

pm

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

API 47-069-00163 County 69-Ohio District 7-Tridelpia
Quad 648- Valley Grove Pad Name CHARLE FRYE-OHI-PAD1 Field/Pool Name Panhandle Field
Farm name CHARLE FRYE-OHI Well Number 8
Operator (as registered with the OOG) SWN Production Company LLC
Address 10000 Energy Drive City Spring State TX Zip 77389

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4433744.133 Easting 536070.563
Landing Point of Curve Northing 4433612.514 Easting 536051.256
Bottom Hole Northing 4432141.534 Easting 537056.452

Elevation (ft) 1267.5' 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 4/30/13 Date drilling commenced 2/14/15 Date drilling ceased 3/27/15
Date completion activities began 5/26/15 Date completion activities ceased 6/21/15
Verbal plugging (Y/N) N 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 564' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 1135' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 627' Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) N

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Reviewed by:
CB 2.27.16
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API 47-069 - 00163 Farm name CHARLE FRYE-OHI Well number 8

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	30	20	126	N	F-25/94 ppf		Y
Surface	17.5	13.375	750	N	J-55/54.5 ppf		Y
Coal	12.25	9.625	2,339.70	N	J-55/40 ppf		Y
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	8.75 to 8.5	5.5	12,865	N	HCP-110		Y
Tubing		2.375	6934	N	P-110		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	19.3	1.19	241.42	Surface	24
Surface	Class A	706	15.6	1.18	833.08	Surface	8
Coal	Class A	844	15.6	1.19	1004.36	Surface	8
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	Class A	2530	15.6	1.19	3010.7	Surface	24
Tubing	NA	NA	NA	NA	NA	NA	NA

Drillers TD (ft) 12,865' Loggers TD (ft) 12,865'
 Deepest formation penetrated Marcellus Plug back to (ft) NA
 Plug back procedure NA

Kick off depth (ft) 5770 TVD

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: 1 bow spring centralizer every third joint TD to Surface Intermediate: 1 bow spring centralizer every third joint TD to Surface Production: 1 solid body centralizer from TD to 30 degrees in the curve, 1 bow spring every third joint from 30 degrees to surface

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____
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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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API 47- 069 - 00163 Farm name CHARLE FRYE-OHI Well number 8

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					

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>6614'</u>	<u>TVD</u>	<u>12,865'</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 217 psi Bottom Hole 4440 psi DURATION OF TEST _____ hrs

OPEN FLOW Gas 2335 mcfpd Oil 326 bpd NGL _____ bpd Water 310 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>		
BASE OF FRESH WATER					
					SEE ATTACHED

Please insert additional pages as applicable.

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

Logging Company Baker Hughes
Address 9110 Grogans Mill RD City The Woodlands State TX Zip 77380

Cementing Company CalFrac Well Services
Address 1450 Lake Robbins Dr. City The Woodlands State TX Zip 77380

Stimulating Company Baker Hughes
Address 9110 Grogans Mill Rd City The Woodlands State TX Zip 77380

Please insert additional pages as applicable.

Completed by Cody Magby Telephone 8327966215
Signature _____ Title Sr. Staff Regulatory Analyst Date 3/3/15

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Field:	
Map Units:	usFt
Vertical Reference Datum (VRD):	Mean Sea Level
Projected Coordinate System:	Zone 17N (84 W to 78 W)

Section:	
Company Name:	Southwestern Energy Company
Units:	Feet
TVD Reference:	Rotary Table

Position:	
Northing:	14,546,367.140
Easting:	1,758,769.009

North Reference:	Grid	Grid Cor
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Comment :

Slot:			
Position (Relative to SW Corner Of Section)			
N/S	8.447999999	Northing:	14,546,375.588
E/W	-10.797	Easting:	1,758,758.212

Ground Level Elevation (usft):	Ground Level:
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Comment :

Well:		
Type:	Main well	
KB Elevation	RKB @ 1294.00usft (SDC 40)	
Closure Distance:	6173.11	Closure Azimut

Comment:

Vertical Section:		
Position of Origin (Relative to Slot centre)	N/S	0
Vertical Section Azimuth:	148.37	

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Survey

Name	Definitive Survey	Company	SWN
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Magnetic Parameters:

Model:	BGGM2014	Field Strength:	52,524	Declination:	-8.76	Dip:
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Survey Tool Ranges:

Survey Tool	Start MD (ft)	End MD (ft)
MS-SRG-WLINE	100.00	725.00
MWD	887.00	12865.00

Survey Points: (Relative to Slot Centre, TVD Relative to Slot TVD Reference)

MD (Ft)	Inc	Az	TVD (Ft)	+N/-S (Ft)	+E/-W (Ft)	V Sec (Ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.07	191.52	100.00	-0.06	-0.01	0.04
200.00	0.05	39.96	200.00	-0.09	0.00	0.08
300.00	0.07	135.34	300.00	-0.10	0.07	0.12
400.00	0.06	6.74	400.00	-0.09	0.12	0.14
500.00	0.19	177.83	500.00	-0.20	0.14	0.24
600.00	0.20	279.84	600.00	-0.34	-0.03	0.27
700.00	0.12	194.73	700.00	-0.41	-0.23	0.23
725.00	0.44	274.93	725.00	-0.43	-0.33	0.19
887.00	0.60	313.02	886.99	0.21	-1.57	-1.00
980.00	1.58	330.03	979.97	1.65	-2.57	-2.75
1073.00	3.09	335.10	1072.89	5.03	-4.26	-6.52
1166.00	4.63	342.18	1165.68	10.88	-6.47	-12.66
1258.00	6.08	339.61	1257.28	18.98	-9.30	-21.04
1351.00	6.66	326.94	1349.71	28.12	-13.96	-31.26
1444.00	7.62	311.91	1441.99	36.76	-21.49	-42.57
1537.00	8.00	303.70	1534.13	44.47	-31.46	-54.36
1629.00	7.54	296.97	1625.29	50.76	-42.17	-65.33
1722.00	6.64	293.21	1717.58	55.65	-52.55	-74.94
1815.00	6.11	298.10	1810.00	60.10	-61.86	-83.61
1908.00	6.20	302.93	1902.47	65.16	-70.44	-92.42
2000.00	6.10	300.28	1993.94	70.32	-78.83	-101.22
2093.00	5.17	296.03	2086.49	74.65	-86.86	-109.12
2177.00	4.84	301.14	2170.17	78.15	-93.30	-115.47
2279.00	4.84	307.12	2271.81	82.97	-100.41	-123.30
2372.00	5.25	285.89	2364.45	86.50	-107.63	-130.10
2464.00	5.23	299.14	2456.07	89.70	-115.34	-136.86
2557.00	5.98	302.79	2548.63	94.38	-123.12	-144.93
2650.00	6.09	298.99	2641.11	99.40	-131.50	-153.60
2743.00	5.64	310.74	2733.63	104.77	-139.28	-162.25
2836.00	6.48	306.33	2826.11	110.86	-146.97	-171.47

