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WR-35
Rev. 8/23/13

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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

API 47 - 061 - 01670 County Monongalia District Clay
Quad Blacksville, WV Pad Name Yost Field/Pool Name Blacksville
Farm name Yost Heritage Inc. Well Number 5H
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 4388282.8 Easting 567095.1
Landing Point of Curve Northing 4388421.4 Easting 567287.9
Bottom Hole Northing 4390237.6 Easting 565987.8

Elevation (ft) 1,492' 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 5-16-2014 Date drilling commenced 9-18-2014 Date drilling ceased 12-10-2014
Date completion activities began 3/7/2015 Date completion activities ceased 3-28-2015
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 1,378' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2,410' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 320' ; 712' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by: _____

API 47-061 - 01670 Farm name Yost Heritage Inc. Well number 5H

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	52'	N	N/A	N/A	Y to surface
Surface	17.5	13 3/8	1,308'	N	54.5	N/A	Y 35 BBL return
Coal							
Intermediate 1	12.25	9 5/8	2,660'	N	40	N/A	Y 25 BBL return
Intermediate 2							
Intermediate 3							
Production	8.5	5.5	16,233'	N	20	N/A	Y 5 BBL return
Tubing	4.771	2.875	8,764'	N	6.5	N/A	
Packer type and depth set		No packer set					

Comment Details All casing and cement jobs went with out issue.

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	1004	15.2	1.27	1,271	CTS	8
Coal							
Intermediate 1	Class A	858	15.2	1.26	1,074	CTS	8
Intermediate 2							
Intermediate 3							
Production	50/50 Premium NE -1.3% R-3.3% MPA170	3192	14.5	1.17	2,661	CTS	48
Tubing							

Drillers TD (ft) 16,223' Loggers TD (ft) 16,233'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure _____

Kick off depth (ft) 8,972'

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 Completed in a multi-stage plug-and-perforate manner.
 (See Attached Details).

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 20-SEP-14		F.R. # 10011101159		SERV. SUPV. Charles M Gray							
LEASE & WELL NAME YOST 5H - API 47081016700000			LOCATION BLACKSVILLE			COUNTY-PARISH-BLOCK Monongalia West Virginia							
DISTRICT Clarksburg		DRILLING CONTRACTOR RIG # PERFORMANCE # 1				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											
		Float Shoe 13-3/8 - 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	
GELLED H2O + LCM							8.43				50		
PREMIUM NE + 2% CACL				0		1,004	15.2	1.27	5.76		227	137.64	
H2O							8.34				196		
400 LB GRANULATED SUGAR (ON THE SIDE)							0				0		
100 LB FED-SEAL (ON THE SIDE)							0				0		
300 LB CELLOFLAKE (ON THE SIDE)							0				0		
Available Mix Water		1000 Bbl.		Available Displ. Fluid		500 Bbl.		TOTAL		473		137.64	
HOLE			TBG-CSG-D.P.						COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE	
17.5		1371	12.62	13.375	54.5	CSG	1308	1308	J-55	1308	1268		
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.
24	24	63.4	CSG	40	40	NO PACKER	0	0	0	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			
196	BBLs	H2O	8.34	460	0	0	0	0	2000	700	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	3800 PSI	CIRCULATING WELL - RIG	<input type="checkbox"/>	BJ	<input checked="" type="checkbox"/>	
10:45	0	0	0	0								ARRIVE ON LOCATION
14:45	0	0	0	0								PRE RIG IN MEETING
15:40	0	0	0	0								PRE JOB SAFETY MEETING
15:50	60	0	6.5	5	H2O							LINE FILL
15:52	3800	0	1	1	H2O							PRESSURE TEST LINES
15:54	100	0	7.2	355	H2O							WATER AHEAD
16:49	125	0	5.8	50	GEL H2O							6% PREFLUSH + 100 LB FED-SEAL + 50 LB FLAKE
16:55	120	0	5.8	10	H2O							WATER SPACER
17:00	210	0	5.8	227	SLURRY							PREMIUM NE + 2% CACL
17:46	0	0	0	0								SHUTDOWN, RELEASE PLUG
17:48	120	0	6	0	H2O							START DISPLACEMENT
18:25	650	0	0	195.9	H2O							PLUG DOWN
18:27	0	0	0	0								CHECK FLOAT - FLOAT HELD (1 BBL BACK)
18:30	0	0	0	0								PRE RIG OUT MEETING

