

*The Road to Excellence Starts with Safety*

<b>Sold To #:</b> 300466		<b>Ship To #:</b> 3911738		<b>Quote #:</b> 0022602595		<b>Sales Order #:</b> 0905839686					
<b>Customer:</b> ANADARKO PETROLEUM CORP-EBUS				<b>Customer Rep:</b> STEVE							
<b>Well Name:</b> CARSON			<b>Well #:</b> 1-13HZ			<b>API/UWI #:</b> 05-123-48124-00					
<b>Field:</b> SPINDLE		<b>City (SAP):</b> DACONO		<b>County/Parish:</b> WELD		<b>State:</b> COLORADO					
<b>Legal Description:</b> SW SW-1-1N-68W-1082FSL-1122FWL											
<b>Contractor:</b> PRECISION DRLG				<b>Rig/Platform Name/Num:</b> PRECISION 464							
<b>Job BOM:</b> 7523 7523											
<b>Well Type:</b> HORIZONTAL GAS											
<b>Sales Person:</b> HALAMERICA\HX41066				<b>Srv Supervisor:</b> Lance Carpenter							
<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>		19394ft		<b>Job Depth TVD</b>		7553					
<b>Water Depth</b>				<b>Wk Ht Above Floor</b>		4					
<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	1934	0	1934	
Casing		5.5	4.892	17	LTC	HCP110	0	19394	0	7553	
Open Hole Section			7.875				1860	19404	18934	7553	
<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	5.5			19384		Top Plug	5.5	1			
Float Shoe	5.5					Bottom Plug	5.5	1			
Float Collar	5.5					SSR plug set	5.5		HES		
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5		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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS			60	bbl	10.5	6.17	39.6		
1 lbm/bbl		<b>FE-2 (100001615)</b>									
0.75 gal/bbl		<b>MUSOL(R) A, 5 GAL PAIL (100064220)</b>									

90.94 lbm/bbl		BARITE, BULK (100003681)							
0.75 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)							
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
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	FDP-C1337-18 (No Surfactants)	SBM FDP-C1337-18 CEMENT SPACER SYS	50	bbl	10.5	6.19	41.4		
1 lbm/bbl		FE-2 (100001615)							
90.63 lbm/bbl		BARITE, BULK (100003681)							
0.25 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)							
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	Gasstop B1	GASSTOP (TM) SYSTEM	640	sack	13.2	1.56	7.73	6	7.73
0.90 %		SCR-100 (100003749)							
5.23 Gal		FRESH WATER							
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	EconoCem	ECONOCEM (TM) SYSTEM	1230	sack	13.5	1.68	7.99	6	7.99
0.10 %		SA-1015, 50 LB SACK (102077046)							
8 Gal		FRESH WATER							
0.35 %		HR-5, 50 LB SK (100005050)							
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 and MMCR	Biocide Water and MMCR	20	bbl	8.34				
0.50 gal/bbl		MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)							
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
6	Biocide Water	Biocide Water	430	bbl	8.34				
Cement Left In Pipe		Amount	10 ft			Reason		Shoe Joint	

Mix Water:	pH 7	Mix Water Chloride:	300 ppm	Mix Water Temperature:	## °F °C
Cement Temperature:	## °F °C	Plug Displaced by:	8.34 lb/gal	Disp. Temperature:	## °F °C
Plug Bumped?	Yes	Bump Pressure:	4807 psi	Floats Held?	Yes
Cement Returns:	## bbl	Returns Density:	## lb/gal kg/m3	Returns Temperature:	## °F °C

**Comment:**

JOB WENT WELL, FULL VOLUME OF CEMENT WAS PUMPED AND CEMENT WAS WEIGHED AND VERRIFIED THROUGHOUT JOB ON SCALES. PUMPED 450 BBLS OF DISPLACEMENT WATER WITH MMCR IN THE FIRST 20BBLS AND BIOCIDES THROUGH OUT, CAUGHT CEMENT AT 60BBLS AWAY, SLOWED RATE TO 4BPM AT 430BBLS AWAY. BUMPED PLUG AND TOOK 500 PSI OVER FINAL CIRCULATING PRESSURE 2400PSI HELD 3000PSI FOR 10 MIN CASING TEST. OPENED UP WET SHOE SUB AT 4807PSI AND PUMPED 3 BBL WET SHOE, CHECKED FLOATS AND GOT 3 BBLS BACK.

