

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

API: 47-051-01670 County: MARSHALL District: CAMERON  
 Quad: CAMERON Pad Name: SIVERT Field/Pool Name: MARCELLUS SHALE  
 Farm name: SIVERT WELL NAME : SIVERT 2H  
 Operator (as registered with the OOG): TRANS ENERGY, INC.  
 Address: P. O. BOX 393 City: ST. MARYS State: WV Zip: 26170

As Drilled Location NAD 83/UTM \*\*\* SEE ATTACHED AS-BUILT WELL LOCATION MAP \*\*\*

Top hole	Northing	<u>4411675</u>	Easting	<u>537113.5</u>
Landing Point of curve	Northing	<u>4411828</u>	Easting	<u>537563</u>
Bottom hole	Northing	<u>4410717</u>	Easting	<u>537010</u>

Elevation (ft): 1438' Type of Well: NEW Type of Report: FINAL

Permit Type: HORIZONTAL 6A Depth Type: SHALLOW

Type of Operation: DRILL

Well Type: GAS

Type of Completion: SINGLE Fluids Produced: BRINE, GAS and NGL

Drilled With: ROTARY

Drilling Media: MUD Intermediate hole: MUD

Production hole: MUD

Mud Type(s) and Additive(s) MUD TYPE - SYNTHETIC BASE DRILLING MUD

<b>ADDITIVES:</b>	Calcium Carbonate	Hydrated Lime	Synvert Synthetic 1-L	Citric Acid	Drispac Low Vis
	Calcium Chloride	Cedar Fiber	Bentonite	Sodium Bicarbonate	L-20C
	Synvert LEM	Rubber Crumb	Soda Ash, dense	Glycerine	Bioclear
	Synvert Synthetic WA-L	Cottonseed Hulls	Lignite	Desco	
	Barite	Synvert Synthetic 11-L	Aluminum Sterate	Caustic Soda Beads	

Date permit issued: 11/18/2013 Date drilling commenced: 7/27/2014 Date drilling ceased: 9/15/2014

Date completion activities began: 9/23/2014 Date completion activities ceased: 12/7/2014

Verbal plugging: N/A Date permission granted: N/A Granted by: N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug.

Fresh water depth (s) ft: 50', 150' Open mine(s) (Y/N) depths: N/A

Salt water depth(s) ft: 1525' Void(s) encountered (Y/N) depths: N/A

Coal Depth(s) ft: 900' Cavern(s) encountered (Y/N) depths: N/A

Is coal being mined in area (Y/N) NO

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Reviewed by:

*[Signature]*

WV Department of  
Environmental Protection

AX 05/04/16  
05/06/2016

API: **47-051-01670** WELL NAME: **SIVERT 2H**

CASING STINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) Provide details below.
Conductor	<b>26"</b>	<b>20"</b>	<b>80'</b>	<b>NEW</b>	<b>J55 / 64</b>	-	-
Surface	<b>17 1/2"</b>	<b>13 3/8"</b>	<b>1050'</b>	<b>NEW</b>	<b>J55 / 94</b>	-	<b>YES</b>
Coal	-	-	-	-	-	-	-
Intermediate 1	<b>12 1/2"</b>	<b>9 3/8"</b>	<b>3095'</b>	<b>NEW</b>	<b>J55 / 40</b>	-	<b>YES</b>
Intermediate 2	-	-	-	-	-	-	-
Intermediate 3	-	-	-	-	-	-	-
Production	<b>8 3/4"</b>	<b>5 1/2"</b>	<b>12406'</b>	<b>NEW</b>	<b>P-110 / 20</b>	-	-
Tubing	-	-	-	-	-	-	-
Packer type and Depth Set							

Comment Details:

