

Well Operator's Report of Well Work



Well Number: BLAKE 4H (519173)

API: 47 - 103 - 02913

Submission:  Initial  Amended

Notes: Please note that Stone Energy Corp. was responsible for the Top Set drilling operations on this well & submitted an initial WR-35 (Attached) at the conclusion of those operations. EQT performed the lateral production drilling operations and subsequent stimulation operations detailed in this amended Report. Please further note that Wireline stages 17 and 26 required re-perforation.

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**519173-47-103-02913-00-00 Perforations**

<b>Stage Number</b>	<b>Perforation Date</b>	<b>Top Perf Depth (ftKB)</b>	<b>Bottom Perf Depth (ftKB)</b>	<b>Number of Shots</b>	<b>Formation</b>
Initiation Sleeve	6/21/2018	13,673	13,675	10	MARCELLUS
2	6/26/2018	13,378	13,540	40	MARCELLUS
3	6/30/2018	13,178	13,340	40	MARCELLUS
4	6/30/2018	12,978	13,140	40	MARCELLUS
5	7/1/2018	12,778	12,940	40	MARCELLUS
6	7/2/2018	12,578	12,740	40	MARCELLUS
7	7/3/2018	12,378	12,540	40	MARCELLUS
8	7/4/2018	12,178	12,340	40	MARCELLUS
9	7/5/2018	11,978	12,140	40	MARCELLUS
10	7/6/2018	11,778	11,940	40	MARCELLUS
11	7/8/2018	11,578	11,740	40	MARCELLUS
12	7/8/2018	11,378	11,540	40	MARCELLUS
13	7/9/2018	11,178	11,340	40	MARCELLUS
14	7/9/2018	10,978	11,140	40	MARCELLUS
15	7/10/2018	10,778	10,940	40	MARCELLUS
16	7/10/2018	10,578	10,740	40	MARCELLUS
17	7/12/2018	10,258	10,540	64	MARCELLUS
18	7/12/2018	10,058	10,220	40	MARCELLUS
19	7/13/2018	9,858	10,020	40	MARCELLUS
20	7/15/2018	9,658	9,820	40	MARCELLUS
21	7/15/2018	9,458	9,620	40	MARCELLUS
22	7/16/2018	9,258	9,420	40	MARCELLUS
23	7/17/2018	9,058	9,220	40	MARCELLUS
24	7/17/2018	8,858	9,020	40	MARCELLUS
25	7/18/2018	8,658	8,820	40	MARCELLUS
26	7/19/2018	8,458	8,620	72	MARCELLUS
27	7/20/2018	8,258	8,420	40	MARCELLUS
28	7/20/2018	8,058	8,220	32	MARCELLUS
29	7/20/2018	7,858	8,020	40	MARCELLUS
30	7/21/2018	7,658	7,820	40	MARCELLUS
31	7/21/2018	7,458	7,620	40	MARCELLUS
32	7/21/2018	7,258	7,420	40	MARCELLUS
33	7/21/2018	7,058	7,220	40	MARCELLUS

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**519173 47-103-02913-00-00 - Stimulated Stages**

<b>Stage Number</b>	<b>Stimulation Date</b>	<b>Ave Pump Rate (BPM)</b>	<b>Ave Treatment Pressure (PSI)</b>	<b>Max Breakdown Pressure (PSI)</b>	<b>ISIP (PSI)</b>	<b>Amount of Proppant (lbs)</b>	<b>Amount of Water (bbbls)</b>	<b>Amount of Nitrogen/other (units)</b>
1	6/26/2018	81	8,163.00	8,840.00	3,212.00	269,480.00	6,615	0
2	6/29/2018	98	7,895.00	9,045.00	3,659.00	450,991.00	8,273	0
3	6/30/2018	96	8,304.00	9,157.00	4,001.00	452,347.00	7,994	0
4	7/1/2018	98	8,560.00	8,997.00	4,020.00	450,772.00	8,191	0
5	7/2/2018	98	8,225.00	8,613.00	3,791.00	450,340.00	7,661	0
6	7/2/2018	97	8,265.00	8,527.00	3,775.00	446,080.00	7,714	0
7	7/4/2018	93	7,892.00	8,505.00	3,727.00	450,830.00	8,080	0
8	7/5/2018	96	8,243.00	9,030.00	3,815.00	450,180.00	7,686	0
9	7/6/2018	96	7,895.00	8,204.00	4,108.00	450,380.00	8,121	0
10	7/8/2018	96	7,969.00	8,356.00	4,083.00	450,420.00	7,709	0
11	7/8/2018	96	8,027.00	8,307.00	3,845.00	450,020.00	7,910	0
12	7/9/2018	97	8,021.00	8,407.00	3,964.00	450,180.00	7,605	0
13	7/9/2018	96	8,164.00	8,549.00	4,046.00	450,660.00	7,839	0
14	7/10/2018	88	8,252.00	8,622.00	4,142.00	450,760.00	7,808	0
15	7/10/2018	96	8,035.00	8,439.00	4,147.00	450,060.00	7,971	0
16	7/11/2018	96	8,334.00	8,756.00	3,896.00	447,500.00	7,768	0
17	7/12/2018	17	8,820.00	9,524.00	4,886.00	5,912.00	6,516	0
17	7/12/2018	95	8,286.00	8,670.00	3,929.00	450,120.00	8,213	0
18	7/13/2018	93	7,930.00	8,784.00	3,834.00	450,940.00	7,951	0
19	7/14/2018	89	7,736.00	8,330.00	4,376.00	450,240.00	7,685	0
20	7/15/2018	83	7,254.00	7,707.00	4,323.00	449,940.00	8,039	0
21	7/16/2018	98	8,234.00	8,652.00	3,714.00	449,480.00	7,915	0
22	7/17/2018	92	7,864.00	8,884.00	4,489.00	450,820.00	7,860	0
23	7/17/2018	97	8,070.00	8,422.00	4,017.00	450,120.00	7,706	0
24	7/18/2018	95	7,975.00	8,865.00	4,158.00	450,980.00	7,801	0
25	7/19/2018	80	7,819.00	8,778.00	4,208.00	450,900.00	8,563	0
26	7/19/2018	27	7,543.00	9,451.00	4,751.00	250.00	3,462	0
26	7/19/2018	67	7,986.00	9,204.00	3,876.00	455,440.00	9,907	0
27	7/20/2018	97	7,822.00	8,175.00	4,335.00	450,500.00	8,666	0
28	7/20/2018	94	7,495.00	7,854.00	4,212.00	450,860.00	8,081	0
29	7/21/2018	94	7,673.00	8,127.00	4,336.00	450,400.00	7,740	0
30	7/21/2018	94	7,506.00	8,354.00	3,733.00	457,400.00	8,197	0
31	7/21/2018	100	7,336.00	7,702.00	3,826.00	455,320.00	7,669	0
32	7/21/2018	98	7,193.00	7,429.00	4,202.00	457,100.00	7,648	0
33	7/21/2018	98	7,268.00	7,731.00	3,385.00	461,900.00	7,397	0

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Well Operator's Report of Well Work

API 47 - 103 - 02913 County WETZEL District MAGNOLIA  
Quad NEW MARTINSVILLE 7.5' Pad Name BLAKE (NMA12) Field/Pool Name N/A  
Farm name GARY LEMONS Well Number BLAKE 4H (519173)  
Operator (as registered with the OOG) EQT Production Company  
Address 625 LIBERTY AVENUE, SUITE 1700 City PITTSBURGH State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,388,565.317 Easting 517,294.712  
Landing Point of Curve Northing 4,388,503.040 Easting 517,157.713  
Bottom Hole Northing 4,390,110.400 Easting 516,075.606

Elevation (ft) 1298 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 Based Mud 13.2 ppg, aliphatic based non-aqueous drilling fluid, barium sulfate, calcium chloride, organophylic clay, quaternary ammonium clay, gilsonite, blended emulsifier, wetting agent, blended graphite, hydrated lime, calcium carbonate, ground walnut shells, fibrous cellulose.

Date permit issued 05/18/2018 Date drilling commenced 06/04/2018 Date drilling ceased 06/08/2018  
Date completion activities began 6/26/2018 Date completion activities ceased 07/21/2018  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

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Freshwater depth(s) ft 90 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1108 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed by DH

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Rev. 8/23/13

API 47-103 - 02913 Farm name GARY LEMONS Well number BLAKE 4H (519173)

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							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5 1/2"	13,700'	NEW	P-110 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has calculated TOC of 3331' MD, which is greater than 500' TVD above the producing formation. No issues during cement job.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	Class A	2032	15.6	1.19	2418	3331'	8+
Tubing							

Drillers TD (ft) 13,714' MD      Loggers TD (ft) N/A  
 Deepest formation penetrated MARCELLUS      Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 5481' MD

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 \_\_\_\_\_

PRODUCTION: ON SHOE TRACK AND EVERY JOINT TO 4806' AND EVERY 3RD JOINT TO 2237'

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 \_\_\_\_\_

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API 47- 103 - 02913 Farm name GARY LEMONS Well number BLAKE 4H (519173)

**PERFORATION RECORD**

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

Please insert additional pages as applicable.

**STIMULATION INFORMATION PER STAGE**

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
								Please See Attached

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>6,845'</u> TVD	<u>7,133'</u> MD
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1,759 psi Bottom Hole N/A psi DURATION OF TEST 187 hrs

OPEN FLOW Gas 6,675 mcfpd Oil N/A bpd NGL 400 bpd Water 693 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

<u>LITHOLOGY/ FORMATION</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>TOP</u>	<u>BOTTOM</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)</u>
	<u>DEPTH IN FT NAME TVD</u>	<u>DEPTH IN FT TVD</u>	<u>DEPTH IN FT MD</u>	<u>DEPTH IN FT MD</u>	
	<u>0</u>		<u>0</u>		

Please insert additional pages as applicable.

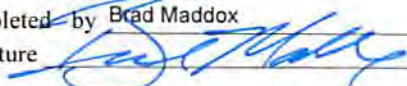
Drilling Contractor Precision Drilling  
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company Baker Hughes  
Address 400 Technology Drive - Suite 100 City Cannonsburg State PA Zip 15317

Cementing Company BJ Services, LLC  
Address 4000 Town Center Blvd, Suite 210 City Cannonsburg State PA Zip 15317

Stimulating Company ProFrac  
Address 777 Main Street, Suite 3900 City Ft. Worth State TX Zip 76102

Please insert additional pages as applicable.

