

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

API 47-069-00242 County OHIO District TRIADELPHIA
Quad VALLEY GROVE Pad Name _____ Field/Pool Name PANHANDLE
Farm name DOROTHY V FRYE (LIFE ESTATE), AMY M FRY & CARRIE L FRYE (REMAINDERMAN) Well Number CHARLES FRYE OHI 605H
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 4,433,726.067 Easting 536,083.294
Landing Point of Curve Northing 4,434,439.815 Easting 536,835.390
Bottom Hole Northing 4,438,071.606 Easting 535,021.305

Elevation (ft) 1266.9 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 09/28/2018 Date drilling commenced 12/02/2019 Date drilling ceased 12/15/2019
Date completion activities began 02/27/2020 Date completion activities ceased 03/29/2020
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug JUL 02 2020

Freshwater depth(s) ft 548' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 774' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 634' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Reviewed by:
87-16-20



API 47-069 - 00242 Farm name DOROTHY V FRYE (LIFE ESTATE), AMY M FRY & GARRE L FRYE (REMAINDER) Well number CHARLES FRYE OHI 605H

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	730'	NEW	J-55/54.50#		Y, 44 bbls
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2,079'	NEW	J-55/36#		Y, 35 bbls
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	21,231'	NEW	P-110/20#		Y, 45 bbls
Tubing		2.875	7,900'	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	758	15.60	1.20	909.60	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	CLASS A	781	15.60	1.19	929.39	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	4,722	15.60	1.18	5,571.96	SURFACE	24
Tubing							

Drillers TD (ft) 21,231' Loggers TD (ft) 21,231'
 Deepest formation penetrated MARCELLUS SHALE Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 8,584'

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

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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 _____

API 47- 069 - 00242

Farm name DOROTHY V FRYE (LIFE ESTATE), AMY M FRY & CARRIE L FRYE (REMANDES) Well number CHARLES FRYE OHI 605H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENT 7	1		

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	ATTACHMENT 7	2				

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Please insert additional pages as applicable.

API 47- 069 - 00242

Farm name DOROTHY V FRYE (LIFE ESTATE), AMY M FRY & CARRIE L FRYE (REMAINDER)

Well number CHARLES FRYE OHI 605H

PRODUCING FORMATION(S)

DEPTHS

<u>MARCELLUS SHALE</u>	<u>6,482'</u>	<u>TVD</u>	<u>7,718'</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 3,038 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 3,808 mcfpd Oil 273 bpd NGL _____ bpd Water 350 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)
	<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 SCHLUMBERGER
Address 10101 WOODLOCH FOREST DR City THE WOODLANDS State TX Zip 77380

Cementing Company BJ SERVICES
Address 11211 FM 2920 City TOMBALL State TX Zip 77377 RECEIVED Office of Oil and Gas

Stimulating Company SWN WELL SERVICES
Address PO BOX 12359 City SPRING State TX Zip 77391-2359 JUL 02 2020
WV Department of Environmental Protection

Completed by Elizabeth Gee Telephone 832-796-2873
Signature [Signature] Title Staff Regulatory Analyst Date 06/30/20

**CHARLES FRYE OHI 605H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
1	1/27/2020	21,184	21,087	36
2	2/27/2020	21,051	20,874	36
3	2/28/2020	20,841	20,664	36
4	2/28/2020	20,631	20,453	72
5	2/29/2020	20,422	20,248	36
6	2/29/2020	20,210	20,032	36
7	3/1/2020	20,000	19,823	36
8	3/1/2020	19,790	19,613	36
9	3/1/2020	19,580	19,403	36
10	3/2/2020	19,365	19,192	36
11	3/2/2020	19,157	18,982	36
12	3/2/2020	18,949	18,772	36
13	3/2/2020	18,739	18,562	36
14	3/3/2020	18,529	18,352	36
15	3/3/2020	18,321	18,142	36
16	3/3/2020	18,108	17,931	36
17	3/4/2020	17,898	17,726	36
18	3/6/2020	17,688	17,516	36
19	3/6/2020	17,478	17,301	36
20	3/7/2020	17,268	17,091	36
21	3/7/2020	17,058	16,880	36
22	3/7/2020	16,847	16,670	36
23	3/8/2020	16,637	16,460	36
24	3/8/2020	16,427	16,250	36
25	3/8/2020	16,217	16,040	36
26	3/9/2020	16,007	15,830	36
27	3/9/2020	15,797	15,619	36
28	3/10/2020	15,586	15,409	36
29	3/10/2020	15,376	15,199	36
30	3/10/2020	15,166	14,989	36
31	3/10/2020	14,956	14,779	36
32	3/11/2020	14,746	14,568	36
33	3/11/2020	14,535	14,358	36
34	3/11/2020	14,320	14,148	36
35	3/12/2020	14,115	13,938	36
36	3/12/2020	13,905	13,730	36
37	3/12/2020	13,695	13,518	36
38	3/13/2020	13,484	13,307	36
39	3/13/2020	13,274	13,097	36
40	3/13/2020	13,064	12,887	36
41	3/14/2020	12,854	12,677	36
42	3/14/2020	12,642	12,467	36
43	3/14/2020	12,434	12,256	36

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**CHARLES FRYE OHI 605H
ATTACHMENT 1
PERF REPORT**

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD2	# SHOTS PER STG
44	3/15/2020	12,223	12,046	36
45	3/15/2020	12,013	11,836	36
46	3/15/2020	11,803	11,626	36
47	3/16/2020	11,593	11,416	36
48	3/16/2020	11,383	11,203	36
49	3/16/2020	11,177	10,995	36
50	3/16/2020	10,962	10,785	36
51	3/17/2020	10,748	10,575	36
52	3/17/2020	10,542	10,365	36
53	3/18/2020	10,332	10,155	36
54	3/18/2020	10,122	9,947	36
55	3/18/2020	9,911	9,734	36
56	3/18/2020	9,701	9,524	36
57	3/19/2020	9,491	9,280	72
58	3/20/2020	9,257	9,104	36
59	3/20/2020	9,071	8,891	36
60	3/20/2020	8,861	8,683	36
61	3/21/2020	8,650	8,473	36
62	3/21/2020	8,436	8,266	36
63	3/21/2020	8,230	8,053	36
64	3/22/2020	8,020	7,843	36

