



03/29/2019

Jackie M. Scholar
Regulatory Reporting Coordinator

CERTIFIED MAIL: 7016 0340 0000 4903 5785

November 27, 2018

WV DEP
Office of Oil and Gas
601 – 57th Street
Charleston, WV 25304

RE: Well Operator's Report of Well Work WR-35
Hart 7H

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection

Dear Sir/Madam,

Enclosed here within please find one (1) Well Operator's Report of Well Work WR-35, one (1) copy of the Plat on Mylar, one (1) copy of the FracFocus report, and one (1) copy of the Directional Survey for **Hart 7H, (API 47-051-01753)**.

If you have any questions, please contact me at (412) 865-3422. Thank you.

Sincerely,
Chevron Appalachia, LLC

Jackie M. Scholar

Enclosures

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

API 47-051-01753 County Marshall District Washington
Quad Moundsville Pad Name Hart Field/Pool Name _____
Farm name John Hart Well Number Hart 7H
Operator (as registered with the OOG) Chevron Appalachia, LLC
Address 700 Cherrington Parkway City Coraopolis State PA Zip 15108

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 516921.61 Easting 1644566.51
Landing Point of Curve Northing 516999.57 Easting 1645625.69
Bottom Hole Northing 510904.75 Easting 1658012.22

Elevation (ft) 1329' 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)
Synthetic - fluid loss control, emulsifiers, shale stabilizer

Date permit issued 6/16/14 Date drilling commenced 10/4/14 Date drilling ceased 9/3/15
Date completion activities began 6/7/18 Date completion activities ceased 11/25/18
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 254' MD from GL Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1997' MD from GL Void(s) encountered (Y/N) depths N
Coal depth(s) ft 859' MD from GL Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed Reviewed by: [Signature]
3/25/17

WR-35
Rev. 8/23/13

API 47-051 - 01753 Farm name John Hart Well number Hart 7H

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	36"	30"	40'	New			Y
Surface	26"	20"	304'	New	J-55; 94		Y
Coal	17 1/2"	13 3/8"	894'	New	J-55; 54.50		Y
Intermediate 1	12 1/4"	9 5/8"	2216'	New	L-80; 40		Y
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	15141'	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	Bulk Cement	Bulk Cement				Surface	8
Surface	Class A	596	15.6	1.20	715	Surface	8
Coal	Class A	843	15.6	1.20	1011	Surface	8
Intermediate 1	Class A	749	15.6	1.20	898	Surface	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead: 1388; Tail: 1602	Lead & Tail: 15.2	Lead & Tail: 1.26	Lead: 1748; Tail: 2018	500' below 9 5/8" shoe, as planned	8
Tubing							

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of Environmental Protection

Drillers TD (ft) 15189' Loggers TD (ft) 15189'
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) 5363'

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 there is a bow spring centralizer every two joints on the
water, coal, and intermediate strings. Production has two centralizers every joint in the lateral and curve, then one every joint from KOP to surface.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS SEE ATTACHED PERFORATION / STIMULATION REPORT

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

WR-35
Rev. 8/23/13

API 47- 051 - 01753 Farm name John Hart Well number Hart 7H

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	6569'	TVD 6594' 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 DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
	SEE	ATTACHED			

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Department of
Environmental Protection

Please insert additional pages as applicable.

Drilling Contractor SEE ATTACHED
Address _____ City _____ State _____ Zip _____

Logging Company Stratagraph NE Inc
Address 116 Ellsworth Avenue City Marietta State OH Zip 45750

Cementing Company Baker Hughes
Address 5373 West Alabama, Suite 300 City Houston State TX Zip 77056

Stimulating Company SEE ATTACHED
Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Jackie M. Scholar Telephone 412-865-3422
Signature *Jackie M. Scholar* Title Regulatory Compliance & Permitting Manager Date 11/27/18

API: 47-051-01753	Farm Name: John Hart	Well Number: Hart 7H
-------------------	----------------------	----------------------