Completed by Brad Maddox Telephone (412) 395 - 7053  
Signature  Title Completions Director Date 10/18/2018

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API 47- 103 - 02913 Farm name GARY LEMONS Well number BLAKE 4H (519173)

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Cementing Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



11/16/2018

Formations Formation		Well# 519173	API# 47-103-02913-00-00	
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
SAND/SHALE	3060	3059	5279	5262
BENSON	5279	5262	5330	5313
SAND/SHALE	5330	5313	5545	5528
ALEXANDER	5545	5528	5585	5568
ELKS	5585	5568	6603	6493
SAND/SHALE	6603	6493	6726	6600
SONYEA	6726	6600	6830	6682
MIDDLESEX	6830	6682	6852	6699
GENESEE	6852	6699	6933	6753
GENESEO	6933	6753	6955	6766
TULLY	6955	6766	7001	6791
HAMILTON	7001	6791	7133	6845
MARCELLUS	7133	6845	13714	6884

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Well Operator's Report of Well Work

Office of Oil and Gas

API 47-103-02913 County Welzel District Magnolia MAR 13 2017  
Quad New Martinsville Pad Name Blake Field/Pool Name Mary  
Farm name Lemons, Gary Well Number #4H  
Operator (as registered with the OOG) Stone Energy Corporation  
Address 1300 Fort Pierpont Dr. - Suite 201 City Morgantown State WV Zip 26508

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4,388,565 Easting 517,295  
Landing Point of Curve Northing TBD - Only Top Hole Drilled Easting TBD - Only Top Hole Drilled  
Bottom Hole Northing TBD - Only Top Hole Drilled Easting TBD - Only Top Hole Drilled

Elevation (ft) 1293 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)  
Air Drilling additives: air, fresh water, soda ash, KCl, clay guard, PAC, foamer, corrosion inhibitor

Date permit issued 9/23/2013 Date drilling commenced 2/28/2014 Date drilling ceased 3/9/2014  
Date completion activities began Not yet completed Date completion activities ceased  
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 90 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft None Reported Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 1108 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N)

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**APPROVED**

NAME: Se...  
DATE: 5-25-17

Reviewed by: DMH

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API 47-103 - 02913

Farm name Lemons, Gary

Well number #4H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/lb	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	80' KB / 80' GL	New	LS - 84 ppf		N - GTS
Surface	17.5"	13.375"	1283' KB / 1273' GL	New	J55 - 54.5 ppf	100' & 200'	Y - CTS
Coal	17.5"	13.375"	1283' KB / 1273' GL	New	J55 - 54.5 ppf	100' & 200'	Y - CTS
Intermediate 1	12.25"	9.625"	2567' KB / 2549' GL	New	J55 - 36 ppf		Y - CTS
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set		13.375" x 9.625" annulus inflatable packer set @ 1177' KB					

Comment Details Circulated 21 bbls cement to surface on the 13.375" casing string. Circulated 45 bbls cement to surface on the 9.625" casing string.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield ( ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Ton (MD)	WOC (hrs)
Conductor	Type 1	34	15.6	1.18	40	Surface	24+
Surface	Class A	940	15.6	1.20	1128	Surface	8
Coal	Class A	940	15.6	1.20	1128	Surface	8
Intermediate 1	Class A	Lead: 660 / Tail: 230	Lead 15.6 / Tail 15.5	Lead 1.22 / Tail 1.21	Lead: 605 / Tail: 378	Surface	8
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 4924 MD / 4907 TVD

Loggers TD (ft) N/A

Deepest formation penetrated Devonian Shale

Plug back to (ft) \_\_\_\_\_

Plug back procedure \_\_\_\_\_

Kick off depth (ft) TBD - only top hole drilled

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 casing has bow spring centralizers placed on

joints 2, 6, 10, 14, 18, 22, 26 and 30. Intermediate casing has bow spring centralizers placed on joints 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56 and 60.

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 \_\_\_\_\_

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API 47-103 - 02913 Farm name Lemons, Gary Well number #4H

### PERFORATION RECORD

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

Please insert additional pages as applicable.

### STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage 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)

Please insert additional pages as applicable.

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API 47-103-02913

Farm name Lemons, Gary

Well number #4H

**PRODUCING FORMATION(S)**

**DEPTHS**

Not yet completed \_\_\_\_\_ 1VD \_\_\_\_\_ MD \_\_\_\_\_  
 Not yet producing \_\_\_\_\_

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 (FRESH WATER, BRINE, OIL, GAS, ETC.)
	DEPTH INT NAH 1VD	DEPTH INT 1VD	DEPTH INT MD	DEPTH INT MD	
Sandstone & Shale	0	1108	0	1108	Fresh water @ 90'
Coal	1108	1115	1108	1115	
					No salt water reported
Sandstone & Shale	1115	2216	1115	2216	
Big Lime	2216	2331	2216	2331	
Big Injun	2331	2416	2331	2416	
Sandstone & Shale	2416	2786	2416	2786	
Berea Sandstone	2786	2795	2786	2795	
Shale	2795	3036	2795	3036	
Gordon	3036	3060	3036	3060	
Undif Devonian Shale	3060	4907	3060	4924	

Please insert additional pages as applicable

Drilling Contractor Highlands (top hole)

Address 800 Virginia Street - East City Charleston State WV Zip 25301

Logging Company Scientific Drilling (top hole)

Address 124 Vista Drive City Charlotes State PA Zip 15022

Cementing Company Halliburton (top hole)


Address 121 Champion Way City Canonsburg State PA Zip 15317

Stimulating Company \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please insert additional pages as applicable

Completed by Greg Zofchak

Signature 

Title Drilling Engineer

Telephone 304-225-1600

Date 3-6-2017

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



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## Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Jacostec
Scale	0.999941	Report Generated	6/20/2018 at 10:15:54 AM
Convergence at slot	0.83° West	Database/Source file	WA_MPL_EASTERNUS_Defn/Blake_4H_519173_AWP_Proj_13714_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	18.80	7.61	1634335.61	420268.80	39°38'47.848"N	80°47'54.974"W
Facility Reference Pt			1634328.00	420250.00	39°38'47.661"N	80°47'55.068"W
Field Reference Pt			1688243.35	385255.46	39°33'08.944"N	80°36'20.337"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Precision 539 (RKB) to Facility Vertical Datum	1316.00ft
Horizontal Reference Pt	Slot	Precision 539 (RKB) to Mean Sea Level	1316.00ft
Vertical Reference Pt	Precision 539 (RKB)	Precision 539 (RKB) to Mud Line at Slot (Slot 4H)	18.00ft
MD Reference Pt	Precision 539 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	322.75°

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	329.980	0.00	-1316.00	0.00	0.00	0.00	0.00	0.00	0.00
18.00	0.000	329.980	18.00	-1298.00	0.00	0.00	0.00	0.00	0.00	0.00
33.00	0.150	329.980	33.00	-1283.00	0.02	0.02	-0.01	1.00	1.00	-200.13
58.00	0.300	329.980	58.00	-1258.00	0.12	0.10	-0.06	0.60	0.60	0.00
83.00	0.450	329.980	83.00	-1233.00	0.28	0.24	-0.14	0.60	0.60	0.00
108.00	0.590	329.980	108.00	-1208.00	0.50	0.44	-0.25	0.56	0.56	0.00
133.00	0.510	328.070	133.00	-1183.00	0.74	0.65	-0.38	0.33	-0.32	-7.64
158.00	0.400	330.280	158.00	-1158.00	0.94	0.82	-0.48	0.45	-0.44	8.84
183.00	0.350	323.080	183.00	-1133.00	1.10	0.95	-0.57	0.27	-0.20	-28.80
208.00	0.410	312.440	208.00	-1108.00	1.27	1.07	-0.68	0.37	0.24	-42.56
233.00	0.390	307.760	232.99	-1083.01	1.44	1.19	-0.81	0.15	-0.08	-18.72
258.00	0.420	308.640	257.99	-1058.01	1.61	1.30	-0.95	0.12	0.12	3.52
283.00	0.400	305.180	282.99	-1033.01	1.78	1.40	-1.10	0.13	-0.08	-13.84
308.00	0.410	305.250	307.99	-1008.01	1.95	1.51	-1.24	0.04	0.04	0.28
333.00	0.400	315.460	332.99	-983.01	2.12	1.62	-1.37	0.29	-0.04	40.84
358.00	0.330	305.310	357.99	-958.01	2.28	1.72	-1.49	0.38	-0.28	-40.60
383.00	0.370	297.080	382.99	-933.01	2.42	1.80	-1.62	0.26	0.16	-32.92
408.00	0.390	305.590	407.99	-908.01	2.57	1.89	-1.77	0.24	0.08	34.04
433.00	0.400	304.900	432.99	-883.01	2.74	1.99	-1.91	0.04	0.04	-2.76
458.00	0.380	308.190	457.99	-858.01	2.90	2.09	-2.04	0.12	-0.08	13.16
483.00	0.370	309.030	482.99	-833.01	3.06	2.19	-2.17	0.05	-0.04	3.36
508.00	0.360	306.910	507.99	-808.01	3.21	2.29	-2.30	0.07	-0.04	-8.48
533.00	0.410	298.490	532.99	-783.01	3.37	2.38	-2.44	0.30	0.20	-33.68
558.00	0.420	301.010	557.99	-758.01	3.54	2.47	-2.60	0.08	0.04	10.08
583.00	0.480	302.450	582.99	-733.01	3.72	2.57	-2.76	0.24	0.24	5.76
608.00	0.590	296.230	607.99	-708.01	3.93	2.68	-2.97	0.50	0.44	-24.88
633.00	0.650	295.650	632.98	-683.02	4.17	2.80	-3.21	0.24	0.24	-2.32
658.00	0.660	292.750	657.98	-658.02	4.42	2.92	-3.47	0.14	0.04	-11.60
683.00	0.700	288.890	682.98	-633.02	4.68	3.03	-3.75	0.24	0.16	-15.44
708.00	0.730	289.360	707.98	-608.02	4.94	3.13	-4.04	0.12	0.12	1.88

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
733.00	0.740	287.800	732.98	-583.02	5.20	3.23	-4.35	0.09	0.04	-6.24
758.00	0.830	286.530	757.97	-558.03	5.48	3.33	-4.67	0.37	0.36	-5.08
783.00	0.770	286.700	782.97	-533.03	5.76	3.43	-5.01	0.24	-0.24	0.68
808.00	0.740	284.100	807.97	-508.03	6.02	3.52	-5.33	0.18	-0.12	-10.40
833.00	0.810	285.500	832.97	-483.03	6.29	3.60	-5.65	0.29	0.28	5.60
858.00	0.850	283.810	857.96	-458.04	6.58	3.70	-6.00	0.19	0.16	-6.76
883.00	0.810	285.920	882.96	-433.04	6.86	3.79	-6.35	0.20	-0.16	8.44
908.00	0.860	289.040	907.96	-408.04	7.16	3.90	-6.70	0.27	0.20	12.48
933.00	0.810	281.990	932.96	-383.04	7.45	4.00	-7.05	0.46	-0.20	-28.20
958.00	0.670	283.120	957.95	-358.05	7.69	4.07	-7.37	0.56	-0.56	4.52
983.00	0.690	279.840	982.95	-333.05	7.92	4.13	-7.66	0.18	0.08	-13.12
1008.00	0.650	278.520	1007.95	-308.05	8.13	4.17	-7.94	0.17	-0.16	-5.28
1033.00	0.580	284.960	1032.95	-283.05	8.33	4.23	-8.21	0.39	-0.28	25.76
1058.00	0.540	278.790	1057.95	-258.05	8.52	4.28	-8.45	0.29	-0.16	-24.68
1083.00	0.510	279.510	1082.95	-233.05	8.68	4.31	-8.67	0.12	-0.12	2.88
1108.00	0.330	281.030	1107.95	-208.05	8.82	4.34	-8.85	0.72	-0.72	6.08
1133.00	0.410	282.070	1132.95	-183.05	8.94	4.38	-9.01	0.32	0.32	4.16
1158.00	0.280	283.610	1157.95	-158.05	9.05	4.41	-9.16	0.52	-0.52	6.16
1183.00	0.340	280.990	1182.95	-133.05	9.16	4.44	-9.29	0.25	0.24	-10.48
1208.00	0.210	288.350	1207.95	-108.05	9.25	4.47	-9.41	0.54	-0.52	29.44
1233.00	0.260	279.690	1232.94	-83.06	9.33	4.49	-9.50	0.24	0.20	-34.64
1258.00	0.230	289.280	1257.94	-58.06	9.41	4.52	-9.61	0.20	-0.12	38.36
1283.00	0.060	0.270	1282.94	-33.06	9.46	4.55	-9.66	0.87	-0.68	283.96
1308.00	0.260	282.480	1307.94	-8.06	9.52	4.57	-9.71	1.02	0.80	-311.16
1333.00	0.190	277.950	1332.94	16.94	9.59	4.59	-9.81	0.29	-0.28	-18.12
1358.00	0.170	287.330	1357.94	41.94	9.65	4.61	-9.88	0.14	-0.08	37.52
1383.00	0.180	287.790	1382.94	66.94	9.71	4.63	-9.96	0.04	0.04	1.84
1408.00	0.230	281.350	1407.94	91.94	9.78	4.65	-10.04	0.22	0.20	-25.76
1433.00	0.210	301.670	1432.94	116.94	9.86	4.69	-10.13	0.32	-0.08	81.28
1458.00	0.300	315.380	1457.94	141.94	9.97	4.76	-10.22	0.43	0.36	54.76

