D1708/2016

WR-35 Rev. 8/23/13

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

API 47 - 103 - 03096 County WE	TZEL I	District PROCTO	
Quad WILEYVILLE Pad Name R	DGETOP LAND VENTURES-WTZ-PAD1	Field/Pool Name 👤	VICTORY
Farm name RIDGETOP CAPITAL, LP		Well Number RIDG	GETOP LAND VENTURES WTZ 1H
Operator (as registered with the OOG) SWN PRODU	CTION COMPANY LLC		
Address PO BOX 12359 City	SPRING	State TX	Zip 77391-2359
As Drilled location NAD 83/UTM Attach an as- Top hole Northing 4,390,722  Landing Point of Curve Northing 4,391,370  Bottom Hole Northing 4,391,370	drilled plat, profile view, and 2.300 East 2.403 East 2.276 East	deviation survey ing 528,013.500 ng 527,785.554 ng 526,771.048	
Elevation (ft) 1436' GL Type of W	/ell ■New □ Existing	Type of Repor	t   Interim   Final
Permit Type   Deviated   Horizontal   Ho	rizontal 6A 🛛 Vertical	Depth Type	□ Deep ■ Shallow
Type of Operation □ Convert □ Deepen ■ Drill	□ Plug Back □ Redril	ling □ Rework	■ Stimulate
Well Type □ Brine Disposal □ CBM ■ Gas □ Oil	□ Secondary Recovery □ So	lution Mining 🗆 S	Storage   Other
Type of Completion ■ Single □ Multiple Fluids I	Produced Brine BGas	□ NGL	Other
Drilled with □ Cable ■ Rotary			
Drilling Media Surface hole ■ Air □ Mud □ Fres	h Water Intermediate h	ole <b>∄</b> Air □ Mu	ıd □ Fresh Water □ Brine
Production hole  Air  Mud  Fresh Water			
Mud Type(s) and Additive(s)  SOBM			
00/00/0040	0.4/20/2045	<del></del>	g ceased 05/07/2015
	commenced 04/20/2015	Date arming	5 00450045
Date completion activities began 07/19/2015	Date completion activ	vities ceased	00/1//2013
Verbal plugging (Y/N) N Date permission g	ranted	_ Granted by	
Please note: Operator is required to submit a plugging a	pplication within 5 days of v	erbal permission to	plug
Freshwater depth(s) ft 345' (BOTTOM)	Open mine(s) (Y/N) d	epths	N
Salt water depth(s) ft 1100' (TOP)	Void(s) encountered (	Y/N) depths	
Coal depth(s) ft1349.65' TO 2576.50'	Cavern(s) encountered	OVAC depths	N
Is coal being mined in area (Y/N)N	Office of	Oil & Gas	Reviewed by:
	AIIIV 9	, ma / 1117	nonionea by.

WERE TRACERS USED □ Yes ■ No

Rev. 8/23/13 Farm name\_RIDGETOP CAPITAL, LP RIDGETOP LAND VENTURES WTZ 1H API 47- 103 -03096 Well number Did cement circulate (Y/N) Basket Casing New or Grade **CASING** Hole \* Provide details below\* Depth(s) Depth Used wt/ft **STRINGS** Size Size Conductor 24" F-25/94# Υ NEW 20" 122' Υ Surface 13.375" 792.80' NEW J-55/54.5# 17.5" Coal SEE INTERMEDIATE Intermediate 1 Υ J-55/40# 12.25" 9.625" 2986.51 NEW Intermediate 2 Intermediate 3 Production 8.75"/8.50" HCP-110/20# Υ 5.5" 12370' NEW Tubing 2.375" 8030.61 NEW L-80 Packer type and depth set Comment Details CEMENT Class/Type Number Slurry Yield WOC Volume Cement DATA of Cement of Sacks ( ft ³/sks) wt (ppg) (ft.3) Top (MD) (hrs) Conductor CLASS A **GROUT** 19.3 1.19 119 SURFACE 24 Surface CLASS A 733 15.6 1.19 872.27 **SURFACE** 8 Coal SEE INTERMEDIATE Intermediate 1 **CLASS A** 1130 15.6 1.19 1344.7 **SURFACE** 8 Intermediate 2 Intermediate 3 Production CLASS A 1089/1109 15.6 SURFACE 1.24/1.19 1350.36/1319.71 24 Tubing Drillers TD (ft) 12370' Loggers TD (ft) 12370' Deepest formation penetrated MARCELLUS Plug back to (ft) N/A Plug back procedure N/A Kick off depth (ft) 6741' 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 - 1 IN THE MIDDLE (WITH STOP COLLAR) AND TOP OF SHOE JOINT, THEN EVERY 3RD JOINT OF CASING INTERMEDIATE: 24 CENTRALIZERS - 1 IN THE MIDDLE (WITH STOP COLLAR) AND TOP OF SHOE JOINT, THEN EVERY 3RD JOINT OF CASING TO SURFACE, AND 1 ON THE LAST COLLAR IN THE HOLE PRODUCTION: 181 CENTRALIZERS - 1 SOLID BODY CENTRALIZER LOCKED IN AGAINST FLOAT COLLAR, 1 SOLID BODY CENTRALIZER ON EACH JOINT TO 30 DEGREES, 1 BOWSPRING EVERY 3RD JOINT TO SURFACE WAS WELL COMPLETED AS SHOT HOLE □ Yes 
■ No DETAILS Received Office of Oil & Gas WAS WELL COMPLETED OPEN HOLE? □ Yes 
■ No **DETAILS** 

