

# HALLIBURTON

iCem<sup>®</sup> Service

**ANADARKO PETROLEUM CORP - EBUS**

**For: Allen Secrest**

Date: Friday, October 03, 2014

**Benson Farms 23N-19HZ**

Surface

Sincerely,

**Matt Bulinski**

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**1.1 Executive Summary**

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Halliburton appreciates the opportunity to perform the cementing services on the **Benson Farms 23N-19HZ** cement **Surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

**Halliburton [Fort Lupton]**

## Cementing Job Summary

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HALLIBURTON

*Cementing Job Summary**The Road to Excellence Starts with Safety*

Sold To #: 300466 Ship To #: 3473526 Quote #: Sales Order #: 0901416763

Customer: ANADARKO PETROLEUM CORP - EBUS Customer Rep: Allen Secrest

Well Name: BENSON FARMS Well #: 23N-19HZ API/UWI #: 05-123-39340-00

Field: WATTENBERG City (SAP): LONGMONT County/Parish: WELD State: COLORADO

Legal Description: SE SE-23-3N-68W-767FSL-71FEL

Contractor: Rig/Platform Name/Num: Majors 42

Job BOM: 7521

Well Type: HORIZONTAL GAS

Sales Person: HALAMERICA\HB47901 Srv Supervisor: Matthew Bulinski

Job

Formation Name	
Formation Depth (MD)	Top Bottom
Form Type	BHST
Job depth MD	1226.77ft
Water Depth	Job Depth TVD
Perforation Depth (MD)	Wk Ht Above Floor
	To

## Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing		9.625	8.921	36		J-55	0	1226.77		
Open Hole Section			13.5				0	1237		

## Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625	1		1226.77	Top Plug	9.625	1	HES
Float Shoe	9.625	1			Bottom Plug	9.625	1	HES
Float Collar	9.625	1		1188.61	SSR plug set	9.625	1	HES
Insert Float	9.625	1			Plug Container	9.625	1	HES
Stage Tool	9.625	1			Centralizers	9.625	1	HES

## 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> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Mud Flush III (Powder)	Mud Flush III	12	bbl	8.4		504	3	
42 gal/bbl		FRESH WATER							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
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last updated on 6/16/2014 3:43:02 PM

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## HALLIBURTON

*Cementing Job Summary*

2	Lead Cement	SWIFCEM (TM) SYSTEM	463	sack	14.2	1.54	3537.32	5	7.64
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
3	Displacement	Displacement	92	bbl	8.33		3864	5	
Cement Left in Pipe		Amount	38.16ft		Reason		Shoe Joint		
Comment									
1) Finished Running Csg at 13:15, Had problems with Pump Truck 1095158 not connecting to Supervisors computer and Allen Secrest requested another truck. Rigged down iron and hoses and HES hand drove back to Brighton yard and switched out trucks. Arrived back at location ready to have safety meeting at 16:00...									
2) As Cementer supervisor Matt Bulinski was dropping plug after cmt it was brought to his attention from Allen Secrest that the BBL counter was off 17bbbls from total. Matt Bulinski confirmed with Allen Secrest that is not always correct and the MX water on the flecs screen of pump truck is more accurate. After double checking #'s to mx water on pump truck it shows HES did pump all required for job...									
3) Top out cmt was delivered and pumped 60sks of 15.8 G-Neat Cmt leaving 8bbbls cmt on surface									