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CHARLES FRYE OHI 605H

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/othr
1	2/27/2020	69	8,027	7,241	4,248	250,620	8,357	0
2	2/27/2020	90	8,544	5,464	4,471	219,000	15,121	0
3	2/28/2020	87	8,334	5,804	5,396	218,740	13,851	0
4	2/28/2020	71	8,498	5,414	4,622	216,340	22,286	0
5	2/29/2020	68	8,253	5,971	4,932	218,740	13,649	0
6	2/29/2020	75	6,926	6,357	4,476	216,690	13,107	0
7	3/1/2020	88	8,205	6,624	5,079	218,060	14,452	0
8	3/1/2020	90	8,261	5,763	5,178	220,290	13,666	0
9	3/1/2020	88	8,241	6,399	4,402	219,890	14,559	0
10	3/2/2020	92	8,184	5,979	5,378	219,270	14,543	0
11	3/2/2020	96	8,407	5,656	5,352	220,720	13,609	0
12	3/2/2020	83	8,173	6,289	4,539	220,440	14,735	0
13	3/3/2020	93	8,109	6,218	4,516	217,010	13,037	0
14	3/3/2020	100	8,465	5,539	5,261	217,440	13,360	0
15	3/3/2020	91	8,315	5,333	4,409	219,530	14,063	0
16	3/4/2020	91	8,172	6,528	4,399	219,300	14,006	0
17	3/6/2020	87	7,808	6,092	4,824	219,890	14,047	0
18	3/6/2020	95	8,254	4,568	4,353	217,740	13,983	0
19	3/7/2020	92	8,149	6,245	4,209	217,250	13,817	0
20	3/7/2020	88	7,870	6,309	5,336	216,320	13,782	0
21	3/7/2020	95	8,239	5,895	4,450	215,120	13,874	0
22	3/8/2020	89	8,109	6,274	4,644	217,540	13,872	0
23	3/8/2020	79	8,019	4,062	4,963	217,300	13,663	0
24	3/8/2020	85	8,198	5,948	4,245	220,110	13,985	0
25	3/9/2020	76	8,151	5,702	4,324	223,460	13,284	0
26	3/9/2020	78	8,015	5,941	4,651	219,880	14,299	0
27	3/9/2020	95	7,879	5,714	4,365	215,180	13,770	0
28	3/10/2020	97	7,902	4,686	4,996	220,640	13,810	0
29	3/10/2020	96	7,857	4,645	5,078	218,470	13,620	0
30	3/10/2020	92	8,026	5,199	4,401	218,780	13,581	0
31	3/11/2020	93	8,029	6,067	4,340	218,650	13,769	0
32	3/11/2020	97	7,683	5,708	4,519	219,360	13,760	0
33	3/11/2020	97	7,873	5,940	4,522	220,250	13,953	0
34	3/12/2020	97	7,921	6,169	4,323	219,820	13,684	0
35	3/12/2020	99	7,889	6,356	4,403	219,830	13,978	0
36	3/12/2020	95	7,992	6,120	4,409	220,140	13,875	0
37	3/13/2020	95	8,017	5,248	4,640	219,380	13,635	0
38	3/13/2020	98	7,844	6,134	4,371	219,400	13,428	0
39	3/13/2020	99	7,945	5,604	4,548	218,190	13,650	0
40	3/13/2020	97	7,740	5,970	4,621	219,970	13,282	0
41	3/14/2020	96	7,777	6,191	4,583	219,180	13,598	0
42	3/14/2020	97	7,646	6,644	4,568	217,820	13,583	0
43	3/15/2020	98	7,441	5,460	4,586	217,200	13,618	0
44	3/15/2020	100	7,525	5,996	4,469	214,740	13,583	0
45	3/15/2020	100	7,494	5,930	4,491	218,640	13,863	0
46	3/15/2020	96	7,735	6,190	4,688	212,770	13,738	0
47	3/16/2020	100	7,561	5,847	4,552	212,450	13,526	0
48	3/16/2020	100	7,382	6,244	4,379	219,240	13,766	0
49	3/16/2020	96	7,393	6,041	4,403	220,260	13,657	0
50	3/17/2020	58	7,333	6,193	4,315	222,690	11,773	0
51	3/17/2020	100	6,657	5,907	4,340	218,280	13,624	0
52	3/17/2020	90	7,129	6,105	4,569	219,460	14,264	0
53	3/18/2020	98	7,297	5,875	4,522	221,380	13,306	0

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CHARLES FRYE OHI 605H

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
54	3/18/2020	98	7,152	6,298	4,489	221,240	14,035	0
55	3/18/2020	101	7,038	5,980	4,588	218,540	13,926	0
56	3/19/2020	97	7,235	6,485	4,124	220,550	14,198	0
57	3/19/2020	90	7,606	5,051	4,587	218,390	18,009	0
58	3/20/2020	100	6,992	5,722	4,306	211,830	13,914	0
59	3/20/2020	98	6,991	5,796	4,301	218,550	13,856	0
60	3/20/2020	100	7,252	6,441	5,044	214,700	13,911	0
61	3/21/2020	98	6,997	6,682	4,365	217,310	14,014	0
62	3/21/2020	99	6,939	6,496	4,517	214,010	14,068	0
63	3/22/2020	100	6,819	6,345	5,087	218,010	13,698	0
64	3/22/2020	100	6,773	6,152	4,023	240,980	14,578	0

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Well Name: Charles Frye OHI 605H 47069002420000

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	548.00	548.00	
Top of Salt Water	774.00	774.00	NA	NA	
Pittsburgh Coal	634.00	634.00	923.00	923.00	
Pottsville (ss)	923.00	923.00	1139.00	1139.00	
Raven Cliff (ss)	1139.00	1139.00	1538.00	1538.00	
Maxton (ss)	1538.00	1538.00	1813.00	1813.00	
Big Injun (ss)	1813.00	1813.00	2424.00	2424.00	
Berea (siltstone)	2424.00	2424.00	6794.00	5890.00	
Rhinestreet (shale)	6794.00	5890.00	7129.00	6170.00	
Cashaqua (shale)	7129.00	6170.00	7221.00	6240.00	
Middlesex (shale)	7221.00	6240.00	7350.00	6327.00	
Burket (shale)	7350.00	6327.00	7392.00	6349.00	
Tully (ls)	7392.00	6349.00	7452.00	6380.00	
Mahantango (shale)	7452.00	6380.00	7718.00	6482.00	
Marcellus (shale)	7718.00	6482.00	NA	NA	GAS

