

Cementing Treatment



Start Date	5/1/18	Well	TA-27-28HN G & D HANKS
End Date	5/1/18	County	WELD
Client	BAYSWATER EXPLORATION & PRODUCTION, LLC	State/Province	CO
Client Field Rep	Marsh	API	05-123-46288
Service Supervisor	Brian Boyd	Rig	True 38
District	Cheyenne, WY	Type of Job	Long String

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			17,958.00	7,131.00	5.00
Casing	4.78	5.50	20.00	17,943.00	7,131.00	

Shoe Length (ft): 30

HARDWARE

Top Plug Used?	Yes	Tool Depth (ft)	17,916
Top Plug Provided By	Rig	Max Casing Pressure - Rated (psi)	9190
Top Plug Size	5.5'	Max Casing Pressure - Operated (psi)	7352
Centralizers Used	Yes	Pipe Movement	Yes
Centralizers Quantity	224	Job Pumped Through	Cement head
Landing Collar Depth (ft)	17,916	Top Connection Thread	BTC
Tool Type	Float collar	Top Connection Size	5.5"

CIRCULATION PRIOR TO JOB

Well Circulated By	Rig	YP Mud In	9
Circulation Prior to Job	Yes	Solids Present at End of Circulation	No
Circulation Time (min)	240	10 sec SGS	8
Circulation Rate (bpm)	6	10 min SGS	14
Circulation Volume (bbls)	1320	30 min SGS	15
Lost Circulation Prior to Cement Job	No	Flare Prior to/during the Cement Job	No
Mud Density In (ppg)	9.7	Gas Present	No
PV Mud In	19		

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TEMPERATURE

Ambient Temperature (°F)	60	Slurry Cement Temperature (°F)	69
Mix Water Temperature (°F)	57	Flow Line Temperature (°F)	16

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/PreFlush/Flush	IntegraGuard EZ Spacer	11.5000			0.00				80.0000
Lead Slurry	BJCem P100.3.01C	13.2000	1.8254	9.88	0.00	6345	950	1,728.0000	307.7000
Tail Slurry	BJCem P50.6.02C	13.5000	1.4777	7.45	6345	11601	1,800	2,641.0000	470.3000
Displacement 1	GW-86 Pill	8.3300			17,466.00			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	367.4000

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Fluid Type	Fluid Name	Component	Concentration	UOM
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	SAND, S-8, Silica Flour, 200 Mesh	215.0000	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	Foam Preventer, FP-25	0.3000	BWOB
Lead Slurry	BJCem P100.3.01C	GELLANT WATER, GW-86	0.0500	BWOB
Lead Slurry	BJCem P100.3.01C	BONDING AGENT, EC-2	3.0000	BWOB
Lead Slurry	BJCem P100.3.01C	RETARDER, R-31	0.1700	BWOB
Lead Slurry	BJCem P100.3.01C	FLUID LOSS, FL-66	0.5000	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	Foam Preventer, FP-25	0.3000	BWOB
Tail Slurry	BJCem P50.6.02C	FLUID LOSS, FL-66	0.2000	BWOB
Tail Slurry	BJCem P50.6.02C	GELLANT WATER, GW-86	0.1000	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	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	BIOCIDE, BIOC11139W	0.0100	GPB
Displacement 2	Retarded Water w/ Clay Protection & Biocide	CLAY STABILIZER ResCare CS	0.0800	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

TREATMENT SUMMARY

Fluid	Rate (bpm)	Fluid Vol. (bbls)
IntegraGuard EZ Spacer	5.00	80.00
BJCem P100.3.01C	6.00	307.70
BJCem P50.6.02C	6.00	470.30
GW-86 Pill	0.00	10.00
Retarded Water w/ Clay Protection & Biocide	8.00	20.00
Water w/ Clay Protection & Biocide	8.00	367.40

