

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

API 47 - 069 - 00195 County OHIO District TRIADELPHIA
Quad VALLEY GROVE, WV Pad Name G W RENTALS LLC-OHI-PAD1 Field/Pool Name PANHANDLE FIELD
Farm name G W RENTALS LLC OHI 5 Well Number G W RENTALS LLC OHI 5
Operator (as registered with the OOG) SWN Production Company LLC
Address PO Box 12359 City Spring State TX Zip 77391

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,436,095.988 Easting 537,035.475
Landing Point of Curve Northing 4,436,420.071 Easting 537,010.703
Bottom Hole Northing 4,438,722.992 Easting 535,737.258

Elevation (ft) 1,246.4' 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 9/22/15 Date drilling commenced 09/29/15 Date drilling ceased 11/09/15
Date completion activities began 08/16/16 Date completion activities ceased 11/03/16
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 511' MD Open mine(s) (Y/N) depths Office of Oil and Gas
Salt water depth(s) ft 1329' MD Void(s) encountered (Y/N) depths 614' - 617'
Coal depth(s) ft 640' MD Cavern(s) encountered (Y/N) depths JAN 26 2017

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

APPROVED

NAME: Eric Blend
DATE: 2-3-17

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Office of Oil and Gas
614' - 617'
JAN 26 2017
WV Department of
Environmental Protection
Reviewed by: _____

API 47-069 - 00195 Farm name G W RENTALS LLC OHI 5 Well number G W RENTALS LLC OHI 5

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	28"	20"	126	NEW	J-55/94#		Y, 1 BBL RETURNED
Surface	17.5"	13.375"	670	NEW	J-55/54.5#	589' & 604'	Y
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25"	9.625"	2124	NEW	J-55/40#		Y, 35 BBLs RETURNED
Intermediate 2							
Intermediate 3							
Production	8.75"/8.50"	5.5"	16352	NEW	HCP-110/20#		Y
Tubing		2.375"	6923	NEW	P-110/4.7#		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	150	17.20			SURFACE	24
Surface	CLASS A	630	15.60	1.20	756	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	793	15.60	1.18	935.74	SURFACE	8
Intermediate 2							
Intermediate 3							
Production		930/2005	15.60	1.23/1.19	1143.9/2385.95	SURFACE	24
Tubing							

Drillers TD (ft) 16,375' Loggers TD (ft) 16,375'
 Deepest formation penetrated UPPER MARCELLUS Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) 5765'

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 _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	EXHIBIT	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	EXHIBIT	2				

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>6496.83</u> TVD	<u>6861.75</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1200 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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, H₂S, ETC)

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>EXHIBIT</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 Weatherford
Address 2000 St. James Place City Houston State TX Zip 77056

Cementing Company Schlumberger Well Services
Address 110 Schlumberger Drive City Sugarland State TX Zip 77478

Stimulating Company Halliburton Energy Services
Address 14851 Milner Road, Gate 5A City Houston State TX Zip 77032

Please insert additional pages as applicable.

Completed by Denise Grantham Telephone 832-796-6139
Signature Denise Grantham Title Regulatory Technician Date 1-25-2017

G W RENTALS LLC OHI 5H
Perf Stage Summary

STAGE NUM	Perf Date	Perf Bottom MD	Perf Top MD	# SHOTS PER STG
1	8/16/2016	16,247	16,050	42
2	8/16/2016	15,982	15,790	42
3	8/17/2016	15,727	15,530	42
4	8/17/2016	15,467	15,270	42
5	8/17/2016	15,207	15,010	42
6	8/18/2016	14,947	14,755	42
7	8/18/2016	14,687	14,490	42
8	8/18/2016	14,425	14,230	42
9	8/18/2016	14,167	13,970	42
10	8/19/2016	13,907	13,710	42
11	8/29/2016	13,647	13,447	66
12	8/29/2016	13,387	13,190	42
13	8/30/2016	13,127	12,930	42
14	8/30/2016	12,867	12,670	42
15	8/30/2016	12,607	12,410	42
16	8/30/2016	12,347	12,150	42
17	8/30/2016	12,087	11,890	42
18	8/31/2016	11,827	11,630	42
19	8/31/2016	11,567	11,370	42
20	8/31/2016	11,307	11,110	42
21	8/31/2016	11,047	10,785	54
22	9/1/2016	10,722	10,590	30
23	9/1/2016	10,527	10,330	42
24	9/1/2016	10,267	10,070	42
25	9/1/2016	10,007	9,810	42
26	9/2/2016	9,747	9,550	42
27	9/2/2016	9,487	9,290	42
28	9/3/2016	9,227	9,030	42
29	9/3/2016	8,967	8,770	42
30	9/3/2016	8,707	8,510	42
31	9/4/2016	8,447	8,250	42
32	9/4/2016	8,187	7,990	42
33	9/4/2016	7,927	7,730	42
34	9/5/2016	7,667	7,470	42
35	9/5/2016	7,407	7,210	42
36	9/5/2016	7,147	6,950	42