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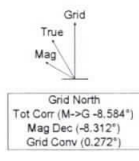
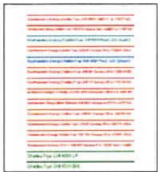
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Borehole: Original Borehole	Well: Charles Frye OHI 405H	Field: WV Ohio County (NAD 83 UTM 17N)	Structure: SDC #40
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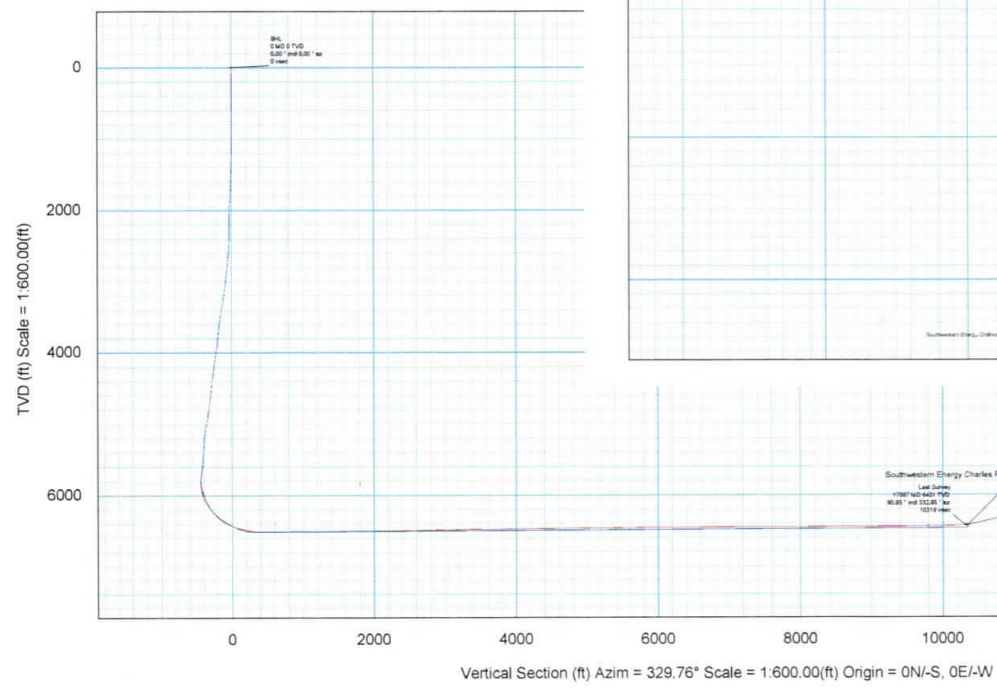
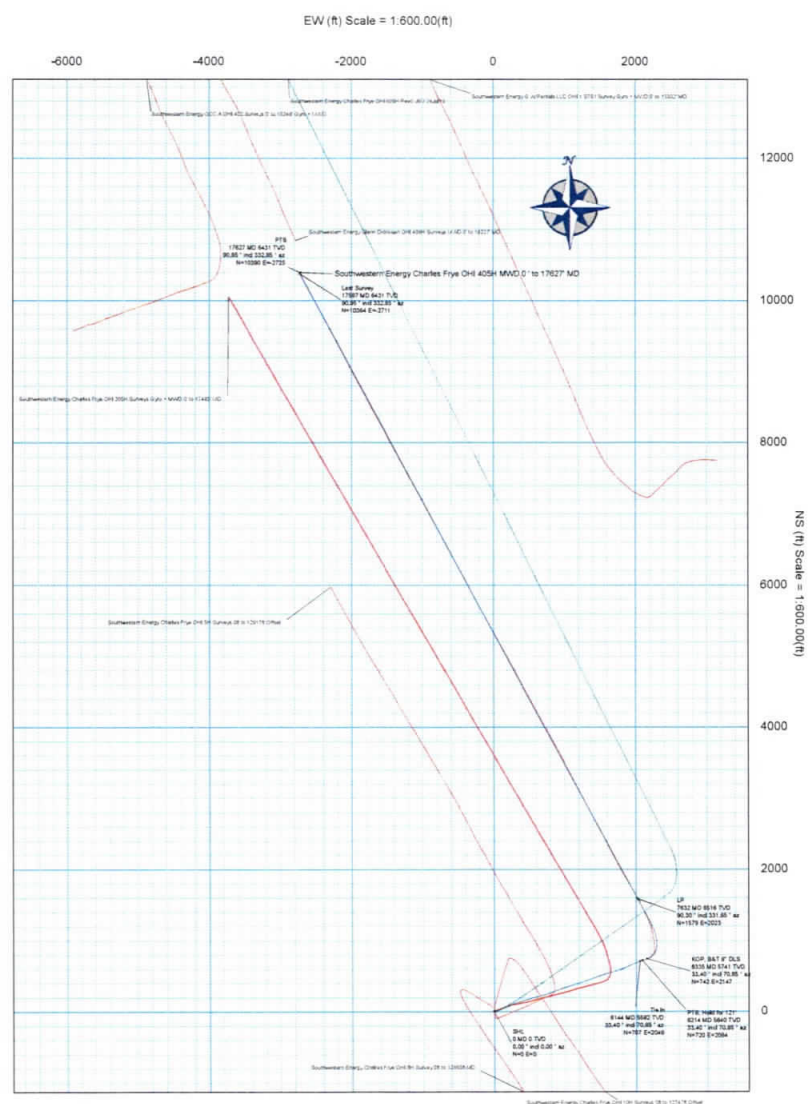
Gravity & Magnetic Parameters Model: HDGM 2019 Dip: 67.156° Date: 26-Nov-2019 MagDec: -8.312° FS: 52492.004mT Gravity FS: 999.352mgm (9.80665 Based)	Surface Location NADE3 UTM Zone 17N, US Feet Lat: N 40 3 10.91 Easting: 14546325.01HU5 Lon: W 80 34 37.17 Grid Conv: 0.2722° Scale Fact: 0.99961602	Miscellaneous Slot: Charles Frye OHI 405H TVD Ref: KB(1292.8ft above MSL) Plan: Southwestern Energy Charles Frye OHI 405H MWD 0' to 17627' MD
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#	Seq	Survey Tool	Vendor/Tool	Rate Size (in)	Thrust Size (in)	MD From (ft)	MD To (ft)	Survey Pressure (PSI)	ESD Size (ESD Meter)	ESD Size (ESD Meter)	Comments
1	1	NAL_NSO-45SHOT-Depth Only		36	30	0	39	146.423	1.262	1.26	
1	2	NAL_NSO-45SHOT-Depth Only		36	30	39	39	Ad Str	1.262	1.26	
1	3	NAL_NSO-45SHOT		36	30	26	790	Ad Str	1.504	1.504	
1	4	NAL_MWD-DR-DLS		36	30	790	8144	Ad Str	54.778	25.318	
1	5	NAL_MWD-LS-DEG		36	30	8144	17627	Ad Str	368.989	54.263	

Critical Point	MD	INCL	AZM	TVD	VSEC	N+1(S)	E+1(W)	DLS
SHC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Lead Survey	17587.00	90.85	332.85	6431.43	10712.41	10385.64	-2711.23	0.78
PTB	17627.00	90.85	332.85	6430.84	10741.70	10396.33	-2734.82	0.00



