

# UNC TETON EXPLORATION DRILLING, INC.



Subsidiary of United Nuclear Corporation  
A UNC RESOURCES Company

P.O. Drawer A-1  
Casper, Wyoming 82602

Telephone 307-265-4102

RE: Research and Development License - 2RD  
Source Material License No. SUA - 1373  
Docket No. 40 - 8693

## 1. Operational Summary

### 1.1 Mining

On January 22, 1980, Teton-Nedco began circulating water from the wellfield through the processing plant and back to the wellfield. This allowed for the filling of the proper process tanks, calibration of meters, detection of leaks, and proper directional flow of the wellfields. Both recovery pumps were adjusted to 40 gpm with flows to injection wells equally split.

On January 31, CO<sub>2</sub> injection began in each wellfield to lower the pH of the aquifer in each wellfield.

Injection of H<sub>2</sub>O<sub>2</sub> was initiated February 19, at a target concentration of 0.5 g/l. U<sub>3</sub>O<sub>8</sub> grade response was noted a few days later. H<sub>2</sub>O<sub>2</sub> is our primary oxidant.

Sodium carbonate - bicarbonate injection was initiated on March 13, at a target concentration of 1.0 g/l. U<sub>3</sub>O<sub>8</sub> grade response was noted shortly afterwards.

### 1.2 Processing

During the month of January, the process area was still under construction, with plumbing and wiring being installed. At this time, the support facilities were also under construction.

Chloride control operations were begun on February 8 to prepare the Ion Exchange units for introduction of feed solution. Feed solution was introduced to Ion exchange column "A" on February 22.

Ion exchange column "A" was taken off line on March 17 for elution with the extraction flow diverted to Ion exchange column "B." "B" column was taken off line on March 26 for elution.

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POOR QUALITY PAGES

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The elution sequence time was greater than anticipated but the strip efficiency needs improvement.

The first batch was precipitated on March 18, by adding hydrochloric acid and hydrogen peroxide and allowing time for settling. Approximately 170 pounds of  $U_3O_8$  was precipitated and put into drums. The low-pregnant solution was transferred to the precipitate tank on March 20 and another two drums of product were filled.

At this time, the processing circuit is being evaluated and improvements are being considered.

### 1.3 Well Fields

Flow balance within the N and M Well Fields are listed on the following pages. Figure 1 shows the location of all wells within the R & D License Area. The total volume of fluid injected for M well field area as of the end of March is  $3.33 \times 10^6$  gals. and the total volume recovered is  $3.39 \times 10^6$  gals. showing a 2% overrecovery. The total volume of fluid injected into the N well field area for the same time period is  $3.49 \times 10^6$  gals., and the total volume recovery is  $3.56 \times 10^6$  gals. representing a 2% overrecovery.

1.3 DAILY WELL FIELD FLOW

DATE	GALLONS PER DAY					
	January	M injection	M recovery	M-BLEED	N injection	N recovery
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23	51701	52993	1292	55920	57801	1881
24	48551	50531	1980	55438	56527	1089
25	49724	51827	2103	55806	56779	973
26	54306	55750	1444	60281	62226	1945
27	50715	51604	889	55715	57749	2034
28	50670	52081	1411	55545	57030	1485
29	51373	52337	964	56414	58524	2110
30	50657	52111	1454	56013	58474	2461
31	50657	50177	1990	54862	56767	1905
Total	155884	46741	13527	505994	52387	15883

1.3 DAILY WELL FIELD FLOW

DATE	GALLONS PER DAY						
	February	M injection	M recovery	M bleed	N injection	N recovery	N bleed
1		49550	50980	1430	55060	56870	1810
2		51450	52700	1250	55930	57490	1560
3		51030	52770	1740	54240	56230	1990
4		52580	53780	1200	52830	53310	480
5		53050	53090	40	55220	57170	1950
6		50950	51960	1010	53980	56020	2040
7							
8		50100	51450	1350	55900	57910	2010
9		49830	51430	1600	55260	57700	2440
10		49510	51730	1920	56200	57840	1640
11		50010	51500	1490	55480	57450	1770
12		50920	51630	710	55510	59020	2510
13		52970	54460	1490	55030	57930	1900
14							
15							
16							
17							
18		54230	55260	1030	56240	57490	1250
19		53740	55080	1340	56020	57560	1540
20							
21							
22							
23							
24							
25		54820	55540	720	55560	56490	930
26							
27							
28							
29							
30							
31							
Total		1547520	1500550	33030	1610420	1653780	43360

### 1.3 DAILY WELL FIELD FLOW

DATE	GALLONS PER DAY						
	March	M injection	M recovery	M bleed	N injection	N recovery	N bleed
1							
2							
3							
4				74128			
5							
6							
7							
8							
9							
10				11707	62870	1200	
11							
12							
13							
14							
15							
16							
17				8477	66212	1338	
18							
19							
20							
21							
22							
23							
24		54285		52034		541	
25							
26							
27							
28							
29							
30							
31		52329	53500	1101	56723	59560	1767
Total		132014	53500	8570	124070	135270	10690

#### 1.4 Waste Generation Volumes

The total volume of liquid waste effluent discharged to the evaporation ponds during the reporting period is tabulated below:

Date	Volume (gallons)
1-22 thru 1-31-80	26072
2-1 thru 2-29-80	80950
3-1 thru 3-25-80	136174

#### 1.5 Solar Evaporation Pond Leak Detection System

As required by the referenced licenses, the standpipes of the pond detection system are being monitored for fluid every two weeks. Fluid was detected in the standpipe for the south pond as early as November 20, 1979 which was prior to any waste effluent discharge to the ponds. Fluid was detected in the standpipe for the south pond on March 6, and a sample was collected. In the event of pond leakage the standpipe for the leak detection systems should contain water in excess of 2 feet above the bottom of the standpipe. However, if the water level in the standpipe is above 0.5 feet, sufficient water is available to collect a sample. As such a sample was collected from the south pond leak detection standpipe on 6 March, 1980. The analytical results for this sample are included in Section 1.5.3. By comparing the water quality results from samples collected from water within the ponds (Section 1.5.2.) with the 6 March analyses from the south pond leak detection standpipe (Section 1.5.3.) it appears that the small quantity of water within the standpipe is derived from rain water infiltration due to repeated freezing and thawing of the ground surface. Water sampled from the south pond leak detection system does not exceed drinking water standards.

##### 1.5.1 Standpipe Fluid Levels

###### Standpipe Fluid Levels (in feet)

Date	South Pond	North Pond
11-20-79	0.18	0
12-04-79	0.34	0
1-30-80	0.25	0
2-21-80	0.08	0
3-06-80	0.55	0.12
3-14-80	0.30	0.20
4- 3-80	0.40	0.20

1.5.2 SOLUTIONS CONTAINED IN SOLAR EVAPORATION PONDS

Date	SOUTH POND			NORTH POND			
	3/7/80	3/21/80	4/3/80	4/3/80			
Calcium (ppm)	69	2	7	38			
Chloride (ppm)	30	196	344	236			
Alkalinity (as ppm CaCO <sub>3</sub> )	150	1573	1456	114			
Sodium (ppm)	70	920	104	176			
Sulfate (ppm)	260	155	150	85			
Selenium (ppm)	.044	<.005	.009	.006			
Arsenic (ppm)	.009	<.005	.007	.007			
Total Dissolved Solids (ppm)	184	1344	2410	610			
Radium (ppm)							
Gross Alpha							
Gross Beta							

Radium-226, gross Alpha and gross Beta are being analyzed by an independent chemistry laboratory and as of April 9, the results are not available.

## 1.5.3- SOUTH POND LEAK DETECTION SYSTEM

Date	3/7/80						
Calcium (ppm)	36						
Chloride (ppm)	36						
Alkalinity (as ppm CaCO <sub>3</sub> )	243						
Sodium (ppm)	82						
Sulfate (ppm)	100						
Selenium (ppm)	<.005						
Arsenic (ppm)	<.005						
Total Dissolved Solids (ppm)	380						
Radium (ppm)							
Gross Alpha							
Gross Beta							

Radium-226, gross Alpha and gross Beta are being analyzed by an independent chemistry laboratory and as of April 9, the results are not available.



## 2. Lixiviant Migration Control

Lixiviant migration is mainly controlled by the use of a pressure gradient causing the lixiviant to flow from an area of high pressure at the injection wells to an area of low pressure at the recovery wells. By referring to 1.3 Daily Wellfield Flow, it is evident that the flow out of the recovery wells is greater than the flow into the injection wells. This is called overrecovery. Teton-Nedco is overrecovering by approximately 2%. This is enough to develop a cone of depression and cause a flow from outside the monitor well rings into the well field areas.

## 3. Private, Domestic Water Wells

All the private wells within 0.5 miles of the Teton-Nedco property were sampled and analyzed for all parameters listed in Table II, 6.05 of the Environmental Report and Research and Development Application, on November 7, 1979. The results are listed in Appendix A. Radium-226 is being analyzed by an independent chemistry laboratory and as of April 1, the results are not available.

## 4. Preoperational Monitor Well Water Analysis

As required by stipulation 15 of the NRC license, at least 15 wells in the locations shown in Figure III. 5.1.01 of the environmental report have been sampled for all the parameters listed in Table II.6.05 of the environmental report. These wells were sampled between January 10 and 17 of 1980 which was prior to the injection of leach solution. The results are listed in Appendix B.

## 5. Monitor Well Water Analysis

As required by the referenced license, the monitor wells are sampled every two weeks and analyzed for specific conductance, chloride, alkalinity, sodium, sulfate, and uranium. The results for these wells during the reporting period are listed in Appendix C.

### 5.1 Excursions

During the reporting period, only one monitor well exceeded its upper control limits on more than one parameter. During the week of February 4, PN5-L-309 exceeded its upper control limits on specific conductivity, sulfate, and alkalinity. However, on

sequent sampling dates the water quality parameters in question declined below their upper control limits and have remained there. All other monitor wells have shown acceptable water analysis results. No excursions have been detected during the reporting period.

## 6. Hydrological Monitoring of Monitor Wells

The potentiometric levels of all monitor wells within the well ring have been monitored as required by the referenced licenses. The results of this monitoring during the reporting period are listed in Appendix D.

### 6.1 Confinement of Aquifers

Static water levels listed in Appendix D suggest that the aquifers exhibit a high degree of confinement.

By observing overall aquifer trends, it is evident that activities that influence water levels in one aquifer have very little, if any, influence in adjacent aquifers. If an injection well increases in wellhead pressure and restricts injection flow, then it is taken off line and redeveloped. N-I-4 was redeveloped on February 5 and caused a decrease in water levels in all "N" aquifer monitor wells on February 5 or 6. However, on these dates "M" aquifer wells exhibited no decrease in water levels. The wells in the Idaho aquifer showed no discernable change. When M-I-4 was redeveloped by pumping on February 12, wells in the adjacent aquifers showed no response.

Fluctuations of water levels in the N and M aquifers are dependent upon small changes in injection and recovery rates within the respective aquifers and not upon the small permeabilities of the confining layers.

## 7. Radiation Safety

Preoperational radiation monitoring was made difficult by the late arrival of certain monitoring equipment from Eberline Instrument Corporation. Early operational data was compiled and used to substitute for or augment preoperational data. The radiological monitoring program is being performed as outlined in the Environmental Report and stipulation 30 of the

NRC License. Sampling points are those indicated in Figure III.2.1.01 of the Environmental Report and the Research and Development License application.

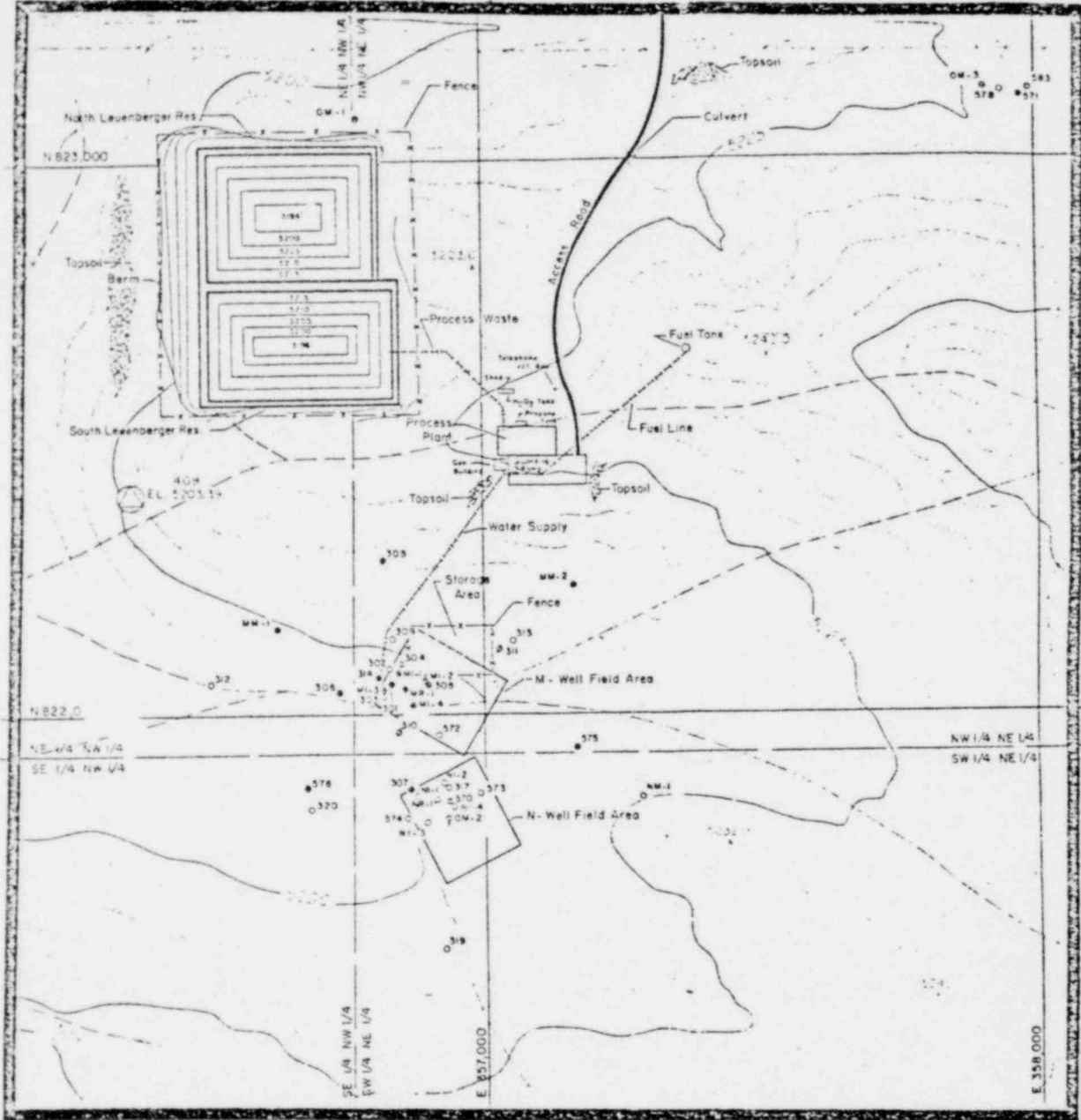
Radon-222 was sampled on February 22 with an average radiation level of 5.09 pCi/l. The base of the high pregnant and precipitation tank had the lowest level of 1.98 pCi/l, and the base of the Ion exchange column was the highest with 10.58 pCi/l. On March 31, Radon was again sampled with an average level of 11.81 pCi/l. The lowest level was the base of the recovery tank with 2.93 pCi/l, and the highest was in the sump with a radiation level of 41.01 pCi/l.

Alpha radiation was monitored on February 18 with an average of 0.02 working levels. The range of Alpha radiation was from 0.0034 to 0.04 working levels. No sample point in the non-processing area was higher than 0.0061 working levels. Alpha was again monitored on March 25, with an average of 0.07 working levels. The range was from 0.002 working levels at the sump grate to 0.33 working levels at the base of the Ion exchange columns.

Beta and Gamma radiation has been monitored several times from February 13 to March 31. Radiation levels have not exceeded 0.728 mrem/hour in the process area and 0.026 mrem/hour in the non-processing area for these two particles.

Airborne particulate sampling is in progress and the sample filters will be sent to an independent chemical analysis laboratory for analysis of natural uranium, Thorium-230 and Radium-226.

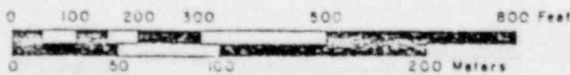
Figure 1. Site Facility Layout



T34N., R.74W.  
Within Section 14

Research & Development  
License Area Boundary

Contour Intervals = 5'



• THE COORDINATES USED ARE AFTER  
THE WYOMING STATE COORDINATE SYSTEM

• ALL DRILL HOLE NUMBERS ARE  
PRECEDED BY A 'PN5-L' INDEX NUMBER.

**LEGEND**

- ⊕ Upper Idaho Aquifer Well
- ⊙ Lower Idaho Aquifer Well
- ⊕ Confining Layer Below Lower Idaho Aquifer Well
- N Aquifer Well
- ⊕ M Aquifer Well
- Basal Aquifer Well
- ⊕ Abandoned Well Sealed With Cement
- Pipe Line With Use Noted

APPENDIX A  
PRIVATE WATER WELLS  
PREMINING WATER ANALYSIS

WATER QUALITY DATA

(Chemical units in mg/l except as noted)

Well Number	Negley #1	Negley #2	Negley #3	Dover- aux	Highway Corner #1	Highway Corner #2	Dixler
Date Sampled	11/7/79	11/7/79	11/7/79	11/7/79	11/7/79	11/7/79	11/7/79
pH (Units)	7.80	7.52	7.40	7.48	7.41	7.34	7.36
Temperature (°C)							
Conductivity (umhos/cm)	1050	875	1125	900	890	870	1025
Ammonia (NH <sub>3</sub> as N)	.07	.05	.05	<.05	<.05	<.05	.13
Total NO <sub>2</sub> /NO <sub>3</sub> (as N)	3.98	1.01	.39	.63	.45	.51	10.50
Bicarbonate (HCO <sub>3</sub> )	346	262	262	254	233	256	244
Carbonate (CO <sub>3</sub> )	0	0	0	0	0	0	0
Calcium (Ca)	164	129	125	136	140	135	154
Chloride (Cl)	7.1	7.1	7.1	3.5	3.5	3.5	7.1
Iron (B)	0	0	.22	0	.05	0	0
Fluoride (F)	.37	.82	.82	.87	.92	.92	.43
Magnesium (Mg)	15	18	21	15	15	17	3
Potassium (K)	10.5	9.2	10.6	9.1	9.1	10.4	19.2
Sodium (Na)	42.5	36	35	35	32	38	38
Sulfate (SO <sub>4</sub> )	210	255	350	205	250	180	280
Aluminum (Al)	<.1	<.1	.1	<.1	<.1	<.1	.1
Arsenic (As)	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Barium (Ba)	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Cadmium (Cd)	<.005	<.005	<.005	.005	<.005	<.005	<.005
Chromium (Cr)	<.05	<.05	<.05	<.05	<.05	.06	<.05
Copper (Cu)	<.05	<.05	<.05	<.05	<.05	<.05	.08
Iron (Fe)	0	.95	.09	.06	.04	.21	.09
Lead (Pb)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Manganese (Mn)	.02	.03	.04	.08	.21	.19	.01
Mercury (Hg)	<.001	<.001	<.005	<.001	<.001	<.001	<.001
Molybdenum (Mo)	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Nickel (Ni)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Radium 226 (Ra) pCi/l	3.20	.97	1.37	.92	.95	1.09	.78
Selenium (Se)	<.005	<.005	.005	<.005	<.005	<.005	<.005
Thorium 230 (Th) pCi/l							
Uranium (U)	.16	0	.2	.04	.04	.06	.04
Vanadium (V)	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Zinc (Zn)	.70	.36	.03	.01	.15	.58	.03
TDS	692	534	500	574	638	610	708

WATER QUALITY DATA

(Chemical units in mg/l except as noted)

Well Number	Lucky Five #1	Lucky Five #2	KT-1	Hicker- son
Date Sampled	11/7/79	11/7/79	11/7/79	11/7/79
pH (Units)	7.38	7.55	7.41	7.60
Temperature (°C)				
Conductivity (umhos/cm)	875	875	860	850
Ammonia (NH <sub>3</sub> as N)	.09	.10	.07	.12
Total NO <sub>2</sub> /NO <sub>3</sub> (as N)	.40	.34	.51	.67
Bicarbonate (HCO <sub>3</sub> )	276	250	244	251
Carbonate (CO <sub>3</sub> )	0	0	0	0
Calcium (Ca)	144	141	138	126
Chloride (Cl)	3.5	3.5	3.5	7.1
Iron (B)	.20	.22	0	.10
Fluoride (F)	.95	.93	.93	.94
Magnesium (Mg)	12	10	12	8
Potassium (K)	13.2	9.4	8.8	8.5
Sodium (Na)	38	35	35	30
Sulfate (SO <sub>4</sub> )	240	230	235	210
Aluminum (Al)	.1	<.1	<.1	<.1
Arsenic (As)	<.005	<.005	<.005	<.005
Barium (Ba)	<.1	<.1	<.1	<.1
Cadmium (Cd)	<.005	<.005	<.005	<.005
Chromium (Cr)	<.05	<.05	<.05	<.05
Copper (Cu)	<.05	<.05	<.05	<.05
Iron (Fe)	.08	.18	.34	.04
Lead (Pb)	<.05	<.05	<.05	<.05
Manganese (Mn)	.30	.20	.31	.22
Mercury (Hg)	<.001	<.001	<.001	<.001
Molybdenum (Mo)	<.1	<.1	<.1	<.1
Nickel (Ni)	<.05	<.05	<.05	<.05
Radium 226 (Ra) pCi/l	1.01	2.29	3.69	1.04
Selenium (Se)	<.005	<.005	<.005	<.005
Thorium 230 (Th) pCi/l				
Uranium (U)	0	.04	0	.02
Vanadium (V)	<.5	<.5	<.5	<.5
Zinc (Zn)	.01	.10	.10	.01
TDS	670	580	564	602

APPENDIX B

MONITOR WELLS

WATER ANALYSIS



WATER QUALITY DATA

(Chemical units in mg/l except as noted)

Well Number	320	570	575	576	M-M-1	M-M-2	N-M-1
Date Sampled	1/10/80	1/17/80	1/17/80	1/15/80	1/11/80	1/17/80	1/12/80
pH (Units)	7.10	7.58	7.58	7.12	7.30	7.80	7.35
Temperature (°C)							
Conductivity (umhos/cm)	810	850	640	575	575	525	740
Ammonia (NH <sub>3</sub> as N)	<1	<1	<1	<1	<1	<1	<1
Total NO <sub>2</sub> /NO <sub>3</sub> (as N)	1.5	1.6	1.4	1.62	1.3	1.5	1.4
Bicarbonate (HCO <sub>3</sub> )	194	234	222	159	213	205	169
Carbonate (CO <sub>3</sub> )	0	0	0	0	0	0	0
Calcium (Ca)	126	152	94	88.5	91	86	125
Chloride (Cl)	4.2	6.6	8.4	4.4	1.8	6.6	0.2
Iron (B)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Fluoride (F)	.3	.4	.3	.4	.5	.4	.4
Magnesium (Mg)	6.6	1.4	7.6	0	0	0	6.1
Potassium (K)	9	10	11	8.5	7	87	8.7
Sodium (Na)	34	25	23	30	25	23	35
Sulfate (SO <sub>4</sub> )	205	270	80	65	100	50	210
Aluminum (Al)	<.1	<.1	<.1	.3	<.1	<.1	<.1
Arsenic (As)	.007	.007	.0145	.022	.034	.061	<.005
Barium (Ba)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Cadmium (Cd)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Chromium (Cr)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Copper (Cu)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Iron (Fe)	.66	.19	.13	.46	.10	<.05	.70
Lead (Pb)	.06	<.05	<.05	.05	<.05	<.05	<.05
Manganese (Mn)	<.05	.07	.06	.05	<.05	<.05	<.05
Mercury (Hg)	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Molybdenum (Mo)	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Nickel (Ni)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Radium 226 (Ra) pCi/l							
Selenium (Se)	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Thorium 230 (Th) pCi/l							
Uranium (U)	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Vanadium (V)	<.5	<.5	<.5	<.5	<.5	<.5	<.5
Zinc (Zn)	<.05	<.05	<.05	<.05	<.05	<.05	<.05
TDS	540	604	412	382	356	334	576





