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# **WEXPRO COMPANY E-BILL**

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**BW Musser 39  
POWDER WASH  
Moffat County, Colorado**

**Cement Surface Casing  
18-Nov-2011**

**Post Job Report**

## The Road to Excellence Starts with Safety

Sold To #: 343491	Ship To #: 2890402	Quote #:	Sales Order #: 9058615
Customer: WEXPRO COMPANY E-BILL		Customer Rep: SST 88, Wexpro	
Well Name: BW Musser		Well #: 39	API/UWI #: 05-081-07619
Field:	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 4 Township 11N Range 97W			
Contractor: Wxpro		Rig/Platform Name/Num: SST 88	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: VOLNER, THOMAS	Srvc Supervisor: HYDE, JOSHUA		MBU ID Emp #: 461612

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ANDERSON, KENNETH Del		478745	ESKELSON, GARY		362060	HYDE, JOSHUA Wayne		461612
LOOMIS, ROBERT Neil		358959	LOVE, CRAIG Allen		412048	VOLLMER, SCOTT T		505020

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10378456C	100 mile	10624098	100 mile	10688346	100 mile	10744565	100 mile
10804483	100 mile	10951234	100 mile	11287616	100 mile	11380721	100 mile

## Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours

TOTAL	Total is the sum of each column separately							
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## Job

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	18 - Nov - 2011	09:00	MST
Form Type	BHST		Job Started	18 - Nov - 2011	13:14	MST
Job depth MD	1530. ft	Job Depth TVD	Job Completed	18 - Nov - 2011	14:50	MST
Water Depth		Wk Ht Above Floor	Departed Loc	18 - Nov - 2011	16:00	MST
Perforation Depth (MD)	From	To				

## Well Data

Description	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Surface Openhole			12.25				80.	1530.		
Conductor Pipe		16.	15.376	55.			.	80.		
Surface Casing		9.625	8.921	36.		J-55	.	1530.		

Sales/Rental/3<sup>rd</sup> Party (HES)

Description	Qty	Qty uom	Depth	Supplier
MICRO MATRIX RETARDER	2	GAL		
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		

## Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Type	Size	Qty	Make
Guide Shoe					Packer				Top Plug	9.625	1	HES
Float Shoe					Bridge Plug				Bottom Plug			
Float Collar					Retainer				SSR plug set			
Insert Float									Plug Container	9.625	1	HES
Stage Tool									Centralizers			

## Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size		Qty

Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water		20.00	bbl	8.33	.0	.0	.0	
2	VariCem RS1 Lead	VARICEM (TM) CEMENT (452009)	200.0	sacks	11.5	2.98	18.22		18.22
	0.125 lbm	POLY-E-FLAKE (101216940)							
	0.25 lbm	KWIK SEAL, SK (100064010)							
	14.803 Gal	FRESH WATER							
3	Mountain G	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	310.0	sacks	15.2	1.28	5.81		5.81
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	1 %	HALLIBURTON GEL, 50 LB SK (100064040)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	5.822 Gal	FRESH WATER							
4	Displacement Water		120.00	bbl	8.5	.0	.0	.0	
5	Top Out Cement	CEMENT STANDARD TYPE II/V, BULK (101809640)		sacks	15.3	1.24	5.59		5.59
	94 lbm	CEMENT STANDARD TYPE II/V, BULK (101809640)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	5.586 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns	0	Cement Slurry	176	Pad	
Top Of Cement		5 Min		Cement Returns	65	Actual Displacement	120	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	316
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	46 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @
The Information Stated Herein Is Correct				Customer Representative Signature					

## PLANNED PUMP SCHEDULE

**Wexpro BW Musser 39 Surface****1. Pressure Test HES Lines****2. Pump Spacer**

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)	Surfactants
2a.	Water	8.33	20	5	

**3. Pump Cement**

	Name	Density (lb/gal)	Slurry Volume (bbls)	Rate (bpm)	Mix Water Required (bbls)
3a.	VariCem RS1-Lead	11.5	106.2	5	86.8
3b.	W1 - Premium-Tail	15.2	70.5	5	42.9
3c.	Holcim Type II-V-Top Out	15.3	22.2	1	13.4

