

QUICKSILVER RESOURCES INC-EBUSINESS  
DO NOT MAIL-801 CHERRY ST  
FORT WORTH, Texas

Pertlaw 24-33

DHS 20

## **Post Job Summary** **Cement Surface Casing**

Date Prepared: 4/23/12  
Version: 1

Service Supervisor: MCKEE, RALPH

Submitted by: Isaac Whorl

**HALLIBURTON**

# HALLIBURTON

## ***Pumping Schedule***

---

Fluid #	Fluid Type	Fluid Name	Density lbm/gal	Avg Rate bbl/min	Volume
1	Spacer	SUPER FLUSH 101	10.00	0.00	20.0 bbl
2	Cement Slurry	VariCem V1	12.30		200.0 sacks
3	Cement Slurry	VariCem V1	13.50		200.0 sacks
4	Mud	Displacement	0.00	0.00	93.0 bbl
5	Cement Slurry	HalCem TopOut	15.60		

## ***Job Summary***

---

### **Job Information**

<b>Job Start Date</b>	4/11/2012 6:38:00 PM
<b>Job MD</b>	1,255.0 ft
<b>Height of Plug Container/Swage Above Rig Floor</b>	4.0 ft
<b>Surface Temperature at Time of Job</b>	52 degF
<b>Mud Type</b>	LSND
<b>Actual Mud Density</b>	9 lbm/gal
<b>Time From End Mud Circ. to Job Start</b>	30.00 minute
<b>Calculated Displacement</b>	93.50 bbl
<b>Amount of Cement Returns</b>	68.50 bbl

### **Cementing Equipment**

<b>Brand of Float Equipment Used</b>	HALLIBURTON
<b>Did Float Equipment Hold?</b>	Yes
<b>Plug set used?</b>	Yes
<b>Did Plugs Bump?</b>	Yes
<b>Calculated Pressure to Bump Plugs</b>	308.0 psig

# HALLIBURTON

## Service Supervisor Reports

### Job Log

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
04/11/2012 08:30	Call Out				Crew called out for job.
04/11/2012 10:00	Pre-Convoy Safety Meeting				Met with crew to discuss the hazards of travel, convoy order, and route to destination.
04/11/2012 10:40	Depart from Service Center or Other Site				Entered into Journey Management.
04/11/2012 13:30	Arrive at Location from Service Center				Ended Journey Management.
04/11/2012 13:40	Other				Met with company man to get numbers and verify information.
04/11/2012 13:41	Other				RIG GETTING READY TO START RUNNING CASING / WAIT ON CASING
04/11/2012 17:00	Assessment Of Location Safety Meeting				Walked around location with crew to identify material locations (water, mud, etc), potential hazards for spotting equipment, and discussed equipment placement.
04/11/2012 17:10	Other				Spot Equipment
04/11/2012 17:20	Pre-Rig Up Safety Meeting				Discuss Safety and hazards.
04/11/2012 17:30	Rig-Up Equipment				Rig iron on the ground.
04/11/2012 18:10	Pre-Job Safety Meeting				DISCUSS SAFETY CONCERNS JOB CONTINGENCIES, AND PUMP SCHEDULE
04/11/2012 18:38	Pump Water	2			FILL LINES
04/11/2012 18:43	Pressure Test			3746.0	END PSI TES 3687 PSIT
04/11/2012 18:46	Pump Water	4		.0	
04/11/2012 18:49	Other	4		30.0	SUPERFLUSH
04/11/2012 18:54	Pump Water	4		25.0	
04/11/2012 18:57	Pump Lead Cement	5.5		21.0	200 SKS. VARICEM @ 12.3#, 2.25 Y, 12.67GPS.
04/11/2012 19:12	Pump Tail Cement	5		151.0	200 SKS. VARICEM @ 13.5 #, 1.73 Y, 8.77 GPS

# HALLIBURTON

Date/Time	Activity Code	Pump Rate	Volume	Pressure (psig)	Comments
04/11/2012 19:25	Shutdown				DROP TOP PLUG
04/11/2012 19:29	Pump Displacement - Start	5.6		45.0	WATER
04/11/2012 19:36	Cement Returns to Surface		25	55.0	
04/11/2012 19:44	Slow Rate	3		150.0	
04/11/2012 19:52	Bump Plug	3		380.0	PRESSURED UP TO 1060 PSI
04/11/2012 19:53	Check Floats			1080.0	FLOATS HELD / RETURNS THROUGHOUT JOB /68 5 BBL CMT TO SURFACE / WELL STATIC
04/11/2012 20:03	End Job				
04/11/2012 20:10	Post-Job Safety Meeting (Pre Rig-Down)				
04/11/2012 20:20	Rig-Down Equipment				
04/11/2012 21:10	Crew Leave Location				
04/11/2012 22:00	Safety Meeting - Departing Location				
04/11/2012 22:15	Other				Thanks for using Halliburton!!!

