

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 516849

API: 47 - 103 - 03168

Submission: Initial Amended

FINAL

Notes:

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WV Department of
Environmental Protection

02/16/2018

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

API 47-103-03168 County Wetzel District Grant
Quad Big Run Pad Name BIG 190 Field/Pool Name N/A
Farm name Coastal Forest Resources Co. DBA Coastal Timberlands Co. Well Number 516849
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave. EQT Plaza, Suite 1700 City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,378,174.82 Easting 533,887.20
Landing Point of Curve Northing 4,378,226.67 Easting 534,988.03
Bottom Hole Northing 4,380,306.75 Easting 534,272.46

Elevation (ft) 1474 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) Water Base Mud 14.4 ppg, aliphatic based non-aqueous drilling fluid, barium sulfate, calcium chloride, organophilic clay, quaternary ammonium clay, gilsonite, blended emulsifier, wetting agent, blended graphite, hydrated lime, calcium carbonate, ground walnut shells, fibrous cellulose.

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Date permit issued 01/09/2017 Date drilling commenced 03/12/2017 Date drilling ceased 06/19/2017
Date completion activities began 7/31/2017 Date completion activities ceased 8/12/2017
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 88', 391', 507' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2233', 2358' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 737', 860', 1051', 1202' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

APPROVED

NAME: Sen A 12
DATE: 11-14-17

Reviewed by:
DmH
02/16/2018

API 47-103 - 03168

Farm name Coastal Forest Resources Co. DBA Coastal Timberlands Co.

Well number 516849

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	30"	26"	40'	NEW	A-500 85.6#	N/A	Y
Surface	17-1/2"	13-3/8"	1286'	NEW	J-55 54.5#	N/A	Y
Coal							
Intermediate 1	12-3/8" & 12-1/4"	9-5/8"	2726'	NEW	A-500 40#	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5 1/2"	16530'	NEW	P-100 20#	N/A	N
Tubing							
Packer type and depth set							

Comment Details Production Cement job has calculated TOC of 7400' 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 ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	49	15.6	1.18	57.82	0	8
Surface	CLASS A	1060	15.8	1.18	1250.8	0	8
Coal							
Intermediate 1	Class A	1000	15.6	1.18	1180	0	8
Intermediate 2							
Intermediate 3							
Production	Class H / Class H	350 / 910	15.2 / 15.6	1.16 / 2.10	2317	7400'	8
Tubing							

Drillers TD (ft) 16540' Loggers TD (ft) N/A
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 2896' MD

Check all wireline logs run
 caliper density deviated/directional induction
 neutron resistivity gamma ray temperature

Well cored Yes No Conventional Sidewall Were cuttings collected Yes

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DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING CONDUCTOR: NONE

SURFACE: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE

INTERMEDIATE 1: ON SHOE TRACK AND EVERY 500' FEET TO SURFACE

PRODUCTION: ON SHOE TRACK AND EVERY JOINT TO 2802'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

API 47- 103 - 03168 Farm name Coastal Forest Resources Co. DBA Coastal Timberlands Co. Well number 516849

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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Please insert additional pages as applicable.

API 47- 103 - 03168

Farm name Coastal Forest Resources Co. DBA Coastal Timberlands Co. Well number 516849

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>MARCELLUS</u>	<u>7581</u> TVD	<u>9174</u> MD
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3,163 psi Bottom Hole N/A psi DURATION OF TEST 91.50 hrs

OPEN FLOW Gas 9,772 mcfpd Oil N/A bpd NGL 0 bpd Water 635 bpd GAS MEASURED BY Estimated Orifice Pilot

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

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Please insert additional pages as applicable.

Drilling Contractor Savanna Drilling
Address 125 Industry Road City Waynesburg State PA Zip 15370

Logging Company Gyrodatta Inc.
Address 601 Mayer St. City Bridgeville State PA Zip 15017

Cementing Company Halliburton Energy Services
Address 121 Champion Way City Canonsburg State PA Zip 15317

Stimulating Company Keane
Address 1245 Old Route 119 City Mount Pleasant State PA Zip 15666

Please insert additional pages as applicable.

