

Ref.

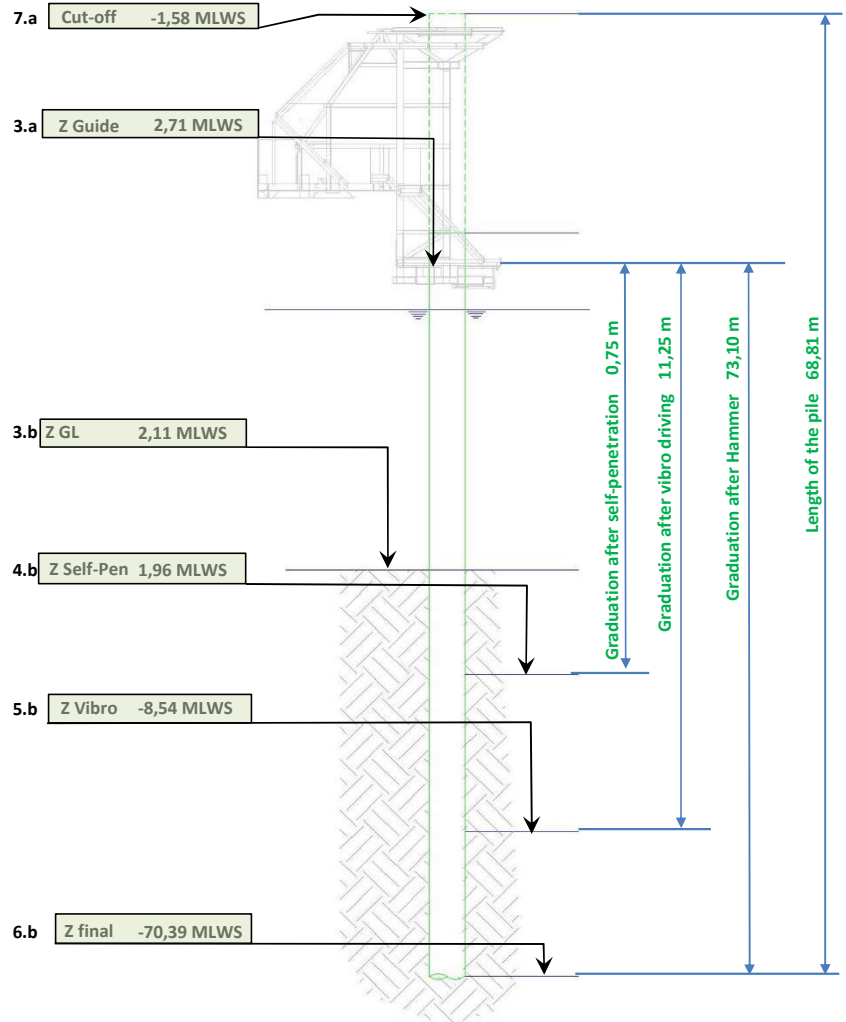
208910  
Job codeCOTE  
Origin200  
Unit/Subunit codeQUA  
DisciplineITP  
Type of document510008A1  
Sequent. Number

