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 - 01753 County Monongalia District Clay
Quad Blacksville Pad Name Fisher Field/Pool Name Fisher
Farm name Aaron K. Fisher Well Number Fisher 6H
Operator (as registered with the OOG) Northeast Natural Energy LLC
Address 707 Virginia Street E., 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 4394349.1 Easting 567423.0
Landing Point of Curve Northing 4394460.9 Easting 567689.3
Bottom Hole Northing 4392497.0 Easting 569218.2

Elevation (ft) 1,453' 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 - 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 8/22/2016 Date drilling commenced 8/28/16 Date drilling ceased 10/28/2016
Date completion activities began 6/1/2017 Date completion activities ceased 6/21/2017
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

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Freshwater depth(s) ft 1,352' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,500' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 350';1,930' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:

Reviewed

07/20/2018

API 47- 061 - 01753 Farm name Aaron K. Fisher Well number Fisher 6H

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	94.71	N/A	Grouted In
Surface	17-1/2"	13-3/8"	1,430'	N	54.5	N/A	Y 66 Bbls
Coal							
Intermediate 1	12-1/4"	9-5/8"	2,655'	N	40	N/A	Y 5 Bbls
Intermediate 2							
Intermediate 3							
Production	8-3/4"	5-1/2"	17,005'	N	20	N/A	Y 30 Bbls
Tubing	N/A	2-7/8"	N/A	N	6.5	N/A	N/A
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 Grout	-	-	3 Yds	-	-	-
Surface	Class A + 2%	1,150	15.6	1.19	1,369.958	Surface	8
Coal							
Intermediate 1	Class A + 1%	875	15.6	1.19	1,038.698	Surface	8
Intermediate 2							
Intermediate 3							
Production	50:50 + Additives	3,390	14.5	1.15	3,890.906	Surface	48
Tubing							

Drillers TD (ft) 17,040' Loggers TD (ft) 17,010'

Deepest formation penetrated Marcellus Plug back to (ft)

Plug back procedure

Kick off depth (ft) 6,326'

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 approximately 120'

Intermediate: Bow spring centralizers every 3rd joint or approximately 120'

Production: Rigid body centralizers placed at a minimum of every other joint (~80') from TD to surface

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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

07/20/2018

API 47- 061 - 01753 Farm name Aaron K. Fisher Well number Fisher 6H

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)
						Please	See	Attachment

Please insert additional pages as applicable.

API 47- 061 - 01753 Farm name Aaron K. Fisher Well number Fisher 6H

PRODUCING FORMATION(S)	DEPTHS		
Marcellus	8,289' TVD	17,040' MD	

Please insert additional pages as applicable.

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

SHUT-IN PRESSURE Surface 3,610 psi Bottom Hole _____ psi DURATION OF TEST 48 hrs

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY
	4,843 mcfpd	_____ bpd	_____ bpd	_____ bpd	☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT 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 Nabors
Address 82 Old Elkins Rd City Buckhannon State WV Zip 26201

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

Cementing Company C&J Energy Services
Address 380 Southpoint Blvd #210 City Canonsburg State PA Zip 15317

Stimulating Company BJ Services
Address 1036 E. Main St. City Bridgeport State WV Zip 26330
Please insert additional pages as applicable.

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Completed by Hollie Medley Telephone 304-212-0422
Signature Hollie Medley Title Regulatory Manager Date 5-18-18

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

07/20/2018

C&J Energy Services

Cement Job Log

Black Lick, PA
724-248-1001

Customer	Northeast Natural	Date:	9/23/2016	Serv. Supervisor:	Anthony Barbara
Date:	9/21/2016	Invoice #	BPA-1609-0018	Serv. Supervisor:	
Lease:	FISHER #8H	Permit #	100 355 602	County and State:	MONONGALIA W.V
District:	BLACK LICK, PA	Rig:		Type of Job:	13.375" Surface

Employees & Units on Job Site:							
Anthony Barbara	91-4211	Ralph Juart	91-1156	George Swanik	1736/2606		
Dan Deyarmin	Pick Up						

Materials Furnished by C&J ENERGY SERVICES

Plugs	Casing Hardware	Physical Slurry Properties					
		Sacks of Cement	Slurry Wt PPG	Slurry Yield CuFt	Water GPS	Bbls	Bbls of Mix Water
Spacer:							
Lead:							
Tail:	CJ910, CJ110 2% Calcium Cloride, .25# CJ600	1150	15.6	1.19	5.21	243.72	142.7
Acid:							
Displacement Chemicals:	NA						

HOLE			TUBING - CASING - DRILL PIPE						COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE	ID	SHOE	FLOAT	STAGE
17-1/2"	30%	1430	13-3/8"	54.5#	Casing	1430'	j-55	12.615"	43'	40'	

LAST CASING			PKR / CMT RET / LINER PKR		PERF DEPTH		TOP CONN		WELL FLUID	
SIZE	ID	DEPTH	BRAND / TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT
24"		40					13-3/8	Butress	AIR	