Completed by James Abbott Telephone (412) 553-5996
Signature _____ Title Dir Completions Date 11/8/2017

API 47- 103 - 03168 Farm name Coastal Forest Resources Co. DBA Coastal Timberlands Co. Well number 516849

Drilling Contractor _____
Address _____ City _____ State _____ Zip _____

Logging Company _____
Address _____ City _____ State _____ Zip _____

Logging Company Pro Directional
Address 750 Conroe Park North Dr. City Conroe State TX Zip 77303

Cementing Company _____
Address _____ City _____ State _____ Zip _____

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Final Formations Well# 516849 API# 47-103-03168				
Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
SAND/SHALE	1	1	744	744
WASHINGTON COAL	744	744	747	747
SAND/SHALE	747	747	867	867
WAYNESBURG COAL	867	867	869	869
SAND/SHALE	869	869	1058	1058
COAL	1058	1058	1063	1063
SAND/SHALE	1063	1063	1209	1209
PITTSBURGH COAL	1209	1209	1215	1215
SAND/SHALE	1215	1215	2272	2267
MAXTON	2272	2267	2350	2345
SAND/SHALE	2350	2345	2428	2423
BIG LIME	2428	2423	2542	2537
SAND/SHALE	2542	2537	2557	2552
BIG INJUN	2557	2552	2663	2658
SAND/SHALE	2663	2658	2834	2829
WEIR	2834	2829	2891	2886
SAND/SHALE	2891	2886	3002	2997
GANTZ	3002	2997	3037	3031
50F	3037	3031	3078	3072
SAND/SHALE	3078	3072	3132	3124
THIRTY FOOT	3132	3124	3163	3153
SAND/SHALE	3163	3153	3277	3259
GORDON	3277	3259	3277	3259
SAND/SHALE	3277	3259	3350	3324
FOURTH SAND	3350	3324	3391	3359
SAND/SHALE	3391	3359	3507	3449
BAYARD	3507	3449	3540	3473
SAND/SHALE	3540	3473	3886	3725
WARREN	3886	3725	3897	3733
SAND/SHALE	3897	3733	4087	3869
SPEECHLEY	4087	3869	4215	3965
SAND/SHALE	4215	3965	4458	4147
BALLTOWN A	4458	4147	4590	4246
SAND/SHALE	4590	4246	4915	4491
RILEY	4915	4491	4968	4532
SAND/SHALE	4968	4532	5559	4974
BENSON	5559	4974	5639	5033
SAND/SHALE	5639	5033	6855	5946
ALEXANDER	6855	5946	6911	5987
ELKS	6911	5987	8453	7165
SONYEA	8453	7165	8642	7313
MIDDLESEX	8642	7313	8714	7366
GENESEEE	8714	7366	8833	7447
GENESEOO	8833	7447	8873	7472
TULLY	8873	7472	8917	7497
HAMILTON	8917	7497	9174	7581
MARCELLUS	9174	7581	16540	7539