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)											
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	TVDSS (ft)	Vert Sect (ft)	North (ft)	East (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1483.00	0.360	338.250	1482.94	166.94	10.11	4.88	-10.29	0.57	0.24	91.56	
1508.00	0.390	333.830	1507.94	191.94	10.27	5.03	-10.36	0.17	0.12	-17.68	
1533.00	0.440	324.660	1532.94	216.94	10.45	5.18	-10.45	0.33	0.20	-36.68	
1558.00	0.370	334.710	1557.94	241.94	10.62	5.33	-10.54	0.40	-0.26	40.20	
1583.00	0.430	335.620	1582.94	266.94	10.79	5.49	-10.61	0.24	0.24	3.64	
1608.00	0.580	322.150	1607.94	291.94	11.01	5.68	-10.73	0.76	0.60	-53.88	
1633.00	0.450	349.300	1632.94	316.94	11.23	5.87	-10.83	1.09	-0.52	108.60	
1658.00	0.460	329.740	1657.94	341.94	11.41	6.05	-10.90	0.62	0.04	-78.24	
1683.00	0.400	337.850	1682.94	366.94	11.60	6.22	-10.98	0.34	-0.24	32.44	
1708.00	0.420	327.780	1707.94	391.94	11.77	6.38	-11.06	0.30	0.08	-40.28	
1733.00	0.440	331.060	1732.94	416.94	11.96	6.54	-11.16	0.13	0.08	13.12	
1758.00	0.500	331.770	1757.93	441.93	12.16	6.72	-11.25	0.24	0.24	2.84	
1783.00	0.500	327.120	1782.93	466.93	12.38	6.91	-11.36	0.16	0.00	-18.60	
1808.00	0.470	331.030	1807.93	491.93	12.59	7.09	-11.47	0.18	-0.12	15.64	
1833.00	0.470	330.960	1832.93	516.93	12.79	7.27	-11.57	0.00	0.00	-0.28	
1858.00	0.430	337.240	1857.93	541.93	12.98	7.45	-11.66	0.25	-0.16	25.12	
1883.00	0.480	331.720	1882.93	566.93	13.18	7.63	-11.75	0.27	0.20	-22.08	
1908.00	0.360	333.260	1907.93	591.93	13.36	7.79	-11.83	0.48	-0.48	6.16	
1933.00	0.330	354.680	1932.93	616.93	13.50	7.93	-11.87	0.53	-0.12	85.68	
1958.00	0.440	316.440	1957.93	641.93	13.65	8.07	-11.94	1.09	0.44	-152.96	
1983.00	0.380	322.640	1982.93	666.93	13.83	8.21	-12.06	0.30	-0.24	24.80	
2008.00	0.350	318.400	2007.93	691.93	13.99	8.33	-12.16	0.16	-0.12	-16.96	
2033.00	0.160	305.450	2032.93	716.93	14.10	8.41	-12.24	0.79	-0.76	-51.80	
2058.00	0.130	302.650	2057.93	741.93	14.16	8.44	-12.29	0.12	-0.12	-11.20	
2083.00	0.120	303.430	2082.93	766.93	14.21	8.47	-12.34	0.04	-0.04	3.12	
2108.00	0.250	301.520	2107.93	791.93	14.29	8.51	-12.41	0.52	0.52	-7.64	
2133.00	0.210	292.250	2132.93	816.93	14.38	8.56	-12.50	0.22	-0.16	-37.08	
2158.00	0.220	258.520	2157.93	841.93	14.44	8.57	-12.59	0.50	0.04	-134.92	
2183.00	0.230	176.690	2182.93	866.93	14.42	8.51	-12.63	1.18	0.04	-327.32	
2208.00	0.340	156.850	2207.93	891.93	14.30	8.39	-12.60	0.58	0.44	-79.36	

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2233.00	0.350	157.680	2232.93	916.93	14.16	8.25	-12.54	0.04	0.04	3.32
2258.00	0.470	151.340	2257.93	941.93	13.98	8.09	-12.46	0.51	0.48	-25.36
2283.00	0.380	163.280	2282.92	966.92	13.80	7.92	-12.39	0.50	-0.36	47.76
2308.00	0.410	150.600	2307.92	991.92	13.64	7.76	-12.32	0.37	0.12	-50.72
2333.00	0.370	159.170	2332.92	1016.92	13.47	7.61	-12.25	0.28	-0.16	34.28
2358.00	0.340	170.470	2357.92	1041.92	13.33	7.46	-12.21	0.30	-0.12	45.20
2383.00	0.440	166.020	2382.92	1066.92	13.18	7.30	-12.17	0.42	0.40	-17.80
2408.00	0.430	156.260	2407.92	1091.92	13.00	7.12	-12.11	0.30	-0.04	-39.04
2433.00	0.400	167.520	2432.92	1116.92	12.83	6.95	-12.05	0.35	-0.12	45.04
2458.00	0.340	155.630	2457.92	1141.92	12.67	6.79	-12.00	0.39	-0.24	-47.56
2483.00	0.340	160.550	2482.92	1166.92	12.53	6.66	-11.95	0.12	0.00	19.68
2508.00	0.360	164.290	2507.92	1191.92	12.39	6.51	-11.90	0.12	0.08	14.96
2532.99	0.390	157.570	2532.91	1216.91	12.23	6.36	-11.85	0.21	0.12	-26.89
2557.99	0.330	182.780	2557.91	1241.91	12.09	6.21	-11.82	0.67	-0.24	100.84
2583.00	0.320	168.740	2582.92	1266.92	11.98	6.07	-11.81	0.36	-0.04	-64.13
2622.99	0.190	70.870	2622.91	1306.91	11.85	5.98	-11.72	0.97	-0.33	-239.73
2653.99	0.580	74.550	2653.91	1337.91	11.78	6.04	-11.52	1.26	1.26	11.87
2716.99	1.360	55.590	2716.90	1400.90	11.62	6.54	-10.60	1.32	1.24	-30.10
2748.99	1.640	60.660	2748.89	1432.89	11.54	6.98	-9.88	0.97	0.87	15.84
2779.99	2.130	70.190	2779.87	1463.87	11.31	7.40	-8.96	1.87	1.58	30.74
2873.99	2.980	100.520	2873.78	1557.78	8.98	7.54	-4.91	1.67	0.90	32.27
2967.99	3.910	121.450	2967.61	1651.61	4.18	5.42	0.23	1.65	0.99	22.27
3061.99	4.640	129.950	3061.35	1745.35	-2.51	1.31	5.88	1.03	0.78	9.04
3155.99	5.280	137.090	3155.00	1839.00	-10.53	-4.30	11.74	0.94	0.68	7.60
3249.99	5.890	152.440	3248.56	1932.56	-19.58	-11.74	16.91	1.71	0.65	16.33
3343.99	6.770	157.220	3341.99	2025.99	-29.70	-21.13	21.29	1.09	0.94	5.09
3438.99	7.060	168.260	3436.30	2120.30	-40.40	-32.01	24.65	1.43	0.31	11.62
3532.99	7.120	172.550	3529.58	2213.58	-50.66	-43.44	26.58	0.57	0.06	4.56
3626.99	7.090	176.020	3622.86	2306.86	-60.57	-55.00	27.73	0.46	-0.03	3.69
3720.99	7.840	177.560	3716.06	2400.06	-70.68	-67.20	28.41	0.83	0.80	1.64

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
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Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
3814.99	8.030	178.140	3809.16	2493.16	-81.30	-80.16	28.90	0.22	0.20	0.62
3908.99	8.170	173.240	3902.22	2586.22	-92.41	-93.36	29.90	0.75	0.15	-5.21
4004.99	8.400	175.650	3997.22	2681.22	-104.17	-107.12	31.23	0.43	0.24	2.51
4098.99	7.660	180.700	4090.30	2774.30	-114.88	-120.23	31.67	1.09	-0.79	5.37
4192.99	7.600	178.710	4183.47	2867.47	-124.85	-132.71	31.74	0.29	-0.06	-2.12
4286.99	7.510	175.650	4276.65	2960.65	-135.04	-145.05	32.34	0.44	-0.10	-3.26
4380.99	8.070	175.380	4369.79	3053.79	-145.75	-157.75	33.34	0.60	0.60	-0.29
4474.99	8.040	172.590	4462.86	3146.86	-157.01	-170.85	34.72	0.42	-0.03	-2.97
4569.99	7.440	174.910	4556.99	3240.99	-167.98	-183.56	36.12	0.71	-0.63	2.44
4663.99	7.950	173.670	4650.15	3334.15	-178.71	-196.09	37.38	0.57	0.54	-1.32
4757.99	7.720	178.150	4743.27	3427.27	-189.44	-208.86	38.30	0.69	-0.24	4.77
4852.00	7.820	176.730	4836.42	3520.42	-199.89	-221.56	38.87	0.23	0.11	-1.51
4925.00	8.050	177.060	4908.72	3592.72	-208.23	-231.62	39.41	0.32	0.32	0.45
5014.00	5.860	174.540	4997.06	3681.06	-217.24	-242.37	40.17	2.48	-2.46	-2.83
5104.00	3.560	174.980	5086.75	3770.75	-223.51	-249.72	40.85	2.56	-2.56	0.49
5193.00	2.310	176.980	5175.63	3859.63	-227.33	-254.27	41.18	1.41	-1.40	2.25
5283.00	0.030	348.040	5265.61	3949.61	-228.80	-256.06	41.28	2.60	-2.53	190.07
5373.00	0.030	225.110	5355.61	4039.61	-228.79	-256.05	41.25	0.06	0.00	-136.59
5462.00	0.040	357.230	5444.61	4128.61	-228.76	-256.03	41.24	0.07	0.01	148.45
5552.00	0.030	213.710	5534.61	4218.61	-228.75	-256.02	41.22	0.07	-0.01	-159.47
5641.00	0.030	281.990	5623.61	4307.61	-228.74	-256.04	41.19	0.04	0.00	76.72
5731.00	7.540	170.100	5713.35	4397.35	-233.97	-261.86	42.18	8.39	8.34	-124.32
5776.00	11.390	169.690	5757.73	4441.73	-240.56	-269.14	43.48	8.56	8.56	-0.91
5821.00	15.220	170.400	5801.51	4485.51	-249.75	-279.34	45.26	8.52	8.51	1.58
5866.00	19.190	171.000	5844.49	4528.49	-261.50	-292.47	47.41	8.83	8.82	1.33
5910.00	24.280	171.840	5885.35	4569.35	-275.79	-308.58	49.82	11.59	11.57	1.91
5955.00	28.500	172.180	5925.65	4609.65	-293.23	-328.39	52.60	9.38	9.38	0.76
6000.00	33.050	172.140	5964.30	4648.30	-313.29	-351.19	55.74	10.11	10.11	-0.09
6045.00	37.670	171.760	6000.99	4684.99	-336.01	-376.97	59.39	10.28	10.27	-0.84
6089.00	40.030	171.990	6035.25	4719.25	-360.12	-404.29	63.29	5.37	5.36	0.52

