

WILLIAMS PRODUCTION RMT INC - EBUS  
DO NOT MAIL - PO BOX 3102  
TOWER 3 SUITE 1000  
TULSA, Oklahoma

GM 534-22

H&P 280

## **Post Job Summary**

# **Cement Surface Casing**

Prepared for: W.C. WILSON  
Date Prepared: AUGUST 9, 2011  
Version: 1

Service Supervisor: ROSS, CHARLES

Submitted by:

**HALLIBURTON**

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300721	<b>Ship To #:</b> 2867044	<b>Quote #:</b>	<b>Sales Order #:</b> 8335163
<b>Customer:</b> WILLIAMS PRODUCTION RMT INC - EBUS		<b>Customer Rep:</b> Wilson, W.C	
<b>Well Name:</b> GM		<b>Well #:</b> 534-22	<b>API/UWI #:</b> 05-045-20228
<b>Field:</b> GRAND VALLEY	<b>City (SAP):</b> PARACHUTE	<b>County/Parish:</b> Garfield	<b>State:</b> Colorado
<b>Legal Description:</b>			
<b>Lat:</b> N 39.5 deg. OR N 39 deg. 29 min. 58.906 secs.		<b>Long:</b> W 108.088 deg. OR W -109 deg. 54 min. 44.104 secs.	
<b>Contractor:</b> H&P 280		<b>Rig/Platform Name/Num:</b> H&P 280	
<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> SCOTT, KYLE		<b>Srv Supervisor:</b> ROSS, CHARLES	<b>MBU ID Emp #:</b> 453128

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	08/09/2011 12:00							
Pre-Convoy Safety Meeting	08/09/2011 14:05							WITH ALL HES EE'S
Depart from Service Center or Other Site	08/09/2011 14:15							
Arrive at Location from Service Center	08/09/2011 15:48							
Assessment Of Location Safety Meeting	08/09/2011 16:15							WITH ALL HES EE'S
Pre-Rig Up Safety Meeting	08/09/2011 16:20							WITH ALL HES EE'S
Rig-Up Equipment	08/09/2011 16:25							1-F550 PICKUP, 1- ELITE PUMP TRUCK, 2- 660 CEMENT BULK TRUCKS, 1-HARD LINE TO RIG AND WASH UP OUT TO THE CELLAR FROM MANIFOLD, 1- 9 5/8" PLUG CONTAINER.
Pre-Job Safety Meeting	08/09/2011 18:35							WITH ALL HES EE'S AND RIG CREW
Start Job	08/09/2011 18:46							TD 2165, 9 5/8 32.3# CASING SET @ 2153.4, SJ 40.4, FC 2113 MW# 10.1, RIG CIRCULATED 1 HR PRIOR TO CEMENT JOB, HEAD AND CASING CHAINED DOWN BECAUSE OF PSI TO LIFT
Pump Water	08/09/2011 18:46		2	2			60.0	FILL LINES, FRESH WATER
Test Lines	08/09/2011 18:48							TEST TO 3000 PSI

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Spacer 1	08/09/2011 18:52		4	20			138.0	FRESH WATER
Pump Lead Cement	08/09/2011 19:04		6	156.8			275.0	370 SKS OF VERSACEM PUMPED @ 12.3 PPG, YIELD 2.38, WATER 13.75
Pump Tail Cement	08/09/2011 19:29		6	60.1			280.0	160 SKS OF VERSACEM PUMPED @ 12.8 PPG, YIELD 2.11, WATER 11.75
Shutdown	08/09/2011 19:39							
Drop Plug	08/09/2011 19:45							TOP PLUG, PLUG WENT
Pump Displacement	08/09/2011 19:45		10	166.3			840.0	FRESH WATER
Slow Rate	08/09/2011 20:04		2	156			450.0	RATE SLOWED 10 BBL PRIOR TO CALCULATED DISPLACEMENT
Bump Plug	08/09/2011 20:08		2	166.3			520.0	PLUG LANDED. PRESSURED UP TO 1080 PSI.
Check Floats	08/09/2011 20:10							FLOATS HELD
End Job	08/09/2011 20:11							GOOD RETURNS THROUGHOUT JOB, NO MOVEMENT OF PIPE THROUGHOUT JOB, SOME CEMENT COLOR AT 111 BBLs, SOLID CEMENT RETURNS AT 128 BBL, 38 BBLs OF CEMENT CIRCULATED TO THE PIT=90 SKS
Post-Job Safety Meeting (Pre Rig-Down)	08/09/2011 20:20							WITH ALL HES EE'S
Rig-Down Equipment	08/09/2011 20:25							
Pre-Convoy Safety Meeting	08/09/2011 21:25							WITH ALL HES EE'S
Depart Location for Service Center or Other Site	08/09/2011 21:30							THANKS FOR USING GRAND JUNCTION HALLIBURTON CEMENT DEPARTMENT, CHUCK ROSS AND CREW

