BRI-GT-01

Date: 20-jul-15

FORMATION STRENGTH TEST (FST)

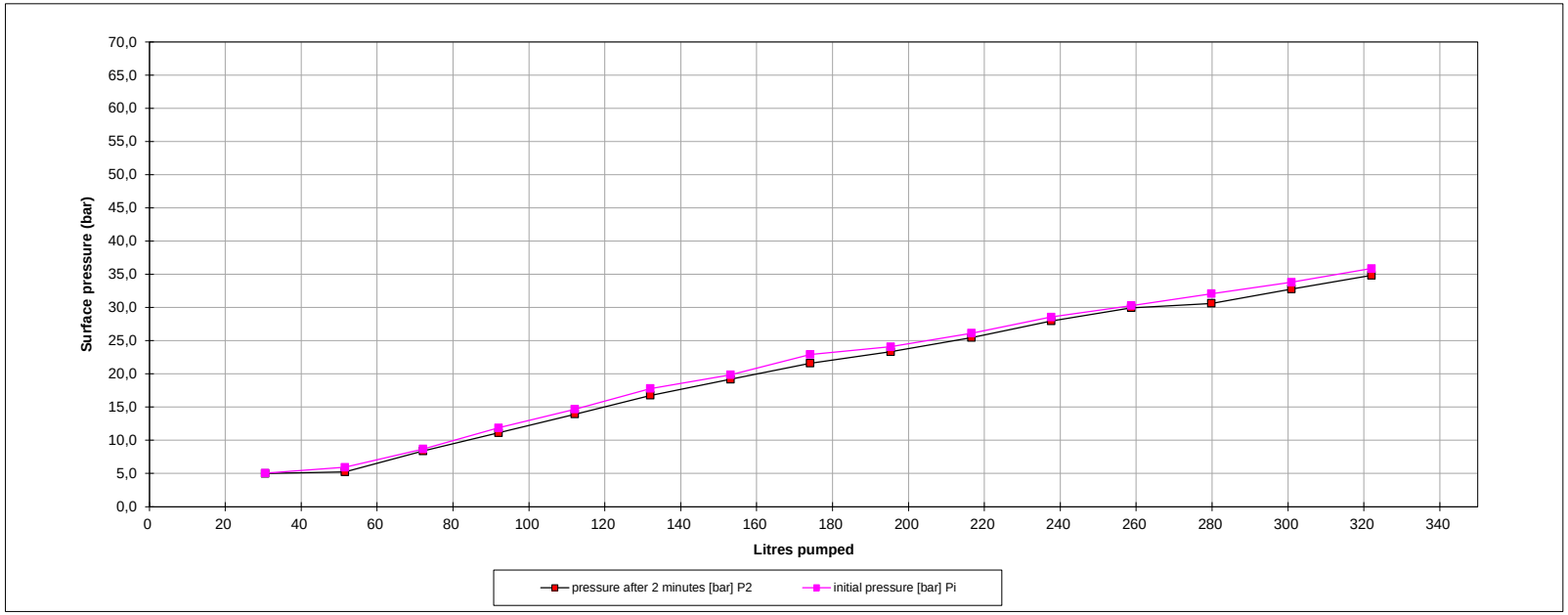
Well:	BRI-GT-01	**Type test:**	LIMIT		
Casing size, inch:	13 3/8	**Mud weight (MSD):**	1,16	s.g.	
Depth test, m AH:	1360	**{Stabilised} Surface pressure:**	**35,0**	Bar	after 15 min
Depth test, m TV :	1236	**Lithology:**	Chalk		
Volume pumped, lts:	322	**Formation:**	Ommelanden		
Volume returned, lts:	150	**Limit required:**	**1,42**	bar/10m	

Ltrs Pumped	30,5	51,5	72,1	92	112	132	153	174	195	217	237,6	259	280	301	322						
initial pressure [bar] P^1	5,0	5,9	8,7	11,9	14,7	17,8	19,9	22,9	24,1	26,1	28,6	30,3	32,1	33,8	35,9						
pressure after 2 minutes [bar] P^2	5,0	5,2	8,4	11,1	13,9	16,8	19,2	21,6	23,3	25,5	28,0	29,9	30,6	32,8	34,8						

FST Gradient = $\dfrac{\text{MSD x 0.981 x TVD / 10 + SP}}{\text{TVD/10}}$ = 1,42 **bar / 10m**