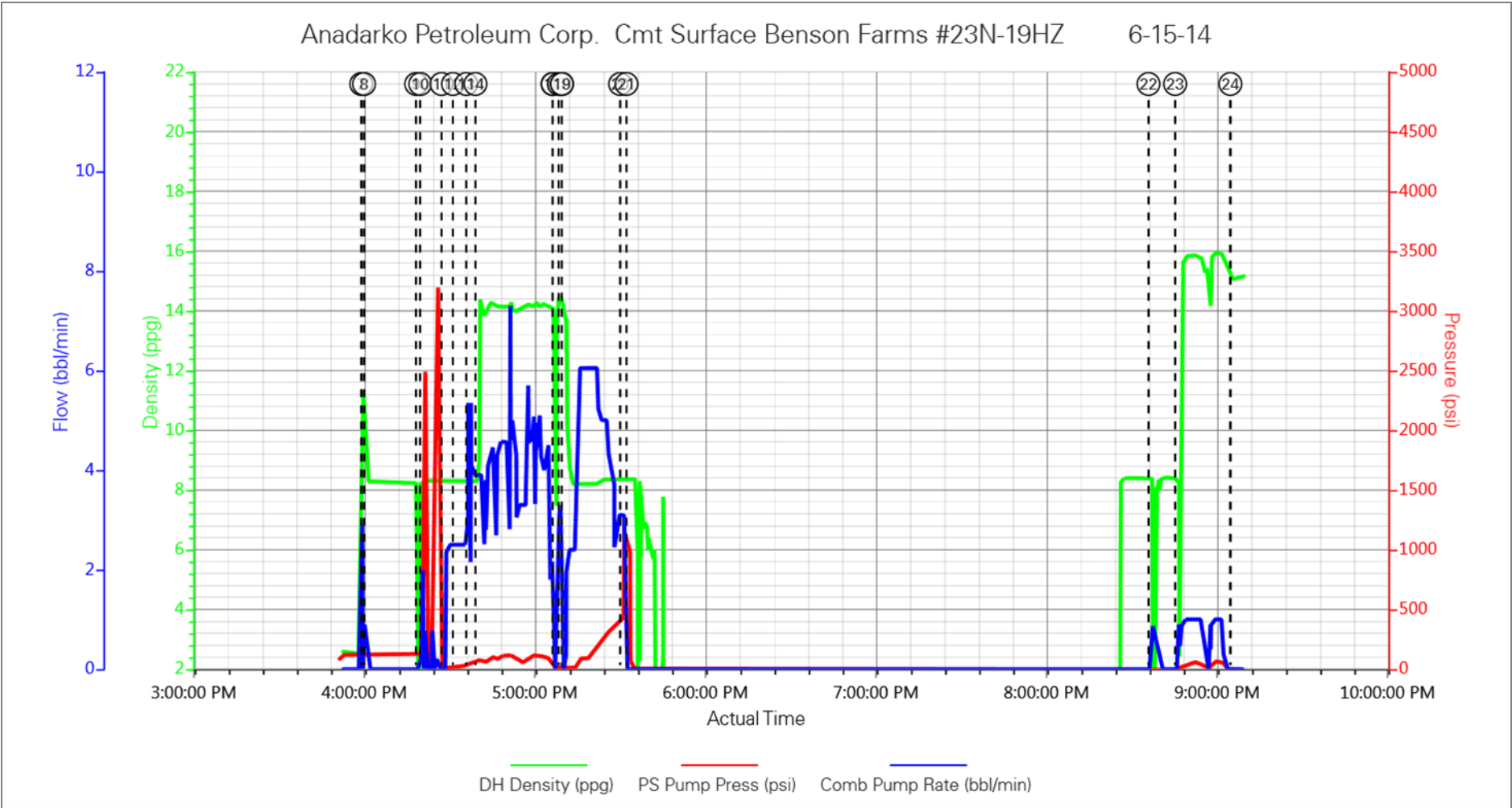
**1.2 Job Event Log**

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	PS Pump Press (psi)	Comb Pump Rate (bbl/min)	Comment
Event	1	Depart Yard Safety Meeting	Depart Yard Safety Meeting	6/15/2014	09:00:00	USER				JSA on Job materials, pre-tripping trucks, and driving to location
Event	2	Arrive At Loc	Arrive At Loc	6/15/2014	10:30:00	USER				Arrived 1.5hrs early and rig is pulling D.P.
Event	3	Safety Meeting - Pre Rig-Up	HES or HES Sub-Contractor Equipment Problem - Start Time	6/15/2014	12:00:00	USER				JSA on rigging up bulk trucks and iron to rig
Event	4	Rig-Up Equipment	Clean Lines	6/15/2014	12:15:00	USER				
Event	5	Rig-Up Completed	Drop Top Plug	6/15/2014	12:45:00	USER				
Event	6	HES or HES Sub-Contractor Equipment Problem - Start Time	Drop Top Plug	6/15/2014	13:00:00	USER				Problems with pump truck connection to Supervisor truck. Allen Secrest wanted other pump truck delivered
Event	7	HES or HES Sub-Contractor Equipment Problem - End Time	Clean Lines	6/15/2014	16:00:00	USER	8.28	129.00	0.90	Pump truck arrived to location and resumed starting job
Event	8	Safety Meeting - Pre Job	Safety Meeting - Pre Rig-Down	6/15/2014	16:01:00	USER	8.27	123.00	0.00	JSA with Company Man, Rig hands, and HES hands on pump schedule
Event	9	Start Job	Start Job	6/15/2014	16:19:19	COM5	8.30	120.00	0.00	
Event	10	Test Lines	Test Lines	6/15/2014	16:20:45	COM5	8.23	127.00	0.00	3000psi Pressure Test Lines to Rig Floor
Event	11	Pump Spacer 1	Pump Spacer 1	6/15/2014	16:28:13	COM5	8.28	0.00	0.00	10bbls H2O Spacer at Avg. 2.5bbl/in with 28psi
Event	12	Pump Spacer 2	Pump Spacer 2	6/15/2014	16:32:15	COM5	8.29	29.00	2.50	12bbls Mud Flush Spacer at Avg. 3bbl/min with 40psi
Event	13	Pump Spacer 1	Pump Spacer 1	6/15/2014	16:36:55	COM5	8.17	44.00	4.00	10bbls H2O Spacer at Avg. 4bbl/min with 60psi
