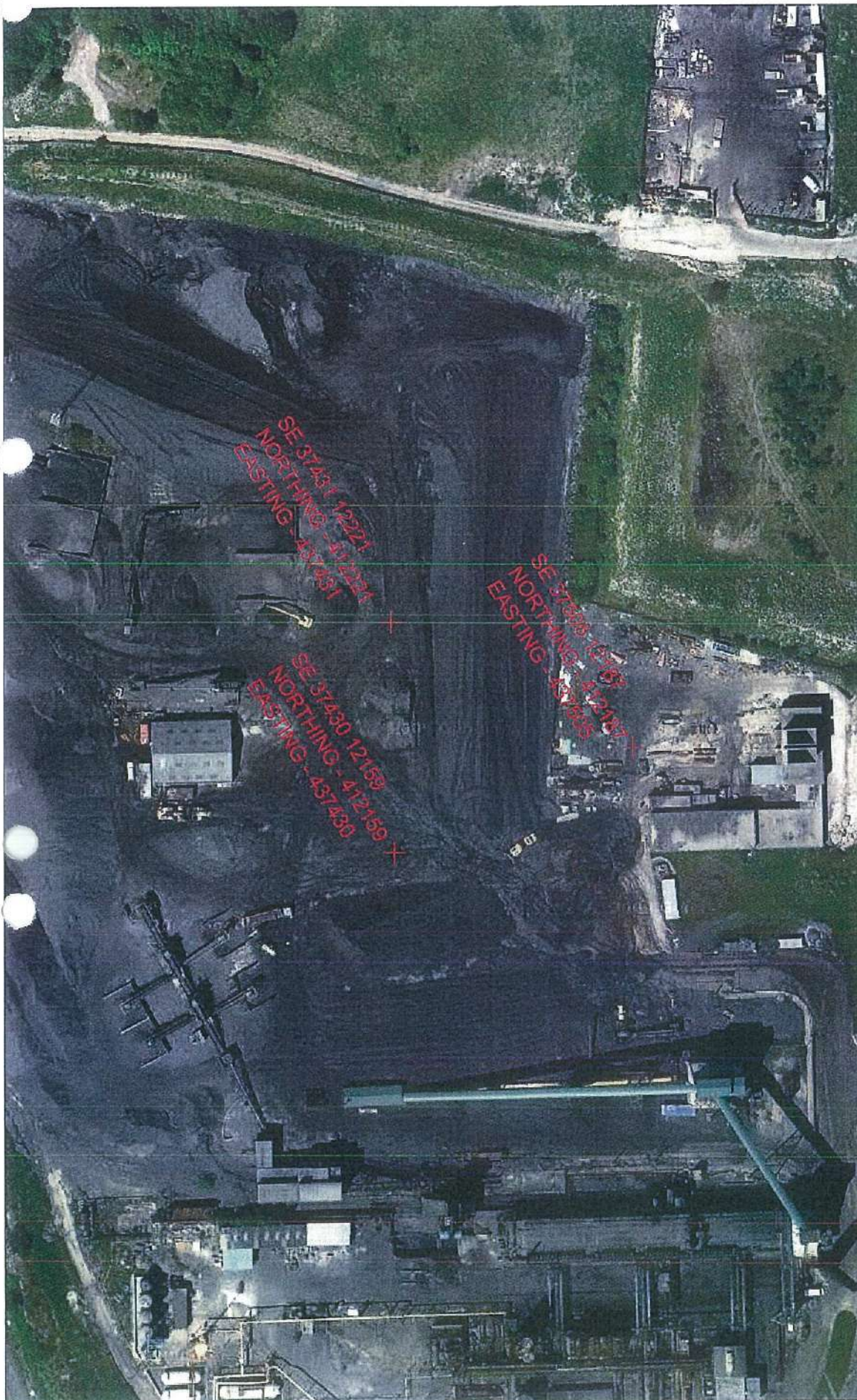




GENERAL NOTES
1.1. THIS DRAWING IS COPYRIGHT AND SHOULD NOT BE REPRODUCED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF PATRICK PARSONS LTD.
1.2. DO NOT SCALE FROM THIS DRAWING.

Rev.	Amendments	Date	By
Revisions			



Orient House
16 Midphol Street
Glasgow
G4 6TW
United Kingdom
T: +44 (0)141 332 4805
E: info@patrickparsons.co.uk
W: www.patrickparsons.co.uk

Client
HARGREAVES (UK) SERVICES LTD

Project
MONCKTON, BARNLEY

Drawing
MINE SHAFT CONJECTURED LOCATION PLAN

Scales NTS At original size A2

Drawn Date	AL AUG '15	Checked JH
---------------	---------------	---------------

Status INFORMATION

Drawing No. G15009-703 Rev.

Appendix B
Exploratory Hole Records & Field Test Data

	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH301							
	Contract Number: G151311	Date Started: 08/06/2015	Date Completed: 09/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 3							
	Easting: 437547.8	Northing: 412088.8	Ground Level: 68.25m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50								
Weather:		Rig Crew:		Termination:										
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/Installation					
			67.85	(0.40) 0.40		CONCRETE		1						
						SAND and GRAVEL.								
				(2.30)				2						
			65.55	2.70		Brown SANDSTONE.		3						
								4						
				(4.60)				5						
								6						
								7						
			60.95	7.30		Grey SANDSTONE.		8						
								9						
								10						
						Continued next sheet								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	21.00	PLAIN	50	21.00	3.00		0	0.00	
					21.00	25.00	SLOTTED	50						



Rig Crew:

Termination:

Samples & In Situ Testing

Strata Details

Groundwater

Depth

Sample ID

Test Result

Level
(=AOP)Depth (m)
(Thickness)

Legend

Strata D

scription

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

rika	Insta
------	-------

ation

$$(10.70)$$

50.25

18.00

Grey MUDSTONE.

Continued next sheet

Start & End of Shift Observations

Borehole Diameter

Casing Diameter

Remarks:

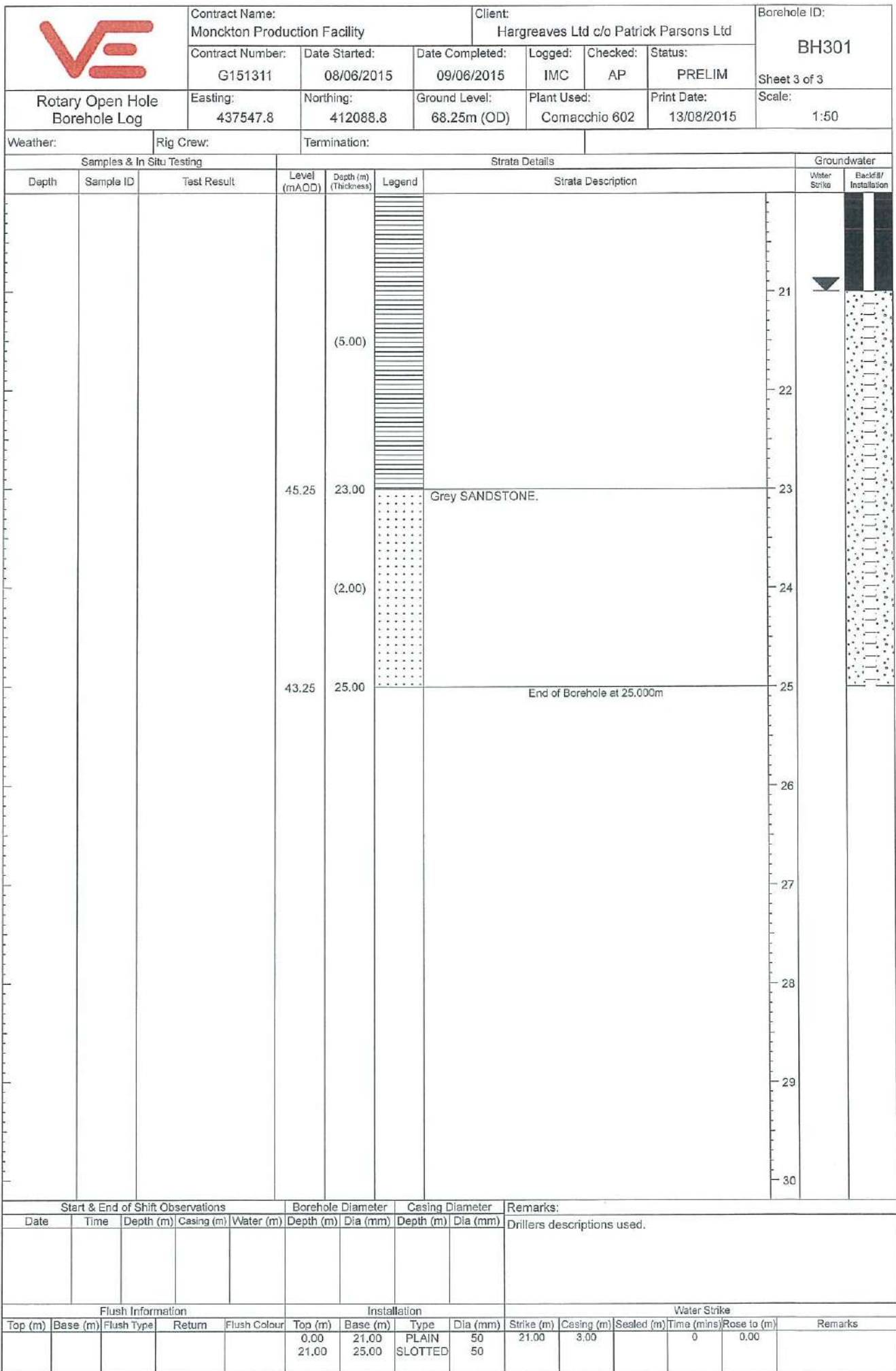
Drillers descriptions used.

