

JK

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

PM

API 47-0918-01250 County TAYLOR District BOOTH'S CREEK
Quad ROSEMONT 7.5' Pad Name RSM112 Field/Pool Name _____
Farm name WOODELL, SPENCER C. & TINA Well Number 514301
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 4351956.9 Easting 571462.8
Landing Point of Curve Northing 4351967.0 Easting 571455.7
Bottom Hole Northing 4348386.3 Easting 572302.8

Elevation (ft) 1590 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 11.5 ppg - powdered hydrocarbon resin, calcium carbonate, ground almond hulls, barium sulfate, calcium chloride, lecithin liquid, organophilic clay, polyaminated fatty acid, calcium hydroxide, polyimide surfactant, modified fatty acid, dimer.trimer fatty acid, ground walnut hulls, refined base oil.

Date permit issued 04/05/2012 Date drilling commenced 09/30/2013 Date drilling ceased 03/06/2014
Date completion activities began 5/19/2014 Date completion activities ceased 6/6/2014
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 430', 1022' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1950' Voids encountered (Y/N) depths N
Coal depth(s) ft 706', 781', 942', 998', 1032' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

RECEIVED
Office of Oil and Gas

SEP 03 2014

Reviewed by: _____

API 47-0910 - 1250 Farm name WOODELL, SPENCER C. & TINA Well number 514301

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	24"	20"	70'	New	94lb/ft	N/A	Y
Surface	17-1/2"	13-3/8"	1,125'	New	54.5lb/ft	231', 430'	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,690'	New	40lb/ft	1422', 789'	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	19,660'	New	20lb/ft	N/A	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	191	15.6	1.18	225	0	8
Surface	Class A	890	15.6	1.19	1059	0	8
Coal							
Intermediate 1	Class A	495/420	15.6	1.19/1.20	1093	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	645/1505	14.2/15.2	1.26/1.97	3779	4830	72
Tubing							

Drillers TD (ft) 19660' Loggers TD (ft) N/A
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 8299'

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-Bowspring centralizer on shoe track and every 500' to surface
 Intermediate-Bowspring centralizer on shoe track and every 500' to surface
 Production- Composite bodied centralizers on every joint from TD up to 4,830'

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- 0910 - 1250 Farm name WODELL, SPENCER C. & TINA Well number 514301

PERFORATION RECORD

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

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)
								See Attachment

Please insert additional pages as applicable.

API 47- 0910 - 1250 Farm name WOODELL, SPENCER C. & TINA Well number _____

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Marcellus	7,586.30	TVD 7,996 MD
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1,769 psi Bottom Hole NA psi DURATION OF TEST 206 hrs

OPEN FLOW Gas 10,080 mcfpd Oil 0 bpd NGL 0 bpd Water 1,248 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 Savanna Drilling
Address 2204 Timberloch Place Suite 230 City Woodlands State TX Zip 77380

Logging Company Hoss Co. Services LLC
Address 614 Trotters Lane City Charleston State WV Zip 25312

Cementing Company Nabors Completion & Production Services Co.
Address PO BOX 975682 City Dallas State TX Zip 75397-5682

Stimulating Company US Well Services
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by James E. Helmick Jr Telephone 412-395-5518
Signature _____ Title Vice President - Completions Operations Date 9/2/2014

