

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 513688

API: 47 - 490 - 2351

Submission: Initial Amended

Notes: Correction to Production Cement Top
(MD)

APPROVED

NAME: *Bill Hembush*

DATE: *2-5-2016*

RECEIVED
Office of Oil and Gas

DEC 21 2015

WV Department of
Environmental Protection

02/12/2016

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

API 47 - 049 - 02351 County Marion District Paw Paw
Quad Grant Town Pad Name GRT 26 Field/Pool Name _____
Farm name Neely Well Number 513688
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 4,383,486 Easting 565,850
Landing Point of Curve Northing 4,383,214 Easting 565,124
Bottom Hole Northing 4,382,292 Easting 565,459

Elevation (ft) 1141 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 10/31/2014 Date drilling commenced 11/20/2014 Date drilling ceased 2/25/2015
Date completion activities began 4/9/2015 Date completion activities ceased 4/13/2015
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 457' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1449', 2772' Void(s) encountered (Y/N) depths (Y) 492'-498'
Coal depth(s) ft 119', 358', 462', 496', 803' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

02/12/2016

API 47-049 - 02351 Farm name Neely Well number 513688

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	75'	NEW	A-500 40LB/FT	NONE	Y
Surface	17.5"	13.375"	655'	NEW	J-55 54.5LB/FT	442', 484', 522'	N
Coal							
Intermediate 1	12.375"	9.625"	3064	NEW	P-110 40LB/FT	NONE	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	11,627	NEW	P-110 20LB/FT	NONE	N
Tubing							
Packer type and depth set							

Comment Details For the 13 3/8" cement top job, Run string line down backside of 13 3/8" Casing to verify cement level, Cement top @ 65' GL.
Make up and Run 64' GL of 1" Tubing down backside, Hook up Allied Cement Services, Grout Backside to surface w/ 15 bbl (75 sks) of Neat Cement

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	72	15.6	1.18	84.96	0	8
Surface	CLASS A	684/75	15.6/15.6	1.20/1.20	910.80	0	8
Coal							
Intermediate 1	CLASS A / CLASS A	905 / 203	15.6 / 15.6	1.18 / 1.18	1307.44	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS A / CLASS H	970 / 420	14.2 / 15.2	1.26 / 1.97	2049.60	2,898'	8
Tubing							

Drillers TD (ft) 11,640' Loggers TD (ft) N/A
Deepest formation penetrated Marcellus Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) 4,566'

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: 1,12
INTERMEDIATE- RAN AT LEAST EVERY 500' FEET JOINTS: #1,#12,#23,#35,#47,#59,#69
PRODUCTION- 144 Composite Body centralizers ran every joint from 4,001' to 10,601'

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 _____

API 47- 049 - 2351 Farm name Neely Well number 513688

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

Please insert additional pages as applicable.

API 47- 049 - 02351 Farm name Neely Well number 513688

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>			
<u>Marcellus</u>	<u>7,617'</u>	<u>TVD</u>	<u>8,640'</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 1,488 psi Bottom Hole N/A psi DURATION OF TEST 94.5 hrs

OPEN FLOW Gas 11,460 mcfpd Oil N/A bpd NGL 0 bpd Water 4,441 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 ₂ 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.

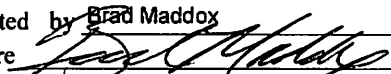
Drilling Contractor ALPHA HUNTER DRILLING (RIG 5)
Address P.O. BOX 430 City RENO State OH Zip 45773

Logging Company HOSSCO SERVICES, LLC
Address 614 TROTTERS LANE City CHARLESTON State WV Zip 25312

Cementing Company Allied Services
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company FTSI
Address 301 E 18th Street City Cisco State TX Zip 76437

Please insert additional pages as applicable.