GUIDE N° : ONSHORE

Pile Position : B-1;P-1

Starting Date : 2/11/2023


Pile Data				
1	a.	Pile Number	B-1;P-1	GO
	b.	Length of the pile	68,81 m	
	c.	Thickness of the pile	20 mm - 11,9 mm	
	d.	Lengths per thickness	55 m - 19 m	
	e.	Diameter of the pile	1524 mm	
Driving Equipment				
2	a.	Vibro Hammer Type	ICE-815	
	b.	Eccentric Moment	46 kgm	
	c.	Centrifugal Force	1250 kN	
	d.	Frequency	1570 rpm	
	e.	Amplitude	23,3 mm	
	f.	Hydraulic Hammer	IHC S-280	
	g.	Max energy/blow	280 kJ	
3	a.	Guiding frame level	2,71 MLWS	
		Graduation before self-penetration	0,60 m	
		Existing Ground Level	2,11 MLWS	
	Reference Level			
4	a.	Installation date	2/11/2023	
	b.	Graduation after self-penetration	0,75 m	
		Z toe after self-penetration	1,96 MLWS	
Self Penetration				
5	a.	Vibration Starting Date	2/11/2023	
	b.	Graduation after vibro driving	11,25 m	
		Z toe after vibro driving	-8,54 MLWS	
	c.	Long. Verticality after vibro	0,33 mm/m	
	d.	Trans. Verticality after vibro	3,33 mm/m	
Vibro driving				
6	a.	Hammer starting date	2/11/2023	
	b.	Graduation after Hammer	73,10 m	
		Z toe after installation	-70,39 MLWS	
	c.	Long. Verticality @ hammer	0,830 mm/m	
	d.	Trans. Verticality @ hammer	1,170 mm/m	
	e.	Average penetration / blow	8,22 mm/bl	
Hammer Driving				
7	a.	Cut-off Date	30/10/2023	
	b.	Cut-off Elevation	-1,580 MLWS	
Pile Cut-Off				
8	Rep		Actual values	Theoretical Values
	a.	Xgrid	1.036.717,758	1.036.717,578
	b.	Ygrid	1.368.191,335	1.368.191,475
	c.	Ztop	2,654 MLWS	-1,580 MLWS



## Comments

- Pile not cut yet. Pile length is temporary

Superintendent	QA/QC	Engineer
Name: Camilo Muñoz	Name: Albert Mosquera	Name: Diego García
Date: 10/11/2023	Date: 10/11/2023	Date: 10/11/2023
Signature:	Signature:	Signature:

	PUERTO ANTIOQUIA PILE DRIVING REPORT						Date :	11/05/2023	
	Ref.	208910 Job code	COTE Origin	200 Unit/Subunit code	QUA Discipline	ITP Type of document	510008A1 Sequent. Number	Rev. :	B1
								Page :	2 of 4

<b>GUIDE N° :</b>	<b>ONSHORE</b>	<b>Pile Position :</b>	<b>B-1;P-1</b>	<b>Starting Hammer Date :</b>	<b>2/11/2023</b>
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N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)	Comments
1	-8,54 MLWS	11,25					
2	-8,79 MLWS	11,50	19	36	19	13	
3	-9,04 MLWS	11,75	12	36	31	21	
4	-9,29 MLWS	12,00	15	72	46	17	
5	-9,54 MLWS	12,25	15	72	61	17	
6	-9,79 MLWS	12,50	15	72	76	17	
7	-10,04 MLWS	12,75	14	72	90	18	
8	-10,29 MLWS	13,00	14	72	104	18	
9	-10,54 MLWS	13,25	14	72	118	18	
10	-10,79 MLWS	13,50	13	72	131	19	
11	-11,04 MLWS	13,75	14	72	145	18	
12	-11,29 MLWS	14,00	14	72	159	18	
13	-11,54 MLWS	14,25	14	72	173	18	
14	-11,79 MLWS	14,50	14	72	187	18	
15	-12,04 MLWS	14,75	14	72	201	18	
16	-12,29 MLWS	15,00	13	72	214	19	
17	-12,54 MLWS	15,25	11	72	225	23	
18	-12,79 MLWS	15,50	11	72	236	23	
19	-13,04 MLWS	15,75	9	72	245	28	
20	-13,29 MLWS	16,00	9	72	254	28	
21	-13,54 MLWS	16,25	9	72	263	28	
22	-13,79 MLWS	16,50	9	72	272	28	
23	-14,04 MLWS	16,75	8	72	280	31	
24	-14,29 MLWS	17,00	6	72	286	42	
25	-14,54 MLWS	17,25	15	72	301	17	
26	-14,79 MLWS	17,50	12	72	313	21	
27	-15,04 MLWS	17,75	12	72	325	21	
28	-15,29 MLWS	18,00	10	72	335	25	
29	-15,54 MLWS	18,25	9	72	344	28	
30	-15,79 MLWS	18,50	8	72	352	31	
31	-16,04 MLWS	18,75	8	72	360	31	
32	-16,29 MLWS	19,00	6	72	366	42	
33	-16,54 MLWS	19,25	7	72	373	36	
34	-16,79 MLWS	19,50	7	72	380	36	
35	-17,04 MLWS	19,75	6	72	386	42	
36	-17,29 MLWS	20,00	6	72	392	42	
37	-17,54 MLWS	20,25	6	72	398	42	
38	-17,79 MLWS	20,50	7	72	405	36	
39	-18,04 MLWS	20,75	6	72	411	42	
40	-18,29 MLWS	21,00	6	72	417	42	
41	-18,54 MLWS	21,25	6	72	423	42	
42	-18,79 MLWS	21,50	6	72	429	42	
43	-19,04 MLWS	21,75	6	72	435	42	
44	-19,29 MLWS	22,00	6	72	441	42	
45	-19,54 MLWS	22,25	7	72	448	36	
46	-19,79 MLWS	22,50	7	72	455	36	
47	-20,04 MLWS	22,75	7	72	462	36	
48	-20,29 MLWS	23,00	8	72	470	31	
49	-20,54 MLWS	23,25	7	72	477	36	
50	-20,79 MLWS	23,50	7	72	484	36	

