REGIONE LIGURIA

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PROVINCIA DI IMPERIA

Comune di Molini di Triora

RIATTIVAZIONE DI UNA CENTRALE IDROELETTRICA UBICATA SUL TORRENTE ARGENTINA NEL COMUNE DI MOLINI DI TRIORA IN LOCALITA' CARPENOSA (IM)

Richiesta di concessione a derivare da acque superficiali

SIMULAZIONE IDRAULICA MONODIMENSIONALE

Oggetto

Sezioni idrauliche stato di fatto

Gruppo di progettazione

E.T.A.research
energiaterritorioambiente
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luca.macario@eta-research.com

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info@eta-research.com

Committente

Azienda agricola Zunino

Sede: Via Periane
18018 Taggia (IM)
P.IVA: 01199290089

Dati progetto

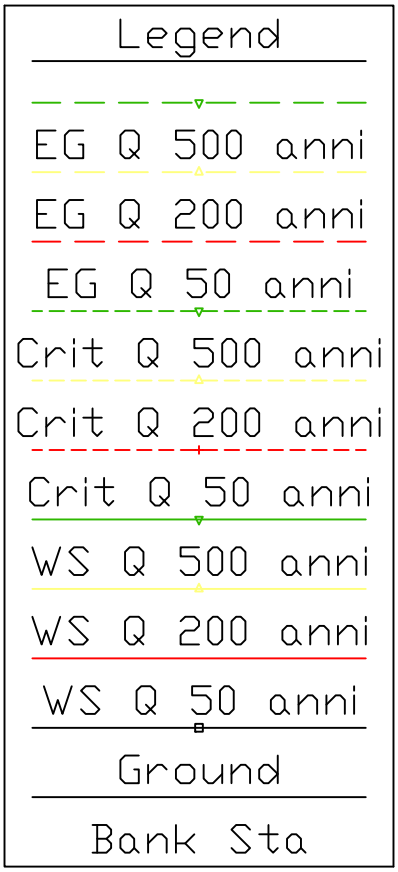
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C15_11	DF	DC	05

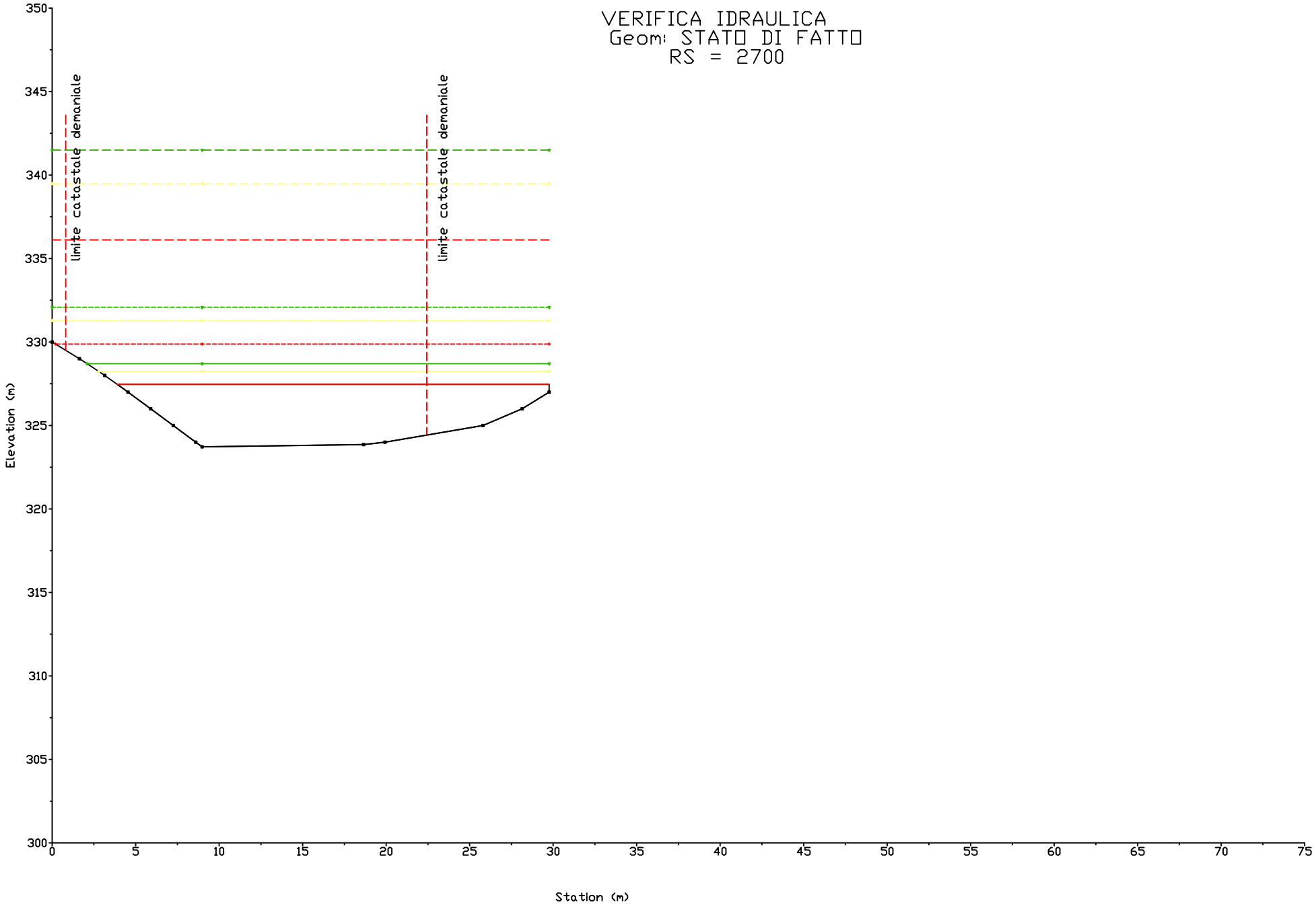
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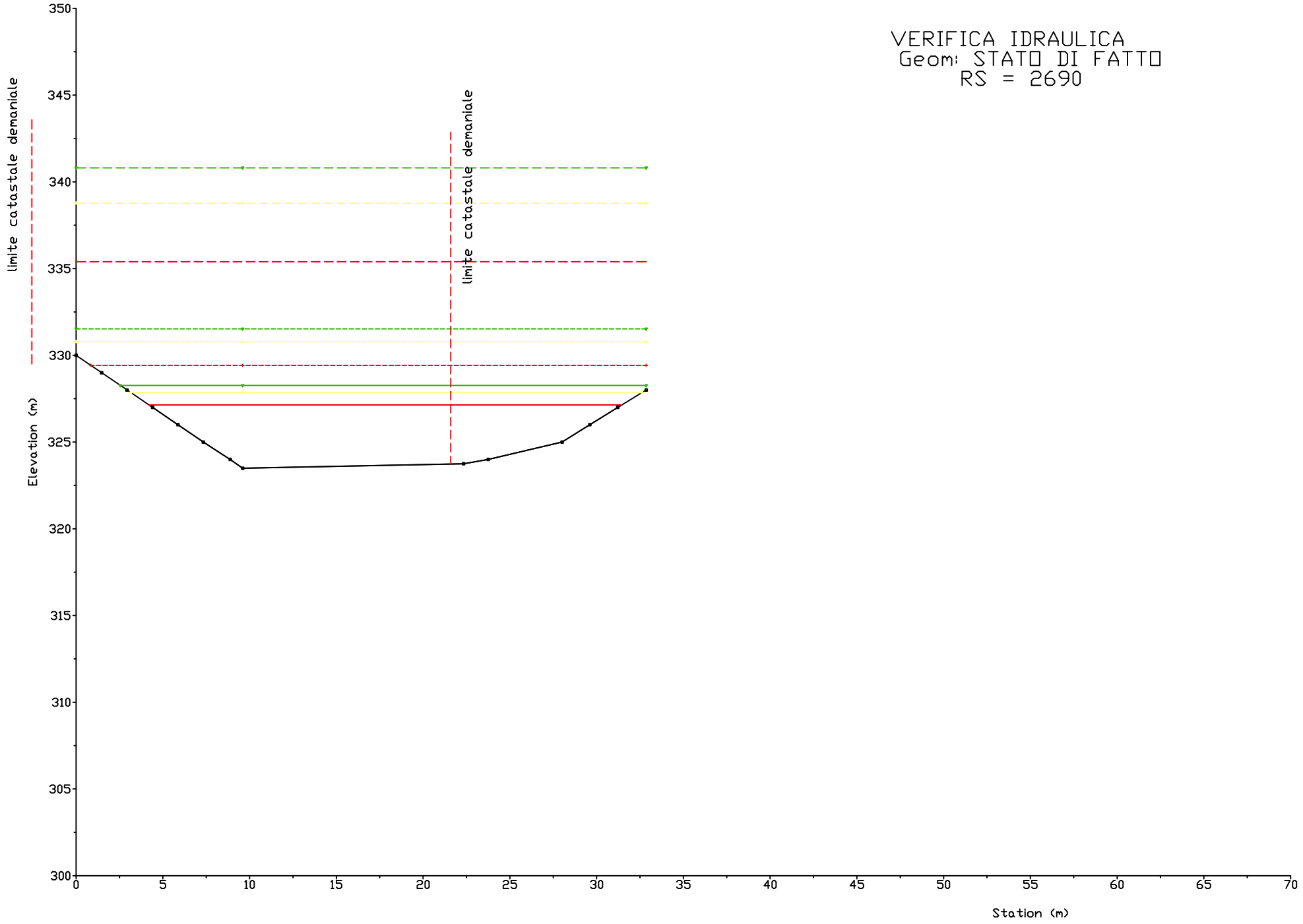
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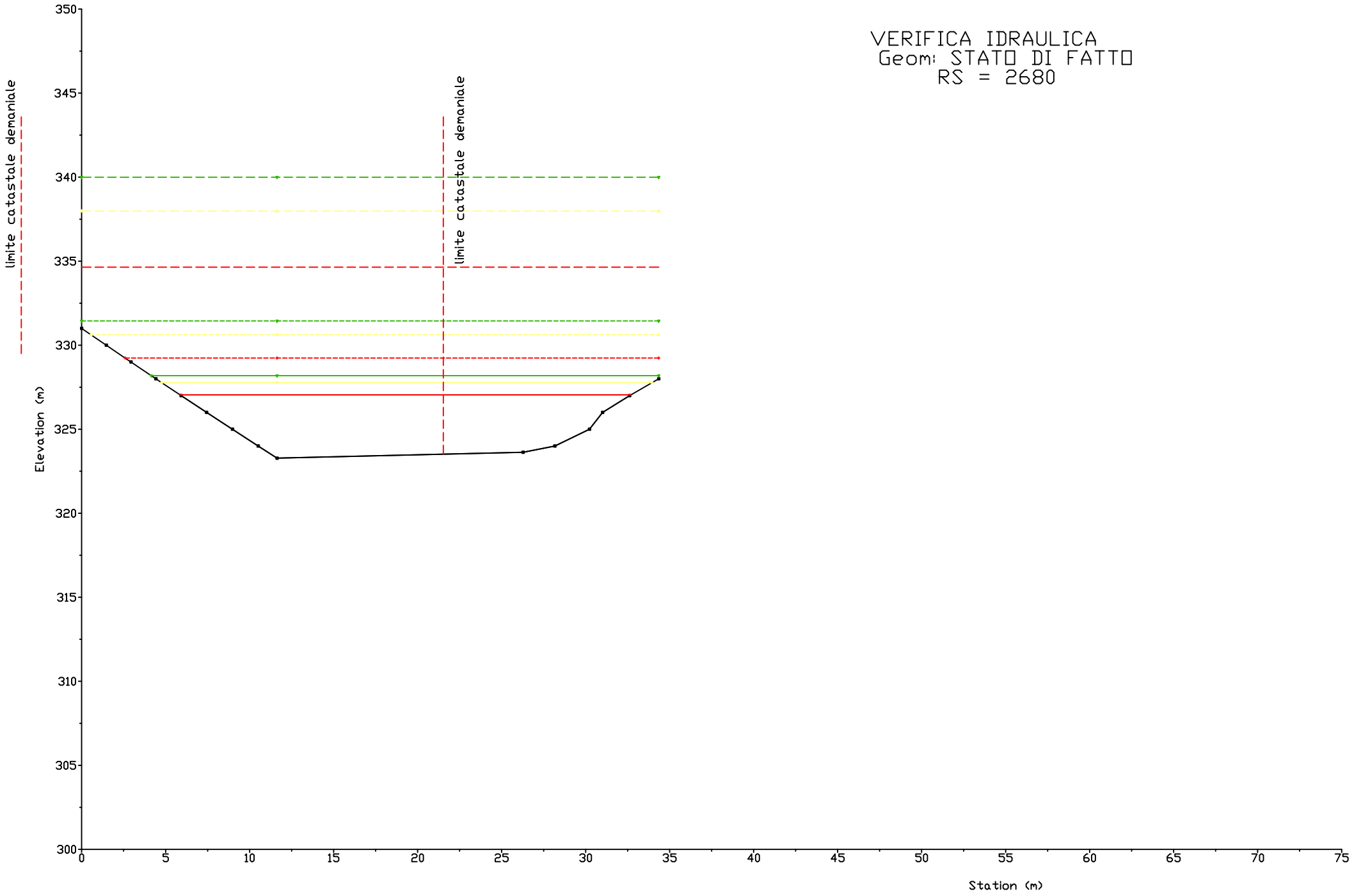
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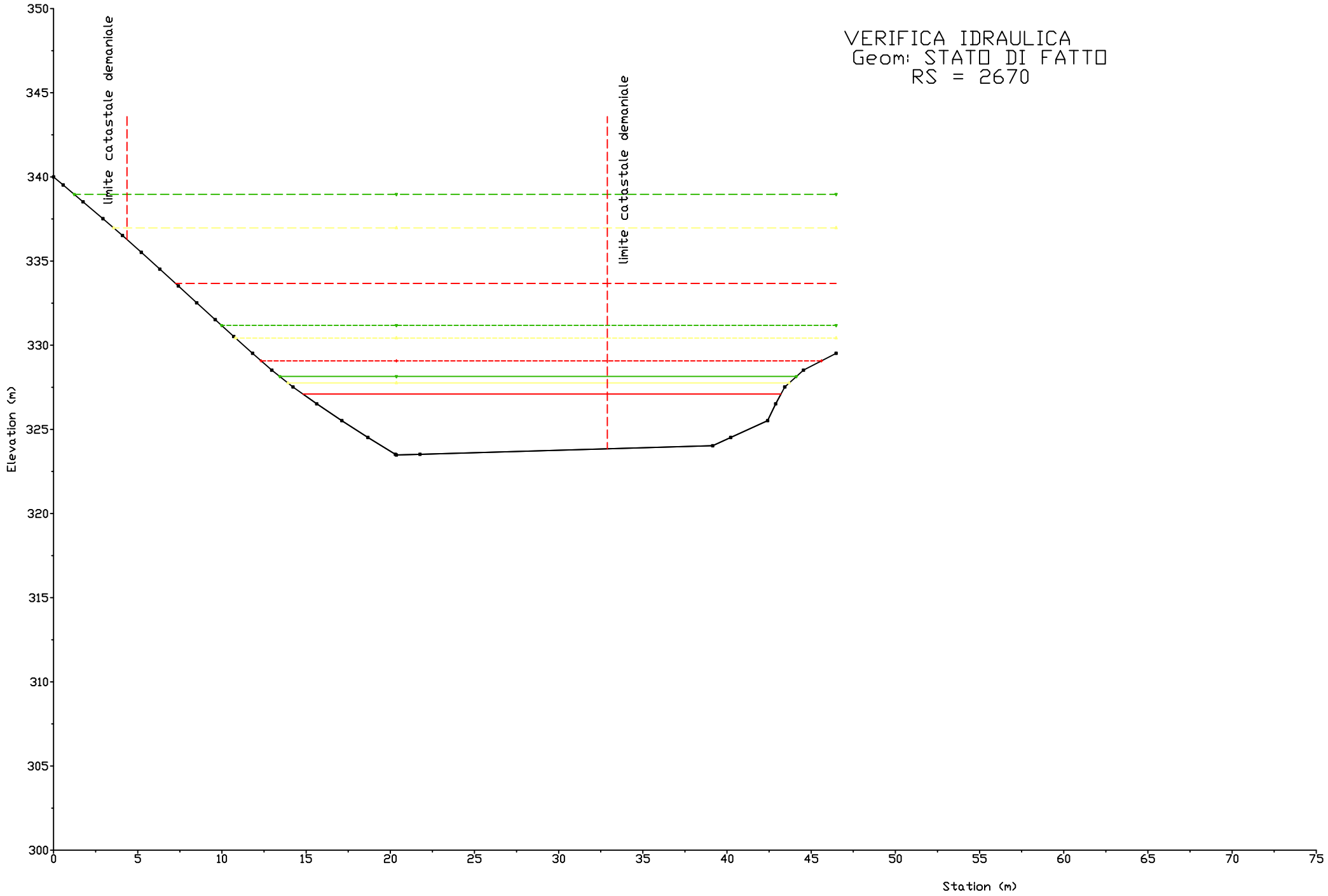
REVISIONE	DATA EMISSIONE	DESCRIZIONE	REDAZIONE	CONTROLLO	APPROVAZIONE
01	MARZO_2016	PRIMA EMISSIONE	Geom. Innocenzi G.	Dott. Ing. Macario L.	Dott. Ing. Macario L.
02					

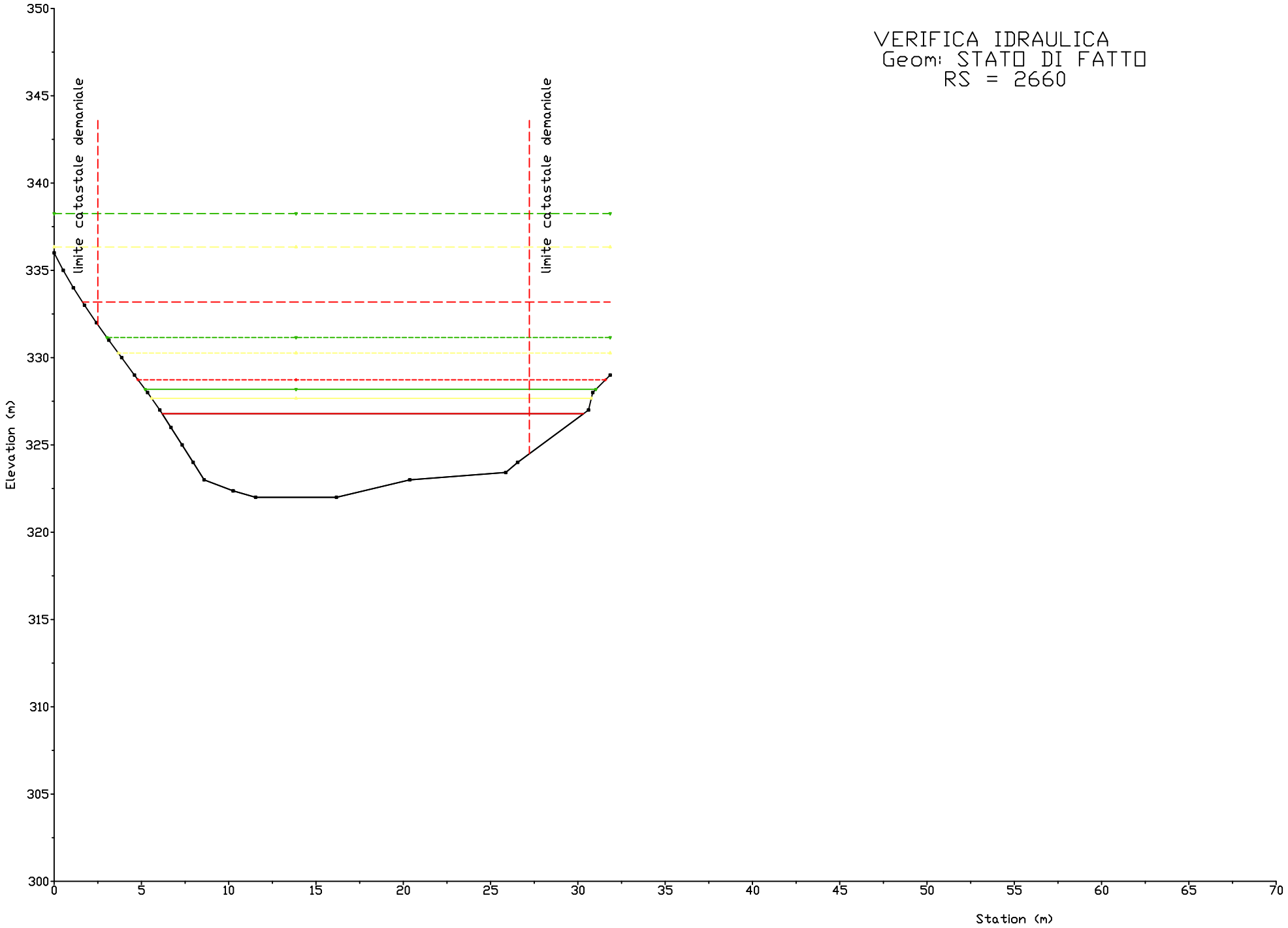

Legend
EG Q 500 anni
EG Q 200 anni
EG Q 50 anni
Crit Q 500 anni
Crit Q 200 anni
Crit Q 50 anni
WS Q 500 anni
WS Q 200 anni
WS Q 50 anni
Ground
Bank Sta

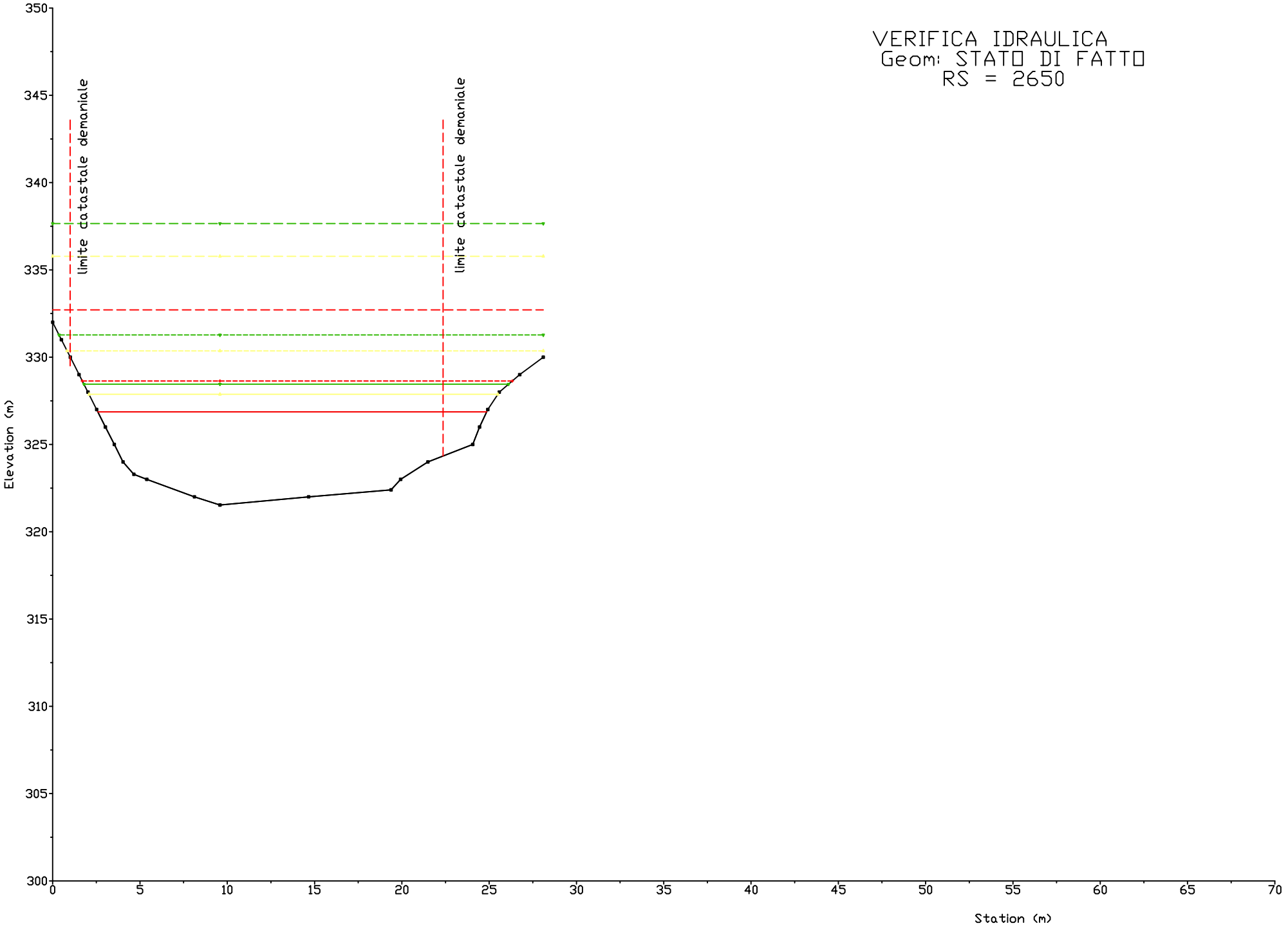

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2700
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
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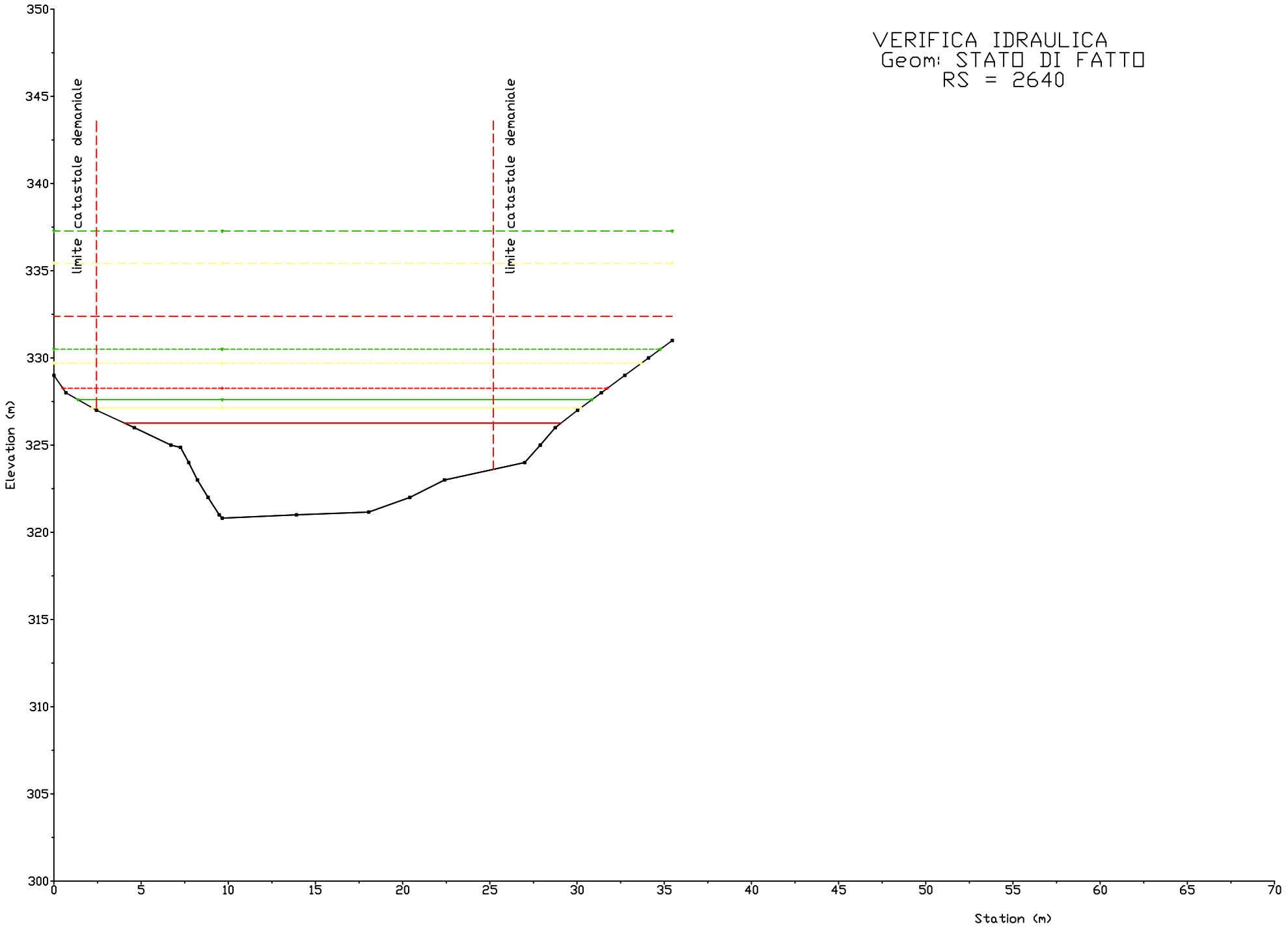

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2690
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
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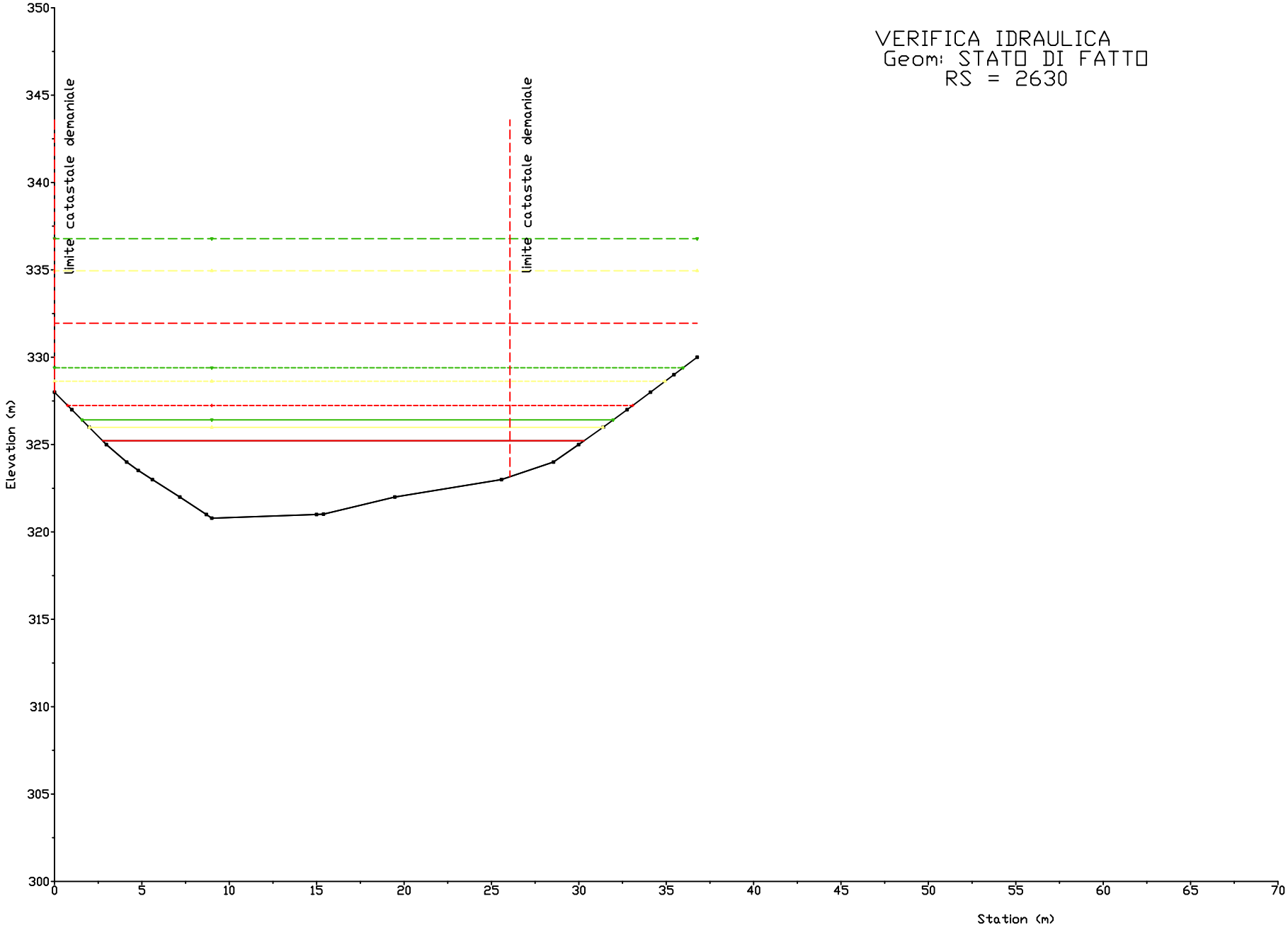

