

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514566

API: 47 - 103 - 02940

Submission: Initial Amended

Notes: -Revised Plat
-Revised "As Drilled" Coordinates
-with Flowback

10/28/2016

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

API 47-103-02940 County WETZEL District GRANT
Quad BIG RUN Pad Name BIG367 Field/Pool Name _____
Farm name DENCIL HENTHORN ET AL Well Number 514566
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 4,378,629.673 Easting 536,094.498
Landing Point of Curve Northing 4,378,525.787 Easting 536,169.030
Bottom Hole Northing 4,376,457.895 Easting 536,912.081

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)
SBM 13.1 ppg – powdered hydrocarbon resin, calcium carbonate, ground almond hulls, barium sulfate, calcium chloride, lecithin liquid, organophilic clay,
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 11/12/2013 Date drilling commenced 3/18/2014 Date drilling ceased 10/3/2014
Date completion activities began 10/12/2015 Date completion activities ceased 11/3/2015
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 708' Open mine(s) (Y/N) depths _____
Salt water depth(s) ft 2171' Void(s) encountered (Y/N) depths _____
Coal depth(s) ft 516', 730', 834', 885', 1022', 1193', 1683' Cavern(s) encountered (Y/N) depths _____

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

APPROVED

NAME: Derek M. Hough
DATE: 9-23-16

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Reviewed by:
WV Department of
Environmental Protection
10/28/2016

API 47-103 - 02940 Farm name DENCIL HENTHORN ET AL Well number 514566

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	NONE	Y
Surface	17-1/2"	13-3/8"	952'	NEW	J-55	421'	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	2897'	NEW	A-500	NONE	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	15,223'	NEW	P-110	NONE	N
Tubing							
Packer type and depth set							

Comment Details _____

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	58	0	8
Surface	Class A	820	15.6	1.19	976	0	8
Coal							
Intermediate 1	Class A	1075	15.6	1.18	1269	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	855/975	14.2/15.2	1.26/1.97	2998	2,520	72
Tubing							

Drillers TD (ft) 15,345' Loggers TD (ft) N/A

Deepest formation penetrated Marcellus Plug back to (ft) 7,928-8500'

Plug back procedure Set Balance Plug # 7,928 ftMD w/ 7,450 ftMD with 140 sks (31 bbl) 14.2 ppg Class A Cement. 1.28 yield. POOH w/ 7,450 and plug # 7,450 ftMD w/ 6,969 ftMD with 140 sks (31 bbls) 14.2 ppg Class A Cement. 1.28 yield. POOH w/ 6,500 ftMD and plug # 6,969 ftMD w/ 6,500 ftMD with 210 sks (35 bbl) 17.5 ppg Class A Cement. 0.95 yield.

Kick off depth (ft) 6,135'

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- N/A
Surface-Bowstring centralizer on shoe track and every 150' to surface
Intermediate-Bowstring centralizer on shoe track and every 150' to surface
Production- Composite bodied centralizers on every joint from TD up to 5,280'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

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514566 Final Formations API #47-103-02940

