

HALLIBURTON

iCem[®] Service

CONOCO/PHILLIPS COMPANY-EBUS

Date: Monday, January 14, 2019

Schuh 3-65 21-20 3AH Surface

Job Date: Thursday, December 13, 2018

Sincerely,

Bryce Hinsch

Legal Notice

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1.0 Cementing Job Summary – Surface Casing

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Schuh 3-65 21-20 3AH** cement **surface** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 75 bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Fort Lupton

The Road to Excellence Starts with Safety

Sold To #: 352431	Ship To #: 3909366	Quote #: 0022522935	Sales Order #: 0905339191
Customer: CONOCO/PHILLIPS COMPANY-EBUS		Customer Rep: Jack Longmire	
Well Name: SCHUH 3-65 21-20		Well #: 3AH	API/UWI #: 05-001-10201-00
Field: WILDCAT	City (SAP): AURORA	County/Parish: ADAMS	State: COLORADO
Legal Description: SE SE-21-3S-65W-1311FSL-475FEL			
Contractor:		Rig/Platform Name/Num: Nabors B16	
Job BOM: 7521 7521			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB41307		Srvc Supervisor: Steven Markovich	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	2247ft	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		16	15.25				0	100		
Casing		9.625	8.921	36	STC	J-55	0	2247		0
Open Hole Section			12.25				100	2258		0

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	9.625			2247	Top Plug	9.625		HES
Float Shoe	9.625				Bottom Plug	9.625		HES
Float Collar	9.625				SSR plug set	9.625		HES
Insert Float	9.625				Plug Container	9.625		HES
Stage Tool	9.625				Centralizers	9.625		HES

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	10 lb/gal Tuned Spacer III	Tuned Spacer III	50	bbl	10	8.97				
38.40 gal/bbl		FRESH WATER								
62.54 lbm/bbl		BARITE, BULK (100003681)								

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	SwiftCem	SWIFTCEM (TM) SYSTEM	500	sack	12	2.57		6	15.14	
15.12 Gal		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	
3	SwiftCem	SWIFTCEM (TM) SYSTEM	255	sack	14.2	1.59		6	7.9	
7.9 Gal		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	
4	Displacement	Displacement	170	bbl	8.33			6		
Cement Left In Pipe		Amount	44 ft		Reason			Shoe Joint		
Mix Water:		pH 6.5	Mix Water Chloride:		00 ppm		Mix Water Temperature:		51 °F °C	
<p>Comment Spacer to surface at 55bbls away, Cement to surface at 95bbls away bringing 75bbls of Cement to surface. Bumped plug at 170bbls away. Final lift pressure was 710psi. Took pressure 500psi over and held. Pressure was at 1402psi when we checked floats. After 1.25bbls back floats held. Kicked in pumps to bring pressure up to 1800psi for 30 min casing test. . After 30 mins pressure was 1845psi. Estimated Top of Tail Cement 1456'</p>										

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Rockies, Brighton

Lab Results- Lead

Job Information

Request/Slurry	2520724/1	Rig Name	Nabors B16	Date	10/DEC/2018
Submitted By	Bryce Hinsch	Job Type	Surface Casing	Bulk Plant	Brighton
Customer	ConocoPhillips	Location		Well	Schuh 3-65 21-20 3AH

Well Information

Casing/Liner Size	9.625 in	Depth MD	2191 ft	BHST	35°C / 95°F
Hole Size	13.5 in	Depth TVD	2191 ft	BHCT	34°C / 93°F
Pressure	1279 psi				

