

Borehole with geotechnical test (CPT, TE1) curves Gr. 5

Contractor:

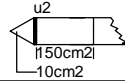
Facility: Exploratory engineering geological and geotechnical investigations on land on plots with cadastral No. Nr. 552/0001:557 and 5552/0001:37, Kairiai village, Klapeida district municipality
Drilling machines VTX 800, auger drilling, diameter 90 mm
Geotechnical test: CPT (TE1), LST EN ISO 22476-1

Date of survey: 2024.07.30
Coordinate x, m: 6169655
Coordinate y, m: 323659
Abs. a., m: 6.5
Mvertical 1:100



UAB Geoconsulting
tel.: 8-612-84305,
e-mail: info@geoconsulting.lt
www.geoconsulting.lt

Test equipment: Geomil, probe No. S10CFIIP.241192
Prepared by: geological engineer A. Bičkauskienė

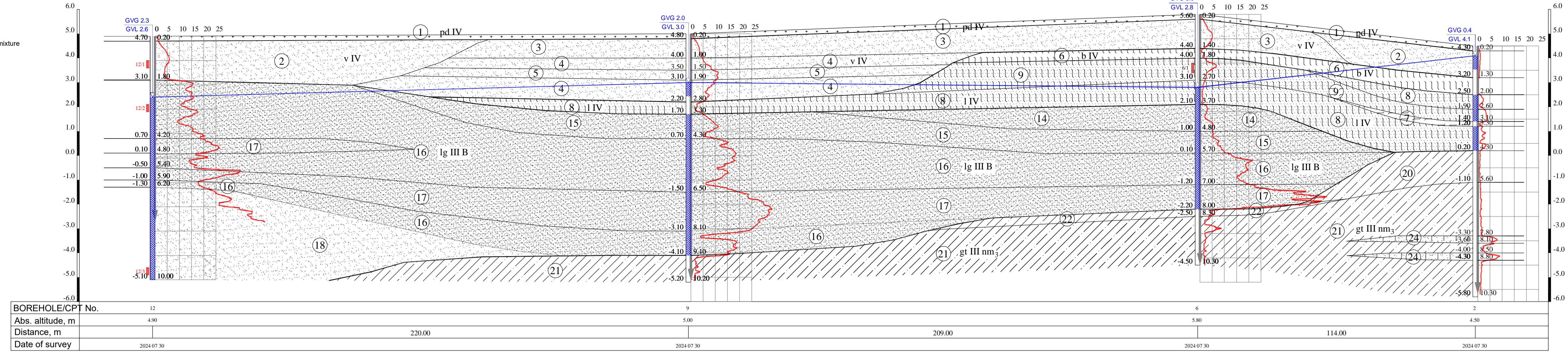


Groundwater depth, m	Depth, m	IGS sole depth, m	IGS thickness, m	IGS sole abs. a., m	Lithology	IGS geological description (in acc. with LST EN ISO 14688)	IGS No.	Soil sample	Stratigraphic -genetic index	Avg. qc, MPa	Avg. fs, kPa	Depth, m																	
												Cone strength qc, MPa			Side friction strength fs, MPa			Ratio fs/qc, %											
												0	8	16	24	32	40	0	0.05	0.1	0.15	0.2	0.25	0	2	4	6	8	10
	0.2	0.2	0.2	6.3		Soil (Hu)	1		pd IV	1.0	7																		
	0.9	0.7	0.7	5.6		Well-sorted sand (SaP), brown, light brown, with soil inclusion at a depth of 0.5 – 0.7 m, moist, loose,	3			2.7	13																		
						Well-sorted sand (SaP), brown, light brown, moist, medium density	4		v IV	5.8	38																		
	3.0			3.5		Well-sorted sand (SaP), brown, light brown, moist – water-bearing, dense	5			13.3	65																		
	3.8	0.8		2.7		Well-sorted sand (SaP), brown, light brown, moist, medium density	4			6.8	54																		
	4.1	0.3		2.4		Well-sorted sand with a small admixture of organic matter (oSAP), light grey, grey, with peat layers, watered, very loose	8		I IV	2.3	21																		
	4.8			1.7		Well-sorted, low-dust – clayey sand (SaFP), grey, with gravel admixture, watered, medium density	15			8.7	38																		
	6.0			0.5		Well-sorted, low-dust – clayey sand (SaFP), grey, with gravel admixture, watered, very dense	17		Ig III B	23.5	73																		
	8.5			-2.0		Well-sorted, low-dust – clayey sand (SaFP), grey, with gravel admixture, watered, dense	16			17.3	87																		
	9.2	0.7		-2.7		Sandy low-plasticity moraine clay (saCIL), grey, with gravel and cobble up to 5% strong	22		gt III nm ₃	2.9	120																		
	10.2	1.0		-3.7																									

