

---

## **WEXPRO COMPANY E-BILL**

---

**Carl Allen 41  
POWDER WASH  
Moffat County, Colorado**

### **Cement Production Casing**

### **Post Job Report**

### The Road to Excellence Starts with Safety

Sold To #: 343491	Ship To #: 2900510	Quote #:	Sales Order #: 9212318
Customer: WEXPRO COMPANY E-BILL	Customer Rep: Wexpro, SST-88		
Well Name: Carl Allen	Well #: 41	API/UWI #: 05-081-07644	
Field: POWDER WASH	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 28 Township 12N Range 97W			
Contractor: Wexpro	Rig/Platform Name/Num: SST 88		
Job Purpose: Cement Production Casing			
Well Type: Development Well	Job Type: Cement Production Casing		
Sales Person: VOLNER, THOMAS	Srv Supervisor: JOHNSON, KENNETH	MBU ID Emp #: 244972	

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ANDERSON, ALLEN G	7	475862	CORBITT, ALEX J	7	458831	JOHNSON, KENNETH E	7	244972
LARSEN, WADE J	7	204453	VOLLMER, SCOTT T	7	505020			

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
11501581	65 mile	11323040	65 mile	11019287	65 mile	11288838	65 mile
11670397	65 mile	10825433C	65 mile	10322492C	65 mile	10713200C	65 mile

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
1-26-2012	6	4						

**TOTAL** Total is the sum of each column separately

### Job

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
Form Type			BHST	On Location	26 - Jan - 2012	01:00	MST
Job depth MD	9520. ft		Job Depth TVD	Job Started	26 - Jan - 2012	04:44	MST
Water Depth			Wk Ht Above Floor	Job Completed	26 - Jan - 2012	06:50	MST
Perforation Depth (MD)	From		To	Departed Loc	26 - Jan - 2012	08:00	MST

### Well Data

Description	Max pressure psig	Size in	ID in	Weight lbf/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Surface Casing		9.625	8.921	36.		J-55		1538		
7.875 Open Hole			7.875				1538	9520		
4 1/2" Production Casing		4.5	3.92	13.5		P-110		9520		

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

Description	Qty	Qty uom	Depth	Supplier
MICRO MATRIX RETARDER	2	GAL		
PLUG,CMTG,TOP,4 1/2,HWE,3.65 MIN/4.14 MA	1	EA		
PLUG,CMTG,BOT,4 1/2,HWE,3.65 MIN/4.14 MA	1	EA		

### Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	4.5	1	HES
Float Shoe					Bridge Plug					Bottom Plug	4.5	1	HES
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	4.5	1	HES
Stage Tool										Centralizers	4.5	35	WTF

### 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	MUD FLUSH III	MUD FLUSH III - SBM (528788)	20.00	bbl	8.4	.0	.0	4	
	42 gal/bbl	FRESH WATER							
	0.25 gal/bbl	D-AIR 3000L, 5 GAL PAIL (101007444)							
2	ExtendaCem RS1	EXTENDACEM (TM) SYSTEM (452981)	480.0	sacks	11.5	2.63	15.50	7	15.50
	0.8 %	HR-7 (100005055)							
	0.3 %	D-AIR 5000, 50 LB SACK (102068797)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	0.25 lbm	KWIK SEAL, SK (100064010)							
	15.50 Gal	FRESH WATER							
3	EconoCem RS-13	ECONOCEM (TM) SYSTEM (452992)	1325.0	sacks	14.2	1.26	5.52	7	5.52
	0.19 %	HR-5, 50 LB SK (100005050)							
	3 lbm	SILICALITE - COMPACTED, 50 LB SK (100012223)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	0.25 lbm	KWIK SEAL, SK (100064010)							
	5.52 Gal	FRESH WATER							
4	Displacement		141.6	bbl	8.4	.0	.0	7	
	0.1 gal/bbl	CLAYFIX 3, TOTETANK (101583425)							
Calculated Values		Pressures		Volumes					
Displacement	141.6	Shut In: Instant		Lost Returns	0	Cement Slurry	522	Pad	
Top Of Cement		5 Min		Cement Returns	60	Actual Displacement	141.6	Treatment	
Frac Gradient		15 Min		Spacers	23	Load and Breakdown		Total Job	686.6
Rates									
Circulating	7	Mixing	7	Displacement	7	Avg. Job	7		
Cement Left In Pipe	Amount 14.03	Reason	Shoe Joint						
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					

