west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 05, 2016

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-5101875, issued to SWN PRODUCTION COMPANY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: CRAIG STROPE MSH 1H
Farm Name: STROPE, RUSSELL W.
API Well Number: 47-5101875
Permit Type: Horizontal 6A Well
Date Issued: 02/05/2016

Promoting a healthy environment.

API Number: 51- 01875

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.

4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.

5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

WW-6B
(10/14)

API NO. 47- 51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator:	SWN Production Co., LLC	494512924	51-Marshall	9-Webster	453-Majorsville
		Operator ID	County	District	Quadrangle

2) Operator's Well Number: Craig Strope MSH 1H Well Pad Name: Craig Strope MSH Pad

3) Farm Name/Surface Owner: Craig D. & Russell W. Strope Public Road Access: Dry Ridge Lone Oak Rd

4) Elevation, current ground: 1278' Elevation, proposed post-construction: 1278'

5) Well Type (a) Gas x Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow x Deep _____
Horizontal X

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Target Formation- Marcellus, Target Top TVD-6678', Target Base TVD-6716', Anticipated Thickness-38', Associated Pressure- 4015

8) Proposed Total Vertical Depth: 6691'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 16,547'

11) Proposed Horizontal Leg Length: ~~9394.35'~~ 9670'

12) Approximate Fresh Water Strata Depths: 306'

13) Method to Determine Fresh Water Depths: nearby water wells and interpretation of wireline logs

14) Approximate Saltwater Depths: 1107'

15) Approximate Coal Seam Depths: 800'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No X

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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WW-6B
(10/14)

API NO. 47- 51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	94#	100'	100'	CTS
Fresh Water	13 3/8"	New	J-55	54.5#	406'	406'	151 sx/CTS
Coal	9 5/8"	New	J-55	40#	2155'	2155'	380 sx/CTS
Intermediate	7"	New	J-55	20#	If Needed	If Needed	If Needed/As Needed
Production	5 1/2"	New	HCP-110	20#	16,547'	16,547'	Lead 827 sx tail 2344 sx/100' inside int
Tubing	2 3/8'	New	P-110	4.7#	Approx. 6691'	Approx. 6691'	
Liners							

C. Tolo 12/1/15

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Max. Associated Surface Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	30"	0.25	2120	81	Class A	1.19/50% Excess
Fresh Water	13 3/8"	17.5"	0.380	2740	633	Class A	1.19/50% Excess
Coal	9 5/8"	12 1/4"	0.395	3950	1768	Class A	1.19/50% Excess
Intermediate	7"	8 3/4"	0.317	4360	3250	Class A	1.20/15% Excess
Production	5 1/2"	8 3/4"	0.361	12360	9500	Class A	1.20/15% Excess
Tubing	2 3/8"	4.778"	0.190				
Liners							

PACKERS

Kind:	10K Arrowset AS1-X			
Sizes:	5 1/2"			
Depths Set:				

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API NO. 47- 51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and stimulate any potential zones between and including the Benson to Marcellus. **If we should encounter a void place basket above and below void area- balance cement to bottom of void and grout from basket to surface. Run casing not less than 20' below void nor more than 50'-75' below void. (*If freshwater is encountered deeper than anticipated it must be protected, set casing 50'-75' below and cts.)

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface. The well is produced through surface facilities consisting of high pressure production unites, vertical separation units, water and oil storage tanks. Max press and anticipated max rate- 9000 lbs @ 80 barrels a minute.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 19.84

22) Area to be disturbed for well pad only, less access road (acres): 11.44

23) Describe centralizer placement for each casing string:

All casing strings will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

24) Describe all cement additives associated with each cement type:

See Attachment ***

25) Proposed borehole conditioning procedures:

All boreholes will be conditioned with circulation and rotation for a minimum of one bottoms up and continuing until operator is satisfied with borehole conditions.

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*Note: Attach additional sheets as needed.

Schlumberger Cement Additives

	Product Name	Product Use	Chemical Name	CAS Number
Surface	S001	accelerator	calcium chloride	10043-52-4
Intermediate	S001	accelerator	calcium chloride	10043-52-4
Kick Off Plug	D080	dispersant	sodium polynaphthalene sulfonate	9008-63-3
	D801	retarder	aromatic polymer derivative	propriatary
	D047	antifoam	polypropylene glycol	25322-69-4
Production-Lead	D167	fluid loss	aliphatic amide polymer	propriatary
	D154	extender	non-crystalline silica	7631-86-9
	D400	gas migration	boric acid	10043-35-3
	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgite)	8031-18-3
	D201	retarder	chrystalline silica	14808-60-7
			metal oxide	propriatary
	D202	dispersant	sulphonated synthetic polymer	propriatary
			formaldehyde (impurity)	propriatary
Production-Tail	D046	antifoam	polypropylene glycol	25322-69-4
			fullers earth (attapulgite)	8031-18-3
	D167	fluid loss	aliphatic amide polymer	propriatary
	D065	dispersant	sodium polynaphthalene sulfonate	9008-63-3
			sodium sulfate	7757-82-6
	D201	retarder	chrystalline silica	14808-60-7
			metal oxide	propriatary
	D153	anti-settling	chrystalline silica	14808-60-7

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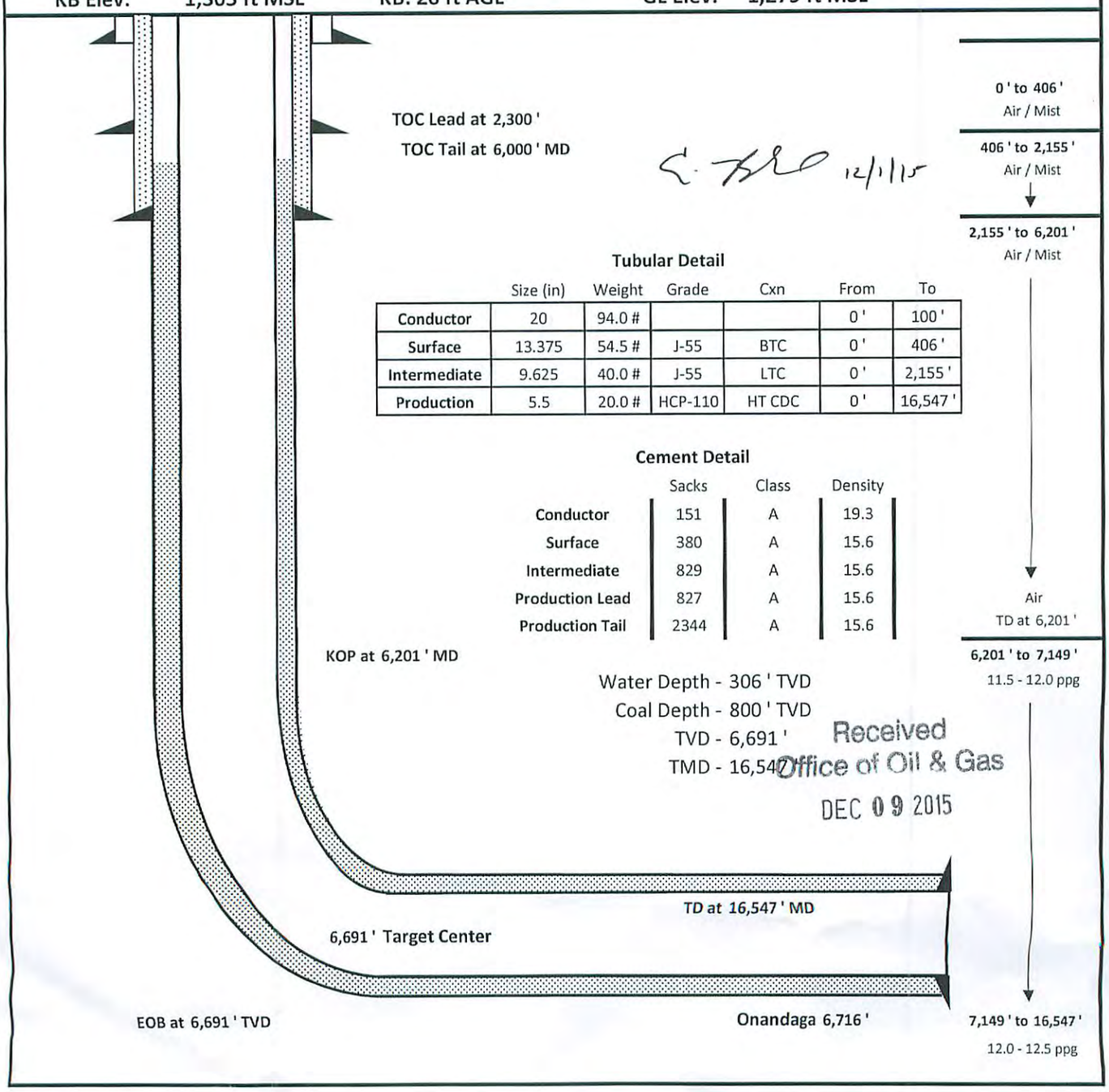
51-01875

Southwestern Energy Company | Proposed Drilling Program

Well:	CRAIG STROPE MSH 1	Re-entry Rig:	SDC 40
Field:	NORTH VICTORY FIE	Prospect:	VICTORY
County:	MARSHALL	State:	WV
SHL:	39.9307 Latitude	-80.57876 Longitude	
BHL:	39.9547 Latitude	-80.59427 Longitude	
KB Elev:	1,305 ft MSL	KB: 26 ft AGL	GL Elev: 1,279 ft MSL



12/1/15

Tubular Detail

	Size (in)	Weight	Grade	Cxn	From	To
Conductor	20	94.0 #			0 '	100 '
Surface	13.375	54.5 #	J-55	BTC	0 '	406 '
Intermediate	9.625	40.0 #	J-55	LTC	0 '	2,155 '
Production	5.5	20.0 #	HCP-110	HT CDC	0 '	16,547 '

Cement Detail

	Sacks	Class	Density
Conductor	151	A	19.3
Surface	380	A	15.6
Intermediate	829	A	15.6
Production Lead	827	A	15.6
Production Tail	2344	A	15.6

Water Depth - 306 ' TVD
Coal Depth - 800 ' TVD
TVD - 6,691 '
TMD - 16,547

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WW-9
(9/13)

API Number 47 - 51 - 01825
Operator's Well No. Craig Strope MSH 1H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name SWN Production Co., LLC OP Code 494512924

Watershed (HUC 10) Upper Wheeling Creek Quadrangle 453-Majorsville

Elevation 1278' County 51-Marshall District 9-Webster

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☑ No ☐

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: closed loop system in place at this time- cuttings will be taken to a permitted landfill.

Will a synthetic liner be used in the pit? Yes ☐ No ☑ If so, what ml.?

Proposed Disposal Method For Treated Pit Wastes:

- ☐ Land Application
- ■ Underground Injection (UIC Permit Number 2D0072539/ 2D0413175/ 2D0610306/ 2D0610317)
- ■ Reuse (at API Number at next anticipated well, API# will be included with the WR-34/DDMR &/or permit addendum.)
- ☐ Off Site Disposal (Supply form WW-9 for disposal location)
- ■ Other (Explain flow back fluids will be put in steel tanks and reused or taken to a permitted disposal facility.

