

# MWD - Gamma Ray

**Schlumberger**

## Recorded Mode

Company: Trias Westland B.V.  
 Well: NLW-GT-02-S1  
 Field: Naaldwijk  
 Rig Name: KCA Deutag T-207

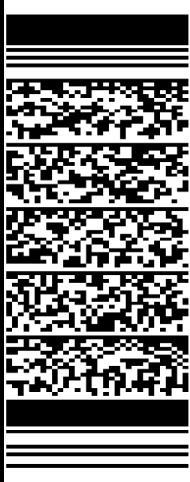
Country: The Netherlands

Latitude:	51° 59' 26.962" N	UWID:	17HOL0035
Longitude:	4° 14' 22.357" E	Rig Name:	KCA Deutag T-207
FL:	NLW-GT-02-S1	Rig Type:	Land Rig
FL1:	Section: 12 1/4 in.		
FL2:	Job no.: 17HOL0035		

Log Measured From: - Drill Floor: 8.42 m

Reference Datum - Mean Sea Level/Permanent Datum: - NAP  
 Ground Level: 0.90 m

Acquisition Dates:	24-Apr-2018 -- 28-Apr-2018	Other Services:	
Log Interval:	2334.00(m) .. 2681.00(m)	Direction & Inclination (Surveys)	
Index Types:	Measured Depth	Directional Drilling	
Index Scales:	1:200, 1:1000		
Depth Source:	Driller's Depth		
Depth Sensor:	3rd Party Depth		
Print Type:	Final		
Spud Date:	08-Mar-2018		