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
6134.00	37.300	175.330	6070.39	4754.39	-384.25	-432.22	66.42	7.63	-6.07	7.42
6179.00	33.540	180.270	6107.06	4791.06	-405.61	-458.25	67.47	10.50	-8.36	10.98
6224.00	29.670	187.050	6145.39	4829.39	-423.45	-481.75	66.04	11.66	-8.60	15.07
6268.00	26.530	195.710	6184.22	4868.22	-437.17	-502.04	62.04	11.68	-7.14	19.68
6313.00	24.310	204.630	6224.88	4908.88	-447.60	-520.14	55.46	9.82	-4.93	19.82
6358.00	22.540	214.000	6266.18	4950.18	-454.74	-535.72	46.77	9.15	-3.93	20.82
6403.00	21.140	224.360	6307.96	4991.96	-458.70	-548.67	36.27	9.10	-3.11	23.02
6447.00	21.440	235.380	6348.98	5032.98	-459.49	-558.92	24.10	9.11	0.68	25.05
6492.00	21.780	246.300	6390.83	5074.83	-457.15	-566.95	9.68	8.96	0.76	24.27
6537.00	23.090	256.150	6432.44	5116.44	-451.69	-572.42	-6.54	8.83	2.91	21.89
6582.00	24.790	265.490	6473.58	5157.58	-443.08	-575.28	-24.52	9.22	3.78	20.76
6626.00	27.000	274.290	6513.18	5197.18	-431.46	-575.25	-43.68	10.06	5.02	20.00
6671.00	29.520	283.460	6552.83	5236.83	-416.10	-571.91	-64.66	11.14	5.60	20.38
6716.00	32.430	290.670	6591.42	5275.42	-397.28	-565.06	-86.75	10.47	6.47	16.02
6761.00	35.880	296.170	6628.66	5312.66	-375.25	-554.98	-109.89	10.28	7.67	12.22
6806.00	39.660	301.270	6664.24	5348.24	-350.08	-541.71	-134.01	10.89	8.40	11.33
6850.00	43.630	306.270	6697.12	5381.12	-322.44	-525.43	-158.27	11.76	9.02	11.36
6895.00	47.850	310.100	6728.52	5412.52	-291.26	-505.48	-183.56	11.18	9.38	8.51
6940.00	52.680	312.670	6757.28	5441.28	-257.34	-482.60	-209.49	11.60	10.73	5.71
6985.00	57.630	314.430	6782.99	5466.99	-220.90	-457.15	-236.24	11.46	11.00	3.91
7029.00	62.460	316.120	6804.95	5488.95	-183.11	-430.06	-263.05	11.47	10.98	3.84
7074.00	66.920	317.680	6824.19	5508.19	-142.65	-400.36	-290.83	10.39	9.91	3.47
7119.00	70.970	318.810	6840.35	5524.35	-100.79	-369.03	-318.78	9.30	9.00	2.51
7164.00	74.320	319.980	6853.77	5537.77	-57.92	-336.43	-346.73	7.85	7.44	2.60
7209.00	78.360	320.830	6865.16	5549.16	-14.43	-302.88	-374.47	4.89	4.53	1.89
7254.00	80.230	322.400	6874.29	5558.29	29.62	-268.35	-401.83	9.25	8.60	3.49
7298.00	84.200	324.260	6880.25	5564.25	73.20	-233.39	-427.85	9.95	9.02	4.23
7343.00	87.850	325.830	6883.37	5567.37	118.05	-196.60	-453.57	8.83	8.11	3.49
7388.00	90.550	327.540	6884.00	5568.00	162.93	-159.00	-478.28	7.10	6.00	3.80
7433.00	90.490	328.420	6883.59	5567.59	207.74	-120.85	-502.13	1.96	-0.13	1.96



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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	TVDSS (ft)	Vert Sect (ft)	North (ft)	East (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7522.00	90.650	330.240	6882.70	5566.70	296.15	-44.31	-547.53	2.05	0.18	2.04
7612.00	90.580	330.410	6881.74	5565.74	385.36	33.88	-592.08	0.20	-0.08	0.19
7701.00	89.660	329.450	6881.55	5565.55	473.65	110.90	-636.68	1.49	-1.03	-1.08
7791.00	89.750	330.120	6882.01	5566.01	562.98	188.67	-681.97	0.75	0.10	0.74
7881.00	90.250	327.450	6882.01	5566.01	652.47	265.64	-728.61	3.02	0.56	-2.97
7970.00	90.340	324.690	6881.56	5565.56	741.31	339.47	-778.28	3.10	0.10	-3.10
8060.00	91.170	323.870	6880.37	5564.37	831.27	412.54	-830.82	1.30	0.92	-0.91
8149.00	92.250	323.010	6877.71	5561.71	920.22	483.99	-883.81	1.55	1.21	-0.97
8239.00	92.150	324.190	6874.26	5558.26	1010.14	556.38	-937.17	1.31	-0.11	1.31
8329.00	92.220	325.900	6870.83	5554.83	1100.00	630.08	-988.70	1.90	0.08	1.90
8418.00	92.190	329.900	6867.40	5551.40	1188.56	705.41	-1035.95	4.49	-0.03	4.49
8508.00	92.150	327.690	6863.99	5547.99	1277.99	782.33	-1082.54	2.45	-0.04	-2.46
8597.00	92.400	323.810	6860.46	5544.46	1366.78	855.82	-1132.58	4.37	0.28	-4.36
8687.00	92.550	326.610	6856.57	5540.57	1456.60	929.66	-1183.88	3.11	0.17	3.11
8776.00	92.030	326.190	6853.02	5537.02	1545.35	1003.73	-1233.09	0.75	-0.56	-0.47
8866.00	92.830	321.370	6849.20	5533.20	1635.23	1076.25	-1286.21	5.42	0.89	-5.36
8956.00	92.870	323.710	6844.72	5528.72	1725.11	1147.59	-1340.87	2.60	0.04	2.60
9045.00	92.830	323.830	6840.30	5524.30	1813.99	1219.30	-1393.41	0.14	-0.04	0.13
9135.00	92.280	327.490	6836.28	5520.28	1903.76	1293.52	-1444.12	4.11	-0.61	4.07
9224.00	91.970	333.830	6832.98	5516.98	1991.81	1371.02	-1487.68	7.13	-0.35	7.12
9314.00	91.940	335.720	6829.91	5513.91	2079.78	1452.38	-1526.01	2.10	-0.03	2.10
9403.00	91.880	334.190	6826.94	5510.94	2166.72	1532.97	-1563.66	1.72	-0.07	-1.72
9493.00	91.820	329.640	6824.04	5508.04	2255.50	1612.31	-1606.00	5.05	-0.07	-5.06
9582.00	91.850	326.710	6821.18	5505.18	2344.05	1687.88	-1652.90	3.29	0.03	-3.29
9672.00	91.790	325.590	6818.33	5502.33	2433.84	1762.59	-1703.01	1.25	-0.07	-1.24
9761.00	91.820	327.010	6815.52	5499.52	2522.62	1836.59	-1752.36	1.60	0.03	1.60
9851.00	91.570	326.820	6812.86	5496.86	2612.35	1911.97	-1801.47	0.35	-0.28	-0.21
9940.00	91.420	324.550	6810.54	5494.54	2701.19	1985.45	-1851.62	2.56	-0.17	-2.55
10030.00	91.510	324.680	6808.24	5492.24	2791.12	2058.80	-1903.72	0.18	0.10	0.14
10120.00	91.820	325.030	6805.62	5489.62	2881.02	2132.36	-1955.51	0.52	0.34	0.39

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
10209.00	91.820	325.220	6802.80	5486.80	2969.90	2205.34	-2006.37	0.21	0.00	0.21
10299.00	91.780	325.860	6799.97	5483.97	3059.75	2279.51	-2057.27	0.71	-0.04	0.71
10388.00	91.880	325.500	6797.13	5481.13	3148.58	2352.97	-2107.42	0.42	0.11	-0.40
10478.00	91.970	327.690	6794.10	5478.10	3238.33	2428.06	-2156.94	2.43	0.10	2.43
10568.00	91.940	330.010	6791.03	5475.03	3327.76	2505.03	-2203.47	2.58	-0.03	2.58
10657.00	91.880	328.400	6788.07	5472.07	3416.14	2581.44	-2249.01	1.81	-0.07	-1.81
10747.00	92.000	327.610	6785.02	5469.02	3505.71	2657.72	-2296.67	0.89	0.13	-0.88
10836.00	92.000	327.760	6781.91	5465.91	3594.33	2732.89	-2344.21	0.17	0.00	0.17
10926.00	91.720	327.640	6778.99	5462.99	3683.94	2808.93	-2392.28	0.34	-0.31	-0.13
11016.00	91.850	328.800	6776.19	5460.19	3773.49	2885.39	-2439.66	1.30	0.14	1.29
11105.00	91.720	329.390	6773.42	5457.42	3861.90	2961.72	-2485.34	0.68	-0.15	0.66
11195.00	91.750	328.130	6770.69	5454.69	3951.36	3038.63	-2532.00	1.40	0.03	-1.40
11284.00	91.720	324.210	6768.00	5452.00	4040.15	3112.52	-2581.52	4.40	-0.03	-4.40
11374.00	91.720	322.780	6765.29	5449.29	4130.10	3184.83	-2635.03	1.59	0.00	-1.59
11463.00	91.780	322.610	6762.58	5446.58	4219.05	3255.59	-2688.94	0.20	0.07	-0.19
11553.00	91.750	322.620	6759.80	5443.80	4309.01	3327.06	-2743.56	0.04	-0.03	0.01
11643.00	91.910	326.470	6756.93	5440.93	4398.90	3400.32	-2795.73	4.28	0.18	4.28
11732.00	91.940	331.790	6753.94	5437.94	4487.27	3476.64	-2841.36	5.97	0.03	5.98
11822.00	91.940	332.400	6750.89	5434.89	4576.03	3556.13	-2883.45	0.68	0.00	0.68
11911.00	91.940	330.580	6747.88	5431.88	4663.94	3634.29	-2925.91	2.04	0.00	-2.04
12001.00	91.510	328.630	6745.17	5429.17	4753.25	3711.88	-2971.42	2.22	-0.48	-2.17
12091.00	91.600	329.700	6742.73	5426.73	4842.65	3789.13	-3017.53	1.19	0.10	1.19
12180.00	91.600	330.530	6740.24	5424.24	4930.88	3866.27	-3061.86	0.93	0.00	0.93
12270.00	91.630	329.560	6737.70	5421.70	5020.12	3944.21	-3106.78	1.08	0.03	-1.08
12359.00	91.600	326.790	6735.19	5419.19	5108.67	4019.80	-3153.69	3.11	-0.03	-3.11
12449.00	91.510	325.870	6732.75	5416.75	5198.47	4094.67	-3203.57	1.03	-0.10	-1.02
12539.00	91.630	325.290	6730.29	5414.29	5288.32	4168.88	-3254.42	0.66	0.13	-0.64
12628.00	91.510	322.180	6727.85	5411.85	5377.26	4240.61	-3307.04	3.50	-0.13	-3.48
12718.00	91.630	321.870	6725.38	5409.38	5467.22	4311.53	-3362.40	0.37	0.13	-0.34
12807.00	91.570	322.170	6722.90	5406.90	5556.18	4381.65	-3417.15	0.34	-0.07	0.34

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# Actual Wellpath Report

Blake 4H (519173) AWP Proj: 13714'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 4H
Area	Wetzel County, WV	Well	Blake 4H (519173)
Field	Wetzel	Wellbore	Blake 4H (519173) AWB
Facility	Blake Pad		

WELLPATH DATA (251 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
12897.00	91.570	323.390	6720.43	5404.43	5646.15	4453.29	-3471.56	1.36	0.00	1.36
12987.00	91.570	327.090	6717.96	5401.96	5736.01	4527.19	-3522.85	4.11	0.00	4.11
13076.00	91.450	329.640	6715.62	5399.62	5824.55	4602.93	-3569.51	2.87	-0.13	2.87
13166.00	91.570	329.170	6713.25	5397.25	5913.91	4680.38	-3615.30	0.54	0.13	-0.52
13255.00	91.600	328.270	6710.79	5394.79	6002.39	4756.41	-3661.49	1.01	0.03	-1.01
13345.00	91.630	325.680	6708.25	5392.25	6092.10	4831.83	-3710.52	2.88	0.03	-2.88
13434.00	91.320	324.440	6705.96	5389.96	6181.00	4904.76	-3761.47	1.44	-0.35	-1.39
13524.00	91.320	325.520	6703.88	5387.88	6270.91	4978.45	-3813.11	1.20	0.00	1.20
13613.00	91.320	326.880	6701.83	5385.83	6359.72	5052.38	-3862.60	1.53	0.00	1.53
13690.00	91.260	327.970	6700.10	5384.10	6436.44	5117.25	-3904.05	1.42	-0.08	1.42
13714.00	91.260	327.970	6699.57	5383.57	6460.34	5137.60	-3916.77	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Blake 4H (519173) AWB Ref Wellpath: Blake 4H (519173) AWP Proj: 13714'										
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]	
24in Open Hole	18.00	93.00	75.00	18.00	93.00	0.00	0.00	0.32	-0.18	
20in Casing Surface	18.00	93.00	75.00	18.00	93.00	0.00	0.00	0.32	-0.18	
17.5in Open Hole	93.00	1253.00	1160.00	93.00	1252.94	0.32	-0.18	4.51	-9.59	
13.375in Casing Surface	18.00	1253.00	1235.00	18.00	1252.94	0.00	0.00	4.51	-9.59	
12.25in Open Hole	1253.00	2583.00	1330.00	1252.94	2582.92	4.51	-9.59	6.07	-11.81	
9.625in Casing Intermediate	18.00	2583.00	2565.00	18.00	2582.92	0.00	0.00	6.07	-11.81	
8.75in Open Hole	2583.00	4852.00	2269.00	2582.92	4836.42	6.07	-11.81	-221.56	38.87	