# Planned Pump Schedule

## Wexpro Carl Allen 41 Production Casing

### 1. Pressure Test HES Lines

### 2. Pump Spacer

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)	Surfactants
2a.	Mud Flush III	8.4	20	4	

### 3. Pump Cement

	Name	Density (lb/gal)	Slurry Volume (bbls)	Rate (bpm)	Mix Water Required (bbls)
3a.	ExtendaCem RS1-Lead	11.5	225.2	7	177.2
3b.	EconoCem RS13-Tail	14.2	297.2	7	174.2

### 4. Shutdown, Wash Pumps and Lines, Drop Top Plug

### 5. Displacement

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)
5a.	Clayfix Water	8.34	130.0	7
5b.	Clayfix Water	8.34	11.6	2



## Cementing Job Log

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 343491	<b>Ship To #:</b> 2900510	<b>Quote #:</b>	<b>Sales Order #:</b> 9212318
<b>Customer:</b> WEXPRO COMPANY E-BILL		<b>Customer Rep:</b> Wexpro, SST-88	
<b>Well Name:</b> Carl Allen	<b>Well #:</b> 41	<b>API/UWI #:</b> 05-081-07644	
<b>Field:</b> POWDER WASH	<b>City (SAP):</b> CRAIG	<b>County/Parish:</b> Moffat	<b>State:</b> Colorado
<b>Legal Description:</b> Section 28 Township 12N 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> Wexpro		<b>Rig/Platform Name/Num:</b> SST 88	
<b>Job Purpose:</b> Cement Production Casing			<b>Ticket Amount:</b>
<b>Well Type:</b> Development Well		<b>Job Type:</b> Cement Production Casing	
<b>Sales Person:</b> VOLNER, THOMAS		<b>Srvc Supervisor:</b> JOHNSON, KENNETH	<b>MBU ID Emp #:</b> 244972

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	01/25/2012 21:00							
Depart Yard Safety Meeting	01/25/2012 22:30							HAVE JSA WITH HES CREW ON ROAD TRAVEL
Depart from Service Center or Other Site	01/25/2012 22:35							
Arrive at Location from Service Center	01/26/2012 01:00							
Assessment Of Location Safety Meeting	01/26/2012 01:05							HAVE JSA WITH HES CREW ON HOW TO SPOT EQUIPMENT
Pre-Rig Up Safety Meeting	01/26/2012 01:15							HAVE JSA WITH HES CREW ON RIGGING UP BULK, WATER, AND IRON
Rig-Up Equipment	01/26/2012 01:30							RIG UP IRON, BULK, AND WATER
Wait on Customer or Customer Sub-Contractor Equip	01/26/2012 02:00							WAIT FOR RIG TO RUN CASING
Wait on Customer or Customer Sub-Contractor Equipm	01/26/2012 04:14							RIG FINISHED RUNNING CASING
Pre-Job Safety Meeting	01/26/2012 04:15							HAVE JSA WITH HES CREW, RIG CREW, AND COMPANY MAN ON RIGGING UP IRON AND PLUG CONTAINER ON THE RIG FLOOR
Rig-Up Completed	01/26/2012 04:40							RIG UP IRON AND PLUG CONTAINER ON RIG FLOOR

Sold To # : 343491

Ship To # :2900510

Quote # :

Sales Order # : 9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Start Job	01/26/2012 04:44	1	2.5	3	3		50.0	DROP HES BOTTOM PLUG, FILL PUMPS AND LINES WITH H2O
Pressure Test	01/26/2012 04:46	2						PRESSURE TEST IRON TO 9066 PSI
Pump Spacer	01/26/2012 04:47	3	4	20	<b>23</b>		373.0	PUMP MUDFLUSH
Pump Lead Cement	01/26/2012 04:54	4	7	225	225		930.0	PUMP 480 SKS OF EXTENDACEM RS1 AT 11.5 LB/GAL 2.63 CUFT/SK 15.5 GAL/SK
Pump Tail Cement	01/26/2012 05:27	5	7	176.5			243.0	PUMP 1325 SKS OF ECONOCES RS13 AT 14.2 LB/GAL 1.26 CUFT/SK 5.52 GAL/SK
Slow Rate	01/26/2012 05:54	6	1.5	1.5			194.3	HAD TO SLOW RATE FOR A SHORT MINUTE DO TO POOR DELIVERY FROM BULK
Resume Mix	01/26/2012 05:55	7	7	119	<b>522</b>		521.0	
Shutdown	01/26/2012 06:12	8						
Wash Pumps and Lines	01/26/2012 06:13	9						
Drop Top Plug	01/26/2012 06:19	10						DROP HES TOP PLUG WITNESSED BY COMPANY MAN
Pump Displacement	01/26/2012 06:19	11	7	121	121		69.0	START H2O DISPLACEMENT WITH CLAYSURF
Slow Rate	01/26/2012 06:37	12	4	10	131		2154. 0	
Slow Rate	01/26/2012 06:40	13	2	10.6	<b>141.6</b>		2426. 0	
Bump Plug	01/26/2012 06:45	14					2493. 0	BUMP PLUG AND GO 500 PSI OVER FINAL CIRCULATING PRESSURE
Check Floats	01/26/2012 06:47	15					3322. 0	FLOATS HELD AND HAD 1.5 BBL BACK TO THE TRUCK
End Job	01/26/2012 06:50	16						