Will closed loop system be used? If so, describe: Yes

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. air drill to KOP, fluid drill with SOBM from KOP to TD

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Oil Base

Additives to be used in drilling medium? see attached sheets

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust)

-Landfill or offsite name/permit number? meadow SWF- 1032, SS Grading SWF- 4902, Northwestern SWF- 1025, Short Creek 1034/WV0109517/CID28726, Carbon Limestone 28726/CID28726
Arden Landfill 100172, American 02-12954, Country Wide 38390/CID38390, Pine Grove 13688

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

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DEC 09 2015

Company Official Signature

Company Official (Typed Name) Dee Southall

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 9th day of November, 20 15

Brittany K Woody Notary Public

My commission expires 11/27/22

OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3302 Old Elkins Road
Buckhannon, WV 26201
My commission expires November 27, 2022

51-01875

Form WW-9

Operator's Well No. Craig Strope MSH 1H

SWN Production Co., LLC

Proposed Revegetation Treatment: Acres Disturbed 19.84 Prevegetation pH _____

Lime _____ (as determined by pH test min. 2) Tons/acre or to correct to pH _____

Fertilizer type 10-20-20

Fertilizer amount 600 lbs/acre

Mulch Hay/Straw 2.5 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
White Grove	15	White Grove	15
Red Top	15	Red Top	15
Orchard Grass	20	Orchard Grass	20

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: E. Bl 12/1/15

Comments: _____

Title: Oil and Gas Inspector Date: 12/1/15

Field Reviewed? (✓) Yes ( ) No

Marcellus Well Drilling Procedures
And Site Safety Plan

SWN Production Co., LLC

47 - 051 - 01875
Well name: Craig Strope MSH 1H
Majorsville, Quad
Webster, District
Marshall County, West Virginia

Submitted by: Danielle Southall Date: 11-9-2015

Title Regulatory Supervisor SWN Production Co., LLC

Approved by: _____ Date: 12/1/15

Title: Oil & Gas Inspector

Approved by: _____ Date: _____

Title: _____

51-01875

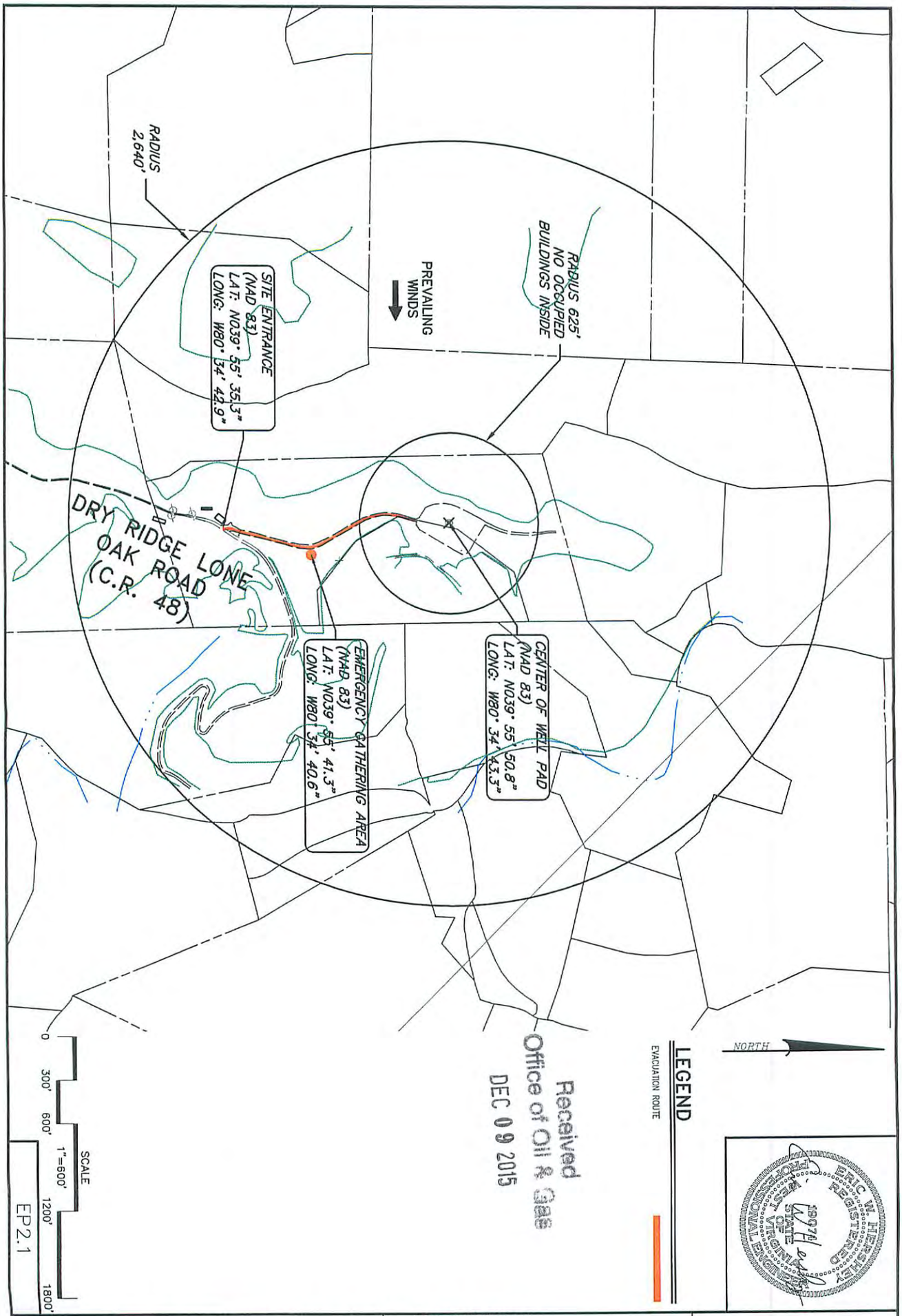
1. Contacts, Schedules, and Meetings

A. SWN Production Company, LLC. 24 Hour Hotline: **1-877-879-0376**

B(a). Emergency Telephone Numbers:

Agency Type	Name	Phone Number	Cell
County Police	Marshall County	911 or 304-843-1500	
State Police	Marshall County	304-843-4100	
Ambulance Service	Marshall County	911 or 304-843-1500	
Hospital	Marshall County	304-845-3211	
Fire Department	Marshall County	911 or 304-842-1500	
Marshall County OEM	Marshall County	304-737-5002	304-843-1130
Dicky Hall	Drilling Engineer Manager	832-796-7139	501-654-4161
Bill Igou	Drilling Superintendent	570-996-4272	501-269-2946
Danny Brooks	Drilling Superintendent	570-996-4298	
Peter Cain	HSE Field Specialist	281-217-4552	
Derek Cutright	Operations General Manager	281-618-7473	
Chris Flanagan	Production Field Manager	832-796-1626	
Michelle McCracken	Manager HSE	281-618-6284	304-522-1179
~~Jim Nicholson~~ Eric Bland	WV Oil and Gas Inspector		304-552-~~3874~~ 1179
Joe McCourt	Inspector Supervisor		304-380-2467
James Martin	Chief	304-926-0499 x 1654	see 12/1/17
OEM			
WV DEP	**Emergency Pollution and Spills**	**1-800-642-3074**	
Contractor's	**Company**	**Phone**	
Well Control Co's	Boots & Coots	1-800-256-9688	
	Halliburton	1-800-409-6479	
Earthwork/Equipment	Triple J Contractors	304-472-3962	
Remediation/Cleanup	Weaverton Environmental	724-746-4850	
Remediation/Cleanup	Ryan Environmental	304-842-5578	
Remediation/Cleanup	Central Environmental Services	304-863-8867	
Heavy Equipment	Kanawha Stone	304-755-8271	
Heavy Equipment/Rouster	Arvilla Pipeline	304-665-2652	
Heavy Equipment	Hoy Contracting	724-627-0272	
Cleanup Supplies	McJunkin Supply	304-472-3565	

51-01825 #5



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DEC 09 2015

ERIC W. HERSHEY
REGISTERED
PROFESSIONAL ENGINEER
STATE OF VIRGINIA
19071

EVACUATION ROUTE/PREVAILING WINDS
FOR
CRAIG STROPE MSH PAD A
WEBSTER DISTRICT MARSHALL COUNTY, WV

RETTEW
RETTEW Associates, Inc.
One Robinson Plaza, 6600 Steubenville Pike, Suite 200,
Pittsburgh, PA 15205
Phone (412) 446-1728 · Fax (412) 446-1733
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

DRAWN BY: MEB
DATE: 11/20/2015
SCALE: 1"=600'
DWG. NO. 087569037

SHL Latitude: 39°57'30" — 10,347' — BHL Latitude: 39°57'30" — 3,060' — 1,330' — BHL Longitude: 80°35'00" — 10,190' — SHL Longitude: 80°32'30"

RETTEW

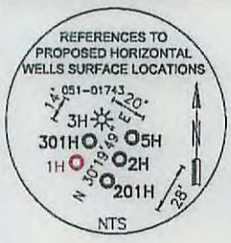
RETTEW Associates, Inc.
27 Travato Street, Suite 101
Bridgeport, WV 26330
Phone (800) 738-8395
Email: rettew@rettew.com
Website: www.rettew.com

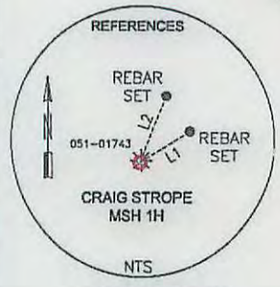
LINE	BEARING	DISTANCE	DESCRIPTION	MONUMENT
L1	N 58°02'22" E	263.10'	SHL TO REF. PNT.	1/2"ø REBAR SET
L2	N 21°25'30" E	321.13'	SHL TO REF. PNT.	1/2"ø REBAR SET
L3	S 77°34'30" E	39.03'	SHL TO LEASE BDY.	
L4	S 71°29'01" W	1665.58'	SHL TO UNIT BNDY.	
L5	S 87°01'13" W	1039.54'	SHL TO LP	
L6	N 20°53'50" W	9394.35'	LP TO BHL	

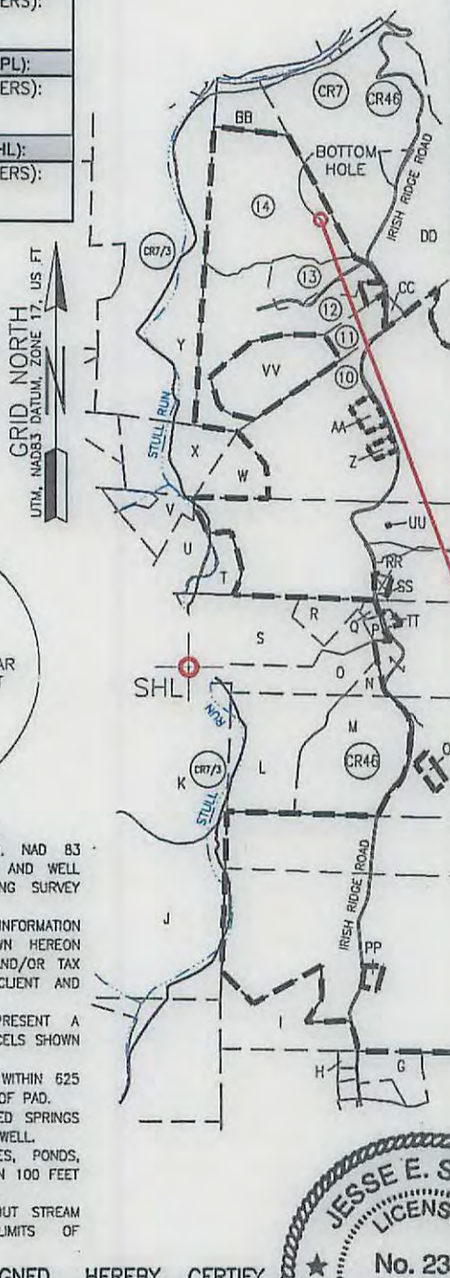
BHL

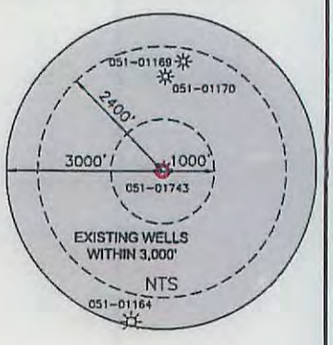
SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,420,151.793 EASTING: 535,993.381
LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,420,135.321 EASTING: 535,676.958
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,422,810.376 EASTING: 534,655.608

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	RUSSELL W. STROPE, ET AL	15-6-19	±53.00
2	CHARLES B. STROPE	15-9-14	±37.15
3	JOE M. KAISER AND SHIRLEY A. KAISER FAMILY REVOCABLE TRUST	15-6-17	±170.22
4	MARK BRENT FITZSIMMONS	15-6-15	±60.00
5	MICHAEL J. & LINDA V. BURKEY	15-6-14	±78.18
6	RICKEE JO FITZSIMMONS STROPE MARK BRENT FITZSIMMONS	15-6-6	±63.36
7	GARY W. STROPE, ET AL	15-6-5	±56.13
8	JOYCE E. GRIMM	15-6-3	±51.07
9	RENEE LYNN GRIMM EBERT	15-3-21	±68.00
10	JOYCE E. GRIMM	15-3-24	±39.11
11	BONNIE L. STRAUTMAN	15-3-25.2	±5.00
12	DORA J. CUNNINGHAM, ET AL	15-3-25	±10.00
13	ROBERT A. BENNETT	15-3-25.5	±35.15
14	RICHARD J. MARKONICH	15-3-2	±55.00









PROPOSED SHL
ELEV: 1278.8'

2000 0 2000
GRAPHIC SCALE IN FEET

NOTES ON SURVEY

1. COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. 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.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
7. 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

JESSE E. SCHOLL LICENSED No. 2313 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

COMPANY: SWN Production Company, LLC — SWN Production Company™

(+) 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 ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

OPERATOR'S WELL #: CRAIG STROPE MSH 1H

API WELL #: 47 (STATE) 51 (COUNTY) 01875164 (PERMIT)

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

WATERSHED: UPPER WHEELING CREEK — ELEVATION: ±1278.80 (PAD ASBUILT)

DISTRICT: WEBSTER — COUNTY: MARSHALL COUNTY — QUADRANGLE: MAJORSVILLE, WV-PA

SURFACE OWNER: RUSSELL W STROPE, ET AL — ACREAGE: ±53.00

OIL & GAS ROYALTY OWNER: RUSSELL W STROPE, CRAIG D STROPE, DONNA J STROPE — ACREAGE: ±53.00

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

CONVERT ☐ PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY)