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2680
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
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300
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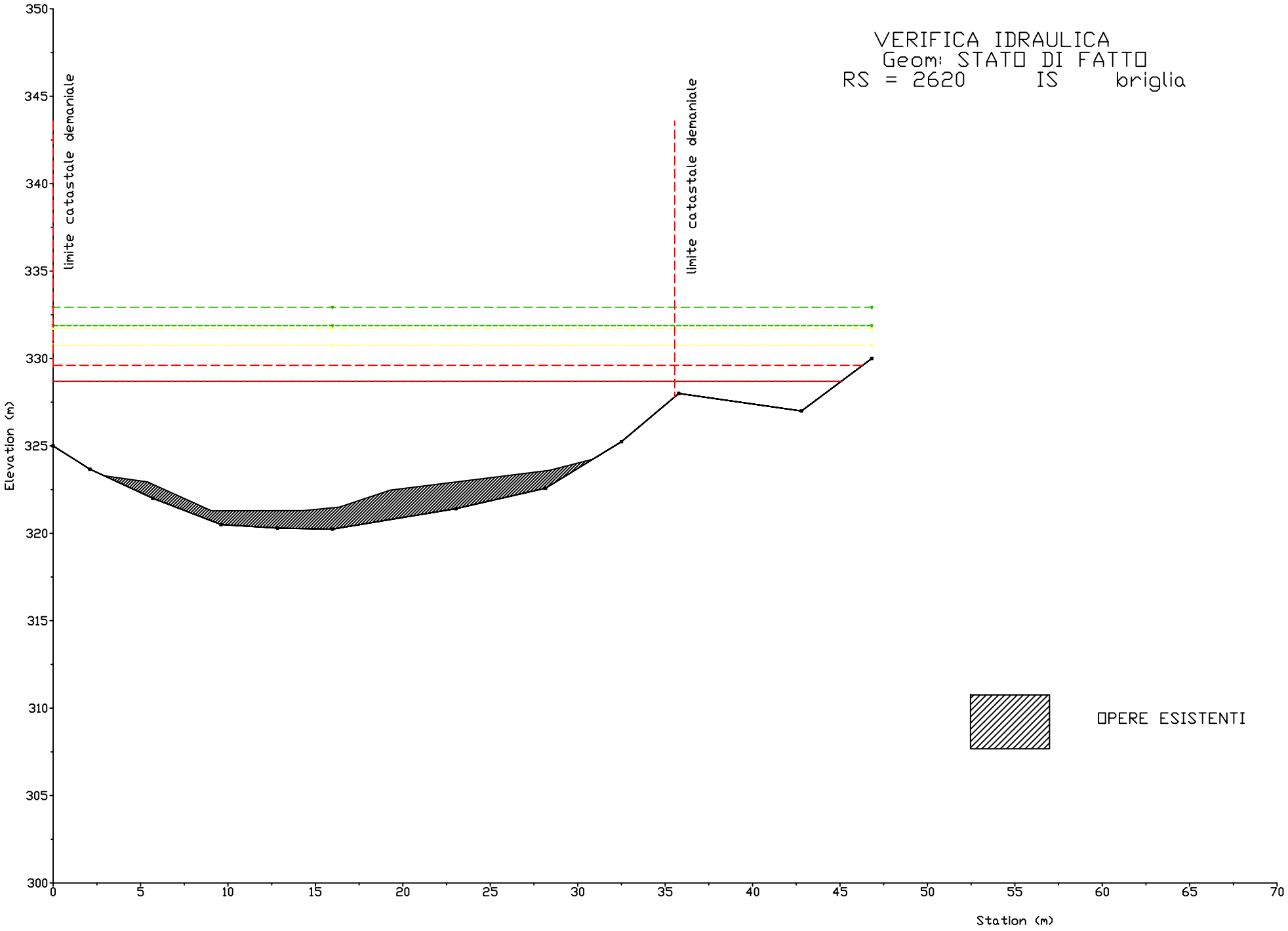

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2670
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
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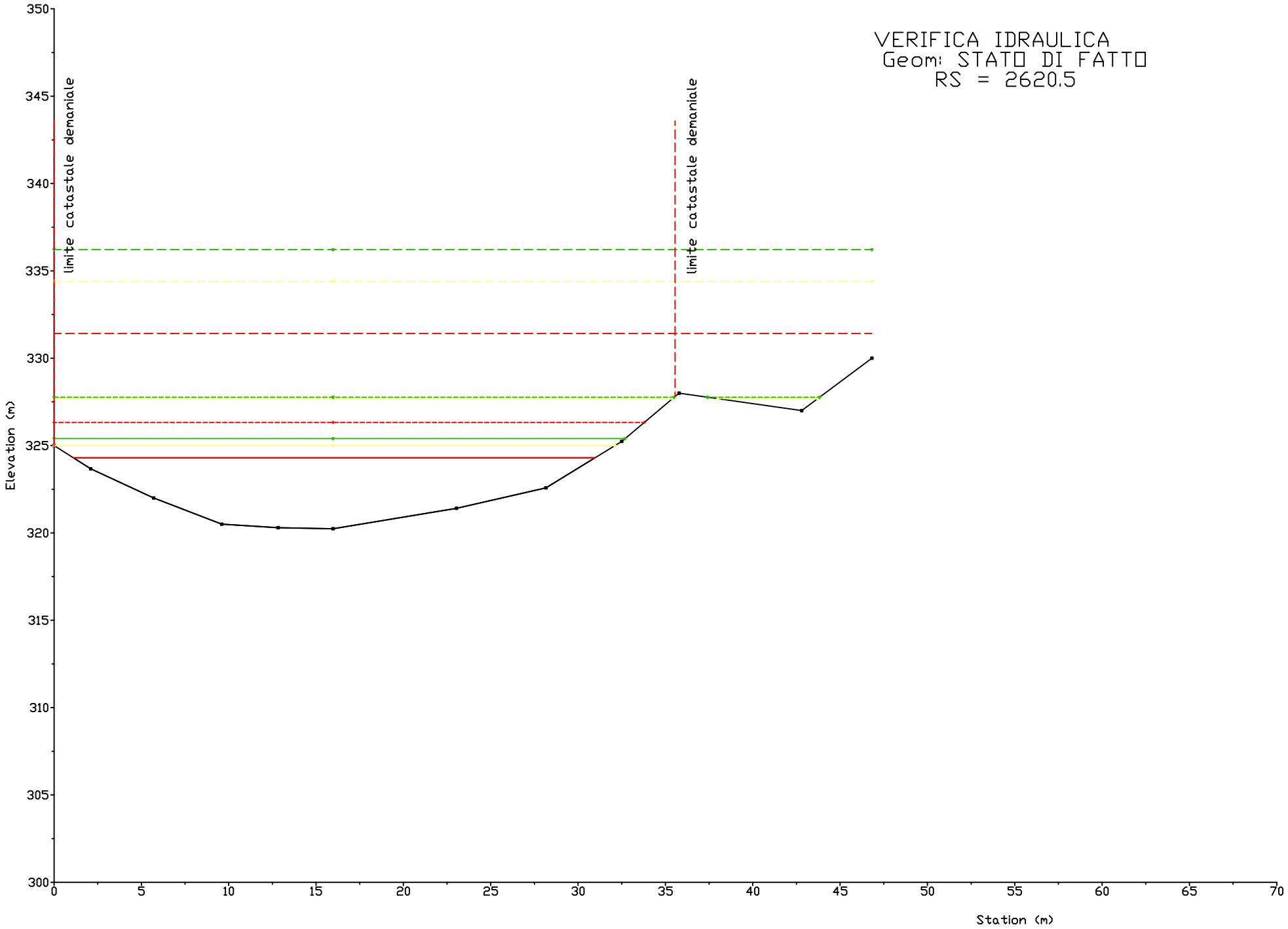

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2660
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limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
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300
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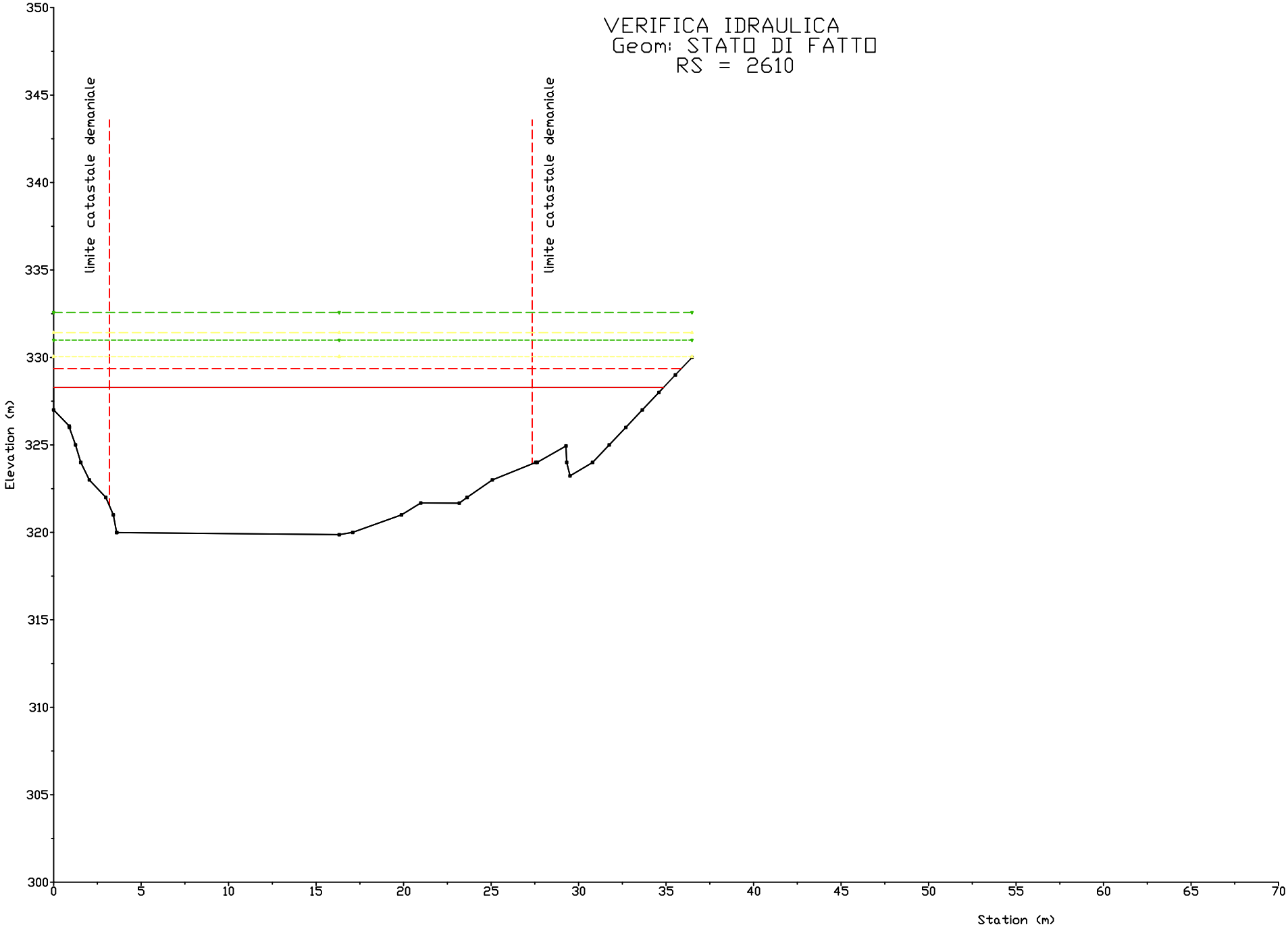

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2650
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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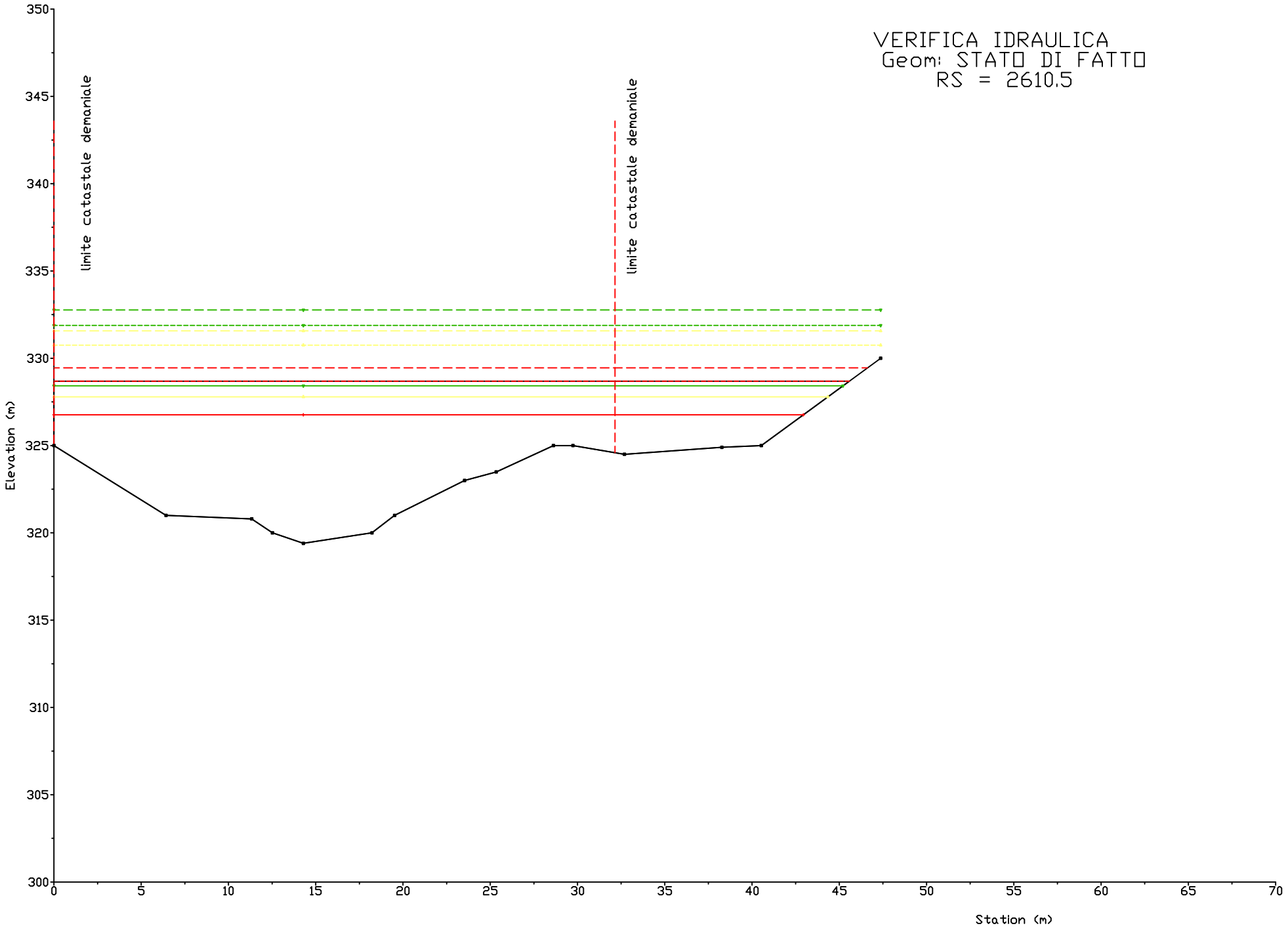

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2640
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limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
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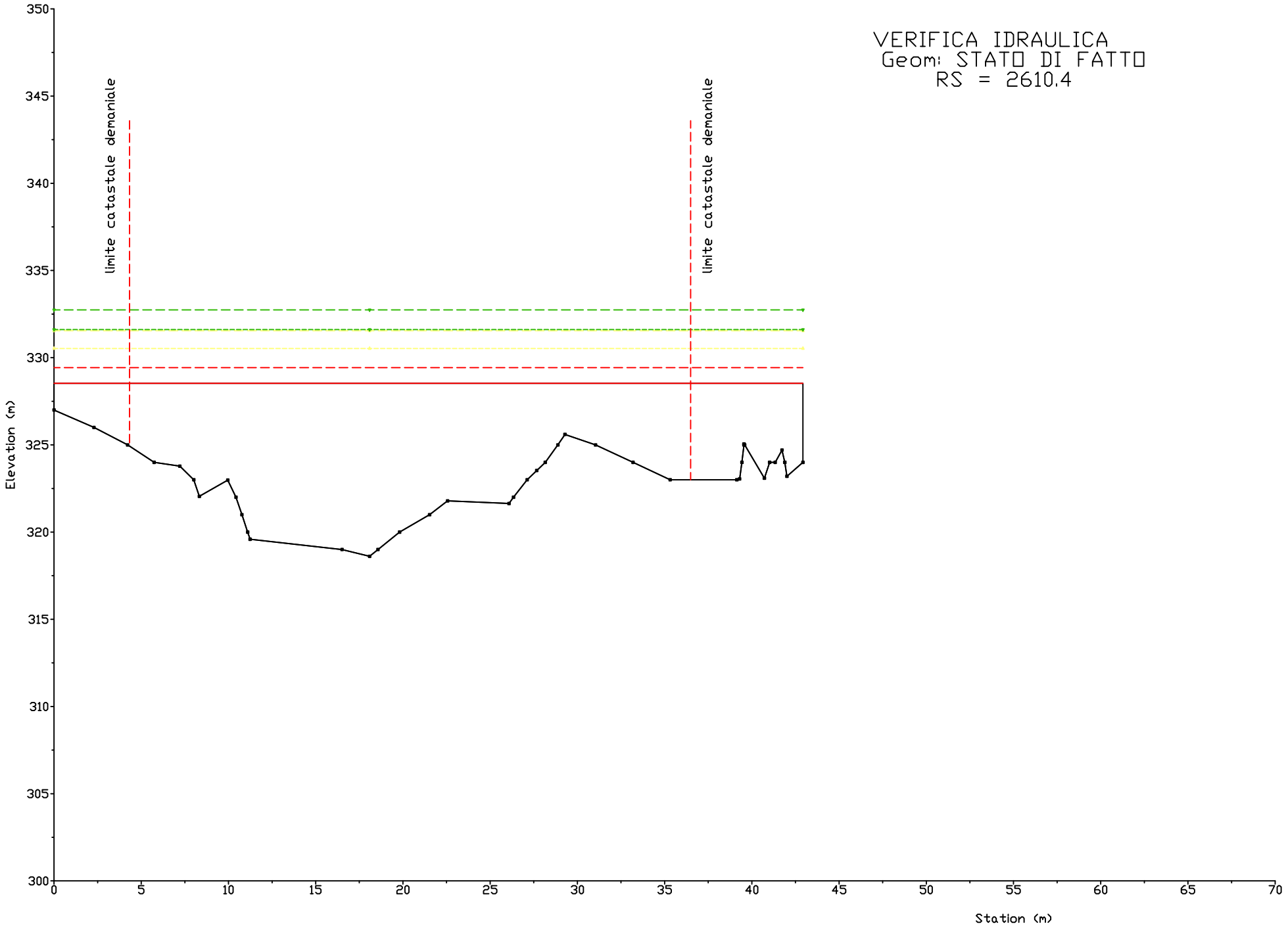

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2630
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
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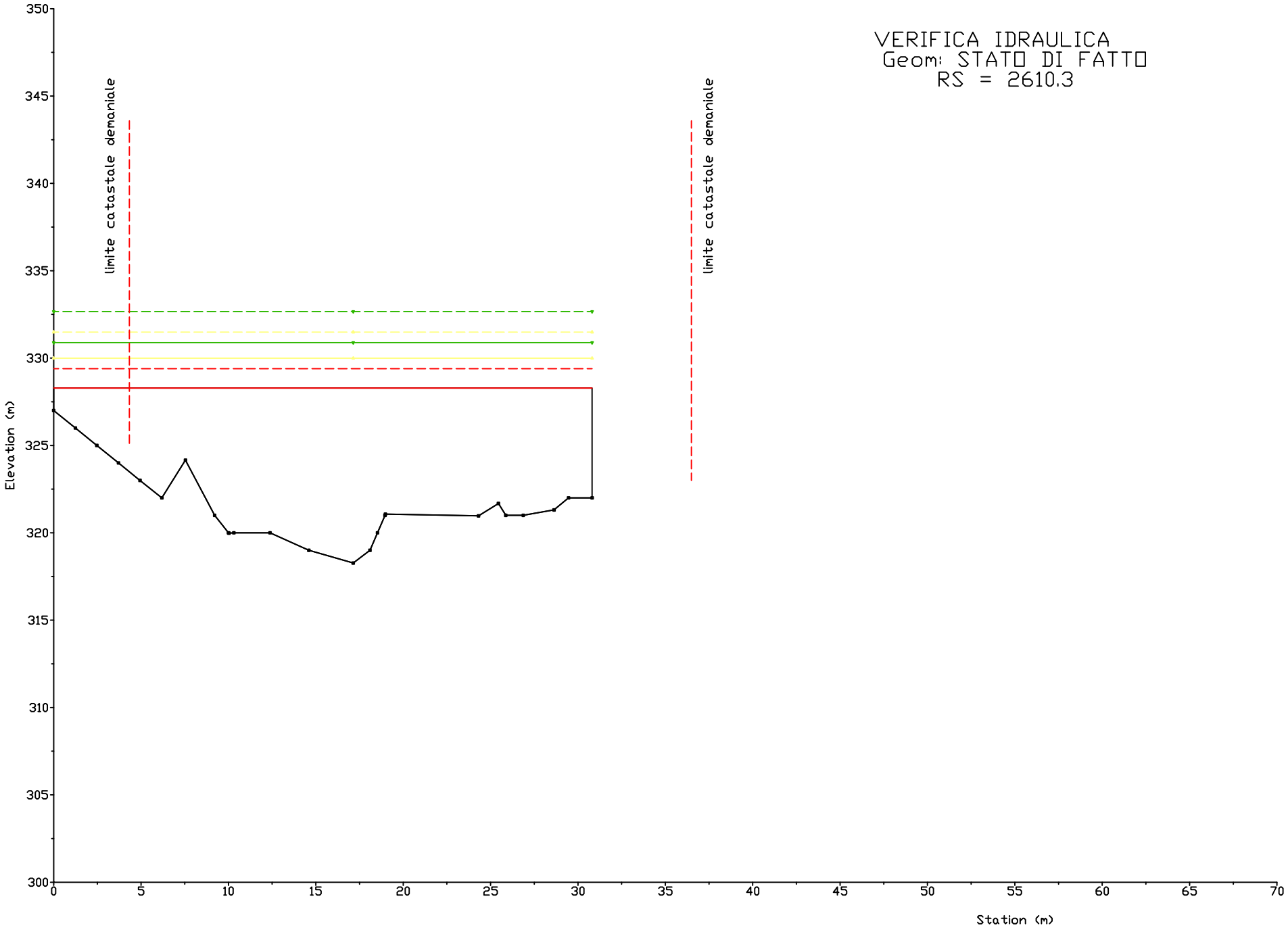

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2620 IS briglia
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
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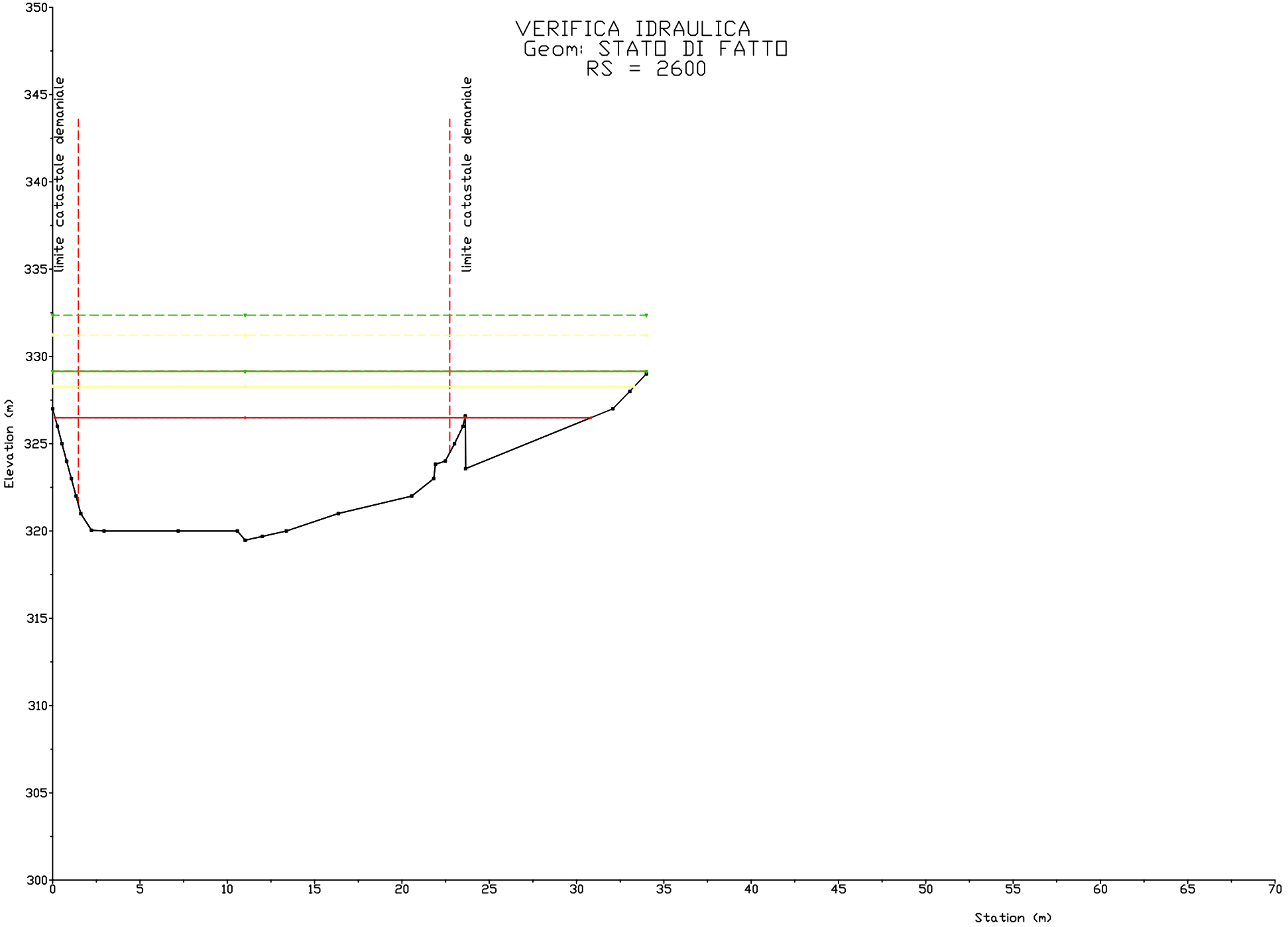

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2620.5
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
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345
340
335
330
325
320
315
310
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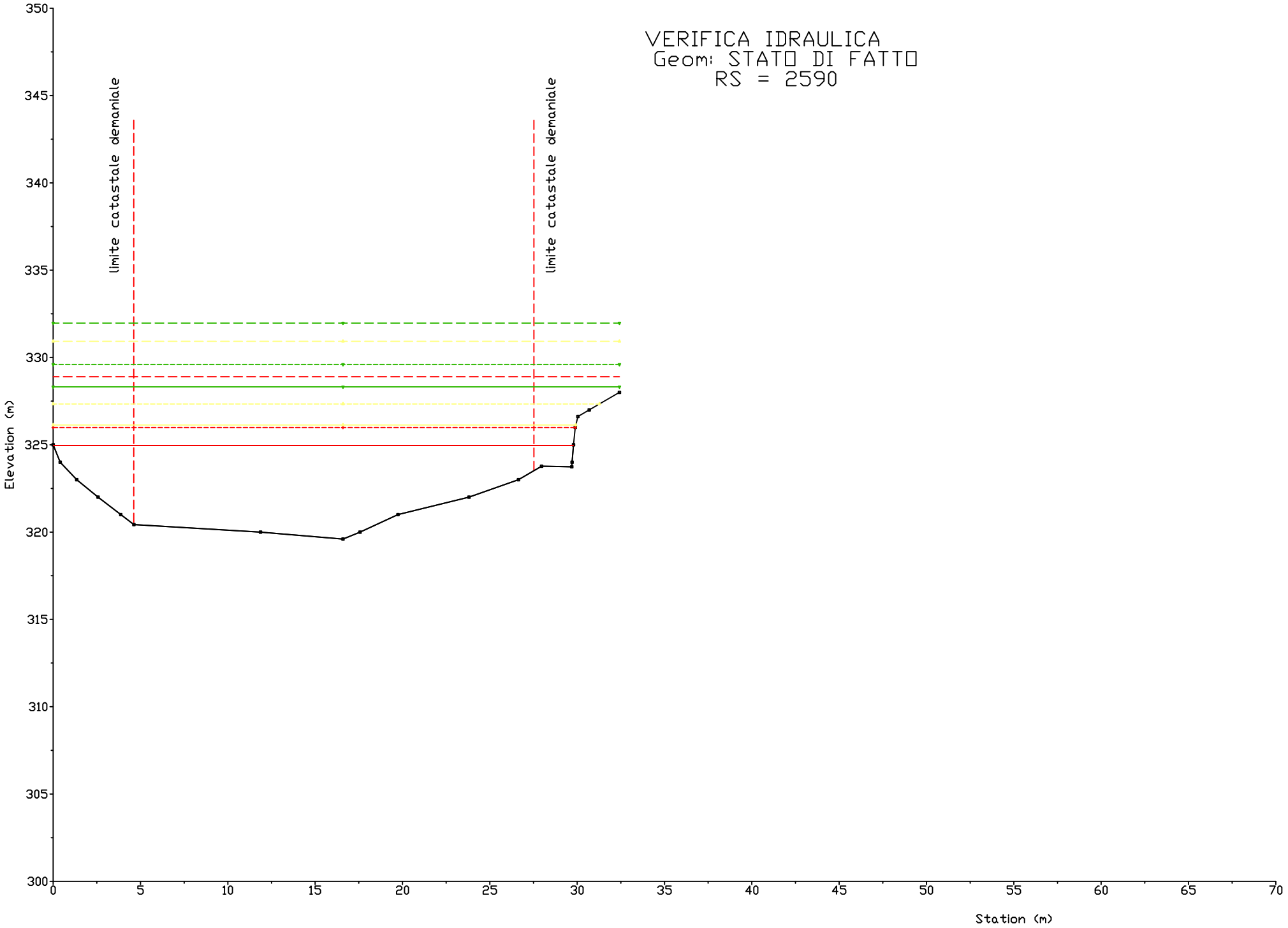

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2610
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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300
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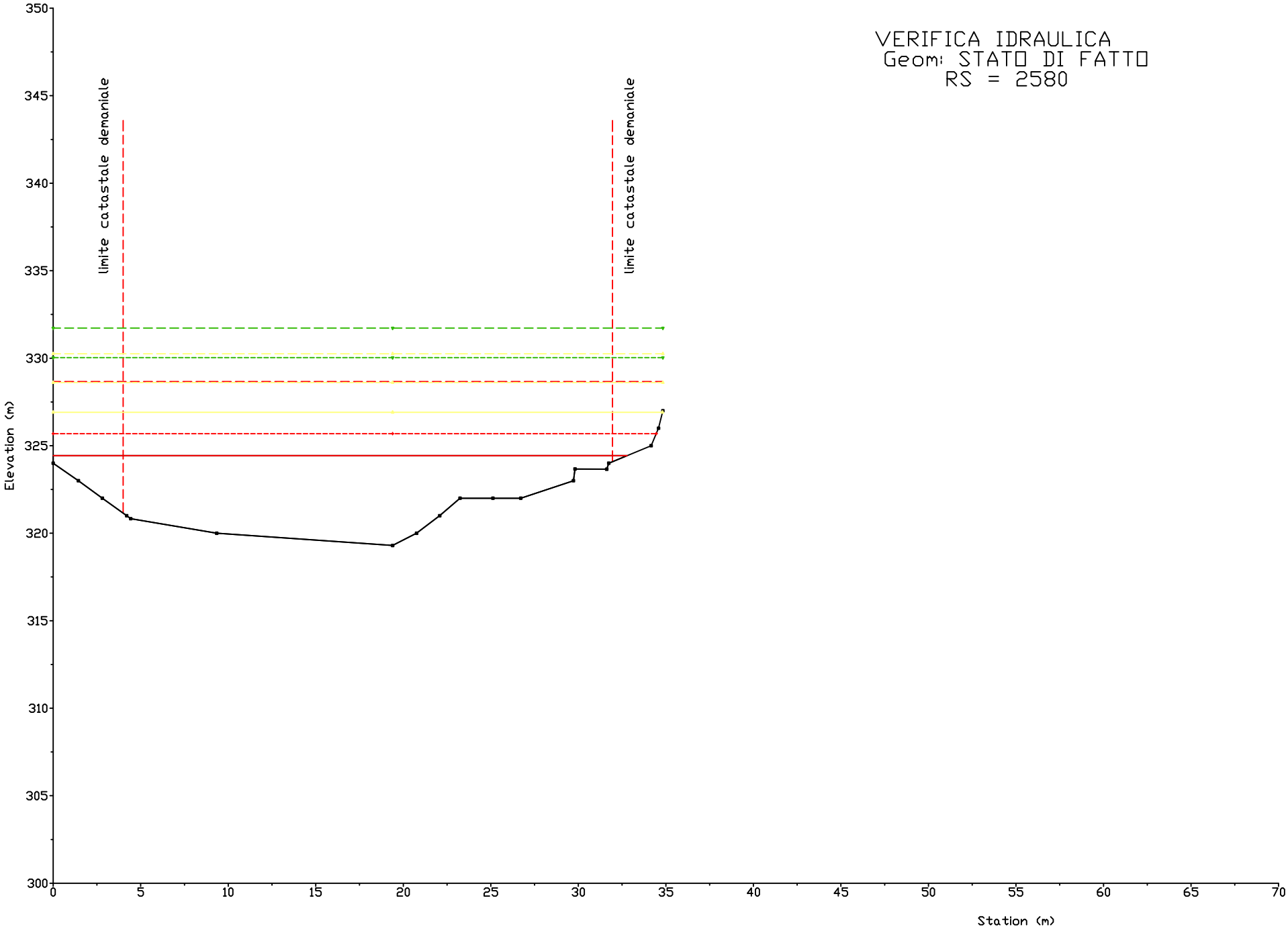