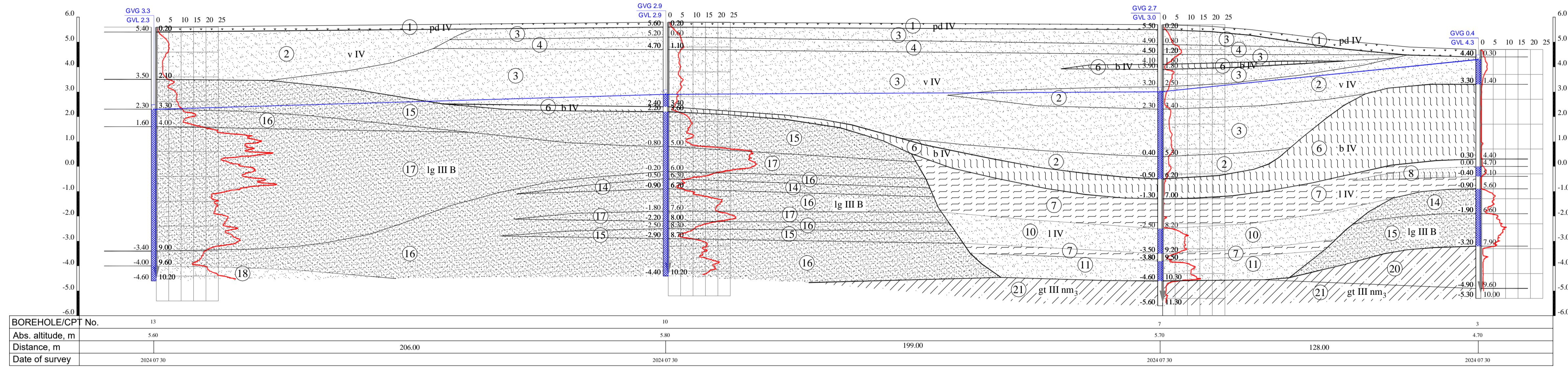
I. IGS number and description (acc. to LST EN ISO 14688-1)

- 1 Soil (Hu), peaty in places, sandy
- 2 Well-sorted sand (SaP), grey, brown gray, dark grey, light grey, brown, light brown, dark brown, with admixture of organic matter, locally with soil inclusions, moist – water-bearing, very loose
- 3 Well-sorted sand (SaP), brown, light brown, brown gray, light grey, yellowish, locally with soil/organic admixture, moist, loose
- 4 Well-sorted sand (SaP), light brown, brown, yellowish, locally with organic admixture, moist – water-bearing, medium density
- 5 Well-sorted sand (SaP), brown, light brown, yellowish, moist – water-bearing, dense
- 6 Organic soil (O): peat (Pt), dark brown, black, locally with sand lenses, sandy, water-saturated, poorly – well decomposed
- 7 Organic soil (O): Ooze (Dy), greenish-grey, locally sandy, with peat inclusions, water-saturated
- 8 Well-sorted sand with a small admixture of organic matter (oSAP), grey, brown gray, light brown, brown, dark brown, dark grey, moist – water-bearing, very loose
- 9 Well-sorted sand with a small admixture of organic matter (oSAP), grey, dark brown, moist – water-bearing, loose
- 10 Well-sorted sand (SaP), grey, watered, medium density
- 11 Well-sorted sand (SaP), grey, watered, dense
- 12 Lowly dusty – clayey sand of varying sorting (SaFG), grey, with organic admixture watered, loose
- 13 Well-sorted, low-dust – clayey sand (SaFP), grey, with gravel admixture in places, watered, very loose
- 14 Well-sorted, low-dust – clayey sand (SaFP), grey, light grey, brown, dark brown, light brown, brown gray, with gravel admixture in places, watered, medium density
- 15 Well-sorted, low-dust – clayey sand (SaFP), grey, light grey, brown, brown gray, light brown, with gravel admixture in places, locally with sandy low-plasticity moraine clay inclusions, watered, dense
- 16 Well-sorted, low-dust – clayey sand (SaFP), light grey, grey, brown, dark brown, brown gray, light brown, with gravel admixture, locally with sandy low-plasticity moraine clay inclusions, watered, very dense
- 17 Well-sorted sand (SaP), light grey, watered, very dense
- 18 Sandy low-plasticity moraine clay (saCL), brown, brown gray, grey, with gravel and cobble up to 5% very weak
- 19 Sandy low-plasticity moraine clay (saCL), grey, brown, with gravel and cobble up to 5% weak
- 20 Sandy low-plasticity moraine clay (saCL), grey, brown gray, with gravel and cobble up to 5% medium strength
- 21 Sandy low-plasticity moraine clay (saCL), grey, brown gray, with gravel and cobble up to 5% strong
- 22 Dusty sand (siSa), grey, watered, medium density
- 23 Dusty sand (siSa), grey, watered, medium density
- 24 Dusty sand (siSa), grey, watered, dense
- 25 Dusty sand (siSa), grey, watered, very dense
- 26 Sandy low-plasticity silt (saSiL), gray-brown, strong
- 27 Sandy low-plasticity silt (saSiL), gray-brown, very strong
- 28 Low-plasticity clay and silt (CL-SiL), gray-brown, brown gray, with sandy low-plasticity silt inclusions, very strong