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REFERENCE WELLPATH IDENTIFICATION			
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Area	Wetzel County, WV	Well	Blake 4H (519173)
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Facility	Blake Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Blake 4H BHL Rev-1	6692.90	5142.34	-3910.81	1630425.04	425410.83	39°39'38.103"N	80°48'45.924"W	point
Blake 4H LP Rev-1	6882.00	-185.42	-451.74	1633883.90	420083.39	39°38'45.951"N	80°48'00.714"W	point

WELLPATH COMPOSITION - Ref Wellbore: Blake 4H (519173) AWB					Ref Wellpath: Blake 4H (519173) AWP Proj: 13714'		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore		
18.00	2583.00	SDI Keeper v1.04	01 SDI Gyro <12-1/4"> (33'-2603')		Blake 4H (519173) AWB		
2583.00	4852.00	OWSG MWD rev2 - Standard	02 SDI MWD <8-3/4"> (2603')(2623'-4852')		Blake 4H (519173) AWB		
4852.00	13690.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	03 BH AT Curve + MagVar MSA <8-1/2">(4852')(4925'-13690')		Blake 4H (519173) AWB		
13690.00	13714.00	Blind Drilling (std)	Projection to bit		Blake 4H (519173) AWB		

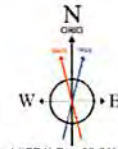
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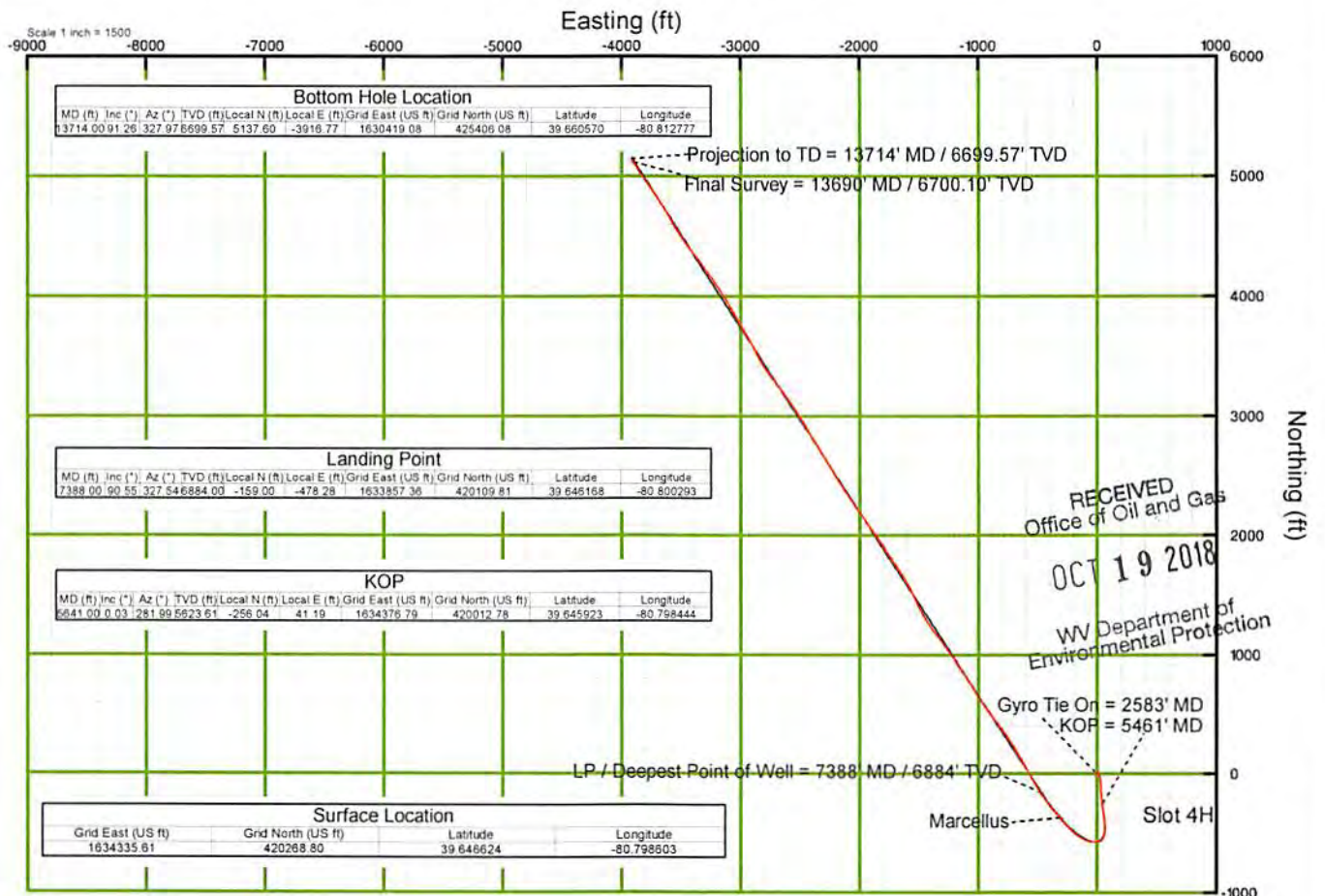
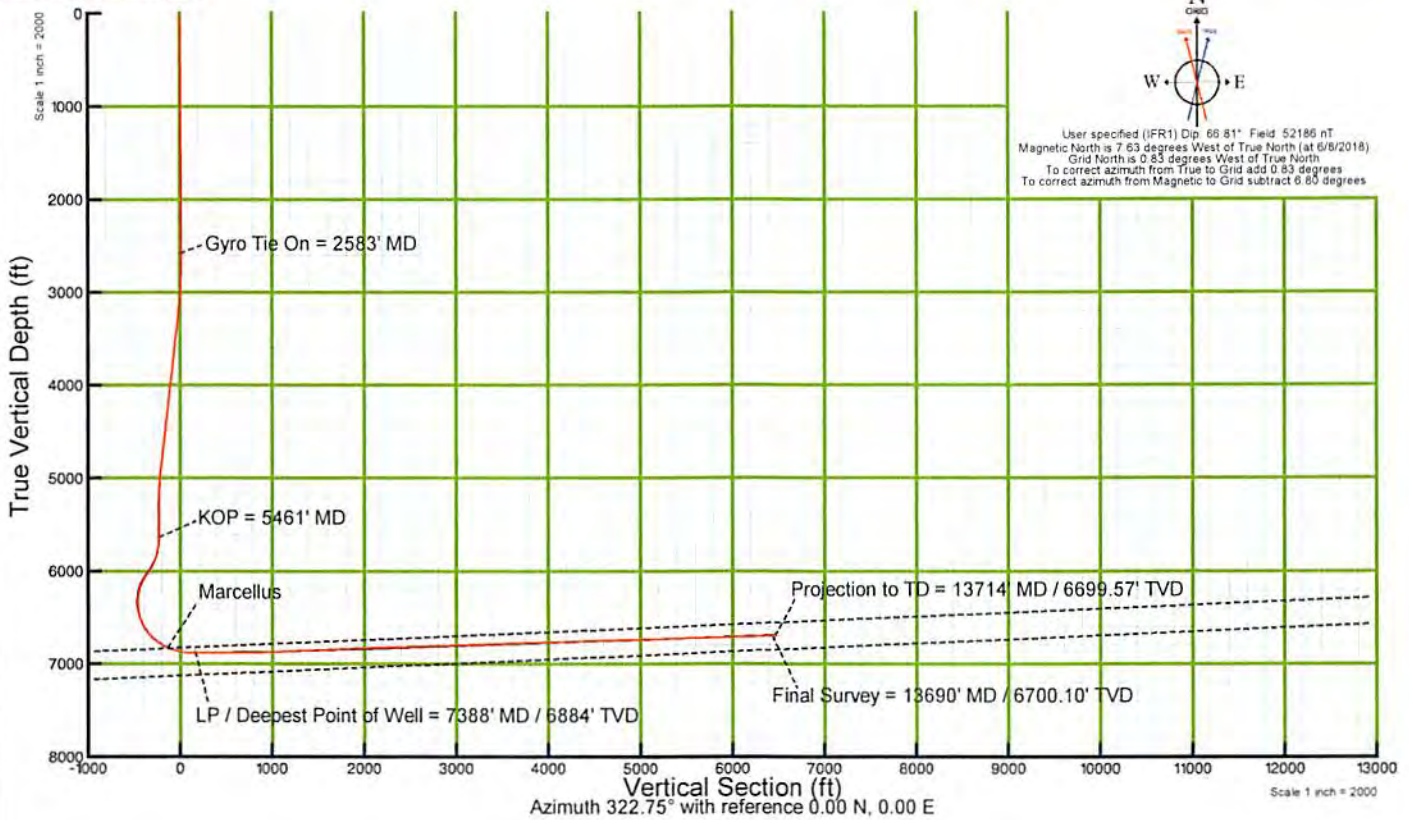


Where energy meets innovation.

KB elevation = 1316ft  
 Ground elevation = 1298ft  
 All measurements taken from KB elevation



User specified (IFR1) Dip: 66.81° Field: 52186 nT  
 Magnetic North is 7.63 degrees West of True North (at 6/8/2018)  
 Grid North is 0.83 degrees West of True North  
 To correct azimuth from True to Grid add 0.83 degrees  
 To correct azimuth from Magnetic to Grid subtract 6.80 degrees



Bottom Hole Location							
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
13714.00	0.91	26.327	976699.57	5137.60	-3916.77	1630419.08	425406.08
						39 645070	-80 812777

Landing Point							
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
7388.00	0.55	327.54	6884.00	-159.00	-478.28	1633857.36	420109.81
						39 645168	-80 800293

KOP							
MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
5461.00	0.03	281.99	5623.61	-256.04	41.19	1634376.79	420012.78
						39 645923	-80 798444