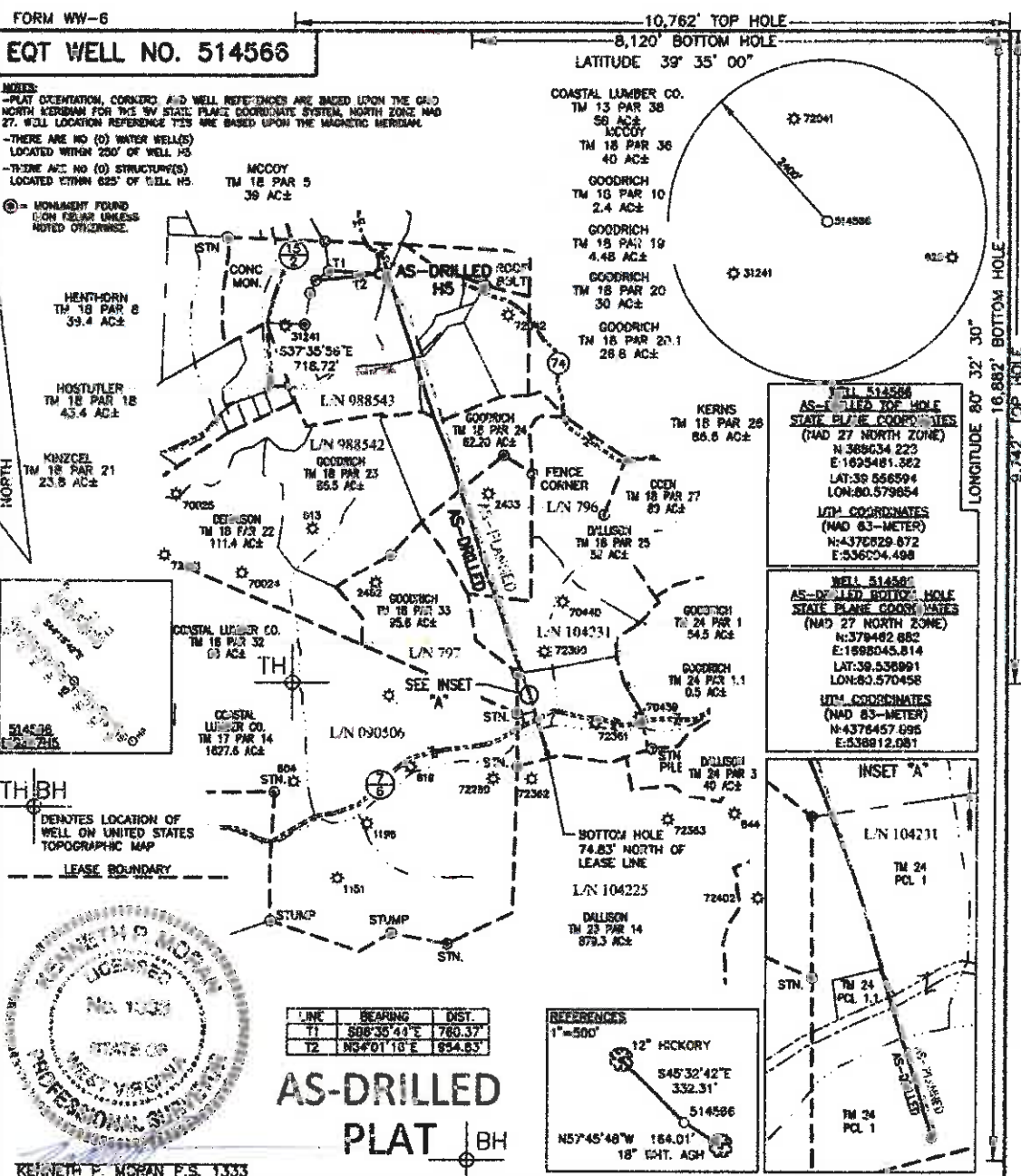
Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	1	1	708	708
SAND/SHALE	1	1	516	516
COAL	516	516	528	528
SAND/SHALE	528	528	730	730
FAIRVIEW COAL	730	730	734	734
SAND/SHALE	734	734	834	834
WAYNESBURG COAL	834	834	836	836
SAND/SHALE	836	836	885	885
COAL	885	885	896	896
SAND/SHALE	896	896	1,022.00	1,022.00
MAPLETOWN COAL	1,022.00	1,022.00	1,025.00	1,025.00
SAND/SHALE	1,025.00	1,025.00	1,193.00	1,193.00
PITTSBURGH COAL	1,193.00	1,193.00	1,199.00	1,199.00
SAND/SHALE	1,199.00	1,199.00	1,683.00	1,683.00
COAL	1,683.00	1,683.00	1,687.00	1,687.00
SAND/SHALE	1,687.00	1,687.00	2,252.00	2,251.90
MAXTON	2,255.00	2,254.90	2,410.00	2,409.90
BIG LIME	2,410.00	2,409.90	2,512.00	2,511.90
BIG INJUN	2,512.00	2,511.90	2,806.00	2,805.90
WEIR	2,806.00	2,805.90	2,956.00	2,955.90
GANTZ	2,956.00	2,955.90	3,006.00	3,005.90
50F	3,006.00	3,005.90	3,100.00	3,099.90
30F	3,100.00	3,099.90	3,224.00	3,223.90
GORDON	3,224.00	3,223.90	3,317.00	3,316.90
4TH	3,317.00	3,316.90	3,472.00	3,471.90
BAYARD	3,472.00	3,471.90	3,838.00	3,837.90
WARREN	3,838.00	3,837.90	4,052.00	4,051.90
SPEECHLEY	4,052.00	4,051.90	4,402.00	4,401.80
BALLTOWN A	4,402.00	4,401.80	4,837.00	4,836.80
RILEY	4,837.00	4,836.80	5,514.00	5,513.80
BENSON	5,514.00	5,513.80	5,908.00	5,907.80
ALEXANDER	5,908.00	5,907.80	6,957.00	6,907.80
RHINESTREET UPPER	6,957.00	6,907.80	7,084.00	7,033.30
RHINESTREET	7,084.00	7,033.30	7,198.00	7,146.10
SONYEA	7,195.00	7,143.20	7,354.00	7,294.50
MIDDLESEX	7,354.00	7,294.50	7,405.00	7,339.20
GENESSEE	7,405.00	7,339.20	7,521.00	7,428.40
GENESEO	7,521.00	7,428.40	7,561.00	7,453.40
TULLY	7,561.00	7,453.40	7,600.00	7,474.80
HAMILTON	7,600.00	7,474.80	7,916.00	7,572.90
MARCELLUS	7,916.00	7,572.90	15,345.00	7,686.20