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CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL ENER	DATE 24-SEP-14	F.R. # 10011102091	SERV. SUPV. Ron Bland
LEASE & WELL NAME YOST 5H - API 47061016700000	LOCATION DAYBROOK W.V		COUNTY-PARISH-BLOCK Monongalia West Virginia
DISTRICT Clarksburg	DRILLING CONTRACTOR RIG # PERFORMNACE		TYPE OF JOB Intermediate

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
9-5/8" Top Cem Plug, Nitrile cvr, Phc	Float Shoe 9-5/8 - 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
PREM NE 1 +1.5%Cacl		858	15.2	1.26	5.76	02:30	190	116.12
500# GEL			8.34				25	
H2O			8.34				191.4	
200# SUGAR FOR PIT			8.34				20	
Available Mix Water 370 Bbl.		Available Displ. Fluid 370 Bbl.		TOTAL			426.4	116.12

HOLE			TBG-CSG-D.P.						COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
12.25	30	2670	8.835	9.625	40	CSG	2660	2660	J-55			

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.
										9.625	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	RATED	Operator		
191.4	BBLs	H2O	8.34	915	0	0	0	0	0	0	2600	2400	TANKS	
		200# SUGAR FOR F	8.34											

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	2577 PSI	CIRCULATING WELL - RIG	<input type="checkbox"/>	BJ	<input type="checkbox"/>		
02:30													
08:30													
09:29		2744											
09:30		140	7	175	H2O								
09:57		130	6	25	GELL								
10:02		125	6	10	H2O								
10:04		190	5.6	190	SLURRY								
10:41		0											
10:42		100	6.5	191.4	H2O								
11:15		977											
11:20		90	6	90	H2O								
11:30													

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	977	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	10	681.4	977	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<i>R. Bland</i>

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CEMENT JOB REPORT



CUSTOMER NORTHEAST NATURAL ENER		DATE 11-DEC-14	F.R.# 10011124961	SERV. SUPV. Brian Lough									
LEASE & WELL NAME YOST 5H - API 47061016700000		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			
5-1/2" Top Cem Plug, Nitri cvr, Phen		Guide Shoe, Cement Nose, 5-1/2 i											
		Float Collar, AI Flap, 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	
H2O							8.34				5		
ULTRA FLUSH HV							13				101		
CLASS A (PREM NE-1) 50/50 POZ(FLY ASH)+R-3+MI						3,192	14.5	1.17	5.14	06:30	636	373.53	
H2O WITH HALLIBURTON RETARDER							8.34				10		
FRESH H2O							8.34				349		
150 LBS OF SUGAR ON THE SIDE							8.34				20		
Available Mix Water		750	Bbl.	Available Displ. Fluid		750	Bbl.	TOTAL		1121	373.53		
HOLE			TBG-CSG-D.P.					COLLAR DEPTHS					
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE	
8.75	10	16233	4.778	5.5	20	CSG	16207		P-110	16207	16193		
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	9.625	40	CSG	2609	2609					5.5	BUTT	SYNTHETIC MUD	12.5
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			
360	BBLs	H2O WITH HALLIBU FRESH H2O	8.34 8.34	3500	0	0	0	0	10112	5000	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 6450 PSI							
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>							
11:30						ARRIVE ON LOCATION. JOB TIME ASAP							
11:35						SPOT EQUIPMENT							
11:45						SAFETY MEETING WITH BHI CREW							
12:00						RIG INTO WELL & TANKS							
17:30						SAFETY MEETING WITH RIG CREW & CO.MAN							
18:00	1000		5		H2O	LINE FILL							
18:01						SHUT DOWN.THREADS ON SUB AND LANDING JOINT LEAKING							
19:40						LEAK REPAIRED. FILL LINE FOR PRESSURE TEST							
19:42	0		.2	.2	H2O	PRESSURE TEST TO 6500 PSI							
19:43	715		4.5	100	PRE-FLUS	ULTRA FLUSH HV							
20:06	976		5.6	636	CEMENT	CLASS A 50/50 POZ (FLY ASH)+R-3+MPA-170. TEMP 45 DEGREEF							
21:09	0					BULK HOSE PLUGGED. SHUT DOWN TO CLEAR HOSE							
21:38	175		3		CEMENT	HOSE CLEANED OUT. CONTINUE TO PUMP CEMENT							
22:46	0				H2O	SHUT DOWN/ FLUSH LINES / DROP PLUG							
22:48	120		5.5	10	H2O	FRESH H2O WITH HALLIBURTON RETARDER							
22:50	3600		6.5	349	H2O	FRESH WATER DISPLACEMENT-TOTAL DISPLACEMENT 360							
23:40	4100		3.5		H2O	LAND PLUG / SHUT DOWN							