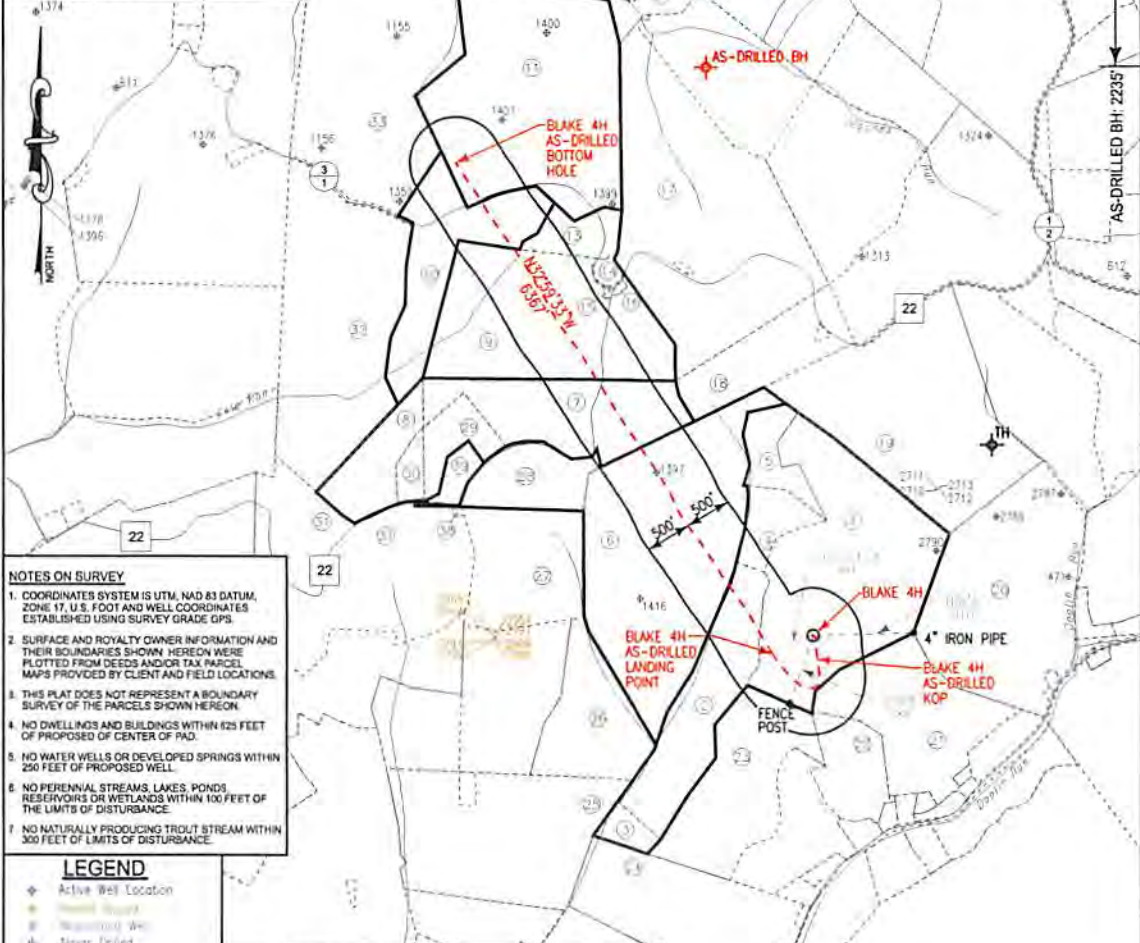
Surface Location			
Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
1634335.61	420268.80	39 646624	-80.798803

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LATITUDE 39° 40' 00"

11/16/2018

**BLAKE 4H  
BLAKE  
EQT Production Company**



- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
  - SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
  - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
  - NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
  - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
  - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
  - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

- LEGEND**
- ◆ Active Well Location
  - ◆ Proposed Well
  - ◆ Abandoned Well
  - ◆ Minor Drilled
  - Tract Identification
  - Proposed Gas Well
  - Located Corner, as noted
  - Surface Tract Lines
  - Reference Line
  - Lease Boundary
  - Creek or Drain
  - Wv County Route
  - Wv State Route

Tract ID	Lease No.	Acres	Owner
1 & 2 & 4	873356	122.62	Gary Lemons ET UX
6	873673	107.75	Ray Blake ET UX
7	873749	75.5	Karen Miller
9	873636	70.5102	Schubbach's Valley Motor
10	873645	40.25	Melvin E. Schubbach ET UX
11	873674	114	David E. Schubbach ET AL

(◆) Denotes Location of Well on United States Topographic Maps



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.

*Thomas C. Smit*  
L. L. S. 687



FILE NO: W2030 (BK 50-21)  
DRAWING NO:  
SCALE: 1" = 1600'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: JUNE 11 20 18  
OPERATORS WELL NO: BLAKE 4H  
API WELL NO  
47 - 103 - 02913  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'

DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

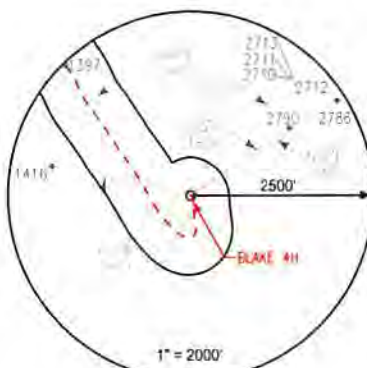
WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
Bridgeport, WV 26330 Bridgeport, WV 26330

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TOP HOLE AS-DRILLED

**Blake 4H  
Blake  
EQT Production Company**

Tract ID	Tax Map No	Parcel No.	County	District	Surface Tract Owner	Acres
1	5	35	Wetzel	Magnolia	Gary Lemons	79.3
2	8	7	Wetzel	Magnolia	Gary Lemons	30.2
3	8	11	Wetzel	Magnolia	Gary Lemons	5.57
4	5	34	Wetzel	Magnolia	Gary Lemons	11.17
5	5	27	Wetzel	Magnolia	Gary Lemons	11
6	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
7	5	26	Wetzel	Magnolia	Stone Energy Corporation	39.95
8	5	25	Wetzel	Magnolia	Stone Energy Corporation	17.64
9	5	19	Wetzel	Magnolia	Ronald L. & Monette Schupbach	68.49
10	5	12	Wetzel	Magnolia	Melvin E. & Wilda G. Schupbach	36.87
11	5	2	Wetzel	Magnolia	David E. & Jeanie L. Schupbach	96.43
12	5	N/A	Wetzel	Magnolia	N/A	2.52
13	5	13	Wetzel	Magnolia	Ronald L. & Monette Schupbach	9.48
14	5	14	Wetzel	Magnolia	Ronald Lee & Monette Schupbach	1.51
15	5	20	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.11
16	5	21	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.19
17	5	16	Wetzel	Magnolia	Sharon L. Bearce	108.64
18	5	22	Wetzel	Magnolia	Sharon L. Bearce	37.5
19	5	28	Wetzel	Magnolia	Gary & Judy Ann Lemons	102.75
20	6	3	Wetzel	Magnolia	Gary Patrick Fitzsimmons	71.99
21	8	8	Wetzel	Magnolia	Darvey L. & Orion F. Neff	41.88
22	8	15.8	Wetzel	Magnolia	David & Orion Neff	11.97
23	8	14	Wetzel	Magnolia	Aaron Lloyd Lemons	41.71
24	8	23	Wetzel	Magnolia	Cathy M. Westfall ET AL	57.68
25	8	12	Wetzel	Magnolia	David L. & Ralph O. & Smith	58.15
26	8	6	Wetzel	Magnolia	Albert Koehner HRS	31.01
27	5	32	Wetzel	Magnolia	George S. Schupbach	37.5
28	5	26.2	Wetzel	Magnolia	Franklin Ray Blake	17.73
29	5	26.3	Wetzel	Magnolia	Stone Energy Corporation	10.96
30	5	25.1	Wetzel	Magnolia	Stone Energy Corporation	4.15
31	5	31	Wetzel	Magnolia	John William Burton	66.56
32	5	11	Wetzel	Magnolia	Ronald L. Schupbach	89.45
33	5	1.1	Wetzel	Magnolia	Ronald L. Schupbach	90.33
34	11	13	Proctor		Coastal Forest Resources Co.	105
35	11	14	Proctor		Coastal Forest Resources Co.	22
36	11	16	Proctor		Nancy J. Garner	40
37	11	26	Proctor		Douglas S. & Linda C. Parrish	53
38	5	31.1	Wetzel	Magnolia	Schupbach Cemetery	0.27
39	5	26.1	Wetzel	Magnolia	Stone Energy Corporation	1.91



**Notes:**  
**BLAKE 4H As-Drilled coordinates are:**  
 NAD 27 N: 420,269,000 E: 1,634,335,000  
 NAD 27 Lat: 39.646625 Long: -80.798608  
 NAD 83 UTM N: 4,388,565,317 E: 517,294,712

**BLAKE 4H As-Drilled KOP coordinates are:**  
 NAD 27 N: 420,012,720 E: 1,634,376,780  
 NAD 27 Lat: 39.645923 Long: -80.798445  
 NAD 83 UTM N: 4,388,487,452 E: 517,308,736

**BLAKE 4H As-Drilled Landing Point coordinates are:**  
 NAD 27 N: 420,072,160 E: 1,633,882,040  
 NAD 27 Lat: 39.646067 Long: -80.800204  
 NAD 83 UTM N: 4,388,503,040 E: 517,157,713

**BLAKE 4H As-Drilled Bottom Hole coordinates are:**  
 NAD 27 N: 425,406,030 E: 1,630,419,050  
 NAD 27 Lat: 39.660571 Long: -80.812778  
 NAD 83 UTM N: 4,390,110,400 E: 516,075,606

West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements  
 Plat orientation, Corner and well ties are based upon the grid north meridian  
 Well location references are based upon the grid north meridian.  
 UTM coordinates are NAD83, Zone 17, Meters.

**Well References**

Fence Post • N83°W 161.0' ○ BLAKE 4H

520°W 547.5'

1" = 200'

**LEGEND**

- Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- - - Lease Boundary
- ~ ~ ~ Creek or Drain
- ⊙ WV County Route
- ⊠ WV State Route

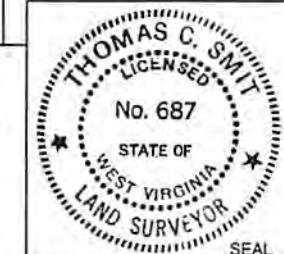
**BLAKE PAD**

- BLAKE 5H
- BLAKE 6H
- BLAKE 3H
- BLAKE 4H
- BLAKE 1H
- BLAKE 2H



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.

*Thomas C. Smit*  
 L. L. S. 687



FILE NO: W2030 (BK 50-21)  
 DRAWING NO:  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: JUNE 11 20 18  
 OPERATORS WELL NO: BLAKE 4H  
 API WELL NO: 47 - 103 - 029  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5' W  
 DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
 ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 115 Professional Place PO Box 280 Bridgeport, WV 26330

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/26/2018
Job End Date:	7/21/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-02913-00-00
Operator Name:	EQT Production
Well Name and Number:	519173
Latitude:	39.64652300
Longitude:	-80.79860400
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,845
Total Base Water Volume (gal):	11,422,255
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	ProFrac	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	86.31385	None
Silver FR-93	Silverback Chemical, LLC	Friction Reducer					
				Listed Below			

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Bio Matar 123	Silverback Chemical, LLC	Biocide					
				Listed Below			
ProFe 105	ProFrac	Iron Control					
				Listed Below			
ProHib 100	ProFrac	Acid Corrosion Inhibitor					
				Listed Below			
Hydrochloric Acid (15%)	ProFrac	Acidizing					
				Listed Below			
ProVis 4.0	ProFrac	Gel Breaker					
				Listed Below			
Sand (Proppant)	ProFrac	Proppant					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			
Silver SI - 800	Silverback Chemical, LLC	Anti-Scalant					
				Listed Below			
ProBreak 100	ProFrac	Gelling Agent					

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				Listed Below			
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.							
			Silica Substrate	14808-60-7	100.00000	13.32904	None
			Hydrochloric Acid	7647-01-0	15.00000	0.04067	None
			Petroleum Distillates, Hydrotreated Light Naphthenic	64742-53-6	60.00000	0.03779	None
			Proprietary Polymers	Proprietary	60.00000	0.03779	
			Petroleum Distillates, Hydrotreated Light Naphthenic	64742-53-6	60.00000	0.03779	
			Proprietary Polymers	Proprietary	60.00000	0.03779	None
			Non-Hazardous Substances	Proprietary	90.00000	0.01716	None
			Non-Hazardous Substances	Proprietary	90.00000	0.01716	
			Glutaraldehyde	111-30-8	20.00000	0.00381	None
			Glutaraldehyde	111-30-8	20.00000	0.00381	
			Polycarboxylic Acid Salt Mixture	Proprietary	40.00000	0.00104	None
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00057	None
			Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	3.00000	0.00057	None
			Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	3.00000	0.00057	
			Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00057	
			Methanol	67-56-1	90.00000	0.00052	None
			Hydrtreated Light Distillate(Petroleum)	64742-47-8	65.00000	0.00040	None
			Gum Guar	9000-30-0	50.00000	0.00031	None
			Citric Acid	77-92-9	100.00000	0.00009	None
			Citric Acid	77-92-9	100.00000	0.00009	
			Imidazoline	61790-69-0	5.00000	0.00003	
			Isopropanol	67-63-0	5.00000	0.00003	None

