Presidenza del Consiglio dei Ministri
Commissario Governativo
per l'Emergenza Idrica in Sardegna

Regione Autonoma della Sardegna
Assessorato dei Lavori Pubblici

ENTE AUTONOMO DEL FLUMENDOSA

SCHEMA IDRICO FLUMINEDDU PER L'ALIMENTAZIONE IRRIGUA DELLA MARMILLA UTILIZZAZIONE DELLE RISORSE DEL FLUMINEDDU, TRASFERITE MEDIANTE IL COLLEGAMENTO TIRSO-FLUMENDOSA

1° LOTTO DELL'ADDUZIONE ED ATTREZZAMENTO IRRIGUO

PROPOSTA PROGETTUALE

LA DORSALE PRINCIPALE FLUMINEDDU - SA FORADA

Profilo schematico

Allegato:
10

Scala 1:25.000/:2.500

Redatto dal Servizio Progetti dell'Ente

Staff tecnico
Ing. Dina Cadoni
Ing. Bruno Loffredo
Ing. Eugenia Murru
Geom. Pierpaolo Corona
Per. Ind. Salvatore Melis
Geom. Mario Scanu
Geom. Osvaldo Carta

Il Direttore Generale
Ing. Alberto Piras

Il Direttore ad interim del Servizio
Ing. Giorgio Sanna

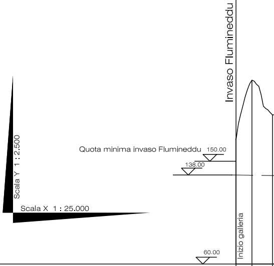
30 ottobre 2005

Denominazione - lunghezza (L) - diametro (DN) tratta		
Caratteristiche idrauliche Verifica n.1	Portata (Q) m3/s Cadente piezometrica (J) m/km Velocità media (V) m/s	
Caratteristiche idrauliche Verifica n.2	Portata (Q) m3/s Cadente piezometrica (J) m/km Velocità media (V) m/s	
Caratteristiche idrauliche Verifica n.3	Portata (Q) m3/s Cadente piezometrica (J) m/km Velocità media (V) m/s	

Verifica n.1: Distretti di "Marmilla Giara nord", "Marmilla valle Flumineddu alta", "Marmilla Mogoro alto e basso" alimentati dal Flumineddu
Distretto di "Marmilla valle Flumineddu bassa" alimentato da Sa Forada.

Verifica n.2: Intero comprensorio della Marmilla alimentato dal Flumineddu.

Verifica n.3: Trasferimento invernale dal Flumineddu a Sa Forada.