CEMENT JOB REPORT



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	6450 PSI
23:42	0					CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input checked="" type="checkbox"/>	
23:43						RELEASE PRESSURE / CHECK FLOATS	
						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	3600	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	1116	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<i>BK Long</i>

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Perforation Record

Stage Number	Report Date	Perforated from MD ft	Perforated to MD ft	Number of Perforations	Formation
1	3/11/2015	16,179	16,068	40	Marcellus Shale
2	3/14/2015	16,028	15,917	40	Marcellus Shale
3	3/14/2014	15,877	15,766	40	Marcellus Shale
4	3/14/2015	15,726	15,612	40	Marcellus Shale
5	3/15/2015	15,565	15,464	40	Marcellus Shale
6	3/15/2015	15,424	15,317	40	Marcellus Shale
7	3/15/2015	15,273	15,162	40	Marcellus Shale
8	3/16/2015	15,122	15,011	40	Marcellus Shale
9	3/16/2015	14,971	14,860	40	Marcellus Shale
10	3/16/2015	14,820	14,709	40	Marcellus Shale
11	3/17/2015	14,669	14,558	40	Marcellus Shale
12	3/17/2015	14,518	14,407	40	Marcellus Shale
13	3/17/2015	14,367	14,256	40	Marcellus Shale
14	3/17/2015	14,218	14,105	40	Marcellus Shale
15	3/18/2015	14,065	13,954	40	Marcellus Shale
16	3/18/2015	13,914	13,803	40	Marcellus Shale
17	3/19/2015	13,763	13,652	40	Marcellus Shale
18	3/19/2015	13,612	13,501	40	Marcellus Shale
19	3/19/2015	13,461	13,350	40	Marcellus Shale
20	3/19/2015	13,310	13,197	40	Marcellus Shale
21	3/19/2015	13,159	13,048	40	Marcellus Shale
22	3/20/2015	13,008	12,897	40	Marcellus Shale
23	3/20/2015	12,857	12,746	40	Marcellus Shale
24	3/20/2015	12,702	12,592	40	Marcellus Shale
25	3/20/2015	12,555	12,444	40	Marcellus Shale
26	3/21/2015	12,404	12,293	40	Marcellus Shale
27	3/20/2015	12,253	12,142	40	Marcellus Shale
28	3/21/2015	12,102	11,991	40	Marcellus Shale
29	3/22/2015	11,947	11,837	40	Marcellus Shale
30	3/22/2015	11,802	11,689	40	Marcellus Shale
31	3/22/2015	11,649	11,538	40	Marcellus Shale
32	3/22/2015	11,498	11,387	40	Marcellus Shale
33	3/23/2015	11,347	11,236	40	Marcellus Shale
34	3/23/2015	11,196	11,085	40	Marcellus Shale
35	3/23/2015	11,043	10,932	40	Marcellus Shale
36	3/23/2015	10,890	10,785	40	Marcellus Shale
37	3/24/2015	10,743	10,632	40	Marcellus Shale
38	3/24/2015	10,592	10,481	40	Marcellus Shale
39	3/24/2015	10,441	10,332	40	Marcellus Shale
40	3/24/2015	10,290	10,179	40	Marcellus Shale
41	3/25/2015	10,136	10,028	40	Marcellus Shale
42	3/25/2015	9,988	9,877	40	Marcellus Shale
43	3/25/2015	9,837	9,728	40	Marcellus Shale
44	3/25/2015	9,686	9,575	40	Marcellus Shale
45	3/28/2015	9,535	9,424	40	Marcellus Shale
46	3/28/2015	9,380	9,273	40	Marcellus Shale
47	3/28/2015	9,230	9,122	40	Marcellus Shale
48	3/28/2015	9,082	8,973	40	Marcellus Shale
49	3/28/2015	8,931	8,820	40	Marcellus Shale

