

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

November 26, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-10302922, issued to STONE ENERGY CORPORATION, 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.

Cinci

James Martin

Operator's Well No: TRACY 1H

Farm Name: MARY J. TRACY LIVING TRUST,

API Well Number: 47-10302922

Permit Type: Horizontal 6A Well

Date Issued: 11/26/2013

API Number: 10302922

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. <u>Failure to adhere to the specified permit</u> conditions may result in enforcement action.

CONDITIONS

- 1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE 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 fifty (50) 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.
- 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.

WW - 6B (3/13)

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

	=			103	6	554
1) Well Operator:	STONE ENERGY	CORPORATION	494490923	Wetzel	Magnolia	Porters Falls
			Operator ID	County	District	Quadrangle
2) Operator's Well	Number:	Tracy #1	Н "	Vell Pad Nan	ne:Trac	у
3 Elevation, curren	it ground:	1,108' Elev	vation, proposed p	oost-construc	ction:	1,101'
4) Well Type: (a) (Gas =	Oil	Underground	Storage		
	Other				-	
	f Gas: Shallow		Deep			
	Horizon	ntal =				
5) Existing Pad? Ye	es or No:	No				DMH
6) Proposed Target	Formation(s). De	pth(s). Anticipate	d Thicknesses and	d Associated	Pressure(s):	6-26-17
	ormation is the Mar					nd approximate
rock pressure will 7) Proposed Total V	range between 3,8 Vertical Depth:		anding Point and 6	,790' TVD at	ΓD (Up-Dip We	ll)
8) Formation at Tot		A PART TOTAL				
9) Proposed Total N	Measured Depth:	13,300'				
10) Approximate F	resh Water Strata	Depths: 50'	Shallowest and 90	9' Deepest		
11) Method to Dete	rmine Fresh Wate	er Depth: Depth	of bit when water sho	ows in the flowli	ne or when drillir	ng soap is injected
12) Approximate Sa	altwater Depths:	1556'				
13) Approximate C	oal Seam Depths:	904'				
14) Approximate D	epth to Possible \	oid (coal mine, k	arst, other):	None A	nticipated	
15) Does proposed adjacent to an a	well location cont ctive mine? If so,			No No		
16) Describe propos	sed well work:		MIRU conductor rig an	d set conductor	into solid rock cer	menting to surface.
RDMO conductor rig	and MIRU top-hole ri	g and drill to KOP whil	le setting surface and	intermediate ca	sing string and c	ementing them to
surface. RDMO top-	rig and MIRU horizont	al rig. Drill curve and	lateral on WBM, set p	roduction casin	g and cement in	place. RDMO.
17) Describe fractur MIRU completion equipm	ring/stimulating n		ely 30 degrees in the curve	e to surface. Perfor	ate 23 individual stag	es in the lateral section
of the well bore and stimu	late each individual set of p	erforations using slick wate	er and sand. MIRU service	rig and flow well ba	ck. Clean out well be	
tubing. Test well flow.	See the attached frac che	emical addendum for addi	tives used during the stin	nulation.	ottic	e of Oil & Gas
19) Total area to be	disturbed includ	ine reade etectrui	la ausa wita ata (Ollio	
18) Total area to be				acres):	- 41	14.9
19) Area to be distu	irbed for well pad	only, less access	road (acres):		11.7	

WW - 6B (3/13)

20)

CASING AND TUBING PROGRAM

ТҮРЕ	Size	New or Used	<u>Grade</u>	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill -up (Cu. Ft.)
Conductor	20"	New	LS	94.0	40'	40'	20 - GTS
Fresh Water	13.375"	New	J55	54.5	1,095'	1,095'	1,059 - CTS
Coal	13.375"	New	J55	54.5	1,095'	1,095'	1,059 - CTS
Intermediate	9.625"	New	J55	36.0	2,430'	2,430'	617 Lead - 393 Tail CTS
Production	5.5"	New	P110	20.0		13,300'	1,025 Lead - 2,288 Tail TOC @ 1,430'
Tubing	2.375"	New	J55	4.7		6,300'	N/A
Liners							

Surface/Coal String will be set above Sea Level at 1,101'.