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DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ Services	Amount of Cement Returned/Reversed	70 bbls
Calculated Displacement Volume (bbls)	397	Method Used to Verify Returns	Visual
Actual Displacement Volume (bbls)	399	Amount of Spacer to Surface	80 bbls
Did Float Hold?	Yes	Amount Bled Back After Job	4.5
Bump Plug	Yes	Total Volume Pumped (bbls)	1256
Bump Plug Pressure (psi)	399	Top Out Cement Spotted	No
Were Returns Planned at Surface	Yes	Lost Circulation During Cement Job	No
Cement returns During Job	Yes		

Event Log



Customer Name: BAYSWATER EXPLORATION
Well Name: TA-27-28HN G & D HANKS
Job Type: Long String

District: Cheyenne, WY
Field Leader: Brian Boyd
Quote ID: QUO-10898-K9M7Q9
Plan ID: ORD-06310-G8S1K5
Execution ID: EXC-06310-G8S1K502

Start Dt./Time	Event	Density (ppg)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
04/30/2018 20:30	Callout					Customer requested crew on location at 4:30
05/01/2018 0:00	Leave Location					Bj crew has journey mangement and departs from shop
05/01/2018 1:04	Arrive on Location					Bj crew arrives on location and meets with customer
05/01/2018 1:20	Safety Meeting					Bj crew has STEACS breifing over spotting trucks and rigging up iron
05/01/2018 1:30	Rig Up					Bj crew rigs up iron and hoses
05/01/2018 2:20	Other (See comment)					Waiting On rig to run casing
05/01/2018 2:30	Other (See comment)					Rig lands casing and begins to recurilate for few hours
05/01/2018 6:30	Safety Meeting					BJ crew has STEACS with BJ, rig crew and company man over job and hazards
05/01/2018 7:18	Start Pumping	8.3300	3.00	4.00	300.00	Fill Pumps And Lines
05/01/2018 7:21	Pressure Test	8.3300	0.50	0.50	5,140.00	Pressure test iron and head to 5000 PSI
05/01/2018 7:31	Pump Spacer	11.5000	2.50	80.00	323.00	Pump 80 bbls of 11.5 PPG spacer
05/01/2018 8:01	Pump Lead Cement	13.2000	6.00	307.00	534.00	Pump 307 bbls of 13.2 PPG Lead Cement (950 sks, 1.8254 Yield, 9.88 Gals/Sks)
05/01/2018 8:52	Pump Tail Cement	13.5000	6.00	473.00	400.00	Pump 473 bbls Of 13.5 PPG Tail Cement (1800 Sks, 1.4777, 7.45 Gals/Sks)
05/01/2018 10:17	Other (See comment)					Shut down pumping
05/01/2018 10:20	Clean Pumps and Lines	8.3300	3.00	15.00	30.00	Wash pumps and lines
05/01/2018 10:32	Drop Top Plug					Drop top plug
05/01/2018 10:33	Pump Displacement	8.3300	8.00	399.00	989.00	Pump 399 bbls of fresh water displacement (first 10 bbls is GW-3LF Pill)
05/01/2018 11:23	Cement Back to Surface	8.3300	8.00	330.00	3,000.00	330 bbls into displacement got cement to surface for total of 70 bbls back
05/01/2018 11:30	Other (See comment)	8.3300	5.00	389.00	2,230.00	Last 10 bbls slow rate to 5 bpm
05/01/2018 11:38	Land Plug	8.3300			3,200.00	Landed plug at 399 bbls landed at 3200 PSI, FCP of 2230
05/01/2018 11:41	Check Floats					Hold for 3 mins and check floats got 4.5 bbls back to pump truck
05/01/2018 11:50	Safety Meeting					Bj crew has STEACS over riggin down iron and hoses
05/01/2018 11:55	Rig Down					BJ crew rigs down iron and hoses
05/01/2018 13:00	Leave Location					BJ crew has journey mangement and departs from location

