

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

API 47-95-02151 County Tyler District Lincoln
Quad Paden City Pad Name Wells Meckley Unit Field/Pool Name Middlebourne
Farm name Velma L. Wells Well Number # 1401 MH

Operator (as registered with the OOG) Triad Hunter, LLC
Address 122 W. John Carpenter City Irving State Texas Zip 75039
Freeway Suite 300

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 380220.69 Easting 1567205.37
Landing Point of Curve Northing 378749.42 Easting 1566134.87
Bottom Hole Northing 373250.94 Easting 1568053.08

Elevation (ft) 985' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
Synthetic Mud System

Date permit issued 5/21/2014 Date drilling commenced 12/9/2014 Date drilling ceased 12/19/2014 PH
Date completion activities began 3/17/16 Date completion activities ceased 4/03/16
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

**additional stages fracked
2/24/18 -
3/12/18*

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft Surface - 300' Open mine(s) (Y/N) depths N/A
Salt water depth(s) ft @ 1200' Void(s) encountered (Y/N) depths N/A RECEIVED
Coal depth(s) ft 600' - 700' Cavern(s) encountered (Y/N) depths N/A Office of Oil and Gas
Is coal being mined in area (Y/N) N

AUG 20 2018
Reviewed by:
WV Department of
Environmental Protection

gcb

Reviewed

*J Craig Blend
8/21/2018*

API 47-95 - 02151 Farm name Velma L. Wells Well number # 1401 MH

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	24"	20"	100'	New	J-55 94#	- 0 -	yes
Surface	17 1/2"	13 3/8"	420'	New	J-55 54.5#	- 0 -	12 bbl. cement returns
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,883'	New	J-55 36#	- 0 -	25 bbl. cement returns
Intermediate 2							
Intermediate 3							
Production	8.75	5 1/2"	13124	New	P-110 20#	-0-	27 bbl. cement returns
Tubing		<u>2 7/8"</u>	<u>6893.3</u>	<u>NEW</u>	<u>L-80 6.4#</u>		
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	160	15.6	1.18	188.8	Surface	24+
Surface	HALCEM (Class A)	365	15.6	1.19	434.4	Surface	12+
Coal							
Intermediate 1	HALCEM (Class A)	1,080	15.6	1.19	1,285.2	Surface	24+
Intermediate 2							
Intermediate 3							
Production	Lead Class A / FlexSEAL / Tail Class A	540/ 458/ 2030	13.5/ 15.3/ 15.2	1.44/ 1.27/ 1.18	777.6/ 581.66/ 2395.4	Surface	24+
Tubing							

Drillers TD (ft) TMD= 13126 TVD= 6234 Loggers TD (ft) *no open hole logs

Deepest formation penetrated Marcellus Shale Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 4720

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

Surface Casing 20" - 3 centralizers
Intermediate Casing 13 3/8" - 6 centralizers

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

API 47- 095-02151 Farm name Velma L. Wells Well number #1401 MH

PRODUCING FORMATION(S)	DEPTHS	
<u>Marcellus Shale</u>	<u>6190</u> TVD	<u>7100</u> MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 2960 psi Bottom Hole 4891 psi DURATION OF TEST 48 hrs
 OPEN FLOW Gas 4 mcfpd Oil 205 bpd NGL N/A bpd Water 230 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
	SEE	ATTACHED	SPREADSHEET FOR FORMATION DETAILS		

Please insert additional pages as applicable.

Drilling Contractor Alpha Hunter Rig 7
 Address 28407 State Route 7 City Marietta State OH Zip 45750
 Logging Company N/A
 Address _____ City _____ State _____ Zip _____
 Cementing Company Halliburton Energy Services / Schlumberger
 Address 4999 East Point Drive / 4600 J Barry Court Suite 200 City Zanesville / Canonsburg State OH/PA Zip 43702 / 15317
 Stimulating Company Producers Service Corp / StingRay Pressure Pumping
 Address 19 Gramst / City Zanesville / Belmont State OH / OH Zip 43701 / 43718

Please insert additional pages as applicable.

Completed by Rachael Parker Telephone 740-868-1319
 Signature R Parker Title Sr. Engineering Technician Date 6/18/18

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

API 47-095 - 02151 Farm name Velma L. Wells Well number # 1401 MH

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
(SEE	ATTACHED	SPREAD	SHEET)	For Additional stages fracked 2/24/18 - 3/12/18	

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
(SEE	ATTACHED	SPREAD	SHEET)	For Additional stages fracked 2/24 - 3/12/18				

Please insert additional pages as applicable.

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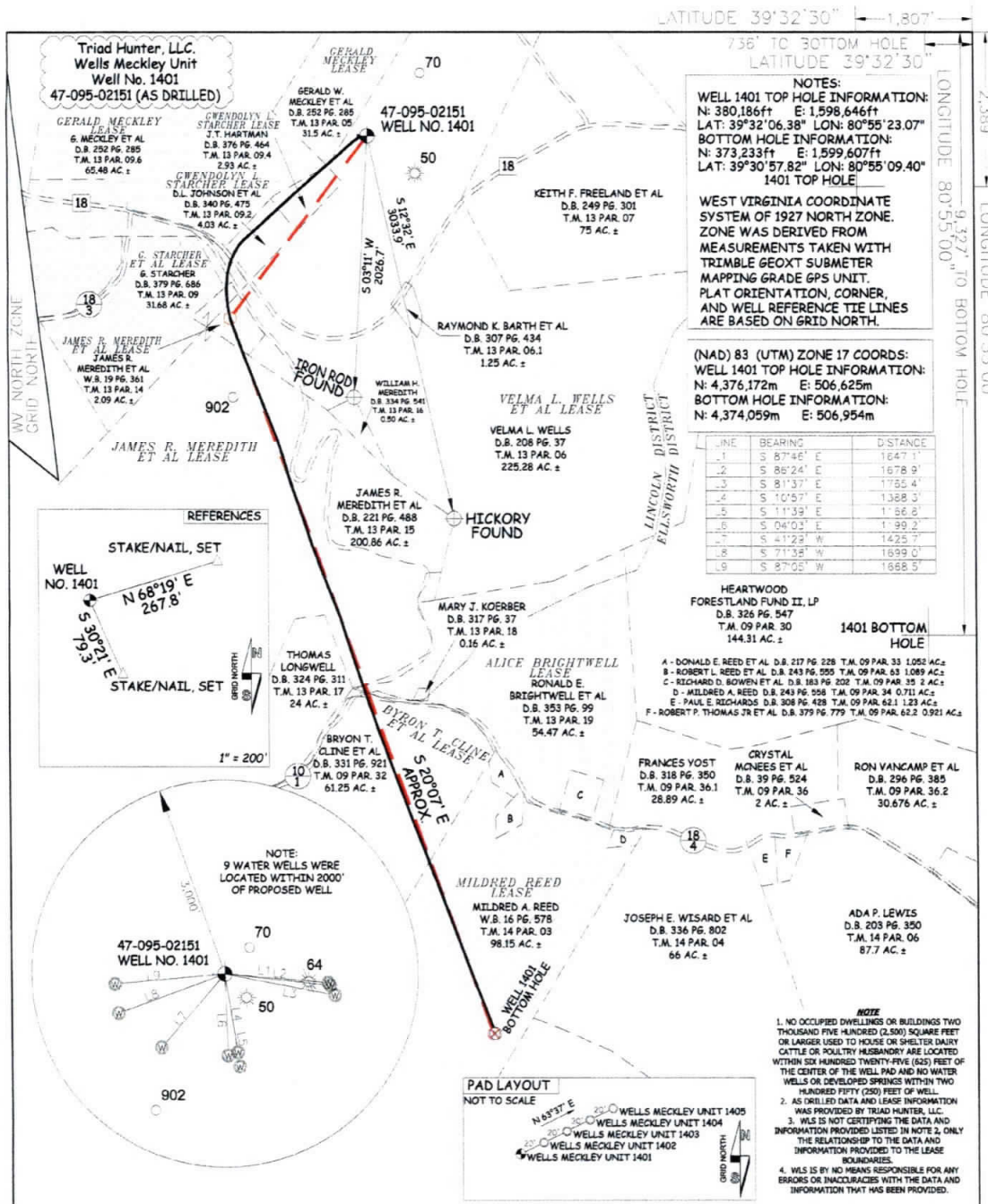
Wells Meckley 1401 Formation Tops

Formation	TVD= MD	Rock Type/ record QTY/Type of Fluid (Fresh water, brine, oil, gas, H2S, Ect)
Water zone	980	
Salt Sand	1,563	
Maxton Sand	1,687	
Pencil Cave	1,761	
Greenbrier Limestone	1,773	
Keener Sand	1,811	
Big Injun	1,822	
Squaw Sand	2,020	
Weir Sand	2,228	
Berea Sandstone	2,398	
Gordon Stray Sand	2,729	
Gordon	2,752	
Fifth Sand	2,840	
Warren	3,375	
Benson	4,845	
Tully LS	6,147	
Marcellus Shale	6,169	
TARGET	6,194	
Onondaga LS	6,223	

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NOTES:
 WELL 1401 TOP HOLE INFORMATION:
 N: 380,186ft E: 1,598,646ft
 LAT: 39°32'06.38" N; 80°55'23.07" W
 BOTTOM HOLE INFORMATION:
 N: 373,233ft E: 1,599,607ft
 LAT: 39°30'57.82" N; 80°55'09.40" W
 1401 TOP HOLE

WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 1401 TOP HOLE INFORMATION:
 N: 4,376,172m E: 506,625m
 BOTTOM HOLE INFORMATION:
 N: 4,374,059m E: 506,954m

LINE	BEARING	DISTANCE
1	S 87°46' E	1647.1'
2	S 86°24' E	1678.9'
3	S 81°37' E	1755.4'
4	S 10°57' E	1388.5'
5	S 11°39' E	1566.2'
6	S 04°03' E	1599.2'
7	S 41°23' W	1425.7'
8	S 71°38' W	1899.0'
9	S 87°05' W	1688.5'

HEARTWOOD FORESTLAND FUND II, LP
 D.B. 326 PG. 547
 T.M. 09 PAR. 30
 144.31 AC. ±

1401 BOTTOM HOLE

A - DONALD E. REED ET AL. D.B. 217 PG. 228 T.M. 09 PAR. 33 1,082 AC. ±
 B - ROBERT L. REED ET AL. D.B. 243 PG. 555 T.M. 09 PAR. 63 1,089 AC. ±
 C - RICHARD D. BOWEN ET AL. D.B. 183 PG. 202 T.M. 09 PAR. 35 2 AC. ±
 D - MILDRED A. REED D.B. 243 PG. 558 T.M. 09 PAR. 34 0.71 AC. ±
 E - PAUL E. REICHARDS D.B. 308 PG. 428 T.M. 09 PAR. 62.1 1.23 AC. ±
 F - ROBERT P. THOMAS JR ET AL. D.B. 379 PG. 779 T.M. 09 PAR. 62.2 0.921 AC. ±

FRANCES YOST
 D.B. 318 PG. 350
 T.M. 09 PAR. 36.1
 28.89 AC. ±

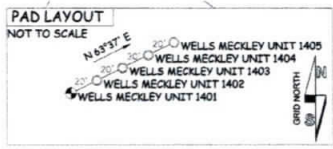
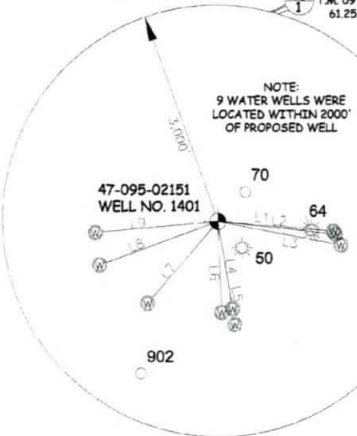
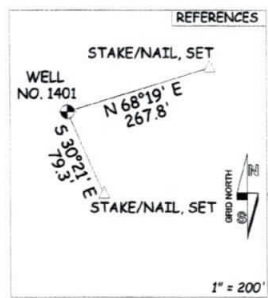
CRYSTAL MONROE ET AL.
 D.B. 39 PG. 524
 T.M. 09 PAR. 36
 2 AC. ±

RON VANCAMP ET AL.
 D.B. 296 PG. 385
 T.M. 09 PAR. 36.2
 30.676 AC. ±

JOSEPH E. WISARD ET AL.
 D.B. 336 PG. 802
 T.M. 14 PAR. 04
 66 AC. ±

ADA P. LEWIS
 D.B. 203 PG. 350
 T.M. 14 PAR. 06
 87.7 AC. ±

- NOTE
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POLYTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD AND NO WATER WELLS OR DEVELOPED SPRINGS WITHIN TWO HUNDRED FIFTY (250) FEET OF WELL.
 2. AS DRILLED DATA AND LEASE INFORMATION WAS PROVIDED BY TRIAD HUNTER, LLC.
 3. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTE 2. ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 4. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.



JOB # 12-104WT
 DRAWING # MECKLEY1401R2
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Found monument, as noted
- Proposed Well Path
- As Drilled Well Path

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 958' WATERSHED OUTLET MIDDLE ISLAND CREEK

QUADRANGLE PADEN CITY 7.5' DISTRICT LINCOLN COUNTY TYLER

SURFACE OWNER VELMA L. WELLS ACREAGE 225.28 ACRES +/-
 OIL & GAS ROYALTY OWNER VELMA L. WELLS ET AL.; GERALD MECKLEY; GERALD MECKLEY; LEASE ACRFAG 225.28 ACRES; 31.5 ACRES; 65.48 ACRES;
 GWENDOLYN L. STARCHER; GWENDOLYN L. STARCHER; GWENDOLYN L. STARCHER ET AL.; JAMES R. MEREDITH ET AL. 2.93 ACRES; 4.03 ACRES; 31.68 ACRES; 200.86 ACRES;
 JAMES R. MEREDITH ET AL.; ALICE BRIGHTWELL; BYRON T. CLINE ET AL.; MILDRED REED 2.09 ACRES; 54.47 ACRES; 81.25 ACRES; 98.15 ACRES +/-

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & RE-PLUG

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,236' TVD 13,120' MD

WELL OPERATOR TRIAD HUNTER, LLC. DESIGNATED AGENT KIMBERLY ARNOLD
 ADDRESS 777 POST OAK BLVD., SUITE 910 ADDRESS P.O. BOX 154
 FORM WW 8 HOUSTON, TX 77056 WAVERLY, WV 26184

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/24/2018
Job End Date:	3/12/2018
State:	West Virginia
County:	Tyler
API Number:	47-095-02151-00-00
Operator Name:	Triad Hunter LLC.
Well Name and Number:	Wells Meckley 1401
Latitude:	39.51600100
Longitude:	-80.91969600
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,236
Total Base Water Volume (gal):	10,111,962
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Service Abstract Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Blue Ridge Mountain Resources	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	89.52794	None
Sand (Silica)	Muskie Proppant	Proppant					
			Silica Substrate	14808-60-7	100.00000	9.44554	None
Hydrochloric Acid (28%)	Dover	Acidizing					
			Water	7732-18-5	64.00000	0.57840	None
			Hydrochloric Acid (Hydrogen Chloride)	7732-18-5	36.00000	0.32535	None
Plexslick 957	Chemplex SOLVAY	Friction Reducer					
			Water	7732-18-5	75.00000	0.04007	None
			Petroleum Distillate	64742-47-8	20.00000	0.01068	None
			Ammonium Chloride ((NH4)Cl)	12125-02-9	2.00000	0.00107	None
			Alcohols, C14-15, ethoxylated	68551-12-2	1.50000	0.00080	None
			Oleic Acid Diethanolamide	93-83-4	1.50000	0.00080	None
Plexslick 907L-EB	Chemplex SOLVAY	Gelling Agent, Water Viscosifier					
			Petroleum distillate	64742-47-8	50.00000	0.01651	None
			Guar gum	9000-30-0	50.00000	0.01651	None

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			Organophilic clay	Proprietary	2.00000	0.00066	None
			Alcohol ethoxylate	34398-01-1	1.00000	0.00033	None
			Crystalline silica	14808-60-7	0.10000	0.00002	None
SI-20W	Moon Chemical Products	Scale Inhibitor	Water	7732-18-5	56.00000	0.01138	None
			Phosphinocarboxylic acid	110224-99-2	44.00000	0.00894	None
K-BAC 1005	Water Science Technologie, LLC	Biocide					
			Polyethylene glycol	25322-68-3	50.00000	0.00643	None
			Water	7732-18-5	44.30000	0.00568	None
			2, 2-Dibromo-3-nitripropionamide	10222-01-2	5.80000	0.00074	None
NEFE-180	Chemplex	Corrosion Inhibitor/Iron Control					
			Acetic acid	64-19-7	89.00000	0.00216	None
			Methanol	67-56-1	40.00000	0.00097	None
			2-Ethylhexanol	104-76-7	10.00000	0.00024	None
			Coconut oil acid diethanolamine	68603-42-9	5.00000	0.00012	None
			Fatty acids, tall oil	61790-12-3	5.00000	0.00012	None
			Alcohols, C14-15, ethoxylated	68951-67-7	5.00000	0.00012	None
			2-Propyn-1-ol	107-19-7	5.00000	0.00012	None
Breaker	Chemplex SOLVAY	Gel Breaker	Sodium Persulfate	7775-27-1	100.00000	0.00072	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Water	7732-18-5	64.00000	0.57840	
			Water	7732-18-5	75.00000	0.04007	
			Guar gum	9000-30-0	50.00000	0.01651	
			Phosphinocarboxylic acid	110224-99-2	44.00000	0.00894	
			Polyethylene glycol	25322-68-3	50.00000	0.00643	
			Water	7732-18-5	44.30000	0.00568	
			Ammonium Chloride ((NH4)Cl)	12125-02-9	2.00000	0.00107	
			Methanol	67-56-1	40.00000	0.00097	
			Alcohols, C14-15, ethoxylated	68551-12-2	1.50000	0.00080	
			Oleic Acid Diethanolamide	93-83-4	1.50000	0.00080	
			Organophilic clay	Proprietary	2.00000	0.00066	
			Alcohol ethoxylate	34398-01-1	1.00000	0.00033	
			2-Ethylhexanol	104-76-7	10.00000	0.00024	
			Coconut oil acid diethanolamine	68603-42-9	5.00000	0.00012	
			2-Propyn-1-ol	107-19-7	5.00000	0.00012	
			Alcohols, C14-15, ethoxylated	68951-67-7	5.00000	0.00012	
			Fatty acids, tall oil	61790-12-3	5.00000	0.00012	
			Crystalline silica	14808-60-7	0.10000	0.00002	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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Post Frac Job Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401

40 Stage Slickwater/Linear Gel Frac
Marcellus Formation
Tyler County, West Virginia
API #: 47-095-02151



WV Department of
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Stage 37	194
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Blue Ridge Mountain Resources
909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Dear Valued Customer,

We at Stingray Pressure Pumping, LLC would like to take the time to say thank you for letting us work with you on servicing the Meckley 1401 well via hydraulic stimulation. We hope we were able to exceed requirements as a service company and look forward to our next job together.

After discussion, the details of the job were determined to be a slickwater/gel hydraulic fracturing treatment. The job design was to use approximately 253,300 gallons of water per stage, for a total job volume of 10.13 million gallons. Proppant totals were to be approximately 270,000 pounds per stage, for a job total of 10.80 million pounds. Actual average water and proppant totals came to 268,451 gallons and 269,784 pounds per stage. Total volumes for the job were 8.85 million gallons of water and 8.9 million pounds of sand

We at Stingray Pressure Pumping, LLC take the quality of our services very seriously. Before each stage, tests were performed on all fluids to ensure their performance, equipment was routinely maintained to minimize downtime, and all personnel on location followed strict safety guidelines. We are continuously looking for ways to improve our services as a company and appreciate any comments or suggestions you may have.

Thank you for your time and business,

Stingray Pressure Pumping, LLC

Pump Schedule

Operator Name: Blue Ridge Mountain Resources														
Well Name: Wells Meckley 1401														
Formation: Marcellus														
Fluid Type: Fresh Water														
150' stages @ 1,800 lb/ft														
Number of Stages: 34 Maintain Acid volume of 3,000 gals for all stages.														
DESCRIPTION	Sand Type	FLUID TYPE	CLEAN VOLUME Gallons	BLENDER CONC BEGIN	BLENDER CONC END	SLURRY RATE bpm	SLURRY VOLUME bbls	SLURRY VOLUME cum	CLEAN RATE bpm	CLEAN VOLUME bbls	CLEAN VOLUME cum	PROP TOTAL stage	PROP TOTAL cum	STAGE TIME min
Slickwater		Slick Water	1,000	0.00	0.00	5.0	23.8	23.8	5.0	23.8	23.8	0	0	0:04:46
15% Acid		15% HCL	3,000	0.00	0.00	15.0	71.4	95.2	15.0	71.4	95.2	0	0	0:04:46
Slickwater (Pad)		Slick Water	14,000	0.00	0.00	85.0	333.3	428.6	85.0	333.3	428.6	0	0	0:03:55
0.10# 100 Mesh	100 Mesh	Slick Water	15,000	0.10	0.10	85.0	358.8	787.3	84.6	357.1	785.7	1,500	1,500	0:04:13
0.25# 100 Mesh	100 Mesh	Slick Water	18,000	0.25	0.25	85.0	433.4	1,220.8	84.0	428.6	1,214.3	4,500	6,000	0:05:06
.5# 100 Mesh	100 Mesh	Slick Water	18,000	0.50	0.50	85.0	438.3	1,659.1	83.1	428.6	1,642.9	9,000	15,000	0:05:09
0.75# 100 Mesh	100 Mesh	Slick Water	16,000	0.75	0.75	85.0	393.9	2,053.0	82.2	381.0	2,023.8	12,000	27,000	0:04:38
0.75# 40/70	40/70 White	Slick Water	16,000	0.75	0.75	85.0	394.0	2,447.0	82.2	381.0	2,404.8	12,000	39,000	0:04:38
1.0# 40/70	40/70 White	Slick Water	21,000	1.00	1.00	85.0	522.8	2,969.8	81.3	500.0	2,904.8	21,000	60,000	0:06:09
1.25# 40/70	40/70 White	Slick Water	24,000	1.25	1.25	85.0	604.0	3,573.8	80.4	571.4	3,476.2	30,000	90,000	0:07:06
1.50# 40/70	40/70 White	Slick Water	24,000	1.50	1.50	85.0	610.5	4,184.3	79.6	571.4	4,047.6	36,000	126,000	0:07:11
1.75# 40/70	40/70 White	Slick Water	24,000	1.75	1.75	85.0	617.0	4,801.3	78.7	571.4	4,619.0	42,000	168,000	0:07:15
2.0# 40/70	40/70 White	Slick Water	24,000	2.00	2.00	85.0	623.5	5,424.9	77.9	571.4	5,190.5	48,000	216,000	0:07:20
2.25# 40/70	40/70 White	Slick Water	24,000	2.25	2.25	85.0	630.1	6,054.9	77.1	571.4	5,761.9	54,000	270,000	0:07:24
Flush		Slick Water	11,300	0.00	0.00	85.0	269.0	6,324.0	85.0	269.0	6,031.0	0	270,000	0:03:10
Design Totals -->			253,300				6,324.0			6,031.0		270,000		1:22:45

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12,044	12,165	6,236	30
11,894	12,015	6,236	30
11,744	11,865	6,236	30
11,594	11,715	6,236	30
11,444	11,565	6,236	30
11,294	11,415	6,236	30
11,144	11,265	6,236	30
10,994	11,115	6,236	30
10,844	10,965	6,236	30
10,694	10,815	6,236	30
10,544	10,665	6,236	30
10,394	10,515	6,236	30
10,244	10,365	6,236	30
10,094	10,215	6,236	30
9,944	10,065	6,236	30
9,794	9,915	6,236	30
9,644	9,765	6,236	30
9,494	9,615	6,236	30
9,344	9,465	6,236	30
9,194	9,315	6,236	30
9,044	9,165	6,236	30
8,894	9,015	6,236	30
8,744	8,865	6,236	30
8,594	8,715	6,236	30
8,444	8,565	6,236	30
8,294	8,415	6,236	30
8,144	8,265	6,236	30
7,994	8,115	6,236	30
7,844	7,965	6,236	30
7,694	7,815	6,236	30
7,544	7,665	6,236	30
7,394	7,515	6,236	30
7,244	7,365	6,236	30



Well: 1401
 Crew: White Fleet
 Location: WV / Tyler
 Formation: Marcellus
 API Number: 47-095-02151

Additives Summary

8	6,126	5,953	236.0	41.3	71.3	14.9	127.0	14.9	5.0
9	5,955	5,762	168.0	39.3	59.8	8.1	156.0	18.8	5.0
10	5,918	5,753	145.0	38.6	58.8	7.9	122.0	12.4	2.5
11	5,966	5,721	180.0	39.5	60.5	7.9	216.0	25.0	5.0
12	6,036	5,754	187.0	39.5	60.3	10.4	226.0	25.0	5.0
13	6,021	5,681	157.0	38.1	60.0	10.4	288.0	28.1	5.0
14	6,088	5,790	187.0	40.3	60.5	10.6	258.0	29.3	5.0
15	7,626	1,050	169.0	50.3	75.0	17.5	6,501.0	651.3	110.0
16	6,209	4,727	207.0	41.3	64.0	10.5	1,420.0	148.0	29.0
17	6,263	5,074	128.0	37.5	67.0	7.2	1,119.0	119.3	20.0
18	6,429	379	136.0	42.5	65.3	10.6	5,980.0	657.0	134.0
19	6,570	6,120	185.0	43.5	65.0	8.8	394.0	45.0	5.0
20	6,087	5,649	125.0	40.0	61.3	9.0	408.0	45.0	10.0
21	5,988	5,537	194.0	35.8	66.3	8.2	408.0	46.0	10.0
22	6,075	5,478	121.0	37.5	65.0	8.3	549.0	57.5	11.0
23	5,991	5,581	172.0	35.8	66.3	9.3	373.0	40.8	7.0
24	5,887	5,355	161.0	35.0	64.5	7.5	474.0	51.5	10.0
25	5,962	5,699	124.0	37.5	63.0	7.4	215.0	22.5	4.0
26	5,986	5,514	170.0	35.5	65.0	7.7	436.0	48.8	9.0
27	6,064	5,452	169.0	36.4	63.8	8.0	563.0	55.0	10.0
28	6,260	4,258	243.0	38.3	65.5		1,950.0	202.8	35.0
29	5,877	5,295	191.0	38.1	59.5	7.9	534.0	57.0	10.0
30	5,977	4,823	183.0	37.5	64.5	7.9	1,111.0	111.1	25.0
31	5,777	5,254	180.0	35.0	59.5	8.1	486.0	49.3	10.0
32	6,018	5,310	233.0	37.5	62.0	7.9	673.0	67.8	14.8
33	5,980	5,154	214.0	37.5	60.0	7.8	787.0	52.5	15.0
34	5,917	5,433	187.0	37.0	63.8	8.3	446.0	49.3	10.0
35	5,734	5,138	178.0	35.3	58.1	7.7	558.0	60.6	11.3
36	10,196	3,744	241.0	64.1	107.0		6,309.0	658.8	132.5
37	5,782	5,476	183.0	36.9	57.4	7.9	253.0	27.3	5.0
38	5,759	5,415	194.0	38.4	63.1	7.9	307.0	31.3	6.3
39	5,853	5,708	160.0	37.5	60.0	7.9	101.0	10.0	2.0
40	5,750	5,714	150.0	38.0	62.6	7.7			
Totals	204,121	166,751	6,656.0	256.2	272.2	7.7	33,740.0	3,614.0	700.0



Well: 1401
 Crew: White Fleet
 Location: WV / Tyler
 Formation: Marcellus
 API Number: 47-095-02151

Fluids Summary

8	6,126	6543	2,411	5,953	127	5,709	939
9	5,955	5697	2,377	5,762	156	5,553	308
10	5,918	6284	2,272	5,753	122	5,510	390
11	5,966	6289	1,903	5,721	216	5,574	263
12	6,036	6377	3,461	5,754	226	5,627	304
13	6,021	6429	3,255	5,681	288	5,614	269
14	6,088	6419	2,772	5,790	258	5,696	252
15	7,626	8079	5,489	1,050	6,501	6,661	263
16	6,209	6544	3,814	4,727	1,420	5,805	252
17	6,263	6628	2,554	5,074	1,119	5,825	261
18	6,429	6784	3,746	379	5,980	6,023	207
19	6,570	6951	3,234	6,120	394	5,749	232
20	6,087	6422	2,033	5,649	408	5,730	207
21	5,988	6341	3,104	5,537	408	5,616	191
22	6,075	6463	2,680	5,478	549	5,670	172
23	5,991	6409	2,596	5,581	373	5,609	184
24	5,887	6251	2,184	5,355	474	5,507	195
25	5,962	6326	2,209	5,699	215	5,618	169
26	5,986	6341	2,423	5,514	436	5,613	150
27	6,064	6369	2,251	5,452	563	5,705	145
28	6,260	6623	2,957	4,258	1,950	5,741	113
29	5,877	6245	2,268	5,295	534	5,526	123
30	5,977	6350	2,251	4,823	1,111	5,633	165
31	5,777	6164	2,390	5,254	486	5,443	148
32	6,018	6403	2,247	5,310	673	5,718	139
33	5,980	6342	2,134	5,154	787	5,678	81
34	5,917	6290	2,306	5,433	446	5,592	81
35	5,734	6132	2,562	5,138	558	5,410	93
36	10,196	10710	6,506	3,744	6,309	9,348	106
37	5,782	6126	2,192	5,476	253	5,457	63
38	5,759	6131	2,302	5,415	307	5,428	63
39	5,853	6201	2,360	5,708	101	5,558	72
40	5,750	6111	2,197	5,714		5,432	34

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Pad: 1401
 Crew: White Fleet
 Location: WV / Tyler
 Formation: Marcellus
 API Number: 47-095-02151

Proppant Summary

8	239,778	27,000	27,640	102.4%	243,000	244,946	100.8%	270,000	272,586	101.0%
9	233,226	27,000	27,760	102.8%	243,000	243,180	100.1%	270,000	270,940	100.3%
10	231,420	27,000	30,780	114.0%	243,000	240,060	98.8%	270,000	270,840	100.3%
11	234,108	27,000	27,580	102.1%	243,000	242,600	99.8%	270,000	270,180	100.1%
12	236,334	27,000	27,300	101.1%	243,000	242,860	99.9%	270,000	270,160	100.1%
13	235,788	27,000	26,000	96.3%	243,000	244,280	100.5%	270,000	270,280	100.1%
14	239,232	27,000	28,640	106.1%	243,000	240,760	99.1%	270,000	269,400	99.8%
15	279,762	27,000	27,000	100.0%	243,000	239,420	98.5%	270,000	266,420	98.7%
16	243,810	27,000	27,840	103.1%	243,000	236,400	97.3%	270,000	264,240	97.9%
17	244,650	27,000	27,080	100.3%	243,000	242,240	99.7%	270,000	269,320	99.7%
18	252,966	27,000	26,920	99.7%	243,000	243,520	100.2%	270,000	270,440	100.2%
19	241,458	27,000	26,940	99.8%	243,000	245,040	100.8%	270,000	271,980	100.7%
20	240,660	27,000	26,920	99.7%	243,000	240,420	98.9%	270,000	267,340	99.0%
21	235,872	27,000	26,980	99.9%	243,000	240,160	98.8%	270,000	267,140	98.9%
22	238,140	27,000	26,920	99.7%	243,000	243,500	100.2%	270,000	270,420	100.2%
23	235,578	27,000	26,920	99.7%	243,000	243,340	100.1%	270,000	270,260	100.1%
24	231,294	27,000	26,920	99.7%	243,000	237,500	97.7%	270,000	264,420	97.9%
25	235,956	27,000	27,000	100.0%	243,000	243,120	100.0%	270,000	270,120	100.0%
26	235,746	27,000	26,880	99.6%	243,000	244,260	100.5%	270,000	271,140	100.4%
27	239,610	27,000	26,900	99.6%	243,000	245,560	101.1%	270,000	272,460	100.9%
28	241,122	27,000	27,020	100.1%	243,000	243,400	100.2%	270,000	270,420	100.2%
29	232,092	27,000	27,000	100.0%	243,000	243,260	100.1%	270,000	270,260	100.1%
30	236,586	27,000	27,040	100.1%	243,000	242,600	99.8%	270,000	269,540	99.8%
31	228,606	27,000	27,060	100.2%	243,000	244,220	100.5%	270,000	271,280	100.5%
32	240,156	27,000	26,440	97.9%	243,000	241,420	99.3%	270,000	267,860	99.2%
33	238,476	27,000	27,000	100.0%	243,000	242,940	100.0%	270,000	269,940	100.0%
34	234,864	27,000	24,840	92.0%	243,000	245,800	101.2%	270,000	270,640	100.2%
35	227,220	27,000	27,020	100.1%	243,000	242,500	99.8%	270,000	269,520	99.8%
36	382,616	27,000	28,180	104.4%	243,000	242,360	99.7%	270,000	270,540	100.2%
37	229,194	27,000	29,240	108.3%	243,000	241,360	99.3%	270,000	270,600	100.2%
38	227,976	27,000	28,160	104.3%	243,000	243,320	100.1%	270,000	271,480	100.5%
39	233,436	27,000	25,340	93.9%	243,000	244,540	100.6%	270,000	269,880	100.0%
40	228,144	27,000	29,140	107.9%	243,000	241,580	99.4%	270,000	270,720	100.3%
TOTALS	7,995,876	861,000	900,400	103.4%	7,018,000	6,902,586	98.4%	7,018,000	7,018,000	100.0%

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 1st Stage of 40 **Stage 1 was omitted**
Marcellus Formation
Tyler
API #: 34-167-29724

Prepared By:
Winston West

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 2nd Stage of 40 Stage 2 was omitted

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 3rd Stage of 40

Stage 3 was omitted

Marcellus Formation

Tyler

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Meckley 1401 - 4th Stage of 40

Stage 4 was omitted

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

Post Frac Stage Report

Prepared For:



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Irving, Texas 75039

Meckley 1401 - 5th Stage of 40 Stage 5 was omitted
Marcellus Formation
Tyler
API #: 34-167-29724

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 6th Stage of 40

Stage 6 was omitted

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

Post Frac Stage Report

Prepared For:



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Irving, Texas 75039

Meckley 1401 - 7th Stage of 40 Stage 7 was omitted
Marcellus Formation
Tyler
API #: 34-167-29724

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 8th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 8th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report									
Customer Representative		Mr. Tu Spatafore			Stingray Representative		Richard Crawford		
Wellbore Information									
Perf Size	# of Perforations	Tubular Type		Tubular Grade		Length of Lateral		Length of Vertical	
0.41 in.	30	5 - 1/2" 20. #		P-110		4,871 ft		7,294 ft	
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf		Flush to Top Perf		Plug Depth	
6,236 ft	12,044 ft	12,165 ft		270 bbls		267 bbls		6,236 ft	
Job Summary									
Fluid Volumes		Chemical Volumes			Notes:			Time:	
Total Fluid Volume :	6,155 bbls	Friction Reducer :	236.00 gals	101% of total proppant placed.					
Clean Volume :	6,126 bbls	Biocide :	41.30 gals						
Raw Acid Volume :	29 bbls	Scale Inhibitor :	71.30 gals	FR started at 0.50 gpt per Mr. Tu Spatafore					
Slickwater Volume :	5,953 bbls	28% HCl Acid :	2134.00 gals						
Gelled Volume :	127 bbls	Acid Inhibitor :	14.94 gals						
Proppant Laden :	5,709 bbls	Gelling Agent :	14.94 gals	Chems from injection test are included on the Field Invoice					
Slurry Volume :	6,543 bbls	Breaker :	5.00 lbs						
Wireline Volume :	939 bbls								
Total Fluid To Recover :	7,065 bbls								
Proppant Totals									
100 Mesh :	27,640 lbs								
40/70 White :	244,946 lbs								
Total :	272,586 lbs								
Treating Pressures		Injection Rates			Treatment Values		Shut-In Values		
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,036 psi	Opening Pressure	1,097 psi		
Minimum	7,425 psi	Minimum	65.3 bpm	Frac ∇	1.21 psi/ft	Open ∇	0.61 psi/ft		
Maximum	9,096 psi	Maximum	88.8 bpm	Pump Time	1.63 Hrs	ISIP	4,820 psi		
Average	7,699 psi	Average	85.7 bpm	HHP	16,171 HHP	Closing Pressure	4,054 psi		
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)	
Pressure Test	FW		9,922					23:42	
Open Well	FW		1,097					23:46	
Start Injection	FW		1,097	17.6				23:46	
Start 15 % HCL Acid	ACID	8.5	5,075	57.4	17			23:49	
Pad	SW	10.3	5,234	205.5	79			23:55	
Ball seat (Breakdown)	SW	11.3	6,036		239			0:06	
Start 0.10 ppa 100 Mesh Sand	SW	37.8	8,113	355.4	285	1,875	33	0:08	
Acid on Formation	SW	42.0	8,268		316		187	0:09	
Start 0.25 ppa 100 Mesh Sand	SW	66.6	8,014	416.5	644	4,382	1,908	0:14	
Increase FR to 0.75 gpt	SW	79.0	8,965		969		5,257	0:19	
Start 0.50 ppa 100 Mesh Sand	SW	77.8	8,714	415.6	1,068	8,352	6,290	0:20	
Increase FR to 1.00 gpt	SW	78.0	8,185		1,107		6,716	0:20	
Decrease FR to 0.75 gpt	SW	84.6	7,640		1,333		11,276	0:23	
Start 0.75 ppa 100 Mesh Sand	SW	84.7	7,651	402.2	1,498	12,540	14,643	0:25	
Start 0.75 ppa 40/70 White	SW	84.6	7,629	374.1	1,920	11,860	27,182	0:30	
Start 1.00 ppa 40/70 White	SW	88.4	7,733	492.1	2,312	20,702	39,042	0:35	
Start 1.25 ppa 40/70 White	SW	88.5	7,612	554.3	2,836	29,108	59,744	0:41	
Start 1.50 ppa 40/70 White	SW	88.8	7,570	541.8	3,431	34,192	88,852	0:47	
Start 1.75 ppa 40/70 White	SW	88.4	7,555	546.4	4,019	40,162	123,044	0:54	
Start 2.00 ppa 40/70 White	SW	88.4	7,602	795.0	4,619	66,823	163,206	1:01	
Increase Gel to 3.75 gpt	SW/Gel	88.2	7,651		4,917		185,780	1:04	
Decrease Gel to 0.00 gpt	SW	85.7	7,622		5,059		196,446	1:06	
Increase FR to 1.00 gpt	SW	85.6	7,590		5,462		226,968	1:10	
Start 2.25 ppa 40/70 White	SW	85.9	7,572	609.6	5,502	42,669	230,030	1:11	
Flush	SW	85.6	7,789	371.3	6,160		272,698	1:19	
Shutdown (Final)	SW	2.9	4,760		6,543		272,698	1:23	



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 8th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,699 psi	0.0%	-23.0%
Average Slurry Rate	85.0 bpm	85.0 bpm	85.7 bpm	0.0%	0.8%
Average Horsepower	20,833 HHP	20,833 HHP	16,171 HHP	0.0%	-22.4%
Average Perf Friction	776 psi	776 psi	789 psi	0.0%	1.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.21 psi/ft	0.0%	9.7%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	223 bbls	223 bbls	-37.5%	0.0%
15% HCl Acid	53.6 bbls	57.4 bbls	57.4 bbls	7.1%	0.0%
Clean	6,011 bbls	6,126 bbls	6,126 bbls	1.9%	0.0%
Fresh Water	6,011 bbls	6,126 bbls	6,126 bbls	1.9%	0.0%
Slickwater	5,934 bbls	5,953 bbls	5,953 bbls	0.3%	0.0%
Proppant Laden	5,333 bbls	5,709 bbls	5,709 bbls	7.0%	0.0%
Flush	267 bbls	371.3 bbls	371.3 bbls	38.9%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.48 gals	236.00 gals	236.00 gals	-6.5%	0.0%
Biocide : K-BAC 1005	37.87 gals	41.3 gals	41.3 gals	9.1%	0.0%
Scale Inhibitor : SI-20W	63.12 gals	71.3 gals	71.3 gals	13.0%	0.0%
Acid : 28% HCl	1,136.36 gals	2,134.00 gals	2,134.00 gals	87.8%	0.0%
Acid Inhibitor : NEFE-180	7.95 gals	14.94 gals	14.94 gals	87.8%	0.0%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,149 lbs	27,640 lbs	0.6%	1.8%
40/70 White	243,000 lbs	245,516 lbs	244,946 lbs	1.0%	-0.2%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 8th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

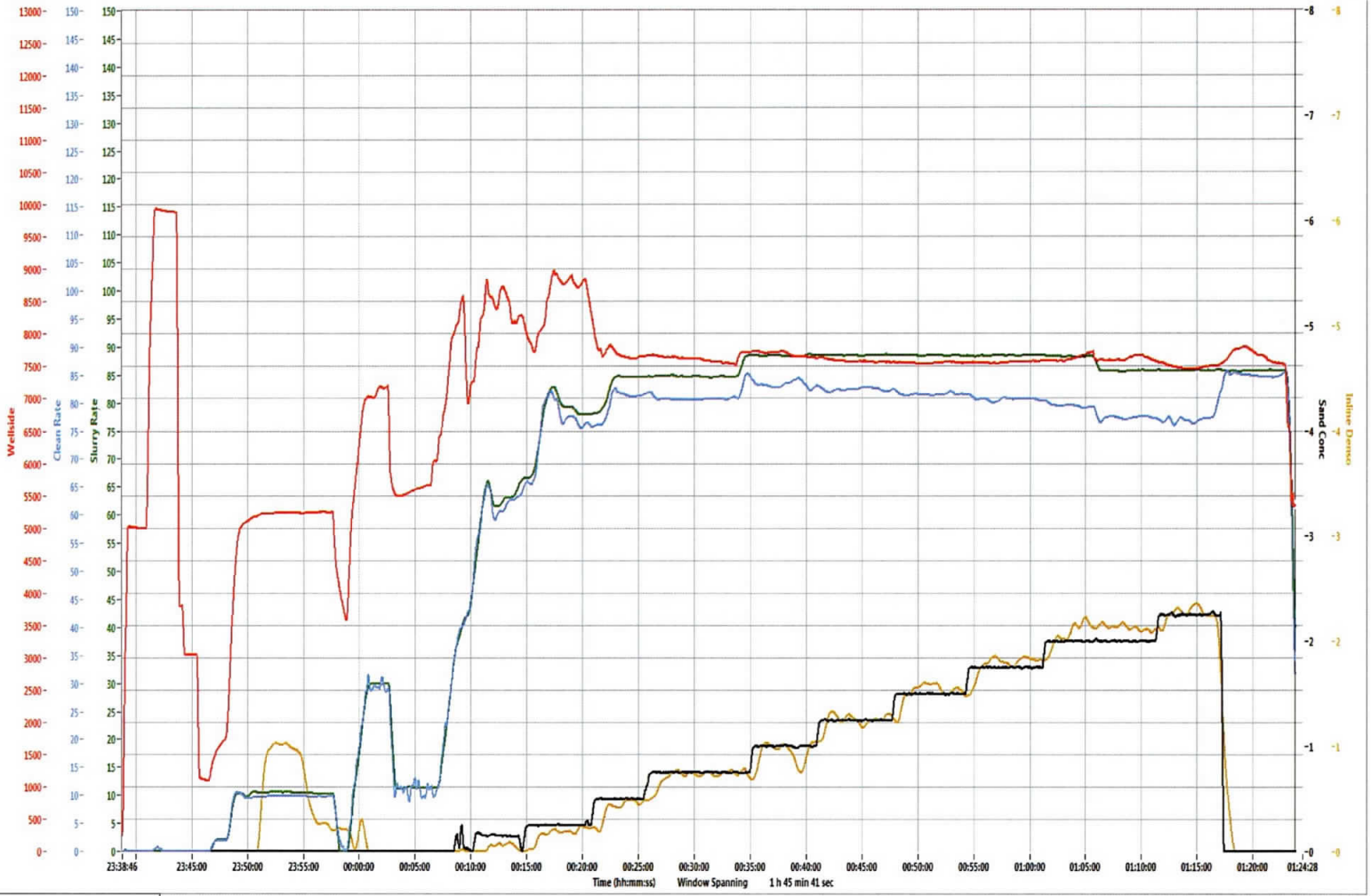
Chemical Volumes

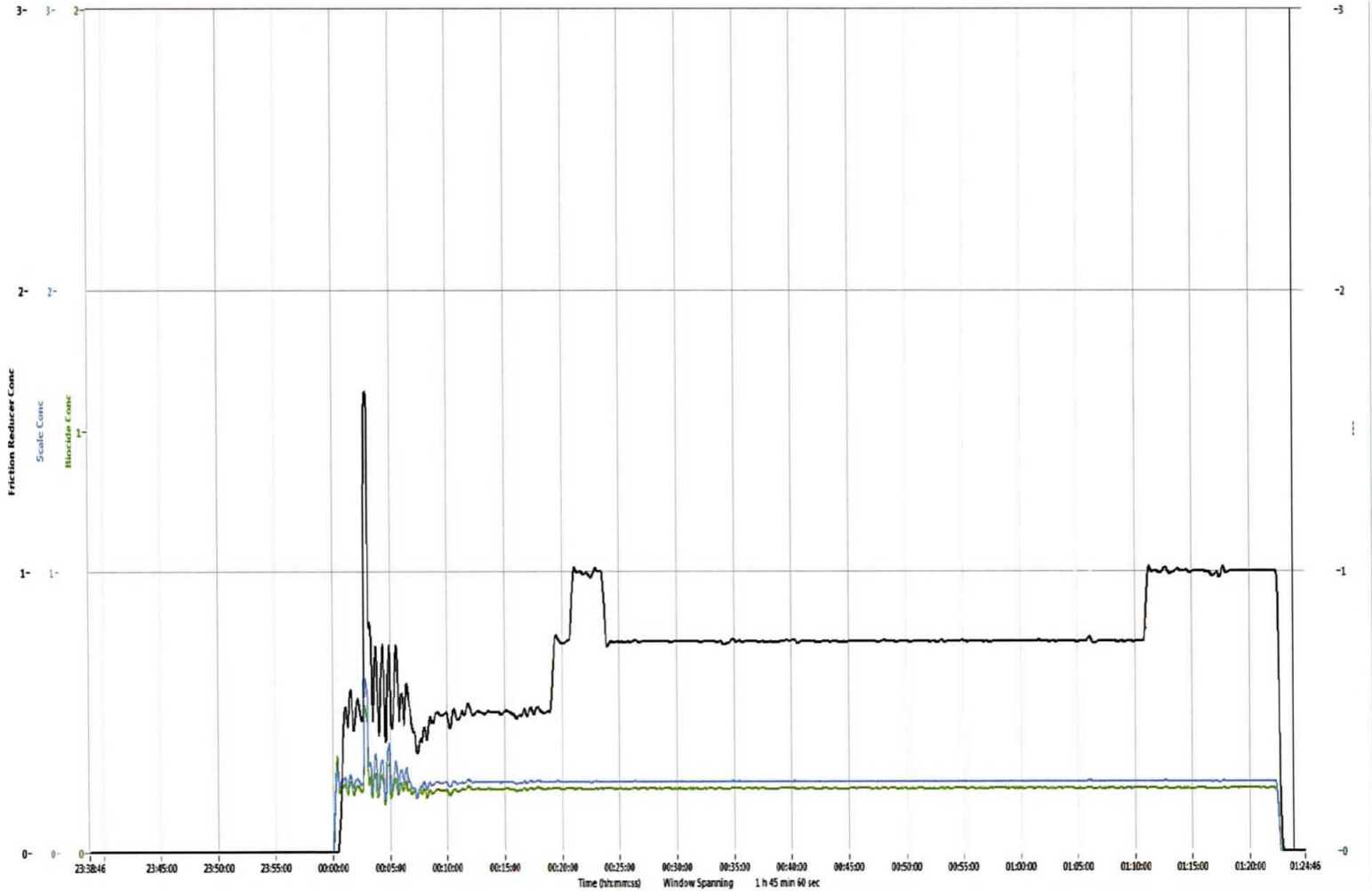
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	236.00 gals	236.00 gals	0%	236.00 gals
Biocide	0.15 gpt	41.3 gals	41.3 gals	0%	41.3 gals
Scale Inhibitor	0.25 gpt	71.3 gals	71.3 gals	0%	71.3 gals
Acid	1.00 gpt	2,134.00 gals	2,134.00 gals	0%	2,134.00 gals
Acid Inhibitor	7.00 gpt	14.94 gals	14.94 gals	0%	14.94 gals
Gelling Agent	2.5 gpt	14.94 gals	14.94 gals	0%	14.94 gals
Breaker	0.5 ppt	5.00 lbs	5.00 lbs	0%	5.00 lbs

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 9th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 9th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Brandon Beckwith
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	4,721 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	11,894 ft	12,015 ft	267 bbls	264 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,983 bbls	Friction Reducer :	168.00 gals	100.3% of total proppant placed.	
Clean Volume :	5,955 bbls	Biocide :	39.30 gals		
Raw Acid Volume :	29 bbls	Scale Inhibitor :	59.80 gals	FR started at 0.50 gpt per Mr. Don Barker	
Slickwater Volume :	5,762 bbls	28% HCl Acid :	1159.00 gals		
Gelled Volume :	156 bbls	Acid Inhibitor :	8.11 gals		
Proppant Laden :	5,553 bbls	Gelling Agent :	18.75 gals		
Slurry Volume :	5,697 bbls	Breaker :	5.00 lbs		
Wireline Volume :	308 bbls				
Total Fluid To Recover :	6,263 bbls				
Proppant Totals					
100 Mesh :	27,760 lbs				
40/70 White :	243,180 lbs				
Total :	270,940 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,587 psi	Opening Pressure	1,772 psi
Minimum	7,135 psi	Minimum	65.0 bpm	Frac ∇	1.16 psi/ft	Open ∇	0.72 psi/ft
Maximum	8,489 psi	Maximum	90.5 bpm	Pump Time	1.52 Hrs	ISIP	4,537 psi
Average	7,518 psi	Average	84.8 bpm	HHP	15,625 HHP	Closing Pressure	4,229 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,946					13:17
Open Well	FW		1,772					13:20
Start Injection	FW		1,811	8.5				13:21
Start 15 % HCL Acid	ACID	10.3	4,360	56.6	8			13:24
Pad	SW	10.3	5,028	86.2	67			13:30
Start 0.10 ppa 100 Mesh Sand	SW	30.7	6,521	346.8	152	1,443	3	13:36
Ball seat (Breakdown)	SW	19.7	5,587		281		512	13:43
Acid on Formation	SW	56.4	7,273		367		866	13:46
Start 0.25 ppa 100 Mesh Sand	SW	76.9	7,636	455.8	504	4,778	1,446	13:48
Start 0.50 ppa 100 Mesh Sand	SW	89.2	7,773	413.5	965	8,682	6,224	13:53
Start 0.75 ppa 100 Mesh Sand	SW	89.3	7,635	398.0	1,385	12,547	14,905	13:58
Start 0.75 ppa 40/70 White	SW	89.7	7,642	374.9	1,795	11,812	27,452	14:02
Start 1.00 ppa 40/70 White	SW	90.2	7,688	515.8	2,181	21,279	39,264	14:07
Start 1.25 ppa 40/70 White	SW	90.4	7,526	581.8	2,718	30,584	60,543	14:13
Start 1.50 ppa 40/70 White	SW	91.0	7,444	616.4	3,333	38,781	91,126	14:19
Increase FR to 1.00 gpt	SW	90.2	7,525		3,787		117,812	14:24
Start 1.75 ppa 40/70 White	SW	89.5	7,456	605.6	3,991	44,572	129,907	14:27
Increase Gel to 2.5 gpt	SW/Gel	90.2	7,336		4,552		168,389	14:33
Decrease Gel to 0.00 gpt	SW	90.2	7,257		4,632		173,788	14:34
Start 2.00 ppa 40/70 White	SW	90.2	7,336	573.7	4,641	48,277	174,480	14:34
Increase Gel to 2.50 gpt	SW/Gel	90.4	7,237		5,162		214,781	14:40
Decrease Gel to 0.00 gpt	SW		7,193		5,184		221,510	14:41
Start 2.25 ppa 40/70 White	SW		7,257	584.5	5,184	44,913	222,757	14:41
Flush	SW	89.8	7,529	365.2	5,624		267,670	14:48
Shutdown (Final)	SW		4,653		5,697		267,670	14:52

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 9th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,518 psi	0.0%	-24.8%
Average Slurry Rate	85.0 bpm	85.0 bpm	84.8 bpm	0.0%	-0.2%
Average Horsepower	20,833 HHP	20,833 HHP	15,625 HHP	0.0%	-25.0%
Average Perf Friction	776 psi	776 psi	772 psi	0.0%	-0.5%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.16 psi/ft	0.0%	5.5%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	95 bbls	95 bbls	-73.5%	0.0%
15% HCl Acid	53.6 bbls	56.6 bbls	56.6 bbls	5.7%	0.0%
Clean	6,008 bbls	5,955 bbls	5,955 bbls	-0.9%	0.0%
Fresh Water	6,008 bbls	5,955 bbls	5,955 bbls	-0.9%	0.0%
Slickwater	5,931 bbls	5,762 bbls	5,762 bbls	-2.8%	0.0%
Proppant Laden	5,333 bbls	5,553 bbls	5,553 bbls	4.1%	0.0%
Flush	264 bbls	365.2 bbls	365.2 bbls	38.3%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.34 gals	173.02 gals	168.00 gals	-31.4%	-2.9%
Biocide : K-BAC 1005	37.85 gals	37.51 gals	39.3 gals	-0.9%	4.8%
Scale Inhibitor : SI-20W	63.08 gals	62.52 gals	59.8 gals	-0.9%	-4.4%
Acid : 28% HCl	1,136.36 gals	1,200.61 gals	1,159.00 gals	5.7%	-3.5%
Acid Inhibitor : NEFE-180	7.95 gals	8.4 gals	8.11 gals	5.7%	-3.5%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,452 lbs	27,760 lbs	1.7%	1.1%
40/70 White	243,000 lbs	240,218 lbs	243,180 lbs	-1.1%	1.2%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 9th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

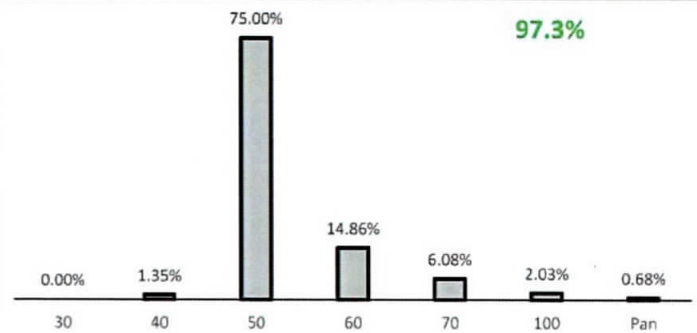
Quality Assesment / Quality Control

Chemical Volumes

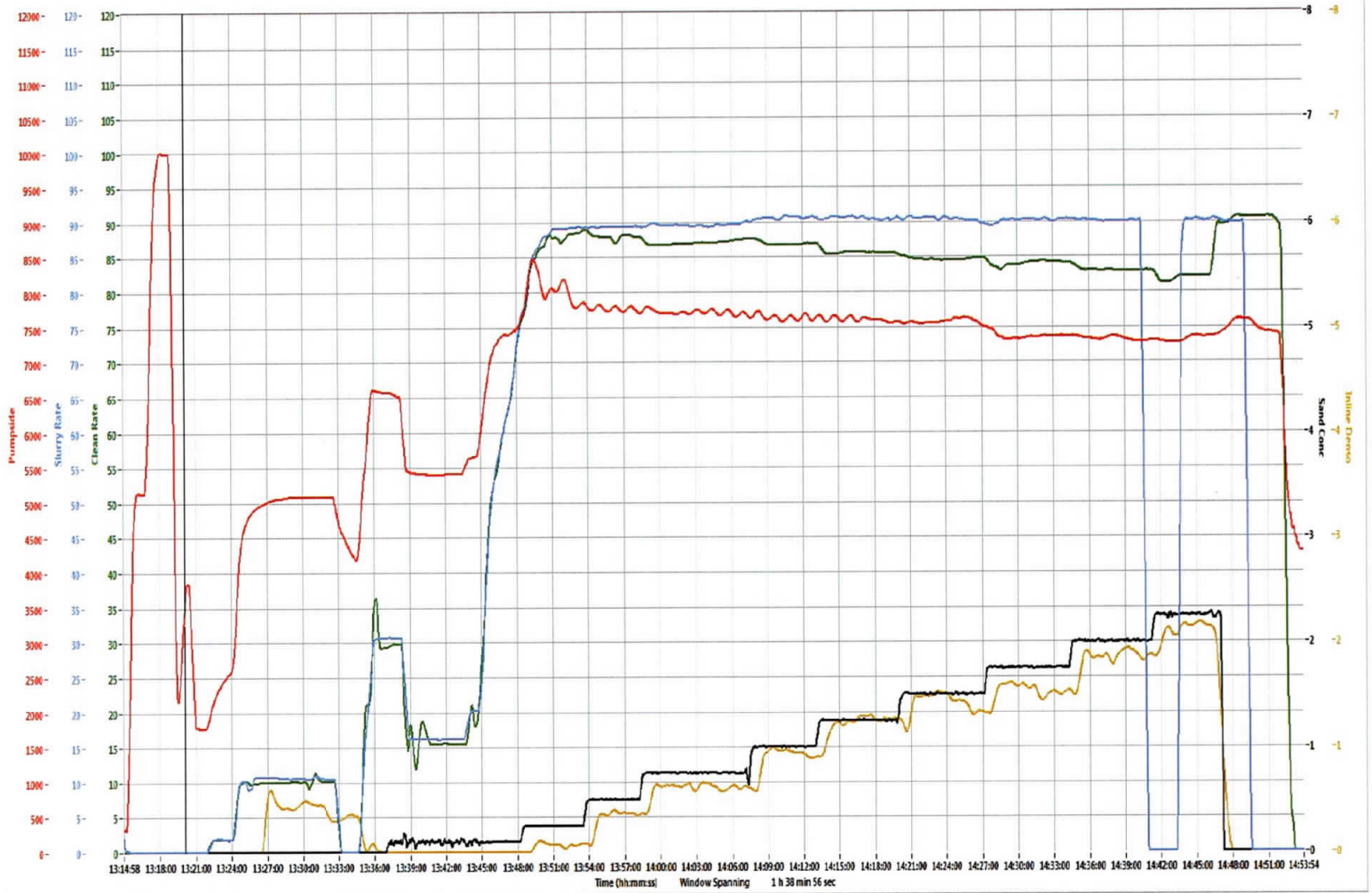
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	173.02 gals	168.00 gals	-3%	168.00 gals
Biocide	0.15 gpt	37.51 gals	39.3 gals	5%	39.3 gals
Scale Inhibitor	0.25 gpt	62.52 gals	59.8 gals	-4%	59.8 gals
Acid	1.00 gpt	1,200.61 gals	1,159.00 gals	-3%	1,159.00 gals
Acid Inhibitor	7.00 gpt	8.4 gals	8.11 gals	-3%	8.11 gals
Gelling Agent	2.5 gpt	16.36 gals	18.75 gals	15%	18.75 gals
Breaker	0.5 ppt	3.27 lbs	5.00 lbs	53%	5.00 lbs

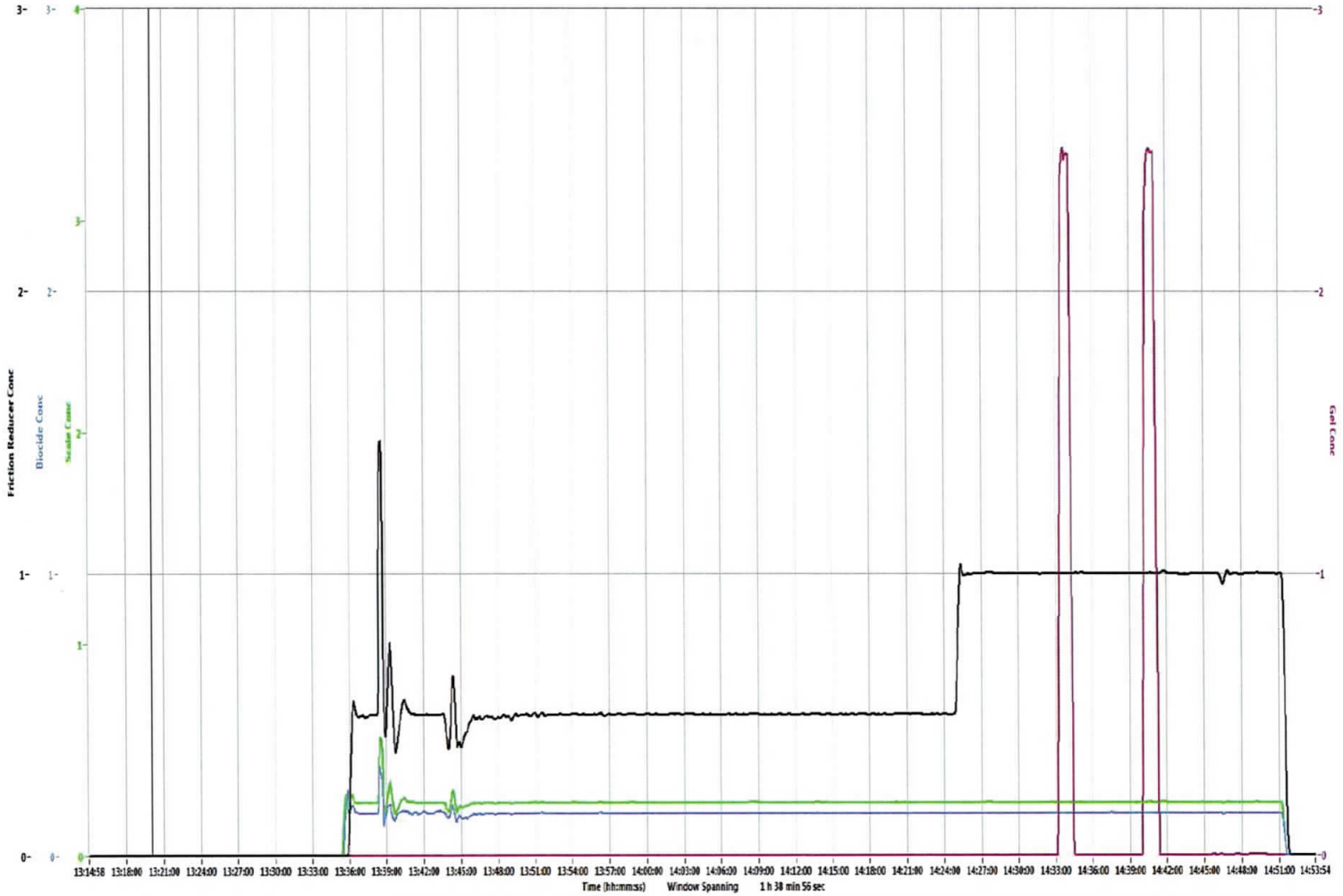
Sand Sieve Analysis :

40/70 Mesh Screen Sizes		Weight Retained	% Retained
30	<= 0.1%	0.00	0.00%
40	>= 90%	2.00	1.35%
50		111.00	75.00%
60		22.00	14.86%
70		9.00	6.08%
100	<= 1%	3.00	2.03%
Pan		1.00	0.68%
Total Sample Weight:		148 grams	100.0%



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 10th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 10th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Jeff Hecht
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2 " 20. #	P-110	4,571 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	11,744 ft	11,865 ft	263 bbls	261 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,945 bbls	Friction Reducer :	145.00 gals		
Clean Volume :	5,918 bbls	Biocide :	38.60 gals		
Raw Acid Volume :	27 bbls	Scale Inhibitor :	58.80 gals		
Slickwater Volume :	5,753 bbls	28% HCl Acid :	1126.00 gals		
Gelled Volume :	122 bbls	Acid Inhibitor :	7.88 gals		
Proppant Laden :	5,510 bbls	Gelling Agent :	12.40 gals		
Slurry Volume :	6,284 bbls	Breaker :	2.50 lbs		
Wireline Volume :	390 bbls				
Total Fluid To Recover :	6,308 bbls				
Proppant Totals					
100 Mesh :	30,780 lbs				
40/70 White :	240,060 lbs				
Total :	270,840 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,645 psi	Opening Pressure	2,122 psi
Minimum	7,243 psi	Minimum	86.4 bpm	Frac ∇	1.12 psi/ft	Open ∇	0.77 psi/ft
Maximum	7,869 psi	Maximum	87.6 bpm	Pump Time	1.55 Hrs	ISIP	4,255 psi
Average	7,505 psi	Average	87.0 bpm	HHP	16,003 HHP	Closing Pressure	3,750 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		10,090					20:36
Open Well	FW		2,122					20:40
Start Injection	FW		2,113	16.1				20:41
Start 15 % HCL Acid	ACID	10.2	4,546	54.1	16			20:44
Pad	SW	10.4	4,799	243.3	74			20:49
Ball seat (Breakdown)	SW	14.6	5,645		238			21:00
Acid on Formation	SW	43.9	7,980		312		10	21:03
Start 0.25 ppa 100 Mesh Sand	SW	45.6	7,514	609.4	319	6,380	25	21:03
Start 0.50 ppa 100 Mesh Sand	SW	82.6	7,828	354.9	938	7,304	6,405	21:12
Start 0.75 ppa 100 Mesh Sand	SW	86.9	7,978	418.3	1,305	13,055	13,709	21:16
Start 0.75 ppa 40/70 White	SW	86.3	7,886	420.8	1,741	13,343	26,764	21:21
Start 1.00 ppa 40/70 White	SW	85.7	7,614	494.4	2,180	20,788	40,107	21:26
Start 1.25 ppa 40/70 White	SW	86.8	7,490	575.8	2,702	30,273	60,895	21:32
Start 1.50 ppa 40/70 White	SW	87.4	7,630	571.3	3,317	36,015	91,160	21:39
Increase FR to 0.75 gpt	SW	87.2	7,538		3,803		119,450	21:45
Start 1.75 ppa 40/70 White	SW	87.1	7,524	566.4	3,935	41,646	127,183	21:46
Start 2.00 ppa 40/70 White	SW	86.9	7,642	700.3	4,552	58,906	168,829	21:54
Increase Gel to 2.50 gpt	SW/Gel	87.0	7,797		4,895		195,792	21:58
Decrease Gel to 0.00 gpt	SW	87.2	7,546		5,030		206,066	21:59
Start 2.25 ppa 40/70 White	SW	87.0	7,471	554.7	5,311	40,281	227,735	22:02
Flush	SW	86.7	7,646	365.6	5,910		268,016	22:09
Shutdown (Final)	SW		4,242		6,284		268,016	22:14

