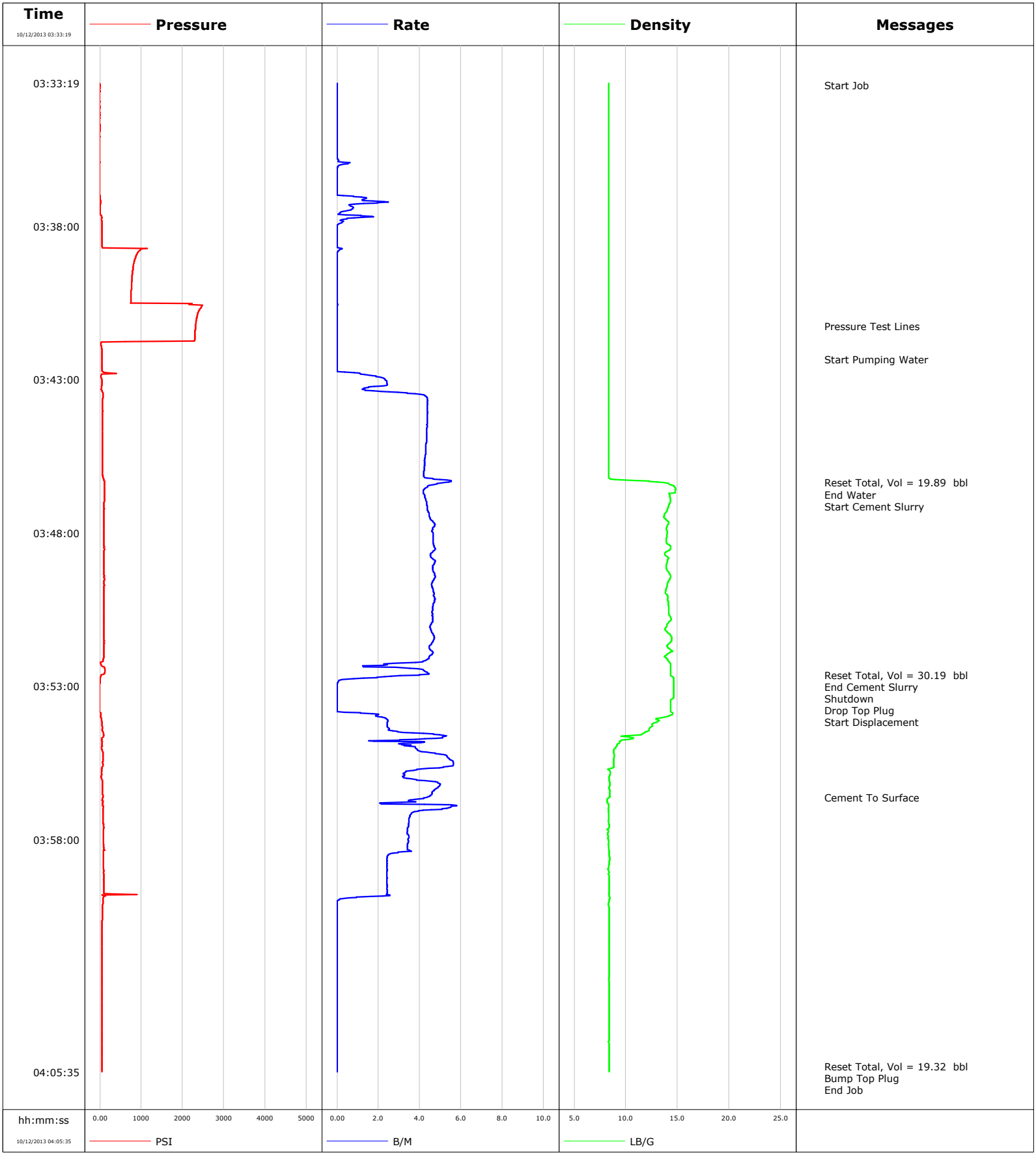
Schlumberger Cementing Job Report

CemCAT v1.3

Well	BIG SKY 12-11	**Client**	NIGHTHAWK
Field	DJ	**SIR No.**	CPU7-00005
Engineer	MATT WHITE	**Job Type**	SURFACE
Country	United States	**Job Date**	10-11-2013



Cementing Service Report

Customer	Job Number
NIGHTHAWK	CPU7-00005

Well	Location (legal)	Schlumberger Location	Job Start
BIG SKY 12-11		WORLAND	Oct/11/2013

