

Cementing Treatment



Start Date	5-21-2018	Field Ticket#	06890-K5V7H50202-87498
End Date	5-22-2018	Well	G & D Hanks WA-27-28HN
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	API#	05-123-46295
Client Field Rep.	Steve	County	WELD
Service Sup.	Albert Snyder	State/Province	CO
District	Cheyenne, WY	Execution ID	EXC-06890-K5V7H502
Type of Job	Long String	Project ID	PRJ1006914

WELL GEOMETRY

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			18,109.00	7,117.00	5.00
Casing	4.78	5.50	20.00	18,097.00	7,117.00	

Shoe Length (ft): 24

HARDWARE

Top Plug Used?	Yes	Max Casing Pressure - Rated (psi)	5320
Top Plug Provided By	3rd party	Max Casing Pressure - Operated (psi)	3600
Top Plug Size	5.5 dart	Pipe Movement	None
Landing Collar Depth (ft)	18,073	Top Connection Thread	Buttress
Tool type	Float Collar	Top Connection Size	5.5
Tool Depth (ft)	18073		

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	PV Mud Out	23
Circulation Prior to Job	Yes	YP Mud In	10
Circulation Time (min)	120	YP Mud Out	10
Circulation Rate (bpm)	10	Solids Present at End of Circulation	No
Circulation Volume (bbls)	2276	10 sec SGS	9
Lost Circulation Prior to Cement Job	No	10 min SGS	17
Mud Density In (ppg)	10	30 min SGS	19
Mud Density Out (ppg)	10	Flare Prior to/during the Cement Job	No
PV Mud In	23	Gas Present	No

TEMPERATURE

Ambient Temperature (°F)	75	Slurry Cement Temperature (°F)	80
Mix Water Temperature (°F)	80	Flow Line Temperature (°F)	140

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BJ FLUID DETAILS

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	7,050.00	960	1,740.0000	309.9000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	7,050.00	11,075.00	1,810	2,670.0000	475.4000
Displacement 1	GW-86 Pill	8.3300			17,633.00			0.0000	10.0000
Displacement 2	Retarded Water w/ Clay Protection & Biocide	8.3331				0.00	0	0.0000	20.0000
Displacement Final	Water w/ Clay Protection & Biocide	8.3331			0.00			0.0000	371.1000

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	GELLANT WATER, GW-86	0.9000	PPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	SPACER SURFACTANT, SS-267	0.7000	GPB
Spacer / Pre Flush / Flush	IntegraGuard EZ Spacer	Spacer Surfactant, SS-247	0.7000	GPB
Lead Slurry	BJCem P100.3.01C	CEMENT, ASTM TYPE III	100.0000	PCT
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
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
Tail Slurry	BJCem P50.6.02C	Flyash (Rockies)	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	BWOB
Tail Slurry	BJCem P50.6.02C	CEMENT, CLASS G	50.0000	PCT
Tail Slurry	BJCem P50.6.02C	RETARDER, SR-20	0.1500	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	EXTENDER, BENTONITE	2.0000	BWOB
Displacement 1	GW-86 Pill	GELLANT WATER, GW-86	2.5000	PPB
Displacement 1	GW-86 Pill	RETARDER, R-8L	0.5000	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	RETARDER, R-8L	0.5000	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	GPB
Displacement 2	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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TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)
IntegraGuard EZ Spacer	5.00	80.00
BJCem P100.3.01C	6.00	309.90
BJCem P50.6.02C	6.00	475.40
GW-86 Pill	6.00	10.00
Retarded Water w/ Clay Protection & Biocide	8.00	20.00
Water w/ Clay Protection & Biocide	8.00	371.10

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ Services	Amount of Cement Returned/Reversed	33
Calculated Displacement Volume (bbls)	400	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	400	Amount of Spacer to Surface	80
Did Float Hold?	Yes	Amount Bled Back After Job	5
Bump Plug	Yes	Total Volume Pumped (bbls)	1267
Bump Plug Pressure (psi)	3600	Top Out Cement Spotted	No
Were Returns Planned at Surface	No	Lost Circulation During Cement Job	No
Cement returns During Job	Yes		



