Weatherford®
LABORATORIES

ROUTINE CORE ANALYSIS FINAL REPORT

of

ROCKHOPPER-1 ST-1

for

ORIGIN ENERGY RESOURCES LIMITED

by

WEATHERFORD LABORATORIES (AUSTRALIA) PTY LTD

Weatherford
LABORATORIES

23rd April, 2010

Origin Energy Resources Limited
135 Coronation Drive
MILTON QLD 4064

Attention: Deidre Brooks
Ted Surka

FINAL REPORT: 0472-02

CLIENT REFERENCE: Purchase Order # 16023588

MATERIAL: 4" Whole Core

LOCALITY: Rockhopper-1 ST-1

WORK REQUIRED: Routine Core Analysis

Please direct technical inquiries regarding this work to the signatory below under whose supervision the work was carried out.

KEVIN H FLYNN
General Manager
SCAL Technical Director

Head Office: 8 Cox Road, Windsor Qld 4030, Australia
☎: 61 7 3357 1133 Facsimile: 61 7 3357 1100
E-mail: info@weatherfordlabs.com
Weatherford Laboratories (Australia)
ABN: 81 008 273 005

CONTENTS

CHAPTERS

APPENDICES

CHAPTER 1

INTRODUCTION

1. INTRODUCTION

The following final report presents the details of a routine core analysis study performed by Weatherford Laboratories' Brisbane facility on behalf of Origin Energy Resources Limited.

The Rockhopper-1 ST-1 core was received at Weatherford Laboratories' Brisbane facility on 5th February 2010.

A routine core analysis study, including sample preparation was undertaken as per instructions received from Origin Energy Resources Limited.

The study included the following analyses:

- Core processing and sample preparation
- Continuous Spectral Core Gamma
- Ambient porosity, permeability & grain density
- Residual Fluid Saturation
- Probe Permeability
- Core Photography

The following report details the methods and procedures utilised in these analyses. Results are presented in both tabular and graphical formats.

CHAPTER 2

STUDY AIMS

2. STUDY AIMS

The analyses were performed with the following aims:

1. To provide depth correlation through the provision of a continuous spectral core gamma log over the cored interval.

2. To provide permeability, helium injection porosity and density data.

3. To provide a permanent record of the core through provision of 5 metre format core photography.

4. To provide a detailed permeability profile across core.

5. To measure pore fluid saturation on fresh state core plug samples.

CHAPTER 3

SAMPLING

3. SAMPLING

3.1 Routine Core Analysis Samples

Eighty seven (87) 1½" diameter horizontal plug samples were cut at 30 cm intervals throughout the sand sections of the core, using brine as the bit lubricant. Twenty eight (28) vertical core samples were drilled at 1 metre intervals. All plugs were trimmed to right cylinders. All off-cuts were labelled and bagged for possible future analysis.

Due to sample friability it was deemed necessary to place selected samples into lead sleeve to preserve sample integrity. A set of stainless steel mesh screens were placed at each end of the sample and a 2 mm fold of lead sleeve used to hold them in place. Samples were then compressed in a Hassler cell at 300 psi to allow the lead to conform to the sample surface.

3.2 Core Slabbing

Upon completion of the sampling, the core was slabbed longitudinally into three sections (1/3: 1/3: 1/3) using brine as the blade cooling and lubricating medium. At the time of writing this report we are still pending instructions to perform the final core slabbing.

CHAPTER 4

SAMPLE PREPARATION

4. SAMPLE PREPARATION

4.1 Soxhlet Cleaning

The samples were initially dried under humid conditions at 60°C for two hours to remove the majority of the water, aiding the efficiency of the extraction process. All samples were cleaned in a modified soxhlet system to remove the pore fluids. The solvent used was a 3:1 chloroform methanol azeotropic mixture. Cleaning continued until tests for oil (fluorescence under UV light) and salt (silver nitrate precipitation) showed negative.

4.2 Humidity Drying

After extraction, the samples were dried to constant weight in a humidity oven at 60°C and 40% relative humidity. Once dry, they were stored in an airtight container and allowed to cool to room temperature.

CHAPTER 5

TEST PROCEDURES

5. TEST PROCEDURES

5.1 Continuous Core Gamma

The core was laid out according to depth markings and analysed using gamma-ray spectrometry to measure potassium (K), gamma-equivalent uranium (eU) and gamma-equivalent thorium (eTh). The terms eU and eTh stand for 'gamma-equivalent' U and Th respectively and indicate that measurements are made of the gamma-ray emitting daughters of these two isotopes. The gamma-ray energy spectrum of each sample is measured with a 100 x 100 NaI (T1) detector housed in a lead shield. Measurements were made with the core on a conventional conveyor belt at much lower speeds than total gamma to ensure full detection of the spectrum.

5.2 Dean-Stark Residual Fluid Saturation

Selected samples underwent fluid saturation analysis. Each fresh state sample was placed in the Dean-Stark fluid extraction apparatus, where it is suspended above a reservoir of boiling toluene. The solvent vapours, together with the extracted pore fluids, are condensed at the top of the glassware and the water collected in a calibrated side arm. Oil and toluene are collected in the reservoir and continue boiling so that clean toluene vapour continues extracting pore fluids. The process is continued until the water production ceases.

From the collected water volume and the latter determined helium injection pore volume of the sample, water saturation is calculated as follows:

$$Sw = (\text{Pore Water Volume} / \text{Pore Volume}) \times 100\%$$

Oil saturations were calculated from the weight loss of sample during analysis and assumptions of 30,000 ppm brine composition and 0.8 g/cm^3 oil density.

5.3 Porosity

The clean and dry plugs were sealed in a matrix cup and a known volume of helium at 100 psi reference pressure was introduced to the cup. From the resultant pressure, the unknown volume, i.e. the grain volume, was calculated using Boyles Law.

The bulk volume of each plug was determined by Archimedes' Principle. The porosity is calculated as the volume percentage of pore space with respect to the bulk volume.

$$P_1 V_1 = P_2 V_2$$

$$\Rightarrow \quad P_1 Vr = P_2 (Vr + Vc - Vg)$$

$$Vp = Vb - Vg$$

$$\textit{Ambient Porosity \%} = \frac{Vp}{Vb} \times 100\%$$

where P_1 = *initial pressure (psig)*
P_2 = *final pressure (psig)*
Vr = *reference cell volume (cm^3)*
Vc = *matrix cup volume (cm^3)*
Vg = *grain volume (cm^3)*
Vp = *pore volume (cm^3)*
Vb = *bulk volume (cm^3)*

5.4 Permeability to Air

The plugs were placed in a Hassler cell at a confining pressure of 300 psig. This pressure was used to prevent bypassing of air around the sample when the measurement is made.

During the measurement, a known air pressure is applied to the upstream face of the sample, creating a flow of air through the sample. Permeability for each sample was then calculated using Darcy's Law, through knowledge of the upstream pressure and flow rate during the test, the viscosity of air and the plug dimensions.

$$Ka = \frac{2000.BP.\mu.q.L}{(P_1^2 - P_2^2).A}$$

where Ka = *air permeability (milliDarcy's)*
BP = *barometric pressure (atmospheres)*
μ = *gas viscosity (cP)*
q = *flow rate (cm^3/s) at barometric pressure*
L = *sample length (cm)*
P_1 = *upstream pressure (atmospheres)*
P_2 = *downstream pressure (atmospheres)*
A = *sample cross sectional area (cm^2)*

5.5 Apparent Grain Density

The apparent grain density is calculated by dividing the weight of the plug by the grain volume determined from the helium injection porosity measurement.

$$\rho = \frac{Wt}{Vg}$$

where ρ = *grain density (g/cm^3)*
Wt = *weight of sample (g)*
Vg = *grain volume (cm^3)*

5.6 Probe Permeability

A permeability profile was obtained across the core using a steady state probe permeameter. Probe permeability measurements were taken at 10 cm intervals along the slabbed core face.

A probe was pneumatically applied to the surface of the core at 100 psig. An 'O' ring on the tip of the probe was used to achieve a seal against the rock. Air was then forced to flow at a constant pressure through the probe tip into the core and back into the atmosphere.

The flow rate was measured by a series of precision flow meters which were selected to cover a wide range of flow rates. The measured flow rate (at a fixed injection pressure) was converted to permeability by comparison against measurements on core plugs with known permeabilities.

5.7 Core Photography

The core photography was carried out on the 2/3 slab of core. Photographs were taken in 5 metre format with a Nikon D100 6.1 megapixel digital SLR camera under UV and white light. The photographs have been digitally edited and printed.

CHAPTER 6

SAMPLE DISTRIBUTION AND STORAGE

6. SAMPLE DISTRIBUTION AND STORAGE

All slabbed core is currently stored at Weatherford Laboratories pending instructions. The final core slab is pending client approval.

All core plug samples and off-cuts are currently stored at Weatherford Laboratories' Brisbane facility.

APPENDIX I

AMBIENT TEST RESULTS

CORE ANALYSIS FINAL REPORT

Client : Origin Energy Resources Limited
Well : Rockhopper-1 ST-1
Core Int : 3196.00 to 3209.38 m
Core Int : 3283.00 to 3297.08 m
Core Int : 3298.50 to 3308.00 m

Date : 9/03/2010
File : 0472-02
Analysts : BW/AA/SC/AS

Sample Number	Depth (m)	Dir	Porosity Helium (percent)	Grain Density (g/cm^3)	Permeability to Air (mD)	Fluid Saturation So (percent)	Fluid Saturation Sw (percent)	Remarks
								Start C#1
1V	3196.00	V	2.6	2.65	< 0.01	2.5	94.1	Slt
1	3196.42	H	0.4	2.59				Frac; Slt
2	3196.76	H	0.9	3.05				Frac; Slt
2V	3197.00	V	2.4	2.65	< 0.01	1.4	97.8	Slt, S.P.
3	3197.35	H						Failed
4	3197.51	H	4.5	2.66				Lam; irreg, Slty
5	3197.85	H	1.6	3.06				Frac; Slt
3V	3198.00	V	3.5	2.67	0.02	1.9	95.8	Slt, Lam, H Frac
6	3198.11	H	2.2	3.09	0.45			Slty, Lam
7	3198.54	H	3.1	2.66	0.14			Lam
8	3198.70	H	9.2	2.64	0.29			Lam
9	3198.96	H	17.2	2.65	1.35			
4V	3199.00	V	13.2	2.65	0.29	0.6	90.9	Lam, S.P.
10	3199.34	H	11.5	2.67	0.26			
11	3199.64	H	9.0	2.71	0.14			Lam
12	3199.89	H	3.8	2.72	2.58			Lam
5V	3200.00	V	6.4	2.72	0.04	1.6	97.2	Lam
13	3200.20	H	7.2	2.72	0.11			Lam
14	3200.50	H	3.7	2.71	0.06			
15	3200.80	H	3.3	2.71	0.17			
6V	3201.00	V	3.0	2.72	0.01	3.3	96.4	Slt
16	3201.10	H	2.3	2.70	0.04			
17	3201.40	H	2.3	2.83	0.57			Slt, Lam
18	3201.70	H	1.0	2.67	0.03			Irr, Lam
19	3201.97	H	0.8	2.86				Frac; Slt
7V	3202.00	V	2.3	2.70	< 0.01	5.8	93.1	Slt
8V	3203.00	V						Failed
20	3203.75	H	0.4	2.63				Frac; Slt
24	3204.05	H	0.4	2.65	0.12			Slt; irreg, Frac?
23	3204.29	H	0.5	2.68				Frac; Slt
22	3204.55	H	1.5	2.68	0.44			Congl
21	3204.85	H	10.6	2.70	0.23			Lam
9V	3204.95	V	10.8	2.68	0.15	0.7	89.3	Lam
10V	3205.00	V	6.5	2.67		0.2	98.9	Irr, Lam
1C	3205.23	H	16.4	2.66	7.6	1.3	86.2	
25	3205.35	H	16.9	2.65	6.7			
26	3205.64	H	11.8	2.66	0.70			
27	3205.92	H	13.9	2.68	2.62			
11V	3206.00	V	15.1	2.67	7.6	0.2	90.4	H Frac
28	3206.20	H	13.9	2.67	7.0			crsg
29	3206.50	H	8.9	2.65	0.44			Lam
30	3206.80	H	16.8	2.65	6.3			
12V	3207.00	V	14.3	2.65	1.74	0.4	89.3	
31	3207.10	H	10.3	2.65	0.36			
32	3207.40	H	13.6	2.65	1.85			
33	3207.95	H	16.4	2.65	6.5			
13V	3208.00	V	15.9	2.66	3.90	0.2	88.3	End C#1
								Start C#2
34	3283.21	H						Failed,

Sample Number	Depth (m)	Dir	Porosity Helium (percent)	Grain Density (g/cm^3)	Permeability to Air (mD)	Fluid Saturation So (percent)	Fluid Saturation Sw (percent)	Remarks
								Start C#1
35	3283.38	H	0.3	2.69	0.01			Slt, Irr
36	3287.69	H						Failed
37	3287.93	H	14.7	2.66	2.95			Lam
14V	3288.00	V	13.6	2.66	1.04	0.6	97.2	Lam
38	3288.25	H	15.1	2.68	2.05			
39	3288.53	H	13.3	2.68	2.31			Lam
40	3288.85	H	5.9	2.71	0.16			Lam
15V	3289.00	V	7.1	2.72	0.14	0.3	99.3	Lam
41	3289.18	H	3.5	2.71	3.17			Lam
42	3289.56	H	0.5	2.73	0.62			Slt, Lam, Frac?
43	3293.50	H	0.3	2.66				Frac; Slt
44	3293.80	H	14.7	2.63	4.38			crsg
2C	3293.90	H	17.6	2.63	6.6	1.3	96.3	
16V	3294.00	V	14.9	2.65	3.33	0.1	96.4	crsg
45	3294.11	H	14.4	2.65	3.80			crsg
46	3294.39	H	8.7	2.70	1.27			crsg
47	3294.69	H	12.3	2.63	3.02			crsg
3C	3294.91	H	16.0	2.63	7.6	0.7	95.5	
48	3294.98	H	17.6	2.63	9.7			crsg
17V	3295.00	V	16.3	2.64	9.5	0.4	46.0	S.P.
49	3295.17	H						Failed
50	3295.47	H						Failed
51	3295.90	H	13.2	2.64	4.83			crsg
4C	3295.91	H						Failed
18V	3296.00	V	11.9	2.63	2.97	0.1	97.0	crsg
52	3296.20	H	10.0	2.65	0.97			crsg
53	3296.42	H	17.7	2.63	25.7			SL, S.P.
54	3296.92	H	8.6	2.66	1.86			crsg, End C#2
								Start C#3
19V	3298.50	V						Failed
55	3298.81	H	12.4	2.64	1.11			
56	3299.10	H	9.7	2.65	0.56			
57	3299.40	H	15.6	2.66	1.61			
20V	3299.50	V	16.0	2.66	1.12	0.1	87.8	
58	3299.70	H	13.5	2.66	1.01			
59	3300.00	H	14.3	2.65	1.43			
60	3300.30	H	15.3	2.67	1.57			
21V	3300.50	V	16.3	2.66	1.21	2.0	83.7	
61	3300.63	H	14.6	2.66	1.65			
62	3300.83	H	13.6	2.65	1.38			
63	3301.17	H	13.7	2.64	1.31			
64	3301.46	H	5.2	2.73	0.15			Lam
22V	3301.50	V	3.7	2.67	0.04	0.9	97.2	Slt, Lam, S.P.
65	3301.79	H	2.3	2.78	1.71			Lam, Frac?
66	3302.09	H	1.1	2.74	0.01			Slt, Lam
67	3302.39	H	0.8	2.79	1.93			Lam, Frac?
23V	3302.56	V	10.2	2.71	0.85	0.5	92.7	Slt, Lam
5C	3302.75	H	11.5	2.63	2.81	3.2	91.1	
68	3302.81	H	15.4	2.63	9.1			crsg
69	3303.06	H	14.0	2.64	5.1			crsg
70	3303.28	H	15.6	2.63	7.2			crsg
24V	3303.50	V	14.9	2.66	5.5	0.7	96.7	crsg, S.P.
71	3303.61	H	19.4	2.63	1379			S.P; SL, Irr
72	3303.90	H	14.7	2.64	5.7			crsg
73	3304.34	H	7.1	2.63	1.35			crsg
25V	3304.50	V	8.1	2.63	1.23	0.0	93.4	crsg
74	3304.80	H	12.4	2.65	2.29			crsg
75	3305.08	H	14.1	2.64	2.57			crsg
76	3305.39	H	15.9	2.64	4.26			crsg

