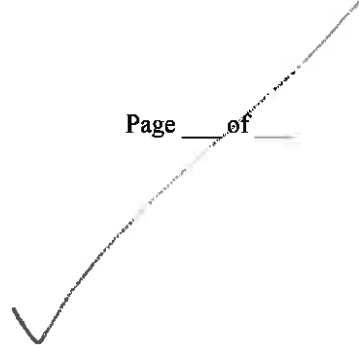


State of West Virginia  
Department of Environmental Protection - Office of Oil and Gas  
Well Operator's Report of Well Work



API 47-103-03016 County WETZEL District GRANT  
Quad BIG RUN Pad Name BIG367 Field/Pool Name \_\_\_\_\_  
Farm name DENCIL HENTHORN ET AL Well Number 515644  
Operator (as registered with the OOG) EQT Production Company  
Address 625 Liberty Ave. EQT Plaza, Suite 1700 City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,378,640.992 Easting 536,096.058  
Landing Point of Curve Northing 4,378,547.227 Easting 536,659.684  
Bottom Hole Northing 4,376,991.847 Easting 537,193.131

Elevation (ft) 1443 GL Type of Well  New  Existing Type of Report  Interim  Final  
Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
Production hole  Air  Mud  Fresh Water  Brine

Mud Type(s) and Additive(s)

Water base Mud 13.5 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 09/16/2014 Date drilling commenced 11/07/2014 Date drilling ceased 6/29/2015  
Date completion activities began 11/5/2015 Date completion activities ceased 11/24/2015  
Verbal plugging (Y/N) N 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

Freshwater depth(s) ft 433',478',705' Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 1965',2130',2168' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 513',727',831',882',1019',1190',1680' Cavern(s) encountered (Y/N) depths N

Is coal being mined in area (Y/N) N

**APPROVED**

NAME: Derek A. Haught  
DATE: 9-23-14

RECEIVED  
Office of Oil and Gas  
WV Department of Environmental Protection  
Reviewed by: Dmit  
**10/28/2016**

API 47-103 03016

Farm name DENCIL HENTHORN ET AL

Well number 515644

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	28"	26"	40'	NEW	A-500 69LB/FT	NONE	Y
Surface	17.5"	13.375"	959'	NEW	J-55 54.5LB/FT	615',197'	Y
Coal							
Intermediate 1	12.375"	9.625"	2901'	NEW	A-500 40LB/FT	1547'	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	14140'	NEW	P-110 20LB/FT	NONE	N
Tubing							
Packer type and depth set							

Comment Details N/A

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	CLASS A	49	15.6	1.18	57.82	0	8
Surface	CLASS A	784	15.6	1.20	940.8	0	8
Coal							
Intermediate 1	CLASS A / CLASS A	611 / 406	15.6 / 15.6	1.18 / 1.20	1208.18	0	8
Intermediate 2							
Intermediate 3							
Production	Class H / Class H	876/736	15.2 / 15.6	1.25 / 2.06	2611.16	3119' MD	72
Tubing							

Drillers TD (ft) 14,140' MD

Loggers TD (ft) N/A

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5,492 MD

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

Well cored    Yes    No    Conventional    Sidewall   Were cuttings collected    Yes    No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

CONDUCTOR- NONE

SURFACE- JOINTS: 1,13

INTERMEDIATE- RAN AT LEAST EVERY 500' FEET

PRODUCTION- 270 Composite Centralizers. One on every joint from TD to 4,000' MD

**RECEIVED**  
Office of Oil and Gas

JUN 27 2016

WAS WELL COMPLETED AS SHOT HOLE    Yes    No   DETAILS \_\_\_\_\_

**WV Department of Environmental Protection**

WAS WELL COMPLETED OPEN HOLE?    Yes    No   DETAILS \_\_\_\_\_

WERE TRACERS USED    Yes    No   TYPE OF TRACER(S) USED \_\_\_\_\_



API 47- 103 - 03016 Farm name DENCIL HENTHORN ET AL Well number 515644

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>7,576</u>	<u>TVD</u>	<u>8,291</u> <u>MD</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1,090 psi Bottom Hole N/A psi DURATION OF TEST 88.00 hrs

OPEN FLOW Gas 12,584 mcfpd Oil N/A bpd NGL 0.0 bpd Water 1,021 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		

Please insert additional pages as applicable.