TOTC 7485

TOLC1809

10 BBLS OF SPACER TO SURFACE.

## 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	7/20/2019	20:30:00	USER	CREW CALLED OUT FOR ON LOCATION AT 0230
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	7/21/2019	01:00:00	USER	AFTER CHECKING CEMENT WAS LOADED AND EQUIPMENT WAS RUNNING CREW HAD PRE CONVOY SAFETY MEETING AND DISCUSSED SAFE FOLLOWING DISTANCE, ROUTE TO TO LOCATION AND WILD LIFE.
Event	3	Arrive At Loc	Arrive At Loc	7/21/2019	01:30:00	USER	CREW ARRIVED ON LOCATION, RIG WAS STILL RUNNING CASING AT WITH 1805' LEFT. HAD SOME GAS ISSUES.
Event	4	Safety Meeting - Pre Rig-Up	Safety Meeting - Pre Rig-Up	7/21/2019	02:00:00	USER	HAD PRE RIG UP SAFETY MEETING WITH CREW AND DISCUSSED 40 FT BUFFER ZONE, TEAM CARRY, PINCH POINTS AND CALLING OUT HAMMER SWINGS.
Event	5	Casing on Bottom	Casing on Bottom	7/21/2019	03:30:00	USER	RIG LANDS CASING ON BOTTOM AND HES STARTS MIXING UP LATEX

Event	6	Safety Meeting	Safety Meeting	7/21/2019	06:20:00	USER	HAD SAFETY MEETING WITH HES AND RIG CREW DISCUSSED MUSTER AREA, S.W.A, 3 POINTS OF CONTACT, SLIP TRIPS AND FALLS, NEAREST HOSPITAL AND GOOD COMMUNICATION THROUGHOUT JOB.
Event	7	Test Lines	Test Lines	7/21/2019	06:55:05	COM6	TESTED LINES TO 6500PSI
Event	8	Pump Spacer 1	Pump Spacer 1	7/21/2019	06:59:16	COM6	PUMPED 60BBLS OF (FDP) SPACER WITH SURFACTANTS 10.5PPG 6.17 YIELD 39.6 GAL
Event	9	Pump Spacer 2	Pump Spacer 2	7/21/2019	07:09:37	COM6	PUMPED 50BBLS OF (FDP) SPACER WITH DRY ADDS 10.5PPG 6.19 YIELD 41.4 GAL
Event	10	Drop Bottom Plug	Drop Bottom Plug	7/21/2019	07:16:55	COM6	DROPPED BOTTOM PLUG ON THE FLY
Event	11	Pump Lead Cement	Pump Lead Cement	7/21/2019	07:16:57	COM6	PUMED 177BBLS OF LEAD (GASSTOP) 13.2PPG 1.56 YIELD 7.73 GAL 640 SKS
Event	12	Pump Tail Cement	Pump Tail Cement	7/21/2019	07:50:27	COM6	PUMPED 368 BBLS OF TAIL CEMENT (ECONOCEM) 13.5PPG 1.68 YIELD 7.99 GAL 1230SKS
Event	13	Drop Top Plug	Drop Top Plug	7/21/2019	08:52:07	COM6	DROPPED TOP PLUG WITH COMPANY MAN ON RIG FLOOR.
Event	14	Pump Displacement	Pump Displacement	7/21/2019	08:53:36	COM6	PUMPED 450 BBLS OF DISPLACEMENT WATER WITH MMCR IN THE FIRST 20BBLS AND BIOCIDES THROUGHOUT. SLOWED RATE TO 4BPM AT 430BBLS AWAY.
Event	15	Bump Plug	Bump Plug	7/21/2019	09:52:29	COM6	BUMPED PLUG AND TOOK 500PSI OVER FINAL CIRCULATING PRESSURE 2400PSI TOOK TO 3000PSI AND HELD FOR 10 MIN CASING TEST.
Event	16	Other	Other	7/21/2019	10:04:12	USER	OPENED UP WET SHOE SUB AT 4807PSI AND PUMPED 3 BBL WET SHOE.

Event	17	Check Floats	Check Floats	7/21/2019	10:05:05	USER	CHECKED FLOATS AND GOT 3BBLs BACK. 10BBLs OF SPACER RETURNED TO SURFACE.
Event	18	End Job	End Job	7/21/2019	10:05:08	USER	
Event	19	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	7/21/2019	10:30:00	USER	HAD PRE RIG DOWN SAFETY MEETING WITH CREW AND DISCUSSED TEAM CARRY WITH IRON, SLIP TRIPS AND FALLS, PINCH POINTS AND GOOD FOOTING PLACEMENT.
Event	20	Depart Location	Depart Location	7/21/2019	12:00:00	USER	HAD PRE CONVOY SAFETY MEETING WITH CREW AND DISCUSSED SAFE FOLLOWING DISTANCE, WILD LIFE AND ROUTE BACK TO YARD. CREW LEAVES LOCATION.

## 3.0 Attachments

### 3.1 Job Chart