Sample Number	Depth (m)	Dir	Porosity Helium (percent)	Grain Density (g/cm^3)	Permeability to Air (mD)	Fluid Saturation So (percent)	Fluid Saturation Sw (percent)	Remarks
								Start C#1
26V	3305.50	V	6.3	2.63	0.48	1.5	94.9	crsg
77	3305.60	H	8.6	2.68	1.68			crsg, S.P.
27V	3306.50	V	2.5	2.64	0.05	4.3	94.0	crsg
78	3306.62	H	8.0	2.64	0.94			crsg
79	3306.90	H	12.6	2.64	2.59			crsg
80	3307.21	H	13.8	2.64	3.67			crsg
81	3307.46	H	16.1	2.64	9.2			crsg
28V	3307.50	V	14.8	2.63	3.96	0.5	63.4	crsg
82	3307.79	H	14.8	2.63	8.0			crsg, End C#3

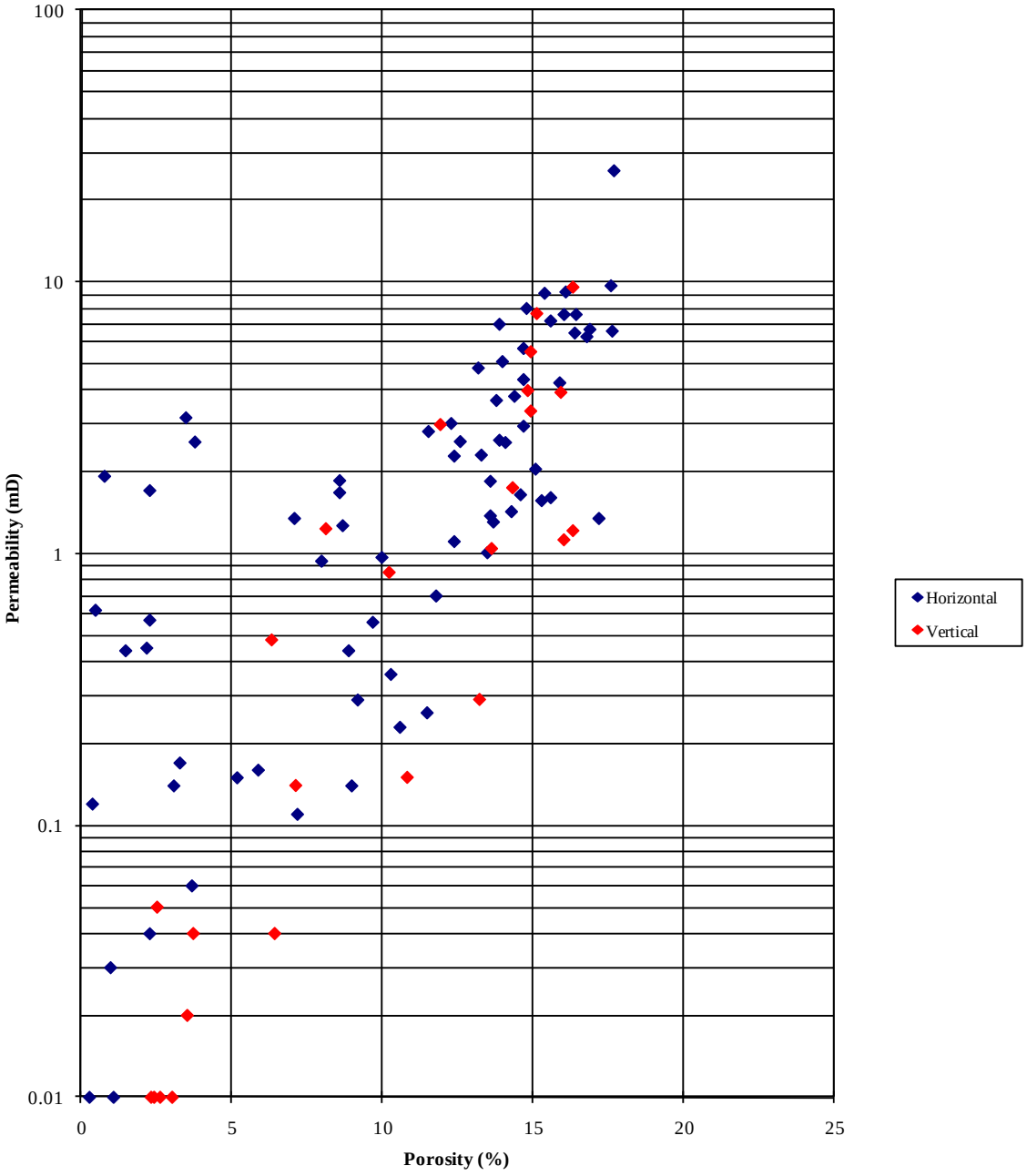
APPENDIX II

POROSITY vs PERMEABILITY

POROSITY vs PERMEABILITY
Ambient

Client: Origin Energy Resources Limited

Well: Rockhopper-1 ST-1



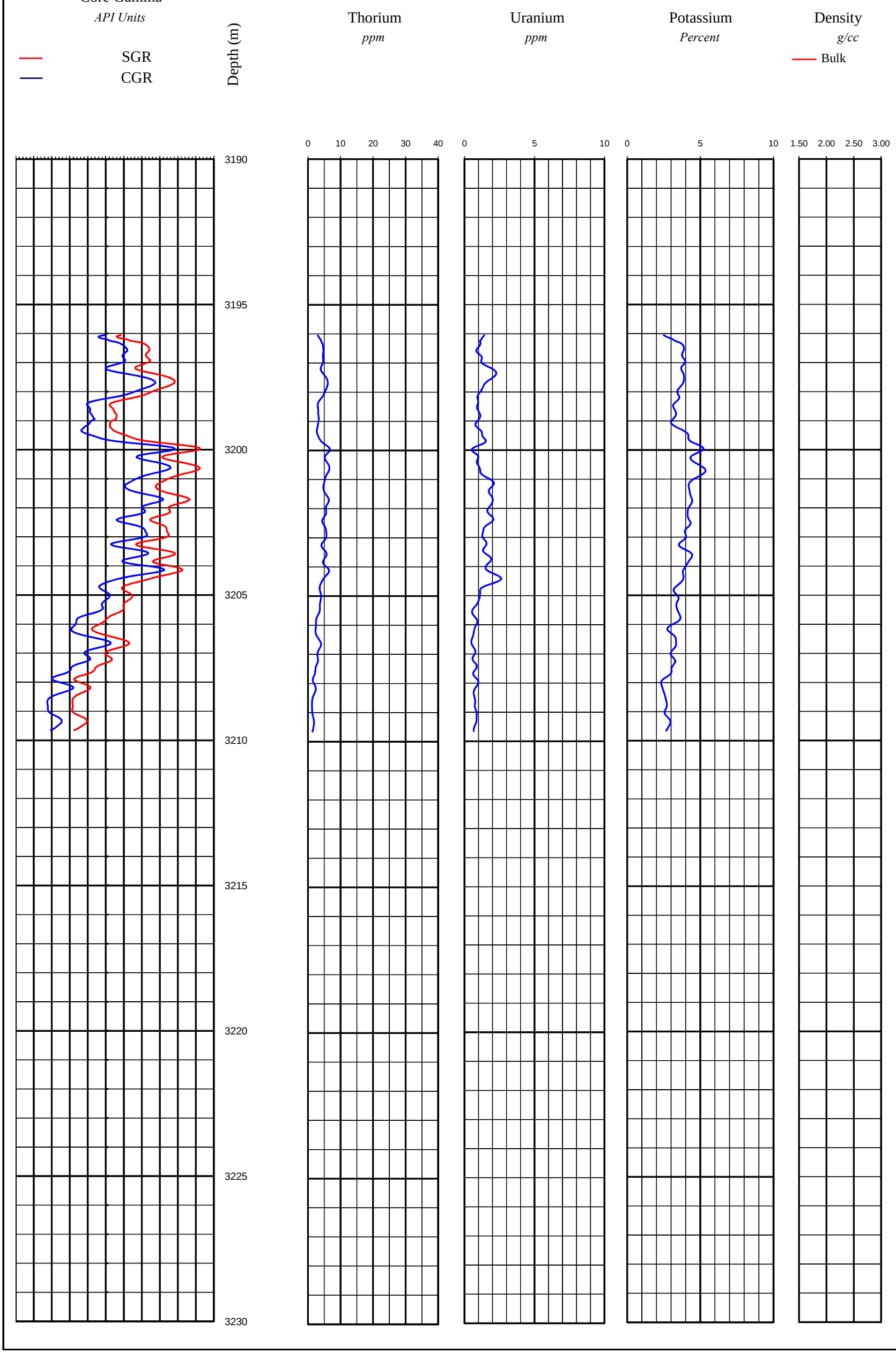
Weatherford Laboratories (Australia)
ABN: 81 008 273 005

APPENDIX III

SPECTRAL CORE GAMMA

CORE PLOT

Client: Origin Energy Resources Limited Core#1: 3196.00 to 3209.38 m
Well: Rockhopper-1 ST-1
File No.: 0472-02



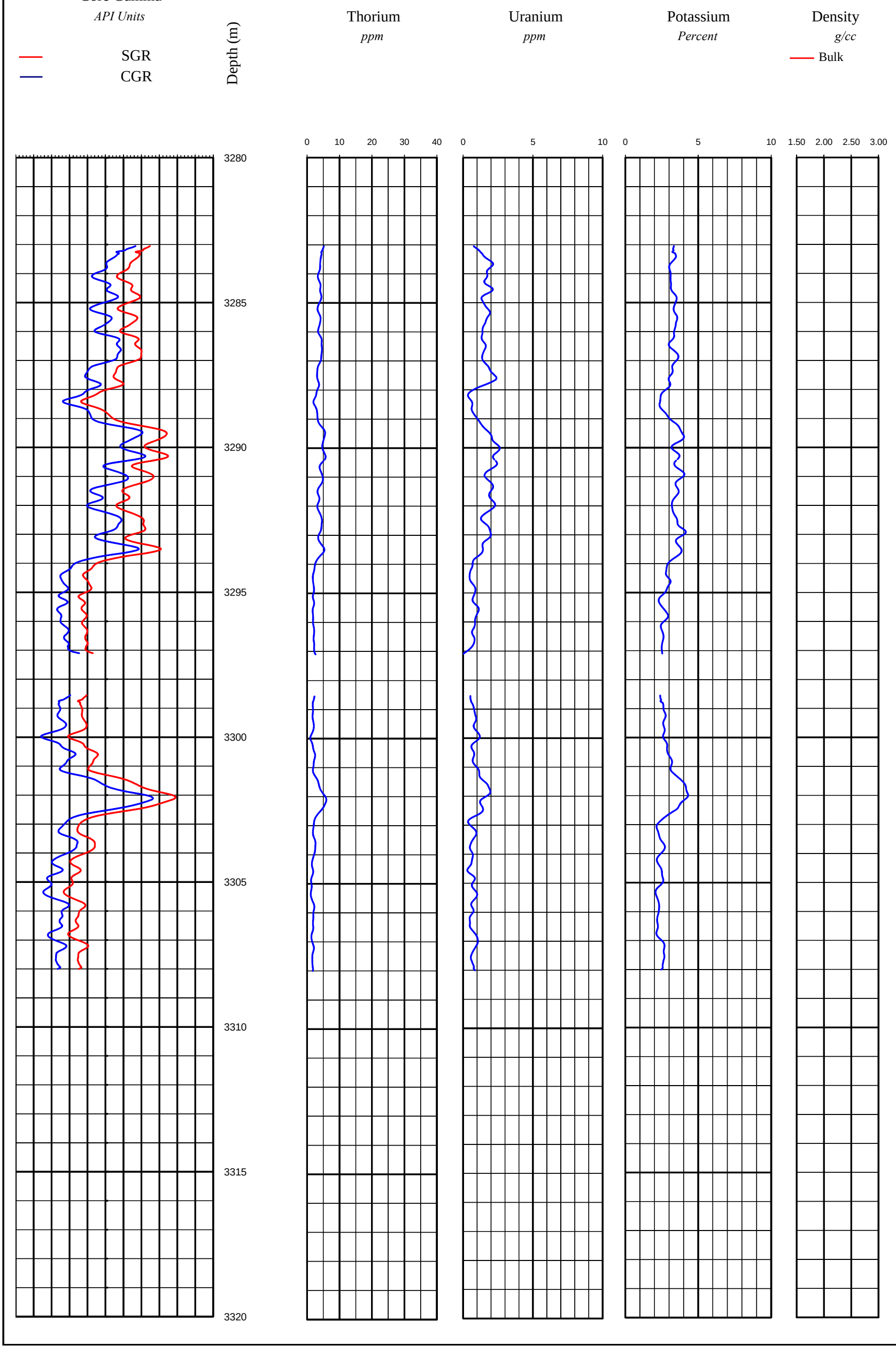
Weatherford Laboratories (Australia)
ABN: 81 008 273 005

CORE PLOT

Weatherford LABORATORIES

Client: Origin Energy Resources Limited
Well: Rockhopper-1 ST-1
File No.: 0472-02