Drilling Contractor ALPHA HUNTER DRILLING (RIG 5)  
Address P.O. BOX 430 City RENO State OH Zip 45773

Logging Company GYRODATA INC.  
Address 601 MAYER ST. City BRIDGEVILLE State PA Zip 15017

Cementing Company ALLIED OIL & GAS SERVICES  
Address 116 KIMMEL SCHOOL ROAD City SHELOCTA State PA Zip 15773

Stimulating Company C&J Energy Services  
Address 3990 Rogerdale Road City Houston State TX Zip 77042

Please insert additional pages as applicable.

Completed by Jim Helmick Telephone 412-395-5518  
Signature  Title VP Completions Date 6/20/2016

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

API 47- 103 - 03016 Farm name DENCIL HENTHORN ET AL Well number 515644

Drilling Contractor Savanna Drilling  
Address 2204 Timberloch Place Suite 230 City Woodlands State TX Zip 77380

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company Baker Hughes  
Address 837 Philippi Pike City Clarksburgh State WV Zip 26301

API 47-103-03016

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	0	0	708	708
SAND/SHALE	0	0	516	516
COAL	516	516	528	528
SAND/SHALE	528	528	730	730
FAIRVIEW COAL	730	730	734	734
SAND/SHALE	734	734	834	834
WAYNESBURG COAL	834	834	836	836
SAND/SHALE	836	836	885	885
COAL	885	885	896	896
SAND/SHALE	896	896	1,022	1,022
MAPLETOWN COAL	1,022	1,022	1,025	1,025
SAND/SHALE	1,025	1,025	1,193	1,193
PITTSBURGH COAL	1,193	1,193	1,199	1,199
SAND/SHALE	1,199	1,199	1,683	1,683
COAL	1,683	1,683	1,687	1,687
SAND/SHALE	1,687	1,687	2,255	2,255
MAXTON	2,255	2,255	2,410	2,410
BIG LIME	2,410	2,410	2,512	2,512
BIG INJUN	2,512	2,512	2,806	2,806
WEIR	2,806	2,806	2,956	2,956
GANTZ	2,956	2,956	3,006	3,006
50F	3,006	3,006	3,100	3,100
30F	3,100	3,100	3,224	3,224
GORDON	3,224	3,224	3,317	3,317
4TH	3,317	3,317	3,472	3,472
BAYARD	3,472	3,472	3,838	3,838
WARREN	3,838	3,838	4,052	4,052
SPEECHLEY	4,052	4,052	4,402	4,402
BALLTOWN A	4,402	4,402	4,837	4,837
RILEY	4,837	4,837	5,517	5,517
BENSON	5,517	5,517	5,945	5,910
ALEXANDER	5,945	5,910	5,982	5,938
ELKS	5,982	5,938	7,592	7,145
SONYEA	7,592	7,145	7,792	7,296
MIDDLESEX	7,792	7,296	7,855	7,343
GENESSEE	7,855	7,343	7,990	7,433
GENESE0	7,990	7,433	8,031	7,459
TULLY	8,031	7,459	8,067	7,480
HAMILTON	8,067	7,480	8,291	7,675
MARCELLUS	8,291	7,576	14,140	7,675

