

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

API 47-103-03015 County WETZEL District GRANT
Quad BIG RUN Pad Name BIG367 Field/Pool Name
Farm name DENCIL HENTHORN ET AL Well Number 515643
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 4,378,644.207 Easting 536,092.810
Landing Point of Curve Northing 4,378,579.005 Easting 536,528.823
Bottom Hole Northing 4,376,463.606 Easting 537,251.264

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 12.5 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 7/11/2015
Date completion activities began 11/9/2015 Date completion activities ceased 11/20/2015
Verbal plugging (Y/N) N Date permission granted N/A Granted by RECEIVED

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

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Freshwater depth(s) ft 433',478',705' Open mine(s) (Y/N) depths N
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 M. Hought
DATE: 6-23-16

Reviewed by:

DmH
10/28/2016

API 47-103 - 03015 Farm name DENCIL HENTHORN ET AL Well number 515643

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	30"	26"	40'	NEW	A-500 85.8LB/FT	NONE	Y
Surface	17.5"	13.375"	961'	NEW	J-55 54.5LB/FT	626'	Y
Coal							
Intermediate 1	12.375"	9.625"	2905'	NEW	A-500 40LB/FT	NONE	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	15,504'	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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	49	15.6	1.18	57.82	0	8
Surface	CLASS A	563	15.6	1.20	675.6	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	761/942	15.2/15.6	1.25/2.06	2891.77	3110'MD	72
Tubing							

Drillers TD (ft) 15,506' MD Loggers TD (ft) N/A
 Deepest formation penetrated Middlesex Plug back to (ft) M/A
 Plug back procedure N/A

Kick off depth (ft) 5,652' 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: 1,10,19
 INTERMEDIATE- RAN AT LEAST EVERY 500' FEET
 PRODUCTION- 269 Composite Centralizers.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

JUN 27 2016

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

10/28/2016

API 47- 103 - 03015 Farm name DENCIL HENTHORN ET AL Well number 515643

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					Please See Attached

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
						Please	See	Attached

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Please insert additional pages as applicable.

API 47- 103 - 03015 Farm name DENCIL HENTHORN ET AL Well number 515643

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MIDDLESEX</u>	<u>7,306</u>	<u>TVD</u>	<u>7,919</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 1,019 psi Bottom Hole N/A psi DURATION OF TEST 133.58 hrs

OPEN FLOW Gas 6,221 mcfpd Oil N/A bpd NGL 0.0 bpd Water 1,118 bpd GAS MEASURED BY Estimated Orifice Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>		<u>BOTTOM</u>		<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H₂S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	
	<u>0</u>		<u>0</u>		

Please insert additional pages as applicable.

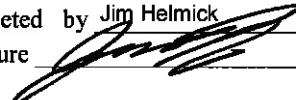
Drilling Contractor ALPHA HUNTER DRILLING (RIG 5)
Address P.O. BOX 430 City RENO State OH Zip 45773

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

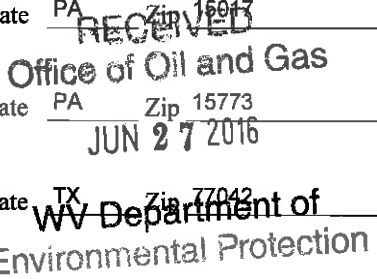
Cementing Company ALLIED OIL & GAS SERVICES
Address 116 KIMMEL SCHOOL ROAD City SHELOCTA State PA Zip 15773

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 - 03015 Farm name DENCIL HENTHORN ET AL Well number 515643

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

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10/28/2016

API 47-103-03015

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	2,955
GANTZ	2,956	2,955	3,006	3,005
50F	3,006	3,005	3,100	3,099
30F	3,100	3,099	3,224	3,223
GORDON	3,224	3,223	3,317	3,316
4TH	3,317	3,316	3,472	3,471
BAYARD	3,472	3,471	3,838	3,837
WARREN	3,838	3,837	4,052	4,051
SPEECHLEY	4,052	4,051	4,402	4,401
BALLTOWN A	4,402	4,401	4,837	4,836
RILEY	4,837	4,836	5,524	5,523
BENSON	5,524	5,523	5,925	5,915
ALEXANDER	5,925	5,915	5,957	5,944
ELKS	5,957	5,944	7,568	7,151
SONYEA	7,568	7,151	7,919	7,306
MIDDLESEX	7,919	7,306	15,506	7,415