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2610.5
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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305
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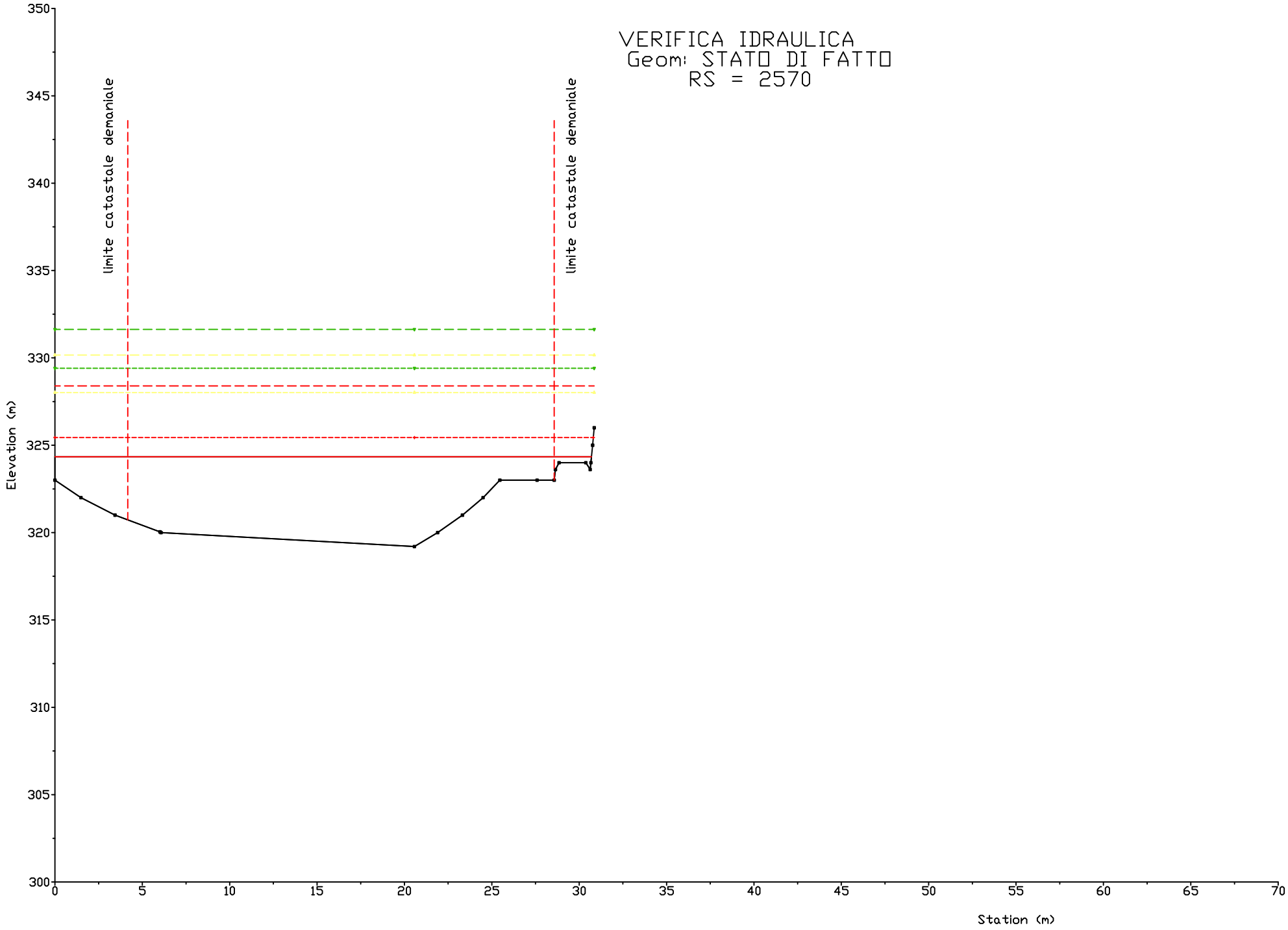

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2610.4
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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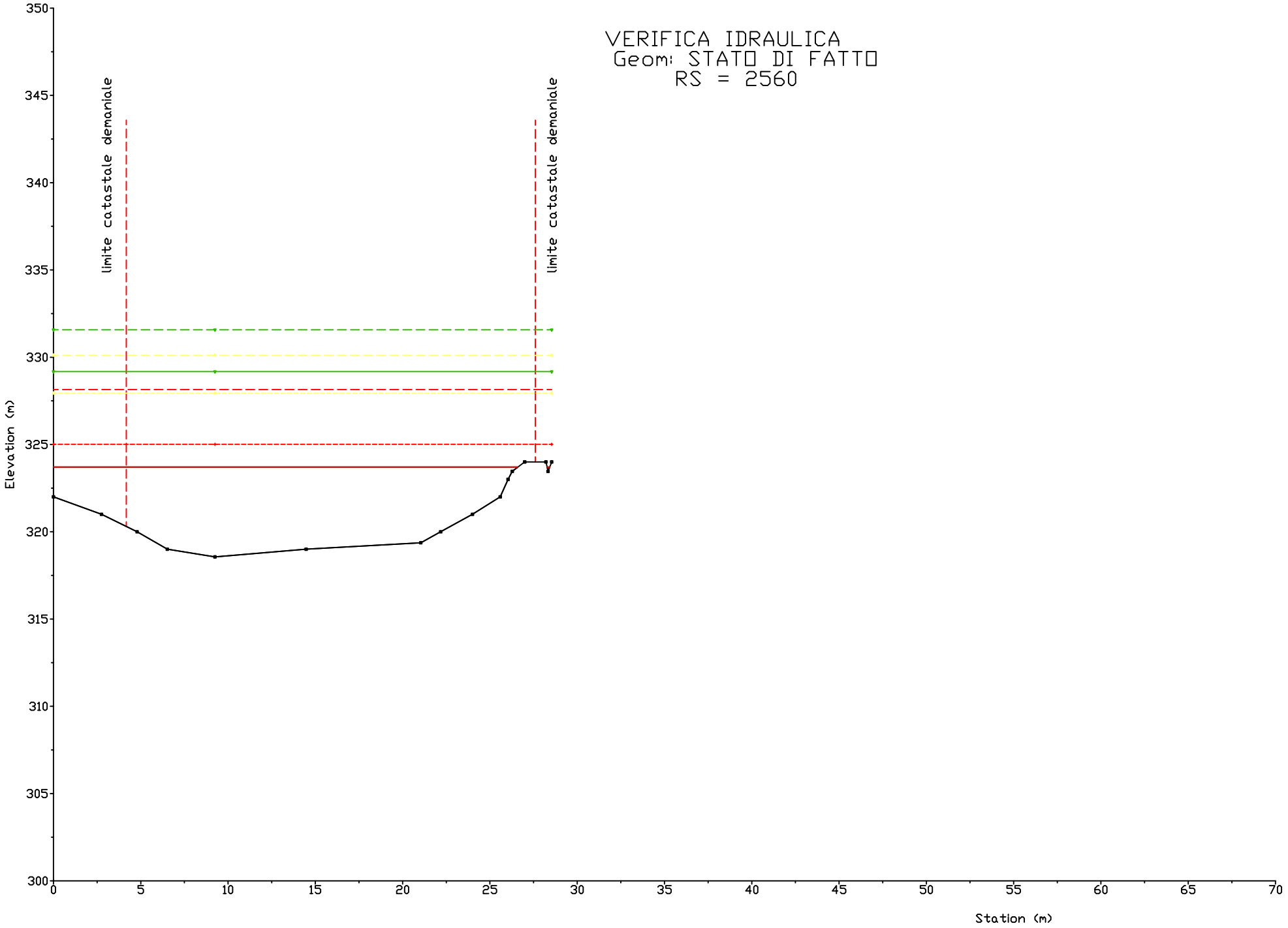

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2610.3
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limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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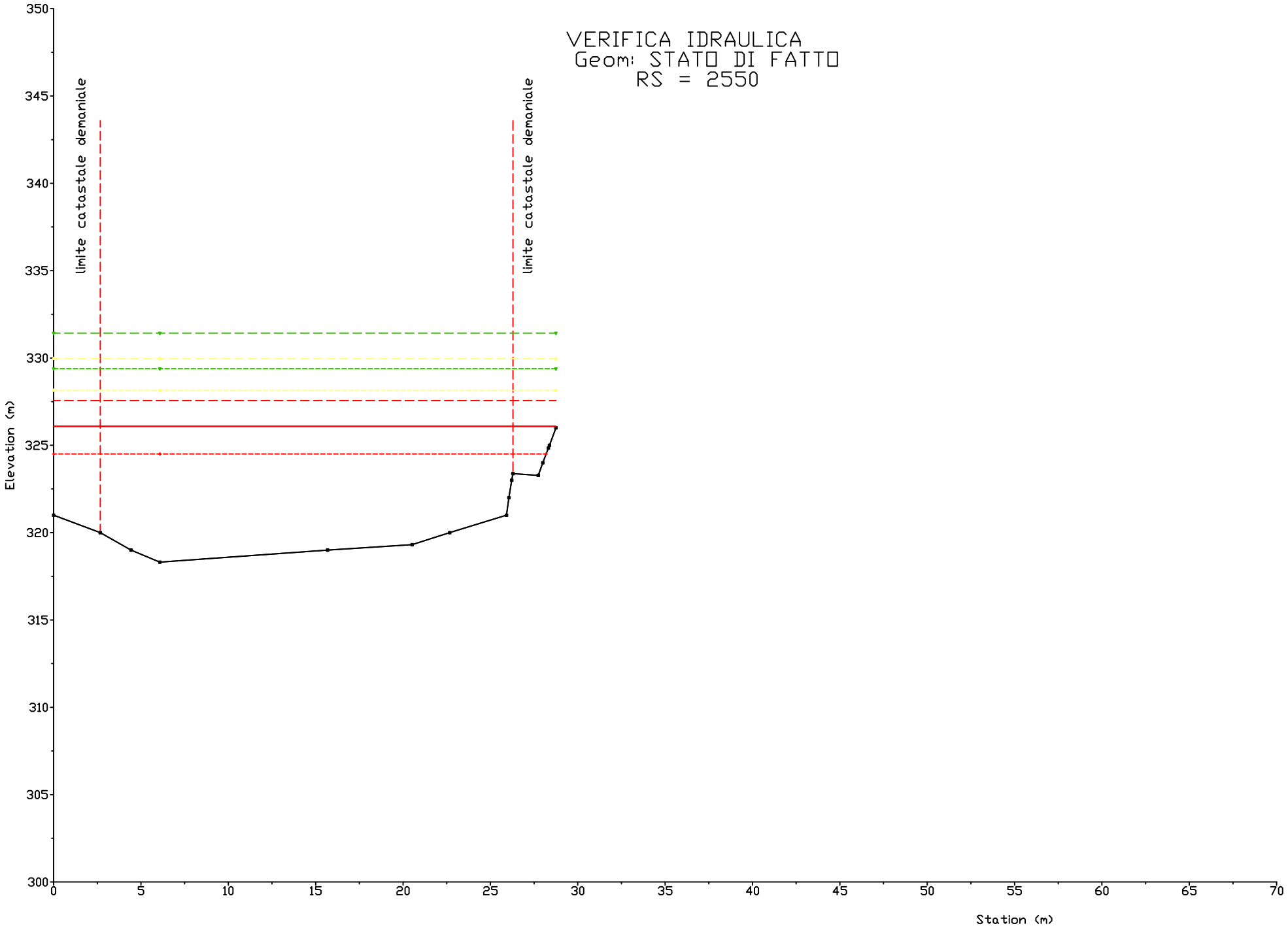

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2600
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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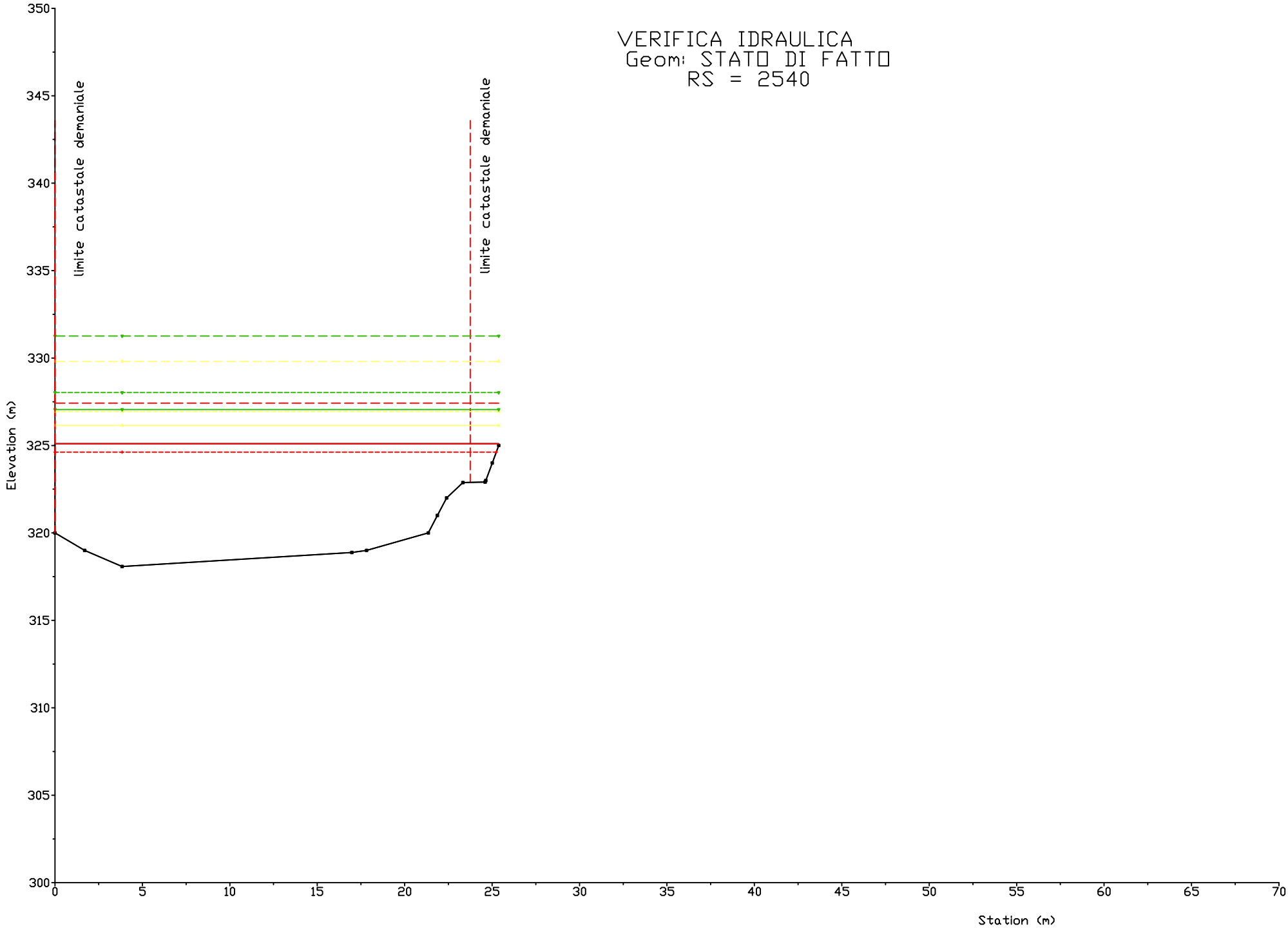

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Geom: STATO DI FATTO
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limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
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345
340
335
330
325
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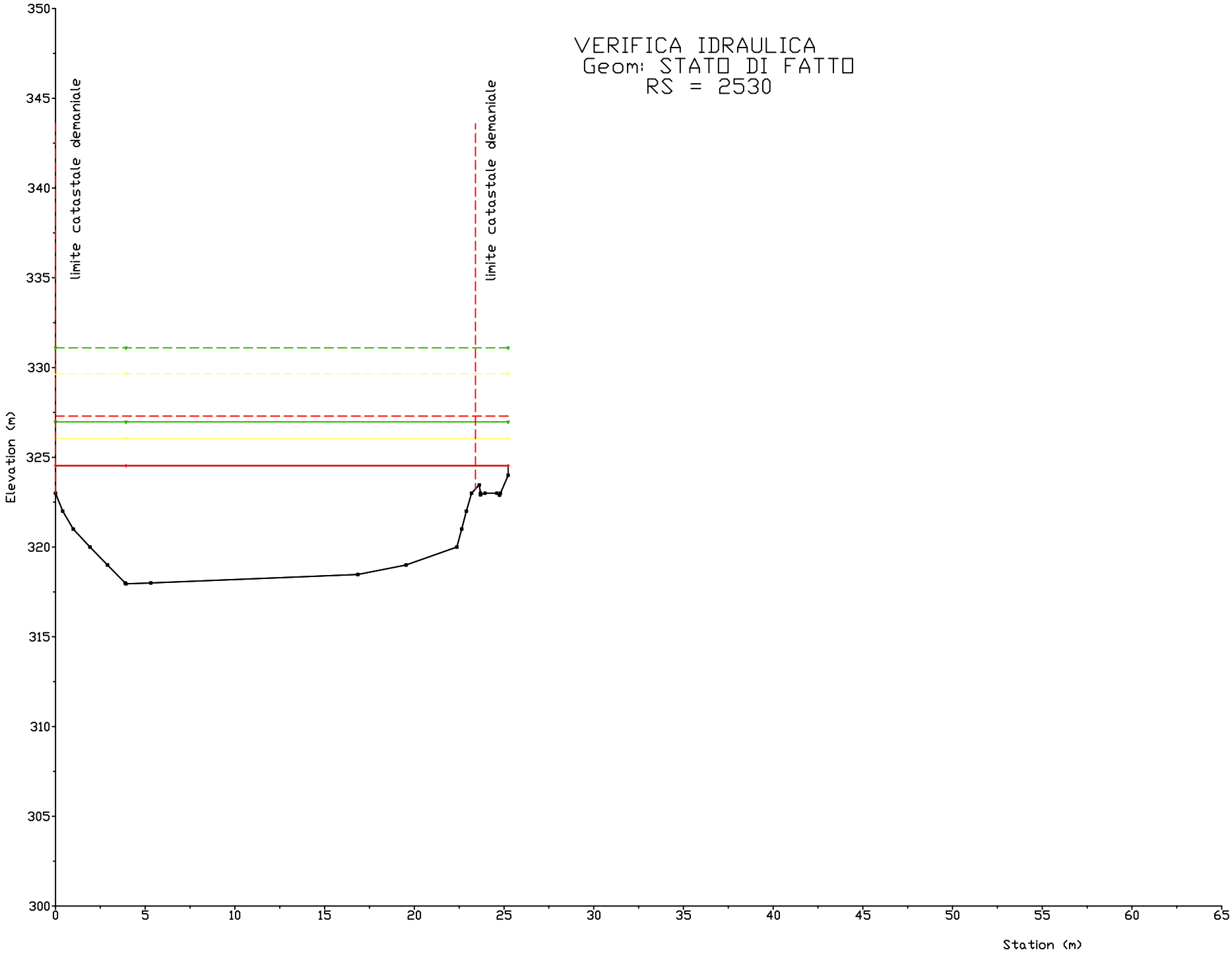

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2580
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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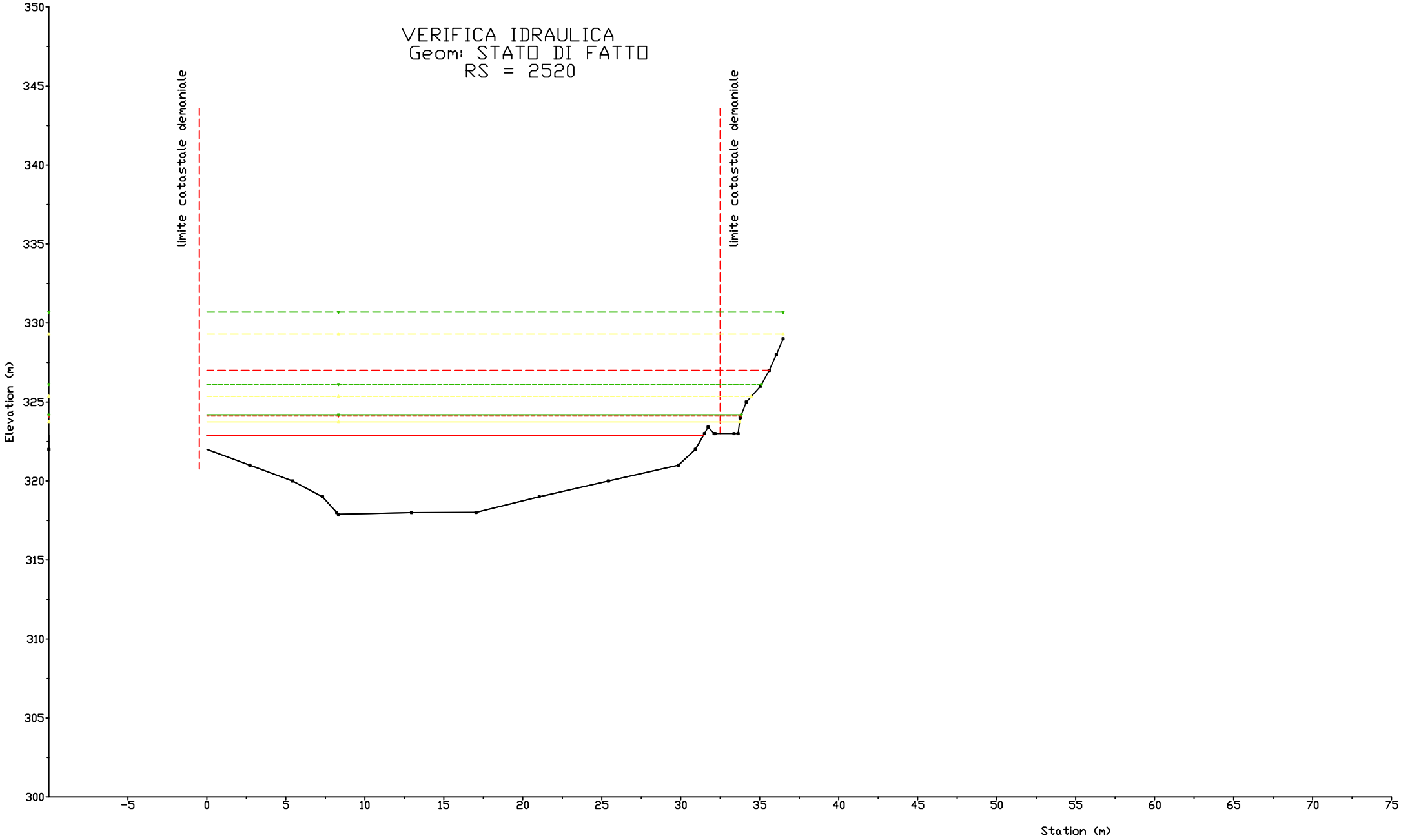

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2570
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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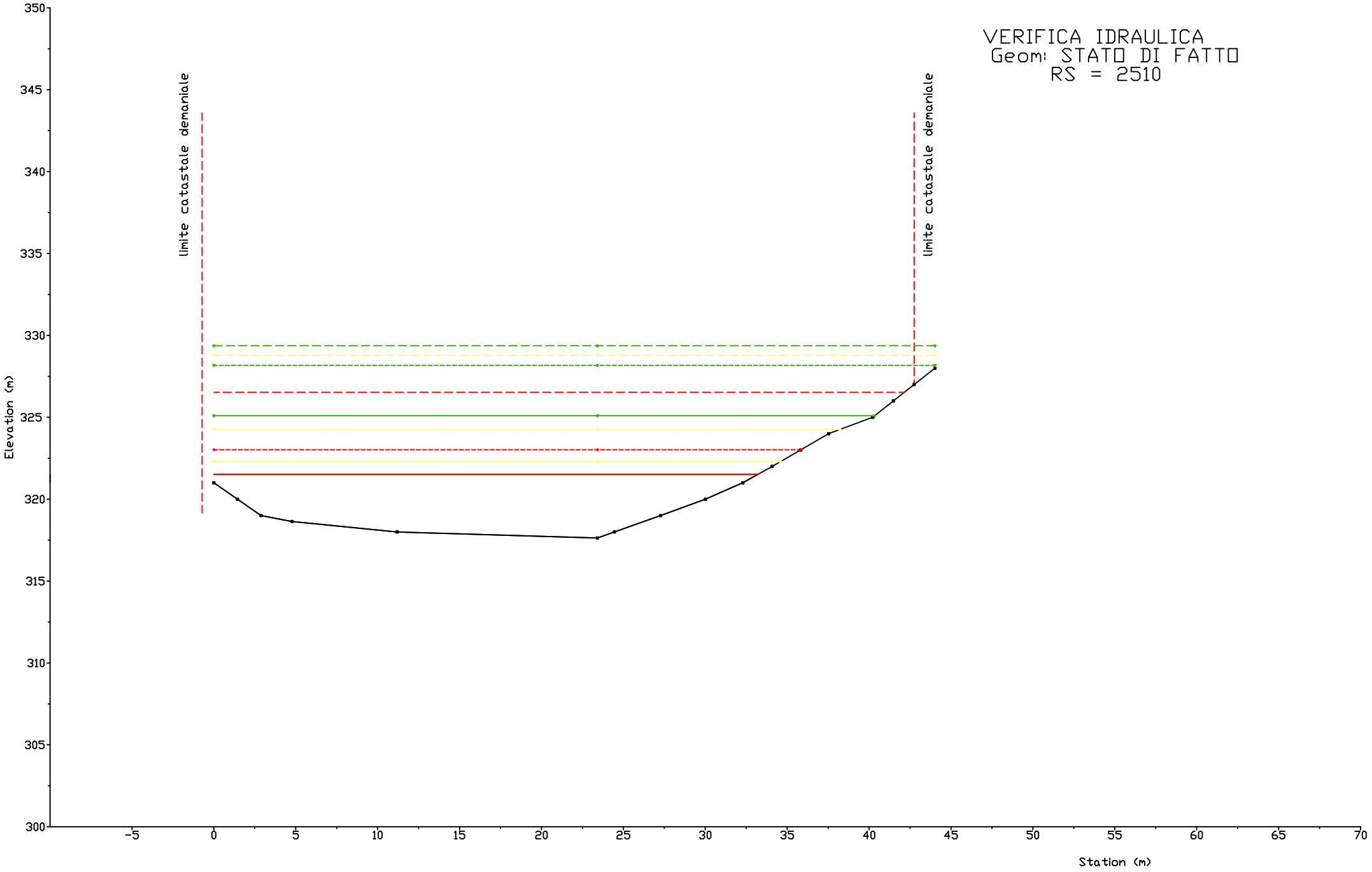

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2560
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
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345
340
335
330
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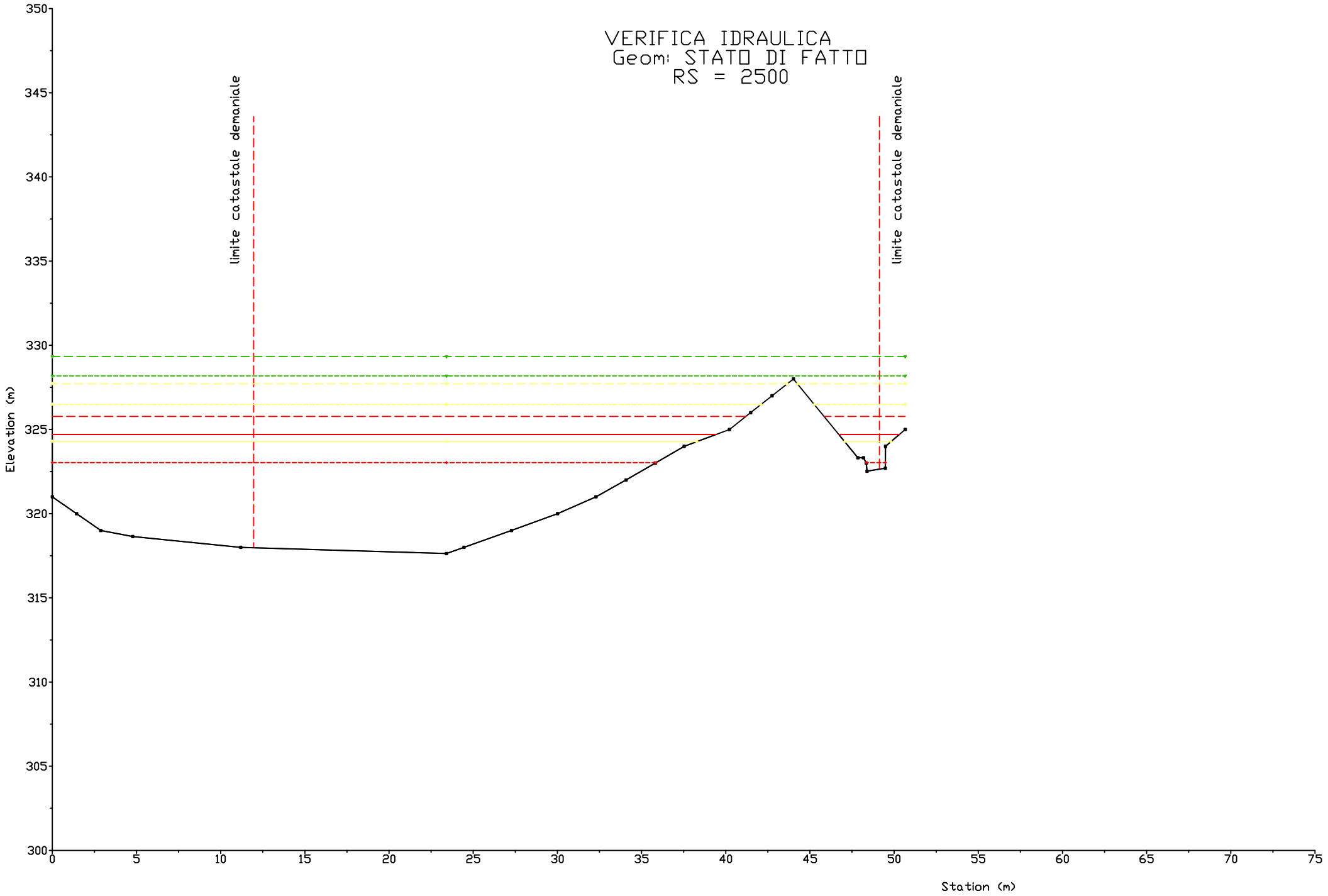