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2929.00	6.38	297.93	2918.53	116.39	-155.77	-180.79
3021.00	6.25	304.95	3009.97	121.66	-164.39	-189.79
3114.00	5.88	303.12	3102.45	127.16	-172.53	-198.75
3207.00	5.35	297.06	3195.00	131.73	-180.38	-206.76
3300.00	5.80	305.29	3287.56	136.42	-188.07	-214.79
3393.00	5.71	303.50	3380.10	141.69	-195.77	-223.31
3485.00	5.55	302.48	3471.65	146.60	-203.34	-231.46
3578.00	5.25	296.30	3564.24	150.90	-210.95	-239.11
3671.00	5.55	310.94	3656.83	155.74	-218.16	-247.01
3764.00	5.17	311.64	3749.42	161.47	-224.69	-255.32
3856.00	5.61	306.67	3841.02	166.91	-231.39	-263.46
3949.00	5.34	305.78	3933.59	172.15	-238.55	-271.68
4042.00	6.59	304.69	4026.09	177.72	-246.45	-280.57
4135.00	6.41	303.39	4118.49	183.61	-255.17	-290.16
4227.00	6.23	304.56	4209.93	189.27	-263.57	-299.38
4320.00	6.03	296.11	4302.40	194.29	-272.11	-308.13
4413.00	5.93	295.64	4394.90	198.51	-280.83	-316.30
4506.00	5.38	290.90	4487.44	202.15	-289.23	-323.80
4598.00	6.33	295.04	4578.96	205.83	-297.86	-331.46
4691.00	6.47	298.70	4671.38	210.52	-307.10	-340.30
4784.00	6.63	296.86	4763.78	215.46	-316.48	-349.43
4877.00	7.05	297.97	4856.11	220.56	-326.31	-358.93
4970.00	6.17	296.77	4948.49	225.49	-335.82	-368.11
5062.00	5.83	295.66	5039.99	229.74	-344.44	-376.25
5155.00	6.09	296.20	5132.49	233.97	-353.13	-384.40
5248.00	6.13	293.51	5224.96	238.12	-362.11	-392.65
5341.00	6.40	299.46	5317.41	242.65	-371.17	-401.26
5434.00	6.29	299.08	5409.84	247.68	-380.14	-410.24
5526.00	6.56	299.51	5501.26	252.72	-389.12	-419.24
5619.00	7.36	297.08	5593.57	258.05	-399.04	-428.98
5712.00	7.22	294.50	5685.82	263.18	-409.66	-438.93
5805.00	8.85	257.94	5777.96	264.11	-421.99	-446.18
5851.00	10.29	248.36	5823.32	261.86	-429.27	-448.08
5903.00	11.26	242.96	5874.41	257.84	-438.11	-449.29
5949.00	13.28	220.19	5919.38	251.75	-445.52	-448.00
5996.00	15.92	192.98	5964.91	241.33	-450.46	-441.72
6042.00	20.05	170.30	6008.71	227.39	-450.55	-429.89
6088.00	24.53	165.27	6051.26	210.37	-446.79	-413.43
6135.00	28.31	162.45	6093.35	190.30	-440.95	-393.28
6181.00	32.71	159.87	6132.97	168.22	-433.37	-370.51
6228.00	37.46	156.83	6171.42	143.14	-423.37	-341.50
6232.00	37.75	156.66	6174.59	140.90	-422.41	-315.14
6274.00	40.80	155.05	6207.10	116.65	-411.59	-288.68
6321.00	43.79	153.51	6241.87	88.16	-397.79	

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6367.00	47.31	150.01	6274.08	59.26	-382.24	-250.91
6413.00	48.80	148.58	6304.83	29.85	-364.76	-216.71
6460.00	52.50	147.98	6334.62	-1.06	-345.65	-180.37
6506.00	54.78	147.32	6361.89	-32.35	-325.83	-143.33
6553.00	57.42	147.96	6388.10	-65.30	-304.95	-104.33
6599.00	60.41	147.72	6411.85	-98.65	-283.99	-64.94
6645.00	63.14	147.41	6433.60	-132.85	-262.25	-24.42
6692.00	66.57	146.14	6453.57	-168.43	-238.94	18.11
6738.00	70.08	145.96	6470.56	-203.88	-215.07	60.81
6785.00	72.81	146.55	6485.51	-240.93	-190.32	105.33
6831.00	77.56	146.40	6497.27	-277.99	-165.76	149.77
6877.00	81.16	147.32	6505.77	-315.84	-141.05	194.95
6924.00	86.00	146.75	6511.02	-355.02	-115.65	241.63
6970.00	88.20	145.79	6513.35	-393.22	-90.14	287.54
7017.00	89.60	144.66	6514.25	-431.82	-63.34	334.46
7109.00	90.57	144.95	6514.11	-507.00	-10.31	426.28
7202.00	89.87	144.72	6513.76	-583.03	43.25	519.10
7295.00	86.88	146.12	6516.39	-659.55	96.00	611.93
7388.00	89.78	145.85	6519.10	-736.60	148.00	704.80
7481.00	89.25	145.57	6519.89	-813.43	200.39	797.69
7574.00	89.43	145.43	6520.96	-890.07	253.06	890.57
7666.00	89.16	146.81	6522.09	-966.44	304.35	982.49
7759.00	89.34	147.04	6523.31	-1044.37	355.09	1075.45
7852.00	89.69	146.60	6524.10	-1122.20	405.99	1168.41
7945.00	88.72	146.41	6525.39	-1199.75	457.31	1261.35
8038.00	89.60	145.52	6526.75	-1276.81	509.35	1354.26
8130.00	87.05	144.22	6529.44	-1352.01	562.26	1446.04
8223.00	87.85	144.55	6533.58	-1427.54	616.37	1538.72
8316.00	89.08	144.70	6536.07	-1503.34	670.19	1631.49
8409.00	88.37	144.98	6538.14	-1579.35	723.73	1724.29
8502.00	89.16	145.55	6540.14	-1655.76	776.70	1817.13
8594.00	89.25	149.19	6541.42	-1733.22	826.30	1909.09
8687.00	89.69	149.30	6542.28	-1813.14	873.85	2002.08
8780.00	88.20	147.50	6543.99	-1892.33	922.57	2095.05
8873.00	88.37	145.80	6546.78	-1969.98	973.67	2187.97
8965.00	88.81	145.31	6549.04	-2045.82	1025.69	2279.83
9058.00	88.99	143.86	6550.83	-2121.60	1079.58	2372.60
9151.00	88.46	142.95	6552.89	-2196.25	1135.00	2465.23
9244.00	89.43	143.46	6554.61	-2270.70	1190.70	2557.84
9337.00	89.34	143.89	6555.61	-2345.63	1245.78	2650.52
9429.00	89.16	145.11	6556.81	-2420.52	1299.20	2742.50
9522.00	89.16	146.08	6558.17	-2497.24	1351.74	2835.28
9615.00	88.55	146.19	6560.03	-2574.45	1403.56	2928.09
9708.00	88.46	145.85	6562.46	-2651.54	1455.52	3020.98