APPENDIX C

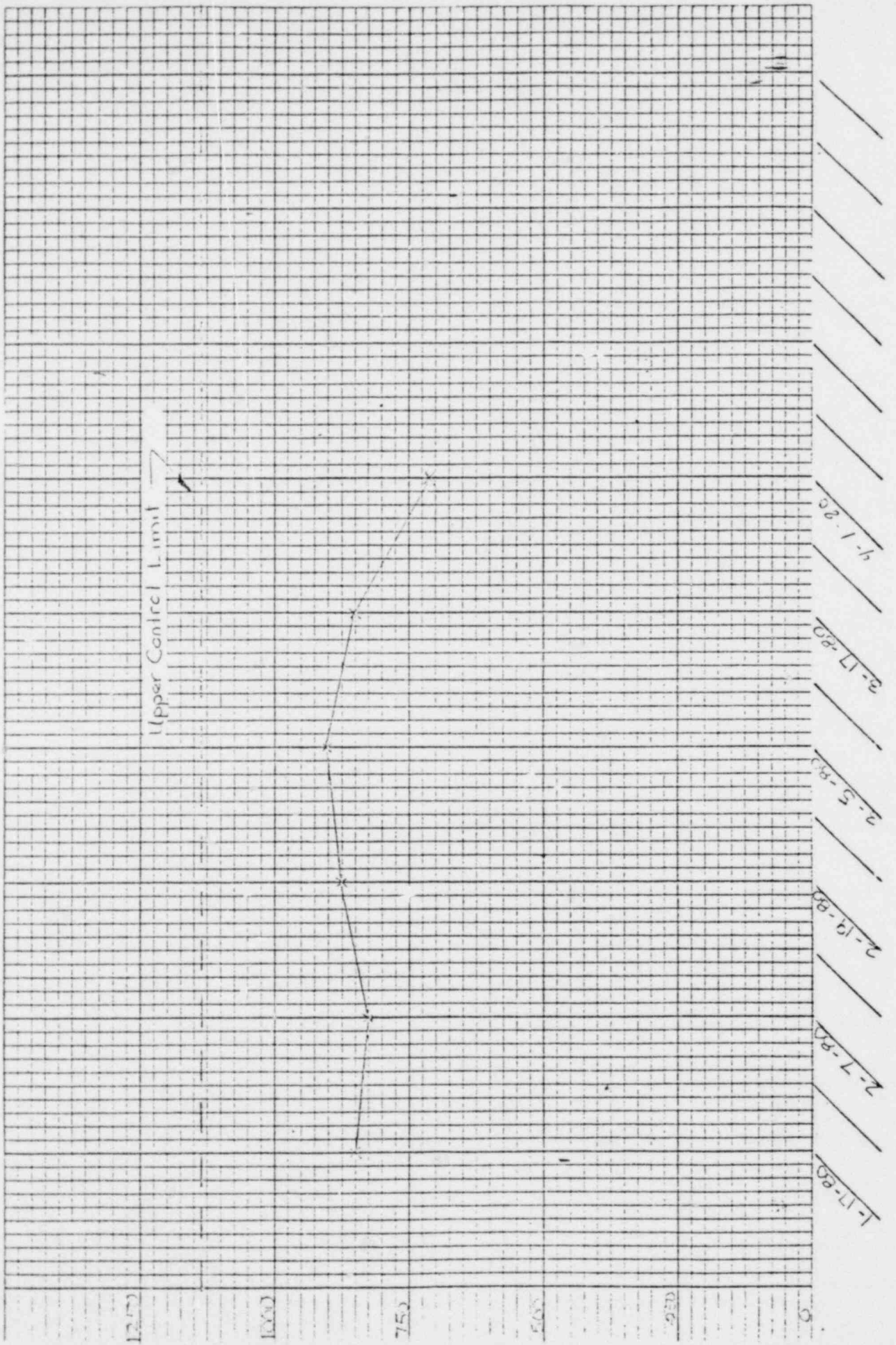
TETON-NEDCO MONITOR WELLS

BIWEEKLY WATER ANALYSIS



WELL NAME: \_\_\_\_\_

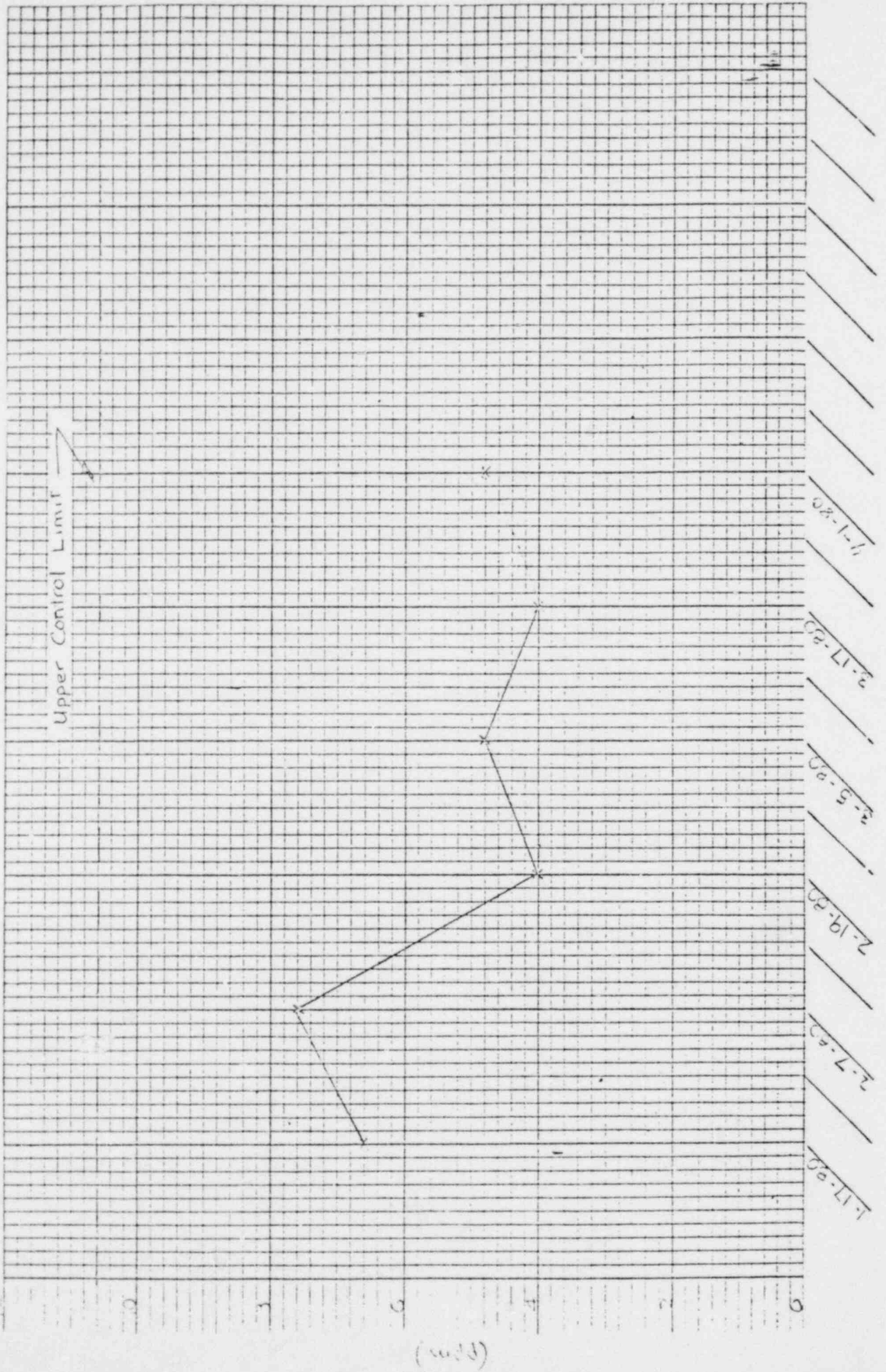
550



SAMPLE COLLECTION DATE

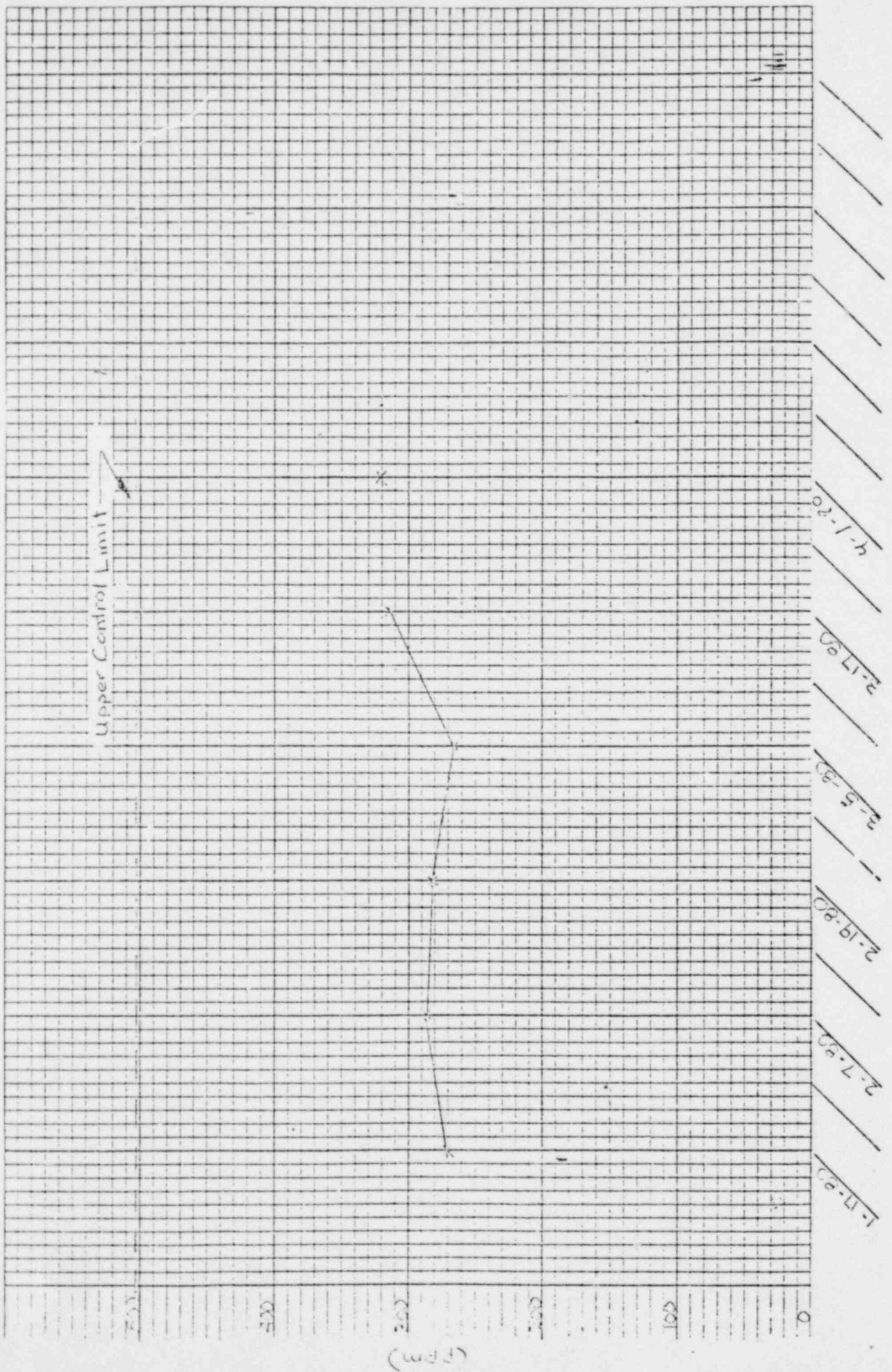
WELL NAME :

3570



SAMPLE COLLECTION DATE

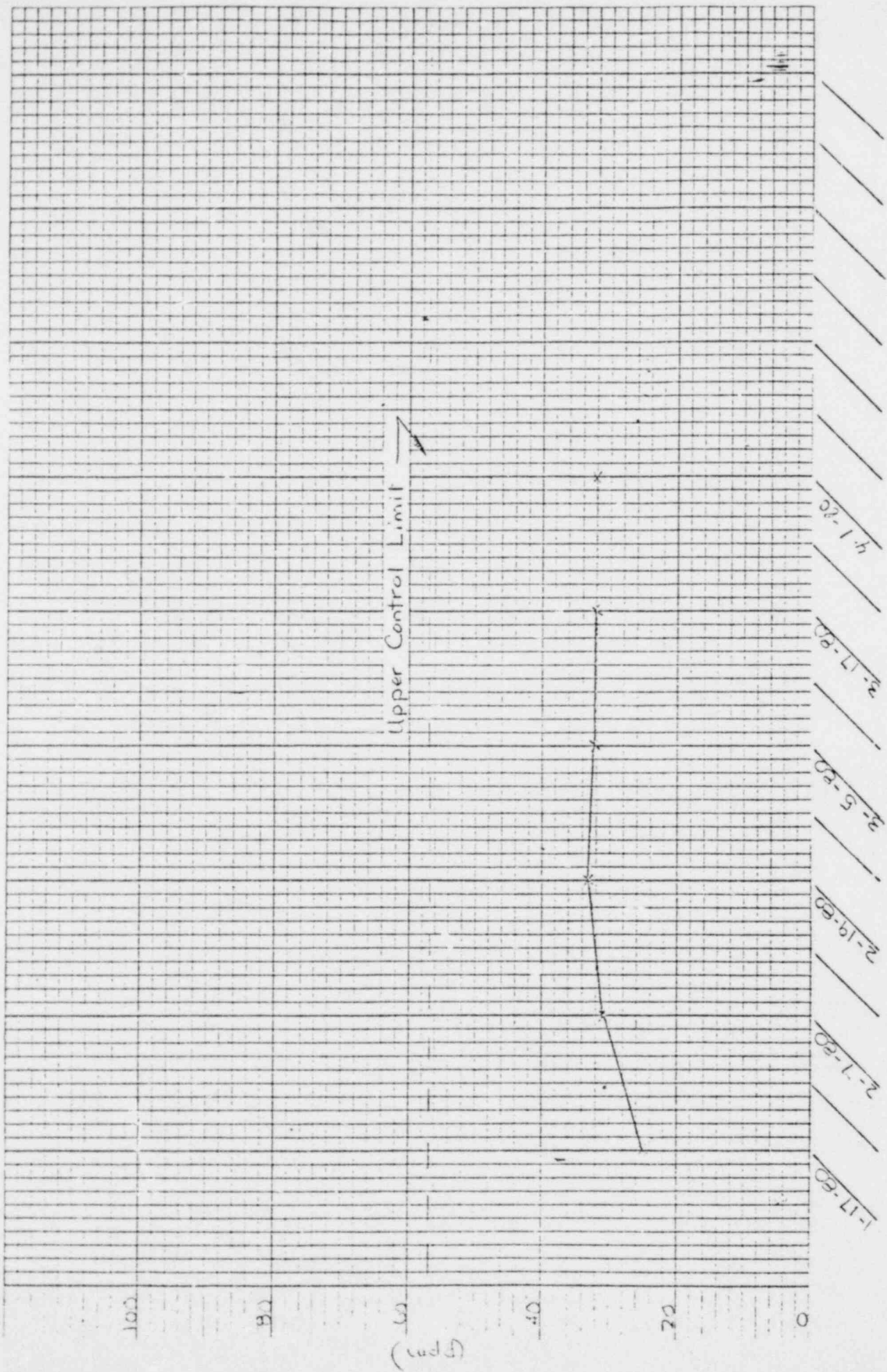
WELL NAME: \_\_\_\_\_ 5.50



SAMPLE COLLECTION DATE

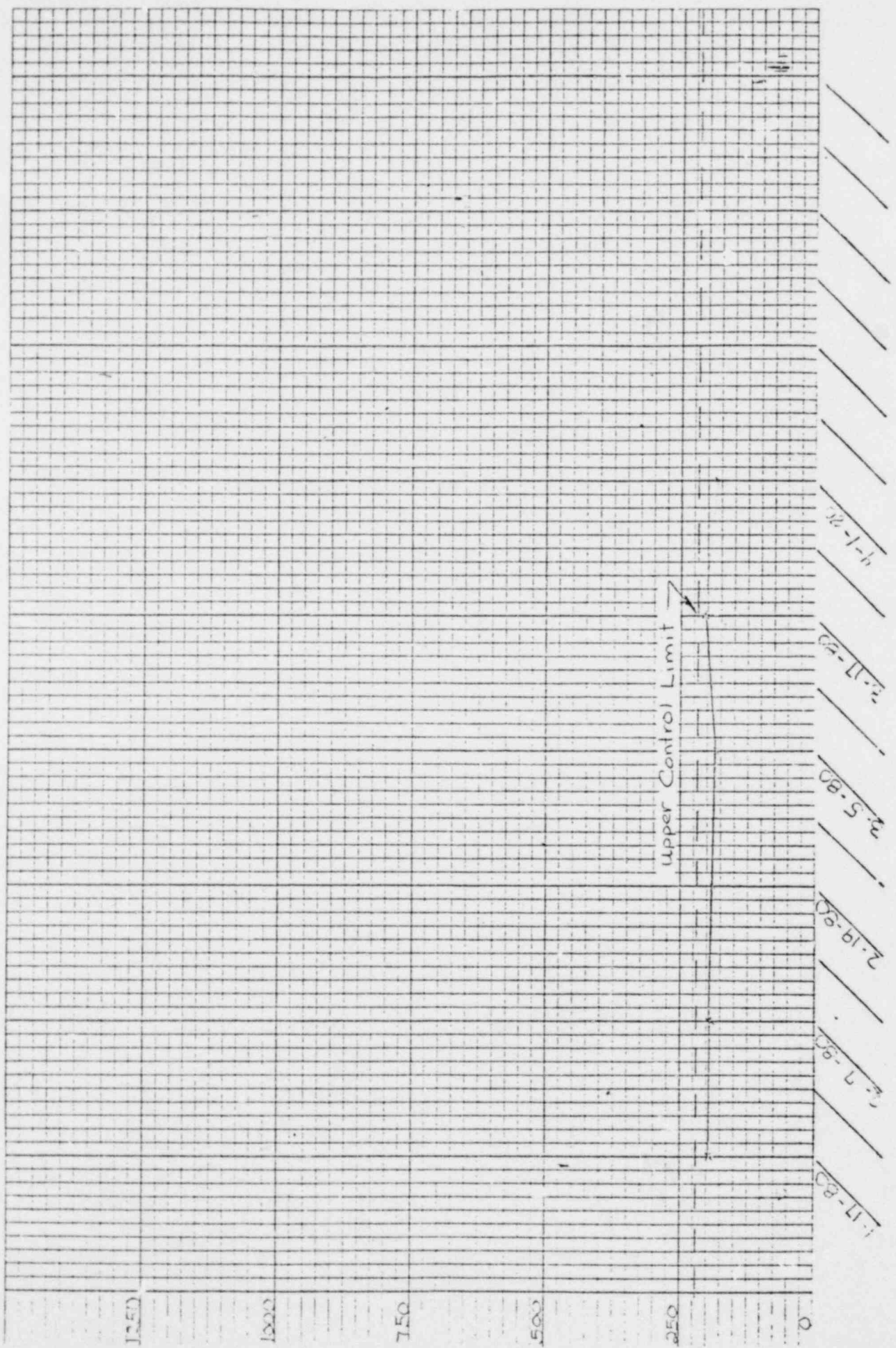


WELL NAME: 570



SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 570



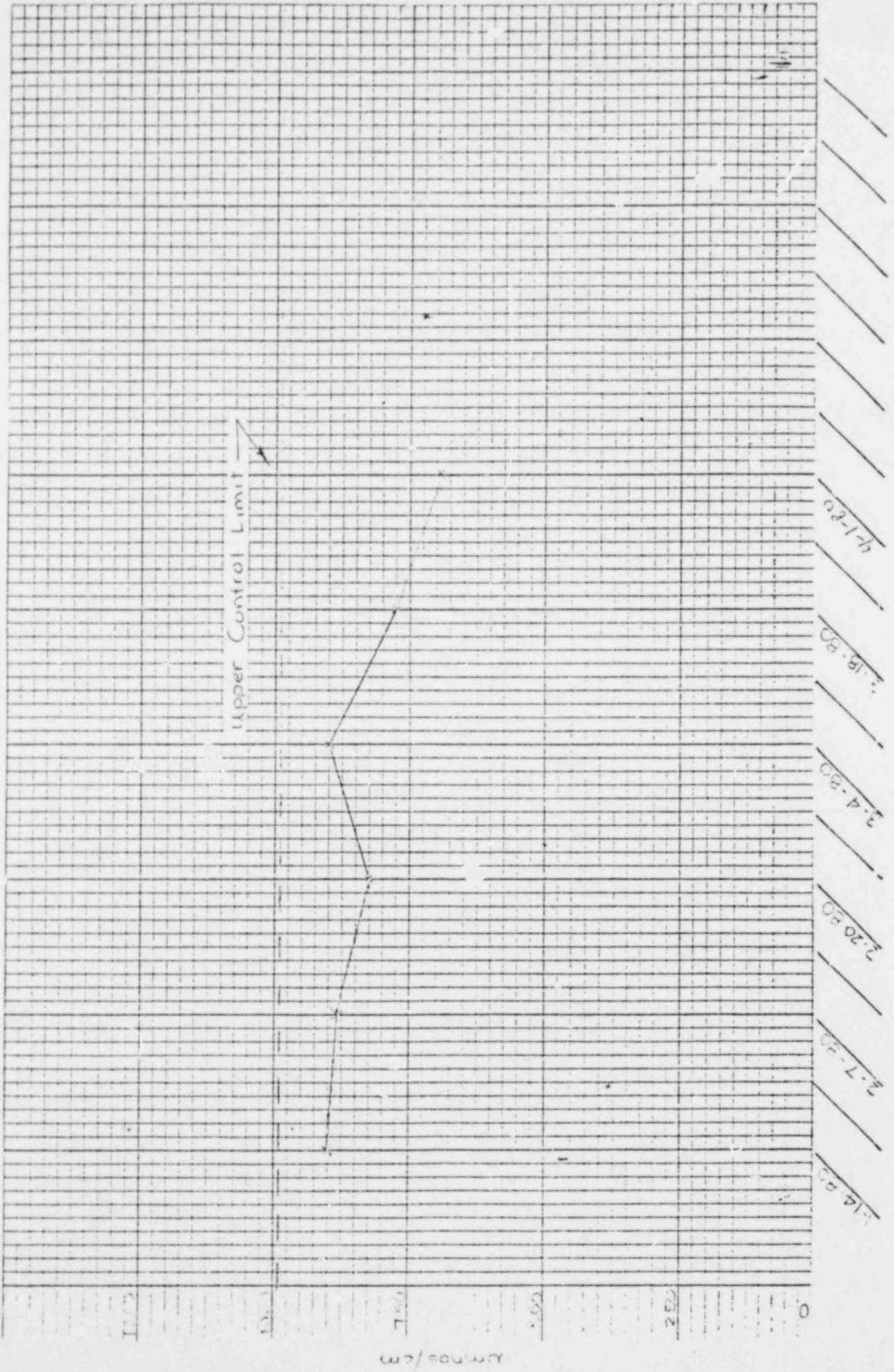
SAMPLE COLLECTION DATE

(CO<sub>2</sub>)



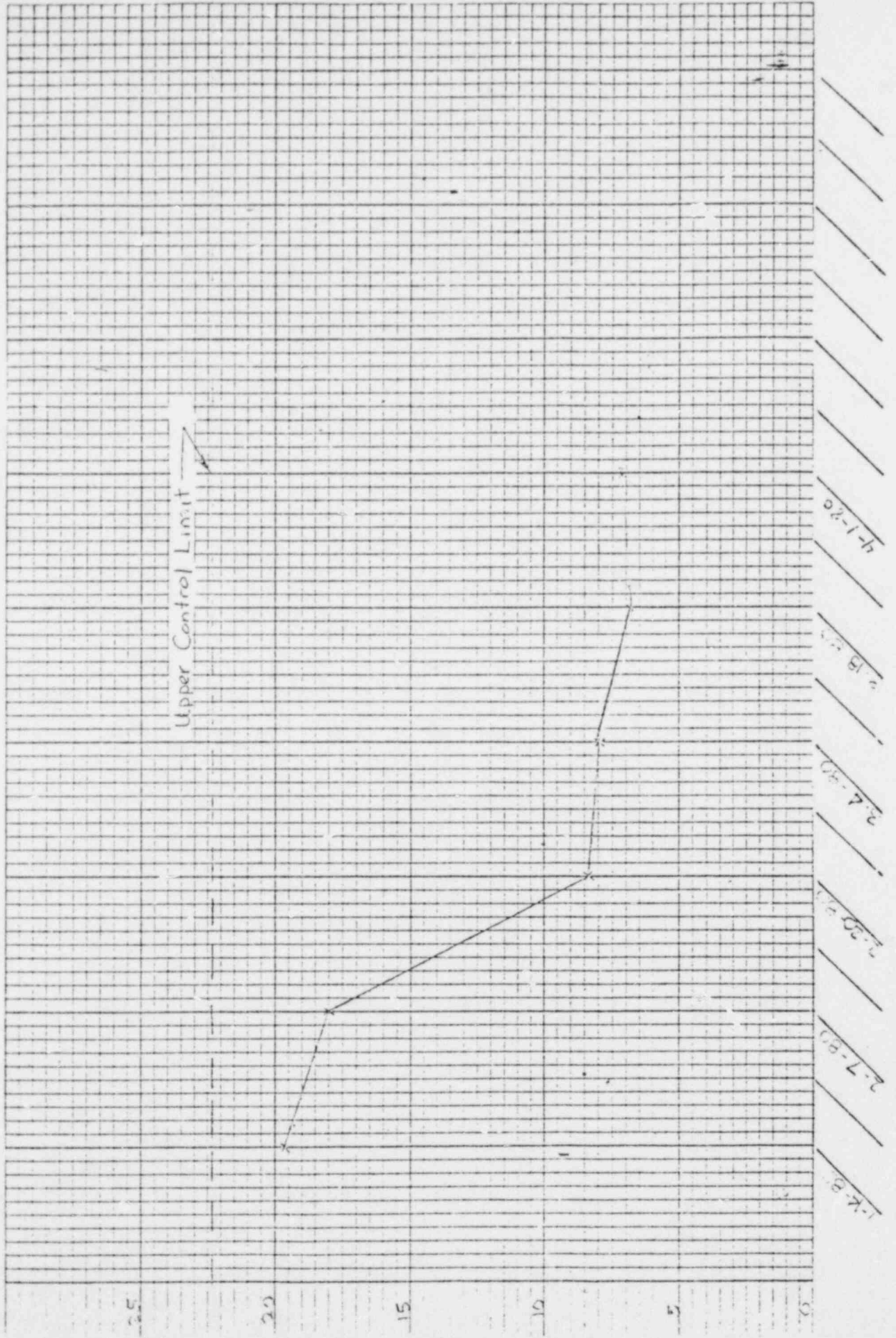
WELL NAME: \_\_\_\_\_

311



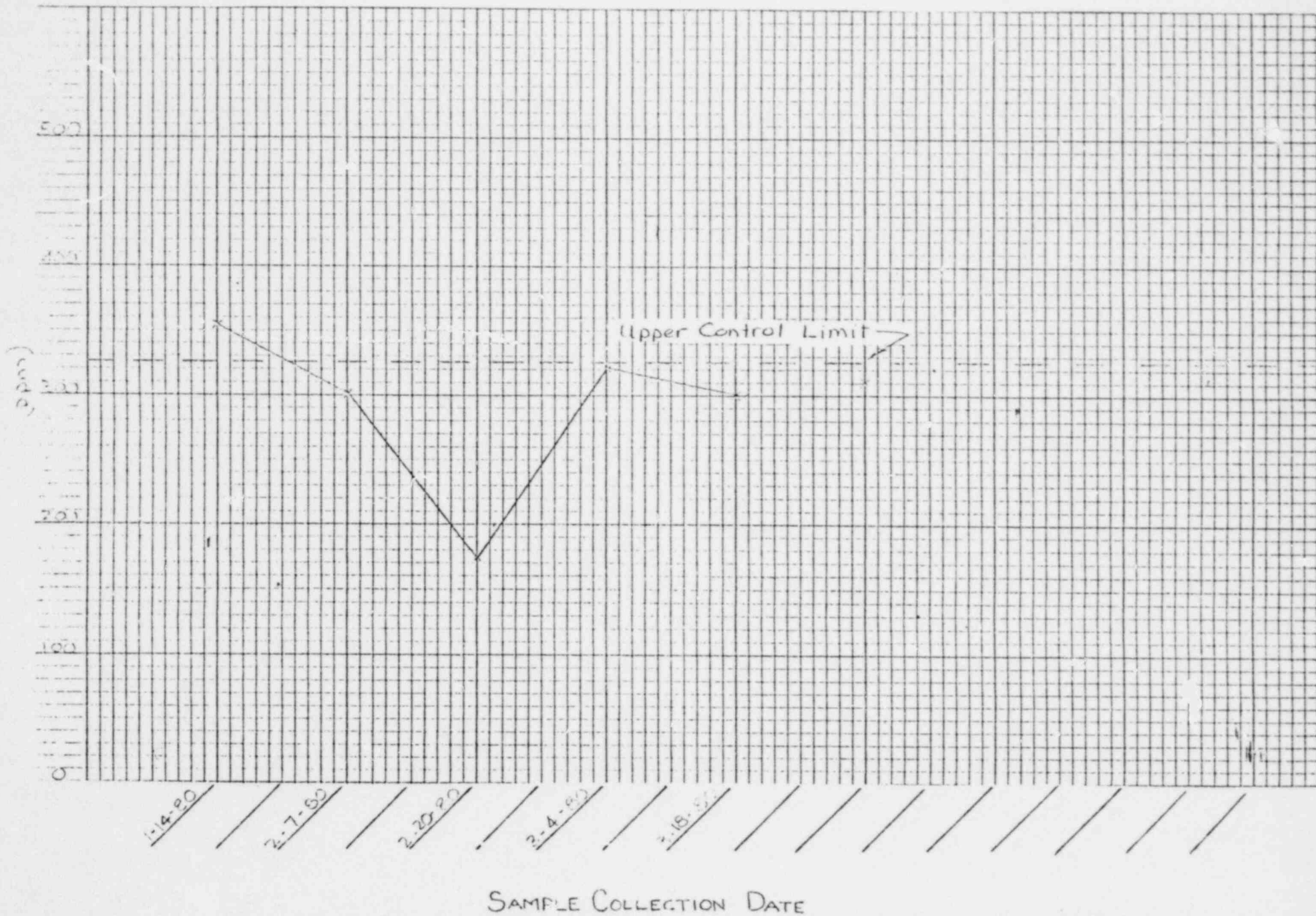
SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_