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 10th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,505 psi	0.0%	-25.0%
Average Slurry Rate	85.0 bpm	85.0 bpm	87.0 bpm	0.0%	2.4%
Average Horsepower	20,833 HHP	20,833 HHP	16,003 HHP	0.0%	-23.2%
Average Perf Friction	776 psi	776 psi	813 psi	0.0%	4.8%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.12 psi/ft	0.0%	1.5%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	259 bbls	259 bbls	-27.4%	0.0%
15% HCl Acid	53.6 bbls	54.1 bbls	54.1 bbls	1.0%	0.0%
Clean	6,005 bbls	5,918 bbls	5,918 bbls	-1.4%	0.0%
Fresh Water	6,005 bbls	5,918 bbls	5,918 bbls	-1.4%	0.0%
Slickwater	5,927 bbls	5,753 bbls	5,753 bbls	-2.9%	0.0%
Proppant Laden	5,333 bbls	5,510 bbls	5,510 bbls	3.3%	0.0%
Flush	261 bbls	365.6 bbls	365.6 bbls	40.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.20 gals	147.62 gals	145.00 gals	-41.5%	-1.8%
Biocide : K-BAC 1005	37.83 gals	37.28 gals	38.6 gals	-1.5%	3.5%
Scale Inhibitor : SI-20W	63.05 gals	62.14 gals	58.8 gals	-1.4%	-5.4%
Acid : 28% HCl	1,136.36 gals	1,147.58 gals	1,126.00 gals	1.0%	-1.9%
Acid Inhibitor : NEFE-180	7.95 gals	8.03 gals	7.88 gals	1.0%	-1.9%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,739 lbs	30,780 lbs	-1.0%	15.1%
40/70 White	243,000 lbs	241,251 lbs	240,060 lbs	-0.7%	-0.5%



Customer: Blue Ridge Mountain Resc

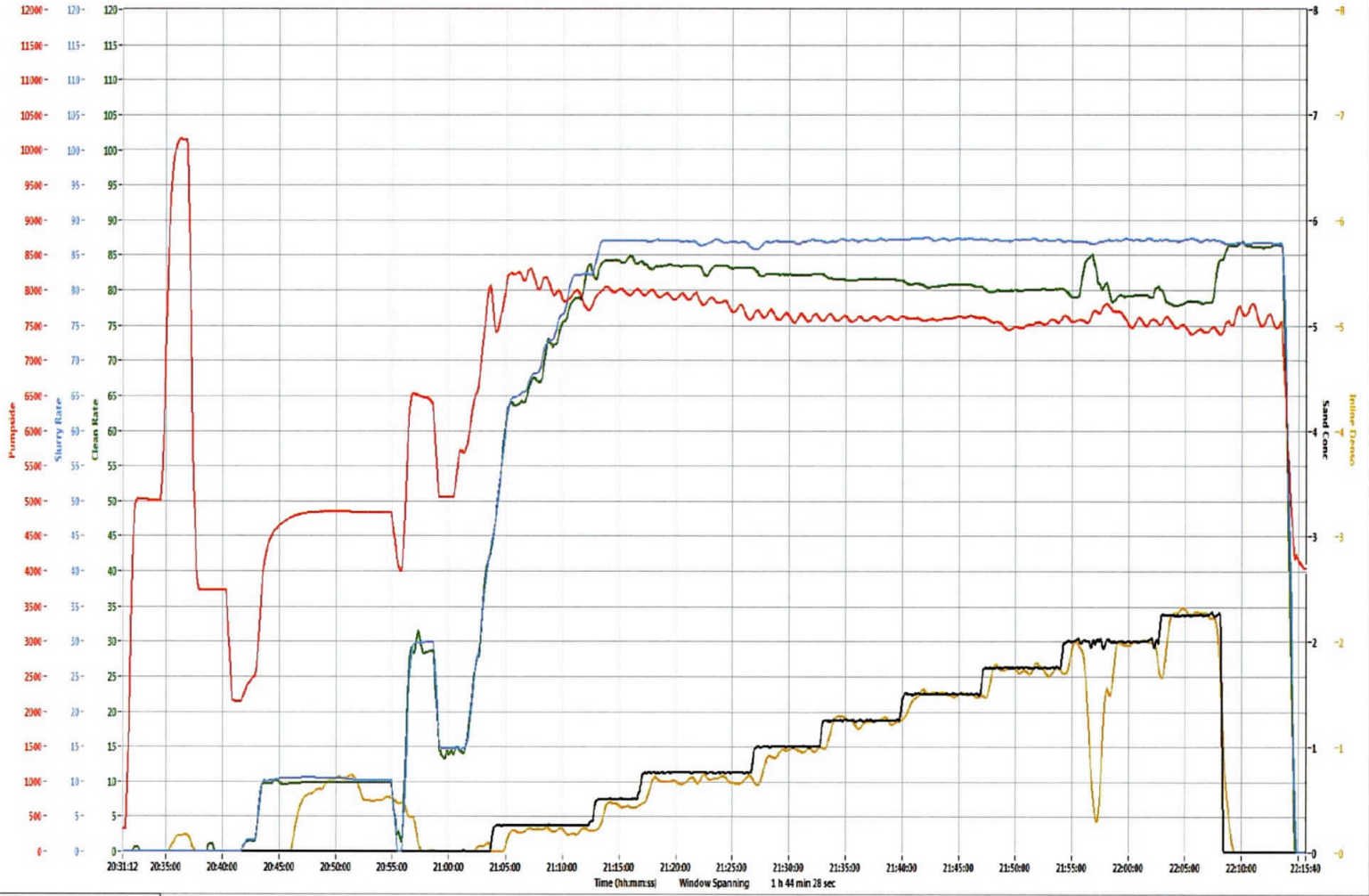
Well: Meckley 1401
 Date: 3/9/2018
 Stage: 10th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

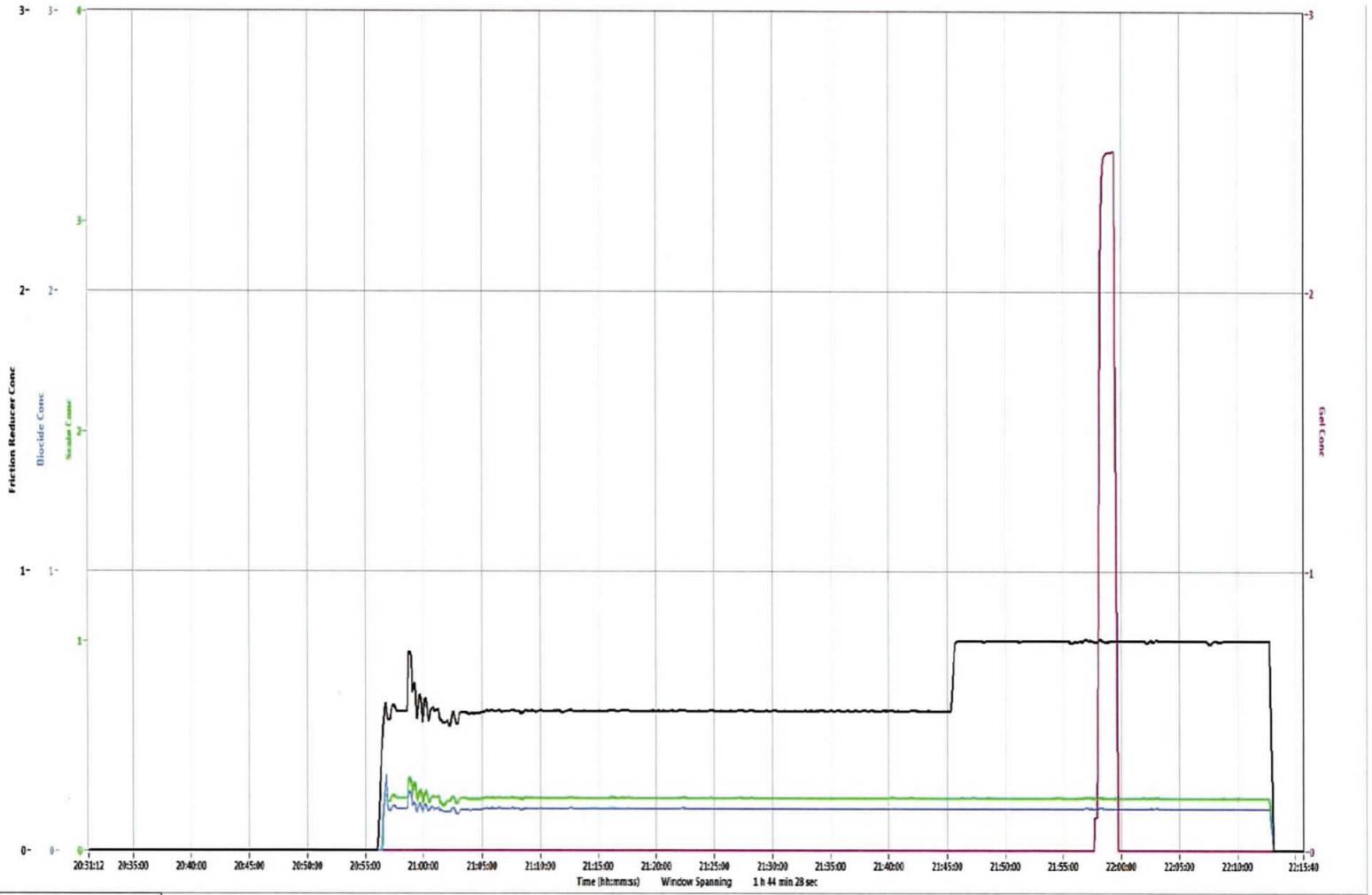
Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	147.62 gals	145.00 gals	-2%	145.00 gals
Biocide	0.15 gpt	37.28 gals	38.6 gals	4%	38.6 gals
Scale inhibitor	0.25 gpt	62.14 gals	58.8 gals	-5%	58.8 gals
Acid	1.00 gpt	1,147.58 gals	1,126.00 gals	-2%	1,126.00 gals
Acid Inhibitor	7.00 gpt	8.03 gals	7.88 gals	-2%	7.88 gals
Gelling Agent	2.5 gpt	12.83 gals	12.4 gals	-3%	12.4 gals
Breaker	0.5 ppt	2.57 lbs	2.5 lbs	-3%	2.5 lbs

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 11th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 11th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Joseph Bishop
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Wellbore Information					
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	4,421 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	11,594 ft	11,715 ft	260 bbls	257 bbls	6,236 ft

Job Summary				
Fluid Volumes		Chemical Volumes		Notes:
Total Fluid Volume :	5,989 bbls	Friction Reducer :	180.00 gals	100.1% of total proppant placed.
Clean Volume :	5,966 bbls	Biocide :	39.50 gals	
Raw Acid Volume :	23 bbls	Scale Inhibitor :	60.50 gals	FR started at 0.50 gpt per Mr. Don Barker
Slickwater Volume :	5,721 bbls	28% HCl Acid :	1130.00 gals	
Gelled Volume :	216 bbls	Acid Inhibitor :	7.91 gals	
Proppant Laden :	5,574 bbls	Gelling Agent :	25.00 gals	
Slurry Volume :	6,289 bbls	Breaker :	5.00 lbs	
Wireline Volume :	263 bbls			
Total Fluid To Recover :	6,229 bbls			
Proppant Totals				
100 Mesh :	27,580 lbs			
40/70 White :	242,600 lbs			
Total :	270,180 lbs			

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,972 psi	Opening Pressure	2,025 psi
Minimum	7,014 psi	Minimum	66.5 bpm	Frac ∇	0.98 psi/ft	Open ∇	0.76 psi/ft
Maximum	8,996 psi	Maximum	91.0 bpm	Pump Time	1.46 Hrs	ISIP	3,390 psi
Average	7,829 psi	Average	88.8 bpm	HHP	17,039 HHP	Closing Pressure	3,156 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,912					6:48
Open Well	FW		2,025					7:19
Start Injection	FW		2,037	6.1				7:20
Start 15 % HCl Acid	ACID	10.2	3,775	45.3	6			7:22
Pad	SW	10.5	4,465	49.6	54	23		7:27
Start 0.10 ppa 100 Mesh Sand	SW	30.5	6,713	286.4	103	1,184	23	7:31
Ball seat (Breakdown)	SW	16.2	5,972		230		541	7:36
Acid on Formation	SW	43.8	7,529		307		865	7:39
Start 0.25 ppa 100 Mesh Sand	SW	66.6	8,427	424.8	390	4,515	1,207	7:40
Start 0.50 ppa 100 Mesh Sand	SW	89.1	8,587	427.7	822	8,968	5,722	7:46
Start 0.75 ppa 100 Mesh Sand	SW	89.4	8,308	399.6	1,262	12,554	14,690	7:51
Start 0.75 ppa 40/70 White	SW	89.5	8,242	386.3	1,673	12,121	27,244	7:55
Start 1.00 ppa 40/70 White	SW	89.6	8,074	504.4	2,071	20,999	39,365	8:00
Start 1.25 ppa 40/70 White	SW	89.9	8,031	602.3	2,600	31,522	60,364	8:05
Increase FR to 0.75 gpt	SW	89.9	7,963		2,612		60,921	8:06
Start 1.50 ppa 40/70 White	SW	90.2	7,580	622.6	3,239	39,123	91,886	8:13
Start 1.75 ppa 40/70 White	SW	90.4	7,506	652.0	3,904	47,917	131,008	8:20
Increase FR to 1.00 gpt	SW	90.1	7,519		4,349		161,333	8:25
Increase Gel to 2.5 gpt	SW/Gel	90.0	7,508		4,531		173,837	8:27
Start 2.00 ppa 40/70 White	SW/Gel	90.3	7,553	580.3	4,606	48,800	178,926	8:28
Decrease Gel to 0.00 gpt	SW	90.6	7,471		4,707		186,713	8:29
Increase Gel to 2.50 gpt	SW/Gel	90.3	7,370		5,172		222,668	8:34
Decrease Gel to 0.00 gpt	SW	90.4	7,427		5,230		227,207	8:35
Start 2.25 ppa 40/70 White	SW	90.3	7,402	637.7	5,236	50,770	227,725	8:35
Flush	SW	85.5	7,224	363.5	5,918		278,495	8:42
Shutdown (Final)	SW		3,334		6,289		278,495	8:47

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 11th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,829 psi	0.0%	-21.7%
Average Slurry Rate	85.0 bpm	85.0 bpm	88.8 bpm	0.0%	4.5%
Average Horsepower	20,833 HHP	20,833 HHP	17,039 HHP	0.0%	-18.2%
Average Perf Friction	776 psi	776 psi	847 psi	0.0%	9.1%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	0.98 psi/ft	0.0%	-11.1%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	56 bbls	56 bbls	-84.4%	0.0%
15% HCl Acid	53.6 bbls	45.3 bbls	45.3 bbls	-15.4%	0.0%
Clean	6,001 bbls	5,966 bbls	5,966 bbls	-0.6%	0.0%
Fresh Water	6,001 bbls	5,966 bbls	5,966 bbls	-0.6%	0.0%
Slickwater	5,924 bbls	5,721 bbls	5,721 bbls	-3.4%	0.0%
Proppant Laden	5,333 bbls	5,574 bbls	5,574 bbls	4.5%	0.0%
Flush	257 bbls	363.5 bbls	363.5 bbls	41.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.06 gals	179.99 gals	180.00 gals	-28.6%	0.0%
Biocide : K-BAC 1005	37.81 gals	37.58 gals	39.5 gals	-0.6%	5.1%
Scale Inhibitor : SI-20W	63.02 gals	62.64 gals	60.5 gals	-0.6%	-3.4%
Acid : 28% HCl	1,136.36 gals	960.91 gals	1,130.00 gals	-15.4%	17.6%
Acid Inhibitor : NEFE-180	7.95 gals	6.73 gals	7.91 gals	-15.4%	17.6%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,244 lbs	27,580 lbs	0.9%	1.2%
40/70 White	243,000 lbs	251,251 lbs	242,600 lbs	3.4%	-3.4%



Customer: Blue Ridge Mountain Resc

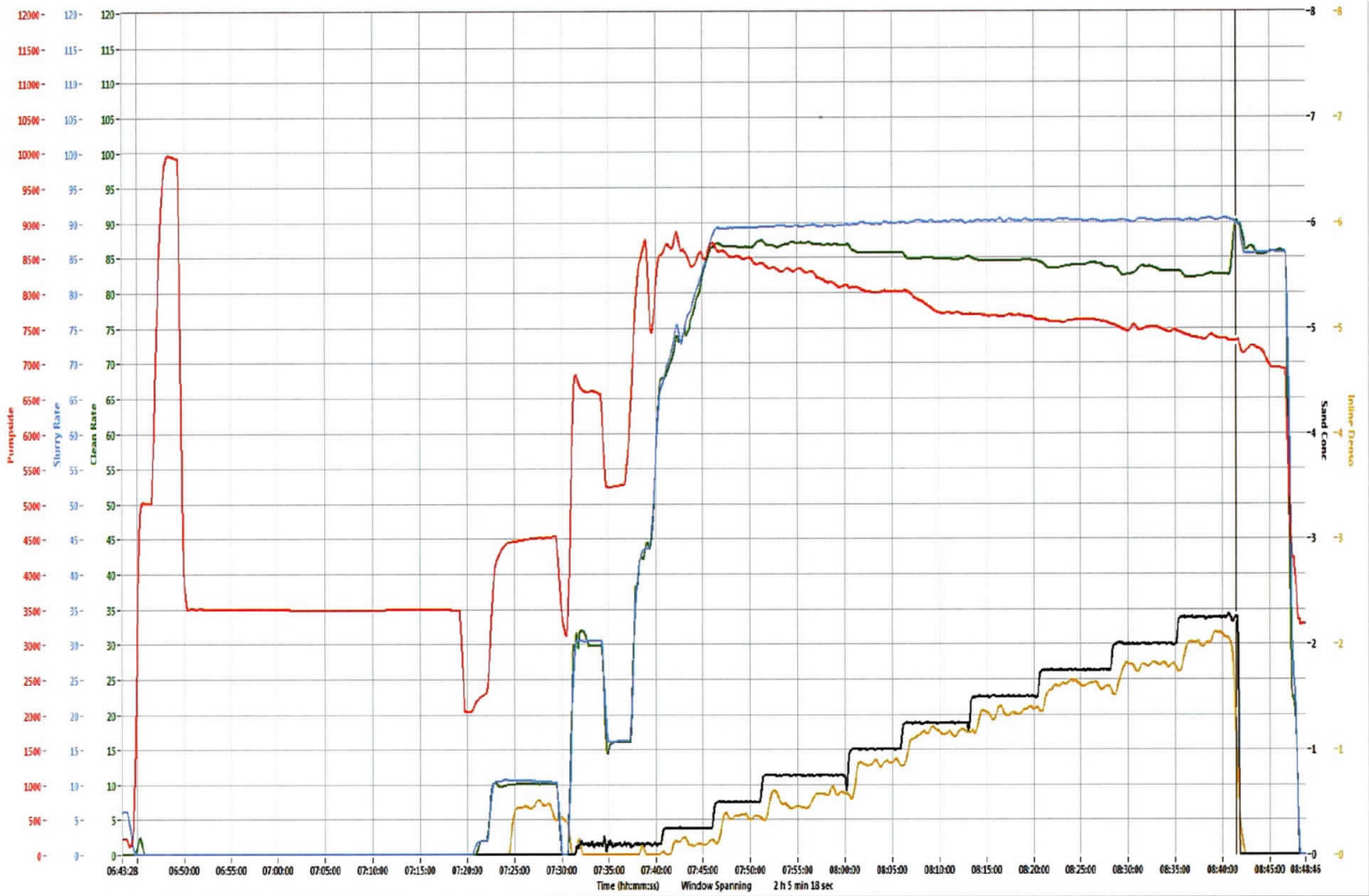
Well: Meckley 1401
 Date: 3/9/2018
 Stage: 11th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

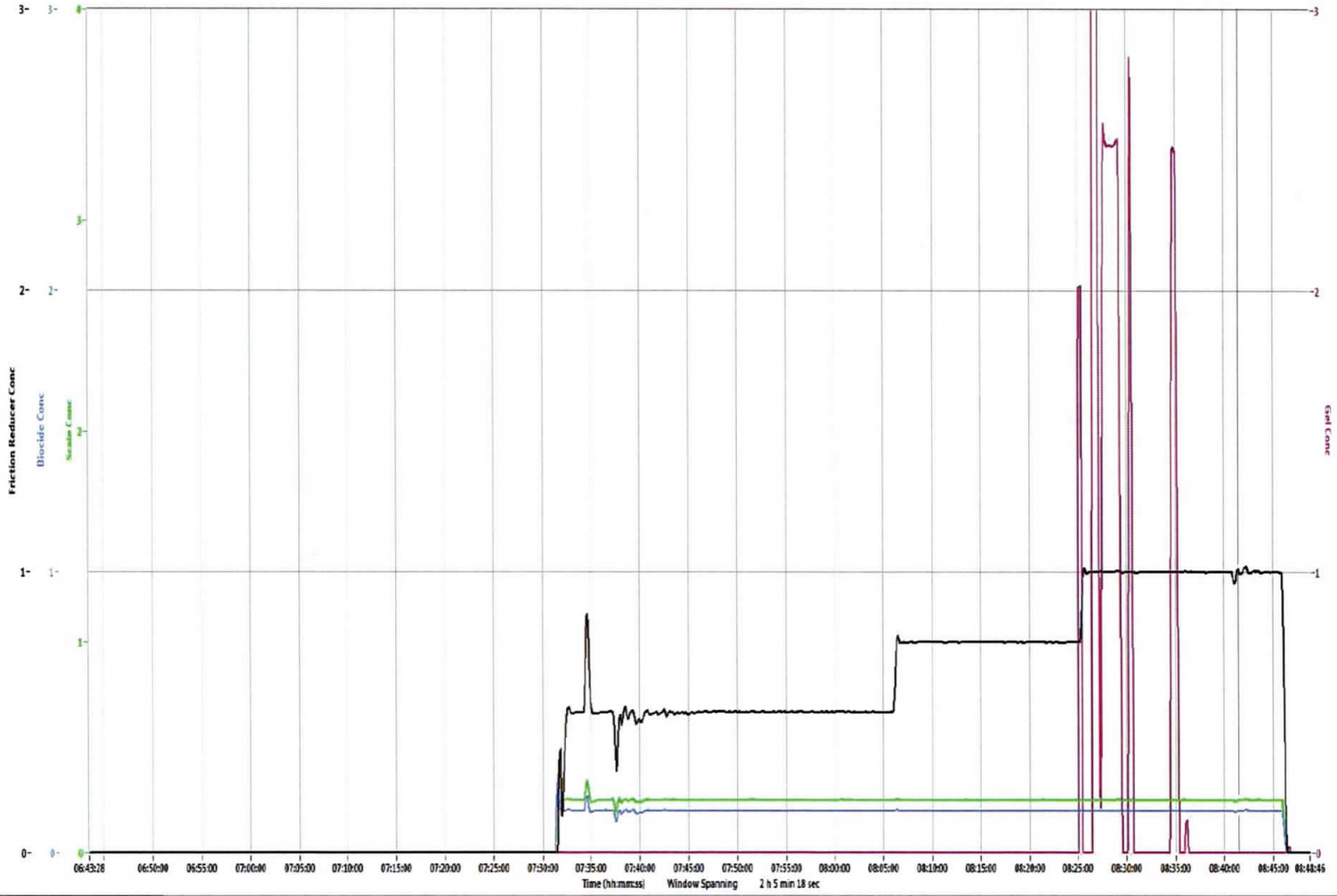
Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	179.99 gals	180.00 gals	0%	180.00 gals
Biocide	0.15 gpt	37.58 gals	39.5 gals	5%	39.5 gals
Scale Inhibitor	0.25 gpt	62.64 gals	60.5 gals	-3%	60.5 gals
Acid	1.00 gpt	960.91 gals	1,130.00 gals	18%	1,130.00 gals
Acid Inhibitor	7.00 gpt	6.73 gals	7.91 gals	18%	7.91 gals
Gelling Agent	2.5 gpt	22.7 gals	25.00 gals	10%	25.00 gals
Breaker	0.5 ppt	4.54 lbs	5.00 lbs	10%	5.00 lbs

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 12th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 12th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Joseph Bishop
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Wellbore Information					
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	4,271 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	11,444 ft	11,565 ft	257 bbls	254 bbls	6,236 ft

Job Summary			
Fluid Volumes		Chemical Volumes	
Total Fluid Volume :	6,077 bbls	Friction Reducer :	187.00 gals
Clean Volume :	6,036 bbls	Biocide :	39.50 gals
Raw Acid Volume :	42 bbls	Scale Inhibitor :	60.30 gals
Slickwater Volume :	5,754 bbls	28% HCl Acid :	1488.00 gals
Gelled Volume :	226 bbls	Acid Inhibitor :	10.42 gals
Proppant Laden :	5,627 bbls	Gelling Agent :	25.00 gals
Slurry Volume :	6,377 bbls	Breaker :	5.00 lbs
Wireline Volume :	304 bbls		
Total Fluid To Recover :	6,340 bbls		
Proppant Totals			
100 Mesh :	27,300 lbs		
40/70 White :	242,860 lbs		
Total :	270,160 lbs		

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	4,935 psi	Opening Pressure	2,272 psi
Minimum	6,813 psi	Minimum	68.5 bpm	Frac ∇	1.03 psi/ft	Open ∇	0.80 psi/ft
Maximum	8,991 psi	Maximum	90.8 bpm	Pump Time	1.61 Hrs	ISIP	3,696 psi
Average	7,308 psi	Average	87.8 bpm	HHP	15,727 HHP	Closing Pressure	3,242 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,867					11:42
Open Well	FW		2,272					11:46
Start Injection	FW		2,269	14.9				11:48
Start 15 % HCl Acid	ACID	9.9	4,160	25.1	14			11:51
Pad	SW	9.9	4,272	9.0	39			11:53
Start 15 % HCl Acid	ACID	9.9	4,327	21.9	48			11:54
Pad	SW	10.2	4,340	50.6	71			11:56
Start 15 % HCl Acid	ACID	9.9	4,336	35.4	123			12:02
Pad	SW	10.2	4,329	47.7	160	0		12:05
Start 0.10 ppa 100 Mesh Sand	SW	16.0	4,699	371.0	209	1,554	0	12:10
Ball seat (Breakdown)	SW	16.1	4,935		227		75	12:11
Acid on Formation	SW	54.0	8,507		337		537	12:14
Start 0.25 ppa 100 Mesh Sand	SW	79.7	8,140	424.3	578	4,487	1,554	12:18
Start 0.50 ppa 100 Mesh Sand	SW	89.2	7,850	584.0	1,012	12,465	6,041	12:23
Start 0.75 ppa 100 Mesh Sand	SW	90.1	7,865	270.6	1,613	8,546	18,505	12:30
Start 0.75 ppa 40/70 White	SW	89.6	7,685	404.8	1,892	12,700	27,052	12:33
Start 1.00 ppa 40/70 White	SW	87.5	7,449	504.5	2,310	20,938	39,752	12:37
Increase FR to 0.75 gpt	SW	87.6	7,417		2,518		47,842	12:40
Start 1.25 ppa 40/70 White	SW	87.7	7,170	572.9	2,837	30,047	60,690	12:43
Start 1.50 ppa 40/70 White	SW	88.3	7,196	587.3	3,441	36,997	90,736	12:50
Increase FR to 1.00 gpt	SW	88.1	7,131		3,452		91,215	12:50
Increase Gel to 2.50 gpt	SW/Gel	88.3	6,936		4,025		124,882	12:57
Start 1.75 ppa 40/70 White	SW/Gel	88.1	6,909	576.2	4,070	42,444	127,733	12:57
Decrease Gel to 0.00 gpt	SW	88.0	6,964		4,082		128,534	12:58
Increase Gel to 2.50 gpt	SW/Gel	88.3	7,009		4,620		165,252	13:04
Start 2.00 ppa 40/70 White	SW/Gel	88.3	6,998	579.0	4,691	48,707	170,177	13:04
Decrease Gel to 0.00 gpt	SW	88.4	7,029		4,702		171,095	13:05
Increase Gel to 2.5 gpt	SW/Gel	88.3	7,005		5,238		212,341	13:11
Start 2.25 ppa 40/70 White	SW/Gel	88.3	6,909	645.1	5,322	51,164	218,884	13:12
Decrease Gel to 0.00 gpt	SW	88.5	6,973		5,342		220,657	13:12
Flush	SW	87.6	7,298	353.1	6,013		270,048	13:19
Shutdown (Final)	SW		3,579		6,377		276,425	13:24

Office of Oil and Gas

AUG 20 2018

WV Department of Environmental Protection



Customer: Blue Ridge Mountain Res.

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 12th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,308 psi	0.0%	-26.9%
Average Slurry Rate	85.0 bpm	85.0 bpm	87.8 bpm	0.0%	3.3%
Average Horsepower	20,833 HHP	20,833 HHP	15,727 HHP	0.0%	-24.5%
Average Perf Friction	776 psi	776 psi	828 psi	0.0%	6.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.03 psi/ft	0.0%	-6.6%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	122 bbls	122 bbls	-65.8%	0.0%
15% HCl Acid	71.4 bbls	82.4 bbls	82.4 bbls	15.4%	0.0%
Clean	6,016 bbls	6,036 bbls	6,036 bbls	0.3%	0.0%
Fresh Water	6,016 bbls	6,036 bbls	6,036 bbls	0.3%	0.0%
Slickwater	5,921 bbls	5,754 bbls	5,754 bbls	-2.8%	0.0%
Proppant Laden	5,333 bbls	5,627 bbls	5,627 bbls	5.5%	0.0%
Flush	254 bbls	353.1 bbls	353.1 bbls	39.0%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.67 gals	193.46 gals	187.00 gals	-23.4%	-3.3%
Biocide : K-BAC 1005	37.90 gals	38.03 gals	39.5 gals	0.3%	3.9%
Scale Inhibitor : SI-20W	63.17 gals	63.38 gals	60.3 gals	0.3%	-4.9%
Acid : 28% HCl	1,515.15 gals	1,747.88 gals	1,488.00 gals	15.4%	-14.9%
Acid Inhibitor : NEFE-180	10.61 gals	12.24 gals	10.42 gals	15.4%	-14.9%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,052 lbs	27,300 lbs	0.2%	0.9%
40/70 White	243,000 lbs	242,996 lbs	242,860 lbs	0.0%	-0.1%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 12th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

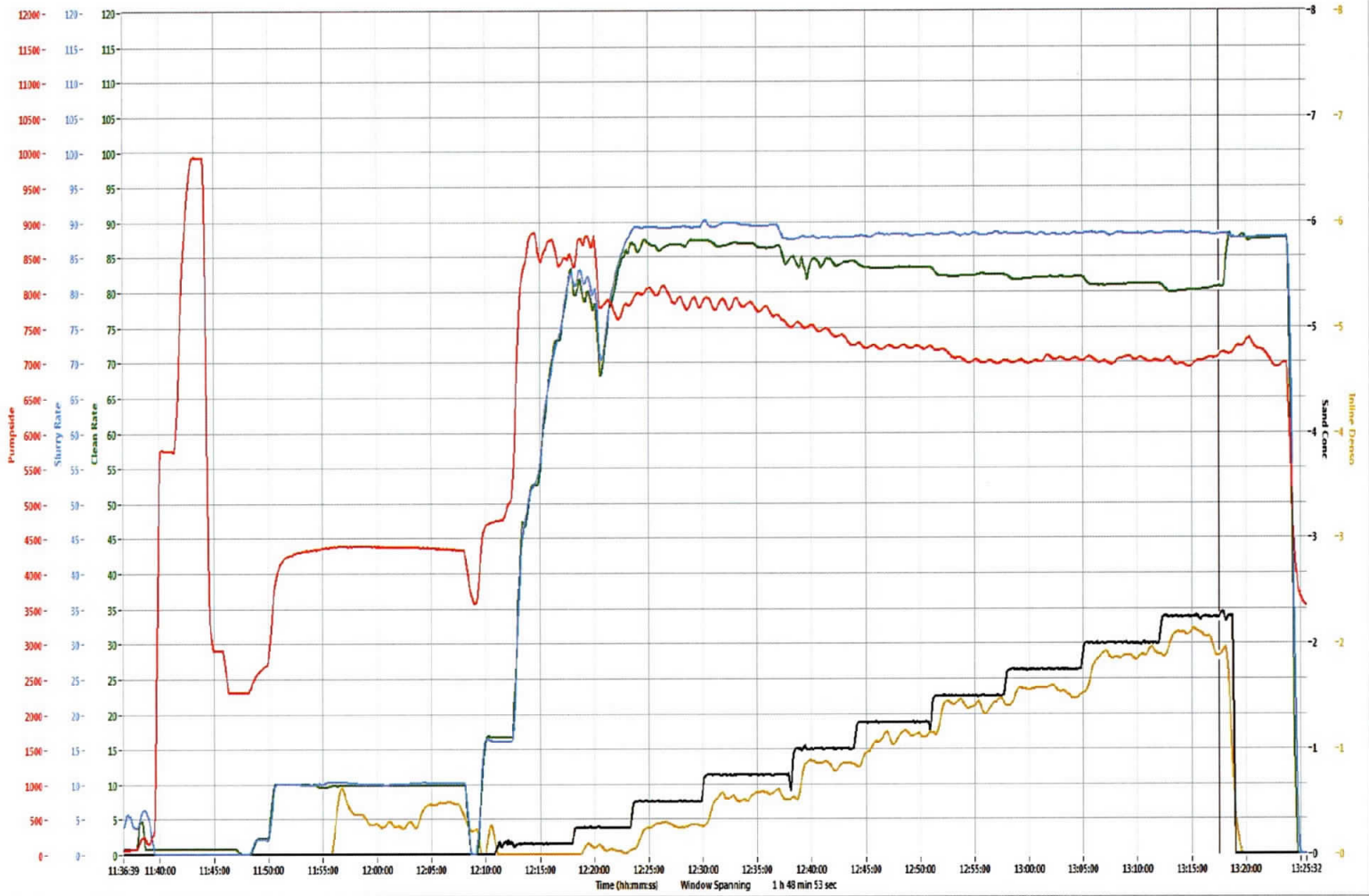
Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	193.46 gals	187.00 gals	-3%	187.00 gals
Biocide	0.15 gpt	38.03 gals	39.5 gals	4%	39.5 gals
Scale Inhibitor	0.25 gpt	63.38 gals	60.3 gals	-5%	60.3 gals
Acid	1.00 gpt	1,747.88 gals	1,488.00 gals	-15%	1,488.00 gals
Acid Inhibitor	7.00 gpt	12.24 gals	10.42 gals	-15%	10.42 gals
Gelling Agent	2.5 gpt	23.7 gals	25.00 gals	5%	25.00 gals
Breaker	0.5 ppt	4.74 lbs	5.00 lbs	5%	5.00 lbs

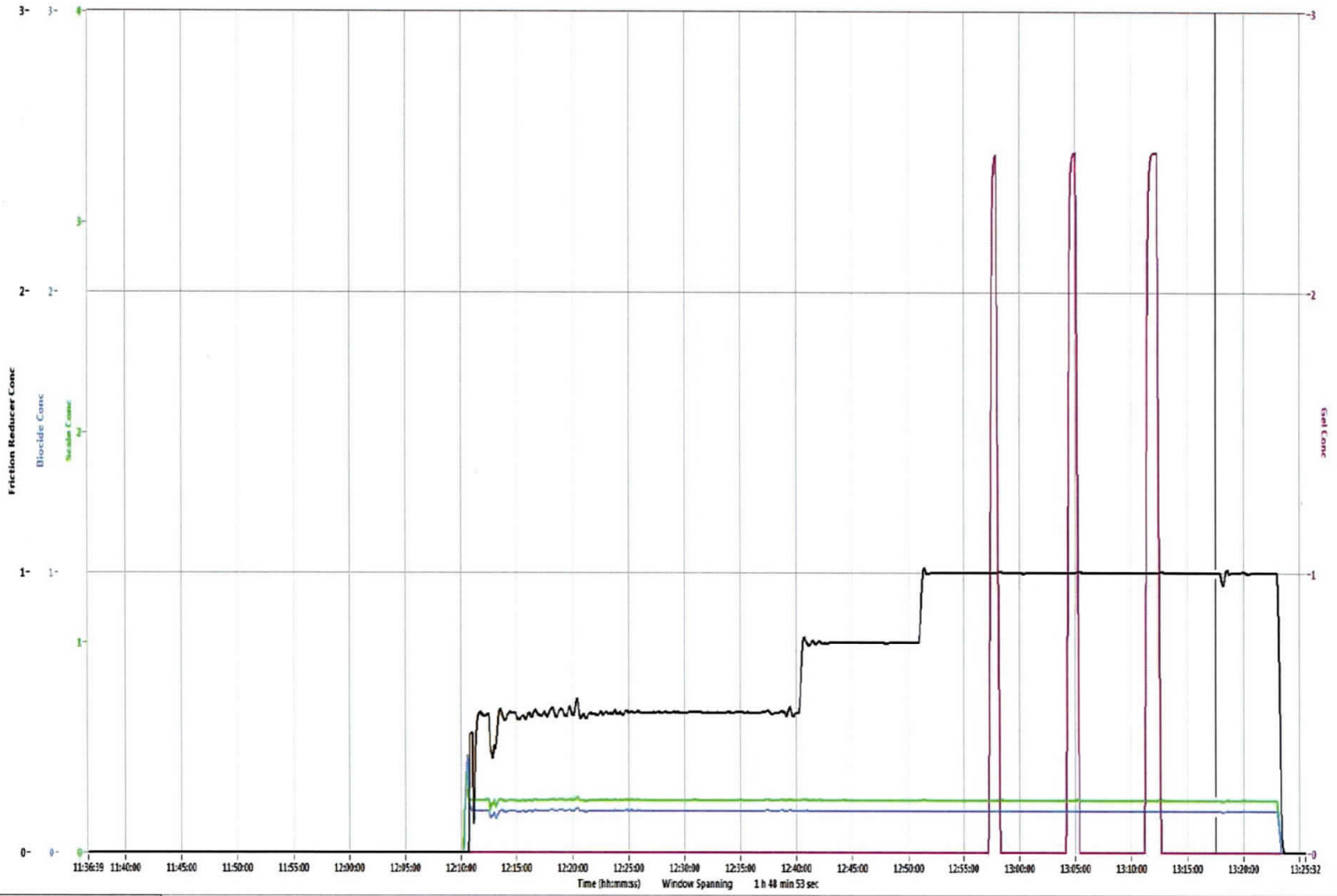
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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 13th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 13th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Richard Crawford
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	4,121 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	11,294 ft	11,415 ft	253 bbls	251 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,060 bbls	Friction Reducer :	157.00 gals		
Clean Volume :	6,021 bbls	Biocide :	38.10 gals		
Raw Acid Volume :	39 bbls	Scale Inhibitor :	60.00 gals	FR started at 0.50 gpt per Mr. Tu Spatafore	
Slickwater Volume :	5,681 bbls	28% HCl Acid :	1483.00 gals		
Gelled Volume :	288 bbls	Acid Inhibitor :	10.38 gals		
Proppant Laden :	5,614 bbls	Gelling Agent :	28.10 gals		
Slurry Volume :	6,429 bbls	Breaker :	5.00 lbs		
Wireline Volume :	269 bbls				
Total Fluid To Recover :	6,290 bbls				
Proppant Totals					
100 Mesh :	26,000 lbs				
40/70 White :	244,280 lbs				
Total :	270,280 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,813 psi	Opening Pressure	1,813 psi
Minimum	7,231 psi	Minimum	72.4 bpm	Frac ∇	1.06 psi/ft	Open ∇	0.72 psi/ft
Maximum	8,525 psi	Maximum	90.7 bpm	Pump Time	1.61 Hrs	ISIP	3,928 psi
Average	7,631 psi	Average	89.6 bpm	HHP	16,759 HHP	Closing Pressure	3,260 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,855					21:13
Open Well	FW		1,813					21:17
Start Injection	FW		1,790	13.8				21:18
Start 15 % HCL Acid	ACID	10.1	4,121	42.0	14			21:21
Pad	SW	10.2	4,443	47.9	59			21:25
Start 15 % HCL Acid	ACID	10.2	4,554	35.5	109			21:30
Pad	SW	10.4	4,630	42.5	147	16		21:34
Start 0.10 ppa 100 Mesh Sand	SW	14.8	4,975	394.4	189	1,213	16	21:39
Ball seat (Breakdown)	SW	14.7	5,813		229		198	21:41
Acid on Formation	SW	45.0	8,125		308		321	21:44
Start 0.25 ppa 100 Mesh Sand	SW	74.0	7,806	439.5	585	4,750	1,229	21:49
Start 0.50 ppa 100 Mesh Sand	SW	89.6	8,133	423.4	1,033	8,988	5,979	21:54
Start 0.75 ppa 100 Mesh Sand	SW	89.9	8,027	302.1	1,471	9,493	14,968	21:59
Start 0.75 ppa 40/70 White	SW	89.9	7,913	381.9	1,786	12,071	24,461	22:02
Start 1.00 ppa 40/70 White	SW	89.8	7,732	485.5	2,186	20,468	36,532	22:07
Start 1.25 ppa 40/70 White	SW	89.8	7,670	552.9	2,701	29,029	56,999	22:12
Increase Gel to 2.50 gpt	SW/Gel	90.1	7,629		3,237		83,257	22:18
Start 1.50 ppa 40/70 White	SW/Gel	89.9	7,605	548.4	3,292	34,469	86,028	22:19
Increase FR to 0.75 gpt	SW/Gel	90.3	7,742		3,333		88,396	22:19
Decrease Gel to 0.00 gpt	SW	89.8	7,564		3,378		91,019	22:20
Start 1.75 ppa 40/70 White	SW	89.9	7,289	552.7	3,885	40,739	120,497	22:25
Increase Gel to 2.50 gpt	SW/Gel	90.1	7,309		3,894		121,254	22:26
Decrease Gel to 0.00 gpt	SW	90.1	7,344		3,960		125,605	22:26
Start 2.00 ppa 40/70 White	SW	90.3	7,415	555.6	4,489	46,672	161,236	22:32
Increase Gel to 2.50 gpt	SW/Gel	90.2	7,493		4,501		162,152	22:32
Decrease Gel to 0.00 gpt	SW	90.1	7,462		4,608		170,289	22:34
Start 2.25 ppa 40/70 White	SW	90.1	7,519	887.1	5,100	68,526	207,908	22:39
Flush	SW	89.8	7,512	355.1	6,065		276,534	22:50
Shutdown (Final)	SW		3,914		6,429		276,534	22:54

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WV Department of Environmental Protection



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 13th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,631 psi	0.0%	-23.7%
Average Slurry Rate	85.0 bpm	85.0 bpm	89.6 bpm	0.0%	5.4%
Average Horsepower	20,833 HHP	20,833 HHP	16,759 HHP	0.0%	-19.6%
Average Perf Friction	776 psi	776 psi	862 psi	0.0%	11.1%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.06 psi/ft	0.0%	-3.3%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	104 bbls	104 bbls	-70.8%	0.0%
15% HCl Acid	71.4 bbls	77.5 bbls	77.5 bbls	8.5%	0.0%
Clean	6,013 bbls	6,021 bbls	6,021 bbls	0.1%	0.0%
Fresh Water	6,013 bbls	6,021 bbls	6,021 bbls	0.1%	0.0%
Slickwater	5,917 bbls	5,681 bbls	5,681 bbls	-4.0%	0.0%
Proppant Laden	5,333 bbls	5,614 bbls	5,614 bbls	5.3%	0.0%
Flush	251 bbls	355.1 bbls	355.1 bbls	41.6%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.53 gals	156.14 gals	157.00 gals	-38.2%	0.6%
Biocide : K-BAC 1005	37.88 gals	37.93 gals	38.1 gals	0.1%	0.4%
Scale Inhibitor : SI-20W	63.13 gals	63.22 gals	60.00 gals	0.1%	-5.1%
Acid : 28% HCl	1,515.15 gals	1,643.94 gals	1,483.00 gals	8.5%	-9.8%
Acid Inhibitor : NEFE-180	10.61 gals	11.51 gals	10.38 gals	8.5%	-9.8%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	24,461 lbs	26,000 lbs	-9.4%	6.3%
40/70 White	243,000 lbs	252,073 lbs	244,280 lbs	3.7%	-3.1%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 13th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

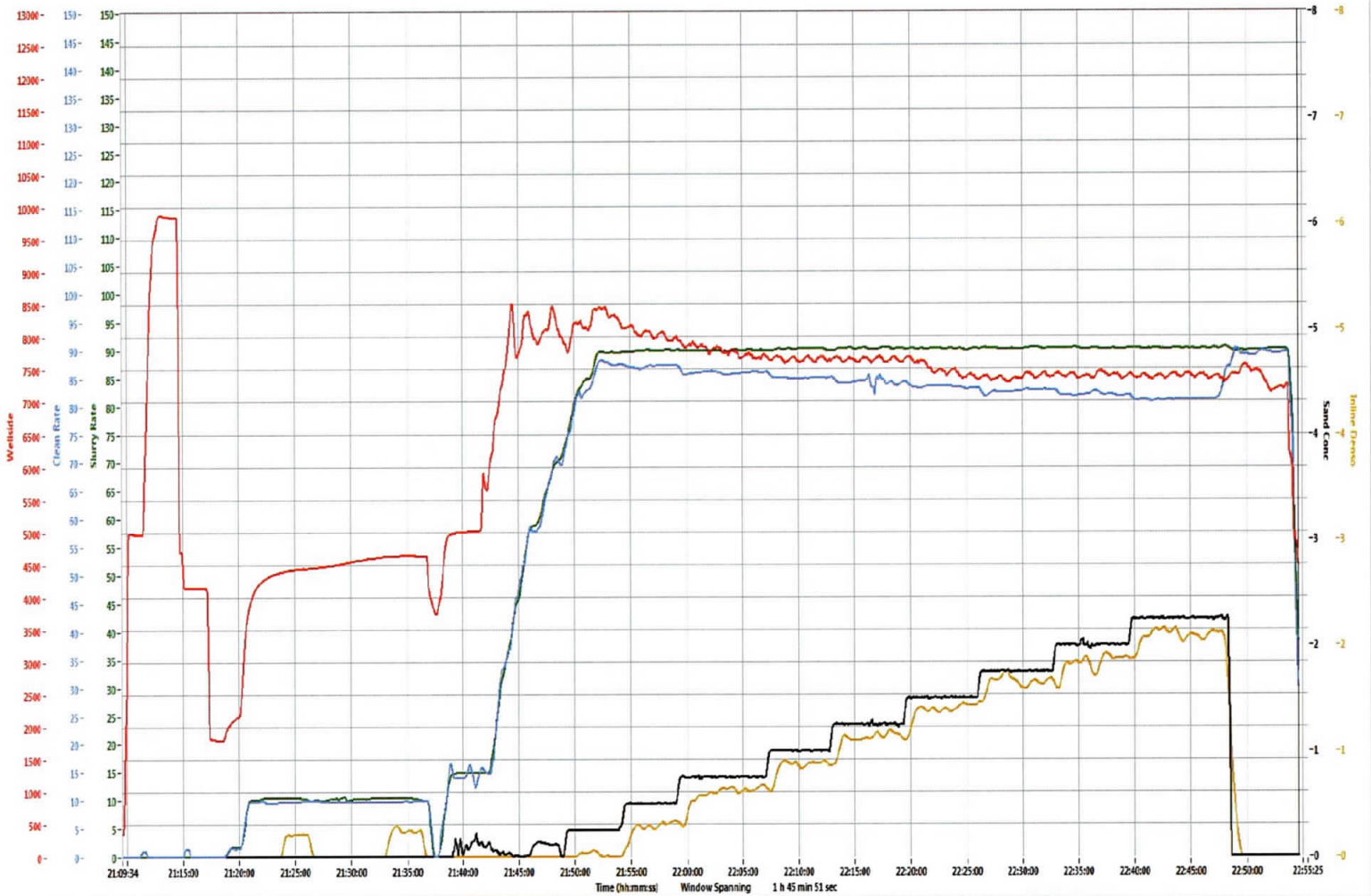
Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	156.14 gals	157.00 gals	1%	157.00 gals
Biocide	0.15 gpt	37.93 gals	38.1 gals	0%	38.1 gals
Scale Inhibitor	0.25 gpt	63.22 gals	60.00 gals	-5%	60.00 gals
Acid	1.00 gpt	1,643.94 gals	1,483.00 gals	-10%	1,483.00 gals
Acid Inhibitor	7.00 gpt	11.51 gals	10.38 gals	-10%	10.38 gals
Gelling Agent	2.5 gpt	30.23 gals	28.1 gals	-7%	28.1 gals
Breaker	0.5 ppt	6.05 lbs	5.00 lbs	-17%	5.00 lbs

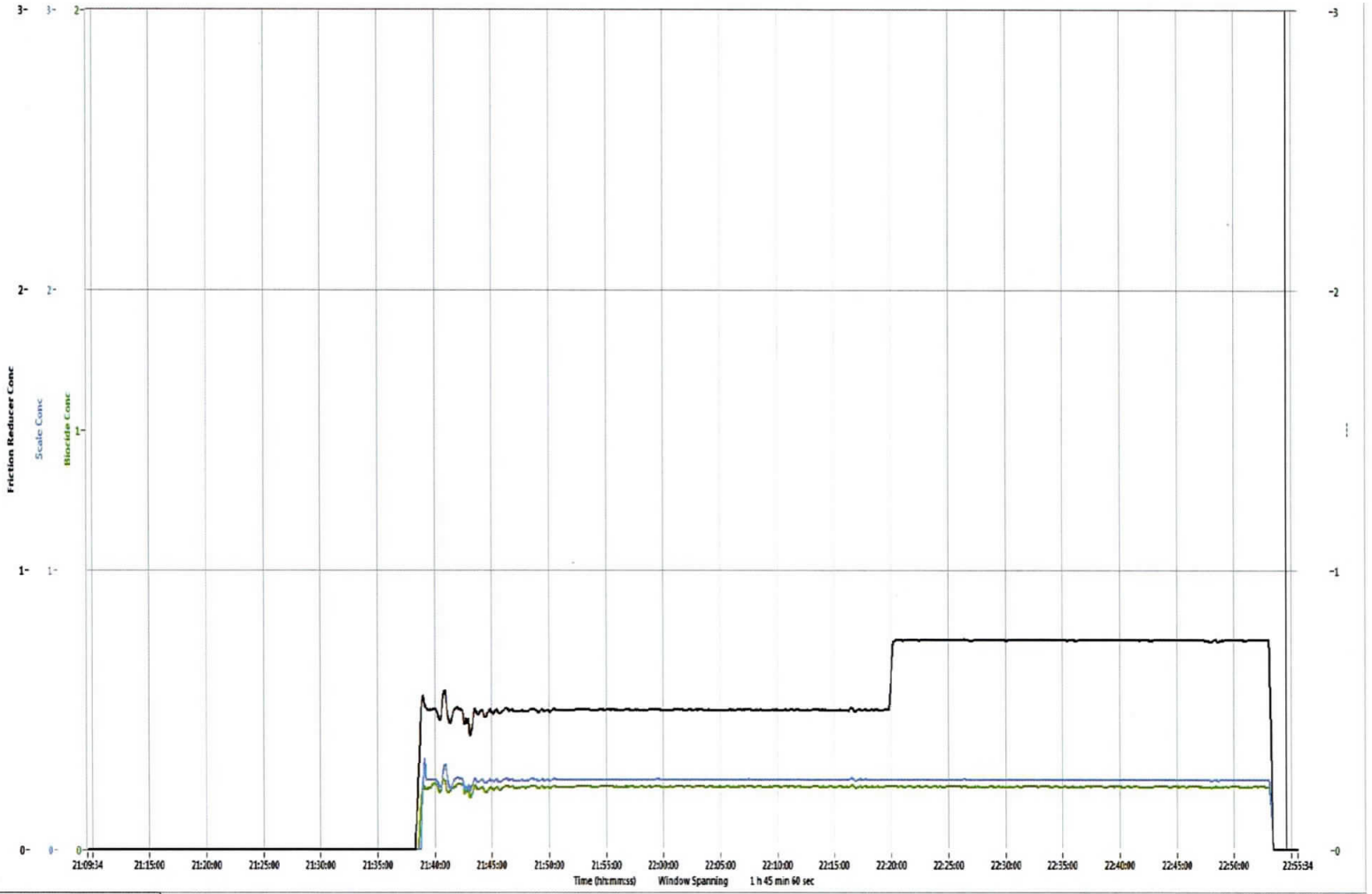
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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 14th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 14th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report											
Customer Representative			Mr. Don Barker			Stingray Representative			Brandon Beckwith		
Wellbore Information											
Perf Size	# of Perforations	Tubular Type		Tubular Grade	Length of Lateral	Length of Vertical					
0.41 in.	30	5 - 1/2" 20. #		P-110	3,971 ft	7,294 ft					
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf	Flush to Top Perf	Plug Depth					
6,236 ft	11,144 ft	11,265 ft		250 bbls	247 bbls	6,236 ft					
Job Summary											
Fluid Volumes			Chemical Volumes			Notes:					
Total Fluid Volume :	6,121 bbls	Friction Reducer :	187.00 gals	99.8% of total proppant placed.				Time:			
Clean Volume :	6,088 bbls	Biocide :	40.30 gals								
Raw Acid Volume :	33 bbls	Scale Inhibitor :	60.50 gals								
Slickwater Volume :	5,790 bbls	28% HCl Acid :	1508.00 gals	FR started at 0.50 gpt per Mr. Don Barker							
Gelled Volume :	258 bbls	Acid Inhibitor :	10.56 gals								
Proppant Laden :	5,696 bbls	Gelling Agent :	29.30 gals								
Slurry Volume :	6,419 bbls	Breaker :	5.00 lbs								
Wireline Volume :	252 bbls										
Total Fluid To Recover :	6,340 bbls										
Proppant Totals											
100 Mesh :	28,640 lbs										
40/70 White :	240,760 lbs										
Total :	269,400 lbs										
Treating Pressures		Injection Rates		Treatment Values		Shut-In Values					
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,710 psi	Opening Pressure	2,005 psi				
Minimum	7,282 psi	Minimum	46.2 bpm	Frac ∇	1.08 psi/ft	Open ∇	0.76 psi/ft				
Maximum	9,013 psi	Maximum	90.5 bpm	Pump Time	1.56 Hrs	ISIP	4,042 psi				
Average	7,740 psi	Average	88.2 bpm	HHP	16,732 HHP	Closing Pressure	3,642 psi				
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)			
Pressure Test	FW		9,919					11:12			
Open Well	FW		2,005					11:15			
Start Injection	FW		1,989	7.6				11:15			
Start 15 % HCL Acid	ACID	10.6	4,092	31.2	7			11:18			
Pad	SW	10.7	4,853	50.4	41			11:21			
Start 15 % HCL Acid	ACID	10.0	4,905	34.8	92			11:26			
Pad	SW	10.4	4,949	48.9	128	0		11:30			
Start 0.10 ppa 100 Mesh Sand	SW	15.7	5,308	371.9	176	1,553	0	11:35			
Ball seat (Breakdown)	SW	15.8	5,710		218		180	11:37			
Acid on Formation	SW	46.2	8,533		296		504	11:39			
Acid on Formation	SW	67.0	8,470		398		924	11:41			
Start 0.25 ppa 100 Mesh Sand	SW	76.7	8,707	508.9	547	5,346	1,554	11:43			
Start 0.50 ppa 100 Mesh Sand	SW	89.4	8,259	397.6	1,062	7,983	6,899	11:49			
Start 0.75 ppa 100 Mesh Sand	SW	89.6	8,051	391.5	1,467	12,316	14,882	11:54			
Start 0.75 ppa 40/70 White	SW	89.8	7,898	378.3	1,873	11,905	27,198	11:58			
Start 1.00 ppa 40/70 White	SW	89.7	7,694	542.5	2,266	22,693	39,103	12:03			
Increase FR to 0.75 gpt	SW	89.8	7,692		2,281		39,619	12:03			
Start 1.25 ppa 40/70 White	SW	90.1	7,454	537.0	2,835	28,190	61,796	12:09			
Start 1.50 ppa 40/70 White	SW	90.1	7,451	575.3	3,401	36,232	89,986	12:15			
Increase FR to 1.00 gpt	SW	90.0	7,460		3,416		90,868	12:15			
Increase Gel to 3.50 gpt	SW/Gel	90.0	7,364		3,947		122,270	12:21			
Start 1.75 ppa 40/70 White	SW/Gel	90.2	7,375	578.9	4,014	42,519	126,218	12:22			
Decrease Gel to 0.00 gpt	SW	90.4	7,390		4,034		127,572	12:22			
Increase Gel to 2.50 gpt	SW/Gel	90.2	7,423		4,600		165,891	12:28			
Start 2.00 ppa 40/70 White	SW/Gel	90.0	7,464	598.5	4,642	50,271	168,737	12:29			
Decrease Gel to 0.00 gpt	SW	89.9	7,435		4,666		170,573	12:29			
Increase Gel to 2.50 gpt	SW/Gel	89.9	7,577		5,200		211,706	12:35			
Start 2.25 ppa 40/70 White	SW/Gel	90.0	7,555	716.0	5,294	51,973	219,008	12:36			
Decrease Gel to 0.00 gpt	SW	89.9	7,572		5,326		221,688	12:36			
Flush	SW	89.7	7,650	351.6	6,059		270,980	12:45			
Shutdown (Final)	SW	0.2	3,993		6,419		279,986	12:49			

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 14th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,740 psi	0.0%	-22.6%
Average Slurry Rate	85.0 bpm	85.0 bpm	88.2 bpm	0.0%	3.8%
Average Horsepower	20,833 HHP	20,833 HHP	16,732 HHP	0.0%	-19.7%
Average Perf Friction	776 psi	776 psi	835 psi	0.0%	7.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.08 psi/ft	0.0%	-1.6%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	107 bbls	107 bbls	-70.1%	0.0%
15% HCl Acid	71.4 bbls	66.0 bbls	66.0 bbls	-7.6%	0.0%
Clean	6,009 bbls	6,088 bbls	6,088 bbls	1.3%	0.0%
Fresh Water	6,009 bbls	6,088 bbls	6,088 bbls	1.3%	0.0%
Slickwater	5,914 bbls	5,790 bbls	5,790 bbls	-2.1%	0.0%
Proppant Laden	5,333 bbls	5,696 bbls	5,696 bbls	6.8%	0.0%
Flush	247 bbls	351.6 bbls	351.6 bbls	42.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.39 gals	197.98 gals	187.00 gals	-21.6%	-5.5%
Biocide : K-BAC 1005	37.86 gals	38.35 gals	40.3 gals	1.3%	5.1%
Scale Inhibitor : SI-20W	63.10 gals	63.92 gals	60.5 gals	1.3%	-5.4%
Acid : 28% HCl	1,515.15 gals	1,400.00 gals	1,508.00 gals	-7.6%	7.7%
Acid Inhibitor : NEFE-180	10.61 gals	9.8 gals	10.56 gals	-7.6%	7.7%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,198 lbs	28,640 lbs	0.7%	5.3%
40/70 White	243,000 lbs	243,782 lbs	240,760 lbs	0.3%	-1.2%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 14th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	197.98 gals	187.00 gals	-6%	187.00 gals
Biocide	0.15 gpt	38.35 gals	40.3 gals	5%	40.3 gals
Scale Inhibitor	0.25 gpt	63.92 gals	60.5 gals	-5%	60.5 gals
Acid	1.00 gpt	1,400.00 gals	1,508.00 gals	8%	1,508.00 gals
Acid Inhibitor	7.00 gpt	9.8 gals	10.56 gals	8%	10.56 gals
Gelling Agent	2.5 gpt	27.06 gals	29.3 gals	8%	29.3 gals
Breaker	0.5 ppt	5.41 lbs	5.00 lbs	-8%	5.00 lbs

Fluid Testing- Mixed Water Analysis

pH	7.3	Chlorides	
TDS	7250 ppm	Temperature	61.3 deg F
TSS		Specific Gravity	1.005

Sand Sieve Analysis :

100 Mesh Mesh Screen Sizes	Weight Retained	% Retained	
40	<= 0.1%	7.60	5.15%
50	>= 90%	100.00	67.75%
60		25.00	16.94%
70		10.00	6.78%
100		5.00	3.39%
140		0.00	0.00%
Pan	<= 1%	0.00	0.00%
Total Sample Weight:	148 grams	100.0%	

Bar chart data for 100 Mesh Sand Sieve Analysis:

Screen Size	% Retained
40	5.15%
50	67.75%
60	16.94%
70	6.78%
100	3.39%
140	0.00%
Pan	0.00%

Sand Sieve Analysis :

40/70 Mesh Screen Sizes	Weight Retained	% Retained	
30	<= 0.1%	0.00	0.00%
40	>= 90%	0.00	0.00%
50		2.00	0.91%
60		90.00	41.10%
70		107.00	48.86%
100	<= 1%	17.00	7.76%
Pan		3.00	1.37%
Total Sample Weight:	219 grams	100.0%	

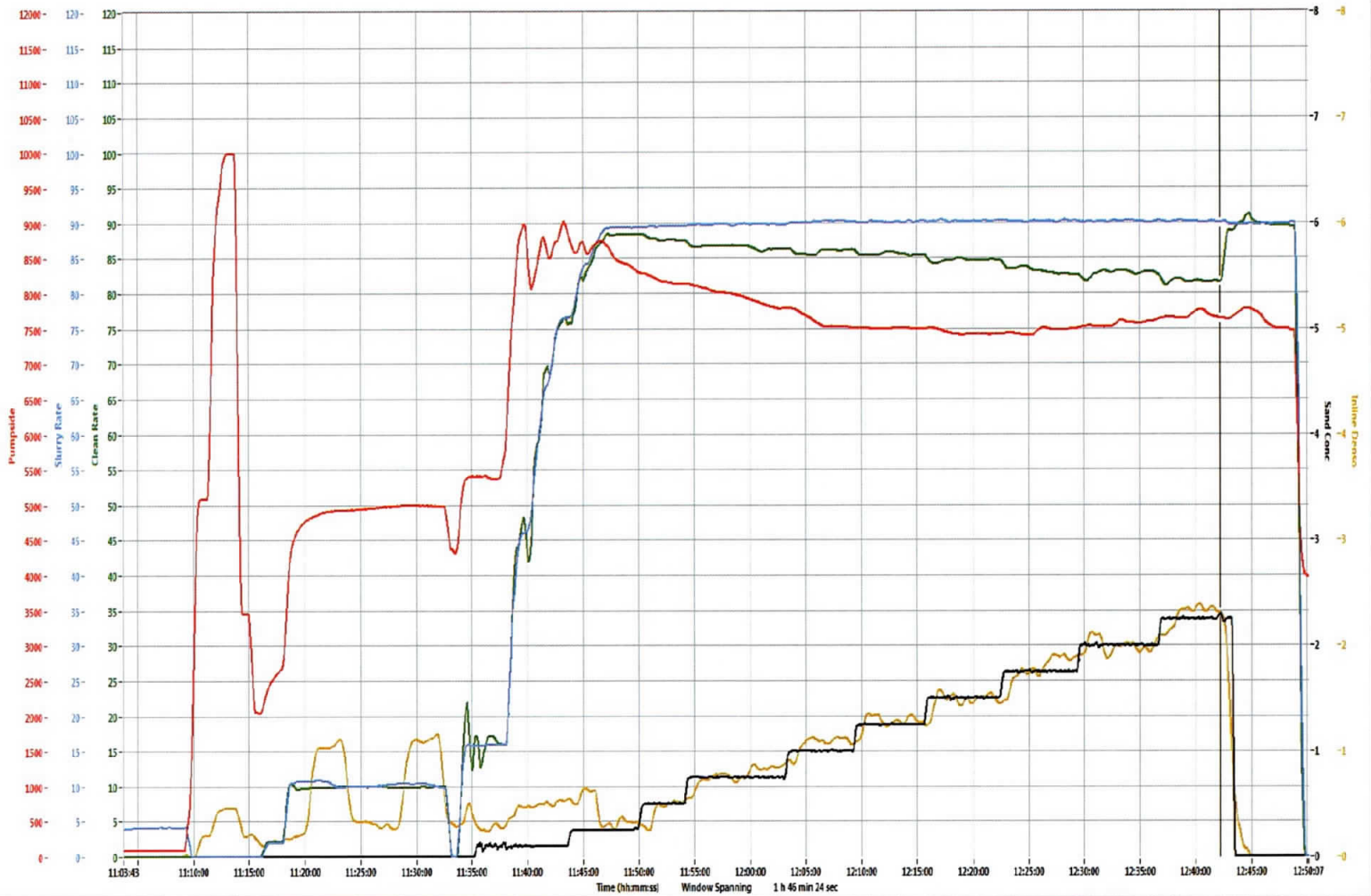
Bar chart data for 40/70 Mesh Sand Sieve Analysis:

Screen Size	% Retained
30	0.00%
40	0.00%
50	0.91%
60	41.10%
70	48.86%
100	7.76%
Pan	1.37%

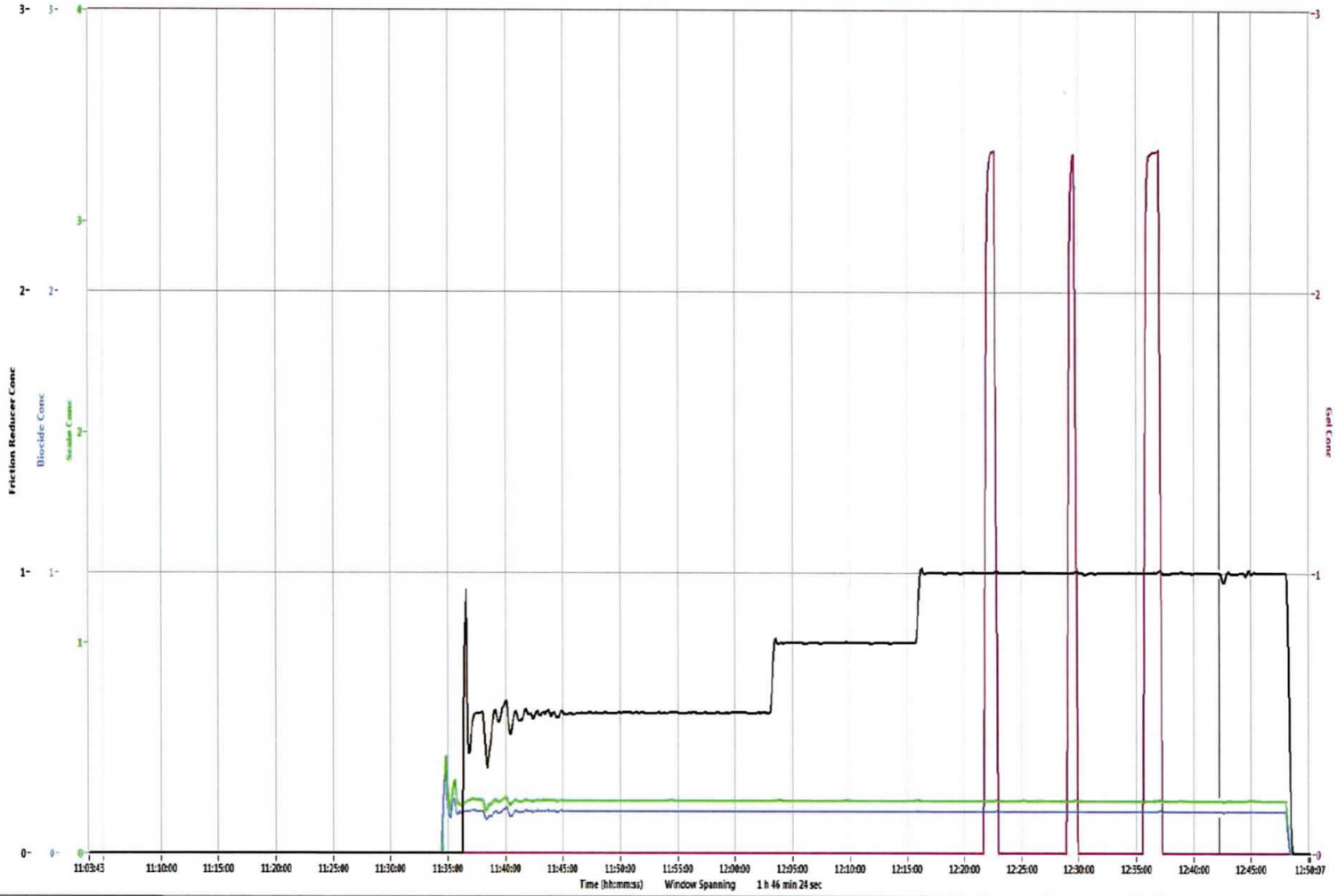
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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 15th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 15th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Richard Crawford
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	3,821 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,994 ft	11,115 ft	247 bbls	244 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	7,692 bbls	Friction Reducer :	169.00 gals		
Clean Volume :	7,626 bbls	Biocide :	50.30 gals		
Raw Acid Volume :	66 bbls	Scale Inhibitor :	75.00 gals		
Slickwater Volume :	1,050 bbls	28% HCl Acid :	2502.00 gals		
Gelled Volume :	6,501 bbls	Acid Inhibitor :	17.51 gals		
Proppant Laden :	6,661 bbls	Gelling Agent :	651.30 gals		
Slurry Volume :	8,079 bbls	Breaker :	110.00 lbs		
Wireline Volume :	263 bbls				
Total Fluid To Recover :	7,889 bbls				
Proppant Totals					
100 Mesh :	27,000 lbs				
40/70 White :	239,420 lbs				
Total :	266,420 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,760 psi	Opening Pressure	1,979 psi
Minimum	7,687 psi	Minimum	59.6 bpm	Frac ∇	1.12 psi/ft	Open ∇	0.75 psi/ft
Maximum	8,709 psi	Maximum	83.8 bpm	Pump Time	2.71 Hrs	ISIP	4,290 psi
Average	8,148 psi	Average	77.6 bpm	HHP	15,498 HHP	Closing Pressure	3,770 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,925					1:56
Open Well	FW		1,979					1:59
Start Injection	FW		1,939	10.0				2:00
Start 15 % HCL Acid	ACID	10.1	4,577	37.1	10			2:03
Pad	SW	10.5	4,955	52.4	49			2:07
Start 15 % HCL Acid	ACID	10.3	4,981	38.8	104			2:12
Pad	SW	10.6	5,011	128.8	146			2:16
Ball seat (Breakdown)	SW	14.8	5,760		214			2:23
Start 0.10 ppa 100 Mesh Sand	SW	30.1	7,253	467.8	275	2,140	48	2:25
Acid on Formation	SW	36.0	7,225		298		238	2:26
Increase FR to 0.75 gpt	SW	56.1	9,020		587		1,486	2:31
Increase Gel to 2.50 gpt	SW/Gel	56.1	8,856		635		1,704	2:32
Sweep	SW/Gel	37.8	8,414	234.9	748		2,180	2:34
Increase FR to 1.00 gpt	SW/Gel	37.2	8,489		893		2,189	2:38
Start 0.10 ppa 100 Mesh Sand	SW/Gel	37.2	8,570	138.6	985	645	2,218	2:40
Sweep	SW/Gel	34.7	8,867	305.1	1,126		2,863	2:44
Decrease Gel to 0.00 gpt	SW	34.7	8,888		1,147		2,863	2:45
Shutdown	SW		5,063		1,438		2,863	2:54
Pad	SW		3,752	10.4	1,438		2,863	3:19
Start 15 % HCL Acid	ACID	10.3	7,744	24.2	1,449		2,863	3:21
Pad	SW	10.6	7,654	49.4	1,475		2,863	3:24
Start 15 % HCL Acid	ACID	10.0	7,559	30.6	1,526		2,863	3:29
Pad	SW	10.6	7,523	367.3	1,558		2,863	3:32
Increase FR to 0.50 gpt	SW	6.8	6,762		1,586		2,863	3:36
Increase Gel to 2.50 gpt	SW/Gel	10.9	7,512		1,594		2,863	3:36
Acid on Formation	SW/Gel	30.7	7,953		1,745		2,863	3:42
Acid on Formation	SW/Gel	45.3	7,922		1,821		2,863	3:44
Start 0.10 ppa 100 Mesh Sand	SW/Gel	54.2	8,073	434.2	1,926	1,711	2,883	3:46
Start 0.25 ppa 100 Mesh Sand	SW/Gel	59.8	8,468	504.3	2,366	5,331	4,594	3:54
Start 0.50 ppa 100 Mesh Sand	SW/Gel	66.6	8,408	450.4	2,881	9,505	9,926	4:02
Start 0.75 ppa 100 Mesh Sand	SW/Gel	70.6	8,474	248.1	3,345	7,778	19,431	4:09
Start 0.75 ppa 40/70 White	SW/Gel	73.1	8,455	458.6	3,603	14,491	27,208	4:13
Start 1.00 ppa 40/70 White	SW/Gel	77.5	8,302	487.7	4,081	20,450	41,699	4:19
Start 1.25 ppa 40/70 White	SW/Gel	82.9	8,304	553.1	4,598	29,092	62,150	4:25
Start 1.50 ppa 40/70 White	SW/Gel	83.1	8,176	543.0	5,191	34,237	91,747	4:33
Start 1.75 ppa 40/70 White	SW/Gel	83.3	8,006	563.9	5,782	41,465	137,742	4:40
Start 2.00 ppa 40/70 White	SW/Gel	83.5	7,970	575.5	6,404	48,378	186,943	4:47

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 15th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Start 2.25 ppa 40/70 White	SW/Gel	83.4	7,833	627.6	7,043	47,870	215,321	4:55
Flush	SW/Gel	82.7	8,074	350.1	7,723		263,191	5:03
Decrease Gel to 0.00 gpt	SW	82.9	7,798		7,942		263,191	5:06
Shutdown (Final)	SW		4,238		8,079		263,191	5:08



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 15th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	8,148 psi	0.0%	-18.5%
Average Slurry Rate	85.0 bpm	85.0 bpm	77.6 bpm	0.0%	-8.7%
Average Horsepower	20,833 HHP	20,833 HHP	15,498 HHP	0.0%	-25.6%
Average Perf Friction	776 psi	776 psi	647 psi	0.0%	-16.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.12 psi/ft	0.0%	2.0%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	357 bbls	1,158 bbls	1,158 bbls	224.3%	0.0%
15% HCl Acid	71.4 bbls	130.7 bbls	130.7 bbls	83.0%	0.0%
Clean	6,006 bbls	7,626 bbls	7,626 bbls	27.0%	0.0%
Fresh Water	6,006 bbls	7,626 bbls	7,626 bbls	27.0%	0.0%
Slickwater	5,911 bbls	1,050 bbls	1,050 bbls	-82.2%	0.0%
Proppant Laden	5,333 bbls	6,661 bbls	6,661 bbls	24.9%	0.0%
Flush	244 bbls	350.1 bbls	350.1 bbls	43.4%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	252.25 gals	174.94 gals	169.00 gals	-30.6%	-3.4%
Biocide : K-BAC 1005	37.84 gals	48.04 gals	50.3 gals	27.0%	4.7%
Scale Inhibitor : SI-20W	63.06 gals	80.07 gals	75.00 gals	27.0%	-6.3%
Acid : 28% HCl	1,515.15 gals	2,772.42 gals	2,502.00 gals	83.0%	-9.8%
Acid Inhibitor : NEFE-180	10.61 gals	19.41 gals	17.51 gals	83.0%	-9.8%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,110 lbs	27,000 lbs	0.4%	-0.4%
40/70 White	243,000 lbs	235,983 lbs	239,420 lbs	-2.9%	1.5%

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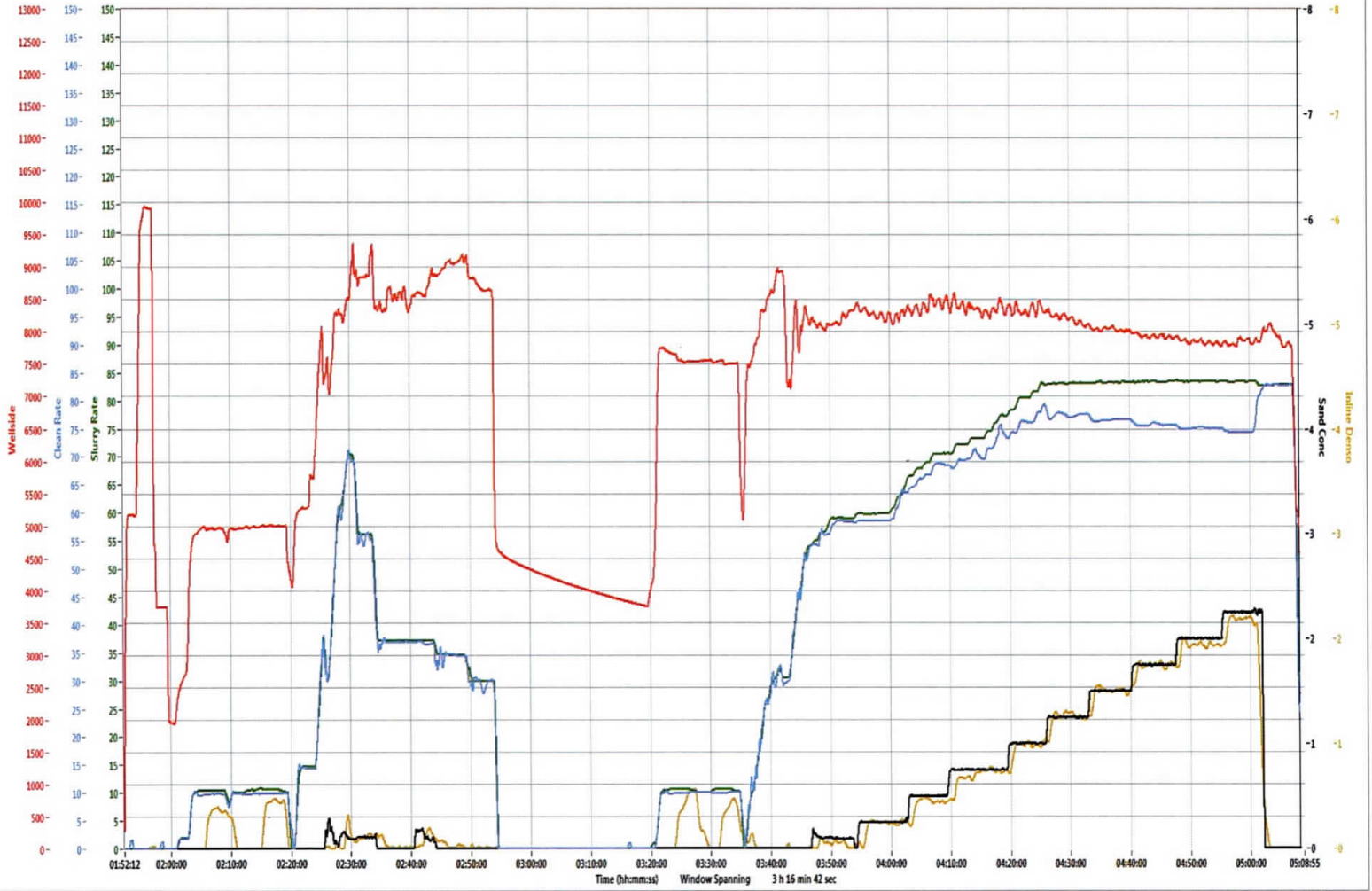
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
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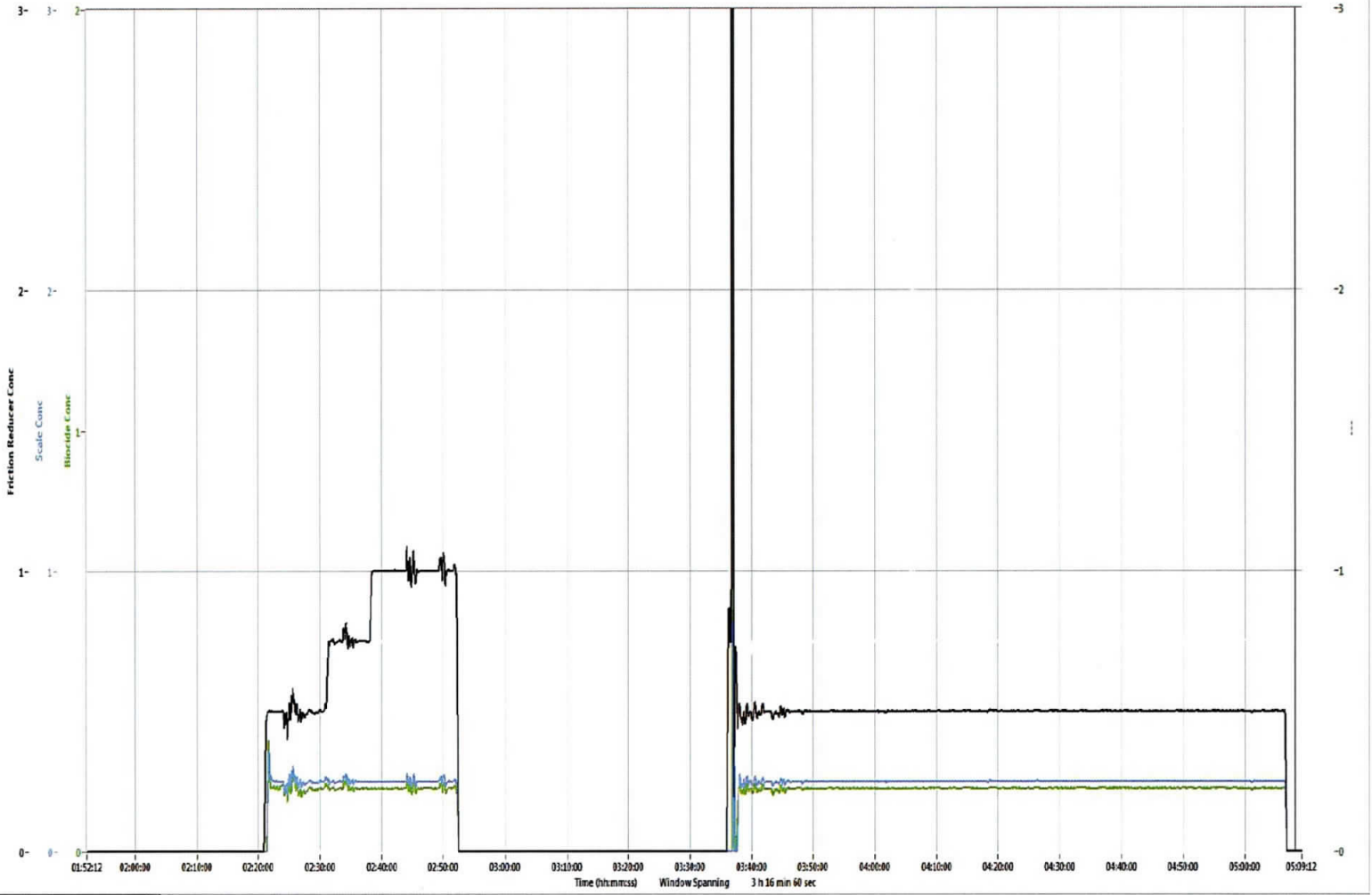
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	174.94 gals	169.00 gals	-3%	169.00 gals
Biocide	0.15 gpt	48.04 gals	50.3 gals	5%	50.3 gals
Scale Inhibitor	0.25 gpt	80.07 gals	75.00 gals	-6%	75.00 gals
Acid	1.00 gpt	2,772.42 gals	2,502.00 gals	-10%	2,502.00 gals
Acid Inhibitor	7.00 gpt	19.41 gals	17.51 gals	-10%	17.51 gals
Gelling Agent	2.5 gpt	682.63 gals	651.3 gals	-5%	651.3 gals
Breaker	0.5 ppt	136.53 lbs	110.00 lbs	-19%	110.00 lbs



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Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 16th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

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Office of Oil and Gas

AUG 20 2018

WV Department of
Environmental Protection



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 16th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Joseph Bishop
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2 " 20. #	P-110	3,671 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,844 ft	10,965 ft	243 bbbls	241 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,245 bbbls	Friction Reducer :	207.00 gals		
Clean Volume :	6,209 bbbls	Biocide :	41.30 gals		
Raw Acid Volume :	36 bbbls	Scale Inhibitor :	64.00 gals		
Slickwater Volume :	4,727 bbbls	28% HCl Acid :	1500.00 gals		
Gelled Volume :	1,420 bbbls	Acid Inhibitor :	10.50 gals		
Proppant Laden :	5,805 bbbls	Gelling Agent :	148.00 gals		
Slurry Volume :	6,544 bbbls	Breaker :	29.00 lbs		
Wireline Volume :	252 bbbls				
Total Fluid To Recover :	6,461 bbbls				
Proppant Totals					
100 Mesh :	27,840 lbs				
40/70 White :	236,400 lbs				
Total :	264,240 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,620 psi	Opening Pressure	2,225 psi
Minimum	7,269 psi	Minimum	85.6 bpm	Frac ∇	1.10 psi/ft	Open ∇	0.79 psi/ft
Maximum	7,683 psi	Maximum	86.8 bpm	Pump Time	1.72 Hrs	ISIP	4,164 psi
Average	7,418 psi	Average	86.3 bpm	HHP	15,690 HHP	Closing Pressure	3,764 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,992					9:14
Open Well	FW		2,225					9:16
Start Injection	FW		2,213	6.8				9:17
Start 12 % HCl Acid	ACID	10.2	5,027	27.1	6			9:19
Pad	SW	10.2	5,171	26.3	34			9:22
Start 12 % HCl Acid	ACID	9.7	5,124	33.6	60			9:24
Pad	SW	10.2	5,138	26.0	95			9:28
Start 12 % HCl Acid	ACID	9.7	5,134	30.1	121			9:30
Pad	SW	10.2	5,173	334.7	151			9:33
Increase Gel to 2.50 gpt	SW/Gel	13.3	5,516		174			9:39
Ball seat (Breakdown)	SW/Gel	15.1	5,620		216			9:42
Acid on Formation	SW/Gel	45.3	7,757		294			9:44
Start 0.10 ppa 100 Mesh Sand	SW/Gel	82.6	8,416	357.0	485	1,508	6	9:47
Start 0.25 ppa 100 Mesh Sand	SW/Gel	68.8	8,412	428.4	847	4,539	1,514	9:52
Decrease Gel to 0.00 gpt.	SW	79.8	8,479		1,273		5,935	9:58
Start 0.50 ppa 100 Mesh Sand	SW	79.8	8,509	418.4	1,280	8,759	6,053	9:58
Start 0.75 ppa 100 Mesh Sand	SW	85.4	8,416	383.1	1,707	11,670	14,811	10:03
Start 0.75 ppa 40/70 White	SW	85.5	8,089	386.4	2,103	12,149	26,482	10:08
Increase FR to 0.75 gpt	SW	85.4	8,059		2,143		27,684	10:08
Start 1.00 ppa 40/70 White	SW	85.9	7,644	512.1	2,504	21,509	38,630	10:12
Increase FR to 1.00 gpt	SW	86.1	7,651		2,662		44,837	10:14
Start 1.25 ppa 40/70 White	SW	86.1	7,457	571.7	3,042	30,043	60,139	10:19
Increase Gel to 2.50 gpt	SW/Gel	86.1	7,436		3,417		78,767	10:23
Decrease Gel to 0.00 gpt	SW	86.0	7,475		3,534		84,637	10:24
Start 1.50 ppa 40/70 White	SW	86.3	7,480	569.5	3,645	35,911	90,182	10:26
Increase Gel to 2.50 gpt	SW/Gel	86.3	7,448		4,198		122,915	10:32
Start 1.75 ppa 40/70 White	SW/Gel	86.4	7,502	568.4	4,251	41,815	126,093	10:33
Decrease Gel to 0.00 gpt	SW	86.3	7,483		4,260		126,681	10:33
Increase Gel to 2.50 gpt	SW/Gel	86.1	7,308		4,802		163,546	10:39
Start 2.00 ppa 40/70 White	SW/Gel	86.2	7,421	573.4	4,867	216,068	167,908	10:40
Decrease Gel to 0.00 gpt	SW	86.0	7,405		4,898		170,340	10:40
Increase Gel to 2.50 gpt	SW/Gel	86.2	7,368		5,431		211,172	10:46
Start 2.25 ppa 40/70 White	SW/Gel	86.6	7,399	649.6	5,496	49,789	216,068	10:47
Decrease Gel to 0.00 gpt	SW	86.3	7,388		5,510		217,292	10:47
Flush	SW	85.8	7,620	342.1	6,194		265,857	10:55
Shutdown (Final)	SW	0.3	4,114		6,544		265,857	11:00



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 16th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,418 psi	0.0%	-25.8%
Average Slurry Rate	85.0 bpm	85.0 bpm	86.3 bpm	0.0%	1.5%
Average Horsepower	20,833 HHP	20,833 HHP	15,690 HHP	0.0%	-24.7%
Average Perf Friction	776 psi	776 psi	800 psi	0.0%	3.1%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.10 psi/ft	0.0%	0.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	224 bbls	394 bbls	394 bbls	76.0%	0.0%
12% HCl Acid	175.5 bbls	90.8 bbls	90.8 bbls	-48.3%	0.0%
Clean	5,973 bbls	6,209 bbls	6,209 bbls	3.9%	0.0%
Fresh Water	5,973 bbls	6,209 bbls	6,209 bbls	3.9%	0.0%
Slickwater	4,788 bbls	4,727 bbls	4,727 bbls	-1.3%	0.0%
Linear Gel	986 bbls	1,420 bbls	1,420 bbls	44.1%	0.0%
Proppant Laden	5,333 bbls	5,805 bbls	5,805 bbls	8.8%	0.0%
Flush	241 bbls	342.1 bbls	342.1 bbls	42.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer : PS-957	250.88 gals	212.03 gals	207.00 gals	-15.5%	-2.4%
Biocide : K-BAC 1005	37.63 gals	39.11 gals	41.3 gals	3.9%	5.6%
Scale Inhibitor : SI-20W	62.72 gals	65.19 gals	64.00 gals	3.9%	-1.8%
Acid : 28% HCl	1,501.99 gals	1,519.36 gals	1,500.00 gals	1.2%	-1.3%
Acid Inhibitor : NEFE-180	10.51 gals	10.64 gals	10.5 gals	1.2%	-1.3%
Gelling Agent : Plexgel 907L-EB	103.50 gals	149.14 gals	148.00 gals	44.1%	-0.8%
Breaker : Sodium Persulfate	20.70 lbs	29.83 lbs	29.00 lbs	44.1%	-2.8%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,475 lbs	27,840 lbs	-1.9%	5.2%
40/70 White	243,000 lbs	407,283 lbs	236,400 lbs	67.6%	-42.0%



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Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	212.03 gals	207.00 gals	-2%	207.00 gals
Biocide	0.15 gpt	39.11 gals	41.3 gals	6%	41.3 gals
Scale Inhibitor	0.25 gpt	65.19 gals	64.00 gals	-2%	64.00 gals
Acid	1.00 gpt	1,519.36 gals	1,500.00 gals	-1%	1,500.00 gals
Acid Inhibitor	7.00 gpt	10.64 gals	10.5 gals	-1%	10.5 gals
Gelling Agent	2.5 gpt	149.14 gals	148.00 gals	-1%	148.00 gals
Breaker	0.5 ppt	29.83 lbs	29.00 lbs	-3%	29.00 lbs

Fluid Testing- Mixed Water Analysis

pH	7.8	Chlorides	
TDS	1250 ppm	Temperature	55 deg F
TSS		Specific Gravity	1.005

Sand Sieve Analysis :

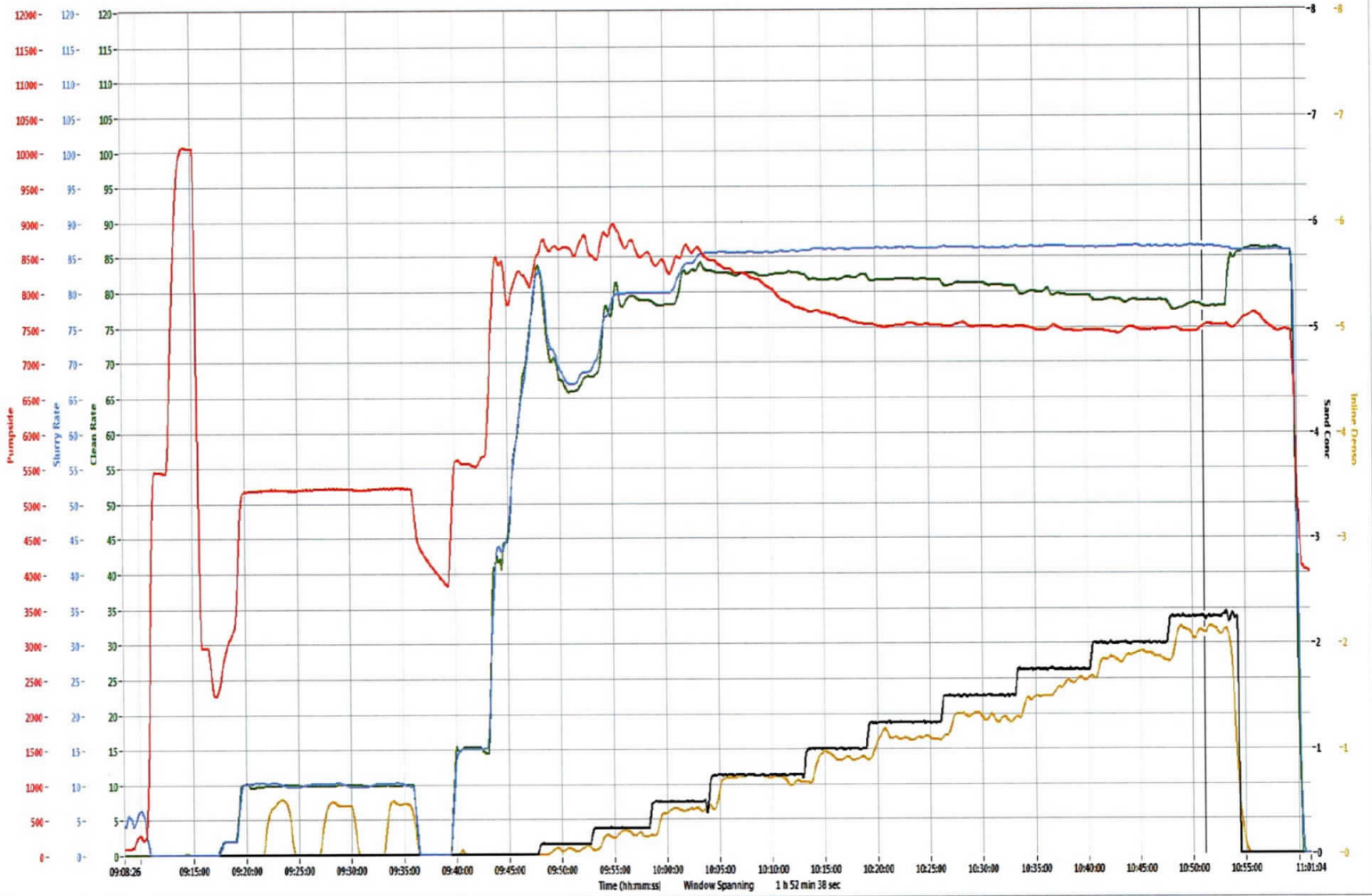
100 Mesh Mesh Screen Sizes		Weight Retained	% Retained
40	<= 0.1%	0.00	0.00%
50	>= 90%	5.00	3.42%
60		7.00	4.79%
70		15.00	10.27%
100		78.00	53.42%
140		35.00	23.97%
Pan	<= 1%	6.00	4.11%
Total Sample Weight:		146 grams	100.0%

Screen Size	Weight Retained (grams)	% Retained
40	0.00	0.00%
50	5.00	3.42%
60	7.00	4.79%
70	15.00	10.27%
100	78.00	53.42%
140	35.00	23.97%
Pan	6.00	4.11%
Total	146	100.0%

Sand Sieve Analysis :

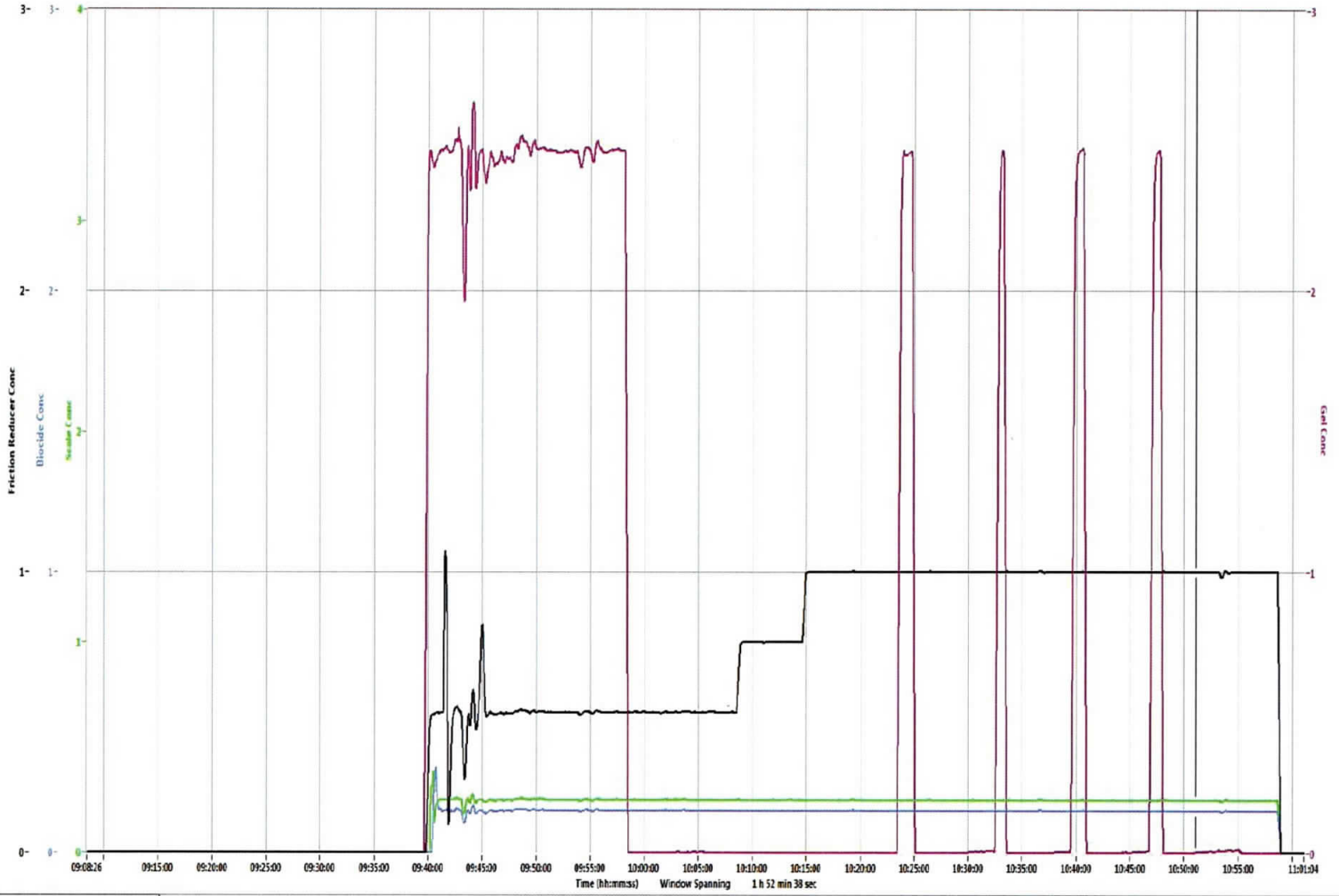
40/70 Mesh Screen Sizes		Weight Retained	% Retained
30	<= 0.1%	0.00	0.00%
40	>= 90%	6.00	4.03%
50		98.00	65.77%
60		30.00	20.13%
70		11.00	7.38%
100	<= 1%	4.00	2.68%
Pan		0.00	0.00%
Total Sample Weight:		149 grams	100.0%

Screen Size	Weight Retained (grams)	% Retained
30	0.00	0.00%
40	6.00	4.03%
50	98.00	65.77%
60	30.00	20.13%
70	11.00	7.38%
100	4.00	2.68%
Pan	0.00	0.00%
Total	149	100.0%



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Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	3,521 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,694 ft	10,815 ft	240 bbbls	237 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,287 bbbls	Friction Reducer :	128.00 gals		
Clean Volume :	6,263 bbbls	Biocide :	37.50 gals		
Raw Acid Volume :	24 bbbls	Scale Inhibitor :	67.00 gals		
Slickwater Volume :	5,074 bbbls	28% HCl Acid :	1033.00 gals		
Gelled Volume :	1,119 bbbls	Acid Inhibitor :	7.23 gals		
Proppant Laden :	5,825 bbbls	Gelling Agent :	119.30 gals		
Slurry Volume :	6,628 bbbls	Breaker :	20.00 lbs		
Wireline Volume :	261 bbbls				
Total Fluid To Recover :	6,524 bbbls				
Proppant Totals					
100 Mesh :	27,080 lbs				
40/70 White :	242,240 lbs				
Total :	269,320 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,745 psi	Opening Pressure	1,877 psi
Minimum	6,864 psi	Minimum	64.8 bpm	Frac ∇	1.03 psi/ft	Open ∇	0.73 psi/ft
Maximum	8,199 psi	Maximum	87.2 bpm	Pump Time	1.64 Hrs	ISIP	3,728 psi
Average	7,470 psi	Average	84.4 bpm	HHP	15,453 HHP	Closing Pressure	3,243 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,844					20:30
Open Well	FW		1,877					20:39
Start Injection	FW	0.2	1,927	33.0				20:40
Start 12% HCL Acid	ACID	15.2	5,308	28.0	35			20:45
Pad	SW	15.9	5,335	28.4	64			20:47
Start 12% HCL Acid	ACID	15.8	5,304	18.6	93			20:49
Pad	SW	15.8	5,332	26.1	113			20:50
Start 12% HCL Acid	ACID	14.9	5,327	14.2	139			20:52
Pad	SW	15.8	5,321	355.3	154			20:53
Increase Gel to 2.50 gpt	SW/Gel	15.2	5,286		197			20:57
Ball seat (Breakdown)	SW/Gel	15.1	5,745		218			20:59
Acid on Formation	SW/Gel	38.2	7,534		319			21:02
Start 0.10 ppa 100 Mesh Sand	SW/Gel	64.1	7,265	370.7	506	1,687	9	21:06
Start 0.25 ppa 100 Mesh Sand	SW/Gel	78.1	8,163	447.6	881	4,802	1,695	21:11
Decrease Gel to 0.00 gpt	SW	84.7	7,840		1,325		6,300	21:16
Start 0.50 ppa 100 Mesh Sand	SW	84.8	7,824	466.4	1,335	9,790	6,497	21:16
Start 0.75 ppa 100 Mesh Sand	SW	84.7	7,747	294.7	1,812	9,295	16,287	21:22
Start 0.75 ppa 40/70 White	SW	84.9	7,514	381.9	2,118	12,080	25,582	21:25
Start 1.00 ppa 40/70 White	SW	85.1	7,344	513.6	2,516	21,567	37,662	21:30
Start 1.25 ppa 40/70 White	SW	85.2	7,335	587.7	3,059	30,841	59,229	21:36
Start 1.50 ppa 40/70 White	SW	85.9	7,314	572.3	3,687	36,080	90,070	21:44
Start 1.75 ppa 40/70 White	SW	85.9	7,370	581.1	4,305	42,761	126,150	21:51
Start 2.00 ppa 40/70 White	SW	86.2	7,409	578.9	4,943	48,730	168,911	21:58
Start 2.25 ppa 40/70 White	SW	86.1	7,454	619.9	5,582	48,184	217,641	22:06
Flush	SW	83.4	7,400	368.4	6,252		265,825	22:14
Shutdown (Final)	SW		3,710		6,628		265,825	22:19



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Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,470 psi	0.0%	-25.3%
Average Slurry Rate	85.0 bpm	85.0 bpm	84.4 bpm	0.0%	-0.7%
Average Horsepower	20,833 HHP	20,833 HHP	15,453 HHP	0.0%	-25.8%
Average Perf Friction	776 psi	776 psi	765 psi	0.0%	-1.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.03 psi/ft	0.0%	-6.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	381 bbls	443 bbls	443 bbls	16.3%	0.0%
12% HCl Acid	139.7 bbls	60.8 bbls	60.8 bbls	-56.5%	0.0%
Clean	6,091 bbls	6,263 bbls	6,263 bbls	2.8%	0.0%
Fresh Water	6,091 bbls	6,263 bbls	6,263 bbls	2.8%	0.0%
Slickwater	4,785 bbls	5,074 bbls	5,074 bbls	6.0%	0.0%
Linear Gel	1,143 bbls	1,119 bbls	1,119 bbls	-2.1%	0.0%
Proppant Laden	5,333 bbls	5,825 bbls	5,825 bbls	9.2%	0.0%
Flush	237 bbls	368.4 bbls	368.4 bbls	55.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	255.83 gals	130.74 gals	128.00 gals	-48.9%	-2.1%
Biocide	38.37 gals	39.45 gals	37.5 gals	2.8%	-4.9%
Scale Inhibitor	63.96 gals	65.76 gals	67.00 gals	2.8%	1.9%
Acid	1,195.22 gals	1,017.37 gals	1,033.00 gals	-14.9%	1.5%
Acid Inhibitor	8.37 gals	7.12 gals	7.23 gals	-14.9%	1.5%
Gelling Agent	119.99 gals	117.47 gals	119.3 gals	-2.1%	1.6%
Breaker	24.00 lbs	23.49 lbs	20.00 lbs	-2.1%	-14.9%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	25,573 lbs	27,080 lbs	-5.3%	5.9%
40/70 White	243,000 lbs	240,243 lbs	242,240 lbs	-1.1%	0.8%

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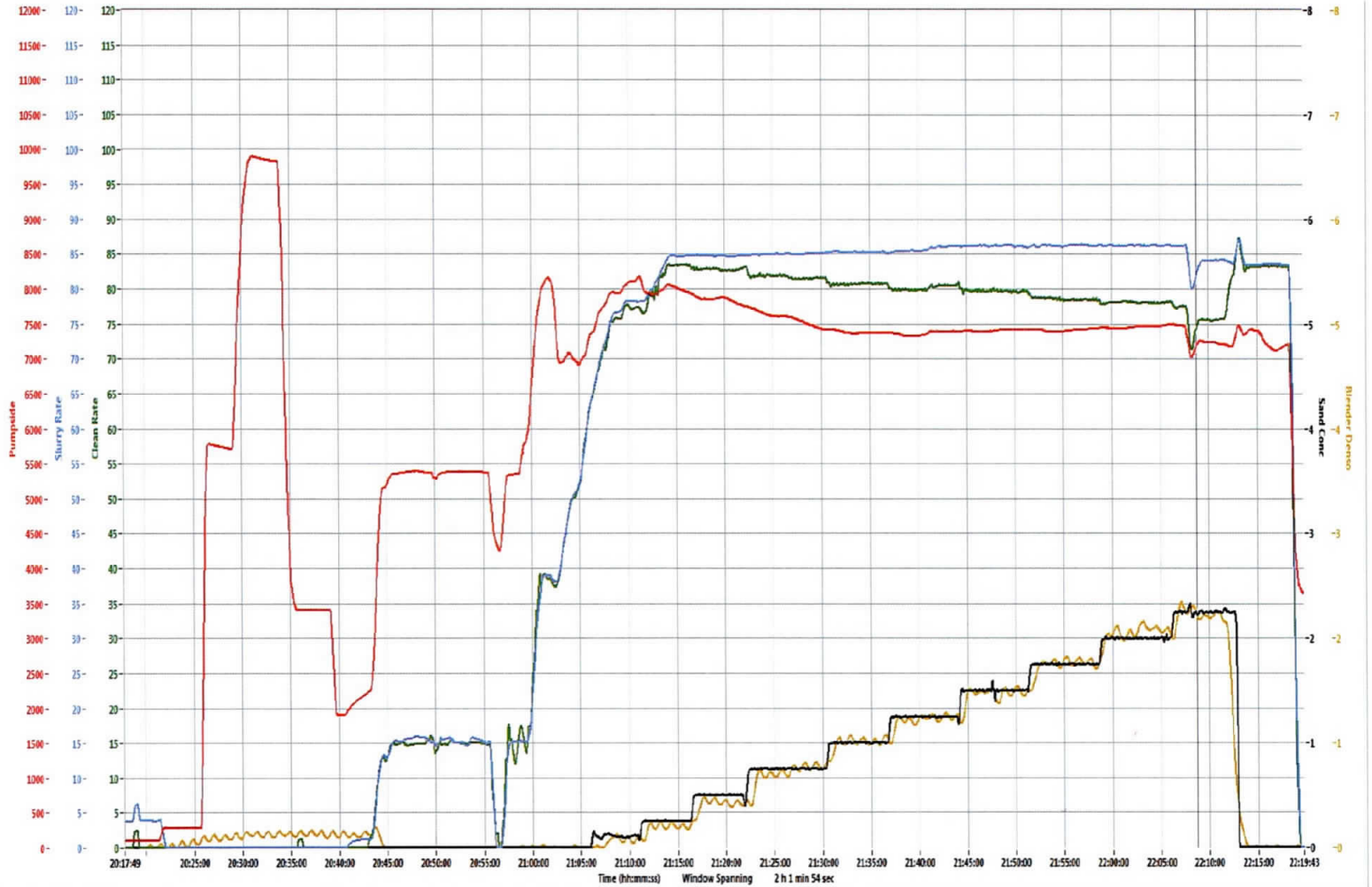
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	130.74 gals	128.00 gals	-2%	128.00 gals
Biocide	0.15 gpt	39.45 gals	37.5 gals	-5%	37.5 gals
Scale Inhibitor	0.25 gpt	65.76 gals	67.00 gals	2%	67.00 gals
Acid	28 %	1,017.37 gals	1,033.00 gals	2%	1,033.00 gals
Acid Inhibitor	7.00 gpt	7.12 gals	7.23 gals	2%	7.23 gals
Gelling Agent	2.5 gpt	117.47 gals	119.3 gals	2%	119.3 gals
Breaker	0.5 ppt	23.49 lbs	20.00 lbs	-15%	20.00 lbs

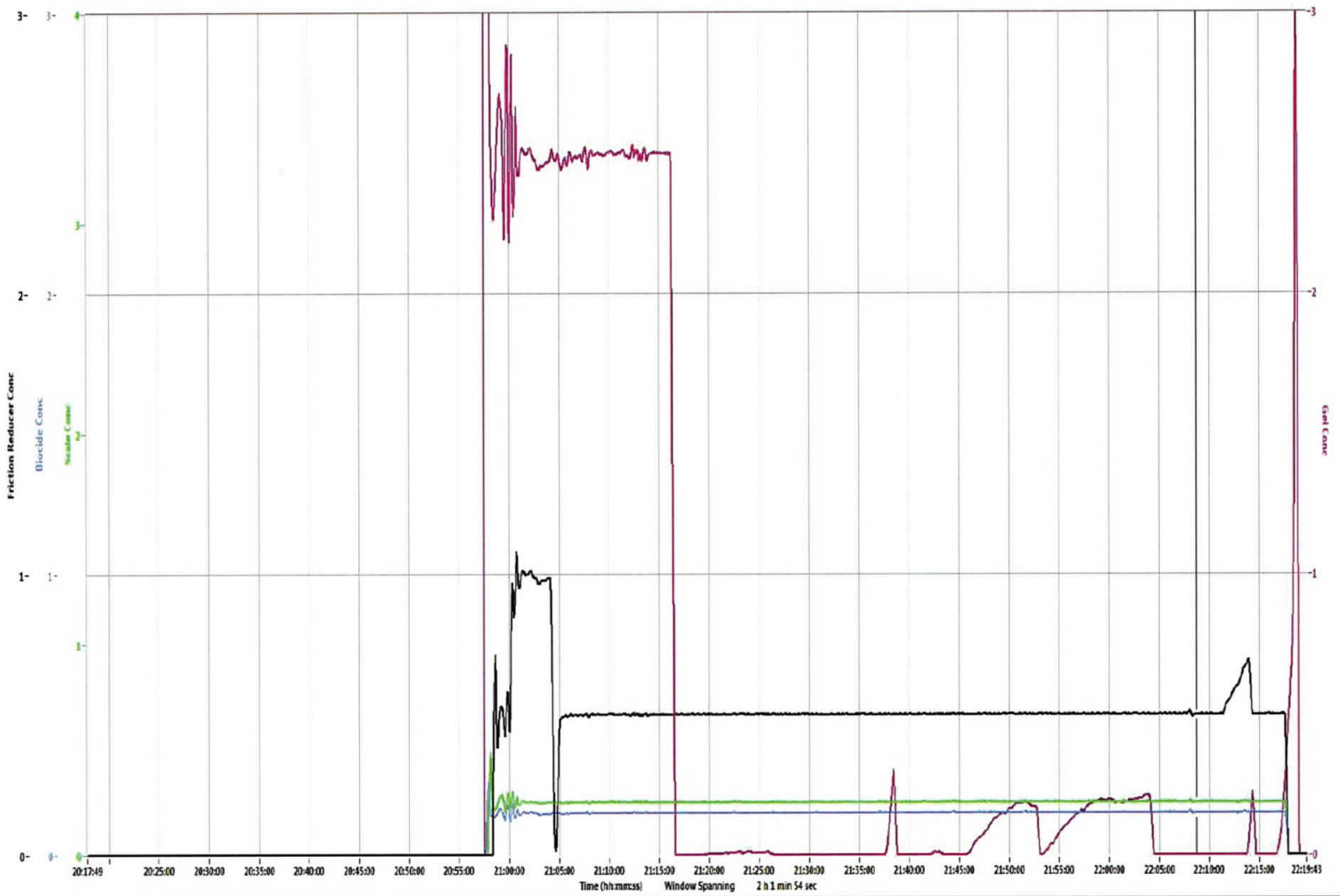
Fluid Testing - Mixed Water Analysis

pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	54.7 deg F
TSS		Specific Gravity	10150
Sulfates	<200 mg/L		



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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	3,371 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,544 ft	10,665 ft	237 bbbls	234 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,465 bbbls	Friction Reducer :	136.00 gals		
Clean Volume :	6,429 bbbls	Biocide :	42.50 gals		
Raw Acid Volume :	36 bbbls	Scale Inhibitor :	65.30 gals		
Slickwater Volume :	379 bbbls	28% HCl Acid :	1510.00 gals		
Gelled Volume :	5,980 bbbls	Acid Inhibitor :	10.57 gals		
Proppant Laden :	6,023 bbbls	Gelling Agent :	657.00 gals		
Slurry Volume :	6,784 bbbls	Breaker :	134.00 lbs		
Wireline Volume :	207 bbbls				
Total Fluid To Recover :	6,636 bbbls				
Proppant Totals					
100 Mesh :	26,920 lbs				
40/70 White :	243,520 lbs				
Total :	270,440 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,906 psi	Opening Pressure	1,987 psi
Minimum	7,817 psi	Minimum	38.9 bpm	Frac ∇	1.04 psi/ft	Open ∇	0.75 psi/ft
Maximum	9,517 psi	Maximum	86.0 bpm	Pump Time	1.98 Hrs	ISIP	3,796 psi
Average	8,377 psi	Average	66.0 bpm	HHP	13,551 HHP	Closing Pressure	3,385 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,938					4:38
Open Well	FW		1,987					4:44
Start Injection	FW	0.1	2,030	16.3				4:45
Start 12 % HCL Acid	ACID	15.4	4,826	29.0	18			4:49
Pad	SW	15.8	4,984	27.6	48			4:51
Start 12 % HCL Acid	ACID	15.4	5,044	30.4	75			4:52
Pad	SW	15.8	5,121	25.8	106			4:54
Start 12 % HCL Acid	ACID	15.3	5,039	29.8	132			4:56
Pad	SW	15.8	5,049	414.0	163			4:58
Increase Gel to 2.50 gpt	SW/Gel	16.6	5,048		201			5:02
Ball seat (Breakdown)	SW/Gel	20.5	6,906		219			5:03
Acid on Formation	SW/Gel	33.9	7,925		298			5:06
Start 0.10 ppa 100 Mesh Sand	SW/Gel	57.7	9,137	358.5	571	1,857	8	5:11
Start 0.25 ppa 100 Mesh Sand	SW/Gel	54.5	9,264	450.0	933	4,662	1,857	5:17
Start 0.50 ppa 100 Mesh Sand	SW/Gel	43.2	8,407	475.1	1,387	9,971	6,520	5:28
Start 0.75 ppa 100 Mesh Sand	SW/Gel	52.4	8,229	307.7	1,872	9,659	16,490	5:38
Start 0.75 ppa 40/70 White	SW/Gel	60.3	8,620	438.8	2,191	13,791	26,149	5:44
Start 1.00 ppa 40/70 White	SW/Gel	64.3	8,185	498.7	2,648	20,562	39,940	5:52
Start 1.25 ppa 40/70 White	SW/Gel	70.9	8,347	592.4	3,171	31,032	60,503	5:59
Start 1.50 ppa 40/70 White	SW/Gel	76.7	8,365	599.9	3,802	37,803	91,534	6:08
Start 1.75 ppa 40/70 White	SW/Gel	79.9	8,268	568.8	4,448	41,729	129,427	6:16
Start 2.00 ppa 40/70 White	SW/Gel	82.3	8,326	582.8	5,065	48,980	171,156	6:24
Start 2.25 ppa 40/70 White	SW/Gel	85.6	8,136	682.8	5,703	53,450	220,137	6:31
Flush	SW/Gel	85.2	8,044	336.2	6,441		273,587	6:40
Decrease Gel to 0.00 gpt	SW	85.2	8,020		6,492		273,587	6:40
Shutdown (Final)	SW	1.0	3,567		6,784		273,587	6:44



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 18th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	8,377 psi	0.0%	-16.2%
Average Slurry Rate	85.0 bpm	85.0 bpm	66.0 bpm	0.0%	-22.4%
Average Horsepower	20,833 HHP	20,833 HHP	13,551 HHP	0.0%	-35.0%
Average Perf Friction	776 psi	776 psi	468 psi	0.0%	-39.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.04 psi/ft	0.0%	-5.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	381 bbls	484 bbls	484 bbls	27.0%	0.0%
12% HCl Acid	139.7 bbls	89.2 bbls	89.2 bbls	-36.2%	0.0%
Clean	6,088 bbls	6,429 bbls	6,429 bbls	5.6%	0.0%
Fresh Water	6,088 bbls	6,429 bbls	6,429 bbls	5.6%	0.0%
Slickwater	4,782 bbls	379 bbls	379 bbls	-92.1%	0.0%
Linear Gel	1,143 bbls	5,980 bbls	5,980 bbls	423.3%	0.0%
Proppant Laden	5,333 bbls	6,023 bbls	6,023 bbls	12.9%	0.0%
Flush	234 bbls	336.2 bbls	336.2 bbls	43.6%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	255.69 gals	134.81 gals	136.00 gals	-47.3%	0.9%
Biocide	38.35 gals	40.5 gals	42.5 gals	5.6%	4.9%
Scale Inhibitor	63.92 gals	67.51 gals	65.3 gals	5.6%	-3.3%
Acid	1,195.22 gals	1,492.59 gals	1,510.00 gals	24.9%	1.2%
Acid inhibitor	8.37 gals	10.45 gals	10.57 gals	24.9%	1.2%
Gelling Agent	119.99 gals	627.91 gals	657.00 gals	423.3%	4.6%
Breaker	24.00 lbs	125.58 lbs	134.00 lbs	423.3%	6.7%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,149 lbs	26,920 lbs	-3.2%	2.9%
40/70 White	243,000 lbs	247,438 lbs	243,520 lbs	1.8%	-1.6%

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Customer: Blue Ridge Mountain Resc

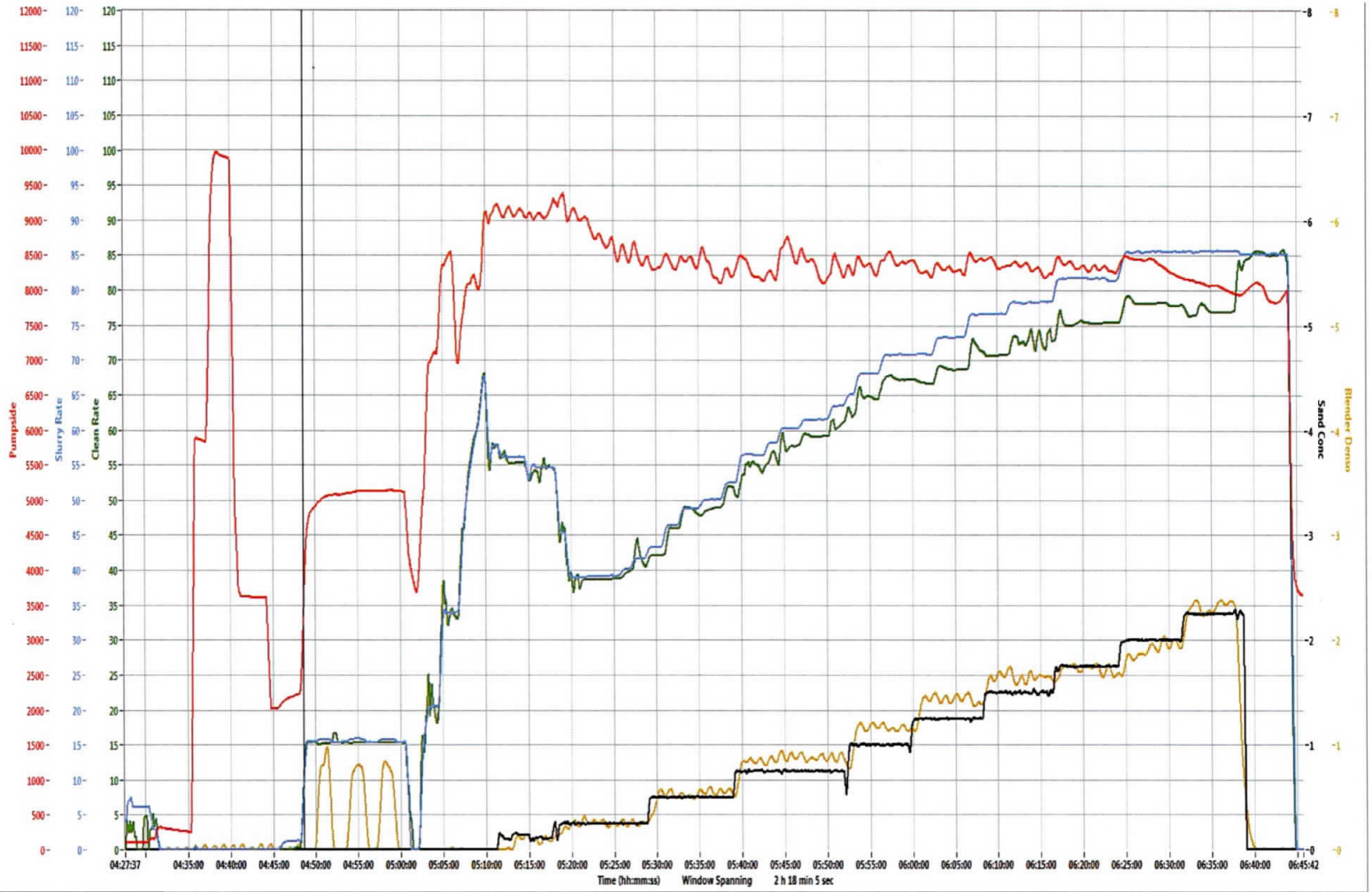
Well: Meckley 1401
 Date: 3/9/2018
 Stage: 18th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

Chemical Volumes

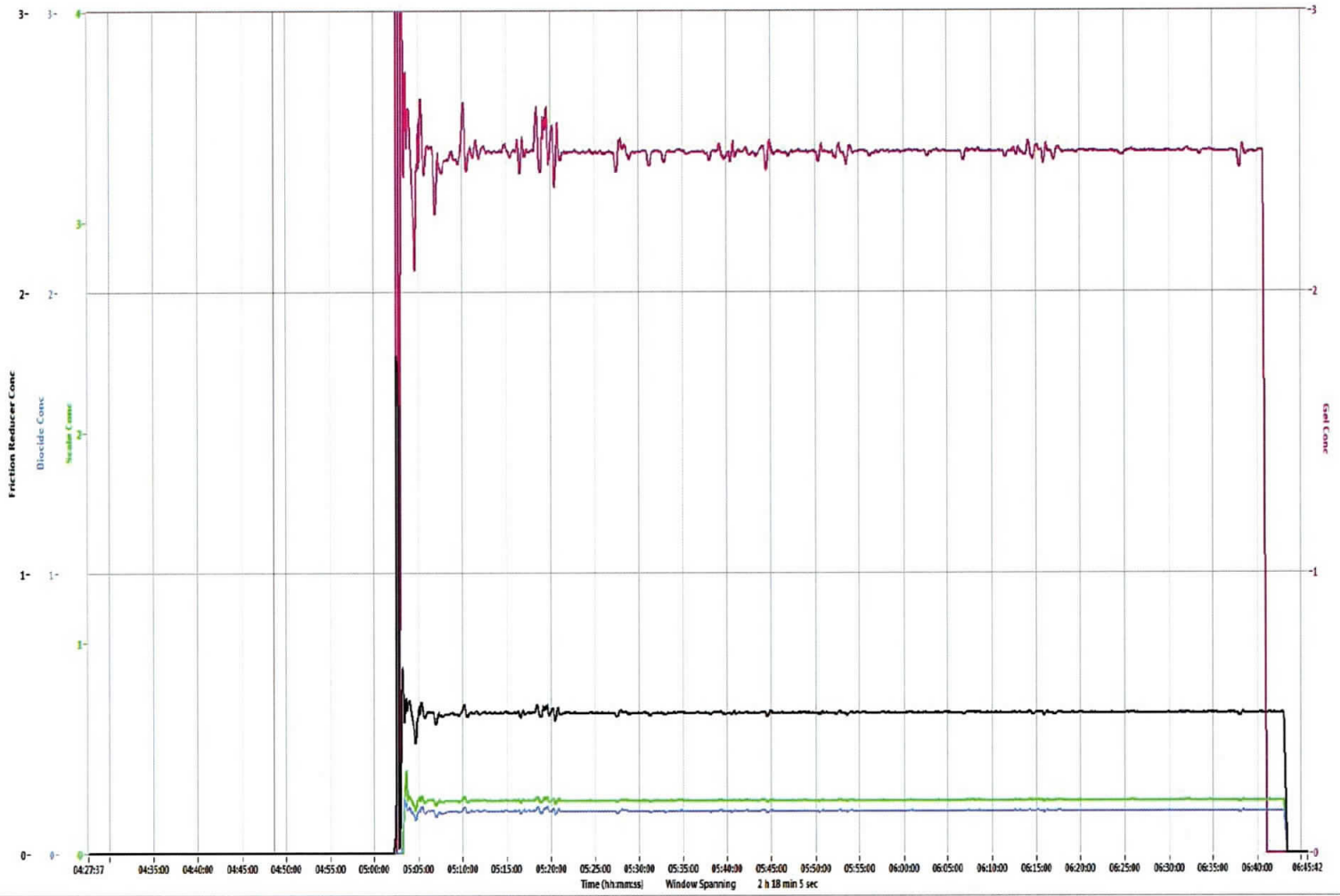
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	134.81 gals	136.00 gals	1%	136.00 gals
Biocide	0.15 gpt	40.5 gals	42.5 gals	5%	42.5 gals
Scale Inhibitor	0.25 gpt	67.51 gals	65.3 gals	-3%	65.3 gals
Acid	28 %	1,492.59 gals	1,510.00 gals	1%	1,510.00 gals
Acid Inhibitor	7.00 gpt	10.45 gals	10.57 gals	1%	10.57 gals
Gelling Agent	2.5 gpt	627.91 gals	657.00 gals	5%	657.00 gals
Breaker	0.5 ppt	125.58 lbs	134.00 lbs	7%	134.00 lbs

Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number D:\SES\data\logs\2018-03-01_04-27-37_LogBlueRidgeMountainResources_Meckley1401_Stage18.tdms



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Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 19th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Brad Truman