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

91.01250

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
SAND / SHALE	0	0	706	706
FRESH WATER ZONE	1	1	1,022.00	1,022.00
COAL	706	706	712	712
SAND / SHALE	712	712	781	781
COAL	781	781	786	786
SAND / SHALE	786	786	942	942
COAL	942	942	947	947
SAND / SHALE	947	947	998	998
COAL	998	998	1,001.00	1,001.00
SAND / SHALE	1,001.00	1,001.00	1,032.00	1,032.00
COAL	1,032.00	1,032.00	1,038.00	1,038.00
SAND / SHALE	1,038.00	1,038.00	1,154.00	1,154.00
MAXTON	1,154.00	1,154.00	1,554.00	1,554.00
BIG LIME	1,554.00	1,554.00	1,838.00	1,837.90
WEIR	1,838.00	1,837.90	2,065.00	2,064.90
GANTZ	2,065.00	2,064.90	2,139.00	2,138.90
50F	2,139.00	2,138.90	2,246.00	2,245.90
30F	2,246.00	2,245.90	2,324.00	2,323.90
GORDON	2,324.00	2,323.90	2,470.00	2,469.90
4TH	2,470.00	2,469.90	2,613.00	2,612.90
BAYARD	2,613.00	2,612.90	3,037.00	3,036.90
B-5	3,037.00	3,036.90	3,255.00	3,254.80
SPEECHLEY	3,255.00	3,254.80	3,631.00	3,630.80
BRADFORD	3,631.00	3,630.80	3,775.00	3,774.70
BALLTOWN B	3,775.00	3,774.70	3,986.00	3,985.70
RILEY	3,986.00	3,985.70	4,610.00	4,609.60
BENSON	4,610.00	4,609.60	4,964.00	4,963.60
ELK	4,964.00	4,963.60	6,896.00	6,826.40
SONYEA	6,896.00	6,826.40	7,324.00	7,137.70
MIDDLESEX	7,324.00	7,137.70	7,465.00	7,241.60
GENESSEE	7,465.00	7,241.60	7,623.00	7,362.00
GENESE0	7,623.00	7,362.00	7,677.00	7,399.80
TULLY	7,677.00	7,399.80	7,752.00	7,448.90
HAMILTON	7,752.00	7,448.90	7,996.00	7,586.30
MARCELLUS	7,996.00	7,586.30	16,660.00	8,013.35

09/19/2014

514301 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	5/19/2014	19,633.00	19,636.00	10	MARCELLUS
1	5/20/2014	19,392.00	19,574.00	32	MARCELLUS
2	5/20/2014	19,092.00	19,334.00	40	MARCELLUS
3	5/20/2014	18,792.00	19,034.00	40	MARCELLUS
4	5/21/2014	18,492.00	18,732.00	40	MARCELLUS
5	5/21/2014	18,192.00	18,438.00	40	MARCELLUS
6	5/22/2014	17,892.00	18,134.00	40	MARCELLUS
7	5/22/2014	17,592.00	17,834.00	40	MARCELLUS
8	5/22/2014	17,296.00	17,534.00	40	MARCELLUS
9	5/23/2014	16,992.00	17,234.00	40	MARCELLUS
10	5/23/2014	16,692.00	16,934.00	40	MARCELLUS
11	5/23/2014	16,392.00	16,630.00	40	MARCELLUS
12	5/24/2014	16,092.00	16,334.00	40	MARCELLUS
13	5/24/2014	15,792.00	16,034.00	40	MARCELLUS
14	5/24/2014	15,450.00	15,734.00	40	MARCELLUS
15	5/24/2014	15,192.00	15,434.00	40	MARCELLUS
16	5/25/2014	14,892.00	15,134.00	40	MARCELLUS
17	5/26/2014	14,592.00	14,838.00	40	MARCELLUS
18	5/26/2014	14,592.00	14,834.00	40	MARCELLUS
19	5/27/2014	13,992.00	14,234.00	40	MARCELLUS
20	5/29/2014	13,692.00	13,934.00	40	MARCELLUS
21	5/29/2014	13,392.00	13,634.00	40	MARCELLUS
22	5/29/2014	13,092.00	13,334.00	40	MARCELLUS
23	5/30/2014	12,792.00	13,034.00	40	MARCELLUS
24	5/31/2014	12,492.00	12,734.00	40	MARCELLUS
25	5/31/2014	12,192.00	12,434.00	40	MARCELLUS
26	6/1/2014	11,892.00	12,134.00	40	MARCELLUS
27	6/1/2014	11,593.00	11,834.00	40	MARCELLUS
28	6/2/2014	11,292.00	11,534.00	40	MARCELLUS
29	6/2/2014	10,992.00	11,234.00	40	MARCELLUS
30	6/2/2014	10,692.00	10,934.00	40	MARCELLUS
31	6/3/2014	10,392.00	10,634.00	40	MARCELLUS
32	6/3/2014	10,092.00	10,332.00	40	MARCELLUS
33	6/4/2014	9,792.00	10,032.00	40	MARCELLUS
34	6/4/2014	9,492.00	9,732.00	40	MARCELLUS
35	6/4/2014	9,192.00	9,432.00	40	MARCELLUS
36	6/5/2014	8,892.00	9,132.00	40	MARCELLUS
37	6/5/2014	8,592.00	8,832.00	40	MARCELLUS
38	6/5/2014	8,288.00	8,532.00	40	MARCELLUS

