

Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1985

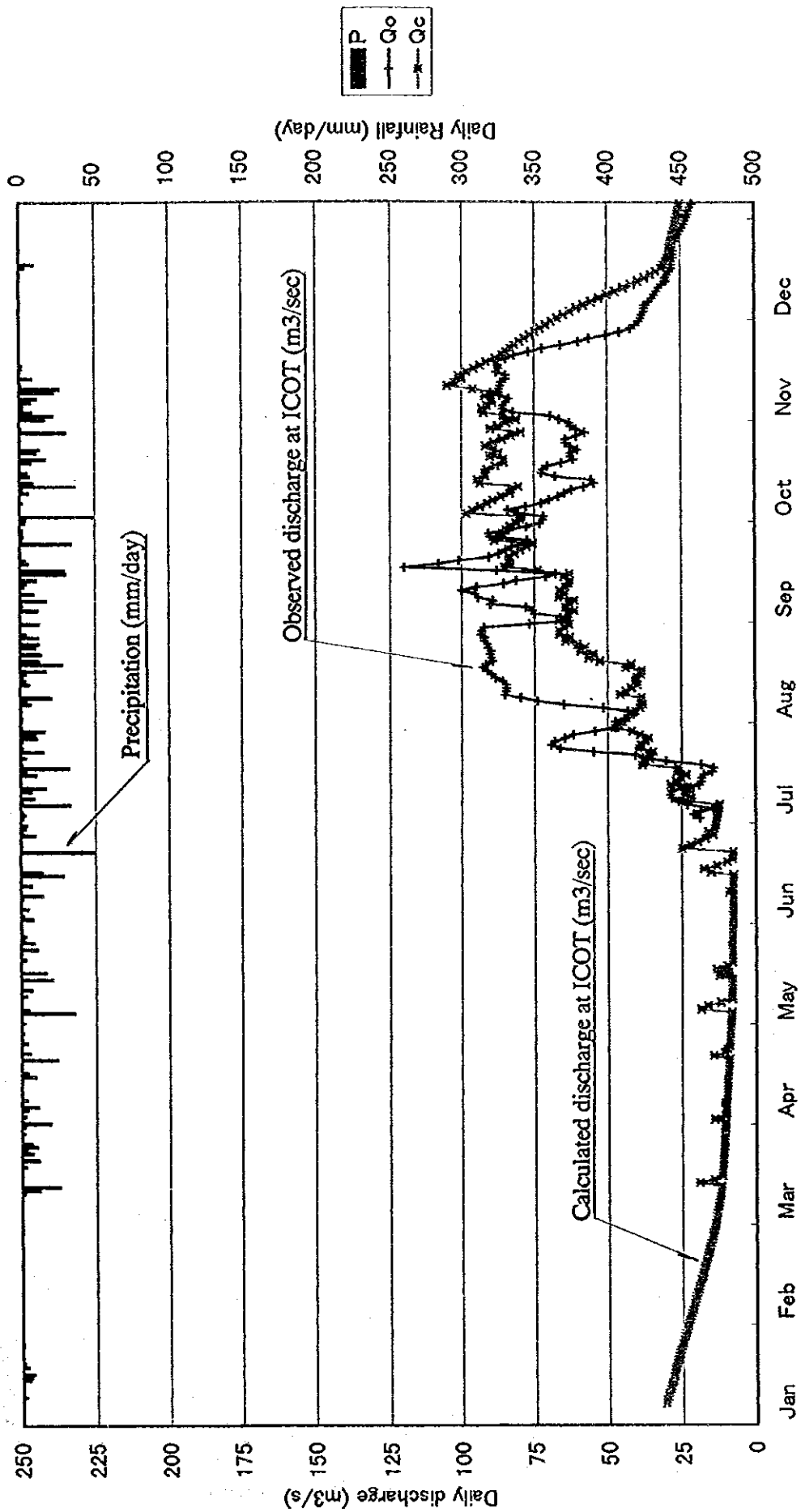
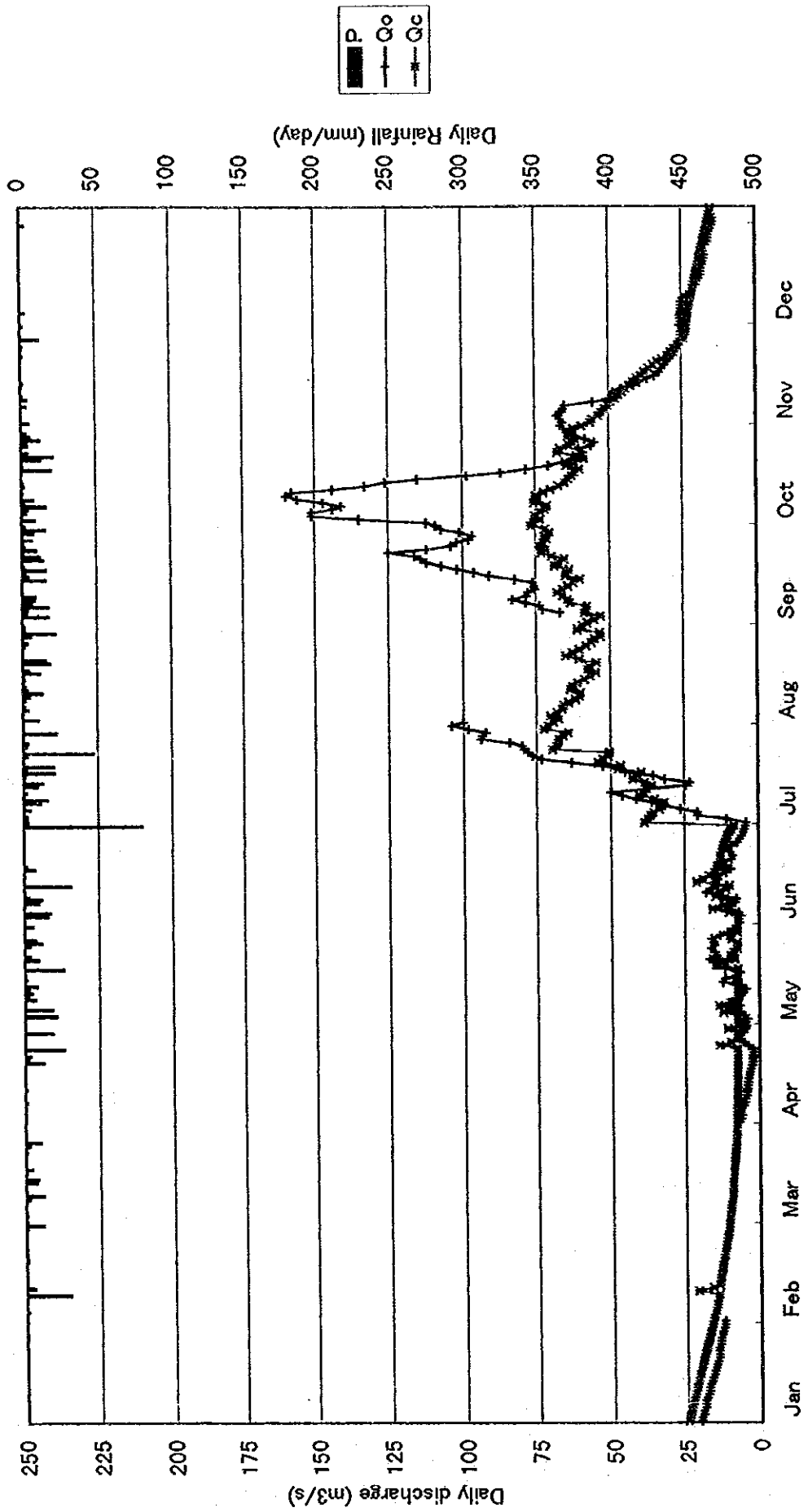
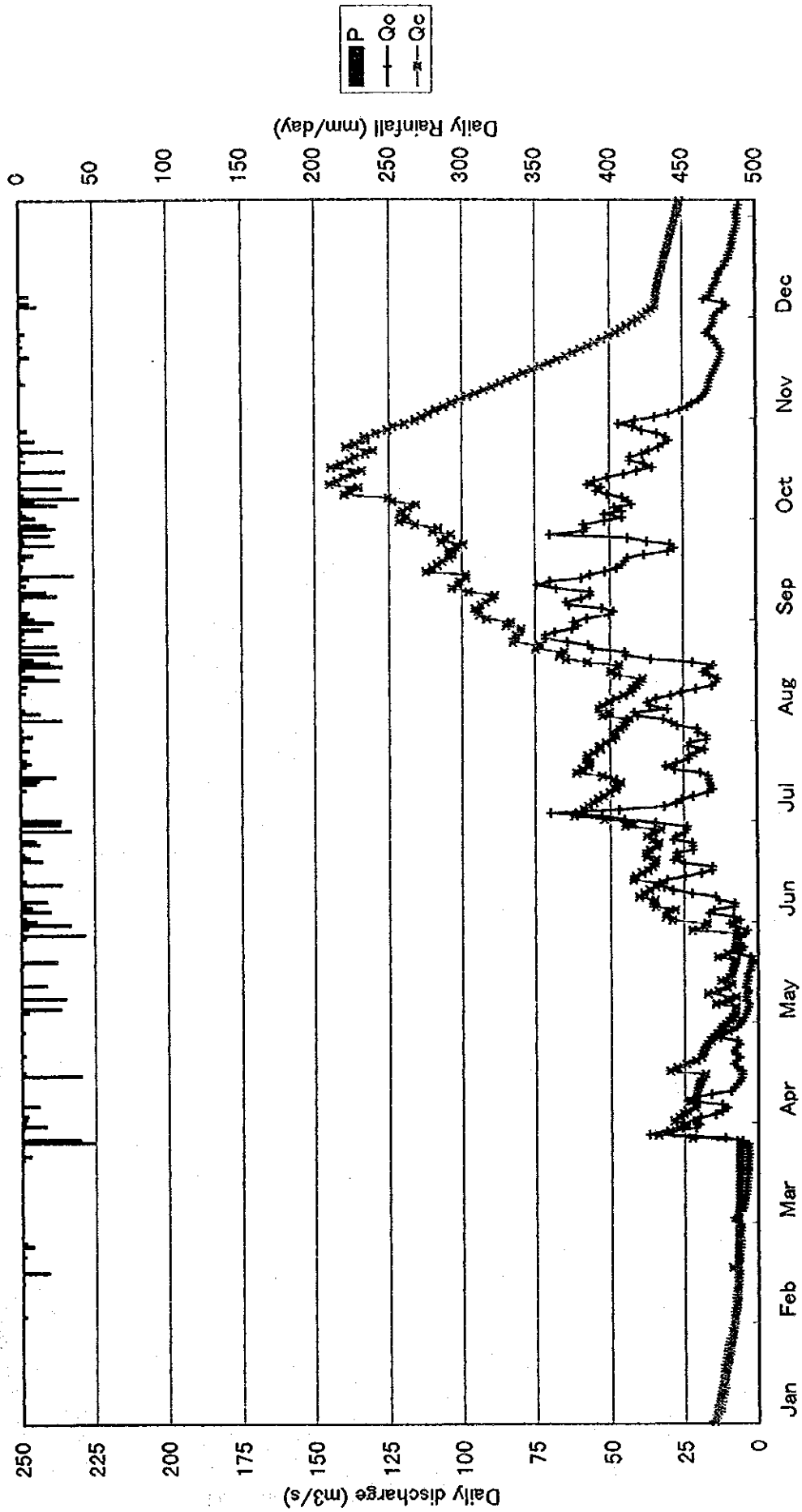


Fig. 3 Tank Model Calculation Result

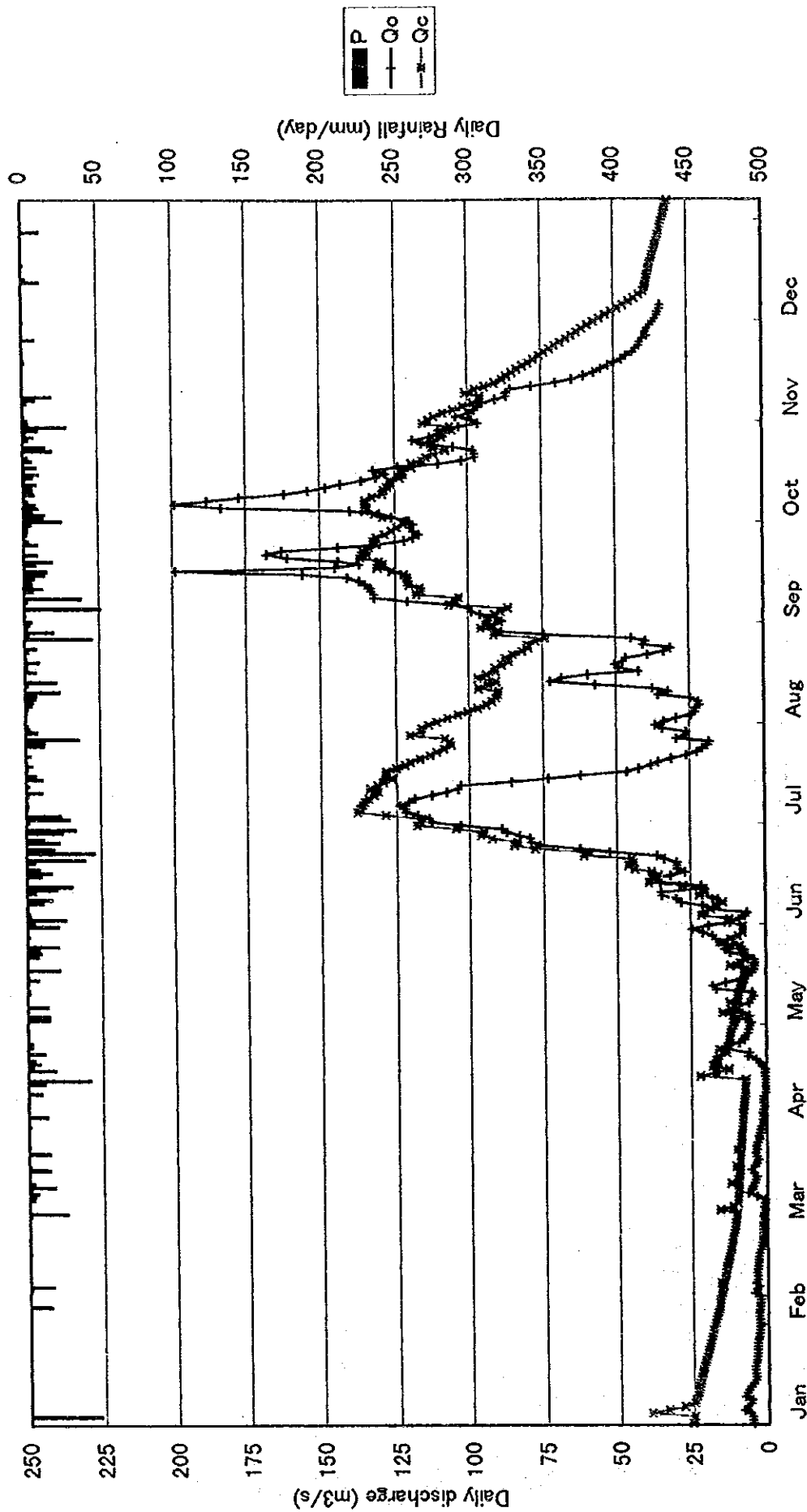
Hytograph at Bossembele and Hydrographs at Boali ICOT
Year 1986



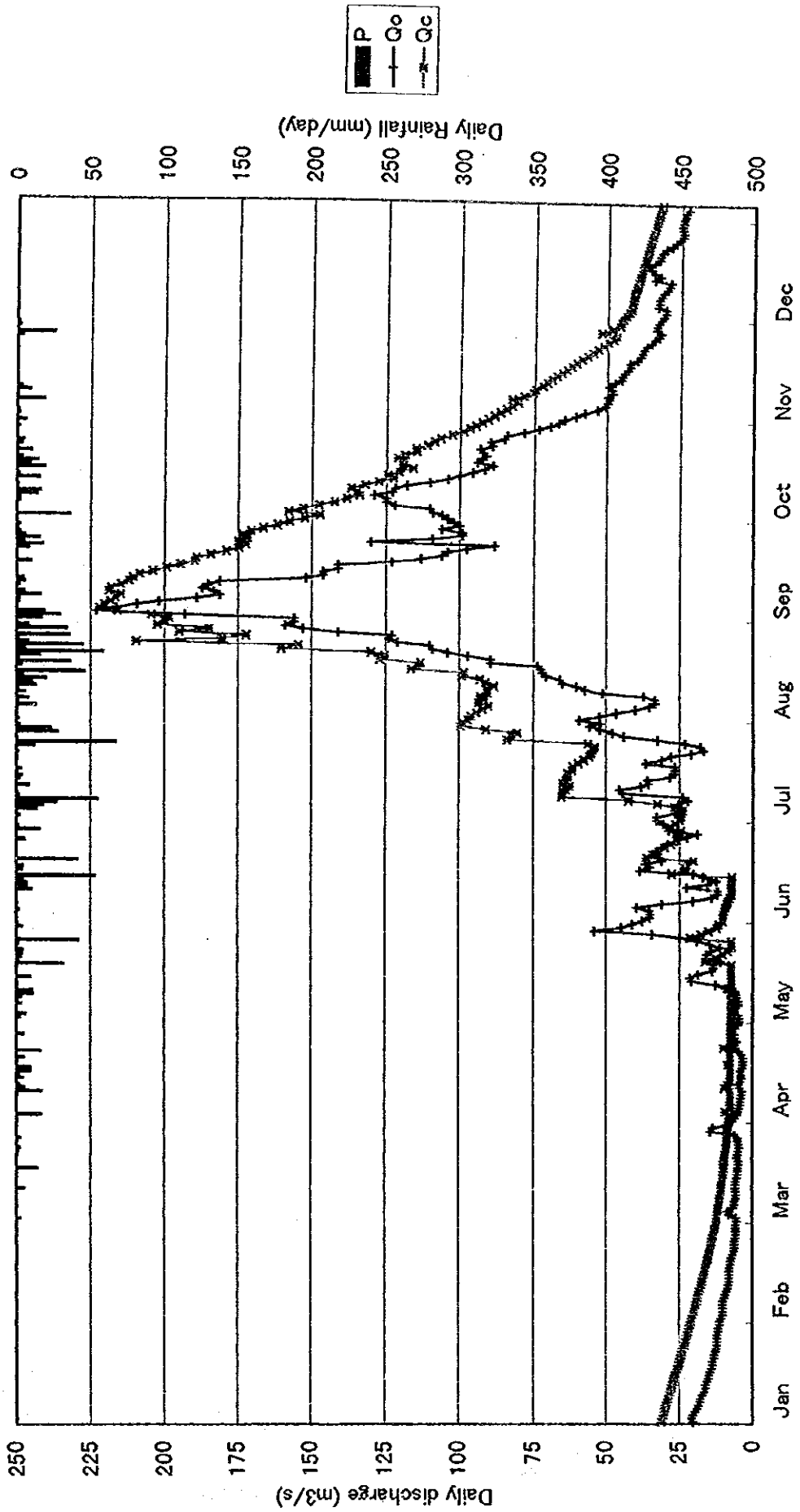
Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1987



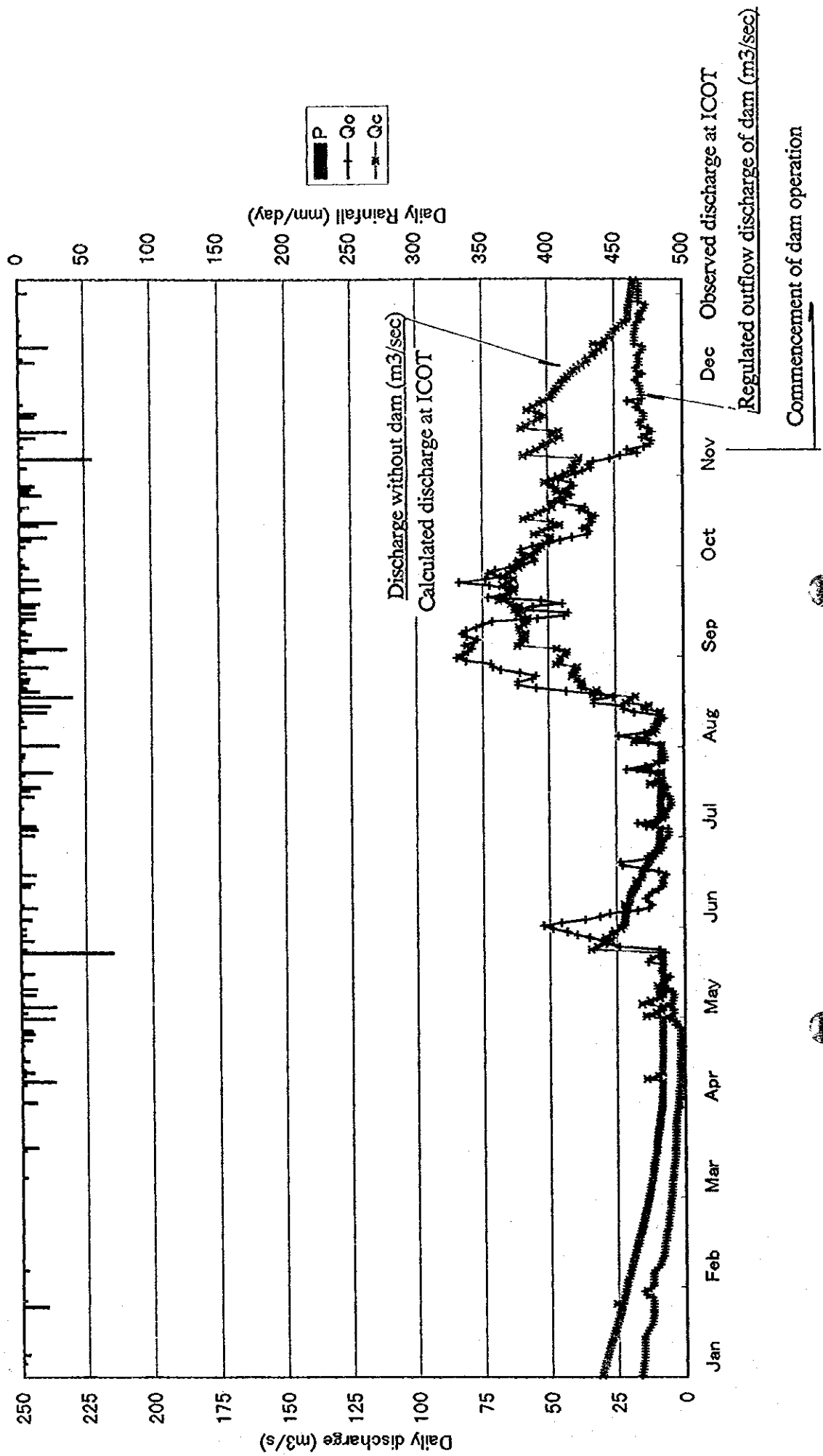
Hyetograph at Bossemele and Hydrographs at Boali ICOT
Year 1988



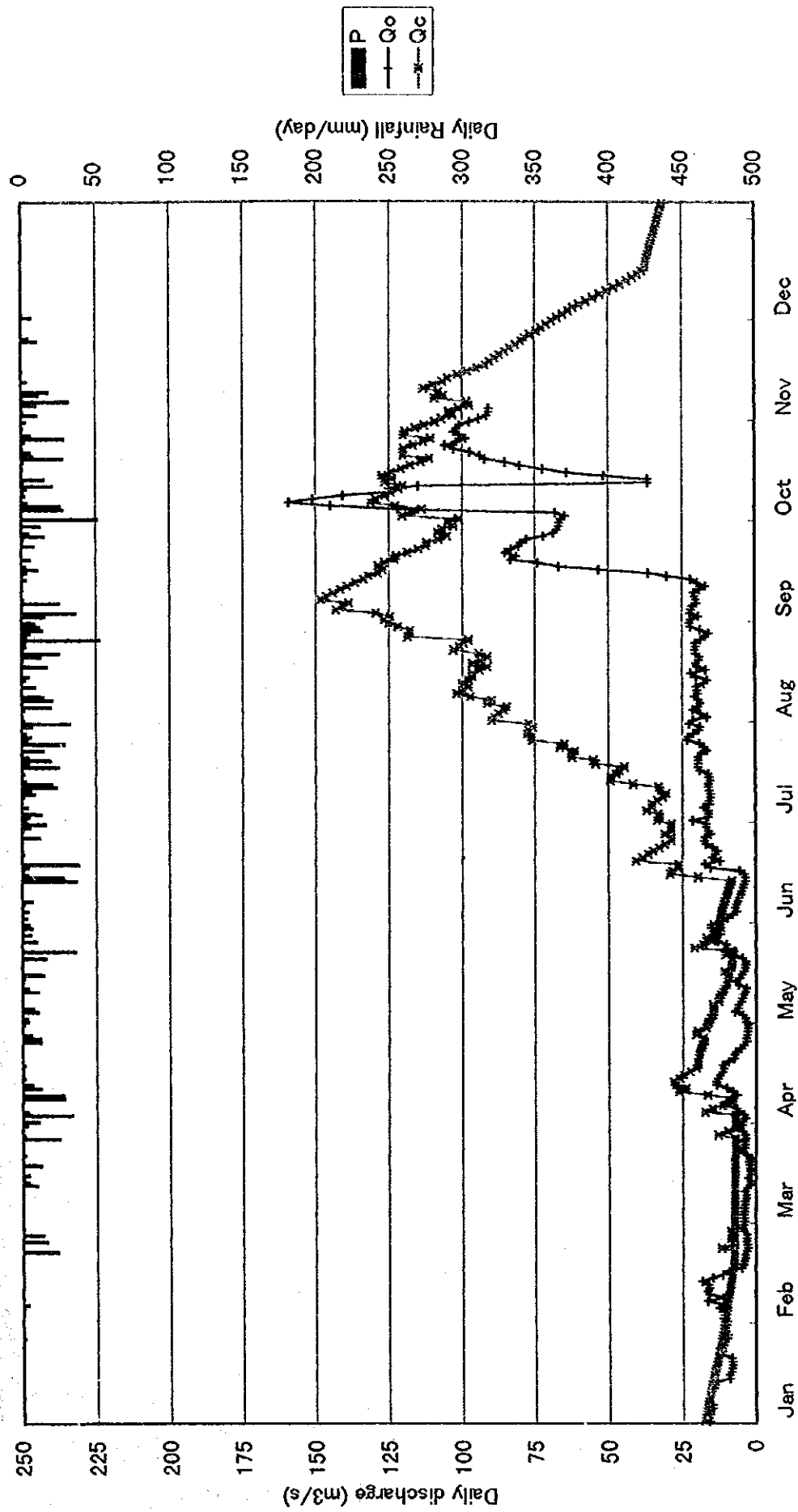
Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1989



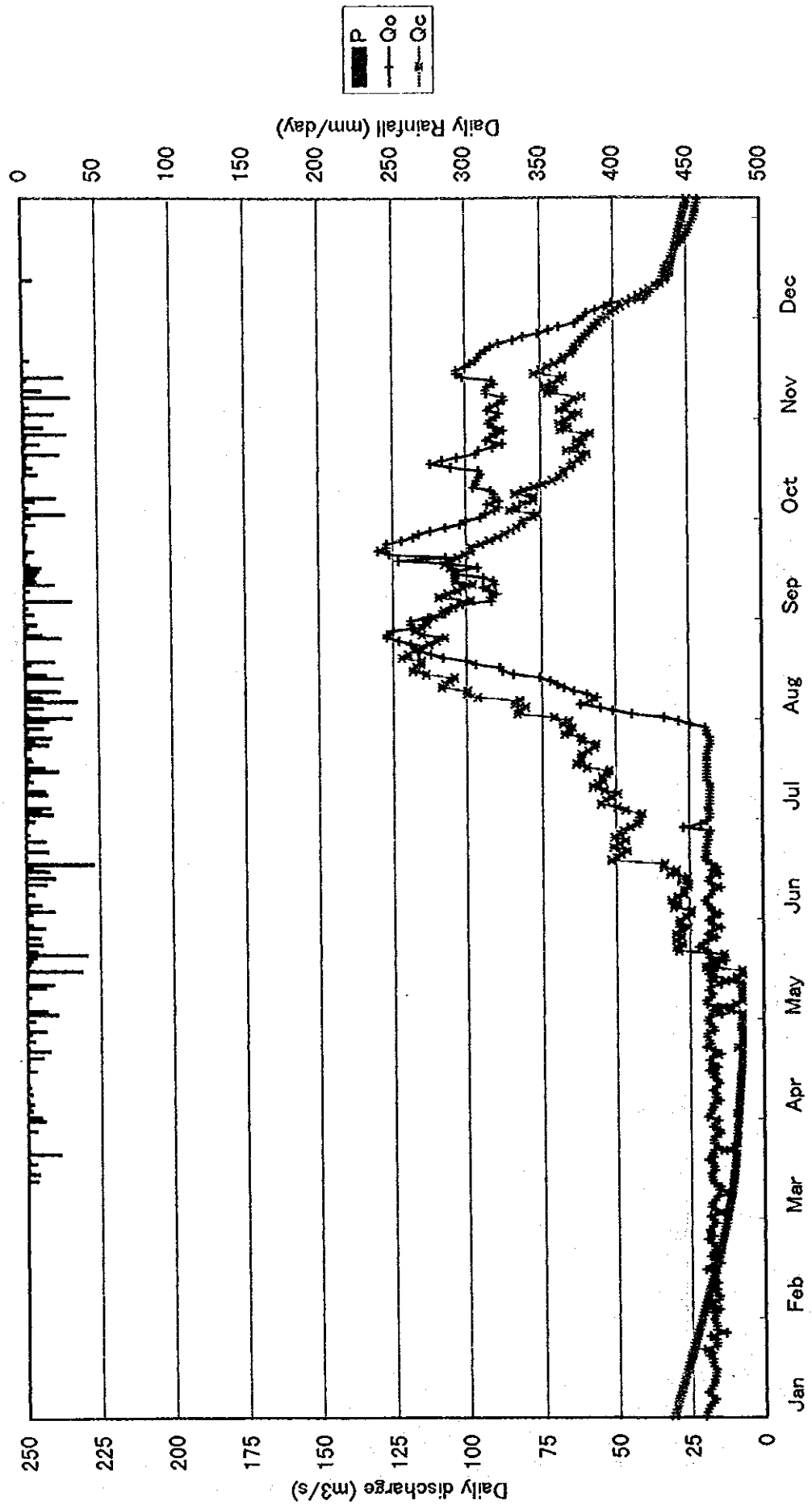
Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1990



Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1991



Hyetograph at Bossembele and Hydrographs at Boali ICOT
Year 1992



Boali Dam Water Balance
1984

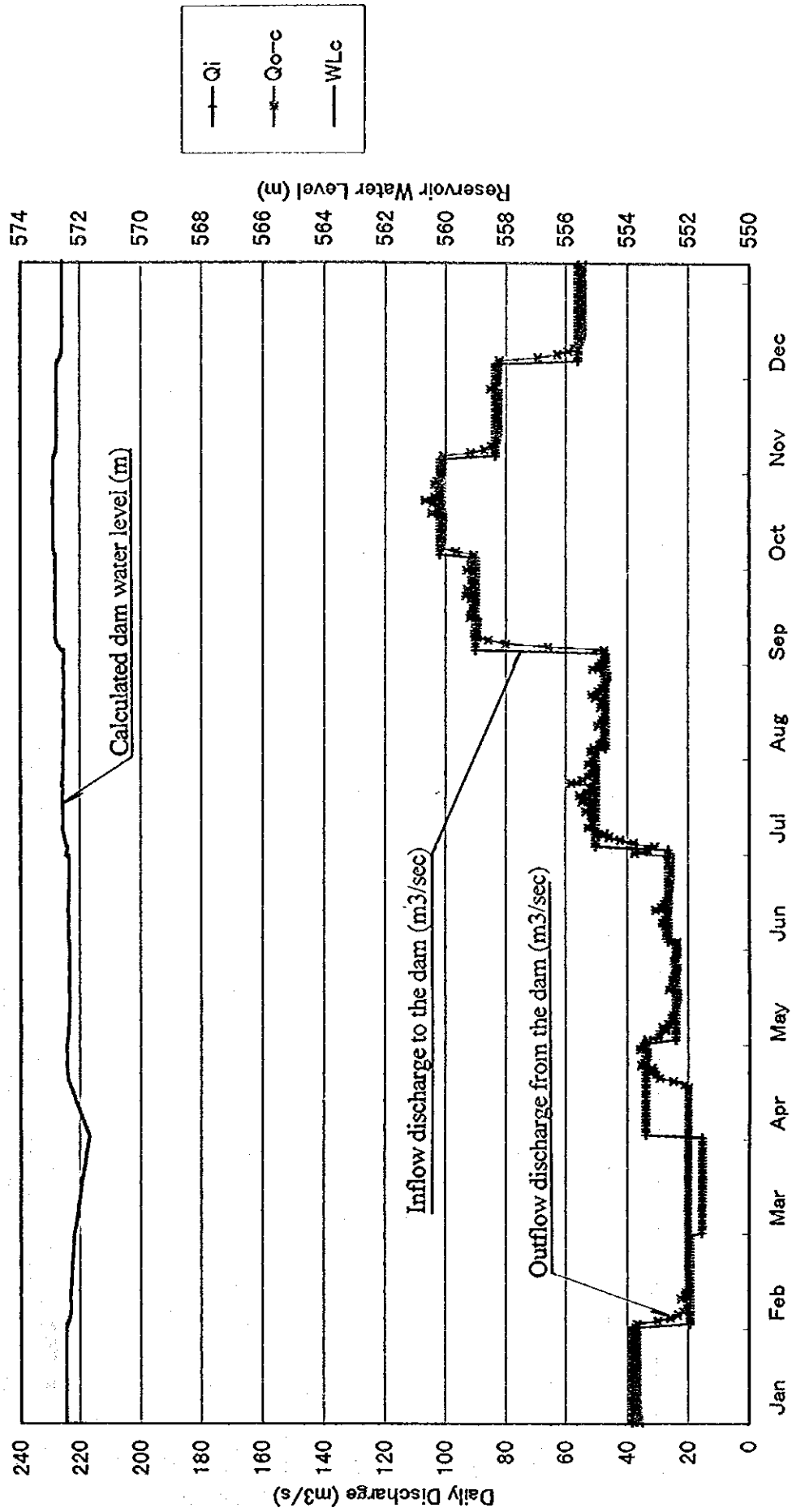
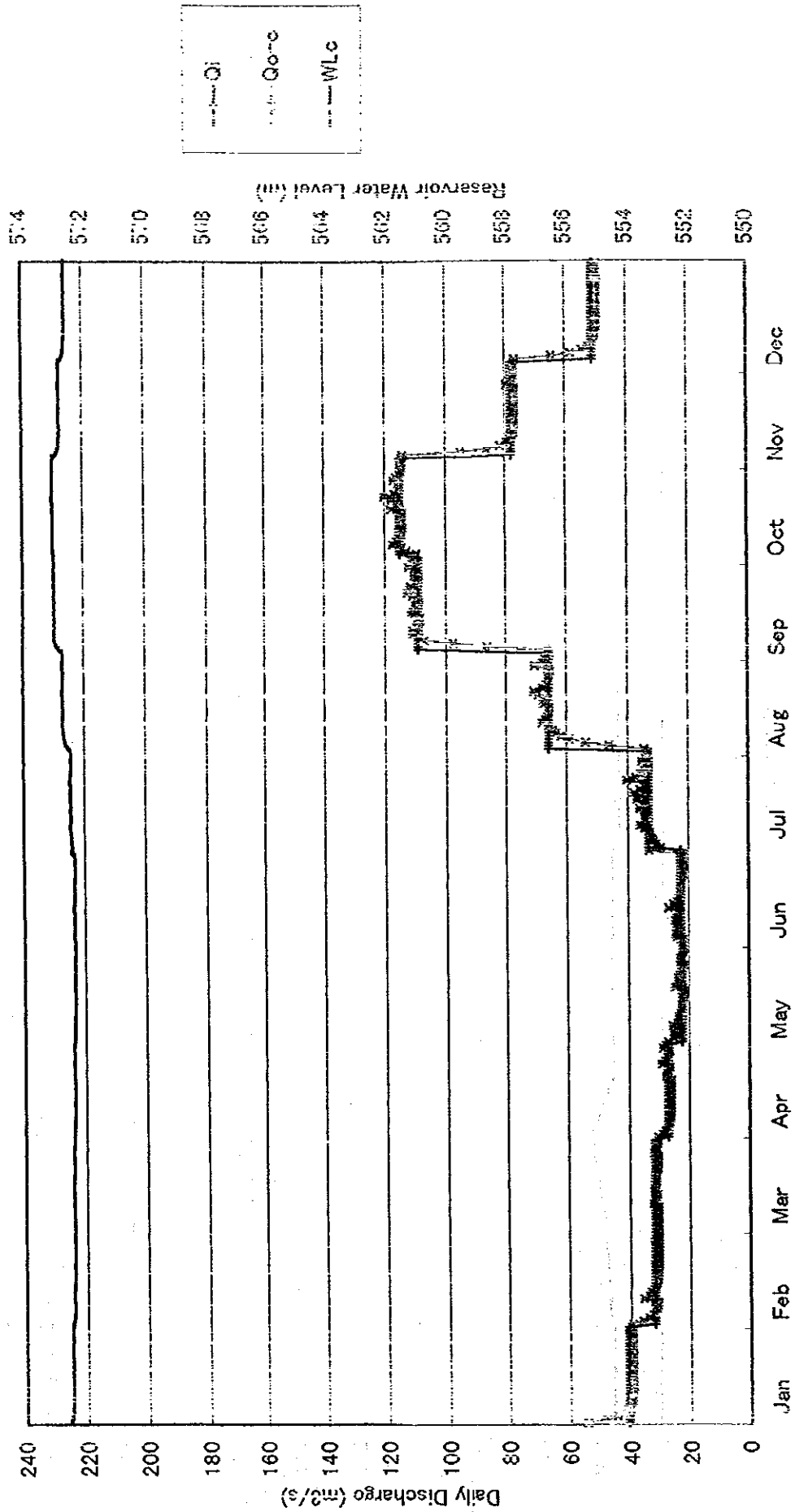
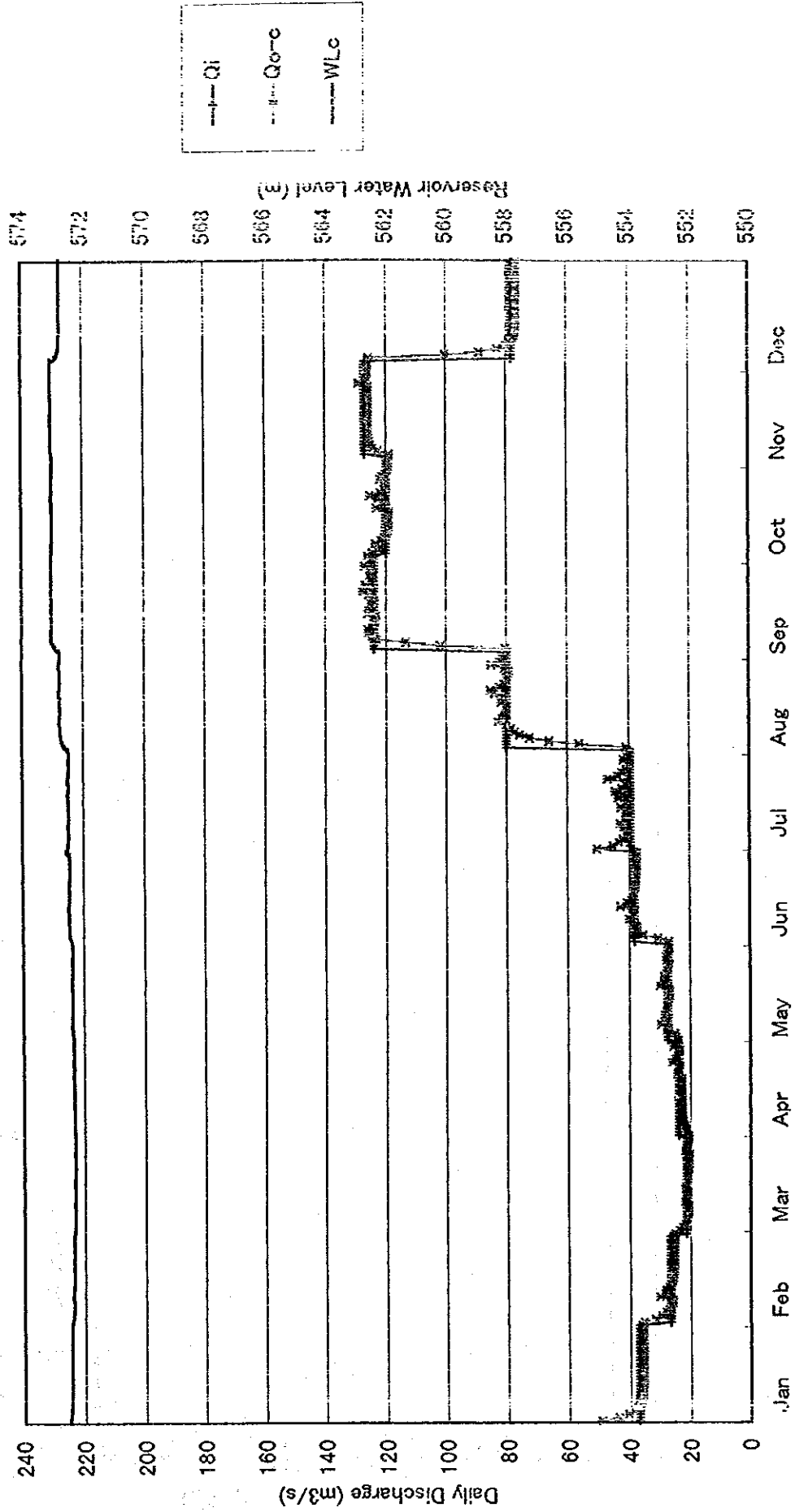


