Listed Below		
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.					
			14808-60-7	100.00000	10.37030
			Proprietary	60.00000	0.06322
			7647-01-0	36.00000	0.03268
			64742-47-8	30.00000	0.03161
			7631-99-4	60.00000	0.02226
			67-56-1	80.00000	0.00797
			Proprietary	5.00000	0.00527
			10102-40-6	5.00000	0.00186
			64-19-7	60.00000	0.00146
			69011-36-5	1.00000	0.00105
			124-04-9	1.00000	0.00105
			77-92-9	40.00000	0.00097
			7647-14-5	5.00000	0.00066
			Proprietary	5.00000	0.00062
			Trade Secret	10.00000	0.00007
			72-17-3	0.10000	0.00004
			7778-77-0	0.10000	0.00004
			8013-01-2	0.10000	0.00004
			127-09-3	0.10000	0.00004
			50-00-0	0.10000	0.00001

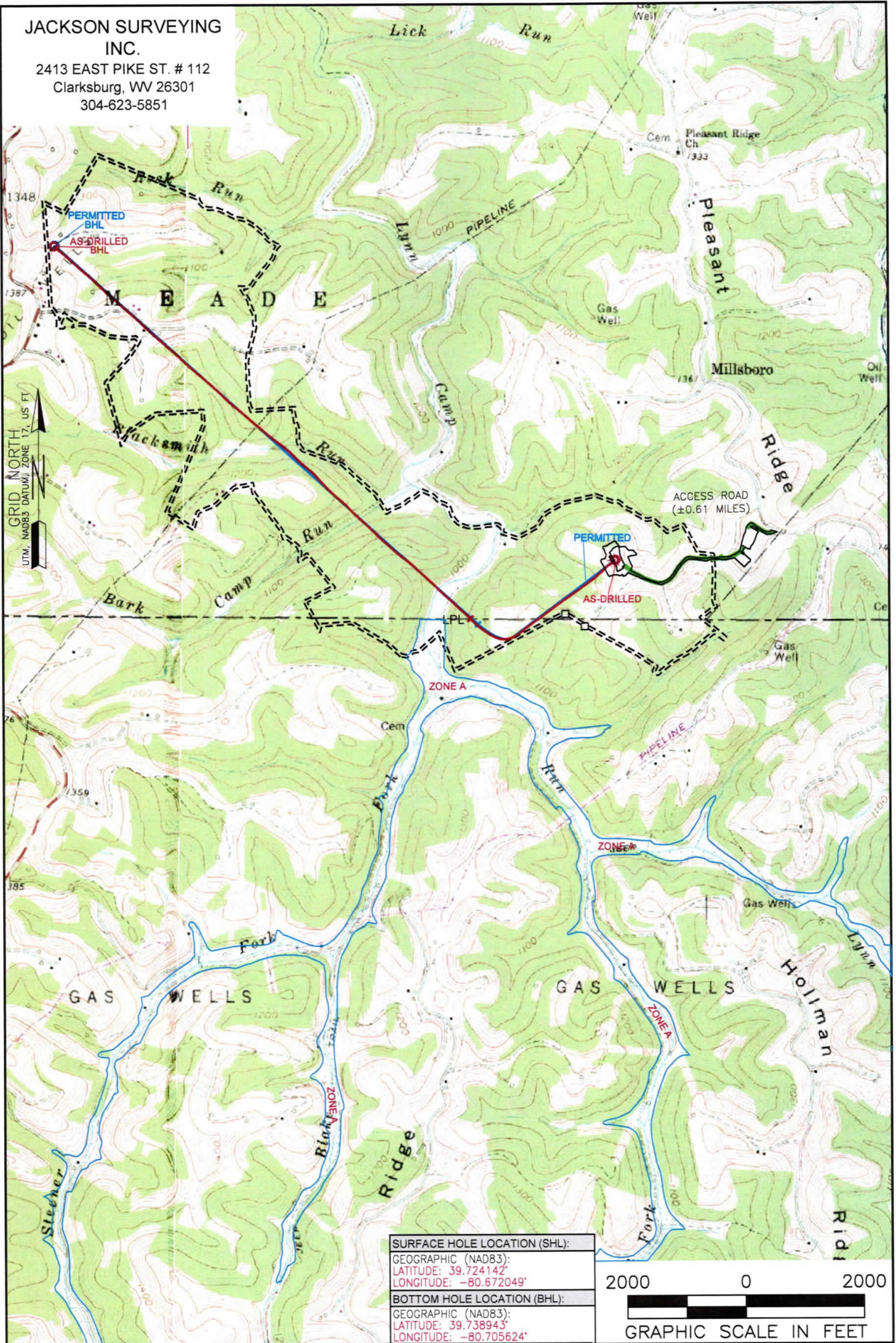
* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%
 *** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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)