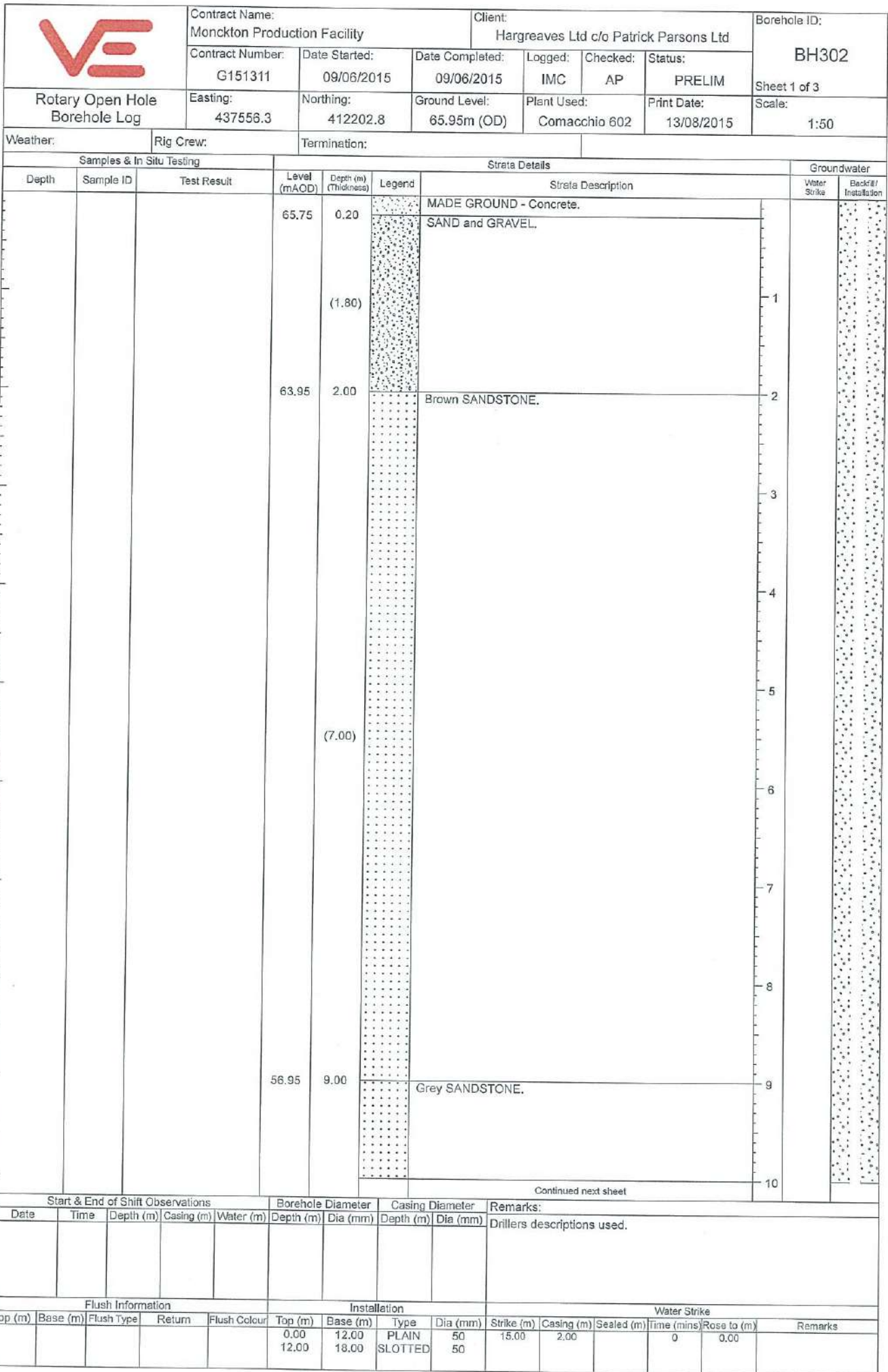
Flush Information		

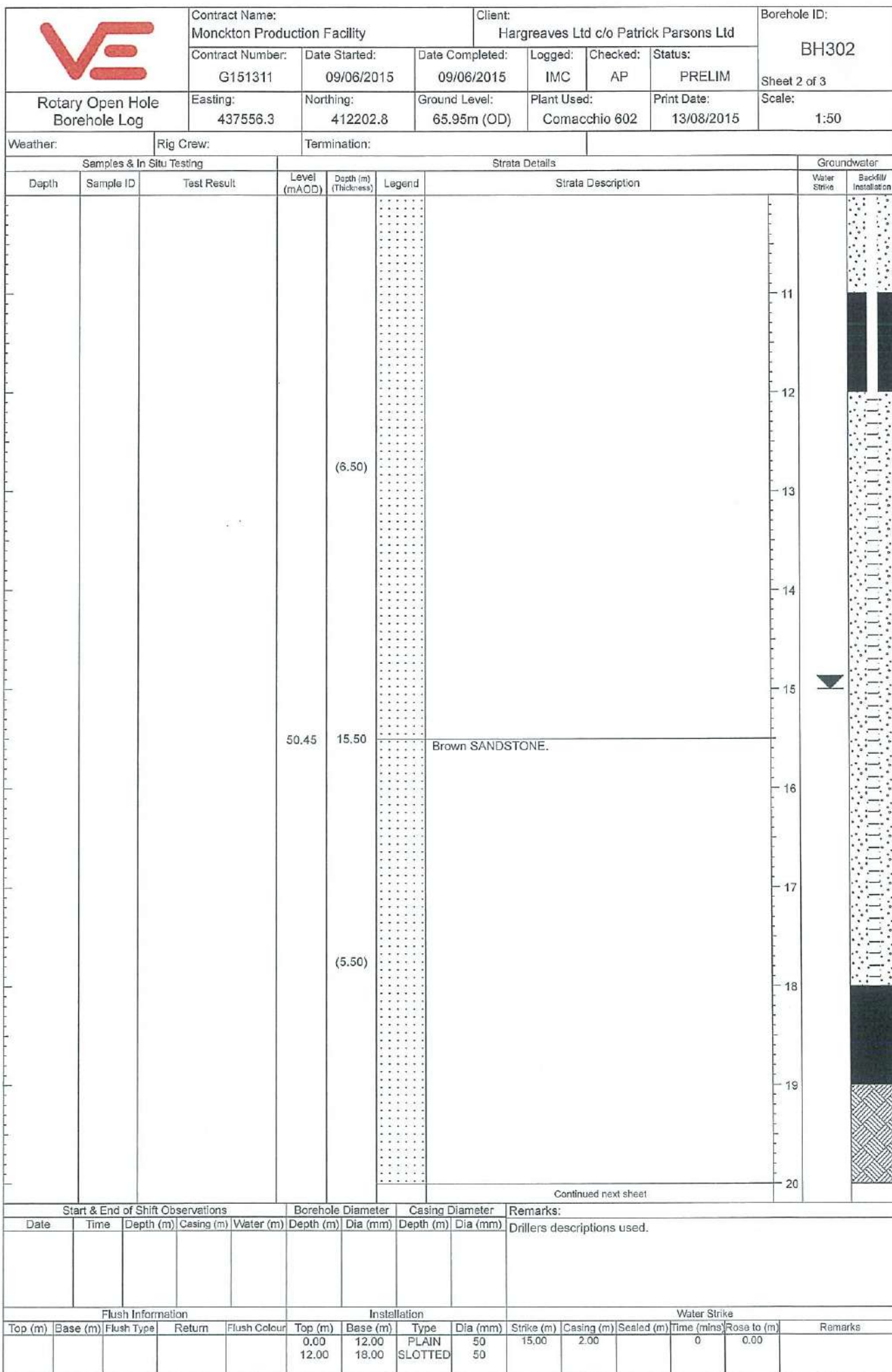
Installation

Water Strike

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	21.00	PLAIN	50	21.00	3.00		0	0.00	
					21.00	25.00	SLOTTED	50						







