

HALLIBURTON

Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 300466		Ship To #: 3752113		Quote #: 0022377492		Sales Order #: 0904451469				
Customer: ANADARKO PETROLEUM CORP-EBUS				Customer Rep:						
Well Name: WAGNER		Well #: 2C-10HZ		API/UWI #: 05-123-43473-00						
Field: WATTENBERG		City (SAP): IONE		County/Parish: WELD		State: COLORADO				
Legal Description: SW NE-22-1N-67W-1722FNL-1574FEL										
Contractor: PRECISION DRLG				Rig/Platform Name/Num: PRECISION 464						
Job BOM: 7525 7525										
Well Type: HORIZONTAL GAS										
Sales Person: HALAMERICA\HX41066				Srvc Supervisor: Ryan Stevens						
Job										
Formation Name										
Formation Depth (MD)		Top		Bottom						
Form Type										
BHST										
Job depth MD		15965 ft		Job Depth TVD		7625 ft				
Water Depth										
Wk Ht Above Floor 5										
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
Drill Pipe	USED	4	3.34	14	XT-39		0	4308	0	4307
Casing	NEW	7	6.276	26	LTC	HCP110	0	5970	0	5970
Casing	NEW	4.5	4	11.6	LTC	HCP110	5747	15965	6856	7625
Open Hole Section			6.125				5970	15970	6856	7625
Tools and Accessories										
Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make		
Guide Shoe	4.5				Top Plug	4.5	1	WETH		
Float Shoe	4.5	1	WETH	15965	Bottom Plug	4.5				
Float Collar	4.5	1	WETH	15965	SSR plug set	4.5				
Insert Float	4.5				Plug Container	4.5				
Stage Tool	4.5				Centralizers	4.5				
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 bb/mi n	Total Mix Fluid Gal	
1	Tuned Spacer III	Tuned Spacer III	60	bbi	10.5	6.25	40.2	5	2,412	
0.70 gal/bbi		MUSOL A, 330 GAL TOTE - (790828)								
88.91 lbm/bbi		BARITE, BULK (100003681)								
37.58 gal/bbi		FRESH WATER								
0.70 gal/bbi		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								

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Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
2	EconoCem	ECONOCEM (TM) SYSTEM	615	sack	13.5	1.68	7.98	5	4907	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft ³ /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	Displacement Fluid	Fresh Water	214	bbl	8.34			3		
Cement Left In Pipe		Amount	43 ft			Reason			Shoe Joint	
Mix Water:		pH 7	Mix Water Chloride: ppm			Mix Water Temperature:			60 °F	
Cement Temperature:		65 °F	Plug Displaced by: Halliburton			Disp. Temperature:			60 °F	
Plug Bumped?		Yes	Bump Pressure: 2356 psi			Floats Held?			Yes	
Cement Returns:		1 bbl	Returns Density:			Returns Temperature:			60 °F	
Comment										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Pump Stage Total <i>(bbl)</i>	Pass-Side Pump Pressure <i>(psi)</i>	Pass-Side Pump Rate <i>(bbl/min)</i>	Comments
Event	1	Call Out	Call Out	11/24/2017	11:30:00	USER					CREW CALLED OUT AT 11:30, REQUESTED ON LOCATION 05:00. CREW PICKED UP CEMENT, CHEMICALS, DRILL PIN FROM FT. LUPTON, CO. BULK 660 11764054, PUMP 12645760.
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy safety meeting	11/25/2017	04:00:00	USER					DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW
Event	3	Crew Leave Yard	Crew Leave Yard	11/25/2017	04:15:00	USER					STARTED JOURNEY MANAGEMENT.
Event	4	Arrive At Loc	Crew arrived on location	11/25/2017	04:30:00	USER					END JOURNEY MANAGEMENT, MEET WITH CO. MAN AND TOOL HAND TO DISCUSS JOB.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/25/2017	04:40:00	USER					HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.
Event	6	Rig-Up Equipment	Rig-Up Equipment	11/25/2017	04:50:21	USER					CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON AND WATER HOSES TO PERFORM JOB.
Event	7	Rig-Up Completed	Rig-Up Completed	11/25/2017	05:30:00	USER					EQUIPMENT WAS RIGGED UP AND READY TO PERFORM JOB.