91-01850-9

514301 - 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	5/19/2014	16.00	8,301.00	NA	5,003	0	864	0
1	5/20/2014	86.00	8,808.00	9,016.00	4,342	503,440	11,800	0
2	5/20/2014	78.00	8,526.00	9,098.00	5,404	501,720	12,992	0
3	5/20/2014	94.00	8,550.00	8,934.00	4,832	501,100	12,265	0
4	5/21/2014	95.00	8,298.00	8,748.00	5,236	499,500	12,182	0
5	5/21/2014	79.00	8,657.00	9,198.00	5,186	500,720	12,919	0
6	5/22/2014	86.20	8,708.00	8,909.00	7,717	502,410	12,228	0
7	5/22/2014	84.00	8,715.00	9,008.00	5,636	503,800	12,177	0
8	5/22/2014	77.00	8,613.00	9,109.00	5,904	503,800	12,778	0
9	5/23/2014	84.40	8,594.00	9,077.00	5,289	502,550	12,204	0
10	5/23/2014	80.00	8,589.00	8,984.00	5,511	496,730	12,138	0
11	5/24/2014	82.00	8,683.00	9,037.00	5,389	502,200	12,051	0
12	5/24/2014	94.00	8,459.00	8,744.00	5,579	501,400	14,150	0
13	5/24/2014	88.00	8,689.00	8,994.00	5,693	500,860	12,133	0
14	5/25/2014	81.60	8,661.00	9,041.00	5,068	501,090	12,141	0
15	5/25/2014	84.00	8,568.00	9,134.00	5,940	501,760	12,097	0
16	5/26/2014	81.70	8,581.00	9,212.00	5,665	500,560	13,057	0
17	5/26/2014	99.00	8,520.00	9,137.00	5,693	500,680	12,128	0
18	5/27/2014	84.00	8,571.00	9,134.00	5,668	501,350	12,299	0
19	5/28/2014	91.00	8,426.00	9,112.00	6,065	500,150	12,622	0
20	5/29/2014	93.80	8,781.00	9,155.00	5,686	501,260	12,109	0
21	5/29/2014	92.00	8,811.00	9,173.00	5,922	501,540	12,175	0
22	5/30/2014	92.00	8,642.00	9,001.00	6,026	500,030	12,157	0
23	5/30/2014	86.00	8,456.00	8,741.00	6,198	500,180	17,324	0
24	5/31/2014	90.50	8,817.00	9,120.00	6,019	502,250	14,536	0
25	5/31/2014	95.00	8,629.00	8,869.00	5,744	501,990	12,536	0
26	6/1/2014	97.40	8,708.00	8,959.00	5,901	500,710	12,104	0
27	6/1/2014	94.00	8,621.00	9,148.00	5,862	501,800	12,171	0
28	6/2/2014	94.00	8,606.00	9,230.00	5,869	500,570	13,250	0
29	6/2/2014	95.00	8,611.00	8,987.00	6,087	500,220	12,083	0
30	6/2/2014	92.00	8,633.00	9,066.00	5,629	500,800	12,046	0
31	6/3/2014	92.80	8,622.00	9,012.00	6,166	501,010	12,066	0
32	6/3/2014	98.00	8,490.00	8,880.00	5,797	501,730	12,451	0
33	6/4/2014	98.20	8,598.00	8,955.00	5,647	502,120	12,182	0
34	6/4/2014	101.00	8,286.00	9,005.00	5,822	500,860	12,140	0
35	6/5/2014	101.00	8,499.00	9,155.00	5,994	492,100	12,059	0
36	6/5/2014	99.40	8,269.00	9,012.00	6,258	497,200	12,126	0
37	6/5/2014	98.00	7,982.00	7,532.00	6,230	501,680	12,083	0
38	6/6/2014	100.00	7,694.00	8,419.00	5,704	514,620	11,991	0