Fig 4 BOALI Dam Water Balance Result (Qb = 20m³/sec) 1964~1998

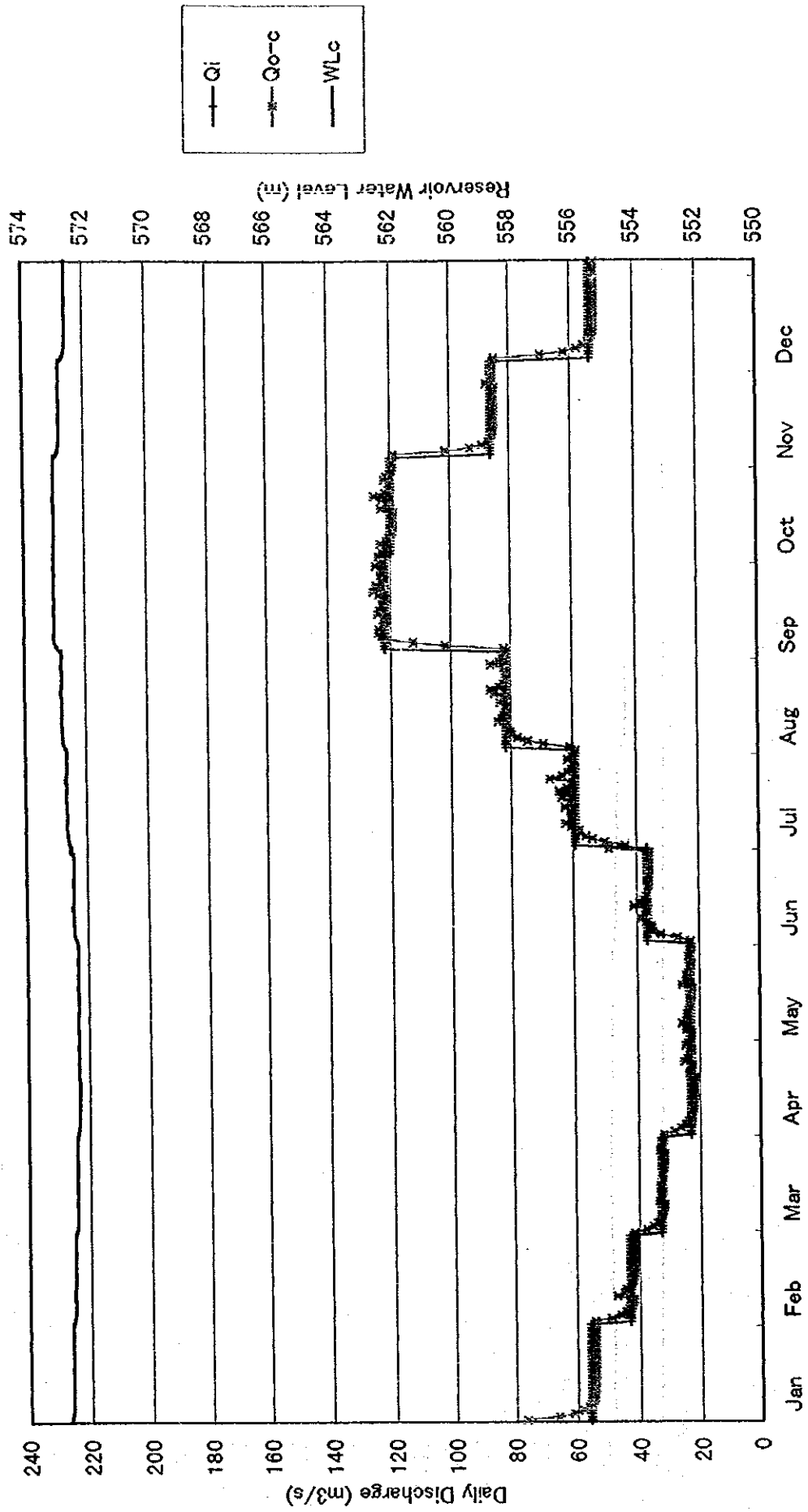
Boali Dam Water Balance 1965



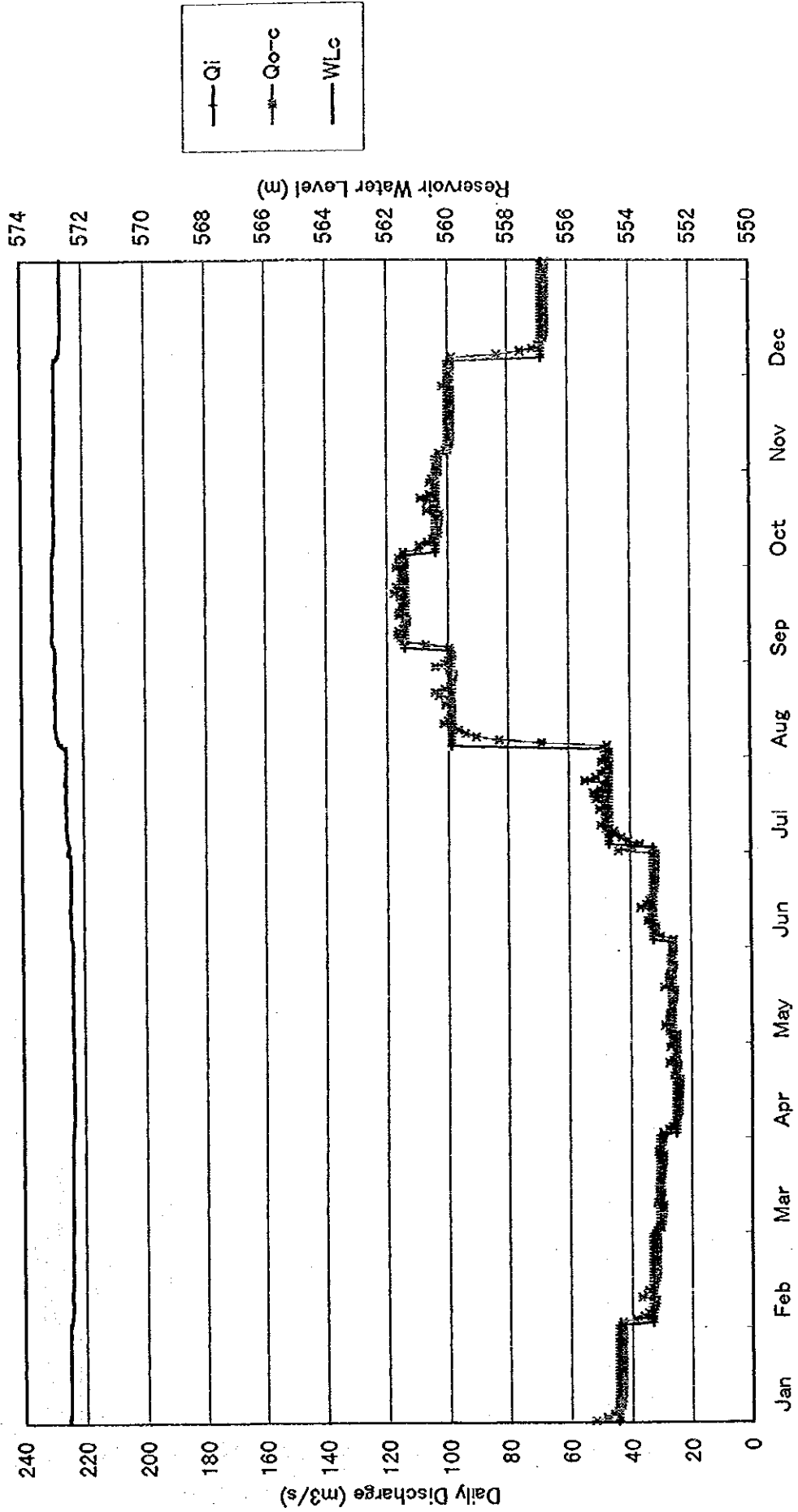
Boali Dam Water Balance
1966



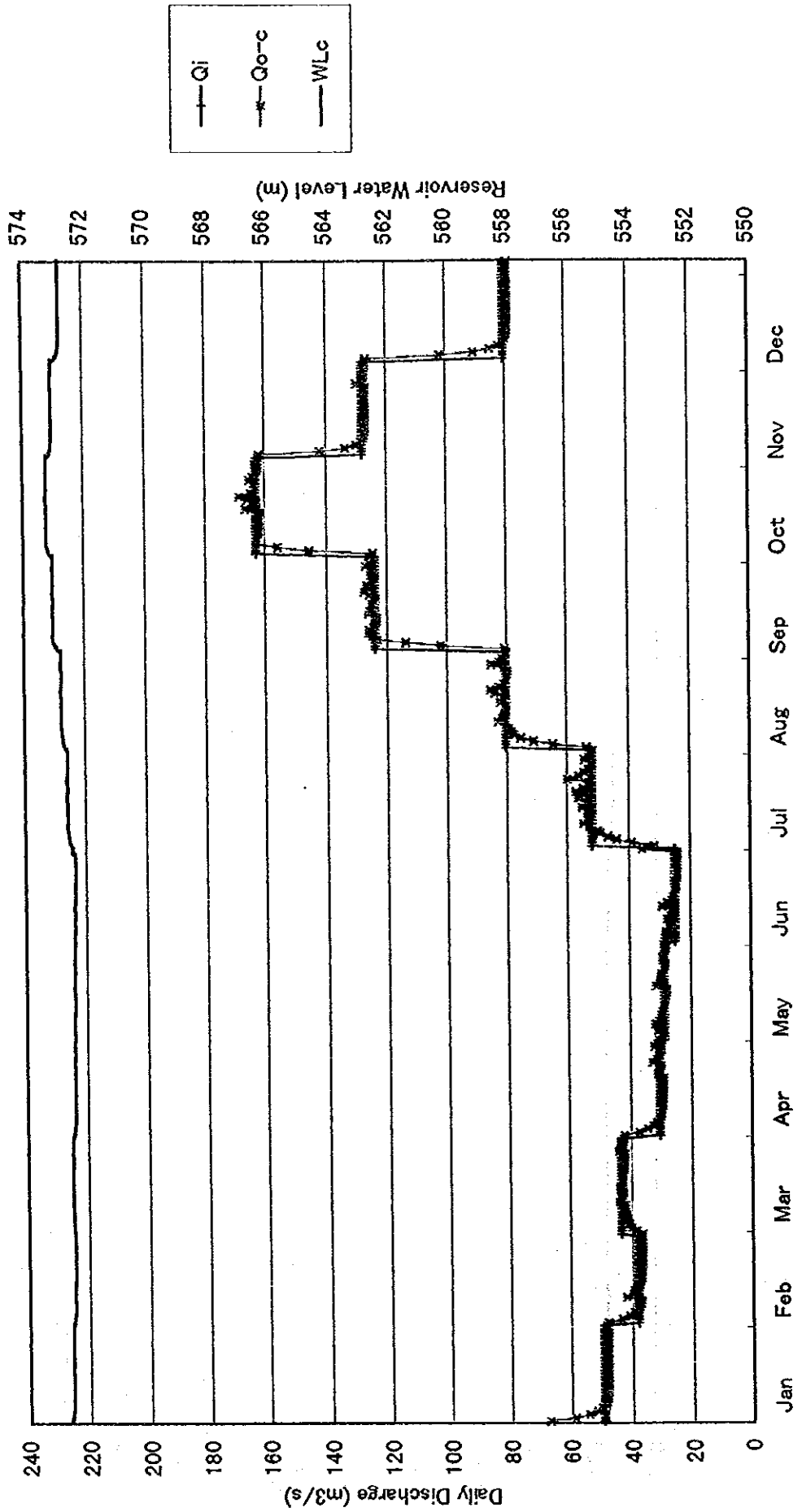
Boali Dam Water Balance
1967



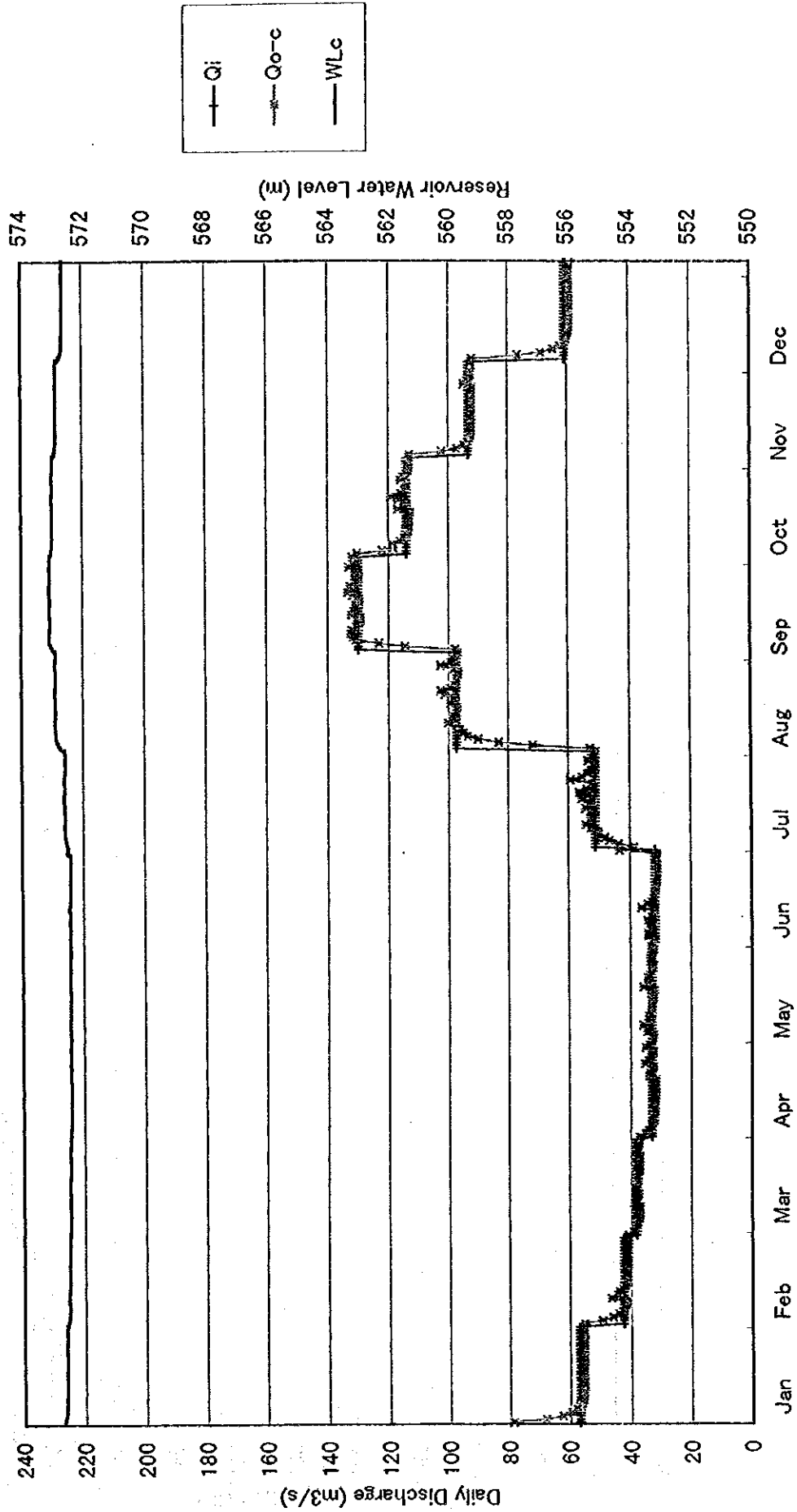
Boali Dam Water Balance
1968



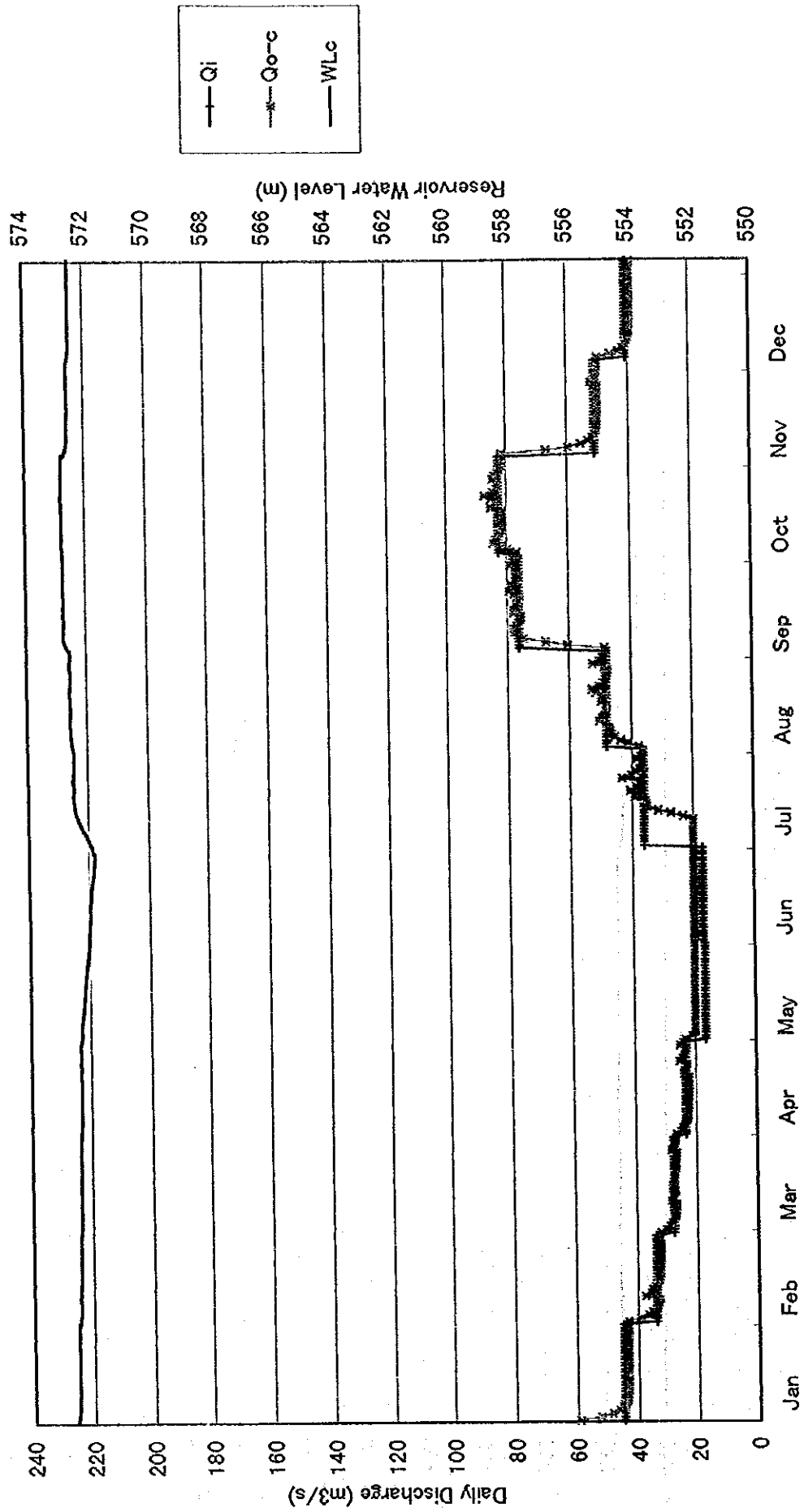
Boali Dam Water Balance
1969



Boali Dam Water Balance 1970



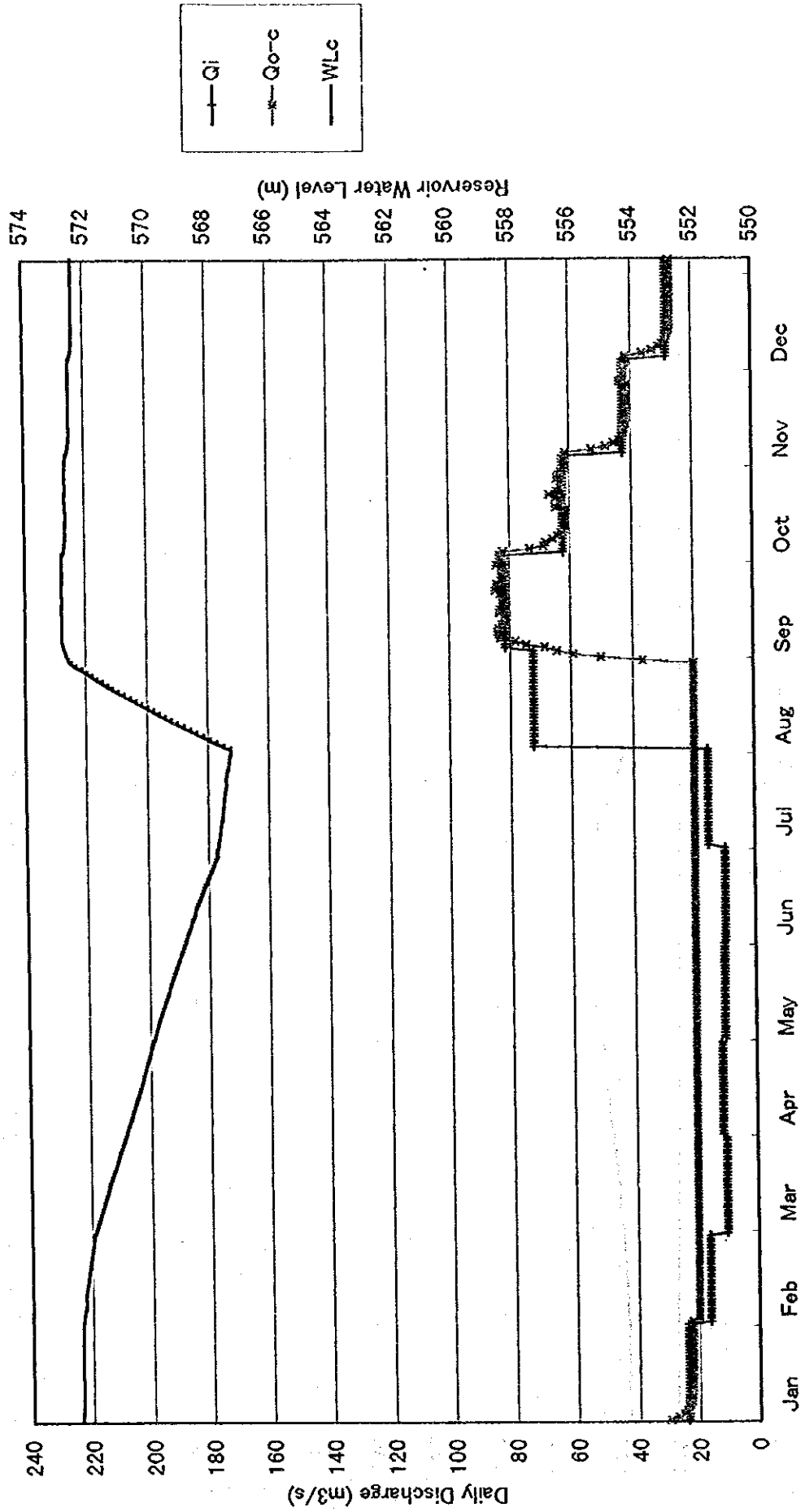
Boali Dam Water Balance
1971



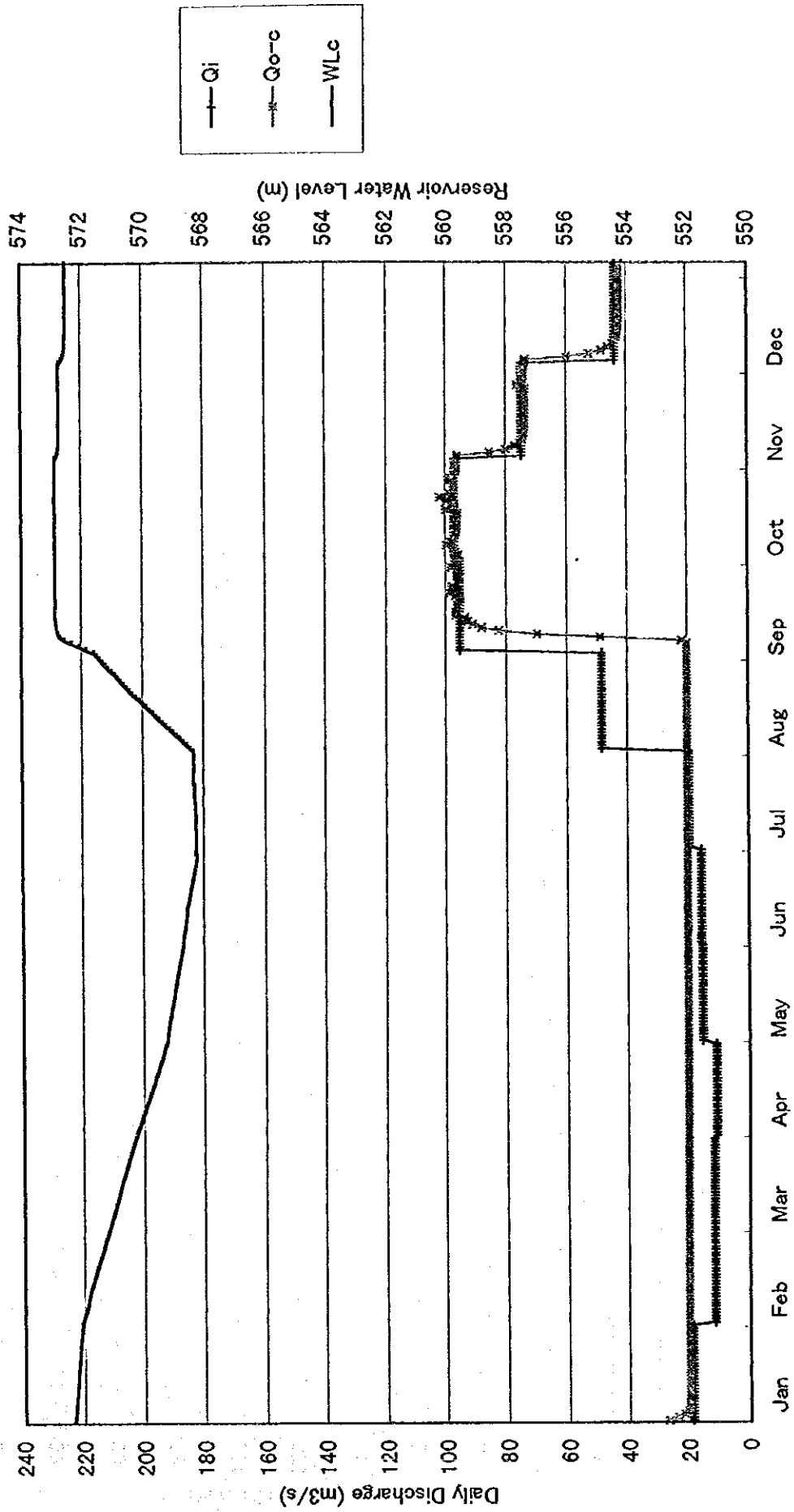
Boali Dam Water Balance
1972



Boali Dam Water Balance
1973



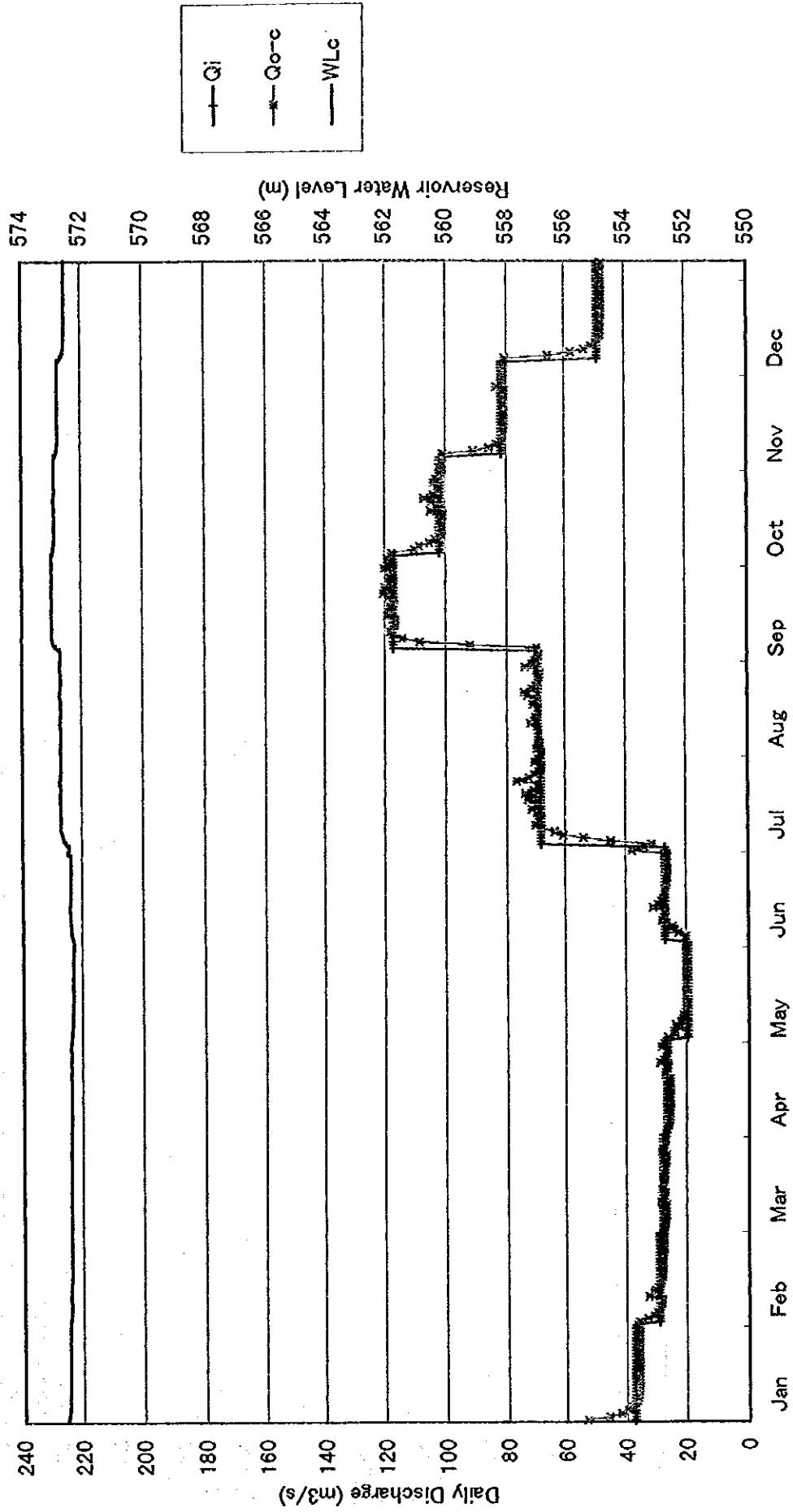
Boali Dam Water Balance
1974



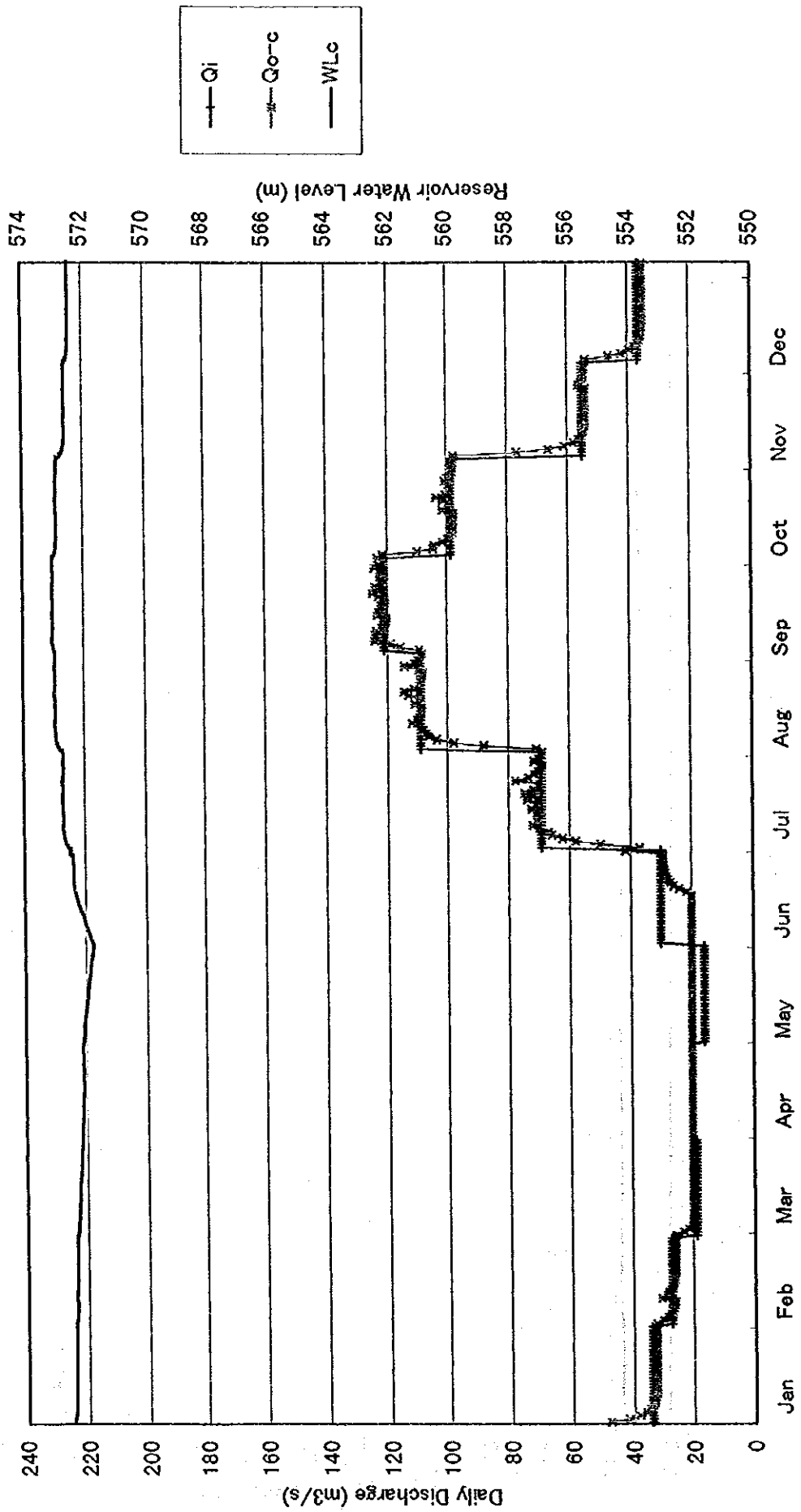
Boali Dam Water Balance
1975



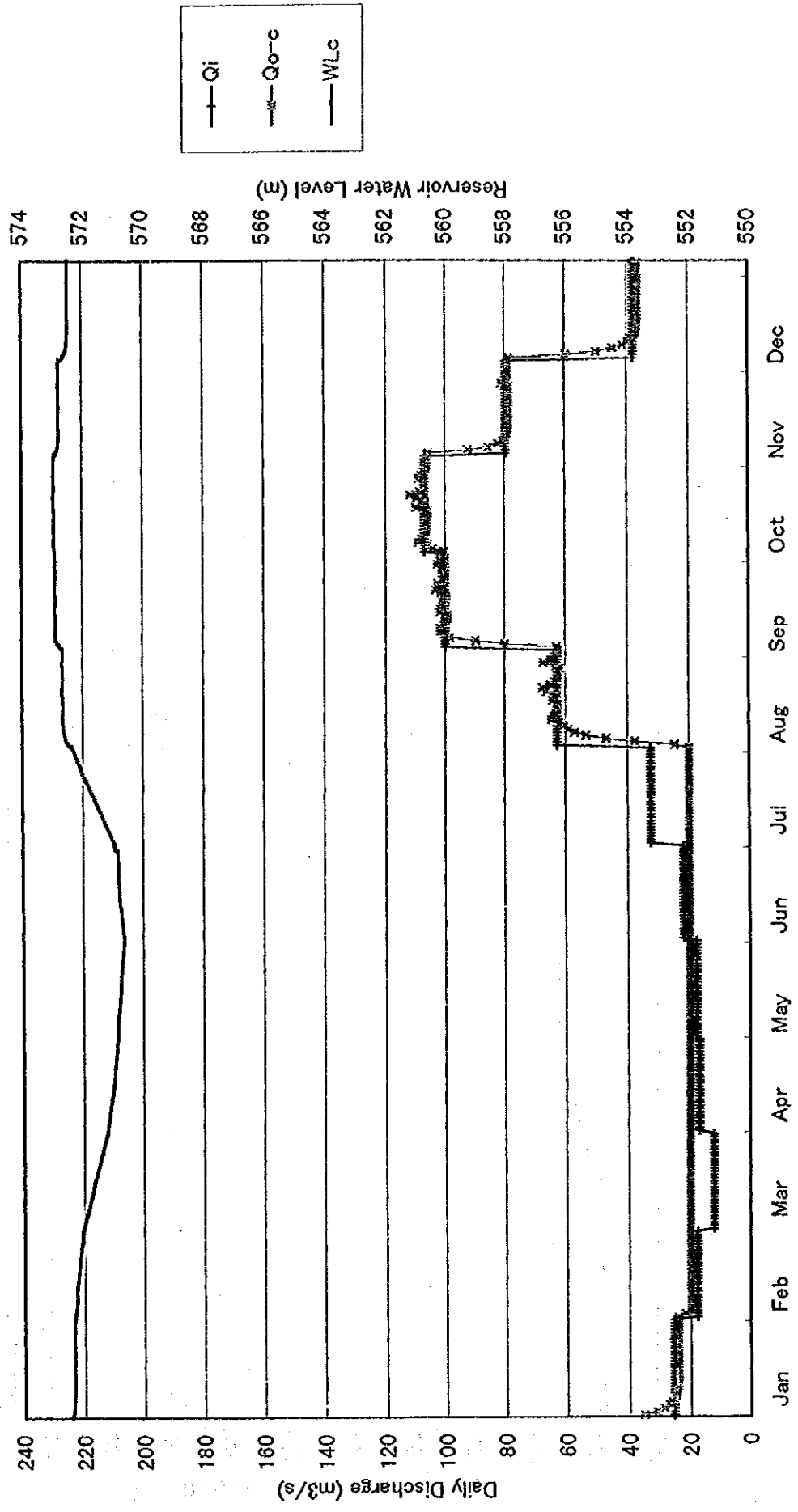
Boali Dam Water Balance
1976



