WR-35
Rev. 8/23/13

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

API 47 - 061 - 01674 County Monongalia District Clay
Quad Blacksville, WV Pad Name Coastal Field/Pool Name Blacksville
Farm name Coastal Forest Resources Company Well Number 1H
Operator (as registered with the OOG) Northeast Natural Energy LLC
Address 707 Virginia St. Suite 1200 City Charleston State WV Zip 25301

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4395375.2 Easting 568196.5
Landing Point of Curve Northing 4395315.5 Easting 567873.6
Bottom Hole Northing 4397012.0 Easting 566560.1

Elevation (ft) 1,420' 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 for horizontal section, BIO-BASE 365, CALCIUM CHLORIDE POWDER, G-SEAL PLUS, HRP, LIME, M-I WATE (BARITE), M-I-X II MEDIUM
MEGADRIL P SYSTEM, MEGADRIL P SYSTEM RENTAL, MEGAMUL, SAFE-CARB 250, VERSATHIN HF, VERSAWET, VG-PLUS, VINSEAL MEDIUM, WALNUT NUT PLUG MEDIUM

Date permit issued 7/18/2014 Date drilling commenced 10/16/2014 Date drilling ceased 2/13/2015
Date completion activities began 6/05/2015 Date completion activities ceased 6/25/2015
Verbal plugging (Y/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 1,243' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,510' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 600 ; 1,200' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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API 47- 061 - 01674 Farm name Coastal Forest Resources Company Well number 1H

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	24	40'	N	N/A	N/A	Y to Surface
Surface	17.5	13 3/8	1,376'	N	54.5	N/A	Y to 40 bbls
Coal							
Intermediate 1	12.25	9 5/8	2,766'	N	40	N/A	Y to 10 bbls
Intermediate 2							
Intermediate 3							
Production	8.5	5.5	15,885'	N	20	N/A	Estimated Top at 2000'
Tubing							
Packer type and depth set							

Comment Details

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ^{3}/sks)	Volume (ft ^{3})	Cement Top (MD)	WOC (hrs)
Conductor	4,500 psi ready mix	36.4		.75	27.27	CTS	48
Surface	Class A	1,038	15.2	1.27	1,271	CTS	8
Coal							
Intermediate 1	Class A	860	15.2	1.26	1,074	CTS	8
Intermediate 2							
Intermediate 3							
Production	50:50 Premium NE-1 3% R-3 3% MPA 170	3,293	14.5	1.17	2,661	Estimated 2,000'	48
Tubing							

Drillers TD (ft) 15,908' Loggers TD (ft) 15,883'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure

Kick off depth (ft) 6,939'

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: bow spring centralizers every 3rd joint or aprox 120'

Intermediate: bow spring centralizers every 3rd joint or aprox 120'

Production: Hard bodied spiral centralizers every other joint or aprox 80' from TD to KOP then bow spring from KOP to 9 5/8" every forth joint or aprox 140'

WAS WELL COMPLETED AS SHOT HOLE ■ Yes ☐ No DETAILS 36 Stages, 40 Shots per Stage

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

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API 47- 061 - 01674 Farm name Coastal Forest Resources Company Well number 1H

PERFORATION RECORD

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

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)

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	8,207.07' TVD	15,908' MD	

Please insert additional pages as applicable.

GAS TEST □ Build up □ Drawdown ■ Open Flow OIL TEST □ Flow □ Pump

SHUT-IN PRESSURE Surface 4046 psi Bottom Hole _____ psi DURATION OF TEST 48 hrs

OPEN FLOW Gas 5379 mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY □ Estimated ■ Orifice □ Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
	0		0		*Please See Attachment

Please insert additional pages as applicable.

Drilling Contractor Pioneer 63
Address 1250 NE Loop 410 Suite 1000 City San Antonio State TX Zip 78209

Logging Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Cementing Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Stimulating Company Schlumberger
Address 1080 US-33 City Weston State WV Zip 26452

Please insert additional pages as applicable.