N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)
51	-21,04 MLWS	23,75	8	72	492	31,3
52	-21,29 MLWS	24,00	9	72	501	27,8
53	-21,54 MLWS	24,25	9	72	510	27,8
54	-21,79 MLWS	24,50	9	72	519	27,8
55	-22,04 MLWS	24,75	9	72	528	27,8
56	-22,29 MLWS	25,00	9	72	537	27,8
57	-22,54 MLWS	25,25	7	72	544	35,7
58	-22,79 MLWS	25,50	8	72	552	31,3
59	-23,04 MLWS	25,75	8	72	560	31,3
60	-23,29 MLWS	26,00	8	72	568	31,3
61	-23,54 MLWS	26,25	8	72	576	31,3
62	-23,79 MLWS	26,50	8	72	584	31,3
63	-24,04 MLWS	26,75	8	72	592	31,3
64	-24,29 MLWS	27,00	8	72	600	31,3
65	-24,54 MLWS	27,25	8	72	608	31,3
66	-24,79 MLWS	27,50	10	72	618	25,0
67	-25,04 MLWS	27,75	9	72	627	27,8
68	-25,29 MLWS	28,00	9	72	636	27,8
69	-25,54 MLWS	28,25	9	72	645	27,8
70	-25,79 MLWS	28,50	9	72	654	27,8
71	-26,04 MLWS	28,75	10	72	664	25,0
72	-26,29 MLWS	29,00	9	72	673	27,8
73	-26,54 MLWS	29,25	10	72	683	25,0
74	-26,79 MLWS	29,50	9	72	692	27,8
75	-27,04 MLWS	29,75	10	72	702	25,0
76	-27,29 MLWS	30,00	10	72	712	25,0
77	-27,54 MLWS	30,25	10	72	722	25,0
78	-27,79 MLWS	30,50	10	72	732	25,0
79	-28,04 MLWS	30,75	12	72	744	20,8
80	-28,29 MLWS	31,00	11	72	755	22,7
81	-28,54 MLWS	31,25	11	72	766	22,7
82	-28,79 MLWS	31,50	12	72	778	20,8
83	-29,04 MLWS	31,75	12	72	790	20,8
84	-29,29 MLWS	32,00	12	72	802	20,8
85	-29,54 MLWS	32,25	12	72	814	20,8
86	-29,79 MLWS	32,50	13	72	827	19,2
87	-30,04 MLWS	32,75	13	72	840	19,2
88	-30,29 MLWS	33,00	13	72	853	19,2
89	-30,54 MLWS	33,25	13	72	866	19,2
90	-30,79 MLWS	33,50	13	72	879	19,2
91	-31,04 MLWS	33,75	13	72	892	19,2
92	-31,29 MLWS	34,00	13	72	905	19,2
93	-31,54 MLWS	34,25	15	72	920	16,7
94	-31,79 MLWS	34,50	15	72	935	16,7
95	-32,04 MLWS	34,75	15	72	950	16,7
96	-32,29 MLWS	35,00	14	72	964	17,9
97	-32,54 MLWS	35,25	15	72	979	16,7
98	-32,79 MLWS	35,50	15	72	994	16,7
99	-33,04 MLWS	35,75	15	72	1.009	16,7
100	-33,29 MLWS	36,00	15	72	1.024	16,7