### The Road to Excellence Starts with Safety

<b>Sold To #:</b> 346707	<b>Ship To #:</b> 2920610	<b>Quote #:</b>	<b>Sales Order #:</b> 9421688
<b>Customer:</b> QUICKSILVER RESOURCES INC-EBUSINESS		<b>Customer Rep:</b>	
<b>Well Name:</b> Pertlaw		<b>Well #:</b> 24-33	<b>API/UWI #:</b>
<b>Field:</b>	<b>City (SAP):</b> CRAIG	<b>County/Parish:</b> Tarrant	<b>State:</b> Texas
<b>Contractor:</b> DHS		<b>Rig/Platform Name/Num:</b> DHS 20	
<b>Job Purpose:</b> Cement Surface Casing			
<b>Well Type:</b> Exploratory / Wildcat		<b>Job Type:</b> Cement Surface Casing	
<b>Sales Person:</b> SCOTT, KYLE		<b>Srvc Supervisor:</b> MCKEE, RALPH	<b>MBU ID Emp #:</b> 259268

### Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ELDER, DENNIS R	0.0	505202	GOODRICH, BENJAMIN Franklin	0.0	481342	MCKEE, RALPH R	0.0	259268
PRICE, WILLIAM	0.0	434806	WILKISON, KEVIN Diverne	0.0	491065			

### Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10574660C	80 mile	10991611	80 mile	11019277	80 mile	11024385	80 mile
11127544	80 mile	11259879	80 mile	11338213	80 mile	11410664	80 mile

### Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
<b>TOTAL</b>			Total is the sum of each column separately					

### Job

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	11 - Apr - 2012	08:30	MST
Form Type		BHST	Job Started	11 - Apr - 2012	13:30	MST
Job depth MD	1255. ft	Job Depth TVD	Job Completed	11 - Apr - 2012	18:38	MST
Water Depth		Wk Ht Above Floor	Departed Loc	11 - Apr - 2012	19:53	MST
Perforation Depth (MD)	From	To			22:00	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
-------------	------------	-------------------	---------	-------	---------------	--------	-------	-----------	--------------	------------	---------------

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

Description	Qty	Qty uom	Depth	Supplier
MILEAGE FOR CEMENTING CREW,ZI	160	MI		
ZI FUEL SURCHG-CARS/PICKUPS<1 1/2TON	160	MI		
CLR,FLT,9-5/8 8RD 29.3-40PPF,2-3/4	1	EA		
SHOE,GID,9-5/8 8RD	1	EA		
COLLAR-STOP-9 5/8"-FRICTION-HINGED	1	EA		
CENTRALIZER-9-5/8"-CSG-12 1/4"-HINGED	5	EA		
KIT,HALL WELD-A	1	EA		
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			
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container			
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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	SUPER FLUSH 101	SUPER FLUSH 101 - SBM (12199)	20.00	bbl	10.	.0	.0	.0	
2	VariCem V1	VARICEM (TM) CEMENT (452009)	200.0	sacks	12.3	2.25	12.67		12.67
	0.125 lbm	POLY-E-FLAKE (101216940)							
	3 lbm	GILSONITE, 2000 LB BAG (100064236)							
	12.666 Gal	FRESH WATER							
3	VariCem V1	VARICEM (TM) CEMENT (452009)	200.0	sacks	13.5	1.73	8.77		8.77
	0.125 lbm	POLY-E-FLAKE (101216940)							
	3 lbm	GILSONITE, 2000 LB BAG (100064236)							
	8.766 Gal	FRESH WATER							
4	Displacement		93.00	bbl	.			.0	
5	HalCem TopOut	HALCEM (TM) SYSTEM (452986)		sacks	15.6	1.2	5.28		5.28
	2 %	CALCIUM CHLORIDE - HI TEST PELLET (100005053)							
	5.278 Gal	FRESH WATER							