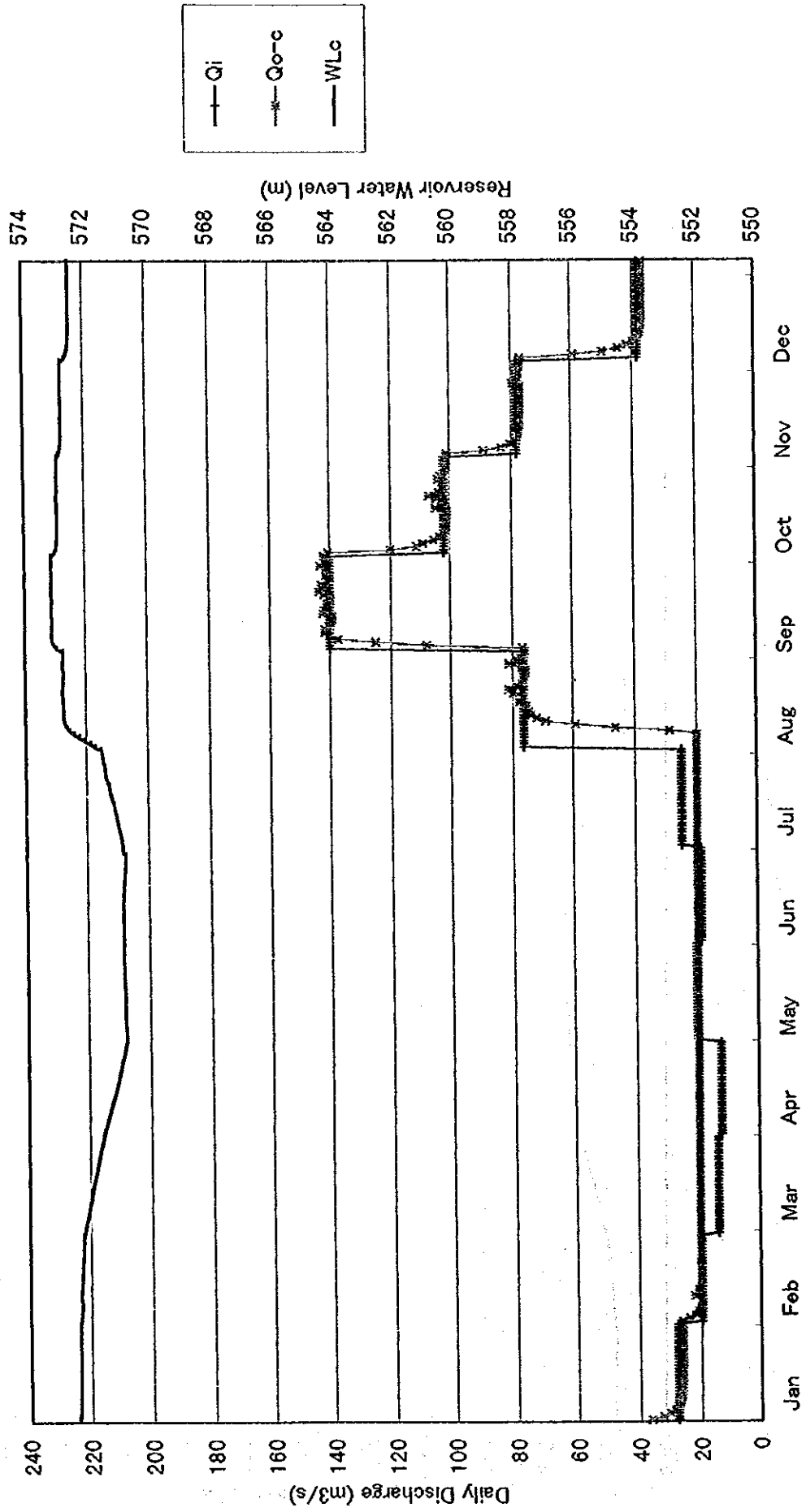
Boali Dam Water Balance
1977



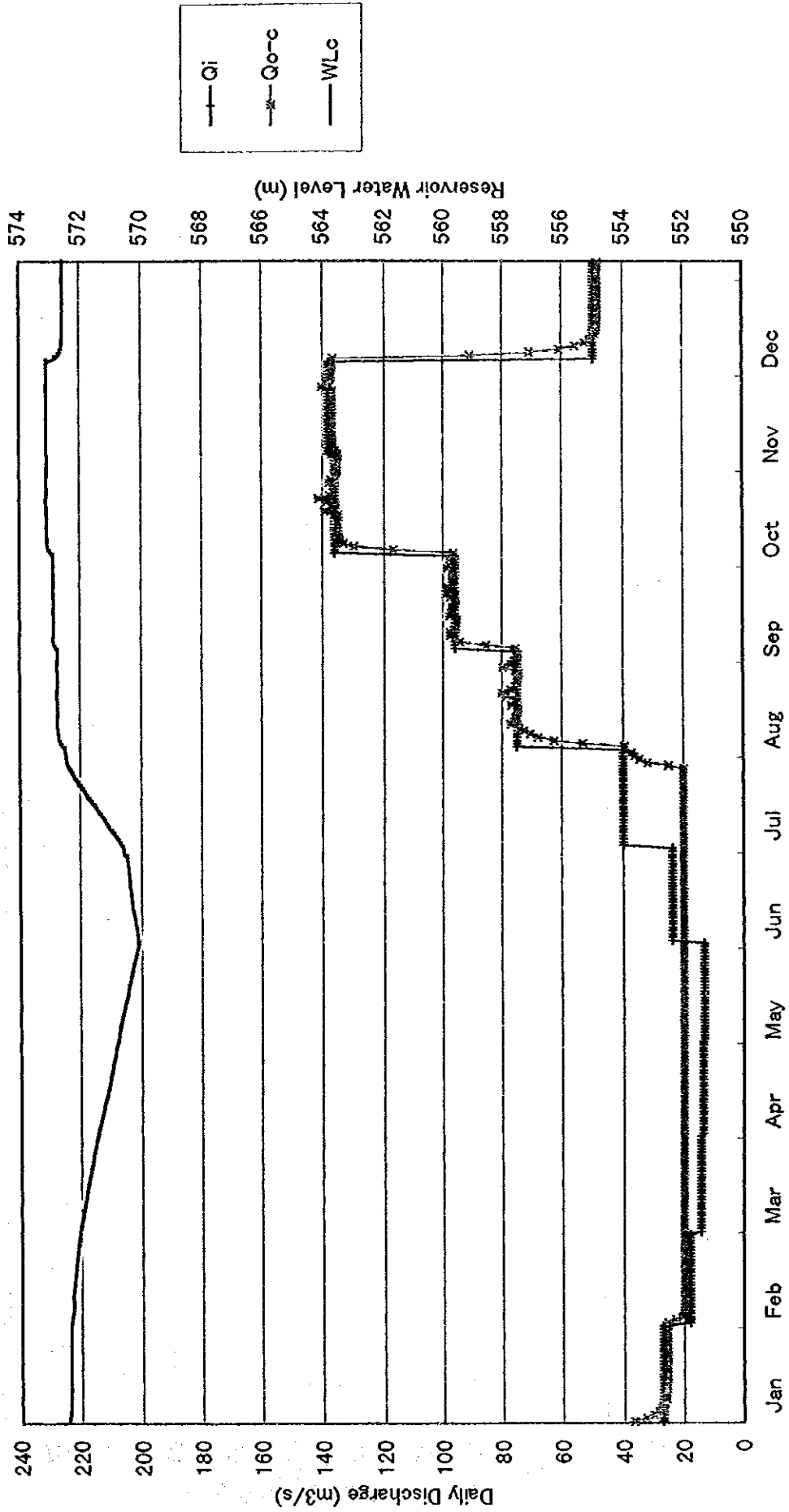
Boali Dam Water Balance
1978



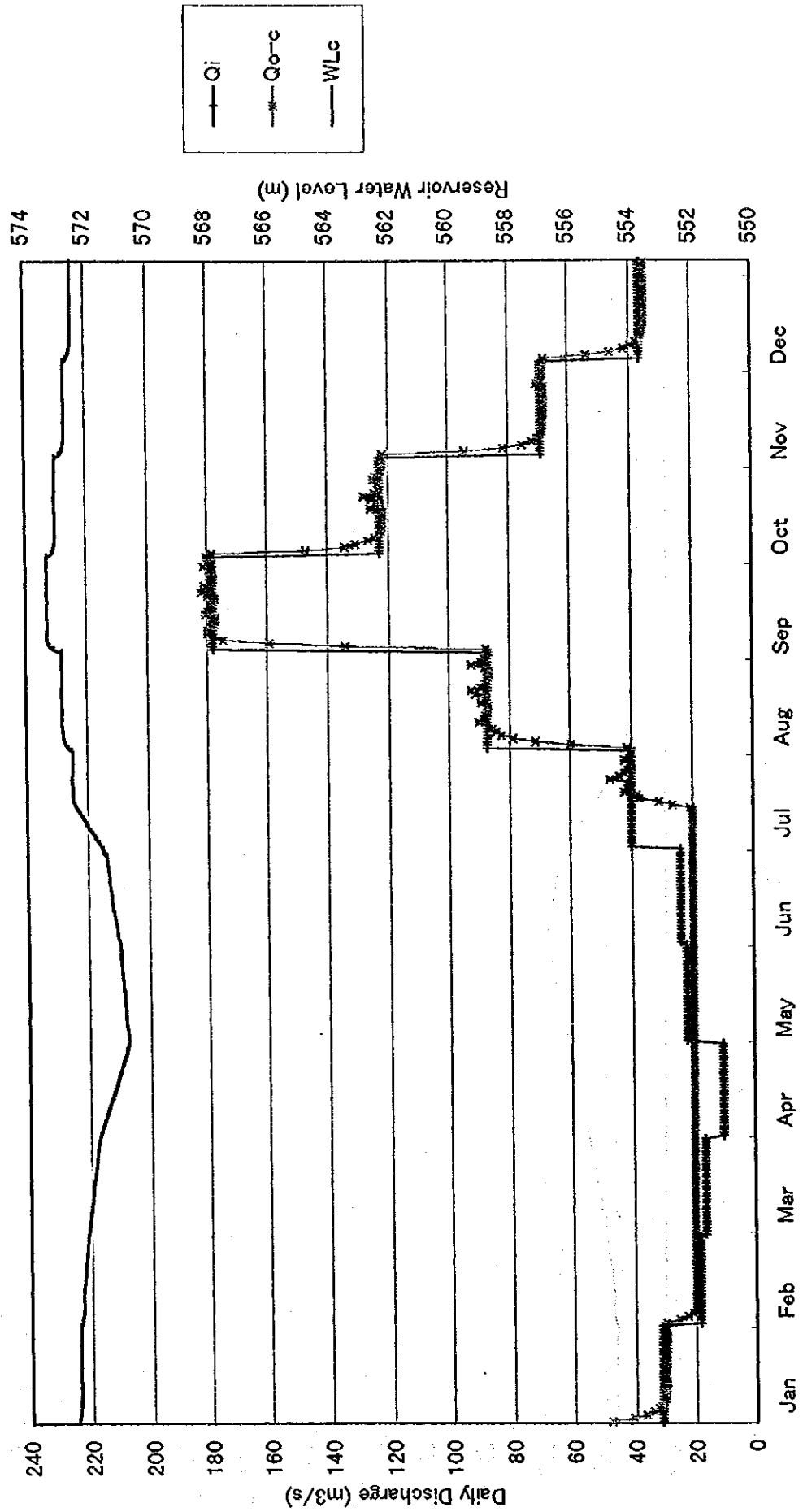
Boali Dam Water Balance
1979



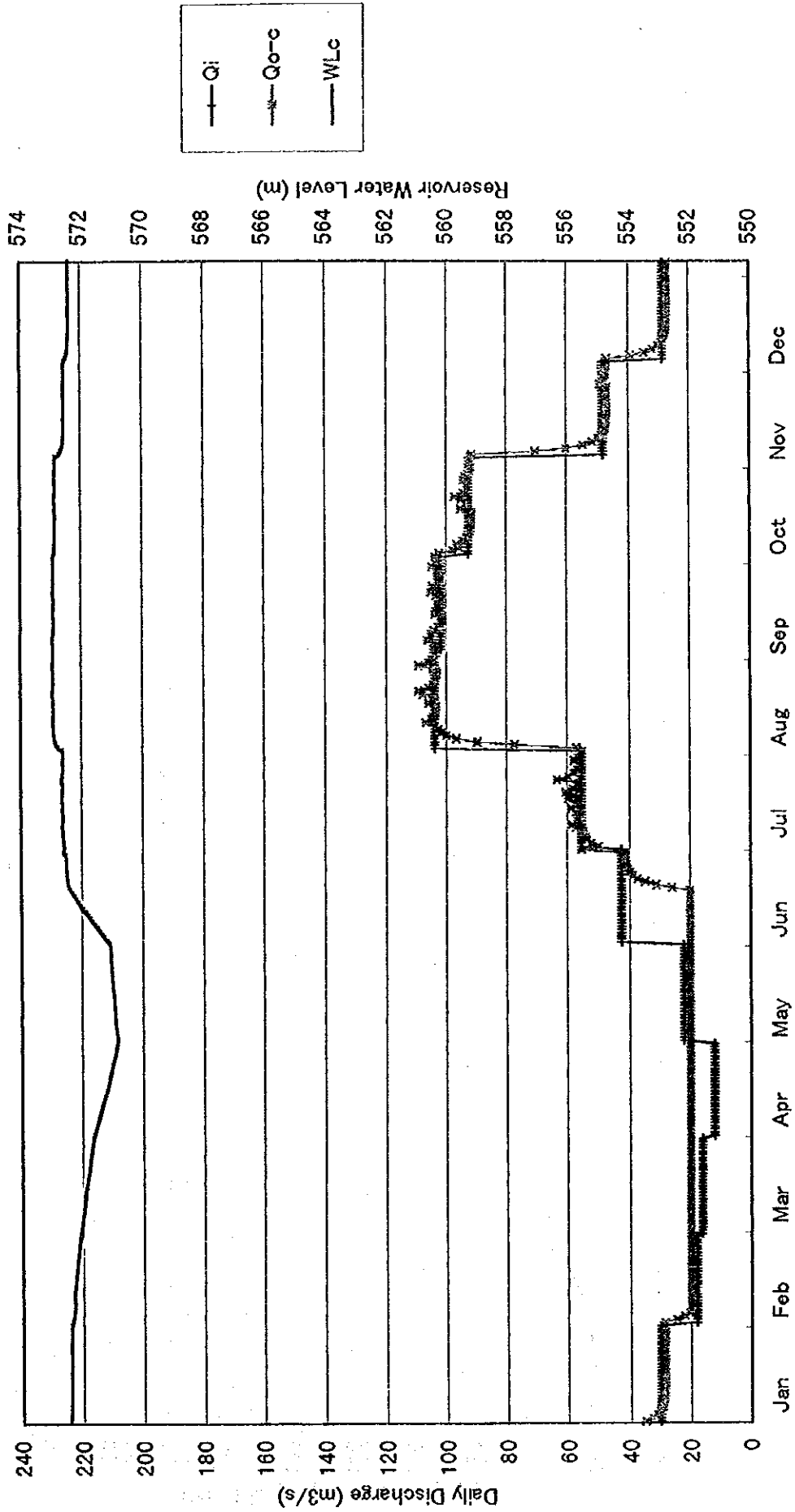
Boali Dam Water Balance
1980



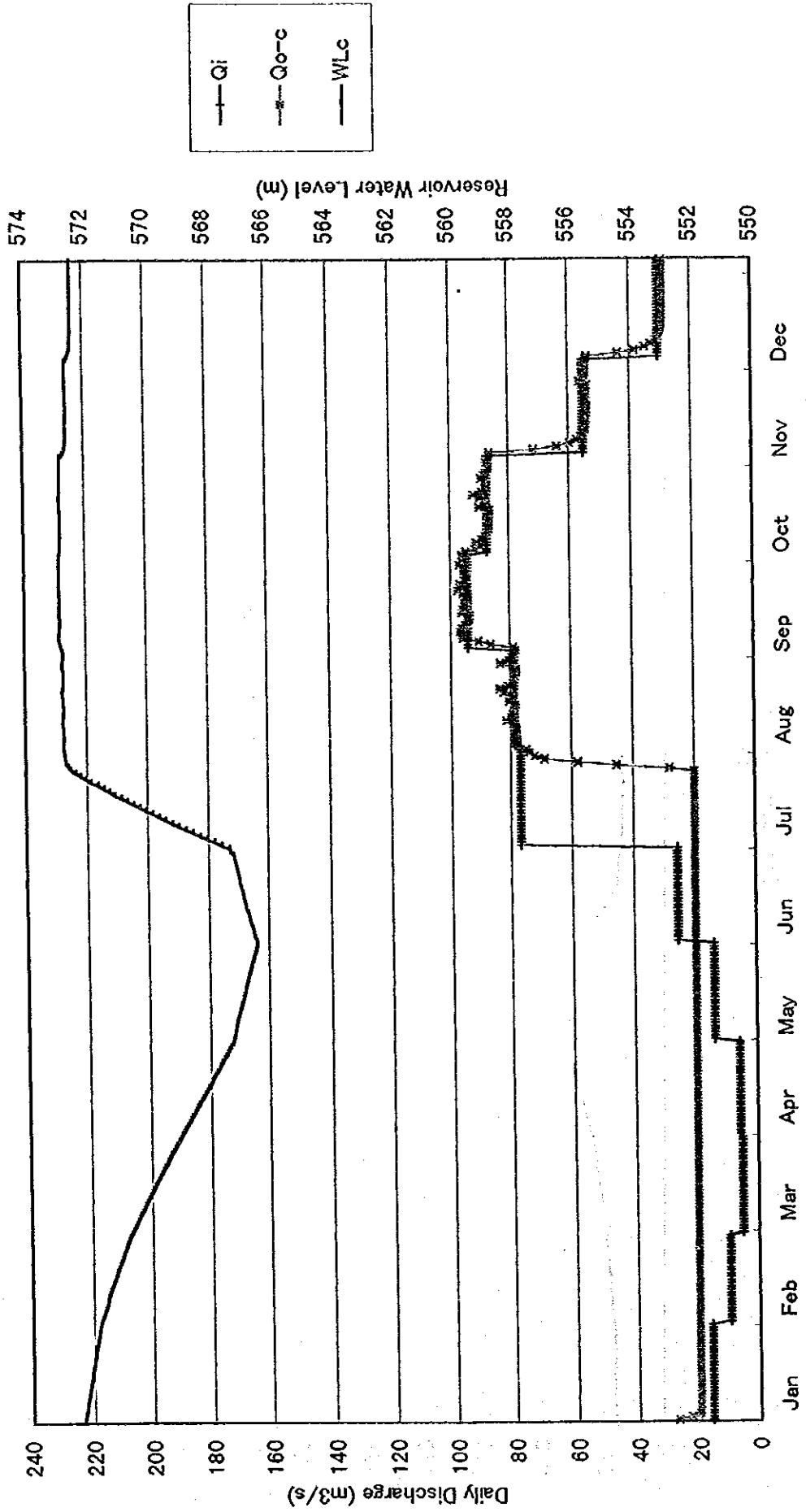
Boali Dam Water Balance
1981



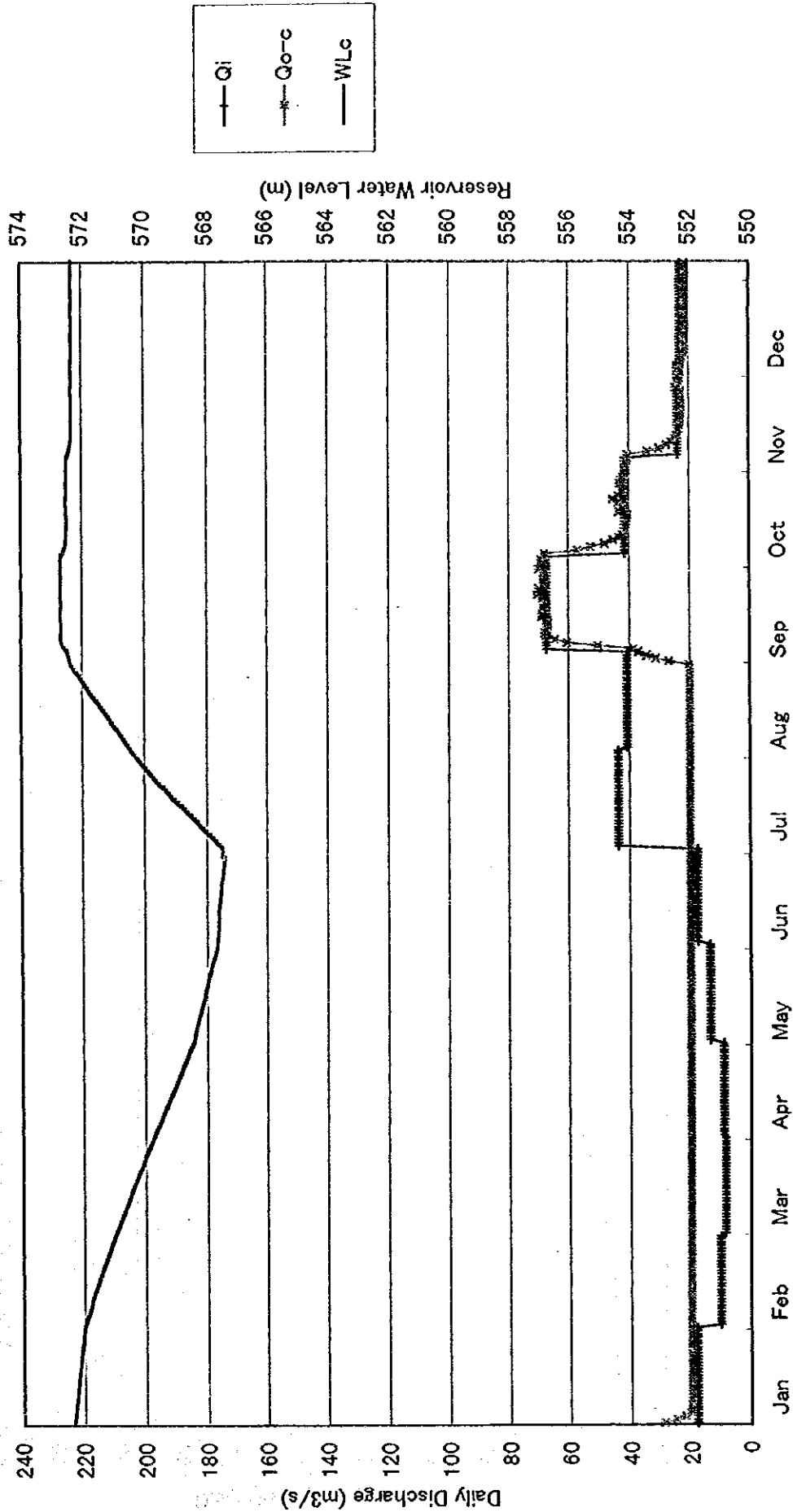
Boali Dam Water Balance
1982



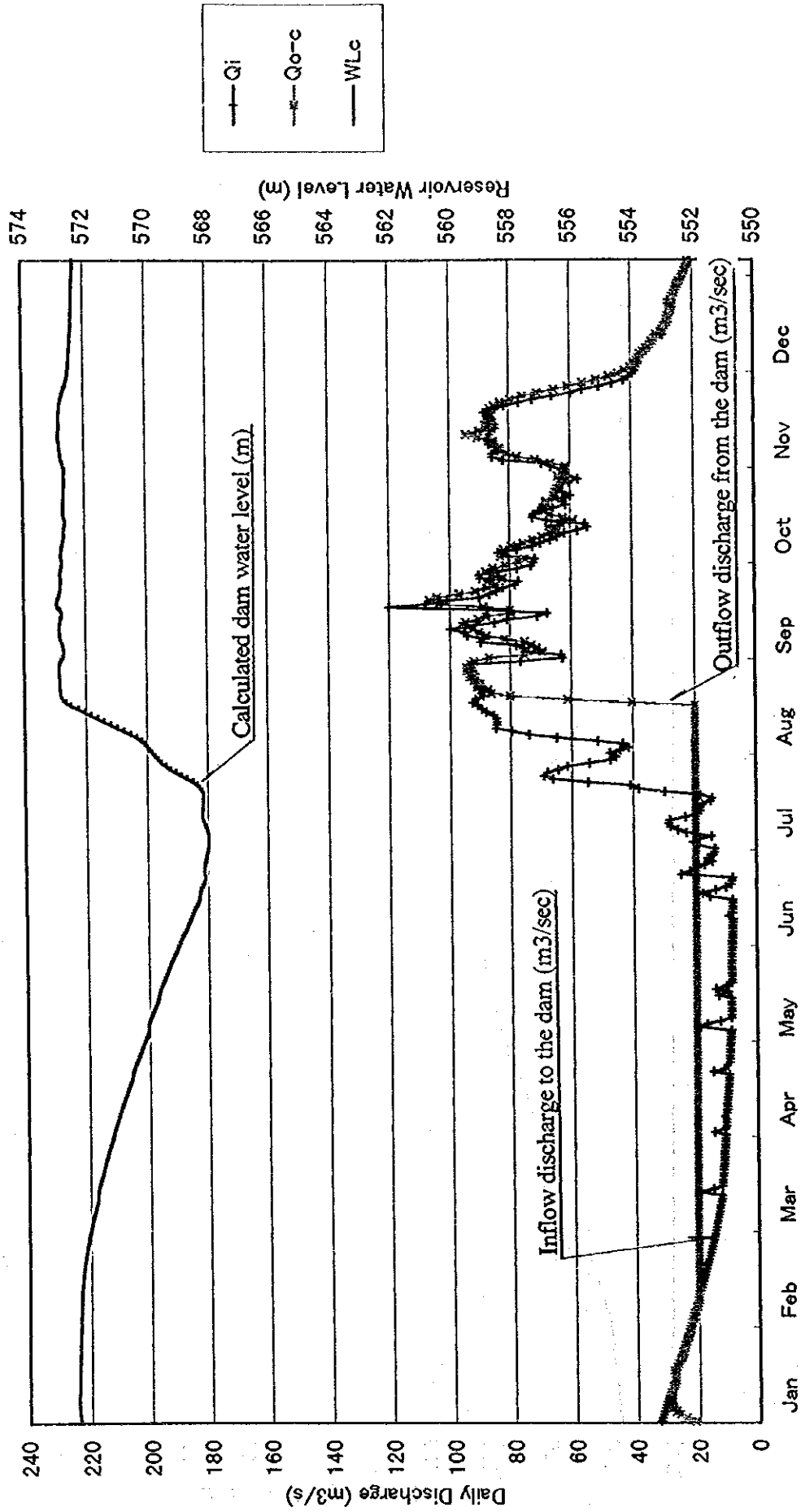
Boali Dam Water Balance
1983



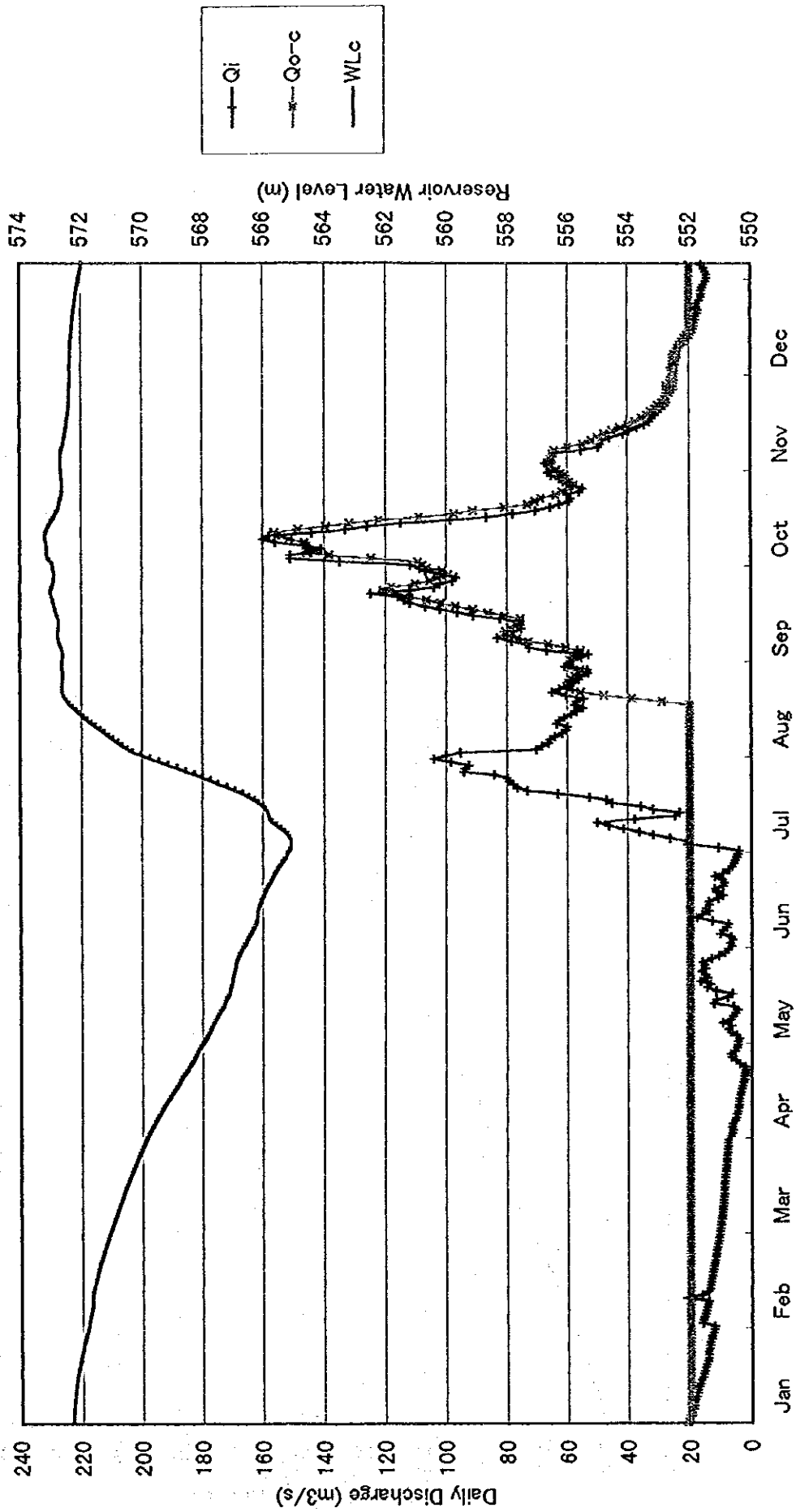
Boali Dam Water Balance
1984



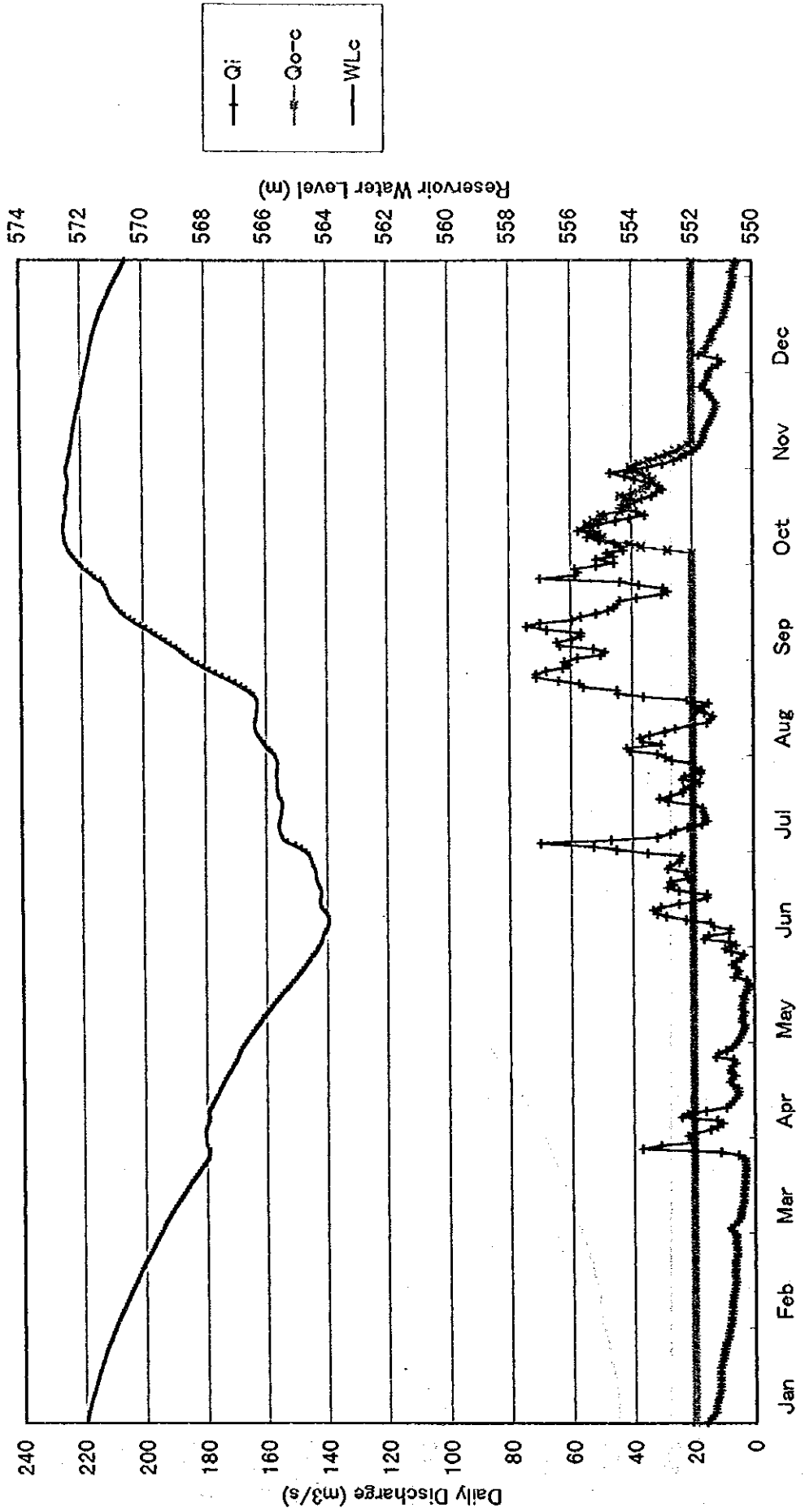
Boali Dam Water Balance
1985



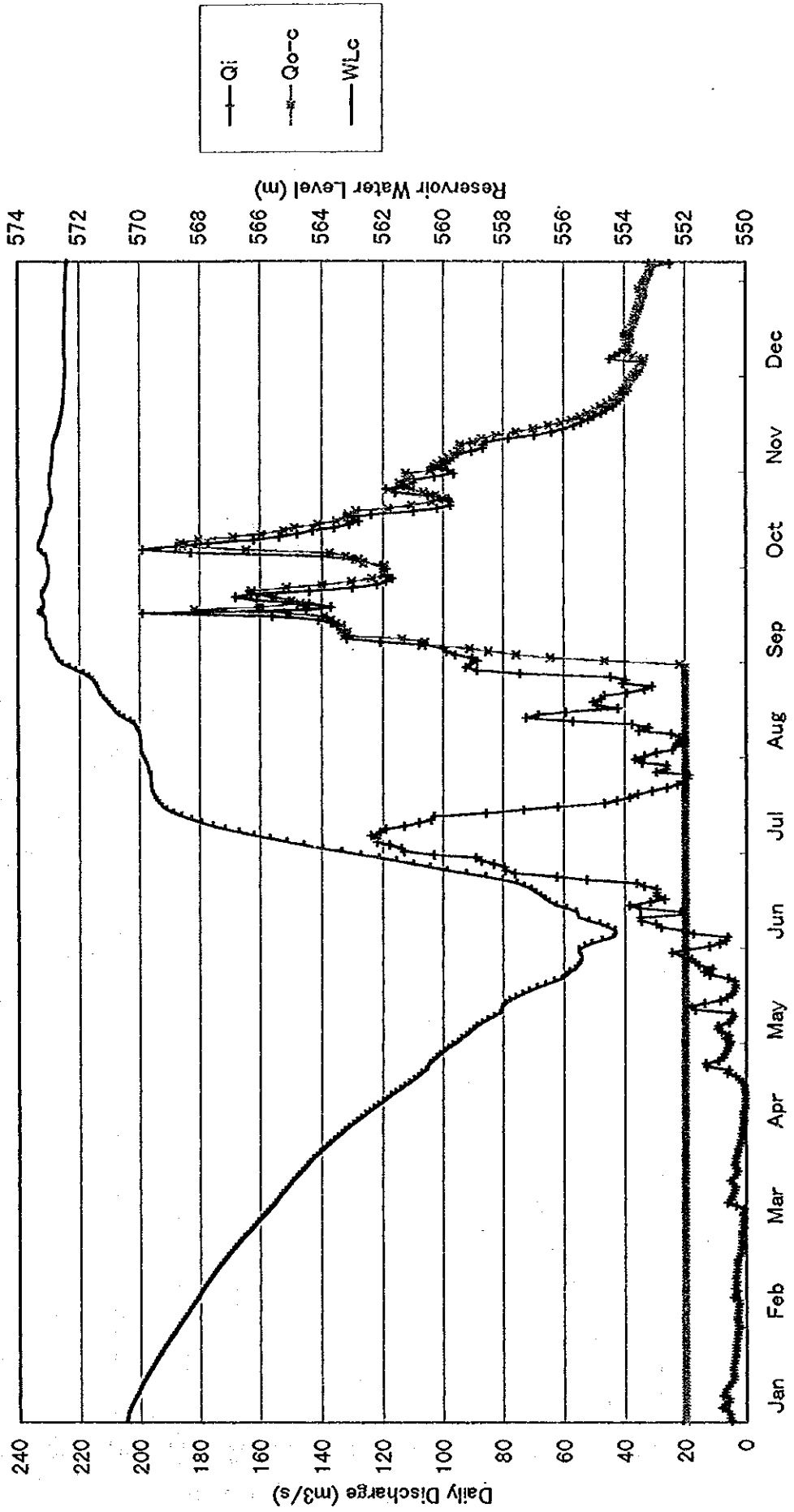
Boali Dam Water Balance
1986



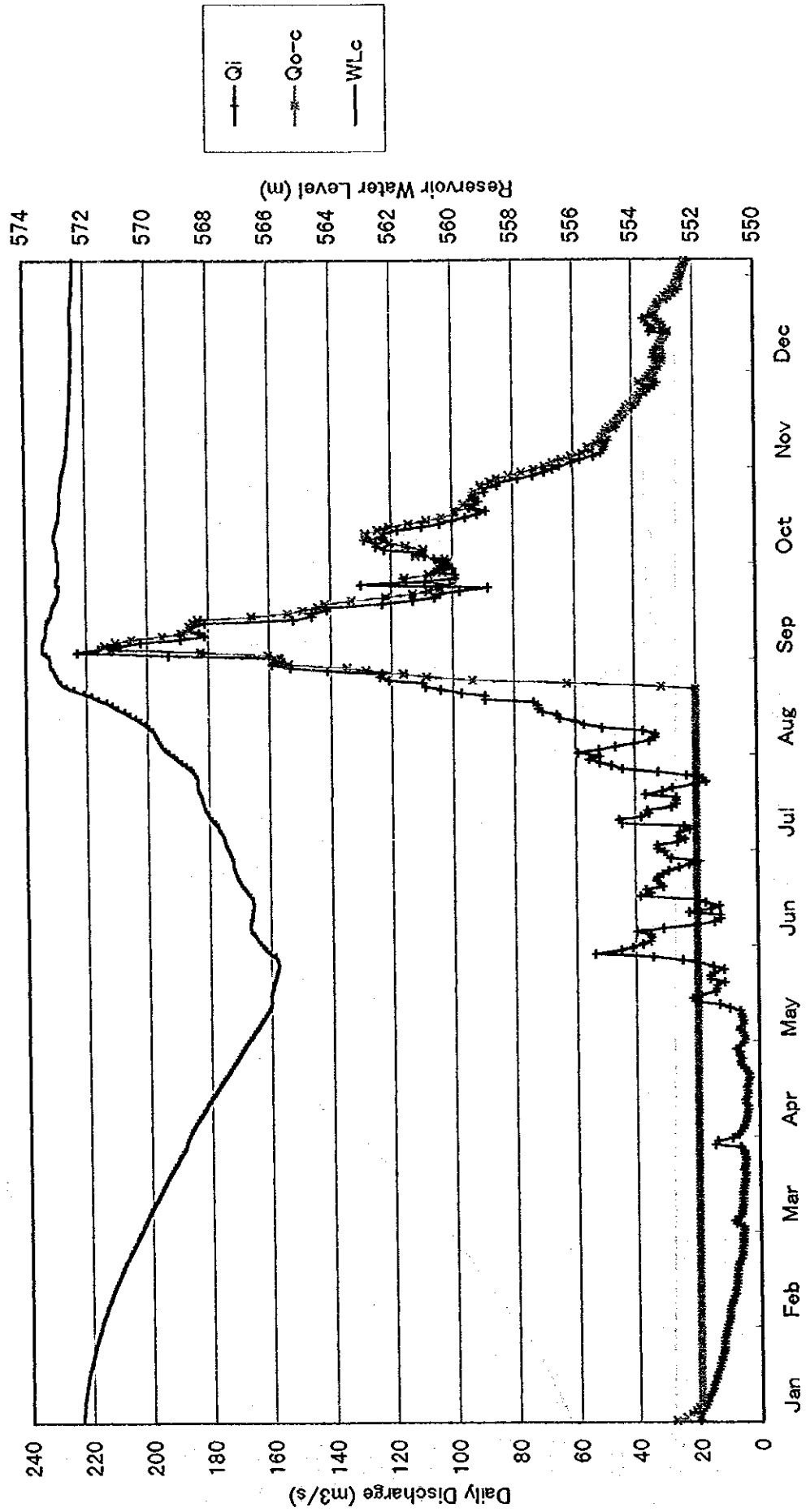
Boali Dam Water Balance
1987



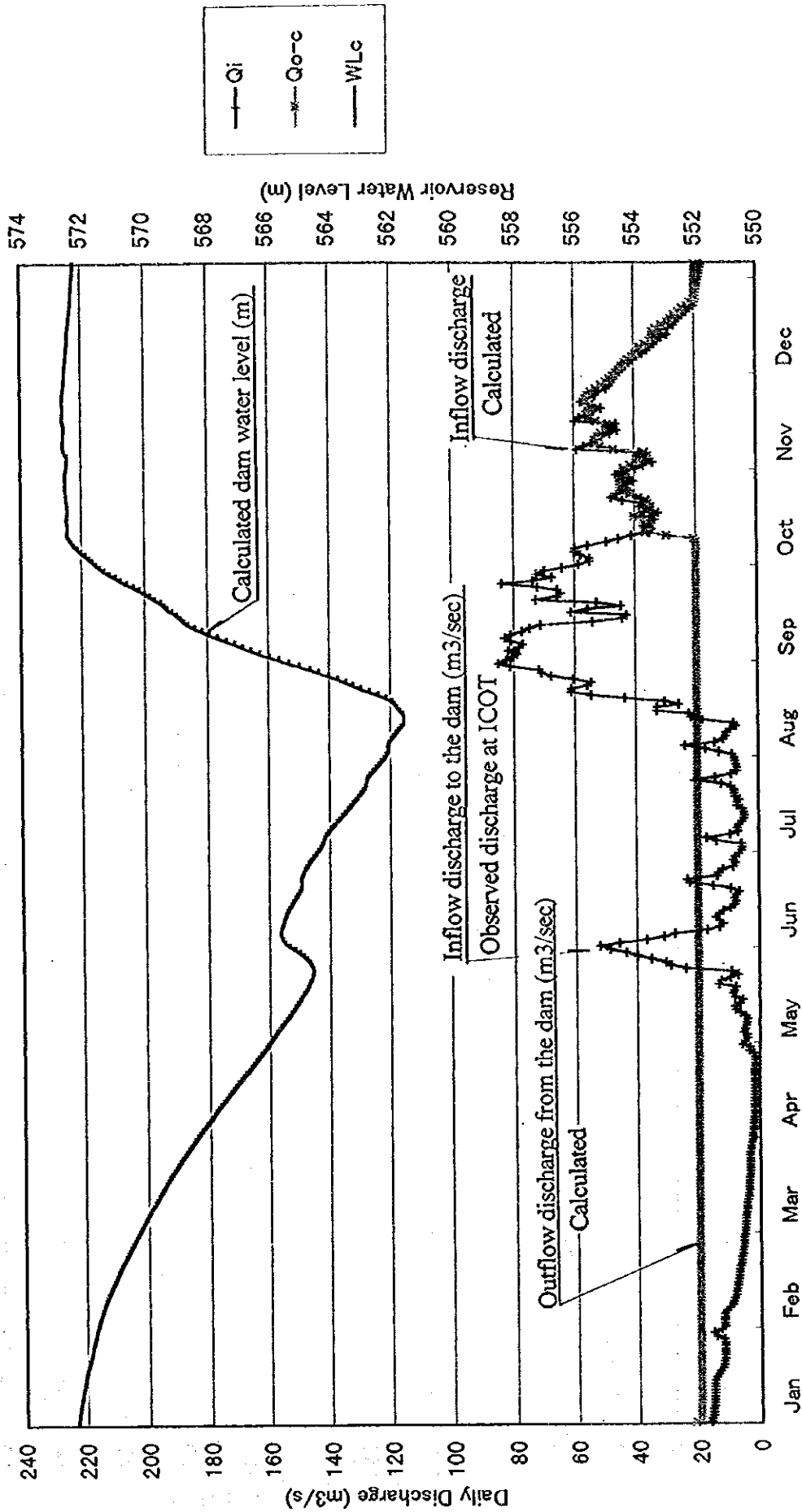
Boali Dam Water Balance
1988