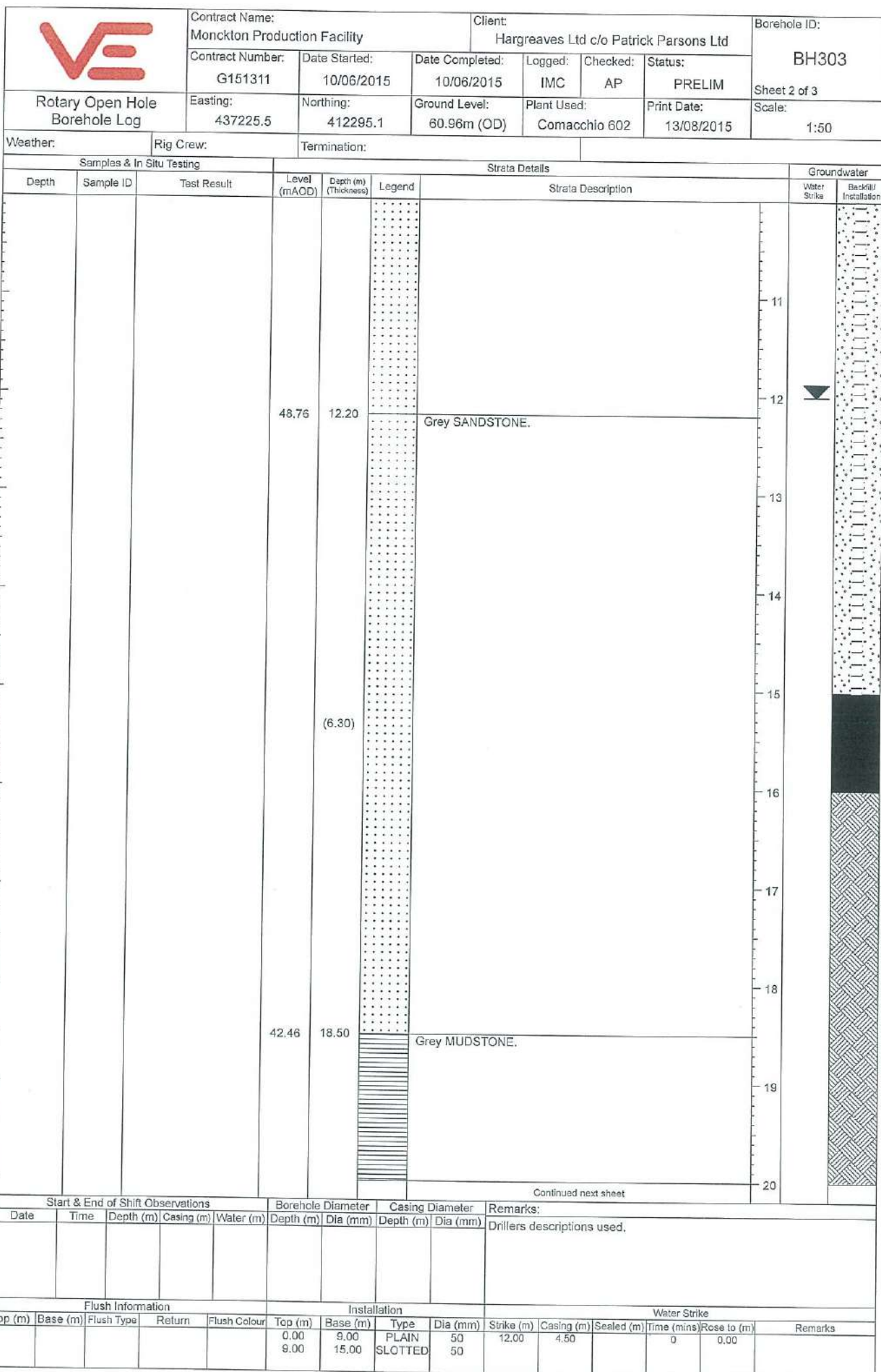
	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd				Borehole ID: BH302	
	Contract Number: G151311	Date Started: 09/06/2015	Date Completed: 09/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 3 of 3	
Rotary Open Hole Borehole Log		Easting: 437556.3	Northing: 412202.8	Ground Level: 65.95m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50	
Weather:		Rig Crew:		Termination:				

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			44.95	21.00		Grey MUDSTONE.	21	
				(4.00)			22	
							23	
							24	
			40.95	25.00		End of Borehole at 25.000m	25	
							26	
							27	
							28	
							29	
							30	

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	12.00	PLAIN	50	15.00	2.00		0	0.00	
					12.00	18.00	SLOTTED	50						

	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: BH303			
	Contract Number: G151311	Date Started: 10/06/2015	Date Completed: 10/06/2015	Logged: IMC	Checked: AP	Status: PRELIM		
Rotary Open Hole Borehole Log		Easting: 437225.5	Northing: 412295.1	Ground Level: 60.96m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015		
Weather:		Rig Crew:	Termination:					
Samples & In-Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
						MADE GROUND - Ash fill.		
			57.96	3.00		SAND and GRAVEL.		
			56.46	4.50		Brown SANDSTONE.		
				(7.70)				
						Continued next sheet		
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)
Flush Information			Installation		Water Strike			
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)
					0.00	9.00	PLAIN	50
					9.00	15.00	SLOTTED	50
		Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	
		12.00	4.50		0	0.00		



	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH303						
	Contract Number: G151311	Date Started: 10/06/2015	Date Completed: 10/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 3 of 3							
	Easting: 437225.5	Northing: 412295.1	Ground Level: 60.96m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50								
Rotary Open Hole Borehole Log		Weather:		Rig Crew:		Termination:								
Samples & In Situ Testing			Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation				
				(6.50)					21					
									22					
									23					
									24					
			35.96	25.00		End of Borehole at 25.000m			25					
									26					
									27					
									28					
									29					
									30					
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	9.00	PLAIN	50	12.00	4.50		0	0.00	
					9.00	15.00	SLOTTED	50						



Contract Name:
Monckton Production Facility

Client:
Hargreaves Ltd c/o Patrick Parsons Ltd

Borehole ID:
BH304

Contract Number:
G151311

Date Started:
11/06/2015

Date Completed:
11/06/2015

Logged:
IMC

Checked:
AP

Status:
PRELIM

Rotary Open Hole
Borehole Log

Easting:
437373.9

Northing:
412054.7

Ground Level:
65.51m (OD)

Plant Used:
Comacchio 602

Print Date:
13/08/2015

Sheet 1 of 2

Scale:
1:50

Weather:

Rig Crew:

Termination:

Samples & In Situ Testing					Strata Details					Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation	
				(1.50)		MADE GROUND - Ash fill.					
			64.01	1.50		Brown SANDSTONE.					
				(5.00)							
			59.01	6.50		Brown MUDSTONE.					
				(1.50)							
			57.51	8.00		Brown SANDSTONE.					
				(4.00)							

	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH304	
	Contract Number: G151311	Date Started: 11/06/2015	Date Completed: 11/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 2 of 2	
Rotary Open Hole Borehole Log	Easting: 437373.9	Northing: 412054.7	Ground Level: 65.51m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50		
	Weather:		Rig Crew:		Termination:			