DRH 6-26-17

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
Conductor	20"	24"	0.375"	N/A	Type 1	1.18
Fresh Water	13.375"	17.5"	0.380"	2,730 psi	Class A	1.19
Coal	13.375"	17.5"	0.380"	2,730 psi	Class A	1.19
Intermediate	9.625"	12.25"	0.352"	3,520 psi	Class A	1.26 Lead - 1.19 Tail
Production	5.5"	8.75"	0.361"	12,360 psi	Class A	1.25 Lead - 1.23 Tail
Tubing	2.375"	N/A	0.190"	7,700 psi	N/A	N/A
Liners	N/A					

PACKERS

Kind:	N/A	
Sizes:		Received Gas
Depths Set:		Olling

2014 3 to 300g

REVISED SECTION 22) for API# 47-103-02922

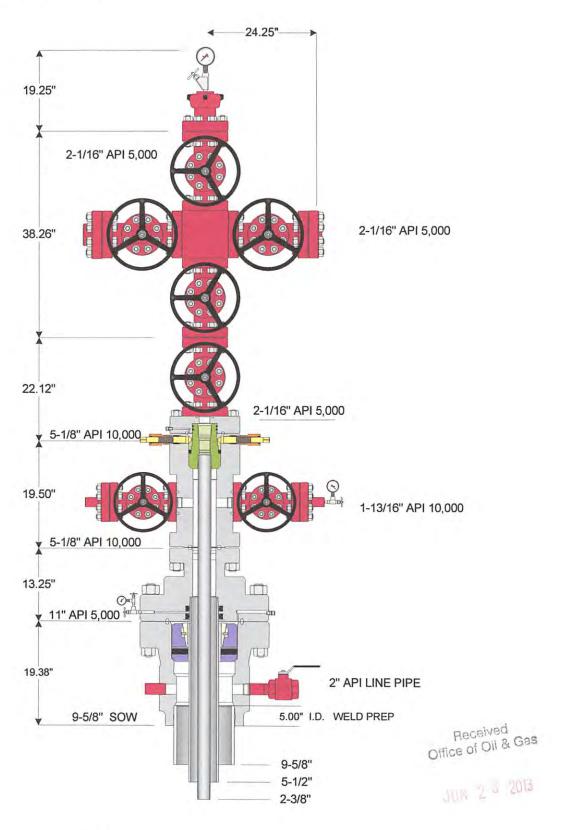
21) Describe centralizer placement for each casing string.
spring centralizers with one (1) being placed above the guide shoe and one (1) every second joint to surface, 14 total
-Intermediate string will incorporate bow spring centralizers with one (1) above the guide shoe, one (1) above float
collar, and one (1) every third joint to surface for a total of 21 centralizers. One straight vane rigid centralizer will be
placed as close to the surface as practical.
-Production string will incorporate alternating left and right hand spiral centralizers with one (1) every fourth joint to
500' above KOP and every third joint from KOP to top of slant for a total 70 left/right rigid spiral centralizers. From
top of slant to TOC bow spring centralizers will be used on every third joint for a total of 10.
22) Describe all cement additives associated with each cement type.
-Fresh Water/Coal string uses a slurry of Class A cement with 0.125 pps Cello Flake and 1.0% to 3.0% CaCl2.
-Intermediate string uses a Lead/Tail slurry. Lead is Class A cement with 0.2 gps Accelerator, 0.08 gps Dispersant, 0.1 gps Anti
Foam, 4.0% Expanding Agent, and 0.5% Gas Migration Agent. Tail is Class A cement with 1.0% CaCl2, 0.125 pps Cello Flake,
and 0.2% Anti-Foam.
- Production string uses a Lead/Tail slurry. the Lead is Class A cement with 4.0% Expanding Agent, 0.5% Gas Migration Agent,
0.25 gps Dispersant, 0.1 gps Anti-foam, and 0.06 gps Retarder. The Tail is Class A cement with 0.2% Dispersant, 0.4% Fluid Los
0.2% Anti-Foam, 0.15% retarder, and 0.2% Anti-Settling Agent.
23) Proposed borehole conditioning procedures.
-Fresh Water/Coal section will be conditioned by circulating air down the down the drill string at TD for 30 to 90
minutes or until the well bore clears of cuttings.
- Intermediate section will conditioned by circulating air and/or stiff foam through the drill string at TD for 30 to 120
minutes until well bore clears of cuttings.
-Production section will be conditioned by circulating drilling fluid through the drill string at TD for 120 to 720 minute
until cuttings shakers clear of cuttings.

