

*The Road to Excellence Starts with Safety*

Sold To #: 300466	Ship To #: 3959413	Quote #: 0022615503	Sales Order #: 0905922011
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: John Truett	
Well Name: SARCHET		Well #: 21-7HZ	API/UWI #: 05-123-50075-00
Field: WATTENBERG	City (SAP): PLATTEVILLE	County/Parish: WELD	State: COLORADO
Legal Description: SW SW-21-3N-66W-565FSL-339FWL			
Contractor: PRECISION DRLG		Rig/Platform Name/Num: PRECISION 464	
Job BOM: 7523 7523			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA/HX41066		Srvc Supervisor: Adam Covington	

**Job**

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	18408ft		Job Depth TVD
Water Depth			Wk Ht Above Floor
Perforation Depth (MD)	From		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	1907	0	1907
Casing		5.5	4.892	17	LTC	HCP110	0	18408	0	7313
Open Hole Section			7.875				1908	18421	0	7313

**Tools and Accessories**

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			18408	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

**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	FDP-C1337-18	SBM FDP-C1337-18 CEMENT SPACER SYS	60	bbl	10.5	6.17		7	

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	55	bbl	10.5	6.19		7	
3	Gasstop B1	GASSTOP (TM) SYSTEM	635	sack	13.2	1.56		7	7.61
4	EconoCem	ECONOCEM (TM) SYSTEM	1140	sack	13.5	1.69		7	8.08
5	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			7	
0.50 gal/bbl		<b>MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781)</b>							
6	Biocide Water	Biocide Water	407	bbl	8.34			7	
<b>Cement Left In Pipe</b>		<b>Amount</b>	5 ft			<b>Reason</b>		<b>Shoe Joint</b>	
<p>TD-18421' OH-7 7/8" TP-18408' 5.5" 17#, SC-1907' 9 5/8" 36#, WSS-18,394', TVD-7313', MUD WAS 9.7# BUT THEN RIG HAD TO MUD UP TO 10.3#. TOP OF TAIL CEMENT AT 7,303.5', TOP OF LEAD CEMENT AT 1906', WITH 27 BBLS OF SPACER BACK TO SURFACE.</p> <p>MIX WATER-- 75 DEGREES, 0- CHLORIDE, 6- PH, 0 SULFATES.</p>									

## 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	8/24/2019	16:30:00	USER	HES CREW WAS CALLED OUT BY SERVICE COORDINATORS FOR AN ON LOCATION TIME OF 2230
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	8/24/2019	20:30:00	USER	MET WITH ALL HES CREW MEMBERS. DISCUSSED DIRECTIONS, NIGHT DRIVING AND FOLLOWING DISTANCES.
Event	3	Depart Shop for Location	Depart Shop for Location	8/24/2019	20:45:00	USER	DEPARTED YARD FOR LOCATION.
Event	4	Arrive At Loc	Arrive At Loc	8/24/2019	21:30:00	USER	GOT NUMBERS FROM CO. MAN. PERFORMED HAZARD HUNT.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	8/24/2019	21:45:00	USER	MET WITH ALL HES EMPLOYEES. DISCUSSED WHERE TO SPOT EQUIPMENT, CALLING OUT SWINGS AND TEAM LIFTS.
Event	16	Start Job	Start Job	8/25/2019	15:25:04	COM5	STARTED JOB TO START MIXING UP SPACER.
Event	24	Check Weight	Check Weight	8/25/2019	15:29:20	COM5	USED PRESSURIZED MUD SCALES TO WEIGH UP SPACER. SPACER WEIGHED UP AT 10.8#
Event	25	Pre-Job Safety Meeting	Pre-Job Safety Meeting	8/25/2019	15:40:00	USER	MET WITH ALL HES AND RIG CREW MEMBERS. DISCUSSED PRESSURES, JOB PROCEDURE AND EMERGENCY PROCESSES.

Event	36	Start Job	Start Job	8/25/2019	16:01:40	RTD Import	FILLED LINES WITH 3 BBLS OF FRESH WATER. 3 BPM, 730 PSI. FULL RETURNS.
Event	37	Test Lines	Test Lines	8/25/2019	16:03:05	RTD Import	PERFORMED A 500 PSI KICKOUT TEST AND A 5TH GEAR STALL OUT. THEN WENT INTO A 7000 PSI PRESSURE TEST ON IRON. HELD FOR A COUPLE MINUTES. NO LEAKS.
Event	45	Drop Bottom Plug	Drop Bottom Plug	8/25/2019	16:07:29	RTD Import	ADAM COVINGTON DROPPED WEATHERFORD 5.5" BOTTOM PLUG. CO. MAN WITNESSED.
Event	46	Pump Spacer 1	Pump Spacer 1*	8/25/2019	16:07:36	RTD Import	PUMPED 60 BBLS OF TUNED PRIME SPACER AT 10.8#, 6.17y, 39.6wr. AT 7 BPM, 1100 PSI. USED 45 GALLONS OF MUSOL A, 45 GALLONS OF DUAL SPACER B AND 30 GALLONS OF D-AIR.
Event	70	Pump Spacer 2	Pump Spacer2*	8/25/2019	16:20:44	RTD Import	PUMPED 55 BBLS OF TUNED PRIME SPACER AT 10.8#, 6.19y, 41.4wr WITH NO SURFACTANTS 7 BPM, 950 PSI.
Event	90	Pump Lead Cement	Pump Lead Cement*	8/25/2019	16:29:19	RTD Import	PUMPED 176 BBLS (635 SKS) OF 13.2#, 1.56y, 7.51wr LEAD CEMENT AT 7 BPM, 1059 PSI. FULL RETURNS.
Event	94	Check Weight	Check Weight	8/25/2019	16:36:09	COM5	USED PRESSURIZED MUD SCALES TO WEIGH UP CEMENT. CEMENT WEIGHED UP AT 13.2#