Stabilized Pressure after 15min: **35,0** **bar**

Equivalent Density = $\dfrac{\text{FST Gradient}}{0.981}$ = 1,45 **s.d.**

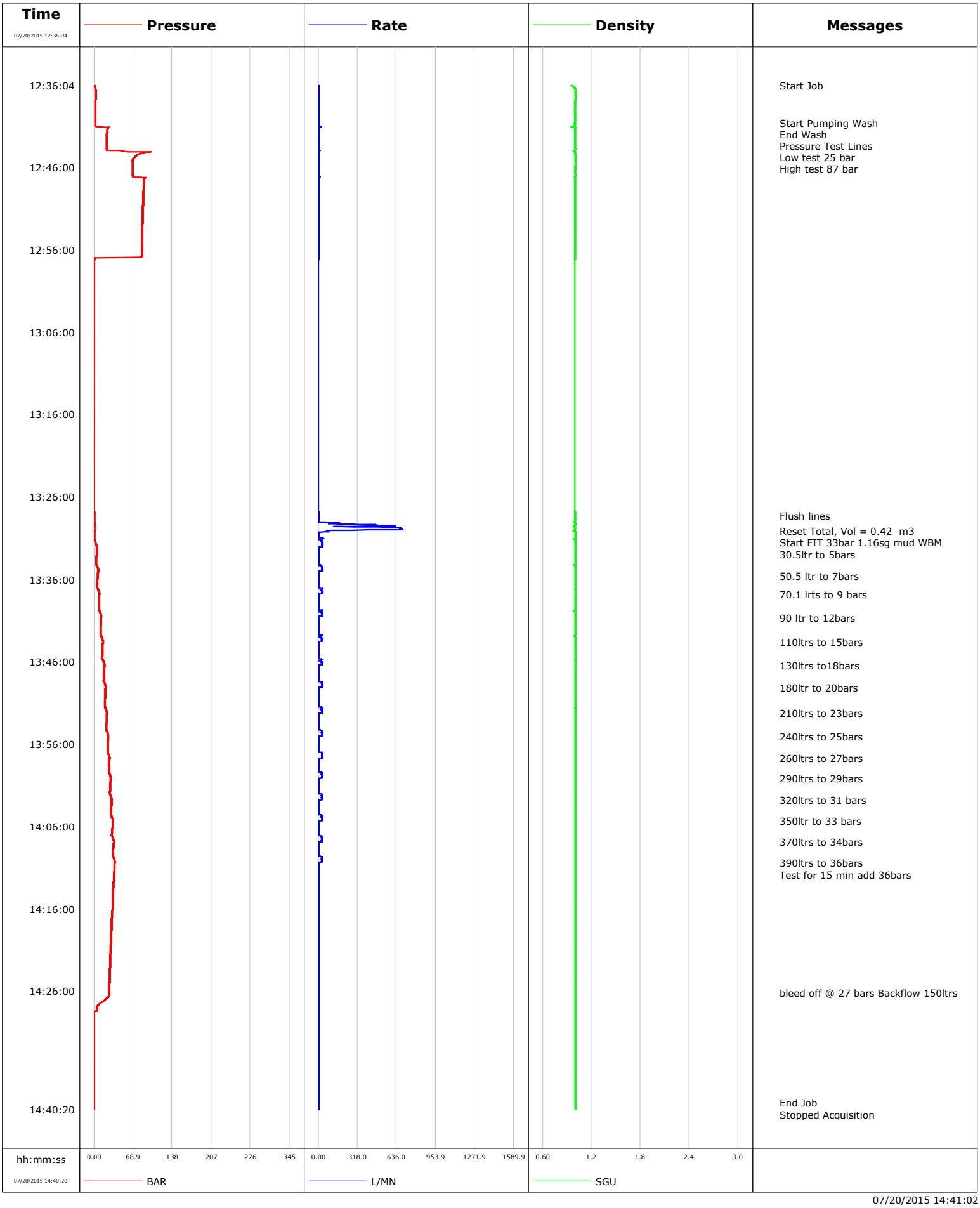


RIG: T-49 (KCA Deutag) DSV: Karl Gollob Rig TP: Roman Thiel de Gafenco

Schlumberger Cementing Job Report

CemCAT v1.3

Well	Geo-BRI-01	**Client**	Geomec
Field	BRI	**SIR No.**	
Engineer	Eric Geits	**Job Type**	FIT 9 5/8 csg
Country	Netherlands	**Job Date**	07-20-2015



Cementing Service Report

Customer	Job Number

Well	Location (legal)	Schlumberger Location	Job Start
			20/Jul/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Well Master	**API/UWI**				

Rig Name	Drilled For	Service Via

Offshore Zone	Well Class	Well Type

Drilling Fluid Type	Max. Density	Plastic Viscosity

Service Line	Job Type
Cementing	

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection

Service Instructions

Casing/Liner

Depth,	Size,	Weight,	Grade	Thread

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

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.

Casing/Tubing Secured ☐	1 Hole Vol. Circulated prior to Cement ☐	Casing Tools	Squeeze Job
Lift Pressure		Shoe Type	Squeeze Type
Pipe Rotated ☐	Pipe Reciprocated ☐	Shoe Depth	Tool Type
No. Centralizers	Top Plugs / Bottom Plugs	Stage Tool Type	Tool Depth
Cement Head Type		Stage Tool Depth	Tail Pipe Size
Job Scheduled For: 20/Jul/2015	Arrived on Location: 20/Jul/2015	Collar Type	Tail Pipe Depth
Leave Location: 20/Jul/2015		Collar Depth	Sqz. Total Vol.

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	12:18:01					Started Acquisition
07/20/2015	12:36:04	1	0.00	0.96	0.0	
07/20/2015	12:36:07					Start Job
07/20/2015	12:36:07	1	0.00	0.96	0.0	
07/20/2015	12:36:31	3	0.00	1.00	0.0	
07/20/2015	12:37:01	3	0.00	1.00	0.0	
07/20/2015	12:37:31	3	0.00	1.00	0.0	
07/20/2015	12:38:01	3	0.00	1.00	0.0	
07/20/2015	12:38:31	3	0.00	0.99	0.0	
07/20/2015	12:39:01	3	0.00	1.00	0.0	
07/20/2015	12:39:31	3	0.00	0.99	0.0	
07/20/2015	12:40:01	3	0.00	0.99	0.0	
07/20/2015	12:40:31	3	0.00	1.00	0.0	
07/20/2015	12:40:36					Start Pumping Wash
07/20/2015	12:40:36	3	0.00	0.99	0.0	
07/20/2015	12:40:40					End Wash
07/20/2015	12:40:40	3	0.00	0.99	0.0	
07/20/2015	12:40:43					Pressure Test Lines
07/20/2015	12:40:43	3	0.00	0.99	0.0	
07/20/2015	12:40:45					Low test 25 bar
07/20/2015	12:40:45	3	0.00	0.99	0.0	

Well	Field	Job Start	Customer	Job Number
		20/Jul/2015		

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	12:41:31	23	0.00	1.00	0.0	
07/20/2015	12:42:01	23	0.00	1.00	0.0	
07/20/2015	12:42:31	23	0.00	1.00	0.0	
07/20/2015	12:43:01	23	0.00	1.00	0.0	
07/20/2015	12:43:31	23	0.00	1.00	0.0	
07/20/2015	12:43:49					High test 87 bar
07/20/2015	12:43:49	23	0.00	1.00	0.0	
07/20/2015	12:44:01	48	0.00	0.99	0.0	
07/20/2015	12:44:31	77	0.00	1.00	0.0	
07/20/2015	12:45:01	68	0.00	1.00	0.0	
07/20/2015	12:45:31	68	0.00	1.00	0.0	
07/20/2015	12:46:01	68	0.00	1.00	0.0	
07/20/2015	12:46:31	68	0.00	1.00	0.0	
07/20/2015	12:47:01	68	0.00	1.00	0.0	
07/20/2015	12:47:31	88	0.00	1.00	0.0	
07/20/2015	12:48:01	87	0.00	1.00	0.0	
07/20/2015	12:48:31	87	0.00	1.00	0.0	
07/20/2015	12:49:01	87	0.00	1.00	0.0	
07/20/2015	12:49:31	87	0.00	1.00	0.0	
07/20/2015	12:50:01	86	0.00	1.00	0.0	
07/20/2015	12:50:31	86	0.00	1.00	0.0	
07/20/2015	12:51:01	86	0.00	1.00	0.0	
07/20/2015	12:51:31	86	0.00	1.00	0.0	
07/20/2015	12:52:01	86	0.00	1.00	0.0	
07/20/2015	12:52:31	86	0.00	1.00	0.0	
07/20/2015	12:53:01	85	0.00	1.00	0.0	
07/20/2015	12:53:31	85	0.00	1.00	0.0	
07/20/2015	12:54:01	85	0.00	1.00	0.0	
07/20/2015	12:54:31	85	0.00	1.00	0.0	
07/20/2015	12:55:01	85	0.00	1.00	0.0	
07/20/2015	12:55:31	84	0.00	1.00	0.0	
07/20/2015	12:56:01	84	0.00	1.00	0.0	
07/20/2015	12:56:31	84	0.00	1.00	0.0	
07/20/2015	12:57:01	1	0.00	1.00	0.0	
07/20/2015	13:28:01	0	0.00	1.00	0.0	
07/20/2015	13:28:18					Flush lines
07/20/2015	13:28:18	0	0.00	1.00	0.0	
07/20/2015	13:28:31	0	0.00	1.00	0.0	
07/20/2015	13:29:01	0	0.00	1.00	0.0	
07/20/2015	13:29:31	2	609.90	1.00	0.1	
07/20/2015	13:30:01	1	568.61	0.99	0.4	
07/20/2015	13:30:07					Reset Total, Vol = 0.42 m3
07/20/2015	13:30:07	0	85.77	0.97	0.4	
07/20/2015	13:30:09					Start FIT 33bar 1.16sg mud WBM
07/20/2015	13:30:09	0	66.71	0.99	0.0	
07/20/2015	13:30:31	0	0.00	1.00	0.0	
07/20/2015	13:31:01	0	0.00	1.00	0.0	
07/20/2015	13:31:31	2	31.77	1.00	0.0	
07/20/2015	13:32:01	5	31.77	1.00	0.0	
07/20/2015	13:32:12					30.5ltr to 5bars
07/20/2015	13:32:12	5	0.00	1.00	0.0	
07/20/2015	13:32:31	4	0.00	1.00	0.0	
07/20/2015	13:33:01	4	0.00	1.00	0.0	
07/20/2015	13:33:31	4	0.00	1.00	0.0	

