APPENDIX 1

Tartu (453) core description
(Anne Põldvere, Anne Kleesment, Tõnis Saadre)

The description is given in a standardized form. The tables are divided into vertical columns based on the type of information. The values occuring rarely are given in brackets.

SERIES — Geological time units.

LOCAL STRATIGRAPHIC UNITS — Stages, formations and members.

CORE BOX NO./FIGURES — Numbers of boxes, location of the intervals of core illustrated (Plates 1–3).

DEPTH/SAMPLES — Levels of the boundaries and sampling depths: A, acritarchs; Ac, acanthodians; C, conodonts; Ch, chitinozoans; G, granulometric samples; I, insoluble residues; M, mineralogical samples; O, ostracodes; T, thin sections.

LITHOLOGY — Legend see on next page.

SEDIMENTARY STRUCTURES — Bedding, thickness of beds: micro- (< 0.2 cm), thin- (0.2–2 cm), medium- (2–10 cm) and thick-bedded (10–50 cm); massive – visible bedding is missing.

MARL BEDS — The most frequent thicknesses of the marl beds; in brackets – infrequent thicknesses. Colours were identified on damp core. Contacts between marlstone and other types of rock may be distinct (D) or indistinct (IND).

MARL CONTENT (%) — The content of marl in the described interval was estimated visually.

ACCESSORY MINERALS AND OOLITHS — The amount of these particles was identified visually.

SHORT DESCRIPTION — The colour of rocks was identified on damp core; the dominant size of crystals (in italics) was estimated visually: cryptocrystalline (size of crystals) < 0.005 mm; microcrystalline 0.005–0.01 mm; very finely crystalline 0.01–0.05 mm; finely crystalline 0.05–0.1 mm and medium crystalline 0.1–1 mm. Clastic fractions (also in italics) are described as follows: clay (size of particles) < 0.005 mm; fine silt 0.005–0.01 mm; coarse silt 0.01–0.05 mm; very fine sand 0.05–0.1 mm; fine sand 0.1–0.25 mm; medium sand 0.25–0.5 mm and coarse sand 0.5–1.0 mm. The percentage of allochems, e.g. bioclasts, intraclasts, ooliths and pellets is also indicated. Main types of rocks are in bold. In descriptions also the rock types according to Dunham (1962) are given (in parentheses).

LEGEND

till

limestone (very finely- or finely crystalline)

dolomitic limestone

sandy limestone

glauconitic limestone

dolostone

argillaceous dolostone

silty dolostone

marlstone (in general)

calcitic marlstone

argillaceous marlstone

dolomitic marlstone

calcitic dolomitic marlstone

claystone

silty claystone

siltstone

argillaceous siltstone

sandstone

calcitic sandstone

dolomitic sandstone

K-bentonite layer

breccia

crypto- and microcrystalline (aphanitic) limestone

skeletal limestones:

grains 10-25% (wackestone)

grains 25-50% (packstone)

grains >50% (rudstone)

fine bioclasts, pyritized

coarse bioclasts, pyritized

a horizontal bedding; b thin- (a), medium- (b) and c thick-bedded (c)

wavy bedding

nodular

thin intercalation

a nodules with distinct (a) b or indistinct (b) contacts

stylolites

discontinuity surfaces

4 number of discontinuity surfaces

mud-cracks

mud-chips

veins

caverns

burrows, pyritized

pyritic mottles

Q quartz grains

glauconite grains

ooliths

intraclasts

kerogen

pyrite

calcite

silicification

micas (in general)

mottled, red-coloured and yellow streak

stromatolites

stromatoporoids

brachiopods

cephalopods

calcareous algae

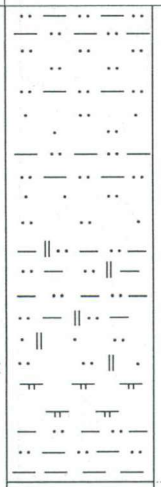
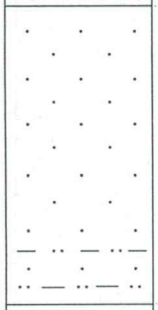
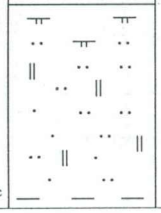
echinoderms

ostracodes

TARTU (453) CORE DESCRIPTION

Location: latitude 6469.70 km, longitude 5481.70 km. Length of core 431 m. Elevation of the top above sea level 65.29 m.

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO FIGURES	DEPTH (m) SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Pleistocene (Quaternary)		1	0.0						Uppermost 30 cm - soil cover. Mottled **till**, mainly represented by sandy-loam *coarse-grained* material with non-rounded clasts
Eifelian	Arukülа Stage Arukülа Formation		14.0 G,M,Ac		Horizontal bedding; thin- to medium-bedded				Intercalation of reddish brown *very fine-grained* **sandstone** and argillaceous **claystone**
			16.0		Horizontal and wavy bedding; thin- to medium-bedded	10 - 30 cm D or IND mottled; reddish brown and grey	15		Intercalation of reddish brown and greenish grey **siltstone**, grey *very fine-grained* and silty **sandstone**, reddish brown **claystone** and mottled dolomitic **marlstone**
		2	G,M,Ac 20.3		Horizontal and wavy bedding; thin-bedded				Yellowish and pinkish grey, *very fine- and fine-grained* **sandstone**
			24.4 G,M,Ac						