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 19th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	3,221 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,394 ft	10,515 ft	233 bbls	231 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,609 bbls	Friction Reducer :	185.00 gals		
Clean Volume :	6,570 bbls	Biocide :	43.50 gals		
Raw Acid Volume :	39 bbls	Scale Inhibitor :	65.00 gals		
Slickwater Volume :	6,120 bbls	28% HCl Acid :	1255.00 gals		
Gelled Volume :	394 bbls	Acid Inhibitor :	8.79 gals		
Proppant Laden :	5,749 bbls	Gelling Agent :	45.00 gals		
Slurry Volume :	6,951 bbls	Breaker :	5.00 lbs		
Wireline Volume :	232 bbls				
Total Fluid To Recover :	6,802 bbls				
Proppant Totals					
100 Mesh :	26,940 lbs				
40/70 White :	245,040 lbs				
Total :	271,980 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,509 psi	Opening Pressure	1,872 psi
Minimum	6,864 psi	Minimum	32.7 bpm	Frac ∇	1.06 psi/ft	Open ∇	0.73 psi/ft
Maximum	9,384 psi	Maximum	86.9 bpm	Pump Time	1.74 Hrs	ISIP	3,877 psi
Average	7,806 psi	Average	77.8 bpm	HHP	14,884 HHP	Closing Pressure	3,194 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,872					23:40
Open Well	FW		1,872					23:46
Start Injection	FW	0.1	1,965	18.2				23:47
Start 15 % HCL Acid	ACID	14.7	5,851	40.4	17			23:50
Pad	SW	15.1	5,878	33.4	59			23:53
Start 15 % HCL Acid	ACID	14.7	5,852	36.6	94			23:55
Pad	SW	15.1	5,886	88.0	131			23:57
Ball seat (Breakdown)	SW	19.5	6,609	402.4	221	652		0:04
Acid on Formation	SW	32.7	7,447		295		340	0:06
Start 0.10 ppa 100 Mesh Sand	SW	66.2	7,970	597.7	623	2,766	652	0:12
Increase FR to 1.00 gpt	SW	68.4	8,852		897		1,790	0:16
Start 0.25 ppa 100 Mesh Sand	SW	57.2	8,301	283.7	1,228	3,013	3,418	0:22
Increase Gel to 2.50 gpt	SW/Gel	60.9	8,363		1,335		4,513	0:23
Start 0.50 ppa 100 Mesh Sand	SW/Gel	66.2	8,208	451.4	1,516	9,440	6,432	0:26
Decrease Gel to 0.00 gpt	SW	70.9	8,371		1,656		9,306	0:28
Start 0.75 ppa 100 Mesh Sand	SW	75.6	8,568	380.7	1,975	11,959	15,872	0:33
Start 0.75 ppa 40/70 White	SW	84.3	7,990	382.9	2,369	12,130	27,831	0:38
Start 1.00 ppa 40/70 White	SW	85.9	7,645	501.2	2,768	21,044	39,961	0:42
Decrease FR to 0.75 gpt	SW	86.2	7,415		3,281		60,341	0:48
Start 1.25 ppa 40/70 White	SW	86.3	7,439	586.4	3,297	30,755	61,004	0:48
Start 1.50 ppa 40/70 White	SW	86.1	7,419	585.9	3,923	36,965	91,760	0:56
Decrease FR to 0.50 gpt	SW	86.3	7,499		3,986		95,451	0:56
Increase Gel to 2.50 gpt	SW/Gel	86.3	7,461		4,478		124,193	1:02
Start 1.75 ppa 40/70 White	SW/Gel	86.2	7,570	572.1	4,554	42,027	128,725	1:03
Decrease Gel to 0.00 gpt	SW	86.1	7,478		4,562		129,147	1:03
Start 2.00 ppa 40/70 White	SW	86.4	7,394	569.4	5,177	47,848	170,752	1:10
Start 2.25 ppa 40/70 White	SW	86.5	7,433	716.0	5,804	57,669	218,600	1:17
Flush	SW	85.8	7,587	362.8	6,581		276,269	1:26
Shutdown (Final)	SW		3,887		6,951		276,269	1:31



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 19th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,806 psi	0.0%	-21.9%
Average Slurry Rate	85.0 bpm	85.0 bpm	77.8 bpm	0.0%	-8.5%
Average Horsepower	20,833 HHP	20,833 HHP	14,884 HHP	0.0%	-28.6%
Average Perf Friction	776 psi	776 psi	650 psi	0.0%	-16.2%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.06 psi/ft	0.0%	-4.0%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	124 bbls	140 bbls	140 bbls	12.8%	0.0%
15% HCl Acid	78.6 bbls	77.0 bbls	77.0 bbls	-2.0%	0.0%
Clean	5,766 bbls	6,570 bbls	6,570 bbls	13.9%	0.0%
Fresh Water	5,766 bbls	6,570 bbls	6,570 bbls	13.9%	0.0%
Slickwater	4,778 bbls	6,120 bbls	6,120 bbls	28.1%	0.0%
Linear Gel	886 bbls	394 bbls	394 bbls	-55.5%	0.0%
Proppant Laden	5,333 bbls	5,749 bbls	5,749 bbls	7.8%	0.0%
Flush	231 bbls	362.8 bbls	362.8 bbls	57.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	242.19 gals	193.05 gals	185.00 gals	-20.3%	-4.2%
Biocide	36.33 gals	41.39 gals	43.5 gals	13.9%	5.1%
Scale Inhibitor	60.55 gals	68.99 gals	65.00 gals	13.9%	-5.8%
Acid	1,136.36 gals	1,633.33 gals	1,255.00 gals	43.7%	-23.2%
Acid Inhibitor	7.95 gals	11.43 gals	8.79 gals	43.7%	-23.2%
Gelling Agent	93.00 gals	41.39 gals	45.00 gals	-55.5%	8.7%
Breaker	18.60 lbs	8.28 lbs	5.00 lbs	-55.5%	-39.6%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,179 lbs	26,940 lbs	0.7%	-0.9%
40/70 White	243,000 lbs	248,439 lbs	245,040 lbs	2.2%	-1.4%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 19th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

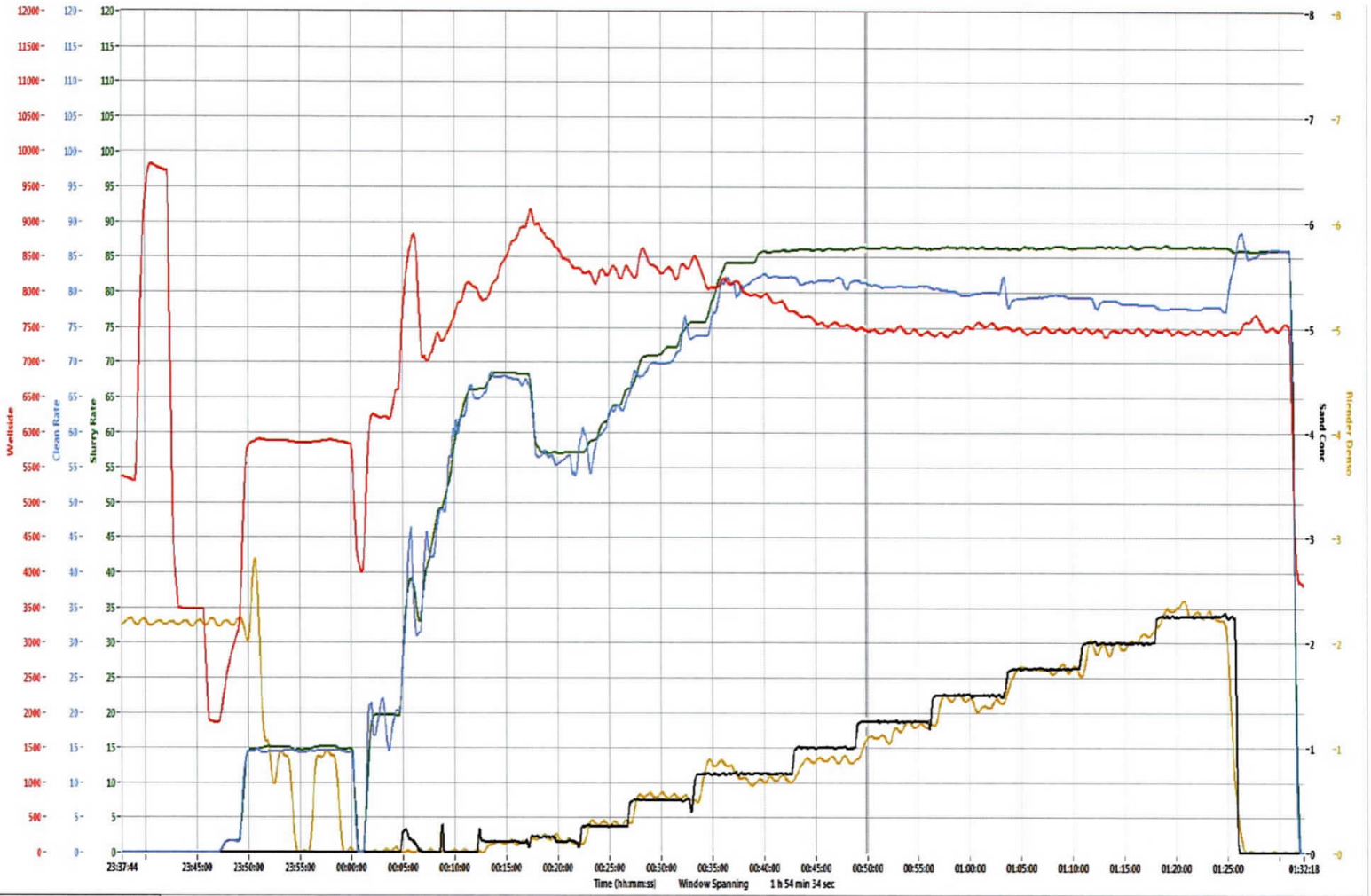
Quality Assesment / Quality Control

Chemical Volumes

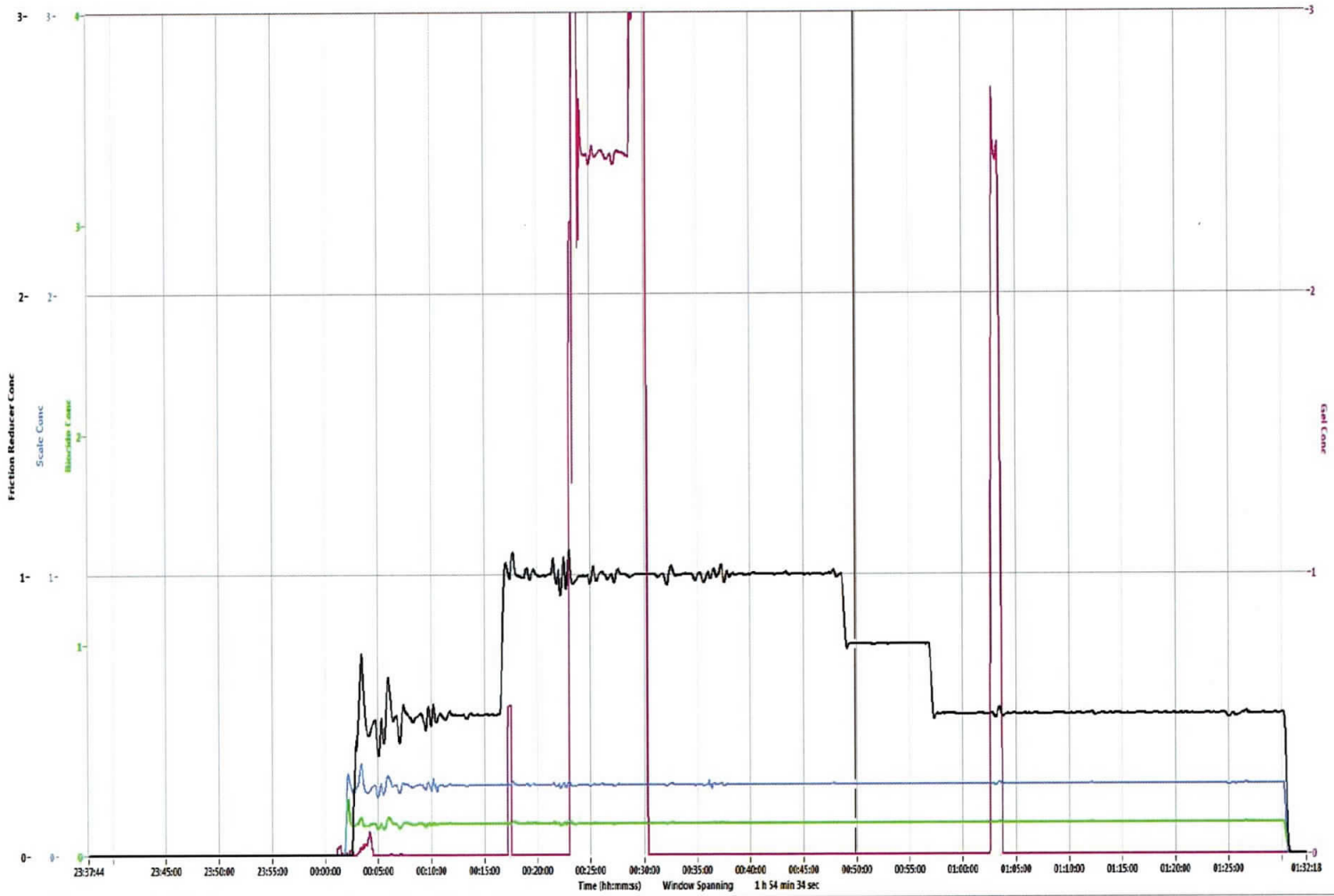
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	193.05 gals	185.00 gals	-4%	185.00 gals
Biocide	0.15 gpt	41.39 gals	43.5 gals	5%	43.5 gals
Scale Inhibitor	0.25 gpt	68.99 gals	65.00 gals	-6%	65.00 gals
Acid	28 %	1,633.33 gals	1,255.00 gals	-23%	1,255.00 gals
Acid Inhibitor	7.00 gpt	11.43 gals	8.79 gals	-23%	8.79 gals
Gelling Agent	2.5 gpt	41.39 gals	45.00 gals	9%	45.00 gals
Breaker	0.5 ppt	8.28 lbs	5.00 lbs	-40%	5.00 lbs

Fluid Testing - Mixed Water Analysis

pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	48.3 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 20th Stage of 40
Marcellus Formation
Tyler
API #: 34-167-29724

Prepared By:
Winston West

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 20th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Brandon Beckwith
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	3,071 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	10,244 ft	10,365 ft	230 bbls	227 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,112 bbls	Friction Reducer :	125.00 gals		
Clean Volume :	6,087 bbls	Biocide :	40.00 gals		
Raw Acid Volume :	24 bbls	Scale Inhibitor :	61.30 gals		
Slickwater Volume :	5,649 bbls	28% HCl Acid :	1289.00 gals		
Gelled Volume :	408 bbls	Acid Inhibitor :	9.02 gals		
Proppant Laden :	5,730 bbls	Gelling Agent :	45.00 gals		
Slurry Volume :	6,422 bbls	Breaker :	10.00 lbs		
Wireline Volume :	207 bbls				
Total Fluid To Recover :	6,294 bbls				
Proppant Totals					
100 Mesh :	26,920 lbs				
40/70 White :	240,420 lbs				
Total :	267,340 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,027 psi	Opening Pressure	1,888 psi
Minimum	7,337 psi	Minimum	87.9 bpm	Frac ∇	1.06 psi/ft	Open ∇	0.74 psi/ft
Maximum	7,920 psi	Maximum	89.0 bpm	Pump Time	1.53 Hrs	ISIP	3,870 psi
Average	7,492 psi	Average	88.6 bpm	HHP	16,269 HHP	Closing Pressure	3,481 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,803					16:02
Open Well	FW		1,888					16:04
Start Injection	FW	1.9	2,340	6.4	1			16:05
Start 15 % HCl Acid	ACID	10.0	4,324	27.6	7			16:07
Pad	SW	10.1	5,130	26.2	35			16:10
Start 15 % HCl Acid	ACID	9.5	5,131	20.8	62			16:13
Pad	SW	10.1	5,175	76.9	83			16:15
Increase Gel to 2.50 gpt	SW/Gel	15.0	5,652		119			16:19
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.2	5,575	357.3	158	1,490	0	16:21
Ball seat (Breakdown)	SW/Gel	15.0	6,027		198		161	16:24
Acid on Formation	SW/Gel	42.3	8,189		272		467	16:26
Start 0.25 ppa 100 Mesh Sand	SW/Gel	79.9	8,155	430.8	516	4,537	1,491	16:30
Decrease Gel to 0.00 gpt	SW	81.6	8,240		527		1,598	16:30
Start 0.50 ppa 100 Mesh Sand	SW	87.8	8,398	445.1	952	9,333	6,028	16:35
Start 0.75 ppa 100 Mesh Sand	SW	87.9	8,200	447.0	1,407	13,736	15,361	16:40
Start 0.75 ppa 40/70 White	SW	87.9	7,946	392.5	1,869	12,352	29,096	16:45
Start 1.00 ppa 40/70 White	SW	88.1	7,746	508.8	2,275	21,228	41,448	16:50
Start 1.25 ppa 40/70 White	SW	88.2	7,868	574.4	2,808	30,129	62,676	16:56
Start 1.50 ppa 40/70 White	SW	88.2	7,523	577.0	3,416	36,363	92,805	17:03
Start 1.75 ppa 40/70 White	SW	88.5	7,477	574.4	4,034	42,161	129,168	17:10
Start 2.00 ppa 40/70 White	SW	88.7	7,504	569.8	4,656	47,870	171,330	17:17
Start 2.25 ppa 40/70 White	SW	88.6	7,509	750.2	5,279	58,315	219,199	17:24
Flush	SW	88.0	7,920	326.6	6,088		277,514	17:33
Shutdown (Final)	SW		3,937		6,422		277,514	17:37



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 20th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Metrics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,492 psi	0.0%	-25.1%
Average Slurry Rate	85.0 bpm	85.0 bpm	88.6 bpm	0.0%	4.2%
Average Horsepower	20,833 HHP	20,833 HHP	16,269 HHP	0.0%	-21.9%
Average Perf Friction	776 psi	776 psi	843 psi	0.0%	8.6%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.06 psi/ft	0.0%	-4.1%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	110 bbls	110 bbls	48.4%	0.0%
15% HCl Acid	78.6 bbls	48.4 bbls	48.4 bbls	-38.4%	0.0%
Clean	5,713 bbls	6,087 bbls	6,087 bbls	6.5%	0.0%
Fresh Water	5,713 bbls	6,087 bbls	6,087 bbls	6.5%	0.0%
Slickwater	4,775 bbls	5,649 bbls	5,649 bbls	18.3%	0.0%
Linear Gel	836 bbls	408 bbls	408 bbls	-51.2%	0.0%
Proppant Laden	5,333 bbls	5,730 bbls	5,730 bbls	7.4%	0.0%
Flush	227 bbls	326.6 bbls	326.6 bbls	43.6%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.95 gals	127.63 gals	125.00 gals	-46.8%	-2.1%
Biocide	35.99 gals	38.35 gals	40.00 gals	6.5%	4.3%
Scale Inhibitor	59.99 gals	63.92 gals	61.3 gals	6.6%	-4.1%
Acid	1,136.36 gals	1,026.67 gals	1,289.00 gals	-9.7%	25.6%
Acid Inhibitor	7.95 gals	7.19 gals	9.02 gals	-9.7%	25.6%
Gelling Agent	87.75 gals	42.85 gals	45.00 gals	-51.2%	5.0%
Breaker	17.55 lbs	8.57 lbs	10.00 lbs	-51.2%	16.7%
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	29,096 lbs	26,920 lbs	7.8%	-7.5%
40/70 White	243,000 lbs	248,417 lbs	240,420 lbs	2.2%	-3.2%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 20th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	127.63 gals	125.00 gals	-2%	125.00 gals
Biocide	0.15 gpt	38.35 gals	40.00 gals	4%	40.00 gals
Scale Inhibitor	0.25 gpt	63.92 gals	61.3 gals	-4%	61.3 gals
Acid	28 %	1,026.67 gals	1,289.00 gals	26%	1,289.00 gals
Acid Inhibitor	7.00 gpt	7.19 gals	9.02 gals	26%	9.02 gals
Gelling Agent	2.5 gpt	42.85 gals	45.00 gals	5%	45.00 gals
Breaker	0.5 ppt	8.57 lbs	10.00 lbs	17%	10.00 lbs

Fluid Testing- Mixed Water Analysis

pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	52.3 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		

Sand Sieve Analysis Sand Box: 676

100 Mesh Mesh Screen Sizes	Weight Retained	% Retained	
40	<= 0.1%	0.11	0.14%
50	>= 90%	6.51	8.13%
60		43.02	53.73%
70		23.17	28.94%
100		6.03	7.53%
140	1.23	1.54%	
Pan	<= 1%	0.00	0.00%
Total Sample Weight:	80 grams	100.0%	

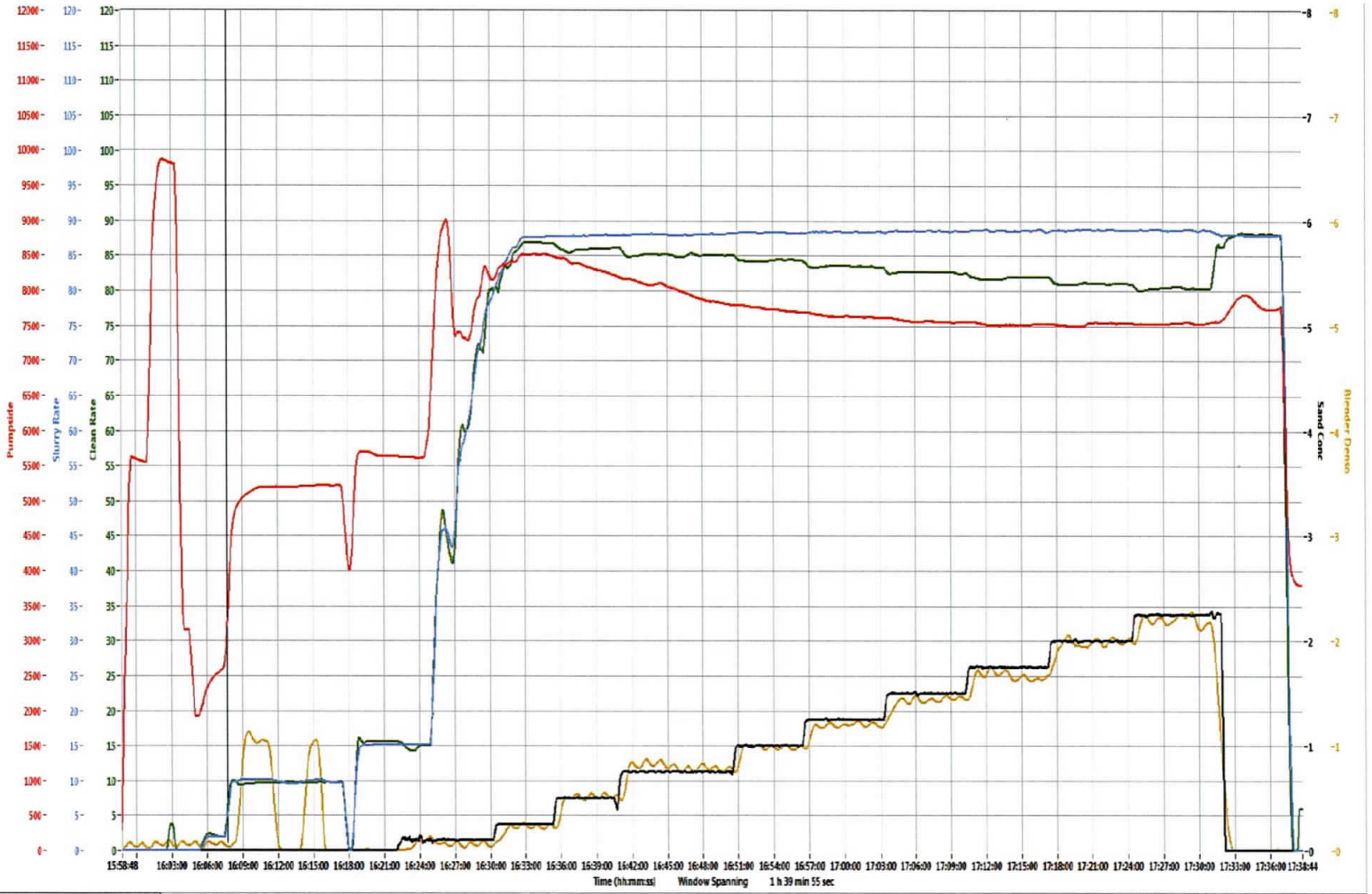
Mesh Size	% Retained
40	0.14%
50	8.13%
60	53.73%
70	28.94%
100	7.53%
140	1.54%
Pan	0.00%

Sand Sieve Analysis Sand Box: 440

40/70 Mesh Screen Sizes	Weight Retained	% Retained	
30	<= 0.1%	0.20	0.04%
40	>= 90%	18.93	4.19%
50		317.48	70.24%
60		90.63	20.05%
70		18.62	4.12%
100	<= 1%	5.73	1.27%
Pan		0.43	0.10%
Total Sample Weight:	452 grams	100.0%	

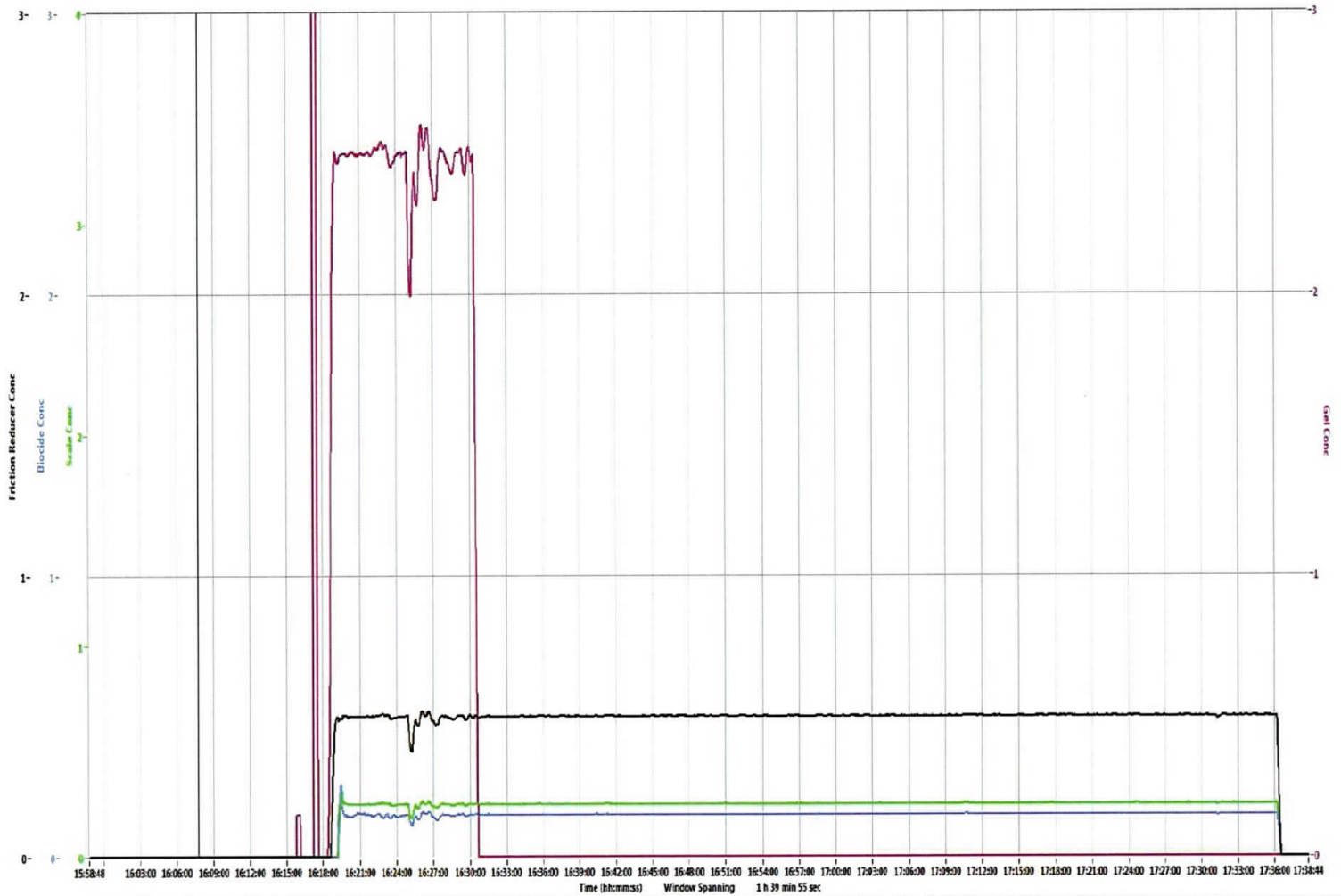
Mesh Size	% Retained
30	0.04%
40	4.19%
50	70.24%
60	20.05%
70	4.12%
100	1.27%
Pan	0.10%

Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number D:\SES\data\logs\2018-03-02_15-58-48_Log_BlueRidge_Mecchie\401_Stage20.tdms



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 21st Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

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AUG 20 2018

WV Department of
Environmental Protection



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 21st
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report											
Customer Representative			Mr. Don Barker			Stingray Representative			Joseph Bishop		
Wellbore Information											
Perf Size	# of Perforations	Tubular Type		Tubular Grade		Length of Lateral		Length of Vertical			
0.41 in.	30	5 - 1/2" 20. #		P-110		2,921 ft		7,294 ft			
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf		Flush to Top Perf		Plug Depth			
6,236 ft	10,094 ft	10,215 ft		227 bbls		224 bbls		6,236 ft			
Job Summary											
Fluid Volumes			Chemical Volumes			Notes:			Time:		
Total Fluid Volume :	6,025 bbls	Friction Reducer :	194.00 gals	98.9% of total proppant placed.							
Clean Volume :	5,988 bbls	Biocide :	35.80 gals								
Raw Acid Volume :	37 bbls	Scale Inhibitor :	66.30 gals	FR started at 0.50 gpt per Mr. Don Barker							
Slickwater Volume :	5,537 bbls	28% HCl Acid :	1169.00 gals								
Gelled Volume :	408 bbls	Acid Inhibitor :	8.18 gals								
Proppant Laden :	5,616 bbls	Gelling Agent :	46.00 gals								
Slurry Volume :	6,341 bbls	Breaker :	10.00 lbs								
Wireline Volume :	191 bbls	X-linker :	0.00 gals								
Total Fluid To Recover :	6,179 bbls										
Proppant Totals											
100 Mesh :	26,980 lbs										
40/70 White :	240,160 lbs										
Total :	267,140 lbs										
Treating Pressures		Injection Rates			Treatment Values			Shut-In Values			
Operator's Max	10,000 psi	Desired	85.0 bpm		Breakdown	6,305 psi		Opening Pressure	1,962 psi		
Minimum	7,050 psi	Minimum	82.9 bpm		Frac ∇	1.05 psi/ft		Open ∇	0.75 psi/ft		
Maximum	8,659 psi	Maximum	90.1 bpm		Pump Time	1.55 Hrs		ISIP	3,827 psi		
Average	7,607 psi	Average	89.0 bpm		HHP	16,593 HHP		Closing Pressure	3,288 psi		
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)			
Pressure Test	FW		9,929					5:30			
Open Well	FW		1,962					5:49			
Start Injection	FW		1,932	6.2				5:50			
Start 15 % HCL Acid	ACID	10.0	4,124	45.6	6			5:52			
Pad	SW	10.2	4,881	25.8	54	2		5:57			
Start 15 % HCL Acid	ACID	9.7	4,863	28.3	80		2	6:00			
Pad	SW	10.6	4,904	62.2	110		2	6:02			
Increase Gel to 2.50 gpt	SW/Gel	14.8	5,171		136		2	6:07			
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.0	5,237		146		2	6:08			
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.1	5,261	352.6	171	1,479	3	6:09			
Ball seat (Breakdown)	SW/Gel	15.1	6,305		196		117	6:11			
Acid on Formation	SW/Gel	41.4	8,720		267		415	6:13			
Start 0.25 ppa 100 Mesh Sand	SW/Gel	80.7	8,394	420.3	522	4,413	1,482	6:17			
Decrease Gel to 0.00 gpt	SW	80.8	8,304		543		1,695	6:17			
Start 0.50 ppa 100 Mesh Sand	SW	87.1	8,545	448.6	947	9,404	5,896	6:22			
Start 0.75 ppa 100 Mesh Sand	SW	89.0	8,295	361.2	1,407	10,992	15,299	6:27			
Start 0.75 ppa 40/70 White	SW	88.9	8,163	418.0	1,782	13,146	26,291	6:31			
Start 1.00 ppa 40/70 White	SW	89.1	7,882	544.6	2,215	22,808	39,438	6:36			
Increase FR to 0.75 gpt	SW	89.0	7,880		2,235		40,119	6:37			
Start 1.25 ppa 40/70 White	SW	89.3	7,549	566.4	2,788	29,723	62,345	6:43			
Start 1.50 ppa 40/70 White	SW	89.6	7,447	570.7	3,389	35,929	91,968	6:49			
Increase FR to 1.00 gpt	SW	89.7	7,313		3,683		109,216	6:53			
Start 1.75 ppa 40/70 White	SW	89.9	7,277	588.8	4,000	43,290	127,897	6:56			
Start 2.00 ppa 40/70 White	SW	89.8	7,301	581.7	4,638	48,869	171,187	7:03			
Start 2.25 ppa 40/70 White	SW	89.6	7,315	674.8	5,274	53,280	220,056	7:10			
Flush	SW	89.3	7,368	329.4	6,003		273,336	7:19			
Shutdown (Final)	SW	0.3	3,749		6,341		273,336	7:23			



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 21st
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Volumes					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,607 psi	0.0%	-23.9%
Average Slurry Rate	85.0 bpm	85.0 bpm	89.0 bpm	0.0%	4.7%
Average Horsepower	20,833 HHP	20,833 HHP	16,593 HHP	0.0%	-20.4%
Average Perf Friction	776 psi	776 psi	851 psi	0.0%	9.6%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.7%
Field Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	94 bbls	94 bbls	27.6%	0.0%
15% HCl Acid	78.6 bbls	73.9 bbls	73.9 bbls	-6.0%	0.0%
Clean	5,710 bbls	5,988 bbls	5,988 bbls	4.9%	0.0%
Fresh Water	5,710 bbls	5,988 bbls	5,988 bbls	4.9%	0.0%
Slickwater	4,772 bbls	5,537 bbls	5,537 bbls	16.0%	0.0%
Linear Gel	836 bbls	408 bbls	408 bbls	-51.2%	0.0%
Proppant Laden	5,333 bbls	5,616 bbls	5,616 bbls	5.3%	0.0%
Flush	224 bbls	329.4 bbls	329.4 bbls	47.0%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.81 gals	191.68 gals	194.00 gals	-20.1%	1.2%
Biocide	35.97 gals	37.72 gals	35.8 gals	4.9%	-5.1%
Scale Inhibitor	59.95 gals	62.87 gals	66.3 gals	4.9%	5.5%
Acid	1,136.36 gals	1,567.58 gals	1,169.00 gals	37.9%	-25.4%
Acid Inhibitor	7.95 gals	10.97 gals	8.18 gals	37.9%	-25.4%
Gelling Agent	87.75 gals	42.85 gals	46.00 gals	-51.2%	7.3%
Breaker	17.55 lbs	8.57 lbs	10.00 lbs	-51.2%	16.7%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,290 lbs	26,980 lbs	-2.6%	2.6%
40/70 White	243,000 lbs	247,044 lbs	240,160 lbs	1.7%	-2.8%



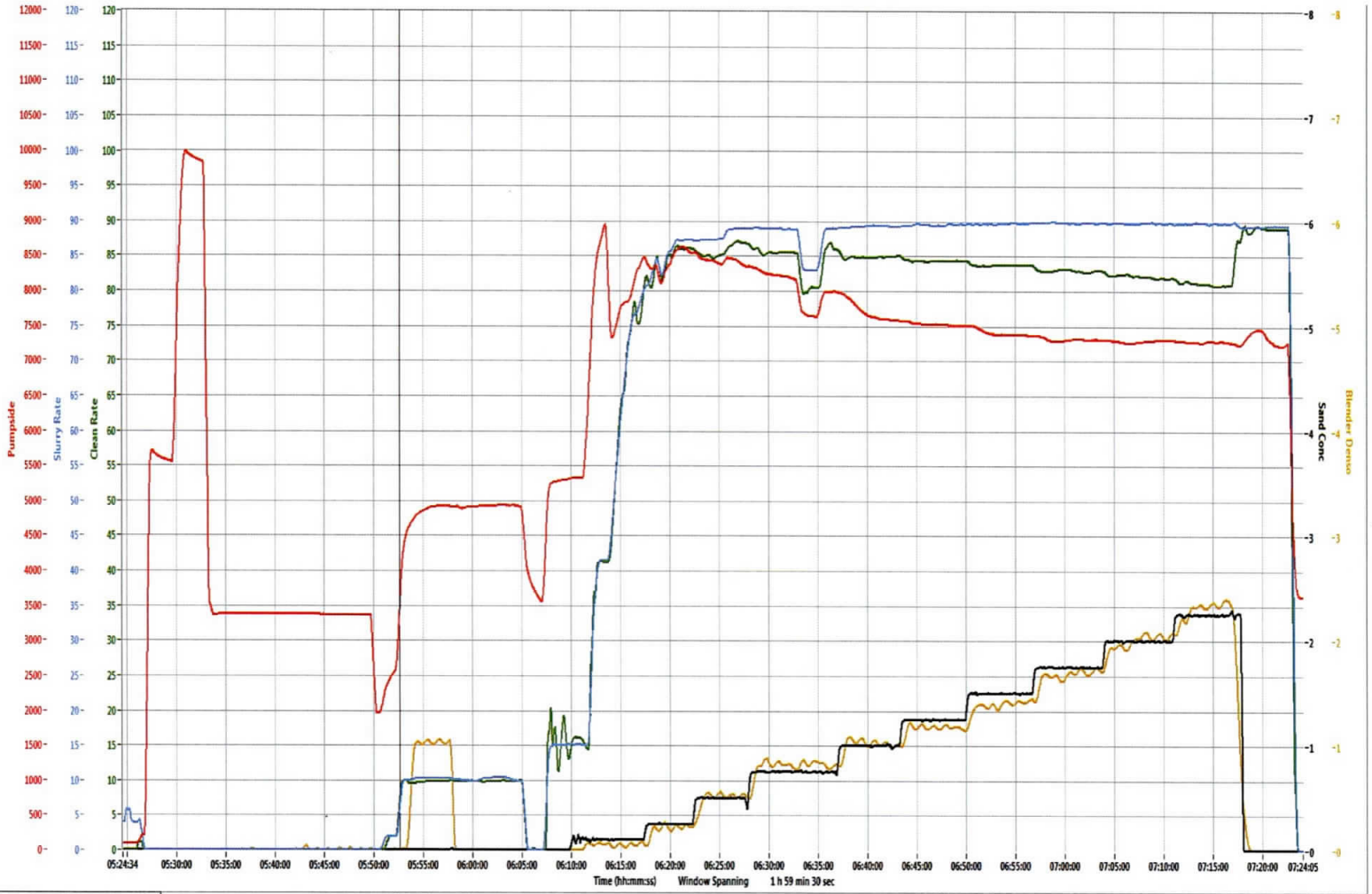
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 21st
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

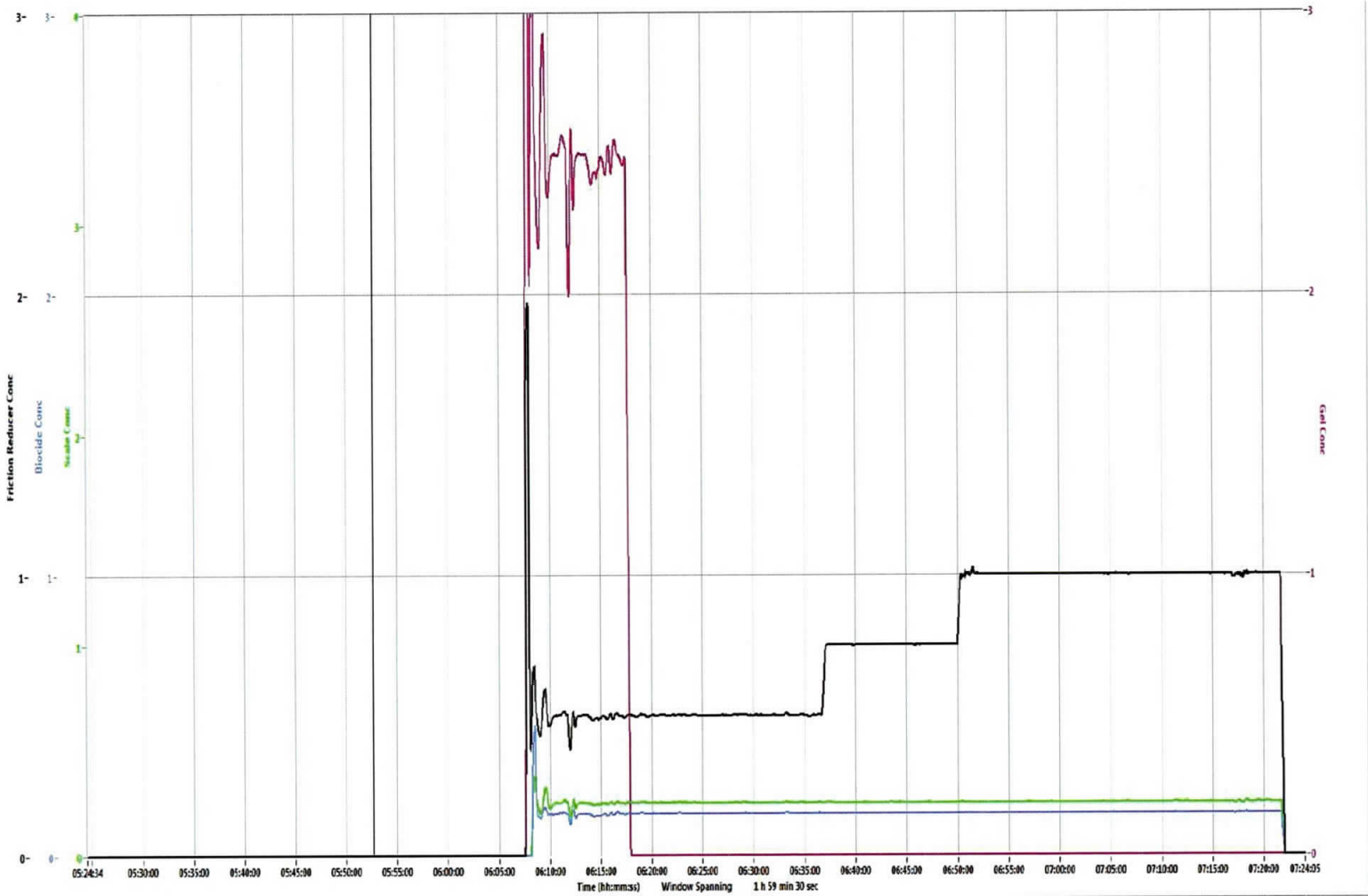
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	191.68 gals	194.00 gals	1%	194.00 gals
Biocide	0.15 gpt	37.72 gals	35.8 gals	-5%	35.8 gals
Scale Inhibitor	0.25 gpt	62.87 gals	66.3 gals	5%	66.3 gals
Acid	28 %	1,567.58 gals	1,169.00 gals	-25%	1,169.00 gals
Acid Inhibitor	7.00 gpt	10.97 gals	8.18 gals	-25%	8.18 gals
Gelling Agent	2.5 gpt	42.85 gals	46.00 gals	7%	46.00 gals
Breaker	0.5 ppt	8.57 lbs	10.00 lbs	17%	10.00 lbs



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 22nd Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Brad Truman

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 22nd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	2,771 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	9,944 ft	10,065 ft	223 bbls	221 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,108 bbls	Friction Reducer :	121.00 gals		
Clean Volume :	6,075 bbls	Biocide :	37.50 gals		
Raw Acid Volume :	32 bbls	Scale Inhibitor :	65.00 gals		
Slickwater Volume :	5,478 bbls	28% HCl Acid :	1182.00 gals		
Gelled Volume :	549 bbls	Acid Inhibitor :	8.27 gals		
Proppant Laden :	5,670 bbls	Gelling Agent :	57.50 gals		
Slurry Volume :	6,463 bbls	Breaker :	11.00 lbs		
Wireline Volume :	172 bbls	X-linker :			
Total Fluid To Recover :	6,247 bbls				
Proppant Totals					
100 Mesh :	26,920 lbs				
40/70 White :	243,500 lbs				
Total :	270,420 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,008 psi	Opening Pressure	2,041 psi
Minimum	7,159 psi	Minimum	75.6 bpm	Frac V	1.00 psi/ft	Open V	0.76 psi/ft
Maximum	8,901 psi	Maximum	87.9 bpm	Pump Time	1.53 Hrs	ISIP	3,542 psi
Average	7,726 psi	Average	86.1 bpm	HHP	16,305 HHP	Closing Pressure	3,010 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,701					20:31
Open Well	FW		2,041					20:36
Start Injection	FW	0.1	2,099	16.2				20:37
Start 15 % HCL Acid	ACID	14.6	4,938	33.0	17			20:41
Pad	SW	15.0	5,191	27.9	51			20:43
Start 15 % HCL Acid	ACID	14.6	5,146	30.8	79			20:45
Pad	SW	15.0	5,163	80.6	110			20:47
Increase Gel to 2.50 gpt	SW/Gel	18.1	5,458		150			20:51
Start 0.10 ppa 100 Mesh Sand	SW/Gel	19.9	5,453	404.2	191	1,654	2	20:53
Ball seat (Breakdown)	SW/Gel	19.8	6,008		198		38	20:53
Acid on Formation	SW/Gel	46.2	7,726		285		347	20:56
Start 0.25 ppa 100 Mesh Sand	SW/Gel	79.9	8,822	442.6	595	4,694	1,656	21:00
Decrease Gel to 0.00 gpt	SW	80.0	8,459		702		2,739	21:02
Start 0.50 ppa 100 Mesh Sand	SW	83.1	8,465	438.0	1,046	9,147	6,350	21:06
Start 0.75 ppa 100 Mesh Sand	SW	86.5	8,112	356.5	1,497	11,222	15,497	21:11
Start 0.75 ppa 40/70 White	SW	86.3	7,973	348.5	1,867	11,037	26,719	21:15
Start 1.00 ppa 40/70 White	SW	86.6	7,865	525.6	2,231	22,083	37,756	21:20
Start 1.25 ppa 40/70 White	SW	86.6	7,502	603.8	2,786	31,789	59,839	21:26
Start 1.50 ppa 40/70 White	SW	86.9	7,515	576.9	3,432	36,328	91,627	21:33
Start 1.75 ppa 40/70 White	SW	86.9	7,523	569.7	4,055	41,909	127,956	21:41
Start 2.00 ppa 40/70 White	SW	86.7	7,360	594.5	4,677	49,975	169,864	21:48
Start 2.25 ppa 40/70 White	SW	87.2	7,348	700.8	5,335	52,727	219,839	21:55
Flush	SW	86.8	7,503	358.0	6,099		272,566	22:04
Shutdown (Final)	SW		3,562		6,463		272,566	22:09



Customer: Blue Ridge Mountain Res.

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 22nd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Data					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,726 psi	0.0%	-22.7%
Average Slurry Rate	85.0 bpm	85.0 bpm	86.1 bpm	0.0%	1.3%
Average Horsepower	20,833 HHP	20,833 HHP	16,305 HHP	0.0%	-21.7%
Average Perf Friction	776 psi	776 psi	796 psi	0.0%	2.6%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.00 psi/ft	0.0%	-8.9%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	125 bbls	125 bbls	68.9%	0.0%
15% HCl Acid	78.6 bbls	63.8 bbls	63.8 bbls	-18.8%	0.0%
Clean	5,706 bbls	6,075 bbls	6,075 bbls	6.5%	0.0%
Fresh Water	5,706 bbls	6,075 bbls	6,075 bbls	6.5%	0.0%
Slickwater	4,768 bbls	5,478 bbls	5,478 bbls	14.9%	0.0%
Linear Gel	836 bbls	549 bbls	549 bbls	-34.3%	0.0%
Proppant Laden	5,333 bbls	5,670 bbls	5,670 bbls	6.3%	0.0%
Flush	221 bbls	358.0 bbls	358.0 bbls	62.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.67 gals	127.23 gals	121.00 gals	-46.9%	-4.9%
Biocide	35.95 gals	38.27 gals	37.5 gals	6.5%	-2.0%
Scale Inhibitor	59.92 gals	63.79 gals	65.00 gals	6.5%	1.9%
Acid	1,136.36 gals	1,233.33 gals	1,182.00 gals	8.5%	-4.2%
Acid Inhibitor	7.95 gals	8.63 gals	8.27 gals	8.5%	-4.2%
Gelling Agent	87.75 gals	57.68 gals	57.5 gals	-34.3%	-0.3%
Breaker	17.55 lbs	11.54 lbs	11.00 lbs	-34.2%	-4.7%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,717 lbs	26,920 lbs	-1.0%	0.8%
40/70 White	243,000 lbs	245,848 lbs	243,500 lbs	1.2%	-1.0%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 22nd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	127.23 gals	121.00 gals	-5%	121.00 gals
Biocide	0.15 gpt	38.27 gals	37.5 gals	-2%	37.5 gals
Scale Inhibitor	0.25 gpt	63.79 gals	65.00 gals	2%	65.00 gals
Acid	28 %	1,233.33 gals	1,182.00 gals	-4%	1,182.00 gals
Acid Inhibitor	7.00 gpt	8.63 gals	8.27 gals	-4%	8.27 gals
Gelling Agent	2.5 gpt	57.68 gals	57.5 gals	0%	57.5 gals
Breaker	0.5 ppt	11.54 lbs	11.00 lbs	-5%	11.00 lbs

Fluid Testing- Mixed Water Analysis

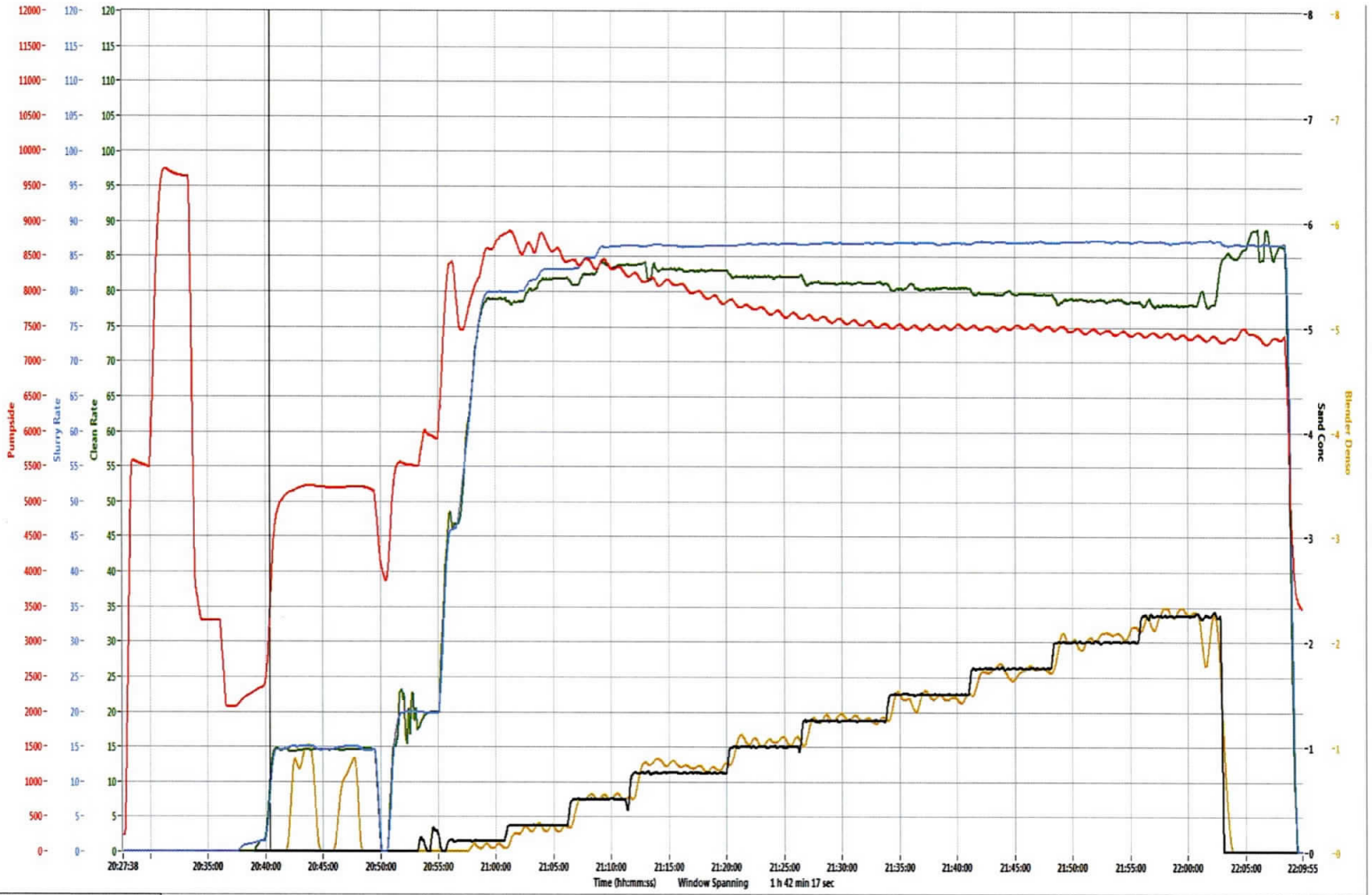
pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	51.3 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		

Sand Sieve Analysis Sand Box: 50459

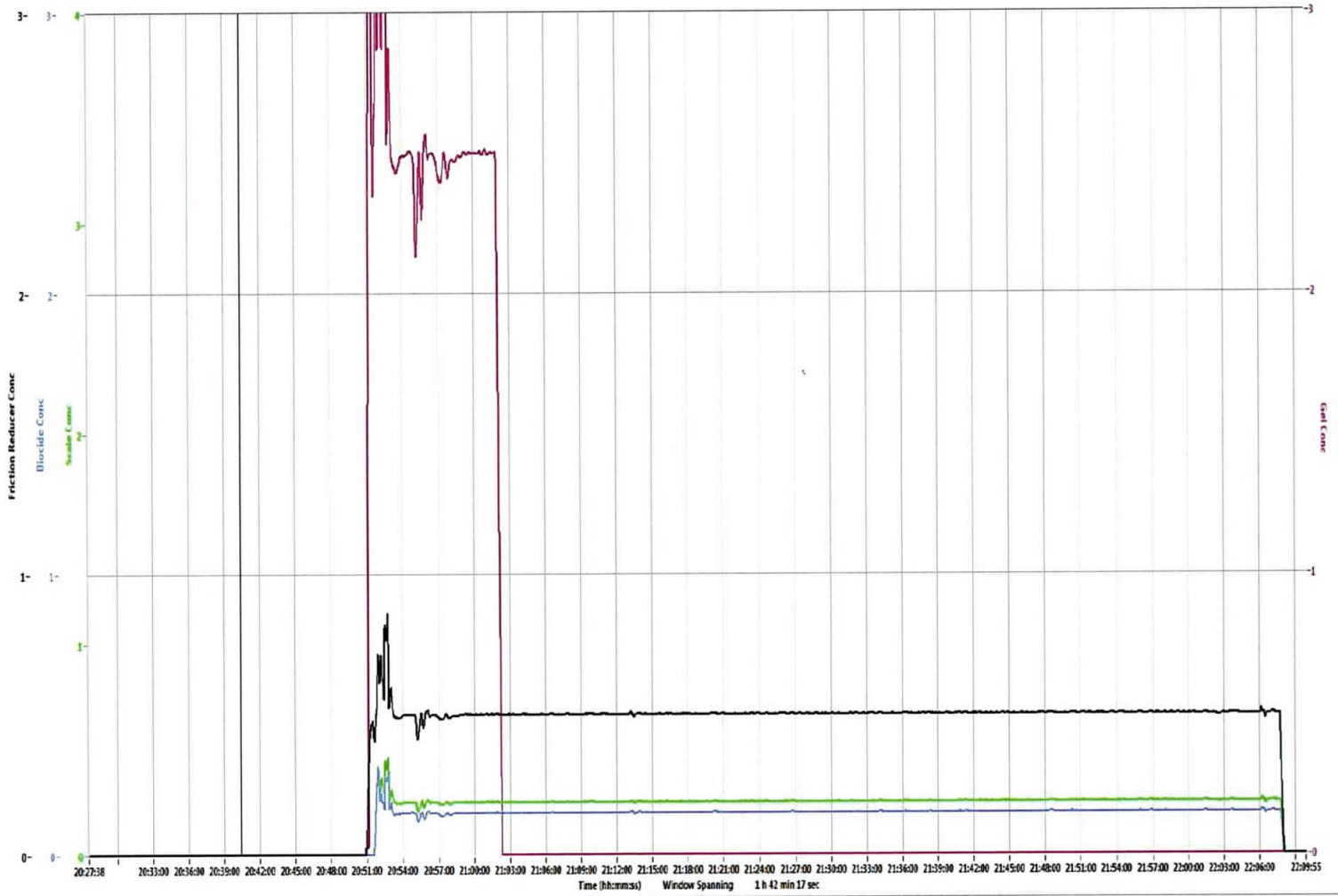
100 Mesh Mesh Screen Sizes	Weight Retained	% Retained	
40	<= 0.1%	0.11	0.03%
50	>= 90%	6.51	1.92%
60		43.17	12.71%
70		283.37	83.46%
100		5.05	1.49%
140	1.32	0.39%	
Pan	<= 1%	0.00	0.00%
Total Sample Weight:	340 grams	100.0%	

Sand Sieve Analysis Sand Box: 1104

40/70 Mesh Screen Sizes	Weight Retained	% Retained	
30	<= 0.1%	0.31	0.07%
40	>= 90%	18.90	4.17%
50		319.07	70.32%
60		91.17	20.09%
70		18.65	4.11%
100	<= 1%	5.21	1.15%
Pan	0.41	0.09%	
Total Sample Weight:	454 grams	100.0%	



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 23rd Stage of 40
Marcellus Formation
Tyler
API #: 34-167-29724

Prepared By:
Winston West

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 23rd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report											
Customer Representative			Mr. Don Barker			Stingray Representative			Joseph Bishop		
Wellbore Information											
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical						
0.41 in.	30	5 - 1/2" 20. #	P-110	2,621 ft	7,294 ft						
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth						
6,236 ft	9,794 ft	9,915 ft	220 bbbls	217 bbbls	6,236 ft						
Job Summary											
Fluid Volumes		Chemical Volumes			Notes:			Time:			
Total Fluid Volume :	6,022 bbbls	Friction Reducer :	172.00 gals	100.1% of total proppant placed.							
Clean Volume :	5,991 bbbls	Biocide :	35.80 gals	FR started at 0.50 gpt per Mr. Don Barker							
Raw Acid Volume :	31 bbbls	Scale Inhibitor :	66.30 gals								
Slickwater Volume :	5,581 bbbls	28% HCl Acid :	1322.00 gals								
Gelled Volume :	373 bbbls	Acid Inhibitor :	9.25 gals								
Proppant Laden :	5,609 bbbls	Gelling Agent :	40.80 gals								
Slurry Volume :	6,409 bbbls	Breaker :	7.00 lbs								
Wireline Volume :	184 bbbls	X-linker :									
Total Fluid To Recover :	6,175 bbbls										
Proppant Totals											
100 Mesh :	26,920 lbs										
40/70 White :	243,340 lbs										
Total :	270,260 lbs										
Treating Pressures		Injection Rates		Treatment Values		Shut-In Values					
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,713 psi	Opening Pressure	2,003 psi				
Minimum	7,011 psi	Minimum	59.0 bpm	Frac V	1.07 psi/ft	Open V	0.76 psi/ft				
Maximum	8,749 psi	Maximum	92.0 bpm	Pump Time	1.46 Hrs	ISIP	3,942 psi				
Average	7,707 psi	Average	90.5 bpm	HHP	17,095 HHP	Closing Pressure	3,384 psi				
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)			
Pressure Test	FW		9,694					12:25			
Open Well	FW		2,003					12:31			
Start Injection	FW		1,991	6.5				12:31			
Start 15 % HCL Acid	ACID	10.0	3,858	33.1	6			12:34			
Pad	SW	10.3	4,587	25.2	41			12:37			
Start 15 % HCL Acid	ACID	9.9	4,582	28.7	66			12:40			
Pad	SW	10.4	4,504	22.9	96			12:43			
Shutdown	SW		4,600		167			12:45			
Open Well	FW		2,059		167			13:15			
Start Injection	SW		2,045	22.6	167			13:17			
Increase Gel to 2.50 gpt	SW/Gel	15.2	4,787		175			13:17			
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.0	4,946	352.8	189	1,466	6	13:18			
Ball seat (Breakdown)	SW/Gel	15.2	5,713		230		178	13:21			
Acid on Formation	SW/Gel	44.5	7,942		311		514	13:23			
Start 0.25 ppa 100 Mesh Sand	SW/Gel	86.8	8,420	442.4	544	4,628	1,472	13:27			
Decrease Gel to 0.00 gpt	SW	87.2	8,369		549		1,523	13:27			
Start 0.50 ppa 100 Mesh Sand	SW	90.6	8,545	420.8	993	8,826	6,100	13:32			
Start 0.75 ppa 100 Mesh Sand	SW	90.8	8,238	364.5	1,425	11,133	14,926	13:36			
Start 0.75 ppa 40/70 White	SW	90.8	8,026	379.3	1,804	11,875	26,059	13:40			
Start 1.00 ppa 40/70 White	SW	90.9	7,875	509.0	2,199	21,215	37,934	13:45			
Start 1.25 ppa 40/70 White	SW	91.1	7,775	574.2	2,735	30,215	59,148	13:51			
Increase FR to 0.75 gpt	SW	91.1	7,780		2,747		59,800	13:51			
Start 1.50 ppa 40/70 White	SW	91.7	7,463	594.9	3,347	37,518	89,363	13:57			
Start 1.75 ppa 40/70 White	SW	91.2	7,440	570.0	3,987	41,815	126,881	14:04			
Start 2.00 ppa 40/70 White	SW	91.5	7,360	578.4	4,606	48,665	168,696	14:11			
Increase FR to 1.00 gpt	SW	91.7	7,423		4,625		170,098	14:11			
Start 2.25 ppa 40/70 White	SW	91.9	7,193	774.2	5,240	60,720	217,360	14:18			
Flush	SW	91.4	7,467	322.3	6,078		278,080	14:27			
Shutdown (Final)	SW	2.9	3,791		6,409		278,080	14:31			



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 23rd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Data					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,707 psi	0.0%	-22.9%
Average Slurry Rate	85.0 bpm	85.0 bpm	90.5 bpm	0.0%	6.5%
Average Horsepower	20,833 HHP	20,833 HHP	17,095 HHP	0.0%	-17.9%
Average Perf Friction	776 psi	776 psi	880 psi	0.0%	13.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.07 psi/ft	0.0%	-3.1%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	77 bbls	77 bbls	4.6%	0.0%
15% HCl Acid	78.6 bbls	61.8 bbls	61.8 bbls	-21.4%	0.0%
Clean	5,703 bbls	5,991 bbls	5,991 bbls	5.0%	0.0%
Fresh Water	5,703 bbls	5,991 bbls	5,991 bbls	5.0%	0.0%
Slickwater	4,765 bbls	5,581 bbls	5,581 bbls	17.1%	0.0%
Linear Gel	836 bbls	373 bbls	373 bbls	-55.4%	0.0%
Proppant Laden	5,333 bbls	5,609 bbls	5,609 bbls	5.2%	0.0%
Flush	217 bbls	322.3 bbls	322.3 bbls	48.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.53 gals	178.76 gals	172.00 gals	-25.4%	-3.8%
Biocide	35.93 gals	37.74 gals	35.8 gals	5.0%	-5.1%
Scale Inhibitor	59.88 gals	62.9 gals	66.3 gals	5.0%	5.4%
Acid	1,136.36 gals	1,310.91 gals	1,322.00 gals	15.4%	0.8%
Acid inhibitor	7.95 gals	9.18 gals	9.25 gals	15.4%	0.8%
Gelling Agent	87.75 gals	39.11 gals	40.8 gals	-55.4%	4.3%
Breaker	17.55 lbs	7.82 lbs	7.00 lbs	-55.4%	-10.5%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,053 lbs	26,920 lbs	-3.5%	3.3%
40/70 White	243,000 lbs	252,021 lbs	243,340 lbs	3.7%	-3.4%