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516849-47-103-03168-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	7/27/2017	15,505	16,530	10	MARCELLUS
1	8/1/2017	16,344	16,466	32	MARCELLUS
2	8/1/2017	16,144	16,306	40	MARCELLUS
3	8/2/2017	15,942	16,106	40	MARCELLUS
4	8/2/2017	15,744	15,901	40	MARCELLUS
5	8/2/2017	15,544	15,706	40	MARCELLUS
6	8/3/2017	15,345	15,506	40	MARCELLUS
7	8/3/2017	15,144	15,306	40	MARCELLUS
8	8/3/2017	14,944	15,106	40	MARCELLUS
9	8/3/2017	14,744	14,901	40	MARCELLUS
10	8/4/2017	14,544	14,706	40	MARCELLUS
11	8/4/2017	14,344	14,506	40	MARCELLUS
12	8/4/2017	14,144	14,306	40	MARCELLUS
13	8/5/2017	13,944	14,106	40	MARCELLUS
14	8/5/2017	13,744	13,906	40	MARCELLUS
15	8/5/2017	13,544	13,706	40	MARCELLUS
16	8/6/2017	13,344	13,506	40	MARCELLUS
17	8/6/2017	13,144	13,306	40	MARCELLUS
18	8/6/2017	12,944	13,106	40	MARCELLUS
19	8/6/2017	12,744	12,906	40	MARCELLUS
20	8/7/2017	12,544	12,706	40	MARCELLUS
21	8/7/2017	12,344	12,506	40	MARCELLUS
22	8/7/2017	12,144	12,306	40	MARCELLUS
23	8/7/2017	11,944	12,106	40	MARCELLUS
24	8/8/2017	11,744	11,906	40	MARCELLUS
25	8/8/2017	11,544	11,706	40	MARCELLUS
26	8/9/2017	11,344	11,506	40	MARCELLUS
27	8/9/2017	11,147	11,306	40	MARCELLUS
28	8/9/2017	10,944	11,106	40	MARCELLUS
29	8/10/2017	10,744	10,906	40	MARCELLUS
30	8/10/2017	10,544	10,703	40	MARCELLUS
31	8/10/2017	10,344	10,506	40	MARCELLUS
32	8/10/2017	10,144	10,304	40	MARCELLUS
33	8/10/2017	9,944	10,106	40	MARCELLUS
34	8/11/2017	9,747	9,906	40	MARCELLUS
35	8/11/2017	9,544	9,706	40	MARCELLUS
36	8/11/2017	9,342	9,506	40	MARCELLUS
37	8/11/2017	9,144	9,300	40	MARCELLUS

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516849 47-103-03168-0000 - Stimulated Stages

Stage Number	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
Initiation Sleeve		15	8,157	9,228	4,810	0	1,161	0
1	8/1/2017	94	9,059	9,363	3,815	451300	8,752	0
2	8/2/2017	94	8,927	9,345	4,020	450140	8,253	0
3	8/2/2017	99	8,936	9,088	4,139	450000	7,923	0
4	8/2/2017	94	8,797	9,370	4,680	450380	7,953	0
5	8/2/2017	92	8,784	9,085	4,773	450860	8,080	0
6	8/3/2017	99	8,856	9,222	4,291	450400	8,039	0
7	8/3/2017	97	8,763	8,932	4,169	449700	7,737	0
8	8/3/2017	99	8,756	9,041	4,551	448820	7,884	0
9	8/4/2017	70	9,014	9,519	3,863	451740	8,204	0
10	8/4/2017	99	8,901	9,221	4,017	449640	7,778	0
11	8/4/2017	100	8,708	8,954	4,921	450080	7,728	0
12	8/5/2017	100	8,632	8,785	4,679	450000	7,618	0
13	8/5/2017	100	8,685	9,009	4,078	449150	7,752	0
14	8/5/2017	100	8,699	9,015	4,176	450520	7,706	0
15	8/5/2017	100	8,664	9,190	4,812	449880	7,599	0
16	8/6/2017	100	8,724	9,038	4,111	449900	7,727	0
17	8/6/2017	100	8,663	8,848	4,281	449780	7,639	0
18	8/6/2017	100	8,372	8,857	4,652	450080	7,526	0
19	8/7/2017	100	8,466	8,667	4,874	450700	7,390	0
20	8/7/2017	100	8,719	8,914	4,510	449680	7,655	0
21	8/7/2017	100	8,676	9,017	4,441	447460	7,487	0
22	8/7/2017	100	8,430	8,707	4,839	449500	7,540	0
23	8/8/2017	100	8,542	8,665	4,327	450100	7,561	0
24	8/8/2017	100	8,536	8,803	4,395	449440	7,451	0
25	8/8/2017	101	8,461	8,701	4,580	450620	9,490	0
26	8/9/2017	85	8,879	9,279	4,365	450980	7,437	0
27	8/9/2017	100	8,434	8,598	4,952	450860	7,744	0
28	8/9/2017	100	8,323	8,608	5,013	450040	7,416	0
29	8/10/2017	85	8,943	9,342	3,724	451840	7,472	0
30	8/10/2017	100	8,347	8,800	4,660	450820	7,367	0
31	8/10/2017	101	8,655	8,968	4,510	450320	7,382	0
32	8/10/2017	100	8,670	9,137	4,880	450580	8,680	0
33	8/10/2017	98	8,938	9,276	4,736	450060	9,721	0
34	8/11/2017	101	8,664	9,133	4,950	450260	7,313	0
35	8/11/2017	97	8,731	9,124	4,716	450700	7,377	0
36	8/11/2017	101	8,488	8,907	4,806	450860	7,216	0
37	8/12/2017	90	8,892	9,176	4,893	450040	8,504	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/31/2017
Job End Date:	8/12/2017
State:	West Virginia
County:	Wetzel
API Number:	47-103-03168-00-00
Operator Name:	EQT Production
Well Name and Number:	516849
Latitude:	39.55250300
Longitude:	-80.60575400
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,581
Total Base Water Volume (gal):	12,233,004
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	Keane	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	85.63379	None
Other Chemical (s)	Listed Above	See Trade Name (s) List					
			Water	7732-18-5	50.00000	0.03781	

