

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

API 47-103-03097 County WETZEL District PROCTOR
Quad WILEYVILLE Pad Name RIDGETOP LAND VENTURES-WTZ-PAD1 Field/Pool Name VICTORY
Farm name RIDGETOP CAPITAL, LP Well Number RIDGETOP LAND VENTURES WTZ 3H
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 4,390,725.031 Easting 528,025.402
Landing Point of Curve Northing 4,390,756.362 Easting 527,986.793
Bottom Hole Northing 4,391,663.531 Easting 526,907.451

Elevation (ft) 1436' 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 04/21/2015 Date drilling commenced 05/07/2015 Date drilling ceased 05/21/2015
Date completion activities began 07/17/2015 Date completion activities ceased 08/14/2015
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 345' (BOTTOM) Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1100' (TOP) Void(s) encountered (Y/N) depths N
Coal depth(s) ft 1347.80' TO 2574.98' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Received
Office of Oil & Gas
NOV 20 2015

Reviewed by:
Don 08/2016

API 47-103 - 03097 Farm name RIDGETOP CAPITAL, LP Well number RIDGETOP LAND VENTURES WTZ 3H

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"	122'	NEW	J-55/94#		Y
Surface	17.5"	13.375"	835'	NEW	J-55/54.5#		Y
Coal	SEE INTERMEDIATE						
Intermediate 1	12.25"	9.625"	2983'	NEW	J-55/40#		Y
Intermediate 2							
Intermediate 3							
Production	8.75" TO 8.50"	5.5"	6529'/12607'	NEW	HCP-110/20#		Y
Tubing		2.375"	7925.2'	NEW	L-80		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	119	SURFACE	24
Surface	CLASS A	740	15.6	1.19	880.6	SURFACE	8
Coal	SEE INTERMEDIATE						
Intermediate 1	CLASS A	1145	15.6	1.19	1362.55	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	1081/1173	15.6	1.24/1.19	1340.44/1395.87	SURFACE	24
Tubing							

Drillers TD (ft) 12607' Loggers TD (ft) 12607'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6579'

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 MIDDLE (WITH STOP COLLAR) AND TOP OF SHOE JOINT, THEN 1 ON TOP OF 3RD JOINT AND 1 AT TOP OF EVERY 3RD JOINT TO SURFACE.
 INTERMEDIATE: 13 CENTRALIZERS - 1 IN MIDDLE (WITH STOP COLLAR) AND TOP OF SHOE JOINT, THEN 1 ON TOP OF 3RD JOINT, 1 AT TOP OF EVERY 3RD JOINT TO SURFACE, AND 1 ON LAST COLLAR.
 PRODUCTION: 181 CENTRALIZERS - 1 SOLID BODY CENTRALIZER LOCKED AGAINST FLOAT COLLAR, 1 SOLID BODY CENTRALIZER ON EACH JOINT TO 30 DEGREES, ONE BOD SPRING 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 NOV 20 2015

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

API 47- 103 - 03097 Farm name RIDGETOP CAPITAL, LP Well number RIDGETOP LAND VENTURES WTZ 3H

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				
							Received Office of Oil & Gas NOV 20 2015	

Please insert additional pages as applicable.

01/08/2016

API 47- 103 - 03097 Farm name RIDGETOP CAPITAL, LP Well number RIDGETOP LAND VENTURES WTZ 3H

PRODUCING FORMATION(S)	DEPTHS		
<u>MARCELLUS</u>	<u>7386.95'</u>	<u>TVD</u>	<u>7781.90'</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 297 psi Bottom Hole 4785 psi DURATION OF TEST N/A hrs

OPEN FLOW Gas 6399 mcfpd Oil 1614 bpd NGL _____ bpd Water 0 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>EXHIBIT</u>	<u>3</u>		

Received
Office of Oil & Gas
NOV 20 2015

Please insert additional pages as applicable.

Drilling Contractor NOMAC DRILLING
Address 3400 SOUTH RADIO ROAD City EL RENO State OK Zip 73036

Logging Company SCHLUMBERGER WIRELINE AND TESTING
Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478

Cementing Company SCHLUMBERGER WELL SERVICES
Address 110 SCHLUMBERGER DRIVE City SUGAR LAND State TX Zip 77478

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 832-796-6215
Signature Cody Magby Title sr. Regulator Date 11/19/15

RETTEW

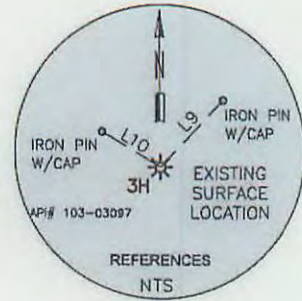
RETTEW Associates, Inc.
27 Travata Street, Suite 101
Bridgeport, WV 26330
Phone: (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,390,725.031 EASTING: 528,025.402
"LANDING POINT" LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,390,756.362 EASTING: 527,986.793
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UTM (NAD83, ZONE 17, METERS): NORTHING: 4,391,663.531 EASTING: 526,907.451

