

**HALLIBURTON**

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

GM 12-23

NABORS 576

## **Post Job Summary**

### **Cement Surface Casing**

Prepared for: FRANK MORRE  
Date Prepared: 7.4.2011  
Version: 1

Service Supervisor: ARNOLD, EDWARD

Submitted by:

**HALLIBURTON**

*The Road to Excellence Starts with Safety*

Sold To #: 300721	Ship To #: 2861797	Quote #:	Sales Order #: 8271496
Customer: WILLIAMS PRODUCTION RMT INC - EBUS	Customer Rep: Moore, Frank		
Well Name: GM	Well #: 12-23	API/UWI #: 05-045-20473	
Field: GRAND VALLEY	City (SAP): PARACHUTE	County/Parish: Garfield	State: Colorado
Lat: N 39.506 deg. OR N 39 deg. 30 min. 22.759 secs.	Long: W 108.083 deg. OR W -109 deg. 55 min. 0.401 secs.		
Contractor: NABORS 576	Rig/Platform Name/Num: NABORS 576		
Job Purpose: Cement Surface Casing			
Well Type: Development Well	Job Type: Cement Surface Casing		
Sales Person: SCOTT, KYLE	Srv Supervisor: ARNOLD, EDWARD	MBU ID Emp #: 439784	

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ARNOLD, EDWARD John	5.5	439784	BRENNECKE, ANDREW Bailey	5.5	486345	RAMSEY, STANTON Michael	5.5	477609
ROSE, BENJAMIN Keith	5.5	487022	SILVERTHORN, AARON Jacob	5.5	491305			

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10784064	60 mile	10829465	60 mile	11006314	60 mile	11360871	60 mile
11542767	60 mile						

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
7.3.2011	3.5	1	7.4.2011	2	2			

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

### Job

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	03 - Jul - 2011	17:30	MST
Form Type	BHST		Job Started	03 - Jul - 2011	20:30	MST
Job depth MD	950. ft	Job Depth TVD	Job Completed	03 - Jul - 2011	23:46	MST
Water Depth		Wk Ht Above Floor	Job Completed	04 - Jul - 2011	00:44	MST
Perforation Depth (MD)	From	To	Departed Loc	04 - Jul - 2011	02:00	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
Open Hole				13.5				.	950.		
Surface Pipe	Unknown		9.625	9.001	32.3		H-40	.	906.		

### 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		

### Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	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

**HALLIBURTON*****Cementing Job Summary***

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	Water Spacer		20.00	bbl	8.34	.0	.0	4	
2	Tail Cement	VERSACEM (TM) SYSTEM (452010)	260.0	sacks	12.8	2.11	11.75	8	11.75
		11.75 Gal							
		FRESH WATER							
3	Displacement Fluid		71.00	bbl	8.34	.0	.0	10	
<b>Calculated Values</b>		<b>Pressures</b>		<b>Volumes</b>					
Displacement	70.9	Shut In: Instant		Lost Returns	0	Cement Slurry	97.7	Pad	
Top Of Cement	SURFACE	5 Min		Cement Returns	20	Actual Displacement	70.9	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	188.6
<b>Rates</b>									
Circulating	RIG	Mixing	8	Displacement	10	Avg. Job	9		
Cement Left In Pipe	Amount	42 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID	Frac ring # 2 @	ID	Frac Ring # 3 @	ID	Frac Ring # 4 @	ID		
<b>The Information Stated Herein Is Correct</b>				Customer Representative Signature					



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Well Type: Development Well	Job Type: Cement Surface Casing		
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Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/03/2011 17:30							
Pre-Convoy Safety Meeting	07/03/2011 19:15							Including entire cement crew
Crew Leave Yard	07/03/2011 19:30							
Arrive At Loc	07/03/2011 20:30							Rig still pulling pipe.
Assessment Of Location Safety Meeting	07/03/2011 20:45							Water Test: Ph 7;KCL 0;S04 <200;Fe 0;Chlorides 0;Calcium 250;Temp 64;210 TDS .
Pre-Rig Up Safety Meeting	07/03/2011 23:00							Including entire cement crew
Rig-Up Equipment	07/03/2011 23:05							1 Elite #; 1 660 bulk truck; 1 hard line from pump to floor; 1 line to upright; 1 line to day tank. 9.625" compact head; #0702
Rig-Up Completed	07/03/2011 23:30							
Pre-Job Safety Meeting	07/03/2011 23:40							Including everyone on location
Start Job	07/03/2011 23:46							TD 950; TP 906+38' landing joint; SJ 45.05; OH 13.5; CASING 9.625 32.2# H-40; MUD 10.3 ppg;
Other	07/03/2011 23:47		2	2			40.0	Fill lines with fresh water.
Pressure Test	07/03/2011 23:49					2537.0		PSI test good, no leaks.
Pump Spacer 1	07/03/2011 23:58		4	20			109.0	20 BBL fresh water.

## Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	07/04/2011 00:06		8	97.7			342.0	260 SKs Tail cement, 12.8 ppg; 2.11 cf3; 11.75 gal/sk. Slowed rate at end to keep good density.
Shutdown	07/04/2011 00:20							
Drop Plug	07/04/2011 00:22							Plug left container.
Pump Displacement	07/04/2011 00:24		10	60.9			480.0	Fresh Water Displacement. Did not reset bbl counter before going to displacement, set to actual value during displacement.
Slow Rate	07/04/2011 00:33		2	10			228.0	Slow rate last ten BBLs
Bump Plug	07/04/2011 00:37						622.0	Bumped plug took 500 psi over.
Check Floats	07/04/2011 00:41							Floats held. .5 BBL back. 20 BBL good cement to surface
End Job	07/04/2011 00:44							
Pre-Rig Down Safety Meeting	07/04/2011 00:50							Including entire cement crew.
Rig-Down Equipment	07/04/2011 01:00							
Rig-Down Completed	07/04/2011 01:45							
Pre-Convoy Safety Meeting	07/04/2011 01:50							Including entire cement crew.
Depart Location for Service Center or Other Site	07/04/2011 02:00							
Other	07/04/2011 02:00							Thank You for using Halliburton. Ed Arnold and crew.



EVENT #	EVENT	VOLUME	SACKS	WEIGHT	YIELD	GAL/ SK
1	Start Job		<b>Max PSI 1120</b>			
4	FILL LINES	2				
6	Test Lines	2500.0				
9	H2O Spacer	20.0				
15	TAIL CEMENT	97.7	260	12.8	2.11	11.75
11	SHUTDOWN					
32	DROP TOP PLUG					
25	DISPLACEMENT	71.0				
1085	SLOW RATE	61.0	2 BBL/MIN			
26	LAND PLUG	184.2				
511	CHECK FLOATS	684.2				
2	END JOB		<b>Do Not Overdisplace</b>			
DISPLACEMENT	TOTAL PIPE	SHOE JOINT LENGTH	FLOAT COLLAR	BBL/FT	H2O REQ.	
70.98	944	42.05	901.95	0.0787	214	
		<b>9 5/8 SURFACE</b>				
PSI to Lift	0.00					
CALCULATED PSI LAND		184	TOTAL FLUID PUMPED		191	
Collapse	1400	Burst	2270	SO#	8271496	