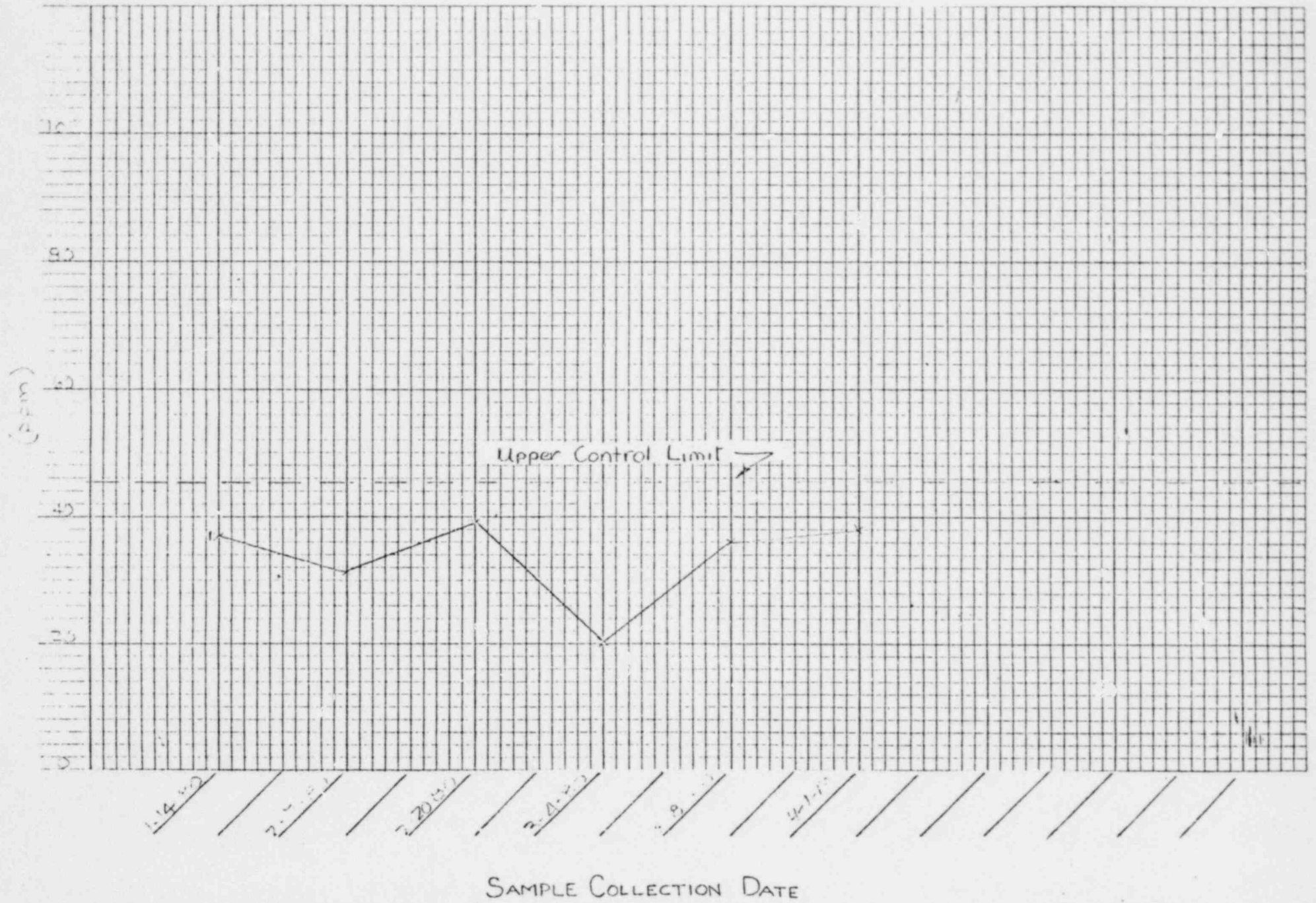


SAMPLE COLLECTION DATE

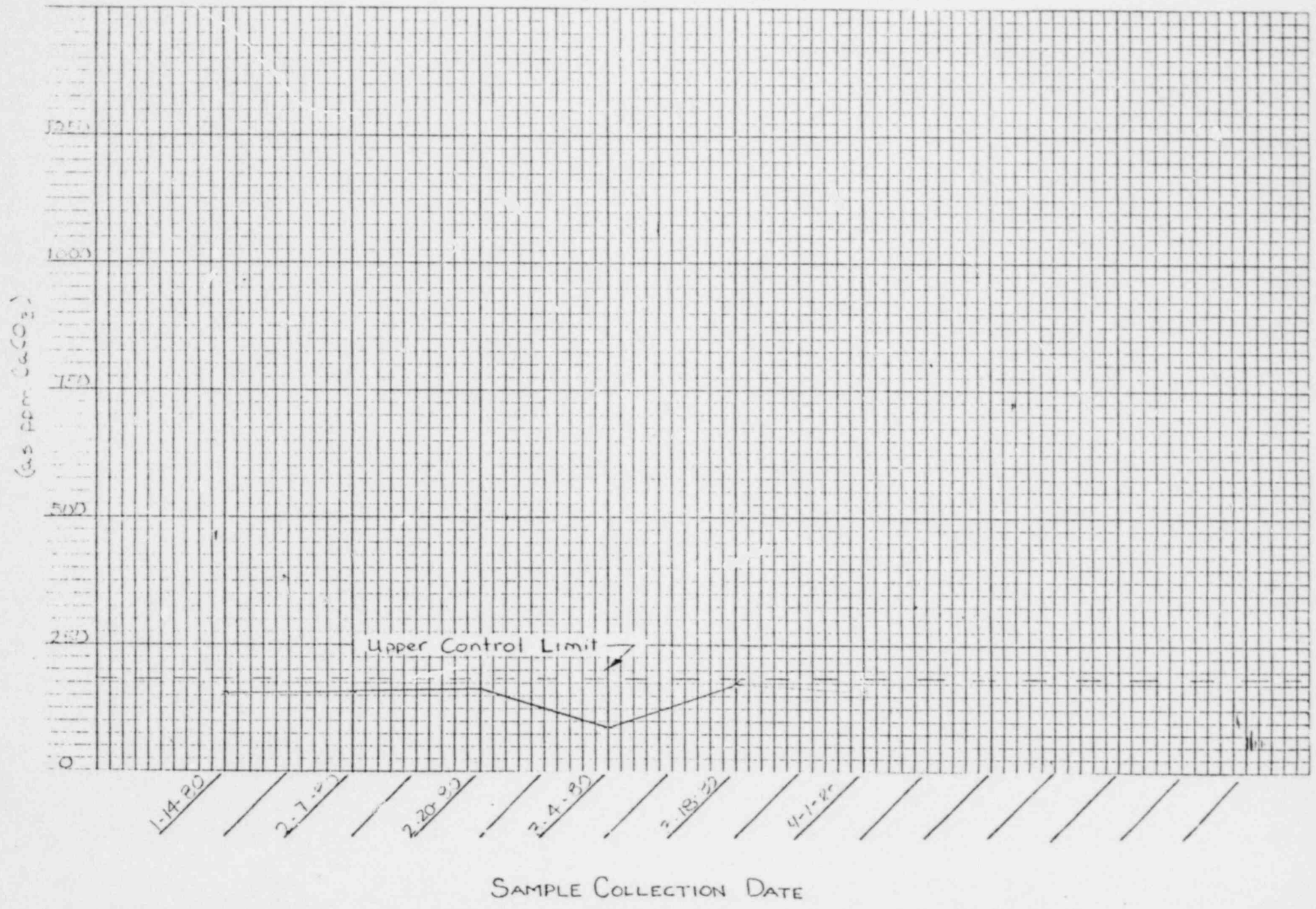
WELL NAME : \_\_\_\_\_



WELL NAME : \_\_\_\_\_



WELL NAME : \_\_\_\_\_





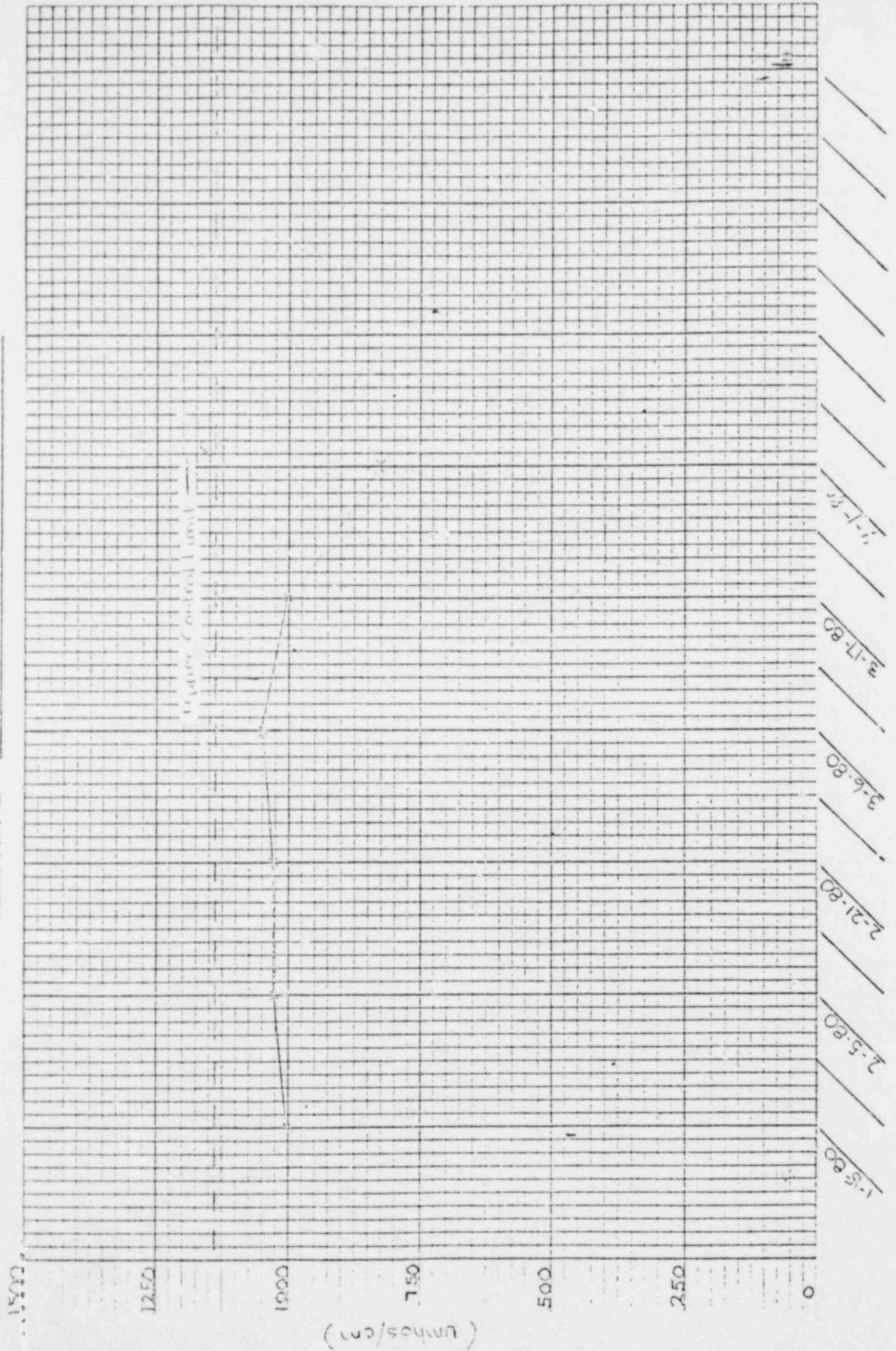
WATER SAMPLES  
 QUARTERLY REPORT  
 WELL NAME 304 (I)

Sampling Date	Conductivity umhos/cm	Cl <sup>-</sup> (ppm)	SO <sub>4</sub> <sup>=</sup> (ppm)	U (ppm)	Na <sup>+</sup> (ppm)	Alkalinity (as ppm CaCO <sub>3</sub> )
	1,137	10.6	502	1	57	221
	1000	1.6	325		41	189
1-15-80						
	1025	5.2	310	4.1	35	199
2-5-80						
	1025	0.8	370	40.1	39	194
2-21-80						
	1050	4.0	420	40.1	36	208
3-4-80						
	1000	2.0	425	40.2	34	210
3-17-80						
	925	0.4	472	40.3	35	210
4-1-80						

6

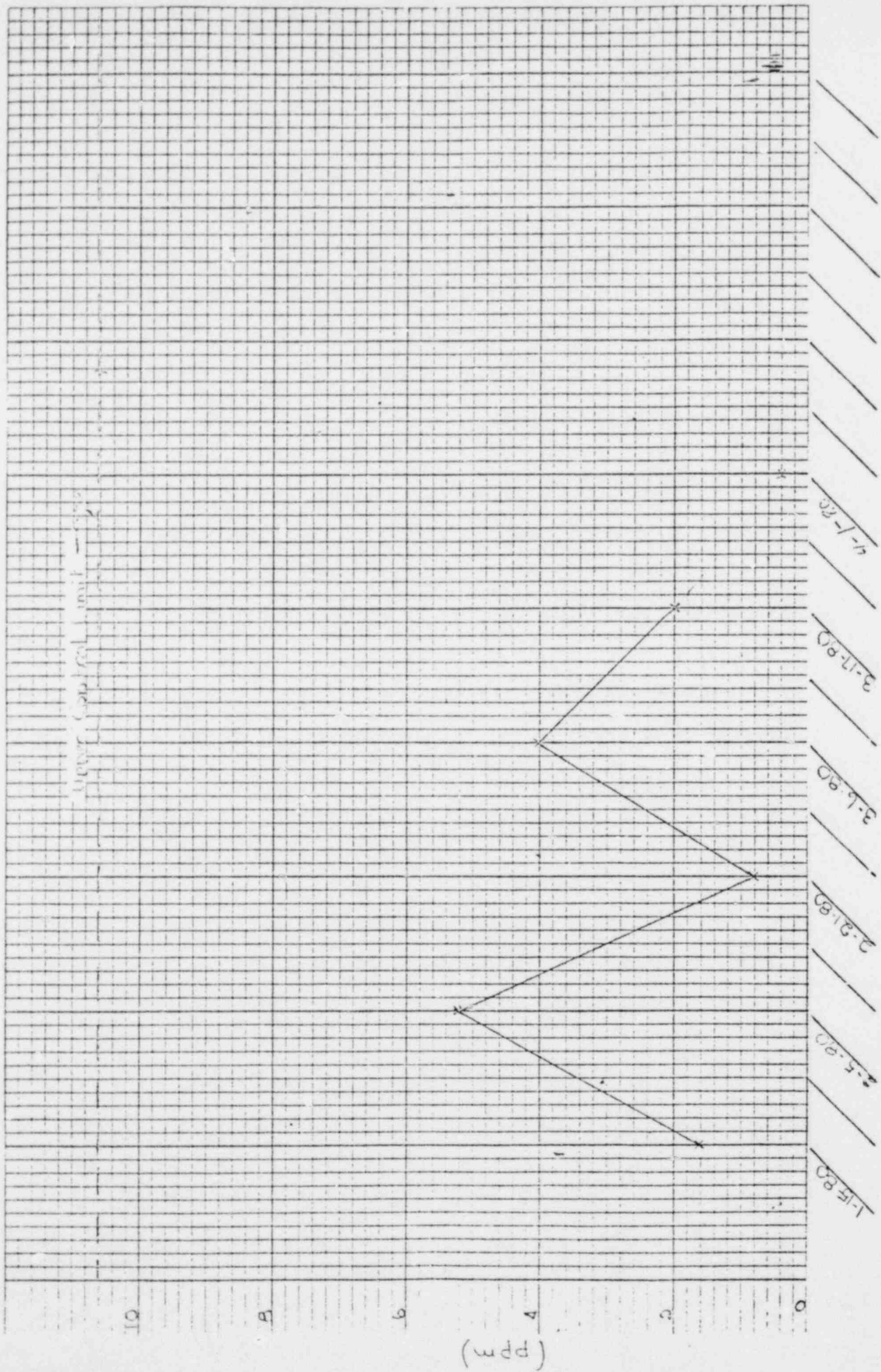
Conductivity

WELL NAME: 304



SAMPLE COLLECTION DATE

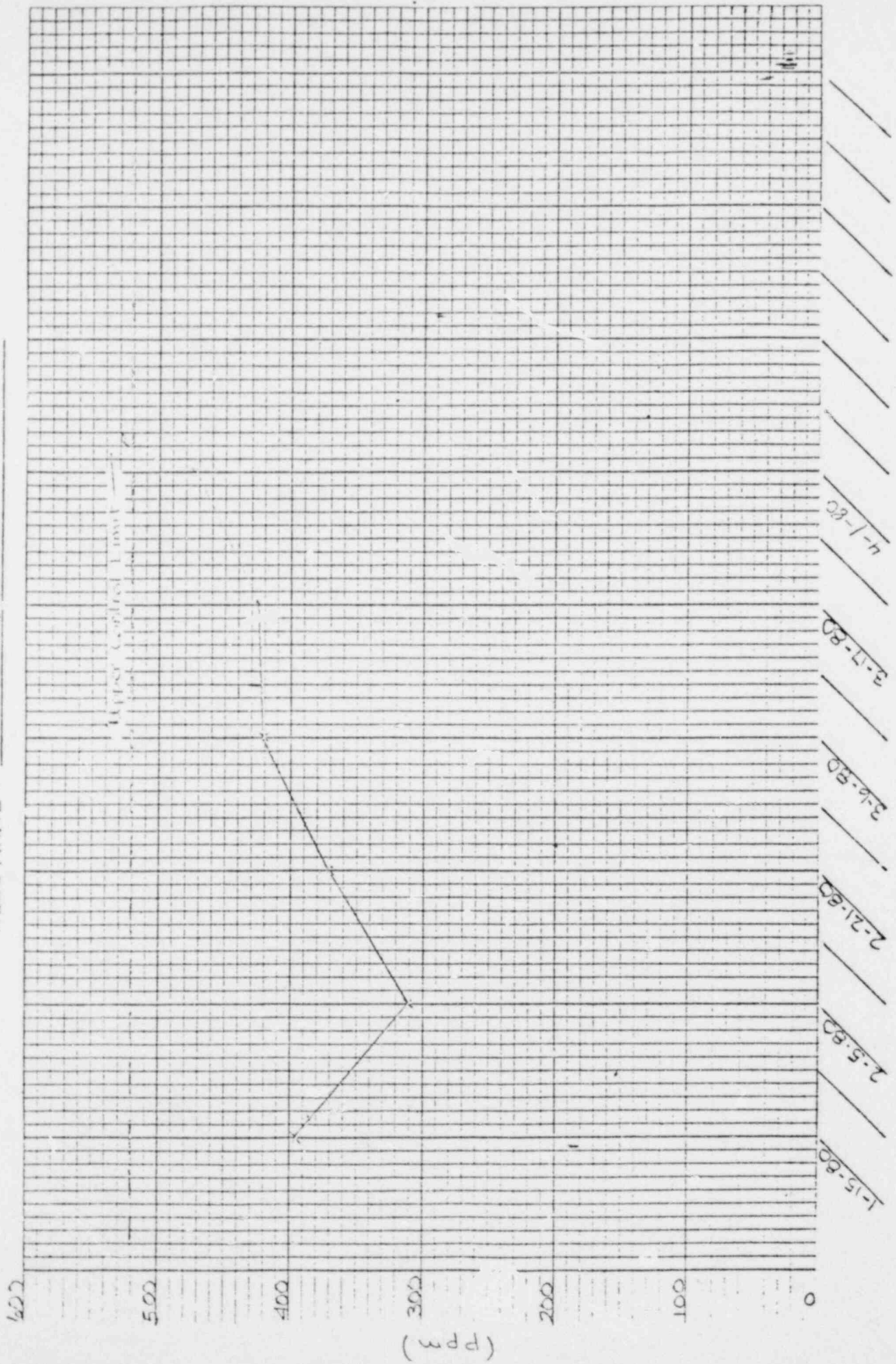
WELL NAME: 304



SAMPLE COLLECTION DATE

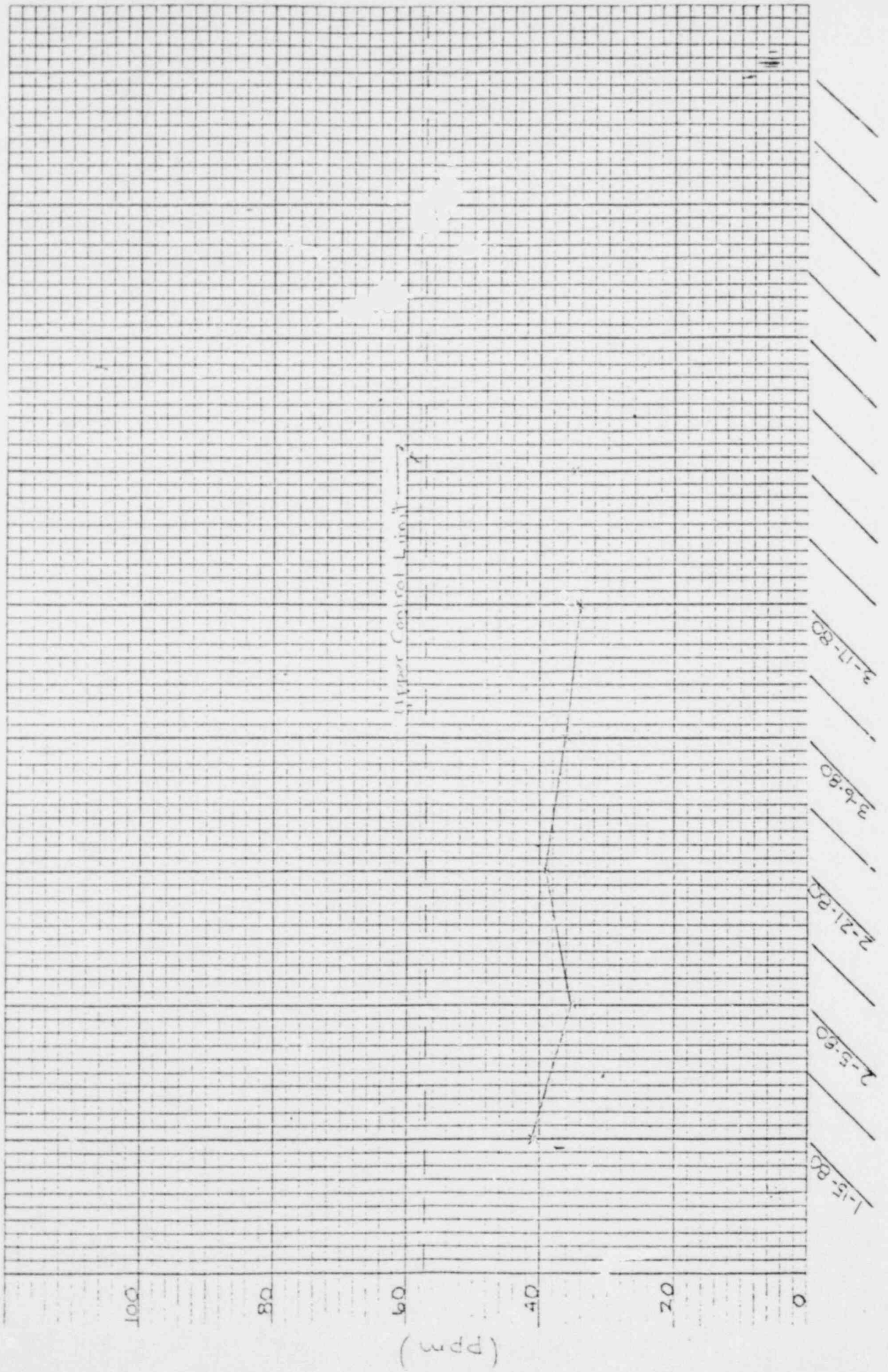
Sulfates

WELL NAME: 304



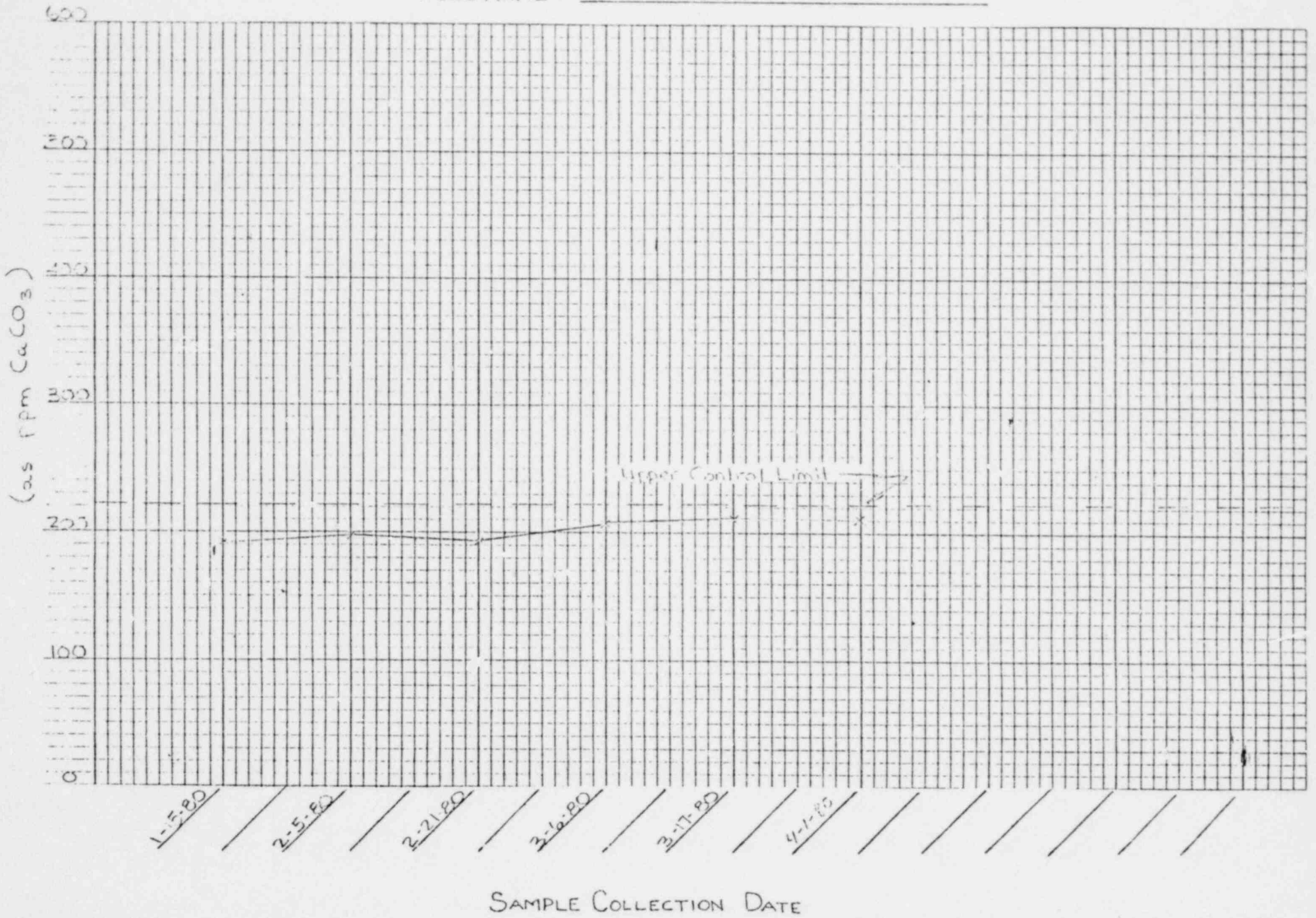
SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 204



