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

API 47 - 061	_ 01675	County Mononga	ilia	District C	lay		
Quad Blacksville, WV	<u>/</u>	o _{ad Name} Coasta	ıl			lacksville	_
Farm name Coastal Fo	rest Resources (Company		Well Nur			
Operator (as registered v	with the OOG) Nor	theast Natural E	nergy LLC				
Address 707 Virginia		City Chai		State	WV	Zip 25301	
Т	op hole Northi	Attach an as-drilleding 4395369.4	plat, profile vie	Easting 56819	4.3		
Landing Point of		ng 4395160.3		Easting 56767			
Botto	om Hole Northi	ng <u>4396879.0</u>		Easting 566389	9.5		
Elevation (ft) 1,430'	GL	Type of Well	New 🗆 Existir	ng Type	of Report	□Interim ≜ Fina	d.
Permit Type Devi	ated 🗆 Horizon	tal 🖪 Horizonta	l 6A 🗆 Vert	ical Dep	th Type	□ Deep 🖪	Shallow
Type of Operation Co	onvert 🗆 Deepen	■ Drill □ l	Plug Back 🗆	Redrilling	Rework	■ Stimulate	
Well Type 🛭 Brine Dis	posal □ CBM ■ G	as □ Oil □ Seco	ndary Recovery	□ Solution Mi	ning 🗆 Ste	orage 🗆 Other	
Type of Completion 🙃	Single A Multiple	Fluids Produc	ed ■ Brine	BGas □ NGL	o Oil	□ Other	
Drilled with Cable	■ Rotary						
	·						
Drilling Media Surface	ehole ■Air □N	1ud □Fresh Wate	r Interme	diate hole 📱 A	ir □ Mud	☐ Fresh Water	□ Brine
Production hole	☐ Mud □ Frest	n Water □ Brine					
Mud Type(s) and Additi	• •						
Synthetic Based Mud for Hori	· · · · · · · · · · · · · · · · · · ·						
MEGADRIL P SYSTEM, MEGAD	PRIL P SYSTEM RENTAL, M	IEGAMUL, SAFE-CARB	50, VERSATHIN HF,	VERSAWET, VG-PLU	S, VINSEAL MI	EDIUM, WALNUT NUT PI	.UG MEDIUN
Date permit issued0	7/18/2014 D	ate drilling comm	enced 10/28	/2014 _{Da}	te drilling	ceased 02/02	/2015
Date completion activitie	es began6/0	05/2015	Date completion	on activities ceas	ed	6/25/2015	_
Verbal plugging (Y/N)		ermission granted		Grante	d by		
Please note: Operator is	required to submit a	a plugging applicat	ion within 5 day	s of verbal pern	nission to p	olug	
Freshwater depth(s) ft	1,243	3'	Open mine(s) (Y/N) depths		N	
Salt water depth(s) ft	2,510'		•	ere Recoeides		N	
Coal depth(s) ft)'		lioodoy (V) ide		N	
Is coal being mined in an		N		OCT 07 20		Reviewed by	:

Rev. 8/23/13 API 47-061 01675 Farm name Coastal Forest Resources Company Well number 7H **CASING** Hole Casing New or Grade Basket Did cement circulate (Y/N) **STRINGS** Size Size Depth Used wt/ft Depth(s) • Provide details below* Conductor 30 24 50' N/A Ν N/A Y to surface Surface 17.5 13 3/8 Ν 54.5 Y to 30 BBLS 1,368 N/A Coal Intermediate 1 12.25 9 5/8 2.763 Ν 40 N/A Y to 20 BBLS Intermediate 2 Intermediate 3 Production 8.5 5.5 16.406 N/A Estimated top 2000' Ν 20 Tubing Packer type and depth set Comment Details WOC CEMENT' Class/Type Volume Cement Number Slurry Yield of Cement (\mathbf{H}_{1}) Top (MD) DATA of Sacks wt (ppg) ft 3/sks) (hrs) Conductor **CTS** 48 4,500 psi ready mix 36.4 .75 27.27 Surface **CTS** 8 1.27 1004 15.2 1,271 Class A Coal Intermediate I **CTS** Class A 880 15.2 1.26 1,074 8 Intermediate 2 Intermediate 3 Production 5050 Premium NE - 1 3% (I-3 3% MPA 1 3,212 14.5 1.17 2,661 Estimated 2,000' 48 Tubing Loggers TD (ft) 16,403 Drillers TD (ft) 16,428' Deepest formation penetrated Marcellus Plug back to (ft) NA Plug back procedure Kick off depth (ft) 6.683' Check all wireline logs run □ caliper □ density □ deviated/directional □ induction □ neutron □ resistivity 🗎 gamma ray □ temperature □sonic Were cuttings collected ■ Yes □ No Conventional Sidewall Well cored Yes No DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Surface: bow spring contratizors 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" Received Office of Oil & Gas DETAILS 36 Stages, 40 Shots per stage WAS WELL COMPLETED AS SHOT HOLE ■ Yes □ No OCT 07 2015 WAS WELL COMPLETED OPEN HOLE? □ Yes 🖪 No DETAILS WERE TRACERS USED □ Yes ■ No TYPE OF TRACER(S) USED __

API 47-061 _ 01675

Farm name Coastal Forest Resources Company Well number 7H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					*Please See Attachment
<u> </u>					
				 	
				1	

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)
ļ								
				-				
ļ								
			·	- 	4.			
				-	·	 		
							Receive e of Oil	<u>a</u>
	1					UTIC	e or Oil	R Gas

Please insert additional pages as applicable.

OCT 07 2015

API 47- 061	01675		Farm	name_Coastal I	orest Res	sources Compa	iny Well	number	7H	-
PRODUCING Marcellus	FORMAT	ION(S)	-	<u>DEPTHS</u> 8,216.76'	_TVD	16,428'	MD			
Please insert ac	lditional pa	ges as ap	plicable.							
		7		■ Open Flow		OIL TEST 🗆	Flow E	Pump		
SHUT-IN PRE		Surface	1.750.0	psi Botto	m Hole	psi	DURAT			T 48 hrs
OPEN FLOW	Gas 4564	mcfpd	Oil	NGL bpd	bpd	Water bpd	GAS N	1EASU	RED E	BY
LITHOLOGY/ FORMATION	TOP DEPTH IN NAME T	FT DE	BOTTOM PTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN MD	FT DESCRIBE				D QUANTITYAND NE, OIL, GAS, H ₂ S, ETC)
	0		1,10	0	1,10			Please S		
		-								
		*								
Please insert ad	lditional pa	ges as app	plicable.							
Drilling Contra	ctor Pione	er 63			-			TV		79200
Address 1250 N	IE Loop 410	Suite 1000		City	San Antor	110	State	TX	Zip	78209
Logging Comp		Hughes								20004
Address 837 Ph	ilippi Pike			City	Clarksburg	3	State	WV	Zip	26301
Cementing Cor Address 837 Ph		er Hughes	5	City	Clarksburg	1	State	wv	Zin	26301
			44	City			June			
Stimulating Co Address 1080 U	p	chlumberg	jer	City	Weston	= -	State	wv	Zin	Received 39ffice of Oil & G
Please insert ad		ges as ap	plicable.	City			State	2/4	_ zip	
						10.1	304 203	8050		OCT 07 2015
Completed by	Zack Arno	iiu	1	Title G		Telephone	304.203	.5005	0/6/201	-