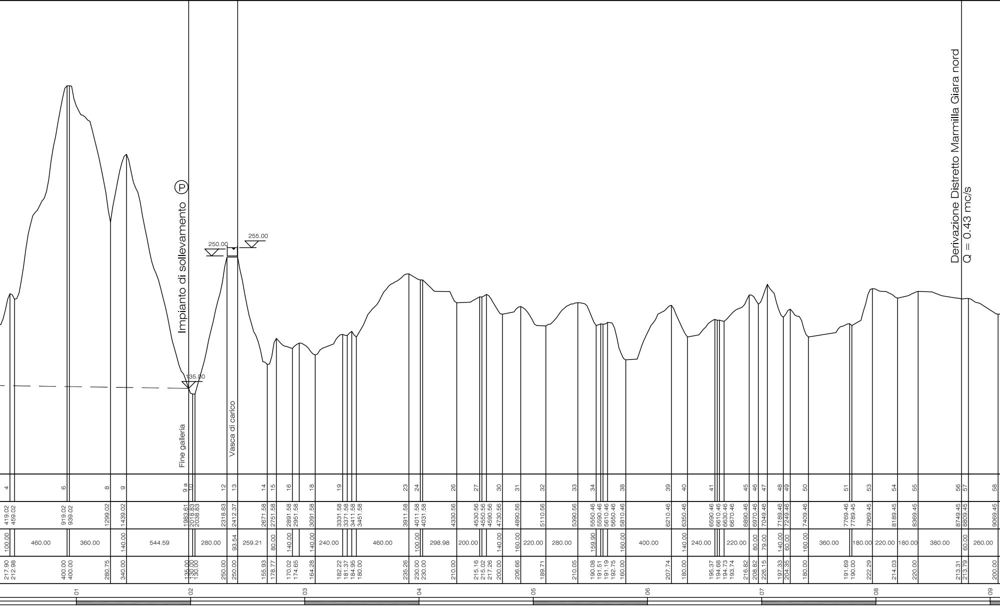

Invaso Flumineddu
Scala Y 1 : 2.500
Scala X 1 : 25.000
Quota minima invaso Flumineddu 150.00
138.00
60.00
Inizio galleria

Nome del picchetto	1	2	3
Distanza progressiva (m)	0.00	139.02	319.02
Distanza parziale (m)		139.02	180.00
Quota terreno (mslm)	168.83	221.05	190.55
Chilometrica	00		

DORSALE FLUMINEDDU - SA FORADA. L=46.877 m

L=2.412 m DN 1.800 mm

Galleria L=1.984 m DN 1.800 mm	Premente Acciaio L=429m DN 1.800 mm	L=6.337 m DN 1.800 mm - C.A.P.
Q= 3.02 m3/s J= 0.57 m/km V= 1.19 m/s	Q= 3.02 m3/s J= 0.57 m/km V= 1.19 m/s	Q= 3.02 m3/s J= 0.57 m/km V= 1.19 m/s
Q= 4.57 m3/s J= 1.32 m/km V= 1.80 m/s	Q= 4.57 m3/s J= 1.32 m/km V= 1.80 m/s	Q= 4.57 m3/s J= 1.32 m/km V= 1.80 m/s
Q= 3.09 m3/s J= 0.60 m/km V= 1.21 m/s	Q= 3.09 m3/s J= 0.60 m/km V= 1.21 m/s	Q= 3.09 m3/s J= 0.60 m/km V= 1.21 m/s


Impianto di sollevamento
P
250.00
255.00
135.00
Fine galleria
Vasca di carico
Derivazione Distretto Marmilla Giara nord
Q = 0.43 mc/s
4 6 8 9 9 a 10 12 13 14 15 16 18 19 23 24 26 27 30 31 32 33 34 38 39 40 41 45 46 47 48 49 50 51 53 54 55 56 57 58
419.02 459.02 919.02 939.02 1299.02 1439.02 1983.61 2018.83 2038.83 2318.83 2412.37 2671.58 2751.58 2891.58 2951.58 3091.58 3331.58 3371.58 3411.58 3451.58 3911.58 4011.58 4031.58 4330.56 4530.56 4550.56 4590.56 4730.56 4890.56 5110.56 5390.56 5550.46 5590.46 5610.46 5650.46 5810.46 6210.46 6350.46 6590.46 6610.46 6630.46 6670.46 6890.46 6970.46 7049.46 7189.46 7249.46 7409.46 7769.46 7789.45 7969.45 8189.45 8369.45 8749.45 8809.45 9069.45
100.00 460.00 360.00 140.00 544.59 280.00 93.54 259.21 80.00 140.00 140.00 240.00 460.00 100.00 298.98 200.00 140.00 160.00 220.00 280.00 159.90 160.00 400.00 140.00 240.00 220.00 80.00 79.00 140.00 60.00 160.00 360.00 180.00 220.00 180.00 380.00 60.00 260.00
217.90 212.98 400.00 400.00 280.75 340.00 135.00 130.00 130.00 250.00 250.00 155.93 178.77 170.02 174.65 164.28 182.22 181.37 184.95 180.00 235.26 230.00 230.00 210.00 215.16 215.02 217.26 200.00 206.66 189.71 210.05 190.08 191.51 191.19 192.75 160.00 207.74 180.00 195.37 194.68 194.73 193.74 216.82 208.82 226.15 197.33 204.35 180.00 191.69 190.00 222.29 214.03 220.00 213.31 213.79 200.00
01 02 03 04 05 06 07 08 09