PERFORATION RECORD					
Stage No.	Perforation Date	Perforated From TMD Ft.	Perforated To TMD Ft.	Number of Perforations	Formation(s)
1	7/3/16	15110	14658	120	Marcellus
2	8/2/18	14351	14531	47	Marcellus
3	8/2/18	14151	14331	47	Marcellus
4	8/3/18	13951	14131	47	Marcellus
5	8/3/18	13751	13931	47	Marcellus
6	8/4/18	13551	13731	47	Marcellus
7	8/4/18	13351	13531	47	Marcellus
8	8/4/18	13151	13331	47	Marcellus
9	8/4/18	12951	13131	47	Marcellus
10	8/5/18	12751	12931	47	Marcellus
11	8/5/18	12551	12731	47	Marcellus
12	8/6/18	12351	12531	47	Marcellus
13	8/6/18	12151	12311	47	Marcellus
14	8/6/18	11951	12111	47	Marcellus
15	8/6/18	11751	11911	47	Marcellus
16	8/7/18	11551	11711	47	Marcellus
17	8/8/18	11351	11511	47	Marcellus
18	8/8/18	11151	11311	47	Marcellus
19	8/8/18	10951	11111	47	Marcellus
20	8/9/18	10751	10911	47	Marcellus
21	8/9/18	10551	10711	47	Marcellus
22	8/9/18	10351	10511	47	Marcellus
23	8/10/18	10151	10311	47	Marcellus
24	8/10/18	9951	10111	47	Marcellus
25	8/10/18	9751	9911	47	Marcellus
26	8/11/18	9551	9711	47	Marcellus
27	8/11/18	9351	9511	47	Marcellus
28	8/11/18	9151	9311	47	Marcellus
29	8/12/18	8951	9111	47	Marcellus
30	8/12/18	8751	8911	47	Marcellus
31	8/12/18	8551	8711	47	Marcellus
32	8/13/18	8351	8511	47	Marcellus
33	8/13/13	8151	8311	47	Marcellus
34	8/13/18	7951	8111	47	Marcellus
35	8/14/18	7751	7911	47	Marcellus
36	8/14/18	7551	7711	47	Marcellus
37	8/14/18	7351	7511	47	Marcellus
38	8/15/18	7151	7311	47	Marcellus
39					
40					

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Department of
Environmental Protection

Please insert additional copies of this page if additional rows/stages are needed.

API: 47-051-01753	Well Name: John Hart	Well Number: Hart 7H
-------------------	----------------------	----------------------

STIMULATION INFORMATION / STAGE								
Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable).								
Stg No.	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	7/3/16	97	8158	n/a	4350	1012660	20857	n/a
2	8/2/18	58.8	9391	n/a	4789	1822	2709	n/a
3	8/2/18	94.7	8988	n/a	4908	402698	10149	n/a
4	8/3/18	96.3	8710	7022	5117	399736	9608	n/a
5	8/3/18	92.4	8829	6621	5080	400805	9661	n/a
6	8/4/18	67.4	9214	6828	4880	5089	4540	n/a
7	8/4/18	95.7	8407	6625	5029	399403	9750	n/a
8	8/4/18	96.8	8373	6058	4827	400907	9637	n/a
9	8/4/18	99.5	8393	6759	5085	400370	9597	n/a
10	8/5/18	99.1	8502	7006	5051	399999	9493	n/a
11	8/5/18	99.8	8251	5885	5085	399807	9601	n/a
12	8/6/18	100.1	8464	6285	4839	399857	9484	n/a
13	8/6/18	98.3	8382	7141	4973	400251	9444	n/a
14	8/6/18	98.7	8374	6872	4855	399676	9750	n/a
15	8/6/18	99.1	8279	6195	4789	400921	9556	n/a
16	8/7/18	100	8002	7180	5087	400075	9472	n/a
17	8/8/18	99	8073	5853	5029	400272	9515	n/a
18	8/8/18	100.3	7999	6200	4901	400394	9399	n/a
19	8/8/18	100.1	8128	5617	4942	401706	9564	n/a
20	8/9/18	99.7	7769	5938	5098	400725	9511	n/a
21	8/9/18	97.9	8171	6980	4816	404013	9458	n/a
22	8/9/18	99.3	7914	7004	4816	400261	9326	n/a
23	8/10/18	99.2	8071	6552	4953	400645	9334	n/a
24	8/10/18	99.7	8261	6568	5031	400993	9308	n/a
25	8/10/18	96.5	8471	7215	4650	403083	10017	n/a
26	8/11/18	98.6	7752	6217	5123	399881	9430	n/a
27	8/11/18	100.4	7745	6440	5021	399761	9455	n/a
28	8/11/18	99.3	7699	7070	5116	400292	9283	n/a
29	8/12/18	99.6	7632	6567	5018	400392	9064	n/a
30	8/12/18	99.7	7524	5846	5013	399853	9315	n/a
31	8/12/18	100.3	7649	7011	4927	402323	9363	n/a
32	8/13/18	98.7	7969	6625	4850	401929	9361	n/a
33	8/13/13	100.5	7790	6898	5025	401708	9300	n/a
34	8/13/18	99.5	7758	8644	5069	400578	9315	n/a
35	8/14/18	99.5	7438	6782	4850	402526	9318	n/a
36	8/14/18	100.5	7277	7041	4945	401111	9350	n/a
37	8/14/18	100.1	7184	7425	4975	400783	9298	n/a
38	8/15/18	99.6	8524	7637	4827	400553	9114	n/a
39								
40								

