

The Road to Excellence Starts with Safety

Sold To #: 375989		Ship To #: 3899603		Quote #:		Sales Order #: 0905764835					
Customer: CONFLUENCE DJ LLC-EBUS						Customer Rep: Scott Suonke					
Well Name: 70 RANCH				Well #: 10-13-2L		API/UWI #: 05-123-47591-00					
Field: WATTENBERG		City (SAP): KERSEY		County/Parish: WELD		State: COLORADO					
Legal Description: SE SW-3-4N-63W-260FSL-1311FWL											
Contractor: ENSIGN DRLG				Rig/Platform Name/Num: ENSIGN 140							
Job BOM: 7523 7523											
Well Type: HORIZONTAL OIL											
Sales Person: HALAMERICA\HX38199				Srv Supervisor: Nicholas Cummins							
Job											
Formation Name											
Formation Depth (MD)		Top	1536ft		Bottom		16451ft				
Form Type				BHST							
Job depth MD		11700ft		Job Depth TVD		6338ft					
Water Depth				Wk Ht Above Floor		4ft					
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			0	1537			
Casing		5.5	4.778	20			0	16436			
Open Hole Section			8.5				1537	16451			
Tools and Accessories											
Type	Size in	Qty	Make	Depth ft		Type	Size in	Qty	Make		
Guide Shoe	5.5	1		16436		Top Plug	5.5	1			
Float Shoe	5.5					Bottom Plug	5.5	1			
Float Collar	5.5	1		16431		SSR plug set	5.5				
Insert Float	5.5					Plug Container	5.5	1	HES		
Stage Tool	5.5					Centralizers	5.5				
Fluid Data											
Stage/Plug #: 1											
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
1	DIESEL	DIESEL			40	bbl	8.3				
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	SBM FDP-C1337-18 CEMENT SPACER SYS			100	bbl	12	3.26	20	8	3440

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	ElastiCem	ELASTICEM (TM) SYSTEM	1965	sack	14.4	1.7	7.3	6	14345	
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	MMCR Displacement	MMCR Displacement	4	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	
5	Displacement	Displacement	356	bbl	8.34					
0.02 gal/bbl		CLA-WEB - TOTE (101985045)								
Cement Left In Pipe		Amount	0 ft		Reason			Wet Shoe		
Mix Water:		pH 7	Mix Water Chloride:			<400 ppm		Mix Water Temperature:		63 °F
Cement Temperature:		N/A	Plug Displaced by:			8.33 lb/gal		Disp. Temperature:		63 °F
Plug Bumped?		Yes	Bump Pressure:			2490 psi		Floats Held?		Yes
Cent Returns:		0 bbl	Returns Density:			N/A		Returns Temperature:		N/A
Comment 100 bbls spacer 595 bbls Cement 356 bbls Displacement MMCR in first 4 bbls Plug bumped foats held										

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (gpm)	Pump Stg Tot (gal)	Comments
Event	1	Call Out	Call Out	6/16/2019	15:30:00	USER					The crew was called out on 6/16/19 at 1730. The customer requested HES on location at 2100 on 6/16/19.
Event	2	Depart from Service Center or Other Site	Depart from Service Center or Other Site	6/16/2019	19:50:00	USER					The crew held a pre journey safety meeting discussing the route and potential hazards while driving The supervisor called in a journey. The crew departed service center.
Event	3	Arrive at Location from Service Center	Arrive at Location from Service Center	6/16/2019	20:50:00	USER					The crew arrived on location safely. The rig was already circulating. The supervisor met with the Company man and received numbers. TD 16,451', TP 16,436' 5 1/2" 20# P-110, FC 16,431', PC 1,536' 9 5/8" 36# J-55, TVD 6,338', OH 8 1/2", Mud 10 ppg.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	6/16/2019	20:51:00	USER					Crew discussed all potential hazards on location.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	6/16/2019	21:00:00	USER					Crew held a safety meeting discussing the rig up procedure. Also all potential hazards associated with

											rigging up all HES equipment and lines.
Event	6	Rig-Up Equipment	Rig-Up Equipment	6/16/2019	21:10:00	USER					The crew rigged up all HES equipment and lines.
Event	7	Rig-Up Completed	Rig-Up Completed	6/16/2019	23:00:00	USER	-33.00	9.01	0.0	75.6	Rig up completed, no one got hurt.
Event	8	Other	Pump Diesel	6/16/2019	23:04:00	USER	-32.00	9.03	0.0	75.6	The rig pumped 40 bbls of diesel before shutting down to rig up for cement.
Event	9	Safety Meeting - Pre Job	Safety Meeting - Pre Job	6/16/2019	23:10:00	USER	-38.00	9.05	0.0	75.6	The crew and all personal involved with cement job discussed all potential hazards associated with job. Followed by the job procedure to ensure everyone understood the plan of action
Event	10	Start Job	Start Job	6/16/2019	23:25:32	COM1	40.00	8.35	0.0	0.0	Started recording data from 11512092. We filled lines with 3 bbls of water at 3 bpm, pressure was at 600 psi.
Event	11	Test Lines	Test Lines	6/16/2019	23:27:43	COM1	339.00	8.45	0.0	117.6	We pressure tested all HES lines to 6,500 psi. The pressure test passed.
Event	12	Pump Spacer 1	Pump Spacer 1	6/16/2019	23:32:29	COM1	231.00	8.44	0.0	117.6	We pumped 100 bbls of Spacer at 8 bpm. Pressure was at 200 psi. 12 ppg 3.26 yield 20 gal/sk. We used pressurized scales to verify density.
Event	13	Pump Lead Cement	Pump Lead Cement	6/16/2019	23:47:37	COM1	268.00	12.38	79.8	3549.0	We pumped 595 bbls (1965 sks) of Cement at 6 bpm, pressure was at 850 psi. 13.2 ppg 1.54 yield 7.55