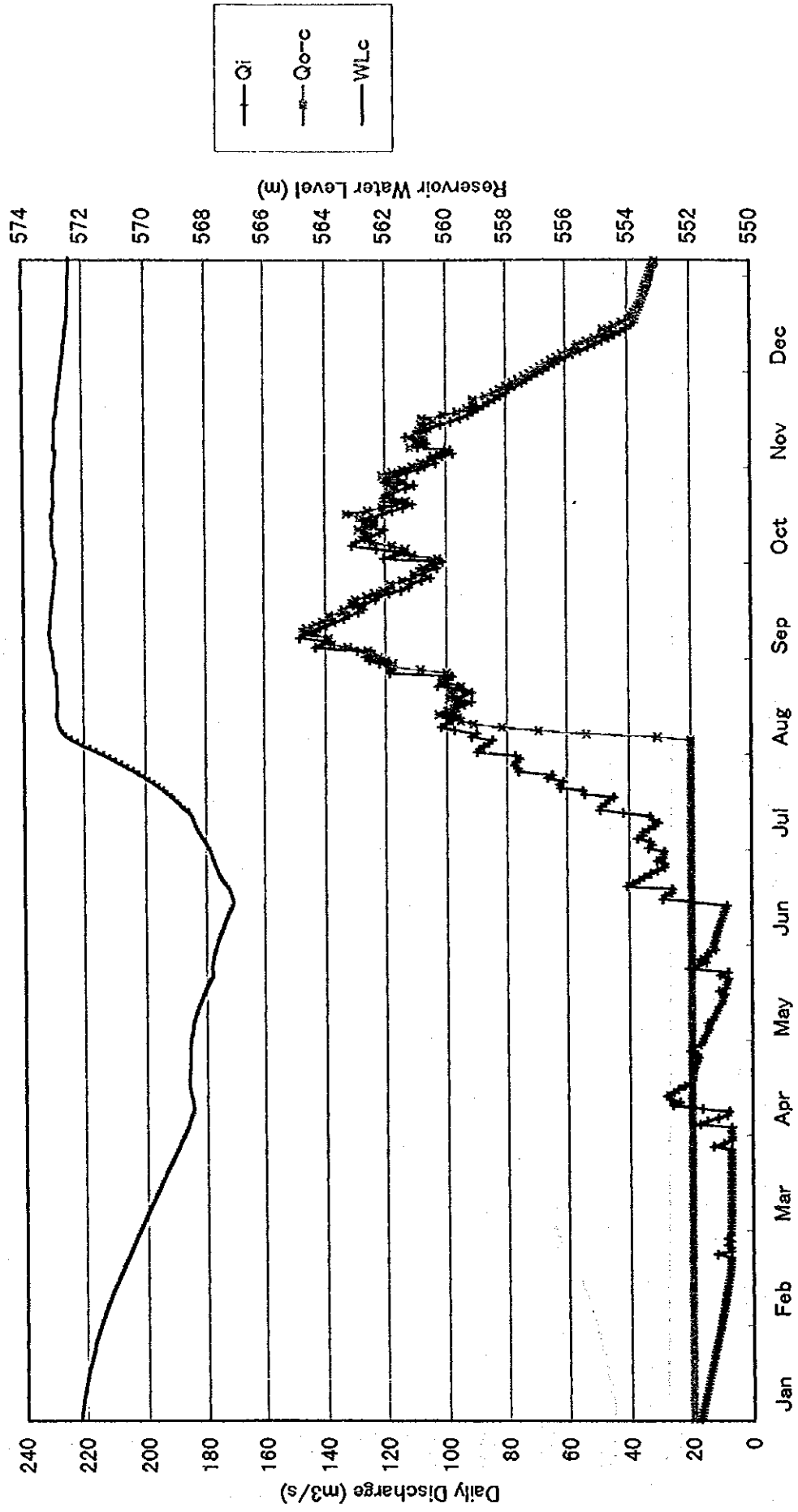
Boali Dam Water Balance
1989



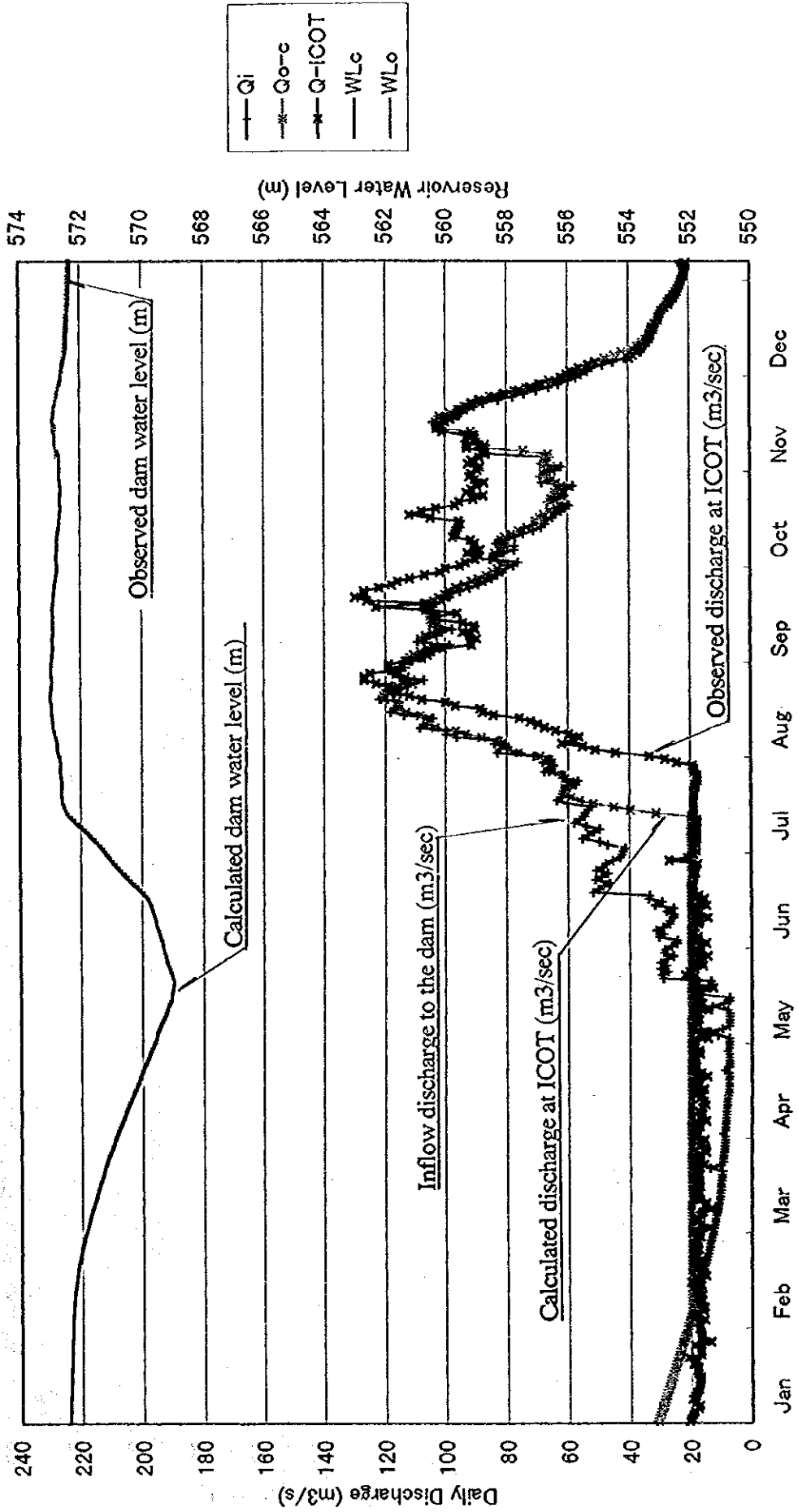
Boali Dam Water Balance
1990



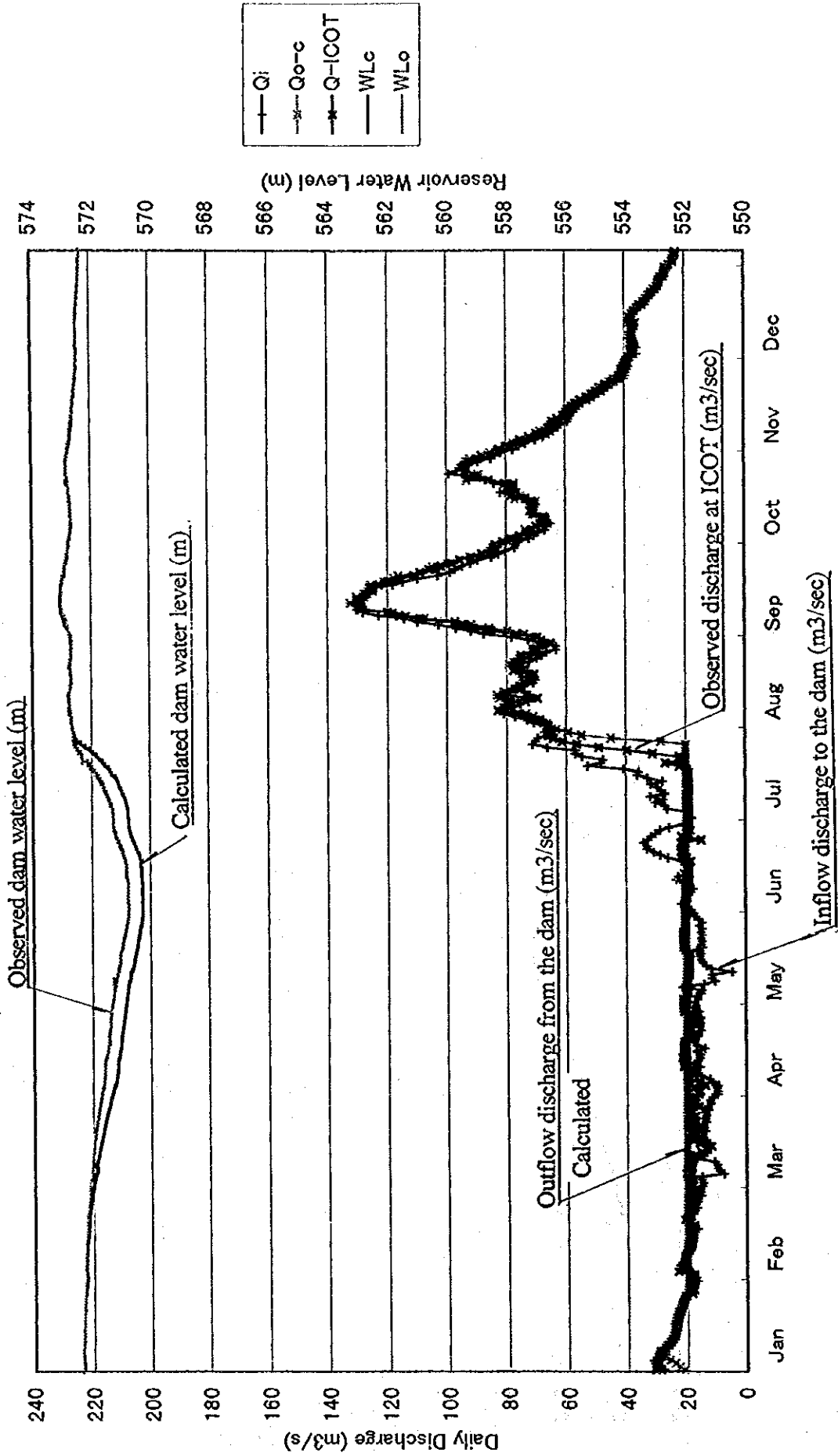
Boali Dam Water Balance
1991



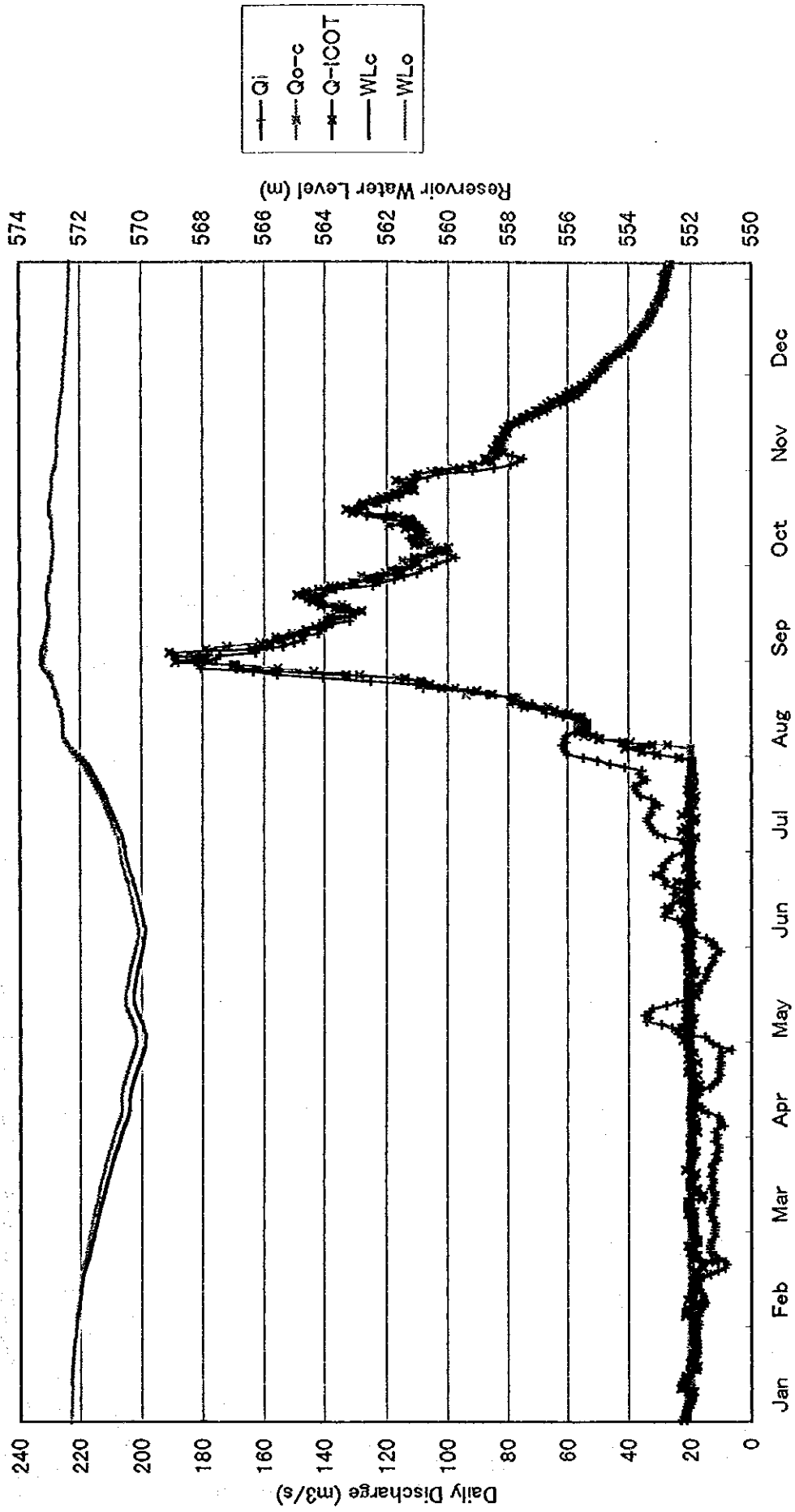
Boali Dam Water Balance
1992



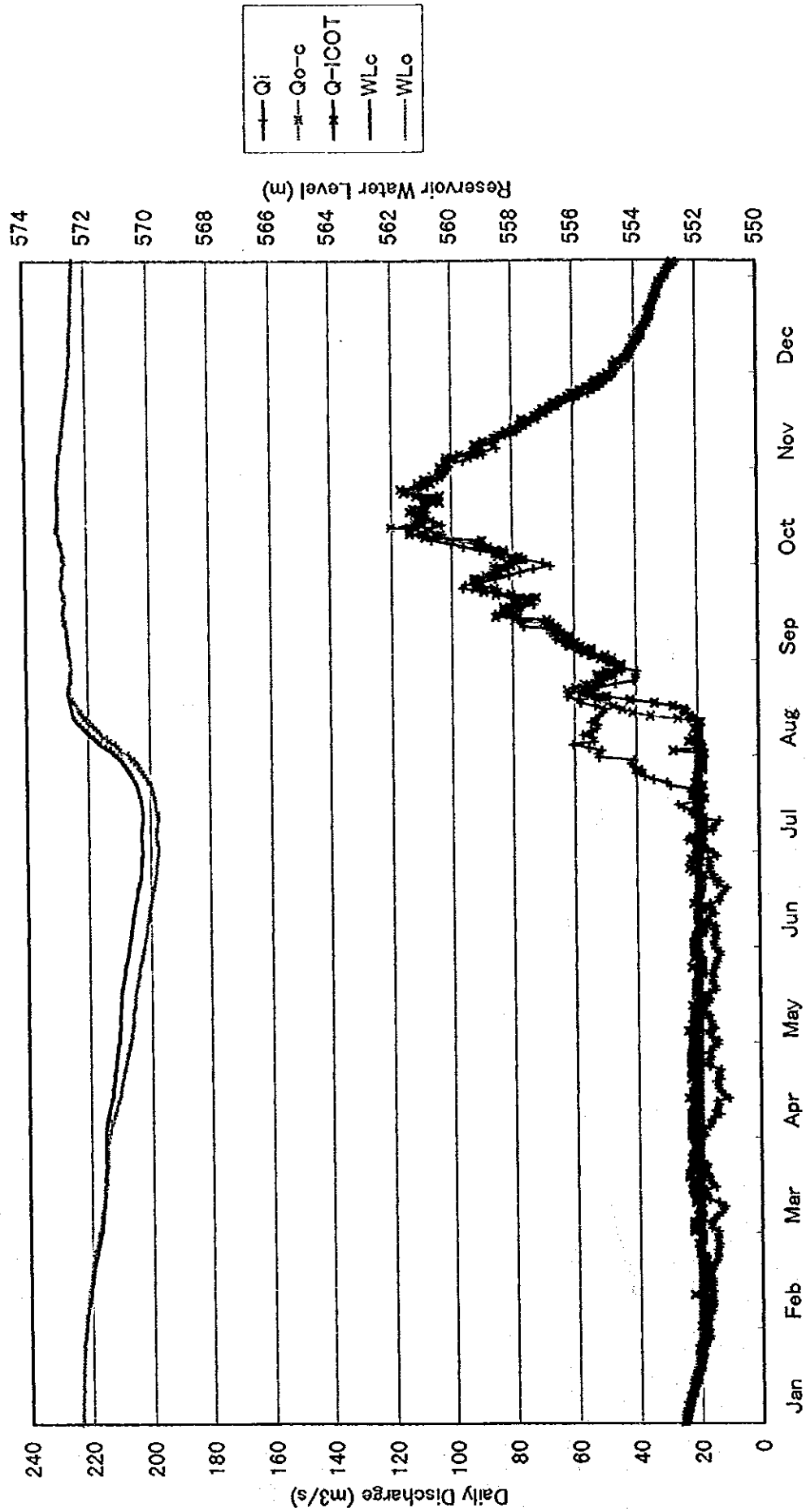
Boali Dam Water Balance
1993



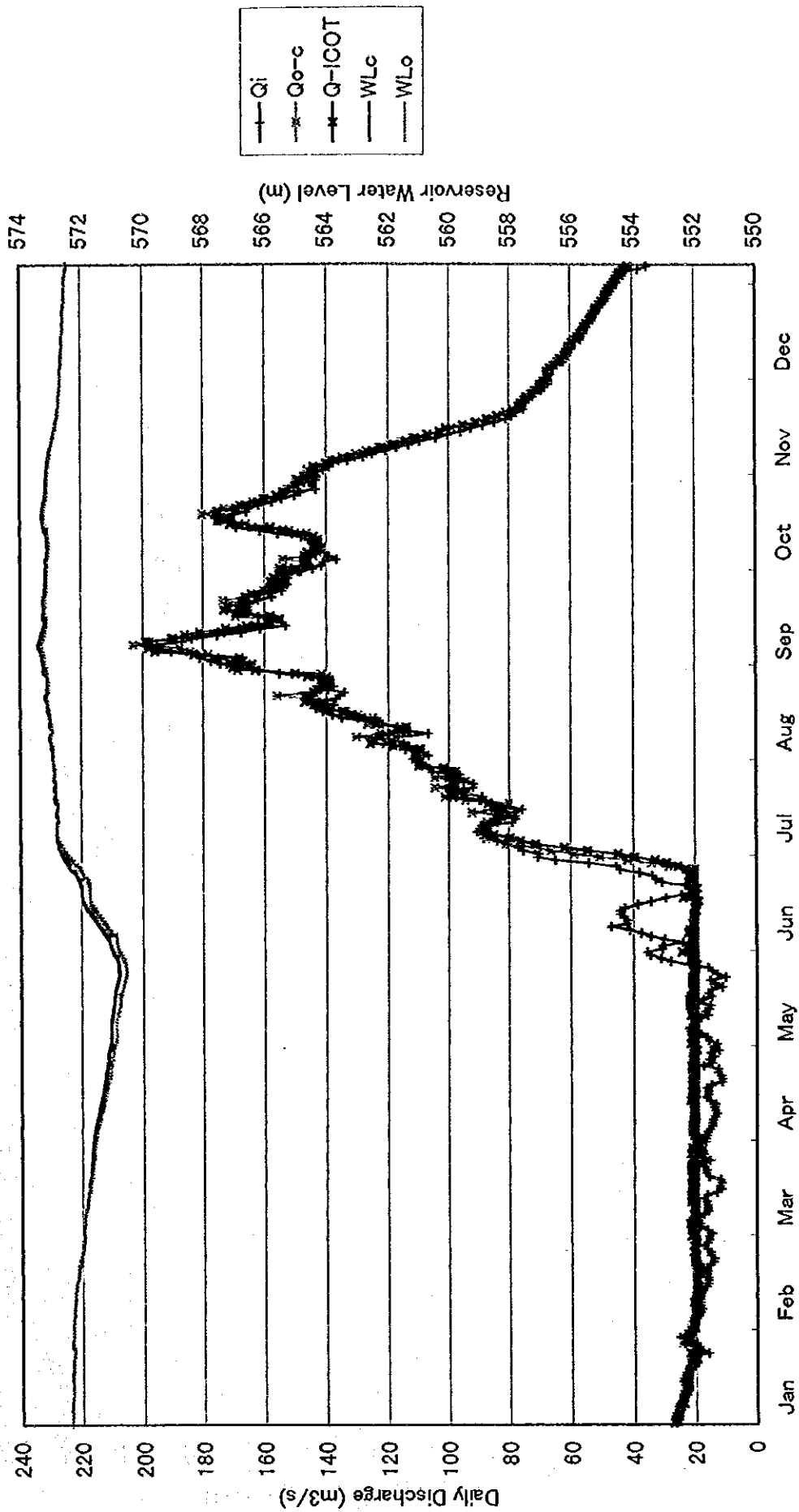
Boali Dam Water Balance
1994



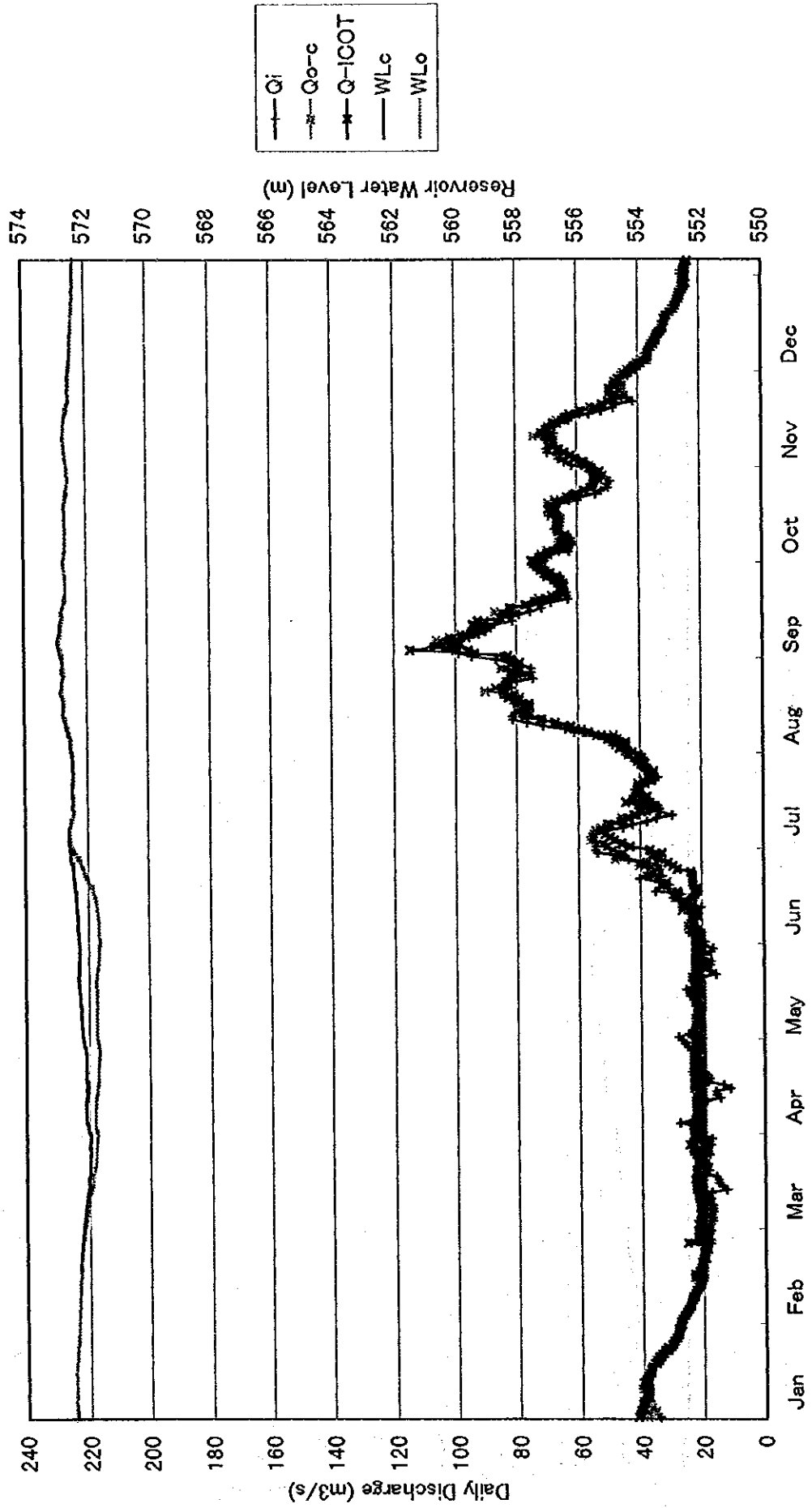
Boali Dam Water Balance
1995



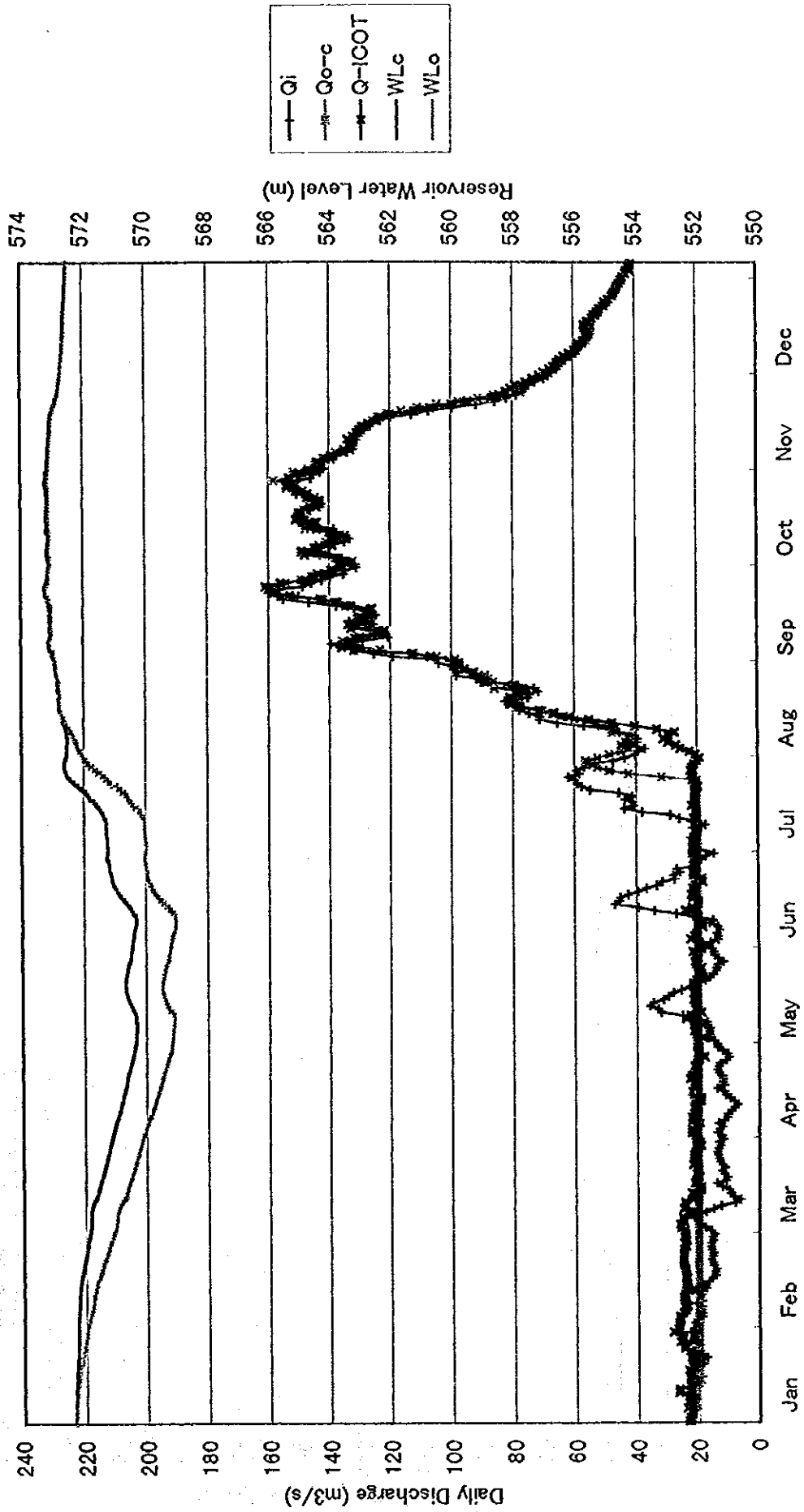
Boali Dam Water Balance
1996



Boali Dam Water Balance
1997



Boali Dam Water Balance
1998



Boali Dam Water Balance
1964

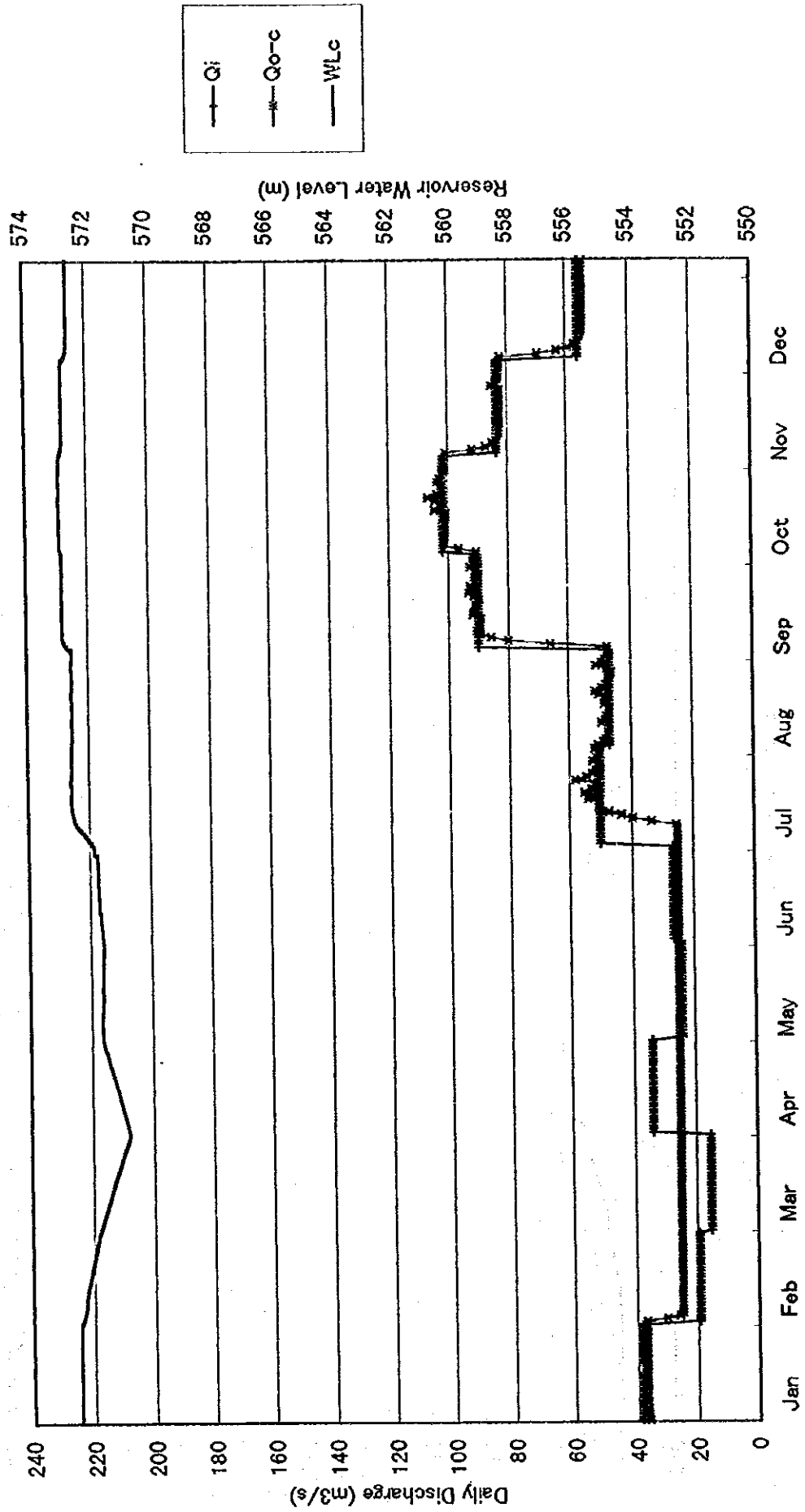
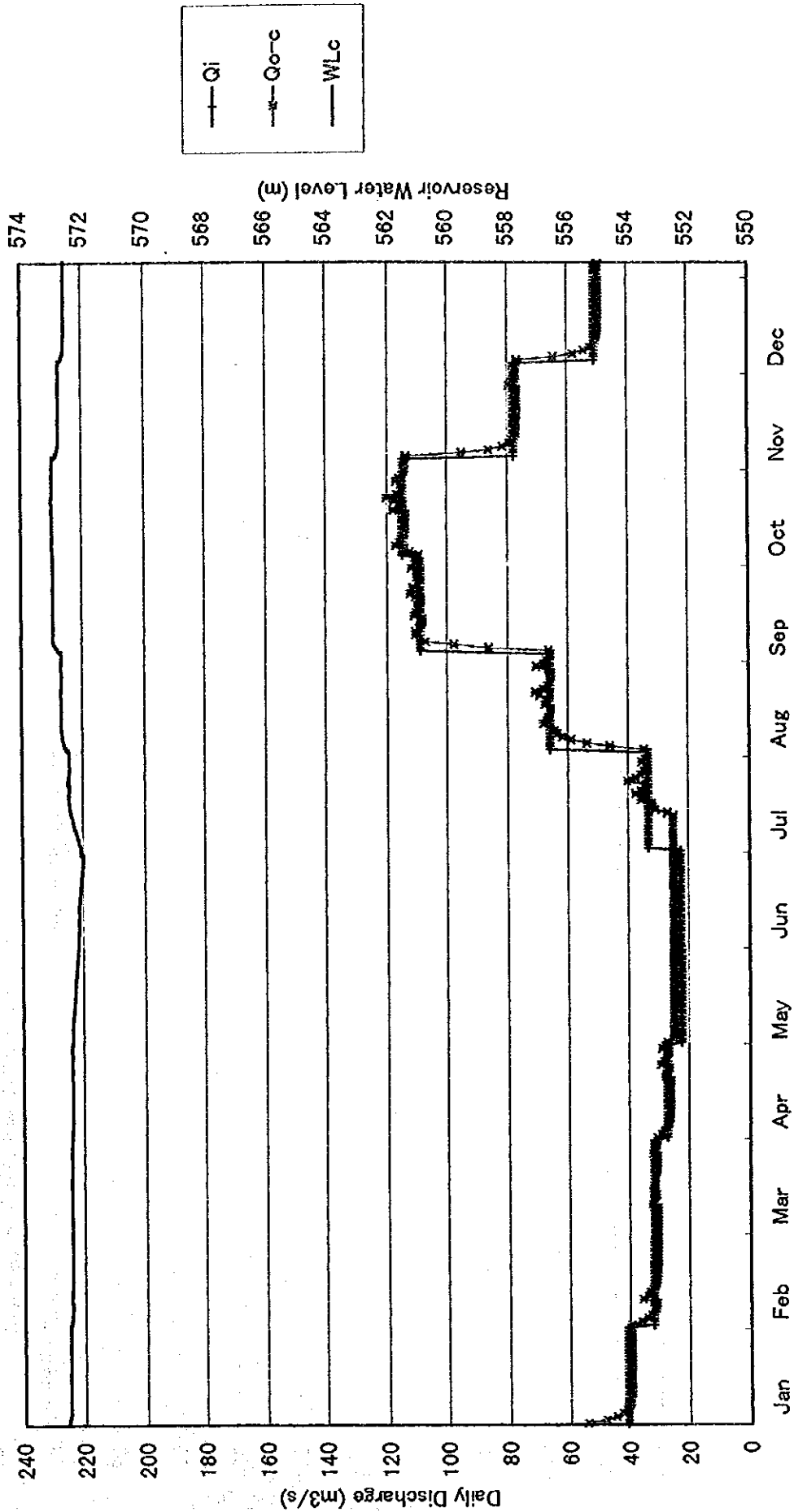
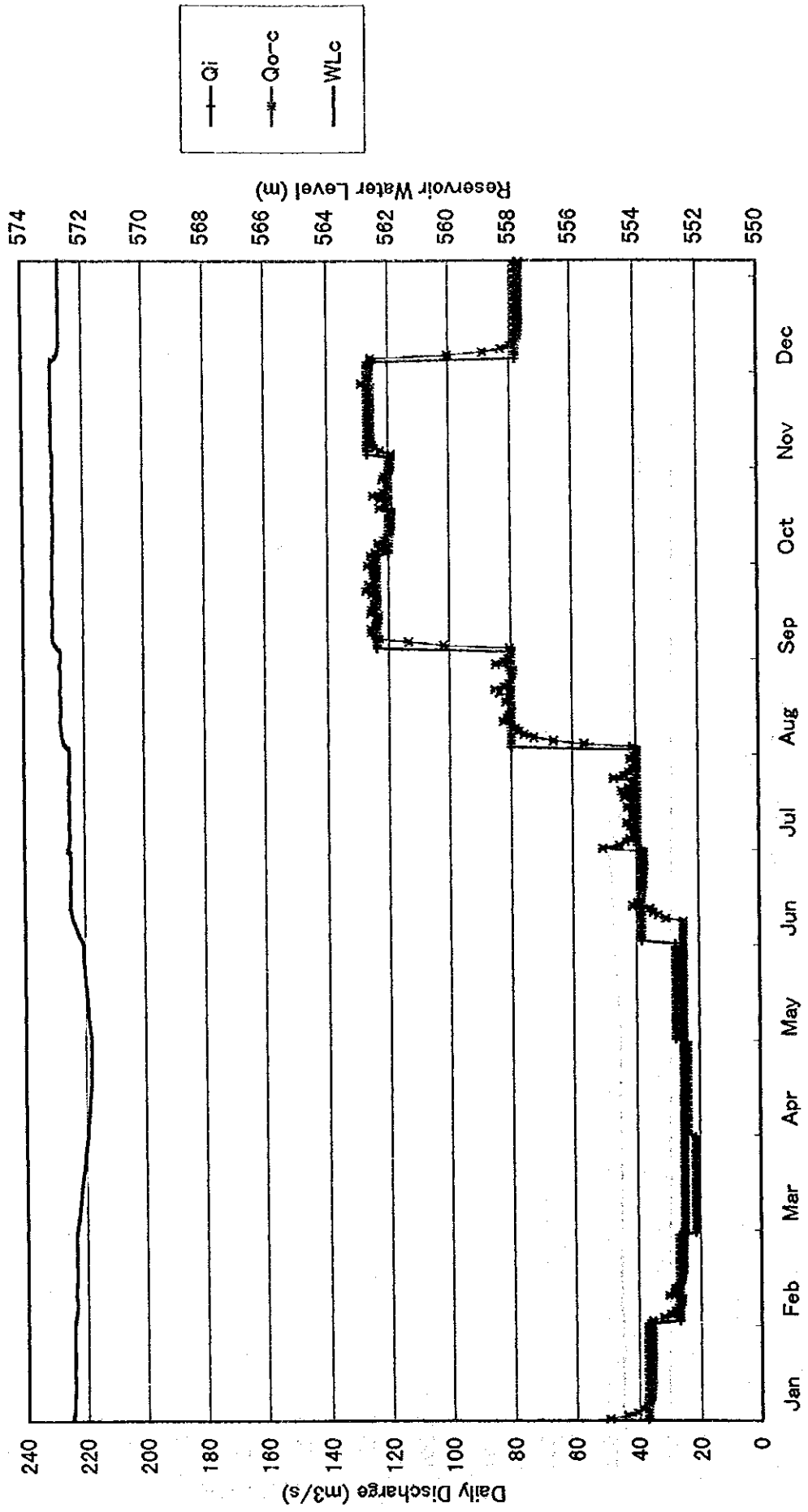


Fig. 5 BOALI Dam Water Balance Result ($Q_b = 25\text{m}^3/\text{sec}$) 1964~1998