Target Name	Shape	Dimension	Latitude	Longitude	Northing	Easting	TVD	VSec	N+1(S)	E+1(W)
Charles Frye OHI 405H SHC	Point	N/A	N 40 4 53.70 W 80 35 11.80	14586708.63	1756028.43	8445.00	10741.49	10386.05	-2730.48	
Charles Frye OHI 405H LP	Point	N/A	N 40 3 28.42 W 80 34 11.06	14547903.45	1760811.13	8542.99	10123.84	10741.08	2023.02	



CONTROLLED

Plan ref	Southwestern Energy Charles Frye OHI 405H MWD 0' to 17627' MD
Drawing ref	
Copy number	of 3
Date	2/26/2020
Drawn by	U/ventura
Checked by	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/27/2020
Job End Date:	3/22/2020
State:	West Virginia
County:	Ohio
API Number:	47-069-00242-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	CHALRES FRYE OHI 605
Latitude:	40.05300600
Longitude:	-80.57695300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,461
Total Base Water Volume (gal):	37,318,536
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
Econo-CI200	SWN Well Services	Corrosion Inhibitor					
				Listed Below			
Fluid 655WG	SWN Well Services	Scale Inhibitor					
				Listed Below			

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Sand	SWN Well Services	Proppant							
				Listed Below					
HCL	SWN Well Services	Solvent							
				Listed Below					
Tolicide PS 50A	SWN Well Services	Biocide							
				Listed Below					
SWN FRW-11LC	SWN Well Services	Friction Reducer							
				Listed Below					
Ecopol-FEAC	SWN Well Services	Iron Control							
				Listed Below					
Base Water	Operator	Base Fluid							
				Listed Below					
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.									
			Water	7732-18-5	100.00000	95.38518	Density = 8.345		
			Crystalline Silica, quartz	14808-60-7	100.00000	4.16667			
			Water	7732-18-5	85.00000	0.33495			
			Hydrochloric Acid	7647-01-0	15.00000	0.04086			
			Petroleum Distillates, Hydrotreated	64742-47-8	25.00000	0.02682			
			Glycerin	56-81-5	50.00000	0.01961			
			Tetrakis	55566-30-8	55.00000	0.01506			
			Diethylenetriamine penta	15827-60-8	10.00000	0.00392			

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		Ammonium Chloride	12125-02-9	2.00000	0.00215
		Alcohols, C12-1, ethoxylated	68551-12-2	1.50000	0.00161
		Oleic Acid Diethanolamide	93-83-4	1.50000	0.00161
		Acetic Acid	64-19-7	37.50000	0.00054
		Methanol	67-56-1	80.00000	0.00033
		Citric Acid	77-92-9	22.50000	0.00033
		Acrylic acid terpolymer	397256-50-7	1.00000	0.00027
		Oxyalkylated fatty acid	68951-67-7	9.67400	0.00004
		Fatty acids	61790-12-3	5.02700	0.00002
		Modified thiourea polymer	68527-49-1	4.74600	0.00002
		Potassium acetate	127-08-2	0.02200	0.00000
		Formaldehyde	50-00-0	0.00400	0.00000

* 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)

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Environmental Protection

Borehole: Original Borehole	Well: Charles Frye OHI 405H	Field: WV Ohio County (NAD 83 UTM 17N)	Structure: SDC 40
---------------------------------------	---------------------------------------	--------------------------------------------------	-----------------------------

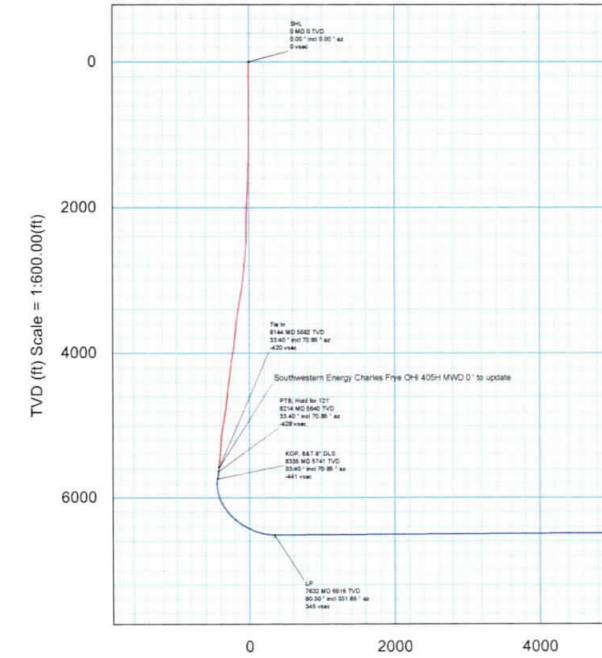
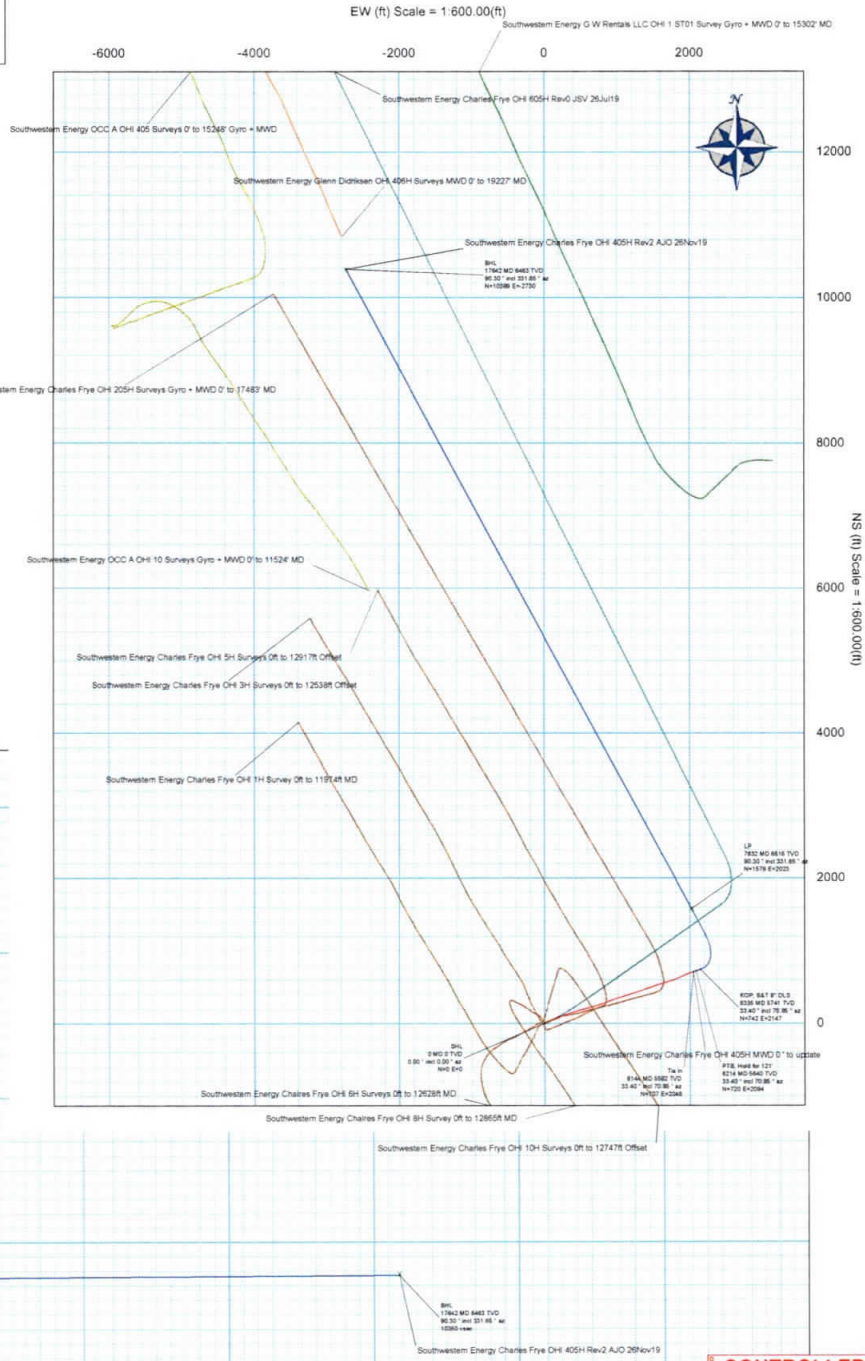
Gravity & Magnetic Parameters		Surface Location		Miscellaneous	
Model: HDGM 2019	Dip: 67.159°	Date: 26-Nov-2019	Surface Location: NAD83 UTM Zone 17N, US Feet	Slot: Charles Frye OHI 405H	TVD Ref: KB(1292.8ft above MSL)
MagDec: -8.312°	FS: 52492.004mT	Gravity FS: 999.352mgal (9.80665 Based)	Lat: N 40 3 10.91 Lon: W 80 34 37.17	Northing: 14546325.0111US Easting: 1758788.8911US	Scale Fact: 0.2722° 0.99961602

