

**Cristianitos Creek (901.400) – 303(d) Fact Sheet  
LAW-Crandall Study**

296

Cristianitos Creek should not be listed at this time.

**Watershed Characteristics**

Cristianitos Creek is a 2.4-mile long waterbody in the San Juan Hydrologic Unit of Region 9. It is classified inland surface water with the following beneficial uses: REC1, REC2, WARM and WILD<sup>1</sup>.

**Water Quality Objectives not Obtained**

Alkalinity, iron, manganese, phosphorus and total dissolved solids (TDS) standards were exceeded. Very hard water<sup>2</sup> was also measured for some of the samples. See Table 1 for specific standards exceeded.

**Evidence of Impairment**

The phosphorus standard was exceeded, but only 2 samples were measured. The alkalinity standard was always exceeded. The iron and manganese standards were exceeded in about half of the samples. TDS was found in excess of the standard in most of the samples. Hard water was found in about half of the total samples. See Table 1 for numbers of times the standards were exceeded.

**Extent of Impairment**

Station 509 is located just upstream of the confluence with San Mateo Creek. The spatial extent is unknown.

**Potential Sources**

Unknown

**TMDL Priority**

No TMDL is required at this time.

**Notes**

Some standards that were exceeded are not considered to impair any water quality criteria for this water body. It should be noted that this water body is exempt from the standards applicable to municipal and domestic drinking supply<sup>1</sup>. Therefore, no standard could be found for several constituents. Alkalinity is an estimate of buffering capacity. It is the amount to bicarbonate and carbonate ions. These ions help to remove toxic metals by precipitating or absorbing them out of solution. Hardness is usually a measure of calcium and magnesium dissolved in the water. Both of these also help to make toxic metals less available to aquatic life. Therefore, high alkalinity and hard water may be protecting water quality. Excess nutrients are not yet a problem, but very few samples were measured for phosphorous.

**Information Sources**

<sup>1</sup> Water Quality Control Plan for the San Diego Basin (9), 1994

Please see Table 1 for sources of standards.

**TABLE 1: LAW-Crandall - San Mateo and Cristianitos**

sampling from 3 Mar 98 - 12 May 00

	alkalinity (ug/L)	arsenic (ug/L)	bicarbonate	BOD	boron (mg/L)	calcium	carbonate	chloride (mg/L)	conductivity	copper (ug/L)	cyanide (ug/L)	fluoride (mg/L)	hardness	hydroxide
Basin Plan Std					0.75			250				1.0		
Freshwater Aquatic Life Protection US EPA Quality Criteria for Water (1976) The Red Book	>20,000 (4-day avg)													
Freshwater Aquatic Life Protection Cal Toxics Rule		340 (1-hour avg)								14 - 44 (hrdnss 100-350) 1-hr avg	22			
Marine Aquatic Life Protection Cal Ocean Plan USEPA Human Health & Welfare (aquatic organisms consumption only)		80 (instnt max)								30 (instnt max)	10 (instnt max)			
USEPA National Recommended Water Quality Criteria - Correction, EPA 822-Z-99-001 (April 1999)														
Boulder Area Sustainability Information Network <a href="http://bcn.boulder.co.us/basin/learning/wq2teacher.html">http://bcn.boulder.co.us/basin/learning/wq2teacher.html</a>													300	
# of std exceedances: Cristianitos Creek 509	7 of 7 (100%)	ND			none			none		none	ND	none	4 of 7 (57%)	
# of std exceedances: San Mateo Creek at San Clemente 510	9 of 9 (100%)	ND			none			none		none	ND	none	1 of 9 (11%)	
# of std exceedances: San Mateo Creek at San Onofre 511	11 of 11 (100%)	ND			none			none		none	ND	none	4 of 11 (36%)	

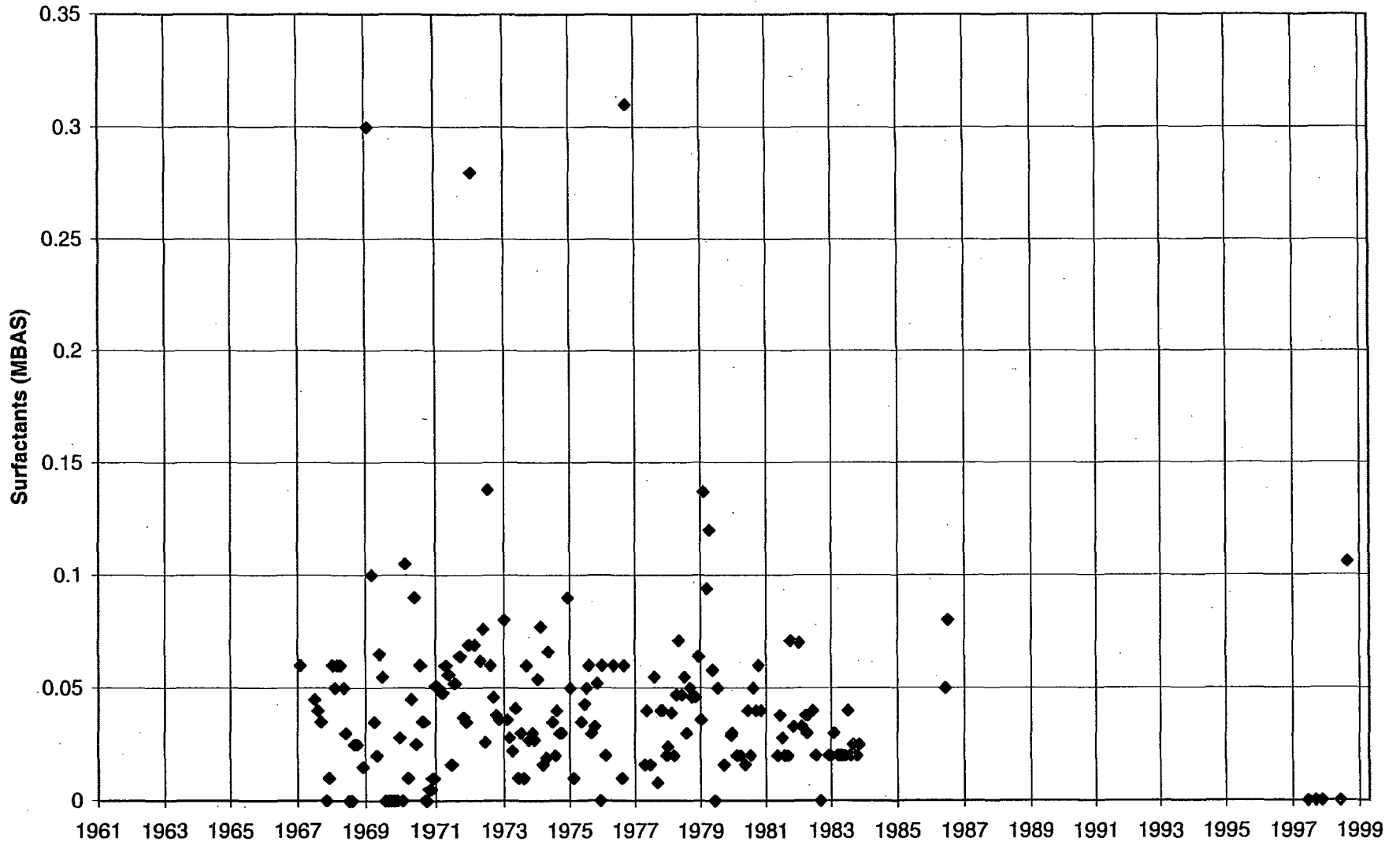
ND = Not Detected

NS = Not Sampled

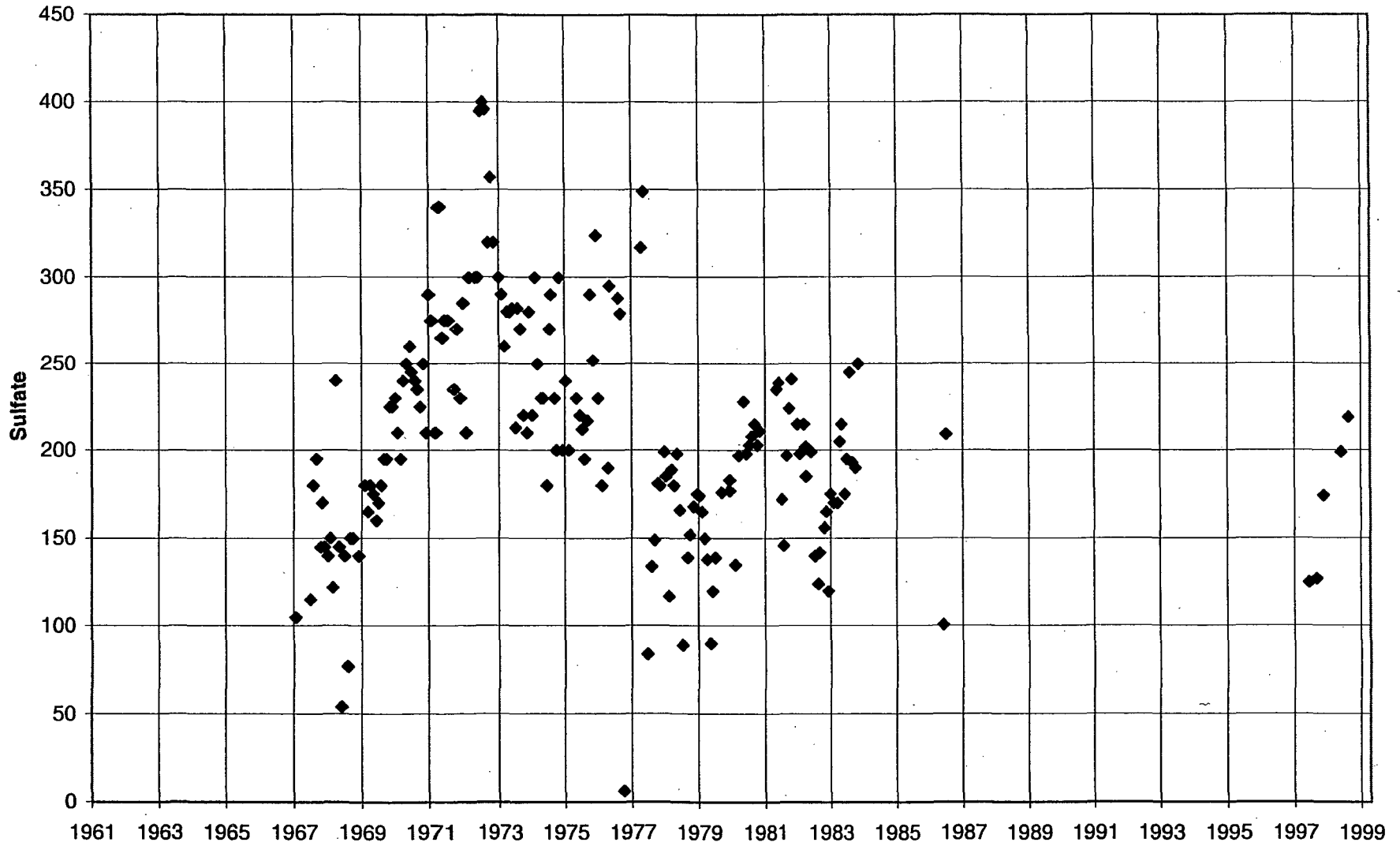
iron (mg/L)	lead (ug/L)	magnesium	manganese (mg/L)	mercury (ug/L)	nitrate (mg/L)	nitrogen (mg/L)	oil & grease	pH	phosphorus (mg/L)	potassium	sodium (%)	sulfate (mg/L)	surfactants	TDS (mg/L)	TOC	Zinc (ug/L)
0.3			0.05		44.29 (10*62/14)	10 (by ratio)	narrative	6.5-9.0	0.1		60	250		500		
	65-245 (hrdnss 100-350) 1-hr avg 20 (instnt max)			0.051					0.1 (saltwater aquatic life protection)							120-340 (hrdnss 100-350) 1-hr avg 200 (instnt max) 69000
				1.4 (1-hr avg)												

4 of 7 (57%)	none	3 of 7 (43%)	ND			none		none	1 of 2 (50%)			none		6 of 7 (86%)		none
2 of 9 (22%)	none	none	ND			none		none	1 of 3 (33%)			none		none		none
2 of 10 (20%)	none	2 of 10 (20%)	ND			3 of 11 (27%)		none	ND			none		5 of 11 (45%)		none