*Note: Attach additional sheets as needed.



103-02922

NOTE: THIS DRAWING IS NOT TO SCALE. THE DIMENSIONS REFLECTED ON THE DRAWING ARE ESTIMATED MEASUREMENTS AND FOR REFERENCE ONLY.





P-31-1-

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Customer: STONE ENERGY	Project: 46705	Quote: 99565 v 3
Tender, Project or Well: 2011-2012 CONVENTIONAL MARCELLUS	Date: 07-17-2011	Dralv1649x2013

Well: Tracy #1H State: West Virginia County: Wetzel

District: Magolia

Prospect: Mary

STONE ENERGY - PROPOSED HORIZONTAL Revision: 25-June-13

Permit Number: 47-103-(17) Permit Issued:

Post Construction Ground Elevation: 1101 0

TD Date: Rig Release Date:

Kelly Bushing: Rig: Spud Date:

Location: Surface: North = 4,385,531 East = 520,384 (UTM NAD 83) North = 4,387,033 East = 519,188 (UTM NAD 83) PTD: 13300' MD / 6790' TVD HOLE PILOT HOLE WELLBORE SIZE FORMATION TOPS DIAGRAM 24" Hole

CASING & CEMENTING DATA HOLE MW & **DIRECTIONAL DATA FLUID TYPE** DEV. then Driven 40' KB (22' BGL) CONDUCTOR PIPE Vertical 20" x 3/8" wall L/S PE @ 40' (set in bedrock & grouted to surface) Shallowest FW 50' TVD 17-1/2" Hole Pittsburgh Coal 904' TVD Air / Mist Deepest FW 909' TVD 1095' TVD SURFACE CASING Vertical 13-3/8" 54.5# J-55 STC @ 1095' MD/TVD Salt Water 1556' TVD Set through fresh water zones Little Lime 2068' TVD Set through coal zones 12-1/4" Hole Big Lime 2098' TVD Cemented to surface Stiff Foam Big Injun Sandstone 2198' TVD Base of Big Injun 2298' TVD 2430' TVD INTERMEDIATE CASING Vertical 9-5/8" 36.0# J-55 LTC @ 2430' MD/TVD Berea Sandstone 2666' TVD Set through potential salt water zones Set below base of Big Injun Gordon Sandstone 2870' TVD Cemented to surface 8-3/4" Hole Air / Dust KOP @ 6119' TVD Rhinestreet Shale (Base) 6368' TVD WBM in Curve 8-3/4" Hole Middlesex Shale 6565' TVD West River Shale 6620' TVD Geneseo Shale 6702' TVD Tully Limestone 6721' TVD Hamilton Shale 6761' TVD 8-3/4" Hole in Marcellus Shale 6815' TVD WBM in Lateral ~90.5° Lateral Onondaga Limestone 6863' TVD TD @ 13300' MD / 6790' TVD Landing Point (LP) @ 7550' MD / 6840' TVD PRODUCTION CASING Notes: Formation tops as per vertical pilot hole ~90.5° angle 5-1/2" 20.0# P-110 CDC @ 13300' MD Curve & lateral tops will vary due to structural changes ~327° azimuth Top of Cement @ 1430' (~1000' inside 9-5/8") Directional plan based upon best estimate of structure

