

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

API 47-061-01676 County Monongalia District Clay
Quad Blacksville, WV Pad Name Coastal Field/Pool Name Blacksville
Farm name Coastal Forest Resources Company Well Number 9H
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 4395409.5 Easting 568208.6
Landing Point of Curve Northing 4395666.6 Easting 568570.2
Bottom Hole Northing 4396860.8 Easting 567638.6

Elevation (ft) 1,430' 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 07/18/2014 Date drilling commenced 12/28/2014 Date drilling ceased 4/22/2015
Date completion activities began N/A Date completion activities ceased N/A
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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Reviewed by:

[Signature]
10/30/2015

API 47-061 - 01676 Farm name Coastal Forest Resources Company Well number 9H

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	50'	N	N/A	N/A	Y to surface
Surface	17.5	13 3/8	1,385'	N	54.5	N/A	Y 30 bbls
Coal							
Intermediate 1	12.25	9 5/8	2,777'	N	40	N/A	N
Intermediate 2							
Intermediate 3							
Production	8.5	5.5	14,089'	N	20	N/A	Estimated top 2000'
Tubing							
Packer type and depth set							

Comment Details All jobs went well, except intermediate. Ran cement bond log. TOC @ 1,000' which is inside the surface string. Due to clearance issues top off job could not be performed. Local DEP and NRE decided best not to perforate and squeeze.

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	1063	15.2	1.27	1,271	CTS	8
Coal							
Intermediate 1	Class A	903	15.2	1.26	1,074	CTS	8
Intermediate 2							
Intermediate 3							
Production	9050 Premium NE - 1.3% R-3.3% MPA 170	2683	14.5	1.17	2,661	Estimated 2,000'	48
Tubing							

Drillers TD (ft) 14,112' Loggers TD (ft) 14,087'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure

Kick off depth (ft) 6,303'

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 This well has not yet been completed

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS

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

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CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL ENER	DATE 30-DEC-14	F.R. # 848610106	SERV. SUPV. Scott J Carson
LEASE & WELL NAME COASTAL 9H - API 47061016760000	LOCATION BLACKSVILLE		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG # PERFORMANCE 2		TYPE OF JOB Surface

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
BJ Cement Plug, Rubber, Top 13-3/8	Float Collar, AI Flap, 13-3/8 - 8rd Guide Shoe, Cement Nose 13-3/8 i	NONE			NONE		

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
H2O			8.34				180	
GEL/FLAKE			8.45				25	
H2O			8.34				10	
PREMIUM NE-1 1% CALCIUM 75LB FLAKE	N/A	1,063	15.2	1.26	5.76	03:00	238	145.45
H2O			8.34				207	
200# SUGAR ON SIDE			0				0	
Available Mix Water <u>500</u> Bbl.		Available Displ. Fluid <u>500</u> Bbl.		TOTAL			<u>660</u>	<u>145.45</u>

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
17.5	30	1420	12.62	13.38	54.5	CSG	1385	1385	J-55	1385	1342	1

LAST CASING				PKR-CMT RET-BR PL-LINER				PERF. DEPTH		TOP CONN		WELL FLUID	
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
23	24	95	CSG	50	50	NO PACKER				13.375	8RD	OTHER	0

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	TANK
207	BBLS	H2O	8.34	480	0	0	0	0	1384	1000	TANK

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

PRESSURE/RATE DETAIL					EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	3600 PSI
							CIRCULATING WELL - RIG <input type="checkbox"/> BJ <input checked="" type="checkbox"/>
19:30							ARRIVE AT LOCATION 12-29-2014 LOCATION TIME 22:00
01:00							PRE-JOB RIG-IN SAFETY MEETING 12-30-2014
01:15							RIG-IN
02:45							PRE-JOB SAFETY MEETING
03:13	100		5	5	H2O		LINE-FILL
03:14	0				H2O		PRESSURE TEST 3600#
03:16	150		7.2	180	H2O		WATER AHEAD
03:40	120		5.3	25	GEL/FLAKE		PRE-FLUSH
03:47	130		5.6	10	H2O		SPACER
03:49	250		5.4	225	SLURRY		15.2 PREMIUM NE-1 1% CALCIUM 75LB FLAKE
04:30	0						SHUT-DOWN RELEASE-PLUG
04:31	350		5.6	209	H2O		START DISPLACEMENT
05:08	870						SHUT-DOWN PLUG-DOWN
05:13	0						BLEED-OFF PRESSURE 1BBL. RETURN
05:14							CLOSE-IN CEMENT HEAD
05:15							POST-JOB RIG-OUT SAFETY MEETING
05:30							RIG-OUT