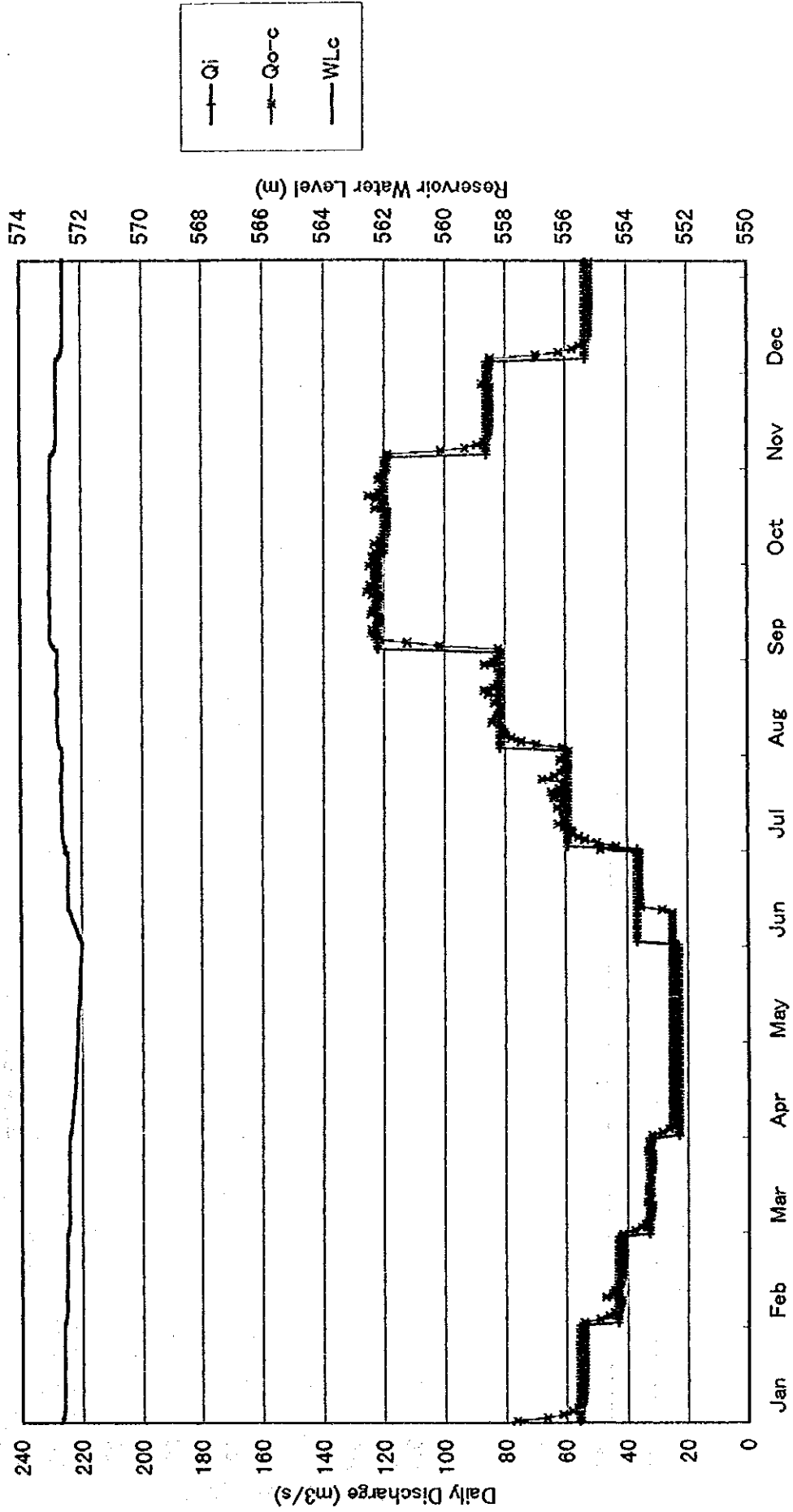
Boali Dam Water Balance
1985



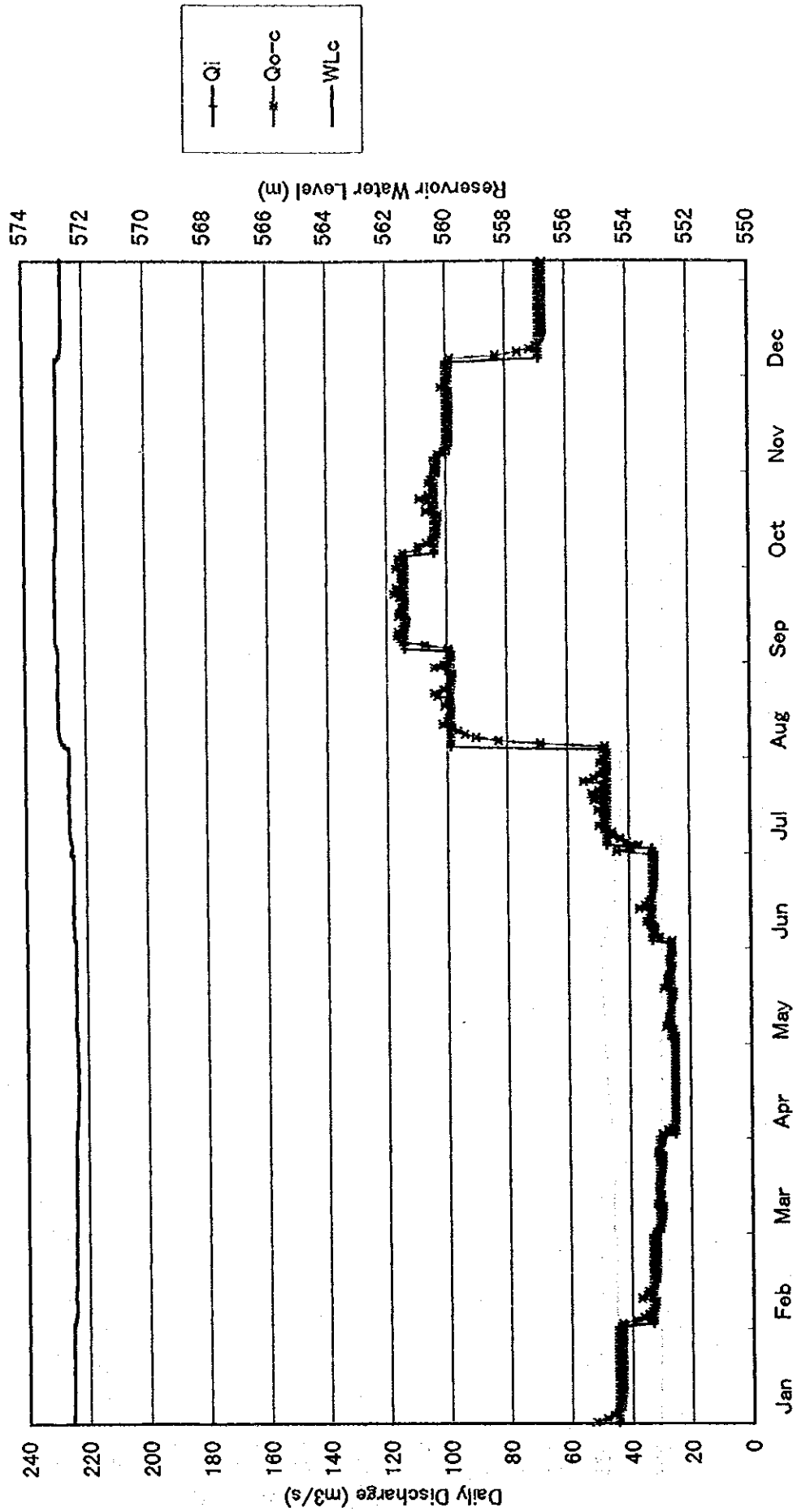
Boali Dam Water Balance
1966



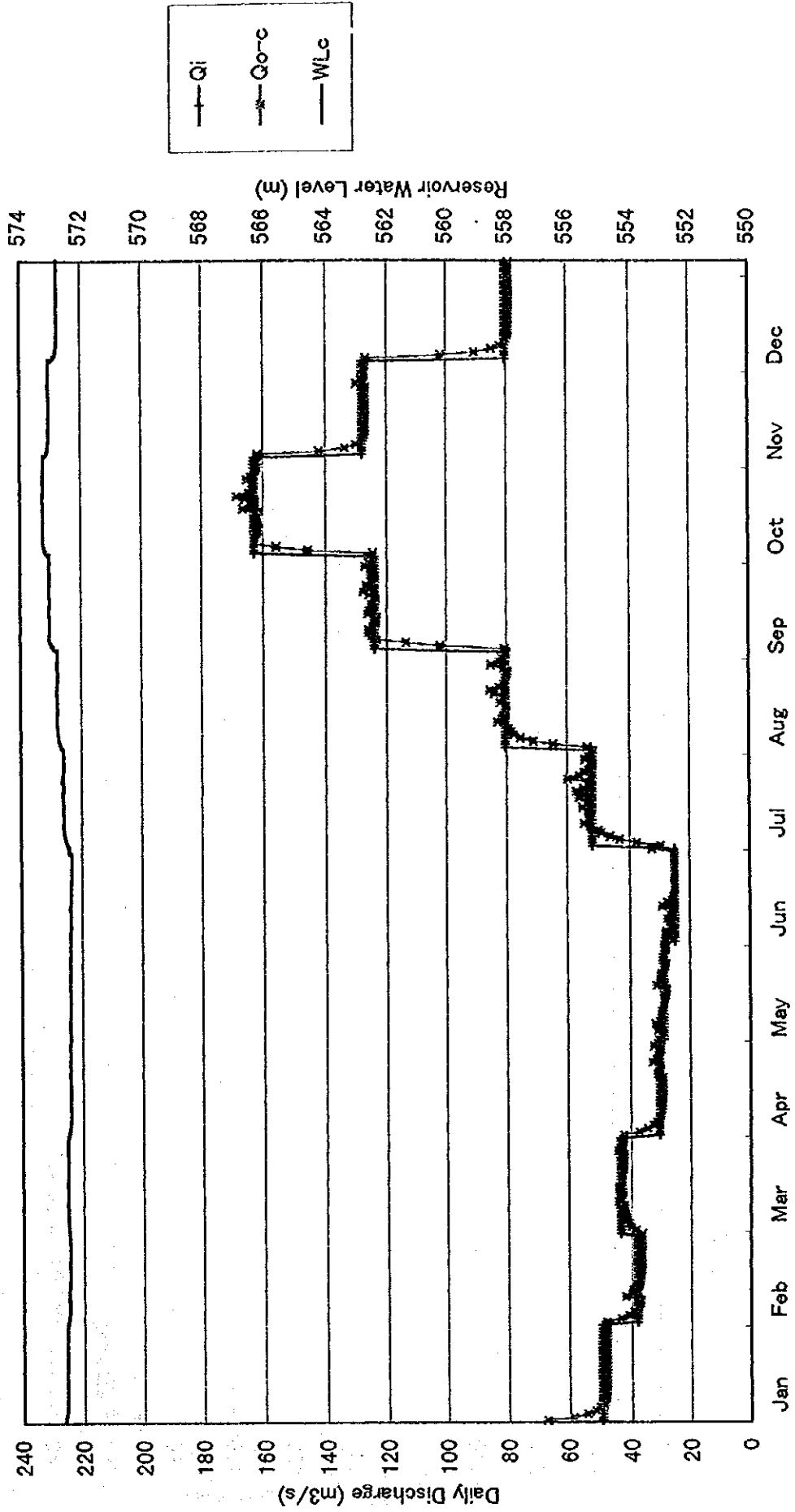
Boali Dam Water Balance 1967



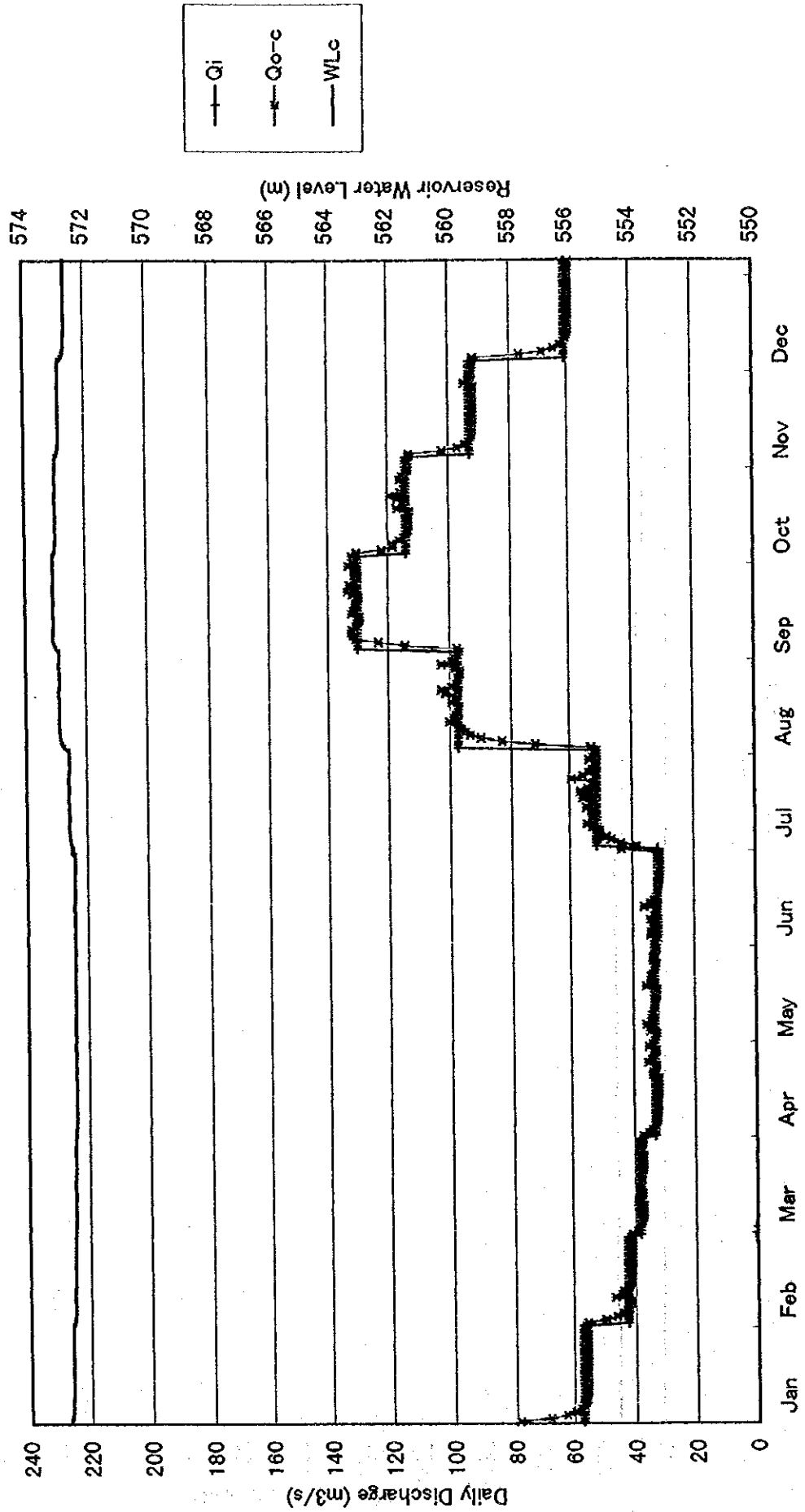
Boali Dam Water Balance
1968



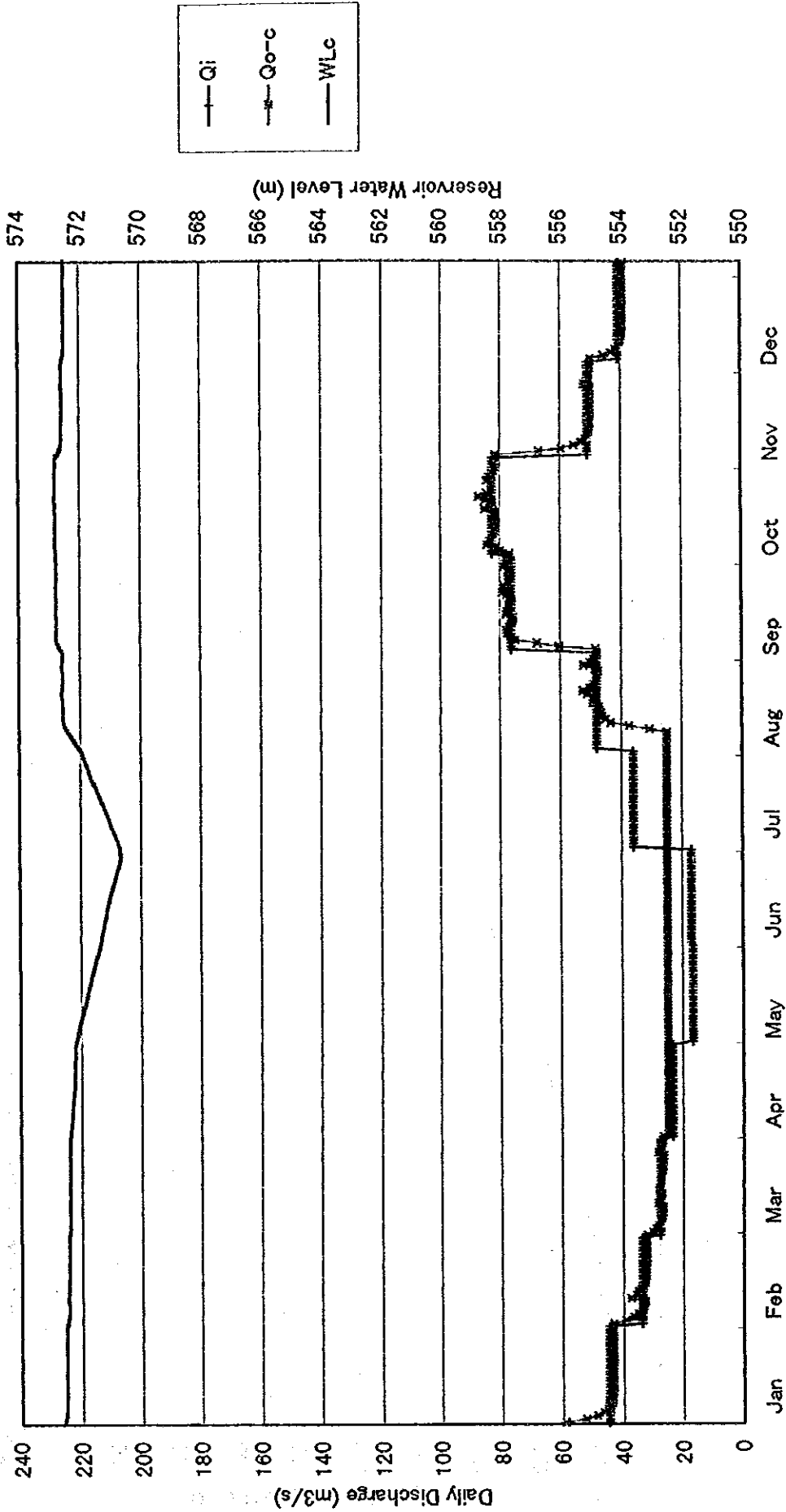
Boali Dam Water Balance
1969



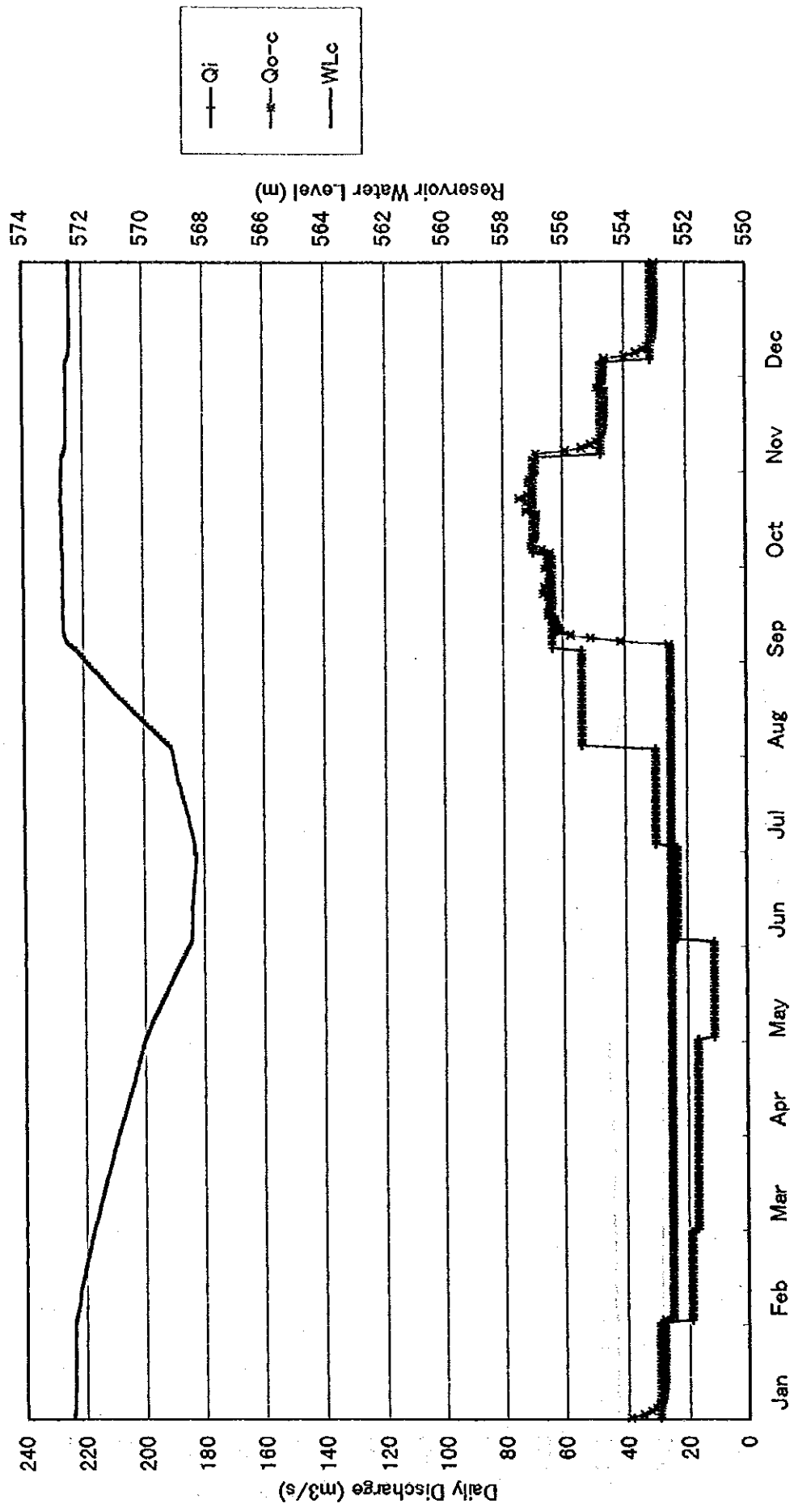
Boali Dam Water Balance
1970



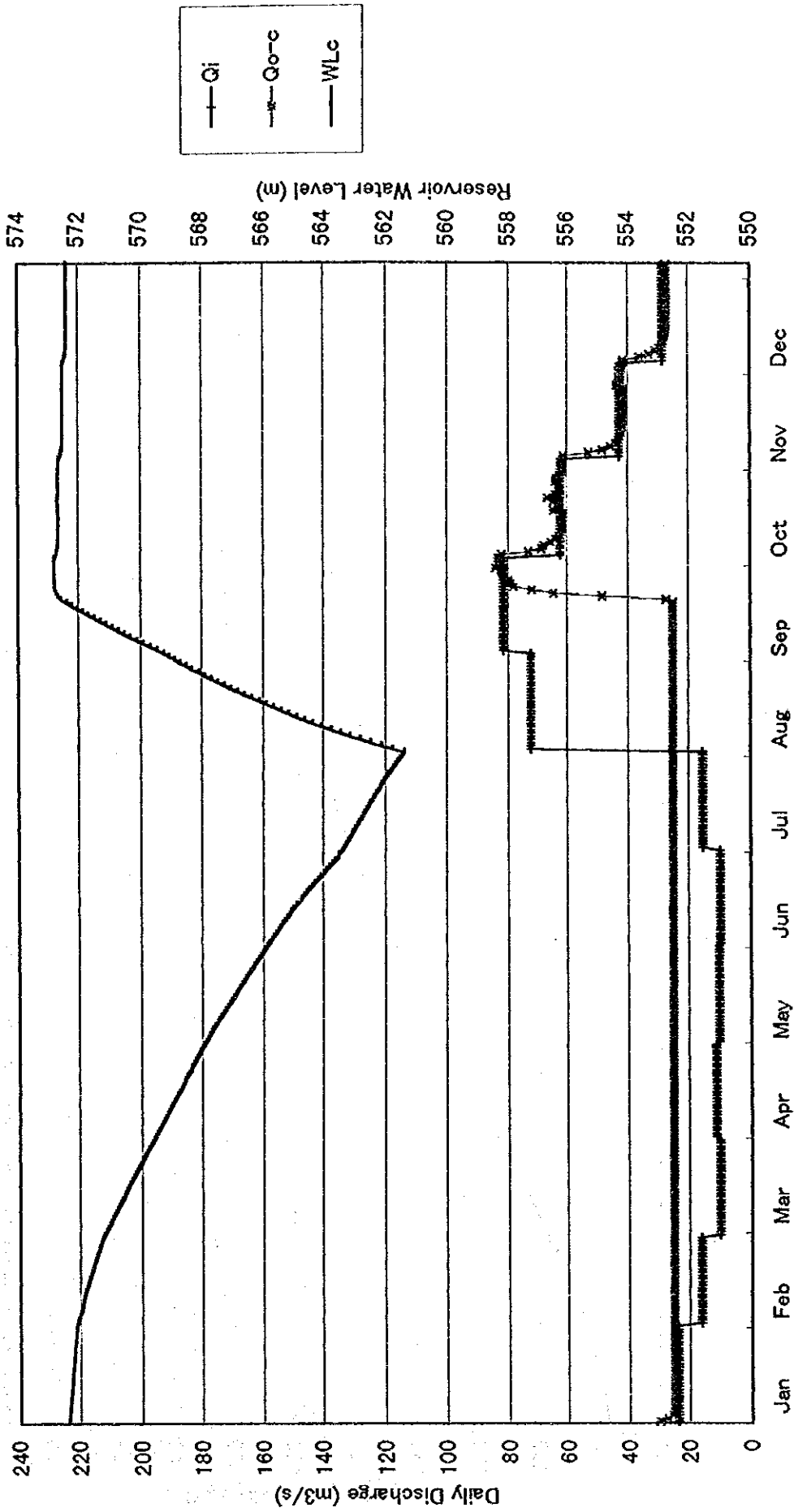
Boali Dam Water Balance
1971



Boali Dam Water Balance 1972



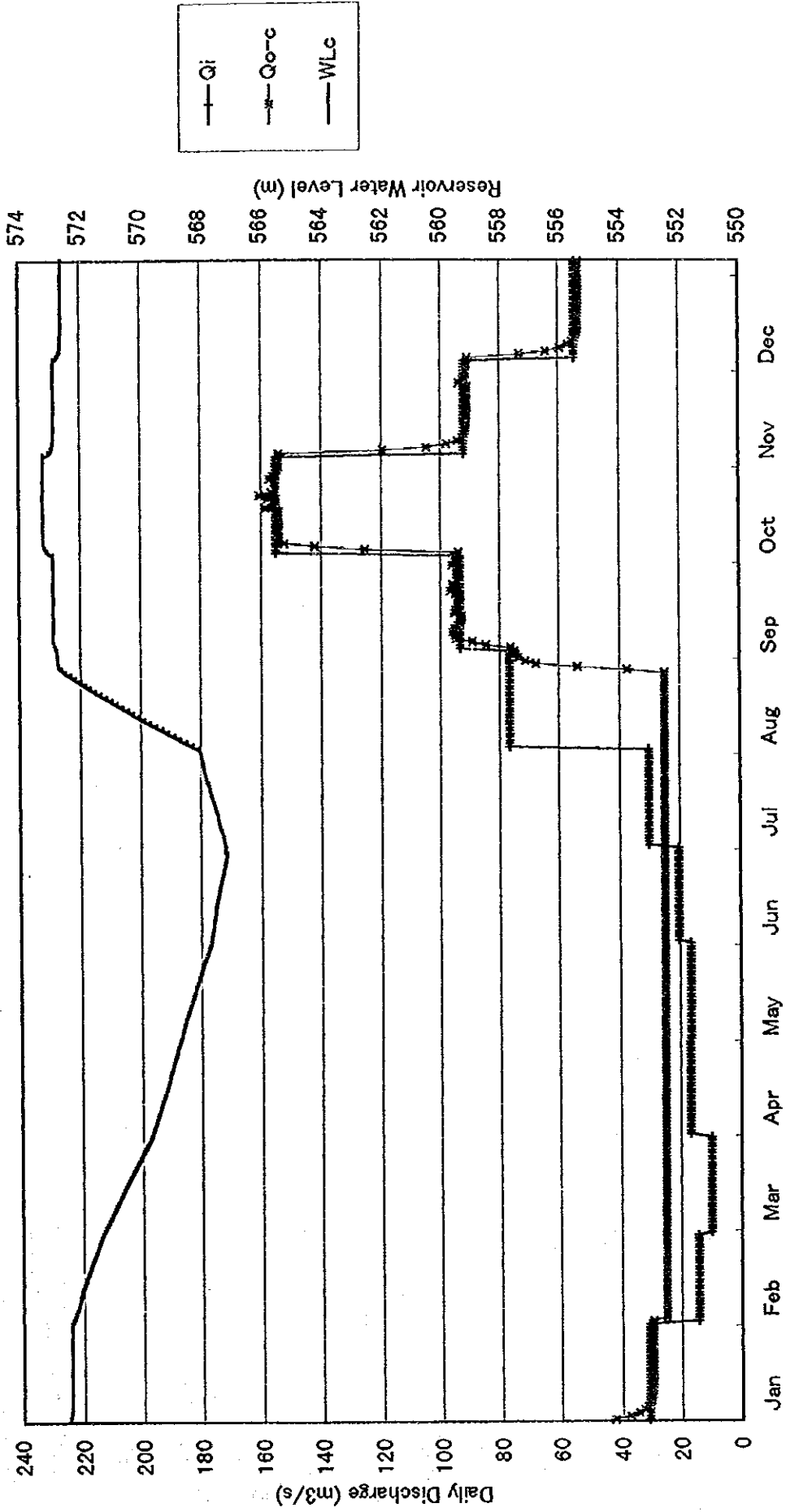
Boali Dam Water Balance
1973



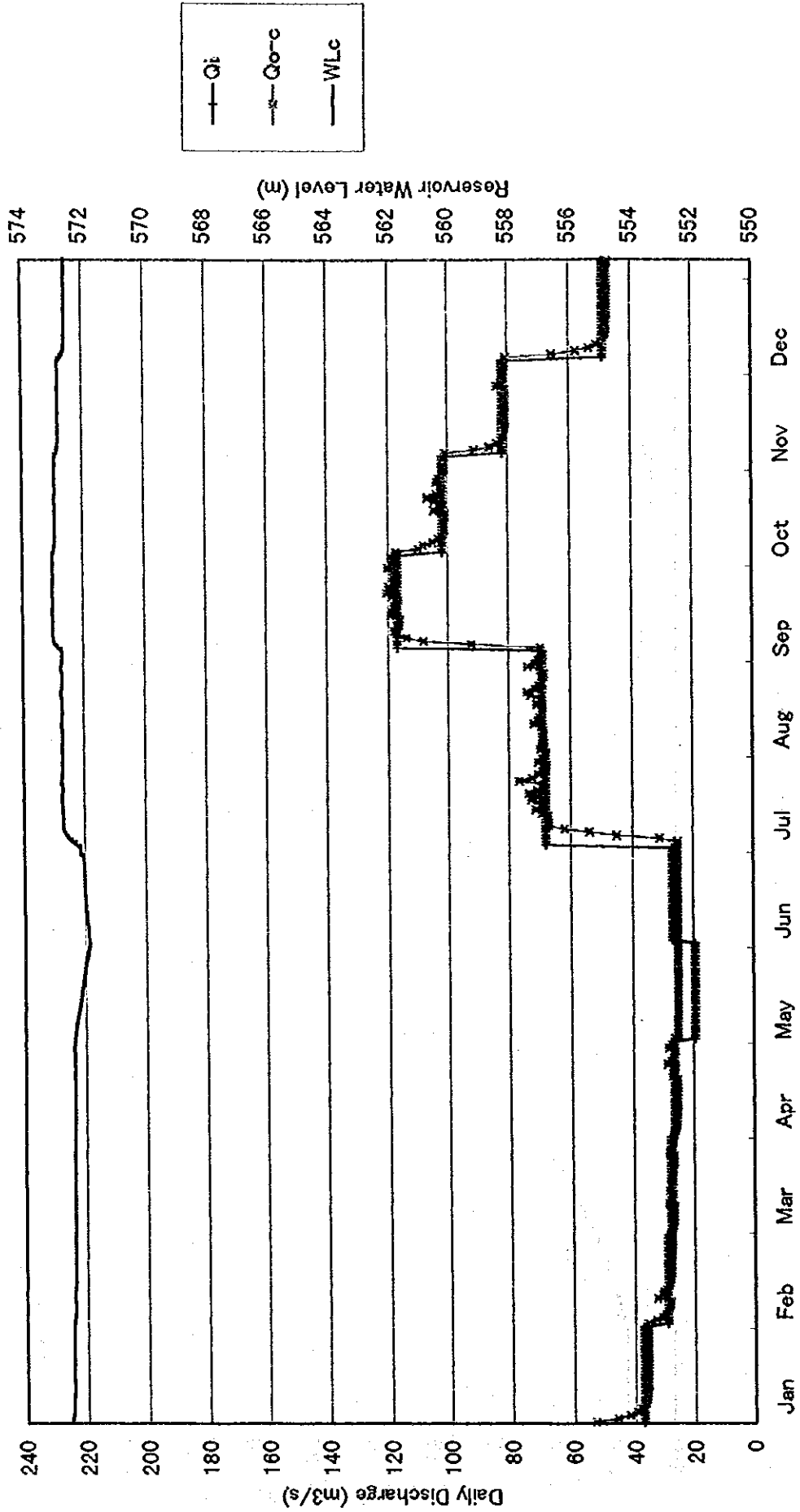
Boali Dam Water Balance
1974



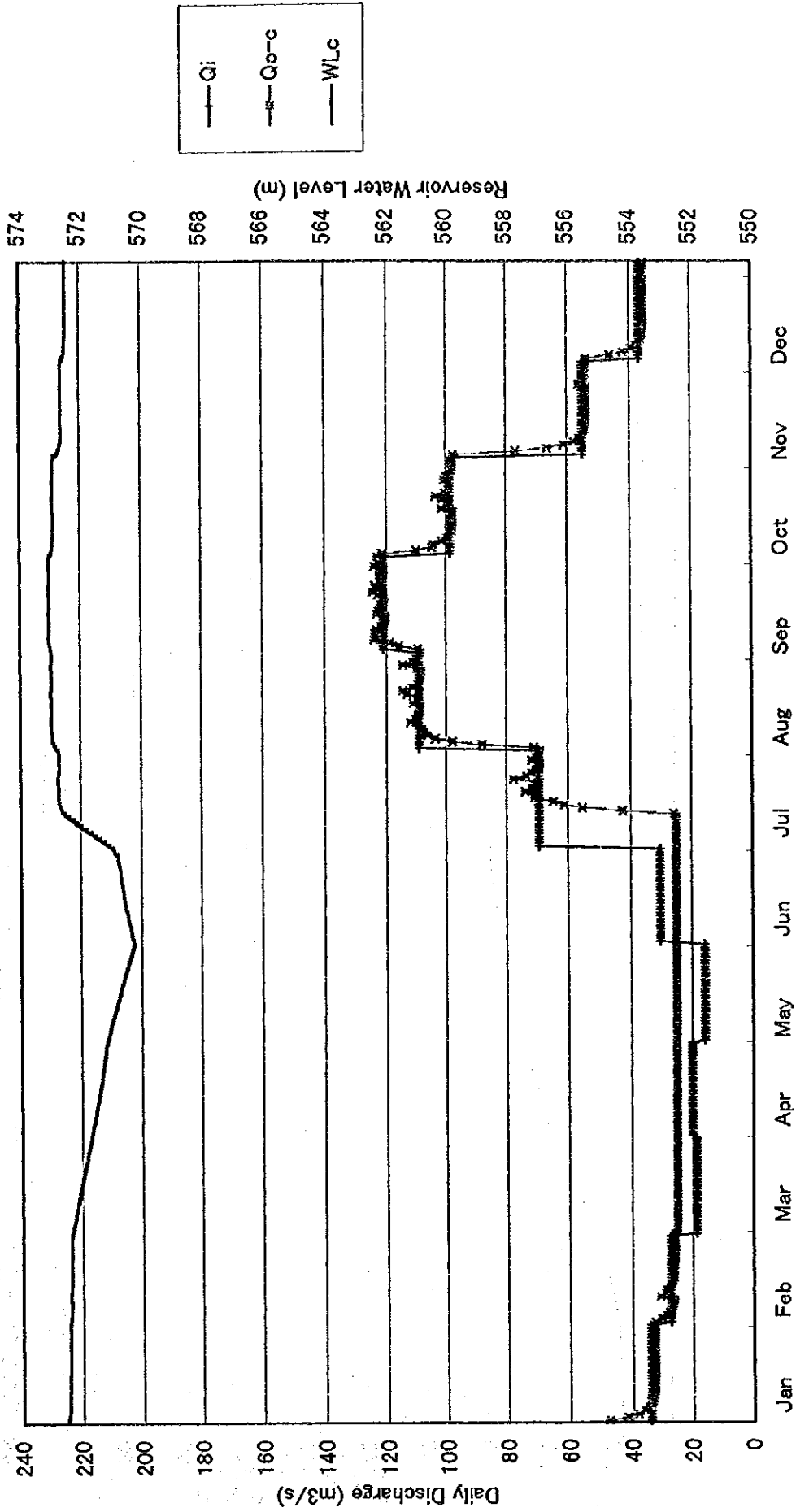
Boali Dam Water Balance 1975



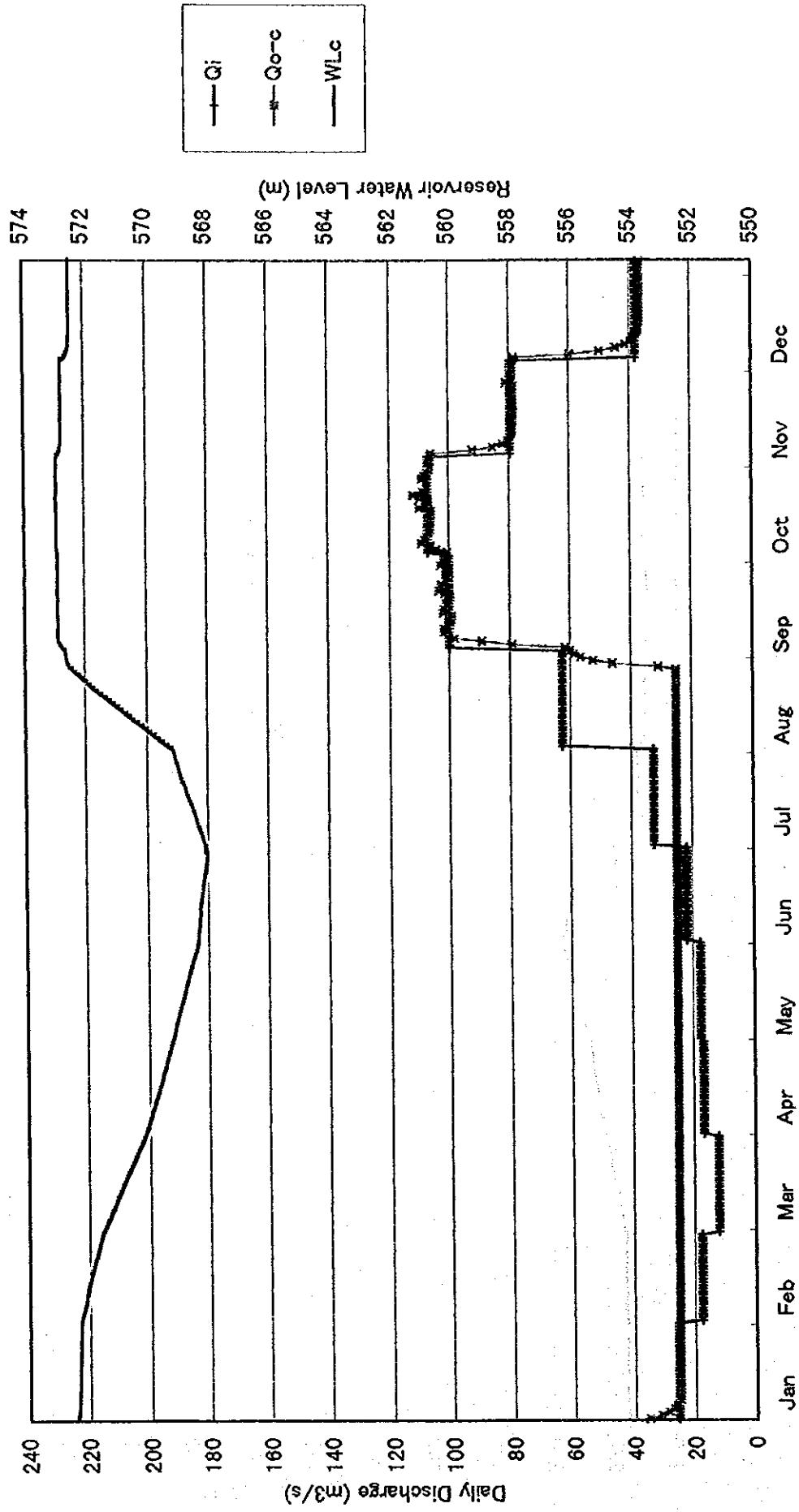
Boali Dam Water Balance
1976



Boali Dam Water Balance
1977



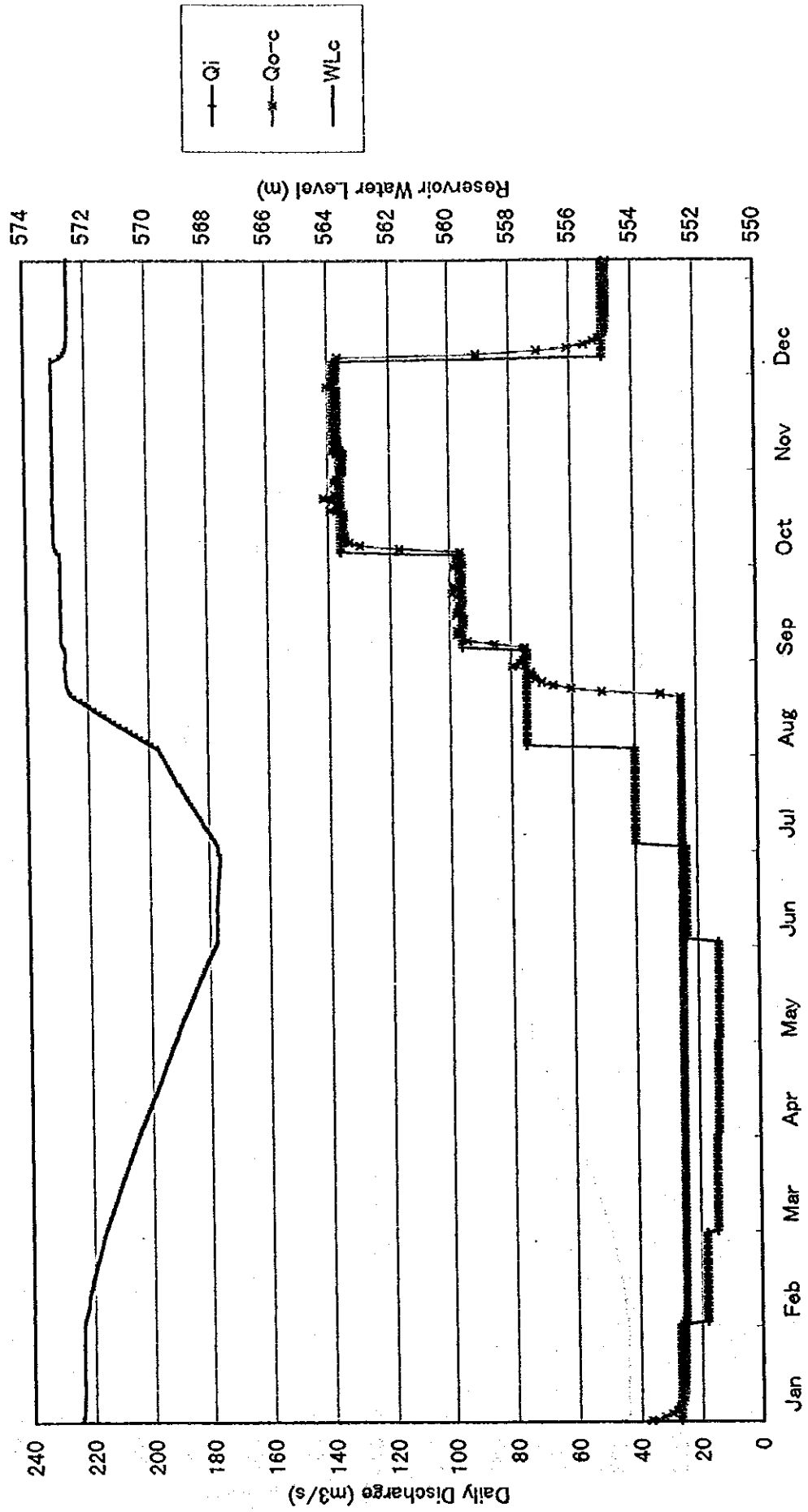
Boali Dam Water Balance
1978



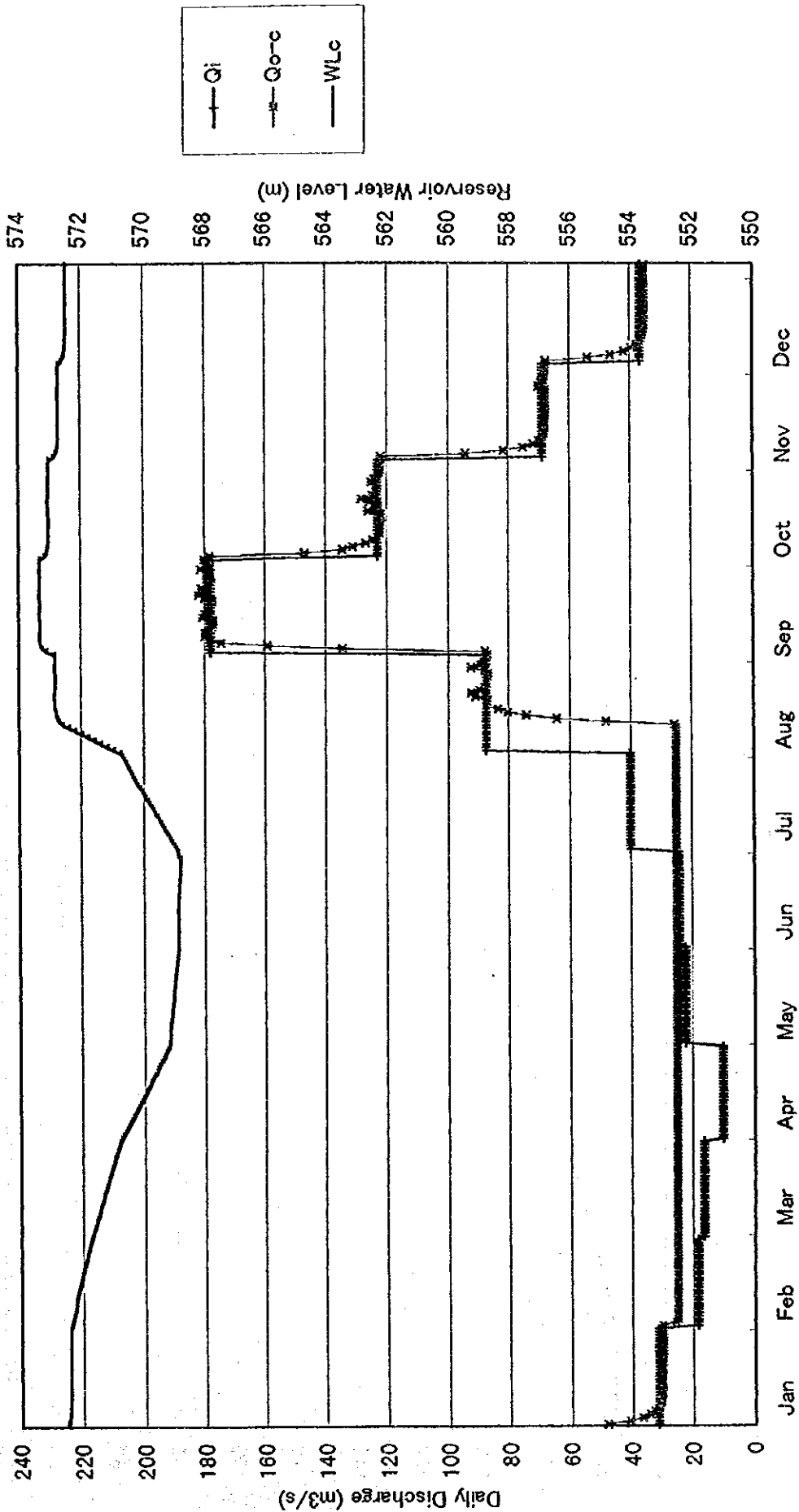
Boali Dam Water Balance
1979



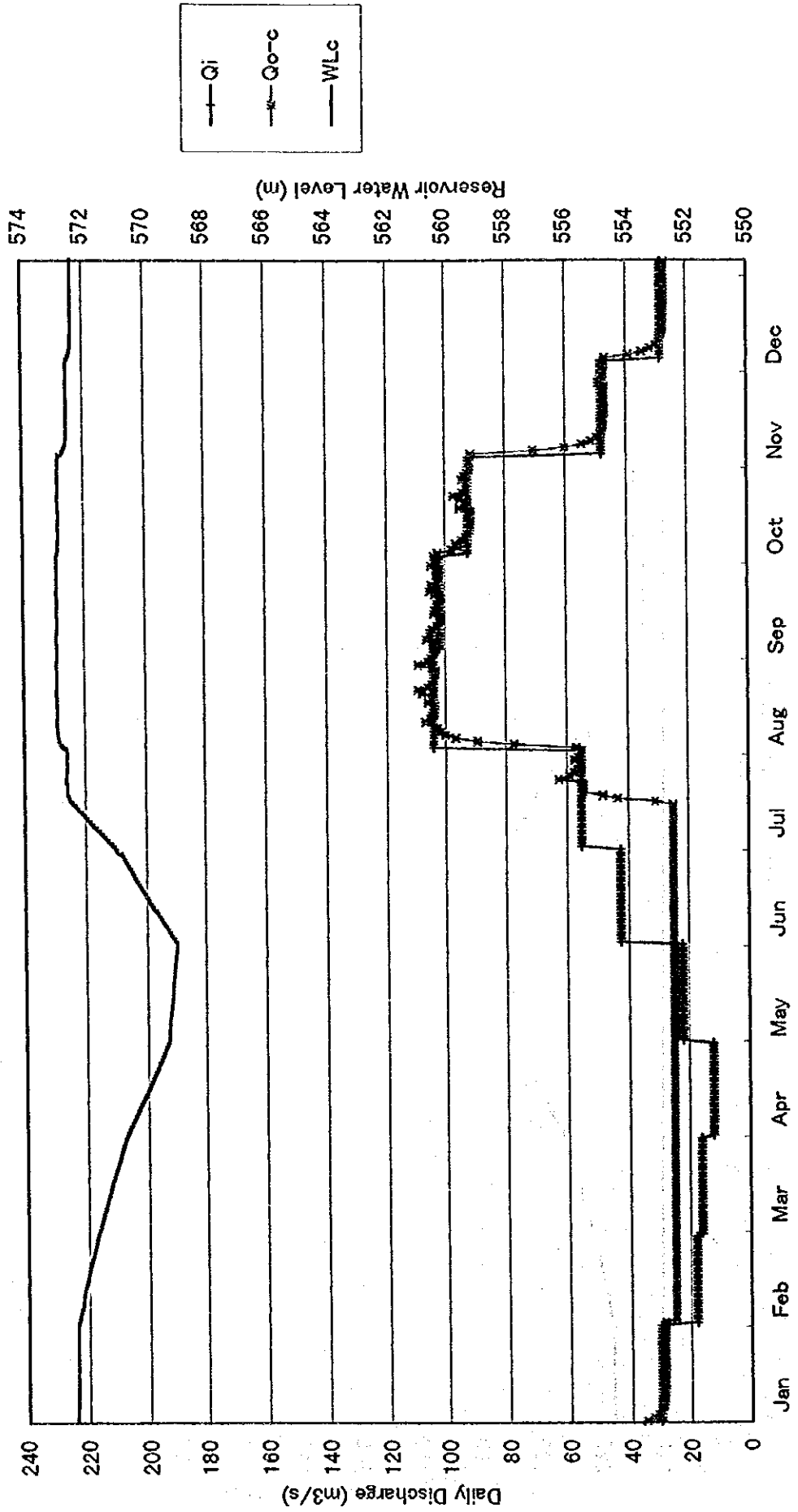
Boali Dam Water Balance
1980



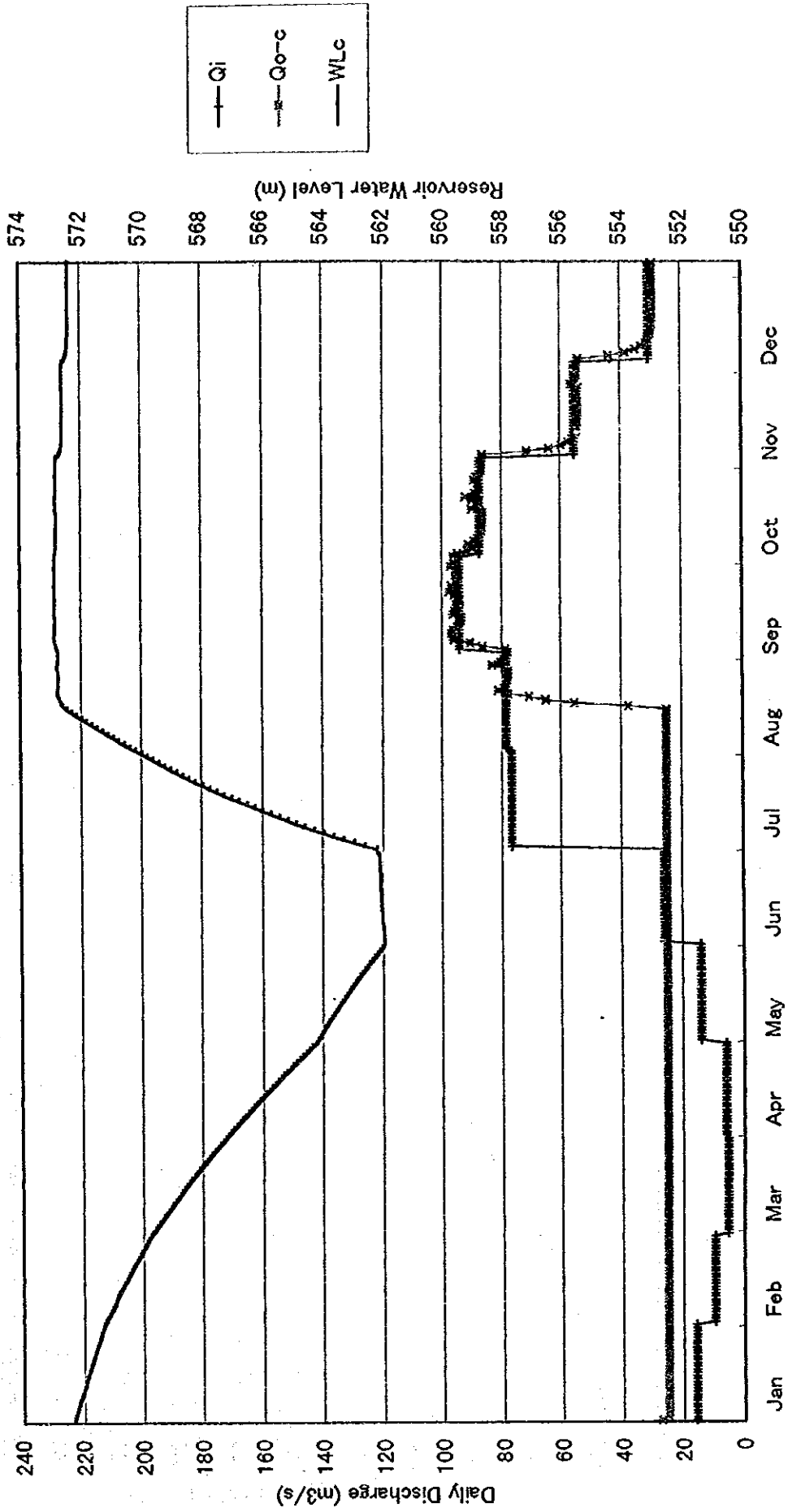
Boali Dam Water Balance
1981



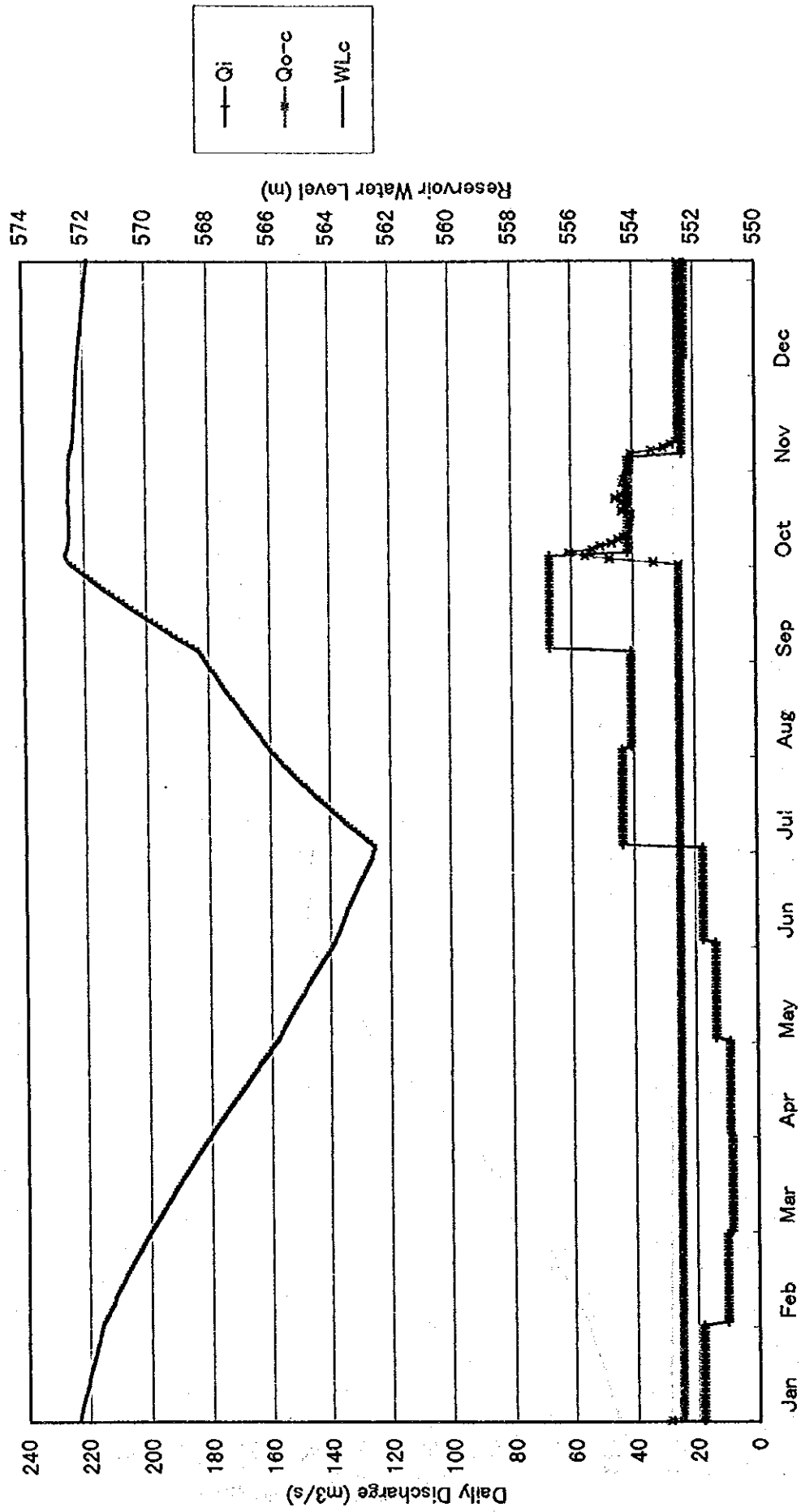
Boali Dam Water Balance
1982



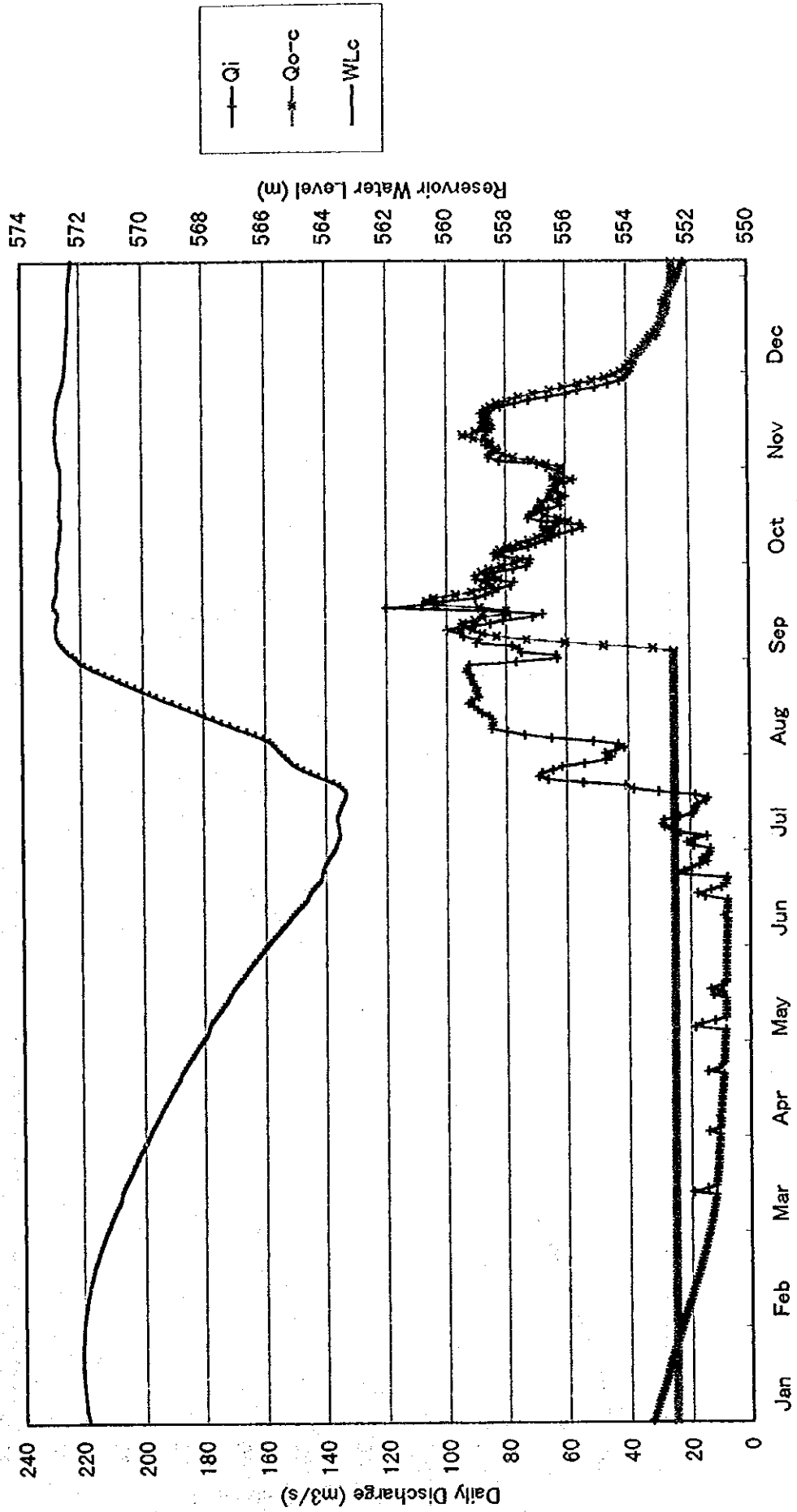
Boali Dam Water Balance
1983



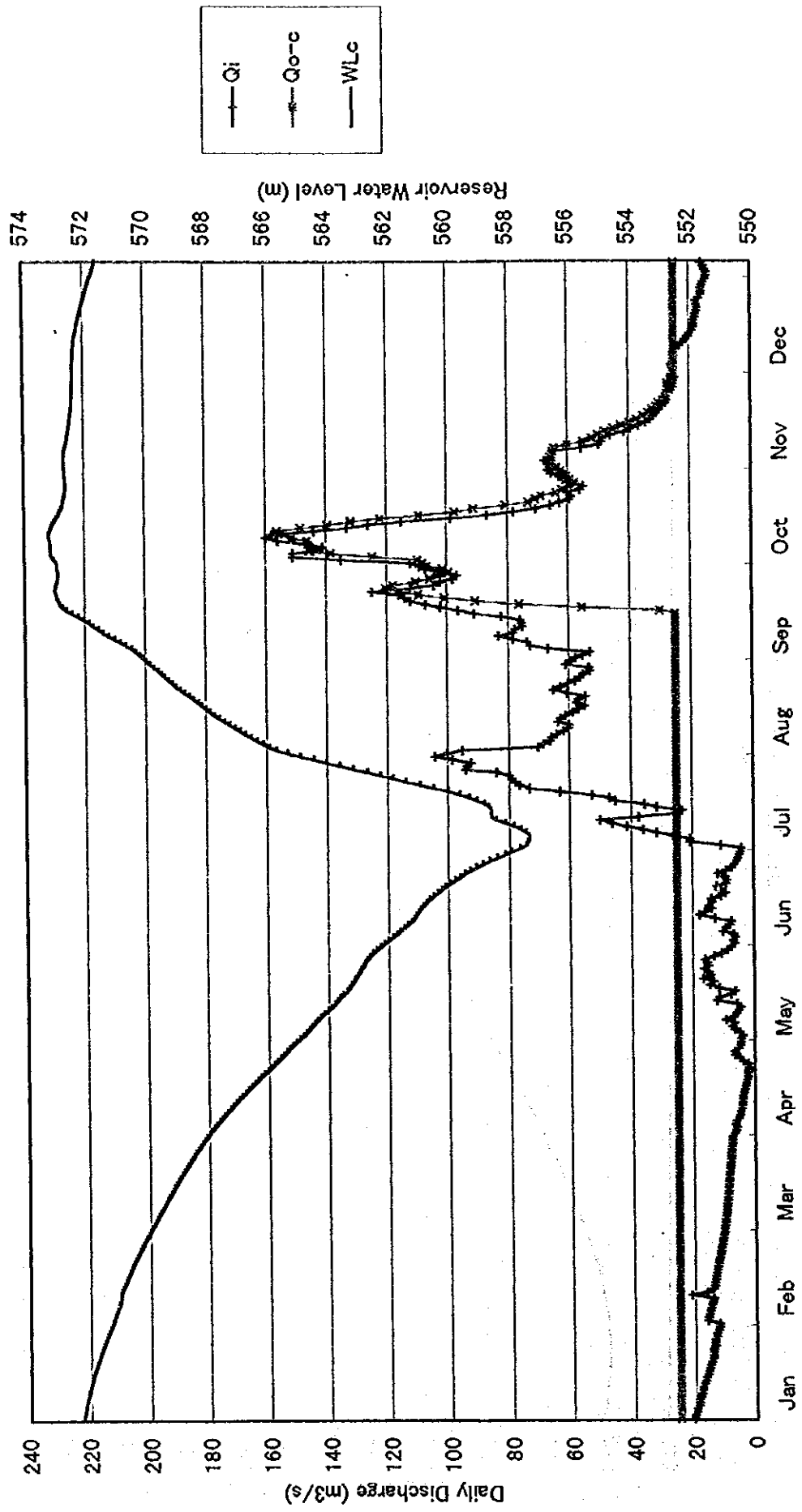
Boali Dam Water Balance
1984



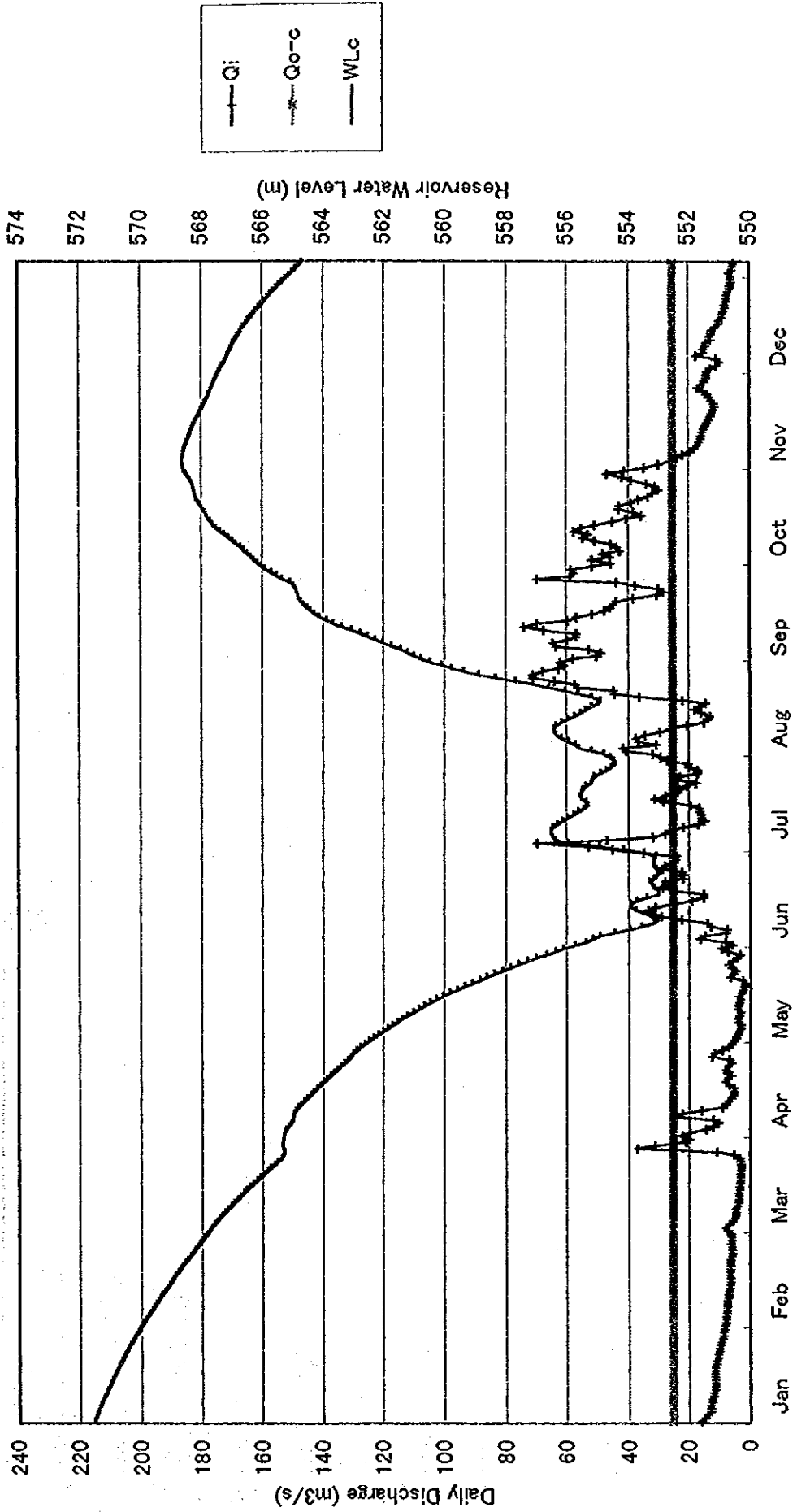
Boali Dam Water Balance
1985



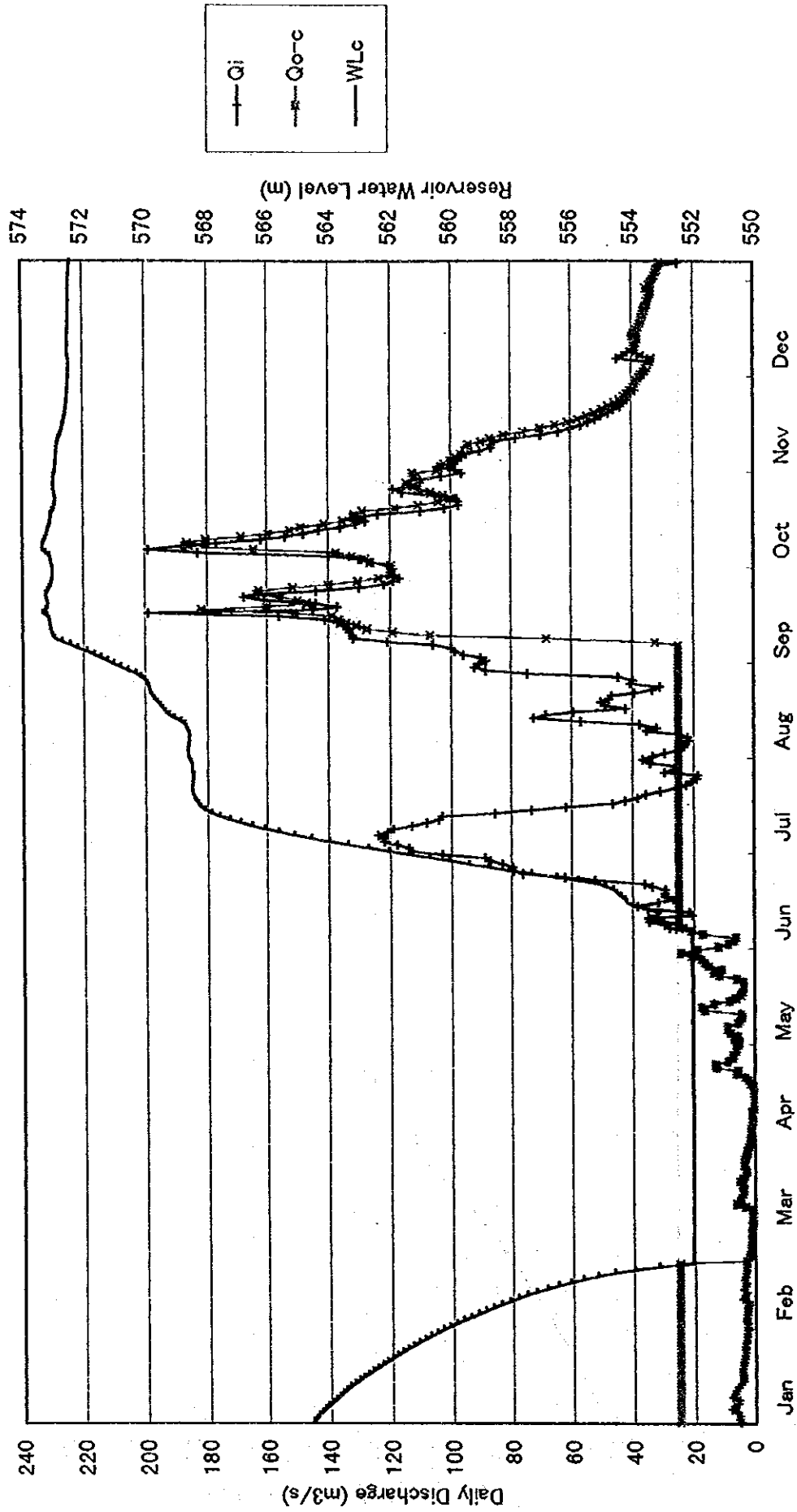
Boali Dam Water Balance
1986



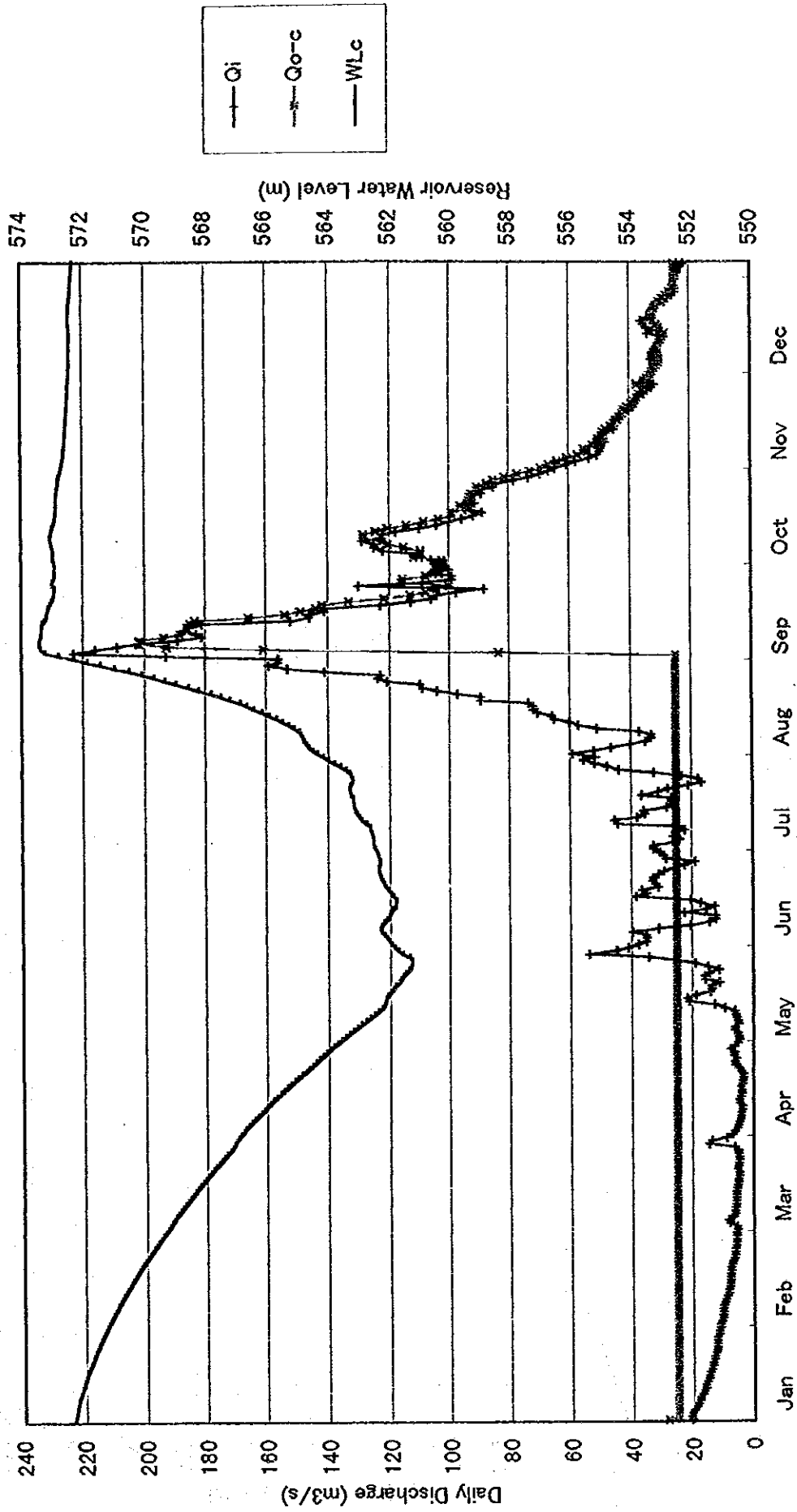
Boali Dam Water Balance
1987



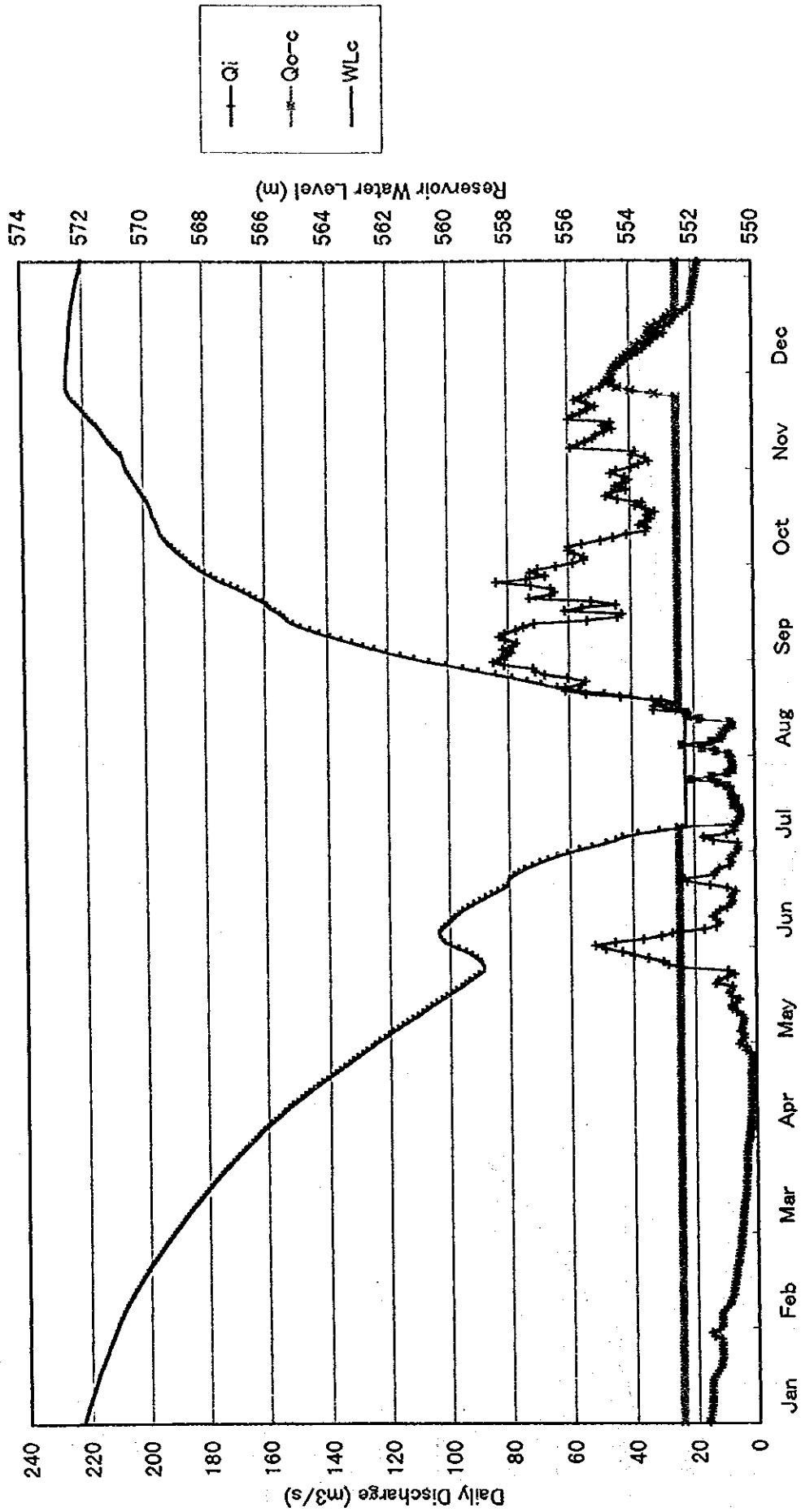
Boali Dam Water Balance
1988



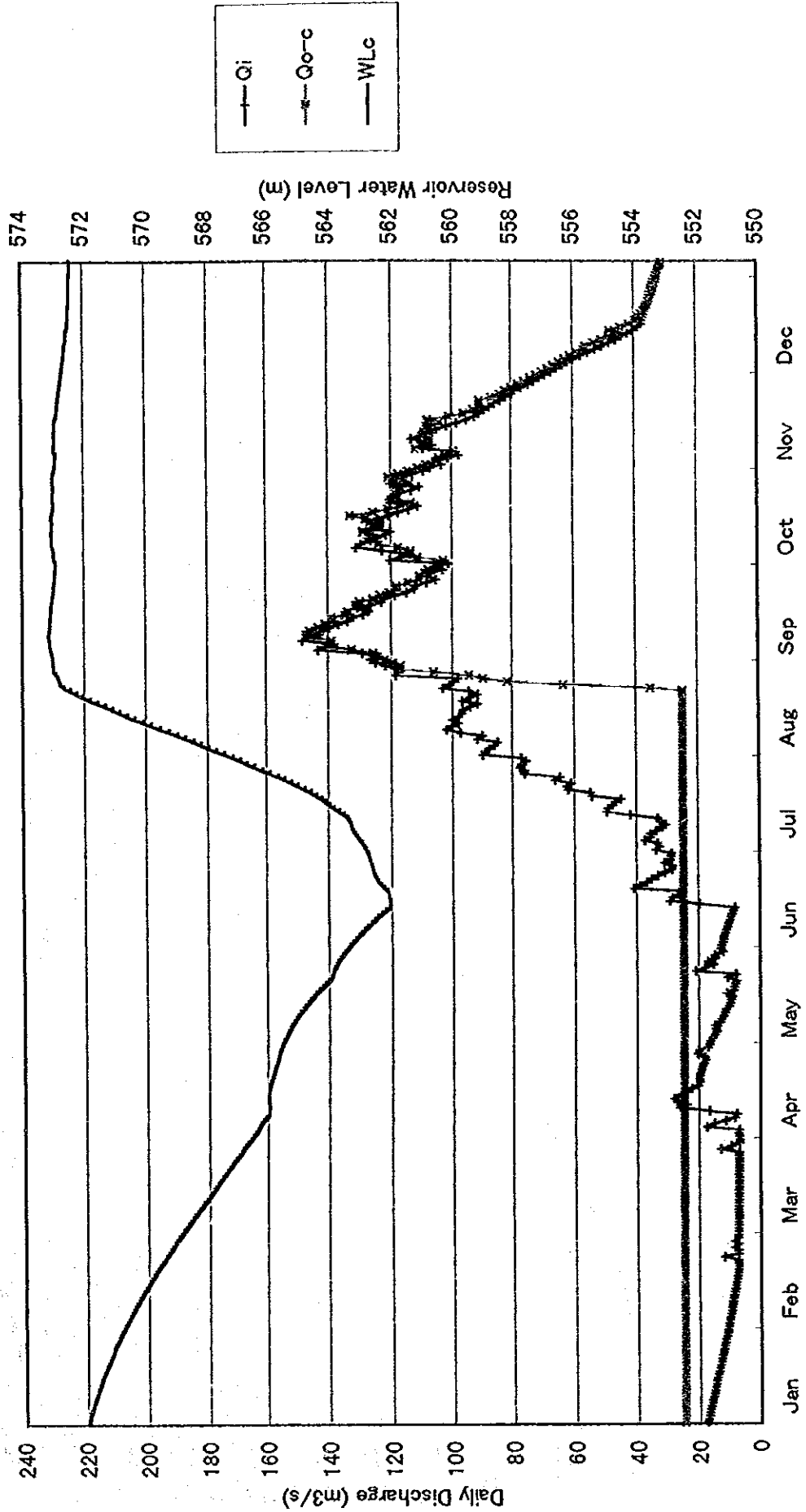
Boali Dam Water Balance
1989



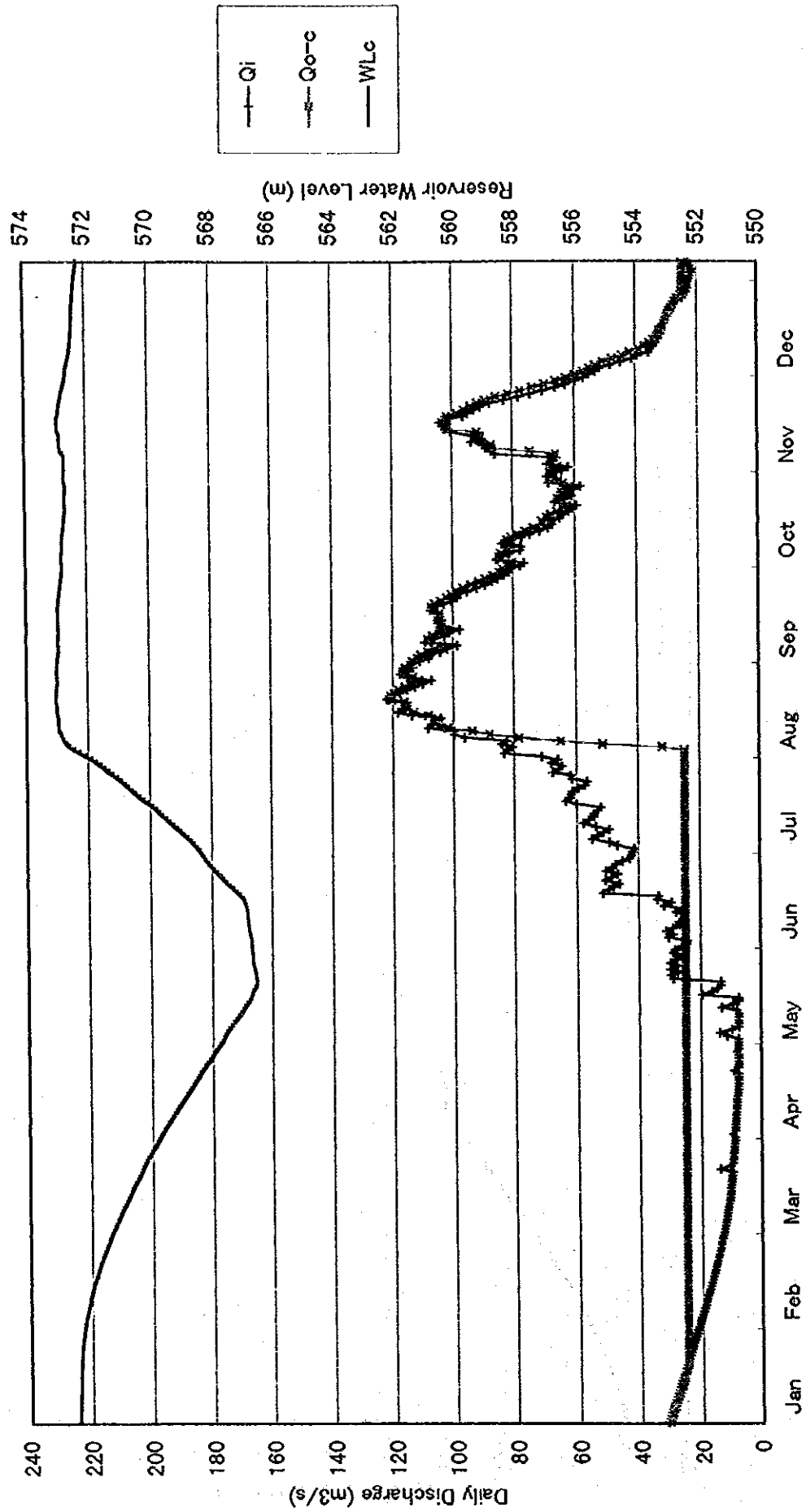
Boali Dam Water Balance
1990



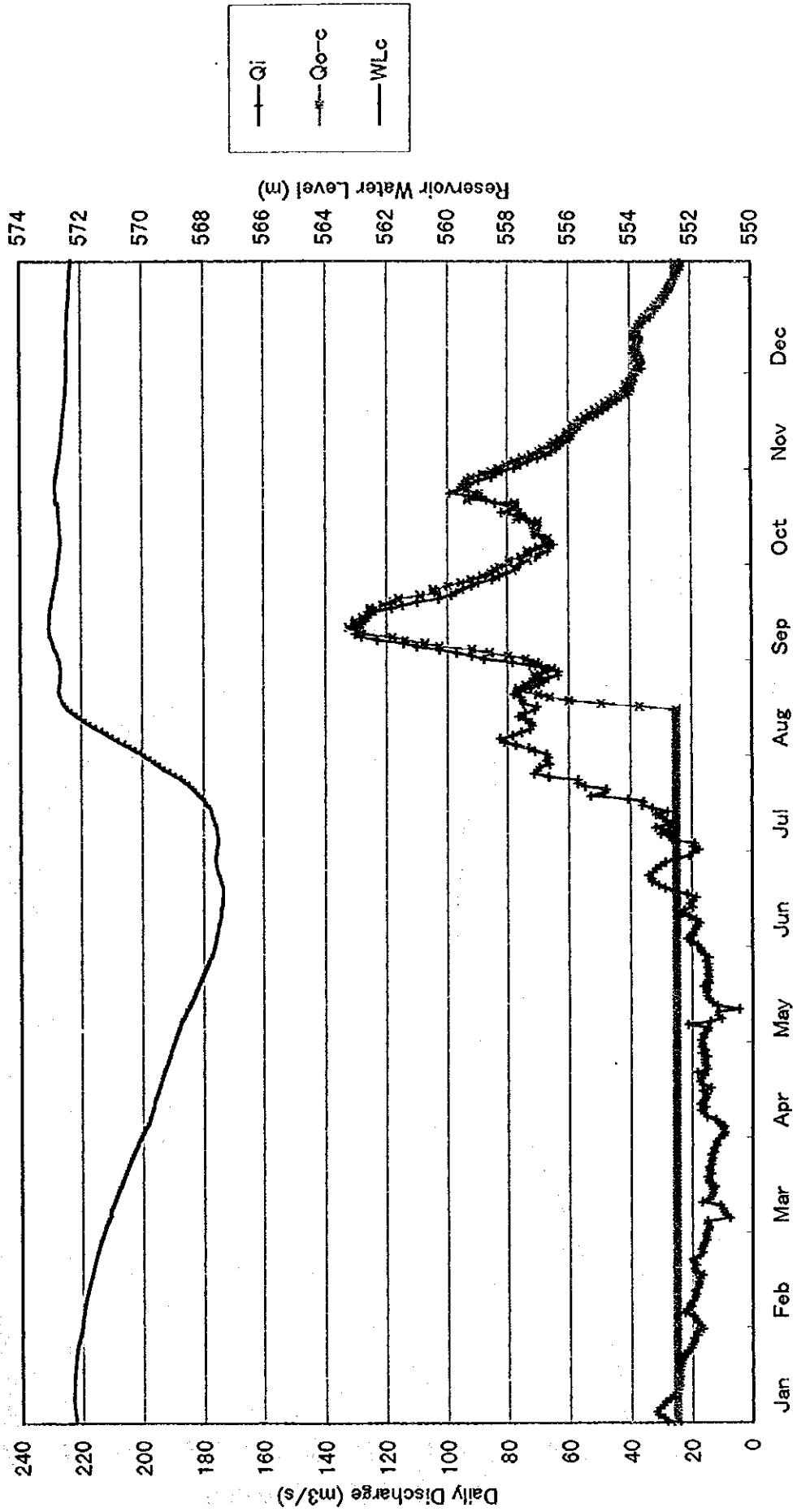
Boali Dam Water Balance
1991



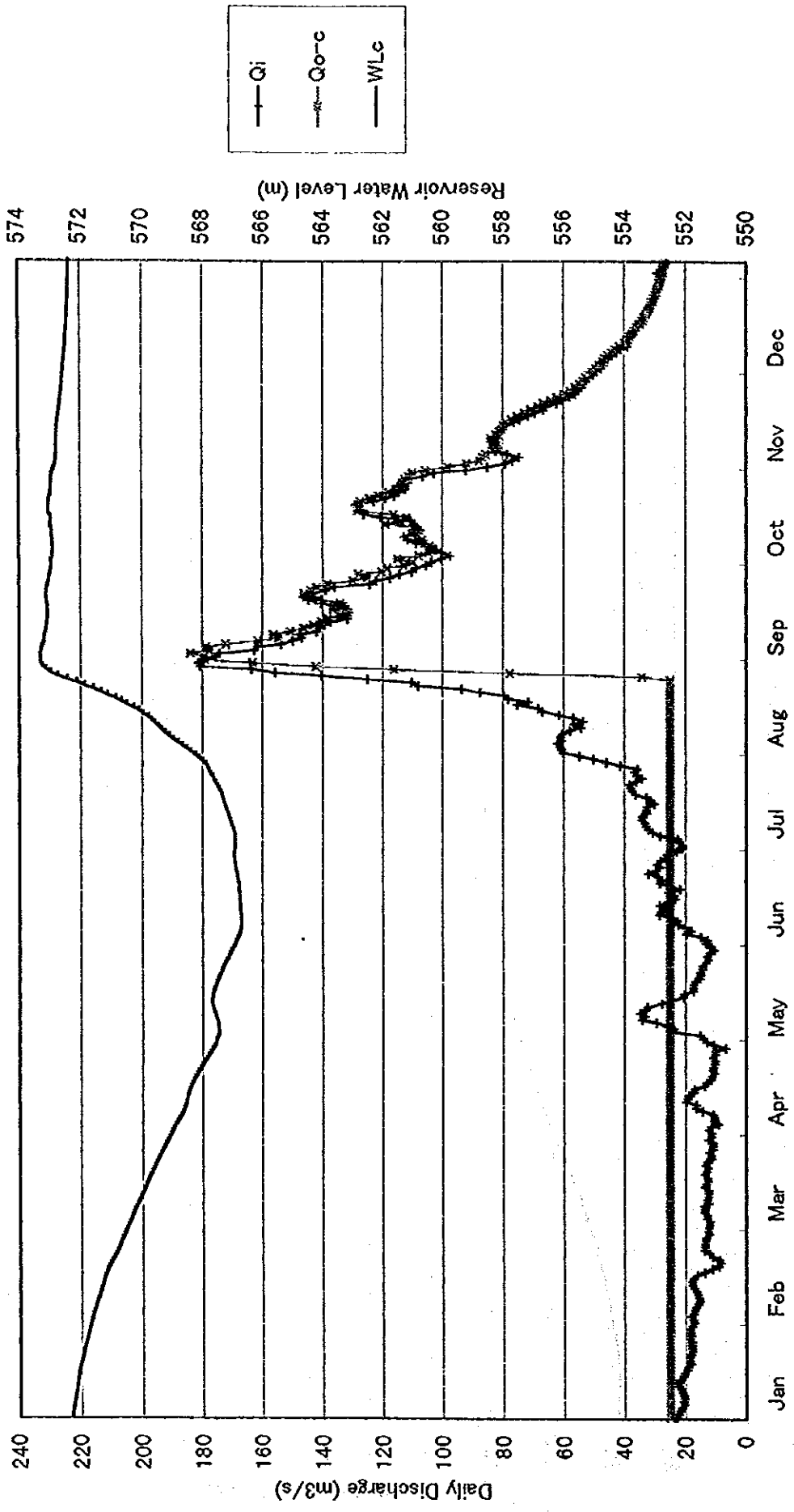
Boali Dam Water Balance
1992



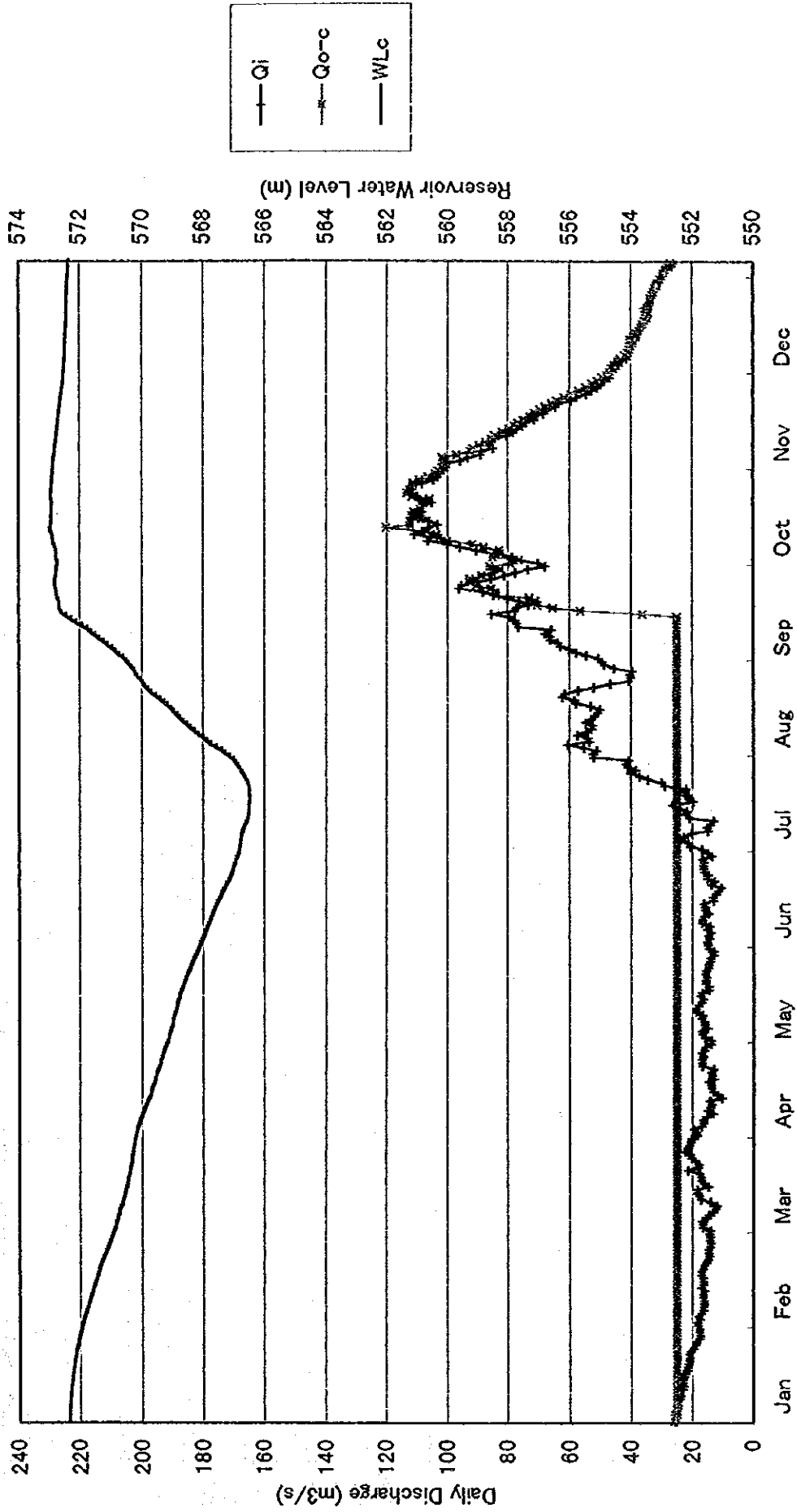
Boali Dam Water Balance
1993



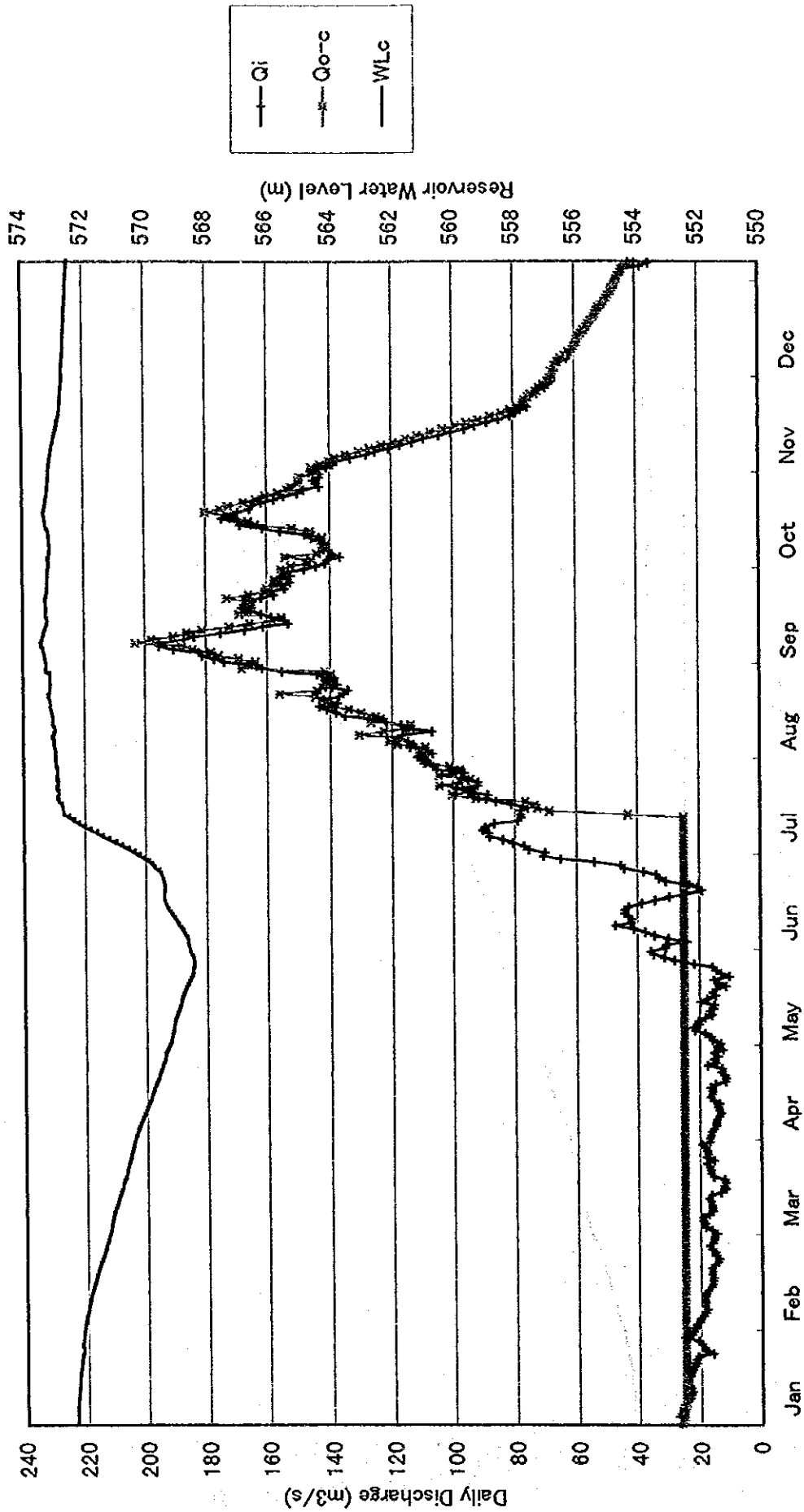
Boali Dam Water Balance
1994



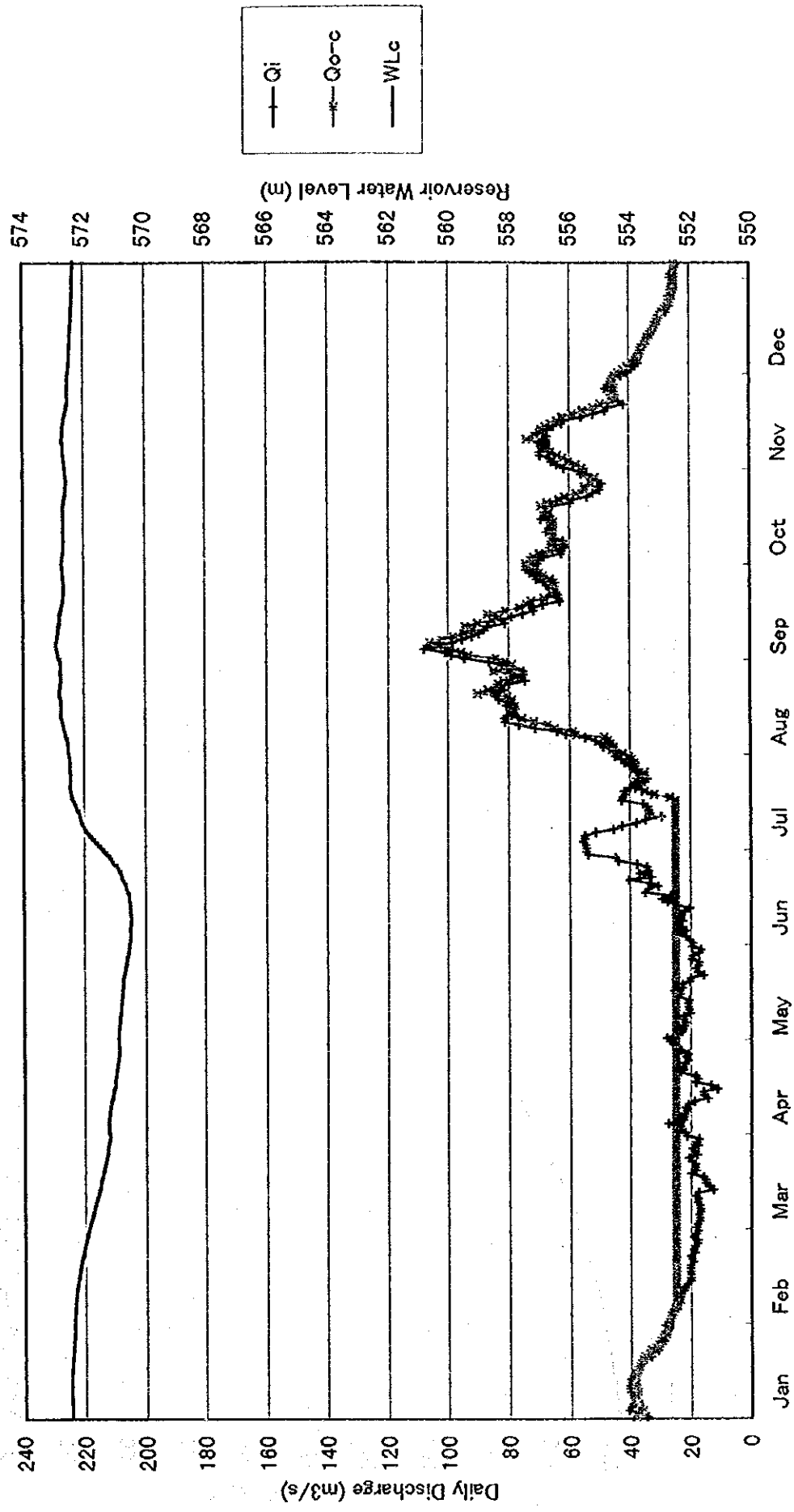
Boali Dam Water Balance
1995



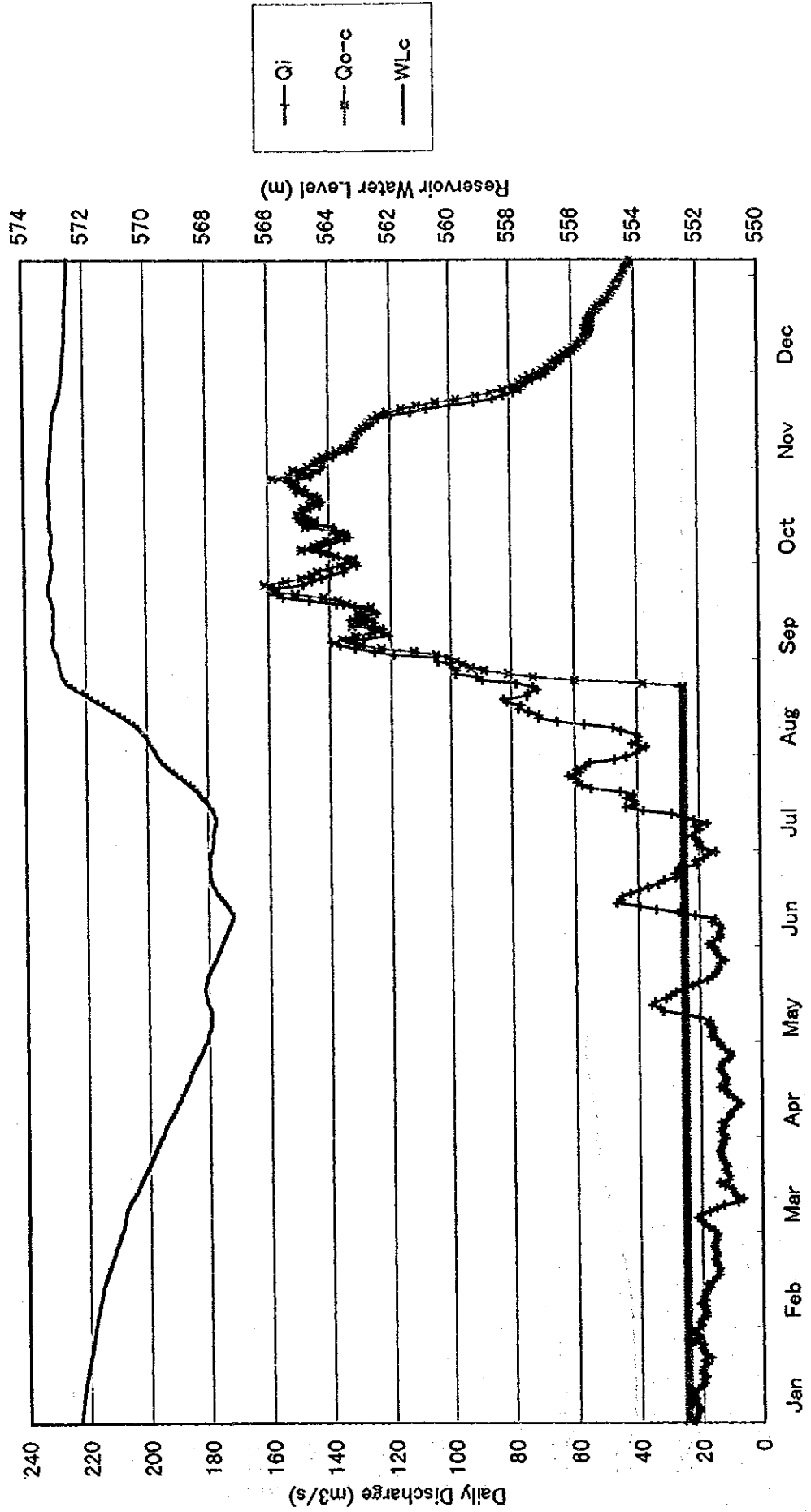
Boail Dam Water Balance
1996



Boali Dam Water Balance