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	CRAIG NORDBERG & CAROL NORDBERG	12-05-01
B	PHILLIP WILEY	12-04-09
C	MASON DIXON FARMS, LLC	09-21-11
D	ANORAH C. SCHOSTAG & RYAN U. SCHOSTAG	09-21-10.1
E	SARAH V. RICHMOND	12-04-08
F	RHODA C. SIVERT & CLEO M. SIVERT	12-04-07
G	KIMBERLY C. HOFFMAN & PAUL G. FOX	09-21-21
H	ELEANOR T. MILLER & JAMES B. MILLER	09-20-16
I	DAVID PAUL WEIGAND	09-20-15
J	DAVID P. WEIGAND	09-20-17.5
K	DAVID PAUL WEIGAND	09-20-09
L	ELEANOR T. MILLER & JAMES B. MILLER	09-20-08
M	JOHN G. WEIGAND JR. & MARILYN S. WEIGAND	09-20-12.2
N	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.2
O	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.1
P	JAMES MILLER, ET UX	09-20-9.6
Q	JAMES MILLER, ET UX	09-20-9.5
R	DAVID PAUL FROHNAPFEL	09-20-7.1
S	ZACHARY M. BLAIR	09-21-04
T	ZACHARY M. BLAIR	09-21-16
U	ZACHARY M. BLAIR	09-21-17
V	ZACHARY M. BLAIR	09-21-14
W	MASON DIXON FARMS, LLC	09-21-22

REVISIONS:	COMPANY:				
					
	OPERATOR'S	ARTHUR WARYCK MSH	API #		DATE: 03-24-2020
	WELL #:	401H	47-051-02172		DRAWN BY: N. MANO
DISTRICT:	COUNTY:	STATE:	SCALE:	DRAWING NO:	
MEADE	MARSHALL	WV	N/A	WELL LOCATION PLAT 2	

**JACKSON SURVEYING
INC.**
2413 EAST PIKE ST. # 112
Clarksburg, WV 26301
304-623-5851



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.724142°
LONGITUDE: -80.672049°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 39.738943°
LONGITUDE: -80.705624°



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ⊗ EXISTING / PRODUCING WELLHEAD
- LPL* LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: ARTHUR WARYCK MSH	WELL # 401H	SERIAL #
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200	COUNTY - CODE MARSHALL - 051	DISTRICT; MEADE	
SURFACE OWNER: A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK	USGS 7 1/2 QUADRANGLE MAP NAME WILEYVILLE, WV	API # 47-051-02172	

Latitude: 39°45'00"(SH)

SURFACE HOLE 1,513'

JACKSON SURVEYING INC.

P.O. Box 1460
677 W. Main St.
Clarksburg, WV 26302
304-623-5851

Latitude: 39°45'00"(BH)

BOTTOM HOLE 10,954'

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,397,191.859
EASTING: 528,106.149