TYPE OF TRACER(S) USED

Page of
---------

WR-35 Rev. 8/23/13

API 47- 103 \_ 03096

Farm name\_RIDGETOP CAPITAL, LP

\_\_\_Well number

RIDGETOP LAND VENTURES WTZ 1H

#### 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.

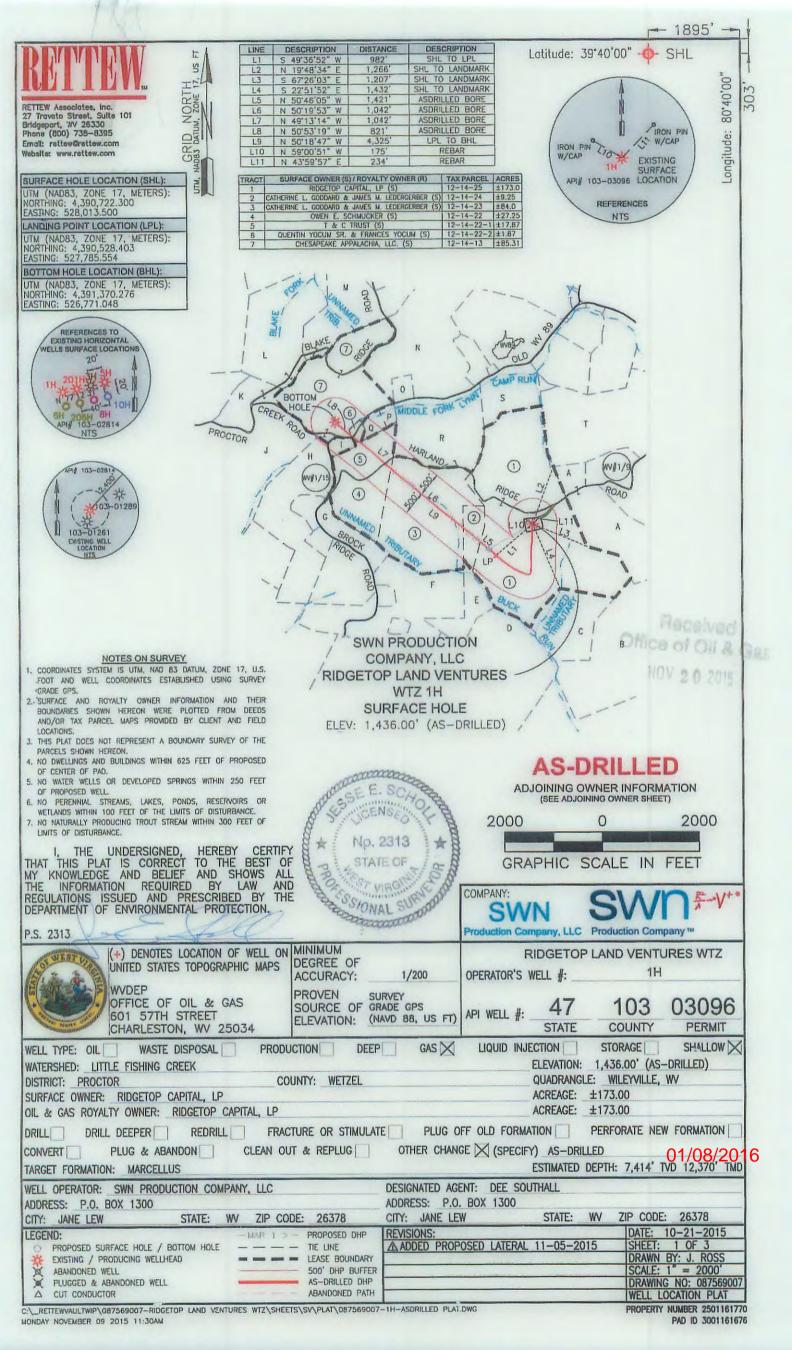
Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	EXHIBIT	2	·			
				†		1		
						<del> </del>		-
				<u> </u>				
						-		
			<u> </u>				<u> </u>	
			<del></del>	<del>  </del>				
	_							
	_							
							(Park	
							, Hec	3ived
							mice of	Dil & Gas
							NOV 2	Dil & Gas

