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# **WEXPRO COMPANY E-BILL**

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

**Cement Surface Casing  
16-Jan-2012**

**Post Job Report**

## The Road to Excellence Starts with Safety

Sold To #: 343491	Ship To #: 2900510	Quote #:	Sales Order #: 9207016
Customer: WEXPRO COMPANY E-BILL		Customer Rep: SST 88, Wexpro	
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 Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: VOLNER, THOMAS	Srvc Supervisor: DOANE, DION		MBU ID Emp #: 458934

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BAIR, DAVID Ray	4	509987	DOANE, DION D	4	458934	MADINGER, ROBERT W	4	451816
MARTINEZ, FRANCISCO J	4	458086						

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10714289C	100 mile	10784049	100 mile	10804551	100 mile	11138998	100 mile
11139006	100 mile	11307426	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
1/16/12	4	4						

<b>TOTAL</b>	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	16 - Jan - 2012	11:00	MST
Form Type	BHST		Job Started	16 - Jan - 2012	13:31	MST
Job depth MD	1538. ft		Job Completed	16 - Jan - 2012	14:34	MST
Water Depth	Wk Ht Above Floor		Departed Loc	16 - Jan - 2012	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.	1538		
Conductor Pipe		16.	15.376	55.			.	80.		
Surface Casing		9.625	8.921	36.		J-55	.	1538.		

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

Description	Qty	Qty uom	Depth	Supplier
MICRO MATRIX RETARDER	3	GAL		
PLUG,CMTG,TOP,9 5/8,HWE,8.16 MIN/9.06 MA	1	EA		
PLUG,CMTG,BOT,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

<b>Gelling Agt</b>	<b>Conc</b>	<b>Surfactant</b>	<b>Conc</b>	<b>Acid Type</b>	<b>Qty</b>	<b>Conc</b>	<b>%</b>
<b>Treatment Fld</b>	<b>Conc</b>	<b>Inhibitor</b>	<b>Conc</b>	<b>Sand Type</b>	<b>Size</b>	<b>Qty</b>	

### 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	8.34	.0	.0	4	
2	VeriCem RS 1	VARICEM (TM) CEMENT (452009)	165.0	sacks	11.5	2.98	18.22	6	18.22
	0.125 lbm	POLY-E-FLAKE (101216940)							
	0.25 lbm	KWIK SEAL, SK (100064010)							
	18.22 Gal	FRESH WATER							
3	W1- Premium	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	250.0	sacks	15.2	1.28	5.81	5	5.81
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	1 %	HALLIBURTON GEL, 50 LB SK (100064040)							
	5.81 Gal	FRESH WATER							
4	Fresh Water		115.00	bbl	8.33	.0	.0	6	
5	Holcim-Type II-V	CEMENT STANDARD TYPE II/V, BULK (101809640)		sacks	15.3	1.25	5.63		5.63
	94 lbm	CEMENT STANDARD TYPE II/V, BULK (101809640)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	5.63 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement	115	Shut In: Instant		Lost Returns	0	Cement Slurry	144	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	35	Actual Displacement	115	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	279
Rates									
Circulating	9	Mixing	6	Displacement	6	Avg. Job	7		
Cement Left In Pipe	Amount	46.04 ft	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 Surface**
**1. Pressure Test HES Lines**
**2. Pump Spacer**

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)	Surfactants
2a.	Water	8.33	20	3	

**3. Pump Cement**

	Name	Density (lb/gal)	Slurry Volume (bbls)	Rate (bpm)	Mix Water Required (bbls)
3a.	VariCem RS1-Lead	11.5	87.6	6	71.6
3b.	W1 - Premium-Tail	15.2	56.9	6	34.6
3c.	Holcim Type II-V-Top Out	15.3	33.3		20.1

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

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)
5a.	Water	8.33	95.0	6
5b.	Water	8.33	10.0	4
5c.	Water	8.33	10.0	2

