



## **POST-STIMULATION REPORT**

# **Northeast Natural Energy, LLC**

**Bogges 3H (Stages 1-66)**

**Marcellus Shale Formation**

**Monongalia County, WV**

**Treatment Dates: 08/30/2019 – 09/18/2019**

**Treatment Type: Slickwater**

**Service District: Zanesville, OH**

**Prepared For:**

**Criss VanGilder**

**Completions Manager**

**Northeast Natural Energy, LLC**

**48 Donley Street, Suite 601**

**Morgantown, WV 26501**

**Prepared By:**

**Cole Bernstiel**

**District Field Engineer**

**109 S. Graham St**

**Zanesville, OH 43701**

**[cbernstiel@producersservicecorp.com](mailto:cbernstiel@producersservicecorp.com)**

*A 100% employee owned company*



## **OPERATIONAL SUMMARY**

PSC appreciates the opportunity to complete the stimulation of the Boggess 3H well. 66 Stages were completed from August 30th, 2019 to September 18th, 2019. Average treating pressure was 8,466 psi at an average rate of 83.3 bpm. Average pump time was 2 hour and 1 minutes. 19,702,740 lbs of 100 mesh sand and 6,629,140 lbs of 40/70 sand was placed for a total of 26,334,860 lbs which is 100% of the designed volume. 43,500 gal of 7.5% HCl was utilized during the stimulation treatment.

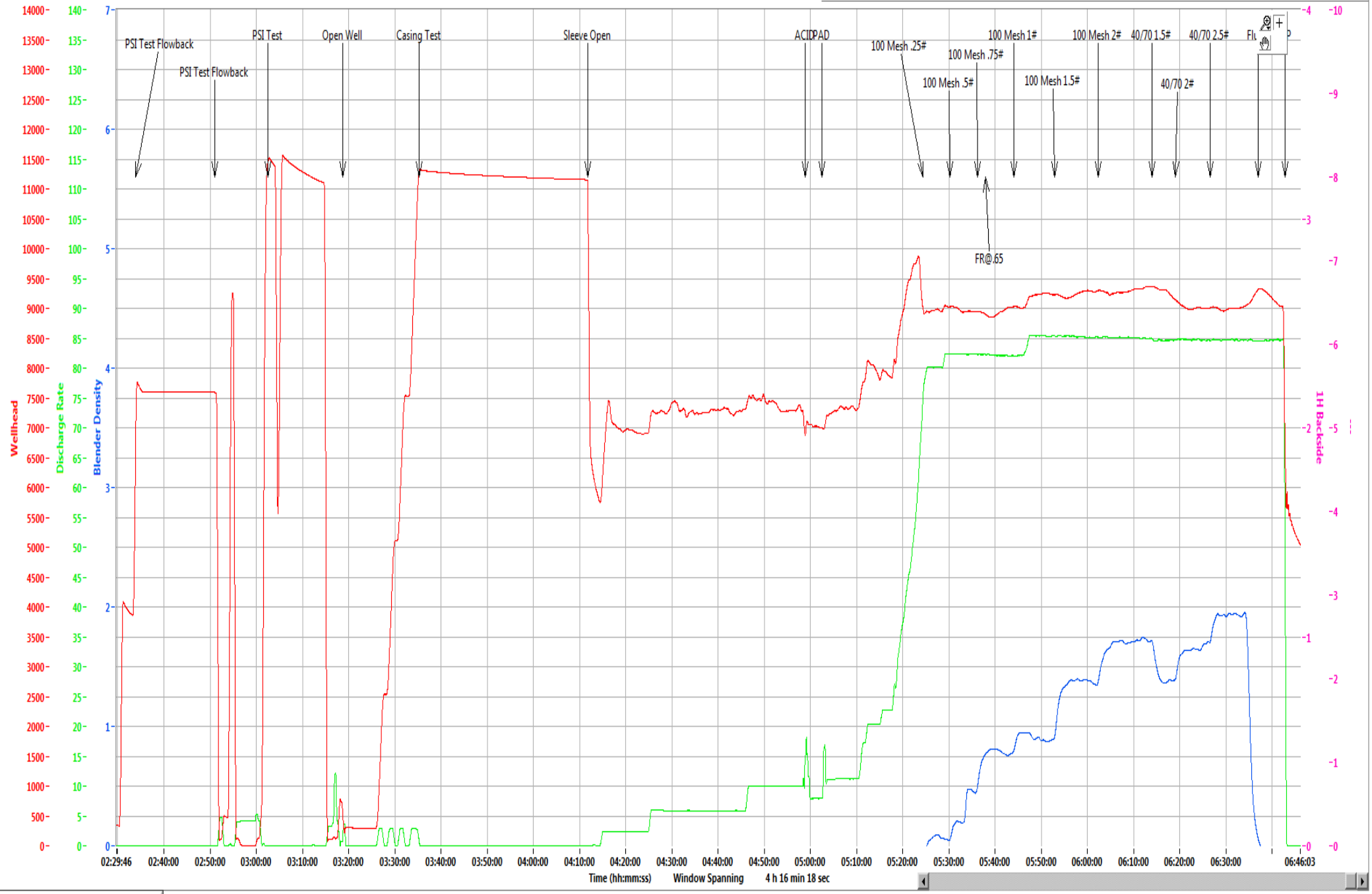




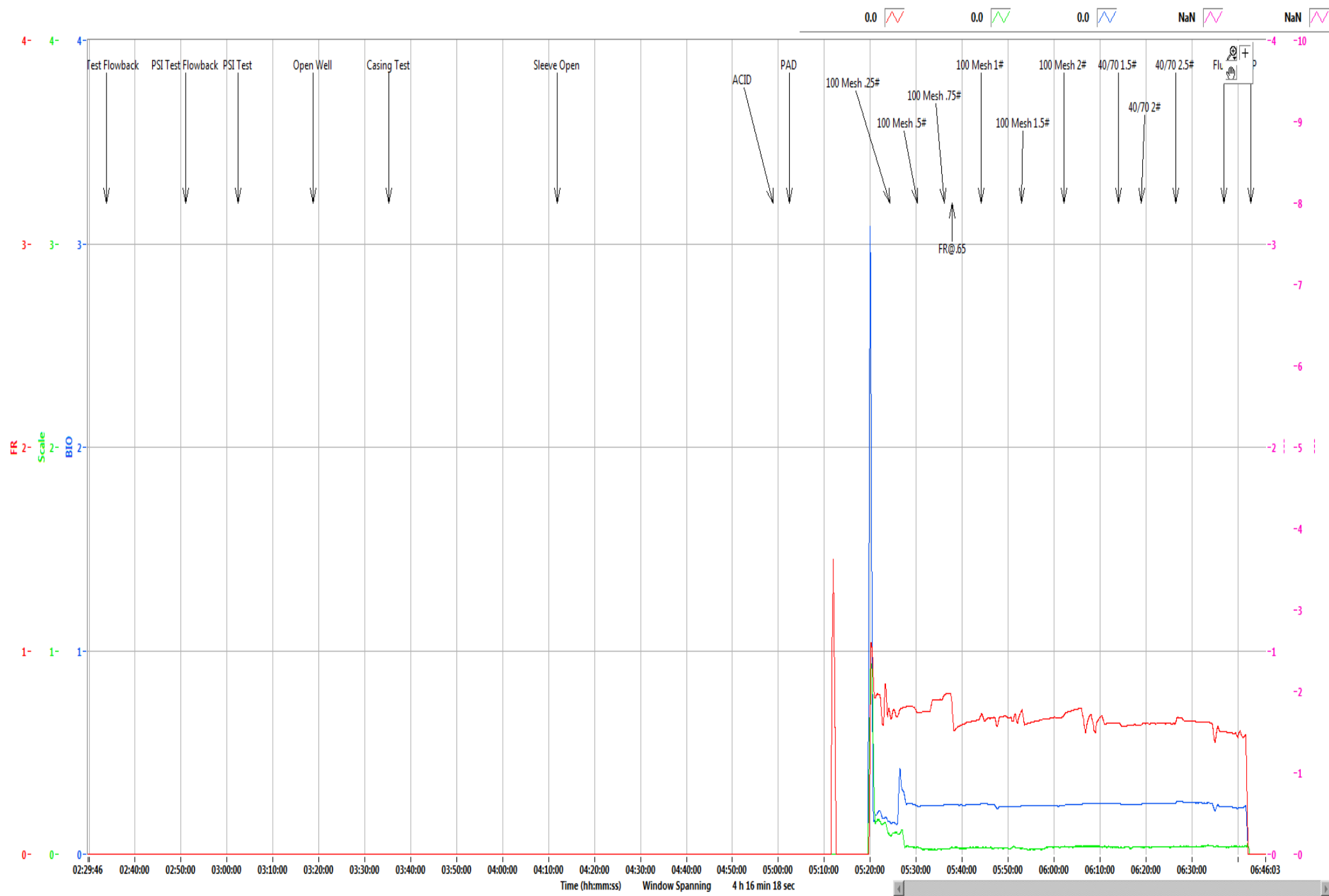
**NNE**  
**Boggess 3H**  
**Stage 1**  
**Producers Service Corp.**

**Post Stage Report**  
**August 30, 2019**





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**Boggess Pad****3H**

Stage	1
Date:	8/30/19
OWP (psi):	77
Starting Time	3:18 AM
Ending Time	6:42 AM
Pump Time (hr:min)	03:24
Swap Time (hr:min)	00:00
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	9,114
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	9,417
Displacement (psi)	9,362
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,257
Final FG (psi/ft)	1.21
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,153
Acid 7.5% HCL (gal)	3,000
Wireline Pump Down (bbls)	
Pad (bbls)	549
Treatment (bbls)	6,184
Displacement (bbls)	484
(Acid Included)Total Fluid (bbls)	7,224
Dirty Job Total (bbls)	7,451
100 Mesh	181,560
40/70	120,500
Total Proppant (lbs)	302,060
Total Proppant %	75.5%

**CHEMICALS**

FR 9800	187
Biocide	70
Scale	11

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23015  
 Date: 8/30/2019  
 Well Name: Bogges 3H  
 Stage No.: 1

State: WV  
 County: Monongahela  
 Operator: Dunn/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	3000	GAL	\$ 1.25	\$ 3,750.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	6	GAL	\$ 35.00	\$ 210.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	1,815.60	CWT	\$ 5.50	\$ 9,985.80
SAND 40/70	40/70 white	1,205.00	CWT	\$ 5.75	\$ 6,928.75
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	187	GAL	\$ 17.75	\$ 3,319.25
BIOC11219A	Biocide @ 0.25 GPT	70	GAL	\$ 16.00	\$ 1,120.00
SCAL16846A	Scale Control @ 0.05 GPT	11	GAL	\$ 16.00	\$ 176.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		151.03	TON	\$ 55.00	\$ 8,306.65
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 53,596.45  
 25% Discount Applied \$ 13,399.11  
 Net Stage Total \$ 40,197.34

(Print Name)  
 Customer Rep:

Glenn Bayl Customer Signature:



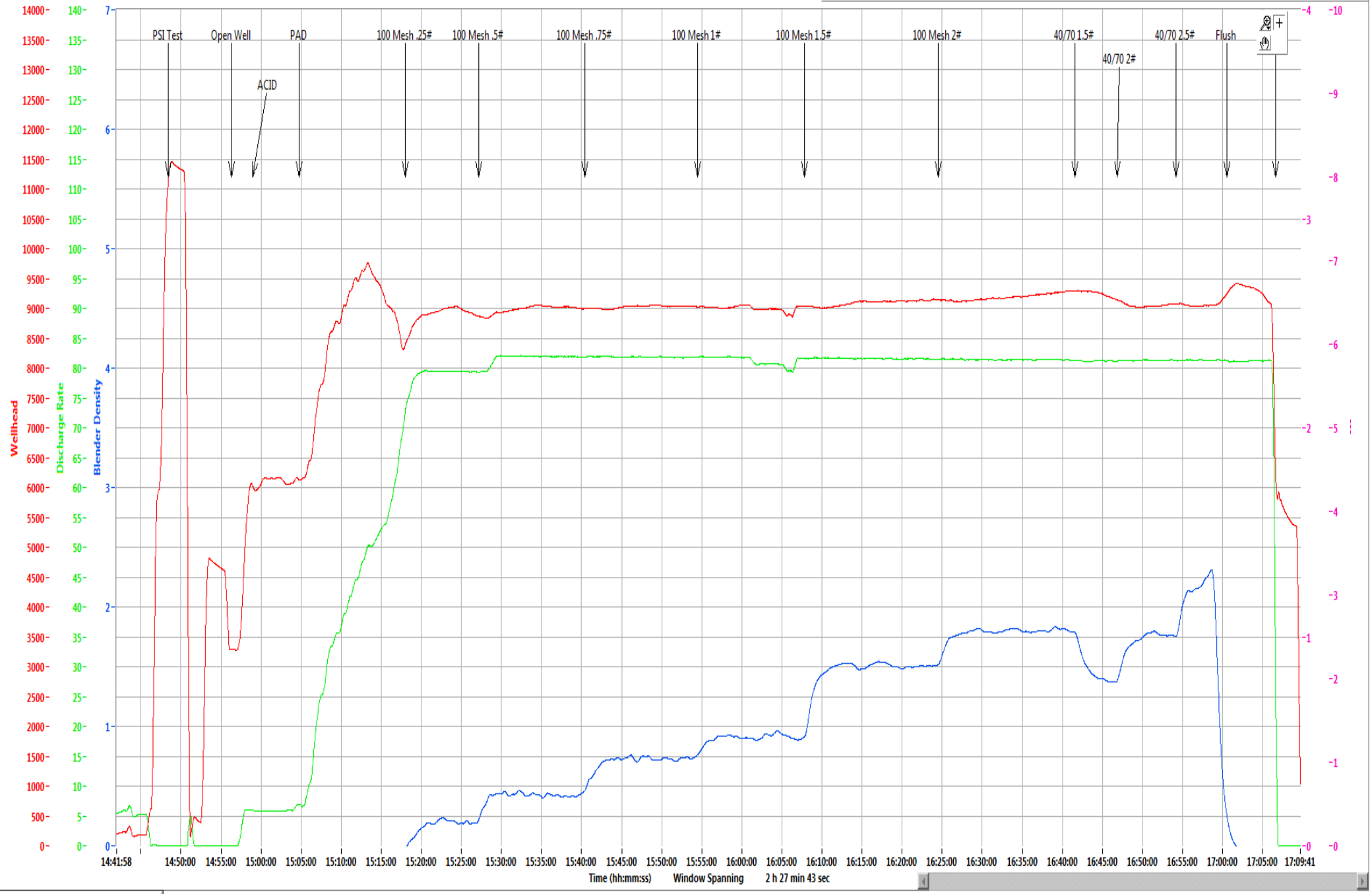
**NNE**  
**Boggess 3H**  
**Stage 2**  
**Producers Service Corp.**

**Post Stage Report**  
**August 30, 2019**



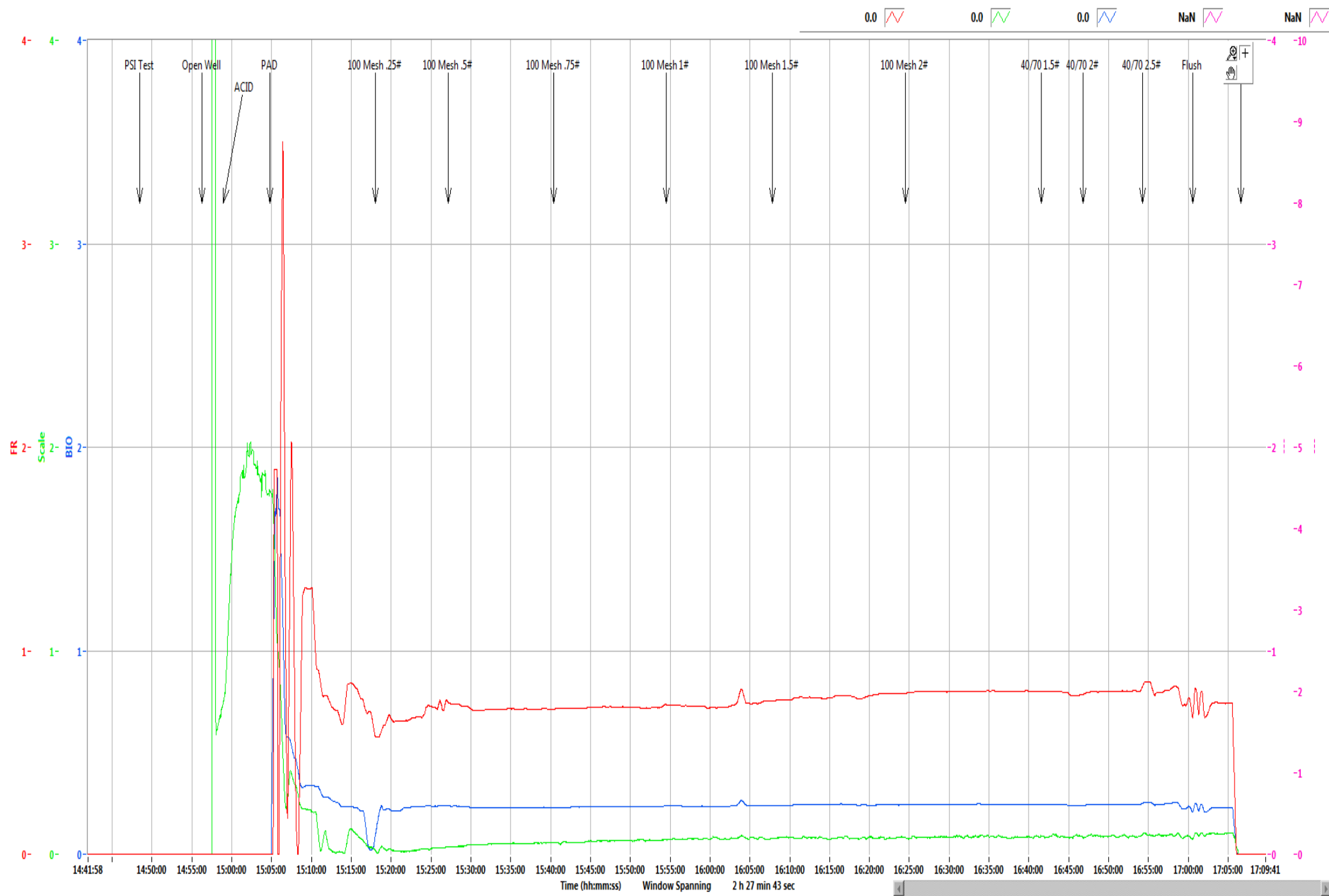


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Time (hh:mm:ss) Window Spanning 2 h 27 min 43 sec

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<b>Boggess Pad</b>	<b>3H</b>
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Stage	2
Date:	8/30/19
OWP (psi):	3,293
Starting Time	2:56 PM
Ending Time	5:06 PM
Pump Time (hr:min)	02:10
Swap Time (hr:min)	08:14
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,132
Average Treating Rate (bbl/min)	81
Average Treating Pressure (psi)	9,058
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	9,333
Displacement (psi)	9,323
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,157
Final FG (psi/ft)	1.20
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,033
Acid 7.5% HCL (gal)	3,000
Wireline Pump Down (bbls)	723
Pad (bbls)	541
Treatment (bbls)	8,086
Displacement (bbls)	472
(Acid Included)Total Fluid (bbls)	9,104
Dirty Job Total (bbls)	9,391
100 Mesh	304,460
40/70	101,420
Total Proppant (lbs)	405,880
Total Proppant %	101.5%

**CHEMICALS**

FR 9800	286
Biocide	91
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23016  
 Date: 8/30/2019  
 Well Name: Bogges 3H  
 Stage No.: 2

State: WV  
 County: Monongahela  
 Operator: Dunn/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	3000	GAL	\$ 1.25	\$ 3,750.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	6	GAL	\$ 35.00	\$ 210.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,044.60	CWT	\$ 5.50	\$ 16,745.30
SAND 40/70	40/70 white	1,014.20	CWT	\$ 5.75	\$ 5,831.65
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	286	GAL	\$ 17.75	\$ 5,076.50
BIOC11219A	Biocide @ 0.25 GPT	91	GAL	\$ 16.00	\$ 1,456.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		202.94	TON	\$ 55.00	\$ 11,161.70
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 64,351.15  
 25% Discount Applied \$ 16,087.79  
 Net Stage Total \$ 48,263.36

(Print Name)

Customer Rep: Glenn Bork

Customer Signature: [Signature]

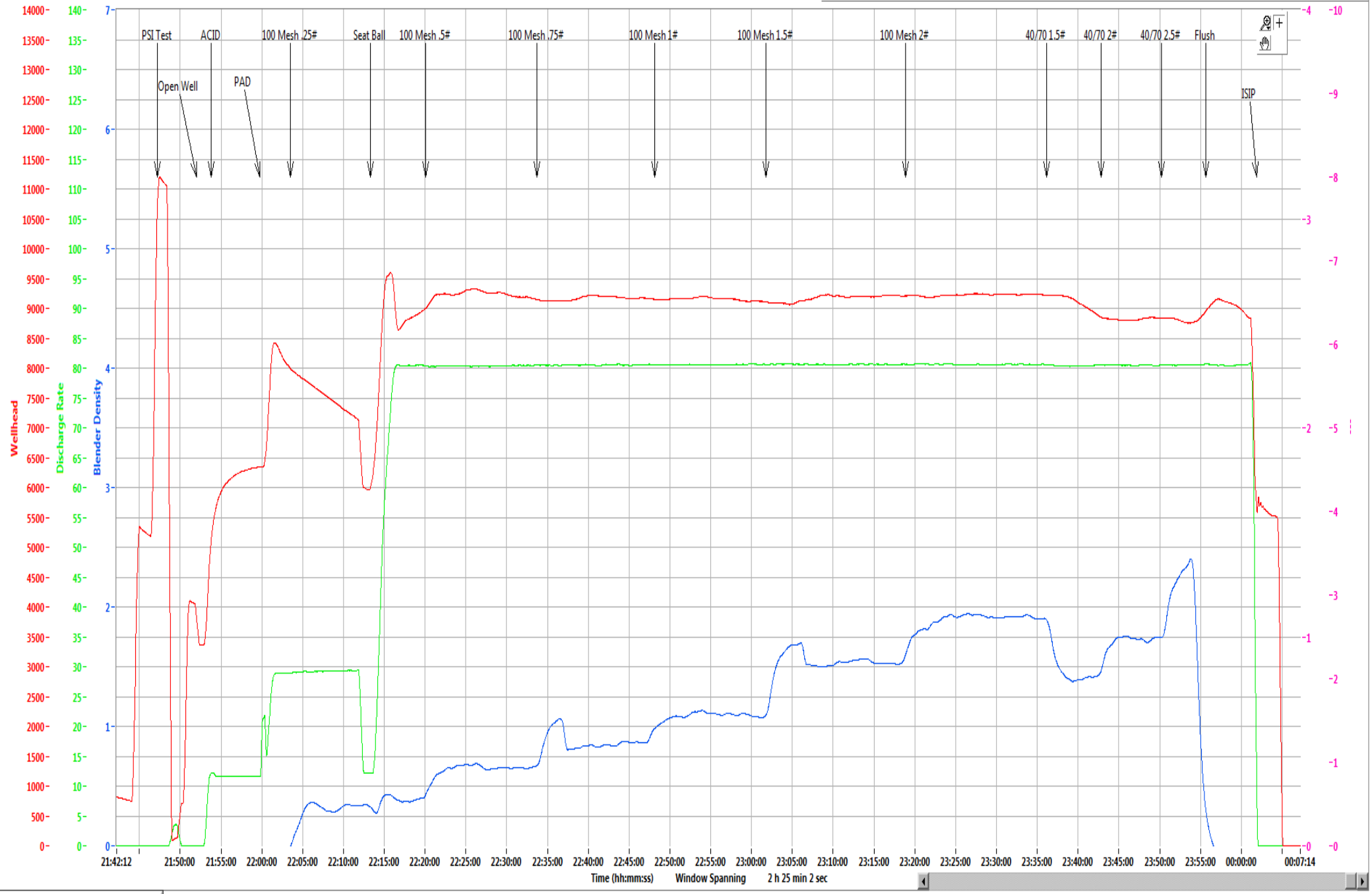


**NNE**  
**Boggess 3H**  
**Stage 3**  
**Producers Service Corp.**

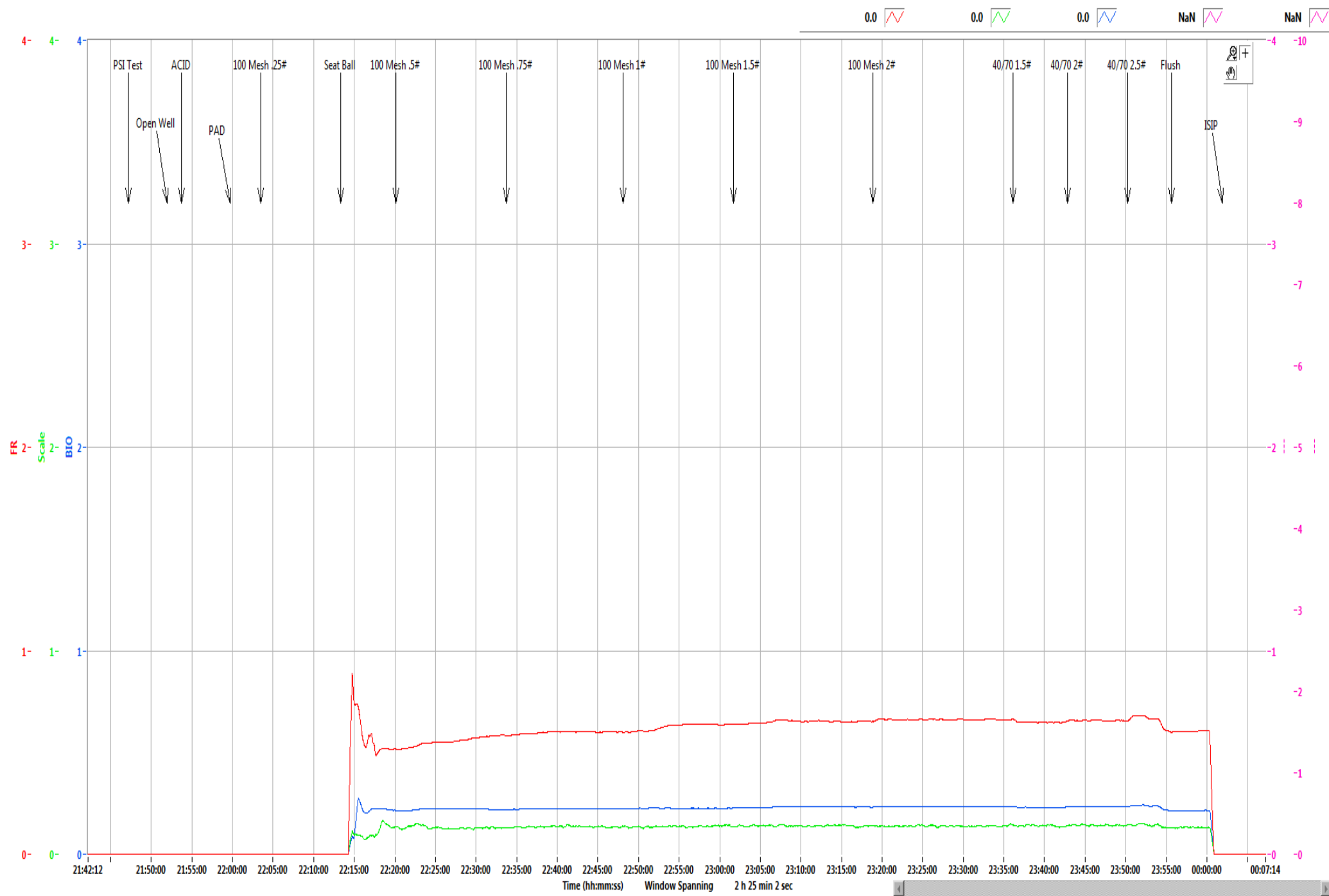
**Post Stage Report**  
**August 31, 2019**



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<b>Boggess Pad</b>	<b>3H</b>
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Stage	3
Date:	8/30/19
OWP (psi):	3,367
Starting Time	9:51 PM
Ending Time	12:01 AM
Pump Time (hr:min)	02:10
Swap Time (hr:min)	04:45
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,299
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	9,126
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	9,647
Displacement (psi)	8,167
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,422
Final FG (psi/ft)	1.11
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,568
Acid 7.5% HCL (gal)	3,000
Wireline Pump Down (bbls)	656
Pad (bbls)	181
Treatment (bbls)	7,986
Displacement (bbls)	467
(Acid Included)Total Fluid (bbls)	8,639
Dirty Job Total (bbls)	9,061
100 Mesh	306,400
40/70	103,440
Total Proppant (lbs)	409,840
Total Proppant %	102.5%

**CHEMICALS**

FR 9800	225
Biocide	85
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23017  
 Date: 8/31/2019  
 Well Name: Bogges 3H  
 Stage No.: 3

State: WV  
 County: Monongahela  
 Operator: Joe/Eck/Jaime  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	3000 ✓	GAL	\$ 1.25	\$ 3,750.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	6	GAL	\$ 35.00	\$ 210.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,064.00 ✓	CWT	\$ 5.50	\$ 16,852.00
SAND 40/70	40/70 white	1,034.40 ✓	CWT	\$ 5.75	\$ 5,947.80
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	225 ✓	GAL	\$ 17.75	\$ 3,993.75
BIOC11219A	Biocide @ 0.25 GPT	85 ✓	GAL	\$ 16.00	\$ 1,360.00
SCAL16846A	Scale Control @ 0.05 GPT	20 ✓	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		204.92	TON	\$ 55.00	\$ 11,270.60
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 63,504.15  
 25% Discount Applied \$ 15,876.04  
 Net Stage Total \$ 47,628.11

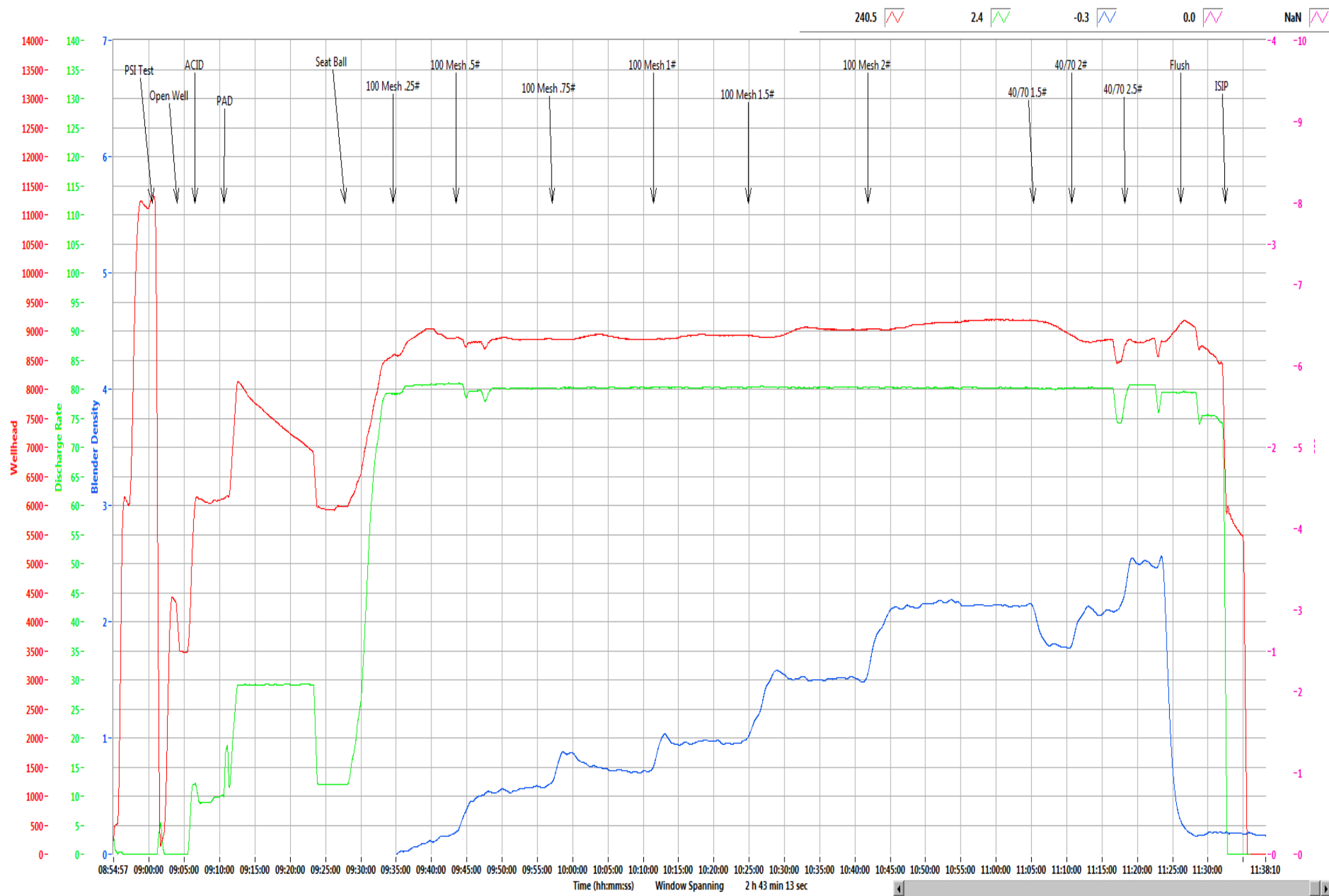
(Print Name) Mike Inman Customer Signature: 



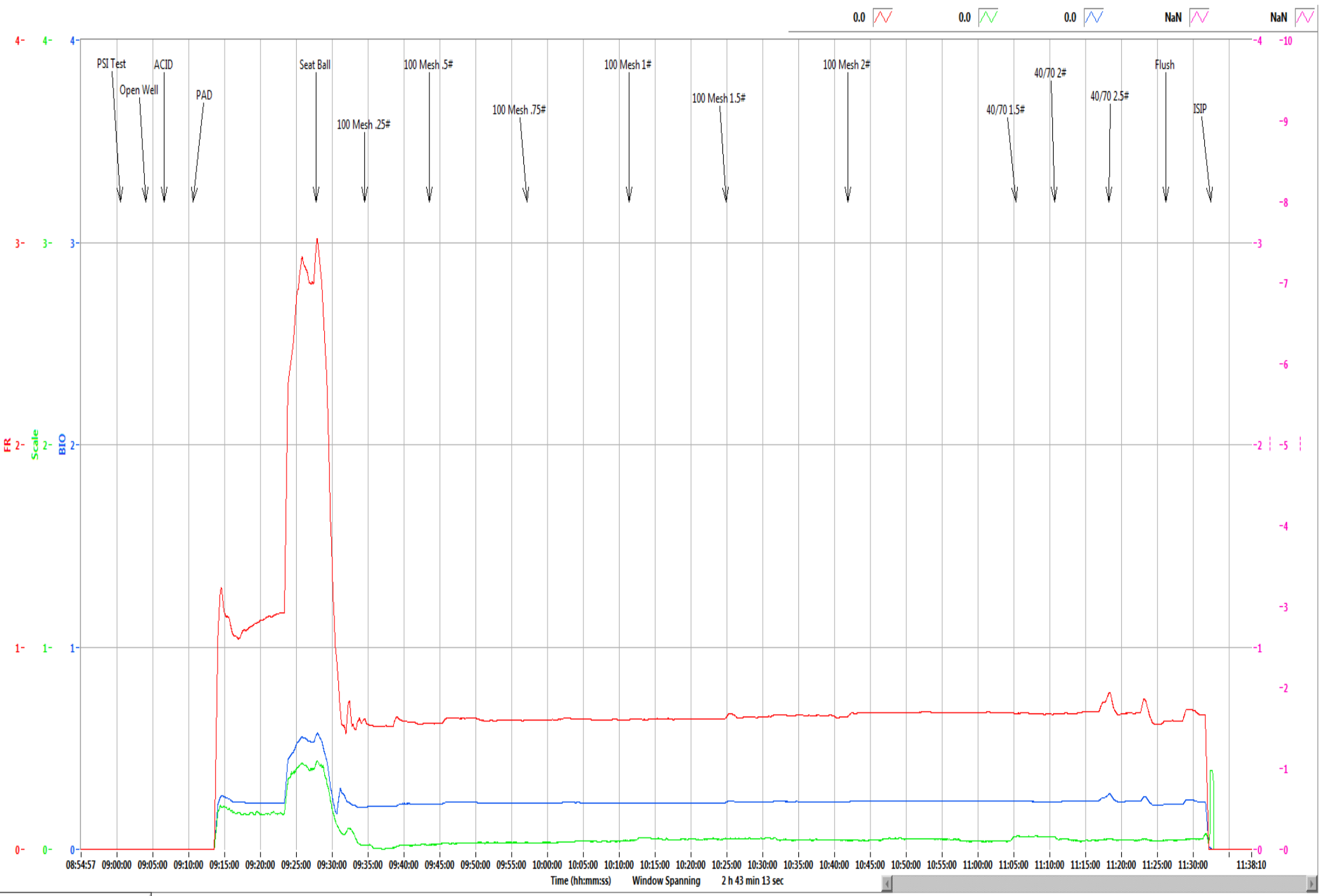
**NNE**  
**Boggess 3H**  
**Stage 4**  
**Producers Service Corp.**

**Post Stage Report**  
**August 31, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	4
Date:	8/31/19
OWP (psi):	3,478
Starting Time	9:03 AM
Ending Time	11:32 AM
Pump Time (hr:min)	02:29
Swap Time (hr:min)	09:02
Starting # Pumps	17
Finishing # Pumps	15
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,016
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	8,948
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	9,251
Displacement (psi)	9,128
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,304
Final FG (psi/ft)	1.22
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,743
Acid 7.5% HCL (gal)	3,000
Wireline Pump Down (bbls)	648
Pad (bbls)	755
Treatment (bbls)	8,593
Displacement (bbls)	465
(Acid Included)Total Fluid (bbls)	9,814
Dirty Job Total (bbls)	10,213
100 Mesh	298,000
40/70	103,040
Total Proppant (lbs)	401,040
Total Proppant %	100.3%

**CHEMICALS**

FR 9800	265
Biocide	103
Scale	21

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23018  
 Date: 8/31/2019  
 Well Name: Bogges 3H  
 Stage No.: 4

State: WV  
 County: Monongahela  
 Operator: Jeremy/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	3000	GAL	\$ 1.25	\$ 3,750.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	6	GAL	\$ 35.00	\$ 210.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,980.00	CWT	\$ 5.50	\$ 16,390.00
SAND 40/70	40/70 white	1,030.40	CWT	\$ 5.75	\$ 5,924.80
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	265	GAL	\$ 17.75	\$ 4,703.75
BIOC11219A	Biocide @ 0.25 GPT	103	GAL	\$ 16.00	\$ 1,648.00
SCAL16846A	Scale Control @ 0.05 GPT	21	GAL	\$ 16.00	\$ 336.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.52	TON	\$ 55.00	\$ 11,028.60
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 63,791.15  
 25% Discount Applied \$ 15,947.79  
 Net Stage Total \$ 47,843.36

(Print Name)  
 Customer Rep:

Glenn Fayl

Customer Signature:

[Signature]



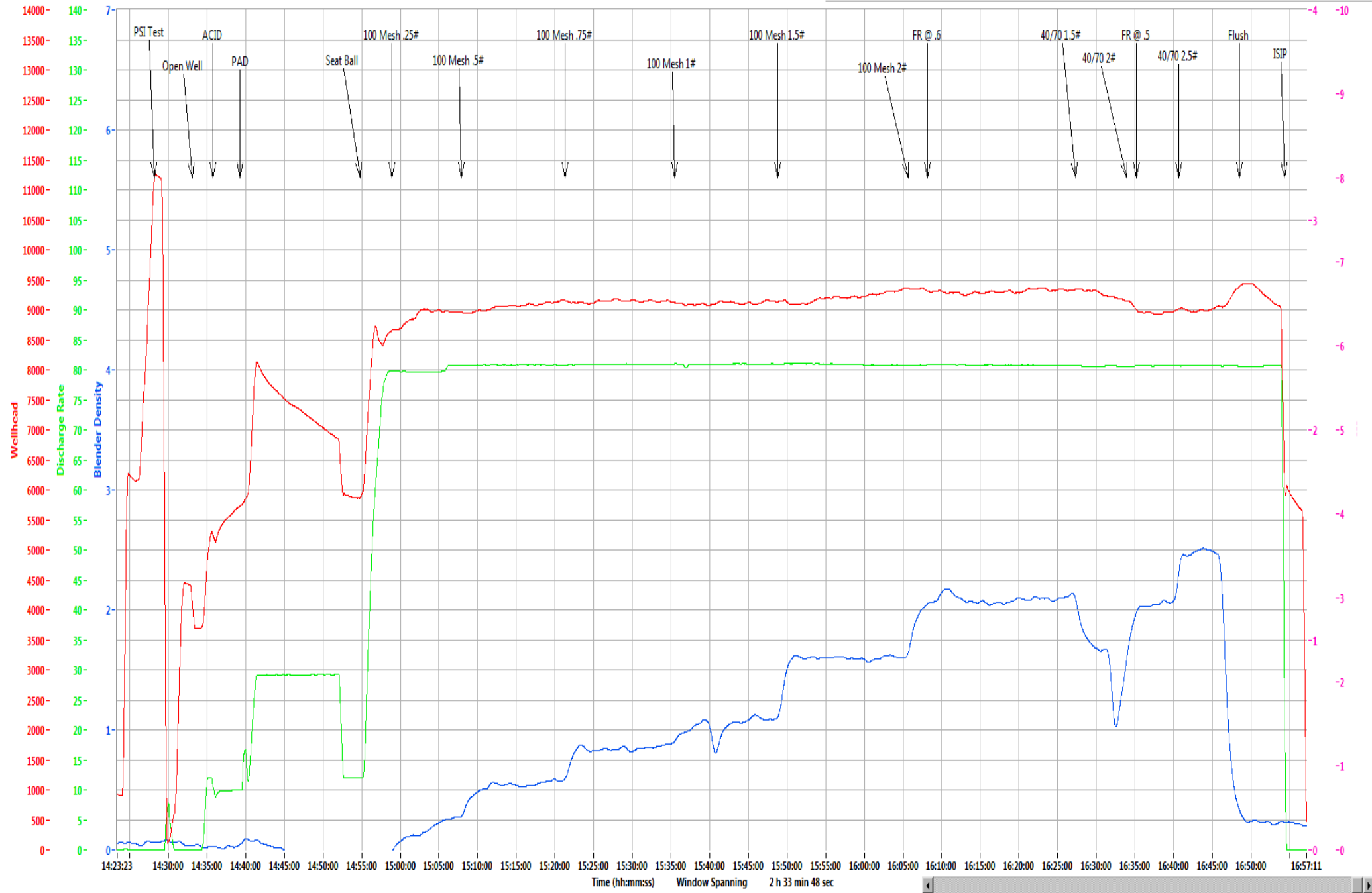


**NNE**  
**Boggess 3H**  
**Stage 5**  
**Producers Service Corp.**

**Post Stage Report**  
**August 31, 2019**



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Time (hh:mm:ss) Window Spanning 2 h 33 min 48 sec

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Time (hh:mm:ss) Window Spanning 2 h 33 min 48 sec

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**Boggess Pad****3H**

Stage	5
Date:	8/31/19
OWP (psi):	3,680
Starting Time	2:33 PM
Ending Time	4:54 PM
Pump Time (hr:min)	02:21
Swap Time (hr:min)	03:01
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,009
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	9,134
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	9,482
Displacement (psi)	9,394
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,171
Final FG (psi/ft)	1.20
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,530
Acid 7.5% HCL (gal)	3,000
Wireline Pump Down (bbls)	747
Pad (bbls)	621
Treatment (bbls)	8,522
Displacement (bbls)	457
(Acid Included)Total Fluid (bbls)	9,601
Dirty Job Total (bbls)	9,965
100 Mesh	300,320
40/70	100,520
Total Proppant (lbs)	400,840
Total Proppant %	100.2%

**CHEMICALS**

FR 9800	226
Biocide	101
Scale	20





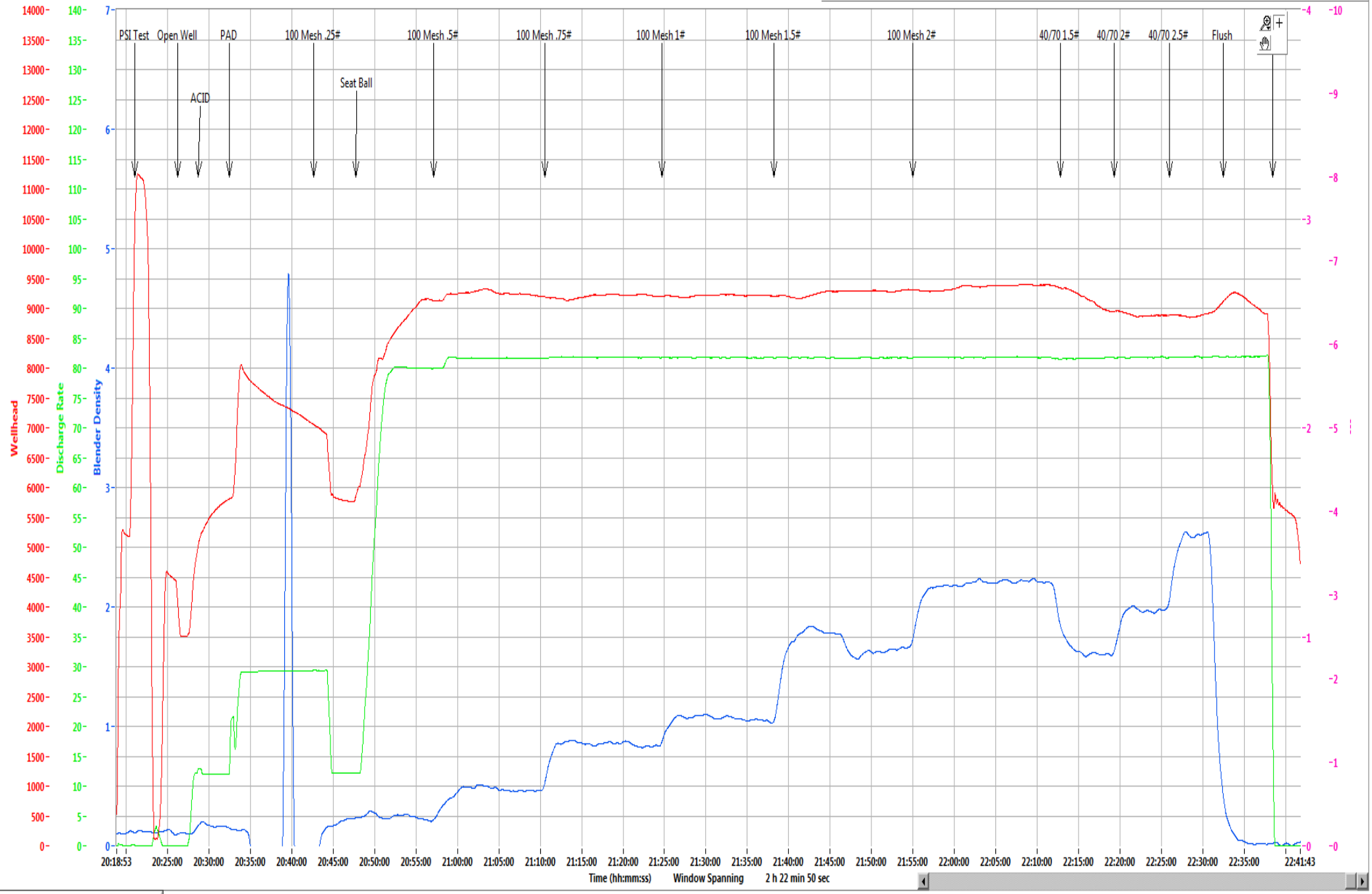
**NNE**  
**Boggess 3H**  
**Stage 6**  
**Producers Service Corp.**

**Post Stage Report**  
**August 31, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	6
Date:	8/31/19
OWP (psi):	3,519
Starting Time	8:26 PM
Ending Time	10:38 PM
Pump Time (hr:min)	02:12
Swap Time (hr:min)	03:32
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,076
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	9,212
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	9,450
Displacement (psi)	9,138
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,569
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,888
Acid 7.5% HCL (gal)	2,000
Wireline Pump Down (bbls)	646
Pad (bbls)	61
Treatment (bbls)	8,415
Displacement (bbls)	454
(Acid Included)Total Fluid (bbls)	8,936
Dirty Job Total (bbls)	9,312
100 Mesh	298,740
40/70	100,180
Total Proppant (lbs)	398,920
Total Proppant %	99.7%

**CHEMICALS**

FR 9800	195
Biocide	95
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23020  
 Date: 8/31/2019  
 Well Name: Bogges (3H)  
 Stage No.: 6

State: WV  
 County: Monongahela  
 Operator: Joe/Jaime F.  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	2000	✓ GAL	\$ 1.25	\$ 2,500.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	4	GAL	\$ 35.00	\$ 140.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,987.40	✓ CWT	\$ 5.50	\$ 16,430.70
SAND 40/70	40/70 white	1,001.80	✓ CWT	\$ 5.75	\$ 5,760.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	195	✓ GAL	\$ 17.75	\$ 3,461.25
BIOC11219A	Biocide @ 0.25 GPT	95	✓ GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	20	✓ GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.46	TON	\$ 55.00	\$ 10,970.30
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 60,902.60  
 25% Discount Applied \$ 15,225.65  
 Net Stage Total \$ 45,676.95

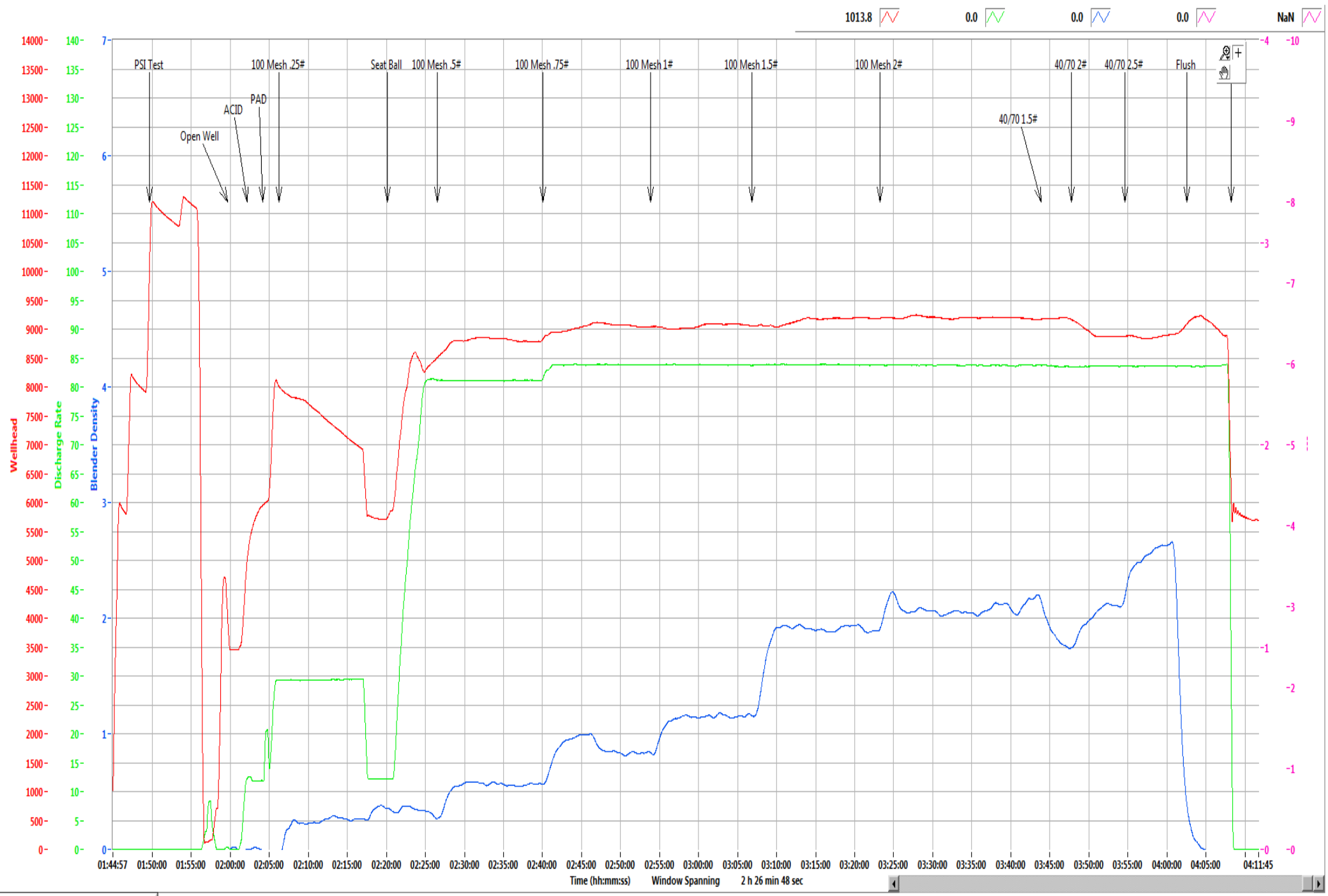
(Print Name) Customer Rep: Mike Tanna Customer Signature: [Signature]



**NNE**  
**Boggess 3H**  
**Stage 7**  
**Producers Service Corp.**

**Post Stage Report**  
**September 3, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	7
Date:	8/31/19
OWP (psi):	3,470
Starting Time	1:59 AM
Ending Time	4:08 AM
Pump Time (hr:min)	02:09
Swap Time (hr:min)	03:21
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,874
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	9,042
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	9,292
Displacement (psi)	9,131
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,095
Final FG (psi/ft)	1.19
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,844
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	616
Pad (bbls)	82
Treatment (bbls)	8,331
Displacement (bbls)	449
(Acid Included)Total Fluid (bbls)	8,868
Dirty Job Total (bbls)	9,257
100 Mesh	297,640
40/70	100,100
Total Proppant (lbs)	397,740
Total Proppant %	99.4%

**CHEMICALS**

FR 9800	200
Biocide	99
Scale	21

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23021  
 Date: 9/1/2019  
 Well Name: Bogges 3H  
 Stage No.: 7

State: WV  
 County: Monongahela  
 Operator: Joe/Jaime F.  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,976.40	CWT	\$ 5.50	\$ 16,370.20
SAND 40/70	40/70 white	1,001.00	CWT	\$ 5.75	\$ 5,755.75
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	200	GAL	\$ 17.75	\$ 3,550.00
BIOC11219A	Biocide @ 0.25 GPT	99	GAL	\$ 16.00	\$ 1,584.00
SCAL16846A	Scale Control @ 0.05 GPT	21	GAL	\$ 16.00	\$ 336.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		198.87	TON	\$ 55.00	\$ 10,937.85
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -
				Total No Discount	\$ 59,653.80
				25% Discount Applied	\$ 14,913.45
				Net Stage Total	\$ 44,740.35

(Print Name) Mike James Customer Rep: \_\_\_\_\_ Customer Signature: [Signature]

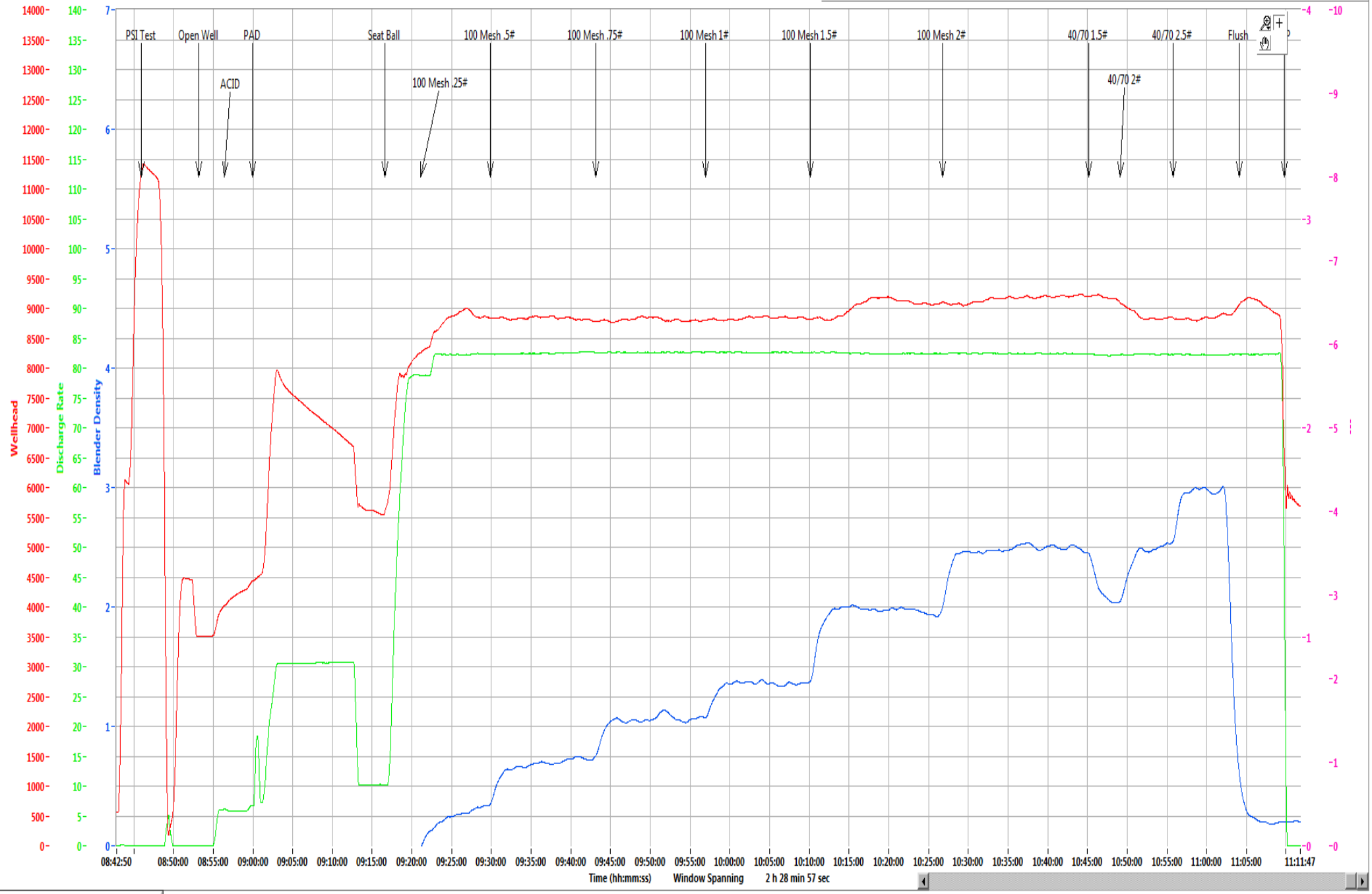


**NNE**  
**Boggess 3H**  
**Stage 8**  
**Producers Service Corp.**

**Post Stage Report**  
**September 1, 2019**



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<b>Boggess Pad</b>	<b>3H</b>
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Stage	8
Date:	9/1/19
OWP (psi):	3,518
Starting Time	8:45 AM
Ending Time	11:09 AM
Pump Time (hr:min)	02:24
Swap Time (hr:min)	04:37
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,802
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,936
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	9,292
Displacement (psi)	8,797
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	7,070
Final FG (psi/ft)	1.31
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,201
Acid 7.5% HCL (gal)	2,000
Wireline Pump Down (bbls)	598
Pad (bbls)	658
Treatment (bbls)	8,139
Displacement (bbls)	446
(Acid Included)Total Fluid (bbls)	9,249
Dirty Job Total (bbls)	9,626
100 Mesh	300,740
40/70	101,780
Total Proppant (lbs)	402,520
Total Proppant %	100.6%

**CHEMICALS**

FR 9800	200
Biocide	96
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23022  
 Date: 9/1/2019  
 Well Name: Bogges 3H  
 Stage No.: 8

State: WV  
 County: Monongahela  
 Operator: Dunn/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	2000	GAL	\$ 1.25	\$ 2,500.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	4	GAL	\$ 35.00	\$ 140.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,007.40	CWT	\$ 5.50	\$ 16,540.70
SAND 40/70	40/70 white	1,017.80	CWT	\$ 5.75	\$ 5,852.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	200	GAL	\$ 17.75	\$ 3,550.00
BIOC11219A	Biocide @ 0.25 GPT	96	GAL	\$ 16.00	\$ 1,536.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.26	TON	\$ 55.00	\$ 11,069.30
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 61,308.35  
 25% Discount Applied \$ 15,327.09  
 Net Stage Total \$ 45,981.26

(Print Name) Glen Boyd Customer Signature: [Signature]