Well	Field	Job Start	Customer	Job Number
		20/Jul/2015		

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	13:34:31	6	31.77	1.00	0.0	
07/20/2015	13:35:01	8	31.77	1.00	0.1	
07/20/2015	13:35:31	6	0.00	1.00	0.1	
07/20/2015	13:35:36					50.5 ltr to 7bars
07/20/2015	13:35:36	6	0.00	1.00	0.1	
07/20/2015	13:36:01	6	0.00	1.00	0.1	
07/20/2015	13:36:31	6	0.00	1.00	0.1	
07/20/2015	13:37:01	5	0.00	1.00	0.1	
07/20/2015	13:37:31	9	28.59	1.00	0.1	
07/20/2015	13:37:50					70.1 lrts to 9 bars
07/20/2015	13:37:50	9	0.00	1.00	0.1	
07/20/2015	13:38:01	9	0.00	1.00	0.1	
07/20/2015	13:38:31	9	0.00	1.00	0.1	
07/20/2015	13:39:01	9	0.00	1.00	0.1	
07/20/2015	13:39:31	9	0.00	1.00	0.1	
07/20/2015	13:40:01	10	22.24	1.00	0.1	
07/20/2015	13:40:31	13	6.35	1.00	0.1	
07/20/2015	13:40:41					90 ltr to 12bars
07/20/2015	13:40:41	12	0.00	1.00	0.1	
07/20/2015	13:41:01	12	0.00	1.00	0.1	
07/20/2015	13:41:31	12	0.00	1.00	0.1	
07/20/2015	13:42:01	12	0.00	1.00	0.1	
07/20/2015	13:42:31	11	0.00	1.00	0.1	
07/20/2015	13:43:01	13	3.18	1.00	0.1	
07/20/2015	13:43:31	16	31.77	1.00	0.1	
07/20/2015	13:43:34					110ltrs to 15bars
07/20/2015	13:43:34	16	3.18	1.00	0.1	
07/20/2015	13:44:01	15	0.00	1.00	0.1	
07/20/2015	13:44:31	15	0.00	1.00	0.1	
07/20/2015	13:45:01	15	0.00	1.00	0.1	
07/20/2015	13:45:31	14	0.00	1.00	0.1	
07/20/2015	13:46:01	17	28.59	1.00	0.1	
07/20/2015	13:46:28					130ltrs to18bars
07/20/2015	13:46:28	18	0.00	1.00	0.1	
07/20/2015	13:46:31	18	0.00	1.00	0.1	
07/20/2015	13:47:01	18	0.00	1.00	0.1	
07/20/2015	13:47:31	17	0.00	1.00	0.1	
07/20/2015	13:48:01	17	0.00	1.00	0.1	
07/20/2015	13:48:31	18	31.77	1.00	0.1	
07/20/2015	13:49:01	21	28.59	1.00	0.2	
07/20/2015	13:49:10					180ltr to 20bars
07/20/2015	13:49:10	21	0.00	1.00	0.2	
07/20/2015	13:49:31	20	0.00	1.00	0.2	
07/20/2015	13:50:01	20	0.00	1.00	0.2	
07/20/2015	13:50:31	19	0.00	1.00	0.2	
07/20/2015	13:51:01	19	0.00	1.00	0.2	
07/20/2015	13:51:31	20	12.71	1.00	0.2	
07/20/2015	13:52:01	22	31.77	1.00	0.2	
07/20/2015	13:52:13					210ltrs to 23bars
07/20/2015	13:52:13	23	28.59	1.00	0.2	
07/20/2015	13:52:31	23	0.00	1.00	0.2	
07/20/2015	13:53:01	22	0.00	1.00	0.2	
07/20/2015	13:53:31	22	0.00	1.00	0.2	
07/20/2015	13:54:01	21	0.00	1.00	0.2	