10/28/2016

515643-47-103-030150000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	8/19/2015	15,502.67	15,504.00	10	MIDDLESEX
1	11/10/2015	15,358.00	15,448.00	32	MIDDLESEX
2	11/10/2015	15,208.00	15,330.00	40	MIDDLESEX
3	11/10/2015	15,062.00	15,178.00	40	MIDDLESEX
4	11/10/2015	14,908.00	15,028.00	40	MIDDLESEX
5	11/11/2015	14,758.00	14,880.00	40	MIDDLESEX
6	11/11/2015	14,608.00	14,730.00	40	MIDDLESEX
7	11/11/2015	14,458.00	14,580.00	40	MIDDLESEX
8	11/11/2015	14,308.00	14,430.00	40	MIDDLESEX
9	11/11/2015	14,158.00	14,280.00	40	MIDDLESEX
10	11/11/2015	14,008.00	14,128.00	40	MIDDLESEX
11	11/12/2015	13,858.00	13,982.00	40	MIDDLESEX
12	11/12/2015	13,708.00	13,828.00	40	MIDDLESEX
13	11/12/2015	13,558.00	13,680.00	40	MIDDLESEX
14	11/13/2015	13,408.00	13,530.00	40	MIDDLESEX
15	11/13/2015	13,252.00	13,380.00	40	MIDDLESEX
16	11/13/2015	13,108.00	13,230.00	40	MIDDLESEX
17	11/13/2015	13,078.00	13,080.00	40	MIDDLESEX
17 1	11/13/2015	12,959.00	13,050.00	40	MIDDLESEX
18	11/13/2015	12,808.00	12,930.00	40	MIDDLESEX
19	11/14/2015	12,658.00	12,780.00	40	MIDDLESEX
20	11/14/2015	12,508.00	12,630.00	40	MIDDLESEX
21	11/14/2015	12,358.00	12,480.00	40	MIDDLESEX
22	11/14/2015	12,207.00	12,330.00	40	MIDDLESEX
23	11/14/2015	12,058.00	12,180.00	40	MIDDLESEX
24	11/14/2015	11,908.00	12,030.00	40	MIDDLESEX
25	11/14/2015	11,758.00	11,880.00	40	MIDDLESEX
26	11/14/2015	11,608.00	11,726.00	40	MIDDLESEX
27	11/14/2015	11,458.00	11,578.00	40	MIDDLESEX
28	11/14/2015	11,308.00	11,430.00	40	MIDDLESEX
29	11/14/2015	11,156.00	11,280.00	40	MIDDLESEX
30	11/14/2015	11,008.00	11,130.00	40	MIDDLESEX
31	11/16/2015	10,858.00	10,980.00	40	MIDDLESEX
32	11/16/2015	10,708.00	10,830.00	40	MIDDLESEX
33	11/16/2015	10,558.00	10,674.00	40	MIDDLESEX
34	11/16/2015	10,408.00	10,530.00	40	MIDDLESEX
35	11/16/2015	10,258.00	10,380.00	40	MIDDLESEX
36	11/16/2015	10,112.00	10,228.00	40	MIDDLESEX
37	11/16/2015	9,958.00	10,080.00	40	MIDDLESEX
38	11/17/2015	9,808.00	9,930.00	40	MIDDLESEX
39	11/17/2015	9,658.00	9,780.00	40	MIDDLESEX
40	11/17/2015	9,508.00	9,628.00	40	MIDDLESEX
41	11/17/2015	9,358.00	9,480.00	40	MIDDLESEX
42	11/17/2015	9,208.00	9,330.00	40	MIDDLESEX
43	11/19/2015	9,058.00	9,180.00	40	MIDDLESEX
44	11/19/2015	8,908.00	9,030.00	40	MIDDLESEX
45	11/19/2015	8,758.00	8,878.00	40	MIDDLESEX
46	11/19/2015	8,608.00	8,728.00	40	MIDDLESEX
47	11/19/2015	8,458.00	8,578.00	40	MIDDLESEX
48	11/19/2015	8,308.00	8,428.00	40	MIDDLESEX
49	11/19/2015	8,158.00	8,280.00	40	MIDDLESEX
50	11/19/2015	8,008.00	8,130.00	40	MIDDLESEX