DORSALE FLUMINEDDU - SA FORADA. L=46.877 m

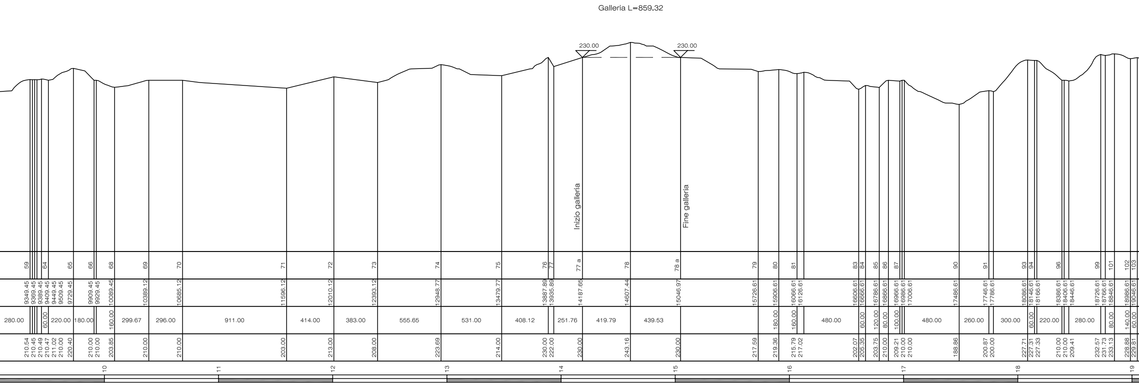
L=23.069 m DN 1.800 mm

L=12.291 m (dei quali 859 m in galleria) DN 1.800 mm - C.A.P (Acciaio in galleria)

Q= 2.59 m3/s
J= 0.42 m/km
V= 1.02 m/s

Q= 4.15 m3/s
J= 1.08 m/km
V= 1.63 m/s

Q= 3.09 m3/s
J= 0.60 m/km
V= 1.21 m/s


Galleria L=859.32
230.00
230.00
Inizio galleria
Fine galleria
59
64
65
66
68
69
70
71
72
73
74
75
76
77
77 a
78
78 a
79
80
81
83
84
85
86
87
90
91
93
94
96
99
101
102
103
9349.45
9369.45
9389.45
9409.45
9449.45
9509.45
9729.45
9909.45
9929.45
10089.45
10389.12
10685.12
11596.12
12010.12
12393.12
12948.77
13479.77
13887.89
13935.89
14187.65
14607.44
15046.97
15726.61
15906.61
16066.61
16126.61
16606.61
16666.61
16786.61
16866.61
16966.61
16986.61
17006.61
17486.61
17746.61
17786.61
18086.61
18146.61
18166.61
18386.61
18406.61
18446.61
18726.61
18766.61
18846.61
18986.61
19046.61
280.00
60.00
220.00
180.00
160.00
299.67
296.00
911.00
414.00
383.00
555.65
531.00
408.12
251.76
419.79
439.53
180.00
160.00
480.00
60.00
120.00
80.00
100.00
480.00
260.00
300.00
60.00
220.00
280.00
80.00
140.00
60.00
210.54
210.45
210.49
210.47
211.02
210.00
220.40
210.00
210.00
203.85
210.00
210.00
203.00
213.00
208.00
223.69
214.00
230.00
222.00
230.00
243.16
230.00
217.59
219.36
215.79
217.02
202.07
205.35
203.75
210.00
209.21
210.00
210.00
188.86
200.87
200.00
227.71
227.31
227.33
210.00
210.00
209.41
232.57
231.73
233.13
228.88
229.81
10
11
12
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14
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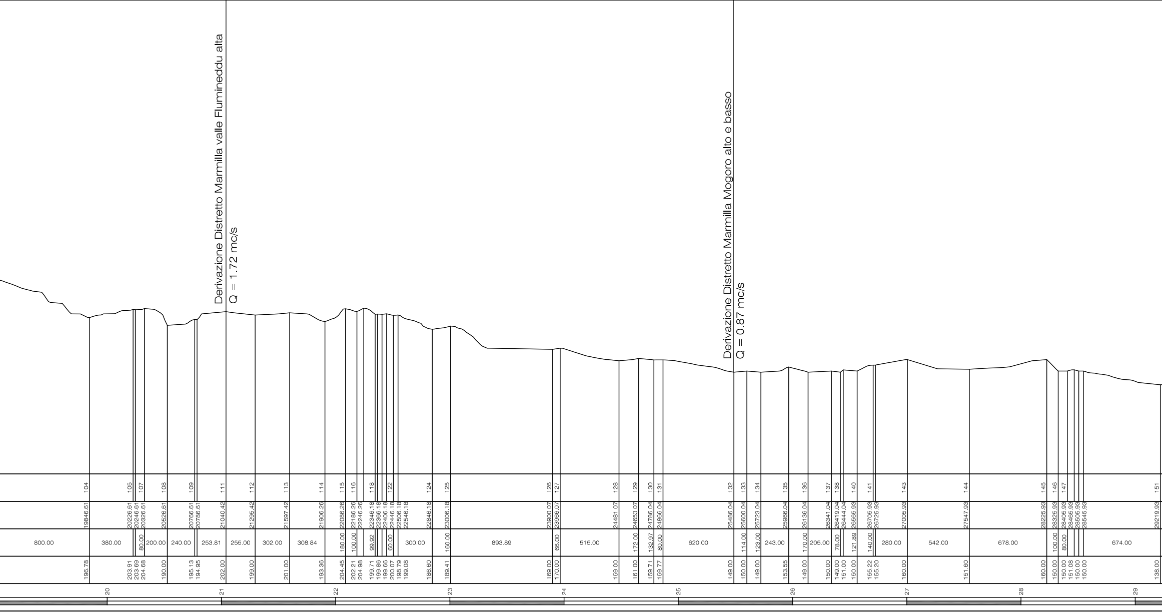
18
19