Event	115	Pump Tail Cement	Pump Tail Cement	8/25/2019	17:01:00	USER	PUMPED 343 BBLS (1140 SKS) OF 13.5#, 1.69y, 8.08wr TAIL CEMENT. AT 7 BPM, 510 PSI. AFTER TAIL WE IMMEDIATELY STARTED TO PUMP 3 BBLS OF FRESH WATER TO CLEAN LINE. CO. MAN WAS WORRIED ABOUT THE AMOUNT OF GAS IN THE WELL. WE PUMPED THE 3 BBLS AND SHUTDOWN. FULL RETURNS.
Event	203	Shutdown	Shutdown	8/25/2019	17:58:34	RTD Import	SHUTDOWN TO DROP PLUG.
Event	204	Drop Top Plug	Drop Top Plug	8/25/2019	17:58:44	RTD Import	ADAM COVINGTON AND BRANDON FANTASIA DROPPED WEATHERFORD 5.5" TOP PLUG. CO. MAN WITNESSED.
Event	205	Pump Displacement	Pump Displacement*	8/25/2019	17:58:49	RTD Import	PUMPED 427 BBLS OF BIOCIDES DISPLACEMENT AT 7 BPM, STARTING AT 60 PSI AND THEN CHANGING THROUGHOUT DISPLACEMENT. CAUGHT PLUG AT 20 AWAY PRESSURE WENT UP TO 600 PSI. FIRST 20 BBLS OF DISPLACEMENT HAD 10 GALLONS OF MMCR DISPERSED THROUGHOUT. BIOCIDES WAS THEN DISPERSED THROUGHOUT THE REST OF DISPLACEMENT. BIOCIDES WAS PROVIDED BY CO. MAN. FULL RETURNS.
Event	231	Shutdown	Shutdown	8/25/2019	19:07:31	RTD Import	SHUTDOWN SO RIG COULD SWAP FROM CHOKE TO FLOW LINE.

Event	237	Bump Plug	Bump Plug	8/25/2019	19:18:14	RTD Import	BUMPED PLUG AT 4 BPM, FCP-2400 PSI, TOOK STRAIGHT UP TO 3000 PSI AND PERFORMED A 3000 PSI CASING TEST FOR 15 MINUTES AS PER CO. MAN.
Event	245	Pressure Up	Pressure Up	8/25/2019	19:32:00	USER	AFTER THE CASING TEST WE PRESSURED UP TO SHIFT SLEEVE. PUMPED 3 BBLS AT 2 BPM. SLEEVE SHIFTED AT 5,003 PSI. WE THEN WENT IMMEDIATELY INTO PUMPING A 3 BBL WET SHOE AT 3 BPM, 2250 PSI.
Event	246	Other	Other	8/25/2019	19:35:01	RTD Import	BLED PRESSURE BACK TO THE TRUCK TO CHECK FLOATS. GOT 3 BBLS OF WATER BACK TO THE TRUCK WHEN FLOW STOPPED, INDICATING THAT THE FLOATS HELD.
Event	247	End Job	End Job	8/25/2019	19:38:49	COM5	TD-18421' OH-7 7/8" TP-18408' 5.5" 17#, SC-1907' 9 5/8" 36#, WSS-18,394', TVD-7313', MUD WAS 9.7# BUT THEN RIG HAD TO MUD UP TO 10.3#. TOP OF TAIL CEMENT AT 7,303.5', TOP OF LEAD CEMENT AT 1906', WITH 27 BBLS OF SPACER BACK TO SURFACE. MIX WATER-- 75 DEGREES, 0- CHLORIDE, 6-PH, 0 SULFATES.
Event	248	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	8/25/2019	19:55:00	USER	MET WITH HES CREW MEMBERS. DISCUSSED SWINGS, TEAM LIFTS AND OVERHEAD LOADS.

---

Event	249	Safety Meeting - Departing Location	Safety Meeting - Departing Location	8/25/2019	21:35:00	USER	MET WITH CREW AND DISCUSSED HOS, DRIVING DIRECTIONS AND DRIVING AT NIGHT.
<hr/>							
Event	250	Depart from Service Center or Other Site	Depart from Service Center or Other Site	8/25/2019	22:00:00	USER	THANK YOU FOR CHOOSING HALLIBURTON. JOB WAS COMPLETED SAFELY BY ADAM COVINGTON AND CREW.
<hr/>							

3.0 Attachments

---

3.1 Job Chart

---