Well	Field	Job Start	Customer	Job Number
		20/Jul/2015		

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	13:55:01	25	28.59	1.00	0.2	
07/20/2015	13:55:04					240ltrs to 25bars
07/20/2015	13:55:04	25	0.00	1.00	0.2	
07/20/2015	13:55:31	25	0.00	1.00	0.2	
07/20/2015	13:56:01	24	0.00	1.00	0.2	
07/20/2015	13:56:31	24	0.00	1.00	0.2	
07/20/2015	13:57:01	24	9.53	1.00	0.2	
07/20/2015	13:57:31	27	28.59	1.00	0.2	
07/20/2015	13:57:41					260ltrs to 27bars
07/20/2015	13:57:41	27	28.59	1.00	0.2	
07/20/2015	13:58:01	27	0.00	1.00	0.2	
07/20/2015	13:58:31	27	0.00	1.00	0.2	
07/20/2015	13:59:01	26	0.00	1.00	0.2	
07/20/2015	13:59:31	27	28.59	1.00	0.2	
07/20/2015	14:00:01	29	28.59	1.00	0.2	
07/20/2015	14:00:10					290ltrs to 29bars
07/20/2015	14:00:10	29	19.06	1.00	0.3	
07/20/2015	14:00:31	29	0.00	1.00	0.3	
07/20/2015	14:01:01	28	0.00	1.00	0.3	
07/20/2015	14:01:31	28	0.00	1.00	0.3	
07/20/2015	14:02:01	28	0.00	1.00	0.3	
07/20/2015	14:02:31	30	28.59	1.00	0.3	
07/20/2015	14:02:46					320ltrs to 31 bars
07/20/2015	14:02:46	32	28.59	1.00	0.3	
07/20/2015	14:03:01	31	0.00	1.00	0.3	
07/20/2015	14:03:31	30	0.00	1.00	0.3	
07/20/2015	14:04:01	30	0.00	1.00	0.3	
07/20/2015	14:04:31	30	0.00	1.00	0.3	
07/20/2015	14:05:01	32	28.59	1.00	0.3	
07/20/2015	14:05:22					350ltr to 33 bars
07/20/2015	14:05:22	33	0.00	1.00	0.3	
07/20/2015	14:05:31	33	0.00	1.00	0.3	
07/20/2015	14:06:01	32	0.00	1.00	0.3	
07/20/2015	14:06:31	32	0.00	1.00	0.3	
07/20/2015	14:07:01	31	0.00	1.00	0.3	
07/20/2015	14:07:31	33	31.77	1.00	0.3	
07/20/2015	14:07:51					370ltrs to 34bars
07/20/2015	14:07:51	35	31.77	1.00	0.3	
07/20/2015	14:08:01	35	0.00	1.00	0.3	
07/20/2015	14:08:31	34	0.00	1.00	0.3	
07/20/2015	14:09:01	34	0.00	1.00	0.3	
07/20/2015	14:09:31	33	0.00	1.00	0.3	
07/20/2015	14:10:01	35	28.59	1.00	0.3	
07/20/2015	14:10:26					390ltrs to 36bars
07/20/2015	14:10:26	37	0.00	1.00	0.3	
07/20/2015	14:10:31	36	0.00	1.00	0.3	
07/20/2015	14:11:01	36	0.00	1.00	0.3	
07/20/2015	14:11:05					Test for 15 min add 36bars
07/20/2015	14:11:05	36	0.00	1.00	0.3	
07/20/2015	14:11:31	35	0.00	1.00	0.3	
07/20/2015	14:12:01	35	0.00	1.00	0.3	
07/20/2015	14:12:31	35	0.00	1.00	0.3	
07/20/2015	14:13:01	34	0.00	1.00	0.3	
07/20/2015	14:13:31	34	0.00	1.00	0.3	

Well	Field	Job Start	Customer	Job Number
		20/Jul/2015		

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	14:14:31	33	0.00	1.00	0.3	
07/20/2015	14:15:01	33	0.00	1.00	0.3	
07/20/2015	14:15:31	33	0.00	1.00	0.3	
07/20/2015	14:16:01	32	0.00	1.00	0.3	
07/20/2015	14:16:31	32	0.00	1.00	0.3	
07/20/2015	14:17:01	32	0.00	1.00	0.3	
07/20/2015	14:17:31	31	0.00	1.00	0.3	
07/20/2015	14:18:01	31	0.00	1.00	0.3	
07/20/2015	14:18:31	31	0.00	1.00	0.3	
07/20/2015	14:19:01	30	0.00	1.00	0.3	
07/20/2015	14:19:31	30	0.00	1.00	0.3	
07/20/2015	14:20:01	30	0.00	1.00	0.3	
07/20/2015	14:20:31	29	0.00	1.00	0.3	
07/20/2015	14:21:01	29	0.00	1.00	0.3	
07/20/2015	14:21:31	29	0.00	1.00	0.3	
07/20/2015	14:22:01	29	0.00	1.00	0.3	
07/20/2015	14:22:31	28	0.00	1.00	0.3	
07/20/2015	14:23:01	28	0.00	1.00	0.3	
07/20/2015	14:23:31	28	0.00	1.00	0.3	
07/20/2015	14:24:01	27	0.00	1.00	0.3	
07/20/2015	14:24:31	27	0.00	1.00	0.3	
07/20/2015	14:25:01	27	0.00	1.00	0.3	
07/20/2015	14:25:31	27	0.00	1.00	0.3	
07/20/2015	14:26:01	27	0.00	1.00	0.3	
07/20/2015	14:26:10					bleed off @ 27 bars Backflow 150ltrs
07/20/2015	14:26:10	27	0.00	1.00	0.3	
07/20/2015	14:26:31	26	0.00	1.00	0.3	
07/20/2015	14:27:01	20	0.00	1.00	0.3	
07/20/2015	14:27:31	10	0.00	1.00	0.3	
07/20/2015	14:28:01	5	0.00	1.00	0.3	
07/20/2015	14:28:31	0	0.00	1.00	0.3	
07/20/2015	14:29:01	-0	0.00	1.00	0.3	
07/20/2015	14:29:31	-0	0.00	1.00	0.3	
07/20/2015	14:30:01	-0	0.00	1.00	0.3	
07/20/2015	14:30:31	-0	0.00	1.00	0.3	
07/20/2015	14:31:01	-0	0.00	1.00	0.3	
07/20/2015	14:31:31	-0	0.00	1.00	0.3	
07/20/2015	14:32:01	-0	0.00	1.00	0.3	
07/20/2015	14:32:31	-0	0.00	1.00	0.3	
07/20/2015	14:33:01	-0	0.00	1.00	0.3	
07/20/2015	14:33:31	-0	0.00	1.00	0.3	
07/20/2015	14:34:01	-0	0.00	1.00	0.3	
07/20/2015	14:34:31	-0	0.00	1.00	0.3	
07/20/2015	14:35:01	-0	0.00	1.00	0.3	
07/20/2015	14:35:31	-0	0.00	1.00	0.3	
07/20/2015	14:36:01	-0	0.00	1.00	0.3	
07/20/2015	14:36:31	-0	0.00	1.00	0.3	
07/20/2015	14:37:01	-0	0.00	1.00	0.3	
07/20/2015	14:37:31	-0	0.00	1.00	0.3	
07/20/2015	14:38:01	-0	0.00	1.00	0.3	
07/20/2015	14:38:31	-0	0.00	1.00	0.3	
07/20/2015	14:39:01	-0	0.00	1.00	0.3	
07/20/2015	14:39:31	-0	0.00	1.00	0.3	
07/20/2015	14:39:34					End Job

Well	Field	Job Start	Customer	Job Number
		20/Jul/2015		

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
07/20/2015	14:40:01	-0	0.00	1.00	0.3	

Post Job Summary

Average Pump Rates,				Volume of Fluid Injected,			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2

Treating Pressure Summary,					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density