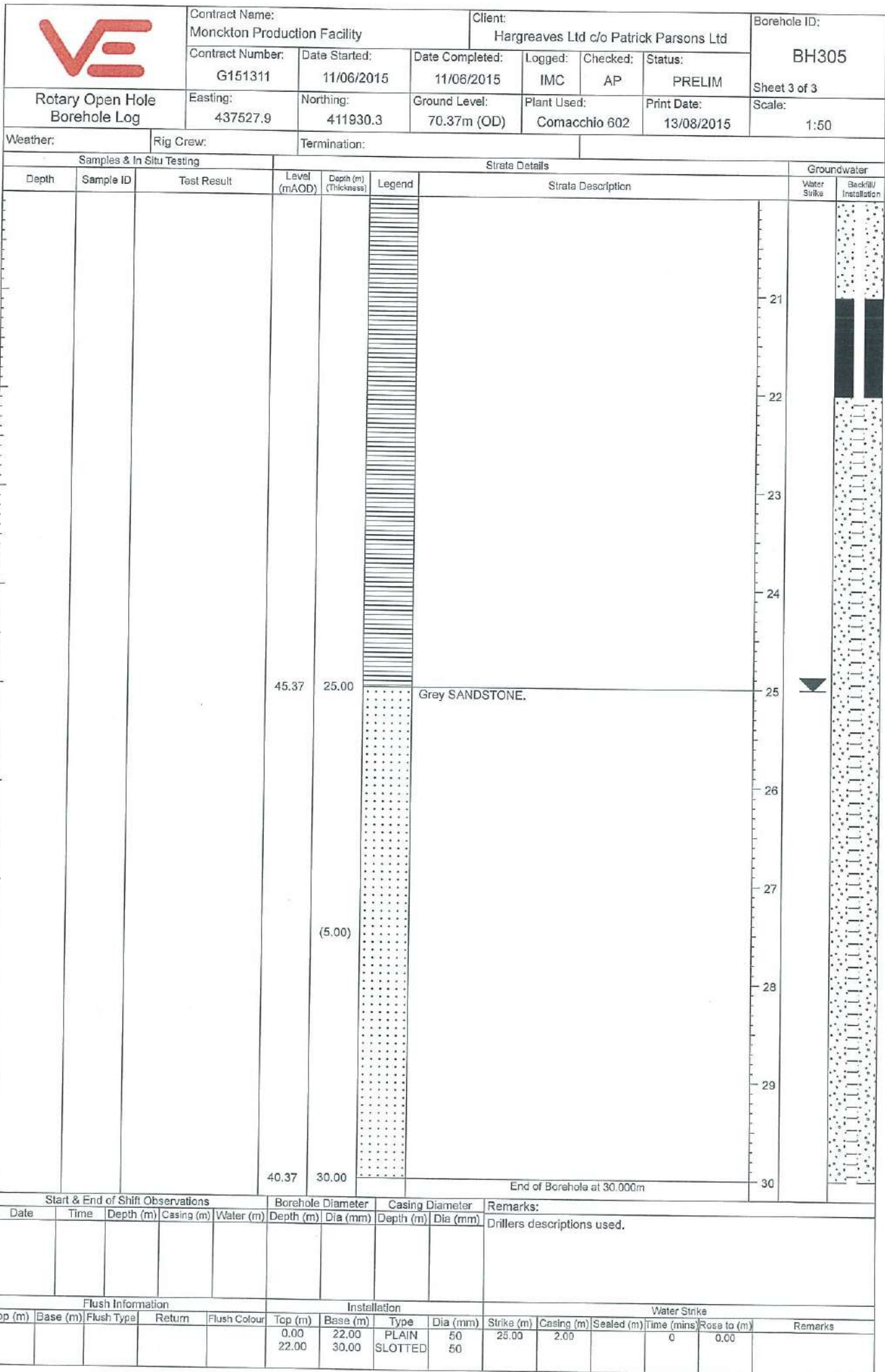
Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
			53.51	12.00			11	
						End of Borehole at 12.000m	12	
							13	
							14	
							15	
							16	
							17	
							18	
							19	
							20	

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	

Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	1.50	PLAIN	50	4.00	1.50		0	0.00	
					1.50	6.50	SLOTTED	50						

	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH305		
	Contract Number: G151311		Date Started: 11/06/2015		Date Completed: 11/06/2015		Logged: IMC	Checked: AP	Status: PRELIM	
	Easting: 437527.9		Northing: 411930.3		Ground Level: 70.37m (OD)		Plant Used: Comacchio 602		Print Date: 13/08/2015	
Rotary Open Hole Borehole Log		Weather:		Rig Crew:		Termination:		Sheet 1 of 3 Scale: 1:50		
Samples & In Situ Testing			Strata Details						Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation
			70.07	(0.30) 0.30		MADE GROUND - Concrete.				
				(1.70)		SAND and GRAVEL.				
			68.37	2.00		Brown SANDSTONE.			1	
				(7.00)					2	
									3	
									4	
									5	
			61.37	9.00		Grey MUDSTONE.			6	
				(1.30)					7	
									8	
									9	
									10	
Continued next sheet										
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.	
Flush Information					Installation				Water Strike	
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)
					0.00	22.00	PLAIN	50	25.00	2.00
					22.00	30.00	SLOTTED	50		
									Sealed (m)	Time (mins)
									Rose to (m)	Remarks
									0	0.00

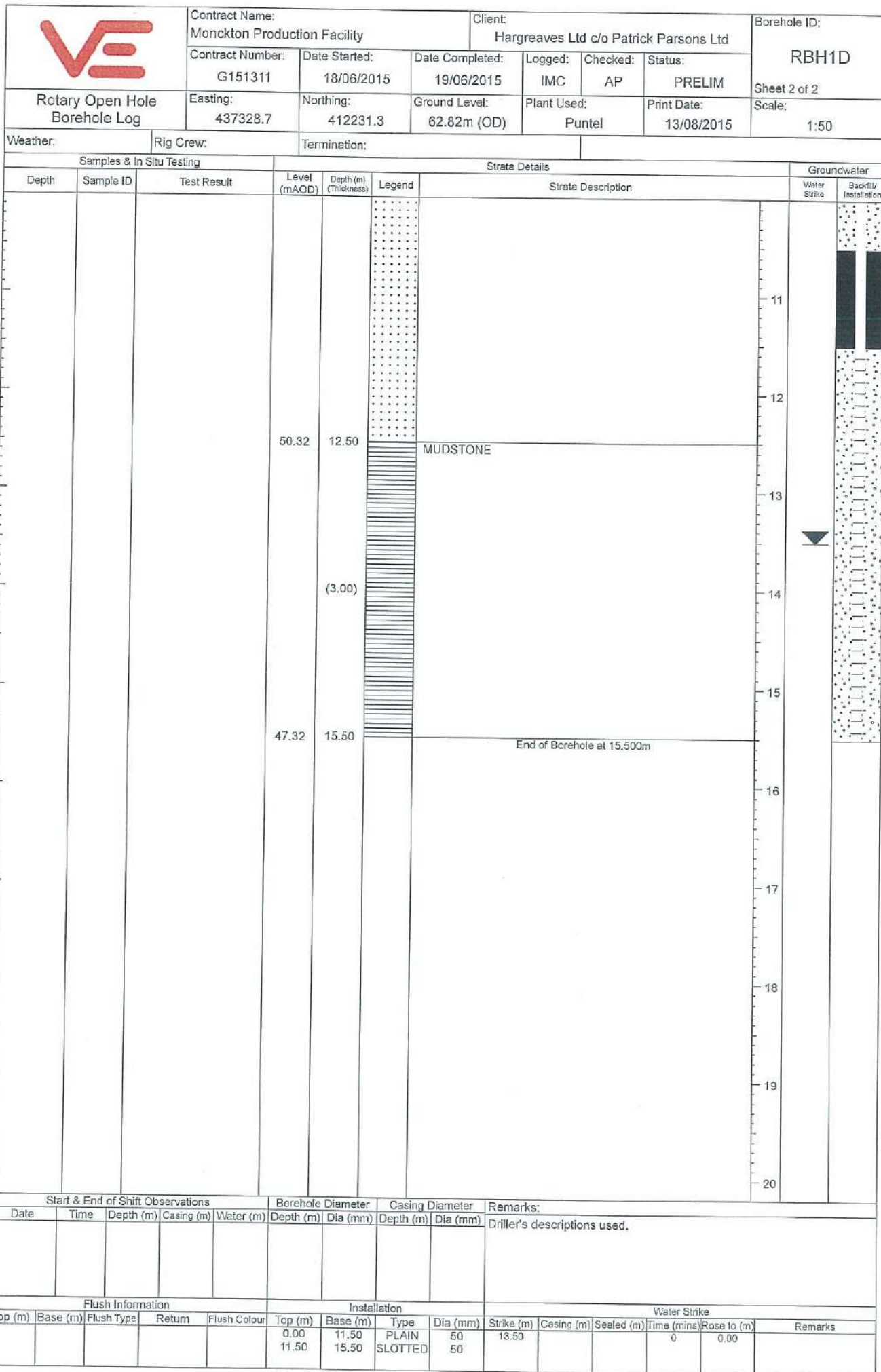
	Contract Name: Monckton Production Facility				Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: BH305						
	Contract Number: G151311	Date Started: 11/06/2015	Date Completed: 11/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 2 of 3							
	Easting: 437527.9		Northing: 411930.3		Ground Level: 70.37m (OD)		Plant Used: Comacchio 602		Print Date: 13/08/2015					
Rotary Open Hole Borehole Log			Weather:		Rig Crew:		Termination:		Scale: 1:50					
Samples & In Situ Testing			Strata Details						Groundwater					
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation				
			60.07	10.30		Grey SANDSTONE.			11					
				(2.20)					12					
			57.87	12.50			Brown SANDSTONE.				13			
				(2.50)				14						
			55.37	15.00			Grey MUDSTONE.			15				
				(10.00)					16					
									17					
								18						
								19						
								20						
						Continued next sheet								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drillers descriptions used.					
Flush Information					Installation				Water Strike					
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	22.00	PLAIN	50	25.00	2.00		0	0.00	
					22.00	30.00	SLOTTED	50						