10/28/2016

515643-47-103-030150000 - 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	11/9/2015	8.30	7,193.00	7,956.00	4,657.00	0	600	0
1		89.50	8,404.00	8,720.00	3,407.00	203,400	5875	0
2		95.80	8,289.00	8,651.00	3,631.00	202,100	5649	0
3		89.60	8,349.00	8,957.00	3,609.00	203,200	5609	0
4		83.80	8,339.00	8,821.00	3,761.00	202,100	5770	0
5		85.40	8,332.00	8,744.00	3,862.00	201,700	5661	0
6		92.60	8,456.00	8,797.00	3,852.00	204,100	5649	0
7		91.70	8,413.00	8,715.00	3,944.00	203,300	5615	0
8		90.40	8,285.00	8,453.00	3,990.00	202,800	5840	0
9		92.50	8,351.00	8,567.00	4,063.00	207,100	5638	0
10		96.30	8,429.00	8,630.00	4,063.00	201,500	5683	0
11		97.80	8,430.00	8,777.00	4,008.00	199,700	6642	0
12		93.90	8,363.00	8,630.00	4,143.00	198,000	5747	0
13		97.60	8,426.00	8,700.00	4,271.00	199,600	5257	0
14		93.20	8,470.00	8,731.00	4,282.00	200,800	5460	0
15		96.60	8,300.00	8,580.00	4,221.00	200,300	5501	0
16		97.70	8,358.00	8,722.00	4,256.00	199,600	5448	0
17		97.90	8,438.00	8,712.00	4,311.00	202,200	5981	0
18		99.10	8,334.00	8,639.00	4,325.00	198,200	5,468	0
19		97.60	8,465.00	8,755.00	4,409.00	199,200	5,410	0
20		97.70	8,322.00	8,595.00	4,323.00	202,900	5,441	0
21		98.10	8,239.00	8,586.00	4,367.00	200,200	5,407	0
22		99.00	8,159.00	8,582.00	4,324.00	198,400	5,260	0
23		100.50	8,351.00	8,660.00	4,325.00	197,100	5,154	0
24		98.50	8,322.00	8,663.00	4,423.00	202,400	5412	0
25		100.50	8,408.00	8,696.00	4,472.00	200,400	5323	0
26		97.20	8,295.00	8,886.00	4,291.00	204,900	5276	0
27		99.30	8,112.00	8,591.00	4,309.00	202,500	5229	0
28		99.00	8,275.00	8,854.00	4,478.00	198,700	5319	0
29		97.70	8,368.00	8,743.00	4,368.00	200,900	5087	0
30		96.70	8,463.00	8,685.00	4,327.00	202,700	5260	0
31		99.60	8,245.00	8,618.00	4,316.00	201,400	5194	0
32		100.40	7,995.00	8,434.00	4,233.00	196,600	5298	0
33		100.80	7,821.00	8,535.00	4,176.00	202,800	5218	0
34		100.50	7,843.00	8,467.00	4,184.00	202,600	5145	0
35		101.00	7,871.00	8,396.00	4,143.00	199,400	5194	0
36		100.30	8,048.00	8,870.00	4,447.00	172,600	5217	0
37		97.30	8,129.00	8,543.00	4,252.00	201,300	5,143	0
38		95.70	8,127.00	8,629.00	4,333.00	200,200	5,085	0
39		100.20	7,814.00	8,435.00	4,173.00	201,300	4,970	0
40		100.20	7,711.00	8,443.00	4,210.00	199,800	5,096	0
41		94.50	7,596.00	8,338.00	4,277.00	198,400	5959	0
42		96.80	7,871.00	8,233.00	4,372.00	201,300	5116	0
43		97.70	7,701.00	8,155.00	4,355.00	197,400	4977	0
44		99.30	7,530.00	8,153.00	4,158.00	200,000	4777	0
45		101.80	7,410.00	8,414.00	4,119.00	204,500	4886	0
46		100.90	7,486.00	8,387.00	4,102.00	200,700	5070	0
47		101.40	7,544.00	8,412.00	4,117.00	200,600	5184	0
48		99.10	7,693.00	8,360.00	4,222.00	203,100	4940	0
49		98.90	7,496.00	8,060.00	4,221.00	204,200	5037	0
50		96.90	7,589.00	8,274.00	4,064.00	198,000	5055	0