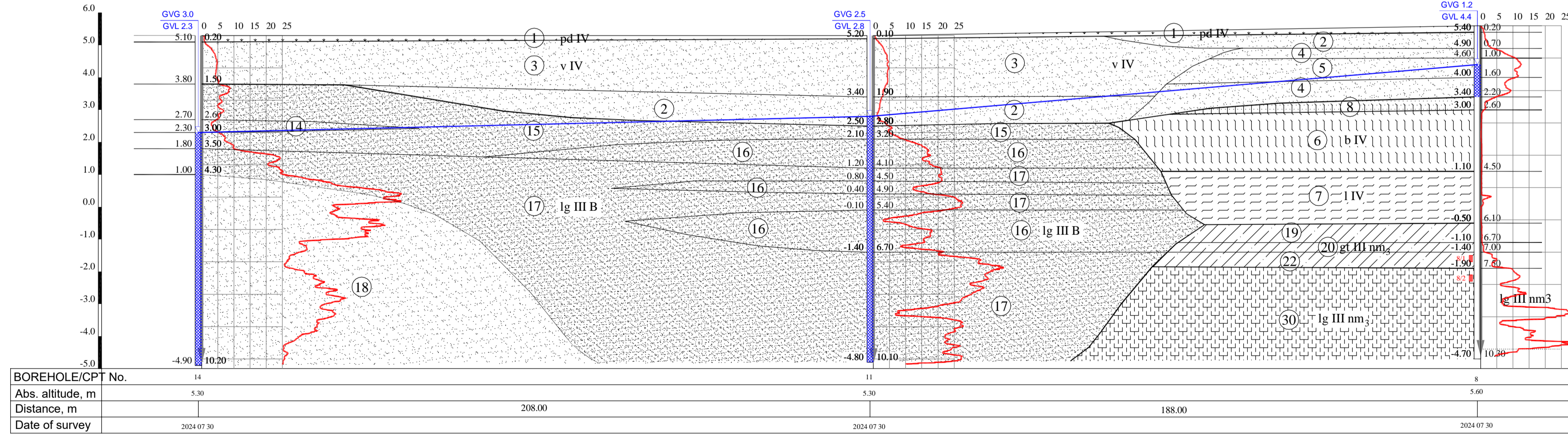
Engineering geological section I-I'



