

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

API 47-051-01729 County Marshall District Webster
Quad Majorsville Pad Name Charles Yoho MSH Field/Pool Name _____
Farm name Charles Yoho MSH Well Number 6H
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 4418626.7 Easting 532731.2
Landing Point of Curve Northing 4418311.1 Easting 532650.0
Bottom Hole Northing 4416768.6 Easting 534408.0

Elevation (ft) 1,330' 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 2/20/2014 Date drilling commenced 9/10/2014 Date drilling ceased 10/27/2014
Date completion activities began 11/29/2014 Date completion activities ceased 12/3/2014
Verbal plugging (Y/N) N Date permission granted _____ Granted by _____

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

Freshwater depth(s) ft approx. 439' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft approx. 1400' Void(s) encountered (Y/N) depths 460'
Coal depth(s) ft approx. 891' Cavern(s) encountered (Y/N) depths N/A
Is coal being mined in area (Y/N) N

Reviewed by: _____

Reviewed

*Jim Nicholson 12/6/2017
via email*

01/05/2018

API 47-051 - 01729 Farm name Charles Yoho MSH Well number 6H

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	26"	20"	122'	New	J-55 106.50#		Y
Surface	17 1/2"	13 3/8"	944'	New	J-55 54.5#	861'	Y
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,327'	New	J-55 40#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4" / 8 1/2"	5 1/2"	13,246'	New	P-110 20#		Y
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	Redi-mix	13 yards				Surface	8
Surface	Class A	158	15.6	1.20	18.96	Surface	8
Coal							
Intermediate 1	Class A	872	15.6	1.24	1,081.28	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	2,535	15.30	1.31	3,320.85	1,827'	8
Tubing							

Drillers TD (ft) 13,249' Loggers TD (ft) 13,249'
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 8,000'

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 joint 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.

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 47-051-01729 Farm name Charles Yoho MSH Well number 6H

PRODUCING FORMATION(S)	DEPTHS	
	TVD	MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ 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	
	0		0		
Base of Freshwater	-	443'			
Pittsburgh Coal	870'	920'			
Big Injun	2020'	2210'			
Geneseo	6497'	6531'			
Tully	6531'	6554'			
Hamilton	6554'	6662'			
Marcellus	6662'	-			
		-			

Please insert additional pages as applicable.

Drilling Contractor Nomac Drilling
Address 171 Locust Ave Extension City Mt. Morris State PA Zip 15349

Logging Company Nomac Drilling
Address 171 Locust Ave Extension City Mt. Morris State PA Zip 15349

Cementing Company Schlumberger
Address 1080 U.S. 33 City Weston State WV Zip 26452

Stimulating Company Schlumberger
Address 1080 U.S. 33 City Weston State WV Zip 26452

Please insert additional pages as applicable.

Completed by Marlene Williams Telephone 405-935-4158
Signature _____ Title Regulatory Analyst II Date 10-10-2017

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

Regulatory Current Wellbore Schematic



Field: **MARSHALL**
 County: **WEST VIRGINIA**
 State: **WEST VIRGINIA**
 Elevation: **GL 1,330.0 KB 1,350.0 KB Height: 20.0**
 Location: **T/D WEBSTER, Q-MAJORSVILLE**

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

HORIZONTAL - Original Hole, 10/12/2017 3:47:51 PM		
MD (ftKB)	Zones	Vertical schematic (actual)
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB

Cement					
Description: Production Casing Cement					
30.0-13,246.0					
Top of Cement (ftKB): 30.0 Top Measurement Method: Volume Calculations					
Fluid	Amount (sacks)	Class	Dens (lb/gal)	Vol Pumped (bbl)	Yield (ft ³ /sack)
Pre Flush			14.00	60.0	
Lead	895	A	15.30	209.0	1.31
Tail	1,640	A	15.60	348.0	1.19
Displacement		H2O	8.30	292.0	
Stimulations & Treatments					
Slickwater Frac on 11/29/2014 12:00 AM					
Date	Type	Wellbore	Zone		
11/29/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
Stim/Treat Stages					
1, Chemical Additives					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	1	Chemical Additives		12,874.0	
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
Corrosion Inhibitor	A264	16.0			
Acid	Acid, Hydrochloric 15pct	7,925.0			
Anti-Bacterial Agent	EC6110A	61.0			
Scale Inhibitor	EC6629A	10.0			
Breaker	J218	110.0			
Gelling Agent	J580	1,666.0			
Friction Reducer	J609	259.0			
Iron Control Agent	L058	42.0			
2, Break Down					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	2	Break Down	<fluidname>, Slickwater	12,874.0	20.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
3, Acid Stage					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	3	Acid Stage	15%, HCl Acid	12,874.0	60.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
4, Spacer					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	4	Spacer	<fluidname>, Slickwater	12,874.0	36.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
5, Acid Stage					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	5	Acid Stage	15%, HCl Acid	12,874.0	60.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
6, Pad					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	6	Pad	<fluidname>, Slickwater	12,874.0	514.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
7, Proppant Laden Fluid					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	12,874.0	1458.0 0
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
Proppant - Natural	Northern White Sand	68,220.0	100 Mesh		
8, Proppant Laden Fluid					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.0	8	Proppant Laden Fluid	15#, Linear Gel	12,874.0	2600.0 0

01/05/2018

RECEIVED
 Office of Oil and Gas
 OCT 16 2017

Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H



Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

HORIZONTAL - Original Hole, 10/12/2017 3:47:51 PM		Vertical schematic (actual)		Stim/Treat Additives			
MD (ftKB)	Zones			Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB		Proppant - Natural	Northern White Sand	264,120.0	40/70
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB		10, Flush			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB		Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG		13,080.0	10	Flush	<fluidname>, Slickwater
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23		Top (ftKB)			Clean V...
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22		12,874.0			286.00
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21		Stim/Treat Additives			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Add	Type	Amount	Sand Size
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		Slickwater Frac on 11/29/2014 12:00 AM			
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18		Date	Type	Wellbore	Zone
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17		11/29/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16		Stim/Treat Stages			
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15		1, Chemical Additives			
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14		Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13		12,824.0	1	Chemical Additives	<fluidname>, Slickwater
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12		Top (ftKB)			Clean V...
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11		12,618.0			23.00
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10		Stim/Treat Additives			
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9		Add	Type	Amount	Sand Size
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8		2, Break Down			
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7		Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6		12,824.0	2	Break Down	<fluidname>, Slickwater
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5		Top (ftKB)			Clean V...
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4		12,618.0			33.00
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3		Stim/Treat Additives			
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2		Add	Type	Amount	Sand Size
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1		3, Acid Stage			
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB		Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,800.9				12,824.0	3	Acid Stage	15%, HCl Acid
10,878.0				Top (ftKB)			Clean V...
11,032.2				12,618.0			37.00
11,133.9				Stim/Treat Additives			
11,288.1				Add	Type	Amount	Sand Size
11,390.1				4, Spacer			
11,544.0				Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
11,646.0				12,824.0	4	Spacer	<fluidname>, Slickwater
11,799.9				Top (ftKB)			Clean V...
11,901.9				12,618.0			36.00
12,056.1				Stim/Treat Additives			
12,158.1				Add	Type	Amount	Sand Size
12,312.0				5, Acid Stage			
12,414.0				Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,567.9				12,824.0	5	Acid Stage	15%, HCl Acid
12,669.9				Top (ftKB)			Clean V...
12,824.1				12,618.0			37.00
12,925.9				Stim/Treat Additives			
13,080.1				Add	Type	Amount	Sand Size
				6, Pad			
				Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
				12,824.0	6	Pad	<fluidname>, Slickwater
				Top (ftKB)			Clean V...
				12,618.0			387.00
				Stim/Treat Additives			
				Add	Type	Amount	Sand Size
				7, Proppant Laden Fluid			
				Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
				12,824.0	7	Proppant Laden Fluid	<fluidname>, Slickwater
				Top (ftKB)			Clean V...
				12,618.0			1422.00
				Stim/Treat Additives			
				Add	Type	Amount	Sand Size
				Proppant - Natural	Northern White Sand	265,060.0	40/70
				8, Proppant Laden Fluid			
				Blm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
				12,824.0	8	Proppant Laden Fluid	15#, Linear Gel
				Top (ftKB)			Clean V...
				12,618.0			2594.00
				Stim/Treat Additives			
				Add	Type	Amount	Sand Size
				Proppant - Natural	Northern White Sand	265,060.0	40/70

01/05/2018

Regulatory Current Wellbore Schematic

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HORIZONTAL - Original Hole, 10/12/2017 3:47:52 PM		Vertical schematic (actual)		Stim/Treat Stages							
MD (ftKB)	Zones			10, Flush							
5,970.1				10, Flush	12,824.0	10	Flush	<fluidname>, Slickwater	12,618.0	280.00	
7,345.1				Stim/Treat Additives							
7,473.1				Add				Type		Amount	Sand Size
7,601.0				Slickwater Frac on 11/29/2014 12:00 AM							
7,729.0				Date	Type	Wellbore	Zone				
7,857.0				11/29/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole				
7,984.9				Stim/Treat Stages							
8,112.9				1, Chemical Additives							
8,241.1				12,568.0	1	Chemical Additives	<fluidname>	12,362.0	Clean V...		
8,369.1				Stim/Treat Additives							
8,497.0				Add				Type		Amount	Sand Size
8,625.0				Corrosion Inhibitor		A264		3.0			
8,753.0				Acid		Acid, Hydrochloric 7.5pct		3,122.0			
8,880.9				Anti-Bacterial Agent		EC6110A		62.0			
9,008.9				Scale Inhibitor		EC6629A		10.0			
9,137.1				Breaker		J218		99.0			
9,270.0				Gelling Agent		J580		1,502.0			
9,393.0		Friction Reducer		J609		202.0					
9,521.0		Iron Control Agent		L058		9.0					
9,649.0		2, Break Down									
9,776.9		12,568.0	2	Break Down	<fluidname>, Slickwater	12,362.0	24.00				
9,904.9		Stim/Treat Additives									
10,033.1		Add				Type		Amount	Sand Size		
10,161.1		3, Acid Stage									
10,289.0		12,568.0	3	Acid Stage	7.5%, HCl Acid	12,362.0	27.00				
10,417.0		Stim/Treat Additives									
10,544.9		Add				Type		Amount	Sand Size		
10,672.9		4, Spacer									
10,800.9		12,568.0	4	Spacer	<fluidname>, Slickwater	12,362.0	34.00				
10,878.0		Stim/Treat Additives									
11,032.2		Add				Type		Amount	Sand Size		
11,133.9		5, Acid Stage									
11,288.1		12,568.0	5	Acid Stage	7.5%, HCl Acid	12,362.0	32.00				
11,390.1		Stim/Treat Additives									
11,544.0		Add				Type		Amount	Sand Size		
11,646.0		6, Pad									
11,799.9		12,568.0	6	Pad	<fluidname>, Slickwater	12,362.0	411.00				
11,901.9		Stim/Treat Additives									
12,056.1		Add				Type		Amount	Sand Size		
12,158.1		7, Proppant Laden Fluid									
12,312.0		12,568.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	12,362.0	1419.00				
12,414.0		Stim/Treat Additives									
12,567.9		Add				Type		Amount	Sand Size		
12,669.9		Proppant - Natural		Northern White Sand		67,820.0		100 Mesh			
12,824.1		8, Proppant Laden Fluid									
12,925.9		12,568.0	8	Proppant Laden Fluid	15#, Linear Gel	12,362.0	2595.00				
13,080.1		Stim/Treat Additives									
		Add				Type		Amount	Sand Size		
		Proppant - Natural		Northern White Sand		264,440.0		40/70			

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

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 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:53 PM		Vertical schematic (actual)		Stim/Treat Stages						
MD (ftKB)	Zones			10, Flush						
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB		12,568.0	10	Flush	<fluidname>, Slickwater	12,362.0	273.00	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB		Stim/Treat Additives						
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG		Add				Type	Amount	Sand Size
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23		Slickwater Frac on 11/30/2014 12:00 AM						
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22		Date	Type	Wellbore	Zone			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21		11/30/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Stim/Treat Stages						
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		1, Chemical Additives						
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17		12,312.0	1	Chemical Additives		12,106.0		
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16		Stim/Treat Additives						
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15		Add				Type	Amount	Sand Size
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14		Corrosion Inhibitor	A264			2.0		
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13		Acid	Acid, Hydrochloric 7.5pct			1,504.0		
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12		Anti-Bacterial Agent	EC6110A			59.0		
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11		Scale Inhibitor	EC6629A			10.0		
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10		Breaker	J218			110.0		
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9		Gelling Agent	J580			1,496.0		
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8		Friction Reducer	J609			102.0		
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7		Iron Control Agent	L058			5.0		
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6		2, Break Down						
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4		12,312.0	2	Break Down	<fluidname>, Slickwater	12,106.0	15.00	
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3		Stim/Treat Additives						
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2		Add				Type	Amount	Sand Size
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1		Proppant - Natural	Northern White Sand			67,620.0	100 Mesh	
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB		3, Acid Stage						
10,800.9				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
10,878.0				12,312.0	3	Acid Stage	7.5%, HCl Acid	12,106.0	36.00	
11,032.2				Stim/Treat Additives						
11,133.9				Add				Type	Amount	Sand Size
11,288.1				6, Pad						
11,390.1				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
11,544.0				12,312.0	6	Pad	<fluidname>, Slickwater	12,106.0	415.00	
11,646.0				Stim/Treat Additives						
11,799.9				Add				Type	Amount	Sand Size
11,901.9				7, Proppant Laden Fluid						
12,056.1				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
12,158.1				12,312.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	12,106.0	1401.00	
12,312.0				Stim/Treat Additives						
12,414.0				Add				Type	Amount	Sand Size
12,567.9				8, Proppant Laden Fluid						
12,669.9				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
12,824.1				12,312.0	8	Proppant Laden Fluid	15#, Linear Gel	12,106.0	2563.00	
12,925.9				Stim/Treat Additives						
13,080.1				Add				Type	Amount	Sand Size
				10, Flush						
				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
				12,312.0	10	Flush	<fluidname>, Slickwater	12,106.0	270.00	
				Stim/Treat Additives						
				Add				Type	Amount	Sand Size
				Slickwater Frac on 11/30/2014 12:00 AM						
				Date	Type	Wellbore	Zone			
				11/30/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole			
				Stim/Treat Stages						
				1, Chemical Additives						
				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	
				12,056.0	1	Chemical Additives		11,850.0		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