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G W RENTALS LLC OHI 5H
Frac Stage Summary

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/other
1	8/16/2016	2	7,608	8,273	4,110	504,940	9,055	
2	8/16/2016	2	7,697	8,818	4,594	497,480	7,909	
3	8/17/2016	2	8,057	8,964	4,264	491,500	9,065	
4	8/17/2016	2	7,792	9,250	4,379	497,020	8,993	
5	8/17/2016	2	7,861	8,370	4,574	500,060	7,930	
6	8/18/2016	2	7,943	8,484	4,472	498,820	8,007	
7	8/18/2016	2	8,148	9,208	4,304	490,020	8,175	
8	8/18/2016	2	8,246	9,336	4,741	386,500	7,049	
9	8/18/2016	2	7,911	8,249	4,504	504,520	7,712	
10	8/19/2016	2	7,927	8,458	4,463	486,380	7,588	
11	8/29/2016	2	7,837	8,706	4,125	499,380	8,700	
12	8/29/2016	2	8,060	8,476	4,378	502,460	7,961	
13	8/30/2016	2	7,978	8,503	4,656	499,400	7,786	
14	8/30/2016	2	7,841	8,822	4,420	502,040	7,711	
15	8/30/2016	2	7,804	8,577	4,282	502,480	7,170	
16	8/30/2016	2	7,566	8,369	4,077	500,960	8,083	
17	8/30/2016	2	7,490	8,780	4,425	497,400	8,220	
18	8/31/2016	2	7,583	8,337	4,621	501,760	7,395	
19	8/31/2016	2	7,249	8,380	4,577	500,480	7,383	
20	8/31/2016	2	7,749	8,266	4,512	494,740	7,972	
21	8/31/2016	2	7,807	8,867	4,526	500,660	8,449	
22	9/1/2016	2	7,486	8,512	4,333	472,940	7,554	
23	9/1/2016	2	7,372	8,725	4,508	495,460	7,238	
24	9/1/2016	2	7,441	8,380	4,607	492,800	7,198	
25	9/1/2016	2	7,310	8,466	4,477	500,860	7,716	
26	9/2/2016	2	7,108	8,467	4,460	504,660	7,350	
27	9/2/2016	2	7,166	8,144	4,470	494,160	7,150	
28	9/3/2016	2	7,215	7,803	4,526	499,880	7,066	
29	9/3/2016	2	7,356	8,374	4,340	497,960	6,974	
30	9/3/2016	2	7,290	8,587	4,679	504,080	6,929	
31	9/4/2016	2	7,273	8,201	4,472	500,600	6,859	
32	9/4/2016	2	7,108	8,793	4,596	499,940	6,810	
33	9/4/2016	2	7,392	8,830	4,395	495,640	7,020	
34	9/5/2016	2	7,032	8,028	4,740	503,976	6,797	
35	9/5/2016	2	7,067	7,822	4,828	508,530	6,914	
36	9/5/2016	2	7,115	8,469	4,786	498,800	6,904	

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Well Name: G W RENTALS LLC OHI 5H

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	N.A.	N.A.	511.00	511.00	?
Top of Salt Water	1329.00	1329.00	N.A.	N.A.	?
Pittsburgh Coal	640.00	640.00	647.00	647.00	?
Big Injun (ss)	1856.00	1856.00	2030.00	2030.00	?
Berea (siltstone)	2381.00	2381.00	2424.00	2424.00	?
Rhinstreet (shale)	5919.00	5876.00	6223.00	6161.00	?
Cashaqua (shale)	6223.69	6161.46	6297.07	6223.60	?
Middlesex (shale)	6297.07	6223.60	6405.67	6305.56	?
Burket (shale)	6405.67	6305.56	6445.09	6331.96	?
Tully (ls)	6445.09	6331.96	6500.33	6365.98	?
Mahantango (shale)	6500.33	6365.98	6861.75	6496.83	?
Marcellus (shale)	6861.75	6496.83	N.A.	N.A.	?

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/16/2016
Job End Date:	9/6/2016
State:	West Virginia
County:	Ohio
API Number:	47-069-00195-08-00
Operator Name:	Southwestern Energy
Well Name and Number:	GW Rentals OHI 5H
Latitude:	40.07432000
Longitude:	-80.56565000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,514
Total Base Water Volume (gal):	11,460,674
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
Lease Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	83.19567	Density = 8.410
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	1.33443	

Bactron K-139	Nalco	Biocide							
						Listed Below			
EC6486A	Nalco	Scale Inhibitor							
						Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent							
						Listed Below			
FR-76	Halliburton	Friction Reducer							
						Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant							
						Listed Below			
WG-36 GELLING AGENT	Halliburton	Gelling Agent							
						Listed Below			
SAND-COMMON WHITE - 100 MESH, 3307 LB BAG	Halliburton	Proppant							
						Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor							
						Listed Below			