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<b>Lat:</b> N 39.5 deg. OR N 39 deg. 29 min. 58.906 secs.				<b>Long:</b> W 108.088 deg. OR W -109 deg. 54 min. 44.104 secs.			
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<b>Job Purpose:</b> Cement Surface Casing							
<b>Well Type:</b> Development Well				<b>Job Type:</b> Cement Surface Casing			
<b>Sales Person:</b> SCOTT, KYLE			<b>Srvc Supervisor:</b> ROSS, CHARLES		<b>MBU ID Emp #:</b> 453128		

**Job Personnel**

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DOUT, JACOB J	6	430298	KUKUS, CHRISTOPHER A	6	413952	ROSS, CHARLES Raymond	6	453128
WOLFE, JON P	6	485217						

**Equipment**

HES Unit #	Distance-1 way						

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
8/9/2011	4	2						

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

**Job**

**Job Times**

Formation Name	Job			Date	Time	Time Zone
Formation Depth (MD)	Top	Bottom	Called Out	09 - Aug - 2011	12:00	MST
Form Type	BHST			On Location	09 - Aug - 2011	15:48
Job depth MD	2165. ft	Job Depth TVD	2165. ft	Job Started	09 - Aug - 2011	18:46
Water Depth		Wk Ht Above Floor	6. ft	Job Completed	09 - Aug - 2011	20:08
Perforation Depth (MD)	From	To	Departed Loc	09 - Aug - 2011	21:30	MST

**Well Data**

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
13 1/2" OPEN HOLE				13.5				.	2165.		
9 5/8" SURFACE CASING	New		9.625	9.001	32.3		H-40	.	2153.4		

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

Description	Qty	Qty uom	Depth	Supplier
PLUG,CMTG, TOP, 9 5/8, HWE, 8.16 MIN/9.06 MA	1	EA		
R/A DENSOMETER W/CHART RECORDER, /JOB, ZI	1	JOB		
ADC (AUTO DENSITY CTRL) SYS, /JOB, ZI	1	JOB		
PORT. DAS W/CEMWIN; ACQUIRE W/HES, ZI	1	JOB		

**Tools and Accessories**

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	9 5/8"	1	
Stage Tool										Centralizers			

**Miscellaneous Materials**

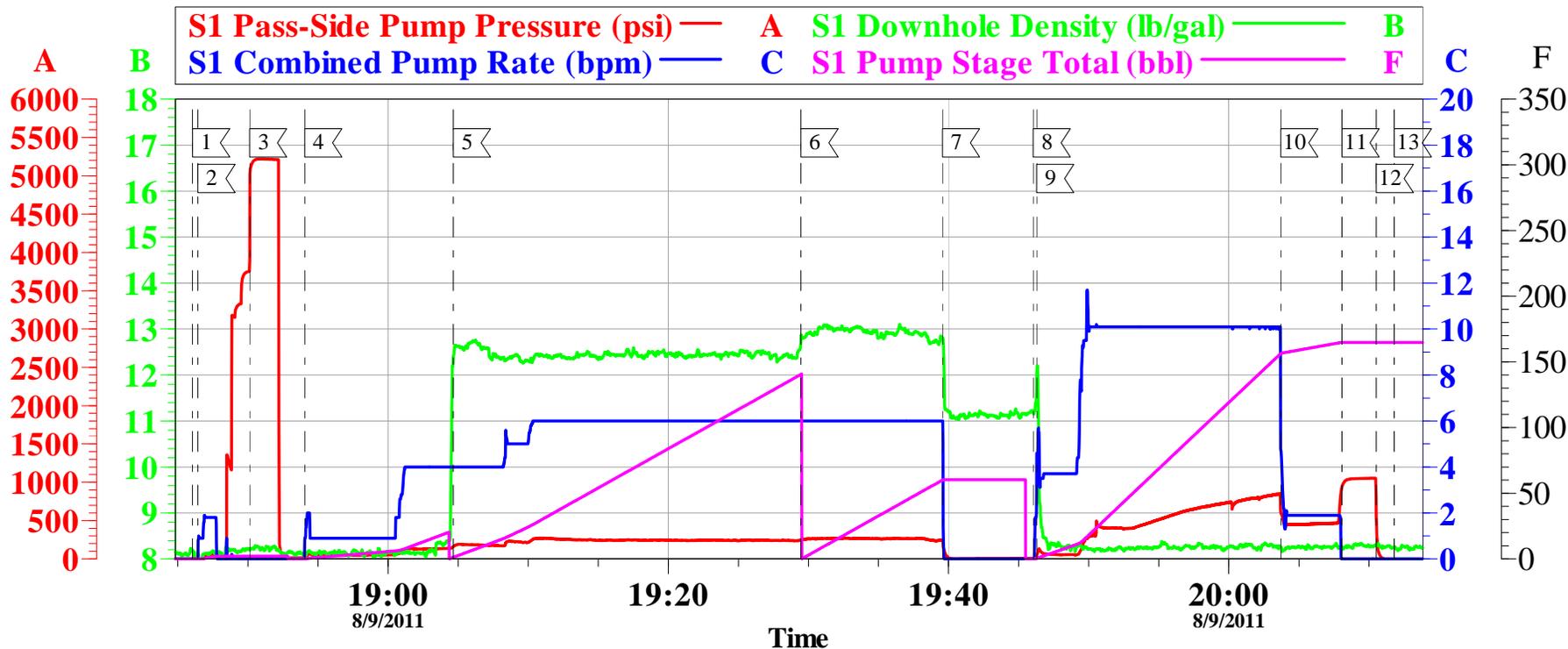
Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size	Qty	