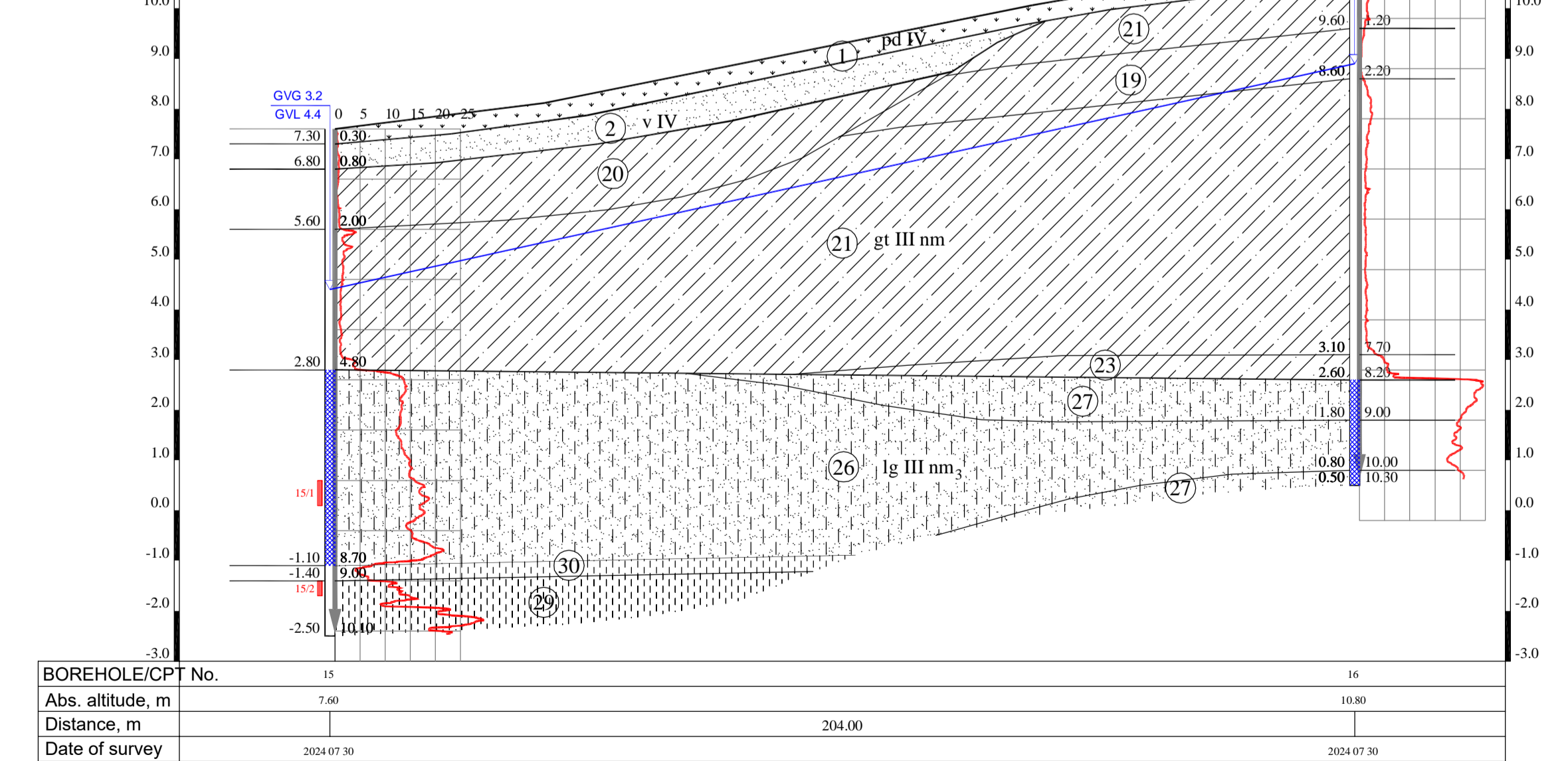
Engineering geological section II-II'



Engineering geological section III-III'



Engineering geological section IV-IV'



II. Stratigraphic-genetic indexing

- pd IV Topsoil
- v IV Holocene aeolian deposits
- b IV Holocene biogenic deposits
- l IV Holocene lacustrine sediments
- lg III B Upper Pleistocene Baltic glacial lake sediments
- gt III nm Upper Pleistocene Upper Nemunas silt marginal glacial deposits
- lg III nm Upper Pleistocene Upper Nemunas Silt marginal glacial sediments

III. Range

- stratigraphic
- lithological
- IGS base (ridge)
- groundwater level

IV. Other markings

- groundwater depth, m GVG 3.37
- groundwater level, m abs. a. GVL 1.5
- IGS boundary altitude, m abs. a. GVL 3.7
- IGS boundary depth, m GVL 1.5
- soil sample, its No. 14
- water-bearing layer
- CPT test curve q
- CPT test depth, m
- Borehole section abs. a. m 17.18
- Borehole depth, m 7.15

Title	First name, surname	Signature	Date
Director	T. Skara		
Engineering geologist	A. Bičkauskienė		
Exploratory engineering geological and geotechnical investigations of land plots, with cadastral No. Nr. 5552/0001:557 and 5552/0001:37, Kaitiai village, Klaipėda district municipality			
Drawing: Engineering geological section I-I' – IV-IV' Legend			
Permit No.:	Scale	Date	graphical Annex No.
1404841	V1:100, H1:1000	2024 09	4.1