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PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES 3600 PSI	
						CIRCULATING WELL - RIG <input type="checkbox"/>	BJ <input checked="" type="checkbox"/>
	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:
<input type="checkbox"/> Y <input type="checkbox"/> N	480	<input type="checkbox"/> Y <input type="checkbox"/> N	30	667	0	<input type="checkbox"/> Y <input type="checkbox"/> N	

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CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL ENER		DATE 11-JAN-15	F.R.# 10011131592	SERV. SUPV. Brian Lough										
LEASE & WELL NAME COASTAL 9H - API 47061016760000		LOCATION DAYBROOK		COUNTY-PARISH-BLOCK Monongalia West Virginia										
DISTRICT Clarksburg		DRILLING CONTRACTOR RIG # PERFORMANCE 2		TYPE OF JOB Intermediate										
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE		MECHANICAL BARRIERS		MD TVD								
9-5/8" Top Cem Plug, Nitrile cvr, Phe		700-LAP-PVTS Float Collar, 9-5/8 in												
		Guide Shoe, Cement Nose, 9-5/8 i												
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								
PROCESSED WATER				8.45		250								
6% GEL (500 LBS) W/ FLAKE (25 LBS)				8.5		25								
FRESH WATER				8.34		10								
CLASS A (PREM NE-1) W/ FLAKE ADDED (75 LBS)		903		15.2	1.24	5.74 03:00 199 123.15								
FRESH WATER				8.34		207								
150 LBS OF SUGAR ON THE SIDE				8.4		20								
FRESH WATER				8.34		182								
Available Mix Water		300 Bbl.		Available Displ. Fluid		300 Bbl.								
				TOTAL		893 123.15								
HOLE			TBG-CSG-D.P.				COLLAR DEPTHS							
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE		
12.25	30	2830	8.835	9.625	40	CSG	2777		J-55	2777	2731			
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID				
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
13.13.38	55	CSG	1385							9.625	8 RND	OTHER	0	
DISPL. VOLUME		DISPL. FLUID		CAL. PSI		CAL. MAX PSI		OP. MAX		MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE		WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator			
207	BBLS	FRESH WATER		8.34	974	0	0	0	0	3160	1300	TANK		
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:														
PRESSURE/RATE DETAIL							EXPLANATION							
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>								
	PIPE	ANNULUS				TEST LINES 4575 PSI								
						CIRCULATING WELL - RIG <input type="checkbox"/> BJ <input checked="" type="checkbox"/>								
11:30						ARRIVE ON LOCATION. JOB TIME 1300 HOURS								
15:10						SPOT EQUIPMENT								
15:20						SAFETY MEETING WITH BHI CREW								
15:40						RIG INTO WELL & TANKS								
16:21				250		PUMP PROCESSED H2O TO GET CASING IN HOLE								
17:00				182		PUMP FRESH H2O TO FINISH GETTING CASING DOWN								
18:10						CASING DOWN. SHUT DOWN & RIG IN HEAD & MANIFOLD								
18:15						SAFETY MEETING WITH RIG CREW & CO.MAN								
18:38	85		5	5	H2O	LINE FILL								
18:40	0		.5	.3	H2O	PRESSURE TEST BHI IRON TO 4575 PSI								
18:42	110		5.4	25	GEL	6% GEL(500 LBS) W/ FLAKE ADDED (25 LBS)								
18:49	115		5.5	7	H2O	FRESH WATER SPACER								
18:51	245		5.5	194	CEMENT	903 SACKS OF CLASS A (PREM NE-1) WITH FLAKE ADDED ON THE FLY. TEMP 49 DEGREES f								
19:30						SHUT DOWN / DROP PLUG								
19:32	1000		5	210	H2O	FRESH WATER DISPLACEMENT								