**4. Shutdown, Drop Top Plug****5. Displacement**

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)
5a.	Water	8.33	90.0	3
5b.	Water	8.33	20.0	2

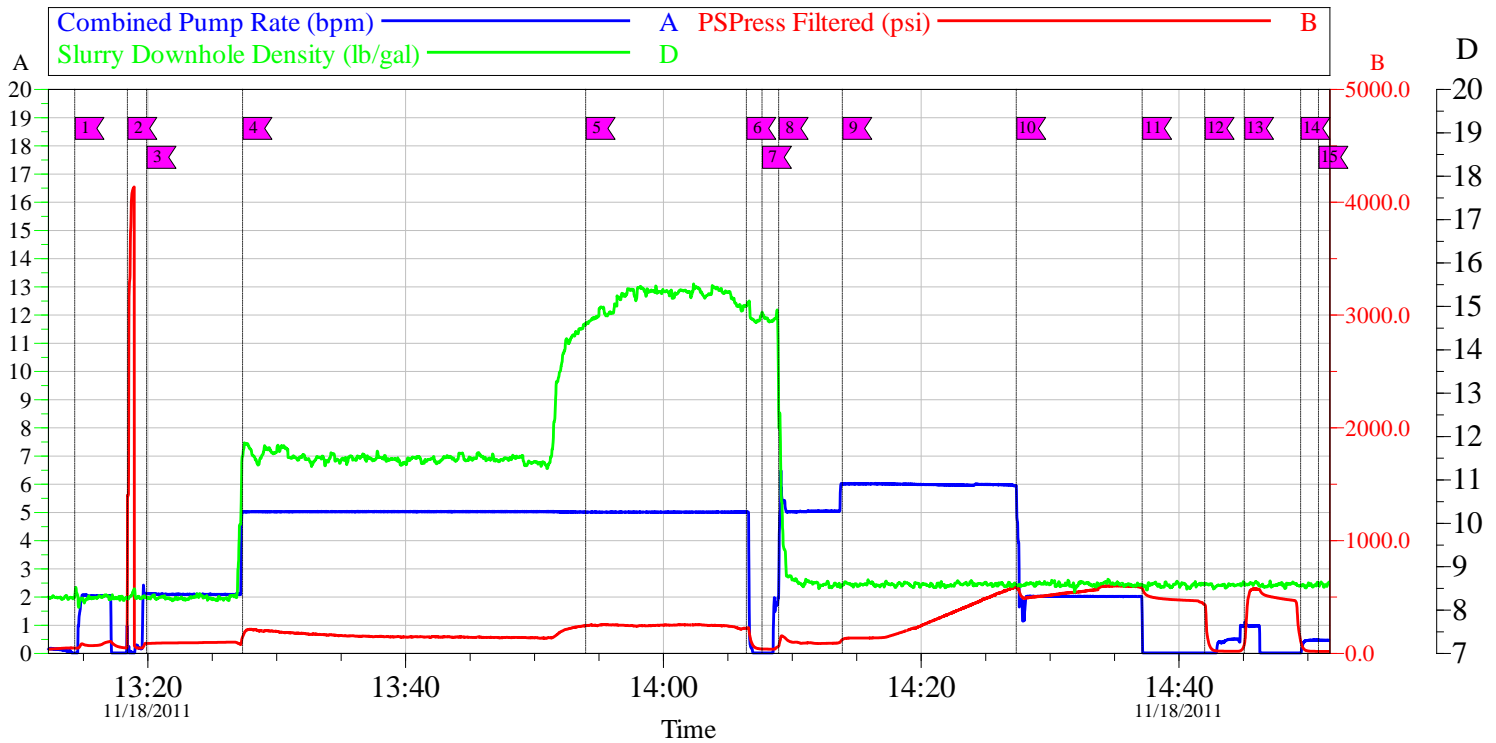
*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 343491	<b>Ship To #:</b> 2890402	<b>Quote #:</b>	<b>Sales Order #:</b> 9058615
<b>Customer:</b> WEXPRO COMPANY E-BILL		<b>Customer Rep:</b> SST 88, Wexpro	
<b>Well Name:</b> BW Musser	<b>Well #:</b> 39	<b>API/UWI #:</b> 05-081-07619	
<b>Field:</b>	<b>City (SAP):</b> CRAIG	<b>County/Parish:</b> Moffat	<b>State:</b> Colorado
<b>Legal Description:</b> Section 4 Township 11N Range 97W			
<b>Lat:</b> N 0 deg. OR N 0 deg. 0 min. 0 secs.		<b>Long:</b> E 0 deg. OR E 0 deg. 0 min. 0 secs.	
<b>Contractor:</b> Wxpro		<b>Rig/Platform Name/Num:</b> SST 88	
<b>Job Purpose:</b> Cement Surface Casing			<b>Ticket Amount:</b>
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> VOLNER, THOMAS		<b>Srvc Supervisor:</b> HYDE, JOSHUA	<b>MBU ID Emp #:</b> 461612