I. IGS number and description (acc. to LST EN ISO 14688-1)

- 1 Soil (Hu), peaty in places, sandy
- 2 Well-sorted sand (SaP), grey, brown gray, dark grey, light grey, brown, light brown, dark brown, with admixture of organic matter, locally with soil inclusions, moist – water-bearing, very loose
- 3 Well-sorted sand (SaP), brown, light brown, brown, brown gray, light grey, yellowish, locally with soil/organic admixture, moist, loose
- 4 Well-sorted sand (SaP), light brown, brown, yellowish, locally with organic admixture, moist – water-bearing, medium density
- 5 Well-sorted sand (SaP), brown, light brown, yellowish, moist – water-bearing, dense
- 6 Organic soil (O): peat (Pt), dark brown, black, locally with sand lenses, sandy, water-saturated, poorly – well decomposed
- 7 Organic soil (O): Ooze (Dy), greenish-grey, locally sandy, with peat inclusions, water-saturated
- 8 Well-sorted sand with a small admixture of organic matter (oSAP), grey, brown gray, light brown, brown, dark brown, dark grey, moist – water-bearing, very loose
- 9 Well-sorted sand with a small admixture of organic matter (oSAP), grey, dark brown, moist – water-bearing, loose
- 10 Well-sorted sand (SaP), grey, watered, medium density
- 11 Well-sorted sand (SaP), grey, watered, dense
- 12 Lowly dusty – clayey sand of varying sorting (SaFG), grey, with organic admixture watered, loose
- 13 Well-sorted, low-dust – clayey sand (SaFP), grey, with gravel admixture in places, watered, very loose
- 14 Well-sorted, low-dust – clayey sand (SaFP), grey, light grey, brown, light brown, brown gray, with gravel admixture, moist – water-bearing, loose
- 15 Well-sorted, low-dust – clayey sand (SaFP), grey, light grey, brown, dark brown, light brown, brown gray, with gravel admixture in places, watered, medium density
- 16 Well-sorted, low-dust – clayey sand (SaFP), grey, light grey, brown, brown gray, light brown, with gravel admixture in places, locally with sandy low-plasticity moraine clay inclusions, watered, dense
- 17 Well-sorted, low-dust – clayey sand (SaFP), light grey, grey, brown, dark brown, brown gray, light brown, with gravel admixture, locally with sandy low-plasticity moraine clay inclusions, watered, very dense
- 18 Well-sorted sand (SaP), light grey, watered, very dense
- 19 Sandy low-plasticity moraine clay (saCIL), brown, brown gray, grey, with gravel and cobble up to 5% very weak
- 20 Sandy low-plasticity moraine clay (saCIL), grey, brown, with gravel and cobble up to 5% weak
- 21 Sandy low-plasticity moraine clay (saCIL), grey, brown gray, brown, with gravel and cobble up to 5% medium strength
- 22 Sandy low-plasticity moraine clay (saCIL), grey, brown gray, with gravel and cobble up to 5% strong
- 23 Sandy low-plasticity moraine clay (saCIL), grey, with gravel and cobble up to 5% very strong
- 24 Dusty sand (siSa), grey, watered, medium density
- 25 Dusty sand (siSa), grey, watered, medium density
- 26 Dusty sand (siSa), grey, watered, dense
- 27 Dusty sand (siSa), grey, watered, very dense
- 28 Sandy low-plasticity silt (saSIL), gray-brown, strong
- 29 Sandy low-plasticity silt (saSIL), gray-brown, very strong
- 30 Low-plasticity clay and silt (CIL-SIL), gray-brown, brown gray, with sandy low-plasticity silt inclusions, very strong

II. Stratigraphic-genetic indexing

- pd IV Topsoil
- v IV Holocene aeolian deposits
- b IV Holocene biogenic deposits
- IV Holocene lacustrine sediments
- lg III B Upper Pleistocene Baltic glacial lake sediments
- gt III nm Upper Pleistocene Upper Nemunas suite marginal glacial deposits
- lg III nm Upper Pleistocene Upper Nemunas Suite marginal glacial sediments