Received Office of Cil & Gas OCT 07 2015

		Bottom Depth in FT	Top Depth in FT		Describe rock type and record quantity and type of fluid (freshwater, brine, oil, gas, H25,
Lithology/Formation	Top Depth in FT Name TVD	ΩVI	MD	Bottom Depth in FT MD	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	2625			sandstone
Shale	2625	2850			shale
Silt/Shale	2850	3280			silt/shale
Grey Shale/Sandstone/Shale	3280	7750			shale/sandstone
Burkett	7750	7927	8138	8473	shale
Geneseo	7927	7972	8473	8564	shale
Tully	7972	8022	8564	8657	limestone
Hamilton	8022	8146	8657	8946	shale
Marcellus	8146	8181	8946	6806	shale
Cherry Valley	8181	8183	6806	6606	limestone
Lower Marcellus	8183		6606		shale

Office of Gil & Gas Received

OCT 07 2015

REPORT SETUP INFORMATION

Coastal 7H AWP Proj: 16428'

Wellpath

Sidetrack (none)

Wellbore Coastal 7H AWB

Coastal 7H

Well

Slot 07

Slot

Facility

ACTUAL WELLPATH REPORT (CSV version)

Operator NORTHEAST NATURAL ENERGY, LLC

Monongalia County, WV

Area Field

Monongalia **Coastal Pad**

REFERENCE WELLPATH IDENTIFICATION

Software System: WellArchitect® 4.0.1

Prepared by Baker Hughes

Projection NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet

North Refe Grid

Convergen 0.45° West 0.999942 Scale

Software S WellArchitect® 4.0.1

Report Gei 2/5/2015 at 2:52:27 PM Stewdenk User

DataBase/: WA_Eastern/ev01.xml

-7 1770291 439841.3 39°42'19.6 80°12'16.225"W Northing Latitude Longitude [US ft] WELLPATH Local Nortl Local East Easting [US ft] -18.7 Slot Locati

439860 39*42'19.8 80*12'16.137"W 1777686 440640.7 39°42'28.1 80°10'41.690"W 1770298 **Facility Ret**

WELLPATH DATUM

Field Refer

Calculation Minimum curvature

Vertical Re Pioneer 63 (RKB) Horizontal Slot

MD Refere Pioneer 63 (RKB)

Field Vertir Mean Sea Level

Pioneer 63 1438.00ft Pioneer 63 18.00ft

Section Or N 0.00, E 0.00 ft Pioneer 63 18.00ft

Section Az: 323.00°

WELLPATH DATA t=interpolated/extrapolated station



EASE & WEI	10030 - 411-				TE 29-C			7357.50		_	-	Scott J C	circon	
0010711	10.00	004040750005		LO	CATION					100	UNTY-PARI			
COASTAL 7	H - API 47	061016750000		DD	BLACKSV	ONTRACTOR	PIG #				Vionongalia V PE OF JOB	vest Virginia	а	
Clarksburg				UK	LLING C	CHIRACIOR	NIG#			0.00	Surface			
SIZE 8	TYPE O	F PLUGS		IST-CSG	-HARDW	ARE	MECHANI	CAL BARRIE	ERS	MD	TVD I	ANGER T	TYPES	MD TVD
I Coment Di	ua Dubb	er, Top 13-3/8	Guido S	hoo Con	nent Nose	12 2/0 ;	NONE				N	IONE		
D Canali Fi	ug, Nubb	a, 10p 13-3/6		bring they	lap, 13-3/	CAN THE STATE OF T	INOINE		-		- '	OIL		
			rioat Co	ildi, Ai F	ар, 13-3/	0 - 0IU		D	HASIC	AL SIL	JRRY PROF	PEDTIES		
									HISIC	AL SLU	JKKI PKOP	LIVILO		
							SACKS	SLURRY		URRY	WATER	PUMP	- 27	Bbl
MATERIAL	S FURNIS	SHED BY BJ			LAB	REPORT NO.	OF CEMENT	WGT PPG		LD	GPS	HR:MIN	SLURR	741.014
PROCESSEI	H2O W	MILL SEAL						8.34					1	75
GEL/FLAKE	21120 VV	WILL OLFAL						8.45					_	25
H2O					-	_		8.34						10
	E 1 20/ C	ALCIUM +FLA	Œ		N/A		1,048	15.2		1.26	5.76	00:00		35 143.6
-120	L-12% C	ALCIOIVI TELA	AL.		NIA		1,040	8.34		1.20	5.76	00.00	-	04
120 100# SUGAF	ON CIDA							8.34						0
				AA C	No.								-	
Available Mix		500		Bbl.	Available	Displ. Fluid	500	BI	bl.		тот			49 143.6
CITE	HOLE	ee arn		On	100-	TBG-CSG-I	1200	T) (D)	CDA	DE	CHOL	COLLAR	500000000000000000000000000000000000000	
17.5	% EXCE	SS DEPT		13.3	WGT.	.5 CSG	13		GRA J-55		SHOE 136	_	1320	STAGE
	AST CAS		12.02	-		T-BR PL-LINE		RF. DEPTH			CONN		VELL FLU	IID
ID OD V			MD TVD		ND & TY		EPTH TO				THREAD	TYPE	· Lub I L	WGT.
23. 24	95. CSC			NO PAG						3.375		OTHER		
DISPL. VOI	UME	n	ISPL. FLUID)	CAL. PS	SI CAL MA	K PSI OP. N	AX M	AX TB	G PSI	M	AX CSG P	SI	MIX
VOLUME	UOM	TY			BUMP PL			200		Operato	200		perator	WATER
A CONTRACTOR OF	200	-	200	THE RESERVE	The second second						The second second			
204	BBLS	H2O		8.34	4	70	0	0	0		0 2	184	1000	TANK
204	BBLS	H2O		8.34	4	70	0	0	0		0 2	184	1000	TANK
		H2O	TOOL, RUNI					0	0		0 2	184	1000	TANK
		BLE SETTING	FOOL, RUNI	NING CS				0	0	E	0 2		1000	TANK
	N: TROUE	BLE SETTING	RE/RATE DE	NING CS	G, ETC. P	RIOR TO CEM	ENTING:	0 EETING: B			XPLANATIO	ON	1000	TANK
XPLANATIO	N: TROUE	BLE SETTING T	RE/RATE DE	NING CS	G, ETC. P	RIOR TO CEM	SAFETY N	EETING: B	J CRE 2670	w X	XPLANATIO	ON X	1000	TANK
XPLANATIOI TIME HR:MIN.	N: TROUE	PRESSU	RE/RATE DE	NING CS	G, ETC. P	RIOR TO CEM	SAFETY N TEST LINE CIRCULAT	EETING: B S ING WELL	J CRE 2670 - RIG	W X	CO. REP.	ON X		
XPLANATIO	N: TROUE	PRESSU	RE/RATE DE	NING CS	G, ETC. P	RIOR TO CEM	SAFETY N TEST LINE CIRCULAT ARRIVE AT	EETING: B S ING WELL	J CRE 2670 - RIG	W X	CO. REP.	ON X		
TIME HR:MIN.	N: TROUE	PRESSU	RE/RATE DE	NING CS	G, ETC. P	RIOR TO CEM	SAFETY N TEST LINE CIRCULAT ARRIVE AT 2014	EETING: B S ING WELL	J CRE 2670 - RIG I 10-28	w X PSI 3-2014 I	CO. REP. BJ LOCATION	X TIME 00:0		
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TIME HR:MIN. 23:50 00:15 00:30 01:45 02:15 02:17 02:19 02:47 02:52 02:54 03:37 03:39 04:12 04:17	PRES PIPE 1 1 1 2 3	PRESSUI SSURE - PSI ANNULU 00 0 0 50 90 00 00 50 00 00 50 0	RE/RATE DE RATE S BPM	5 6.4 5.4 5.4 5.2	5 180 25 10 227	FLUID TYPE H2O H2O H2O/MILL S GEL/FLAKE H2O SLURRY	SAFETY M TEST LINE CIRCULAT ARRIVE AT 2014 10-29-2014 RIG-IN PRE-JOB S LINE-FILL PRESSURI WATER AI- PRE-FLUS SPACER 15.2# PREI SHUT-DOW START DIS SHUT-DOW BLEED-OF	EETING: B S ING WELL LOCATION PRE-JOB F SAFETY MES ETEST 2670 IEAD H MIUM NE-1: VN RELEAS PLACMENT	J CRE 2670 - RIG 10-28 ETING 22% CA	w X PSI SAFET	CO. REP. BJ LOCATION Y MEETING	DN X X X X X X X X X X X X X X X X X X X	00 10-29	
TIME HR:MIN. 23:50 00:15 00:30 01:45 02:15 02:17 02:19 02:47 02:52 02:54 03:37 03:39 04:12	PRES PIPE 1 1 1 2 3	PRESSUI SSURE - PSI ANNULU 00 0 0 50 90 00 0 50 0 0 0	RE/RATE DE RATE S BPM	5 6.4 5.4 5.4 5.2	5 180 25 10 227	FLUID TYPE H2O H2O H2O/MILL S GEL/FLAKE H2O SLURRY	SAFETY M TEST LINE CIRCULAT ARRIVE AT 2014 10-29-2014 RIG-IN PRE-JOB S LINE-FILL PRESSURI WATER AI- PRE-FLUS SPACER 15.2# PREI SHUT-DOW START DIS SHUT-DOW BLEED-OF CLOSE-IN	EETING: B S ING WELL LOCATION PRE-JOB F SAFETY MES ETEST 2670 IEAD H MIUM NE-1: VN RELEAS PLACMENT	J CRE 2670 - RIG 10-28 RIG-IN 22% CA CA E PLU	W X PSI SAFET	CO. REP. BJ LOCATION Y MEETING	DN X X X X X X X X X X X X X X X X X X X	00 10-29	