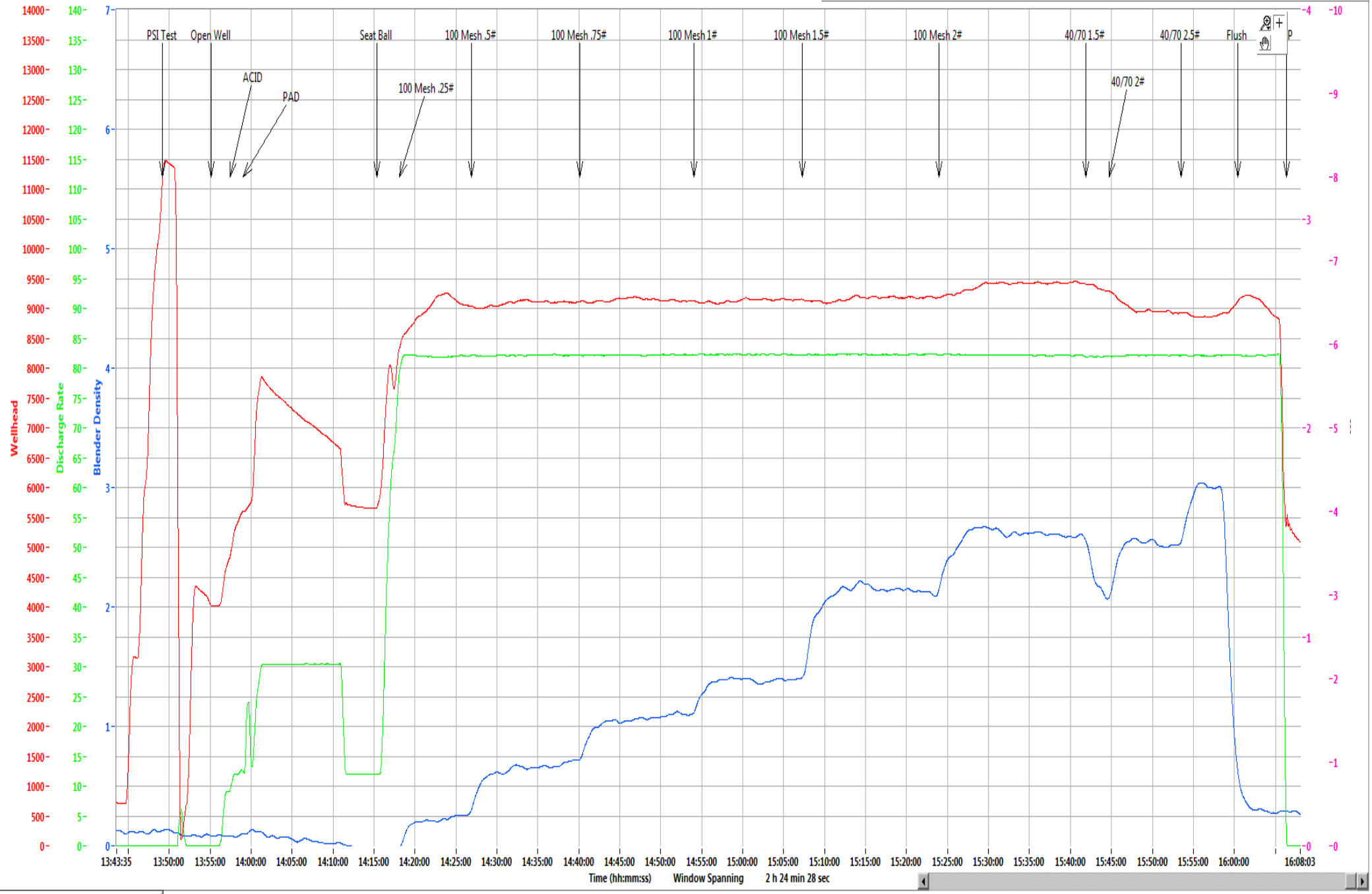




**NNE**  
**Boggess 3H**  
**Stage 9**  
**Producers Service Corp.**

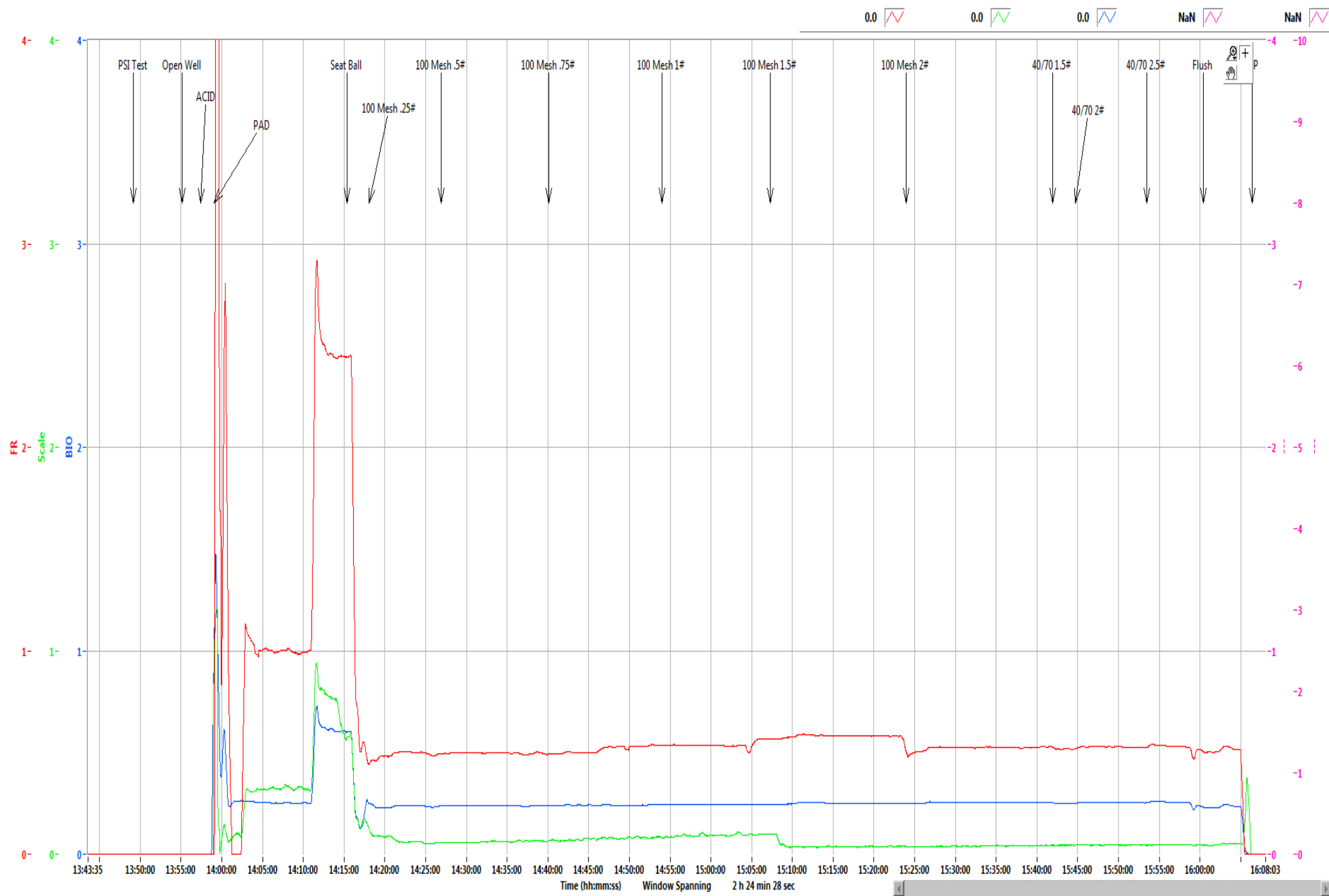
**Post Stage Report**  
**September 1, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	9
Date:	9/1/19
OWP (psi):	4,016
Starting Time	1:55 PM
Ending Time	4:06 PM
Pump Time (hr:min)	02:11
Swap Time (hr:min)	02:46
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,891
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	9,148
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	9,492
Displacement (psi)	9,159
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,652
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,024
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	624
Pad (bbls)	540
Treatment (bbls)	8,061
Displacement (bbls)	441
(Acid Included)Total Fluid (bbls)	9,048
Dirty Job Total (bbls)	9,414
100 Mesh	300,800
40/70	99,380
Total Proppant (lbs)	400,180
Total Proppant %	100.0%

**CHEMICALS**

FR 9800	188
Biocide	94
Scale	18

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23023  
 Date: 9/1/2019  
 Well Name: Bogges 3H  
 Stage No.: 9

State: WV  
 County: Monongahela  
 Operator: Dunn/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,008.00	CWT	\$ 5.50	\$ 16,544.00
SAND 40/70	40/70 white	993.80	CWT	\$ 5.75	\$ 5,714.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	188	GAL	\$ 17.75	\$ 3,337.00
BIOC11219A	Biocide @ 0.25 GPT	94	GAL	\$ 16.00	\$ 1,504.00
SCAL16846A	Scale Control @ 0.05 GPT	18	GAL	\$ 16.00	\$ 288.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.09	TON	\$ 55.00	\$ 11,004.95
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 59,512.30  
 25% Discount Applied \$ 14,878.08  
 Net Stage Total \$ 44,634.23

(Print Name) Dunn Customer Rep: [Signature] Customer Signature: [Signature]

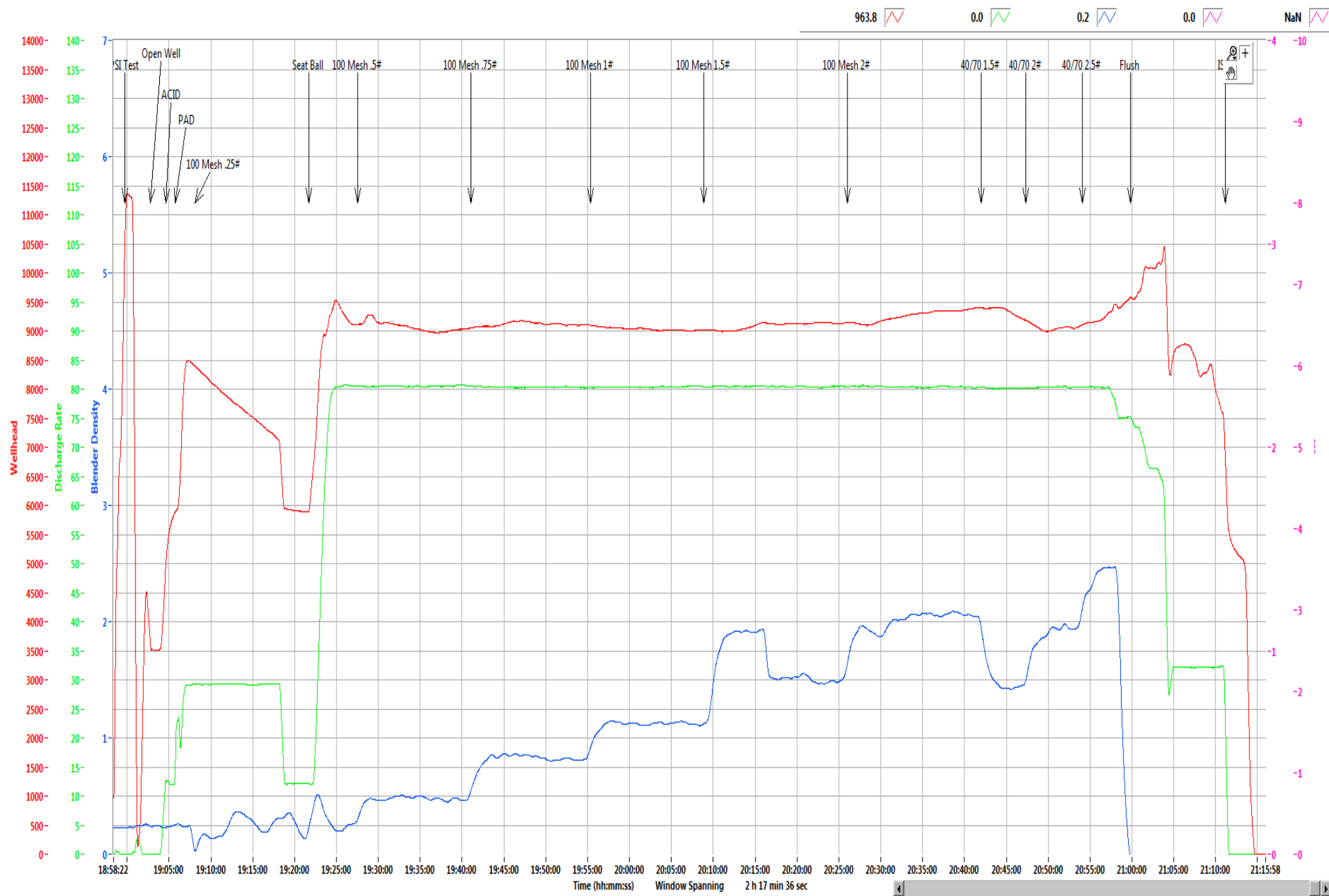


**NNE**  
**Bogges 3H**  
**Stage 10**  
**Producers Service Corp.**

**Post Stage Report**  
**September 1, 2019**

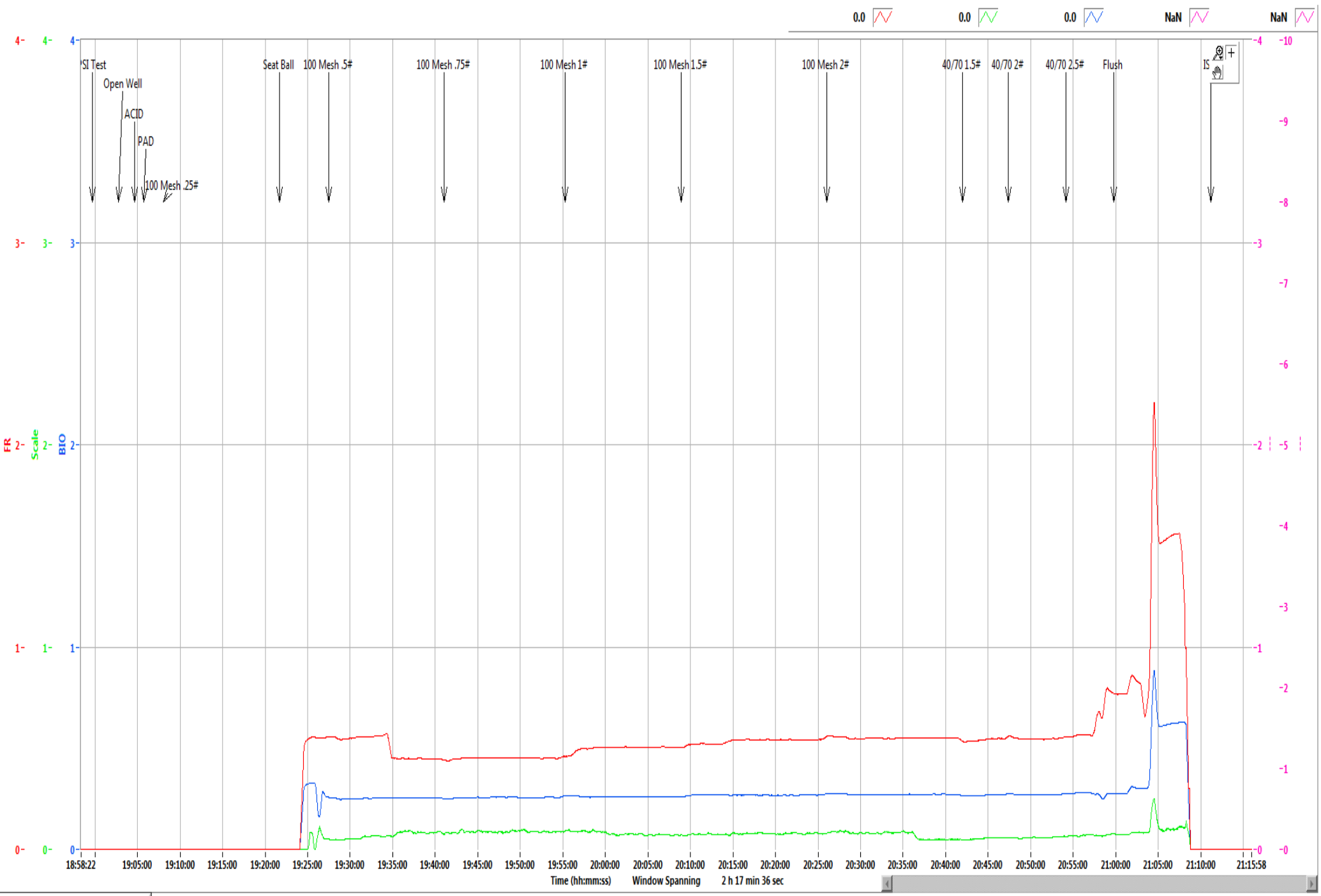






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**Boggess Pad****3H**

Stage	10
Date:	9/1/19
OWP (psi):	3,508
Starting Time	7:02 PM
Ending Time	9:11 PM
Pump Time (hr:min)	02:09
Swap Time (hr:min)	02:56
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

Pressures & Rates

Breakdown Pressure (psi)	6,659
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	9,135
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	10,864
Displacement (psi)	9,604
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,687
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

Fluids & Proppant

Slickwater (bbls)	8,327
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	559
Pad (bbls)	86
Treatment (bbls)	7,743
Displacement (bbls)	500
(Acid Included)Total Fluid (bbls)	8,339
Dirty Job Total (bbls)	8,720
100 Mesh	302,600
40/70	103,760
Total Proppant (lbs)	406,360
Total Proppant %	101.6%

CHEMICALS

FR 9800	187
Biocide	91
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23024  
 Date: 9/1/2019  
 Well Name: Boggest 3H  
 Stage No.: 10

State: WV  
 County: Monongahela  
 Operator: Joe/Jamie F  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	✓ GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,026.00	✓ CWT	\$ 5.50	\$ 16,643.00
SAND 40/70	40/70 white	1,037.60	✓ CWT	\$ 5.75	\$ 5,966.20
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	187	✓ GAL	\$ 17.75	\$ 3,319.25
BIOC11219A	Biocide @ 0.25 GPT	91	✓ GAL	\$ 16.00	\$ 1,456.00
SCAL16846A	Scale Control @ 0.05 GPT	20	✓ GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		203.18	TON	\$ 55.00	\$ 11,174.90
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 59,339.35  
 25% Discount Applied \$ 14,834.84  
 Net Stage Total \$ 44,504.51

(Print Name) Mike Turner Customer Rep: Mike Turner Customer Signature: 



**NNE**  
**Boggess 3H**  
**Stage 11**  
**Producers Service Corp.**

**Post Stage Report**  
**September 2, 2019**





Refresh Graph



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**Boggess Pad****3H**

Stage	11
Date:	9/2/19
OWP (psi):	3,193
Starting Time	8:34 AM
Ending Time	10:49 AM
Pump Time (hr:min)	02:15
Swap Time (hr:min)	05:16
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,162
Average Treating Rate (bbl/min)	81
Average Treating Pressure (psi)	8,825
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	9,090
Displacement (psi)	8,906
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,537
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	5,592
5 Minute Leakoff Rate (psi/min)	-11
10 Minute Leakoff Pressure (psi)	5,454
10 Minute Leakoff Rate (psi/min)	8
15 Minute Leakoff Pressure (psi)	5,226
15 Minute Leakoff Rate (psi/min)	21

**Fluids & Proppant**

Slickwater (bbls)	9,546
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	591
Pad (bbls)	611
Treatment (bbls)	8,146
Displacement (bbls)	431
(Acid Included)Total Fluid (bbls)	9,570
Dirty Job Total (bbls)	9,552
100 Mesh	303,760
40/70	96,080
Total Proppant (lbs)	399,840
Total Proppant %	100.0%

**CHEMICALS**

FR 9800	208
Biocide	103
Scale	22

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23026  
 Date: 9/2/2019  
 Well Name: Bogges 3H  
 Stage No.: 11

State: WV  
 County: Monongahela  
 Operator: Jeremy/Mark  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,037.60	CWT	\$ 5.50	\$ 16,706.80
SAND 40/70	40/70 white	960.80	CWT	\$ 5.75	\$ 5,524.60
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	208	GAL	\$ 17.75	\$ 3,692.00
BIOC11219A	Biocide @ 0.25 GPT	103	GAL	\$ 16.00	\$ 1,648.00
SCAL16846A	Scale Control @ 0.05 GPT	22	GAL	\$ 16.00	\$ 352.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.92	TON	\$ 55.00	\$ 10,995.60
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 60,039.00  
 25% Discount Applied \$ 15,009.75  
 Net Stage Total \$ 45,029.25

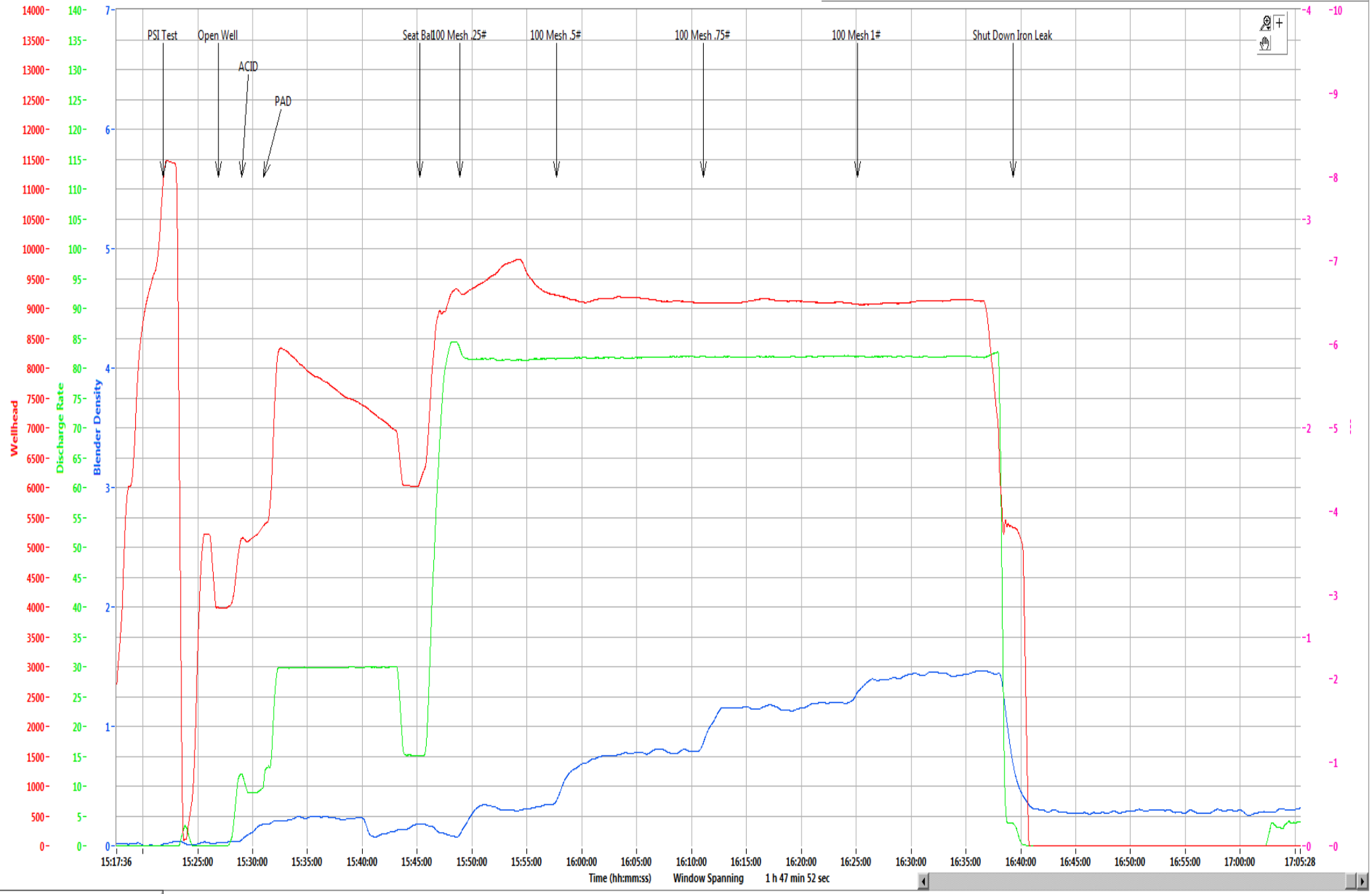
(Print Name) Sean Bol Customer Signature: [Signature]  
 Customer Rep: \_\_\_\_\_



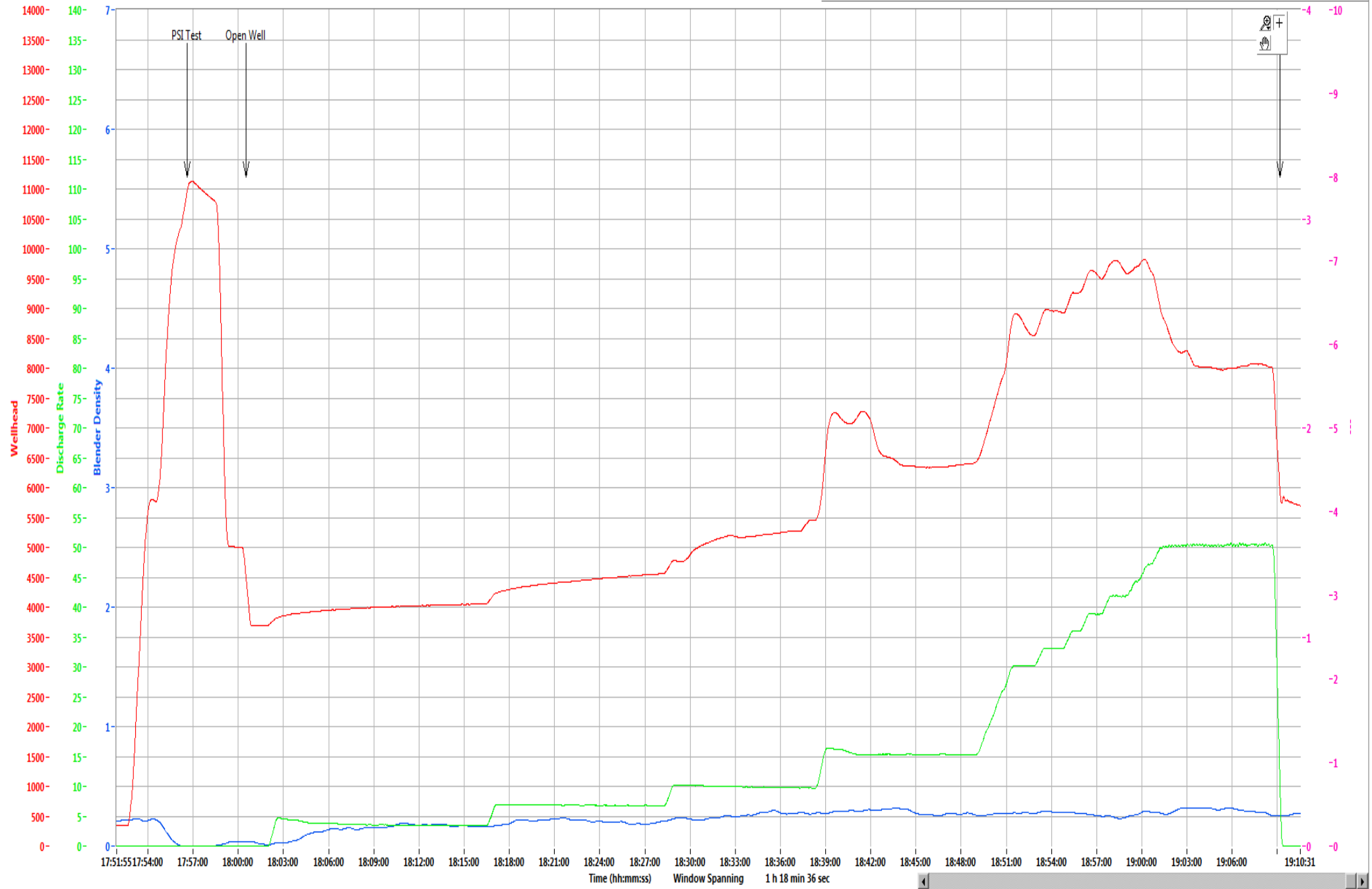
**NNE**  
**Boggess 3H**  
**Stage 12**  
**Producers Service Corp.**

**Post Stage Report**  
**September 2, 2019**

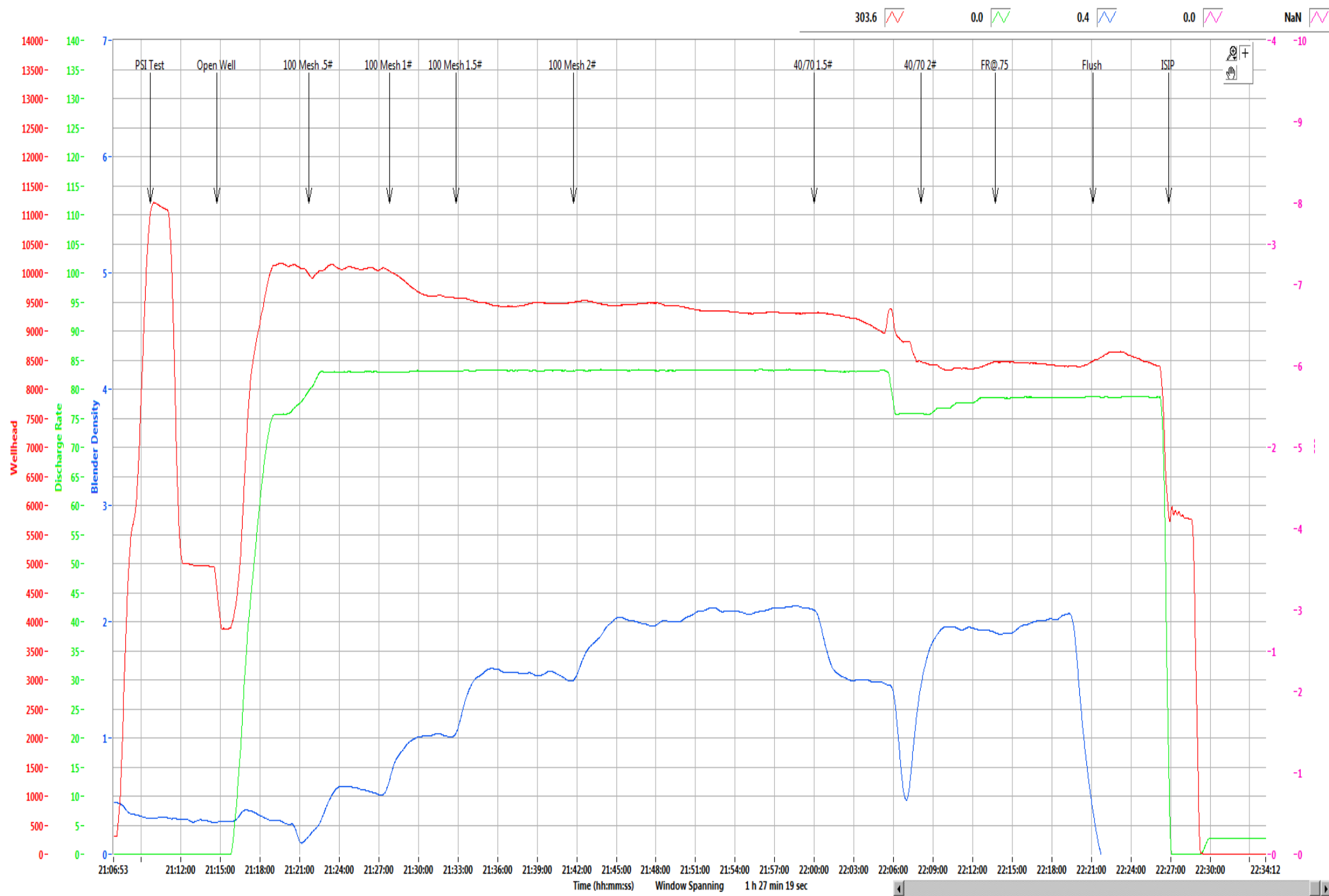




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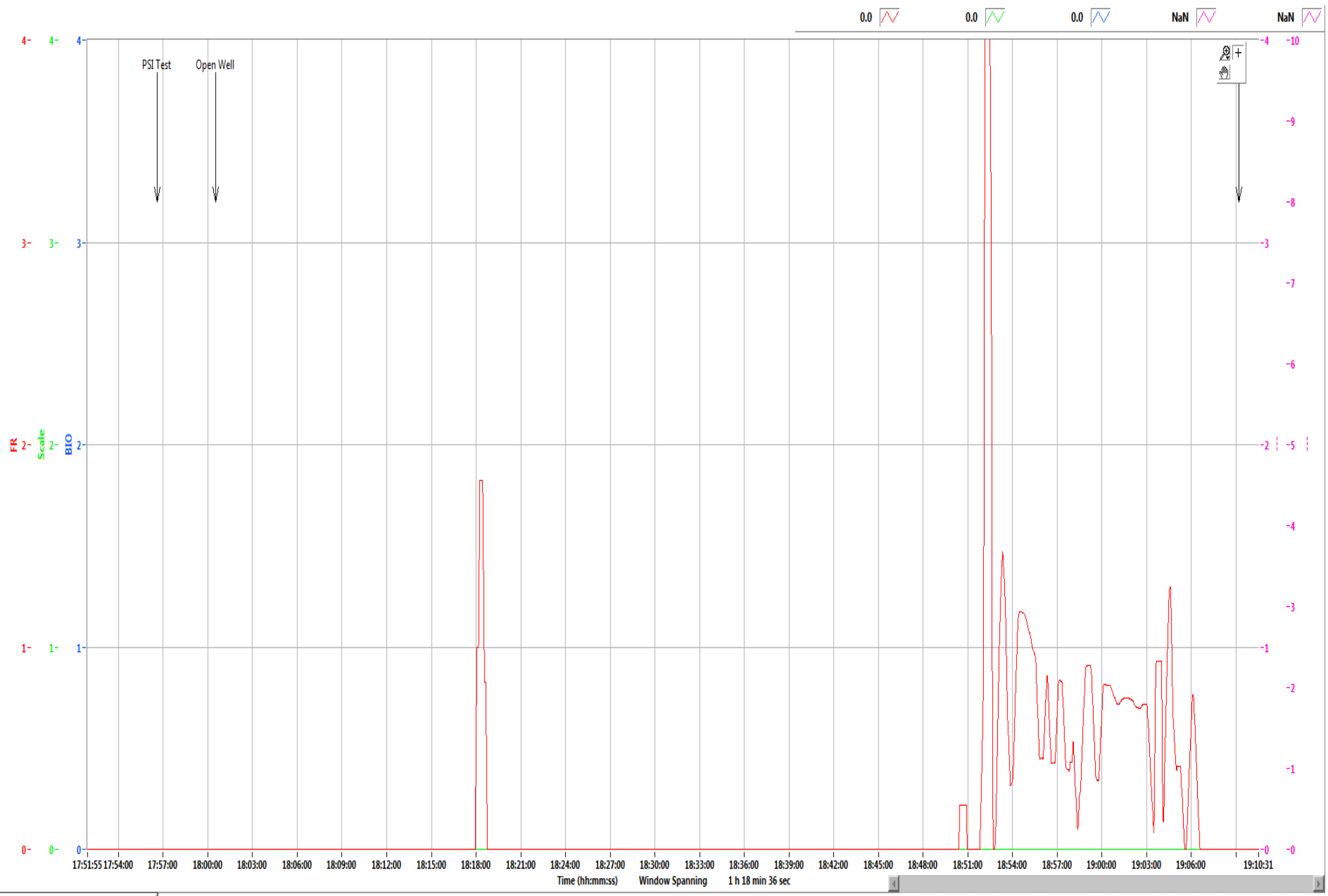
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<b>Boggess Pad</b>	<b>3H</b>
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Stage	12
Date:	9/2/19
OWP (psi):	3,996
Starting Time	3:26 PM
Ending Time	10:26 PM
Pump Time (hr:min)	07:00
Swap Time (hr:min)	01:11
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,332
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	9,260
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	10,209
Displacement (psi)	8,491
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,494
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	11,132
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	521
Pad (bbls)	639
Treatment (bbls)	10,087
Displacement (bbls)	424
(Acid Included)Total Fluid (bbls)	11,156
Dirty Job Total (bbls)	11,790
100 Mesh	300,440
40/70	99,920
Total Proppant (lbs)	400,360
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	199
Biocide	95
Scale	19

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23028  
 Date: 9/2/2019  
 Well Name: Bogges 3H  
 Stage No.: 12

State: WV  
 County: Monongahela  
 Operator: Jeremy/Mark  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,004.40	CWT	\$ 5.50	\$ 16,524.20
SAND 40/70	40/70 white	999.20	CWT	\$ 5.75	\$ 5,745.40
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	199	GAL	\$ 17.75	\$ 3,532.25
BIOC11219A	Biocide @ 0.25 GPT	95	GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	19	GAL	\$ 16.00	\$ 304.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.18	TON	\$ 55.00	\$ 11,009.90
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 59,755.75  
 25% Discount Applied \$ 14,938.94  
 Net Stage Total \$ 44,816.81

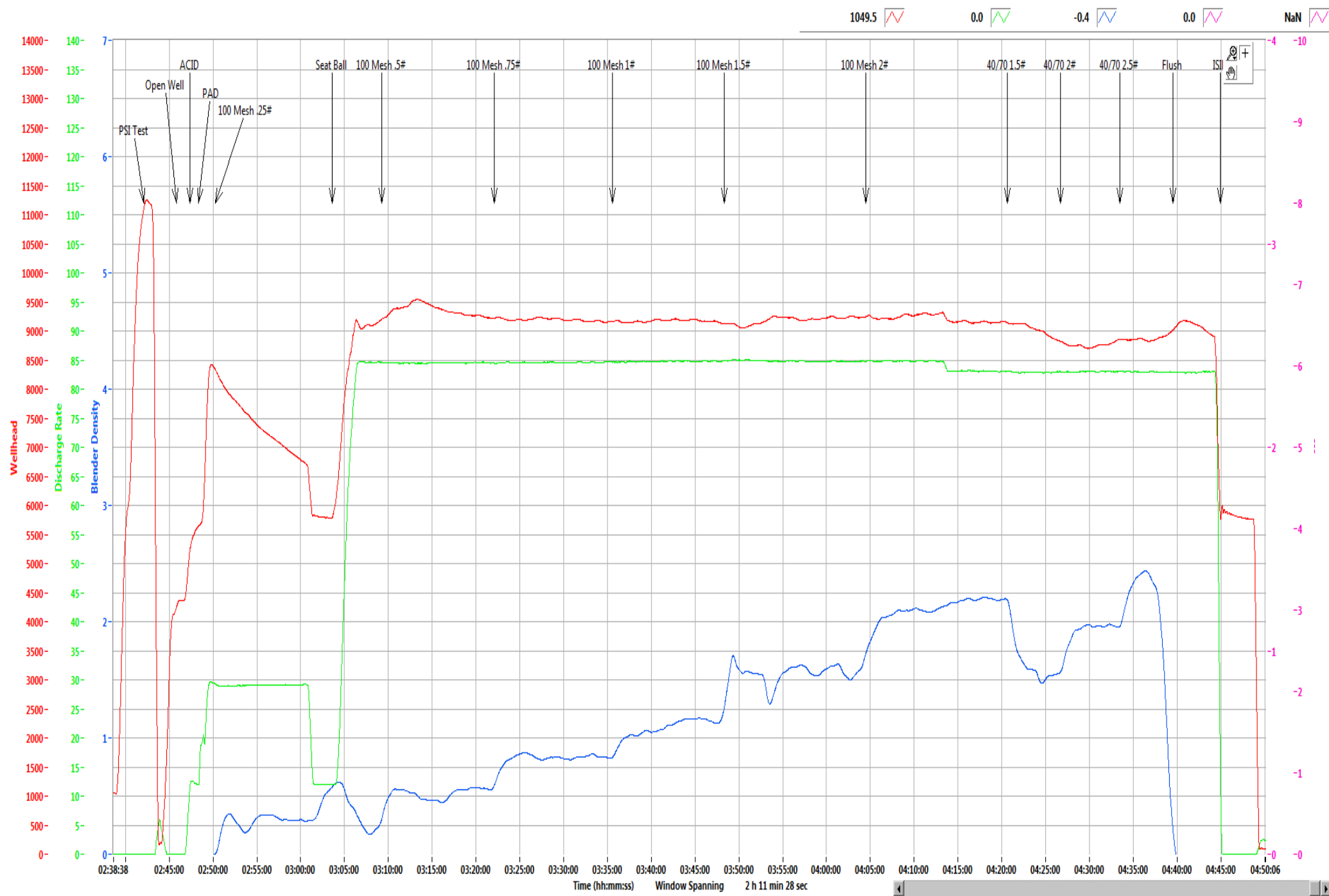
(Print Name)  
 Customer Rep: Mike Tanner Customer Signature: 



**NNE**  
**Boggess 3H**  
**Stage 13**  
**Producers Service Corp.**

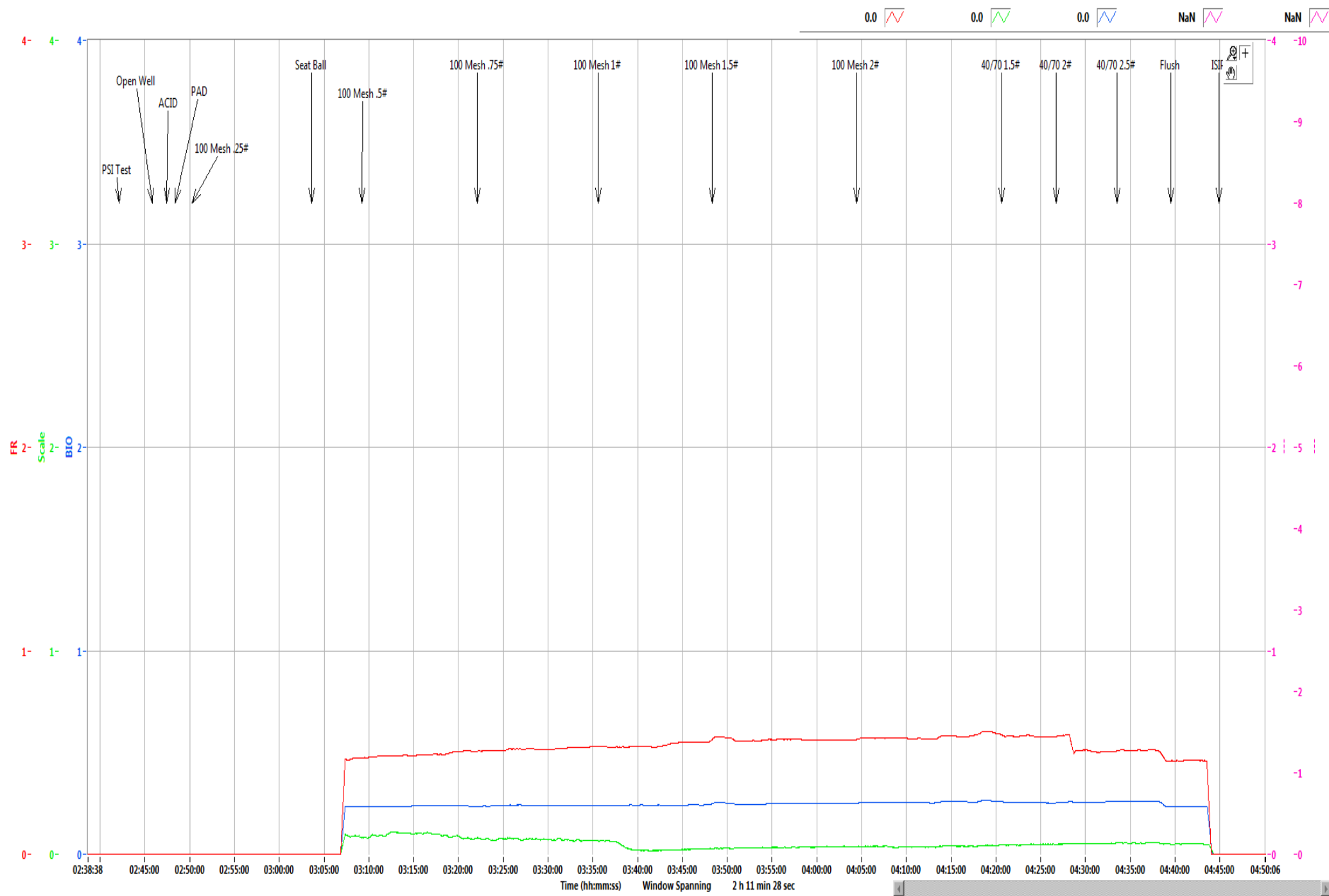
**Post Stage Report**  
**September 3, 2019**





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Time (hh:mm:ss) Window Spanning 2 h 11 min 28 sec



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<b>Boggess Pad</b>	<b>3H</b>
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Stage	13
Date:	9/3/19
OWP (psi):	4,366
Starting Time	2:45 AM
Ending Time	4:44 AM
Pump Time (hr:min)	01:59
Swap Time (hr:min)	01:22
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,175
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	9,151
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	9,601
Displacement (psi)	9,120
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,488
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,454
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	525
Pad (bbls)	67
Treatment (bbls)	7,972
Displacement (bbls)	420
(Acid Included)Total Fluid (bbls)	8,466
Dirty Job Total (bbls)	8,813
100 Mesh	301,500
40/70	99,700
Total Proppant (lbs)	401,200
Total Proppant %	100.3%

**CHEMICALS**

FR 9800	175
Biocide	85
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23030  
 Date: 9/3/2019  
 Well Name: Bogges 3H ✓  
 Stage No.: 13 ✓

State: WV  
 County: Monongahela  
 Operator: Jamie/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	✓ GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,015.00	✓ CWT	\$ 5.50	\$ 16,582.50
SAND 40/70	40/70 white	997.00	✓ CWT	\$ 5.75	\$ 5,732.75
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	175	✓ GAL	\$ 17.75	\$ 3,106.25
BiOC11219A	Biocide @ 0.25 GPT	85	✓ GAL	\$ 16.00	\$ 1,360.00
SCAL16846A	Scale Control @ 0.05 GPT	20	✓ GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.6	TON	\$ 55.00	\$ 11,033.00
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 58,594.50  
 25% Discount Applied \$ 14,648.63  
 Net Stage Total \$ 43,945.88

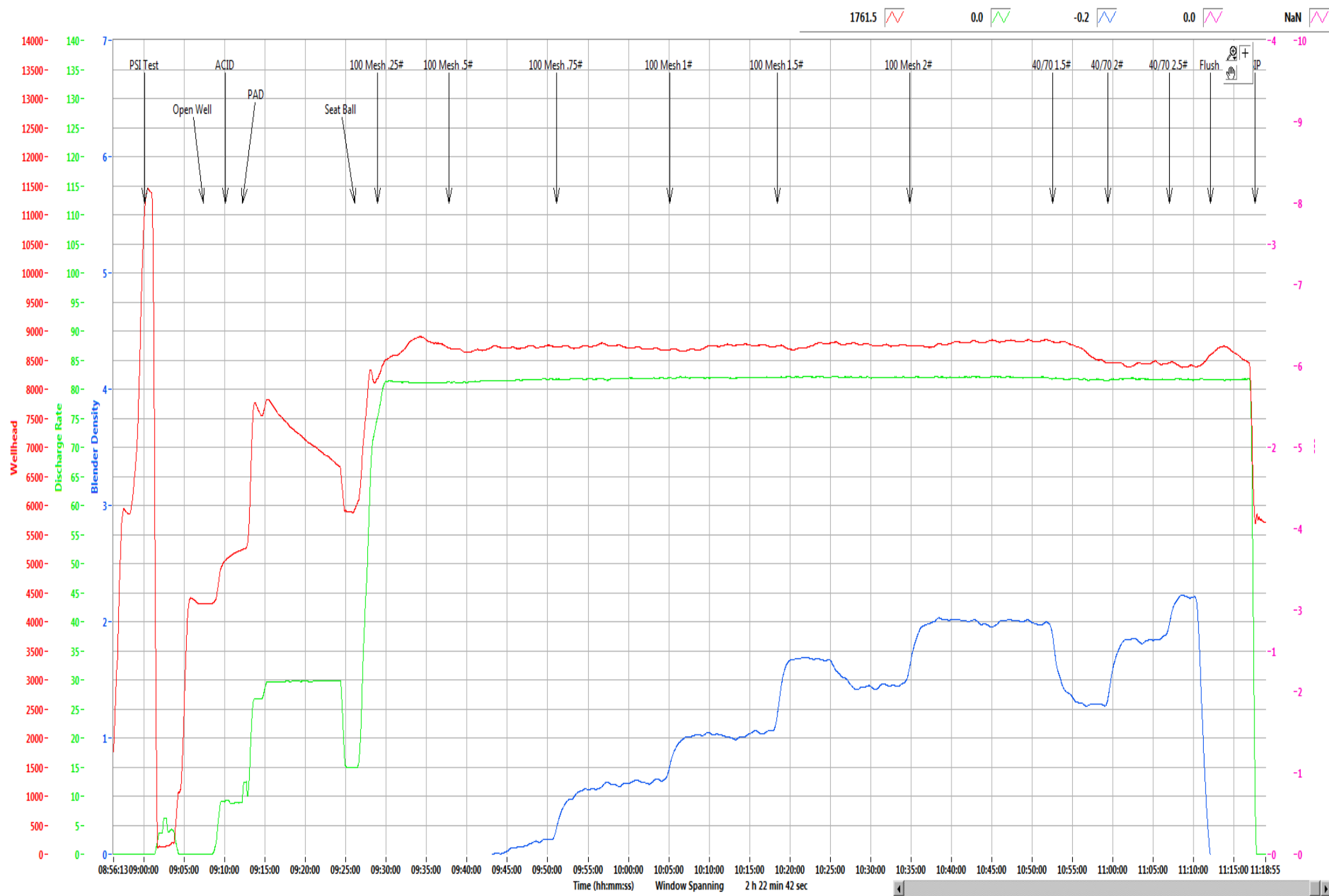
(Print Name) Mike Inman Customer Rep: \_\_\_\_\_ Customer Signature: [Signature]



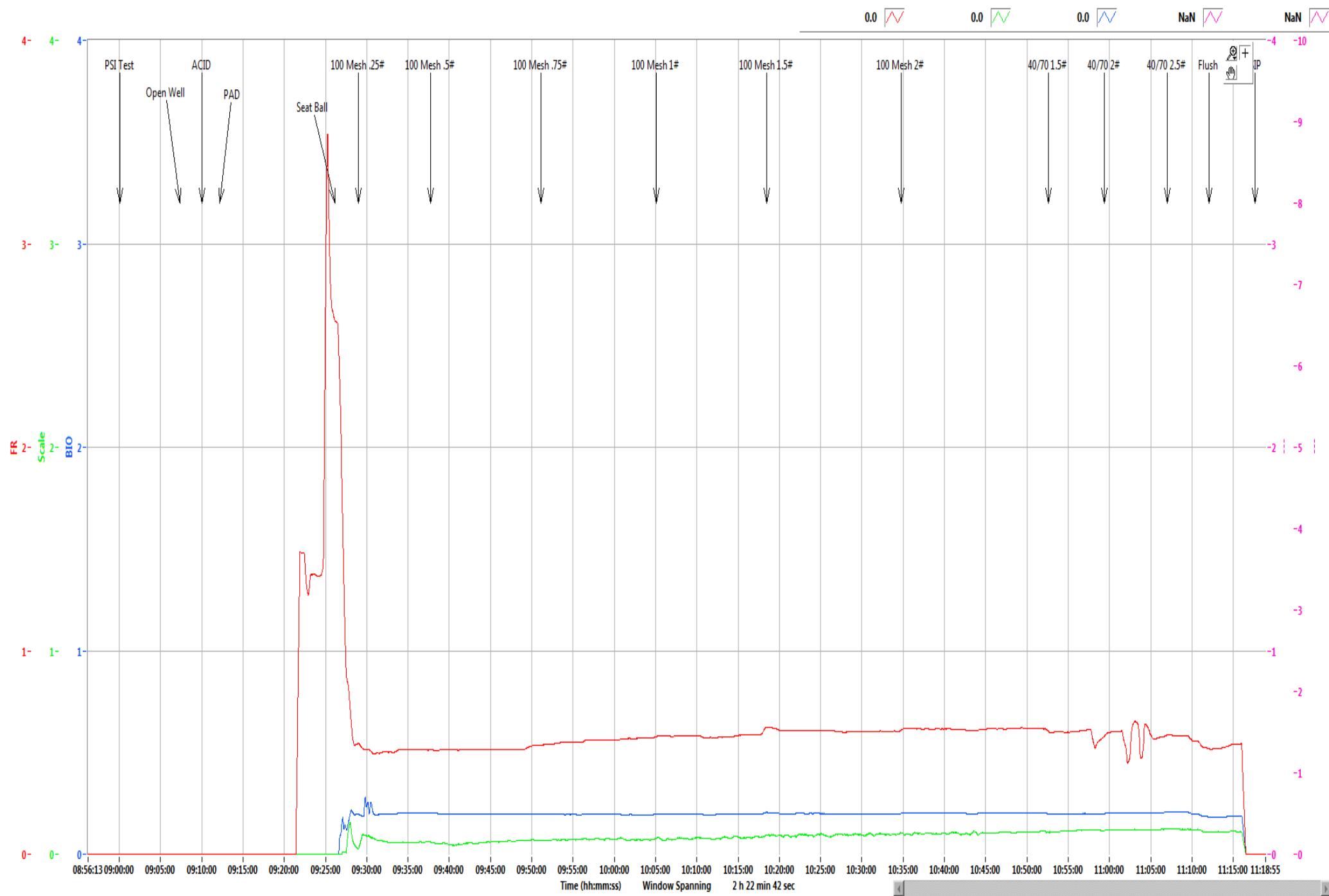
**NNE**  
**Boggess 3H**  
**Stage 14**  
**Producers Service Corp.**

**Post Stage Report**  
**September 3, 2019**





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**Bogges Pad 3H**

Stage	14
Date:	9/3/19
OWP (psi):	4,305
Starting Time	9:07 AM
Ending Time	11:17 AM
Pump Time (hr:min)	02:10
Swap Time (hr:min)	01:12
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,091
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,710
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,940
Displacement (psi)	8,632
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,487
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,003
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	523
Pad (bbls)	548
Treatment (bbls)	8,057
Displacement (bbls)	422
(Acid Included)Total Fluid (bbls)	9,027
Dirty Job Total (bbls)	9,391
100 Mesh	301,580
40/70	99,560
Total Proppant (lbs)	401,140
Total Proppant %	100.3%

**CHEMICALS**

FR 9800	201
Biocide	98
Scale	22

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23032  
 Date: 9/3/2019  
 Well Name: Boggess 3H  
 Stage No.: 14

State: WV  
 County: Monongahela  
 Operator: Jeremy/Mark  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,015.80	CWT	\$ 5.50	\$ 16,586.90
SAND 40/70	40/70 white	995.60	CWT	\$ 5.75	\$ 5,724.70
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	201	GAL	\$ 17.75	\$ 3,567.75
BIOC11219A	Biocide @ 0.25 GPT	98	GAL	\$ 16.00	\$ 1,568.00
SCAL16846A	Scale Control @ 0.05 GPT	22	GAL	\$ 16.00	\$ 352.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.57	TON	\$ 55.00	\$ 11,031.35
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 59,950.70  
 25% Discount Applied \$ 14,987.68  
 Net Stage Total \$ 44,963.03

(Print Name)  
 Customer Rep:

*Gene Bond*

Customer Signature:

*Gene Bond*

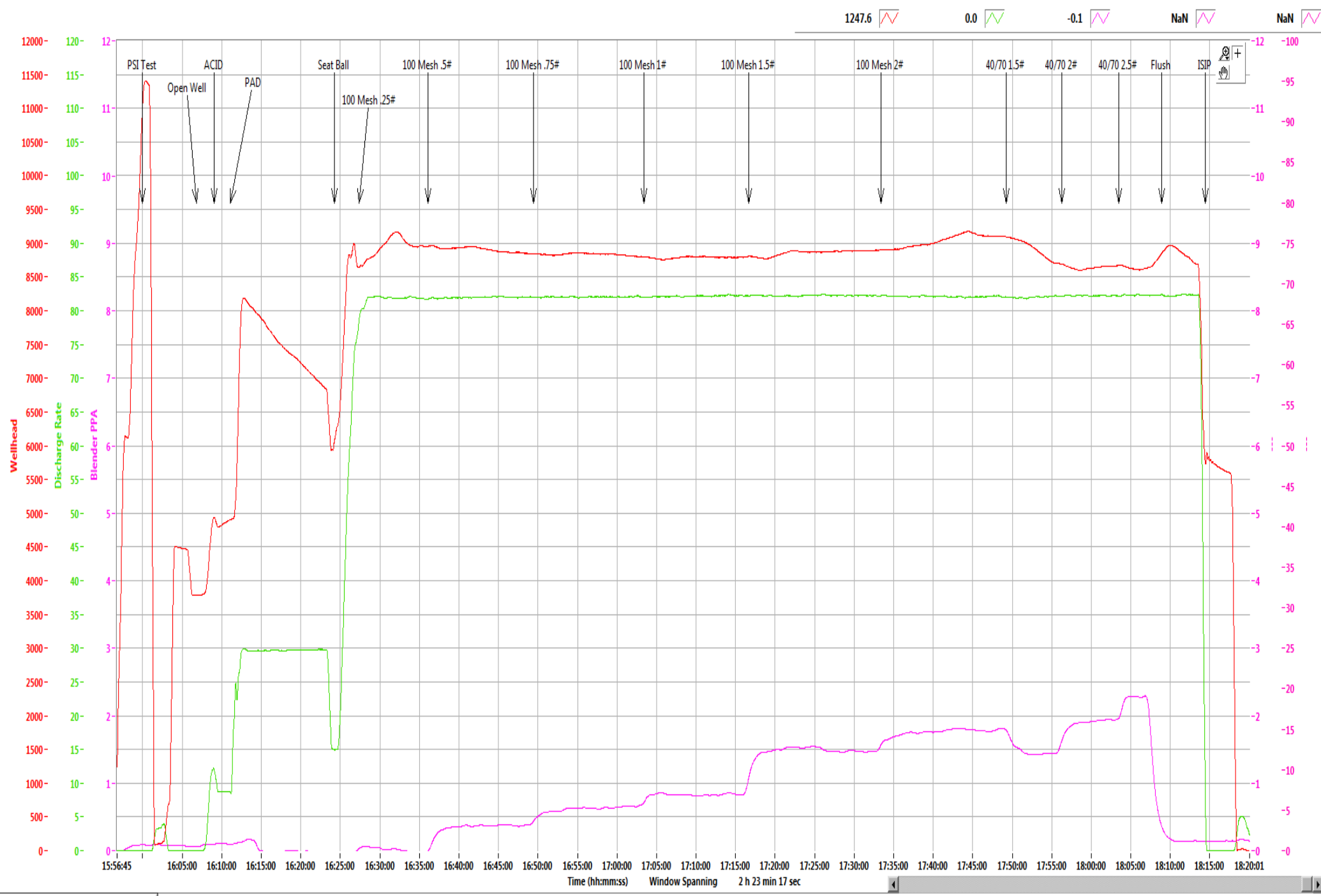




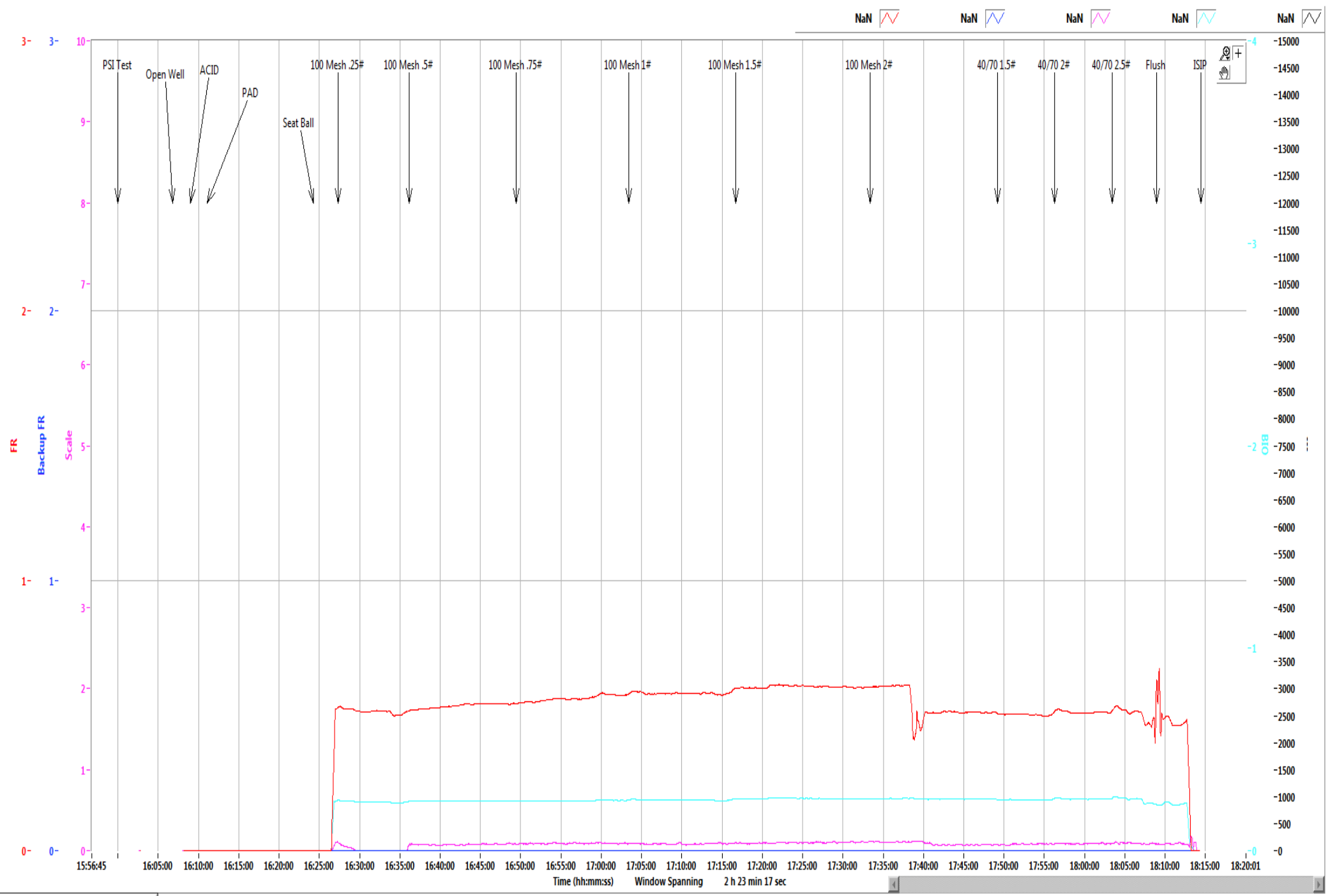
**NNE**  
**Bogges 3H**  
**Stage 15**  
**Producers Service Corp.**

**Post Stage Report**  
**September 3, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	15
Date:	9/3/19
OWP (psi):	3,794
Starting Time	4:06 PM
Ending Time	6:14 PM
Pump Time (hr:min)	02:08
Swap Time (hr:min)	00:46
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,375
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,867
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	9,210
Displacement (psi)	8,862
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,581
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,914
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	493
Pad (bbls)	530
Treatment (bbls)	7,991
Displacement (bbls)	413
(Acid Included)Total Fluid (bbls)	8,938
Dirty Job Total (bbls)	9,309
100 Mesh	299,820
40/70	100,640
Total Proppant (lbs)	400,460
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	224
Biocide	95
Scale	21

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23034  
 Date: 9/3/2019  
 Well Name: Boggess 3H  
 Stage No.: 15

State: WV  
 County: Monongahela  
 Operator: Eck/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,998.20	CWT	\$ 5.50	\$ 16,490.10
SAND 40/70	40/70 white	1,006.40	CWT	\$ 5.75	\$ 5,786.80
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	224	GAL	\$ 17.75	\$ 3,976.00
BIOC11219A	Biocide @ 0.25 GPT	95	GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	21	GAL	\$ 16.00	\$ 336.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.23	TON	\$ 55.00	\$ 11,012.65
DIESEL FUEL	Not eligible for discount	0	GAL	\$ 3.04	\$ -

Total No Discount \$ 60,241.55  
 25% Discount Applied \$ 15,060.39  
 Net Stage Total \$ 45,181.16

(Print Name) Customer Rep: Mike Inman Customer Signature: [Signature]

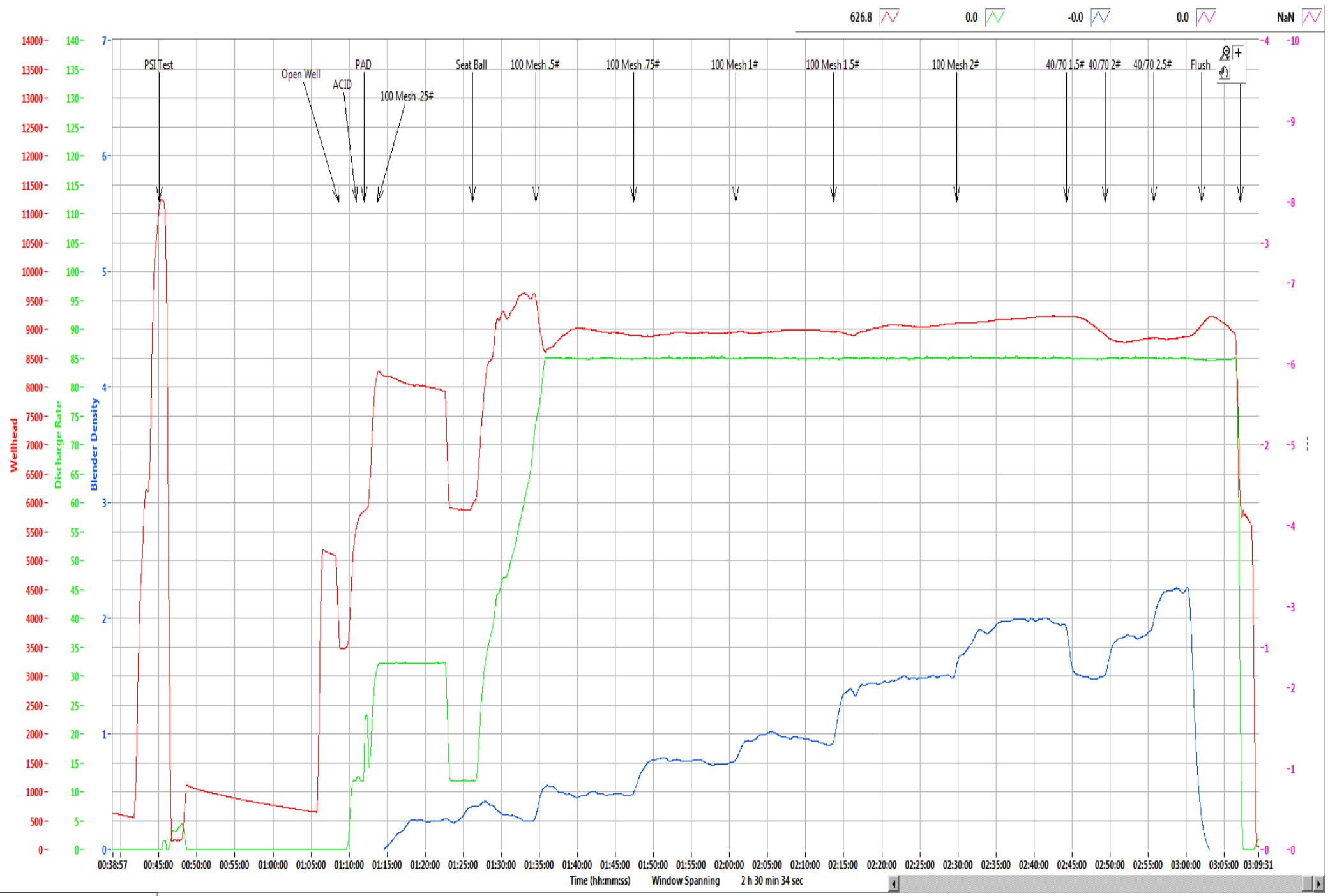


**NNE**  
**Boggess 3H**  
**Stage 16**  
**Producers Service Corp.**

**Post Stage Report**  
**September 4, 2019**







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**Boggess Pad****3H**

Stage	16
Date:	9/4/19
OWP (psi):	3,454
Starting Time	1:08 AM
Ending Time	3:07 AM
Pump Time (hr:min)	01:59
Swap Time (hr:min)	00:54
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,043
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,991
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	9,677
Displacement (psi)	9,100
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,885
Final FG (psi/ft)	1.17
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,240
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	422
Pad (bbls)	68
Treatment (bbls)	7,771
Displacement (bbls)	406
(Acid Included)Total Fluid (bbls)	8,252
Dirty Job Total (bbls)	8,622
100 Mesh	300,040
40/70	100,140
Total Proppant (lbs)	400,180
Total Proppant %	100.0%