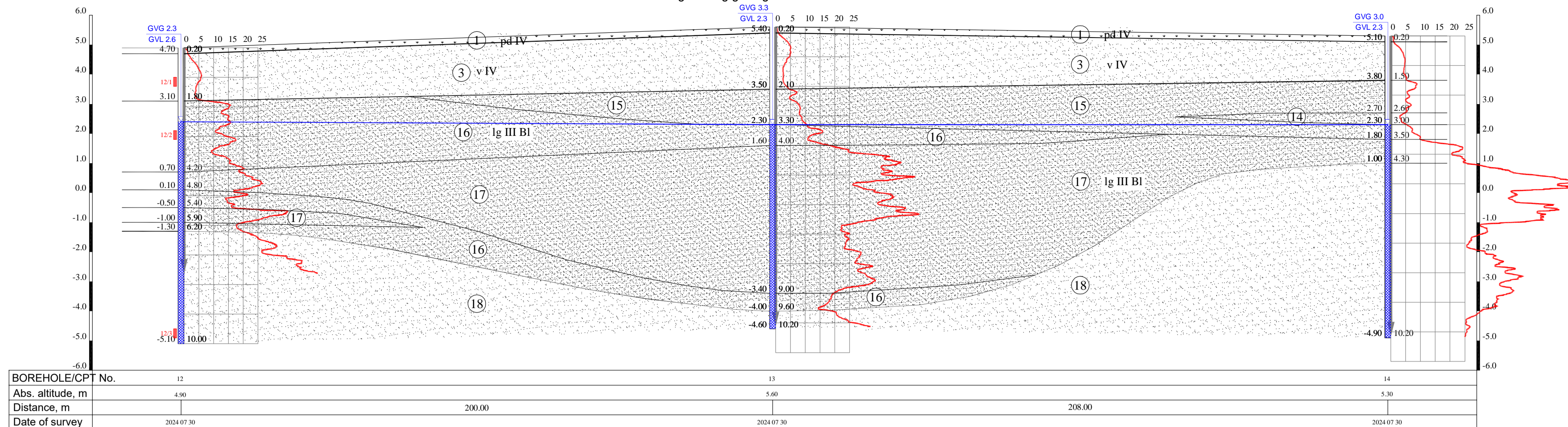
III. Range

- stratigraphic
- lithological
- IGS base (ridge)
- groundwater level

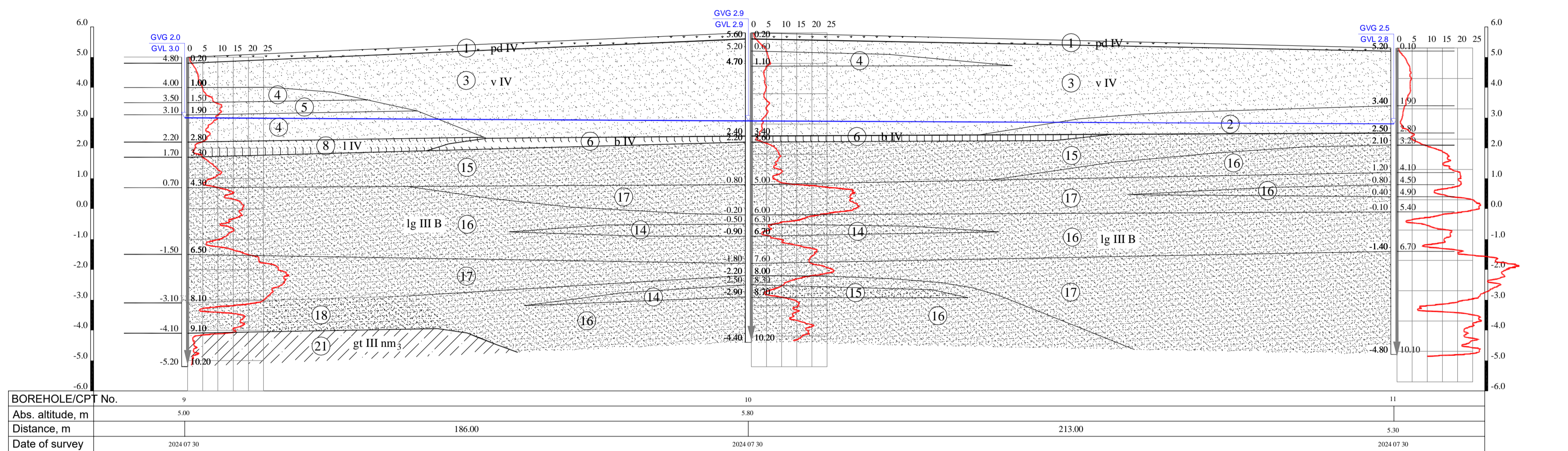
IV. Other markings

- groundwater depth, m GVG 3.37
- IGS boundary altitude, m abs.a. GVL 1.5
- IGS boundary depth, m abs.a. 3.17
- IGS boundary depth, m abs.a. 3.17
- soil sample No. 1.4
- water-bearing layer
- CPT test curve q
- CPT test depth, m
- Boreshole section abs.a., m 1.16
- Boreshole depth, m 7.18