91-01250

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/19/2014
Job End Date:	6/6/2014
State:	West Virginia
County:	Taylor
API Number:	47-091-01250-00-00
Operator Name:	EQT Production
Well Name and Number:	RSM112 - 514301
Longitude:	-80.17123800
Latitude:	39.31397200
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	8,015
Total Base Water Volume (gal):	53,505,900
Total Base Non Water Volume:	941,424



91-01250

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	USWS	Carrier	Water	7732-18-5	100.00000	89.73510	
Sand	USWS	Proppant	Crystalline Silica	14808-60-7	100.00000	9.87114	
MX-5	Halliburton	Biocide	Sodium Nitrate	7631-99-4	60.00000	0.05823	
WFRA-405e	USWS	Friction Reducer	Distillates, Petroleum, Hydrotreated Light	64742-47-8	20.00000	0.02251	
			Sodium Chloride	7647-14-5	20.00000	0.02251	
LGC-15	USWS	Gel	Petroleum Distillates	64742-47-8	60.00000	0.02505	
Hydrochloric Acid 15%	USWS	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.01577	
SI-110	USWS	Scale Inhibitor	Ethylene Glycol	107-21-1	40.00000	0.01049	
MX-8	Halliburton	Biocide	Bacteria Culture	N/A	100.00000	0.00996	
AP-One	USWS	Gel Breaker	Ammonium Persulfate	7727-54-0	100.00000	0.00094	

AI-301	USWS	Corrosion Inhibitor				
			DIETHYLENE GLYCOL	111-46-6	30.00000	0.00006
			METHENAMINE	100-97-0	20.00000	0.00004
			HYDROGEN CHLORIDE	7647-01-0	10.00000	0.00002
			POLYETHYLENEPOLYAMINE	58603-67-8	10.00000	0.00002
			COCO AMINE	51791-14-8	5.00000	0.00001

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)

91-01250

EQT PRODUCTION CO. WELL NO. WV 514301 CORDER LEASE

LATITUDE 39°20'00"

LINE	BEARING	DISTANCE
L1	S 27°45'00" W	401.00'
L2	N 89°00'00" W	122.25'
L3	S 43°20'00" W	471.50'
L4	S 87°15'00" W	431.19'
L5	N 87°00'00" W	258.27'
L6	S 27°15'00" W	24.75'
L7	N 50°00'00" W	211.00'
L8	S 87°00'00" W	1268.00'
L9	N 27°45'00" W	361.00'
L10	N 84°15'00" W	179.11'
L11	N 64°15'00" W	283.64'
L12	S 27°00'00" E	113.25'
L13	N 27°00'00" E	68.75'
L14	N 27°00'00" W	184.13'
L15	N 13°15'00" W	1082.00'
L16	S 87°00'00" E	351.17'
L17	N 27°00'00" E	172.00'
L18	S 27°00'00" W	198.00'
L19	N 27°00'00" W	19.00'
L20	N 27°00'00" E	91.00'
L21	N 60°15'00" E	161.00'
L22	N 43°15'00" E	144.50'
L23	N 62°00'00" E	303.13'
L24	N 62°00'00" E	351.10'

LONGITUDE 80°10'00"
7.054'

**WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 297,174.4
E. 1,810,080.8

LAT=(N) 39.313972
LONG=(W) 80.171238

UTM (NAD'83)(METERS)
N. 4,351,956.9
E. 571,462.8

NOTES ON SURVEY

1. TIES TO WELLS, CORNERS, AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD'27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 59 PAGE 101 & DEED BOOK 224 PAGE 405.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF TAYLOR COUNTY IN JULY, 2013.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SURVEY GRADE).
5. U.S. RT. 50 IN THIS AREA APPEARS TO BE PART OF THE OLD NORTHWESTERN TURNPIKE, A STRIP OF LAND CLAIMED IN FEE BY THE WVDH. SLS RECOMMENDS PROPER LEGAL & LEASING (IF NEEDED) PROCEDURES BE TAKEN BEFORE DRILLING COMMENCES.
6. PLAT DATED 04/19/10 REVISED 07/18/11 TO EXTEND HORIZONTAL LEG AND CHANGE BOTTOM HOLE COORDINATES, REVISED AGAIN 07/25/11 TO CHANGE SIX DIGIT WELL NUMBERS, REVISED 10/23/13 TO EXTEND LATERAL & REVISED 11/07/13 TO CONFORM WITH CURRENT DEP REGULATIONS, ETC.
7. NO WATER WELLS WERE FOUND WITHIN 250 FEET OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS (GREATER THAN 2500 SQUARE FEET) OR DWELLINGS WERE FOUND WITHIN 825 FEET OF CENTER OF PROPOSED WELL PAD.
8. PLAT UPDATED ON 07/16/14 TO SHOW THE AS DRILLED PATH COORDINATES FROM INFORMATION PROVIDED BY EDT ON 03/20/14

AS DRILLED INFORMATION

WELL NO. WV 514301 STATE PLANE COORDINATES NORTH ZONE (NAD 27)	WELL NO. WV 514301 STATE PLANE COORDINATES NORTH ZONE (NAD 27)
N. 285,412.2 E. 1,812,642.1	N. 297,174.4 E. 1,810,080.8
LAT=(N) 39.281730 LONG=(W) 80.161880	LAT=(N) 39.313972 LONG=(W) 80.171238
UTM (NAD'83)(METERS) N. 4,348,386.3 E. 572,302.8	UTM (NAD'83)(METERS) N. 4,351,956.9 E. 571,462.8

**LANDING POINT
WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 296,282.5
E. 1,809,351.1

LAT=(N) 39.311508
LONG=(W) 80.173794

UTM (NAD'83)(METERS)
N. 4,351,681.4
E. 571,245

LEGEND

AS DRILLED	—
PROPOSED	- - - - -

**BOTTOM HOLE
WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)**

N. 285,418.9
E. 1,812,672.4

LAT=(N) 39.281749
LONG=(W) 80.161773

UTM (NAD'83)(METERS)
N. 4,348,388.5
E. 572,311.9



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. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE	NOVEMBER 11	20	13
REVISED DATE	JULY 16	20	14
OPERATORS WELL NO	WV 514301		
API WELL NO.	47	091	01250
	STATE	COUNTY	PERMIT

MINIMUM DEGREE OF ACCURACY	1 / 200	FILE NO.	7249PASDRILLED514301
PROVEN SOURCE OF ELEVATION	DGPS (SURVEY GRADE TIE TO CORS NETWORK)		
		SCALE	1" = 2,000'

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

WELL TYPE	OIL	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW <input checked="" type="checkbox"/>	
LOCATION	ELEVATION 1,586' (GROUND) / 1,580' (PROPOSED) WATERSHED CORBIN BRANCH & HUSTEAD FORK								
	DISTRICT BOOTH'S CREEK COUNTY TAYLOR QUADRANGLE ROSEMONT 7.5'								
SURFACE OWNER	SPENCER C. & TINA R. WOODDELL ACREAGE 107.17±								
ROYALTY OWNER	PEGGY KNOTTS ET AL (310 AC ±) / O.E., EVA L. CORDER ET AL (240 AC ±) & W. DOUGLAS BARNETT ET AL (81 AC ±)								
PROPOSED WORK	RICHARD D. KNOTTS ET AL (40 AC ±) / PEGGY KNOTTS ET AL (756 AC ±) / JOHN C. STOUT ET AL (277.5 AC ±) LEASE NO. 109669 / 122971 / 122264 / 123805 / 988340								
DRILL	<input checked="" type="checkbox"/>	CONVERT	<input type="checkbox"/>	DRILL DEEPER	<input type="checkbox"/>	REDRILL	<input type="checkbox"/>	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>	PLUG OFF OLD
FORMATION	PERFORATE NEW FORMATION <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> OTHER <input type="checkbox"/>								
PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION MARCELLUS ESTIMATED DEPTH								

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

09/19/2014

COUNTY NAME
PERMIT

EQT PRODUCTION CO. WELL NO. WV 514301 CORDER LEASE

LATITUDE 39°20'00"