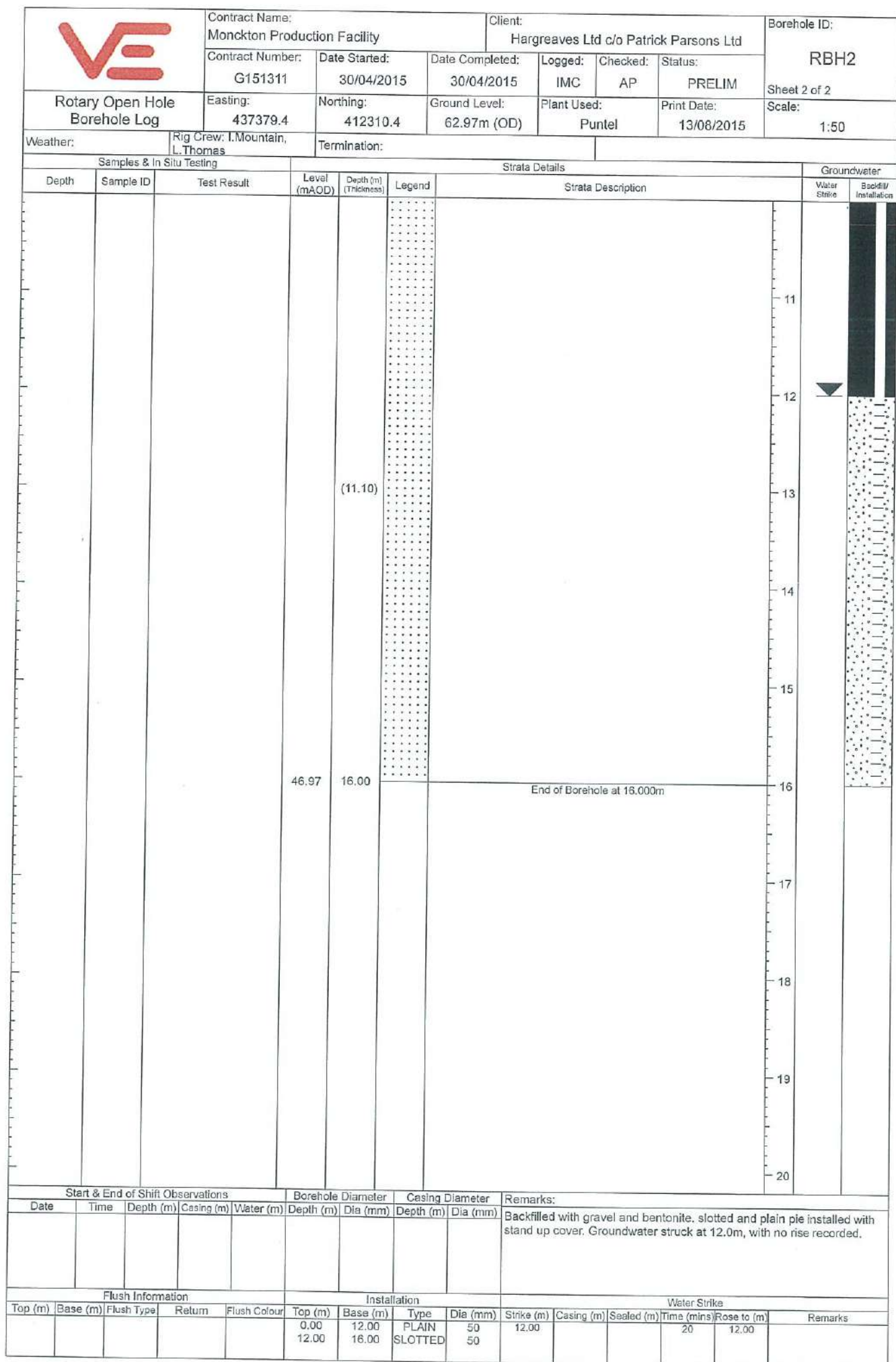
	Contract Name: Monckton Production Facility		Client: Hargreaves Ltd c/o Patrick Parsons Ltd		Borehole ID: RBH1		
	Contract Number: G151311	Date Started: 30/04/2015	Date Completed: 30/04/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2
Rotary Open Hole Borehole Log	Easting: 437328.8	Northing: 412234.2	Ground Level: 62.90m (OD)	Plant Used: Comacchio 602	Print Date: 13/08/2015	Scale: 1:50	
Weather:		Rig Crew: I.Mountain, L.Thomas		Termination:			
Samples & In Situ Testing			Strata Details				Groundwater
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike
			61.70	(1.20) 1.20		MADE GROUND (Drillers Description)	
				(4.00) 5.20		Brown weathered SANDSTONE (Drillers Description)	
						SANDSTONE (Drillers Description)	
						Continued next sheet	
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)
Flush Information			Installation		Water Strike		
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type
					0.00	12.00	PLAIN
					12.00	18.00	SLOTTED
					Strike (m)	Casing (m)	Sealed (m)
					Time (mins)	Rose to (m)	Remarks

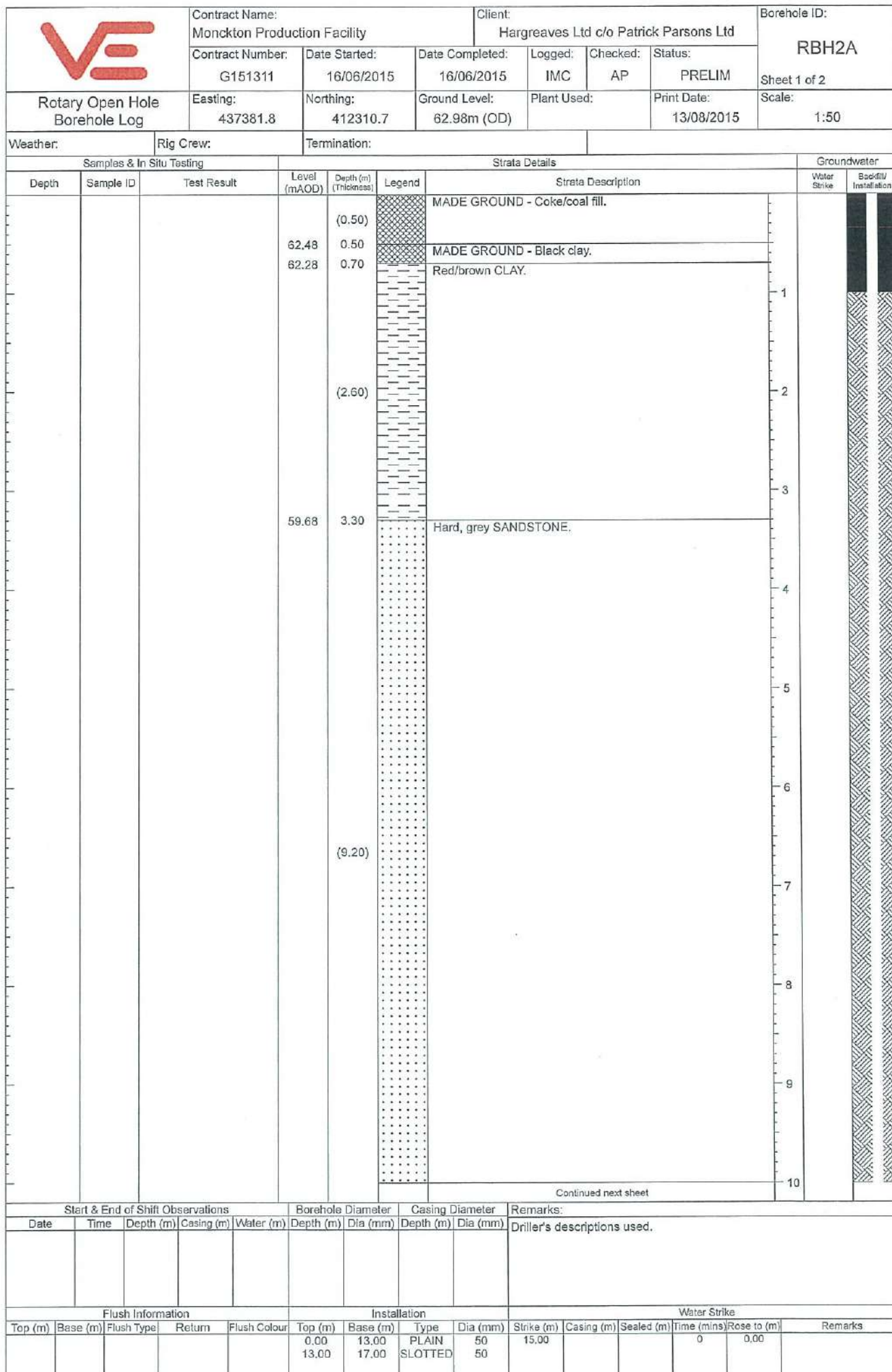
[illegible]