DISPL VOLUME		DISPL FLUID		CAL PSI		WATER	CEMENT TEMP	MAX PRESSURE		Bbls H2O on Loc.
VOLUME	UOM	TYPE	WGT	BMP PLUG	PH	TEMP	GOING DOWN HOLE	RATED	WORKING	
214.0	BBL	H2O	8.33		8	72.1	93.5	2000	650	1000

Time Hrs	Rate	Pressure	Bbls Pumped	Fluid Type			
					Time Left Yard	5:00 PM	Time Left Loc 12:45 AM
					Time Arrived on Loc	7:30 PM	Time Arrived Yard 4:00 AM
1:45 PM					CALLED IN FOR JOB		
4:30 PM					PRECONVOY MEETING		
5:00 PM					LEFT YARD		
7:30 PM					ARRIVE ON LOCATION		
7:45 PM					PRE-JOB SAFTEY MEETING		
8:00 PM					SPOT TRUCKS		
8:10 PM					Rig Up		
					Safety meeting with Company Man and Rig Crew		
9:24 PM	4	60	5	H2O	Load lines		
9:26 PM		1550			Pressure Test		
9:27 PM	7	129	160	H2O	Establish Circulation		
9:52 PM	3	80	50	GEL	Mix and Pump Gelled water @ 8.7#PPG		
10:10 PM	3	80	10	H2O	Fresh water Spacer		
10:17 PM	7	32	243.7	CEMT	Mix and Pump Cement @ 15.6#PPG Weighed with Pressurized Mud Scales		
10:58 PM					Drop Plug		
10:59 PM	2	10	1	H2O	Start Displacement		
11:02 PM	7.2	85	20	H2O	Rate and Pressure		
11:06 PM	7	120	50	H2O	Rate and Pressure		
11:13 PM	7	290	100	H2O	Rate and Pressure		
11:20 PM	6.9	530	150	H2O	Rate and Pressure		
11:28 PM	4.8	630	200	H2O	Rate and Pressure		
11:31 PM	3	595	210	H2O	Rate and Pressure		
11:33 PM		1035	214		Land Plug Got 66bls cement returned		
11:39 PM		1040			Bleed off Floats did not hold.		
11:40 PM		240			Pressured up Shut in Well		
11:55 PM					Wash up/ Rig Down		
12:45 AM					Leave Location		

Bumped Plug	Final Lift Pressure	Floats Held	PSI Left on Casing	Cement to Surface		Total Circulation	Recommended time to wait on cement		
YES	595	NO	240	66	Bbls	683		Hours	Anthony Barbara Service Supervisor

07/20/2018

C&J Energy Services

Cement Job Log

Black Lick, PA
724-248-1001

Customer	NORTHEAST NATURAL	Date:	9/26/2016	Serv. Supervisor:	Jason D. Cribbs		
Date:		Invoice #	BPA-1609-0019	Serv. Supervisor:			
Lease:	FISHER 6H	Permit #		County and State:	MONONGALIA,WV		
District:	Black Lick, PA	Rig:	US ENERGY 9-1	Type of Job:	9 5/8 INTERMEDIATE		
Employees & Units on Job Site:		R. STEPHENSON	93-4087	M. FRANCO	91-3536	R. JUART	92-1419

Materials Furnished by C&J ENERGY SERVICES

Plugs	Casing Hardware	Physical Slurry Properties					
9 5/8 RUBBER TOP		Sacks of Cement	Slurry Wt PPG	Slurry Yield CuFt	Water GPS	Bbls	Bbls of Mix Water
Spacer: CJ020 (500# BENTONITE)						25	
Lead:							
Tail: CJ910 + 1% CJ110		875	15.6	1.19	5.22	185	108
Acid:							
Displacement Chemicals:							

HOLE			TUBING - CASING - DRILL PIPE						COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE	ID	SHOE	FLOAT	STAGE
12 1/4	30%	2680'	9 5/8	40#	CASING	2655'	J-55	8.835	NA	NA	NA

LAST CASING			PKR / CMT RET / LINER PKR		PERF DEPTH		TOP CONN		WELL FLUID	
SIZE	ID	DEPTH	BRAND / TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT
13 3/8	12.615	1430'	NA	NA	NA	NA	9 5/8	BUTTRESS	KCL	9.2#

DISPL VOLUME		DISPL FLUID		CAL PSI		WATER	CEMENT TEMP	MAX PRESSURE		Bbls H2O on Loc.
VOLUME	UOM	TYPE	WGT	BMP PLUG	PH	TEMP	GOING DOWN HOLE	RATED	WORKING	
198.0	BBL	H2O	8.33	NA	7	65	NA	3950	3160	800