HORIZONTAL - Original Hole, 10/12/2017 3:47:53 PM			Stim/Treat Additives					
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size		
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Corrosion Inhibitor	A264	3.0			
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Acid	Acid, Hydrochloric 15pct	3,081.0			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Anti-Bacterial Agent	EC6110A	60.0			
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Scale Inhibitor	EC6629A	10.0			
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Breaker	J218	99.0			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Gelling Agent	J580	1,346.0			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Friction Reducer	J609	106.0			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Iron Control Agent	L058	9.0			
8,241.1			2, Break Down					
8,369.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	12,056.0	2	Break Down	<fluidname>, Slickwater	11,850.0	36.00
8,625.0			Stim/Treat Additives					
8,753.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Add	Type	Amount	Sand Size		
8,880.9			3, Acid Stage					
9,008.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,137.1			12,056.0	3	Acid Stage	7.5%, HCl Acid	11,850.0	36.00
9,270.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Stim/Treat Additives					
9,393.0			Add	Type	Amount	Sand Size		
9,521.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	4, Spacer					
9,649.0			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,776.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	12,056.0	4	Spacer	<fluidname>, Slickwater	11,850.0	36.00
9,904.9			Stim/Treat Additives					
10,033.1		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	Add	Type	Amount	Sand Size		
10,161.1			5, Acid Stage					
10,289.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,417.0			12,056.0	5	Acid Stage	7.5%, HCl Acid	11,850.0	42.00
10,544.9		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Stim/Treat Additives					
10,672.9			Add	Type	Amount	Sand Size		
10,800.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	6, Pad					
10,878.0			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,032.2		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	12,056.0	6	Pad	<fluidname>, Slickwater	11,850.0	354.00
11,133.9			Stim/Treat Additives					
11,288.1		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	Add	Type	Amount	Sand Size		
11,390.1			7, Proppant Laden Fluid					
11,544.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,646.0			12,056.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	11,850.0	1417.00
11,799.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Stim/Treat Additives					
11,901.9			Add	Type	Amount	Sand Size		
12,056.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	8, Proppant Laden Fluid					
12,158.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,312.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	12,056.0	8	Proppant Laden Fluid	15#, Linear Gel	11,850.0	2584.00
12,414.0			Stim/Treat Additives					
12,567.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	Add	Type	Amount	Sand Size		
12,669.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	9, Proppant Laden Fluid					
12,824.1		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,925.9			11,800.0	1	Chemical Additives	<fluidname>, Slickwater	11,594.0	
13,080.1		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Corrosion Inhibitor	A264	3.0			

11/05/2018
 MARSHALL
 SHALE, Original Hole



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBTD:
 TD: 13,249.0

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:54 PM			Stim/Treat Additives					
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size		
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Acid	Acid, Hydrochloric 15pct	2,958.0			
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Anti-Bacterial Agent	EC6110A	77.0			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Scale Inhibitor	EC6629A	13.0			
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Breaker	J218	132.0			
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Gelling Agent	J580	2,871.0			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Friction Reducer	J609	106.0			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Iron Control Agent	L058	9.0			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	2, Break Down					
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,369.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	11,800.0	2	Break Down	<fluidname>, Slickwater	11,594.0	29.00
8,497.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Stim/Treat Additives					
8,625.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Add	Type	Amount	Sand Size		
8,753.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	3, Acid Stage					
8,880.9		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,008.9		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	11,800.0	3	Acid Stage	7.5%, HCl Acid	11,594.0	35.00
9,137.1		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Stim/Treat Additives					
9,270.0		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	Add	Type	Amount	Sand Size		
9,393.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	4, Spacer					
9,521.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,649.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	11,800.0	4	Spacer	<fluidname>, Slickwater	11,594.0	35.00
9,776.9		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Stim/Treat Additives					
9,904.9		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	Add	Type	Amount	Sand Size		
10,033.1		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	5, Acid Stage					
10,161.1		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,289.0		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	11,800.0	5	Acid Stage	7.5%, HCl Acid	11,594.0	39.00
10,417.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Stim/Treat Additives					
10,544.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	Add	Type	Amount	Sand Size		
10,672.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	6, Pad					
10,800.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,878.0		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	11,800.0	6	Pad	<fluidname>, Slickwater	11,594.0	329.00
11,032.2			Stim/Treat Additives					
11,133.9			Add	Type	Amount	Sand Size		
11,288.1			7, Proppant Laden Fluid					
11,390.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,544.0			11,800.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	11,594.0	1380.00
11,646.0			Stim/Treat Additives					
11,799.9			Add	Type	Amount	Sand Size		
11,901.9			8, Sweep					
12,056.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,158.1			11,800.0	8	Sweep	15#, Linear Gel	11,594.0	407.00
12,312.0			Stim/Treat Additives					
12,414.0			Add	Type	Amount	Sand Size		
12,567.9			10, Proppant Laden Fluid					
12,669.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,824.1			11,800.0	10	Proppant Laden Fluid	15#, Linear Gel	11,594.0	3618.00
12,925.9			Stim/Treat Additives					
13,080.1			Add	Type	Amount	Sand Size		
			11, Flush					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			11,800.0	11	Flush	<fluidname>, Slickwater	11,594.0	260.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Slickwater Frac on 11/30/2014 12:00 AM					
			Date	Type	Wellbore	Zone		
			11/30/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
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Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:55 PM		Vertical schematic (actual)		Stim/Treat Stages																																									
MD (ftKB)	Zones			1, Chemical Additives																																									
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB		11,544.0	1	Chemical Additives		11,338.0																																					
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB		Stim/Treat Additives																																									
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG		<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> <tr> <td>Corrosion Inhibitor</td> <td>A264</td> <td>3.0</td> <td></td> </tr> <tr> <td>Acid</td> <td>Acid, Hydrochloric 7.5pct</td> <td>3,085.0</td> <td></td> </tr> <tr> <td>Anti-Bacterial Agent</td> <td>EC6110A</td> <td>60.0</td> <td></td> </tr> <tr> <td>Scale Inhibitor</td> <td>EC6629A</td> <td>10.0</td> <td></td> </tr> <tr> <td>Breaker</td> <td>J218</td> <td>110.0</td> <td></td> </tr> <tr> <td>Gelling Agent</td> <td>J580</td> <td>1,760.0</td> <td></td> </tr> <tr> <td>Friction Reducer</td> <td>J609</td> <td>227.0</td> <td></td> </tr> <tr> <td>Iron Control Agent</td> <td>L058</td> <td>9.0</td> <td></td> </tr> </tbody> </table>						Add	Type	Amount	Sand Size	Corrosion Inhibitor	A264	3.0		Acid	Acid, Hydrochloric 7.5pct	3,085.0		Anti-Bacterial Agent	EC6110A	60.0		Scale Inhibitor	EC6629A	10.0		Breaker	J218	110.0		Gelling Agent	J580	1,760.0		Friction Reducer	J609	227.0		Iron Control Agent	L058	9.0	
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7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23		2, Break Down																																									
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21		11,544.0	2	Break Down	<fluidname>, Slickwater	11,338.0	18.00																																				
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Stim/Treat Additives																																									
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16		11,544.0	3	Acid Stage	7.5%, HCl Acid	11,338.0	27.00																																				
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15		Stim/Treat Additives																																									
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14		<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11		11,544.0	4	Spacer	<fluidname>, Slickwater	11,338.0	32.00																																				
9,393.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9		Stim/Treat Additives																																									
9,521.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8		<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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9,776.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
9,904.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5		11,544.0	5	Acid Stage	7.5%, HCl Acid	11,338.0	29.00																																				
10,033.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4		Stim/Treat Additives																																									
10,161.1		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3		<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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10,289.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2		6, Pad																																									
10,417.0		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
10,544.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB		11,544.0	6	Pad	<fluidname>, Slickwater	11,338.0	386.00																																				
10,672.9				Stim/Treat Additives																																									
10,800.9				<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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10,878.0				7, Proppant Laden Fluid																																									
11,032.2				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
11,133.9				11,544.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	11,338.0	1407.00																																				
11,288.1				Stim/Treat Additives																																									
11,390.1				<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> <tr> <td>Proppant - Natural</td> <td>Northern White Sand</td> <td>67,300.0</td> <td>100 Mesh</td> </tr> </tbody> </table>						Add	Type	Amount	Sand Size	Proppant - Natural	Northern White Sand	67,300.0	100 Mesh																												
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Proppant - Natural	Northern White Sand	67,300.0	100 Mesh																																										
11,544.0				8, Proppant Laden Fluid																																									
11,646.0				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
11,799.9				11,544.0	8	Proppant Laden Fluid	15#, Linear Gel	11,338.0	2584.00																																				
11,901.9				Stim/Treat Additives																																									
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Proppant - Natural	Northern White Sand	263,940.0	40/70																																										
12,158.1				10, Flush																																									
12,312.0				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
12,414.0				11,544.0	10	Flush	<fluidname>, Slickwater	11,338.0	251.00																																				
12,567.9				Stim/Treat Additives																																									
12,669.9				<table border="1"> <thead> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> </tr> </thead> <tbody> </tbody> </table>						Add	Type	Amount	Sand Size																																
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12,824.1				Slickwater Frac on 11/30/2014 12:00 AM																																									
12,925.9				Date	Type	Wellbore	Zone																																						
13,080.1				11/30/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole																																						
				Stim/Treat Stages																																									
				1, Chemical Additives																																									
				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																				
				11,288.0	1	Chemical Additives		11,082.0																																					

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:56 PM			Stim/Treat Additives					
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size		
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Corrosion Inhibitor	A264	3.0			
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Acid	Acid, Hydrochloric 7.5pct	3,106.0			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Anti-Bacterial Agent	EC6110A	58.0			
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Scale Inhibitor	EC6629A	10.0			
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Breaker	J218	110.0			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Gelling Agent	J580	1,535.0			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Friction Reducer	J609	186.0			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Iron Control Agent	L058	9.0			
8,241.1			2, Break Down					
8,369.1			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	11,288.0	2	Break Down	<fluidname>, Slickwater	11,082.0	30.00
8,625.0			Stim/Treat Additives					
8,753.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Add	Type	Amount	Sand Size		
8,880.9			3, Acid Stage					
9,008.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,137.1			11,288.0	3	Acid Stage	7.5%, HCl Acid	11,082.0	30.00
9,270.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Stim/Treat Additives					
9,393.0			Add	Type	Amount	Sand Size		
9,521.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	4, Spacer					
9,649.0			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,776.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	11,288.0	4	Spacer	<fluidname>, Slickwater	11,082.0	35.00
9,904.9			Stim/Treat Additives					
10,033.1		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	Add	Type	Amount	Sand Size		
10,161.1			5, Acid Stage					
10,289.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,417.0			11,288.0	5	Acid Stage	7.5%, HCl Acid	11,082.0	30.00
10,544.9		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Stim/Treat Additives					
10,672.9			Add	Type	Amount	Sand Size		
10,800.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	6, Pad					
10,878.0			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,032.2		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	11,288.0	6	Pad	<fluidname>, Slickwater	11,082.0	341.00
11,133.9			Stim/Treat Additives					
11,288.1		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	Add	Type	Amount	Sand Size		
11,390.1			7, Proppant Laden Fluid					
11,544.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,646.0			11,288.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	11,082.0	1418.00
11,799.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Stim/Treat Additives					
11,901.9			Add	Type	Amount	Sand Size		
12,056.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Proppant - Natural	Northern White Sand	67,760.0	100 Mesh		
12,158.1			8, Proppant Laden Fluid					
12,312.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,414.0			11,288.0	8	Proppant Laden Fluid	15#, Linear Gel	11,082.0	2588.00
12,567.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	Stim/Treat Additives					
12,669.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Add	Type	Amount	Sand Size		
12,824.1		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Proppant - Natural	Northern White Sand	264,480.0	40/70		
12,925.9			10, Flush					
13,080.1		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			11,288.0	10	Flush	<fluidname>, Slickwater	11,082.0	245.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Slickwater Frac on 11/30/2014 12:00 AM					
			Date	Type	Wellbore	Zone		
			11/30/2014	Slickwater Frac	Original Hole	SHALE, Original Hole		
			Stim/Treat Stages					
			1, Chemical Additives					
			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			11,032.0	1	Chemical Additives		10,826.0	
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Corrosion Inhibitor	A264	3.0			

11/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:57 PM			Stim/Treat Additives					
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size		
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Acid	Acid, Hydrochloric 7.5pct	3,147.0			
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Anti-Bacterial Agent	EC6110A	58.0			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Scale Inhibitor	EC6629A	9.0			
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Breaker	J218	110.0			
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Gelling Agent	J580	1,535.0			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Friction Reducer	J609	188.0			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Iron Control Agent	L058	9.0			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	2, Break Down					
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	11,032.0	2	Break Down	<fluidname>, Slickwater	10,826.0	25.00
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Stim/Treat Additives					
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Add	Type	Amount	Sand Size		
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	3, Acid Stage					
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	11,032.0	3	Acid Stage	7.5%, HCl Acid	10,826.0	30.00
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Stim/Treat Additives					
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Add	Type	Amount	Sand Size		
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	4, Spacer					
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,649.0		Composite Frac Plug (Cage Ball); 11,288.1-11,315.0 ftKB; 4.78 in; Stage 8	11,032.0	4	Spacer	<fluidname>, Slickwater	10,826.0	34.00
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Stim/Treat Additives					
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Add	Type	Amount	Sand Size		
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	5, Acid Stage					
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	11,032.0	5	Acid Stage	7.5%, HCl Acid	10,826.0	30.00
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Stim/Treat Additives					
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Add	Type	Amount	Sand Size		
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	6, Pad					
10,800.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,878.0			11,032.0	6	Pad	<fluidname>, Slickwater	10,826.0	378.00
11,032.2			Stim/Treat Additives					
11,133.9			Add	Type	Amount	Sand Size		
11,288.1			7, Proppant Laden Fluid					
11,390.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,544.0			11,032.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	10,826.0	1400.00
11,646.0			Stim/Treat Additives					
11,799.9			Add	Type	Amount	Sand Size		
11,901.9			Proppant - Natural	Northern White Sand	67,240.0	100 Mesh		
12,056.1			8, Proppant Laden Fluid					
12,158.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,312.0			11,032.0	8	Proppant Laden Fluid	15#, Linear Gel	10,826.0	2597.00
12,414.0			Stim/Treat Additives					
12,567.9			Add	Type	Amount	Sand Size		
12,669.9			Proppant - Natural	Northern White Sand	264,700.0	40/70		
12,824.1			10, Flush					
12,925.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
13,080.1			11,032.0	10	Flush	<fluidname>, Slickwater	10,826.0	243.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Slickwater Frac on 11/30/2014 12:00 AM					
			Date	Type	Wellbore	Zone		
			11/30/2014	Slickwater Frac	Original Hole	MARCELLUS		
			Stim/Treat Stages					
			1, Chemical Additives					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			10,776.0	1	Chemical Additives		10,570.0	
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Corrosion Inhibitor	A264	3.0			
			Acid	Acid, Hydrochloric 7.5pct	3,085.0			