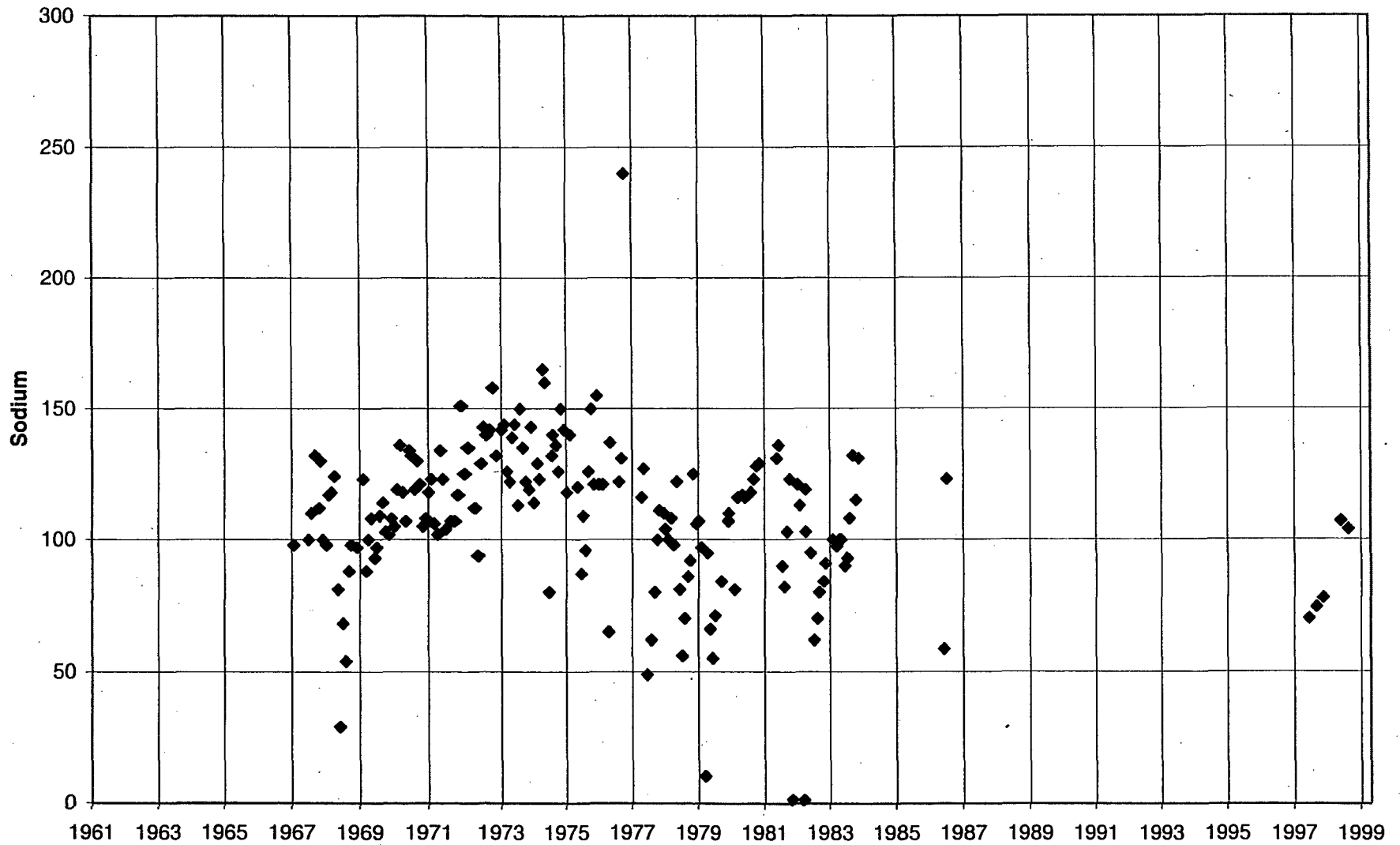
Cristianitos Creek near San Clemente



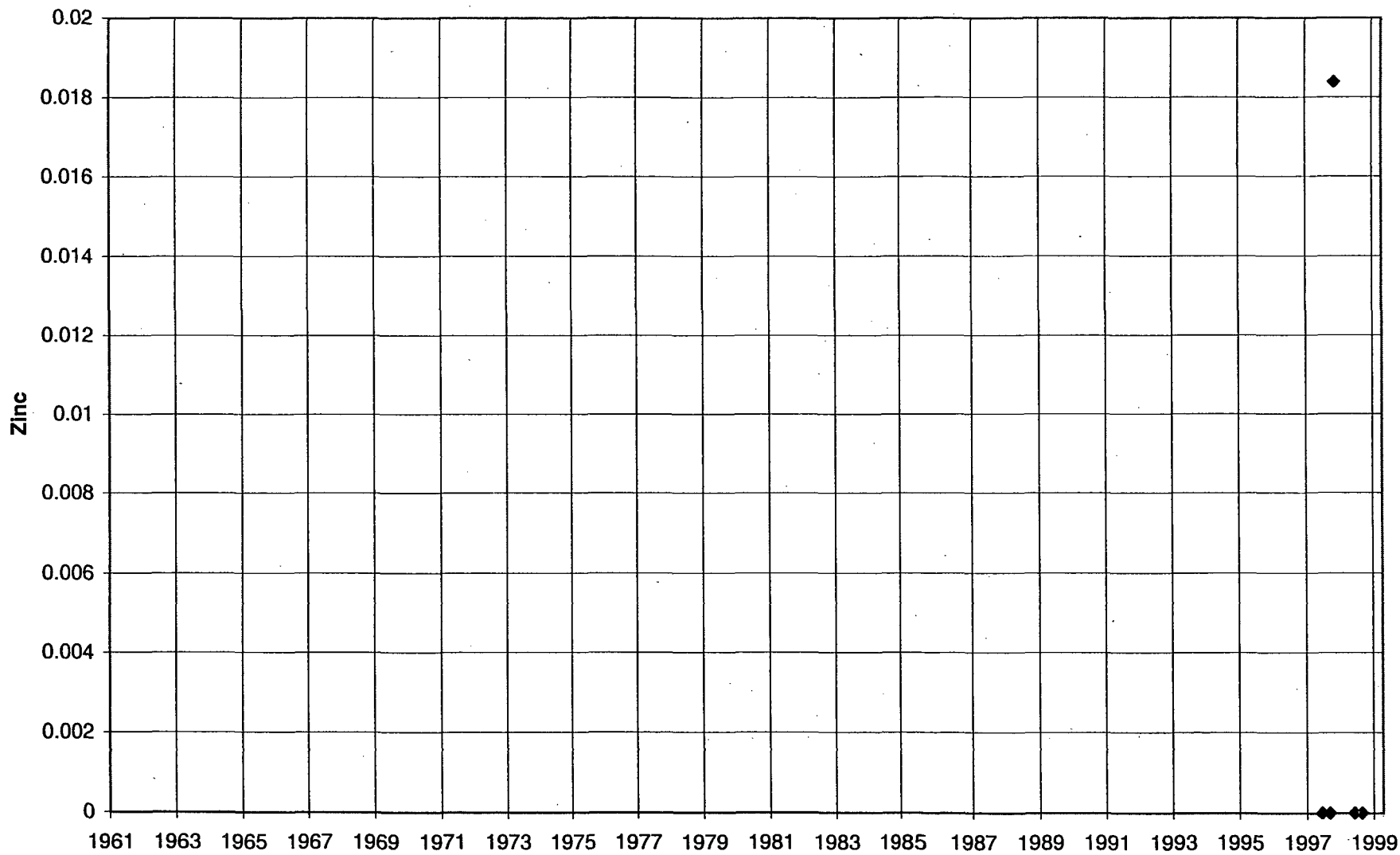
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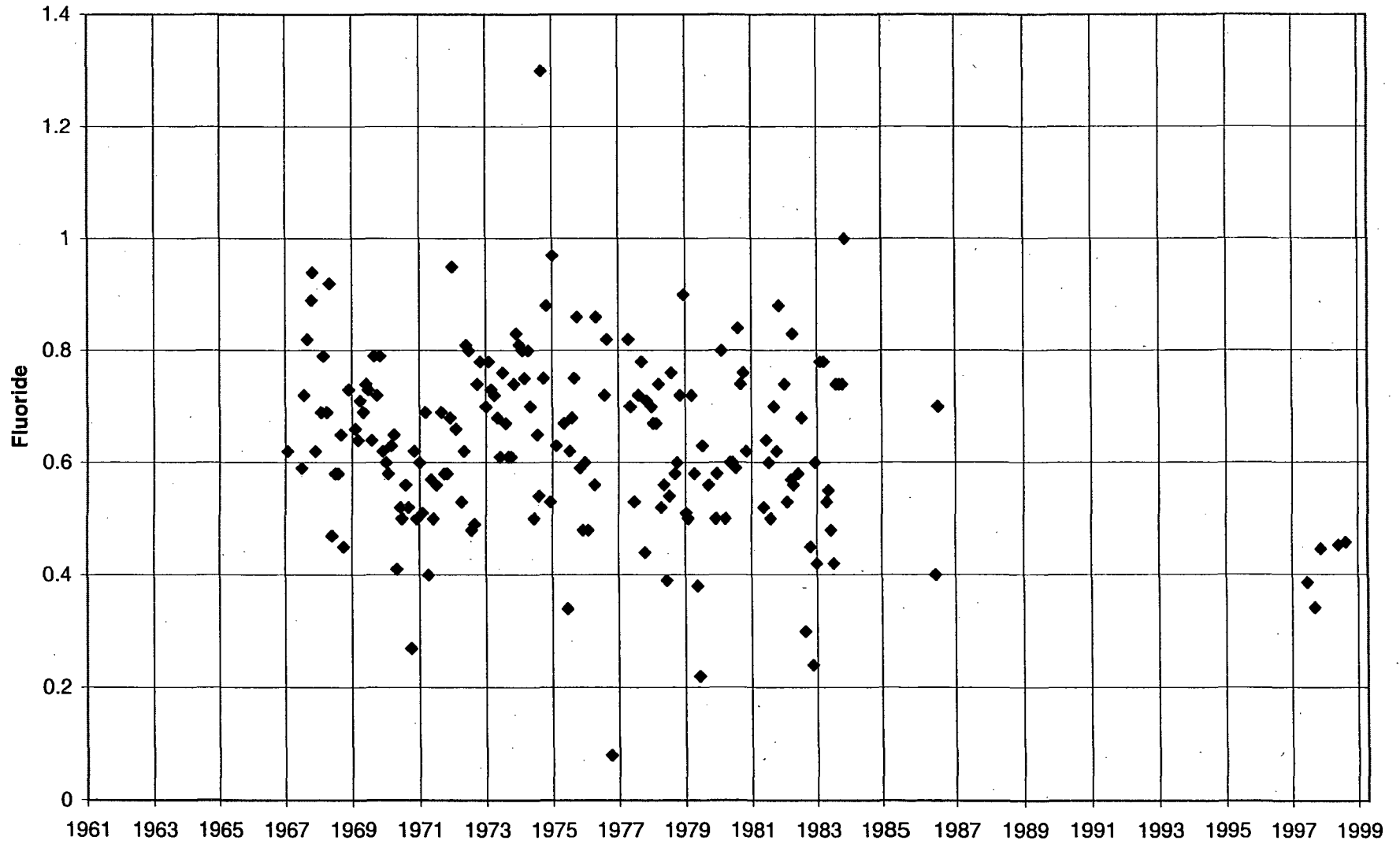


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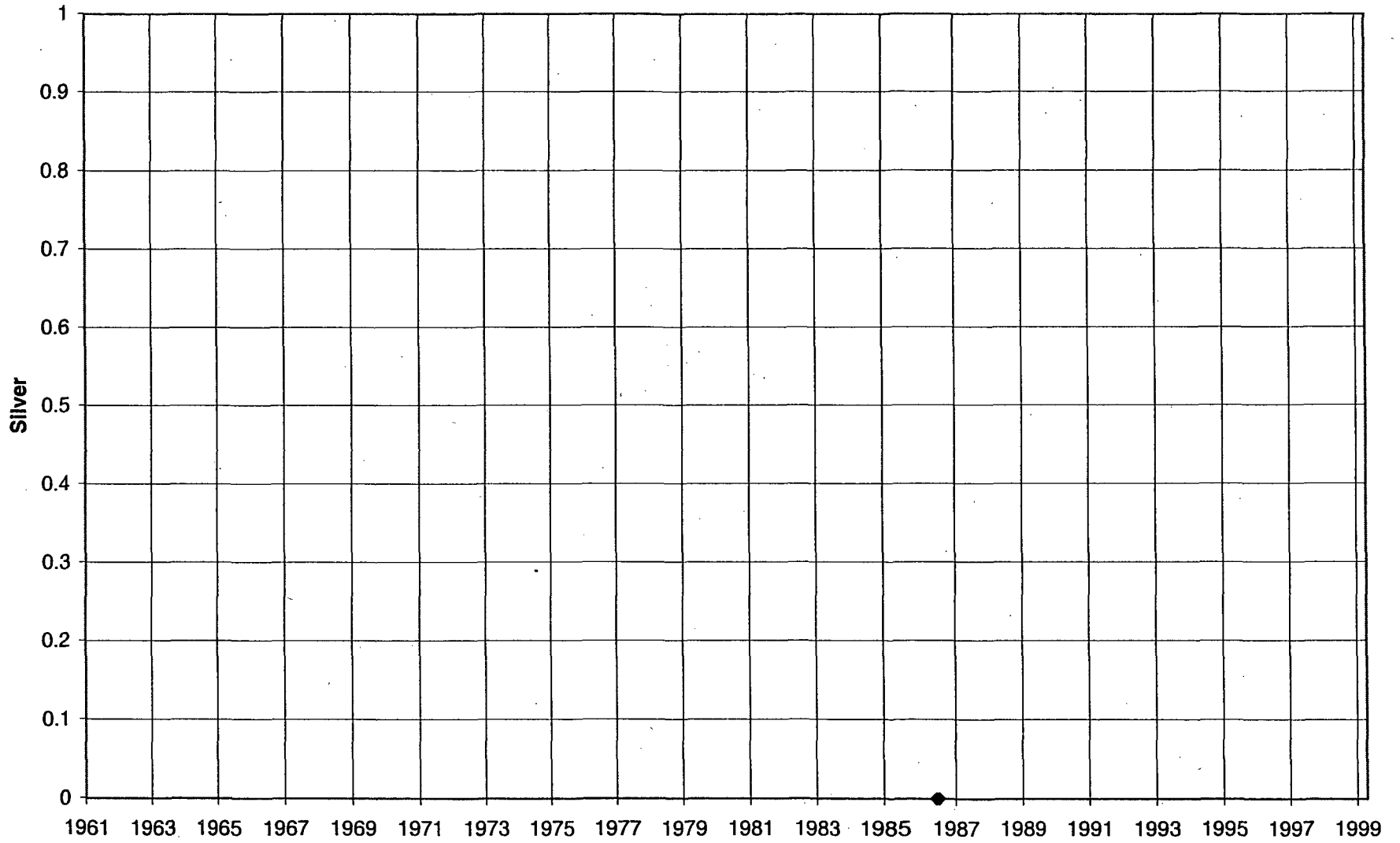