Completed by Brad Maddox Telephone 412-395-7053
Signature  Title Director of Drilling Date 12/9/2015

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

02/12/2016

API 47- 049 - 2351 Farm name Neely Well number 513688

Drilling Contractor Patterson UTI (Rig 252)
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

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

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company NABORS CEMENTING SERVICES
Address 2504 SMITH CREEK ROAD City WAYNESBURG State PA Zip 15370

513688 Final Formations API 47-490-2351

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	1		457	
SAND/SHALE	1		119	
WAYNESBURG	119		124	
SAND/SHALE	124		358	
SEWICKLEY	358		364	
SAND/SHALE	364		462	
REDSTONE	462		464	
SAND/SHALE	464		496	
PITTSBURGH	496		504	
SAND/SHALE	504		803	
COAL	803		810	
SAND/SHALE	810		1,405.00	
MAXTON	1,405.00		1,478.00	
SAND/SHALE	1,478.00		1,715.00	
BIG LIME	1,715.00		1,836.00	
BIG INJUN	1,836.00		1,947.00	
SAND/SHALE	1,947.00		2,027.00	
WEIR	2,027.00		2,048.00	
SAND/SHALE	2,048.00		2,335.00	
GANTZ	2,335.00		2,354.00	
SAND/SHALE	2,354.00		2,381.00	
50F	2,381.00		2,443.00	
SAND/SHALE	2,443.00		2,497.00	
30F	2,497.00		2,535.00	
SAND/SHALE	2,535.00		2,580.00	
GORDON	2,580.00		2,591.00	
SAND/SHALE	2,591.00		2,651.00	
4TH SAND	2,651.00		2,725.00	
SAND/SHALE	2,725.00		2,821.00	
BAYARD	2,821.00		2,884.00	
SAND/SHALE	2,884.00		3,262.00	
WARREN	3,262.00		4,868.00	4,850.80
BENSON	4,868.00	4,850.80	5,146.00	5,067.40
ALEXANDER	5,146.00	5,067.40	6,227.00	5,880.20
RHINESTREET	6,227.00	5,880.20	7,740.00	7,028.60
SONYEA	7,740.00	7,028.60	8,020.00	7,236.00
MIDDLESEX	8,020.00	7,236.00	8,120.00	7,306.30
GENESSEE	8,120.00	7,306.30	8,280.00	7,419.00
GENESSEO	8,280.00	7,419.00	8,350.00	7,467.40
TULLY	8,350.00	7,467.40	8,442.00	7,524.80
HAMILTON	8,442.00	7,524.80	8,640.00	7,617.00
MARCELLUS	8,640.00	7,617.00		

02/12/2016

513688- 47-049-02351-0000 - 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	4/9/2015	11.7	8,353	9,202	5,064	0	802	0
1	4/10/2015	99.9	8,032	8,674	5,034	250,700	6,750	0
2	4/10/2015	100.5	8,256	8,661	5,528	250,300	6,656	0
3	4/11/2015	100.0	8,360	8,754	5,309	250,600	6,698	0
4	4/11/2015	101.6	8,415	8,898	5,497	251,400	6,508	0
5	4/11/2015	99.7	8,617	9,052	5,169	250,900	6,427	0
6	4/11/2015	99.4	8,545	9,205	5,312	251,200	6,395	0
7	4/11/2015	100.9	8,194	8,868	5,692	250,700	6,335	0
8	4/11/2015	100.8	8,202	8,605	5,718	250,300	6,440	0
9	4/11/2015	100.4	8,379	8,781	5,660	250,400	6,271	0
10	4/12/2015	98.2	8,919	9,144	5,653	250,700	6,364	0
11	4/12/2015	98.2	8,630	9,083	5,534	250,300	6,389	0
12	4/12/2015	100.2	8,785	9,145	5,829	250,400	6,246	0
13	4/12/2015	100.1	8,255	8,753	5,497	250,400	6,205	0
14	4/12/2015	100.4	7,880	8,179	5,760	250,300	6,311	0
15	4/13/2015	101.9	8,030	8,387	5,738	250,300	6,211	0
16	4/13/2015	99.9	8,853	9,175	5,405	250,100	6,318	0
17	4/13/2015	100.6	8,261	8,957	5,661	250,700	6,258	0
18	4/13/2015	100.9	8,111	8,593	5,866	250,100	6,453	0