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:57 PM			Stim/Treat Additives				
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size	
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Anti-Bacterial Agent	EC6110A	59.0		
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Scale Inhibitor	EC6629A	10.0		
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Breaker	J218	77.0		
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Gelling Agent	J580	1,395.0		
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Friction Reducer	J609	80.0		
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Iron Control Agent	L058	9.0		
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	2, Break Down				
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Btm (ftKB)	Stg #	Stage Type	Clean V...	
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	10,776.0	2	Break Down	15.00	
8,369.1		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Stim/Treat Additives				
8,497.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Add	Type	Amount	Sand Size	
8,625.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	3, Acid Stage				
8,753.0		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Btm (ftKB)	Stg #	Stage Type	Clean V...	
8,880.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	10,776.0	3	Acid Stage	36.00	
9,008.9		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Stim/Treat Additives				
9,137.1		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Add	Type	Amount	Sand Size	
9,270.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	4, Spacer				
9,393.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Btm (ftKB)	Stg #	Stage Type	Clean V...	
9,521.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	10,776.0	4	Spacer	35.00	
9,649.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Stim/Treat Additives				
9,776.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Add	Type	Amount	Sand Size	
9,904.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	5, Acid Stage				
10,033.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Btm (ftKB)	Stg #	Stage Type	Clean V...	
10,161.1		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	10,776.0	5	Acid Stage	35.00	
10,289.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Stim/Treat Additives				
10,417.0		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Add	Type	Amount	Sand Size	
10,544.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	6, Pad				
10,672.9			Btm (ftKB)	Stg #	Stage Type	Clean V...	
10,800.9			10,776.0	6	Pad	306.00	
10,878.0			Stim/Treat Additives				
11,032.2			Add	Type	Amount	Sand Size	
11,133.9			7, Proppant Laden Fluid				
11,288.1			Btm (ftKB)	Stg #	Stage Type	Clean V...	
11,390.1			10,776.0	7	Proppant Laden Fluid	1411.00	
11,544.0			Stim/Treat Additives				
11,646.0			Add	Type	Amount	Sand Size	
11,799.9			8, Proppant Laden Fluid				
11,901.9			Btm (ftKB)	Stg #	Stage Type	Clean V...	
12,056.1			10,776.0	8	Proppant Laden Fluid	2596.00	
12,158.1			Stim/Treat Additives				
12,312.0			Add	Type	Amount	Sand Size	
12,414.0			10, Flush				
12,567.9			Btm (ftKB)	Stg #	Stage Type	Clean V...	
12,669.9			10,776.0	10	Flush	236.00	
12,824.1			Stim/Treat Additives				
12,925.9			Add	Type	Amount	Sand Size	
13,080.1			Slickwater Frac on 12/1/2014 12:00 AM				
			Date	Type	Wellbore	Zone	
			12/1/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole	
			Stim/Treat Stages				
			1, Chemical Additives				
			Btm (ftKB)	Stg #	Stage Type	Clean V...	
			10,520.0	1	Chemical Additives	10,314.0	
			Stim/Treat Additives				
			Add	Type	Amount	Sand Size	
			Corrosion Inhibitor	A264	3.0		
			Acid	Acid, Hydrochloric 7.5pct	3,102.0		
			Anti-Bacterial Agent	EC6110A	59.0		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

OCT 18 2017

HORIZONTAL - Original Hole, 10/12/2017 3:47:58 PM			Stim/Treat Additives			
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Scale Inhibitor	EC6629A	10.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Breaker	J218	110.0	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Gelling Agent	J580	1,777.0	
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Friction Reducer	J609	140.0	
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Iron Control Agent	L058	9.0	
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	2, Break Down			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
8,241.1		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	10,520.0	2	Break Down	<fluidname>, Slickwater
8,369.1			Top (ftKB)	Clean V...	10,314.0	14.00
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Stim/Treat Additives			
8,625.0			Add	Type	Amount	Sand Size
8,753.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	3, Acid Stage			
8,880.9			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,008.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	10,520.0	3	Acid Stage	7.5%, HCl Acid
9,137.1			Top (ftKB)	Clean V...	10,314.0	30.00
9,270.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Stim/Treat Additives			
9,393.0			Add	Type	Amount	Sand Size
9,521.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	4, Spacer			
9,649.0			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,776.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	10,520.0	4	Spacer	<fluidname>, Slickwater
9,904.9			Top (ftKB)	Clean V...	10,314.0	33.00
10,033.1		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	Stim/Treat Additives			
10,161.1			Add	Type	Amount	Sand Size
10,289.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	5, Acid Stage			
10,417.0			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,544.9		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	10,520.0	5	Acid Stage	7.5%, HCl Acid
10,672.9			Top (ftKB)	Clean V...	10,314.0	29.00
10,800.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Stim/Treat Additives			
10,878.0			Add	Type	Amount	Sand Size
11,032.2		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	6, Pad			
11,133.9			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
11,288.1		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	10,520.0	6	Pad	<fluidname>, Slickwater
11,390.1			Top (ftKB)	Clean V...	10,314.0	345.00
11,544.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Stim/Treat Additives			
11,646.0			Add	Type	Amount	Sand Size
11,799.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	7, Proppant Laden Fluid			
11,901.9			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,056.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	10,520.0	7	Proppant Laden Fluid	<fluidname>, Slickwater
12,158.1			Top (ftKB)	Clean V...	10,314.0	1410.00
12,312.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Stim/Treat Additives			
12,414.0			Add	Type	Amount	Sand Size
12,567.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	8, Proppant Laden Fluid			
12,669.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,824.1		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	10,520.0	8	Proppant Laden Fluid	15#, Linear Gel
12,925.9			Top (ftKB)	Clean V...	10,314.0	2608.00
13,080.1		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Proppant - Natural	Northern White Sand	67,830.0	100 Mesh
			9, Proppant Laden Fluid			
			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			10,520.0	10	Flush	<fluidname>, Slickwater
			Top (ftKB)	Clean V...	10,314.0	230.00
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Proppant - Natural	Northern White Sand	264,020.0	40/70
			10, Flush			
			Slickwater Frac on 12/1/2014 12:00 AM			
			Date	Type	Wellbore	Zone
			12/1/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
			Stim/Treat Stages			
			1, Chemical Additives			
			Bitm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			10,264.0	1	Chemical Additives	<fluidname>, Slickwater
			Top (ftKB)	Clean V...	10,058.0	
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Corrosion Inhibitor	A264	3.0	
			Acid	Acid, Hydrochloric 7.5%	3,135.0	
			Anti-Bacterial Agent	EC6110A	60.0	
			Scale Inhibitor	EC6629A	10.0	

01/05/2018

RECEIVED
Office of Oil and Gas

OCT 18 2017



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBTD:
 TD: 13,249.0

HORIZONTAL - Original Hole, 10/12/2017 3:47:59 PM		Stim/Treat Additives				
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Breaker	J218	110.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Gelling Agent	J580	1,585.0	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Friction Reducer	J609	135.0	
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Iron Control Agent	L058	9.0	
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	2, Break Down			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Btn (ftKB)	Stg #	Stage Type	Clean V...
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	10,264.0	2	Break Down	15.00
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Stim/Treat Additives			
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Add	Type	Amount	Sand Size
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	3, Acid Stage			
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Btn (ftKB)	Stg #	Stage Type	Clean V...
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	10,264.0	3	Acid Stage	28.00
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	Stim/Treat Additives			
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Add	Type	Amount	Sand Size
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	4, Spacer			
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Btn (ftKB)	Stg #	Stage Type	Clean V...
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	10,264.0	4	Spacer	32.00
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Stim/Treat Additives			
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Add	Type	Amount	Sand Size
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	5, Acid Stage			
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Btn (ftKB)	Stg #	Stage Type	Clean V...
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	10,264.0	5	Acid Stage	32.00
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Stim/Treat Additives			
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Add	Type	Amount	Sand Size
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	6, Pad			
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Btn (ftKB)	Stg #	Stage Type	Clean V...
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	10,264.0	6	Pad	317.00
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Stim/Treat Additives			
10,800.9			Add	Type	Amount	Sand Size
10,878.0			7, Proppant Laden Fluid			
11,032.2			Proppant - Natural	Northern White Sand	67,580.0	100 Mesh
11,133.9			8, Proppant Laden Fluid			
11,288.1			Btn (ftKB)	Stg #	Stage Type	Clean V...
11,390.1			10,264.0	7	Proppant Laden Fluid	1395.00
11,544.0			Stim/Treat Additives			
11,646.0			Add	Type	Amount	Sand Size
11,799.9			10, Flush			
11,901.9			Btn (ftKB)	Stg #	Stage Type	Clean V...
12,056.1			10,264.0	8	Proppant Laden Fluid	2669.00
12,158.1			Stim/Treat Additives			
12,312.0			Add	Type	Amount	Sand Size
12,414.0			10, Flush			
12,567.9			Btn (ftKB)	Stg #	Stage Type	Clean V...
12,669.9			10,264.0	10	Flush	223.00
12,824.1			Stim/Treat Additives			
12,925.9			Add	Type	Amount	Sand Size
13,080.1			Slickwater Frac on 12/1/2014 12:00 AM			
			Date	Type	Wellbore	Zone
			12/1/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
			Stim/Treat Stages			
			1, Chemical Additives			
			Btn (ftKB)	Stg #	Stage Type	Clean V...
			10,008.0	1	Chemical Additives	0
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Corrosion Inhibitor	A264	3.0	
			Acid	Acid, Hydrochloric 7.5pct	3,122.0	
			Anti-Bacterial Agent	EC6110A	60.0	
			Scale Inhibitor	EC6629A	10.0	
			Breaker	J218	10.0	

01/05/2018

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Office of Oil and Gas

01.13.2017



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBTD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:47:59 PM			Stim/Treat Additives			
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Gelling Agent	J580	1,621.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Friction Reducer	J609	136.0	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Iron Control Agent	L058	9.0	
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	2, Break Down			
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	10,008.0	2	Break Down	<fluidname>, Slickwater
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Top (ftKB)			Clean V...
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	9,802.0			20.00
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Stim/Treat Additives			
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Add	Type	Amount	Sand Size
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	3, Acid Stage			
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	10,008.0	3	Acid Stage	7.5%, HCl Acid
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Top (ftKB)			Clean V...
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	9,802.0			31.00
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Stim/Treat Additives			
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Add	Type	Amount	Sand Size
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	4, Spacer			
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	10,008.0	4	Spacer	<fluidname>, Slickwater
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Top (ftKB)			Clean V...
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	9,802.0			35.00
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Stim/Treat Additives			
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Add	Type	Amount	Sand Size
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	5, Acid Stage			
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	10,008.0	5	Acid Stage	7.5%, HCl Acid
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Top (ftKB)			Clean V...
10,800.9			9,802.0			34.00
10,878.0			Stim/Treat Additives			
11,032.2			Add	Type	Amount	Sand Size
11,133.9			6, Pad			
11,288.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
11,390.1			10,008.0	6	Pad	<fluidname>, Slickwater
11,544.0			Top (ftKB)			Clean V...
11,646.0			9,802.0			299.00
11,799.9			Stim/Treat Additives			
11,901.9			Add	Type	Amount	Sand Size
12,056.1			7, Proppant Laden Fluid			
12,158.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,312.0			10,008.0	7	Proppant Laden Fluid	<fluidname>, Slickwater
12,370.0			Top (ftKB)			Clean V...
12,414.0			9,802.0			1399.00
12,567.9			Stim/Treat Additives			
12,669.9			Add	Type	Amount	Sand Size
12,824.1			8, Proppant Laden Fluid			
12,925.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
13,080.1			10,008.0	8	Proppant Laden Fluid	15#, Linear Gel
			Top (ftKB)			Clean V...
			9,802.0			2580.00
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Proppant - Natural	Northern White Sand	67,640.0	100 Mesh
			9, Proppant Laden Fluid			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			10,008.0	9	Proppant Laden Fluid	15#, Linear Gel
			Top (ftKB)			Clean V...
			9,802.0			218.00
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Proppant - Natural	Northern White Sand	264,140.0	40/70
			10, Flush			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			10,008.0	10	Flush	<fluidname>, Slickwater
			Top (ftKB)			Clean V...
			9,802.0			218.00
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Slickwater Frac on 12/2/2014 12:00 AM			
			Date	Type	Wellbore	Zone
			12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
			Stim/Treat Stages			
			1, Chemical Additives			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			9,752.0	1	Chemical Additives	<fluidname>, Slickwater
			Top (ftKB)			Clean V...
			9,546.0			0
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Corrosion Inhibitor	A264	3.0	
			Acid	Acid, Hydrochloric 7.5pct	3,081.0	
			Anti-Bacterial Agent	EC6110A	59.0	
			Scale Inhibitor	EC6629A	9.0	
			Breaker	J218	77.0	
			Gelling Agent	J580	1,185.0	