TARGET FORMATION: MARCELLUS — ESTIMATED DEPTH: 6,691' TVD 16,548' 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:
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- ABANDONED WELL
- PLUGGED & ABANDONED WELL
- CUT CONDUCTOR
- TIE LINE
- SURFACE BOUNDARY
- LEASE BOUNDARY
- MARCELLUS DHP
- ABANDONED PATH

REVISIONS:	DATE: 10-05-2015
	DRAWN BY: B.HERMAN
	SCALE: 1" = 2000'
	DRAWING NO:087569037
	WELL LOCATION PLAT

C:_RETTEWVAULTWIP\087569037-CRAIG STROPE\SHEETS\SV\PLAT\087569037-1H-WELL PLAT.DWG
MONDAY DECEMBER 07 2015 01:31PM

PROPERTY NUMBER 2501164772
PAD ID 3001155505

51-0185

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

ADJOINING SURFACE OWNERS

TRACT	ADJOINING SURFACE OWNERS	TAX PARCEL	ACRES
A	JOHN S. KUTIS	15-6-20	±19.87
B	JOHN S. KUTIS	15-10-1	±53.08
C	RUSSELL W. STROPE; CRAIG D. STROPE;	15-9-15	±61.88
D	HAROLD E. AND LINDA K. ASHTON	15-9-18	±59.54
E	RONALD LEE YOHO	15-9-13	±30.00
F	RONALD LEE YOHO	15-9-12	±75.91
G	DONALD R. YOHO	15-9-12.2	±9.31
H	DONNA LOU MCMILLAN	15-9-11.2	±1.02
I	HARRY W. LILLEY	15-6-17.1	±19.50
J	WILLIAM E. COFFIELD	15-6-16	±77.40
K	CRAIG R. AND DONITA D. MILLER	15-6-11	±40.00
L	MARK BRENT FITZSIMMONS	15-6-12	±20.00
M	KATIE FITZSIMMONS	15-6-13	±28.30
N	KATIE FITZSIMMONS	15-6-7	±2.00
O	MARK BRENT FITZSIMMONS	15-6-8	±15.00
P	GARY W. STROPE	15-6-6.1	±1.00
Q	LARRY W. DUNLAP	15-6-9.1	±0.63
R	LARRY W. DUNLAP	15-6-9.2	±5.92
S	MARK BRENT FITZSIMMONS	15-6-9	±27.13
T	MARK BRENT FITZSIMMONS	15-6-2	±4.00
U	EDNA S. GALL AND FRANK P. LAUTAR	15-6-1	±5.00
V	JASPER N. GIVENS	15-3-28	±7.68
W	JAMES S. SHIPLEY	15-3-26	±8.00
X	BETTY SUE PACZEWSKI	15-6-27	±72.13
Y	SARA JO ANDERSON	15-2-4	±116.89
Z	WHEELING CREEK WATERSHED COMMISSION	15-3-24.1	±0.97
AA	LONNIE R. PETHTEL	15-3-23	±1.92
BB	ISKCON-NEW MATHURA VRINDABAN	15-3-1	±5.00
CC	OHIO VALLEY HEART INSTITUTE, INC.	15-3-25.1	±1.12
DD	SHARON HUPP AND RICHARD MARKONICH	15-3-3	±105.08
EE	OHIO VALLEY HEART INSTITUTE, INC.	15-3-20	±41.12
FF	WHEELING CREEK WATERSHED COMMISSION	15-3-19	±9.00
GG	WHEELING CREEK WATERSHED COMMISSION	15-3-18	±53.00
HH	BETTY SUE PACZEWSKI AND ALBERT J. PACZEWSKI	15-3-17	±21.00
II	BETTY SUE PACZEWSKI AND ALBERT J. PACZEWSKI	15-6-27	±72.13
JJ	WHEELING CREEK WATERSHED COMMISSION	15-6-6.2	±3.00
KK	KERRY GLENN FOSTER	15-6-24	±50.00
LL	RUSSELL W. STROPE; CRAIG D. STROPE;	15-6-23	±30.00
MM	CHRISTINE A. BERNIER	15-6-22	±3.26
NN	CHRISTINE A. BERNIER	15-6-33	±30.00
OO	MICHAEL J. BURKEY AND LINDA BURKEY	15-6-14.1	±1.53
PP	HERMAN D. ESTEL	15-6-17.2	±1.10
QQ	CRAIG D. STROPE	15-9-15.2	±5.01
RR	JULIE A. ANDERSON	15-6-5.1	±0.87
SS	MARK BRENT FITZSIMMONS	15-6-4	±0.25
TT	KYLEA J. REED	15-6-6.3	±0.93
UU	RENEE LYNN GRIMM EBERT	15-6-3.1	±0.06
VV	BONNIE L. STRAUTMAN	15-3-25.4	±19.88

REVISIONS:	COMPANY: SWN Production Company, LLC / SWN Production Company™	
	OPERATOR'S WELL #: CRAIG STROPE MSH 1H	DATE: 10-05-2015
	LOCATION: WEBSTER DISTRICT, MARSHALL COUNTY, WEST VIRGINIA	DRAWN BY: B.HERMAN SCALE: N/A DRAWING NO:087569037 WELL LOCATION PLAT

C:_RETTEWVAULTWIP\087569037-CRAIG STROPE\SHEETS\SV\PLAT\087569037-1H-WELL PLAT.DWG
MONDAY DECEMBER 07 2015 01:32PM

PROPERTY NUMBER 2501164772
PAD ID 3001155505

51-01875

RETTEW

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

TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES
1	RUSSELL W. STROPE, ET AL (S) RUSSELL W. STROPE (R) CRAIG D. STROPE (R) DONNA J. STROPE (R)	15-6-19	±53.00
2	CHARLES B. STROPE (S) DONNA J. STROPE (R)	15-9-14	±37.15
3	JOE M. KAISER AND SHIRLEY A. KAISER FAMILY REVOCABLE TRUST (S) SHERI EVRAETS (R)	15-6-17	±170.22
4	MARK BRENT FITZSIMMONS (S) MARK B. FITZSIMMONS AND DEBORAH A. FITZSIMMONS (R)	15-6-15	±60.00
5	MICHAEL J. & LINDA V. BURKEY (S) MICHAEL J. BURKEY AND LINDA V. BURKEY (R) ROSE L. RILEY (R) VICKI F. RILEY (R) ROBERT J. RILEY III AND TAMMY J. RILEY (R) TIMOTHY G. RILEY AND JUDY W. RILEY (R) DAVID B. RILEY AND KELLY R. RILEY (R) ELLEN W. RILEY; MARK D. FLOWER (R) WENDY MAXIM (R) BRENT M. RUFFNER (R) JAMES B. RILEY JR. AND CATALINA RILEY (R) WENDY ROSIAN, GUARDIAN AND MOTHER OF DANIEL D. RUFNER, A MINOR CHILD (R)	15-6-14	±78.18
6	RICKEE JO FITZSIMMONS STROPE MARK BRENT FITZSIMMONS (S) RICKEE JO STROPE (R) MARK BRENT FITZSIMMONS (R)	15-6-6	±63.36
7	GARY W STROPE, ET AL (S) GARY W. STROPE AND RICKEE J. FITZSIMMONS (R) JOSHUA WAYNE STROPE (R) GARY ANTHONY STROPE (R) KYLEA JO REED (R)	15-6-5	±56.13
8	JOYCE E. GRIMM (S)(R)	15-6-3	±51.07
9	RENEE LYNN GRIMM EBERT (S) RENEE LYNN GRIMM (R) NELLIE M. BILYEU AND WILLARD E. BILYEU (R) RUSSEL M. EARLIWINE JR (R) HAROLD F. EARLIWINE AND FLORA M. EARLIWINE (R) HOMER D. EARLIWINE (R) LARRY MARK JOCHUM AND BETTY L. JOCHUM (R) GREGORY DEAN JOCHUM AND DEBORAH L. JOCHUM (R) RALPH E EARLIWINE (R) JAMES K. EARLIWINE (R) RHONDA KAY WILLIAMS AND CHARLES E. WILLIAMS JR. (R) JOHN D. EARLIWINE (R) GLADYS L. WADE, AKA GLADYS V. WADE (R)	15-3-21	±68.00
10	JOYCE E. GRIMM (S)(R)	15-3-24	±39.11
11	BONNIE L. STRAUTMAN (S) BONNIE L. STRAUTMAN AND JEFFREY A. STRAUTMAN (R) JOYCE A. EWING AND FRED A. EWING (R) EDWARD F. THACKER AND LINDA M. THACKER (R) DONALD P. THACKER (R) JAMES W. THACKER AND LINDA L. THACKER (R) CHARLES ELLER AND RUTH A. ELLER (R) DAVID ELLER AND JANE ELLER (R) CHARLES C. THACKER (R) CHARLES V. ELLER (R)	15-3-25.2	±5.00
12	DORA J. CUNNINGHAM, ET AL (S) BONNIE L. STRAUTMAN AND JEFFREY A. STRAUTMAN (R) JOYCE A. EWING AND FRED A. EWING (R) EDWARD F. THACKER AND LINDA M. THACKER (R) DONALD P. THACKER (R) JAMES W. THACKER AND LINDA L. THACKER (R) CHARLES ELLER AND RUTH A. ELLER (R) DAVID ELLER AND JANE ELLER (R) CHARLES C. THACKER (R) CHARLES V ELLER (R)	15-3-25	±10.00
13	ROBERT A. BENNETT (S) BONNIE L. STRAUTMAN AND JEFFREY A. STRAUTMAN (R) JOYCE A. EWING AND FRED A. EWING (R) EDWARD F. THACKER AND LINDA M. THACKER (R) DONALD P. THACKER (R) JAMES W. THACKER AND LINDA L. THACKER (R) CHARLES ELLER AND RUTH A. ELLER (R) DAVID ELLER AND JANE ELLER (R) CHARLES C. THACKER (R) CHARLES V. ELLER (R)	15-3-25.5	±35.15
14	RICHARD J. MARKONICH (S) FREDERICK W DAGUE AND HARRIETT C. RIGGLE; (R)	15-3-2	±55.00

REVISIONS:

COMPANY: SWN Production Company, LLC — SWN Production Company™

OPERATOR'S WELL #: CRAIG STROPE MSH 1H

LOCATION: WEBSTER DISTRICT, MARSHALL COUNTY, WEST VIRGINIA

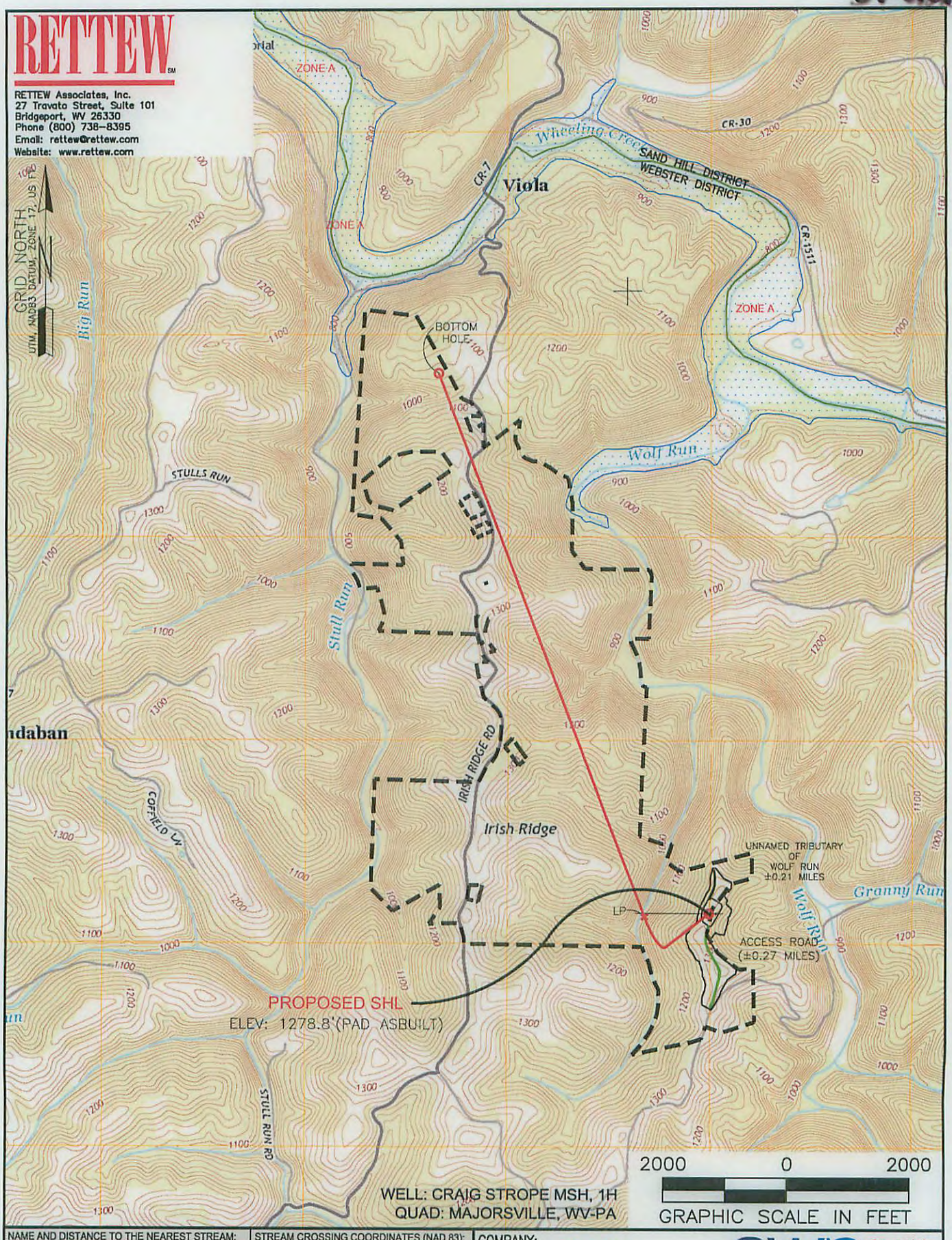
DATE: 10-05-2015
DRAWN BY: B.HERMAN
SCALE: N/A
DRAWING NO:087569037
INTERNAL WELL PLAT