Core#2: 3283.00 to 3297.08 m
Core#3: 3298.50 to 3308.00 m



Weatherford Laboratories (Australia)
ABN: 81 008 273 005

APPENDIX IV

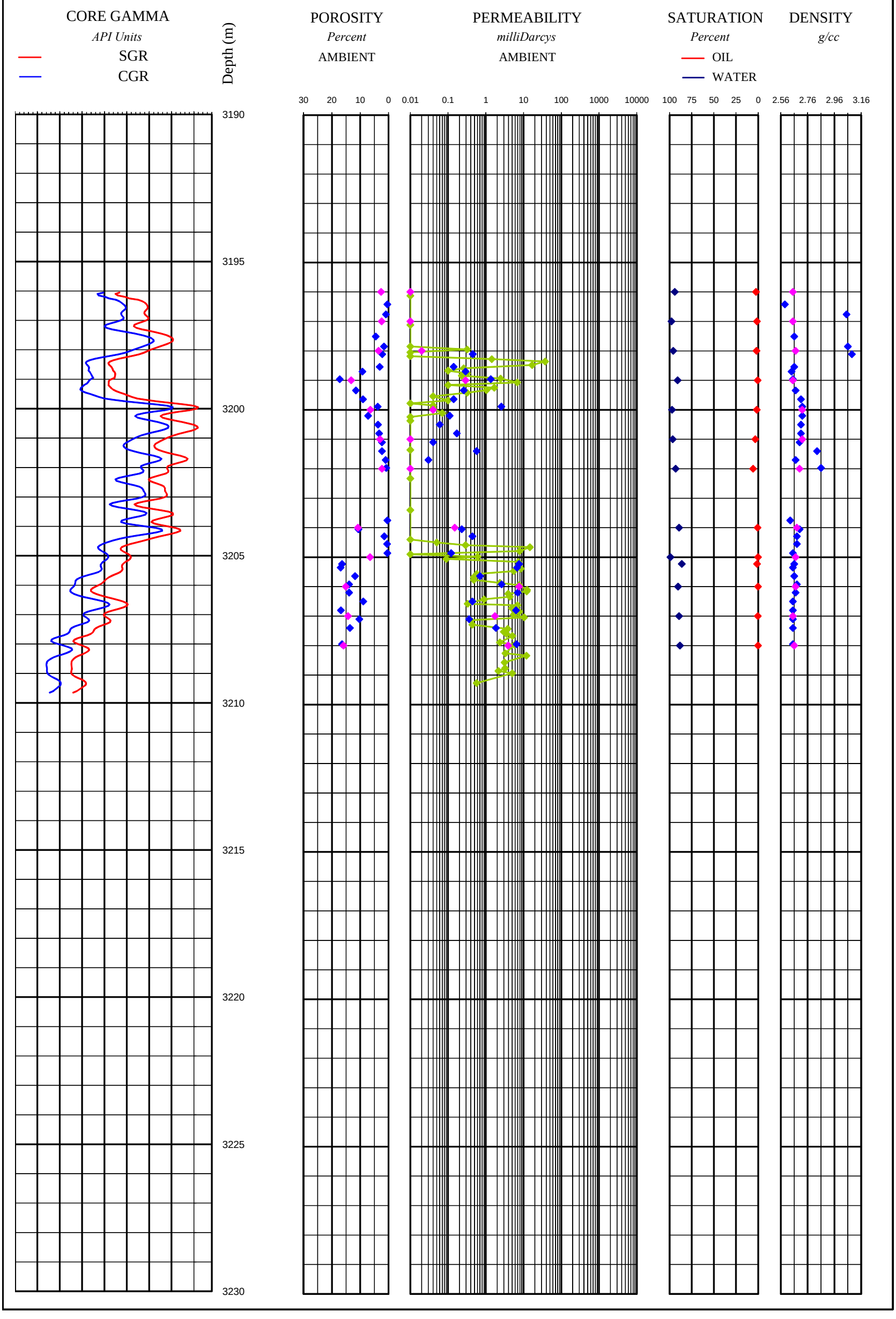
CORE LOG PLOTS

CORE PLOT

Weatherford LABORATORIES

Client: Origin Energy Resources Limited Core#1: 3196.00 to 3209.38 m
Well: Rockhopper-1 ST-1
File No.: 0472-02

Horizontal
Probe Perm
Vertical



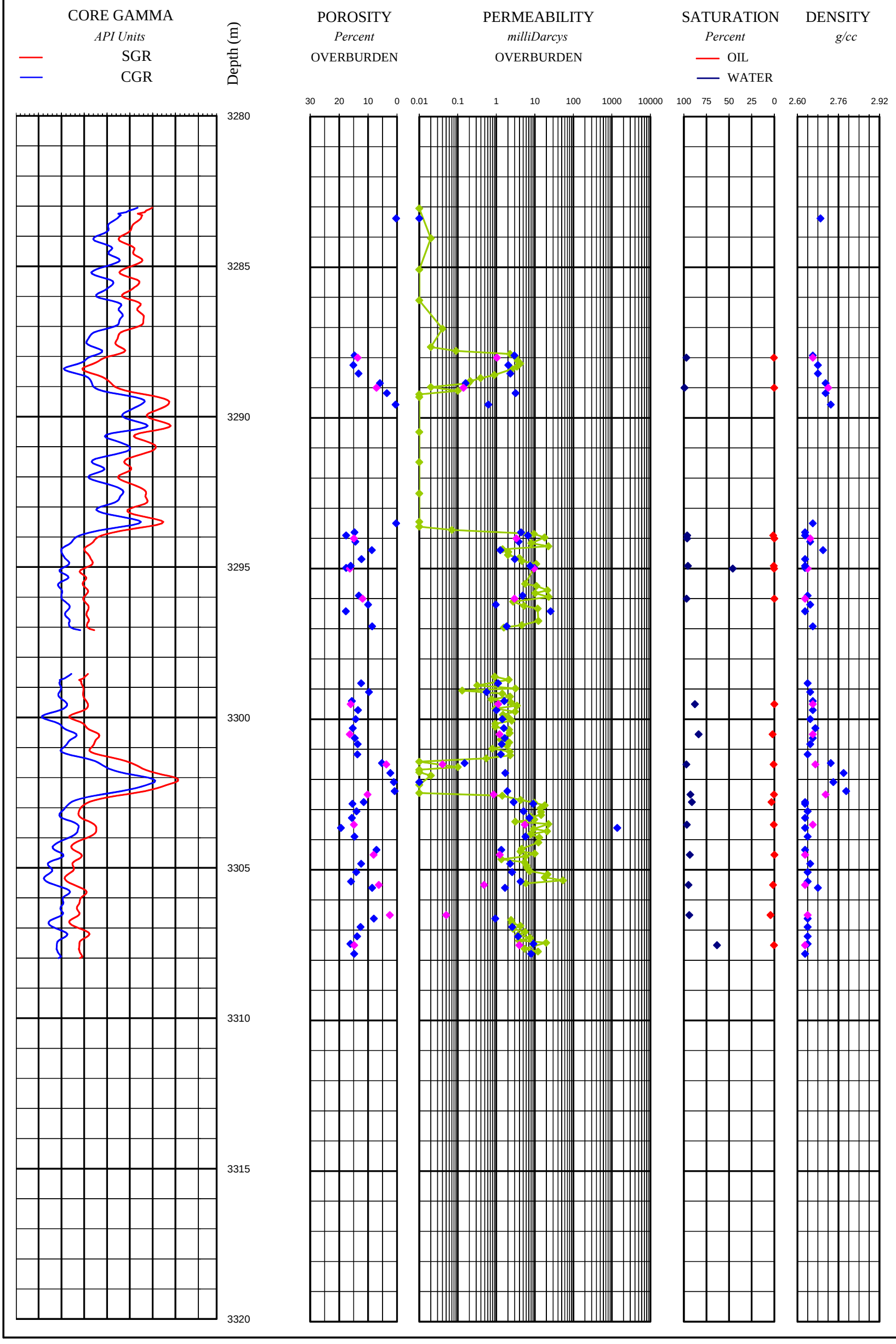
Weatherford Laboratories (Australia)
ABN: 81 008 273 005

CORE PLOT

Weatherford LABORATORIES

Client:	Origin Energy Resources Limited	Core#2:	3283.00 to 3297.08 m
Well:	Rockhopper-1 ST-1	Core#3:	3298.50 to 3308.00 m
File No.:	0472-02		

◆ Horizontal
◆ Probe Perm
◆ Vertical



Weatherford Laboratories (Australia)
ABN: 81 008 273 005

APPENDIX V

PROBE PERMEABILITY DATA

PROBE PERMEABILITY

Client Origin Energy Resources Limited
Well Rockhopper-1 ST-1

Depth *(metres)*	Probe Permeability *(mD)*	Comments	Depth *(metres)*	Probe Permeability *(mD)*	Comments
		Core#1			
3196.13	0.01	Slt	3204.59	0.29	Lam
3197.12	0.01	Slt	3204.66	14.7	Lam, Frac?
3197.85	0.01	Slt	3204.79	7.9	Lam
3197.95	0.32	sst lam	3204.90	0.01	Lam
3198.05	0.01	Slt	3204.98	0.61	Lam
3198.18	0.01	Slt	3205.06	0.09	Lam
3198.28	1.44		3205.16	7.3	
3198.36	37.4		3205.26	7.3	
3198.48	17.0	Lam	3205.39	8.5	
3198.59	0.26	Lam	3205.47	5.5	
3198.67	0.10	Lam	3205.57	0.58	Lam
3198.76	0.32	Lam	3205.68	0.48	
3198.84	0.23	Lam	3205.77	0.48	
3198.94	2.47	Lam	3205.87	2.36	Lam
3199.07	6.9	Lam	3205.95	7.7	
3199.16	0.10	Lam	3206.11	12.4	crsg, Lam
3199.25	1.68	Fracs	3206.16	12.1	crsg
3199.33	1.04	Lam	3206.24	3.91	crsg
3199.42	0.32	Lam	3206.34	4.35	crsg
3199.54	0.04		3206.43	0.90	Lam
3199.68	0.10		3206.58	0.33	
3199.78	0.01	Lam	3206.63	6.9	crsg
3199.85	0.04		3206.73	4.93	
3199.95	0.04		3206.85	7.7	
3200.11	0.07		3206.95	5.5	
3200.24	0.01		3207.04	10.4	
3200.37	0.01	Slt	3207.14	0.40	Lam
3201.36	0.01	Slt	3207.29	0.44	
3202.33	0.01	Slt	3207.43	3.80	
3203.40	0.01	Slt	3207.53	3.00	
3204.40	0.01	Slt	3207.60	3.51	
3204.50	0.05	Lam	3207.67	5.1	

PROBE PERMEABILITY

Client Origin Energy Resources Limited
Well Rockhopper-1 ST-1

Depth *(metres)*	Probe Permeability *(mD)*	Comments	Depth *(metres)*	Probe Permeability *(mD)*	Comments
3207.89	2.36	Lam	3288.98	0.02	Lam
3207.97	5.8		3289.10	0.10	Lam
		Rbl	3289.22	0.01	Slt
3208.26	3.31	Lam	3289.31	0.01	Slt
3208.34	11.9		3290.47	0.01	Slt
		Rbl	3291.47	0.01	Slt
3208.57	3.14		3292.51	0.01	Slt
		Rbl	3293.45	0.01	Slt
3208.77	3.24		3293.61	0.01	Slt
3208.86	2.16		3293.72	0.07	Lam
3208.94	5.0		3293.85	9.5	crsg
		Rbl	3293.97	17.9	crsg
3209.27	0.57	lam	3294.16	8.1	crsg, Lam
			3294.26	22.5	crsg
		Core#2	3294.36	1.46	
3283.05	0.01	Slt	3294.45	2.05	Lam
3284.04	0.02	Slt	3294.55	2.00	
3285.08	0.01	Slt	3294.65	3.95	
3286.10	0.01	Slt	3294.75	4.63	
3287.04	0.04	Slt	3294.85	10.9	crsg
3287.65	0.02	Slt			Rbl
3287.78	0.09	Lam	3295.51	5.6	crsg
3287.88	2.27	Lam	3295.58	11.1	crsg
3287.98	3.15	Lam	3295.72	21.3	crsg
3288.10	3.59	Lam	3295.82	10.2	crsg
3288.20	4.18	Lam	3295.94	23.0	crsg
3288.30	3.44	Lam	3296.10	2.73	crsg
3288.38	2.56	Lam	3296.24	5.3	crsg
3288.58	0.89	Lam	3296.33	11.9	crsg
3288.68	0.39	Lam	3296.74	12.4	crsg, Irreg
3288.78	0.21	Lam	3296.88	4.59	crsg, Lam
3288.85	0.19	Lam	3296.96	1.57	crsg

PROBE PERMEABILITY

Client Origin Energy Resources Limited
Well Rockhopper-1 ST-1

Depth *(metres)*	Probe Permeability *(mD)*	Comments	Depth *(metres)*	Probe Permeability *(mD)*	Comments
			3301.87	0.02	Intbd
		Core#3	3302.18	0.01	
3298.59	0.91		3302.45	0.01	
3298.69	2.11		3302.54	1.43	crsg
3298.88	0.32		3302.68	4.28	crsg
3298.98	3.13		3302.77	9.6	crsg
3299.05	0.13	Lam	3302.86	18.1	crsg
3299.15	1.43		3302.96	14.0	crsg
3299.25	2.27		3303.08	14.5	crsg
3299.34	0.75	Lam	3303.18	14.6	crsg
3299.45	2.42		3303.24	7.8	crsg
3299.55	3.44		3303.33	9.7	crsg
3299.65	0.94	Lam	3303.40	3.11	crsg
3299.75	3.07		3303.48	22.5	crsg
3299.85	1.49		3303.64	9.4	crsg
3299.95	2.09		3303.72	20.9	crsg
3300.05	2.51		3303.82	7.8	crsg
3300.15	0.94	Lam	3303.93	13.1	crsg
3300.25	0.94		3304.09	12.4	crsg
3300.35	2.15	Lam	3304.30	4.58	crsg
3300.46	2.22	Lam	3304.39	4.24	crsg
3300.68	1.31	Lam	3304.46	9.9	crsg
3300.77	2.16	Lam	3304.55	5.8	crsg
3300.88	1.90	Lam	3304.65	1.36	crsg
3300.98	0.79	Lam	3304.75	5.4	crsg
3301.08	2.24	Lam	3304.85	6.0	crsg
3301.20	2.29	Lam	3304.94	6.4	crsg
3301.30	0.55	Lam	3305.04	7.3	crsg, Lam
3301.41	0.01	Lam	3305.15	21.4	crsg
3301.59	0.10	Lam	3305.25	18.1	crsg
3301.68	0.01		3305.35	53.9	crsg
3301.76	0.01		3305.45	5.9	crsg