Please insert additional pages as applicable.

WK-35 Rev. 8/23/13									Page 4 of
API 47- 103	_ 03096	Farm	name_RIDGET	OP CA	PITAL, LP	Well	numbe	r_RIDGETOP LAND	VENTURES WTZ 1H
PRODUCING	FORMATION(	<u>(S)</u>	<u>DEPTHS</u>						
MARCELLUS		<del></del>	7389.42'	TVD	7833.50'	MD			
		<del></del>		_ 1 1 1 1					
				_					
Please insert ac	dditional pages a	as applicable.		<del></del>					
GAS TEST	□ Build up □	Drawdown	□ Open Flow		OIL TEST .	Flow =	Pump	)	
SHUT-IN PRE	SSURE Surf	Face 300	psi Botto	m Hole <u>4</u>	788 psi	DURAT	LION (	OF TEST N/A	hrs
OPEN FLOW	Gas 6682 mcf	Oil pd <u>120</u>	NGL bpd	bpd	Water 0 bpd			JRED BY  □ Orifice □	⊐ Pilot
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTO DEPTH II MD	N FT DESCRIBE			RECORD QUAN'	
	0		0			(114			3,13,112,137
	SEE	EXHIBIT	3						
	<del> </del>								
									_
							_		
				<del></del>					
		i							
Please insert ac	lditional pages a	s applicable.	•						
Orilling Contra	octor NOMAC DE	RILLING							
Address 3400 S	OUTH RADIO ROA	AD	City	EL RENC	)	State	OK	Zip _73036	
			INE AND TESTI	NG					
	CHLUMBERGER D		City	SUGARI	AND	State	TX	Zip_77478_	
Cementing Cor	npany SCHLUM	BERGER WEI	LL SERVICES						
	CHLUMBERGER DI		City	SUGARI	AND	State	TX	Zip <u>77478</u>	<del> </del>
Stimulating Co	mpany BAKER	R HUGHES						^	Received
Address 9110 G	ROGANS MILL RE	)	City	THE WO	ODLANDS	State	TX	Zip 77380	rice of Oll &
Please insert ac	Iditional pages a	s applicable.	·						NOV 2 0 2015
Completed by	cody M	layby			Telephone	832	- 7 96	-6215	
		<del></del>	mid #	Δ	_, ,,,,,,		n .	11/19/15	<del></del>