	Page of
API Number 47 - 103	- 02922
Operator's Well No	Tracy #1H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name	STONE	E ENERGY CORF	ORATION	OP Code	494490923
Watershed (HUC 10)Littl	e Fishing Creek	Quadrangle	Р	orters Falls
Elevation	1,101'	County	Wetzel	District	Magnolia
Will a pit be used for	or drill cuttings?	Yes No pated pit waste:	✓		No
Will a synt	hetic liner be us	ed in the pit? Yes	No ✓ If:	so, what ml.?	N/A
		For Treated Pit Wastes			
	Reuse (a	t API Number_Flow Back Disposal (Supply form	will be collected and use	ed for other stimula	, 34-121-24037, 34-121-24086) stions, wells not permitted yet)
Will closed loop sys	stem be used? _	Both the Top-Hole Rig a	nd Horizontal Rig will i	ncorporate the u	se of a closed loop system
Drilling medium and	ticipated for this	well? Air, freshwater,	oil based, etc. Top-Hole	on air and/or drilli	ng soap, Horizontal on Salt Brine
		ynthetic, petroleum, etc.			
Additives to be used	I in drilling med	ium?	See WW	-9 Addendum	
					sed of in an approved landfill
-If left in p	it and plan to so	lidify what medium will	be used? (cement, lin	me, sawdust)	N/A
-Landfill or	r offsite name/pe	ermit number?	Wetzel County Sanita	ary Landfill (SWF	F-1021/WV109185)
on August 1, 2005, 1 provisions of the pe law or regulation ca I certify un application form an obtaining the inform	by the Office of crimit are enforce in lead to enforce inder penalty of all attachmentation, I believing false inform	Oil and Gas of the Wese able by law. Violation ement action. law that I have personnts thereto and that, b	t Virginia Department is of any term or cond ally examined and an ased on my inquiry is true, accurate, and	of Environmenta ition of the gene of familiar with of those individ complete. I ar	ER POLLUTION PERMIT in all Protection. I understand the eral permit and/or other applies the information submitted or luals immediately responsible aware that there are significant.
Company Official (Typed Name)_	Timothy P. McGregor			
Company Official T	itle	Land Coordinator			
Subscribed and swo	rn before me thi	1	Jun	20 Volayy	OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGIN

Form WW-9			Operator's We	Tracy #1H
	STONE ENER	GY CORF	•	
Proposed Revegetation Treatm	nent: Acres Disturbed		·	
Lime2.0	Tons/acre or to correct to	орН	S.5 	
Fertilizer (10-20-20 c	or equivalent) 500-750	lbs/acre (500 l	bs minimum)	
	0 75 + Strow	ons/acre	ŕ	
		Seed Mixtures		
Are			Area	
Seed Type	lbs/acre		Seed Type	lbs/acre
Marcellus Mix	100.0		Marcellus Mix	100.0
White or Ladino Clover	10.0	W	hite or Ladino Clover	10.0
Orchard Grass	40.0		Orchard Grass	40.0
Winter Rye	50.0		Winter Rye	50.0
Plan Approved by:				
Comments:				
-				
<u></u>				
Title: Oil + Gis 7	-nou-tr	Date:	6-26-17	
Field Reviewed?) Yes () No		Received Office of Oil & Gas



WW-9 ADDENDUM

Drilling Medium Anticipated for This well

- Vertical section of well bore, down to KOP, will be drilled on air and/or a combination of air and drilling soap.
- From KOP through the curve section and horizontal section of well bore will be drilled on a brine-water based mud system.