RECEIVED
 Office of Oil and Gas
DEC 4 2018
 WV Department of Environmental Protection

WR-35

Page 7 of 9

API: 47-051-01753	Farm Name: John Hart	Well Number: Hart 7H
-------------------	----------------------	----------------------

	TVD	Base TVD	MD	Base MD
Pittsburgh Coal			503	
Greenbrier			1793.56	1842.56
Burgoon			1842.56	2273.56
Weir			2273.56	2487.56
Berea			2487.56	2797.56
Int. String (9 5/8")			2797.56	2797.56
Gordon			2797.56	3078.32
U. Bayard			3078.32	6226.32
Sycamore Grit			6226.32	6318.32
Middlesex			6318.32	6720
BRKT	6432	6446	6720	6734
TLLY	6446	6477	6734	6798
S5	6477	6574	6798	7066
S3	6574	6591	7066	7134
STFD*	6591	6593	7134	7151
S2.B	6593	6609	7151	7251
S2.A	6609		7251	

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Department of
Environmental Protection

WR-35

Page 8 of 9

API: 47-051-01753	Farm Name: John Hart	Well Number: Hart 7H
-------------------	----------------------	----------------------

PERF & STIM CONTRACTORS		
Driller	Driller	Driller
Name Schlumberger Technology Corp	Name Universal Pressure Pumping	Name
Address 4600 J Barry Court, Suite 200	Address 18360 Technology Drive	Address
City - State - Zip Canonsburg, PA 15307	City - State - Zip Meadville, PA 16335	City - State - Zip

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection

WR-35

Page 9 of 9

API: 47-051-01753	Farm Name: John Hart	Well Number: Hart 7H
-------------------	----------------------	----------------------

DRILLING CONTRACTORS		
Driller	Driller	Driller
Name Rocky Mountain Drilling	Name Highlands Drilling LLC	Name Nabors Drilling USA
Address 185 North Vernal Avenue, Suite 2	Address 900 Virginia Street East	Address 10100 NW 10th Street
City - State - Zip Vernal, UT 84078	City - State - Zip Charlestown, WV 25301	City - State - Zip Oklahoma City, OK 73127

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/3/2016
Job End Date:	7/3/2016
State:	West Virginia
County:	Marshall
API Number:	47-051-01753-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Hart 7H
Latitude:	39.91350000
Longitude:	-80.65490000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,711
Total Base Water Volume (gal):	874,883
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Schlumberger	N/A					
			Water (Including Mix Water Supplied by Client)*	7732-18-5		87.68892	
A264A	Schlumberger	Corrosion Inhibitor					
				Listed Below			

Submitted 7/28/16

S012-4070	Schlumberger	Propping Agent				
				Listed Below		
B466	Schlumberger	Moderate Salinity Friction Reducer				
				Listed Below		
H315	Schlumberger	Acid				
				Listed Below		
M300	Schlumberger	Myacide TS GA 25				
				Listed Below		
S100	Schlumberger	Fluid Loss Additive				
				Listed Below		
U042	Schlumberger	Chelating Agent				
				Listed Below		
B317	Schlumberger	Scale Inhibitor				
				Listed Below		
L058	Schlumberger	Iron Control Agent				
				Listed Below		

