

The Road to Excellence Starts with Safety

Sold To #: 304535	Ship To #: 3700231	Quote #: 0022158393	Sales Order #: 0903125117
Customer: PDC ENERGY - EBUS		Customer Rep:	
Well Name: SPAUR	Well #: 101-201	API/UWI #: 05-123-42324-00	
Field: WATTENBERG	City (SAP): MILLIKEN	County/Parish: WELD	State: COLORADO
Legal Description: SE SW-10-4N-67W-255FSL-1583FWL			
Contractor: ENSIGN DRLG		Rig/Platform Name/Num: ENSIGN 121	
Job BOM: 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB71271		Srcv Supervisor: Aaron Smith	
Job			

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	11637ft	Job Depth TVD	7220
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
Casing		9.625	8.921	36	LTC	J-55	0	1370		1370
Casing		5.5	4.778	20		P-110	0	11618	0	7220
Open Hole Section			8.5				1370	11637	1368	7220

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5				Top Plug	5.5	1	HES
Float Shoe	5.5	1		11618	Bottom Plug	5.5		HES
Float Collar	5.5	1		11590	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 ³ /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal	
1	Mud Flush III (Powder)	Mud Flush III	40	bbl	8.4			6		
42 gal/bbl			FRESH WATER							
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	ELASTICEM (TM) SYSTEM	914	sack	13.2	1.57		6	7.51	
7.51 Gal		FRESH WATER								
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
3	EconoCem	ECONOCEM (TM) SYSTEM	930	sack	13.5	1.65		4	7.86	
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft3/sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal	
4	MMCR Displacement	MMCR Displacement	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/mi n	Total Mix Fluid Gal	
5	Water	Water	237	bbl	8.33					
Cement Left In Pipe		Amount	28 ft		Reason			Shoe Joint		
Comment										

HALLIBURTON

Customer: PDC ENERGY EBUS
 Job: PDC ENERGY SPAUR 101-201 PRODUCTION
 Case: Case 1 | SO#: 903125117

1.0 Real-Time Job Summary

1.1 Job Event Log

Event	Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Comments
Event 1	Call Out		Call Out		2/14/2016	21:00:00	USER				FOR ONLOCATION @ 0300
Event 2	Depart Yard Safety Meeting		Depart Yard Safety Meeting		2/15/2016	01:00:00	USER				JOURNEY MANAGEMENT MEETING PRIOR TO DEPARTURE
Event 3	Depart Location for Service Center or Other Site		Depart Location for Service Center or Other Site		2/15/2016	01:30:00	USER				JOURNEY CALLED INTO DISPATCH
Event 4	Arrive at Location from Service Center		Arrive at Location from Service Center		2/15/2016	02:00:00	USER				WITH ALL EQUIPMENT AND MATERIALS, RIG RUNNING CASING
Event 5	Assessment Of Location Safety Meeting		Assessment Of Location Safety Meeting		2/15/2016	02:15:00	USER				HAZARD HUNT AND WATER TEST PERFORMED, WATER TEMP 52, CL 56, PH 7
Event 6	Pre-Rig Up Safety Meeting		Pre-Rig Up Safety Meeting		2/15/2016	02:20:00	USER				JSA TO DISCUSS THE HAZARDS OF RIG-UP
Event 7	Rig-Up Equipment		Rig-Up Equipment		2/15/2016	02:25:00	USER				
Event 8	Rig-Up Completed		Rig-Up Completed		2/15/2016	03:00:00	USER				
Event 9	Circulate Well		Circulate Well		2/15/2016	06:30:00	USER				8 BPM, 9.8 #/GAL, PV 14, YP 15, GELS 5/13, 1.5 HRS, 758 PSI, 212 UNITS OF GAS.
Event 10	Pre-Job Safety Meeting		Pre-Job Safety Meeting		2/15/2016	07:30:00	USER	0.00	0.06	2.00	WITH CUSTOMER REP AND RIG CREW
Event 11	Prime Pumps		Prime Pumps		2/15/2016	08:00:07	COM5	0.00	0.06	0.00	
Event 12	Other		Other		2/15/2016	08:31:33	COM5	0.00	8.62	4.00	FILL LINES
Event 13	Test Lines		Test Lines		2/15/2016	08:34:07	COM5	0.00	8.87	57.00	@5000 PSI

iCem Service

(v. 4.2.393)