PROBE PERMEABILITY

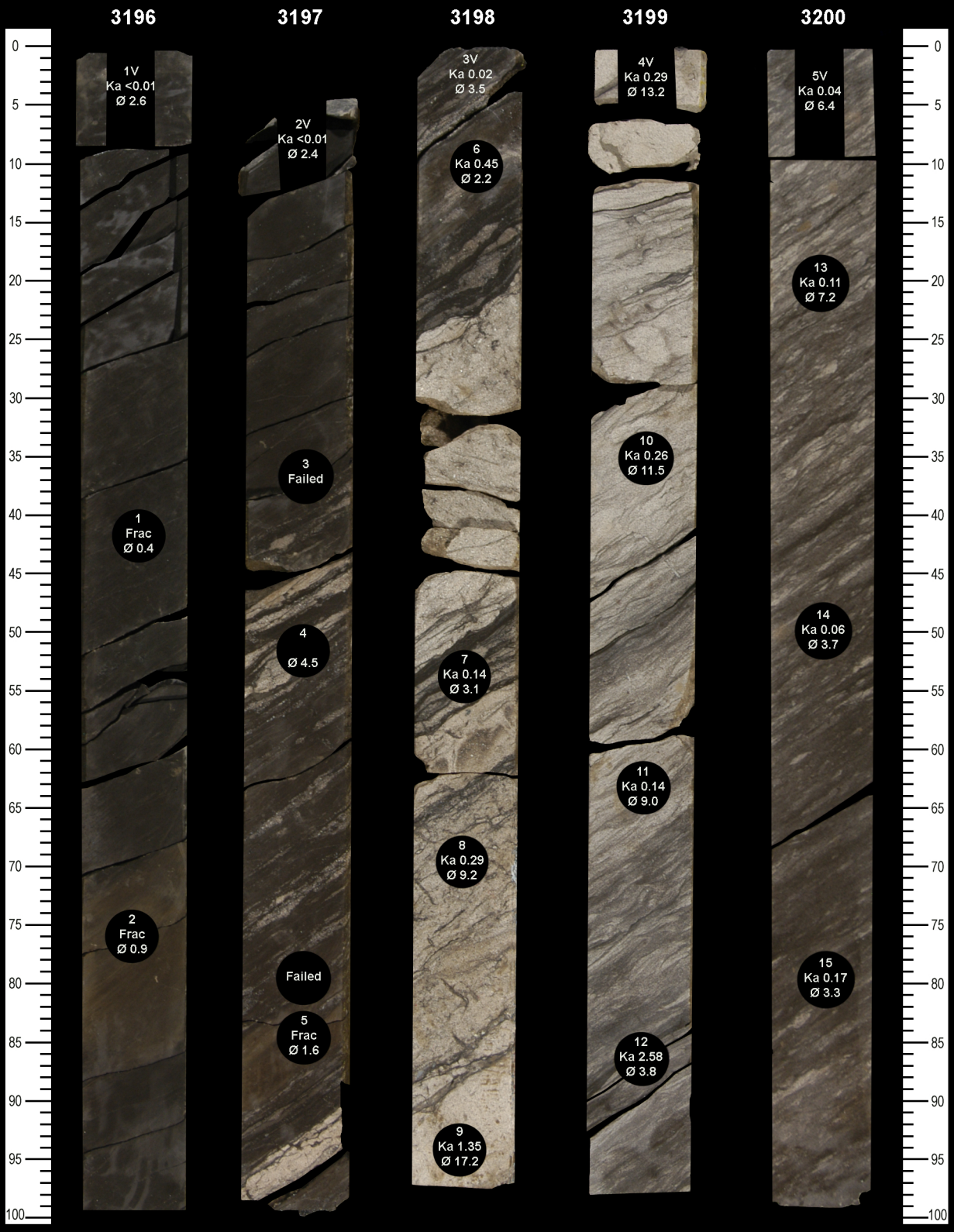
Client Origin Energy Resources Limited
Well Rockhopper-1 ST-1

Depth *(metres)*	**Probe Permeability** *(mD)*	**Comments**
	Rbl	
3306.66	2.41	N.B. 0.04mD is the limit of detection
3306.76	2.56	
3306.86	4.23	
3306.96	2.76	
3307.06	5.6	
3307.16	3.69	
3307.26	7.5	
3307.35	3.91	
3307.42	19.6	
3307.62	5.5	
3307.71	12.1	
3307.84	10.8	
3307.93	11.3	