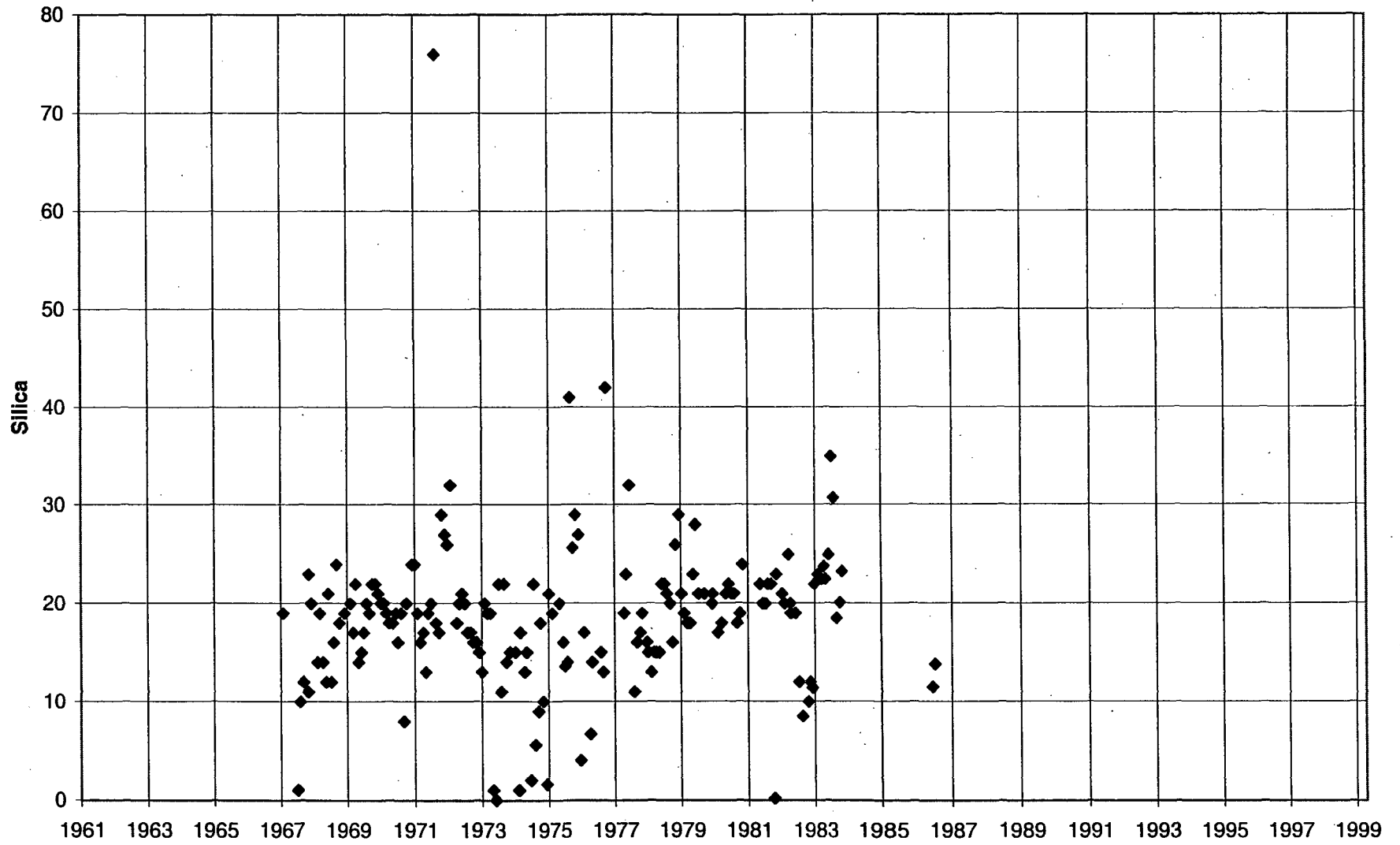
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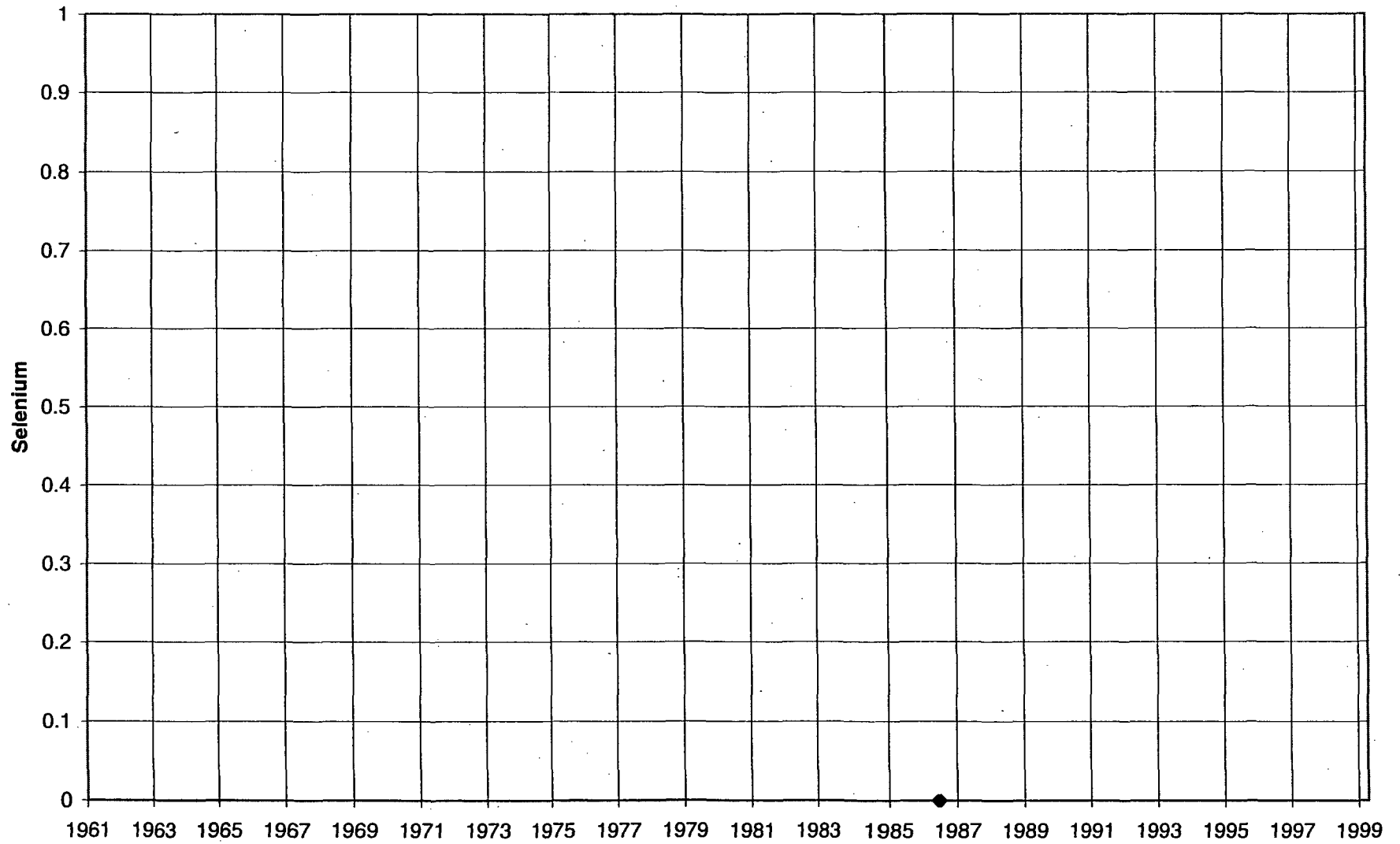
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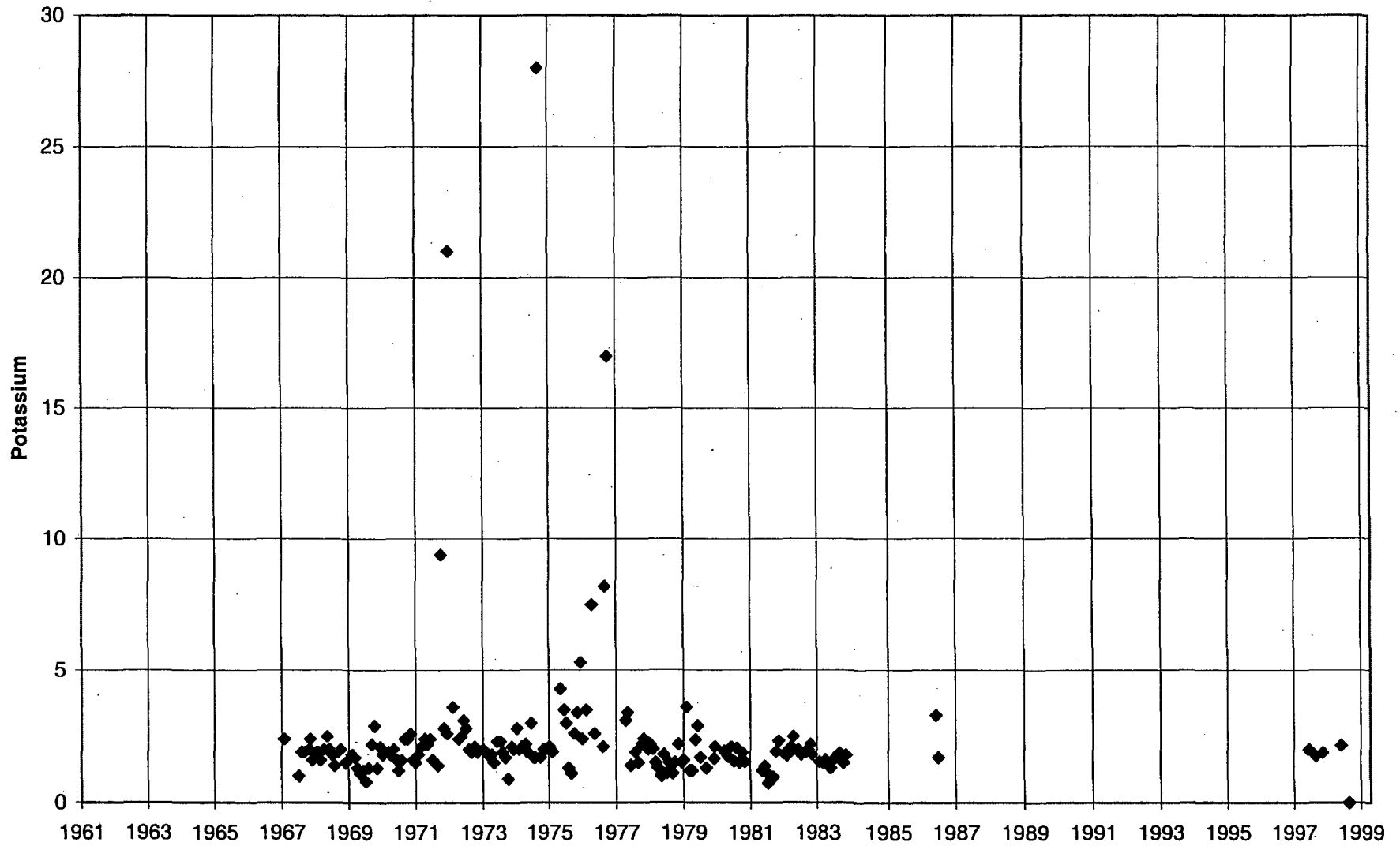
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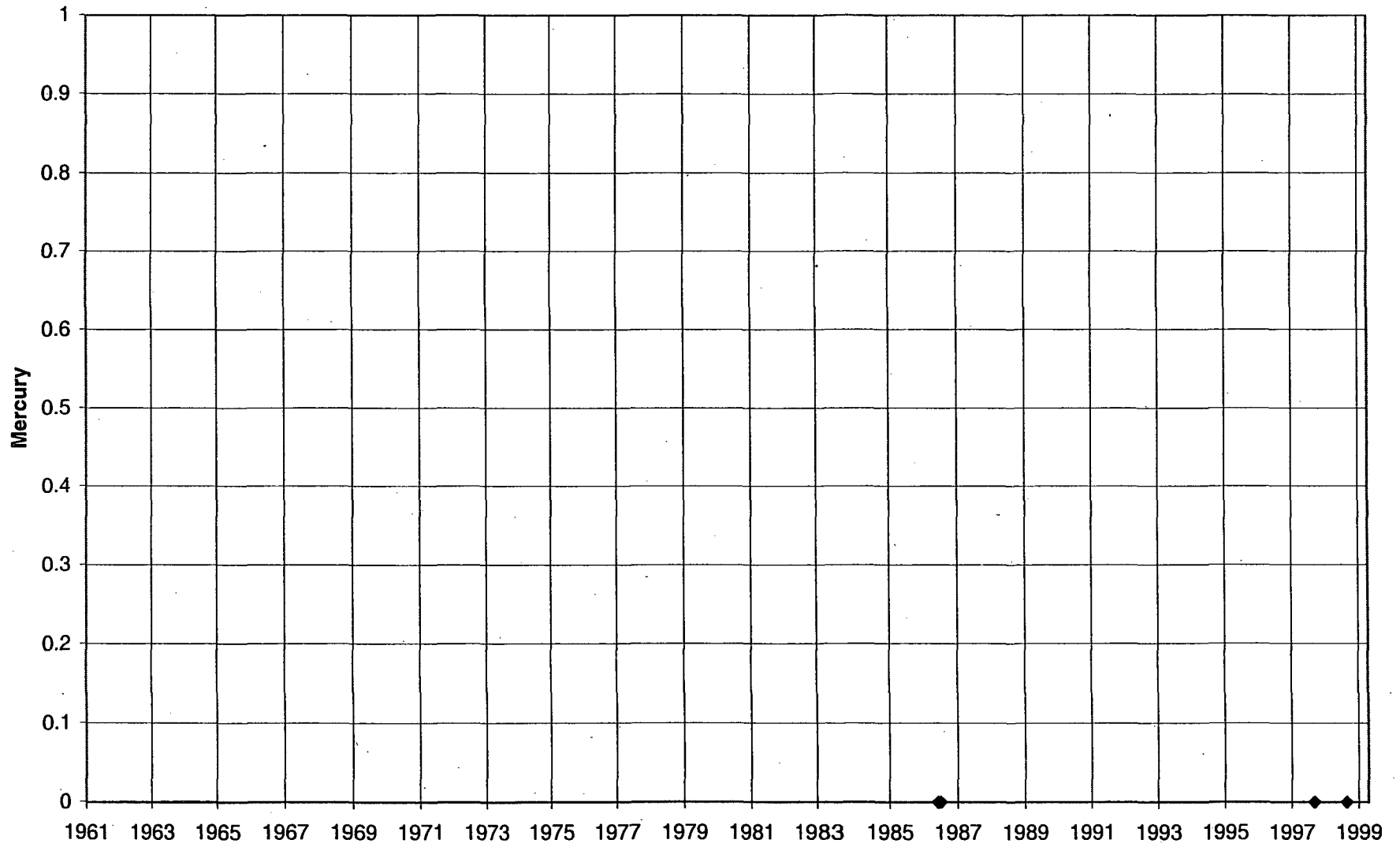
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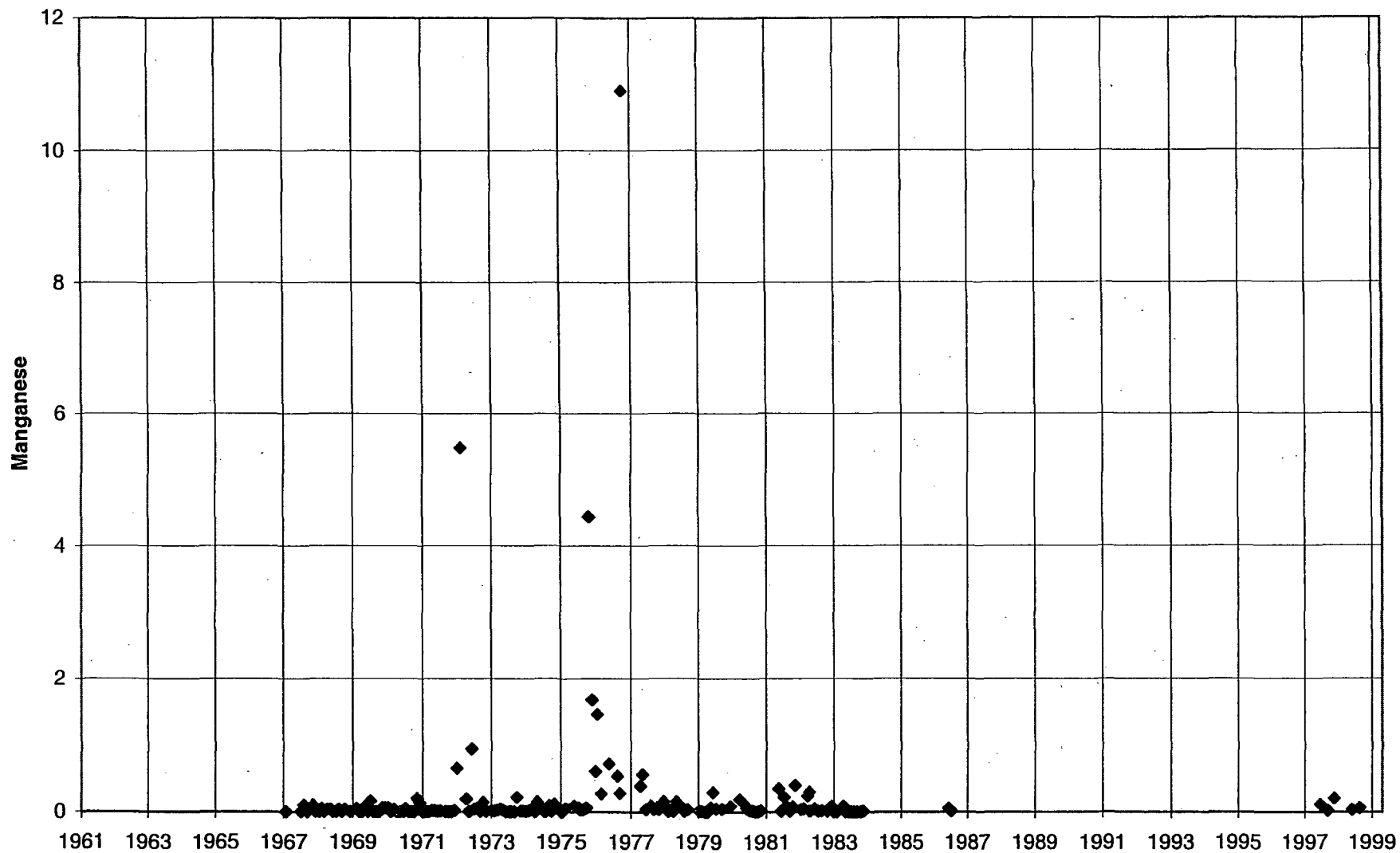
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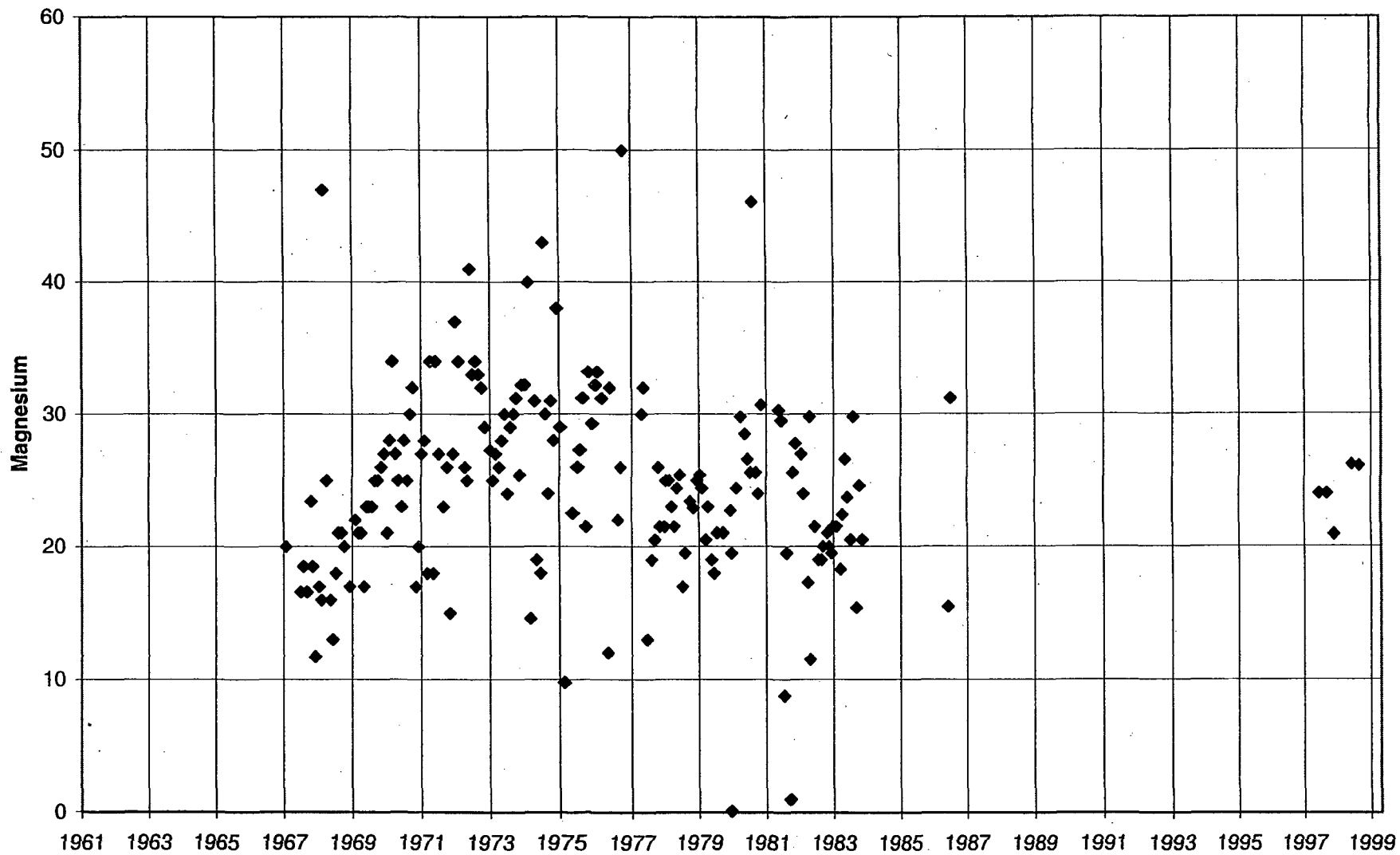
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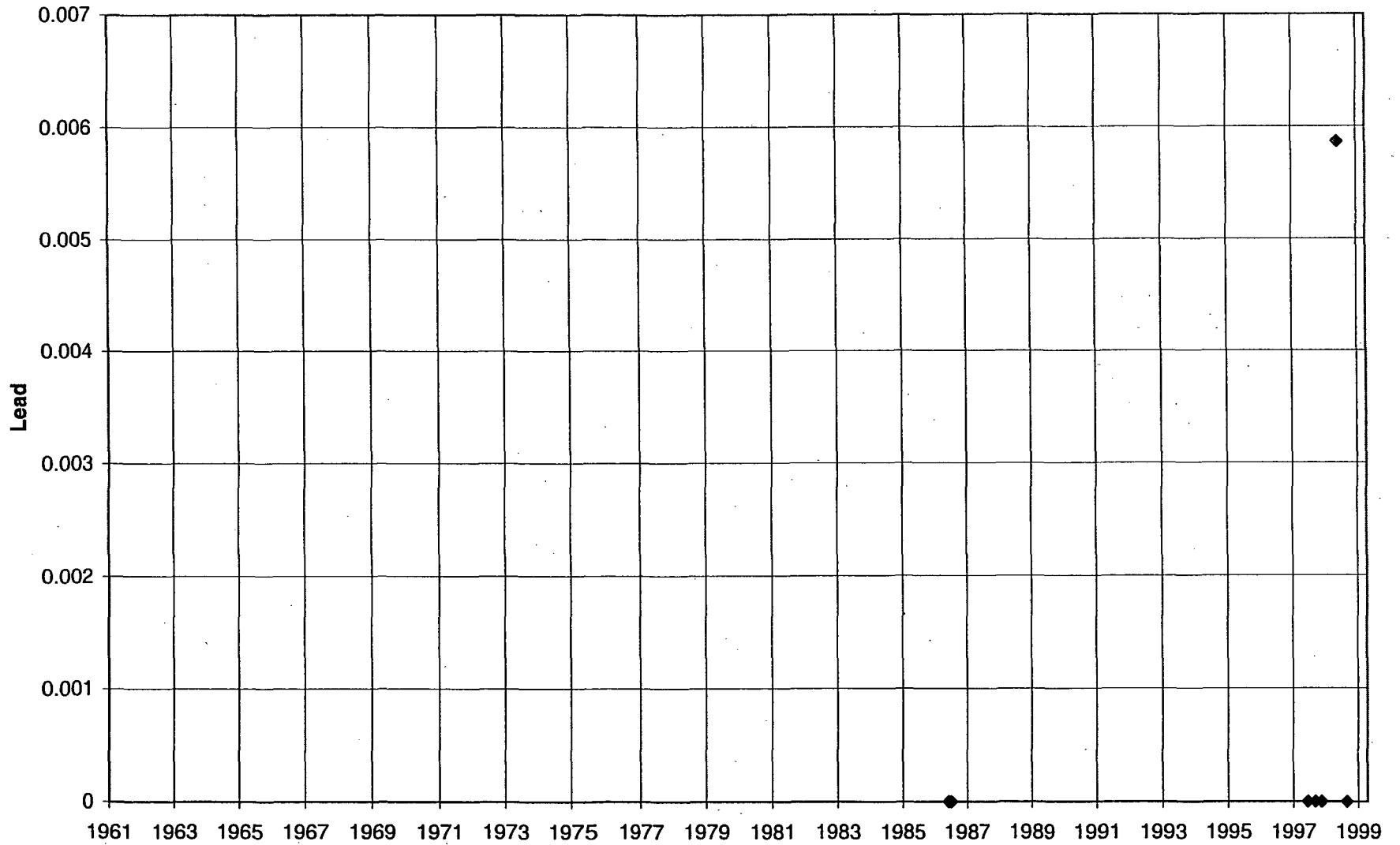