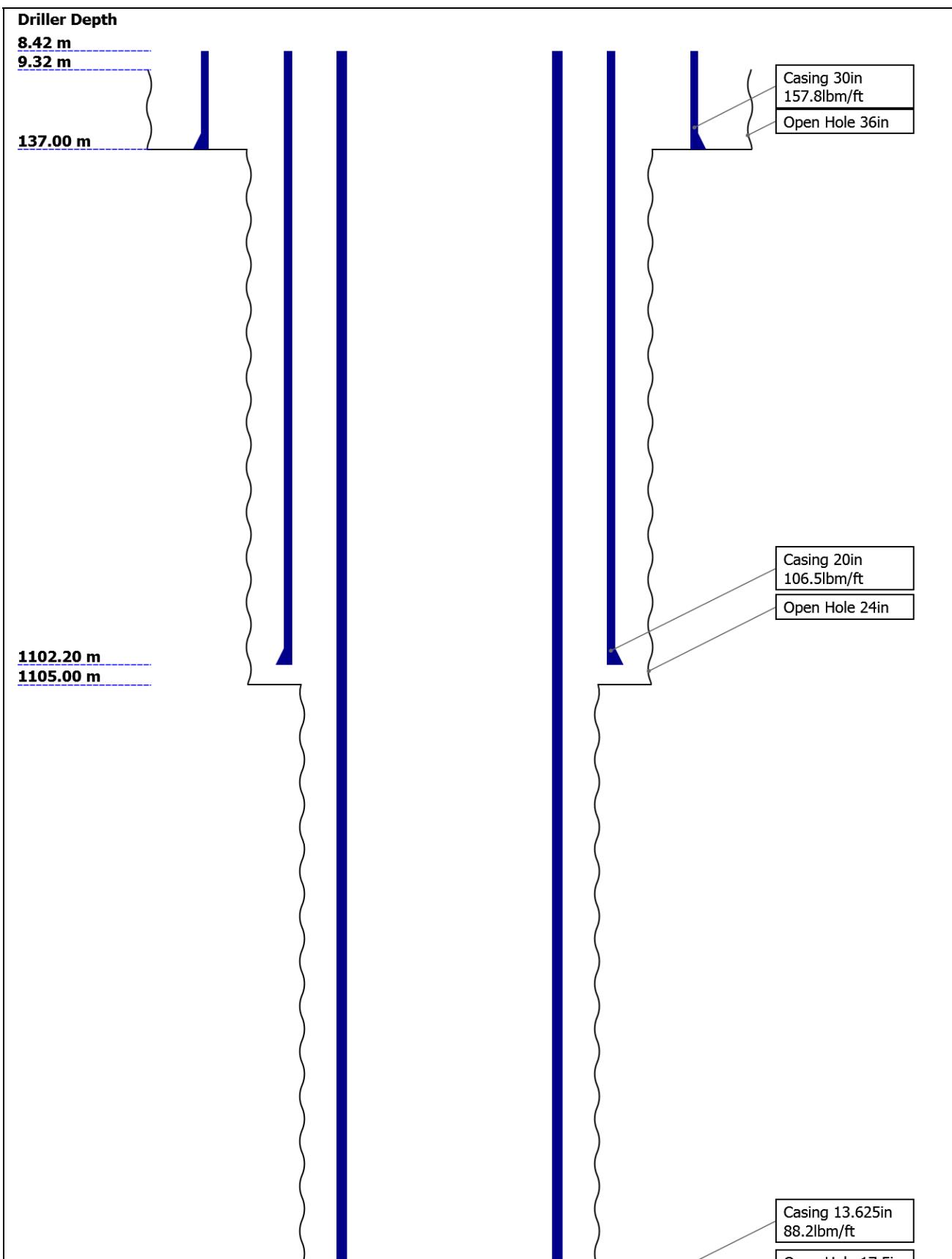
## Disclaimer

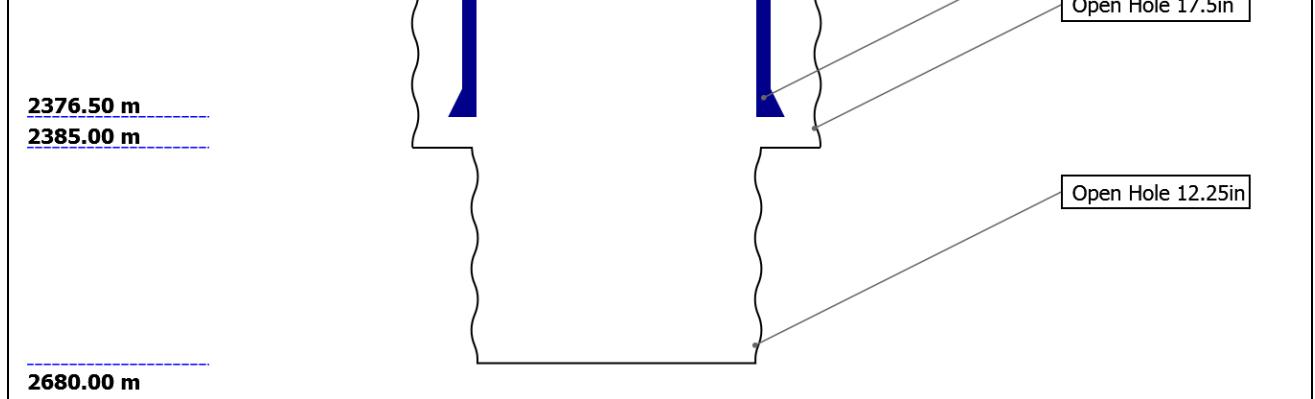
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## Well Sketch





## Borehole Size/Casing Record

Bit						
Bit Size ( in )	36	24	17.5	12.25		
Top Driller ( m )	9.32	137	1105	2385		
Bottom Driller ( m )	137	1105	2385	2680		
Casing						
Size ( in )	30	20	13.625			
Weight ( lbm/ft )	157.8	106.5	88.2			
Inner Diameter ( in )	29.021	19	12.375			
Grade	X52	K55	L80			
Top Driller ( m )	8.42	8.42	8.42			
Bottom Driller ( m )	137	1102.2	2376.5			

## Operational Run Summary

Parameter ( unit )	Run 6					
Date Log Started	23-Apr-2018					
Time Log Started	20:41:53					
Date Log Finished	28-Apr-2018					
Time Log Finished	03:29:46					
Bit Size ( in )	12.250					
Bit Start Depth ( m )	2385.00					
Bit Stop Depth ( m )	2680.00					
Top Log Interval ( m )	2336.30					
Bottom Log Interval ( m )	2669.90					
Max Hole Deviation ( deg )	45.26					
Azimuth of Max Deviation ( deg )	107.83					
Logging Unit Number	N/A					
Logging Unit Location						
Recorded By	I.Urazina					
Witnessed By	K.Gollob					
Service Order Number	17HOL0035					

## Borehole Fluids

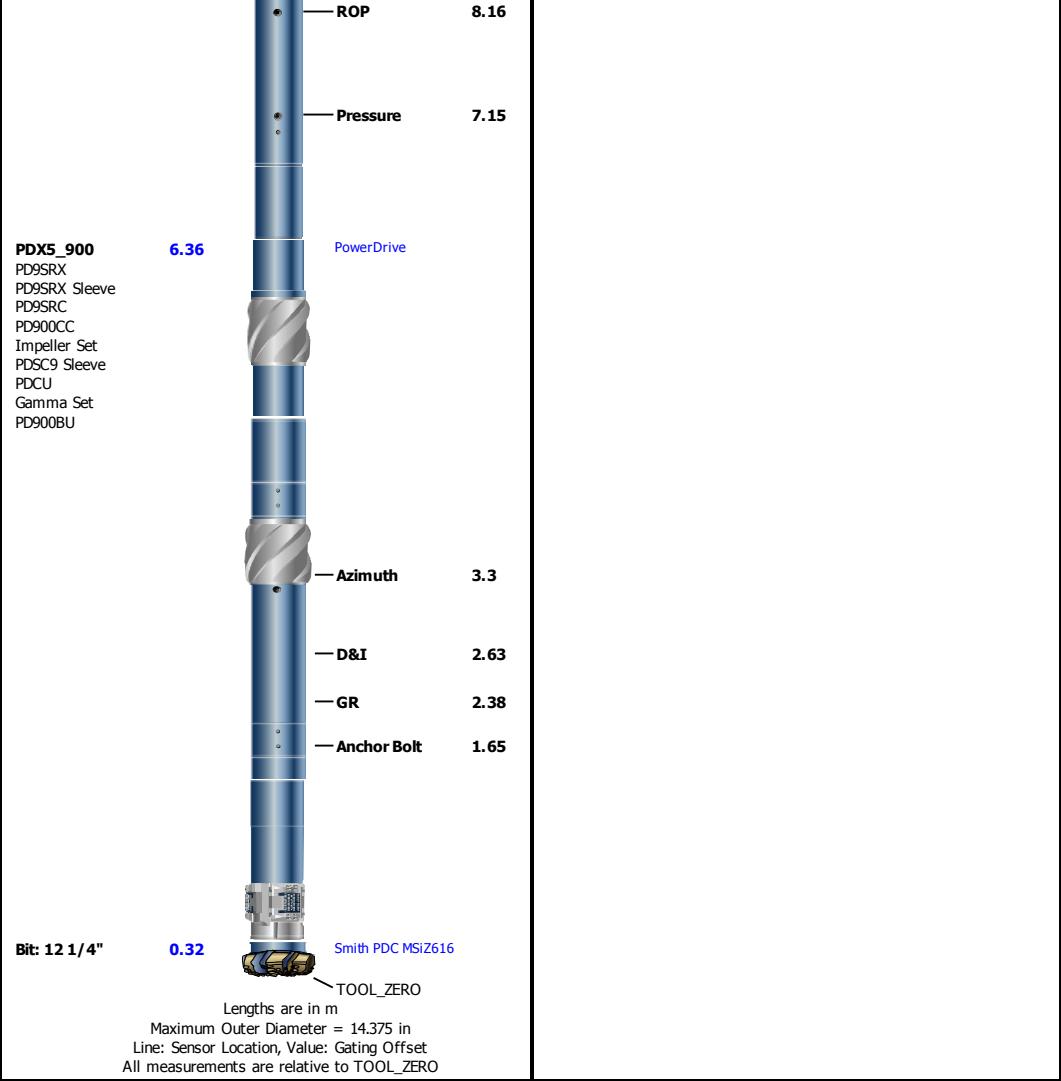
Parameter( unit )	Run 6				
Fluid Type	Water				
Fluid Name	KCl/Polymer				
Max Recorded Temperatures ( degC )	71.4				
Source of Sample	Active Tank				
Salinity ( ppm )	34972.18				
Density ( g/cm3 )	1.13				
Funnel Viscosity ( s )					
Fluid Loss ( cm3 )	3				
PH	9.5				
Source RMF					
RMC	Pressed				
RM @ Meas Temp ( ohm.m@degC )	0.2 @ 20				
RMF @ Meas Temp ( ohm.m@degC )	0.15 @ 20				
RMC @ Meas Temp ( ohm.m@degC )					
RM @ BHT ( ohm.m@degC )	0.07 @ 71.4				
RMF @ BHT ( ohm.m@degC )	0.05 @ 71.4				
RMC @ BHT ( ohm.m@degC )	NaN @ 71.4				
Total Solid ( % )					
High Gravity Solids ( % )					