**CHEMICALS**

FR 9800	173
Biocide	87
Scale	18

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23036  
 Date: 9/4/2019  
 Well Name: Bogges 3H  
 Stage No.: 16

State: WV  
 County: Monongahela  
 Operator: Eck/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,000.40	CWT	\$ 5.50	\$ 16,502.20
SAND 40/70	40/70 white	1,001.40	CWT	\$ 5.75	\$ 5,758.05
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	173	GAL	\$ 17.75	\$ 3,070.75
BIOC11219A	Biocide @ 0.25 GPT	87	GAL	\$ 16.00	\$ 1,392.00
SCAL16846A	Scale Control @ 0.05 GPT	18	GAL	\$ 16.00	\$ 288.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.09	TON	\$ 55.00	\$ 11,004.95
DIESEL FUEL	Not eligible for discount	187	GAL	\$ 3.04	\$ 568.48

Total No Discount \$ 58,475.95  
 25% Discount Applied \$ 14,618.99  
 Net Stage Total \$ 44,425.44

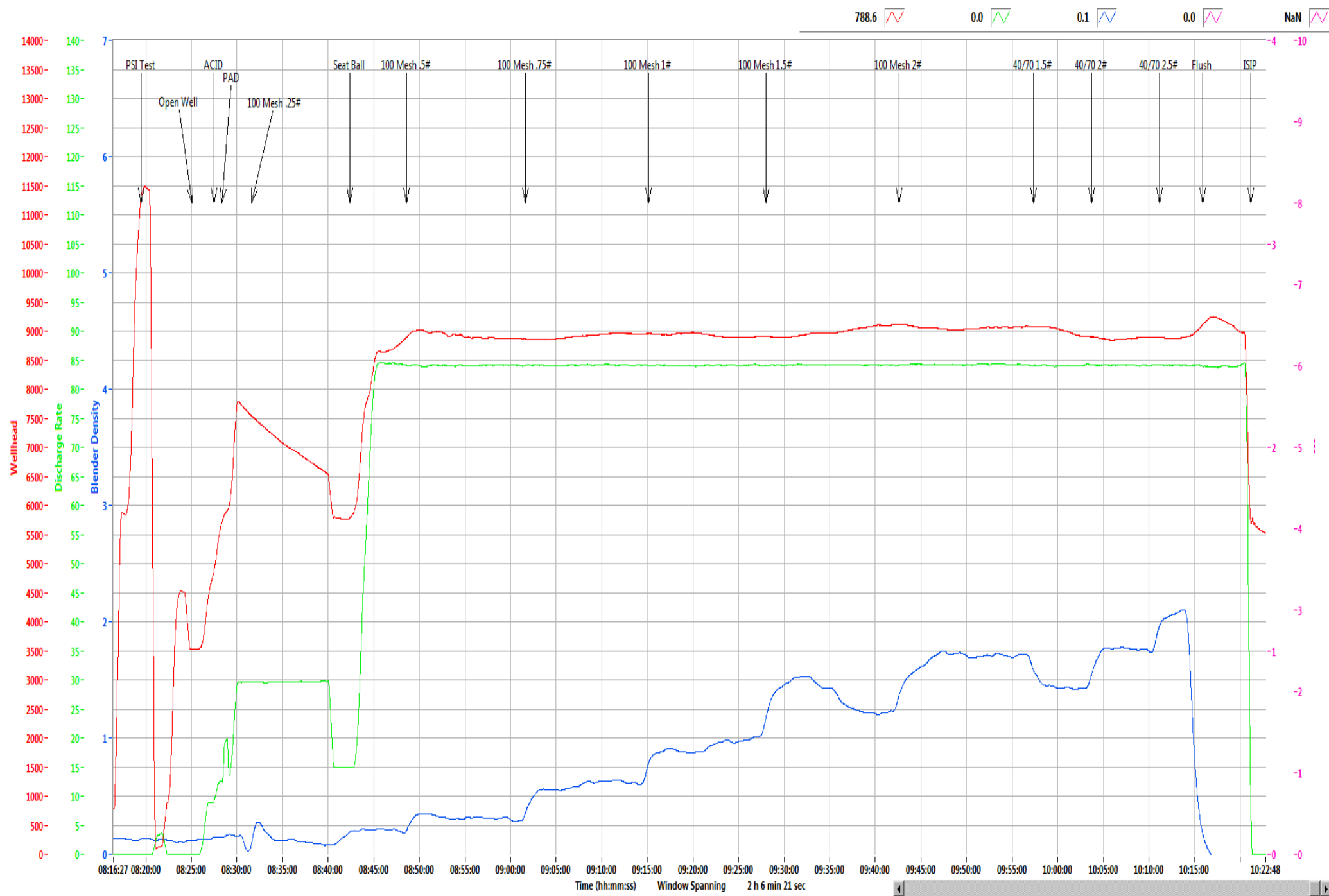
(Print Name) Customer Rep: Mike Inman Customer Signature: 



**NNE**  
**Boggess 3H**  
**Stage 17**  
**Producers Service Corp.**

**Post Stage Report**  
**September 4, 2019**





Refresh Graph

<b>Boggess Pad</b>	<b>3H</b>
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Stage	17
Date:	9/4/19
OWP (psi):	3,528
Starting Time	8:25 AM
Ending Time	10:21 AM
Pump Time (hr:min)	01:56
Swap Time (hr:min)	00:56
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,892
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,956
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	9,158
Displacement (psi)	9,165
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,603
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

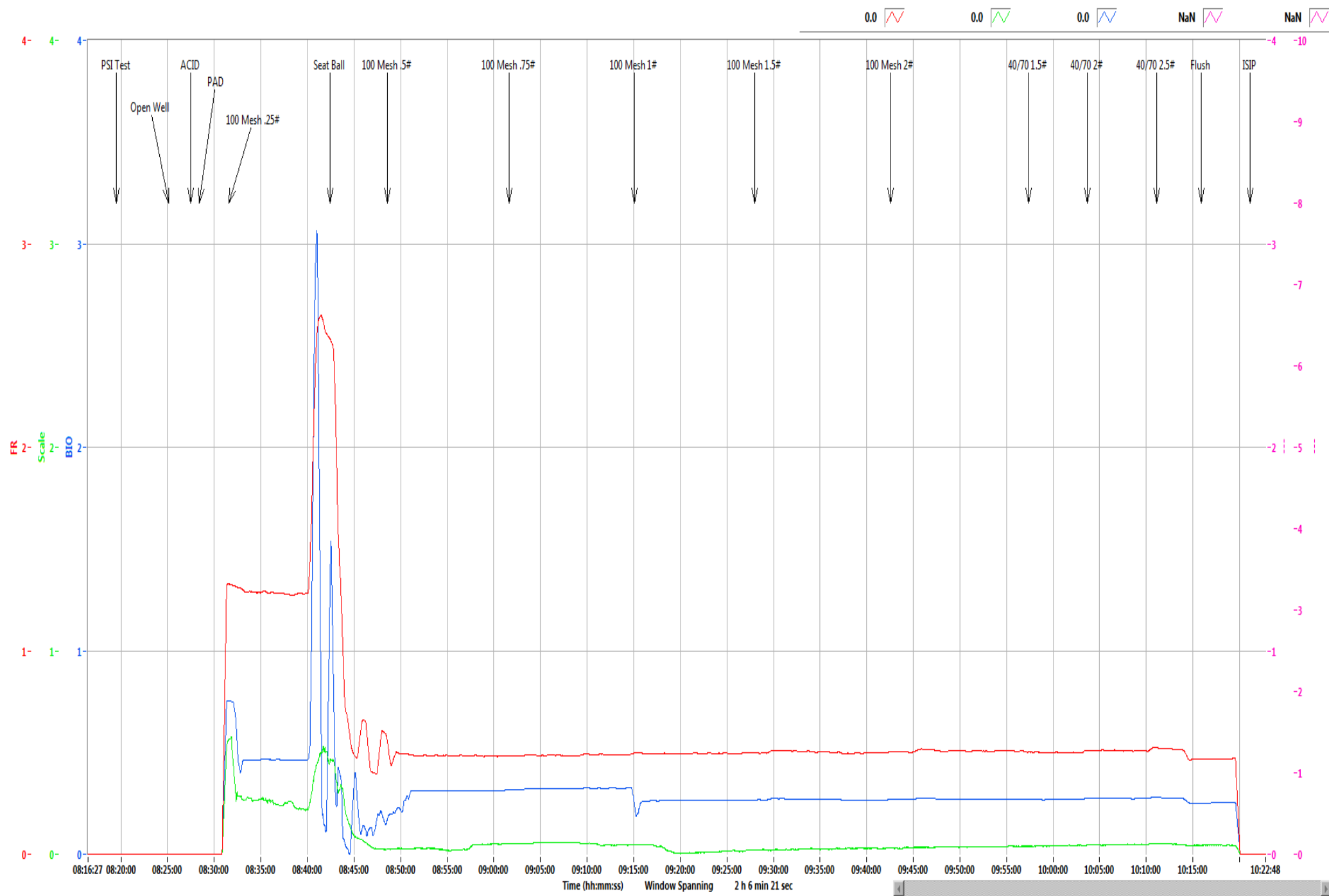
**Fluids & Proppant**

Slickwater (bbls)	8,188
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	482
Pad (bbls)	83
Treatment (bbls)	7,708
Displacement (bbls)	409
(Acid Included)Total Fluid (bbls)	8,200
Dirty Job Total (bbls)	8,563
100 Mesh	300,300
40/70	99,980
Total Proppant (lbs)	400,280
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	178
Biocide	92
Scale	16





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Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23038  
 Date: 9/4/2019  
 Well Name: Bogges 3H  
 Stage No.: 17

State: WV  
 County: Monongahela  
 Operator: Moon/Mark  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,003.00	CWT	\$ 5.50	\$ 16,516.50
SAND 40/70	40/70 white	999.80	CWT	\$ 5.75	\$ 5,748.85
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	178	GAL	\$ 17.75	\$ 3,159.50
BIOC11219A	Biocide @ 0.25 GPT	92	GAL	\$ 16.00	\$ 1,472.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.14	TON	\$ 55.00	\$ 11,007.70
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,620.55  
 25% Discount Applied \$ 14,655.14  
 Net Stage Total \$ 43,965.41

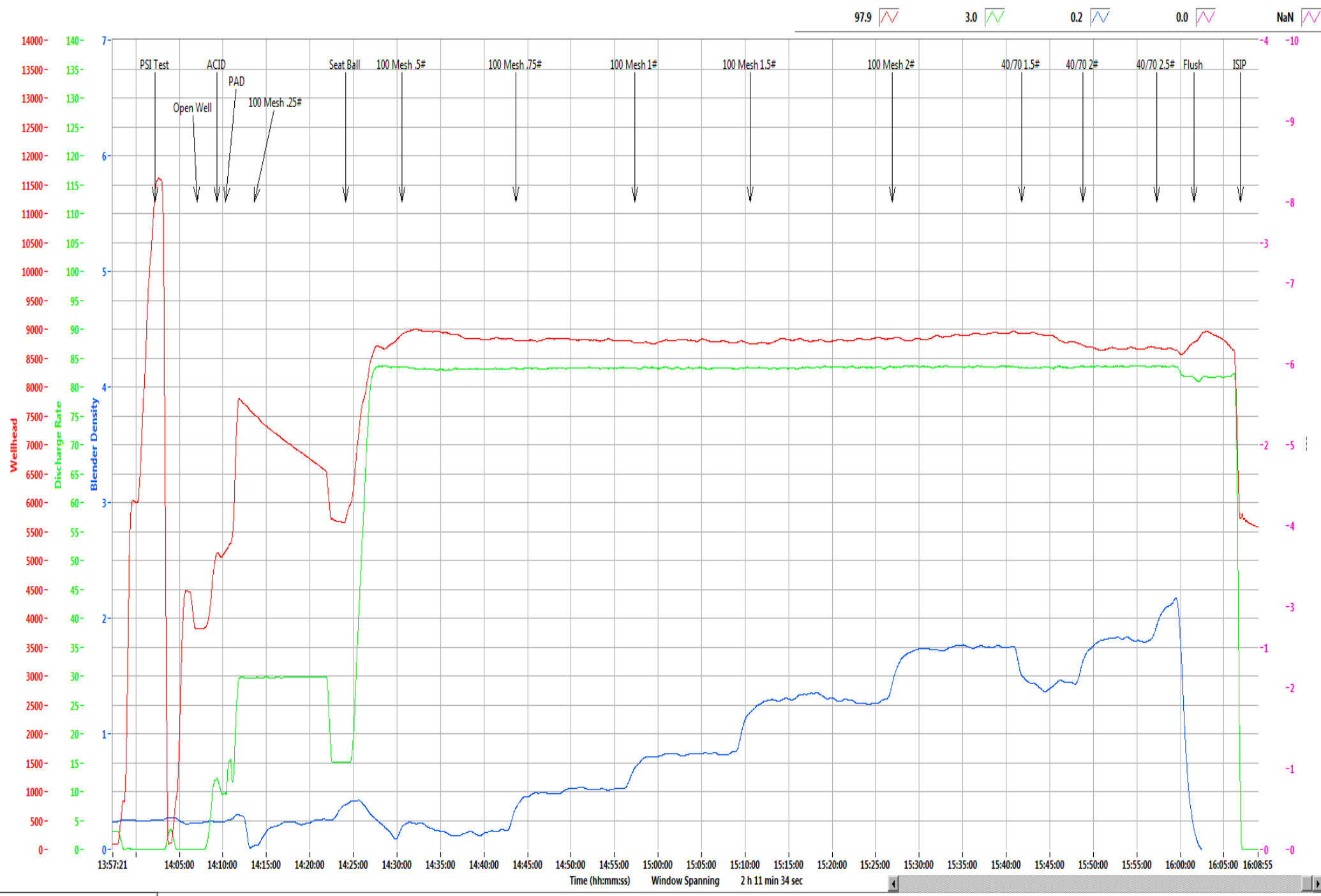
(Print Name) Customer Rep: Glen Bond Customer Signature: [Signature]



**NNE**  
**Boggess 3H**  
**Stage 18**  
**Producers Service Corp.**

**Post Stage Report**  
**September 4, 2019**





Time (hh:mm:ss) Window Spanning 2 h 11 min 34 sec

Refresh Graph

<b>Boggess Pad</b>	<b>3H</b>
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Stage	18
Date:	9/4/19
OWP (psi):	3,822
Starting Time	2:07 PM
Ending Time	4:06 PM
Pump Time (hr:min)	01:59
Swap Time (hr:min)	01:07
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

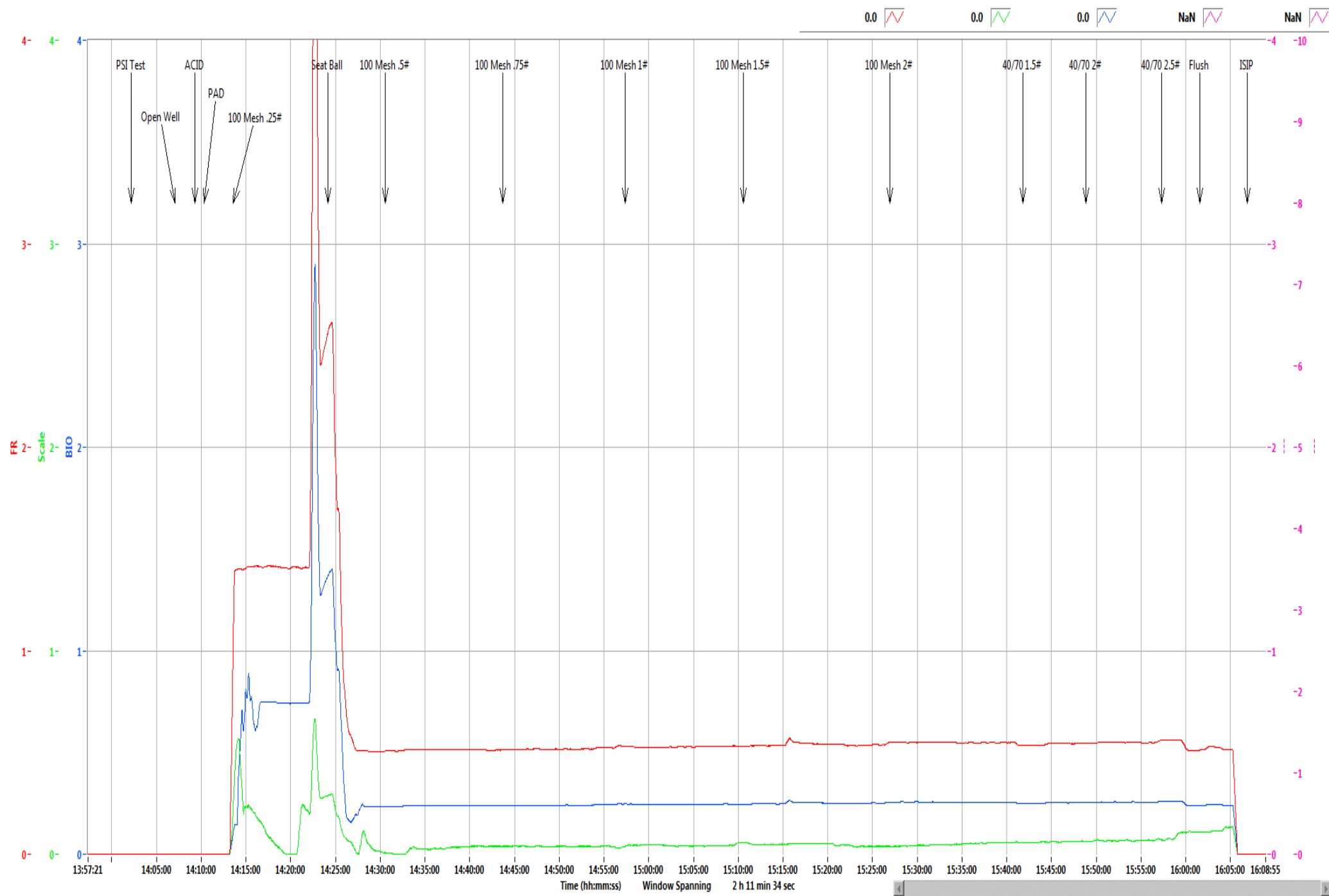
Breakdown Pressure (psi)	5,993
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,815
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	9,037
Displacement (psi)	8,726
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,546
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,433
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	439
Pad (bbls)	84
Treatment (bbls)	7,959
Displacement (bbls)	402
(Acid Included)Total Fluid (bbls)	8,445
Dirty Job Total (bbls)	8,795
100 Mesh	297,120
40/70	106,760
Total Proppant (lbs)	403,880
Total Proppant %	101.0%

**CHEMICALS**

FR 9800	185
Biocide	88
Scale	17



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Refresh Graph



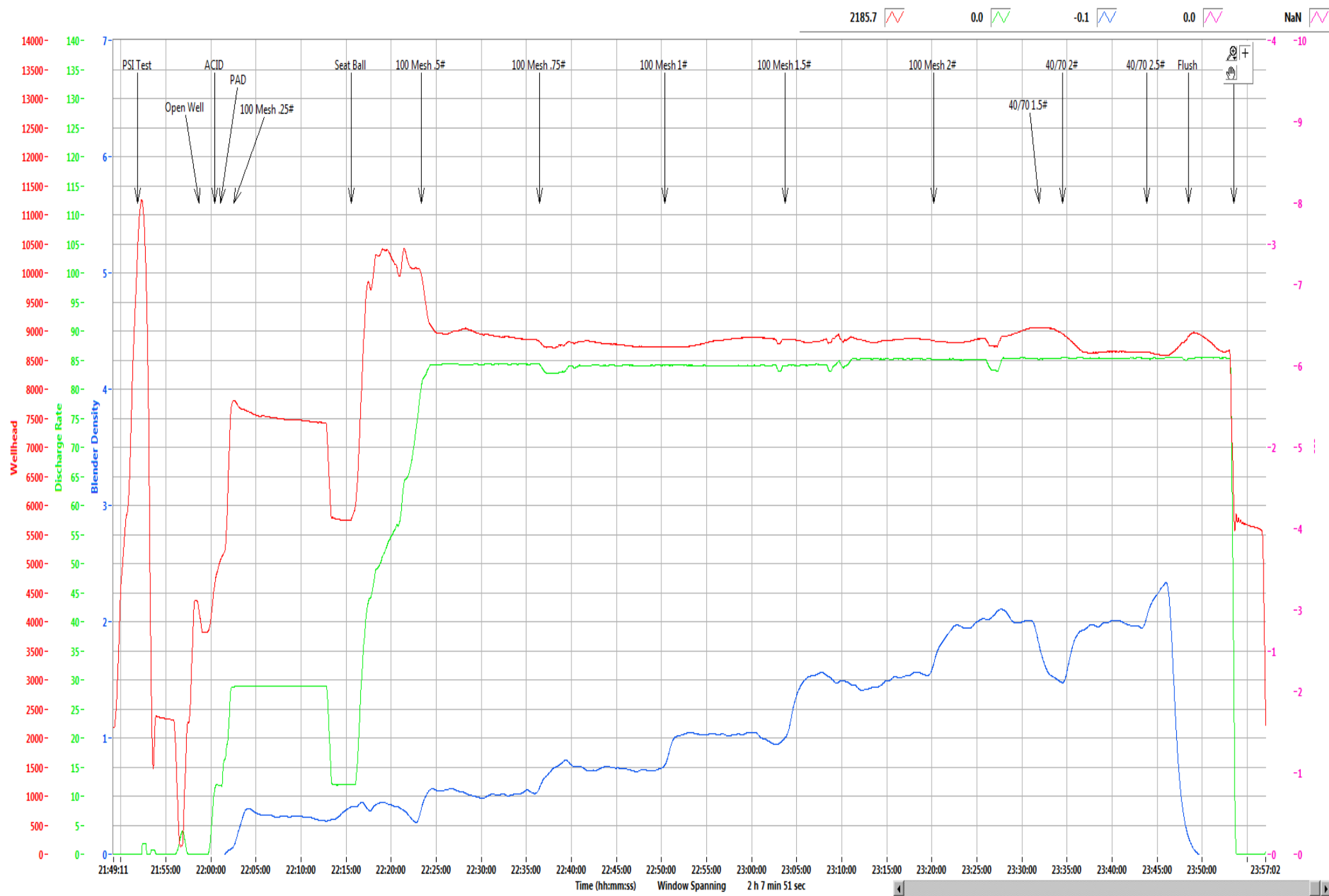




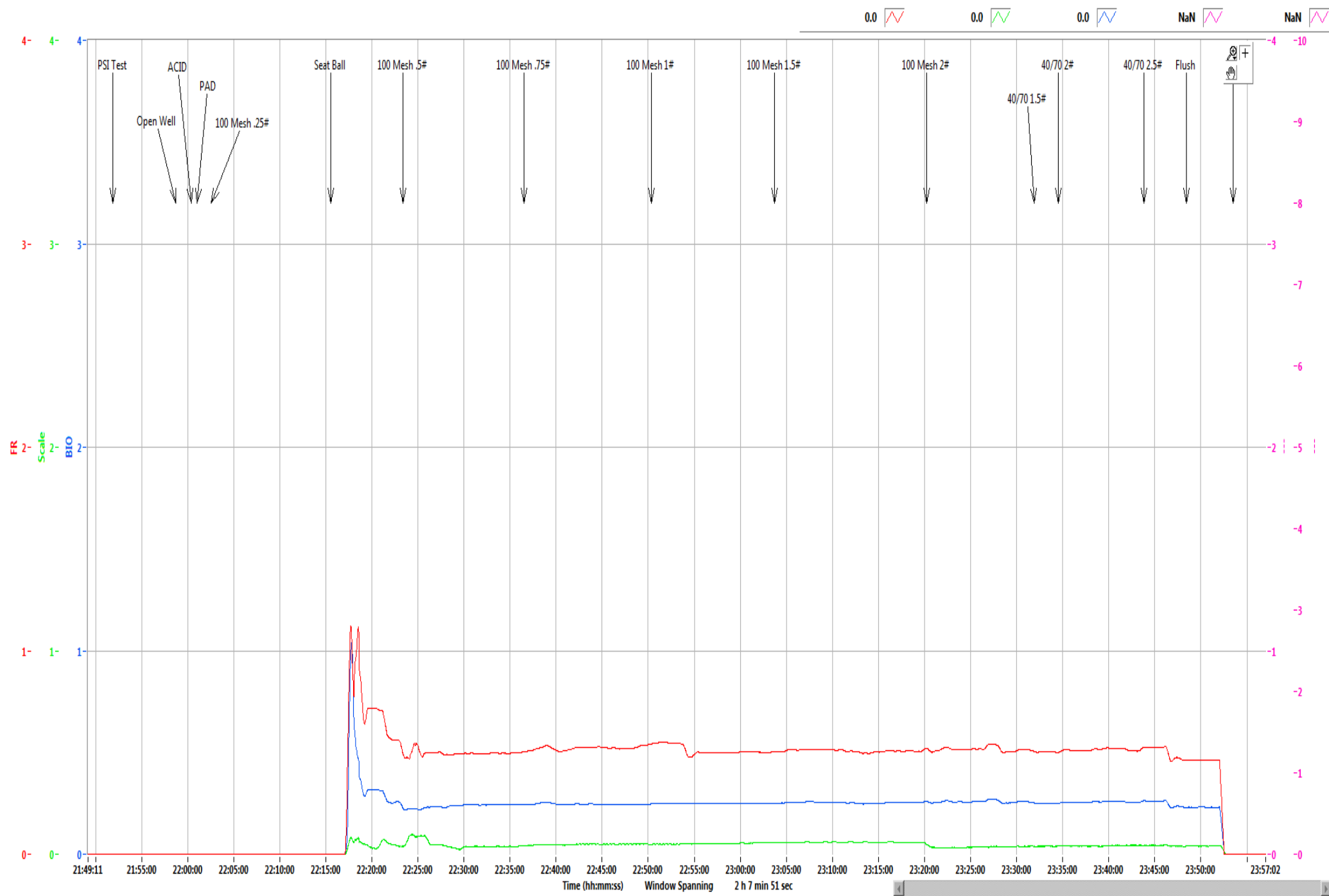
**NNE**  
**Boggess 3H**  
**Stage 19**  
**Producers Service Corp.**

**Post Stage Report**  
**September 4, 2019**





Refresh Graph



Refresh Graph

**Boggess Pad****3H**

Stage	19
Date:	9/4/19
OWP (psi):	3,791
Starting Time	9:58 PM
Ending Time	11:53 PM
Pump Time (hr:min)	01:55
Swap Time (hr:min)	02:19
Starting # Pumps	17
Finishing # Pumps	14
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,964
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,824
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,521
Displacement (psi)	8,897
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,179
Final FG (psi/ft)	1.08
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,923
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	408
Pad (bbls)	47
Treatment (bbls)	7,476
Displacement (bbls)	402
(Acid Included)Total Fluid (bbls)	7,929
Dirty Job Total (bbls)	8,385
100 Mesh	301,260
40/70	100,140
Total Proppant (lbs)	401,400
Total Proppant %	100.4%

**CHEMICALS**

FR 9800	163
Biocide	80
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23042  
 Date: 9/4/2019  
 Well Name: Bogges 3H  
 Stage No.: 1B

State: WV  
 County: Monongahela  
 Operator: Jamie/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,012.60	CWT	\$ 5.50	\$ 16,569.30
SAND 40/70	40/70 white	1,001.40	CWT	\$ 5.75	\$ 5,758.05
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	163	GAL	\$ 17.75	\$ 2,893.25
BIOC11219A	Biocide @ 0.25 GPT	80	GAL	\$ 16.00	\$ 1,280.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.7	TON	\$ 55.00	\$ 11,038.50
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -
				Total No Discount	\$ 57,893.10
				25% Discount Applied	\$ 14,473.28
				Net Stage Total	\$ 43,419.83

(Print Name) Mike Inman Customer Rep: \_\_\_\_\_ Customer Signature: [Signature]

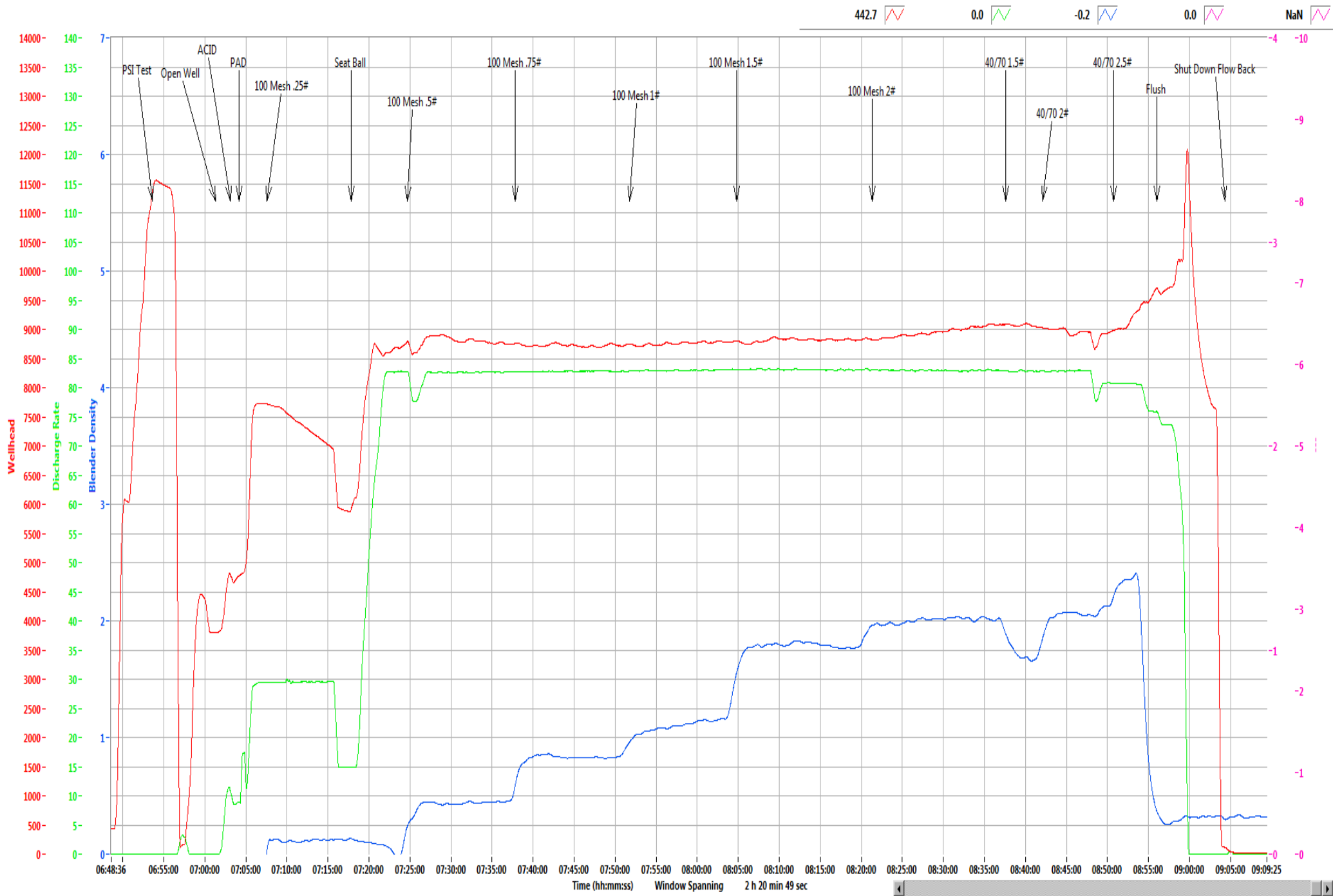


**NNE  
Bogges 3H  
Stage 20  
Producers Service Corp.**

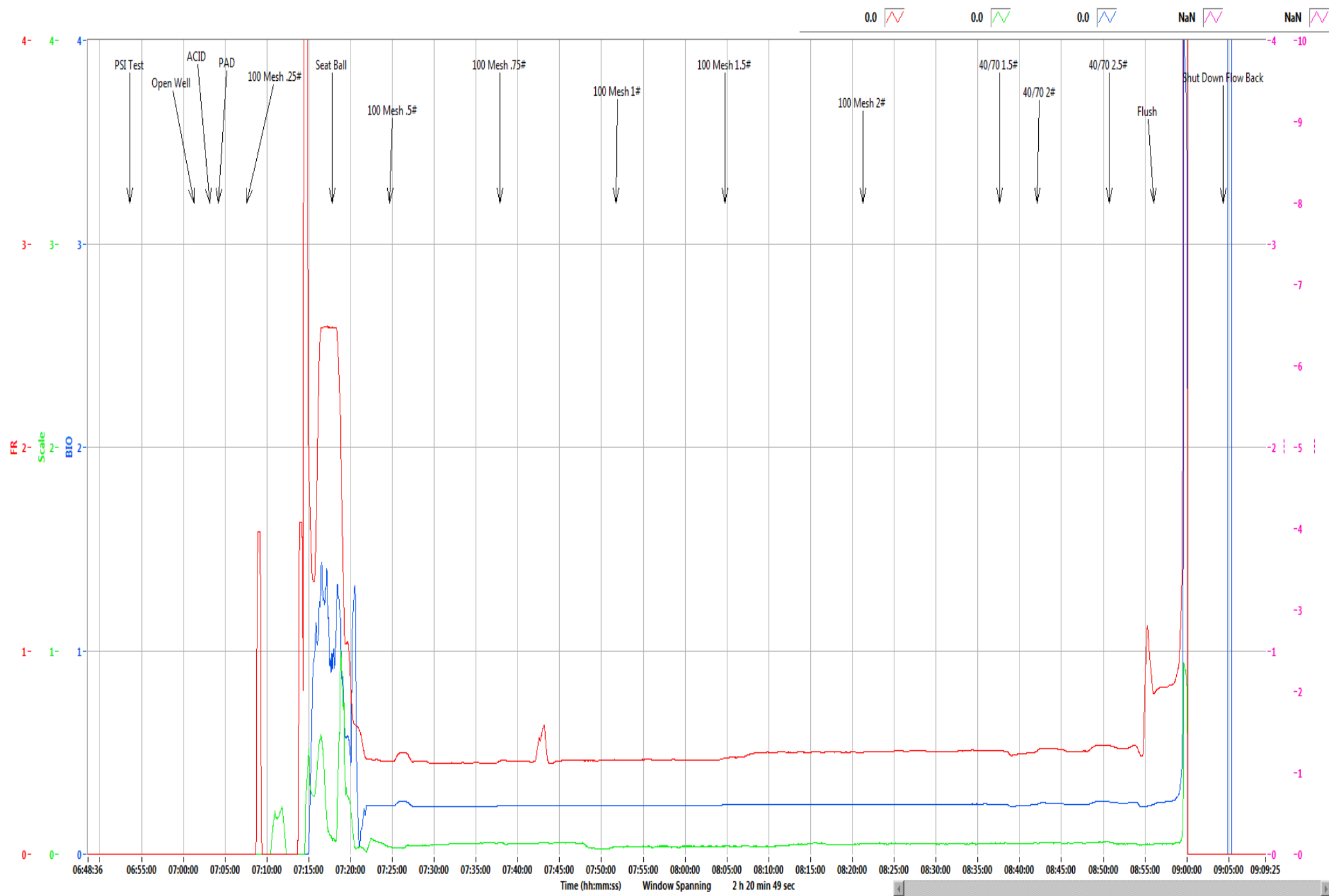
**Post Stage Report  
September 5, 2019**







Refresh Graph



Refresh Graph

<b>Boggess Pad</b>	<b>3H</b>
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Stage	20
Date:	9/5/19
OWP (psi):	3,806
Starting Time	7:01 AM
Ending Time	9:04 AM
Pump Time (hr:min)	02:03
Swap Time (hr:min)	01:33
Starting # Pumps	17
Finishing # Pumps	15
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,156
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,854
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	12,714
Displacement (psi)	9,742
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	8,573
Final FG (psi/ft)	1.50
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,225
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	409
Pad (bbls)	83
Treatment (bbls)	7,918
Displacement (bbls)	235
(Acid Included)Total Fluid (bbls)	8,237
Dirty Job Total (bbls)	8,574
100 Mesh	301,600
40/70	100,200
Total Proppant (lbs)	401,800
Total Proppant %	100.5%

**CHEMICALS**

FR 9800	173
Biocide	86
Scale	18

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23044  
 Date: 9/5/2019  
 Well Name: Bogges 3H  
 Stage No.: 20

State: WV  
 County: Monongahela  
 Operator: Moon/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,016.00	CWT	\$ 5.50	\$ 16,588.00
SAND 40/70	40/70 white	1,002.00	CWT	\$ 5.75	\$ 5,761.50
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	173	GAL	\$ 17.75	\$ 3,070.75
BIOC11219A	Biocide @ 0.25 GPT	86	GAL	\$ 16.00	\$ 1,376.00
SCAL16846A	Scale Control @ 0.05 GPT	18	GAL	\$ 16.00	\$ 288.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.9	TON	\$ 55.00	\$ 11,049.50
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,593.75  
 25% Discount Applied \$ 14,648.44  
 Net Stage Total \$ 43,945.31

(Print Name)

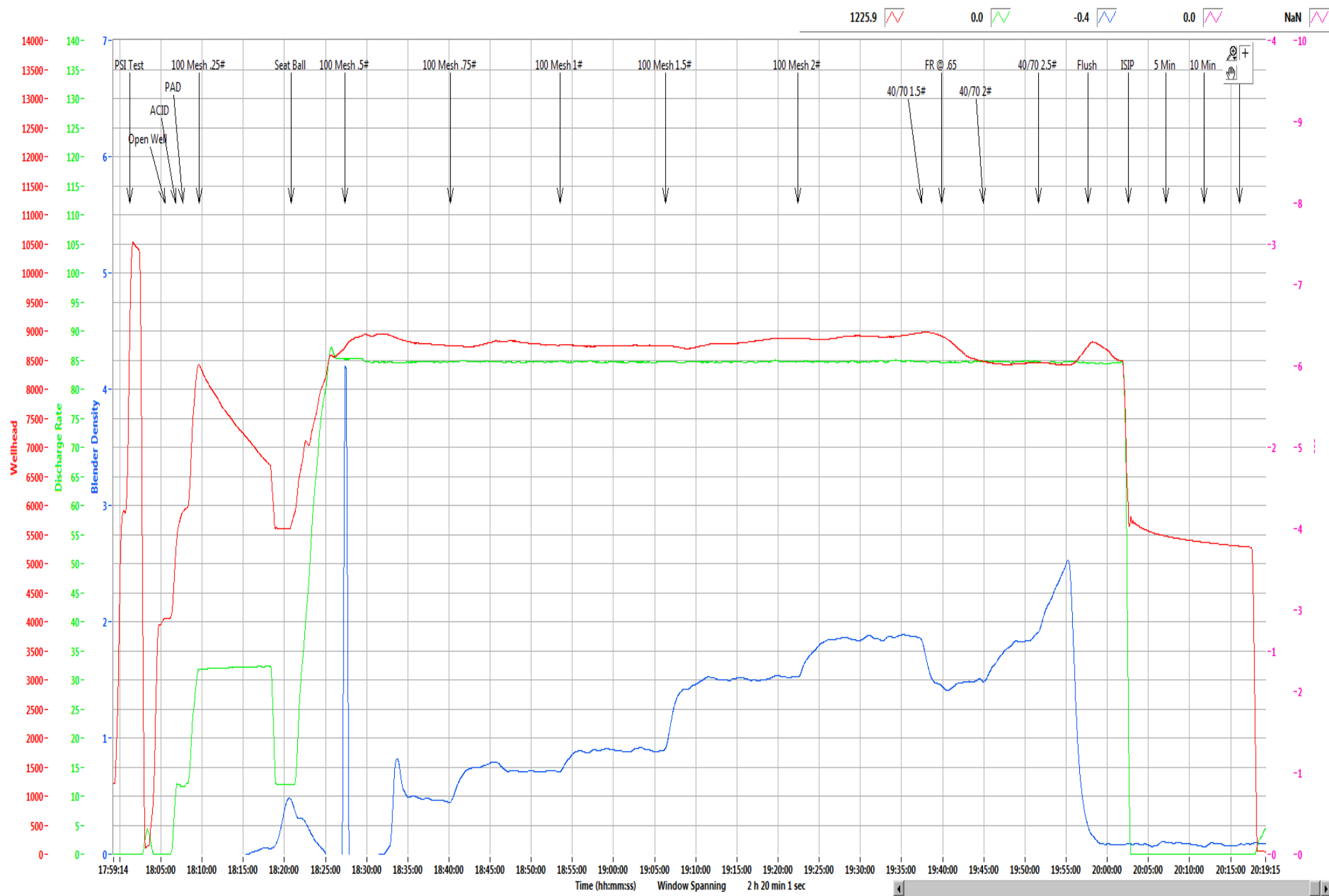
Customer Rep: Glenn Boyd

Customer Signature: [Signature]



**NNE**  
**Boggess 3H**  
**Stage 21**  
**Producers Service Corp.**

**Post Stage Report**  
**September 5, 2019**



1225.9 0.0 -0.4 0.0 NaN

Refresh Graph



Refresh Graph





**Boggess Pad****3H**

Stage	21
Date:	9/5/19
OWP (psi):	4,054
Starting Time	6:05 PM
Ending Time	8:16 PM
Pump Time (hr:min)	02:11
Swap Time (hr:min)	00:50
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

Pressures & Rates

Breakdown Pressure (psi)	5,854
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,759
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	9,012
Displacement (psi)	8,786
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,255
Final FG (psi/ft)	1.09
5 Minute Leakoff Pressure (psi)	5,465
5 Minute Leakoff Rate (psi/min)	-42
10 Minute Leakoff Pressure (psi)	5,361
10 Minute Leakoff Rate (psi/min)	-11
15 Minute Leakoff Pressure (psi)	5,295
15 Minute Leakoff Rate (psi/min)	-3

Fluids & Proppant

Slickwater (bbls)	8,503
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	396
Pad (bbls)	49
Treatment (bbls)	8,051
Displacement (bbls)	388
(Acid Included)Total Fluid (bbls)	8,515
Dirty Job Total (bbls)	8,876
100 Mesh	300,100
40/70	100,120
Total Proppant (lbs)	400,220
Total Proppant %	100.1%

CHEMICALS

FR 9800	192
Biocide	95
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23046  
 Date: 9/5/2019  
 Well Name: Bogges 3H  
 Stage No.: 21

State: WV  
 County: Monongahela  
 Operator: Brad/Joe/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,001.00	CWT	\$ 5.50	\$ 16,505.50
SAND 40/70	40/70 white	1,001.20	CWT	\$ 5.75	\$ 5,756.90
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	192	GAL	\$ 17.75	\$ 3,408.00
BIOC11219A	Biocide @ 0.25 GPT	95	GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.11	TON	\$ 55.00	\$ 11,006.05
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,976.45  
 25% Discount Applied \$ 14,744.11  
 Net Stage Total \$ 44,232.34

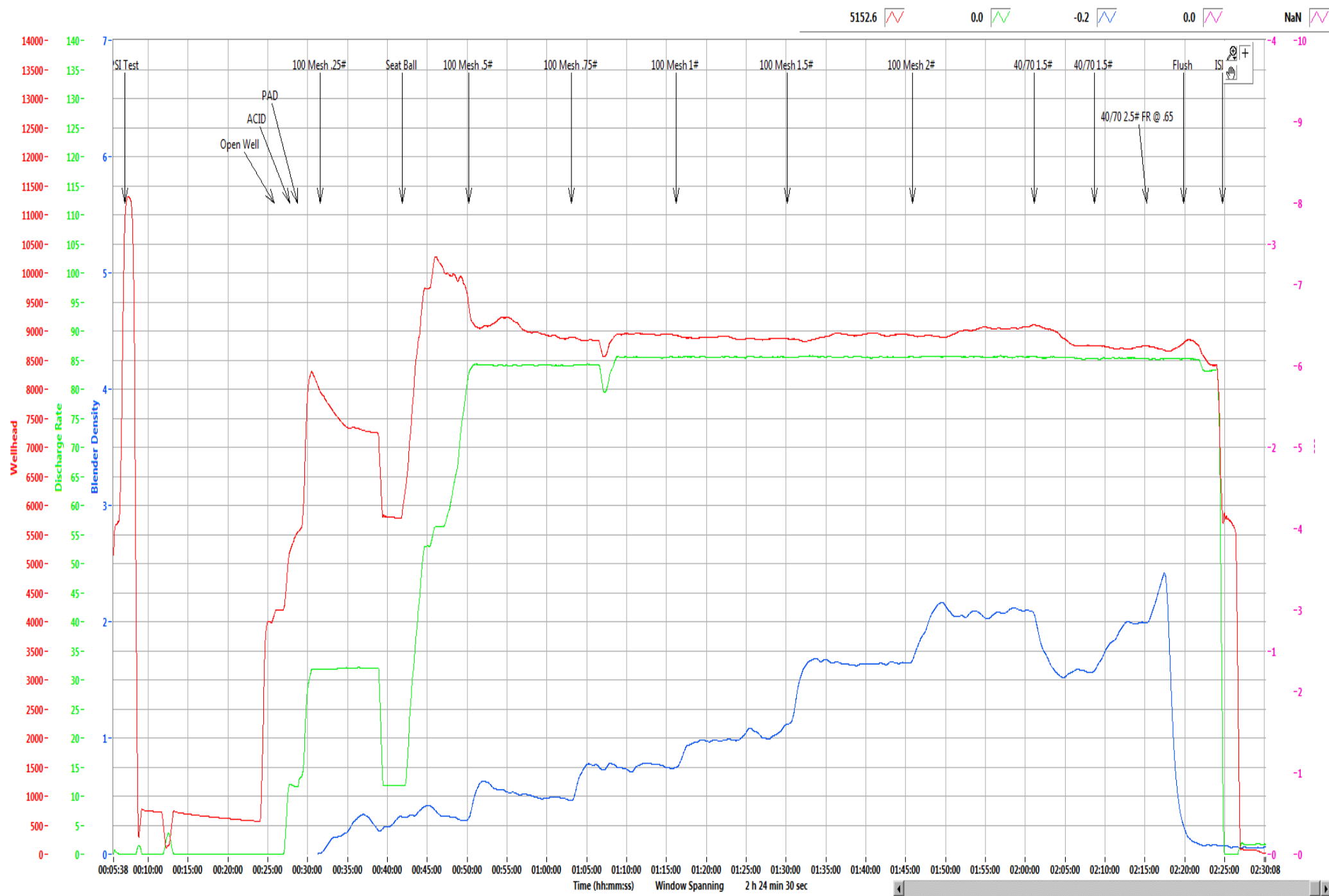
(Print Name) Mike Inman Customer Rep: \_\_\_\_\_ Customer Signature: 



**NNE**  
**Boggess 3H**  
**Stage 22**  
**Producers Service Corp.**

**Post Stage Report**  
**September 6, 2019**





Refresh Graph

Time (hh:mm:ss) Window Spanning 2 h 24 min 30 sec



Refresh Graph

<b>Boggess Pad</b>	<b>3H</b>
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Stage	22
Date:	9/6/19
OWP (psi):	4,193
Starting Time	12:07 AM
Ending Time	2:24 AM
Pump Time (hr:min)	02:17
Swap Time (hr:min)	00:18
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,332
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,919
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	10,321
Displacement (psi)	8,864
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,448
Final FG (psi/ft)	1.11
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,646
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	385
Pad (bbls)	79
Treatment (bbls)	8,189
Displacement (bbls)	383
(Acid Included)Total Fluid (bbls)	8,658
Dirty Job Total (bbls)	9,011
100 Mesh	294,900
40/70	100,020
Total Proppant (lbs)	394,920
Total Proppant %	98.7%

**CHEMICALS**

FR 9800	176
Biocide	85
Scale	19

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23048  
 Date: 9/6/2019  
 Well Name: Bogges 3H  
 Stage No.: 22

State: WV  
 County: Monongahela  
 Operator: Brad/Joe/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,949.00	CWT	\$ 5.50	\$ 16,219.50
SAND 40/70	40/70 white	1,000.20	CWT	\$ 5.75	\$ 5,751.15
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	176	GAL	\$ 17.75	\$ 3,124.00
BIOC11219A	Biocide @ 0.25 GPT	85	GAL	\$ 16.00	\$ 1,360.00
SCAL16846A	Scale Control @ 0.05 GPT	19	GAL	\$ 16.00	\$ 304.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		197.46	TON	\$ 55.00	\$ 10,860.30
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,078.95  
 25% Discount Applied \$ 14,519.74  
 Net Stage Total \$ 43,559.21

(Print Name) Mike Inman Customer Rep: \_\_\_\_\_ Customer Signature: 

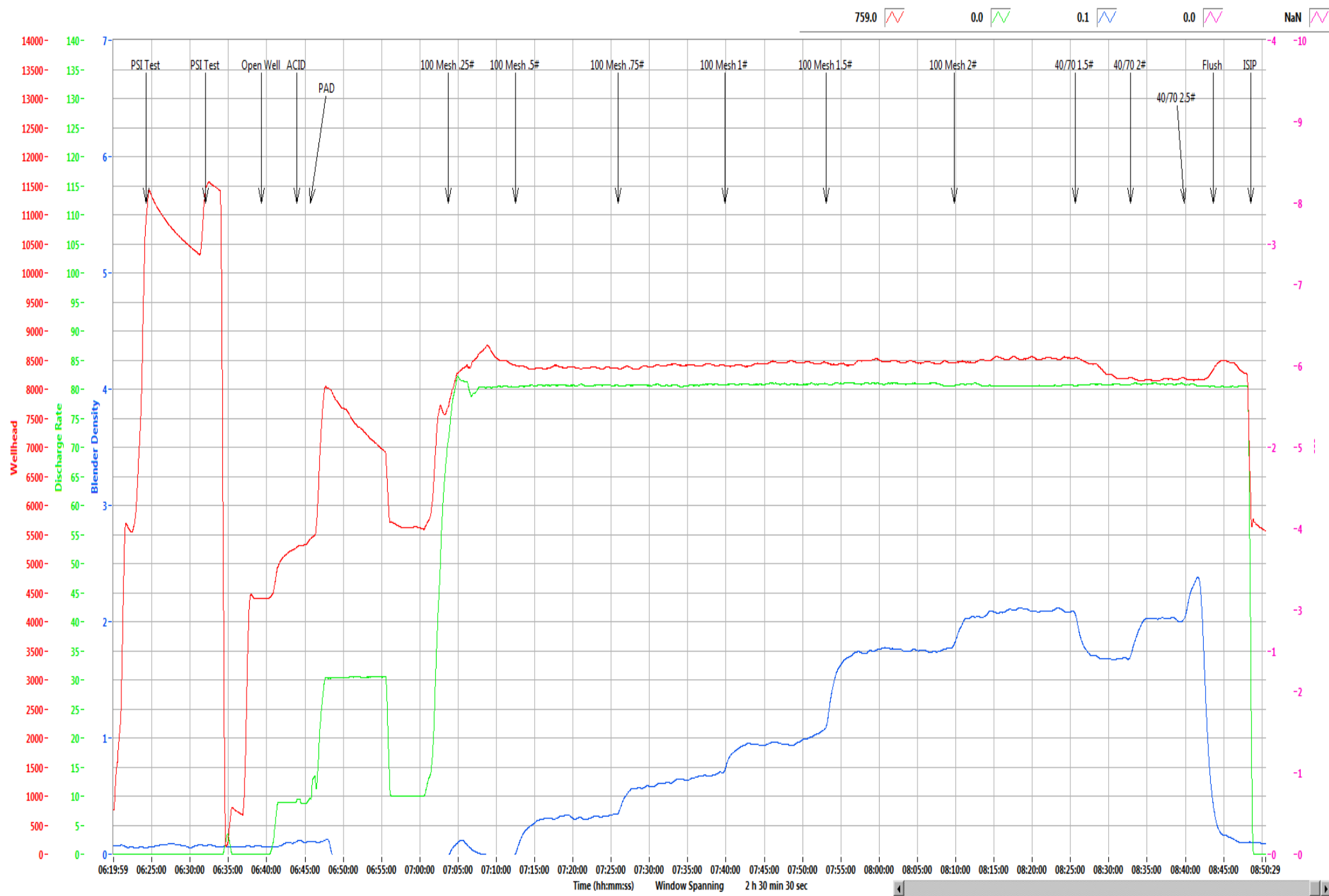




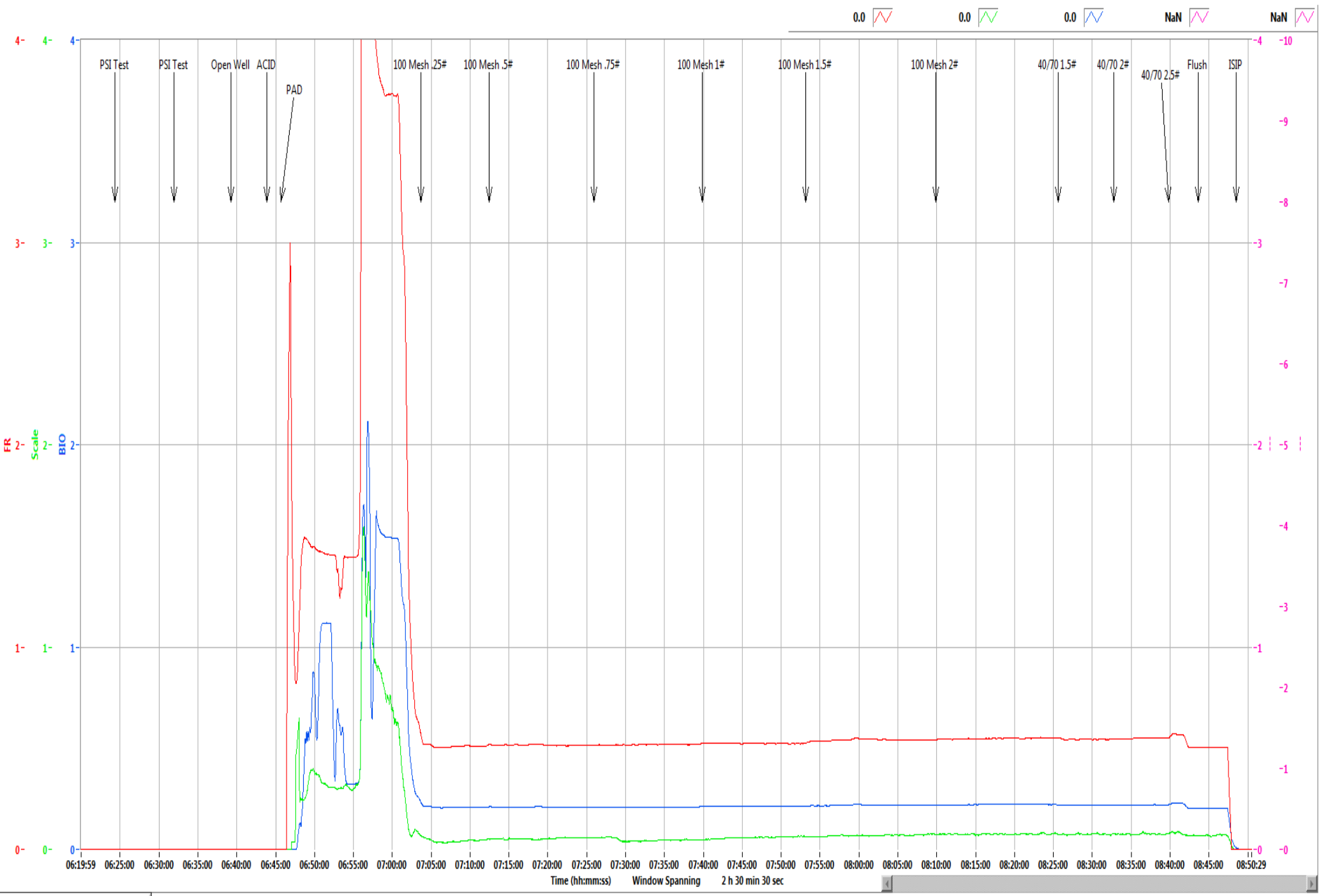
**NNE**  
**Bogges 3H**  
**Stage 23**  
**Producers Service Corp.**

**Post Stage Report**  
**September 6, 2019**





Refresh Graph



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<b>Bogges Pad</b>	<b>3H</b>
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Stage	23
Date:	9/6/19
OWP (psi):	4,400
Starting Time	6:31 AM
Ending Time	8:48 AM
Pump Time (hr:min)	02:17
Swap Time (hr:min)	01:21
Starting # Pumps	16
Finishing # Pumps	15
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,703
Average Treating Rate (bbl/min)	81
Average Treating Pressure (psi)	8,408
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	8,798
Displacement (psi)	8,402
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,976
Final FG (psi/ft)	1.18
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,715
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	399
Pad (bbls)	464
Treatment (bbls)	7,890
Displacement (bbls)	380
(Acid Included)Total Fluid (bbls)	8,739
Dirty Job Total (bbls)	9,066
100 Mesh	304,160
40/70	94,640
Total Proppant (lbs)	398,800
Total Proppant %	99.7%

**CHEMICALS**

FR 9800	192
Biocide	93
Scale	22

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22950  
 Date: 9/6/2019  
 Well Name: Bogges 3H  
 Stage No.: 23

State: WV  
 County: Monongahela  
 Operator: Jeremy/Jeremy  
 PO/A/E: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,041.60	CWT	\$ 5.50	\$ 16,728.80
SAND 40/70	40/70 white	946.40	CWT	\$ 5.75	\$ 5,441.80
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	192	GAL	\$ 17.75	\$ 3,408.00
BIOC11219A	Biocide @ 0.25 GPT	93	GAL	\$ 16.00	\$ 1,488.00
SCAL16846A	Scale Control @ 0.05 GPT	22	GAL	\$ 16.00	\$ 352.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.4	TON	\$ 55.00	\$ 10,967.00
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 59,505.60  
 25% Discount Applied \$ 14,876.40  
 Net Stage Total \$ 44,629.20

(Print Name) Sten Boyd Customer Rep: \_\_\_\_\_  
 Customer Signature: [Signature]



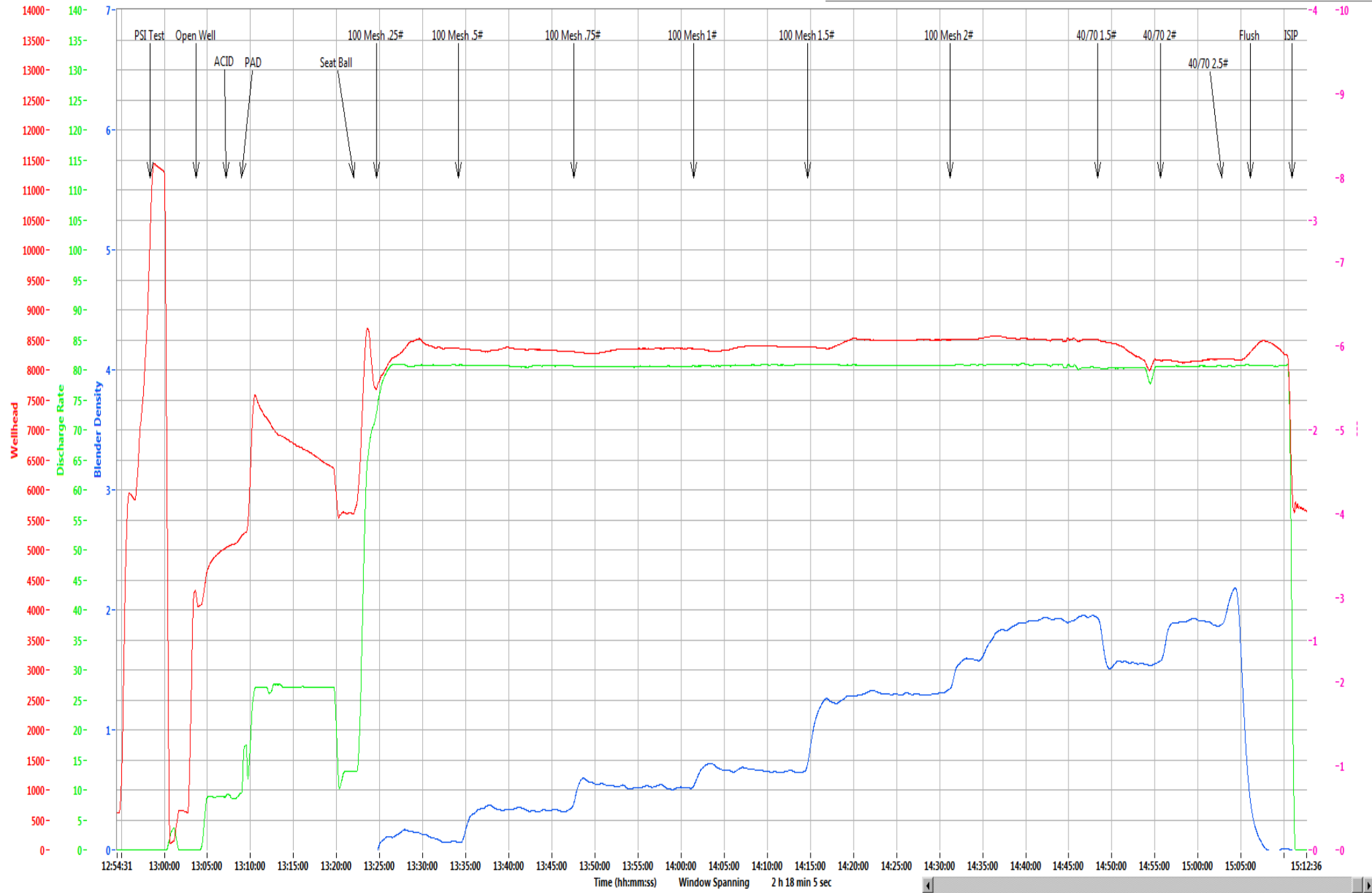
**NNE**  
**Bogges 3H**  
**Stage 24**  
**Producers Service Corp.**