RECEIVED  
Office of Oil and Gas  
JUN 27 2016

WV Department of  
Environmental Protection

10/28/2016

API 47-103-03016

**PHOENIX**  
TECHNOLOGY SERVICES



## **EQT Production - Marcellus**

**Wetzel County, WV**

**Wetzel County 515644**

**Well #515644**

**Main Wellbore**

**Design: 515644 As Drilled Surveys**

## **Standard Survey Report**

**13 July, 2015**



**Where energy meets innovation.**

10/28/2016

515644-47-103-030160000 - Stimulated Stages

Stage Number	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
Initiation Sleeve	11/5/2015	99.40	7,010.00	9,015.00	5,484.00	0	844	0
1	11/5/2015	89.30	8,526.00	8,814.00	4,472.00	200,900	5605	0
2	11/5/2015	93.80	8,551.00	8,884.00	5,170.00	202,300	5444	0
3	11/5/2015	98.60	8,478.00	8,869.00	4,729.00	199,200	5425	0
4	11/6/2015	95.90	8,500.00	8,889.00	4,694.00	202,300	5292	0
5	11/6/2015	97.20	8,506.00	8,947.00	5,106.00	198,700	5253	0
6	11/7/2015	91.30	8,364.00	8,832.00	5,128.00	199,600	5315	0
7	11/7/2015	93.80	8,412.00	8,738.00	5,256.00	198,700	5272	0
8	11/7/2015	96.20	8,552.00	8,681.00	5,551.00	201,800	5287	0
9	11/7/2015	91.60	8,519.00	8,812.00	5,383.00	199,100	5267	0
10	11/7/2015	87.30	8,526.00	8,797.00	5,090.00	200,700	5123	0
11	11/7/2015	97.00	8,495.00	8,761.00	5,499.00	202,000	5089	0
12	11/8/2015	100.80	8,465.00	8,745.00	5,237.00	202,200	5158	0
13	11/8/2015	100.50	8,382.00	8,572.00	5,571.00	202,000	5266	0
14	11/8/2015	100.60	8,324.00	8,699.00	5,446.00	204,000	5315	0
15	11/8/2015	100.60	8,443.00	8,692.00	5,247.00	203,500	5232	0
16	11/8/2015	100.60	8,192.00	8,384.00	5,711.00	197,900	5222	0
17	11/8/2015	100.50	8,379.00	8,712.00	5,372.00	200,600	5287	0
18	11/8/2015	100.40	8,284.00	8,625.00	5,140.00	201,700	4,975	0
19	11/20/2015	96.90	8,276.00	8,497.00	5,596.00	197,900	5,332	0
20	11/21/2015	97.50	8,235.00	8,462.00	5,563.00	204,200	5,233	0
21	11/21/2015	96.60	8,130.00	8,757.00	5,510.00	200,100	5,011	0
22	11/21/2015	99.70	8,190.00	8,809.00	5,317.00	200,100	5,272	0
23	11/21/2015	99.00	8,229.00	8,540.00	5,436.00	201,900	5,215	0
24	11/21/2015	100.00	8,250.00	8,423.00	5,608.00	201,000	5,125	0
25	11/22/2015	99.30	8,121.00	8,387.00	5,507.00	205,100	5014	0
26	11/22/2015	95.90	8,175.00	8,456.00	5,282.00	202,600	5227	0
27	11/22/2015	95.10	8,267.00	8,491.00	5,215.00	200,100	5160	0
28	11/22/2015	96.90	8,214.00	8,490.00	5,703.00	200,000	5205	0
29	11/22/2015	100.30	8,209.00	8,472.00	5,664.00	199,600	5193	0
30	11/22/2015	99.70	8,280.00	8,487.00	5,645.00	200,500	5020	0
31	11/23/2015	96.10	8,155.00	8,434.00	5,788.00	199,700	6433	0
32	11/23/2015	98.80	8,128.00	8,345.00	5,620.00	200,900	4737	0
33	11/23/2015	101.70	8,132.00	8,436.00	5,566.00	200,300	4958	0
34	11/23/2015	100.30	8,100.00	8,319.00	4,632.00	200,500	5025	0
35	11/23/2015	99.00	8,046.00	8,245.00	5,574.00	200,200	4896	0
36	11/24/2015	100.50	7,804.00	7,968.00	5,327.00	200,900	5018	0
37	11/24/2015	100.10	7,917.00	8,123.00	5,770.00	202,400	4,831	0
38	11/24/2015	100.00	7,990.00	8,283.00	5,563.00	200,400	5,060	0