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	3/11/2015	67	9,251	7,017	4,873	401,840	10,002
2	3/14/2015	81	9,338	6,184	5,736	280,027	6,789
3	3/14/2015	73	9,020	6,830	6,013	396,700	6,484
4	3/14/2015	79	8,870	6,558	6,149	428,837	7,701
5	3/15/2015	80	8,992	7,257	6,321	403,829	7,488
6	3/15/2015	78	8,999	6,198	5,596	399,660	7,553
7	3/15/2015	79	9,197	8,146	6,426	404,320	7,308
8	3/16/2015	78	9,001	7,436	6,032	400,060	7,649
9	3/16/2015	81	9,036	6,306	5,701	395,620	7,567
10	3/16/2015	80	9,097	6,352	6,010	401,860	7,510
11	3/17/2015	74	9,004	8,598	5,846	400,880	8,766
12	3/17/2015	76	8,849	8,126	6,371	403,464	7,252
13	3/17/2015	80	9,262	7,428	5,959	399,960	8,773
14	3/17/2015	77	8,790	8,822	5,642	396,180	7,302
15	3/18/2015	75	8,985	8,509	5,546	399,900	7,121
16	3/18/2015	74	9,048	8,580	5,833	398,280	7,455
17	3/19/2015	72	8,792	7,922	N/A	326,655	6,667
18	3/19/2015	80	8,783	8,586	6,303	399,780	7,298
19	3/19/2015	78	9,009	8,653	6,468	401,400	7,789
20	3/19/2015	78	8,843	6,872	6,023	400,620	7,285
21	3/19/2015	78	8,843	7,197	6,023	400,620	7,285
22	3/20/2015	75	8,754	8,645	5,865	399,800	7,201
23	3/20/2015	76	8,704	9,029	6,278	401,080	7,269
24	3/20/2015	79	8,786	7,935	6,468	401,380	7,387
25	3/20/2015	70	8,780	8,837	6,117	400,700	8,273
26	3/21/2015	83	8,740	9,135	5,769	399,220	7,393
27	3/20/2015	81	8,850	8,371	5,546	400,900	7,093
28	3/21/2015	85	8,765	9,218	6,404	405,360	7,467
29	3/22/2015	77	8,926	9,353	5,610	402,320	8,438
30	3/22/2015	87	8,857	9,062	6,530	374,060	6,932
31	3/22/2015	84	8,463	8,865	5,895	401,680	7,537
32	3/22/2015	84	8,524	7,515	5,546	398,880	7,446
33	3/23/2015	89	8,527	8,057	5,704	399,400	7,076
34	3/23/2015	87	8,746	8,245	6,149	358,355	6,791
35	3/23/2015	87	8,376	7,420	6,085	403,120	7,086
36	3/23/2015	87	8,712	7,315	5,890	405,940	7,200
37	3/24/2015	86	8,861	8,039	5,991	400,020	7,126
38	3/24/2015	91	8,824	8,258	6,544	400,100	7,017
39	3/24/2015	91	8,774	8,803	6,594	398,300	7,375
40	3/24/2015	90	8,964	8,493	N/A	327,484	6,517
41	3/25/2015	91	8,717	7,889	6,530	399,440	7,250
42	3/25/2015	90	8,790	8,326	6,182	402,320	7,082
43	3/25/2015	93	8,619	7,294	6,691	399,920	7,039
44	3/25/2015	84	8,697	8,781	6,149	399,500	7,068
45	3/28/2015	95	8,757	7,387	6,213	403,680	7,168
46	3/28/2015	93	8,659	9,145	6,062	400,800	6,894
47	3/28/2015	88	8,667	8,174	6,561	401,520	7,046
48	3/28/2015	90	8,953	9,012	6,216	398,380	7,849
49	3/28/2015	92	8,813	8,701	5,704	262,280	5,798