SP BREAKER	Halliburton	Breaker							
					Listed Below				
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.									
			Crystalline silica, quartz	14808-60-7	100.00000	15.39839			
			Hydrochloric acid	7647-01-0	15.00000	0.76795			
			Inorganic salt	Proprietary	30.00000	0.02725			
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02725			
			Acrylamide acrylate copolymer	Proprietary	30.00000	0.02725			Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Quaternary Ammonium Compounds, Benzyl-C12 Chlorides	68424-85-1	10.00000	0.00271			
			Glutaraldehyde	111-30-8	10.00000	0.00271			
			Guar gum	9000-30-0	100.00000	0.00236			
			Ethylene Glycol	107-21-1	30.00000	0.00161			
			Ethanol	64-17-5	5.00000	0.00135			
			Non-hazardous food substance	Proprietary	100.00000	0.00033			
			Sodium persulfate	7775-27-1	100.00000	0.00004			
			Sodium sulfate	7757-82-6	0.10000	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)



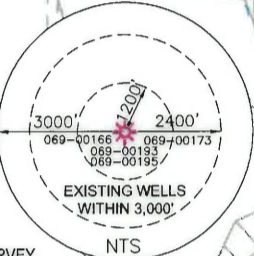
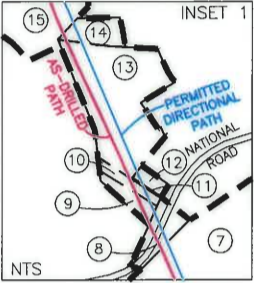
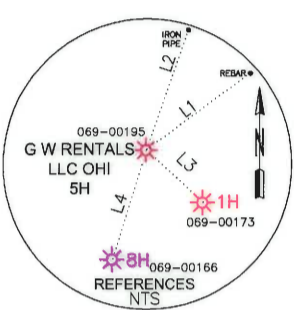
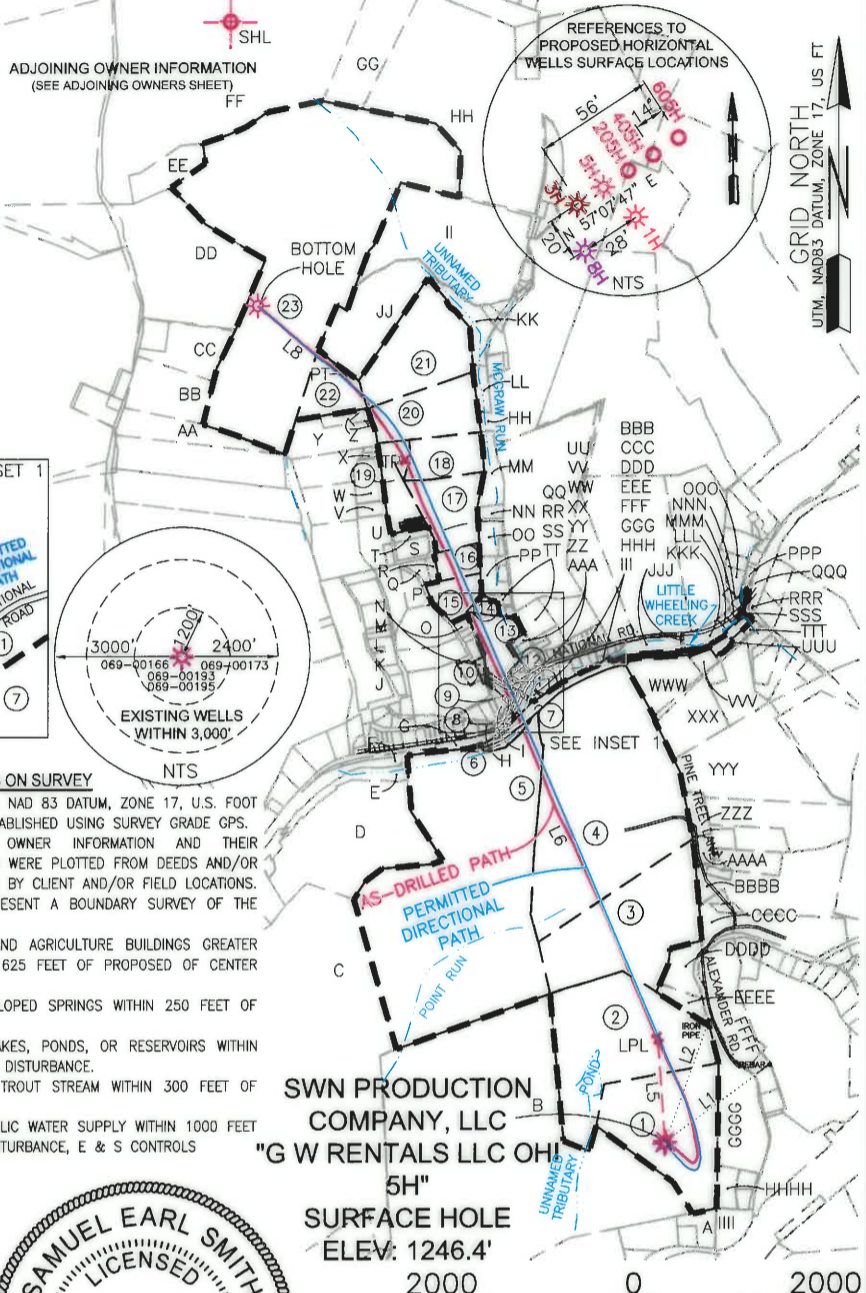
320 O'Bryan Lane • Van Buren, AR 72956
 Office: 479.474.7916 • Fax: 479.474.2450
 Surveying • handa-inc.com