Time Hrs	Rate	Pressure	Bbls Pumped	Fluid Type				
					Time Left Yard	1:45 AM	Time Left Loc	7:15 PM
					Time Arrived on Loc	4:30 AM	Time Arrived Yard	
11:00 PM					CALLED OUT FOR JOB			
1:30 AM					PRE-CONVOY SAFETY MEETING			
1:45 AM					LEAVE YARD			
4:30 AM					ARRIVED TO LOCATION/PRE-JOB SAFETY MEETING			
4:45 AM					SPOT TRUCKS/RIG UP/PRIME PUMPS			
6:00 AM					HOLD SAFETY MEETING WITH ALL PERSONNEL			
6:11 AM	7	130	230	KCL	PUMP KCL WATER TO LOAD HOLE			
6:45 AM	5	50	10	H2O	PUMP H20 TO FLUSH DRILL PIPE			
6:47 AM					SHUT DOWN/WAIT ON RIG TO TRIP OUT/RUN CASING			
4:00 PM					HOLD SAFETY MEETING WITH ALL PERSONNEL			
4:24 PM	3	50	5	H2O	PUMP H20 TO LOAD TREATING LINES			
4:25 PM					PRESSURE TEST PUMPS AND LINES TO 3000 PSI (NO LEAKS)			
4:28 PM	6.5	100	110	H2O	PUMP H20 TO GAIN CIRCULATION			
4:45 PM	5	150	25	GEL	MIX AND PUMP GEL SPACER			
4:50 PM	4	150	10	H2O	PUMP H20 TO CLEAN MIX TUB			
4:52 PM	5	250	185	CEMT	MIX AND PUMP CEMENT @ 15.6 PPG			
5:28 PM	0	0	0		SHUT DOWN/RELEASE TOP PLUG			
5:30 PM	7 TO 4	0-900	177	H2O	PUMP H20 DISPLACEMENT			
5:58 PM		600			SHUT DOWN WITH 5 BBLS OF CEMENT TO SURFACE			
6:00 PM					CLOSE IN CEMENT HEAD/RELEASE PRESSURE FROM LINES			
6:05 PM					WASH UP/RACK UP			
7:00 PM					JOB COMPLETE			
7:15 PM					PRE-CONVOY SAFETY MEETING			
7:20 PM					LEAVE LOCATION			

Bumped Plug	Final Lift Pressure	Floats Held	PSI Left on Casing	Cement to Surface		Total Circulation	Recommended time to wait on cement		Jason D. Cribbs
YES	900	YES	600	5	Bbls	397	NA	Hours	Service Supervisor

07/20/2018

C&J Energy Services

Cement Job Log

Customer:	NORTHEAST NATURAL ENERGY LLC	**Date:**	10/27/2016	**Serv. Supervisor:**	
Cust. Rep.:	Jay Lewis	**Ticket #:**	BPA-1610-0016	**Serv. Center**	Black Lick, PA
Lease:	Fisher 6H	**API Well #:**		**County:**	Monongalia **State:** WV
Well Type:		**Rig:**	Nabors Drilling X08	**Type of Job:**	Production Casing

Materials Furnished by C&J ENERGY SERVICES

Plugs	Casing Hardware		Physical Slurry Properties					
			Sacks of Cement	Fluid Dens (lb/gal)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
Spacer 1:	CJ810 PureScrub Spacer + 0.5 gpb CJ880		-	13.5				
Spacer 2:	CJ810 PureScrub Spacer		-	13.5				
Scavenger								
Lead								
Tail:	50:50 CJ010:CJ910 + 0.35% CJ210 + 0.2% CJ500 + 0.2% CJX157011		3390	14.5	1.15	4.79	693	387
Displacement Chemicals:								

OPEN HOLE DATA			TUBULAR DATA								
SIZE (in)	EXCESS (%)	DEPTH (ft)	TYPE (CSG/TBG/DP)	OD (in)	WEIGHT (lbs/ft)	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
8 3/4		6300	Casing	5 1/2	20		17005		4.79		
8 1/2		17040									

PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
SIZE (in)	WEIGHT (lbs/ft)	ID (in)	DEPTH (ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
9 5/8	40	8.84	2655					17005	16982		

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)		WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY					
MUD	12.7 ppg	375 bbl	H20	8.3 ppg	3970	10K PLUS	6000		1400