**Post Stage Report**  
**September 6, 2019**



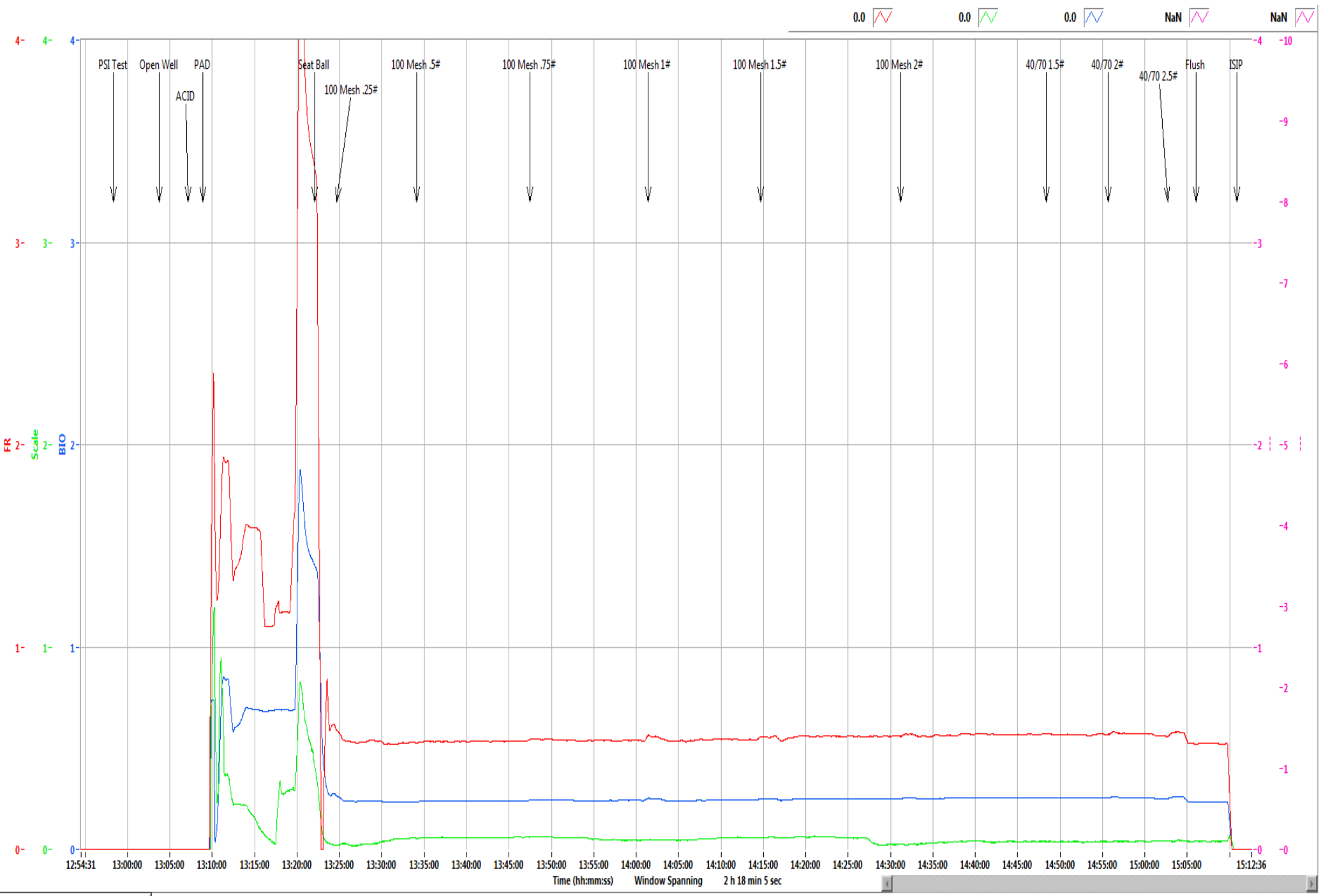


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Time (hh:mm:ss) Window Spanning 2 h 18 min 5 sec

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**Boggess Pad****3H**

Stage	24
Date:	9/6/19
OWP (psi):	4,046
Starting Time	12:58 PM
Ending Time	3:10 PM
Pump Time (hr:min)	02:12
Swap Time (hr:min)	00:42
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,855
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	8,370
Maximum Treating Rate (bbl/min)	82
Maximum Treating Pressure (psi)	8,846
Displacement (psi)	8,319
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,469
Final FG (psi/ft)	1.24
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,816
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	381
Pad (bbls)	453
Treatment (bbls)	8,005
Displacement (bbls)	377
(Acid Included)Total Fluid (bbls)	8,840
Dirty Job Total (bbls)	9,142
100 Mesh	300,060
40/70	99,780
Total Proppant (lbs)	399,840
Total Proppant %	100.0%

**CHEMICALS**

FR 9800	190
Biocide	95
Scale	21

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22952  
 Date: 9/6/2019  
 Well Name: Bogges 3H  
 Stage No.: 24

State: WV  
 County: Monongahela  
 Operator: Jeremy/Jeremy  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,000.60	CWT	\$ 5.50	\$ 16,503.30
SAND 40/70	40/70 white	997.80	CWT	\$ 5.75	\$ 5,737.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	190	GAL	\$ 17.75	\$ 3,372.50
BIOC11219A	Biocide @ 0.25 GPT	95	GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	21	GAL	\$ 16.00	\$ 336.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.92	TON	\$ 55.00	\$ 10,995.60
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 59,584.75  
 25% Discount Applied \$ 14,896.19  
 Net Stage Total \$ 44,688.56

(Print Name)

Customer Rep: Glen Ball

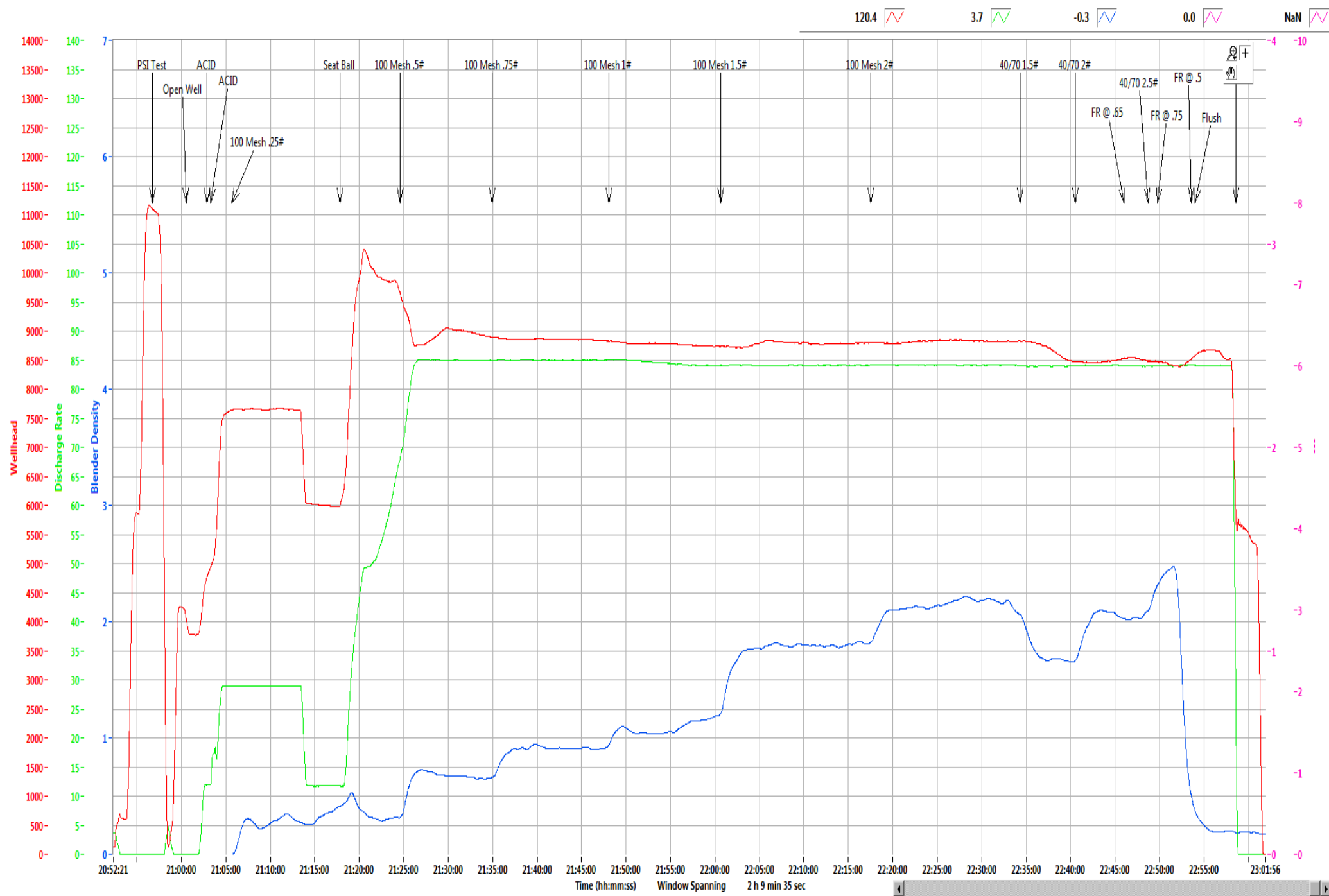
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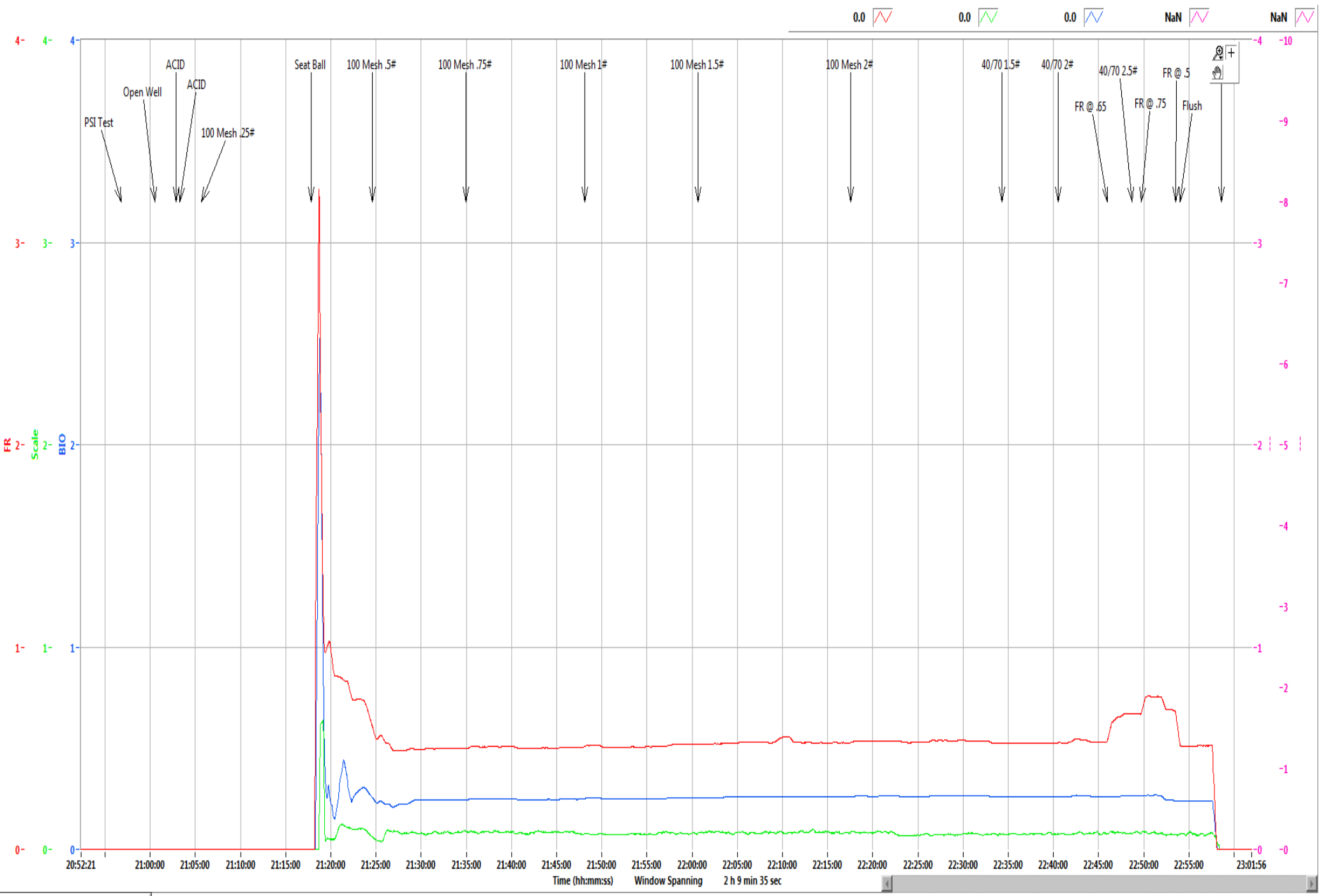
**NNE**  
**Boggess 3H**  
**Stage 25**  
**Producers Service Corp.**

**Post Stage Report**  
**September 6, 2019**





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**Boggess Pad****3H**

Stage	25
Date:	9/6/19
OWP (psi):	3,759
Starting Time	9:00 PM
Ending Time	10:58 PM
Pump Time (hr:min)	01:58
Swap Time (hr:min)	02:31
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,290
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,769
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,470
Displacement (psi)	8,625
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,279
Final FG (psi/ft)	1.09
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,406
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	361
Pad (bbls)	79
Treatment (bbls)	7,955
Displacement (bbls)	373
(Acid Included)Total Fluid (bbls)	8,412
Dirty Job Total (bbls)	8,721
100 Mesh	300,680
40/70	100,200
Total Proppant (lbs)	400,880
Total Proppant %	100.2%

**CHEMICALS**

FR 9800	180
Biocide	85
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501




Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22954  
 Date: 9/6/2019  
 Well Name: Bogges 3H  
 Stage No.: 25

State: WV  
 County: Monongahela  
 Operator: Austin/Brad/Joe  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,006.80	CWT	\$ 5.50	\$ 16,537.40
SAND 40/70	40/70 white	1,002.00	CWT	\$ 5.75	\$ 5,761.50
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	180	GAL	\$ 17.75	\$ 3,195.00
BIOC11219A	Biocide @ 0.25 GPT	85	GAL	\$ 16.00	\$ 1,360.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.44	TON	\$ 55.00	\$ 11,024.20
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,280.10  
 25% Discount Applied \$ 14,570.03  
 Net Stage Total \$ 43,710.08

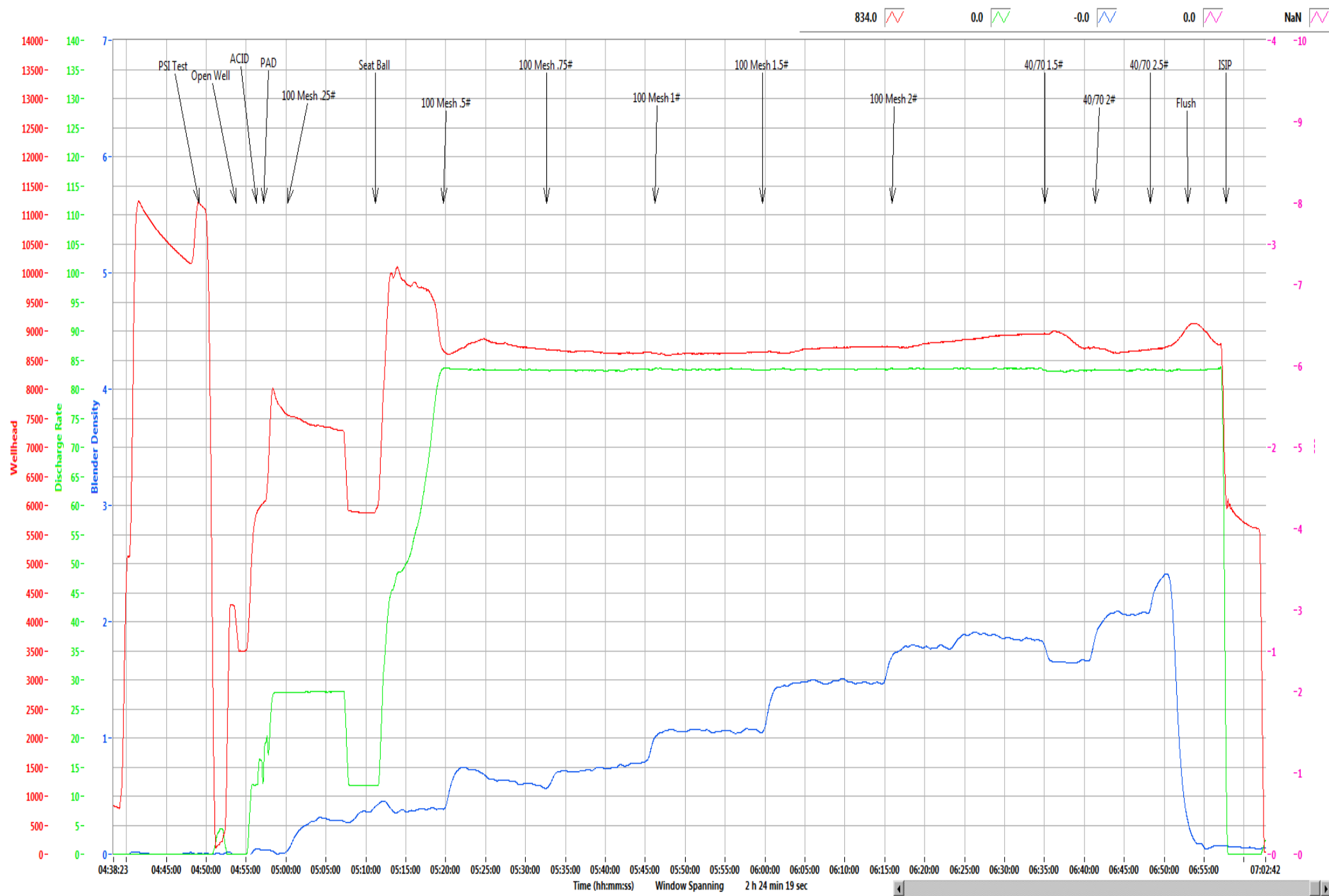
(Print Name) Mike Tomer Customer Rep: \_\_\_\_\_ Customer Signature: 



**NNE**  
**Boggess 3H**  
**Stage 26**  
**Producers Service Corp.**

**Post Stage Report**  
**September 7, 2019**

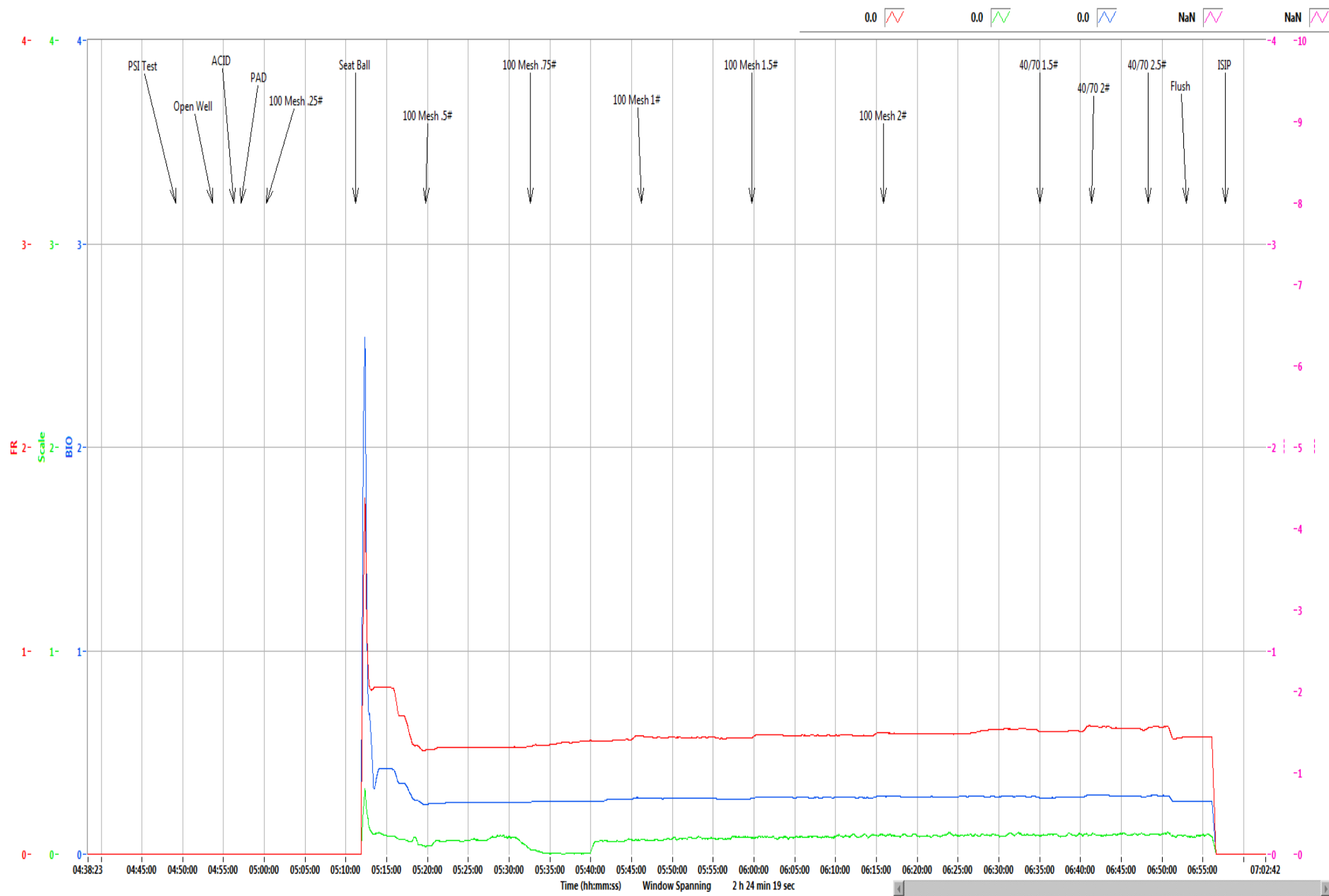




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**Boggess Pad****3H**

Stage	26
Date:	9/7/19
OWP (psi):	3,485
Starting Time	4:53 AM
Ending Time	6:57 AM
Pump Time (hr:min)	02:04
Swap Time (hr:min)	01:27
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,100
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,760
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	10,173
Displacement (psi)	9,106
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,773
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	9,032
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	370
Pad (bbls)	106
Treatment (bbls)	8,246
Displacement (bbls)	371
(Acid Included)Total Fluid (bbls)	9,044
Dirty Job Total (bbls)	8,694
100 Mesh	298,020
40/70	99,840
Total Proppant (lbs)	397,860
Total Proppant %	99.5%

**CHEMICALS**

FR 9800	184
Biocide	91
Scale	20





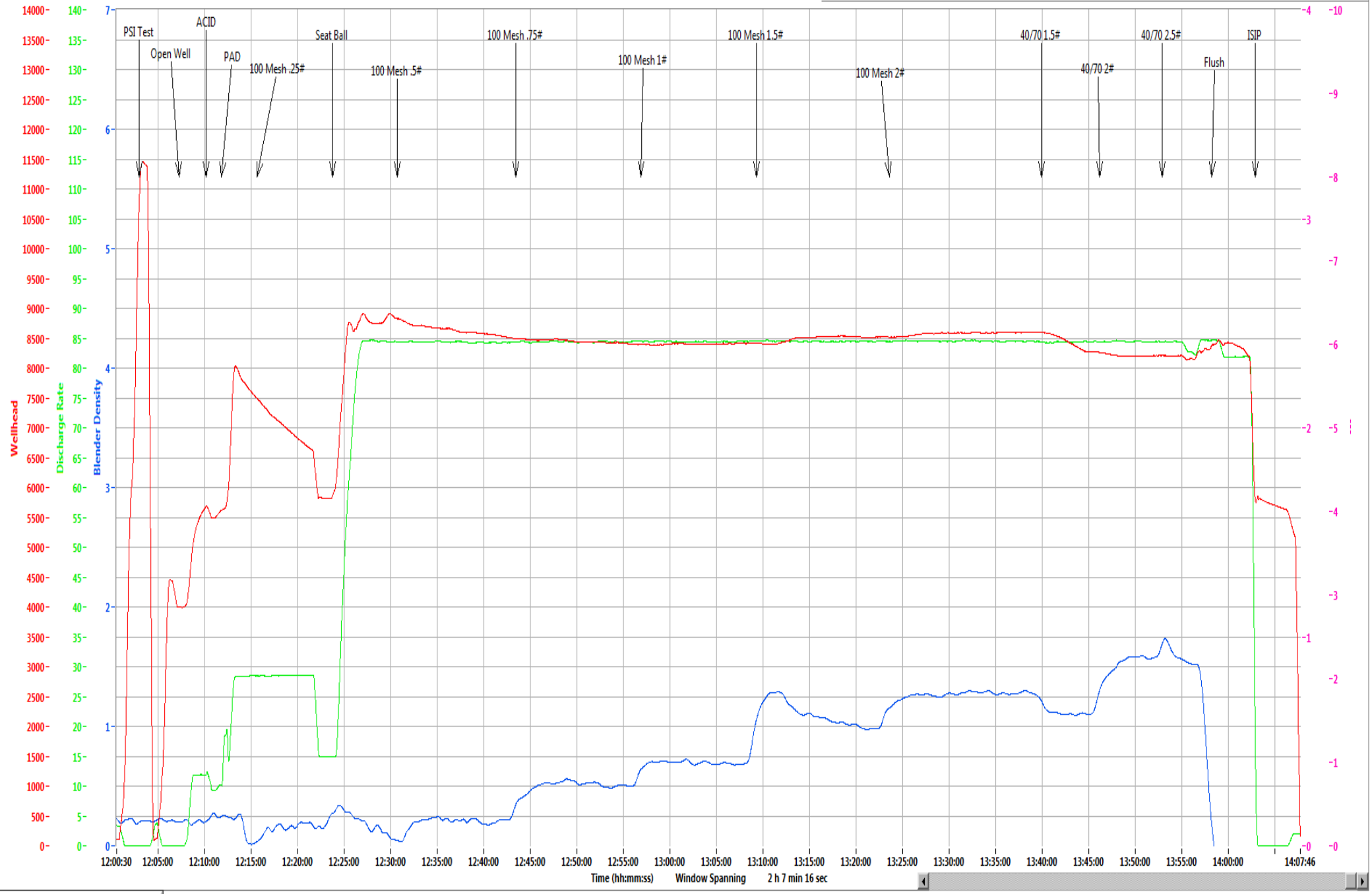


**NNE**  
**Boggess 3H**  
**Stage 27**  
**Producers Service Corp.**

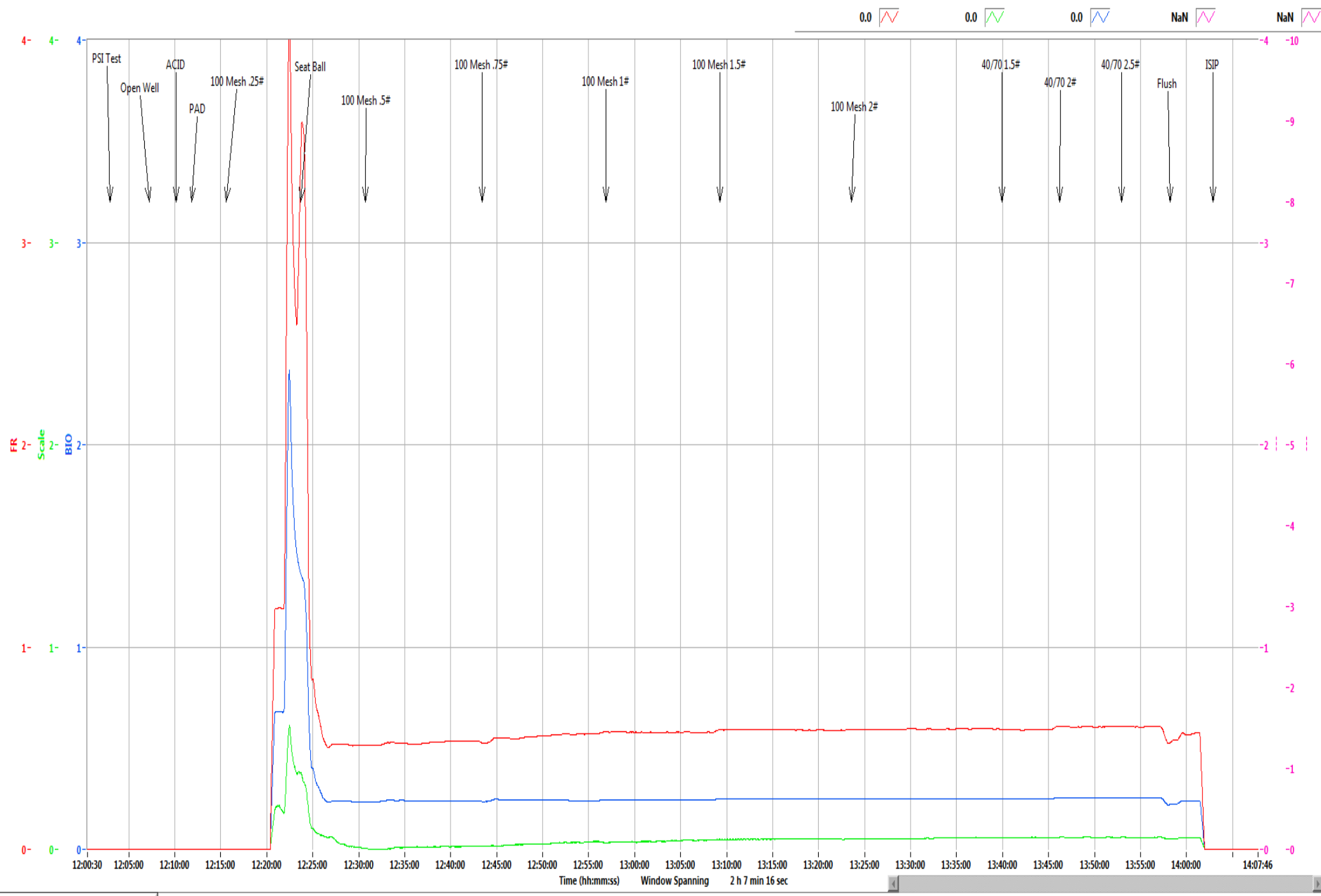
**Post Stage Report**  
**September 7, 2019**



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**Boggess Pad****3H**

Stage	27
Date:	9/7/19
OWP (psi):	3,995
Starting Time	12:07 PM
Ending Time	2:02 PM
Pump Time (hr:min)	01:55
Swap Time (hr:min)	02:08
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,076
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,483
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	9,000
Displacement (psi)	8,415
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,668
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,325
Acid 7.5% HCL (gal)	1,000
Wireline Pump Down (bbls)	348
Pad (bbls)	98
Treatment (bbls)	7,881
Displacement (bbls)	370
(Acid Included)Total Fluid (bbls)	8,349
Dirty Job Total (bbls)	8,714
100 Mesh	299,080
40/70	100,280
Total Proppant (lbs)	399,360
Total Proppant %	99.8%

**CHEMICALS**

FR 9800	175
Biocide	88
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22958  
 Date: 9/7/2019  
 Well Name: Bogges 3H  
 Stage No.: 27

State: WV  
 County: Monongahela  
 Operator: Moon/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	1000	GAL	\$ 1.25	\$ 1,250.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	2	GAL	\$ 35.00	\$ 70.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,990.80	CWT	\$ 5.50	\$ 16,449.40
SAND 40/70	40/70 white	1,002.80	CWT	\$ 5.75	\$ 5,766.10
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	175	GAL	\$ 17.75	\$ 3,106.25
BIOC11219A	Biocide @ 0.25 GPT	88	GAL	\$ 16.00	\$ 1,408.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.68	TON	\$ 55.00	\$ 10,982.40
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 59,152.15  
 25% Discount Applied \$ 14,788.04  
 Net Stage Total \$ 44,364.11

(Print Name) Glen Bay Customer Signature: [Signature]  
 Customer Rep: \_\_\_\_\_

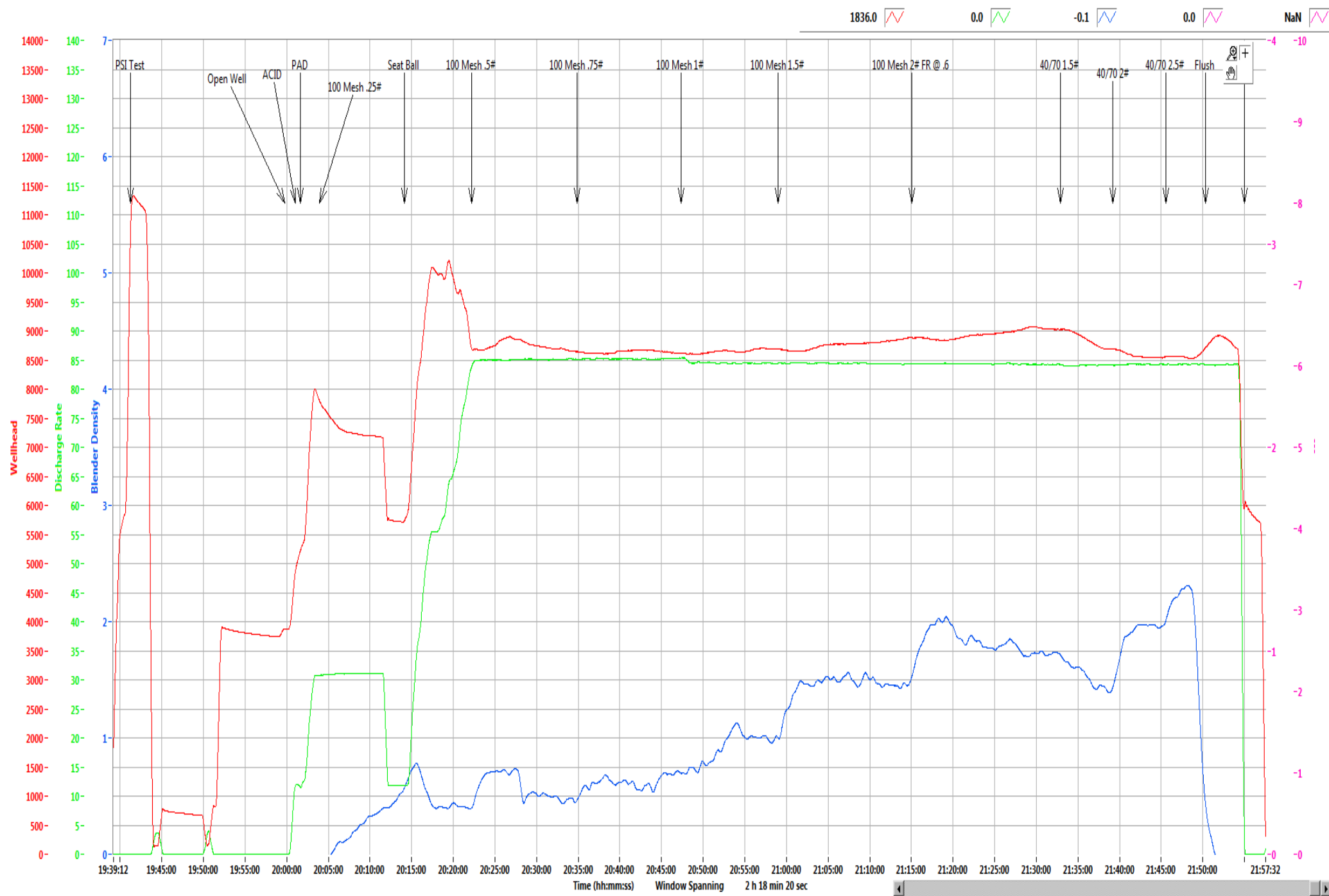


**NNE**  
**Boggess 3H**  
**Stage 28**  
**Producers Service Corp.**

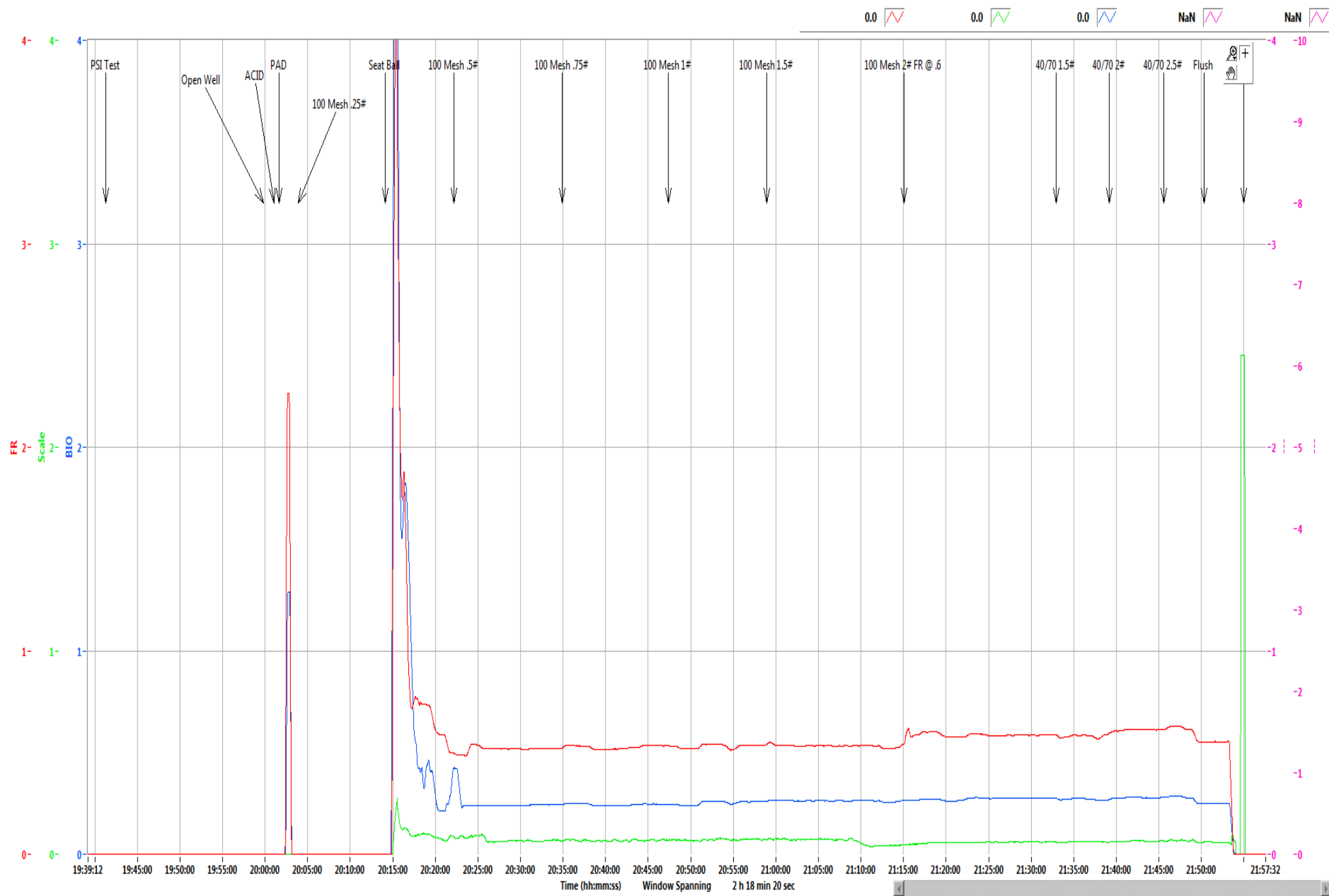
**Post Stage Report**  
**September 7, 2019**







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**Boggess Pad****3H**

Stage	28
Date:	9/7/19
OWP (psi):	3,864
Starting Time	7:59 PM
Ending Time	9:54 PM
Pump Time (hr:min)	01:55
Swap Time (hr:min)	02:55
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,871
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,752
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,346
Displacement (psi)	8,719
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,917
Final FG (psi/ft)	1.17
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,308
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	354
Pad (bbls)	69
Treatment (bbls)	7,882
Displacement (bbls)	358
(Acid Included)Total Fluid (bbls)	8,314
Dirty Job Total (bbls)	8,663
100 Mesh	303,760
40/70	100,310
Total Proppant (lbs)	404,070
Total Proppant %	101.0%

**CHEMICALS**

FR 9800	187
Biocide	94
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22960  
 Date: 9/7/2019  
 Well Name: Bogges 3H  
 Stage No.: 28

State: WV  
 County: Monongahela  
 Operator: Brad/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,037.60	CWT	\$ 5.50	\$ 16,706.80
SAND 40/70	40/70 white	1,003.10	CWT	\$ 5.75	\$ 5,767.83
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	187	GAL	\$ 17.75	\$ 3,319.25
BIOC11219A	Biocide @ 0.25 GPT	94	GAL	\$ 16.00	\$ 1,504.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		202.035	TON	\$ 55.00	\$ 11,111.93
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,811.80  
 25% Discount Applied \$ 14,702.95  
 Net Stage Total \$ 44,108.85

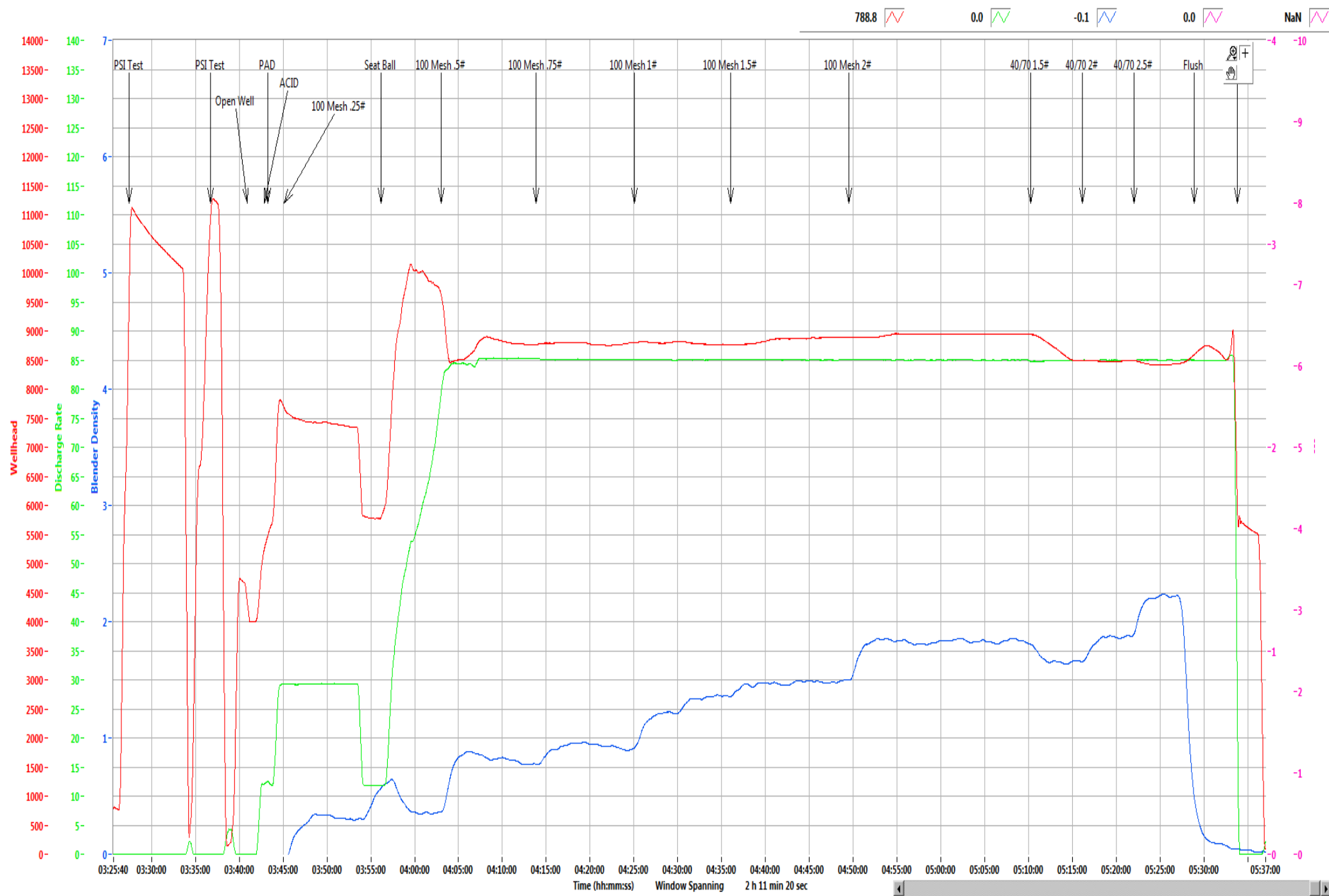
(Print Name) Customer Rep: Rob Cowen Customer Signature: RA Austin



**NNE**  
**Boggess 3H**  
**Stage 29**  
**Producers Service Corp.**

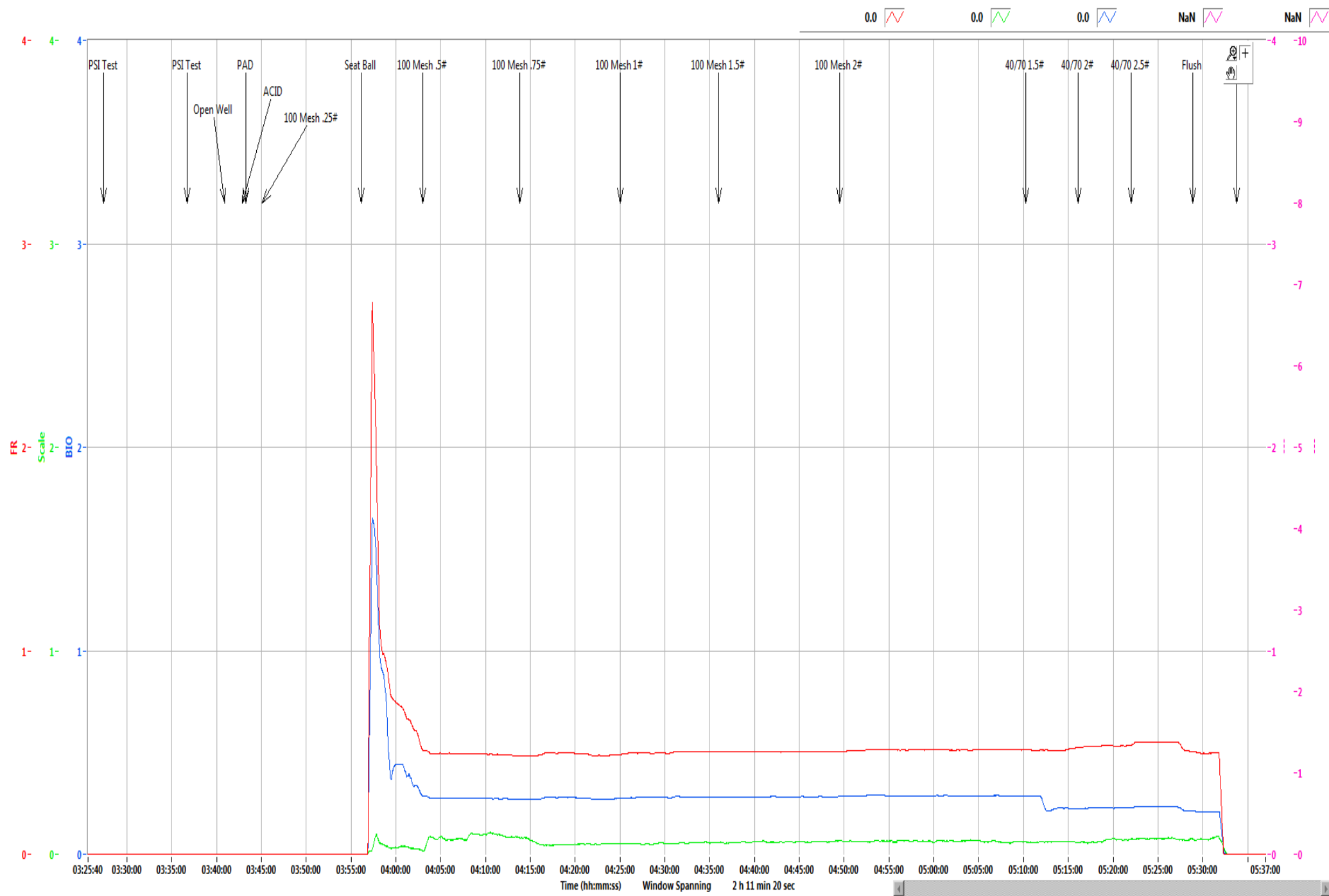
**Post Stage Report**  
**September 8, 2019**





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**Boggess Pad****3H**

Stage	29
Date:	9/8/19
OWP (psi):	4,011
Starting Time	3:40 AM
Ending Time	5:33 AM
Pump Time (hr:min)	01:53
Swap Time (hr:min)	01:48
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,999
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,820
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,201
Displacement (psi)	8,611
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,585
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,062
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	337
Pad (bbls)	45
Treatment (bbls)	7,669
Displacement (bbls)	349
(Acid Included)Total Fluid (bbls)	8,068
Dirty Job Total (bbls)	8,458
100 Mesh	294,880
40/70	105,060
Total Proppant (lbs)	399,940
Total Proppant %	100.0%

**CHEMICALS**

FR 9800	168
Biocide	88
Scale	17

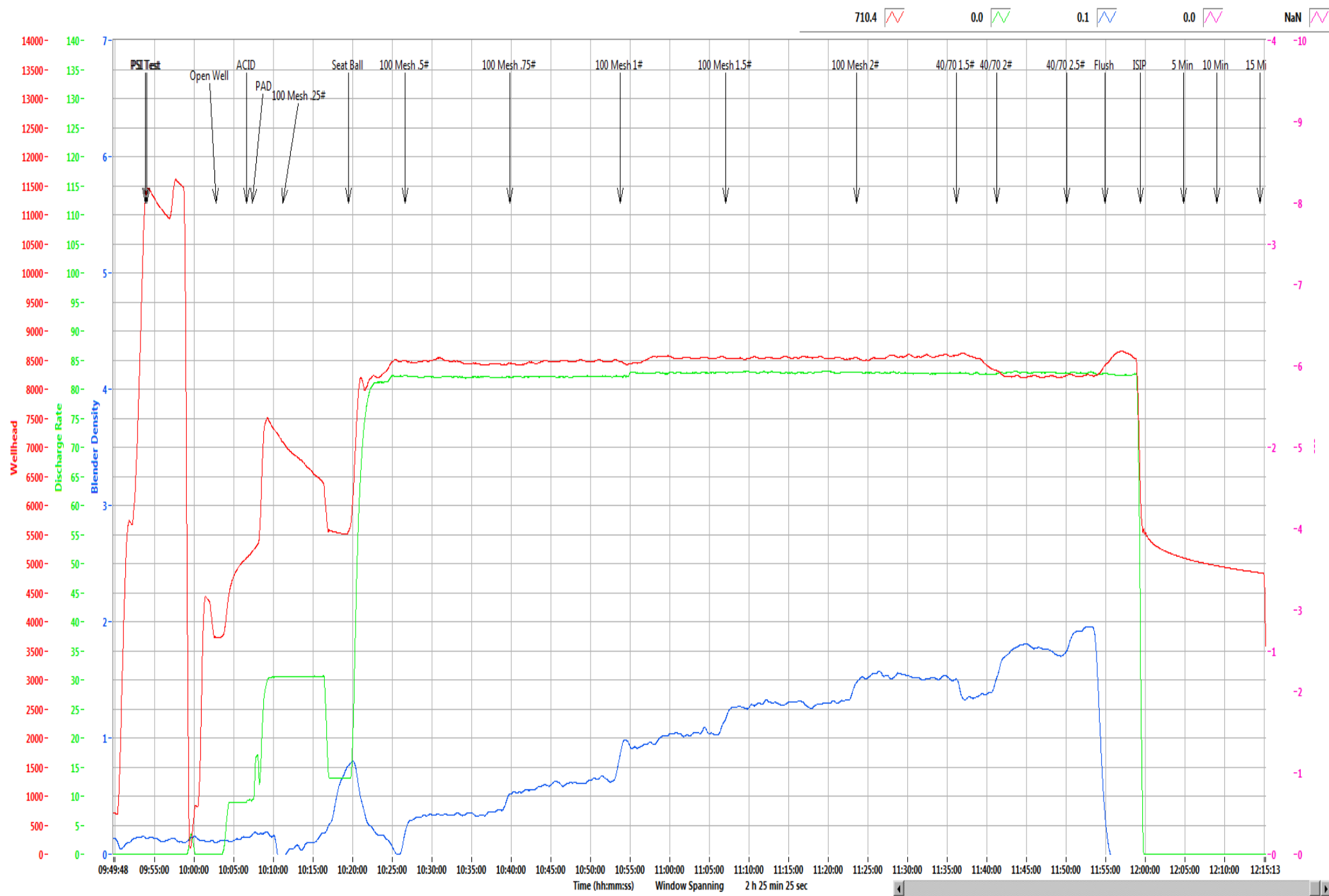




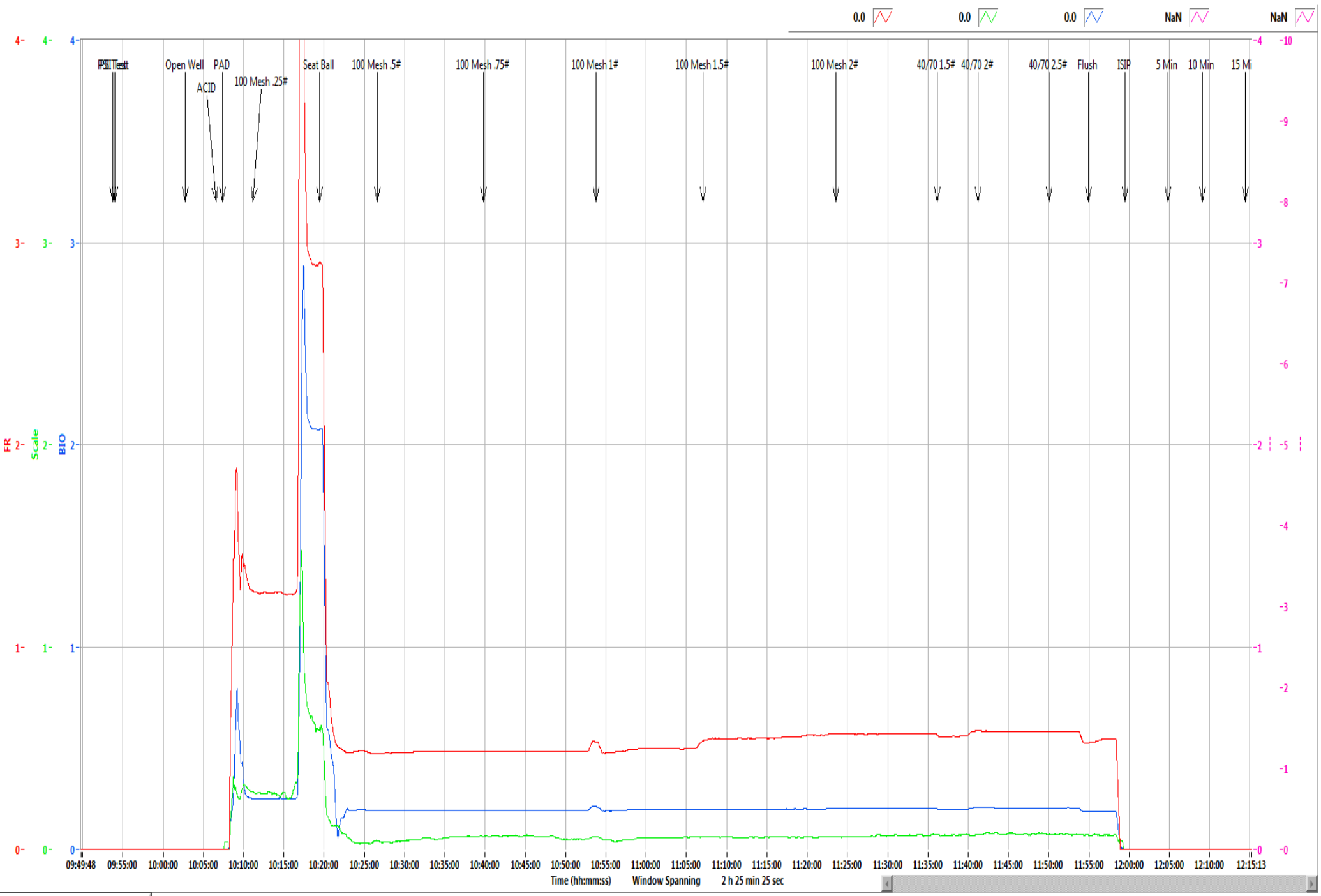
**NNE**  
**Boggess 3H**  
**Stage 30**  
**Producers Service Corp.**

**Post Stage Report**  
**September 8, 2019**





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<b>Bogges Pad</b>	<b>3H</b>
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Stage	30
Date:	9/8/19
OWP (psi):	3,730
Starting Time	9:53 AM
Ending Time	12:14 PM
Pump Time (hr:min)	02:21
Swap Time (hr:min)	00:32
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,657
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,460
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,642
Displacement (psi)	8,430
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,998
Final FG (psi/ft)	1.18
5 Minute Leakoff Pressure (psi)	5,088
5 Minute Leakoff Rate (psi/min)	182
10 Minute Leakoff Pressure (psi)	4,955
10 Minute Leakoff Rate (psi/min)	104
15 Minute Leakoff Pressure (psi)	4,837
15 Minute Leakoff Rate (psi/min)	77

**Fluids & Proppant**

Slickwater (bbls)	8,141
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	332
Pad (bbls)	100
Treatment (bbls)	7,705
Displacement (bbls)	342
(Acid Included)Total Fluid (bbls)	8,153
Dirty Job Total (bbls)	8,570
100 Mesh	300,540
40/70	104,320
Total Proppant (lbs)	404,860
Total Proppant %	101.2%

**CHEMICALS**

FR 9800	174
Biocide	87
Scale	19

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22964  
 Date: 9/8/2019  
 Well Name: Bogges 3H  
 Stage No.: 30

State: WV  
 County: Monongahela  
 Operator: Jeremy T/Jeremy M  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,005.40	CWT	\$ 5.50	\$ 16,529.70
SAND 40/70	40/70 white	1,043.20	CWT	\$ 5.75	\$ 5,998.40
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	174	GAL	\$ 17.75	\$ 3,088.50
BIOC11219A	Biocide @ 0.25 GPT	87	GAL	\$ 16.00	\$ 1,392.00
SCAL16846A	Scale Control @ 0.05 GPT	19	GAL	\$ 16.00	\$ 304.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		202.43	TON	\$ 55.00	\$ 11,133.65
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,906.25  
 25% Discount Applied \$ 14,726.56  
 Net Stage Total \$ 44,179.69

(Print Name)

Customer Rep:

Customer Signature:





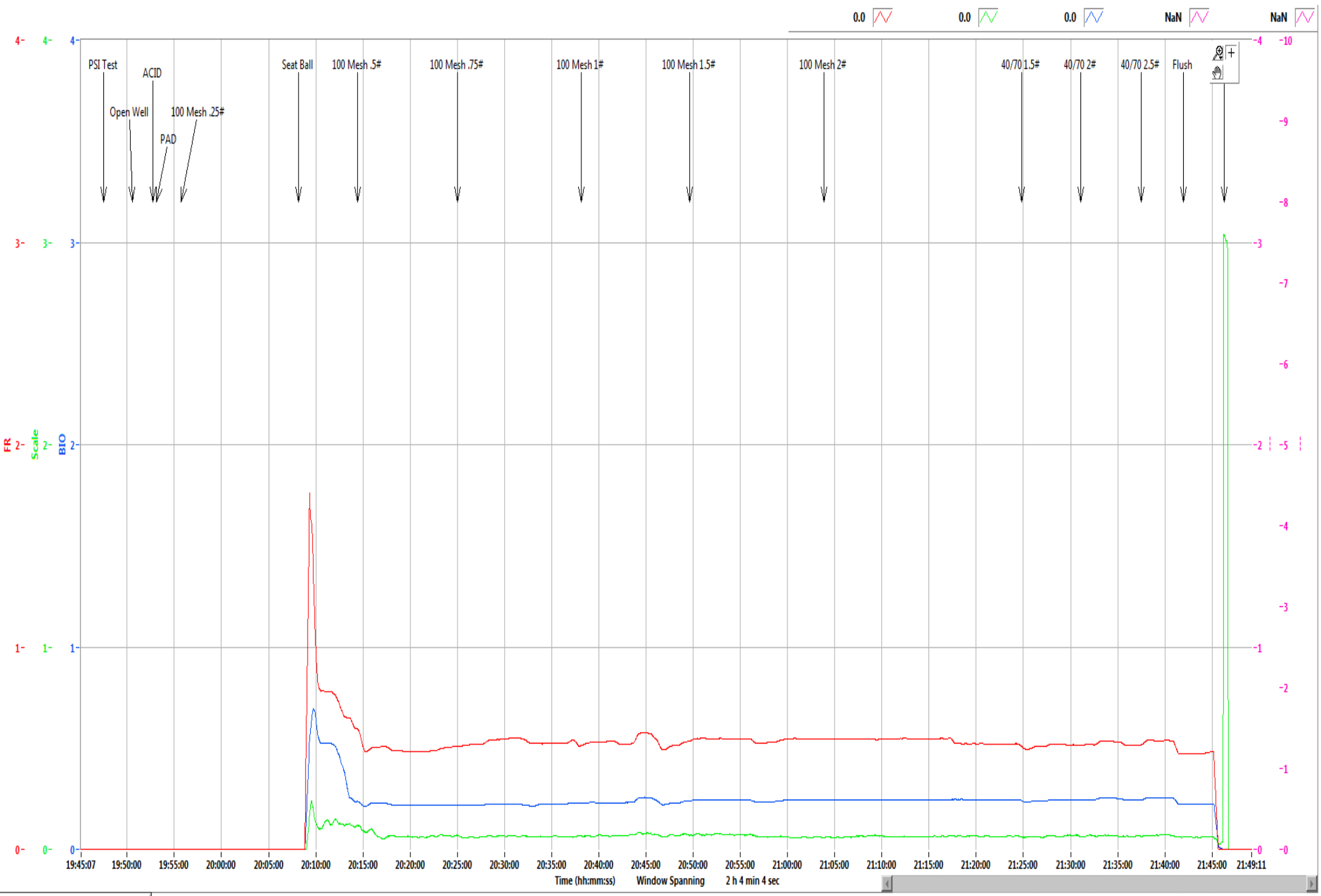
**NNE**  
**Boggess 3H**  
**Stage 31**  
**Producers Service Corp.**

**Post Stage Report**  
**September 8, 2019**





Refresh Graph



**Boggess Pad****3H**

Stage	31
Date:	9/8/19
OWP (psi):	3,475
Starting Time	7:50 PM
Ending Time	9:46 PM
Pump Time (hr:min)	01:56
Swap Time (hr:min)	05:05
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,617
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,613
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,164
Displacement (psi)	8,658
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,434
Final FG (psi/ft)	1.11
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,070
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	330
Pad (bbls)	70
Treatment (bbls)	7,659
Displacement (bbls)	341
(Acid Included)Total Fluid (bbls)	8,076
Dirty Job Total (bbls)	8,378
100 Mesh	298,060
40/70	101,500
Total Proppant (lbs)	399,560
Total Proppant %	99.9%

**CHEMICALS**

FR 9800	170
Biocide	77
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22966  
 Date: 9/8/2019  
 Well Name: Bogges 3H  
 Stage No.: 31

State: WV  
 County: Monongahela  
 Operator: Brad/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,980.60	CWT	\$ 5.50	\$ 16,393.30
SAND 40/70	40/70 white	1,015.00	CWT	\$ 5.75	\$ 5,836.25
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	170	GAL	\$ 17.75	\$ 3,017.50
BiOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.78	TON	\$ 55.00	\$ 10,987.90
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,868.95  
 25% Discount Applied \$ 14,467.24  
 Net Stage Total \$ 43,401.71

(Print Name) Rob Casper Customer Rep: \_\_\_\_\_ Customer Signature: [Signature]