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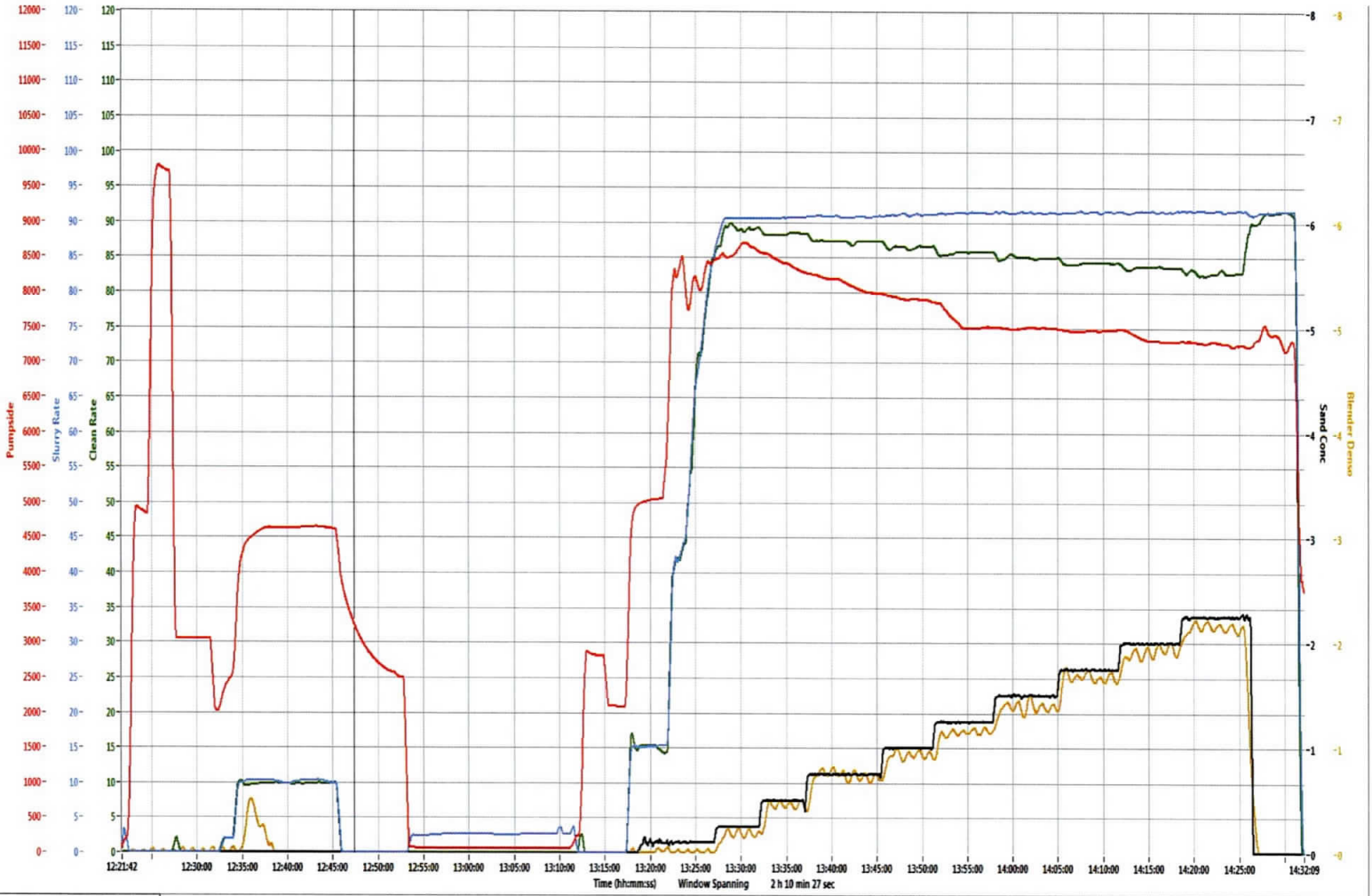


Customer: Blue Ridge Mountain Resc

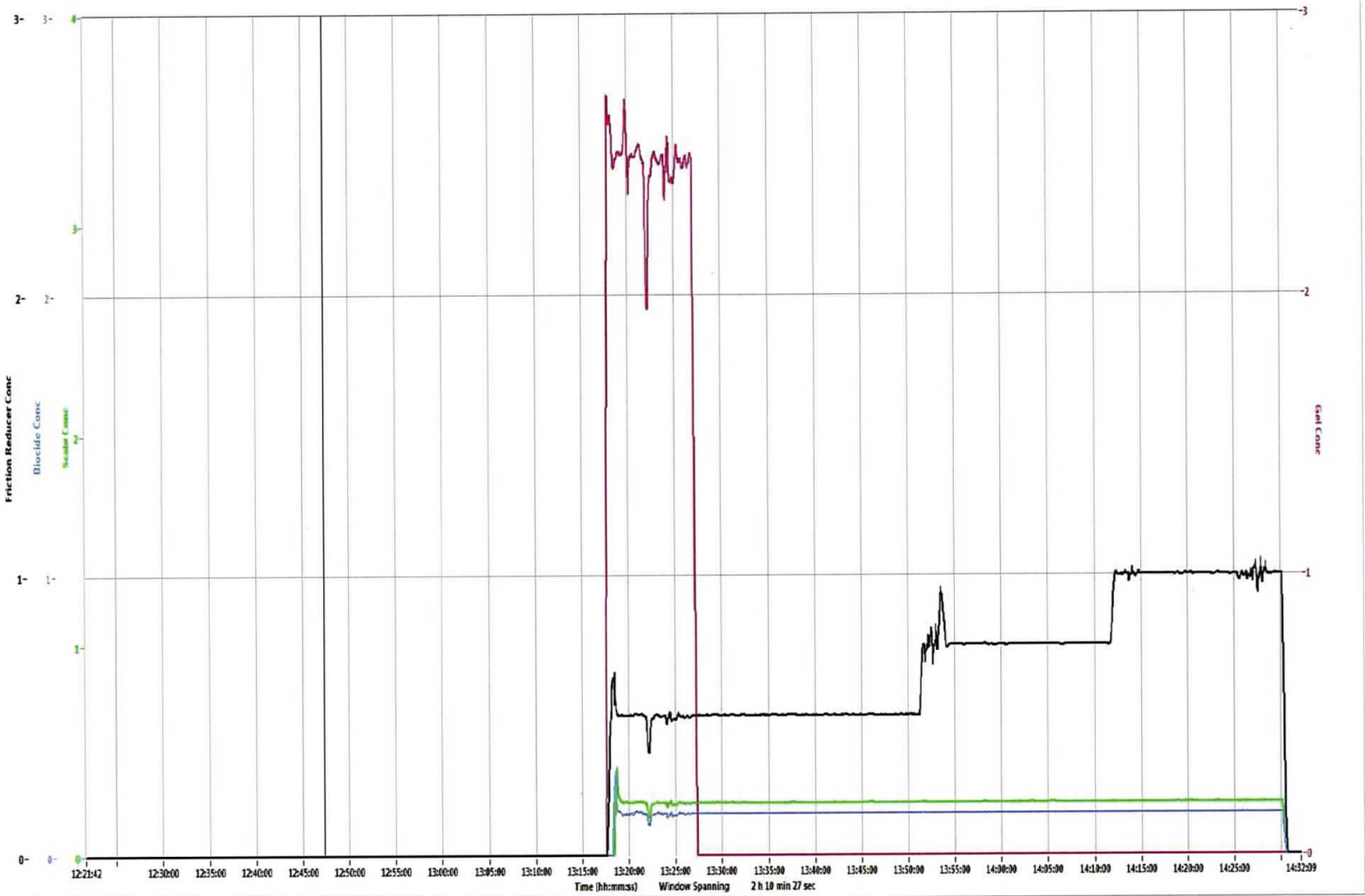
Well: Meckley 1401
 Date: 3/9/2018
 Stage: 23rd
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assesment / Quality Control

Chemical Volume					
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	178.76 gals	172.00 gals	-4%	172.00 gals
Biocide	0.15 gpt	37.74 gals	35.8 gals	-5%	35.8 gals
Scale Inhibitor	0.25 gpt	62.9 gals	66.3 gals	5%	66.3 gals
Acid	28 %	1,310.91 gals	1,322.00 gals	1%	1,322.00 gals
Acid Inhibitor	7.00 gpt	9.18 gals	9.25 gals	1%	9.25 gals
Gelling Agent	2.5 gpt	39.11 gals	40.8 gals	4%	40.8 gals
Breaker	0.5 ppt	7.82 lbs	7.00 lbs	-10%	7.00 lbs



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 24th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 24th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Joseph Bishop
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2 " 20. #	P-110	2,471 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	9,644 ft	9,765 ft	217 bbls	214 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,913 bbls	Friction Reducer :	161.00 gals		
Clean Volume :	5,887 bbls	Biocide :	35.00 gals		
Raw Acid Volume :	26 bbls	Scale Inhibitor :	64.50 gals		
Slickwater Volume :	5,355 bbls	28% HCl Acid :	1070.00 gals		
Gelled Volume :	474 bbls	Acid Inhibitor :	7.49 gals		
Proppant Laden :	5,507 bbls	Gelling Agent :	51.50 gals		
Slurry Volume :	6,251 bbls	Breaker :	10.00 lbs		
Wireline Volume :	195 bbls	X-linker :			
Total Fluid To Recover :	6,082 bbls				
Proppant Totals					
100 Mesh :	26,920 lbs				
40/70 White :	237,500 lbs				
Total :	264,420 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,289 psi	Opening Pressure	2,002 psi
Minimum	6,452 psi	Minimum	53.4 bpm	Frac ∇	1.05 psi/ft	Open ∇	0.75 psi/ft
Maximum	8,390 psi	Maximum	91.3 bpm	Pump Time	1.63 Hrs	ISIP	3,822 psi
Average	7,334 psi	Average	86.7 bpm	HHP	15,584 HHP	Closing Pressure	3,408 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,774					11:07
Open Well	FW		2,002					11:11
Start Injection	FW		1,991	32.8				11:11
Start 15 % HCL Acid	ACID	11.0	4,803	25.7	54			11:20
Pad	SW	11.6	4,780	38.0	69			11:22
Start 15 % HCL Acid	ACID	10.6	4,713	26.3	111			11:30
Pad	SW	10.0	4,762	46.5	134	14		11:32
Increase Gel to 2.50 gpt	SW/Gel	15.3	5,206		176		2	11:37
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.2	5,334	362.0	178	1,529	14	11:37
Ball seat (Breakdown)	SW/Gel	15.2	5,289		179		19	11:37
Acid on Formation	SW/Gel	48.7	8,074		271		409	11:40
Start 0.25 ppa 100 Mesh Sand	SW/Gel	72.8	7,125	425.2	541	4,481	1,543	11:43
Decrease Gel to 0.00 gpt.	SW	66.9	6,857		652		2,678	11:45
Start 0.50 ppa 100 Mesh Sand	SW	75.2	7,146	445.4	972	9,300	6,024	11:50
Start 0.75 ppa 100 Mesh Sand	SW	85.9	7,790	360.2	1,430	10,997	15,325	11:55
Start 0.75 ppa 40/70 White	SW	90.3	7,926	381.7	1,805	12,024	26,321	11:59
Start 1.00 ppa 40/70 White	SW	90.3	7,724	496.0	2,203	20,743	38,345	12:04
Start 1.25 ppa 40/70 White	SW	90.3	7,590	577.3	2,726	30,304	59,088	12:10
Start 1.50 ppa 40/70 White	SW	90.5	7,444	615.5	3,341	38,797	89,392	12:16
Increase FR to 0.75 gpt	SW	90.6	7,499		3,354		90,185	12:17
Start 1.75 ppa 40/70 White	SW	90.9	7,059	565.9	4,004	41,622	128,189	12:24
Start 2.00 ppa 40/70 White	SW	91.1	7,147	559.0	4,620	46,969	169,812	12:31
Increase FR to 1.00 gpt	SW	90.9	7,126		4,634		170,857	12:31
Start 2.25 ppa 40/70 White	SW	91.0	6,884	634.2	5,236	50,181	216,781	12:37
Flush	SW	90.6	7,150	321.6	5,922		266,961	12:45
Shutdown (Final)	SW	0.2	3,796		6,251		266,961	12:49



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 24th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,334 psi	0.0%	-26.7%
Average Slurry Rate	85.0 bpm	85.0 bpm	86.7 bpm	0.0%	2.0%
Average Horsepower	20,833 HHP	20,833 HHP	15,584 HHP	0.0%	-25.2%
Average Perf Friction	776 psi	776 psi	807 psi	0.0%	4.0%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.8%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	117 bbls	117 bbls	58.9%	0.0%
15% HCl Acid	78.6 bbls	52.0 bbls	52.0 bbls	-33.8%	0.0%
Clean	5,700 bbls	5,887 bbls	5,887 bbls	3.3%	0.0%
Fresh Water	5,700 bbls	5,887 bbls	5,887 bbls	3.3%	0.0%
Slickwater	4,762 bbls	5,355 bbls	5,355 bbls	12.5%	0.0%
Linear Gel	836 bbls	474 bbls	474 bbls	-43.3%	0.0%
Proppant Laden	5,333 bbls	5,507 bbls	5,507 bbls	3.3%	0.0%
Flush	214 bbls	321.6 bbls	321.6 bbls	50.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.39 gals	166.9 gals	161.00 gals	-30.3%	-3.5%
Biocide	35.91 gals	37.09 gals	35.00 gals	3.3%	-5.6%
Scale Inhibitor	59.85 gals	61.81 gals	64.5 gals	3.3%	4.4%
Acid	1,136.36 gals	1,103.03 gals	1,070.00 gals	-2.9%	-3.0%
Acid inhibitor	7.95 gals	7.72 gals	7.49 gals	-2.9%	-3.0%
Gelling Agent	87.75 gals	49.73 gals	51.5 gals	-43.3%	3.6%
Breaker	17.55 lbs	9.95 lbs	10.00 lbs	-43.3%	0.5%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,321 lbs	26,920 lbs	-2.5%	2.3%
40/70 White	243,000 lbs	240,640 lbs	237,500 lbs	-1.0%	-1.3%

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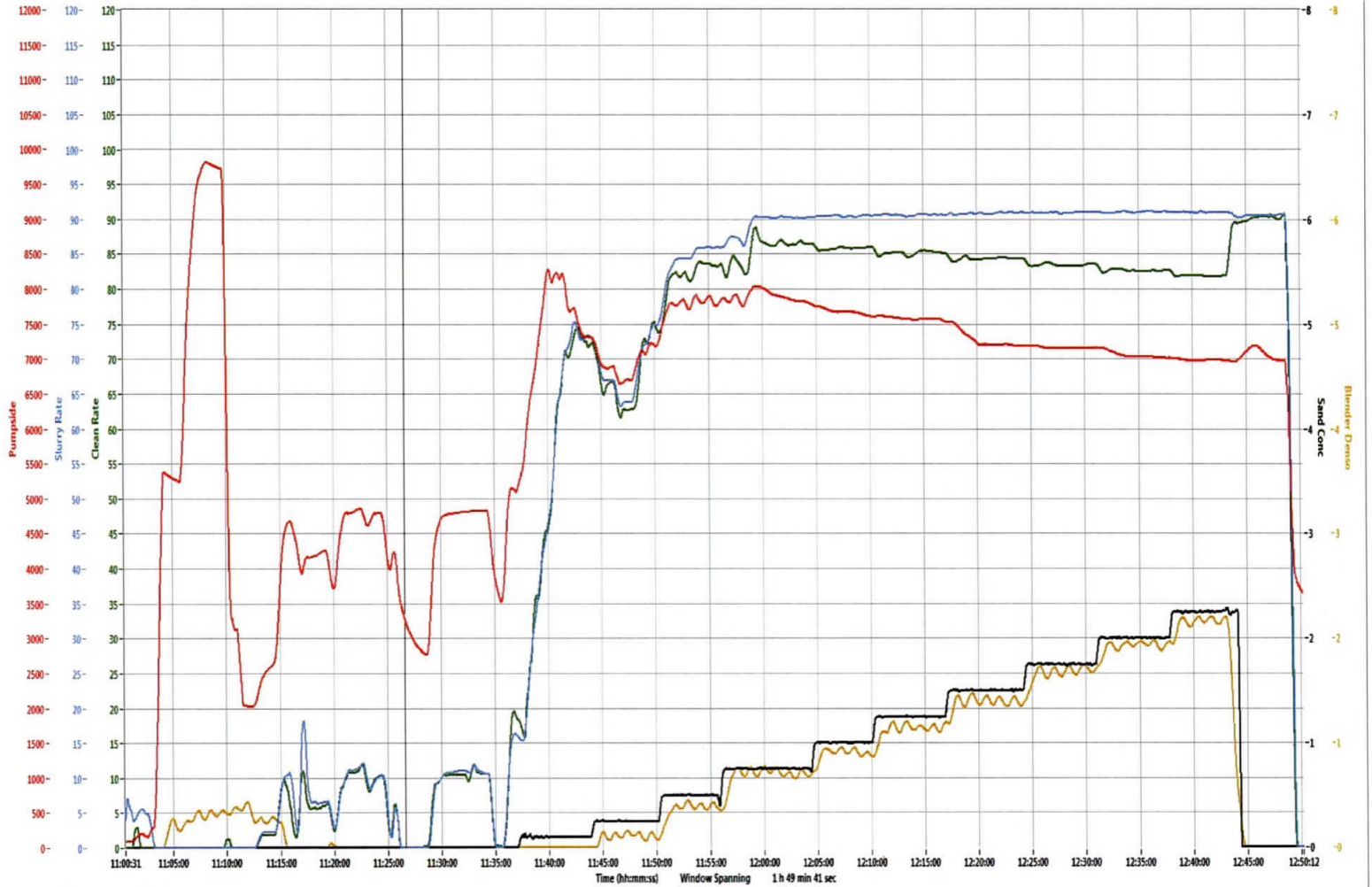
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 24th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

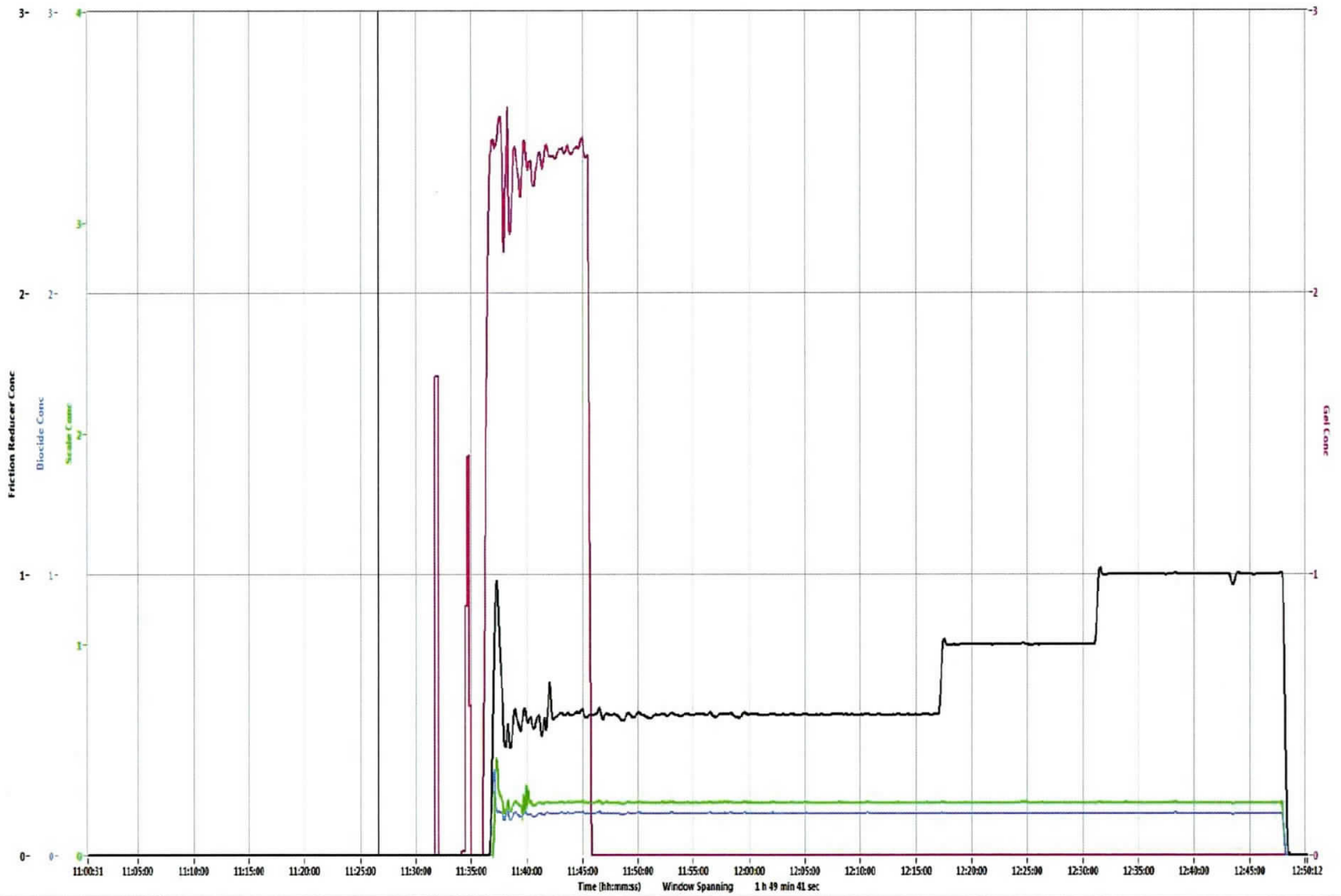
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	166.9 gals	161.00 gals	-4%	161.00 gals
Biocide	0.15 gpt	37.09 gals	35.00 gals	-6%	35.00 gals
Scale Inhibitor	0.25 gpt	61.81 gals	64.5 gals	4%	64.5 gals
Acid	28 %	1,103.03 gals	1,070.00 gals	-3%	1,070.00 gals
Acid Inhibitor	7.00 gpt	7.72 gals	7.49 gals	-3%	7.49 gals
Gelling Agent	2.5 gpt	49.73 gals	51.5 gals	4%	51.5 gals
Breaker	0.5 ppt	9.95 lbs	10.00 lbs	1%	10.00 lbs



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 25th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Brad Truman



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 25th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report									
Customer Representative		Mr. Chad Barton			Stingray Representative		Anthony Thomas		
Wellbore Information									
Perf Size	# of Perforations	Tubular Type		Tubular Grade		Length of Lateral		Length of Vertical	
0.41 in.	30	5 - 1/2" 20. #		P-110		2,321 ft		7,294 ft	
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf		Flush to Top Perf		Plug Depth	
6,236 ft	9,494 ft	9,615 ft		213 bbbls		211 bbbls		6,236 ft	
Job Summary									
Fluid Volumes		Chemical Volumes			Notes:			Time:	
Total Fluid Volume :	5,988 bbbls	Friction Reducer :	124.00 gals		100% of total proppant placed.				
Clean Volume :	5,962 bbbls	Biocide :	37.50 gals						
Raw Acid Volume :	27 bbbls	Scale Inhibitor :	63.00 gals		FR started at 0.50 gpt per Mr. Chad Barton				
Slickwater Volume :	5,699 bbbls	28% HCl Acid :	1060.00 gals						
Gelled Volume :	215 bbbls	Acid Inhibitor :	7.42 gals						
Proppant Laden :	5,618 bbbls	Gelling Agent :	22.50 gals						
Slurry Volume :	6,326 bbbls	Breaker :	4.00 lbs						
Wireline Volume :	169 bbbls	X-linker :							
Total Fluid To Recover :	6,131 bbbls								
Proppant Totals									
100 Mesh :	27,000 lbs								
40/70 White :	243,120 lbs								
Total :	270,120 lbs								
Treating Pressures		Injection Rates			Treatment Values		Shut-In Values		
Operator's Max	10,000 psi	Desired	85.0 bpm		Breakdown	6,656 psi		Opening Pressure	1,684 psi
Minimum	6,971 psi	Minimum	85.0 bpm		Frac ∇	1.00 psi/ft		Open ∇	0.70 psi/ft
Maximum	8,362 psi	Maximum	86.4 bpm		Pump Time	1.49 Hrs		ISIP	3,519 psi
Average	7,339 psi	Average	85.7 bpm		HHP	15,415 HHP		Closing Pressure	3,185 psi
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)	
Pressure Test	FW		9,904					2:32	
Open Well	FW		1,684					2:39	
Start Injection	FW	0.1	1,769	21.7				2:41	
Start 15 % HCL Acid	ACID	15.6	4,633	25.7	19			2:45	
Pad	SW	16.0	4,771	26.8	45			2:46	
Start 15 % HCL Acid	ACID	15.6	4,826	26.9	72			2:48	
Pad	SW	15.9	4,884	72.7	100			2:50	
Increase Gel to 2.50 gpt	SW/Gel	18.6	5,200		138			2:53	
Start 0.10 ppa 100 Mesh Sand	SW/Gel	19.6	5,425	358.4	172	1,441	2	2:55	
Ball seat (Breakdown)	SW/Gel	19.5	6,656		192		69	2:56	
Acid on Formation	SW/Gel	40.7	8,551		268		343	2:58	
Decrease Gel to 0.00 gpt	SW	68.9	7,730		348		670	3:00	
Start 0.25 ppa 100 Mesh Sand	SW	85.1	8,349	433.4	528	4,599	1,443	3:02	
Start 0.50 ppa 100 Mesh Sand	SW	85.4	7,719	468.8	969	9,827	6,042	3:07	
Start 0.75 ppa 100 Mesh Sand	SW	85.5	7,507	371.4	1,450	11,714	15,869	3:13	
Start 0.75 ppa 40/70 White	SW	85.4	7,507	380.2	1,836	11,992	27,582	3:17	
Start 1.00 ppa 40/70 White	SW	85.6	7,327	523.9	2,232	22,032	39,574	3:22	
Start 1.25 ppa 40/70 White	SW	85.5	7,210	580.1	2,784	30,503	61,606	3:28	
Start 1.50 ppa 40/70 White	SW	85.7	7,183	593.3	3,404	37,413	92,109	3:36	
Start 1.75 ppa 40/70 White	SW	85.9	7,087	619.3	4,043	45,538	129,523	3:43	
Start 2.00 ppa 40/70 White	SW	85.9	7,294	575.7	4,718	48,389	175,061	3:51	
Start 2.25 ppa 40/70 White	SW	86.0	7,201	613.7	5,354	47,536	223,450	3:58	
Flush	SW	85.7	7,206	296.4	6,022		270,985	4:06	
Shutdown (Final)	SW		3,565		6,326		270,985	4:10	



Customer: Blue Ridge Mountain Res.

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 25th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,339 psi	0.0%	-26.6%
Average Slurry Rate	85.0 bpm	85.0 bpm	85.7 bpm	0.0%	0.8%
Average Horsepower	20,833 HHP	20,833 HHP	15,415 HHP	0.0%	-26.0%
Average Perf Friction	776 psi	776 psi	789 psi	0.0%	1.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.00 psi/ft	0.0%	-9.3%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	121 bbls	121 bbls	64.2%	0.0%
15% HCl Acid	78.6 bbls	52.6 bbls	52.6 bbls	-33.1%	0.0%
Clean	5,696 bbls	5,962 bbls	5,962 bbls	4.7%	0.0%
Fresh Water	5,696 bbls	5,962 bbls	5,962 bbls	4.7%	0.0%
Slickwater	4,758 bbls	5,699 bbls	5,699 bbls	19.8%	0.0%
Linear Gel	836 bbls	215 bbls	215 bbls	-74.2%	0.0%
Proppant Laden	5,333 bbls	5,618 bbls	5,618 bbls	5.3%	0.0%
Flush	211 bbls	296.4 bbls	296.4 bbls	40.6%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.25 gals	124.76 gals	124.00 gals	-47.9%	-0.6%
Biocide	35.89 gals	37.56 gals	37.5 gals	4.7%	-0.2%
Scale Inhibitor	59.81 gals	62.6 gals	63.00 gals	4.7%	0.6%
Acid	1,136.36 gals	1,115.76 gals	1,060.00 gals	-1.8%	-5.0%
Acid Inhibitor	7.95 gals	7.81 gals	7.42 gals	-1.8%	-5.0%
Gelling Agent	87.75 gals	22.6 gals	22.5 gals	-74.2%	-0.4%
Breaker	17.55 lbs	4.52 lbs	4.00 lbs	-74.2%	-11.5%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,580 lbs	27,000 lbs	2.1%	-2.1%
40/70 White	243,000 lbs	243,403 lbs	243,120 lbs	0.2%	-0.1%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 25th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Quality Assessment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	124.76 gals	124.00 gals	-1%	124.00 gals
Biocide	0.15 gpt	37.56 gals	37.5 gals	0%	37.5 gals
Scale Inhibitor	0.25 gpt	62.6 gals	63.00 gals	1%	63.00 gals
Acid	28 %	1,115.76 gals	1,060.00 gals	-5%	1,060.00 gals
Acid Inhibitor	7.00 gpt	7.81 gals	7.42 gals	-5%	7.42 gals
Gelling Agent	2.5 gpt	22.6 gals	22.5 gals	0%	22.5 gals
Breaker	0.5 ppt	4.52 lbs	4.00 lbs	-12%	4.00 lbs

Fluid Testing- Mixed Water Analysis

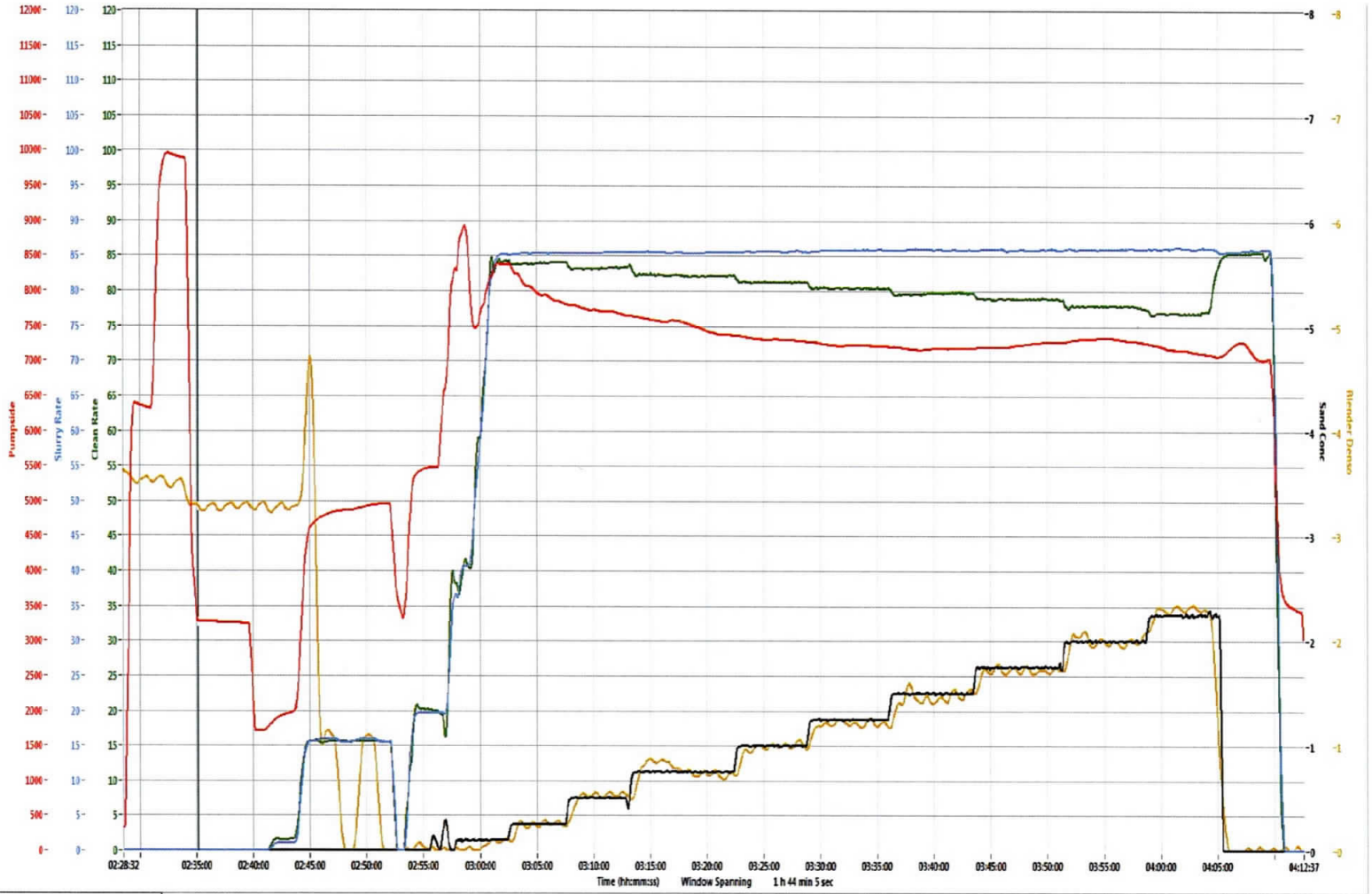
pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	50.1 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		

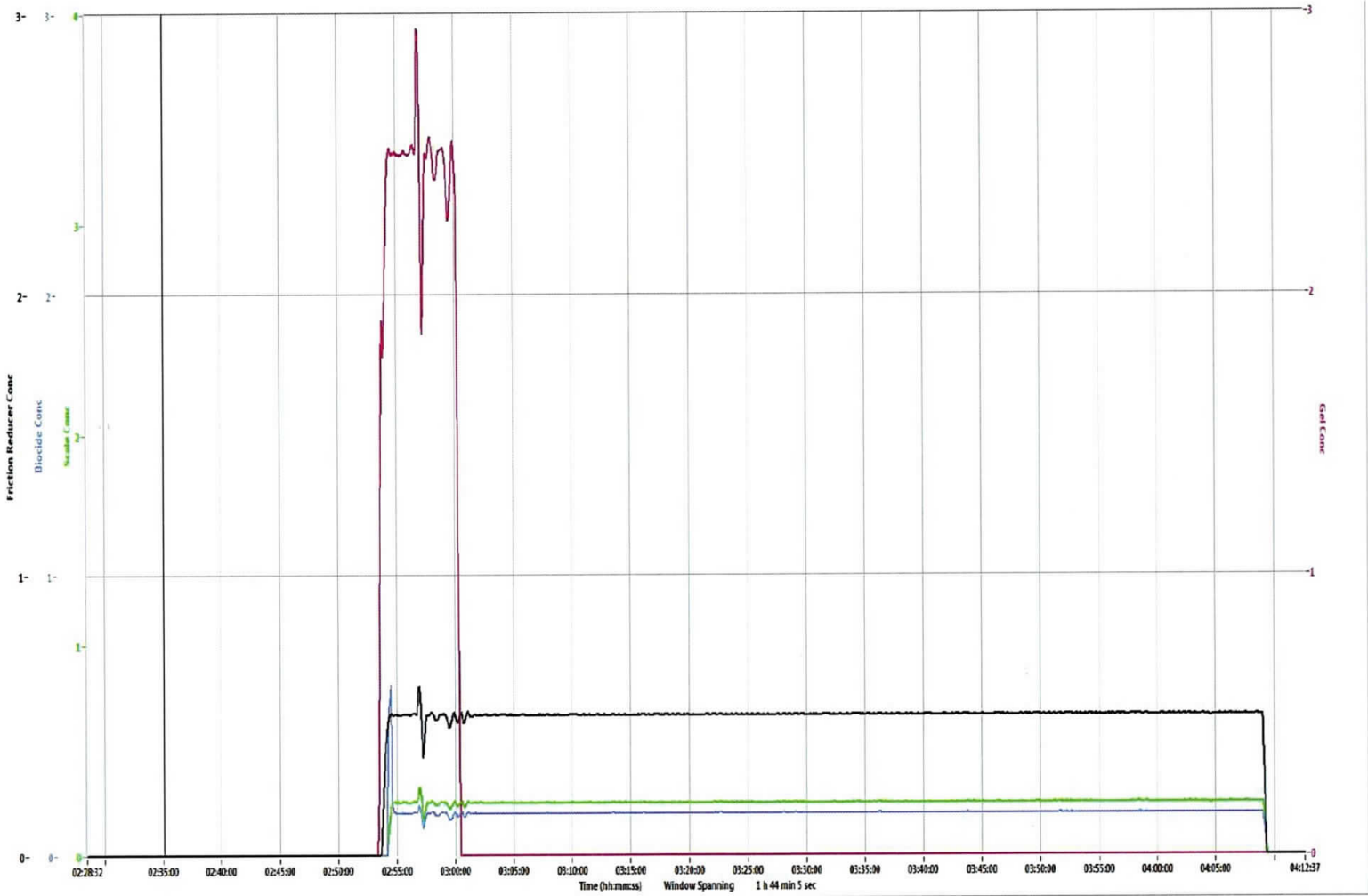
Sand Sieve Analysis Sand Box: 676

100 Mesh Mesh Screen Sizes	Weight Retained	% Retained	
40	<= 0.1%	0.09	0.03%
50	>= 90%	6.51	1.91%
60		42.31	12.44%
70		284.74	83.74%
100		5.10	1.50%
140		1.27	0.37%
Pan	<= 1%	0.00	0.00%
Total Sample Weight:	340 grams	100.0%	

Sand Sieve Analysis Sand Box: 50188

40/70 Mesh Screen Sizes	Weight Retained	% Retained	
30	<= 0.1%	0.21	0.05%
40	>= 90%	18.93	4.18%
50		317.48	70.17%
60		91.63	20.25%
70		18.61	4.11%
100	<= 1%	5.19	1.15%
Pan		0.41	0.09%
Total Sample Weight:	452 grams	100.0%	





Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 26th Stage of 40

Marcellus Formation

Tyler

API #: 34-167-29724

Prepared By:
Winston West

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 26th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Joseph Bishop
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	2,171 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	9,344 ft	9,465 ft	210 bbbls	207 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,016 bbbls	Friction Reducer :	170.00 gals		
Clean Volume :	5,986 bbbls	Biocide :	35.50 gals		
Raw Acid Volume :	29 bbbls	Scale Inhibitor :	65.00 gals		
Slickwater Volume :	5,514 bbbls	28% HCl Acid :	1097.00 gals		
Gelled Volume :	436 bbbls	Acid Inhibitor :	7.68 gals		
Proppant Laden :	5,613 bbbls	Gelling Agent :	48.80 gals		
Slurry Volume :	6,341 bbbls	Breaker :	9.00 lbs		
Wireline Volume :	150 bbbls	X-linker :			
Total Fluid To Recover :	6,136 bbbls				
Proppant Totals					
100 Mesh :	26,880 lbs				
40/70 White :	244,260 lbs				
Total :	271,140 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,868 psi	Opening Pressure	2,247 psi
Minimum	7,119 psi	Minimum	84.5 bpm	Frac V	1.08 psi/ft	Open V	0.79 psi/ft
Maximum	8,389 psi	Maximum	91.1 bpm	Pump Time	1.49 Hrs	ISIP	4,008 psi
Average	7,566 psi	Average	90.1 bpm	HHP	16,707 HHP	Closing Pressure	3,631 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Pressure Test	FW		9,721					6:55
Open Well	FW		2,247					7:03
Start Injection	FW		2,196	8.6				7:03
Start 15 % HCL Acid	ACID	10.5	4,380	26.4	8			7:06
Pad	SW	11.0	5,027	26.0	35			7:09
Start 15 % HCL Acid	ACID	10.5	5,062	31.3	61			7:11
Pad	SW	10.9	5,080	45.6	93			7:14
Increase Gel to 2.50 gpt	SW/Gel	13.2	5,176		120			7:18
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.4	5,384	356.5	138	1,543	5	7:19
Ball seat (Breakdown)	SW/Gel	15.4	5,868		176		175	7:21
Acid on Formation	SW/Gel	49.5	7,992		258		525	7:24
Start 0.25 ppa 100 Mesh Sand	SW/Gel	83.7	8,235	481.8	492	5,112	1,547	7:27
Decrease Gel to 0.00 gpt	SW	85.3	8,148		554		2,188	7:28
Start 0.50 ppa 100 Mesh Sand	SW	84.6	8,028	406.8	982	8,521	6,659	7:33
Start 0.75 ppa 100 Mesh Sand	SW	90.0	8,117	382.6	1,400	11,645	15,180	7:38
Start 0.75 ppa 40/70 White	SW	90.1	7,935	378.9	1,797	11,924	26,825	7:42
Start 1.00 ppa 40/70 White	SW	90.2	7,681	581.3	2,190	24,359	38,748	7:47
Start 1.25 ppa 40/70 White	SW	90.4	7,576	572.0	2,802	30,046	63,107	7:53
Start 1.50 ppa 40/70 White	SW	90.7	7,543	584.4	3,412	36,813	93,154	8:00
Increase FR to 0.75 gpt	SW	90.6	7,559		3,427		93,991	8:00
Start 1.75 ppa 40/70 White	SW	90.9	7,264	584.5	4,043	42,953	129,967	8:07
Start 2.00 ppa 40/70 White	SW	90.8	7,283	585.1	4,680	49,142	172,919	8:14
Increase FR to 1.00 gpt	SW	90.7	7,283		4,698		174,295	8:14
Start 2.25 ppa 40/70 White	SW	90.8	7,225	627.6	5,323	47,069	222,062	8:21
Flush	SW	90.5	7,411	336.2	5,997		269,131	8:29
Shutdown (Final)	SW	7.1	4,242		6,341		269,131	8:33



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 26th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

Proposed vs Actual

Wellbore Hydrology					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,566 psi	0.0%	-24.3%
Average Slurry Rate	85.0 bpm	85.0 bpm	90.1 bpm	0.0%	6.0%
Average Horsepower	20,833 HHP	20,833 HHP	16,707 HHP	0.0%	-19.8%
Average Perf Friction	776 psi	776 psi	872 psi	0.0%	12.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.08 psi/ft	0.0%	-2.1%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	80 bbls	80 bbls	8.7%	0.0%
15% HCl Acid	78.6 bbls	57.7 bbls	57.7 bbls	-26.6%	0.0%
Clean	5,693 bbls	5,986 bbls	5,986 bbls	5.2%	0.0%
Fresh Water	5,693 bbls	5,986 bbls	5,986 bbls	5.2%	0.0%
Slickwater	4,755 bbls	5,514 bbls	5,514 bbls	16.0%	0.0%
Linear Gel	836 bbls	436 bbls	436 bbls	-47.9%	0.0%
Proppant Laden	5,333 bbls	5,613 bbls	5,613 bbls	5.2%	0.0%
Flush	207 bbls	336.2 bbls	336.2 bbls	62.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	239.11 gals	170.07 gals	170.00 gals	-28.9%	0.0%
Biocide	35.87 gals	37.71 gals	35.5 gals	5.1%	-5.9%
Scale Inhibitor	59.78 gals	62.86 gals	65.00 gals	5.2%	3.4%
Acid	1,136.36 gals	1,223.94 gals	1,097.00 gals	7.7%	-10.4%
Acid Inhibitor	7.95 gals	8.57 gals	7.68 gals	7.7%	-10.4%
Gelling Agent	87.75 gals	45.76 gals	48.8 gals	-47.9%	6.6%
Breaker	17.55 lbs	9.15 lbs	9.00 lbs	-47.9%	-1.6%
X-Linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,820 lbs	26,880 lbs	-0.7%	0.2%
40/70 White	243,000 lbs	242,306 lbs	244,260 lbs	-0.3%	0.8%

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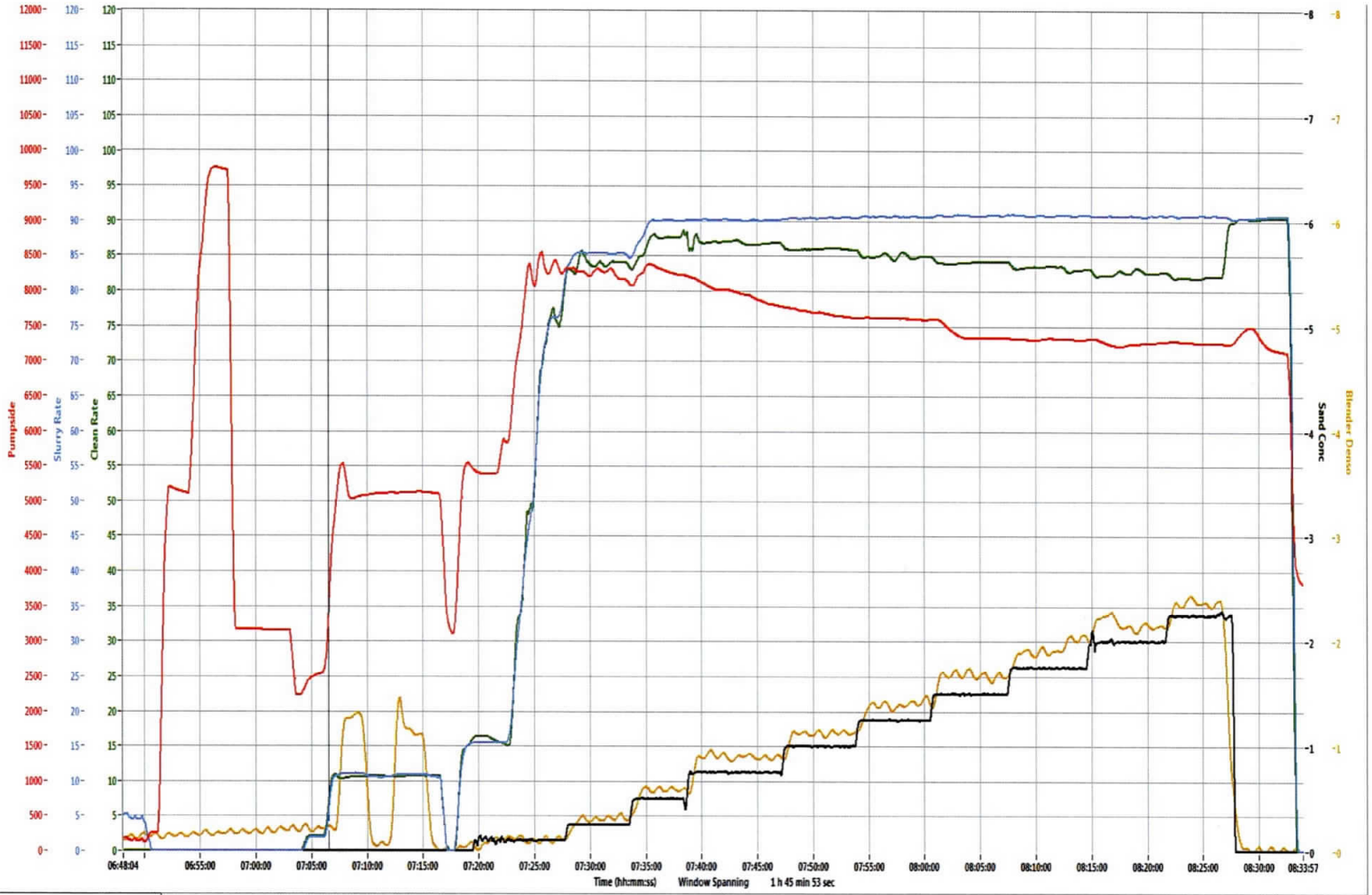
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 26th
 Formation: Marcellus
 Location: Tyler
 API Number: 34-167-29724

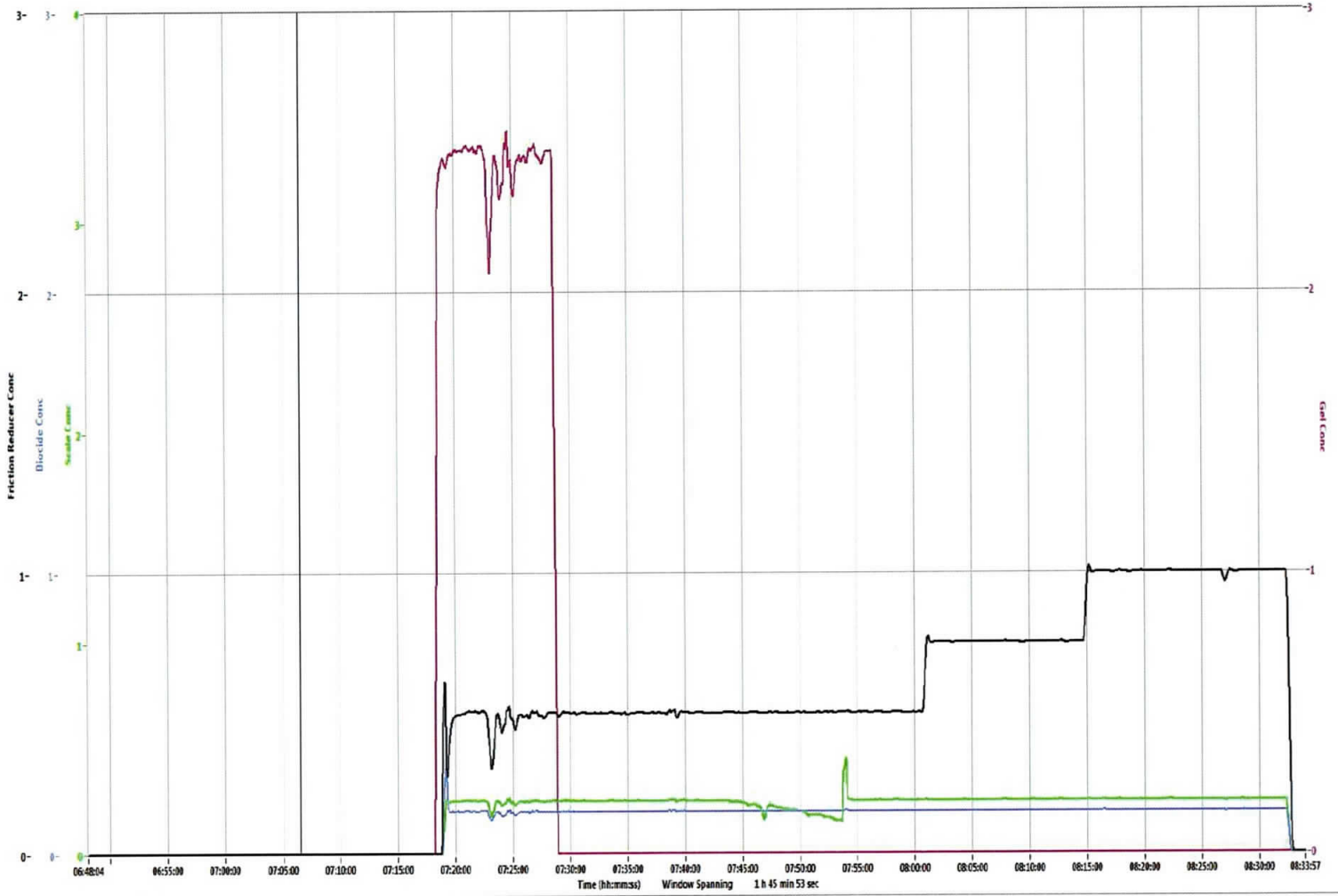
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	170.07 gals	170.00 gals	0%	170.00 gals
Biocide	0.15 gpt	37.71 gals	35.5 gals	-6%	35.5 gals
Scale Inhibitor	0.25 gpt	62.86 gals	65.00 gals	3%	65.00 gals
Acid	28 %	1,223.94 gals	1,097.00 gals	-10%	1,097.00 gals
Acid Inhibitor	7.00 gpt	8.57 gals	7.68 gals	-10%	7.68 gals
Gelling Agent	2.5 gpt	45.76 gals	48.8 gals	7%	48.8 gals
Breaker	0.5 ppt	9.15 lbs	9.00 lbs	-2%	9.00 lbs



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 27th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

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Prepared By:
Brad Truman



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 27th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report									
Customer Representative		Mr. Chad Barton			Stingray Representative		Ivan McClain		
Wellbore Information									
Perf Size	# of Perforations	Tubular Type		Tubular Grade		Length of Lateral		Length of Vertical	
0.41 in.	30	5 - 1/2" 20. #		P-110		2,021 ft		7,294 ft	
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf		Flush to Top Perf		Plug Depth	
6,236 ft	9,194 ft	9,315 ft		207 bbls		204 bbls		6,236 ft	
Job Summary									
Fluid Volumes		Chemical Volumes			Notes:			Time:	
Total Fluid Volume :	6,091 bbls	Friction Reducer :	169.00 gals		100.9% of total proppant placed.				
Clean Volume :	6,064 bbls	Biocide :	35.40 gals						
Raw Acid Volume :	27 bbls	Scale Inhibitor :	63.80 gals		FR started at 0.50 gpt per Mr. Chad Barton				
Slickwater Volume :	5,452 bbls	28% HCl Acid :	1141.00 gals						
Gelled Volume :	563 bbls	Acid Inhibitor :	7.99 gals						
Proppant Laden :	5,705 bbls	Gelling Agent :	55.00 gals						
Slurry Volume :	6,369 bbls	Breaker :	10.00 lbs						
Wireline Volume :	145 bbls	X-linker :							
Total Fluid To Recover :	6,209 bbls								
Proppant Totals									
100 Mesh :	26,900 lbs								
40/70 White :	245,560 lbs								
Total :	272,460 lbs								
Treating Pressures		Injection Rates		Treatment Values		Shut-In Values			
Operator's Max	10,000 psi	Desired	85.0 bpm		Breakdown	5,867 psi		Opening Pressure	1,951 psi
Minimum	6,990 psi	Minimum	45.2 bpm		Frac V	1.05 psi/ft		Open V	0.75 psi/ft
Maximum	8,795 psi	Maximum	90.7 bpm		Pump Time	1.51 Hrs		ISIP	3,865 psi
Average	7,619 psi	Average	88.7 bpm		HHP	16,564 HHP		Closing Pressure	3,540 psi
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)	
Pressure Test	FW		10,060					6:43	
Open Well	FW		1,951					6:45	
Start Injection	FW		1,949	22.5				6:45	
Start 15 % HCL Acid	ACID	10.0	4,839	30.2	23			6:49	
Pad	SW	10.5	4,871	24.7	55			6:52	
Start 15 % HCL Acid	ACID	9.7	4,856	23.4	81			6:55	
Pad	SW	10.5	4,907	148.8	105			6:57	
Increase Gel to 2.50 gpt	SW/Gel	11.8	5,036		130			7:01	
Ball seat (Breakdown)	SW/Gel	15.2	5,867		179			7:04	
Start 0.10 ppa 100 Mesh Sand	SW/Gel	42.7	8,507	371.6	254	1,338	673	7:07	
Acid on Formation	SW/Gel	45.8	8,100		269		750	7:07	
Start 0.25 ppa 100 Mesh Sand	SW/Gel	89.2	8,681	565.5	623	6,566	2,011	7:12	
Decrease Gel to 0.00 gpt	SW	89.2	8,699		632		2,088	7:12	
Start 0.50 ppa 100 Mesh Sand	SW	89.6	8,362	411.1	1,193	8,756	8,577	7:18	
Start 0.75 ppa 100 Mesh Sand	SW	89.5	8,090	387.8	1,612	12,206	17,333	7:23	
Start 0.75 ppa 40/70 White	SW	89.7	8,014	354.4	2,012	11,219	29,539	7:27	
Start 1.00 ppa 40/70 White	SW	89.9	7,646	503.8	2,378	21,162	40,758	7:31	
Start 1.25 ppa 40/70 White	SW	90.0	7,595	574.2	2,906	30,270	61,920	7:37	
Increase FR to 0.75 gpt	SW	90.2	7,529		3,151		74,111	7:40	
Start 1.50 ppa 40/70 White	SW	90.3	7,281	565.5	3,514	35,631	92,190	7:44	
Start 1.75 ppa 40/70 White	SW	90.3	7,234	577.5	4,120	42,611	127,822	7:51	
Increase FR to 1.00 gpt	SW	90.3	7,251		4,476		152,003	7:55	
Increase Gel to 2.50 gpt	SW/Gel	90.3	7,315		4,690		166,671	7:57	
Start 2.00 ppa 40/70 White	SW/Gel	90.2	7,209	567.4	4,744	47,508	170,432	7:58	
Decrease Gel to 0.00 gpt	SW	90.2	7,181		4,753		171,072	7:58	
Start 2.25 ppa 40/70 White	SW	90.3	7,100	653.0	5,360	50,506	217,940	8:04	
Flush	SW	89.9	7,194	309.2	6,054		268,446	8:12	
Shutdown (Final)	SW		3,820		6,369		268,446	8:16	



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 27th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,619 psi	0.0%	-23.8%
Average Slurry Rate	85.0 bpm	85.0 bpm	88.7 bpm	0.0%	4.4%
Average Horsepower	20,833 HHP	20,833 HHP	16,564 HHP	0.0%	-20.5%
Average Perf Friction	776 psi	776 psi	845 psi	0.0%	8.9%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	196 bbls	196 bbls	165.5%	0.0%
15% HCl Acid	78.6 bbls	53.6 bbls	53.6 bbls	-31.8%	0.0%
Clean	5,690 bbls	6,064 bbls	6,064 bbls	6.6%	0.0%
Fresh Water	5,690 bbls	6,064 bbls	6,064 bbls	6.6%	0.0%
Slickwater	4,752 bbls	5,452 bbls	5,452 bbls	14.7%	0.0%
Linear Gel	836 bbls	563 bbls	563 bbls	-32.6%	0.0%
Proppant Laden	5,333 bbls	5,705 bbls	5,705 bbls	7.0%	0.0%
Flush	204 bbls	309.2 bbls	309.2 bbls	51.5%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	238.97 gals	177.13 gals	169.00 gals	-25.9%	-4.6%
Biocide	35.85 gals	38.2 gals	36.4 gals	6.6%	-4.7%
Scale Inhibitor	59.74 gals	63.67 gals	63.8 gals	6.6%	0.2%
Acid	1,136.36 gals	1,136.97 gals	1,141.00 gals	0.1%	0.4%
Acid Inhibitor	7.95 gals	7.96 gals	7.99 gals	0.1%	0.4%
Gelling Agent	87.75 gals	59.12 gals	55.00 gals	-32.6%	-7.0%
Breaker	17.55 lbs	11.82 lbs	10.00 lbs	-32.6%	-15.4%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	28,866 lbs	26,900 lbs	6.9%	-6.8%
40/70 White	243,000 lbs	238,907 lbs	245,560 lbs	-1.7%	2.8%

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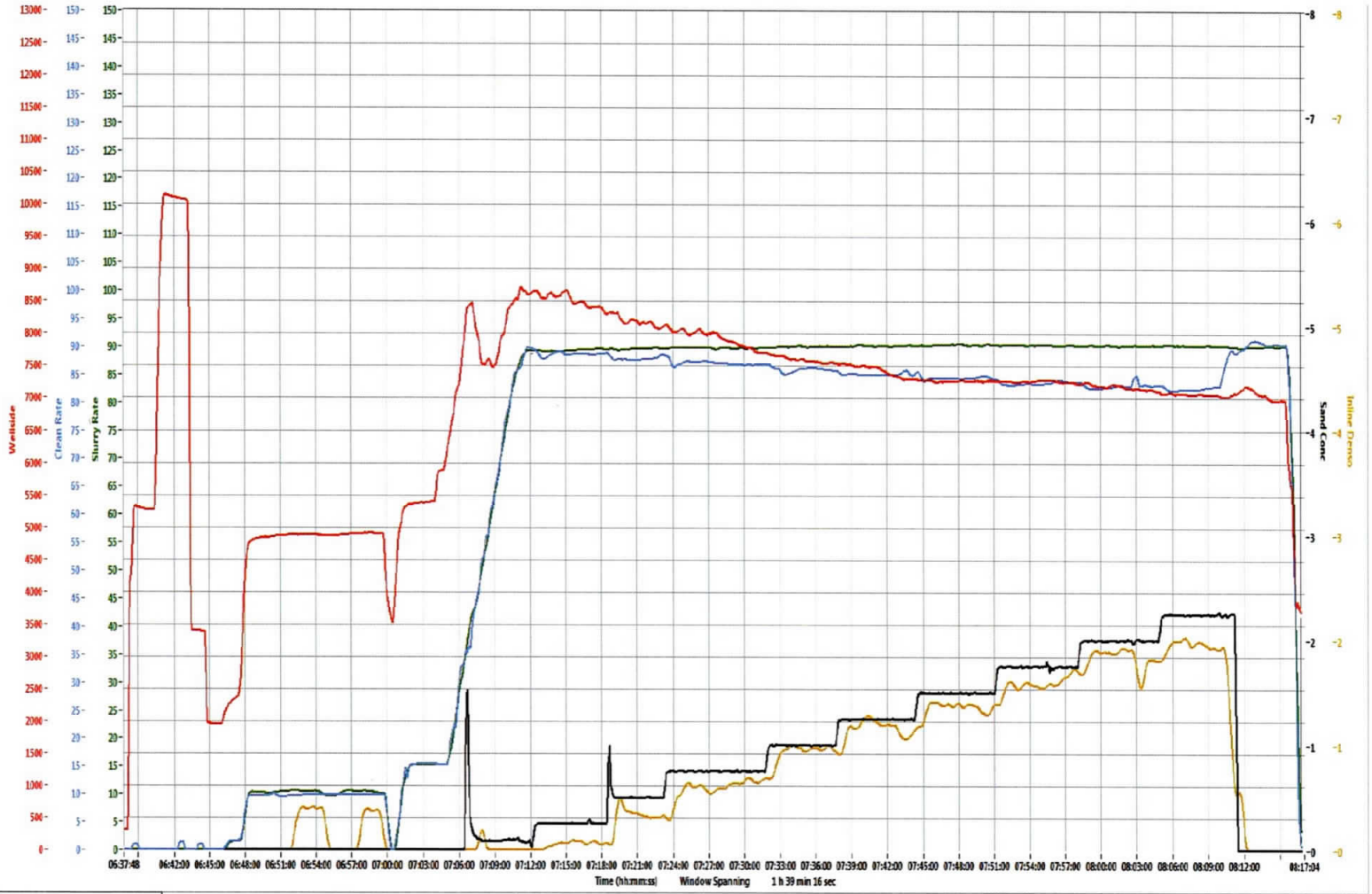
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 27th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

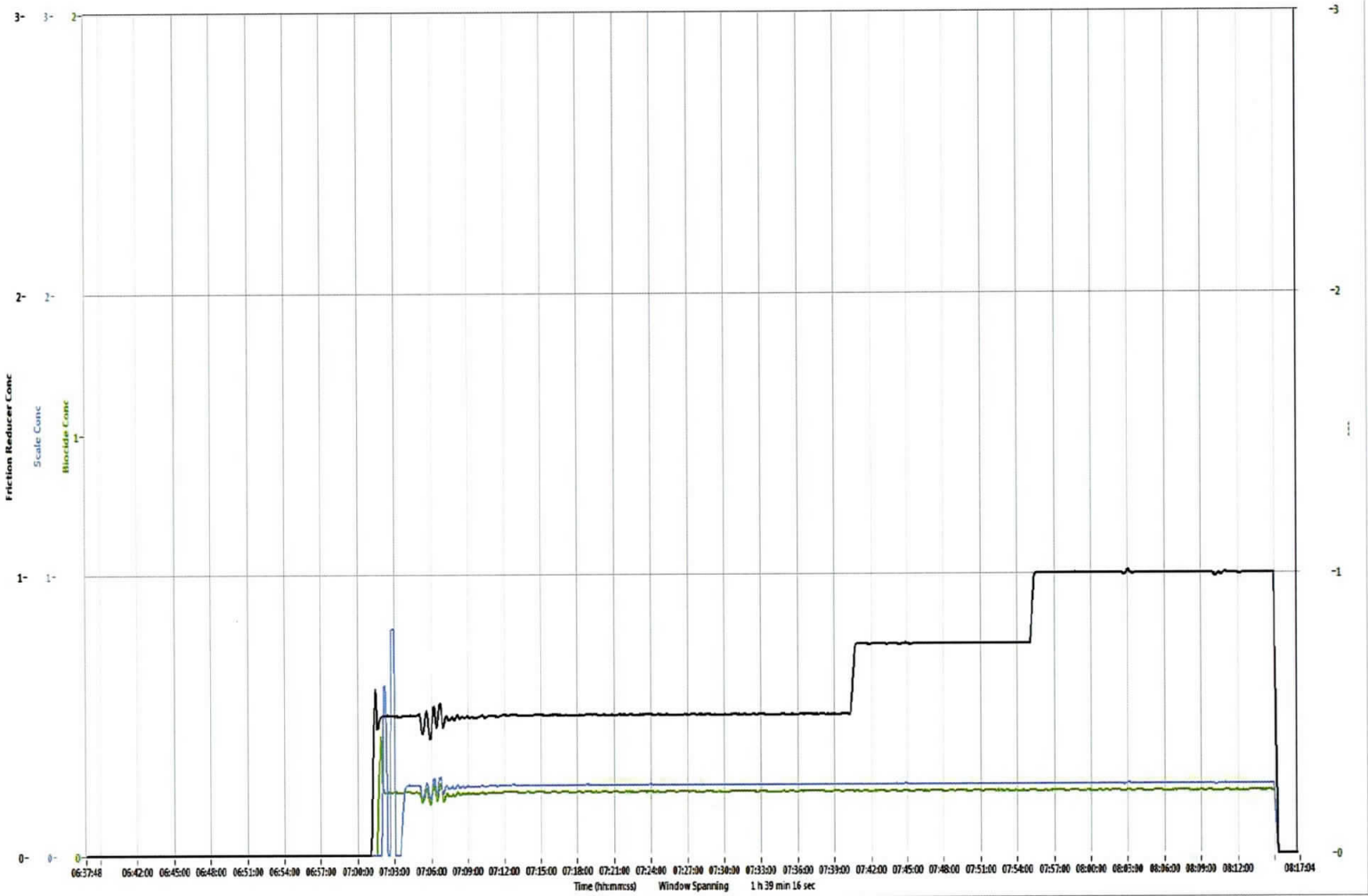
Chemical Inventory

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	177.13 gals	169.00 gals	-5%	169.00 gals
Biocide	0.15 gpt	38.2 gals	36.4 gals	-5%	36.4 gals
Scale Inhibitor	0.25 gpt	63.67 gals	63.8 gals	0%	63.8 gals
Acid	28 %	1,136.97 gals	1,141.00 gals	0%	1,141.00 gals
Acid Inhibitor	7.00 gpt	7.96 gals	7.99 gals	0%	7.99 gals
Gelling Agent	2.5 gpt	59.12 gals	55.00 gals	-7%	55.00 gals
Breaker	0.5 ppt	11.82 lbs	10.00 lbs	-15%	10.00 lbs



Refresh Graph

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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 28th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman

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Customer: Blue Ridge Mountain Resources

