

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3932315		<b>Quote #:</b> 0022561997		<b>Sales Order #:</b> 0905586118					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Terry Hackford							
<b>Well Name:</b> MAB			<b>Well #:</b> 15-4HZ			<b>API/UWI #:</b> 05-123-49245-00					
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> IONE		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> SW SE-15-1N-66W-533FSL-2171FEL											
<b>Contractor:</b>				<b>Rig/Platform Name/Num:</b> Akita 522							
<b>Job BOM:</b> 7523 7523											
<b>Well Type:</b> HORIZONTAL GAS											
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srv Supervisor:</b> Kamereon White							
<b>Job</b>											
<b>Formation Name</b>											
<b>Formation Depth (MD)</b>		<b>Top</b>		<b>Bottom</b>							
<b>Form Type</b>					<b>BHST</b>						
<b>Job depth MD</b>		18127ft			<b>Job Depth TVD</b>						
<b>Water Depth</b>					<b>Wk Ht Above Floor</b> 5'						
<b>Perforation Depth (MD)</b>		<b>From</b>		<b>To</b>							
<b>Well Data</b>											
<b>Description</b>	<b>New / Used</b>	<b>Size in</b>	<b>ID in</b>	<b>Weight lbm/ft</b>	<b>Thread</b>	<b>Grade</b>	<b>Top MD ft</b>	<b>Bottom MD ft</b>	<b>Top TVD ft</b>	<b>Bottom TVD ft</b>	
Casing		9.625	8.921	36		J-55	0	1877	0	1877	
Casing		5.5	4.892	17	LTC	HCP110	0	18127	0	7482	
Open Hole Section			7.875				1877	18138	1877	7482	
<b>Tools and Accessories</b>											
<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>	<b>Depth ft</b>		<b>Type</b>	<b>Size in</b>	<b>Qty</b>	<b>Make</b>		
						<b>Top Plug</b>	5.5	1	WTHR		
<b>Float Shoe</b>	5.5	1		18,127		<b>Bottom Plug</b>	5.5	1	WTHR		
<b>Float Collar</b>	5.5	1		18,123.8							
						<b>Plug Container</b>	5.5	1	HES		
						<b>Centralizers</b>	5.5	354			
<b>Fluid Data</b>											
<b>Stage/Plug #: 1</b>											
<b>Fluid #</b>	<b>Stage Type</b>	<b>Fluid Name</b>			<b>Qty</b>	<b>Qty UoM</b>	<b>Mixing Density lbm/gal</b>	<b>Yield ft3/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS			80	bbl	10.5	6.14	39.4	5	

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	
2	Gasstop B1	GASSTOP (TM) SYSTEM	640	sack	13.2	1.56		8	7.61	
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	EconoCem	ECONOCEM (TM) SYSTEM	1090	sack	13.5	1.68		6-8	7.99	
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	
4	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			10		
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	
5	Biocide Water	Biocide Water	400	bbl	8.34			8		
Cement Left In Pipe		Amount	3 ft		Reason			Shoe Joint		
Mix Water:		pH 7	Mix Water Chloride:			< 400 ppm		Mix Water Temperature:		57 °F
			Plug Displaced by:			8.33 lb/gal				
Plug Bumped?		Yes	Bump Pressure:			3000 psi		Floats Held?		Yes
Cement Returns:		0 bbl	Returns Density:			9.5 lb/gal				
Comment										

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comments
Event	1	Call Out	Call Out	3/31/2019	02:00:00	USER	Crew called out and was requested to be on location @ 10:00.
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	3/31/2019	07:45:00	USER	Crew discussed the route of travel and supervisor called in a journey.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	3/31/2019	08:20:00	USER	Crew left the yard.
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	3/31/2019	08:30:00	USER	Crew arrived on location early and the rig was running casing.
Event	5	Safety Meeting - Assessment of Location	Safety Meeting - Assessment of Location	3/31/2019	08:40:00	USER	Spotting in trucks and supervisor met with the customer and got the well information. TD-18,138' TP-18,127.36' SJ-3.5' FC-18,123.86' Cas-5.5" 17# P110 PC-9.625" 36# Set @ 1877' Mud Weight-9.5 ppg OBM, Wet Shoe- 3 Bbls TVD-7482' OH-7.875."
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	3/31/2019	08:50:00	USER	Discussed rig up procedure and signed the JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	3/31/2019	09:00:00	USER	Rigged up all HES equipment and lines.
Event	8	Rig-Up Completed	Rig-Up Completed	3/31/2019	10:00:00	USER	All HES equipment and lines rigged up safely.
Event	9	Casing on Bottom	Casing on Bottom	3/31/2019	11:00:00	USER	Casing on Bottom with the landing Joint.
Event	10	Pre-Job Safety Meeting	Pre-Job Safety Meeting	3/31/2019	13:15:00	USER	Discussed the job procedure and pressures with all personnel involved with the cement job.
Event	11	Check Weight	Check Weight	3/31/2019	13:31:45	COM4	Checked the weight of the spacer with the pressurized mud scales, scaled @ 10.5 ppg.
Event	12	Other	Other	3/31/2019	13:41:46	COM4	Fill lines with 3 bbls of water 3 bpm 200 psi.