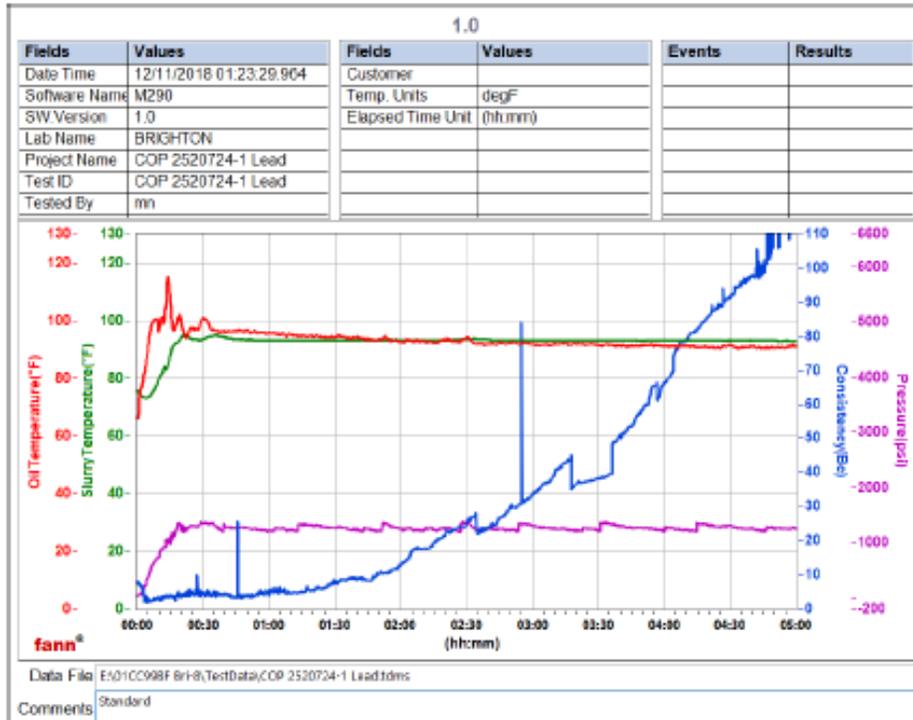
Cement Information - Lead Design

Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.	Cement Properties	
100	% BWOC	Cemex Type I-II		Bulk Blend	11.12.18	1	Slurry Density	12 lbm/gal
15.14	gal/sack	Field (Fresh) Water		Lab	09.10.18	8/19/2018	Slurry Yield	2.57 ft ³ /sack
2	% BWOC	Cal-Seal 60	PB	Bulk Blend	11.12.18		Water Requirement	15.14 gal/sack
2.3	% BWOC	Econolite (Powder - PB)	PB	Bulk Blend	11.12.18			
0.2	% BWOC	VERSASET (PB)	PB	Bulk Blend	11.12.18			
6	lb/sk	Mountain Enhancer 923	PB	Bulk Blend	11.12.18			

Operation Test Results Request ID 2520724/1

Thickening Time, Request Test ID:36051050 11/DEC/2018

Temp (degF)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
93	1279	18	10	2:56	3:34	3:43	4:03	4:46



HALLIBURTON

Rockies, Brighton

Lab Results- Tail

Job Information

Request/Slurry	2520725/1	Rig Name	Nabors B16	Date	10/DEC/2018
Submitted By	Bryce Hinsch	Job Type	Surface Casing	Bulk Plant	Brighton
Customer	ConocoPhillips	Location		Well	Schuh 3-65 21-20 3AH

Well Information

Casing/Liner Size	9.625 in	Depth MD	2191 ft	BHST	35°C/95°F
Hole Size	13.5 in	Depth TVD	2191 ft	BHCT	34°C/93°F
Pressure	1279 psi				