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USER: kpoth
 LAYOUT: H5-AS DRILLED
 PLOT DATE/TIME: 7/21/2014 -- 11:30am
 NORTH
 CAD FILE: R:\030-2259 EQT DRILLED Well Pad and Access Rd\Survey\AS-DRILLED\030-2259 BIG 367-514566-AD.dwg



FILE NO. 030-2259 DATE JULY 21 2014

SCALE: 1"=2000' OPERATOR'S WELL NO. 514566

MINIMUM DEGREE OF ACCURACY: 1 in 2500 API WELL NO. _____

PROVEN SOURCE OF ELEVATION: OPUS SURVEY GRADE GPS STATE 47 COUNTY 103 PERMIT 02940

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

LOCATION: ELEVATION: EG: 1,474.6' PROP: 1,442.90' WATER SHED: NORTH FORK OF FISHING CREEK

DISTRICT: GRANT COUNTY: WETZEL

QUADRANGLE: RIG RUN ACREAGE: 39.4 AC±

SURFACE OWNER: DENCIL HENTHORN ET AL LEASE ACREAGE: 379.58 AC±

OIL & GAS ROYALTY OWNER: SHIPEN ESTATE, INC., CNX GAS CO., LLC LEASE NO. 988543

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PERFORATE NEW FORMATION PLUG OFF OLD FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____

