

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

API 47 - 051 - 01727 County Marshall District Washington  
Quad Moundsville Pad Name Robert Young MSH Field/Pool Name \_\_\_\_\_  
Farm name Robert Young MSH 3H Well Number 839144  
Operator (as registered with the OOG) Chesapeake Appalachia, L.L.C.  
Address P.O. Box 18496 City Oklahoma City State OK Zip 73154-0496

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 1235 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)  
SOBM

Date permit issued 2/6/2014 Date drilling commenced 2/26/2014 Date drilling ceased 3/20/2014  
Date completion activities began 8/5/2014 Date completion activities ceased 8/14/2014  
Verbal plugging (Y/N) N Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

Freshwater depth(s) ft 272' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1375' Void(s) encountered (Y/N) depths N WV Department of  
Coal depth(s) ft 710' Cavern(s) encountered (Y/N) depths N Environmental Protection  
Is coal being mined in area (Y/N) N

Reviewed by:  
AXWS 06/24/16

API 47-051 - 01727 Farm name Robert Young MSH 3H Well number 839144

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"	122'	New	K-55 94#		Y surface
Surface	17 1/2"	13 3/8"	765'	New	J-55 54.60#		Y surface
Coal							
Intermediate 1	12 1/4"	9 5/8"	2507'	New	J-55 40#		Y surface
Intermediate 2							
Intermediate 3							
Production	8 3/4" / 8 1/2"	5 1/2"	13242'	New	P-110 20#		Y 431'
Tubing		2 3/8"	10381.6	New			
Packer type and depth set							

Comment Details \_\_\_\_\_

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	Premium	200	15.60	1.18	236	Surface	8
Surface	A	691	15.60	1.20	829.2	Surface	8
Coal							
Intermediate 1	A	880	15.60	1.20	1056	Surface	8
Intermediate 2							
Intermediate 3							
Production	A	2443	15.00 / 15.60	1.38 / 1.19	1092.98 / 1971.83	431'	8
Tubing							

Drillers TD (ft) 13253 Loggers TD (ft) 13253  
 Deepest formation penetrated Marcellus Plug back to (ft) \_\_\_\_\_  
 Plug back procedure \_\_\_\_\_

Kick off depth (ft) 5828'

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 \_\_\_\_\_  
Surface / Coal - Run centralizers in the middle and top of the first joint, top of the third ft and every 4th joint to surface.  
 Production - Run 1st centralizer 3' from Shoe, 2nd at top of the first joint and then one every 3rd joint to TOC.

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

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

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





## PERFORATION RECORD ATTACHMENT

Well Name and Number: Robert Young MSH 3H

API No. 47-051-01727

Stage	PERFORATION RECORD				STIMULATION RECORD							
	Date	Interval Perforated		Total Number Of Shots				Fluid		Propping Agent		Average Injection Rate
		From	To		Date	Interval Treated	Type	Amount	Type	Amount		
1	8/5/2014	12,894	13095	35	8/5/2014	12,894	13095	SLK Wtr	9130	Sand	603580	80
2	8/6/2014	12,644	12845	35	8/6/2014	12,644	12845	SLK Wtr	9441	Sand	605680	78.7
3	8/6/2014	12,394	12595	35	8/6/2014	12,394	12595	SLK Wtr	8886	Sand	605420	80
4	8/7/2014	12,144	12345	35	8/7/2014	12,144	12345	SLK Wtr	9017	Sand	185360	43
5	8/7/2014	11,894	12095	35	8/7/2014	11,894	12095	SLK Wtr	9109	Sand	605320	81
6	8/8/2014	11,644	11845	35	8/8/2014	11,644	11845	SLK Wtr	8915	Sand	605440	80.2
7	8/8/2014	11,394	11595	35	8/8/2014	11,394	11595	SLK Wtr	8896	Sand	605520	78.4
8	8/8/2014	11,144	11345	35	8/8/2014	11,144	11345	SLK Wtr	9726	Sand	603760	64
9	8/9/2014	10,894	11095	35	8/9/2014	10,894	11095	SLK Wtr	8550	Sand	595020	78
10	8/9/2014	10,644	10845	35	8/9/2014	10,644	10845	SLK Wtr	11485	Sand	606650	70
11	8/9/2014	10,394	10595	35	8/9/2014	10,394	10595	SLK Wtr	8741	Sand	603700	77
12	8/10/2014	10,144	10345	35	8/10/2014	10,144	10345	SLK Wtr	11013	Sand	604900	56
13	8/10/2014	9,894	10095	35	8/10/2014	9,894	10095	SLK Wtr	8839	Sand	604860	78
14	8/11/2014	9,644	9845	35	8/11/2014	9,644	9845	SLK Wtr	8885	Sand	602910	79
15	8/11/2014	9,394	9595	35	8/11/2014	9,394	9595	SLK Wtr	9594	Sand	604400	69.4
16	8/11/2014	9,144	9345	35	8/11/2014	9,144	9345	SLK Wtr	10380	Sand	602880	65
17	8/12/2014	8,894	9095	35	8/12/2014	8,894	9095	SLK Wtr	3688	Sand	7193	39.1
18	8/12/2014	8,644	8845	35	8/12/2014	8,644	8845	SLK Wtr	9392	Sand	605960	70
19	8/12/2014	8,394	8595	35	8/12/2014	8,394	8595	SLK Wtr	8685	Sand	605020	76.6
20	8/13/2014	8,144	8345	35	8/13/2014	8,144	8345	SLK Wtr	8623	Sand	605840	73.5
21	8/13/2014	7,894	8095	35	8/13/2014	7,894	8095	SLK Wtr	8693	Sand	602380	69.5
22	8/13/2014	7,644	7845	35	8/13/2014	7,644	7845	SLK Wtr	8585	Sand	605020	75
23	8/14/2014	7,394	7595	35	8/14/2014	7,394	7595	SLK Wtr	8108	Sand	608240	76.1
24	8/14/2014	7,144	7345	35	8/14/2014	7,144	7345	SLK Wtr	7361	Sand	604340	80
25	8/14/2014	6,894	7095	35	8/14/2014	6,894	7095	SLK Wtr	6860	Sand	592080	77

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