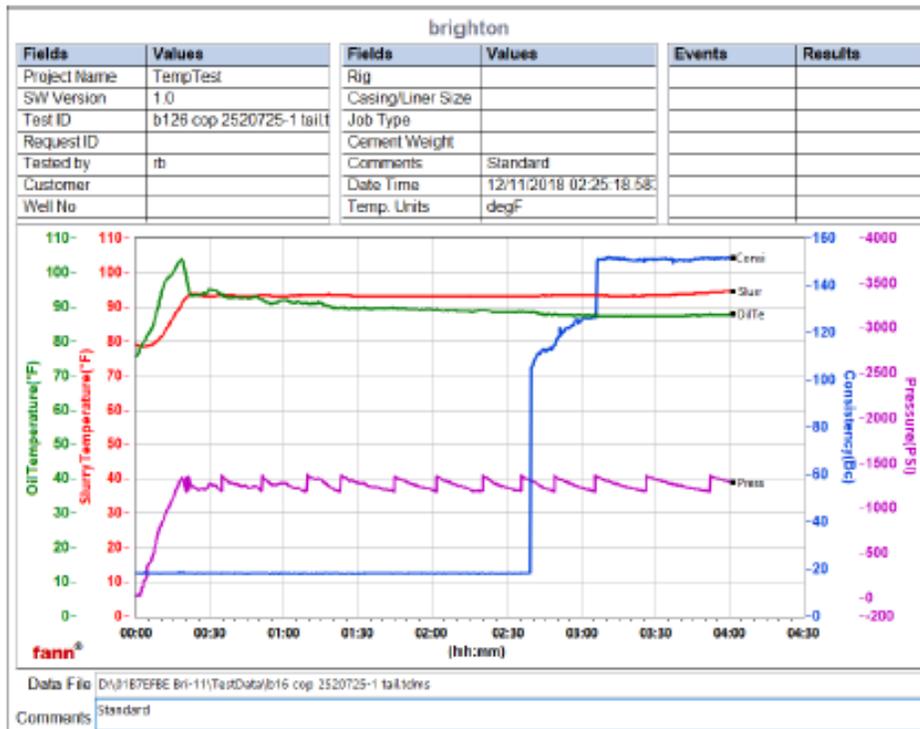
Cement Information - Tail Design

Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.	Cement Properties	
100	% BWOC	Mountain G		Bulk Blend	11.12.18	1	Slurry Density	14.2 lbm/gal
7.9	gal/sack	Field (Fresh) Water		Lab	09.10.18	8/19/2018	Slurry Yield	1.59 ft ³ /sack
2	% BWOC	Cal-Seal 60	PB	Bulk Blend	11.12.18		Water Requirement	7.9 gal/sack
1.3	% BWOC	Econolite (Powder - PB)	PB	Bulk Blend	11.12.18			
0.2	% BWOC	VERSASET (PB)	PB	Bulk Blend	11.12.18			
6	lb/sk	Mountain Enhancer 923	PB	Bulk Blend	11.12.18			

Operation Test Results Request ID 2520725/1

Thickening Time, Request Test ID:36051053 11/DEC/2018

Temp (degF)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	40 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
93	1279	18	19	2:39	2:39	2:39	2:39	2:39



Data File: D:\3187EFBE Bri-11\TextData\B16 cop 2520725-1 tail.odws
 Comments: Standard

2.0 Real-Time Job Summary – Surface Casing

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	DS Pump Press <i>(psi)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	12/13/2018	00:00:00	USER					Job called out at 00:00 with an on location time of 0600. Customer called back while we were on our way to location and changed OL time to 0900.
Event	2	Crew Leave Yard	Crew Leave Yard	12/13/2018	03:30:00	USER					JSA with HES crew on directions and road hazards on the way to location
Event	3	Arrive At Loc	Arrive At Loc	12/13/2018	08:00:00	USER					Arrived on location, rig just finished pulling drill pipe.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	12/13/2018	08:15:00	USER					JSA and hazard hunt with HES crew
Event	5	Start Job	Start Job	12/13/2018	16:51:53	COM4	8.41	-1.00	0.00	7.80	TD 2258' TP 2247' FC 2203' 9 5/8" 36# Surface Casing, 13 1/2" Open Hole.
Event	6	Other	Other	12/13/2018	16:53:12	COM4	8.50	-4.00	0.00	7.80	Fill lines
Event	7	Test Lines	Test Lines	12/13/2018	16:55:21	COM4	8.46	18.00	0.00	9.10	Set kick outs to 500psi and check low pressure kick outs, then bring pressure up to 3500psi and hold.
Event	8	Pump Spacer 1	Pump Spacer 1	12/13/2018	17:07:59	COM4	8.38	7.00	0.00	0.00	Pump 50bbls of 10ppg 8.97yield Tuned Spacer. Pumped at 4bbl/min 146psi.
Event	9	Check Weight	Check Weight	12/13/2018	17:09:25	COM4	10.02	98.00	3.70	3.60	Weight verified by pressurized scales.
Event	10	Drop Bottom Plug	Drop Bottom Plug	12/13/2018	17:19:37	USER	9.94	87.00	4.00	44.20	Plug pre-loaded into HES