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9800.00	88.46	145.39	6564.93	-2727.44	1507.45	3112.84
9893.00	88.37	146.79	6567.50	-2804.59	1559.31	3205.73
9986.00	87.76	147.38	6570.64	-2882.62	1609.82	3298.65
10079.00	89.16	147.64	6573.14	-2961.03	1659.75	3391.60
10172.00	89.52	146.48	6574.21	-3039.07	1710.32	3484.57
10264.00	89.96	145.18	6574.63	-3115.19	1761.99	3576.48
10357.00	89.08	143.30	6575.41	-3190.65	1816.33	3669.23
10450.00	88.81	142.04	6577.12	-3264.58	1872.72	3761.75
10543.00	88.90	142.62	6578.98	-3338.18	1929.54	3854.22
10636.00	88.29	143.61	6581.26	-3412.54	1985.34	3946.80
10728.00	88.90	144.20	6583.52	-3486.86	2039.52	4038.49
10821.00	88.99	144.09	6585.23	-3562.23	2093.99	4131.22
10914.00	89.25	145.71	6586.66	-3638.30	2147.46	4224.04
11007.00	89.69	146.33	6587.52	-3715.42	2199.43	4316.95
11099.00	89.69	146.72	6588.02	-3792.16	2250.18	4408.90
11192.00	89.69	146.43	6588.52	-3869.77	2301.40	4501.86
11285.00	89.87	145.93	6588.88	-3947.04	2353.16	4594.79
11378.00	89.87	145.77	6589.09	-4024.00	2405.37	4687.70
11470.00	88.72	144.66	6590.22	-4099.55	2457.85	4779.55
11563.00	89.16	145.16	6591.94	-4175.63	2511.30	4872.36
11656.00	88.81	146.38	6593.59	-4252.51	2563.61	4965.25
11749.00	89.25	146.41	6595.16	-4329.96	2615.07	5058.18
11841.00	90.22	146.92	6595.59	-4406.82	2665.63	5150.14
11934.00	90.04	146.84	6595.38	-4484.71	2716.44	5243.11
12027.00	89.25	146.54	6595.95	-4562.43	2767.51	5336.06
12120.00	88.90	146.52	6597.45	-4640.00	2818.80	5429.00
12213.00	88.37	146.26	6599.67	-4717.43	2870.26	5521.92
12305.00	87.93	147.52	6602.64	-4794.45	2920.49	5613.84
12398.00	88.46	145.78	6605.57	-4872.09	2971.59	5706.75
12491.00	88.46	144.65	6608.07	-4948.44	3024.63	5799.57
12584.00	88.90	145.67	6610.21	-5024.75	3077.74	5892.40
12677.00	88.81	145.67	6612.07	-5101.53	3130.18	5985.28
12769.00	88.90	145.34	6613.91	-5177.34	3182.27	6077.14
12814.00	90.13	147.52	6614.29	-5214.83	3207.15	6122.11
12865.00	90.13	147.52	6614.17	-5257.86	3234.54	6173.11

Wellpath created using minimum curvature

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CHARLES FRYE OHI 8H

Ohio Co. WV

PANHANDLE (CHARLES FRYE)

Latitude: 40.0531456600

Longitude: -80.5770625600

vergence: 0.27

CHARLES FRYE OHI 8H

Latitude: 40.0531690000

Longitude: -80.5771010000

CHARLES FRYE OHI 8H

Rig Height (Drill Floor): 26

h: 148.401

.00 E/W 0.00

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67.37 Date: 2/21/2015

Source Survey

GYRO/MS/SDC40 (WB#1)

MWD/SLB/SDC40 (WB#1)

DLS (deg/ 100ft)	Build Rate (deg/ 100ft)	Turn Rate (deg/ 100ft)	
0.00	0.00	0.00	
0.07	0.07	0.00	G
0.12	-0.02	-151.56	G
0.09	0.02	95.38	G
0.12	-0.01	-128.60	G
0.25	0.13	171.09	G
0.30	0.01	102.01	G
0.22	-0.08	-85.11	G
1.74	1.28	320.80	G
0.23	0.10	23.51	N
1.10	1.05	18.29	N
1.64	1.62	5.45	N
1.73	1.66	7.61	N
1.60	1.58	-2.79	N
1.63	0.62	-13.62	N
2.25	1.03	-16.16	N
1.27	0.41	-8.83	N
1.11	-0.50	-7.32	N
1.09	-0.97	-4.04	N
0.82	-0.57	5.26	N
0.57	0.10	5.19	N
0.33	-0.11	-2.88	N
1.10	-1.00	-4.57	N
0.66	-0.39	6.08	N
0.49	0.00	5.86	N
2.04	0.44	-22.83	N
1.31	-0.02	14.40	N
0.89	0.81	3.92	N
0.45	0.12	-4.09	N
1.38	-0.48	12.63	N
1.03	0.90	-4.74	N

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1.02	-0.11	-9.03	N
0.85	-0.14	7.63	N
0.45	-0.40	-1.97	N
0.85	-0.57	-6.52	N
0.99	0.48	8.85	N
0.22	-0.10	-1.92	N
0.21	-0.17	-1.11	N
0.70	-0.32	-6.65	N
1.51	0.32	15.74	N
0.41	-0.41	0.75	N
0.70	0.48	-5.40	N
0.30	-0.29	-0.96	N
1.35	1.34	-1.17	N
0.25	-0.19	-1.40	N
0.24	-0.20	1.27	N
0.99	-0.22	-9.09	N
0.12	-0.11	-0.51	N
0.78	-0.59	-5.10	N
1.13	1.03	4.50	N
0.46	0.15	3.94	N
0.28	0.17	-1.98	N
0.47	0.45	1.19	N
0.96	-0.95	-1.29	N
0.39	-0.37	-1.21	N
0.29	0.28	0.58	N
0.31	0.04	-2.89	N
0.76	0.29	6.40	N
0.13	-0.12	-0.41	N
0.30	0.29	0.47	N
0.92	0.86	-2.61	N
0.38	-0.15	-2.77	N
5.65	1.75	-39.31	N
4.66	3.13	-20.83	N
2.69	1.87	-10.38	N
11.31	4.39	-49.50	N
15.46	5.62	-57.89	N
17.51	8.98	-49.30	N
10.58	9.74	-10.93	N
8.47	8.04	-6.00	N
9.98	9.57	-5.61	N
10.77	10.11	-6.47	N
7.66	7.23	-4.13	N
7.66	7.26	-3.84	N
6.73	6.36	-3.28	N

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9.38	7.65	-7.61	N
3.98	3.24	-3.11	N
7.93	7.87	-1.28	N
5.09	4.96	-1.43	N
5.73	5.62	1.36	N
6.52	6.50	-0.52	N
5.96	5.93	-0.67	N
7.70	7.30	-2.70	N
7.64	7.63	-0.39	N
5.93	5.81	1.26	N
10.33	10.33	-0.33	N
8.07	7.83	2.00	N
10.37	10.30	-1.21	N
5.22	4.78	-2.09	N
3.83	2.98	-2.40	N
1.10	1.05	0.32	N
0.79	-0.75	-0.25	N
3.55	-3.22	1.51	N
3.13	3.12	-0.29	N
0.64	-0.57	-0.30	N
0.25	0.19	-0.15	N
1.53	-0.29	1.50	N
0.31	0.19	0.25	N
0.60	0.38	-0.47	N
1.06	-1.04	-0.20	N
1.35	0.95	-0.96	N
3.11	-2.77	-1.41	N
0.93	0.86	0.35	N
1.33	1.32	0.16	N
0.82	-0.76	0.30	N
1.05	0.85	0.61	N
3.96	0.10	3.96	N
0.49	0.47	0.12	N
2.51	-1.60	-1.94	N
1.84	0.18	-1.83	N
0.72	0.48	-0.53	N
1.57	0.19	-1.56	N
1.13	-0.57	-0.98	N
1.18	1.04	0.55	N
0.47	-0.10	0.46	N
1.34	-0.20	1.33	N
1.04	0.00	1.04	N
0.67	-0.66	0.12	N
0.38	-0.10	-0.37	N