1997



Boali Dam Water Balance
1998



Result of Boali-Dam Water Balance
 $Q_b = 20 \text{ m}^3/\text{s}$

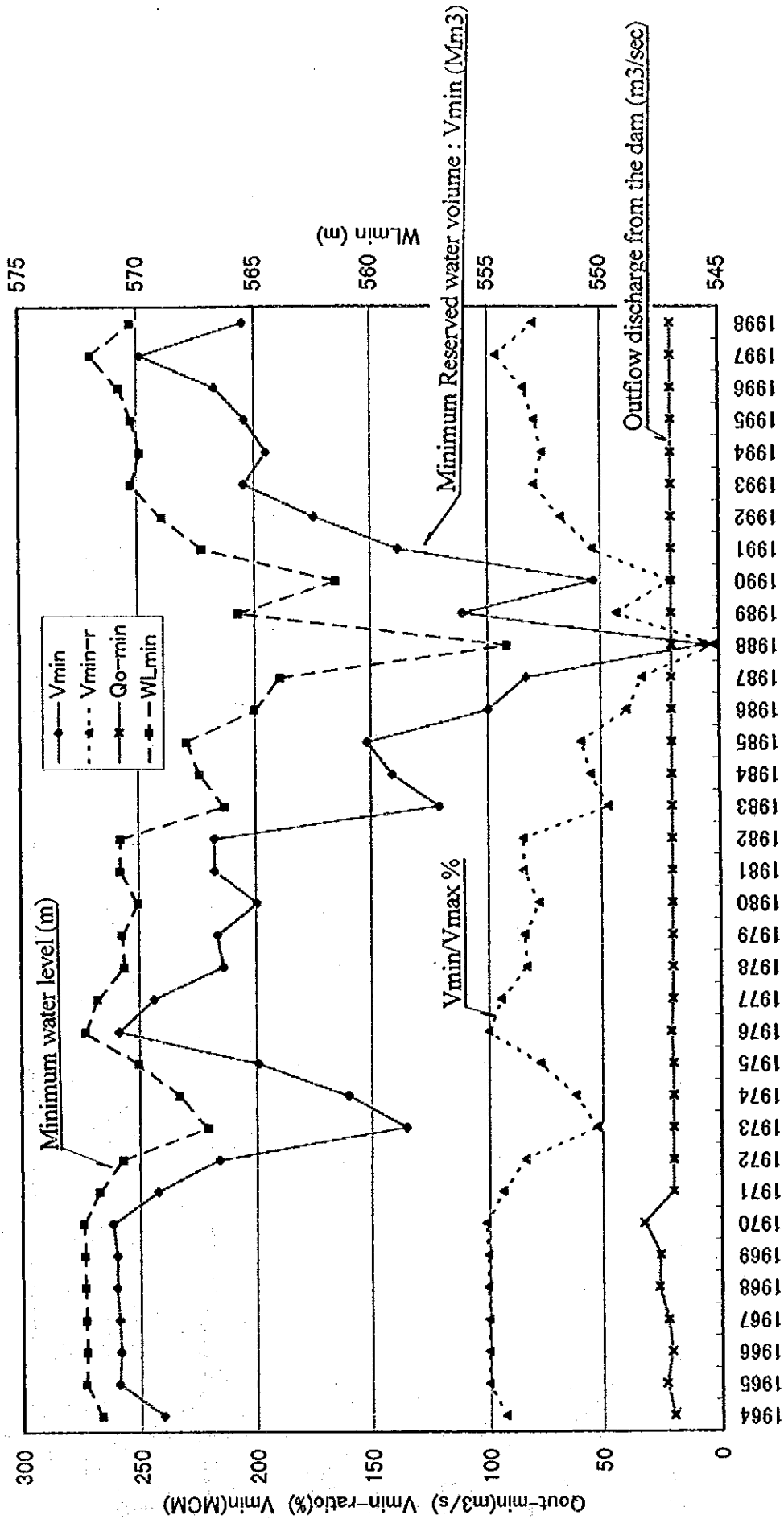


Fig. 6 Long Term Fluctuation of BOALI Dam Water Balance ($Q_b = 20 \text{ m}^3/\text{sec}$)

D

Result of Boali Dam Water Balance
 $Q_b = 25 \text{ m}^3/\text{s}$

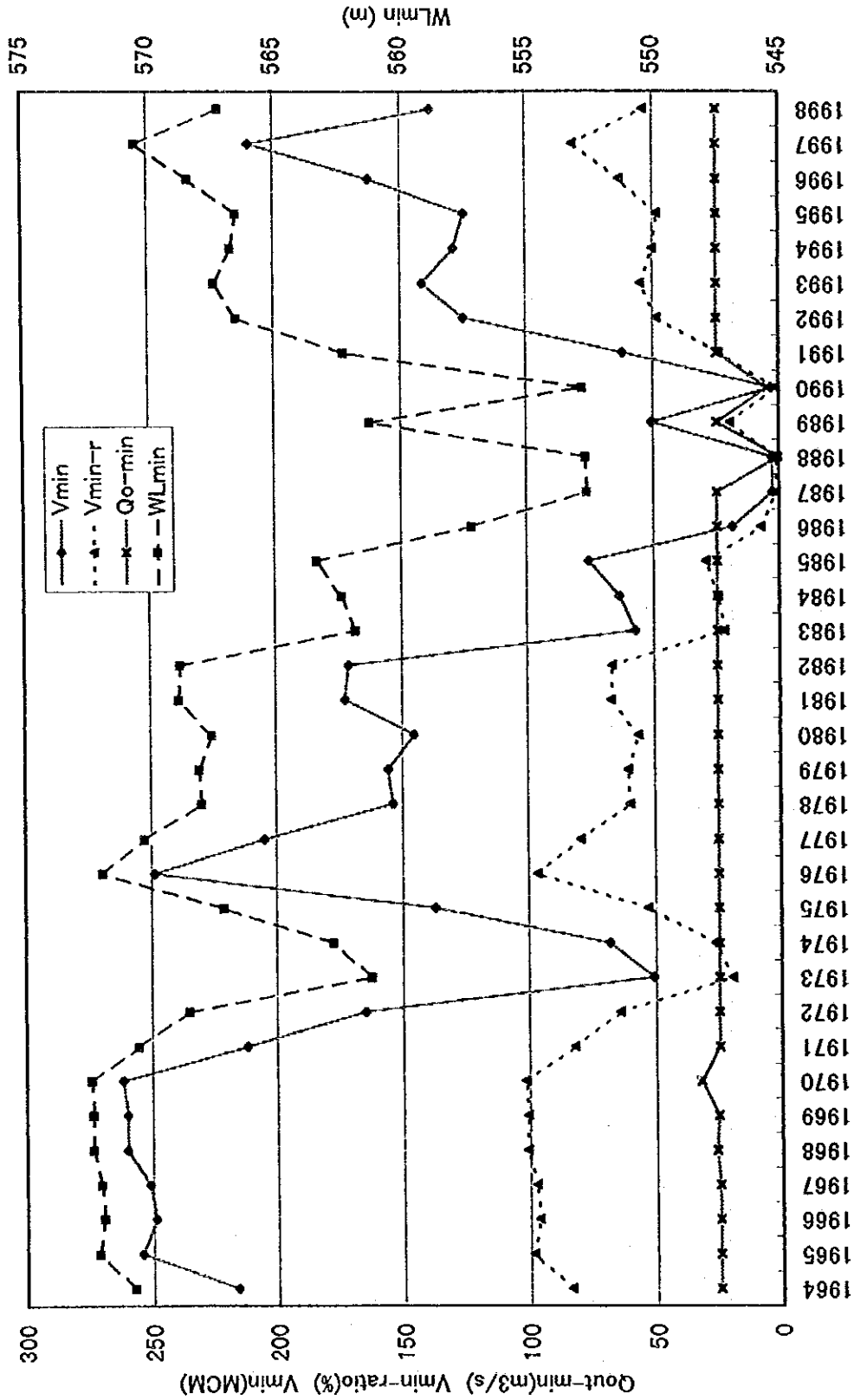
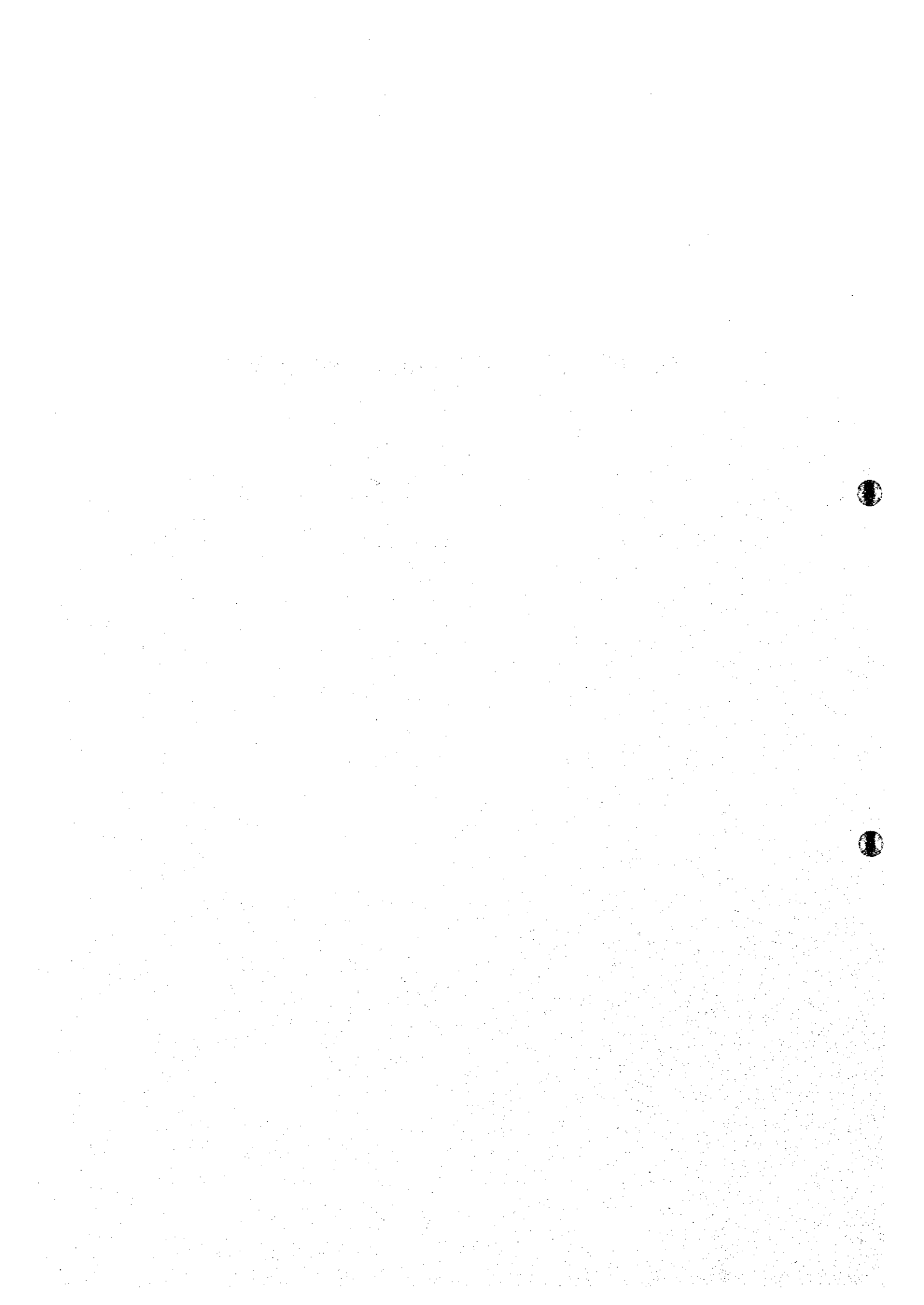


Fig. 7 Long Term Fluctuation of BOALI Dam Water Balance ($Q_b = 25 \text{ m}^3/\text{sec}$)

6. SOCIOECONOMIC ASPECT



6. Socioeconomic Aspect

Table of Contents

1. Data of Kiosk	-----	6-2
2. Result of Questioner on Water Consumption	-----	6-4

1. Data of Kiosk

	Kiosk no	Date Stop	Date Restart	No of contractor	Technical Problem	Management Problem	No. of Costumer	
1	7	98.02						
2	8	98.02						
3	22	98.08						
4	24	98.07	No	1	No	Yes	Rainy season less	Alternative other Kiosque
5	27							
6	28	98.05	99.06	1	No	yes	Always	
7	30							
8	46	98.08	No	2	No	Yes	Rainy Season Less Dry Season Many	
9	51	98.08	No	1	No	Yes	Always	Owner 'Privatised' Kiosque, she thinks Kiosque is her comodity
10	54	95	No	2	No	Yes	Always	People use traditional well water for alternative
11	57	98.08	98.11	1	No	Yes	Always	A month ago the Community well is broken, Chief is asked to repair. People prefer to drink well water, better taste (Price 5cfa per 20 l) but work load to pump is too much. Therefore they buy water from Kiosque, even though it is more expensive for washing and so on.
12	68	98.08						
13	70	91		1				Owner of the land had confrikt with constructor of Kiosque
14	77	98.08	No	1	No	Yes	Always	There is always management problem so population around lost trust for this kiosque and they go to other kiosque in market
15	83	97	No	1	No	Yes	Always	Traditional well
16	84	95	No	3	No	Yes	Always	Kiosque at market place
17	88	95	No	1	No	Yes	Rainy season less	
18	93							

19	98	99.01	2	sometime s	yes	Always	Other kioskue
20	100	99.06	1	Sometim es a day stop	Yes	Rainy Season Less Dry Season Many	
21	110	98.08					
22	111	98.08	1	Sometim es a day stop	Yes	Always	Owner Privatized Kioskue
23	125						
24	128	98.09					
25	138	98.08					
26	139	98.08					
27	65	98.11	3	No	Yes	Always	People buy water from private connection after Kioskue is closed