SAMPLE COLLECTION DATE

WELL NAME : 304

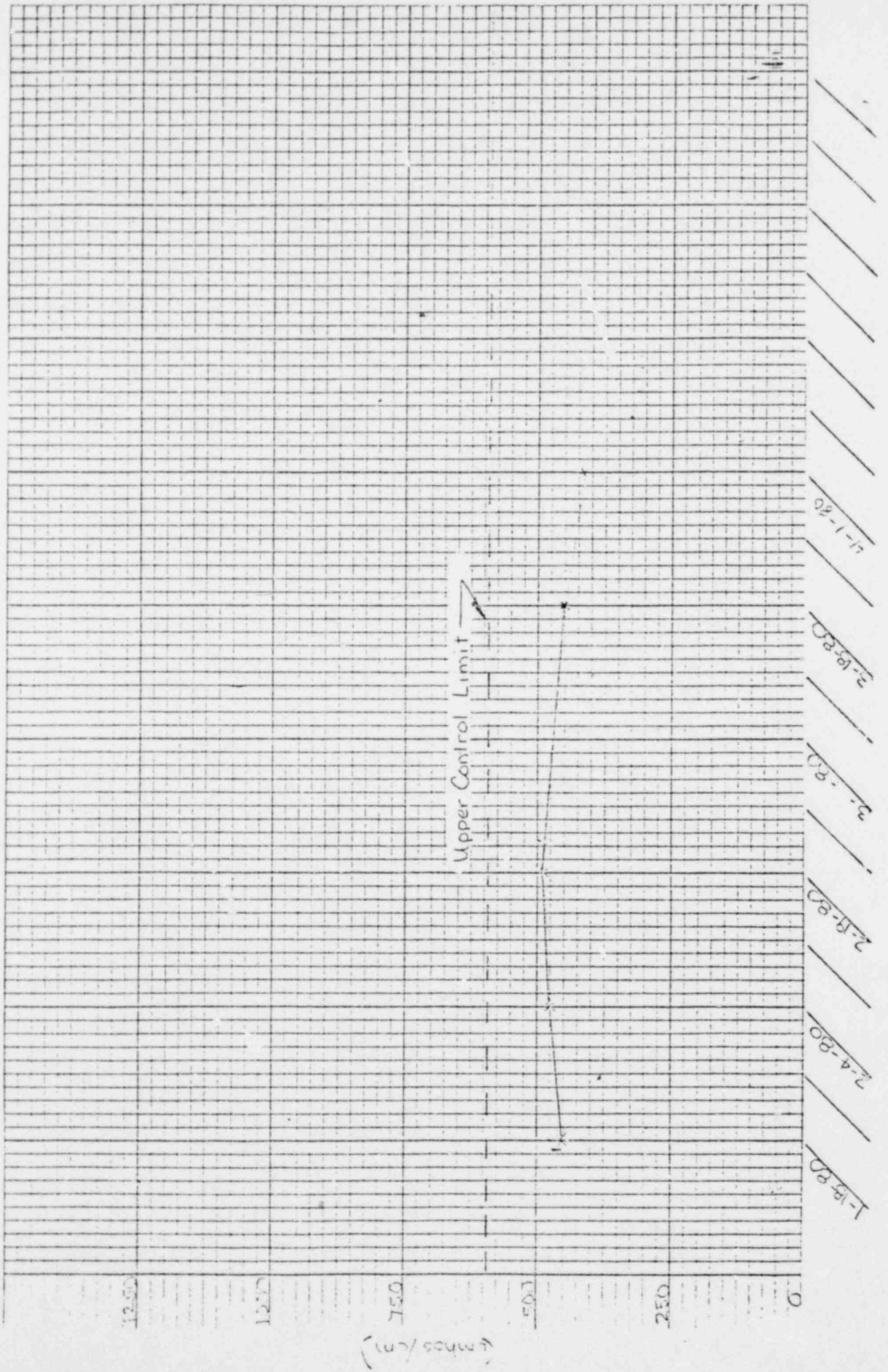


WATER SAMPLES  
QUARTERLY REPORT  
WELL NAME 314

Date	Conductivity umhos/cm	Cl <sup>-</sup> (ppm)	SO <sub>4</sub> <sup>=</sup> (ppm)	U (ppm)	Na <sup>+</sup> (ppm)	Alkalinity (as ppm CaCO <sub>3</sub> )
1-13-80	450	8.0	100	<0.1	44	166
2-4-80	475	7.5	40	<0.1	41	182
2-19-80	490	6.0	55	<0.1	41	194
3-6-80	550	31.6	68	<0.1	25	180
3-18-80	450	7.6	40	<0.2	42	194
4-3-80	420	6.0	70	<0.2	39	200

Note: 2-20-80 coliforms per 100 ml 16 - Atypical bacteria, per 100 ml 60  
2-26-80 " " " " " " " " " " " " " "