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details
1:45 AM						0	PRE JOB SAFTEY MEETING
2:07 AM						0	SPOT TRUCKS
2:19 AM						0	RUN LINES TO WELL PRIME PUMPS
4:30 AM						0	SAFTEY MEETING
5:09 AM	4	650			5	5	PUMP H20 AHEAD
5:11 AM	0.1	6300				5	PRESSURE TEST LINES AND PUMPS
6:00 AM						5	RELEASE BOTTOM PLUG
6:05 AM						5	BATCH UP AND WEIGH SPACER WITH MUD SCALES
6:07 AM	6.5	1000			50	55	MIX AND PUMP SPACER ONE @ 13.5 PPG
6:14 AM	6.5	850			50	105	MIX AND PUMP SPACER TWO @ 13.5 PPG
6:21 AM		1200			694	799	WEIGH CEMENT WITH PRESSURIZED MUD SCALES
6:24 AM						799	MIX AND PUMP CEMENT @ 14.5 PPG
8:00 AM						799	SHUT DOWN WASH LINES AND PUMPS SPOT SUGAR H20
8:12 AM						799	RELEASE TOP PLUG
8:14 AM	8	1350-4300			150	949	PUMP H20 DISPLACEMENT 93-4067
						949	SWITH OUT TRUCKS
8:30 AM	7	4300			225	1174	PUMP H20 DISPLACEMENT 93-4066
9:21 AM	3					1174	PLUG BUMPED 3910 PSI-4670 PSI
9:26 AM						1174	RELEASE OFF CHECK FLOATS
						1174	FLOATS HELD 5 BBL RETURNED TO TRUCK
9:40 AM						1174	WASH AND RACK UP TRUCKS
11:00 AM						1174	JOB COMPLETE
						1174	
						1174	

Left Yard	1/0/00 10:49 PM			Left Loc.	10/27/16 11:00 AM		
Arrived Loc.	1/0/00 1:07 AM			Left Loc.			
Bumped Plug (psi)	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	*0*
Yes	4700	Yes	0	30	Yes		Service Supervisor

07/20/2018

	ORTHEAST NATURAL ENERGY LL	YARD CALL			DISTRICT
	Fisher 6H	RTS DATE			Black Lick, PA
		YARD RTN			

version 100516

CUSTOMER INFORMATION	
Customer Name	NORTHEAST NATURAL
Customer #:	1000662
AFE #:	
Cust Rep on Loc:	Jay Lewis
Cust Phone #:	
Order Placed By:	
Phone #:	
Proposed Job Amt:	$48,809.36

JOB INFORMATION	
Ticket #:	BPA-1610-0016
PO #:	
Order Taken By:	John Barnett
Order Date:	
Salesman:	
Tech Writer:	Jason Winegarden

WELL INFORMATION	
API #:	
Field Name:	
Well Name:	Fisher
Well Numer:	6H
Well Type:	
Formation:	Marcellus
Rig Contractor:	Nabors Drilling
Rig Name/Num.:	X08
Rig Phone:	
County:	Monongalia
State:	WV
Latitude:	39.696324
Longitude:	80-223655
Township:	
Quote Number:	BPA16102001

WELL DATA	
Casing Size	5 1/2
Casing Depth	17031
TVD	8262
TMD	17031
OH	8 1/2
OH Depth	17031
BHST	159
BHCT	132

TOP CONNECTION		
Size	Type	Thread
5 1/2	2-Plug Cont.	

JOB TYPE
Production Casing

TUBULAR DATA			
Size	Grade	Weight	Depth
5 1/2		20	17031

CEMENTING PLUG			
Qty	Size	Type	Material

COMMENTS

SPECIAL JOB INSTRUCTIONS

DIRECTIONS TO WELL

From Black Lick: 119 South to 22 West to 66 South to 119 South to 43 South to 68 West to 79 North. Proceed to Exit 155, get off and bear right to the bottom of the hill. Turn left onto Route 7 West. Proceed 1.6 miles continue onto Route 7. Proceed for 13.7 miles to Blacksville and turn left onto Route 218. Proceed for 2.1 to location road on left.

Emergency Contacts

Nearest Hospital		Phone Number:	
Police Department		Phone Number:	
Fire Department		Phone Number:	

Designated Emergency Vehicle	Vehicle Location:
MSDS on Dash of Emergency Vehicle? (y/n)	
Muster Area #2	

Cell Phone Service on location? (y/n)	
If not, nearest working phone	

Iron Tracking

	Taken Out			Returned		
Iron Type	Taken By	Date Out	Time Out	Returned By	Date In	Time In

07/20/2018

NORTHEAST NATURAL ENERGY LLC | Fisher 6H | 5.5" Production Casing

Personnel/Equipment				
Driver	*Assignment*	*Tractor*	*Trailer*	*Comments*

BLEND INFO					
Amount	Units	System/Additives	Density (ppg)	Yield	Water Req.
		Spacers			
50	bbl	CJ810 PureScrub Spacer + 0.5 gpb CJ880	13.5		
50	bbl	CJ810 PureScrub Spacer	13.5		
		Tail			
3390		50:50 CJ010:CJ910 + 0.35% CJ210 + 0.2% CJ500 + 0.2% CJX157011	14.5	1.15	4.79
		Additional Additives			
200	lb	CJ 795-Sugar			