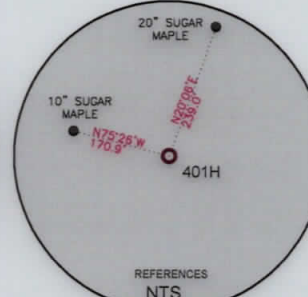
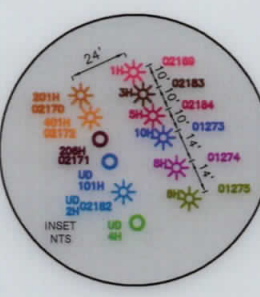
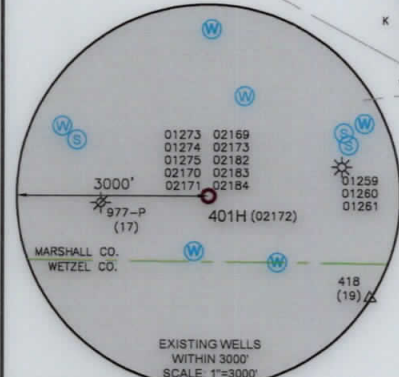
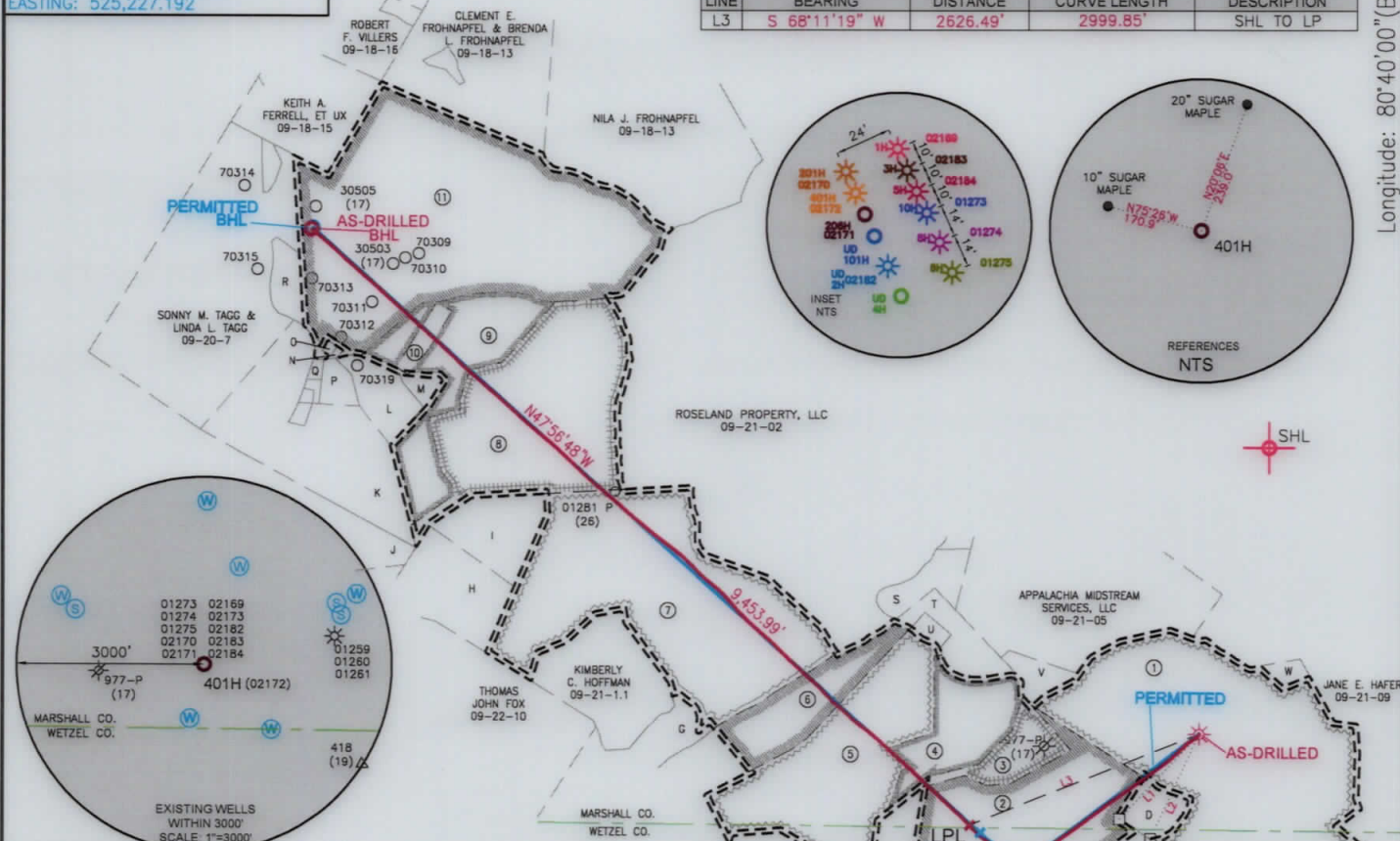
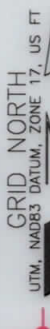
LANDING POINT (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,396,866.788
EASTING: 527,401.524

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,398,829.320
EASTING: 525,227.192

Table with 3 columns: TRACT, SURFACE OWNER (S) / ROYALTY OWNER (R), TAX PARCEL. Lists 11 tracts and their owners.