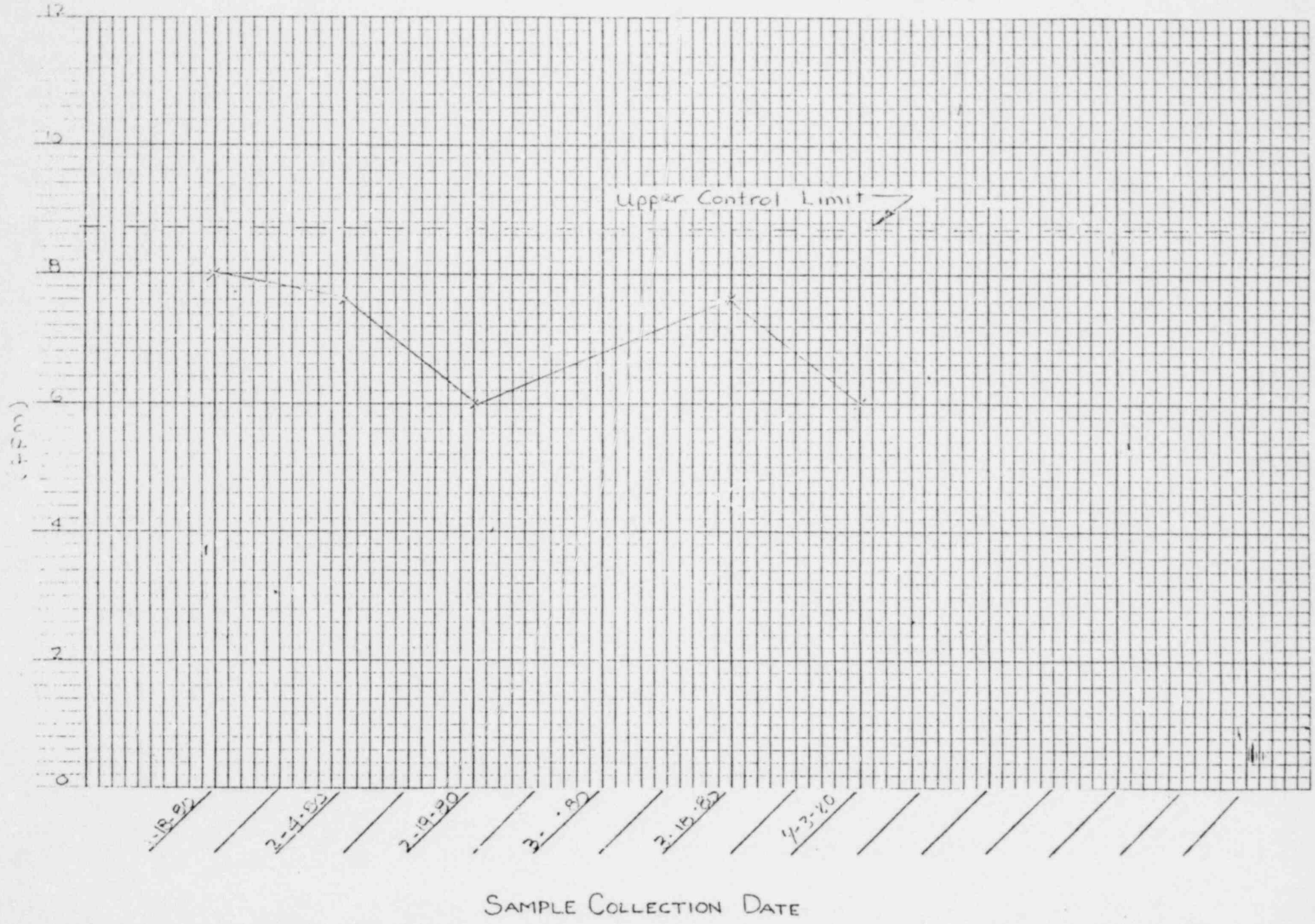
WELL NAME : 314



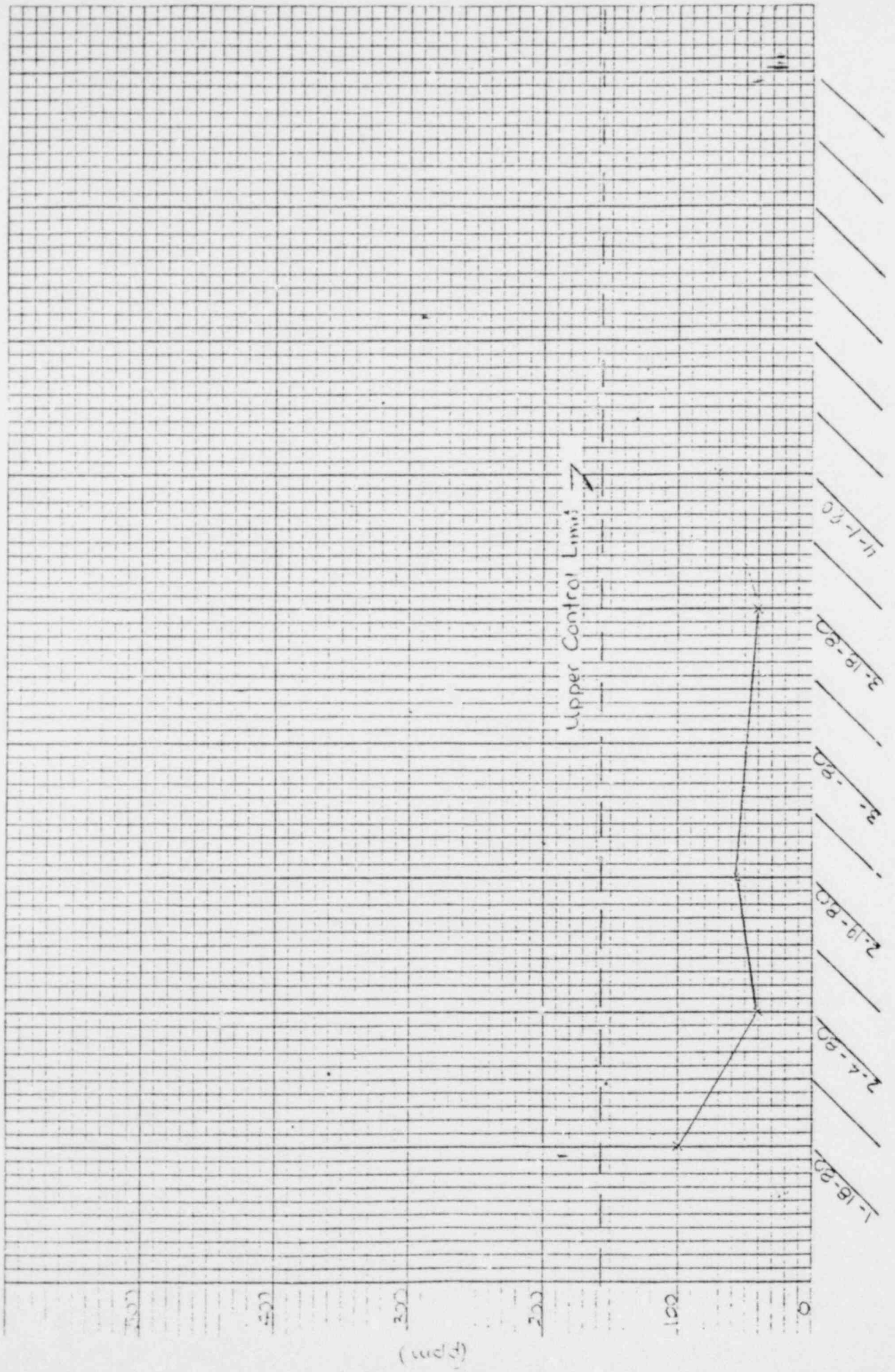
SAMPLE COLLECTION DATE



WELL NAME : \_\_\_\_\_

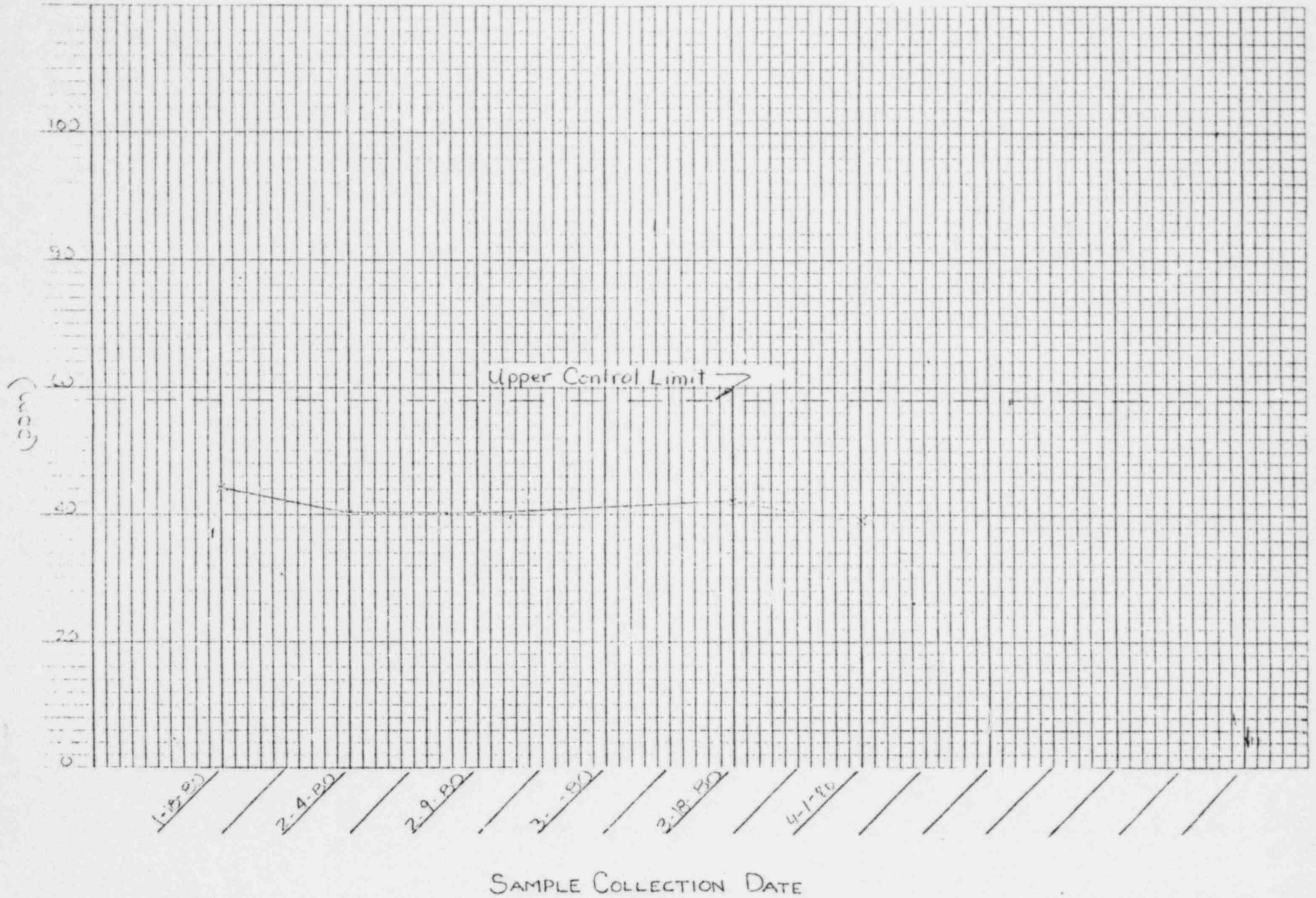


WELL NAME: \_\_\_\_\_



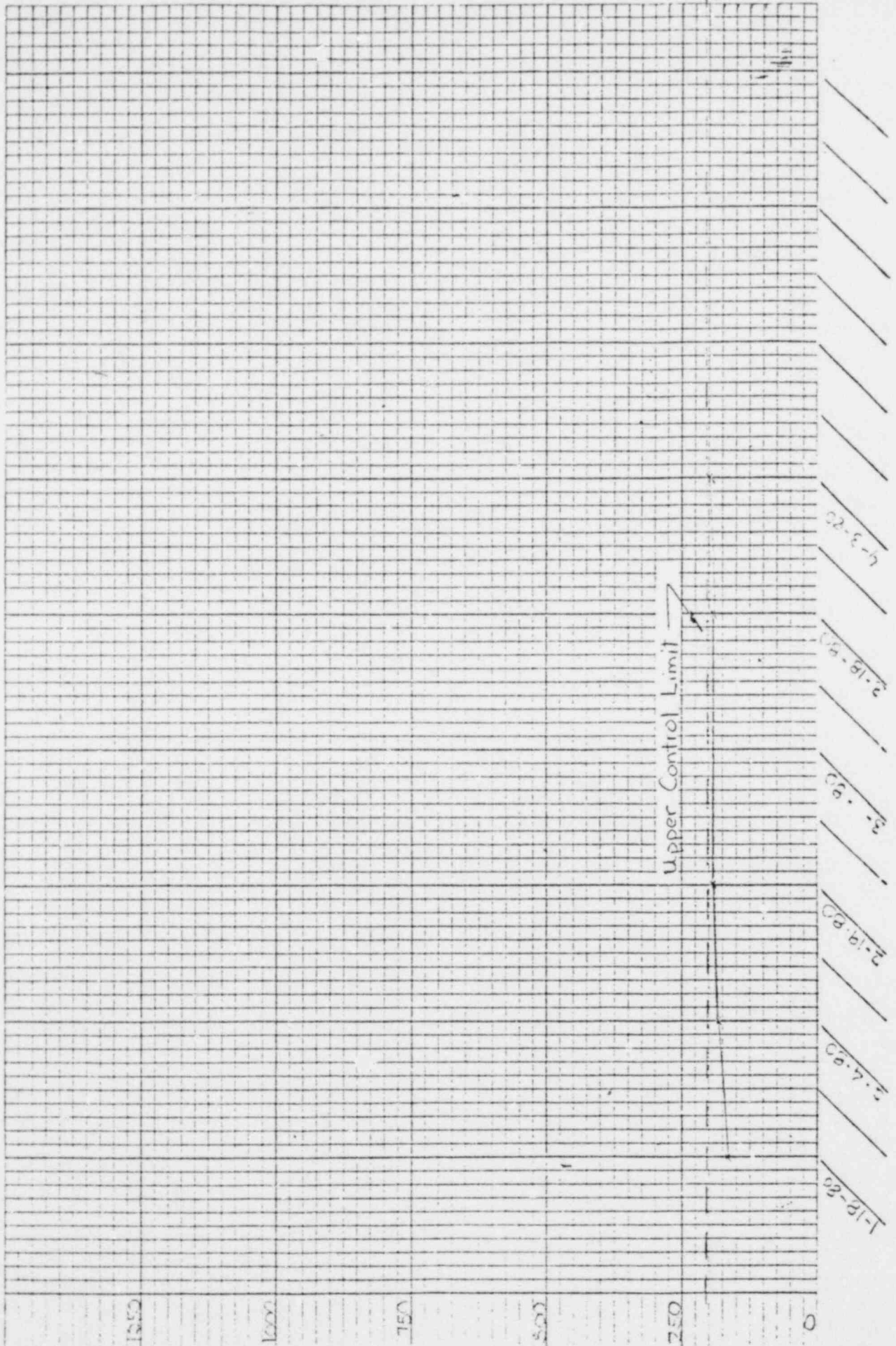
SAMPLE COLLECTION DATE

WELL NAME : 314



Alkalinity

WELL NAME: E-11

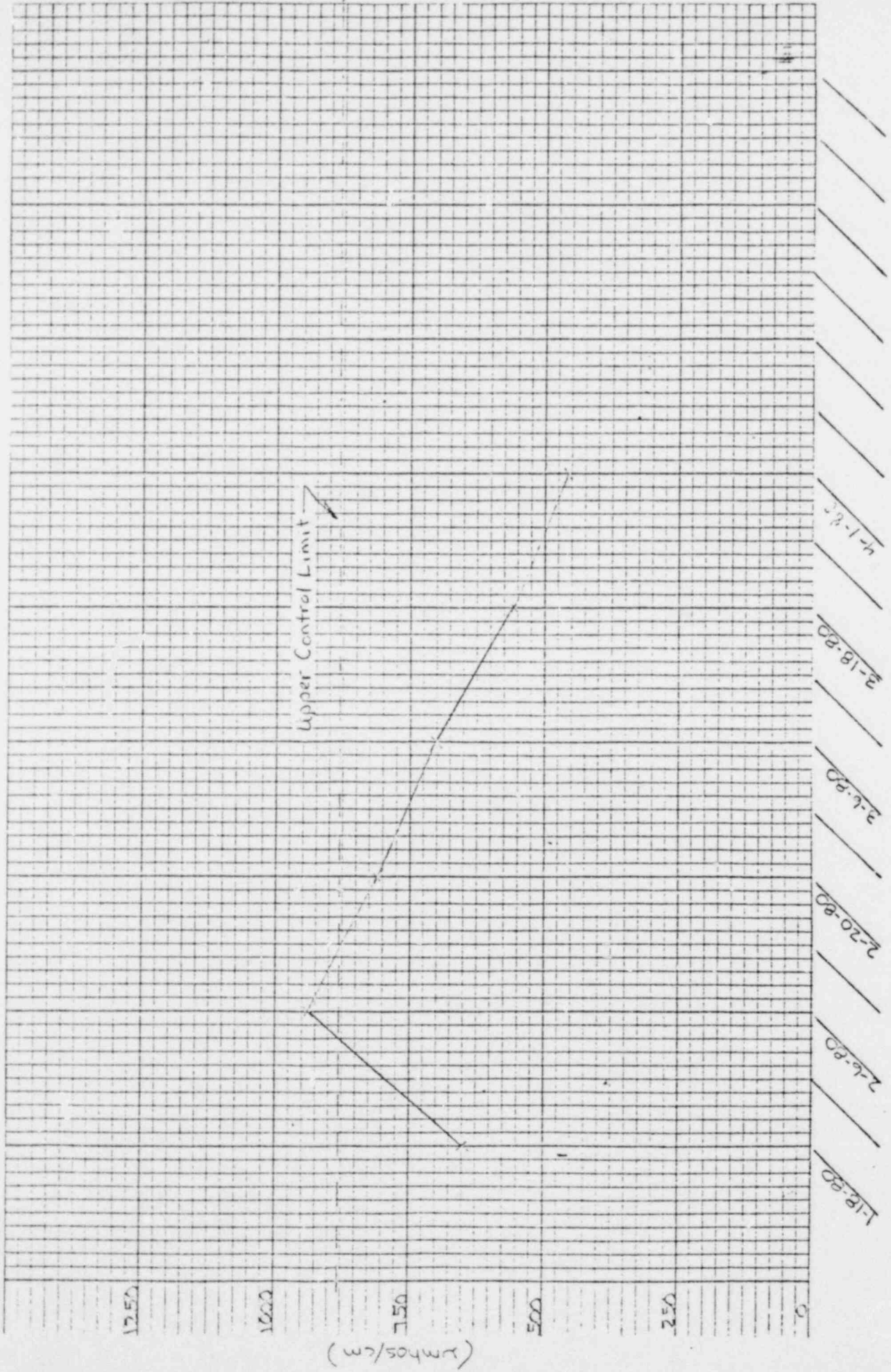


Kas PPM CaCO<sub>3</sub>

SAMPLE COLLECTION DATE



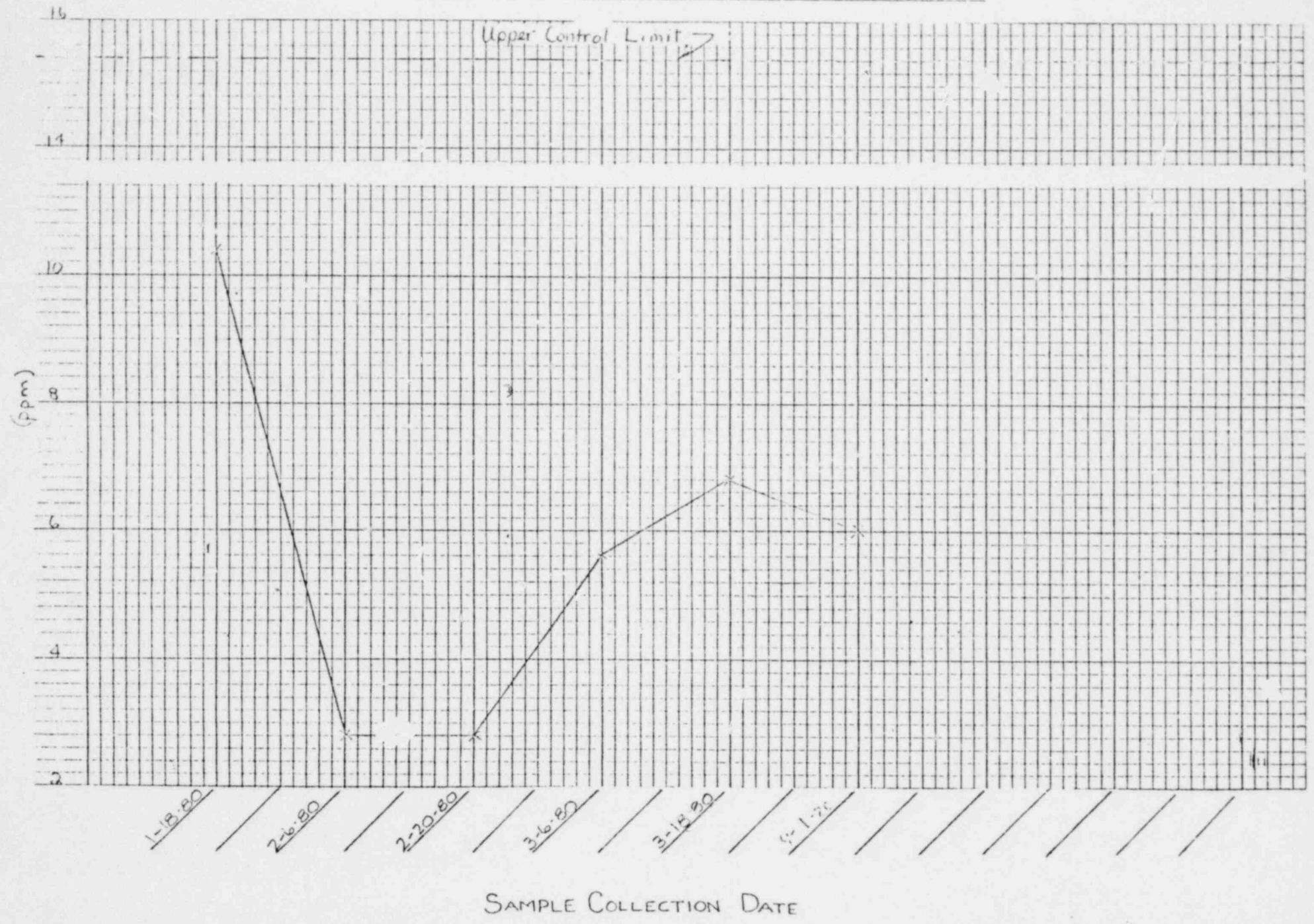
WELL NAME: \_\_\_\_\_ PCH



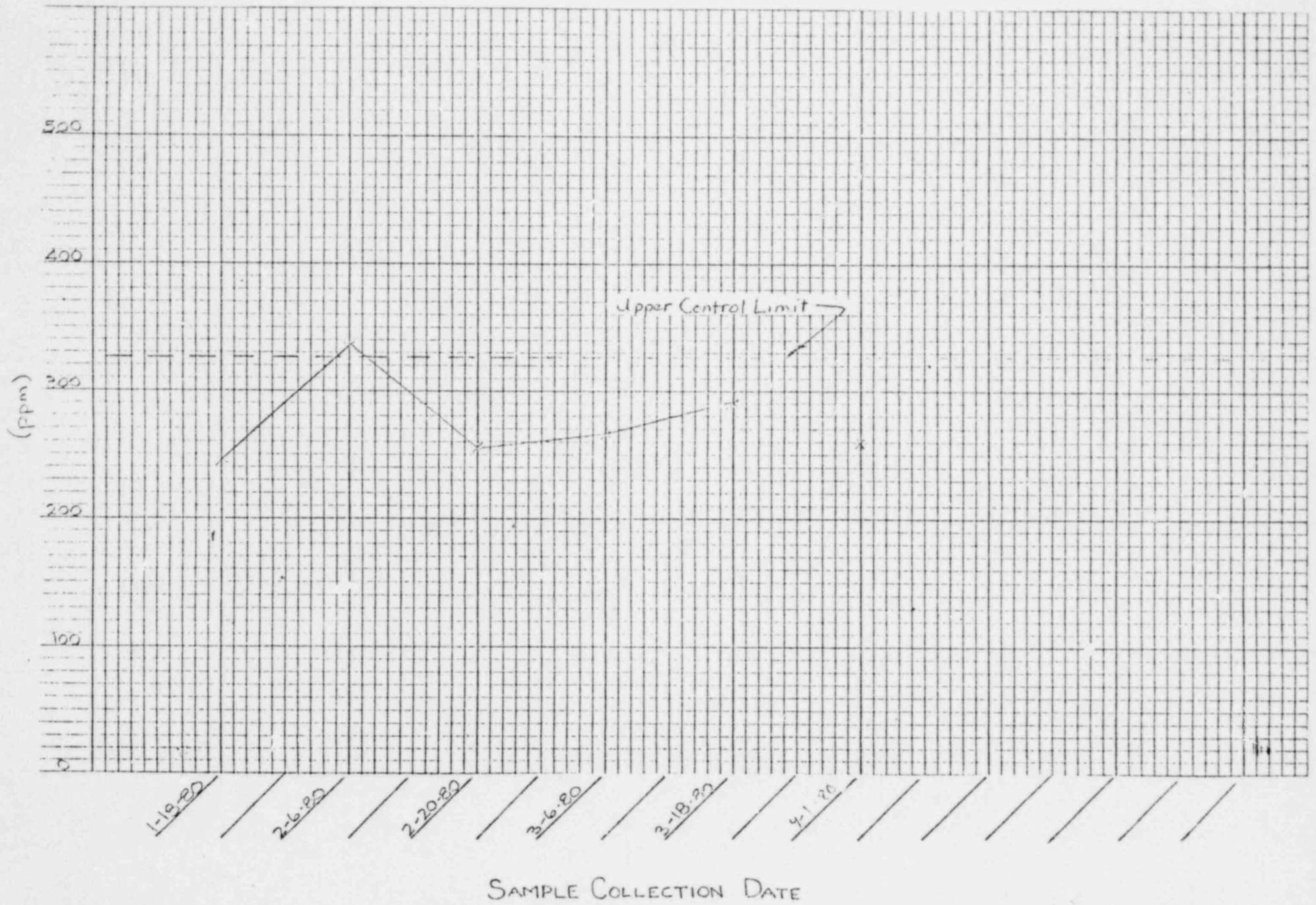
SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_

Upper Control Limit



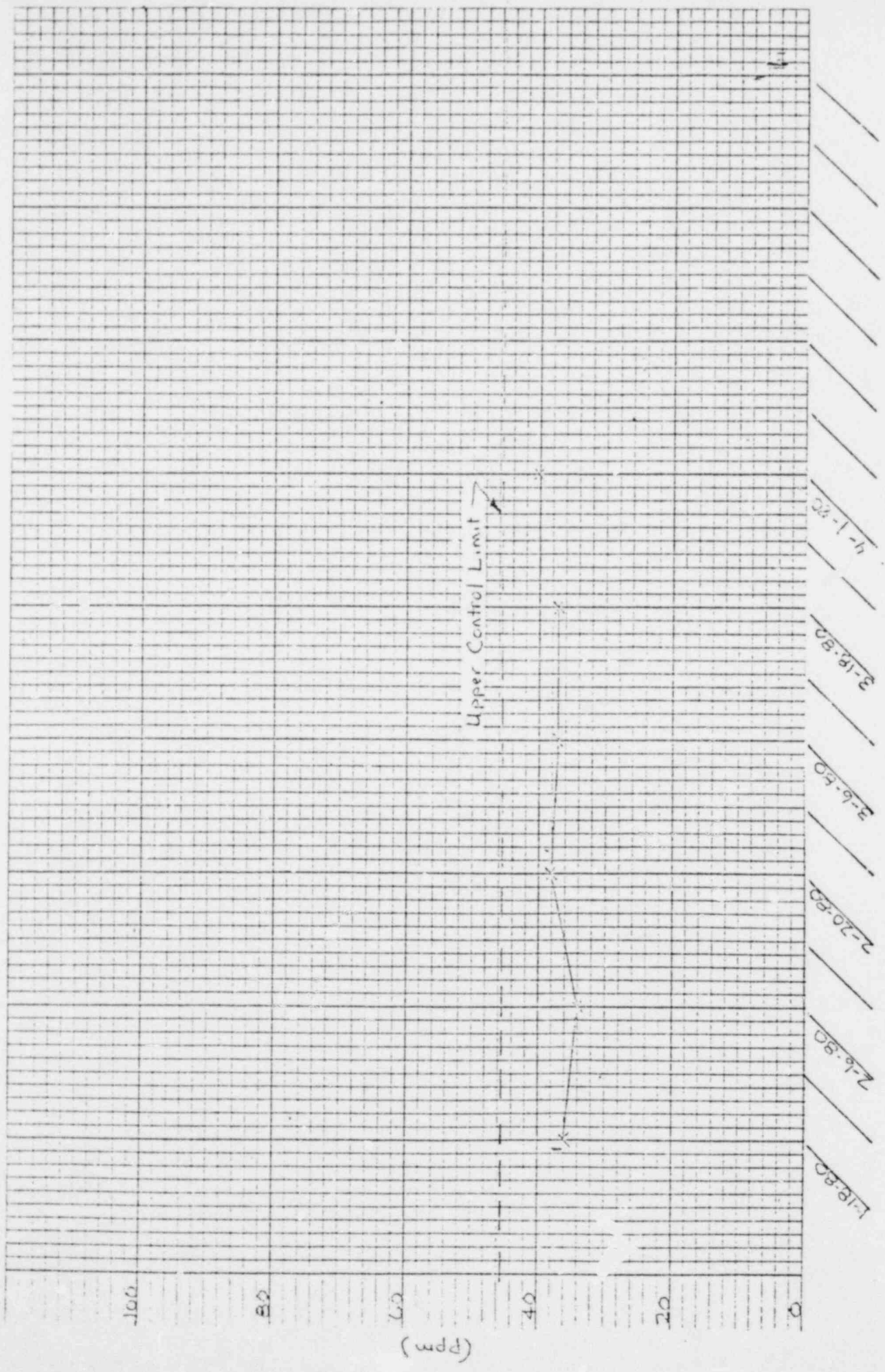
WELL NAME : 309





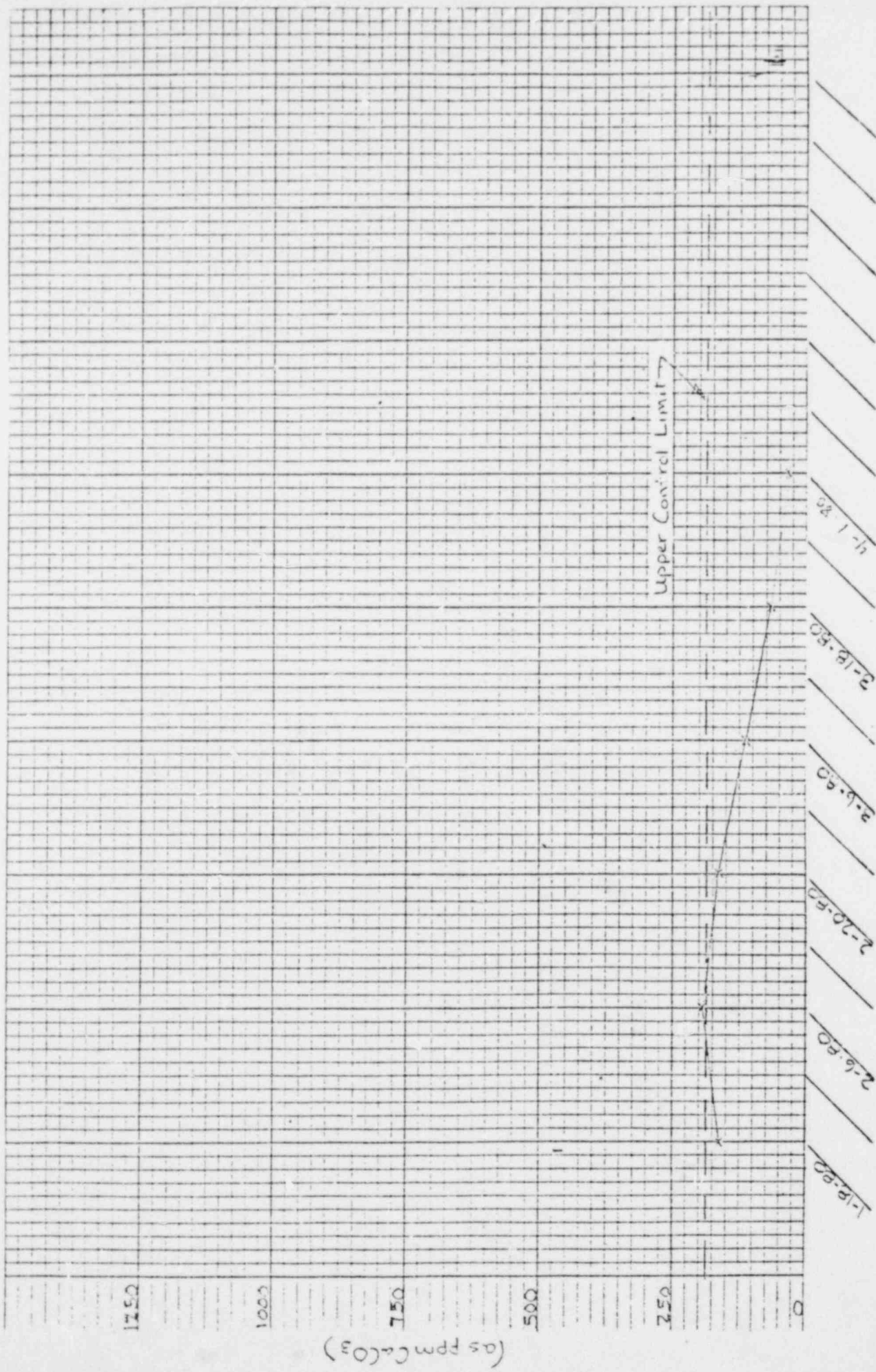
WELL NAME: \_\_\_\_\_

803



SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 309

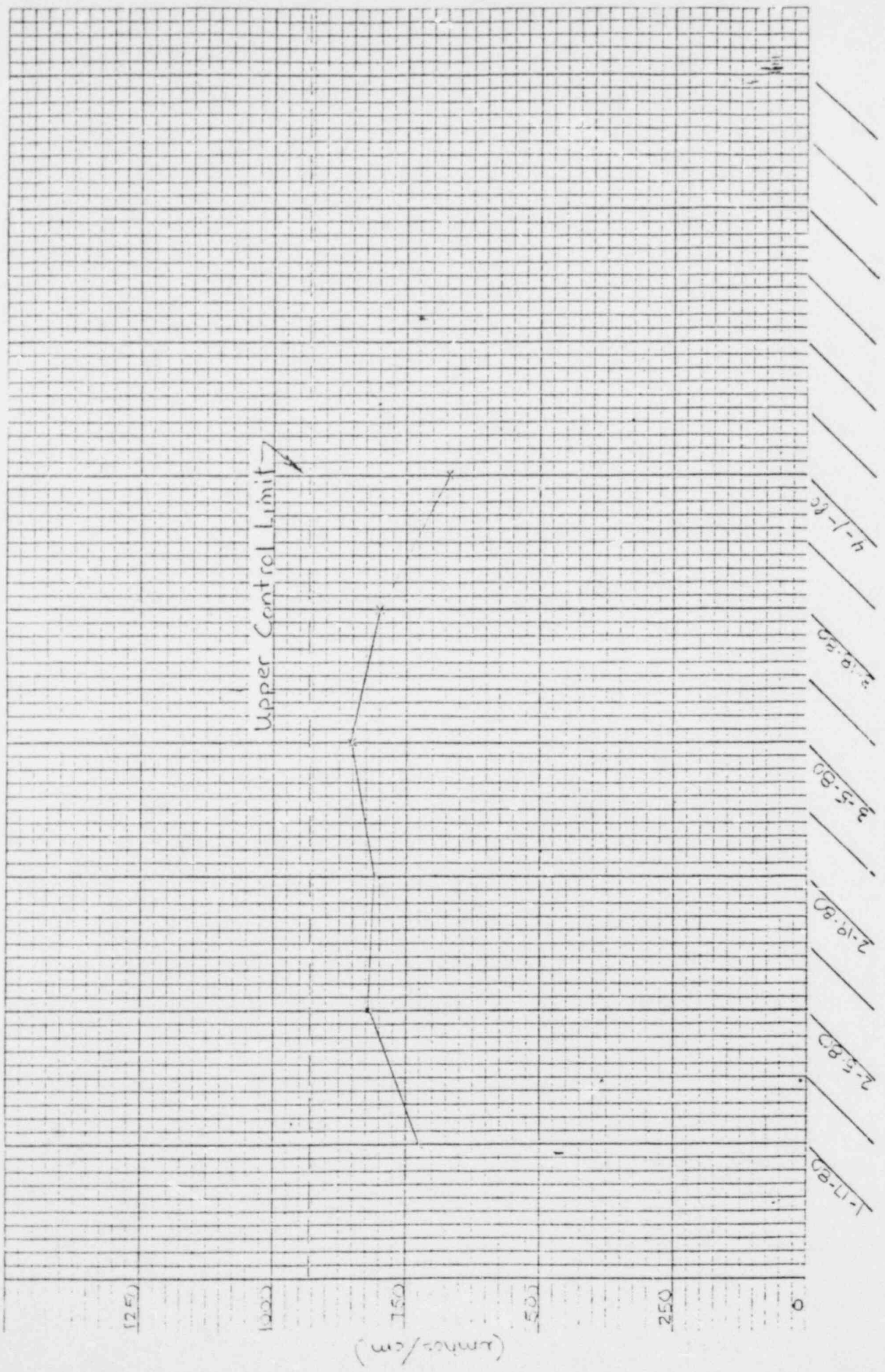


SAMPLE COLLECTION DATE



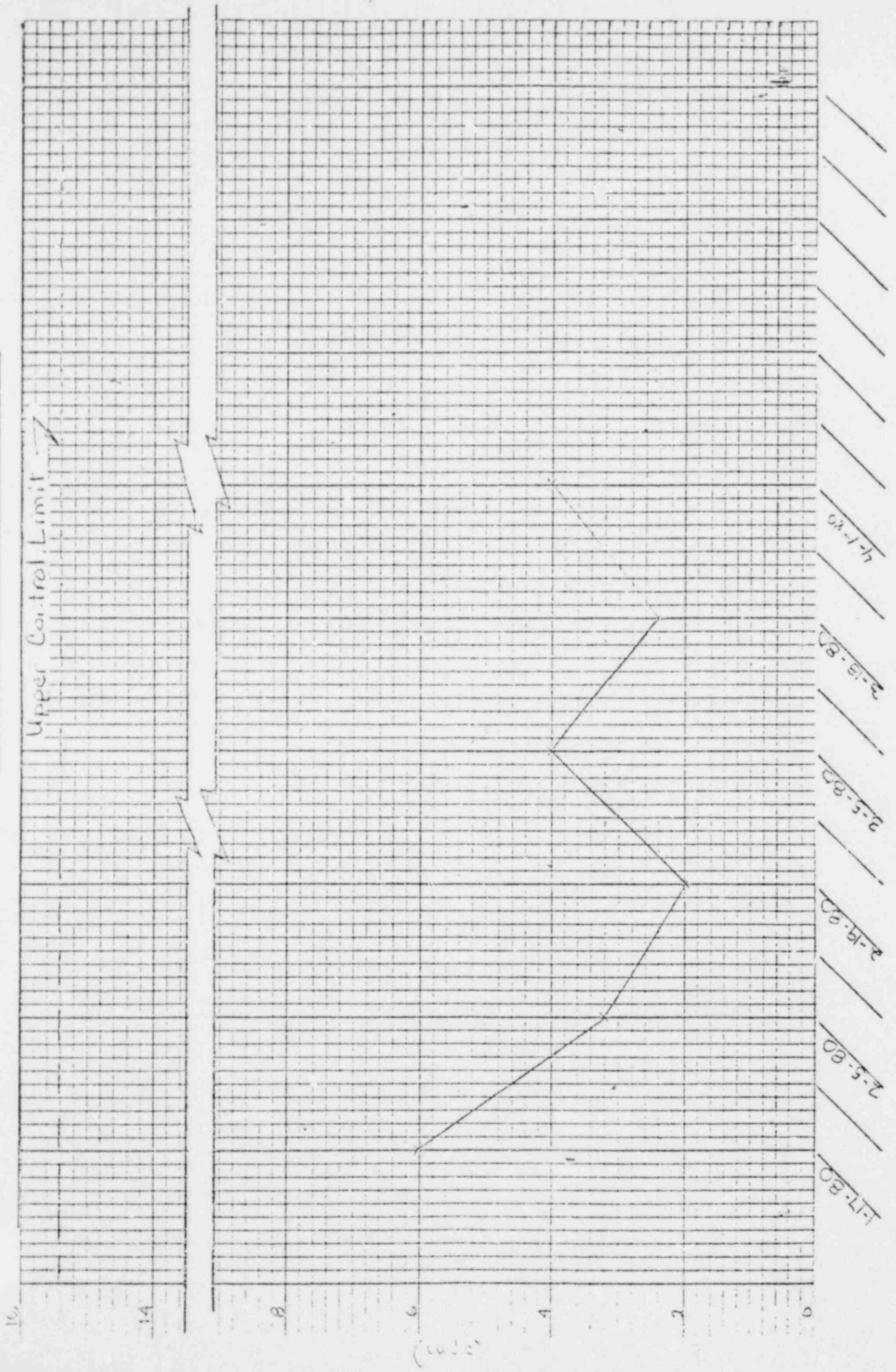
Control Chart

WELL NAME: \_\_\_\_\_



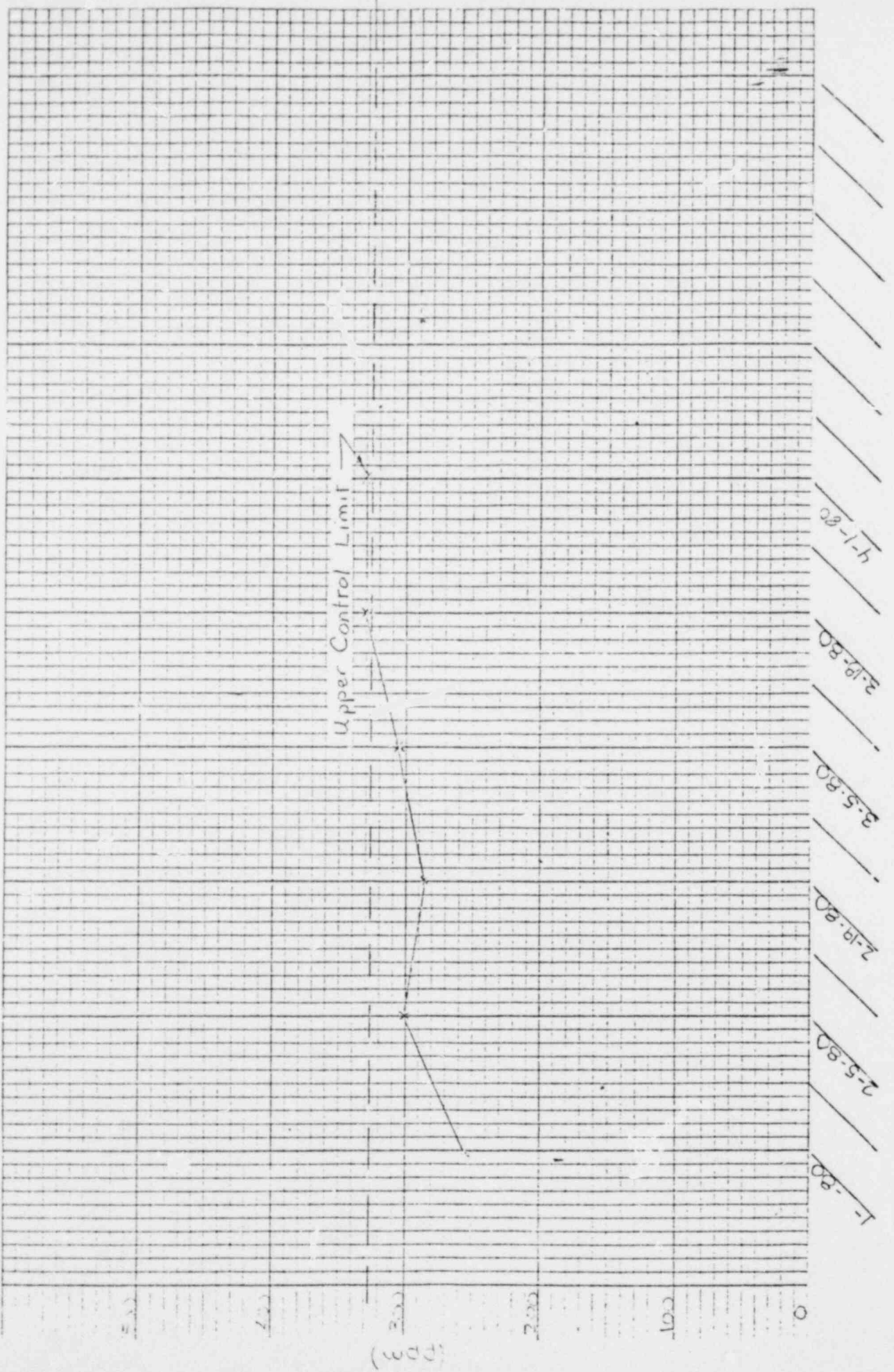
SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_



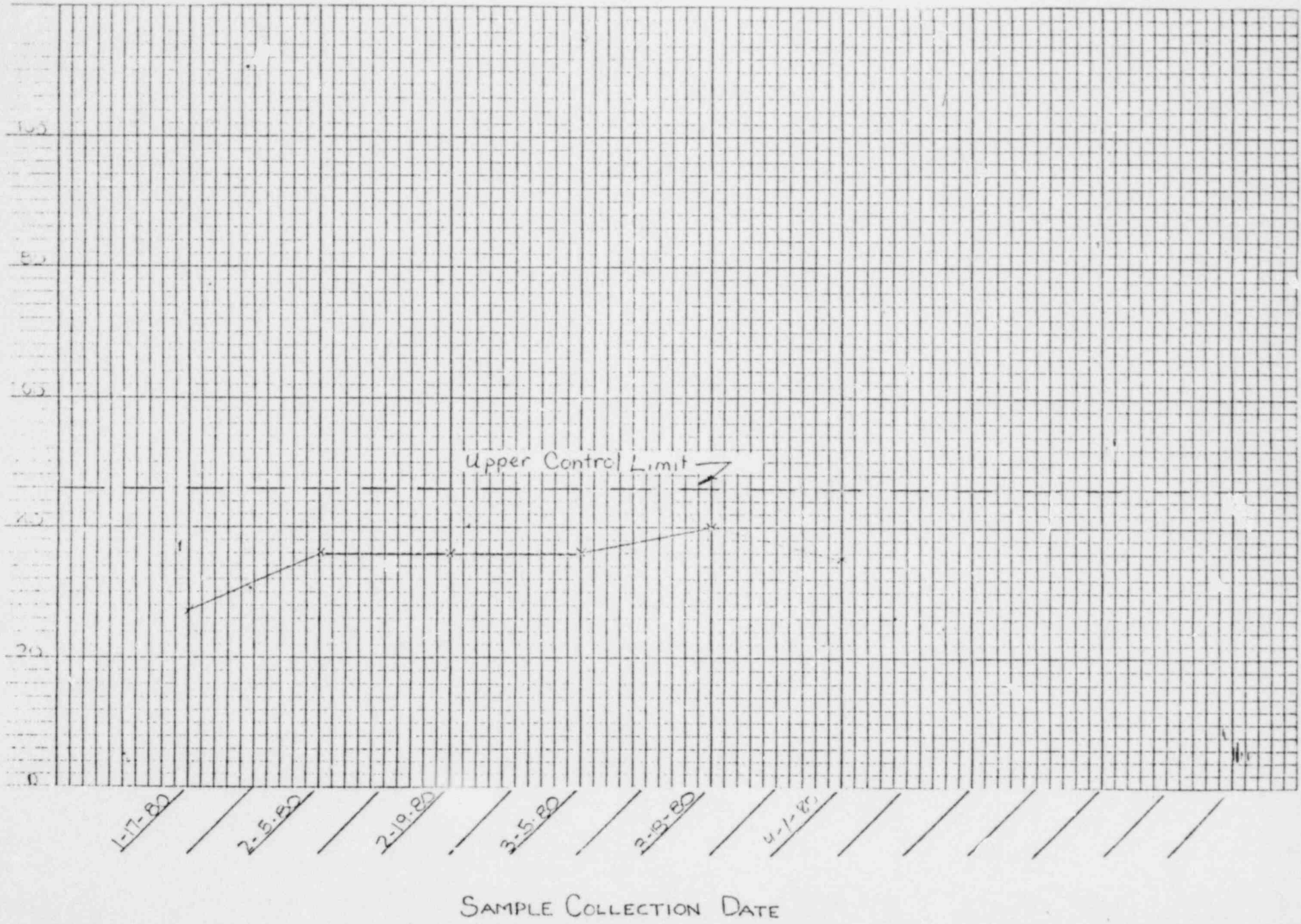
SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 319