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MORGANTOWN, WV

Hydraulic Fracturing Fluid Product Component Information Disclosure



Job Start Date:	3/11/2015
Job End Date:	3/28/2015
State:	West Virginia
County:	Monongalia
API Number:	47-061-01670-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Yost 5H
Longitude:	-80.21804700
Latitude:	39.64169800
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	8,350
Total Base Water Volume (gal):	15,992,004
Total Base Non Water Volume:	0

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
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	Schlumberger	Corrosion Inhibitor, Bactericide (Myacide GA25), Scale Inhibitor, AntiFoam Agent, Acid Breaker, Gelling Agent, Friction Reducer, Iron Control Agent,					
			Water (Including Mix Water Supplied by Client)*	NA		86.73556	
			Quartz, Crystalline silica	14808-60-7	98.71479	13.09396	
			Hydrochloric acid	7647-01-0	0.61321	0.08134	
			Guar gum	9000-30-0	0.29775	0.03949	
			Ammonium sulfate	7783-20-2	0.14799	0.01963	
			Acrylamide, 2-acrylamido-2-methylpropanesulfonic acid, sodium salt polymer	38193-60-1	0.10923	0.01449	
			Glutaraldehyde	111-30-8	0.04507	0.00598	
			Diammonium peroxodisulphate	7727-54-0	0.01744	0.00231	
			Ethanol, 2,2'-(1,1'-tris(dihydrogen phosphate), sodium salt	68171-29-9	0.01178	0.00156	