WV Department of Environmental Protection  
10/28/2016



**515644-47-103-030160000 - Perforations**

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	8/20/2015	14,138.00	14,140.00	10	MARCELLUS
1	11/5/2015	13,993.00	14,085.00	32	MARCELLUS
2	11/5/2015	13,843.00	13,965.00	40	MARCELLUS
3	11/5/2015	13,693.00	13,815.00	40	MARCELLUS
4	11/6/2015	13,543.00	13,665.00	40	MARCELLUS
5	11/6/2015	13,393.00	13,515.00	40	MARCELLUS
6	11/6/2015	13,243.00	13,363.00	40	MARCELLUS
7	11/7/2015	13,093.00	13,215.00	40	MARCELLUS
8	11/7/2015	12,943.00	13,065.00	40	MARCELLUS
9	11/7/2015	12,793.00	12,913.00	40	MARCELLUS
10	11/7/2015	12,643.00	12,765.00	40	MARCELLUS
11	11/7/2015	12,493.00	12,615.00	40	MARCELLUS
12	11/8/2015	12,343.00	12,465.00	40	MARCELLUS
13	11/8/2015	12,193.00	12,315.00	40	MARCELLUS
14	11/8/2015	12,043.00	12,163.00	40	MARCELLUS
15	11/8/2015	11,893.00	12,013.00	40	MARCELLUS
16	11/8/2015	11,743.00	11,865.00	40	MARCELLUS
17	11/8/2015	11,593.00	11,715.00	40	MARCELLUS
18	11/8/2015	11,433.00	11,565.00	40	MARCELLUS
19	11/20/2015	11,293.00	11,415.00	40	MARCELLUS
20	11/21/2015	11,143.00	11,265.00	40	MARCELLUS
21	11/21/2015	10,993.00	11,115.00	40	MARCELLUS
22	11/21/2015	10,843.00	10,963.00	40	MARCELLUS
23	11/21/2015	10,695.00	10,813.00	40	MARCELLUS
24	11/21/2015	10,543.00	10,666.00	48	MARCELLUS
25	11/21/2015	10,390.00	10,515.00	40	MARCELLUS
26	11/22/2015	10,243.00	10,365.00	40	MARCELLUS
27	11/22/2015	10,093.00	10,213.00	40	MARCELLUS
28	11/22/2015	9,943.00	10,063.00	40	MARCELLUS
29	11/22/2015	9,793.00	9,913.00	40	MARCELLUS
30	11/22/2015	9,643.00	9,765.00	40	MARCELLUS
31	11/22/2015	9,493.00	9,615.00	40	MARCELLUS
32	11/23/2015	9,346.00	9,463.00	40	MARCELLUS
33	11/23/2015	9,193.00	9,315.00	40	MARCELLUS
34	11/23/2015	9,043.00	9,165.00	40	MARCELLUS
35	11/23/2015	8,893.00	9,015.00	40	MARCELLUS
36	11/24/2015	8,743.00	8,861.00	40	MARCELLUS
37	11/24/2015	8,593.00	8,712.00	40	MARCELLUS
38	11/24/2015	8,443.00	8,581.00	40	MARCELLUS

# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date	11/5/2015
Job End Date	11/24/2015
State	West Virginia
County	Wayne
API Number	47-103-03016-00-00
Operator Name	EOT Production
Well Name and Number	515644
Longitude	-80.58002100
Latitude	39.55661300
Datum	NAD83
Federal/Tribal Well	NO
True Vertical Depth	7,576
Total Base Water Volume (gal)	8,342,712
Total Base Non Water Volume	0



## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	C and J Energy Services	Carrier/Base Fluid	Water	7732-18-5	100.00000	89.71513	None
Sand (Proppant)	C and J Energy Services	Proppant					
MC MX 437-5	Multi-Chem Group	Calcium Nitrate Solution	Silica Substrate	14808-60-7	100.00000	9.83955	None
FR-18	C and J Energy Services	Anionic Friction Reducer	Calcium Nitrate	10124-37-5	60.00000	0.05662	None
			Distillates (petroleum), Hydrotreated Light	64742-47-8	45.00000	0.03216	None
			Ethylene Glycol	107-21-1	10.00000	0.00715	None
Hydrochloric Acid (15%)	C and J Energy Services	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03840	None
SI-4	C and J Energy Services	Scale Inhibitor					
			Bis (hexamethylene triaminepen (methylenephosphonis acid))	Proprietary	10.00000	0.00230	None
			Sodium Hydroxide	1310-73-2	1.00000	0.00023	None
AI-2	C and J Energy Services	Acid corrosion inhibitor					





June 8, 2016

Mr. Gene Smith  
West Virginia Department of Environmental Protection  
Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304

Re: Modification of 47-103-03016

Dear Mr. Smith,

Please accept the attached updates for the above referenced permit. Upon inspection of our as-drilled plat, we noted the curve geometry crossed into 1 additional lease, #993304. Enclosed is an updated WW-6A1, WW-6B, mylar plat and rec plan reflecting corrections to update the permit file to be consistent with the as-drilled well bore.