RECEIVED
 Office of Oil and Gas
 DEC 4 2018
 WV Department of
 Environmental Protection

Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients

			Quartz, Crystalline silica	14808-60-7	98.79047	12.16217
			Hydrochloric acid	7647-01-0	0.50811	0.06255

			2-Propenoic acid, ammonium salt, polymer with 2-propenamide, sodium salt	910644-97-2	0.20830	0.02564	
			Distillates, petroleum, hydrotreated light	64742-47-8	0.19287	0.02374	
			Glutaraldehyde	111-30-8	0.10421	0.01283	
			Ammonium sulfate	7783-20-2	0.08486	0.01045	
			Tetrasodium ethylenediaminetetraacetate	64-02-8	0.06305	0.00776	
			Ammonium acetate	631-61-8	0.04629	0.00570	
			Alcohols, C10-16, ethoxylated	68002-97-1	0.02807	0.00346	
			Alcohols, C12-C14, ethoxylated	68439-50-9	0.02777	0.00342	
			Alcohols, C12-C16, ethoxylated	68551-12-2	0.02777	0.00342	
			Sorbitan monooleate	1338-43-8	0.02314	0.00285	
			Sodium thiosulphate	7772-98-7	0.02314	0.00285	
			Ethanol, 2,2',2"-nitrilotris-, 1,1',1"-tris (dihydrogen phosphate), sodium salt	68171-29-9	0.01718	0.00211	
			Ethoxylated oleylamine	26635-93-8	0.01157	0.00142	
			Trisodium ortho phosphate	7601-54-9	0.00755	0.00093	
			Quaternary ammonium compounds, ethylbis (hydroxyethyl)tallow alkyl, ethoxylated, Et sulfates (salts)	68071-95-4	0.00656	0.00081	
			Sodium Glycolate (impurity)	2836-32-0	0.00511	0.00063	
			Sodium erythorbate	6381-77-7	0.00390	0.00048	
			Methanol	67-56-1	0.00260	0.00032	
			Ethylene Glycol	107-21-1	0.00215	0.00026	
			Sodium hydroxide	1310-73-2	0.00170	0.00021	

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Department of
Environmental Protection

			Disodium Ethylene Diamine Tetra Acetate (impurity)	139-33-3	0.00170	0.00021	
			Trisodium Ethylenediaminetetraacetate (impurity)	150-38-9	0.00170	0.00021	
			Reaction product of: acetophenone, formaldehyde, cyclohexylamine, methanol and acetic acid	224635-63-6	0.00107	0.00013	
			Trisodium nitrilotriacetate (impurity)	5064-31-3	0.00085	0.00010	
			Propan-2-ol	67-63-0	0.00077	0.00009	
			Cinnamaldehyde	104-55-2	0.00060	0.00007	
			Alcohol, C9-C11, Ethoxylated	68439-46-3	0.00045	0.00006	
			Acetic acid(impurity)	64-19-7	0.00011	0.00001	
			Acetophenone	98-86-2	0.00011	0.00001	
			Amines, tallow alkyl, ethoxylated	61791-26-2	0.00009	0.00001	
			2-Propenamid (impurity)	79-06-1	0.00008	0.00001	
			Formaldehyde (impurity)	50-00-0	0.00007	0.00001	

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Dept. of Environmental Protection

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

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

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/2/2018
Job End Date:	8/15/2018
State:	West Virginia
County:	Marshall
API Number:	47-051-01753-00-00
Operator Name:	Chevron USA Inc.
Well Name and Number:	Hart 7H
Latitude:	39.91348700
Longitude:	-80.65486100
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,743
Total Base Water Volume (gal):	14,231,658
Total Base Non Water Volume:	



RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection



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
Unislick ST50	Universal Pressure Pumping	Friction Reducer					
				Listed Below			
Iron Control A	Universal Pressure Pumping	Iron Control Agent					