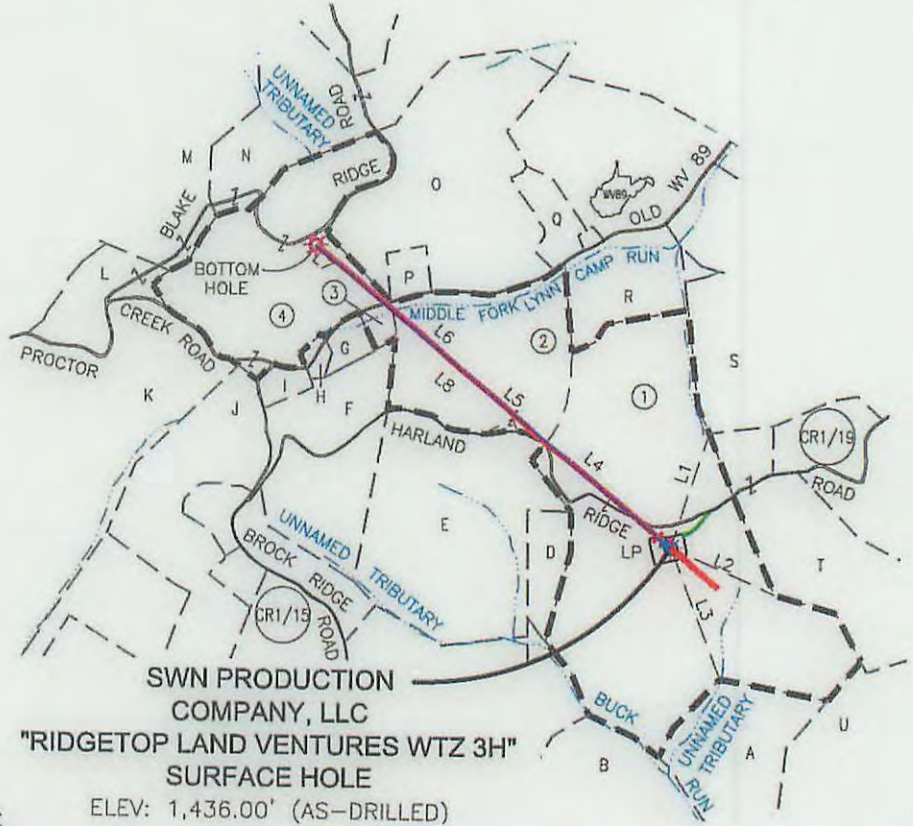
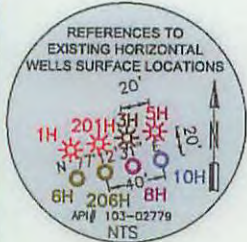
GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT

LINE	DESCRIPTION	DISTANCE	DESCRIPTION
L1	N 18°54'36" E	1,221'	SHL TO LANDMARK
L2	S 64°09'25" E	1,171'	SHL TO LANDMARK
L3	S 19°31'32" E	1,441'	SHL TO LANDMARK
L4	N 50°16'34" W	1,768'	ASDRILLED BORE
L5	N 49°38'26" W	854'	ASDRILLED BORE
L6	N 49°26'13" W	1,137'	ASDRILLED BORE
L7	N 50°16'52" W	867'	ASDRILLED BORE
L8	N 49°57'13" W	4,626'	LPL TO BHL
L9	N 43°59'57" E	23'	SHL TO REF. PNT.
L10	N 59°00'51" W	175'	SHL TO REF. PNT.

Latitude: 39°40'00" SHL



TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	RIDGETOP CAPITAL LP. (S)	12-14-25	±173.00
2	JAMES & JORETTA RITCHEA (S)	12-14-4	±62.11
3	SHERAL ALAN YOCUM (S)	12-14-22.4	±2.38
4	CHESAPEAKE APPALACHIA, LLC (S)	12-14-13	±85.30



NOTES ON SURVEY

- COORDINATES 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 FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS AND BUILDINGS 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, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

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. 2313



(+) 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 **SWN** Production Company, LLC

RIDGETOP LAND VENTURES WTZ
OPERATOR'S WELL #: 3H
API WELL #: 47 103 03097
STATE COUNTY PERMIT

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

WATERSHED: LITTLE FISHING CREEK
DISTRICT: PROCTOR COUNTY: WETZEL
SURFACE OWNER: RIDGETOP CAPITAL, LP
OIL & GAS ROYALTY OWNER: RIDGETOP CAPITAL, LP
ELEVATION: 1,436.00' (AS-DRILLED)
QUADRANGLE: WILEYVILLE, WV
ACREAGE: ±173.00
ACREAGE: ±173.00