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Eifelian	Aruküla Stage Aruküla Formation	3 1 4	24.4 G,M		Horizontal bedding; indistinctly thin-bedded	20 - 30 cm D and IND reddish brown with violet grey partings	10	Biotite	Intercalation of reddish brown **claystone** and silty to *very fine-grained* **sandstone** with reddish brown, partly grey **siltstone** and dolomitic **marlstone**
		5	37.0		Indistinctly inclined, parallel bedding; medium- to thin-bedded			Biotite	Reddish brown, *very fine- and fine-grained* **sandstone**
	Narva Stage Narva Formation Kernavė Substage	6	45.0 G,M,Ac		Horizontal lenticular bedding; thin-bedded, dolomitic marl massive	10 - 60 cm reddish brown with grey partings	10	Biotite	Intercalation of reddish brown **claystone** and *fine- to coarse-grained* **siltstone** with mottled dolomitic **marlstone**

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO FIGURES	DEPTH (m) SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Eifelian	Narva Stage Narva Formation Kernavė Substage	6			☞				☞ follow up
		7	58.4 G,M,Ac		Horizontal planar and wavy bedding; thin- to medium-bedded, dolomitic marl massive	10 - 100 cm D (IND) mottled, grey and reddish brown	20	Biotite	Reddish brown, silty or *fine- to very fine-grained* **sandstone** with interbeds of mottled dolomitic marlstone, grey and reddish brown siltstone and claystone
		8	65.0 G,M,Ac		Horizontal indistinctly wavy and planar bedding; medium- to thin-bedded, dolomitic marl massive	20 - 50 cm IND violet grey	10	Biotite	Intercalation of reddish brown and grey **claystone**, greenish grey **siltstone,** *very fine-grained* or silty **sandstone** and violet grey dolomitic **marlstone**
		9	73.8		Indistinctly wavy and planar bedding	20 - 40 cm, IND, mottled violet grey and reddish brown	70		**Dolomitic marlstone** with interbeds of grey siltstone, *very fine-grained* or silty sandstone and mottled claystone

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Eifelian					☞				☞ follow up
	Narva Stage Narva Formation Kernavė Substage	10 11 2	77.3 G,M		Disrupted wavy and horizontal bedding; thin- to medium-bedded	5 - 50 cm D (IND) violet grey and reddish brown mottled	10	Biotite	Yellowish and reddish brown *very fine-grained* or silty **sandstone** with interbeds of mottled dolomitic marlstone, reddish brown claystone and siltstone
		12	89.0 G,M,Ac		Horizontal indistinctly planar bedding; medium- to thick-bedded			Muscovite, biotite	Reddish brown *fine-grained* **sandstone** and **siltstone**
	Narva Stage Narva Formation Leivu Substage		93.8		Planar thin- to medium-bedded				Reddish brown **arenaceous claystone** with interbeds of grey siltstone and *very fine-grained* sandstone
		13	96.0 G,M		Wavy bedding; massive to medium-bedded	20 - 40 cm IND grey, violet grey and reddish brown	100		Grey, violet grey and reddish brown mottled **dolomitic marlstone**
		14	100.2						
		3							

PLATES 1-3

Plate 1

Selected intervals of Tartu core

(depth increases from left to right)

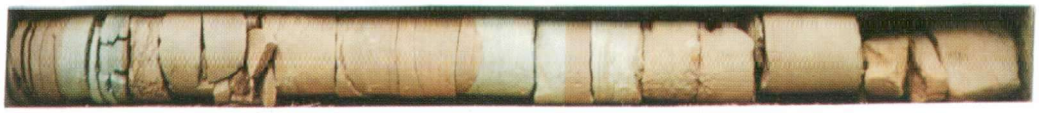


Figure 1. **Aruküla Formation**; 32.2 - 33.2 m.

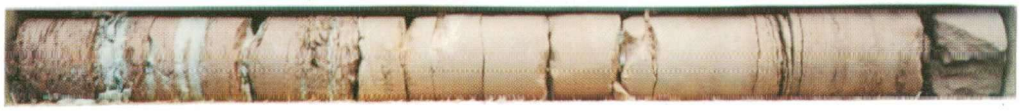


Figure 2. **Narva Formation. Kernave Substage**; 85.0 - 88.5 m.

Figure 3. **Narva Formation. Leivu Substage**; 100.9 - 101.9 m.

Figure 4. **Narva Formation. Vadja Substage**; 122.5 - 123.5 m.

Figure 5. **Pärnu Formation. Tamme to Tori substages**; 137.4 - 142.6 m.

Figure 6. **Rezekne Formation**; 142.6 - 154.0 m.

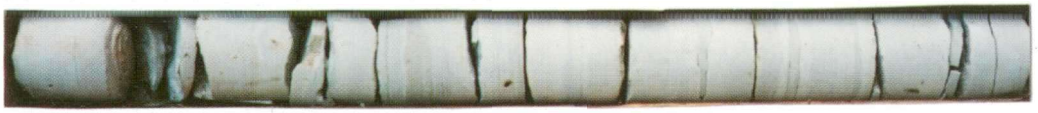


Figure 7. **Saarde Formation**; 154.4 - 155.4 m.