If you have any questions, please do not hesitate to contact me at (304) 848-0076.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vicki Roark', written in a cursive style.

Vicki Roark  
Permitting Supervisor-WV

Enc.

EQT WELL NO. 515644

LATITUDE 39°36'00"

NOTES:

- PLAT ORIENTATION, CORNERS, AND WELL REFERENCES ARE BASED UPON THE GRID NORTH MERIDIAN FOR THE WV STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 27. WELL LOCATION REFERENCE TIES ARE BASED UPON THE MAGNETIC MERIDIAN.
- THERE ARE NO (0) WATER WELL(S) LOCATED WITHIN 250' OF WELL H1.
- THERE ARE NO (0) STRUCTURE(S) LOCATED WITHIN 625' OF WELL H1.

⊙ = MONUMENT FOUND IRON REBAR UNLESS NOTED OTHERWISE.

- COASTAL LUMBER CO. TM 13 PAR 38 58 AC±
- MCCOY TM 18 PAR 36 40 AC±
- GOODRICH TM 18 PAR 10 2.4 AC±
- L/N 993304 GOODRICH TM 18 PAR 20 30 AC±

AS DRILLED COORDINATES FOR WELL NO. WV 515644

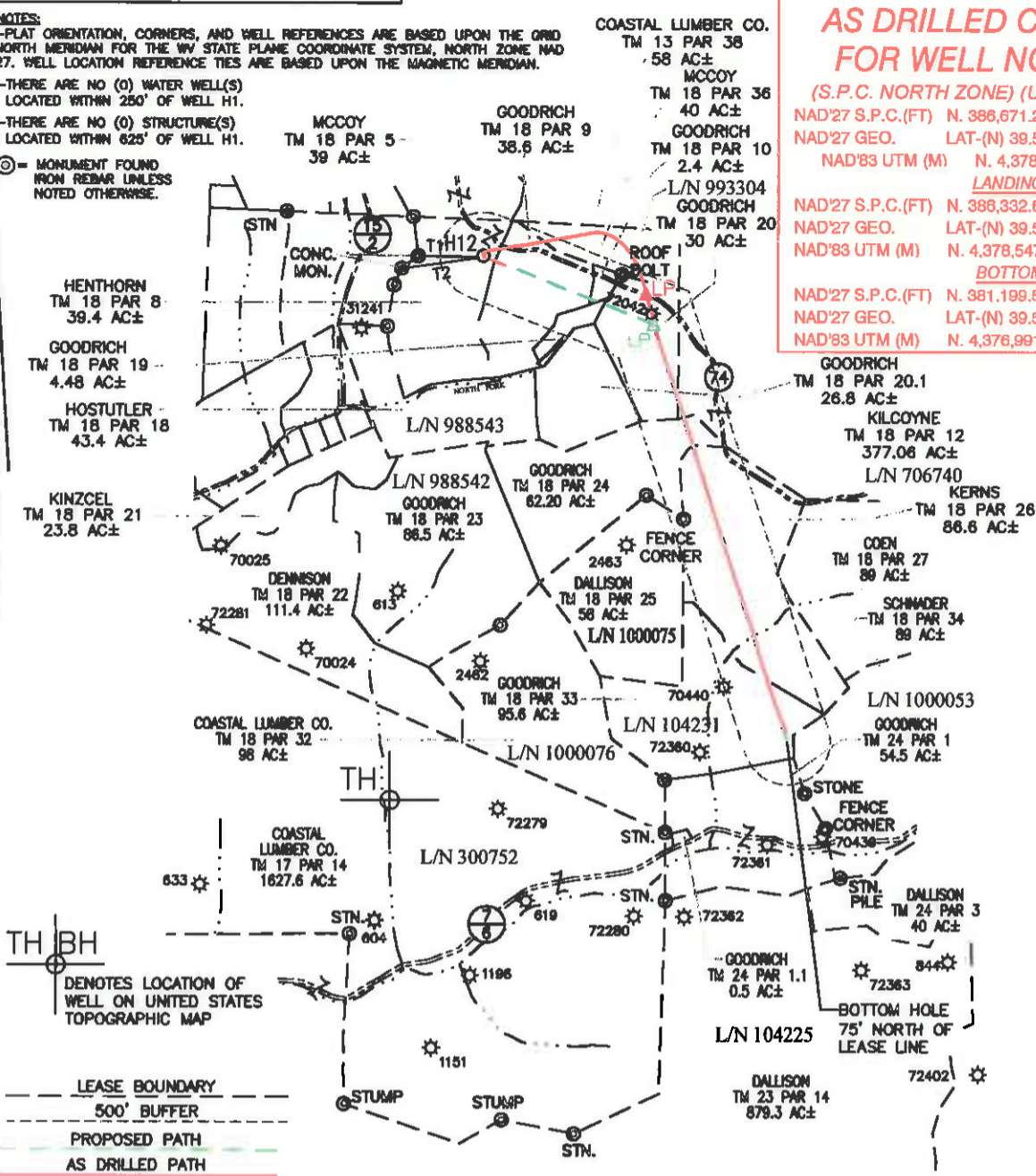
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 388,671.286	E. 1,695,487.398
NAD'27 GEO.	LAT-(N) 39.556696	LONG-(W) 80.579835
NAD'83 UTM (M)	N. 4,378,640.992	E. 536,096.058
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 388,332.689	E. 1,697,331.745
NAD'27 GEO.	LAT-(N) 39.555744	LONG-(W) 80.573468
NAD'83 UTM (M)	N. 4,378,547.227	E. 536,659.684
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 381,199.582	E. 1,698,997.211
NAD'27 GEO.	LAT-(N) 39.541707	LONG-(W) 80.587343
NAD'83 UTM (M)	N. 4,376,991.847	E. 537,193.131

