
WEXPRO COMPANY E-BILL

**BW Musser 31
POWDER WASH
Moffat County , Colorado**

**Cement Surface Casing
30-Nov-2011**

Post Job Report

Planned pumping schedule

1. Pressure Test HES Lines

2. Pump Spacer

	Name	Density (lb/gal)	Volume (bbls)	Rate (bpm)	Surfactants
2a.	Fresh Water	8.33	20	4	

3. Pump Cement

	Name	Density (lb/gal)	Slurry Volume (bbls)	Rate (bpm)	Mix Water Required (bbls)
3a.	VariCem RS1-Lead	11.5	92.9	5	75.9
3b.	W1 - Premium-Tail	15.2	60.4	5	36.5
3c.	Mountain G-Top Out	15.8	31.3		17.9

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

Sold To #: 343491	Ship To #: 2891055	Quote #:	Sales Order #: 9099035
Customer: WEXPRO COMPANY E-BILL		Customer Rep: SST 88, Wexpro	
Well Name: BW Musser	Well #: 31	API/UWI #: 05-081-07468	
Field: POWDER WASH	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 4 Township 11N Range 97W			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Wxpro		Rig/Platform Name/Num: SST 88	
Job Purpose: Cement Surface Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: VOLNER, THOMAS		Srvc Supervisor: DOANE, DION	MBU ID Emp #: 458934

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	11/29/2011 20:00							HES CEW CALLED OUT @ 2000 TO SST-88 SURFACE
Pre-Convoy Safety Meeting	11/29/2011 22:20							DISCUSS DRIVING HAZARDS TO LOCATION
Crew Leave Yard	11/29/2011 22:30							DEPART SERVICE CENTER
Arrive At Loc	11/30/2011 00:30							ARRIVE AT LOCATION @0030
Assessment Of Location Safety Meeting	11/30/2011 00:35							ACCESS LOCATION
Wait on Customer or Customer Sub-Contractor Equip	11/30/2011 01:00							CASING ON BOTTOM @ 0230 CIRCULATING @ 6 BPM WITH 200 PSI WITH 0 LOSES
Rig-Up Equipment	11/30/2011 02:30							RIG UP
Pre-Job Safety Meeting	11/30/2011 03:30							SAFETY MEETING WITH CO MAN AND RIG CREW
Start Job	11/30/2011 04:56	1	2	3	3		35.0	FILL LINES H2O
Pressure Test	11/30/2011 04:58	2/3						GOOD PRESSURE TEST AT 3,000 PSI, NO LEAKS
Pump Spacer	11/30/2011 05:00	4	4	20	23		27.0	PUMP20 H2O SPACER
Pump Lead Cement	11/30/2011 05:05	5	6	93	116		116.0	PUMPED 175 SKS OF VARICEM RS1 @ 11.5 PPG, 2.98 YIELD, 18.22 GAL/SK
Pump Tail Cement	11/30/2011 05:23	6	6	60	176		257.0	PUMPED 265 SKS OF W-1 PREMIUM @ 15.2 PPG, 1.28 YIELD, 5.79 GAL/SK

Activity Description	Date/Time	Cht #	Rate bbl/ min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Shutdown	11/30/2011 05:31	7						SHUTDOWN
Drop Plug	11/30/2011 05:31	7						DROP PLUG WITNESSED BY CO MAN
Pump Displacement	11/30/2011 05:33	8	6	100	276		74.0	PUMP 115.8 BBLS H2O
Slow Rate	11/30/2011 05:51	9	2	15.8	291.8		420.0	PUMPED H2O
Bump Plug	11/30/2011 05:57	10						BROUGHT FINAL CIRCULATING 514 PSI
Check Floats	11/30/2011 06:00	11						FLOATS HELD, 0.75 BBLS BACK TO THE PUMP, END CASING TEST
Pre-Rig Down Safety Meeting	11/30/2011 06:05							DISCUSS RIG DOWN HAZARDS
Rig-Down Equipment	11/30/2011 06:10							RIG DOWN
Pre-Convoy Safety Meeting	11/30/2011 07:25							DISCUSS DRIVING HAZARDS
Crew Leave Location	11/30/2011 07:30							THANK YOU FROM DION DOANE AND HES CREW
Other	11/30/2011 07:31							FULL RETURNS THROUGHOUT THE JOB, 20 BBLS OF SPACER ,AND 46 BBLS OF CEMENT TO SURFACE.
Other	11/30/2011 07:32							CHART TIME IS ONE HOUR AHEAD

