

# HALLIBURTON

iCem<sup>®</sup> Service

## **ANADARKO PETROLEUM CORP-EBUS**

Ft. Lupton District, COLORADO

**For: WILL DRAKE**

Date: Friday, July 05, 2019

**JDB**

WELD

ANADARKO JDB 15-8HZ PRODUCTION AKITA 522

Job Date: Friday, July 05, 2019

Sincerely,

**SAM CARPENTER**

## Table of Contents

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1.0	Real-Time Job Summary .....	7
1.1	Job Event Log .....	7
2.0	Attachments.....	11
2.1	ANADARKO JDB 15-8HZ PRODUCTION AKITA 522-Custom Results.png.....	11
3.0	Custom Graphs.....	12
3.1	Custom Graph.....	12

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466	<b>Ship To #:</b> 0003931229	<b>Quote #:</b> 0022599425	<b>Sales Order #:</b> 0905812631
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS		<b>Customer Rep:</b> WILL DRAKE	
<b>Well Name:</b> JDB		<b>Well #:</b> 15-8HZ	<b>API/UWI #:</b> 05-123-49216-00
<b>Field:</b> WATTENBERG	<b>City (SAP):</b> IONE	<b>County/Parish:</b> WELD	<b>State:</b> COLORADO
<b>Legal Description:</b> SE SE-15-1N-66W-523FSL-1072FEL			
<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>Srvc Supervisor:</b> Lance Carpenter	

**Job**

<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>	13864ft		<b>Job Depth TVD</b> 7656
<b>Water Depth</b>			<b>Wk Ht Above Floor</b> 4
<b>Perforation Depth (MD)</b>	<b>From</b>		<b>To</b>

**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	1888	0	1888
Casing		5.5	4.892	17	LTC	HCP110	0	13864	0	7656
Open Hole Section			7.875				1888	13874	1888	7656

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			13864	Top Plug	5.5	1	
Float Shoe	5.5				Bottom Plug	5.5	1	
Float Collar	5.5			13855	SSR plug set	5.5		HES
Insert Float	5.5				Plug Container	5.5	1	HES
Stage Tool	5.5				Centralizers	5.5	216	HES

**Fluid Data**

<b>Stage/Plug #: 1</b>										
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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	60	bbl	10.5	6.17				
0.75 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>								
0.50 gal/bbl		<b>D-AIR 3000L, 5 GAL PAIL (101007444)</b>								

90.94 lbm/bbl		<b>BARITE, BULK (100003681)</b>							
0.75 gal/bbl		<b>DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)</b>							
1 lbm/bbl		<b>FE-2 (100001615)</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>
2	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	10.5	6.19			
90.63 lbm/bbl		<b>BARITE, BULK (100003681)</b>							
1 lbm/bbl		<b>FE-2 (100001615)</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>
3	Gasstop B1	GASSTOP (TM) SYSTEM	640	sack	13.2	1.56		6	7.62
0.90 %		<b>SCR-100 (100003749)</b>							
5.12 Gal		<b>FRESH WATER</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>
4	EconoCem	ECONOCEM (TM) SYSTEM	640	sack	13.5	1.68		6	7.99
0.10 %		<b>SA-1015, 50 LB SACK (102077046)</b>							
7.99 Gal		<b>FRESH WATER</b>							
0.35 %		<b>HR-5, 50 LB SK (100005050)</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>
5	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>							
<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>
6	Biocide Water	Biocide Water	302	bbl	8.34				
<b>Cement Left In Pipe</b>	<b>Amount</b>	11 ft			<b>Reason</b>	<b>Shoe Joint</b>			

Mix Water:	pH 7	Mix Water Chloride:	200 ppm	Mix Water Temperature:	64 °F
Cement Temperature:	## °F °C	Plug Displaced by:	8.4 lb/gal Water	Disp. Temperature:	## °F °C
Plug Bumped?	Yes	Bump Pressure:	2300 psi	Floats Held?	Yes
Cement Returns:	## bbl m3	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

**Comment**

JOB WENT WELL. NO ACCIDENT, INJURY OR SPILL. CEMENT VOLUMES VERIFIED, WEIGHED AND MIX WATER CHECKED. DROPPED BOTTOM PLUG AFTER SPACER. DROPPED TOP PLUG BEFORE DISPLACEMENT. BOTH WITNESSED BY CUSTOMER REP. CAUGHT PRESSURE DURING DISPLACEMENT AT 63 BBL AWAY. 17 BBL SPACER TO SURFACE, RETURNS AT 305 BBL AWAY. BUMPED PLUG AT 4 BPM AT 2300 PSI, TOOK TO 2800 PSI AND HELD FOR 5 MINUTE CASING TEST. PRESSURED UP TO 4575 PSI TO OPEN WET SHOE SUB AND PUMPED 3 BBL WET SHOE. CHECKED FLOATS, GOT 2 BBL BACK, FLOATS HELD. HAD TO SHUTDOWN TWICE FOR LEAK ON STAND PIPE, SECOND TIME CHANGED GASKET.