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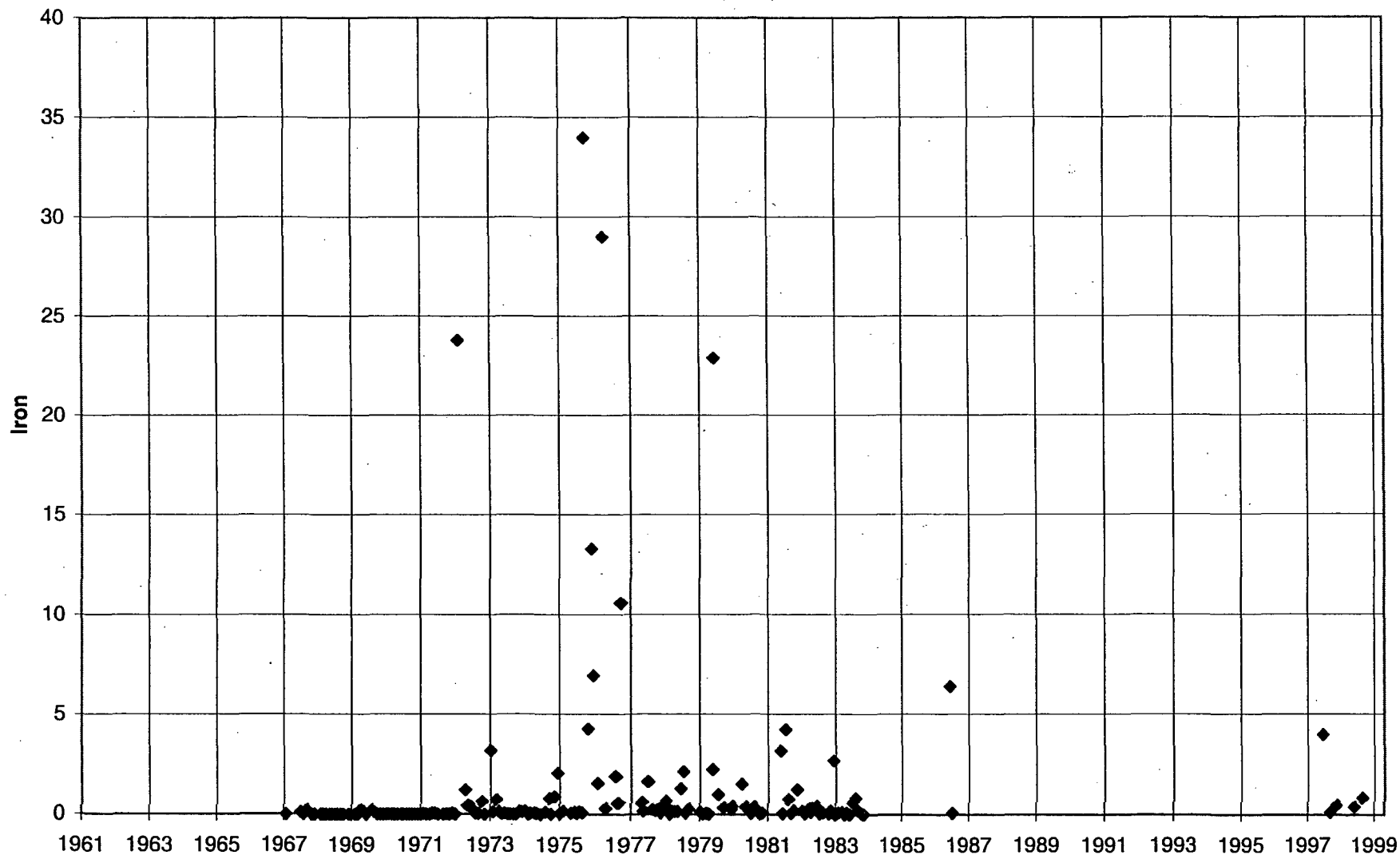