CEMENT DATA	Class / type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
CONDUCTOR	<b>TYPE 1</b>	-	-	-	-	-	-
SURFACE	<b>TYPE 1</b>	<b>880</b>	<b>15.6</b>	<b>1.21</b>	<b>1065'</b>	<b>SURFACE</b>	<b>10.5</b>
COAL	-	-	-	-	-	-	-
INTERMEDIATE 1	<b>TYPE 1</b>	<b>997</b>	<b>15.6</b>	<b>1.19</b>	<b>1186'</b>	<b>SURFACE</b>	<b>8.0</b>
INTERMEDIATE 2	-	-	-	-	-	-	-
INTERMEDIATE 3	-	-	-	-	-	-	-
PRODUCTION	<b>POS H CLASS H</b>	<b>1409, 1245</b>	<b>13.5, 15.6</b>	<b>1.35, 1.19</b>	<b>1902, 1482</b>	<b>SURFACE</b>	<b>8.0</b>
TUBING	-	-	-	-	-	-	-

Drillers TD (ft): **12450'**      Loggers TD (ft): **12450'**  
 Deepest formation penetrated: **MARCELLUS SHALE**      Plug back to (ft): **N/A**  
 Plug back procedure: **N/A**

Kick off depth (ft) **7070'**

Check all wireline logs run:  caliper     density     deviated/directional     induction  
 neutron     resistivity     gamma ray     temperature     sonic

Well cored? **NO**      Were cuttings collected? **NO**

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

**FRESS WATER STRING - 1 CENTRALIZER EVERY 160'**

**INTERMEDIATE STRING - 1 CENTRALIZER EVERY 100' FROM 3,300' TO 900'**

**PRODUCTION STRING - 1 CENTRALIZER EVERY 80' FROM TD TO ABOVE ROP (7000')**

WAS WELL COMPLETED AS SHOT HOLE? **YES**      DETAILS: **RECEIVED**

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WAS WELL COMPLETED OPEN HOLE? **NO**      DETAILS: **JUN 22 2015**

WERE TRACERS USED? **NO**      TYPE OF TRACER(S) USED: **N/A**      **WV Department of Environmental Protection**





API: <b>47-051-01670</b>	WELL NAME : <b>SIVERT 2H</b>
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PRODUCING FORMATION(S)	DEPTHS
<b>MARCELLUS SHALE</b>	<b>7,138'</b> TVD <b>12,450'</b> MD

GAS TEST: N/A OIL TEST: N/A

PRESSURE: Surface: \_\_\_\_\_ psi Bottom hole: \_\_\_\_\_ psi DURATION OF TEST: \_\_\_\_\_ hrs

OPEN FLOW	GAS: _____ mcfpd	OIL: _____ bpd	NGL: _____ bpd	WATER: _____ bpd	GAS MEASURED BY: <b>ESTIMATED</b>
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LITHOLOGY / FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S, ETC)
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SAND	1,581	1,639			
MAXTON	1,991	2,013			
BIG LIME	2,147	2,102			
BIG INJUN	2,103	2,183			
BEREA	2,315	2,335			
30 FT	2,635	2,684			
GORDON	2,747	2,797			
4TH	2,796	2,835			
5TH	2,911	2,931			
RILEY	4,435	4,453			
BENSON	4,818	4,841			
ALEXANDER	4,931	4,961			
MIDDLESEX	6,849	6,862			
BURKETT	6,887	6,910			
TULLY LIME	6,913	7,007			
MARCELLUS	7,057	7,101			
ONONDAGA	7,109				
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					JUN 22 2015
					WV Department of Environmental Protection

Please insert additional pages as applicable.

API: 47-051-01670 WELL NAME : SIVERT 2H

Drilling Contractor: H&P INTERNATIONAL DRILLING  
Address: 912 N EAGLE VALLEY ROAD City: HOWARD State: PA Zip: 16841

Logging Contractor: BAKER HUGHES  
Address: 17015 ALDINE WESTFIELD ROAD City: WOOSTER State: OH Zip: 44691

Cementing Company: BAKER HUGHES  
Address: 17015 ALDINE WESTFIELD ROAD City: WOOSTER State: OH Zip: 44691

Stimulating Company: GO FRAC  
Address: 7000 CALMONT AVENUE, SUITE 310 City: FORT WORTH State: TX Zip: 76116

Completed by: Leslie A. Gearhart, Vice President of Operations

Telephone: 304/684-7053

Signature: 