## Remarks and Equipment Summary

### Run 6: Toolstring

### Run 6: Remarks

Equip name NM Stab: 8 1/4":2 804	Length <b>16.58</b>	MP name 12 3/32 in Non-Mag Stabilizer	Offset	All depths referenced to driller's depth. See EOWR for depth tracking details.
X/O: 8 1/4":4126	<b>15.62</b>	Non-Mag X-Over		All data from tool memory. All data acquired while drilling.
TELE825:G4203	<b>14.76</b>	TeleScope		Gamma Ray measurement is environmentally corrected for mud weight, bit size, collar thickness and Potassium content.
MSSU825:85397 Upper Extender:aa U KA027 MDC825:G4203 MMA:704 MDI:3711 PMGR:1103 PMEA:3711 MTA:3446 MTK825:2761 APWD MSSD825:89142 Lower Extender, Lon 9				Run 6 and 12 1/4 in. section TD at 2680 m.
		D&I	<b>10.51</b>	
		GR	<b>9.86</b>	



## 12.25 in. Section

### MWD - Gamma Ray 1:200 MD

#### Software Version

Acquisition System		Version	
Maxwell 2018 SP1		8.1.99839.3100	
Tool Interface		Loaded Version	
HSPM	20.3c.062	8.1.99839.3100	
Tool Elements		Software Version	Firmware Version
PMGR	TeleScope - M10 Gamma Ray Assembly	8.1.99839.3100	V14.0
DRILLING_SURFACE	DRILLING_SURFACE	8.1.99839.3100	

#### Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run 6	Ream Down 1	Down	2340.89 m	2384.83 m	24-Apr-2018 14:47:43	25-Apr-2018 05:13:30	Yes
Run 6	Drilling	Down	2389.43 m	2679.93 m	25-Apr-2018 05:13:30	28-Apr-2018 03:29:46	Yes

All depths are referenced to toolstring zero

#### Log

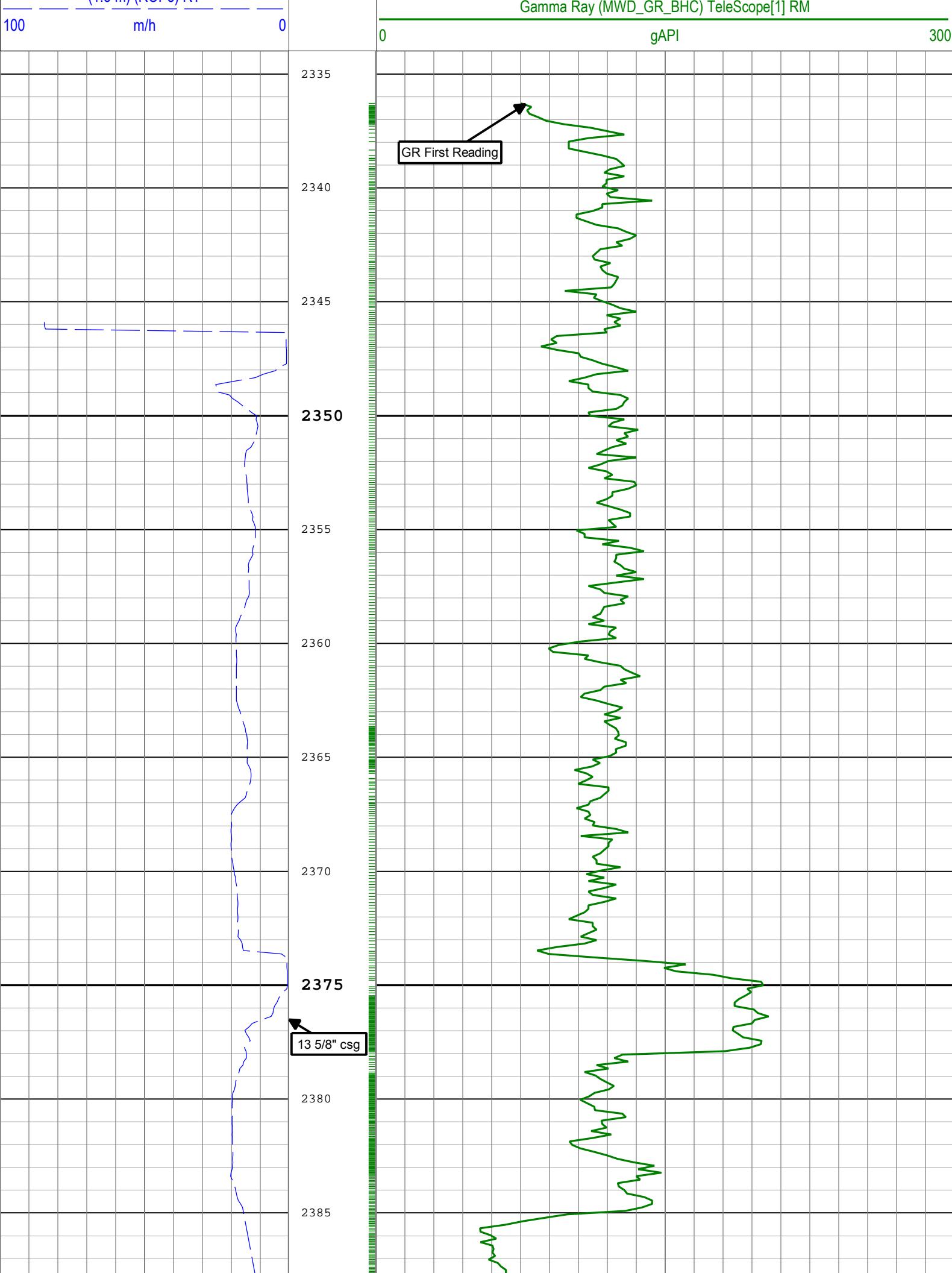
Company:Trias Westland B.V. Well:NLW-GT-02-S1