TOP OF TAIL – 7675'

TOP OF LEAD – 1940'

TOP OF SPACER – SURFACE WITH 17 BBL BACK

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	PS Pump Press <i>(psi)</i>	Comments
Event	1	Check Floats	Call Out	7/5/2019	05:30:00	USER					CREW CALLED OUT. ON LOCATION 1130
Event	2	Depart Shop for Location	Depart Shop for Location	7/5/2019	10:30:00	USER					CREW HAS VERIFIED EQUIPMENT AND MATERIALS FOR JOB. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTE, FOLLOWING DISTANCES, CONVOY ORDER, STOPS, WALK AROUNDS, HAZARDS, OTHER VEHICLES AND DEPARTS FOR LOCATION
Event	3	Arrive At Loc	Arrive At Loc	7/5/2019	10:45:00	USER					CREW ARRIVES AT LOCATION. RIG RIH CASING 10500'.
Event	4	Casing on Bottom	Casing on Bottom	7/5/2019	13:00:00	USER					CASING ON BOTTOM. CASING CREW BEGINS RIGGING DOWN. RIG UP HES PLUG CONTAINER AND BEGIN CIRCULATION. PLUGS WERE LOADED AND VERIFIED
Event	5	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/5/2019	14:00:00	USER	8.48	0.00	11.20	-25.00	CREW, RIG CREW AND CUSTOMER REP HAVE PRE JOB SAFETY MEETING DISCUSSING HAZARDS, MUSTER AREAS, RED ZONES, TUGGER OPERATIONS, ROLES,

COMMUNICATION, SLIPS  
TRIPS FALLS, LINE OF FIRE,  
PINCH POINTS, STOP WORK  
AND JOB PROCEEDURE. RIG  
PUMPS DIESEL AFTER  
SAFETY MEETING.  
CIRCULATION 9.6 BPM @  
1130 PSI

Event	6	Start Job	Start Job	7/5/2019	14:20:15	COM6	8.50	0.00	0.00	-24.00	START JOB
Event	7	Test Lines	Test Lines	7/5/2019	14:23:29	COM6	8.45	0.00	2.20	76.00	FILL LINES WITH 2.5 BBL WATER. PRESSURE TEST HES LINES TO 6500 PSI. HELD FOR A FEW MINUTES, TEST GOOD.
Event	8	Pump Spacer	Pump Spacer	7/5/2019	14:30:42	USER	10.44	3.50	3.90	185.00	PUMP 60 BBL FDP SPACER 10.5# 6.17 YIELD 39.6 GAL
Event	9	Pump Spacer 2	Pump Spacer 2	7/5/2019	14:41:17	COM6	10.83	5.00	0.00	470.00	PUMP 50 BBL FDP SPACER 10.5# 6.19 YIELD 41.4 GAL
Event	10	Drop Bottom Plug	Drop Bottom Plug	7/5/2019	14:49:29	COM6	10.48	6.00	46.80	515.00	DROP BOTTOM PLUG WITNESSED BY CUSTOMER REP
Event	11	Pump Lead Cement	Pump Lead Cement	7/5/2019	14:49:44	USER	10.41	6.00	48.30	518.00	PUMP 177 BBL GASSTOP LEAD 13.2# 1.56 YIELD 7.62 GAL 640 SACKS
Event	12	Pump Tail Cement	Pump Tail Cement	7/5/2019	15:17:29	COM6	13.80	8.00	206.20	647.00	PUMP 191 BBL ECONOCEM TAIL 13.5# 1.68 YIELD 7.99 GAL 640 SACKS
Event	13	Other	Other	7/5/2019	15:33:27	COM6	16.04	0.00	124.50	683.00	SHUTDOWN. STAND PIPE LEAKING AND HAD TO TIGHTEN. CAVITATION POSSIBLY CAUSING CONNECTIONS TO LOOSEN
Event	14	Shutdown	Shutdown	7/5/2019	15:53:22	COM6	13.29	0.00	239.00	755.00	SHUTDOWN. BLOW DOWN LINES TO THE PIT. WASH PUMPS TO THE PIT.