Customer: Bayswater Exploration &

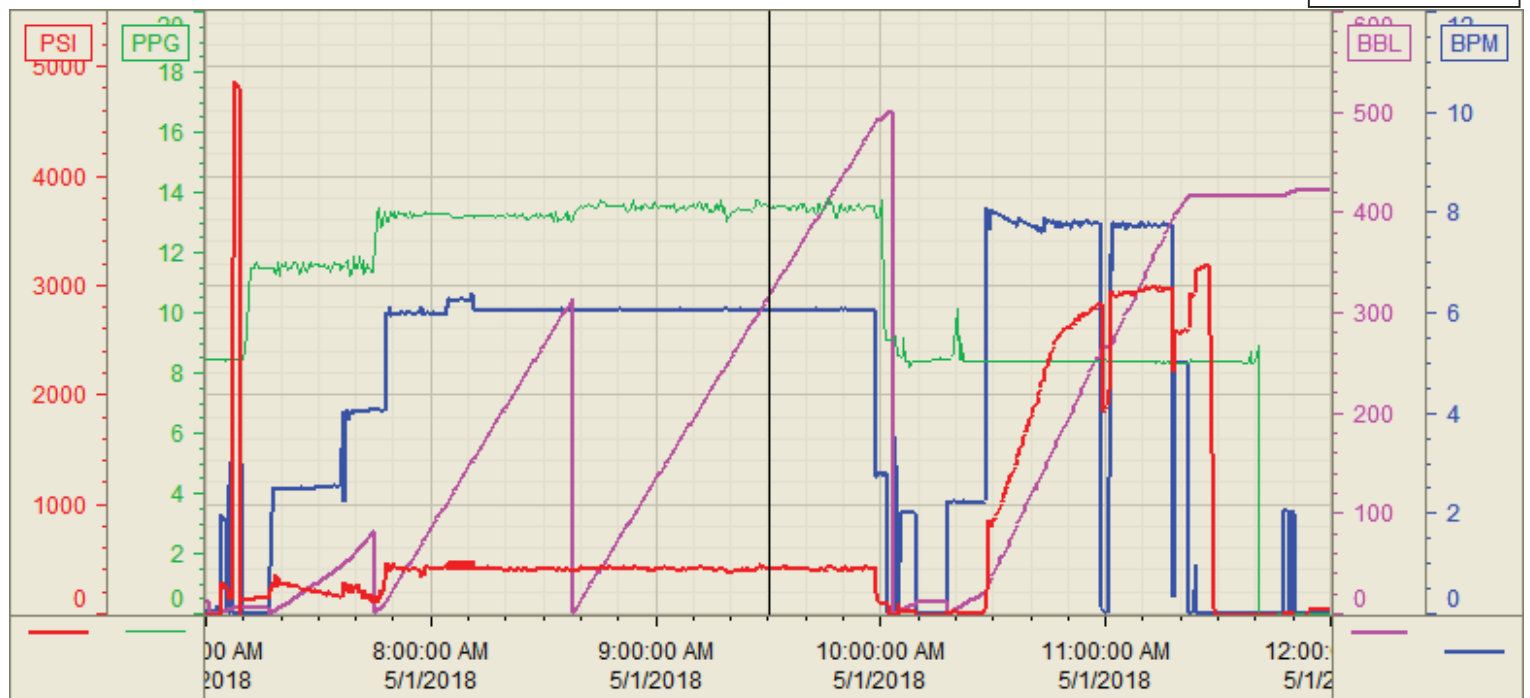
Well Number: TA-27-28HN

Lease Info: G D Hawks



Print Date/Time

5/1/2018 12:09:06 PM



	Name	Y value	X value/time stamp	Tag name Y
1	DS - Press (PSI)	427.2	5/1/2018 9:30:13 AM	Cement\DS_DISCHARGE_PRESS_DIAL
2	Recirc - Density (PPG)	13.51	5/1/2018 9:30:13 AM	Cement\DENSITY_ACTUAL_RATE
3	Down Hole Total (BBL)	315.7 i.	5/1/2018 9:30:08 AM i.	Cement\DOWNHOLE_FLOW_TOTAL
4	Combined Rate	6.05 i.	5/1/2018 9:30:08 AM i.	Cement\Flow_Combined
5				

Source: Control1 12:09:01 PM