Well: Mckley 1401
 Date: 3/8/2018
 Stage: 28th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,871 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	9,044 ft	9,165 ft	203 bbls	201 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,295 bbls	Friction Reducer :	243.00 gals		
Clean Volume :	6,260 bbls	Bioicide :	38.30 gals		
Raw Acid Volume :	36 bbls	Scale Inhibitor :	65.50 gals		
Slickwater Volume :	4,258 bbls	28% HCl Acid :	1148.00 gals		
Gelled Volume :	1,950 bbls	Acid Inhibitor :			
Proppant Laden :	5,741 bbls	Gelling Agent :	202.75 gals		
Slurry Volume :	6,623 bbls	Breaker :	35.00 lbs		
Wireline Volume :	113 bbls	X-linker :			
Total Fluid To Recover :	6,373 bbls				
Proppant Totals					
100 Mesh :	27,020 lbs				
40/70 White :	243,400 lbs				
Total :	270,420 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,248 psi	Opening Pressure	1,992 psi
Minimum	6,823 psi	Minimum	44.5 bpm	Frac V	1.07 psf/ft	Open V	0.75 psi/ft
Maximum	9,373 psi	Maximum	85.4 bpm	Pump Time	1.79 Hrs	ISIP	3,972 psi
Average	7,806 psi	Average	71.6 bpm	HHP	13,699 HHP	Closing Pressure	3,336 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,807					21:25
Open Well	FW		1,992					21:32
Start Injection	FW	0.5	2,052	16.9				21:33
Start 15 % HCl Acid	ACID	14.8	5,286	40.3	19			21:37
Pad	SW	15.5	5,191	35.2	62			21:40
Start 15 % HCl Acid	ACID	15.0	5,194	30.1	98			21:42
Pad	SW	15.3	5,171	46.3	129			21:44
Increase Gel to 2.50 gpt	SW/Gel	18.8	5,469		172			21:48
Start 0.10 ppa 100 Mesh Sand	SW/Gel	18.8	5,480	390.4	175	1,491	13	21:48
Ball seat (Breakdown)	SW/Gel	18.8	6,248		185		29	21:49
Acid on Formation	SW/Gel	38.8	7,743		264		248	21:51
Start 0.25 ppa 100 Mesh Sand	SW/Gel	72.5	9,101	175.5	566	984	1,504	21:56
Increase FR to 1.00 gpt	SW/Gel	51.4	9,304		659		2,448	21:57
Sweep	SW/Gel	44.6	9,180	174.9	747	7	2,489	21:59
Start 0.10 ppa 100 Mesh Sand	SW/Gel	44.8	8,513	261.1	925	1,262	2,496	22:03
Start 0.25 ppa 100 Mesh Sand	SW/Gel	44.7	8,705	185.8	1,190	1,977	3,758	22:09
Start 0.50 ppa 100 Mesh Sand	SW/Gel	46.3	8,327	324.4	1,379	6,818	5,735	22:13
Start 0.75 ppa 100 Mesh Sand	SW/Gel	60.0	8,239	440.1	1,713	13,814	12,553	22:20
Decrease Gel to 0.00 gpt	SW	71.1	8,236		2,070		23,380	22:25
Start 0.75 ppa 40/70 White	SW	73.4	8,202	420.4	2,169	13,142	26,367	22:26
Start 1.00 ppa 40/70 White	SW	81.2	7,709	514.8	2,606	21,598	39,509	22:32
Start 1.25 ppa 40/70 White	SW	84.7	7,455	580.2	3,150	30,388	61,107	22:38
Start 1.50 ppa 40/70 White	SW	84.8	7,229	581.1	3,772	36,576	91,495	22:46
Start 1.75 ppa 40/70 White	SW	85.2	7,073	591.7	4,400	43,512	128,071	22:53
Increase Gel to 2.50 gpt	SW/Gel	85.3	7,168		4,957		165,877	23:00
Start 2.00 ppa 40/70 White	SW/Gel	85.2	7,110	561.8	5,041	47,213	171,584	23:01
Decrease Gel to 0.00 gpt	SW	85.1	7,057		5,055		172,648	23:01
Start 2.25 ppa 40/70 White	SW	82.8	6,951	631.9	5,656	47,328	218,797	23:08
Flush	SW	82.2	7,309	292.5	6,334		266,125	23:16
Shutdown (Final)	SW		4,151		6,623		266,125	23:20



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/8/2018
 Stage: 28th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,806 psi	0.0%	-21.9%
Average Slurry Rate	85.0 bpm	85.0 bpm	71.6 bpm	0.0%	-15.8%
Average Horsepower	20,833 HHP	20,833 HHP	13,699 HHP	0.0%	-34.2%
Average Perf Friction	776 psi	776 psi	551 psi	0.0%	-29.0%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.07 psi/ft	0.0%	-2.6%
Fluids					
	Design	Proposed	Actual	D%	A %
Pad	381 bbls	273 bbls	273 bbls	-28.2%	0.0%
15% HCl Acid	136.6 bbls	70.4 bbls	70.4 bbls	-48.5%	0.0%
Clean	6,052 bbls	6,260 bbls	6,260 bbls	3.4%	0.0%
Fresh Water	6,052 bbls	6,260 bbls	6,260 bbls	3.4%	0.0%
Slickwater	5,105 bbls	4,258 bbls	4,258 bbls	-16.6%	0.0%
Linear Gel	786 bbls	1,950 bbls	1,950 bbls	148.1%	0.0%
Proppant Laden	5,333 bbls	5,741 bbls	5,741 bbls	7.6%	0.0%
Flush	201 bbls	292.5 bbls	292.5 bbls	45.7%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	254.16 gals	249.6 gals	243.00 gals	-1.8%	-2.6%
Biocide	38.12 gals	39.44 gals	38.3 gals	3.5%	-2.9%
Scale Inhibitor	63.54 gals	65.73 gals	65.5 gals	3.4%	-0.3%
Acid	1,136.36 gals	1,493.33 gals	1,148.00 gals	31.4%	-23.1%
Acid inhibitor	7.95 gals	-	-	-100.0%	
Gelling Agent	82.50 gals	204.72 gals	202.75 gals	148.1%	-1.0%
Breaker	16.50 lbs	40.94 lbs	35.00 lbs	148.1%	-14.5%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,347 lbs	27,020 lbs	-2.4%	2.6%
40/70 White	243,000 lbs	239,758 lbs	243,400 lbs	-1.3%	1.5%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/8/2018
 Stage: 28th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

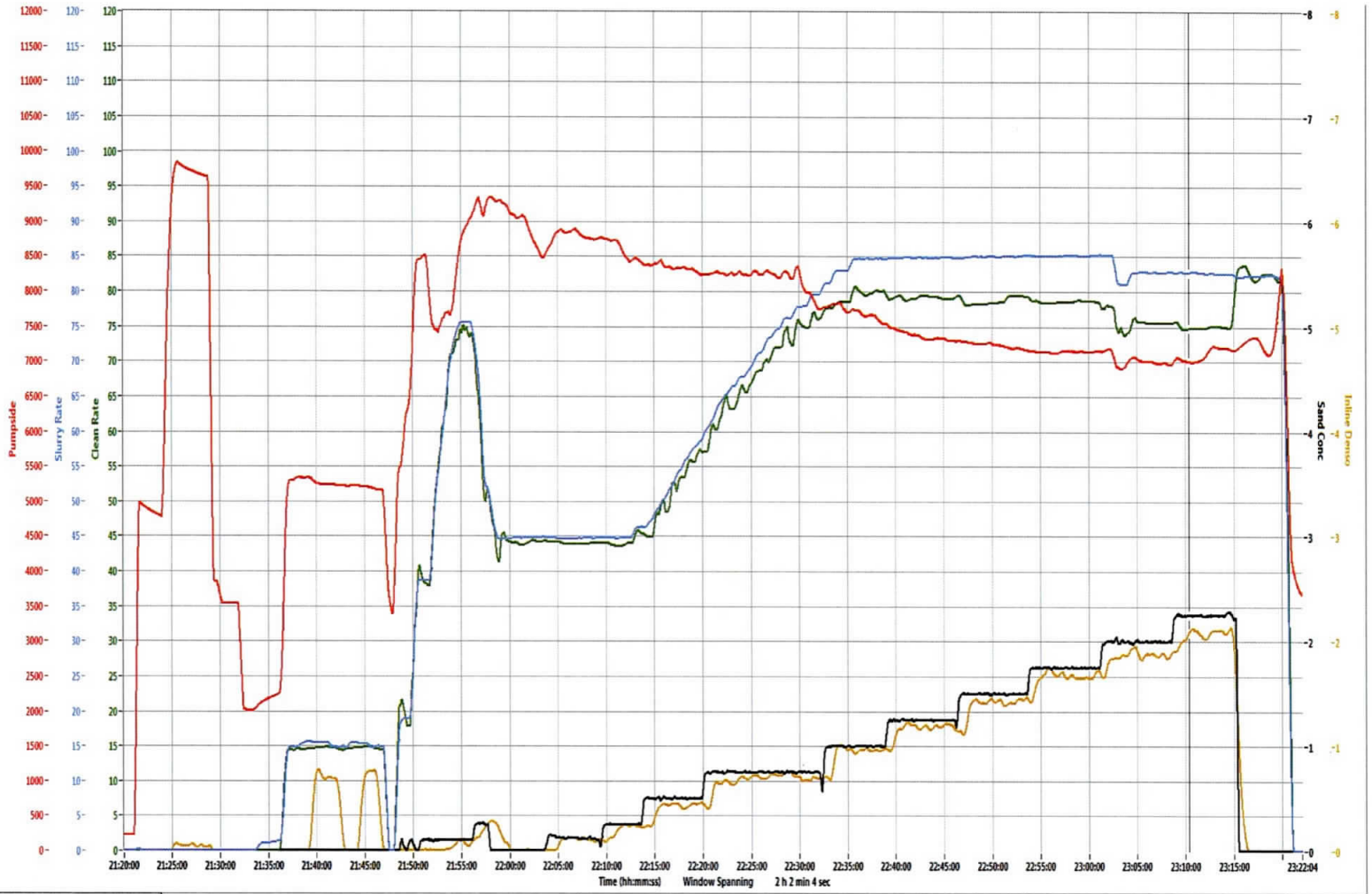
Quality Assesment / Quality Control

Chemical Volumes

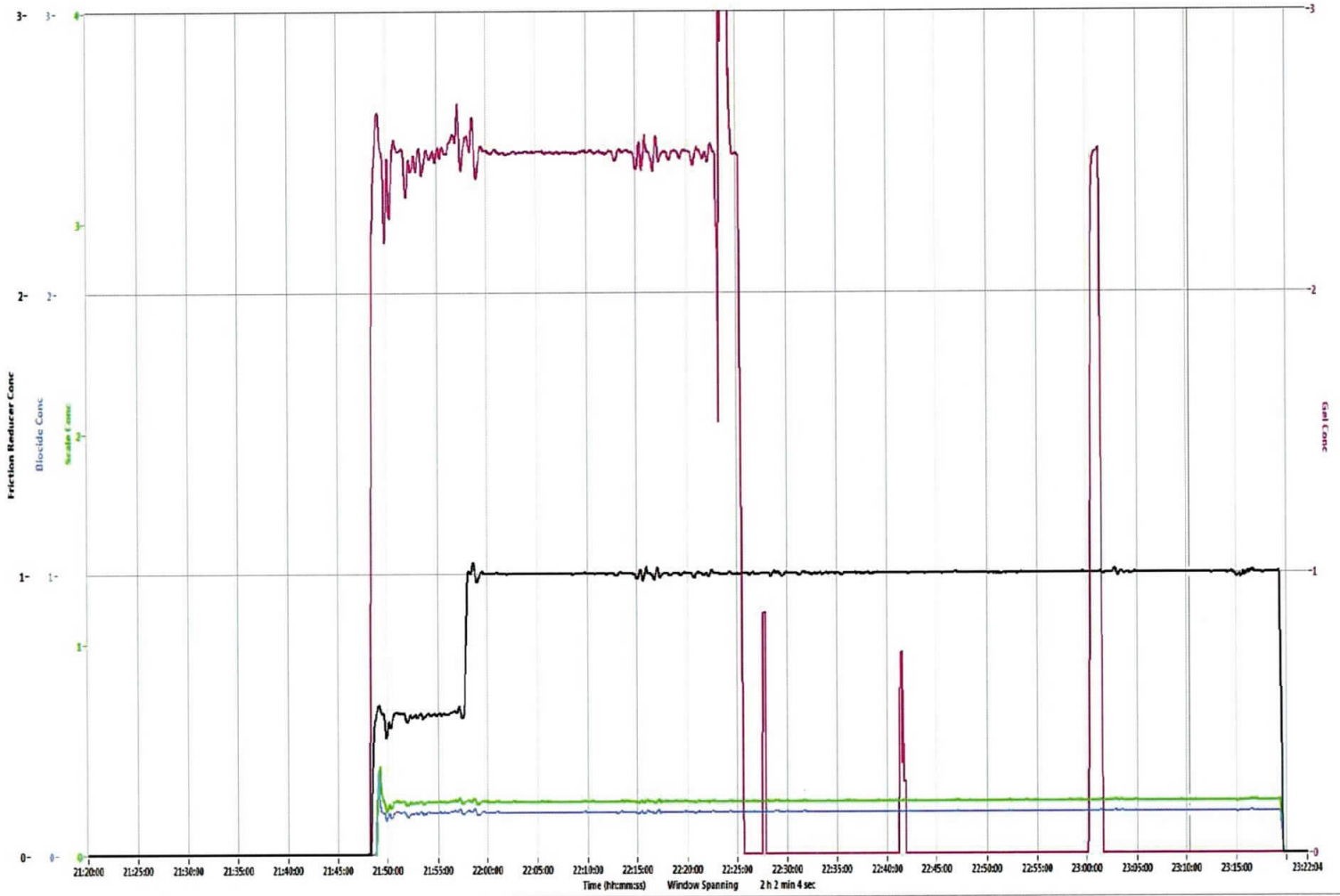
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	249.6 gals	243.00 gals	-3%	243.00 gals
Biocide	0.15 gpt	39.44 gals	38.3 gals	-3%	38.3 gals
Scale Inhibitor	0.25 gpt	65.73 gals	65.5 gals	0%	65.5 gals
Acid	28 %	1,493.33 gals	1,148.00 gals	-23%	1,148.00 gals
Gelling Agent	2.5 gpt	204.72 gals	202.75 gals	-1%	202.75 gals
Breaker	0.5 ppt	40.94 lbs	35.00 lbs	-15%	35.00 lbs

Fluid Testing - Mixed Water Analysis

pH	7	Chlorides	0 ppm
TDS	10150 ppm	Temperature	49.1 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		



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Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 29th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/10/2018
 Stage: 29th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Richard Crawford
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,721 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,894 ft	9,015 ft	200 bbbls	197 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,905 bbbls	Friction Reducer :	191.00 gals		
Clean Volume :	5,877 bbbls	Biocide :	38.10 gals		
Raw Acid Volume :	27 bbbls	Scale Inhibitor :	59.50 gals		
Slickwater Volume :	5,295 bbbls	28% HCl Acid :	1131.00 gals		
Gelled Volume :	534 bbbls	Acid Inhibitor :	7.92 gals		
Proppant Laden :	5,526 bbbls	Gelling Agent :	57.00 gals		
Slurry Volume :	6,245 bbbls	Breaker :	10.00 lbs		
Wireline Volume :	123 bbbls	X-linker :			
Total Fluid To Recover :	6,000 bbbls				

Proppant Totals		Injection Rates		Treatment Values		Shut-in Values	
100 Mesh :	27,000 lbs	Desired	85.0 bpm	Breakdown	6,307 psi	Opening Pressure	1,898 psi
40/70 White :	243,260 lbs	Minimum	80.7 bpm	Frac V	1.00 psi/ft	Open V	0.74 psi/ft
Total :	270,260 lbs	Maximum	86.9 bpm	Pump Time	1.55 Hrs	ISIP	3,540 psi
		Average	86.0 bpm	HHP	15,582 HHP	Closing Pressure	3,262 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,970					12:11
Open Well	FW		1,898					12:16
Start Injection	FW		1,995	21.7	0			12:17
Start 15 % HCl Acid	ACID	10.1	5,440	27.0	23			12:20
Pad	SW	10.3	5,484	34.5	52			12:23
Start 15 % HCl Acid	ACID	9.9	5,430	27.0	87			12:27
Pad	SW	10.3	5,459	73.8	115			12:30
Ball seat (Breakdown)	SW	14.9	6,307		174			12:35
Start 0.10 ppa 100 Mesh Sand	SW	21.8	7,205	197.6	189	771	27	12:36
Increase Gel to 2.50 gpt	SW/Gel	23.2	7,270		190		35	12:36
Acid on Formation	SW/Gel	36.3	8,253		248		326	12:38
Decrease Gel to 0.00 gpt	SW	67.7	7,964		380		764	12:40
Start 0.25 ppa 100 Mesh Sand	SW	68.9	7,991	450.7	385	4,875	799	12:40
Start 0.50 ppa 100 Mesh Sand	SW	78.2	8,088	427.4	843	9,107	5,673	12:47
Start 0.75 ppa 100 Mesh Sand	SW	85.6	8,171	372.8	1,284	11,735	14,781	12:52
Start 0.75 ppa 40/70 White	SW	85.6	7,833	381.1	1,672	12,065	26,516	12:56
Start 1.00 ppa 40/70 White	SW	85.7	7,669	499.7	2,069	20,997	38,581	13:01
Increase FR to 0.75 gpt	SW	85.8	7,644		2,097		39,721	13:01
Start 1.25 ppa 40/70 White	SW	86.0	7,262	572.5	2,595	30,078	59,577	13:07
Increase FR to 1.00 gpt	SW	86.0	7,275		3,194		89,120	13:14
Start 1.50 ppa 40/70 White	SW	86.3	7,279	555.9	3,204	35,077	89,655	13:14
Start 1.75 ppa 40/70 White	SW	86.4	7,174	579.3	3,802	42,669	124,733	13:21
Increase Gel to 2.50 gpt	SW/Gel	86.3	7,294		4,283		157,281	13:27
Start 2.00 ppa 40/70 White	SW/Gel	86.4	7,345	576.7	4,431	48,462	167,402	13:29
Decrease Gel to 0.00 gpt	SW	86.5	7,290		4,517		173,999	13:30
Increase Gel to 2.50 gpt	SW/Gel	86.6	7,203		5,020		212,326	13:35
Start 2.25 ppa 40/70 White	SW/Gel	86.4	7,206	803.7	5,066	60,077	215,863	13:36
Decrease Gel to 0.00 gpt	SW	86.2	7,152		5,160		223,867	13:37
Flush	SW	86.2	7,041	303.2	5,933		275,940	13:46
Shutdown (Final)	SW		3,478		6,245		275,940	13:50



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/10/2018
 Stage: 29th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Flow Properties					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,393 psi	0.0%	-26.1%
Average Slurry Rate	85.0 bpm	85.0 bpm	86.0 bpm	0.0%	1.2%
Average Horsepower	20,833 HHP	20,833 HHP	15,582 HHP	0.0%	-25.2%
Average Perf Friction	776 psi	776 psi	794 psi	0.0%	2.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.00 psi/ft	0.0%	-8.9%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	130 bbls	130 bbls	76.1%	0.0%
15% HCl Acid	78.6 bbls	54.0 bbls	54.0 bbls	-31.3%	0.0%
Clean	5,547 bbls	5,877 bbls	5,877 bbls	6.0%	0.0%
Fresh Water	5,547 bbls	5,877 bbls	5,877 bbls	6.0%	0.0%
Slickwater	4,816 bbls	5,295 bbls	5,295 bbls	9.9%	0.0%
Linear Gel	629 bbls	534 bbls	534 bbls	-15.1%	0.0%
Proppant Laden	5,197 bbls	5,526 bbls	5,526 bbls	6.3%	0.0%
Flush	197 bbls	303.2 bbls	303.2 bbls	53.6%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	232.97 gals	193.24 gals	191.00 gals	-17.1%	-1.2%
Biocide	34.95 gals	37.03 gals	38.1 gals	6.0%	2.9%
Scale inhibitor	58.24 gals	61.71 gals	59.5 gals	6.0%	-3.6%
Acid	1,136.36 gals	1,145.45 gals	1,131.00 gals	0.8%	-1.3%
Acid inhibitor	7.95 gals	8.02 gals	7.92 gals	0.8%	-1.3%
Gelling Agent	66.00 gals	56.05 gals	57.00 gals	-15.1%	1.7%
Breaker	13.20 lbs	11.21 lbs	10.00 lbs	-15.1%	-10.8%
X-linker	0.01 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,489 lbs	27,000 lbs	-1.9%	1.9%
40/70 White	243,000 lbs	249,425 lbs	243,260 lbs	2.6%	-2.5%

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Customer: Blue Ridge Mountain Resc

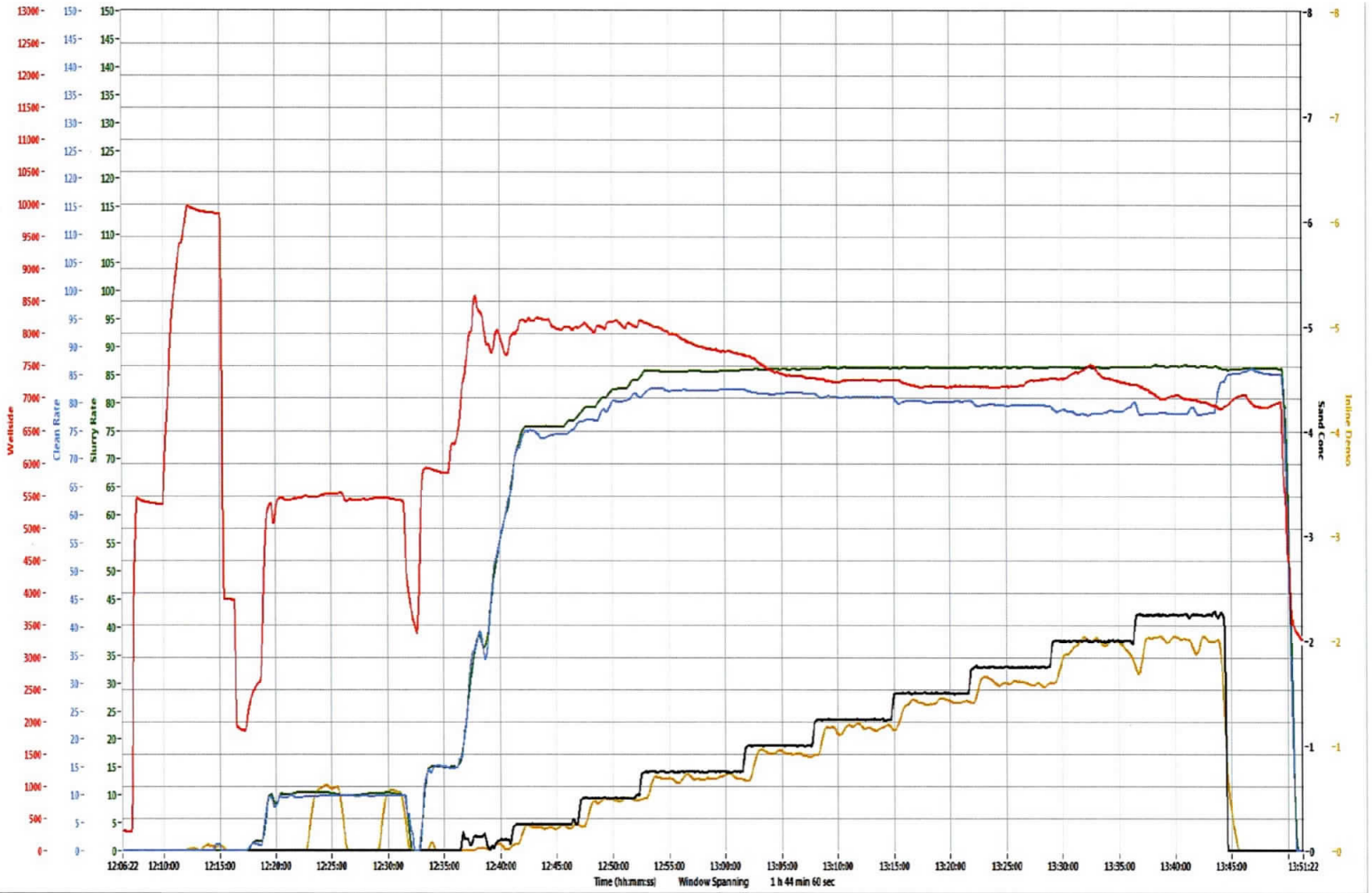
Well: Meckley 1401
 Date: 3/10/2018
 Stage: 29th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

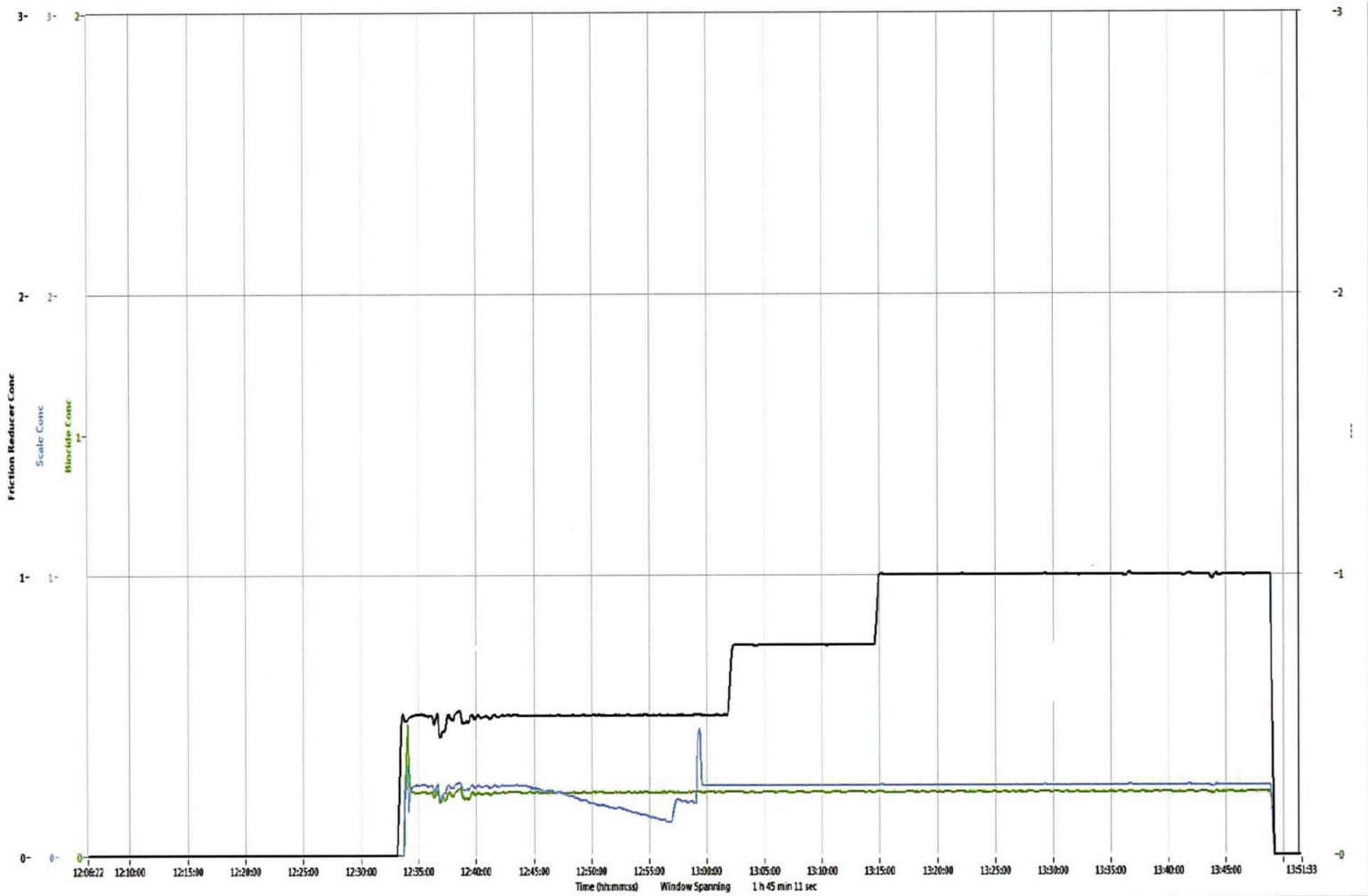
Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	193.24 gals	191.00 gals	-1%	191.00 gals
Biocide	0.15 gpt	37.03 gals	38.1 gals	3%	38.1 gals
Scale Inhibitor	0.25 gpt	61.71 gals	59.5 gals	-4%	59.5 gals
Acid	28 %	1,145.45 gals	1,131.00 gals	-1%	1,131.00 gals
Acid Inhibitor	7.00 gpt	8.02 gals	7.92 gals	-1%	7.92 gals
Gelling Agent	2.5 gpt	56.05 gals	57.00 gals	2%	57.00 gals
Breaker	0.5 ppt	11.21 lbs	10.00 lbs	-11%	10.00 lbs

Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number dt:\ses\data\logs\2018-03-08_12-06-22_LogBlueRidge_Meckley\401_Stage29.sdrms



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Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 30th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 30th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Ivan McClain
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,571 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,744 ft	8,865 ft	197 bbls	194 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,005 bbls	Friction Reducer :	183.00 gals		
Clean Volume :	5,977 bbls	Biocide :	37.50 gals		
Raw Acid Volume :	27 bbls	Scale Inhibitor :	64.50 gals		
Slickwater Volume :	4,823 bbls	28% HCl Acid :	1124.00 gals		
Gelled Volume :	1,111 bbls	Acid Inhibitor :	7.87 gals		
Proppant Laden :	5,633 bbls	Gelling Agent :	111.10 gals		
Slurry Volume :	6,350 bbls	Breaker :	25.00 lbs		
Wireline Volume :	165 bbls	X-linker :			
Total Fluid To Recover :	6,142 bbls				

Proppant Totals

100 Mesh :	27,040 lbs
40/70 White :	242,600 lbs
Total :	269,640 lbs

Treating Pressures

Operator's Max	10,000 psi
Minimum	7,027 psi
Maximum	8,806 psi
Average	7,717 psi

Injection Rates

Desired	85.0 bpm
Minimum	40.6 bpm
Maximum	86.9 bpm
Average	78.5 bpm

Treatment Values

Breakdown	6,427 psi
Frac V	1.05 psi/ft
Pump Time	1.58 Hrs
HHP	14,847 HHP

Shut-in Values

Opening Pressure	1,734 psi
Open V	0.71 psi/ft
ISIP	3,864 psi
Closing Pressure	3,490 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,733					4:10
Open Well	FW		1,734					4:31
Start Injection	FW	0.6	1,815	16.7				4:32
Start 15 % HCl Acid	ACID	14.6	5,109	30.4	18			4:36
Pad	SW	15.0	5,280	26.7	49			4:38
Start 15 % HCl Acid	ACID	14.5	5,239	23.2	76			4:40
Pad	SW	15.1	5,262	153.3	100			4:41
Increase Gel to 2.50 gpt	SW/Gel	22.0	6,033		154			4:45
Ball seat (Breakdown)	SW/Gel	19.5	6,427		187			4:47
Start 0.10 ppa 100 Mesh Sand	SW/Gel	36.7	8,507	249.6	250	1,032	4	4:49
Acid on Formation	SW/Gel	36.7	8,147		263		49	4:49
Start 0.25 ppa 100 Mesh Sand	SW/Gel	56.1	8,208	441.8	500	4,701	1,036	4:54
Start 0.50 ppa 100 Mesh Sand	SW/Gel	59.2	8,427	481.7	950	10,145	5,737	5:02
Decrease Gel to 0.00 gpt	SW	59.2	8,369		966		6,052	5:02
Start 0.75 ppa 100 Mesh Sand	SW	73.8	8,351	350.8	1,442	11,004	15,882	5:09
Start 0.75 ppa 40/70 White	SW	80.8	8,229	381.2	1,806	12,064	26,887	5:14
Start 1.00 ppa 40/70 White	SW	85.7	8,138	560.5	2,203	23,531	38,951	5:19
Increase FR to 0.75 gpt	SW	85.8	8,260		2,253		40,904	5:19
Start 1.25 ppa 40/70 White	SW	86.1	7,595	553.4	2,794	29,100	62,482	5:26
Start 1.50 ppa 40/70 White	SW	86.1	7,411	560.7	3,385	35,344	91,582	5:32
Increase FR to 1.00 gpt	SW	86.5	7,391		3,432		94,334	5:33
Start 1.75 ppa 40/70 White	SW	86.5	7,172	597.6	3,992	43,988	126,926	5:39
Increase Gel to 2.50 gpt	SW/Gel	86.6	7,149		4,613		168,709	5:47
Start 2.00 ppa 40/70 White	SW/Gel	86.7	7,134	596.1	4,645	50,031	170,914	5:47
Decrease Gel to 0.00 gpt	SW	86.9	7,065		4,799		182,577	5:49
Increase Gel to 2.50 gpt	SW/Gel	86.5	7,119		5,271		218,297	5:54
Start 2.25 ppa 40/70 White	SW/Gel	86.6	7,117	679.9	5,306	50,052	220,945	5:55
Decrease Gel to 0.00 gpt	SW	86.4	7,144		5,426		231,217	5:56
Flush	SW	86.2	7,313	300.9	6,041		270,997	6:03
Shutdown (Final)	SW		3,863		6,350		270,997	6:07



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 30th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,717 psi	0.0%	-22.8%
Average Slurry Rate	85.0 bpm	85.0 bpm	78.5 bpm	0.0%	-7.6%
Average Horsepower	20,833 HHP	20,833 HHP	14,847 HHP	0.0%	-28.7%
Average Perf Friction	776 psi	776 psi	662 psi	0.0%	-14.7%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	197 bbls	197 bbls	166.5%	0.0%
15% HCl Acid	78.6 bbls	53.6 bbls	53.6 bbls	-31.8%	0.0%
Clean	5,680 bbls	5,977 bbls	5,977 bbls	5.2%	0.0%
Fresh Water	5,680 bbls	5,977 bbls	5,977 bbls	5.2%	0.0%
Slickwater	4,792 bbls	4,823 bbls	4,823 bbls	0.7%	0.0%
Linear Gel	786 bbls	1,111 bbls	1,111 bbls	41.4%	0.0%
Proppant Laden	5,333 bbls	5,633 bbls	5,633 bbls	5.6%	0.0%
Flush	194 bbls	300.9 bbls	300.9 bbls	55.0%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	238.55 gals	193.28 gals	183.00 gals	-19.0%	-5.3%
Biocide	35.78 gals	37.66 gals	37.5 gals	5.2%	-0.4%
Scale Inhibitor	59.64 gals	62.76 gals	64.5 gals	5.2%	2.8%
Acid	1,136.36 gals	1,136.97 gals	1,124.00 gals	0.1%	-1.1%
Acid Inhibitor	7.95 gals	7.96 gals	7.87 gals	0.1%	-1.1%
Gelling Agent	82.50 gals	116.69 gals	111.1 gals	41.4%	-4.8%
Breaker	16.50 lbs	23.34 lbs	25.00 lbs	41.5%	7.1%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,882 lbs	27,040 lbs	-0.4%	0.6%
40/70 White	243,000 lbs	244,110 lbs	242,600 lbs	0.5%	-0.6%

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Customer: Blue Ridge Mountain Resc

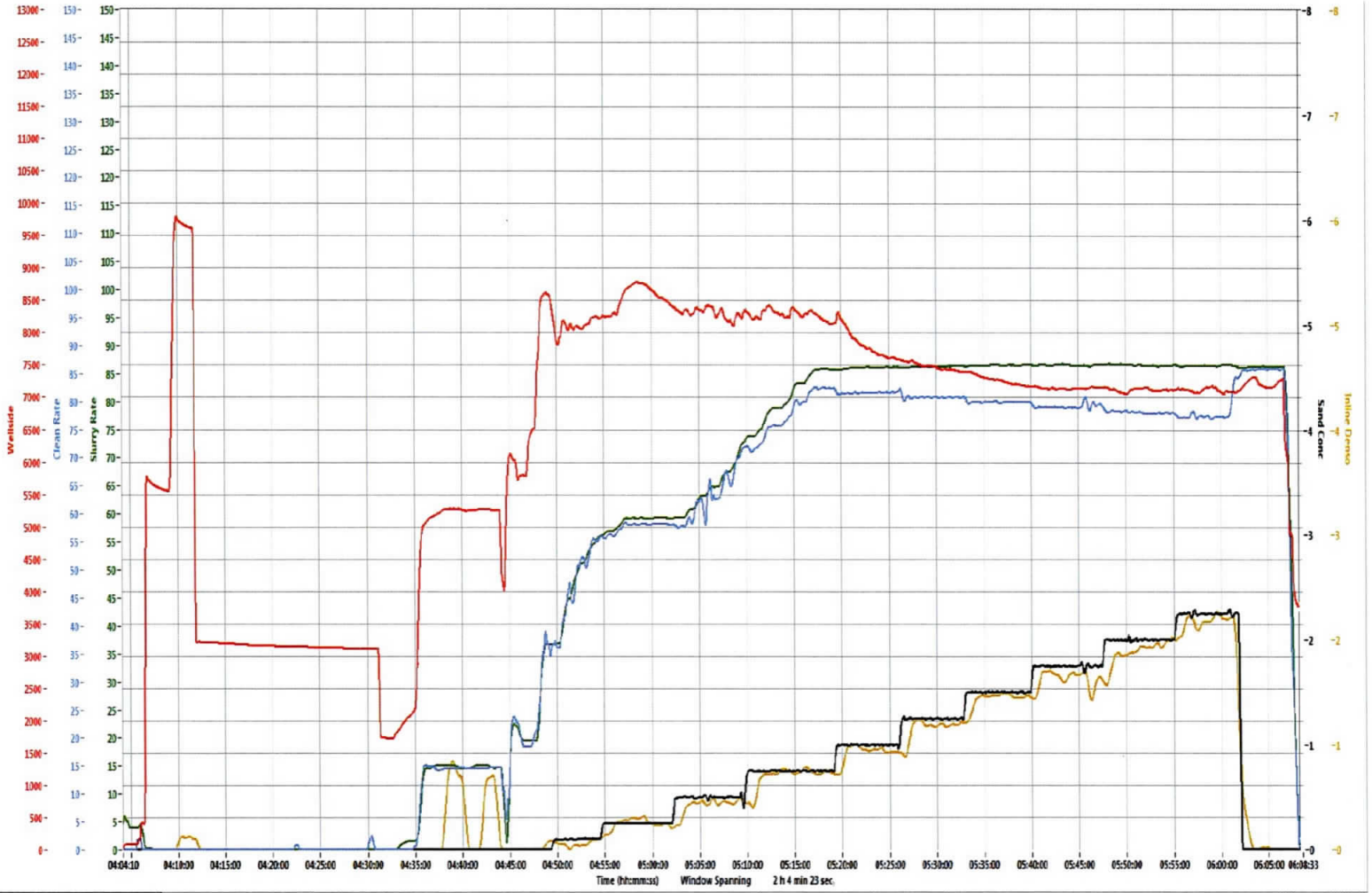
Well: Meckley 1401
 Date: 3/9/2018
 Stage: 30th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

Chemical Volumes

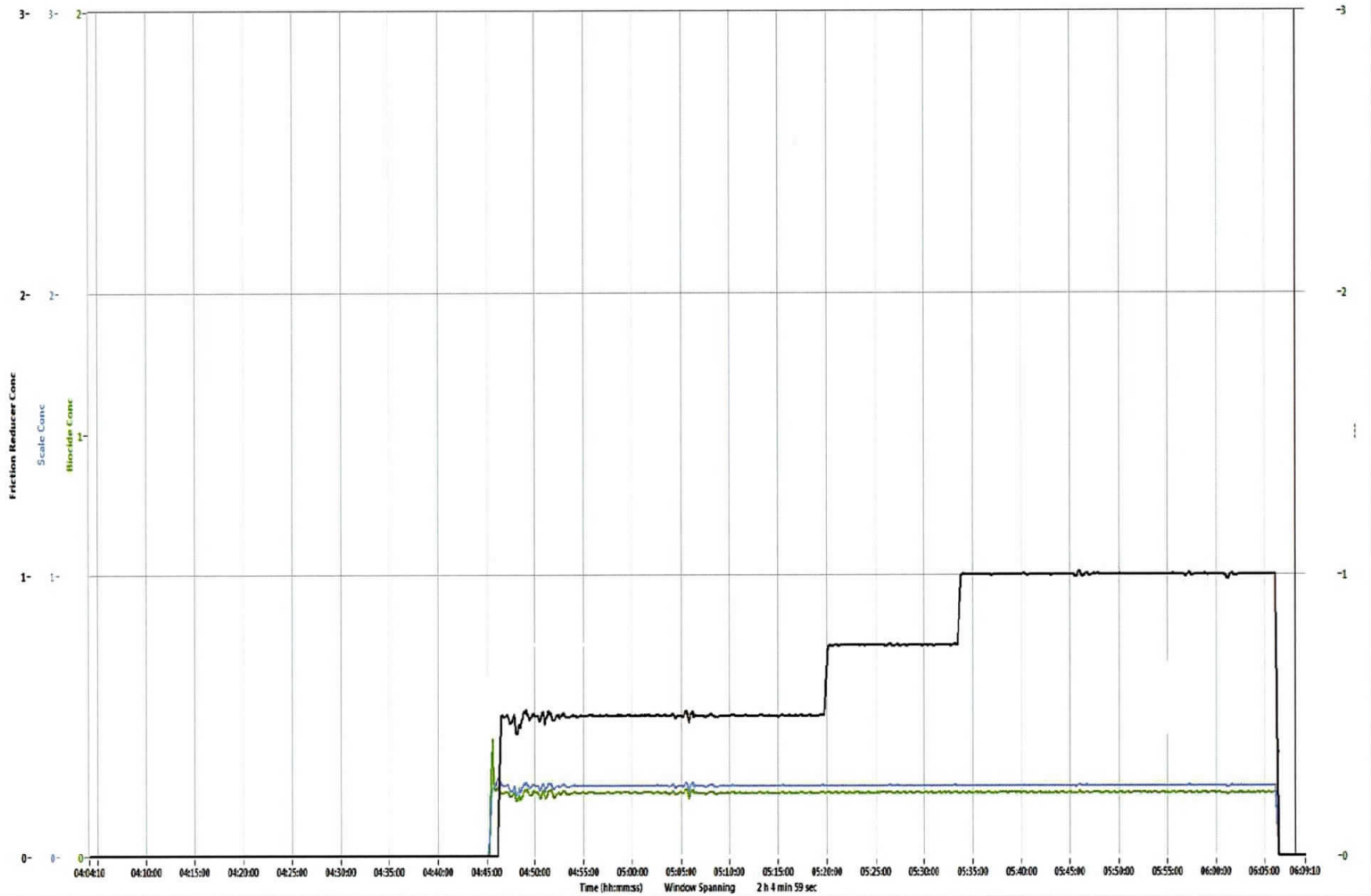
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	193.28 gals	183.00 gals	-5%	183.00 gals
Biocide	0.15 gpt	37.66 gals	37.5 gals	0%	37.5 gals
Scale Inhibitor	0.25 gpt	62.76 gals	64.5 gals	3%	64.5 gals
Acid	28 %	1,136.97 gals	1,124.00 gals	-1%	1,124.00 gals
Acid Inhibitor	7.00 gpt	7.96 gals	7.87 gals	-1%	7.87 gals
Gelling Agent	2.5 gpt	116.69 gals	111.1 gals	-5%	111.1 gals
Breaker	0.5 ppt	23.34 lbs	25.00 lbs	7%	25.00 lbs

Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number d:\seri\data\log\2018-03-09_04-04-10_LogBlueRidge_Mecicle\1401_Stage30.dms



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 31st Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson

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Well: Meckley 1401
 Date: 3/9/2018
 Stage: 31st
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Customer: Blue Ridge Mountain Resources

Treatment Report

Customer Representative	Mr. Joe Hartley	Stingray Representative	Richard Crawford
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Wellbore Information					
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,421 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,594 ft	8,715 ft	193 bbbls	191 bbbls	6,236 ft

Job Summary					
Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,806 bbbls	Friction Reducer :	180.00 gals		
Clean Volume :	5,777 bbbls	Biocide :	35.00 gals		
Raw Acid Volume :	29 bbbls	Scale Inhibitor :	59.50 gals		
Slackwater Volume :	5,254 bbbls	28% HCl Acid :	1159.00 gals		
Gelled Volume :	486 bbbls	Acid Inhibitor :	8.11 gals		
Proppant Laden :	5,443 bbbls	Gelling Agent :	49.30 gals		
Slurry Volume :	6,164 bbbls	Breaker :	10.00 lbs		
Wireline Volume :	148 bbbls	X-linker :			
Total Fluid To Recover :	5,925 bbbls				
Proppant Totals					
100 Mesh :	27,060 lbs				
40/70 White :	244,220 lbs				
Total :	271,280 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-in Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,917 psi	Opening Pressure	2,231 psi
Minimum	6,548 psi	Minimum	57.7 bpm	Frac V	1.04 ps/ft	Open V	0.79 ps/ft
Maximum	8,764 psi	Maximum	87.0 bpm	Pump Time	1.62 Hrs	ISIP	3,772 psi
Average	7,537 psi	Average	80.4 bpm	HHP	14,851 HHP	Closing Pressure	3,459 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,793					9:26
Open Well	FW		2,231					9:28
Start Injection	FW		2,200	9.1				9:29
Start 15 % HCl Acid	ACID	10.5	4,980	27.9	11			9:33
Pad	SW	10.9	5,151	25.3	41			9:36
Start 15 % HCl Acid	ACID	10.5	5,148	29.0	67			9:39
Pad	SW	10.9	5,111	67.8	97	10		9:41
Start 0.10 ppa 100 Mesh Sand	SW	14.6	5,501	224.1	164	1,186	10	9:48
Increase Gel to 2.50 gpt	SW/Gel	14.6	5,514		166		22	9:48
Ball seat (Breakdown)	SW/Gel	14.5	5,917		175		56	9:48
Acid on Formation	SW/Gel	31.6	8,458		235		347	9:51
Decrease Gel to 0.00 gpt	SW	58.7	8,121		368		1,101	9:54
Start 0.25 ppa 100 Mesh Sand	SW	59.0	8,201	439.7	388	4,694	1,196	9:54
Start 0.50 ppa 100 Mesh Sand	SW	60.5	8,426	434.8	836	9,120	5,489	10:01
Start 0.75 ppa 100 Mesh Sand	SW	76.8	8,406	383.2	1,283	11,841	15,009	10:08
Start 0.75 ppa 40/70 White	SW	84.2	8,259	372.5	1,683	11,742	26,850	10:13
Increase FR to 0.75 gpt	SW	84.5	7,811		2,060		38,205	10:17
Start 1.00 ppa 40/70 White	SW	84.2	7,817	496.9	2,073	20,862	38,592	10:18
Start 1.25 ppa 40/70 White	SW	84.6	7,328	569.4	2,598	29,901	59,454	10:24
Increase FR to 1.00 gpt	SW	84.9	7,199		3,194		88,643	10:31
Start 1.50 ppa 40/70 White	SW	84.8	7,208	567.8	3,208	35,811	89,355	10:31
Increase Gel to 2.50 gpt	SW/Gel	85.0	7,123		3,765		121,716	10:38
Start 1.75 ppa 40/70 White	SW/Gel	85.0	7,095	568.5	3,824	41,791	125,166	10:38
Decrease Gel to 0.00 gpt	SW	85.0	7,076		3,882		129,052	10:39
Increase Gel to 2.50 gpt	SW/Gel	84.9	7,016		4,395		163,504	10:45
Start 2.00 ppa 40/70 White	SW/Gel	84.9	6,982	627.9	4,446	52,751	166,958	10:46
Decrease Gel to 0.00 gpt	SW	85.1	6,990		4,478		169,431	10:46
Increase Gel to 2.50 gpt	SW/Gel	85.3	7,010		5,021		210,718	10:52
Decrease Gel to 0.00 gpt	SW	86.0	7,090		5,130		219,021	10:54
Start 2.25 ppa 40/70 White	SW	86.5	7,107	665.5	5,139	50,502	219,709	10:54
Flush	SW	84.7	7,123	296.6	5,859		270,211	11:02
Shutdown (Final)	SW		3,793		6,164		270,211	11:06



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 31st
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,537 psi	0.0%	-24.6%
Average Slurry Rate	85.0 bpm	85.0 bpm	80.4 bpm	0.0%	-5.4%
Average Horsepower	20,833 HHP	20,833 HHP	14,851 HHP	0.0%	-28.7%
Average Perf Friction	776 psi	776 psi	694 psi	0.0%	-10.5%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.04 psi/ft	0.0%	-5.5%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	102 bbls	102 bbls	38.5%	0.0%
15% HCl Acid	78.6 bbls	56.9 bbls	56.9 bbls	-27.6%	0.0%
Clean	5,677 bbls	5,777 bbls	5,777 bbls	1.8%	0.0%
Fresh Water	5,677 bbls	5,777 bbls	5,777 bbls	1.8%	0.0%
Slickwater	4,788 bbls	5,254 bbls	5,254 bbls	9.7%	0.0%
Linear Gel	786 bbls	486 bbls	486 bbls	-38.2%	0.0%
Proppant Laden	5,333 bbls	5,443 bbls	5,443 bbls	2.1%	0.0%
Flush	191 bbls	296.6 bbls	296.6 bbls	55.5%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	238.41 gals	189.86 gals	180.00 gals	-20.4%	-5.2%
Blocide	35.76 gals	36.4 gals	35.00 gals	1.8%	-3.8%
Scale Inhibitor	59.60 gals	60.66 gals	59.5 gals	1.8%	-1.9%
Acid	1,136.36 gals	1,206.97 gals	1,159.00 gals	6.2%	-4.0%
Acid Inhibitor	7.95 gals	8.45 gals	8.11 gals	6.2%	-4.0%
Gelling Agent	82.50 gals	51.02 gals	49.3 gals	-38.2%	-3.4%
Breaker	16.50 lbs	10.2 lbs	10.00 lbs	-38.2%	-2.0%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,850 lbs	27,060 lbs	-0.6%	0.8%
40/70 White	243,000 lbs	243,362 lbs	244,220 lbs	0.1%	0.4%

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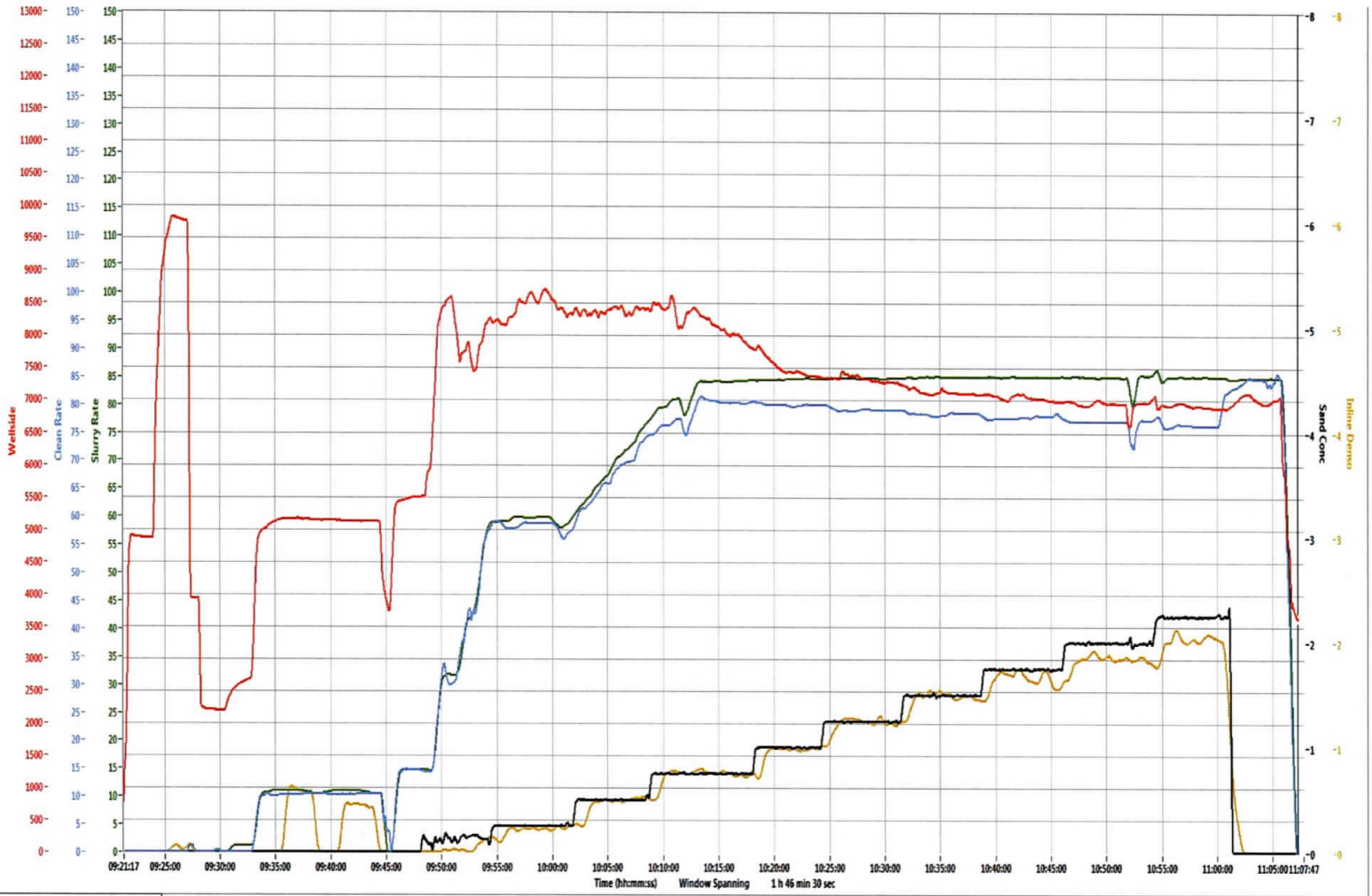
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 31st
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

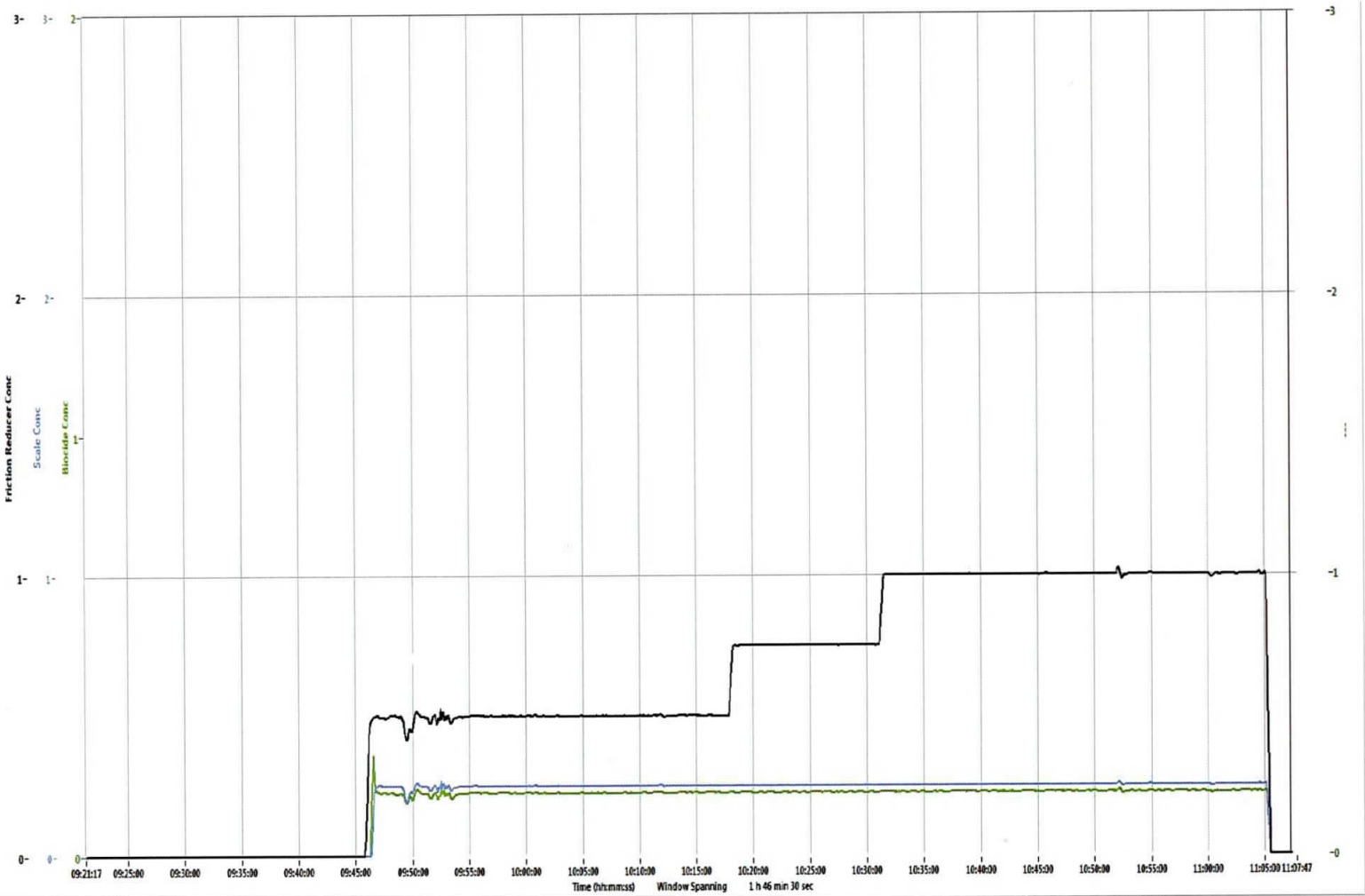
Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	189.86 gals	180.00 gals	-5%	180.00 gals
Biocide	0.15 gpt	36.4 gals	35.00 gals	-4%	35.00 gals
Scale Inhibitor	0.25 gpt	60.66 gals	59.5 gals	-2%	59.5 gals
Acid	28 %	1,206.97 gals	1,159.00 gals	-4%	1,159.00 gals
Acid Inhibitor	7.00 gpt	8.45 gals	8.11 gals	-4%	8.11 gals
Gelling Agent	2.5 gpt	51.02 gals	49.3 gals	-3%	49.3 gals
Breaker	0.5 ppt	10.2 lbs	10.00 lbs	-2%	10.00 lbs



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600
Irving, Texas 75039

Meckley 1401 - 32nd Stage of 40
Marcellus Formation
Tyler
API #: 47-095-02151

Prepared By:
Chris Richardson

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 32nd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Joe Hartley	Stingray Representative	Richard Crawford
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,271 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,444 ft	8,565 ft	190 bbbls	187 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,045 bbbls	Friction Reducer :	233.00 gals		
Clean Volume :	6,018 bbbls	Biocide :	37.50 gals		
Raw Acid Volume :	27 bbbls	Scale Inhibitor :	62.00 gals		
Slickwater Volume :	5,310 bbbls	28% HCl Acid :	1126.00 gals		
Gelled Volume :	673 bbbls	Acid Inhibitor :	7.88 gals		
Proppant Laden :	5,718 bbbls	Gelling Agent :	67.75 gals		
Slurry Volume :	6,403 bbbls	Breaker :	14.80 lbs		
Wireline Volume :	139 bbbls	X-linker :			
Total Fluid To Recover :	6,157 bbbls				
Proppant Totals					
100 Mesh :	26,440 lbs				
40/70 White :	241,420 lbs				
Total :	267,860 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,204 psi	Opening Pressure	2,115 psi
Minimum	6,157 psi	Minimum	52.3 bpm	Frac V	1.00 psi/ft	Open V	0.77 psi/ft
Maximum	9,296 psi	Maximum	82.1 bpm	Pump Time	1.82 Hrs	ISIP	3,534 psi
Average	7,873 psi	Average	70.2 bpm	HHP	13,547 HHP	Closing Pressure	3,250 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbl)	Cumulative Slurry Volume (bbbl)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,814					16:28
Open Well	FW		2,115					16:31
Start Injection	FW		2,112	8.8				16:31
Start 15 % HCl Acid	ACID	9.9	4,900	26.8	9			16:34
Pad	SW	10.3	5,020	21.6	38			16:37
Start 15 % HCl Acid	ACID	9.9	5,012	26.7	60			16:39
Pad	SW	10.2	4,996	68.8	88			16:41
Increase Gel to 2.50 gpt	SW/Gel	14.7	5,531		151			16:47
Start 0.10 ppa 100 Mesh Sand	SW/Gel	14.7	5,555	354.1	157	1,947	26	16:47
Ball seat (Breakdown)	SW/Gel	14.6	6,204		169		112	16:48
Acid on Formation	SW/Gel	29.5	8,287		237		542	16:51
Decrease Gel to 0.00 gpt	SW	54.0	8,752		498		1,888	16:57
Start 0.25 ppa 100 Mesh Sand	SW	54.0	9,043	469.4	515	4,982	1,973	16:57
Increase FR to 0.75 gpt	SW	52.3	9,102		806		4,957	17:02
Start 0.50 ppa 100 Mesh Sand	SW	52.4	9,076	468.8	994	9,867	6,956	17:06
Increase FR to 1.00 gpt	SW	52.4	9,108		1,072		8,542	17:08
Increase Gel to 2.50 gpt	SW/Gel	52.4	8,814		1,221		11,563	17:10
Decrease Gel to 0.00 gpt	SW	52.5	8,687		1,284		12,838	17:12
Start 0.75 ppa 100 Mesh Sand	SW	58.2	8,466	410.8	1,478	12,905	16,822	17:15
Start 0.75 ppa 40/70 White	SW	67.1	7,985	528.1	1,903	16,640	29,727	17:22
Increase Gel to 2.50 gpt	SW/Gel	71.8	8,339		2,195		38,536	17:26
Decrease Gel to 0.00 gpt	SW	72.0	8,062		2,263		40,619	17:27
Start 1.00 ppa 40/70 White	SW	70.6	8,627	485.1	2,453	20,398	46,367	17:30
Increase Gel to 2.50 gpt	SW/Gel	71.0	7,910		2,703		56,311	17:33
Decrease Gel to 0.00 gpt	SW	72.2	7,670		2,849		62,089	17:35
Start 1.25 ppa 40/70 White	SW	74.6	7,717	583.6	2,965	30,624	66,765	17:37
Start 1.50 ppa 40/70 White	SW	81.1	7,672	572.3	3,587	36,081	97,389	17:45
Increase Gel to 2.50 gpt	SW/Gel	81.3	7,423		3,904		116,019	17:48
Decrease Gel to 0.00 gpt	SW	81.2	7,442		3,976		120,158	17:49
Start 1.75 ppa 40/70 White	SW	81.1	7,630	588.7	4,205	43,300	133,470	17:52
Start 2.00 ppa 40/70 White	SW	81.2	7,245	588.1	4,850	49,428	176,770	18:00
Start 2.25 ppa 40/70 White	SW	79.1	6,742	578.9	5,502	42,418	226,198	18:08
Flush	SW	73.4	6,435	264.6	6,131		268,616	18:17
Shutdown (Final)	SW		3,645		6,403		268,616	18:21



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 32nd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Data					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,873 psi	0.0%	-21.3%
Average Slurry Rate	85.0 bpm	85.0 bpm	70.2 bpm	0.0%	-17.4%
Average Horsepower	20,833 HHP	20,833 HHP	13,547 HHP	0.0%	-35.0%
Average Perf Friction	776 psi	776 psi	529 psi	0.0%	-31.8%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.00 psi/ft	0.0%	-9.0%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	99 bbls	99 bbls	34.4%	0.0%
15% HCl Acid	78.6 bbls	53.5 bbls	53.5 bbls	-31.9%	0.0%
Clean	5,673 bbls	6,018 bbls	6,018 bbls	6.1%	0.0%
Fresh Water	5,673 bbls	6,018 bbls	6,018 bbls	6.1%	0.0%
Slickwater	4,785 bbls	5,310 bbls	5,310 bbls	11.0%	0.0%
Linear Gel	786 bbls	673 bbls	673 bbls	-14.3%	0.0%
Proppant Laden	5,333 bbls	5,718 bbls	5,718 bbls	7.2%	0.0%
Flush	187 bbls	264.6 bbls	264.6 bbls	41.2%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	238.27 gals	233.8 gals	233.00 gals	-1.9%	-0.3%
Biocide	35.74 gals	37.91 gals	37.5 gals	6.1%	-1.1%
Scale Inhibitor	59.57 gals	63.19 gals	62.00 gals	6.1%	-1.9%
Acid	1,136.36 gals	1,134.85 gals	1,126.00 gals	-0.1%	-0.8%
Acid Inhibitor	7.95 gals	7.94 gals	7.88 gals	-0.1%	-0.8%
Gelling Agent	82.50 gals	70.71 gals	67.75 gals	-14.3%	-4.2%
Breaker	16.50 lbs	14.14 lbs	14.8 lbs	-14.3%	4.7%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	29,701 lbs	26,440 lbs	10.0%	-11.0%
40/70 White	243,000 lbs	238,889 lbs	241,420 lbs	-1.7%	1.1%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 32nd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