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	11/18/2011 04:45							HALLIBURTON CREW CALLED OUT FOR CMT JOB
Pre-Convoy Safety Meeting	11/18/2011 06:45							HES CREW HAD JSA ON DRIVING PROCEDURES
Crew Leave Yard	11/18/2011 07:00							HES DEPARTED YARD FOR LOCATION
Arrive at Location from Service Center	11/18/2011 09:10							REQUESTED ON LOCATION 02:00 BY COMPANY MAN
Assessment Of Location Safety Meeting	11/18/2011 09:20							HES DID WALK AROUND LOCATION AND DISCUSSED RIG UP PROCEDURES
Rig-Up Equipment	11/18/2011 09:30							HES CREW RIGGED UP IRON,BULK EQUIPMENT,WATER FITTINGS AND HOSES
Rig-Up Completed	11/18/2011 10:20							
Wait on Customer or Customer Sub-Contractor Equip	11/18/2011 10:25							WAIT ON CUSTOMER TO RUN CASING
Wait on Customer or Customer Sub-Contractor Equipm	11/18/2011 12:30							CUSTOMER COMPLETED RUNNING CASING
Pre-Job Safety Meeting	11/18/2011 12:55							HES,RIG CREW AND COMPANY MAN HAD JSA ON JOB SAFETY AND PROCEDURES
Pump Water	11/18/2011 13:14		2	5	5		43.0	FILL PUMPS AND LINES
Pressure Test	11/18/2011 13:18							PRESSURE TESTED HES IRON TO 4000 PSI

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Water	11/18/2011 13:19		2	15	20		84.0	PUMP H2O SPACER AHEAD
Pump Lead Cement	11/18/2011 13:27		5	106	106		139.0	VARICEM RS1-LEAD AT 11.50 PPG 2.98 Y 18.22 GAL/SK 200 SKS
Pump Tail Cement	11/18/2011 13:54		5	70	176		240.0	PUMPED W1-PREMIUM TAIL CMT AT 15.20 PPG 1.28 Y 5.81 GAL/SK 310 SKS
Shutdown	11/18/2011 14:06							
Drop Top Plug	11/18/2011 14:07							DROPPED TOP PLUG WITNESSED BY COMPANY MAN
Pump Displacement	11/18/2011 14:08		5	20	20		87.0	HES PUMPED H2O DISPLACEMENT
Other	11/18/2011 14:13		6	80	100		586.0	INCREASED RATE ON DISPLACEMENT COMPANY MAN REQUEST
Slow Rate	11/18/2011 14:27		2	20	120		492.0	PUMPED H2O DISPLACEMENT SLOWED RATE LAST 15 BBLS
Other	11/18/2011 14:37						576.0	WENT 5 BBLS OVER ON DISPLACEMENT COMPANY MANS REQUEST DID NOT PRESSURE PLUG BLED BACK FLOATS GOT 1.5 BBLS BACK
Check Floats	11/18/2011 14:42						.0	CHECK FLOATS GOT 1.5 BBLS BACK TO THE TRUCK
Other	11/18/2011 14:45		1	1.5	120		596.0	PUMPED 1.5 BBLS SHUTDOWN
Check Floats	11/18/2011 14:49						.0	CHECKED FLOATS THEY HELD AGAIN GOT 1 BBL BACK TO THE TRUCK
End Job	11/18/2011 14:50							
Rig-Down Equipment	11/18/2011 14:55							RIGGED DOWN IRON,BULK EQUIPMENT AND WATER HOSES AND FITTINGS
Activity Description	Date/Time	Cht	Rate bbl/min	Volume bbl		Pressure psig		Comments