EXPLANATION			•	RATE DETAIL	PRESSURE		
TING: BJ CREW X CO. REP. X	SAFETY MEE	FLUID	Bbl. FLUID	RATE	JRE - PSI	PRESSU	TIME
2670 PSI	TEST LINES	TYPE	PUMPED	ВРМ	ANNULUS	PIPE	HR:MIN.
WELL - RIG BJ X	CIRCULATIN	, ,					
	RIG-OUT						04:30
SERVICE SUPERVISOR SIGNATURE:	SPOT TOP OUT	PSI LEFT ON	TOTAL BBL.	BBL.CMT RETURNS/	TEST FLOAT	PSI TO BUMP	BUMPED
	CEMENT	CSG	PUMPED	REVERSED	EQUIP.	PLUG	PLUG
	YN	0	647	30	YN	470	YN

Office of Oil & Gas



	NORTHE	AST NA	TURAL ENE	R	DATE 01	-NOV-1	4 F.F	R.# 1001	111427	78	Si	ERV. SUPV	. (Charles N	A Gray		
EASE & WE			an and a second		LOCATION						C	OUNTY-PA					
COASTAL	7H - API 47	061016	750000		BLACKS		D4070-	DIO #				Monongalia		st Virginia	a		
Clarksburg					DRILLING PERFOR			KIG#			T	PE OF JO Intermedia					
	& TYPE OF	PLUG	SS	LIST-	CSG-HARDV	VARE		MECHAN	ICAL	BARRIE	RS MD			NGER T	TYPES	MD	TVD
BJ Cement Pl				Float Shoe	ASSET IN S												
D Cellent Fi	iug, Rubbe	я, тор	9-3/6		Al Flap, 9-5/	Ω Qer						4.1					
				r toat Collar,	A Fiap, 9-3/	0 - 010				pı	YSICAL SI	HRRY DR	OPE	PTIES			1
									1		TOIONE S	LONKIFK	JE	KIILO			
								SACKS		URRY	SLURRY		3	PUMP			Bbl
MATERIAL	S FURNIS	HED B	Y BJ		LAE	REPO	ORT NO.	OF		VGT PG	YLD FT	GPS	E	R:MIN	SLURRY		MIX NATER
GELLED H20	n							1.00		8.43			+			25	-
PREMIUM N	- 0.000	ACI			EST	5		880		15.2	1.27	5.	77	04:17	19		120.2
H20	L 1 2 /0 U/	IOL			Lo			660	-	8.34	1.27	3.		O1.17	20		120.2
200 LB GRAI	NUI ATED	SUGA	RIONTH	E SIDE \						0.54						0	
	70.000	5550	1000		1 Avetet	la Di-	of Florid	75	0	Bb			-		-		120.0
Available Mix	av ann		1000	Bb	i. Availab		pl. Fluid	75	U		i.	TC	TAL		43		120.2
SIZE	HOLE	SS	DEPTH	ID	OD WG		BG-CSG-I		D	TVD	GRADE	SHOE	- 1	224-1-22	DEPTHS		AGE
12.25	/V LAGE		2850		9.625	40 C			762	2762			762		2742	01	7101
1	AST CASI	NG			PKR-CMT R	ET-BR	R PL-LINE	R P	ERF.	DEPTH	ТО	P CONN	T	, v	VELL FLU	ID	
ID OD V	VGT T	YPE	MD	TVD	BRAND & T	-	Contract Con	ЕРТН ТО	P	втм	SIZE	THREAD		TYPE	227502		WGT.
13. 13.38	55. CSG		1368	1368 NO	PACKER			0	0		9.625	8RD	O	THER			
DISPL. VOI	LUME		DISP	L. FLUID	CAL. I	PSI	CAL. MA	X PSI OP. I	MAX	MA	X TBG PSI		MAX	CSG P	SI		MIX
VOLUME	UOM	-	TYPE	WG	T. BUMP			02 15	222	177.0	D Opera		TED	0	perator	W	ATER
1 OLOME	100 march 200 miles			110	i. Domir i	LUG	TO RE	v. Su.	PSI	RATE	D Opera	itor RA	TED	O	Juliuto		
208	BBLS	H20			The state of the state of	980	TO RE	0	PSI 0	RATE	0	0	316		ALC: NO.	TANK	
208		LE SET		8	3.34 S CSG, ETC.	980		0	0.50	RATE	0	Sell Levi	316	60		TANK	
208 XPLANATIO	N: TROUB	LE SET	RESSURE	DL, RUNNING	3.34 S CSG, ETC.	980 PRIOR	R TO CEM	0 MENTING:	0		0	0 EXPLANA	316 TION	50		TANK	Ç.
400000000000000000000000000000000000000	N: TROUB	LE SET	RESSURE	DL, RUNNING	3.34 S CSG, ETC.	980 PRIOF		0 MENTING:	О	ING: BJ	0	0 EXPLANA	316 TION	50		TANK	
208 EXPLANATION TIME	N: TROUB	LE SET	RESSURE/	DL, RUNNING RATE DETAI RATE	S CSG, ETC.	980 PRIOF	R TO CEM	0 SAFETY I	0 MEETI ES	ING: BJ	CREW X	0 EXPLANA	316 TION	60		TANK	
208 XPLANATIO	N: TROUB	LE SET	RESSURE/	DL, RUNNING RATE DETAI RATE	Bbl. FLUID PUMPED	980 PRIOF	R TO CEM	0 SAFETY I	0 MEETI ES	ING: BJ	CREW X	EXPLANA CO. REF	316	60		TANK	
ZPLANATION TIME HR:MIN. 08:30 09:30	N: TROUB	PF SURE AT	- PSI NNULUS	DL, RUNNING RATE DETAI RATE BPM 0 0	Bbl. FLUID PUMPED	PRIOF	R TO CEM	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG I	MEETI ES TING V N LOO	ING: BJ WELL - CATION ETING	CREW X 2800 PSI RIG (LOC TIM	EXPLANA CO. REF	316	60		TANK	
ZPLANATION TIME HR:MIN. 08:30 09:30 11:50	N: TROUB PRES	PF SURE AN	- PSI NNULUS 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0	Bbl. FLUID PUMPED	PRIOR	R TO CEN	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S	MEETI ES TING V N LOO	ING: BJ WELL - CATION ETING	CREW X 2800 PSI RIG (LOC TIM	EXPLANA CO. REF	316	60		TANK	
ZPLANATION TIME HR:MIN. 08:30 09:30 11:50 12:03	PRES PIPE	PF SSURE AN O O O O	PSI NNULUS 0 0 0	PATE DETAIL RATE BPM 0 0 0 5.8	Bbl. FLUID PUMPED	PRIOF	TO CENTUID TYPE	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL	MEETI ES TING V N LOO N MEI SAFE	ING: BJ WELL - CATION ETING TY MEE	CREW X 8000 PSI RIG (LOC TIM	EXPLANA CO. REF	316	60		TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05	PRES PIPE 20 280	PF SURE AN O O O O O O O O O O O O O O O O O O	PSI NNULUS 0 0 0 0	PATE BPM 0 0 0 5.8	Bot. FLUID PUMPED	980 PRIOF	FLUID TYPE P/W P/W	SAFETY IN TEST LINI CIRCULATE ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR	0 WEETING VIN LOOK	WELL - CATION ETING TY MEE	CREW X 2800 PSI RIG LOC TIM	EXPLANA CO. REF	316	60		TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06	PRES PIPE	PF SURE AN O O O O O O O O O O O O O O O O O O	PSI NNULUS 0 0 0 0 0	RATE DETAIL RATE BPM 0 0 0 5.8 1 7.2	Bol. FLUID PUMPED	980 PRIOF	TO CENTUID TYPE	SAFETY IN TEST LINI CIRCULATED PRE RIG II PRE JOB SILINE FILL PRESSUR PROCESS	0 MEETING V N LOOK N MEI SAFE TESSAFE	WELL - CATION ETING TY MEE ST LINE	CREW X 2800 PSI RIG LOC TIM	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09	PRES PIPE 20 280 28	PF SURE AN O O O O O O O O O	PSI NNULUS 0 0 0 0 0 0	RATE DETAIL RATE BPM 0 0 0 5.8 1 7.2 0	Bol. FLUID PUMPED	PRIOR	P/W P/W	SAFETY INTEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW	MEETING V N LOO N MEESAFE E TES	WELL - CATION ETING TY MEE ST LINE 120 AHE	CREW X 2800 PSI RIG LOC TIM	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32	PRES PIPE 20 280 28	PF SURE AN 0 0 0 0 0 0 0 0 0	PSI NNULUS 0 0 0 0 0 0 0	RATE DETAIL RATE BPM 0 0 0 5.8 1 7.2 0 7.2	Bbi. FLUID PUMPED	980 PRIOR	P/W P/W P/W	SAFETY MEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME MESUME MES	MEETING V N LOO N MEE E TES E TES E TES WN, S'	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHE	CREW X 2800 PSI RIG LOC TIM	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00	PRES PIPE 20 280 281 31	PF SURE AN O O O O O O O O O	PSI NNULUS 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 5.8 1 7.2 0 7.2 5.8	Bbi. FLUID PUMPED	980 PRIOR	P/W P/W P/W P/W L H20	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME V 6% PREFIL	MEETTING N LOOK N MEETTING N LOOK N MEETTING N LOOK N MEETTING N M	ING: BJ WELL - CATION ETING TY MEE ST LINE ST LINE IZO AHE WITCH '	CREW X 2800 PSI RIG LOC TIM	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04	PRES PIPE 20 280 28 31 18	PF SURE AI 0 0 0 0 0 0 0 0 0	PSI NNULUS O O O O O O O O O O O O O O O O O O	DL, RUNNING RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8	Bbi. FLUID PUMPED	PRIOR F	P/W P/W P/W P/W L H20	SAFETY MEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME MESUME MES	MEETING IN LOOK IN MEETING IN LOOK IN MEETING IN LOOK IN MEETING I	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHE	CREW X 2800 PSI RIG (LOC TIM TING	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00	PRES PIPE 20 280 28 31 18 27	PF SURE AI 0 0 0 0 0 0 0 0 0	PSI NNULUS 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 5.8 1 7.2 0 7.2 5.8	3.34 Bbl. FLUID PUMPED	PRIOR F	P/W P/W P/W P/W L H20	SAFETY METERS IN TEST LINI CIRCULATE ARRIVE OF PREFILL PRESSUR PROCESS SHUTDOW RESUME VECTOR OF THE PRESSUR PROCESS SHUTDOW RESUME VECTOR OF THE PRESSURE VECTOR OF THE VECTOR OF THE PRESSURE VECTOR OF THE VECTOR OF THE VECTOR OF	MEETING IN LOOK IN MEETING IN MEE	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHE ER 2% CAG	CREW X 2800 PSI RIG (LOC TIM	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07	PRES PIPE 20 280 28 31 18 27	PF SURE AN 0 0 0 0 0 0 0 0 0	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 5.8	3.34 Bbl. FLUID PUMPED	PRIOR F	P/W P/W P/W P/W L H20 D URRY	SAFETY METERS IN TEST LINI CIRCULATER SIGNER SERVICE OF THE SUME NOT THE SUM NOT THE	MEETING IN N LOOK IN MEETING IN M	WELL - CATION ETING TY MEE ST LINE 120 AHEA WITCH ER AHEA ER 2% CAG	CREW X 2800 PSI RIG (LOC TIM TING S AD TANKS DU	EXPLANA CO. REF BJ E 9 AM)	3166 TION	()	1500	TANK	
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07 13:34	PRES PIPE 20 280 28 31 18 27	PF SURE AN	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 5.8	3.34 Bbl. FLUID PUMPED	PRIOR F	P/W P/W P/W L H20 D URRY	SAFETY METERS IN TEST LINE CIRCULATER SIGNER SHUTDOWN SHUTDOWN SHUTDOWN	MEETIES N LOX N MEI SAFE E TES ED H VN, SI WATE USH PACE NE + VN, R	WELL - CATION ETING TY MEE ST LINE 120 AHEA WITCH ER AHEA ER 2% CAG	CREW X 2800 PSI RIG (LOC TIM TING S AD TANKS DU	EXPLANA CO. REF BJ E 9 AM)	316	N TANK	1500		
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07 13:34 13:35	PRES PIPE 20 280 28 31 18 27 27	PF SURE AN	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 5.8 0 7.2	3.34 Bbi. FLUID PUMPED () () () () () () () () () () () () ()	PRIOR F	P/W P/W P/W L H20 D URRY	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME V 6% PREFL WATER SI PREMIUM SHUTDOW START DIS	MEETIES N LOX N MEI SAFE E TES ED H VN, SI WATE LUSH PACE NE + VN, R SPLAG	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHEA ER AHEA ER CEMEN	CREW X 2800 PSI RIG (LOC TIM	EXPLANA CO. REF BJ E 9 AM)	316	N TANK	1500		
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07 13:34 13:35 14:11	PRES PIPE 20 280 28 31 18 27 27	PF SURE AN O O O O O O O O O	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 5.8 0 7.2 0	225 11 194 208	PRIOR F	P/W P/W P/W L H20 D URRY	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME V 6% PREFL WATER SI PREMIUM SHUTDOW START DIS PLUG DO	MEETIES N LOO N MEI SAFE E TES ED H WN, S' WATE LUSH PACE NE + VN, R SPLAC WN OAT	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHEA TR 2% CAC	CREW X 2800 PSI RIG LOC TIME TING SAD TANKS DUAD CL. PLUG	EXPLANA CO. REF BJ E 9 AM)	316	N TANK	1500		
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07 13:34 13:35 14:11 14:15	PRES PIPE 20 280 28 31 18 27 27	PF SURE AN O O O O O O O O O	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 0 7.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	225 11 194 208	980 PRIOR	P/W P/W P/W L H20 D URRY	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME N 6% PREFL WATER SI PREMIUM SHUTDOW START DIS PLUG DON CHECK FL	MEETIES N LOO N MEI SAFE E TES ED H WN, S' WATE LUSH PACE NE + VN, R SPLAC WN OAT	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHEA TR 2% CAC	CREW X 2800 PSI RIG LOC TIME TING SAD TANKS DUAD CL. PLUG	EXPLANA CO. REF BJ E 9 AM)	316	N TANK	1500		
TIME HR:MIN. 08:30 09:30 11:50 12:03 12:05 12:06 12:09 12:32 13:00 13:04 13:07 13:34 13:35 14:11 14:15	PRES PIPE 20 280 28 31 18 27 27	PF SURE AN O O O O O O O O O	- PSI NNULUS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DL, RUNNING RATE DETAI RATE BPM 0 0 0 5.8 1 7.2 0 7.2 5.8 5.8 0 7.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	225 11 194 208	980 PRIOR	P/W P/W P/W L H20 D URRY	SAFETY N TEST LINI CIRCULAT ARRIVE O PRE RIG II PRE JOB S LINE FILL PRESSUR PROCESS SHUTDOW RESUME N 6% PREFL WATER SI PREMIUM SHUTDOW START DIS PLUG DON CHECK FL	MEETIES N LOO N MEI SAFE E TES ED H WN, S' WATE LUSH PACE NE + VN, R SPLAC WN OAT	WELL - CATION ETING TY MEE ST LINE 120 AHE WITCH ER AHEA TR 2% CAC	CREW X 2800 PSI RIG LOC TIME TING SAD TANKS DUAD CL. PLUG	EXPLANA CO. REF BJ E 9 AM)	316	N TANK	1500		