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

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost ☐	Job Completed ☐
		-	-

Schlumberger

Service Quality Evaluation

Client:	Geomec
Field:	BRI
Rig:	
Well:	Geo-BRI-01
Service Line:	Cementing
Job Type:	FIT 9 5/8 csg

Service Order #:	
Date:	20/Jul/2015
Operating Time (hh:mm):	00:00
Client Rep:	Karl
Schlumberger Engineer:	Eric Geits
Schlumberger FSM:	

Main Objective:

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No	Result
1	**HSE**			
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	yes ☐ no ☒	0
1b	Free of environmental spill or non-compliant discharge	5	yes ☐ no ☒	0
1c	Wellsite left clean	4	yes ☐ no ☒	0
			Sub-total	0%

2	**Design / Preparation**			
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	yes ☐ no ☒	0
2b	Equipment maintenance schedule completed / Green tagged	2	yes ☐ no ☒	0
2c	All materials and equipment required for job/contingency checked & on location	2	yes ☐ no ☒	0
2d	Safety / pre-job meeting conducted with all involved present	2	yes ☐ no ☒	0
			Sub-total	0%

3	**Execution**			
3a	Lost time < 30 mins	3	yes ☐ no ☒	0
3b	Equipment pressure tested succesfully	3	yes ☐ no ☒	0
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	yes ☐ no ☒	0
3d	Plugs / darts released and tested succesfully	2	yes ☐ no ☒	0
3e	Density variation met expectations	2	yes ☐ no ☒	0
3f	Personnel performed as per expectations	2	yes ☐ no ☒	0
3g	Equipment performed as per expectations	2	yes ☐ no ☒	0
3h	Job pumped as per design	3	yes ☐ no ☒	0
3i	Did job start on time	2	yes ☐ no ☒	0
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	yes ☐ no ☒	0
			Sub-total	0%

4	**Evaluation**			
4a	Main job objective achieved with no consequential non-productive time	10	yes ☐ no ☒	0
			Sub-total	0%

Total 0%

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

Client:	**Schlumberger:**
Client Signature:	**Schlumberger Signature:**

BRI-GT-01

Date: 1-aug-15

FORMATION STRENGTH TEST (FST)

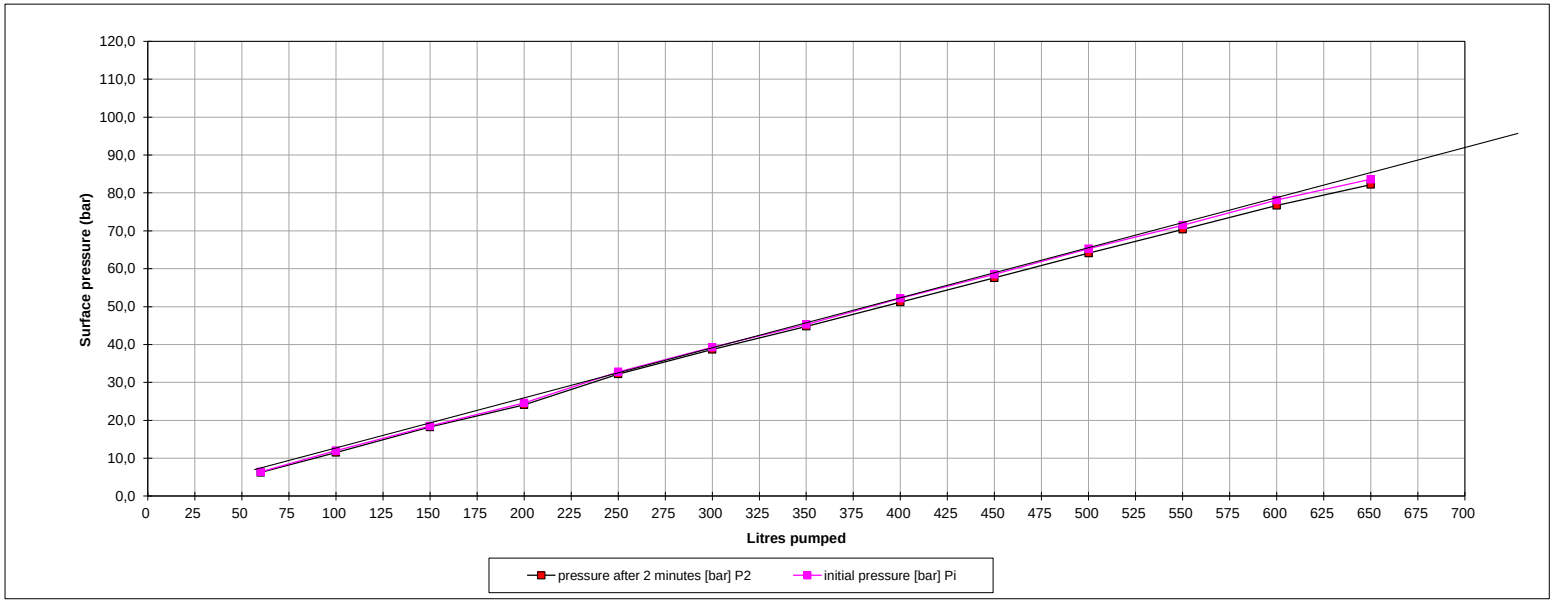
Well:	BRI-GT-01	**Type test:**	LOT		
Casing size, inch:	9,625	**Mud weight (MSD):**	1,13	s.g.	
Depth test, m AH:	2784	**{Stabilised} Surface pressure:**	**82,2**	Bar	after 15 min
Depth test, m TV :	2175	**Lithology:**	Sandstone		
Volume pumped, lts:	650	**Formation:**	RBMH		
Volume returned, lts:	400	**Limit required:**		bar/10m	

Ltrs Pumped	60	40	50	50	50	50	50	50	50	50	50	50	50									
Cum Ltrs Pumped	60	100	150	200	250	300	350	400	450	500	550	600	650									
initial pressure [bar] P^1	6,4	12,0	18,5	24,6	32,8	39,3	45,3	52,2	58,5	65,3	71,5	78,1	83,6									
pressure after 2 minutes [bar] P^2	6,2	11,5	18,2	24,1	32,2	38,7	44,8	51,2	57,6	64,1	70,4	76,7	82,2									

FST Gradient = $\dfrac{\text{MSD x 0.981 x TVD / 10 + SP}}{\text{TVD/10}}$ = = 1,49 **bar / 10m**