Submitted 8/22/18

				Listed Below			
Water	Chevron Appalachia, LLC	Carrier/Base Fluid					
				Listed Below			
AP Breaker	Universal Pressure Pumping	Gel Breaker					
				Listed Below			
Sand (Proppant)	Universal Pressure Pumping	Proppant					
				Listed Below			
Scale Inhibitor E	Universal Pressure Pumping	Scale Inhibitor					
				Listed Below			
Unihib G	Universal Pressure Pumping	Acid Inhibitor					
				Listed Below			
Hydrochloric Acid (7.5%)	Universal Pressure Pumping	Acidizing					
				Listed Below			
Unigel 5F	Universal Pressure Pumping	Viscosifier					
				Listed Below			
K-Bac 1020	Universal Pressure Pumping	Biocide					

RECEIVED
Office of Oil and Gas
DEC 4 2018
WV Department of
Environmental Protection

			Listed Below			
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.						
			Water	7732-18-5	100.00000	88.30296
			Silica	14808-60-7	99.90000	10.42503
			Hydrochloric Acid	7647-01-0	7.50000	0.08665
			Petroleum Distillates, Hydrotreated Light	64742-47-8	30.00000	0.01985
			Ammonium Acetate	631-61-8	13.00000	0.00860
			Polyethylene Glycol	25322-68-3	50.00000	0.00599
			Ethylene Glycol	107-21-1	30.00000	0.00559
			Water	7732-18-5	30.00000	0.00359
			Alcohols, ethoxylated	68551-12-2	5.00000	0.00331
			Alcohols, ethoxylated	68439-50-9	5.00000	0.00331
			Alcohols, ethoxylated	68002-97-1	5.00000	0.00331
			2,2-Dibromo-3- nitrilopropionamide	10222-01-2	21.00000	0.00251
			Copolymer of Maleic and Acrylic Acid	52255-49-9	20.00000	0.00162
			Butyl diglycol	112-34-5	75.00000	0.00068
			Alcohols, C10-16, ethoxylated	68002-97-1	50.00000	0.00045
			Guar Gum	9000-30-0	100.00000	0.00042
			DETA phosphonate	15827-60-8	5.00000	0.00040
			Hexamethylene Triamine Penta(Methylene Phosphonic Acid)	34690-00-1	5.00000	0.00040
			Methanol	67-56-1	5.00000	0.00005
			Ammonium persulfate	7727-54-0	100.00000	0.00002
			Thiourea	62-56-6	1.00000	0.00001
			Formaldehyde	50-00-0	1.00000	0.00001

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
Office of Oil and Gas

DEC 4 2018

WV Department of
Environmental Protection

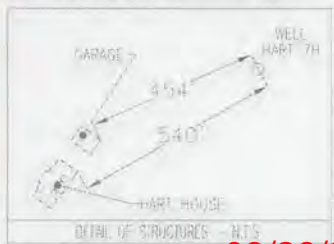
Well is located on topo map 1,164 feet south of Latitude: 39° 55' 00"

AS DRILLED PLAT

SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83
 N:4418212.24
 E:529498.06
 NAD83, WV NORTH
 N:516921.61
 E:1644566.51

AS DRILLED SURFACE HOLE LOCATION (SHL)
 UTM 17-NAD83(M)
 N:4418212.24
 E:529498.06
 NAD83, WV NORTH
 N:516921.61
 E:1644566.51

AS DRILLED APPROX. LANDING POINT
 UTM 17-NAD83(M)
 N:4418241.39
 E:529820.35
 NAD83, WV NORTH
 N:516999.57
 E:1645625.69



PARCEL	LESSOR
A	JOHN J. & RENEE HART
B	LAURA MAE HARTLEY
C	RICHARD A. & RUTH B. GAMES
D	RICHARD A. & RUTH B. GAMES
E	RICHARD A. & RUTH B. GAMES
F	RICHARD A. & RUTH B. GAMES
G	RICHARD A. & RUTH B. GAMES
H	HONUS A. STOLLAR
J	JOHN D. & SHARON M. EBBERT
K	CHRISTOPHER D. & SANDRA D. O'NEIL
L	PHILIP A. & DEBORAH K. KITTLE
M	RICHARD A. & RUTH B. GAMES

