

# Cementing Treatment



**Start Date** 04/16/2018 **Well** G & D HANKS U-27-28HN  
**End Date** 04/16/2018 **County** WELD  
**Client** BAYSWATER EXPLORATION & PRODUCTION, LLC **State/Province** CO  
**Client Field Rep** **API** 05-123-46033  
**Service Supervisor** Jesus Saldivar **Rig** True 38  
**District** Cheyenne, WY **Type of Job** Long String

## WELL GEOMETRY

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Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)
Previous Casing	8.92	9.63	36.00	1,553.00	1,553.00	
Open Hole	8.50			18,220.41	7,267.00	8.00
Casing	4.78	5.50	20.00	18,207.73	7,267.00	

**Shoe Length (ft):** 42

## HARDWARE

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**Bottom Plug Used?** No **Pipe Movement** None None  
**Top Plug Used?** Yes **Job Pumped Through** Plug Container  
**Top Plug Provided By** KLX **Top Connection Thread** BTC  
**Top Plug Size** 5.5" **Top Connection Size** 5.5"  
**Centralizers Used** Yes  
**Centralizers Quantity** 203  
**Centralizers Type** Phenolic  
**Landing Collar Depth (ft)** 18,208

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## CIRCULATION PRIOR TO JOB

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Well Circulated By	True	PV Mud Out	19
Circulation Prior to Job	Yes	YP Mud In	8
Circulation Time (min)	360	YP Mud Out	8
Circulation Rate (bpm)	12.5	Solids Present at End of Circulation	No
Circulation Volume (bbls)	4,500	10 sec SGS	9
Lost Circulation Prior to Cement Job	No	10 min SGS	18
Mud Density In (ppg)	10.3	30 min SGS	21
Mud Density Out (ppg)	10.3	Flare Prior to/during the Cement Job	No
PV Mud In	19	Gas Present	No

## TEMPERATURE

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Ambient Temperature (°F)	55	Slurry Cement Temperature (°F)	55
Mix Water Temperature (°F)	55	Flow Line Temperature (°F)	125

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## BJ FLUID DETAILS

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Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	11.5000			0.00				80.0000
Lead Slurry	BJCem P100.3.01C	13.2000	1.8254	9.88	0.00	6,950.00	960	1,753.0000	312.2000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	6,950.00	11,263.00	1,900	2,792.0000	497.2000
Displacement 1	Retarded Water w/ Clay Protection & Biocide	8.3331			17,270.00			0.0000	10.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	394.0000

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Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SAND, S-8, Silica Flour, 200 Mesh	215.0000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	Spacer Surfactant, SS-247	0.7000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	GELLANT WATER, GW-86	0.9000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-267	0.7000	GPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
Lead Slurry	BJCem P100.3.01C	RETARDER, R-31	0.1700	BWOB
Lead Slurry	BJCem P100.3.01C	Foam Preventer, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, EC-2	3.0000	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	BWOB
Lead Slurry	BJCem P100.3.01C	GELLANT WATER, GW-86	0.0500	BWOB
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1500	BWOB
Displacement 1	Retarded Water w/ Clay Protection & Biocide	RETARDER, R-8L	0.5000	GPB
Displacement 1	Retarded Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB
Displacement 1	Retarded Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement Final	Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB

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## DISPLACEMENT AND END OF JOB SUMMARY

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<b>Displaced By</b>	BJS	<b>Amount of Cement Returned/Reversed</b>	55bbls
<b>Calculated Displacement Volume (bbls)</b>	404	<b>Method Used to Verify Returns</b>	Weight
<b>Actual Displacement Volume (bbls)</b>	404	<b>Amount of Spacer to Surface</b>	80bbls
<b>Did Float Hold?</b>	Yes	<b>Pressure Left on Casing (psi)</b>	0
<b>Bump Plug</b>	Yes	<b>Amount Bled Back After Job</b>	4bbls
<b>Bump Plug Pressure (psi)</b>	2750	<b>Total Volume Pumped (bbls)</b>	1293
<b>Were Returns Planned at Surface</b>	Yes	<b>Lost Circulation During Cement Job</b>	No
<b>Cement returns During Job</b>	Yes		