GUIDE N° :

ONSHORE

Pile Position :


B-1;P-1

Starting Hammer Date :

2/11/2023

N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)
101	-33,54 MLWS	36,25	15	72	1.039	16,7
102	-33,79 MLWS	36,50	15	72	1.054	16,7
103	-34,04 MLWS	36,75	15	72	1.069	16,7
104	-34,29 MLWS	37,00	15	72	1.084	16,7
105	-34,54 MLWS	37,25	15	72	1.099	16,7
106	-34,79 MLWS	37,50	15	72	1.114	16,7
107	-35,04 MLWS	37,75	15	72	1.129	16,7
108	-35,29 MLWS	38,00	17	72	1.146	14,7
109	-35,54 MLWS	38,25	21	72	1.167	11,9
110	-35,79 MLWS	38,50	17	72	1.184	14,7
111	-36,04 MLWS	38,75	19	72	1.203	13,2
112	-36,29 MLWS	39,00	20	72	1.223	12,5
113	-36,54 MLWS	39,25	21	72	1.244	11,9
114	-36,79 MLWS	39,50	21	72	1.265	11,9
115	-37,04 MLWS	39,75	22	72	1.287	11,4
116	-37,29 MLWS	40,00	21	72	1.308	11,9
117	-37,54 MLWS	40,25	21	72	1.329	11,9
118	-37,79 MLWS	40,50	23	72	1.352	10,9
119	-38,04 MLWS	40,75	21	72	1.373	11,9
120	-38,29 MLWS	41,00	21	72	1.394	11,9
121	-38,54 MLWS	41,25	21	72	1.415	11,9
122	-38,79 MLWS	41,50	21	72	1.436	11,9
123	-39,04 MLWS	41,75	21	72	1.457	11,9
124	-39,29 MLWS	42,00	21	72	1.478	11,9
125	-39,54 MLWS	42,25	21	72	1.499	11,9
126	-39,79 MLWS	42,50	21	72	1.520	11,9
127	-40,04 MLWS	42,75	21	72	1.541	11,9
128	-40,29 MLWS	43,00	21	72	1.562	11,9
129	-40,54 MLWS	43,25	21	72	1.583	11,9
130	-40,79 MLWS	43,50	23	72	1.606	10,9
131	-41,04 MLWS	43,75	23	72	1.629	10,9
132	-41,29 MLWS	44,00	23	72	1.652	10,9
133	-41,54 MLWS	44,25	24	72	1.676	10,4
134	-41,79 MLWS	44,50	24	72	1.700	10,4
135	-42,04 MLWS	44,75	25	72	1.725	10,0
136	-42,29 MLWS	45,00	25	72	1.750	10,0
137	-42,54 MLWS	45,25	67	72	1.817	3,7
138	-42,79 MLWS	45,50	65	72	1.882	3,8
139	-43,04 MLWS	45,75	67	72	1.949	3,7
140	-43,29 MLWS	46,00	60	120	2.009	4,2
141	-43,54 MLWS	46,25	42	120	2.051	6,0
142	-43,79 MLWS	46,50	30	120	2.081	8,3
143	-44,04 MLWS	46,75	30	120	2.111	8,3
144	-44,29 MLWS	47,00	30	120	2.141	8,3
145	-44,54 MLWS	47,25	30	120	2.171	8,3
146	-44,79 MLWS	47,50	28	120	2.199	8,9
147	-45,04 MLWS	47,75	27	120	2.226	9,3
148	-45,29 MLWS	48,00	28	120	2.254	8,9
149	-45,54 MLWS	48,25	27	120	2.281	9,3
150	-45,79 MLWS	48,50	28	120	2.309	8,9