Event	13	Test Lines	Test Lines	3/31/2019	13:47:06	COM4	Tested the lines to 500 psi and 6500 psi and held for 2 min no leaks.
Event	14	Pump Spacer 1	Pump Spacer 1	3/31/2019	13:49:49	COM4	Pumped 80 bbls of FDP spacer @ 10.5 ppg 6.14 yield 39.4 gal/sk 6 bpm 300 psi.
Event	15	Drop Bottom Plug	Drop Bottom Plug	3/31/2019	14:03:10	COM4	The customer and Halliburton rep witnessed the plug being dropped 75 bbls of spacer gone on the fly.
Event	16	Pump Lead Cement	Pump Lead Cement	3/31/2019	14:08:18	COM4	Pumped 178 bbls of Latex Lead cement @ 13.2 ppg 1.56 yield 7.61 gal/sk (640 sks) 8 bpm 540 psi
Event	17	Check Weight	Check Weight	3/31/2019	14:14:47	COM4	Checked the weight of Latex Lead Cement with the pressurized mud scales, scaled @ 13.2 ppg.
Event	18	Pump Tail Cement	Pump Tail Cement	3/31/2019	14:35:12	COM4	Pumped 326 bbls of Tail Cement @ 13.5 ppg 1.68 yield 7.99 gal/sk (1090 sks) 6-8 bpm 560 psi.
Event	19	Check Weight	Check Weight	3/31/2019	14:35:33	COM4	Checked the weight of Tail Cement with the pressurized mud scales, scaled @ 13.5 ppg.
Event	20	Check Weight	Check Weight	3/31/2019	14:40:47	COM4	Checked the weight of Tail Cement with the pressurized mud scales, scaled @ 13.0 ppg.
Event	21	Check Weight	Check Weight	3/31/2019	15:09:37	COM4	Checked the weight of Tail Cement with the pressurized mud scales, scaled @ 13.5 ppg.
Event	22	Shutdown	Shutdown	3/31/2019	15:22:00	COM4	Shutdown to wash pumps and lines.
Event	23	Drop Top Plug	Drop Top Plug	3/31/2019	15:36:20	COM4	The customer and Halliburton rep witnessed the Top plug being dropped.
Event	24	Pump Displacement	Pump Displacement	3/31/2019	15:36:24	COM4	Pumped 420 bbls calculated displacement. Full returns throughout.
Event	25	Displ Reached Cement	Displ Reached Cement	3/31/2019	15:41:49	COM4	@ 50 bbls away we caught the plug and maintained 10 bpm.
Event	26	Bump Plug	Bump Plug	3/31/2019	16:36:44	COM4	Bumped the plug, the final circulating psi was 2400 psi and took up to 3000 psi and shutdown the pump as per customer

							request.
Event	27	Other	Other	3/31/2019	16:41:04	COM4	Pressured up @ 2 bpm to shift the wet shoe sub and pumped a 3 bbls wet shoe @ 5 bpm.
Event	28	End Job	End Job	3/31/2019	16:47:35	COM4	Cement job complete, Calculated tops TOTC-7577' TOLC-1817' TOS-147' No cement or spacer back to surface.
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	3/31/2019	16:48:00	USER	Crew held a safety meeting discussing the rig down procedure. Also all potential hazards associated with rigging down all HES equipment and lines.
Event	30	Rig Down Lines	Rig Down Lines	3/31/2019	16:55:00	USER	The crew rigged down all HES equipment and lines.
Event	31	Rig-Down Completed	Rig-Down Completed	3/31/2019	18:30:00	USER	Rig down completed no one got hurt.
Event	32	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	3/31/2019	18:50:00	USER	The crew held a pre journey safety meeting discussing the route and potential hazards while driving. The supervisor called in a journey.

## 3.0 Attachments

### 3.1 Job Chart