Completed by Zack Arnold Telephone 304.203.8059
Signature _____ Title General Manager - Operations Date 10/6/2015

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

Lithology/Formation	Top Depth in FT Name TVD	Bottom Depth in FT TVD	Top Depth in FT MD	Bottom Depth in FT MD	Describe rock type and record quantity and type of fluid (freshwater, brine, oil, gas, H2S, etc)
Sand/Shale/Silt	0	345			sand/shale/silt
Red Rock	345	355			red rock
Sand/Shale/Silt	355	2344			sand/shale/silt
Limestone	2344	2502			limestone
Big Injun	2502	2620			sandstone
Sand/Shale	2620	2995			sand/shale
Shale	2995	3125			shale
Sand/Shale	3125	3722			sand/shale
Shale	3722	6500			shale
Shandstone/Shale	6500	7755			sandstone/shale
Burkett	7755	7923	7916	8151	shale
Geneseo	7923	7968	8151	8219	shale
Tully	7968	8028	8219	8297	limestone
Hamilton	8028	8131	8297	8510	shale
Marcellus	8131	8173	8510	8647	shale
Cherry Valley	8173	8180	8647	8668	limestone
Lower Marcellus	8180		8668		shale

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ACTUAL WELLPATH REPORT (CSV version)
Prepared by Baker Hughes
Software System: WellArchitect® 4.0.1

47-061-01674

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC
Area	Monongalia County, WV
Field	Monongalia
Facility	Coastal Pad
Slot	Slot 01
Well	Coastal 1H
Wellbore	Coastal 1H AWB
Wellpath	Coastal 1H AWP Proj: 15908'
Sidetrack	(none)

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
North Reference	Grid
Scale	0.999942
Convergence at slot	0.4S° West
Software System	WellArchitect® 4.0.1
User	Gotfbral
Report Generated	13/Feb/2015 at 13:48
DataBase/Source file	WANorthEast/ev3940.xml

WELLPATH LOCATION	Local Nort [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	0	0	1770298	439860	39°42'19.8	80°12'16.137"W
Facility Reference Pt			1770298	439860	39°42'19.8	80°12'16.137"W
Field Reference Pt			1777686	440640.7	39°42'28.1	80°10'41.690"W

WELLPATH DATUM

Calculation method	Minimum curvature
Horizontal Reference Point	Slot
Vertical Reference Point	Pioneer 63 (RKB)
MD Reference Point	Pioneer 63 (RKB)
Field Vertical Reference	Mean Sea Level
Pioneer 63 (RKB) to Facility Vertical Datum	18.00ft
Pioneer 63 (RKB) to Mean Sea Level	1438.00ft
Pioneer 63 (RKB) to Mud Line at Slot (Slot 01)	18.00ft
Section Origin	N 0.00, E 0.00 ft
Section Azimuth	323.00°

WELLPATH DATA † = interpolated/extrapolated station

	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Di [ft]	Closure Di [°]	DLS [°/100ft]
†	0	0	58.87	0	0	0	0	1770298	439860	39°42'19.837"N	80°12'16.137"W	0	0	0

61-01674

CEMENT JOB REPORT

BAKER HUGHES

CUSTOMER NORTHEAST NATURAL ENER	DATE 18-OCT-14	F.R. # 10011109854	SERV. SUPV. Brian Lough
LEASE & WELL NAME COASTAL #1H - API 47061016740000	LOCATION CLAY		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG #		TYPE OF JOB Surface

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
13-3/8" Top Cem Plug, Nitr cvr, Phe	Guide Shoe, Texas-Notched 13-3/8						
	Float Collar, Auto Fill, 13-3/8 - 8rd						

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
			PHYSICAL SLURRY PROPERTIES					
H2O			8.34				185	
6% GEL W/FLAKE			8.5				25	
H2O			8.34				10	
PREM NE-1 + 2% CACL		1,038	15.2	1.27	5.77	04:14	225	136.66
						TOTAL	445	136.66

Available Mix Water 500 Bbl. Available Displ. Fluid 500 Bbl.