*The Road to Excellence Starts with Safety*

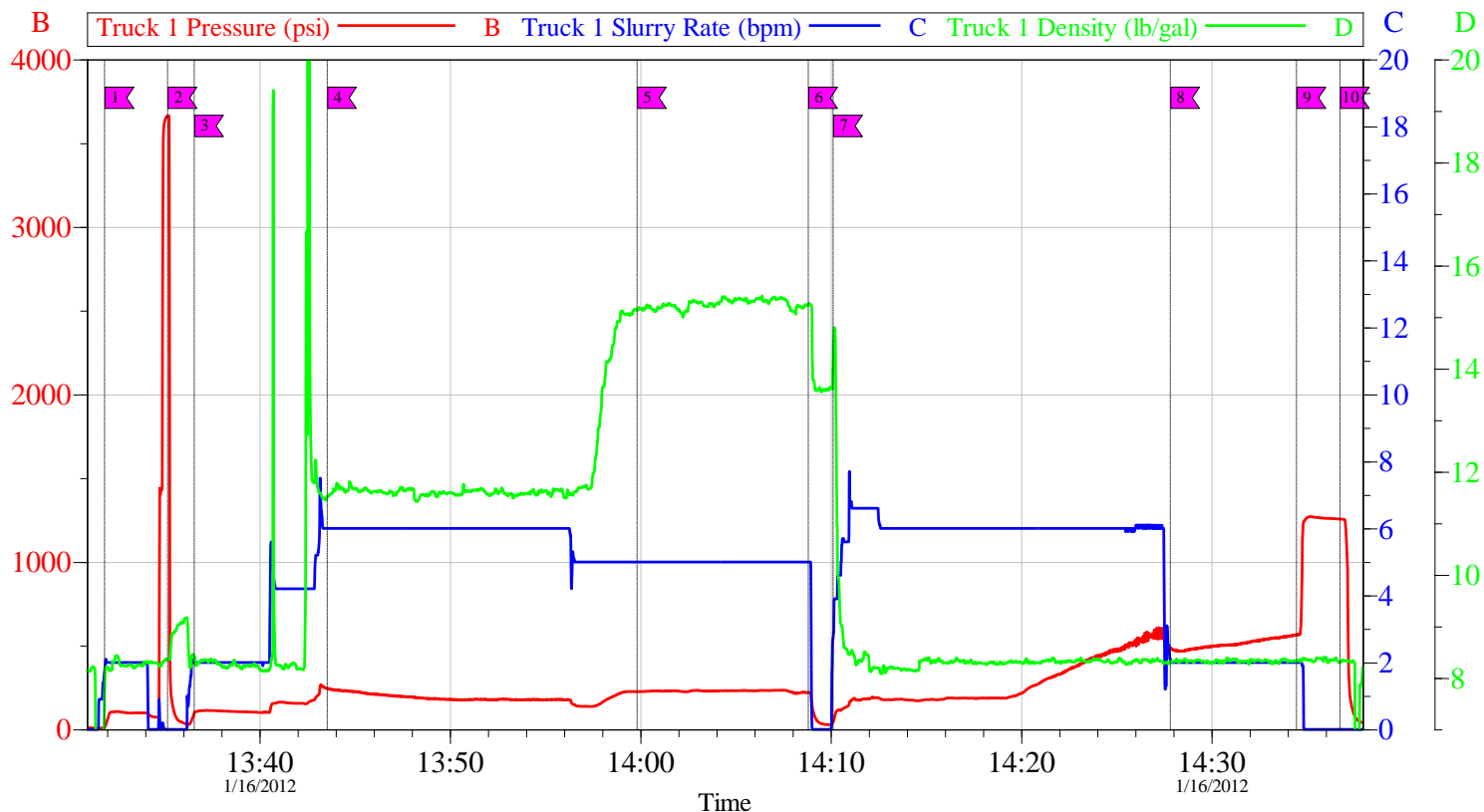
<b>Sold To #:</b> 343491	<b>Ship To #:</b> 2900510	<b>Quote #:</b>	<b>Sales Order #:</b> 9207016
<b>Customer:</b> WEXPRO COMPANY E-BILL		<b>Customer Rep:</b> SST 88, Wexpro	
<b>Well Name:</b> Carl Allen	<b>Well #:</b> 41	<b>API/UWI #:</b> 05-081-07644	
<b>Field:</b> POWDER WASH	<b>City (SAP):</b> CRAIG	<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 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>Srv Supervisor:</b> DOANE, DION	<b>MBU ID Emp #:</b> 458934