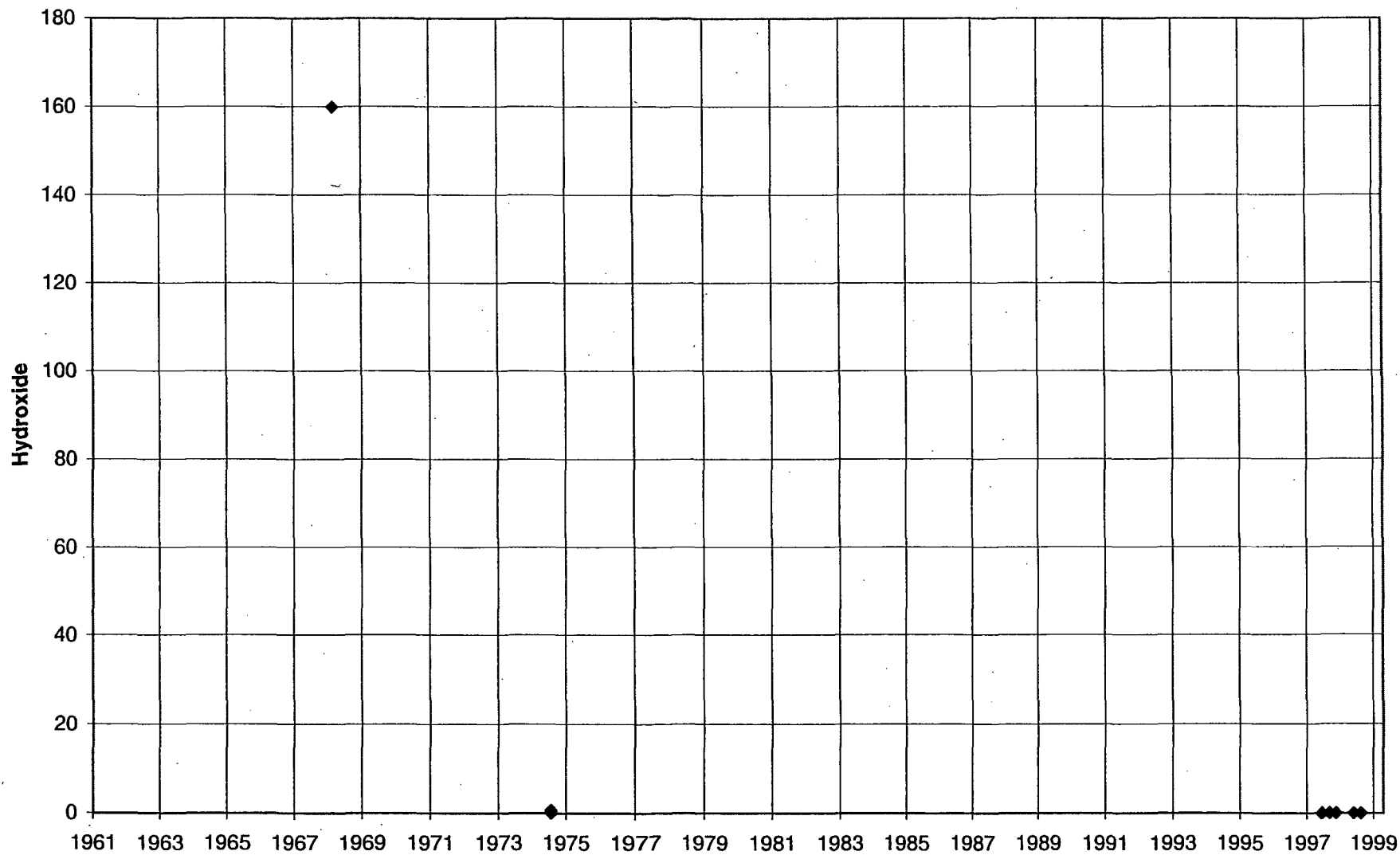
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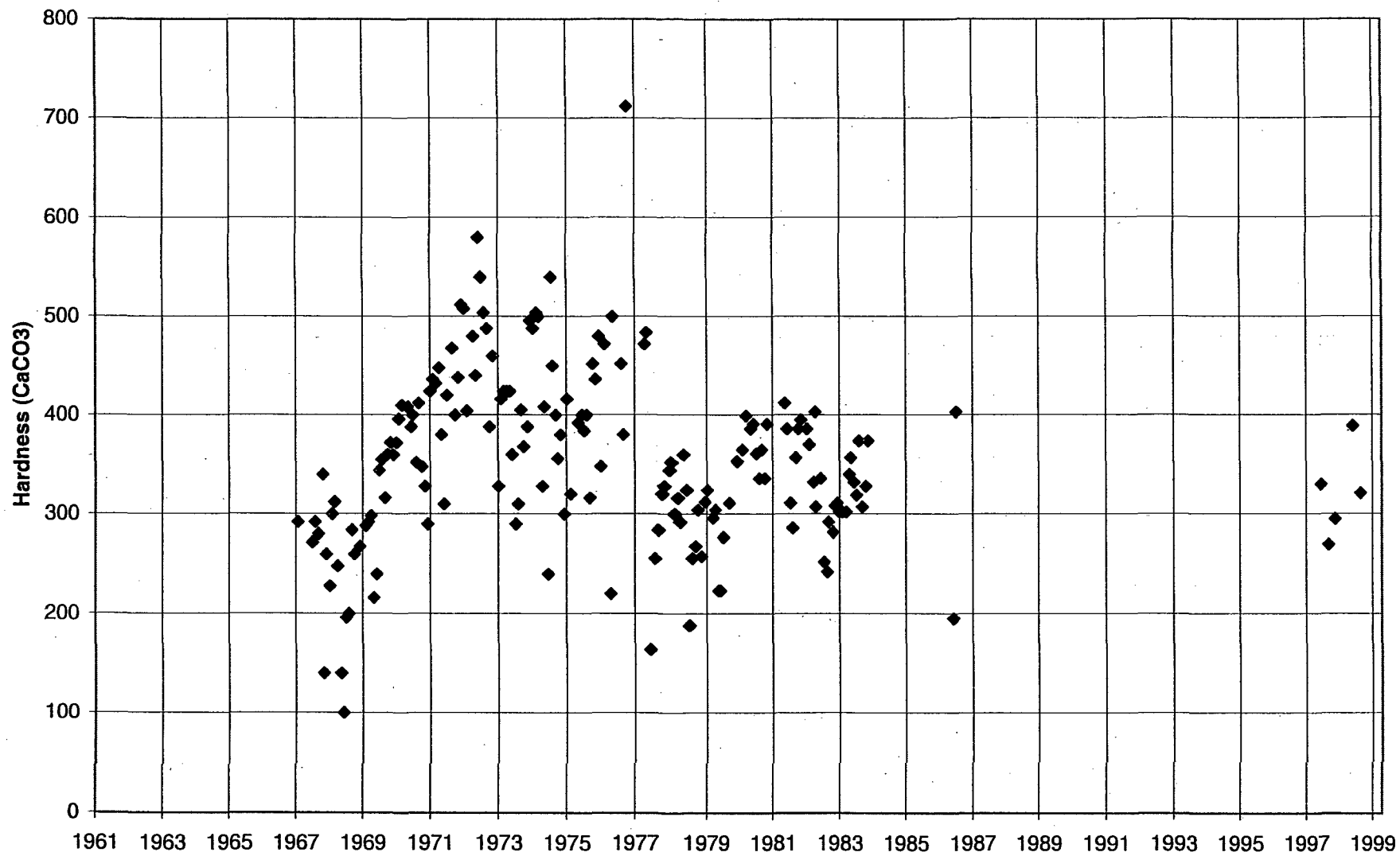
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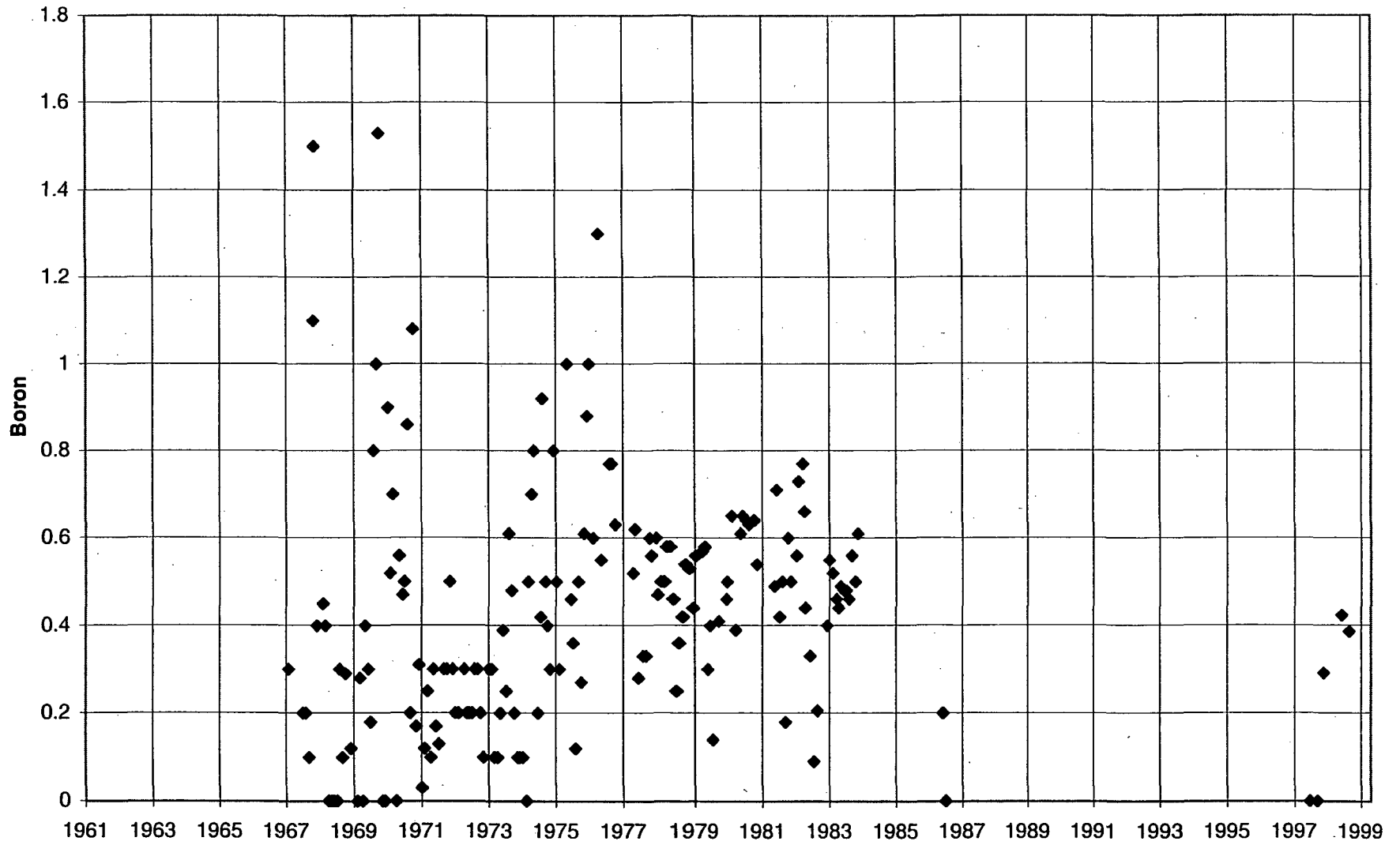
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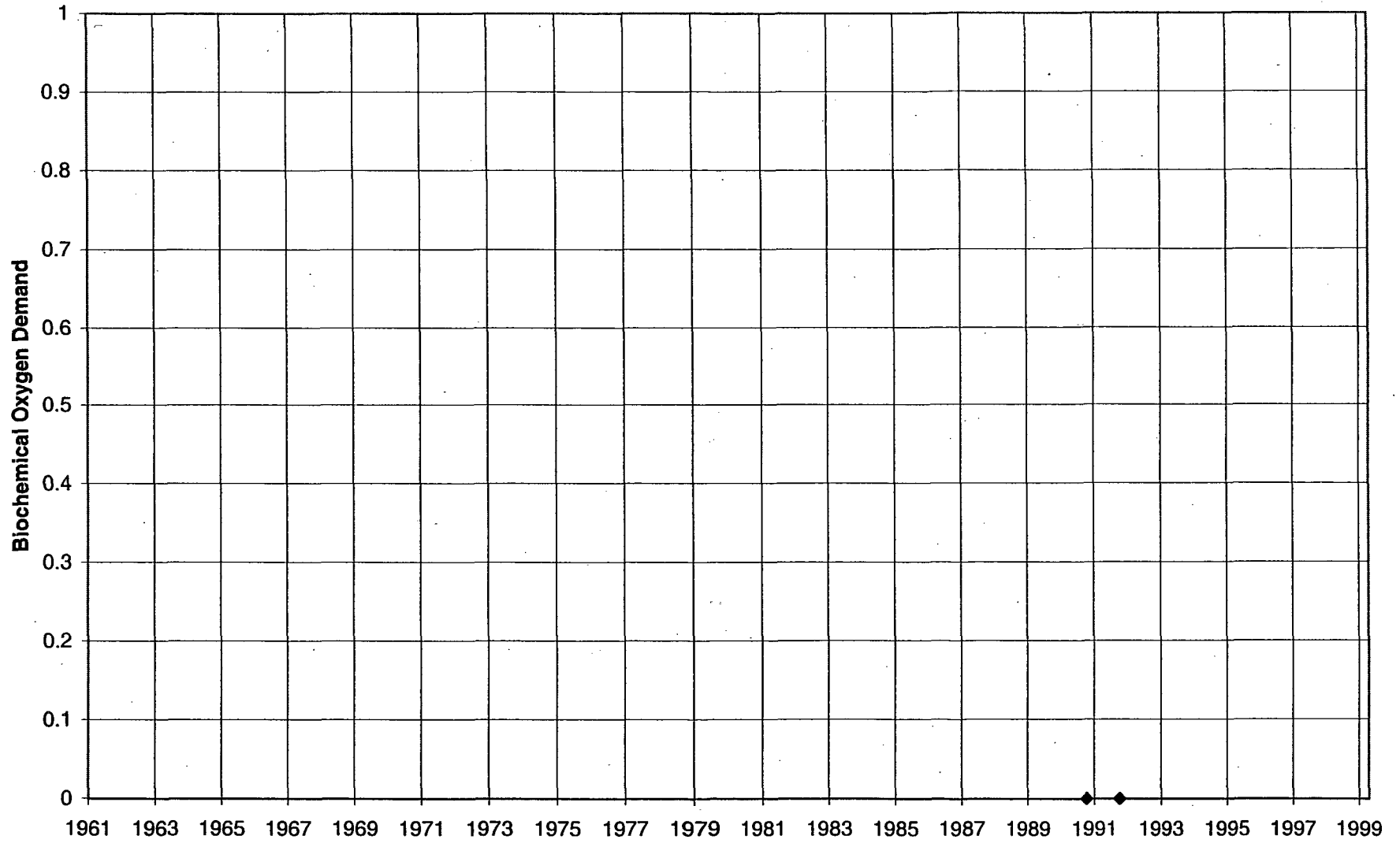
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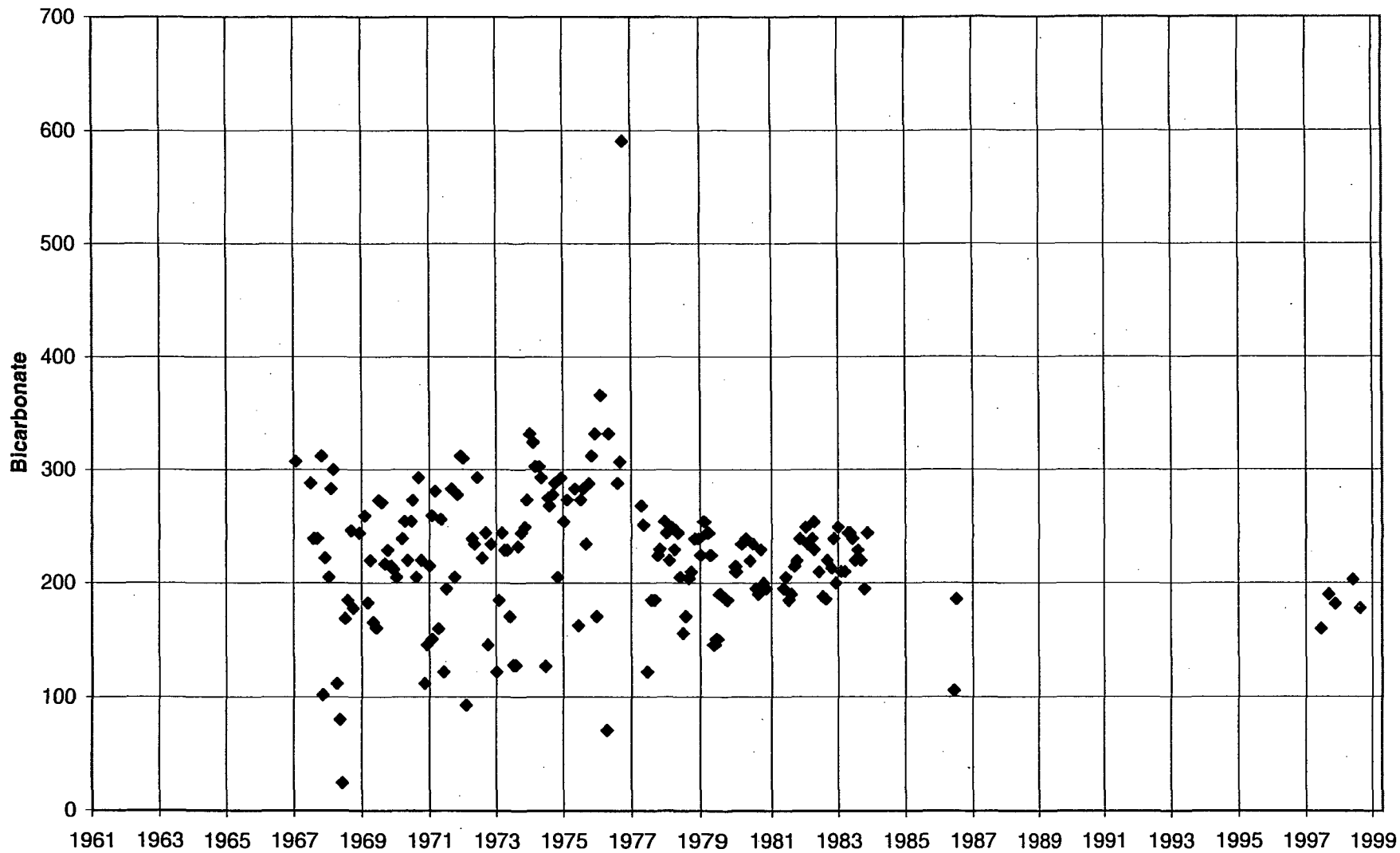
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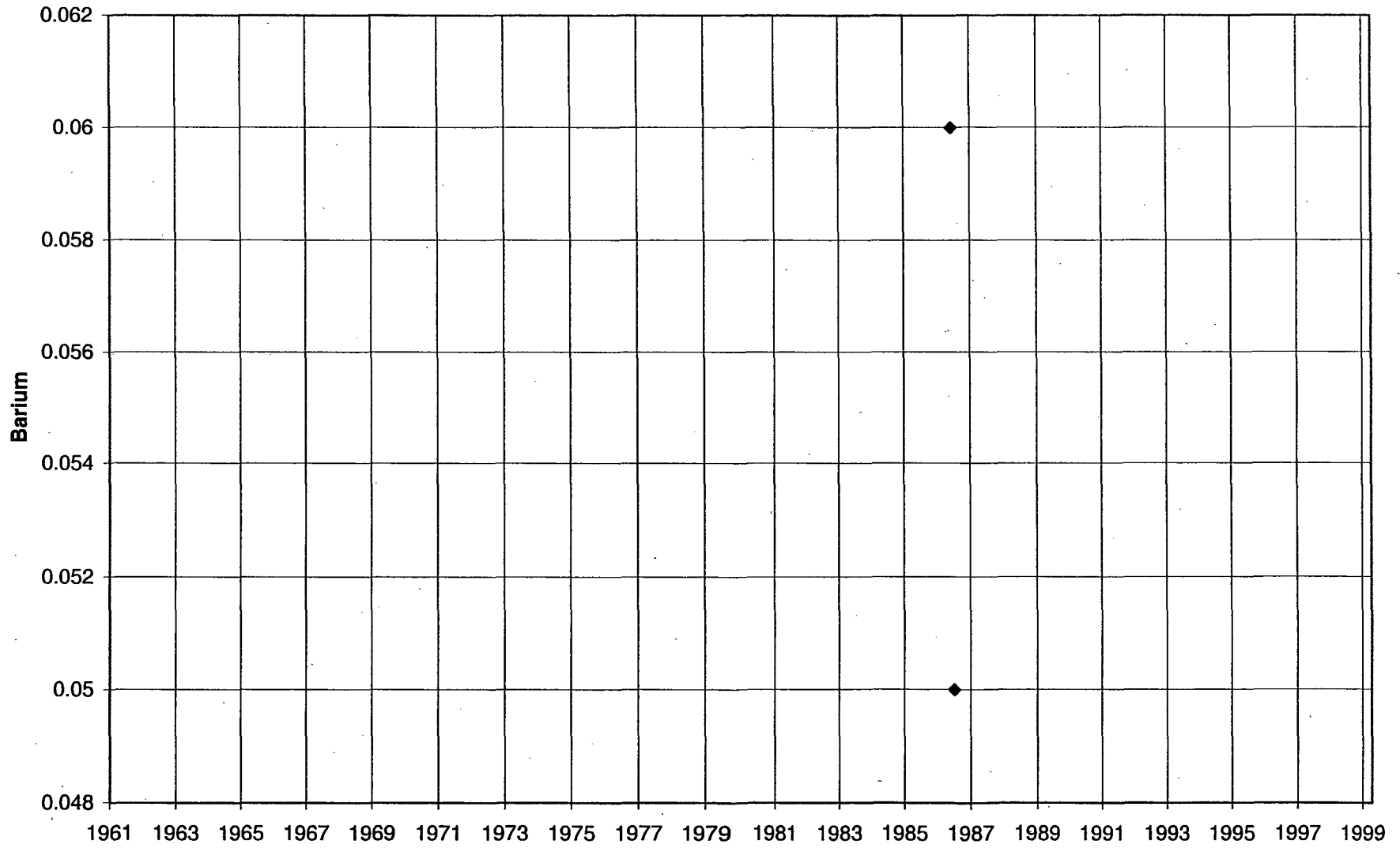
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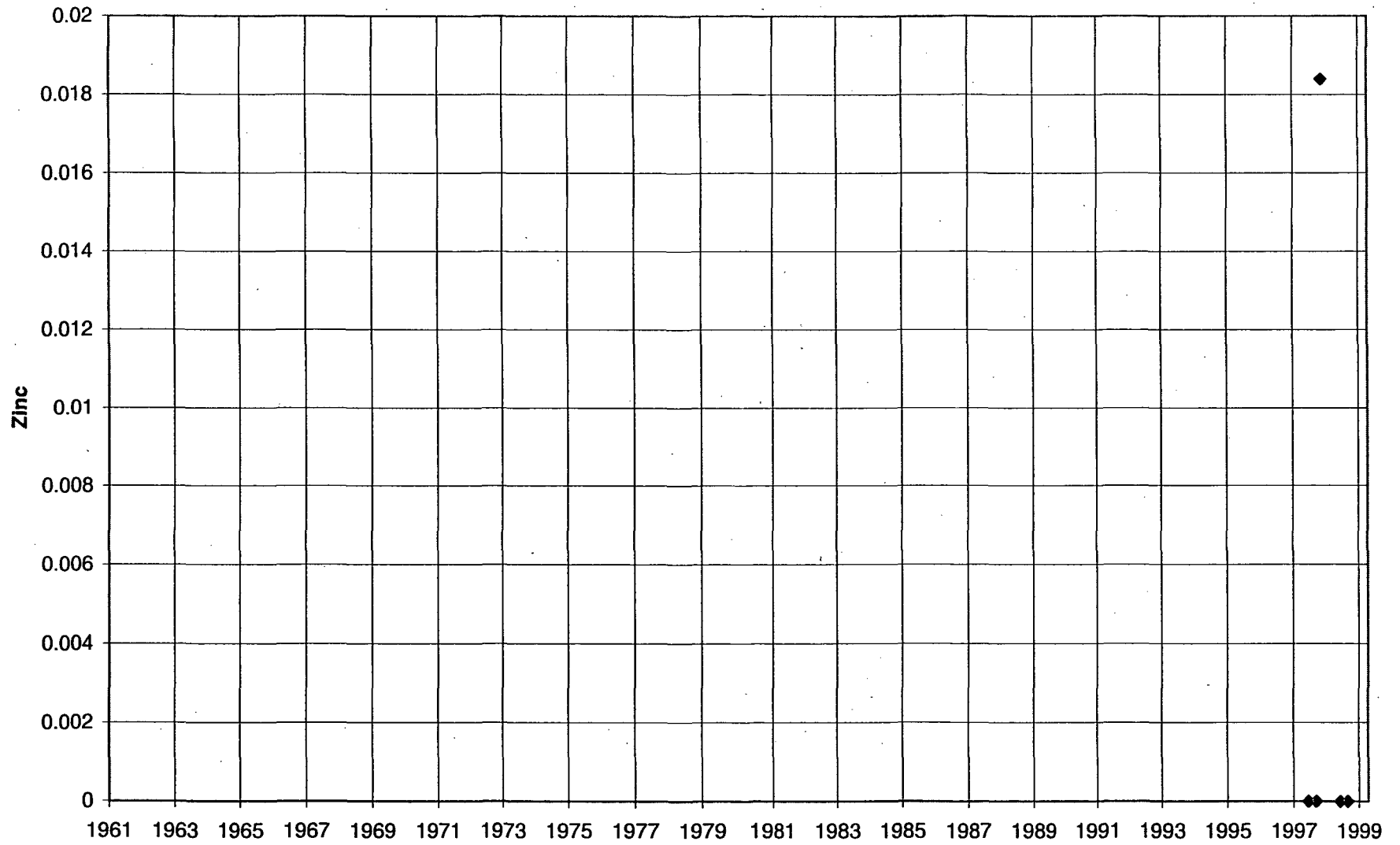