Calculated Values		Pressures		Volumes			
Displacement		Shut In: Instant		Lost Returns		Cement Slurry	
Top Of Cement		5 Min		Cement Returns		Actual Displacement	
Frac Gradient		15 Min		Spacers		Load and Breakdown	

Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	0 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @

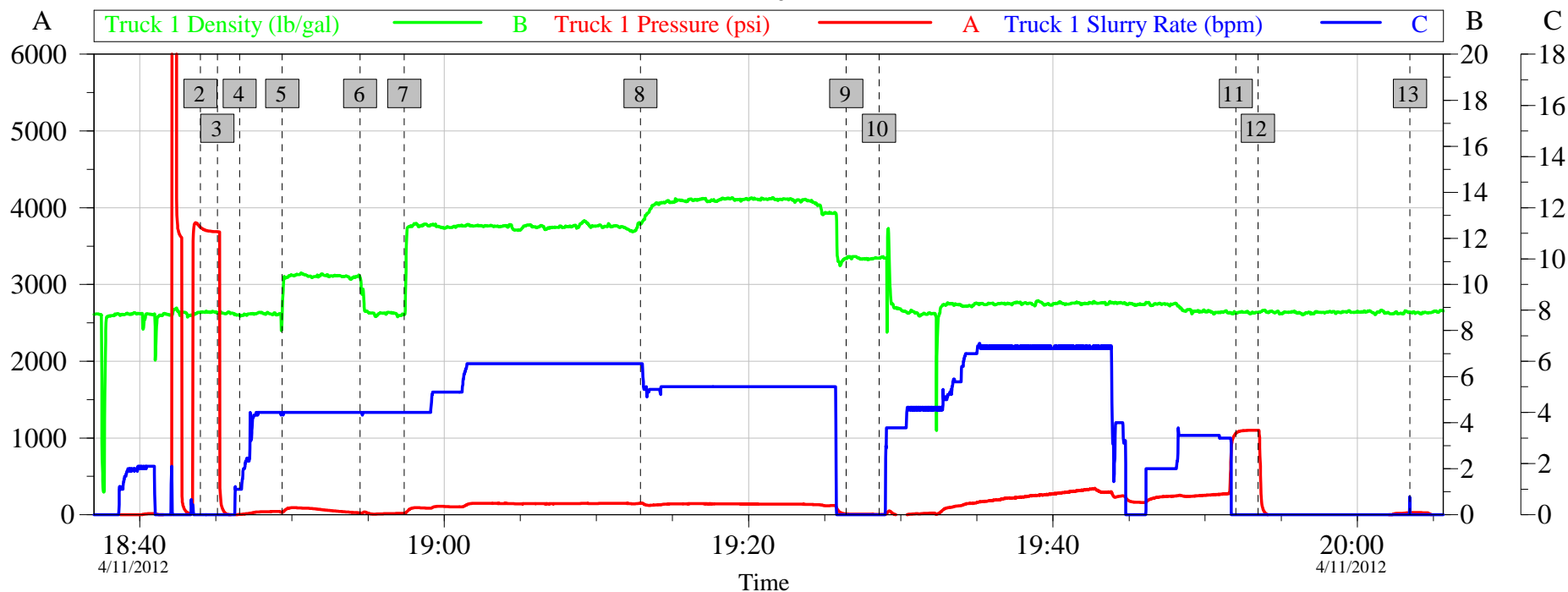
The Information Stated Herein Is Correct	Customer Representative Signature
--	-----------------------------------

# HALLIBURTON

## Data Acquisition

### QUICKSILVER SURFACE PERTLAW # 24-33

4-11-2012



#### Global Event Log

Intersection	T1P	Intersection	T1P	Intersection	T1P
2 PRESSURE TEST	18:43:59 3746	3 END PSI TEST	18:45:06 3687	4 PUMP H2O SPACER	18:46:34 5.000
5 PUMP SUPERFLUSH	18:49:22 33.42	6 PUMP H2O SPACER	18:54:29 25.70	7 Pump Lead Cement	18:57:23 21.00
8 Pump Tail Cement	19:12:54 151.3	9 Drop Plug	19:26:25 12.00	10 Pump Displacement	19:28:34 6.000
11 Bump Plug	19:52:01 1060	12 CHECK FLOATS	19:53:28 1102	13 END JOB	20:03:27 28.00

Customer:	Job Date: 11-Apr-2012	Sales Order #: 9421688
Well Description:	UWI:	

OptiCem v6.4.10  
11-Apr-12 20:46