513688-47-049-02351-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	4/9/2015	11,602.00	11,603.00	10	MARCELLUS
1	4/10/2015	11,481.00	11,602.00	32	MARCELLUS
2	4/10/2015	11,331.00	11,451.00	40	MARCELLUS
3	4/11/2015	11,181.00	11,301.00	40	MARCELLUS
4	4/11/2015	11,033.00	11,151.00	40	MARCELLUS
5	4/11/2015	10,881.00	11,001.00	40	MARCELLUS
6	4/11/2015	10,731.00	10,851.00	40	MARCELLUS
7	4/11/2015	10,581.00	10,701.00	40	MARCELLUS
8	4/11/2015	10,431.00	10,551.00	40	MARCELLUS
9	4/12/2015	10,281.00	10,398.00	40	MARCELLUS
10	4/12/2015	10,131.00	10,251.00	40	MARCELLUS
11	4/12/2015	9,980.00	10,101.00	40	MARCELLUS
12	4/12/2015	9,678.00	9,801.00	40	MARCELLUS
13	4/12/2015	9,831.00	9,951.00	40	MARCELLUS
14	4/12/2015	9,531.00	9,651.00	40	MARCELLUS
15	4/13/2015	9,381.00	9,499.00	40	MARCELLUS
16	4/13/2015	9,234.00	9,351.00	40	MARCELLUS
17	4/13/2015	9,081.00	9,201.00	40	MARCELLUS
18	4/13/2015	8,931.00	9,051.00	40	MARCELLUS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	4/9/2015
Job End Date:	4/13/2015
State:	West Virginia
County:	Marion
API Number:	47-049-02351-00-00
Operator Name:	EQT Production
Well Name and Number:	513688
Longitude:	-80.23323100
Latitude:	39.59849600
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,617
Total Base Water Volume (gal):	4,873,554
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	FTS International	Carrier/Base Fluid	Water	7732-18-5	100.00000	89.65396	None
Sand (Proppant)	FTS International	Proppant	Crystalline Silica	14808-60-7	100.00000	9.94156	None
MC MX 437-5	Multi-Chem	Calcium nitrate solution	Calcium nitrate	10124-37-5	60.00000	0.05720	None
FRW-900	FTS International	Friction reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02253	None
			Alkyl Alcohol	Proprietary	10.00000	0.00751	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00376	None
Hydrochloric Acid (15%)	FTS International	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03100	None
CS-500-SI	FTS International	Scale Inhibitor	Ethylene glycol	107-21-1	10.00000	0.00253	None
FE-100L	FTS International	Iron control	Citric acid	77-92-9	55.00000	0.00072	None
CI-150	FTS International	Acid Corrosion Inhibitor	Organic amine resin salt	Proprietary	30.00000	0.00011	None

			Isopropanol	67-63-0	30.00000	0.00011	None
			Ethylene glycol	107-21-1	30.00000	0.00011	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00004	None
			Aromatic aldehyde	Proprietary	10.00000	0.00004	None
			Dimethylformamide	68-12-2	10.00000	0.00004	None
NE-100	FTS International	Non-emulsifier					
			2-Propanol	67-63-0	10.00000	0.00003	None
			2-Butoxyethanol	111-76-2	10.00000	0.00003	None
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00002	None
Ingredients shown above are subject to 29 CFR 1910.1200(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)

Welcome Michelle N., Operator - OpNo. E1210363 [Log Out]

Hydraulic Fracturing
DISCLOSURE



Please use the FracFocus XML submission process or create disclosures online.

FIND A WELL
BY STATE

ABOUT PROJECT
PARTNERS

(Note: Clicking the FracFocus, FIND A WELL links will open a new window.)

Prepare Disclosure for FracFocus Submission

[Disclosure Lists](#) | [Dashboard](#)

Disclosure has been submitted.

Note: This window expires with 10 minutes of inactivity. After that you will be taken back to the dashboard.