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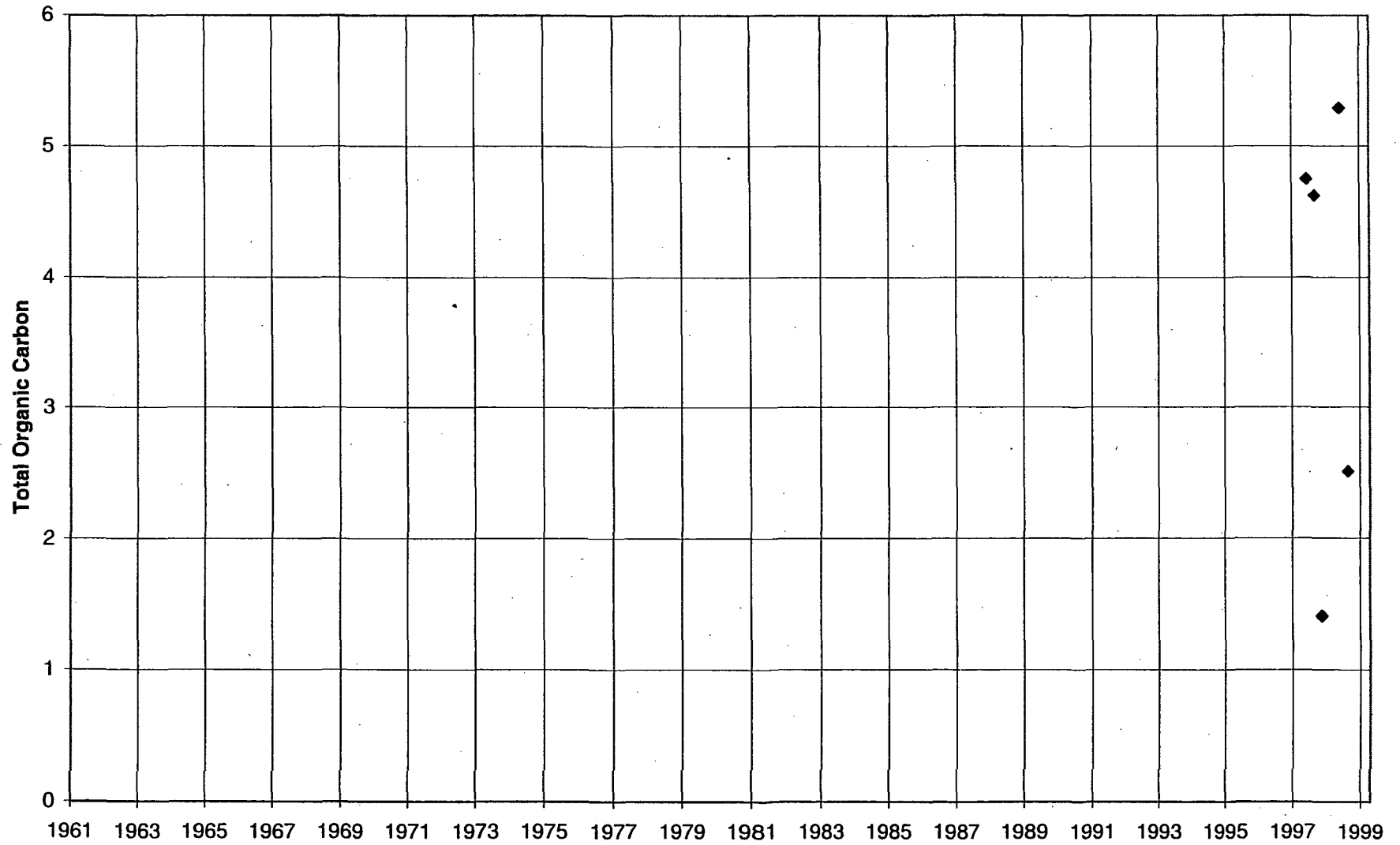