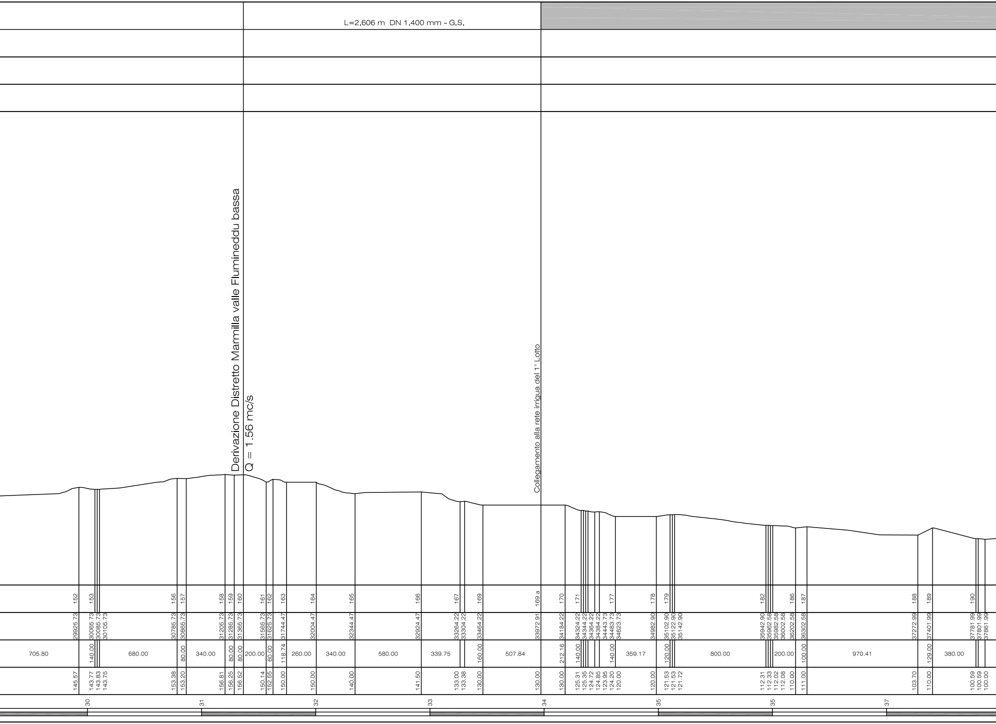
DORSALE FLUMINEDDU - SA FORADA. L=46.877 m