HOLE SIZE	% EXCESS	DEPTH	TBG-CSG-D.P. ID	OD	WGT.	TYPE	MD	TVD	GRADE	COLLAR DEPTHS SHOE	FLOAT	STAGE
17.5	30	1400	12.62	13.38	54.5	CSG	1366		J-55	1366	1321	

LAST CASING ID	OD	WGT	TYPE	MD	TVD	PKR-CMT RET-BR PL-LINER BRAND & TYPE	DEPTH	PERF. DEPTH TOP	BTM	TOP CONN SIZE	THREAD	WELL FLUID TYPE	WGT.
23.	24	95.	CSG	40	40					13.375	8 RND	OTHER	0

DISPL. VOLUME VOLUME	UOM	DISPL. FLUID TYPE	WGT.	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV.	OP. MAX SQ. PSI	MAX TBG PSI RATED	Operator	MAX CSG PSI RATED	Operator	MIX WATER
206	BBLS			500	0	0	0	0	2184	750	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

TIME HR:MIN.	PRESSURE - PSI PIPE	ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
	PRESSURE/RATE DETAIL					SAFETY MEETING: BJ CREW X CO. REP. X
						TEST LINES 3140 PSI
						CIRCULATING WELL - RIG BJ X
16:30						ARRIVE ON LOCATION
16:40						SAFETY MEETING WITH BHI CREW
17:00						SPOT EQUIPMENT& RIG IN
19:25						SAFETY MEETING WITH RIG CREW & CO.MAN
19:50	85		5	5	H2O	LINE FILL
19:51	0		.2	.1	H2O	PRESSURE TEST 3140 PSI
19:53	212		6.6	180	H2O	LOAD HOLE WITH H2O
20:20	166		5.6	25	GEL	6% GEL WITH FLAKE
20:29	165		5.5	10	H2O	H2O SPACER
20:29	342		5.6	225	CEMENT	1038 SACKS OF PREM NE-1 + 2% CACL. TEMP - 77 DEGREE f
20:40	344		5.6			CIRCULATE WELL AT 293 BBLS INTO JOB
21:10	0		0		----------	SHUT DOWN / DROP PLUG
21:12	515		6	206	H2O	DISPLACEMENT
21:50	960		1		H2O	LAND PLUG
21:55	0					RELEASE PRESSURE. / END JOB.

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
Y N	515	Y N	40	657	0	Y N	

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CEMENT JOB REPORT

BAKER HUGHES

CUSTOMER NORTHEAST NATURAL ENER	DATE 22-OCT-14	F.R. # 848610104	SERV. SUPV. Scott J Carson
LEASE & WELL NAME COASTAL 1H - API 47061018740000	LOCATION BLACKSVILLE		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG # PERFORMANCE		TYPE OF JOB Intermediate

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
BJ Cement Plug, Rubber, Bottom 9-	Guide Shoe, Cement Nose, 9-5/8 i	NONE			NONE		
	Float Collar, Al Flap, 9-5/8 - 8rd						

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
		PHYSICAL SLURRY PROPERTIES						
H2O			8.34				165	
GEL/FLAKE			8.45				25	
H2O			8.34				10	
PREMIUM NE-1 2%CALCIUM	N/A	860	15.2	1.26	5.76	04:17	193	117.95
H2O			8.34				206	
300# SUGAR ON SIDE			0				0	

Available Mix Water 500 Bbl. Available Displ. Fluid 500 Bbl. TOTAL 599 117.95

HOLE SIZE	HOLE % EXCESS	HOLE DEPTH	TBG-CSG-D.P. ID	OD	WGT.	TYPE	MD	TVD	GRADE	COLLAR DEPTHS SHOE	FLOAT	STAGE
12.25	30	2835	8.835	9.625	40	CSG	2766	2766	J-55	2766	2722	1

LAST CASING ID	OD	WGT	TYPE	MD	TVD	PKR-CMT RET-BR PL-LINER BRAND & TYPE	DEPTH	PERF. DEPTH TOP	BTM	TOP CONN SIZE	THREAD	WELL FLUID TYPE	WGT.
13.	13.38	55.	CSG	1370	1370	NO PACKER				9.625	8RD	KCL WATER	8.4