Additives to be Used While Drilling

- Common additives when air drilling: KCl (CAS No. 1302-78-9 & 14808-60-7), soda ash (CAS No. 497-19-8), shale stabilizer (CAS No 67-48-1 & 7732-1835), drilling soap (CAS No. 111-76-2), air hammer/motor lubricant.
- Common water based additives for mud drilling: NaCl (CAS No. 7647-14-5), KCl (CAS No. 7447-40-7), barite (CAS No. 13462-86-7 & 14808-60-7), starch (CAS No. 9005-25-8), PAC (CAS No. 9004-32-4), xanthum gum (CAS No. 11138-66-2), PHPA (CAS No. 64742-47-8), polysaccharide (CAS No. 11138-66-2), sulfonated asphaltic material (CAS No. 269-212-0 & 238-878-4), aluminum silicate (CAS No. 37287-16-4), gilsonite (CAS No. 12002-43-6), graphite (CAS No.14808-60-7 & 7782-42-5), shale stabilizer (CAS No. 67-48-1 & 7732-18-5), fluid loss control polymers (CAS No. 9004-34-6), viscosity control polymers (CAS No. 11138-66-2 & 107-22-2), soda ash (CAS No. 497-19-8), sodium bicarbonate (CAS No. 144-55-8), NaOH (CAS No. 1310-73-2, 7647-14-5, & 7732-18-5), lime (CAS No. 1305-62-0), gypsum (CAS No.778-18-9), citric acid (CAS No. 77-92-9), biocide (CAS No. 52-51-7 or 7732-18-5 + 67-56-1 + 141-43-5), CaCO₃ (CAS No. 471-34-1), cellulose fibers (CAS No. 14808-60-7), nut plug (CAS No. 9004-34-6 & 14808-60-7), cross-linking polymers (CAS No. 107-22-2 & 11138-66-2), other LCMs, surfactants (CAS No. 64-17-5), ROP enhancer/lubricant (CAS No. 8002-13-9), beads, corrosion inhibitor (CAS No. 7732-18-5), aluminum stearate (CAS No. 300-92-5), defoamer (CAS No. 246-771-9).

MSDS are available upon request.

DMH 6-26-13

Received Office of Oil & Gas

JUN 2 8 2013



WW-9 ADDENDUM

Drill Cuttings Disposal Method

Closed loop drilling system will be incorporated. No waste pits will be constructed. All
drill cuttings are put through a drier system and hauled to and disposed of at approved
and permitted landfills.

Landfills or Offsite Names and Permit Numbers

Wetzel County Sanitary Landfill Rt. 1, Box 156A New Martinsville, WV 26155 SWF-1021 / WV01909185 Brooke County Sanitary Landfill Colliers, WV 26035 SWF-1013 / WV0109029

DAH 626-17

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Office of Oil & Gas

พest virginia department of environmental protection



Water Management Plan: Primary Water Sources



WMP-01358

API/ID Number:

047-103-02922

Operator:

Stone Energy Corporation

Tracy #1H

Important:

For each proposed primary water source (including source intakes for purchased water sources) identified in your water management plan, and summarized herein, DEP has made an evaluation concerning water availability over the specified date range. DEP's assessment is based on the following considerations:

- Statistical analysis of historical USGS stream gauge data (transferred to un-gauged locations as necessary);
- •Identification of sensitive aquatic life (endangered species, mussels, etc.);
- Quantification of known existing demands on the water supply (Large Quantity Users);
- •Minimum flows required by the Army Corps of Engineers; and
- Designated stream uses.

Based on these factors, DEP has provided, for each intake location (and origination point for purchased water), a reference gauge location and discharge flow reading which must be surpassed prior to withdrawals. Additionally, DEP has established a minimum passby flow at the withdrawal location which must also be surpassed prior to withdrawals. These thresholds are considered terms of the permit and are enforceable as such.

DEP is aware that some intake points will be used for mutiple wells and well sites. In these cases, the thresholds set by the Water Management Plan are to be interepreted as total withdrawal limits for each location over the specified date range regardless of how many wells are supported by that intake.