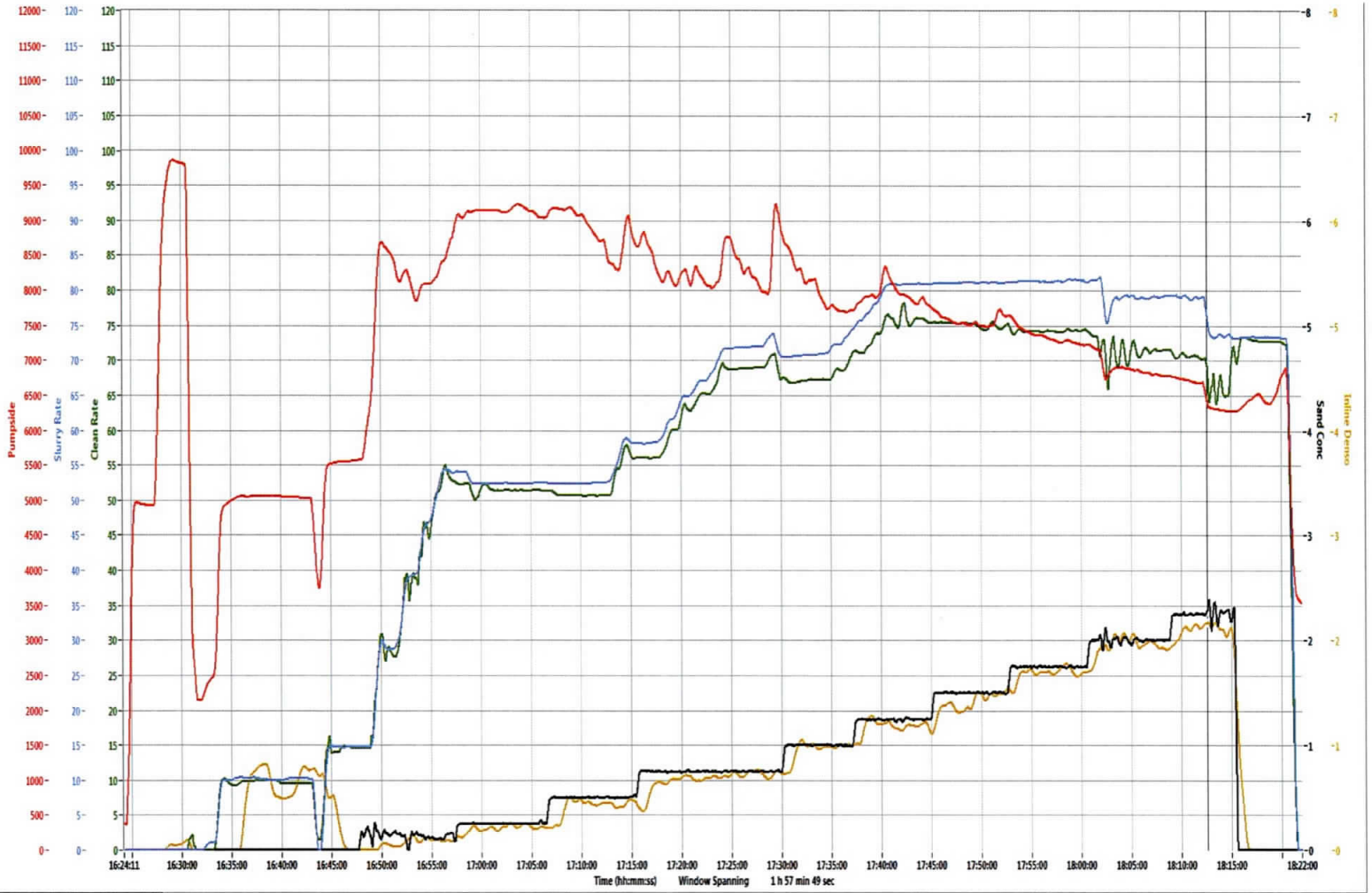
Quality Assesment / Quality Control

Chemical Volumes

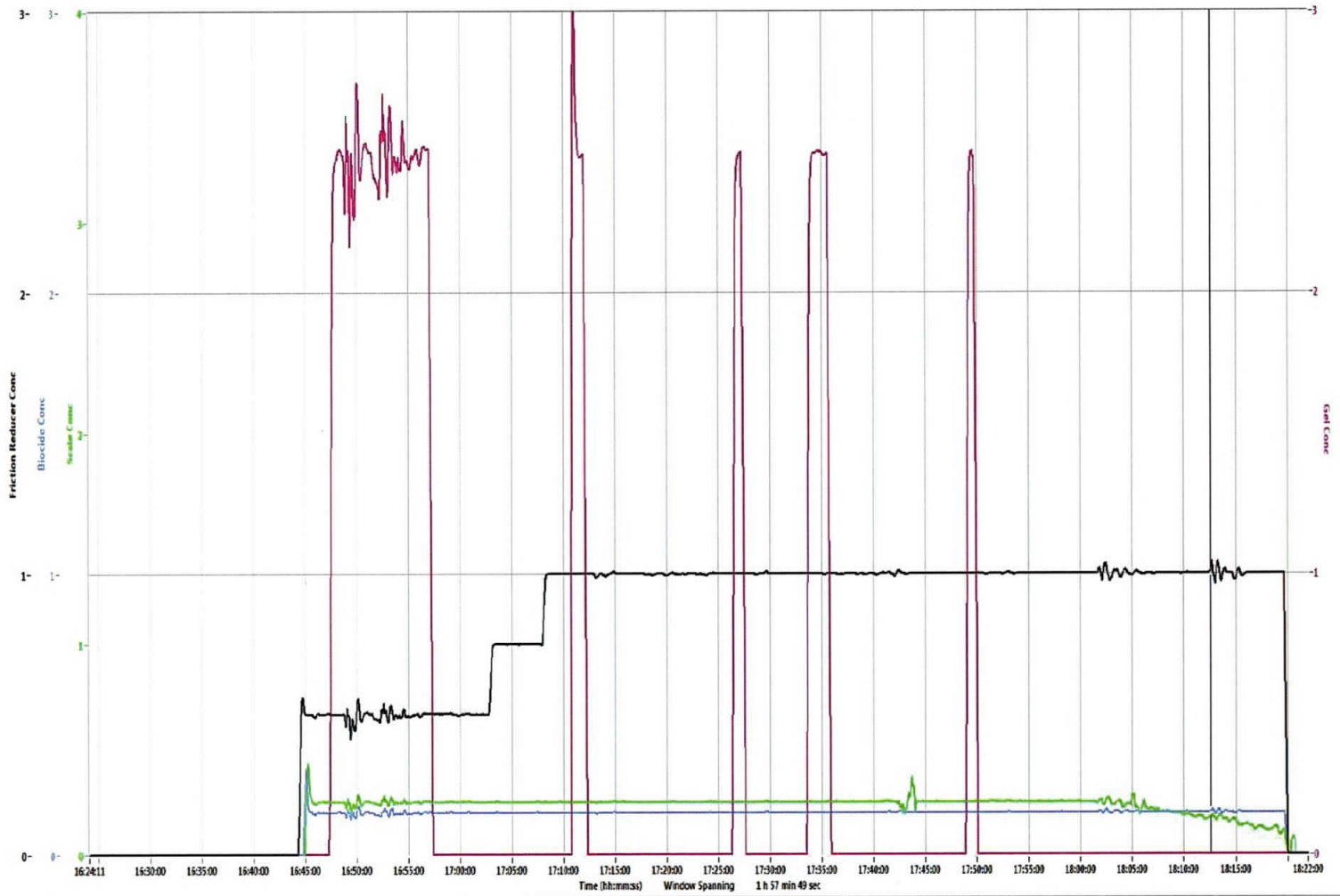
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	233.8 gals	233.00 gals	0%	233.00 gals
Biocide	0.15 gpt	37.91 gals	37.5 gals	-1%	37.5 gals
Scale Inhibitor	0.25 gpt	63.19 gals	62.00 gals	-2%	62.00 gals
Acid	28 %	1,134.85 gals	1,126.00 gals	-1%	1,126.00 gals
Acid Inhibitor	7.00 gpt	7.94 gals	7.88 gals	-1%	7.88 gals
Gelling Agent	2.5 gpt	70.71 gals	67.75 gals	-4%	67.75 gals
Breaker	0.5 ppt	14.14 lbs	14.8 lbs	5%	14.8 lbs

Fluid Testing - Mixed Water Analysis

pH	7.1	Chlorides	0 ppm
TDS	10150 ppm	Temperature	41.9 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		



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Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 33rd Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman

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WV Department of
Environmental Protection



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 33rd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	1,121 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,294 ft	8,415 ft	187 bbbls	184 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	6,006 bbbls	Friction Reducer :	214.00 gals		
Clean Volume :	5,980 bbbls	Biocide :	37.50 gals		
Raw Acid Volume :	26 bbbls	Scale Inhibitor :	60.00 gals		
Slickwater Volume :	5,154 bbbls	28% HCl Acid :	1119.00 gals		
Gelled Volume :	787 bbbls	Acid Inhibitor :	7.83 gals		
Proppant Laden :	5,678 bbbls	Gelling Agent :	52.50 gals		
Slurry Volume :	6,342 bbbls	Breaker :	15.00 lbs		
Wireline Volume :	81 bbbls	X-linker :			
Total Fluid To Recover :	6,061 bbbls				
Proppant Totals					
100 Mesh :	27,000 lbs				
40/70 White :	242,940 lbs				
Total :	269,940 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,406 psi	Opening Pressure	7,264 psi
Minimum	6,588 psi	Minimum	30.4 bpm	Frac V	1.02 pp/ft	Open V	0.80 psi/ft
Maximum	9,254 psi	Maximum	86.4 bpm	Pump Time	1.59 Hrs	ISIP	3,652 psi
Average	7,590 psi	Average	76.8 bpm	HHP	14,287 HHP	Closing Pressure	3,430 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,838					21:20
Open Well	FW		2,254					21:27
Start Injection	FW	0.2	2,372	13.6				21:28
Start 15 % HCl Acid	ACID	14.7	5,314	25.2	15			21:31
Pad	SW	15.0	5,360	28.5	41			21:33
Start 15 % HCl Acid	ACID	14.6	5,374	25.6	71			21:35
Pad	SW	15.1	5,388	65.5	97	9		21:37
Ball seat (Breakdown)	SW	19.5	6,406		159		1	21:42
Start 0.10 ppa 100 Mesh Sand	SW	19.5	6,432	352.6	160	1,012	9	21:42
Increase Gel to 2.50 gpt	SW/Gel	19.5	6,464		162		22	21:42
Acid on Formation	SW/Gel	30.4	8,540		242		238	21:45
Start 0.25 ppa 100 Mesh Sand	SW/Gel	63.9	8,495	428.8	515	4,539	1,021	21:50
Increase FR to 0.75 gpt	SW/Gel	63.9	9,052		728		3,198	21:51
Decrease Gel to 0.00 gpt	SW	63.6	9,019		886		3,198	21:53
Start 0.50 ppa 100 Mesh Sand	SW	58.0	9,016	431.1	952	9,081	5,560	21:57
Start 0.75 ppa 100 Mesh Sand	SW	70.4	8,140	385.1	1,395	12,093	14,641	22:04
Start 0.75 ppa 40/70 White	SW	80.3	7,985	508.6	1,795	15,902	26,734	22:09
Start 1.00 ppa 40/70 White	SW	84.8	8,095	580.8	2,322	24,501	42,636	22:16
Increase FR to 1.00 gpt	SW	85.6	7,765		2,615		54,308	22:19
Start 1.25 ppa 40/70 White	SW	85.4	7,530	524.1	2,934	27,537	67,137	22:23
Start 1.50 ppa 40/70 White	SW	85.8	7,201	596.4	3,493	37,639	94,674	22:29
Start 1.75 ppa 40/70 White	SW	86.0	7,013	581.9	4,136	42,834	132,312	22:37
Increase Gel to 2.50 gpt	SW/Gel	86.1	7,013		4,149		133,176	22:37
Decrease Gel to 0.00 gpt	SW	85.9	7,079		4,225		138,290	22:38
Start 2.00 ppa 40/70 White	SW	86.2	6,885	578.3	4,770	48,552	175,146	22:44
Start 2.25 ppa 40/70 White	SW	86.2	6,711	616.1	5,406	43,520	223,698	22:52
Flush	SW	85.9	6,850	263.4	6,069		267,218	22:59
Shutdown (Final)	SW		3,700		6,342		267,218	23:03



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 33rd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Metrics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,590 psi	0.0%	-24.1%
Average Slurry Rate	85.0 bpm	85.0 bpm	76.8 bpm	0.0%	-9.6%
Average Horsepower	20,833 HHP	20,833 HHP	14,287 HHP	0.0%	-31.4%
Average Perf Friction	776 psi	776 psi	633 psi	0.0%	-18.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.02 psi/ft	0.0%	-7.3%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	108 bbls	108 bbls	45.8%	0.0%
15% HCl Acid	78.6 bbls	50.8 bbls	50.8 bbls	-35.4%	0.0%
Clean	5,670 bbls	5,980 bbls	5,980 bbls	5.5%	0.0%
Fresh Water	5,670 bbls	5,980 bbls	5,980 bbls	5.5%	0.0%
Slickwater	4,782 bbls	5,154 bbls	5,154 bbls	7.8%	0.0%
Linear Gel	786 bbls	787 bbls	787 bbls	0.2%	0.0%
Proppant Laden	5,333 bbls	5,678 bbls	5,678 bbls	6.5%	0.0%
Flush	184 bbls	263.4 bbls	263.4 bbls	43.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	238.13 gals	217.17 gals	214.00 gals	-8.8%	-1.5%
Biocide	35.72 gals	37.67 gals	37.5 gals	5.5%	-0.5%
Scale Inhibitor	59.53 gals	62.79 gals	60.00 gals	5.5%	-4.4%
Acid	1,136.36 gals	1,077.58 gals	1,119.00 gals	-5.2%	3.8%
Acid Inhibitor	7.95 gals	7.54 gals	7.83 gals	-5.2%	3.8%
Gelling Agent	82.50 gals	52.00 gals	52.5 gals	-37.0%	1.0%
Breaker	16.50 lbs	16.52 lbs	15.00 lbs	0.1%	-9.2%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	26,734 lbs	27,000 lbs	-1.0%	1.0%
40/70 White	243,000 lbs	240,484 lbs	242,940 lbs	-1.0%	1.0%

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Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/9/2018
 Stage: 33rd
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	217.17 gals	214.00 gals	-1%	214.00 gals
Biocide	0.15 gpt	37.67 gals	37.5 gals	0%	37.5 gals
Scale Inhibitor	0.25 gpt	62.79 gals	60.00 gals	-4%	60.00 gals
Acid	28 %	1,077.58 gals	1,119.00 gals	4%	1,119.00 gals
Acid Inhibitor	7.00 gpt	7.54 gals	7.83 gals	4%	7.83 gals
Gelling Agent	2.5 gpt	52.00 gals	52.5 gals	1%	52.5 gals
Breaker	0.5 ppt	16.52 lbs	15.00 lbs	-9%	15.00 lbs

Fluid Testing- Mixed Water Analysis

pH	7	Chlorides	0 ppm
TDS	10150 ppm	Temperature	49.35 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		

Sand Sieve Analysis Sand Box: 51417

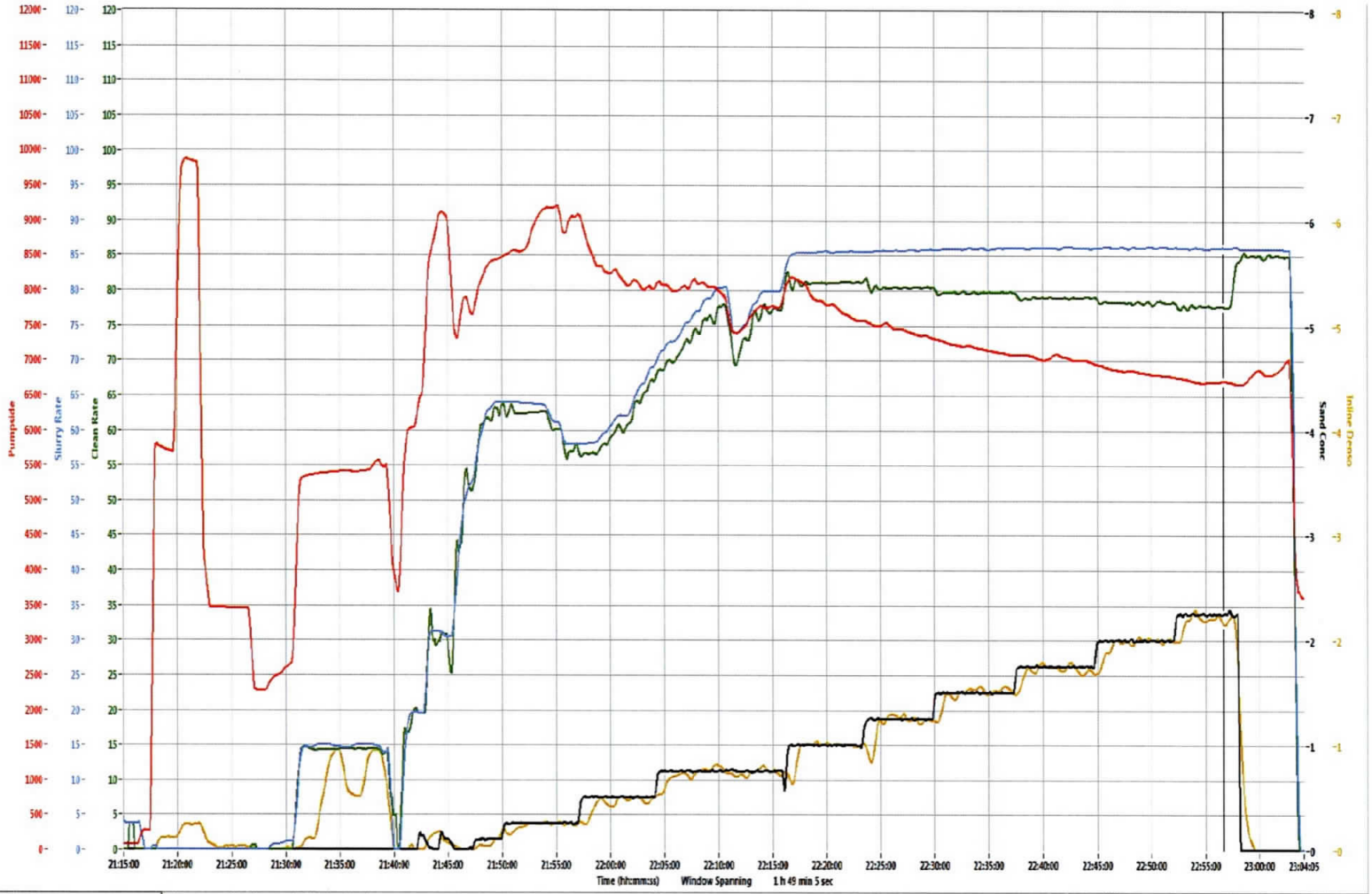
100 Mesh Mesh Screen Sizes	Weight Retained	% Retained	
40	<= 0.1%	0.13	0.04%
50	>= 90%	6.74	1.99%
60		43.01	12.73%
70		281.71	83.35%
100		5.15	1.52%
140	1.23	0.36%	
Pan	<= 1%	0.00	0.00%
Total Sample Weight:	338 grams	100.0%	

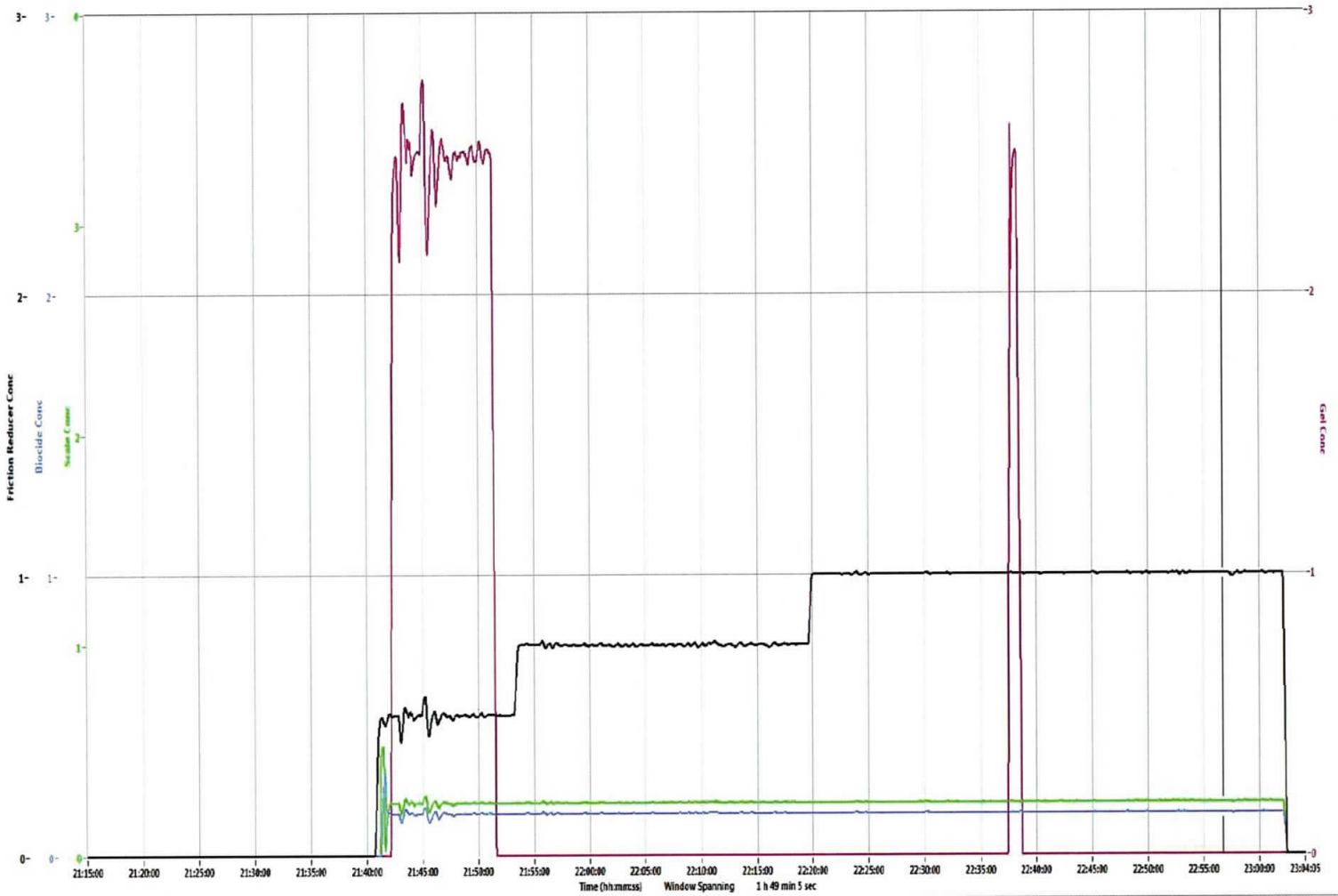
Mesh Size	% Retained
40	0.04%
50	1.99%
60	12.73%
70	83.35%
100	1.52%
140	0.36%
Pan	0.00%

Sand Sieve Analysis Sand Box: 51404

40/70 Mesh Screen Sizes	Weight Retained	% Retained	
30	<= 0.1%	0.27	0.06%
40	>= 90%	18.87	4.14%
50		321.01	70.43%
60		90.63	19.89%
70		18.65	4.09%
100	<= 1%	5.71	1.25%
Pan		0.63	0.14%
Total Sample Weight:	456 grams	100.0%	

Mesh Size	% Retained
30	0.06%
40	4.14%
50	70.43%
60	19.89%
70	4.09%
100	1.25%
Pan	0.14%





Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 34th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson

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WV Department of
Environmental Protection



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/10/2018
 Stage: 34th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Richard Crawford
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Wellbore Information					
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	971 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	8,144 ft	8,265 ft	183 bbbls	181 bbbls	6,236 ft

Job Summary					
Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,945 bbbls	Friction Reducer :	187.00 gals		
Clean Volume :	5,917 bbbls	Biocide :	37.00 gals		
Raw Acid Volume :	28 bbbls	Scale Inhibitor :	63.80 gals		
Slickwater Volume :	5,433 bbbls	28% HCl Acid :	1179.00 gals		
Gelled Volume :	446 bbbls	Acid Inhibitor :	8.25 gals		
Proppant Laden :	5,592 bbbls	Gelling Agent :	49.30 gals		
Slurry Volume :	6,290 bbbls	Breaker :	10.00 lbs		
Wireline Volume :	81 bbbls	X-linker :			
Total Fluid To Recover :	5,998 bbbls				
Proppant Totals					
100 Mesh :	24,840 lbs				
40/70 White :	245,800 lbs				
Total :	270,640 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-in Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,829 psi	Opening Pressure	1,974 psi
Minimum	6,726 psi	Minimum	81.0 bpm	Frac V	1.04 psi/ft	Open V	0.75 psi/h
Maximum	7,972 psi	Maximum	86.2 bpm	Pump Time	1.58 Hrs	ISIP	3,796 psi
Average	7,119 psi	Average	85.4 bpm	HHP	14,902 HHP	Closing Pressure	3,505 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbl)	Cumulative Slurry Volume (bbbl)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,751					6:06
Open Well	FW		1,574					6:10
Start Injection	FW		1,957	10.4				6:11
Start 15 % HCl Acid	ACID	10.1	4,731	27.4	11			6:13
Pad	SW	10.5	4,869	30.6	40			6:16
Start 15 % HCl Acid	ACID	10.2	4,922	27.5	71			6:19
Pad	SW	10.4	4,977	48.7	100	48		6:21
Increase Gel to 2.50 gpt	SW/Gel	15.6	5,376		147		30	6:26
Start 0.10 ppa 100 Mesh Sand	SW/Gel	15.6	5,372	357.8	148	1,685	48	6:26
Ball seat (Breakdown)	SW/Gel	15.6	5,829		155		145	6:27
Acid on Formation	SW/Gel	30.4	8,315		229		509	6:29
Start 0.25 ppa 100 Mesh Sand	SW/Gel	61.6	8,394	455.0	506	4,829	1,733	6:35
Decrease Gel to 0.00 gpt	SW	61.6	8,481		519		1,856	6:35
Start 0.50 ppa 100 Mesh Sand	SW	70.5	8,524	412.5	968	8,641	6,562	6:42
Start 0.75 ppa 100 Mesh Sand	SW	81.4	8,605	380.5	1,391	11,808	15,203	6:47
Start 0.75 ppa 40/70 White	SW	84.7	8,253	364.7	1,784	11,523	27,011	6:52
Increase FR to 0.75 gpt	SW	84.8	7,906		2,144		37,906	6:56
Start 1.00 ppa 40/70 White	SW	84.8	7,880	516.5	2,164	21,671	38,534	6:57
Start 1.25 ppa 40/70 White	SW	85.0	7,383	569.5	2,710	29,970	60,205	7:03
Increase FR to 1.00 gpt	SW	85.1	7,258		3,206		89,547	7:10
Start 1.50 ppa 40/70 White	SW	85.2	7,272	573.8	3,318	36,230	90,174	7:10
Start 1.75 ppa 40/70 White	SW	85.3	7,037	552.7	3,938	40,678	126,404	7:17
Increase Gel to 2.50 gpt	SW/Gel	84.2	6,909		4,511		164,919	7:24
Start 2.00 ppa 40/70 White	SW/Gel	85.4	6,934	619.3	4,543	52,030	167,081	7:24
Decrease Gel to 0.00 gpt	SW	85.6	6,960		4,594		170,946	7:25
Start 2.25 ppa 40/70 White	SW	85.6	6,864	710.7	5,227	53,401	219,102	7:32
Flush	SW	85.3	7,072	287.0	5,997		272,502	7:41
Shutdown (Final)	SW		3,811		6,290		272,502	7:45



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/10/2018
 Stage: 34th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Details					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,119 psi	0.0%	-28.8%
Average Slurry Rate	85.0 bpm	85.0 bpm	85.4 bpm	0.0%	0.5%
Average Horsepower	20,833 HHP	20,833 HHP	14,902 HHP	0.0%	-28.5%
Average Perf Friction	776 psi	776 psi	783 psi	0.0%	0.9%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.04 psi/ft	0.0%	-5.2%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	90 bbls	90 bbls	21.5%	0.0%
15% HCl Acid	78.6 bbls	54.9 bbls	54.9 bbls	-30.1%	0.0%
Clean	5,667 bbls	5,917 bbls	5,917 bbls	4.4%	0.0%
Fresh Water	5,667 bbls	5,917 bbls	5,917 bbls	4.4%	0.0%
Slickwater	4,778 bbls	5,433 bbls	5,433 bbls	13.7%	0.0%
Linear Gel	786 bbls	446 bbls	446 bbls	-43.2%	0.0%
Proppant Laden	5,333 bbls	5,592 bbls	5,592 bbls	4.9%	0.0%
Flush	181 bbls	287.0 bbls	287.0 bbls	58.7%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.99 gals	193.37 gals	187.00 gals	-18.8%	-3.3%
Biocide	35.70 gals	37.28 gals	37.00 gals	4.4%	-0.8%
Scale Inhibitor	59.50 gals	62.13 gals	63.8 gals	4.4%	2.7%
Acid	1,136.36 gals	1,164.55 gals	1,179.00 gals	2.5%	1.2%
Acid Inhibitor	7.95 gals	8.15 gals	8.25 gals	2.5%	1.2%
Gelling Agent	82.50 gals	46.82 gals	49.3 gals	-43.2%	5.3%
Breaker	16.50 lbs	9.36 lbs	10.00 lbs	-43.3%	6.8%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,011 lbs	24,840 lbs	0.0%	-8.0%
40/70 White	243,000 lbs	245,492 lbs	245,800 lbs	1.0%	0.1%

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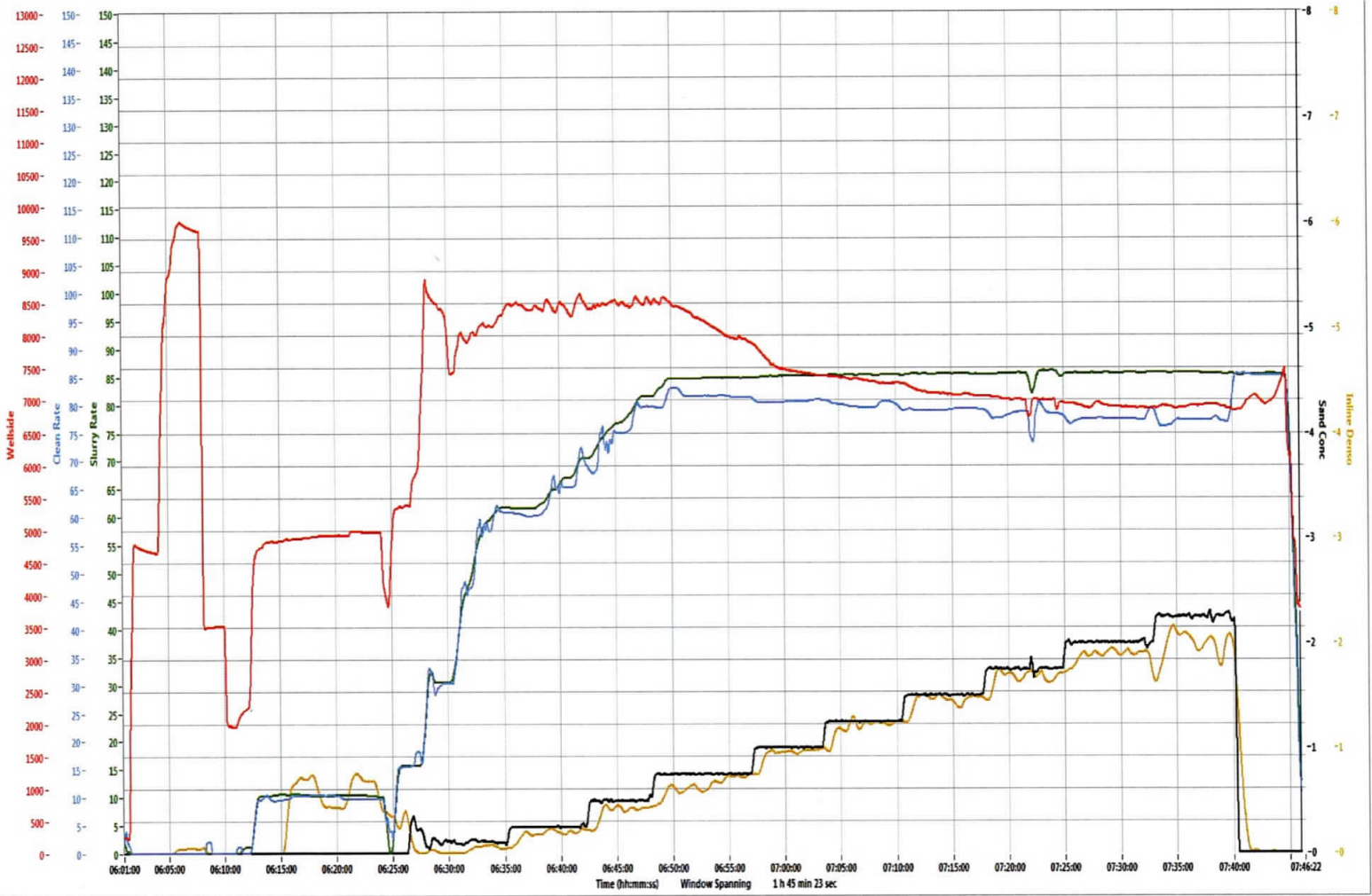
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/10/2018
 Stage: 34th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	193.37 gals	187.00 gals	-3%	187.00 gals
Biocide	0.15 gpt	37.28 gals	37.00 gals	-1%	37.00 gals
Scale Inhibitor	0.25 gpt	62.13 gals	63.8 gals	3%	63.8 gals
Acid	28 %	1,164.55 gals	1,179.00 gals	1%	1,179.00 gals
Acid Inhibitor	7.00 gpt	8.15 gals	8.25 gals	1%	8.25 gals
Gelling Agent	2.5 gpt	46.82 gals	49.3 gals	5%	49.3 gals
Breaker	0.5 ppt	9.36 lbs	10.00 lbs	7%	10.00 lbs

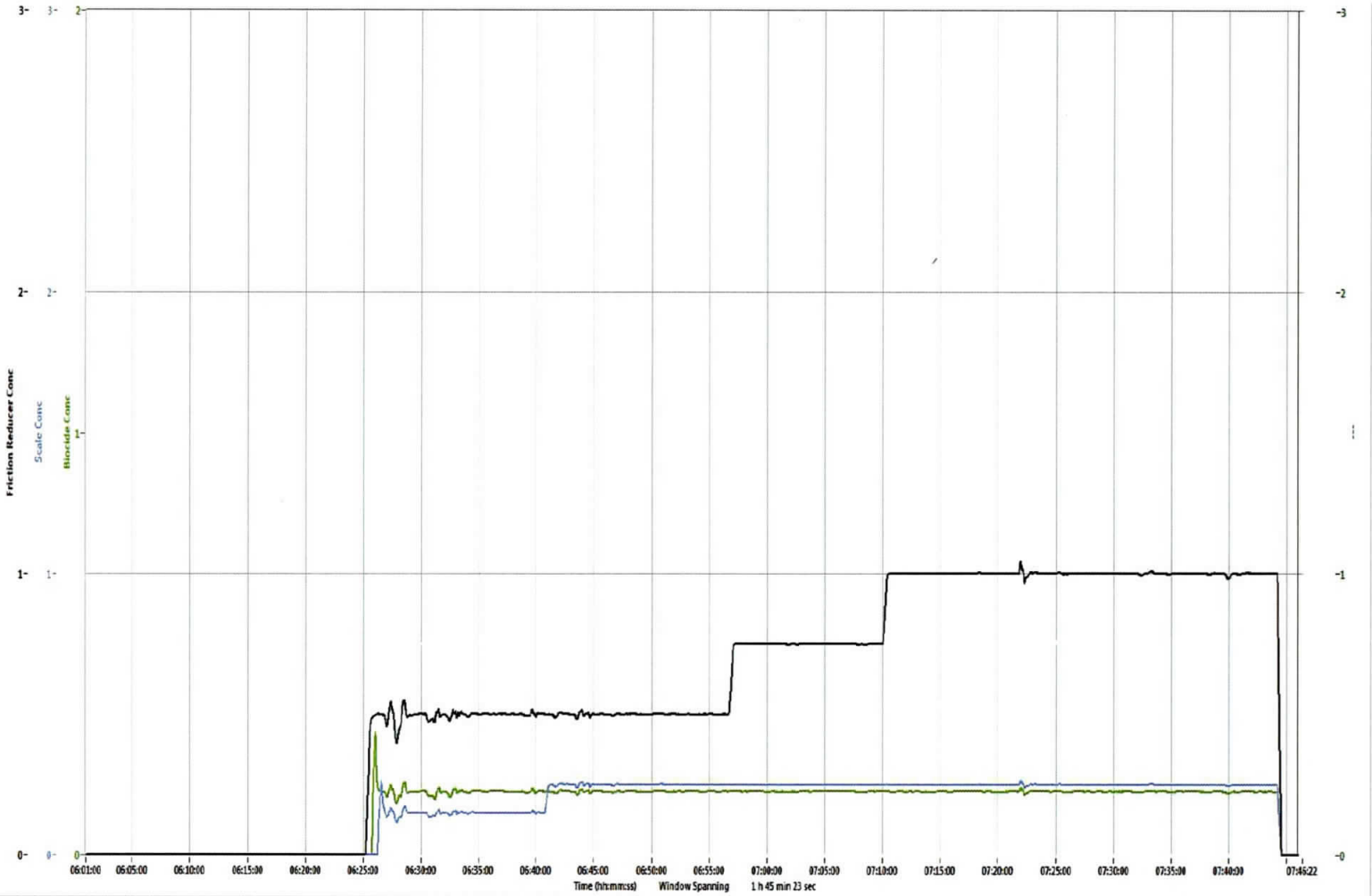


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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 35th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 35th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Don Barker	Stingray Representative	Richard Crawford
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Wellbore Information					
Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	821 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	7,994 ft	8,115 ft	180 bbbls	177 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,765 bbbls	Friction Reducer :	178.00 gals		
Clean Volume :	5,734 bbbls	Biocide :	35.30 gals		
Raw Acid Volume :	31 bbbls	Scale Inhibitor :	58.10 gals		
Slickwater Volume :	5,138 bbbls	28% HCl Acid :	1106.00 gals		
Gelled Volume :	558 bbbls	Acid Inhibitor :	7.74 gals		
Proppant Laden :	5,410 bbbls	Gelling Agent :	60.60 gals		
Slurry Volume :	6,132 bbbls	Breaker :	11.30 lbs		
Wireline Volume :	93 bbbls	X-linker :			
Total Fluid To Recover :	5,827 bbbls				
Proppant Totals					
100 Mesh :	27,020 lbs				
40/70 White :	242,500 lbs				
Total :	269,520 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-in Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,034 psi	Opening Pressure	2,031 psi
Minimum	6,820 psi	Minimum	68.1 bpm	Frac V	1.05 psi/ft	Open V	0.76 psi/h
Maximum	8,677 psi	Maximum	85.7 bpm	Pump Time	1.55 Hrs	ISIP	3,815 psi
Average	7,405 psi	Average	84.2 bpm	HHP	15,281 HHP	Closing Pressure	3,554 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,798					13:51
Open Well	FW		2,031					13:54
Start Injection	FW	1.2	2,340	7.9	0			13:55
Start 15 % HCl Acid	ACID	10.1	4,886	27.1	11			13:58
Pad	SW	11.3	4,946	30.4	39			14:01
Start 15 % HCl Acid	ACID	10.0	5,028	33.9	60			14:03
Pad	SW	10.9	5,054	46.4	95			14:06
Increase Gel to 2.50 gpt	SW/Gel	14.8	5,488		134			14:10
Start 0.10 ppa 100 Mesh Sand	SW/Gel	14.8	5,512	394.2	141	1,902	9	14:11
Ball seat (Breakdown)	SW/Gel	14.9	6,034		148		56	14:11
Acid on Formation	SW/Gel	29.6	8,436		192		327	14:13
Start 0.25 ppa 100 Mesh Sand	SW/Gel	65.5	8,607	442.9	537	4,688	1,911	14:20
Decrease Gel to 0.00 gpt	SW	65.5	8,546		547		2,006	14:20
Start 0.50 ppa 100 Mesh Sand	SW	69.0	8,381	450.6	989	9,468	6,599	14:26
Start 0.75 ppa 100 Mesh Sand	SW	83.5	8,547	421.3	1,451	13,452	16,066	14:32
Increase FR to 0.75 gpt	SW	84.9	8,042		1,891		29,095	14:37
Start 1.00 ppa 40/70 White	SW	84.7	8,057	505.0	1,891	21,242	29,519	14:38
Start 1.25 ppa 40/70 White	SW	85.0	7,532	671.3	2,427	35,299	50,761	14:44
Start 1.50 ppa 40/70 White	SW	85.1	7,234	675.3	3,148	42,621	86,059	14:52
Increase FR to 1.00 gpt	SW	85.3	7,181		3,434		102,611	14:56
Start 1.75 ppa 40/70 White	SW	85.3	6,987	568.4	3,882	41,751	128,681	15:01
Increase Gel to 2.50 gpt	SW/Gel	85.6	6,965		4,450		166,598	15:08
Start 2.00 ppa 40/70 White	SW/Gel	85.3	6,993	579.0	4,507	48,642	170,432	15:08
Decrease Gel to 0.00 gpt	SW	85.5	7,017		4,530		172,155	15:09
Increase Gel to 2.50 gpt	SW/Gel	85.4	6,966		5,088		214,425	15:15
Start 2.25 ppa 40/70 White	SW/Gel	85.6	6,953	635.2	5,149	46,112	219,074	15:16
Decrease Gel to 0.00 gpt	SW	85.6	6,992		5,171		220,875	15:16
Flush	SW	85.3	7,071	285.9	5,838		265,186	15:24
Shutdown (Final)	SW		3,715		6,132		265,186	15:28



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 35th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Well Parameters					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,405 psi	0.0%	-26.0%
Average Slurry Rate	85.0 bpm	85.0 bpm	84.2 bpm	0.0%	-0.9%
Average Horsepower	20,833 HHP	20,833 HHP	15,281 HHP	0.0%	-26.6%
Average Perf Friction	776 psi	776 psi	761 psi	0.0%	-1.9%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.9%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	75 bbls	75 bbls	1.2%	0.0%
15% HCl Acid	78.6 bbls	61.0 bbls	61.0 bbls	-22.4%	0.0%
Clean	5,663 bbls	5,734 bbls	5,734 bbls	1.3%	0.0%
Fresh Water	5,663 bbls	5,734 bbls	5,734 bbls	1.3%	0.0%
Slickwater	4,775 bbls	5,138 bbls	5,138 bbls	7.6%	0.0%
Linear Gel	786 bbls	558 bbls	558 bbls	-29.0%	0.0%
Proppant Laden	5,333 bbls	5,410 bbls	5,410 bbls	1.4%	0.0%
Flush	177 bbls	285.9 bbls	285.9 bbls	61.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.85 gals	187.64 gals	178.00 gals	-21.1%	-5.1%
Biocide	35.68 gals	36.12 gals	35.3 gals	1.2%	-2.3%
Scale Inhibitor	59.46 gals	60.21 gals	58.1 gals	1.3%	-3.5%
Acid	1,136.36 gals	1,293.94 gals	1,106.00 gals	13.9%	-14.5%
Acid Inhibitor	7.95 gals	9.06 gals	7.74 gals	13.9%	-14.5%
Gelling Agent	82.50 gals	58.57 gals	60.6 gals	-29.0%	3.5%
Breaker	16.50 lbs	11.71 lbs	11.3 lbs	-29.0%	-3.5%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	29,510 lbs	27,020 lbs	9.3%	-8.4%
40/70 White	243,000 lbs	235,667 lbs	242,500 lbs	-3.0%	2.9%

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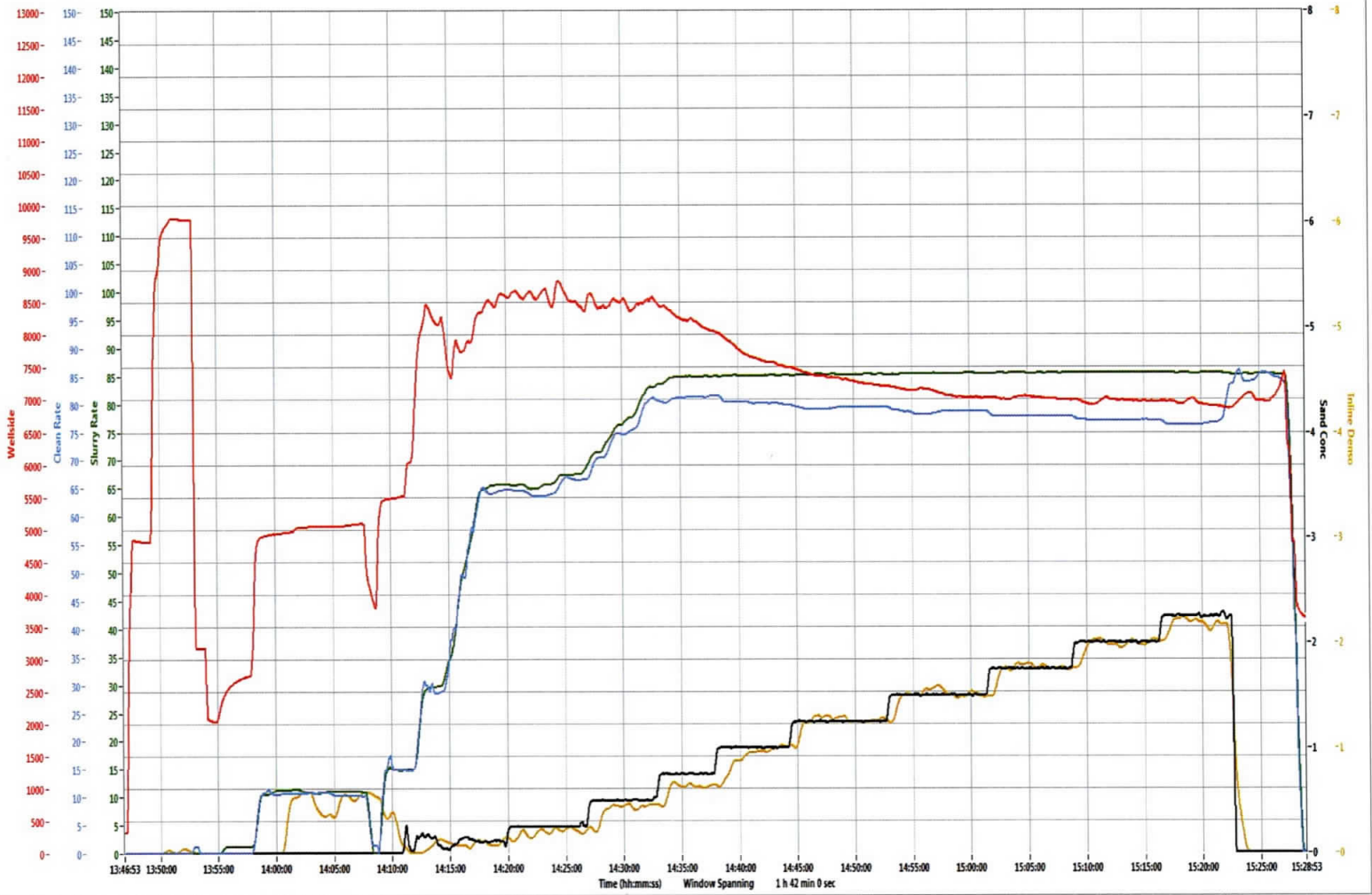
Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 35th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

Chemical Volumes

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	187.64 gals	178.00 gals	-5%	178.00 gals
Biocide	0.15 gpt	36.12 gals	35.3 gals	-2%	35.3 gals
Scale Inhibitor	0.25 gpt	60.21 gals	58.1 gals	-4%	58.1 gals
Acid	28 %	1,293.94 gals	1,106.00 gals	-15%	1,106.00 gals
Acid Inhibitor	7.00 gpt	9.06 gals	7.74 gals	-15%	7.74 gals
Gelling Agent	2.5 gpt	58.57 gals	60.6 gals	3%	60.6 gals
Breaker	0.5 ppt	11.71 lbs	11.3 lbs	-4%	11.3 lbs

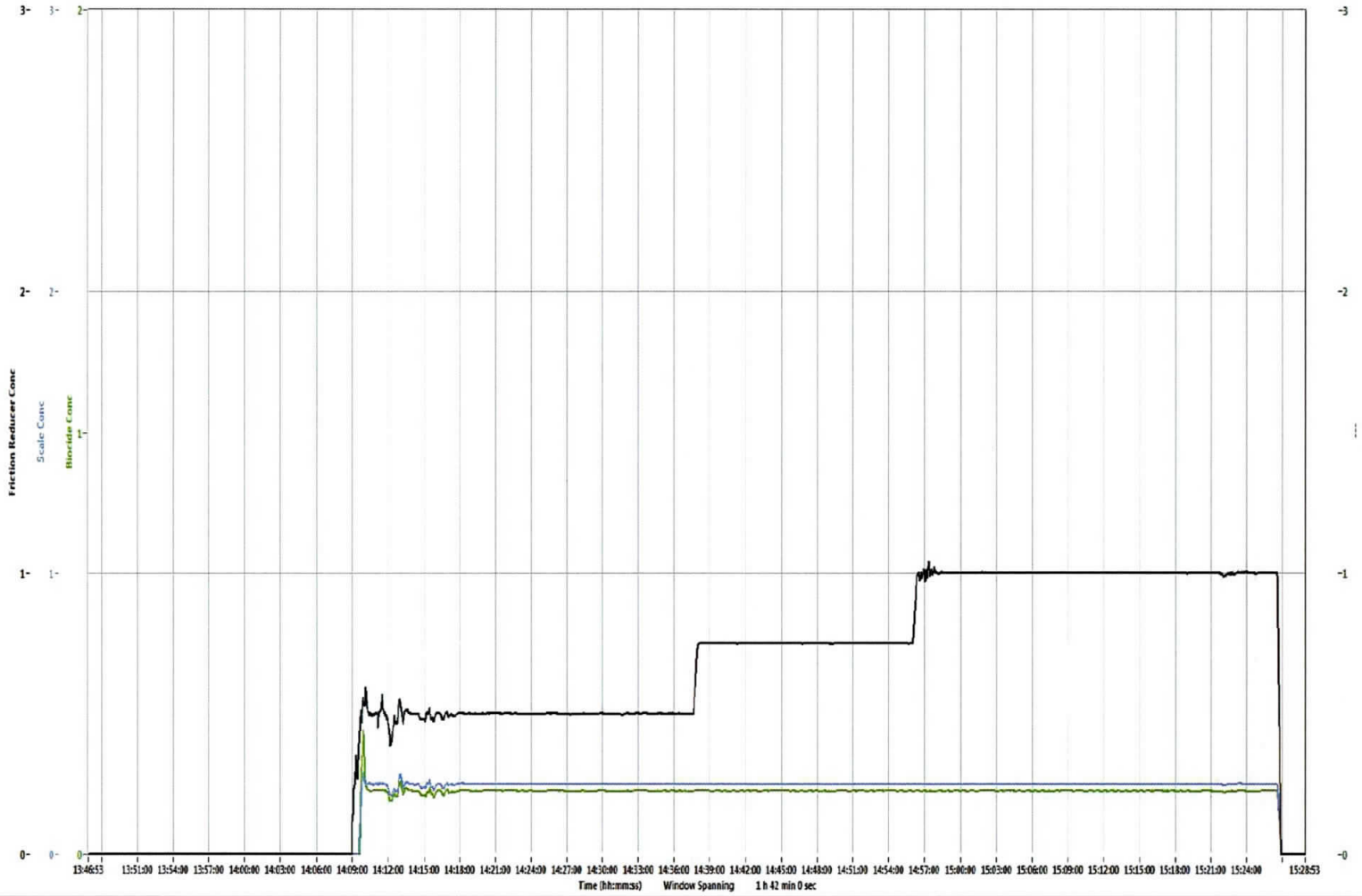


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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 36th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman

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Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 36th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report									
Customer Representative		Mr. Tu Spatafore			Stingray Representative		Ivan McClain		
Wellbore Information									
Perf Size	# of Perforations	Tubular Type		Tubular Grade	Length of Lateral		Length of Vertical		
0.41 in.	30	5 - 1/2" 20. #		P-110	671 ft		7,294 ft		
TVD	Top Perf	Bottom Perf		Flush to Bottom Perf	Flush to Top Perf		Plug Depth		
6,236 ft	7,844 ft	7,965 ft		177 bbbls	174 bbbls		6,236 ft		
Job Summary									
Fluid Volumes			Chemical Volumes			Notes:		Time:	
Total Fluid Volume :	10,275 bbbls	Friction Reducer :	241.00 gals	100.2% of total proppant placed.					
Clean Volume :	10,196 bbbls	Blocide :	64.10 gals	FR started at 0.50 gpt per Mr. Tu Spatafore					
Raw Acid Volume :	78 bbbls	Scale Inhibitor :	107.00 gals						
Seawater Volume :	3,744 bbbls	28% HCl Acid :	3394.00 gals						
Gelled Volume :	6,309 bbbls	Acid Inhibitor :							
Proppant Laden :	9,348 bbbls	Gelling Agent :	658.80 gals						
Slurry Volume :	10,710 bbbls	Breaker :							
Wireline Volume :	106 bbbls	X-linker :							
Total Fluid To Recover :	10,302 bbbls								
Proppant Totals									
100 Mesh :	28,180 lbs								
40/70 White :	242,360 lbs								
Total :	270,540 lbs								
Treating Pressures		Injection Rates		Treatment Values		Shut-In Values			
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,975 psi	Opening Pressure	2,248 psi		
Minimum	6,557 psi	Minimum	21.6 bpm	Frac V	1.13 psi/ft	Open V	0.79 psi/ft		
Maximum	9,932 psi	Maximum	62.6 bpm	Pump Time	4.31 Hrs	ISIP	4,312 psi		
Average	8,060 psi	Average	52.5 bpm	HHP	10,372 HHP	Closing Pressure	3,608 psi		
Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbl)	Cumulative Slurry Volume (bbbl)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)	
Pressure Test	FW		9,861					20:06	
Open Well	FW		2,248					20:13	
Start Injection	FW	0.1	2,364	13.3				20:13	
Start 15 % HCl Acid	ACID	14.5	5,829	35.7	16			20:17	
Pad	SW	14.9	5,828	31.8	53			20:19	
Start 15 % HCl Acid	ACID	14.4	5,887	23.8	86			20:22	
Pad	SW	14.9	5,847	91.7	111			20:23	
Ball seat (Breakdown)	SW	19.5	6,975		163			20:28	
Increase Gel to 2.50 gpt	SW/Gel	19.4	6,986		183			20:29	
Start 0.10 ppa 100 Mesh Sand	SW/Gel	32.2	8,556	316.0	196	1,339	6	20:29	
Acid on Formation	SW/Gel	30.4	8,207		228		122	20:30	
Decrease Gel to 0.00 gpt	SW	56.1	8,120		509		1,283	20:36	
Start 0.25 ppa 100 Mesh Sand	SW	56.1	8,166	427.1	516	4,511	1,344	20:36	
Start 0.50 ppa 100 Mesh Sand	SW	55.8	8,812	781.0	951	15,130	5,855	20:44	
Increase FR to 0.75 gpt	SW	55.7	8,872		1,001		6,867	20:44	
Increase FR to 1.00 gpt	SW	55.6	9,093		1,225		11,422	20:48	
Increase Gel to 2.50 gpt	SW/Gel	51.4	9,112		1,290		12,753	20:50	
Decrease Gel to 0.00 gpt	SW	49.4	8,851		1,374		14,474	20:51	
Sweep	SW	21.8	7,245	394.8	1,755		20,985	21:01	
Increase Gel to 2.50 gpt	SW/Gel	21.9	6,658		1,901		20,985	21:07	
Decrease Gel to 0.00 gpt	SW	24.0	8,802		2,132		20,985	21:17	
Flush	SW	23.9	8,723	86.5	2,156		20,985	21:18	
Shutdown	SW		5,396		2,245		20,985	21:22	
Decrease FR to .50 gpt	FW	0.5	4,400		2,245		20,985	21:26	
Start Injection	FW	0.5	4,400	37.7	2,245		20,985	21:26	
Start 15 % HCl Acid	ACID	14.4	7,728	45.2	2,283		20,985	21:29	
Pad	SW	15.1	7,526	1,410.2	2,332		20,985	21:33	
Acid on Formation	SW	24.9	8,522		2,493		20,985	21:43	
Increase FR to 1.00 gpt	SW	33.8	8,815		3,105		20,985	22:01	
Shutdown	SW		5,298		3,758		20,985	22:20	
Start Injection	FW	1.1	4,525	16.2	3,758		20,985	22:24	
Start 15 % HCl Acid	ACID	14.9	6,998	50.2	3,774		20,985	22:26	
Pad	SW	15.4	7,046	710.0	3,828		20,985	22:29	
Acid on Formation	SW	36.1	9,037		4,000		20,985	22:39	
Increase Gel to 2.50 gpt	SW/Gel	41.5	8,816		4,316		20,985	22:47	
Start 0.20 ppa 40/70 White	SW/Gel	41.5	8,918	970.7	4,540	8,064	21,004	22:53	
Start 0.35 ppa 40/70 White	SW/Gel	53.2	9,057	446.1	5,530	6,568	29,068	23:14	



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 36th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Stage Comments	Fluid System	Slurry Rate (gpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (military)
Start 0.50 ppa 40/70 White	SW/Gel	55.2	8,857	485.1	5,983	10,202	35,636	23:23
Start 0.75 ppa 40/70 White	SW/Gel	59.4	8,408	462.9	6,444	14,474	45,838	23:31
Start 1.00 ppa 40/70 White	SW/Gel	59.5	8,349	402.1	6,970	16,891	60,312	23:39
Start 1.25 ppa 40/70 White	SW/Gel	61.8	8,513	331.6	7,397	17,508	77,203	23:46
Start 1.50 ppa 40/70 White	SW/Gel	61.8	8,290	542.8	7,754	34,222	94,711	23:52
Start 1.75 ppa 40/70 White	SW/Gel	62.1	7,925	870.0	8,345	56,479	128,934	0:02
Start 2.00 ppa 40/70 White	SW/Gel	62.3	7,712	390.0	9,293	32,790	185,413	0:17
Start 2.25 ppa 40/70 White	SW/Gel	62.3	7,794	679.1	9,729	54,011	218,203	0:24
Decrease Gel to 0.00 gpt	SW	62.2	7,412		10,354		270,595	0:34
Flush	SW	62.2	7,666	222.9	10,480		272,214	0:36
Shutdown (Final)	SW		4,467		10,710		272,214	0:40

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 36th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	8,060 psi	0.0%	-19.4%
Average Slurry Rate	85.0 bpm	85.0 bpm	52.5 bpm	0.0%	-38.2%
Average Horsepower	20,833 HHP	20,833 HHP	10,372 HHP	0.0%	-50.2%
Average Perf Friction	776 psi	776 psi	296 psi	0.0%	-61.9%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.13 psi/ft	0.0%	2.3%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	2,706 bbls	2,706 bbls	3565.8%	0.0%
15% HCl Acid	78.6 bbls	154.9 bbls	154.9 bbls	97.1%	0.0%
Clean	5,660 bbls	10,196 bbls	10,196 bbls	80.2%	0.0%
Fresh Water	5,660 bbls	10,196 bbls	10,196 bbls	80.2%	0.0%
Slackwater	4,772 bbls	3,744 bbls	3,744 bbls	-21.5%	0.0%
Linear Gel	786 bbls	6,309 bbls	6,309 bbls	703.0%	0.0%
Proppant Laden	5,333 bbls	9,348 bbls	9,348 bbls	75.3%	0.0%
Flush	174 bbls	309.4 bbls	309.4 bbls	77.7%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.71 gals	248.29 gals	241.00 gals	4.4%	-2.9%
Biocide	35.66 gals	64.24 gals	64.1 gals	80.2%	-0.2%
Scale Inhibitor	59.43 gals	107.06 gals	107.00 gals	80.1%	-0.1%
Acid	1,136.36 gals	3,285.76 gals	3,394.00 gals	189.1%	3.3%
Acid Inhibitor	7.95 gals	-	-	-100.0%	
Gelling Agent	82.50 gals	662.43 gals	658.8 gals	703.0%	-0.5%
Breaker	16.50 lbs	132.49 lbs	-	703.0%	-100.0%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	20,979 lbs	28,180 lbs	-22.3%	34.3%
40/70 White	243,000 lbs	251,210 lbs	242,360 lbs	3.4%	-3.5%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 36th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

Chemical Volumes

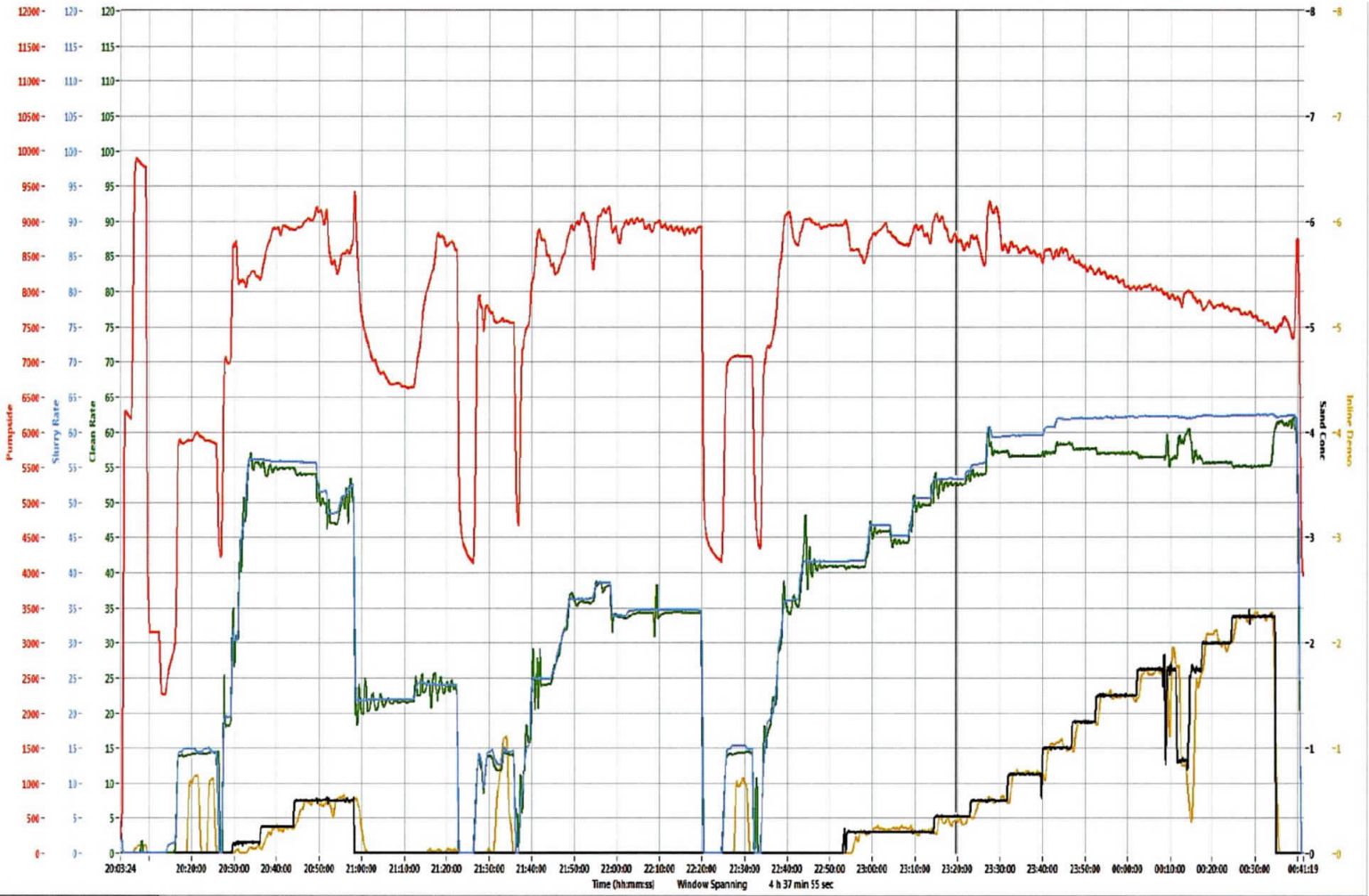
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	248.29 gals	241.00 gals	-3%	241.00 gals
Biocide	0.15 gpt	64.24 gals	64.1 gals	0%	64.1 gals
Scale Inhibitor	0.25 gpt	107.06 gals	107.00 gals	0%	107.00 gals
Acid	28 %	3,285.76 gals	3,394.00 gals	3%	3,394.00 gals
Gelling Agent	2.5 gpt	662.43 gals	658.8 gals	-1%	658.8 gals