DISPL. VOLUME VOLUME	UOM	DISPL. FLUID TYPE	WGT.	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV.	OP. MAX SQ. PSI	MAX TBG PSI RATED	Operator	MAX CSG PSI RATED	Operator	MIX WATER
206	BBLS	H2O	8.34	970	0	0	0	0	3160	1800	TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL TIME HR:MIN	PRESSURE - PSI PIPE	ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
						SAFETY MEETING: BJ CREW X CO. REP. X
						TEST LINES 3600 PSI
						CIRCULATING WELL - RIG X BJ X
21:30						ARRIVE AT LOCATION 10-21-2014 LOCATION TIME 22:00
02:30						PRE-JOB RIG-IN SAFETY MEETING
02:45						RIG-IN
04:30						PRE-JOB SAFETY MEETING
04:54	120		5	5	H2O	LINE-FILL
04:55	0				H2O	PRESSURE TEST 3600#
04:56	140		5.5	165	H2O	BREAK CIRCULATION
05:26	300		5.2	25	GEL/FLAK	PRE-FLUSH
05:30	280		5.4	10	H2O	SPACER
05:32	265		5.4	191	SLURRY	15.2# PREMIUM NE-1 2%CALCIUM
06:07	0					SHUT-DOWN RELEASE PLUG
06:08	500		5.6	208	H2O	START DISPLACEMENT
06:45	1460					SHUT-DOWN
06:47	0					BLEED-OFF PRESSURE 1.5BBL. RETURN
06:48	0					CLOSE-IN CEMENT HEAD
06:50						POST-JOB RIG OUT SAFETY MEETING
07:00						RIG-OUT

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CEMENT JOB REPORT

BAKER HUGHES

PRESSURE/RATE DETAIL						EXPLANATION
TIME HR:MIN.	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW [X] CO. REP. [X]
						TEST LINES 3600 PSI
						CIRCULATING WELL - RIG [X] BJ [X]

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
Y N	970	Y N	10	600	0	Y N	

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CEMENT JOB REPORT

BAKER HUGHES

CUSTOMER	DATE	F.R. #	SERV. SUPV.
NORTHEAST NATURAL ENER	14-FEB-15	10011139371	Kevin Paugh

LEASE & WELL NAME	LOCATION	COUNTY-PARISH-BLOCK
COASTAL 1H - API 47061016740000	CLAY	Monongalia West Virginia
DISTRICT	**DRILLING CONTRACTOR RIG #**	**TYPE OF JOB**
Clarksburg	PIONEER 63	Long String

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
Latch Down Plug & Assembly, 5-1/2	Float Collar, Auto Fill, 5-1/2 - BUTTRI						

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	PHYSICAL SLURRY PROPERTIES: SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
ULTRABOND			13				50	
MULTIBOND		223	13	1.26	5.85		50	31.03
PREM NE-1+.2% MPA-170+.35% R-3		3,070	14.5	1.17	5.14		640	375.88
H2O			8.34				353	
200 LB SUGAR			0				0	

Available Mix Water 1200 Bbl. Available Displ. Fluid 500 Bbl. TOTAL 1093 406.91

HOLE SIZE	HOLE % EXCESS	HOLE DEPTH	TBG-CSG-D.P. ID	OD	WGT.	TYPE	MD	TVD	GRADE	COLLAR DEPTHS SHOE	FLOAT	STAGE
8.75	10	6500	4.778	5.5	20	CSG	15908	8209	J-55			

LAST CASING ID	OD	WGT	TYPE	MD	TVD	PKR-CMT RET-BR PL-LINER BRAND & TYPE	DEPTH	PERF. DEPTH TOP	BTM	TOP CONN SIZE	THREAD	WELL FLUID TYPE	WGT.
8.8	9.625	40	CSG	2766	2766					5.5	BUTT	SYNTHETIC MUD	11.9

DISPL. VOLUME VOLUME	UOM	DISPL. FLUID TYPE	WGT.	CAL. PSI BUMP PLUG	CAL. MAX PSI TO REV.	OP. MAX SQ. PSI	MAX TBG PSI RATED	Operator	MAX CSG PSI RATED	Operator	MIX WATER
356	BBLS	H2O	8.34	4700	0	0	0	0	10000	5000	TANK
		200 LB SUGAR	0								