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KWG-111L	Keane	Gel					
			Water	7732-18-5	50.00000	0.03781	None
KAI-12	Keane	Acid Corrosion Inhibitor					
				Listed Below			
KSI-19	Keane	Scale Inhibitor					
				Listed Below			
KWBO-2	Keane	Gel Breaker					
				Listed Below			
KFR-23	Keane	Friction Reducer					
				Listed Below			
Hydrochloric Acid (15%)	Keane	Acidizing					
				Listed Below			
MC MX 8-2544	Multi-Chem Group	Live Culture - Nitrate Reducing Bacteria					
				Listed Below			
Sand (Proppant)	Keane	Proppant					
				Listed Below			
MC MX 5-3886	Multi-Chem Group	Specialty Brine					

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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	13.97296	None
			Calcium nitrate.4H2O	13477-34-4	100.00000	0.10558	None
			Calcium nitrate.4H2O	13477-34-4	100.00000	0.10558	
			Hydrochloric Acid	7647-01-0	15.00000	0.02568	None
			copolymer of 2-propenamide	69418-26-4	20.00000	0.01512	None
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01512	
			copolymer of 2-propenamide	69418-26-4	20.00000	0.01512	
			Distillates (petroleum), hydrotreated light	64742-47-8	20.00000	0.01512	None
			Sodium chloride	7647-14-5	100.00000	0.00939	
			Sodium chloride	7647-14-5	100.00000	0.00939	None
			Solvent naphtha (petroleum) heavy aliph.	64742-96-7	60.00000	0.00663	None
			Solvent naphtha (petroleum) heavy aliph.	64742-96-7	60.00000	0.00663	
			Guar gum	9000-30-0	60.00000	0.00663	
			Guar gum	9000-30-0	60.00000	0.00663	None
			Methanol	67-56-1	30.00000	0.00601	None
			Methanol	67-56-1	30.00000	0.00601	
			alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00151	
			oleic acid diethanolamide	93-83-4	2.00000	0.00151	
			oleic acid diethanolamide	93-83-4	2.00000	0.00151	None
			alcohols, C12-16, ethoxylated	68551-12-2	2.00000	0.00151	None
			Trade Secret	Proprietary	10.00000	0.00111	
			Trade Secret	Proprietary	10.00000	0.00111	None
			Sodium nitrate	7631-99-4	5.00000	0.00047	
			Sodium nitrate	7631-99-4	5.00000	0.00047	None