L=4.441 m DN 1.800 mm - C.A.P.	L=5.884 m DN 1.400 mm - G.S.
Q= 0.87 m3/s J= 0.05 m/km V= 0.34 m/s	Q= 0.00 m3/s J= 0.00 m/km V= 0.00 m/s
Q= 2.42 m3/s J= 0.37 m/km V= 0.95 m/s	Q= 1.56 m3/s J= 0.56 m/km V= 1.01 m/s
Q= 3.09 m3/s J= 0.60 m/km V= 1.21 m/s	Q= 3.09 m3/s J= 2.20 m/km V= 2.01 m/s


Derivazione Distretto Marmilla valle Flumineddu alta
Q = 1.72 mc/s
Derivazione Distretto Marmilla Mogoro alto e basso
Q = 0.87 mc/s
104 105 107 108 109 111 112 113 114 115 116 118 122 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 140 141 143 144 145 146 147 151
19846.61 20226.61 20246.61 20326.61 20526.61 20766.61 20786.61 21040.42 21295.42 21597.42 21906.26 22086.26 22186.26 22246.26 22346.18 22366.18 22406.18 22446.18 22506.18 22546.18 22846.18 23006.18 23900.07 23966.07 24481.07 24653.07 24786.04 24866.04 25486.04 25600.04 25723.04 25966.04 26136.04 26341.04 26419.04 26444.04 26565.93 26705.93 26725.93 27005.93 27547.93 28225.93 28325.93 28405.93 28465.93 28505.93 28545.93 29219.93
800.00 380.00 80.00 200.00 240.00 253.81 255.00 302.00 308.84 180.00 100.00 99.92 60.00 300.00 160.00 893.89 66.00 515.00 172.00 132.97 80.00 620.00 114.00 123.00 243.00 170.00 205.00 78.00 121.89 140.00 280.00 542.00 678.00 100.00 80.00 674.00
196.78 203.91 203.69 204.68 190.00 195.13 194.95 202.00 199.00 201.00 193.36 204.45 202.21 204.98 199.71 199.86 199.66 200.07 198.79 199.08 186.60 189.41 169.00 170.00 159.00 161.00 159.71 159.77 149.00 150.00 149.00 153.55 149.00 150.00 149.00 151.00 150.00 155.22 155.20 160.00 151.60 160.00 150.00 150.00 151.08 150.00 150.00 138.00
20 21 22 23 24 25 26 27 28 29

DORSALE FLUMINEDDU - SA FORADA. L=46.877 m

L=21.396 m DN 1.400 mm


L=2.606 m DN 1.400 mm - G.S.
Derivazione Distretto Marmilla valle Flumineddu bassa
Q = 1.56 mc/s
Collegamento alla rete irrigua del 1° Lotto
152
153
156
157
158
159
160
161
162
163
164
165
166
167
169
169 a
170
171
177
178
179
182
186
187
188
189
190
29925.73
30065.73
30085.73
30105.73
30785.73
30865.73
31205.73
31285.73
31365.73
31565.73
31625.73
31744.47
32004.47
32344.47
32924.47
33264.22
33304.22
33464.22
33972.91
34184.22
34324.22
34344.22
34364.22
34384.22
34443.73
34483.73
34623.73
34982.90
35102.90
35122.90
35142.90
35942.90
35962.58
35982.58
36002.58
36202.58
36302.58
37272.99
37401.99
37781.99
37801.99
37861.99
705.80
140.00
680.00
80.00
340.00
80.00
80.00
200.00
60.00
118.74
260.00
340.00
580.00
339.75
160.00
507.84
212.16
140.00
140.00
359.17
120.00
800.00
200.00
100.00
970.41
129.00
380.00
145.57
143.77
143.83
143.75
153.38
153.20
156.81
156.25
156.52
150.14
152.55
150.00
150.00
140.00
141.50
133.00
133.38
130.00
130.00
130.00
125.31
125.35
124.72
124.85
123.95
124.20
120.00
120.00
121.53
121.53
121.72
112.31
112.33
112.02
112.08
110.00
111.00
103.70
110.00
100.59
100.59
100.00
30
31
32
33
34
35
35
37