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL TIME HR:MIN.	PRESSURE - PSI PIPE	ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	EXPLANATION
						SAFETY MEETING: BJ CREW [X] CO. REP. [X]
						TEST LINES 5400 PSI
						CIRCULATING WELL - RIG [X] BJ [X]
04:30						ARRIVE ON LOCATION (LOC TIME 0500)
08:00						SPOT EQUIPMENT
08:30						PRE RIG IN SAFETY MEETING
08:35						RIG IN
10:45						SAFETY MEETING WITH CUSTOMER AND RIG CREW
11:00						RIG HEAD AND MANIFOLD IN
11:30	300		3	5	H2O	LINE FILL
11:40	5400		1	1	H2O	PRESSURE TEST
11:45	600		5	50	ULTRABOI	ULTRABOND 265 LBS/BBL BARITE+125 GAL S-5+50 GAL ULTRABOND
11:55	930		5	50	MULTIBON	MULTIBOND
12:05	800		5.4	638	SLURRY	PREM NE-1 +.2% MPA-170+.35% R-3
14:40	10		3	5	H2O	SHUT DOWN WASH OUT LINES
14:45						DROP PLUG
14:50	850		7		H2O	START DISPLACEMENT(10 BBL RETARD H2O)
15:50	3950			363		PLUG DOWN
15:55						RELEASE PRESSURE FLOATS HELD 3.5 BBL BACK
16:00						RIG DOWN SAFETY MEETING

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CEMENT JOB REPORT

BAKER HUGHES

PRESSURE/RATE DETAIL

TIME HR:MIN.	PRESSURE - PSI PIPE	PRESSURE - PSI ANNULUS	RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE

EXPLANATION

SAFETY MEETING: BJ CREW [X] CO. REP. [X]

TEST LINES 5400 PSI

CIRCULATING WELL - RIG [X] BJ [X]

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
[Y] N	3900	[Y] N	0	1116	0	Y [N]	

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Office of Oil & Gas
OCT 07 2015

10/30/2015

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Perforation Record					
Stage Number	Report Date	Perforated from MD ft	Perforated to MD ft	Number of Perforations	Formation
1	6/9/2015	15788	15631	40	Marcellus Shale
2	6/11/2015	15589	15432	40	Marcellus Shale
3	6/11/2014	15390	15233	40	Marcellus Shale
4	6/11/2015	15191	15037	40	Marcellus Shale
5	6/12/2015	14993	14835	40	Marcellus Shale
6	6/12/2015	14794	14631	40	Marcellus Shale
7	6/12/2015	14595	14438	40	Marcellus Shale
8	6/12/2015	14396	14242	40	Marcellus Shale
9	6/13/2015	14197	14040	40	Marcellus Shale
10	6/13/2015	13998	13841	40	Marcellus Shale
11	6/14/2015	13799	13642	40	Marcellus Shale
12	6/14/2015	13600	13443	40	Marcellus Shale
13	6/15/2015	13401	13244	40	Marcellus Shale
14	6/15/2015	13202	13049	40	Marcellus Shale
15	6/15/2015	13004	12846	40	Marcellus Shale
16	6/15/2015	12805	12651	40	Marcellus Shale
17	6/16/2015	12606	12449	40	Marcellus Shale
18	6/16/2015	12407	12248	40	Marcellus Shale
19	6/16/2015	12208	12051	40	Marcellus Shale
20	6/17/2015	12009	11852	40	Marcellus Shale
21	6/17/2015	11810	11653	40	Marcellus Shale
22	6/17/2015	11611	11454	40	Marcellus Shale
23	6/18/2015	11412	11255	40	Marcellus Shale
24	6/18/2015	11213	11056	40	Marcellus Shale
25	6/18/2015	11015	10857	40	Marcellus Shale
26	6/18/2015	10816	10658	40	Marcellus Shale
27	6/19/2015	10617	10460	40	Marcellus Shale
28	6/22/2015	10418	10261	40	Marcellus Shale
29	6/22/2015	10219	10062	40	Marcellus Shale
30	6/22/2015	10020	9863	40	Marcellus Shale
31	6/23/2015	9821	9666	40	Marcellus Shale
32	6/23/2015	9622	9465	40	Marcellus Shale
33	6/23/2015	9423	9266	40	Marcellus Shale
34	6/24/2015	9224	9067	40	Marcellus Shale
35	6/24/2015	9026	8868	40	Marcellus Shale
36	6/25/2015	8827	8669	40	Marcellus Shale