Jr8004



		PRESSURE	RATE DETAIL	-			EXPLANATION
TIME	PRESS	URE - PSI	RATE	Bbl. FLUID	FLUID	SAFETY MEI	ETING: BJ CREW X CO. REP. X
HR:MIN.	PIPE	ANNULUS	ВРМ	PUMPED	TYPE	TEST LINES	2800 PSI
						CIRCULATIN	G WELL - RIG BJ X
BUMPED	PSI TO BUMP	TEST FLOAT	BBL.CMT RETURNS/	TOTAL BBL.	PSI LEFT ON	SPOT TOP OUT	SERVICE SUPERVISOR SIGNATURE:
PLUG	PLUG	EQUIP.	REVERSED	PUMPED	CSG	CEMENT	
YN	1020	YN	20	662	0	YN	

Received
Office of Cil & Gas
OCT 07 2015



	monthing to	NATURAL E	ENER	DATE 03-FE	EB-15 F.R	991010	8000		SER	RV. SUPV	- Brian	Lough	
COASTAL	L NAME - API 4706101	6750000		LOCATION CONDIT-R	AGTOWN						RISH-BLC a West Vir		
DISTRICT		0,0000	1	DRILLING CO	ONTRACTOR	RIG#			TYP	E OF JOI	В		
Clarksburg				PIONEER	776					ong String	7. 1. 1. 1. 1. 1. 1.	D TVDES	MD =
SIZE 8	TYPE OF PL	UGS	LIST-C	SG-HARDWA	RE	MECHANIC	AL BARRIE	ERS	MD	TVD	HANGE	RTYPES	MD TVI
5-1/2" Top C	em Plug, Nit	rile cvr, Phe	Guide Shoe, Float Collar,										
			Float Collar,	Ai Piap, 5 - C	oiu		D	HAGIC	A1 C11	IDDV DD	OPERTIES		
								HISICA	AL SLU	MKI PK	OF LIVIL		1
MATERIAL	.S FURNISHEI	DEYBJ		LAB R	REPORT NO.	SACKS OF CEMENT	SLURRY WGT PPG	SLU YL F		WATER GPS	PUM TIME HR:MI	Bbl	Bbl MIX WATE
H2O						Ţ	8.34		1				5
ULTRA FLU	ISH HV						13					10	00
50/50 POZ	CLASS A(PF	REM NE-1)+	R-3_MPA-17	0		3,212	14.5		1.17	5.	15 05:2	3 66	393
Action with the extent	RETARDER		-				8.4						10
FRESH WA		1		100			8.34		-			35	54
	SUGAR TH	IE SIDE			-		8.34	-				-	30
Available Mix		500	Bbl.	Available	Displ. Fluid	500	1000	bl.	•	TC	TAL	1 116	393
	HOLE				TBG-CSG-I						100	AR DEPTHS	
SIZE	% EXCESS	DEPTH	ID (DD WGT.			TVD	GRAI	DE	SHOE		FLOAT	STAGE
8.75	10	16428	4.778	5.5	20 CSG	1642	28	P-11	0	16	428	16418	
ī	AST CASING	70.55		PKR-CMT RET	T-BR PL-LINE	R PE	RF. DEPTH		TOP	CONN	1	WELL FLU	IID
ID OD V 8.8 9.625	VGT TYPE	E MI		BRAND & TYP	PE D	ЕРТН ТОР	BTN	1 5		THREAD BUTT		HETIC MUI	WGT
DISPL. VO	LUME	DIS	PL. FLUID	1 au no			-	-					
		Dio	PL. PLUID	CAL. PS	I CAL. MA	X PSI OP. M.	AX M	AX TBO	G PSI		MAX CSC	PSI	MIX
VOLUME	UOM	TYPE			the second second			-	G PSI Operate		MAX CSC	Operator	WATER
VOLUME 364	100000		WGT		UG TO RE			-	-	or RA		Operator	
The Arthurs	100000	TYPE	WGT	BUMP PL	UG TO RE	V. SQ. P	SI RAT	ED 0	-	or RA	TED	Operator	WATER
The Arthurs	100000	TYPE	WGT	BUMP PL	UG TO RE	V. SQ. P	SI RAT	ED 0	-	or RA	TED	Operator	WATER
364	BBLS FR	TYPE ESH WATE	WGT	BUMP PL 34 400	UG TO RE	0 SQ. P	SI RAT	ED 0	-	or RA	TED	Operator	WATER
364	BBLS FR	TYPE ESH WATE SETTING TO	WGT	BUMP PL 34 400 CSG, ETC. PF	UG TO RE	0 SQ. P	SI RAT	ED 0	Operato	or RA	10118	Operator	WATER
364 EXPLANATIO	BBLS FR	TYPE ESH WATE SETTING TO PRESSURE	R 8.	BUMP PL 34 400 CSG, ETC. PF	UG TO RE	ENTING:	SI RATI	O O	Operato	O RA	10118 TION	Operator	WATER
364	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8.	BUMP PL 34 400 CSG, ETC. PF	UG TO RE	0 SQ. P	O RATI	O O	Operato E	O RA	10118 TION	Operator	WATER
364 EXPLANATIO	BBLS FR	TYPE ESH WATE SETTING TO PRESSURE	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	O SQ. P O SAFETY M	O EETING: B	0 0 J CREV 7025	Operato E	O RA	10118 TION	Operator	WATER
364 EXPLANATIO	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE:	O EETING: BS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	E W X PSI	O RA O CO. REF	TION 2. X	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN.	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI	O EETING: BS NG WELL N LOCATI	J CREV 7025 - RIG	E W X PSI X OB TIM	O RA O CO. REF BJ ME 0600	TION 2. X	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O	O EETING: B S NG WELL N LOCATI	J CREV 7025 - RIG	E W X PSI X OB TIM	O RA O CO. REF BJ ME 0600	TION 2. X	Operator 5000	WATER
TIME HR:MIN. 06:00 06:01	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC	EETING: B S NG WELL N LOCATI QUIPMENT	J CREV 7025 - RIG ON. JO	E W X PSI X OB TIME	EXPLANA CO. REF	TION 2. X	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT IEETING V	J CREY 7025 - RIG FON JO TON L	W X PSI X OB TIME	EXPLANA CO. REF BJ ME 0600 TION	TION E. [X] HOURS	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT JIEETING V	J CREY 7025 - RIG FON JO TON L	W X PSI X OB TIME	EXPLANA CO. REF BJ ME 0600 TION	TION E. [X] HOURS	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT JIPMENT JIEETING V WELL & T	J CREV 7025 - RIG ON. JO F ON L	W X PSI X OGATION OCAT	EXPLANA CO. REF BJ ME 0600 TION	TION E. [X] HOURS	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30	BBLS FR N: TROUBLE PRESSU	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	R 8. OL, RUNNING PRATE DETAIL	CSG, ETC. PF	TO RE	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO RIG IN HE LINE FILL	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT	J CREV 7025 - RIG ON. JO F ON L WITH I	W X PSI X OCAT BHI CF	EXPLANA CO. REF BJ ME 0600 FION REW