Stabilized Pressure after 15min: **82,2** **bar**

Equivalent Density = $\dfrac{\text{FST Gradient}}{0.981}$ = 1,52 **s.d.**



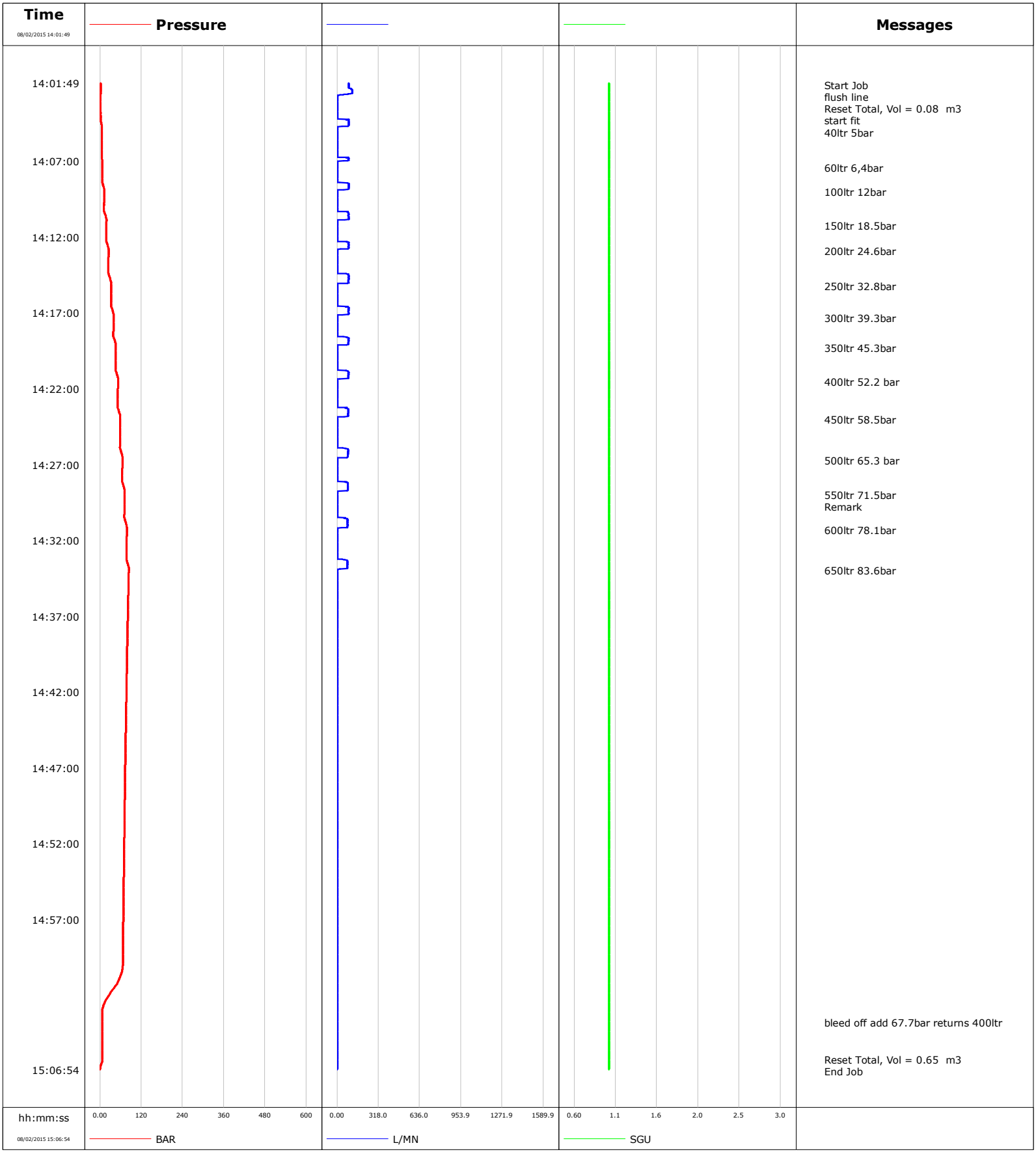
RIG:	T-49 (KCA Deutag)	DSV:	Peter Nutters	Rig TP:	Jan Strijker

Schlumberger

Cementing Job Report

CemCAT v1.6

Well	BRI-GT-01	**Client**	Geomec
Field	BRI	**SIR No.**	
Engineer	Eric Geitz	**Job Type**	FIT 8 1/2
Country	Netherlands	**Job Date**	02-08-15



Schlumberger

Cementing Service Report

Customer	Job Number
Geomec	

Well	Location (legal)	Schlumberger Location	Job Start
BRI-GT-01			Aug/02/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
BRI		deg	mm	m	m

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Well Master	API/UWI	bars	degC	degC	sgu

Rig Name	Drilled For	Service Via

Offshore Zone	Well Class	Well Type

Drilling Fluid Type	Max. Density	Plastic Viscosity
	sgu	cP

Service Line	Job Type
Cementing	FIT 8 1/2

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
bars	bars	

Service Instructions

Casing/Liner

Depth, m	Size, mm	Weight, kg/m	Grade	Thread

Tubing/Drill Pipe

T/D	Depth, m	Size, mm	Weight, kg/m	Grade	Thread

Perforations/Open Hole

Top, m	Bottom, m	shot/m	No. of Shots	Total Interval
m	m			m
m	m			Diameter
m	m			mm

Treat Down	Displacement	Packer Type	Packer Depth
	m3		m

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
m3	m3	m3	m3

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

Lift Pressure	bars	Shoe Type	Squeeze Type

Pipe Rotated	Pipe Reciprocated	Shoe Depth	m	Tool Type	
☐	☐				

No. Centralizers	Top Plugs	Bottom Plugs	Stage Tool Type	Tool Depth	m

Cement Head Type	Stage Tool Depth	m	Tail Pipe Size	mm

Job Scheduled For	Arrived on Location	Leave Location	Collar Type	Tail Pipe Depth	m
Aug/02/2015	Aug/02/2015	Aug/02/2015			
			Collar Depth m	Sqz. Total Vol.	m3

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
08/02/2015	14:01:49	1	89.31	1.00	0.000	Started Acquisition
08/02/2015	14:01:58	1	88.62	1.00	0.013	Start Job
08/02/2015	14:02:03	1	89.57	1.00	0.021	flush line
08/02/2015	14:02:19	2	117.32	1.00	0.047	
08/02/2015	14:02:49	1	0.00	1.00	0.080	
08/02/2015	14:02:56	1	0.00	1.00	0.080	Reset Total, Vol = 0.08 m3
08/02/2015	14:03:19	1	0.00	1.00	0.000	
08/02/2015	14:03:26	1	0.00	1.00	0.000	start fit
08/02/2015	14:03:49	1	0.00	1.00	0.000	
08/02/2015	14:04:19	2	88.41	1.00	0.006	
08/02/2015	14:04:49	5	0.00	1.00	0.042	
08/02/2015	14:04:52	5	0.00	1.00	0.042	40ltr 5bar
08/02/2015	14:05:19	5	0.00	1.00	0.042	
08/02/2015	14:05:49	5	0.00	1.00	0.042	
08/02/2015	14:06:19	4	0.00	1.00	0.042	
08/02/2015	14:06:49	5	88.70	1.00	0.046	
08/02/2015	14:07:19	7	0.00	1.00	0.061	
08/02/2015	14:07:26	7	0.00	1.00	0.061	60ltr 6,4bar
08/02/2015	14:07:49	6	0.00	1.00	0.061	
08/02/2015	14:08:19	6	0.00	1.00	0.061	
08/02/2015	14:08:49	12	89.78	1.00	0.096	