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 ESTIMATED DEPTH: 7,404' TVD 12,607' 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: 10-26-2015
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	△ ADDED PROPOSED LATERAL 11-05-2015	
★ EXISTING / PRODUCING WELLHEAD	△ REMOVE 500' BUFFER FROM LEGEND 11-16-2015	
⊗ ABANDONED WELL		
⊗ PLUGGED & ABANDONED WELL		
△ CUT CONDUCTOR		
— PROPOSED DHP		
- - - TIE LINE		
- - - LEASE BOUNDARY		
— AS-DRILLED DHP		
- - - ABANDONED PATH		
		DRAWN BY: J. ROSS
		SCALE: 1" = 2000'
		DRAWING NO: 087569007
		WELL LOCATION PLAT



ADJOINING OWNERS

AS-DRILLED

RETTEW Associates, Inc.
 27 Travato Street, Suite 101
 Bridgeport, WV 26330
 Phone (800) 738-8395
 Email: rettetw@rettetw.com
 Website: www.rettetw.com

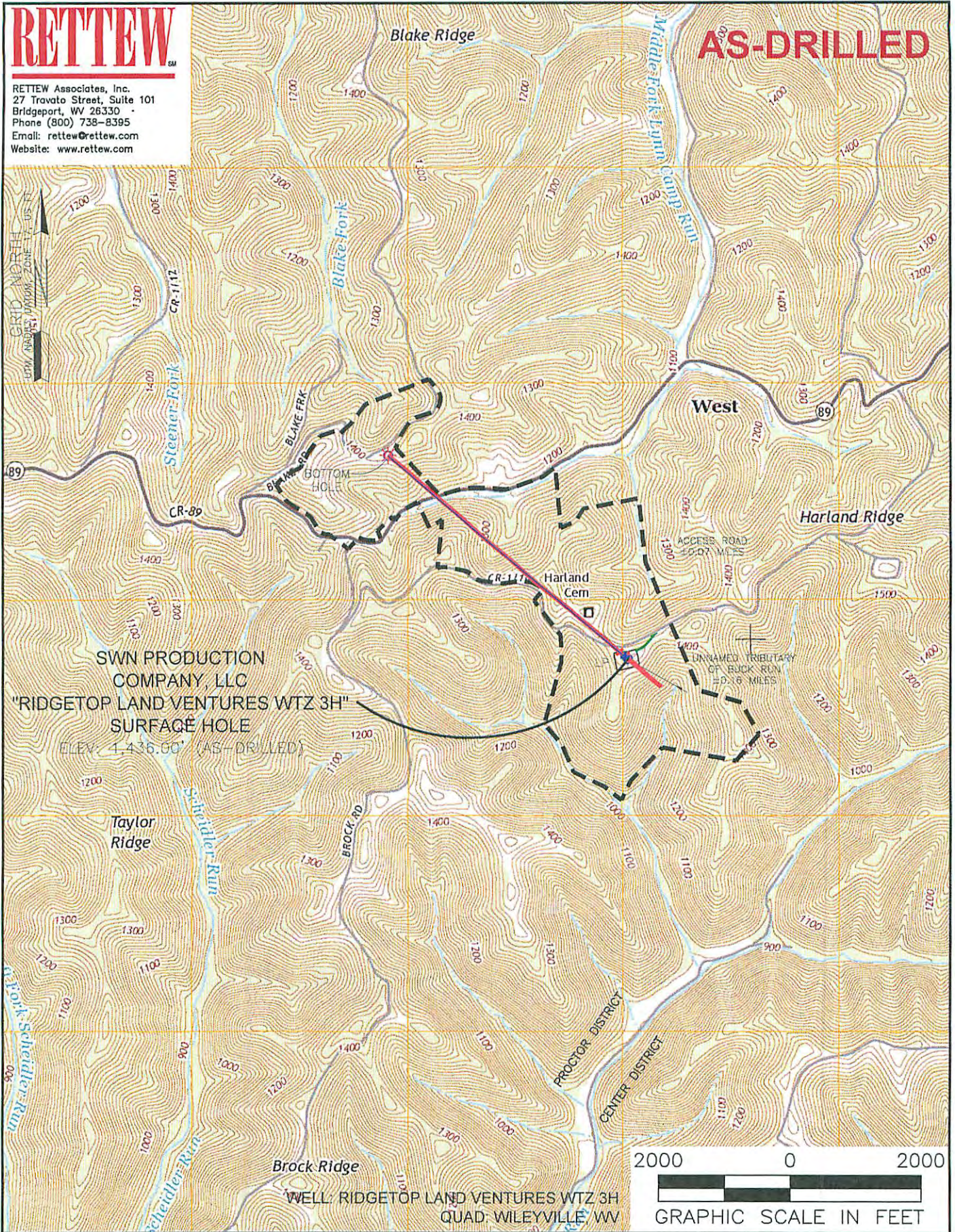
TRACT	ADJOINING PROPERTY OWNERS	TAX PARCEL	ACRES
A	DEBORAH REIN	12-14-35	±36.68
B	ERICK D. & PHYLLIS BECKER	12-18-07	±57.13
C	BRENT PAUL BLAKE, ETAL	12-14-34	±18.00
D	CATHERINE L. GODDARD & JAMES M. LEDERGERBER	12-14-24	±9.25
E	CATHERINE L. GODDARD & JAMES M. LEDERGERBER	12-14-23	±84.00
F	T & C TRUST, LEE ESTHER TRUSTEE	12-14-22.1	±17.87
G	JULIE SNIDER	12-14-22.6	±4.67
H	QUENTIN SR & FRANCES YOCUM	12-14-22.2	±1.87
I	QUENTIN ALAN YOCUM, JR	12-14-22.3	±3.21
J	JAMES H. FOGG	12-14-21.1	±66.45
K	BUSTER & BARBARA A. BLAKE	12-14-12.1	±134.46
L	SHEILA K. WHITE	12-14-12.4	±18.35
M	ROBERT C. & DENISE M. PENDLEBURY	12-14-03	±67.50
N	NORMAN E. JR & NANCY M. KEENEY	12-09-45	±113.36
O	RONNIE E. & YVONNE M. WADE	12-14-04.1	±94.37
P	RONNIE E. & YVONNE M. WADE	12-14-04.4	±5.00
Q	LEAH M. SNOW	12-14-04.3	±6.92
R	MICHAEL E. & VELVA C. LASURE	12-14-14	±25.00
S	WILLIAM R. PITOSCIA	12-14-16	±104.01
T	ANTHONY A. & DAVID T. PITOSCIA	12-14-26	±66.58
U	ROBERT LEE CECIL	12-15-33	±139.04