		#		Stage	Total	Tubing	Casing	
Post-Job Safety Meeting (Pre Rig-Down)	11/18/2011 15:00							HES AND RIG CREW HAD JSA ON RIGGING DOWN EQUIPMENT
Rig-Down Completed	11/18/2011 15:45							
Pre-Convoy Safety Meeting	11/18/2011 15:50							HES HAD JSA ON DRIVING SAFETY AND PROCEDURES
Crew Leave Location	11/18/2011 16:00							HES DEPARTED LOCATION FOR SERVICE CENTER
Other	11/18/2011 16:01							HAD FULL RETURNS DURING THE JOB GOT 65 BBLS OF CMT BACK DID NOT TOP OUT WELL
Other	11/18/2011 16:02							RIG WAS ON BOTTOM AT 12:30 CIRCULATED BOTTOMS UP HAD 190 PSI AT 10 BPM AND 0 UNITS OF GAS USED HALLIBURTONS TOP PLUG AND HALLIBURTON FLOATS FLOAT EQUIPMENT

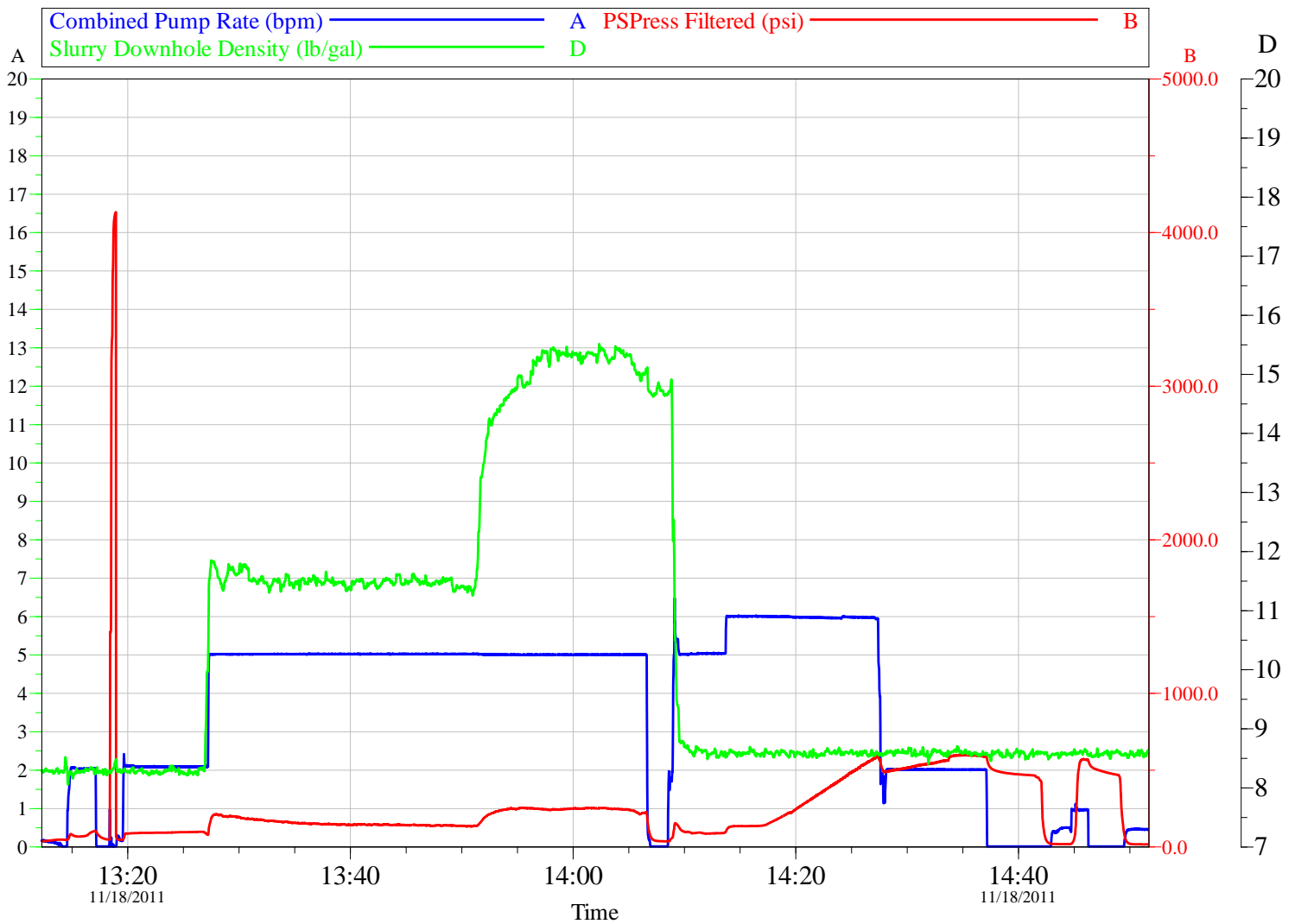


Intersection		Local Event Log									
		CPR	PF	SDD	Intersection			CPR	PF	SDD	
1	START JOB	13:14:22	0.000	43.82	8.288	2	PRESSURE TEST	13:18:28	0.570	1068	8.248
3	PUMP H2O SPACER	13:19:57	2.105	84.72	8.264	4	PUMP LEAD CMT	13:27:23	5.011	139.6	11.54
5	PUMP TAIL CMT	13:54:01	4.996	240.7	14.56	6	SHUT DOWN	14:06:29	5.004	218.9	15.01
7	DROP TOP PLUG	14:07:42	0.000	35.36	14.85	8	PUMP H2O DISPLACEMENT	14:08:59	2.278	60.72	12.52
9	INCREASED RATE COMPANY MAN REQUEST	14:13:56	6.003	118.6	8.574	10	SLOW RATE TO LAND PLUG	14:27:25	5.923	586.7	8.575
11	SHUTDOWN	14:37:11	1.228	576.9	8.573	12	CHECKED FLOATS	14:42:02	0.000	428.1	8.593
13	PRESSURE UP ON PLUG	14:45:06	0.919	70.86	8.621	14	CHECK FLOATS/FLOATS HELD	14:49:29	0.000	106.7	8.560
15	END JOB	14:50:52	0.454	14.35	8.619						