Event	8	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/25/2017	19:00:00	USER						MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.
Event	9	Start Job	Start Job	11/25/2017	20:28:00	COM5						START RECORDING JOB DATA
Event	10	Pressure Test	Pressure Test	11/25/2017	20:44:59	USER	8.39	0.7	11.00	0.00		PRESSURE TEST PUMPS AND LINES. KICK OUTS SEET TO 500 PSI KICKED OUT @ 823. 5TH GEAR STALL OUT @ 1,660 PSI.
Event	11	Pump Spacer 1	Pump Spacer 1	11/25/2017	20:50:39	COM5						PUMP 60 BBLS OF TUNED SPACER @ 10.5 LB/GAL, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.
Event	12	Pump Cement	Pump Cement	11/25/2017	21:14:18	COM5						PUMP 615 SKS OF ECONOCEM @ 13.5 LB/GAL, 1.69 YIELD, 7,98 GAL/SK, 184 BBLS, DENSITY VERIFIED BY PRESSURIZED MUD SCALES. TOC CALCULATED @ 503' ABOOVE LINER TOP.
Event	13	Shutdown	Shutdown	11/25/2017	21:56:19	COM5						SHUTDOWN TO DROP DART/CLEAN LINES.
Event	14	Pump Displacement	Pump Displacement	11/25/2017	22:05:42	COM5						BEGIN DISPLACEMENT WITH 213 BBLS OF FREA WATER AND BIO-SIDE. MMCR IN THE FIRST 20 BBLS OF DISPLACEMENT.
Event	15	Other	Other	11/25/2017	22:16:44	COM5						SLOW RATE TO 3.0 BPM @ 45 BBLS TO LAND DART. PICKED UP PLUG @ 55 BBLS AWAY PRESSURE WAS 1,421 PSI
Event	16	Other	Other	11/25/2017	22:20:01	COM5						INCREASE RATE AFTER

											7	PICKING UP PLUG TO 5BPM
Event	17	Bump Plug	Bump Plug	11/25/2017	23:09:48	COM5					PLUG BUMPED AT CALCULATED DISPLACEMENT. PRESSURED 1,000 PSI OVER FINALE CIRCULATING PRESSURE.	
Event	18	Check Floats	Check Floats	11/25/2017	23:12:37	USER	8.28	213.4	1530.00	0.00	CHECK FLOATS, FLOATS HELD, 1 BBLS BACK.	
Event	19	Set Packer	Set Packer	11/25/2017	23:16:13	COM5					WETHERFORD SET PACKER	
Event	20	Pressure Up Well	Pressure Up Well	11/25/2017	23:28:07	COM5					PRESSURE UP BACK SIDE TO TEST PACKER, MONITERD PRESSURE WITH RIG.	
Event	21	Pump Water	Pump Water	11/25/2017	23:32:12	USER					PUMP FRESH WATER TO CLEAN 7" CSG. 60 BBLS OF SPACER BACK AND 1 BBLS OF CEMENT.	
Event	22	End Job	End Job	11/26/2017	00:18:02	COM5					STOP RECORDING JOB DATA.	
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/26/2017	00:30:00	USER					DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.	
Event	24	Rig-Down Equipment	Rig-Down Equipment	11/26/2017	00:40:00	USER					CREW BEGAIN TO RIG DOWN EQUIPMENT FOR TRAVEL	
Event	25	Rig-Down Completed	Rig-Down Completed	11/26/2017	01:30:00	USER					ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN.	
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/26/2017	01:40:00	USER					DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH	

Event	27	Crew Leave Location	Crew Leave Location	11/26/2017	01:50:00	USER	CREW
							DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.

3.0 Attachments

3.1 Anadarko Wagner 2C-10HZ Production Liner Job Chart