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			Methanol	67-56-1	90.00000	0.00022	None
			Sodium persulfate	7775-27-1	99.00000	0.00013	
			Sodium persulfate	7775-27-1	99.00000	0.00013	None
			Fatty Imidazoline	61790-69-0	5.00000	0.00001	None
			Xylene	1330-20-7	5.00000	0.00001	None
			Prop-2-yn-1-ol	107-19-7	5.00000	0.00001	None
			Alcohols, C7-9-iso-, C8-rich	68526-83-0	5.00000	0.00001	None
			Isoproyl Alcohol	67-63-0	5.00000	0.00001	None
			Ethylbenzene	100-41-4	1.00000	0.00000	None

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

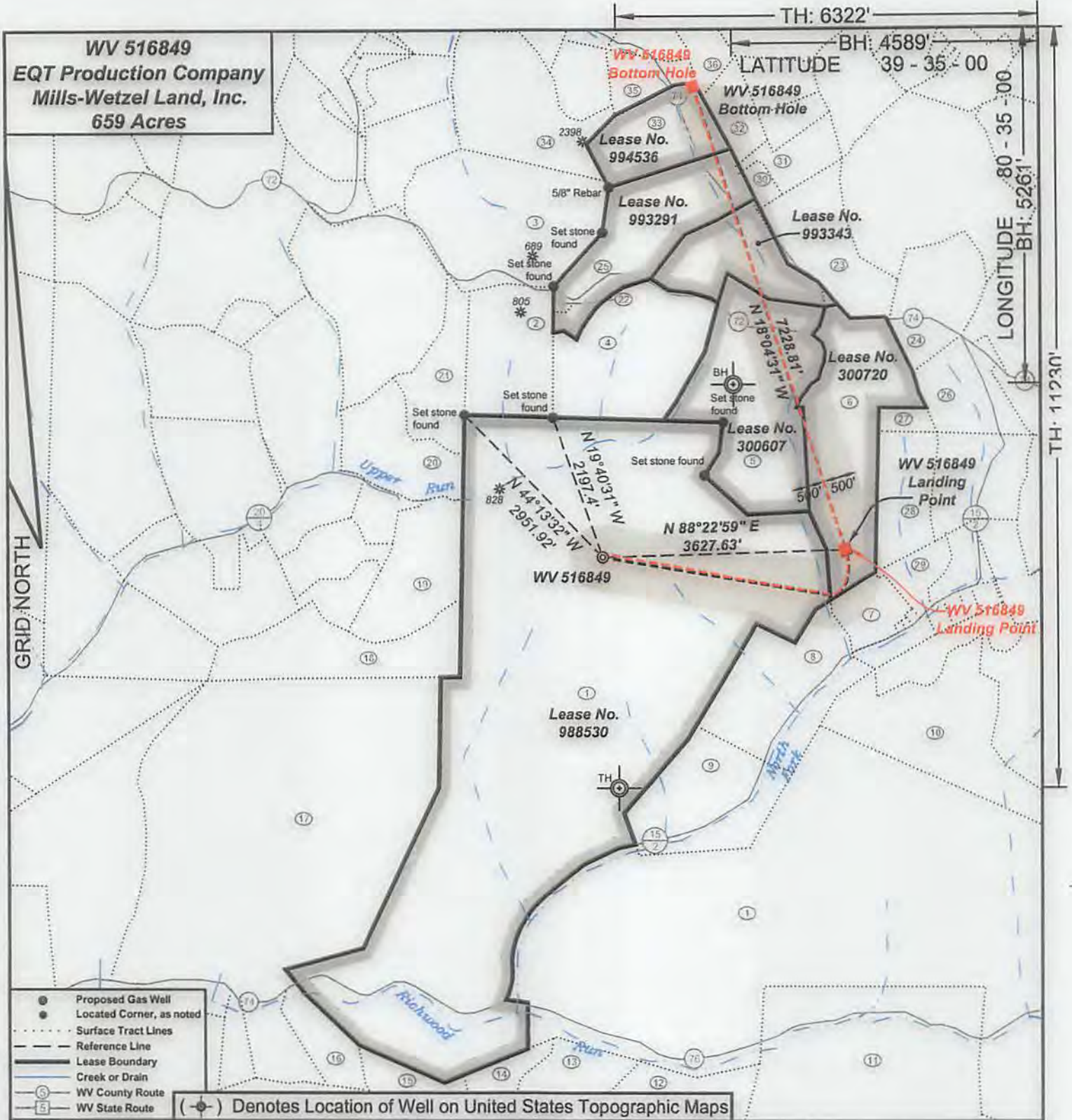
** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** 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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- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route