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date	11/9/2015
Job End Date	11/20/2015
State	West Virginia
County	Weize
API Number	47-103-03015-00-00
Operator Name	EQT Production
Well Name and Number	515643
Longitude	-80.58005900
Latitude	39.55664200
Datum	NAD83
Federal/Tribal Well	NO
True Vertical Depth	7,306
Total Base Water Volume (gal)	11,307,744
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					
Sand (Proppant)	C and J Energy Services	Proppant	Water	7732-18-5	100.00000	90.00646	None
MC MX 437-5	Multi-Chem Group	Calcium Nitrate Solution	Silica Substrate	14808-60-7	100.00000	9.56330	None
FR-18	C and J Energy Services	Anionic Friction Reducer	Calcium Nitrate	10124-37-5	60.00000	0.05741	None
Hydrochloric Acid (15%)	C and J Energy Services	Acidizing	Distillates (petroleum), Hydrotreated Light Ethylene Glycol	64742-47-8	45.00000	0.03181	None
SI-4	C and J Energy Services	Scale Inhibitor	Hydrochloric Acid	107-21-1	10.00000	0.00707	None
AI-2	C and J Energy Services	Acid corrosion inhibitor	Bis (hexamethylene triaminepiperidine methylene phosphonic acid) Sodium Hydroxide	7647-01-0	15.00000	0.03609	None
				1310-73-2	1.00000	0.00228	None
						0.00023	None



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 47-103-03015

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 blue ink, appearing to read 'Vicki Roark', is written over the word 'Sincerely,'.

Vicki Roark
Permitting Supervisor-WV

Enc.

10/28/2016

EQT WELL NO. 515643

LATITUDE 39°35'00"

NOTES:
 -PLAT ORIENTATION, CORNERS, AND WELL REFERENCES ARE BASED UPON THE GRID NORTH MERIDIAN FOR THE WV STATE PLANE COORDINATE SYSTEM, NORTH ZONE MAD 27. WELL LOCATION REFERENCE TIES ARE BASED UPON THE MAGNETIC MERIDIAN.
 -THERE ARE NO (O) WATER WELL(S) LOCATED WITHIN 250' OF WELL H1.
 -THERE ARE NO (O) STRUCTURE(S) LOCATED WITHIN 625' OF WELL H1.
 (M) = MONUMENT FOUND IRON REBAR UNLESS NOTED OTHERWISE.

AS DRILLED COORDINATES FOR WELL NO. WV 515643
 (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 386,682.016	E. 1,695,476.916
NAD'27 GEO.	LAT-(N) 39.556725	LONG-(W) 80.579873
NAD'83 UTM (M)	N. 4,378,844.207	E. 536,092.810

LANDING POINT

NAD'27 S.P.C.(FT)	N. 386,444.142	E. 1,696,904.074
NAD'27 GEO.	LAT-(N) 39.556036	LONG-(W) 80.574987
NAD'83 UTM (M)	N. 4,378,579.005	E. 536,528.823