Sold To # : 343491

Ship To # :2900510

Quote # :

Sales Order # : 9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pre-Rig Down Safety Meeting	01/26/2012 06:55							HAVE JSA WITH HES CREW, RIG CREW, AND COMPANY MAN ON RIGGING DOWN IRON AND PLUG CONTAINER ON THE RIG FLOOR AND IRON, WATER, AND BULK ON THE GROUND
Rig-Down Equipment	01/26/2012 07:00							RIG DOWN IRON AND PLUG CONTAINER ON RIG FLOOR AND IRON, BULK, AND WATER ON THE GROUND
Other	01/26/2012 07:18							GAVE RIG HANDS 2 GAL OF MMCR TO USE TO WASH OUT THE FLOW LINE TO PIT
Pre-Convoy Safety Meeting	01/26/2012 07:55							HAVE JSA WITH HES CREW ON ROAD TRAVEL
Depart Location for Service Center or Other Site	01/26/2012 08:00							
Other	01/26/2012 08:01							HAD FULL RETURNS THROUGH ENTIRE JOB AND HAD 60 BBL OF CEMENT TO SURFACE AND 20 BBL OF MUDFLUSH
Other	01/26/2012 08:02							RIG WAS ON BOTTOM AT 0330 CIRCULATED AT 7 BPM 600 PSI AND 1832 UNITS OF GAS. MUD WT WAS AT 10.5 LB/GAL
Other	01/26/2012 08:03							ESTIMATED TOP OF TAIL WAS AT 2196

Sold To # : 343491

Ship To # :2900510

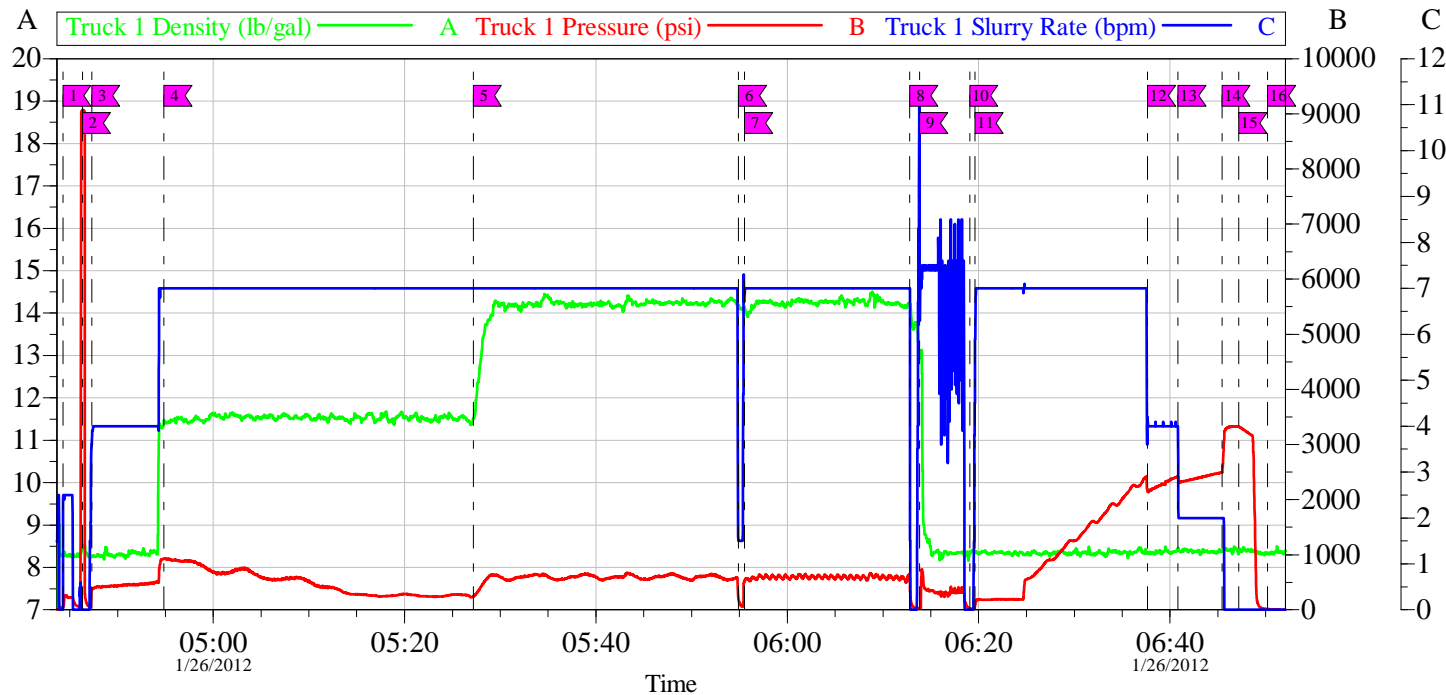
Quote # :