Customer:	WEXPRO	Job Date:	18-Nov-2011	Sales Order #:	9058615
Well Description:	BW MUSSER 39	JOB DISCRIPTION:	SURFACE	SUPERVISOR:	JOSH HYDE

OptiCem v6.4.9  
18-Nov-11 15:24





Customer: WEXPRO	Job Date: 18-Nov-2011	Sales Order #: 9058615
Well Description: BW MUSSER 39	JOB DISCRIPTION: SURFACE	SUPERVISOR: JOSH HYDE

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18-Nov-11 15:25

## HALLIBURTON

## Water Analysis Report

COMPANY:	WEXPRO	Date Recorded	11/18/2011
SUBMITTED BY:	JOSH HYDE	SO#	9058615
LEASE:	BW MUSSER	Job Type	SURFACE
WELL #:	39	Camp Location	10142 ROCK SPRINGS WY

## CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value	Max Acceptable Limit	Potential Problems in Exceeding Limit
pH	6	5 to 8.5	Chemicals in water can cause severe retardation
Chlorides <sup>1,2</sup>	0	3000 mg/L	Can accelerate the set time on cement 1% ~ 4800 mg/L
Total Alkalinity	40	1000 mg/L	Cement is greatly retarded to the point where it may not set up at all, decrease strength of cement and possibly thicken cement slurry. (Typically occurs @ pH ≥ 8.3)
Total Hardness	50	400 mg/L	Slightly shortens pump time on cement.
Sulfates	<200	1500 mg/L	Will greatly decrease the strength of cement
Iron	0.15	300 mg/L	Could cause gelation issues with cement
Water Temp	73°	50F to 80F	High temps will accelerate; Low temps may risk freezing in cold weather

NOTES:

1. If the water's pH is greater than or equal to 8, avoid using it since Magnesium may be present (there are no field test strips for Magnesium).