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2550
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
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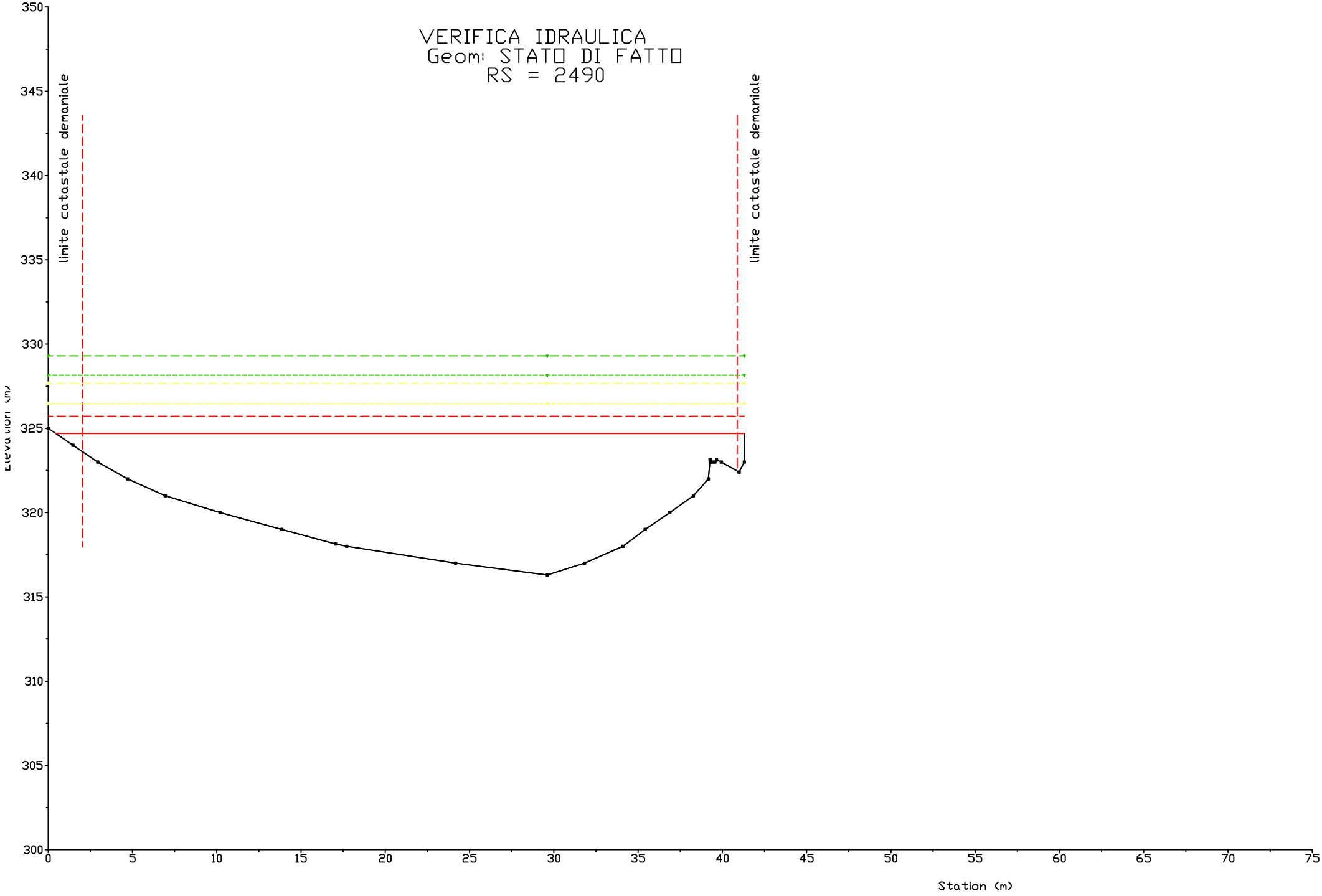

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2540
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
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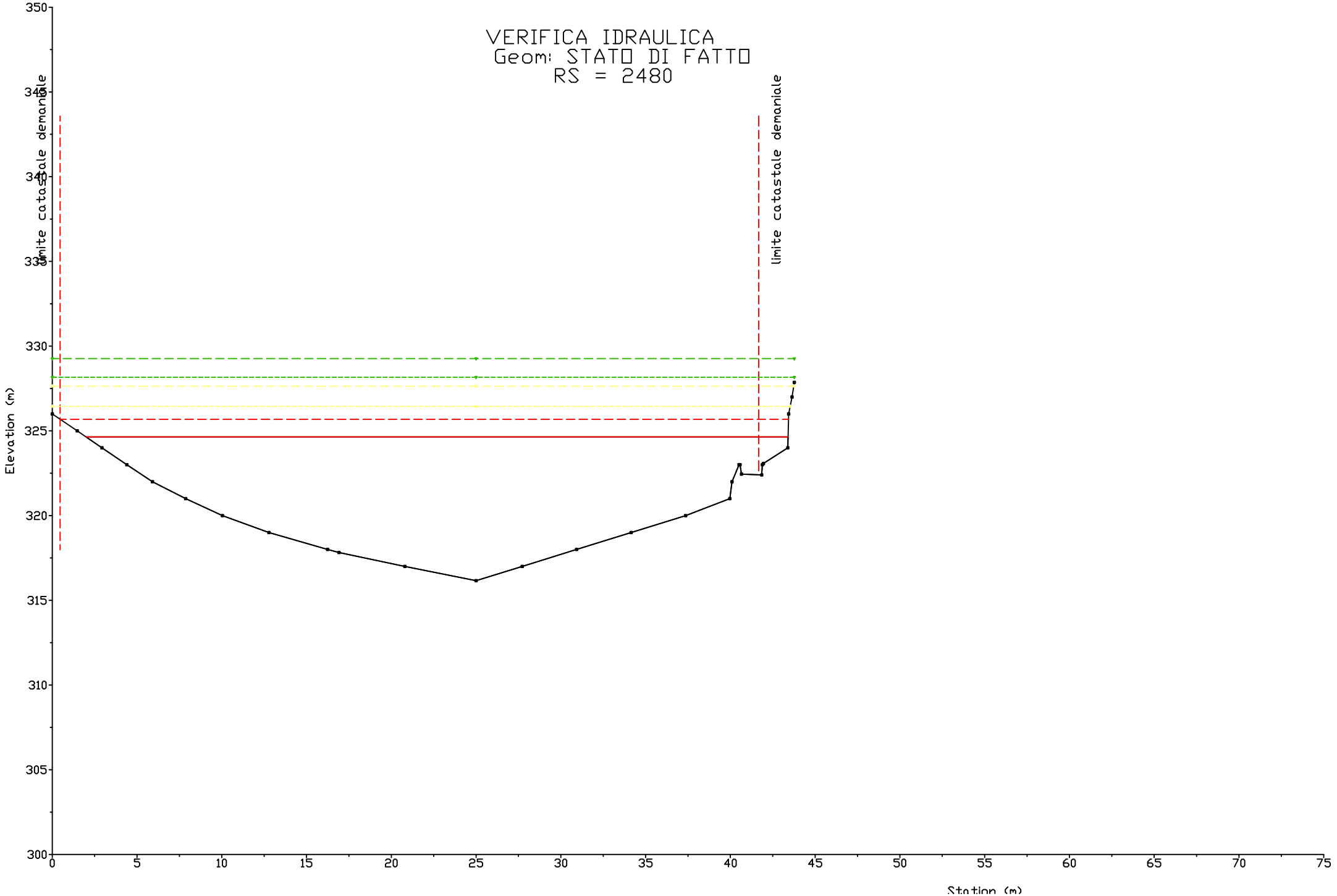

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2530
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
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50
55
60
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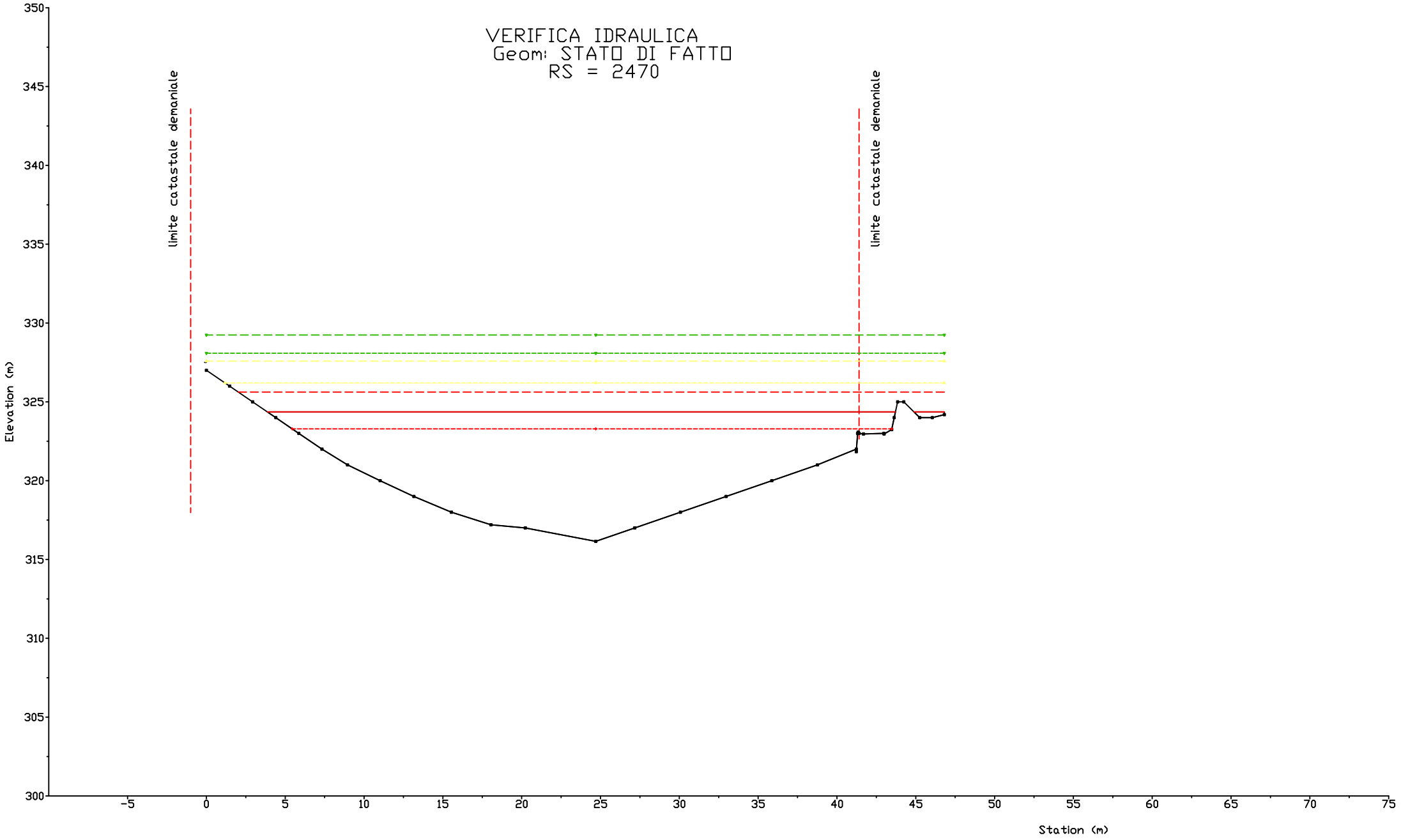

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2520
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
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345
340
335
330
325
320
315
310
305
300
-5
0
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70
75

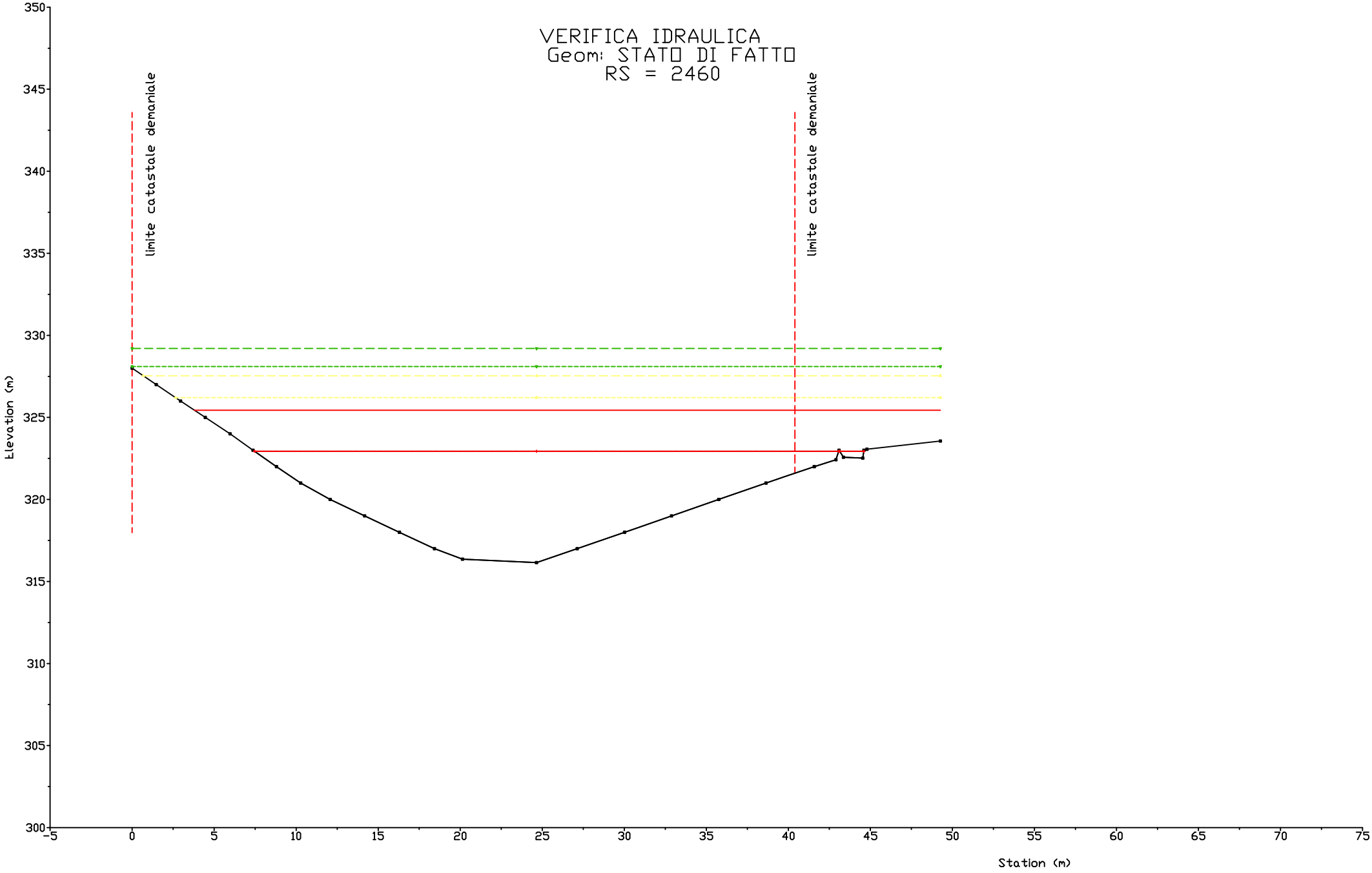

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2510
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
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345
340
335
330
325
320
315
310
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-5
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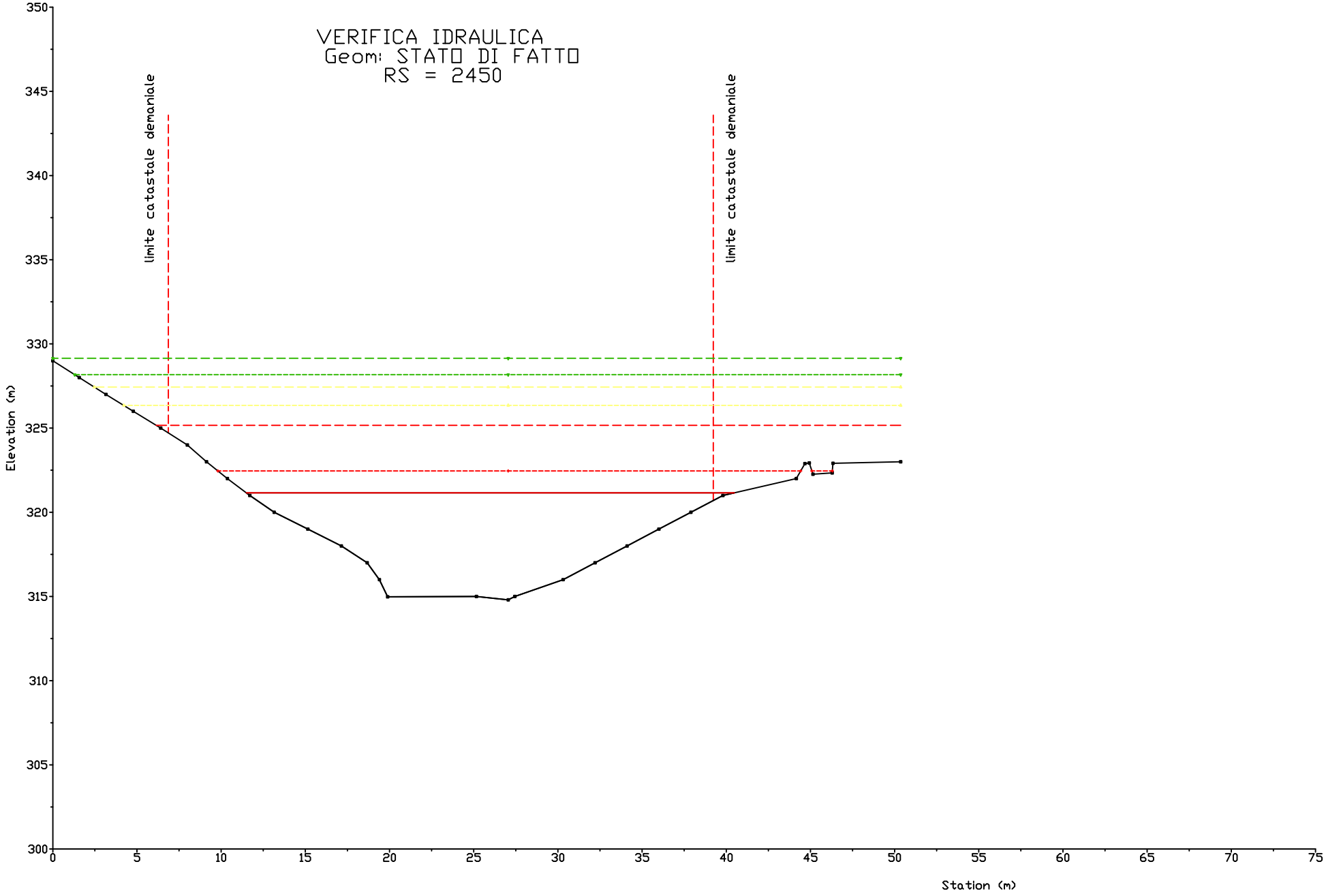

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2500
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
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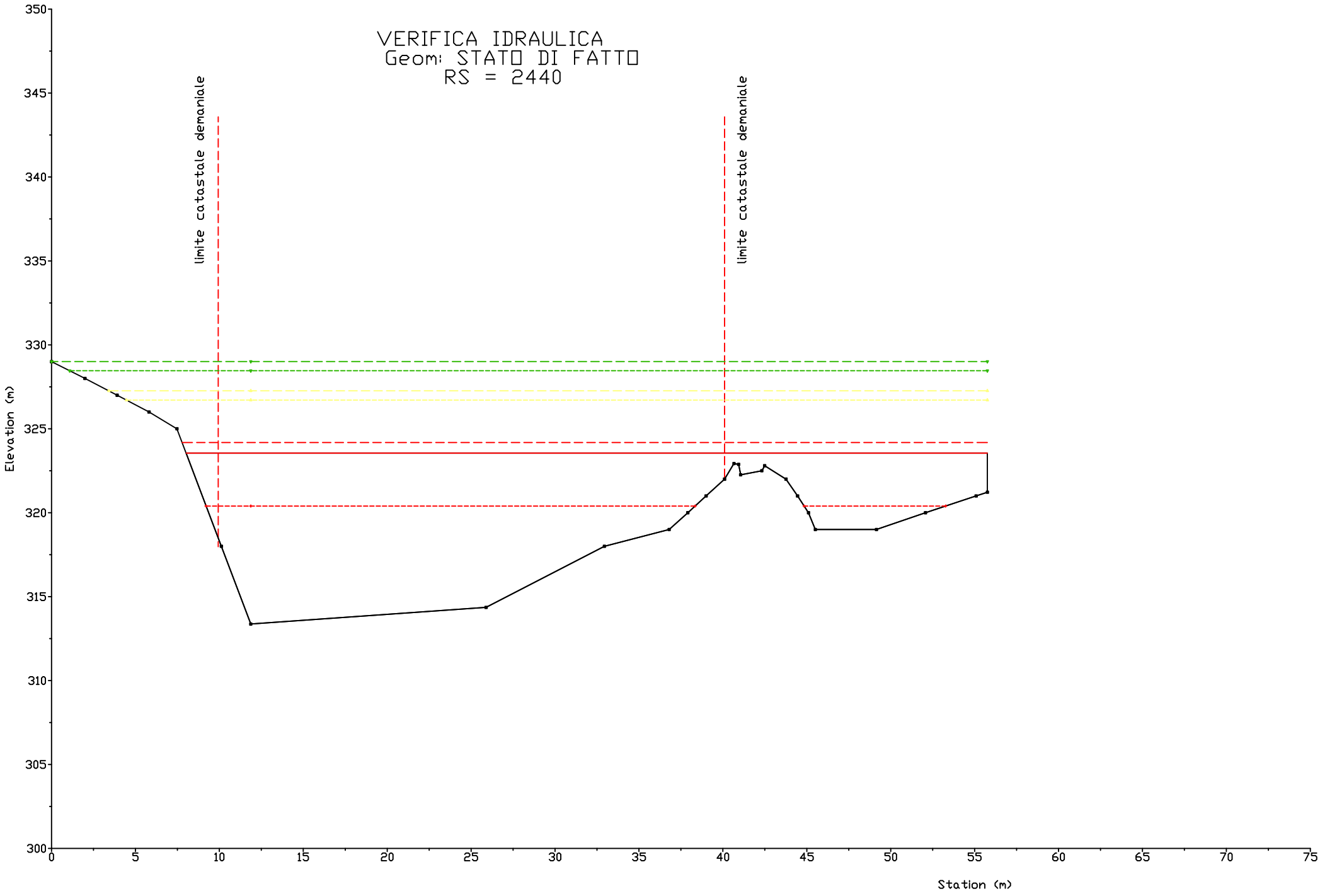

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2490
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

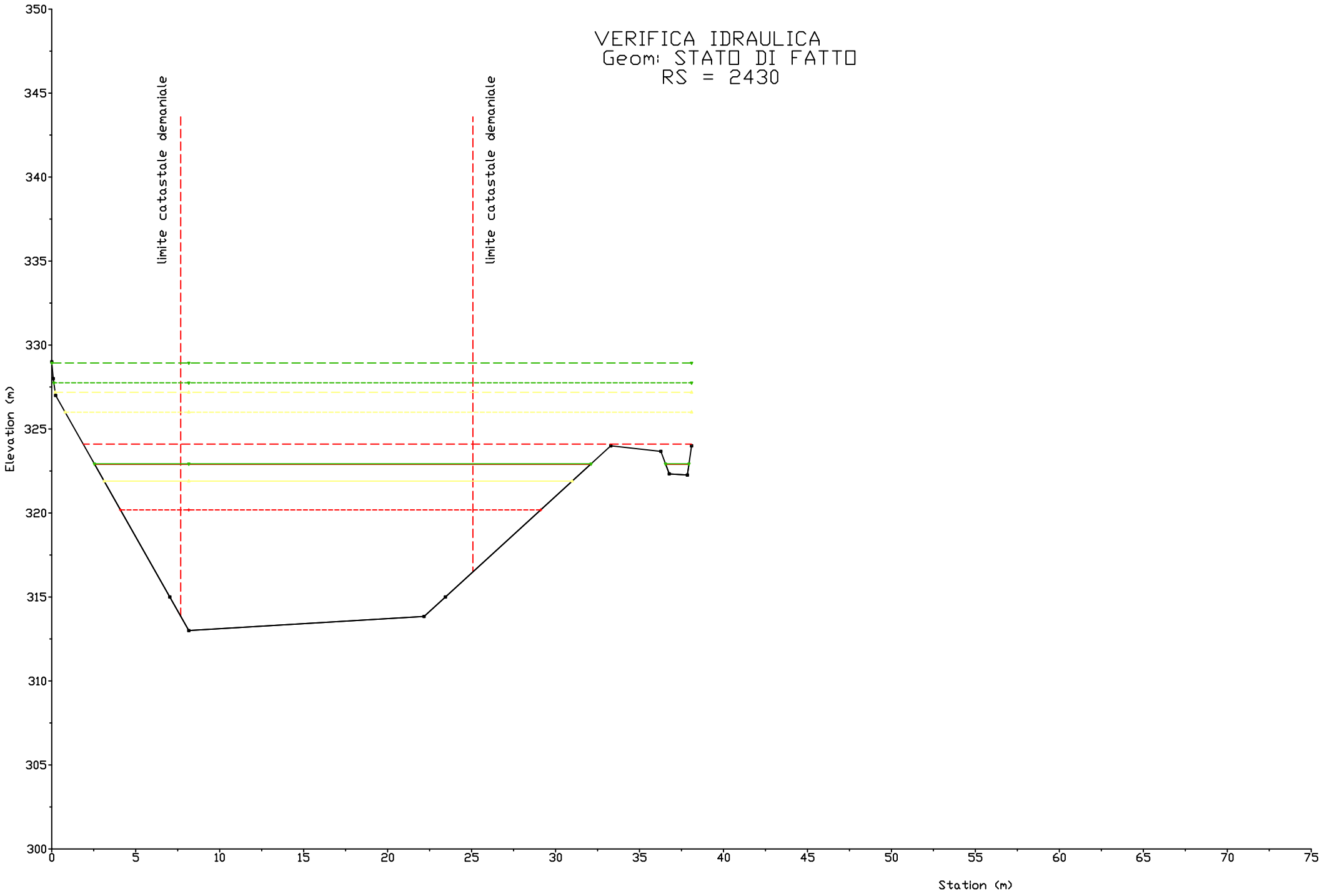

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2480
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

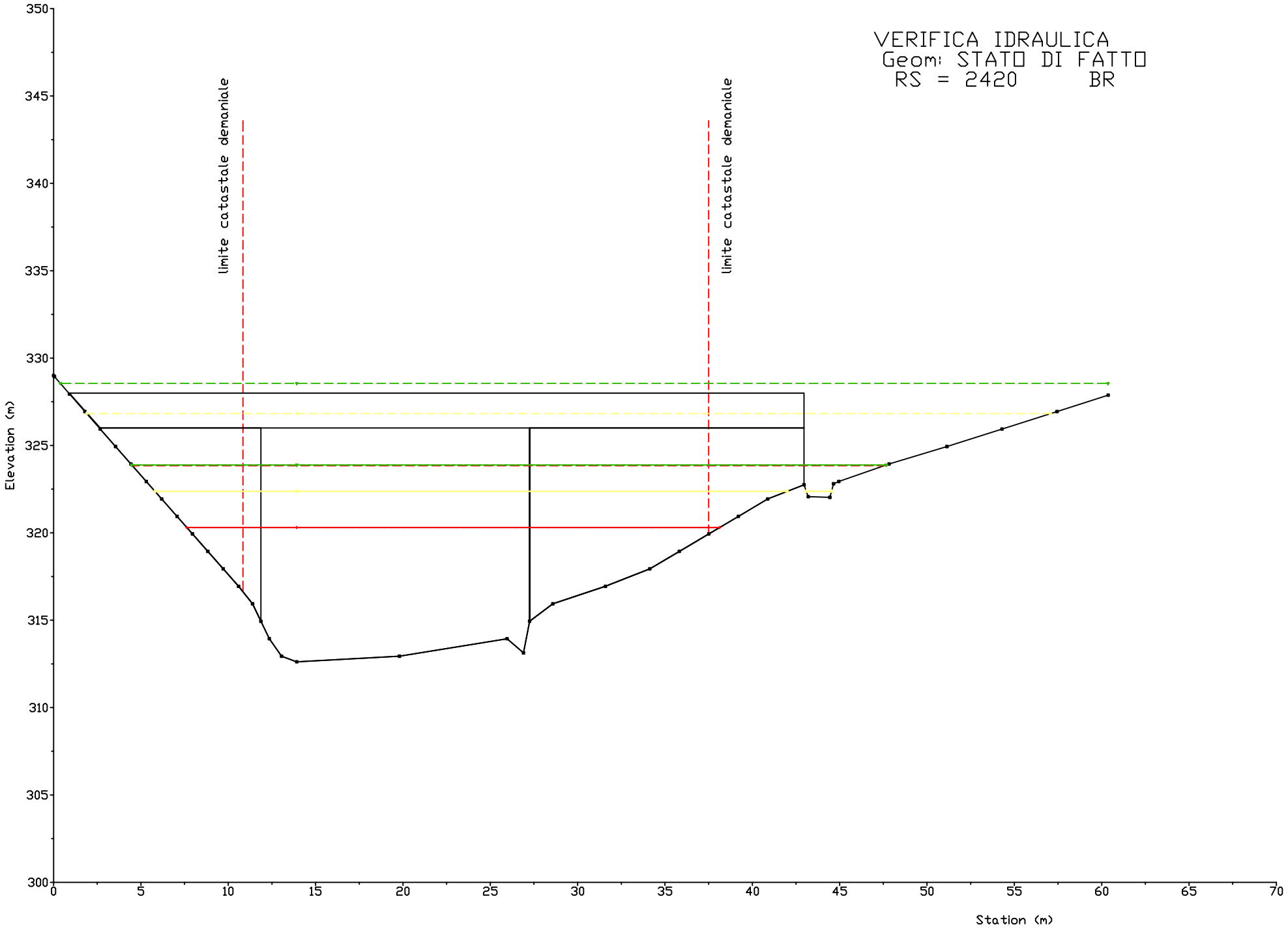

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2470
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
-5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

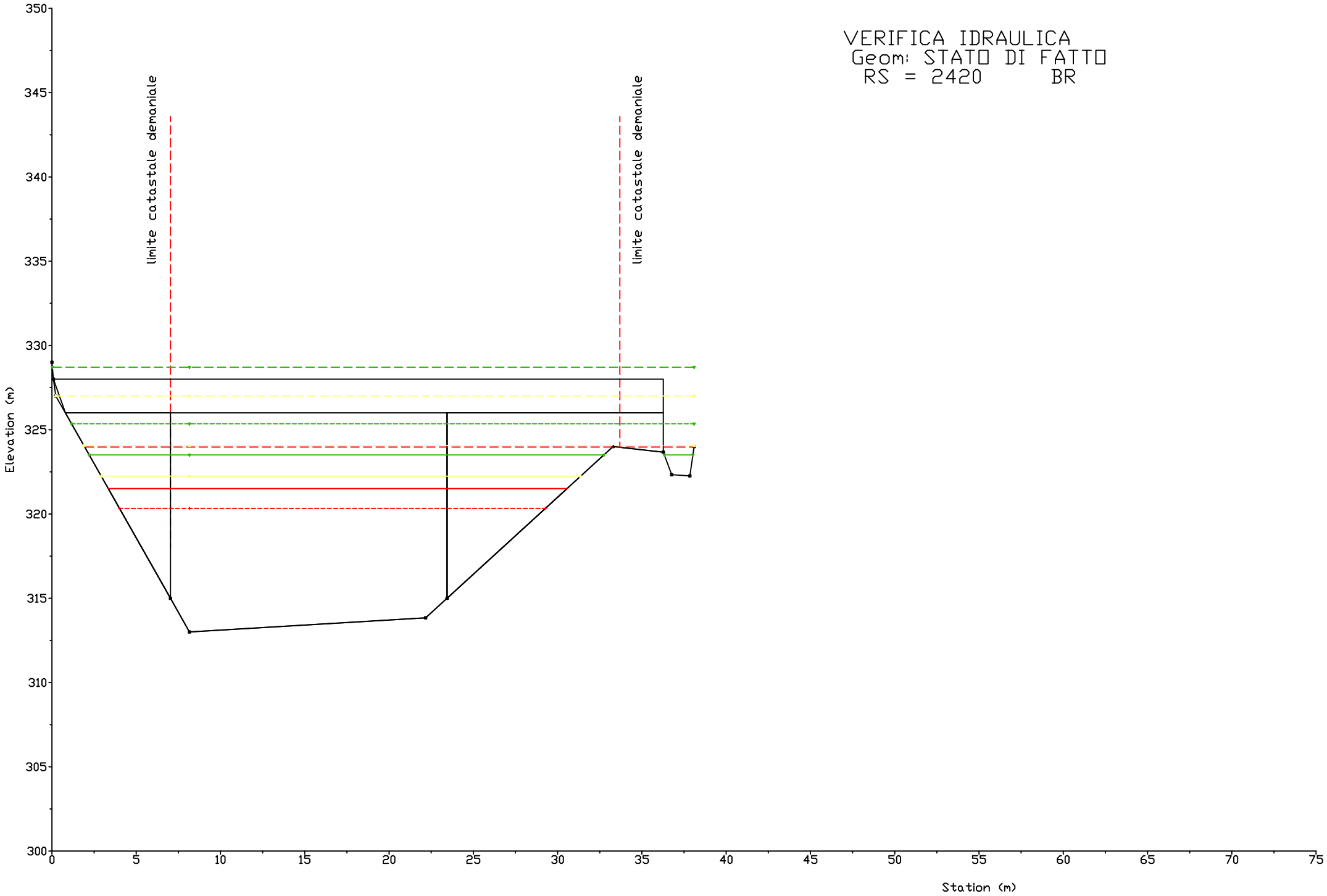

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2460
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
-5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