				8							head. Plugs loaded and dropped in front of company rep.
Event	11	Pump Lead Cement	Pump Lead Cement	12/13/2018	17:21:38	COM4	11.81	109.00	4.00	0.00	Pump 228bbbls (500sks) of 12ppg 2.57yield Lead Cement. Pumped at 8bbl/min 250psi.
Event	12	Check Weight	Check Weight	12/13/2018	17:25:40	COM4	12.06	126.00	4.00	16.20	Weight verified by pressurized scales.
Event	13	Pump Tail Cement	Pump Tail Cement	12/13/2018	17:56:56	COM4	13.69	202.00	5.90	0.00	Pump 72bbbls (255sks) of 14.2ppg 1.59yield Tail Cement. Pumped at 8bbl/min 321psi.
Event	14	Check Weight	Check Weight	12/13/2018	17:58:42	COM4	14.30	346.00	8.00	12.60	Weight verified by pressurized scales.
Event	15	Shutdown	Shutdown	12/13/2018	18:07:59	COM4	14.44	39.00	0.00	71.90	Shutdown.
Event	16	Drop Top Plug	Drop Top Plug	12/13/2018	18:18:02	COM4	14.55	15.00	0.00	71.90	Plug pre-loaded into HES head. Plugs loaded and dropped in front of company rep.
Event	17	Pump Displacement	Pump Displacement	12/13/2018	18:18:06	COM4	14.54	15.00	0.00	71.90	Pump 170bbbls of Fresh H2O. Pumped first 20bbbls at 3bbl/min then increased rate to 6bbl/min. Spacer to surface at 55bbbls away, Cement to surface at 95bbbls away bringing 75bbbls of cement to surface.
Event	18	Bump Plug	Bump Plug	12/13/2018	18:53:37	COM4	8.34	706.00	3.00	171.20	Bumped plug at 170bbbls away, final lift pressure was 710psi. Took pressure 500psi over and held. Pressure before we check floats was 1402psi. Opened release line and after 1.25bbbls back floats held.

Event	19	Test Lines	Test Lines	12/13/2018	19:00:30	COM4	8.39	1781.00	0.00	1.50	Kicked in pumps to do a 30min 1800psi casing test. After 30 mins pressure was 1845psi. Released pressure and floats held
Event	20	End Job	End Job	12/13/2018	19:33:11	COM4	8.32	-3.00	0.00	1.50	Thank you, Steve Markovich and crew.

3.0 Attachments – Surface Casing

3.1 Conoco Schuh 3-65 21-20 3AH Surface Job Chart



4.0 Cementing Job Summary – Production Casing

4.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the cement casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately 25 bbls of cement were returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton Fort Lupton

The Road to Excellence Starts with Safety

Sold To #: 352431	Ship To #: 3909366	Quote #: 0022522737	Sales Order #: 0905348078
Customer: CONOCO/PHILLIPS COMPANY-EBUS		Customer Rep: Aron Negusse	
Well Name: SCHUH 3-65 21-20		Well #: 3AH	API/UWI #: 05-001-10201-00
Field: WILDCAT	City (SAP): AURORA	County/Parish: ADAMS	State: COLORADO
Legal Description: SE SE-21-3S-65W-1311FSL-475FEL			
Contractor:		Rig/Platform Name/Num: Nabors B16	
Job BOM: 7523 7523			
Well Type: HORIZONTAL OIL			
Sales Person: HALAMERICA/HB41307		Srvc Supervisor: Nicholas Roles	