C:_RETTEWVAULTWIP\087569037-CRAIG STROPE\SHEETS\SV\PLAT\087569037-1H-WELL PLAT.DWG
MONDAY DECEMBER 07 2015 01:34PM

PROPERTY NUMBER 2501164772
PAD ID 3001155505

51-01875

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



WELL: CRAIG STROPE MSH, 1H
QUAD: MAJORSVILLE, WV-PA

NAME AND DISTANCE TO THE NEAREST STREAM:	STREAM CROSSING COORDINATES (NAD 83):
UN NAMED TRIBUTARY OF WOLF RUN IS LOCATED ±0.21 MILES WEST OF THE CENTER OF THE DRILL PAD.	NO NEW CROSSINGS.

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 LAGER THAN 2500 SQ FT: >625 FEET

FEMA FLOOD INFORMATION:

BY GRAPHIC PLOTTING ONLY FEMA FIRM INCORPORATED AREA OF MARSHALL COUNTY, WEST VIRGINIA; MAP NUMBER 54051C0125E; EFFECTIVE DATE: SEPTEMBER 25, 2009.

NO FLOOD ZONES.

COMPANY: SWN Production Company, LLC / SWN Production Company™

OPERATOR'S WELL #: CRAIG STROPE MSH 1H

LOCATION: WEBSTER DISTRICT, MARSHALL COUNTY, WEST VIRGINIA

SURFACE HOLE LOCATION:

GEOGRAPHIC (NAD83):
LATITUDE: 39.930711°
LONGITUDE: -80.578759°

BOTTOM HOLE LOCATION:

GEOGRAPHIC (NAD83):
LATITUDE: 39.954720°
LONGITUDE: -80.594274°

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- ABANDONED WELL
- PLUGGED & ABANDONED WELL
- CUT CONDUCTOR
- MARCELLUS DHP
- ACCESS ROAD
- ACCESS ROAD TO PREV. SITE
- HIGHWAY/INTERSTATE
- COUNTY ROAD

REVISIONS:	DATE: 10-05-2015
	DRAWN BY: B.HERMAN
	SCALE: 1" = 2000'
	DRAWING NO:087569037
	TOPOGRAPHIC MAP

C:_RETTEWVAULTWIP\087569037-CRAIG STROPE\SHEETS\SV\PLAT\087569037-1H-WELL PLAT.DWG
MONDAY DECEMBER 07 2015 01:32PM

PROPERTY NUMBER 2501164772
PAD ID 3001155505

Craig Strope 1H Plat 6A1

Tract #	TMP	Surface Owner	Deeded Acreage	Vesting BK/PG	Mineral Deed	Lease #	Lessor	Lessee	Royalty	BK/PG
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
7)	15-6-5	Gary W Strope, et al	56.1280	647/103		1-287170-001	Gary W Strope and Rickee J Fitzsimmons	Chesapeake Appalachia, LLC	12.50%	690/308
		mineral owner				1-287170-002	Joshua Wayne Strope	Chesapeake Appalachia, LLC	12.50%	690/353
		mineral owner				1-287170-003	Gary Anthony Strope	Chesapeake Appalachia, LLC	12.50%	690/356
		mineral owner				1-287170-004	Kylea Jo Reed	Chesapeake Appalachia, LLC	12.50%	690/359
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
8)	15-6-3	Joyce E Grimm	51.0700	567/600		1-274393-000	Joyce E Grimm	Chesapeake Appalachia, LLC	14.00%	682/129
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
9)	15-3-21	Renee Lynn Grimm Ebert	68.0000	632/524		1-274394-000	Renee Lynn Grimm	Chesapeake Appalachia, LLC	14.00%	682/130
		Mineral Owner			398/463	47-0000660-001	Nellie M Bilyeu and Willard E Bilyeu	Chesapeake Appalachia, LLC	18.00%	828/40
		Mineral Owner			398/463	47-0000661-001	Russel M Earliwine Jr	Chesapeake Appalachia, LLC	18.00%	828/46
		Mineral Owner			398/463	47-0000662-001	Harold F Earliwine and Flora M Earliwine	Chesapeake Appalachia, LLC	18.00%	828/52
		Mineral Owner			398/463	47-0000663-001	Homer D Earliwine	Chesapeake Appalachia, LLC	18.00%	828/66
		Mineral Owner			398/463	47-0000664-001	Larry Mark Jochum and Betty L Jochum	Chesapeake Appalachia, LLC	18.00%	828/72
		Mineral Owner			398/463	47-0000665-001	Gregory Dean Jochum and Deborah L Jochum	Chesapeake Appalachia, LLC	18.00%	828/77
		Mineral Owner			398/463	47-0000668-001	Ralph E Earliwine	Chesapeake Appalachia, LLC	18.00%	828/98
		Mineral Owner			398/463	47-0000717-001	James K Earliwine	Chesapeake Appalachia, LLC	18.00%	830/82
		Mineral Owner			398/463	47-0000720-001	Rhonda Kay Williams and Charles E Williams Jr.	Chesapeake Appalachia, LLC	18.00%	830/144
		Mineral Owner			398/463	47-0000725-001	John D Earliwine	Chesapeake Appalachia, LLC	18.00%	830/207
		Mineral Owner			398/463	47-0000726-001	Gladys L Wade, aka Gladys V Wade	Chesapeake Appalachia, LLC	18.00%	830/217
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
							Joyce E. Grimm	Chesapeake Appalachia, LLC	14.00%	682/131
10)	15-3-24	Joyce E Grimm	39.1100	419/422		1-274395-000	Chesapeake Appalachia, LLC	SWN Production Company		33/110
11)	15-3-25.2	Bonnie L Strautmann	5.0000	454/406	448/215	1-298764-001	Bonnie L Strautman and Jeffrey A Strautman	Chesapeake Appalachia, LLC	18.75%	700/626
		Mineral Owner			448/215	1-298764-002	Joyce A Ewing and Fred A Ewing	Chesapeake Appalachia, LLC	18.75%	701/90
		Mineral Owner			448/215	1-298764-003	Edward F Thacker and Linda M Thacker	Chesapeake Appalachia, LLC	18.75%	700/630
		Mineral Owner			448/215	1-298764-004	Donald P Thacker	Chesapeake Appalachia, LLC	18.75%	702/53
		Mineral Owner			448/215	1-298764-005	James W Thacker and Linda L Thacker	Chesapeake Appalachia, LLC	18.75%	703/169
		Mineral Owner			448/215	1-298764-006	Charles Eller and Ruth A Eller	Chesapeake Appalachia, LLC	18.75%	702/436
		Mineral Owner			448/215	1-298764-007	David Eller and Jane Eller	Chesapeake Appalachia, LLC	18.75%	702/440
		Mineral Owner			448/215	1-298764-008	Charles C Thacker	Chesapeake Appalachia, LLC	18.75%	704/199
		Mineral Owner			448/215	47-0000667-001	Charles V Eller	Chesapeake Appalachia, LLC	18.75%	828/93
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
12)	15-3-25	Dora J Cunningham, et al	10.0000	736/448	448/215	1-298764-001	Bonnie L Strautman and Jeffrey A Strautman	Chesapeake Appalachia, LLC	18.75%	700/626
		Mineral Owner			448/215	1-298764-002	Joyce A Ewing and Fred A Ewing	Chesapeake Appalachia, LLC	18.75%	701/90
		Mineral Owner			448/215	1-298764-003	Edward F Thacker and Linda M Thacker	Chesapeake Appalachia, LLC	18.75%	700/630

Received
Office of Oil & Gas
DEC 09 2015

SL810-15

Craig Strope 1H Plat 6A1

Tract #	TMP	Surface Owner	Deeded Acreage	Vesting BK/PG	Mineral Deed	Lease #	Lessor	Lessee	Royalty	BK/PG
		Mineral Owner			448/215	1-298764-004	Donald P Thacker	Chesapeake Appalachia, LLC	18.75%	702/53
		Mineral Owner			448/215	1-298764-005	James W Thacker and Linda L Thacker	Chesapeake Appalachia, LLC	18.75%	703/169
		Mineral Owner			448/215	1-298764-006	Charles Eller and Ruth A Eller	Chesapeake Appalachia, LLC	18.75%	702/436
		Mineral Owner			448/215	1-298764-007	David Eller and Jane Eller	Chesapeake Appalachia, LLC	18.75%	702/440
		Mineral Owner			448/215	1-298764-008	Charles C Thacker	Chesapeake Appalachia, LLC	18.75%	704/199
		Mineral Owner			448/215	47-0000667-001	Charles V Eller	Chesapeake Appalachia, LLC	18.75%	828/93
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
13)	15-3-25.5	Robert A Bennett	35.1520	597/494	448/215	1-298764-001	Bonnie L Strautman and Jeffrey A Strautman	Chesapeake Appalachia, LLC	18.75%	700/626
		Mineral Owner			448/215	1-298764-002	Joyce A Ewing and Fred A Ewing	Chesapeake Appalachia, LLC	18.75%	701/90
		Mineral Owner			448/215	1-298764-003	Edward F Thacker and Linda M Thacker	Chesapeake Appalachia, LLC	18.75%	700/630
		Mineral Owner			448/215	1-298764-004	Donald P Thacker	Chesapeake Appalachia, LLC	18.75%	702/53
		Mineral Owner			448/215	1-298764-005	James W Thacker and Linda L Thacker	Chesapeake Appalachia, LLC	18.75%	703/169
		Mineral Owner			448/215	1-298764-006	Charles Eller and Ruth A Eller	Chesapeake Appalachia, LLC	18.75%	702/436
		Mineral Owner			448/215	1-298764-007	David Eller and Jane Eller	Chesapeake Appalachia, LLC	18.75%	702/440
		Mineral Owner			448/215	1-298764-008	Charles C Thacker	Chesapeake Appalachia, LLC	18.75%	704/199
					448/215	47-0000667-001	Charles V Eller	Chesapeake Appalachia, LLC	18.75%	828/93
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
14)	15-3-2	Richard J Markonich	55.0000	622/157	403/467	1-385431-000	Frederick W Dague andHarriett C Riggle;	Tri Energy Holdings, LLC	18.75%	699/365
							TriEnergy Holdings, LLC	NPAR, LLC		24/180
							NPAR, LLC	Chevron USA, Inc.		756/332
							Chevron USA, Inc	Statoil USA Onshore Properties, Inc		30/494
							Chevron USA, Inc	Chesapeake Appalachia, LLC		30/532
							Chesapeake Appalachia, LLC	SWN Production Company, LLC		33/110
Adjoining Tracts										
A)	15-6-20	John S Kutis	19.8700	638/574						
B)	15-10-1	John S Kutis	53.0800	638/574						
C)	15-9-15	Russell W Strope; Craig D Strope;	61.8764	779/625						
D)	15-9-18	Harold E. and Linda K. Ashton	59.5410	626/248						
E)	15-9-13	Ronald Lee Yoho	30.0000	538/462						
F)	15-9-12	Ronald Lee Yoho	75.9120	WB 101/213						
G)	15-9-12.2	Donald R Yoho	9.3050	538/246						
H)	15-9-11.2	Donna Lou McMillan	1.0160	595/660						
I)	15-6-17.1	Harry W Lilley	19.4970	452/387						
J)	15-6-16	William E Coffield	77.4000	660/136						
K)	15-6-11	Craig R. and Donita D. Miller	40.0000	628/619						
L)	15-6-12	Mark Brent Fitzsimmons	20.0000	600/213						
M)	15-6-13	Katie Fitzsimmons	28.3000	678/624						