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

RETTEW

RETTEW Associates, Inc.
27 Travato Street, Suite 101
Bridgeport, WV 26330
Phone (800) 738-8395
Email: rettetw@rettetw.com
Website: www.rettetw.com

AS-DRILLED



SWN PRODUCTION COMPANY, LLC
"RIDGETOP LAND VENTURES WTZ 3H"
SURFACE HOLE
ELEV. 4,436.00' (AS-DRILLED)

WELL: RIDGETOP LAND VENTURES WTZ 3H
QUAD: WILEYVILLE WV



NAME AND DISTANCE TO THE NEAREST STREAM: AN UNNAMED TRIBUTARY TO BUCK RUN IS LOCATED 0.16 MILES± SOUTHEAST OF THE CENTER OF THE DRILL PAD.		STREAM CROSSING COORDINATES (NAD 83): NO NEW CROSSINGS.		COMPANY: 	
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 RIDGETOP LAND VENTURES WTZ WELL #: 3H		LOCATION: PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA	
FEMA FLOOD INFORMATION: PER FEMA TILE 54051C0250E, EFFECTIVE DATE SEPTEMBER 25, 2009, NO FLOOD ZONES		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 39.665878° LONGITUDE: -80.673266°		NOV 20 2015 01/08/2016	
LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE EXISTING / PRODUCING WELLHEAD ABANDONED WELL PLUGGED & ABANDONED WELL CUT CONDUCTOR		PROPOSED DHP AS-DRILLED DHP LEASE BOUNDARY ACCESS ROAD ACCESS ROAD TO PREV. SITE HIGHWAY/INTERSTATE COUNTY ROAD		REVISIONS: Δ ADDED PROPOSED LATERAL 11-05-2015	
		DATE: 10-26-2015		DRAWN BY: J. ROSS SCALE: 1" = 2000' DRAWING NO: 087569007 TOPOGRAPHIC MAP	