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 Spacer		20.00	bbl	8.33	.0	.0	.0	
2	Lead Cement	VERSACEM (TM) SYSTEM (452010)	370.0	sacks	12.3	2.38	13.75		13.75
3	Tail Cement	VERSACEM (TM) SYSTEM (452010)	160.0	sacks	12.8	2.11	11.75		11.75
11.75 Gal		FRESH WATER							
4	Displacement Fluid		167.00	bbl	8.34	.0	.0	.0	
Calculated Values		Pressures			Volumes				
Displacement	166.3	Shut In: Instant		Lost Returns	NONE	Cement Slurry	218	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	38	Actual Displacement	166.3	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	405
Rates									
Circulating	20	Mixing	6	Displacement	10	Avg. Job	7.7		
Cement Left In Pipe	Amount	40.4 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					

EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job		<b>1120 Max Psi</b>			
6	Test Lines	2500.0				
9	H2O Spacer	20.0				
	Lead Cement	156.8	370	12.3	2.38	13.75
15	Tail Cement	60.1	160	12.8	2.11	11.75
22	Drop Plug	0.0				
23	Displace with H2O	166.3				
26	Land Plug	451.7	500 over			
2	Release Psi / Job Over	0.0				
			<b>Do Not Overdisplace</b>			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH		FLOAT COLLAR	BBL/FT	H2O REQ.
166.29	2153.4	40.40		2113.00	0.0787	412
Pressure to Lift	800	<b>*****Use Mud Scales on Each Tier*****</b>				
Total Displacement	166.29					
<b>CALCULATED DIFFERENTIAL PSI</b>		452	<b>TOTAL FLUID PUMPED</b>		403	
<b>Collapse</b>	<b>1400</b>	<b>Burst</b>	<b>2270</b>	<b>SO#</b>	8335163	