Figure 8. **Saarde Formation**; 175.1 - 176.0 m.

Figure 9. **Õhne Formation**; 210.3 - 211.5 m.

Figure 10. **Õhne Formation. Rozeni Member**; 220.5 - 221.6 m.

Selected intervals of Tartu core

(depth increases from left to right)

Figure 11. **Õhne Formation. Ruhja Member**; 225.4 - 226.4 m.

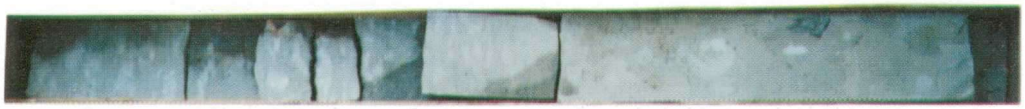


Figure 12. **Õhne Formation. Puikule Member**; 227.4 - 228.4 m.

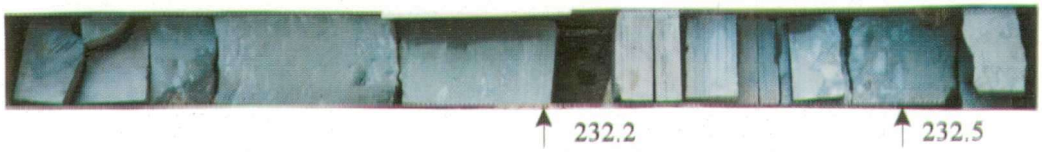


Figure 13. **Salduse to Halliku formations**; 231.5 - 232.6 m.

Figure 14. **Halliku Formation**; 246.1 - 247.1 m.

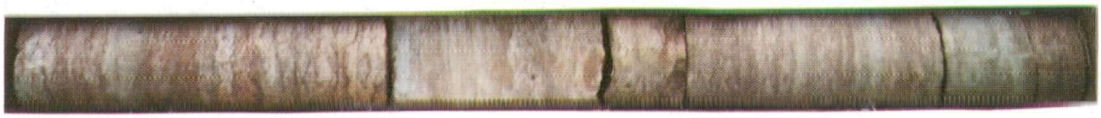


Figure 15. **Jonstorp Formation**; 271.7 - 272.7 m.

Figure 16. **Fjäcka to Saunja formations**; 281.9 - 282.8 m.

Figure 17. **Mõntu Formation**; 284.6 - 285.6 m.

Figure 18. **Rägavere Formation**; 286.7 - 287.6 m.

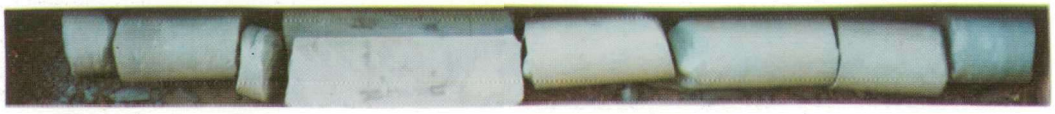


Figure 19. **Lukštai Formation**; 295.5 - 296.5 m.

Figure 20. **Keila Formation**; 311.5 - 312.5 m.

Selected intervals of Tartu core

(depth increases from left to right)

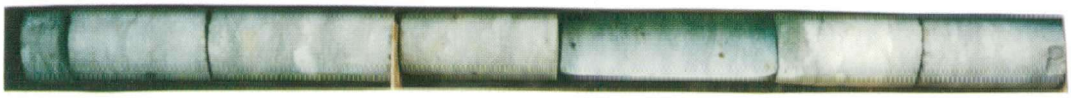


Figure 21. **Jõhvi Formation**; 315.5 - 316.5 m.

Figure 22. **Vasavere Formation**; 318.5 - 319.5 m.

Figure 23. **Tatruse Formation**; 322.6 - 323.6 m.

Figure 24. **Dreimani Formation**; 336.7 - 337.7 m.

Figure 25. **Kõrgekallas Formation**; 341.6 - 342.5 m.

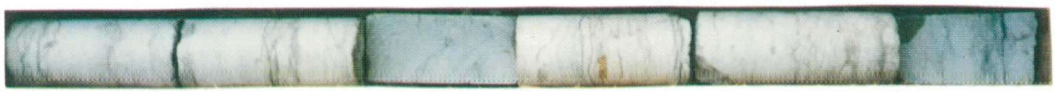


Figure 26. **Väo Formation**; 352.2 - 353.2 m.

Figure 27. **Stirnas Formation**; 354.1 - 355.0 m.

Figure 28. **Segerstad Formation**; 359.8 - 360.8 m.

Figure 29. **Baldone Formation**; 367.5 - 368.7 m.

Figure 30. **Kriukai to Zebre formations**; 380.3 - 381.2 m.

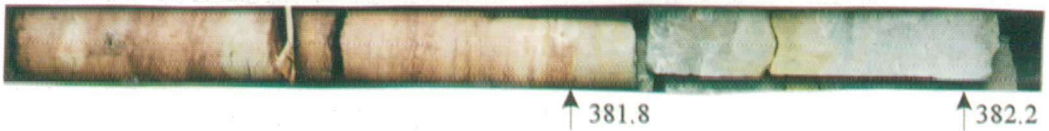


Figure 31. **Zebre to Kallavere formations**; 381.2 - 382.2 m.