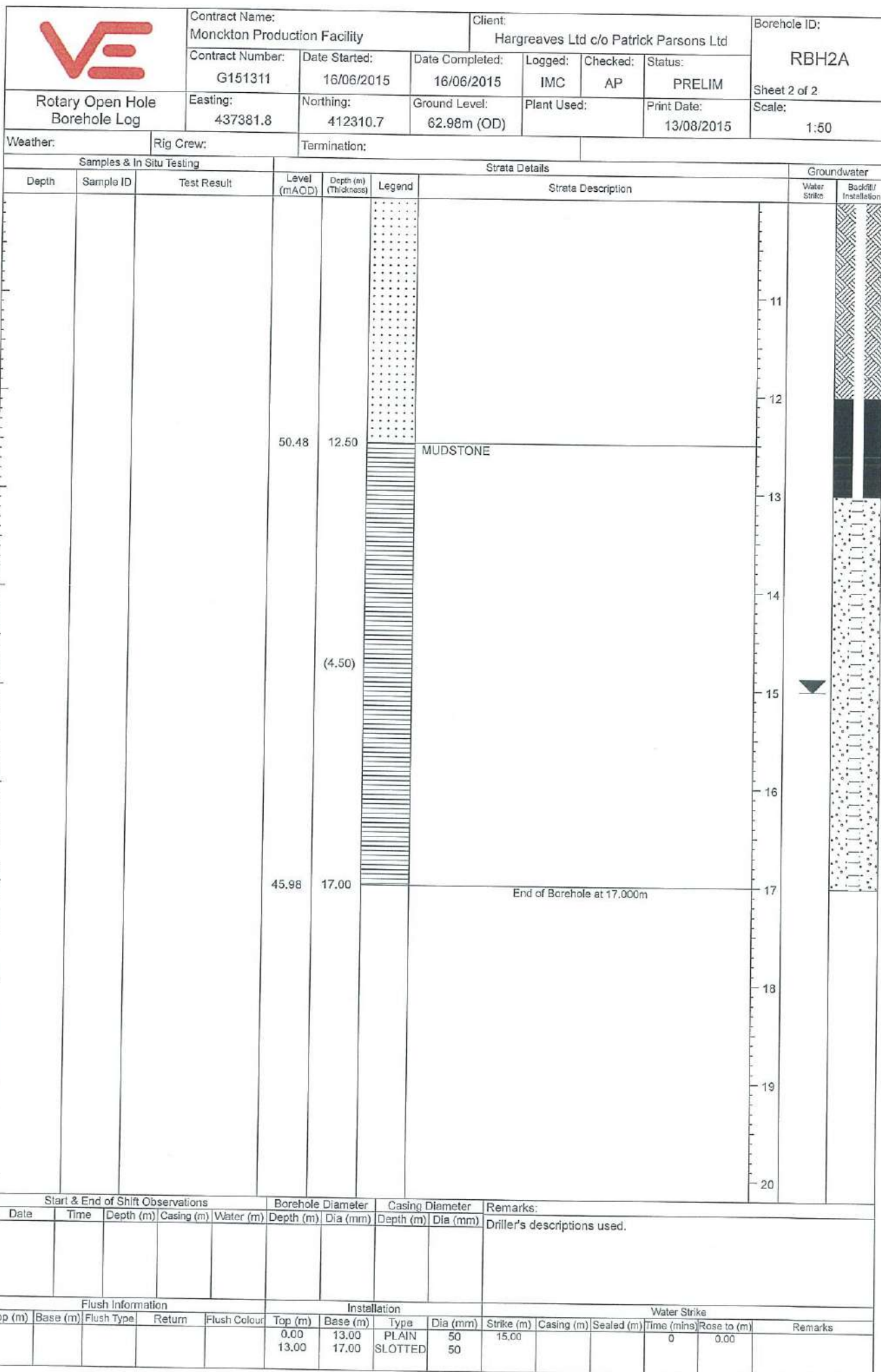
	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: RBH1D			
	Contract Number: G151311	Date Started: 18/06/2015	Date Completed: 19/06/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2			
Rotary Open Hole Borehole Log		Easting: 437328.7	Northing: 412231.3	Ground Level: 62.82m (OD)	Plant Used: Puntel	Print Date: 13/08/2015	Scale: 1:50			
Weather:		Rig Crew:		Termination:						
Samples & In Situ Testing				Strata Details				Groundwater		
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	Backfill/ Installation	
				(0.50)		MADE GROUND - Coke/coal fill.				
			62.32	0.50		MADE GROUND - Concrete.				
			62.22	0.60		MADE GROUND				
				(0.50)						
			61.72	1.10		Brown CLAY.				
				(0.40)						
			61.32	1.50		Broken SANDSTONE.				
				(1.10)						
			60.22	2.60		NO RECOVERY.				
				(0.40)						
			59.82	3.00		Hard, red SANDSTONE.				
				(9.50)						
						Continued next sheet				
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:	
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Driller's descriptions used.	
Flush Information					Installation				Water Strike	
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)
					0.00	11.50	PLAIN	50	13.50	
					11.50	15.50	SLOTTED	50		
									Sealed (m)	Time (mins)
									Rose to (m)	Remarks
									0	0.00