APPENDIX VI

CORE PHOTOGRAPHY

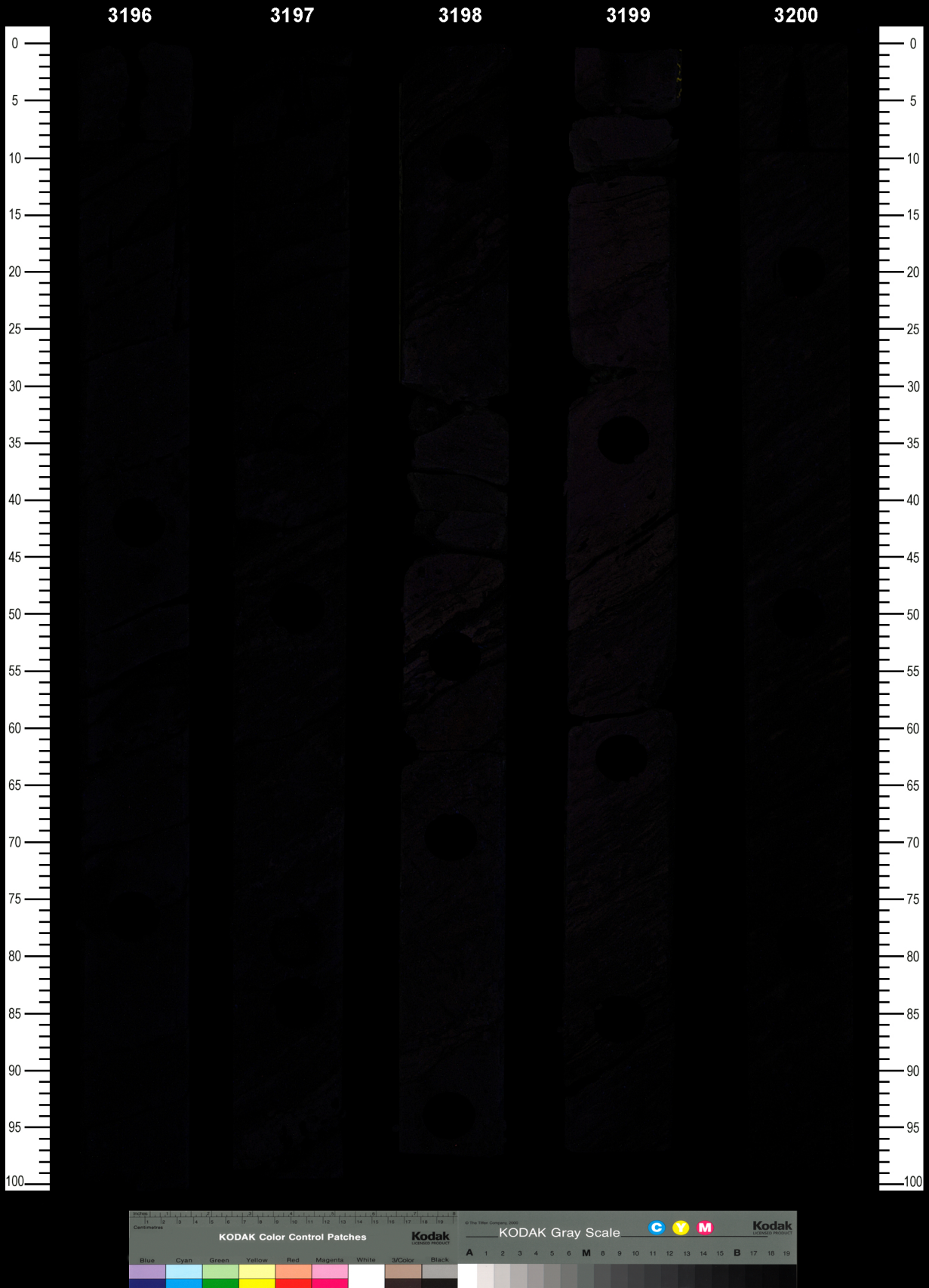
ROCKHOPPER-1 ST-1
Core 1



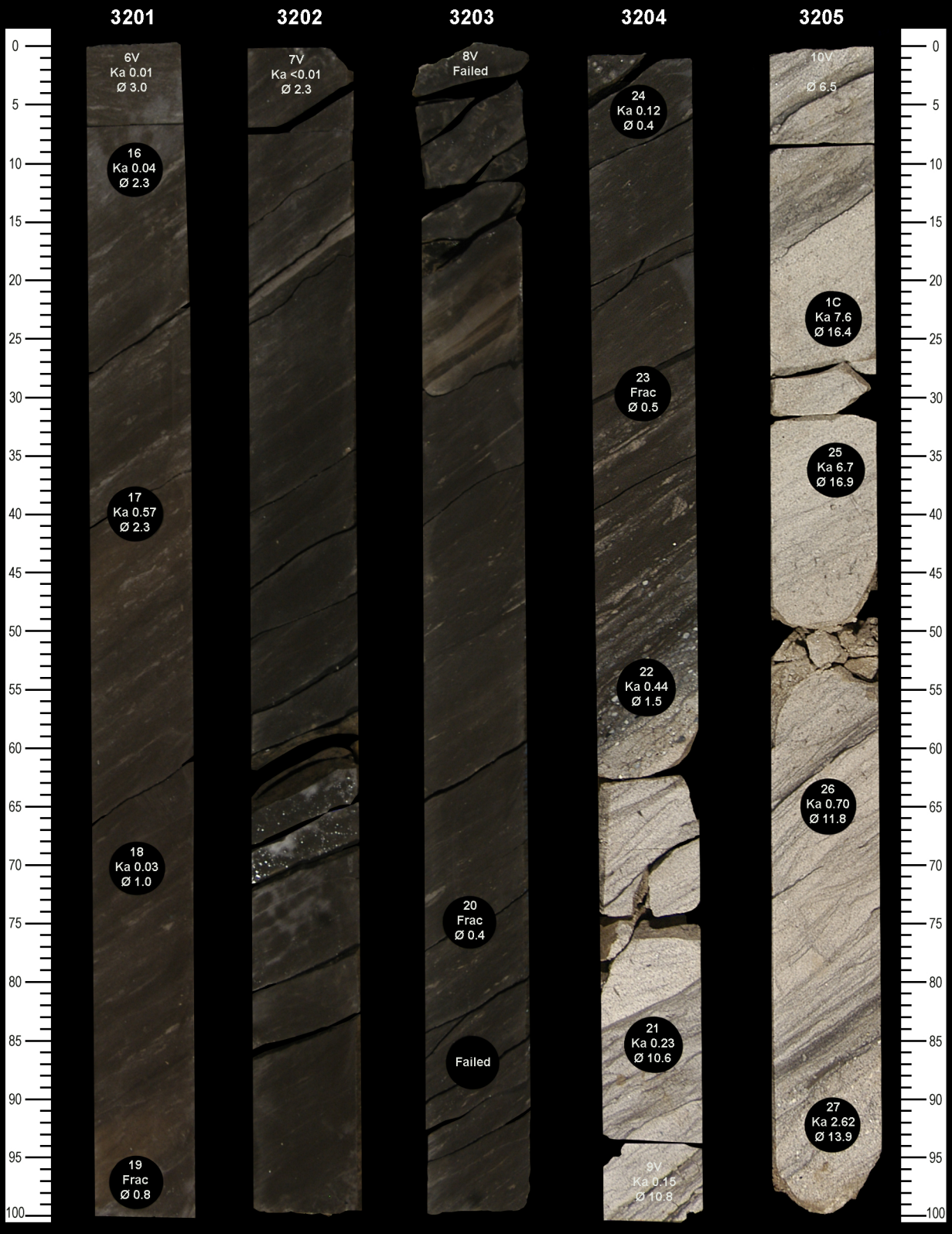
ROCKHOPPER-1 ST-1

Core 1

Ultra Violet



ROCKHOPPER-1 ST-1
Core 1



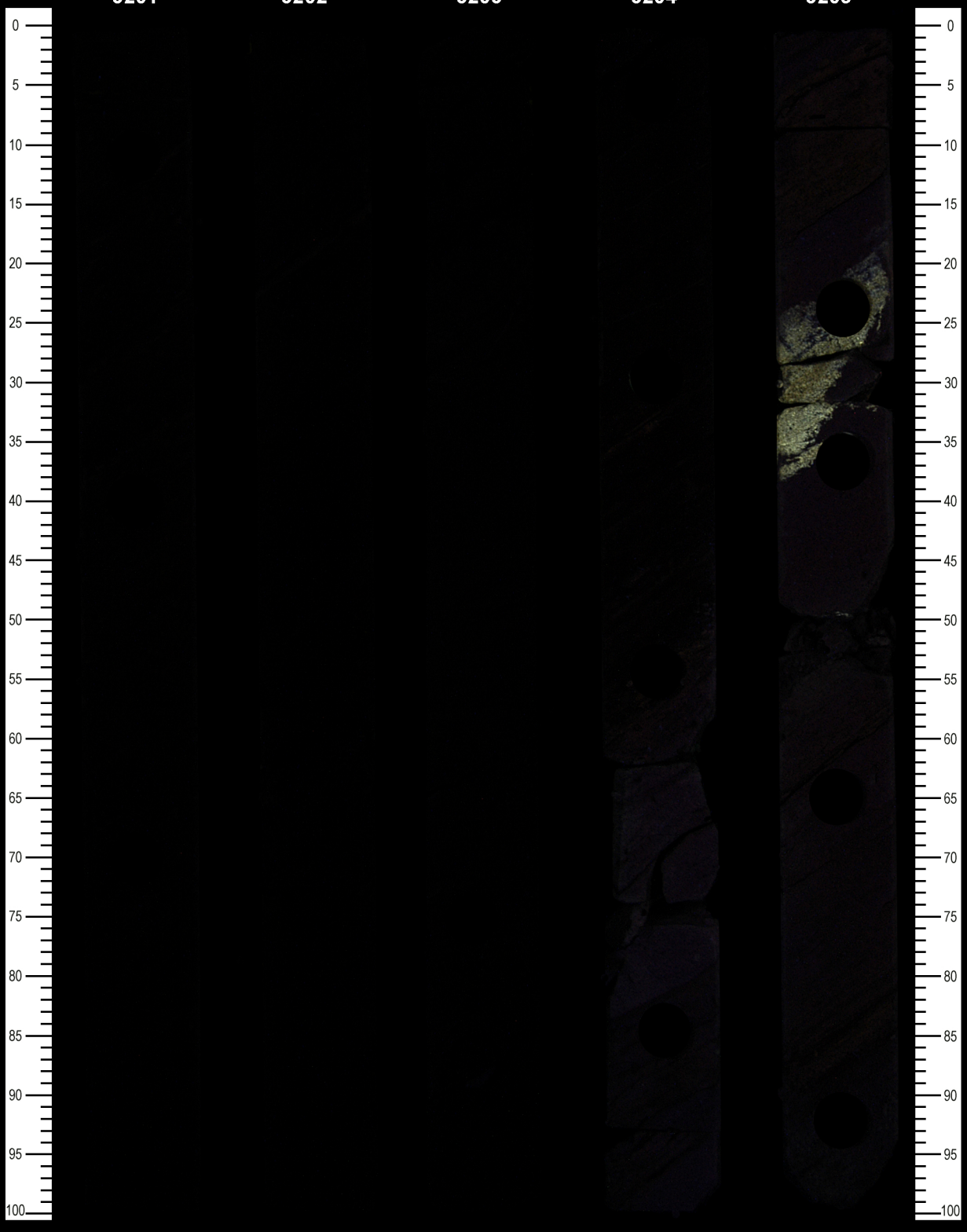
KODAK Color Control Patches

KODAK Gray Scale

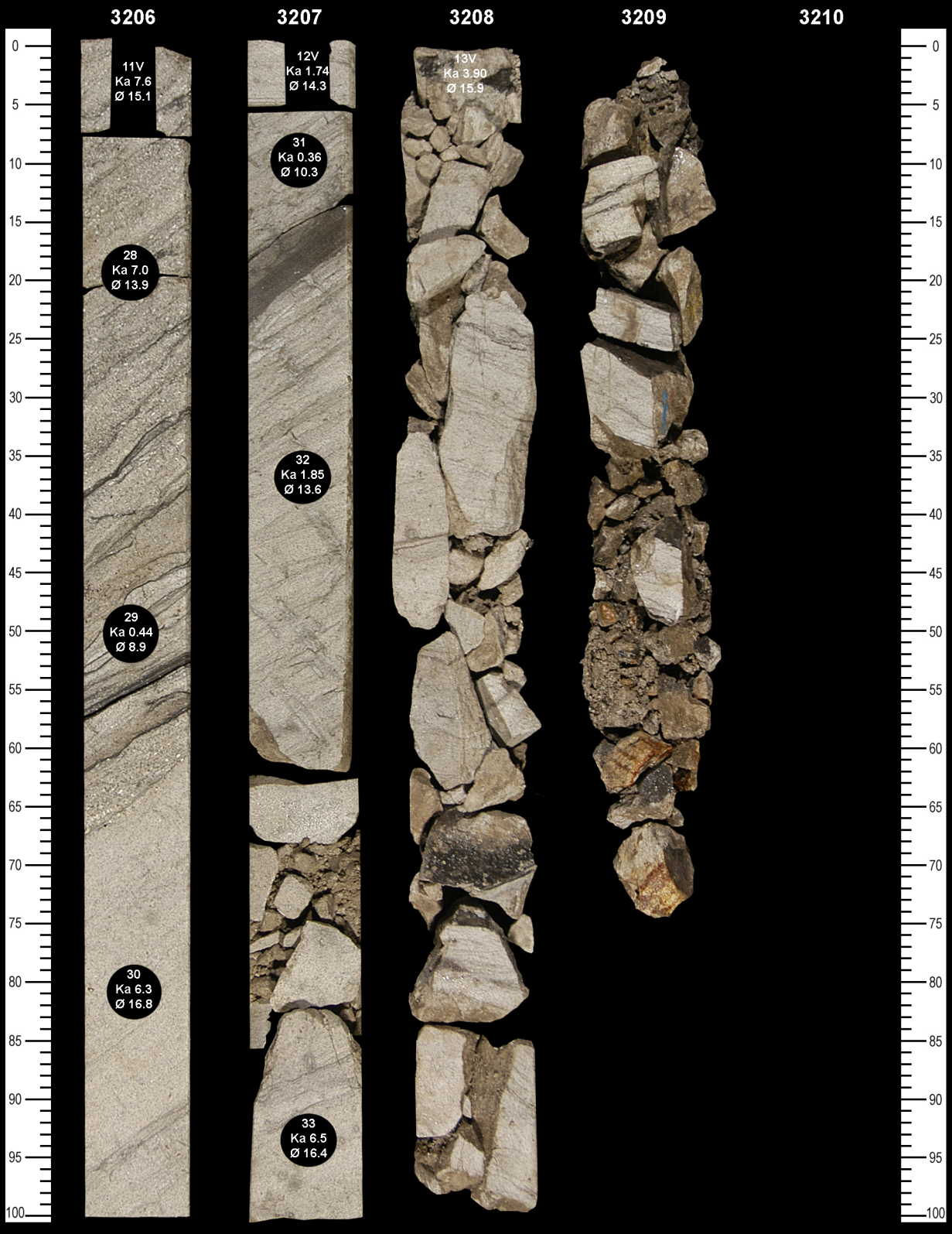
ROCKHOPPER-1 ST-1

Core 1

Ultra Violet



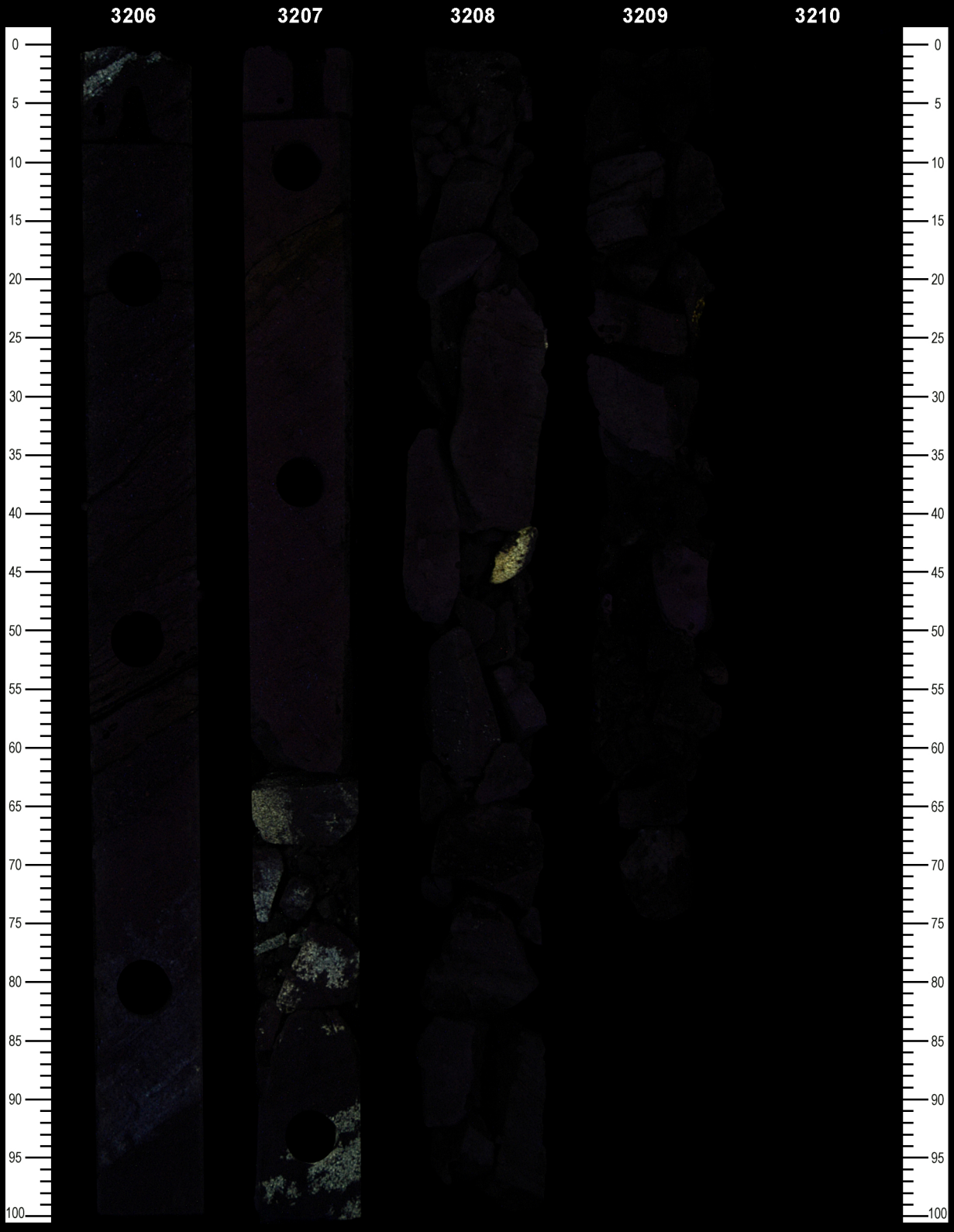
ROCKHOPPER-1 ST-1
Core 1



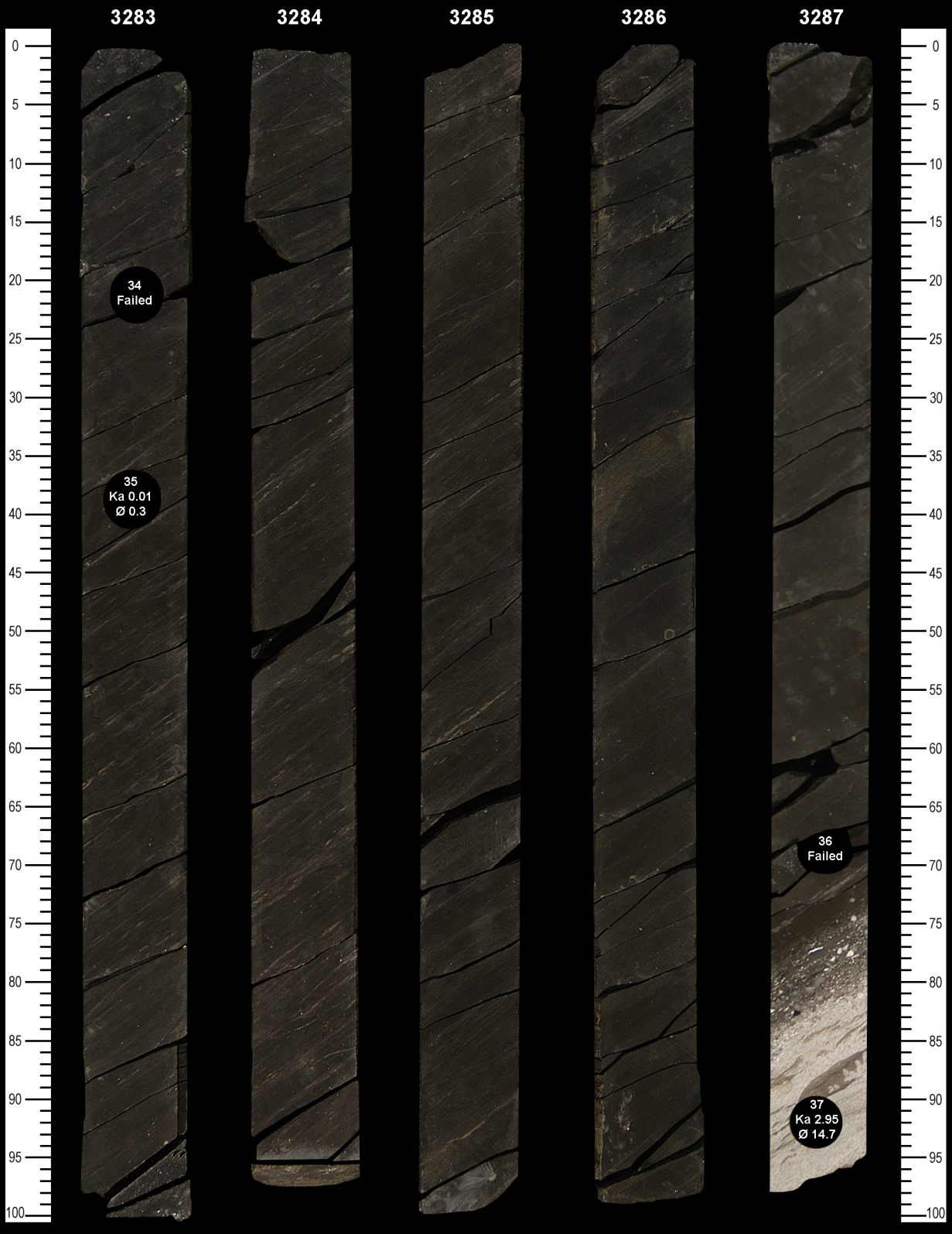