Latitude: 40°05'00"

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 53°39'20" E	1324.31'	SHL TO LANDMARK	5/8" REBAR
L2	N 19°01'34" E	1301.02'	SHL TO LANDMARK	1" IRON PIPE
L3	S 49°14'41" E	20.20'	SHL TO REF. PNT.	G W RENTALS LLC OHI 1H WELL HEAD 069-00173
L4	S 15°31'37" W	30.80'	SHL TO REF. PNT.	G W RENTALS LLC OHI 8H WELL HEAD 069-00166

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L5	N 04°22'15" W	1066.36'		SHL TO LP
L6	N 23°53'13" W	6520.80'		LP TO TP
L7	CHD: N 37°22'25" W	CHD: 1133.19'	1137.42'	TP TO PT
L8	N 50°48'34" W	1096.20'		PT TO BHL

TRACT	SURFACE OWNER (S)/ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	GW RENTALS, LLC (S) LEE J GLESSNER & GARY W GLESSNER (R) JAMES Z CHAMBERS (R) JEFFREY S CHAMBERS (R) JUDY LYNN CHAMBERS (R)	6-T9-5.1	27.66
2	GW RENTALS, LLC (S)	6-T9-5.2	38.15
3	GW RENTALS, LLC (S/R)	6-T4-2.2	26.65
4	GARY W GLESSNER AS TRUSTEE OF THE LEE J GLESSNER DYNASTY TRUST (S) LEE J GLESSNER (R)	6-T4-2	86.89
5	BETTY M SINCLAIR (S/R)	3-L14-1.1	99.77
6	VALLEY GROVE VOLUNTEER FIRE DEPARTMENT, INC (S/R)	8-VG9-94	0.83
7	VALLEY GROVE VOLUNTEER FIRE DEPARTMENT, INC (S/R)	8-VG9-93	15.88
8	THE VILLAGE OF VALLEY GROVE (S/R)	8-VG9-81	1.12
9	L&M RENTALS, LLC (S/R)	8-VG9-76	0.49
10	TODD M MAXWELL (S/R)	8-VG9-76.1	0.40
11	SCOTT M HEATH (S/R)	8-VG9-77.1	0.01
12	SCOTT M HEATH (S/R)	8-VG9-77	0.17
13	DONALD H WADDELL (S/R)	8-VG6-8	6.00
14	DENISE A STILES & JOANNA D MAAS (S/R)	8-VG6-7	0.93
15	HAROLD K SAYRE (S/R)	3-L14A-189	4.39
16	MICHAEL A ZINK & PATRICIA J ZINK (S/R)	3-L14A-17	3.21
17	ROBER DALE ABERCROMBIE & PATRICIA ANN ABERCROMBIE (S/R)	3-L14A-197	10.08
18	JOHN M BORING III & APRIL D BORING (S/R)	3-L11N-29	6.64
19	JOHN M BORING III & APRIL D BORING (S/R)	3-L11N-31	4.85
20	JOHN M BORING III & APRIL D BORING (S/R)	3-L11-70	13.05
21	EARL P. FARMER JR. (S)	3-L11-16	19.44
22	EARL P. FARMER JR & HEATHER NAVE FARMER (S/R)	3-L11-17.1	6.79
23	ERIC W LYTLE (S/R)	3-L10-49	117.06



- 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.

SURFACE HOLE LOCATION (SHL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,095.988 EASTING: 537,035.475
LANDING POINT LOCATION (LPL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,436,420.071 EASTING: 537,010.703
BOTTOM HOLE LOCATION (BHL)
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,438,722.992 EASTING: 535,737.258

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 *[Signature]* 07-27-16

(+) 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 GRADE GPS ELEVATION: (NAVD 88, US FT)	COMPANY: SWN Production Company, LLC Production Company™
	G W RENTALS LLC OHI OPERATOR'S WELL #: 5H API WELL #: 47 69 00195 STATE COUNTY PERMIT	

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: WHEELING CREEK ELEVATION: 1,246.4'

DISTRICT: TRIADELPHIA COUNTY: OHIO QUADRANGLE: VALLEY GROVE WW.