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
DJ			12.3 in	337.0 ft	337.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
LINCOLN	Wyoming				

Well Master	API/UWI

Rig Name	Drilled For	Service Via
	Oil	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity
Water	8.34 lb/gal	

Service Line	Job Type
Cementing	SURFACE

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
1000 psi		Single Cement head

Service Instructions
Cement Surface Casing

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
337.0	8.630	24.0	J55	8RD
0.0	0.000	0.0		

Tubing/Drill Pipe

Depth,	Size,	Weight,	Grade	Thread

Perforations/Open Hole

Top,	Bottom,		No. of Shots	Total Interval
				Diameter

Treat Down	Displacement	Packer Type	Packer Depth
Casing	18.8 bbl		

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
	21.5 bbl	24.8 bbl	49.0 bbl

Casing/Tubing Secured	1 Hole Vol. Circulated prior to Cement	Casing Tools	Squeeze Job
X	X		

Lift Pressure	100 psi	Shoe Type	Guide	Squeeze Type	
Pipe Rotated	☐	Pipe Reciprocated	☐	Shoe Depth	337.0 ft	Tool Type	
No. Centralizers		Top Plugs	1	Bottom Plugs	Stage Tool Type		Tool Depth	
Cement Head Type	Single				Stage Tool Depth		Tail Pipe Size	
Job Scheduled For	Arrived on Location	Leave Location			Collar Type	Float	Tail Pipe Depth	
Oct/11/2013	Oct/11/2013	Oct/11/2013			Collar Depth	295.0 ft	Sqz. Total Vol.	

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
10/12/2013	03:18:40					Started Acquisition
10/12/2013	03:33:19	-0	0.0	8.37	0.0	
10/12/2013	03:33:23					Start Job
10/12/2013	03:33:23	-0	0.0	8.37	0.0	
10/12/2013	03:33:40	-0	0.0	8.37	0.0	
10/12/2013	03:38:40	52	0.0	8.36	0.8	
10/12/2013	03:41:15					Pressure Test Lines
10/12/2013	03:41:15	2317	0.0	8.36	0.8	
10/12/2013	03:42:20					Start Pumping Water
10/12/2013	03:42:20	49	0.0	8.36	0.8	
10/12/2013	03:43:40	71	4.4	8.36	3.1	
10/12/2013	03:46:22					Reset Total, Vol = 19.89 bbl
10/12/2013	03:46:22	110	5.2	13.63	14.9	
10/12/2013	03:46:28					End Water
10/12/2013	03:46:28	111	4.5	14.55	15.4	
10/12/2013	03:46:34					Start Cement Slurry
10/12/2013	03:46:34	108	4.2	14.82	15.8	
10/12/2013	03:48:40	101	4.6	13.81	25.3	
10/12/2013	03:52:38					Reset Total, Vol = 30.19 bbl
10/12/2013	03:52:38	42	4.0	14.34	43.1	
10/12/2013	03:52:42					End Cement Slurry

Well	Field	Job Start	Customer	Job Number
BIG SKY 12-11	DJ	Oct/11/2013	NIGHTHAWK	CPU7-00005

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
10/12/2013	03:52:44					Shutdown
10/12/2013	03:52:44	-4	1.9	14.62	43.4	
10/12/2013	03:52:47					Drop Top Plug
10/12/2013	03:52:47	10	0.5	14.63	43.4	
10/12/2013	03:53:40	-3	0.0	14.34	43.4	
10/12/2013	03:54:01					Start Displacement
10/12/2013	03:54:01	20	2.2	13.79	43.7	
10/12/2013	03:56:37					Cement To Surface
10/12/2013	03:56:37	76	4.4	8.50	54.2	
10/12/2013	03:58:40	87	2.4	8.44	61.4	
10/12/2013	04:03:40	55	0.0	8.40	64.4	
10/12/2013	04:05:24					Reset Total, Vol = 19.32 bbl
10/12/2013	04:05:24	54	0.0	8.40	64.4	
10/12/2013	04:05:29					Bump Top Plug
10/12/2013	04:05:29	55	0.0	8.40	64.4	
10/12/2013	04:05:31					End Job
10/12/2013	04:05:31	55	0.0	8.40	64.4	

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
3.0			5.0	31.0		20.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
120	0	60	900				

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
	31.0 bbl	18.8 bbl	68 degF	Washed Thru Perfs ☐	To

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
	MATT WHITE	-	-