ROCKHOPPER-1 ST-1

Core 1

Ultra Violet



ROCKHOPPER-1 ST-1
Core 2



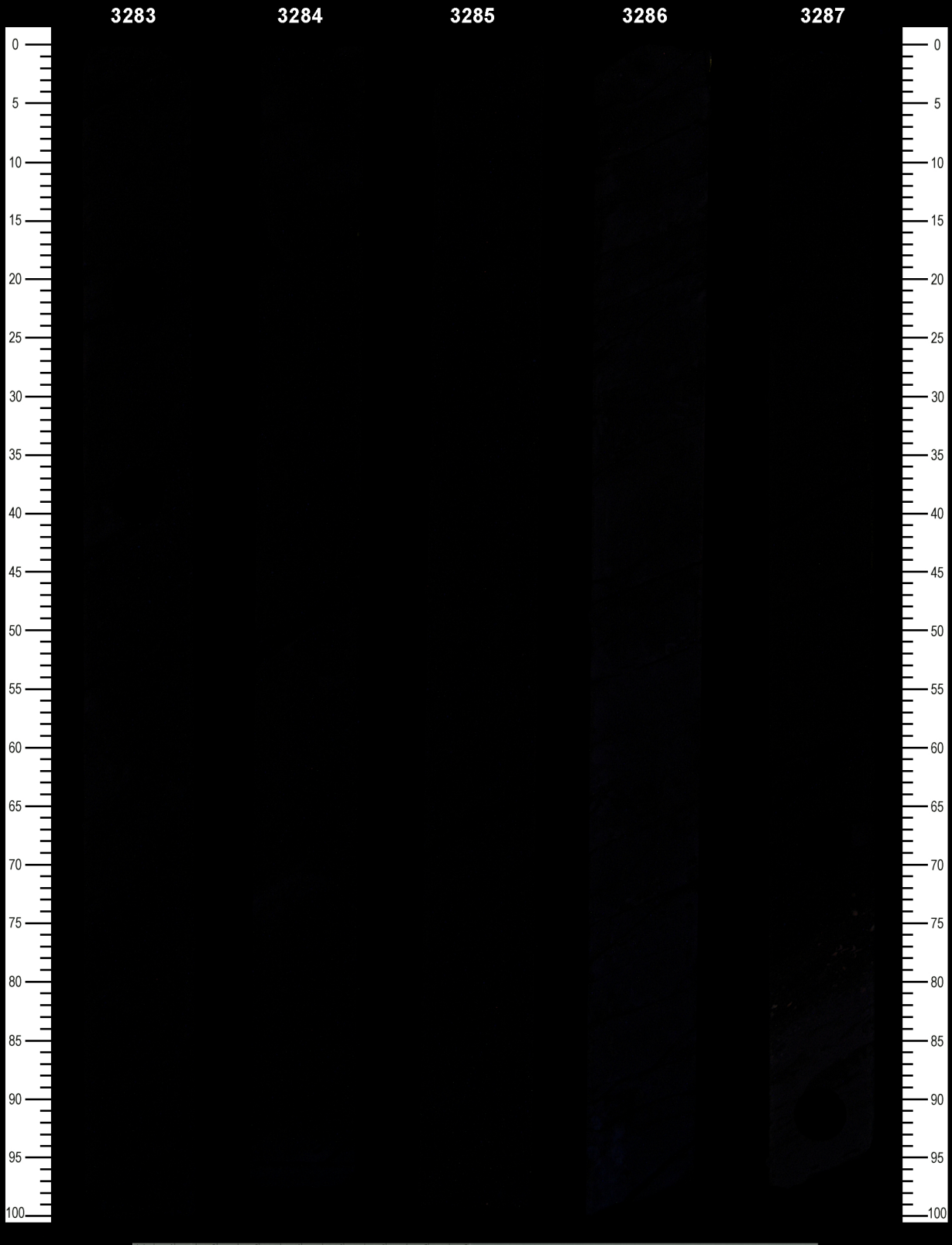
Origin energy

ROCKHOPPER-1 ST-1

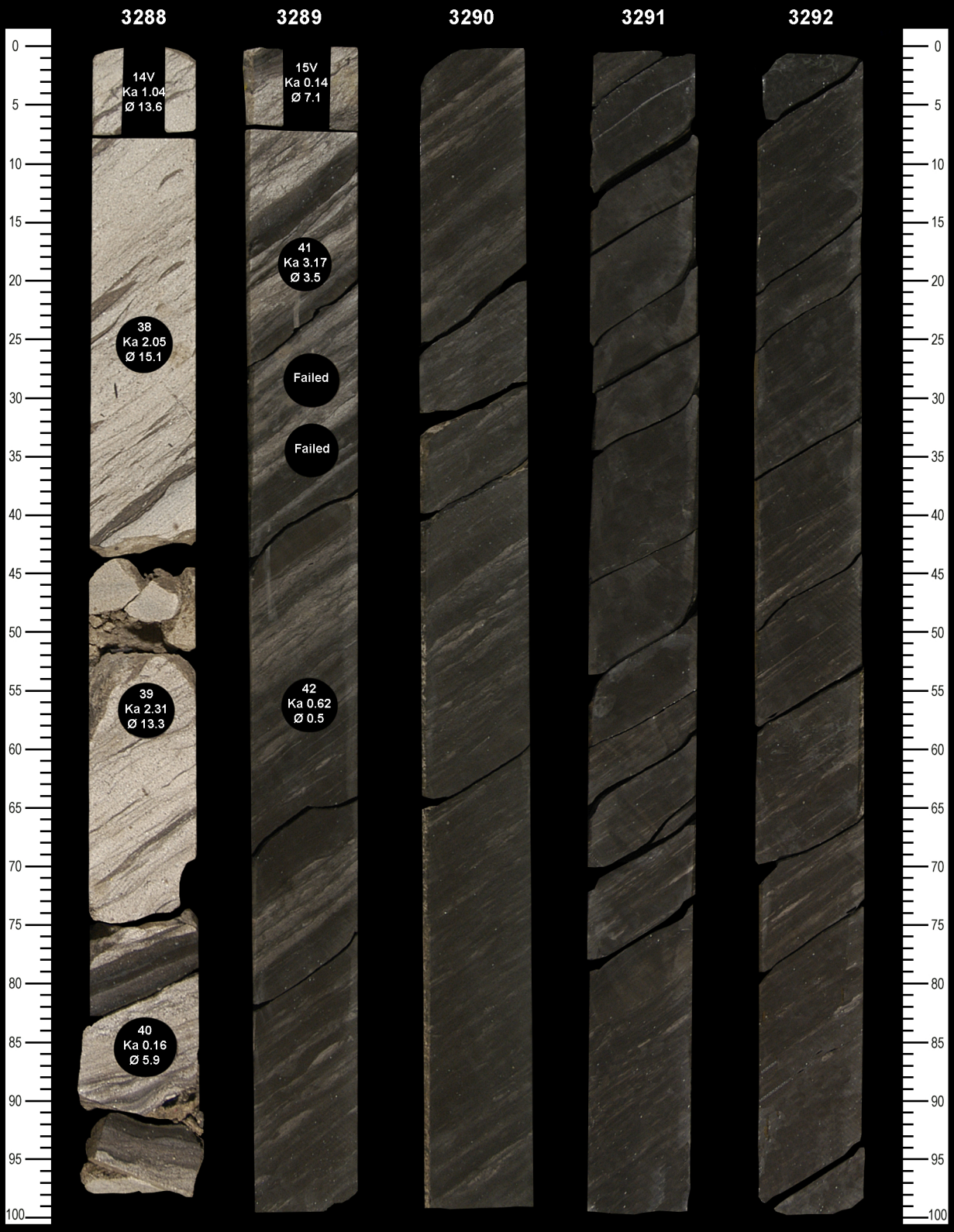
Core 2

Ultra Violet

Weatherford LABORATORIES



ROCKHOPPER-1 ST-1
Core 2



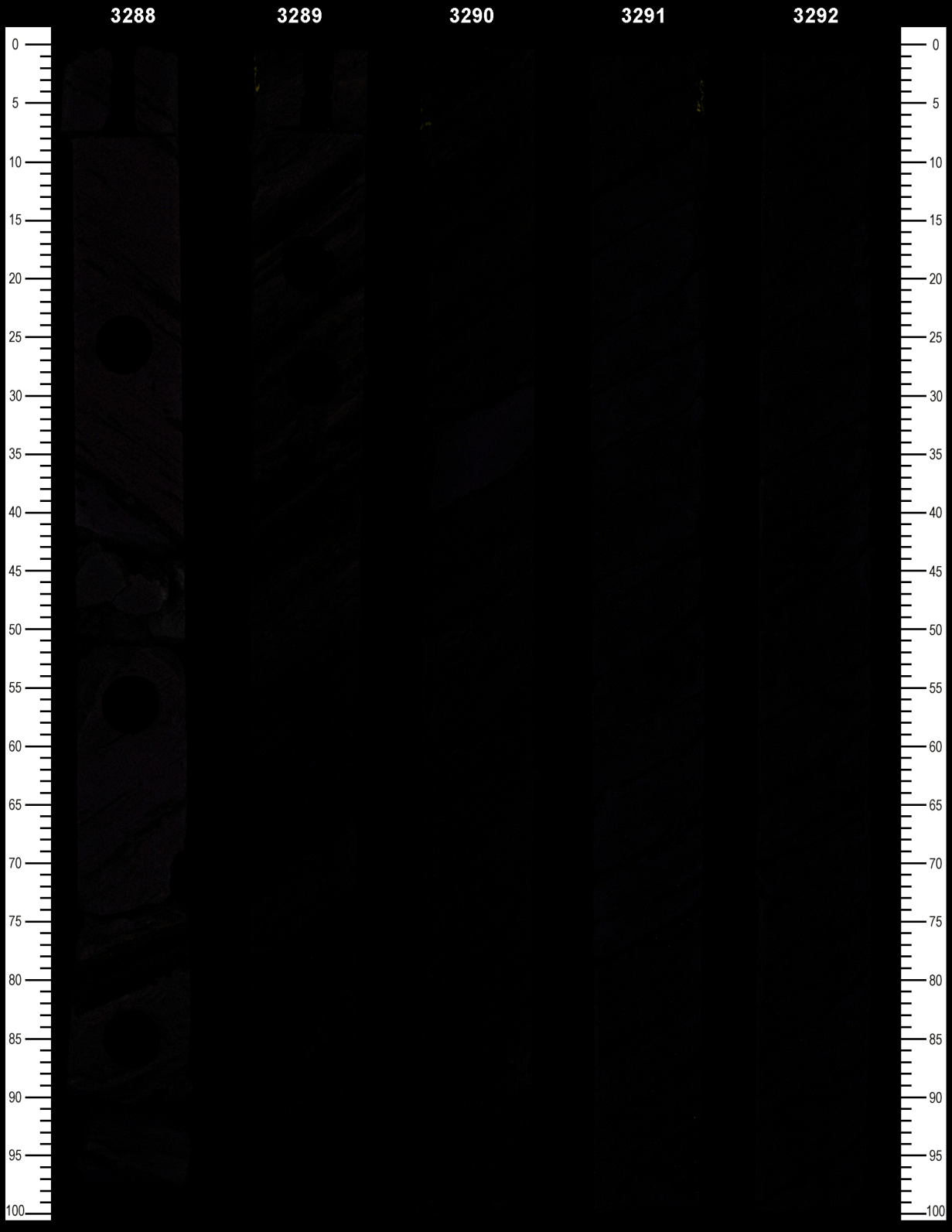
Origin energy

ROCKHOPPER-1 ST-1

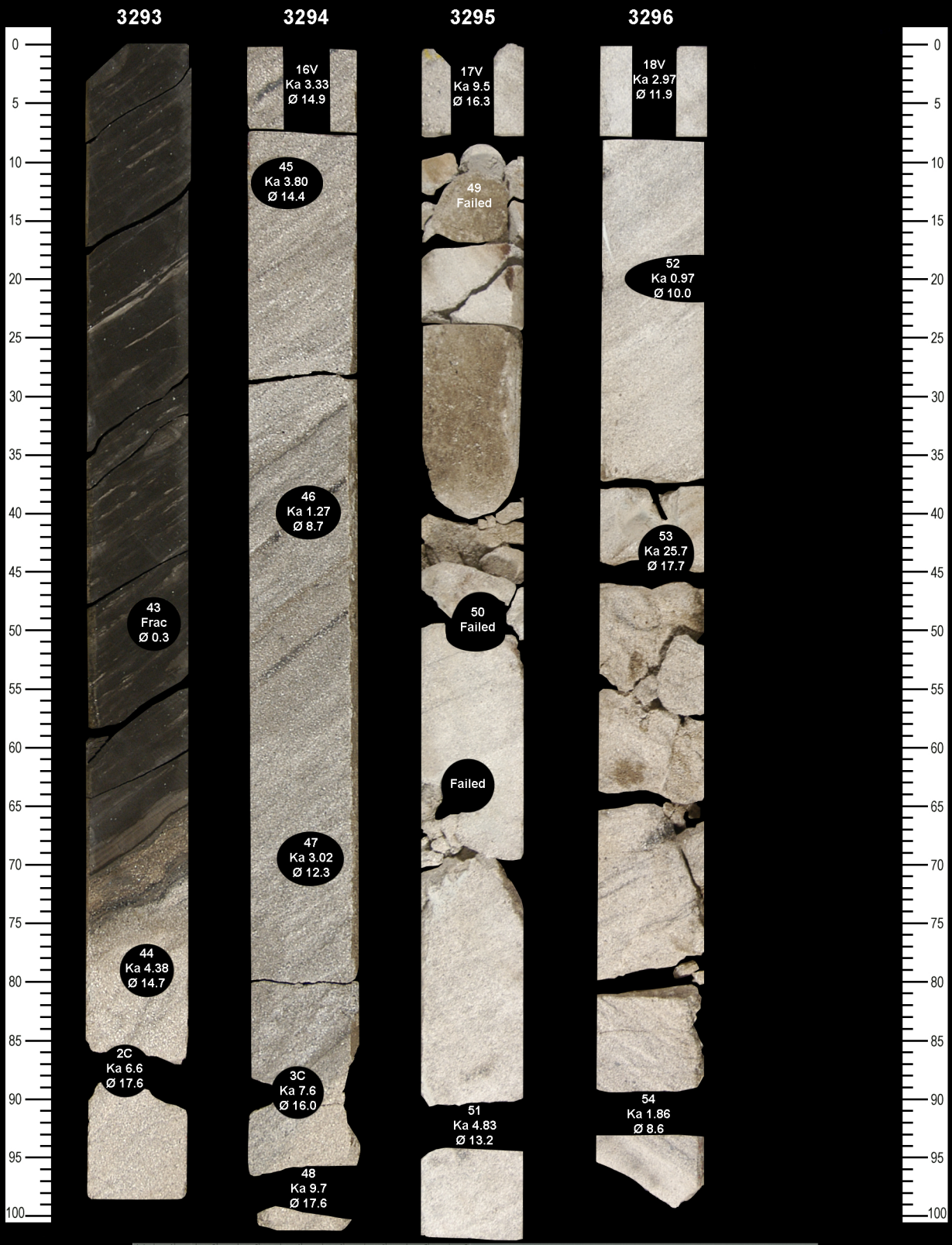
Core 2

Ultra Violet

Weatherford® LABORATORIES



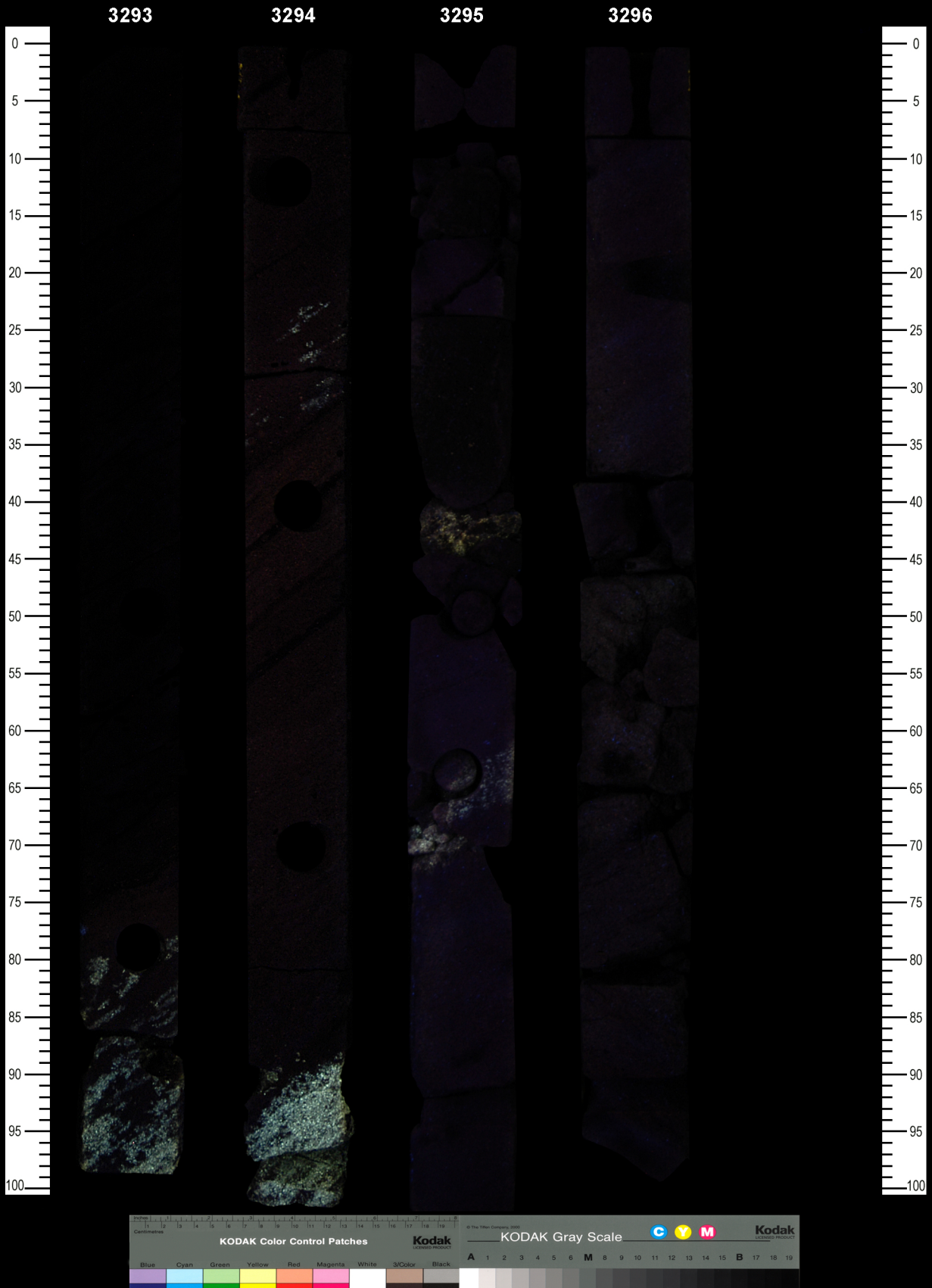
ROCKHOPPER-1 ST-1