# WILLIAMS

## CEMENT 9 5/8" SURFACE CASING GM 534-22

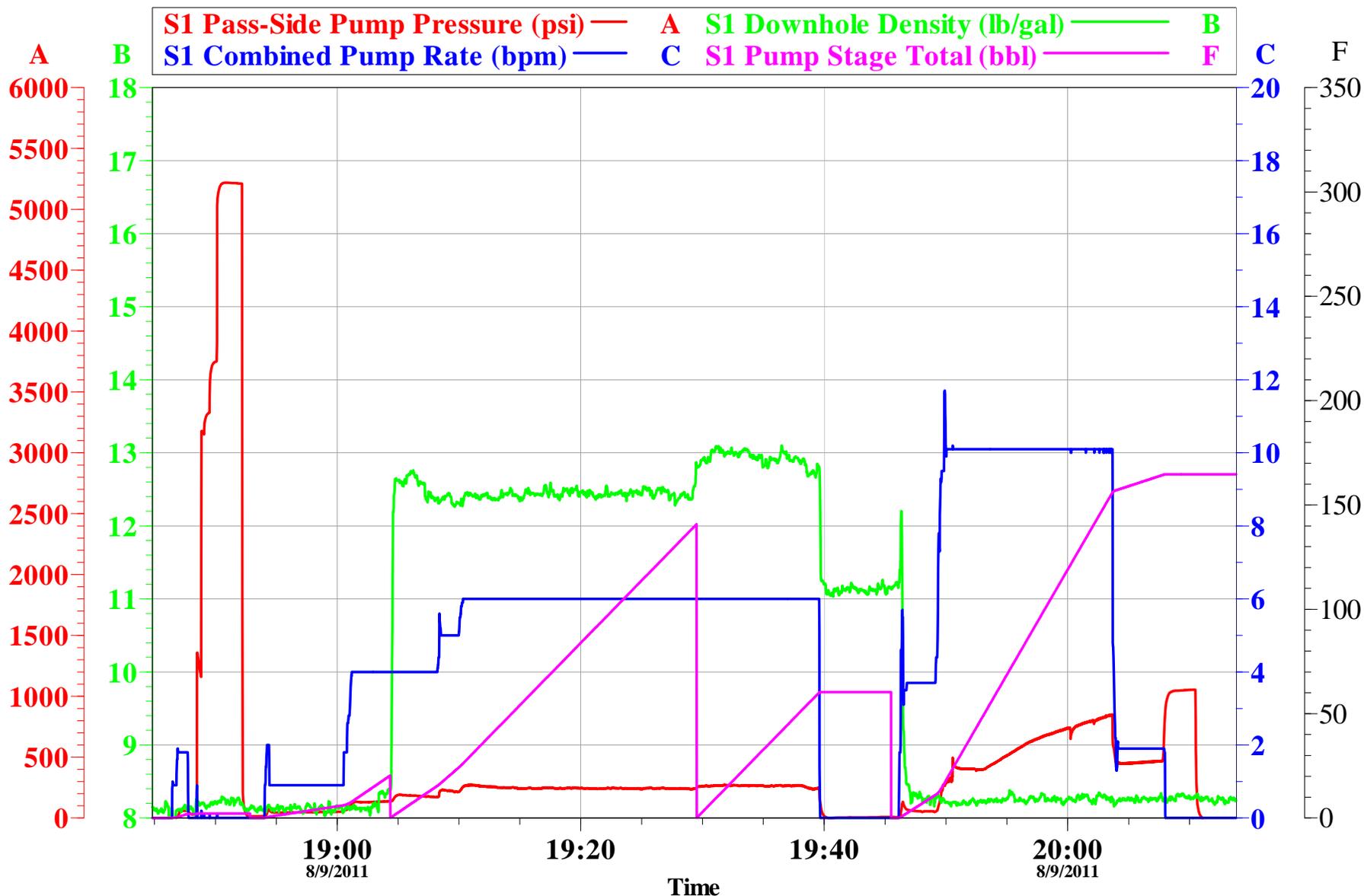


Local Event Log							
Maximum	SPPP	Maximum	SPPP				
1	START JOB	18:46:03	-2.000	2	PRIME LINES	18:46:26	3826
3	PRESSURE TEST	18:50:07	5219	4	PUMP FRESH WATER SPACER	18:54:03	160.2
5	PUMP LEAD CEMENT	19:04:39	274.0	6	PUMP TAIL CEMENT	19:29:28	274.0
7	SHUT DOWN	19:39:34	248.0	8	DROP PLUG	19:46:02	23.52
9	PUMP DISPLACEMENT	19:46:17	850.0	10	SLOW RATE	20:03:42	942.7
11	BUMP PLUG	20:08:05	1054	12	CHECK FLOATS	20:10:31	561.0
13	END JOB	20:11:49	-7.000				

Customer: WILLIAMS	Job Date: 09-Aug-2011	Sales Order #: 8335163
Well Description: GM 534-22	Job type: SURFACE	ADC Used: YES
Customer Rep: W.C. WILSON	Service Supervisor: CHUCK ROSS	Operator/ Pump: JACOB DOUT

# WILLIAMS

## CEMENT 9 5/8" SURFACE CASING GM 534-22



Customer: WILLIAMS	Job Date: 09-Aug-2011	Sales Order #: 8335163
Well Description: GM 534-22	Job type: SURFACE	ADC Used: YES
Customer Rep: W.C. WILSON	Service Supervisor: CHUCK ROSS	Operator/ Pump: JACOB DOUT