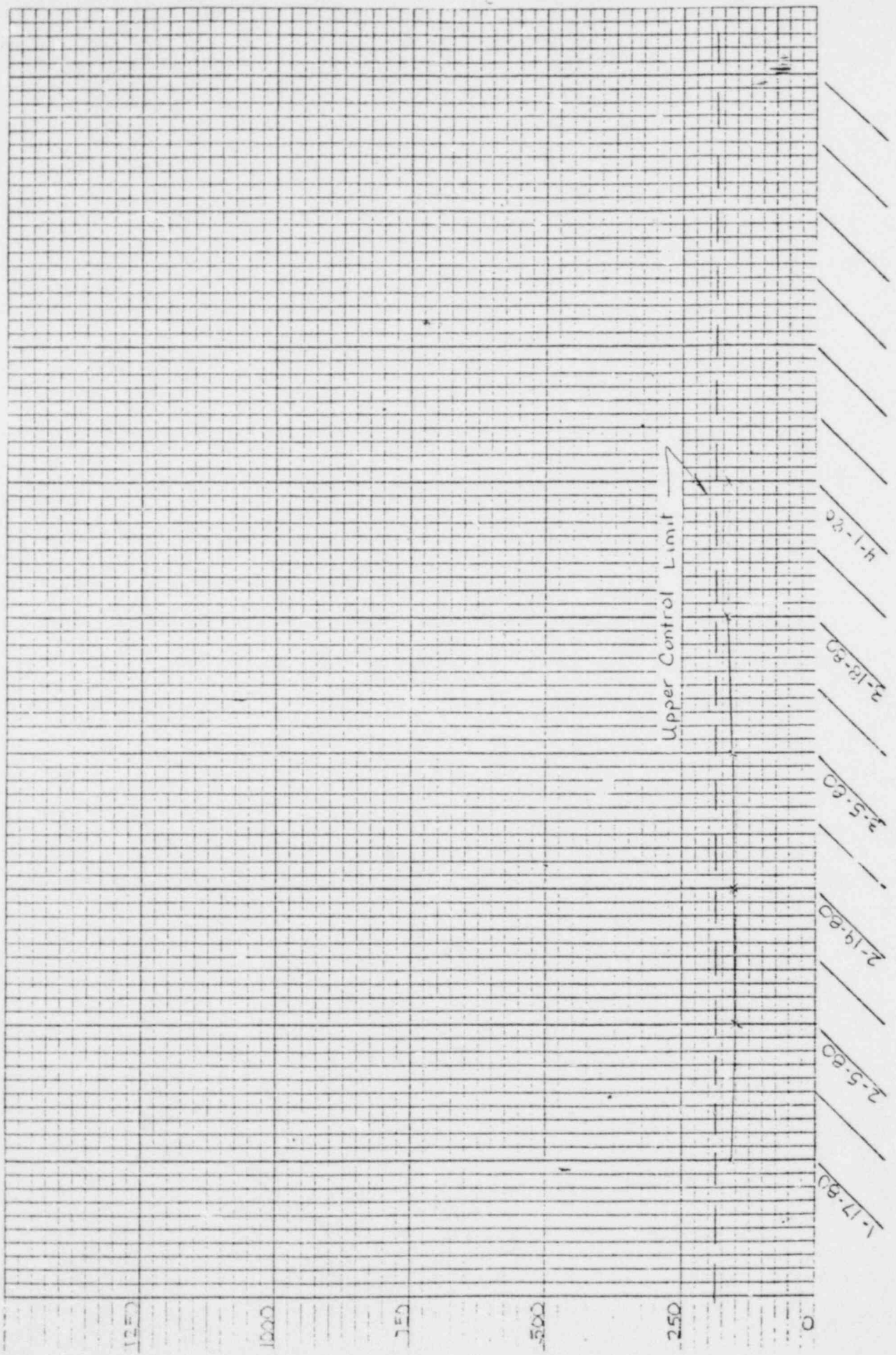


SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_



WELL NAME : \_\_\_\_\_



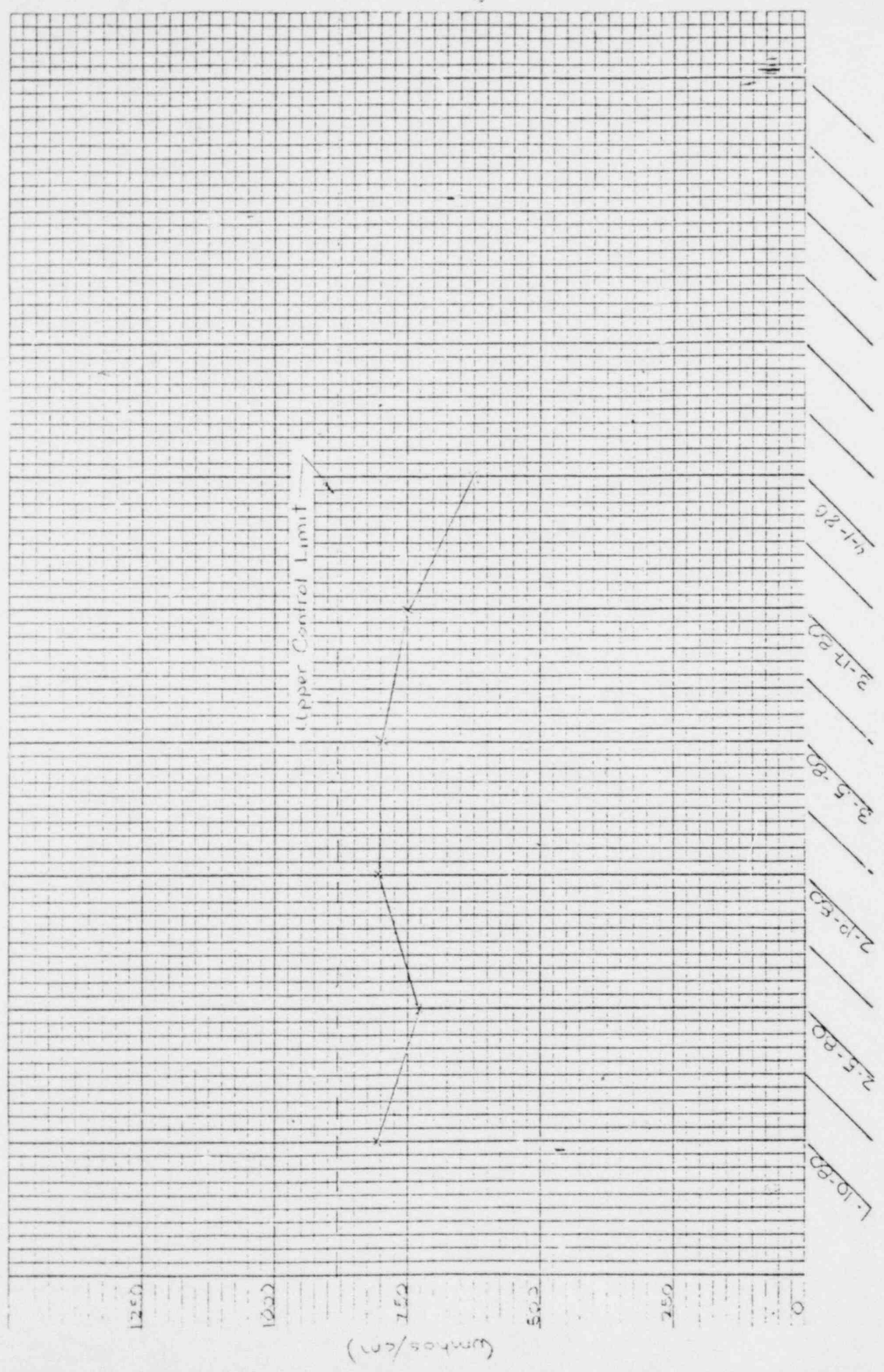
SAMPLE COLLECTION DATE





conductivity

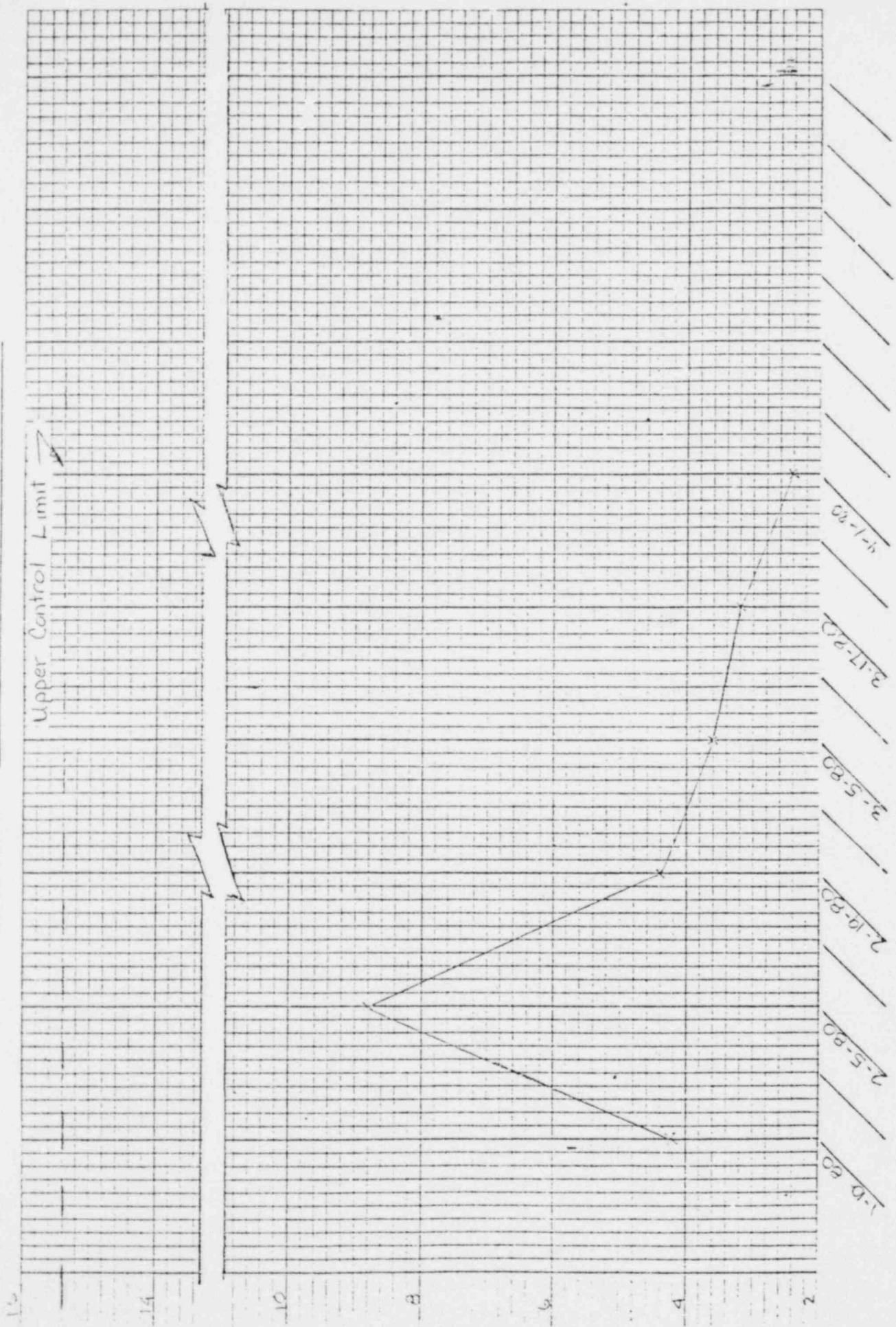
WELL NAME: \_\_\_\_\_ 370



SAMPLE COLLECTION DATE

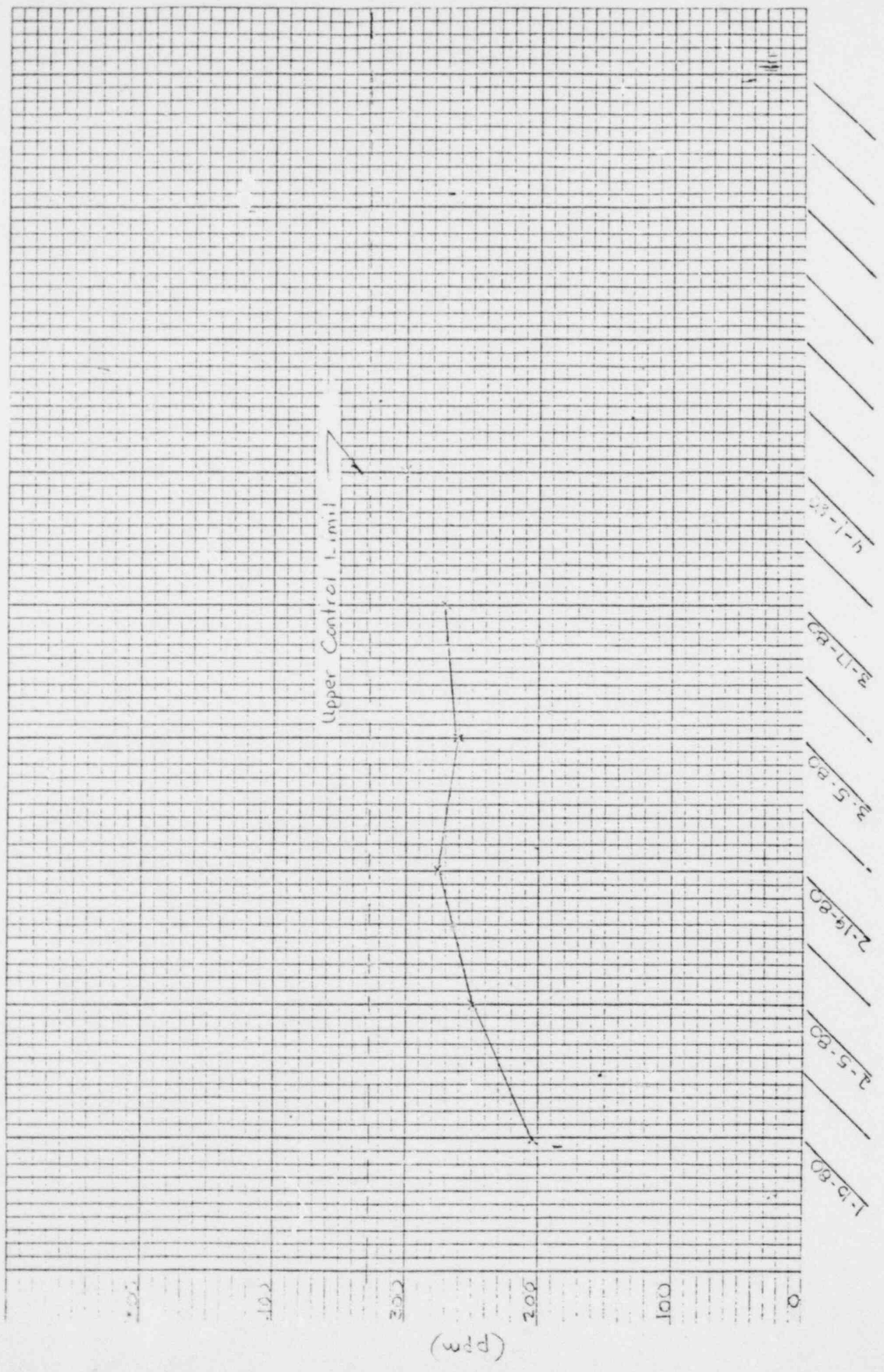
WELL NAME: \_\_\_\_\_

32.1



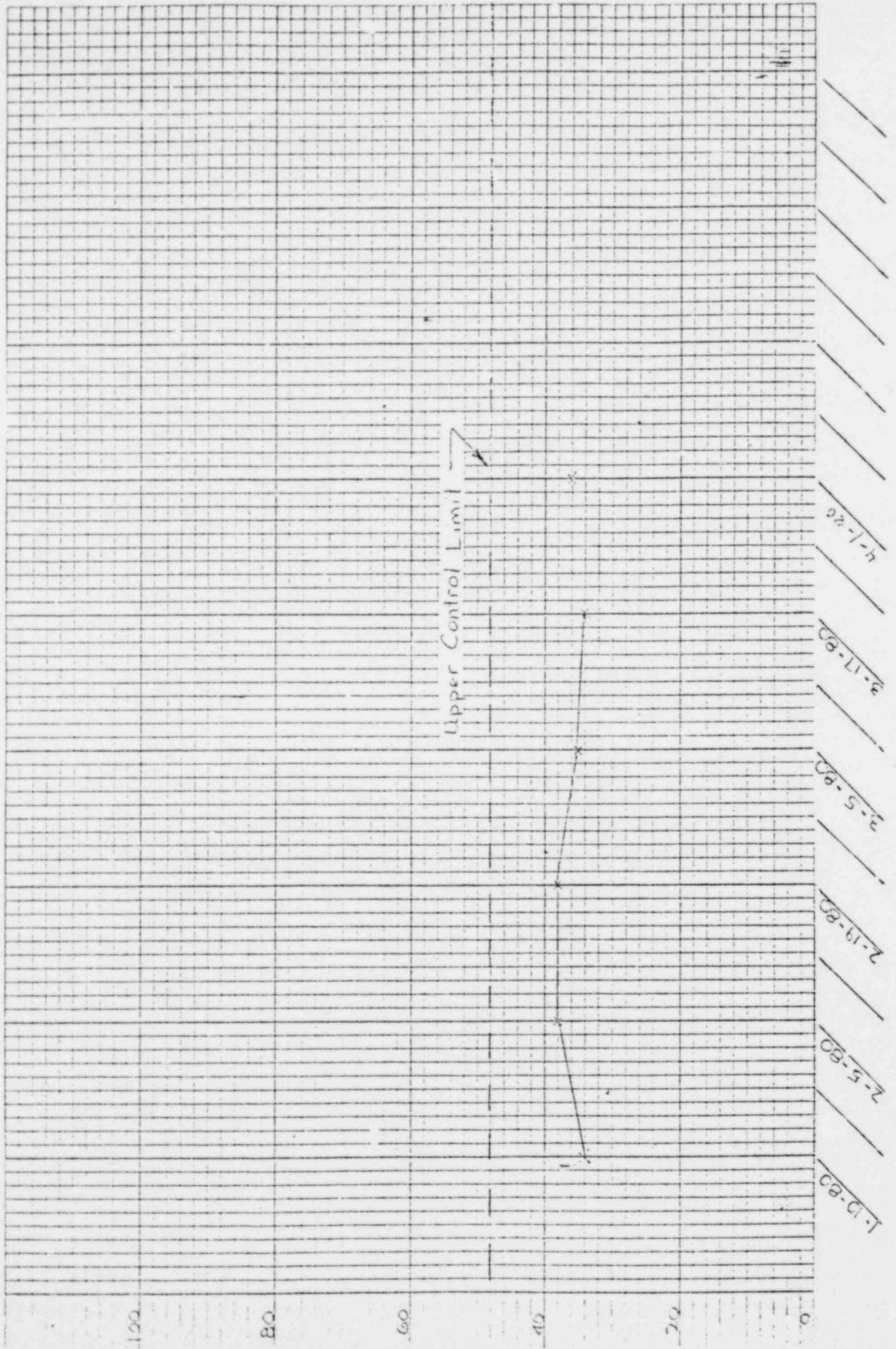
SAMPLE COLLECTION DATE

WELL NAME: 320



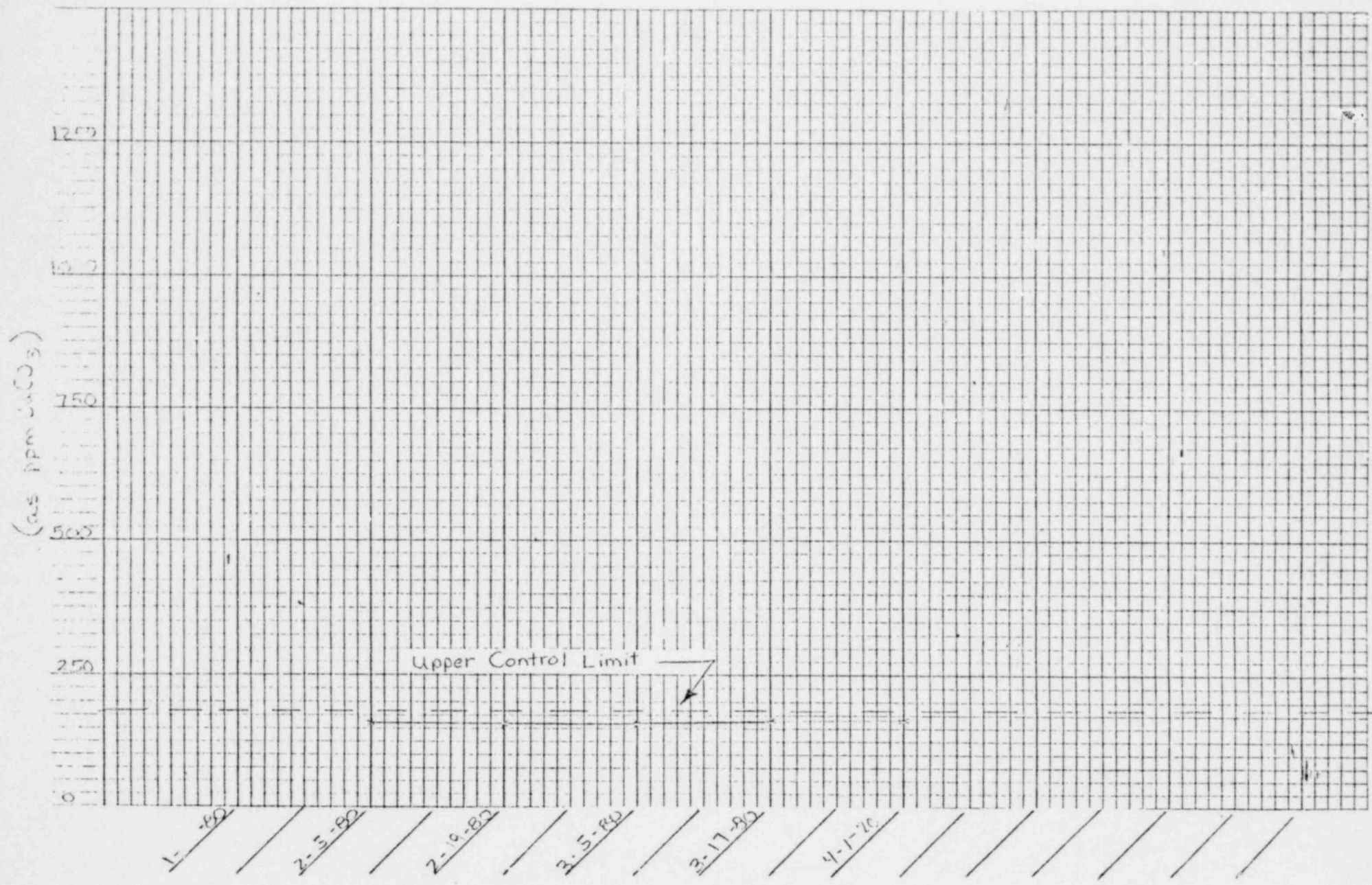
SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 32.0