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,397,191.859
EASTING: 528,106.149
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,396,866.788
EASTING: 527,362.905
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,398,824.564
EASTING: 525,223.272

Table with 5 columns: LINE, BEARING, DISTANCE, DESCRIPTION, MONUMENT. Lists 3 lines with bearings and distances.



WELL RESTRICTIONS

- 1. NO OCCUPIED DWELLINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
2. NO AGRICULTURE BUILDINGS > 2500 SQ FT. WITHIN 625 FEET OF CENTER OF PAD.
3. NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
4. NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
5. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
6. NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD, LIMITS OF DISTURBANCE, E & S CONTROLS OR PUBLIC WATER SUPPLY.

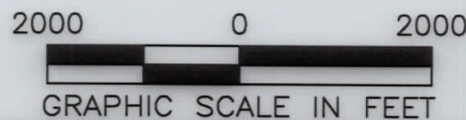
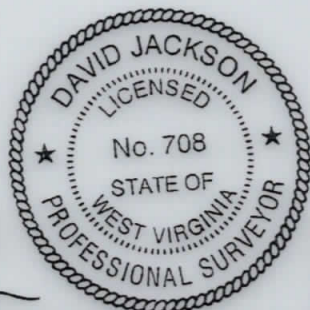
NOTES ON SURVEY

- 1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 708

David L Jackson



COMPANY: SWN Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SURVEY SOURCE OF ELEVATION: GRADE GPS (NAVD 88, US FT)

ARTHUR WARYCK MSH
OPERATOR'S WELL #: 401H
API WELL #: 47 051 02172
STATE COUNTY PERMIT

WELL TYPE: OIL [] WASTE DISPOSAL [] PRODUCTION [X] DEEP [] GAS [X] LIQUID INJECTION [] STORAGE [] SHALLOW [X]
WATERSHED: LYNN CAMP RUN OF FISH CREEK (HUC-10) ELEVATION: 1326.0'
DISTRICT: MEADE COUNTY: MARSHALL QUADRANGLE: WILEYVILLE, WV
SURFACE OWNER: A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK ACREAGE: ±125.39
OIL & GAS ROYALTY OWNER: CHARLES W. CAIN & PEARL CAIN ACREAGE: ±125.39
DRILL [] DRILL DEEPER [] REDRILL [] FRACTURE OR STIMULATE [] PLUG OFF OLD FORMATION [] PERFORATE NEW FORMATION []
CONVERT [] PLUG & ABANDON [] CLEAN OUT & REPLUG [] OTHER CHANGE [X] (SPECIFY) AS-DRILLED
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,109 TVD 17,517 TMD

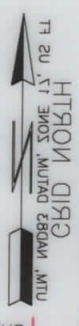
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITTANY WOODY
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200
CITY: MORGANTOWN STATE: WV ZIP CODE: 26508 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508

Table with 2 columns: LEGEND (PROPOSED SURFACE HOLE, EXISTING WELLHEAD, LPL, etc.) and REVISIONS (DATE, DRAWN BY, SCALE, etc.)