OptiCem v6.4.10  
09-Aug-11 20:24

# HALLIBURTON

## Water Analysis Report

Company: OXY  
Submitted by: CHUCK ROSS  
Attention: JON TROUT  
Lease: GM  
Well #: 534-22

Date: 8/9/2011  
Date Rec.: 8/9/2011  
S.O.#: 8335163  
Job Type: 9 5/8" SURFACE

Specific Gravity	<i>MAX</i>	<b>1</b>
pH	<i>8</i>	<b>7.4</b>
Potassium (K)	<i>5000</i>	<b>0</b> Mg / L
Calcium (Ca)	<i>500</i>	<b>250</b> Mg / L
Iron (FE2)	<i>300</i>	<b>0</b> Mg / L
Chlorides (Cl)	<i>3000</i>	<b>0</b> Mg / L
Sulfates (SO <sub>4</sub> )	<i>1500</i>	<b>&lt;200</b> Mg / L
Chlorine (Cl <sub>2</sub> )		<b>NA</b> Mg / L
Temp	<i>40-80</i>	<b>78</b> Deg
Total Dissolved Solids		<b>140</b> Mg / L

Respectfully: CHUCK ROSS

Title: CEMENTING SUPERVISOR

Location: Grand Junction, CO

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or

<b>Sales Order #:</b> 8335163	<b>Line Item:</b> 10	<b>Survey Conducted Date:</b> 8/9/2011
<b>Customer:</b> WILLIAMS PRODUCTION RMT INC - EBUS		<b>Job Type (BOM):</b> CMT SURFACE CASING BOM
<b>Customer Representative:</b> W.C. WILSON		<b>API / UWI: (leave blank if unknown)</b> 05-045-20228
<b>Well Name:</b> GM		<b>Well Number:</b> 534-22
<b>Well Type:</b> Development Well	<b>Well Country:</b> United States of America	
<b>H2S Present:</b> No	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

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	8/9/2011
Survey Interviewer	The survey interviewer is the person who initiated the survey.	CHARLES ROSS (HB20648)
Customer Participation	Did the customer participate in this survey? (Y/N)	Yes
Customer Representative	Enter the Customer representative name	W.C. WILSON
HSE	Was our HSE performance satisfactory? Circle Y or N	Yes
Equipment	Were you satisfied with our Equipment? Circle Y or N	Yes
Personnel	Were you satisfied with our people? Circle Y or N	Yes
Customer Comment	Customer's Comment	DONE A VERY GOOD JOB
Job DVA	Did we provide job DVA above our normal service today? Circle Y or N	No
Time	Please enter hours in decimal format to nearest quarter hour.	
Other	Enter short text for other efficiencies gained.	
Customer Initials	Customer's Initials	
Please provide details	Please describe how the job efficiencies were gained.	

CUSTOMER SIGNATURE

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<b>H2S Present:</b> No	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

### KEY PERFORMANCE INDICATORS

General	
<b>Survey Conducted Date</b>	8/9/2011
The date the survey was conducted	

Cementing KPI Survey	
<b>Type of Job</b>	0
Select the type of job. (Cementing or Non-Cementing)	
<b>Select the Maximum Deviation range for this Job</b>	Deviated
What is the highest deviation for the job you just completed? This may not be the maximum well deviation.	
<b>Total Operating Time (hours)</b>	5
Total Operating Hours Including Rig-up, Pumping, Rig-down. Enter in decimal format.	
<b>HSE Incident, Accident, Injury</b>	No
HSE Incident, Accident, Injury. This should be recordable incidents only.	
<b>Was the job purpose achieved?</b>	Yes
Was the job delivered correctly as per customer agreed design?	
<b>Operating Hours (Pumping Hours)</b>	1.37
Total number of hours pumping fluid on this job. Enter in decimal format.	
<b>Customer Non-Productive Rig Time (hrs)</b>	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.	
<b>Type of Rig Classification Job Was Performed</b>	Drilling Rig (Portable)
Type Of Rig (classification) Job Was Performed On	
<b>Number Of JSAs Performed</b>	5
Number Of Jsas Performed	
<b>Number of Unplanned Shutdowns</b>	0
Unplanned shutdown is when injection stops for any period of time.	
<b>Was this a Primary Cement Job (Yes / No)</b>	Yes

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<b>H2S Present:</b> No	<b>Well State:</b> Colorado	<b>Well County:</b> Garfield

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