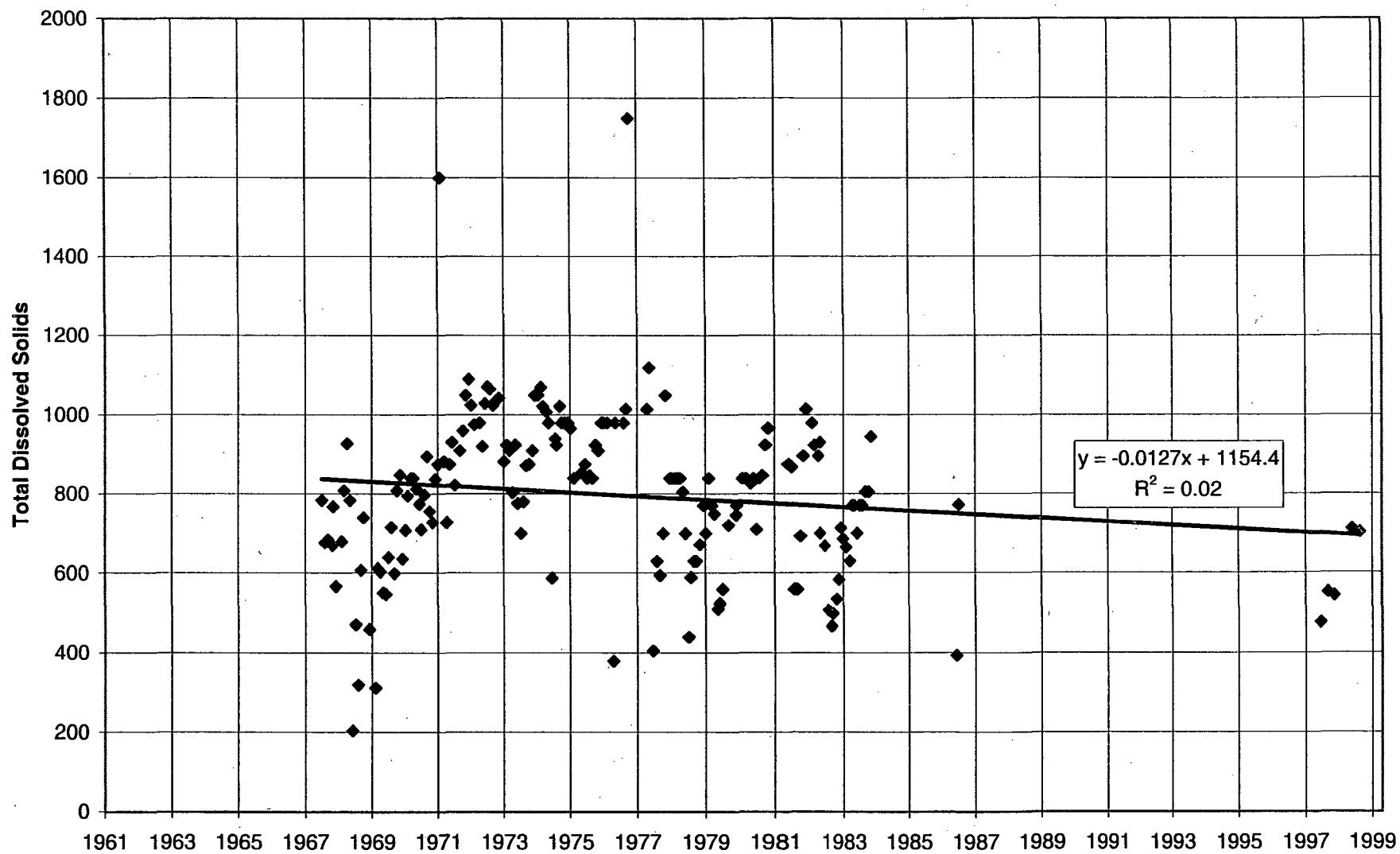
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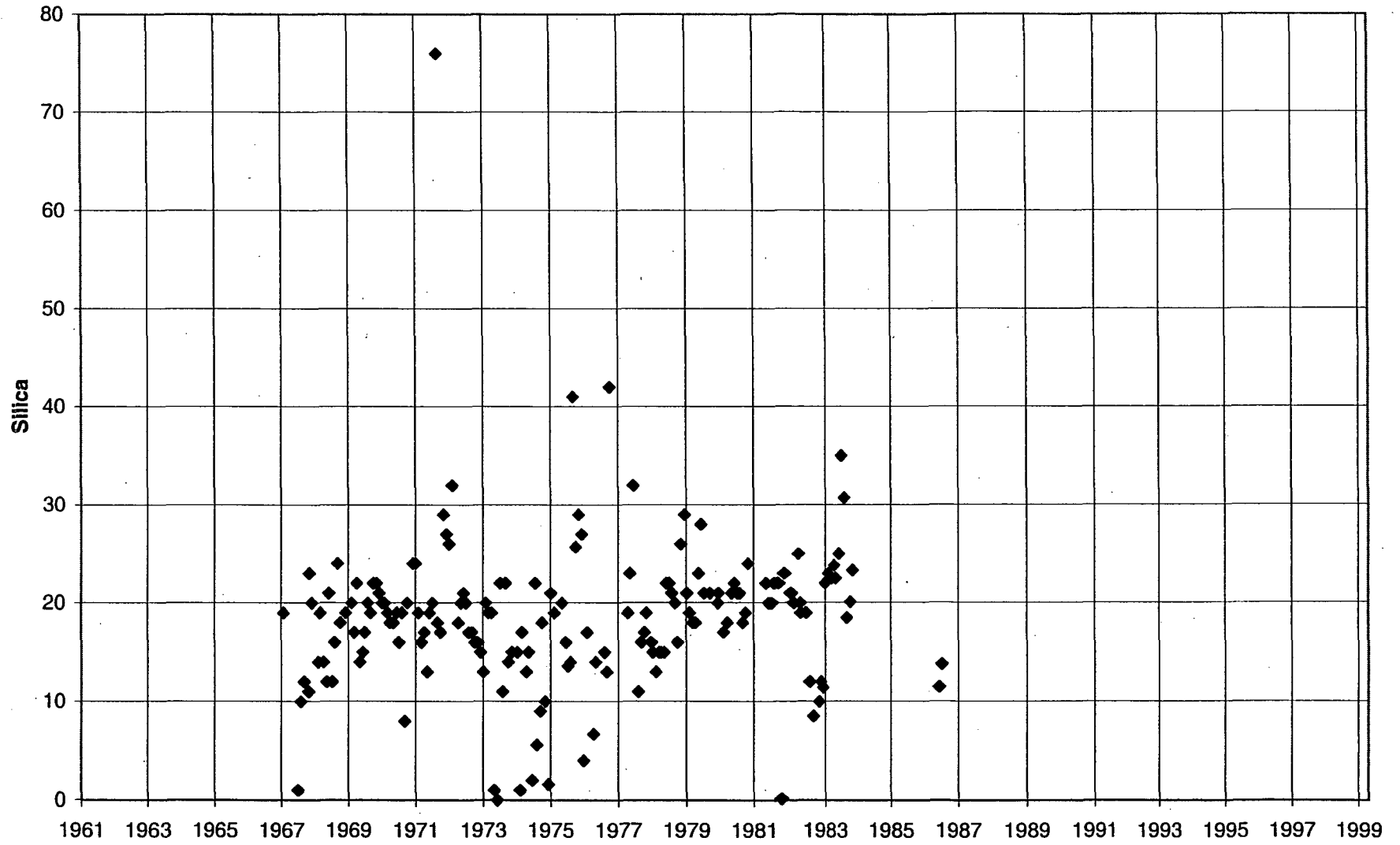
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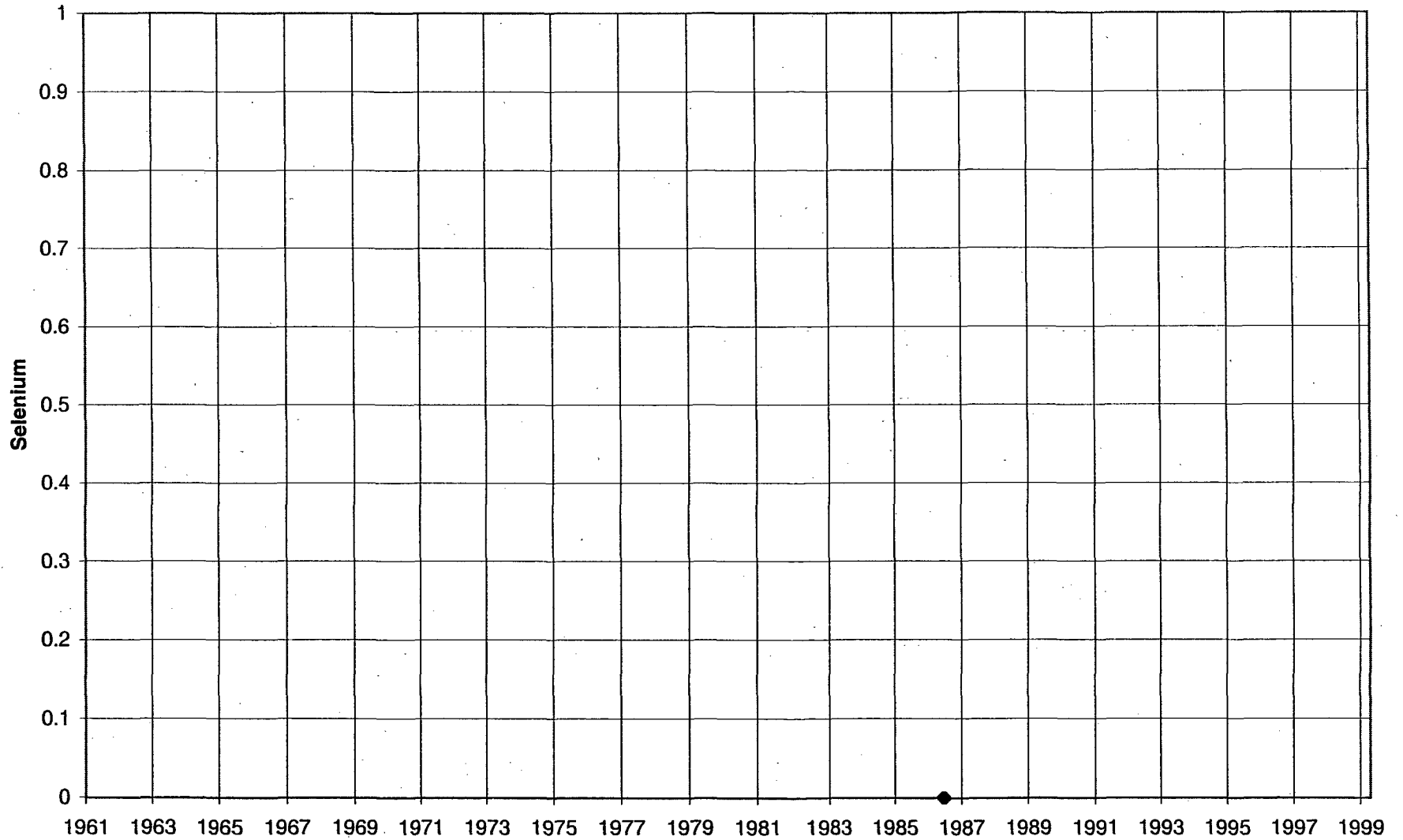
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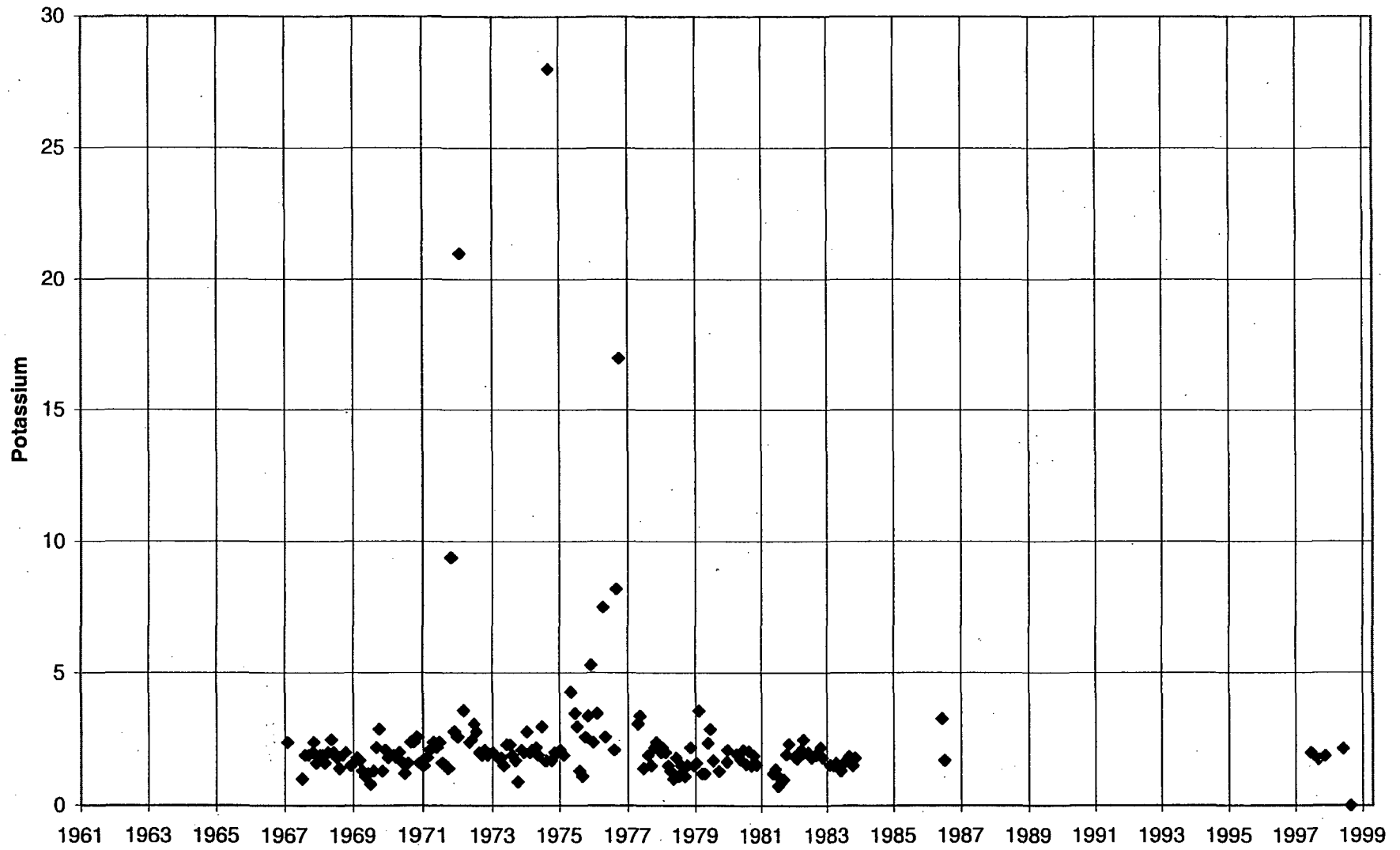
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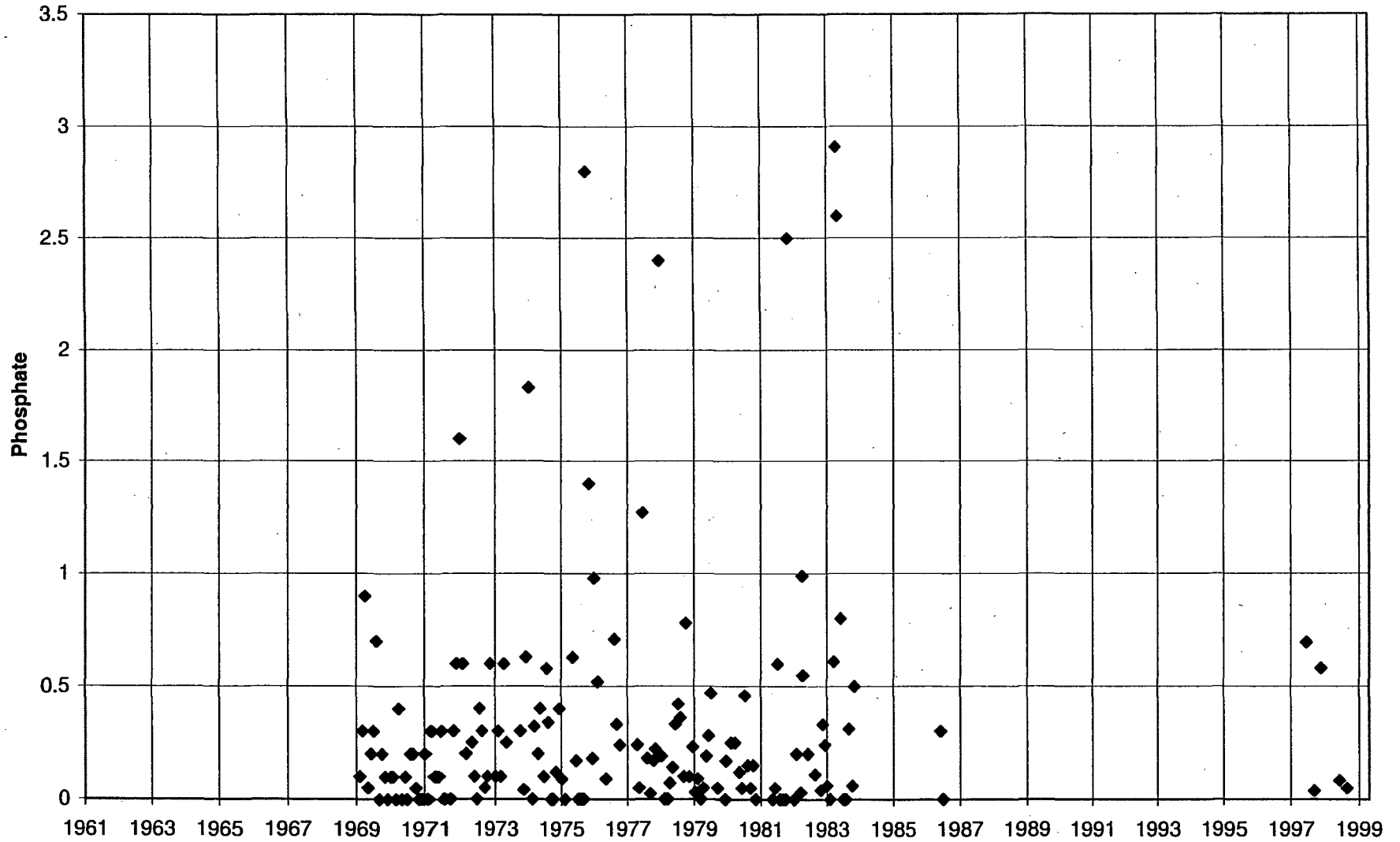
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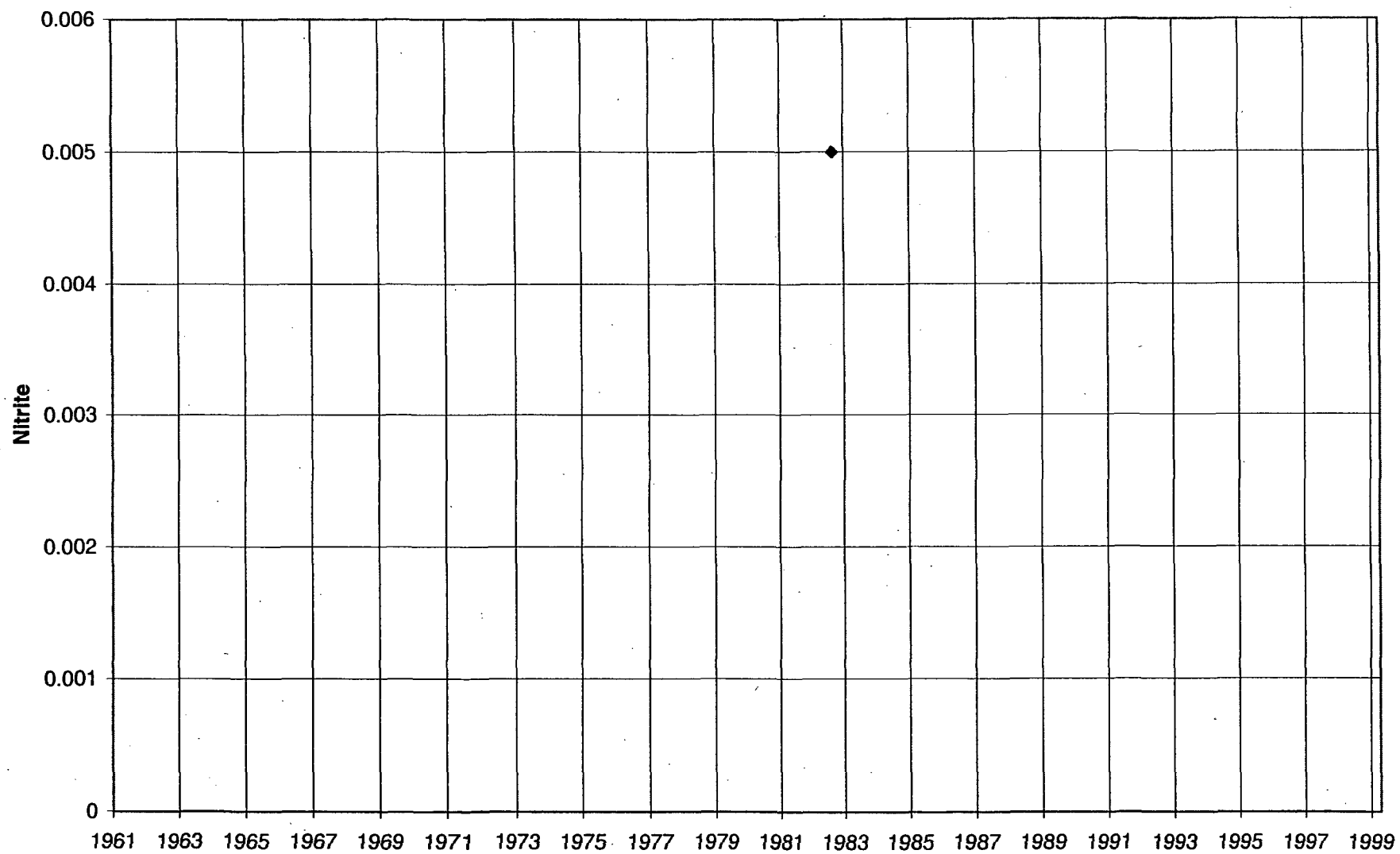
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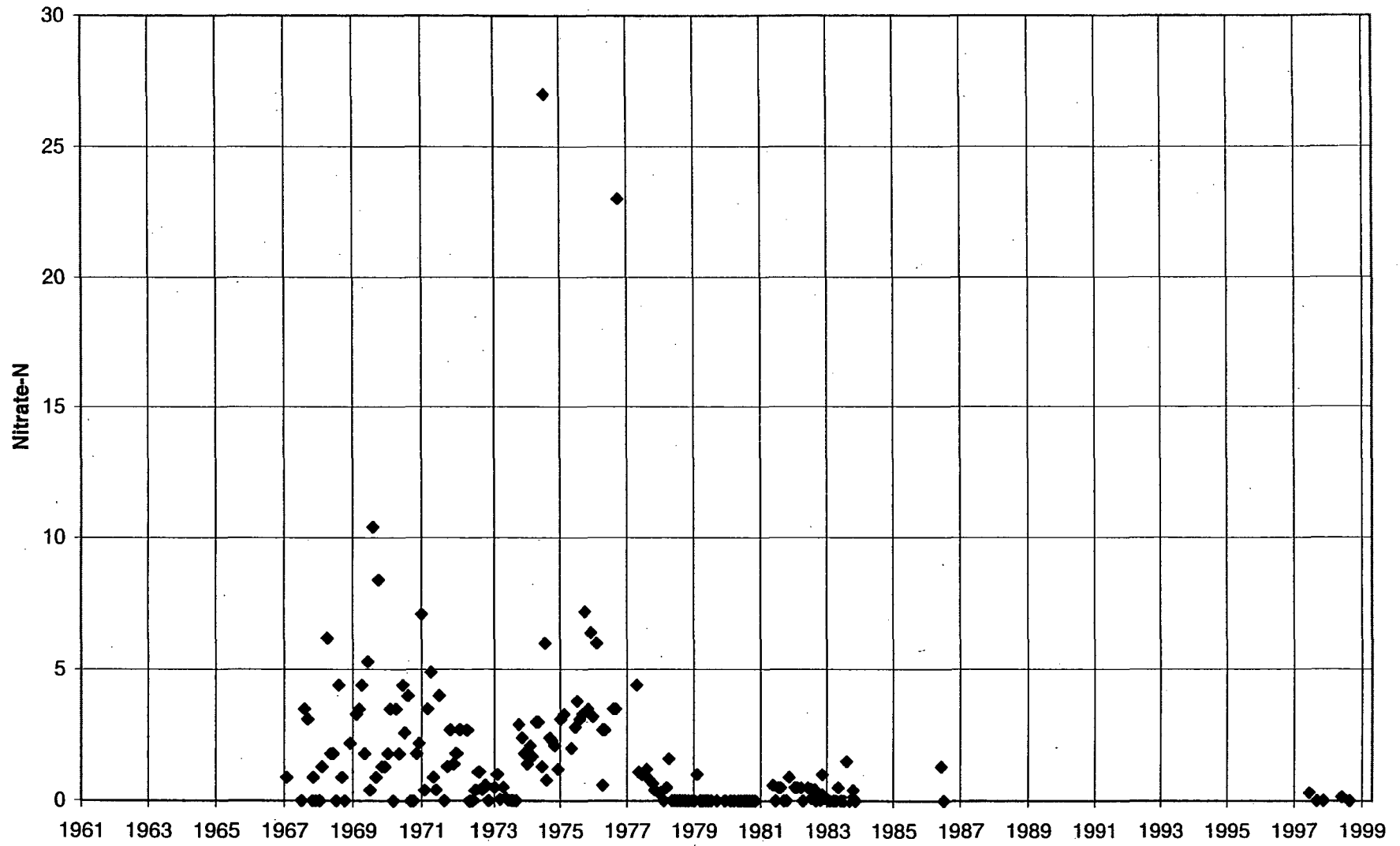