LINE	BEARING	DISTANCE
L1	S 89°45'00" W	652.00'
L2	S 89°45'00" W	1023.00'
L3	S 87°30'00" W	471.00'
L4	S 89°15'00" W	411.10'
L5	N 89°15'00" W	292.27'
L6	S 87°15'00" W	242.71'
L7	N 25°00'00" W	231.00'
L8	S 89°00'00" W	1282.52'
L9	N 27°00'00" W	561.00'
L10	N 84°15'00" W	578.19'
L11	N 84°15'00" W	293.04'
L12	S 89°00'00" E	118.14'
L13	N 72°00'00" E	988.72'
L14	N 34°00'00" W	584.10'
L15	N 17°15'00" W	1062.70'
L16	S 89°00'00" E	921.10'
L17	N 63°45'00" E	372.90'
L18	S 29°00'00" W	198.00'
L19	N 37°00'00" W	92.00'
L20	N 23°45'00" E	92.00'
L21	N 09°15'00" E	165.00'
L22	N 42°15'00" E	544.50'
L23	N 17°45'00" E	292.17'
L24	N 49°45'00" E	551.20'

LONGITUDE 80°10'00"

WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)

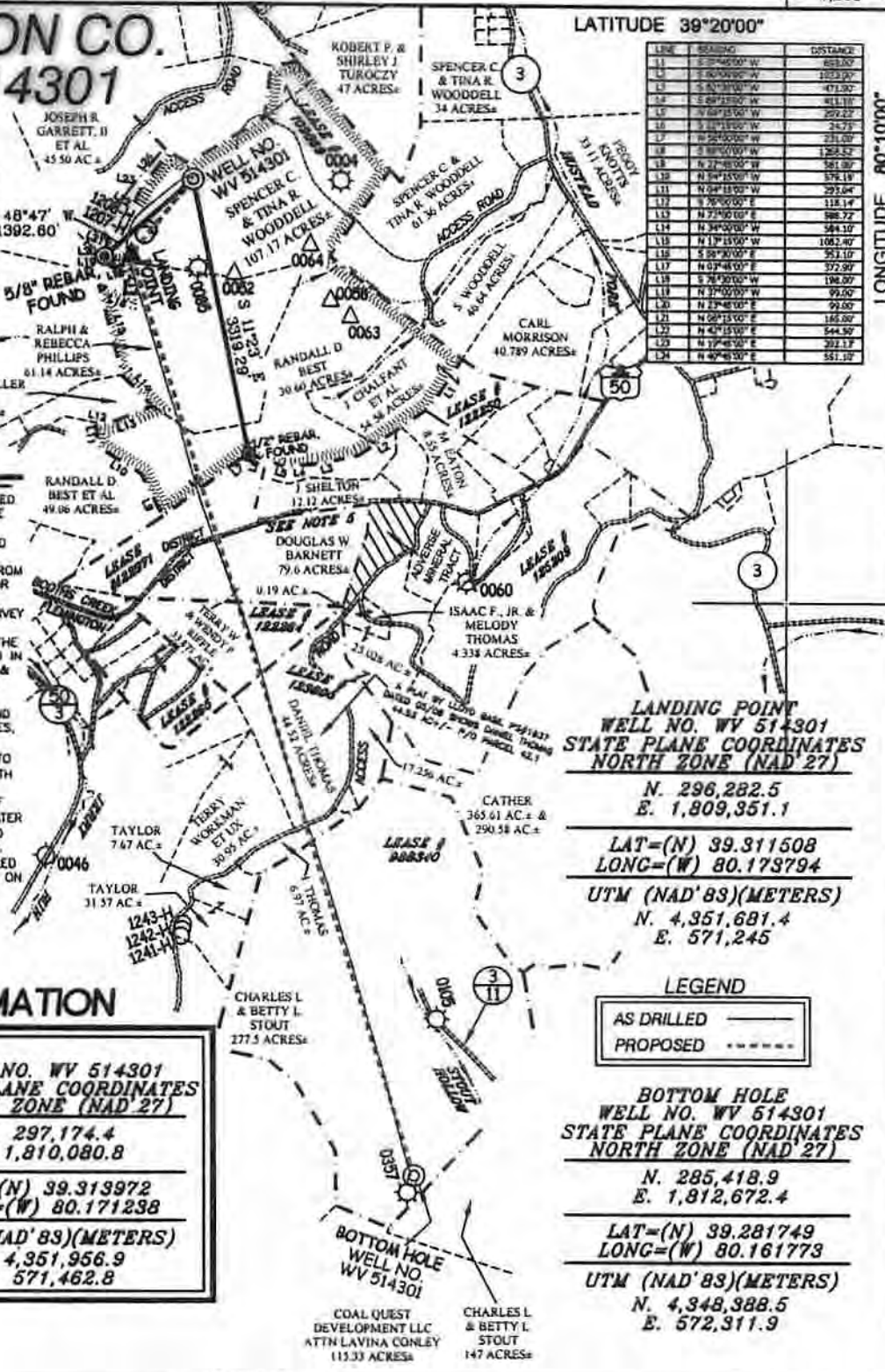
N. 297,174.4
E. 1,810,080.8

LAT=(N) 39.313972
LONG=(W) 80.171238

UTM (NAD'83)(METERS)
N. 4,351,956.9
E. 571,462.8

NOTES ON SURVEY

1. TIES TO WELLS, CORNERS, AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD'27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 59 PAGE 101 & DEED BOOK 224 PAGE 405.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF TAYLOR COUNTY IN JULY, 2013.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SURVEY GRADE).
5. U.S. RT. 50 IN THIS AREA APPEARS TO BE PART OF THE OLD NORTHWESTERN TURNPIKE, A STRIP OF LAND CLAIMED IN FEE BY THE WOOD. SLS RECOMMENDS PROPER LEGAL & LEASING (IF NEEDED) PROCEDURES BE TAKEN BEFORE DRILLING COMMENCES.
6. PLAT DATED 04/18/10 REVISED 07/18/11 TO EXTEND HORIZONTAL LEG AND CHANGE BOTTOM HOLE COORDINATES, REVISED AGAIN 07/25/11 TO CHANGE SIX DIGIT WELL NUMBERS, REVISED 10/23/13 TO EXTEND LATERAL & REVISED 11/07/13 TO CONFORM WITH CURRENT DEP REGULATIONS, ETC.