Seq	Survey Tool	Vendor/Tool	Hole Size (in)	Cable Size (in)	Expected Rate (ft/hr)	MD From (ft)	MD To (ft)	Survey Frequency (Hz)	EDU Size (ft)	EDU Size (ft)	Comments/Contingency
1	NAL_NSO-MSHOT	Geop Only	30	30	0	26	Act Sts	1.252	1.252		
2	NAL_NSO-MSHOT		30	30	28	790	Act Sts	3.049	1.509		
3	NAL_MWD-NON_SLS		30	30	750	8144	Act Sts	54.779	20.518		
4	NAL_MWD_1_2_DEG		30	30	8144	17542.338	11700	384.321	98.716		

Critical Point	MD	INCL	AZIM	TVD	VBEC	N-VIS-1	W-VIS-1	DLS
Tie In	8144.00	33.40	70.85	5581.77	163.36	707.14	2047.81	
PTB Head for 121'	8214.00	33.40	70.89	5640.21	169.33	719.79	2084.22	0.00
KOP B&T 8" DLS	8328.00	33.40	70.89	5741.22	171.47	741.84	2147.14	0.00
LP	7831.96	90.30	331.85	8518.00	1013.83	1879.05	2023.02	8.00
BHL	17642.34	90.30	331.85	8463.00	1074.49	1038.95	-2730.49	0.00



Target Description		Latitude	Longitude	Northing	Easting	VISec	N-VIS-1	W-VIS-1
Charles Frye OHI 405H TPL	Point	N 40 3 20.06	W 80 34 10.77	14547201.11	1758836.95	8022.00	204.89	2048.90
Charles Frye OHI 405H BHC	Point	N 40 4 53.70	W 80 35 11.89	14556709.85	1756059.45	8440.00	10741.49	10388.95
Charles Frye OHI 405H LP	Point	N 40 3 26.42	W 80 34 11.06	14547903.45	1758811.13	8540.00	1012.83	1579.05