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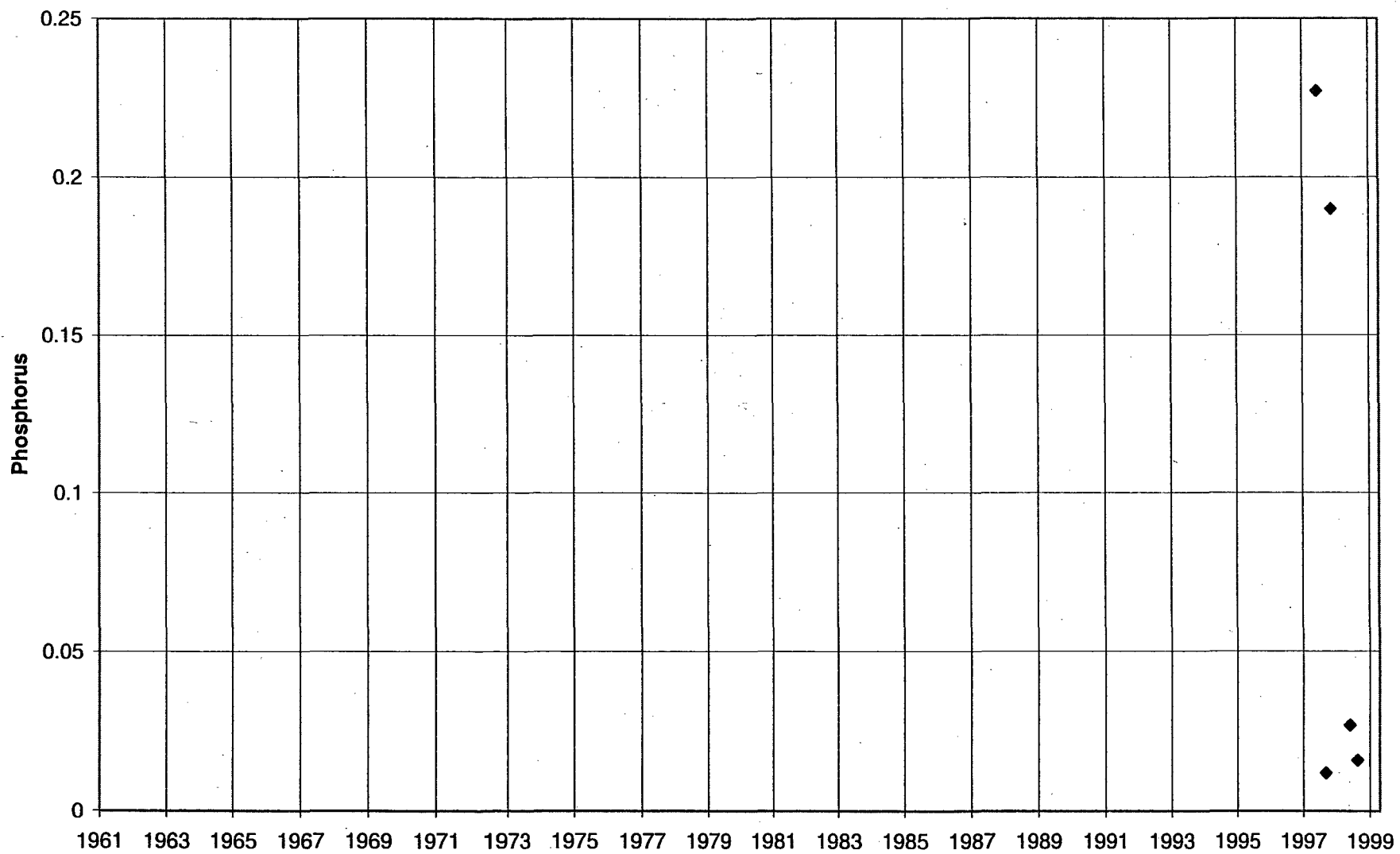




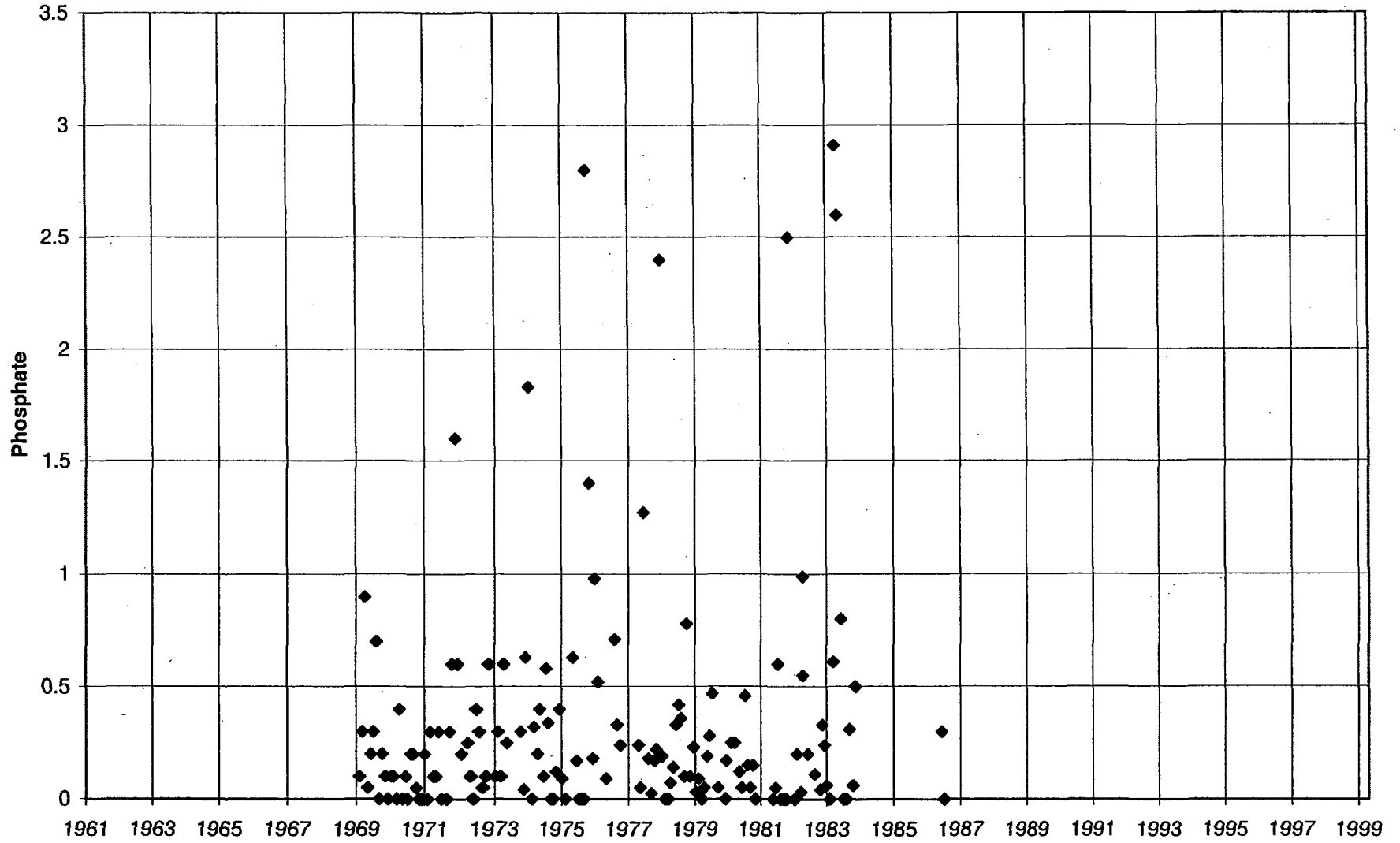
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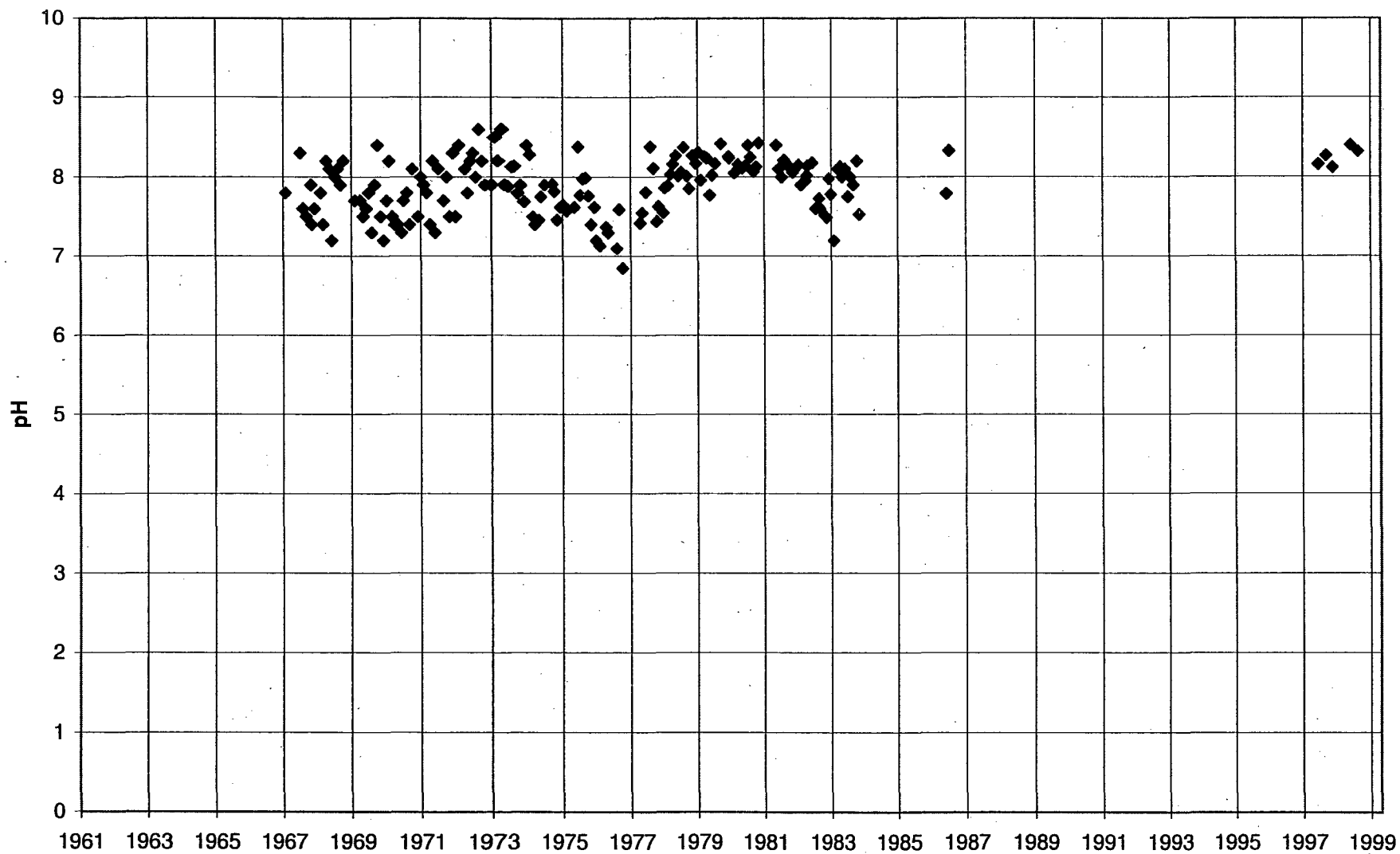
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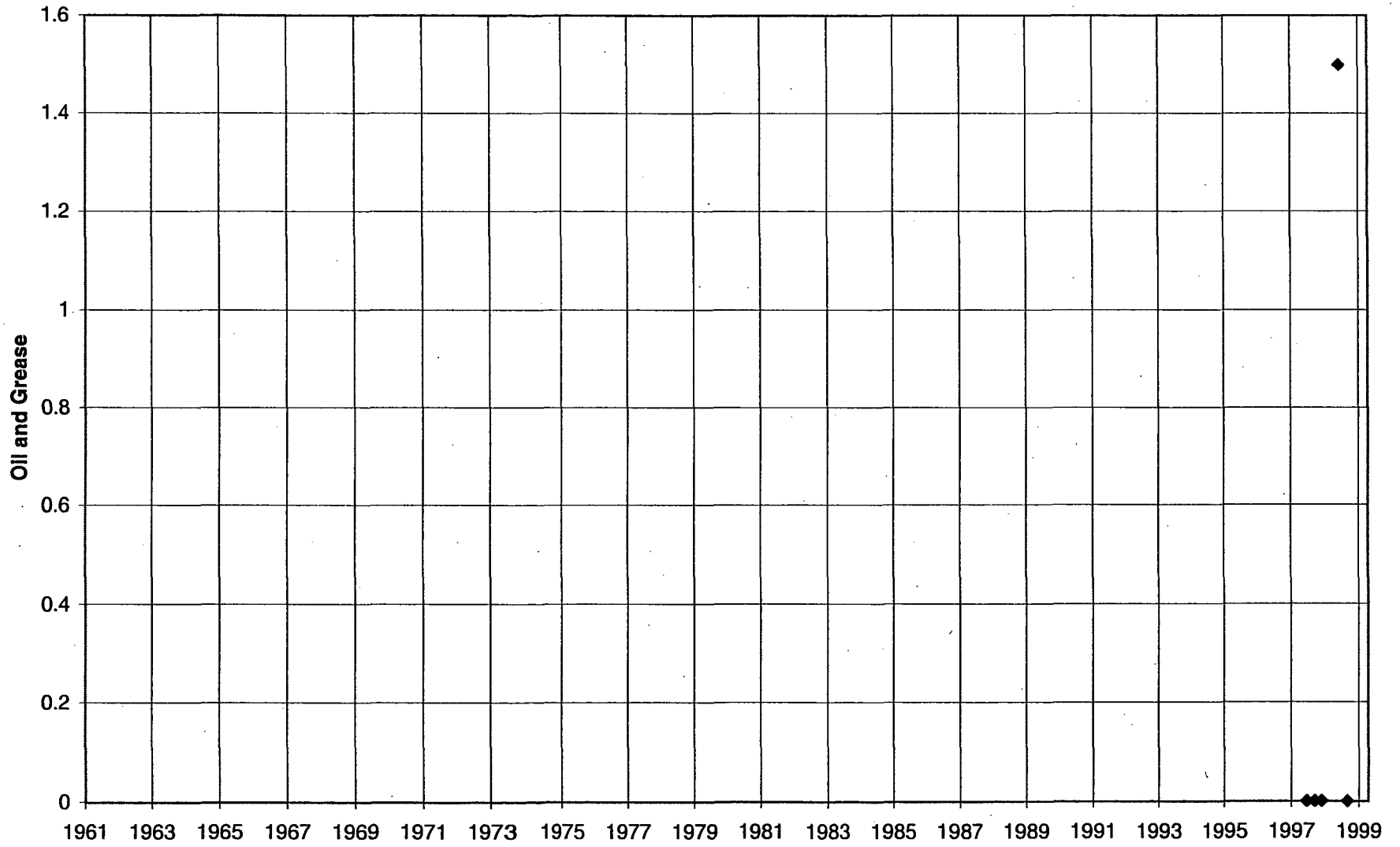
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