Hydraulic Fracturing Data

Job Start Date 4/9/2015 Job End Date 4/13/2015 API Number 47-049-02351-00-00 State & County West Virginia --- Marion

Well Name 513688

Longitude -80.233231 Latitude 39.598496 Datum NAD83 Federal/Tribal Well?

True Vertical Depth (ft) 7617 Total Water Vol (gal) 4873554 Total Non Water Vol 0 Total Mass (lbs) 45363094



MSDS Chemical Ingredients

	Trade Name	Supplier	Purpose	Ingredients	CAS #	% High Additive	% HF Job	Comments	Ingredient Mass
<input type="button" value="Edit"/>	Water	FTS International	Carrier/Base Fluid	Water	7732-18-5	100%	89.6539557636%	None	40669808.13
<input type="button" value="Edit"/>	Sand (Proppant)	FTS International	Proppant	Crystalline Silica	14808-60-7	100%	9.9415617701%	None	4509800
<input type="button" value="Edit"/>	MC MX 437-5	Multi-Chem	Calcium nitrate solution	Calcium nitrate	10124-37-5	60%	.0572043715%	None	25949.673
<input type="button" value="Edit"/>	FRW-900	FTS International	Friction reducer	Hydrotreated light distillate	64742-47-8	30%	.0225340472%	None	10222.141
				Alkyl Alcohol	Proprietary	10%	.0075113491%	None	3407.38
				Oxyalkylated alcohol A	Proprietary	5%	.0037556745%	None	1703.69
<input type="button" value="Edit"/>	Hydrochloric Acid (15%)	FTS International	Acidizing	Hydrochloric Acid	7647-01-0	15%	.0310018785%	None	14063.411
<input type="button" value="Edit"/>	CS-500-SI	FTS International	Scale inhibitor	Ethylene glycol	107-21-1	10%	.0025318247%	None	1148.514
<input type="button" value="Edit"/>	FE-100L	FTS International	Iron control	Citric acid	77-92-9	55%	.0007163407%	None	324.954
<input type="button" value="Edit"/>	CI-150	FTS International							

		Acid Corrosion Inhibitor						
<input type="button" value="Edit"/> NE-100 FTS International Non-emulsifier		Organic amine resin salt	Proprietary	30%	.0001147359%	None	52.048	
		Isopropanol	67-63-0	30%	.0001147359%	None	52.048	
		Ethylene glycol	107-21-1	30%	.0001147359%	None	52.048	
		Quaternary ammonium compound	Proprietary	10%	.0000382453%	None	17.349	
		Aromatic aldehyde	Proprietary	10%	.0000382453%	None	17.349	
		Dimethylformamide	68-12-2	10%	.0000382453%	None	17.349	
		2-Propanol	67-63-0	10%	.0000346029%	None	15.697	
		2-Butoxyethanol	111-76-2	10%	.0000346029%	None	15.697	
		Dodecylbenzenesulfonic acid	27176-87-0	5%	.0000173014%	None	7.848	

Non-MSDS Chemical Ingredients

Trade Name	Supplier	Purpose	Ingredients	CAS #	% High Additive	% HF Job	Comments	Ingredient Mass
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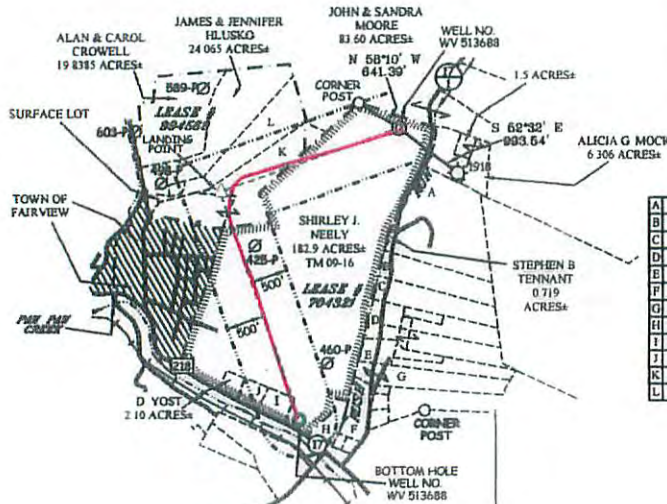
NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS.
2. 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. AS DRILLED INFORMATION PROVIDED BY EOT.