7. NO WATER WELLS WERE FOUND WITHIN 250 FEET OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS (GREATER THAN 2500 SQUARE FEET) OR DWELLINGS WERE FOUND WITHIN 625 FEET OF CENTER OF PROPOSED WELL PAD.
8. PLAT UPDATED ON 07/16/14 TO SHOW THE AS DRILLED PATH COORDINATES FROM INFORMATION PROVIDED BY EQT ON 03/20/14.



LANDING POINT
WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)

N. 296,282.5
E. 1,809,351.1

LAT=(N) 39.311508
LONG=(W) 80.173794

UTM (NAD'83)(METERS)
N. 4,351,681.4
E. 571,245

LEGEND

AS DRILLED ———
PROPOSED - - - - -

BOTTOM HOLE
WELL NO. WV 514301
STATE PLANE COORDINATES
NORTH ZONE (NAD 27)

N. 285,418.9
E. 1,812,672.4

LAT=(N) 39.281749
LONG=(W) 80.161773

UTM (NAD'83)(METERS)
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AS DRILLED INFORMATION

BOTTOM HOLE WELL NO. WV 514301 STATE PLANE COORDINATES NORTH ZONE (NAD 27)	BOTTOM HOLE WELL NO. WV 514301 STATE PLANE COORDINATES NORTH ZONE (NAD 27)
N. 285,412.2 E. 1,812,642.1	N. 297,174.4 E. 1,810,080.8
LAT=(N) 39.281730 LONG=(W) 80.161880	LAT=(N) 39.313972 LONG=(W) 80.171238
UTM (NAD'83)(METERS) N. 4,348,386.3 E. 572,302.8	UTM (NAD'83)(METERS) N. 4,351,956.9 E. 571,462.8



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P.S. 677

Gregory A. Smith



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 DATE NOVEMBER 11 , 20 13
 REVISED DATE JULY 16 , 20 14
 OPERATORS WELL NO. WV 514301
 API WELL NO. 47-091-01250
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7249PASDRILLED514301
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2,000'

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

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 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 _____

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