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PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	4575 PSI
						CIRCULATING WELL - RIG <input type="checkbox"/> BJ <input checked="" type="checkbox"/>	
20:18	1325		3		H2O	LAND PLUG.	
20:21	0					RELEASE PRESSURE / CHECK FLOATS. 1.5 BBLs H2O RETURN TO PUMPER	
20:22						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:
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	974	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	893	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

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CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL EN		DATE 23-APR-15	F.R.# 10011151669	SERV. SUPV. Kevin Paugh										
LEASE & WELL NAME COASTAL #9H - API 47061016760000		LOCATION CLAY		COUNTY-PARISH-BLOCK Monongalia West Virginia										
DISTRICT Clarksburg		DRILLING CONTRACTOR RIG # PIONEER 63		TYPE OF JOB 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 - 8rd												
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 10									13				50	
MultiBond								221	13	1.27	5.87		50	30.90
50:50 Poz (Fly Ash):Class A								2,683	14.5	1.17	5.15		550	322.29
Sugar Water AFTER Plug									8.34				20	
Fresh Water									8.34				293.87	
SUGAR									0				0	
Available Mix Water		1500	Bbl.	Available Displ. Fluid		600	Bbl.	TOTAL		963.87	353.19			
HOLE			TBG-CSG-D.P.						COLLAR DEPTHS					
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE		
8.5		14089	4.778	5.5	20	CSG	14089	8200						
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID				
ID	OD	WGT.	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
8.8	9.63	40	CSG	2777	2777					5.5	8 RD	SYNTHETIC MUD	12.6	
DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER			
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator				
313	BBLS	Fresh Water SUGAR	8.34 0	4500	0	0	0	0	10000	6000	TANK			
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:														
PRESSURE/RATE DETAIL							EXPLANATION							
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>								
	PIPE	ANNULUS				TEST LINES 5000 PSI								
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>								
23:00						ARRIVE ON LOCATION (LOC TIME 0100)								
23:05						SPOT EQUIPMENT								
23:10						PRE RIG IN SAFETY MEETING								
00:00						RIG IN								
01:30						SAFETY MEETING WITH CUSTOMER								
01:50	200		5	5	H2O	LINE FILL								
01:55	8600		1	1	H2O	PRESSURE TEST								
02:00	533		4	50	ULTRABOND	SPACER								
02:15	673		5.6	50	MULTIBOND	SPACER								
02:25	1140		7	550	SLURRY	50/50 PREM NE-1 +.3% R-3 + .2% MPA-170								
03:45						SHUT DOWN WASH LINES								
03:50						DROP PLUG								
03:52	1982		7	20	SUGAR V	TREATED DISPLACEMENT								
03:55	2442		7	293	H2O	DISPLACEMENT								
04:45	4490					PLUG DOWN								
04:50						HELD 5 MIN AND RELEASED FLOATS HELD								
04:55						PRE RIG DOWN SAFETY MEETING								