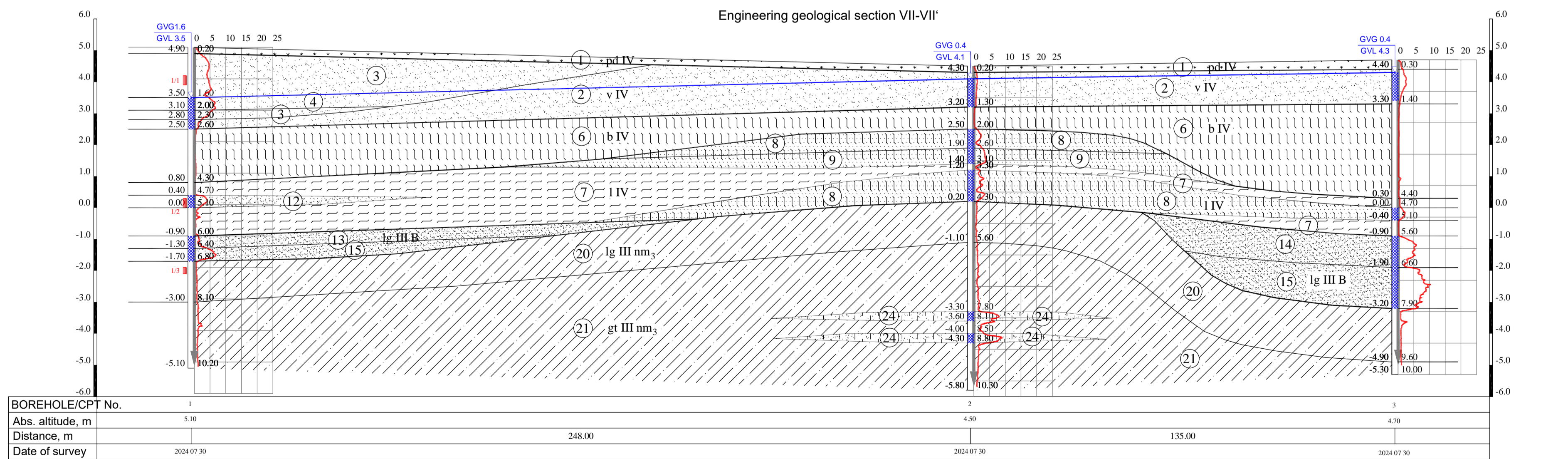
Engineering geological section V-V'



Engineering geological section VI-VI'

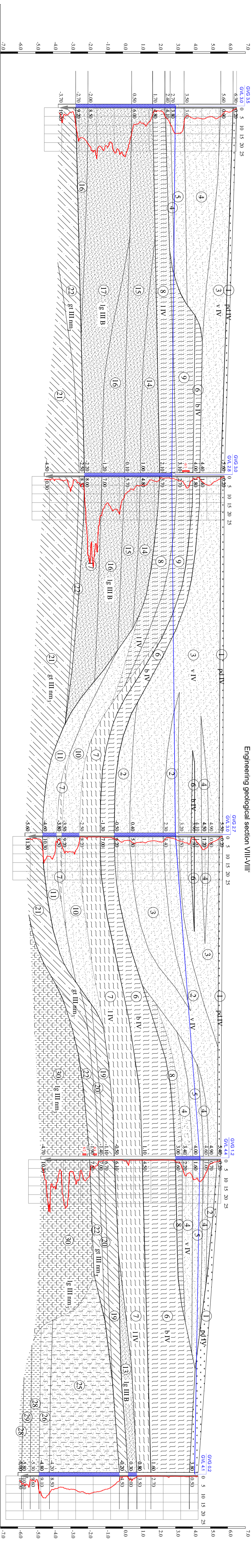


Engineering geological section VII-VII'



Title	First name, surname	Signature	Ministry of National Defence of the Republic of Lithuania		
Director	T. Skara	[Signature]			
Engineering geologist	A. Bičkauskienė	[Signature]	Exploratory engineering geological and geotechnical investigations of land plots, with cadastral No. Nr. 5552/0001:557 and 5552/0001:37, Kairiai village, Klaipeida district municipality		
Project	Engineering geological section V-V' – VII-VII'. Legend		Permit No.:	Scale	Date
Contractor	UAB Geoconsulting [Logo]		140NR41	V1:100 H1:1000	2024 09
					graphical Annex No. 4.2

Engineering geological section VIII-VIII'



BOREHOLE/CPT No.	Abs. altitude, m	Distance, m	Date of survey
5	6.50	211.00	2024.07.30
6	5.80	206.00	2024.07.30
7	5.70	185.00	2024.07.30
8	5.60	181.00	2024.07.30