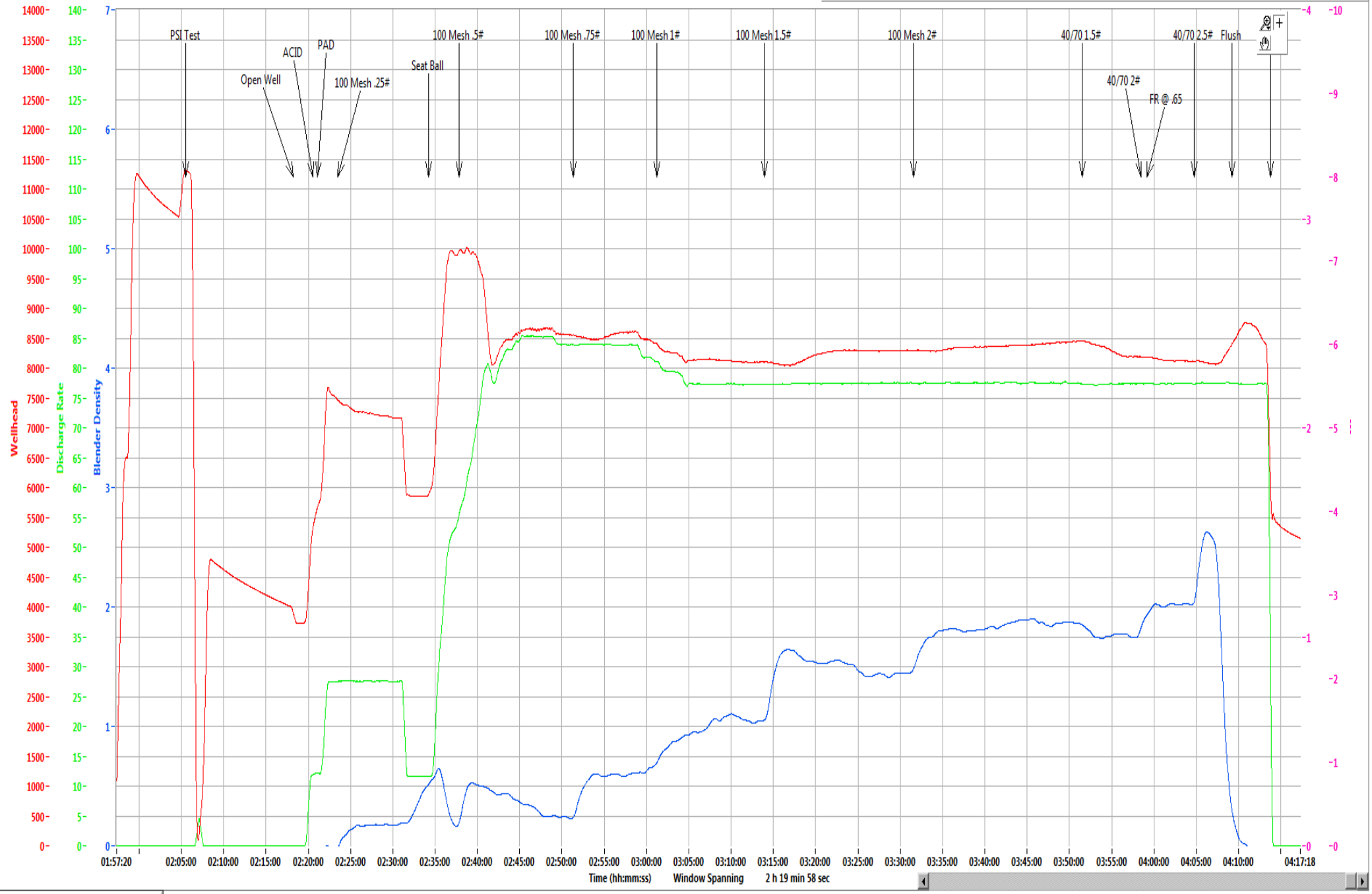
**NNE**  
**Boggess 3H**  
**Stage 32**  
**Producers Service Corp.**

**Post Stage Report**  
**September 9, 2019**



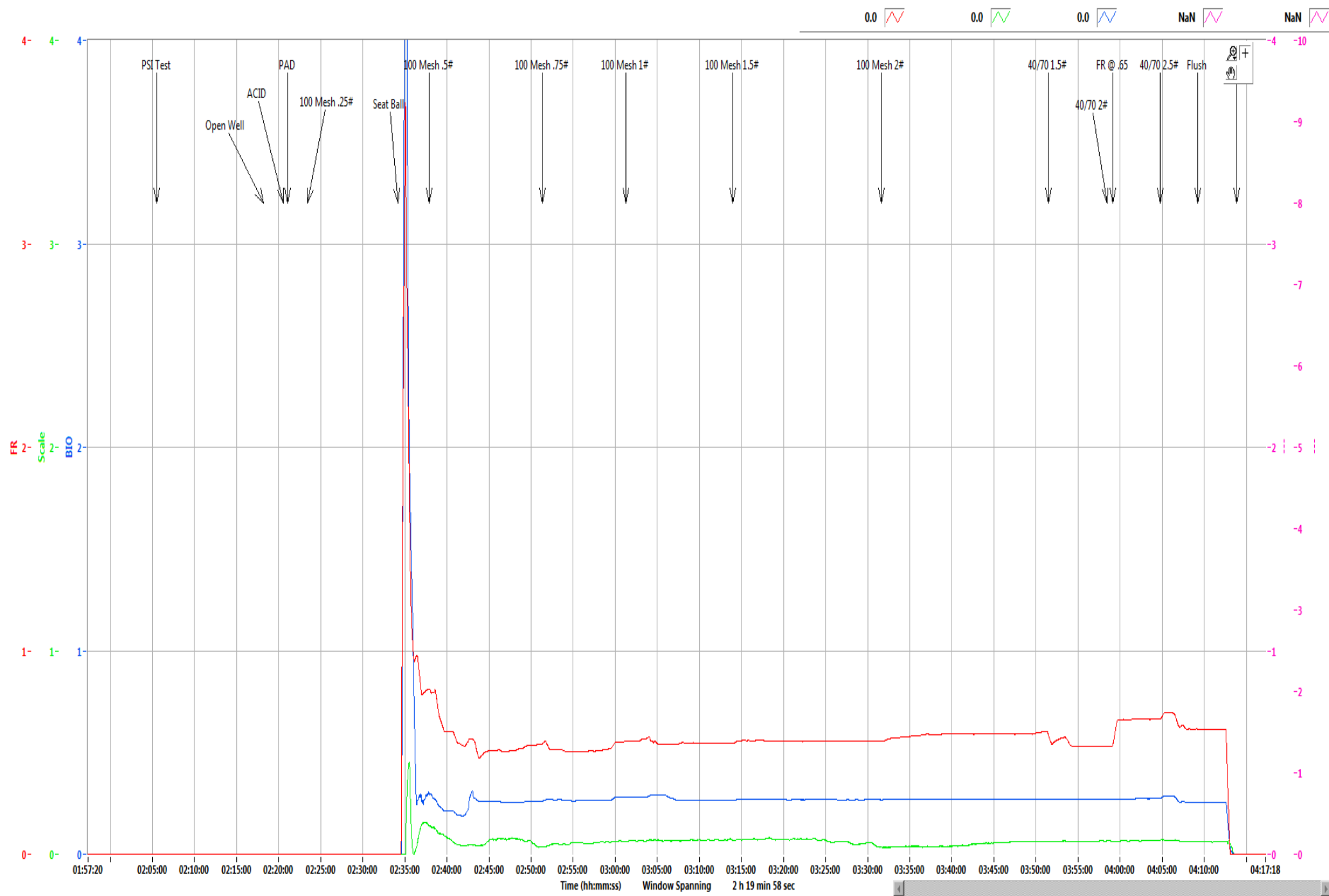


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<b>Boggess Pad</b>	<b>3H</b>
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Stage	32
Date:	9/9/19
OWP (psi):	3,727
Starting Time	2:18 AM
Ending Time	4:13 AM
Pump Time (hr:min)	01:55
Swap Time (hr:min)	01:41
Starting # Pumps	16
Finishing # Pumps	13
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,035
Average Treating Rate (bbl/min)	79
Average Treating Pressure (psi)	8,310
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	10,095
Displacement (psi)	8,615
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,330
Final FG (psi/ft)	1.10
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,645
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	292
Pad (bbls)	70
Treatment (bbls)	7,244
Displacement (bbls)	333
(Acid Included)Total Fluid (bbls)	7,651
Dirty Job Total (bbls)	7,983
100 Mesh	300,500
40/70	99,840
Total Proppant (lbs)	400,340
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	165
Biocide	80
Scale	18

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22968  
 Date: 9/9/2019  
 Well Name: Bogges 3H  
 Stage No.: 32

State: WV  
 County: Monongahela  
 Operator: Brad/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,005.00	CWT	\$ 5.50	\$ 16,527.50
SAND 40/70	40/70 white	998.40	CWT	\$ 5.75	\$ 5,740.80
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	165	GAL	\$ 17.75	\$ 2,928.75
BIOC11219A	Biocide @ 0.25 GPT	80	GAL	\$ 16.00	\$ 1,280.00
SCAL16846A	Scale Control @ 0.05 GPT	18	GAL	\$ 16.00	\$ 288.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.17	TON	\$ 55.00	\$ 11,009.35
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,904.40  
 25% Discount Applied \$ 14,476.10  
 Net Stage Total \$ 43,428.30

(Print Name)  
 Customer Rep:

*Rob Cowger*

Customer Signature:

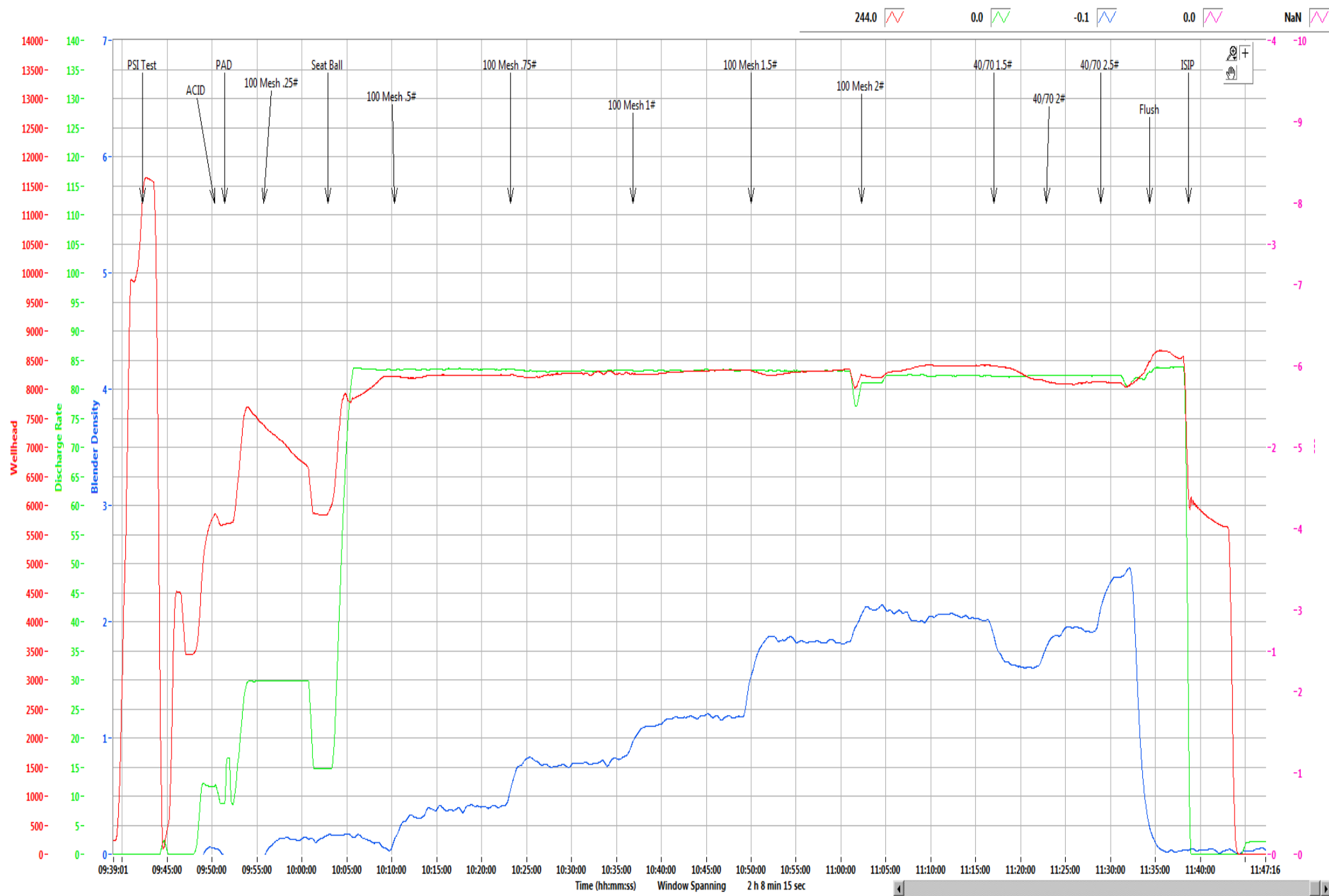
*RA Cowger*



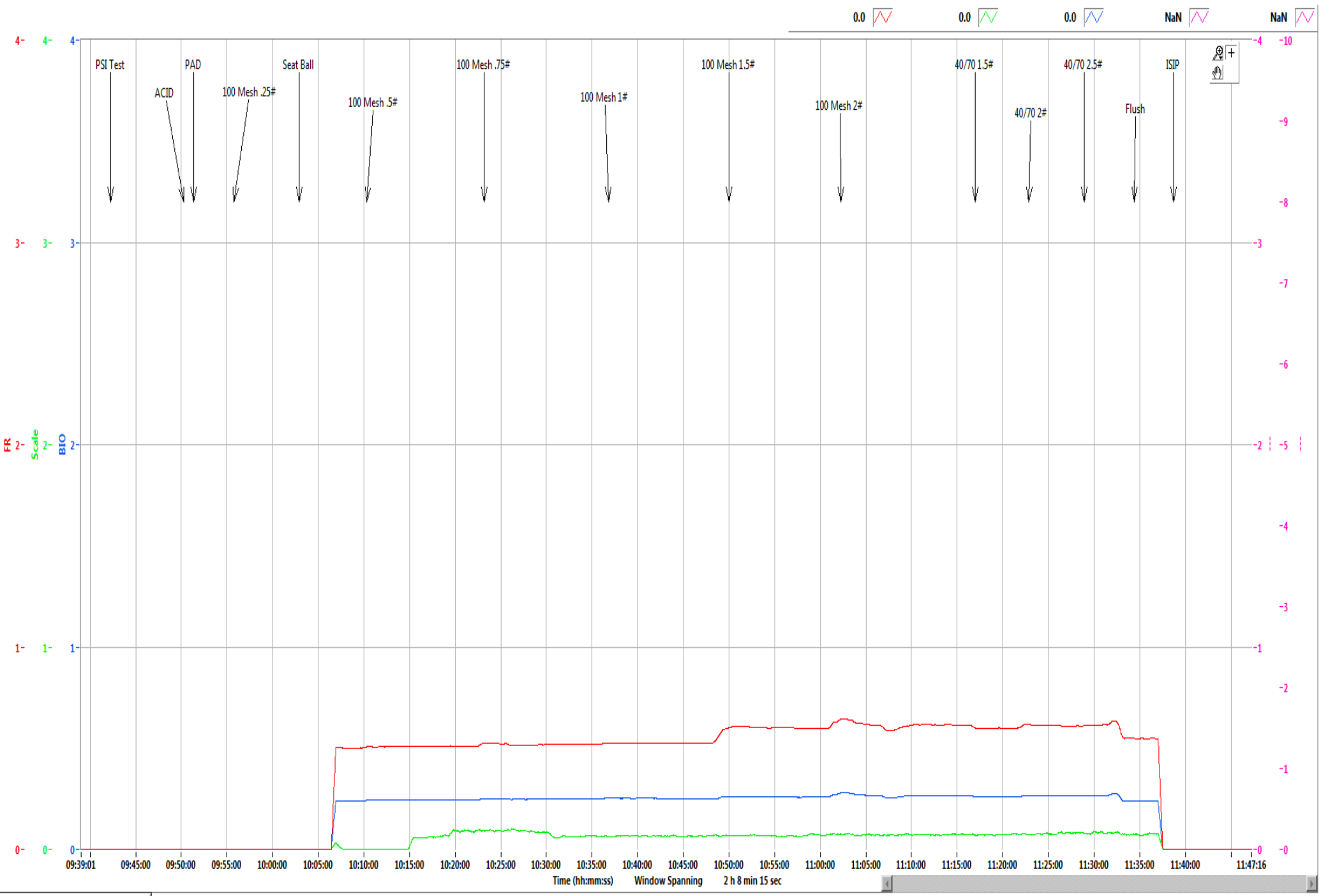
**NNE**  
**Bogges 3H**  
**Stage 33**  
**Producers Service Corp.**

**Post Stage Report**  
**September 9, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	33
Date:	9/9/19
OWP (psi):	3,439
Starting Time	9:47 AM
Ending Time	11:38 AM
Pump Time (hr:min)	01:51
Swap Time (hr:min)	01:03
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,043
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,243
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	8,456
Displacement (psi)	8,525
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,686
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,843
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	285
Pad (bbls)	104
Treatment (bbls)	7,409
Displacement (bbls)	342
(Acid Included)Total Fluid (bbls)	7,855
Dirty Job Total (bbls)	8,188
100 Mesh	299,240
40/70	101,000
Total Proppant (lbs)	400,240
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	165
Biocide	82
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22970  
 Date: 9/9/2019  
 Well Name: Bogges 3H  
 Stage No.: 33

State: WV  
 County: Monongahela  
 Operator: Moon/Tilton  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,992.40	CWT	\$ 5.50	\$ 16,458.20
SAND 40/70	40/70 white	1,010.00	CWT	\$ 5.75	\$ 5,807.50
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	165	GAL	\$ 17.75	\$ 2,928.75
BIOC11219A	Biocide @ 0.25 GPT	82	GAL	\$ 16.00	\$ 1,312.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.12	TON	\$ 55.00	\$ 11,006.60
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,293.05  
 25% Discount Applied \$ 14,573.26  
 Net Stage Total \$ 43,719.79

(Print Name)  
 Customer Rep: GB

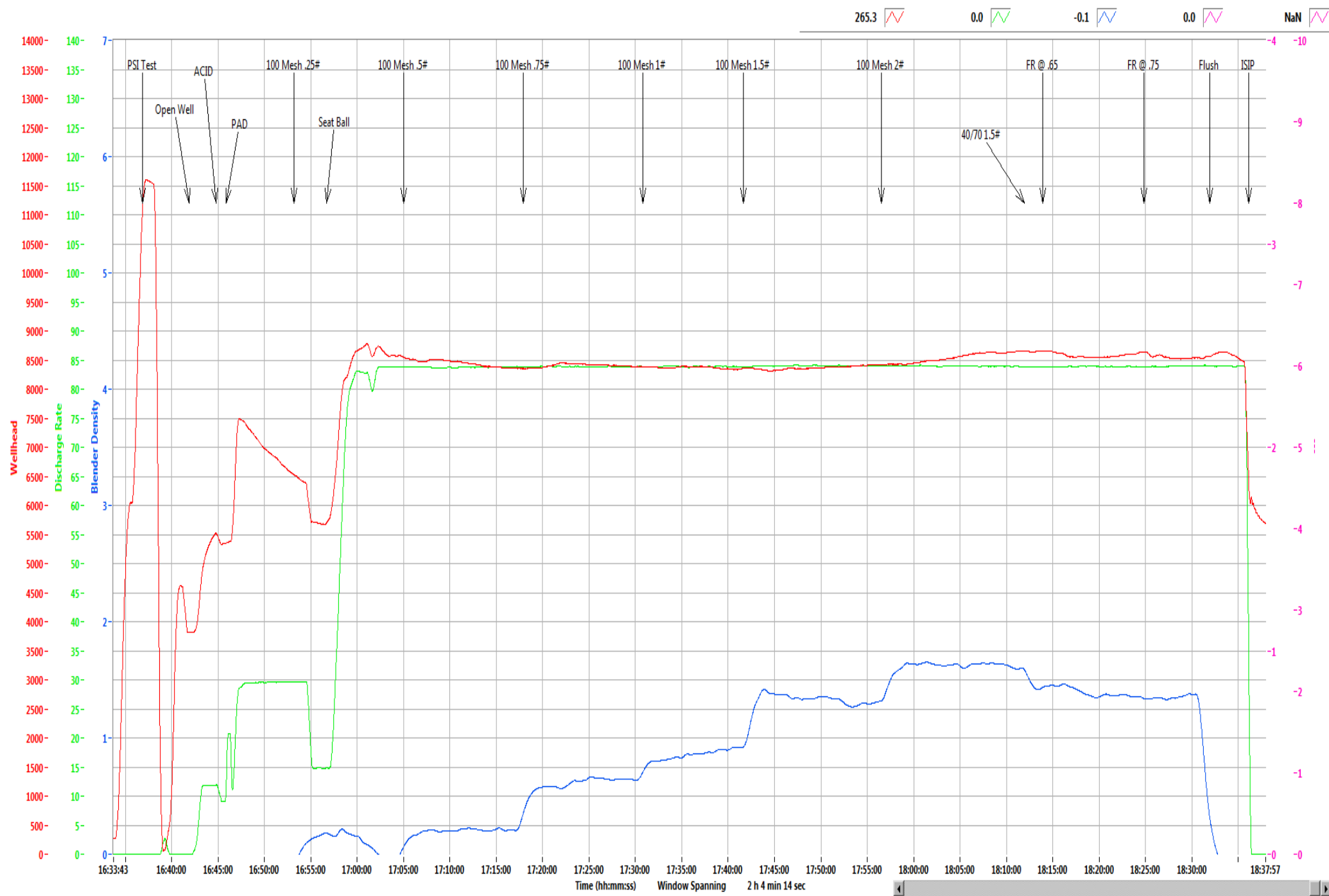
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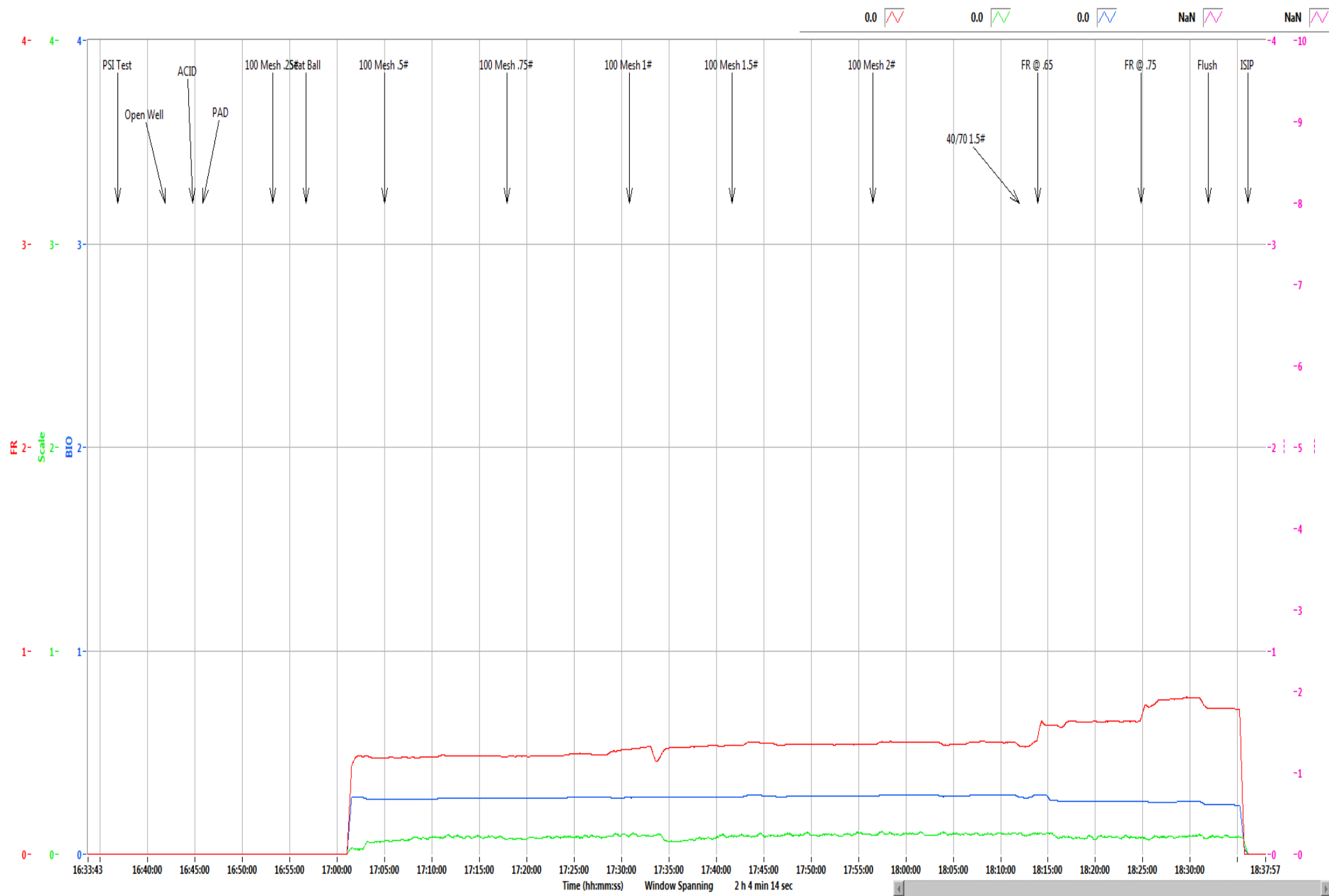
**NNE**  
**Bogges 3H**  
**Stage 34**  
**Producers Service Corp.**

**Post Stage Report**  
**September 9, 2019**





Refresh Graph



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**Bogges Pad****3H**

Stage	34
Date:	9/9/19
OWP (psi):	3,812
Starting Time	4:41 PM
Ending Time	6:36 PM
Pump Time (hr:min)	01:55
Swap Time (hr:min)	00:59
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,826
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,470
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,839
Displacement (psi)	8,583
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,858
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	8,224
Acid 7.5% HCL (gal)	500
Wireline Pump Down (bbls)	302
Pad (bbls)	209
Treatment (bbls)	7,687
Displacement (bbls)	333
(Acid Included)Total Fluid (bbls)	8,236
Dirty Job Total (bbls)	8,544
100 Mesh	296,860
40/70	99,900
Total Proppant (lbs)	396,760
Total Proppant %	99.2%

**CHEMICALS**

FR 9800	199
Biocide	95
Scale	22

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22972  
 Date: 9/9/2019  
 Well Name: Bogges 3H  
 Stage No.: 34

State: WV  
 County: Monongahela  
 Operator: Stetson/Dunn  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	500	GAL	\$ 1.25	\$ 625.00
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	1	GAL	\$ 35.00	\$ 35.00
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,968.60	CWT	\$ 5.50	\$ 16,327.30
SAND 40/70	40/70 white	999.00	CWT	\$ 5.75	\$ 5,744.25
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	199	GAL	\$ 17.75	\$ 3,532.25
BIOC11219A	Biocide @ 0.25 GPT	95	GAL	\$ 16.00	\$ 1,520.00
SCAL16846A	Scale Control @ 0.05 GPT	22	GAL	\$ 16.00	\$ 352.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		198.38	TON	\$ 55.00	\$ 10,910.90
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,846.70  
 25% Discount Applied \$ 14,711.68  
 Net Stage Total \$ 44,135.03

(Print Name)  
 Customer Rep:

*Rob Cowser*

Customer Signature:

*Rob Cowser*

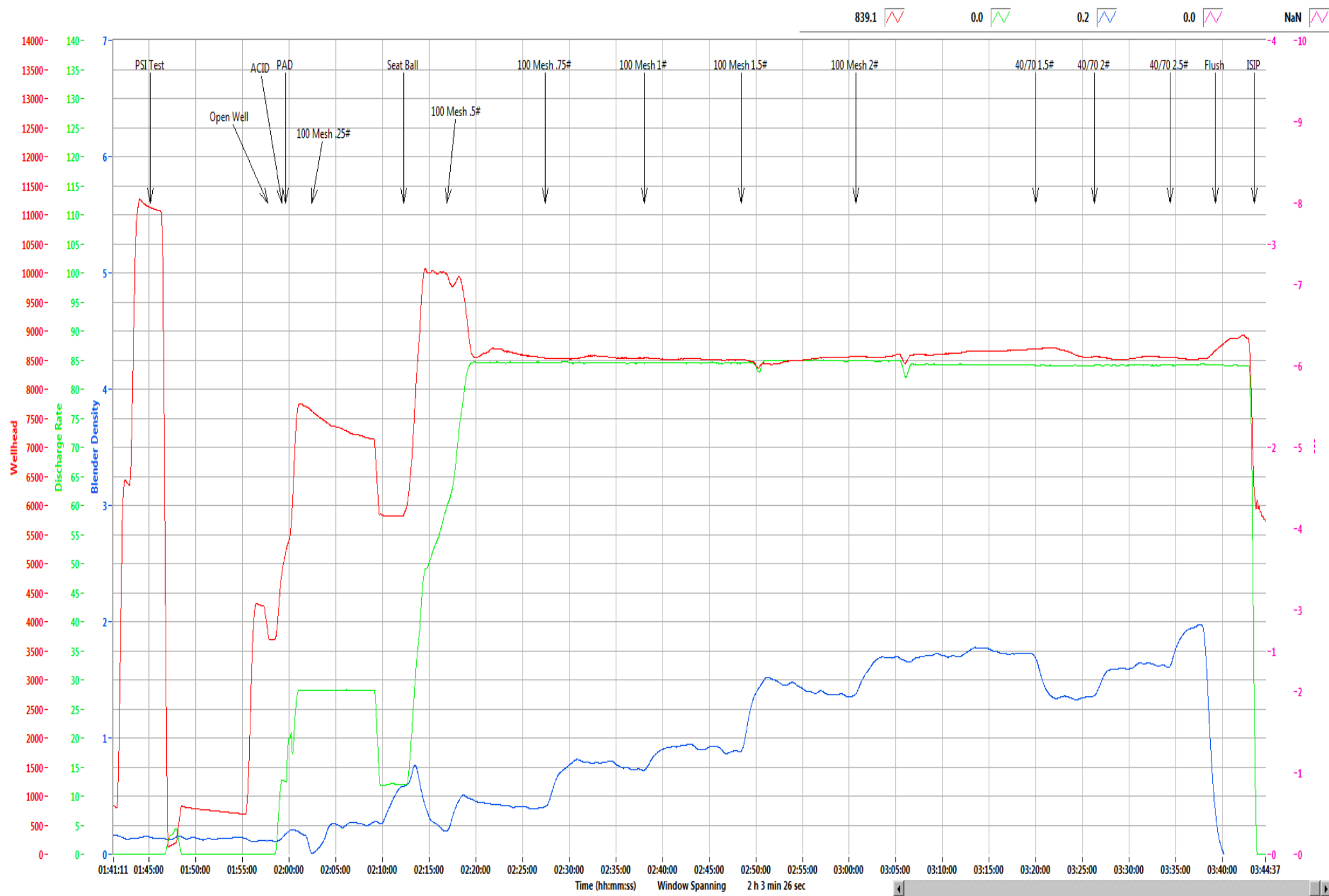




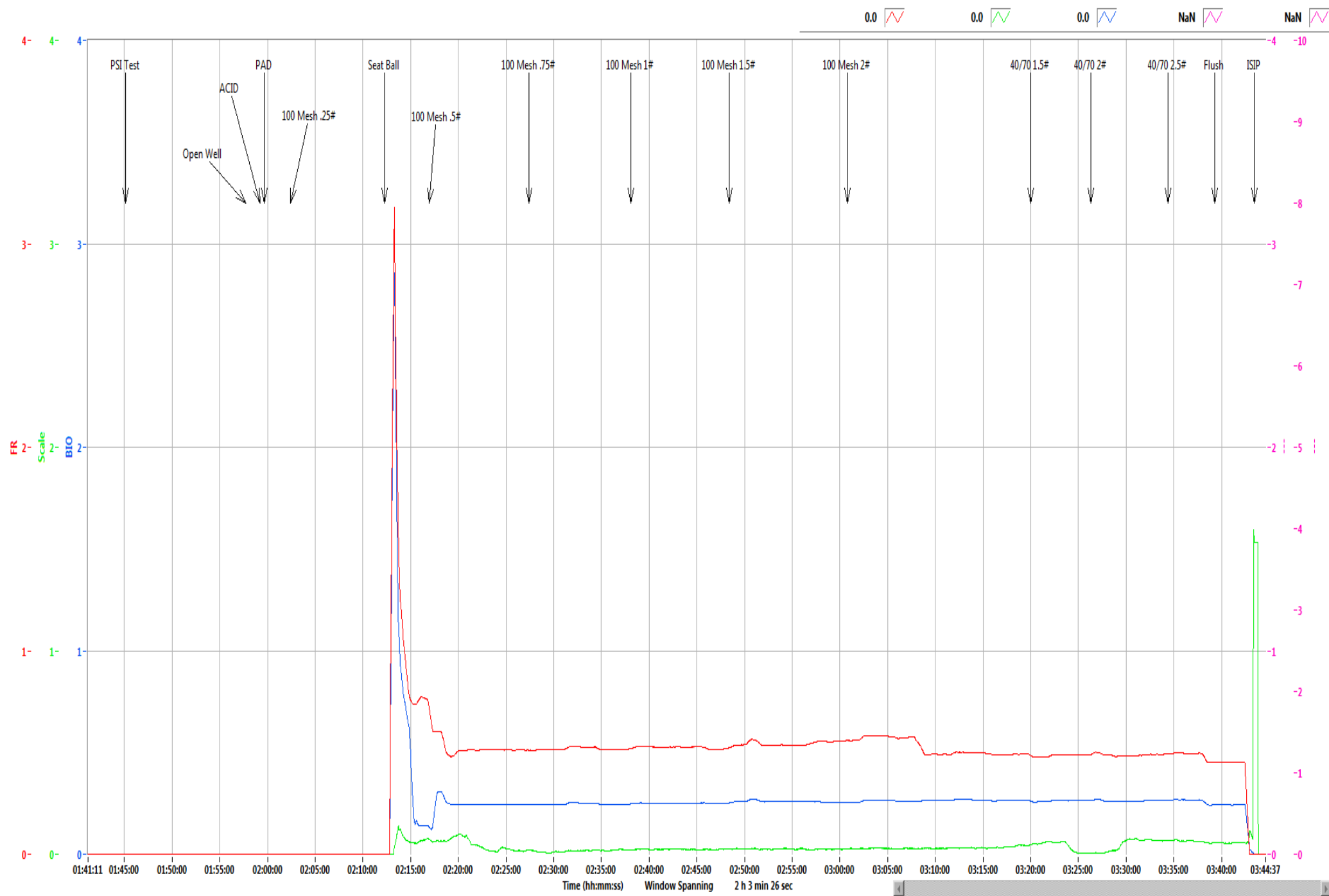
**NNE**  
**Boggess 3H**  
**Stage 35**  
**Producers Service Corp.**

**Post Stage Report**  
**September 10, 2019**





Refresh Graph



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**Boggess Pad****3H**

Stage	35
Date:	9/10/19
OWP (psi):	3,706
Starting Time	1:57 AM
Ending Time	3:43 AM
Pump Time (hr:min)	01:46
Swap Time (hr:min)	02:29
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,049
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,561
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	10,139
Displacement (psi)	8,661
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,781
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,467
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	270
Pad (bbls)	72
Treatment (bbls)	7,078
Displacement (bbls)	325
(Acid Included)Total Fluid (bbls)	7,473
Dirty Job Total (bbls)	7,808
100 Mesh	299,500
40/70	104,700
Total Proppant (lbs)	404,200
Total Proppant %	101.1%

**CHEMICALS**

FR 9800	162
Biocide	82
Scale	19

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22974  
 Date: 9/10/2019  
 Well Name: Bogges 3H  
 Stage No.: 35

State: WV  
 County: Monongahela  
 Operator: Stetson/Dunn  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,995.00	CWT	\$ 5.50	\$ 16,472.50
SAND 40/70	40/70 white	1,047.00	CWT	\$ 5.75	\$ 6,020.25
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	162	GAL	\$ 17.75	\$ 2,875.50
BIOC11219A	Biocide @ 0.25 GPT	82	GAL	\$ 16.00	\$ 1,312.00
SCAL16846A	Scale Control @ 0.05 GPT	19	GAL	\$ 16.00	\$ 304.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		202.1	TON	\$ 55.00	\$ 11,115.50
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,229.75  
 25% Discount Applied \$ 14,557.44  
 Net Stage Total \$ 43,672.31

(Print Name) Rob Owen Customer Rep: \_\_\_\_\_ Customer Signature: [Signature]

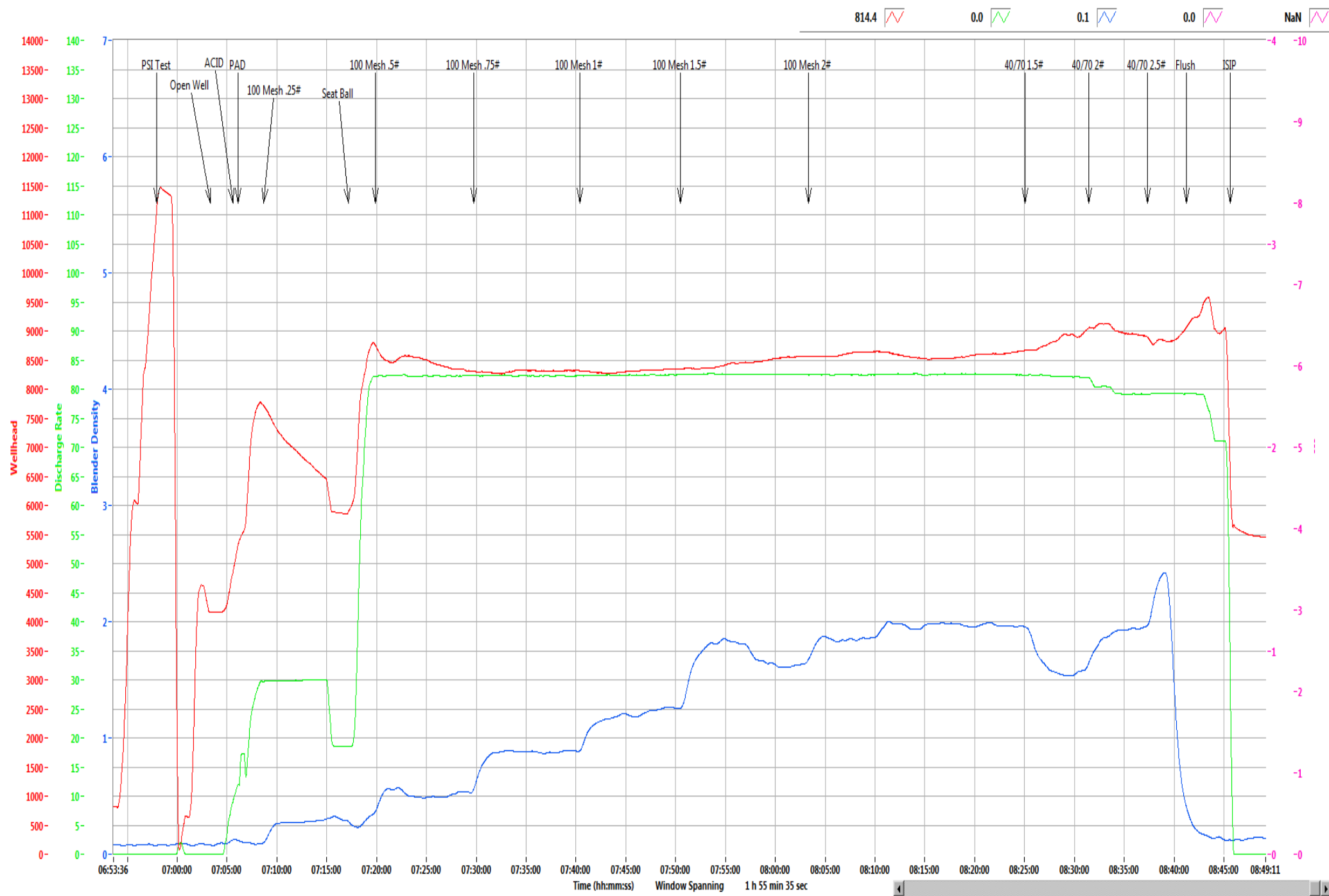


**NNE**  
**Boggess 3H**  
**Stage 36**  
**Producers Service Corp.**

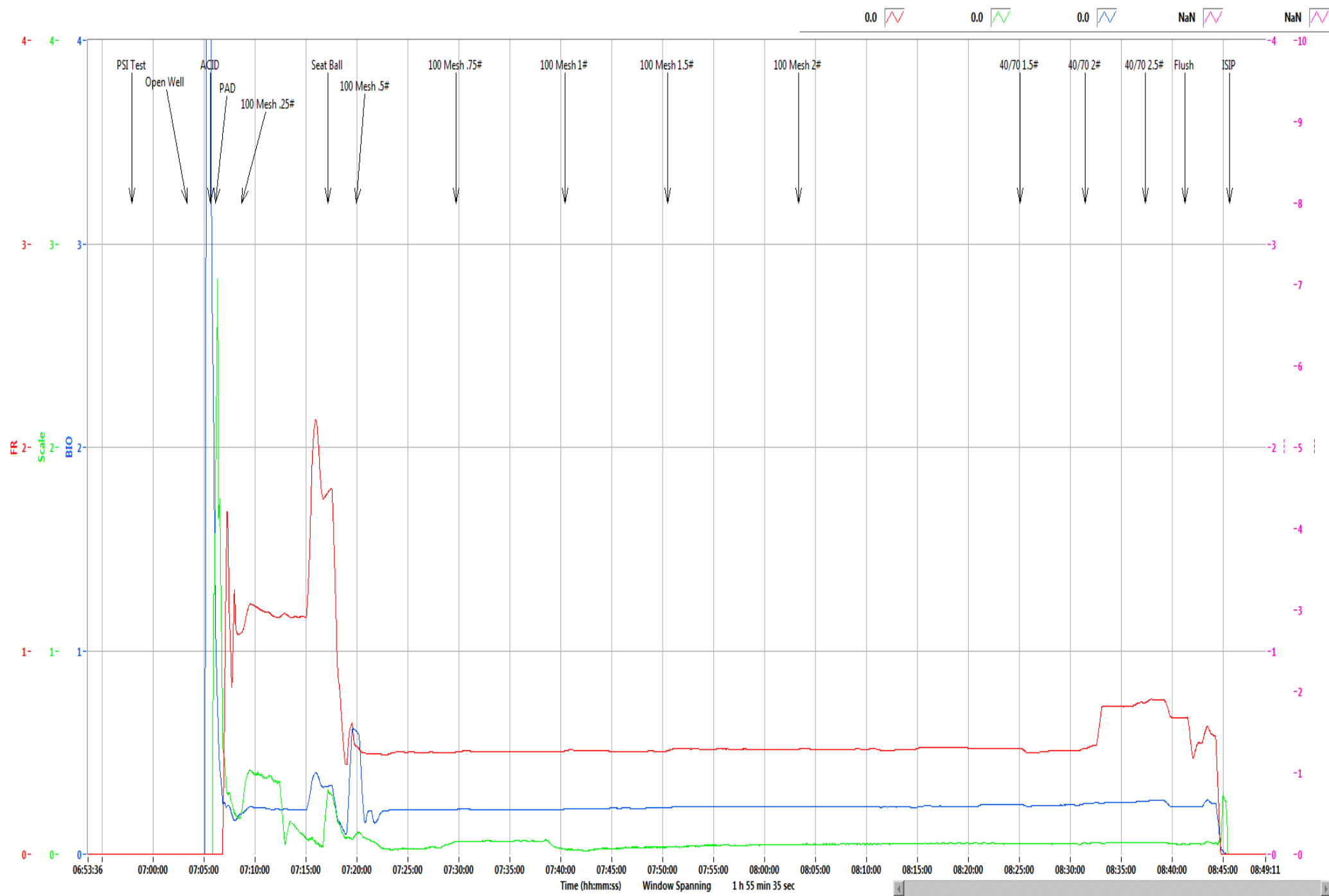
**Post Stage Report**  
**September 10, 2019**







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**Boggess Pad****3H**

Stage	36
Date:	9/10/19
OWP (psi):	4,167
Starting Time	6:57 AM
Ending Time	8:45 AM
Pump Time (hr:min)	01:48
Swap Time (hr:min)	00:59
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,079
Average Treating Rate (bbl/min)	82
Average Treating Pressure (psi)	8,542
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	8,542
Displacement (psi)	9,116
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,732
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,202
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	271
Pad (bbls)	65
Treatment (bbls)	6,820
Displacement (bbls)	318
(Acid Included)Total Fluid (bbls)	7,208
Dirty Job Total (bbls)	7,519
100 Mesh	302,800
40/70	99,720
Total Proppant (lbs)	402,520
Total Proppant %	100.6%

**CHEMICALS**

FR 9800	161
Biocide	75
Scale	16

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22976  
 Date: 9/10/2019  
 Well Name: Bogges 3H  
 Stage No.: 36

State: WV  
 County: Monongahela  
 Operator: Jeremy T/Jeremy M  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,028.00	CWT	\$ 5.50	\$ 16,654.00
SAND 40/70	40/70 white	997.20	CWT	\$ 5.75	\$ 5,733.90
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	161	GAL	\$ 17.75	\$ 2,857.75
BIOC11219A	Biocide @ 0.25 GPT	75	GAL	\$ 16.00	\$ 1,200.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.26	TON	\$ 55.00	\$ 11,069.30
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,900.95  
 25% Discount Applied \$ 14,475.24  
 Net Stage Total \$ 43,425.71

(Print Name)  
 Customer Rep: E. Boone

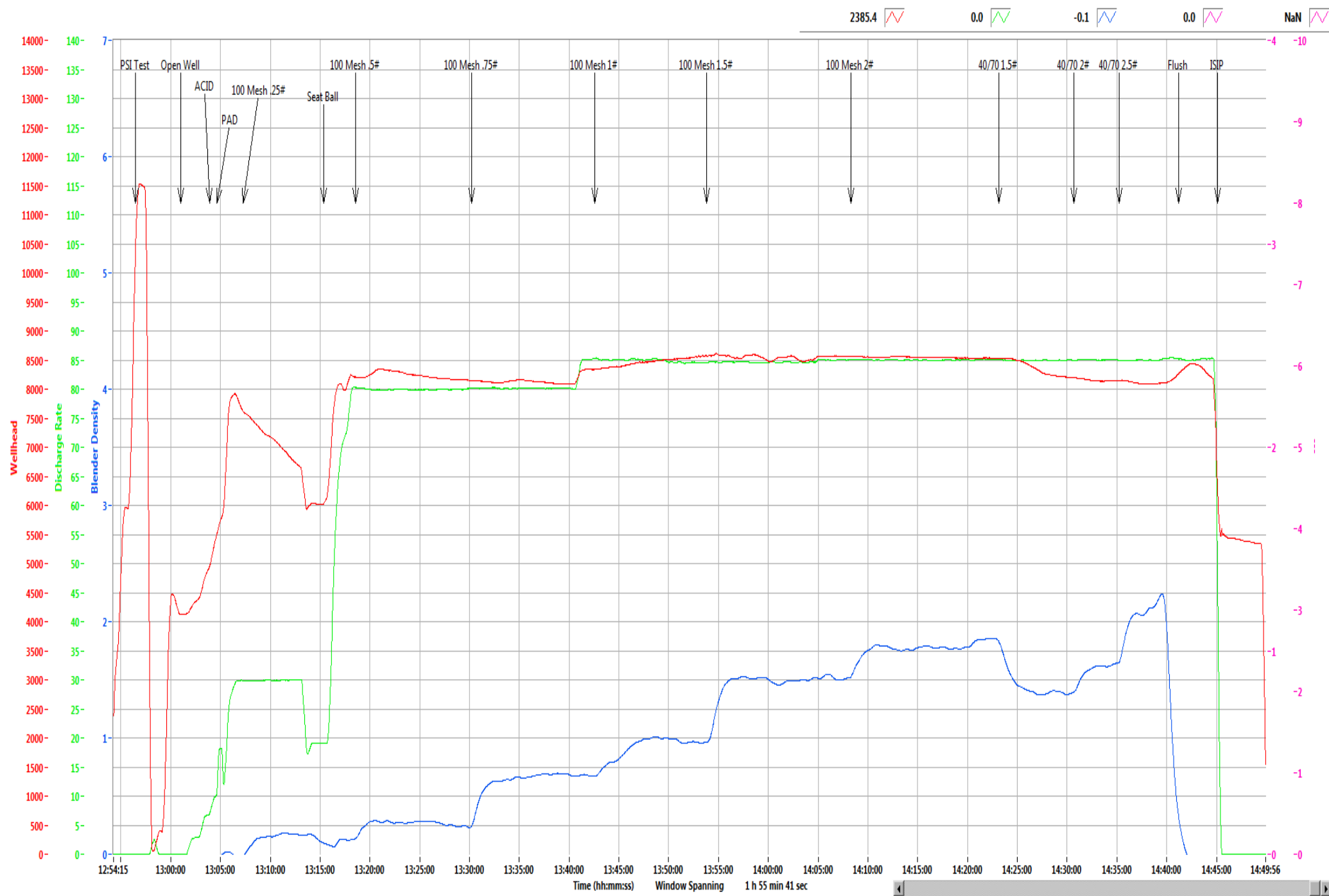
Customer Signature: E. Boone



**NNE**  
**Boggess 3H**  
**Stage 37**  
**Producers Service Corp.**

**Post Stage Report**  
**September 10, 2019**





Refresh Graph



Refresh Graph



<b>Boggess Pad</b>	<b>3H</b>
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Stage	37
Date:	9/10/19
OWP (psi):	4,134
Starting Time	12:56 PM
Ending Time	2:45 PM
Pump Time (hr:min)	01:49
Swap Time (hr:min)	01:10
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,212
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,366
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,661
Displacement (psi)	8,308
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,153
Final FG (psi/ft)	1.20
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,352
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	263
Pad (bbls)	67
Treatment (bbls)	6,971
Displacement (bbls)	315
(Acid Included)Total Fluid (bbls)	7,358
Dirty Job Total (bbls)	7,723
100 Mesh	300,600
40/70	100,880
Total Proppant (lbs)	401,480
Total Proppant %	100.4%

**CHEMICALS**

FR 9800	155
Biocide	76
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22978  
 Date: 9/10/2019  
 Well Name: Boggess 3H  
 Stage No.: 37

State: WV  
 County: Monongahela  
 Operator: Jeremy T/Jeremy M  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,006.00	CWT	\$ 5.50	\$ 16,533.00
SAND 40/70	40/70 white	1,008.80	CWT	\$ 5.75	\$ 5,800.60
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	155	GAL	\$ 17.75	\$ 2,751.25
BIOC11219A	Biocide @ 0.25 GPT	76	GAL	\$ 16.00	\$ 1,216.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.74	TON	\$ 55.00	\$ 11,040.70
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,743.55  
 25% Discount Applied \$ 14,435.89  
 Net Stage Total \$ 43,307.66

(Print Name)  
 Customer Rep: E. Stone

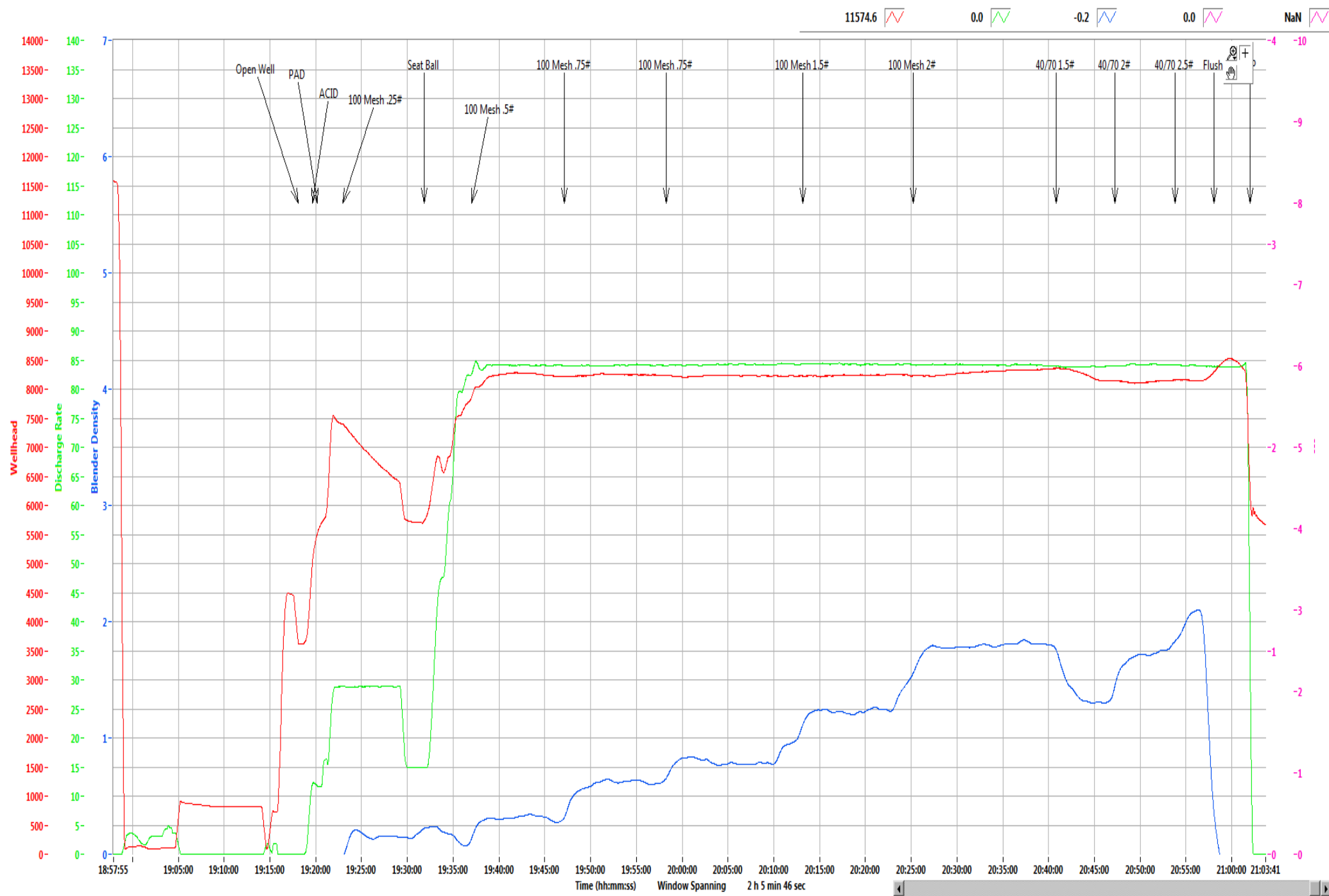
Customer Signature: E. Stone



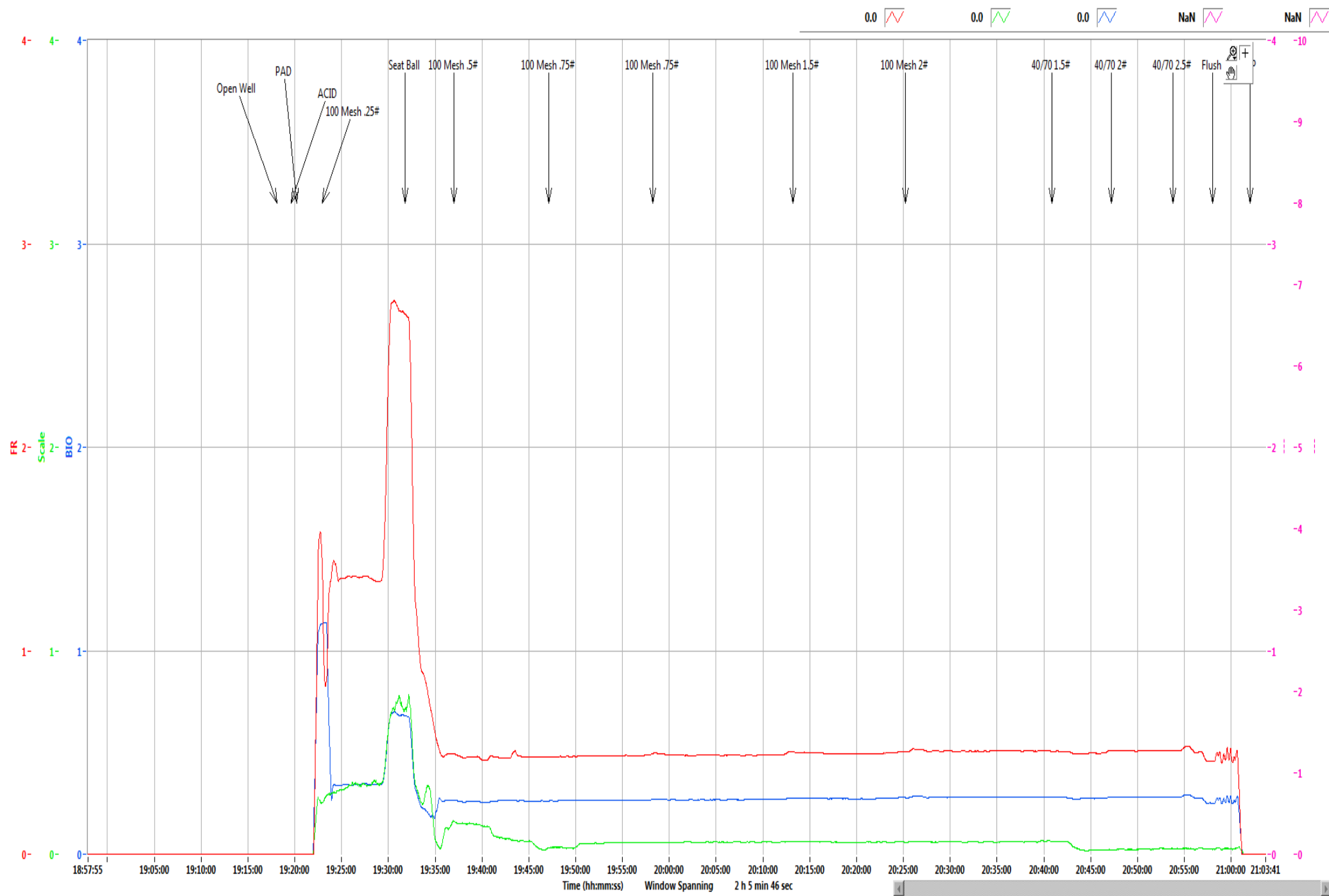
**NNE**  
**Boggess 3H**  
**Stage 38**  
**Producers Service Corp.**

**Post Stage Report**  
**September 10, 2019**





Refresh Graph



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**Boggess Pad****3H**

Stage	38
Date:	9/10/19
OWP (psi):	3,618
Starting Time	7:18 PM
Ending Time	9:01 PM
Pump Time (hr:min)	01:43
Swap Time (hr:min)	01:52
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,881
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,233
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,413
Displacement (psi)	8,293
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,556
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,368
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	263
Pad (bbls)	61
Treatment (bbls)	7,000
Displacement (bbls)	308
(Acid Included)Total Fluid (bbls)	7,374
Dirty Job Total (bbls)	7,724
100 Mesh	300,740
40/70	99,760
Total Proppant (lbs)	400,500
Total Proppant %	100.1%

**CHEMICALS**

FR 9800	164
Biocide	85
Scale	19

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22980  
 Date: 9/10/2019  
 Well Name: Boggess 3H  
 Stage No.: 38

State: WV  
 County: Monongahela  
 Operator: Stetson/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,007.40	CWT	\$ 5.50	\$ 16,540.70
SAND 40/70	40/70 white	997.60	CWT	\$ 5.75	\$ 5,736.20
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	164	GAL	\$ 17.75	\$ 2,911.00
BIOC11219A	Biocide @ 0.25 GPT	85	GAL	\$ 16.00	\$ 1,360.00
SCAL16846A	Scale Control @ 0.05 GPT	19	GAL	\$ 16.00	\$ 304.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.25	TON	\$ 55.00	\$ 11,013.75
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,995.65  
 25% Discount Applied \$ 14,498.91  
 Net Stage Total \$ 43,496.74

(Print Name)

Customer Rep: Rob Cowger

Customer Signature: [Signature]

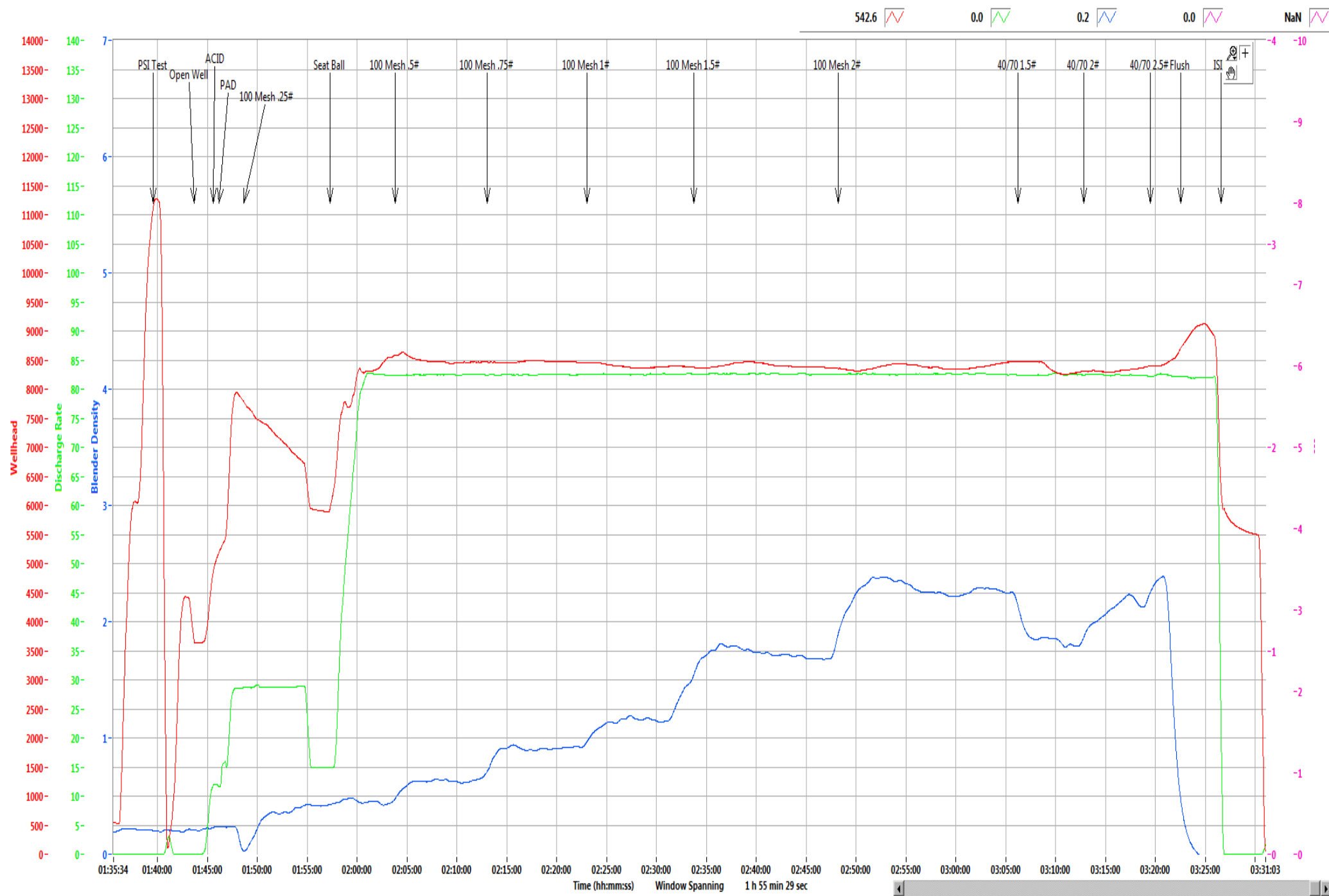




**NNE**  
**Boggess 3H**  
**Stage 39**  
**Producers Service Corp.**

**Post Stage Report**  
**September 11, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	39
Date:	9/11/19
OWP (psi):	3,620
Starting Time	1:43 AM
Ending Time	3:26 AM
Pump Time (hr:min)	01:43
Swap Time (hr:min)	01:49
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,358
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,410
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	8,795
Displacement (psi)	8,771
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,031
Final FG (psi/ft)	1.18
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,184
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	252
Pad (bbls)	64
Treatment (bbls)	6,814
Displacement (bbls)	307
(Acid Included)Total Fluid (bbls)	7,190
Dirty Job Total (bbls)	7,534
100 Mesh	298,840
40/70	104,410
Total Proppant (lbs)	403,250
Total Proppant %	100.8%

**CHEMICALS**

FR 9800	149
Biocide	74
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22982  
 Date: 9/11/2019  
 Well Name: Bogges 3H  
 Stage No.: 39

State: WV  
 County: Monongahela  
 Operator: Stetson/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,988.40	CWT	\$ 5.50	\$ 16,436.20
SAND 40/70	40/70 white	1,044.10	CWT	\$ 5.75	\$ 6,003.58
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	149	GAL	\$ 17.75	\$ 2,644.75
BIOC11219A	Biocide @ 0.25 GPT	74	GAL	\$ 16.00	\$ 1,184.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.625	TON	\$ 55.00	\$ 11,089.38
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,759.90  
 25% Discount Applied \$ 14,439.98  
 Net Stage Total \$ 43,319.93

(Print Name) Customer Rep: Rob Cowger Customer Signature: [Signature]