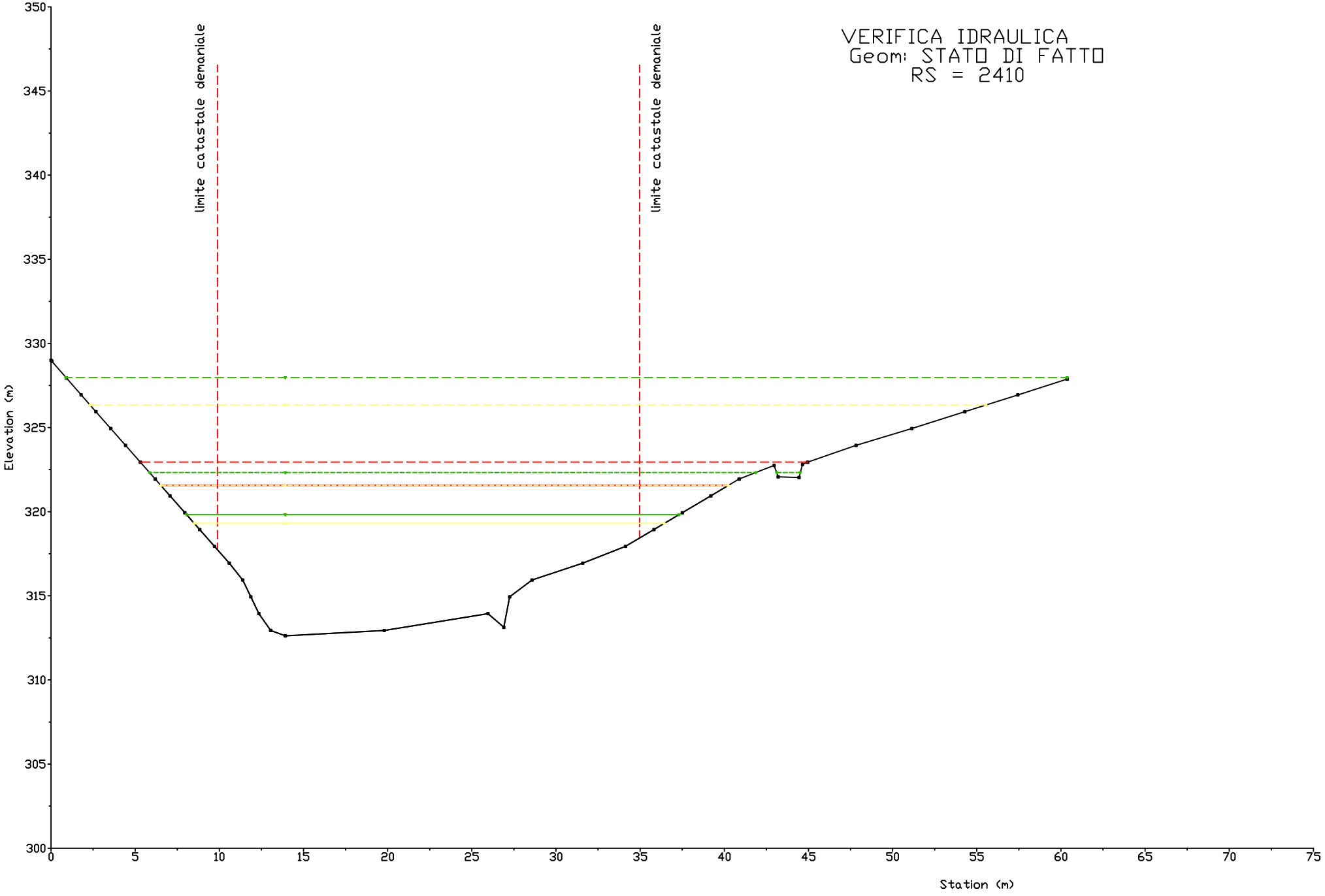

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2450
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

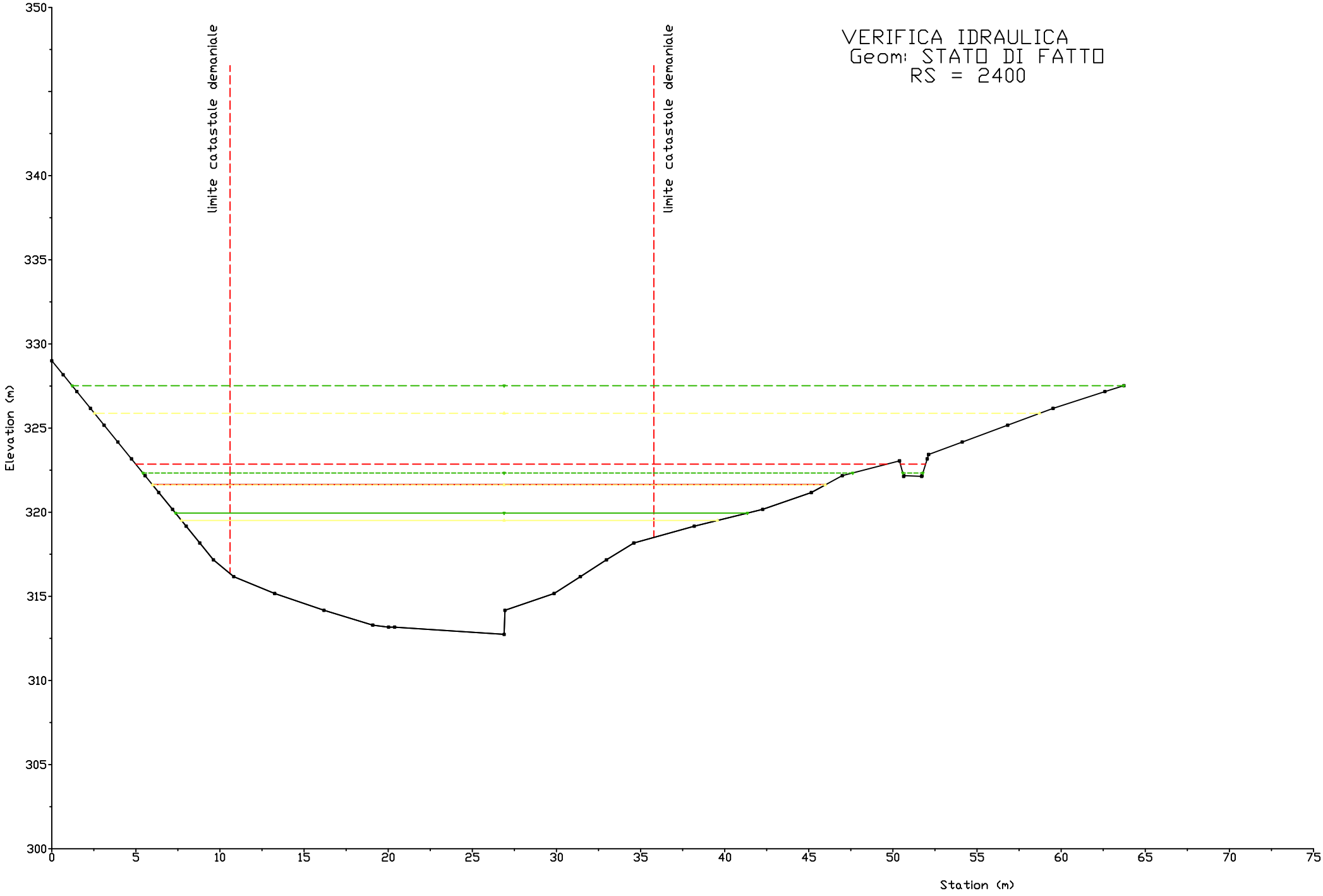

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2440
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
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70
75

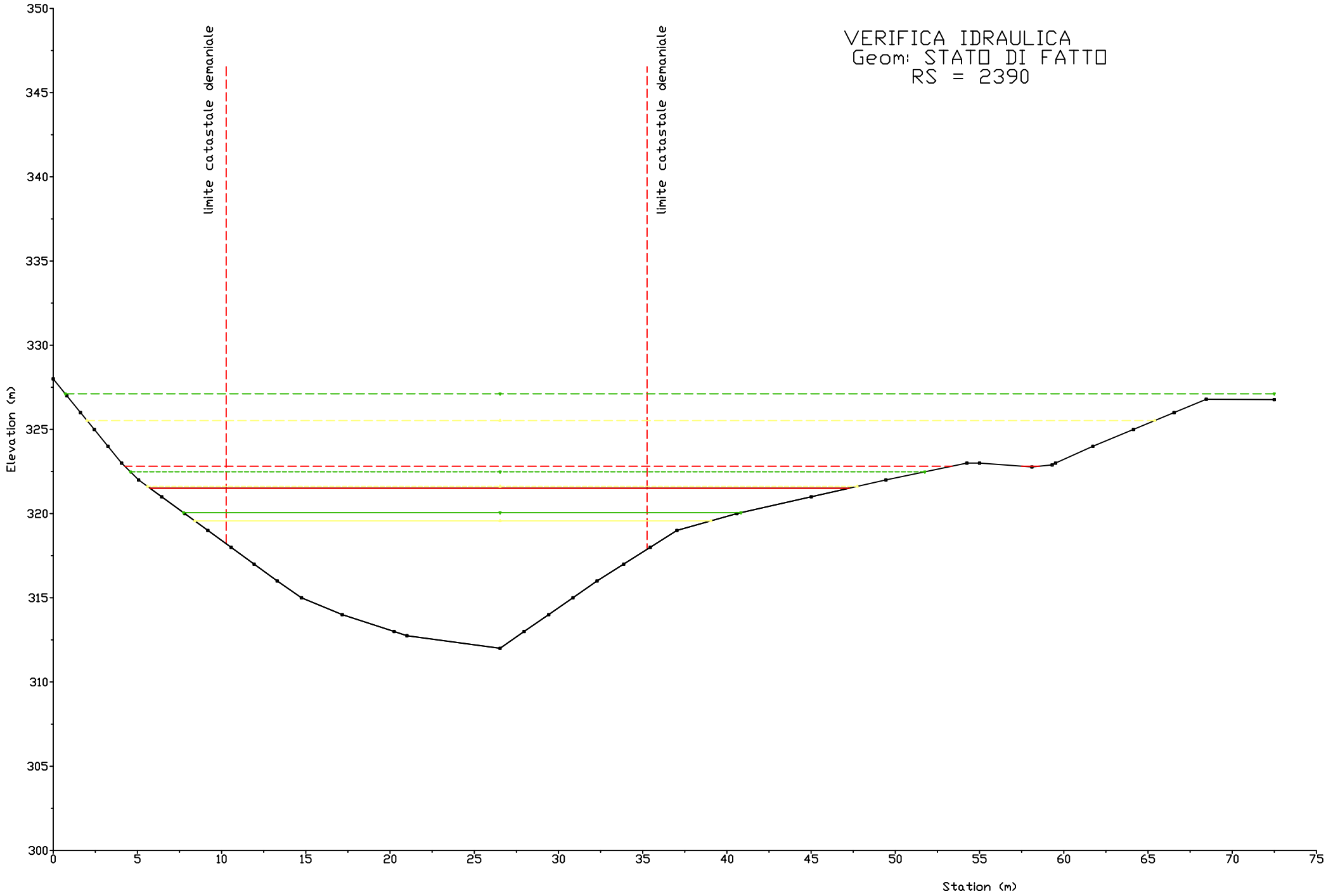

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2430
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

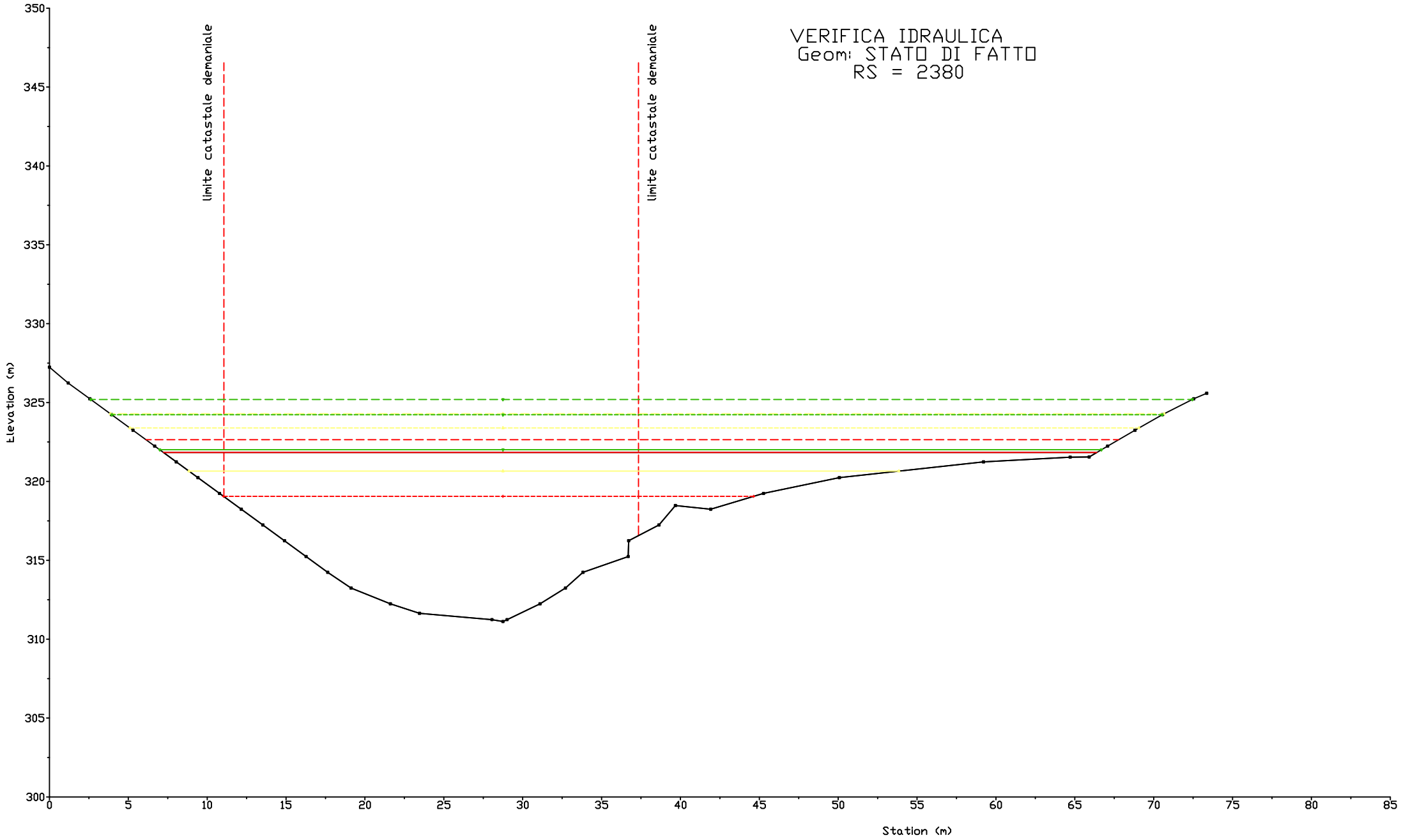

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2420 BR
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70

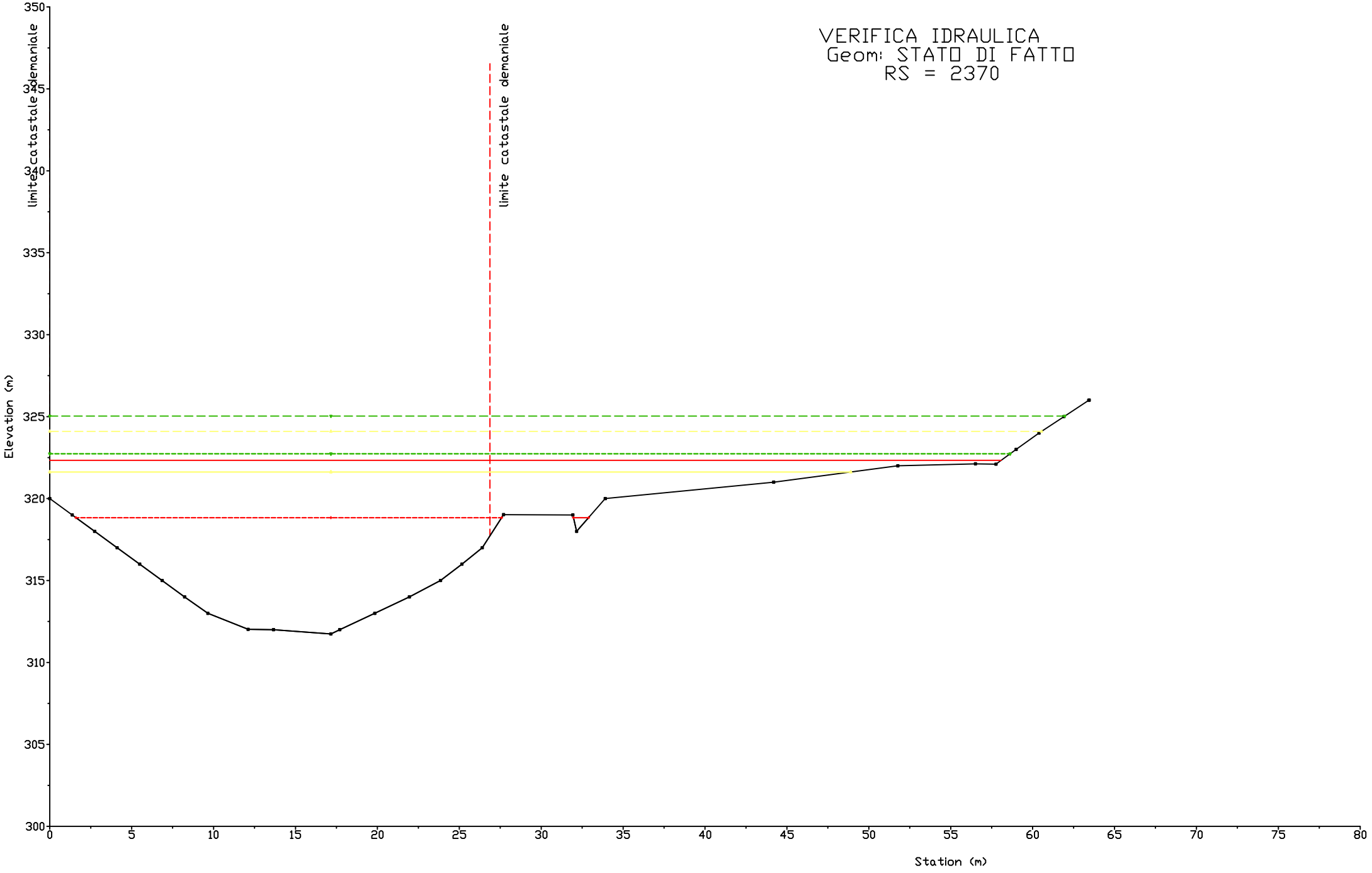

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2420 BR
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

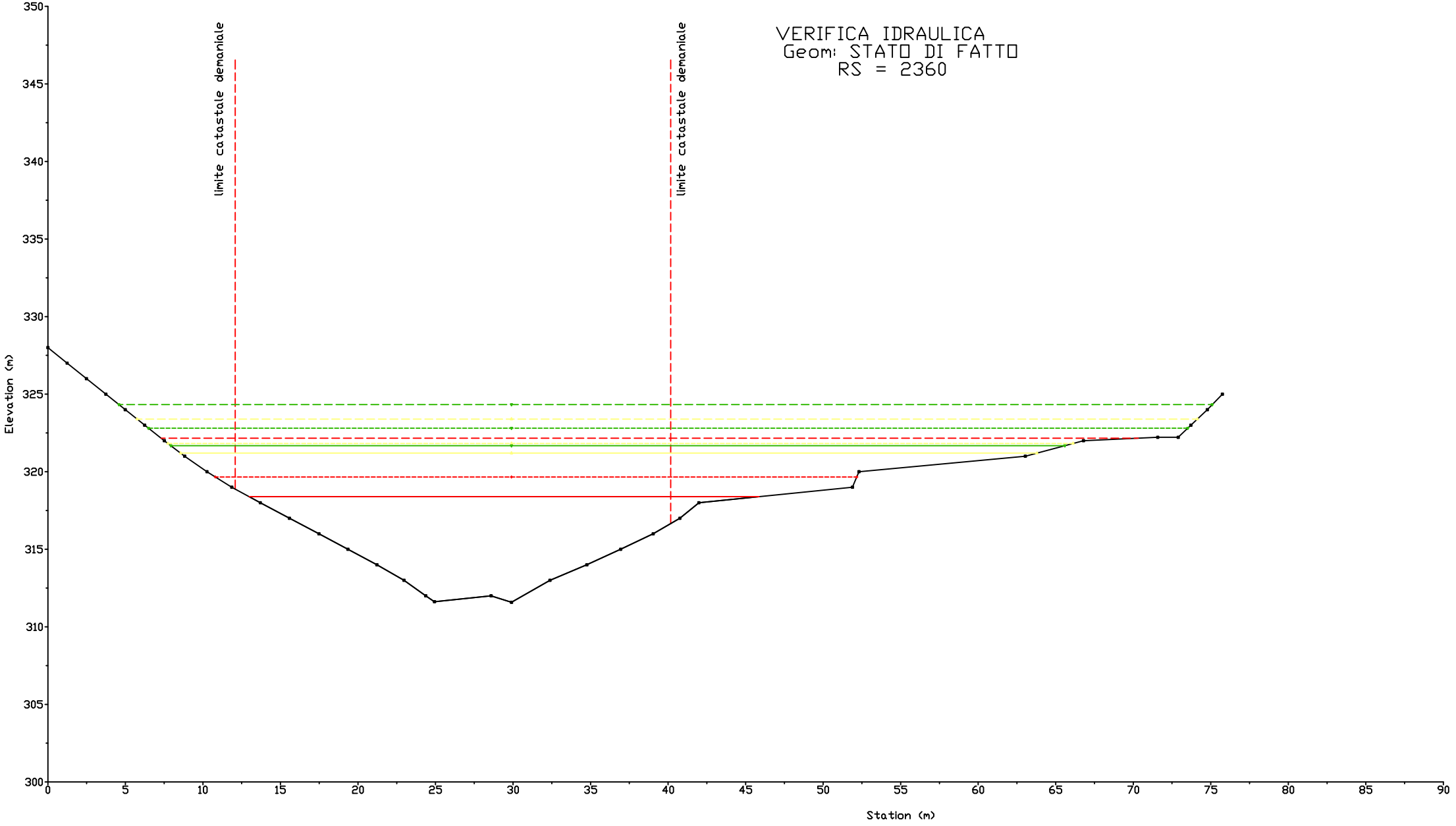

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2410
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

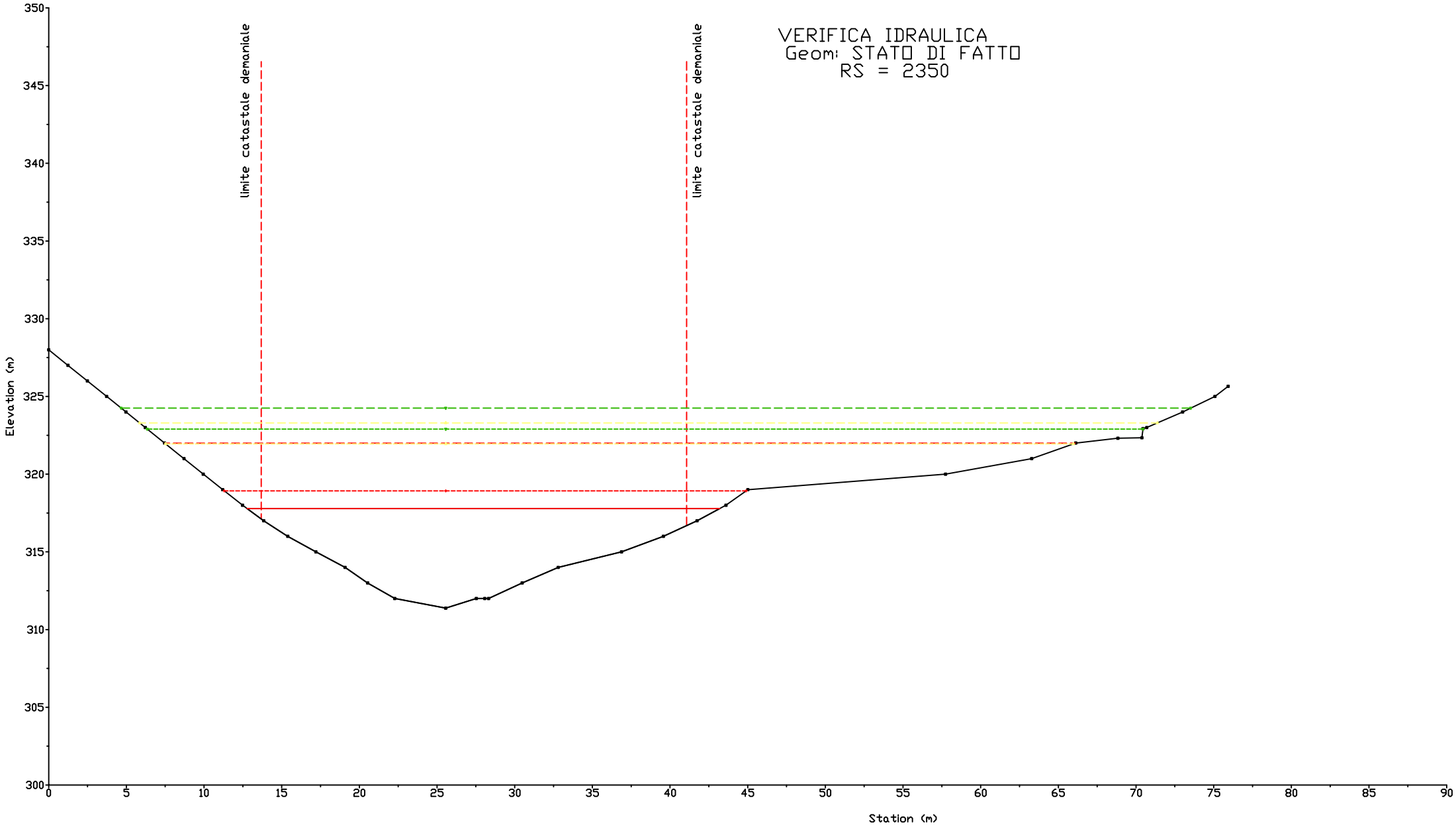

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2400
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

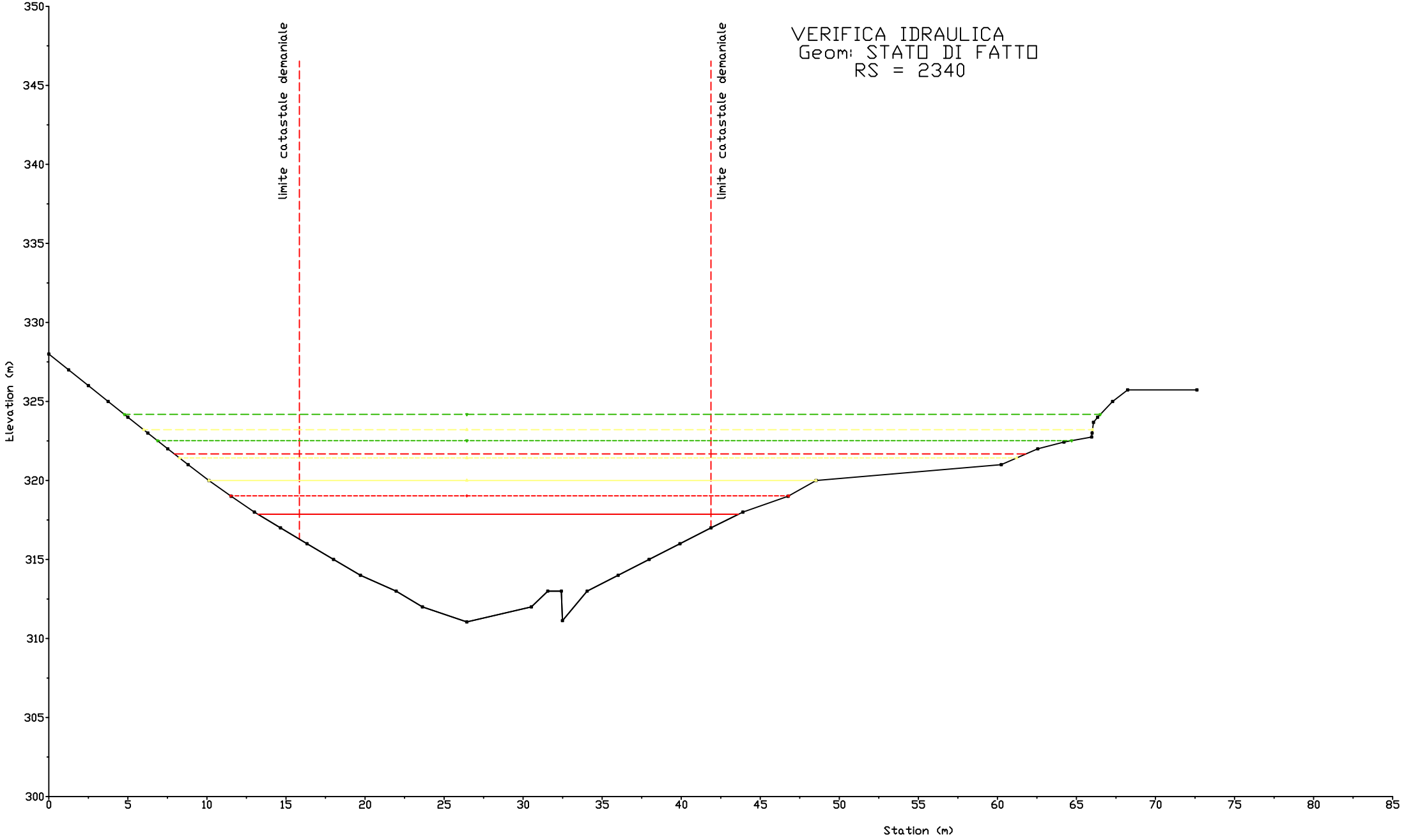

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2390
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

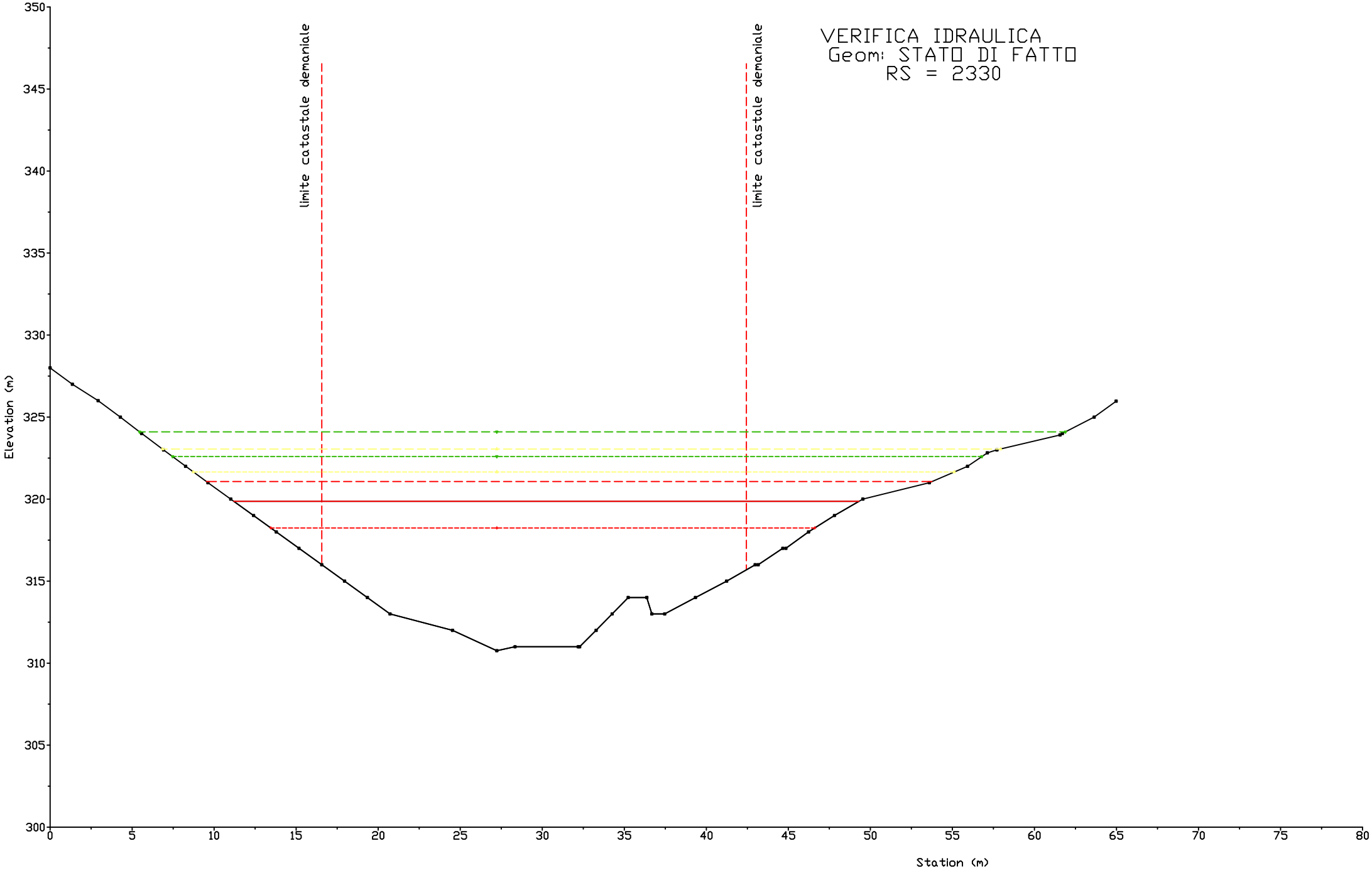

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2380
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