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0.50	0.00	-0.50	N
1.51	-0.10	1.51	N
0.91	-0.66	0.63	N
1.53	1.51	0.28	N
1.31	0.39	-1.25	N
1.49	0.48	-1.41	N
2.23	-0.95	-2.02	N
1.39	-0.29	-1.35	N
0.63	0.10	0.62	N
1.25	-0.66	1.06	N
0.92	0.66	0.64	N
0.15	0.10	-0.12	N
1.76	0.28	1.74	N
0.82	0.47	0.67	N
0.42	0.00	0.42	N
0.31	0.00	-0.31	N
0.57	0.19	-0.54	N
0.17	0.00	-0.17	N
1.74	-1.25	-1.21	N
0.72	0.47	0.54	N
1.36	-0.38	1.31	N
0.47	0.47	0.03	N
1.19	1.05	0.55	N
0.21	-0.19	-0.09	N
0.91	-0.85	-0.32	N
0.38	-0.38	-0.02	N
0.63	-0.57	-0.28	N
1.45	-0.48	1.37	N
1.95	0.57	-1.87	N
1.21	0.00	-1.22	N
1.19	0.47	1.10	N
0.10	-0.10	0.00	N
0.37	0.10	-0.36	N
5.56	2.73	4.84	N
0.00	0.00	0.00	N

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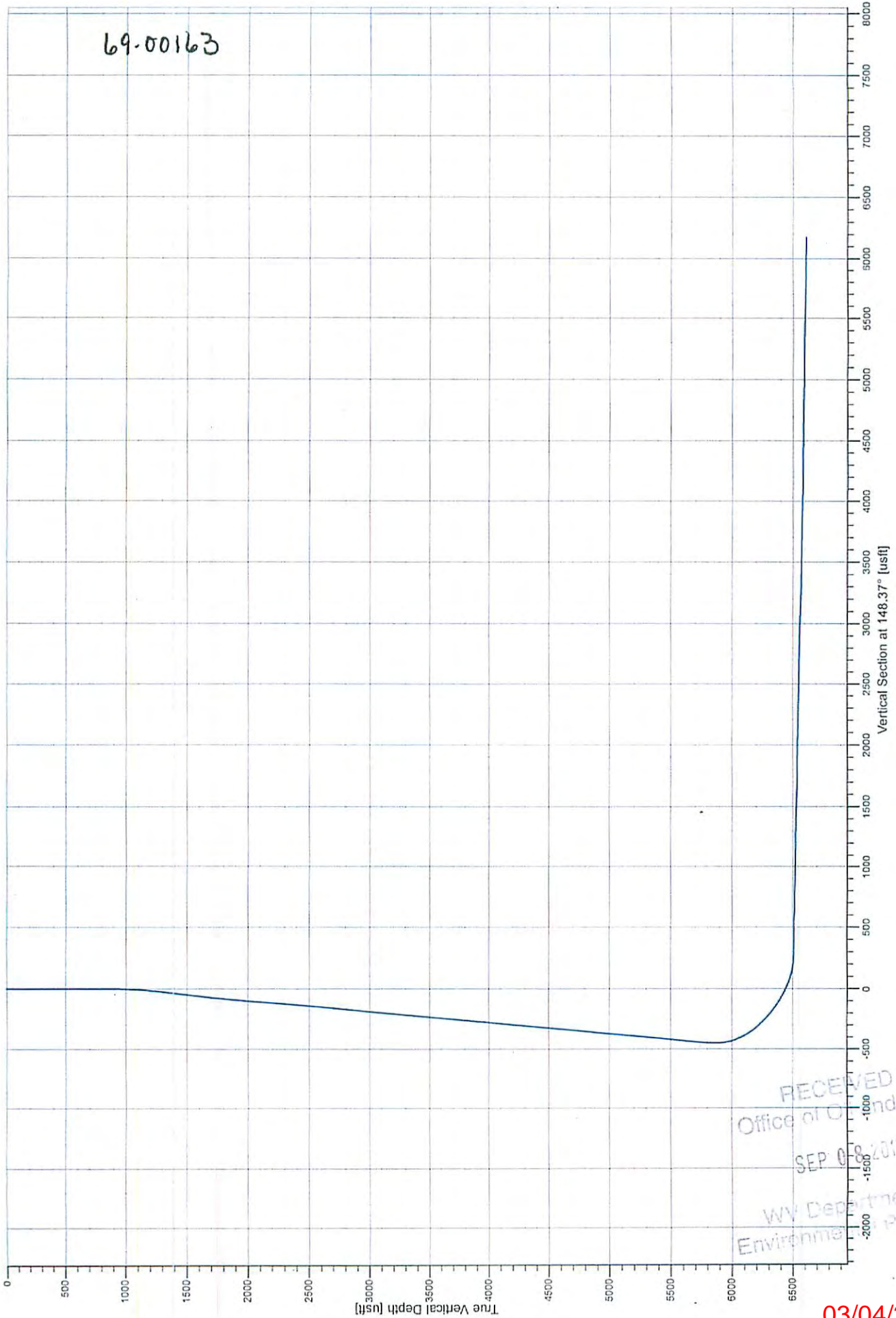
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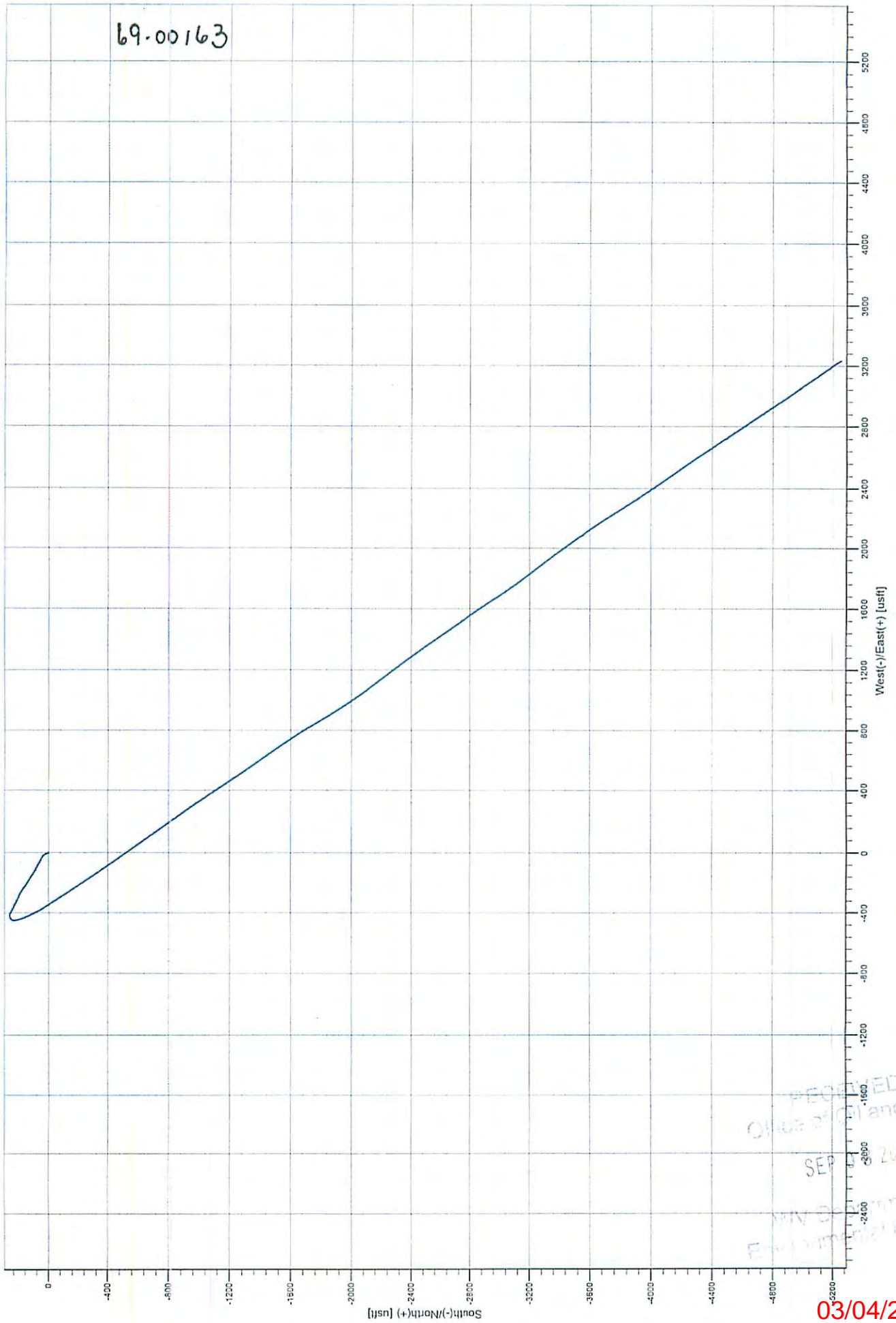
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COMPASS 5000.1 Build 73