SAMPLE COLLECTION DATE

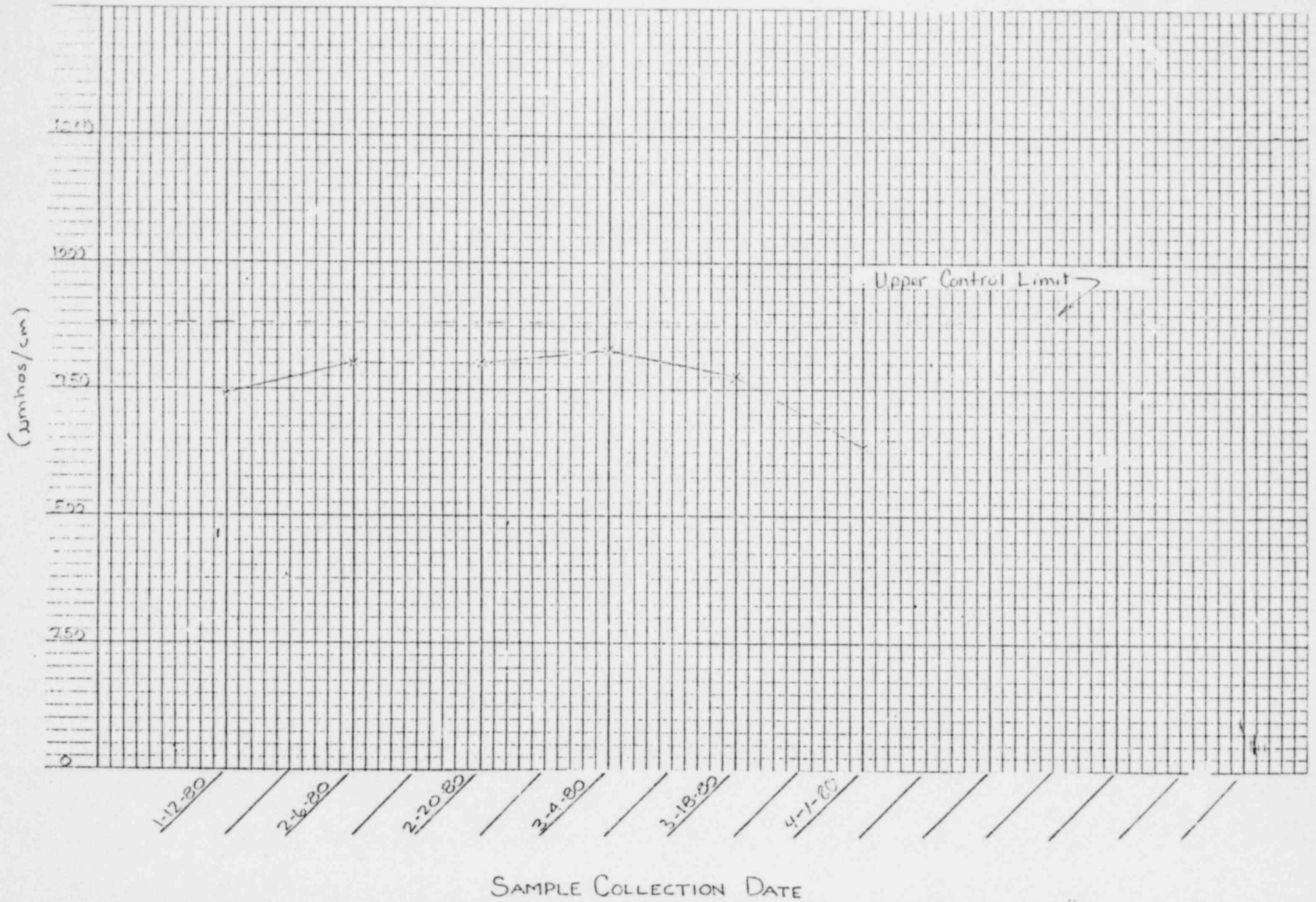
WELL NAME : 330



SAMPLE COLLECTION DATE



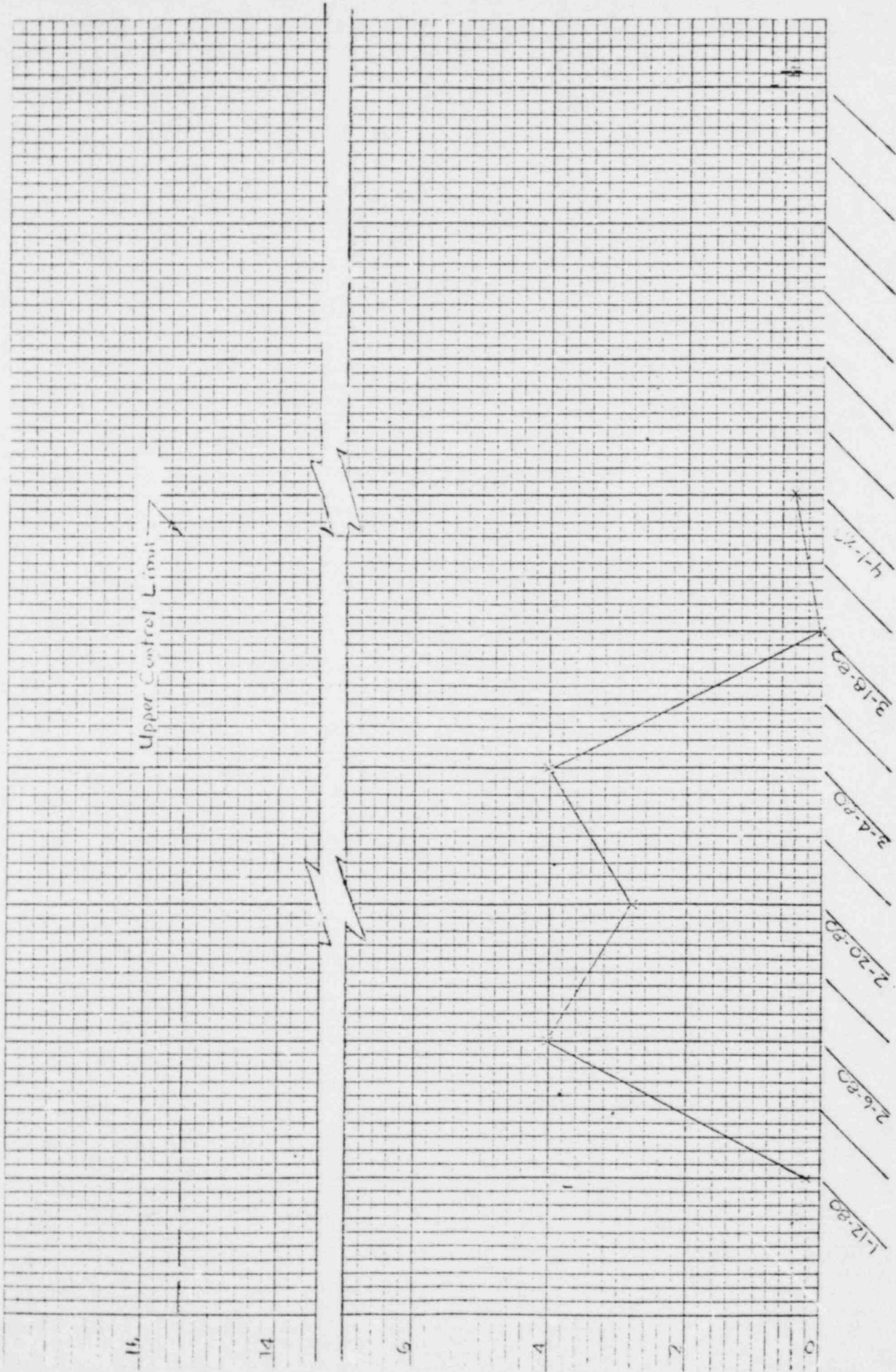
WELL NAME : N.M.1





WELL NAME: N.M.-1

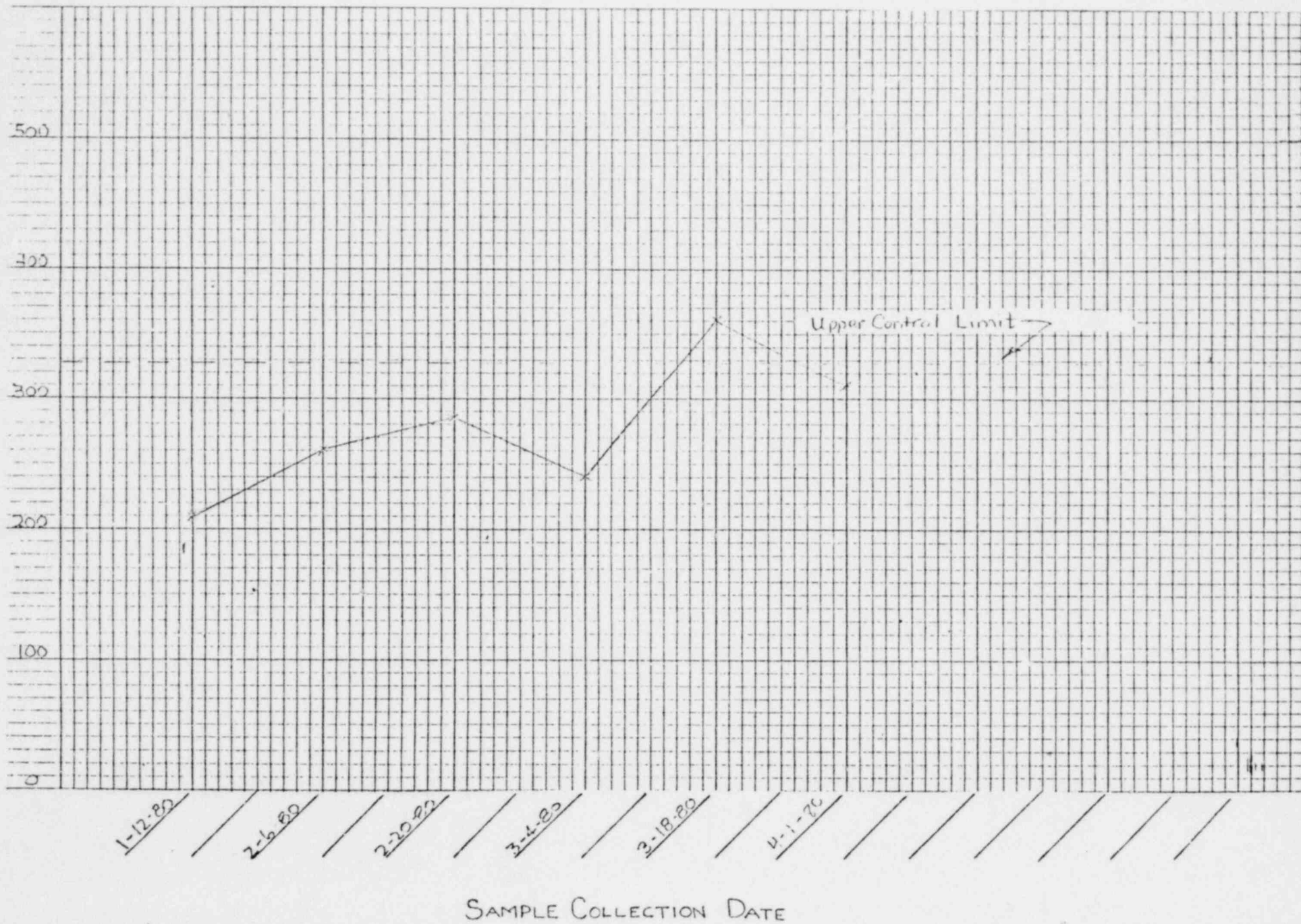
Chloride



SAMPLE COLLECTION DATE

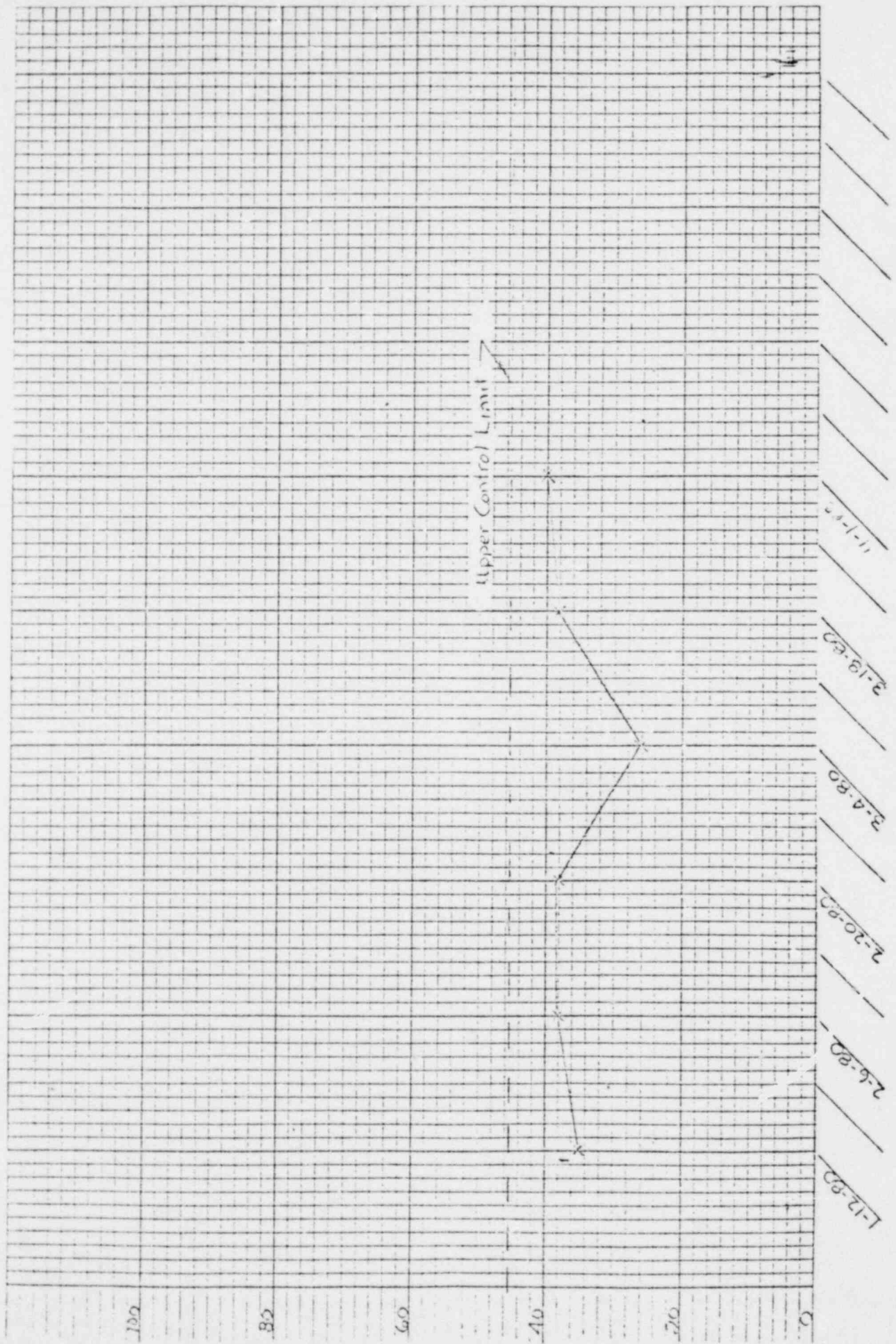
(ppm)

WELL NAME : 11-14-1



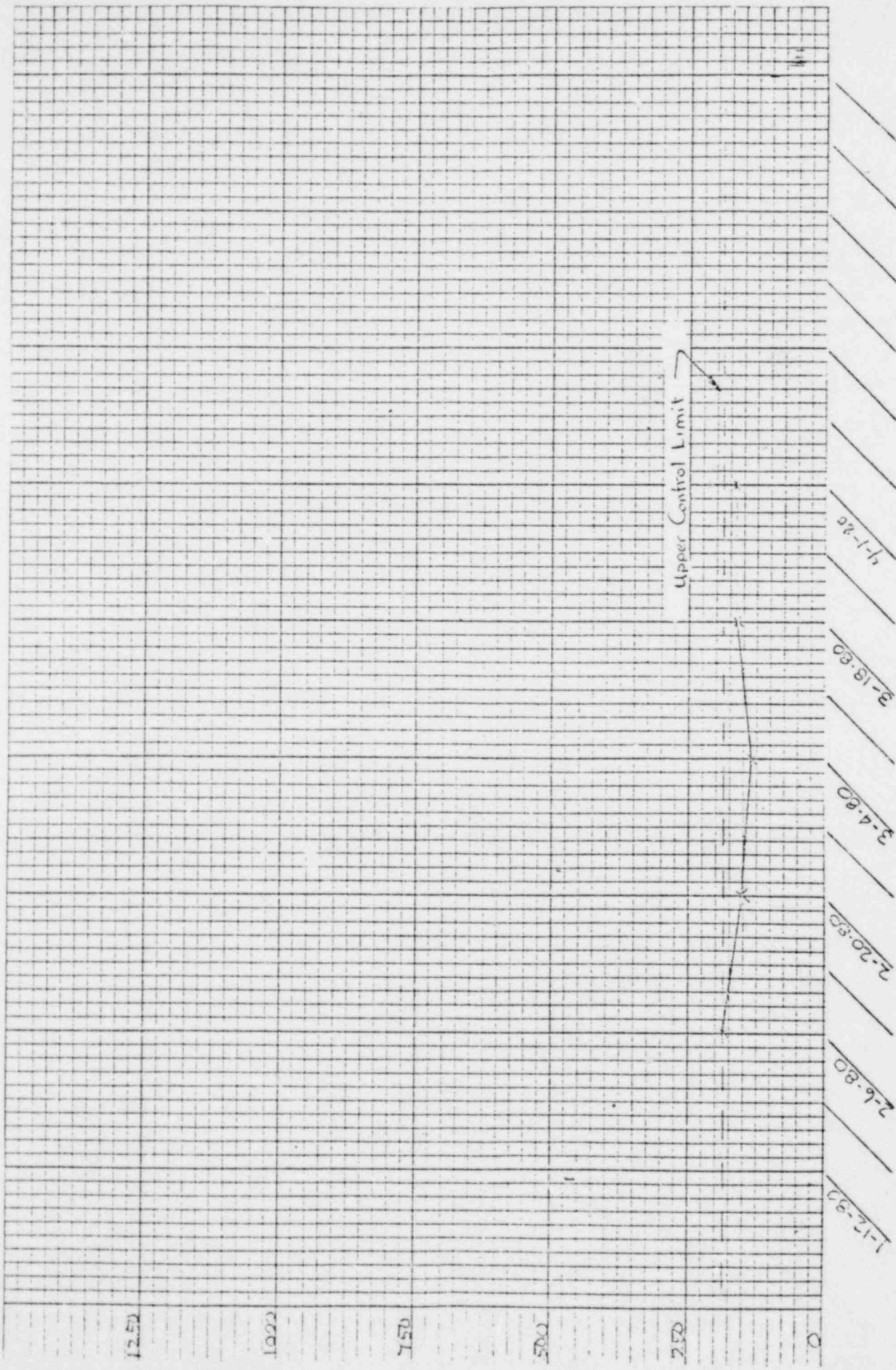
m-001111C

WELL NAME : \_\_\_\_\_ F. M. I



SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 11M

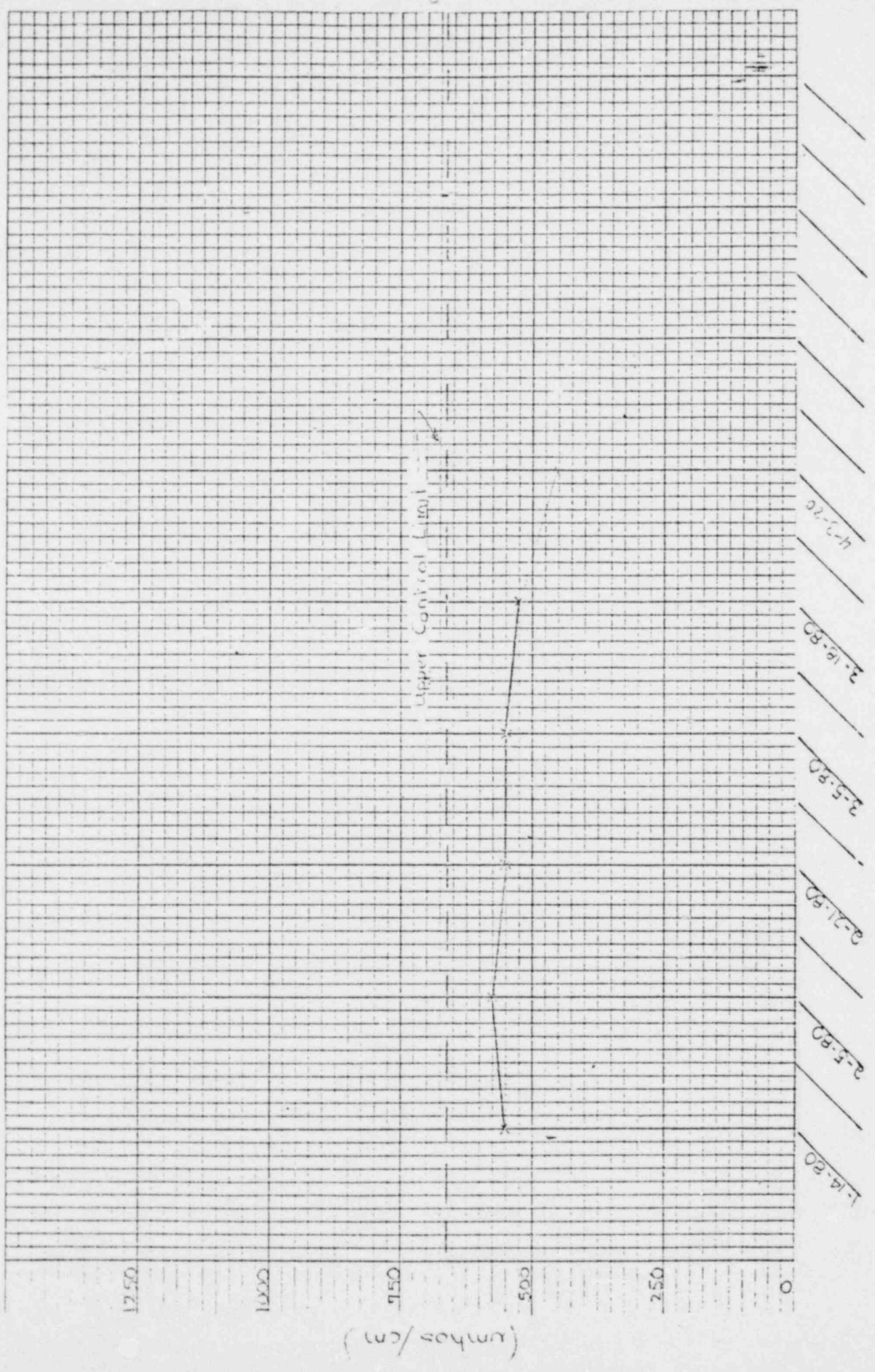


SAMPLE COLLECTION DATE



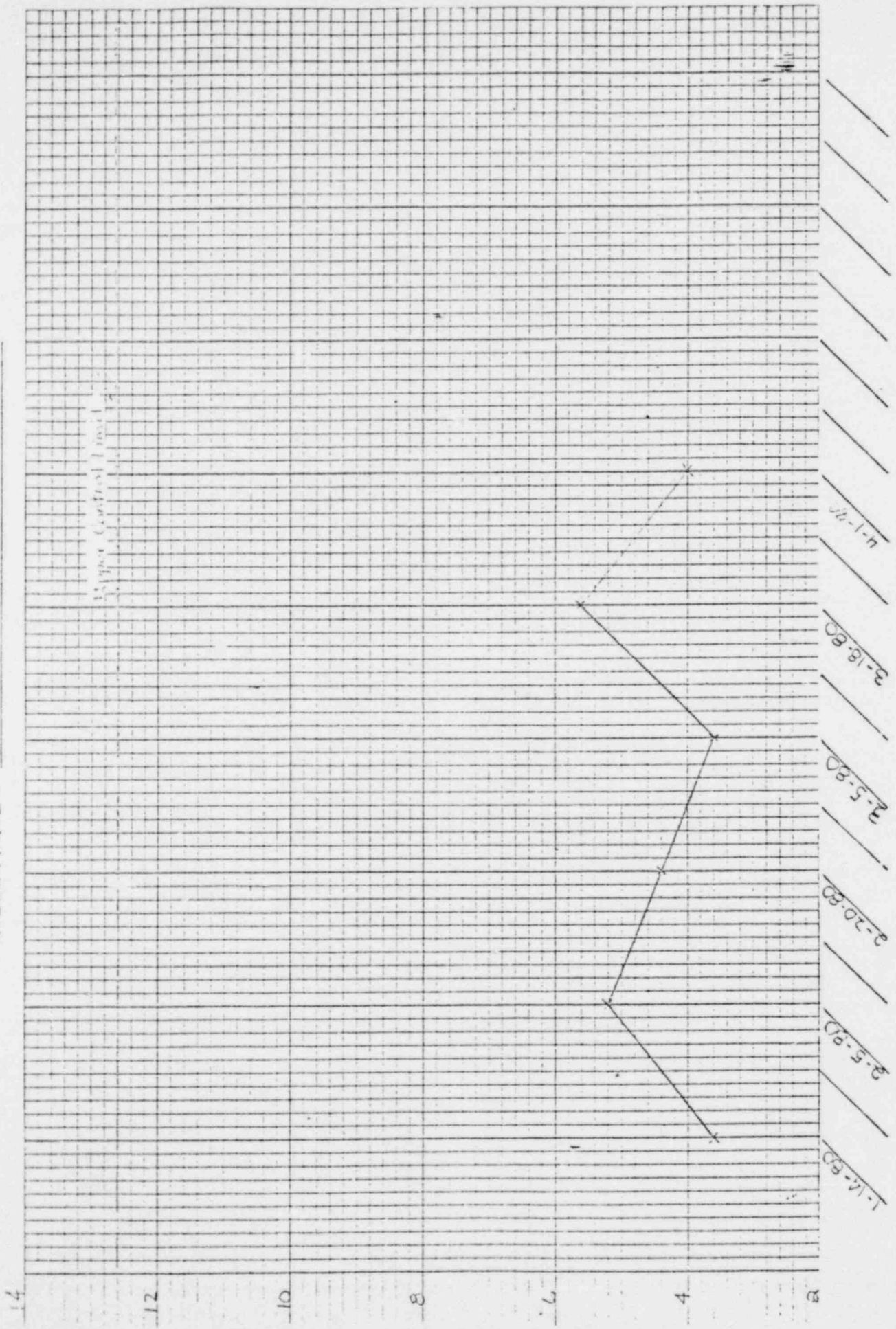
Conductivity

WELL NAME: \_\_\_\_\_ 3015



SAMPLE COLLECTION DATE

WELL NAME: \_\_\_\_\_ 305



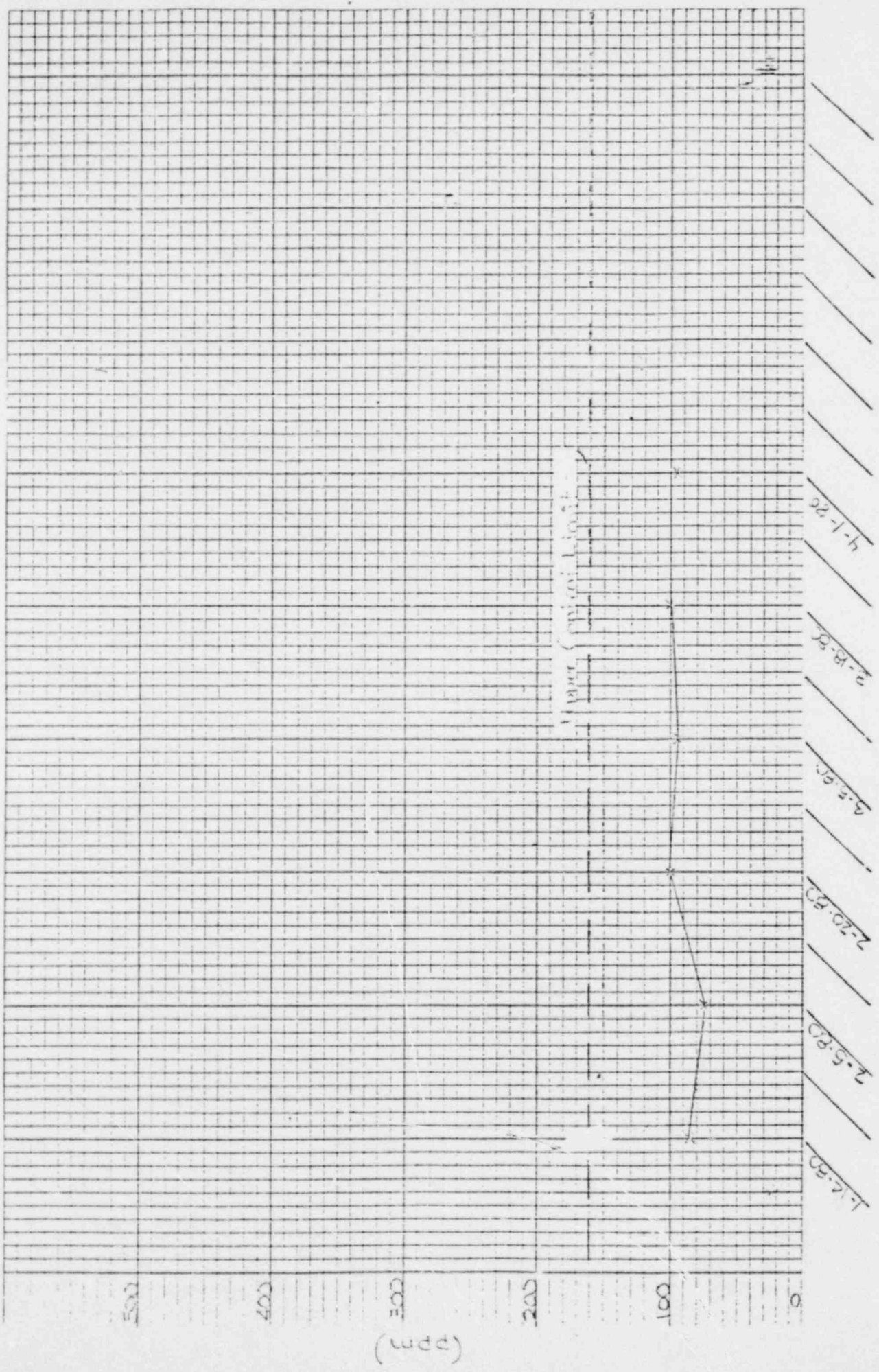
Water Control Point

(ft)