1. IGS number and description (acc. to LST EN ISO 14888-1)

- | | |
|---|---|
| <p>1. Soil (Hu), peaty in places, sandy</p> <p>2. Well-sorted sand (SsP), grey, brown grey, dark grey, light grey, brown, light brown, dark brown, with admixture of organic matter, locally with soil inclusions, moist – water-bearing, very loose</p> <p>3. Well-sorted sand (SsP), brown, light brown, brown, brown gray, light grey, yellowish, locally with soil inclusions, moist, loose</p> <p>4. Well-sorted sand (SsP), light brown, brown, yellowish, locally with organic admixture, moist – water-bearing, medium density</p> <p>5. Well-sorted sand (SsP), brown, light brown, yellowish, moist – water-bearing, dense</p> <p>6. Organic soil (O), hard (F), dark brown, black, locally with sand lenses, sandy, water-saturated, poorly – well decomposed</p> <p>7. Organic soil (O), Ooze (D), greenish-grey, locally sandy, with peat inclusions, water-saturated</p> <p>8. Well-sorted sand with a small admixture of organic matter (oSsP), grey, brown grey, light brown, brown, dark brown, dark grey, moist – water-bearing, very loose</p> <p>9. Well-sorted sand with a small admixture of organic matter (oSsP), grey, dark brown, moist – water-bearing, loose</p> <p>10. Well-sorted sand (SsP), grey, watered, medium density</p> <p>11. Well-sorted sand (SsP), grey, watered, dense</p> <p>12. Lowly dusty – clayey sand of varying sorting (SsF-G), grey, with organic admixture watered, loose</p> <p>13. Well-sorted, low-dust – clayey sand (SsFP), grey, with gravel admixture in places, watered, very loose</p> <p>14. Well-sorted, low-dust – clayey sand (SsFP), grey, light grey, brown, light brown, brown grey, with gravel admixture, moist – water-bearing, loose</p> <p>15. Well-sorted, low-dust – clayey sand (SsFP), grey, light grey, brown, dark brown, light brown, brown grey, with gravel admixture in places, watered, medium density</p> | <p>16. Well-sorted, low-dust – clayey sand (SsFP), grey, light grey, brown, brown gray, light brown, with gravel admixture, watered, very loose</p> <p>17. Well-sorted, low-dust – clayey sand (SsFP), light grey, grey, brown, dark brown, brown grey, light brown, with gravel admixture, locally with sandy low-plasticity moraine clay inclusions, watered, very dense</p> <p>18. Well-sorted sand (SsP), light grey, watered, very dense</p> <p>19. Sandy low-plasticity moraine clay (saCL), brown, brown grey, grey, with gravel and cobble up to 5%, very weak</p> <p>20. Sandy low-plasticity moraine clay (saCL), grey, brown, with gravel and cobble up to 5%, weak</p> <p>21. Sandy low-plasticity moraine clay (saCL), grey, brown grey, brown, with gravel and cobble up to 5%, medium strength</p> <p>22. Sandy low-plasticity moraine clay (saCL), grey, brown grey, with gravel and cobble up to 5%, strong</p> <p>23. Sandy low-plasticity moraine clay (saCL), grey, with gravel and cobble up to 5%, very strong</p> <p>24. Dusty sand (sSs), grey, watered, medium density</p> <p>25. Dusty sand (sSs), grey, watered, medium density</p> <p>26. Dusty sand (sSs), grey, watered, dense</p> <p>27. Dusty sand (sSs), grey, watered, very dense</p> <p>28. Sandy low-plasticity silt (saSL), grey-brown, strong</p> <p>29. Sandy low-plasticity silt (saSL), grey-brown, very strong</p> <p>30. Low-plasticity clay and silt (CL, SL), grey-brown, brown grey, with sandy low-plasticity silt inclusions, very strong</p> |
|---|---|

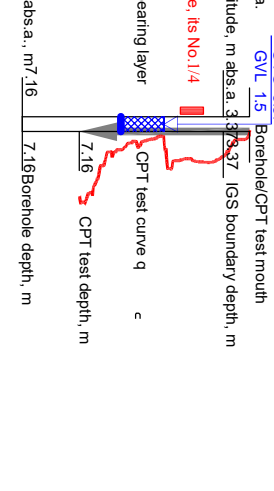
II. Stratigraphic-genetic indexing

- | | |
|--------|---|
| p.t.IV | Topsoil |
| v.IV | Holocene aeolian deposits |
| b.IV | Holocene biogenic deposits |
| I.IV | Holocene lacustrine sediments |
| g.IIIB | Upper Pleistocene Baltic glacial lake sediments |
| g.IIIV | Lower Pleistocene Upper Kermuaus Silt |
| g.IIIV | Lower Pleistocene Upper Kermuaus Silt |
| g.IIIV | Lower Pleistocene Upper Kermuaus Silt |

III. Range

- | | |
|--|---------------------|
| | - stratigraphic |
| | - lithological |
| | - IGS base (pige) |
| | - groundwater level |

IV. Other markings



Title	First name, surname	Signature	Scale
Director	T. Skara		1:100, H1:1000
Engineering geologist's name	Signature	Scale	Date
Engineering geologist's name: Birkaitis		1:100, H1:1000	2024.09
Permit No.:	Scale	Date	graphical Annex No.
1404841	1:100, H1:1000	2024.09	4.3

Ministry of National Defence of the Republic of Lithuania

Exploratory engineering geological and geotechnical investigations of land plots, with cadastral No. N. 5552/0001:557 and 5552/0001:37, Karina village, Kaipeda district municipality

UAB Geoconsulting
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