Event	15	Drop Top Plug	Drop Top Plug	7/5/2019	16:03:16	COM6	8.37	0.00	256.80	648.00	DROP TOP PLUG WITNESSED BY CUSTOMER REP
Event	16	Pump Displacement	Pump Displacement	7/5/2019	16:03:22	COM6	8.26	0.00	256.80	648.00	PUMP 322 BBL WATER DISPLACEMENT (FIRST 20 BBL MMCR, BIOCIDES THROUGHOUT)
Event	17	Other	Other	7/5/2019	16:28:39	USER	8.42	0.00	187.20	1538.00	STAND PIPE LEAKING AGAIN AND HAD TO SHUTDOWN. TIGHTENED TWO CONNECTION, ONE STILL LEAKING. CHANGED OUT IRON GASKET AND TIGHTENED BACK UP BEFORE CONTINUING
Event	18	Slow Rate	Slow Rate	7/5/2019	16:59:33	USER	8.47	6.90	315.40	2694.00	SLOW RATE TO BUMP PLUG
Event	19	Bump Plug	Bump Plug	7/5/2019	17:04:15	USER	8.44	4.00	334.60	2258.00	BUMP PLUG 4 BPM AT 2300 PSI. TOOK TO 2800 PSI AND HELD FOR 5 MINUTE CASING TEST
Event	20	Other	Other	7/5/2019	17:09:54	USER	8.51	0.00	335.10	2907.00	PRESSURE UP TO 4575 PSI TO OPEN WET SHOE SUB THEN PUMPED 3 BBL WET SHOE
Event	21	Check Floats	Check Floats	7/5/2019	17:12:16	USER	8.44	0.00	340.10	1618.00	CHECK FLOATS. 2 BBL BACK. FLOATS HELD
Event	22	End Job	End Job	7/5/2019	17:13:41	COM6	8.52	0.00	340.10	715.00	END JOB
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/5/2019	17:15:00	USER					CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING RIG OPERATIONS, HAZARDS, RED ZONES, LINE OF FIRE, SLIPS TRIPS FALLS, TUGGER OPERATIONS, COMMUNICATION AND BEGIN RIGGING DOWN EQUIPMENT

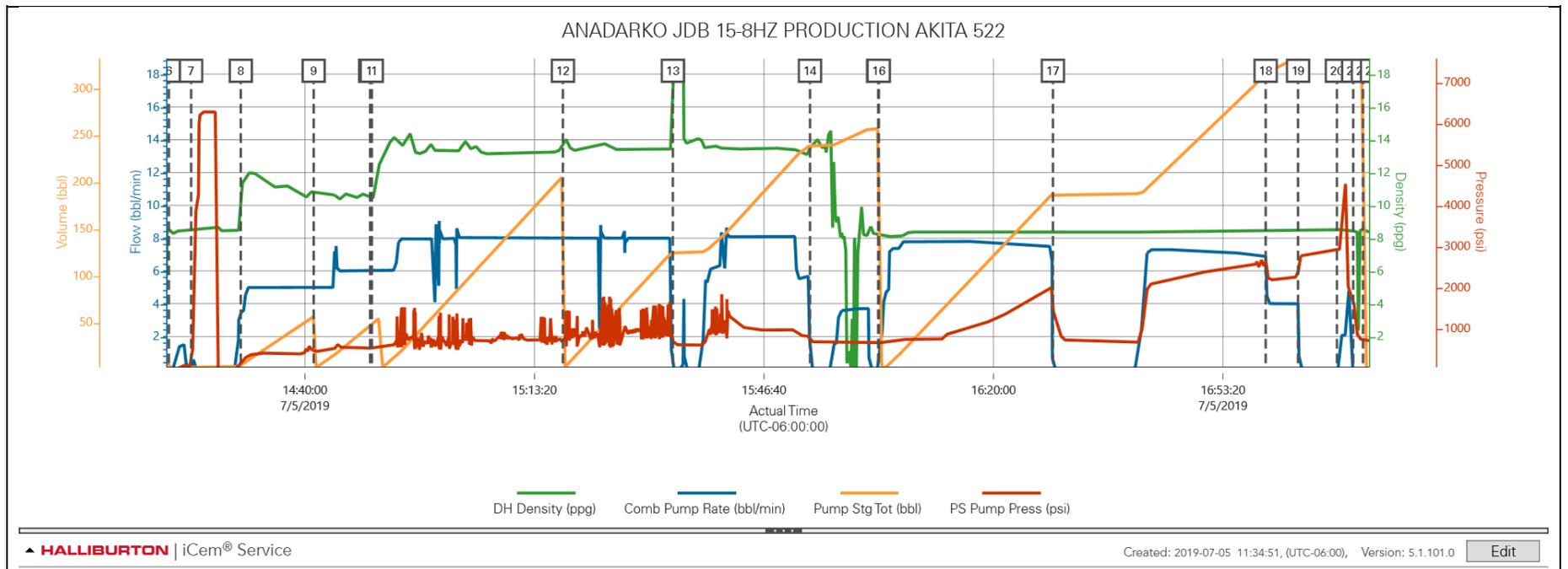
Event	24	Depart Location	Depart Location	7/5/2019	19:00:00	USER
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CREW IS RIGGED DOWN.  
CREW HAS JOURNEY  
MANAGEMENT SAFETY  
MEETING DISCUSSING  
ROUTE, FIT FOR DUTY,  
HAZARDS, CONVOY ORDER,  
FOLLOWING DISTANCE,  
WALK AROUNDS AND  
DEPARTS FROM LOCATION

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## 2.0 Attachments

### 2.1 ANADARKO JDB 15-8HZ PRODUCTION AKITA 522-Custom Results.png



3.0 Custom Graphs

3.1 Custom Graph