Event	14	Pump Cement	Pump Cement	6/15/2014	16:40:10	COM5	12.20	67.00	3.90	463sks Swiftcem Cmt. at 14.2ppg, 1.54yield, 7.64gal/sk, Mixed with rig water and # verify 3x's by

										pressurized mud scales. Avg 4.5bbl/min with 110psi
Event	15	Shutdown	Shutdown	6/15/2014	17:07:17	COM5	7.57	2.00	1.00	Shutdown Check weight of cmt 14.25ppg with pressurized mud scales
Event	16	Pump Lead Cement	Pump Lead Cement	6/15/2014	17:07:23	COM5	13.50	4.00	1.00	Resume pumping cmt
Event	17	Shutdown	Shutdown	6/15/2014	17:09:31	COM5	13.92	2.00	0.00	After Pumping Cmt Allen Secrest was watching BBL counter and said it was short 17bbls and I confirmed with him the BBL counter is not always correct.
Event	18	Drop Top Plug	Drop Top Plug	6/15/2014	17:10:33	COM5	13.87	-4.00	0.00	Pre-Loaded
Event	19	Pump Displacement	Pump Displacement	6/15/2014	17:10:36	COM5	13.85	-4.00	0.00	92bbls H2O displacment. Good returns througout. Mud Flush to Surface at 50bbls into displacment which should have brought around 8bbls cmt to surface... Signs of polyflake in water but no other signs of cmt.
Event	20	Bump Plug	Bump Plug	6/15/2014	17:31:04	COM5	8.37	511.00	3.10	Slowed down to 3bbl/min to bump.. Plug landed at 492psi and brought to 1160psi for 2mins... Floats Held
Event	21	Other	Other	6/15/2014	17:33:18	USER	8.41	125.00	0.00	No Cmt to surface and welll fell back 10' HES hand went back to Brighton yard to have top out cmt loaded on truck
Event	22	Other	Spacer	6/15/2014	20:36:57	COM5				4bbls H2O spacer
Event	23	Pump Cement	Pump Cement	6/15/2014	20:46:19	COM5				60sks G-neat Top out cmt at 1bbl/min 40psi
Event	24	End Job	End Job	6/15/2014	21:05:45	COM5	15.17	-3.00	0.00	

2.0 Custom Graphs

2.1 Custom Graph



### 3.0 Appendix

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Insert Planned Pump Schedule from Proposal or actual Job Procedure built for job