Fluid Testing / Mud Water Analysis

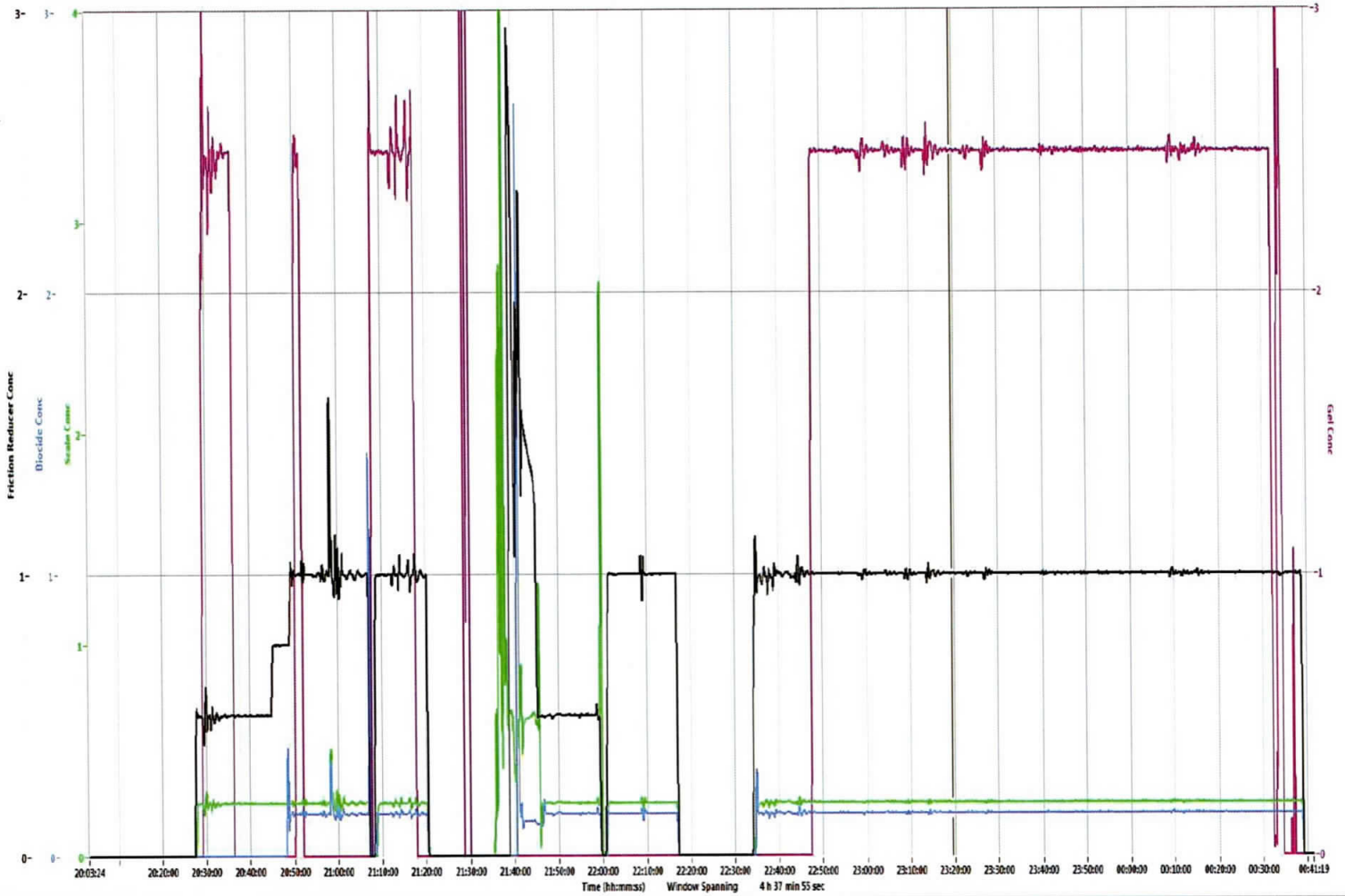
pH	7.1	Chlorides	0 ppm
TDS	10050 ppm	Temperature	43.5 deg F
TSS		Specific Gravity	1.007
Sulfates	<200 mg/L		

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Customer Name: Customer Name Lesse Name: Lesse Name Job Number: Job Number D:\SES\data\logs\2018-03-10_20-03-24_LogBlueRidge_Meckley1401_Stage36.tdms



Refresh Graph



Refresh Graph

Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 37th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 37th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Tu Spatafore	Service Representative	Ivan McClain
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	521 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	7,694 ft	7,815 ft	173 bbbls	171 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,808 bbbls	Friction Reducer :	183.00 gals		
Clean Volume :	5,782 bbbls	Biocide :	36.90 gals		
Raw Acid Volume :	26 bbbls	Scale Inhibitor :	57.40 gals	FR started at 0.50 gpt per Mr. Tu Spatafore	
Slickwater Volume :	5,476 bbbls	28% HCl Acid :	1124.00 gals		
Gelled Volume :	253 bbbls	Acid Inhibitor :	7.87 gals		
Proppant Laden :	5,457 bbbls	Gelling Agent :	27.30 gals		
Sharry Volume :	6,126 bbbls	Breaker :	5.00 lbs		
Wireline Volume :	63 bbbls	X-linker :			
Total Fluid To Recover :	5,845 bbbls				
Proppant Totals					
100 Mesh :	29,240 lbs				
40/70 White :	241,360 lbs				
Total :	270,600 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,371 psi	Opening Pressure	2,536 psi
Minimum	6,739 psi	Minimum	40.5 bpm	Frac V	1.13 psi/ft	Open V	0.84 psi/ft
Maximum	8,409 psi	Maximum	86.7 bpm	Pump Time	1.44 Hrs	ISIP	4,310 psi
Average	7,200 psi	Average	84.3 bpm	HHP	14,876 HHP	Closing Pressure	3,658 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbl)	Cumulative Slurry Volume (bbbl)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,854					4:58
Open Well	FW		2,536					5:15
Start Injection	FW	0.1	2,663	26.9				5:16
Start 15 % HCl Acid	ACID	13.7	5,673	24.8	17			5:20
Pad	SW	16.8	5,784	30.1	44			5:22
Start 15 % HCl Acid	ACID	15.0	5,792	27.4	76			5:24
Pad	SW	16.0	5,820	88.9	106			5:26
Ball seat (Breakdown)	SW	19.5	6,371		166			5:30
Increase Gel to 2.50 gpt	SW/Gel	25.8	7,137		186			5:31
Start 0.10 ppa 100 Mesh Sand	SW/Gel	35.4	8,074	196.5	191	851	7	5:31
Acid on Formation	SW/Gel	43.6	7,155		252		236	5:33
Decrease Gel to 0.00 gpt	SW	77.3	8,120		380		793	5:35
Start 0.25 ppa 100 Mesh Sand	SW	78.6	8,203	473.7	386	5,061	857	5:35
Start 0.50 ppa 100 Mesh Sand	SW	85.7	7,982	477.7	868	10,159	5,918	5:41
Start 0.75 ppa 100 Mesh Sand	SW	85.9	7,580	491.4	1,357	15,270	16,076	5:47
Start 1.00 ppa 40/70 White	SW	85.8	7,449	503.4	1,867	21,099	31,346	5:52
Increase FR to 0.75 gpt	SW	85.8	7,318		2,000		36,585	5:54
Start 1.25 ppa 40/70 White	SW	86.2	7,007	688.8	2,396	36,198	52,446	5:59
Start 1.50 ppa 40/70 White	SW	86.1	6,971	721.4	3,128	45,465	88,643	6:07
Increase FR to 1.00 gpt	SW	86.2	6,858		3,146		89,653	6:07
Start 1.75 ppa 40/70 White	SW	86.3	6,868	587.1	3,903	43,159	134,108	6:16
Increase Gel to 2.50 gpt	SW/Gel	86.4	6,805		4,502		174,528	6:23
Start 2.00 ppa 40/70 White	SW/Gel	86.5	6,878	554.7	4,542	46,654	177,267	6:23
Decrease Gel to 0.00 gpt	SW	86.5	6,873		4,564		178,965	6:24
Start 2.25 ppa 40/70 White	SW	86.3	6,876	643.5	5,153	46,472	223,921	6:31
Flush	SW	86.1	7,194	271.7	5,845		270,393	6:39
Shutdown (Final)	SW		4,181		6,126		270,393	6:42



Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 37th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,200 psi	0.0%	-28.0%
Average Slurry Rate	85.0 bpm	85.0 bpm	84.3 bpm	0.0%	-0.8%
Average Horsepower	20,833 HHP	20,833 HHP	14,876 HHP	0.0%	-28.6%
Average Perf Friction	776 psi	776 psi	763 psi	0.0%	-1.6%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.13 psi/ft	0.0%	2.3%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	146 bbls	146 bbls	97.7%	0.0%
15% HCl Acid	78.6 bbls	52.2 bbls	52.2 bbls	-33.6%	0.0%
Clean	5,657 bbls	5,782 bbls	5,782 bbls	2.2%	0.0%
Fresh Water	5,657 bbls	5,782 bbls	5,782 bbls	2.2%	0.0%
Slickwater	4,768 bbls	5,476 bbls	5,476 bbls	14.8%	0.0%
Linear Gel	786 bbls	253 bbls	253 bbls	-67.8%	0.0%
Proppant Laden	5,333 bbls	5,457 bbls	5,457 bbls	2.3%	0.0%
Flush	171 bbls	271.7 bbls	271.7 bbls	59.1%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.57 gals	190.24 gals	183.00 gals	-19.9%	-3.8%
Biocide	35.64 gals	36.42 gals	36.9 gals	2.2%	1.3%
Scale Inhibitor	59.39 gals	60.71 gals	57.4 gals	2.2%	-5.5%
Acid	1,136.36 gals	1,107.27 gals	1,124.00 gals	-2.6%	1.5%
Acid Inhibitor	7.95 gals	7.75 gals	7.87 gals	-2.6%	1.5%
Gelling Agent	82.50 gals	26.59 gals	27.3 gals	-67.8%	2.7%
Breaker	16.50 lbs	5.32 lbs	5.00 lbs	-67.8%	-6.0%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	31,340 lbs	29,240 lbs	16.1%	-6.7%
40/70 White	243,000 lbs	239,047 lbs	241,360 lbs	-1.6%	1.0%



Customer: Blue Ridge Mountain Resc

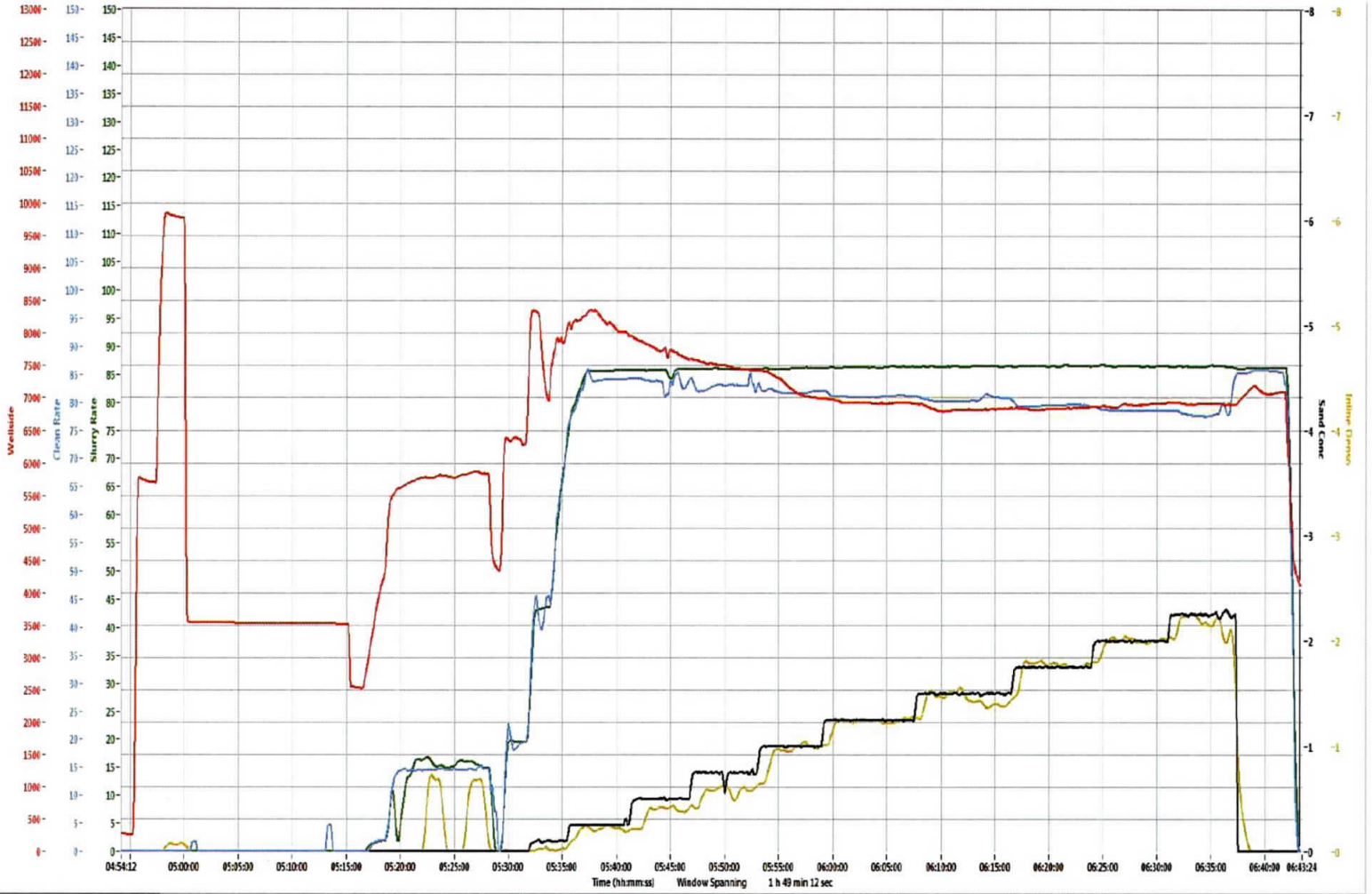
Well: Meckley 1401
 Date: 3/11/2018
 Stage: 37th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

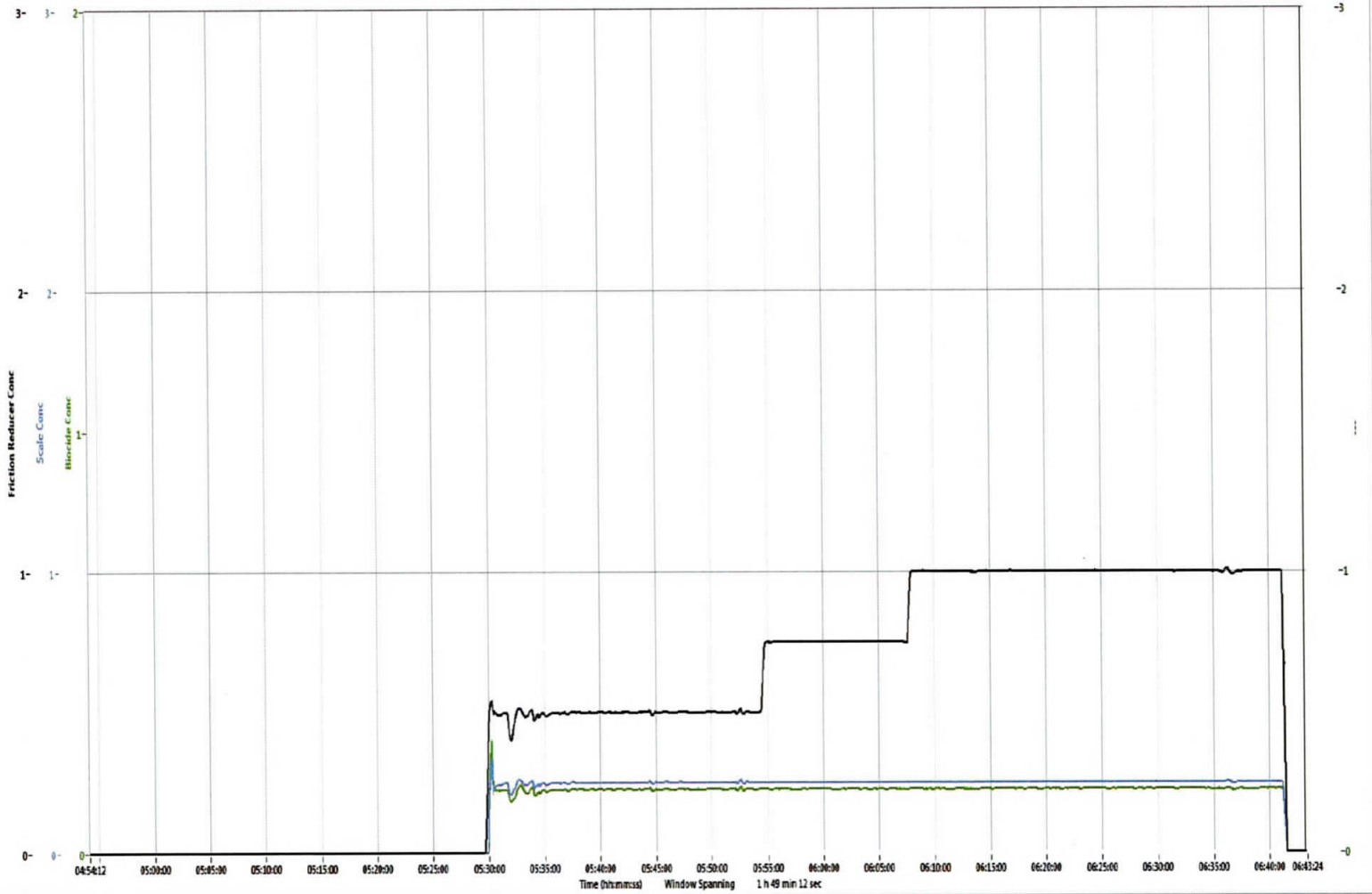
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	190.24 gals	183.00 gals	-4%	183.00 gals
Biocide	0.15 gpt	36.42 gals	36.9 gals	1%	36.9 gals
Scale Inhibitor	0.25 gpt	60.71 gals	57.4 gals	-5%	57.4 gals
Acid	28 %	1,107.27 gals	1,124.00 gals	2%	1,124.00 gals
Acid Inhibitor	7.00 gpt	7.75 gals	7.87 gals	2%	7.87 gals
Gelling Agent	2.5 gpt	26.59 gals	27.3 gals	3%	27.3 gals
Breaker	0.5 ppt	5.32 lbs	5.00 lbs	-6%	5.00 lbs

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Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number d:\ser\data\logs\2018-03-11_04-30-12_LogBlueRidge_Meckley\401_Stage37.odms



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 38th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 38th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Joe Hartley	Stingray Representative	Richard Crawford
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	371 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	7,544 ft	7,665 ft	170 bbbls	167 bbbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,786 bbbls	Friction Reducer :	194.00 gals	100.5% of total proppant placed.	
Clean Volume :	5,759 bbbls	Biocide :	38.40 gals		
Raw Acid Volume :	28 bbbls	Scale Inhibitor :	63.10 gals	FR started at 0.50 gpt per Mr. Joe Hartley	
Slickwater Volume :	5,415 bbbls	28% HCl Acid :	1129.00 gals		
Gelled Volume :	307 bbbls	Acid Inhibitor :	7.90 gals		
Proppant Laden :	5,428 bbbls	Gelling Agent :	31.30 gals		
Slurry Volume :	6,131 bbbls	Breaker :	6.30 lbs		
Wireline Volume :	63 bbbls	X-Linker :			
Total Fluid To Recover :	5,822 bbbls				
Proppant Totals					
100 Mesh :	28,160 lbs				
40/70 White :	243,320 lbs				
Total :	271,480 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-In Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	6,552 psi	Opening Pressure	2,167 psi
Minimum	7,860 psi	Minimum	42.1 bpm	Frac V	1.15 psi/ft	Open V	0.78 psi/ft
Maximum	8,986 psi	Maximum	80.6 bpm	Pump Time	1.91 Hrs	ISIP	4,470 psi
Average	8,543 psi	Average	65.6 bpm	MHP	13,736 MHP	Closing Pressure	3,862 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbbls)	Cumulative Slurry Volume (bbbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,796					11:55
Open Well	FW		2,167					11:59
Start Injection	FW		2,157	9.6				11:59
Start 15 % HCl Acid	ACID	10.1	4,970	27.4	13			12:03
Pad	SW	10.4	5,129	24.4	42			12:06
Start 15 % HCl Acid	ACID	9.9	5,193	27.4	66			12:08
Pad	SW	10.4	5,176	77.9	93			12:11
Ball seat (Breakdown)	SW	14.7	6,552		143			12:16
Start 0.25 ppa 100 Mesh Sand	SW	25.1	8,229	447.7	170	4,758	1	12:18
Acid on Formation	SW	28.8	8,220		216		424	12:19
Start 0.50 ppa 100 Mesh Sand	SW	57.2	8,738	641.3	624	13,498	4,760	12:28
Increase FR to 0.75 gpt	SW	51.2	9,154		879		9,986	12:32
Increase Gel to 2.50 gpt	SW/Gel	45.4	8,167		1,272		17,978	12:41
Start 0.75 ppa 100 Mesh Sand	SW/Gel	45.6	8,188	340.0	1,285	10,695	18,258	12:41
Decrease Gel to 0.00 gpt	SW	48.7	8,421		1,370		20,835	12:43
Start 0.75 ppa 40/70 White	SW	52.2	8,471	370.4	1,637	11,679	28,953	12:49
Start 1.00 ppa 40/70 White	SW	58.0	8,677	487.9	2,023	20,251	40,632	12:56
Start 1.25 ppa 40/70 White	SW	61.7	8,679	563.8	2,537	29,604	60,883	13:04
Increase FR to 1.00 gpt	SW	65.6	8,649		3,125		89,962	13:13
Start 1.50 ppa 40/70 White	SW	65.6	8,546	566.8	3,135	35,706	90,487	13:13
Increase Gel to 2.50 gpt	SW/Gel	71.7	8,681		3,708		123,993	13:22
Start 1.75 ppa 40/70 White	SW/Gel	71.5	8,662	568.7	3,744	41,784	126,191	13:22
Decrease Gel to 0.00 gpt	SW	75.1	8,646		4,272		161,876	13:30
Start 2.00 ppa 40/70 White	SW	76.4	8,704	624.1	4,362	52,442	167,976	13:31
Increase Gel to 2.50 gpt	SW/Gel	80.1	8,648		4,965		213,948	13:38
Start 2.25 ppa 40/70 White	SW/Gel	80.1	8,496	714.8	5,051	53,584	220,418	13:39
Decrease Gel to 0.00 gpt	SW	80.2	8,501		5,089		223,693	13:40
Flush	SW	80.3	8,355	294.0	5,828		274,002	13:49
Shutdown (Final)	SW		4,791		6,131		274,002	13:54

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 38th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	8,543 psi	0.0%	-14.6%
Average Slurry Rate	85.0 bpm	85.0 bpm	65.6 bpm	0.0%	-22.8%
Average Horsepower	20,833 HHP	20,833 HHP	13,736 HHP	0.0%	-34.1%
Average Perf Friction	776 psi	776 psi	462 psi	0.0%	-40.4%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.15 psi/ft	0.0%	4.6%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	112 bbls	112 bbls	51.6%	0.0%
15% HCl Acid	78.6 bbls	54.8 bbls	54.8 bbls	-30.3%	0.0%
Clean	5,653 bbls	5,759 bbls	5,759 bbls	1.9%	0.0%
Fresh Water	5,653 bbls	5,759 bbls	5,759 bbls	1.9%	0.0%
Slickwater	4,765 bbls	5,415 bbls	5,415 bbls	13.6%	0.0%
Linear Gel	786 bbls	307 bbls	307 bbls	-61.0%	0.0%
Proppant Laden	5,333 bbls	5,428 bbls	5,428 bbls	1.8%	0.0%
Flush	167 bbls	294.0 bbls	294.0 bbls	75.5%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.43 gals	201.59 gals	194.00 gals	-15.1%	-3.8%
Biocide	35.62 gals	36.28 gals	38.4 gals	1.9%	5.8%
Scale Inhibitor	59.36 gals	60.46 gals	63.1 gals	1.9%	4.4%
Acid	1,136.36 gals	1,162.42 gals	1,129.00 gals	2.3%	-2.9%
Acid Inhibitor	7.95 gals	8.14 gals	7.9 gals	2.3%	-2.9%
Gelling Agent	82.50 gals	32.18 gals	31.3 gals	-61.0%	-2.7%
Breaker	16.50 lbs	6.44 lbs	6.3 lbs	-61.0%	-2.2%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	28,952 lbs	28,160 lbs	7.2%	-2.7%
40/70 White	243,000 lbs	245,049 lbs	243,320 lbs	0.8%	-0.7%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 38th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

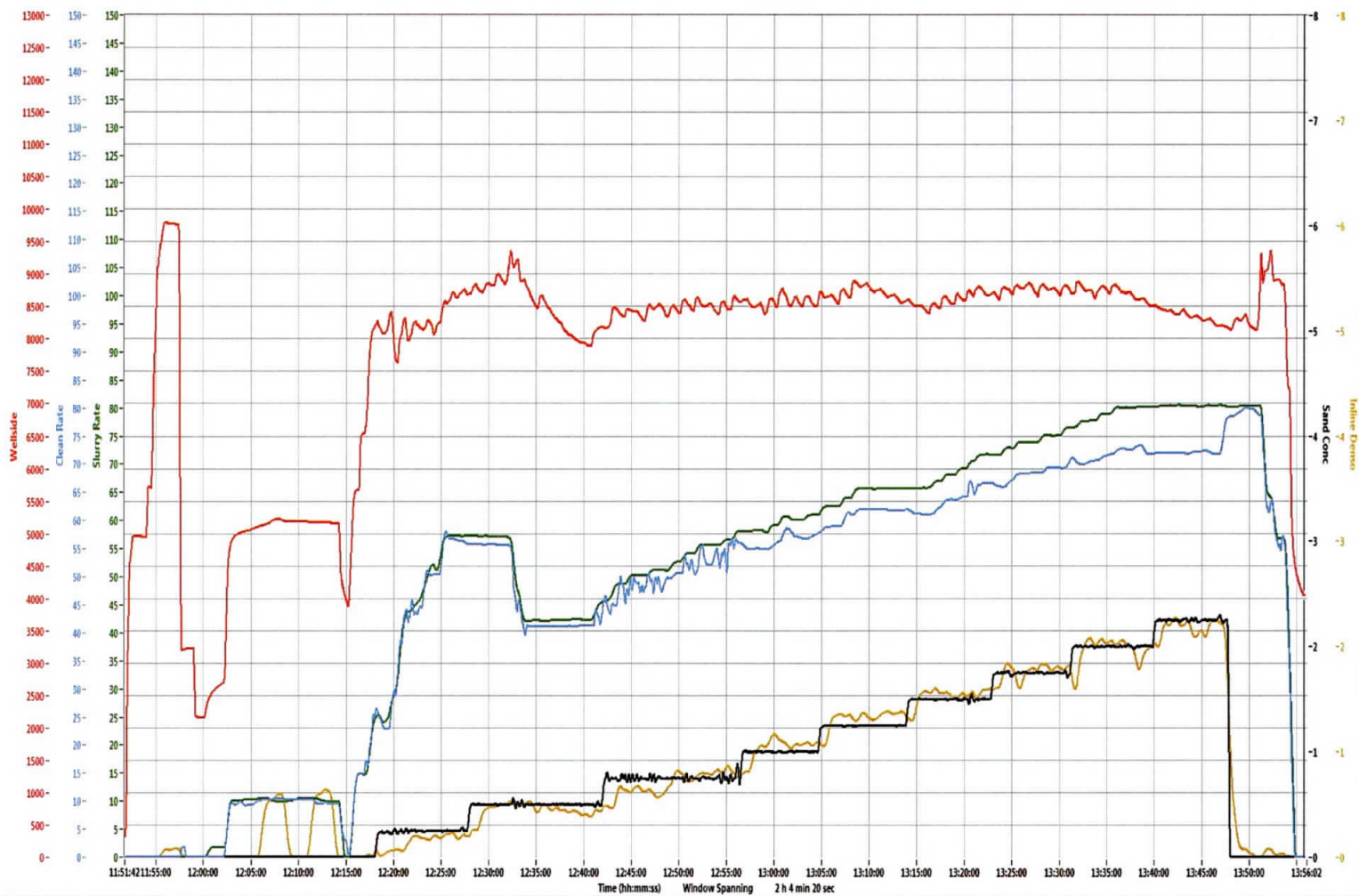
Chemical Volume

Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	201.59 gals	194.00 gals	-4%	194.00 gals
Biocide	0.15 gpt	36.28 gals	38.4 gals	6%	38.4 gals
Scale Inhibitor	0.25 gpt	60.46 gals	63.1 gals	4%	63.1 gals
Acid	28 %	1,162.42 gals	1,129.00 gals	-3%	1,129.00 gals
Acid Inhibitor	7.00 gpt	8.14 gals	7.9 gals	-3%	7.9 gals
Gelling Agent	2.5 gpt	32.18 gals	31.3 gals	-3%	31.3 gals
Breaker	0.5 ppt	6.44 lbs	6.3 lbs	-2%	6.3 lbs

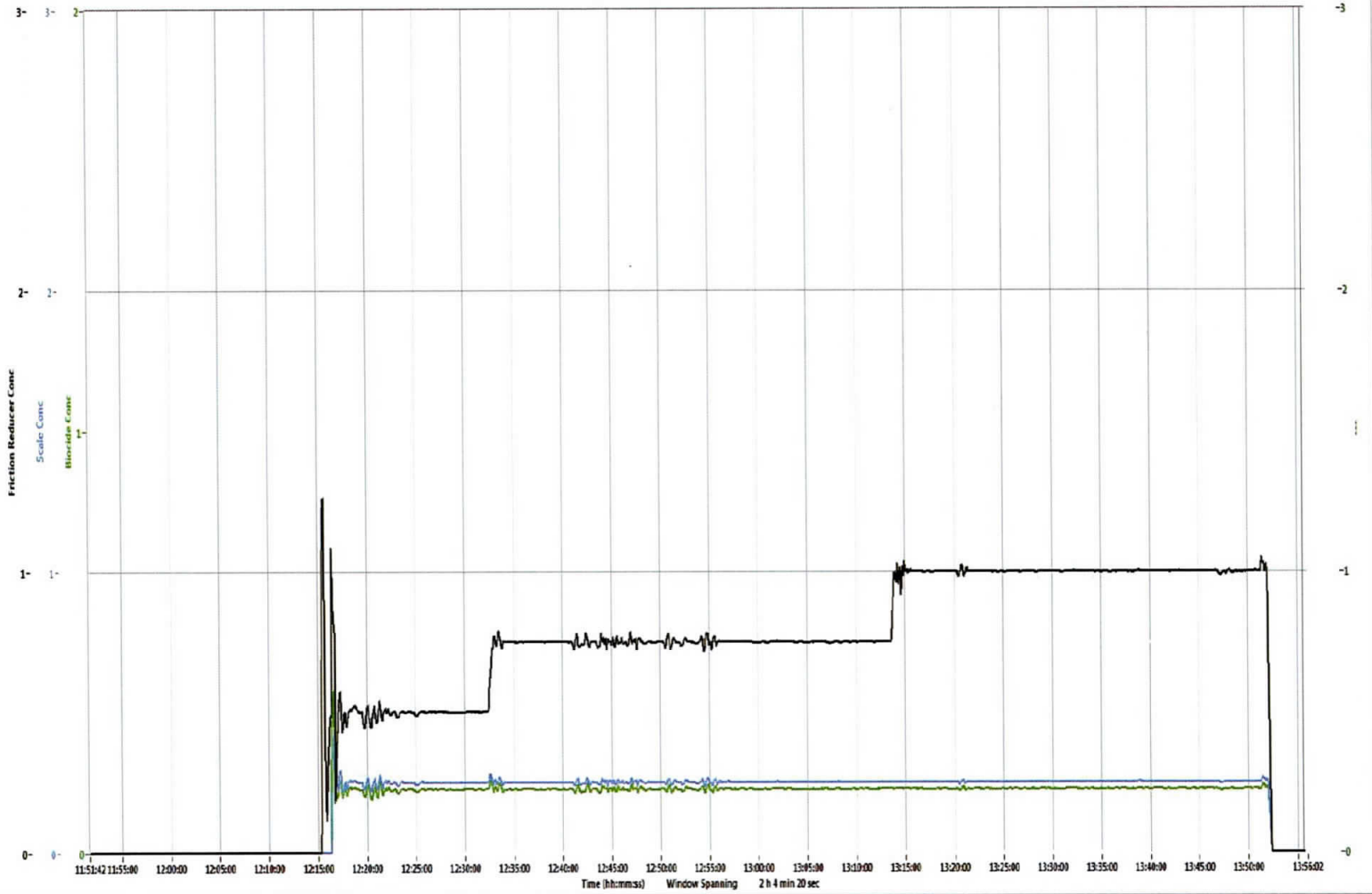
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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 39th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Brad Truman



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 39th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Tu Spatafore	Stingray Representative	Anthony Thomas
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	221 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	7,394 ft	7,515 ft	167 bbls	164 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,882 bbls	Friction Reducer :	160.00 gals		
Clean Volume :	5,853 bbls	Biocide :	37.50 gals		
Raw Acid Volume :	28 bbls	Scale Inhibitor :	60.00 gals		
Slickwater Volume :	5,708 bbls	28% HCl Acid :	1129.00 gals		
Gelled Volume :	101 bbls	Acid Inhibitor :	7.90 gals		
Proppant Laden :	5,558 bbls	Gelling Agent :	10.00 gals		
Slurry Volume :	6,201 bbls	Breaker :	2.00 lbs		
Wireline Volume :	72 bbls	X-linker :			
Total Fluid To Recover :	5,925 bbls				
Proppant Totals					
100 Mesh :	25,340 lbs				
40/70 White :	244,540 lbs				
Total :	269,880 lbs				

Treating Pressures		Injection Rates		Treatment Values		Shut-in Values	
Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	7,838 psi	Opening Pressure	2,063 psi
Minimum	6,511 psi	Minimum	33.7 bpm	Frac V	0.99 psi/ft	Open V	0.76 psi/ft
Maximum	8,073 psi	Maximum	87.4 bpm	Pump Time	1.48 Hrs	ISIP	3,442 psi
Average	7,279 psi	Average	81.7 bpm	HHP	14,576 HHP	Closing Pressure	3,224 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,897					21:39
Open Well	FW		2,063					21:43
Start Injection	FW	0.1	2,238	17.0				21:44
Start 15 % HCl Acid	ACID	14.5	6,374	28.0	18			21:47
Pad	SW	15.1	6,496	26.9	46			21:49
Start 15 % HCl Acid	ACID	14.5	6,378	28.2	72			21:51
Pad	SW	15.0	6,295	70.2	102			21:53
Ball seat (Breakdown)	SW	21.5	7,838		157			21:57
Start 0.10 ppa 100 Mesh Sand	SW	21.7	7,707	344.9	170	1,424	3	21:58
Acid on Formation	SW	29.6	8,065		219		184	21:59
Start 0.25 ppa 100 Mesh Sand	SW	57.2	7,174	473.7	515	5,067	1,427	22:05
Start 0.50 ppa 100 Mesh Sand	SW	77.6	7,640	443.6	993	9,367	6,494	22:12
Start 0.75 ppa 100 Mesh Sand	SW	86.5	7,858	371.9	1,446	11,679	15,862	22:18
Start 0.75 ppa 40/70 White	SW	86.6	7,669	383.3	1,831	12,154	27,541	22:22
Start 1.00 ppa 40/70 White	SW	86.5	7,413	506.9	2,230	21,380	39,694	22:27
Increase FR to 0.75 gpt	SW	86.5	7,779		2,697		58,331	22:32
Increase Gel to 2.50 gpt	SW/Gel	86.5	7,752		2,707		58,734	22:32
Start 1.25 ppa 40/70 White	SW/Gel	86.5	7,762	568.8	2,764	29,890	61,075	22:33
Decrease Gel to 0.00 gpt	SW	86.5	7,675		2,814		63,555	22:34
Start 1.50 ppa 40/70 White	SW	86.7	7,296	567.4	3,370	35,775	90,965	22:40
Start 1.75 ppa 40/70 White	SW	87.1	7,116	578.5	3,982	42,592	126,740	22:47
Start 2.00 ppa 40/70 White	SW	87.1	6,853	572.7	4,613	48,142	169,332	22:54
Start 2.25 ppa 40/70 White	SW	87.2	6,740	648.7	5,243	48,771	217,474	23:02
Flush	SW	87.0	6,828	250.8	5,942		266,245	23:10
Shutdown (Final)	SW		3,486		6,201		266,245	23:13

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Customer: Blue Ridge Mountain Res.

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 39th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,279 psi	0.0%	-27.2%
Average Slurry Rate	85.0 bpm	85.0 bpm	81.7 bpm	0.0%	-3.9%
Average Horsepower	20,833 HHP	20,833 HHP	14,576 HHP	0.0%	-30.0%
Average Perf Friction	776 psi	776 psi	717 psi	0.0%	-7.6%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	0.99 psi/ft	0.0%	-10.4%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	114 bbls	114 bbls	54.6%	0.0%
15% HCl Acid	78.6 bbls	56.2 bbls	56.2 bbls	-28.5%	0.0%
Clean	5,650 bbls	5,853 bbls	5,853 bbls	3.6%	0.0%
Fresh Water	5,650 bbls	5,853 bbls	5,853 bbls	3.6%	0.0%
Slickwater	4,762 bbls	5,708 bbls	5,708 bbls	19.9%	0.0%
Linear Gel	786 bbls	101 bbls	101 bbls	-87.2%	0.0%
Proppant Laden	5,333 bbls	5,558 bbls	5,558 bbls	4.2%	0.0%
Flush	164 bbls	250.8 bbls	250.8 bbls	52.8%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.29 gals	156.69 gals	160.00 gals	-34.0%	2.1%
Biocide	35.59 gals	36.87 gals	37.5 gals	3.6%	1.7%
Scale Inhibitor	59.32 gals	61.46 gals	60.00 gals	3.6%	-2.4%
Acid	1,136.36 gals	1,192.12 gals	1,129.00 gals	4.9%	-5.3%
Acid Inhibitor	7.95 gals	8.34 gals	7.9 gals	4.9%	-5.3%
Gelling Agent	82.50 gals	10.56 gals	10.00 gals	-87.2%	-5.3%
Breaker	16.50 lbs	2.11 lbs	2.00 lbs	-87.2%	-5.2%
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	27,538 lbs	25,340 lbs	2.0%	-8.0%
40/70 White	243,000 lbs	238,704 lbs	244,540 lbs	-1.8%	2.4%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/11/2018
 Stage: 39th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

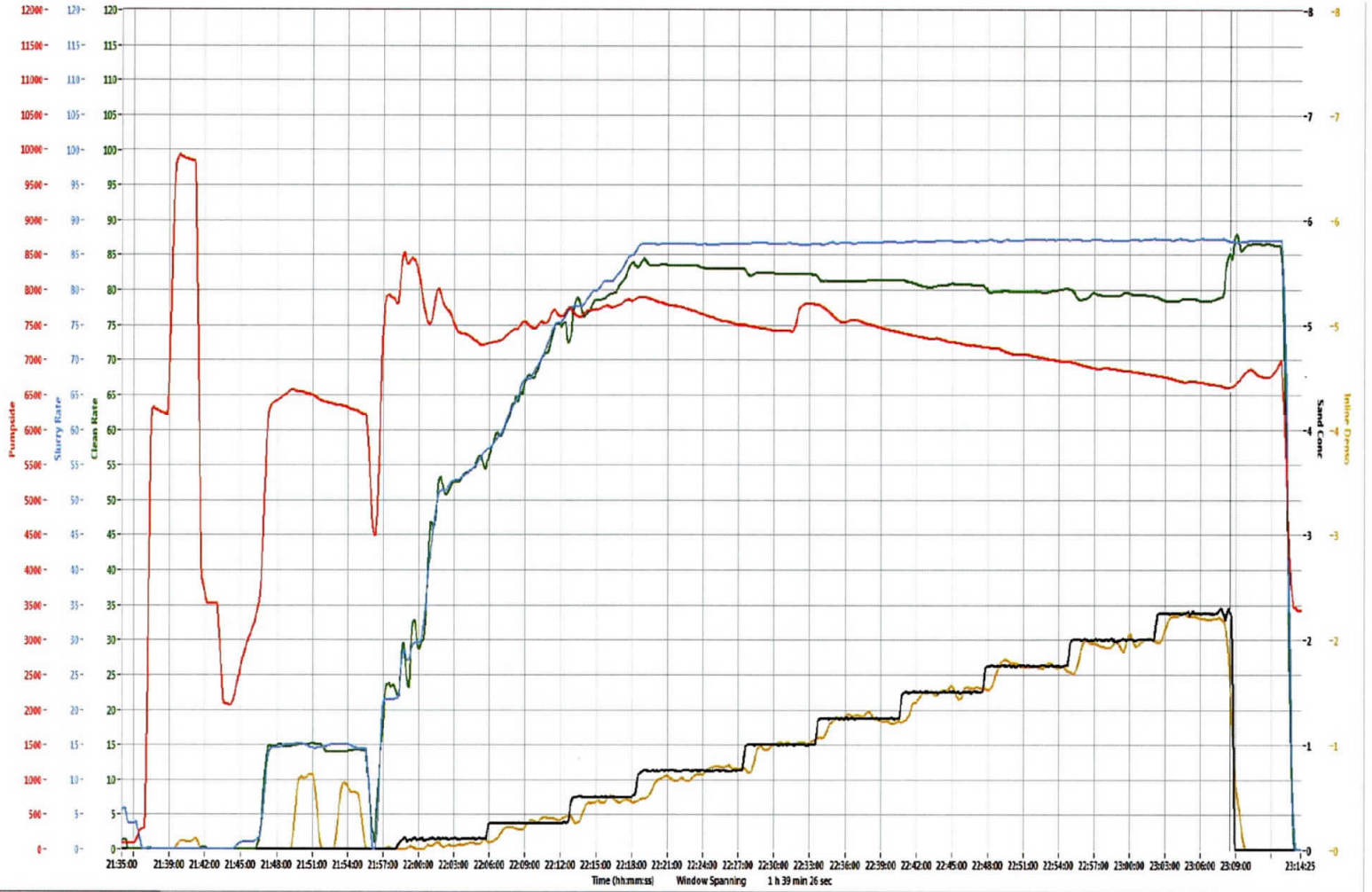
Chemical Volumes					
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	156.69 gals	160.00 gals	2%	160.00 gals
Biocide	0.15 gpt	36.87 gals	37.5 gals	2%	37.5 gals
Scale Inhibitor	0.25 gpt	61.46 gals	60.00 gals	-2%	60.00 gals
Acid	28 %	1,192.12 gals	1,129.00 gals	-5%	1,129.00 gals
Acid Inhibitor	7.00 gpt	8.34 gals	7.9 gals	-5%	7.9 gals
Gelling Agent	2.5 gpt	10.56 gals	10.00 gals	-5%	10.00 gals
Breaker	0.5 ppt	2.11 lbs	2.00 lbs	-5%	2.00 lbs

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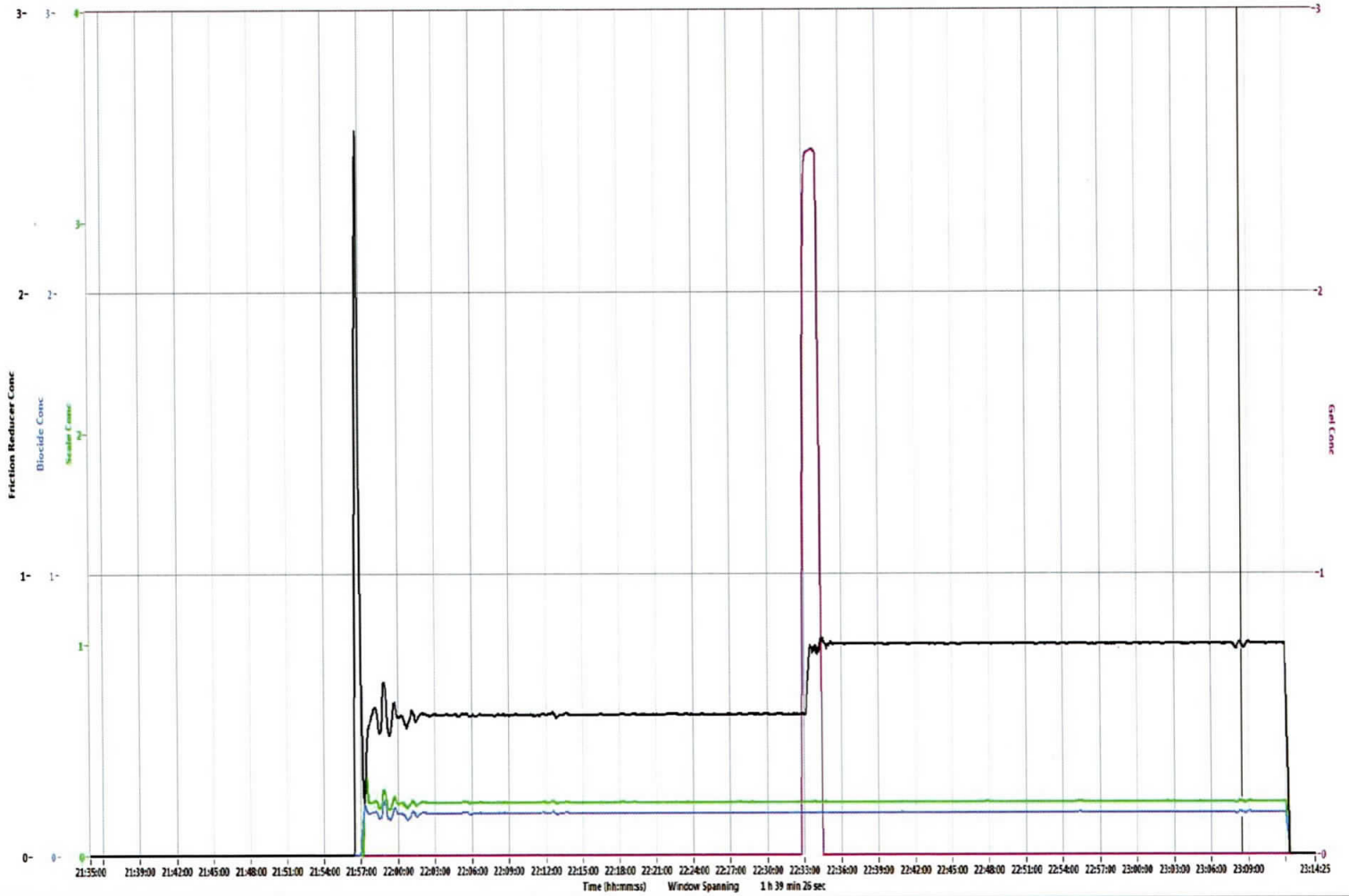
AUG 20 2018

WV Department of
 Environmental Protection
 209

Customer Name: Customer Name Lease Name: Lease Name Job Number: Job Number Dr:\SES\data\logs\2018-03-11_21-03-12_LogBlueRidge_Meckley\401_Stage39.tdms



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Post Frac Stage Report

Prepared For:



909 Lake Carolyn Pkwy Ste 600

Irving, Texas 75039

Meckley 1401 - 40th Stage of 40

Marcellus Formation

Tyler

API #: 47-095-02151

Prepared By:
Chris Richardson



Customer: Blue Ridge Mountain Resources

Well: Meckley 1401
 Date: 3/12/2018
 Stage: 40th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Treatment Report

Customer Representative	Mr. Don Barker	Service Representative	Jeff Hecht
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Wellbore Information

Perf Size	# of Perforations	Tubular Type	Tubular Grade	Length of Lateral	Length of Vertical
0.41 in.	30	5 - 1/2" 20. #	P-110	71 ft	7,294 ft
TVD	Top Perf	Bottom Perf	Flush to Bottom Perf	Flush to Top Perf	Plug Depth
6,236 ft	7,244 ft	7,365 ft	164 bbls	161 bbls	6,236 ft

Job Summary

Fluid Volumes		Chemical Volumes		Notes:	Time:
Total Fluid Volume :	5,776 bbls	Friction Reducer :	150.00 gals		
Clean Volume :	5,750 bbls	Blocide :	38.00 gals		
Raw Acid Volume :	26 bbls	Scale Inhibitor :	62.60 gals		
Slidewater Volume :	5,714 bbls	28% HCl Acid :	1100.00 gals		
Gelled Volume :		Acid Inhibitor :	7.70 gals		
Proppant Laden :	5,432 bbls	Gelling Agent :			
Slurry Volume :	6,111 bbls	Breaker :			
Wireline Volume :	34 bbls	X-linker :			
Total Fluid To Recover :	5,784 bbls				
Proppant Totals					
100 Mesh :	29,140 lbs				
40/70 White :	241,580 lbs				
Total :	270,720 lbs				

Treating Pressures

Injection Rates

Treatment Values

Shut-In Values

Operator's Max	10,000 psi	Desired	85.0 bpm	Breakdown	5,983 psi	Opening Pressure	1,981 psi
Minimum	6,438 psi	Minimum	37.2 bpm	Frac V	1.05 psi/ft	Open V	0.75 psi/ft
Maximum	8,342 psi	Maximum	86.9 bpm	Pump Time	1.50 Hrs	ISIP	3,854 psi
Average	7,155 psi	Average	83.5 bpm	HHP	14,642 HHP	Closing Pressure	3,995 psi

Stage Comments	Fluid System	Slurry Rate (bpm)	Surface Pressure (psi)	Stage Clean Volume (bbls)	Cumulative Slurry Volume (bbls)	Stage Proppant (lbs)	Cumulative Proppant (lbs)	Time (Military)
Pressure Test	FW		9,778					6:21
Open Well	FW		1,981					6:25
Start Injection	FW	0.1	2,080	9.6				6:26
Start 15 % HCl Acid	ACID	10.1	4,714	25.5	11			6:28
Pad	SW	10.5	4,789	26.1	38			6:30
Start 15 % HCl Acid	ACID	10.1	4,765	26.8	63			6:33
Pad	SW	10.5	4,754	50.4	93	34		6:36
Start 0.10 ppa 100 Mesh Sand	SW	14.8	6,048	299.5	141	1,564	34	6:41
Ball seat (Breakdown)	SW	15.0	5,983		163		198	6:43
Acid on Formation	SW	35.8	7,380		207		452	6:45
Start 0.25 ppa 100 Mesh Sand	SW	68.2	8,232	475.1	441	5,047	1,598	6:49
Start 0.50 ppa 100 Mesh Sand	SW	83.5	8,196	446.9	921	9,465	6,645	6:56
Start 0.75 ppa 100 Mesh Sand	SW	85.8	7,639	412.0	1,380	13,070	16,110	7:01
Start 1.00 ppa 40/70 White	SW	86.0	7,528	539.9	1,907	22,661	29,180	7:06
Start 1.25 ppa 40/70 White	SW	86.1	7,108	705.5	2,374	37,145	51,840	7:13
Start 1.50 ppa 40/70 White	SW	86.1	7,024	670.5	3,126	42,296	88,985	7:21
Increase FR to 0.75 gpt	SW	86.3	7,080		3,143		90,038	7:21
Start 1.75 ppa 40/70 White	SW	86.4	6,730	506.2	3,848	37,239	131,281	7:30
Start 2.00 ppa 40/70 White	SW	86.5	6,702	606.9	4,400	51,019	168,520	7:36
Start 2.25 ppa 40/70 White	SW	86.5	6,521	692.6	5,068	52,949	219,538	7:44
Flush	SW	86.3	6,798	282.5	5,820		272,487	7:52
Shutdown (Final)	SW		3,773		6,111		272,487	7:56

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Customer: Blue Ridge Mountain Res

Well: Meckley 1401
 Date: 3/12/2018
 Stage: 40th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Proposed vs Actual

Wellbore Hydraulics					
	Design	Proposed	Actual	D%	A %
Average Treating Pressure	10,000 psi	10,000 psi	7,155 psi	0.0%	-28.5%
Average Slurry Rate	85.0 bpm	85.0 bpm	83.5 bpm	0.0%	-1.8%
Average Horsepower	20,833 HHP	20,833 HHP	14,642 HHP	0.0%	-29.7%
Average Perf Friction	776 psi	776 psi	749 psi	0.0%	-3.5%
Frac Gradient	1.10 psi/ft	1.10 psi/ft	1.05 psi/ft	0.0%	-4.4%
Fluid Volumes					
	Design	Proposed	Actual	D%	A %
Pad	74 bbls	86 bbls	86 bbls	16.7%	0.0%
15% HCl Acid	78.6 bbls	52.3 bbls	52.3 bbls	-33.4%	0.0%
Clean	5,647 bbls	5,750 bbls	5,750 bbls	1.8%	0.0%
Fresh Water	5,647 bbls	5,750 bbls	5,750 bbls	1.8%	0.0%
Slickwater	4,758 bbls	5,714 bbls	5,714 bbls	20.1%	0.0%
Linear Gel	786 bbls	0 bbls	0 bbls	-100.0%	
Proppant Laden	5,333 bbls	5,432 bbls	5,432 bbls	1.8%	0.0%
Flush	161 bbls	282.5 bbls	282.5 bbls	75.7%	0.0%
Chemical Volumes					
	Design	Proposed	Actual	D%	A %
Friction Reducer	237.15 gals	149.36 gals	150.00 gals	-37.0%	0.4%
Biocide	35.57 gals	36.22 gals	38.00 gals	1.8%	4.9%
Scale Inhibitor	59.29 gals	60.37 gals	62.6 gals	1.8%	3.7%
Acid	1,136.36 gals	1,109.39 gals	1,100.00 gals	-2.4%	-0.8%
Acid Inhibitor	7.95 gals	7.77 gals	7.7 gals	-2.4%	-0.8%
Gelling Agent	82.50 gals	-	-	-100.0%	
Breaker	16.50 lbs	-	-	-100.0%	
X-linker	0.02 gals	-	-	-100.0%	
Proppant Volumes					
	Design	Proposed	Actual	D%	A %
100 Mesh	27,000 lbs	29,180 lbs	29,140 lbs	8.1%	-0.1%
40/70 White	243,000 lbs	243,308 lbs	241,580 lbs	0.1%	-0.7%



Customer: Blue Ridge Mountain Resc

Well: Meckley 1401
 Date: 3/12/2018
 Stage: 40th
 Formation: Marcellus
 Location: Tyler
 API Number: 47-095-02151

Quality Assesment / Quality Control

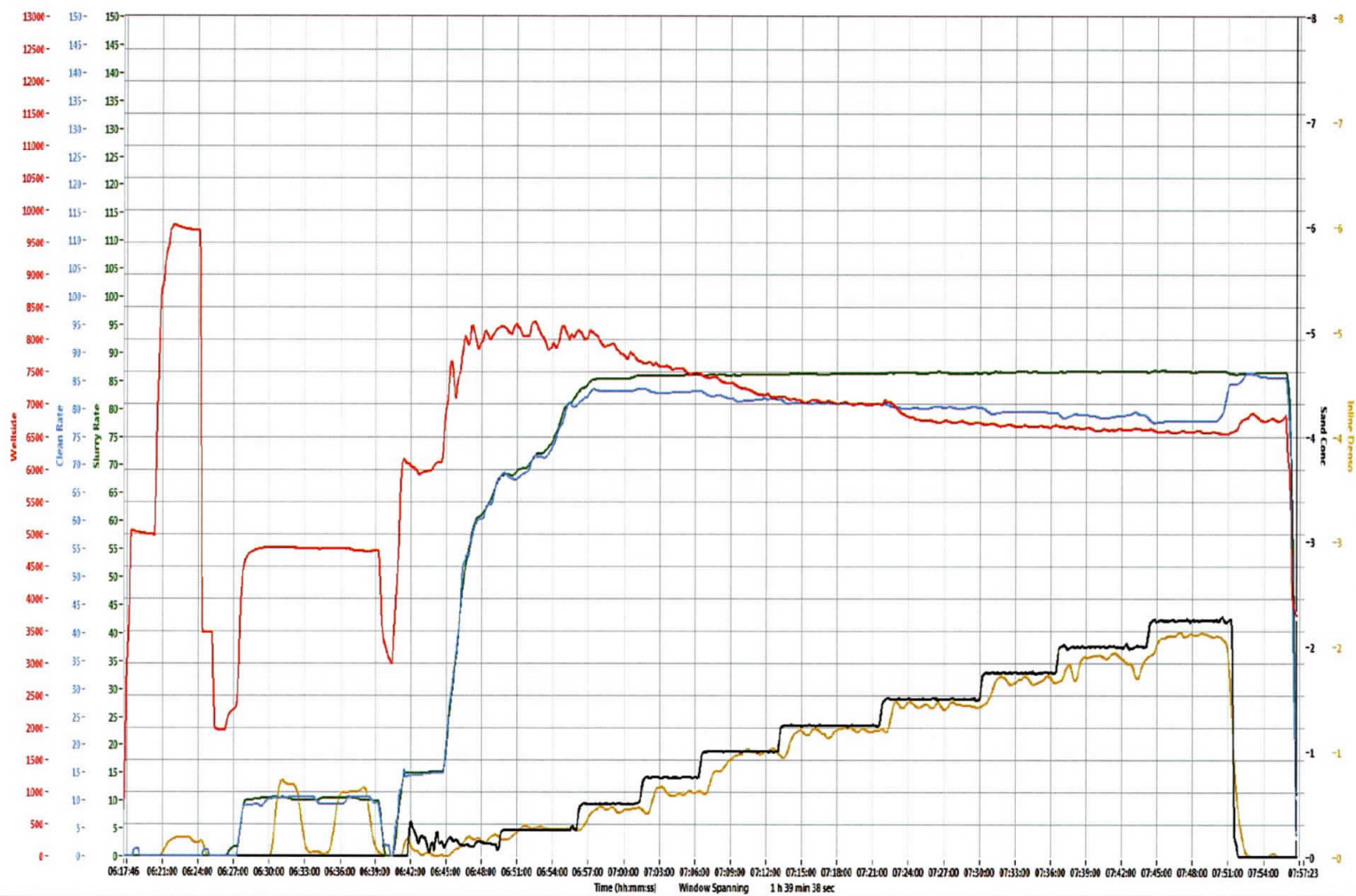
Chemical Inventory					
Chemical Inventory	Proposed Concentration	Proposed Volume	Actual Volume Used	Percent Variance	Actual Volume Sold
Friction Reducer	1.00 gpt	149.36 gals	150.00 gals	0%	150.00 gals
Biocide	0.15 gpt	36.22 gals	38.00 gals	5%	38.00 gals
Scale Inhibitor	0.25 gpt	60.37 gals	62.6 gals	4%	62.6 gals
Acid	28 %	1,109.39 gals	1,100.00 gals	-1%	1,100.00 gals
Acid Inhibitor	7.00 gpt	7.77 gals	7.7 gals	-1%	7.7 gals

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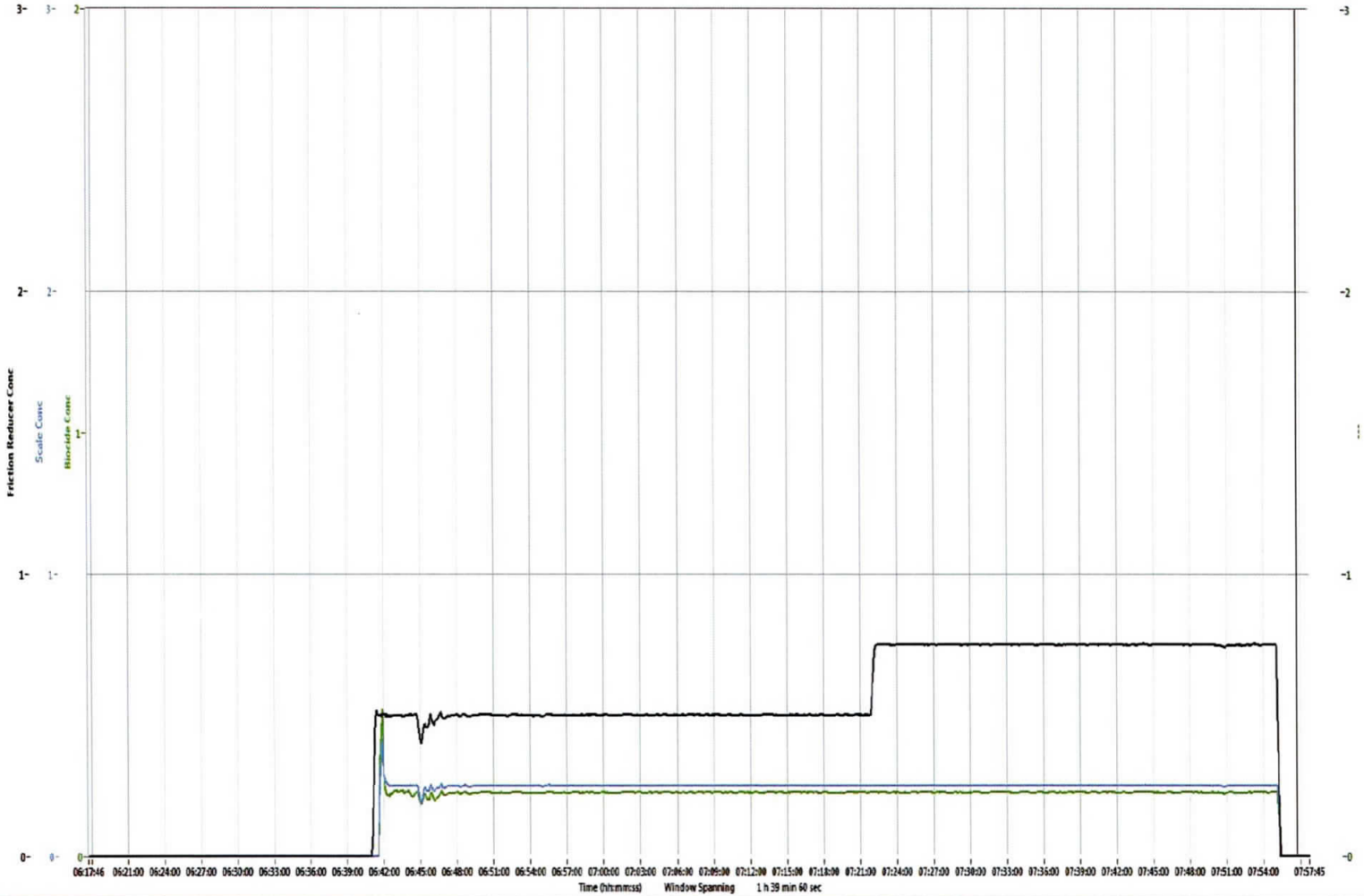
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WV Department of
 Environmental Protection 215

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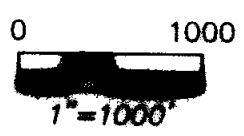
AUG 20 2018

WV Department of
Environmental Protection

WELLS MECKLEY 1001 (AS-DRILLED)

LEGEND

- ⊕ TYPED MAP POINT
- ⊗ EXISTING WELLS
- PRE-20 WELLS
- POWER LINES
- POWER WELLS
- MEASUREMENT WELL
- ROAD
- STREAM



No. 2741
STATE OF
WEST VIRGINIA
PROFESSIONAL
SURVEYOR

WELLS MECKLEY 1001

WELLS MECKLEY 1002

WELLS MECKLEY 1003

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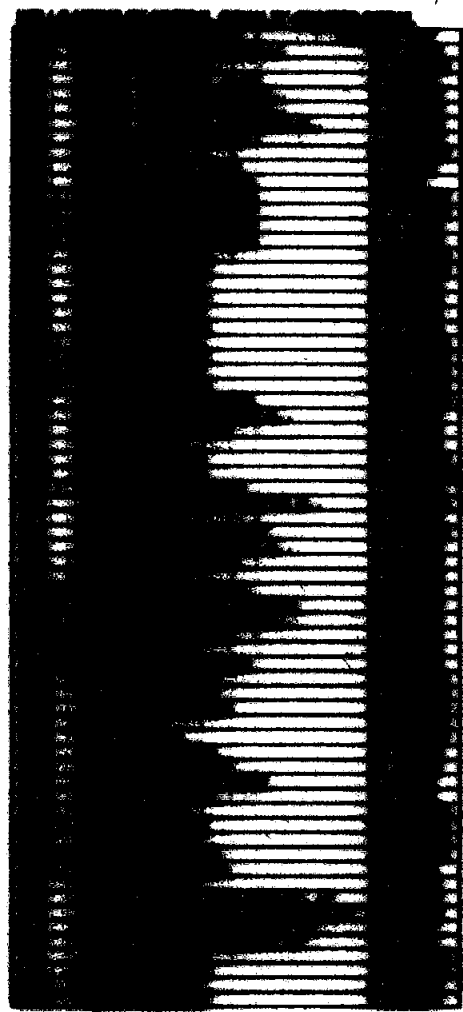
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WELLS MECKLEY 1100



SURVEY NOTES:

1. ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
2. ALL CORNERS ARE BENCHMARKS UNLESS OTHERWISE NOTED.
3. ALL DISTANCES ARE MEASURED ALONG THE CENTERLINE OF THE ROAD.
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11283 EMERSON AVENUE, PARKERSBURG, WV 26104
(304) 464-5385 PICKERING USA.COM

API WELL #: 47-095-02151
STATE COUNTY PERMIT

OPERATOR'S WELL #: WELLS MECKLEY 1001

WELL OPERATOR TRIAD HINTER, LLC (SUBSIDIARY OF BLUE RIDGE ENERGY SERVICES) ADDRESS 125 PUTNAM ST. MARIETTA OH 45750
DESIGNATED AGENT KENNETH B. WOOD ADDRESS PO BOX 154 WEAVERLY WV 26184 DATE: 8/12/2019