SURFACE OWNER: GW RENTALS, LLC ACREAGE: ±27.66

OIL & GAS ROYALTY OWNER: LEE J GLESSNER & MARK W GLESSNER, JAMES Z CHAMBERS, JEFFREY S CHAMBERS, & JUDY LYNN CHAMBERS ACREAGE: ±27.66

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

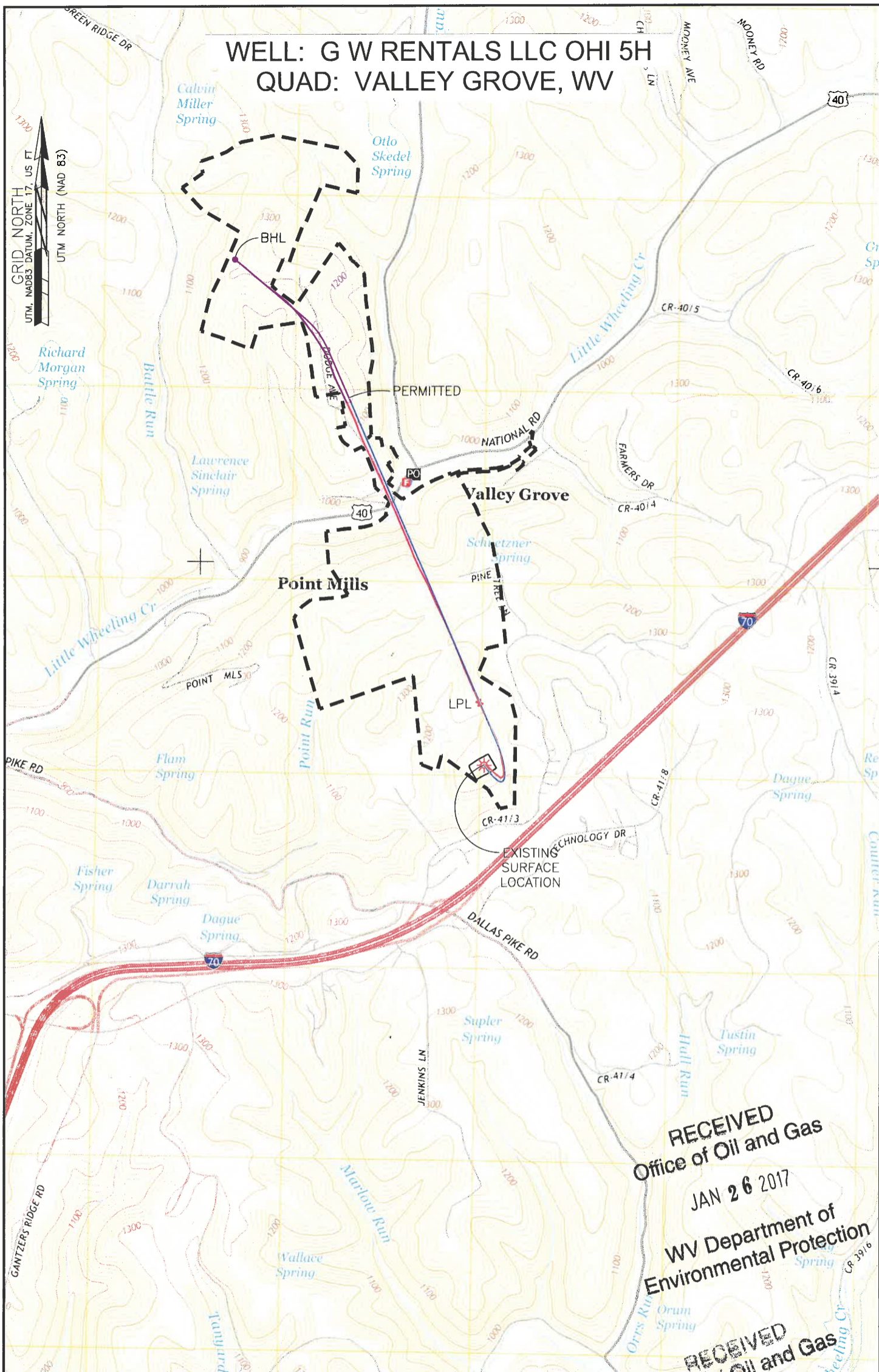
CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED

TARGET FORMATION: MARCELLUS DEPTH: 6,514' TVD 16,375' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL
 ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300
 CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND:	REVISIONS:	DATE: 11-20-2015
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	△ ADDED ADJACENT PARCELS, 08-14-2015	SEE INSET SHEET 2
⊙ EXISTING / PRODUCING WELLHEAD	△ ADDED ADJACENT PARCEL OWNERS, TAX MAP	DRAWN BY: S. HUTSON
⊗ ABANDONED WELL	△ PARCEL NUMBER, & ACREAGE, 09-10-2015	SCALE: 1" = 2000'
⊗ PLUGGED & ABANDONED WELL	△ UPDATED WITH AS-DRILLED DIRECTIONAL PATH, 11-24-2015	DRAWING NO: 59323
△ CUT CONDUCTOR	△ UPDATED PER. DIR. PATH, ADD LP COORDS. 07-25-2016	WELL LOCATION PLAT

**WELL: G W RENTALS LLC OHI 5H
 QUAD: VALLEY GROVE, WV**



RECEIVED
 Office of Oil and Gas
 JAN 26 2017
 WV Department of
 Environmental Protection

RECEIVED
 Office of Oil and Gas
 JAN 26 2017

NOTE:
 THE PURPOSE OF THIS PLAT IS FOR THE LOCATION OF PROPOSED GAS WELLS AND DOES NOT REPRESENT A CLOSED BOUNDARY SURVEY. PROPERTY LINE AND OWNERS WERE OBTAINED FROM VARIOUS FIELD EVIDENCE, TAX RECORDS AND AERIAL MAPPING.