28	DG	98	1(DG)	No	Yes	Always	DG will not new owner for this kioskue, People use traditional well water
29	New	-					A woman has right to start Kioskue but hasn't started, no Kioskue around
30	71	-	2	Only morning time till 10 o'clock water			No alternativr water resource, price is too much, f 3 for 10 l reasonable
31	??	98	3	No	Yes	Rainy Less Dry Many	There are always Management problem. 3 owners has been in charge of Kioskue
32	118	-	2	Now pype is broken	No	Always	Worker's payment per month cfa.20000

2.Result of Questioner on Water Consumption

Q No. Question	No Answer	Private Connection water user	Kiosque water user	No Kiosque/No Provate Water user
1 Question concerning concession How many houses in the concession		2.1	1.1	1.6
2 Type of the house	0 Concrete 1 Brick 2 Traditional	8 14 0	1 16 4	2 14 2
3 Type of the roof	0 Metal 1 Traditional	14 0	19 2	16 1
4 How many wells do you have in your concession	0 Traditional well 1 Deep well	4 0	9 0	10 0
5 Do you have electricity service connections in the concession?	0 yes 1 no	10 5	11 9	1 15
6 If yes, how much did you pay for last 3 months?	Average	11835	7021	2967
7 How much is the total income of your family? (per month)		124000	91125	46500

Question concerning water supply
 What are your sources of water supply?

8	0	Water kiosk	0	20	0
	1	Private water service connection	9	0	0
	2	Neighbor's private water service connection	6	1	0
	3	Individual traditional well -covered	2	4	6
	4	uncovered	2	6	4
	5	Neighbor's traditional well covered	2	12	8
	6	uncovered	1	3	2
9	0	Yes	6	1	4
	1	No	7	6	13
10	0	Expensive	2	3	1
	1	Too far from SODEKA connection/Kiosque	3	8	10
	2	Hard work to collect enough water from Kiosque	0	2	0
	3	Must wait too long to get water from Kiosque	0	1	0
	4	SODEKA establishment cost is too expensive	0	2	2
	5	Bad quality of water	2	3	6
	6	Shortage of water during dry season	2	1	1

7	Too far from wells	0	1	1
8	conflict with neighbor	1	2	1
11	Are you ready to pay for potable water supply?	0	7	14
1	yes	7	17	
1	no	0	3	2
3	Private connection	11	0	0
12	If so, how much?	4114	2047	2429
Person with private water connection				
13	How many connection do you have?	11	0	0
14	How much had you to pay over last three months for all connections?(Possible to see water bill)	7081	0	0
15	How many neighbors use your tap?	8	0	0