Customer Name Bayswater  
 Well Name G&D Hanks U-27-28HN  
 Job Type Long String

District Cheyenne  
 Supervisor Jesus Saldivar  
 Engineer Holden Fauber



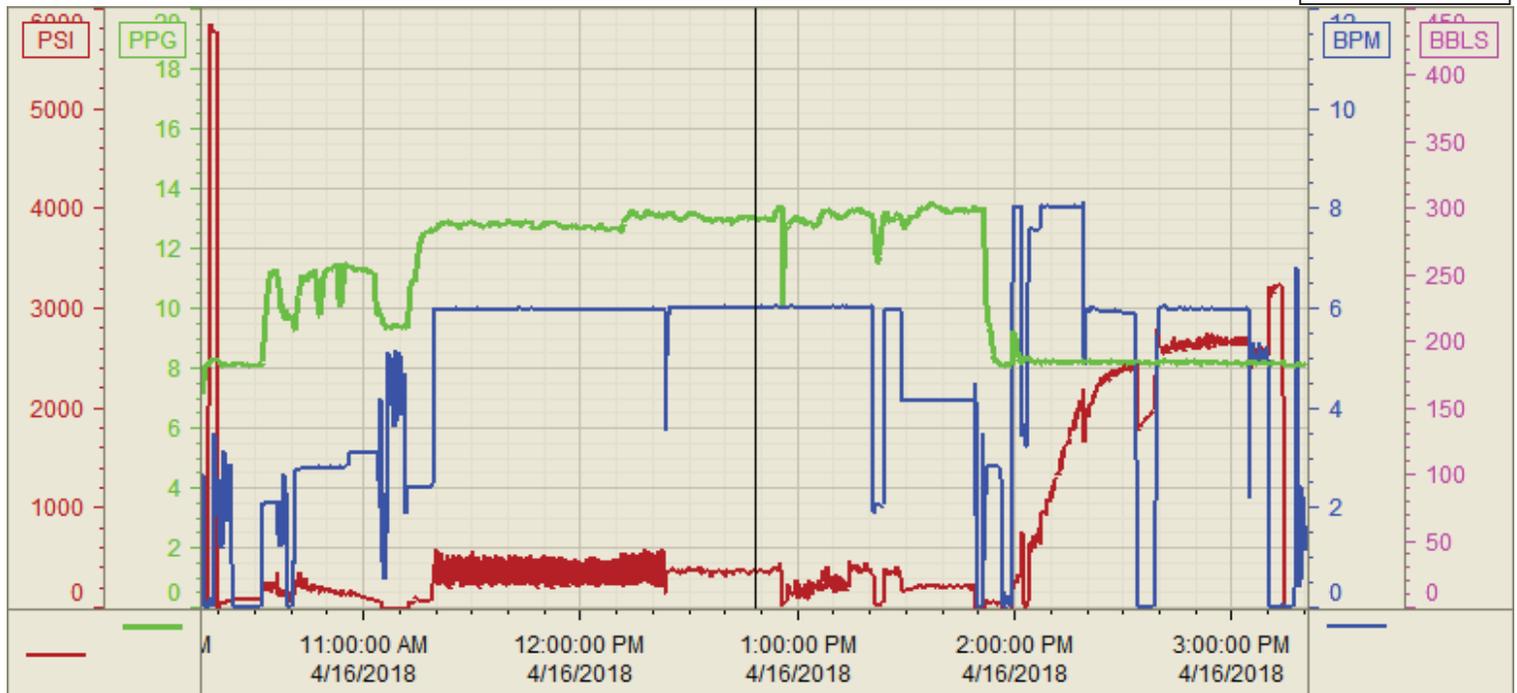
Seq No.	Start Date/Time	Category	Event	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
1	4/16/2018 0:01	Mobilization	Call Out					Crew gets called out requested time 5:30
2	3:00	Mobilization	Depart Facility					Crew departs facility
3	5:00	Operational	On Location					Crew arrives on location I went and got numbers from customer
4	5:05	Operational	Spot Equipment					Spot equipment
5	5:30	Operational	Rig Up					Crew rigs up iron and hoses needed for the job
6	5:45	StandBy	Wait					Crew waits for rig to circulate
7	7:00	Operational	Safety Meeting					Crew has a safety meeting with rig crew and company man discussing the job. Rig landed casing out at 18,207.73', TVD was 7,284, TD was 18,220.41, Float shoe was at 18,165.73 and floatation collar was at 6,955.203 centralizers were ran.
8	7:20	StandBy	Wait					Crew waits for rig to finish circulating
9	8:30	Downtime	Other					While rigging up cement head Cement supervisor was injured and was taken to the nearest medical facility. Rig circulated until new supervisor made it to job site. Rig was down for about 01:30 hr. while waiting for supervisor.
10	10:10	Operational	Other					Rig pumped 20bbls of Diesel before breaking off and having BJ services tie on to the well.
11	10:21	Operational	Fill Lines	8.33	3	3	200	Filled lines with 3 bbls at 3 bpm with 200psi
12	10:25	Operational	Pressure Test					Pressure tested 5,000 psi
13	10:33	Operational	EZ Spacer	11.5	2.5	80	200	Pumped 80 bbls of EZ Spacer at 2.5bpm with Surfactants added through the LA pumps. SS-267 was short 8gals due to supervisor not turning pump back on after shutting it to clear blockage in mix system.
14	10:40	Operational	Shutdown					Shutdown and cleared out blockage in mixing system before batching up and going downhole with tail.
15	11:15	Operational	Lead	13.2	6	312	300	Mixed and pumped 960sk(312bbls) of BJ Cem P100.3.01C Lead cement at 13.2lbs/gal, 1.82ft3/sk and 9.88gals/sk.
16	12:10	Operational	Tail	13.5	6	497	300	Mixed and pumped 1900sk(497bbls) of BJ Cem P50.3.01C Lead cement at 13.5lbs/gal, 1.47ft3/sk and 7.45gals/sk. Had to slow rate due to loss of product.