61-01674

Stimulation Record							
Stage Number	Report Date	Avg Treating Rate (BPM)	Avg Treating Pressure (psi)	Breakdown Pressure (psi)	ISIP (psi)	Total Proppant Amount (lbs)	Total Clean Fluid (Bbls)
1	6/9/2015	57	8,955	7,630	4,402	300,720	9,591
2	6/11/2015	87	9,065	5,826	5,200	302,440	7,090
3	6/11/2014	79	8,919	7,423	5,629	298,620	6,465
4	6/11/2015	82	8,533	6,720	5,427	301,980	5,060
5	6/12/2015	95	8,900	6,770	5,065	301,860	5,486
6	6/12/2015	81	8,525	6,891	4,520	302,980	4,933
7	6/12/2015	80	8,532	7,529	4,644	240,200	4,405
8	6/12/2015	94	9,023	8,662	4,710	300,320	5,502
9	6/13/2015	96	8,870	7,664	4,433	300,580	5,223
10	6/13/2015	84	9,107	7,400	4,975	305,920	5,842
11	6/14/2015	95	9,031	7,236	4,705	300,440	4,885
12	6/14/2015	75	8,762	7,677	5,434	300,740	5,937
13	6/15/2015	81	9,035	8,466	5,373	299,980	6,409
14	6/15/2015	83	8,553	8,315	4,407	303,140	5,080
15	6/15/2015	84	8,651	6,991	4,409	299,980	5,348
16	6/15/2015	90	8,774	6,394	4,254	301,200	5,776
17	6/16/2015	91	8,902	6,990	4,342	299,220	5,659
18	6/16/2015	84	8,489	7,024	4,550	301,920	4,994
19	6/16/2015	94	8,640	7,217	4,465	300,720	4,814
20	6/17/2015	91	8,895	7,721	4,453	251,100	4,697
21	6/17/2015	84	8,475	7,543	4,540	305,160	4,878
22	6/17/2015	82	8,715	7,335	4,540	306,180	5,102
23	6/18/2015	92	8,479	7,460	4,685	300,900	4,949
24	6/18/2015	82	8,548	8,083	4,747	297,860	4,984
25	6/18/2015	92	8,596	8,198	4,624	204,520	4,838
26	6/18/2015	91	8,707	7,421	6,426	301,800	4,787
27	6/19/2015	81	8,437	7,109	4,680	298,240	4,769
28	6/22/2015	89	8,754	7,576	5,316	246,500	4,290
29	6/22/2015	88	8,379	8,033	4,645	395,620	6,359
30	6/22/2015	85	8,422	7,236	5,251	400,460	6,258
31	6/23/2015	83	8,848	8,051	4,852	298,920	4,789
32	6/23/2015	90	8,536	7,082	5,007	301,980	4,821
33	6/23/2015	94	8,583	4,780	5,339	400,640	8,595
34	6/24/2015	88	8,438	7,434	5,437	403,700	8,609
35	6/24/2015	92	8,484	7,600	5,160	302,340	4,833
36	6/25/2015	94	8,761	7,797	5,093	299,680	4,716

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/8/2015
Job End Date:	6/25/2015
State:	West Virginia
County:	Monongalia
API Number:	47-061-01674-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Coastal 1H
Longitude:	-80.20448200
Latitude:	39.70551000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	8,219
Total Base Water Volume (gal):	8,953,560
Total Base Non Water Volume:	0