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			Alcohols, C7-9-ISO, C8 Rich	68526-83-0	5.00000	0.00003	None
			Propargyl Alcohol	107-19-7	5.00000	0.00003	None
			Xylene	1330-20-7	5.00000	0.00003	
			Xylene	1330-20-7	5.00000	0.00003	None
			Imidazoline	61790-69-0	5.00000	0.00003	None
			Alcohols, C7-9-ISO, C8 Rich	68526-83-0	5.00000	0.00003	
			Ammonium Persulfate	7727-54-0	100.00000	0.00002	None
			Ethylbenzene	100-41-4	1.00000	0.00001	
			Ethylbenzene	100-41-4	1.00000	0.00001	None

\* 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

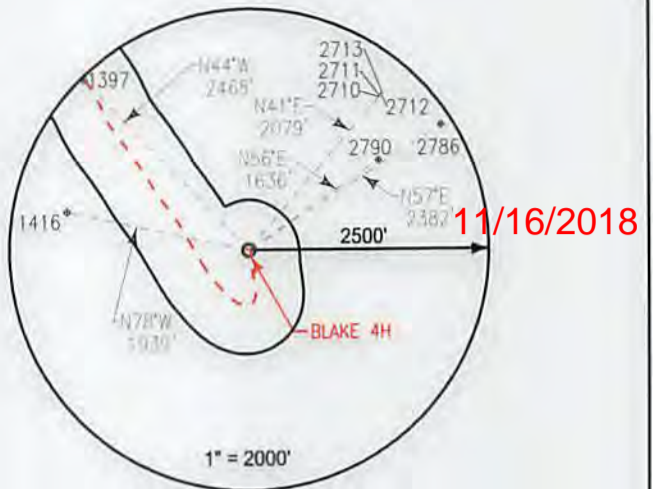
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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

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**Blake 4H  
Blake  
EQT Production Company**

Tract ID.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	5	35	Wetzel	Magnolia	Gary Lemons	79.7
2	8	7	Wetzel	Magnolia	Gary Lemons	30.2
3	8	13	Wetzel	Magnolia	Gary Lemons	5.57
4	5	34	Wetzel	Magnolia	Gary Lemons	11.17
5	5	27	Wetzel	Magnolia	Gary Lemons	11
6	5	33	Wetzel	Magnolia	Franklin Ray Blake	108.47
7	5	26	Wetzel	Magnolia	Stone Energy Corporation	39.95
8	5	25	Wetzel	Magnolia	Stone Energy Corporation	17.64
9	5	19	Wetzel	Magnolia	Ronald L. & Monette Schupbach	68.49
10	5	12	Wetzel	Magnolia	Melvin E. & Wilda G. Schupbach	36.87
11	5	2	Wetzel	Magnolia	David E. & Jeanie L. Schupbach	96.43
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16	5	21	Wetzel	Magnolia	Ronald L. & Monette Schupbach	0.19
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19	5	28	Wetzel	Magnolia	Gary & Judy Ann Lemons	102.75
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31	5	31	Wetzel	Magnolia	John William Burton	66.56
32	5	11	Wetzel	Magnolia	Ronald L. Schupbach	89.45
33	5	1.1	Wetzel	Magnolia	Ronald L. Schupbach	90.33
34	11	13	Proctor	Coastal Forest Resources Co.		105
35	11	14	Proctor	Coastal Forest Resources Co.		22
36	11	16	Proctor	Nancy J. Garner		40
37	11	26	Proctor	Douglas S. & Linda C. Parish		53
38	5	31.1	Wetzel	Magnolia	Schupbach Cemetery	0.27
39	5	26.1	Wetzel	Magnolia	Stone Energy Corporation	3.93



**Notes:**  
**BLAKE 4H As-Drilled coordinates are**  
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**BLAKE 4H As-Drilled Landing Point coordinates are**  
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 the grid north meridian  
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 meridian.  
 UTM coordinates are NAD83, Zone 17, Meters.



**LEGEND**

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- - - - Reference Line
- Lease Boundary
- ~ Creek or Drain
- ⊙ WV County Route
- ⊠ WV State Route

- BLAKE PAD**
- BLAKE 5H
  - BLAKE 6H
  - BLAKE 3H
  - **BLAKE 4H**
  - BLAKE 1H
  - BLAKE 2H



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.

*L. L. S.*  
**L. L. S. 687**



FILE NO: W2030 (BK 50-21)  
 DRAWING NO: \_\_\_\_\_  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY:  
1:2500  
 PROVEN SOURCE OF ELEVATION:  
NGS CORS Station

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

DATE: JUNE 11 20 18  
 OPERATORS WELL NO: BLAKE 4H  
**API WELL NO**  
47 - 103 - 02913  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'  
 DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
 ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

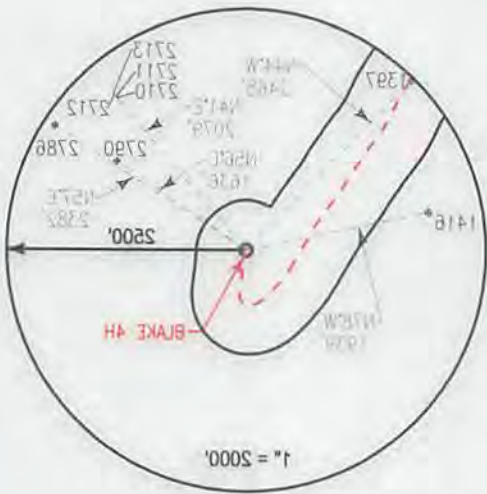
PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
Bridgeport, WV 26330 Bridgeport, WV 26330



Tract ID	Tax Map No	Parcel No	County	District	Surface Tract Owner	Acres
1	79.7	25	West	Magalia	Gary Lemons	1.0
2	8	7	West	Magalia	Gary Lemons	1.0
3	8	13	West	Magalia	Gary Lemons	1.0
4	11.7	2	West	Magalia	Gary Lemons	1.0
5	2	27	West	Magalia	Gary Lemons	1.0
6	108.47	2	West	Magalia	Franklin Ray Blake	1.0
7	108.47	2	West	Magalia	Stone Energy Corporation	1.0
8	17.64	2	West	Magalia	Stone Energy Corporation	1.0
9	88.48	2	West	Magalia	Ronald L & Monette Schupbach	1.0
10	38.87	2	West	Magalia	Melvin E & Wida G Schupbach	1.0
11	86.43	2	West	Magalia	David E & Jeanie L Schupbach	1.0
12	2.2	2	West	Magalia	N/A	1.0
13	9.48	2	West	Magalia	Ronald L & Monette Schupbach	1.0
14	1.21	2	West	Magalia	Ronald Lee & Monette Schupbach	1.0
15	0.11	2	West	Magalia	Ronald L & Monette Schupbach	1.0
16	0.19	2	West	Magalia	Ronald L & Monette Schupbach	1.0
17	108.64	2	West	Magalia	Sharon L Beare	1.0
18	37.2	2	West	Magalia	Sharon L Beare	1.0
19	102.78	2	West	Magalia	Gary & Judy Ann Lemons	1.0
20	71.99	2	West	Magalia	Gary Patrick Fitzsimons	1.0
21	42.88	2	West	Magalia	Danny L & Orion F. Neff	1.0
22	11.97	2	West	Magalia	David & Olin Neff	1.0
23	43.78	2	West	Magalia	Aaron Lloyd Lemons	1.0
24	27.88	2	West	Magalia	Cathy M. Westfall ET AL	1.0
25	33.01	2	West	Magalia	David L & Ralph O. Smith	1.0
26	37.2	2	West	Magalia	Albert Koerber HRS	1.0
27	17.73	2	West	Magalia	George S. Schupbach	1.0
28	10.92	2	West	Magalia	Franklin Ray Blake	1.0
29	4.19	2	West	Magalia	Stone Energy Corporation	1.0
30	66.26	2	West	Magalia	John William Burton	1.0
31	89.42	2	West	Magalia	Ronald L Schupbach	1.0
32	90.33	2	West	Magalia	Ronald L Schupbach	1.0
33	102	2	West	Magalia	Coastal Forest Resources Co	1.0
34	52	2	West	Magalia	Coastal Forest Resources Co	1.0
35	40	2	West	Magalia	Nancy J. Garner	1.0
36	23	2	West	Magalia	Douglas S & Linda C. Parish	1.0
37	0.27	2	West	Magalia	Schupbach Cemetery	1.0
38	3.93	2	West	Magalia	Stone Energy Corporation	1.0

11/16/2018



**Notes:**  
 BLAKE 4H As-Dilled KOP coordinates are  
 NAD 27 N: 420,259.000 E: 1,834,326.000  
 NAD 27 Lat: 38.84823 Long: -80.78842  
 NAD 83 UTM N: 4,388,882.317 E: 517,284.712

BLAKE 4H As-Dilled KOP coordinates are  
 NAD 27 N: 420,012.750 E: 1,834,378.780  
 NAD 27 Lat: 38.84823 Long: -80.78842  
 NAD 83 UTM N: 4,388,487.425 E: 517,308.726

BLAKE 4H As-Dilled Landing Point coordinates are  
 NAD 27 N: 420,072.180 E: 1,833,882.040  
 NAD 27 Lat: 38.848087 Long: -80.800204  
 NAD 83 UTM N: 4,388,503.040 E: 517,127.713

BLAKE 4H As-Dilled Bottom Hole coordinates are  
 NAD 27 N: 425,408.030 E: 1,830,418.080  
 NAD 27 Lat: 38.880271 Long: -80.842378  
 NAD 83 UTM N: 4,390,110.400 E: 516,072.608

UTM coordinates are NAD83, Zone 17, Meter.  
 Well location references are based upon the gnd north meridian.  
 Plat orientation, Corner and well ties are based upon the gnd north meridian.  
 West Virginia Coordinates system of 1927 (North Zone) based upon Differential GPS Measurements



- BLAKE PAD
- BLAKE 2H
  - BLAKE 6H
  - BLAKE 3H
  - BLAKE 4H
  - BLAKE 1H
  - BLAKE 2H

**LEGEND**

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- W County Route
- W State Route



I, the undersigned, hereby certify that this plot 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.

*Thomas C. Smith*  
 L. L. S. 687



DATE: JUNE 11 20 18

OPERATORS WELL NO: BLAKE 4H

API WELL NO

STATE COUNTY PERMIT

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

FILE NO: W2030 (BK 50-21)

DRAWING NO:

SCALE: 1" = 1000'

MINIMUM DEGREE OF ACCURACY:

PROVEN SOURCE OF ELEVATION: 1:2500

INGS CORS Station

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL

(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,288' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'