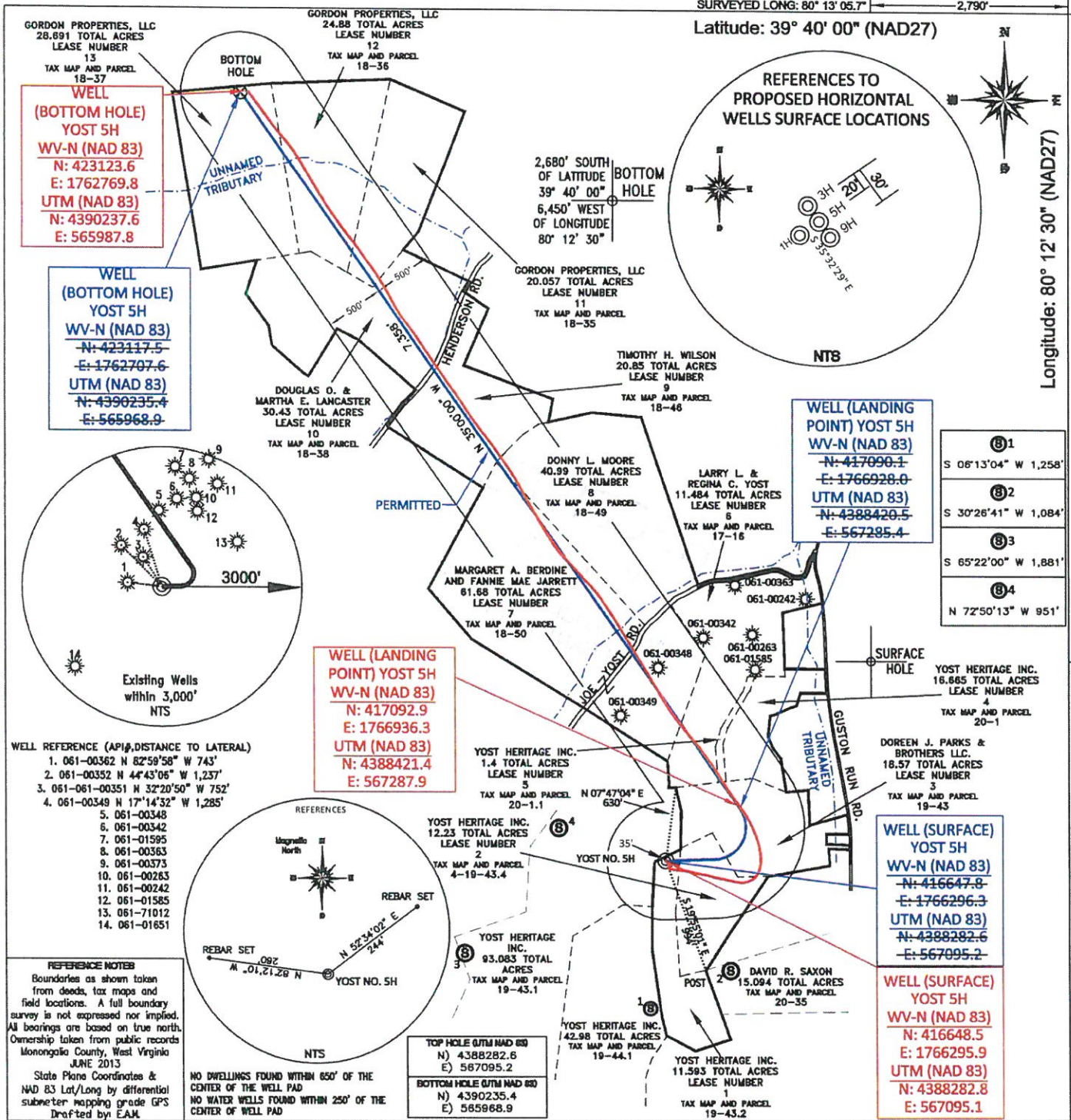
SURFACE HOLE DEC. LONG: 80.218250
 SURVEYED LONG: 80° 13' 05.7"

Latitude: 39° 40' 00" (NAD27)

2,790'

Longitude: 80° 12' 30" (NAD27)

9,100'



FILE #: NNE10

DRAWING #: 2298

SCALE: PLAT - 1" = 1200'
TICK MARK - 1" = 2000'

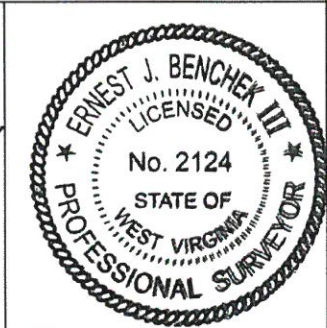
MINIMUM DEGREE OF ACCURACY: 1/200

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: [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 Diposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: DUNKARD CREEK

COUNTY/DISTRICT: MONONGALIA / CLAY

SURFACE OWNER: YOST HERITAGE INC.

OIL & GAS ROYALTY OWNER: JOE POGUE ET AL

LEASE NUMBERS: _____

DATE: AUGUST 4, 2015

OPERATOR'S WELL #: YOST NO. 5H AS-DRILLED

API WELL #: 47 61 01670
 STATE COUNTY

AS-BUILT ELEVATION: 1,492'

QUADRANGLE: BLACKSVILLE, WV

ACREAGE: 11.593 +/-

ACREAGE: 282.86 +/-

TARGET FORMATION: MARCELLUS

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

ESTIMATED DEPTH: TVD: 8,231' TMD: 16,073'

DESIGNATED AGENT: JOHN ADAMS

WELL OPERATOR: NORTHEAST NATURAL ENERGY LLC

ADDRESS: 707 VIRGINIA STREET EAST, SUITE 1200

CITY: CHARLESTON STATE: WV ZIP CODE: 25301