(⊙) 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.

Ben R. Singleton
P.S. 2092



SEAL

FILE NO: 196-34-G-10
DRAWING NO: 196-10 Big 190 H21
SCALE: 1" = 2000'
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 23 20 17
OPERATOR'S WELL NO.: 516849
API WELL NO
47 - 103 - 03168
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1473.5' (As-built) WATERSHED Upper Run and North Fork QUADRANGLE: Big Run
DISTRICT: Grant COUNTY: Wetzel
SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 659
ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988530 ACREAGE: 659
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: 7,572

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
Bridgeport, WV 26330 Bridgeport, WV 26330

WV 516849
EQT Production Company
Mills-Wetzel Land, Inc.
659 Acres

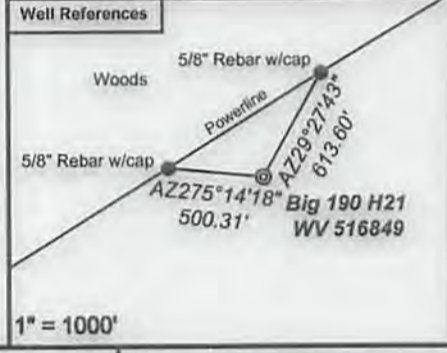
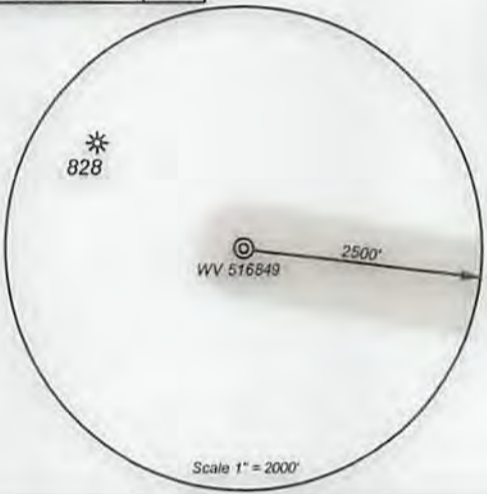
Tract ID.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	17	14	Wetzel	Grant	Coastal Forest Resources Co.	1627.60
2	12	46	Wetzel	Grant	Jimmy L. & James C. Yoho	56.10
3	12	42	Wetzel	Grant	Jimmy L. & James C. Yoho	103.30
4	12	47	Wetzel	Grant	Coastal Forest Resources Co.	87.50
5	13	46	Wetzel	Grant	Burl Henthorn Est, et al.	99.00
6	18	1	Wetzel	Grant	McKinley E. Calvert Heirs	100.00
7	18	14	Wetzel	Grant	Frank M. & Frankie L. Dulaney	9.55
8	18	13	Wetzel	Grant	Ralph G. Dulaney	87.50
9	18	17	Wetzel	Grant	Alan D. & Diana L. Barr	13.00
10	18	22	Wetzel	Grant	Karen R. Dennison, et al.	111.40
11	23	5	Wetzel	Grant	Thomas E. Wyatt, et al.	174.68
12	23	4	Wetzel	Grant	Dallison Lumber Inc.	36.10
13	23	2	Wetzel	Grant	Billy D. Arnolds, Jr.	38.80
14	23	1	Wetzel	Grant	Billy D. Arnolds, Jr.	16.50
15	22	27	Wetzel	Grant	Dallison Lumber Inc.	31.35
16	22	13	Wetzel	Grant	James Jones, et al.	16.75
17	17	16	Wetzel	Grant	David A. Arnolds	402.61
18	17	13	Wetzel	Grant	David A. Arnolds	62.25
19	17	12	Wetzel	Grant	Rhonda K. Spencer	57.20
20	17	4	Wetzel	Grant	George W. Cain	42.60
21	12	45	Wetzel	Grant	Jimmy L. & James C. Yoho	44.10
22	12	49	Wetzel	Grant	George W. Cain	1.00
23	13	36	Wetzel	Grant	Sara Miller, et al.	49.00
24	13	37	Wetzel	Grant	Lydie Martin	16.00
25	12	43	Wetzel	Grant	Jennie B. Goddard, et al.	74.50
26	18	3	Wetzel	Grant	Lydie Martin	32.25
27	18	2	Wetzel	Grant	Frederick Jewell, et al.	4.66
28	18	6	Wetzel	Grant	Dwight Beckett	37.00
29	18	17	Wetzel	Grant	Alan D. & Diana L. Barr	13.00
30	13	28	Wetzel	Grant	Kenneth D. Eiford	4.59
31	13	29	Wetzel	Grant	Kenneth D. Eiford	17.50
32	13	19	Wetzel	Grant	Larry D. & Mary A. Huggins	19.25
33	12	35	Wetzel	Grant	H. G. Kirkpatrick Est	49.50
34	12	34	Wetzel	Grant	HFP LLC	75.28
35	12	21	Wetzel	Grant	John Laws, et al.	11.50
36	12	22	Wetzel	Grant	Esther Ruth Coen	51.60