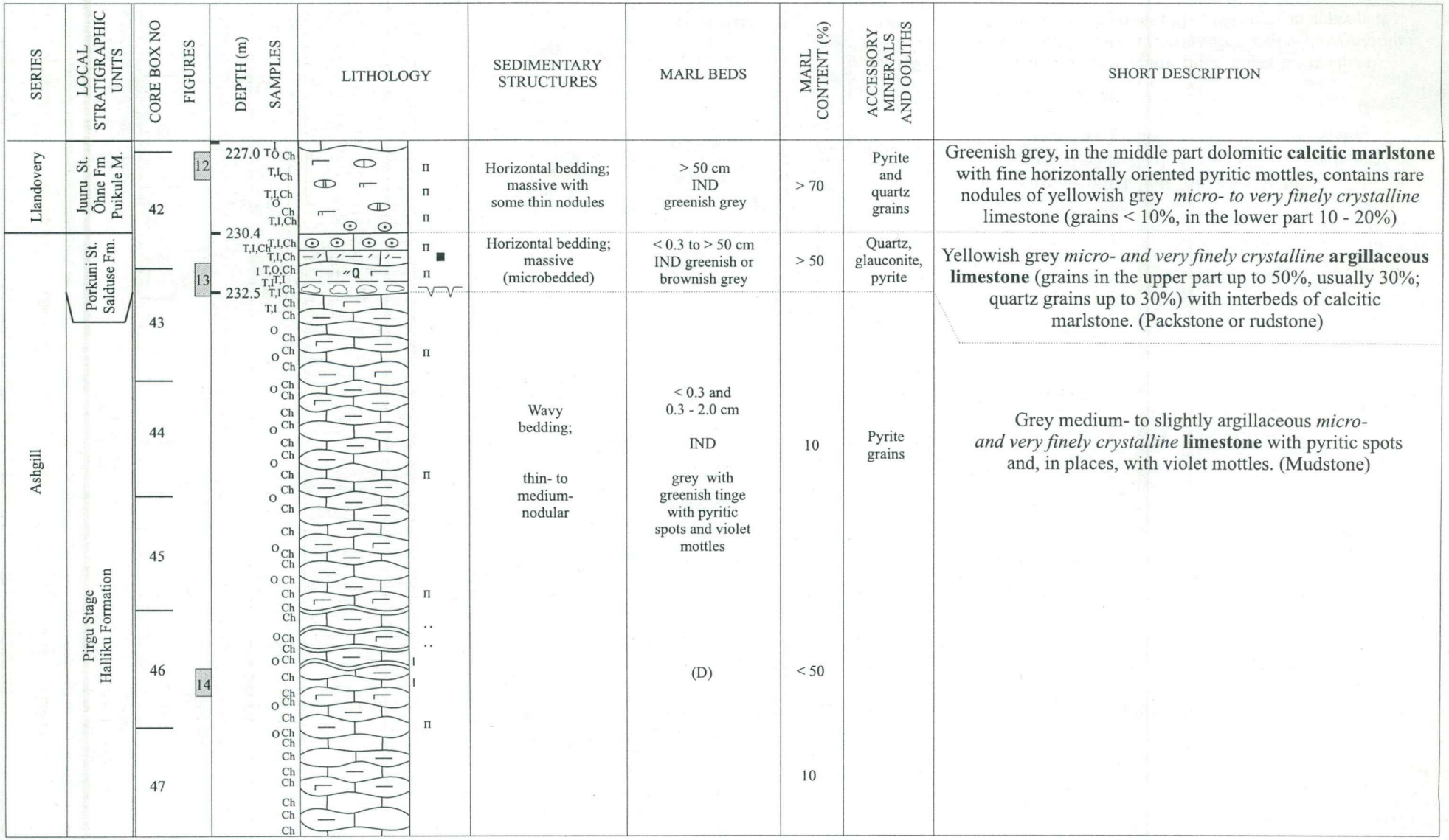
SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Eifelian	Narva Stage Narva Formation Leivu Substage	14 (3)	G,M		Horizontal bedding; medium- to thin-bedded, dolomitic marl massive	20 - 80 cm D or IND grey	75	Quartz grains	Grey **dolomitic marlstone** with interbeds of *crypto- to microcrystalline* dolostone and arenaceous claystone. Basal 10 cm pinkish grey dolomitic **sandstone**
		15	106.0		Wavy bedding; thin- to medium-bedded or irregularly nodular	20 - 40 cm IND grey with reddish brown partings mottled	20	Dolomite	Intercalation of dark grey **dolomitic claystone** with grey and mottled (grey with reddish brown partings) dolomitic **marlstone** and yellowish grey fractured *crypto- to microcrystalline* **dolostone**
	Narva Stage Narva Formation Vadja Substage	16	113.4		Thick- to medium-bedded and lenticularly nodular	20 - 40 cm IND dark grey	> 90		Sedimentary **breccia**: arenaceous dolomitic marlstone with unsorted pebbles of *micro- to very finely crystalline* dolostone, dolomitic marlstone and siltstone
		17	115.7		Thin-bedded and nodular				Grey **claystone** with interbeds of yellowish grey nodular *microcrystalline* dolostone
		18	117.5 G,M		Nodular and breccial	20 - 40 cm IND dark grey	60		Intercalation of arenaceous **dolomitic marlstone** and yellowish grey fractured *crypto- to microcrystalline* **dolostone**
		19 (4)	120.3		Wavy bedding; thick- to medium-bedded or massive, basal part platy or thin-bedded	0.2 - 2.0; < 200 cm IND dark grey	90		Sedimentary **breccia**: arenaceous dolomitic marlstone with unsorted pebbles of *microcrystalline* dolostone, dolomitic marlstone and siltstone, thin interbeds of yellowish grey cavernous dolostone and dark grey platy claystone
			127.0						