45-1

Childre of Oil & Gas



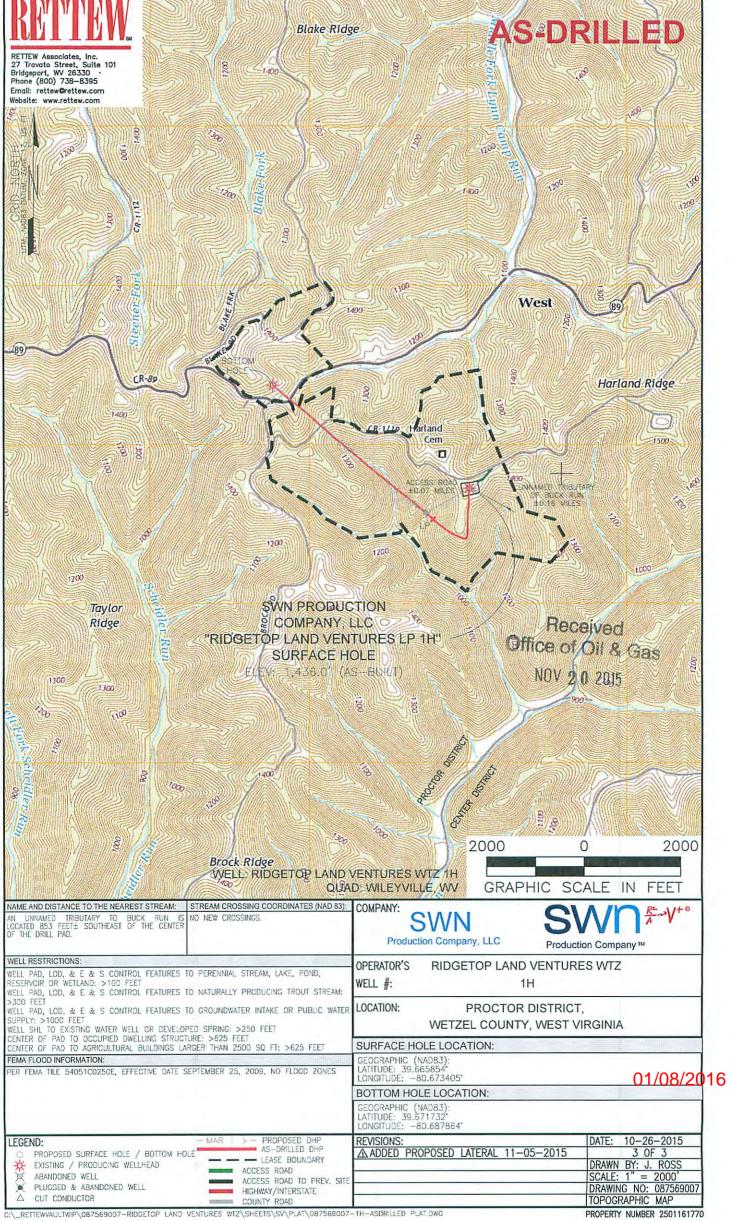


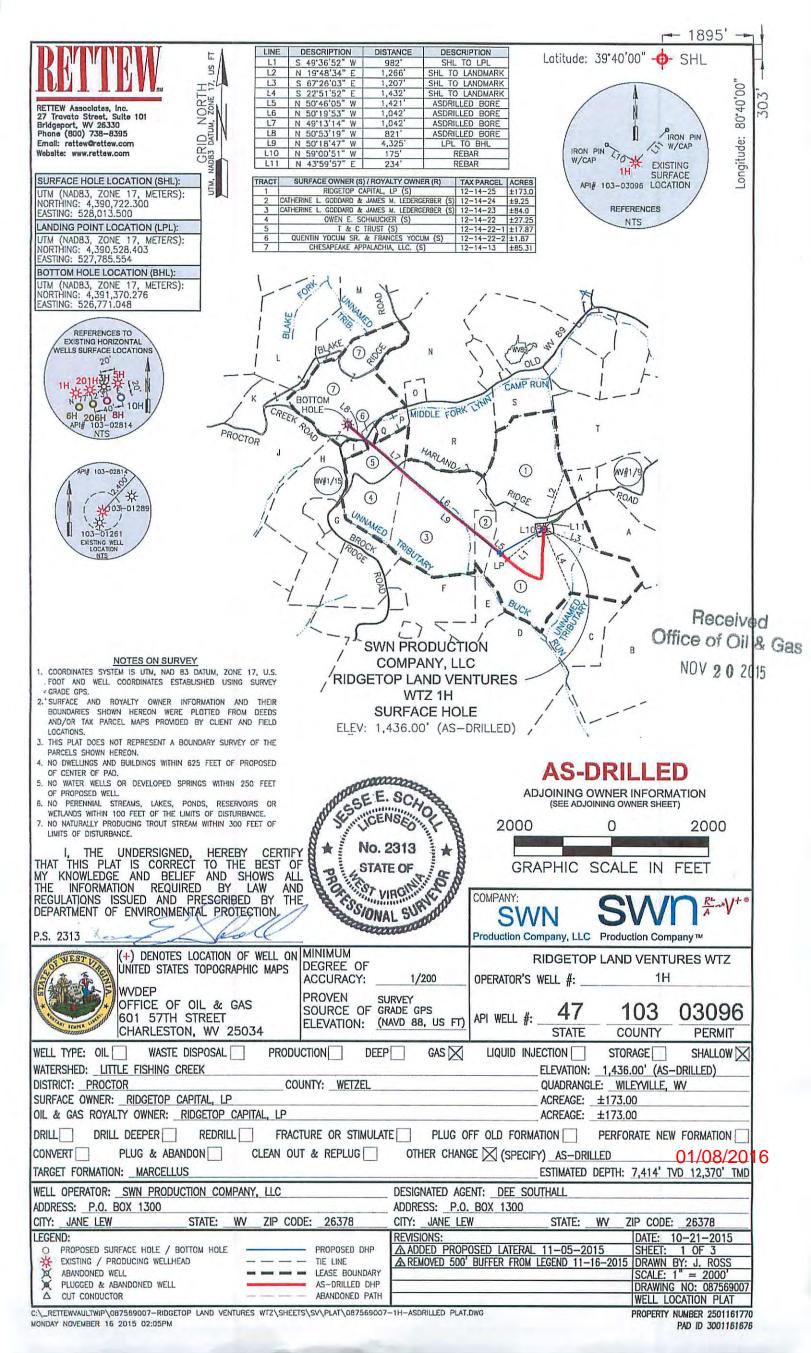


### ADJOINING OWNERS

TRACT	ADJOINING SURFACE OWNER	TAX PARCEL	ACRES
A	ANTHONY A PITOSIA & DAVID T. PITOSCIA	12-14-26	±66.58
В	ROBERT LEE CECIL	12-15-33	±139.0
С	MARY M. BALLOUZ DAVIS	12-14-35	±36.0
D	ERICK D. & PHYLLIS BECKER	12-18-7	±57.13
E	PAUL BRENT BLAKE, ET AL	12-14-34	±18.0
F	PAUL BRENT BLAKE, ET AL	12-14-32-3	±85.96
G	OWEN E. SCHMUCKER	12-14-21-4	±15.0
Н	JAMES H. FOGG	12-14-21-1	±66.44
1.	ALAN QUENTIN YOCUM, JR.	12-14-22-3	±3.21
J	BUSTER & BARBARA A. BLAKE	12-14-12-1	±134.5
K	SHEILA K. WHITE	12-14-12-4	±18.35
L	ROBERT C. & DENISE M. PENDLEBURY	12-14-3	$\pm 67.50$
М	NORMAN E. KEENEY, JR. & NANCY M. KEENEY	12-09-45	±113.4
N	RONNIE E. & YVONNE M. WADE	12-14-4-1	±94.37
0	RONNIE E. & YVONNE M. WADE	12-14-4-4	±5.00
Р	ALAN SHERAL YOCUM	12-14-22-4	±2.38
Q	JULIE SNIDER	12-14-22-6	±4.67
R	JAMES & JORETTA RITCHEA	12-14-40	±62.11
S	MICHAEL E. & VELVA C. LASURE	12-14-14	±25.00
T	WILLIAM R. PITOSCIA	12-14-16	±104.0

01/08/2016 COMPANY: REVISIONS: SWN △ADDED PROPOSED LATERAL 11-05-2015 Production Company, LLC Production Company™ DATE: 10-26-2015 RIDGETOP LAND VENTURES WTZ OPERATOR'S SHEET: 2 OF 3
DRAWN BY: J. ROSS
SCALE: NTS
DRAWING NO:087569007
ADJOINING OWNERS
PROPERTY NUMBER 2501161770
PAD ID 3001161676 WELL #: 1H LOCATION: PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA





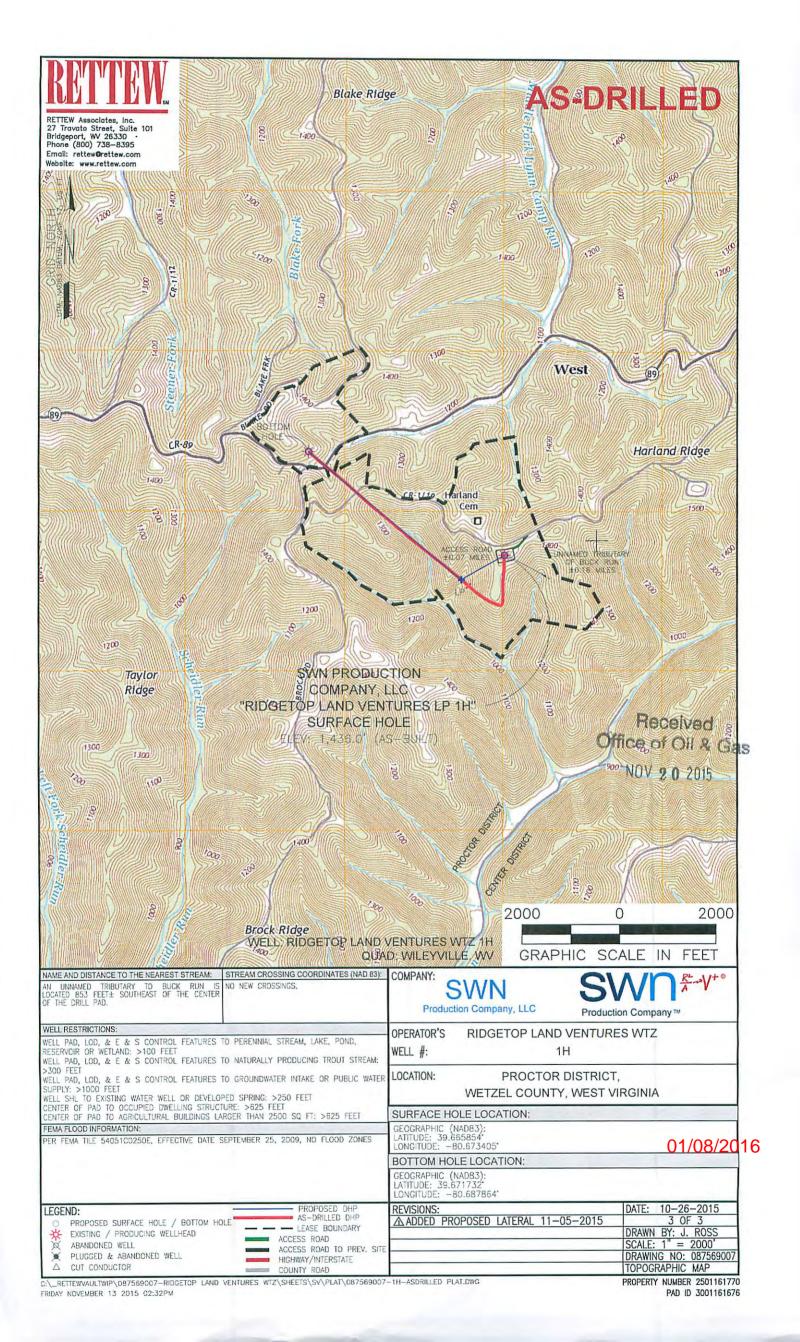


### **ADJOINING OWNERS**

TRACT	ADJOINING SURFACE OWNER	TAX PARCEL	ACRES
Α	ANTHONY A PITOSIA & DAVID T. PITOSCIA	12-14-26	±66.58
В	ROBERT LEE CECIL	12-15-33	±139.0
C	MARY M. BALLOUZ DAVIS	12-14-35	±36.0
D	ERICK D. & PHYLLIS BECKER	12-18-7	±57.13
E	PAUL BRENT BLAKE, ET AL	12-14-34	±18.0
F	PAUL BRENT BLAKE, ET AL	12-14-32-3	±85.96
G	OWEN E. SCHMUCKER	12-14-21-4	±15.0
Н	JAMES H. FOGG	12-14-21-1	±66.44
1	ALAN QUENTIN YOCUM, JR.	12-14-22-3	±3.21
J	BUSTER & BARBARA A. BLAKE	12-14-12-1	±134.5
K	SHEILA K. WHITE	12-14-12-4	±18.35
L	ROBERT C. & DENISE M. PENDLEBURY	12-14-3	±67.50
M	NORMAN E. KEENEY, JR. & NANCY M. KEENEY	12-09-45	±113.4
N	RONNIE E. & YVONNE M. WADE	12-14-4-1	±94.37
0	RONNIE E. & YVONNE M. WADE	12-14-4-4	±5.00
Р	ALAN SHERAL YOCUM	12-14-22-4	±2.38
Q	JULIE SNIDER	12-14-22-6	±4.67
R	JAMES & JORETTA RITCHEA	12-14-40	±62.11
S	MICHAEL E. & VELVA C. LASURE	12-14-14	±25.00
T	WILLIAM R. PITOSCIA	12-14-16	±104.0

