

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3899042		<b>Quote #:</b> 0022545200		<b>Sales Order #:</b> 0905486959					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> Jason Lamb							
<b>Well Name:</b> BAJA BERG			<b>Well #:</b> 35-9HZ		<b>API/UWI #:</b> 05-123-47569-00						
<b>Field:</b> WATTENBERG		<b>City (SAP):</b> IONE		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> SE SW-35-2N-67W-1087FSL-2451FWL											
<b>Contractor:</b> PRECISION DRLG				<b>Rig/Platform Name/Num:</b> PRECISION 461							
<b>Job BOM:</b> 7525 7525											
<b>Well Type:</b> HORIZONTAL GAS											
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srvc Supervisor:</b> Steven Markovich							
<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>		17720ft			<b>Job Depth TVD</b>						
<b>Water Depth</b>					<b>Wk Ht Above Floor</b>						
<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>	
Drill Pipe		4	3.34	14			0	6400	0	6260	
Casing		7	6.276	26		HCP110	0	6500	0	6360	
Casing		4.5	4	11.6	LTC	HCP110	6400	17719	6287	7396	
Open Hole Section			6.125				6500	17729	6360	7396	
<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>		
Guide Shoe	4.5			17719		Top Plug	4.5		HES		
Float Shoe	4.5					Bottom Plug	4.5		HES		
Float Collar	4.5					SSR plug set	4.5		HES		
Insert Float	4.5					Plug Container	4.5		HES		
Stage Tool	4.5					Centralizers	4.5		HES		
<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 ft<sup>3</sup>/sack</b>	<b>Mix Fluid Gal</b>	<b>Rate bbl/min</b>	<b>Total Mix Fluid Gal</b>
1	Tuned Spacer III	Tuned Spacer III			60	bbl	10.5	6.18			
0.75 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>									
37.58 gal/bbl		<b>FRESH WATER</b>									

0.75 gal/bbl	<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>								
0.25 gal/bbl	<b>D-AIR 3000L, 5 GAL PAIL (101007444)</b>								
89.91 lbm/bbl	<b>BARITE, BULK (100003681)</b>								
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	EconoCem	ECONOCER (TM) SYSTEM	680	sack	13.5	1.68		6	7.99
8 Gal		<b>FRESH WATER</b>							
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	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34				
0.50 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							
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	Biocide Water	217	bbl	8.34				
Cement Left In Pipe	Amount	0 ft			Reason			Wet Shoe	
Mix Water:	pH 07	Mix Water Chloride:	00 ppm			Mix Water Temperature:	75 °F °C		
<b>Comment</b> Dart passed through the tool at 60bbls away. Pressure went up to 1645psi. Bumped plug at 237bbls away, final lift pressure was 1695psi. Brought pressure 500psi over and held. Kicked in the pumps to bring pressure up to 3000psi for 10mins. Pressure went from 2986psi to 3165psi in 10 mins. Opened release line to check floats and after 1.5bbls back the floats held. Kicked in pumps at 2bbl/min to burst WSS. WSS burst at 3224psi then increased rate to 4bbl/mi and pumped a 3bbl wet shoe. Tested the back side to 3000psi for 10 mins. Pressure went from 3041psi to 3037psi over the 10 mins. Pumped 167bbls to circulate the well clean. 60bbls of spacer and 6bbls of cement above the liner.									

## 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	2/19/2019	02:00:00	USER	Job called out at 0100 with an on location time of 0800
Event	2	Crew Leave Yard	Crew Leave Yard	2/19/2019	06:45:00	USER	JSA with HES crew on directions and road hazards on the way to location
Event	3	Arrive At Loc	Arrive At Loc	2/19/2019	07:00:00	USER	Arrived on location, rig was circulating.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	2/19/2019	07:10:00	USER	JSA and hazard hunt with HES crew
Event	5	Start Job	Start Job	2/19/2019	10:25:02	COM4	TD 17726' TP 17719.89' LC 17673' WSS 17663.5 4 1/2" 11.6# Production Casing, 4809.93' 4" 14# DP, 1397.53' 28# 4" 28# HWDP, Liner Top 6264.56', Previous Casing 7" 26# Intermediate String set at 6496',
Event	6	Test Lines	Test Lines	2/19/2019	10:54:37	COM4	Set kick outs to 500psi and check low pressure kick outs, then bring pressure u to 5000psi and hold.
Event	7	Check Weight	Check Weight	2/19/2019	11:07:06	COM4	Weight verified by pressurized scales.
Event	8	Pump Spacer 1	Pump Spacer 1	2/19/2019	11:07:33	COM4	Pump 60bbls of 10.5ppg 6.18yield Tuned Spacer. Added 45gallons of Musol and Dual B on the fly. Pumped at 5bbl/min 900psi.
Event	9	Pump Lead Cement	Pump Lead Cement	2/19/2019	11:24:10	COM4	Pump 203.46bbls (680sks) of 13.5ppg 1.68yield Cement. Pumped at 5bbl/min 486psi.
Event	10	Check Weight	Check Weight	2/19/2019	11:26:26	COM4	Weight verified by pressurized scales.
Event	11	Check Weight	Check Weight	2/19/2019	11:28:46	COM4	Weight verified by pressurized scales.
Event	12	Shutdown	Shutdown	2/19/2019	12:04:59	COM4	Shutdown and clean pumps and lines.
Event	13	Drop Top Plug	Drop Top Plug	2/19/2019	12:22:51	COM4	Dart loaded into DP

Event	14	Pump Displacement	Pump Displacement	2/19/2019	12:22:55	COM4	Pump 237bbls of H2O. First 20bbls with MMCR then the rest with biocide. Pumped at 6bbl/min. Slowed rate to 3bbs a min at 50bbls away for the dart to pass through the tool.
Event	15	Displ Reached Cement	Displ Reached Cement	2/19/2019	12:36:46	COM4	Displacement reached cement at 28bbls away.
Event	16	Other	Other	2/19/2019	12:43:24	COM4	Dart passed through the tool at 60bbls away. Pressure went up to 1645psi.
Event	17	Bump Plug	Bump Plug	2/19/2019	13:16:58	COM4	Bumped plug at 237bbls away, final lift pressure was 1695psi. Brought pressure 500psi over and held.
Event	18	Pressure Up Well	Pressure Up Well	2/19/2019	13:20:00	COM4	Kicked in the pumps to bring pressure up to 3000psi for 10mins. Pressure went from 2986psi to 3165psi in 10 mins. Opened release line to check floats and after 1.5bbs back the floats held.
Event	19	Other	Other	2/19/2019	13:31:01	COM4	Kicked in pumps at 2bbl/min to burst WSS. WSS burst at 3224psi then increased rate to 4bbl/mi and pumped a 3bbl wet shoe.
Event	20	Other	Other	2/19/2019	13:48:32	COM4	Kicked in pumps to verify flow through the backside. After 1.5bbls away we had flow.
Event	21	Test Lines	Test Lines	2/19/2019	13:51:26	COM4	Kicked in pumps to test the back side at 3000psi for 10 mins. Pressure went from 3041psi to 3037psi over the 10 mins.
Event	22	Other	Other	2/19/2019	14:11:06	COM4	Kicked in pumps to bring pressure up to 600psi to sting out.
Event	23	Pump Displacement	Pump Displacement	2/19/2019	14:13:14	COM4	Pump 167bbls to circulate the well clean. 60bbls of spacer and 6bbls of cement above the liner.
Event	24	End Job	End Job	2/19/2019	14:46:00	COM4	Thank you Steve Markovich and crew.

## 3.0 Attachments

### 3.1 Job Chart