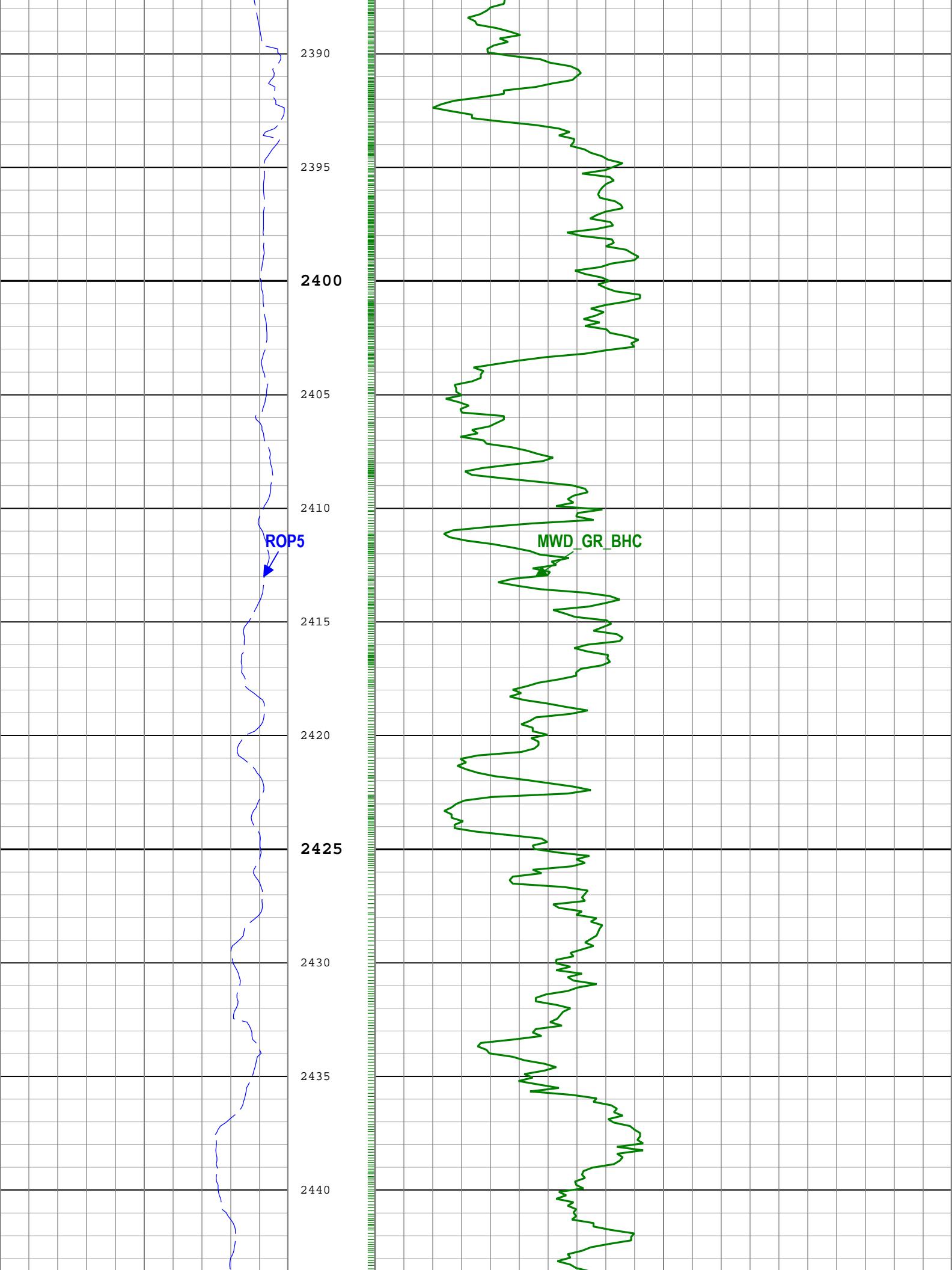
12.25 in. Section:S196

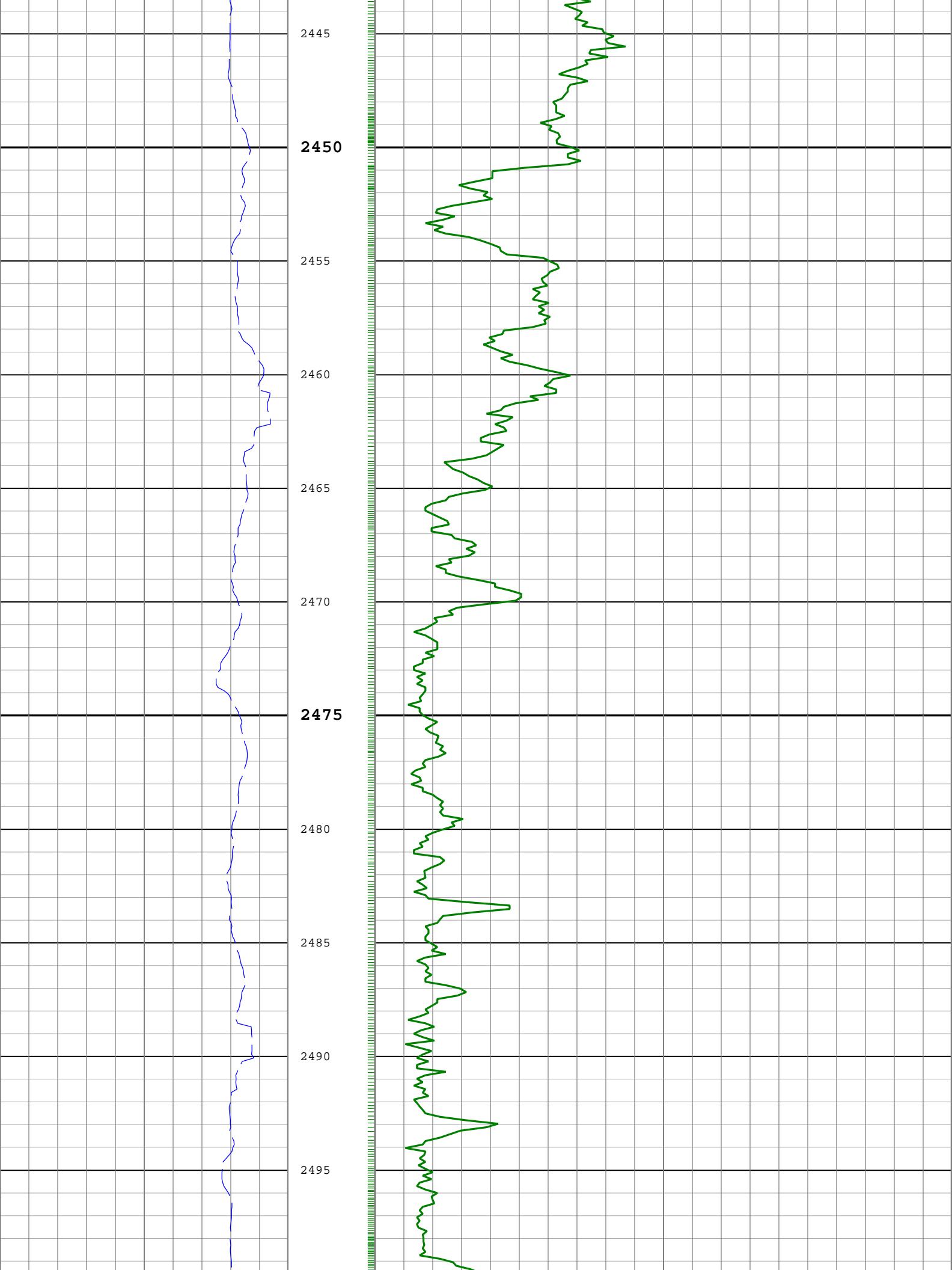
Description: TeleScope Gamma Ray Depth RT Format: Log ( GR MWD and PD with ticks ) Index Scale: 1:200 Index Unit: m Index Type: Measured Depth Creation Date: 02-May-2018 19:50:11

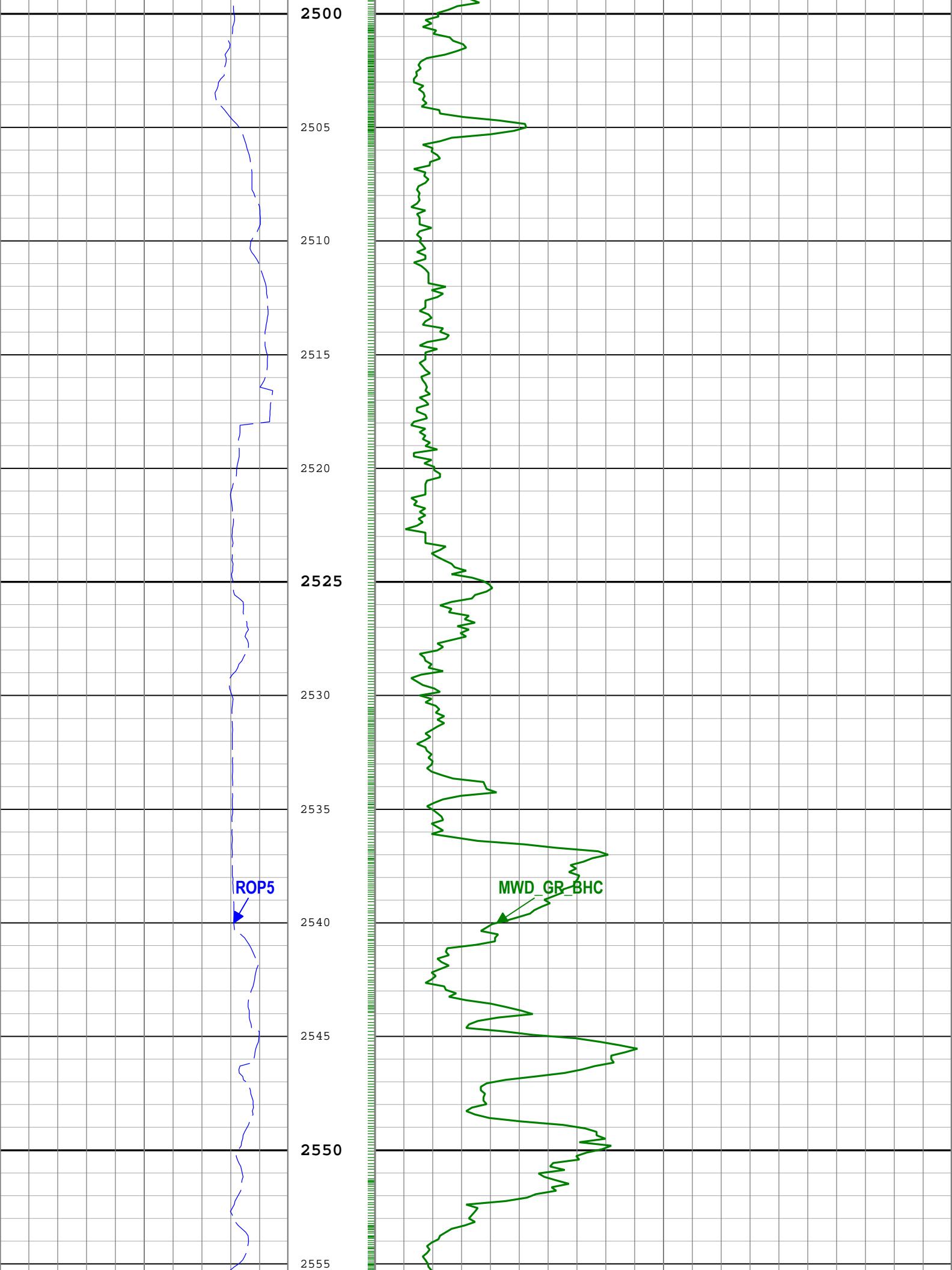
TICKS\_GR - Gamma Ray Tick Marks TeleScope[1] RM