N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)
151	-46,04 MLWS	48,75	29	120	2.338	8,6
152	-46,29 MLWS	49,00	29	120	2.367	8,6
153	-46,54 MLWS	49,25	28	120	2.395	8,9
154	-46,79 MLWS	49,50	27	120	2.422	9,3
155	-47,04 MLWS	49,75	28	120	2.450	8,9
156	-47,29 MLWS	50,00	28	120	2.478	8,9
157	-47,54 MLWS	50,25	27	120	2.505	9,3
158	-47,79 MLWS	50,50	29	120	2.534	8,6
159	-48,04 MLWS	50,75	30	120	2.564	8,3
160	-48,29 MLWS	51,00	30	120	2.594	8,3
161	-48,54 MLWS	51,25	29	120	2.623	8,6
162	-48,79 MLWS	51,50	30	120	2.653	8,3
163	-49,04 MLWS	51,75	30	120	2.683	8,3
164	-49,29 MLWS	52,00	31	120	2.714	8,1
165	-49,54 MLWS	52,25	28	120	2.742	8,9
166	-49,79 MLWS	52,50	29	120	2.771	8,6
167	-50,04 MLWS	52,75	33	120	2.804	7,6
168	-50,29 MLWS	53,00	32	150	2.836	7,8
169	-50,54 MLWS	53,25	32	150	2.868	7,8
170	-50,79 MLWS	53,50	31	150	2.899	8,1
171	-51,04 MLWS	53,75	32	150	2.931	7,8
172	-51,29 MLWS	54,00	35	150	2.966	7,1
173	-51,54 MLWS	54,25	34	150	3.000	7,4
174	-51,79 MLWS	54,50	33	150	3.033	7,6
175	-52,04 MLWS	54,75	34	150	3.067	7,4
176	-52,29 MLWS	55,00	34	150	3.101	7,4
177	-52,54 MLWS	55,25	34	150	3.135	7,4
178	-52,79 MLWS	55,50	35	150	3.170	7,1
179	-53,04 MLWS	55,75	37	150	3.207	6,8
180	-53,29 MLWS	56,00	36	150	3.243	6,9
181	-53,54 MLWS	56,25	35	150	3.278	7,1
182	-53,79 MLWS	56,50	35	150	3.313	7,1
183	-54,04 MLWS	56,75	35	150	3.348	7,1
184	-54,29 MLWS	57,00	36	150	3.384	6,9
185	-54,54 MLWS	57,25	38	150	3.422	6,6
186	-54,79 MLWS	57,50	37	150	3.459	6,8
187	-55,04 MLWS	57,75	37	150	3.496	6,8
188	-55,29 MLWS	58,00	38	150	3.534	6,6
189	-55,54 MLWS	58,25	38	150	3.572	6,6
190	-55,79 MLWS	58,50	39	150	3.611	6,4
191	-56,04 MLWS	58,75	39	150	3.650	6,4
192	-56,29 MLWS	59,00	40	150	3.690	6,3
193	-56,54 MLWS	59,25	44	150	3.734	5,7
194	-56,79 MLWS	59,50	43	150	3.777	5,8
195	-57,04 MLWS	59,75	42	150	3.819	6,0
196	-57,29 MLWS	60,00	43	150	3.862	5,8
197	-57,54 MLWS	60,25	42	190	3.904	6,0
198	-57,79 MLWS	60,50	42	190	3.946	6,0
199	-58,04 MLWS	60,75	42	190	3.988	6,0
200	-58,29 MLWS	61,00	44	190	4.032	5,7

		<b>PUERTO ANTIOQUIA</b> <b>PILE DRIVING REPORT</b>					Date : 11/05/2023
		Ref. 208910 Job code	COTE 200 Origin Unit/Subunit code	QUA Discipline	ITP Type of document	510008A1 Sequenc. Number	Rev. : B1 Page : 4 of 4