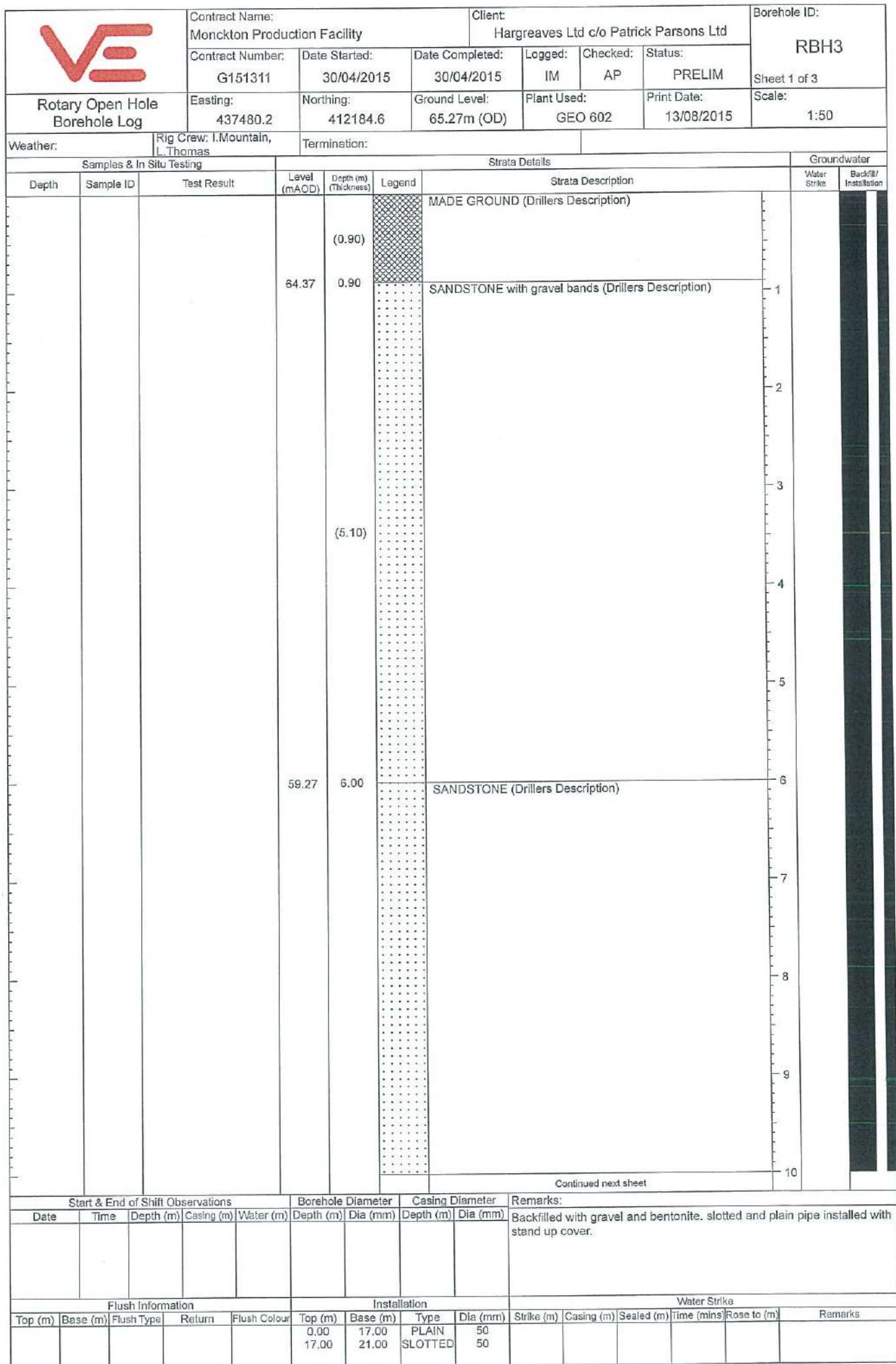


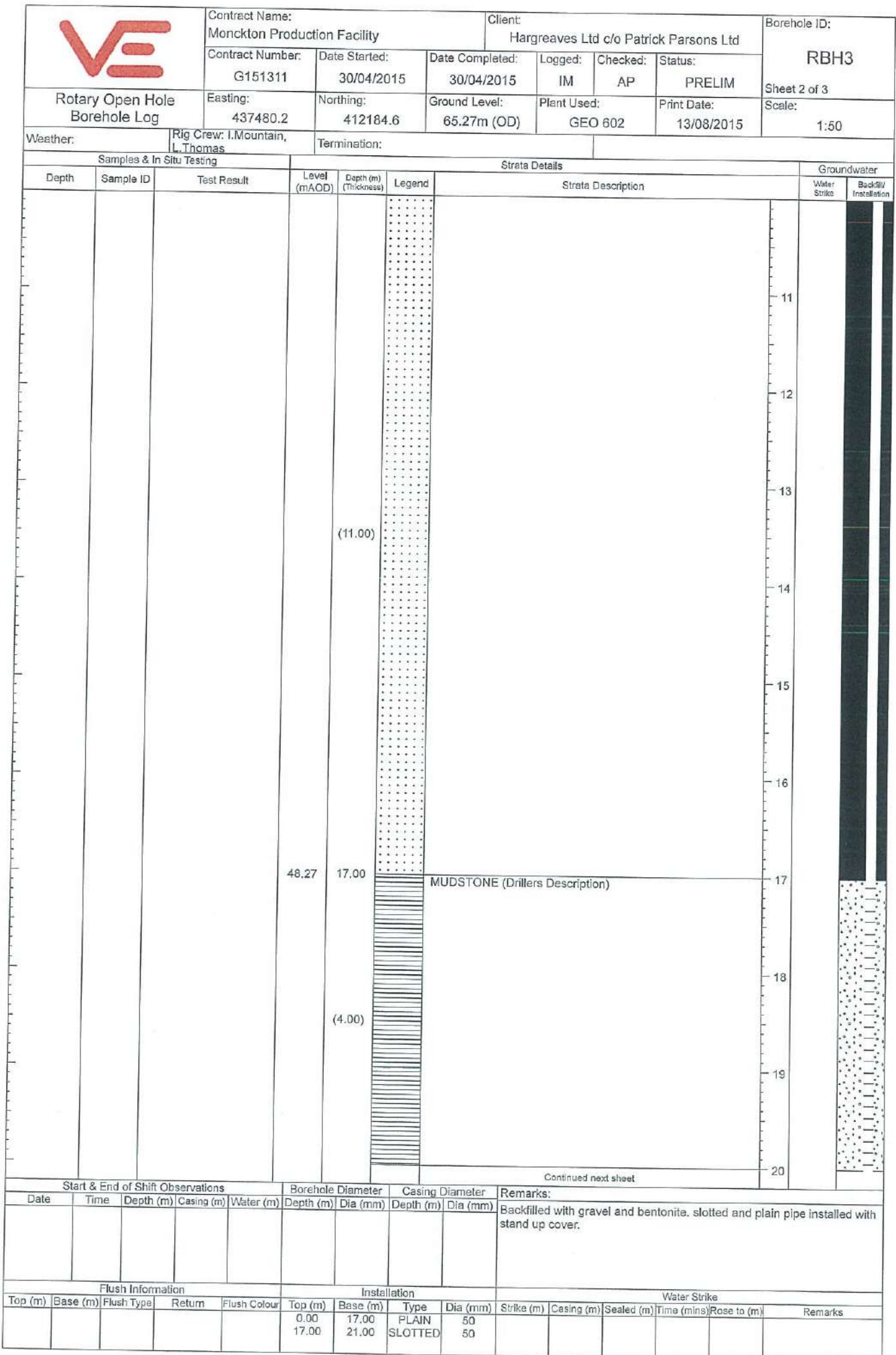
	Contract Name: Monckton Production Facility			Client: Hargreaves Ltd c/o Patrick Parsons Ltd			Borehole ID: RBH2		
	Contract Number: G151311	Date Started: 30/04/2015	Date Completed: 30/04/2015	Logged: IMC	Checked: AP	Status: PRELIM	Sheet 1 of 2		
Rotary Open Hole Borehole Log	Easting: 437379.4	Northing: 412310.4	Ground Level: 62.97m (OD)	Plant Used: Puntel	Print Date: 13/08/2015	Scale: 1:50			
Weather:		Rig Crew: I.Mountain, L.Thomas		Termination:					
Samples & In Situ Testing			Strata Details					Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description		Water Strike	
						MADE GROUND (Drillers Description)			
			61.87	(1.10) 1.10				1	
				(2.00)		Brown weathered SANDSTONE		2	
			59.87	3.10		MUDSTONE (Drillers Description)		3	
				(1.80)				4	
			58.07	4.90		SANDSTONE (Drillers Description)		5	
								6	
								7	
								8	
								9	
								10	
Continued next sheet									
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Backfilled with gravel and bentonite. slotted and plain pie installed with stand up cover. Groundwater struck at 12.0m, with no rise recorded.
Flush Information					Installation			Water Strike	
Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)
					0.00	12.00	PLAIN	50	12.00
					12.00	16.00	SLOTTED	50	
								Casing (m)	Sealed (m)
								Time (mins)	Rose to (m)
								20	12.00
								Remarks	