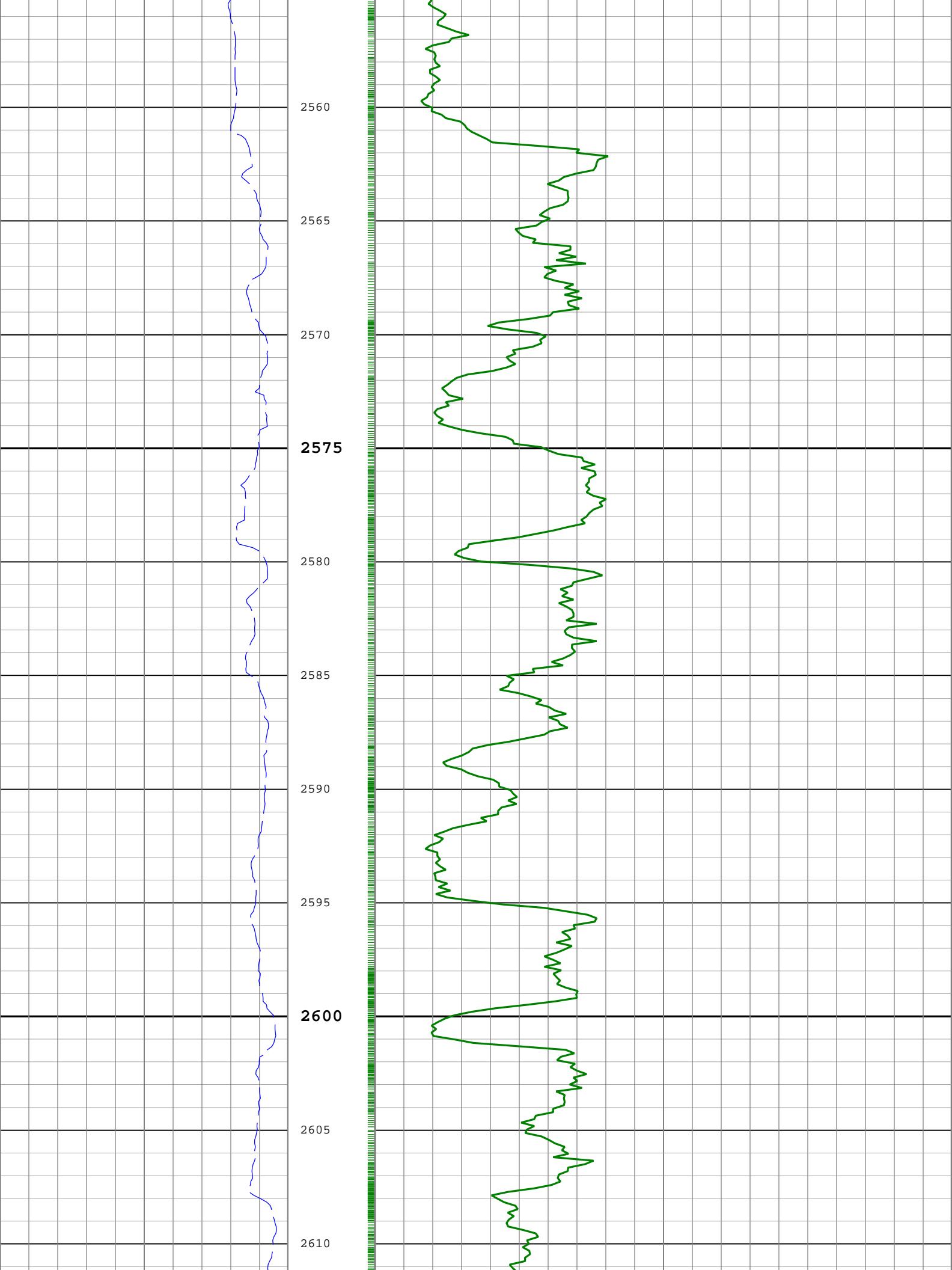
Rate of penetration averaged over the last 5 ft  
(1.5 m) (ROP5) RT