gal/sk. We used pressurized scales to verify density throughout cement due to mixing issues.

Event	14	Check Weight	Check Weight	6/16/2019	23:49:09	COM1	1073.00	14.01	231.0	247.8	The scaled weighed up at 14.1 ppg
Event	15	Check Weight	Check Weight	6/17/2019	00:03:24	COM1	229.00	14.05	121.8	1814.4	The scaled weighed up at 14 ppg
Event	16	Check Weight	Check Weight	6/17/2019	00:08:18	COM1	382.00	14.49	121.8	2410.8	The scaled weighed up at 14.25 ppg.
Event	17	Check Weight	Check Weight	6/17/2019	00:23:34	COM1	318.00	14.23	117.6	5535.6	The scaled weighed up at 13.9 ppg
Event	18	Check Weight	Check Weight	6/17/2019	00:42:21	COM1	749.00	14.21	243.6	9366.0	The scaled weighed up at 14.35 ppg.
Event	19	Shutdown	Shutdown	6/17/2019	01:49:54	COM1	137.00	15.38	0.0	26002.2	Shutdown pumped 15 bbls of fresh water to clean pumps and lines. Loaded bottom plug.
Event	20	Drop Bottom Plug	Drop Bottom Plug	6/17/2019	02:06:54	COM1	95.00	-0.10	0.0	26548.2	Plug left container witnessed by company man, toolhands, and cementer.
Event	21	Pump Displacement	Pump Displacement	6/17/2019	02:06:58	COM1	96.00	-0.10	0.0	26548.2	Pumped 4 bbls MMCR water behind plug per customer request.
Event	22	Shutdown	Shutdown	6/17/2019	02:10:04	USER	195.00	7.99	105.0	193.2	Shutdown to drop top plug.
Event	23	Drop Top Plug	Drop Top Plug	6/17/2019	02:13:00	USER	97.00	8.03	0.0	193.2	Plug left container witnessed by company man, toolhands, and cementer.
Event	24	Resume Pumping	Resume Pumping	6/17/2019	02:13:21	USER	109.00	7.89	37.8	197.4	Pumped 356 bbls of displacement at 10 bpm until we caught cement, at 25 bbls. Then slowed rate to 8 per customer request.

Event	25	Bump Plug	Bump Plug	6/17/2019	03:05:52	COM1	2934.00	8.38	0.0	14973.0	Bumped the plug. Final circulating pressure was 2,490 psi. We pressured up to 2,938 psi before shutting down.
Event	26	Other	Pressure Up	6/17/2019	03:08:01	COM1	2992.00	8.38	0.0	14973.0	Pressure up to 3,800 before kicking out. While kicked out plug burst at 3,878 psi.
Event	27	Other	Check Floats	6/17/2019	03:14:59	COM1	2401.00	8.35	0.0	15010.8	Released pressure back to truck to check floats 3 bbls back.
Event	28	End Job	End Job	6/17/2019	03:31:26	COM1	77.00	8.33	0.0	15010.8	Cement job complete. Stopped recording data from Elite 11512092. Estimated top of cement 2,187'. Estimated 0 bbls of spacer to surface.
Event	29	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	6/17/2019	03:35:00	USER	78.00	8.33	0.0	15010.8	Crew held a safety meeting discussing the rig down procedure. Also all potential hazards associated with rigging down all HES equipment and lines.
Event	30	Rig-Down Equipment	Rig-Down Equipment	6/17/2019	04:00:00	USER	0.00	0.22	0.0	17182.2	The crew rigged down all HES equipment and lines.
Event	31	Rig-Down Completed	Rig-Down Completed	6/17/2019	05:00:00	USER					Rig down completed no one got hurt.

The crew held a pre journey safety meeting discussing the route and potential hazards while driving The supervisor called in a journey.

Event	32	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	6/17/2019	05:30:00	USER
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Event	33	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	6/17/2019	05:40:00	USER
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Nick Cummins and crew would like to thank you for your business, and choosing Halliburton Cement! Please feel free to call if you have any questions.

3.0 Attachments

3.1 70 Ranch 10-13-2L-Custom Results