Received Office of Oil & Gas NOV 2 0 2015

01/08/2016 COMPANY: REVISIONS: SWN △ADDED PROPOSED LATERAL 11-05-2015 Production Company, LLC Production Company™ OPERATOR'S RIDGETOP LAND VENTURES WTZ WELL #: 1H SCALE: NTS
DRAWING NO:087569007
ADJOINING OWNERS
PROPERTY NUMBER 2501161770
PAD ID 3001161676 LOCATION: PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA



## RIDGETOP LAND VENTURES WTZ 1 EXHIBIT 1

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG	FORMATION
1	7/19/2015	12,027	12,219	42	MARCELLUS
2	7/19/2015	11,763	11,963	42	MARCELLUS
3	7/20/2015	11,499	11,699	42	MARCELLUS
4	7/20/2015	11,235	11,435	42	MARCELLUS
5	7/20/2015	10,971	11,171	42	MARCELLUS
6	7/20/2015	10,707	10,907	42	MARCELLUS
7	7/21/2015	10,443	10,643	42	MARCELLUS
8	7/21/2015	10,179	10,379	42	MARCELLUS
9	7/21/2015	9,915	10,115	42	MARCELLUS
10	7/21/2015	9,651	9,851	42	MARCELLUS
11	7/21/2015	9,387	9,587	42	MARCELLUS
12	7/22/2015	9,123	9,323	42	MARCELLUS
13	7/22/2015	8,859	9,059	42	MARCELLUS
14	7/23/2015	8,595	8,795	42	MARCELLUS
15	7/23/2015	8,331	8,531	42	MARCELLUS
16	7/23/2015	8,067	8,267	42	MARCELLUS

Received
Office of Oil & Gas

NOV 20 2015

## RIDGETOP LAND VENTURES WTZ 1 EXHIBIT 2

}		Ave	Ave	Max				Amount
		Pump	Treatment	Breakdown		Amount of	Amount	of
STAGE		Rate	Pressure	Pressure	ISIP	Proppant	of water	nitrogen/
NUM	Stim Date	(BPM)	(PSI)	(PSI)	(PSI)	(lbs)	bbls	other
1	7/19/2015	101	8,138	8,708	4,684	485,518	7,490	
2	7/19/2015	100	8,181	9,183	4,929	502,697	7,336	
3	7/20/2015	100	8,058	8,400	4,880	502,435	7,176	
4	7/20/2015	101	8,099	8,707	5,184	503,999	7,205	
5	7/20/2015	102	7,983	8,383	5,024	502,615	7,228	
6	7/20/2015	100	7,759	8,513	4,734	501,666	7,709	
7	7/21/2015	102	7,798	8,502	4,482	504,079	7,178	
8	7/21/2015	102	7,725	8,167	5,201	501,433	7,030	
9	7/21/2015	101	7,730	8,137	5,197	500,723	7,071	
10	7/21/2015	101	7,790	8,709	5,026	472,913	6,773	
11	7/21/2015	101	7,527	7,948	4,994	503,504	7,519	
12	7/22/2015	102	7,510	8,208	4,742	501,452	6,963	
13	7/22/2015	101	7,561	8,450	4,760	491,214	6,811	
14	7/23/2015	102	7,193	7,881	5,041	506,427	7,191	
15	7/23/2015	100	7,429	9,343	5,386	500,550	7,165	
16	7/23/2015	100	7,511	7,888	5,505	504,240	7,129	
Gra	nd Total	101	7,750	9,343	4,986	7,985,465	114,974	

Received
Office of Oil & Gas
NOV 2 0 2015

### RIDGETOP LAND VENTURES WTZ 1H EXHIBIT 3

LITHOLOGY/FORMATION	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, TVD (FT)	TOP DEPTH, MD (FT)	BOTTOM DEPTH, MD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	N.A.	345.00	N.A.	345.00	
Top of Salt Water	1100.00	N.A.	1100.00	N.A.	
Pittsburgh Coal	1349.60	2576.31	1349.65	2576.50	?
Big Injun (ss)	2576.31	3135.76	2576.50	3136.00	?
Berea (siltstone)	3135.76	6738.72	3136.00	6900.10	?
Rhinestreet (shale)	6738.72	7054.54	6900.10	7238.27	?
Cashaqua (shale)	7054.54	7173.07	7238.27	7388.55	?
Middlesex (shale)	7173.07	7259.60	7388.55	7522.82	?
Burket (shale)	7259.60	7284.35	7522.82	7565.58	?
Tully (ls)	7284.35	7306.07	7565.58	7605.68	?
Mahantango (shale)	7306.07	7389.42	7605.68	7833.50	3/
Marcellus (shale)	7389.42	N.A.	7833.50	N.A.	?