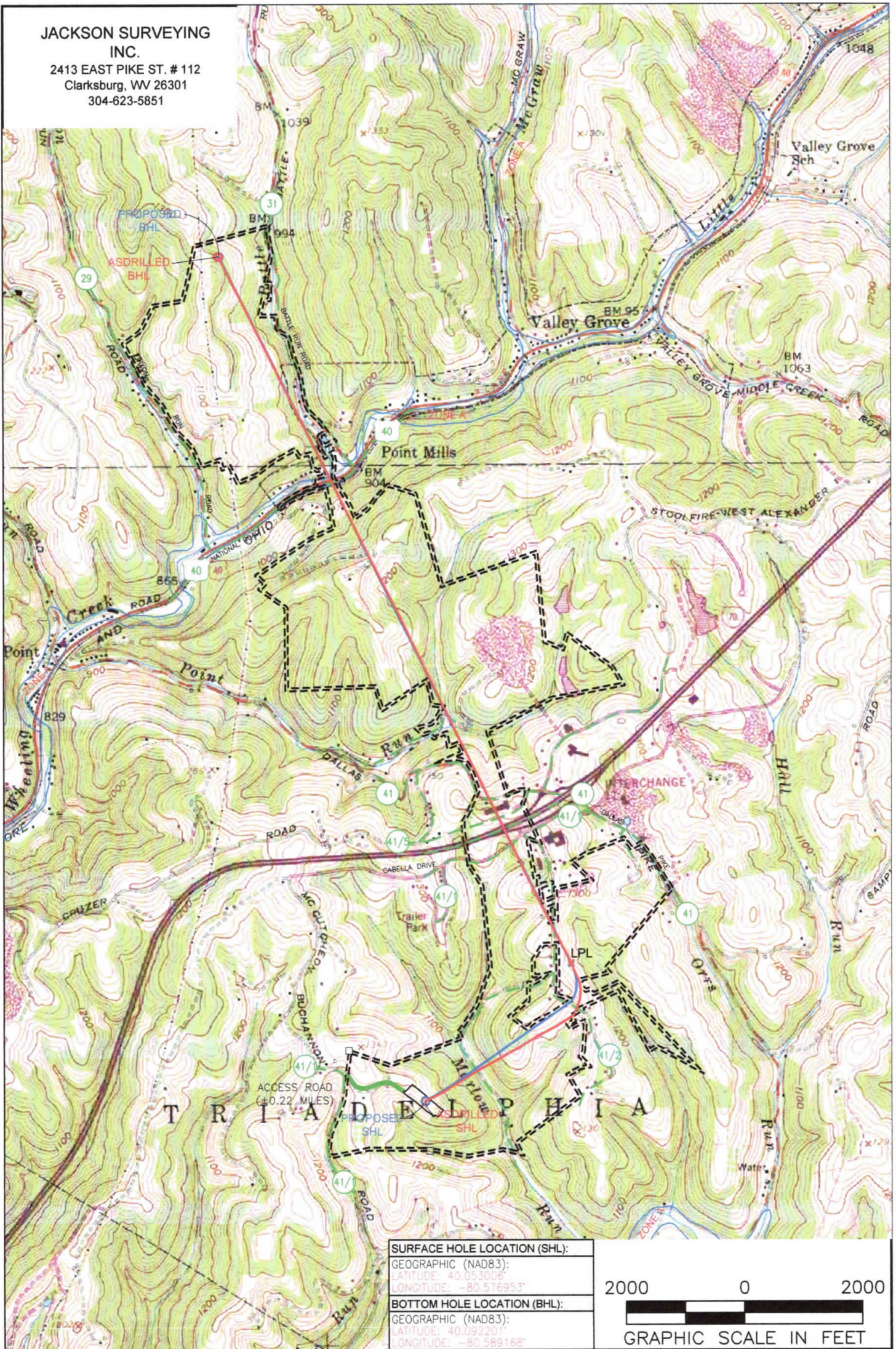


Vertical Section (ft) Azim = 329.76° Scale = 1:600.00(ft) Origin = 0N/-S, 0E/-W

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JUL 02 2020
 WV Department of Environmental Protection

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



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.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

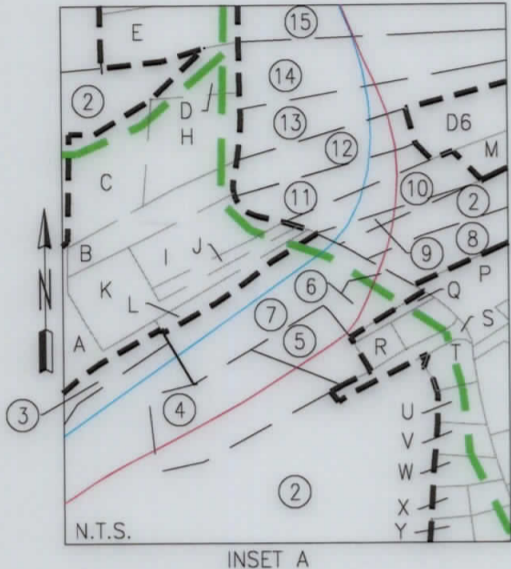
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ✱ EXISTING / PRODUCING WELLHEAD
- ✱ LPL LANDING POINT LOCATION
- FLOOD PLAIN
- ACCESS ROAD
- PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH

WELL OPERATOR:
SWN PRODUCTION COMPANY, LLC
ADDRESS:
1300 FORT PIERPONT ROAD, SUITE 200, MORGANTOWN, WV 26508

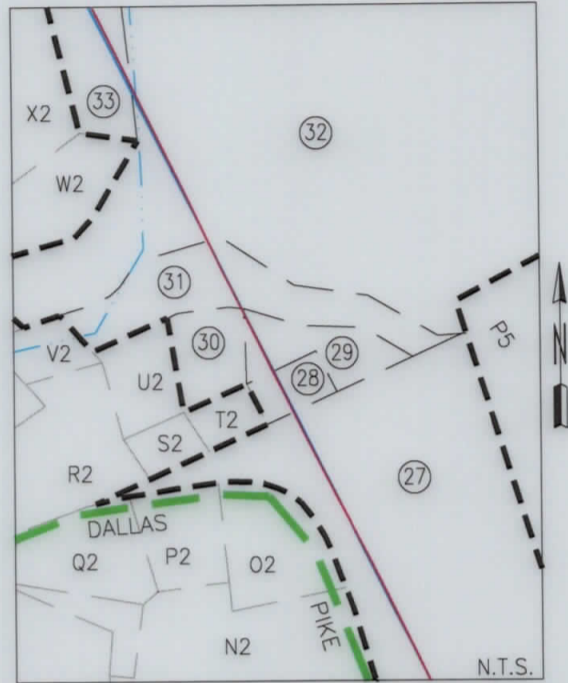
WELL (FARM) NAME: CHARLES FRYE OHI	WELL # 605H	SERIAL #
COUNTY - CODE OHIO - 069	DISTRICT; TRIADDELPHIA	
USGS 7 1/2 QUADRANGLE MAP NAME VALLEY GROVE, WV		

SURFACE OWNER:
DOROTHY V. FRYE (LIFE ESTATE), DAVID W. FRYE (LIFE OCCUPANCY),
AMY M. FRYE & CORRIE L. FRYE (REMAINDERMAN)

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





INSET A



INSET B





SEE INSET C

REVISIONS:	COMPANY:	 		
	OPERATOR'S	CHARLES FRYE OHI		
	WELL #:	605H		
	DISTRICT:	COUNTY:	STATE:	DATE: 06-23-2019
		TRIADELPHIA	OHIO	WV
			DRAWN BY: N. MANO	
			SCALE: N/A	
			DRAWING NO:	
			WELL LOCATION PLAT 2	