REW & C	TION I X HOURS	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55	BBLS FR N: TROUBLE PRESSU PIPE	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	COL, RUNNING FRATE DETAIL RATE BPM	CSG, ETC. PF	RIOR TO CEM	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT	J CREV 7025 - RIG ON. JO F ON L WITH I	W X PSI X OCAT BHI CF	EXPLANA CO. REF BJ ME 0600 FION REW REW & C	TION I X HOURS	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44	BBLS FR N: TROUBLE PRESSU PIPE 800	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	COL, RUNNING FRATE DETAIL RATE BPM	CSG, ETC. PF Bbl. FLUID PUMPED	RIOR TO CEM	ENTING: SAFETY M TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO RIG IN HE LINE FILL	EETING: B S NG WELL N LOCATI QUIPMENT DIPMENT DIEETING V WELL & T DIEETING V AD & MAN	J CREY 7025 - RIG FON J FON L WITH I FANKS	EW X PSI X OCAT BHI CF	EXPLANA CO. REF BJ ME 0600 FION REW CASING	TION X X X X X X X X X X X X X X X X X X X	Operator 5000	WATER
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44 14:45	BBLS FR N: TROUBLE PRESSU PIPE 800 0	TYPE ESH WATE SETTING TO PRESSURE RE - PSI	E WGT R 8. OL, RUNNING FRATE DETAIL RATE BPM 5.5	CSG, ETC. PF Bbl. FLUID PUMPED 5	RIOR TO CEM FLUID TYPE H2O	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO SAFETY M RIG IN HE LINE FILL SHUT DOV PRESSUR ULTRA FL	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT JIPMENT JIEETING V WELL & T JIEETING V WELL & T JIEETING V WELT B WELT B WE	J CREV 7025 - RIG ON. JO F ON L WITH I ANKS WITH I NIFOLL	W X PSI SI CONTO	EXPLANA CO. REF BJ ME 0600 TION REW CASING	TION IN I	Operator 5000	TANK
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44 14:45 15:39	BBLS FR N: TROUBLE PRESSU PIPE 800 0	TYPE ESH WATE SETTING TO PRESSURE RE - PSI ANNULUS	R 8. OL, RUNNING FRATE DETAIL RATE BPM 5.5	BUMP PL 34 400 CSG, ETC. PF Bbl. FLUID PUMPED 5 1 100	RIOR TO CEM FLUID TYPE H2O	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO RIG IN HE. LINE FILL SHUT DON PRESSUR	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT JIPMENT JIEETING V WELL & T JIEETING V WELL & T JIEETING V WELT B WELT B WE	J CREV 7025 - RIG FON L WITH I WITH I	W X PSI X OCAT BHI CI	EXPLANA CO. REF BJ ME 0600 FION REW CASING 7025 PS	TION IN ITION IN ITION TO ITION	Operator 5000	TANK
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44 14:45 15:39 15:41 16:01	BBLS FR N: TROUBLE PRESSU PIPE 800 0 0 725	TYPE ESH WATE SETTING TO PRESSURE RE - PSI ANNULUS	E WGT R 8. OL, RUNNING FRATE DETAIL RATE BPM 5.5 4.5	BUMP PL 34 400 CSG, ETC. PF Bbl. FLUID PUMPED 5 1 100 665	FLUID TYPE H2O PRE FLUS	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO SAFETY M RIG IN HE LINE FILL SHUT DOV PRESSUR ULTRA FL 3212 SACI	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT	J CREV 7025 - RIG ON. JO FON L WITH I WITH I	W X PSI X OCAT BHI CF	EXPLANA CO. REF BJ ME 0600 FION REW CASING 7025 PS	TION TION X HOURS CO. MAN COLLAFSI REES f	Operator 5000	WATER TANK WOC R-
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44 14:45 15:39 15:41 16:01 17:40	BBLS FR N: TROUBLE PRESSU PIPE 800 0 725 850	TYPE ESH WATE SETTING TO FRESSURE RE - PSI ANNULUS	R 8. OL, RUNNING FRATE DETAIL RATE BPM 5.5 1 4.5 7	BUMP PL 34 400 CSG, ETC. PF Bbl. FLUID PUMPED 5 1 100 665	H2O H2O PRE FLUS CEMENT	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE ECI SAFETY MI RIG INTO SAFETY MI RIG IN HE LINE FILL SHUT DON PRESSUR ULTRA FL 3212 SACI 3+.2% BW	EETING: B S NG WELL N LOCATI DUIPMENT DIEETING V WELL & T MEETING V WELL & T SETING V WELL & T SETING V WELL & T WELL &	J CREY 7025 - RIG ON. JO FON L WITH I ANKS	PSI X OCAT BHI CI CON TO CONT TO	EXPLANA CO. REF BJ ME 0600 FION REW CASING 7025 PS	TION TION X HOURS CO. MAN COLLAR SI REM NERES f ETARDE	Operator 5000 R & SUB S-1)+.3% BN	WATER TANK WOC R- PLUG
364 EXPLANATIO TIME HR:MIN. 06:00 06:01 10:45 11:00 11:10 13:30 13:55 14:44 14:45 15:39 15:41 16:01	BBLS FR N: TROUBLE PRESSU PIPE 800 0 725 850	TYPE ESH WATE SETTING TO PRESSURE RE - PSI ANNULUS	E WGT R 8. OL, RUNNING FRATE DETAIL RATE BPM 5.5 1 4.5	BUMP PL 34 400 CSG, ETC. PF Bbl. FLUID PUMPED 5 1 100 665 10 10	FLUID TYPE H2O PRE FLUS CEMENT	ENTING: SAFETY MI TEST LINE: CIRCULATI ARRIVE O STAGE EC SPOT EQU SAFETY M RIG INTO SAFETY M RIG IN HE. LINE FILL SHUT DOV. PRESSUR ULTRA FL 3212 SACI 3+.2% BW SHUT DOV	EETING: B S NG WELL N LOCATI QUIPMENT JIPMENT JIEETING V WELL & T AD & MAN WN TO FIX E TEST B USH HV (S OF CL) OC MPA- WN / FLUS CTON RET	J CREV 7025 - RIG FON JO FON L WITH I ANKS WITH I WIFOLD X LEAN HI IRC ASS A 170. TO SH LIN FARDE	W X PSI X OB TIME OCAT BHI CF CON TO CON TO CEMP 4 IES / SER	EXPLANA CO. REF BJ ME 0600 FION REW CASING 7025 PS 0 POZ (P	TION TION X HOURS CO. MAN COLLAR SI REM NERES f ETARDE	Operator 5000	WATER TANK WOC R- PLUG