Sales Order # : 9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00

## Cementing Job Log



Local Event Log											
Intersection		TID	TIP	TISR	Intersection		TID	TIP	TISR		
1	START JOB / FILL LINES	04:44:17	8.270	47.20	0.039	2	PRESSURE TEST IRON	04:46:20	8.500	9066	0.000
3	PUMP MUDFLUSH	04:47:18	8.250	373.2	3.603	4	PUMP LEAD CEMENT	04:54:51	11.48	930.8	7.000
5	PUMP TAIL CEMENT	05:27:11	11.51	243.7	7.000	6	SLOW RATE DO TO DELIVERY	05:54:54	14.19	194.3	1.500
7	RESUME MIX	05:55:32	14.08	521.0	6.900	8	SHUTDOWN	06:12:47	14.24	594.1	7.000
9	WASH PUMPS AND LINES	06:13:49	12.93	30.00	8.900	10	DROP TOP PLUG	06:19:03	8.380	26.00	0.000
11	PUMP DISPLACEMENT	06:19:37	8.358	69.06	4.829	12	SLOW RATE	06:37:38	8.334	2154	4.141
13	SLOW RATE	06:40:49	8.440	2426	4.000	14	BUMP PLUG	06:45:26	8.392	2493	2.000
15	CHECK FLOATS	06:47:11	8.410	3322	0.000	16	END JOB	06:50:12	8.312	14.00	0.000

Customer: WEXPRO  
Well Description: CARL ALLEN 41

Job Date: 26-Jan-2012  
JOB DESCRIPTION PRODUCTION

Sales Order #: 9212318  
SUPERVISOR KEN JOHNSON

OptiCem v6.4.10  
26-Jan-12 07:17

Sold To #: 343491

Ship To #: 2900510

Quote #:

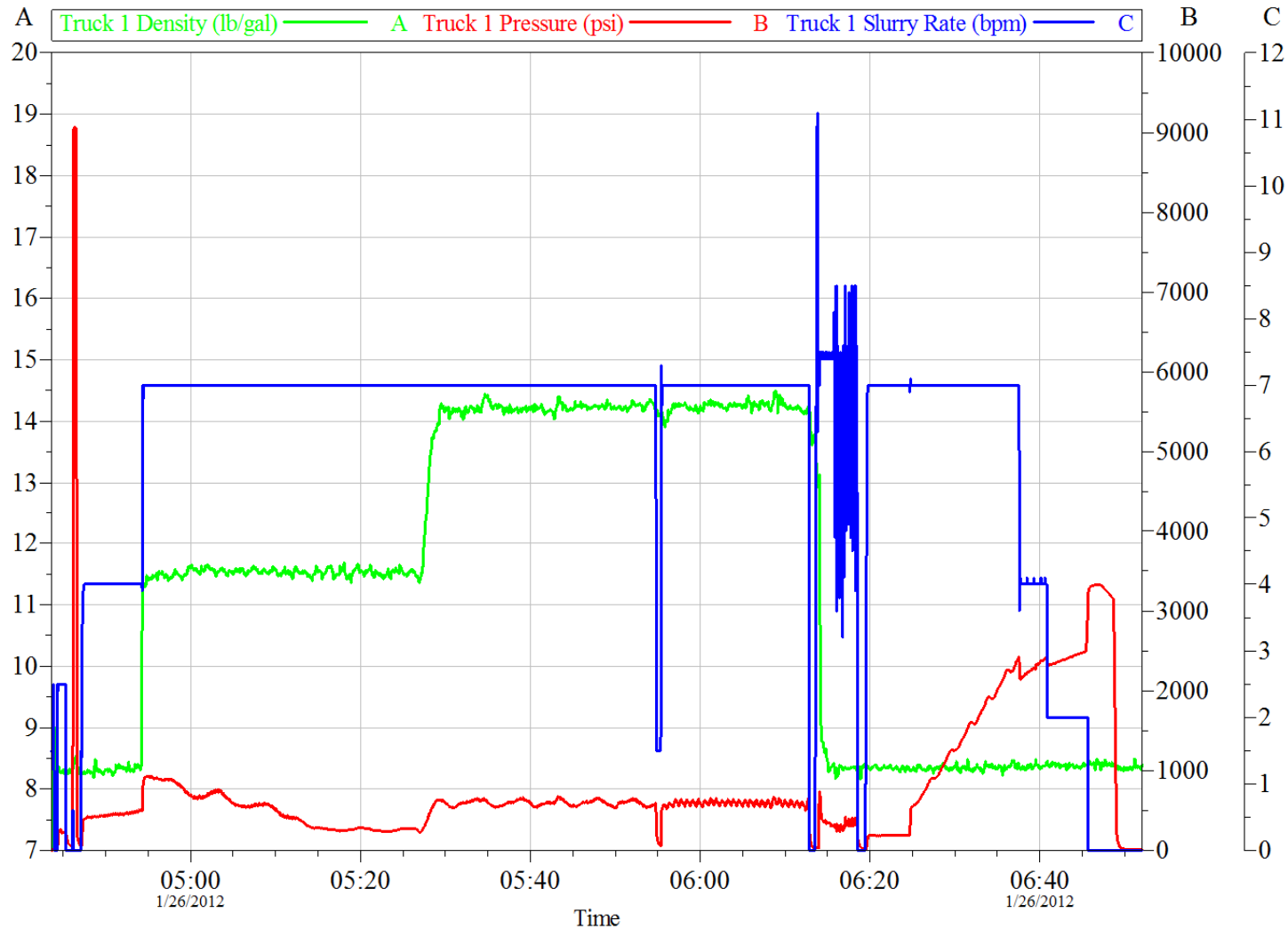
Sales Order #: 9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00



## Cementing Job Log



Customer: WEXPRO	Job Date: 26-Jan-2012	Sales Order #: 9212318
Well Description: CARL ALLEN 41	JOB DESCRIPTION PRODUCTION	SUPERVISOR KEN JOHNSON

OptiCem v6.4.10  
26-Jan-12 08:10

Sold To # : 343491

Ship To # :2900510

Quote # :

Sales Order # : 9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00

## Cementing Job Log

## HALLIBURTON

## Water Analysis Report

COMPANY: WEXPRO

Date Recorded 1/26/2012

SUBMITTED BY: K. Johnson

SO# 9212318

LEASE: CARL ALLEN

Job Type PRODUCTION

WELL #: 41

Camp Location ROCKSPRINGS WY

## CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit
pH	6	----	6.0 - 8.0	Chemicals in the water can cause severe retardation
Chlorides	0	ppm	3000 ppm	Can shorten thickening time of cement
Sulfates	<200	ppm	1500 ppm	Will greatly decrease the strength of cement
Total Hardness	120	ppm	500 mg/L	High concentrations will accelerate the set of the cement
Calcium	10	ppm	500 ppm	High concentrations will accelerate the set of the cement
Total Alkalinity	80	ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all (typically occurs @ pH ≥ 8.3).
Potassium	400	ppm	5000 ppm	High concentrations will shorten the pump time of cement (indicates the presence of chlorides, therefore if Potassium levels
Iron	0	ppm	300 ppm	High concentrations will accelerate the set of the cement
Temperature	77	°F	50-80 °F	High temps will accelerate; Low temps may risk freezing in cold weather

Item	Approximate Calculated Value	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit - Calculation Method
Magnesium	110	ppm	300 ppm	High concentrations will accelerate the set of the cement

Submitted Respectfully by: \_\_\_\_\_

Sold To #: 343491

Ship To #: 2900510

Quote #:

Sales Order #:

9212318

SUMMIT Version: 7.2.27

Monday, February 06, 2012 05:49:00