LONGITUDE 80°32'30"

9,705' TOP HOLE

NAD'27 GRID NORTH



SPECIAL NOTES  
 -LEASE AND SURFACE INFO SHOWN HEREON WAS TAKEN FROM PERMIT PLAT DATED JUNE 23, 2014 FOR API# 47-103-03016H.  
 -AS DRILLED INFORMATION PROVIDED BY EQT.

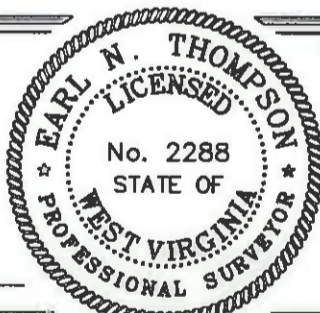
LINE	BEARING	DIST.
T1	S89°23'36"E	764.81'
T2	N81°52'04"E	965.07'

LEASE NO.	ROYALTY OWNER	ACRES
988542	CNX GAS CO. LLC	280±
104231	JOYCE M. MARTIN et al	300±
706740	EQT PRODUCTION CO.	1003.75±
993304	DELLA M. MCCOY et al	40±

**Professional Energy Consultants**  
 ALIANCE OF MIDDLE EAST SURVEYORS  
**SLS** SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MANAGERS  
 (904) 482-5850 WWW.SLSURVEYS.COM

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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 2288 *Earl N. Thompson*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE JUNE 23, 20 14

REVISED JULY 15, 2015, MAY 16, 2016 & JUNE 06, 2016

OPERATORS WELL NO. WV 515644

API WELL NO. 47-103-03016H  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8471BIG 367 WELLS-R2  
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY OPUS (SURVEY GRADE GPS) SCALE 1" = 2000'

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



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

LOCATION: PAD ELEVATION 1,442.9' WATERSHED NORTH FORK OF FISHING CREEK  
 DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'  
 SURFACE OWNER DENCIL HENTHORN ET AL ACREAGE 39.4±  
 ROYALTY OWNER SHIBEN ESTATE, INC. ACREAGE 297.5±  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER   
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION MARCELLUS SHALE  
 ESTIMATED DEPTH 7,565'

COUNTY NAME

PERMIT

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY  
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330