TARGET FORMATION: MARCELLUS SHALE ESTIMATED DEPTH: 7,686 TVD/ 15,345 MD

WELL OPERATOR: EQT PRODUCTION DESIGNATED AGENT: REX C. RAY

ADDRESS: 115 PROFESSIONAL PLACE BRIDGEPORT, WV 26330 ADDRESS: 115 PROFESSIONAL PLACE BRIDGEPORT, WV 26330



7/20/2016

514566 - 47-103-02940-0000 - 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	10/12/2015	10.90	8,006.00	9,438.00	5,582.00	0	716	0
1	10/13/2015	89.40	8,592.00	8,861.00	4,240.00	200,900	6502	0
2	10/13/2015	99.50	8,848.00	9,135.00	5,575.00	200,400	6136	0
3	10/13/2015	92.70	8,715.00	8,997.00	5,724.00	203,000	5763	0
4	10/14/2015	97.40	8,666.00	8,967.00	5,509.00	199,500	5989	0
5	10/14/2015	93.50	8,678.00	8,178.00	5,556.00	200,900	5526	0
6	10/14/2015	99.70	8,978.00	9,315.00	5,546.00	201,200	5490	0
7	10/15/2015	95.30	8,849.00	9,337.00	4,754.00	203,300	5545	0
8	10/15/2015	98.60	8,813.00	9,086.00	5,072.00	203,000	5499	0
9	10/15/2015	95.20	8,802.00	9,451.00	6,233.00	191,400	5631	0
9.01	10/15/2015	19.00	7,007.00	8,332.00	5,546.00	0	2267	0
10	10/16/2015	71.00	8,780.00	9,454.00	5,579.00	19,000	5491	0
10.1	10/16/2015	90.90	8,313.00	8,512.00	5,593.00	204,200	6679	0
11	10/16/2015	94.90	8,570.00	9,122.00	5,398.00	199,400	5386	0
12	10/16/2015	92.10	8,581.00	9,310.00	5,163.00	199,100	5398	0
13	10/16/2015	100.30	8,635.00	8,914.00	5,265.00	201,900	5535	0
14	10/17/2015	99.80	8,755.00	9,016.00	5,328.00	196,500	5500	0
15	10/17/2015	96.60	8,577.00	9,008.00	5,286.00	200,700	5507	0
16	10/17/2015	96.60	8,869.00	9,275.00	5,693.00	198,300	5,680	0
17	10/18/2015	94.40	8,631.00	8,976.00	5,772.00	200,100	5,456	0
18	10/18/2015	84.00	8,746.00	9,214.00	5,904.00	200,100	5,358	0
19	10/18/2015	98.20	8,719.00	9,206.00	5,614.00	200,000	5,297	0
20	10/18/2015	99.60	8,828.00	9,184.00	5,227.00	196,300	5,641	0
21	10/19/2015	100.50	8,446.00	9,100.00	5,579.00	200,300	5,267	0
22	10/19/2015	100.50	8,521.00	8,734.00	5,501.00	201,600	5349	0
23	10/19/2015	101.30	8,579.00	8,918.00	5,130.00	201,700	5248	0
24	10/19/2015	101.80	8,550.00	8,896.00	5,508.00	200,900	5268	0
25	10/30/2015	95.20	8,238.00	8,928.00	5,232.00	205,100	5092	0
26	10/30/2015	95.60	8,361.00	8,996.00	5,560.00	203,000	5190	0
27	10/31/2015	97.20	8,286.00	8,929.00	4,248.00	198,700	5137	0
28	10/31/2015	96.10	8,359.00	8,594.00	5,682.00	200,600	5320	0
29	10/31/2015	87.70	8,414.00	8,817.00	5,408.00	204,200	6040	0
30	10/31/2015	86.30	8,388.00	8,758.00	6,039.00	202,800	5035	0
31	10/31/2015	91.10	8,447.00	8,809.00	5,575.00	187,000	4957	0
32	10/31/2015	100.50	8,192.00	8,890.00	5,755.00	201,400	5054	0
33	10/31/2015	94.90	8,242.00	8,521.00	5,630.00	205,300	4988	0
34	11/1/2015	93.20	8,315.00	8,817.00	5,280.00	202,100	5006	0
35	11/1/2015	100.80	8,079.00	8,483.00	5,363.00	202,400	5,086	0
36	11/1/2015	98.70	8,095.00	8,549.00	5,470.00	198,600	5,128	0
37	11/1/2015	101.40	8,140.00	8,433.00	5,897.00	199,000	4,994	0
38	11/1/2015	99.80	8,099.00	8,625.00	5,720.00	199,900	5,036	0
39	11/1/2015	99.10	8,199.00	8,750.00	5,640.00	206,600	5022	0
40	11/1/2015	100.40	8,036.00	9,150.00	5,401.00	195,200	4875	0
41	11/2/2015	100.10	7,949.00	8,466.00	5,180.00	205,300	4976	0
42	11/2/2015	101.10	7,741.00	8,075.00	5,662.00	204,200	5150	0
43	11/2/2015	100.70	8,054.00	8,580.00	5,544.00	201,200	5027	0
44	11/2/2015	100.20	7,751.00	8,274.00	5,699.00	202,000	4728	0
45	11/2/2015	100.90	7,777.00	8,030.00	5,189.00	199,900	4872	0
46	11/2/2015	101.20	7,578.00	7,932.00	5,313.00	204,100	4924	0
47	11/2/2015	100.30	8,010.00	8,519.00	5,040.00	204,300	4667	0
48	11/2/2015	91.70	8,218.00	8,803.00	5,385.00	202,600	4903	0