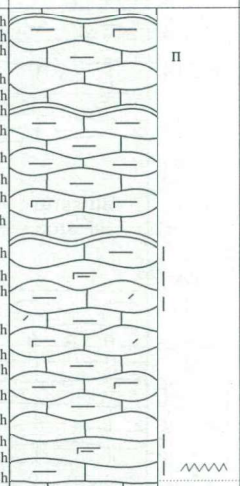
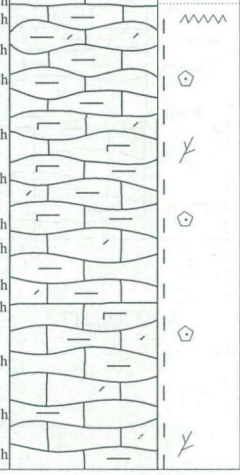
SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Eifelian	Pärnu Stage Pärnu Formation Tamme Substage	20	127.0 G,M		Indistinctly discontinuous bedding; medium-bedded				Light grey *medium- to fine-grained* **sandstone**. Upper 20 cm cavernous with dolomitic cement, in lower part loose with irregular patches of dolomitic cement
	Pärnu Stage Pärnu Formation Tori Substage	5	137.5 G,M		Indistinctly discontinuous bedding				Pinkish grey *very fine- to fine-grained* weakly cemented **sandstone**
Emsian	Rēzekne Stage Rēzekne Formation	6	142.6 G,M		Thin-bedded	20 - 40 cm; D; grey	100		Arenaceous **dolomitic marlstone** with interbeds of grey claystone
			143.6 G,M		Indistinctly horizontal bedding;				Whitish grey (with yellowish tinge) *very fine- to fine-grained*, weakly cemented **sandstone**

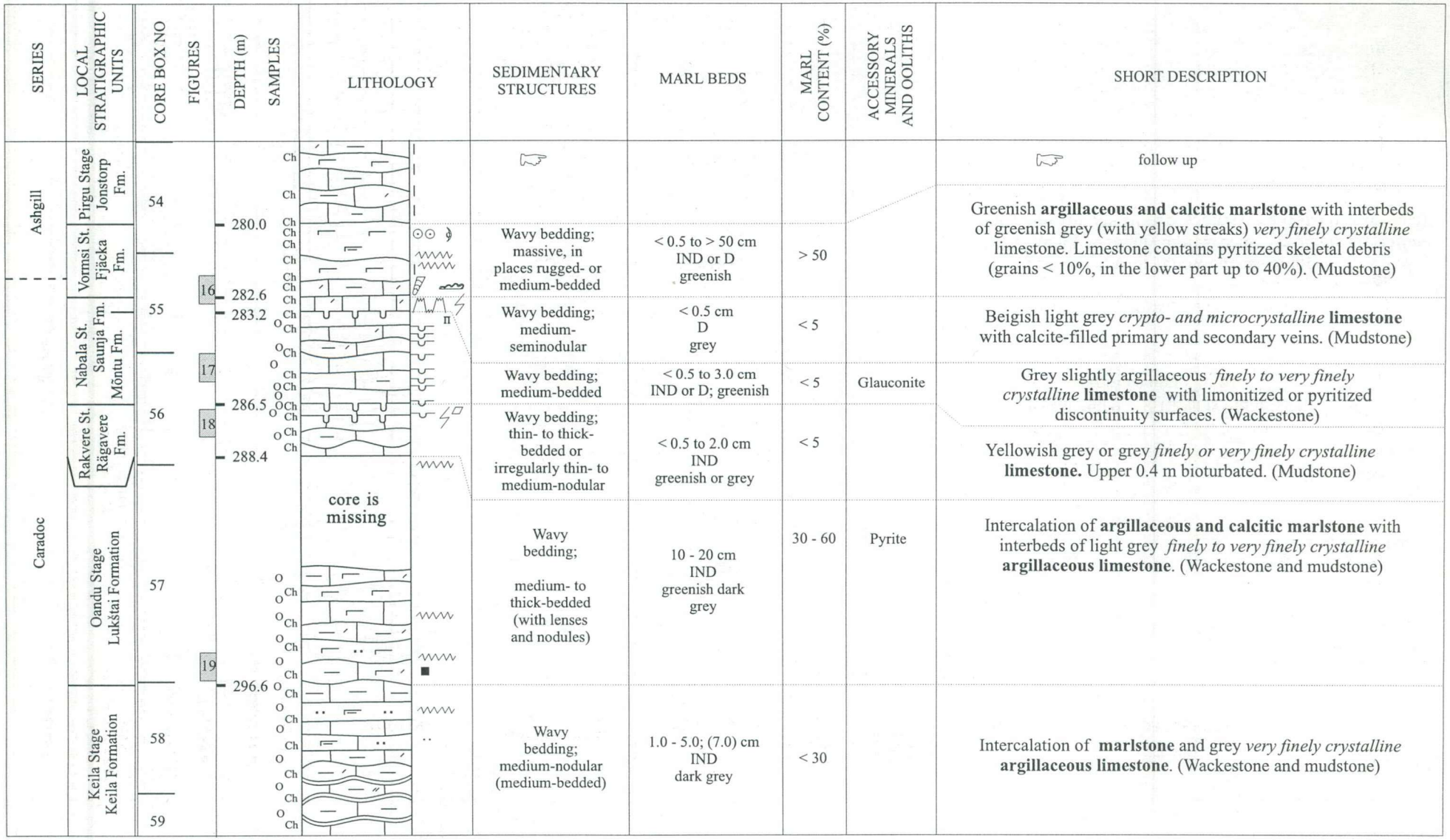
SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
		21 / 6			☞				☞ follow up
Llandovery	Raikküla Stage Saarde Formation	21 / 6	154.0						
		23 / 7			Wavy bedding; medium- and thick-bedded	0.5 - 2 cm (4 - 6 cm) D greenish light grey	< 10		Whitish beige (with brownish tinge) or light grey (in places with violet tinge) *micro- and very finely crystalline* **dolostone** (grains < 10%). Upper 0.5 m *very finely and microcrystalline*
		24	159.0		Wavy bedding; medium-bedded	0.5 - 3 cm (5 cm) IND greenish light grey	< 10		Beigish grey and grey (with violet and pyrite mottles) *micro- and very finely crystalline* **dolostone** (grains < 10%)
		25	163.0		Horizontal bedding; medium-bedded	0.5 - 3 cm (4 cm) D greenish grey	20 - 30		Grey, with pyritic mottles *micro- to very finely crystalline* **dolostone** (grains < 10%)
		26							
		27	169.7		Wavy bedding; medium-bedded	0.5 - 2 cm D greenish dark grey or brownish grey	< 5		Brownish light grey or grey *micro- to very finely crystalline* **dolostone** (10 - 25% grains)
		28 / 8	173.5		Wavy bedding; rugged medium-bedded with rare thin beds	< 0.5 cm IND dark grey	< 10		Grey with dispersed pyrite mottles *very finely crystalline* **dolostone** (grains < 10%)
			177.5						