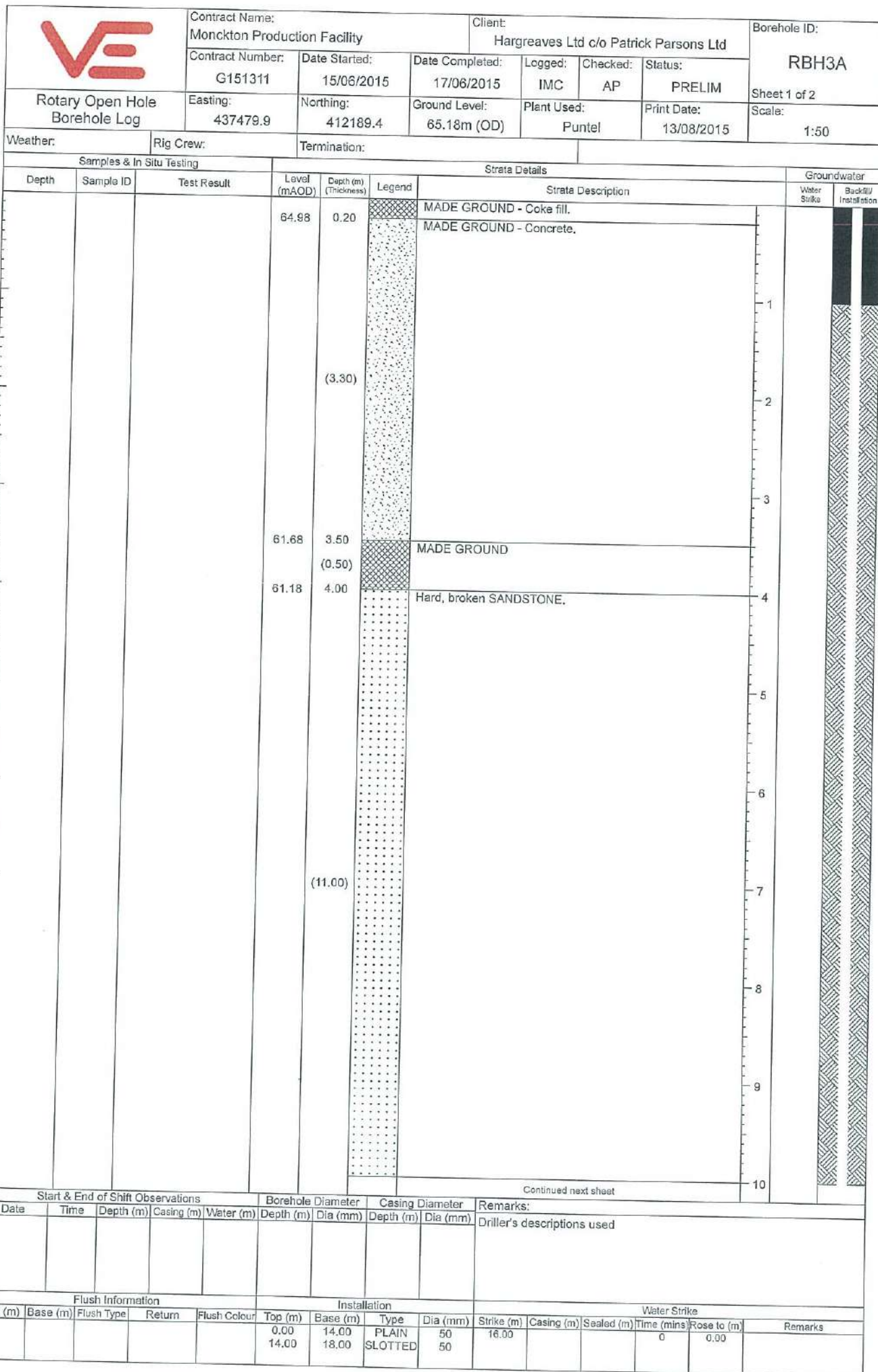


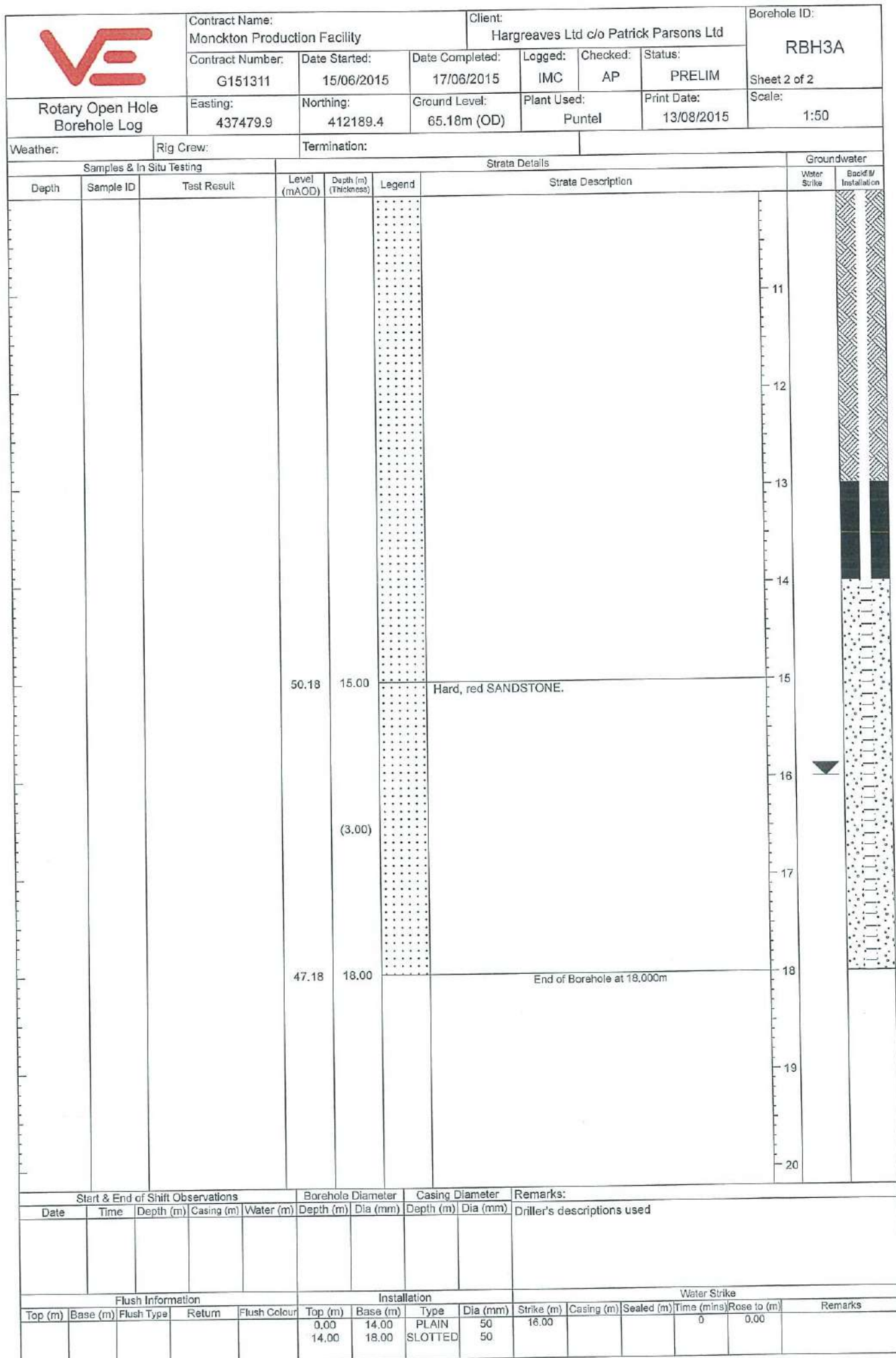






[illegible]







Contract Name:
Monckton Production Facility

Client:
Hargreaves Ltd c/o Patrick Parsons Ltd

Borehole ID:
RBH4

Contract Number:
G151311

Date Started:
01/05/2015

Date Completed:
01/05/2015

Logged:
IMC

Checked:
AP

Status:
PRELIM

Rotary Open Hole
Borehole Log

Easting:
437414.0

Northing:
412077.1

Ground Level:
66.23m (OD)

Plant Used:
GEO 602

Print Date:
13/08/2015

Sheet 1 of 2
Scale:
1:50

Weather:

Rig Crew: I. Mountain,
L. Thomas

Termination:

Samples & In Situ Testing

Strata Details

Groundwater

Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/Installation
						MADE GROUND (Drillers Description)		
				(3.40)			1	
							2	
			62.83	3.40		Brown weathered SANDSTONE (Drillers Description)		
				(1.90)			4	
			60.93	5.30		SANDSTONE (Drillers Description)		
							6	
							7	
							8	
							9	
							10	

Continued next sheet

Start & End of Shift Observations

Borehole Diameter

Casing Diameter

Remarks:

Backfilled with gravel and bentonite. slotted and plain pipe installed with stand up cover. Groundwater struck at 13.9m, with no rise recorded.

Flush Information

Installation

Water Strike

Top (m)	Base (m)	Flush Type	Return	Flush Colour	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
					0.00	14.00	PLAIN	50				0	0.00	
					14.00	18.00	SLOTTED	50	13.90			20	13.90	