Job

Formation Name			
Formation Depth (MD)	Top		Bottom
Form Type	BHST		
Job depth MD	18018ft	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	STC	J-55	0	2247		2247
Casing		5.5	4.67	23	TXP-BTC	P-110	0	18018		7823
Open Hole Section			8.5				2191	18028	2247	7823

Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	5.5			18018	Top Plug	5.5		HES
Float Shoe	5.5				Bottom Plug	5.5		HES
Float Collar	5.5			17933	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	10.5 lb/gal Tuned Spacer III	Tuned Spacer III	60	bbl	10.5	6.7		6		
0.6670 gal/bbl		MUSOL(R) A, 5 GAL PAIL (100064220)								
0.1670 gal/bbl		D-AIR 3000L, 5 GAL PAIL (101007444)								

37.58 gal/bbl		FRESH WATER								
83.48 lbm/bbl		BARITE, BULK (100003681)								
0.6670 gal/bbl		DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665)								
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	ElastiCem	ELASTICEM (TM) SYSTEM	870	sack	13.2	1.57		8	7.54	
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	ECONOCEM (TM) SYSTEM	1485	sack	13.5	1.79		8	8.73	
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	40	bbl	8.34			10		
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	Water	Water	340	bbl	8.33			10		
Cement Left In Pipe		Amount	85 ft		Reason			Shoe Joint		
Mix Water:		pH 06	Mix Water Chloride:		0 ppm		Mix Water Temperature:		45°F	
Cement Temperature:		## °F °C		Plug Displaced by:		8.33 lb/gal		Disp. Temperature:		45 °F
Plug Bumped?		Yes		Bump Pressure:		3500 psi MPa		Floats Held?		Yes
Cement Returns:		## bbl		Returns Density:		## lb/gal kg/m3		Returns Temperature:		## °F °C
Comment Got 25bbls Spacer back. Estimated TOT-6469' TOL-770'										

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Rockies, Brighton

Lab Results- Lead

Job Information

Request/Slurry	2515221/1	Rig Name	Nabors B16	Date	14/NOV/2018
Submitted By	Ervee Hirsch	Job Type	Production Casing	Bulk Plant	Brighton
Customer	ConocoPhillips	Location	Well	Well	Any

Well Information

Casing/Liner Size	5.5 in	Depth MD	17972 ft	BHST	106°C / 223°F
Hole Size	8.5 in	Depth TVD	7437 ft	BHCT	104°C / 219°F
Pressure	4541 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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Cement Information - Lead Design ✓