514566 - 47-103-02940-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	8/24/2015	15,221.46	15,223.00	10	MARCELLUS
1	10/13/2015	15,161.00	15,193.00	24	MARCELLUS
2	10/13/2015	14,920.00	15,043.00	40	MARCELLUS
3	10/13/2015	14,920.00	15,043.00	40	MARCELLUS
4	10/14/2015	14,621.00	14,743.00	40	MARCELLUS
5	10/14/2015	14,471.00	14,593.00	40	MARCELLUS
6	10/14/2015	14,321.00	14,440.00	40	MARCELLUS
7	10/14/2015	14,171.00	14,293.00	40	MARCELLUS
8	10/15/2015	14,021.00	14,143.00	40	MARCELLUS
9	10/15/2015	13,873.00	13,993.00	40	MARCELLUS
10	10/15/2015	13,721.00	13,843.00	40	MARCELLUS
10.1	10/16/2015	13,661.00	13,813.00	24	MARCELLUS
11	10/16/2015	13,511.00	13,633.00	40	MARCELLUS
12	10/16/2015	13,361.00	13,481.00	40	MARCELLUS
13	10/16/2015	13,210.00	13,333.00	40	MARCELLUS
14	10/16/2015	13,061.00	13,183.00	40	MARCELLUS
15	10/17/2015	12,911.00	13,031.00	40	MARCELLUS
16	10/17/2015	12,761.00	12,883.00	40	MARCELLUS
17	10/18/2015	12,611.00	12,728.00	40	MARCELLUS
18	10/18/2015	12,461.00	12,583.00	40	MARCELLUS
19	10/18/2015	12,311.00	12,433.00	40	MARCELLUS
20	10/18/2015	12,160.00	12,283.00	40	MARCELLUS
21	10/18/2015	12,011.00	12,133.00	40	MARCELLUS
22	10/19/2015	11,861.00	11,983.00	40	MARCELLUS
23	10/19/2015	11,711.00	11,833.00	40	MARCELLUS
24	10/19/2015	11,561.00	11,679.00	40	MARCELLUS
25	10/19/2015	11,411.00	11,533.00	40	MARCELLUS
26	10/30/2015	11,261.00	11,381.00	40	MARCELLUS
27	10/31/2015	11,113.00	11,231.00	40	MARCELLUS
28	10/31/2015	10,961.00	11,081.00	40	MARCELLUS
29	10/31/2015	10,811.00	10,931.00	40	MARCELLUS
30	10/31/2015	10,661.00	10,783.00	40	MARCELLUS
31	10/31/2015	10,511.00	10,632.00	40	MARCELLUS
32	10/31/2015	10,361.00	10,481.00	40	MARCELLUS
33	10/31/2015	10,210.00	10,331.00	40	MARCELLUS
34	11/1/2015	10,061.00	10,181.00	40	MARCELLUS
35	11/1/2015	9,911.00	10,031.00	40	MARCELLUS
36	11/1/2015	9,897.00	9,899.00	8	MARCELLUS
36.1	11/1/2015	9,761.00	9,853.00	32	MARCELLUS
37	11/1/2015	9,611.00	9,729.00	40	MARCELLUS
38	11/1/2015	9,461.00	9,581.00	40	MARCELLUS
39	11/1/2015	9,311.00	9,431.00	40	MARCELLUS
40	11/1/2015	9,161.00	9,281.00	40	MARCELLUS
41	11/2/2015	9,009.00	9,147.00	40	MARCELLUS
42	11/2/2015	8,861.00	8,981.00	40	MARCELLUS
43	11/2/2015	8,711.00	8,831.00	40	MARCELLUS
44	11/2/2015	8,561.00	8,683.00	40	MARCELLUS
45	11/2/2015	8,411.00	8,532.00	40	MARCELLUS
46	11/2/2015	8,261.00	8,383.00	40	MARCELLUS
47	11/2/2015	8,111.00	8,231.00	40	MARCELLUS
48	11/2/2015	7,961.00	8,081.00	40	MARCELLUS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date	10/12/2015
Job End Date	11/3/2015
State	West Virginia
County	Weize
API Number	47-103-02940-00-00
Operator Name	EQT Production
Well Name and Number	514566
Longitude	-80.58004000
Latitude	39.55651100
Datum	NAD83
Federal/Tribal Well	NO
True Vertical Depth	7,573
Total Base Water Volume (gal)	11,101,902
Total Base Non Water Volume	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical 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	90.16746	None
Sand (Proppant)	C and J Energy Services	Proppant	Silica Substrate	14808-60-7	100.00000	9.40089	None
MC MX 437-5	Multi-Chem Group	Calcium Nitrate Solution	Calcium Nitrate	10124-37-5	60.00000	0.05767	None
FR-18	C and J Energy Services	Anionic Friction Reducer	Distillates (petroleum), Hydrotreated Light Ethylene Glycol	64742-47-8	45.00000	0.03591	None
Hydrochloric Acid (15%)	C and J Energy Services	Acidizing	Hydrochloric Acid	107-21-1	10.00000	0.00798	None
SI-4	C and J Energy Services	Soluble Inhibitor	Bis (hexamethylene triaminepenta methylenephosphonic acid)	7647-01-0	15.00000	0.03487	None
AI-2	C and J Energy Services	Acid corrosion inhibitor	Sodium Hydroxide	Proprietary	10.00000	0.00228	None
				1310-73-2	1.00000	0.00023	None