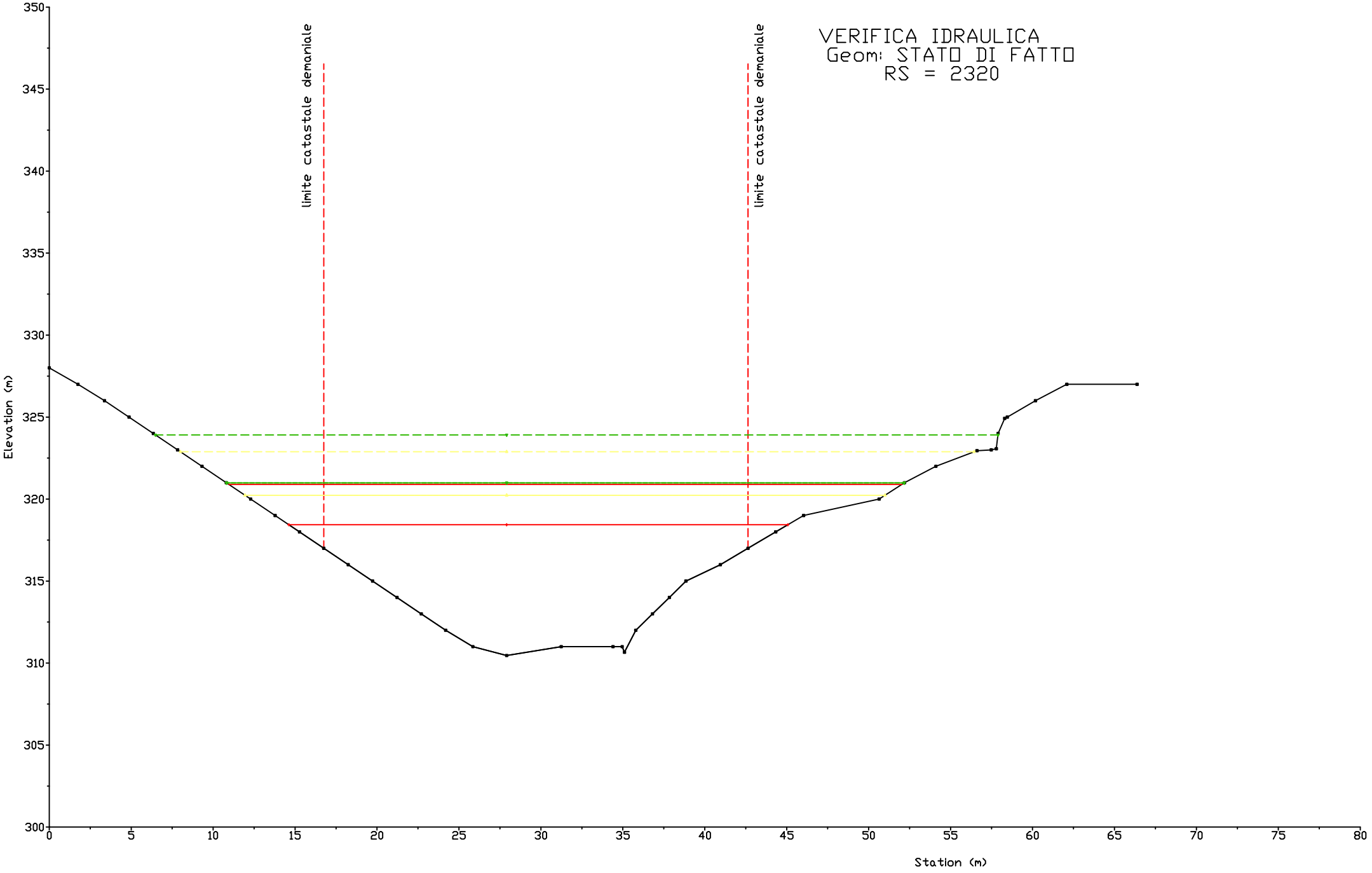

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2370
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

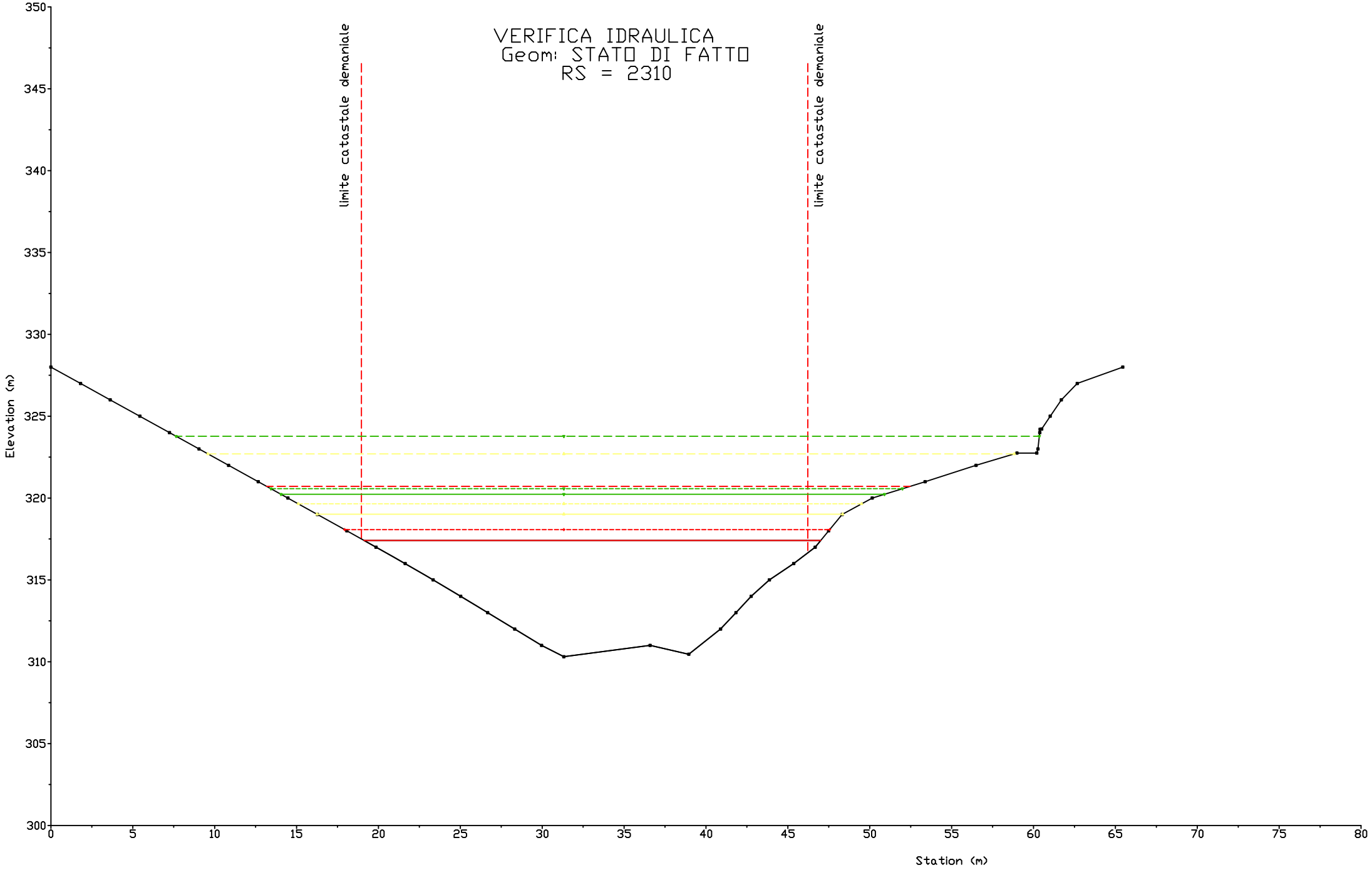

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2360
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90

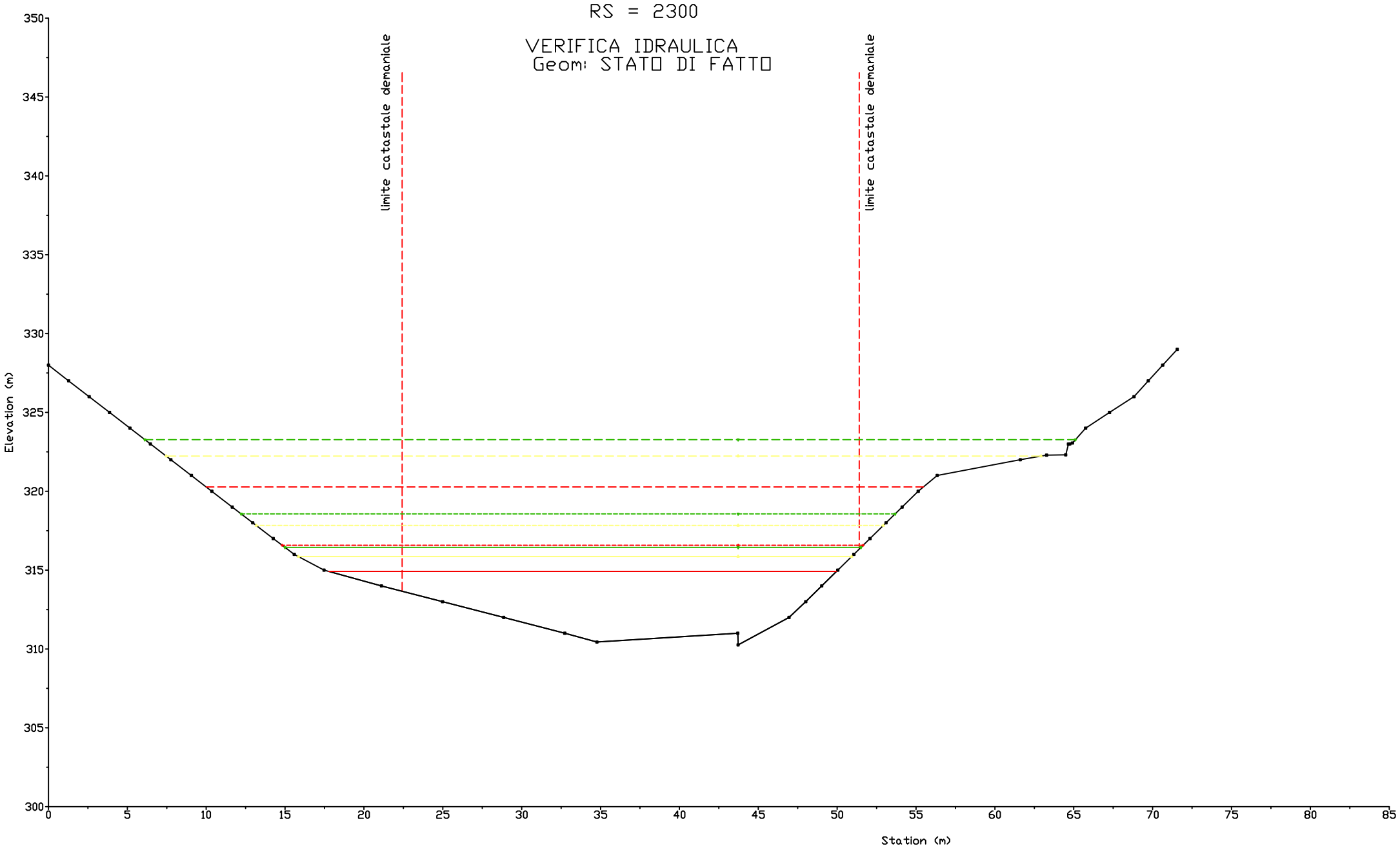

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2350
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90

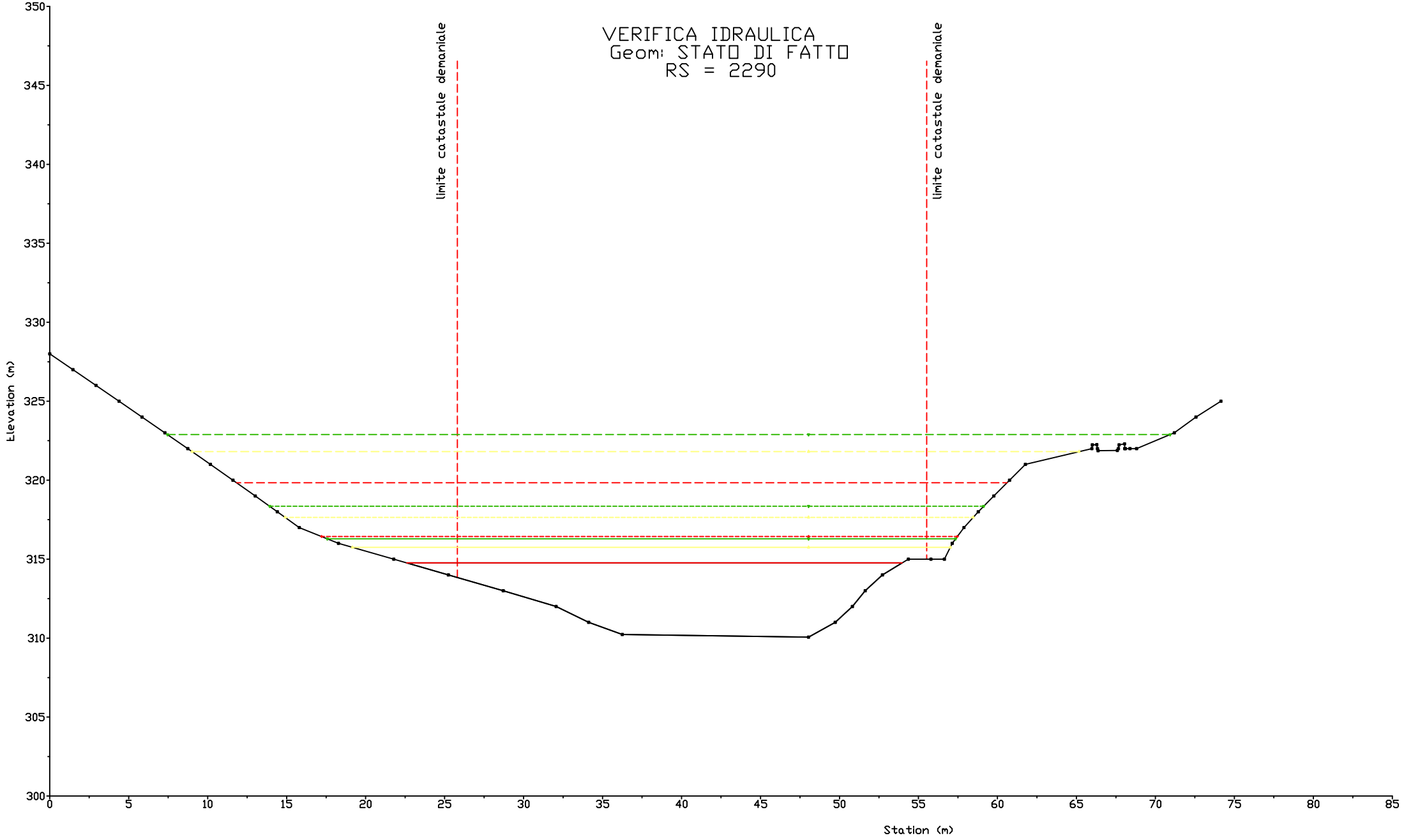

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2340
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

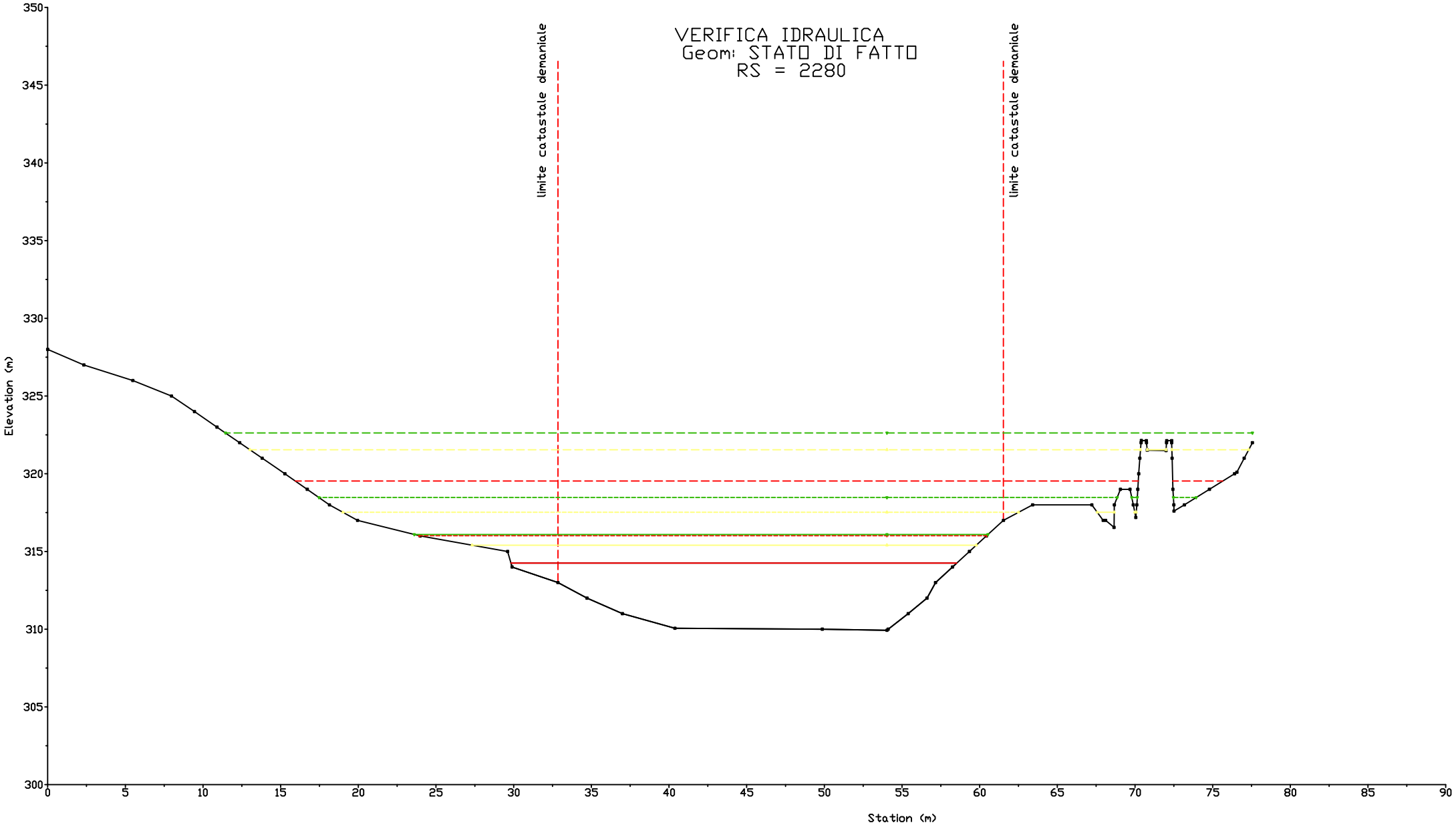

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2330
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

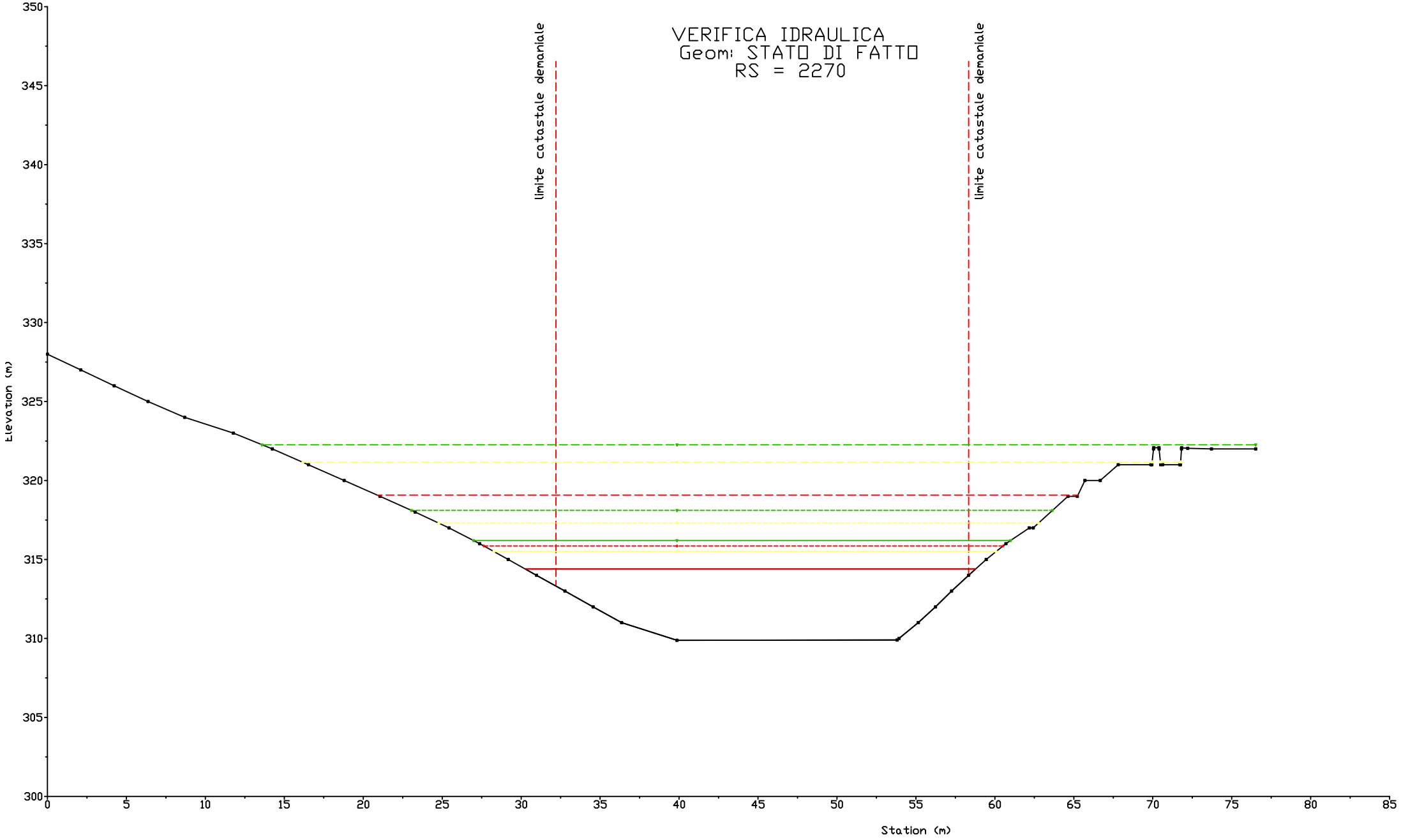

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2320
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

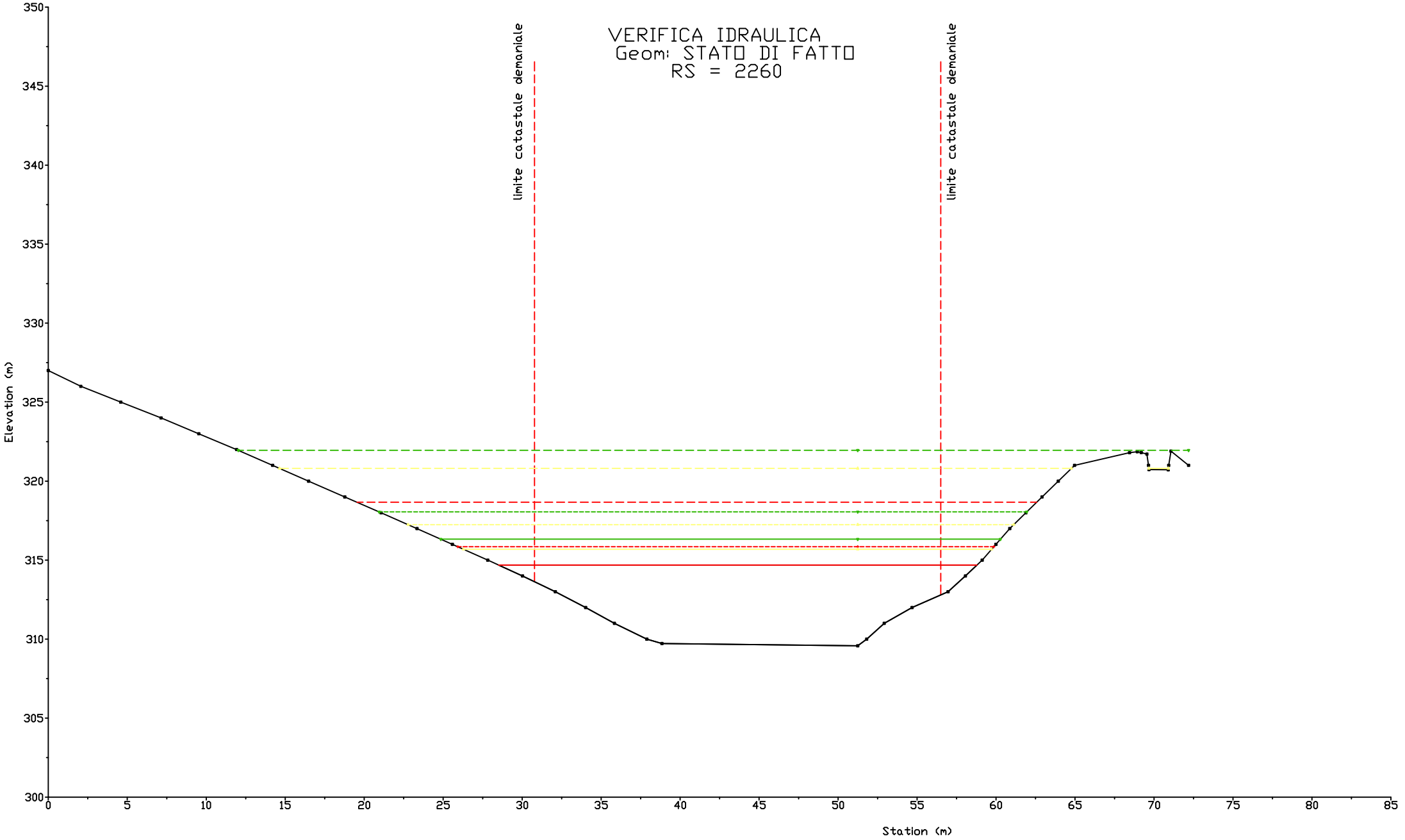

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2310
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

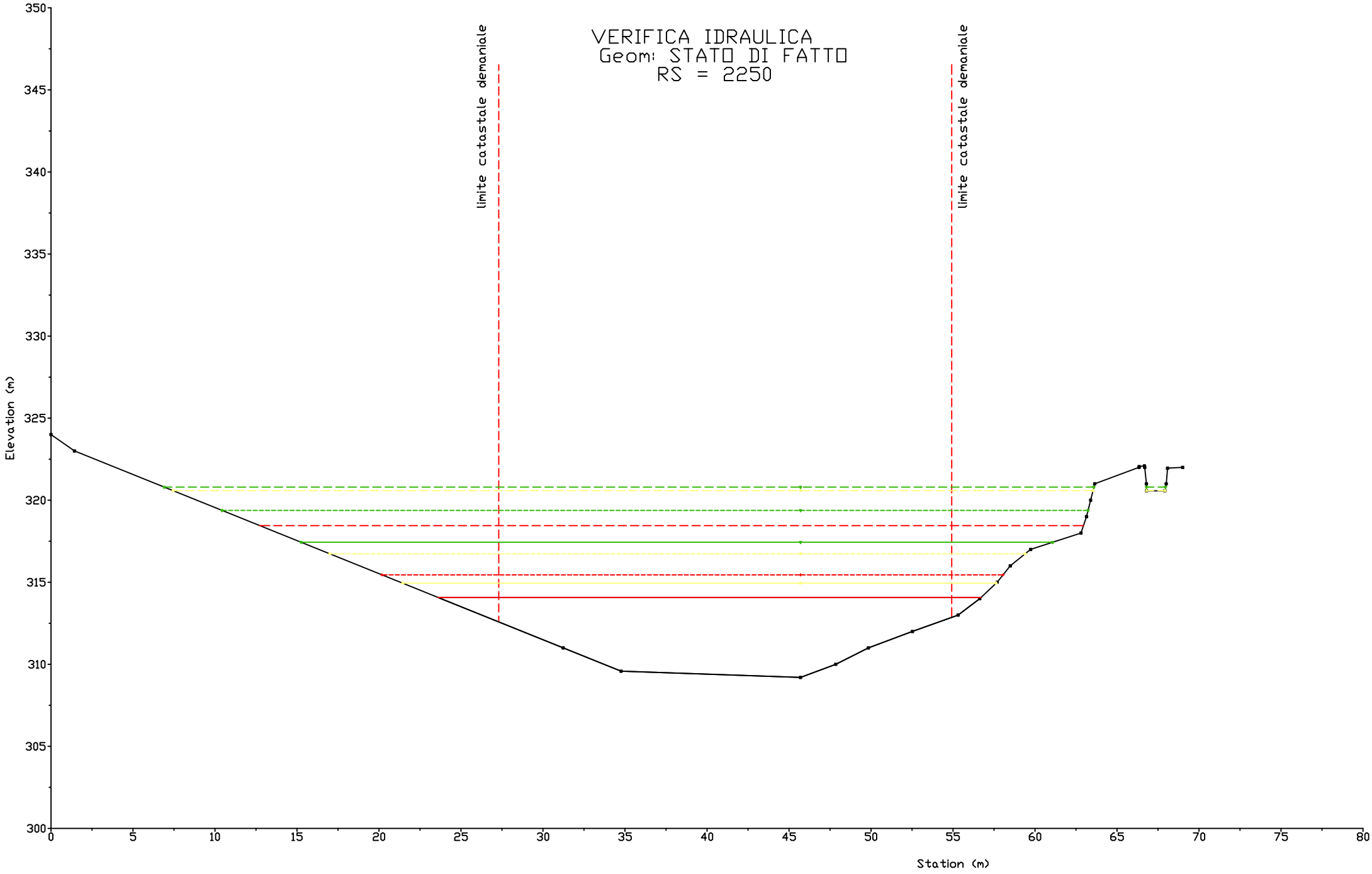

RS = 2300
VERIFICA IDRAULICA
Geom: STATO DI FATTO
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

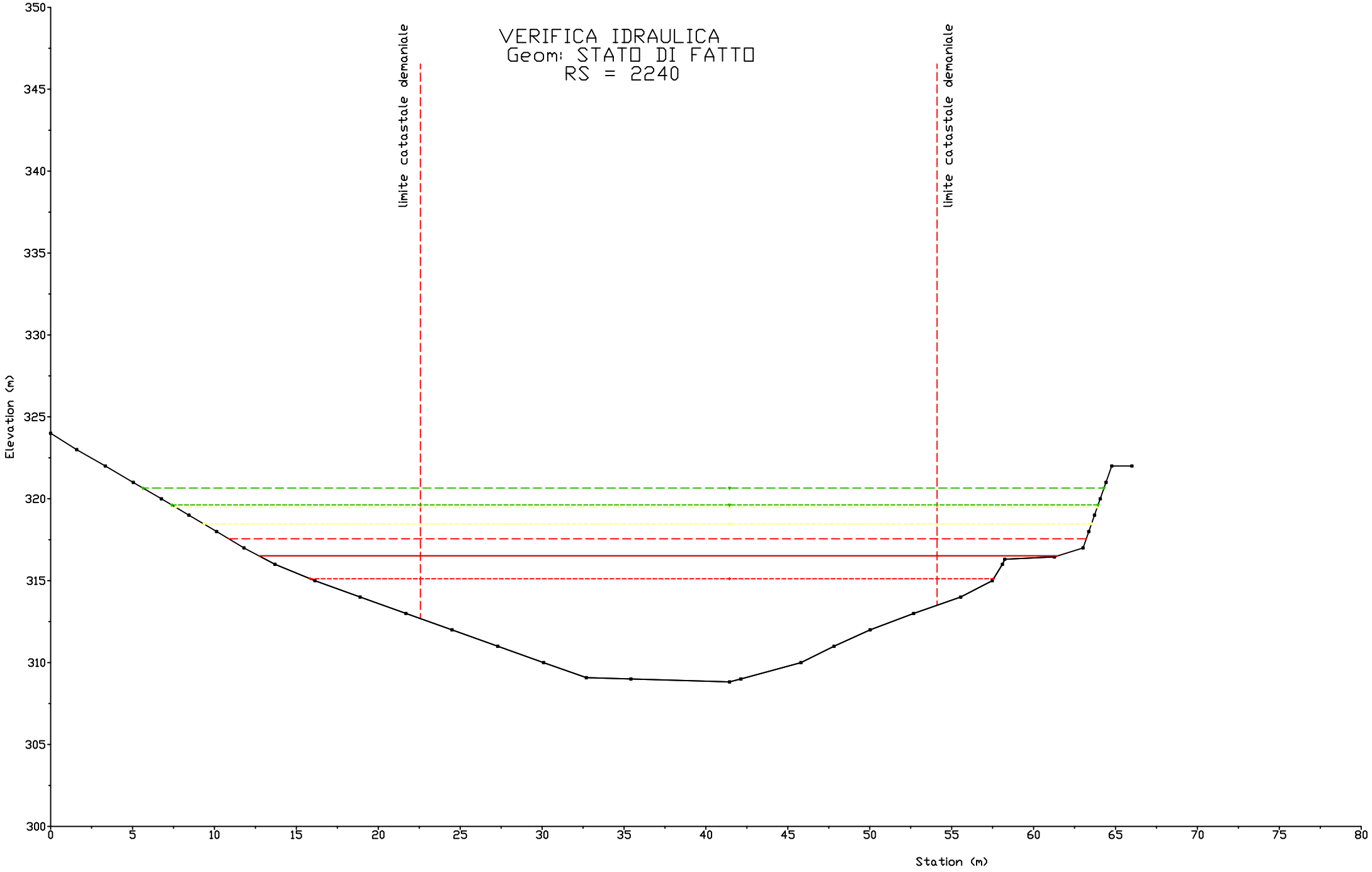

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2290
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
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70
75
80
85