As-Drilled Well Information:
WV 516849 coordinates are
 NAD 27 N: 385,262.74 E: 1,688,213.84
 NAD 83 UTM N: 4,378,174.82 E: 533,887.20
WV 516849 Landing Point coordinates are
 NAD 27 N: 385,372.49 E: 1,691,828.89
 NAD 83 UTM N: 4,378,226.67 E: 534,988.03
WV 516849 Bottom Hole coordinates are
 NAD 27 N: 392,237.38 E: 1,689,594.50
 NAD 83 UTM N: 4,380,306.75 E: 534,272.46
 West Virginia Coordinate 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.

Big 190

H22, 516850	
H21, 516849	
H20, 516848	● 47-103-03109
H19, 516847	
47-103-02727	
47-103-02728	● 47-103-03020
47-103-02729	● 47-103-03021
47-103-02730	● 47-103-03022
47-103-02731	● 47-103-03023
47-103-02732	
47-103-02733	
47-103-02734	
47-103-02735	
47-103-02736	
47-103-02856	

Lease No.	Acres	Owner
300720	103	Lois A. Dennis, et al.
300607	99	ET Blue Grass LLC, et al.
993343	50	Mary R. Huggins, et al.
993291	74.5	Mary Margaret Price & James G. Price, et al.

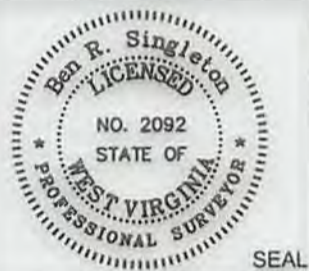


- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route



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.

Ben R. Singleton
 P.S. 2092



FILE NO: 196-34-G-10
 DRAWING NO: 196-10 Big 190 H21
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: June 23 20 17
 OPERATOR'S WELL NO.: 516849
 API WELL NO
 47 - 103 - 03168
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1473.5' (As-built) WATERSHED Upper Run and North Fork QUADRANGLE: Big Run
 DISTRICT: Grant COUNTY: Wetzel
 SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 659
 ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988530 ACREAGE: 659
 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: 7,572

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280
 Bridgeport, WV 26330 Bridgeport, WV 26330