07/20/2018

Perforation Record

Stage No.	Report Date	Perforated from MD Ft.	Perforated to MD ft.	Number of Perforations	Formation
1	6/7/2017		16,860	40	Marceullus
2	6/7/2017	16,827	16,685	40	Marceullus
3	6/7/2017	16,652	16,511	40	Marceullus
4	6/7/2017	16,478	16,336	40	Marceullus
5	6/8/2017	16,303	16,161	40	Marceullus
6	6/8/2017	16,128	15,986	40	Marceullus
7	6/8/2017	15,953	15,811	40	Marceullus
8	6/8/2017	15,778	15,462	40	Marceullus
9	6/9/2017	15,604	15,462	40	Marceullus
10	6/9/2017	15,429	15,287	40	Marceullus
11	6/9/2017	15,249	15,112	40	Marceullus
12	6/10/2017	15,079	14,937	40	Marceullus
13	6/10/2017	14,904	14,762	40	Marceullus
14	6/10/2017	14,730	14,588	40	Marceullus
15	6/10/2017	14,555	14,413	40	Marceullus
16	6/11/2017	14,380	14,238	40	Marceullus
17	6/11/2017	14,205	14,063	40	Marceullus
18	6/11/2017	14,030	13,888	40	Marceullus
19	6/12/2017	13,855	13,714	40	Marceullus
20	6/12/2017	13,681	13,539	40	Marceullus
21	6/12/2017	13,503	13,364	40	Marceullus
22	6/13/2017	13,331	13,189	40	Marceullus
23	6/13/2017	13,156	13,014	40	Marceullus
24	6/13/2017	12,981	12,840	40	Marceullus
25	6/13/2017	12,807	12,665	40	Marceullus
26	6/14/2017	12,632	12,490	40	Marceullus
27	6/14/2017	12,457	12,315	40	Marceullus
28	6/14/2017	12,282	12,140	40	Marceullus
29	6/14/2017	12,107	11,966	40	Marceullus
30	6/15/2017	11,933	11,791	40	Marceullus
31	6/16/2017	11,758	11,616	40	Marceullus
32	6/16/2017	11,583	11,441	40	Marceullus
33	6/17/2017	11,408	11,266	40	Marceullus
34	6/17/2017	11,233	11,092	40	Marceullus
35	6/17/2017	11,059	10,917	40	Marceullus
36	6/17/2017	10,884	10,742	40	Marceullus
37	6/18/2017	10,709	10,567	40	Marceullus
38	6/18/2017	10,534	10,392	40	Marceullus
39	6/18/2017	10,359	10,217	40	Marceullus
40	6/18/2017	10,185	10,043	40	Marceullus
41	6/18/2017	10,010	9,868	40	Marceullus
42	6/19/2017	9,835	9,693	40	Marceullus
43	6/19/2017	9,660	9,518	40	Marceullus
44	6/19/2017	9,485	9,343	40	Marceullus
45	6/19/2017	9,310	9,169	40	Marceullus
46	6/20/2017	9,136	8,994	40	Marceullus
47	6/20/2017	8,961	8,819	40	Marceullus

07/20/2018

Stimulation Report

Stage No.	Report Date	Avg Treating Rate (BPM)	Avg Treating Pressure (psi)	Breakdown Pressure (psi)	ISIP (psi)	Total Amount of Proppant (lbs)	Total Clean Fluid (bbls)
1	6/7/2017	76	9,134	9,500		375,623	10,012
2	6/7/2017	79	9,100	7,855	5,986	404,478	7,917
3	6/7/2017	78	9,046	8,349	5,516	404,802	7,784
4	6/7/2017	79	8,934	8,307	5,704	399,799	8,864
5	6/8/2017	78	8,974	8,022	5,753	399,843	7,720
6	6/8/2017	76	8,799	9,406	5,823	402,185	8,085
7	6/8/2017	76	8,817	8,829	6,035	399,534	7,800
8	6/8/2017	78	8,949	8,471	6,373	399,106	7,654
9	6/9/2017	77	8,840	8,950	5,860	401,537	7,824
10	6/9/2017	78	8,824	8,414	5,823	401,181	7,905
11	6/9/2017	79	8,725	7,887	6,081	400,141	7,434
12	6/10/2017	80	8,769	7,109	5,964	399,468	7,166
13	6/10/2017	77	8,704	7,940	5,716	400,778	7,523
14	6/10/2017	80	8,689	7,081	5,840	398,648	7,324
15	6/10/2017	80	8,967	8,589	6,445	400,539	8,219
16	6/11/2017	80	8,452	8,902	5,489	401,012	7,455
17	6/11/2017	80	8,654	9,008	6,016	399,405	7,368
18	6/11/2017	80	8,696	7,453	5,825	398,538	6,866
19	6/12/2017	79	8,575	7,052	5,964	400,056	7,527
20	6/12/2017	80	8,543	7,193	5,961	398,613	7,302
21	6/12/2017	79	8,774	7,476	5,941	397,930	7,170
22	6/13/2017	79	8,743	7,440	6,063	399,447	6,881
23	6/13/2017	80	8,486	6,652	6,519	390,685	8,573
24	6/13/2017	80	8,309	7,369	6,058	398,751	6,987
25	6/13/2017	79	8,370	8,004	6,249	399,068	6,999
26	6/14/2017	80	8,267	6,802	6,140	399,389	6,940
27	6/14/2017	81	8,291	8,116	6,125	400,421	7,435
28	6/14/2017	81	8,268	7,637	5,618	400,427	7,466
29	6/14/2017	80	8,171	7,521	5,776	399,761	7,000
30	6/15/2017	79	8,248	8,220	5,678	398,264	7,210
31	6/16/2017	80	7,989	6,698	5,685	400,775	7,565
32	6/16/2017	80	8,119	6,422	5,979	404,080	7,693
33	6/17/2017	81	8,012	7,525	6,131	399,986	7,313
34	6/17/2017	80	7,964	8,116	5,366	399,934	7,208
35	6/17/2017	81	8,132	6,707	6,117	400,001	8,110
36	6/17/2017	81	8,259	7,262	5,993	376,217	7,126
37	6/18/2017	80	8,153	7,728	6,220	402,241	7,438
38	6/18/2017	81	7,958	6,388	5,741	399,877	7,392
39	6/18/2017	81	8,060	6,588	5,378	401,566	7,343
40	6/18/2017	81	8,165	5,557	5,605	401,230	7,402
41	6/18/2017	81	8,114	6,161	5,706	400,428	7,246
42	6/19/2017	80	7,987	6,549	5,786	400,110	7,277
43	6/19/2017	80	8,227	8,200	6,130	398,658	7,467
44	6/19/2017	81	8,221	7,257	6,158	388,518	7,183
45	6/19/2017	81	8,009	7,688	6,356	402,429	7,301
46	6/20/2017	80	8,227	8,200	6,130	398,658	7,467
47	6/20/2017	80	8,217	8,001	5,494	400,375	7,487