Created: Monday, February 15, 2016

HALLIBURTON

Customer: PDC ENERGY EBUS
 Job: PDC ENERGY SPAUR 10I-201 PRODUCTION
 Case: Case 1 | SO#: 903125117

Event	14	Pump Spacer 1	Pump Spacer 1	2/15/2016	08:38:25	COM5	0.00	8.80	10.00	40 BBL5 MUD FLUSH
Event	15	Pump Spacer 2	Pump Spacer 2	2/15/2016	08:47:07	COM5	4.20	8.83	373.00	10 BBL5 FRESH WATER
Event	16	Check Weight	Check weight	2/15/2016	08:47:23	COM5	4.20	8.77	352.00	SCALED @ 12.5 #/GAL, WEIGHED UP TO 13.2 PPG,
Event	17	Pump Lead Cement	Pump Lead Cement	2/15/2016	08:50:35	COM5	4.20	11.88	425.00	914 SKS (255.57 BBL5) ELASTICEM @ 13.2 PPG, VERIFIED WITH PRESSURIZED SCALES
Event	18	Pump Tail Cement	Pump Tail Cement	2/15/2016	09:26:49	COM5	4.80	13.44	154.00	930 SKS (273.29 BBL5) ELASTICEM @ 13.5 PPG, VERIFIED WITH PRESSURIZED SCALES
Event	19	Check Weight	Check weight	2/15/2016	09:27:11	COM5	4.80	13.41	166.00	VERIFIED WEIGHT WITH SCALES.
Event	20	Shutdown	Shutdown	2/15/2016	10:02:59	COM5	0.00	13.48	70.00	TOOL HAND LOADED TOP PLUG IN CASING
Event	21	Drop Top Plug	Drop Top Plug	2/15/2016	10:05:51	COM5	0.00	13.58	13.00	257 BBL5 FRESH WATER WITH BIOCID AND STA- CLEAR
Event	22	Pump Displacement	Pump Displacement	2/15/2016	10:11:39	COM5	0.00	8.05	17.00	@210 BBL5 DISPLACEMENT 47 BBL5 TO SURFACE TOP OF CEMENT @ 62 FEET.
Event	23	Other	SPACER RETURNS TO SURFACE	2/15/2016	10:33:59	COM5	0.00	8.31	1594.00	@ 500 PSI OVER, FINAL CIRCULATING PRESSURE 2510 PSI, HELD FOR 15 MIN FINAL PRESSURE 3056 PSI
Event	24	Bump Plug	Bump Plug	2/15/2016	10:41:59	COM5	0.00	8.31	2708.00	FLOATS GOOD 2.5 BBL5 BACK
Event	25	Check Floats	Check Floats	2/15/2016	10:57:07	USER	0.00	8.52	1659.00	THANKS AARON SMITH AND CREW
Event	26	End Job	End Job	2/15/2016	11:02:46	COM5				JSA TO DISCUSS THE HAZARDS OF RIG-DOWN
Event	27	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	2/15/2016	11:03:00	USER	0.00	8.23	46.00	

iCem Service

(v. 4.2.393)

Created: Monday, February 15, 2016

HALLIBURTON

Customer: PDC ENERGY EBUS
 Job: PDC ENERGY SPAUR 101-201 PRODUCTION
 Case: Case 1 | SO#: 903125117

Event	28	Rig-Down Equipment	Rig-Down Equipment	2/15/2016	11:08:00	USER	0.00	8.20	54.00	
Event	29	Rig-Down Completed	Rig-Down Completed	2/15/2016	11:20:00	USER	0.00	8.21	18.00	NO INCIDENTS OR INJURIES
Event	30	Depart Location Safety Meeting	Depart Location Safety Meeting	2/15/2016	11:25:00	USER				JOURNEY MANAGEMENT MEETING PRIOR TO DEPARTURE
Event	31	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	2/15/2016	11:30:00	USER				JOURNEY CALLED INTO DISPATCH