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	01/16/2012 06:00							HES CREW CALLED OUT @ 0600 TO WEXPRO SST 88 CARL ALLEN 41 SURFACE
Pre-Convoy Safety Meeting	01/16/2012 08:20							DICUSS DRIVING HAZARDS
Crew Leave Yard	01/16/2012 08:30							DEPART SERVICE CENTER
Arrive At Loc	01/16/2012 11:30							ARRIVE AT LOCATION @ 1130
Assessment Of Location Safety Meeting	01/16/2012 11:35							ASSESS LOCATION
Rig-Up Equipment	01/16/2012 11:45							RIG UP
Wait on Customer or Customer Sub-Contractor Equip	01/16/2012 12:00							ON BOTTOM @ 1200 CIRCULATING @ 9 BPM @ 147 PSI WITH 0 UNITS OF GAS WITH NO LOSSES
Pre-Job Safety Meeting	01/16/2012 13:00							SAFETY MEETING WITH CO MAN AND RIG CREW
Rig-Up Equipment	01/16/2012 13:15							RIG UP FLOOR
Start Job	01/16/2012 13:31	1	2	5			120.0	FILL LINES
Pressure Test	01/16/2012 13:35	2						GOOD PRESSURE TEST TO 3663 PSI, NO LEAKS
Pump Spacer	01/16/2012 13:36	3	4	20	20		65.0	PUMP H2O @ 8.33 PPG
Pump Lead Cement	01/16/2012 13:43	4	6	87			246.0	PUMP 165 SKS OF VARI CEM RS1 @ 11.5 PPG, 2.98 YIELD, 18.22 GAL/SK

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	01/16/2012 13:59	5	5	57	144		226.0	PUMP 250 SKS OF W1 PREMIUM TAIL @ 15.2 PPG, 1.28 YIELD, 5.81 GAL/SK
Drop Plug	01/16/2012 14:08	6						WITNESSED BY CoMAN
Pump Displacement	01/16/2012 14:10	7	6	100			188.0	PUMP 115 H2O DISPLACEMENT
Slow Rate	01/16/2012 14:27	8	2	15	115		485.0	SLOW RATE TO 2 BPM TO BUMP PLUG
Bump Plug	01/16/2012 14:34	9					564.0	BROUGHT FINAL CIRCULATING PSI TO
Check Floats	01/16/2012 14:36	10					1256.0	FLOATS HELD, 1 BBL BACK TO THE PUMP
Pre-Rig Down Safety Meeting	01/16/2012 14:40							DISCUSS RIG DOWN HAZARDS
Rig-Down Equipment	01/16/2012 14:45							RIG DOWN
Pre-Convoy Safety Meeting	01/16/2012 15:50							DISCUSS DRIVING HAZARDS
Crew Leave Location	01/16/2012 16:00							THANKS FROM HES CREW
Other	01/16/2012 16:01							GOOD FULL RETURNS THROUGH OUT JOB WITH 35 BBLs OF GOOD CEMENT BACK TO SURFACE
Other	01/16/2012 16:02							FINAL CIRCULATING PRESSURE @ 564 PSI WITH 1 BBL BACK TO TRUCK