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S1-01815

Craig Strope 1H Plat 6A1

Tract #	TMP	Surface Owner	Deeded Acreage	Vesting BK/PG	Mineral Deed	Lease #	Lessor	Lessee	Royalty	BK/PG
N)	15-6-7	Katie Fitzsimmons	2.0000	678/624						
O)	15-6-8	Mark Brent Fitzsimmons	15.0000	WB 82/479						
P)	15-6-6.1	Gary W Strope	1.0000	647/103						
Q)	15-6-9.1	Larry W Dunlap	0.6270	466/507						
R)	15-6-9.2	Larry W Dunlap	5.9230	662/115						
S)	15-6-9	Mark Brent Fitzsimmons	27.1270	247/479						
T)	15-6-2	Mark Brent Fitzsimmons	4.0000	WB 82/471						
U)	15-6-1	Edna S Gall and Frank P Lautar	5.0000	WB 28/203						
V)	15-3-28	Jasper N Givens	7.6800	76/511						
W)	15-3-26	James S Shipley	8.0000	356/421						
X)	15-6-27	Betty Sue Paczewski	72.1300	574/167						
Y)	15-2-4	Sara Jo Anderson	116.8900	658/222						
Z)	15-3-24.1	Wheeling Creek Watershed Commission	0.9740	WB 74/593						
AA)	15-3-23	Lonnie R Pethtel	1.9150	630/337						
BB)	15-3-1	Iskcon-New Mathura Vrindaban	5.0000	736/465						
CC)	15-3-25.1	Ohio Valley Heaart Institute, Inc.	1.1180	595/383						
DD)	15-3-3	Sharon Hupp and Richard Markonich	105.0800	618/269						
EE)	15-3-20	Ohio Valley Heaart Institute, Inc.	41.1200	595/383						
FF)	15-3-19	Wheeling Creek Watershed Commission	9.0000	420/306						
GG)	15-3-18	Wheeling Creek Watershed Commission	53.0000	420/302						
HH)	15-3-17	Betty Sue Paczewski and Albert J. Paczewski	21.0000	574/167						
II)	15-6-27	Betty Sue Paczewski and Albert J. Paczewski	72.1300	574/167						
JJ)	15-6-6.2	Wheeling Creek Watershed Commission	3.0000	548/419						
KK)	15-6-24	Kerry Glenn Foster	50.0000	570/559						
LL)	15-6-23	Russell W Strope; Craig D Strope;	30.0000	779/625						
MM)	15-6-22	Christine A Bernier	3.2600	609/146						
NN)	15-6-33	Christine A Bernier	30.0000	609/146						
OO)	15-6-14.1	Michael J. Burkey and Linda Burkey	1.5250	661/129						
PP)	15-6-17.2	Herman D. Estel	1.1020	661/85						
QQ)	15-9-15.2	Craig D Strope	5.0070	788/362						
RR)	15-6-5.1	Julie A. Anderson	0.8720	687/365						

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Craig Strope 1H Plat 6A1

Tract #	TMP	Surface Owner	Deeded Acreage	Vesting BK/PG	Mineral Deed	Lease #	Lessor	Lessee	Royalty	BK/PG
SS)	15-6-4	Mark Brent Fitzsimmons	0.25	WB 82/479						
TT)	15-6-6.3	Kylea J. Reed	0.9290	746/356						
UU)	15-6-3.1	Renee Lynn Grimm Ebert	0.0600	632/527						
VV)	15-3-25.4	Bonnie L Strautmann	19.8750	594/511						

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51-0187S

51-01875

SWN Production Company™

SWN Production Company, LLC
P O Box 12359
Spring, Texas 77391-2359
www.swn.com

December 1, 2015

Ms. Laura Cooper
WV DEP Office of Oil & Gas
601 57th St., SE
Charleston, WV 25304

RE: SWN's proposed Craig Strope MSH 1H
Marshall County, West Virginia

Dear Ms. Cooper:

SWN Production Company, LLC ("SWN") is applying for a drilling permit for the above referenced well. The State of West Virginia has raised some concern as to SWN's right to drill under Irish Ridge Road. Please be advised that SWN has leased all mineral owners under said route as it relates to the above-referenced well and unit.

If you have any questions, please feel free to contact me at 832-796-2959 or via email at Jeremy_Martin@swn.com.

Regards,

Jeremy Martin, CPL
Staff Landman

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DEC 09 2015

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The Right People doing the Right Things, wisely investing the cash flow from our underlying Assets, will create Value+®

WW-6AC
(1/12)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 12/8/15

API No. 47- 51 - 01875
Operator's Well No. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

Notice has been given:
Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	WV	UTM NAD 83 Easting:	535993.381
County:	51-Marshall	Northing:	4420151.793
District:	9-Webster	Public Road Access:	Dry Ridge Lone Oak Rd
Quadrangle:	453-Majorsville	Generally used farm name:	Craig Strope
Watershed:	Upper Wheeling Creek		

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY		OOG OFFICE USE ONLY
☐ 1. NOTICE OF SEISMIC ACTIVITY	or ☒ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED	☐ RECEIVED/ NOT REQUIRED
☐ 2. NOTICE OF ENTRY FOR PLAT SURVEY	or ☒ NO PLAT SURVEY WAS CONDUCTED	☐ RECEIVED
☒ 3. NOTICE OF INTENT TO DRILL	or ☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)	☐ RECEIVED/ NOT REQUIRED
☒ 4. NOTICE OF PLANNED OPERATION		☐ RECEIVED
☒ 5. PUBLIC NOTICE		☐ RECEIVED
☒ 6. NOTICE OF APPLICATION		☐ RECEIVED

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Required Attachments:
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

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(1/12)

SI-01875

Certification of Notice is hereby given:

THEREFORE, I _____, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	SWN Production Co., LLC	Address:	P.O. Box 1300
By:	Dee Southall		Jane Lew, WV 26378
Its:	Regulatory Supervisor	Facsimile:	
Telephone:	832-796-1610	Email:	Dee_Southall@swn.com

NOTARY SEAL
OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3302 Old Elkins Road
Buckhannon, WV 26201
My commission expires November 27, 2022

Subscribed and sworn before me this 9th day of November 2015

Brittany R Woody Notary Public

My Commission Expires 11/27/22

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-6A
(9-13)

API NO. 47-51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 12/8/15 **Date Permit Application Filed:** 12/8/15

Notice of:

☑ PERMIT FOR ANY WELL WORK ☐ CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

☐ PERSONAL SERVICE ☑ REGISTERED MAIL ☐ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)
Name: Craig D. Strope & Russell W. Strope
Address: 2878 Lone Oak Rd
Cameron, WV 26033
Name:
Address:

☐ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name:
Address:
Name:
Address:

☐ SURFACE OWNER(s) (Impoundments or Pits)
Name:
Address:

☑ COAL OWNER OR LESSEE
Name: CNX Center %Leatherwood
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

☐ COAL OPERATOR
Name:
Address:

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: *** See Attachment #1
Address:

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name:
Address:

*Please attach additional forms if necessary

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Attachment #1

51-01875

Strope MSH Pad - Water Purveyors w/in 1500'

Landowner	Address
KUTIS, JOHN S. & SYLVIA M.	1440 SUNSET LANE, GLEN DALE, WV 26038 ✓
KAISER, JOE M. & SHIRLEY A.	6509 ST RT 303, RAVENNA, OH, 44266 ✓
STROPE, DOUGLAS L. & RUSSELL W. & CRAIG D. X2	RR 4 BOX 290, CAMERON, WV 26033 ✓
BERNIER, CHRISTINE A.	11075 PACKARD, WARREN, MI, 48089 ✓

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(8-13)

API NO. 47-51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:
Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions
Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

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examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:
Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:
Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:
Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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(8-13)

API NO. 47-51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

(1) The proposed well work will constitute a hazard to the safety of persons;
(2) The plan for soil erosion and sediment control is not adequate or effective;
(3) Damage would occur to publicly owned lands or resources; or
(4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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(8-13)

API NO. 47- 51 - 01875
OPERATOR WELL NO. Craig Strope MSH 1H
Well Pad Name: Craig Strope MSH Pad

Notice is hereby given by:

Well Operator: SWN Production Co., LLC
Telephone: 832-796-1610
Email: Dee_Southall@swn.com

Address: P.O. Box 1300
Jane Lew, WV 26378
Facsimile:

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

OFFICIAL SEAL
Notary Public, State of West Virginia
BRITTANY R WOODY
3302 Old Elkins Road
Buckhannon, WV 26201
My commission expires November 27, 2022

Subscribed and sworn before me this 9th day of November 2015

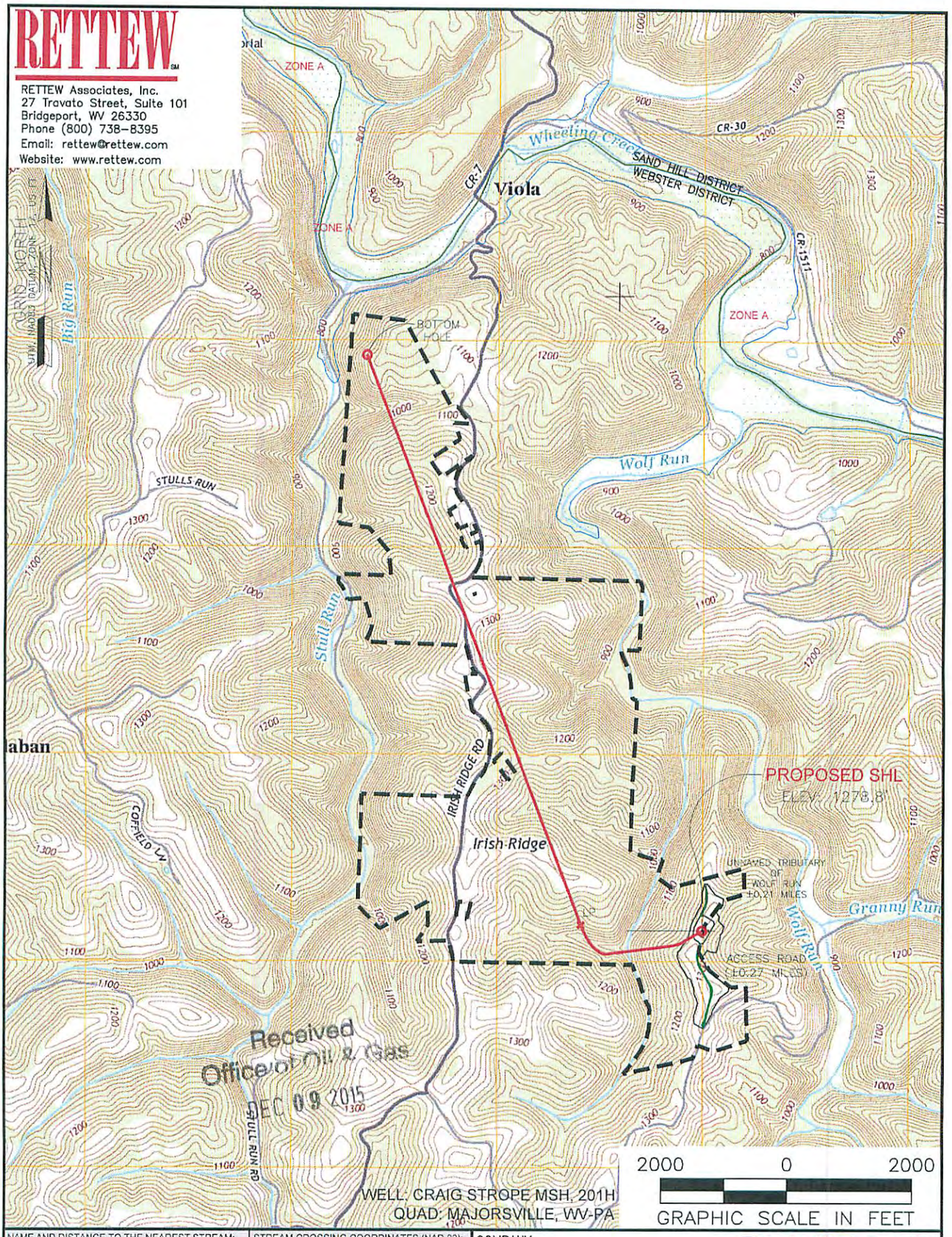
Brittany R Woody Notary Public

My Commission Expires 11/27/22

Received
Office of Oil & Gas
DEC 09 2015

51-01875

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



WELL: CRAIG STROPE MSH, 201H
QUAD: MAJORSVILLE, WV-PA

NAME AND DISTANCE TO THE NEAREST STREAM:	STREAM CROSSING COORDINATES (NAD 83):
UN NAMED TRIBUTARY OF WOLF RUN IS LOCATED ±0.21 MILES WEST OF THE CENTER OF THE DRILL PAD.	NO NEW CROSSINGS.