**JACKSON SURVEYING
INC.**


2413 EAST PIKE ST. # 112
Clarksburg, WV 26301
304-623-5851

ADJOINING OWNERS TABLE			ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL	TRACT	SURFACE OWNER	TAX PARCEL
A	PHILIP MARQUART & KERSTEN MARQUART	06-T9-20.45	P3	HARRY E. HOLMAN & C.L. HOLMAN	06-T3-12
B	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.39	Q3	KEITH E. BARON & C.J. BARON	03-L13-15
C	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.18	R3	GARY L. DEMERSKI & MARY C. DEMERSKI	03-L13-14
D	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.22	S3	JAMES C. KNIGHT & D.L. KNIGHT	03-L13-13
E	BRIAN D. DOLENCE & DONNA J. DOLENCE	06-T9-17.1	T3	STEVEN P. SHEARER	03-L13-12.2
F	FLOYD L. WENSEL & M. WENSEL	06-T9-17.3	U3	JOLLY W. WHEELER, SR. & SARAH JANE, LIFE EST. ET AL	03-L13-12
G	BRIDGET D. MURRAY & DAVID S. MURRAY	06-T9-17.4			
H	JOSHUA R. BOYD & AMY M. BOYD	06-T9-20.52	V3	JOLLY W. WHEELER, SR. & SARAH JANE, LIFE EST. ET AL	03-L13-11.1
I	WILLIAM C. SCHUETZ & SANDRA SCHUETZ	06-T9-20.6			
J	WILLIAM C. SCHUETZ & SANDRA SCHUETZ	06-T9-20.5	W3	KEITH BARON & CAROLYN BARON	03-L13-11
K	NICOLE SEIFERT	06-T9-20.51	X3	KEITH E. BARON & CAROLYN J. BARON	03-L13-11.2
L	SARAH ANN PORTER	06-T9-20.41	Y3	JAMES E. WHEELER, JR. & B.J. WHEELER	03-L13-10
M	DAVID A. WILLIAMS & JANIE G. WILLIAMS	06-T9-20.14	Z3	JAMES E. WHEELER, JR. & B.J. WHEELER	03-L13-09
N	AMC CORP.	06-T9-29	A4	JAMES E. WHEELER, III & CHRISTINE WHEELER	03-L13-08
O	JEFFERY D. MCKENZIE & F.M. MCKENZIE	06-T14-12	B4	JAMES E. WHEELER, III & CHRISTINE WHEELER	03-L13-08.1
P	BRADLEY W. HAND & R.L. HAND	06-T9-20.38	C4	RHONDA L. FLANEGIN	03-L13-07
Q	THOMAS POSEY & KATHERINE A. POSEY	06-T9-20.42	D4	TYSON L. LOVERIDGE & VANESSA LOVERIDGE	03-L13-06
R	THOMAS POSEY & KATHERINE A. POSEY	06-T9-20.43	E4	BOARD OF COMM. OHIO CO.	03-L13-06.3
S	GEORGE L. DUNN & NANCY M. DUNN	06-T9-20.50	F4	KIMBERLY STEVENSON, JAMES STEVENSON, BRENDA DELGADO & BRENDA STEVENSON	03-L13-06.1
T	JAMES L. ABERCROMBIE & DIANA L. ABERCROMBIE	06-T9-20.30			
U	JAMES L. ABERCROMBIE & DIANA L. ABERCROMBIE	06-T9-20.29	G4	JAMES ALAN STEVENSON	03-L13-05.4
V	ROBERT J. ALOE	06-T9-20.23	H4	SANDRA LYNN STEVENSON-MOKROS	03-L13-05.3
W	MICHAEL J. WHEELER	06-T9-20.31	I4	KIMBERLY STEVENSON	03-L13-05.5
X	MICHAEL J. WHEELER	06-T9-20.26	J4	KIMBERLY ANN STEVENSON	03-L13-05.2
Y	MICHAEL J. WHEELER	06-T9-20.37	K4	CURTIS ROBERT HARRIS	03-L10-37
Z	BRENT A. HILL & PATTY J. HILL	06-T9-20.47	L4	ARCH J. DIERINGER, JR.	03-L10-45.1
A2	BRENT A. HILL & PATTY J. HILL	06-T9-20.32	M4	C.A. EVANS & R.A. DIERINGER	03-L13-21.1
B2	DONALD W. PEGG & J.L. PEGG	06-T9-20.1	N4	ARLEY NEMO	03-L13-20
C2	GARY FLANEGIN	06-T9-20.20	O4	ARLEY NEMO	03-L13-16.1
D2	MICHAEL W. NASH & C.J. NASH	06-T9-20.19	P4	RICHARD DEEVER	03-L13-20.1
E2	LISA A. OLIVER	06-T9-20.21	Q4	GREGORY R. GANTZER	03-L13-19
F2	MATTHEW J. CROFT & SADIE L. CROFT	06-T14-61	R4	ARCH J. DIERINGER, JR.	03-L13-21
G2	ZACHARY ALLAN MEYER	06-T14-02	S4	ALVIN YODER	03-L13-21.2
H2	DEBORAH ANN CRAIG & SETH COLLIN CRAIG	06-T13-16	T4	ALVIN YODER	03-L13-22
I2	HEATHER L. BISE	06-T8-53.1	U4	FRESH AIR FARM, INC.	08-VG8-11
J2	KENNETH W. CRAIG & LINDA CRAIG, LEWIS B. CRAIG (LE) & VIRGINIA A. CRAIG (LE)	06-T8-53	V4	HORST LOHR	03-L13-17
K2	DALLAS PIKE CAMPGROUND LLC	06-T9-16	W4	MARY E. HOLMAN	08-VG8-03
L2	DALLAS PIKE CAMPGROUND, L.L.C.	06-T9-15	X4	FREDERICK J. COOK	08-VG8-12
M2	FREDERICK H. TUSTIN	06-T9-15.1	Y4	ELEANOR L. KNIGHT, LE	08-VG8-07
N2	LINDA M. ORR & ROBERT BRADY ORR	06-T9-13.12	Z4	ELEANOR L. KNIGHT, LE	08-VG8-06
O2	LINDA M. ORR & ROBERT BRADY ORR	06-T9-13.4	A5	DEBORAH LYNN KOSEM	08-VG8-06.1
P2	LINDA M. ORR & ROBERT BRADY ORR	06-T9-13.8	B5	A.R. WALKER & HILDA M. WALKER	08-VG8-08
Q2	LINDA M. ORR & ROBERT BRADY	06-T9-13.11	C5	KARL L. KOSEM, JR. & D. L. KOSEM	08-VG8-09
R2	ALLEN L. GELLNER & D.M. GELLNER	06-T9-1	D5	VILLAGE OF VALLEY GROVE	08-VG8-10
S2	DEBRA M. GELLNER & A. GELLNER	06-T9-2.1	E5	ROBERT A. BROCK & WILMA E. BROCK	08-VG10-14
T2	LINDA L. VELAS	06-T9-2.3	F5	RICHARD HENRY & REBECCA HENRY	08-T3-26
U2	DEBRA M. GELLNER & ALLEN L. GELLNER	06-T9-2.4	G5	ROBERT A. BROCK & WILMA E. BROCK	08-T3-26.1
V2	BILLIE JO LONG	06-T9-1.1	H5	JAMES K. GIBSON	08-L14-01
W2	RANDAL ALAN HOWARD	06-T8-16	I5	DONALD C. SINCLAIR & BETTY SINCLAIR	03-L14-1.1
X2	JOEL GEORGE MCFARLAND, BRIAN N. MILAN & DON EARL MCFARLAND	06-T8-13	J5	GW RENTALS, LLC	06-T4-2.2
Y2	JOEL GEORGE MCFARLAND, BRIAN N. MILAN & DON EARL MCFARLAND	06-T8-12	K5	G W RENTALS, L.L.C.	06-T9-5.2
Z2	STEPHEN J. GRETCHEN & THERESA L. GRETCHEN	06-T8-11	L5	GW RENTALS, LLC	06-T9-5.1
A3	CLYDE E. MCCORD	06-T3-20	M5	BUD & DARL, INC.	06-T9-6.6
B3	ROBERT W. MCCORD JR. & DIANNA L. MCCORD	06-T3-21	N5	JVB RESTAURANT ENTERPRISES, L.L.C.	06-T9-6.5
C3	KENNETH J. BERNIER & L.R. BERNIER	06-T3-24	O5	WINDMILL TRUCKERS CENTER, INC.	06-T9-36.7
D3	CLYDE E. MCCORD & D.C. MCCORD	06-T3-21.1	P5	HUNTER REALTY PARTNERS, L.L.C.	06-T9-7
E3	PAUL R. TEMPLIN SR. & CAROL G. TEMPLIN	06-T3-20.1	Q5	MONICA, L.L.C.	06-T9-22.4
F3	MELODY GARRISON	06-T3-33	R5	CHEROKEE TRADING POST, INC.	06-T9-13.1
G3	PAUL R. TEMPLIN SR. & C.G. TEMPLIN	08-VG10-01	S5	CHEROKEE TRADING POST, INC.	06-T9-17.2
H3	KARL L. KOSEM, SR. & C.J. KOSEM	08-VG10-2.1	T5	DONALD T. PIKO	06-T9-28.2
I3	KARL L. KOSEM, SR. & CAROL J. KOSEM	08-VG10-02	U5	C.A. GOUDY & M.P. GOUDY	06-T9-19
J3	ALBERT J. TRAGER	08-VG10-03	V5	DOROTHY M. SAMPSON	06-T9-17.5
K3	DALE A. MULLEY	08-VG10-10	W5	RACJAC, L.L.C.	06-T9-24
L3	DONNA L. FISCHER	08-VG10-12	X5	ANAND & AMIT, INC.	06-T9-22
M3	FRANKLIN COSTANZO	08-VG8-04	Y5	AMC, INC.	06-T9-25
N3	GERALD T. MOORE & ANNA M. MOORE	06-T3-15.3	Z5	AMC, INC.	06-T9-22.2
O3	CHERYL L. HOLMAN & H.E. HOLMAN	06-T3-13	A6	AMC, INC.	06-T9-27
			B6	DO, L.L.C.	06-T9-41
			C6	BUD & DARL INC.	06-T9-41.7
			D6	JAMES E. DUNN & DONNA M. DUNN	06-T9-20.15