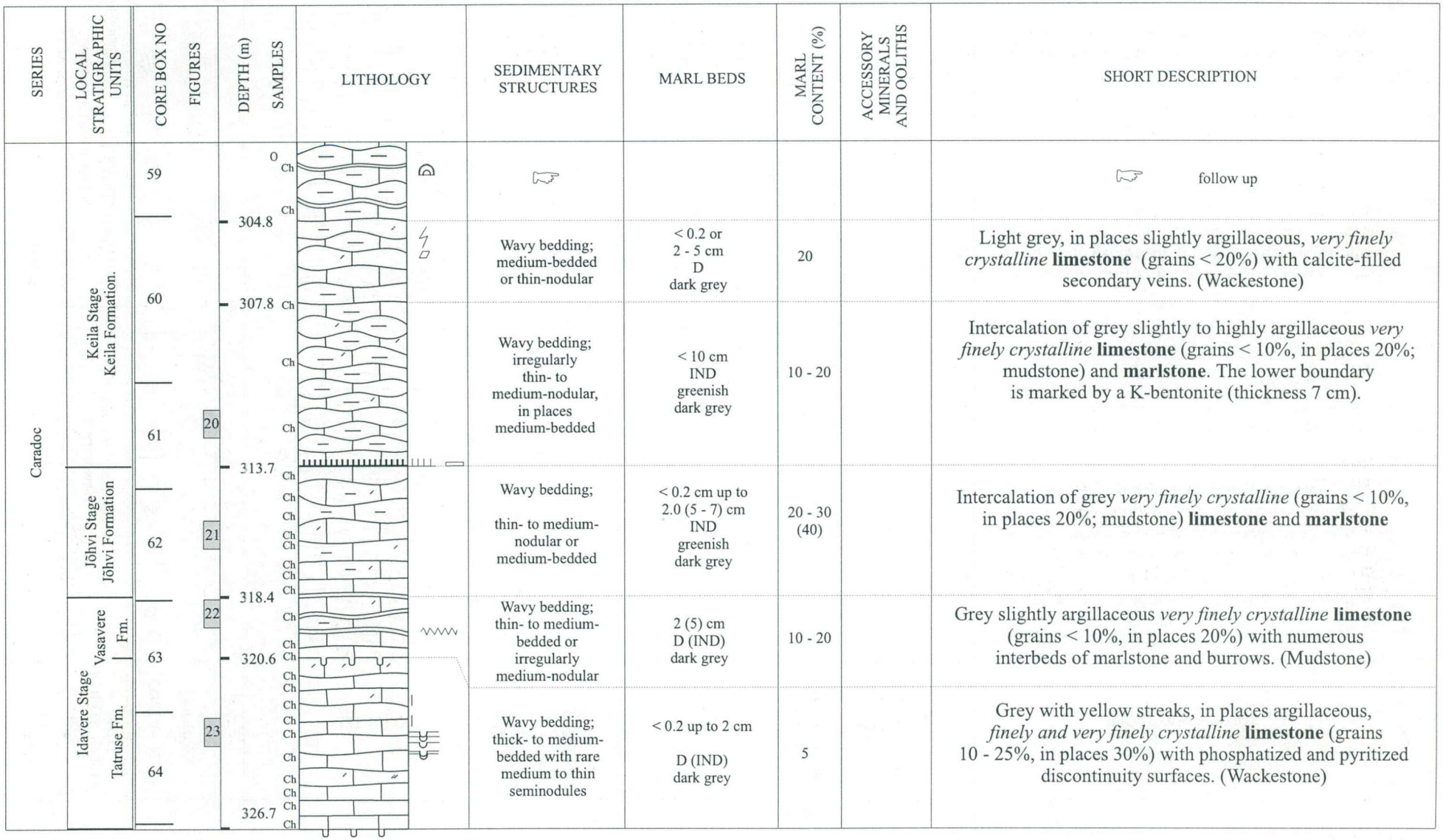
SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Llandovery	Raikküla Stage Saarde Formation	29	177.5	π π	Wavy bedding; thin- (medium-) nodular, rugged, medium- to thin-bedded	0.3 - 1.0 cm D bright green	< 10		Light grey *crypto- to microcrystalline* (locally *very finely crystalline*) **limestone** with partly dolomitized darker interbeds. Grains in limestone < 10%, rarely up to 30%. (Mudstone)
	Juuru Stage Öhne Formation	30 31 32 33 34	182.0	ω ϟ	Wavy bedding; thin- to medium-nodular	0.3 - 2 cm (3 cm) D greenish grey	40 - 60		Greenish grey **marlstone** with **limestone** nodules. In nodules: grey or greenish grey slightly argillaceous *finely crystalline* **limestone** (grains < 10%, rarely in places 25 - 50%). In some intervals (up to 30% of formation) the content of thin- to medium-nodular limestones exceeds 60%. (Mudstone)