		PRESSURE	RATE DETAIL	-			EXPLANATION
TIME	PRESSU	RE - PSI	RATE	Bbl. FLUID	FLUID	SAFETY ME	ETING: BJ CREW X CO. REP. X
HR:MIN.	PIPE	ANNULUS	BPM	PUMPED	TYPE	TEST LINES	7025 PSI
						CIRCULATIN	G WELL - RIG X BJ X
18:42	0					RELEASE P	RESSURE / CHECK FLOATS
18:45						END JOB	
BUMPED PLUG Y N	PSI TO BUMP PLUG 4000	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED 0	TOTAL BBL. PUMPED 1148	PSI LEFT ON CSG	SPOT TOP OUT CEMENT Y	SERVICE SUPERVISOR SIGNATURE:

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:		Perfora	ation Reco	rd	
Stage	Report Date	Perforated	Perforated to	Number of	Formation
Number	Report Date	from MD ft	MDft	Perforations	Formation
1	6/11/2015	16,325	16,166	40	Marcellus Shale
2	6/11/2015	16,123	15,964	40	Marcellus Shale
3	6/12/2015	15,924	15,762	40	Marcellus Shale
4	6/12/2015	15,720	15,561	40	Marcellus Shale
5	6/12/2015	15,518	15,359	40	Marcellus Shale
6	6/13/2015	15,317	15,158	40	Marcellus Shale
7	6/13/2015	15,115	14,956	40	Marcellus Shale
8	6/13/2015	14,914	14,754	40	Marcellus Shale
9	6/14/2015	14,712	14,553	40	Marcellus Shale
10	6/15/2015	14,510	14,553	40	Marcellus Shale
11	6/15/2015	14,309	14,150	40	Marcellus Shale
12	6/15/2015	14,107	13,949	40	Marcellus Shale
13	6/16/2015	13,906	13,746	40	Marcellus Shale
14	6/16/2015	13,704	13,545	40	Marcellus Shale
15	6/16/2015	13,502	13,343	40	Marcellus Shale
16	6/17/2015	13,301	13,142	40	Marcellus Shale
17	6/17/2015	13,099	12,940	40	Marcellus Shale
18	6/17/2015	12,898	12,738	40	Marcellus Shale
19	6/17/2015	12,696	12,541	40	Marcellus Shale
20	6/18/2015	12,496	12,335	40	Marcellus Shale
21	6/18/2015	12,293	12,134	40	Marcellus Shale
22	6/18/2015	12,091	11,932	40	Marcellus Shale
23	6/19/2015	11,890	11,730	40	Marcellus Shale
24	6/19/2015	11,688	11,529	40	Marcellus Shale
25	6/19/2015	11,486	11,327	40	Marcellus Shale
26	6/22/2015	11,285	11,126	40	Marcellus Shale
27	6/23/2015	11,083	10,924	40	Marcellus Shale
28	6/23/2015	10,882	10,722	40	Marcellus Shale
29	6/23/2015	10,680	10,521	40	Marcellus Shale
30	6/24/2015	10,478	10,319	40	Marcellus Shale
31	6/24/2015	10,277	10,118	40	Marcellus Shale
32	6/24/2015	10,075	9,916	40	Marcellus Shale
33	6/25/2015	9,874	9,712	40	Marcellus Shale
34	6/25/2015	9,672	9,513	40	Marcellus Shale
35	6/25/2015	9,470	9,311	40	Marcellus Shale
36	6/26/2015	9,271	9,110	40	Marcellus Shale