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 LAGER THAN 2500 SQ FT: >625 FEET

FEMA FLOOD INFORMATION:

BY GRAPHIC PLOTTING ONLY FEMA FIRM INCORPORATED AREA OF MARSHALL COUNTY, WEST VIRGINIA; MAP NUMBER 54051C0125E; EFFECTIVE DATE: [illegible]

NO FLOOD ZONES.

Received
Office of Oil & Gas
DEC 09 2015

COMPANY: SWN Production Company, LLC — SWN Production Company™

OPERATOR'S WELL #: CRAIG STROPE MSH 201H

LOCATION: WEBSTER DISTRICT, MARSHALL COUNTY, WEST VIRGINIA

SURFACE HOLE LOCATION:
GEOGRAPHIC (NAD83):
LATITUDE: 39.930683°
LONGITUDE: -80.578697°

BOTTOM HOLE LOCATION:
GEOGRAPHIC (NAD83):
LATITUDE: 39.955812°
LONGITUDE: -80.597707°

LEGEND:
- PROPOSED SURFACE HOLE / BOTTOM HOLE
- EXISTING / PRODUCING WELLHEAD
- ABANDONED WELL
- PLUGGED & ABANDONED WELL
- CUT CONDUCTOR
- MARCELLUS DHP
- ACCESS ROAD
- ACCESS ROAD TO PREV. SITE
- HIGHWAY/INTERSTATE
- COUNTY ROAD

REVISIONS:	DATE: 10-05-2015
	DRAWN BY: B.HERMAN
	SCALE: 1" = 2000'
	DRAWING NO:087569037
	TOPOGRAPHIC MAP

C:_RETTEWVAULTWIP\087569037-CRAIG STROPE\SHEETS\SV\PLAT\087569037-201H-WELL PLAT.DWG
MONDAY DECEMBER 07 2015 02:02PM

PROPERTY NUMBER 250116469
PAD ID 3001155505

WW-6A4
(1/12)

51-01875
Operator Well No. Craig Strope MSH 1H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.
Date of Notice: 11/03/2015 **Date Permit Application Filed:** 12/8/15

Delivery method pursuant to West Virginia Code § 22-6A-16(b)

☐ HAND DELIVERY ☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided,* That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however,* That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s):

Name: Craig D. Strope & Russell W. Strope
Address: 2878 Lone Oak Rd.
Cameron, WV 26033

Name:
Address:

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia
County: Marshall
District: Webster
Quadrangle: Majorsville
Watershed: Upper Wheeling Creek

UTM NAD 83 Easting: 535,993.381
Northing: 4,420,151.793
Public Road Access: Dry Ridge Lone Oak Rd
Generally used farm name: Strope

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: SWN Production Company, LLC
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-884-1611
Email: micah_feather@swn.com
Facsimile:

Authorized Representative: Micah Feather
Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Telephone: 304-884-1611
Email: micah_feather@swn.com
Facsimile:

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Received
Office of Oil & Gas
DEC 09 2015

WW-6A5
(1/12)

Operator Well No. 51-01875 Craig Strope MSH 1H

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF PLANNED OPERATION

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**
Date of Notice: 11/03/2015 **Date Permit Application Filed:** 12/8/15

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s)
(at the address listed in the records of the sheriff at the time of notice):

Name: Craig D. Strope & Russell W. Strope
Address: 2878 Lone Oak Rd.
Cameron, WV 26033

Name:
Address:

Notice is hereby given:
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia
County: Marshall
District: Webster
Quadrangle: Majorsville
Watershed: Upper Wheeling Creek

UTM NAD 83 Easting: 535,993.381
Northing: 4,420,151.793
Public Road Access: Dry Ridge Lone Oak Rd.
Generally used farm name: Strope

This Notice Shall Include:
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: SWN Production Company, LLC
Telephone: 304-884-1611
Email: micah_feather@swn.com

Address: PO Box 1300, 179 Innovation Drive
Jane Lew, WV 26378
Facsimile:

Oil and Gas Privacy Notice:
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Received
Office of Oil & Gas
DEC 09 2015

51-01825

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

November 17, 2015

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Craig Strope Pad MSH 1H Well Site, Marshall County

Dear Mr. Martin,

The West Virginia Division of Highways has assigned #06-2013-0483 to the application for permit to Chesapeake Appalachia, LLC for access to the State Road for the well site located off of Marshall County Route 48 SLS.

The operator has signed an OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton
Regional Maintenance Engineer
Central Office Oil &Gas Coordinator

Received
Office of Oil & Gas
DEC 09 2015

Cc: Brittany Woody
Southwestern Energy
CH, OM, D-6
File

51-01875

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
BAKER HUGHES	ALPHA 1427	Biocide	Didecyl Dimethyl Ammonium Chloride	007173-51-1
			Ethanol	000064-17-5
			Glutaraldehyde (Pentanediol)	000111-30-8
			Quaternary Ammonium Compound	068424-85-1
			Water	007732-18-5
	BF-7L	Buffer	Potassium Carbonate	000584-08-7
	ClayCare	Clay Stabilizer	Choline Chloride	000067-48-1
			Water	007732-18-5
	Enzyme G-I	Breaker	No Hazardous Components	NONE
	ENZYME G-NE	Breaker	No Hazardous Components	NONE
	FRW-18	Friction Reducer	Petroleum Distillate Hydrotreated Light	064742-47-8
	GW-3LDF	Gel	Petroleum Distillate Blend	N/A-014
			Polysaccharide Blend	N/A-021
	SCALETROL 720	Scale Inhibitor	Diethylene Glycol	000111-46-6
			Ethylene Glycol	000107-21-1
	XLW-32	Crosslinker	Boric Acid	010043-35-3
			Methanol (Methyl Alcohol)	000067-56-1
FRAC TECH SERVICES	APB01 (AMMONIUM PERSUFATE BREAKER)	Breaker	Ammonium Persulfate	007727-54-0
	B05 (LOW PH BUFFER)	Buffer	Acetic acid	000064-19-7
	BXL03 Borate XL Delayed High Temp	Crosslinker	No Hazardous Components	NONE
	FRW-200	Friction Reducer	No Hazardous Components	NONE
	HVG01 (TURQUOISE-1 BULK)	Gelling Agent	Petroleum Distillate Hydrotreated Light	064742-47-8
	KCLS-4	Clay Stabilizer	No Hazardous Components	NONE
	LTB-1	Breaker	Ammonium Persulfate	N/A

Received
Office of Oil & Gas
DEC 09 2015

51-01875

Supplier Name	Product Name	Product Use	Chemical Name	CAS Number
NALCO ONESOURCE	EC6110A	Biocide	Ethanol	000064-17-5
			Glutaraldehyde (Pentanediol)	000111-30-8
			Quaternary Ammonium Compounds	N/A-063
	EC6629A	Biocide	No Hazardous Components	NONE
WEATHERFORD	WBK-133 OXIDIZER	Breaker	Ammonium Persulfate	007727-54-0
	WBK-134	Breaker	Ammonium Persulfate	007727-54-0
			Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7
	WCS-631LC	Clay Stabilizer	Proprietary Non Hazardous Salt	N/A-229
			Water	007732-18-5
	WFR-55LA	Friction Reducer	No Hazardous Components	NONE
	WGA-15L	Gel	Petroleum Distillate Hydrotreated Light	064742-47-8
	WPB-584-L	Buffer	Potassium Carbonate	000584-08-7
			Potassium Hydroxide	001310-58-3
	WXL-101LE	Corsslinker	No Hazardous Components	NONE
	WXL-101LM	Crosslinker	Petroleum Distillate Hydrotreated Light	064742-47-8
	WXL-105L	Crosslinker	Water	007732-18-5
			Ethylene Glycol	000107-21-1
			Boric Acid	010043-35-3
			Ethanolamine	000141-43-5
SCHLUMBERGER	B244 Green-Cide 25G	Biocide	Glutaraldehyde	111-30-8
	L071 Temporary Clay Stabilizer	Clay Stabilizer	Cholinium Chloride	67-48-1
	Breaker J218	Breaker	Diammonium Peroxidisulphate	7727-54-0
	EB-Clean* J475 Breaker		Diammonium Peroxidisulphate	7727-54-0
	Friction Reducer B315	Friction Reducer	Distillates (petroleum), Hydrotreated light Aliphatic Alcohol Glycol Ether	64742-47-8 Proprietary
	Friction Reducer J609		Ammonium Sulfate	7783-20-2
Supplier Name	Product Name	Product Use	Chemical Name	CAS Number

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51-01875

SCHLUMBERGER	Water Gelling Agent J580	Gel	Carbohydrate Polymer	Proprietary
	Scale Inhibitor B317	Scale Inhibitor	Trisodium ortho phosphate Ethane-1, 2-diol	7601-54-9 107-21-1
	Borate Crosslinker J532	Crosslinker	Aliphatic polyol Sodium tetraborate decahydrate	Proprietary 1303-96-4
	Crosslinker J610		Aliphatic polyol Potassium hydroxide	Proprietary 1310-58-3

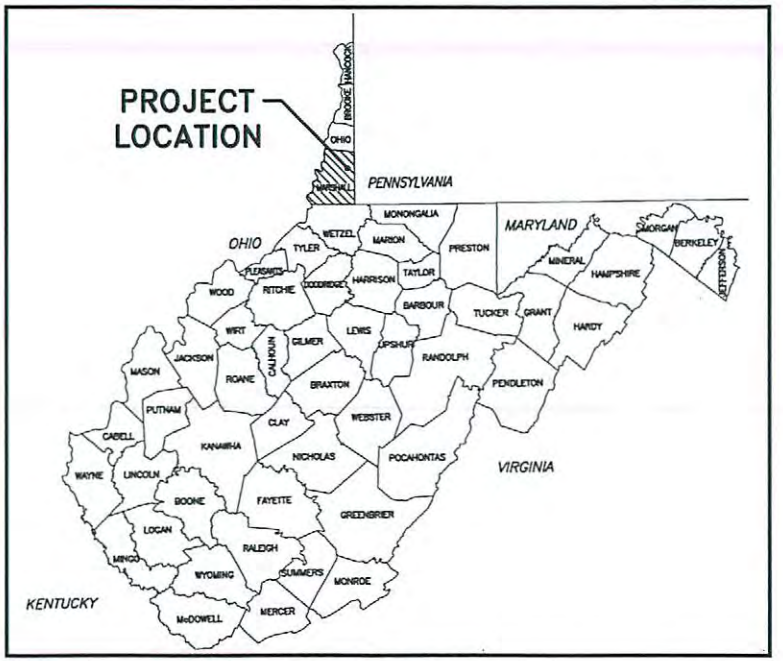
Received
Office of Oil & Gas
DEC 09 2015

WVDEP OOG
ACCEPTED AS-BUILT
2/5/2015

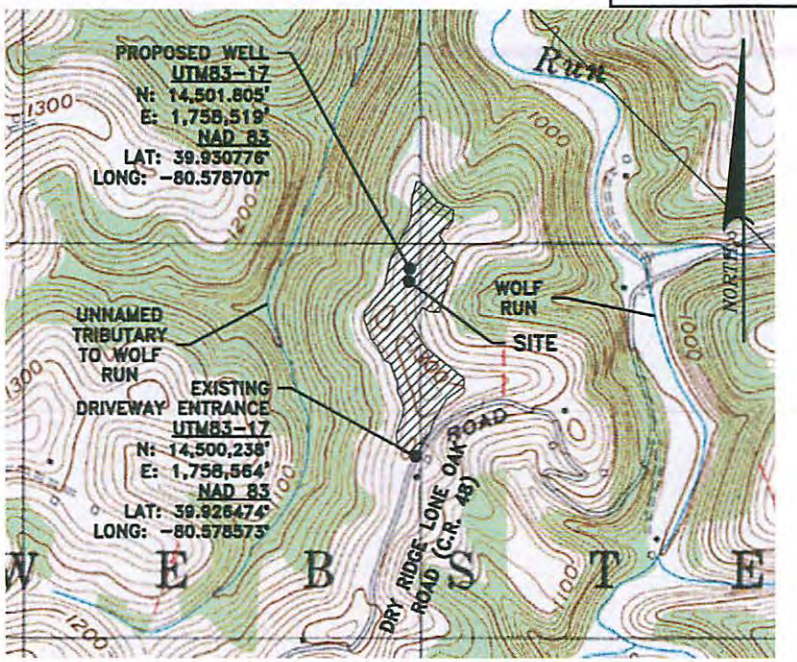
AS-BUILT SITE PLAN
FOR
CRAIG STROPE MSH PAD A
WEBSTER DISTRICT, MARSHALL COUNTY, WV

ERIC W. HERSHEY
REGISTERED
19074
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

DRAWN BY: MEB
DATE: 11/20/15, Rev. 2/4/16
SCALE: AS SHOWN
DWG. NO. 087569037



COUNTY MAP
N.T.S.