Core 2



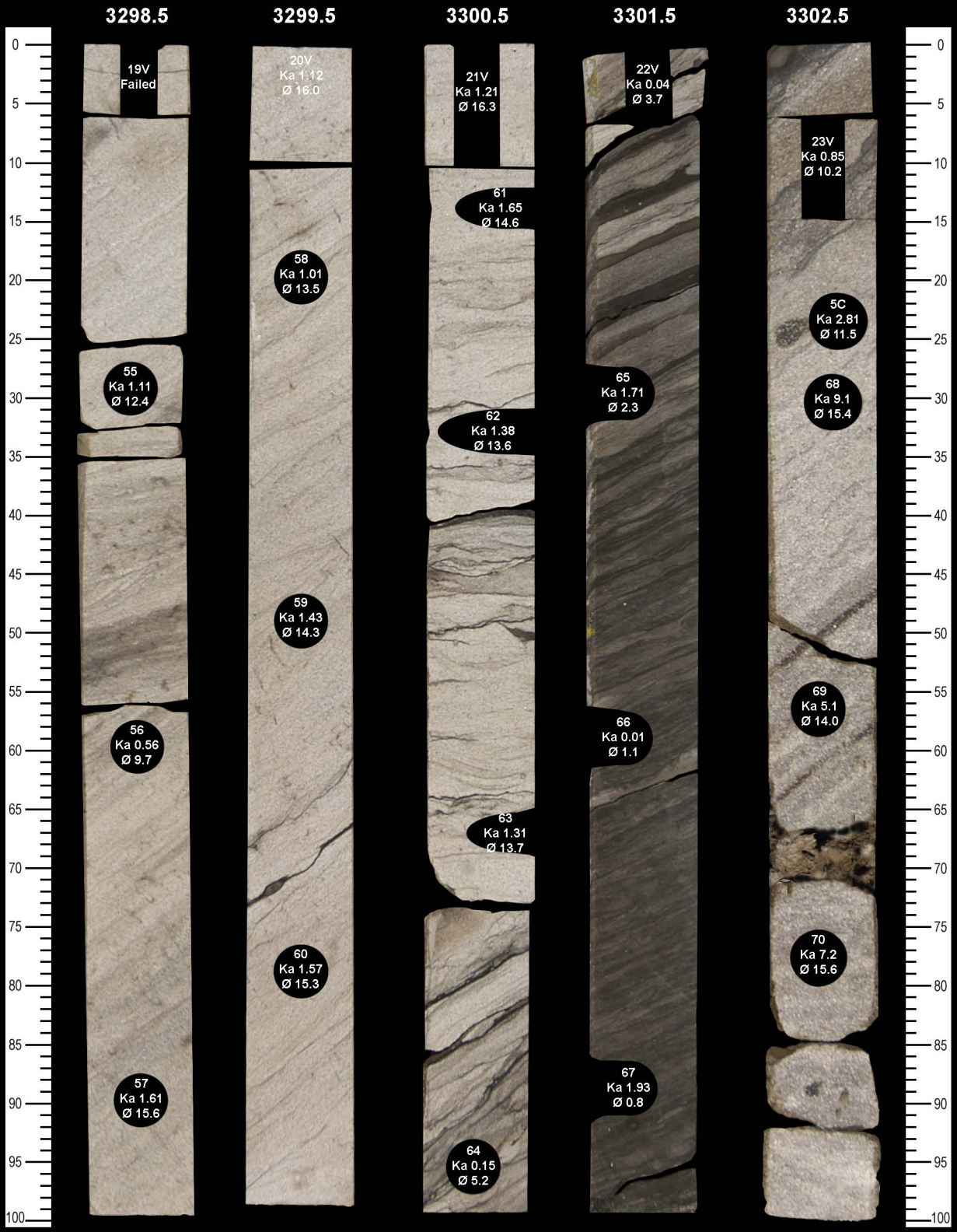
ROCKHOPPER-1 ST-1

Core 2

Ultra Violet



ROCKHOPPER-1 ST-1
Core 3

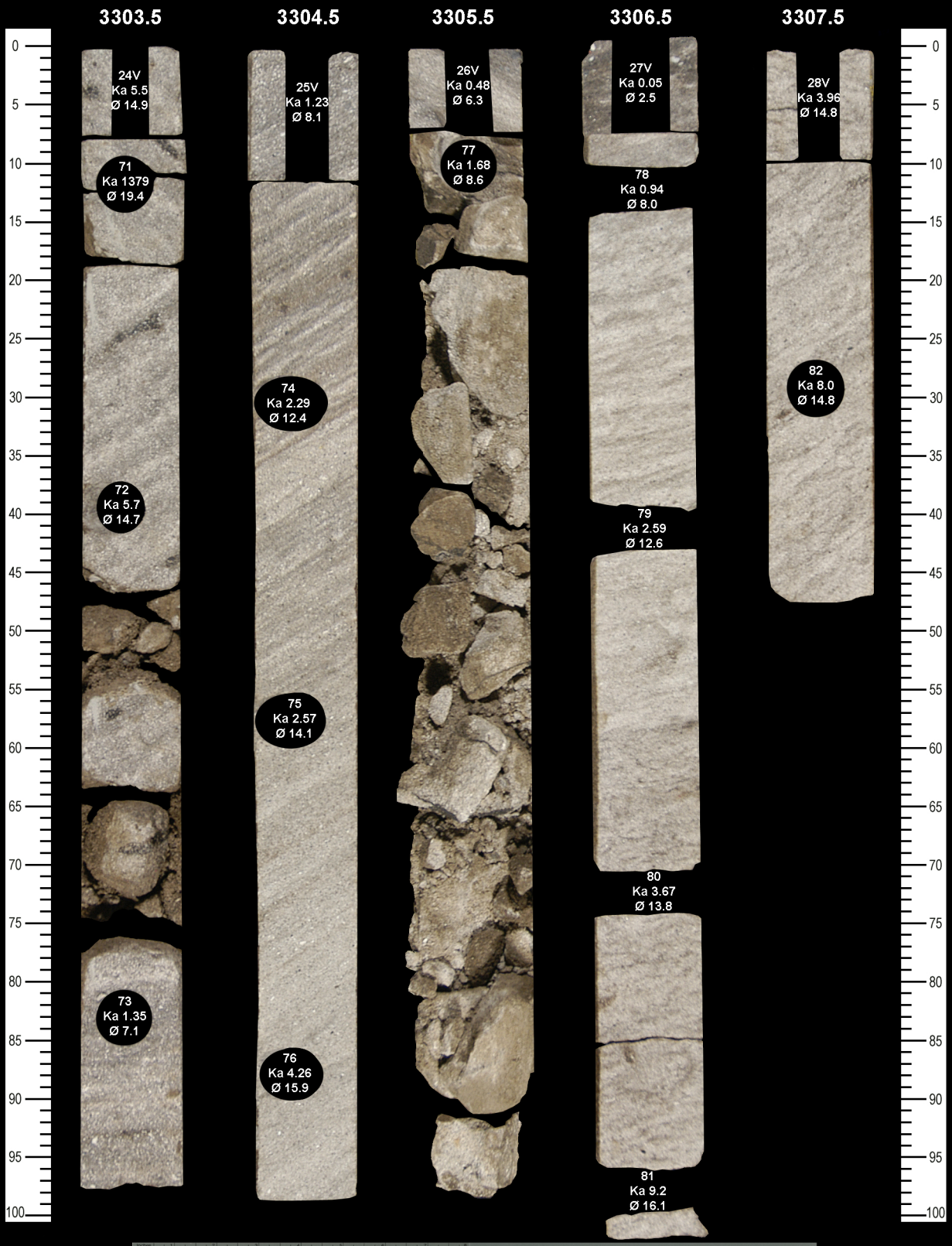


ROCKHOPPER-1 ST-1

Core 3

Ultra Violet

ROCKHOPPER-1 ST-1
Core 3



Origin energy

ROCKHOPPER-1 ST-1

Core 3

Ultra Violet

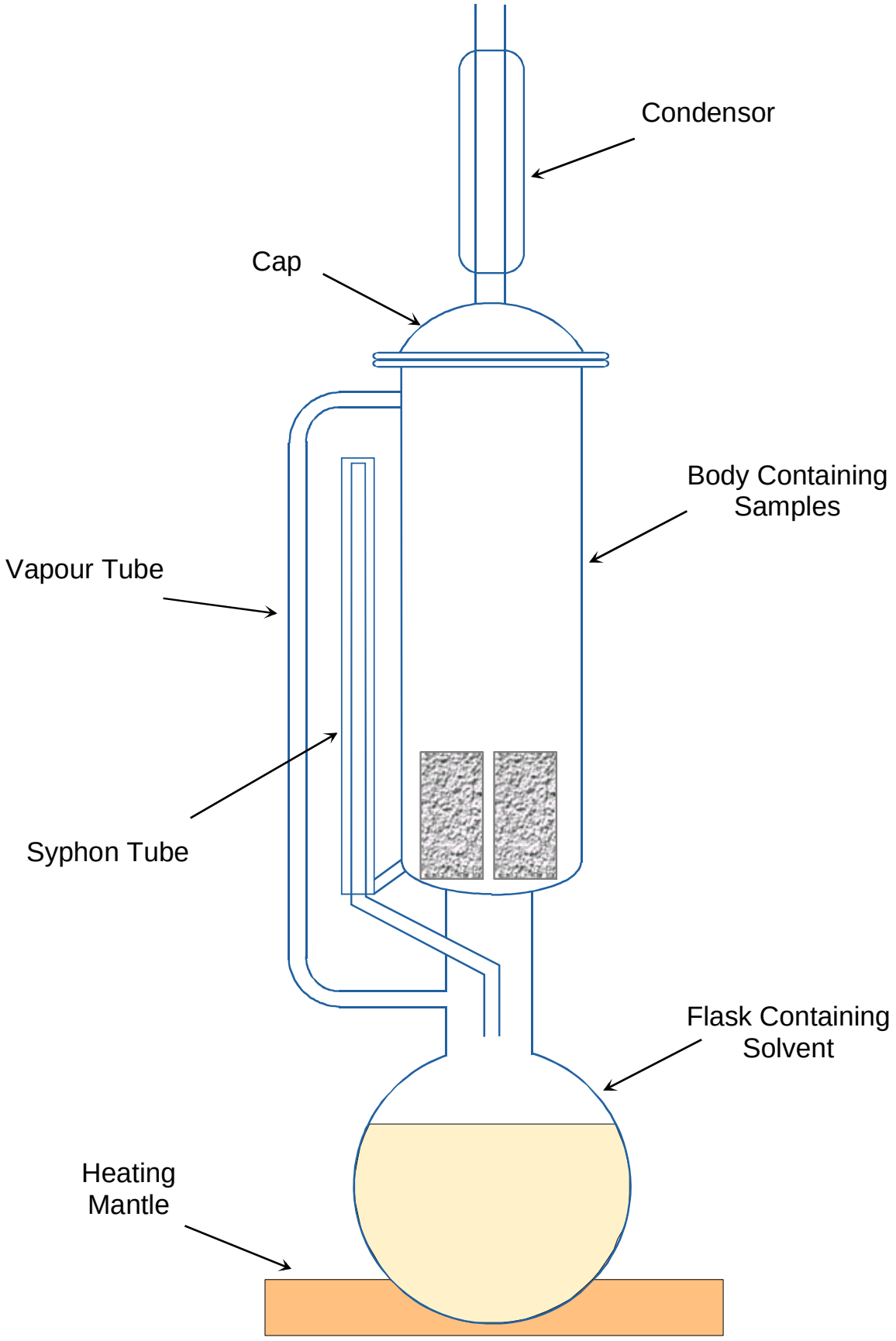
Weatherford® LABORATORIES

APPENDIX VII

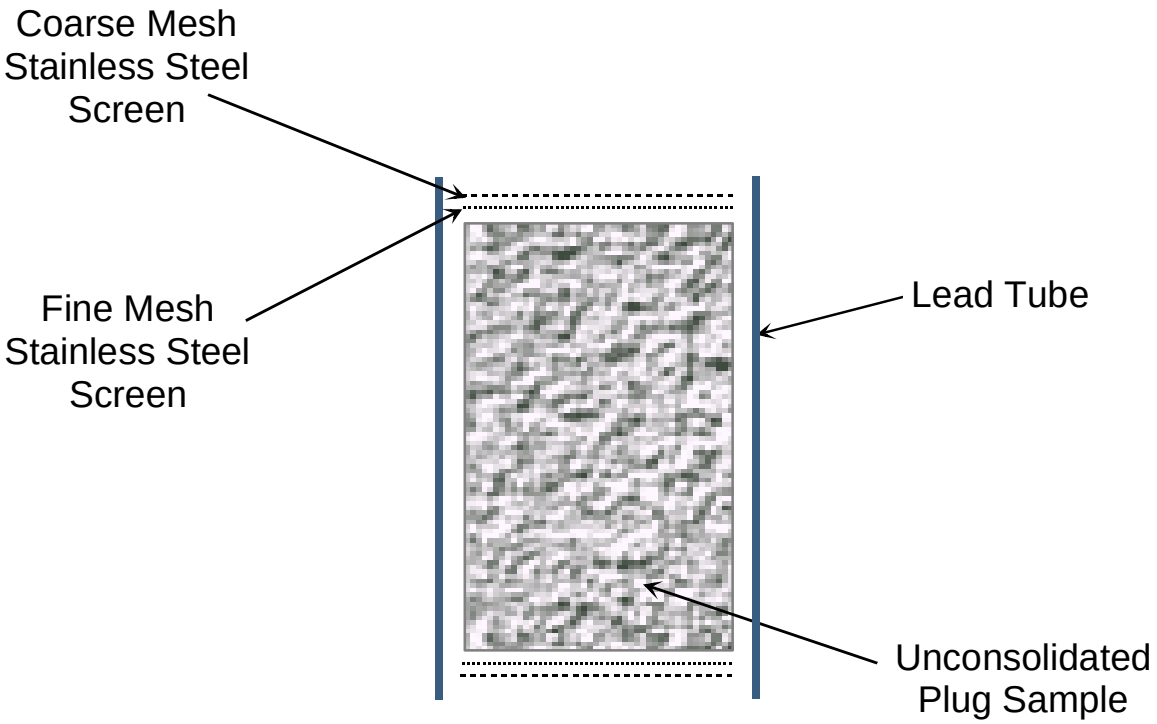
EQUIPMENT SCHEMATICS

SOXHLET CLEANING APPARATUS

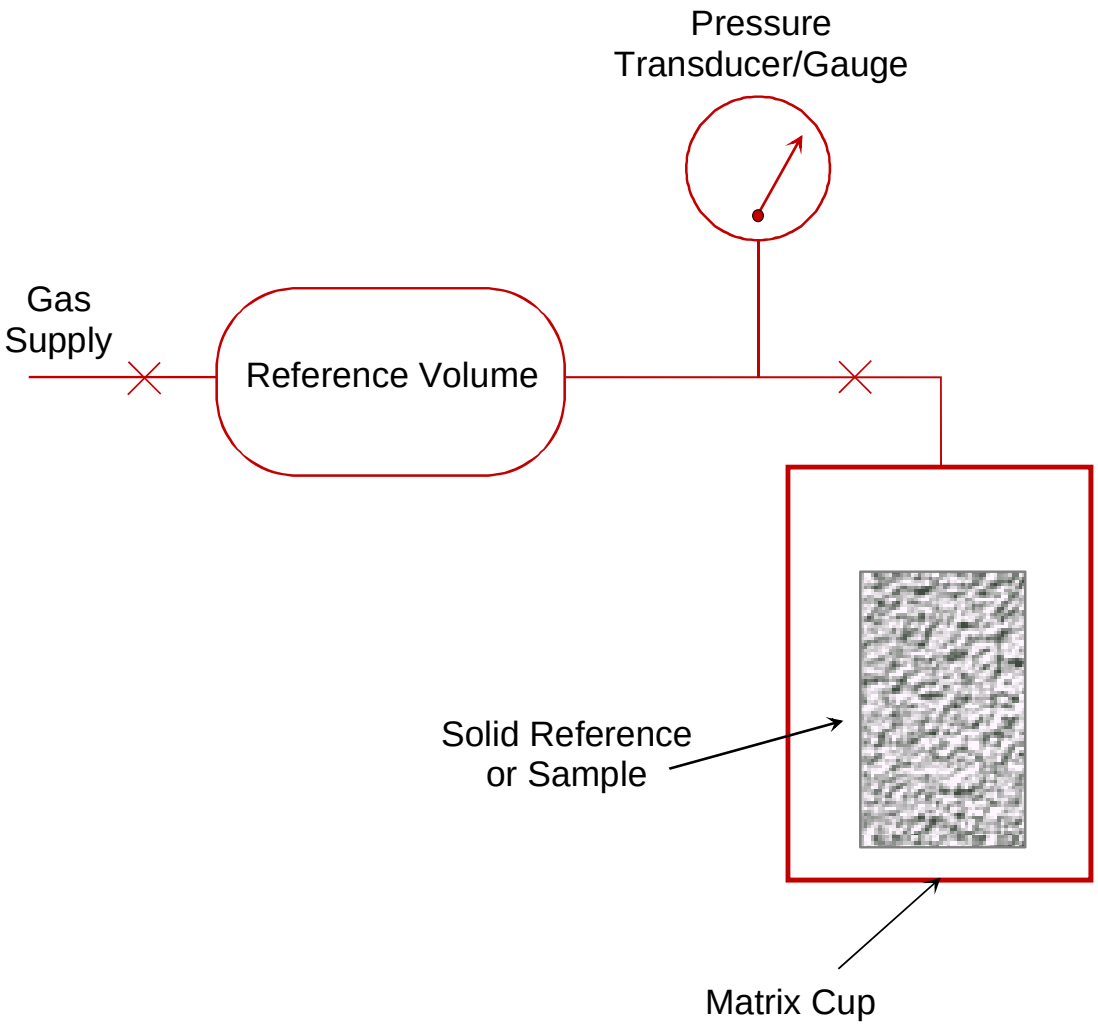