17	13:55	Operational	Shutdown					Swapped valves on the rig floor to wash pumps and lines before dropping the latch down plug.
18	13:59	Operational	Drop Plug					Removed cap from the plug container and customer rep witnessed the latch down plug go.
19	14:00	Operational	Displacement	8.4	8	10	250	Pumped 10bbls of retarded water with R-8L
20	14:02	Operational	Displacement	8.4	8	130	2000	Pumped 130bbls of fresh water with biocide and ASF-50 @ 8bpm.
21	14:20	Operational	Slow Rate	8.4	6	140	1900	Slowed rate as per customer.
22	14:21	Operational	Displacement	8.4	6	91	2300	Pumped 91bbls of fresh water with biocide and ASF-50 @ 6bpm.
23	14:32	Operational	Shutdown					Shutdown for rig to break lines from there stack and swap them to the four sided take to take returns.
24	14:36	Operational	Displacement	8.4	6	150	2700	Pumped 150bbls of fresh water with biocide and ASF-50 @ 6bpm.
25	14:58	Operational	Spacer To Surface					Got 80bbls EZ Spacer to surface at 269bbls away.
26	15:11	Operational	Cement To Surface					Got 55bbls of lead cement to surface at 349bbls away.
27	15:13	Operational	Slow Rate					Slowed rate for the last 20bbls of displacement.
28	15:14	Operational	Displacement	8.33	5	20	2600	Displaced 20bbls of fresh water with no adds.
29	15:20	Operational	Land Plug	8.33	5		2750	Bumped plug at 404bbls of displacement away. Pressured the well up to 3250psi and held pressure for 5 minutes.
30	15:25	Operational	Check Floats				3250	Bled pressure of to driverside displacement tank and got 4bbls of flow back and it stopped.
31	15:30	Operational	Job Complete					Crew washed up the rigs stack before rigging down
32	15:45	Operational	Rig Down					Crew had pre-rig out briefing.
33	17:00	Mobilization	Depart location					Crew departs location for home district.

Customer: Bayswater  
 Well Number: Hanks U-27-28HN  
 Lease Info:



Print Date/Time

4/16/2018 4:01:36 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DH - Density (PPG)	13.04 i.	4/16/2018 12:48:15 PM i.	CementerDENSITY2_ACTUAL_RATE
2	Combined Rate (BPM)	6.02	4/16/2018 12:48:12 PM	CementerFlow_Combined
3	PS - Press (PSI)	378.7 i.	4/16/2018 12:48:15 PM i.	CementerPS_DISCHARGE_PRESS_DIAL
4				
5				

Source: Control1 4:01:31 PM