07/20/2018

Formation and Depths

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)
Gray Sand/Shale	0	245			sand/shale
Gray/Red Shale	245	335			shale
Gray Sand	335	350			sand
Coal	350	355			coal
Sand	355	375			sand
Coal	375	380			coal
Sand/Shale	380	1056			sand/shale
Coal	1056	1066			coal
Sand/Shale	1066	1135			sand/shale
Gray/Red Shale	1135	1670			shale
Sand	1670	1864			sand
Coal	1884	1890			coal
Sand/Shale	1890	1920			sand/shale
Coal	1920	1930			coal
Sand/shale	1930	2480			sand/shale
Sand	2480	2680			sand
Sand/shale	2680	3600			sand/shale
Sandstone/Shale/Siltstone	3600	6300			sandstone/shale/siltstone
Middlesex	7569	7764	7726	7950	shale
Burkett	7764	7979	7950	8218	shale
Geneseo	7979	8020	8218	8275	shale
Tully	8020	8068	8275	8345	limestone
Hamilton	8068	8179	8345	8534	shale
Marcellus	8179	8235	8534	8701	shale
Cherry Valley	8235	8238	8701	8789	limestone
Lower Marcellus	8238		8709		shale

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/31/2017
Job End Date:	6/20/2017
State:	West Virginia
County:	Monongalia
API Number:	47-061-01753-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Fisher 6H
Latitude:	39.69632900
Longitude:	-80.21360900
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,292
Total Base Water Volume (gal):	15,449,742
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