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COMPASS 5000.1 Build 73

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Well API #: 47069001630000	PERFORATION RECORDS					
WELL NAME	STAGE NUMBER	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG	FORMATION
CHARLES FRYE OHI 8	1	5/19/2015	12,491	12,688	42	MARCELLUS
CHARLES FRYE OHI 8	2	5/20/2015	12,231	12,428	42	MARCELLUS
CHARLES FRYE OHI 8	3	5/20/2015	11,971	12,168	42	MARCELLUS
CHARLES FRYE OHI 8	4	5/20/2015	11,711	11,908	42	MARCELLUS
CHARLES FRYE OHI 8	5	5/21/2015	11,451	11,648	42	MARCELLUS
CHARLES FRYE OHI 8	6	5/21/2015	11,191	11,388	42	MARCELLUS
CHARLES FRYE OHI 8	7	5/21/2015	10,931	11,128	42	MARCELLUS
CHARLES FRYE OHI 8	8	5/22/2015	10,671	10,868	42	MARCELLUS
CHARLES FRYE OHI 8	9	5/22/2015	10,411	10,608	42	MARCELLUS
CHARLES FRYE OHI 8	10	5/22/2015	10,151	10,348	42	MARCELLUS
CHARLES FRYE OHI 8	11	5/23/2015	9,891	10,088	42	MARCELLUS
CHARLES FRYE OHI 8	12	5/23/2015	9,635	9,828	42	MARCELLUS
CHARLES FRYE OHI 8	13	5/23/2015	9,371	9,568	42	MARCELLUS
CHARLES FRYE OHI 8	14	5/23/2015	9,111	9,308	42	MARCELLUS
CHARLES FRYE OHI 8	15	5/24/2015	8,851	9,048	42	MARCELLUS
CHARLES FRYE OHI 8	16	5/24/2015	8,591	8,789	42	MARCELLUS
CHARLES FRYE OHI 8	17	5/24/2015	8,331	8,528	42	MARCELLUS
CHARLES FRYE OHI 8	18	5/24/2015	8,071	8,268	42	MARCELLUS
CHARLES FRYE OHI 8	19	5/25/2015	7,811	8,008	42	MARCELLUS
CHARLES FRYE OHI 8	20	5/25/2015	7,551	7,748	42	MARCELLUS
CHARLES FRYE OHI 8	21	5/25/2015	7,291	7,488	42	MARCELLUS
CHARLES FRYE OHI 8	22	5/25/2015	7,031	7,228	42	MARCELLUS

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CHARLES FRYE 8H					
LITHOLOGY/FORMATION	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, TVD (FT)	TOP DEPTH, MD (FT)	BOTTOM DEPTH, MD (FT)	QUANTITY AND TYPE OF FLUID
Pittsburgh Coal	627	642	627	642	NA
Big Injun (ss)	1681	2006	1681	2006	100 bbl/hr water
Rhinestreet (shale)	5851	6141	5880	6191	NA
Cashaqua (shale)	6141	6219	6191	6290	NA
Middlesex (shale)	6219	6288	6290	6387	NA
Burket (shale)	6288	6320	6387	6436	NA
Tully (ls)	6320	6351	6436	6488	NA
Mahantango (shale)	6351	6486	6488	6786	NA
Marcellus (shale)	6486		6786		gas

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Well APN#	STAGE NUM	Stim Date	STIMULATION INFORMATION PER STAGE				Amount of Proppant (lbs)	Amount of water bbls	Amount of Nitrogen	Other
WELL NAME			Ave Pump Rate (GPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)				
CHARLES FRYE OH1 8	1	5/19/2015	97	7,641	8,412	4,472	501,207	7,689		
CHARLES FRYE OH1 8	2	5/20/2015	102	7,885	8,571	4,553	500,333	7,150		
CHARLES FRYE OH1 8	3	5/20/2015	102	7,918	8,675	4,782	500,618	7,167		
CHARLES FRYE OH1 8	4	5/20/2015	102	7,905	8,300	4,314	503,668	7,585		
CHARLES FRYE OH1 8	5	5/21/2015	102	7,672	8,495	4,377	500,608	7,128		
CHARLES FRYE OH1 8	6	5/21/2015	102	7,419	8,619	4,425	499,541	7,127		
CHARLES FRYE OH1 8	7	5/21/2015	102	7,824	9,333	4,723	491,106	7,217		
CHARLES FRYE OH1 8	8	5/22/2015	104	7,590	9,085	4,436	501,203	7,108		
CHARLES FRYE OH1 8	9	5/22/2015	100	7,817	8,729	4,186	501,829	8,644		
CHARLES FRYE OH1 8	10	5/22/2015	102	7,341	7,911	4,403	505,023	7,158		
CHARLES FRYE OH1 8	11	5/23/2015	102	7,395	7,838	4,707	494,818	7,137		
CHARLES FRYE OH1 8	12	5/23/2015	105	7,229	8,917	4,651	502,543	7,100		
CHARLES FRYE OH1 8	13	5/23/2015	102	7,553	8,636	4,818	499,731	7,102		
CHARLES FRYE OH1 8	14	5/23/2015	103	7,408	7,727	4,527	503,131	6,967		
CHARLES FRYE OH1 8	15	5/24/2015	104	7,159	7,505	4,746	465,385	6,863		
CHARLES FRYE OH1 8	16	5/24/2015	102	7,283	6,781	4,637	505,728	7,674		
CHARLES FRYE OH1 8	17	5/24/2015	102	7,081	8,717	4,951	501,219	6,948		
CHARLES FRYE OH1 8	18	5/24/2015	101	7,097	7,569	4,707	505,878	6,926		
CHARLES FRYE OH1 8	19	5/25/2015	100	7,097	7,692	4,452	506,396	7,125		
CHARLES FRYE OH1 8	20	5/25/2015	100	7,316	8,340	4,627	504,397	7,058		
CHARLES FRYE OH1 8	21	5/25/2015	95	6,684	8,363	4,528	502,333	7,078		
CHARLES FRYE OH1 8	22	5/25/2015	101	6,979	7,589	4,394	504,819	6,976		