RETTEW

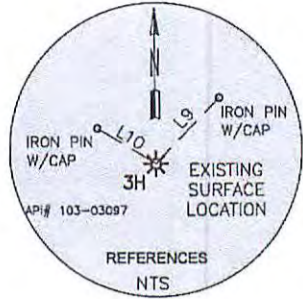
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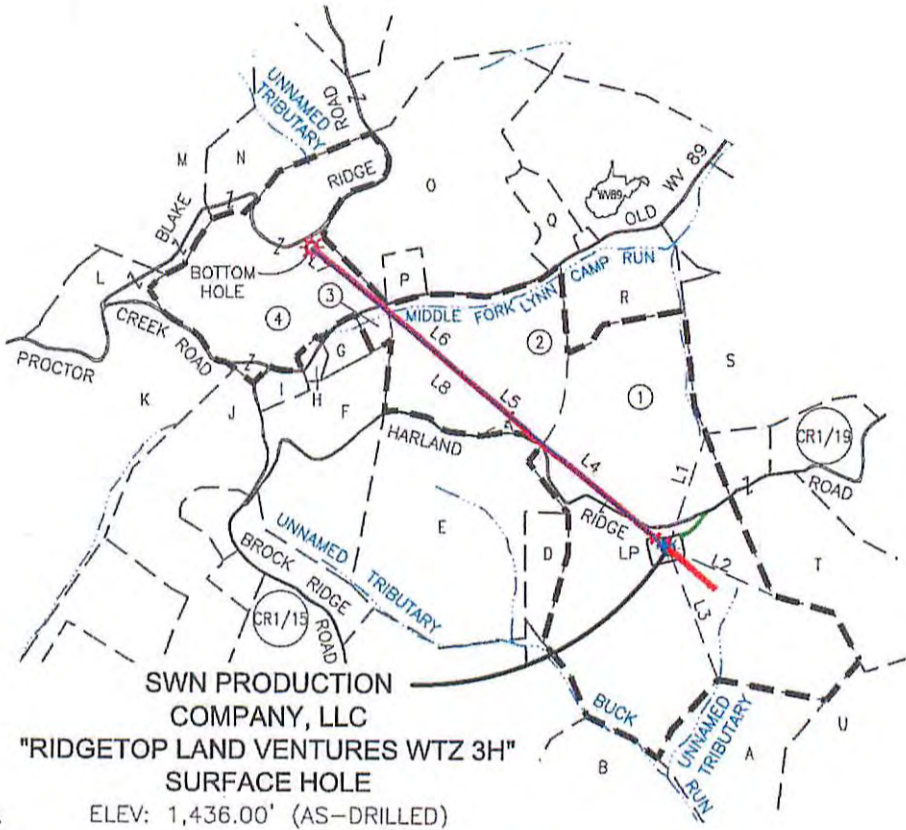
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TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
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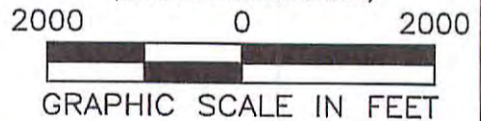
SWN PRODUCTION COMPANY, LLC
"RIDGETOP LAND VENTURES WTZ 3H"
SURFACE HOLE

ELEV: 1,436.00' (AS-DRILLED)

Receiver
Office of Oil & Gas
NOV 20 2015

AS-DRILLED

ADJOINING OWNER INFORMATION
(SEE ADJOINING OWNER SHEET)



NOTES ON SURVEY

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P.S. 2313



(+) 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 **SWN** Production Company™

RIDGETOP LAND VENTURES WTZ
OPERATOR'S WELL #: 3H
API WELL #: 47 103 03097
STATE COUNTY PERMIT

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

WATERSHED: LITTLE FISHING CREEK ELEVATION: 1,436.00' (AS-DRILLED)

DISTRICT: PROCTOR COUNTY: WETZEL QUADRANGLE: WILEYVILLE, WV

SURFACE OWNER: RIDGETOP CAPITAL, LP ACREAGE: ±173.00

OIL & GAS ROYALTY OWNER: RIDGETOP CAPITAL, LP ACREAGE: ±173.00

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 ESTIMATED DEPTH: 7,404' TVD 12,607' 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: 10-26-2015
○ PROPOSED SURFACE HOLE / BOTTOM HOLE	△ ADDED PROPOSED LATERAL 11-05-2015	
⊙ EXISTING / PRODUCING WELLHEAD	△ REMOVE 500' BUFFER FROM LEGEND 11-16-2015	
⊗ ABANDONED WELL		DRAWN BY: J. ROSS
⊗ PLUGGED & ABANDONED WELL		SCALE: 1" = 2000'
△ CUT CONDUCTOR		DRAWING NO: 087569007
— PROPOSED DHP		WELL LOCATION PLAT
- - - TIE LINE		
— LEASE BOUNDARY		
— AS-DRILLED DHP		
- - - ABANDONED PATH		



RETTEW Associates, Inc.
 27 Travato Street, Suite 101
 Bridgeport, WV 26330
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 Email: rettetw@rettetw.com
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ADJOINING OWNERS