For all purchased water intakes, determinations of water availability are made at the original source intake location. It is the responsibility of the Oil and Gas Operator, not the seller, to cease withdrawal of water from the seller when flows are less than the minimum gauge reading at the stream gauge referenced by the Water Management Plan in order to protect stream uses.

Note that the determinations made herein are based on the best available data, but it is impossible to predict water availability in the future. While the DEP has carefully established these minimum withdrawal thresholds, it remains the operator's responsibility to protect aquatic life at all times. Approval to withdrawal is contingent upon permission from the land owner. It is the responsibility of the operator to secure and maintain permission prior to any withdrawals.

The operator is reminded that 24-48 hours prior to withdrawing (or purchasing) water, DEP must be notified by email at DEP.water.use@wv.gov.

APPROVED AUG 2 3 2013

Source Summary

103-02922

WMP-01358

API Number:

047-103-02922

Operator:

Stone Energy Corporation

Tracy #1H

Stream/River

Source

Ohio River @ The Spielers Club

Wetzel

Owner:

The Spielers Club

Start Date

End Date

Total Volume (gal)

Max. daily purchase (gal)

Intake Latitude: Intake Longitude:

7/1/2014

7/1/2015

6,700,000

39.709677

-80.826384

Regulated Stream?

Ohio River Min. Flow

Ref. Gauge ID:

9999999

Ohio River Station: Willow Island Lock & Dam

Max. Pump rate (gpm):

833

Min. Gauge Reading (cfs):

6,468.00

Min. Passby (cfs)

DEP Comments:

Refer to the specified station on the National Weather Service's Ohio River forecast

website: http://www.erh.noaa.gov/ohrfc//flows.shtml

WMP-01358 API/ID Number: 047-103-02922 Operator: Stone Energy Corporation Tracv #1H Ohio River @ The Spielers Club 20595 Source Name Source Latitude: 39.709677 Source ID: The Spielers Club Source Longitude: -80.826384 5030201 HUC-8 Code: 7/1/2014 Anticipated withdrawal start date: 25000 Drainage Area (sq. mi.): County: Wetzel Anticipated withdrawal end date: 7/1/2015 ✓ Mussel Stream? **Endangered Species?** 6,700,000 Total Volume from Source (gal): Trout Stream? Tier 3? 833 Max. Pump rate (gpm): Regulated Stream? Ohio River Min. Flow Proximate PSD? Grandview-Doolin PSD Max. Simultaneous Trucks: Max. Truck pump rate (gpm) Gauged Stream? Ohio River Station: Willow Island Lock & Dam Reference Gaug 9999999 25,000.00 Gauge Threshold (cfs): 6468 Drainage Area (sq. mi.)

Month	Median monthly flow (cfs)	Threshold (+ pump	Estimated Available water (cfs)
1	45,700.00	-	
2	49,200.00	14.0	A
3	65,700.00	-	
4	56,100.00		-
5	38,700.00	-	
6	24,300.00	-	12
7	16,000.00	-	16
8	13,400.00	-	-
9	12,800.00	÷	-
10	15,500.00	÷	
11	26,300.00	-	-
12	41,300.00	7.4	-2

Water Availability Profile 80000 60000 40000 20000 1 2 3 4 5 6 7 8 9 10 11 12 Median Monthly Flow — Threshold

Water Availability Assessment of Location

Base Threshold (cfs):	-
Upstream Demand (cfs):	0.00
Downstream Demand (cfs):	0.00
Pump rate (cfs):	1.86
Headwater Safety (cfs):	0.00
Ungauged Stream Safety (cfs):	0.00

"Threshold", as depicted in the chart above is meant only to indicate the calculated base threshold at the proposed withdrawal location. This value does not include the proposed pump rate or existing demand on the stream. Refer to the monthly breakdown above for a more complete estimation of water availability by month.

