

The Road to Excellence Starts with Safety

Sold To #: 300466	Ship To #: 3837791	Quote #: 0022402764	Sales Order #: 0904621435
Customer: ANADARKO PETROLEUM CORP-EBUS		Customer Rep: Kirt	
Well Name: HERGENREDER		Well #: 25N-4HZ	API/UWI #: 05-123-45858-00
Field: WATTENBERG	City (SAP): LONGMONT	County/Parish: WELD	State: COLORADO
Legal Description: NW NW-33-3N-68W-334FNL-1013FWL			
Contractor: Xtreme		Rig/Platform Name/Num: Xtreme 24	
Job BOM: 7523 7523			
Well Type: HORIZONTAL GAS			
Sales Person: HALAMERICA\HX41066		Srvc Supervisor: Luke Kosakewich	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	14213ft	Job Depth TVD	7033ft
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	2321	0	2321
Casing		5.5	4.892	17	LTC	HCP110	0	14200	0	7033
Open Hole Section			7.875				2321	14213	2321	7033

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe					Top Plug	5.5	1	Weatherford
Float Shoe	5.5			14200	Bottom Plug	5.5	1	Weatherford
Float Collar	5.5			14190	SSR plug set			
Insert Float					Plug Container	5.5	1	HES
Stage Tool					Centralizers			

Fluid Data

Stage/Plug #: 1										
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.25		5		
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	

2	ElastiCem LEAD	ELASTICEM (TM) SYSTEM	490	sack	12.5	1.8		8	9.49	
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 TAIL/Tuff Fiber	ECONOCEM (TM) SYSTEM	490	sack	13.5	1.68		8	7.98	
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 TAIL/NO TUFF FIBER	ECONOCEM (TM) SYSTEM	400	sack	13.5	1.68		6	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	
5	Biocide Water and MMCR	Biocide Water and MMCR	20	bbl	8.34			6		
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	294	bbl	8.34			6		
Cement Left In Pipe	Amount	0 ft	Reason				Wet Shoe			
<p>Comment There were full returns throughout the job. Bumped the plug 1,000 psi. over 2,00 psi. at 3 bpm and held for 5 minutes. Got no spacer or cement to surface. Pressured up to 4,715 psi. to burst the plug. Pumped 5 bbls. for a wet shoe. Floats held. Got 3 bbls. of fluid back to the truck.</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	2/6/2018	14:00:00	USER	Crew was called out at 14:00 for an on location time of 19:30.
Event	2	Depart Location Safety Meeting	Depart Location Safety Meeting	2/6/2018	17:45:00	USER	Crew held a pre journey safety meeting and JSA.
Event	3	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/6/2018	17:50:00	USER	Started journey management with dispatch and left location.
Event	4	Arrive at Location from Other Job or Site	Arrive at Location from Other Job or Site	2/6/2018	19:00:00	USER	Crew performed a site assessment and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics to calculate the job. The rig was running casing.
Event	5	Other	Other	2/6/2018	19:10:00	USER	
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	2/6/2018	19:15:00	USER	The crew held a pre rig up safety meeting and JSA.
Event	7	Rig-Up Equipment	Rig-Up Equipment	2/6/2018	19:20:00	USER	The crew rigged up all lines, hoses and equipment for the job.
Event	8	Safety Meeting	Safety Meeting	2/6/2018	23:30:00	USER	All personnel on location held a pre cement job safety meeting and JSA.
Event	9	Start Job	Start Job	2/6/2018	23:31:57	COM4	Pumped 3 bbls. of fresh water at 3 bpm. to fill lines and establish circulation.
Event	10	Test Lines	Test Lines	2/6/2018	23:40:16	COM4	Pressure tested lines to 4,900 psi. with a 500 psi. electronic kick out test. The pressure test failed. Pressure was bleeding off 14 psi. for every second. Shutdown and bled off pressure. Had to trouble shoot where pressure was falling off. After trouble shooting the leak and greasing all low torque valves, it was determined that the low torque valves were bleeding off pressure due to lack of grease. Pumped 3 more bbls. of