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Legal Description: Section 4 Township 11N Range 97W			
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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 #
DELGUIDICE, NATHAN Joshua	4	398458	DOANE, DION D	4	458934	LEATHAM, BROOK E	4	470713
MCCOY, STEVE Allen	4	416547						

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10378456C	65 mile	10592956C	65 mile	10624098	65 mile	10783485	65 mile
10867409	65 mile	11138998	65 mile	11501581	65 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
11/30/11	4	4						

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	29 - Nov - 2011	20:00	CST
Form Type		BHST	Job Started	30 - Nov - 2011	00:30	CST
Job depth MD	1540.5 ft	Job Depth TVD	Job Completed	30 - Nov - 2011	03:56	CST
Water Depth		Wk Ht Above Floor	Departed Loc	30 - Nov - 2011	05:00	CST
Perforation Depth (MD)	From	To		30 - Nov - 2011	06:30	CST

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.	1550		
Conductor Pipe		16.	15.376	55.			0	80		
Surface Casing		9.625	8.921	36.		J-55	0	1550		

Sales/Rental/3rd 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

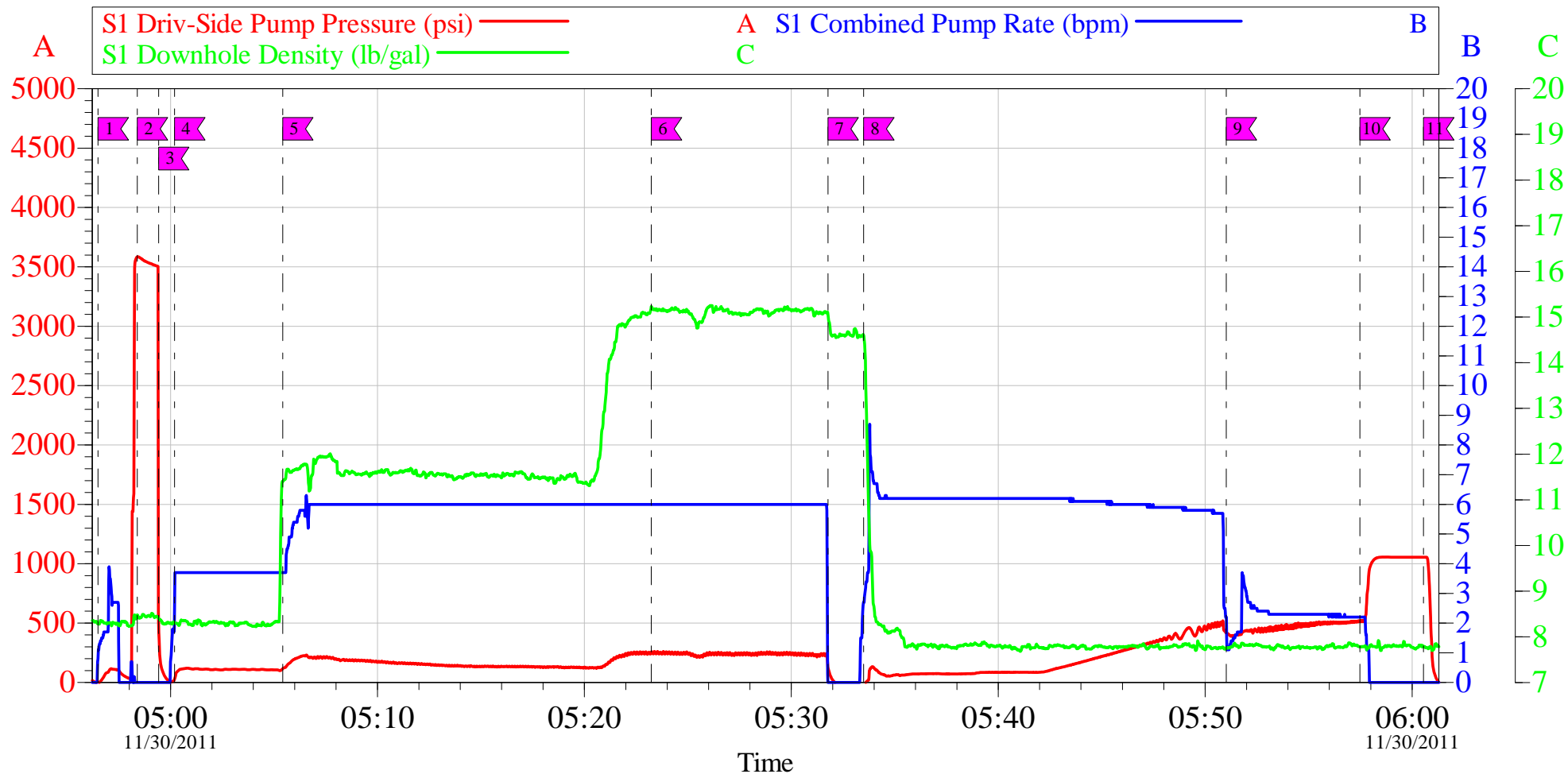
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty	