					Isopropyl Alcohol	67-63-0	40.00000	0.00017	None
					Glycol Ethers	111-76-2	40.00000	0.00017	None
					Propargyl Alcohol	107-19-7	40.00000	0.00017	None
					Ethoxylated Nonyphenol	68412-54-4	13.00000	0.00006	None
					Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004	None
LSG-100	C and J Energy Services				Gelling Agent				
					Solvent naphtha, (petroleum) heavy aliphatic	64742-47-8	65.00000	0.00004	None
					Proprietary non-hazardous polymers	Proprietary	60.00000	0.00003	None
Ingredients shown above are subject to 29 CFR 1910.1209(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.									

* 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%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

EQT WELL NO. 514566

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 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 9 38.6 AC±

GOODRICH TM 18 PAR 10 2.4 AC±

MCCOY TM 18 PAR 5 39 AC±

AS DRILLED COORDINATES FOR WELL NO. WV 514566 (BIG367 H5)

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

NAD'27 S.P.C.(FT) N. 386,634.229 E. 1,695,481.662
 NAD'27 GEO. LAT-(N) 39.555594 LONG-(W) 80.579854
 NAD'83 UTM (M) N. 4,378,629.673 E. 536,094.498

LANDING POINT

NAD'27 S.P.C.(FT) N. 386,289.248 E. 1,695,720.552
 NAD'27 GEO. LAT-(N) 39.555572 LONG-(W) 80.579178
 NAD'83 UTM (M) N. 4,378,525.767 E. 536,169.030