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/20/2015
Job End Date:	5/25/2015
State:	West Virginia
County:	Ohio
API Number:	47-069-00163-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	OHI FRYE CHARLES 8H
Longitude:	-80.56583000
Latitude:	40.03864000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,614
Total Base Water Volume (gal):	6,672,456
Total Base Non Water Volume:	0



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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	82.66182	
Sand, White, 40/70	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		9.65370	
Sand, White, 100 mesh	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		6.37980	
HCl, 10.1 - 15%	Baker Hughes	Acidizing					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		1.17457	SmartCare Product
MaxPerm-20A, 265 gallon tote	Baker Hughes	Friction Reducer					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.07430	SmartCare Product
Ferrotrol 300L	Baker Hughes	Iron Control					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00807	SmartCare Product
CI-39	Baker Hughes	Corrosion Inhibitor					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00236	
GBW-5	Baker Hughes	Breaker					

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			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00061 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	16.02483
			Water	7732-18-5	85.00000	1.04662
			Hydrochloric Acid	7647-01-0	15.00000	0.17609
			1-Propanesulfonic acid, 2- methyl 2-[[[1-oxo-2-propen-1-yl] amino]-, polymer with 2- propanamide, sodium salt	83446-68-8	60.00000	0.04455
			Hydrotreated Light Distillate	84742-47-8	30.00000	0.02228
			Citric Acid	77-92-9	60.00000	0.00484
			Oxyalkylated alcohol	78330-21-9	5.00000	0.00371
			Polyoxyethylene sorbitan monooleate	9005-65-6	5.00000	0.00371
			Sorbitan, mono-(9Z)-9- nctadecenoate	1338-43-8	5.00000	0.00371
			Sodium Chloride	7647-14-5	5.00000	0.00371
			Oxyalkylated Fatty Acid	51791-002	40.00000	0.00094
			Formic Acid	64-18-6	30.00000	0.00071
			Tar Bases, Quinoline Derivs., Benzyl Chloride-Quaternized	72480-70-7	30.00000	0.00071
			Aldehyde	104-55-2	30.00000	0.00071
			Ammonium Persulphate	7727-54-0	100.00000	0.00061
			Isopropanol	67-63-0	5.00000	0.00012
			Quaternary Ammonium Compound	100765-57-9	5.00000	0.00012
			Sulfurized polyolefin	68037-13-8	5.00000	0.00012
			Potassium Iodide	7681-11-0	2.00000	0.00005
			Polyalkylene	7756-94-7	1.00000	0.00002
			Potassium Acetate	127-08-2	0.50000	0.00001

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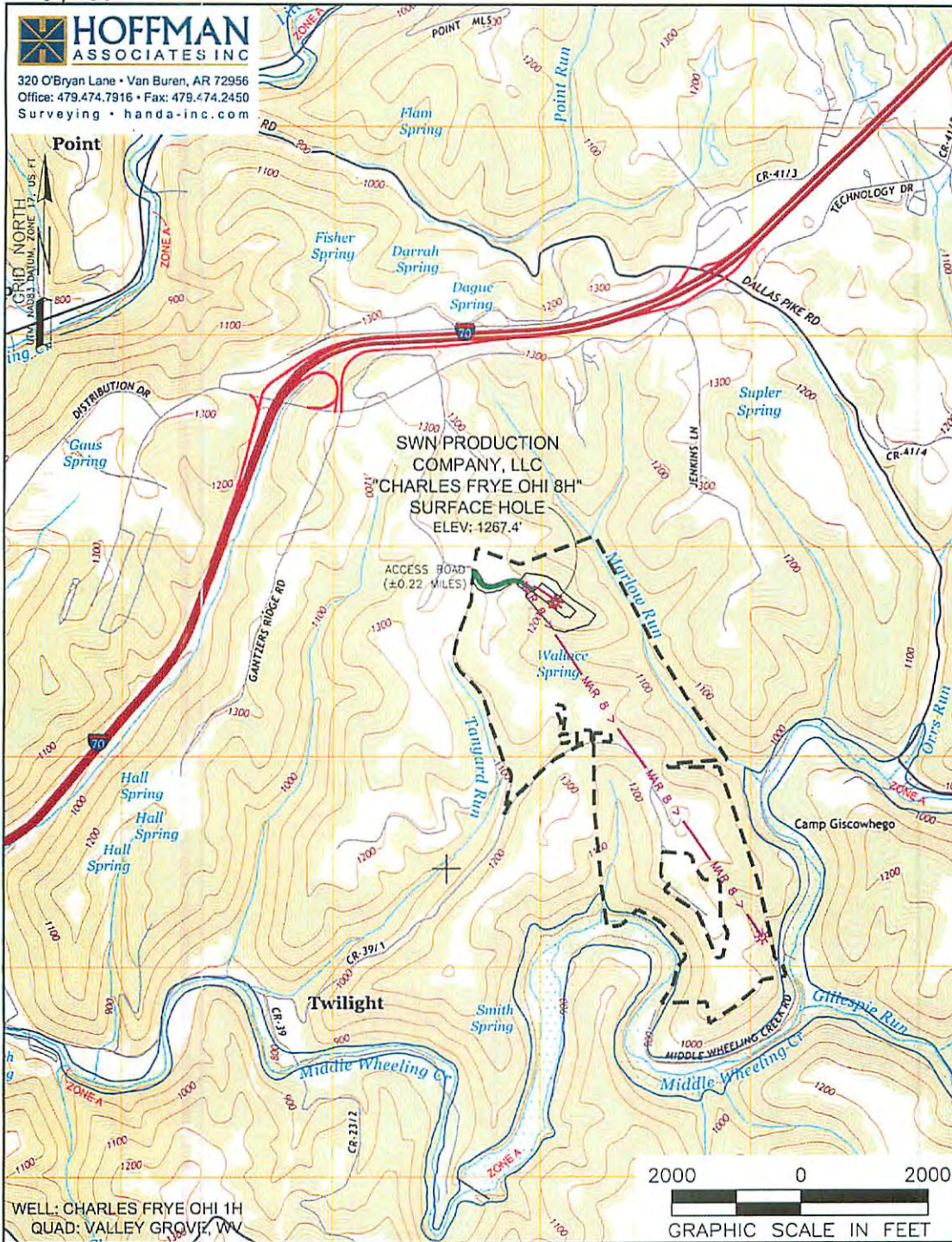
* Total Water Volume sources may include fresh water, produced water, and/or recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