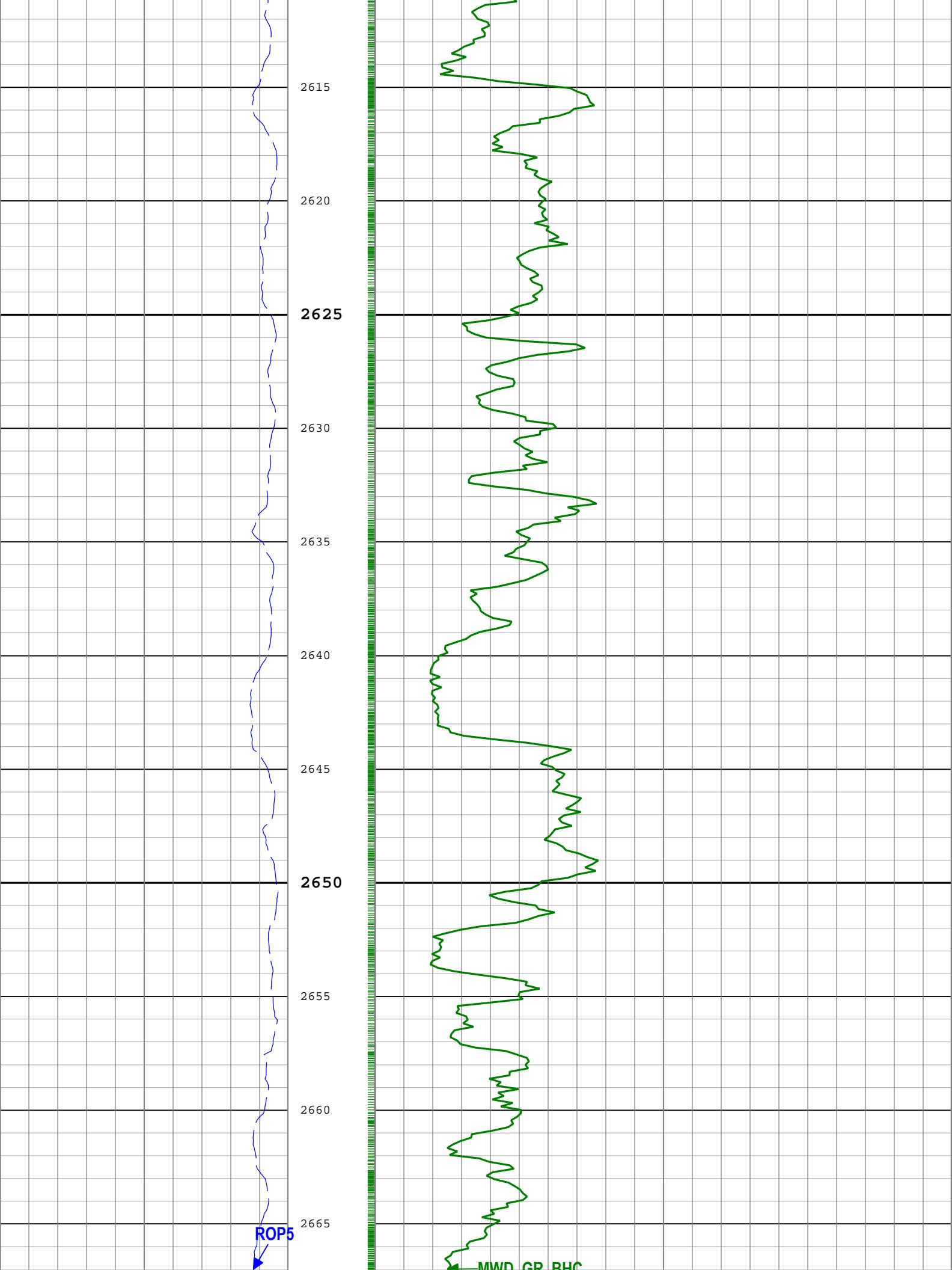


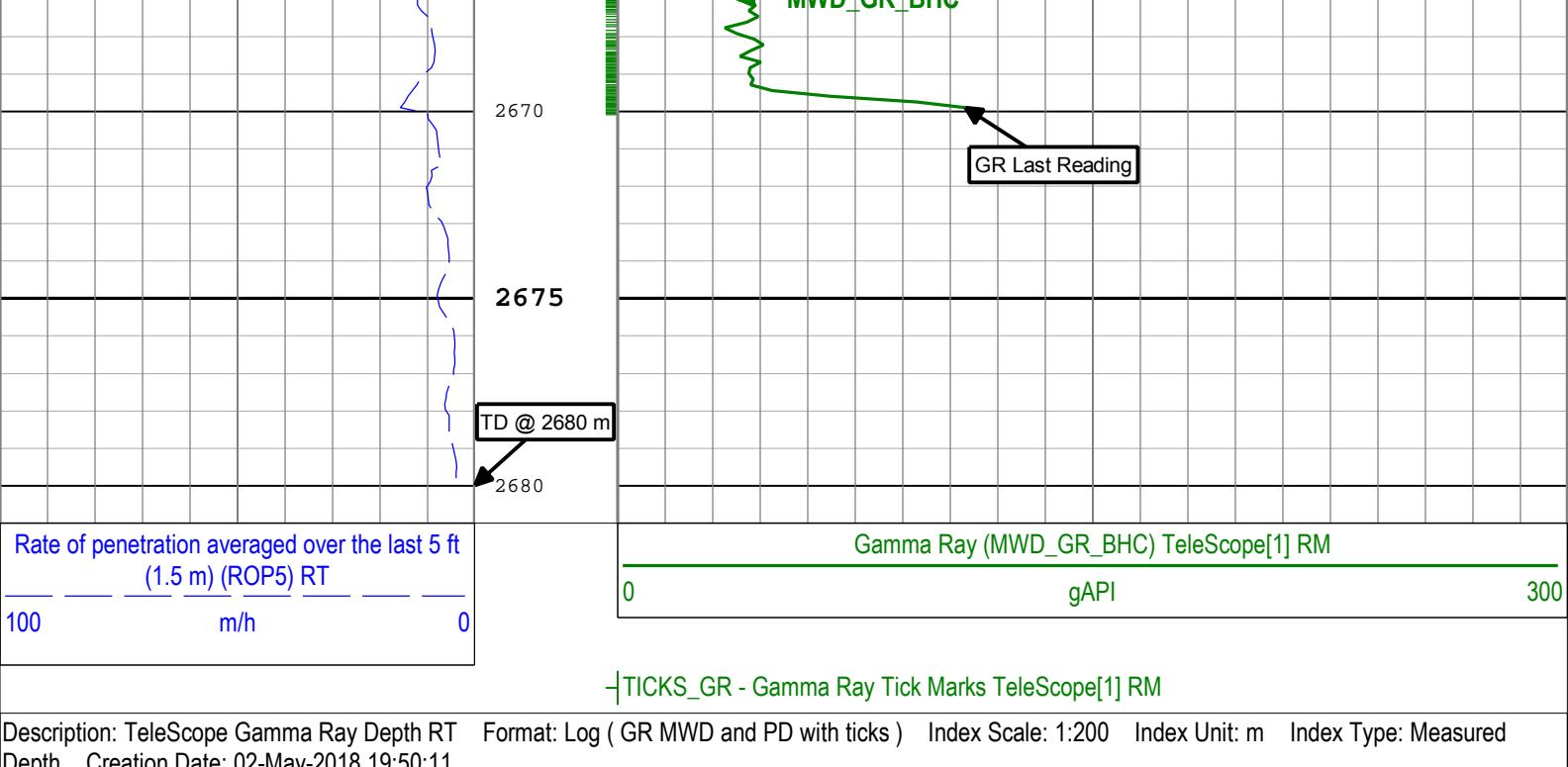












## 12.25 in. Section

### MWD - Gamma Ray 1:1000 MD

#### Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run 6	Ream Down 1	Down	2340.89 m	2384.83 m	24-Apr-2018 14:47:43	25-Apr-2018 05:13:30	Yes
Run 6	Drilling	Down	2389.43 m	2679.93 m	25-Apr-2018 05:13:30	28-Apr-2018 03:29:46	Yes

All depths are referenced to toolstring zero

#### Log

Company:Trias Westland B.V.