AS-DRILLED

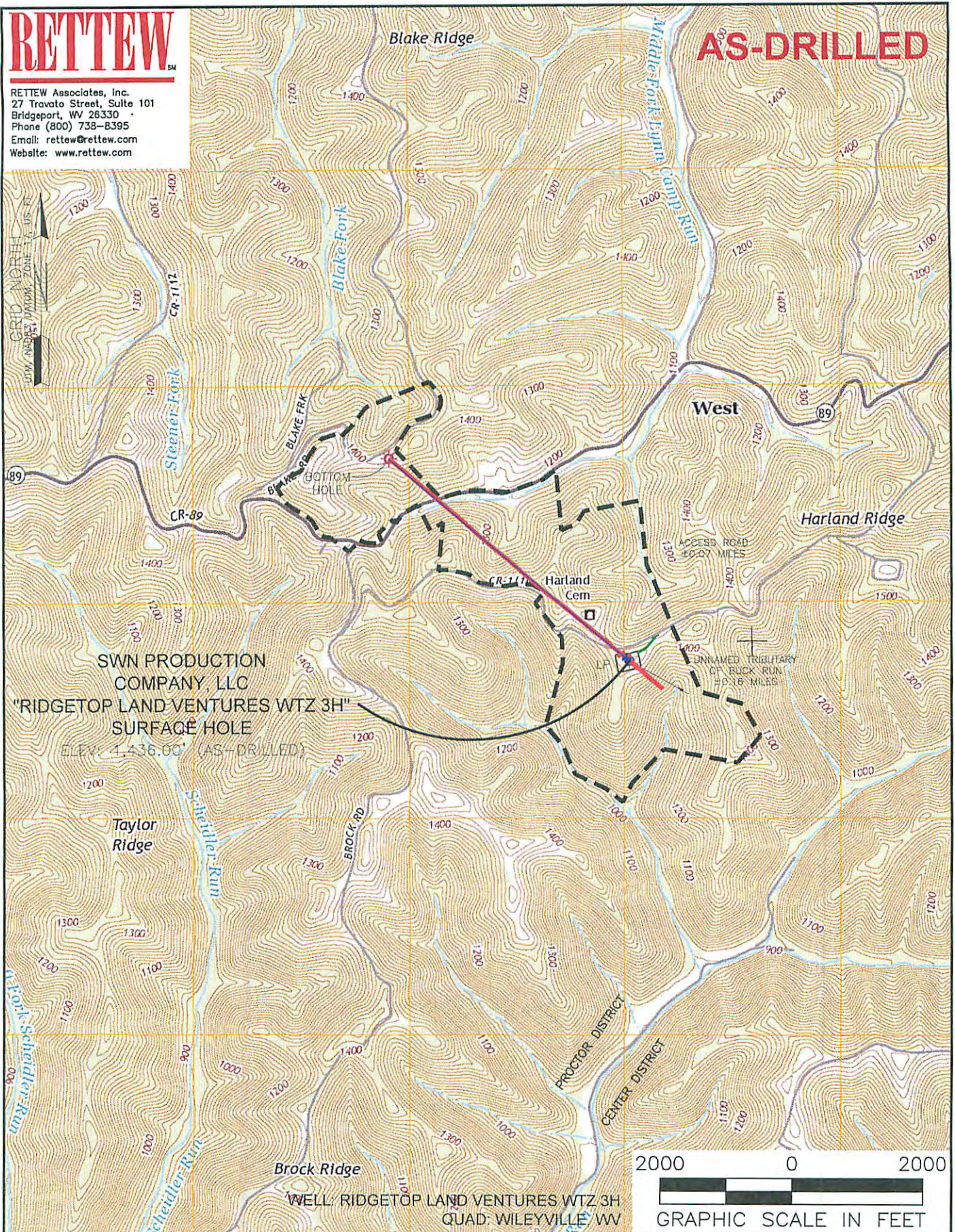
TRACT	ADJOINING PROPERTY OWNERS	TAX PARCEL	ACRES
A	DEBORAH REIN	12-14-35	±36.68
B	ERICK D. & PHYLLIS BECKER	12-18-07	±57.13
C	BRENT PAUL BLAKE, ETAL	12-14-34	±18.00
D	CATHERINE L. GODDARD & JAMES M. LEDERGERBER	12-14-24	±9.25
E	CATHERINE L. GODDARD & JAMES M. LEDERGERBER	12-14-23	±84.00
F	T & C TRUST, LEE ESTHER TRUSTEE	12-14-22.1	±17.87
G	JULIE SNIDER	12-14-22.6	±4.67
H	QUENTIN SR & FRANCES YOCUM	12-14-22.2	±1.87
I	QUENTIN ALAN YOCUM, JR	12-14-22.3	±3.21
J	JAMES H. FOGG	12-14-21.1	±66.45
K	BUSTER & BARBARA A. BLAKE	12-14-12.1	±134.46
L	SHEILA K. WHITE	12-14-12.4	±18.35
M	ROBERT C. & DENISE M. PENDLEBURY	12-14-03	±67.50
N	NORMAN E. JR & NANCY M. KEENEY	12-09-45	±113.36
O	RONNIE E. & YVONNE M. WADE	12-14-04.1	±94.37
P	RONNIE E. & YVONNE M. WADE	12-14-04.4	±5.00
Q	LEAH M. SNOW	12-14-04.3	±6.92
R	MICHAEL E. & VELVA C. LASURE	12-14-14	±25.00
S	WILLIAM R. PITOSCIA	12-14-16	±104.01
T	ANTHONY A. & DAVID T. PITOSCIA	12-14-26	±66.58
U	ROBERT LEE CECIL	12-15-33	±139.04