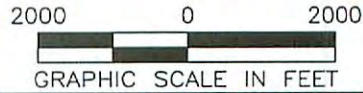
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WELL: CHARLES FRYE OHI 1H
 QUAD: VALLEY GROVE, WV



NAME AND DISTANCE TO THE NEAREST STREAM: MARLOW RUN IS LOCATED ±0.13 MILES NORTHEAST OF THE CENTER OF THE DRILL PAD.		STREAM CROSSING COORDINATES (NAD 83): NO NEW CROSSINGS.		COMPANY: SWN Production Company, LLC	
WELL RESTRICTIONS: WELL PAD, LOD, & E & S CONTROL FEATURES TO PERENNIAL STREAM, LAKE, POND, RESERVOIR OR WETLAND: >100 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO NATURALLY PRODUCING TROUT STREAM: >300 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY: >1000 FEET WELL SHL TO EXISTING WATER WELL OR DEVELOPED SPRING: >250 FEET CENTER OF PAD TO OCCUPIED DWELLING STRUCTURE: >625 FEET CENTER OF PAD TO AGRICULTURAL BUILDINGS LARGER THAN 2500 SQ FT: >625 FEET		OPERATOR'S CHARLES FRYE OHI		WELL #: 8H	
FEMA FLOOD INFORMATION: BY GRAPHIC PLOTTING ONLY FEMA FIRM INCORPORATED AREA OF OHIO COUNTY, WEST VIRGINIA: MAP NUMBER 54069C0078C, 54069C0095D, & 54069C0095D, EFFECTIVE DATE: JULY 17, 2006.		LOCATION: TRIDELPHIA DISTRICT, OHIO COUNTY, WEST VIRGINIA		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.053169° LONGITUDE: -80.577101°	
LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ⊗ EXISTING / PRODUCING WELLHEAD ⊗ ABANDONED WELL ⊗ PLUGGED & ABANDONED WELL ⊗ CUT CONDUCTOR		BOTTOM HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 40.038688° LONGITUDE: -80.565634°		REVISIONS: DATE: 08-25-2015	
○ EXISTING SPRING ○ EXISTING WATER WELL — ACCESS ROAD — ACCESS ROAD TO PREV. SITE — HIGHWAY/INTERSTATE — COUNTY ROAD		DRAWN BY: S. HUTSON SCALE: 1" = 2000' DRAWING NO: 59061 TOPOGRAPHIC MAP		PROPERTY NUMBER 2501162091 PAD ID 3001155647	

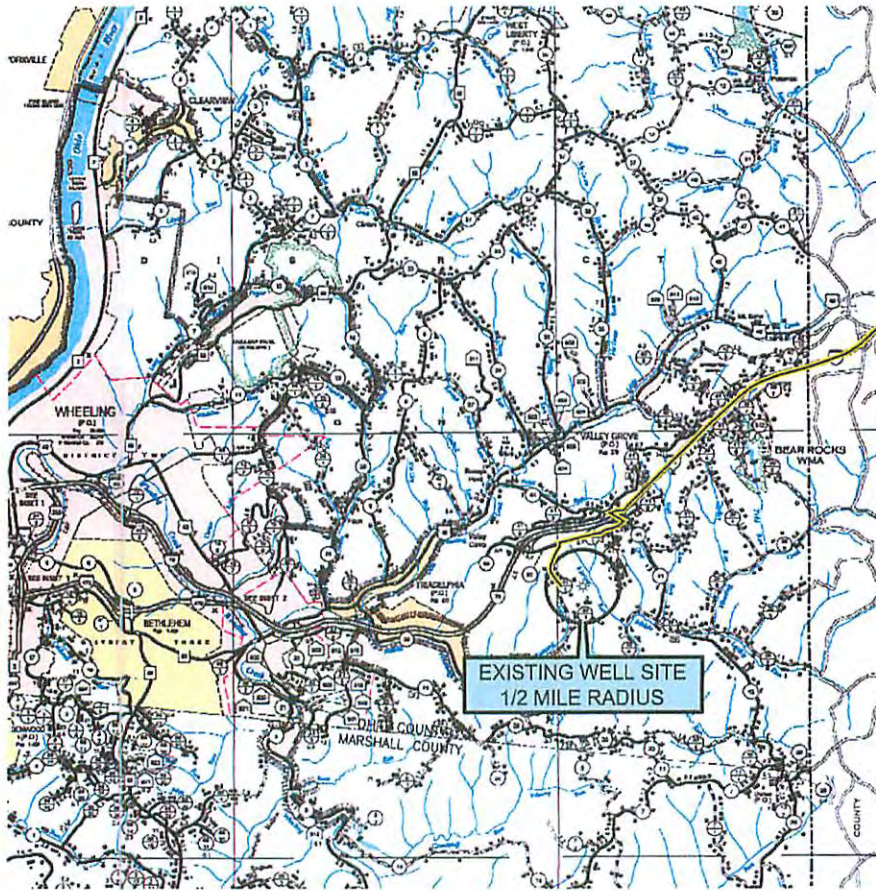
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GRID NORTH
 UTM, NAD83 DATUM, ZONE 17, US FT



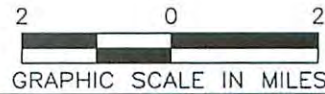
ACCESS ROAD COORDINATES (NAD 83):
 LEAVE PUBLIC ROAD LAT: 40.054421° / LONG: -80.581823°
 ENTER WELL SITE LAT: 40.053584° / LONG: -80.578284°



GENERAL HIGHWAY MAP
 OHIO COUNTY
 WEST VIRGINIA
 PREPARED BY
 WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 PLANNING DIVISION
 IN COOPERATION WITH
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION



GENERAL HIGHWAY MAP
 MARSHALL COUNTY
 WEST VIRGINIA
 PREPARED BY
 WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 PLANNING DIVISION
 IN COOPERATION WITH
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION



DRIVING DIRECTIONS:
 DRIVING DIRECTIONS:
 FROM THE INTERSECTION OF HACKERS CREEK ROAD AND I-79N (EXIT 105) IN JANE LEW, WEST VIRGINIA; TRAVEL NORTH ON I-79 FOR ±92.4 MILES TO I-70W; BEAR LEFT ONTO I-70W AND TRAVEL ±20.9 MILES TO DALLAS PIKE (EXIT 11); TURN LEFT (EAST) ONTO DALLAS PIKE AND TRAVEL ±0.1 MILES TO MCCUTCHEON ROAD; TURN RIGHT (SOUTHWEST) ONTO MCCUTCHEON ROAD AND TRAVEL ±1.0 MILES; TURN LEFT (SOUTH) ONTO MCCUTCHEON ROAD AND TRAVEL ±0.7 MILES TO EXISTING SWN PRODUCTION COMPANY, LLC "CHARLES FRYE OH" ACCESS ROAD; TURN LEFT (EAST) ONTO EXISTING ACCESS ROAD AND TRAVEL ±0.2 MILES TO EXISTING SWN PRODUCTION COMPANY, LLC "CHARLES FRYE OH" GAS WELL PAD.