### WEXPRO SST 88 CARL ALLEN 41 SURFACE

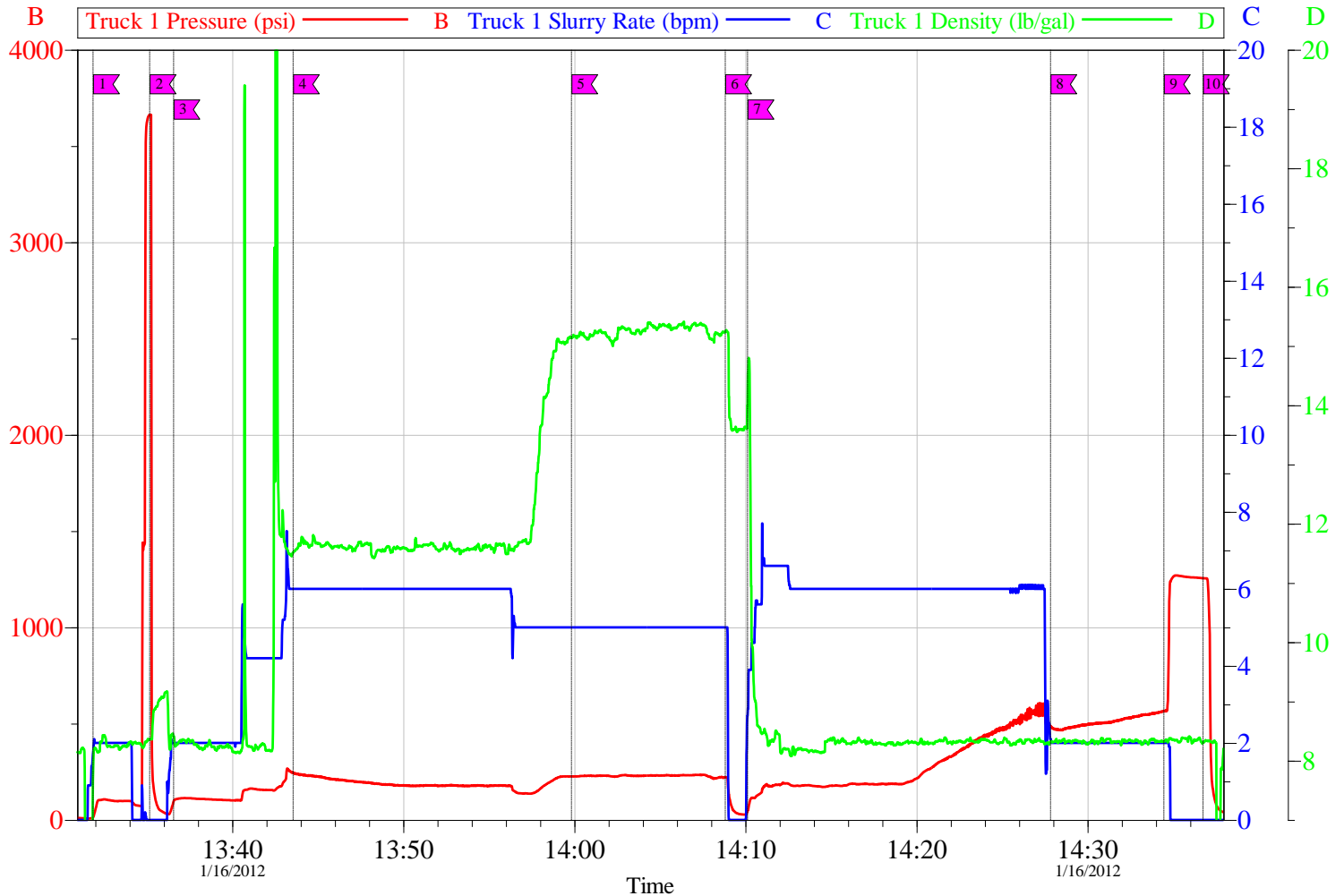


Local Event Log																	
Intersection		TID	TIP	TISR	Intersection		TID	TIP	TISR	Intersection		TID	TIP	TISR			
1	FILL LINES	13:31:52	7.808	13.95	1.747	2	PREZSURE TEST	13:35:10	8.360	3663	0.000	3	PUMP H2O SPACER	13:36:34	8.420	95.00	2.000
4	PUMP LEAD CEMENT	13:43:33	11.51	246.0	6.000	5	PUMP TAIL CEMENT	13:59:50	15.13	226.0	5.000	6	SHUTDOWN / DROP PLUG	14:08:49	15.23	221.0	5.000
7	PUMP DISPLACEMENT	14:10:07	13.99	45.00	2.700	8	SLOW RATE	14:27:50	8.320	485.5	2.100	9	BUMP PLUG	14:34:28	8.322	564.2	2.000
10	CHECK FLOATS	14:36:45	8.310	1256	0.000												

Customer: WEXPRO	Job Date: 16-Jan-2012	Sales Order #: 9207016
Well Description: CARL ALLEN 41	SUPERVISOR D DOANE	JOB TYPE SURFACE

OptiCem v6.4.10  
16-Jan-12 15:00

### WEXPRO SST 88 CARL ALLEN 41 SURFACE



Customer: WEXPRO	Job Date: 16-Jan-2012	Sales Order #: 9207016
Well Description: CARL ALLEN 41	SUPERVISOR D DOANE	JOB TYPE SURFACE

OptiCem v6.4.10  
16-Jan-12 15:01

HALLIBURTON

Cementing

# Water Analysis Report

COMPANY: WEXPRO Date Recorded 1/16/2012

SUBMITTED BY: D DOANE SO# 9207016

LEASE: CARL ALLEN Job Type SURFACE

WELL #: 41 Camp Location ROCK SPRINGS

## CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value	Units	Max. Acceptable Limit	Potential Problems in Exceeding Limit
pH	7	----	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	10	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	180	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 are measured as high, so should the chlorides)
Iron	0	ppm	300 ppm	High concentrations will accelerate the set of the cement
Temperature	69	°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	0	ppm	300 ppm	High concentrations will accelerate the set of the cement <b>Calculation Method:</b> Subtract tested "Calcium" value from "Total Hardness" value.