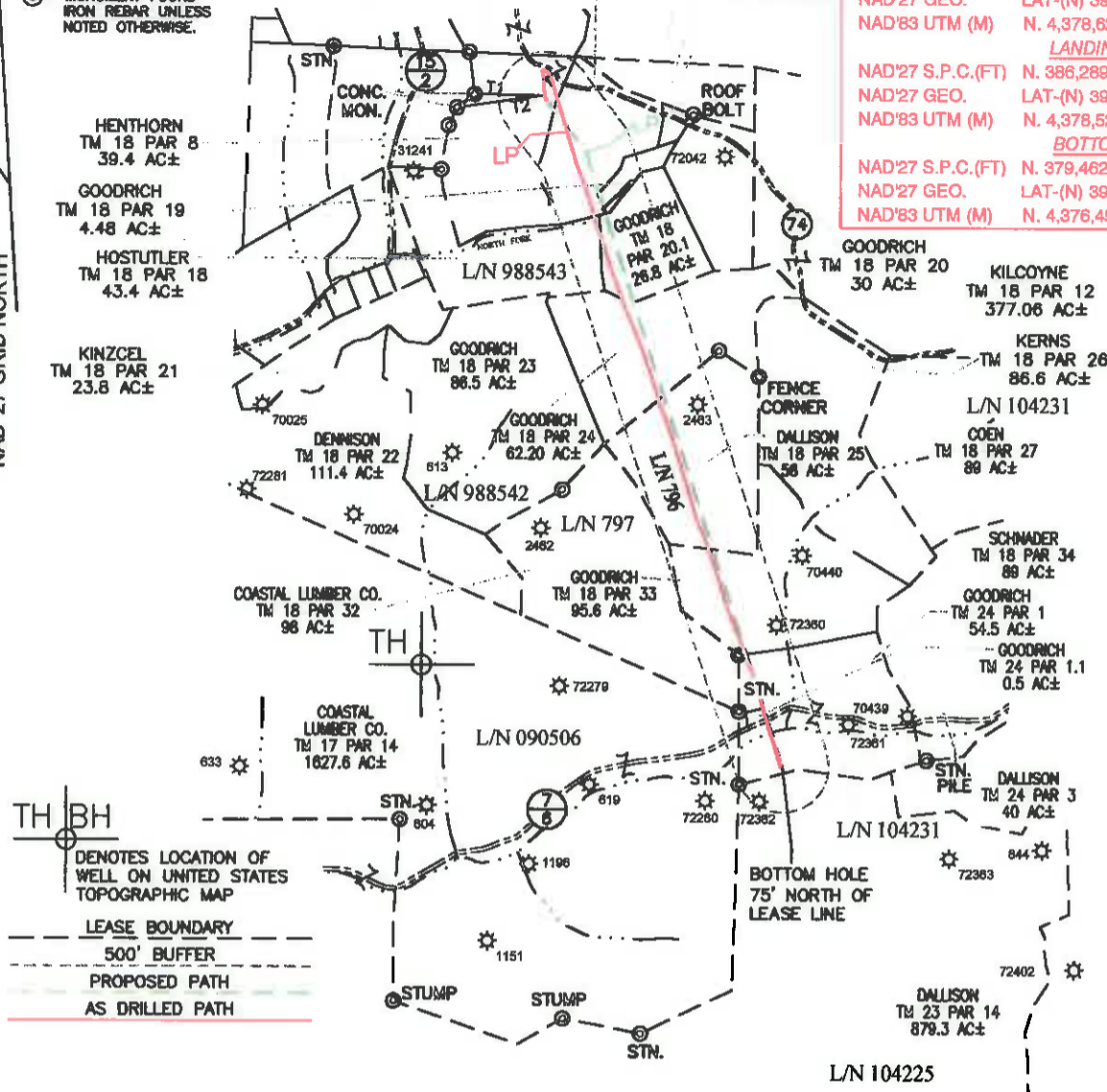
BOTTOM HOLE

NAD'27 S.P.C.(FT) N. 379,462.882 E. 1,698,045.814
 NAD'27 GEO. LAT-(N) 39.538908 LONG-(W) 80.570643
 NAD'83 UTM (M) N. 4,376,457.895 E. 536,912.081

NAD 27 GRID NORTH

LONGITUDE 80°32'30"

8,742' TOP HOLE



TH BH
 ⊙ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAP

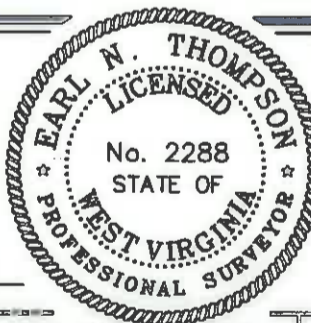
--- LEASE BOUNDARY
 - - - 500' BUFFER
 - - - PROPOSED PATH
 --- AS DRILLED PATH

SPECIAL NOTES
 -LEASE AND SURFACE INFO SHOWN HEREON WAS TAKEN FROM PERMIT PLAT FOR API# 47-103-02940H.
 -AS DRILLED INFORMATION PROVIDED BY EQT.

LINE	BEARING	DIST.
T1	S86°35'44"E	760.37'
T2	N84°01'16"E	954.83'



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JANUARY 3, 20 14
 REVISED 06/16/16
 OPERATORS WELL NO. WV 514566
 API WELL NO. 47-103-02940H
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 8471BIG367WELLS-RH1R
 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 X LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION X STORAGE DEEP SHALLOW X

LOCATION: ELEVATION PROPOSED 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. CNX GAS CO., LLC ACREAGE 379.58±
 LEASE NO. 104231

PROPOSED WORK:
 DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH TVD/MD

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