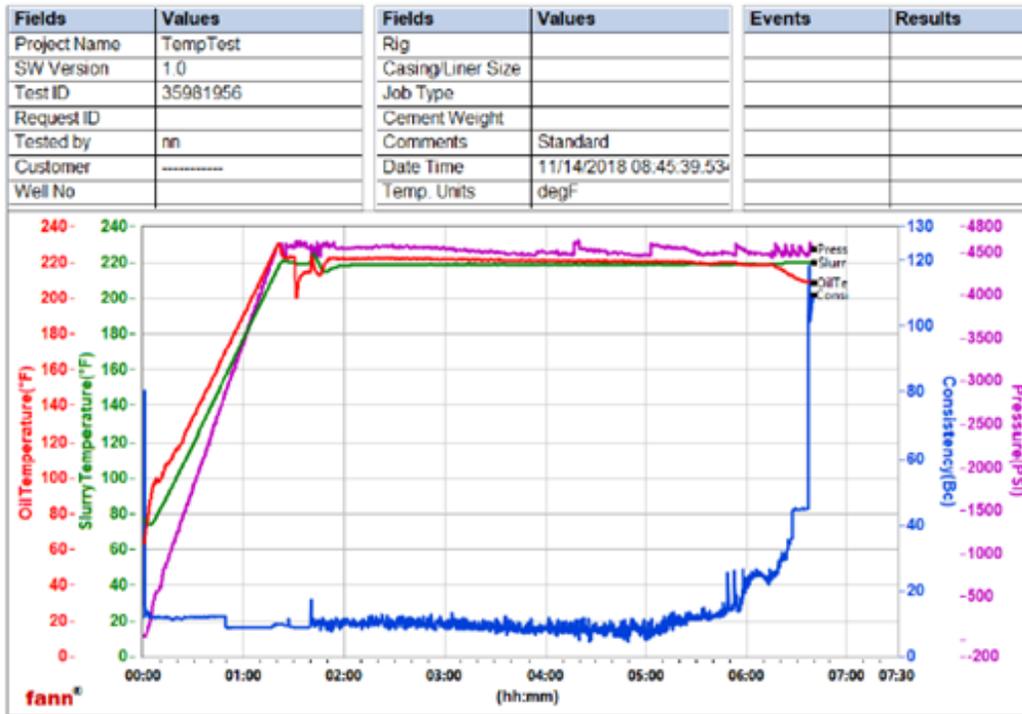
Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.	Cement Properties		
100	% BWOC	Cement Blend					Slurry Density	13.2	lbm/gal
							Slurry Yield	1.57	ft ³ /sack
7.54	gal/sack	Field (Fresh) Water		Lab	09.10.18	8/19/2018	Water Requirement	7.54	gal/sack
5	lb/sk	WellLife 708 (PB)	PB	Lab	26.09.18	09-26-18	Total Mix Fluid	7.54	gal/sack
0.1	% BWOC	SA-1015 (PB)	PB	Lab	12.12.18	SB3243W			
0.35	% BWOC	SCR-100 (PB)	PB	Lab	11.12.18	ct18K05001			
1	lb/sk	Silicalite - Compacted	PB	Lab	16.12.18		Water Source	Field (Fresh)	Water
0.2	% BWOC	HALAD-344 (PB)	PB	Lab	12.12.18		Water Chloride		

Pilot Test Results Request ID 2515221/1

Thickening Time - ON-OFF-ON, Request Test ID: 35981956 14/NOV/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (min)	Static Period (min)	Peak reading (BC)
219	4541	80	6:24	6:37	6:37	6:37	12	90	10	17.2

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Rockies, Brighton

Lab Results- Tail

Job Information

Request/Slurry	2515222/1	Rig Name	Nabors B16	Date	14/NOV/2018
Submitted By	Bryce Hirsch	Job Type	Production Casings	Bulk Plant	Brighton
Customer	ConocoPhillips	Location	Weld	Well	Any

Well Information

Casing/Liner Size	5.5 in	Depth MD	17972 ft	BHST	106°C / 223°F
Hole Size	3.5 in	Depth TVD	7487 ft	BHCT	104°C / 219°F
Pressure	4541 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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Cement Information - Tail Design ✓