JACKSON SURVEYING

INC.
P.O. Box 1480
677 W. Main St.
Clarkspurg, WV 26032
304-832-8811

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,397,191.812 EASTING: 528,108.241
LANDING POINT (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,398,886.788 EASTING: 527,401.824
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,398,824.250 EASTING: 525,227.192



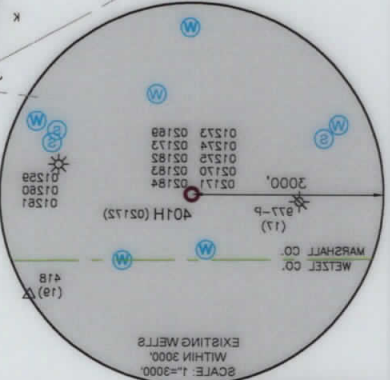
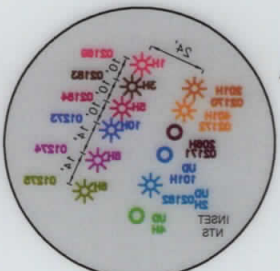
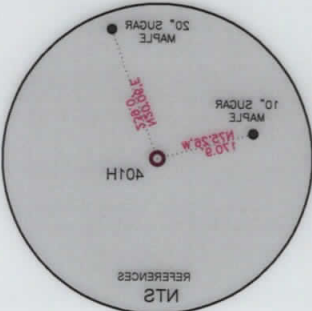
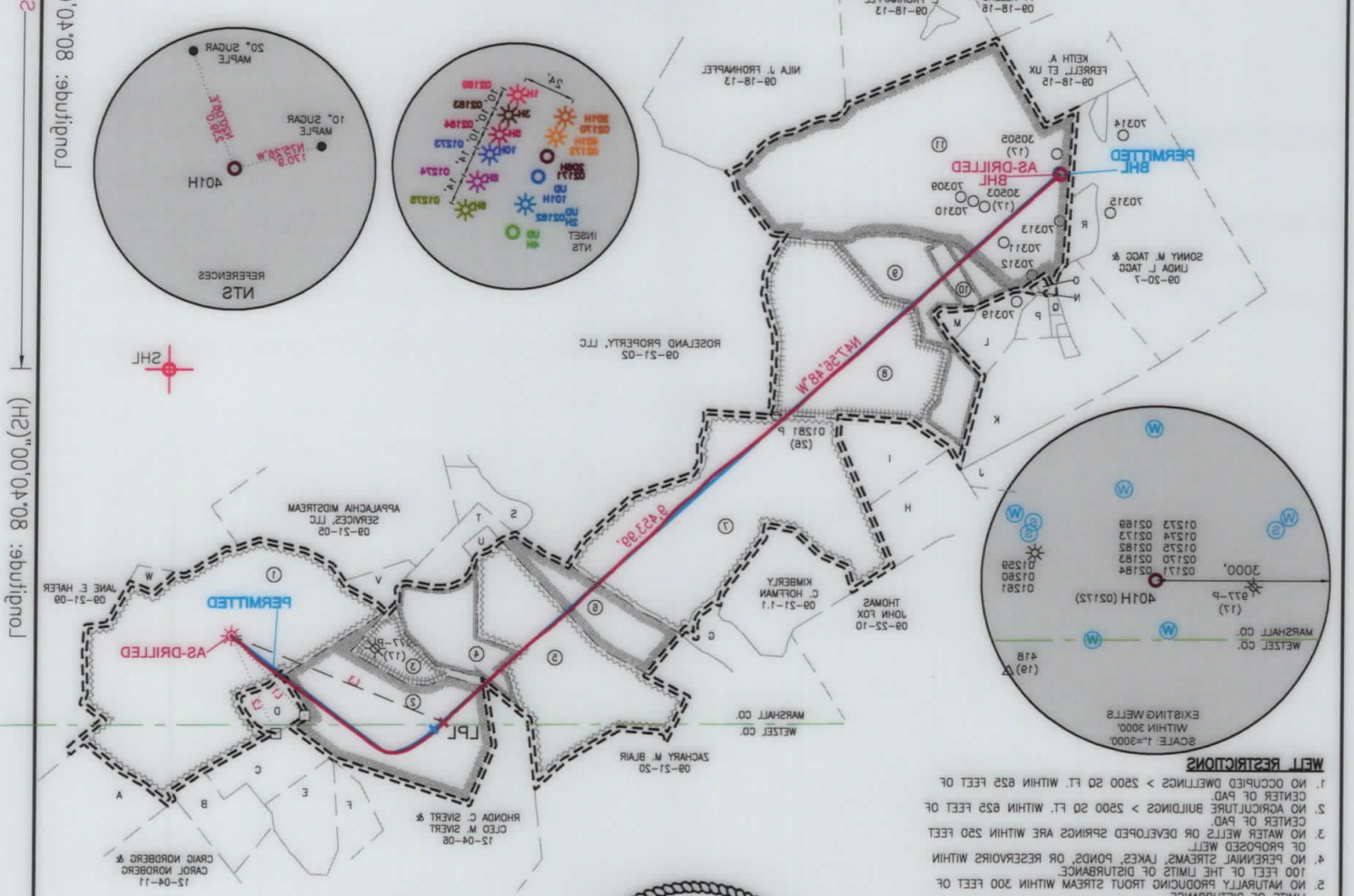
TRACT	SURFACE OWNER	TAX PARCEL
1	A. MICHAEL WARYCK & DEBORAH B. ELLEN WARYCK (2) \ CHARLES W. CAIN & PEARL CAIN (R)	09-21-10
2	MASON DIXON FARMS, LLC (2)	09-21-12
3	ZACHARY M. BLAIR (2)	09-21-13
4	ZACHARY D. BLAIR (2)	09-21-15
5	ZACHARY M. BLAIR (2)	09-21-19
6	ZACHARY M. BLAIR (2)	09-21-18
7	ROBERT F. VILLERS (2)	09-21-01
8	MARY JOSEPHINE NICE (2)	09-20-13
9	DAVID PAUL WEIGAND (2)	09-20-12
10	ELEANOR T. MILLER & JAMES B. MILLER (2)	09-20-15
11	LISA A. FROHNAPFEL (2)	09-20-11