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Llandovery	Juuru Stage Õhne Formation	35 36 37 38 39			☞				☞ follow up
	Juuru St. Õhne Fm. Rozeni Member	40 10	218.8 T,I I		Wavy bedding; thin- to medium-bedded or medium- to thin-nodular	0.3 - 3.0 cm IND greenish grey, in places reddish	< 10 > 50 60 - 70 < 60	Hematite	Intercalation of light grey (in places reddish) variously argillaceous *finely to very finely crystalline* **limestone** (grains 10 - 30%) and **marlstone**. (Wackestone)
	Juuru St. Õhne Fm. Rüja Member	41 11	223.0 T,I T,I 227.0 T,I,O		Wavy bedding; medium- to thin-nodular	0.3 - 2 cm D grey, in places brownish	< 10	Pyrite and quartz grains	Light grey, with yellow tinge, upper 0.5 m slightly argillaceous, *very finely crystalline and microcrystalline* **limestone** with grains (10 - 20%) only in upper part . (Mudstone)


SERIES
LOCAL STRATIGRAPHIC UNITS
CORE BOX NO
FIGURES
DEPTH (m)
SAMPLES
LITHOLOGY
SEDIMENTARY STRUCTURES
MARL BEDS
MARL CONTENT (%)
ACCESSORY MINERALS AND OOLITHS
SHORT DESCRIPTION
Llandovery
Juuru St.
Õhne Fm
Puikule M.
Ashgill
Porkuni St.
Salduse Fm.
Pirgu Stage
Halliku Formation
42
43
44
45
46
47
12
13
14
227.0
230.4
232.5
Horizontal bedding; massive with some thin nodules
> 50 cm
IND
greenish grey
> 70
Pyrite and quartz grains
Greenish grey, in the middle part dolomitic calcitic marlstone with fine horizontally oriented pyritic mottles, contains rare nodules of yellowish grey micro- to very finely crystalline limestone (grains < 10%, in the lower part 10 - 20%)
Horizontal bedding; massive (microbedded)
< 0.3 to > 50 cm
IND greenish or brownish grey
> 50
Quartz, glauconite, pyrite
Yellowish grey micro- and very finely crystalline argillaceous limestone (grains in the upper part up to 50%, usually 30%; quartz grains up to 30%) with interbeds of calcitic marlstone. (Packstone or rudstone)
Wavy bedding;
thin- to medium-nodular
< 0.3 and
0.3 - 2.0 cm
IND
grey with greenish tinge with pyritic spots and violet mottles
10
Pyrite grains
Grey medium- to slightly argillaceous micro- and very finely crystalline limestone with pyritic spots and, in places, with violet mottles. (Mudstone)
(D)
< 50
10

SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Ashgill	Pirgu Stage Halliku Formation	48 49 50			☞	IND	10 10 - 40		☞ follow up ⇦ Interval 260.9 - 261.2 m is bioturbated (grains up to 20%)
	Pirgu Stage Jonstorp Formation	51 52 53 15	264.8		Wavy bedding; irregularly thin-nodular or thin-bedded	< 2 cm IND or D grey or reddish violet with yellow streaks	< 30		Reddish violet, with yellow streaks or greenish yellow spots, slightly to highly argillaceous *very finely crystalline* **limestone** (grains 10 - 25%, rarely > 25%). (Wackestone)


SERIES
LOCAL STRATIGRAPHIC UNITS
CORE BOX NO
FIGURES
DEPTH (m)
SAMPLES
LITHOLOGY
SEDIMENTARY STRUCTURES
MARL BEDS
MARL CONTENT (%)
ACCESSORY MINERALS AND OOLITHS
SHORT DESCRIPTION
Ashgill
Caradoc
Pirgu Stage Jonstorp Fm.
Vormsi St. Fjäcka Fm.
Nabala St. Saunja Fm. Mõntu Fm.
Rakvere St. Rägavere Fm.
Oandu Stage Lukstai Formation
Keila Stage Keila Formation
54
55
56
57
58
59
16
17
18
19
280.0
282.6
283.2
286.5
288.4
296.6
core is missing
follow up
Wavy bedding; massive, in places rugged- or medium-bedded
< 0.5 to > 50 cm IND or D greenish
> 50
Greenish **argillaceous and calcitic marlstone** with interbeds of greenish grey (with yellow streaks) *very finely crystalline* limestone. Limestone contains pyritized skeletal debris (grains < 10%, in the lower part up to 40%). (Mudstone)
Wavy bedding; medium-seminodular
< 0.5 cm D grey
< 5
Beigish light grey *crypto- and microcrystalline* **limestone** with calcite-filled primary and secondary veins. (Mudstone)
Wavy bedding; medium-bedded
< 0.5 to 3.0 cm IND or D; greenish
< 5
Glauconite
Grey slightly argillaceous *finely to very finely crystalline* **limestone** with limonitized or pyritized discontinuity surfaces. (Wackestone)
Wavy bedding; thin- to thick-bedded or irregularly thin- to medium-nodular
< 0.5 to 2.0 cm IND greenish or grey
< 5
Yellowish grey or grey *finely or very finely crystalline* **limestone.** Upper 0.4 m bioturbated. (Mudstone)
Wavy bedding; medium- to thick-bedded (with lenses and nodules)
10 - 20 cm IND greenish dark grey
30 - 60
Pyrite
Intercalation of **argillaceous and calcitic marlstone** with interbeds of light grey *finely to very finely crystalline* **argillaceous limestone**. (Wackestone and mudstone)
Wavy bedding; medium-nodular (medium-bedded)
1.0 - 5.0; (7.0) cm IND dark grey
< 30
Intercalation of **marlstone** and grey *very finely crystalline* **argillaceous limestone**. (Wackestone and mudstone)



SERIES	LOCAL STRATIGRAPHIC UNITS	CORE BOX NO / FIGURES	DEPTH (m) / SAMPLES	LITHOLOGY	SEDIMENTARY STRUCTURES	MARL BEDS	MARL CONTENT (%)	ACCESSORY MINERALS AND OOLITHS	SHORT DESCRIPTION
Caradoc	Keila Stage Keila Formation.	59	0 Ch Ch	D	☞				☞ follow up
		60	304.8 307.8 Ch Ch		Wavy bedding; medium-bedded or thin-nodular	< 0.2 or 2 - 5 cm D dark grey	20		Light grey, in places slightly argillaceous, *very finely crystalline* **limestone** (grains < 20%) with calcite-filled secondary veins. (Wackestone)
		61	20 Ch 313.7		Wavy bedding; irregularly thin- to medium-nodular, in places medium-bedded	< 10 cm IND greenish dark grey	10 - 20		Intercalation of grey slightly to highly argillaceous *very finely crystalline* **limestone** (grains < 10%, in places 20%; mudstone) and **marlstone**. The lower boundary is marked by a K-bentonite (thickness 7 cm).
	Jõhvi Stage Jõhvi Formation	62	21 Ch Ch Ch Ch Ch Ch Ch 318.4		Wavy bedding; thin- to medium-nodular or medium-bedded	< 0.2 cm up to 2.0 (5 - 7) cm IND greenish dark grey	20 - 30 (40)		Intercalation of grey *very finely crystalline* (grains < 10%, in places 20%; mudstone) **limestone** and **marlstone**
	Idavere Stage Vasavere Fm.	63	22 Ch Ch 320.6		Wavy bedding; thin- to medium-bedded or irregularly medium-nodular	2 (5) cm D (IND) dark grey	10 - 20		Grey slightly argillaceous *very finely crystalline* **limestone** (grains < 10%, in places 20%) with numerous interbeds of marlstone and burrows. (Mudstone)
	Tatruse Fm.	64	23 Ch Ch Ch Ch Ch Ch Ch Ch 326.7 Ch		Wavy bedding; thick- to medium-bedded with rare medium to thin seminodules	< 0.2 up to 2 cm D (IND) dark grey	5		Grey with yellow streaks, in places argillaceous, *finely and very finely crystalline* **limestone** (grains 10 - 25%, in places 30%) with phosphatized and pyritized discontinuity surfaces. (Wackestone)