Applicant / Well Operator Name SWN PRODUCTION COMPANY, LLC	Well (Farm) Name G W RENTALS LLC OHI	Well 5H	Serial #
Address PO BOX 1300, JANE LEW, WV 76378	County - Code OHIO - 69	District TRIADELPHIA	
Surface Landowner / Lessor G W RENTALS LLC	USGS 7 1/2 Quadrangle Map Name VALLEY GROVE, WV		



320 O'Bryan Lane • Van Buren, AR 72956
Office: 479.474.7916 • Fax: 479.474.2450
Surveying • handa-inc.com

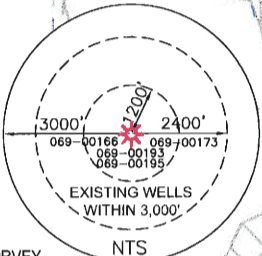
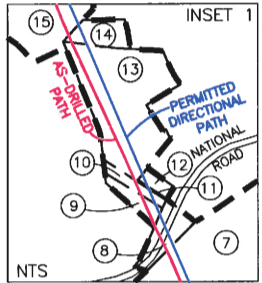
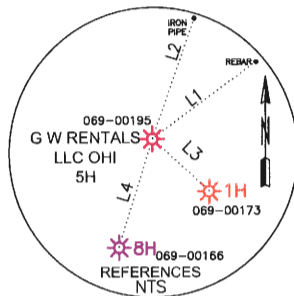
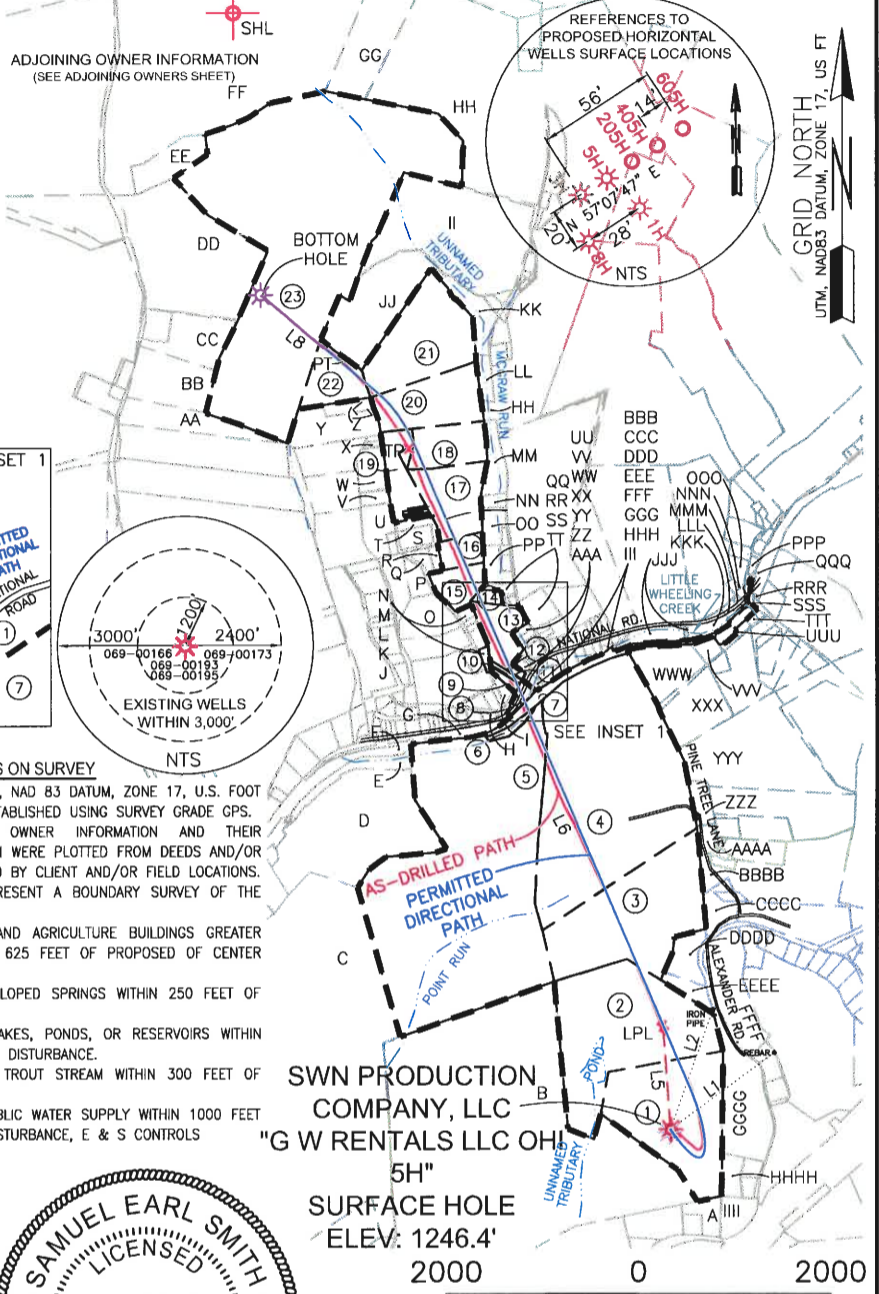
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	GW RENTALS, LLC (S) LEE J GLESSNER & GARY W GLESSNER (R) JAMES Z CHAMBERS (R) JEFFREY S CHAMBERS (R) JUDY LYNN CHAMBERS (R)	6-T9-5.1	27.66
2	GW RENTALS, LLC (S) LEE J GLESSNER & GARY W GLESSNER (R)	6-T9-5.2	38.15
3	GW RENTALS, LLC (S/R) GARY W GLESSNER AS TRUSTEE OF THE LEE J GLESSNER DYNASTY TRUST (S) LEE J GLESSNER (R)	6-T4-2.2	26.65
4	BETTY M SINCLAIR (S/R)	6-T4-2	86.89
5	BETTY M SINCLAIR (S/R)	3-L14-1.1	99.77
6	VALLEY GROVE VOLUNTEER FIRE DEPARTMENT, INC (S/R)	8-VG9-94	0.83
7	VALLEY GROVE VOLUNTEER FIRE DEPARTMENT, INC (S/R)	8-VG9-93	15.88
8	THE VILLAGE OF VALLEY GROVE (S/R)	8-VG9-81	1.12
9	L&M RENTALS, LLC (S/R)	8-VG9-76	0.49
10	TODD M MAXWELL (S/R)	8-VG9-76.1	0.40
11	SCOTT M HEATH (S/R)	8-VG9-77.1	0.01
12	SCOTT M HEATH (S/R)	8-VG9-77	0.17
13	DONALD H WADDELL (S/R)	8-VG6-8	6.00
14	DENISE A STILES & JOANNA D MAAS (S/R)	8-VG6-7	0.93
15	HAROLD K SAYRE (S/R)	3-L14A-189	4.39
16	MICHAEL A ZINK & PATRICIA J ZINK (S/R)	3-L14A-17	3.21
17	ROBER DALE ABERCROMBIE & PATRICIA ANN ABERCROMBIE (S/R)	3-L14A-197	10.08
18	JOHN M BORING III & APRIL D BORING (S/R)	3-L11N-29	6.64
19	JOHN M BORING III & APRIL D BORING (S/R)	3-L11N-31	4.85
20	JOHN M BORING III & APRIL D BORING (S/R)	3-L11-70	13.05
21	EARL P. FARMER JR. (S)	3-L11-16	19.44
22	EARL P. FARMER JR & HEATHER NAVE FARMER (S/R)	3-L11-17.1	6.79
23	ERIC W LYTTLE (S/R)	3-L10-49	117.08

LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 53°39'20" E	1324.31'	SHL TO LANDMARK	5/8" REBAR
L2	N 19°01'34" E	1301.02'	SHL TO LANDMARK	1" IRON PIPE
L3	S 49°14'41" E	20.20'	SHL TO REF. PNT.	G W RENTALS LLC OHI 1H WELL HEAD 069-00173
L4	S 15°31'37" W	30.80'	SHL TO REF. PNT.	G W RENTALS LLC OHI 8H WELL HEAD 069-00166

LINE	BEARING	DISTANCE	CURVE LENGTH	DESCRIPTION
L5	N 04°22'15" W	1066.36'		SHL TO LP
L6	N 23°53'13" W	6520.80'		LP TO TP
L7	CHD: N 37°22'25" W CHD: 1133.19'		1137.42'	TP TO PT
L8	N 50°48'34" W	1096.20'		PT 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.

SURFACE HOLE LOCATION (SHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,436,095.988
EASTING: 537,035.475

LANDING POINT LOCATION (LPL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,436,420.071
EASTING: 537,010.703

BOTTOM HOLE LOCATION (BHL):

UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,438,722.992
EASTING: 535,737.258

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* 07-27-16

SWN PRODUCTION COMPANY, LLC
"G W RENTALS LLC OHI 5H"
SURFACE HOLE
ELEV: 1246.4'

GRAPHIC SCALE IN FEET

COMPANY: **SWN** Production Company, LLC

<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034</p>	<p>MINIMUM DEGREE OF ACCURACY: 1/200</p> <p>PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)</p>	<p>G W RENTALS LLC OHI</p> <p>OPERATOR'S WELL #: 5H</p> <p>API WELL #: 47</p>
	<p>RECEIVED 69 00195</p> <p>Office of Oil and Gas</p> <p>STATE COUNTY PERMIT</p>	<p>JAN 26 2016</p>