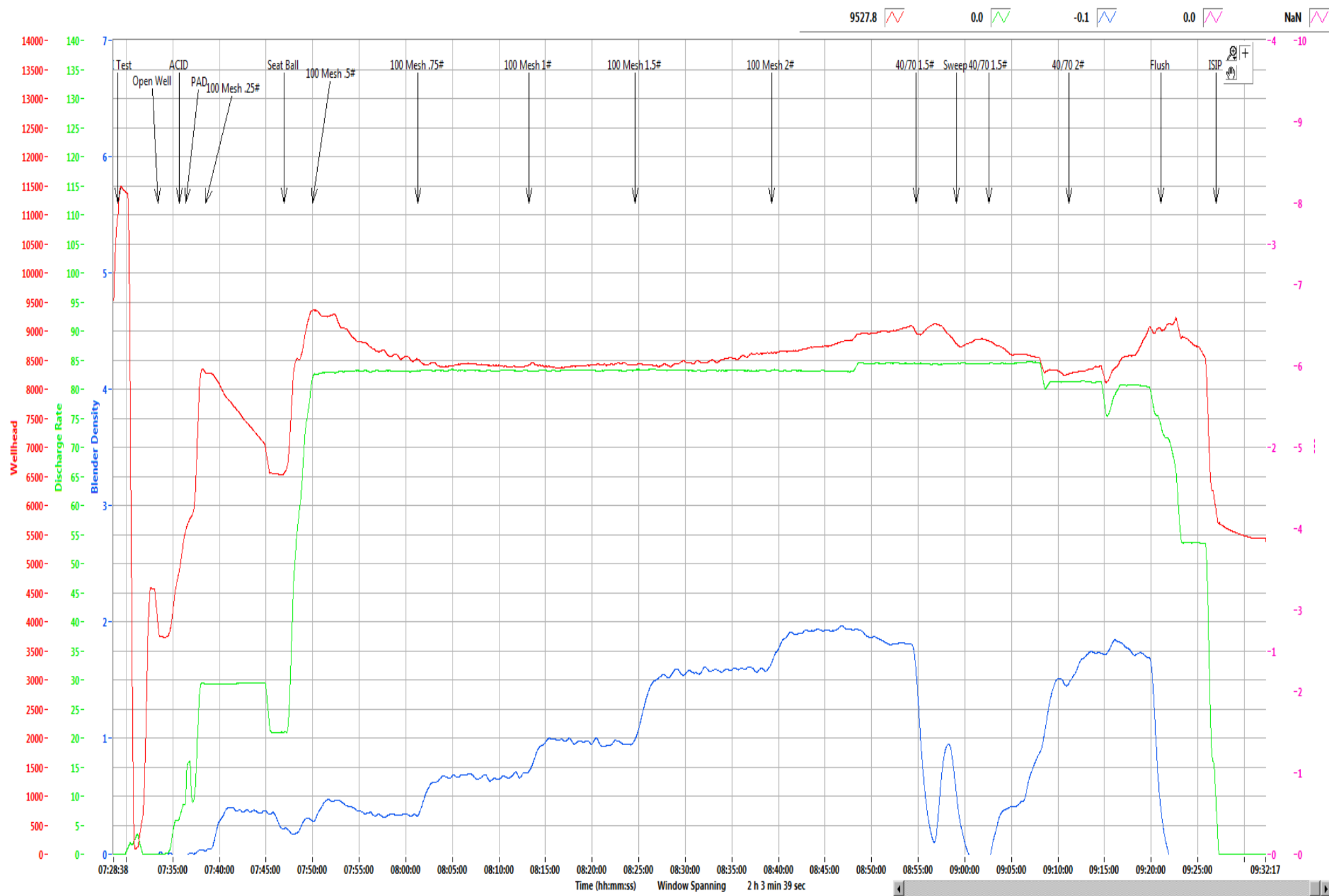


**NNE**  
**Boggess 3H**  
**Stage 40**  
**Producers Service Corp.**

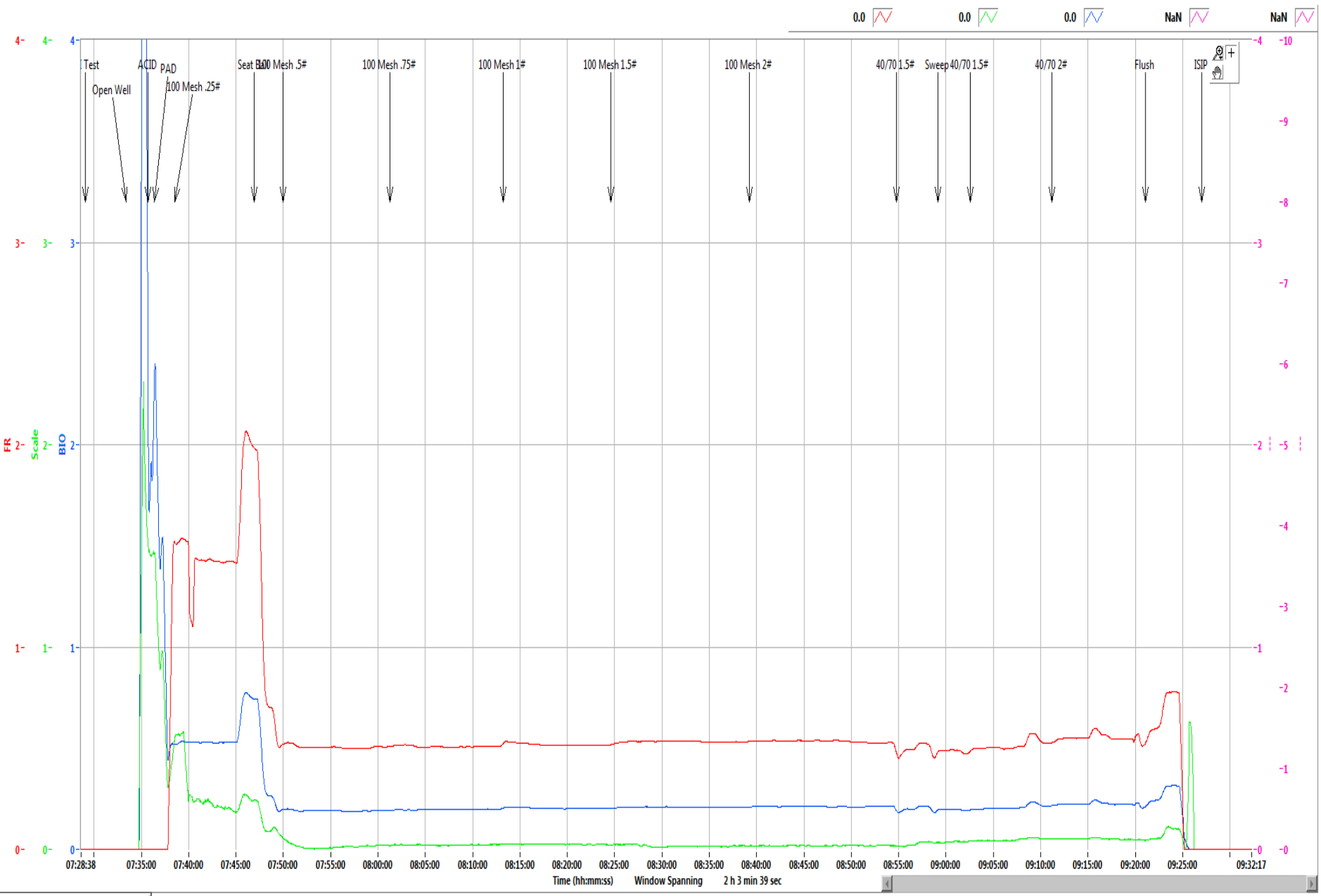
**Post Stage Report**  
**September 11, 2019**







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**Boggess Pad****3H**

Stage	40
Date:	9/11/19
OWP (psi):	3,743
Starting Time	7:33 AM
Ending Time	9:26 AM
Pump Time (hr:min)	01:53
Swap Time (hr:min)	07:33
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,709
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,618
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	9,472
Displacement (psi)	8,958
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,619
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	5,489
5 Minute Leakoff Rate (psi/min)	26
10 Minute Leakoff Pressure (psi)	5,375
10 Minute Leakoff Rate (psi/min)	24
15 Minute Leakoff Pressure (psi)	5,180
15 Minute Leakoff Rate (psi/min)	29

**Fluids & Proppant**

Slickwater (bbls)	7,987
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	241
Pad (bbls)	61
Treatment (bbls)	7,626
Displacement (bbls)	301
(Acid Included)Total Fluid (bbls)	7,993
Dirty Job Total (bbls)	8,335
100 Mesh	283,120
40/70	103,160
Total Proppant (lbs)	386,280
Total Proppant %	96.6%

**CHEMICALS**

FR 9800	154
Biocide	77
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22982  
 Date: 9/11/2019  
 Well Name: Bogges 3H  
 Stage No.: 40

State: WV  
 County: Monongahela  
 Operator: Kelby/Jeremy  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,831.20	CWT	\$ 5.50	\$ 15,571.60
SAND 40/70	40/70 white	1,031.60	CWT	\$ 5.75	\$ 5,931.70
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	154	GAL	\$ 17.75	\$ 2,733.50
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		193.14	TON	\$ 55.00	\$ 10,622.70
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 56,461.50  
 25% Discount Applied \$ 14,115.38  
 Net Stage Total \$ 42,346.13

(Print Name) E. Boone Customer Rep: \_\_\_\_\_ Customer Signature: E. Boone

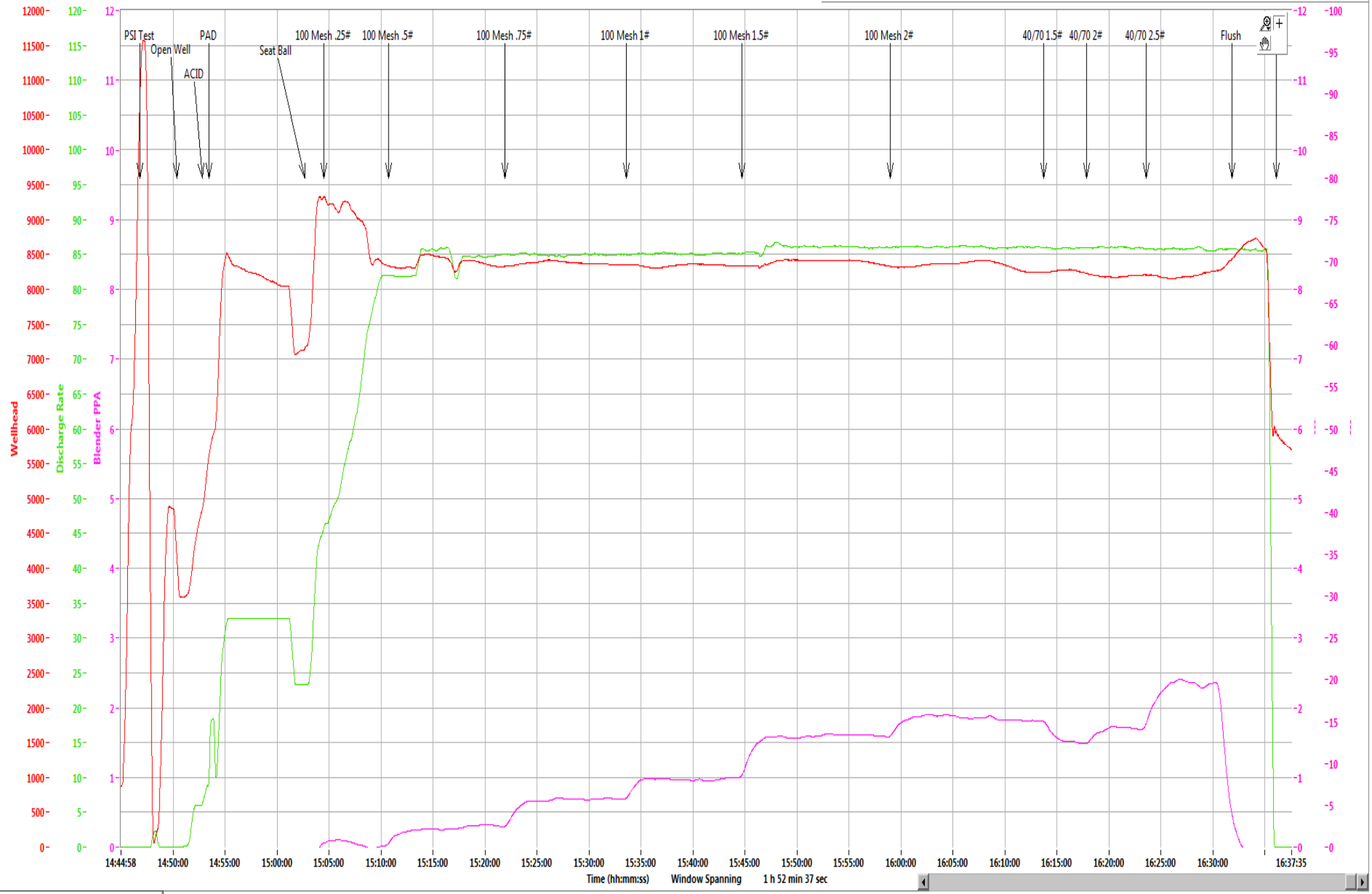


**NNE**  
**Boggess 3H**  
**Stage 41**  
**Producers Service Corp.**

**Post Stage Report**  
**September 11, 2019**

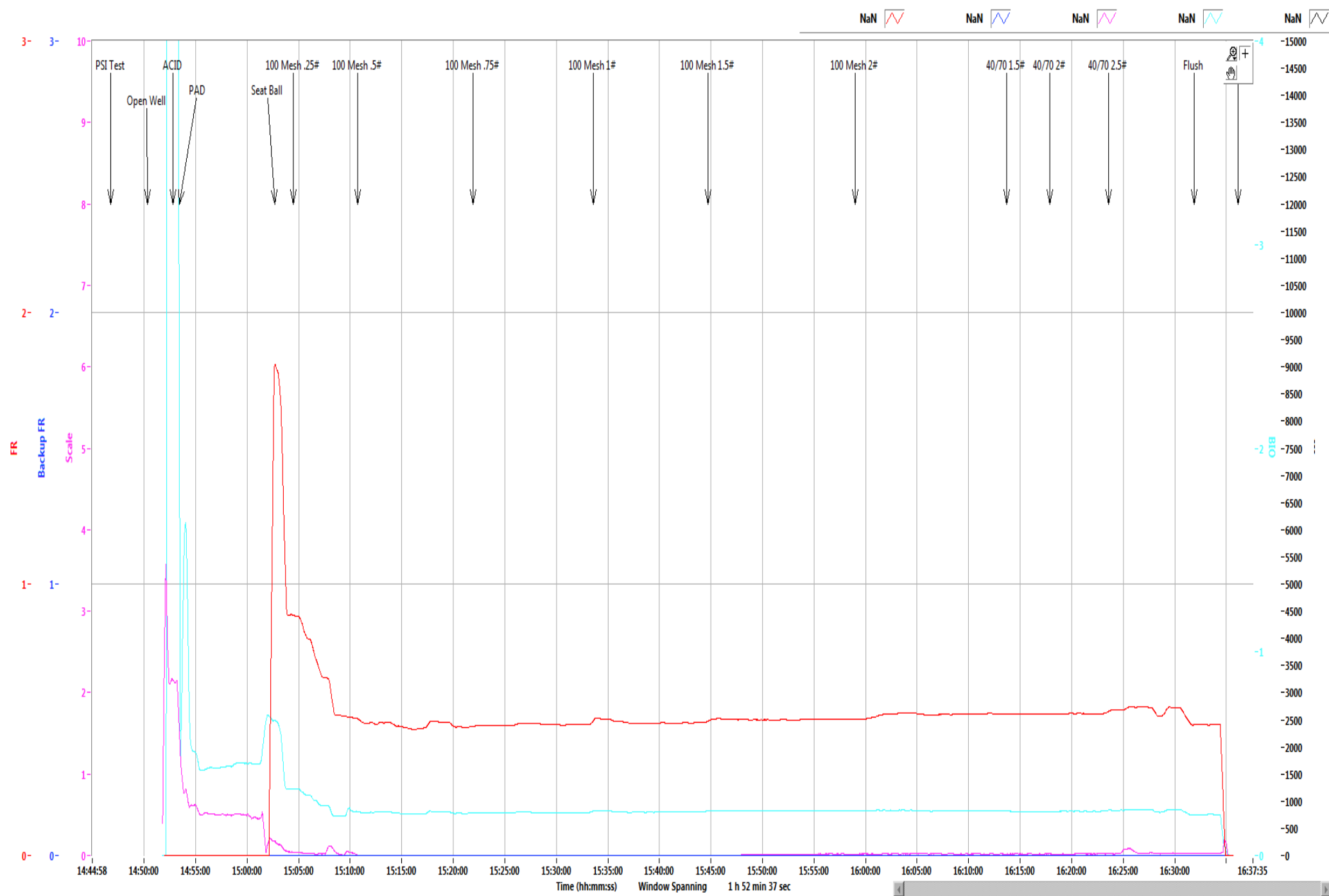


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Time (hh:mm:ss) Window Spanning 1 h 52 min 37 sec

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**Bogges Pad****3H**

Stage	41
Date:	9/11/19
OWP (psi):	3,587
Starting Time	2:50 PM
Ending Time	
Pump Time (hr:min)	
Swap Time (hr:min)	02:32
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	7,282
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,336
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	9,567
Displacement (psi)	8,468
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,797
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,610
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	224
Pad (bbls)	359
Treatment (bbls)	6,958
Displacement (bbls)	299
(Acid Included)Total Fluid (bbls)	7,616
Dirty Job Total (bbls)	7,997
100 Mesh	293,060
40/70	114,340
Total Proppant (lbs)	407,400
Total Proppant %	101.9%

**CHEMICALS**

FR 9800	159
Biocide	83
Scale	16

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22986  
 Date: 9/11/2019  
 Well Name: Bogges 3H  
 Stage No.: 41

State: WV  
 County: Monongahela  
 Operator: Keiby/Jeremy  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,930.60	CWT	\$ 5.50	\$ 16,118.30
SAND 40/70	40/70 white	1,143.40	CWT	\$ 5.75	\$ 6,574.55
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	159	GAL	\$ 17.75	\$ 2,822.25
BIOC11219A	Biocide @ 0.25 GPT	83	GAL	\$ 16.00	\$ 1,328.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		203.7	TON	\$ 55.00	\$ 11,203.50
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,432.60  
 25% Discount Applied \$ 14,608.15  
 Net Stage Total \$ 43,824.45

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

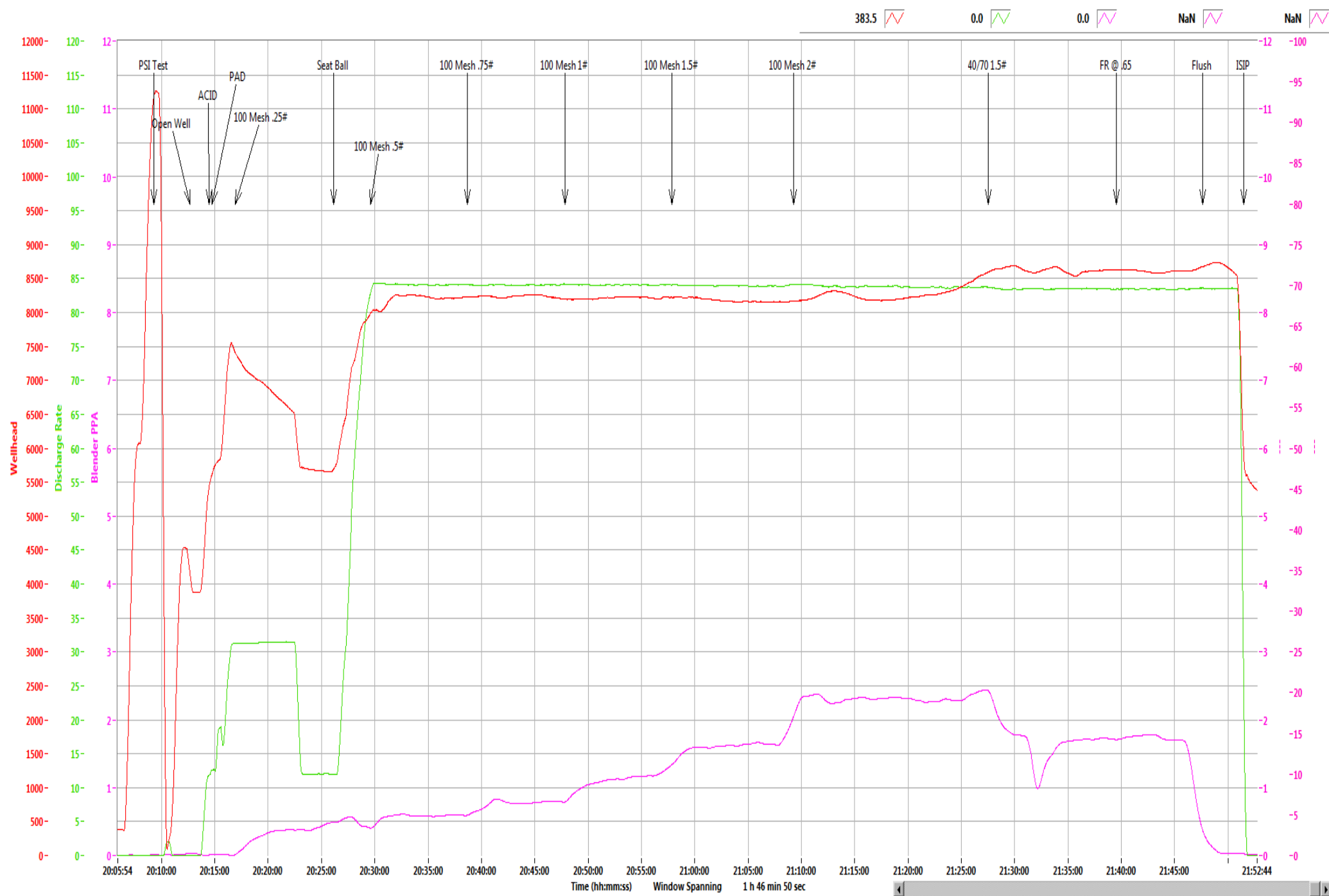
*E. Boone*



**NNE**  
**Boggess 3H**  
**Stage 42**  
**Producers Service Corp.**

**Post Stage Report**  
**September 11, 2019**





Refresh Graph



**Boggess Pad****3H**

Stage	42
Date:	9/11/19
OWP (psi):	3,886
Starting Time	8:12 PM
Ending Time	9:51 PM
Pump Time (hr:min)	01:39
Swap Time (hr:min)	00:51
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,801
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,317
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,738
Displacement (psi)	8,699
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,547
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	6,948
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	235
Pad (bbls)	66
Treatment (bbls)	8,590
Displacement (bbls)	294
(Acid Included)Total Fluid (bbls)	6,954
Dirty Job Total (bbls)	7,314
100 Mesh	301,700
40/70	100,520
Total Proppant (lbs)	402,220
Total Proppant %	100.6%

**CHEMICALS**

FR 9800	150
Biocide	72
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22988  
 Date: 9/11/2019  
 Well Name: Bogges 3H  
 Stage No.: 42

State: WV  
 County: Monongahela  
 Operator: Stetson/Dunn/David  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,017.00	CWT	\$ 5.50	\$ 16,593.50
SAND 40/70	40/70 white	1,005.20	CWT	\$ 5.75	\$ 5,779.90
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	150	GAL	\$ 17.75	\$ 2,662.50
BIOC11219A	Biocide @ 0.25 GPT	72	GAL	\$ 16.00	\$ 1,152.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.11	TON	\$ 55.00	\$ 11,061.05
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,602.95  
 25% Discount Applied \$ 14,400.74  
 Net Stage Total \$ 43,202.21

(Print Name)

Customer Rep: Rob Cowen

Customer Signature: PA Cowen



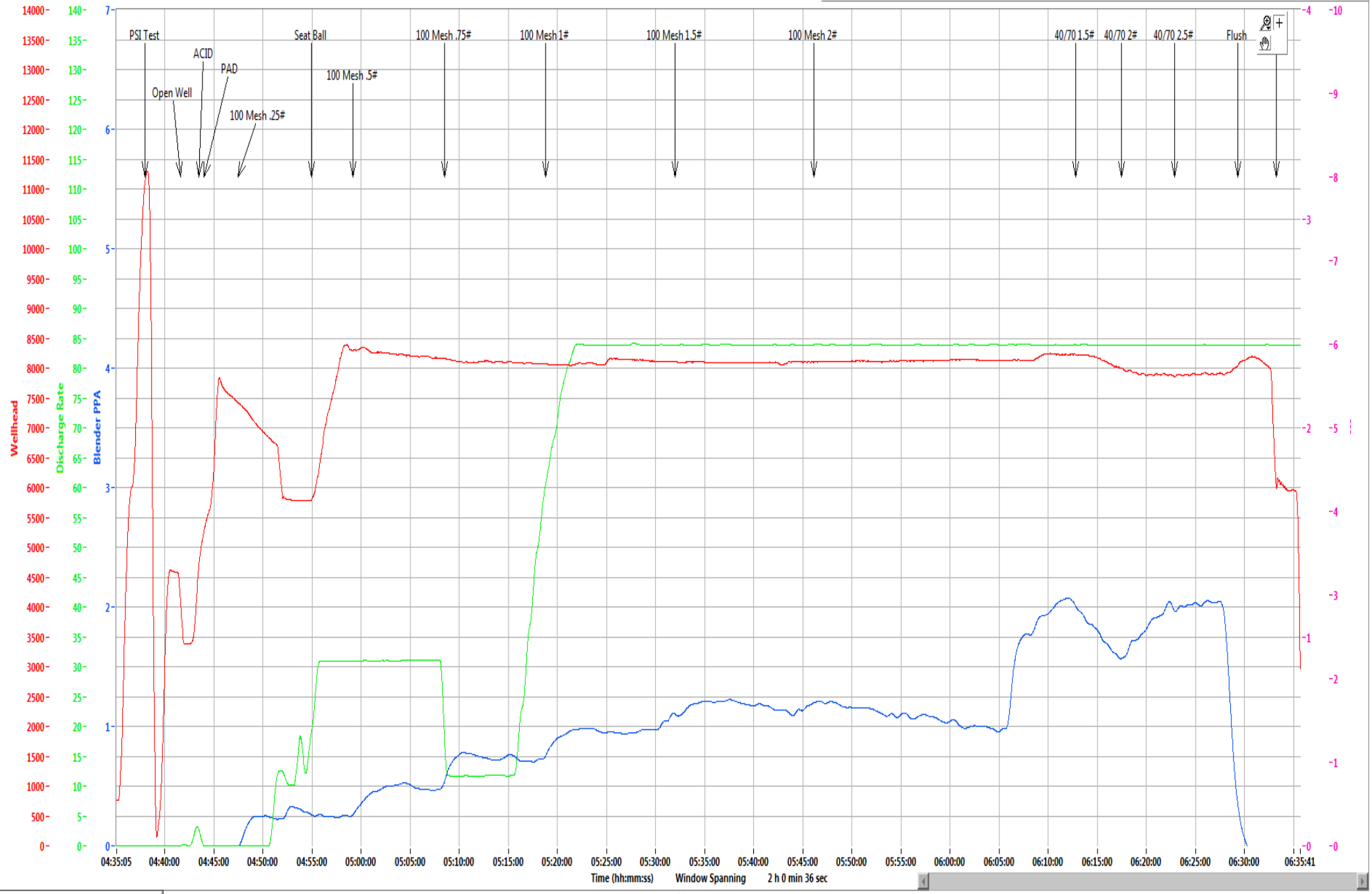


**NNE**  
**Boggess 3H**  
**Stage 43**  
**Producers Service Corp.**

**Post Stage Report**  
**September 12, 2019**



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<b>Bogges Pad</b>	<b>3H</b>
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Stage	43
Date:	9/12/19
OWP (psi):	3,402
Starting Time	4:41 AM
Ending Time	6:33 AM
Pump Time (hr:min)	01:52
Swap Time (hr:min)	04:16
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,987
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,105
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,489
Displacement (psi)	8,087
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,830
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,936
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	199
Pad (bbls)	102
Treatment (bbls)	7,541
Displacement (bbls)	293
(Acid Included)Total Fluid (bbls)	7,942
Dirty Job Total (bbls)	8,387
100 Mesh	301,100
40/70	100,040
Total Proppant (lbs)	401,140
Total Proppant %	100.3%

**CHEMICALS**

FR 9800	145
Biocide	72
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22990  
 Date: 9/12/2019  
 Well Name: Bogges 3H  
 Stage No.: 43

State: WV  
 County: Monongahela  
 Operator: Brad/Keiby  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,011.00	CWT	\$ 5.50	\$ 16,560.50
SAND 40/70	40/70 white	1,000.40	CWT	\$ 5.75	\$ 5,752.30
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	145	GAL	\$ 17.75	\$ 2,573.75
BIOC11219A	Biocide @ 0.25 GPT	72	GAL	\$ 16.00	\$ 1,152.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.57	TON	\$ 55.00	\$ 11,031.35
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,423.90  
 25% Discount Applied \$ 14,355.98  
 Net Stage Total \$ 43,067.93

(Print Name)  
 Customer Rep: E. Boone

Customer Signature: [Signature]

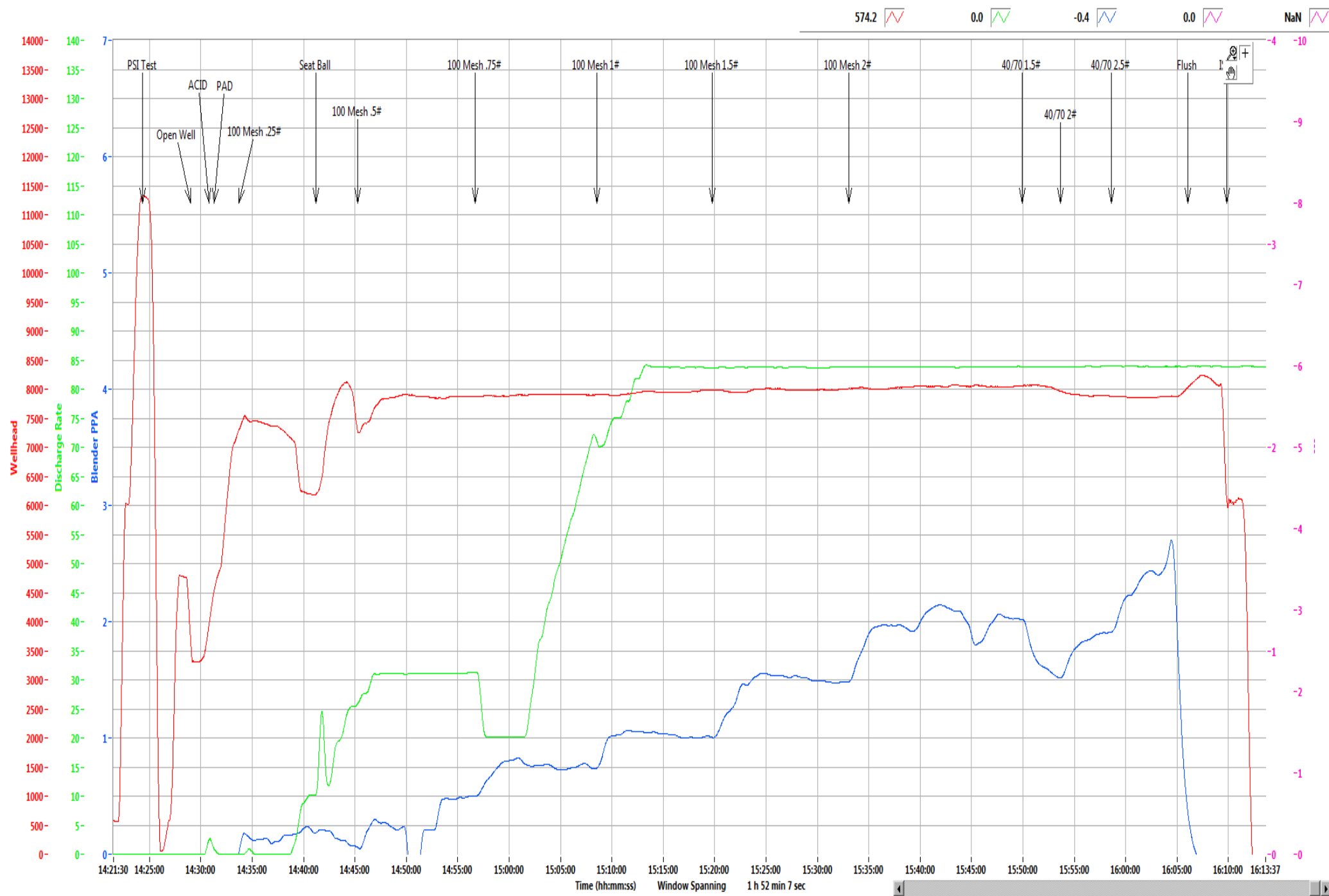


**NNE**  
**Boggess 3H**  
**Stage 44**  
**Producers Service Corp.**

**Post Stage Report**  
**September 12, 2019**







Refresh Graph



<b>Boggess Pad</b>	<b>3H</b>
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Stage	44
Date:	9/12/19
OWP (psi):	3,339
Starting Time	2:28 PM
Ending Time	4:09 PM
Pump Time (hr:min)	01:41
Swap Time (hr:min)	03:46
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,319
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	7,952
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,219
Displacement (psi)	8,022
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,869
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,155
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	192
Pad (bbls)	61
Treatment (bbls)	6,806
Displacement (bbls)	288
(Acid Included)Total Fluid (bbls)	7,161
Dirty Job Total (bbls)	7,545
100 Mesh	294,180
40/70	103,140
Total Proppant (lbs)	397,320
Total Proppant %	99.3%

**CHEMICALS**

FR 9800	155
Biocide	74
Scale	16

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22991  
 Date: 9/12/2019  
 Well Name: Bogges 3H  
 Stage No.: 44

State: WV  
 County: Monongahela  
 Operator: Brad/Kelby  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,941.80	CWT	\$ 5.50	\$ 16,179.90
SAND 40/70	40/70 white	1,031.40	CWT	\$ 5.75	\$ 5,930.55
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	155	GAL	\$ 17.75	\$ 2,751.25
BIOC11219A	Biocide @ 0.25 GPT	74	GAL	\$ 16.00	\$ 1,184.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		198.66	TON	\$ 55.00	\$ 10,926.30
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,358.00  
 25% Discount Applied \$ 14,339.50  
 Net Stage Total \$ 43,018.50

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

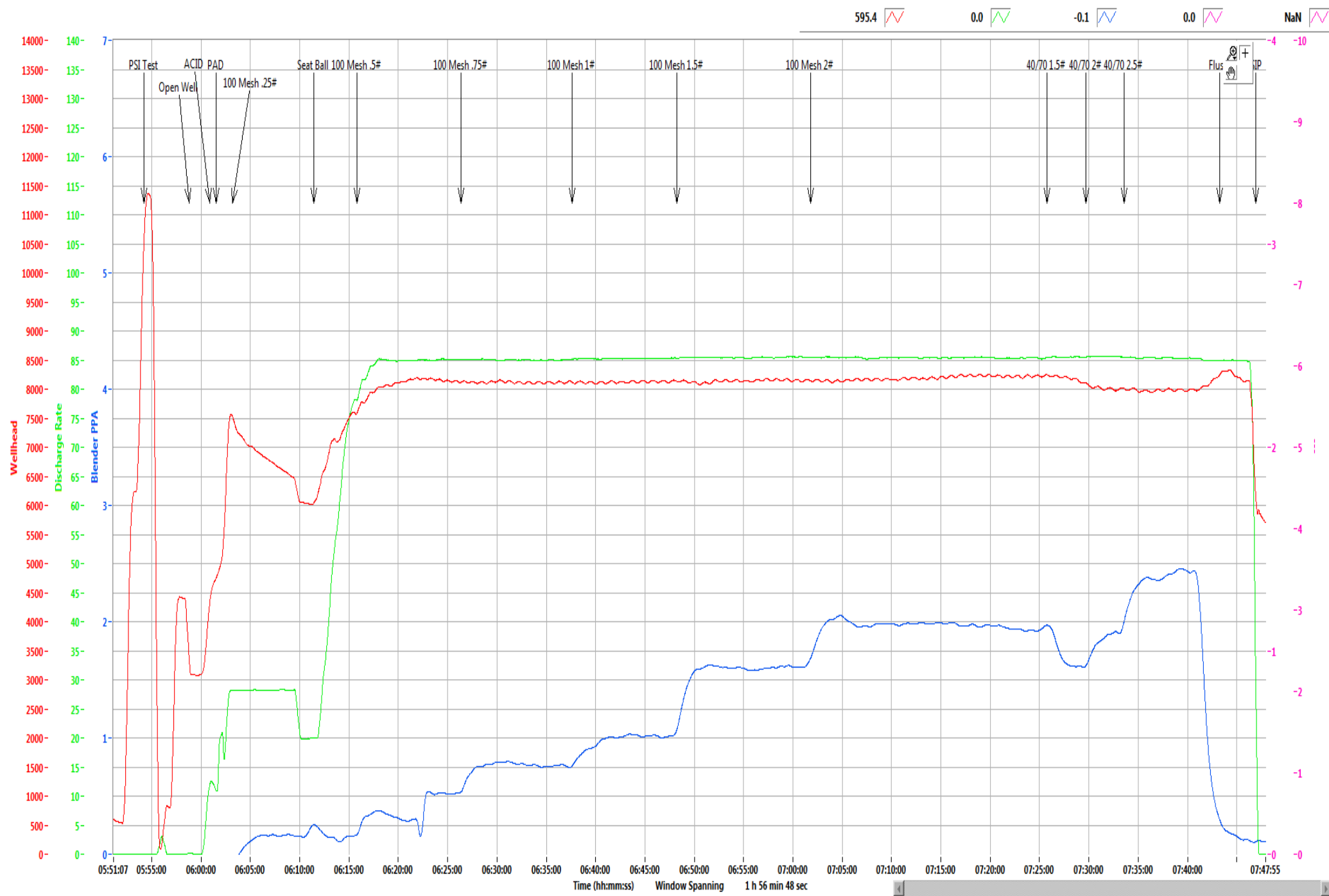
*E. Boone*



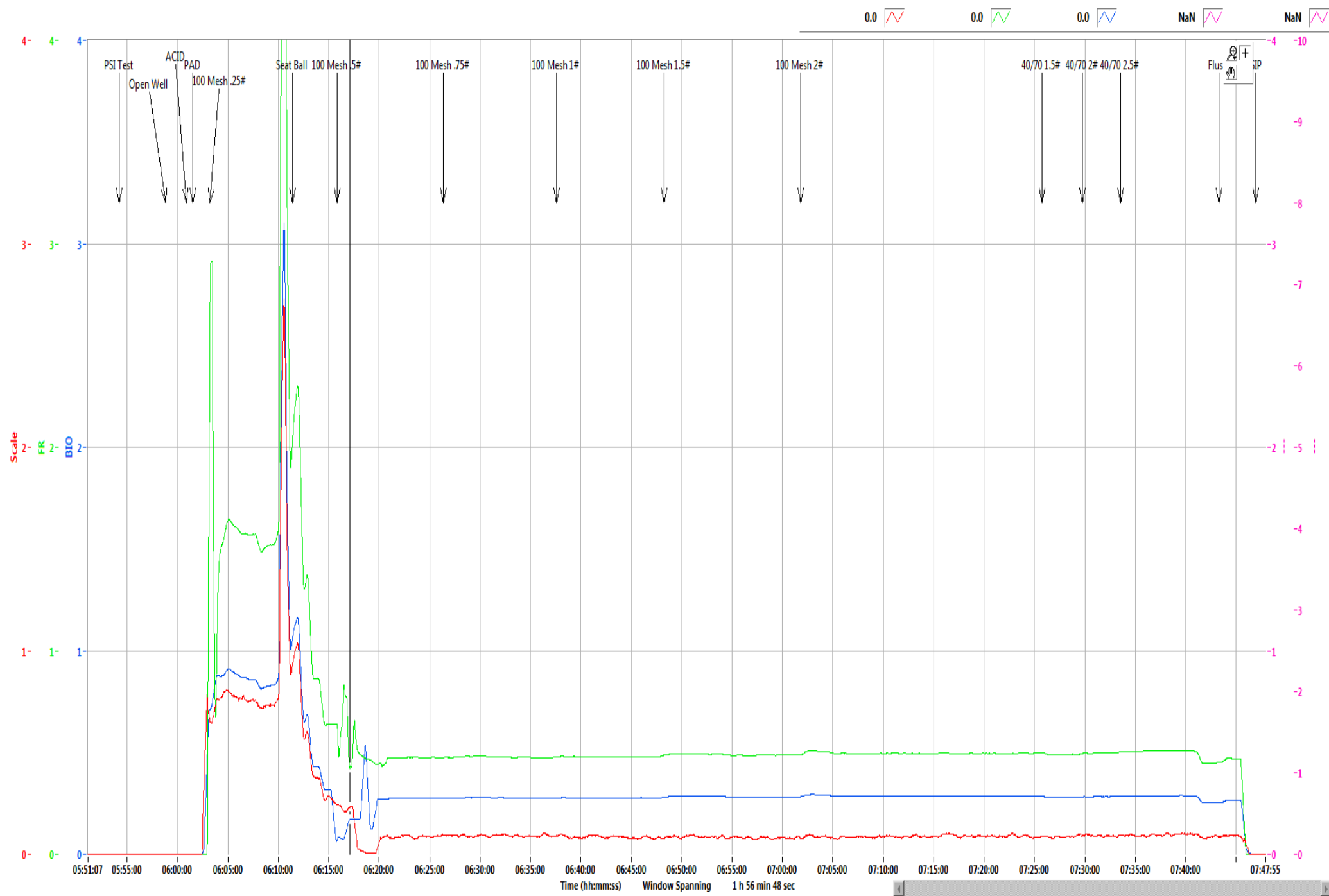
**NNE**  
**Boggess 3H**  
**Stage 45**  
**Producers Service Corp.**

**Post Stage Report**  
**September 13, 2019**





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<b>Boggess Pad</b>	<b>3H</b>
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Stage	45
Date:	9/13/19
OWP (psi):	3,071
Starting Time	5:58 AM
Ending Time	7:46 AM
Pump Time (hr:min)	01:48
Swap Time (hr:min)	00:56
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,502
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,136
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,361
Displacement (psi)	8,337
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,868
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,852
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	193
Pad (bbls)	54
Treatment (bbls)	7,516
Displacement (bbls)	281
(Acid Included)Total Fluid (bbls)	7,858
Dirty Job Total (bbls)	8,284
100 Mesh	304,460
40/70	94,180
Total Proppant (lbs)	398,640
Total Proppant %	99.7%

**CHEMICALS**

FR 9800	162
Biocide	81
Scale	16

Northeast Natural Energy  
48 Donley Street, Ste 601  
Morgantown, WV 26501



Producers Service Corp  
109 S. Graham St.  
Zanesville, OH 43701

Invoice #: 22994  
Date: 9/13/2019  
Well Name: Boggess 3H  
Stage No.: 45

State: WV  
County: Monongahela  
Operator: Brad/Kelby  
PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,044.60	CWT	\$ 5.50	\$ 16,745.30
SAND 40/70	40/70 white	941.80	CWT	\$ 5.75	\$ 5,415.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	162	GAL	\$ 17.75	\$ 2,875.50
BIOC11219A	Biocide @ 0.25 GPT	81	GAL	\$ 16.00	\$ 1,296.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.32	TON	\$ 55.00	\$ 10,962.60
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,680.75  
25% Discount Applied \$ 14,420.19  
Net Stage Total \$ 43,260.56

(Print Name)  
Customer Rep:

*E. Score*

Customer Signature:

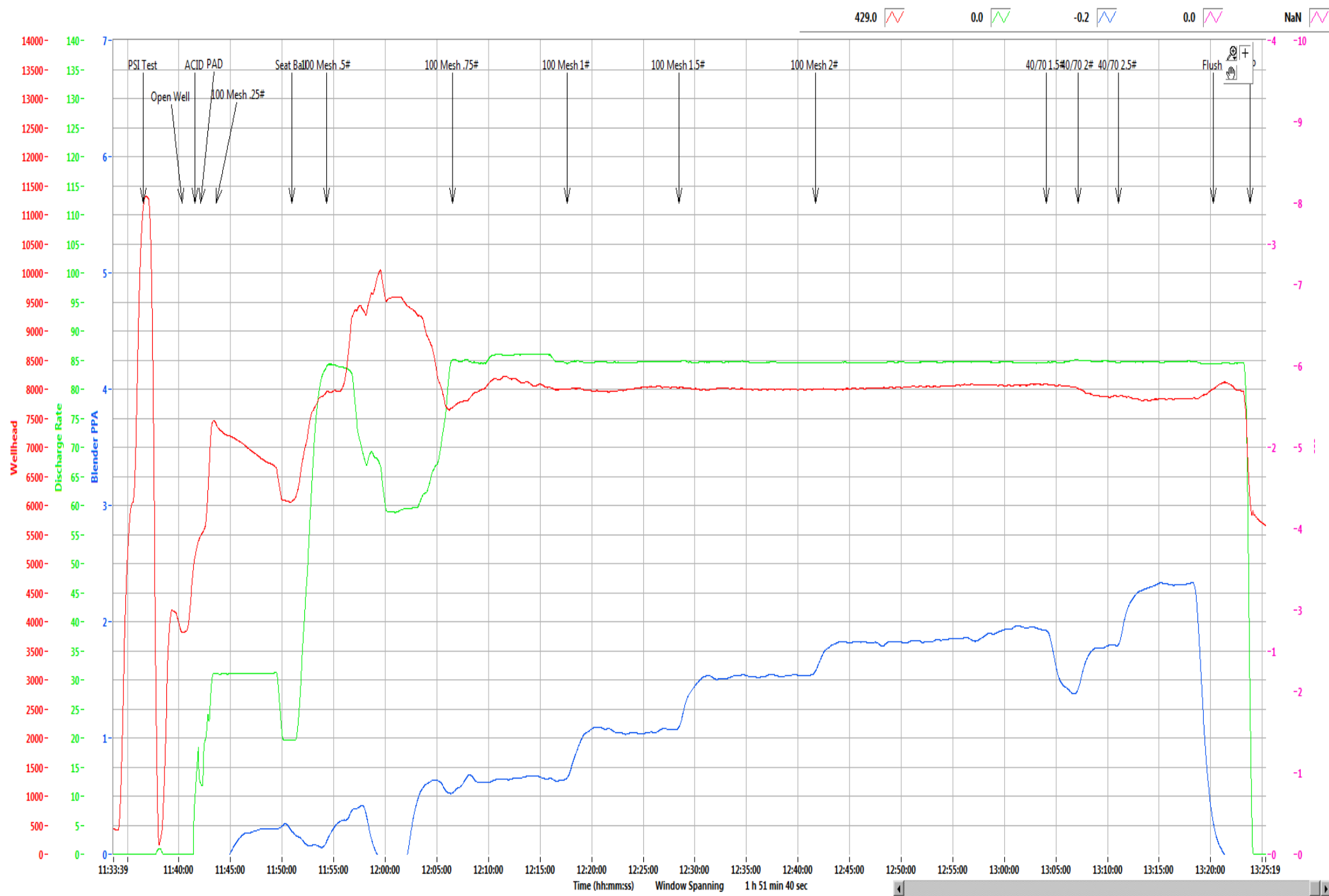
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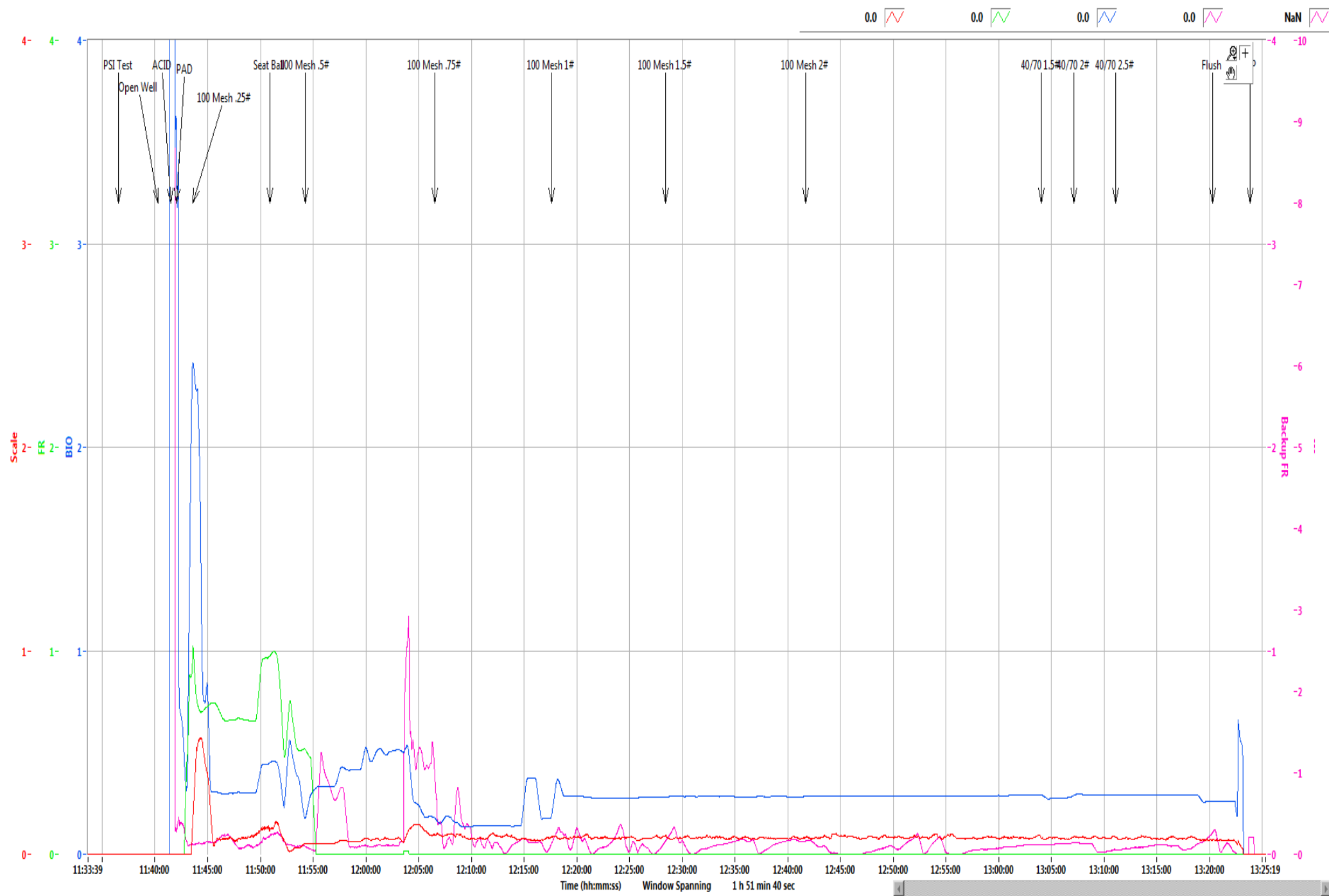
**NNE**  
**Boggess 3H**  
**Stage 46**  
**Producers Service Corp.**

**Post Stage Report**  
**September 13, 2019**





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<b>Bogges Pad</b>	<b>3H</b>
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Stage	46
Date:	9/13/19
OWP (psi):	3,823
Starting Time	11:40 AM
Ending Time	1:23 PM
Pump Time (hr:min)	01:43
Swap Time (hr:min)	01:14
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	6,172
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,170
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	10,126
Displacement (psi)	8,038
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,754
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,441
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	173
Pad (bbls)	45
Treatment (bbls)	7,127
Displacement (bbls)	271
(Acid Included)Total Fluid (bbls)	7,447
Dirty Job Total (bbls)	7,851
100 Mesh	304,680
40/70	95,000
Total Proppant (lbs)	399,680
Total Proppant %	99.9%

**CHEMICALS**

FR 9800	154
Biocide	77
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 22996  
 Date: 9/13/2019  
 Well Name: Bogges 3H  
 Stage No.: 46

State: WV  
 County: Monongahela  
 Operator: Brad/Kelby  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,046.80	CWT	\$ 5.50	\$ 16,757.40
SAND 40/70	40/70 white	950.00	CWT	\$ 5.75	\$ 5,462.50
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	154	GAL	\$ 17.75	\$ 2,733.50
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.84	TON	\$ 55.00	\$ 10,991.20
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,546.60  
 25% Discount Applied \$ 14,386.65  
 Net Stage Total \$ 43,159.95

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

*E. Boone*

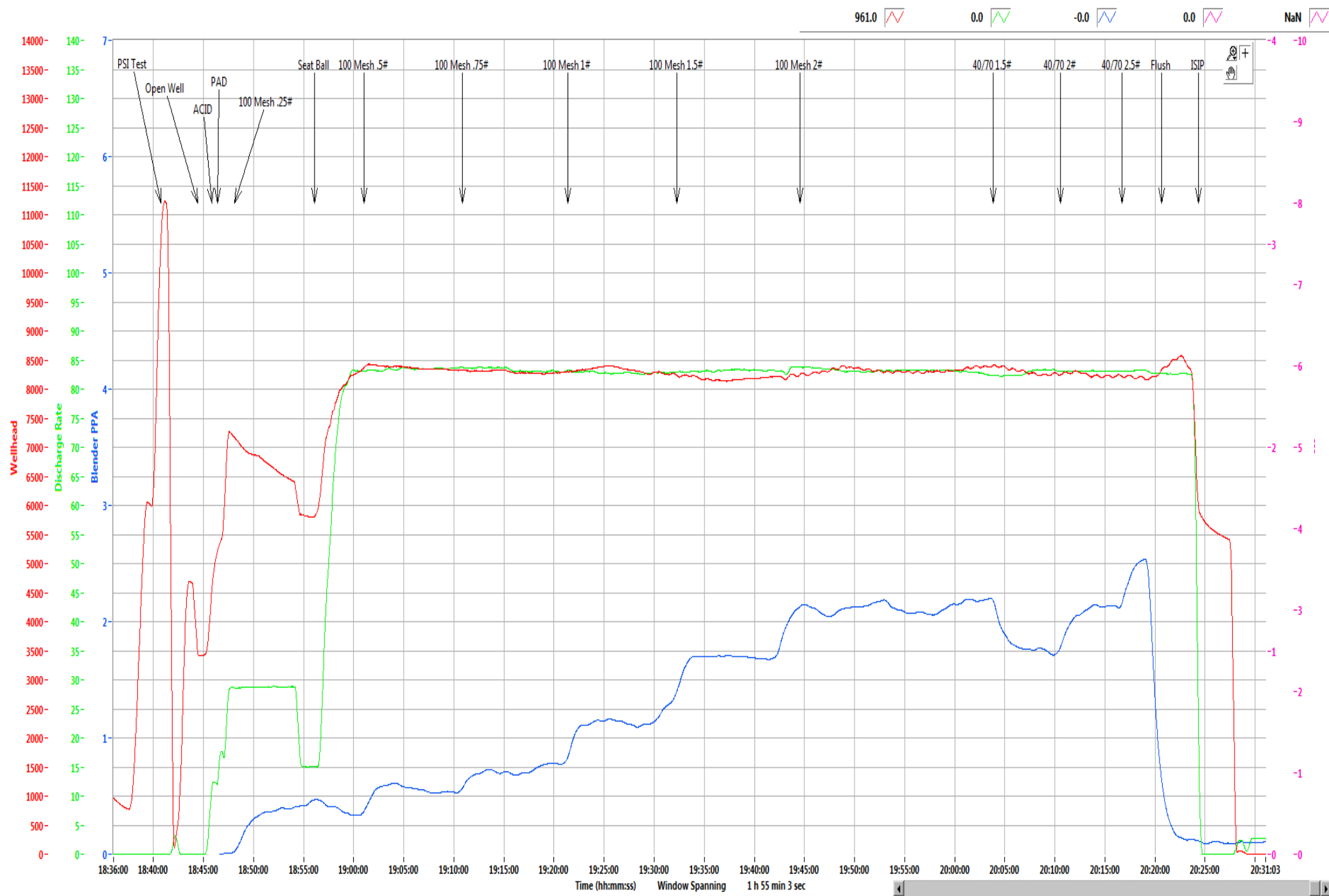




**NNE**  
**Bogges 3H**  
**Stage 47**  
**Producers Service Corp.**

**Post Stage Report**  
**September 13, 2019**





Refresh Graph



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Scale

FR

BLO

Backup FR

Time (hh:mm:ss) Window Spanning 1 h 55 min 3 sec

Refresh Graph

<b>Bogges Pad</b>	<b>3H</b>
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Stage	47
Date:	9/13/19
OWP (psi):	3,426
Starting Time	6:44 PM
Ending Time	8:24 PM
Pump Time (hr:min)	01:40
Swap Time (hr:min)	01:11
Starting # Pumps	
Finishing # Pumps	
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,985
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,291
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	8,564
Displacement (psi)	8,402
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,842
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	7,065
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	164
Pad (bbls)	40
Treatment (bbls)	7,031
Displacement (bbls)	266
(Acid Included)Total Fluid (bbls)	7,071
Dirty Job Total (bbls)	7,485
100 Mesh	298,920
40/70	100,020
Total Proppant (lbs)	398,940
Total Proppant %	99.7%

**CHEMICALS**

FR 9800	151
Biocide	76
Scale	15





**NNE**  
**Boggess 3H**  
**Stage 48**  
**Producers Service Corp.**

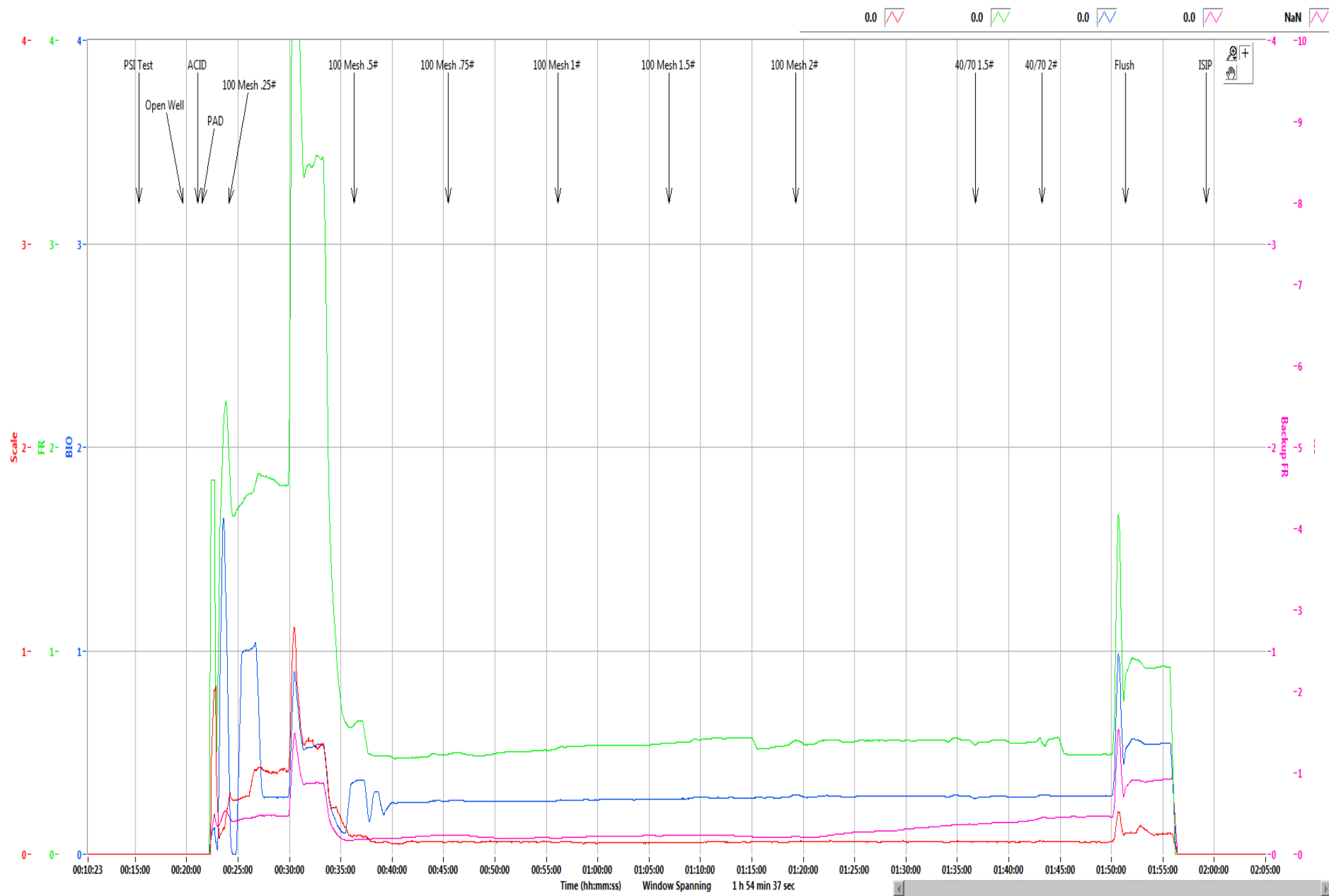
**Post Stage Report**  
**September 14, 2019**







Refresh Graph



Refresh Graph

<b>Boggess Pad</b>	<b>3H</b>
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Stage	48
Date:	9/14/19
OWP (psi):	3,400
Starting Time	12:19 AM
Ending Time	
Pump Time (hr:min)	
Swap Time (hr:min)	00:19
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

**Pressures & Rates**

Breakdown Pressure (psi)	5,941
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,090
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,329
Displacement (psi)	6,216
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,989
Final FG (psi/ft)	1.18
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

**Fluids & Proppant**

Slickwater (bbls)	6,971
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	163
Pad (bbls)	61
Treatment (bbls)	6,629
Displacement (bbls)	300
(Acid Included)Total Fluid (bbls)	6,977
Dirty Job Total (bbls)	7,038
100 Mesh	299,220
40/70	89,580
Total Proppant (lbs)	388,800
Total Proppant %	97.2%

**CHEMICALS**

FR 9800	143
Biocide	73
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23050  
 Date: 9/14/2019  
 Well Name: Bogges 3H  
 Stage No.: 48

State: WV  
 County: Monongahela  
 Operator: Stetson/David  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4NI INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,992.20	CWT	\$ 5.50	\$ 16,457.10
SAND 40/70	40/70 white	895.80	CWT	\$ 5.75	\$ 5,150.85
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	143	GAL	\$ 17.75	\$ 2,538.25
BIOC11219A	Biocide @ 0.25 GPT	73	GAL	\$ 16.00	\$ 1,168.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		194.4	TON	\$ 55.00	\$ 10,692.00
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 56,408.20  
 25% Discount Applied \$ 14,102.05  
 Net Stage Total \$ 42,306.15

(Print Name)  
 Customer Rep:

*Rob Cowger*

Customer Signature:

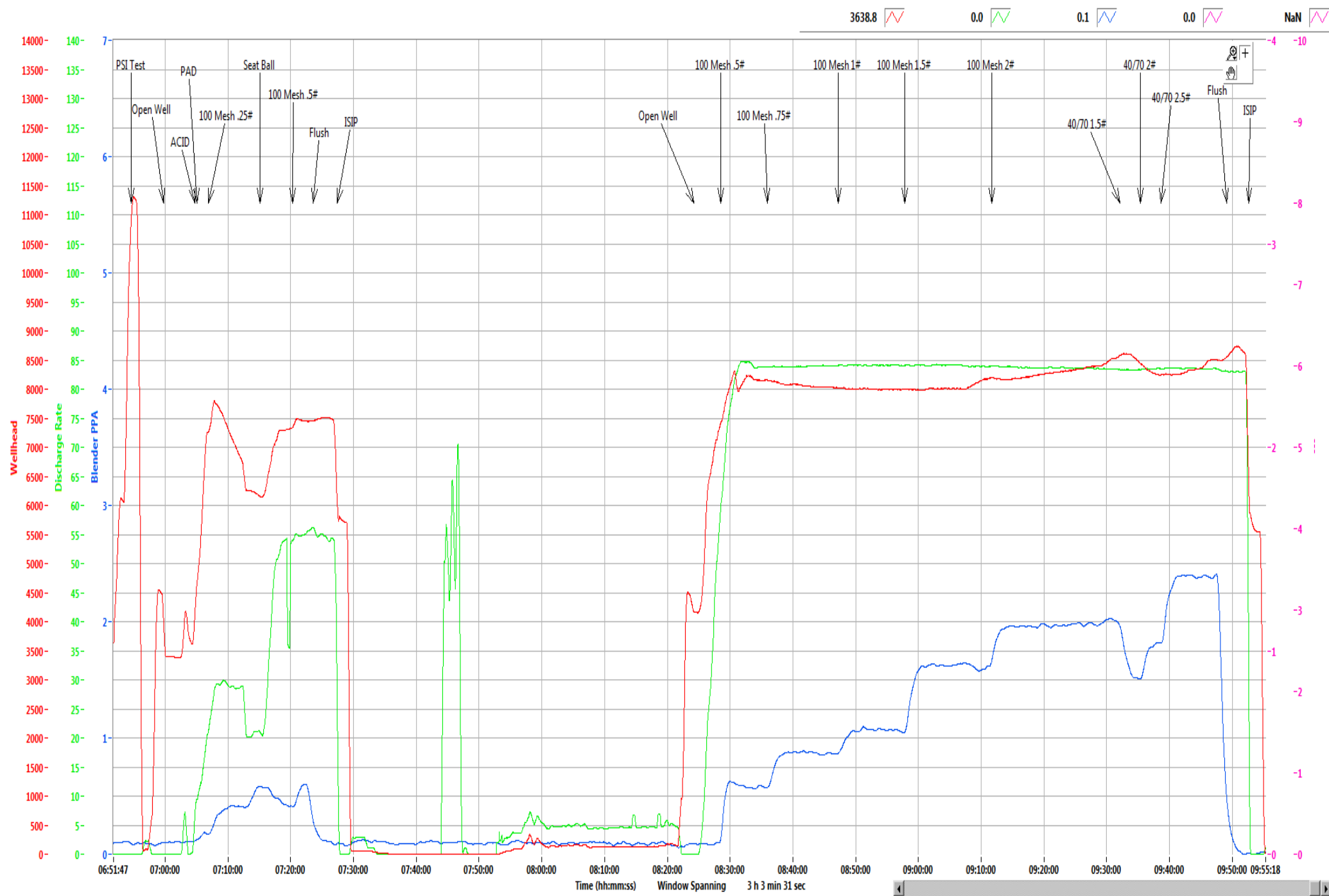
*Rob Cowger*



**NNE**  
**Boggess 3H**  
**Stage 49**  
**Producers Service Corp.**

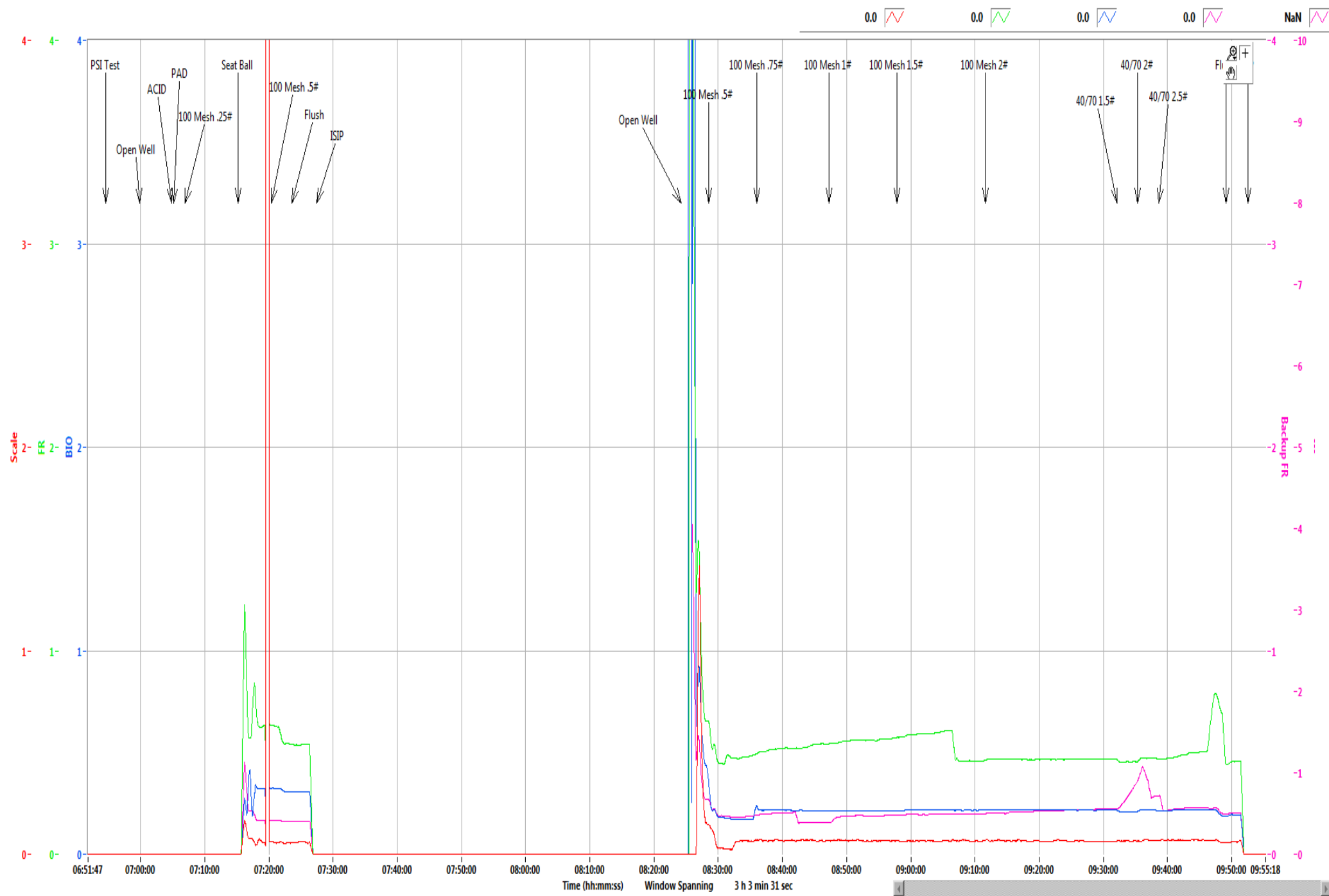
**Post Stage Report**  
**September 14, 2019**





Time (hh:mm:ss) Window Spanning 3 h 3 min 31 sec

Refresh Graph



Refresh Graph



# NNE Boggess Pad

## 3H

Stage	49
Date:	9/14/19
OWP (psi):	3,396
Starting Time	6:59 AM
Ending Time	9:52 AM
Pump Time (hr:min)	02:53
Swap Time (hr:min)	01:38
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,136
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,183
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,655
Displacement (psi)	8,608
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,018
Final FG (psi/ft)	1.18
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,955
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	152
Pad (bbls)	46
Treatment (bbls)	7,653
Displacement (bbls)	255
(Acid Included)Total Fluid (bbls)	7,961
Dirty Job Total (bbls)	8,268
100 Mesh	300,540
40/70	100,000
Total Proppant (lbs)	400,540
Total Proppant %	100.1%

### CHEMICALS

FR 9800	155
Biocide	77
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23052  
 Date: 9/14/2019  
 Well Name: Boggess 3H  
 Stage No.: 49

State: WV  
 County: Monongahela  
 Operator: Brad/Keiby  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,005.40	CWT	\$ 5.50	\$ 16,529.70
SAND 40/70	40/70 white	1,000.00	CWT	\$ 5.75	\$ 5,750.00
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	155	GAL	\$ 17.75	\$ 2,751.25
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.27	TON	\$ 55.00	\$ 11,014.85
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,647.80  
 25% Discount Applied \$ 14,411.95  
 Net Stage Total \$ 43,235.85

(Print Name)  
 Customer Rep:

E. Boone

Customer Signature:

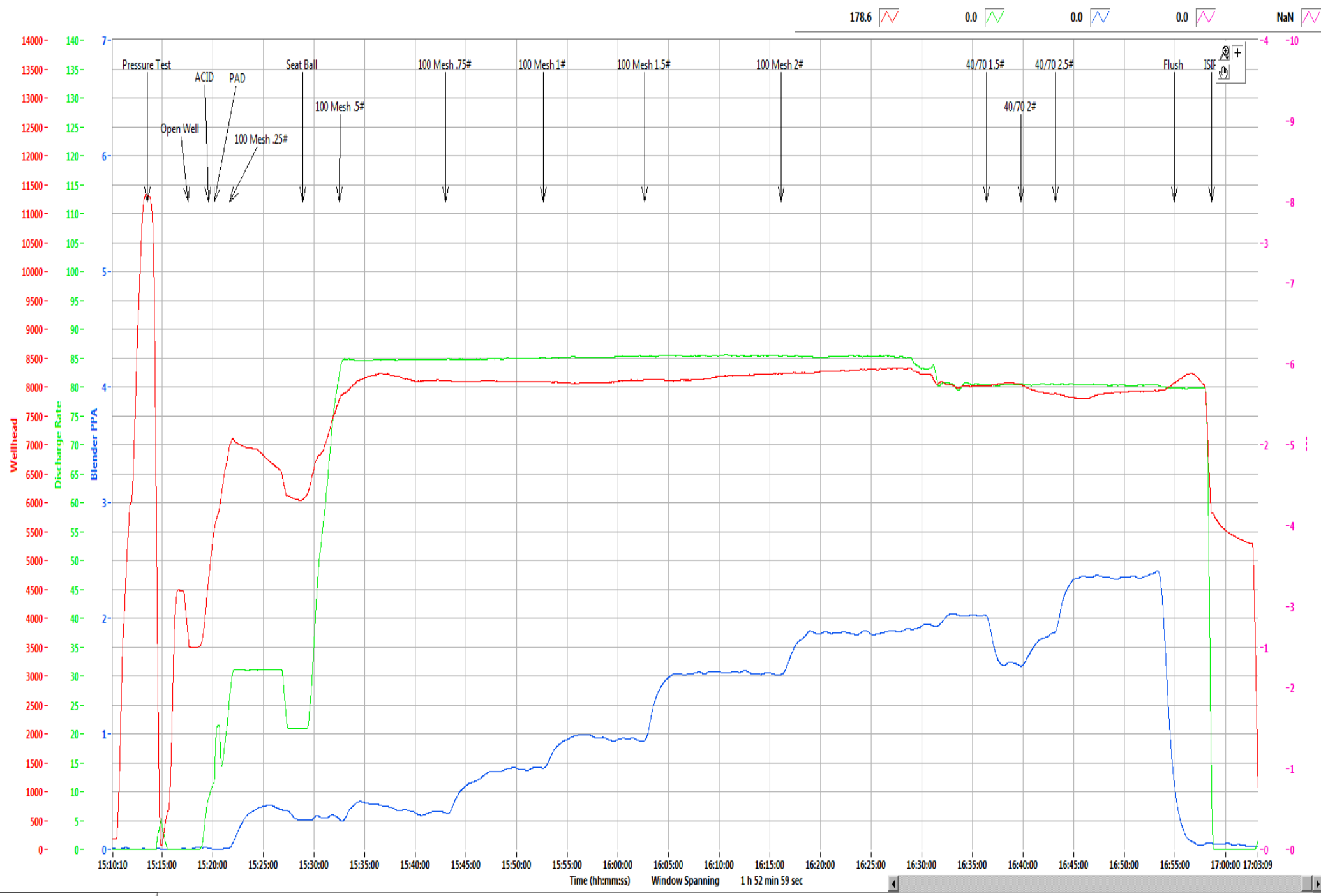
*E. Boone*



**NNE**  
**Bogges 3H**  
**Stage 50**  
**Producers Service Corp.**

**Post Stage Report**  
**September 14, 2019**





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# NNE Boggess Pad

## 3H

Stage	50
Date:	9/14/19
OWP (psi):	3,494
Starting Time	3:17 PM
Ending Time	4:58 PM
Pump Time (hr:min)	01:41
Swap Time (hr:min)	00:45
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,156
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	8,106
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,375
Displacement (psi)	8,076
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,730
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,177
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	144
Pad (bbls)	40
Treatment (bbls)	6,881
Displacement (bbls)	258
(Acid Included)Total Fluid (bbls)	7,183
Dirty Job Total (bbls)	7,597
100 Mesh	297,740
40/70	103,600
Total Proppant (lbs)	401,340
Total Proppant %	100.3%

### CHEMICALS

FR 9800	155
Biocide	77
Scale	16

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23054  
 Date: 9/14/2019  
 Well Name: Boggess 3H  
 Stage No.: 50

State: WV  
 County: Monongahela  
 Operator: Brad/Kelby  
 PO/A/E: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,977.40	CWT	\$ 5.50	\$ 16,375.70
SAND 40/70	40/70 white	1,036.00	CWT	\$ 5.75	\$ 5,957.00
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	155	GAL	\$ 17.75	\$ 2,751.25
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.67	TON	\$ 55.00	\$ 11,036.85
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,738.80  
 25% Discount Applied \$ 14,434.70  
 Net Stage Total \$ 43,304.10

(Print Name) Customer Rep: E. Boone Customer Signature: E. Boone

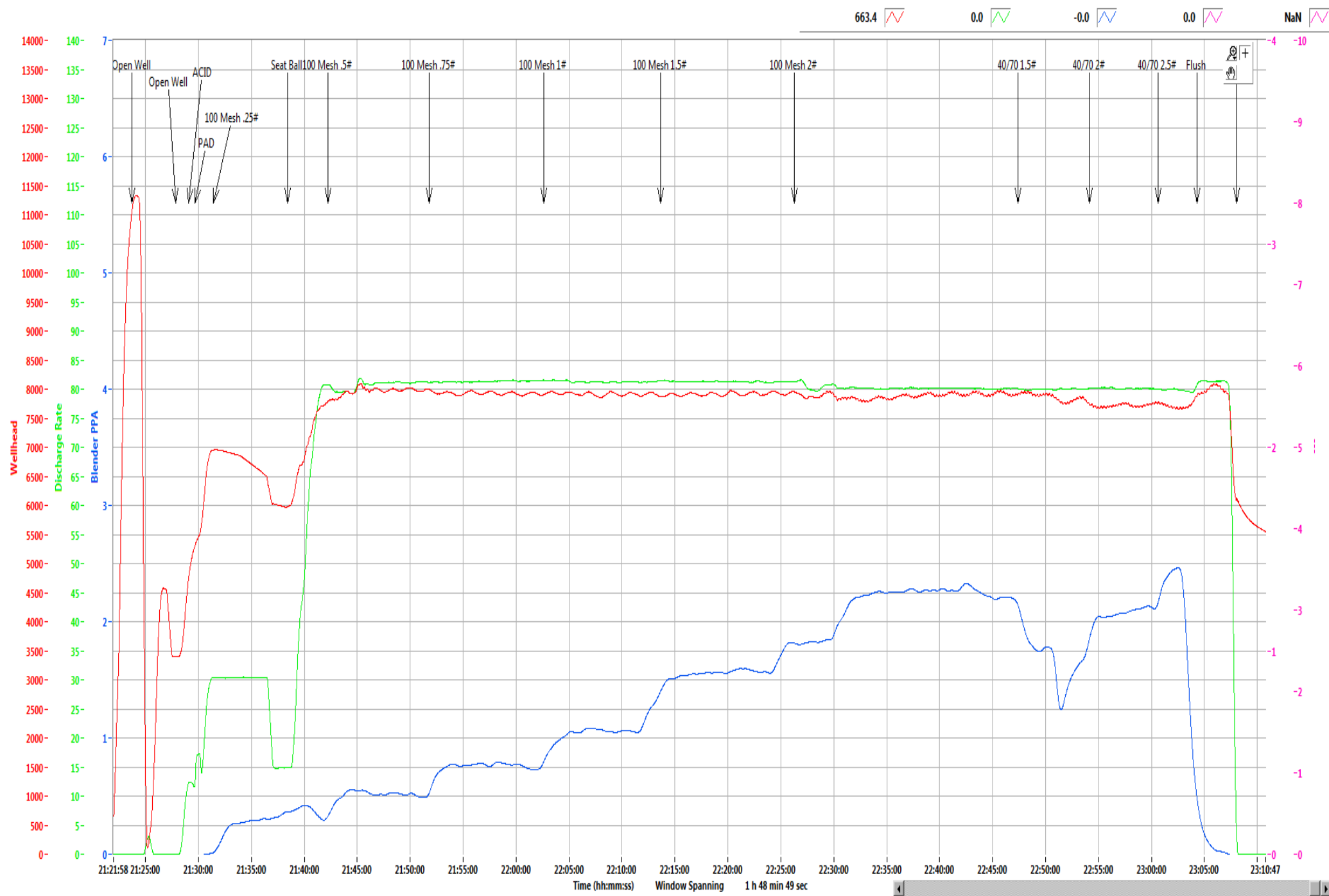




**NNE**  
**Boggess 3H**  
**Stage 51**  
**Producers Service Corp.**

**Post Stage Report**  
**September 14, 2019**





Refresh Graph



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# NNE Boggess Pad

## 3H

Stage	51
Date:	9/14/19
OWP (psi):	3,392
Starting Time	9:27 PM
Ending Time	11:03 PM
Pump Time (hr:min)	01:36
Swap Time (hr:min)	01:38
Starting # Pumps	16
Finishing # Pumps	15
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,041
Average Treating Rate (bbl/min)	80
Average Treating Pressure (psi)	7,887
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	8,261
Displacement (psi)	5,405
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,933
Final FG (psi/ft)	1.17
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	6,920
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	132
Pad (bbls)	40
Treatment (bbls)	7,334
Displacement (bbls)	254
(Acid Included)Total Fluid (bbls)	6,926
Dirty Job Total (bbls)	7,374
100 Mesh	304,800
40/70	95,960
Total Proppant (lbs)	400,760
Total Proppant %	100.2%

### CHEMICALS

FR 9800	143
Biocide	73
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23056  
 Date: 9/14/2019  
 Well Name: Bogges 3H  
 Stage No.: 51

State: WV  
 County: Monongahela  
 Operator: Stetson/David  
 PO/A/E: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,048.00	CWT	\$ 5.50	\$ 16,764.00
SAND 40/70	40/70 white	959.60	CWT	\$ 5.75	\$ 5,517.70
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	143	GAL	\$ 17.75	\$ 2,538.25
BIOC11219A	Biocide @ 0.25 GPT	73	GAL	\$ 16.00	\$ 1,168.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.38	TON	\$ 55.00	\$ 11,020.90
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,362.85  
 25% Discount Applied \$ 14,340.71  
 Net Stage Total \$ 43,022.14

(Print Name) Customer Rep: Rob Cowger Customer Signature: [Signature]

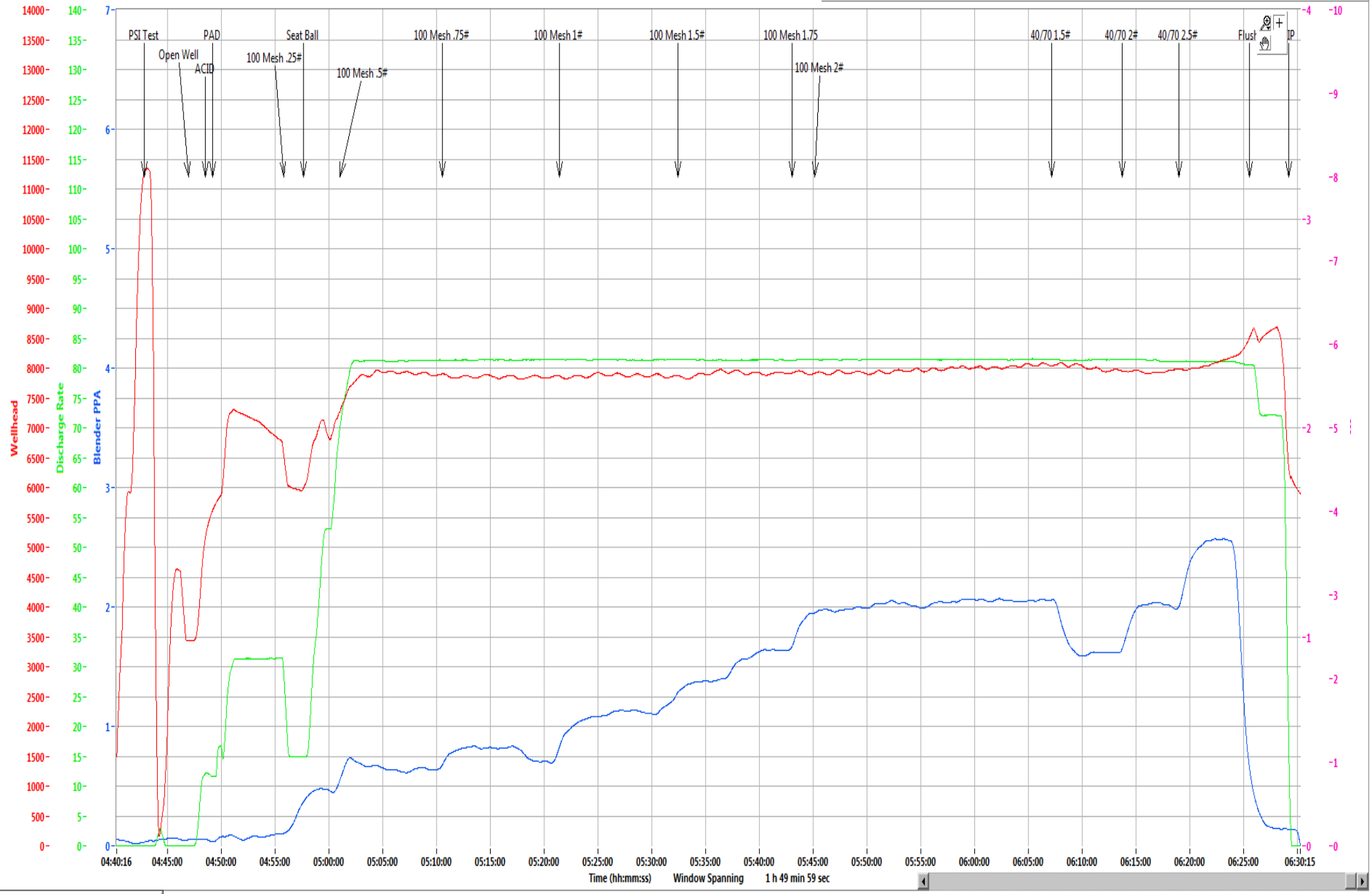


**NNE**  
**Boggess 3H**  
**Stage 52**  
**Producers Service Corp.**

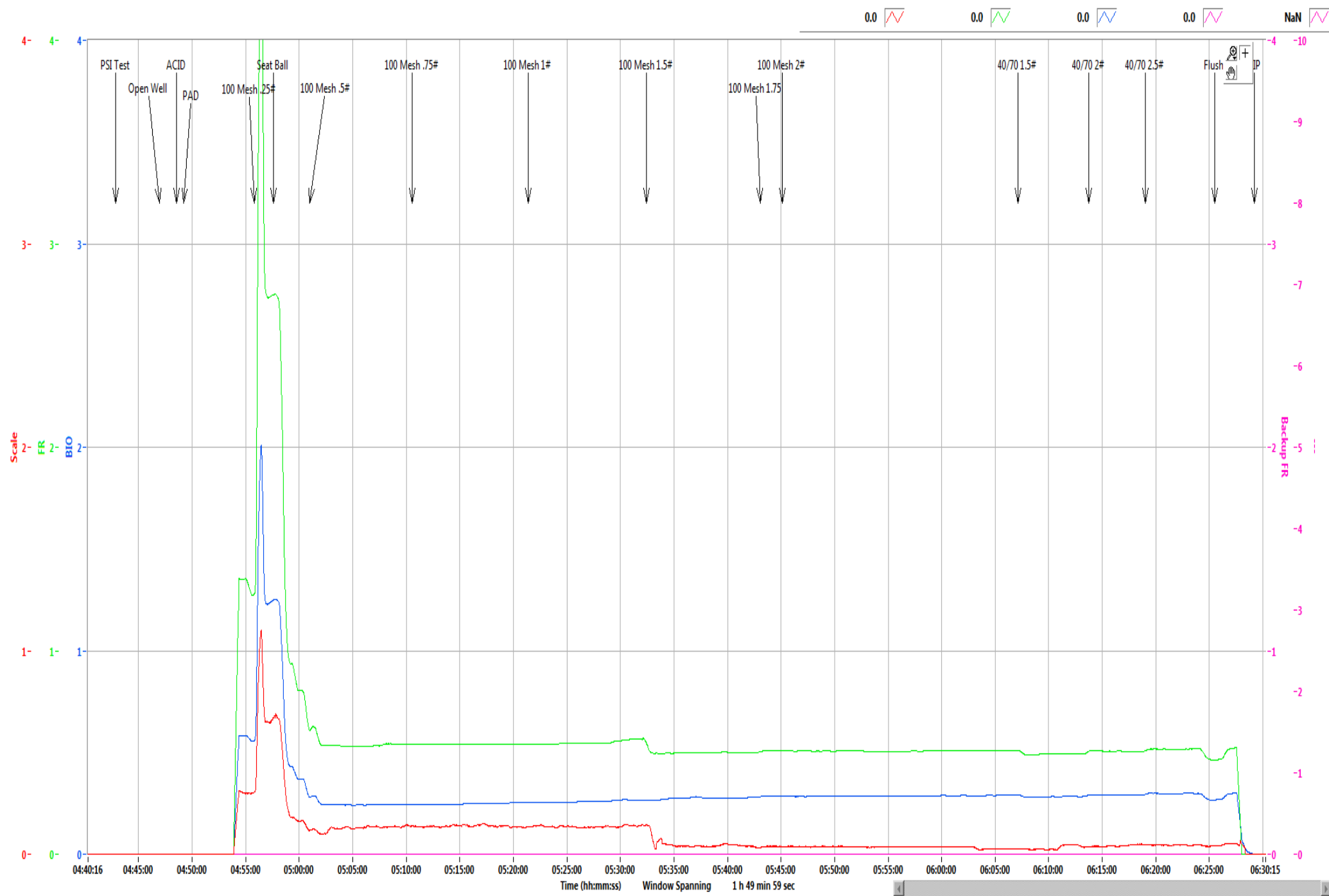
**Post Stage Report**  
**September 15, 2019**







Refresh Graph



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Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23058  
 Date: 9/15/2019  
 Well Name: Bogges 3H  
 Stage No.: 52

State: WV  
 County: Monongahela  
 Operator: Kelby/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,007.60	CWT	\$ 5.50	\$ 16,541.80
SAND 40/70	40/70 white	1,006.00	CWT	\$ 5.75	\$ 5,784.50
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	147	GAL	\$ 17.75	\$ 2,609.25
BIOC11219A	Biocide @ 0.25 GPT	73	GAL	\$ 16.00	\$ 1,168.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.68	TON	\$ 55.00	\$ 11,037.40
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,510.95  
 25% Discount Applied \$ 14,377.74  
 Net Stage Total \$ 43,133.21

(Print Name)

Customer Rep: Rob Cowger

Customer Signature: [Signature]

# NNE Boggess Pad

## 3H

Stage	52
Date:	9/15/19
OWP (psi):	3,430
Starting Time	4:46 AM
Ending Time	6:29 AM
Pump Time (hr:min)	01:43
Swap Time (hr:min)	02:34
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,137
Average Treating Rate (bbl/min)	81
Average Treating Pressure (psi)	7,933
Maximum Treating Rate (bbl/min)	83
Maximum Treating Pressure (psi)	8,313
Displacement (psi)	8,549
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,292
Final FG (psi/ft)	1.22
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,070
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	125
Pad (bbls)	189
Treatment (bbls)	6,622
Displacement (bbls)	241
(Acid Included)Total Fluid (bbls)	7,076
Dirty Job Total (bbls)	7,505
100 Mesh	300,760
40/70	100,600
Total Proppant (lbs)	401,360
Total Proppant %	100.3%

### CHEMICALS

FR 9800	147
Biocide	73
Scale	15



**NNE**  
**Boggess 3H**  
**Stage 53**  
**Producers Service Corp.**

**Post Stage Report**  
**September 15, 2019**





Refresh Graph





# NNE Boggess Pad

## 3H

Stage	53
Date:	9/15/19
OWP (psi):	3,598
Starting Time	11:31 AM
Ending Time	1:17 PM
Pump Time (hr:min)	01:46
Swap Time (hr:min)	01:13
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,134
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	7,992
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,204
Displacement (psi)	8,207
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,495
Final FG (psi/ft)	1.12
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,459
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	126
Pad (bbls)	54
Treatment (bbls)	7,161
Displacement (bbls)	245
(Acid Included)Total Fluid (bbls)	7,465
Dirty Job Total (bbls)	7,868
100 Mesh	298,320
40/70	102,000
Total Proppant (lbs)	400,320
Total Proppant %	100.1%

### CHEMICALS

FR 9800	154
Biocide	77
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23060  
 Date: 9/15/2019  
 Well Name: Bogges 3H  
 Stage No.: 53

State: WV  
 County: Monongahela  
 Operator: Kelby/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,983.20	CWT	\$ 5.50	\$ 16,407.60
SAND 40/70	40/70 white	1,020.00	CWT	\$ 5.75	\$ 5,865.00
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	154	GAL	\$ 17.75	\$ 2,733.50
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.16	TON	\$ 55.00	\$ 11,008.80
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,616.90  
 25% Discount Applied \$ 14,404.23  
 Net Stage Total \$ 43,212.68

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

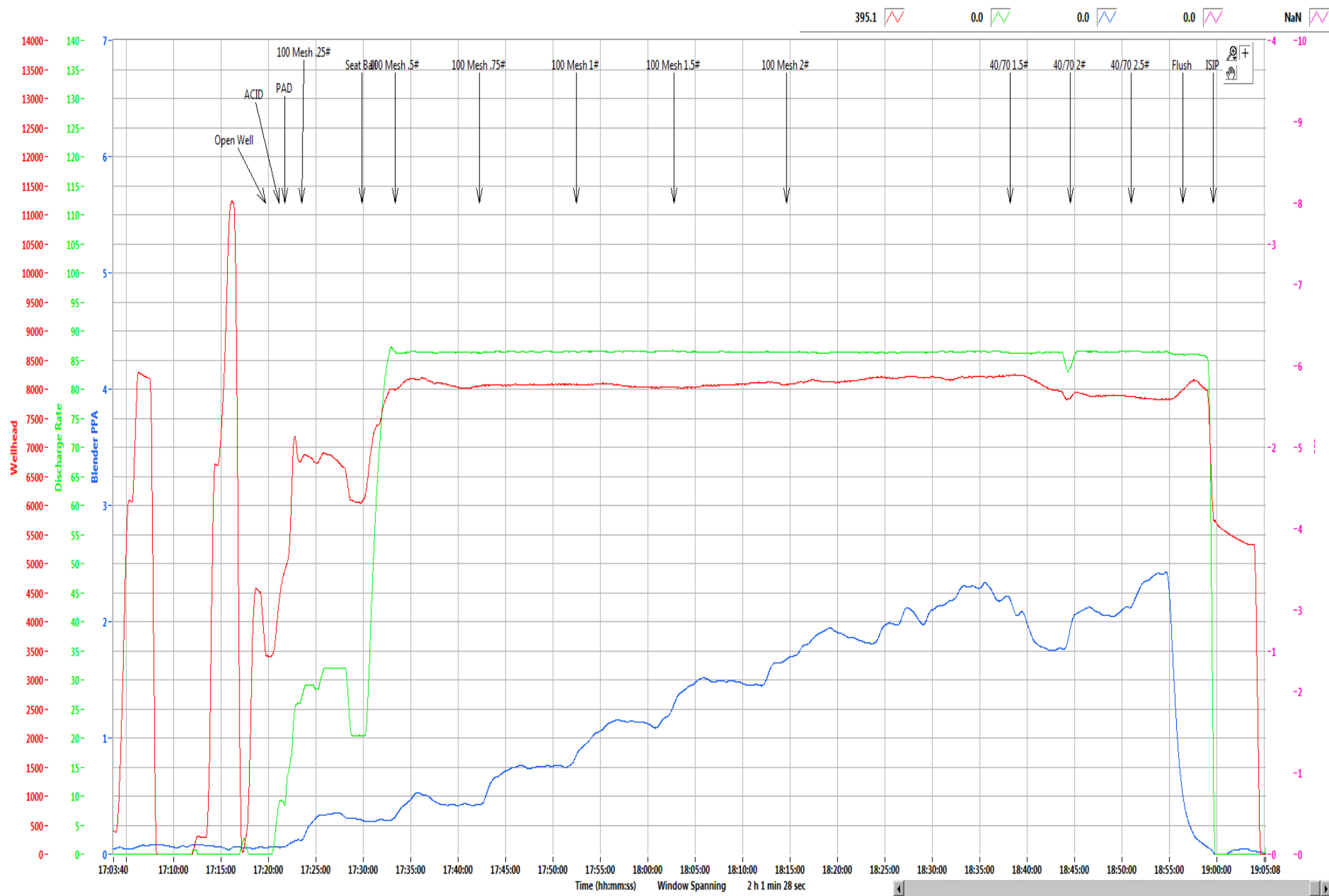
*E. Boone*



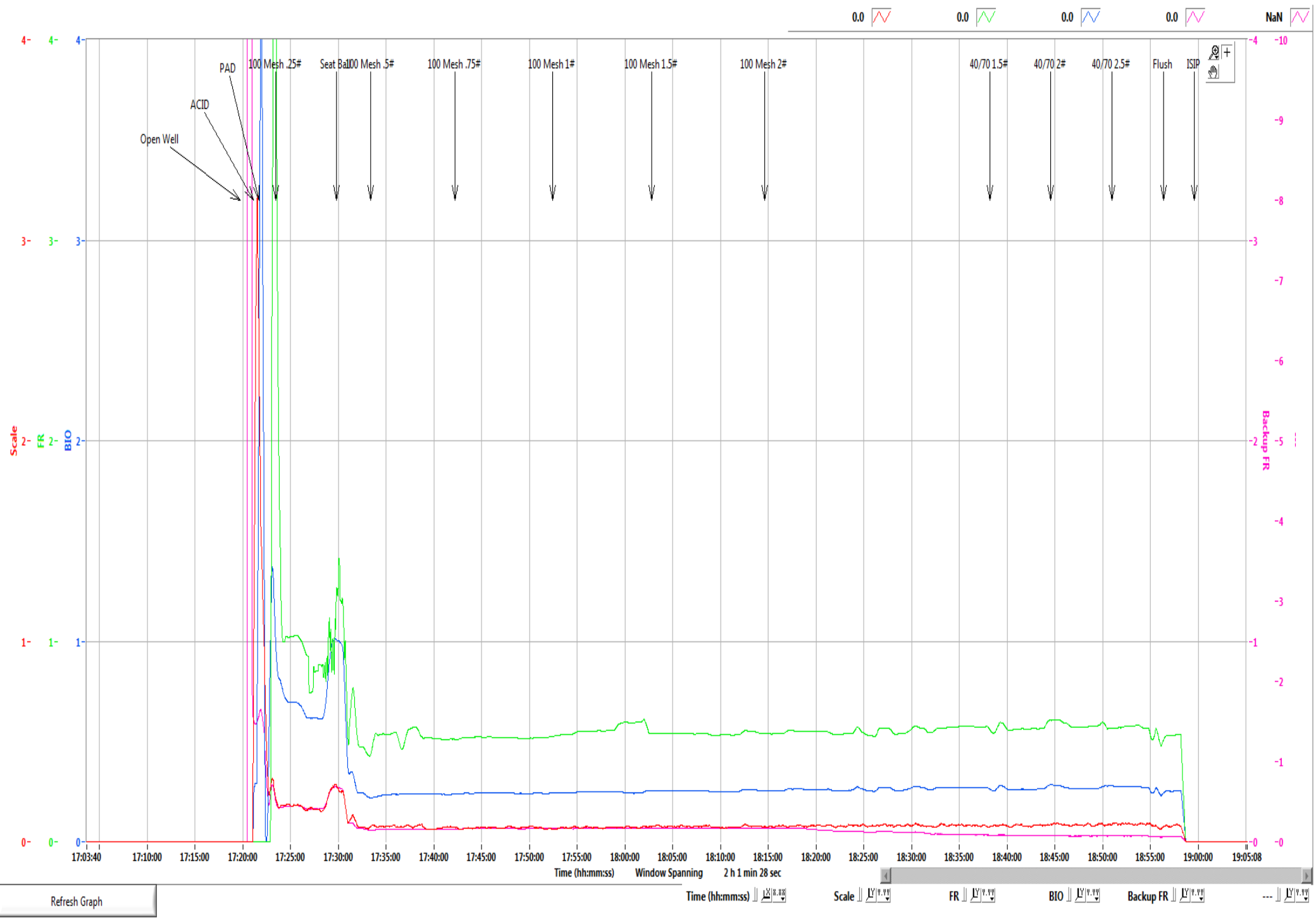
**NNE**  
**Boggess 13H**  
**Stage 45**  
**Producers Service Corp.**

**Post Stage Report**  
**September 15, 2019**





Refresh Graph



<b>3h</b>
<b>54</b>
9/15/19
3,407
5:19 PM
6:59 PM
01:40
01:07
16
16
8,030

6,190
86
7,956
87
8,301
8,000
2.50
5,701
1.14

7,427
250
105
50
7,619
6,887
7,433
7,869
300,320
104,940
405,260
101.3%

159
77
17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23062  
 Date: 9/15/2019  
 Well Name: Bogges 3h  
 Stage No.: 54

State: WV  
 County: Monongahela  
 Operator: Kelby/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,003.20	CWT	\$ 5.50	\$ 16,517.60
SAND 40/70	40/70 white	1,049.40	CWT	\$ 5.75	\$ 6,034.05
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	159	GAL	\$ 17.75	\$ 2,822.25
BIOC11219A	Biocide @ 0.25 GPT	77	GAL	\$ 16.00	\$ 1,232.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		202.63	TON	\$ 55.00	\$ 11,144.65
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,152.55  
 25% Discount Applied \$ 14,538.14  
 Net Stage Total \$ 43,614.41

(Print Name)

Customer Rep: Rob Ganger

Customer Signature: [Signature]





**NNE**  
**Boggess 3H**  
**Stage 55**  
**Producers Service Corp.**

**Post Stage Report**  
**September 16, 2019**





345.2 0.0 0.0 0.0 NaN

Time (hh:mm:ss) Window Spanning 1 h 48 min 56 sec

Refresh Graph



# NNE Boggess Pad

## 3H

Stage	55
Date:	9/15/19
OWP (psi):	3,500
Starting Time	10:38 PM
Ending Time	12:16 AM
Pump Time (hr:min)	01:38
Swap Time (hr:min)	00:44
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	5,905
Average Treating Rate (bbl/min)	83
Average Treating Pressure (psi)	8,111
Maximum Treating Rate (bbl/min)	84
Maximum Treating Pressure (psi)	8,301
Displacement (psi)	7,953
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,698
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,004
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	100
Pad (bbls)	40
Treatment (bbls)	6,760
Displacement (bbls)	233
(Acid Included)Total Fluid (bbls)	7,010
Dirty Job Total (bbls)	7,445
100 Mesh	302,720
40/70	99,960
Total Proppant (lbs)	402,680
Total Proppant %	100.7%

### CHEMICALS

FR 9800	151
Biocide	76
Scale	18

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23064  
 Date: 9/16/2019  
 Well Name: Bogges 3H  
 Stage No.: 55

State: WV  
 County: Monongahela  
 Operator: Stetson/David  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,027.20	CWT	\$ 5.50	\$ 16,649.60
SAND 40/70	40/70 white	999.60	CWT	\$ 5.75	\$ 5,747.70
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	151	GAL	\$ 17.75	\$ 2,680.25
BIOC11219A	Biocide @ 0.25 GPT	76	GAL	\$ 16.00	\$ 1,216.00
SCAL16846A	Scale Control @ 0.05 GPT	18	GAL	\$ 16.00	\$ 288.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.34	TON	\$ 55.00	\$ 11,073.70
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,785.25  
 25% Discount Applied \$ 14,446.31  
 Net Stage Total \$ 43,338.94

(Print Name)  
 Customer Rep:

*Rob Cowger*

Customer Signature:

*RA Cowger*



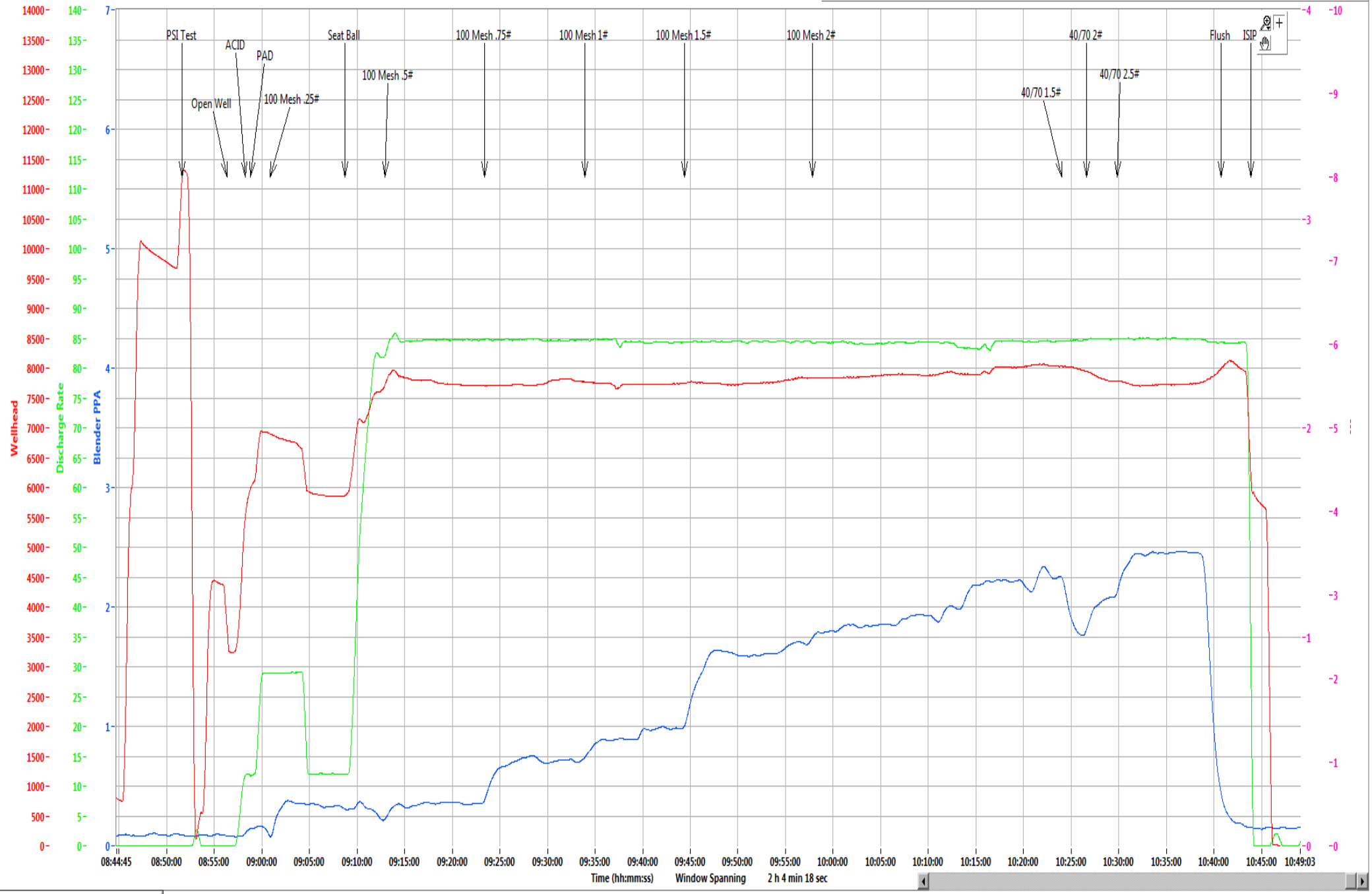
**NNE**  
**Boggess 3H**  
**Stage 56**  
**Producers Service Corp.**

**Post Stage Report**  
**September 16, 2019**

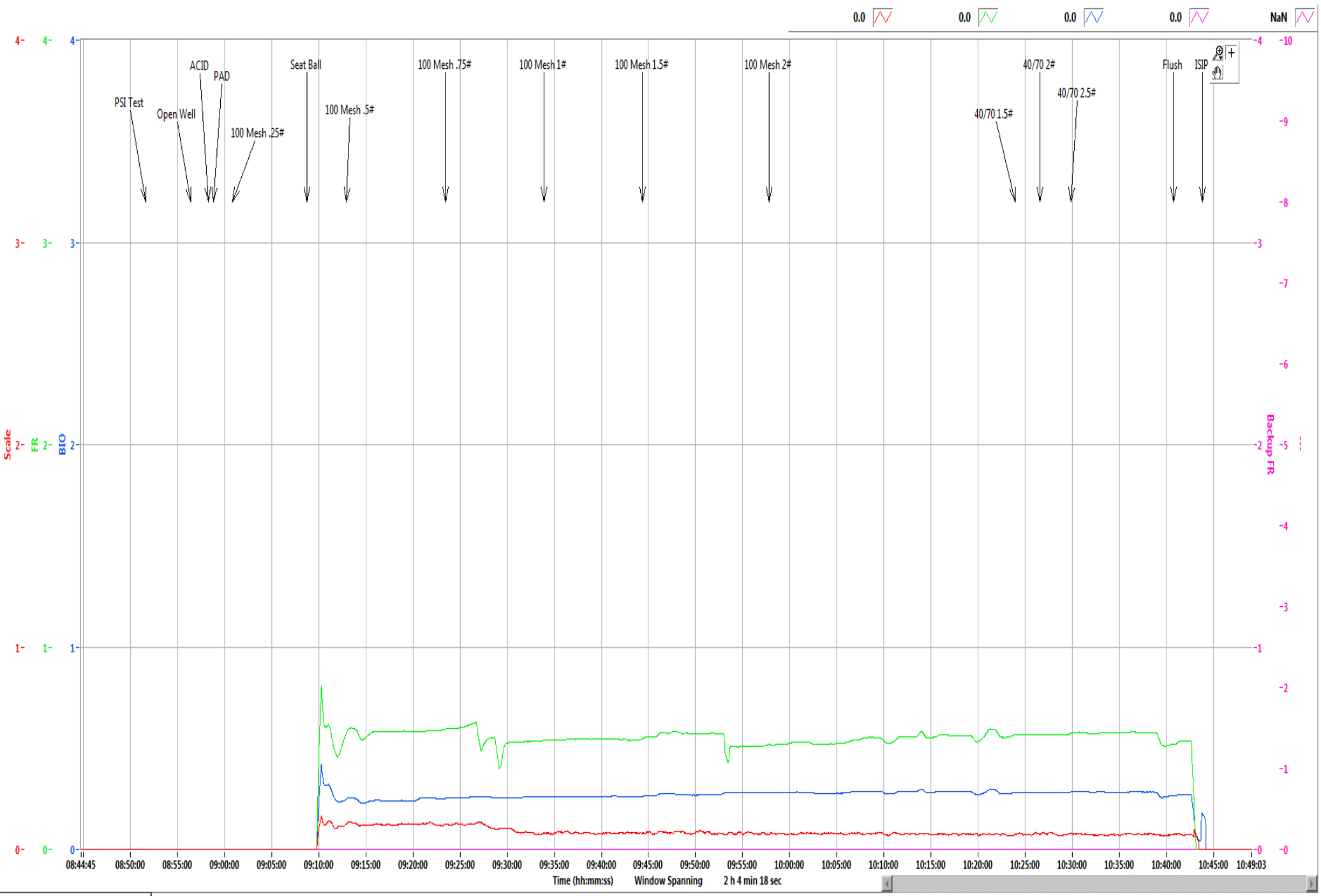




791.1 0.0 0.1 0.0 NaN



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# NNE Boggess Pad

3H

Stage	56
Date:	9/16/19
OWP (psi):	3,242
Starting Time	8:56 AM
Ending Time	10:43 AM
Pump Time (hr:min)	01:47
Swap Time (hr:min)	05:18
Starting # Pumps	17
Finishing # Pumps	15
TVD (ft)	8,030

## Pressures & Rates

Breakdown Pressure (psi)	5,944
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	7,816
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,134
Displacement (psi)	8,053
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,791
Final FG (psi/ft)	1.15
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

## Fluids & Proppant

Slickwater (bbls)	7,706
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	95
Pad (bbls)	62
Treatment (bbls)	7,411
Displacement (bbls)	232
(Acid Included)Total Fluid (bbls)	7,712
Dirty Job Total (bbls)	8,166
100 Mesh	300,080
40/70	100,180
Total Proppant (lbs)	400,260
Total Proppant %	100.1%

## CHEMICALS

FR 9800	155
Biocide	83
Scale	17

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23066  
 Date: 9/16/2019  
 Well Name: Bogges 3H  
 Stage No.: 56

State: WV  
 County: Monongahela  
 Operator: Austin/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,000.80	CWT	\$ 5.50	\$ 16,504.40
SAND 40/70	40/70 white	1,001.80	CWT	\$ 5.75	\$ 5,760.35
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	155	GAL	\$ 17.75	\$ 2,751.25
BIOC11219A	Biocide @ 0.25 GPT	83	GAL	\$ 16.00	\$ 1,328.00
SCAL16846A	Scale Control @ 0.05 GPT	17	GAL	\$ 16.00	\$ 272.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.13	TON	\$ 55.00	\$ 11,007.15
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,753.15  
 25% Discount Applied \$ 14,438.29  
 Net Stage Total \$ 43,314.86

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

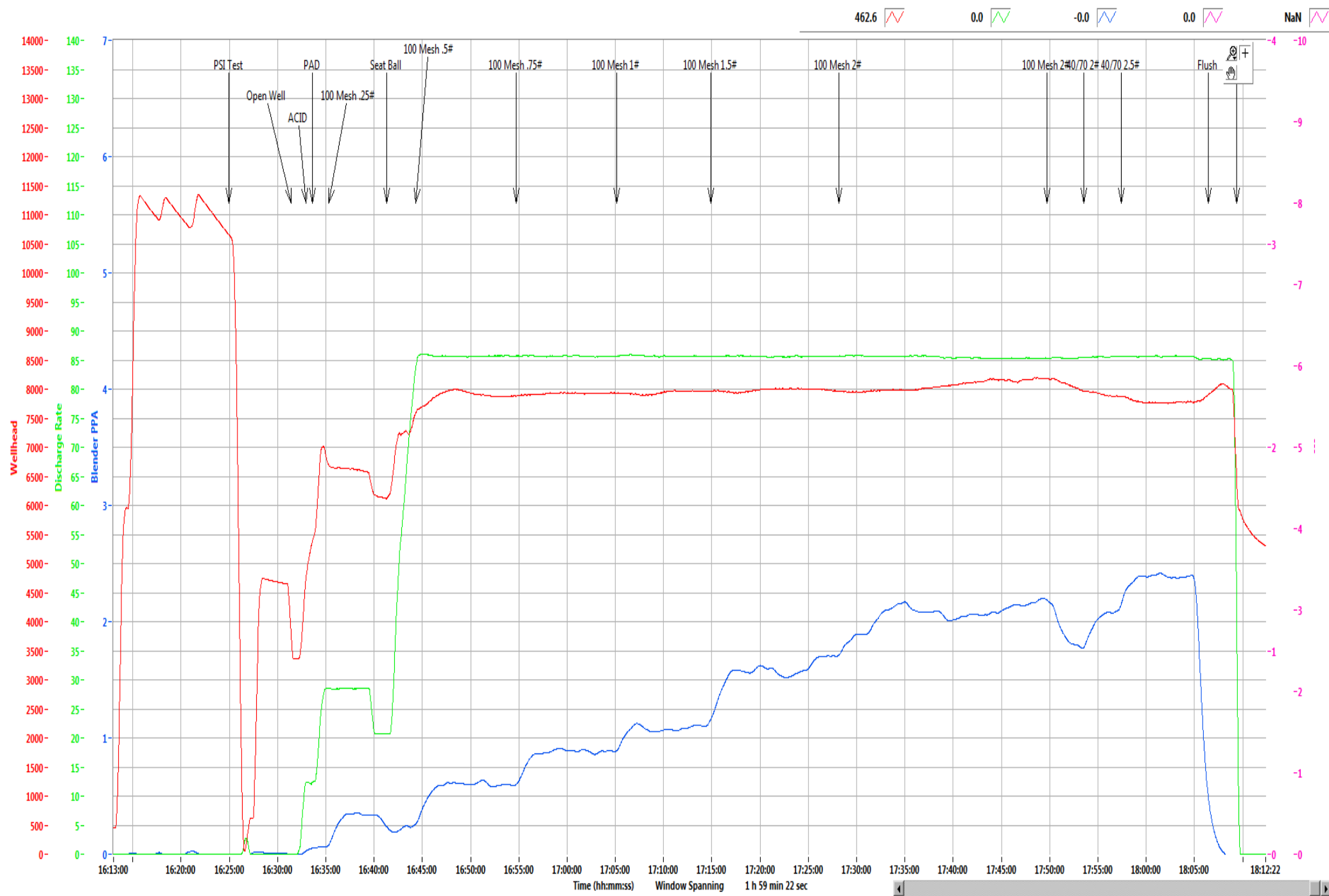
*E. Boone*



**NNE**  
**Bogges 3H**  
**Stage 57**  
**Producers Service Corp.**

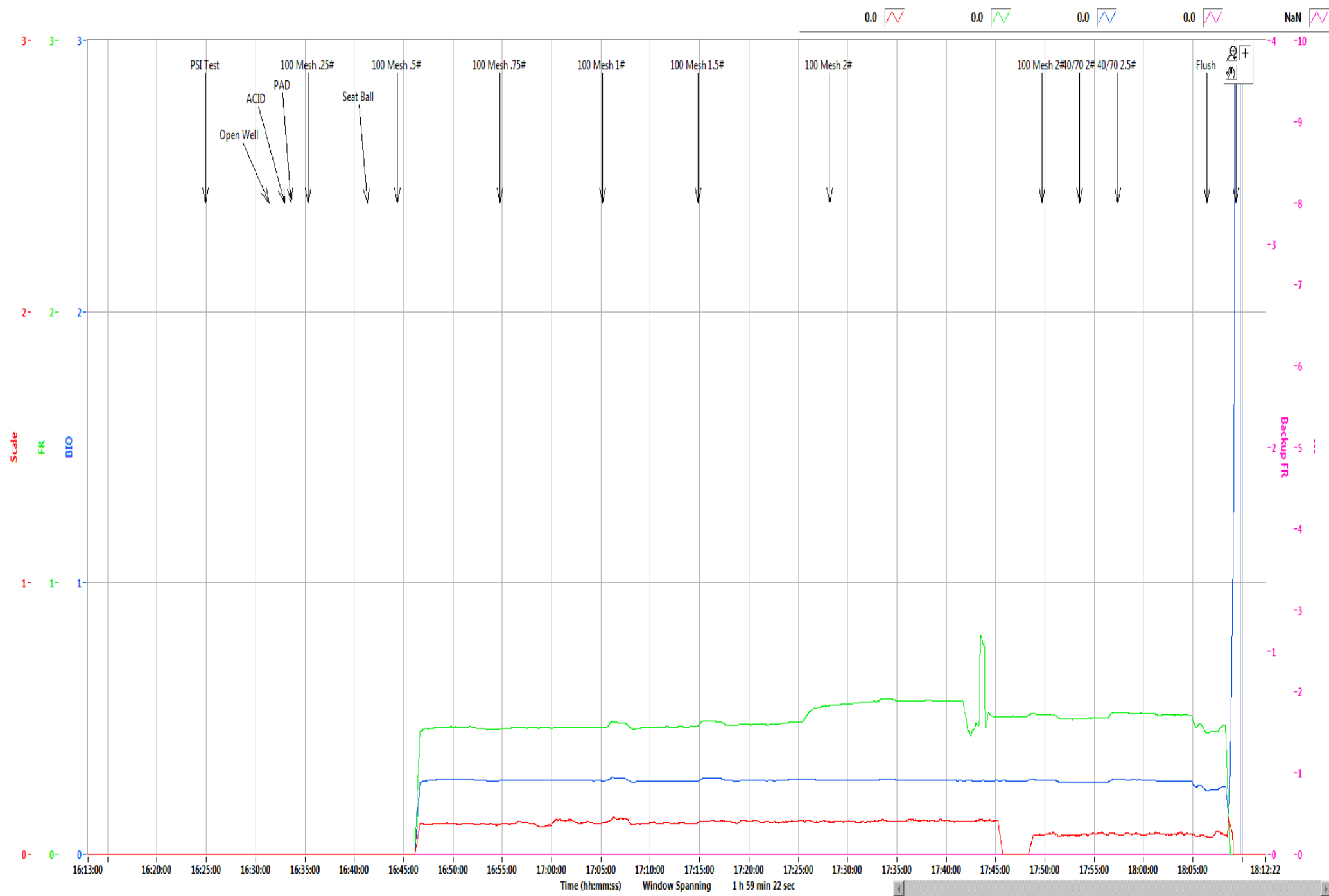
**Post Stage Report**  
**September 16, 2019**





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# NNE Boggess Pad

3H

Stage	57
Date:	9/16/19
OWP (psi):	3,362
Starting Time	4:31 PM
Ending Time	6:09 PM
Pump Time (hr:min)	01:38
Swap Time (hr:min)	01:34
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

## Pressures & Rates

Breakdown Pressure (psi)	6,263
Average Treating Rate (bbl/min)	86
Average Treating Pressure (psi)	7,960
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,241
Displacement (psi)	7,945
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,198
Final FG (psi/ft)	1.20
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

## Fluids & Proppant

Slickwater (bbls)	7,200
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	85
Pad (bbls)	59
Treatment (bbls)	6,956
Displacement (bbls)	228
(Acid Included)Total Fluid (bbls)	7,206
Dirty Job Total (bbls)	7,663
100 Mesh	304,560
40/70	105,120
Total Proppant (lbs)	409,680
Total Proppant %	102.4%

## CHEMICALS

FR 9800	157
Biocide	81
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23068  
 Date: 9/16/2019  
 Well Name: Bogges 3H  
 Stage No.: 57

State: WV  
 County: Monongahela  
 Operator: Austin/Brad  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,045.60	CWT	\$ 5.50	\$ 16,750.80
SAND 40/70	40/70 white	1,051.20	CWT	\$ 5.75	\$ 6,044.40
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	157	GAL	\$ 17.75	\$ 2,786.75
BIOC11219A	Biocide @ 0.25 GPT	81	GAL	\$ 16.00	\$ 1,296.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		204.84	TON	\$ 55.00	\$ 11,266.20
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 58,594.15  
 25% Discount Applied \$ 14,648.54  
 Net Stage Total \$ 43,945.61

(Print Name)  
 Customer Rep: Rob Cowg

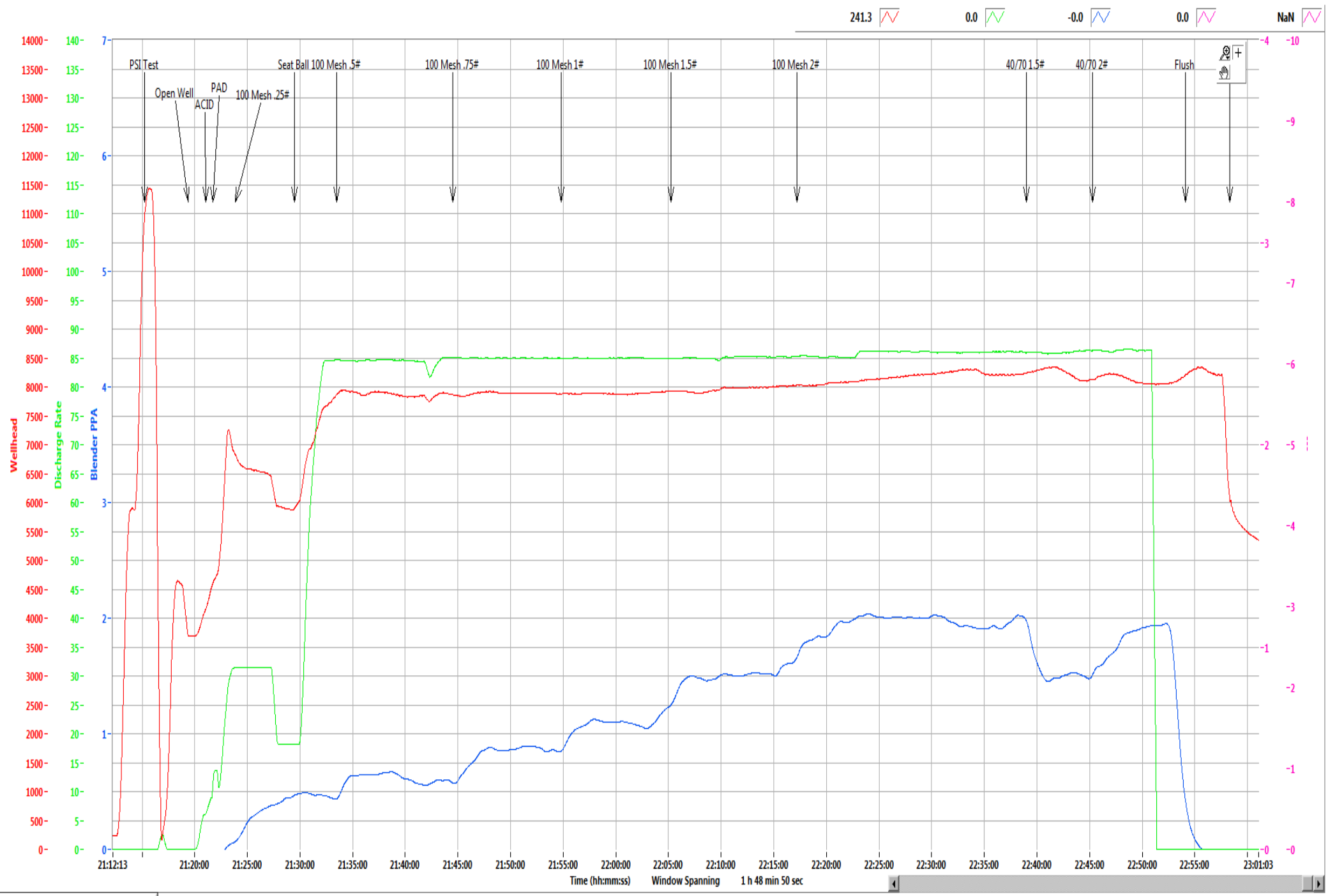
Customer Signature: [Signature]



**NNE**  
**Boggess 3H**  
**Stage 58**  
**Producers Service Corp.**

**Post Stage Report**  
**September 16, 2019**





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# NNE Boggess Pad

3H

Stage	58
Date:	9/16/19
OWP (psi):	3,679
Starting Time	9:19 PM
Ending Time	10:58 PM
Pump Time (hr:min)	01:39
Swap Time (hr:min)	00:51
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

## Pressures & Rates

Breakdown Pressure (psi)	6,028
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	8,014
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,391
Displacement (psi)	
Max Prop Con (lb/gal)	2.00
ShutDown ISIP (psi)	5,802
Final FG (psi/ft)	1.16
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

## Fluids & Proppant

Slickwater (bbls)	7,696
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	78
Pad (bbls)	51
Treatment (bbls)	7,452
Displacement (bbls)	240
(Acid Included)Total Fluid (bbls)	7,702
Dirty Job Total (bbls)	8,073
100 Mesh	319,100
40/70	50,020
Total Proppant (lbs)	369,120
Total Proppant %	92.3%

## CHEMICALS

FR 9800	150
Biocide	76
Scale	20

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23070  
 Date: 9/16/2019  
 Well Name: Bogges 3H  
 Stage No.: 58

State: WV  
 County: Monongahela  
 Operator: Tilton/David  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,191.00	CWT	\$ 5.50	\$ 17,550.50
SAND 40/70	40/70 white	500.20	CWT	\$ 5.75	\$ 2,876.15
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	150	GAL	\$ 17.75	\$ 2,662.50
BIOC11219A	Biocide @ 0.25 GPT	76	GAL	\$ 16.00	\$ 1,216.00
SCAL16846A	Scale Control @ 0.05 GPT	20	GAL	\$ 16.00	\$ 320.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		184.56	TON	\$ 55.00	\$ 10,150.80
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 54,905.95  
 25% Discount Applied \$ 13,726.49  
 Net Stage Total \$ 41,179.46

(Print Name)  
 Customer Rep: Rob Cowen

Customer Signature: [Signature]