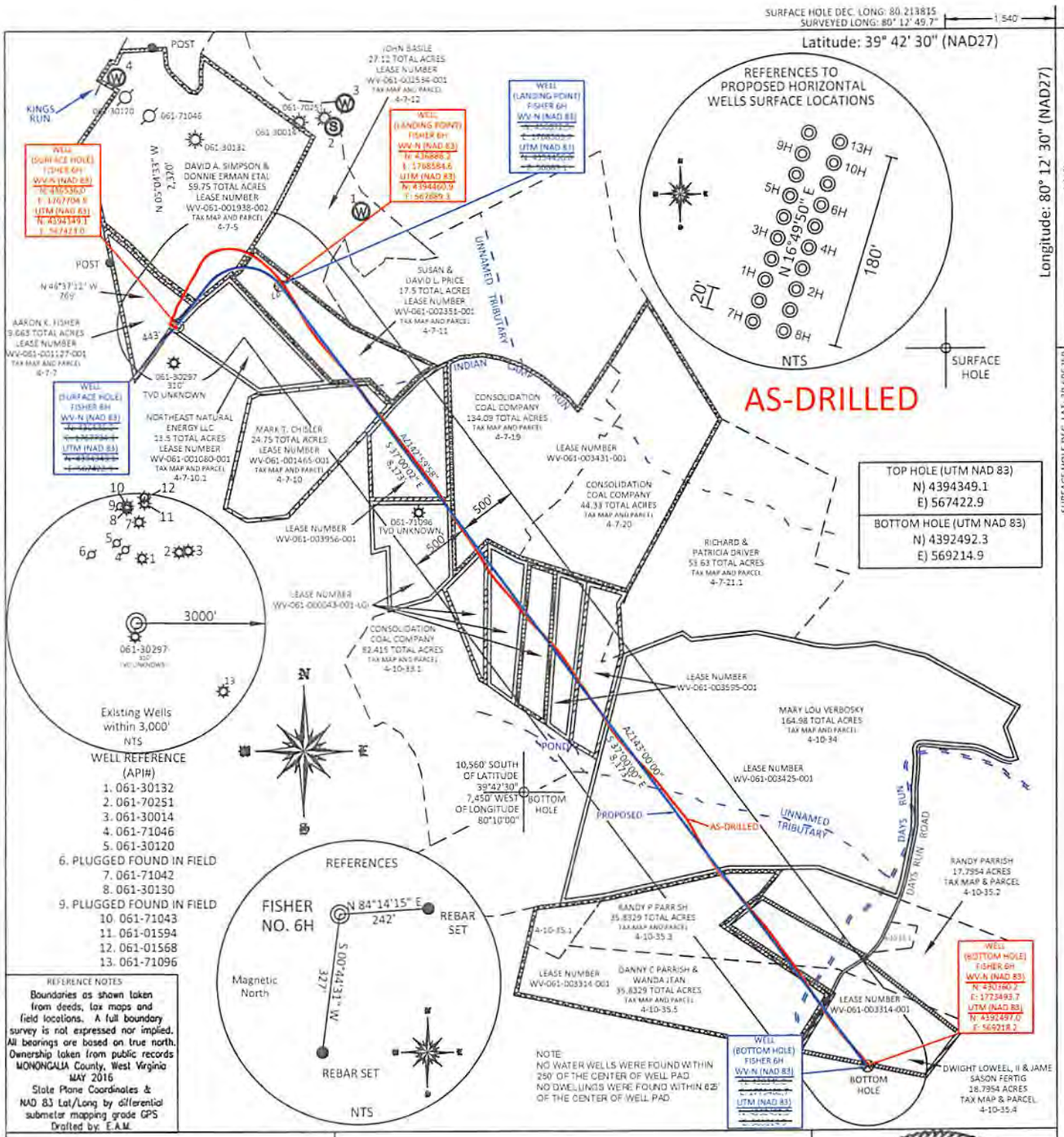
Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier					
			Water	7732-18-5	100.00000	81.13162	
Sand, White	BJ Services	Proppant					
				Listed Below			

HCl, 5.1 - 7.5%	BJ Services	Acidizing					
				Listed Below			
Other Chemical (s)	BJ Services	See Trade Name (s) List					
			Water	7732-18-5	92.50000	6.46223	
MaxPerm 30	BJ Services	Friction Reducer					
				Listed Below			
Ferrotrol 300L	BJ Services	Iron Control					
				Listed Below			
CI-14	BJ Services	Corrosion Inhibitor					
				Listed Below			
GBW-5	BJ Services	Breaker					
				Listed Below			
EC6486A	Nalco-Champion	Scale Inhibitor					
				Listed Below			
K-139	Nalco-Champion	Microbial Control					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline Silica (Quartz)	14808-60-7	100.00000	11.82225	
			Hydrochloric Acid	7647-01-0	7.50000	0.52126	

			Acrylamide Modified Acrylic Polymer	38193-60-1	60.00000	0.03123	
			Petroleum distillates	64742-47-8	30.00000	0.01561	
			Quaternary ammounium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	30.00000	0.00448	
			Citric Acid	77-92-9	60.00000	0.00282	
			Sodium Chloride	7647-14-5	5.00000	0.00260	
			Sorbian, mono-(9Z)-9octadecenoate	1338-43-8	5.00000	0.00260	
			Sorbitan monooleate ethoxylate	9005-65-6	5.00000	0.00260	
			Oxyalkylated Alcohol	78330-21-9	5.00000	0.00260	
			Glutaraldehyde	111-30-8	10.00000	0.00176	
			Ethylene Glycol	107-21-1	30.00000	0.00129	
			Amine Triphosphate	Proprietary	30.00000	0.00116	
			Methanol	67-56-1	100.00000	0.00111	
			Ethanol	64-17-5	5.00000	0.00061	
			Acetic acid	127-08-2	1.00000	0.00052	
			Polyoxyalkylenes	68951-67-7	30.00000	0.00033	
			Ammonium Persulfate	7727-54-0	100.00000	0.00014	
			Fatty Acids	61790-12-3	1.20000	0.00011	
			Modified Thiourea Polymer	68527-49-1	7.00000	0.00008	
			Propargyl Alcohol	107-19-7	5.00000	0.00006	
			Olefin	64743-02-8	5.00000	0.00006	
			Acetic acid, Potassium Salt	64-19-7	0.10000	0.00005	
			Tetrasodium EDTA	64-02-8	0.10000	0.00005	
			Formaldehyde	50-00-0	1.00000	0.00001	