01/05/2018

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16 2017



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:00 PM			Stim/Treat Additives			
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Friction Reducer	J609	80.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Iron Control Agent	L058	9.0	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.0-2,327.0 ftKB	2, Break Down			
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	9,752.0	2	Break Down	<fluidname>, Slickwater
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Top (ftKB)	Clean V...	9,546.0 12.00	
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	Stim/Treat Additives			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Add	Type	Amount	Sand Size
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	3, Acid Stage			
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	9,752.0	3	Acid Stage	7.5%, HCl Acid
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Top (ftKB)	Clean V...	9,546.0 35.00	
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	Stim/Treat Additives			
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Add	Type	Amount	Sand Size
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	4, Spacer			
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	9,752.0	4	Spacer	<fluidname>, Slickwater
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Top (ftKB)	Clean V...	9,546.0 36.00	
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Stim/Treat Additives			
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	Add	Type	Amount	Sand Size
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	5, Acid Stage			
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	9,752.0	5	Acid Stage	7.5%, HCl Acid
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Top (ftKB)	Clean V...	9,546.0 35.00	
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	Stim/Treat Additives			
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Add	Type	Amount	Sand Size
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	6, Pad			
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,800.9			9,752.0	6	Pad	<fluidname>, Slickwater
10,878.0			Top (ftKB)	Clean V...	9,546.0 326.00	
11,032.2			Stim/Treat Additives			
11,133.9			Add	Type	Amount	Sand Size
11,288.1			7, Proppant Laden Fluid			
11,390.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
11,544.0			9,752.0	7	Proppant Laden Fluid	<fluidname>, Slickwater
11,646.0			Top (ftKB)	Clean V...	9,546.0 1470.00	
11,799.9			Stim/Treat Additives			
11,901.9			Add	Type	Amount	Sand Size
12,056.1			8, Proppant Laden Fluid			
12,158.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,312.0			9,752.0	8	Proppant Laden Fluid	15#, Linear Gel
12,414.0			Top (ftKB)	Clean V...	9,546.0 2554.00	
12,567.9			Stim/Treat Additives			
12,669.9			Add	Type	Amount	Sand Size
12,824.1			10, Flush			
12,925.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
13,080.1			9,752.0	10	Flush	<fluidname>, Slickwater
			Top (ftKB)	Clean V...	9,546.0 227.00	
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Slickwater Frac on 12/2/2014 12:00 AM			
			Date	Type	Wellbore	Zone
			12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
			Stim/Treat Stages			
			1, Chemical Additives			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			9,496.0	1	Chemical Additives	
			Top (ftKB)	Clean V...	9,290.0	
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Corrosion Inhibitor	A264	3.0	
			Acid	Acid, Hydrochloric 7.5pct	3,126.0	
			Anti-Bacterial Agent	EC6110A	57.0	
			Scale Inhibitor	EC6629A	10.0	
			Breaker	J218	88.0	
			Gelling Agent	J580	1,261.0	
			Friction Reducer	J609	100.0	

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Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:00 PM			Stim/Treat Additives			
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Iron Control Agent	L058	9.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	2, Break Down			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Btm (ftKB)	Stg #	Stage Type	Clean V...
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78	9,496.0	2	Break Down	11.00
7,729.0		in; Kill PLUG	Stim/Treat Additives			
7,857.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB;	Add	Type	Amount	Sand Size
7,984.9		4.78 in; Stage 23	3, Acid Stage			
8,112.9		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB;	Btm (ftKB)	Stg #	Stage Type	Clean V...
8,241.1		4.78 in; Stage 22	9,496.0	3	Acid Stage	35.00
8,369.1		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB;	Stim/Treat Additives			
8,497.0		4.78 in; Stage 21	Add	Type	Amount	Sand Size
8,625.0		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB;	4, Spacer			
8,753.0		4.78 in; Stage 20	Btm (ftKB)	Stg #	Stage Type	Clean V...
8,880.9		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB;	9,496.0	4	Spacer	36.00
9,008.9		4.78 in; Stage 19	Stim/Treat Additives			
9,137.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB;	Add	Type	Amount	Sand Size
9,270.0		4.78 in; Stage 18	5, Acid Stage			
9,393.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB;	Btm (ftKB)	Stg #	Stage Type	Clean V...
9,521.0		4.78 in; Stage 17	9,496.0	5	Acid Stage	36.00
9,649.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB;	Stim/Treat Additives			
9,776.9		4.78 in; Stage 16	Add	Type	Amount	Sand Size
9,904.9		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB;	6, Pad			
10,033.1		4.78 in; Stage 15	Btm (ftKB)	Stg #	Stage Type	Clean V...
10,161.1		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB;	9,496.0	6	Pad	324.00
10,289.0		4.78 in; Stage 14	Stim/Treat Additives			
10,417.0		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0	Add	Type	Amount	Sand Size
10,544.9		ftKB; 4.78 in; Stage 13	7, Proppant Laden Fluid			
10,672.9		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0	Btm (ftKB)	Stg #	Stage Type	Clean V...
10,800.9		ftKB; 4.78 in; Stage 12	9,496.0	7	Proppant Laden Fluid	1420.00
10,878.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0	Stim/Treat Additives			
11,032.2		ftKB; 4.78 in; Stage 11	Add	Type	Amount	Sand Size
11,133.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0	Proppant - Natural	Northern White Sand	68,790.0	100 Mesh
11,288.1		ftKB; 4.78 in; Stage 10	8, Proppant Laden Fluid			
11,390.1		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0	Btm (ftKB)	Stg #	Stage Type	Clean V...
11,544.0		ftKB; 4.78 in; Stage 9	9,496.0	8	Proppant Laden Fluid	2566.00
11,646.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0	Stim/Treat Additives			
11,799.9		ftKB; 4.78 in; Stage 8	Add	Type	Amount	Sand Size
11,901.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0	Proppant - Natural	Northern White Sand	263,220.0	40/70
12,056.1		ftKB; 4.78 in; Stage 7	10, Flush			
12,158.1		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0	Btm (ftKB)	Stg #	Stage Type	Clean V...
12,312.0		ftKB; 4.78 in; Stage 6	9,496.0	10	Flush	208.00
12,414.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0	Stim/Treat Additives			
12,567.9		ftKB; 4.78 in; Stage 5	Add	Type	Amount	Sand Size
12,669.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0	Slickwater Frac on 12/2/2014 12:00 AM			
12,824.1		ftKB; 4.78 in; Stage 4	Date	Type	Wellbore	Zone
12,925.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB;	12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
13,080.1		4.78 in; Stage 1	Stim/Treat Stages			
		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	1, Chemical Additives			
			Btm (ftKB)	Stg #	Stage Type	Clean V...
			9,240.0	1	Chemical Additives	9,034.0
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Corrosion Inhibitor	A264	3,048.0	
			Acid	Acid, Hydrochloric 7.5pct	59.0	
			Anti-Bacterial Agent	EC6110A	10.0	
			Scale Inhibitor	EC6629A	176.0	
			Breaker	J218	2,286.0	
			Gelling Agent	J580	51.0	
			Friction Reducer	J609	9.0	
			Iron Control Agent	L058		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBD:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:01 PM			Stim/Treat Stages					
MD (ftKB)	Zones	Vertical schematic (actual)	2, Break Down					
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Stim/Treat Fluid	Top (ftKB)	Clean V...			
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	9,240.0	9,034.0	22.00			
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Stim/Treat Additives					
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Add	Type	Amount	Sand Size		
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	3, Acid Stage					
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Stim/Treat Fluid	Top (ftKB)	Clean V...			
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	9,240.0	9,034.0	36.00			
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Stim/Treat Additives					
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Add	Type	Amount	Sand Size		
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	4, Spacer					
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Stim/Treat Fluid	Top (ftKB)	Clean V...			
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	9,240.0	9,034.0	35.00			
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	Stim/Treat Additives					
8,880.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Add	Type	Amount	Sand Size		
9,008.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	5, Acid Stage					
9,137.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Stim/Treat Fluid	Top (ftKB)	Clean V...			
9,270.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	9,240.0	9,034.0	35.00			
9,393.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Stim/Treat Additives					
9,521.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Add	Type	Amount	Sand Size		
9,649.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	6, Pad					
9,776.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Stim/Treat Fluid	Top (ftKB)	Clean V...			
9,904.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	9,240.0	9,034.0	437.00			
10,033.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Stim/Treat Additives					
10,161.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Add	Type	Amount	Sand Size		
10,289.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	7, Proppant Laden Fluid					
10,417.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Stim/Treat Fluid	Top (ftKB)	Clean V...			
10,544.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	9,240.0	9,034.0	1393.0 0			
10,672.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Stim/Treat Additives					
10,800.9			Add	Type	Amount	Sand Size		
10,878.0			Proppant - Natural	Northern White Sand	67,320.0	100 Mesh		
11,032.2			8, Proppant Laden Fluid					
11,133.9			Stim/Treat Fluid	Top (ftKB)	Clean V...			
11,288.1			9,240.0	9,034.0	2554.0 0			
11,390.1			Stim/Treat Additives					
11,544.0			Add	Type	Amount	Sand Size		
11,646.0			Proppant - Natural	Northern White Sand	263,740.0	40/70		
11,799.9			10, Flush					
11,901.9			Stim/Treat Fluid	Top (ftKB)	Clean V...			
12,056.1			9,240.0	9,034.0	205.00			
12,158.1			Stim/Treat Additives					
12,312.0			Add	Type	Amount	Sand Size		
12,414.0			Slickwater Frac on 12/2/2014 12:00 AM					
12,567.9			Date	Type	Wellbore	Zone		
12,669.9			12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
12,824.1			Stim/Treat Stages					
12,925.9			1, Chemical Additives					
13,080.1			Stim/Treat Fluid	Top (ftKB)	Clean V...			
			8,984.0	8,778.0				
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Corrosion Inhibitor	A264	3.0			
			Acid	Acid, Hydrochloric 7.5pct	3,155.0			
			Anti-Bacterial Agent	EC6110A	10.0			
			Scale Inhibitor	EC6629A	10.0			
			Breaker	J218	110.0			
			Gelling Agent	J580	1,711.0			
			Friction Reducer	J609	233.0			
			Iron Control Agent	L058	9.0			

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:02 PM																																																																																																																																																																																																																																																																																																																																																																																																															
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5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Stages</th> </tr> <tr> <th colspan="6" style="text-align: center;">2, Break Down</th> </tr> <tr> <th style="width: 15%;">Btm (ftKB)</th> <th style="width: 5%;">Stg #</th> <th style="width: 20%;">Stage Type</th> <th style="width: 20%;">Stim/Treat Fluid</th> <th style="width: 15%;">Top (ftKB)</th> <th style="width: 25%;">Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>2</td> <td>Break Down</td> <td><fluidname>, Slickwater</td> <td>8,778.0</td> <td>18.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">3, Acid Stage</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>3</td> <td>Acid Stage</td> <td>7.5%, HCl Acid</td> <td>8,778.0</td> <td>30.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">4, Spacer</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>4</td> <td>Spacer</td> <td><fluidname>, Slickwater</td> <td>8,778.0</td> <td>35.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">5, Acid Stage</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>5</td> <td>Acid Stage</td> <td>7.5%, HCl Acid</td> <td>8,778.0</td> <td>32.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">6, Pad</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>6</td> <td>Pad</td> <td><fluidname>, Slickwater</td> <td>8,778.0</td> <td>400.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">7, Proppant Laden Fluid</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>7</td> <td>Proppant Laden Fluid</td> <td><fluidname>, Slickwater</td> <td>8,778.0</td> <td>1411.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td>Proppant - Natural</td> <td>Northern White Sand</td> <td>67,500.0</td> <td>100 Mesh</td> <td colspan="2"></td> </tr> <tr> <th colspan="6" style="text-align: center;">8, Proppant Laden Fluid</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>8</td> <td>Proppant Laden Fluid</td> <td>15#, Linear Gel</td> <td>8,778.0</td> <td>2535.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td>Proppant - Natural</td> <td>Northern White Sand</td> <td>263,080.0</td> <td>40/70</td> <td colspan="2"></td> </tr> <tr> <th colspan="6" style="text-align: center;">10, Flush</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,984.0</td> <td>10</td> <td>Flush</td> <td><fluidname>, Slickwater</td> <td>8,778.0</td> <td>195.00</td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td colspan="6"> </td> </tr> <tr> <th colspan="6" style="text-align: center;">Slickwater Frac on 12/2/2014 12:00 AM</th> </tr> <tr> <th>Date</th> <th>Type</th> <th>Wellbore</th> <th>Zone</th> <th colspan="2"></th> </tr> <tr> <td>12/2/2014</td> <td>Slickwater Frac</td> <td>Original Hole</td> <td>MARCELLUS SHALE, Original Hole</td> <td colspan="2"></td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Stages</th> </tr> <tr> <th colspan="6" style="text-align: center;">1, Chemical Additives</th> </tr> <tr> <th>Btm (ftKB)</th> <th>Stg #</th> <th>Stage Type</th> <th>Stim/Treat Fluid</th> <th>Top (ftKB)</th> <th>Clean V...</th> </tr> <tr> <td>8,728.0</td> <td>1</td> <td>Chemical Additives</td> <td></td> <td>8,522.0</td> <td></td> </tr> <tr> <th colspan="6" style="text-align: center;">Stim/Treat Additives</th> </tr> <tr> <th>Add</th> <th>Type</th> <th>Amount</th> <th>Sand Size</th> <th colspan="2"></th> </tr> <tr> <td>Corrosion Inhibitor</td> <td>A264</td> <td>3.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Acid</td> <td>Acid, Hydrochloric 7.5pct</td> <td>3,089.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Anti-Bacterial Agent</td> <td>EC6110A</td> <td>10.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Scale Inhibitor</td> <td>EC6629A</td> <td>110.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Breaker</td> <td>J218</td> <td>1,435.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Gelling Agent</td> <td>J580</td> <td>166.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Friction Reducer</td> <td>J609</td> <td>9.0</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Iron Control Agent</td> <td>L058</td> <td></td> <td></td> <td colspan="2"></td> </tr> </table>	Stim/Treat Stages						2, Break Down						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	2	Break Down	<fluidname>, Slickwater	8,778.0	18.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									3, Acid Stage						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	3	Acid Stage	7.5%, HCl Acid	8,778.0	30.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									4, Spacer						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	4	Spacer	<fluidname>, Slickwater	8,778.0	35.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									5, Acid Stage						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	5	Acid Stage	7.5%, HCl Acid	8,778.0	32.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									6, Pad						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	6	Pad	<fluidname>, Slickwater	8,778.0	400.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									7, Proppant Laden Fluid						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	8,778.0	1411.00	Stim/Treat Additives						Add	Type	Amount	Sand Size			Proppant - Natural	Northern White Sand	67,500.0	100 Mesh			8, Proppant Laden Fluid						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	8	Proppant Laden Fluid	15#, Linear Gel	8,778.0	2535.00	Stim/Treat Additives						Add	Type	Amount	Sand Size			Proppant - Natural	Northern White Sand	263,080.0	40/70			10, Flush						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,984.0	10	Flush	<fluidname>, Slickwater	8,778.0	195.00	Stim/Treat Additives						Add	Type	Amount	Sand Size									Slickwater Frac on 12/2/2014 12:00 AM						Date	Type	Wellbore	Zone			12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole			Stim/Treat Stages						1, Chemical Additives						Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...	8,728.0	1	Chemical Additives		8,522.0		Stim/Treat Additives						Add	Type	Amount	Sand Size			Corrosion Inhibitor	A264	3.0				Acid	Acid, Hydrochloric 7.5pct	3,089.0				Anti-Bacterial Agent	EC6110A	10.0				Scale Inhibitor	EC6629A	110.0				Breaker	J218	1,435.0				Gelling Agent	J580	166.0				Friction Reducer	J609	9.0				Iron Control Agent	L058				
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Proppant - Natural	Northern White Sand	263,080.0	40/70																																																																																																																																																																																																																																																																																																																																																																																																												
10, Flush																																																																																																																																																																																																																																																																																																																																																																																																															
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																																																																																																																																																																																																																																																																																																																																																																																										
8,984.0	10	Flush	<fluidname>, Slickwater	8,778.0	195.00																																																																																																																																																																																																																																																																																																																																																																																																										
Stim/Treat Additives																																																																																																																																																																																																																																																																																																																																																																																																															
Add	Type	Amount	Sand Size																																																																																																																																																																																																																																																																																																																																																																																																												
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Date	Type	Wellbore	Zone																																																																																																																																																																																																																																																																																																																																																																																																												
12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole																																																																																																																																																																																																																																																																																																																																																																																																												
Stim/Treat Stages																																																																																																																																																																																																																																																																																																																																																																																																															
1, Chemical Additives																																																																																																																																																																																																																																																																																																																																																																																																															
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...																																																																																																																																																																																																																																																																																																																																																																																																										
8,728.0	1	Chemical Additives		8,522.0																																																																																																																																																																																																																																																																																																																																																																																																											
Stim/Treat Additives																																																																																																																																																																																																																																																																																																																																																																																																															
Add	Type	Amount	Sand Size																																																																																																																																																																																																																																																																																																																																																																																																												
Corrosion Inhibitor	A264	3.0																																																																																																																																																																																																																																																																																																																																																																																																													
Acid	Acid, Hydrochloric 7.5pct	3,089.0																																																																																																																																																																																																																																																																																																																																																																																																													
Anti-Bacterial Agent	EC6110A	10.0																																																																																																																																																																																																																																																																																																																																																																																																													
Scale Inhibitor	EC6629A	110.0																																																																																																																																																																																																																																																																																																																																																																																																													
Breaker	J218	1,435.0																																																																																																																																																																																																																																																																																																																																																																																																													
Gelling Agent	J580	166.0																																																																																																																																																																																																																																																																																																																																																																																																													
Friction Reducer	J609	9.0																																																																																																																																																																																																																																																																																																																																																																																																													
Iron Control Agent	L058																																																																																																																																																																																																																																																																																																																																																																																																														