Fluid Data

Stage/Plug #: 1

Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	Fresh Water		20.00	bbl	8.33			4	
2	VariCem RS1 Lead	VARICEM (TM) CEMENT (452009)	175.0	sacks	11.5	2.98	18.22	6	
	0.125 lbm	POLY-E-FLAKE (101216940)							
	0.25 lbm	KWIK SEAL, SK (100064010)							
	18.22 Gal	FRESH WATER							
3	Mountain G	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	265.0	sacks	15.2	1.28	5.79	6	
	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)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	5.79 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement	115.8	Shut In: Instant		Lost Returns	0	Cement Slurry	153	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	46	Actual Displacement	115.8	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	289.1
Rates									
Circulating	6	Mixing		6	Displacement	6	Avg. Job		6
Cement Left In Pipe	Amount	41.53 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					

WEXPRO SST 88 BW MUSSER 31 SURFACE



Local Event Log											
Intersection			SDPP	SCPR	SDD	Intersection			SDPP	SCPR	SDD
1	FILL LINES	04:56:30	-2.178	0.853	8.288	2	PRESSURE TEST	04:58:24	3584	0.000	8.480
3	RELEASE PRESSURE	04:59:25	492.2	0.000	8.398	4	PUMP SPACER	05:00:12	27.52	2.452	8.301
5	PUMP LEAD CEMENT	05:05:25	116.0	3.700	11.40	6	PUMP TAIL CEMENT	05:23:14	257.1	6.000	15.23
7	SHUTDOWN/DROP PLUG	05:31:47	125.3	0.000	15.05	8	PUMP H2O DISPLACEMENT	05:33:30	-17.80	2.700	14.59
9	SLOW RATE	05:51:01	420.1	2.200	7.753	10	BUMP PLUG	05:57:29	514.6	2.200	7.780
11	CHECK FLOATS	06:00:33	1054	0.000	7.780						