LOCATION MAP
SCALE - 1"=1000'

LIST OF DRAWINGS

TS1.1 . . . . . COVER SHEET
EP2.1 . . . . . EVACUATION ROUTE/PREVAILING WINDS
EP2.2 . . . . . EVACUATION ROUTE/PREVAILING WINDS
AS3.1 . . . . . AS-BUILT OVERVIEW
AS3.2 . . . . . AS-BUILT SITE PLAN
AS3.3 . . . . . AS-BUILT SITE PLAN
AS3.4 . . . . . AS-BUILT SITE PLAN
CRA4.1 . . . . . ACCESS ROAD PROFILE
CRA4.2 . . . . . PAD CROSS SECTIONS
MRP5.1 . . . . . RECLAMATION OVERVIEW
MRP5.2 . . . . . RECLAMATION PLAN
MRP5.3 . . . . . RECLAMATION PLAN
MRP5.4 . . . . . RECLAMATION PLAN
MRD6.1 . . . . . DETAILS
MRD6.2 . . . . . DETAILS
MRD6.3 . . . . . DETAILS

SITE DATA

TOTAL DISTURBED AREA: 19.84 ACRES
ROAD DISTURBED AREA: 11.44 ACRES
PAD DISTURBED ACRES: 8.40 ACRES
ACCESS ROAD LENGTH: 1,423'
ACCESS ROAD AVERAGE WIDTH: 25'
WELL PAD ELEVATION: 1278.8'

WELL API NUMBERS

WELL NUMBER	API NUMBER	CELLAR DIAMETER	CELLAR DEPTH	CELLAR MATERIAL
1H	N/A	N/A	N/A	N/A
2H	N/A	N/A	N/A	N/A
3H	API 051-01743	8 FT	8 FT	CMP
201H	N/A	N/A	N/A	N/A
301H	N/A	N/A	N/A	N/A

WEST VIRGINIA 811
CALL BEFORE YOU DIG! Dial 811 or 800.245.4848
Miss Utility of West Virginia

AT LEAST 48 HOURS, BUT NOT MORE THAN 10 WORKING DAYS (EXCLUDING WEEKENDS AND HOLIDAYS), PRIOR TO TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL CONTACT MISS UTILITY OF WEST VIRGINIA AT 811 OR 1-800-245-4848.

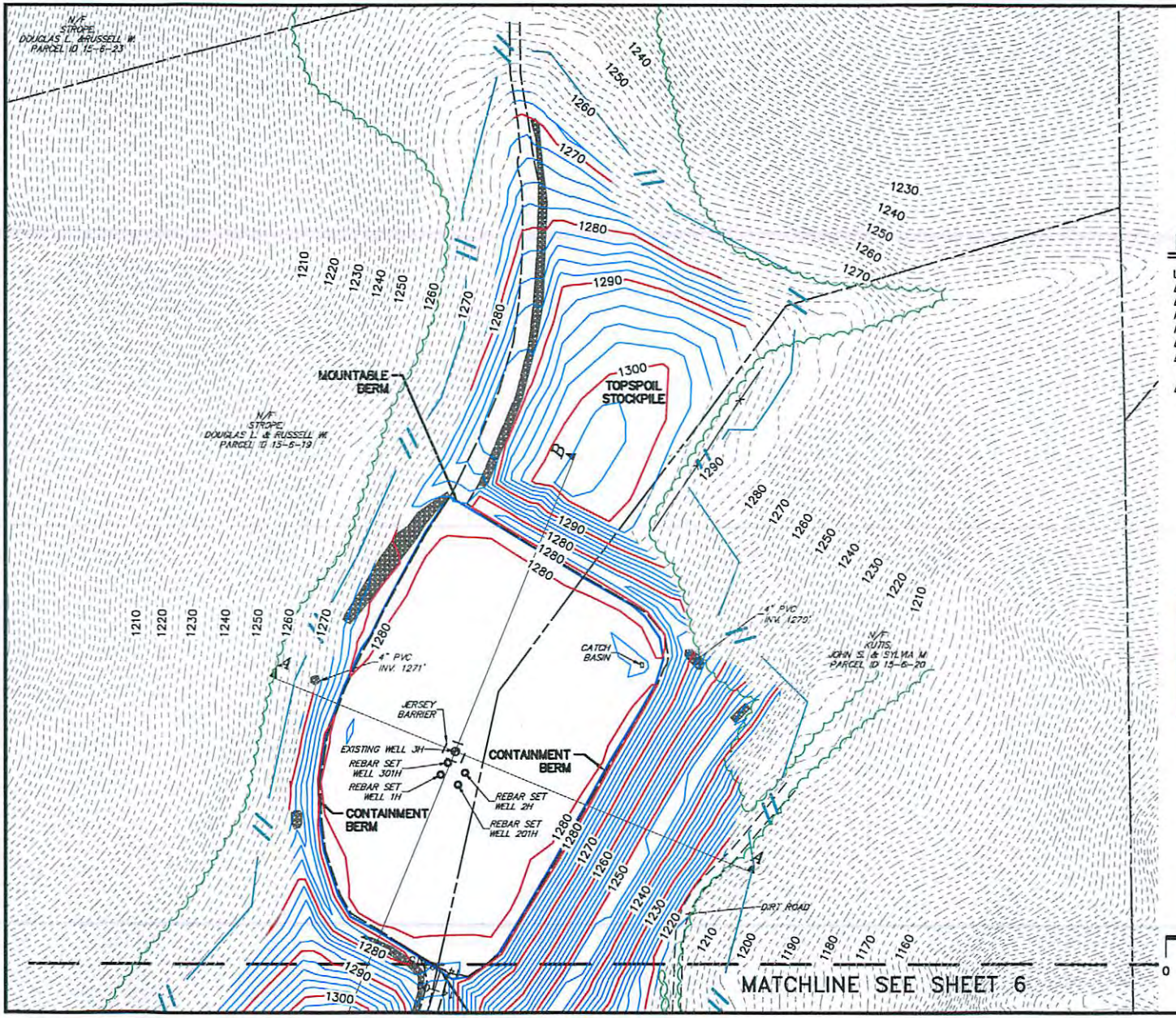
swn Southwestern Energy®

OPERATOR
SWN PRODUCTION CO., LLC
P.O. BOX 1300
JANE LEW, WV 26378
(832) 796-1610

RETTEW
RETTEW Associates, Inc.
One Robinson Plaza, 6600 Steubenville Pike, Suite 200,
Pittsburgh, PA 15205
Phone (412) 446-1728 - Fax (412) 446-1733
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

COVER SHEET
FOR
CRAIG STROPE MSH PAD A
WEBSTER DISTRICT MARSHALL COUNTY, WV

TS1.1



NORTH

LEGEND

- LIMITS OF DISTURBANCE (19.84 ACRES)
- EXISTING CHAIN-LINK FENCE
- EXISTING CONTOUR LINE
- AS-BUILT MAJOR CONTOUR LINE
- AS-BUILT MINOR CONTOUR LINE
- EXISTING WELL HEAD
- EXISTING TREELINE
- EXISTING RIPRAP

SCALE
1"=100'
0 50' 100' 200' 300'

AS3.4

ERIC W. HERSHEY
REGISTERED
19074
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

WVDEP OOG ACCEPTED AS-BUILT
2/5/2015

DRAWN BY: MEB
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SCALE: 1"=100'
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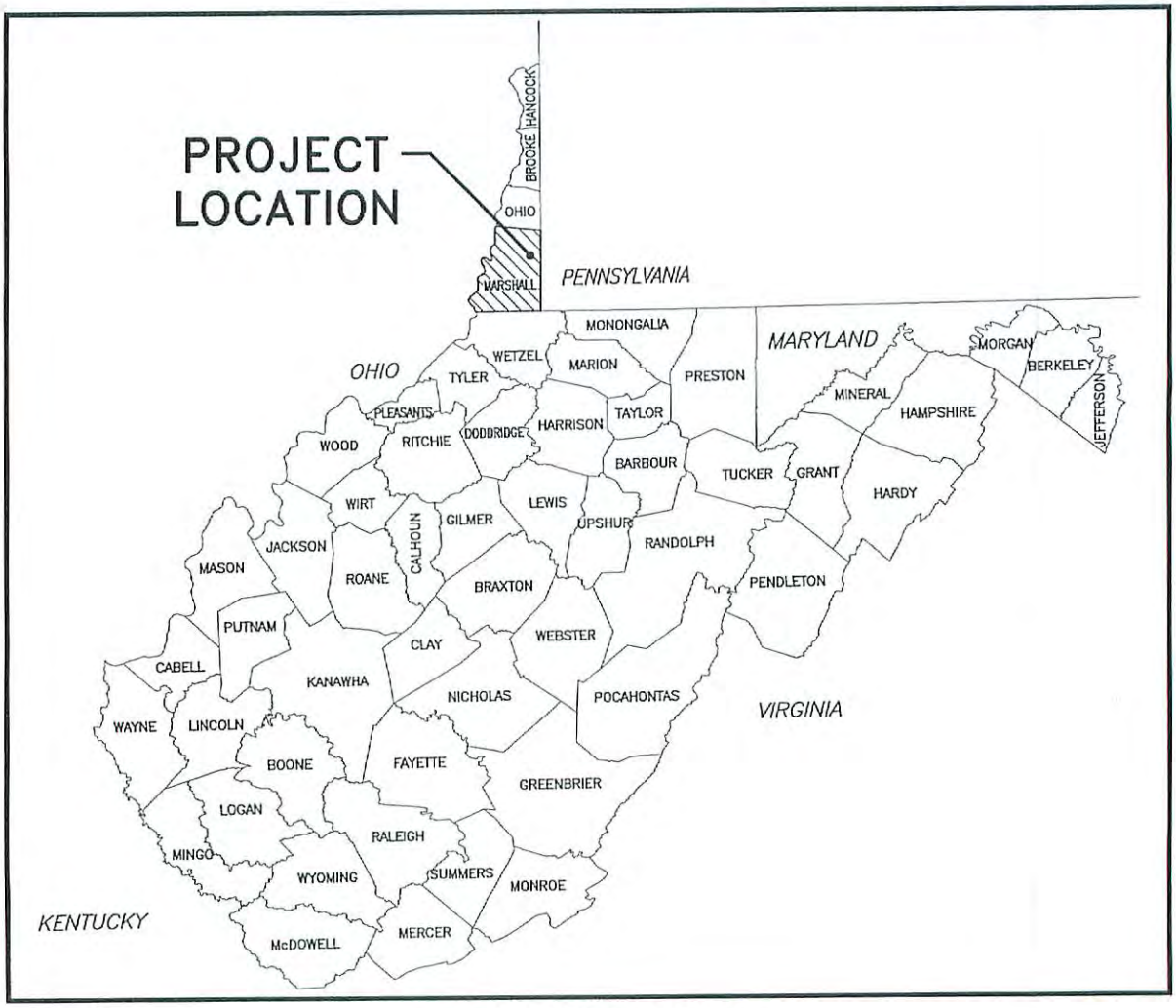
AS-BUILT SITE PLAN
FOR
CRAIG STROPE MSH PAD A
WEBSTER DISTRICT MARSHALL COUNTY, WV

AS-BUILT SIT

FOR

CRAIG STROPE

WEBSTER DISTRICT, MAR



COUNTY MAP

N.T.S.