DRIVING PRECAUTIONS:
 DRIVING DIRECTIONS NOT PROVIDED BY SWN.

COMPANY:

OPERATOR'S: CHARLES FRYE OH
WELL #: 8H

LOCATION: TRIDELPHIA DISTRICT,
 OHIO COUNTY, WEST VIRGINIA

SURFACE HOLE LOCATION:
 GEOGRAPHIC (NAD83):
 LATITUDE: 40.053169°
 LONGITUDE: -80.577101°

BOTTOM HOLE LOCATION:
 GEOGRAPHIC (NAD83):
 LATITUDE: 40.038688°
 LONGITUDE: -80.565634°

DISTANCE / DIRECTION FROM NEAREST TOWN:
 ±1.7 MILES SOUTHEAST FROM VALLEY CAMP, WEST VIRGINIA 26059

LEGEND:
 ○ PROPOSED SURFACE HOLE / BOTTOM HOLE — DRIVING DIRECTION ROUTE
 * EXISTING / PRODUCING WELLHEAD
 X ABANDONED WELL
 ⊠ PLUGGED & ABANDONED WELL
 △ CUT CONDUCTOR

REVISIONS:

DATE: 08-25-2015

DRAWN BY: S. HUTSON
SCALE: 1" = 2 MILES
DRAWING NO.: 59061
DRIVING DIRECTION MAP

03/04/2016

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 29°27'25" E	1233'	SHL TO LANDMARK	PARCEL CORNER
L2	S 61°05'29" E	1932'	SHL TO LANDMARK	PARCEL CORNER
L3	S 37°17'05" W	20.39'	SHL TO REF. PNT.	CHARLES FRYE OHI 3H WELL HEAD (069-00079)
L4	S 50°46'42" E	27.78'	SHL TO REF. PNT.	CHARLES FRYE OHI 10H WELL HEAD (069-00091)
LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L5	S 08°20'41" W	436.44'		SHL TO LP
L6	S 34°20'48" E	5845.23'		LP TO BHL

Latitude: 40°05'00"

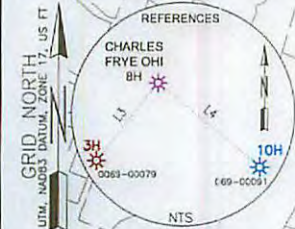
Longitude: 80°32'30"

NOTES ON SURVEY

- COORDINATE SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- 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 PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO OCCUPIED DWELLINGS AND AGRICULTURE BUILDINGS GREATER THAN 2500 SQ. FT. WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM 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.

SWN PRODUCTION COMPANY, LLC
"CHARLES FRYE OHI 8H"
SURFACE HOLE
ELEV: 1267.4'

TRACT	SURFACE OWNER(S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	CHARLES FRYE & DOROTHY FRYE (S) DOROTHY V FRYE (R)	06-114-01	105.00
2	ZACHARY ALLAN MEYER (S) ZACHARY MEYER & JENNIFER MEYER (R)	06-114-02	91.58
3	DONALD L MOFFITT JR & L L MOFFITT (S) DONALD L MOFFITT JR & LINDA J MOFFITT (R) DAVID R MOFFITT (R) JUDITH L REBICH (R)	06-114-03.3	1.549
4	DAVID R MOFFITT & LINDA J MOFFITT (S/R)	06-114-03	34.231
5	REGINA A CONKLIN & HENRY M CONKLIN (S) REGINA A CONKLIN & HENRY J CONKLIN (R)	06-114-03.4	1.048
6	DAVID R MOFFITT & L J MOFFITT (S) DAVID R MOFFITT & LINDA J MOFFITT (R)	06-114-03.2	2.00
7	JUSTUS LUZADER JR. LIFE ESTATE (S) JUSTUS LUZADER JR (R)	06-114-11	57.513
8	RICHARD J LUZADER (S/R)	06-114-11.1	14.922
9	JASON GRAY & NICOLE L GRAY (S) RICHARD J LUZADER (R)	06-114-11.3	5.03
10	KIRK LUZADER & JUDY LUZADER (S) KIRK D LUZADER & JUDY L LUZADER (R)	06-114-11.2	14.365
11	KIRK D LUZADER & JUDY L LUZADER (S/R)	06-114-11.4	6.94
12	CHRISTY M BOFF (S/R)	06-114-10	54.866

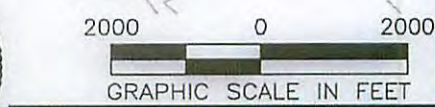


SURFACE HOLE LOCATION (SHL):	
GEOGRAPHIC (NAD83):	LATITUDE: 40.053169°
	LONGITUDE: -80.577101°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,546,375.541
	EASTING: 1,758,758.170
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,433,744.133
	EASTING: 536,070.563
LANDING POINT LOCATION (LPL):	
GEOGRAPHIC (NAD83):	LATITUDE: 40.051984°
	LONGITUDE: -80.577335°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,545,943.721
	EASTING: 1,758,694.830
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,433,612.514
	EASTING: 536,051.256
BOTTOM HOLE LOCATION (BHL):	
GEOGRAPHIC (NAD83):	LATITUDE: 40.038688°
	LONGITUDE: -80.565634°
UTM (NAD83, ZONE 17, FEET):	NORTHING: 14,541,117.681
	EASTING: 1,761,992.710
UTM (NAD83, ZONE 17, METERS):	NORTHING: 4,432,141.534
	EASTING: 537,056.452



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. 2315 *Samuel Earl Smith*



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 SOURCE OF SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)	OPERATOR'S WELL #: CHARLES FRYE OHI 8H API WELL #: 47 STATE 69 COUNTY 00163H6A PERMIT
	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"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	

WATERSHED: MIDDLE WHEELING CREEK DISTRICT: TRIDELPHIA COUNTY: OHIO SURFACE OWNER: CHARLES FRYE & DOROTHY FRYE OIL & GAS ROYALTY OWNER: DOROTHY V FRYE	ELEVATION: 1267.4' QUADRANGLE: VALLEY GROVE ACREAGE: ±105.00 ACREAGE: ±105.00
DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input checked="" type="checkbox"/>	
CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED	
TARGET FORMATION: MARCELLUS	ESTIMATED DEPTH: 6,614' TVD 12,865' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378	DESIGNATED AGENT: DEE SOUTHWALL ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378
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LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELL HEAD ⊗ ABANDONED WELL ⊕ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR	REVISIONS: --- LEASE BOUNDARY --- 500' DHP BUFFER --- MAR 1 --- MARCELLUS DHP --- ABANDONED PATH	DATE: 08-25-2015 DRAWN BY: S. HUTSON SCALE: 1" = 2000' DRAWING NO: 59061 WELL LOCATION PLAT
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03/04/2016