REVISIONS:	COMPANY:	 	
	OPERATOR'S	CHARLES FRYE OHI	
	WELL #:	605H	
	DISTRICT:	COUNTY:	STATE:
	TRIADELPHIA	OHIO	WV
			DATE: 06-23-2019
			DRAWN BY: N. MANO
			SCALE: N/A
			DRAWING NO:
			WELL LOCATION PLAT 4

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

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	DOROTHY V. FRYE (LIFE ESTATE), DAVID W. FRYE (LIFE OCCUPANCY), AMY M. FRYE & CORRIE L. FRYE (REMAINDERMEN) (S)/ DOROTHY FRYE (R)	06-T14-01
TRACT	SURFACE OWNER	TAX PARCEL
2	GEORGE L. DUNN & NANCY M. DUNN (LE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND & CONSTANCE L. KERCHER (S)	06-T9-20
3	SARAH ANN PORTER (S)	06-T9-20.44
4	CHRISTOPHER R. DUNN & TANAKA H. DUNN (S)	06-T9-20.46
5	CONSTANCE L. KERCHER (S)	06-T9-20.49
6	THOMAS E. POSEY & K.A. POSEY (S)	06-T9-20.36
7	GEORGE L. DUNN & NANCY M. DUNN (LE), KATHERINE A. POSEY, CHRISTOPHER R. DUNN, RHONDA L. HAND & CONSTANCE L. KERCHER (REMAINDERMAN) (S)	06-T9-20.2
8	MICHAEL P. ORTH & BRENDA K. CUNNINGHAM (S)	06-T9-20.35
9	DAVID WILLIAMS & JANIE G. WILLIAMS (S)	06-T9-20.13
10	DAVID WILLIAMS & JANIE G. WILLIAMS (S)	06-T9-20.11
11	JAMES E. DUNN & D.M. DUNN (S)	06-T9-20.8
12	JAMES E. DUNN & D.M. DUNN (S)	06-T9-20.16
13	JEREMY A. STEWART AND AMANDA J. STEWART (S)	06-T9-20.17
14	EVELYN BETH STEWART DEGENNARO (S)	06-T9-20.3
15	AMC INC. (S)	06-T9-28
16	DOROTHY M. SAMPSON A/K/A DOROTHY MAE SAMPSON (S)	06-T9-18
17	DOROTHY M. SAMPSON A/K/A DOROTHY MAE SAMPSON (S)	06-T9-17
18	DOROTHY M. SAMPSON (S)	06-T9-17.8
19	CHEROKEE TRADING POST, INC. (S)	06-T9-17.6
20	CHEROKEE TRADING POST, INC. (S)	06-T9-17.7
21	LINDA M. ORR & ROBERT BRADY ORR (S)	06-T9-13
22	WHITE DEER REALTY, INC. (S)	06-T9-13.3
23	WEST VIRGINIA DEPARTMENT OF TRANSPORTION DIVISION OF HIGHWAY (S)	I-70
24	GOKUL INC. (S)	06-T9-14
25	DONALD T. PIKO (S)	06-T9-13.10
26	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS (S)	DALLAS PIKE
27	LINDA M. ORR & ROBERT BRADY ORR (S)	06-T9-13.13
28	CHARLES W. ULLOM & S.E. ULLOM (S)	06-T9-2.2
29	CHARLES W. ULLOM & SYLVIA E. ULLOM (S)	06-T9-2.6
30	LINDA L. VELAS (S)	06-T9-2.5
31	CAROL L. HOWARD (S)	06-T9-2
32	WINDMILL TRUCKERS CENTER, INC. (S)	06-T9-04
33	KEVIN S. KOSEM & B.A. KOSEM (S)	06-T3-27
34	RUTH R. HALL (S)	06-T3-25
35	ANDREW P. HOGAN (S)	08-VG10-14.1
36	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS (S)	NATIONAL ROAD
37	A.R. WALKER & HILDA M. WALKER (S)	08-VG8-05
38	MARY J. ZINK (S)	08-VG10-13
39	ELEANOR L. KNIGHT, LIFE EST. (S)	08-VG8-02
40	NORMA J. ELTRINGHAM & MICHAEL C. ELTRINGHAM (S)	08-VG8-1.1
41	PATTY J. EBBERT (S)	08-VG8-01
42	JAMES E. EBBERT & MARY E. EBBERT (S)	03-L13-18
43	THOMAS E. SEIFERT (S)	03-L13-17.2
44	RICHARD G. DEEVER (S)	03-L13-16

REVISIONS:	COMPANY:		
	OPERATOR'S	CHARLES FRYE OHI	DATE: 06-23-2019
	WELL #:	605H	DRAWN BY: N. MANO
	DISTRICT:	TRIADDELPHIA	SCALE: N/A
	COUNTY:	OHIO	DRAWING NO:
	STATE:	WV	WELL LOCATION PLAT 3