SURFACE HOLE LOCATION (SHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,397,191.859 EASTING: 528,108.149
LANDING POINT LOCATION (LPL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,398,894.411 EASTING: 527,382.905
BOTTOM HOLE LOCATION (BHL): UTM (NAD83, ZONE 17, METERS): NORTHING: 4,398,824.284 EASTING: 525,227.272

LINE	BEARING	DISTANCE	DESCRIPTION
L3	2 68°11'19" W	2826.49	SHL TO L.P.
L2	2 24°41'38" W	1226.73	SHL TO LANDMARK
L1	2 42°27'30" W	1232.25	SHL TO LANDMARK

Latitude: 39°42'00" (BH) Longitude: 80°42'00" (SH)

Bottom Hole 10.924' Surface Hole 17.513'



- WELL RESTRICTIONS**
- NO OCCUPIED DWELLINGS < 2500 SQ FT WITHIN 825 FEET OF CENTER OF PAD.
 - NO AGRICULTURE BUILDINGS < 2500 SQ FT WITHIN 825 FEET OF CENTER OF PAD.
 - NO WATER WELLS OR DEVELOPED SPRINGS ARE WITHIN 250 FEET OF PROPOSED WELL.
 - NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
 - NO NATURALLY PRODUCING TIGHT STRAIN WITHIN 300 FEET OF LIMITS OF DISTURBANCE.
 - NO GROUND INTAKE OR PUBLIC WATER SUPPLY WITHIN 1000 FEET OF WELL PAD LIMITS OF DISTURBANCE. E & S CONTROLS OR PUBLIC WATER SUPPLY.

NOTES ON SURVEY



- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
- THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- ALL INTEREST ARE GRANT NORTH UNLESS OTHERWISE DESIGNATED.
- 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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



COMPANY: **SWN** Production Company, LLC
 GRAPHIC SCALE IN FEET: 0, 1000, 2000

WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>
WATERSHED: LYN CAMP RUN OF FISH CREEK (HUC-10)
DISTRICT: MEADE COUNTY: MARSHALL
SURFACE OWNER: A. MICHAEL WARYCK & DEBORAH ELLEN WARYCK
OIL & GAS ROYALTY OWNER: CHARLES W. CAIN & PEARL CAIN
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED
DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/>
TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: 7109 TMD 17.517 TMD
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: BRITANNY WOODY
ADDRESS: 1300 FORT PIERPONT ROAD, SUITE 200 CITY: MORGANTOWN STATE: WV ZIP CODE: 26508
DATE: 03-24-2020
REVISIONS:
LEGEND: ○ PROPOSED SURFACE HOLE \ BOTTOM HOLE * EXISTING \ PRODUCING WELLS LPL LANDING POINT LOCATION ○ EXISTING WATER WELL ○ EXISTING SPRING --- SURVEYED BOUNDARY --- DRILLING UNIT --- LEASE BOUNDARY --- AS-DRILLED PATH --- PROPOSED PATH

ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	CRAIG NORDBERG & CAROL NORDBERG	12-05-01
B	PHILLIP WILEY	12-04-09
C	MASON DIXON FARMS, LLC	09-21-11
D	ANORAH C. SCHOSTAG & RYAN U. SCHOSTAG	09-21-10.1
E	SARAH V. RICHMOND	12-04-08
F	RHODA C. SIVERT & CLEO M. SIVERT	12-04-07
G	KIMBERLY C. HOFFMAN & PAUL G. FOX	09-21-21
H	ELEANOR T. MILLER & JAMES B. MILLER	09-20-16
I	DAVID PAUL WEIGAND	09-20-15
J	DAVID P. WEIGAND	09-20-17.5
K	DAVID PAUL WEIGAND	09-20-09
L	ELEANOR T. MILLER & JAMES B. MILLER	09-20-08
M	JOHN G. WEIGAND JR. & MARILYN S. WEIGAND	09-20-12.2
N	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.2
O	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.1
P	JAMES MILLER, ET UX	09-20-9.6
Q	JAMES MILLER, ET UX	09-20-9.5
R	DAVID PAUL FROHNAPFEL	09-20-7.1
S	ZACHARY M. BLAIR	09-21-04
T	ZACHARY M. BLAIR	09-21-16
U	ZACHARY M. BLAIR	09-21-17
V	ZACHARY M. BLAIR	09-21-14
W	MASON DIXON FARMS, LLC	09-21-22

REVISIONS:	COMPANY:		 	
	OPERATOR'S	ARTHUR WARYCK MSH	API #	DATE: 03-24-2020
	WELL #:	401H	47-051-02172	DRAWN BY: N. MANO
	DISTRICT:	COUNTY:	STATE:	SCALE: N/A
	MEADE	MARSHALL	WV	DRAWING NO: WELL LOCATION PLAT 2

WELL LOCATION PLAT 2		DRAWING NO:	STATE:	WV	DISTRICT:	MEADE	REVISIONS:
DRAWING NO:		SCALE:	N/A		COUNTY:	MARSHALL	
DRAWN BY: N. MANO		API #	47-051-02172		WELL #:	401H	
DATE: 03-24-2020		OPERATOR'S		ARTHUR WARYCK MSH		COMPANY:	



TRACT	SURFACE OWNER	TAX PARCEL
A	CRAIG NORDBERG & CAROL NORDBERG	12-02-01
B	PHILLIP WILEY	12-04-09
C	MASON DIXON FARMS, LLC	09-21-11
D	ANORAH C. SCHOSTAG & RYAN U. SCHOSTAG	09-21-10.1
E	SARAH V. RICHMOND	12-04-08
F	RHODA C. SIVERT & CLEO M. SIVERT	12-04-07
G	KIMBERLY C. HOFFMAN & PAUL G. FOX	09-21-21
H	ELEANOR T. MILLER & JAMES B. MILLER	09-20-18
I	DAVID PAUL WEIGAND	09-20-15
J	DAVID P. WEIGAND	09-20-17.2
K	DAVID PAUL WEIGAND	09-20-09
L	ELEANOR T. MILLER & JAMES B. MILLER	09-20-08
M	JOHN G. WEIGAND JR. & MARILYN S. WEIGAND	09-20-12.2
N	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.2
O	ELEANOR T. MILLER & JAMES B. MILLER	09-20-9.1
P	JAMES MILLER, ET UX	09-20-9.6
Q	JAMES MILLER, ET UX	09-20-9.3
R	DAVID PAUL FROHNAPFEL	09-20-7.1
S	ZACHARY M. BLAIR	09-21-04
T	ZACHARY M. BLAIR	09-21-16
U	ZACHARY M. BLAIR	09-21-17
V	ZACHARY M. BLAIR	09-21-14
W	MASON DIXON FARMS, LLC	09-21-22

ADJOINING OWNERS TABLE