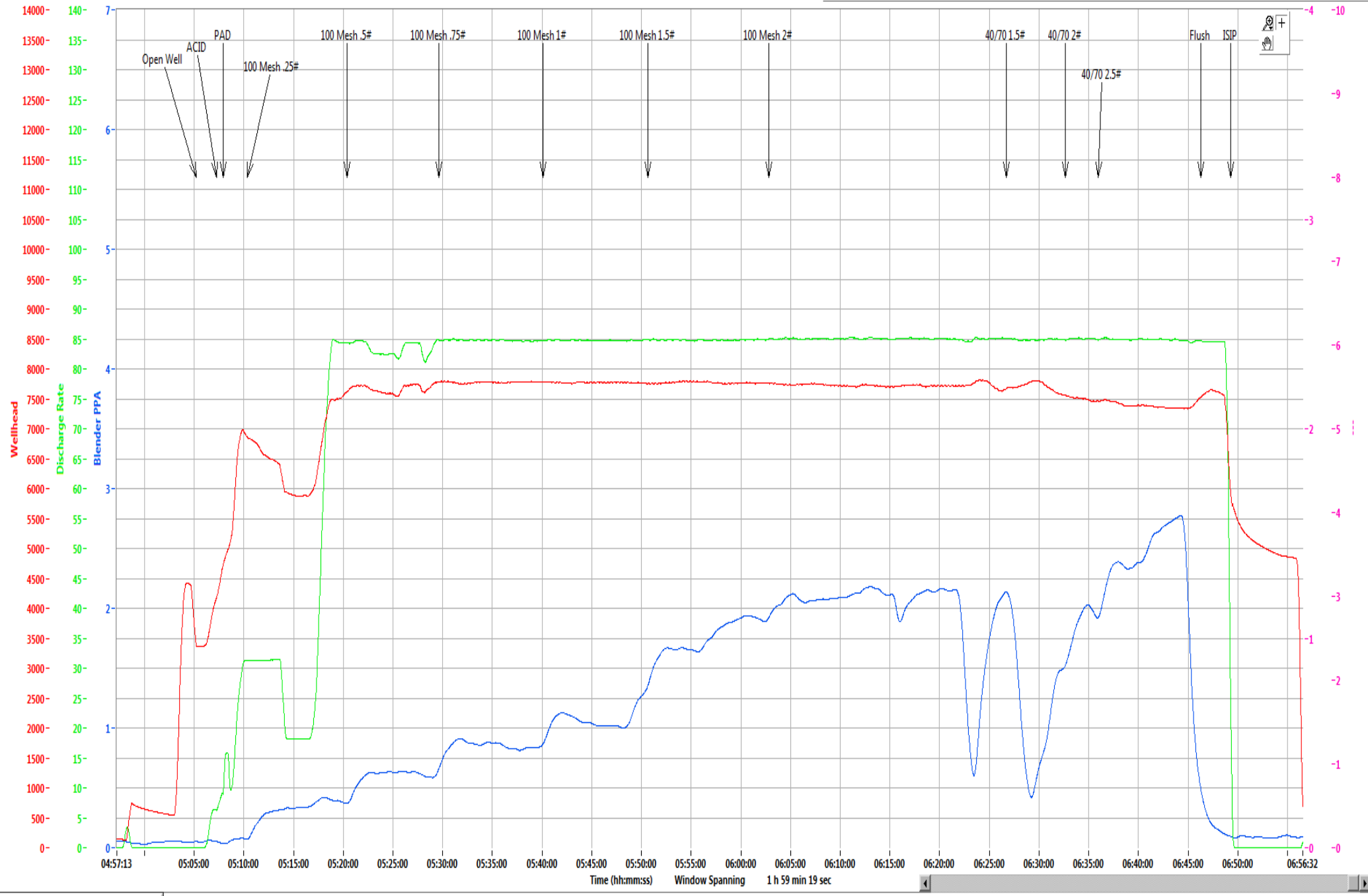


**NNE**  
**Boggess 3H**  
**Stage 59**  
**Producers Service Corp.**

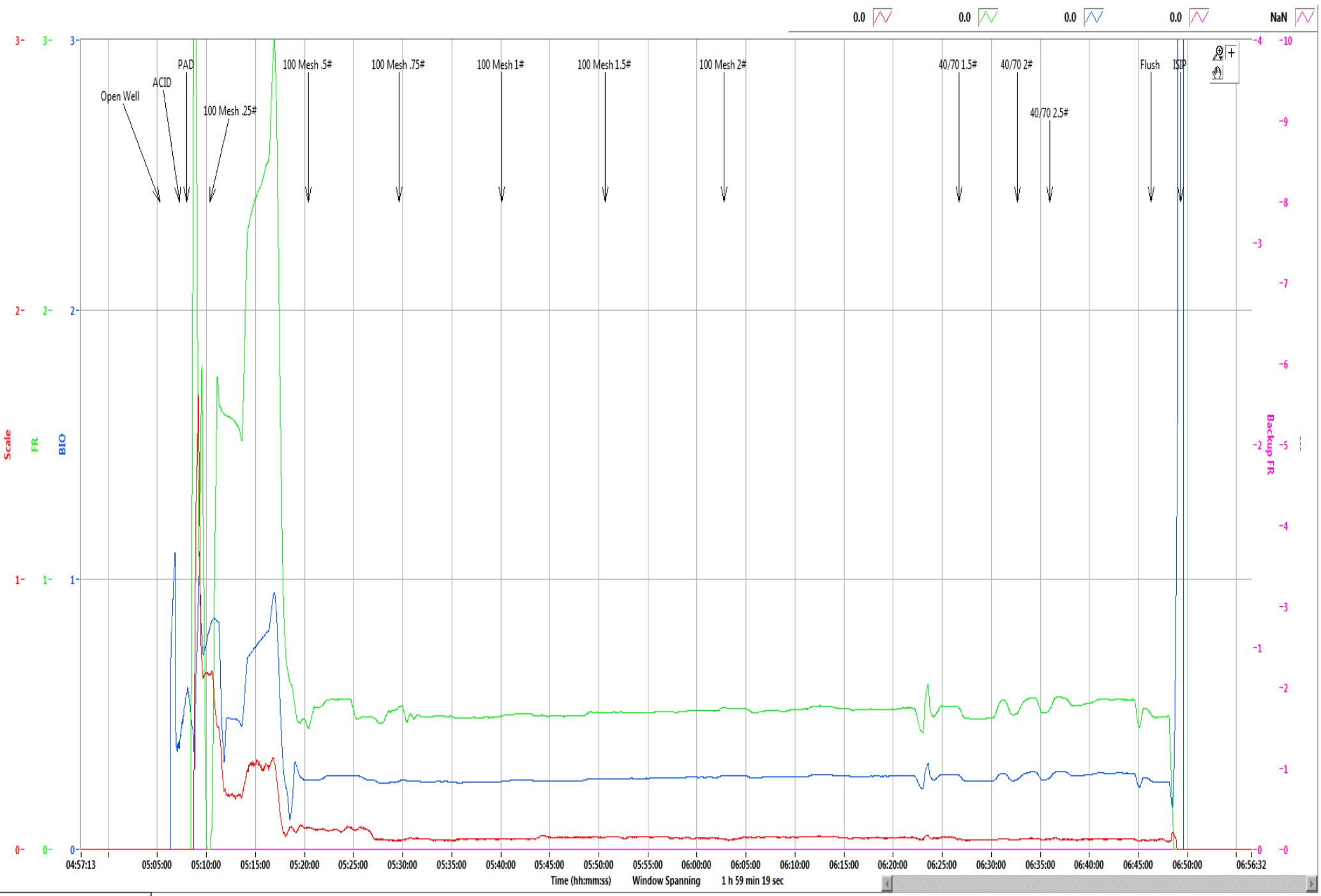
**Post Stage Report**  
**September 17, 2019**



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# NNE Boggess Pad

## 3H

Stage	59
Date:	9/17/19
OWP (psi):	
Starting Time	5:05 AM
Ending Time	6:49 AM
Pump Time (hr:min)	01:44
Swap Time (hr:min)	02:52
Starting # Pumps	17
Finishing # Pumps	16
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	5,912
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	7,686
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	7,854
Displacement (psi)	7,757
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,585
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,508
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	71
Pad (bbls)	53
Treatment (bbls)	7,226
Displacement (bbls)	219
(Acid Included)Total Fluid (bbls)	7,514
Dirty Job Total (bbls)	7,980
100 Mesh	300,820
40/70	100,220
Total Proppant (lbs)	401,040
Total Proppant %	100.3%

### CHEMICALS

FR 9800	150
Biocide	78
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23072  
 Date: 9/17/2019  
 Well Name: Boggess 3H  
 Stage No.: 59

State: WV  
 County: Monongahela  
 Operator: Tilton/David  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,008.20	CWT	\$ 5.50	\$ 16,545.10
SAND 40/70	40/70 white	1,002.20	CWT	\$ 5.75	\$ 5,762.65
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	150	GAL	\$ 17.75	\$ 2,662.50
BIOC11219A	Biocide @ 0.25 GPT	78	GAL	\$ 16.00	\$ 1,248.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.52	TON	\$ 55.00	\$ 11,028.60
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,616.85  
 25% Discount Applied \$ 14,404.21  
 Net Stage Total \$ 43,212.64

(Print Name)  
 Customer Rep: E. Boone

Customer Signature: [Signature]

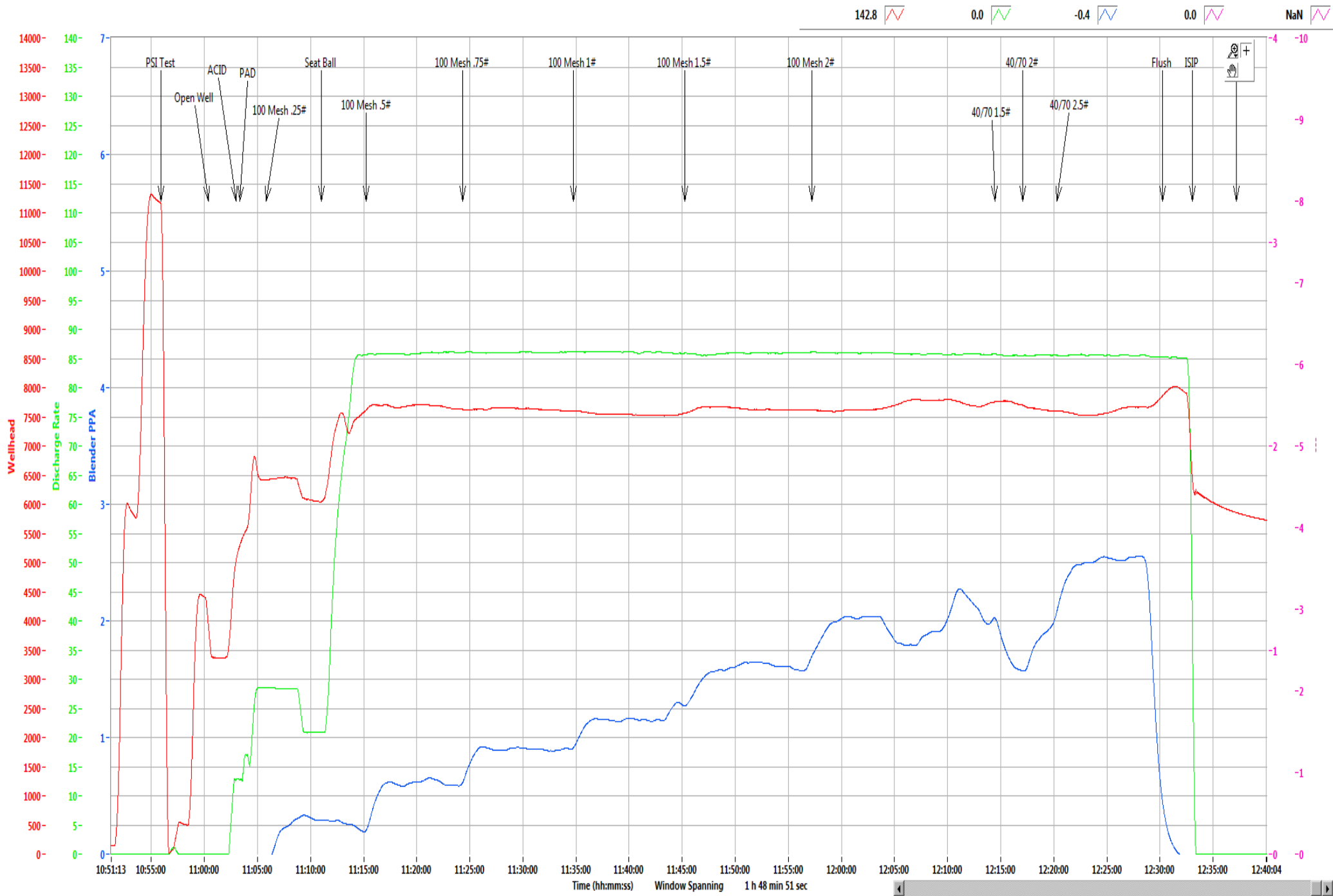


**NNE**  
**Boggess 3H**  
**Stage 60**  
**Producers Service Corp.**

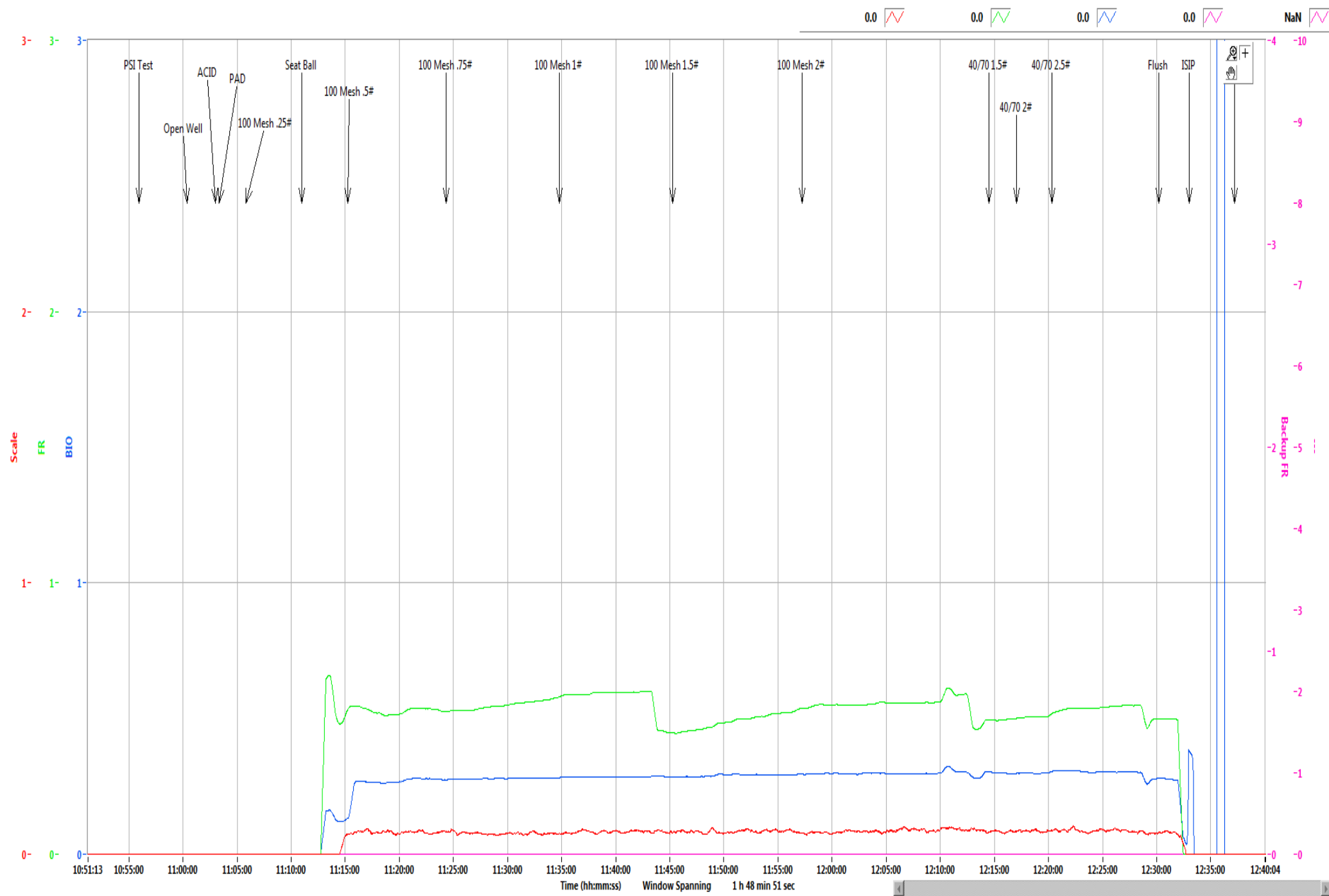
**Post Stage Report**  
**September 17, 2019**







Refresh Graph



Refresh Graph

# NNE Boggess Pad

## 3H

Stage	60
Date:	9/17/19
OWP (psi):	3,370
Starting Time	11:00 AM
Ending Time	12:33 PM
Pump Time (hr:min)	01:33
Swap Time (hr:min)	01:05
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,132
Average Treating Rate (bbl/min)	86
Average Treating Pressure (psi)	7,638
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	7,838
Displacement (psi)	7,912
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,915
Final FG (psi/ft)	1.17
5 Minute Leakoff Pressure (psi)	5,845
5 Minute Leakoff Rate (psi/min)	14
10 Minute Leakoff Pressure (psi)	5,784
10 Minute Leakoff Rate (psi/min)	13
15 Minute Leakoff Pressure (psi)	5,700
15 Minute Leakoff Rate (psi/min)	14

### Fluids & Proppant

Slickwater (bbls)	6,711
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	61
Pad (bbls)	81
Treatment (bbls)	6,416
Displacement (bbls)	214
(Acid Included)Total Fluid (bbls)	6,717
Dirty Job Total (bbls)	7,172
100 Mesh	297,000
40/70	104,320
Total Proppant (lbs)	401,320
Total Proppant %	100.3%

### CHEMICALS

FR 9800	138
Biocide	68
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23074  
 Date: 9/17/2019  
 Well Name: Bogges 3H  
 Stage No.: 60

State: WV  
 County: Monongahela  
 Operator: Brad/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,970.00	CWT	\$ 5.50	\$ 16,335.00
SAND 40/70	40/70 white	1,043.20	CWT	\$ 5.75	\$ 5,998.40
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	138	GAL	\$ 17.75	\$ 2,449.50
BIOC11219A	Biocide @ 0.25 GPT	68	GAL	\$ 16.00	\$ 1,088.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.66	TON	\$ 55.00	\$ 11,036.30
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,261.20  
 25% Discount Applied \$ 14,315.30  
 Net Stage Total \$ 42,945.90

(Print Name)  
 Customer Rep:

*E. Boone*

Customer Signature:

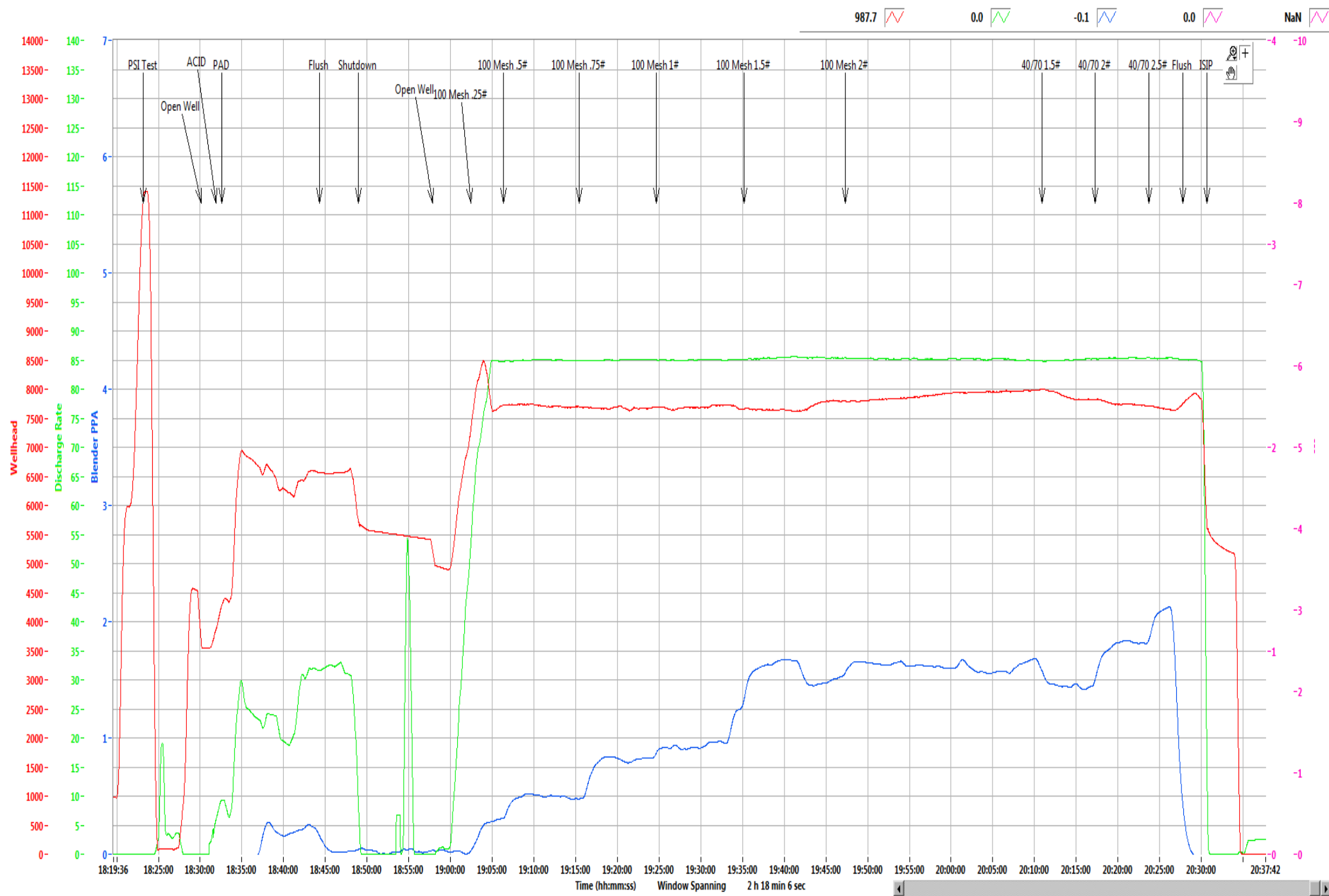
*E. Boone*



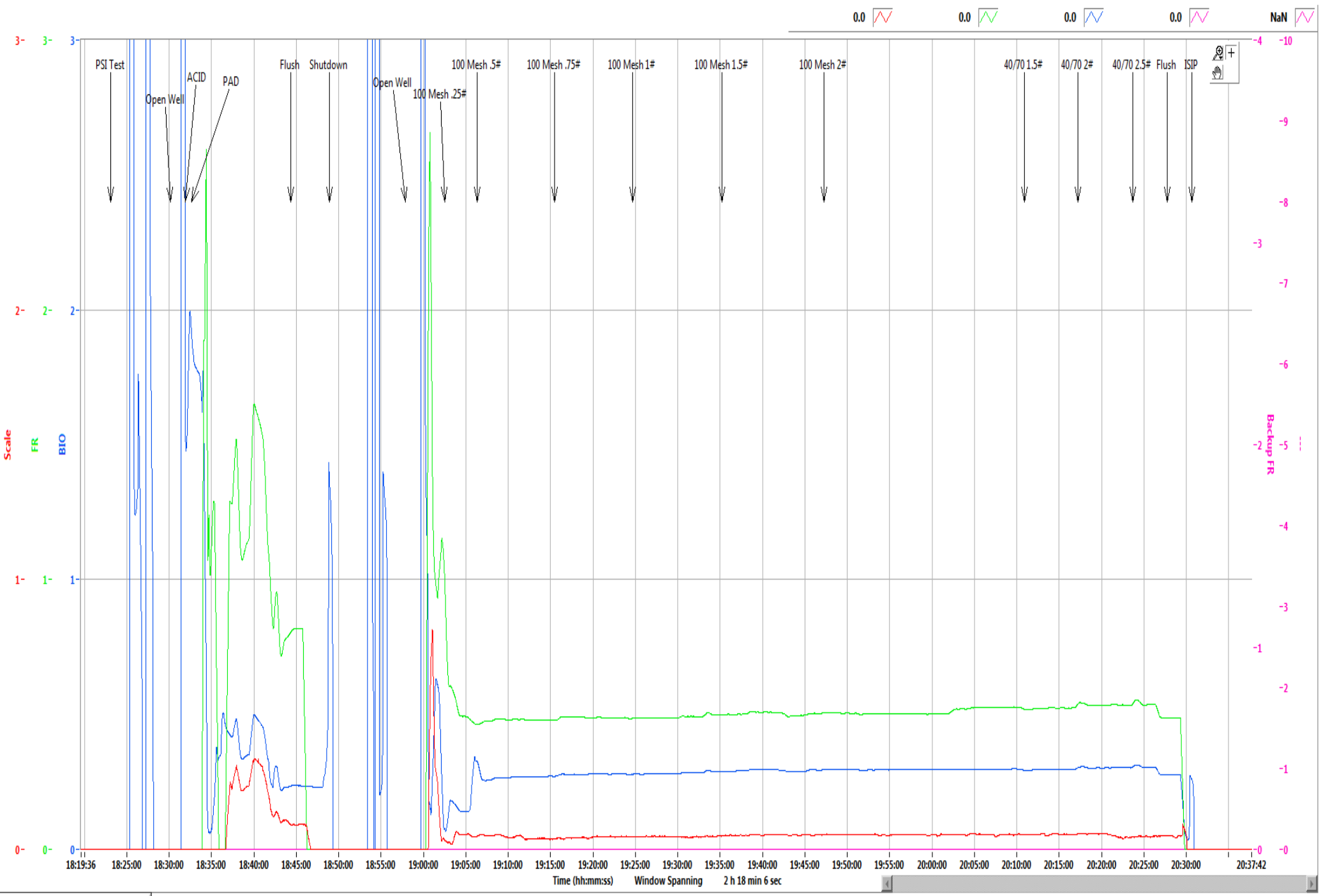
**NNE**  
**Boggess 3H**  
**Stage 61**  
**Producers Service Corp.**

**Post Stage Report**  
**September 17, 2019**





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# NNE Boggess Pad

## 3H

Stage	61
Date:	9/17/19
OWP (psi):	3,553
Starting Time	6:30 PM
Ending Time	8:30 PM
Pump Time (hr:min)	02:00
Swap Time (hr:min)	01:03
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,323
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	7,769
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,054
Displacement (psi)	210
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,598
Final FG (psi/ft)	1.13
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,771
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	61
Pad (bbls)	100
Treatment (bbls)	7,461
Displacement (bbls)	210
(Acid Included)Total Fluid (bbls)	7,777
Dirty Job Total (bbls)	8,054
100 Mesh	299,460
40/70	100,260
Total Proppant (lbs)	399,720
Total Proppant %	99.9%

### CHEMICALS

FR 9800	163
Biocide	81
Scale	16

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23076  
 Date: 9/17/2019  
 Well Name: Bogges 3H  
 Stage No.: 61

State: WV  
 County: Monongahela  
 Operator: Jeremy/Nial  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,994.60	CWT	\$ 5.50	\$ 16,470.30
SAND 40/70	40/70 white	1,002.60	CWT	\$ 5.75	\$ 5,764.95
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	163	GAL	\$ 17.75	\$ 2,893.25
BIOC11219A	Biocide @ 0.25 GPT	81	GAL	\$ 16.00	\$ 1,296.00
SCAL16846A	Scale Control @ 0.05 GPT	16	GAL	\$ 16.00	\$ 256.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		199.86	TON	\$ 55.00	\$ 10,992.30
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,802.80  
 25% Discount Applied \$ 14,450.70  
 Net Stage Total \$ 43,352.10

(Print Name)

Customer Rep: Rob Cowger

Customer Signature: [Signature]

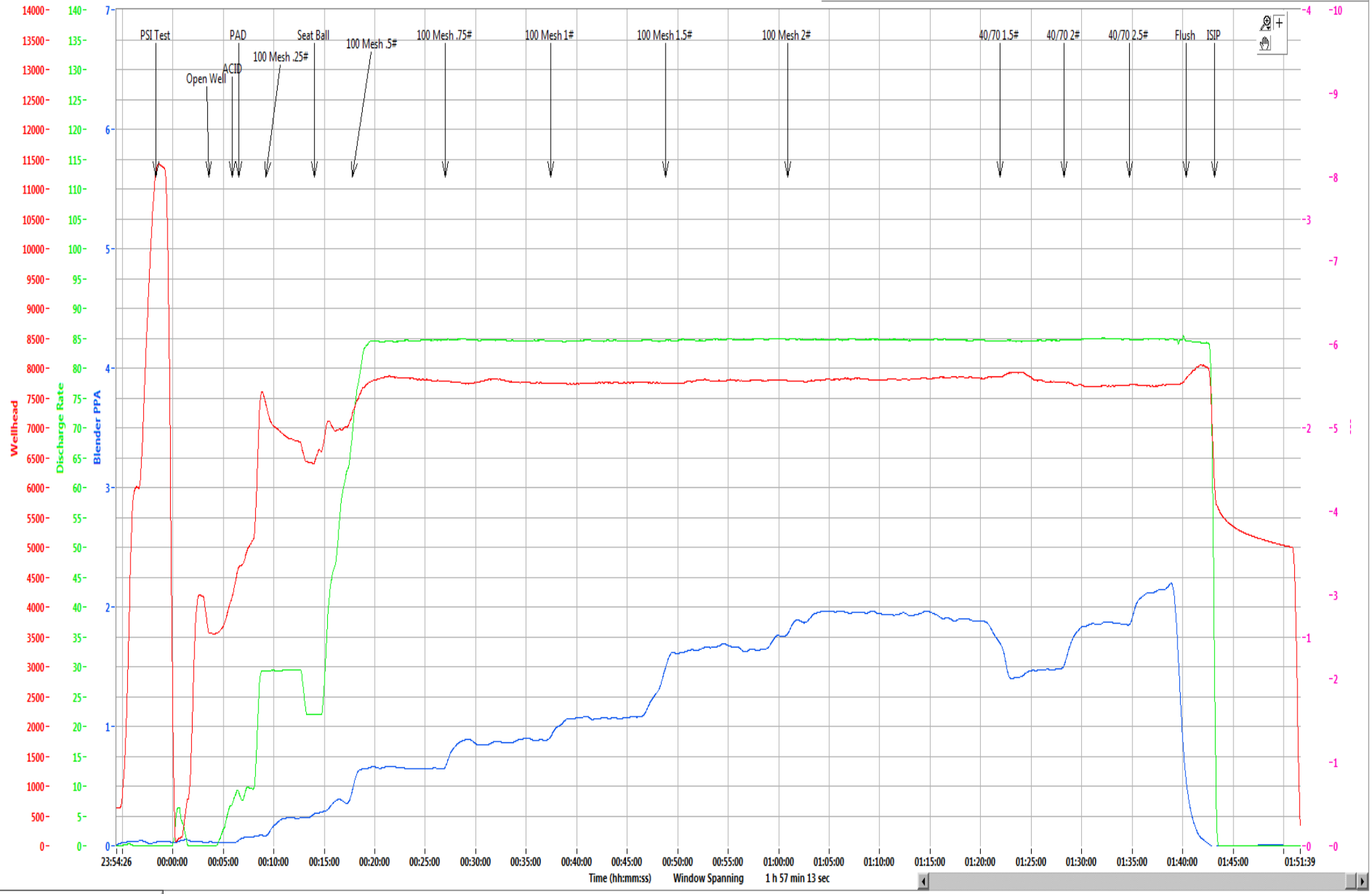


**NNE**  
**Boggess 3H**  
**Stage 62**  
**Producers Service Corp.**

**Post Stage Report**  
**September 18, 2019**



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# NNE Boggess Pad

## 3H

Stage	62
Date:	9/18/19
OWP (psi):	3,555
Starting Time	12:23 AM
Ending Time	1:43 AM
Pump Time (hr:min)	01:20
Swap Time (hr:min)	03:53
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,708
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	7,783
Maximum Treating Rate (bbl/min)	85
Maximum Treating Pressure (psi)	7,973
Displacement (psi)	6,970
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,689
Final FG (psi/ft)	1.14
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,126
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	95
Pad (bbls)	59
Treatment (bbls)	6,911
Displacement (bbls)	162
(Acid Included)Total Fluid (bbls)	7,132
Dirty Job Total (bbls)	7,535
100 Mesh	299,900
40/70	101,200
Total Proppant (lbs)	401,100
Total Proppant %	100.3%

### CHEMICALS

FR 9800	149
Biocide	74
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23077  
 Date: 9/18/2019  
 Well Name: Bogges 3H  
 Stage No.: 62

State: WV  
 County: Monongahela  
 Operator: Jeremy/Nial  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	2,999.00	CWT	\$ 5.50	\$ 16,494.50
SAND 40/70	40/70 white	1,012.00	CWT	\$ 5.75	\$ 5,819.00
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	149	GAL	\$ 17.75	\$ 2,644.75
BIOC11219A	Biocide @ 0.25 GPT	74	GAL	\$ 16.00	\$ 1,184.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.55	TON	\$ 55.00	\$ 11,030.25
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -

Total No Discount \$ 57,526.50  
 25% Discount Applied \$ 14,381.63  
 Net Stage Total \$ 43,144.88

(Print Name) Customer Rep: Rob Cowger Customer Signature: [Signature]



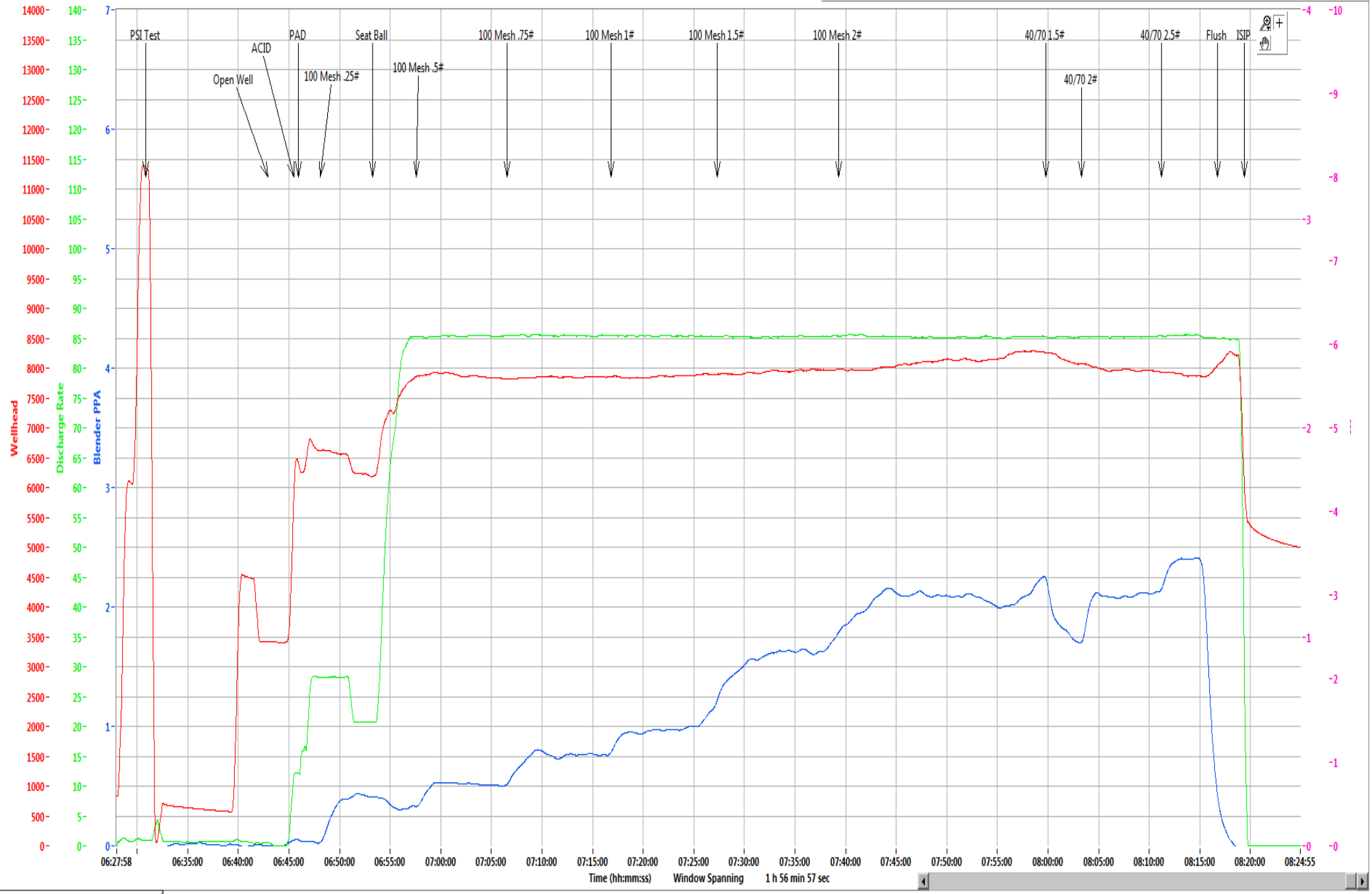


**NNE**  
**Boggess 3H**  
**Stage 63**  
**Producers Service Corp.**

**Post Stage Report**  
**September 18, 2019**



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Time (hh:mm:ss) Window Spanning 1 h 56 min 57 sec

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# NNE Boggess Pad

3H

Stage	63
Date:	9/18/19
OWP (psi):	3,410
Starting Time	6:42 AM
Ending Time	8:19 AM
Pump Time (hr:min)	01:37
Swap Time (hr:min)	
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	

## Pressures & Rates

Breakdown Pressure (psi)	6,283
Average Treating Rate (bbl/min)	85
Average Treating Pressure (psi)	7,965
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,351
Displacement (psi)	8,098
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,437
Final FG (psi/ft)	
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

## Fluids & Proppant

Slickwater (bbls)	6,993
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	45
Pad (bbls)	64
Treatment (bbls)	6,733
Displacement (bbls)	195
(Acid Included)Total Fluid (bbls)	6,999
Dirty Job Total (bbls)	7,455
100 Mesh	298,640
40/70	104,440
Total Proppant (lbs)	403,080
Total Proppant %	100.8%

## CHEMICALS

FR 9800	145
Biocide	72
Scale	14



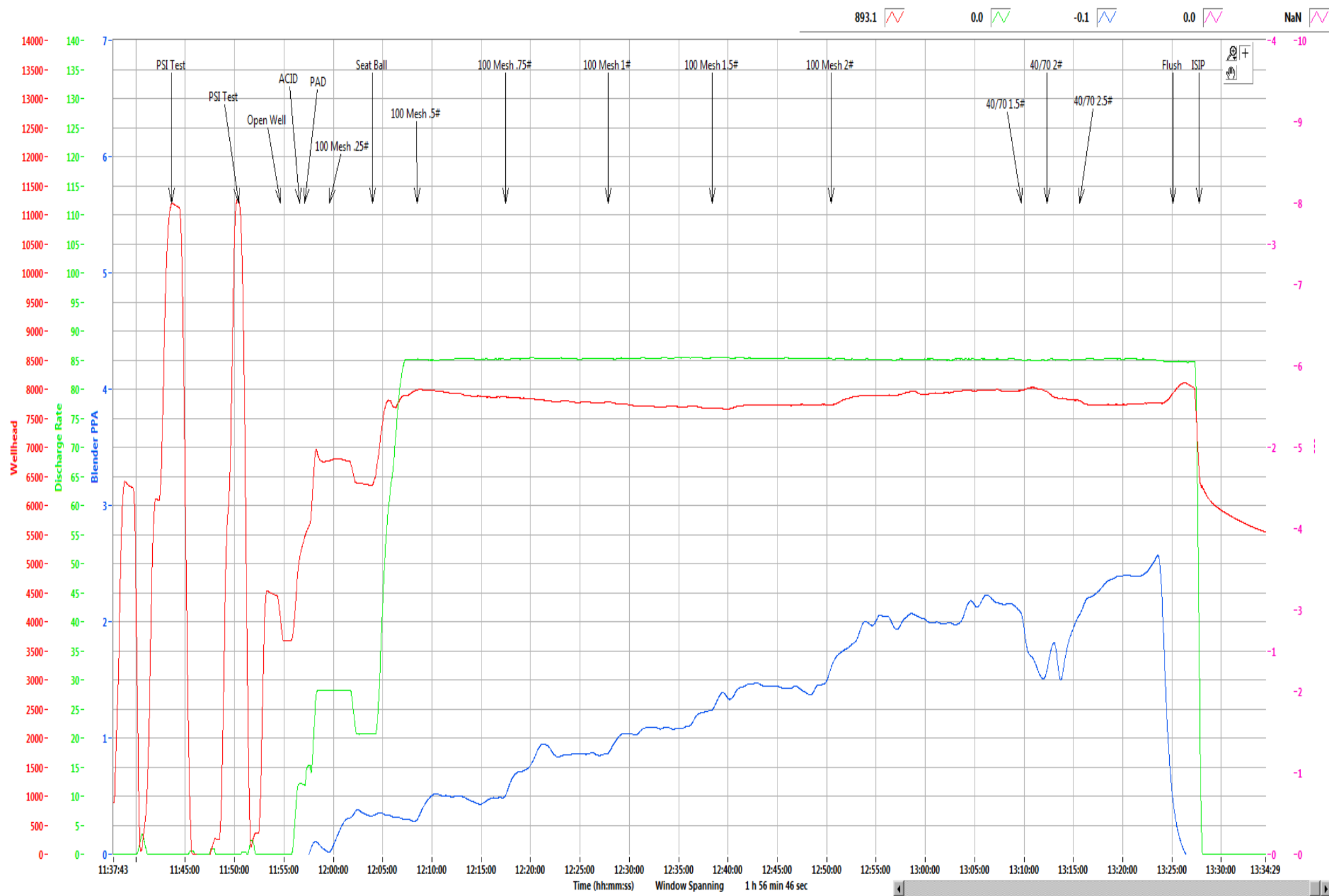


**NNE**  
**Boggess 3H**  
**Stage 64**  
**Producers Service Corp.**

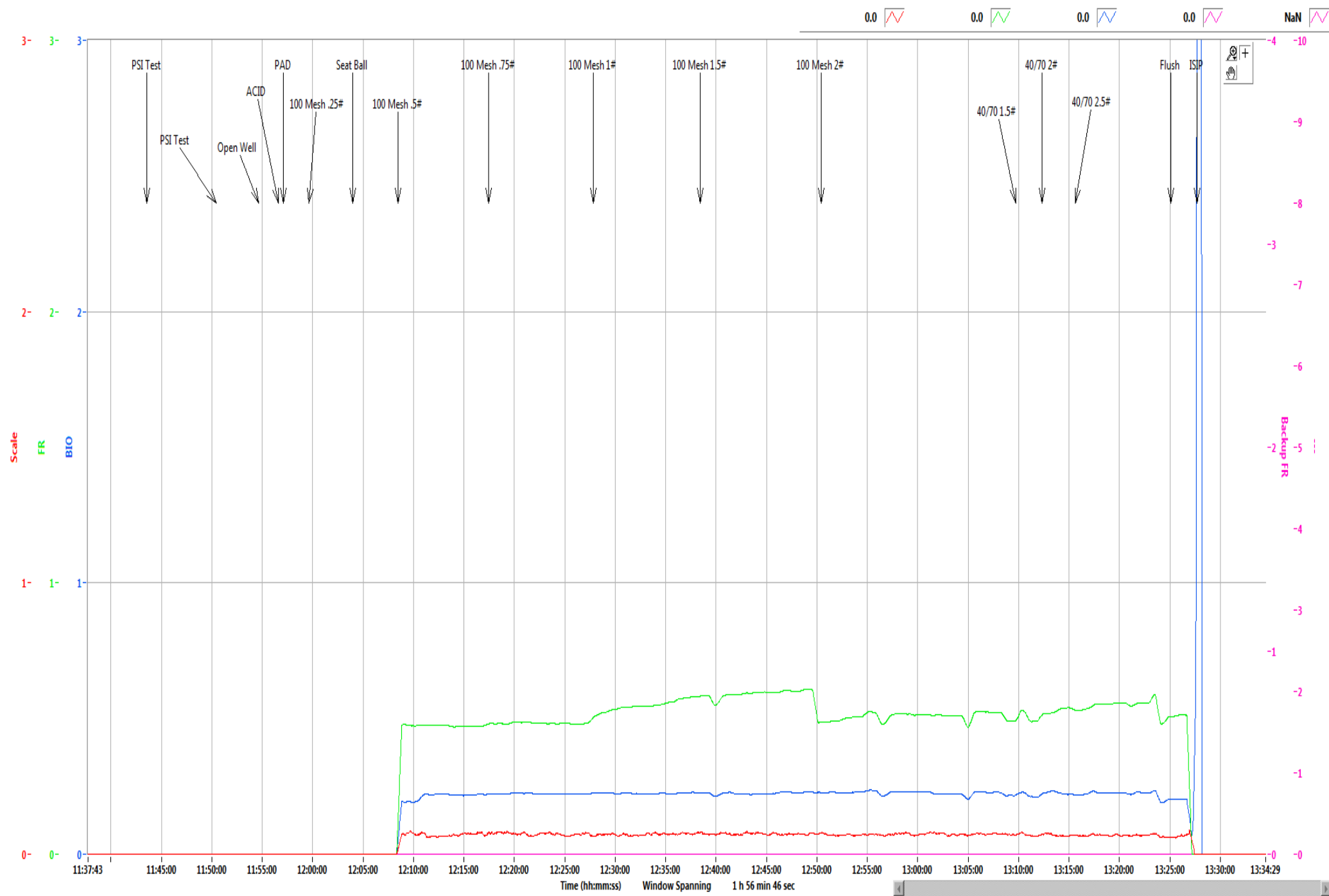
**Post Stage Report**  
**September 18, 2019**







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# NNE Boggess Pad

## 3H

Stage	64
Date:	9/18/19
OWP (psi):	3,684
Starting Time	11:54 AM
Ending Time	1:27 PM
Pump Time (hr:min)	01:33
Swap Time (hr:min)	00:58
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,030

### Pressures & Rates

Breakdown Pressure (psi)	6,639
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	7,824
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	8,073
Displacement (psi)	7,954
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,227
Final FG (psi/ft)	1.21
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	6,781
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	39
Pad (bbls)	71
Treatment (bbls)	6,517
Displacement (bbls)	194
(Acid Included)Total Fluid (bbls)	6,787
Dirty Job Total (bbls)	7,246
100 Mesh	300,560
40/70	101,680
Total Proppant (lbs)	402,240
Total Proppant %	100.6%

### CHEMICALS

FR 9800	141
Biocide	71
Scale	14

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23082  
 Date: 9/18/2019  
 Well Name: Bogges 3H  
 Stage No.: 64

State: WV  
 County: Monongahela  
 Operator: Brad/Austin  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,006.00	CWT	\$ 5.50	\$ 16,533.00
SAND 40/70	40/70 white	1,017.00	CWT	\$ 5.75	\$ 5,847.75
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	141	GAL	\$ 17.75	\$ 2,502.75
BIOC11219A	Biocide @ 0.25 GPT	71	GAL	\$ 16.00	\$ 1,136.00
SCAL16846A	Scale Control @ 0.05 GPT	14	GAL	\$ 16.00	\$ 224.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		201.15	TON	\$ 55.00	\$ 11,063.25
DIESEL FUEL	Not eligible for discount	405	GAL	\$ 3.04	\$ 1,231.20

Total No Discount \$ 57,436.75  
 25% Discount Applied \$ 14,359.19  
 Net Stage Total \$ 44,308.76

(Print Name)  
 Customer Rep: E. Boone

Customer Signature: E. Boone

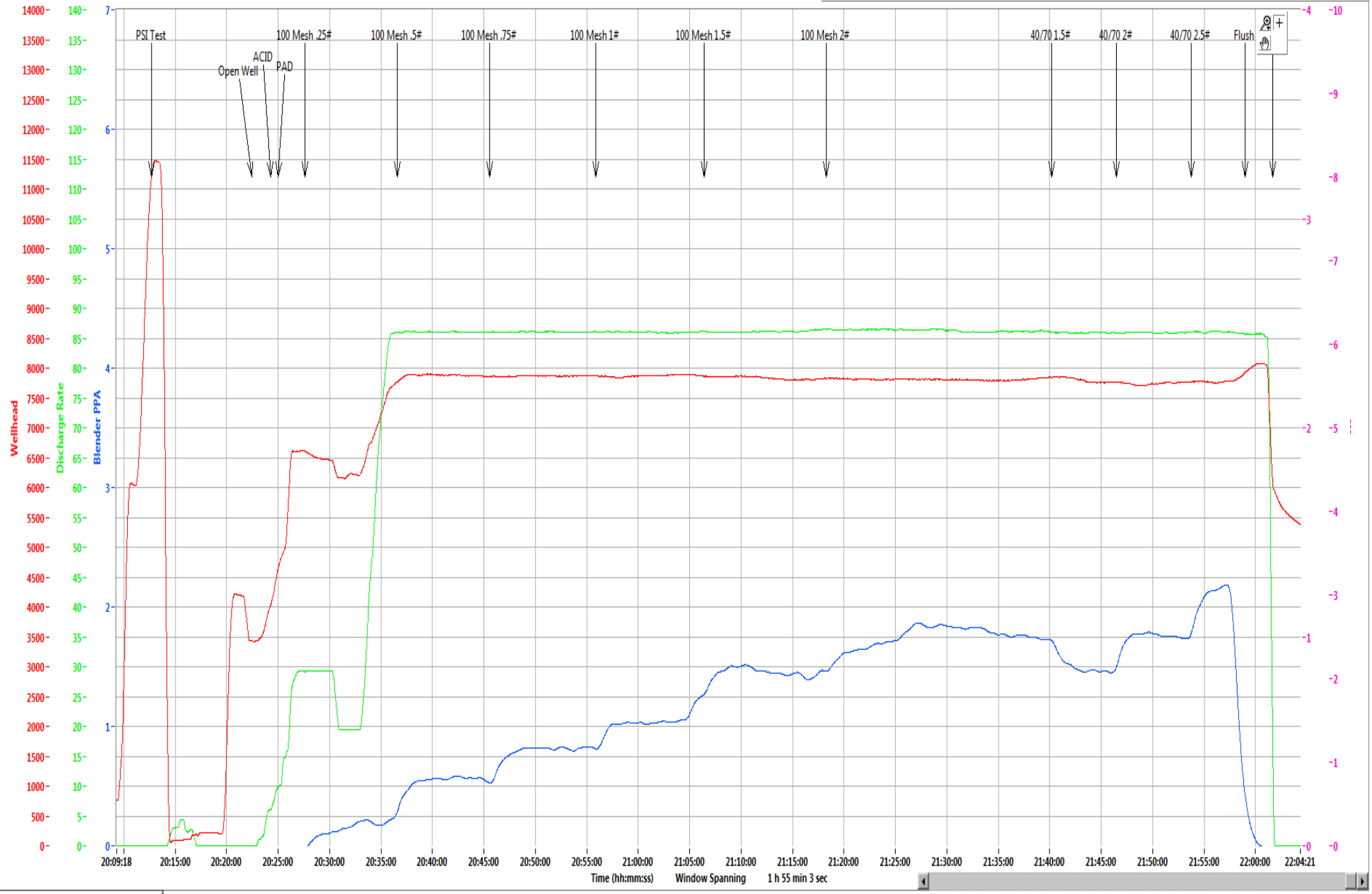


**NNE**  
**Boggess 3H**  
**Stage 65**  
**Producers Service Corp.**

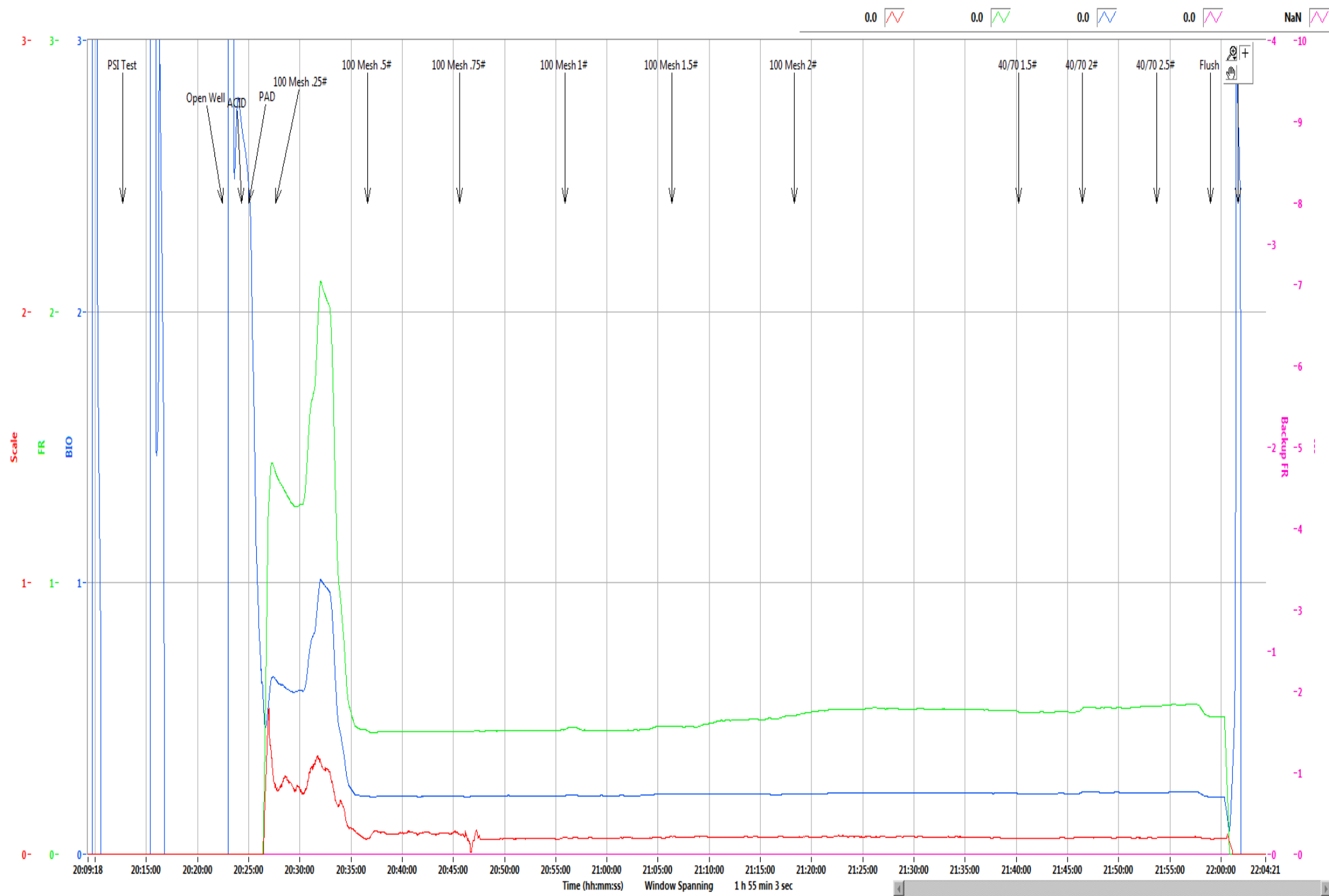
**Post Stage Report**  
**September 18, 2019**



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# NNE Boggess Pad

3H

Stage	65
Date:	9/18/19
OWP (psi):	3,427
Starting Time	8:22 PM
Ending Time	10:01 PM
Pump Time (hr:min)	01:39
Swap Time (hr:min)	00:55
Starting # Pumps	16
Finishing # Pumps	16
TVD (ft)	8,030

## Pressures & Rates

Breakdown Pressure (psi)	6,250
Average Treating Rate (bbl/min)	86
Average Treating Pressure (psi)	7,827
Maximum Treating Rate (bbl/min)	87
Maximum Treating Pressure (psi)	7,957
Displacement (psi)	198
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	5,965
Final FG (psi/ft)	1.10
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

## Fluids & Proppant

Slickwater (bbls)	7,279
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	25
Pad (bbls)	60
Treatment (bbls)	7,019
Displacement (bbls)	188
(Acid Included)Total Fluid (bbls)	7,285
Dirty Job Total (bbls)	7,753
100 Mesh	303,980
40/70	100,240
Total Proppant (lbs)	404,220
Total Proppant %	101.1%

## CHEMICALS

FR 9800	157
Biocide	76
Scale	15

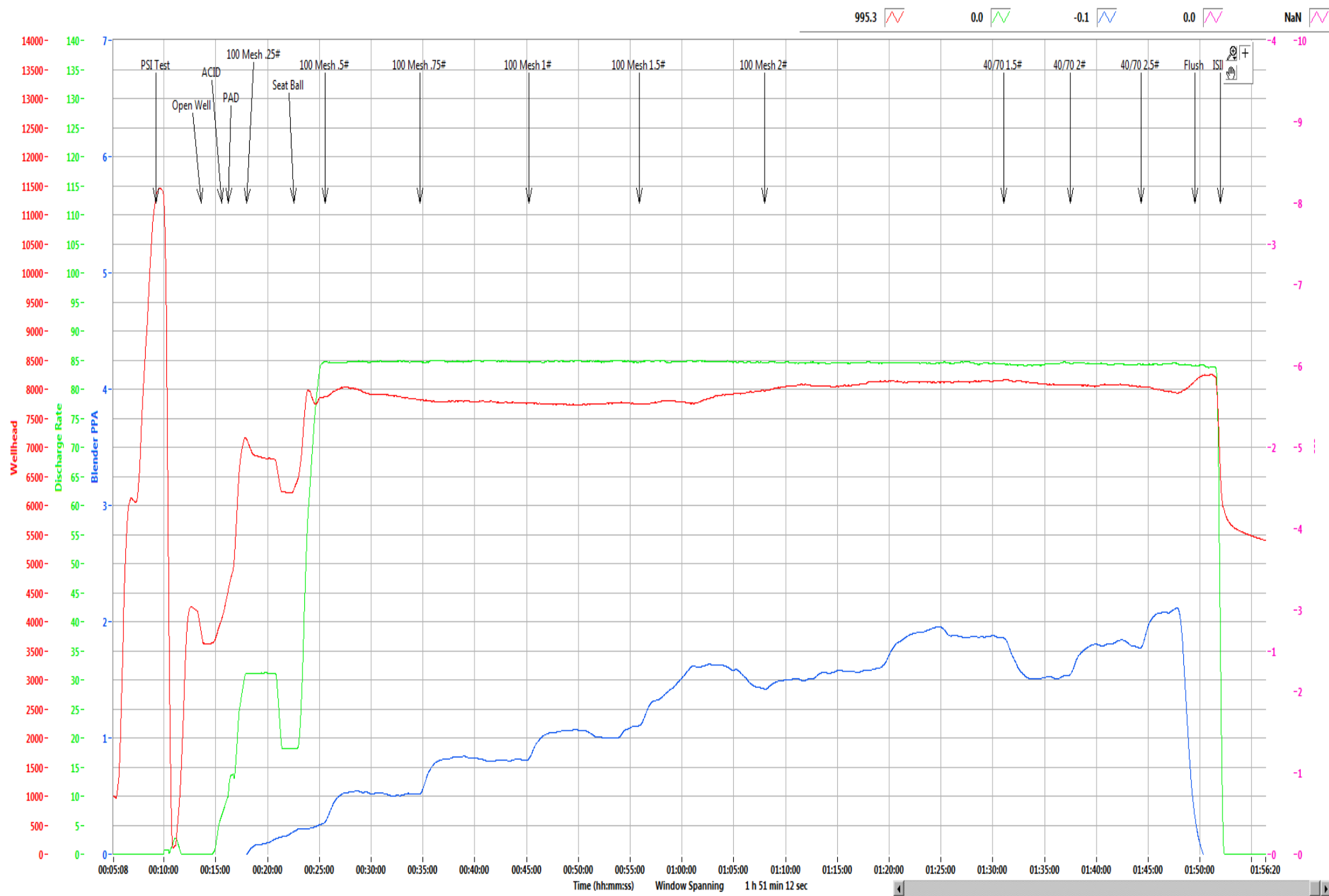




**NNE**  
**Boggess 3H**  
**Stage 66**  
**Producers Service Corp.**

**Post Stage Report**  
**September 19, 2019**





995.3 0.0 -0.1 0.0 NaN

Refresh Graph



Refresh Graph

# NNE Boggess Pad

## 3H

Stage	66
Date:	9/18/19
OWP (psi):	3,625
Starting Time	12:13 AM
Ending Time	1:51 AM
Pump Time (hr:min)	01:38
Swap Time (hr:min)	02:12
Starting # Pumps	17
Finishing # Pumps	17
TVD (ft)	8,020

### Pressures & Rates

Breakdown Pressure (psi)	6,491
Average Treating Rate (bbl/min)	84
Average Treating Pressure (psi)	7,948
Maximum Treating Rate (bbl/min)	86
Maximum Treating Pressure (psi)	8,207
Displacement (psi)	8,212
Max Prop Con (lb/gal)	2.50
ShutDown ISIP (psi)	6,061
Final FG (psi/ft)	1.10
5 Minute Leakoff Pressure (psi)	
5 Minute Leakoff Rate (psi/min)	
10 Minute Leakoff Pressure (psi)	
10 Minute Leakoff Rate (psi/min)	
15 Minute Leakoff Pressure (psi)	
15 Minute Leakoff Rate (psi/min)	

### Fluids & Proppant

Slickwater (bbls)	7,198
Acid 7.5% HCL (gal)	250
Wireline Pump Down (bbls)	26
Pad (bbls)	44
Treatment (bbls)	6,968
Displacement (bbls)	188
(Acid Included)Total Fluid (bbls)	7,204
Dirty Job Total (bbls)	7,668
100 Mesh	301,000
40/70	100,900
Total Proppant (lbs)	401,900
Total Proppant %	100.5%

### CHEMICALS

FR 9800	151
Biocide	75
Scale	15

Northeast Natural Energy  
 48 Donley Street, Ste 601  
 Morgantown, WV 26501



Producers Service Corp  
 109 S. Graham St.  
 Zanesville, OH 43701

Invoice #: 23085  
 Date: 9/19/2019  
 Well Name: Boggess 3H  
 Stage No.: 66

State: WV  
 County: Monongahela  
 Operator: tilton/nial  
 PO/AFE: 100344-604

Description	Notes	Amount	Units of Sale	Unit Cost	Total Cost
FLUID PUMP CHARGE OVER 3000 PSI PER HHP PER HR	Fixed each stage @ 80 BPM max	1	EA	\$ 15,000.00	\$ 15,000.00
BLENDER CHARGE 80 BPM		1	EA	\$ 2,500.00	\$ 2,500.00
BLENDER CHARGE STAND BY BLENDER	NO CHARGE	0	EA	\$ 1,000.00	\$ -
HC ACID 7.5%	Iron Control Acid	250	GAL	\$ 1.25	\$ 312.50
4N1 INHIBITOR	Inhibitor @ 2 gal/1000	0.5	GAL	\$ 35.00	\$ 17.50
ACID DELIVERY	Includes Chemicals	2	HR	\$ 100.00	\$ 200.00
SAND 80/100	80/100 white	3,010.00	CWT	\$ 5.50	\$ 16,555.00
SAND 40/70	40/70 white	1,009.00	CWT	\$ 5.75	\$ 5,801.75
StimSTREAM FR 9800	Friction Reducer @ 0.5 GPT	151	GAL	\$ 17.75	\$ 2,680.25
BIOC11219A	Biocide @ 0.25 GPT	75	GAL	\$ 16.00	\$ 1,200.00
SCAL16846A	Scale Control @ 0.05 GPT	15	GAL	\$ 16.00	\$ 240.00
HIGH PRESSURE MANIFOLD		1	STAGE	\$ 1,500.00	\$ 1,500.00
N2 PRESSURE RELIEF VALVE		1	STAGE	\$ 200.00	\$ 200.00
HIGH PRESSURE DENSIOMETER		1	STAGE	\$ 400.00	\$ 400.00
COMMAND CENTER		0	STAGE	\$ 1,500.00	\$ -
PUMP DOWN FOR PERFORATING		0	STAGE	\$ 1,500.00	\$ -
ARROWS UP SYSTEM		200.95	TON	\$ 55.00	\$ 11,052.25
DIESEL FUEL	Not eligible for discount		GAL	\$ 3.04	\$ -
				Total No Discount	\$ 57,659.25
				25% Discount Applied	\$ 14,414.81
				Net Stage Total	\$ 43,244.44

(Print Name)  
 Customer Rep:

*Rob Cowge*

Customer Signature:

*[Handwritten Signature]*