Well	Field	Job Start	Customer	Job Number
BRI-GT-01	BRI	Aug/02/2015	Geomec	

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
08/02/2015	14:09:19	12	0.00	1.00	0.102	
08/02/2015	14:09:49	12	0.00	1.00	0.102	
08/02/2015	14:10:19	12	83.99	1.00	0.102	
08/02/2015	14:10:49	19	88.95	1.00	0.145	
08/02/2015	14:11:15	18	0.00	1.00	0.150	150ltr 18.5bar
08/02/2015	14:11:19	18	0.00	1.00	0.150	
08/02/2015	14:11:49	18	0.00	1.00	0.150	
08/02/2015	14:12:19	19	75.76	1.00	0.151	
08/02/2015	14:12:49	25	0.00	1.00	0.193	
08/02/2015	14:12:55	25	0.00	1.00	0.193	200ltr 24.6bar
08/02/2015	14:13:19	24	0.00	1.00	0.193	
08/02/2015	14:13:49	24	0.00	1.00	0.193	
08/02/2015	14:14:19	24	0.00	1.00	0.193	
08/02/2015	14:14:49	30	87.45	1.00	0.227	
08/02/2015	14:15:12	33	0.00	1.00	0.250	250ltr 32.8bar
08/02/2015	14:15:19	33	0.00	1.00	0.250	
08/02/2015	14:15:49	32	0.00	1.00	0.250	
08/02/2015	14:16:19	32	0.00	1.00	0.250	
08/02/2015	14:16:49	36	87.01	1.00	0.270	
08/02/2015	14:17:19	39	0.00	1.00	0.298	300ltr 39.3bar
08/02/2015	14:17:49	39	0.00	1.00	0.298	
08/02/2015	14:18:19	39	0.00	1.00	0.298	
08/02/2015	14:18:49	42	86.61	1.00	0.318	
08/02/2015	14:19:19	45	0.00	1.00	0.344	350ltr 45.3bar
08/02/2015	14:19:49	45	0.00	1.00	0.344	
08/02/2015	14:20:19	45	0.00	1.00	0.344	
08/02/2015	14:20:49	46	83.50	1.00	0.346	
08/02/2015	14:21:19	52	87.08	1.00	0.389	
08/02/2015	14:21:30	52	0.00	1.00	0.393	400ltr 52.2 bar
08/02/2015	14:21:49	52	0.00	1.00	0.393	
08/02/2015	14:22:19	52	0.00	1.00	0.393	
08/02/2015	14:22:49	51	0.00	1.00	0.393	
08/02/2015	14:23:19	53	86.02	1.00	0.397	
08/02/2015	14:23:49	59	83.54	1.00	0.440	
08/02/2015	14:24:01	58	0.00	1.00	0.444	450ltr 58.5bar
08/02/2015	14:24:19	58	0.00	1.00	0.444	
08/02/2015	14:24:49	58	0.00	1.00	0.444	
08/02/2015	14:25:19	58	0.00	1.00	0.444	
08/02/2015	14:25:49	57	0.00	1.00	0.444	
08/02/2015	14:26:19	63	83.11	1.00	0.477	
08/02/2015	14:26:42	65	0.00	1.00	0.497	500ltr 65.3 bar
08/02/2015	14:26:49	65	0.00	1.00	0.497	
08/02/2015	14:27:19	65	0.00	1.00	0.497	
08/02/2015	14:27:49	64	0.00	1.00	0.497	
08/02/2015	14:28:19	67	81.52	1.00	0.511	
08/02/2015	14:28:49	71	0.00	1.00	0.547	
08/02/2015	14:28:59	71	0.00	1.00	0.547	550ltr 71.5bar
08/02/2015	14:29:09	71	0.00	1.00	0.547	Remark
08/02/2015	14:29:19	71	0.00	1.00	0.547	
08/02/2015	14:29:49	71	0.00	1.00	0.547	
08/02/2015	14:30:19	70	0.00	1.00	0.547	
08/02/2015	14:30:49	75	80.44	1.00	0.570	
08/02/2015	14:31:19	78	0.00	1.00	0.599	
08/02/2015	14:31:20	78	0.00	1.00	0.599	600ltr 78.1bar