DORSALE FLUMINEDDU - SA FORADA. L=46.877 m

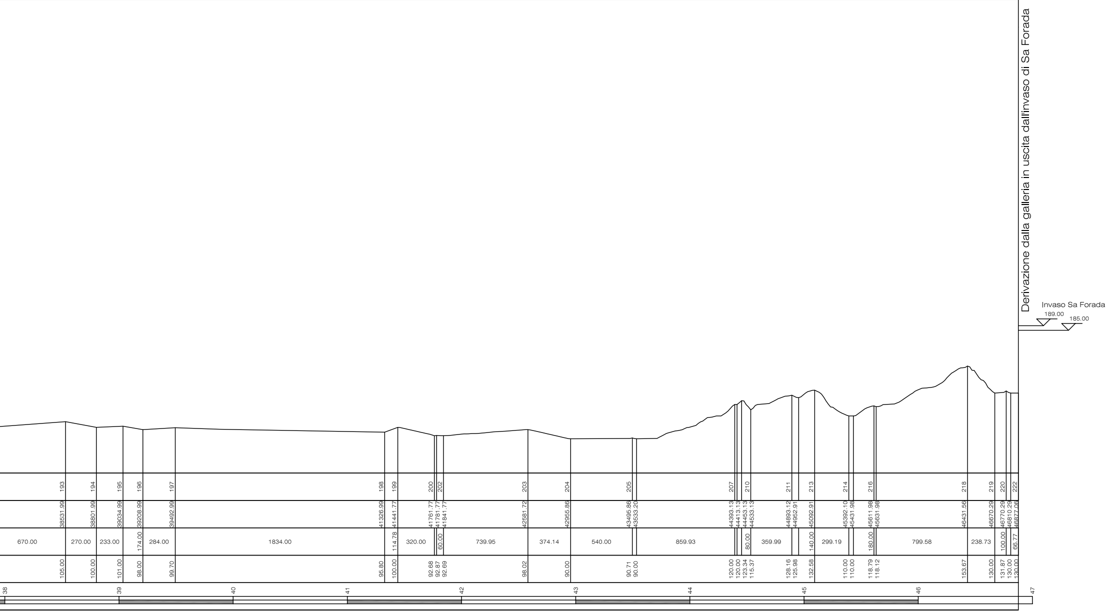
1° lotto L=12.905 m DN 1.400 mm - G.S.

Q= - 1.56 m3/s
J= - 0.56 m/km
V= - 1.01 m/s

Flusso invertito da Sa Forada alla diramazione Marmilla valle Flumineddu bassa

Q= 0.00 m3/s
J= 0.00 m/km
V= 0.00 m/s

Q= 3.09 m3/s
J= 2.20 m/km
V= 2.01 m/s


Derivazione dalla galleria in uscita dall'invaso di Sa Forada
Invaso Sa Forada
189.00
185.00
193 194 195 196 197 198 199 200 202 203 204 205 207 210 211 213 214 216 218 219 220 222
38531.99 38801.99 39034.99 39208.99 39492.99 41326.99 41441.77 41761.77 41781.77 41841.77 42581.72 42955.86 43495.86 43533.20 44393.13 44413.13 44453.13 44533.13 44893.12 44952.91 45092.91 45392.10 45431.98 45611.98 45631.98 46431.56 46670.29 46770.29 46810.29 46877.06
670.00 270.00 233.00 174.00 284.00 1834.00 114.78 320.00 60.00 739.95 374.14 540.00 859.93 80.00 359.99 140.00 299.19 180.00 799.58 238.73 100.00 66.77
105.00 100.00 101.00 98.00 99.70 95.80 100.00 92.68 92.87 92.69 98.02 90.00 90.71 90.00 120.00 120.00 123.34 115.37 128.16 125.98 132.58 110.00 110.00 118.79 118.12 153.67 130.00 131.87 130.00 130.00
38 39 40 41 42 43 44 45 46 47