SEE PAGE 2 FOR SURFACE OWNERS

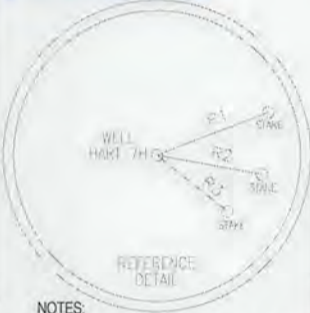
LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- WELL REFERENCE
- AS-DRILLED LATERAL
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- LESSORS
- SURFACE OWNERS

GAS WELLS

- EXISTING WELLS
- PLUGGED WELLS

APPROX. LANDING POINT
 UTM 17-NAD83
 N:4418319.38
 E:529745.50
 NAD83, WV NORTH
 N:517259.62
 E:1645384.36



LINE	BEARING	DISTANCE
R1	N 68°21'17" E	248.92
R2	S 79°33'23" E	223.27
R3	S 51°48'50" E	188.07
R4	N 23°44'34" W	1519.41
R5	N 58°20'18" W	1484.88
R6	S 72°27'16" W	1652.72

BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83
 N:4416410.54
 E:531431.09
 NAD83, WV NORTH
 N:510903.28
 E:1650810.87

AS DRILLED BOTTOM HOLE LOCATION (BHL)
 UTM 17-NAD83(M)
 N:4416411.00
 E:531431.49
 NAD83, WV NORTH
 N:510904.75
 E:1650812.22

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

Blue Mountain Inc.
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: HART 7H AS-DRILLED
 DRAWING #: HART 7H AS-DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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]
 R.P.E.: _____ L.L.S.: P.S. No. 2000

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: APRIL 28, 2016
 OPERATOR'S WELL #: HART 7H AS-DRILLED
 API WELL #: 47 51 01753
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: MIDDLE GRAVE CREEK - GRAVE CREEK ELEVATION: 1329.10'
 COUNTY/DISTRICT: MARSHALL / WASHINGTON QUADRANGLE: MOUNDSVILLE, WV 7.5'
 SURFACE OWNER: JOHN J. & RENEE HART ACREAGE: 108.550±
 OIL & GAS ROYALTY OWNER: JOHN J. & RENEE HART ACREAGE: 667.782±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,743.33'± TMD: 15,221'±
 WELL OPERATOR CHEVRON APPALACHIA, LLC DESIGNATED AGENT KENNETH E. TAWNEY
 Address 800 MOUNTAIN VIEW DRIVE Address 500 LEE STREET, EAST SUITE 1600
 City SMITHFIELD State PA Zip Code 15478 City CHARLESTON State WV Zip Code 25301-3202

Well is located on topo map 8,371 feet west of Longitude: 80° 37' 30"