Customer Name: BAYSWATER EXPLORATION & PRODUCTION, LLC

Well Name: WA-27-28HN G & D HANKS

Job Type: Long String

TMD (ft): 18097

District: Cheyenne, WY

Field Leader: Albert Snyder

Quote ID: QUO-12076-W0B5W3

Plan ID: ORD-06890-K5V7H5

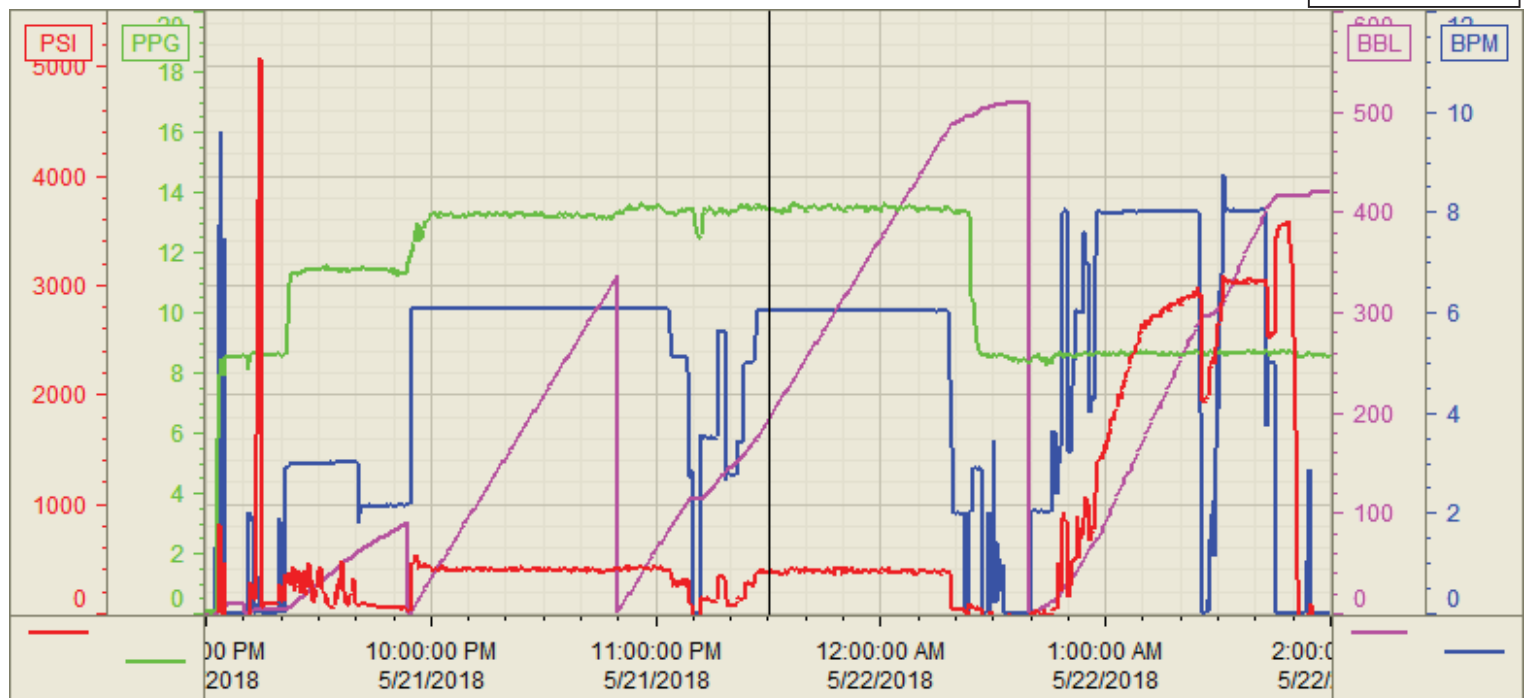
Execution ID: EXC-06890-K5V7H502

Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
05/21/2018 10:00	Callout					called out at 10:00 requested on location time 17:00
05/21/2018 11:15	Leave Location					drive together in convoy
05/21/2018 14:00	Safety Meeting					discussed journey to location
05/21/2018 15:30	Arrive on Location					arrives at 15:00 2 hours early
05/21/2018 16:00	Safety Meeting					discussed rigging up equipment
05/21/2018 16:30	Rig Up					rigged up using teamwork
05/21/2018 16:40	Customer					waiting on casing to be ran and hole to be circulated 2 bottoms up
05/21/2018 21:00	Other (See comment)	8.3300	2.00	3.00	400.00	pump fresh water fill lines
05/21/2018 21:05	Pressure Test	8.3300	1.00	1.00	5,000.00	test lines to 5000 psi
05/21/2018 21:10	Safety Meeting					discussed job with rig crew
05/21/2018 21:10	Pump Spacer	11.5000	3.00	80.00	450.00	pump ez spacer with chemical in it
05/21/2018 21:46	Pump Lead Cement	13.2000	6.00	313.00	500.00	mix amnd pump 960 sks of p-100 at 13.2# with 1.83 yield and 9.88 water req.
05/21/2018 23:09	Pump Tail Cement	13.5000	6.00	474.00	400.00	mix and pump 1810 sks of p-50 at 13.5# with 1.47 yield and 7.45 water req.
05/22/2018 0:37	Drop Top Plug					dropped plug and washed to the pit
05/22/2018 0:57	Pump Displacement	9.0000	6.00	10.00	0.00	pump pill with R8L
05/22/2018 1:00	Pump Displacement	8.3300	6.00	20.00	150.00	Pump 20 bbls of R8L water
05/22/2018 1:17	Pump Displacement	8.3300	8.00	100.00	1,800.00	fresh water with biocide/ rescare
05/22/2018 1:30	Pump Displacement	8.3300	8.00	200.00	3,000.00	fresh water with biocide /rescare
05/22/2018 1:43	Pump Displacement	8.3300	8.00	287.00	2,300.00	spacer back to surface all 80 bbls
05/22/2018 1:55	Pump Displacement	8.3300	5.00	350.00	2,700.00	cement to the surface 33 bls back
05/22/2018 2:00	Land Plug	8.3300	5.00	400.00	3,600.00	plug landed on calcualted that was 400 bbls
05/22/2018 2:10	Check Floats					float is holding
05/22/2018 2:15	Safety Meeting					discussed rigging down
05/22/2018 2:30	Rig Down					rig down with safety no hurry
05/22/2018 3:00	Safety Meeting					discussed journey steacs briefing and after action review
05/22/2018 4:00	Leave Location					depart location stay in convoy

Customer: BAYSWATER
Well Number: WA-27-28HN
Lease Info: G&D HANKS



Print Date/Time
5/22/2018 2:30:16 AM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	400.0	5/21/2018 11:30:00 PM	CementorDS_DISCHARGE_PRESS_DIAL
2	DH - Density (PPG)	13.49	5/21/2018 11:30:02 PM	CementorDENSITY2_ACTUAL_RATE
3	Down Hole Total (BBLs)	195.1	5/21/2018 11:30:16 PM	CementorDOWNHOLE_FLOW_TOTAL
4	Combined Rate	6.04 i.	5/21/2018 11:30:00 PM i.	CementorFlow_Combined
5				

Source: Control1 2:30:10 AM