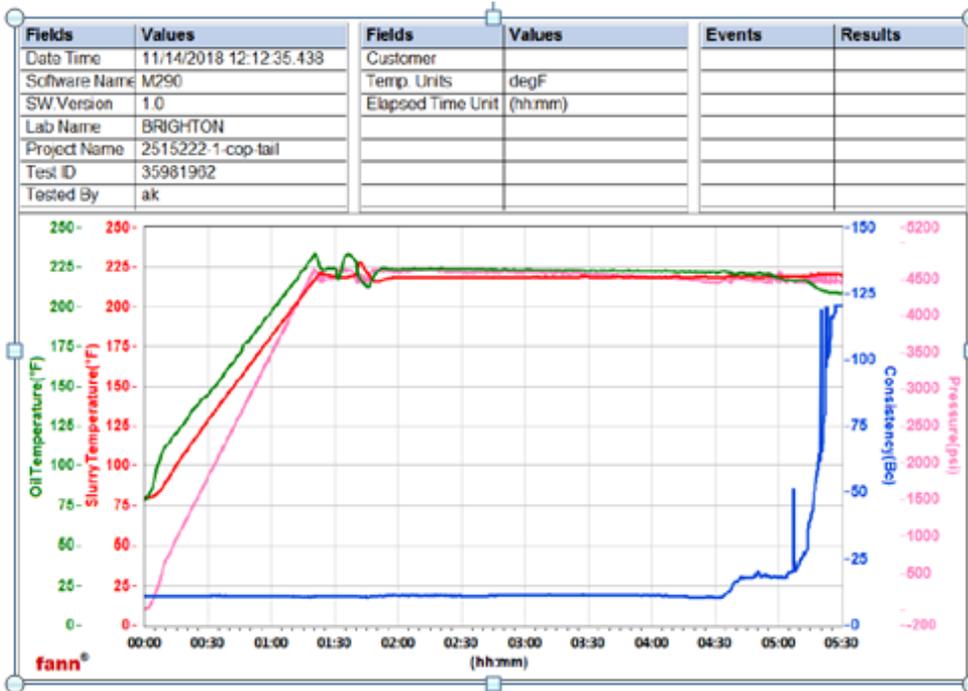
Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.	Cement Properties		
100	% BWOC	Cement Blend					Slurry Density	13.5	lbm/gal
3.75	gal/sack	Field (Fresh) Water		Lab	09.10.18	8/19/2018	Slurry Yield	1.79	ft ³ /sack
25	% BWOC	SS-200 silica flour	PB	Lab	27.06.18	6.27.2018	Water Requirement	8.73	gal/sack
0.1	% BWOC	SA-1015 (PB)	PB	Lab	12.11.18	8E3445w	Total Mix Fluid	8.73	gal/sack
0.3	% BWOC	HR-5 (PB)	PB	Lab	12.11.18	1180115			
0.8	% BWOC	HALAD-344 (PB)	PB	Lab	14.11.18	20180903	Water Source	Field (Fresh) Water	
0.2	% BWOC	HALAD-413 (PB)	PB	Lab	14.11.18	132MSD0648AO	Water Chloride		

Pilot Test Results Request ID 2515222/1

Thickening Time - ON-OFF-ON, Request Test ID:35981962 15/NOV/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh: min)	50 Bc (hh: min)	70 Bc (hh: min)	100 Bc (hh: min)	Start Bc	Stirring before stop (min)	Static Period (min)	Peak reading (BC)
219	4541	80	5:08	5:17	5:18	5:21	11	90	10	11

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5.0 Real-Time Job Summary – Production Casing

5.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	12/19/2018	19:00:00	USER					Called out by Service Coordinator for O/L at 0100
Event	2	Depart Yard Safety Meeting	Depart Yard Safety Meeting	12/19/2018	19:45:00	USER					Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive.
Event	3	Depart from Service Center or Other Site	Depart from Service Center or Other Site	12/19/2018	20:00:00	USER					Journey Management prior to departure
Event	4	Arrive at Location from Service Center	Arrive at Location from Service Center	12/19/2018	21:00:00	USER					Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment.
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/20/2018	00:30:00	USER					Discussed rigging up hazards and procedure according to HMS.
Event	6	Other	Other	12/20/2018	01:00:00	USER					Water test- PH-6, Chlor-0, Temp-45.
Event	7	Safety Meeting - Pre Job	Safety Meeting - Pre Job	12/20/2018	03:15:00	USER	0.00	0.02	-23.00	0.00	Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority.
Event	8	Start Job	Start Job	12/20/2018	03:44:51	COM2	0.00	8.46	1.00	0.00	TD-18028', TP-18018' 5.5" 23#, FC-17933', TVD-7823', OH-8.5", SURF-2247' 9.625" 36#, MUD-9.8#.
Event	9	Test Lines	Test Lines	12/20/2018	03:54:40	COM2	0.00	8.56	32.00	3.60	Pumped 3bbls fresh water

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to fill lines, closed manifold, performed 500psi k/o function test, followed with 5th gear stall at 1400psi, proceeded to bring pressure up to 5000psi. Held pressure and no leaks.