Well	Field	Job Start	Customer	Job Number
BRI-GT-01	BRI	Aug/02/2015	Geomec	

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
08/02/2015	14:32:19	77	0.00	1.00	0.599	
08/02/2015	14:32:49	77	0.00	1.00	0.599	
08/02/2015	14:33:19	78	79.14	1.00	0.603	
08/02/2015	14:33:49	83	76.80	1.00	0.642	
08/02/2015	14:34:00	83	0.00	1.00	0.649	650ltr 83.6bar
08/02/2015	14:34:19	83	0.00	1.00	0.649	
08/02/2015	14:34:49	83	0.00	1.00	0.649	
08/02/2015	14:35:19	82	0.00	1.00	0.649	
08/02/2015	14:35:49	82	0.00	1.00	0.649	
08/02/2015	14:36:19	81	0.00	1.00	0.649	
08/02/2015	14:36:49	81	0.00	1.00	0.649	
08/02/2015	14:37:19	80	0.00	1.00	0.649	
08/02/2015	14:37:49	80	0.00	1.00	0.649	
08/02/2015	14:38:19	80	0.00	1.00	0.649	
08/02/2015	14:38:49	79	0.00	1.00	0.649	
08/02/2015	14:39:19	79	0.00	1.00	0.649	
08/02/2015	14:39:49	78	0.00	1.00	0.649	
08/02/2015	14:40:19	78	0.00	1.00	0.649	
08/02/2015	14:40:49	78	0.00	1.00	0.649	
08/02/2015	14:41:19	77	0.00	1.00	0.649	
08/02/2015	14:41:49	77	0.00	1.00	0.649	
08/02/2015	14:42:19	76	0.00	1.00	0.649	
08/02/2015	14:42:49	76	0.00	1.00	0.649	
08/02/2015	14:43:19	76	0.00	1.00	0.649	
08/02/2015	14:43:49	75	0.00	1.00	0.649	
08/02/2015	14:44:19	75	0.00	1.00	0.649	
08/02/2015	14:44:49	75	0.00	1.00	0.649	
08/02/2015	14:45:19	74	0.00	1.00	0.649	
08/02/2015	14:45:49	74	0.00	1.00	0.649	
08/02/2015	14:46:19	74	0.00	1.00	0.649	
08/02/2015	14:46:49	73	0.00	1.00	0.649	
08/02/2015	14:47:19	73	0.00	1.00	0.649	
08/02/2015	14:47:49	73	0.00	1.00	0.649	
08/02/2015	14:48:19	72	0.00	1.00	0.649	
08/02/2015	14:48:49	72	0.00	1.00	0.649	
08/02/2015	14:49:19	72	0.00	1.00	0.649	
08/02/2015	14:49:49	71	0.00	1.00	0.649	
08/02/2015	14:50:19	71	0.00	1.00	0.649	
08/02/2015	14:50:49	71	0.00	1.00	0.649	
08/02/2015	14:51:19	71	0.00	1.00	0.649	
08/02/2015	14:51:49	70	0.00	1.00	0.649	
08/02/2015	14:52:19	70	0.00	1.00	0.649	
08/02/2015	14:52:49	70	0.00	1.00	0.649	
08/02/2015	14:53:19	69	0.00	1.00	0.649	
08/02/2015	14:53:49	69	0.00	1.00	0.649	
08/02/2015	14:54:19	69	0.00	1.00	0.649	
08/02/2015	14:54:49	69	0.00	1.00	0.649	
08/02/2015	14:55:19	68	0.00	1.00	0.649	
08/02/2015	14:55:49	68	0.00	1.00	0.649	
08/02/2015	14:56:19	68	0.00	1.00	0.649	
08/02/2015	14:56:49	68	0.00	1.00	0.649	
08/02/2015	14:57:19	67	0.00	1.00	0.649	
08/02/2015	14:57:49	67	0.00	1.00	0.649	
08/02/2015	14:58:19	67	0.00	1.00	0.649	

Well	Field	Job Start	Customer	Job Number
BRI-GT-01	BRI	Aug/02/2015	Geomec	

Date	Time 24-hr clock	Treating Pressure BAR	Flow Rate L/MN	Density SGU	Volume M3	Message
08/02/2015	14:59:19	66	0.00	1.00	0.649	
08/02/2015	14:59:49	66	0.00	1.00	0.649	
08/02/2015	15:00:19	65	0.00	1.00	0.649	
08/02/2015	15:00:49	57	0.00	1.00	0.649	
08/02/2015	15:01:19	47	0.00	1.00	0.649	
08/02/2015	15:01:49	31	0.00	1.00	0.649	
08/02/2015	15:02:19	17	0.00	1.00	0.649	
08/02/2015	15:02:49	8	0.00	1.00	0.649	
08/02/2015	15:03:19	7	0.00	1.00	0.649	
08/02/2015	15:03:45	7	0.00	1.00	0.649	bleed off add 67.7bar returns 400ltr
08/02/2015	15:03:49	7	0.00	1.00	0.649	
08/02/2015	15:04:19	7	0.00	1.00	0.649	
08/02/2015	15:04:49	7	0.00	1.00	0.649	
08/02/2015	15:05:19	7	0.00	1.00	0.649	
08/02/2015	15:05:49	7	0.00	1.00	0.649	
08/02/2015	15:06:15	7	0.00	1.00	0.649	Reset Total, Vol = 0.65 m3
08/02/2015	15:06:19	7	0.00	1.00	0.000	
08/02/2015	15:06:22	7	0.00	1.00	0.000	End Job

Post Job Summary

Average Pump Rates, l/min				Volume of Fluid Injected, m3			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2

Treating Pressure Summary, bars					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
	0					m3	sgu

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp		
%	0.000 m3	m3	degC	Cement Circulated to Surface? ☐	Volume m3
				Washed Thru Perfs ☐	To m

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Peter Nutters	Eric Geitz	☐	☐
		-	-

Schlumberger

Service Quality Evaluation

Client:	Geomec
Field:	BRI
Rig:	
Well:	BRI-GT-01
Service Line:	Cementing
Job Type:	FIT 8 1/2

Service Order #:	
Date:	Aug/02/2015
Operating Time (hh:mm):	00:00
Client Rep:	Peter Nutters
Schlumberger Engineer:	Eric Geitz
Schlumberger FSM:	

Main Objective:

To be completed by Company Rep. Please answer Y (Yes) or N (No) and add any comments below.

		Score	Yes / No	Result
1	**HSE**			
1a	Free of lost time injury and compliance with SLB and loc. spec. HSE practice	5	**yes** ☐ **no** ☒	0
1b	Free of environmental spill or non-compliant discharge	5	**yes** ☐ **no** ☒	0
1c	Wellsite left clean	4	**yes** ☐ **no** ☒	0
			Sub-total	0%

2	**Design / Preparation**			
2a	Program incl. job simulation (CemCADE) & pump schedule / tool hydraulic calcs	3	**yes** ☐ **no** ☒	0
2b	Equipment maintenance schedule completed / Green tagged	2	**yes** ☐ **no** ☒	0
2c	All materials and equipment required for job/contingency checked & on location	2	**yes** ☐ **no** ☒	0
2d	Safety / pre-job meeting conducted with all involved present	2	**yes** ☐ **no** ☒	0
			Sub-total	0%

3	**Execution**			
3a	Lost time < 30 mins	3	**yes** ☐ **no** ☒	0
3b	Equipment pressure tested succesfully	3	**yes** ☐ **no** ☒	0
3c	All key parameters monitored and recorded accurately (Pressure, Rate, Density)	2	**yes** ☐ **no** ☒	0
3d	Plugs / darts released and tested succesfully	2	**yes** ☐ **no** ☒	0
3e	Density variation met expectations	2	**yes** ☐ **no** ☒	0
3f	Personnel performed as per expectations	2	**yes** ☐ **no** ☒	0
3g	Equipment performed as per expectations	2	**yes** ☐ **no** ☒	0
3h	Job pumped as per design	3	**yes** ☐ **no** ☒	0
3i	Did job start on time	2	**yes** ☐ **no** ☒	0
3j	Free of Operational failures (screen out, Cementing Example, etc.)	3	**yes** ☐ **no** ☒	0
			Sub-total	0%

4	**Evaluation**			
4a	Main job objective achieved with no consequential non-productive time	10	**yes** ☐ **no** ☒	0
			Sub-total	0%

Total 0%

Comments: (Please include a brief explanation for a "NO" response and summarize any innovations attempted on this well.)

Client:	**Schlumberger:**
Client Signature:	**Schlumberger Signature:**