DATE: 6/17/15

\*\*\* SEE ATTACHED CHEMICAL DISCLOSURE \*\*\*

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Environmental Protection

Fracture Start Date/Time:	10/1/14 7:49
Fracture End Date/Time:	10/29/14 15:29
State:	West Virginia
County:	Marshall
API Number:	47-051-01670
Operator Number:	494481575
Well Name:	Sivert 2H
Federal Well:	No
Longitude:	-80.5661
Latitude:	39.8542
Long/Lat Projection:	NAD27
True Vertical Depth (TVD):	7,139'
Total Clean Fluid Volume* (gal):	5,935,440



Additive	Specific Gravity	Additive Quantity	Mass (lbs)	
Freshwater	1.00	5,935,440	49,531,247	gal
100 Mesh	2.65	1,914,938	1,914,938	lb
40/70 White Sand	2.65	2,084,300	2,084,300	lb
20/40 White Sand	2.65	1,200,320	1,200,320	lb
Plexhib 256	0.86	38	273	gal
HCl Acid 10-15%	1.07	19,000	169,654	gal
Ferriplex 66	1.15	38	365	gal
Greenflush	0.81	148	1,000	gal
Sodium Persulfate	2.60	3	3	lb
Beta M-4.0	1.05	41	359	gal
Plexbreak 145	0.95	38	301	gal
Plexslick 953	1.06	3,809	33,693	gal
				gal
				gal
				lb
				gal
				gal
				gal

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Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**
Freshwater	Republic Energy	Frac Base	Water	7732-18-5	100.00%	49,531,247	90.16098%
100 Mesh	US Silica	Proppant	Sand	14808-60-7	100.00%	1,914,938	3.48573%
40/70 White Sand	US Silica	Proppant	Sand	14808-60-7	100.00%	2,084,300	3.79402%
20/40 White Sand	US Silica	Proppant	Sand	14808-60-7	100.00%	1,200,320	2.18492%
HCl Acid 10-15%	GoFrac	Acid	Hydrochloric Acid	7647-01-0	15.00%	25,448	0.04632%
Ferriplex 66	Chemplex	Iron Control	Acetic Acid	64-19-7	50.00%	182	0.00033%
			Citric Acid	77-92-9	30.00%	109	0.00020%
			Water	7732-18-5	35.00%	128	0.00023%
Greenflush	Chemplex	Cleaner	Alcohol Ethoxylate Surfactants	Proprietary	10.00%	100	0.00018%
Plexbreak 145	Chemplex	Non-Emulsifier	Cocamide Diethanolamine Salt	68603-42-9	10.00%	30	0.00005%
			Diethanolamine	111-42-2	5.00%	15	0.00003%
			Ethylene Glycol Monobutyl Ether	111-76-2	15.00%	45	0.00008%
			Methyl Alcohol	67-56-1	15.00%	45	0.00008%
			Water	7732-18-5	66.00%	199	0.00036%
Plexhib 256	Chemplex	Corrosion Inhibitor	Alcohol Ethoxylate Surfactants	Proprietary	30.00%	82	0.00015%
			Methyl Alcohol	67-56-1	70.00%	191	0.00035%
			n-olefins	Proprietary	10.00%	27	0.00005%
			Propargyl Alcohol	107-19-7	8.00%	22	0.00004%
			Thiourea-formaldehyde copolymer	68527-49-1	30.00%	82	0.00015%
Sodium Persulfate	Chemplex	Active Breaker	Sodium Persulfate	7775-27-1	100.00%	3	0.00001%
Plexslick 953	Chemplex	Friction Reducer	Alcohol Ethoxylate Surfactants	Proprietary	8.00%	2,695	0.00491%
			Hydrotreated Petroleum Distillate	64742-47-8	30.00%	10,108	0.01840%
			Polyacrylamide-co-acrylic acid	Proprietary	32.00%	10,782	0.01963%
			Water	7732-18-5	35.00%	11,793	0.02147%
Beta M-4.0	PfP	Guar Gel	Guar Gum	9000-30-0	50.00%	180	0.00033%
			Petroleum Distillate	64742-47-8	55.00%	198	0.00036%
			Clay	Proprietary	5.00%	18	0.00003%

Total Slurry Mass (Lbs)  
54,936,453

\*Total Water Volume sources may include fresh water, produced water, and/or recycled water  
\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