03/29/2019

HART 7H

	SURFACE OWNER	DIST-TM/PAR
1	JOHN J. II & JENNA E. HART	14-10-11
2	DENNIS & MICHELLE S. BLAKE	14-10/11.3
3	CARL W. & BRIDGETT L. YOHO	14-6/35
4	JAMES E. CURRY	14-10/15
5	JAMES E. CURRY	14-10/13
6	JOHN J. HART ET UX	14-10/14
7	JAMES E. BLAKE	14-10/11.1
8	JOHN J. HART ET UX	14-6/36
9	CARL W. YOHO ET AL	14-6/35.1
10	CARL W. & BRIDGETT L. YOHO	14-6/28.1
11	CARL W. & BRIDGETT L. YOHO	14-6/28
12	JEFFREY D. & DENISE A. CRAMER	14-6/27
13	ANNE E. MORRIS	14-6/26
14	JOHN J. HART ET UX	14-10/18
15	JOHN J. & RENEE HART	14-10/19
16	JOHN J. & RENEE HART	14-10/19.1
17	JEFFREY D. & DENISE A. CRAMER	14-10/20
18	JOHN A. BIERCE ET UX	14-6/18.4
19	VERNON KNOX JR. ET UX	15-15/1
20	VERNON KNOX JR. ET UX	15-15/2
21	JOHN A. BIERCE II ET UX	15-15/3
22	JOHN A. BIERCE II ET UX	15-15/4
23	JOHN B. KESTNER ET UX	15-15/5
24	JOHN A. BIERCE II ET UX	15-15/6
25	JOHN A. BIERCE II ET UX	15-15/7
26	HEIKKI & TRISHA YEAGER	15-15/8.6
27	LARRY D. STERN	15-15/8.14
28	JASON D. PETHTEL	15-15/8.2
29	JASON D. PETHTEL	15-15/8.17
30	WILLIAM S. COX JR.	15-15/8.13
31	JOHN E. DRAKE ET UX	15-15/8.16
32	WILLIAM S. COX JR.	15-15/8.4
33	RONALD ADAMS ET UX	15-15/8.5
34	JOHN E. DRAKE ET UX	15-15/8.15
35	JOHN E. DRAKE ET UX	15-15/8.1
36	EDWARD D. & MALLORY J. FORDYCE	15-8/5.5
37	REX W. & JANET L. GARRISON	15-8/5.9
38	REX W. GARRISON	15-8/5.6
39	REX W. & JANET L. GARRISON	15-8/5.8
40	REX W. & JANET L. GARRISON	15-8/5
41	STEVE M. BONAR II	15-8/5.1
42	LEROY E. MEADOWS ET UX	15-8/5.10
43	LEROY E. MEADOWS ET UX	15-8/4
44	KANDY J. & ANTHONY E. BLATT	15-15/9.1
45	HONUS A. STOLLAR	15-15/9
46	ERIC & CHRISTINA KESTNER	15-15/8.18
47	FRANKIE D. WHITE ET UX	15-15/8.8
48	CHRISTOPHER R. & DANIELLE KING	15-15/8.9
49	JOHN M. SKRYPEK ET UX	15-15/8.10
50	NATHAN J. & SHANEY M. LILLEY	15-15/12.3
51	JERRY LILLEY ET UX	15-15/12.2
52	JERRY LILLEY ET UX	15-15/11.1
53	M E CHURCH	15-15/10
54	NATHAN J. & SHANEY M. LILLEY	15-15/11.2
55	JERRY IVAN & CAROLYN LILLEY	15-15/11
56	STEVEN & JOYCE ROBINSON ET AL	15-15/26
57	CHARLES BURKIEVICZ	15-15/19
58	CARL WILLIAM ERNEST JR	15-15/19.2
59	CARL WILLIAM ERNEST JR	15-15/19.1
60	ALLEN E. PETHTEL	15-15/19.3
61	ETHAN M J ULLUM	15-15/20
62	FRANKLIN J. PIERSON ET UX	15-15/21
63	FRANKLIN PIERSON ET UX	15-15/22
64	FRANKLIN J. PIERSON ET UX	15-15/24.2
65	JOHN D. EBBERT JR ET UX	15-15/24
66	EVELYN J. GAMBLE	15-15/24.1
67	CHRISTOPHER D. & SANDRA O'NEIL	15-15/23
68	TIMOTHY G. DUNLAP ET UX	15-16/19
69	CHRISTOPHER D. & SANDRA O'NEIL	15-15/18
70	JOHN A. BIERCE ET UX	14-6/18.4
71	PHILIP ALAN KITTLE	15-15/35
72	PHILIP ALAN KITTLE	15-15/34
73	PHILIP ALAN KITTLE	15-15/25
74	PHILIP ALAN & DEBORAH K. KITTLE	15-15/33

03/29/2019

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83
N:4418212.24
E:529498.06
NAD83, WV NORTH
N:516921.61
E:1644566.51

AS DRILLED
SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4418212.24
E:529498.06
NAD83, WV NORTH
N:516921.61
E:1644566.51

APPROX. LANDING POINT
UTM 17-NAD83
N:4418319.38
E:529745.50
NAD83, WV NORTH
N:517259.62
E:1645384.36

AS DRILLED
APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4418241.39
E:529820.35
NAD83, WV NORTH
N:516999.57
E:1645625.69

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83
N:4416410.54
E:531431.09
NAD83, WV NORTH
N:510903.28
E:1650810.87

AS DRILLED
BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4416411.00
E:531431.49
NAD83, WV NORTH
N:510904.75
E:1650812.22