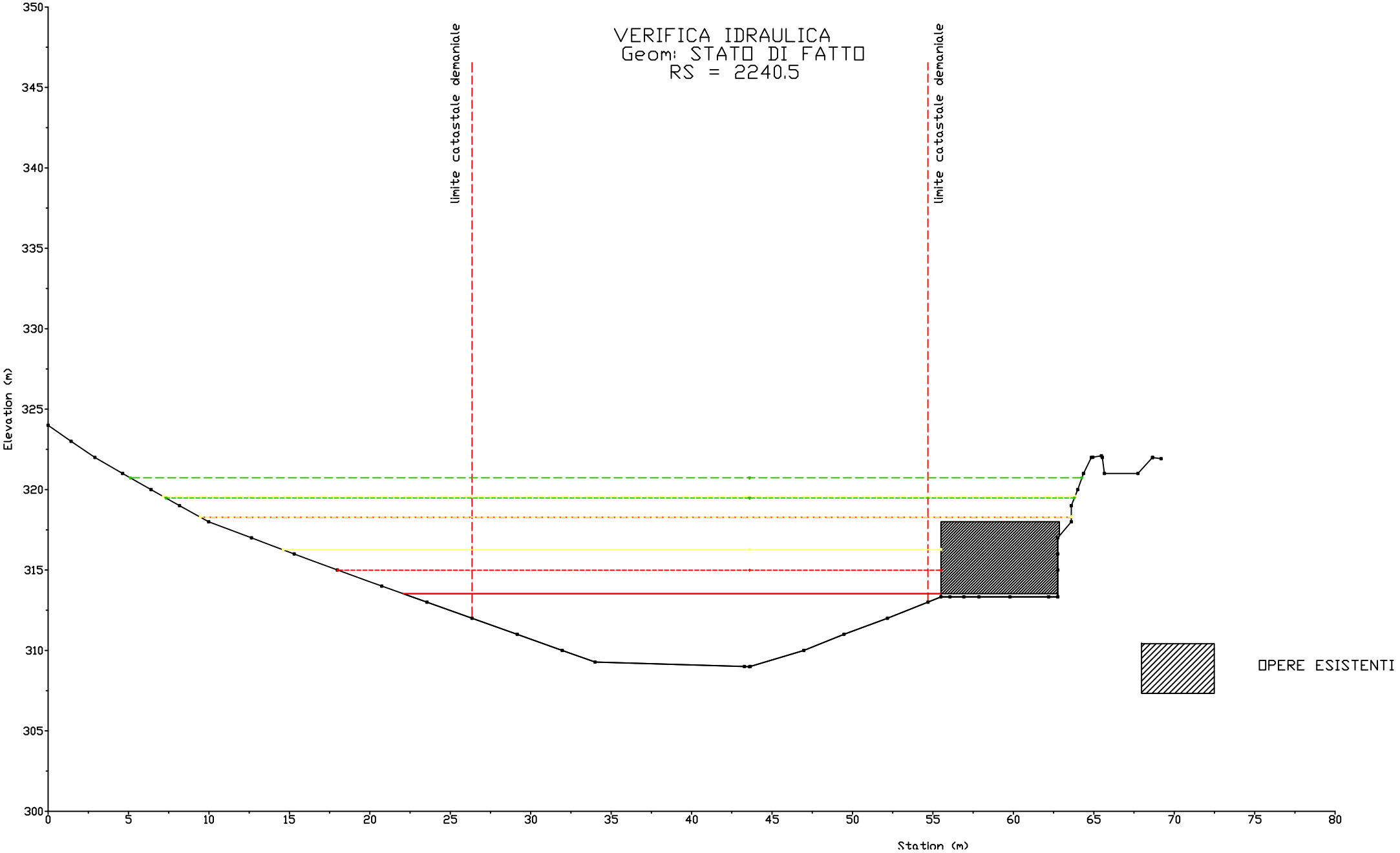

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2280
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90

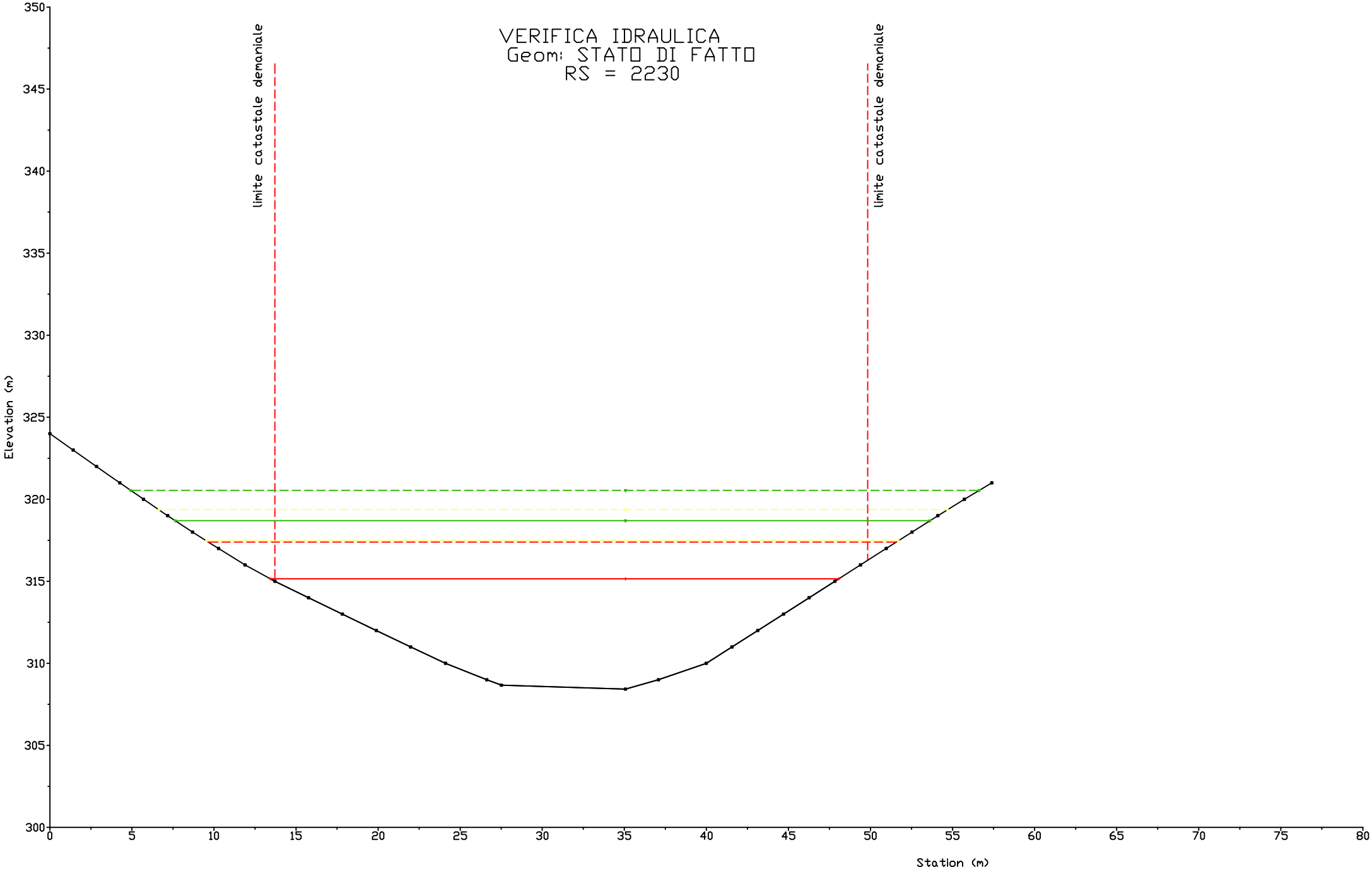

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2270
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

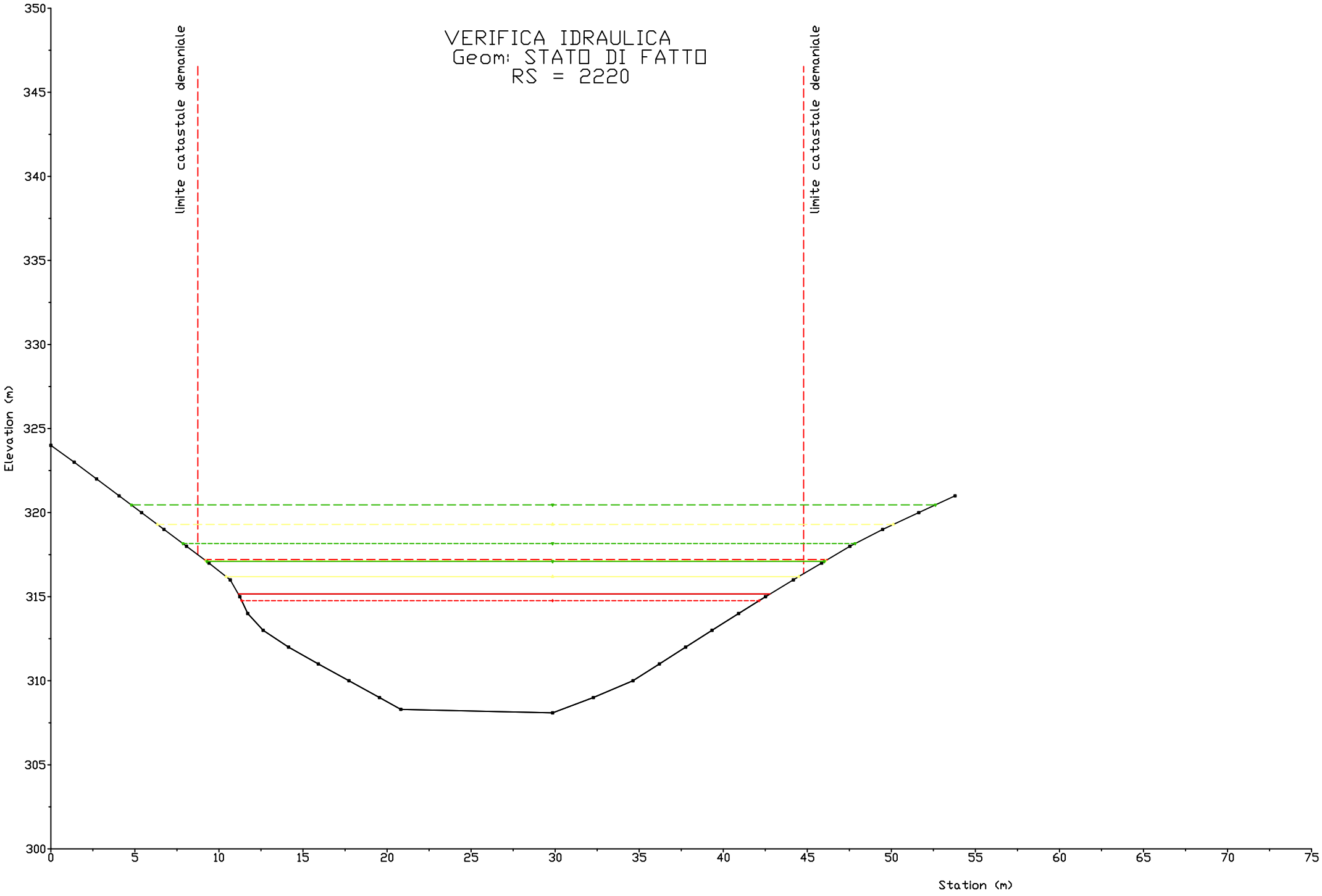

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2260
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
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85

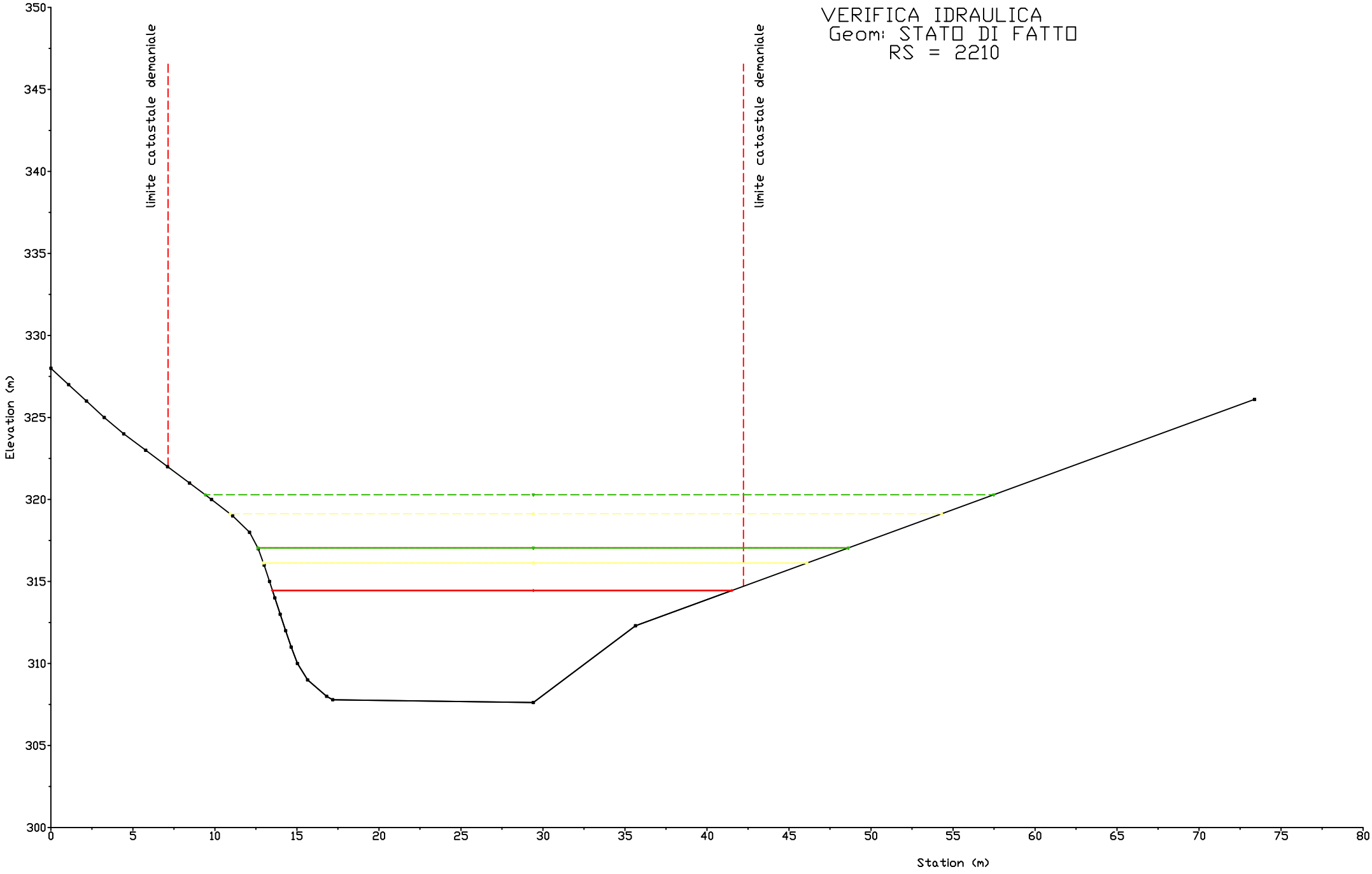

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2250
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
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80

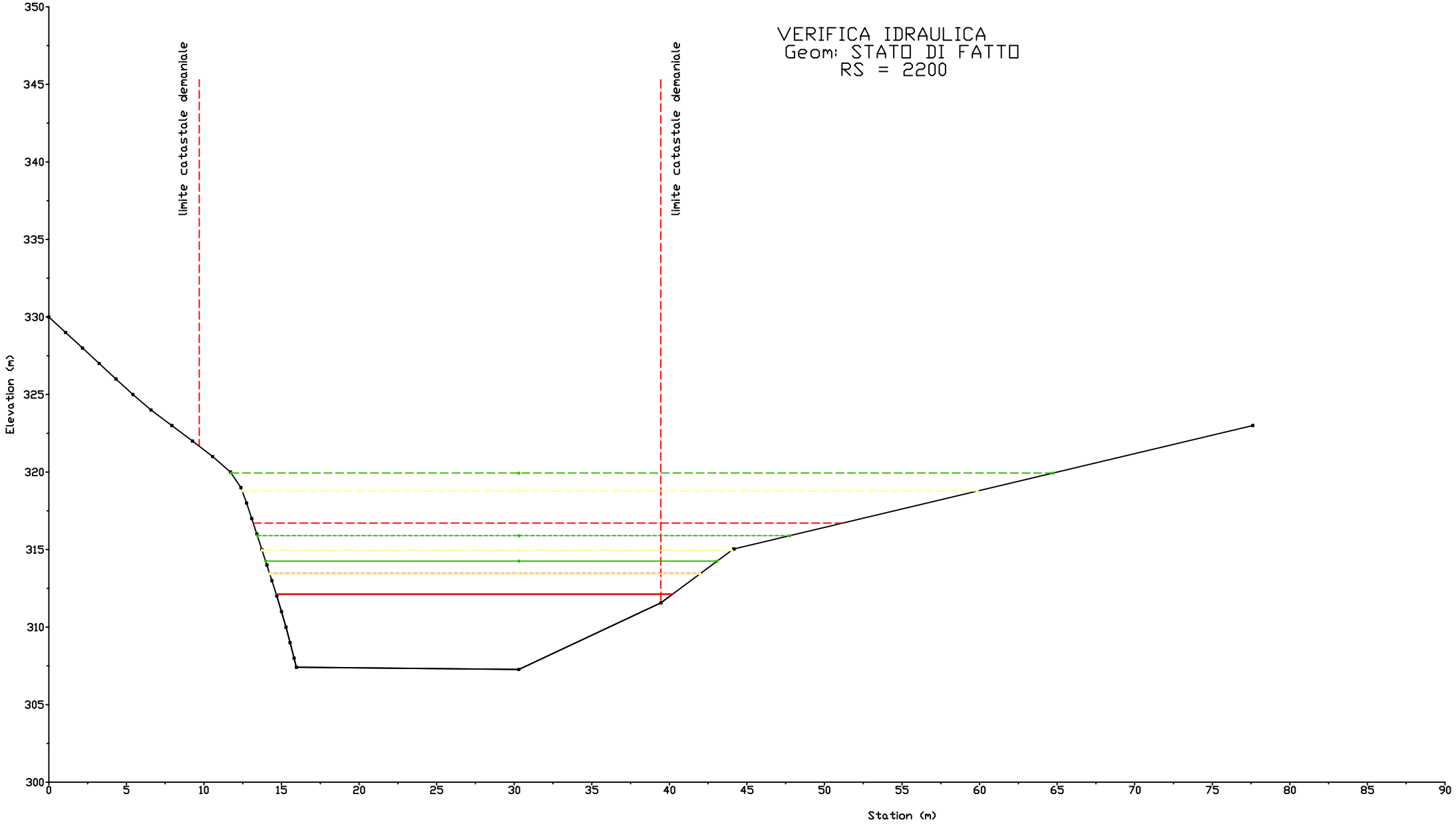

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2240
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

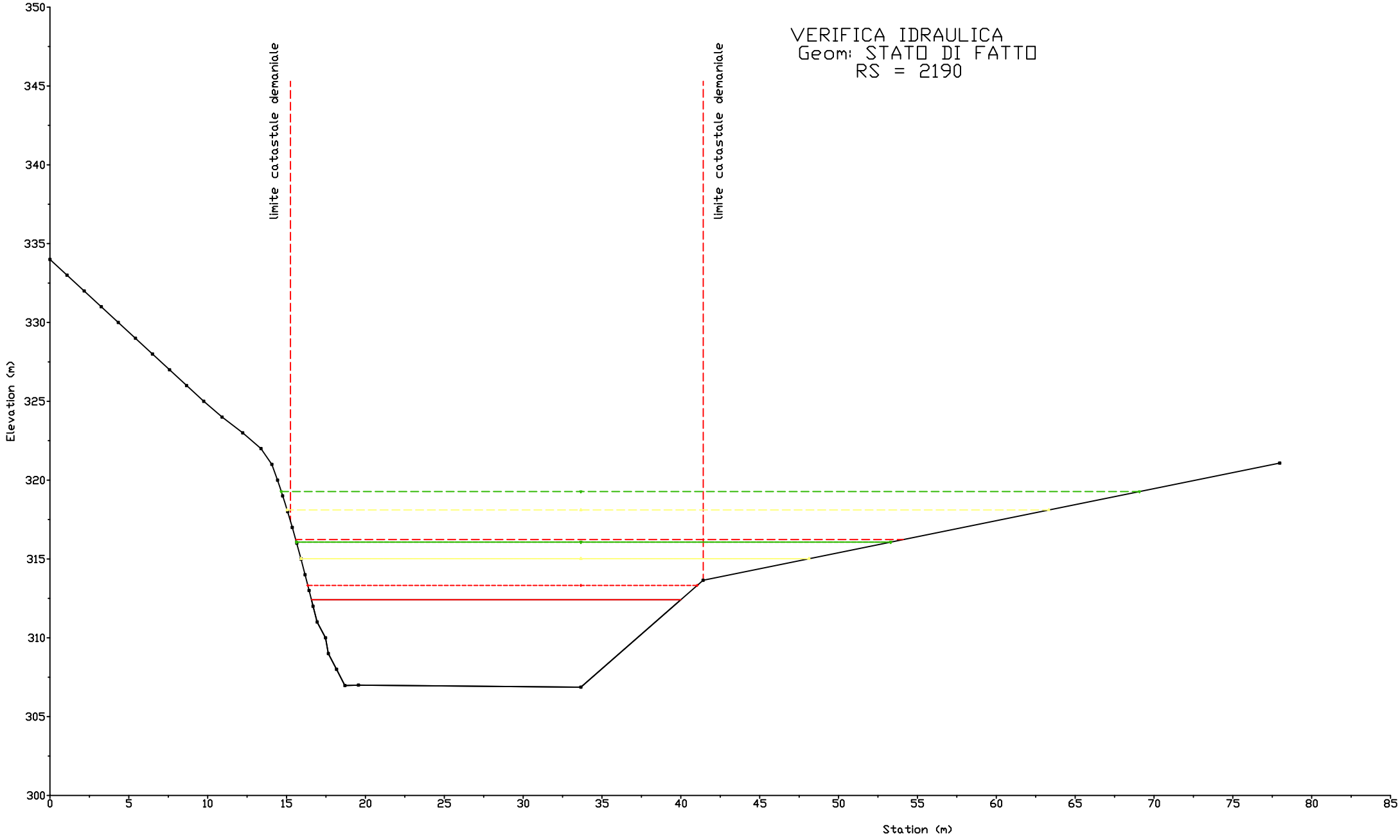

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2240.5
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
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40
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OPERE ESISTENTI

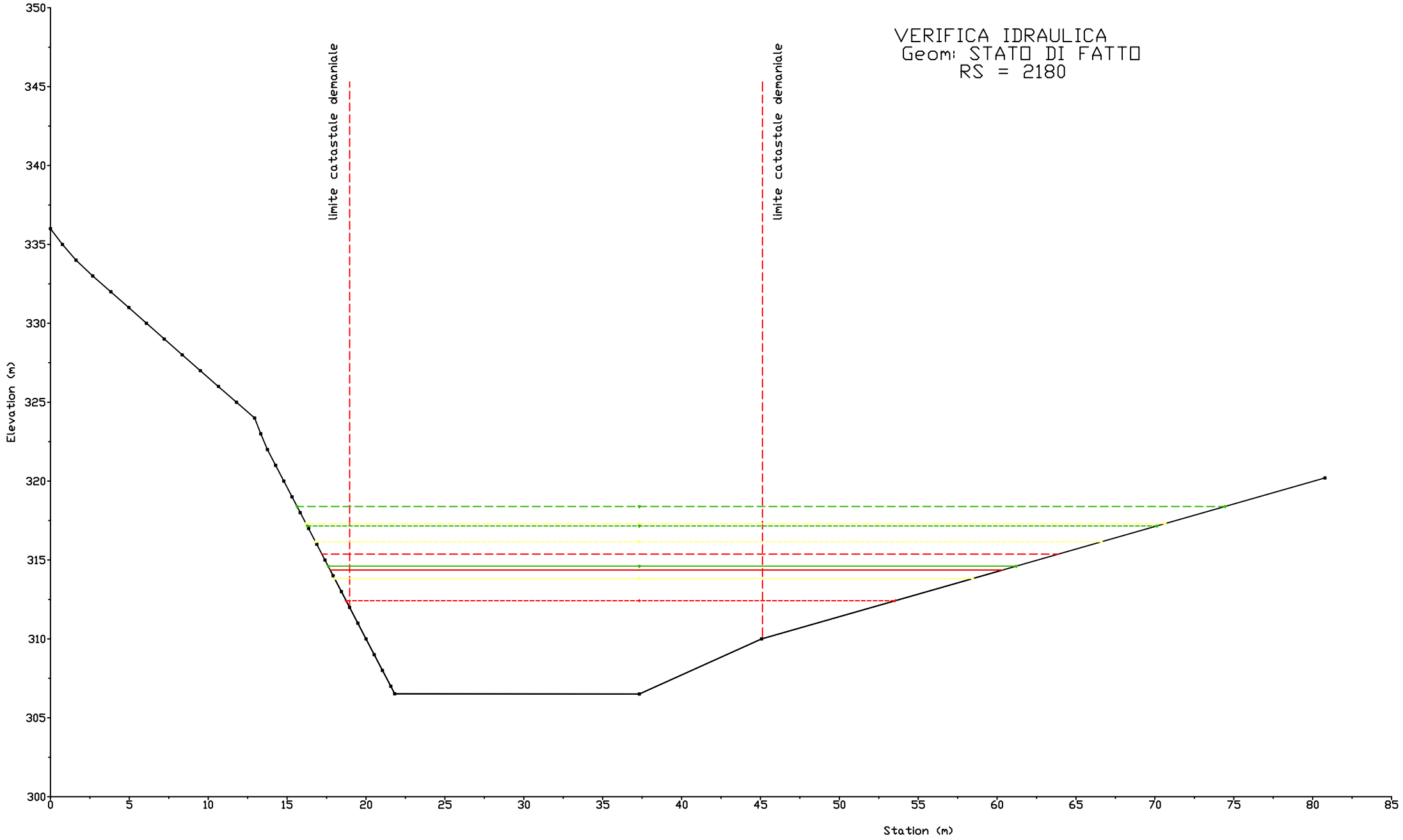

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2230
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

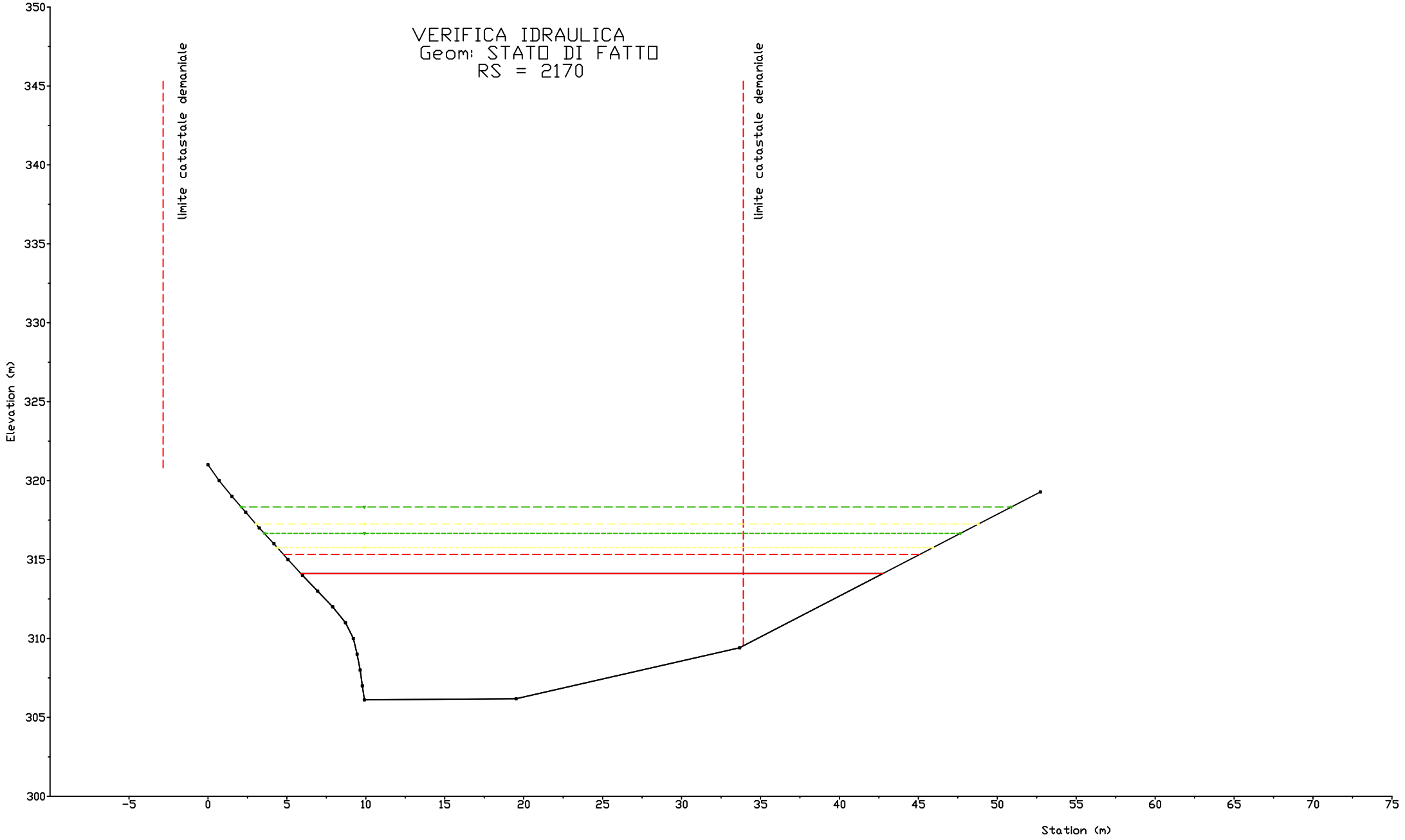

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2220
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