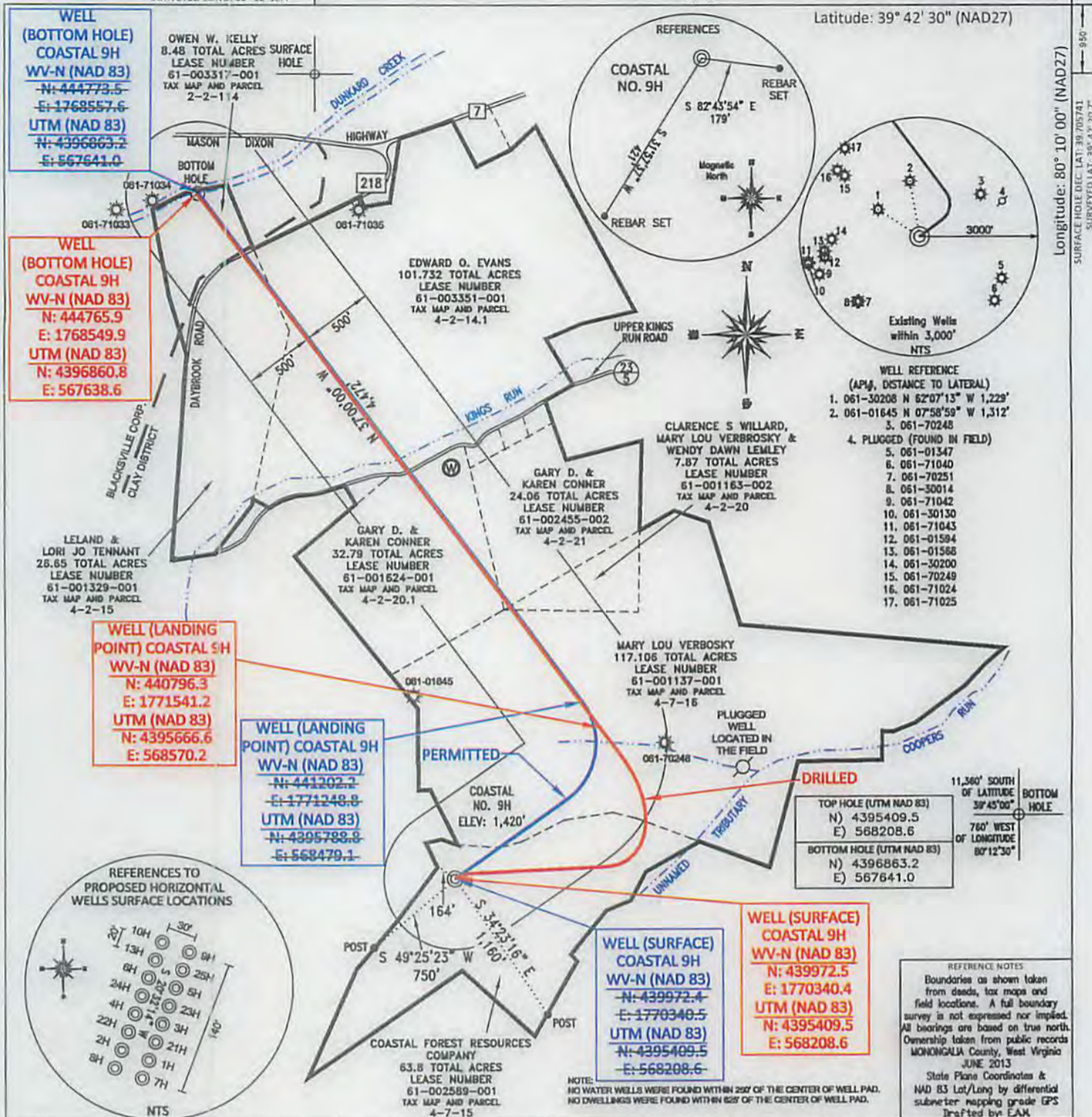
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PRESSURE/RATE DETAIL						EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>		
	PIPE	ANNULUS				TEST LINES 5000 PSI		
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>		
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:	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	4500	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	1015	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

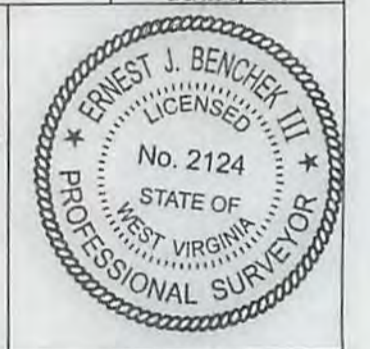
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FILE #: NNE12
 DRAWING #: 2352
 SCALE: PLAT: 1" = 1000'
TICK: 1" = 200'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE OF ELEVATION: SUBMETER MAPPING GRADE GPS

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

Signed: [Signature]
 L.L.S. #2124: Ernest J. Benchek III



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

Well Type: Oil Waste Disposal 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: 382.758 +/-
 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: 8,198.94' TMD: 14,112'
 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