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

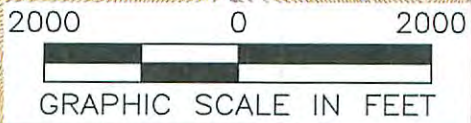
RETTEW

RETTEW Associates, Inc.
27 Travato Street, Suite 101
Bridgeport, WV 26330
Phone (800) 738-8395
Email: rettet@rettew.com
Website: www.rettet.com

AS-DRILLED



SWN PRODUCTION COMPANY LLC
"RIDGETOP LAND VENTURES WTZ 3H"
SURFACE HOLE
ELEV: 1,436.00' (AS-DRILLED)



WELL: RIDGETOP LAND VENTURES WTZ 3H
QUAD: WILEYVILLE WV

NAME AND DISTANCE TO THE NEAREST STREAM: AN UNNAMED TRIBUTARY TO BUCK RUN IS LOCATED 0.15 MILES± SOUTHEAST OF THE CENTER OF THE DRILL PAD.		STREAM CROSSING COORDINATES (NAD 83): NO NEW CROSSINGS.		COMPANY: 	
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 RIDGETOP LAND VENTURES WTZ WELL #: 3H		LOCATION: PROCTOR DISTRICT, WETZEL COUNTY, WEST VIRGINIA	
FEMA FLOOD INFORMATION: PER FEMA TILE 54051C0250E, EFFECTIVE DATE SEPTEMBER 25, 2009, NO FLOOD ZONES		SURFACE HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 39.665878° LONGITUDE: -80.673265°		BOTTOM HOLE LOCATION: GEOGRAPHIC (NAD83): LATITUDE: 39.674370° LONGITUDE: -80.686261°	
LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ✖ EXISTING / PRODUCING WELLHEAD ✖ ABANDONED WELL ✖ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR		— PROPOSED DHP — AS-DRILLED DHP - - - LEASE BOUNDARY — ACCESS ROAD — ACCESS ROAD TO PREV. SITE — HIGHWAY/INTERSTATE — COUNTY ROAD		REVISIONS: △ ADDED PROPOSED LATERAL 11-05-2015	
				DATE: 10-26-2015 DRAWN BY: J. ROSS SCALE: 1" = 2000' DRAWING NO: 087569007 TOPOGRAPHIC MAP	

01/08/2016

RIDGETOP LAND VENTURES WTZ 3

EXHIBIT 1

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG	FORMATION
1	7/18/2015	12,300	12,494	42	MARCELLUS
2	8/1/2015	12,044	12,238	42	MARCELLUS
3	8/1/2015	11,788	11,982	42	MARCELLUS
4	8/2/2015	11,532	11,726	42	MARCELLUS
5	8/2/2015	11,276	11,470	42	MARCELLUS
6	8/2/2015	11,020	11,214	42	MARCELLUS
7	8/2/2015	10,764	10,958	42	MARCELLUS
8	8/2/2015	10,508	10,702	42	MARCELLUS
9	8/3/2015	10,252	10,446	42	MARCELLUS
10	8/3/2015	9,996	10,190	42	MARCELLUS
11	8/3/2015	9,740	9,934	42	MARCELLUS
12	8/3/2015	9,484	9,678	42	MARCELLUS
13	8/3/2015	9,228	9,417	42	MARCELLUS
14	8/4/2015	8,972	9,166	42	MARCELLUS
15	8/4/2015	8,716	8,910	42	MARCELLUS
16	8/4/2015	8,460	8,654	42	MARCELLUS
17	8/5/2015	8,204	8,398	42	MARCELLUS
18	8/5/2015	7,948	8,142	42	MARCELLUS

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RIDGETOP LAND VENTURES WTZ 3

EXHIBIT 2

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	7/18/2015	100	8,250	9,249	4,977	392,696	5,693	
2	8/1/2015	93	8,376	9,230	4,967	388,933	6,811	
3	8/1/2015	96	8,318	8,942	4,872	349,348	5,759	
4	8/2/2015	98	8,180	8,438	5,091	394,843	6,068	
5	8/2/2015	100	8,381	9,018	5,272	392,627	6,091	
6	8/2/2015	100	8,191	8,887	4,775	395,502	6,784	
7	8/2/2015	100	7,880	8,893	4,958	392,428	5,870	
8	8/2/2015	99	7,941	8,136	4,867	393,111	5,943	
9	8/3/2015	99	8,023	8,274	5,107	393,341	5,940	
10	8/3/2015	99	8,077	8,535	4,730	390,539	5,618	
11	8/3/2015	101	7,861	8,337	4,923	390,066	5,718	
12	8/3/2015	100	7,874	8,392	5,074	392,663	5,673	
13	8/3/2015	100	8,054	8,401	4,635	391,657	5,836	
14	8/4/2015	101	7,782	8,082	4,635	393,879	5,831	
15	8/4/2015	102	7,859	8,264	4,947	389,583	5,774	
16	8/4/2015	101	7,783	8,260	4,805	390,696	5,538	
17	8/5/2015	100	7,829	8,864	5,086	394,015	7,190	
18	8/5/2015	100	7,813	8,073	4,706	404,400	5,890	
Grand Total		99	8,026	9,249	4,913	7,030,327	108,027	