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:02 PM		Vertical schematic (actual)		Stim/Treat Stages					
MD (ftKB)	Zones			2, Break Down					
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB		8,728.0	2	Break Down	<fluidname>, Slickwater	8,522.0	24.00
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB		Stim/Treat Additives					
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG		Add	Type	Amount	Sand Size		
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23		3, Acid Stage					
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21		8,728.0	3	Acid Stage	7.5%, HCl Acid	8,522.0	28.00
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Stim/Treat Additives					
8,241.1		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Add	Type	Amount	Sand Size		
8,369.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		4, Spacer					
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,625.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18		8,728.0	4	Spacer	<fluidname>, Slickwater	8,522.0	31.00
8,753.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17		Stim/Treat Additives					
8,880.9		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16		Add	Type	Amount	Sand Size		
9,008.9		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15		5, Acid Stage					
9,137.1		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,270.0		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13		8,728.0	5	Acid Stage	7.5%, HCl Acid	8,522.0	30.00
9,393.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12		Stim/Treat Additives					
9,521.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11		Add	Type	Amount	Sand Size		
9,649.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10		6, Pad					
9,776.9		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,904.9		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8		8,728.0	6	Pad	<fluidname>, Slickwater	8,522.0	281.00
10,033.1		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7		Stim/Treat Additives					
10,161.1		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6		Add	Type	Amount	Sand Size		
10,289.0		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5		7, Proppant Laden Fluid					
10,417.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,544.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3		8,728.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	8,522.0	1391.00
10,672.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2		Stim/Treat Additives					
10,800.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1		Add	Type	Amount	Sand Size		
10,878.0		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB		8, Proppant Laden Fluid					
11,032.2				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,133.9				8,728.0	8	Proppant Laden Fluid	15#, Linear Gel	8,522.0	2557.00
11,288.1				Stim/Treat Additives					
11,390.1				Add	Type	Amount	Sand Size		
11,544.0				9, Proppant Laden Fluid					
11,646.0				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,799.9				8,728.0	9	Proppant Laden Fluid	15#, Linear Gel	8,522.0	2557.00
11,901.9				Stim/Treat Additives					
12,056.1				Add	Type	Amount	Sand Size		
12,158.1				10, Flush					
12,312.0				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,414.0				8,728.0	10	Flush	<fluidname>, Slickwater	8,522.0	189.00
12,567.9				Stim/Treat Additives					
12,669.9				Add	Type	Amount	Sand Size		
12,824.1				Slickwater Frac on 12/2/2014 12:00 AM					
12,925.9				Date	Type	Wellbore	Zone		
13,080.1				12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
				Stim/Treat Stages					
				1, Chemical Additives					
				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
				8,472.0	1	Chemical Additives		8,266.0	
				Stim/Treat Additives					
				Add	Type	Amount	Sand Size		
				Corrosion Inhibitor	A264			3.0	
				Acid	Acid, Hydrochloric 7.5pct			3,085.0	
				Anti-Bacterial Agent	EC6110A			10.0	
				Scale Inhibitor	EC6629A			110.0	
				Breaker	J218			1,631.0	
				Gelling Agent	J580			131.0	
				Friction Reducer	J609			9.0	
				Iron Control Agent	L058				

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:03 PM		Vertical schematic (actual)		Stim/Treat Stages					
MD (ftKB)	Zones			2, Break Down					
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB		8,472.0	2	Break Down	<fluidname>, Slickwater	8,266.0	15.00
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB		Stim/Treat Additives					
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG		Add	Type	Amount	Sand Size		
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23		3, Acid Stage					
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21		8,472.0	3	Acid Stage	7.5%, HCl Acid	8,266.0	26.00
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20		Stim/Treat Additives					
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19		Add	Type	Amount	Sand Size		
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18		4, Spacer					
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16		8,472.0	4	Spacer	<fluidname>, Slickwater	8,266.0	38.00
8,753.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15		Stim/Treat Additives					
8,880.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13		Add	Type	Amount	Sand Size		
9,008.9		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12		5, Acid Stage					
9,137.1		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,270.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10		8,472.0	5	Acid Stage	7.5%, HCl Acid	8,266.0	25.00
9,393.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9		Stim/Treat Additives					
9,521.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8		Add	Type	Amount	Sand Size		
9,649.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7		6, Pad					
9,776.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,904.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5		8,472.0	6	Pad	<fluidname>, Slickwater	8,266.0	245.00
10,033.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4		Stim/Treat Additives					
10,161.1		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3		Add	Type	Amount	Sand Size		
10,289.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2		7, Proppant Laden Fluid					
10,417.0		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1		Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,544.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB		8,472.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	8,266.0	1394.00
10,672.9				Stim/Treat Additives					
10,800.9				Add	Type	Amount	Sand Size		
10,878.0				Proppant - Natural	Northern White Sand	67,700.0	100 Mesh		
11,032.2				8, Proppant Laden Fluid					
11,133.9				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,288.1				8,472.0	8	Proppant Laden Fluid	15#, Linear Gel	8,266.0	2566.00
11,390.1				Stim/Treat Additives					
11,544.0				Add	Type	Amount	Sand Size		
11,646.0				Proppant - Natural	Northern White Sand	264,700.0	40/70		
11,799.9				10, Flush					
11,901.9				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,056.1				8,472.0	10	Flush	<fluidname>, Slickwater	8,266.0	182.00
12,158.1				Stim/Treat Additives					
12,312.0				Add	Type	Amount	Sand Size		
12,414.0				Slickwater Frac on 12/2/2014 12:00 AM					
12,567.9				Date	Type	Wellbore	Zone		
12,669.9				12/2/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
12,824.1				Stim/Treat Stages					
12,925.9				1, Chemical Additives					
13,080.1				Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
				8,216.0	1	Chemical Additives		8,010.0	
				Stim/Treat Additives					
				Add	Type	Amount	Sand Size		
				Corrosion Inhibitor	A264	3.0			
				Acid	Acid, Hydrochloric 7.5pct	3,028.0			
				Anti-Bacterial Agent	EC6110A	9.0			
				Scale Inhibitor	EC6629A	77.0			
				Breaker	J218	771.0			
				Gelling Agent	J580	89.0			
				Friction Reducer	J609	9.0			
				Iron Control Agent	L058				

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Field: MARSHALL
 County: WEST VIRGINIA
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

HORIZONTAL - Original Hole, 10/12/2017 3:48:04 PM			Stim/Treat Stages					
MD (ftKB)	Zones	Vertical schematic (actual)	2, Break Down					
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	8,216.0	2	Break Down	<fluidname>, Slickwater	8,010.0	19.00
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Stim/Treat Additives					
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Add	Type	Amount	Sand Size		
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	3, Acid Stage					
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	8,216.0	3	Acid Stage	7.5%, HCl Acid	8,010.0	36.00
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Stim/Treat Additives					
8,241.1		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Add	Type	Amount	Sand Size		
8,369.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	4, Spacer					
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
8,625.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	8,216.0	4	Spacer	<fluidname>, Slickwater	8,010.0	35.00
8,753.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Stim/Treat Additives					
8,880.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Add	Type	Amount	Sand Size		
9,008.9		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	5, Acid Stage					
9,137.1		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,270.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15	8,216.0	5	Acid Stage	7.5%, HCl Acid	8,010.0	36.00
9,393.0		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Stim/Treat Additives					
9,521.0		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Add	Type	Amount	Sand Size		
9,649.0		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	6, Pad					
9,776.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
9,904.9		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	8,216.0	6	Pad	<fluidname>, Slickwater	8,010.0	224.00
10,033.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Stim/Treat Additives					
10,161.1		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	Add	Type	Amount	Sand Size		
10,289.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	7, Proppant Laden Fluid					
10,417.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
10,544.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	8,216.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	8,010.0	1393.00
10,672.9		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Stim/Treat Additives					
10,800.9		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Add	Type	Amount	Sand Size		
10,878.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	8, Proppant Laden Fluid					
11,032.2		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,133.9		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	8,216.0	8	Proppant Laden Fluid	10#, Linear Gel	8,010.0	2571.00
11,288.1		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Stim/Treat Additives					
11,390.1		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	Add	Type	Amount	Sand Size		
11,544.0		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	10, Flush					
11,646.0		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
11,799.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	8,216.0	10	Flush	<fluidname>, Slickwater	8,010.0	219.00
11,901.9		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Stim/Treat Additives					
12,056.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	Add	Type	Amount	Sand Size		
12,158.1		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3	Slickwater Frac on 12/3/2014 12:00 AM					
12,312.0		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Date	Type	Wellbore	Zone		
12,414.0		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	12/3/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
12,567.9		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	Stim/Treat Stages					
12,669.9			1, Chemical Additives					
12,824.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
12,925.9			7,960.0	1	Chemical Additives		7,754.0	
13,080.1			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Corrosion Inhibitor	A264	2.0			
			Acid	Acid, Hydrochloric 7.5pct	1,582.0			
			Anti-Bacterial Agent	EC6110A				
			Scale Inhibitor	EC6629A	12.0			
			Breaker	J218	132.0			
			Gelling Agent	J580	1,591.0			
			Friction Reducer	J609	132.0			
			Iron Control Agent	L058	5.0			

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:04 PM	
MD (ftKB)	Zones
5,970.1	20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB
7,345.1	13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB
7,473.1	9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB
7,601.0	Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG
7,729.0	Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23
7,857.0	Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22
7,984.9	Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21
8,112.9	Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20
8,241.1	
8,369.1	
8,497.0	Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19
8,625.0	
8,753.0	Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18
8,880.9	
9,008.9	Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17
9,137.1	
9,270.0	Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16
9,393.0	
9,521.0	Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15
9,649.0	
9,776.9	Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14
9,904.9	
10,033.1	Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13
10,161.1	
10,289.0	Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12
10,417.0	
10,544.9	Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11
10,672.9	
10,800.9	Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10
10,878.0	
11,032.2	Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9
11,133.9	
11,288.1	Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8
11,390.1	
11,544.0	Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7
11,646.0	
11,799.9	Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6
11,901.9	
12,056.1	Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5
12,158.1	
12,312.0	Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4
12,414.0	
12,567.9	Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3
12,669.9	*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2
12,824.1	Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1
12,925.9	
13,080.1	5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB

Stim/Treat Stages					
2, Break Down					
Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
7,960.0	2	Break Down	<fluidname>, Slickwater	7,754.0	19.00
Stim/Treat Additives					
Add	Type	Amount	Sand Size		
3, Acid Stage					
7,960.0	3	Acid Stage	7.5%, HCl Acid	7,754.0	36.00
Stim/Treat Additives					
6, Pad					
7,960.0	6	Pad	<fluidname>, Slickwater	7,754.0	252.00
Stim/Treat Additives					
7, Proppant Laden Fluid					
7,960.0	7	Proppant Laden Fluid	<fluidname>, Slickwater	7,754.0	1311.00
Stim/Treat Additives					
Proppant - Natural		Northern White Sand	67,380.0	100 Mesh	
8, Proppant Laden Fluid					
7,960.0	8	Proppant Laden Fluid	10#, Linear Gel	7,754.0	589.00
Stim/Treat Additives					
Proppant - Natural		Northern White Sand	49,894.0	40/70	
10, Flush					
7,960.0	10	Flush	<fluidname>, Slickwater	7,754.0	579.00
Stim/Treat Additives					
11, Pad					
7,960.0	11	Pad	<fluidname>, Slickwater	7,754.0	316.00
Stim/Treat Additives					
12, Proppant Laden Fluid					
7,960.0	12	Proppant Laden Fluid	10#, Linear Gel	7,754.0	2217.00
Stim/Treat Additives					
Proppant - Natural		Northern White Sand	214,386.0	40/70	
13, Flush					
7,960.0	13	Flush	10#, Linear Gel	7,754.0	172.00
Stim/Treat Additives					
Slickwater Frac on 12/3/2014 12:00 AM					
Date	Type	Wellbore	Zone		
12/3/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole		
Stim/Treat Stages					
1, Chemical Additives					
7,704.0	1	Chemical Additives		7,498.0	
Stim/Treat Additives					
Corrosion Inhibitor		A264	2.0		
Acid		Acid, Hydrochloric 7.5pct	1,603.0		
Anti-Bacterial Agent		EC6110A	52.0		
Scale Inhibitor		EC6629A	9.0		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:05 PM			Stim/Treat Additives			
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB	Breaker	J218	99.0	
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB	Gelling Agent	J580	1,088.0	
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB	Friction Reducer	J609	162.0	
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG	Iron Control Agent	L058	5.0	
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23	2, Break Down			
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21	7,704.0	2	Break Down	<fluidname> Slickwater
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20	Top (ftKB)	Clean V...		
8,241.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19	7,498.0	10.00		
8,369.1		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18	Stim/Treat Additives			
8,497.0		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17	Add	Type	Amount	Sand Size
8,625.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16	3, Acid Stage			
8,753.0		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
8,880.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13	7,704.0	3	Acid Stage	7.5%, HCl Acid
9,008.9		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12	Top (ftKB)	Clean V...		
9,137.1		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11	7,498.0	45.00		
9,270.0		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10	Stim/Treat Additives			
9,393.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9	Add	Type	Amount	Sand Size
9,521.0		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8	6, Pad			
9,649.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7	Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
9,776.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6	7,704.0	6	Pad	<fluidname> Slickwater
9,904.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5	Top (ftKB)	Clean V...		
10,033.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4	7,498.0	79.00		
10,161.1		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2	Stim/Treat Additives			
10,289.0		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1	Add	Type	Amount	Sand Size
10,417.0		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB	7, Proppant Laden Fluid			
10,544.9			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
10,672.9			7,704.0	7	Proppant Laden Fluid	<fluidname> Slickwater
10,800.9			Top (ftKB)	Clean V...		
10,878.0			7,498.0	1408.0	0	
11,032.2			Stim/Treat Additives			
11,133.9			Add	Type	Amount	Sand Size
11,288.1			8, Proppant Laden Fluid			
11,390.1			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
11,544.0			7,704.0	8	Proppant Laden Fluid	15#, Linear Gel
11,646.0			Top (ftKB)	Clean V...		
11,799.9			7,498.0	2375.0	0	
11,901.9			Stim/Treat Additives			
12,056.1			Add	Type	Amount	Sand Size
12,158.1			9, Proppant Laden Fluid			
12,312.0			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
12,414.0			7,704.0	10	Flush	<fluidname> Slickwater
12,567.9			Top (ftKB)	Clean V...		
12,669.9			7,498.0	166.00		
12,824.1			Stim/Treat Additives			
12,925.9			Add	Type	Amount	Sand Size
13,080.1			10, Flush			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			7,704.0	10	Flush	<fluidname> Slickwater
			Top (ftKB)	Clean V...		
			7,498.0	166.00		
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			Slickwater Frac on 12/3/2014 12:00 AM			
			Date	Type	Wellbore	Zone
			12/3/2014	Slickwater Frac	Original Hole	MARCELLUS SHALE, Original Hole
			Stim/Treat Stages			
			1, Chemical Additives			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			7,448.0	1	Chemical Additives	<fluidname> Slickwater
			Top (ftKB)	Clean V...		
			7,242.0			
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			2, Break Down			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			7,448.0	2	Break Down	<fluidname> Slickwater
			Top (ftKB)	Clean V...		
			7,242.0	14.00		
			Stim/Treat Additives			
			Add	Type	Amount	Sand Size
			3, Acid Stage			
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid
			7,448.0	3	Acid Stage	7.5%, HCl Acid
			Top (ftKB)	Clean V...		
			7,242.0	28.00		

01/05/2018



Regulatory Current Wellbore Schematic

CHARLES YOHO MSH 6H

Spud Date: 10/15/2014
 Rig Release Date: 10/29/2014
 Initial Compl. Date:
 API #: 4705101729
 CHK Property #: 839257
 1st Gas Sales Date:
 1st Oil Sales Date:
 PBDT:
 TD: 13,249.0

Field:
 County: MARSHALL
 State: WEST VIRGINIA
 Elevation: GL 1,330.0 KB 1,350.0 KB Height: 20.0
 Location: T/D WEBSTER, Q-MAJORSVILLE

HORIZONTAL - Original Hole, 10/12/2017 3:48:06 PM			Stim/Treat Additives					
MD (ftKB)	Zones	Vertical schematic (actual)	Add	Type	Amount	Sand Size		
5,970.1		20 in; 106.50 lb/ft; J-55; 30.0-122.0 ftKB						
7,345.1		13 3/8 in; 54.50 lb/ft; J-55; 27.5-944.0 ftKB						
7,473.1		9 5/8 in; 40.00 lb/ft; J-55; 26.9-2,327.0 ftKB						
7,601.0		Composite Bridge Plug; 5,970.0-5,972.0 ftKB; 4.78 in; Kill PLUG						
7,729.0		Composite Frac Plug (Cage Ball); 7,473.0-7,475.0 ftKB; 4.78 in; Stage 23						
7,857.0		Composite Frac Plug (Cage Ball); 7,729.0-7,731.0 ftKB; 4.78 in; Stage 22						
7,984.9		Composite Frac Plug (Cage Ball); 7,985.0-7,987.0 ftKB; 4.78 in; Stage 21						
8,112.9		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20						
8,241.1		Composite Frac Plug (Cage Ball); 8,241.0-8,243.0 ftKB; 4.78 in; Stage 20						
8,369.1		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19						
8,497.0		Composite Frac Plug (Cage Ball); 8,497.0-8,499.0 ftKB; 4.78 in; Stage 19						
8,625.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18						
8,753.0		Composite Frac Plug (Cage Ball); 8,753.0-8,755.0 ftKB; 4.78 in; Stage 18						
8,880.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17						
9,008.9		Composite Frac Plug (Cage Ball); 9,009.0-9,011.0 ftKB; 4.78 in; Stage 17						
9,137.1		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16						
9,270.0		Composite Frac Plug (Cage Ball); 9,270.0-9,272.0 ftKB; 4.78 in; Stage 16						
9,393.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15						
9,521.0		Composite Frac Plug (Cage Ball); 9,521.0-9,523.0 ftKB; 4.78 in; Stage 15						
9,649.0		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14						
9,776.9		Composite Frac Plug (Cage Ball); 9,777.0-9,779.0 ftKB; 4.78 in; Stage 14						
9,904.9		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13						
10,033.1		Composite Frac Plug (Cage Ball); 10,033.0-10,035.0 ftKB; 4.78 in; Stage 13						
10,161.1		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12						
10,289.0		Composite Frac Plug (Cage Ball); 10,289.0-10,291.0 ftKB; 4.78 in; Stage 12						
10,417.0		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11						
10,544.9		Composite Frac Plug (Cage Ball); 10,545.0-10,547.0 ftKB; 4.78 in; Stage 11						
10,672.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10						
10,800.9		Composite Frac Plug (Cage Ball); 10,801.0-10,803.0 ftKB; 4.78 in; Stage 10						
10,878.0		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9						
11,032.2		Composite Frac Plug (Cage Ball); 11,057.0-11,059.0 ftKB; 4.78 in; Stage 9						
11,133.9		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8						
11,288.1		Composite Frac Plug (Cage Ball); 11,313.0-11,315.0 ftKB; 4.78 in; Stage 8						
11,390.1		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7						
11,544.0		Composite Frac Plug (Cage Ball); 11,569.0-11,571.0 ftKB; 4.78 in; Stage 7						
11,646.0		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6						
11,799.9		Composite Frac Plug (Cage Ball); 11,825.0-11,827.0 ftKB; 4.78 in; Stage 6						
11,901.9		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5						
12,056.1		Composite Frac Plug (Cage Ball); 12,081.0-12,083.0 ftKB; 4.78 in; Stage 5						
12,158.1		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4						
12,312.0		Composite Frac Plug (Cage Ball); 12,337.0-12,339.0 ftKB; 4.78 in; Stage 4						
12,414.0		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3						
12,567.9		Composite Frac Plug (Cage Ball); 12,593.0-12,594.0 ftKB; 4.78 in; Stage 3						
12,669.9		*COPY* Composite Bridge Plug; 12,849.0-12,851.0 ftKB; 4.78 in; Stage 2						
12,824.1		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1						
12,925.9		Composite Bridge Plug; 13,090.0-13,092.0 ftKB; 4.78 in; Stage 1						
13,080.1		5 1/2 in; 20.00 lb/ft; P-110; 25.1-13,246.0 ftKB						
			4, Pad					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			7,448.0	4	Pad	<fluidname>, Slickwater	7,242.0	24.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			5, Proppant Laden Fluid					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			7,448.0	5	Proppant Laden Fluid	<fluidname>, Slickwater	7,242.0	1406.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Proppant - Natural	Northern White Sand	68,280.0	100 Mesh		
			6, Proppant Laden Fluid					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			7,448.0	6	Proppant Laden Fluid	15#, Linear Gel	7,242.0	2529.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		
			Proppant - Natural	Northern White Sand	265,500.0	40/70		
			7, Flush					
			Btm (ftKB)	Stg #	Stage Type	Stim/Treat Fluid	Top (ftKB)	Clean V...
			7,448.0	7	Flush	<fluidname>, Slickwater	7,242.0	163.00
			Stim/Treat Additives					
			Add	Type	Amount	Sand Size		

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	11/29/2014
State:	WEST VIRGINIA
County:	MARSHALL
API Number:	4705101729
Operator Name:	SWN PRODUCTION CO LLC
Well Name and Number:	CHARLES YOHO MSH 6H
Longitude:	-80.617213
Latitude:	39.917026
Long/Lat Projection:	NAD27
Production Type:	GAS
True Vertical Depth (TVD):	6,760

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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
Fresh Water	CHESAPEAKE ENERGY	Carrier/Base Fluid	Water	007732-18-5	100.00%	83.34665%	
EC6111A	NALCO	Anti-Bacterial Agent	Glutaraldehyde (Pentanediol)	000111-30-8	30.00%	0.01819%	
EC6629A	NALCO	Scale Inhibitor	No Hazardous Components	NONE		0.00000%	
A264, J218, J580, J609, L058, Northern White Sand, 100 Mesh Sand, Acid, Hydrochloric 7.5pct, Acid, Hydrochloric 15pct	SCHLUMBERGER	Breaker, Corrosion Inhibitor, Friction Reducer, Gelling Agent, Iron Control Agent, Acid, Proppant - Natural	Crystalline silica	14808-60-7	98.47643%	16.39963%	
			Hydrochloric acid	7647-01-0	0.79684%	0.13270%	
			Guar gum	9000-30-0	0.46102%	0.07678%	
			Ammonium sulfate	7783-20-2	0.08892%	0.01481%	
			Acrylamide, 2-acrylamido-2-methylpropanesulfonic acid, sodium salt polymer	38193-60-1	0.06563%	0.01093%	
			Calcium chloride	10043-52-4	0.04931%	0.00821%	
			Diammonium peroxodisulphate	7727-54-0	0.03207%	0.00534%	
Polymer of 2-acrylamido-2-methylpropanesulfonic acid sodium salt and methyl acrylate	136793-29-8	0.00703%	0.00117%				
Urea	57-13-6	0.00432%	0.00072%				

Sodium erythorbate	6381-77-7	0.00301%	0.00050%	
Potassium chloride	7447-40-7	0.00291%	0.00048%	
Methanol	67-56-1	0.00268%	0.00045%	
Non-crystalline silica (impurity)	7631-86-9	0.00205%	0.00034%	
Fatty acids, tall-oil	61790-12-3	0.00187%	0.00031%	
Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	0.00154%	0.00026%	
Sodium sulfate	7757-82-6	0.00101%	0.00017%	
Sodium chloride	7647-14-5	0.00089%	0.00015%	
Alcohols, C14-15, ethoxylated (7EO)	68951-67-7	0.00073%	0.00012%	
Propargyl alcohol	107-19-7	0.00049%	0.00008%	
2-propenamid	79-06-1	0.00021%	0.00004%	
Hexadec-1-ene	629-73-2	0.00016%	0.00003%	
Tetrasodium ethylenediaminetetraacetate	64-02-8	0.00011%	0.00002%	
1-Octadecene (C18)	112-88-9	0.00008%	0.00001%	
Dimethyl siloxanes and silicones	63148-62-9	0.00006%	0.00001%	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	0.00001%	< 0.00001%	
Formaldehyde	50-00-0	0.00001%	< 0.00001%	
Octamethylcyclotetrasiloxane	556-67-2	0.00001%	< 0.00001%	
Decamethyl cyclopentasiloxane	541-02-6	< 0.00001%	< 0.00001%	
Dodecamethylcyclohexasiloxane	540-97-6	< 0.00001%	< 0.00001%	
Copper(II) sulfate	7758-98-7	< 0.00001%	< 0.00001%	


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Additional Ingredients Not Listed on MSDS

EC6111A, EC6629A	NALCO	Anti-Bacterial Agent, Scale Inhibitor	Methanol (Methyl Alcohol)	000067-56-1		0.00725%	
			Proprietary Acrylate Polymer	TRADE SECRET		0.00725%	
			Proprietary Quaternary Ammonium Salt	TRADE SECRET		0.00725%	
			Water	007732-18-5		0.03101%	

* 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%

"Additional Ingredients Not Listed on MSDS" component information were obtained directly from the supplier. As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of this information should be directed to the supplier who provided it.