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

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CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED

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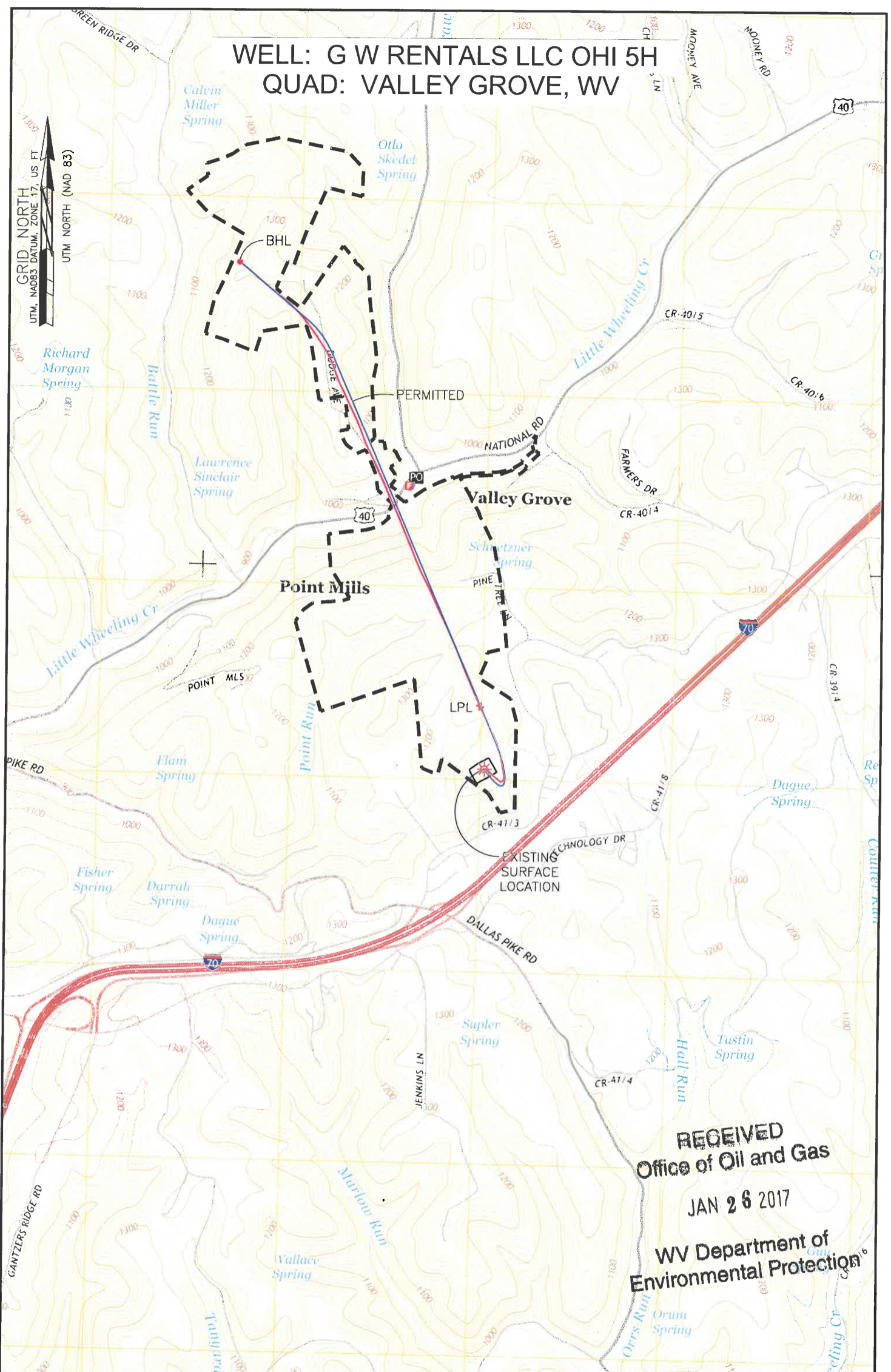
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ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300

CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

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		WELL LOCATION PLAT

WELL: G W RENTALS LLC OHI 5H QUAD: VALLEY GROVE, WV



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WV Department of
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PROPERTY LINE AND OWNERS WERE OBTAINED FROM VARIOUS FIELD
EVIDENCE, TAX RECORDS AND AERIAL MAPPING.

LEGEND
----- EXTERNAL LEASE LINE

Applicant / Well Operator Name SWN PRODUCTION COMPANY, LLC	Well (Farm) Name G W RENTALS LLC OHI	Well # 5H	Serial #
Address PO BOX 1300, JANE LEW, WV 76378	County - Code OHIO - 69	District TRIADELPHIA	
Surface Landowner / Lessor G W RENTALS LLC	USGS 7 1/2 Quadrangle Map Name VALLEY GROVE, WV		