	Selling water at home	1	0	
16	Do they pay?	0	6	0
1	Free	3	0	0
1	Pay	5	0	0
17	Are you satisfied with SODECA service?	0	5	0
1	yes	5	0	0
1	no	4	0	0
18	If not, why?	1	0	0
1	Expensive	3	0	0
2	No extension	1	0	0
	Dry season not enough water	3	0	0

19	Using water kiosk How far from here to kiosk			471	0
20	How much do your family buy water for a day?			62	0
21	Who goes to the water collection?	0	Men	1	0
		1	Women	12	0
		2	Boy	8	0
		3	Girl	11	0
22	Sanitation and Hygiene How do you keep water for cooking and drinking	0	Open pot	0	0
		1	Covered pot	2	0
		2	Can/Jerrycan	3	0
		3	Covered pan	19	15
		4	Open bowl	2	2
		5	Covered bowl	0	0
		6	other	3	2
23	How do you drink water from traditional	0	Boiling	0	1
		1	Filtering	1	0
		2	nothing	5	6
		3	Sterilization by javel	8	9
24	Do you have Toilets	0	Traditional without roof	14	14
		1	Traditional with roof	3	0
		2	Modern(how much cost, how you get?)	3	0
		3	No toilets	0	2
25	Are toilets used by all household	0	yes	14	11
		1	no	6	4

26	If not, who doesn't use?	0	Younger children	3	6	1
		1	Women	0	0	0
		2	other	0	0	0
27	Why	0	fear to fall down	1	4	0
		1	using pot	2	1	0
28	Where do you dispose your rubbish?	0	Through it everywhere	1	0	1
		1	Through it in dumping sit	6	9	7
		2	Burnt	9	15	7
		3	Trough to canal	0	0	2
29	How do you dispose waste water	0	Through it anywhere	13	17	11
		1	Through it pit/drain	2	3	5
		2	Through it to Vegetable garden	0	0	1
		3	Through it to toilet	0	0	0
30	Where do you keep the kitchen utensils	0	off floor	13	19	13
		1	on floor	2	1	3
31	When do you wash your hands	0	before preparing food?	13	15	12
		1	Before eating	15	20	16
		2	After defecation	12	14	10
32	Do you wash raw fruit and vegetable before eating	0	yes	15	18	15
		1	no	0	2	1
33	Organization and information Do you have organization working for improving your life in your village?	0	yes	1	5	3
		1	no	14	15	13

34	Do members of your family attend the courses / education on sanitation	0	yes	5	3	1
		1	no	10	17	15
35	if so, who ?	0	Men	1	2	1
		1	Women	4	2	0
		2	Girl	0	0	0
		3	Boy	0	0	0
36	what is the easy way for you to get information concerning sanitation	0	TV	3	3	3
		1	Radio	8	7	3
		2	School of children	0	1	0
		3	Village drama	2	2	1
		4	Organized course	11	19	15
		5	From neighbors	1	0	0
		6	Film show	0	1	0
37	Family member		Total	11	13	13