Company: Chesapeake
Lease/Well: Charles Yoho MSH/6H

Rig Name: Nomac 337
State/County: West Virginia/Marshall
VS-Azi: 0.00 Degrees
Latitude: 39.91581, Longitude: -80.61925
Grid North = True North +0.71 degs
Grid Correction Applied = +0.71 degs



Depth Reference : 22 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: charles yoho msh 6h-de_01.ut
Minimum Curvature Method
Report Date/Time: 8/23/2017 / 10:22

VES Survey International
Morgantown, West Virginia
304-777-2189
Surveyor: Robert Hilling
Charles Yoho MSH 6H / API 47-051-01729

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.25	27.54	100.00	0.19	0.10	0.19	0.22	27.54	0.25
200.00	0.08	25.25	200.00	0.45	0.23	0.45	0.51	27.21	0.17
300.00	0.08	51.12	300.00	0.56	0.32	0.56	0.64	29.46	0.04
400.00	0.43	76.03	400.00	0.69	0.74	0.69	1.01	46.71	0.36
500.00	0.36	89.90	500.00	0.79	1.42	0.79	1.62	61.02	0.12
600.00	0.12	103.22	599.99	0.76	1.84	0.76	1.99	67.50	0.24
700.00	0.05	245.62	699.99	0.72	1.90	0.72	2.04	69.32	0.17
800.00	0.12	254.09	799.99	0.67	1.76	0.67	1.88	69.14	0.07
900.00	0.09	264.94	899.99	0.63	1.58	0.63	1.70	68.08	0.04
1000.00	1.46	295.83	999.98	1.18	0.35	1.18	1.23	16.39	1.38
1100.00	5.52	291.12	1099.78	3.47	-5.29	3.47	6.33	303.28	4.07
1200.00	6.86	293.27	1199.19	7.57	-15.27	7.57	17.04	296.36	1.36
1300.00	8.66	297.95	1298.27	13.46	-27.41	13.46	30.53	296.15	1.91
1400.00	8.50	304.92	1397.15	21.22	-40.12	21.22	45.39	297.87	1.05
1500.00	7.75	316.81	1496.16	30.36	-50.80	30.36	59.18	300.87	1.84
1600.00	7.14	326.60	1595.32	40.46	-58.83	40.46	71.40	304.52	1.40
1700.00	6.98	324.89	1694.56	50.62	-65.74	50.62	82.98	307.60	0.26
1800.00	5.86	326.92	1793.93	59.87	-72.03	59.87	93.66	309.74	1.15

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	5.41	327.76	1693.45	68.13	-77.33	68.13	103.06	311.38	0.46
2000.00	4.14	327.34	1993.10	75.16	-81.79	75.16	111.08	312.58	1.26
2100.00	3.94	322.38	2092.85	80.92	-85.83	80.92	117.96	313.31	0.41
2200.00	3.53	326.65	2192.64	86.21	-89.62	86.21	124.35	313.89	0.49
2300.00	3.07	325.04	2292.47	90.97	-92.85	90.97	129.99	314.42	0.47
2400.00	2.59	319.93	2392.35	94.90	-95.84	94.90	134.87	314.72	0.54
2500.00	1.87	312.44	2492.27	97.73	-98.50	97.73	138.76	314.78	0.78
2600.00	1.35	311.82	2592.24	99.62	-100.58	99.62	141.56	314.72	0.52
2700.00	0.89	312.96	2692.22	100.93	-102.02	100.93	143.51	314.69	0.46
2800.00	0.71	320.52	2792.21	101.93	-102.98	101.93	144.90	314.71	0.21
2900.00	0.87	319.67	2892.20	102.99	-103.87	102.99	146.27	314.76	0.17
3000.00	1.04	312.50	2992.18	104.18	-105.03	104.18	147.93	314.77	0.20
3100.00	0.59	305.55	3092.17	105.09	-106.11	105.09	149.35	314.72	0.45
3200.00	0.47	306.14	3192.17	105.64	-106.87	105.64	150.27	314.67	0.12
3300.00	0.49	307.56	3292.16	106.15	-107.55	106.15	151.11	314.62	0.02
3400.00	0.39	309.58	3392.16	106.63	-108.15	106.63	151.88	314.59	0.10
3500.00	0.40	312.59	3492.16	107.08	-108.67	107.08	152.57	314.58	0.02
3600.00	0.25	320.41	3592.16	107.49	-109.07	107.49	153.14	314.58	0.15
3700.00	0.33	316.02	3692.16	107.87	-109.41	107.87	153.64	314.59	0.08
3800.00	0.23	315.25	3792.15	108.22	-109.76	108.22	154.13	314.60	0.09
3900.00	0.42	314.14	3892.15	108.62	-110.16	108.62	154.71	314.60	0.19
4000.00	0.25	318.95	3992.15	109.04	-110.57	109.04	155.29	314.60	0.17
4100.00	0.45	327.42	4092.15	109.54	-110.93	109.54	155.89	314.64	0.21
4200.00	0.32	328.40	4192.15	110.10	-111.28	110.10	156.55	314.69	0.13
4300.00	0.56	332.21	4292.14	110.77	-111.66	110.77	157.28	314.77	0.24
4400.00	0.46	318.80	4392.14	111.50	-112.15	111.50	158.14	314.84	0.15
4500.00	0.41	308.07	4492.14	112.02	-112.69	112.02	158.89	314.83	0.10
4600.00	0.60	306.93	4592.13	112.55	-113.38	112.55	159.76	314.79	0.19
4700.00	0.57	295.08	4692.13	113.07	-114.24	113.07	160.74	314.70	0.12
4800.00	0.65	307.08	4792.12	113.62	-115.14	113.62	161.76	314.62	0.15
4900.00	0.57	303.79	4892.12	114.24	-116.01	114.24	162.81	314.56	0.08
5000.00	0.48	302.69	4992.11	114.74	-116.77	114.74	163.71	314.50	0.09
5100.00	0.69	291.49	5092.11	115.19	-117.69	115.19	164.68	314.39	0.23
5200.00	0.81	294.62	5192.10	115.71	-118.89	115.71	165.90	314.22	0.13
5300.00	1.02	293.01	5292.09	116.35	-120.35	116.35	167.40	314.03	0.21
5400.00	1.10	280.51	5392.07	116.87	-122.12	116.87	169.03	313.74	0.24
5500.00	0.93	278.27	5492.05	117.16	-123.86	117.16	170.49	313.41	0.18
5600.00	0.59	275.23	5592.04	117.33	-125.17	117.33	171.56	313.15	0.34
5670.00	0.68	264.51	5662.04	117.32	-125.95	117.32	172.12	312.97	0.21

01/05/2018
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Weatherford®

SURVEY REPORT

Report Date: 10/27/2014
 Customer: Chesapeake
 Job Name: 10435009
 Well Name: Charles Yoho MSH 6H

Field: Marcellus Shale
 Rig: Nomac 337
 Rig Loc: Marshall County

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
Grid North	154.10 deg	52745 nT	67.15 deg	-8.70 deg	-0.71 deg	-7.99 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	5670.00 ft	0.68 deg	264.51 deg	5662.04 ft	117.29 ft	-125.97 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head			Dogleg (deg/100ft)
				NS (ft)	EW (ft)	Vsect (ft)	
5839.00	0.64	292.94	5831.03	117.56	-127.84	-161.59	0.19
5875.00	0.51	308.20	5867.03	117.74	-128.15	-161.89	0.55
5906.00	1.14	244.50	5898.02	117.69	-128.54	-162.02	3.30
5938.00	4.66	224.28	5929.98	116.62	-129.73	-161.58	11.29
5969.00	8.59	220.20	5960.77	113.95	-132.10	-160.21	12.76
6001.00	12.06	220.84	5992.24	109.60	-135.83	-157.92	10.85
6032.00	15.25	219.58	6022.36	104.00	-140.55	-154.95	10.33
6063.00	17.77	218.42	6052.08	97.15	-146.09	-151.21	8.20
6095.00	19.11	216.64	6082.44	89.12	-152.25	-146.68	4.54
6126.00	21.39	215.17	6111.52	80.43	-158.54	-141.60	7.54
6157.00	23.73	214.80	6140.15	70.69	-165.35	-135.81	7.56
6189.00	26.02	216.15	6169.18	59.73	-173.17	-129.37	7.37
6220.00	27.78	218.42	6196.82	48.58	-181.67	-123.05	6.57
6251.00	29.45	219.68	6224.04	37.05	-191.03	-116.77	5.73
6282.00	30.66	221.76	6250.87	25.29	-201.16	-110.62	5.15
6314.00	33.08	223.26	6278.04	12.84	-212.58	-104.41	7.96
6345.00	36.09	222.65	6303.56	-0.04	-224.56	-98.06	9.77
6377.00	39.70	221.72	6328.81	-14.60	-237.76	-90.72	11.42
6409.00	43.71	220.44	6352.70	-30.65	-251.74	-82.38	12.81
6440.00	47.14	217.74	6374.45	-47.80	-265.64	-73.04	12.68
6471.00	49.16	216.28	6395.13	-66.24	-279.54	-62.52	7.40
6502.00	51.79	215.96	6414.86	-85.55	-293.63	-51.30	8.52
6533.00	54.65	215.78	6433.42	-105.67	-308.18	-39.56	9.24
6565.00	57.84	214.63	6451.20	-127.41	-323.51	-26.70	10.41
6597.00	61.13	214.77	6467.44	-150.07	-339.20	-13.17	10.29
6628.00	63.94	213.77	6481.74	-172.80	-354.68	0.52	9.51
6659.00	66.16	212.57	6494.82	-196.33	-370.06	14.96	7.97
6690.00	67.89	211.81	6506.92	-220.48	-385.26	30.05	6.02
6722.00	68.00	211.56	6518.93	-245.72	-400.84	45.95	0.80
6753.00	67.27	210.00	6530.73	-270.35	-415.51	61.70	5.22
6785.00	66.50	206.97	6543.29	-296.21	-429.55	78.83	9.03
6816.00	66.22	202.97	6555.73	-321.94	-441.53	96.75	11.85
6848.00	67.42	198.90	6568.33	-349.41	-452.04	116.87	12.28
6879.00	69.94	196.69	6579.60	-376.91	-460.86	137.75	10.50
6911.00	72.17	194.27	6589.99	-406.07	-468.93	160.46	9.99
6942.00	73.39	192.45	6599.17	-434.88	-475.77	183.38	6.85
6973.00	74.30	190.42	6607.79	-464.06	-481.67	207.06	6.94
7005.00	75.19	188.33	6616.21	-494.52	-486.70	232.26	6.89
7036.00	75.46	185.90	6624.07	-524.28	-490.41	257.40	7.63

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Depth (ft)	Inc (deg)	Azimuth (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
7068.00	76.29	183.82	6631.88	-555.20	-493.04	284.07	6.82
7099.00	77.63	180.47	6638.88	-585.37	-494.17	310.72	11.38
7130.00	78.58	178.18	6645.27	-615.70	-493.81	338.16	7.85
7162.00	79.01	175.22	6651.49	-647.03	-492.00	367.14	9.17
7193.00	79.91	172.22	6657.16	-677.32	-488.67	395.84	9.95
7225.00	80.52	169.31	6662.60	-708.45	-483.61	426.05	9.16
7256.00	81.65	166.21	6667.40	-738.37	-477.11	455.80	10.53
7287.00	82.83	163.70	6671.59	-768.03	-469.14	485.97	8.88
7319.00	84.48	161.32	6675.12	-798.36	-459.58	517.42	9.01
7350.00	85.89	158.44	6677.73	-827.36	-448.96	548.15	10.31
7444.00	87.34	154.79	6683.28	-913.47	-411.72	641.88	4.17
7538.00	89.58	154.25	6685.81	-998.29	-371.30	735.84	2.45
7633.00	89.28	153.91	6686.75	-1083.73	-329.77	830.83	0.48
7727.00	88.92	155.14	6688.23	-1168.58	-289.35	924.82	1.36
7822.00	88.72	155.40	6690.18	-1254.85	-249.61	1019.78	0.35
7916.00	88.41	155.36	6692.54	-1340.28	-210.47	1113.72	0.33
8010.00	87.92	155.56	6695.55	-1425.74	-171.44	1207.65	0.56
8105.00	89.79	155.11	6697.45	-1512.05	-131.81	1302.60	2.02
8198.00	89.34	154.95	6698.15	-1596.36	-92.55	1395.59	0.51
8292.00	88.79	155.08	6699.69	-1681.55	-52.85	1489.56	0.60
8385.00	88.13	154.71	6702.18	-1765.73	-13.41	1582.52	0.81
8479.00	87.67	155.16	6705.63	-1850.82	26.39	1676.45	0.68
8574.00	88.64	154.08	6708.69	-1936.61	67.08	1771.39	1.53
8668.00	89.62	152.88	6710.12	-2020.70	109.05	1865.37	1.65
8760.00	89.46	152.77	6710.85	-2102.55	151.06	1957.35	0.21
8855.00	88.69	152.69	6712.39	-2186.98	194.59	2052.31	0.81
8948.00	89.90	152.39	6713.53	-2269.49	237.47	2145.26	1.34
9043.00	90.09	151.90	6713.54	-2353.48	281.85	2240.21	0.55
9138.00	89.16	151.94	6714.16	-2437.30	326.57	2335.14	0.98
9232.00	88.36	151.49	6716.20	-2520.05	371.10	2429.03	0.98
9327.00	89.67	153.63	6717.83	-2604.35	414.87	2523.97	2.64
9420.00	90.23	152.74	6717.91	-2687.34	456.82	2616.96	1.13
9513.00	89.83	152.88	6717.86	-2770.07	499.32	2709.94	0.46
9608.00	91.07	153.19	6717.12	-2854.73	542.39	2804.92	1.35
9702.00	90.44	155.04	6715.88	-2939.29	583.42	2898.90	2.08
9796.00	90.33	155.20	6715.25	-3024.57	622.97	2992.89	0.21
9891.00	89.20	155.70	6715.64	-3110.98	662.44	3087.86	1.30
9984.00	88.62	156.78	6717.40	-3196.08	699.90	3180.77	1.32
10078.00	88.30	157.31	6719.93	-3282.60	736.55	3274.62	0.66
10172.00	89.27	155.40	6721.92	-3368.68	774.24	3368.52	2.28
10266.00	88.86	155.35	6723.46	-3454.12	813.40	3462.48	0.44
10361.00	89.58	153.65	6724.75	-3539.86	854.30	3557.47	1.94
10455.00	89.88	153.51	6725.19	-3624.04	896.12	3651.46	0.35
10549.00	89.44	153.77	6725.75	-3708.26	937.86	3745.46	0.54
10643.00	88.60	153.98	6727.36	-3792.65	979.24	3839.44	0.92
10737.00	88.30	154.56	6729.90	-3877.30	1020.04	3933.40	0.69
10831.00	91.10	154.44	6730.39	-3962.13	1060.50	4027.39	2.98
10925.00	91.50	154.98	6728.26	-4047.10	1100.65	4121.36	0.71
11020.00	90.51	155.17	6726.60	-4133.23	1140.67	4216.33	1.06
11115.00	88.44	155.33	6727.47	-4219.50	1180.44	4311.30	2.19
11210.00	86.97	153.44	6731.27	-4305.09	1221.48	4406.22	2.52
11304.00	87.00	153.51	6736.21	-4389.08	1263.40	4500.08	0.08
11397.00	88.38	154.01	6739.96	-4472.42	1304.48	4593.00	1.58