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			Stimulat	ion Reco	rd	····	
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	6/11/2015	78	8,355	7,859	4,063	395,660	6,989
2	6/11/2015	88	9,067	6,698	5,274	307,140	7,259
3	6/12/2015	91	9,081	6,269	4,685	403,600	6,871
4	6/12/2015	85	8,493	7,522	5,368	379,620	6,206
5	6/12/2015	96	8,978	6,887	4,594	401,254	6,899
6	6/13/2015	94	8,977	6,092	4,509	399,986	7,104
7	6/13/2015	76	8,839	6,920	4,396	399,780	7,735
8	6/13/2015	94	8,822	6,500	5,482	400,540	6,317
9	6/14/2015	87	8,691	6,617	5,445	399,980	6,451
10	6/15/2015	78	8,619	4,877	5,512	399,700	7,714
11	6/15/2015	85	8,550	6,760	5,507	401,000	6,341
12	6/15/2015	87	8,895	6,861	4,954	401,816	7,232
13	6/16/2015	90	8,827	6,019	4,561	400,020	6,424
14	6/16/2015	80	8,928	6,939	5,530	404,120	6,477
15	6/16/2015	84	8,823	6,207	5,778	358,060	6,597
16	6/17/2015	93	8,716	5,900	5,274	400,440	6,068
17	6/17/2015	86	8,554	6,048	5,816	346,760	6,081
18	6/17/2015	80	8,584	7,535	4,438	400,080	6,625
19	6/17/2015	77	8,914	8,150	5,463	401,960	7,613
20	6/18/2015	94	8,858	7,346	5,162	400,880	7,822
21	6/18/2015	78	8,395	8,384	4,574	399,040	6,733
22	6/18/2015	89	8,632	7,831	4,699	395,180	6,297
23	6/19/2015	91	8,636	8,336	4,636	401,420	6,099
24	6/19/2015	87	8,406	8,521	4,852	397,540	6,178
25	6/19/2015	86	8,511	7,059	4,919	400,940	6,593
26	6/22/2015	69	8,358	7,536	8,670	338,900	7,505
27	6/23/2015	81	8,433	7,200	NA	361,380	6,351
28	6/23/2015	82	8,712	8,447	5,265	398,500	7,168
29	6/23/2015	84	8,624	5,403	5,619	400,820	6,808
30	6/24/2015	86	8,505	5,608	4,954	398,360	6,205
31	6/24/2015	86	8,401	8,530	5,472	401,760	6,115
32	6/24/2015	92	8,781	5,300	5,230	397,580	6,046
33	6/25/2015	86	8,102	6,000	5,160	407,805	6,380
34	6/25/2015	89	8,780	9,250	5,208	404,340	8,881
35	6/25/2015	86	8,793	8,527	5,023	399,860	6,558
36	6/26/2015	88	8,791	8,000	5,678	318,040	6,223

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Hydraulic Fracturing Fluid Product Component Information Disclosure

nposition:	Hydraulic Fracturing Fluid Composition:
0	Total Base Non Water Volume:
10,800,930	Total Base Water Volume (gal):
8,218	True Vertical Depth:
ON	Federal/Tribal Well:
NAD83	Datum:
39.70545900	Latitude:
-80.20457000	Longitude:
Coastal 7H	Well Name and Number:
Northeast Natural Energy LLC	Operator Name:
47-061-01675-00-00	API Number:
Monongalia	County:
West Virginia	State:
6/26/2015	Job End Date:
6/8/2015	Job Start Date:





Comments												
Maximum Ingredient Concentration in HF Fluid (% by mass)**	on-MSDS.		86.08564	13.75426	0.08952	0.02301	0.01698	0.01502	0.00450	0.00182	0.00135	0.00112
Maximum Maximum Ingredient Concentration in Concentration in Additive (% by mass)** (% by mass)**	ts shown below are N			98.84937	0.64340	0.16538	0.12206	0.10795	0.03232	0.01308	0.00970	0.00803
Chemical Abstract Service Number (CAS #)	ets (MSDS), Ingredien		NA	14808-60-7	7647-01-0	7783-20-2	38193-60-1	0-02-0006	111-30-8	136793-29-8	7727-54-0	57-13-6
Ingredients	appear on Material Safety Data Sheets (MSDS), Ingredients shown below are Non-MSDS		Water (Including Mix Water Supplied by Client)*	Quartz, Crystalline silica	Hydrochloric acid	Ammonium sulfate	Acrylamide, 2-acrylamido-2- methylpropanesulfonic acid, sodium salt polymer	Guar gum	Glutaraldehyde	Polymer of 2-acrylamido-2- methylpropanesulfonic acid sodium salt and methyl acrylate	Diammonium peroxidisulphate	Urea
Purpose		Corrosion Inhibitor, Scale Inhibitor, Biocide, AntiFoam Agent, Acid, Breaker, Gelling Agent, Friction Reducer, Crosslinker, Iron Control Agent, Proppi										
Supplier	ingredients shown above are subject to 29 CFR 1910,1200(i) and	Schlumberger		IVEC	7:1 8, Gas		7 2015					
Trade Name	Ingredients shown above	Proppant Transport		Hece	Office of		S102 4.0 100					

		8-87-17190	0.00765	0.00108
	Alkyl(c12-16) dimethylbenzyl ammonium chloride	68424-85-1	0.00577	0.00080
	Sodium erythorbate	6381-77-7	0.00394	0.00055
	Trisodium ortho phosphate	7601-54-9	0.00336	0.00047
	Potassium borate	1332-77-0	0.00326	0.00045
	Methanol	67-56-1	0.00241	0.00034
	Polypropylene glycol	25322-69-4	0.00243	0.00034
	Non-crystalline silica (impurity)	7631-86-9	0.00194	0.00027
	Sodium sulfate	7757-82-6	0.00187	0.00026
	Fatty acids, tall-oil	61790-12-3	0.00145	0.00020
	Vinylidene chloride/methylacrylate copolymer	25038-72-6	0.00128	0.00018
	Potassium hydroxide	1310-58-3	0.00120	0.00017
	Thiourea, polymer with formaldehyde and 1-phenylethanone	68527-49-1	0.00120	0.00017
	Glycerol	56-81-5	0.00106	0.00015
	Ethylene Glycol	107-21-1	0.00096	0.00013
	Ethanol	64-17-5	0.00069	0.00010
	Alcohols, C14-15, ethoxylated (7EO)	68951-67-7	0.00057	0.00008
	2-propenamid	79-06-1	0.00040	0.00006
	Propargyl alcohol	107-19-7	0.00038	0.00005
	Tetrasodium ethylenediaminetetraacetate	84-02-8	0.00021	0.00003
	Hexadec-1-ene	629-73-2	0.00013	0.00002
Cenec	Dimethyl siloxanes and silicones	63148-62-9	0.00011	0.00002
CHICA OF CHI & Gas	Magnesium silicate hydrate (talc)14807-96-6	14807-96-6	0.00004	0.00001
	1-Octadecene (C18)	112-88-9	0.00006	0.00001
0.7 2015	poly(tetrafluoroethylene)	9002-84-0	0.00002	
	Copper(II) sulfate	7758-98-7		
	Decamethyl cyclopentasiloxane 541-02-6	541-02-6	0.00001	
	Siloxanes and silicones, dimethyl, reaction products with silica	67762-90-7	0.00002	
	Formaldehyde	0-00-09	0.00001	
	Octamethylcyclotetrasiloxane	556-67-2	0.00001	

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) 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%