Well:NLW-GT-02-S1

12.25 in. Section:S196

Description: TeleScope Gamma Ray Depth RT Format: Log ( GR MWD and PD no ticks ) Index Scale: 1:1000 Index Unit: m Index Type: Measured Depth Creation Date: 02-May-2018 19:50:14

**Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT**

100	m/h	0
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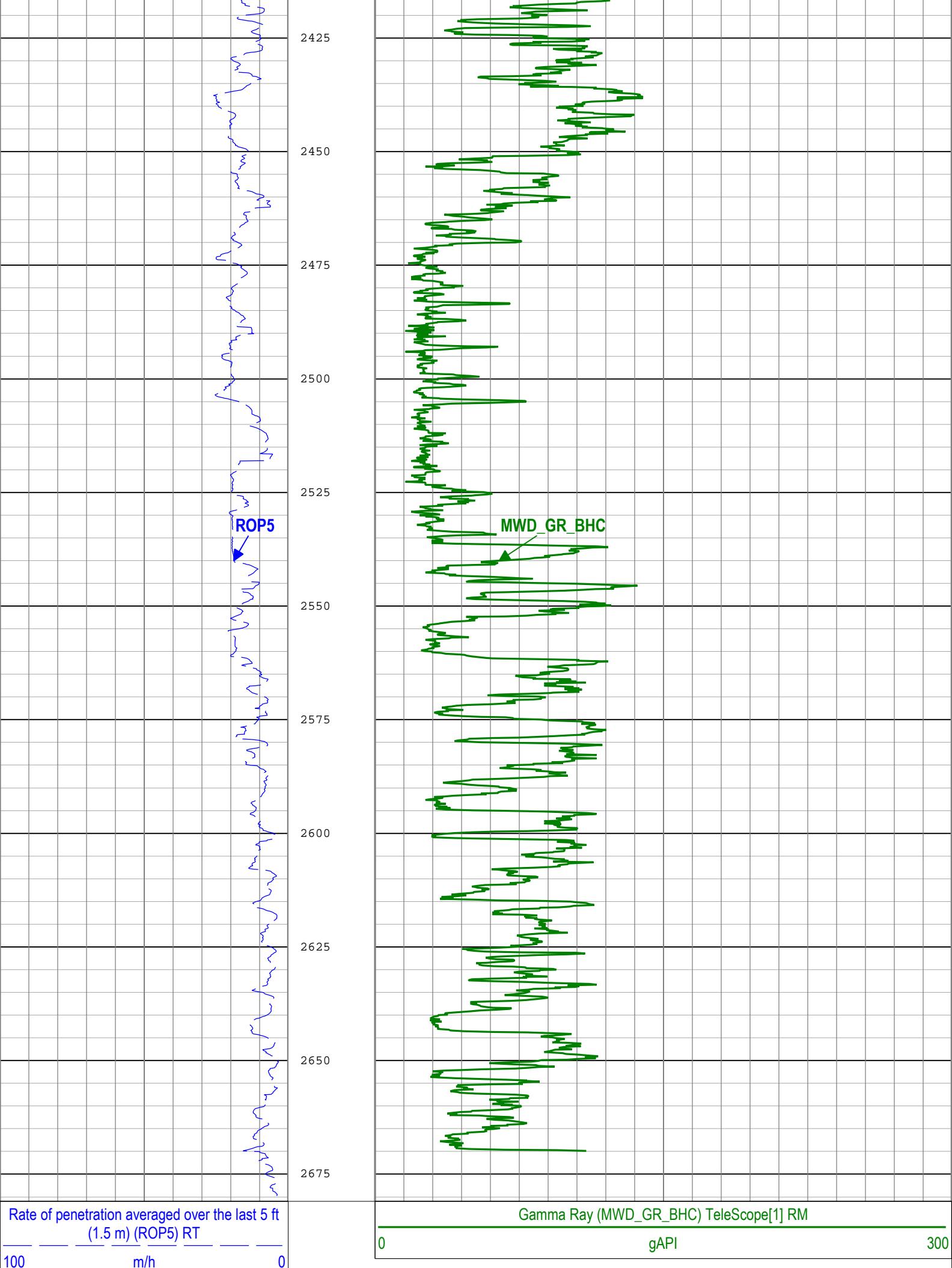
**Gamma Ray (MWD\_GR\_BHC) TeleScope[1] RM**

0	gAPI	300
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**Gamma Ray (MWD\_GR\_BHC) TeleScope[1] RM**

0	gAPI	300
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## Channel Processing Parameters

### Run 6: Parameters

Parameter	Description	Tool	Value	Unit
BHK	Drilling Fluid Potassium Concentration	Borehole	3.5	%
BS	Bit Size	DNMSESSION	Depth Zoned	in
DFD	Drilling Fluid Density	Borehole	1.13	g/cm3
GR_SRC	GR Input Channel Name	TELE825	GAMMA_CPS	

### Run 6 Depth Zoned Parameters

Parameter	Value	Start ( m )	Stop ( m )
BS	17.5	2334	2385
BS	12.25	2385	2679.93

All depth are actual.

### Tool Control Parameters

### Calibration Report

#### TELE825 (TeleScope 825) Calibration - Run 6

Primary Equipment :

Gamma Ray Cartridge PMGR 1103

### GAMMA\_SF - Gamma Ray: Blanket

Master (Time Frame File): 12:22:51 20-Apr-2018

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Calibration Gain		Master	1.0000	0.7500	0.8804	1.2500	

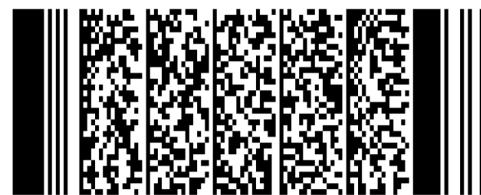
**Company:** Trias Westland B.V.

**Well:** NLW-GT-02-S1

**Field:** Naaldwijk

**Rig Name:** KCA Deutag T-207

**Country:** The Netherlands



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