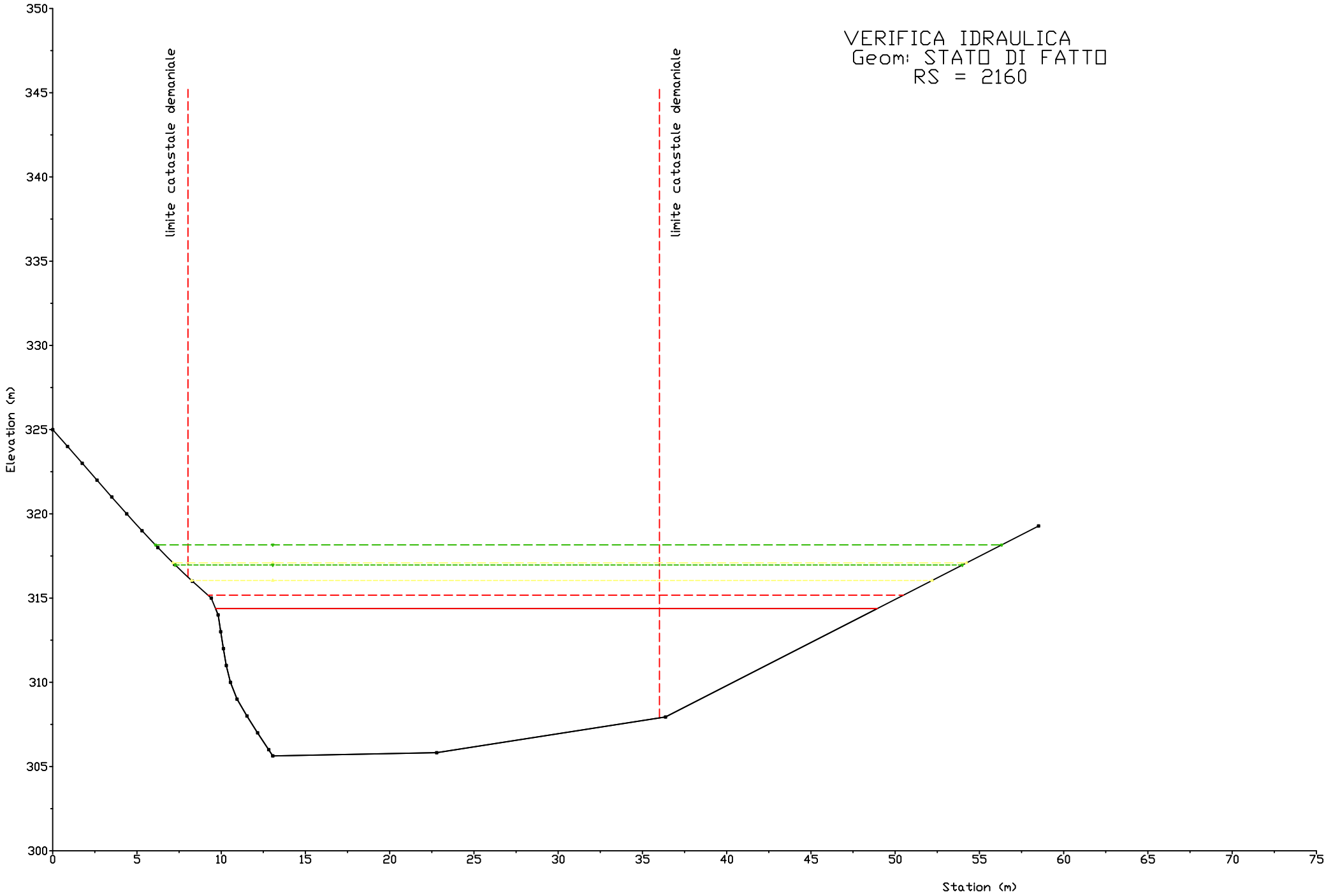

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2210
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

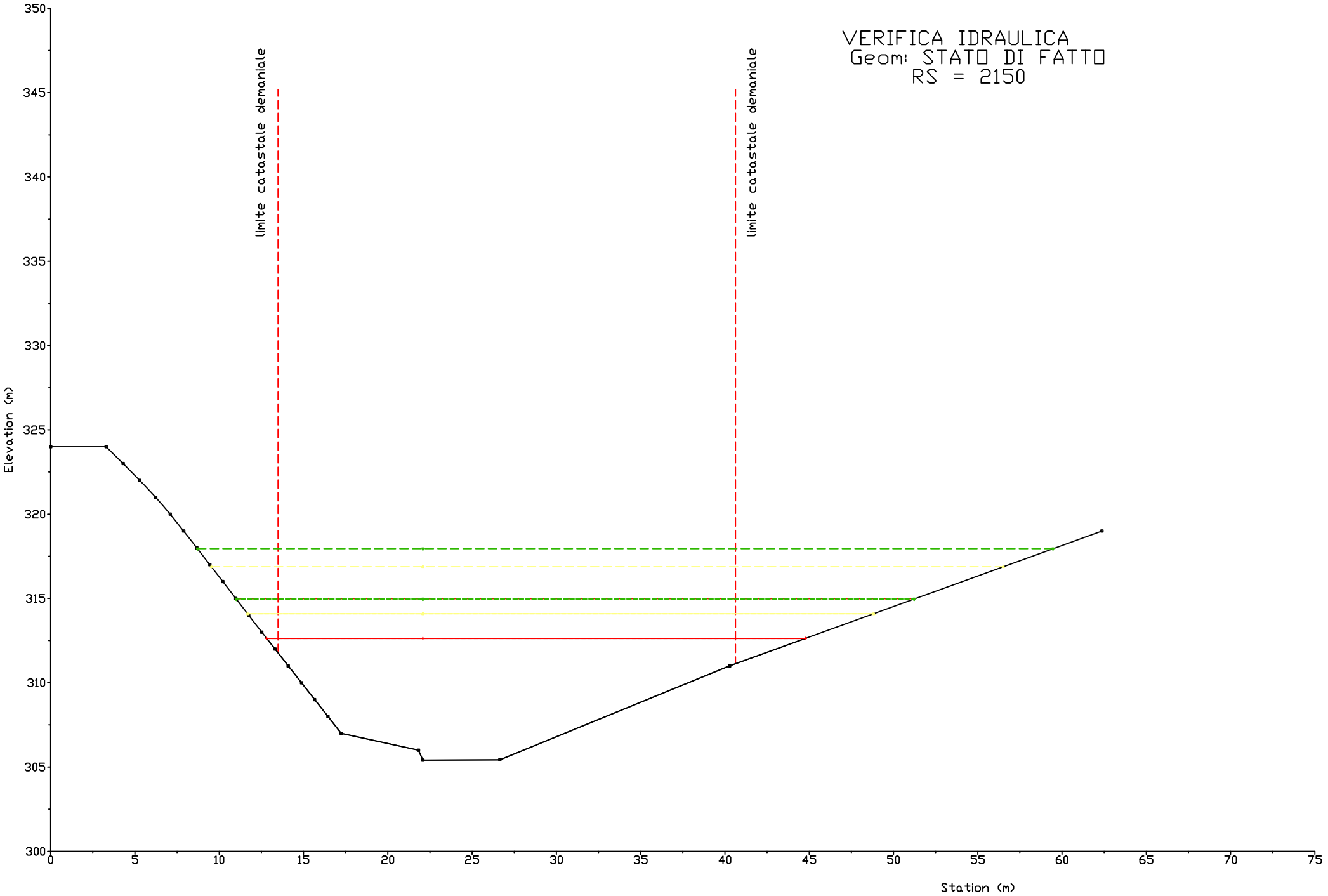

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2200
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90

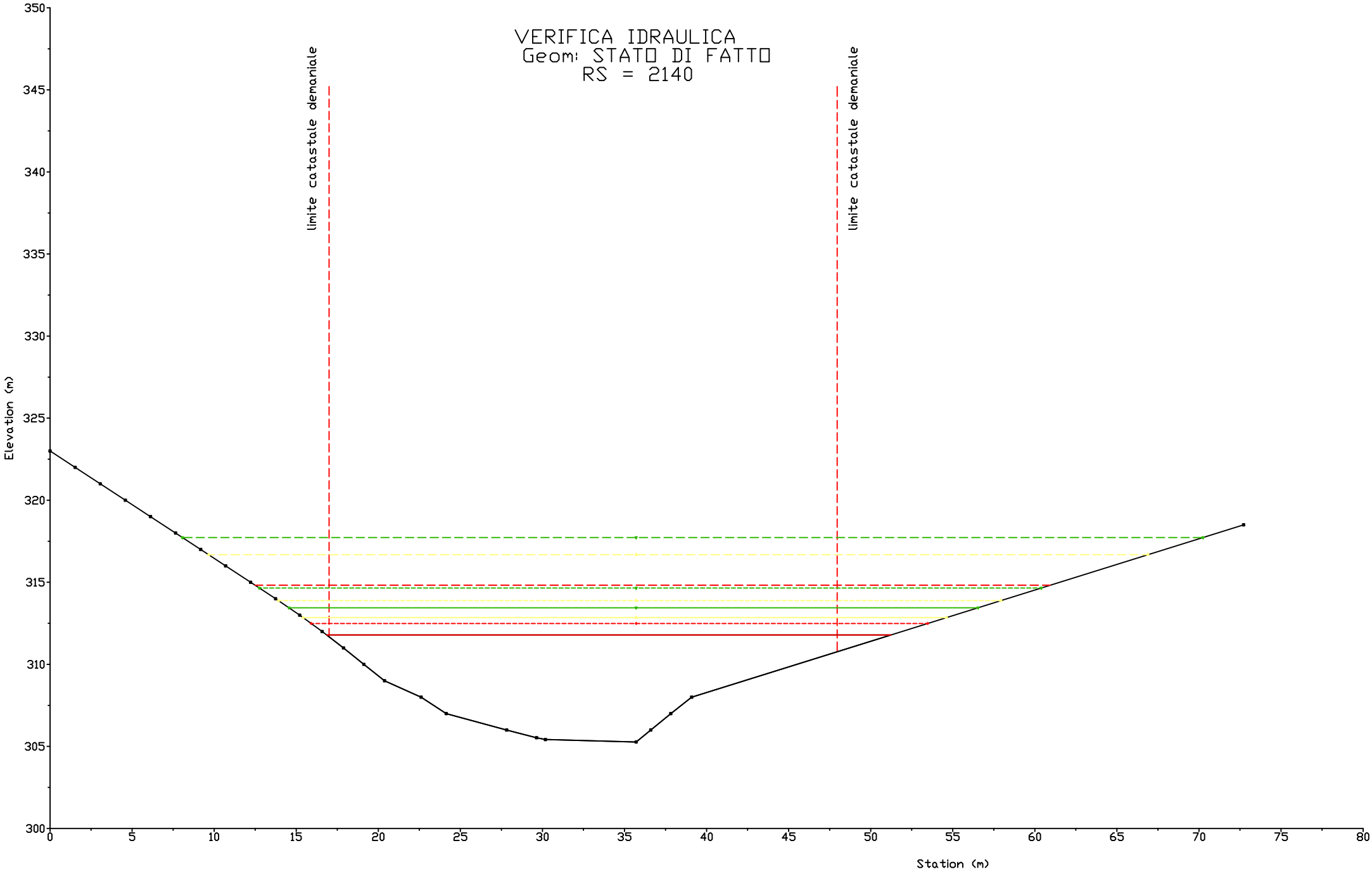

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2190
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

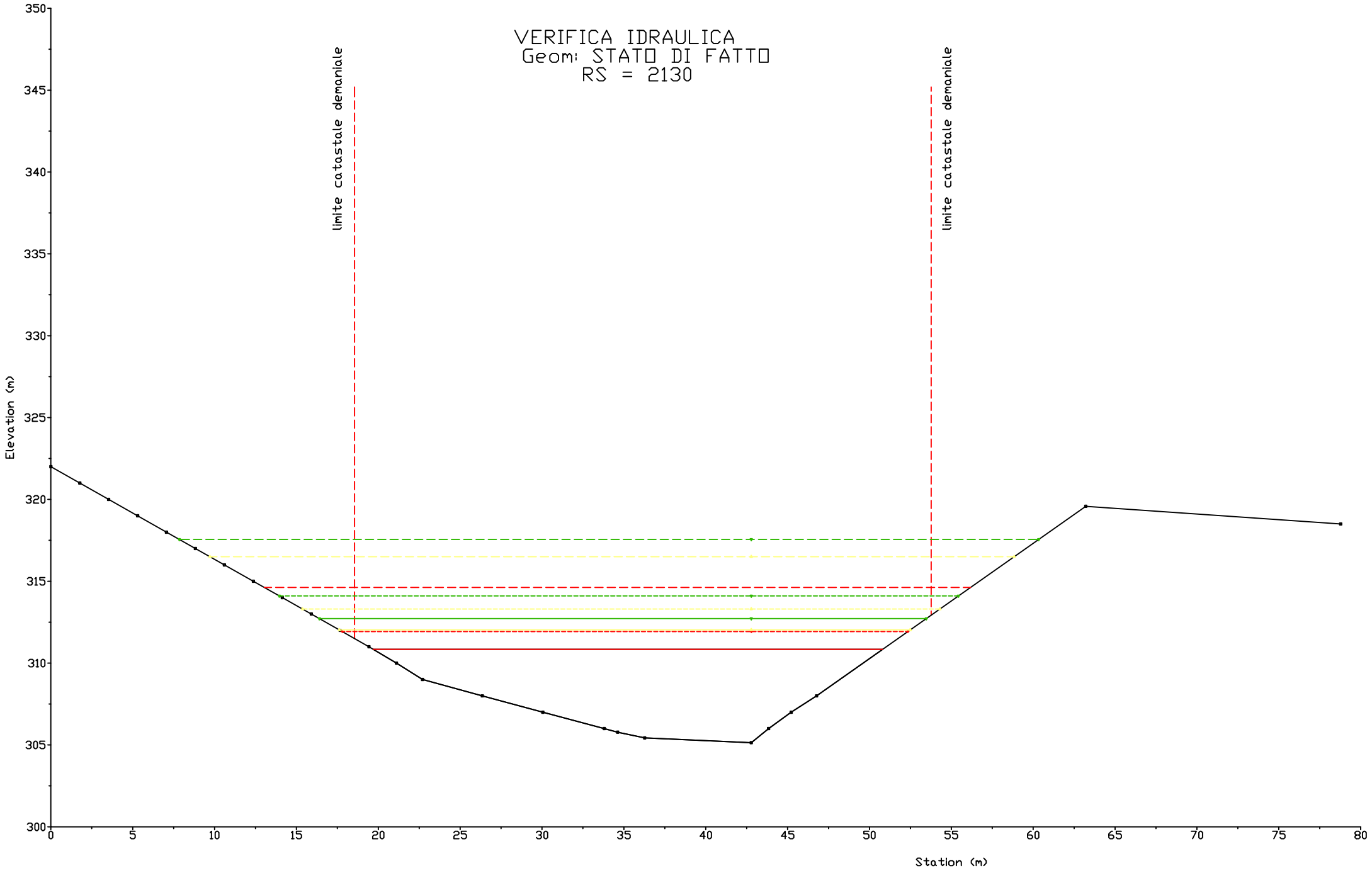

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2180
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

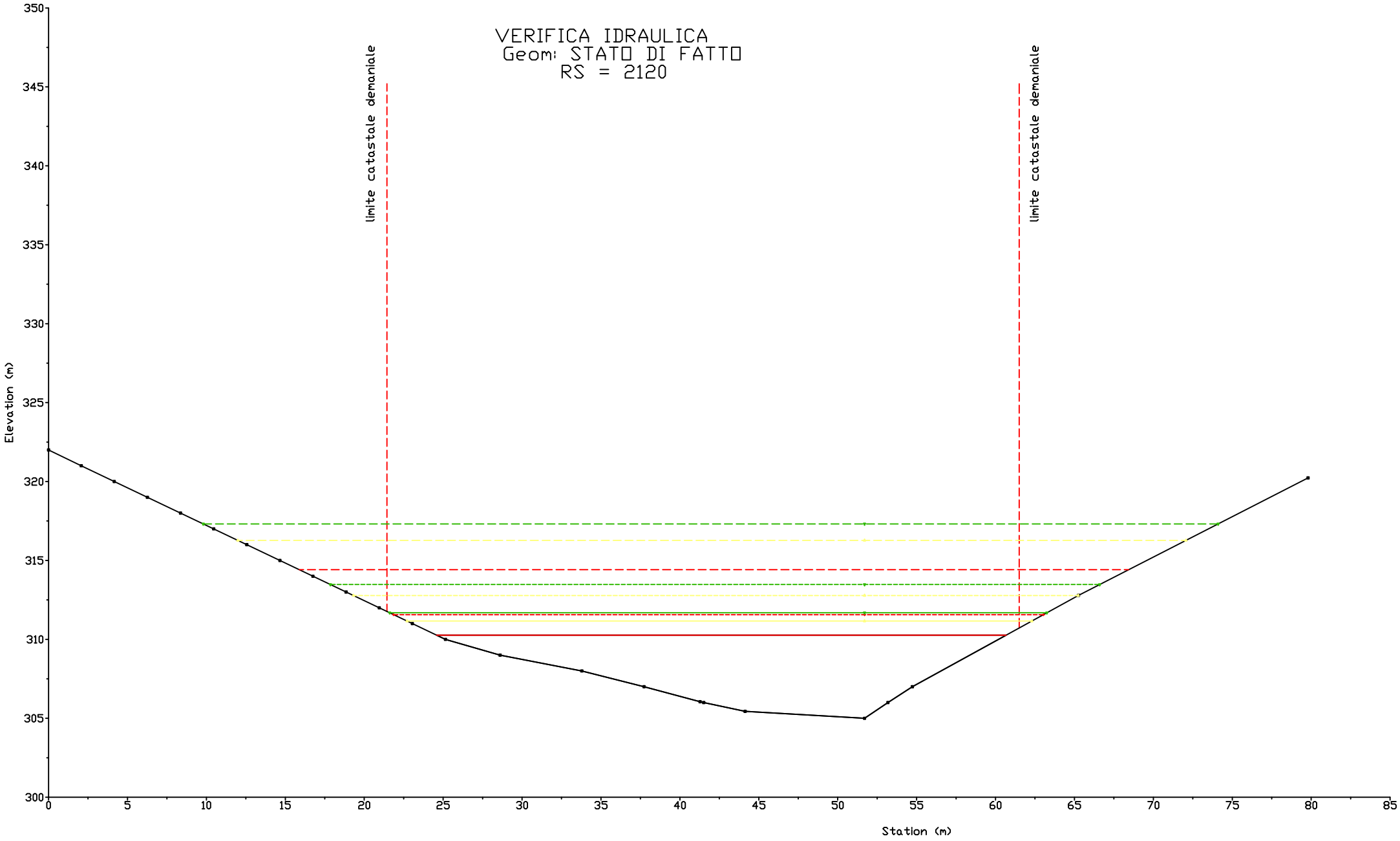

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2170
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
-5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

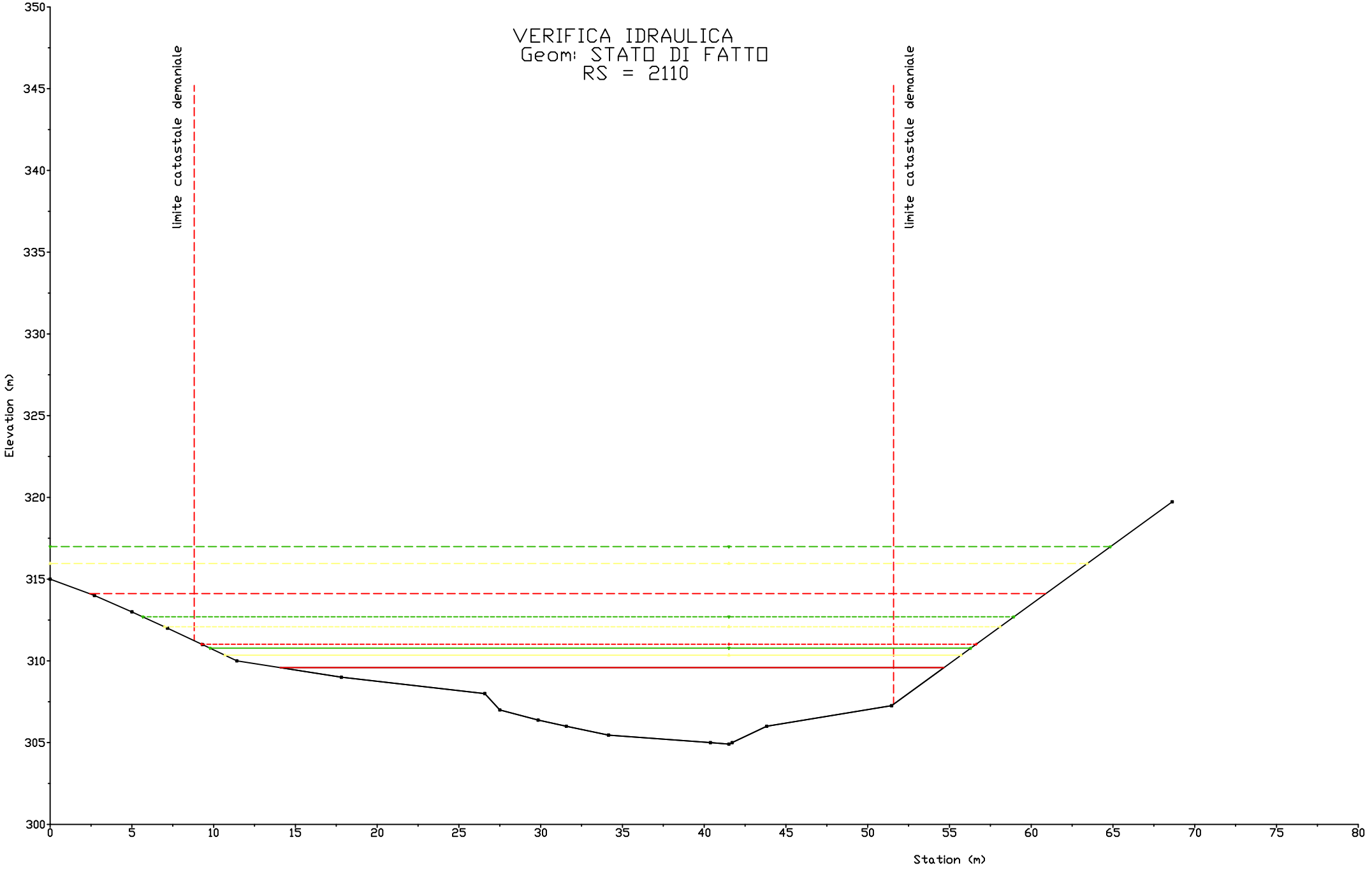

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2160
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

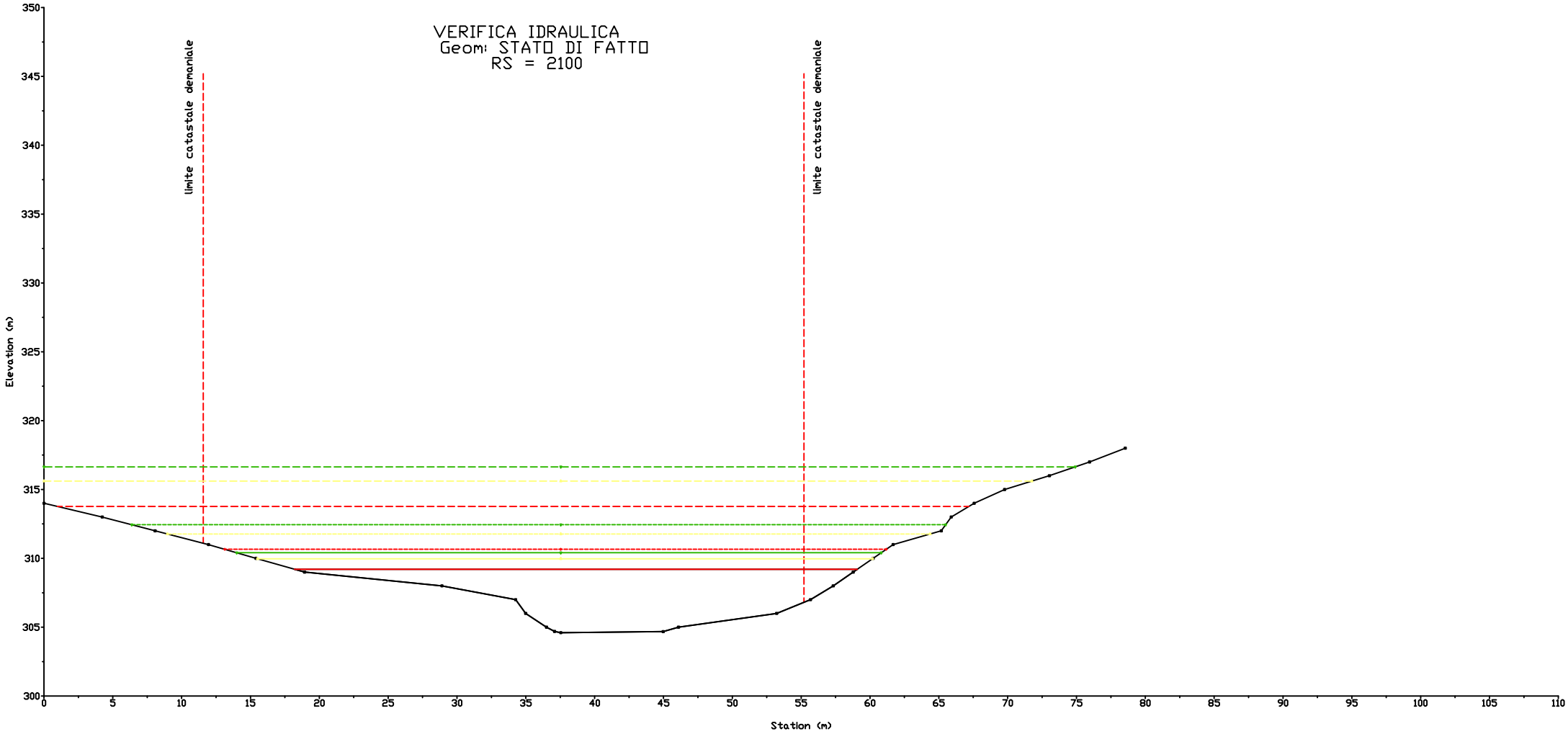

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2150
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75

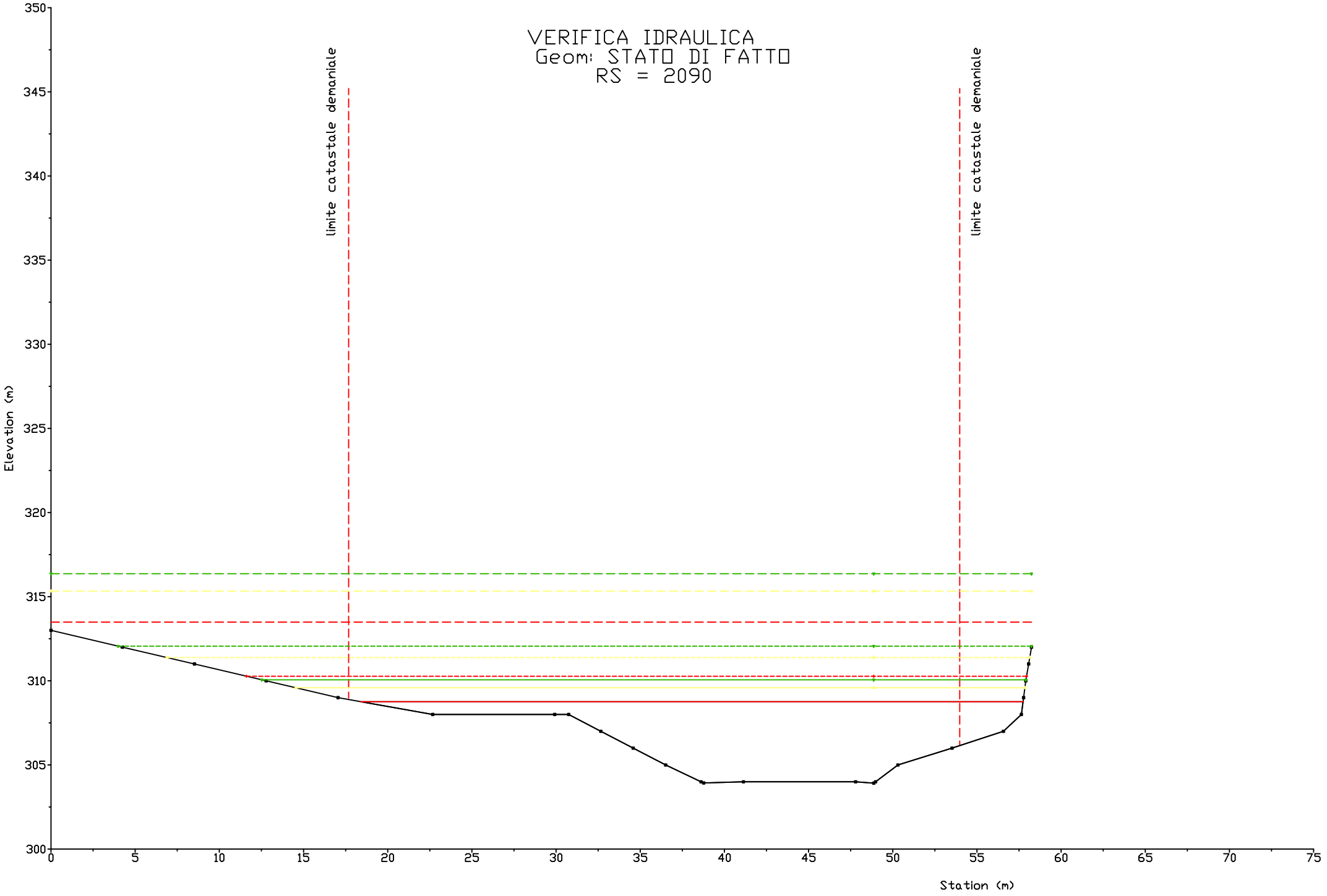

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2140
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80

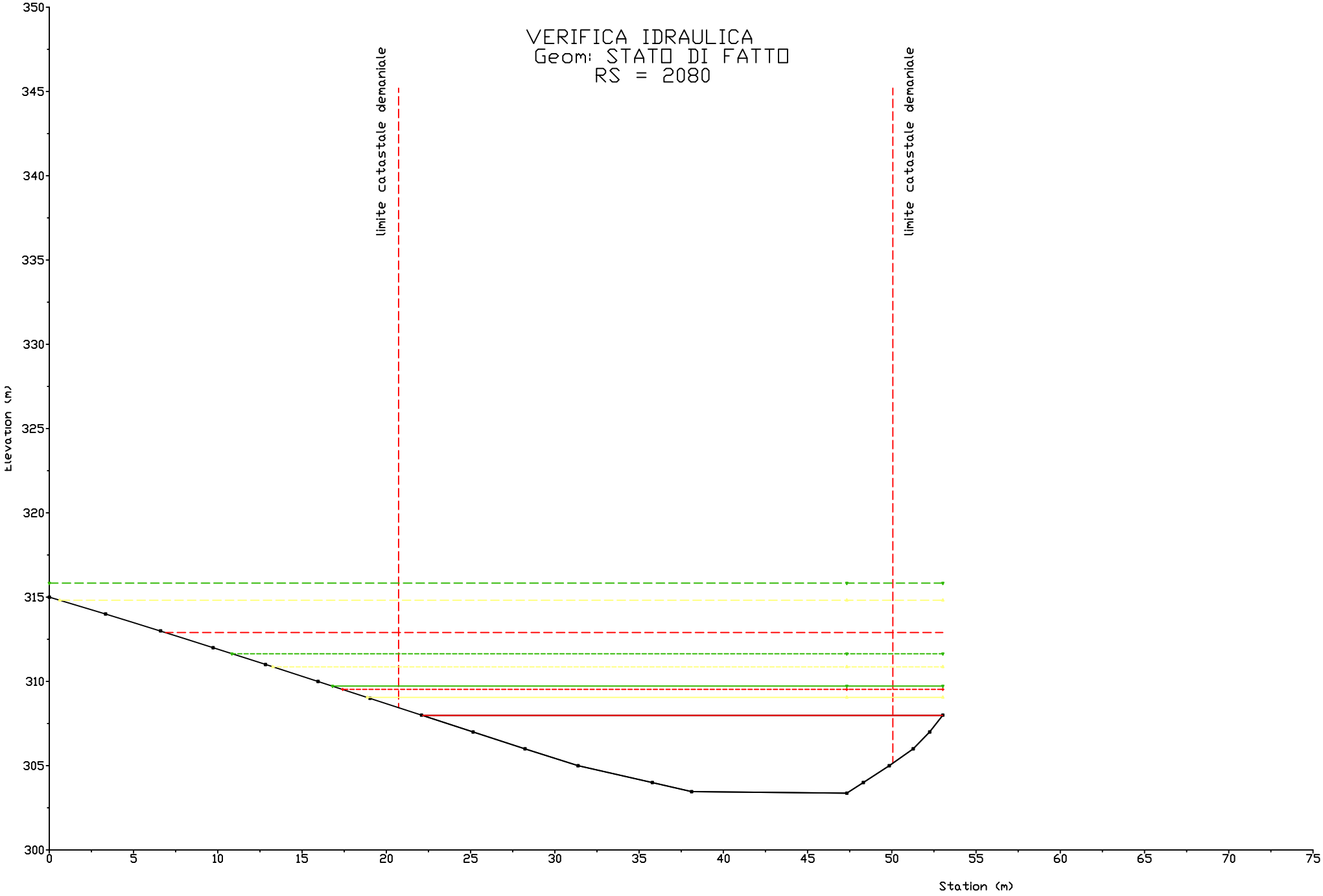

VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2130
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80


VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2120
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85


VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2110
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80


VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2100
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110


VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2090
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75


VERIFICA IDRAULICA
Geom: STATO DI FATTO
RS = 2080
limite catastale demaniale
limite catastale demaniale
Elevation (m)
Station (m)
350
345
340
335
330
325
320
315
310
305
300
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75