							fresh water. Re-pressure tested to 4,900 psi. and pressure held.
Event	11	Test Lines	Test Lines	2/7/2018	00:38:33	USER	Pumped 3 bbls. of fresh water. Re-pressure tested to 4,900 psi. and pressure held.
Event	12	Pump Spacer	Pump Spacer	2/7/2018	00:48:29	USER	Pumped 60 bbls. of Tuned Spacer III with surfactants mixed at 10.5 ppg., Yield: 6.25 ft ³ /sk, 40.2 gal/sk. Density was verified by pressurized scales.
Event	13	Shutdown	Shutdown	2/7/2018	01:04:21	USER	Shutdown to drop the bottom plug.
Event	14	Drop Bottom Plug	Drop Bottom Plug	2/7/2018	01:09:35	USER	Dropped the bottom plug witnessed by the customer.
Event	15	Pump Lead Cement	Pump Lead Cement	2/7/2018	01:11:25	USER	Pumped 157 bbls. (490 sks.) of Elasticem mixed at 12.5 ppg., Yield: 1.8 ft ³ /sk, 9.49 gal/sk. Density was verified by pressurized scales.
Event	16	Pump Tail Cement	Pump Tail Cement	2/7/2018	01:30:33	COM4	Pumped 147 bbls. (490 sks.) of Econocem with Tuff Fiber mixed at 13.5 ppg. Yield: 1.68 ft ³ /sk, 7.98 gal/sk. Density was verified by pressurized scales.
Event	17	Pump Tail Cement	Pump Tail Cement	2/7/2018	02:20:47	COM4	Pumped 120 bbls. (400 sks.) of Econocem mixed at 13.5 ppg. Yield: 1.68 ft ³ /sk, 7.98 gal/sk. Density was verified by pressurized scales.
Event	18	Check Weight	Check weight	2/7/2018	02:23:26	COM4	Cement weighed up at 13.6 ppg.
Event	19	Shutdown	Shutdown	2/7/2018	02:39:07	COM4	Shutdown to clean lines and drop the top plug.
Event	20	Clean Lines	Clean Lines	2/7/2018	02:43:38	COM4	Washed lines and pumps until clean.

Event	21	Drop Top Plug	Drop Top Plug	2/7/2018	02:50:21	COM4	Dropped the top plug witnessed by the customer.
Event	22	Pump Displacement	Pump Displacement	2/7/2018	02:50:27	COM4	Pumped 314 bbls. of fresh water with MMCR in the first 20 bbls. and Biocide throughout the rest of displacement.
Event	23	Bump Plug	Bump Plug	2/7/2018	03:48:34	COM4	Bumped the plug 1,000 psi. over 2,000 psi. at 3 bpm. Finale pressue was 3,000 psi. Held for 5 minutes.
Event	24	Pressure Up Well	Pressure Up Well	2/7/2018	03:51:43	COM4	Pressured up to 4,715 to burst the plug.
Event	25	Other	Other	2/7/2018	03:53:43	USER	Pumped 5 bbls. of fresh water for a wet shoe.
Event	26	Check Floats	Check Floats	2/7/2018	03:54:37	USER	Bled off pressure to check floats. Floats held. Got 3 bbls. of fluid back to the truck. Got no spacer to surface.
Event	27	End Job	End Job	2/7/2018	03:57:30	COM4	Washed and blew down all lines, pumps and hoses until clean and dry.
Event	28	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/7/2018	06:00:00	USER	Halliburton cement crew held a pre rig down safety meeting and JSA.
Event	29	Rig-Down Equipment	Rig-Down Equipment	2/7/2018	06:15:00	USER	Rigged down all lines, hoses and equipment.
Event	30	Depart Location Safety Meeting	Depart Location Safety Meeting	2/7/2018	08:00:00	USER	Held a pre journey safety meeting with the crew.
Event	31	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/7/2018	08:30:00	USER	Started journey management with dispatch and left location.

3.0 Attachments

3.1 Job Chart