DISTRICT: Magalia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons

ROYALTY OWNER: Gary Lemons, ET UX

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

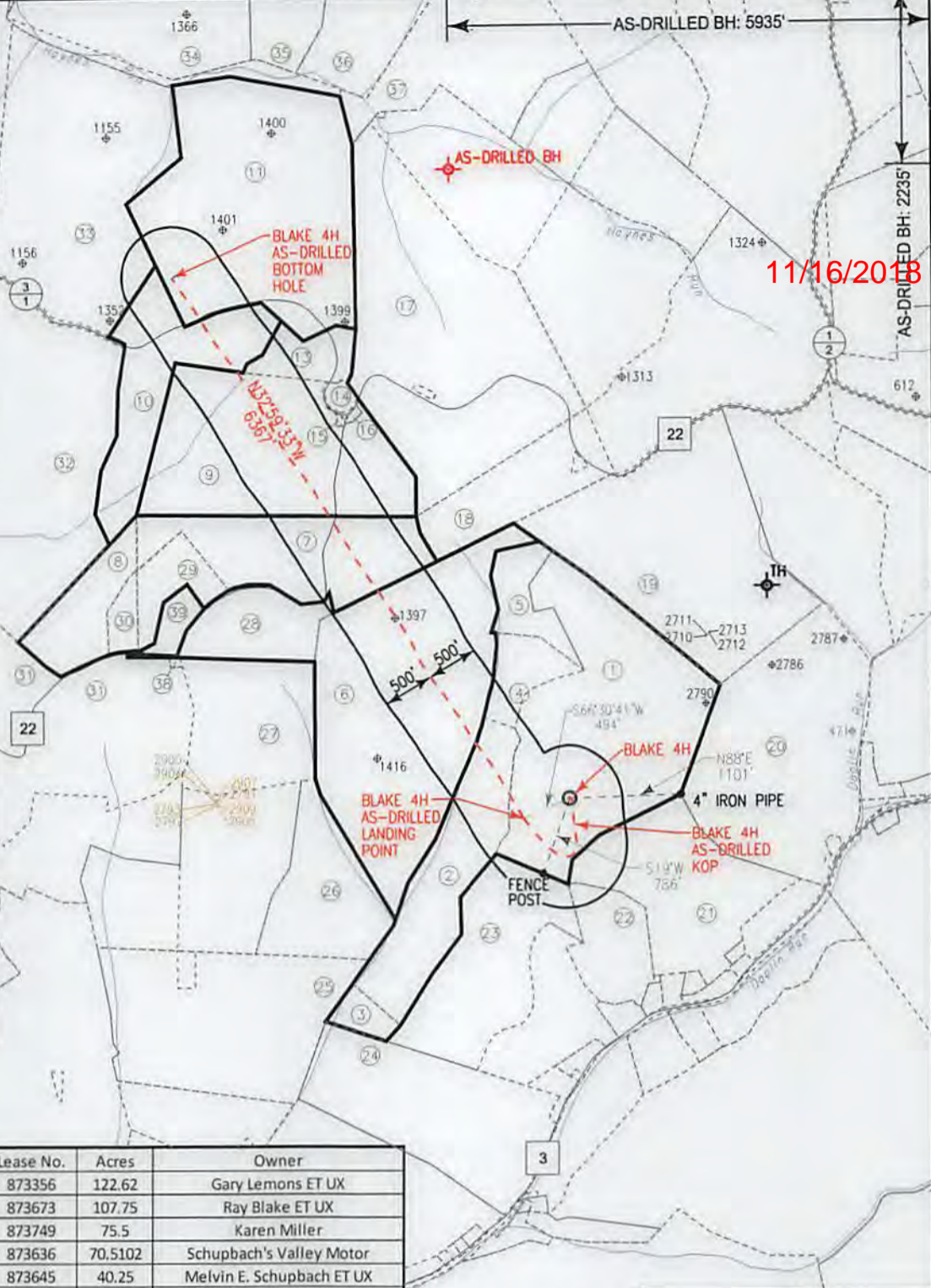
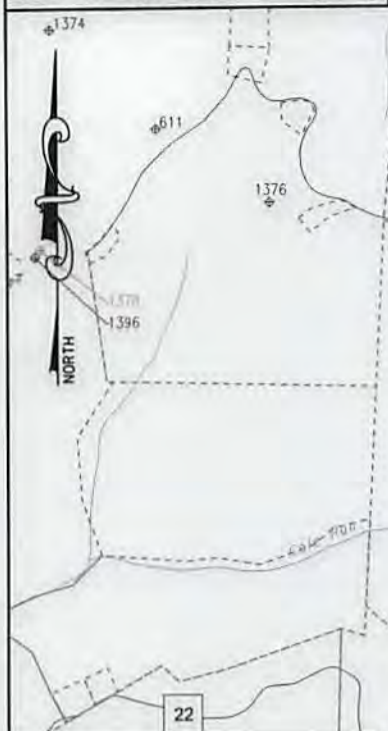
DESIGNATED AGENT: Jason Ranson

ADDRESS: 115 Professional Place PO Box 280 Bhdgport, WV 26330

ADDRESS: 115 Professional Place PO Box 280 Bhdgport, WV 26330

WELL OPERATOR: EQT Production Company

**BLAKE 4H  
BLAKE  
EQT Production Company**



11/16/2018

- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
  - SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
  - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
  - NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
  - NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
  - NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
  - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

- LEGEND**
- ⊕ Active Well Location
  - ⊕ Permit Issued
  - ⊕ Abandoned Well
  - ⊕ Never Drilled
  - ① Tract Identification
  - Proposed Gas Well
  - Located Corner, as noted
  - Surface Tract Lines
  - - - Reference Line
  - Lease Boundary
  - Creek or Drain
  - ⊙ WV County Route
  - ⊙ WV State Route

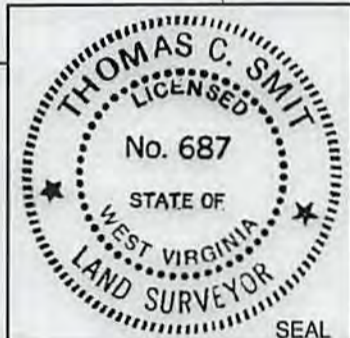
Tract ID.	Lease No.	Acres	Owner
1 & 2 & 4	873356	122.62	Gary Lemons ET UX
6	873673	107.75	Ray Blake ET UX
7	873749	75.5	Karen Miller
9	873636	70.5102	Schubach's Valley Motor
10	873645	40.25	Melvin E. Schubach ET UX
11	873674	114	David E. Schubach ET AL

(⊕) Denotes Location of Well on United States Topographic Maps



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.

*Thomas C. Smits*  
L. L. S. 687



FILE NO: W2030 (BK 50-21)  
DRAWING NO:  
SCALE: 1" = 1600'  
MINIMUM DEGREE OF ACCURACY: 1:2500  
PROVEN SOURCE OF ELEVATION: NGS CORS Station

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

DATE: JUNE 11 20 18  
OPERATORS WELL NO: BLAKE 4H  
API WELL NO  
47 - 103 - 02913  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION ELEVATION: 1,298' WATERSHED: CAMP RUN QUADRANGLE: NEW MARTINSVILLE 7.5'  
DISTRICT: Magnolia COUNTY: Wetzel

SURFACE OWNER: Gary Lemons ACREAGE: 69.12 ±  
ROYALTY OWNER: Gary Lemons, ET UX LEASE NO: 873356 ACREAGE: 122.62 ±

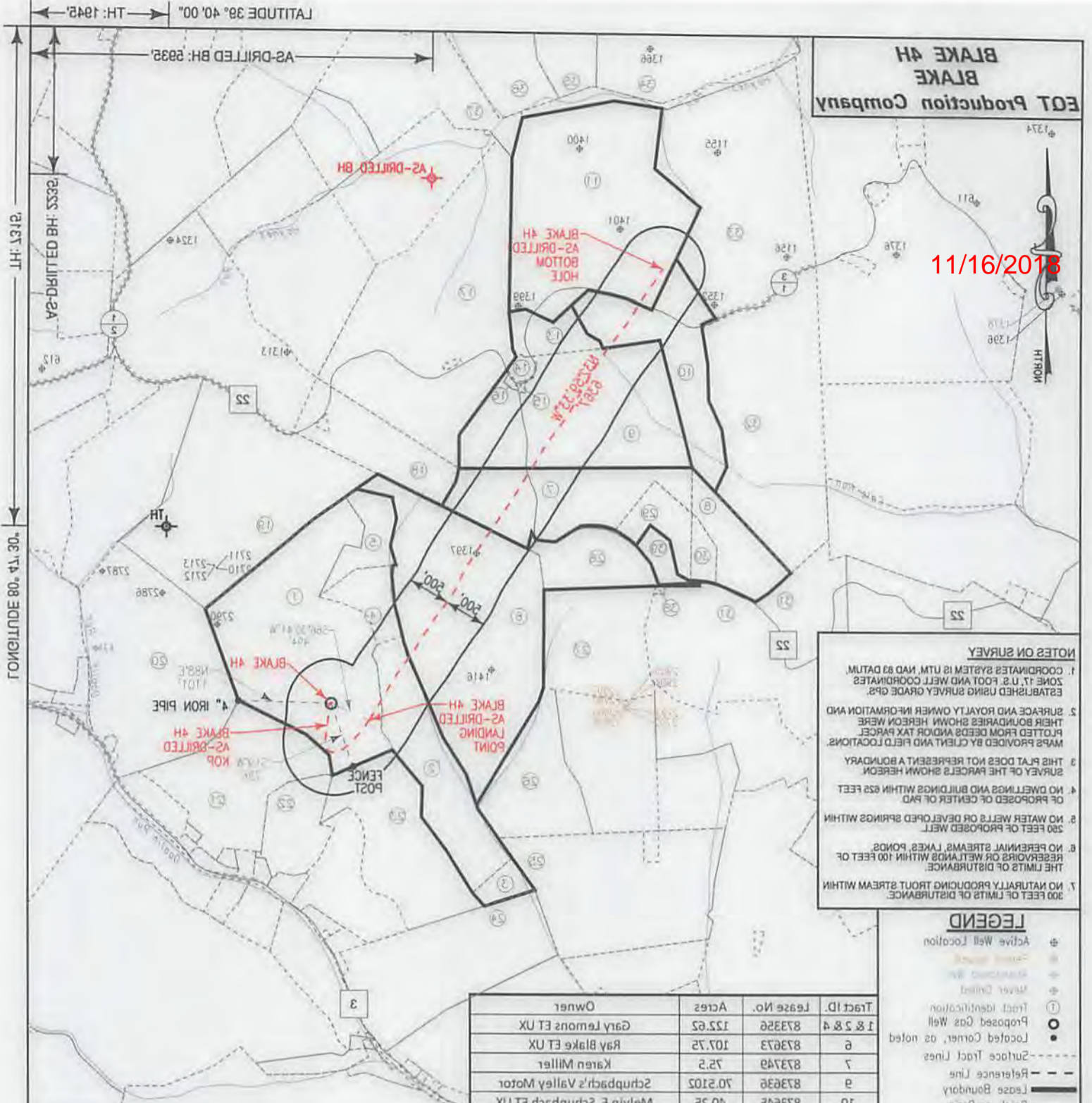
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 6,786'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
Bridgeport, WV 26330 Bridgeport, WV 26330

TOP HOLE AS-DRILLED

11/16/2018



**NOTES ON SURVEY**

1. COORDINATE SYSTEM IS UTM, NAD 83 DATUM, ZONE 17 U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS AND BUILDINGS WITHIN 825 FEET OF PROPOSED CENTER OF PAD.
5. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
6. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
7. NO NATURALLY PRODUCING FROTH STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

**LEGEND**

- ⊕ Active Well Location
- Proposed Gas Well
- Located Corner, as noted
- ① Tract Identification
- Surface Tract Lines
- - - Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊖ WV State Route

Tract ID	Lease No.	Acres	Owner
1 & 2 & 4	873356	125.65	Gary Lemons ET UX
6	873673	107.75	Ray Blake ET UX
7	873749	75.2	Karen Miller
9	873636	70.2102	Schubach's Valley Motor
10	873645	40.25	Melvin E. Schubach ET UX
11	873674	14	David E. Schubach ET AL

(⊕) Denotes Location of Well on United States Topographic Maps

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.

*Thomas C. Smith*  
L. L. S. 687



STATE COUNTY PERMIT	47 - 103 - 02913	API WELL NO	STATE COUNTY PERMIT
OPERATORS WELL NO:	BLAKE 4H	DATE:	JUNE 11 20 18
FILE NO:	W5030 (BK 50-21)	DRAWING NO:	
SCALE:	1"=1600'	MINIMUM DEGREE OF ACCURACY:	1:2500
PROVEN SOURCE OF ELEVATION:	NGS CORS Station		

WELL TYPE:	<input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL
(IF GAS) PRODUCTION:	<input type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input checked="" type="checkbox"/> SHALLOW
LOCATION ELEVATION:	1,298'
DISTRICT:	Magnolia
SURFACE OWNER:	Gary Lemons
ROYALTY OWNER:	Gary Lemons, ET UX
PROPOSED WORK:	<input type="checkbox"/> DRILL <input type="checkbox"/> CONVERT <input checked="" type="checkbox"/> DRILL DEEPER <input checked="" type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION
PLUG AND ABANDON:	<input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> TARGET FORMATION: Marcellus
DESIGNATED AGENT:	Jason Ranson
ADDRESS:	115 Professional Place PO Box 280
ADDRESS:	115 Professional Place PO Box 280
ADDRESS:	Bridgeport, WV 26330
ADDRESS:	Bridgeport, WV 26330

TOP HOLE AS-DRILLED