LATITUDE 39°37'30"

LEGEND

LEASE LINE	---
SURFACE LINE	----
PROPOSED PATH	---
AS DRILLED PATH	---
OFFSET LINE	---
TIE LINE	---
CREEK	---
ROAD	---
COUNTY ROUTE	---
STATE ROUTE	---
PROPOSED WELL	⊙
EXISTING WELL	⊙
PERMITTED WELL	⊙
TAX MAP--PARCEL	00-00



A	D. TENNANT ET AL	33.99 AC ±
B	S. TENNANT	1.2 AC ±
C	R. EDDY	1.71 AC ±
D	F. MARKLEY	2.29 AC ±
E	R. HUNTER ET AL	3.35 AC ±
F	W. MOORE	5.56 AC ±
G	ALLEN HENDERSON ET AL	11.70 AC ±
H	R. WOODHOUSE ET AL	3.05 AC ±
I	J. KUBAS	3.38 AC ± TM 09-18
J	A. MAGRO ET AL	2.52 AC ±
K	FRANK & GOLDEN HOLLIS	25 AC ± TM 09-15 & 15.1
L	STANLEY HAUGHT ET AL	0.38 AC ± TM 09-14.1

**EQT PRODUCTION COMPANY
D. HAUGHT LEASE
190.5 ACRES ±
WELL NO. WV 513688**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD27 S.P.C.(FT) N. 400,839.1 E. 1,793,397.0
 NAD27 GEO. LAT-(N) 39.598498 LONG-(W) 80.233230
 NAD83 UTM (M) N. 4,383,485.8 E. 565,850.4
LANDING POINT
 NAD27 S.P.C.(FT) N. 400,087.5 E. 1,790,087.3
 NAD27 GEO. LAT-(N) 39.598104 LONG-(W) 80.241721
 NAD83 UTM (M) N. 4,383,214.1 E. 565,123.6
BOTTOM HOLE
 NAD27 S.P.C.(FT) N. 397,043.5 E. 1,792,037.3
 NAD27 GEO. LAT-(N) 39.587771 LONG-(W) 80.237900
 NAD83 UTM (M) N. 4,382,292.0 E. 565,459.0

ROYALTY OWNERS		
MARY RUTH (SIBB) MEFFE	50 AC ±	LEASE NO. 694088

**AS DRILLED COORDINATES
FOR WELL NO. WV 513688**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)
 NAD27 S.P.C.(FT) N. 400,839.1 E. 1,793,397.0
 NAD27 GEO. LAT-(N) 39.598498 LONG-(W) 80.233230
 NAD83 UTM (M) N. 4,383,485.8 E. 565,850.4
BOTTOM HOLE
 NAD27 S.P.C.(FT) N. 397,050.7 E. 1,792,017.8
 NAD27 GEO. LAT-(N) 39.587790 LONG-(W) 80.237978
 NAD83 UTM (M) N. 4,382,294.1 E. 565,453.0



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 AUGUST 14, 20 14
 REVISED MARCH 03, 20 15
 OPERATORS WELL NO. WV 513688
 API WELL NO. 47
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7248ASDRILLED513688
 SCALE 1" = 2,000'
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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: ELEVATION 1,141' WATERSHED RUSH RUN
 DISTRICT PAW PAW COUNTY MARION QUADRANGLE GRANT TOWN 7.5'

SURFACE OWNER SHIRLEY J. NEELY ACREAGE 182.9±
 ROYALTY OWNER JUDITH YOST ROBINSON, ET AL ACREAGE 190.5±
 PROPOSED WORK: LEASE NO. 704321

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 ESTIMATED DEPTH TVD 7581'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330
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02/12/2016