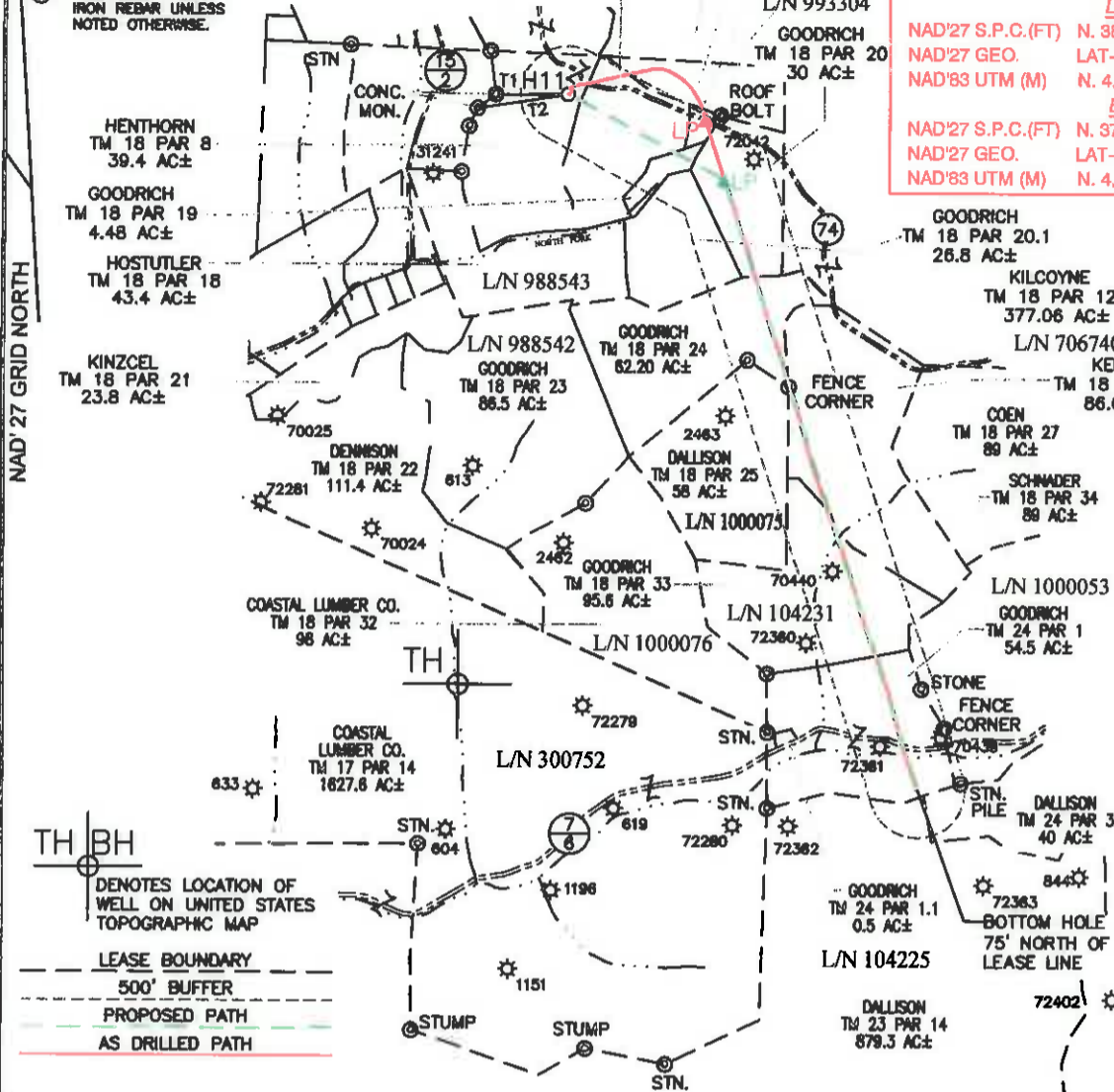
BOTTOM HOLE

NAD'27 S.P.C.(FT)	N. 379,463.016	E. 1,699,159.112
NAD'27 GEO.	LAT-(N) 39.536945	LONG-(W) 80.566896
NAD'83 UTM (M)	N. 4,376,463.606	E. 537,251.264

LONGITUDE 80°32'30"

NAD'27 GRID NORTH

9,694 TOP HOLE



LINE	BEARING	DIST.
T1	N89°48'00"E	754.29'
T2	N81°08'33"E	956.29'

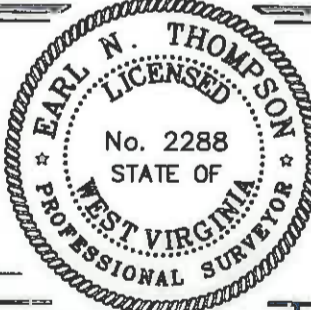
SPECIAL NOTES
 -LEASE AND SURFACE INFO SHOWN HEREON WAS TAKEN FROM PERMIT PLAT DATED JUNE 23, 2014 FOR API# 47-103-03015H.
 -AS DRILLED INFORMATION PROVIDED BY EQT.

LEASE NO.	ROYALTY OWNER	ACRES
988542	CNX GAS CO. LLC	280±
1000075	OSMUND, FOREST MEMBERSHIP CO. OSMA, FOREST MEMBERSHIP CO.	98±
104231	JOYCE M. MARTIN et al	300±
993304	DELLA M. McCOY et al	40±

Professional Energy Consultants
 A DIVISION OF SLS SURVEYING & ENGINEERING, INC.
 SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 PROJECT MGMT.
 (804) 482-6884
 WWW.SLSURVEYING.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*



STATES TOPOGRAPHIC MAPS.
 DATE JUNE 23, 20 14
 REVISED JULY 16, 2015, MAY 16, 2016 & JUNE 06, 2016
 OPERATORS WELL NO. WV 515643
 API WELL NO. 47 - 103 - 03015H
 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 297.50±
 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 MIDDLESEX
 ESTIMATED DEPTH 7,291'

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

COUNTY NAME PERMIT