* 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)



FILE #: NNE14

DRAWING #: 2386

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: APRIL 13, 2018

OPERATOR'S WELL #: FISHER NO. 6H

API WELL #: 47 (STATE) 61 (COUNTY) ____ (PERMIT)

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

WATERSHED: DUNKARD CREEK

AS-BUILT ELEVATION: 1,453'

COUNTY/DISTRICT: MONONGALIA / CLAY

QUADRANGLE: BLACKSVILLE

SURFACE OWNER: AARON K. FISHER

ACREAGE: 9.663 +/-

OIL & GAS ROYALTY OWNER: HENRY P. AMES, III, ET AL

ACREAGE: 542.4809 +/-

LEASE NUMBERS:

07/20/2018

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: 8,289.25' TMD: 17,040'

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

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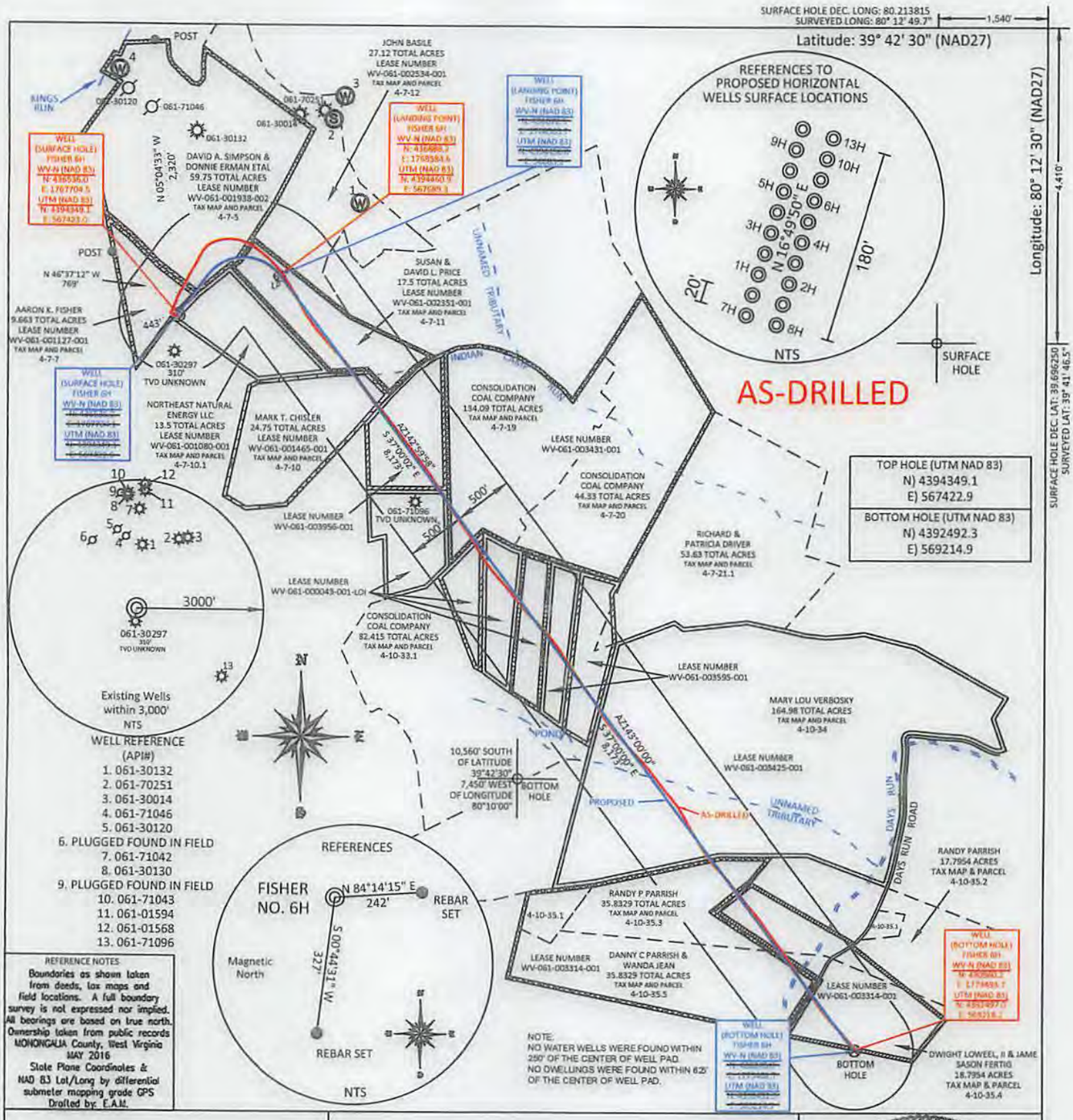

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