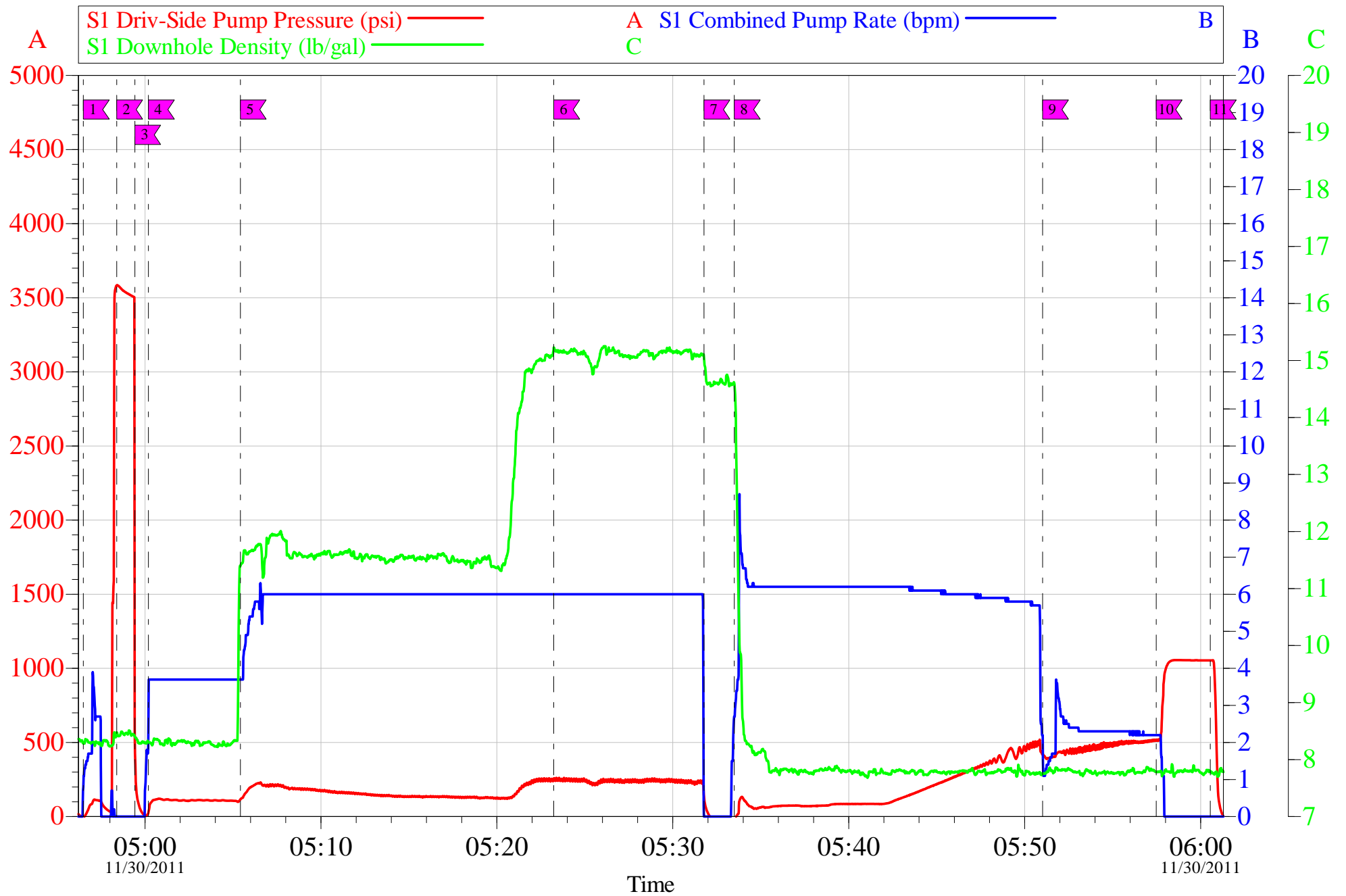
Customer: WEXPRO
Well Description: BW MUSSER 31

Job Date: 30-Nov-2011
SUPERVISOR D DOANE

Sales Order #: 9099035
JOB TYPE SURFACE

OptiCem v6.4.9
30-Nov-11 06:24

WEXPRO SST 88 BW MUSSER 31 SURFACE



Customer: WEXPRO
Well Description: BW MUSSER 31

Job Date: 30-Nov-2011
SUPERVISOR D DOANE

Sales Order #: 9099035
JOB TYPE SURFACE

OptiCem v6.4.9
30-Nov-11 06:25

HALLIBURTON

Cementing

Water Analysis Report

COMPANY: WEXPRO SST 88 Date Recorded: 11/30/2011

SUBMITTED BY: D DOANE SO#: 9099035

LEASE: BW MUSSER Job Type: SURFACE

WELL #: 31 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	120	ppm	500 mg/L	High concentrations will accelerate the set of the cement
Calcium	100	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 \geq 8.3).
Bicarbonates		ppm	1000 ppm	Cement is greatly retarded to the point where it may not set up at all
Potassium	0	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	0.6	ppm	300 ppm	High concentrations will accelerate the set of the cement
Tannin Lignin		ppm	100 ppm	Can greatly retard the cement.
Temperature	71	°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		ppm	300 ppm	High concentrations will accelerate the set of the cement Calculation Method: Subtract tested "Calcium" value from "Total Hardness" value.
Carbonates		ppm	100 ppm	Cement is greatly retarded to the point where it may not set up at all. Calculation Method: Subtract tested "Bicarbonates" value from "Total Alkalinity" value.