Event	10	Pump Spacer 1	Pump Spacer 1	12/20/2018	03:59:45	COM2	0.00	8.52	17.00	3.70	Pumped 60bbls of 11# 4.83y 30.5g/s Tuned Spacer III with 40g Dual Spacer B, 40g Musol-A and 10g D-Air at 5bpm 420psi
Event	11	Check Weight	Check Weight	12/20/2018	04:05:56	COM2	1.50	10.44	154.00	8.60	Weight verified with pressurized mud scales.
Event	12	Drop Bottom Plug	Drop Bottom Plug	12/20/2018	04:24:02	COM2	5.50	10.70	429.00	63.80	Dropped by HES supervisor, witnessed by company man.
Event	13	Pump Lead Cement	Pump Lead Cement	12/20/2018	04:24:05	COM2	5.50	10.81	437.00	64.10	Pumped 870sks or 243bbls of 13.2# 1.57y 7.54g/s Elasticem at 8bpm 470psi
Event	14	Check Weight	Check Weight	12/20/2018	04:27:21	COM2	5.50	13.26	382.00	18.00	Weight verified with pressurized mud scales.
Event	15	Check Weight	Check Weight	12/20/2018	04:54:59	COM2	8.30	13.14	416.00	2.00	Weight verified with pressurized mud scales.
Event	16	Pump Tail Cement	Pump Tail Cement	12/20/2018	04:58:32	COM2	8.30	13.06	374.00	31.30	Pumped 1485sks or 473bbls of 13.5# 1.79y 8.73g/s Econocem at 8bpm 423psi.
Event	17	Check Weight	Check Weight	12/20/2018	05:10:22	COM2	8.10	13.63	389.00	61.70	Weight verified with pressurized mud scales.
Event	18	Check Weight	Check Weight	12/20/2018	05:54:37	COM2	8.20	13.49	400.00	424.40	Weight verified with pressurized mud scales.
Event	19	Shutdown	Shutdown	12/20/2018	06:21:15	COM2	0.00	8.30	35.00	591.20	Pumped 10bbls fresh water through pumps and lines.
Event	20	Drop Top Plug	Drop Top Plug	12/20/2018	06:21:18	COM2	0.00	8.32	34.00	591.20	Dropped by HES supervisor, witnessed by company man.

Event	21	Pump Displacement	Pump Displacement	12/20/2018	06:21:21	COM2	0.00	8.32	33.00	0.00	Pumped 380bbbls fresh water with 20g of MMCR in first 40bbbls, with 15g biocide, 1bucket oxygen and 2 barrels of Baracore 100 throughout.
Event	22	Bump Plug	Bump Plug	12/20/2018	07:37:12	COM2	0.00	8.28	3531.00	385.40	Slowed down at 360bbbls away to 3bpm, final circulating pressure-2530psi, Bump Pressure-3500psi.
Event	23	Check Floats	Check Floats	12/20/2018	07:42:09	USER	0.00	8.26	3342.00	385.40	Released pressure and got 4.5bbbls fresh water back. Floats held.
Event	24	End Job	End Job	12/20/2018	07:43:39	COM2	0.00	8.25	16.00	385.40	Got 25bbbls Spacer back. Estimated TOT-6469' TOL-770'
Event	25	Safety Meeting - Pre Rig-Down	Safety Meeting - Pre Rig-Down	12/20/2018	07:45:00	USER	0.00	8.24	15.00	0.00	All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/20/2018	08:45:00	USER					All HSE present and fit to drive. Aware of directions and hazards.
Event	27	Depart Location for Service Center or Other Site	Depart Location for Service Center or Other Site	12/20/2018	09:00:00	USER					Pre journey management prior to departure.

6.0 Attachments – Production Casing

6.1 Schuh 3-65 21-20-Custom Results.png