07/11/17
08/11/17

08/16/17

Depth (ft)	Inc (deg)	Azimuth (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
11491.00	89.84	154.37	6741.42	-4557.03	1345.40	4686.99	1.60
11583.00	90.05	154.47	6741.51	-4640.02	1385.13	4778.99	0.25
11678.00	89.34	155.24	6742.02	-4726.01	1425.49	4873.98	1.10
11771.00	90.47	155.16	6742.17	-4810.43	1464.50	4966.96	1.22
11865.00	90.19	155.34	6741.63	-4895.80	1503.85	5060.94	0.35
11959.00	89.34	154.32	6742.02	-4980.87	1543.83	5154.93	1.41
12054.00	89.07	155.68	6743.33	-5066.96	1583.97	5249.90	1.46
12148.00	89.48	154.77	6744.52	-5152.30	1623.36	5343.88	1.06
12242.00	88.90	154.11	6745.85	-5237.09	1663.91	5437.87	0.93
12336.00	90.38	151.03	6746.44	-5320.51	1707.21	5531.82	3.64
12428.00	89.70	150.37	6746.38	-5400.74	1752.23	5623.65	1.03
12523.00	89.27	152.37	6747.23	-5484.11	1797.75	5718.54	2.15
12618.00	88.97	152.75	6748.69	-5568.42	1841.52	5813.49	0.51
12712.00	88.46	152.39	6750.80	-5651.83	1884.81	5907.43	0.66
12806.00	88.63	153.51	6753.19	-5735.52	1927.54	6001.38	1.20
12901.00	90.13	154.01	6754.21	-5820.72	1969.54	6096.37	1.66
12996.00	89.38	152.51	6754.62	-5905.55	2012.29	6191.36	1.77
13090.00	88.75	152.51	6756.15	-5988.93	2055.67	6285.31	0.67
13180.00	88.63	152.51	6758.21	-6068.75	2097.20	6375.25	0.13
Projected to Total Depth:							
13249.00	88.63	152.51	6759.86	-6129.94	2129.04	6444.20	0.00

Vertical Section is 6444.20 ft along the target direction of 154.10 deg at a measured depth of 13249.00 ft.
Horizontal Displacement is 6489.14 ft along the well bore azimuth of 160.85 deg.
The total correction is -7.99 deg relative to Grid North.

01/05/2018
00:13:07
01/05/2018

SURFACE HOLE DEC. LONG: 80.617213
 SURVEYED LONG: 80° 37' 02.0"

9,520'

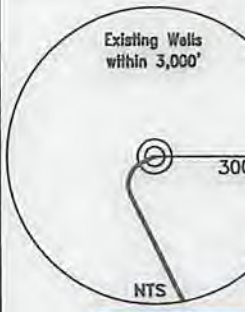
Latitude: 39° 57' 30" (NAD27)

Longitude: 80° 35' 00" (NAD27)

TOP HOLE (UTM NAD 83) N) 4418626.7 E) 532731.2	A) JOHN W. AND GLADYS C. LOVELL	15-8-45.2	LEASE NUMBER 6	0.52 AC
	B) JAMES J. AND MARY E. ANDENORA	15-8-45.1	LEASE NUMBER 7	0.33 AC
	C) JAMES J. AND MARY E. ANDENORA	15-14-6.1	LEASE NUMBER 8	0.18 AC

BOTTOM HOLE (UTM NAD 83) N) 4416768.6 E) 533408.0

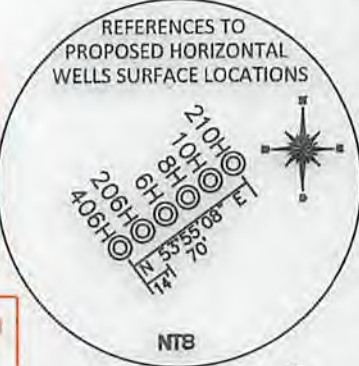
NO WATER WELLS WERE FOUND WITHIN 250' OF THE CENTER OF WELL PAD



WELL (SURFACE HOLE)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 518104.2
 E: 1655198.9
 UTM (NAD 83)
 N: 4418626.7
 E: 532731.2

DOROTHY L. YOHO
 84.25 TOTAL ACRES
 LEASE NUMBER 1
 TAX MAP AND PARCEL 15-8-33

WELL (SURFACE HOLE)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 518104.2
 E: 1655198.9
 UTM (NAD 83)
 N: 4418626.7
 E: 532731.2

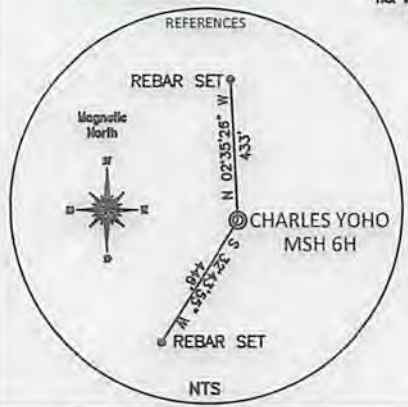


WELL (LANDING POINT)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 517073.2
 E: 1654915.0
 UTM (NAD 83)
 N: 4418311.3
 E: 532650.0

DOROTHY L. YOHO
 17.28 TOTAL ACRES
 LEASE NUMBER 2
 TAX MAP AND PARCEL 15-8-40

CHARLES YOHO
 MSH 6H
 POST
 N 11°28'04" W 718'
 S 29°05'58" E 842'

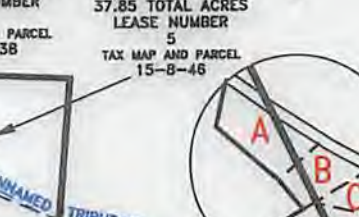
WELL (LANDING POINT)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 517073.2
 E: 1654915.0
 UTM (NAD 83)
 N: 4418311.3
 E: 532650.0



ROBERT L. HARNESS
 19.18 TOTAL ACRES
 LEASE NUMBER 3
 TAX MAP AND PARCEL 15-8-39

PROPOSED
 AS-DRILLED
 WAYNESBURG PIKE
 S 25°53'46" E 5,954'

DENNIS E. AND AMBER L. ASTON
 25.421 TOTAL ACRES
 LEASE NUMBER 4
 TAX MAP AND PARCEL 15-8-38



ROGER KEYSER
 37.85 TOTAL ACRES
 LEASE NUMBER 5
 TAX MAP AND PARCEL 15-8-46

ROGER KEYSER
 81.389 TOTAL ACRES
 LEASE NUMBER 9
 TAX MAP AND PARCEL 15-14-6

UNNAMED TRIBUTARY
 UNNAMED TRIBUTARY
 UNNAMED TRIBUTARY

DAVID LEE MAGERS
 8.24 TOTAL ACRES
 LEASE NUMBER 10
 TAX MAP AND PARCEL 15-14-7.5

CLIFTON E. AND SONDR J. YOCUM
 25.804 TOTAL ACRES
 LEASE NUMBER 12
 TAX MAP AND PARCEL 15-14-7.4

DAVID LEE MAGERS
 19.92 TOTAL ACRES
 LEASE NUMBER 13
 TAX MAP AND PARCEL 15-14-7

REFERENCE NOTES
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Marshall County, West Virginia JUNE 2013
 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS
 Drafted by: E.A.M.

1	N 88°47'23" W 951'
2	S 87°25'26" W 930'
3	S 30°21'54" W 672'

WELL (BOTTOM HOLE)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 511856.7
 E: 1657455.8
 UTM (NAD 83)
 N: 4416768.6
 E: 533408.0

DAVID LEE MAGERS
 37.57 TOTAL ACRES
 LEASE NUMBER 11
 TAX MAP AND PARCEL 15-14-7.6

WELL (BOTTOM HOLE)
 CHARLES YOHO
 MSH 6H
 WV-N (NAD 83)
 N: 511856.7
 E: 1657455.8
 UTM (NAD 83)
 N: 4416734.9
 E: 533450.6

CLIFTON E. AND SONDR J. YOCUM
 8.05 TOTAL ACRES
 TAX MAP AND PARCEL 15-14-9

FILE #: CHE 119
 DRAWING #: 2275
 SCALE: PLAT - 1" = 1200'
 TICK MARK - 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.
 Signed: *[Signature]*
 L.L.S. #2124 Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WYDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304
 Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow
 WATERSHED: WHEELING CREEK ELEVATION: 1330'
 COUNTY/DISTRICT: MARSHALL/WEBSTER QUADRANGLE: MAJORSVILLE, WV
 SURFACE OWNER: DOROTHY L. YOHO ACREAGE: 84.25 +/-
 OIL & GAS ROYALTY OWNER: DOROTHY L. YOHO ACREAGE: 357.91 +/-
 LEASE NUMBERS: _____
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____
 TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,759.86' TMD: 7,444'
 WELL OPERATOR: CHESAPEAKE APPALACHIA, LLC DESIGNATED AGENT: JODY JONES
 ADDRESS: PO BOX 18496 ADDRESS: 2321 ENERGY DRIVE
 CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496 CITY: LOUISVILLE STATE: OH ZIP CODE: 44641

SURFACE HOLE DEC. LAT: 39.917026 SURVEYED LAT: 39° 55' 01.3"

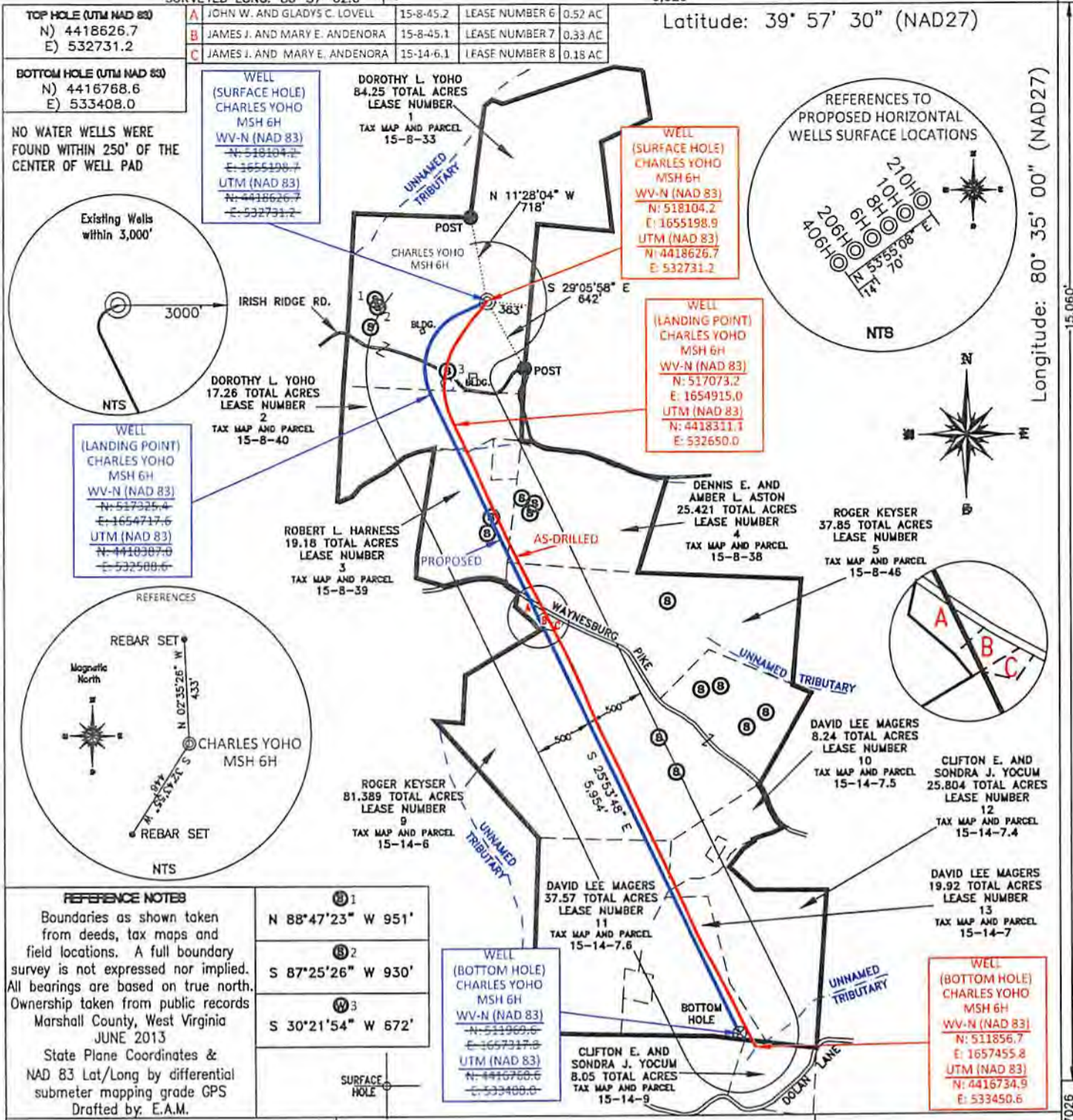
01/05/2018

SURFACE HOLE DEC. LONG: 80.617213
 SURVEYED LONG: 80° 37' 02.0"

9,520'

Latitude: 39° 57' 30" (NAD27)

Longitude: 80° 35' 00" (NAD27)



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 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS
 Drafted by: E.A.M.

1	N 88°47'23" W 951'
2	S 87°25'26" W 930'
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FILE #: CHE 119
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 5TH STREET
 CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
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WATERSHED: WHEELING CREEK ELEVATION: 1330'
 COUNTY/DISTRICT: MARSHALL/WEBSTER QUADRANGLE: MAJORSVILLE, WV
 SURFACE OWNER: DOROTHY L. YOHO ACREAGE: 84.25 +/-
 OIL & GAS ROYALTY OWNER: DOROTHY L. YOHO ACREAGE: 357.91 +/-

LEASE NUMBERS: _____

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,759.86' TMD: 7,444'
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 ADDRESS: PO BOX 18496 ADDRESS: 2321 ENERGY DRIVE
 CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496 CITY: LOUISVILLE STATE: OH ZIP CODE: 44641

DATE: OCTOBER 4, 2017
 OPERATOR'S WELL #: CHARLES YOHO MSH 6H
 API WELL #: 47 51 STATE COUNTY PERMIT

01/05/2018

SURFACE HOLE DEC. LAT: 39.97026 SURVEYED LAT: 39° 55' 01.3"