Submitted Respectfully by: _____

Sales Order #: 9099035	Line Item: 10	Survey Conducted Date: 11/30/2011
Customer: WEXPRO COMPANY E-BILL		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-081-07468
Well Name: BW Musser		Well Number: 31
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Moffat

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

CUSTOMER SATISFACTION SURVEY

CATEGORY	CUSTOMER SATISFACTION RESPONSE	
Survey Conducted Date	The date the survey was conducted	11/30/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	DION DOANE (HB26150)
Customer Participation	Did the customer participate in this survey? (Y/N)	No
Customer Representative	Enter the Customer representative name	
HSE	Was our HSE performance satisfactory? Circle Y or N	
Equipment	Were you satisfied with our Equipment? Circle Y or N	
Personnel	Were you satisfied with our people? Circle Y or N	
Customer Comment	Customer's Comment	

CUSTOMER SIGNATURE

Sales Order #: 9099035	Line Item: 10	Survey Conducted Date: 11/30/2011
Customer: WEXPRO COMPANY E-BILL		Job Type (BOM): CMT SURFACE CASING BOM
Customer Representative:		API / UWI: (leave blank if unknown) 05-081-07468
Well Name: BW Musser		Well Number: 31
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Moffat

KEY PERFORMANCE INDICATORS

General	
Survey Conducted Date	11/30/2011
The date the survey was conducted	

Cementing KPI Survey	
Type of Job	0
Select the type of job. (Cementing or Non-Cementing)	
Select the Maximum Deviation range for this Job	Vertical
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
Total Operating Time (hours)	4
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
HSE Incident, Accident, Injury	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
Was the job purpose achieved?	Yes
Was the job delivered correctly as per customer agreed design?	
Operating Hours (Pumping Hours)	2
Total number of hours pumping fluid on this job. Enter in decimal format.	
Customer Non-Productive Rig Time (hrs)	0
Lost time due to Halliburton in the start, execution, or completion of an ordered service or product, or delays in a follow-on service. Enter in decimal format. 0 if none.	
Type of Rig Classification Job Was Performed	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
Number Of JSAs Performed	5
Number Of Jsas Performed	
Number of Unplanned Shutdowns	0
Unplanned shutdown is when injection stops for any period of time.	
Was this a Primary Cement Job (Yes / No)	Yes

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Customer Representative:		API / UWI: (leave blank if unknown) 05-081-07468
Well Name: BW Musser		Well Number: 31
Well Type: Development Well	Well Country: United States of America	
H2S Present:	Well State: Colorado	Well County: Moffat

Primary Cement Job= Casing job, Liner job, or Tie-back job.	
Did We Run Wiper Plugs? Did We Run Top And Bottom Casing Wiper Plugs?	Top
Mixing Density of Job Stayed in Designed Density Range (0-100%) Density Range defined as +/- .20 ppg. Calculation: Total BBLs cement mixed at designed density divided by total BBLs of cement multiplied by 100	98
Was Automated Density Control Used? Was Automated Density Control (ADC) Used ?	Yes
Pump Rate (percent) of Job Stayed At Designed Pump Rate Pump Rate range defined as +/- 1bbl/min. Calculation: Total BBLs of fluid pumped at the designed rate divided by Total BBLs of fluid pumped, multiplied by 100	95
Nbr of Remedial Sqz Jobs Rqd - Competition Number Of Remedial Squeeze Jobs Required After Primary Job Performed By Competition	0
Nbr of Remedial Plug Jobs Rqd - HES Number Of Remedial Plug Jobs Needed After Primary Plug Pumped By HES	0
Nbr of Remedial Sqz Jobs Rqd - HES Number Of Remedial Squeeze Jobs Required After Primary Job Performed By HES	0