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**RIDGETOP LAND VENTURES WTZ 3H
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	1347.79	2574.48	1347.80	2574.98	
Big Injun (ss)	2574.48	3138.41	2574.98	3139.50	
Berea (siltstone)	3138.41	6726.73	3139.50	6815.59	
Rhinestreet (shale)	6726.73	7045.81	6815.59	7157.08	
Cashaqua (shale)	7045.81	7168.10	7157.08	7309.25	
Middlesex (shale)	7168.10	7261.85	7309.25	7453.60	
Burket (shale)	7261.85	7279.59	7453.60	7485.43	
Tully (ls)	7279.59	7299.84	7485.43	7524.72	
Mahantango (shale)	7299.84	7386.95	7524.72	7781.90	
Marcellus (shale)	7386.95	N.A.	7781.90	N.A.	

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/29/2015
Job End Date:	8/5/2015
State:	West Virginia
County:	Wetzel
API Number:	47-103-03097-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	RIDGETOP LAND VENTURES WTZ 3H
Longitude:	-80.68644000
Latitude:	39.67428000
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,299
Total Base Water Volume (gal):	4,537,134
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	81.64096	
Sand, White, 40/70	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		10.19397	
Sand, White, 100 mesh	Baker Hughes	Proppant					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		6.34553	
HCl, 10.1 - 15%	Baker Hughes	Acidizing					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		1.60225	SmartCare Product
MaxPerm-20A, 265 gallon tote	Baker Hughes	Friction Reducer					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.11109	SmartCare Product
Ferrotrol 300L	Baker Hughes	Iron Control					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.01101	SmartCare Product
Alpha 1427	Baker Hughes	Biocide					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.01090	SmartCare Product
Scaletrol 720	Baker Hughes	Scale Inhibitor					

			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.01060	SmartCare Product
CI-39	Baker Hughes	Corrosion Inhibitor					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00322	
GBW-5	Baker Hughes	Breaker					
			MSDS and Non-MSDS Ingredients Listed Below	N/A		0.00179	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	16.52562	
			Water	7732-18-5	85.00000	1.44496	
			Hydrochloric Acid	7647-01-0	15.00000	0.24014	
			1-Propanesulfonic acid, 2- methyl-2-[(1-oxo-2-propen-1-yl) amino]-, polymer with 2- propenamide, sodium salt	83446-68-8	60.00000	0.06660	
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.03330	
			Citric Acid	77-92-9	60.00000	0.00660	
			Sodium Chloride	7647-14-5	5.00000	0.00566	
			Sorbitan, mono-(9Z)-9- octadecenoate	1338-43-8	5.00000	0.00555	
			Oxyalkylated alcohol	78330-21-9	5.00000	0.00555	
			Polyoxyethylene sorbitan monooleate	9005-65-6	5.00000	0.00555	
			Ethylene Glycol	107-21-1	45.00000	0.00477	
			Glutaraldehyde	111-30-8	30.00000	0.00327	
			2-Propenoic, Polymer with Sodium Phosphinate, Sodium Salt	71050-62-9	20.00000	0.00212	
			Ammonium Persulphate	7727-54-0	100.00000	0.00179	
			Oxyalkylated Fatty Acid	61791-002	40.00000	0.00128	
	Received		Didecyl Dimethyl Ammonium Chloride	7173-51-5	10.00000	0.00109	
			Aldehyde	104-55-2	30.00000	0.00096	
			Tar Bases, Quinoline Derivs., Benzyl Chloride-Quaternized	72480-70-7	30.00000	0.00096	
			Formic Acid	64-18-6	30.00000	0.00096	
			Quaternary Ammonium Compound	68424-85-1	5.00000	0.00071	
			Ethanol	64-17-5	5.00000	0.00054	
			Calcium Chloride	10043-52-4	5.00000	0.00053	
			Sulfurized polyolefin	68037-13-8	5.00000	0.00016	
			Isopropanol	67-63-0	5.00000	0.00016	
			Potassium Chloride	7447-40-7	1.00000	0.00011	
			Potassium Iodide	7681-11-0	2.00000	0.00006	
			Polyaklylene	7756-94-7	1.00000	0.00003	
			Potassium Acetate	127-08-2	0.50000	0.00002	

* 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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