Weatherford LABORATORIES



LEAD SLEEVE SCHEMATIC (Exploded View)



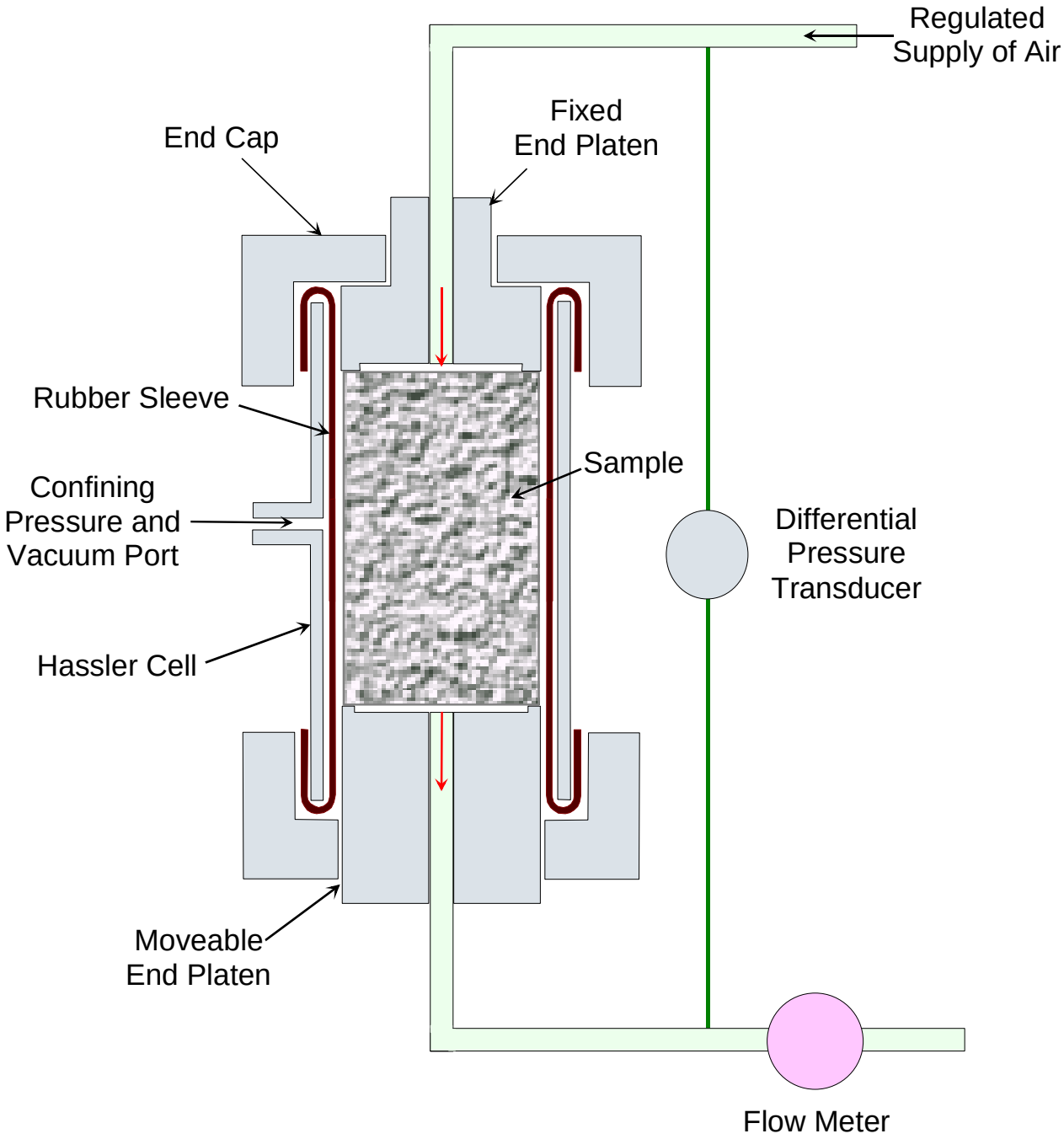
POROSIMETER SCHEMATIC



P1.V1 (reference) = P2.V2 (sample)

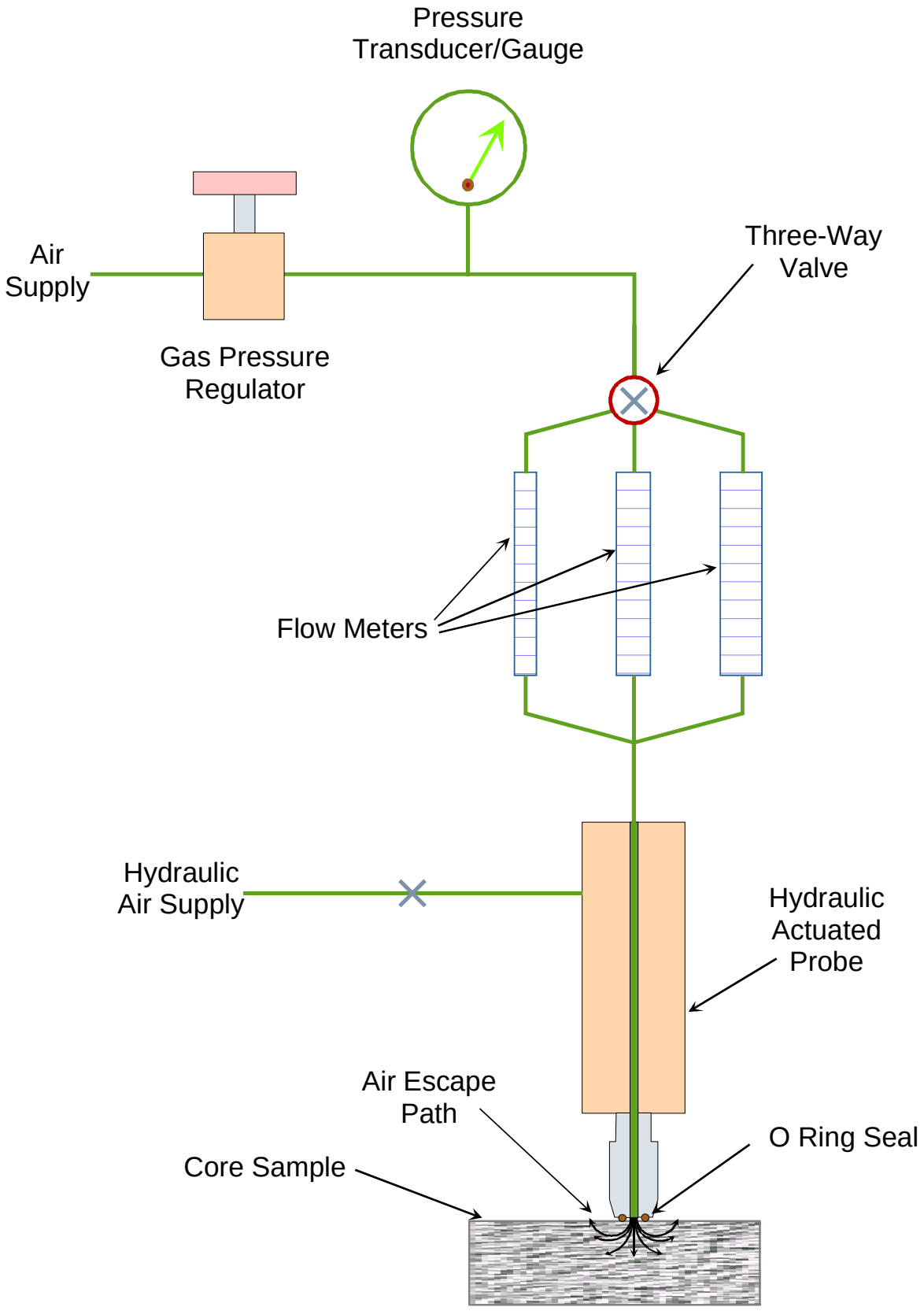
GAS PERMEAMETER SCHEMATIC (Hassler)

Weatherford LABORATORIES



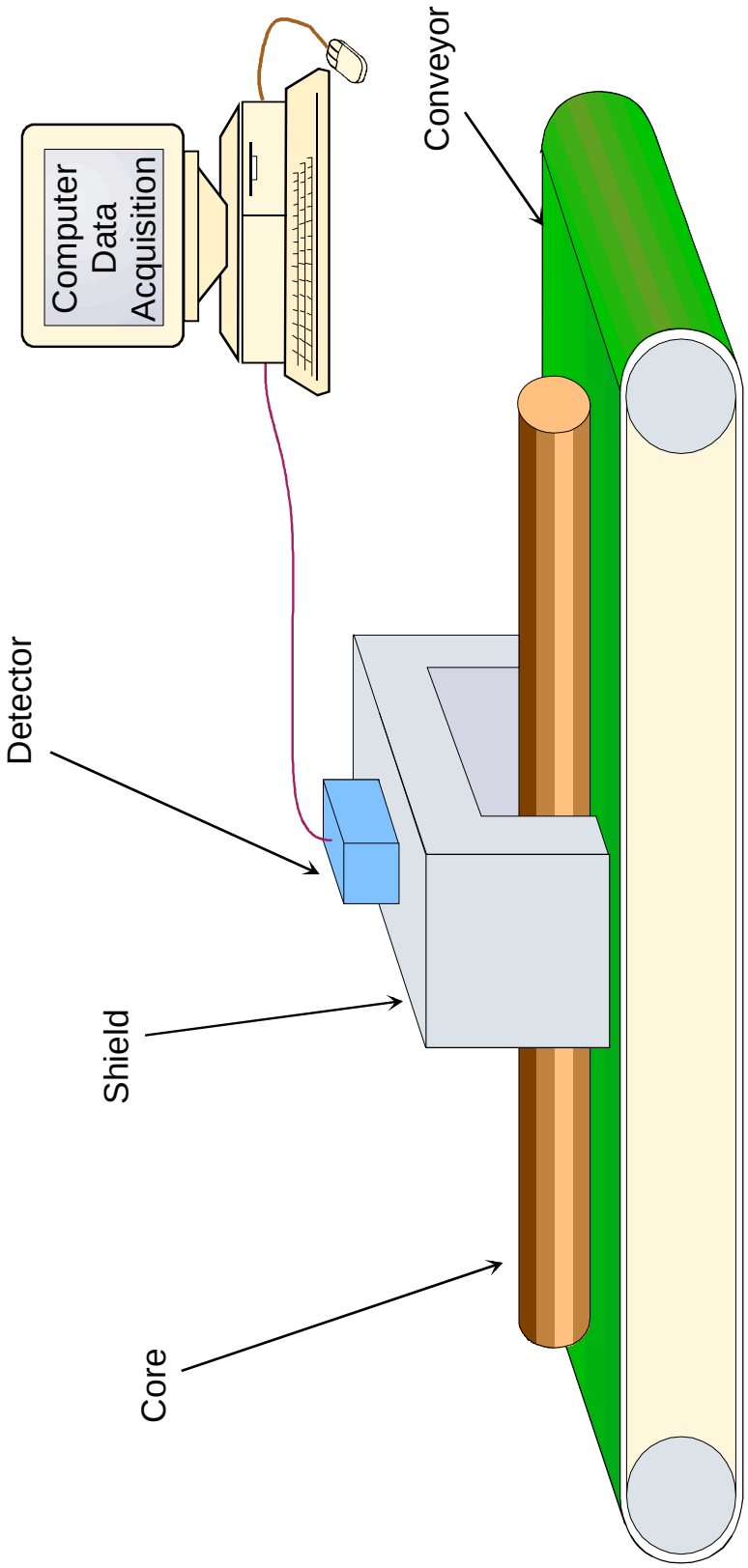
PROBE PERMEAMETER SCHEMATIC

Weatherford LABORATORIES



CONTINUOUS CORE GAMMA SCHEMATIC

Weatherford LABORATORIES



DEAN-STARK APPARATUS

Weatherford LABORATORIES