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas

61-01674

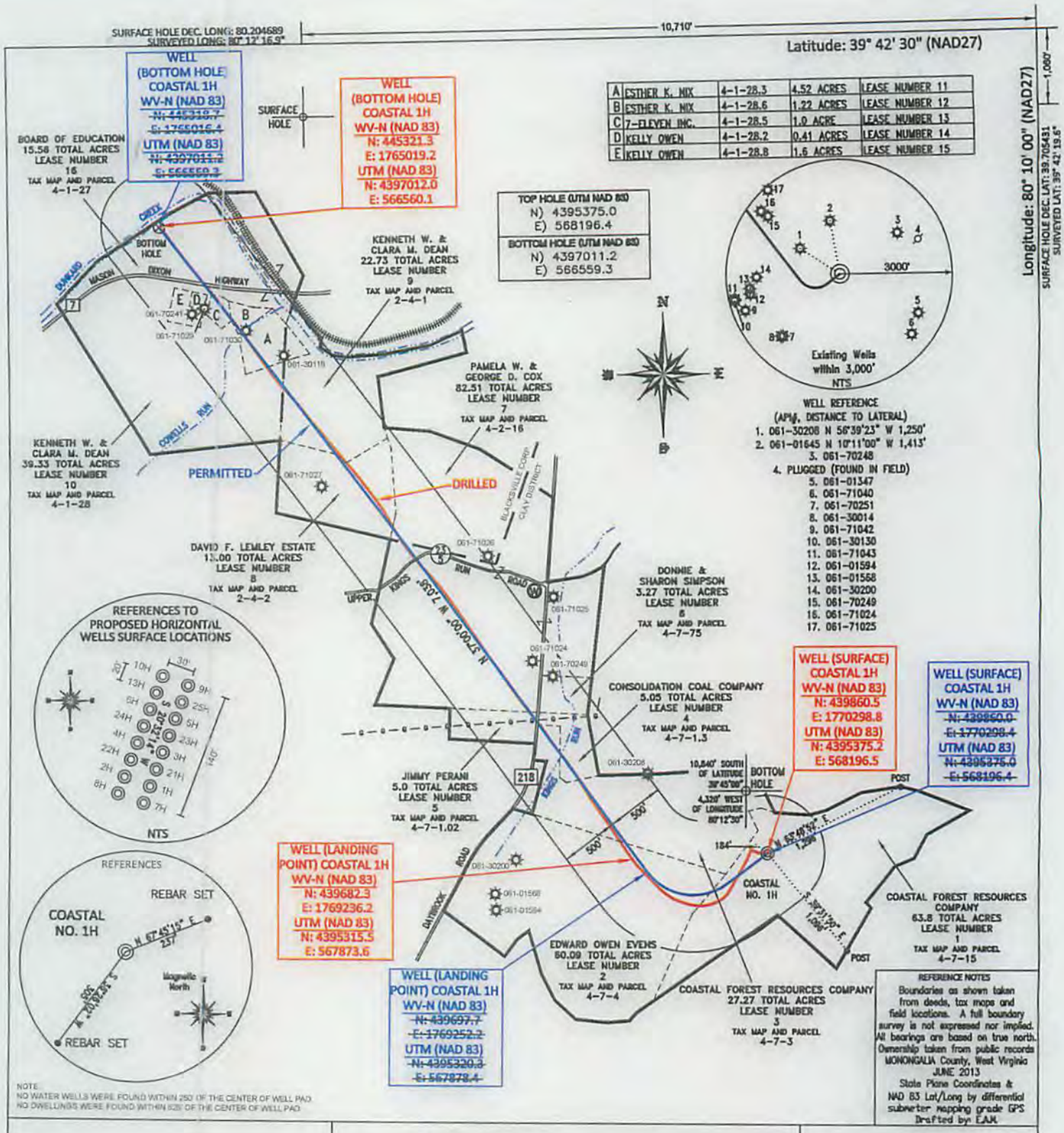
Hydraulic Fracturing Fluid Composition:

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
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Proppant Transport	Schlumberger	Corrosion Inhibitor, Scale Inhibitor, Biocide, Acid, Breaker, Gelling Agent, Friction Reducer, Iron Control Agent, Fluid Loss Additive , Propping Age					
			Water (Including Mix Water Supplied by Client)*	NA		86.13305	
			Quartz, Crystalline silica	14808-60-7	98.54897	13.66574	
			Hydrochloric acid	7647-01-0	0.93414	0.12954	
			Ammonium sulfate	7783-20-2	0.16885	0.02341	
			Acrylamide, 2-acrylamido-2-methylpropanesulfonic acid, sodium salt polymer	38193-60-1	0.12463	0.01728	
			Guar gum	9000-30-0	0.10873	0.01508	
			Glutaraldehyde	111-30-8	0.03452	0.00479	
			Polymer of 2-acrylamido-2-methylpropanesulfonic acid sodium salt and methyl acrylate	136793-29-8	0.01335	0.00185	
			Diammonium peroxidisulphate	7727-54-0	0.00900	0.00125	
			Urea	57-13-6	0.00820	0.00114	

			Ethanol, 2,2',2"-nitrilotris-, 1,1',1"-tris(dihydrogen phosphate), sodium salt	68171-29-9	0.00816	0.00113	
			Alkyl(c12-16) dimethylbenzyl ammonium chloride	68424-85-1	0.00616	0.00085	
			Sodium erythorbate	6381-77-7	0.00612	0.00085	
			Methanol	67-56-1	0.00361	0.00050	
			Trisodium ortho phosphate	7601-54-9	0.00359	0.00050	
			Fatty acids, tall-oil	61790-12-3	0.00227	0.00032	
			Non-crystalline silica (impurity)	7631-86-9	0.00198	0.00027	
			Sodium sulfate	7757-82-6	0.00191	0.00027	
			Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	0.00188	0.00026	
			Vinylidene chloride/methylacrylate copolymer	25038-72-6	0.00117	0.00016	
			Ethylene Glycol	107-21-1	0.00102	0.00014	
			Alcohols, C14-15, ethoxylated (7EO)	68951-67-7	0.00089	0.00012	
			Ethanol	64-17-5	0.00074	0.00010	
			Propargyl alcohol	107-19-7	0.00059	0.00008	
			2-propenamid	79-06-1	0.00041	0.00006	
			Tetrasodium ethylenediaminetetraacetate	64-02-8	0.00021	0.00003	
			Hexadec-1-ene	629-73-2	0.00020	0.00003	
			Dimethyl siloxanes and silicones	63148-62-9	0.00012	0.00002	
			1-Octadecene (C18)	112-88-9	0.00010	0.00001	
			Dodecamethylcyclohexasiloxane	540-97-6			
			Copper(II) sulfate	7758-98-7			
			Formaldehyde	50-00-0	0.00001		
			Octamethylcyclotetrasiloxane	556-67-2	0.00001		
			Siloxanes and silicones, dimethyl, reaction products with silica	67762-90-7	0.00002		
			poly(tetrafluoroethylene)	9002-84-0	0.00002		
			Decamethyl cyclopentasiloxane	541-02-6	0.00001		
			Magnesium silicate hydrate (talc)	14807-96-6	0.00004		

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)



FILE #: NNE12
DRAWING #: 2318
SCALE: PLAT: 1" = 1200' TICK: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed:

L.L.S. #2124 : Ernest J. Benchek III

ERNEST J. BENCHEK III LICENSED No. 2124 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: OCTOBER 5, 2015

OPERATOR'S WELL #: COASTAL NO. 1H AS-DRILLED

API WELL #: 47 (STATE) 61 (COUNTY) 01674 H6A (PERMIT)

Well Type: ☐ Oil ☐ Waste Diposal ☐ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: DUNKARD CREEK
ELEVATION: 1,420'
COUNTY/DISTRICT: MONONGALIA / CLAY
QUADRANGLE: BLACKSVILLE
SURFACE OWNER: COASTAL FOREST RESOURCES COMPANY
ACREAGE: 63.8 +/- 10/30/2015
OIL & GAS ROYALTY OWNER: WACO OIL AND GAS, ET AL
ACREAGE: 341.08 +/-
LEASE NUMBERS:

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

TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: TVD: 8,207.07' TMD: 15,908'
WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC
DESIGNATED AGENT: JOHN ADAMS
ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200
CITY: CHARLESTON STATE: WV ZIP CODE: 25301
CITY: CHARLESTON STATE: WV ZIP CODE: 25301