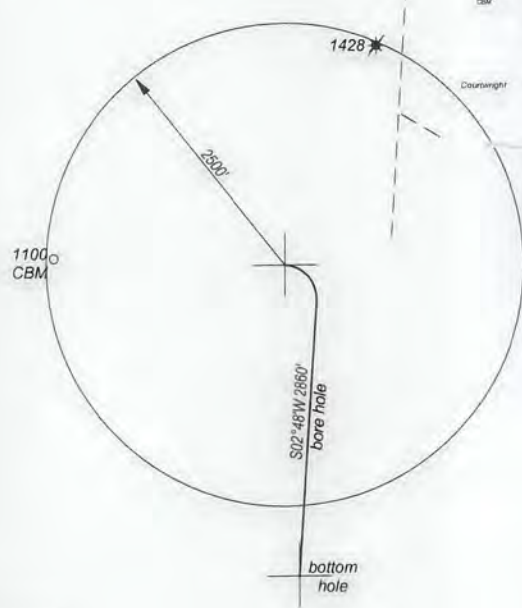
All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

top hole 80°33'58.08" (80.566132) 6905'  
 bottom hole 80°33'56.1" (80.565583) 6700'

**SIVERT, ET AL  
 203.749 ACRE LEASE**

LATITUDE 39°52'30"

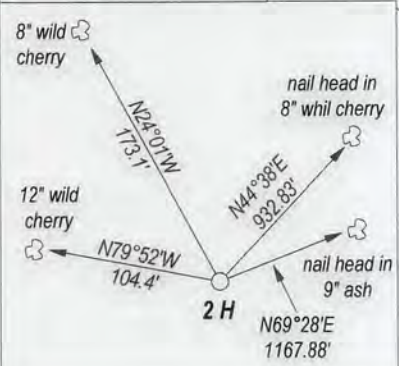
LONGITUDE 80°32'30"



UTM NAD 83  
 top hole  
 N: 4411675.1  
 E: 537113.537  
 bottom hole  
 N: 4410717  
 E: 537010

WV NORTH NAD. 83  
 N: 495052.098  
 E: 1669197.844

McELROY MINE  
 COORD.  
 N: -62439.448  
 E: 94982.003



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 Environmental Protection

No existing wells within 500' feet of lateral  
 No water wells within 250' of top hole  
 No buildings of any kind within 625' of top hole

*Handwritten notes:*  
 0.22  
 8.33  
 13

top hole 39°51'15.44" (39.854290)  
 bottom hole 39°50'43.5" (39.845417)

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2500'  
 MINIMUM DEGREE OF ACCURACY 1 : 200  
 PROVEN SOURCE OF ELEVATION GPS  
 OBSERVATION

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 THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED) *[Signature]*  
 PROFESSIONAL SURVEYOR: 551



**STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENERGY  
 DIVISION OF OIL AND GAS**

DATE AUGUST 21ST, 2013  
 OPERATORS WELL NO. SIVERT 2H

**API 47 - 051 - 01670**  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF GAS) PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW

LOATION: ELEVATION 1438' WATER SHED NORTH FORK OF GRAVE CREEK  
 DISTRICT CAMERON COUNTY MARSHALL QUADRANGLE CAMERON

SURFACE OWNER GEORGE M. SIVERT & ANTOINETTE M. SIVERT ACREAGE 109.479  
 OIL & GAS ROYALTY SIVERT, ET AL LEASE AC. 203.749

PROPOSED WORK: DRILL  CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_  
 FRACTURE OR STIMULATE \_\_\_\_\_ PLUG OFF OLD FORMATION \_\_\_\_\_  
 PERFORATE NEW FORMATION \_\_\_\_\_  
 OTHER PHYSICAL CHANGE IN WELL \_\_\_\_\_  
 PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_

TARGET FORMATION MARCELLUS SHALE ESTIMATED DEPTH 7200'

WELL OPERATOR TRANS ENERGY, INC. DESIGNATED AGENT LOREN BAGLEY  
 ADDRESS P. O. BOX 393 ADDRESS P. O. BOX 393  
ST. MARYS, WV 26170 ST. MARYS, WV 26170

FORM WW - 6

COUNTY NAME \_\_\_\_\_  
 PERMIT \_\_\_\_\_

05/06/2016