103-02922 west virginia department of environmental protection





Water Management Plan: **Secondary Water Sources**



WMP-01358

API/ID Number

047-103-02922

Operator:

Stone Energy Corporation

Tracy #1H

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Multi-site impoundment

Source ID: 20596 Source Name

Pribble Freshwater Impoundment

Source start date:

7/1/2014 7/1/2015

Source end date:

Source Lat:

39.685144

Source Long:

-80.820002

County

Wetzel

Max. Daily Purchase (gal)

Total Volume from Source (gal):

6,700,000

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-277

WMP-01358

API/ID Number

047-103-02922

Operator:

Stone Energy Corporation

Tracy #1H

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- •For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- •For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Source ID: 20597 Source Name Tuttle Fresh Water Impoundment Source start date: 7/1/2014
Source end date: 7/1/2015

Source Lat: 39.586528 Source Long: -80.779889 County Wetzel

Max. Daily Purchase (gal) Total Volume from Source (gal): 3,350,000

DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-588

Conley Fresh Water Impoundment Source ID: 20598 Source Name 7/1/2014 Source start date: 7/1/2015 Source end date: -80.79156 39.608922 Wetzel Source Lat: Source Long: County 3,350,000 Max. Daily Purchase (gal) Total Volume from Source (gal): DEP Comments:

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-589

WMP-01358

API/ID Number:

047-103-02922

Operator:

Stone Energy Corporation

Tracy #1H

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Recycled Frac Water

Source ID: 20599 Source Name

Maury Pad; Weekley Pad

Source start date:

7/1/2014

Source end date:

7/1/2015

Source Lat:

Max. Daily Purchase (gal)

Source Long:

County

Total Volume from Source (gal):

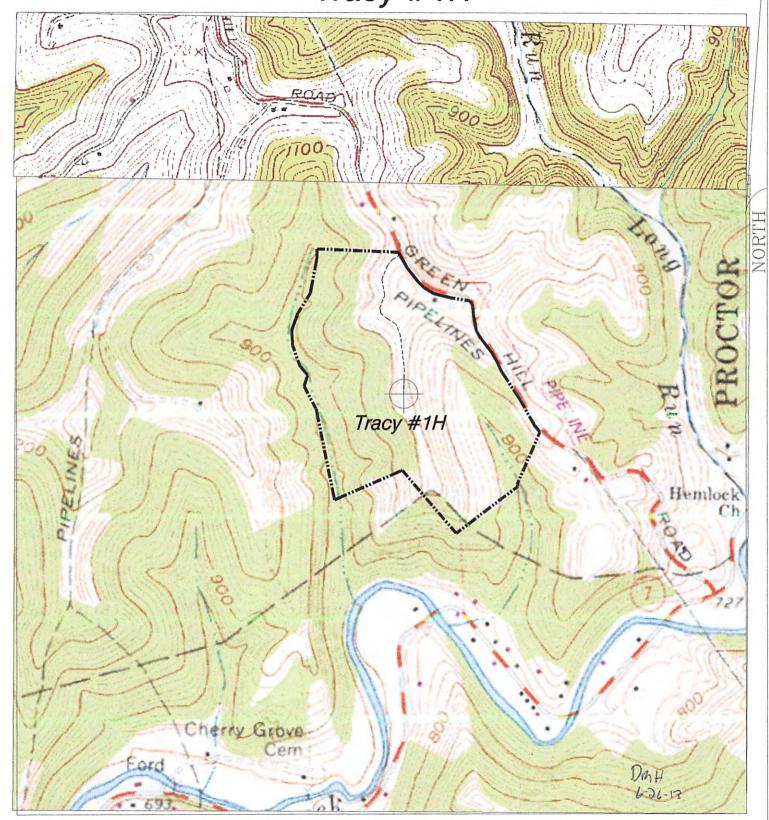
200,000

DEP Comments:

Form W-9

Stone Energy Corporation Tracy #1H

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HUPP Surveying & Mapping

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