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swn Southwestern Energy®

OPERATOR

SWN PRODUCTION CO., LLC
P.O. BOX 1300
JANE LEW, WV 26378
(832) 796-1610

LIST OF DI

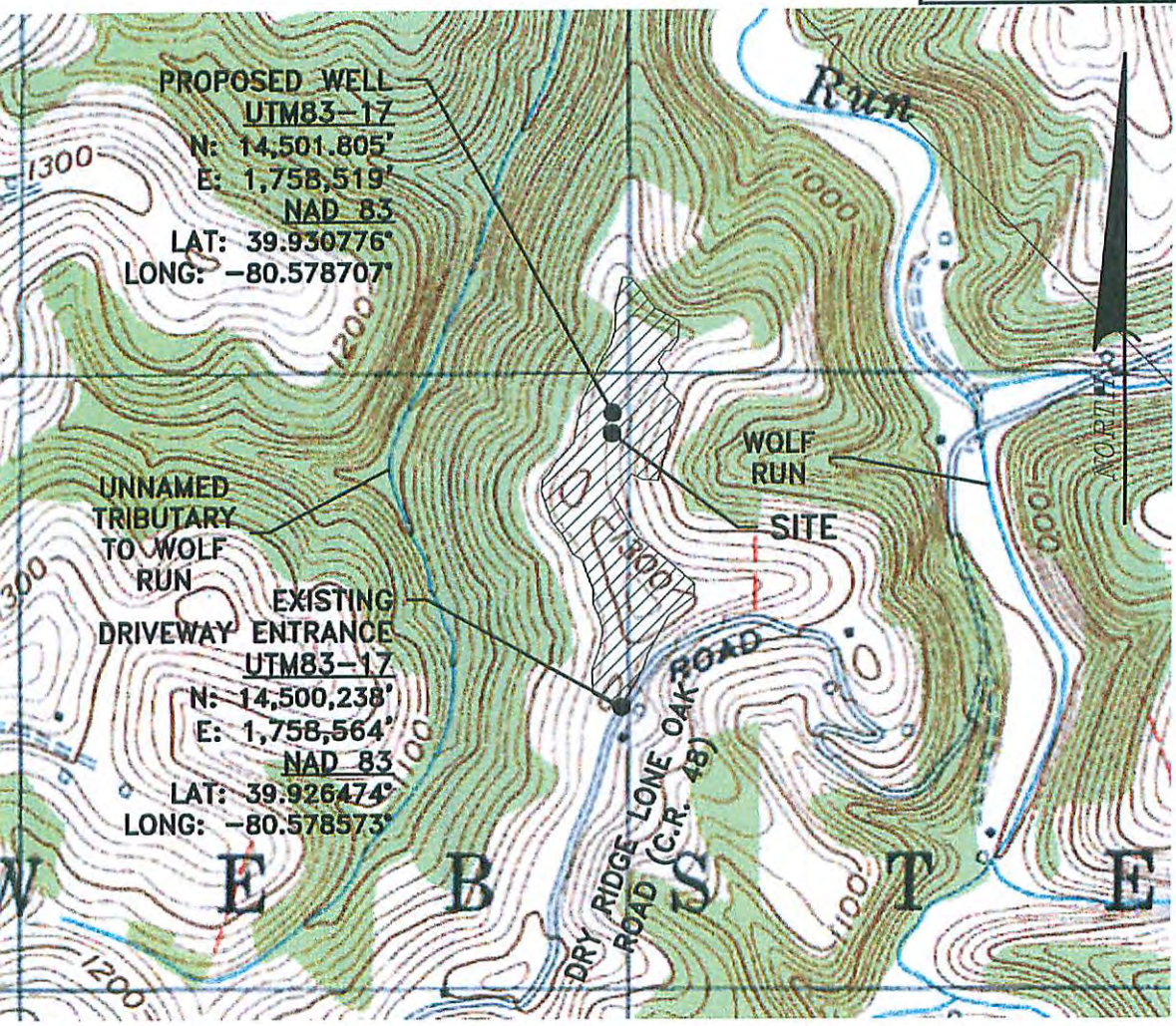
TS1.1 . . . . . COVER
EP2.1 . . . . . EVACUA
EP2.2 . . . . . EVACUA
AS3.1 . . . . . AS-BUI
AS3.2 . . . . . AS-BUI
AS3.3 . . . . . AS-BUI
AS3.4 . . . . . AS-BUI
CRA4.1 . . . . . ACCESS
CRA4.2 . . . . . PAD CR
MRP5.1 . . . . . RECLAM
MRP5.2 . . . . . RECLAM
MRP5.3 . . . . . RECLAM
MRP5.4 . . . . . RECLAM
MRD6.1 . . . . . DETAILS
MRD6.2 . . . . . DETAILS
MRD6.3 . . . . . DETAILS

51-01875

E PLAN

MSH PAD A

SHALL COUNTY, WV



LOCATION MAP

SCALE – 1"=1000'

ERIC W. HERSHEY
REGISTERED
19074
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

DRAWN BY: MEB
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SCALE: AS SHOWN
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RETTEW

RETTEW Associates, Inc.
One Robinson Plaza, 6600 Steubenville Pike, Suite 200,
Pittsburgh, PA 15205
Phone (412) 446-1728 · Fax (412) 446-1733
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

COVER SHEET
FOR
CRAIG STROPE MSH PAD A
WEBSTER DISTRICT MARSHALL COUNTY, WV

RAWINGS

SHEET
TION ROUTE/PREVAILING WINDS
TION ROUTE/PREVAILING WINDS
T OVERVIEW
T SITE PLAN
T SITE PLAN
T SITE PLAN
ROAD PROFILE
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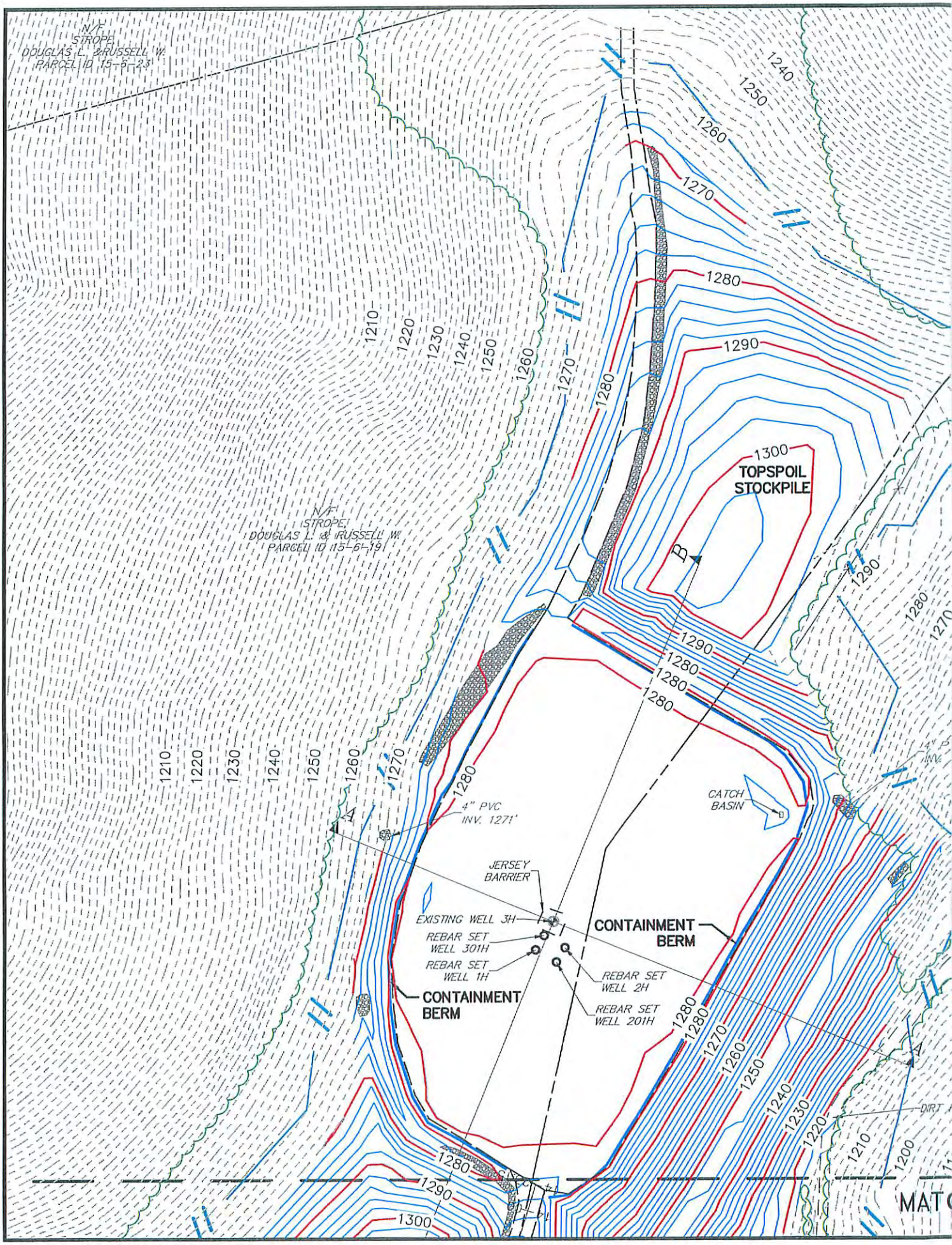
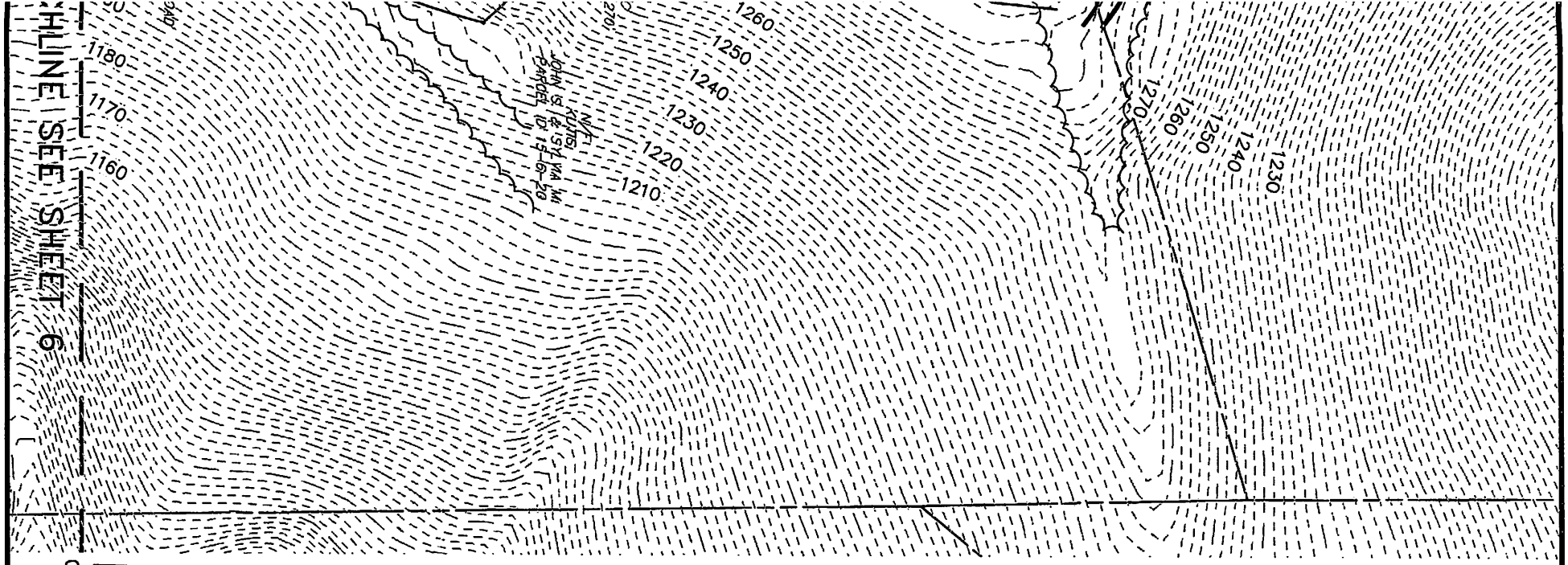
WELL API NUMBERS

1H	API N/A
2H	API N/A
3H	API 051-01743
201H	API N/A
301H	API N/A

12/1/15

TS1.1


N/F
STROPE,
DOUGLAS L. & RUSSELL W.
PARCEL ID 15-6-23'
N/F
STROPE,
DOUGLAS L. & RUSSELL W.
PARCEL ID 15-6-19'
TOPSPOIL
STOCKPILE
CONTAINMENT
BERM
CONTAINMENT
BERM
JERSEY
BARRIER
EXISTING WELL 3H
REBAR SET
WELL 301H
REBAR SET
WELL 1H
REBAR SET
WELL 2H
REBAR SET
WELL 201H
4" PVC
INV. 1271'
CATCH
BASIN
A
A
B
B
1210
1220
1230
1240
1250
1260
1270
1280
1290
1300



LEGEND

- LIMITS OF DISTURBANCE (19.84 ACRES)
- EXISTING CHAIN-LINK FENCE
- EXISTING CONTOUR LINE
- AS-BUILT MAJOR CONTOUR LINE
- AS-BUILT MINOR CONTOUR LINE
- EXISTING WELL HEAD
- EXISTING TREELINE
- EXISTING RIPRAP

NORTH

SCALE 1"=100'

0 50' 100' 200' 300'

AS3.4

ERIC W. WESTSHELEY
REGISTERED
PROFESSIONAL ENGINEER
STATE OF VIRGINIA
19071

AS-BUILT SITE PLAN
FOR
CRAIG STROPE MSH PAD A

WEBSTER DISTRICT MARSHALL COUNTY, WV

RETTEW

RETTEW Associates, Inc.
One Robinson Plaza, 6600 Steubenville Pike, Suite 200,
Pittsburgh, PA 15205
Phone (412) 446-1728 · Fax (412) 446-1733
Engineers • Planners • Surveyors • Landscape Architects
Environmental Consultants

DRAWN BY: MEB
DATE: 11/20/2015
SCALE: 1"=100'
DWG. NO. 087569037