Office of Oil & Gas

### Hydraulic Fracturing Fluid Product Component Information Disclosure

6/30/2015	Job Start Date:
7/23/2015	Job End Date:
West Virginia	State:
Wetzel	County:
47-103-03096-00-00	API Number:
Southwestern Energy	Operator Name:
RIDGETOP LAND VENTURES WTZ	Well Name and Number:
1H	
-80.68736000	Longitude:
39.67124000	Latitude:
NAD27	Datum:
NO	Federal/Tribal Well:
7,299	True Vertical Depth:
4,189,332	Total Base Water Volume (gal):
0	Total Base Non Water Volume:
	Title Hand Wall Lines Committee







### 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	82.60053	
Sand, White, 40/70	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		9.58565	
Sand, White, 100 nesh	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		6.41162	
HCI, 10.1 - 15%	Baker Hughes	Acidizing					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		1.22154	SmartCare Product
MaxPerm-20A, 265 gallon tote	Baker Hughes	Friction Reducer					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.09202	SmartCare Product
Alpha 1427	Baker Hughes	Biocide					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00966	SmartCare Product
Scaletrol 720	Baker Hughes	Scale Inhibitor					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00912	SmartCare Product
errotrol 300L	Baker Hughes	Iron Control					

			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00838Sma	rtCare Product
39	Baker Hughes	Corrosion Inhibitor					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00252	
GBW-5	Baker Hughes	Breaker					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00142Sma	rtCare Product
gredients shown ab	ove are subject to 29 C	FR 1910.1200(i) and a	ppear on Material Safety Data She	eets (MSDS). Ingredien	ts shown below are Non-N	MSDS.	
redients in Additive	Baker Hughes	See Trade Name(s)					
(MSDS and non-		List					
MSDS)			Crystalline Silica (Quartz)	14808-60-7	100.00000	15.98614	
			Water Water	7732-18-5	85.00000	1.10750	
			T CONTRACTOR	7647-01-0	15.00000	0.18310	
			Hydrochloric Acid	7277		The state of the s	
			1-Propanesulfonic acid, 2- methyl-2-[(1-oxo-2-propen-1-yl)	83446-68-8	60.00000	0.05517	
			aminol-, polymer with 2-				
			propenamide, sodium salt				
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02759	
			Citric Acid	77-92-9	60.00000	0.00502	
			Sodium Chloride	7647-14-5	5.00000	0.00469	
			Oxyalkylated alcohol	78330-21-9	5.00000	0.00460	
			Sorbitan, mono-(9Z)-9- octadecenoate	1338-43-8	5.00000	0.00460	
			Polyoxyethylene sorbitan monooleate	9005-65-6	5.00000	0.00460	
			Ethylene Glycol	107-21-1	45.00000	0.00410	
			Glutaraldehyde	111-30-8	30.00000	0.00290	
			2-Propenoic, Polymer with Sodium Phosphinate, Sodium Salt	71050-62-9	20.00000	0.00182	
			Ammonium Persulphate	7727-54-0	100.00000	0.00142	
			Oxyalkylated Fatty Acid	61791-002	40.00000	0.00101	
	2		Didecyl Dimethyl Ammonium Chloride	7173-51-5	10.00000	0.00097	
	2 0		Formic Acid	64-18-6	30.00000	0.00076	
	2 0	D	Aldehyde	104-55-2	30.00000	0.00076	
	20	900	Tar Bases, Quinoline Derivs., Benzyl Chloride-Quaternized	72480-70-7	30.00000	0.00076	
	27	-	Quaternary Ammonium Compound	68424-85-1	5.00000	0.00061	
	जं रू	Ď.	Ethanol	64-17-5	5.00000	0.00048	
	24		Calcium Chloride	10043-52-4	5.00000	0.00046	
	23		Isopropanol	67-63-0	5.00000	0.00013	
	200		Sulfurized polyolefin	68037-13-8	5.00000	0.00013	
			Potassium Chloride	7447-40-7	1.00000	0.00009	
			Potassium lodide	7681-11-0	2,00000	0.00005	
			Polyaklylene	7756-94-7	1.00000	0.00003	
			Potassium Acetate	127-08-2	0.50000	0.00003	

\* 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)

Received
Office of Oil & Gas
NOV 2 0 2015