<b>GUIDE N° :</b>	<b>ONSHORE</b>	<b>Pile Position :</b>	<b>B-1;P-1</b>	<b>Starting Hammer Date :</b>	<b>2/11/2023</b>
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N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)
201	-58,54 MLWS	61,25	43	190	4.075	5,8
202	-58,79 MLWS	61,50	45	190	4.120	5,6
203	-59,04 MLWS	61,75	45	190	4.165	5,6
204	-59,29 MLWS	62,00	45	190	4.210	5,6
205	-59,54 MLWS	62,25	48	190	4.258	5,2
206	-59,79 MLWS	62,50	48	190	4.306	5,2
207	-60,04 MLWS	62,75	46	190	4.352	5,4
208	-60,29 MLWS	63,00	47	190	4.399	5,3
209	-60,54 MLWS	63,25	47	190	4.446	5,3
210	-60,79 MLWS	63,50	46	190	4.492	5,4
211	-61,04 MLWS	63,75	47	190	4.539	5,3
212	-61,29 MLWS	64,00	49	190	4.588	5,1
213	-61,54 MLWS	64,25	50	190	4.638	5,0
214	-61,79 MLWS	64,50	49	190	4.687	5,1
215	-62,04 MLWS	64,75	54	190	4.741	4,6
216	-62,29 MLWS	65,00	54	190	4.795	4,6
217	-62,54 MLWS	65,25	92	190	4.887	2,7
218	-62,79 MLWS	65,50	92	190	4.979	2,7
219	-63,04 MLWS	65,75	92	190	5.071	2,7
220	-63,29 MLWS	66,00	72	190	5.143	3,5
221	-63,54 MLWS	66,25	63	190	5.206	4,0
222	-63,79 MLWS	66,50	73	190	5.279	3,4
223	-64,04 MLWS	66,75	68	190	5.347	3,7
224	-64,29 MLWS	67,00	68	190	5.415	3,7
225	-64,54 MLWS	67,25	69	190	5.484	3,6
226	-64,79 MLWS	67,50	66	190	5.550	3,8
227	-65,04 MLWS	67,75	73	190	5.623	3,4
228	-65,29 MLWS	68,00	70	190	5.693	3,6
229	-65,54 MLWS	68,25	71	190	5.764	3,5
230	-65,79 MLWS	68,50	70	190	5.834	3,6
231	-66,04 MLWS	68,75	70	190	5.904	3,6
232	-66,29 MLWS	69,00	74	190	5.978	3,4
233	-66,54 MLWS	69,25	64	190	6.042	3,9
234	-66,79 MLWS	69,50	79	190	6.121	3,2
235	-67,04 MLWS	69,75	90	190	6.211	2,8
236	-67,29 MLWS	70,00	115	190	6.326	2,2
237	-67,54 MLWS	70,25	115	190	6.441	2,2
238	-67,79 MLWS	70,50	113	190	6.554	2,2
239	-68,04 MLWS	70,75	122	190	6.676	2,0
240	-68,29 MLWS	71,00	108	190	6.784	2,3
241	-68,54 MLWS	71,25	118	190	6.902	2,1
242	-68,79 MLWS	71,50	119	190	7.021	2,1
243	-69,04 MLWS	71,75	11	190	7.032	22,7
244	-69,29 MLWS	72,00	105	190	7.137	2,4
245	-69,54 MLWS	72,25	100	190	7.237	2,5
246	-69,79 MLWS	72,50	83	190	7.320	3,0
247	-70,04 MLWS	72,75	83	190	7.403	3,0
248	-70,29 MLWS	73,00	83	190	7.486	3,0
249	-70,39 MLWS	73,10	37	190	7.523	2,7
250	-				7.523	-

N°	Toe Level	Graduation	Blow Count	Energy (kJ)	Cumulative Blow Count	Penetration per blow (mm/blow)
251	-				7.523	-
252	-				7.523	-
253	-				7.523	-
254	-				7.523	-
255	-				7.523	-
256	-				7.523	-
257	-				7.523	-
258	-				7.523	-
259	-				7.523	-
260	-				7.523	-
261	-				7.523	-
262	-				7.523	-
263	-				7.523	-
264	-				7.523	-
265	-				7.523	-
266	-				7.523	-
267	-				7.523	-
268	-				7.523	-
269	-				7.523	-
270	-				7.523	-
271	-				7.523	-
272	-				7.523	-
273	-				7.523	-
274	-				7.523	-
275	-				7.523	-
276	-				7.523	-
277	-				7.523	-
278	-				7.523	-
279	-				7.523	-
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281	-				7.523	-
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283	-				7.523	-
284	-				7.523	-
285	-				7.523	-
286	-				7.523	-
287	-				7.523	-
288	-				7.523	-
289	-				7.523	-
290	-				7.523	-
291	-				7.523	-
292	-				7.523	-
293	-				7.523	-
294	-				7.523	-
295	-				7.523	-
296	-				7.523	-
297	-				7.523	-
298	-				7.523	-
299	-				7.523	-
300	-				7.523	-