SAMPLE COLLECTION DATE

201 10.1

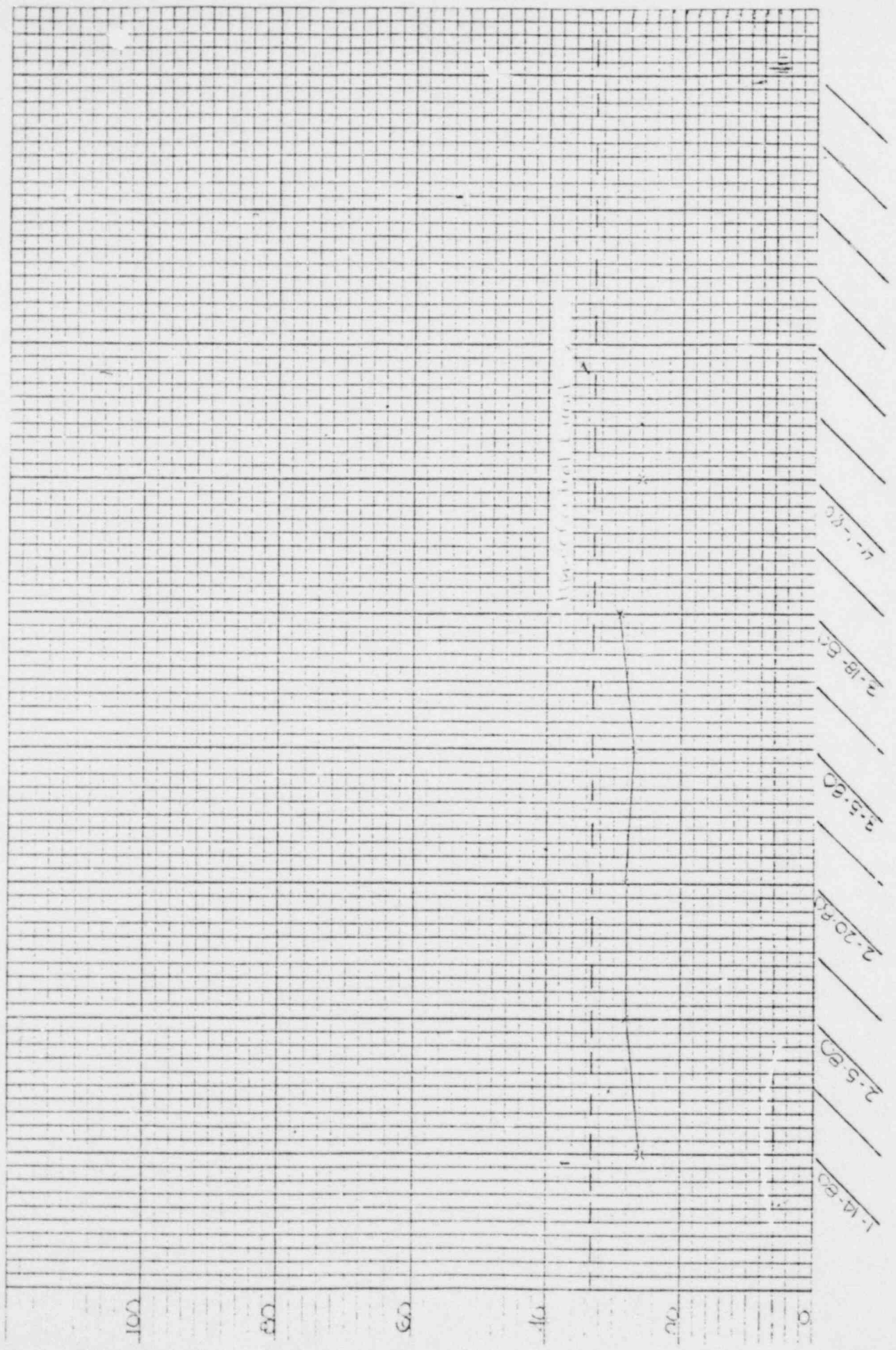
WELL NAME: \_\_\_\_\_



SAMPLE COLLECTION DATE

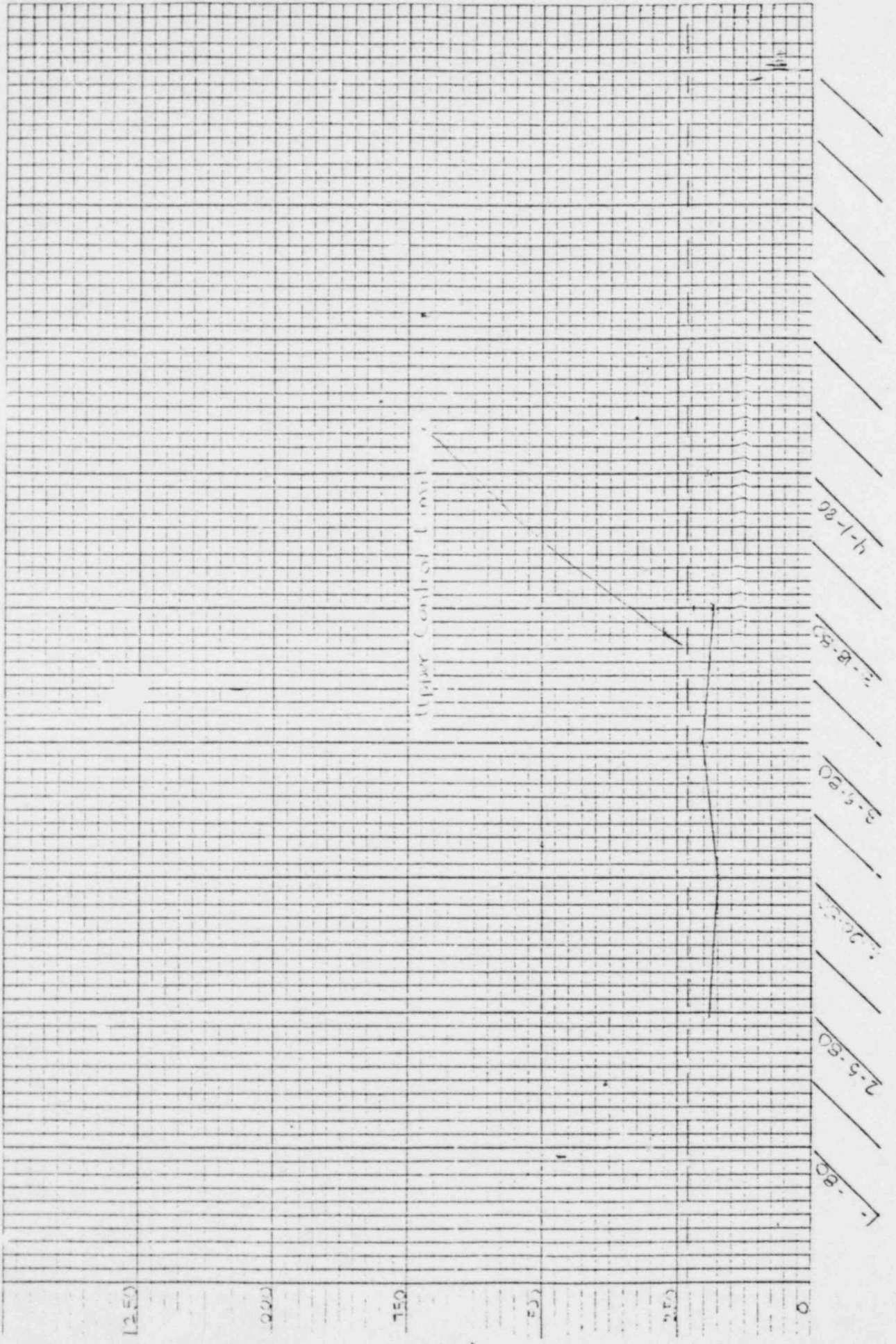


WELL NAME : \_\_\_\_\_



SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_

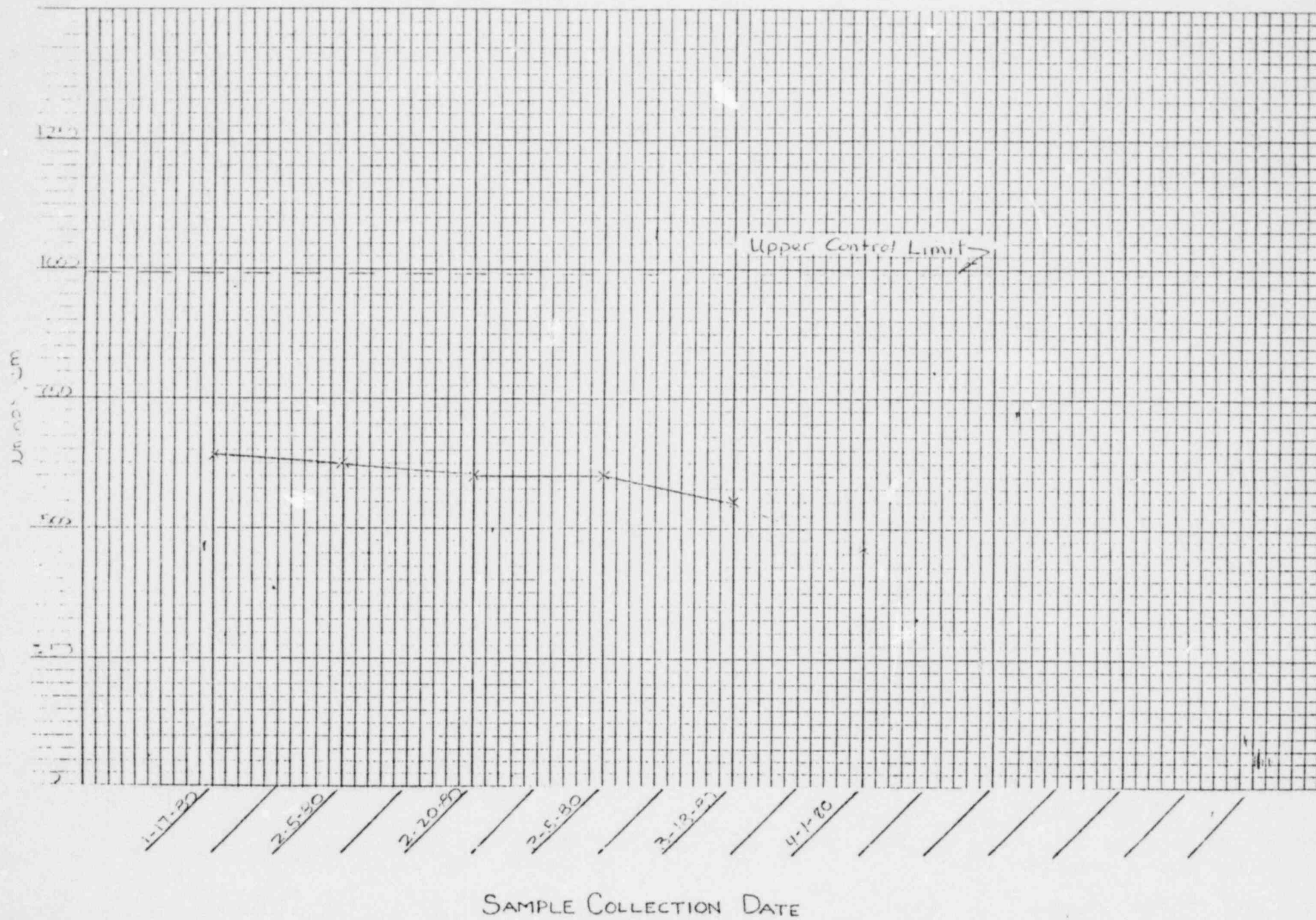


(as P<sub>2</sub>O<sub>5</sub> CaCO<sub>3</sub>)

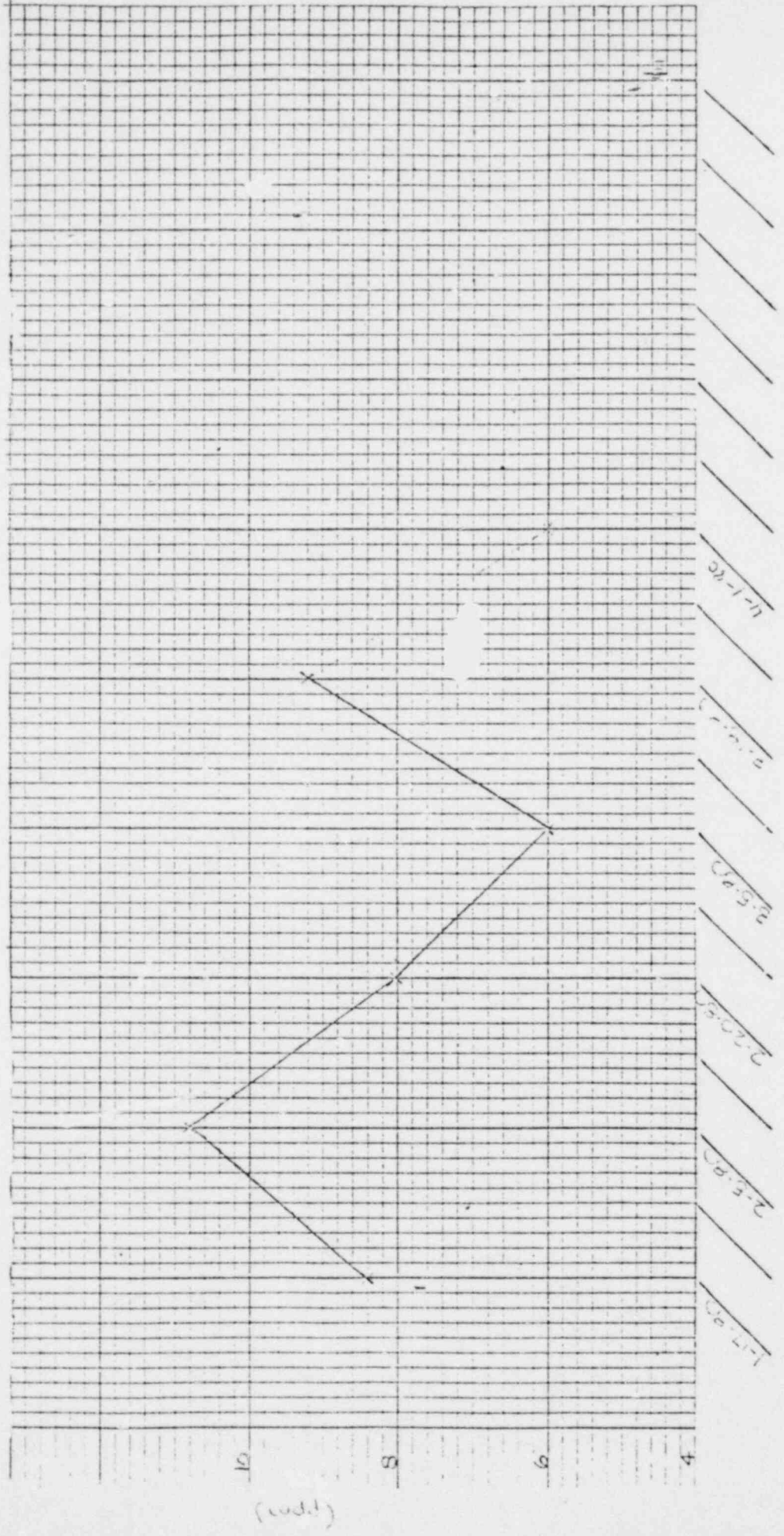
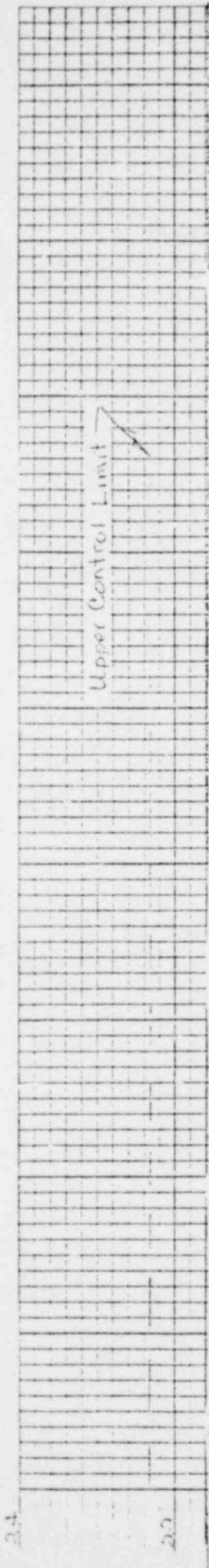
SAMPLE COLLECTION DATE



WELL NAME : \_\_\_\_\_

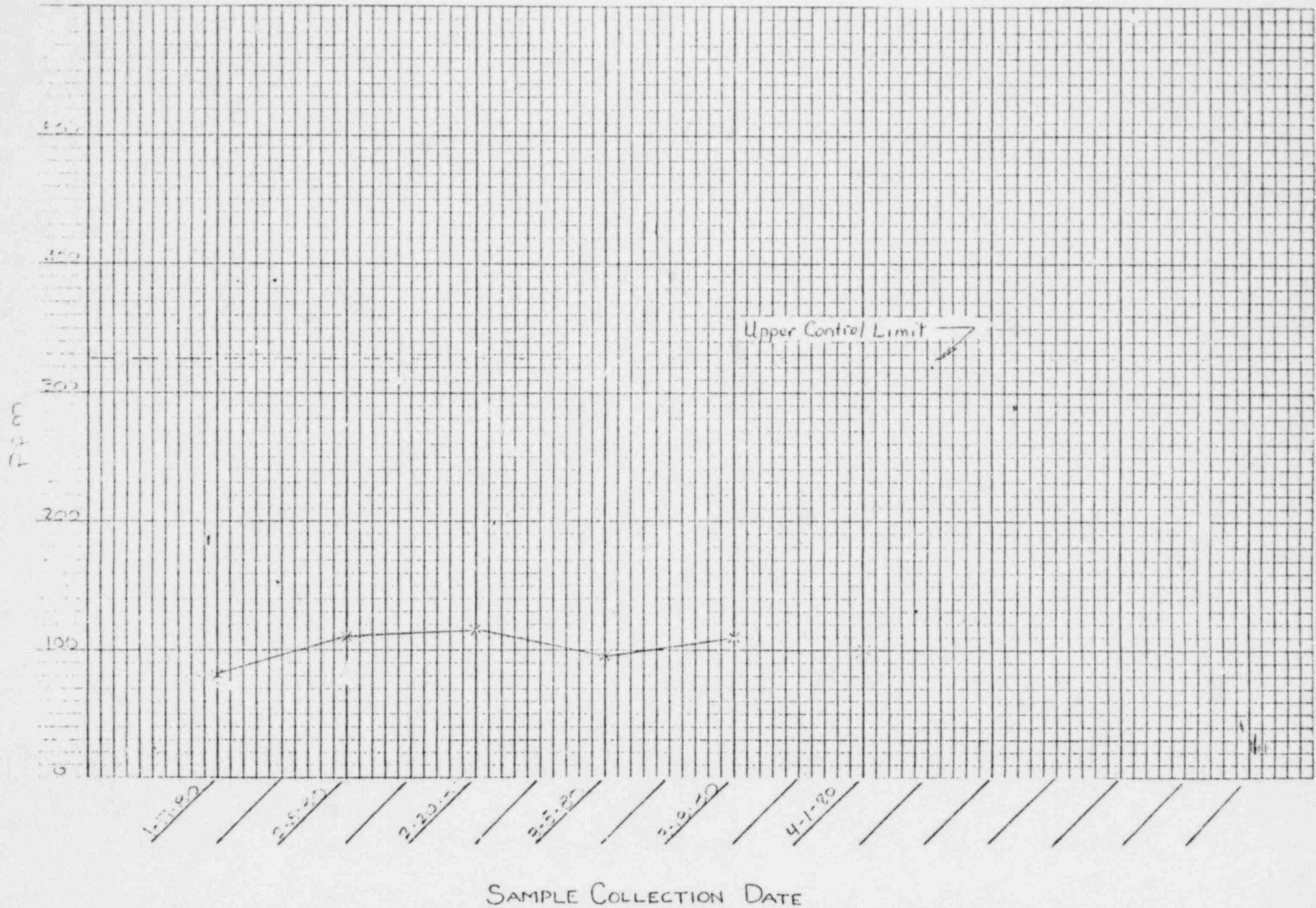


WELL NAME: \_\_\_\_\_

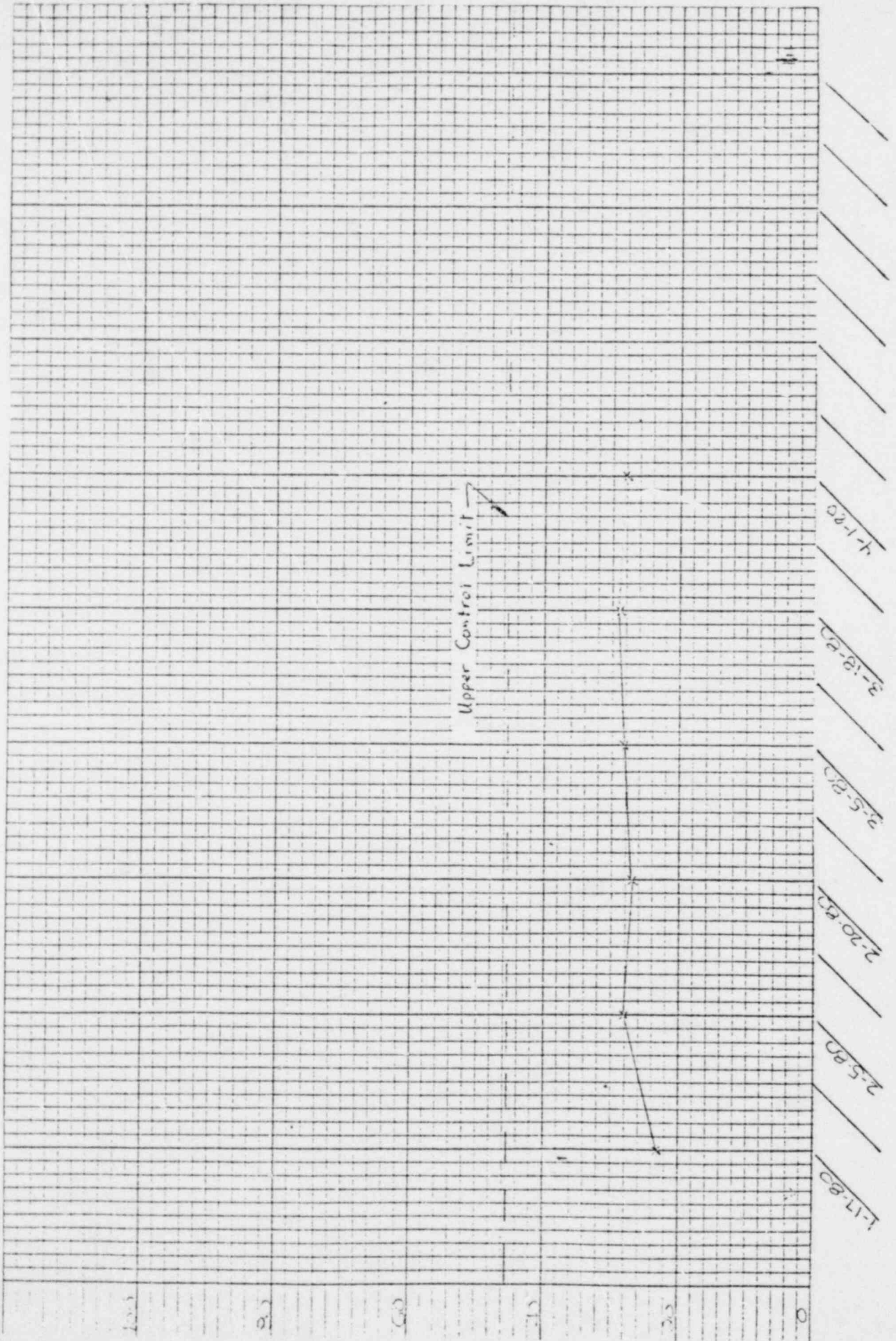


SAMPLE COLLECTION DATE

WELL NAME : \_\_\_\_\_ 095 \_\_\_\_\_



WELL NAME: 595

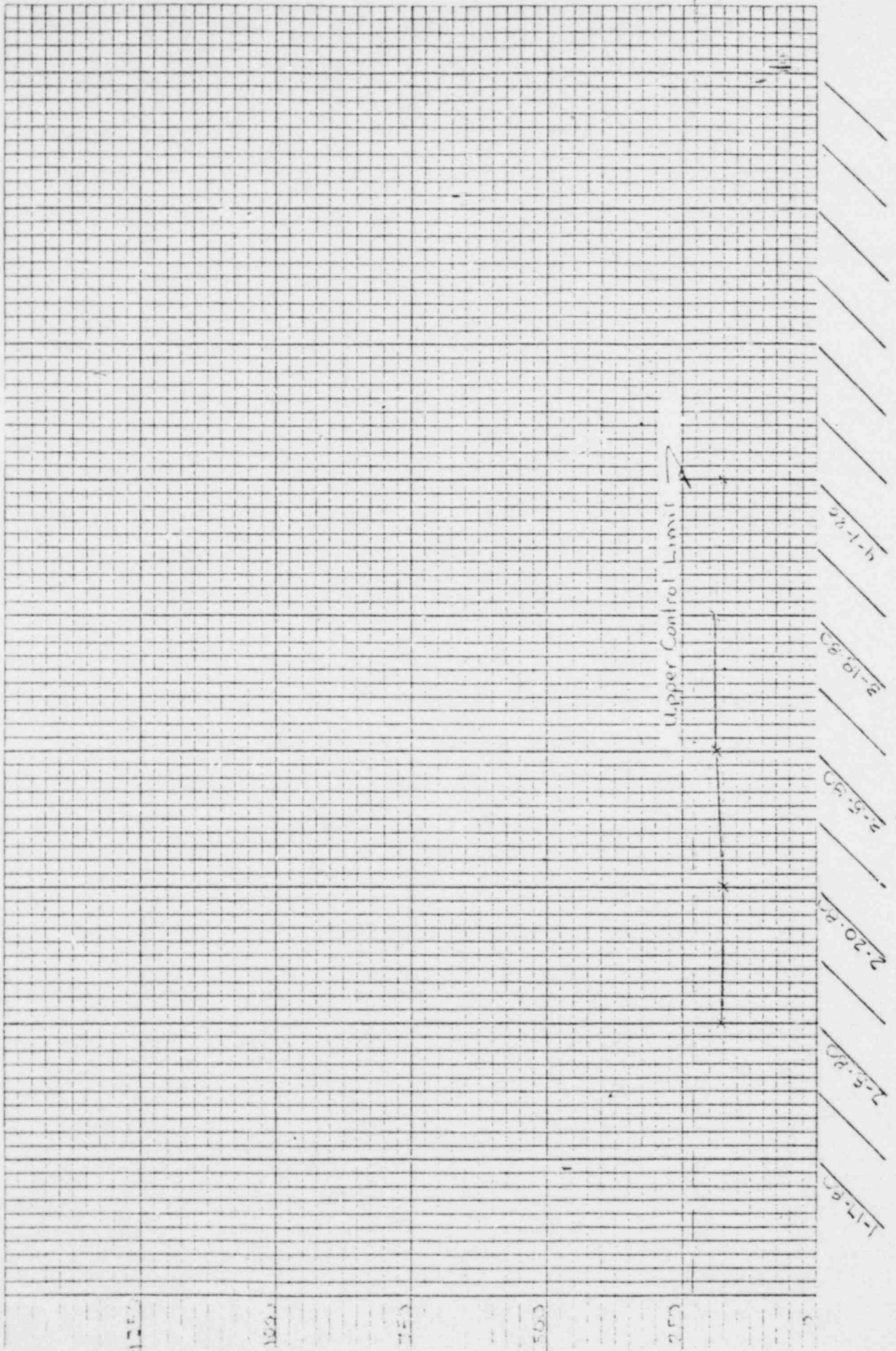


SAMPLE COLLECTION DATE

(cm)

WELL NAME: \_\_\_\_\_

ENE



SAMPLE COLLECTION DATE

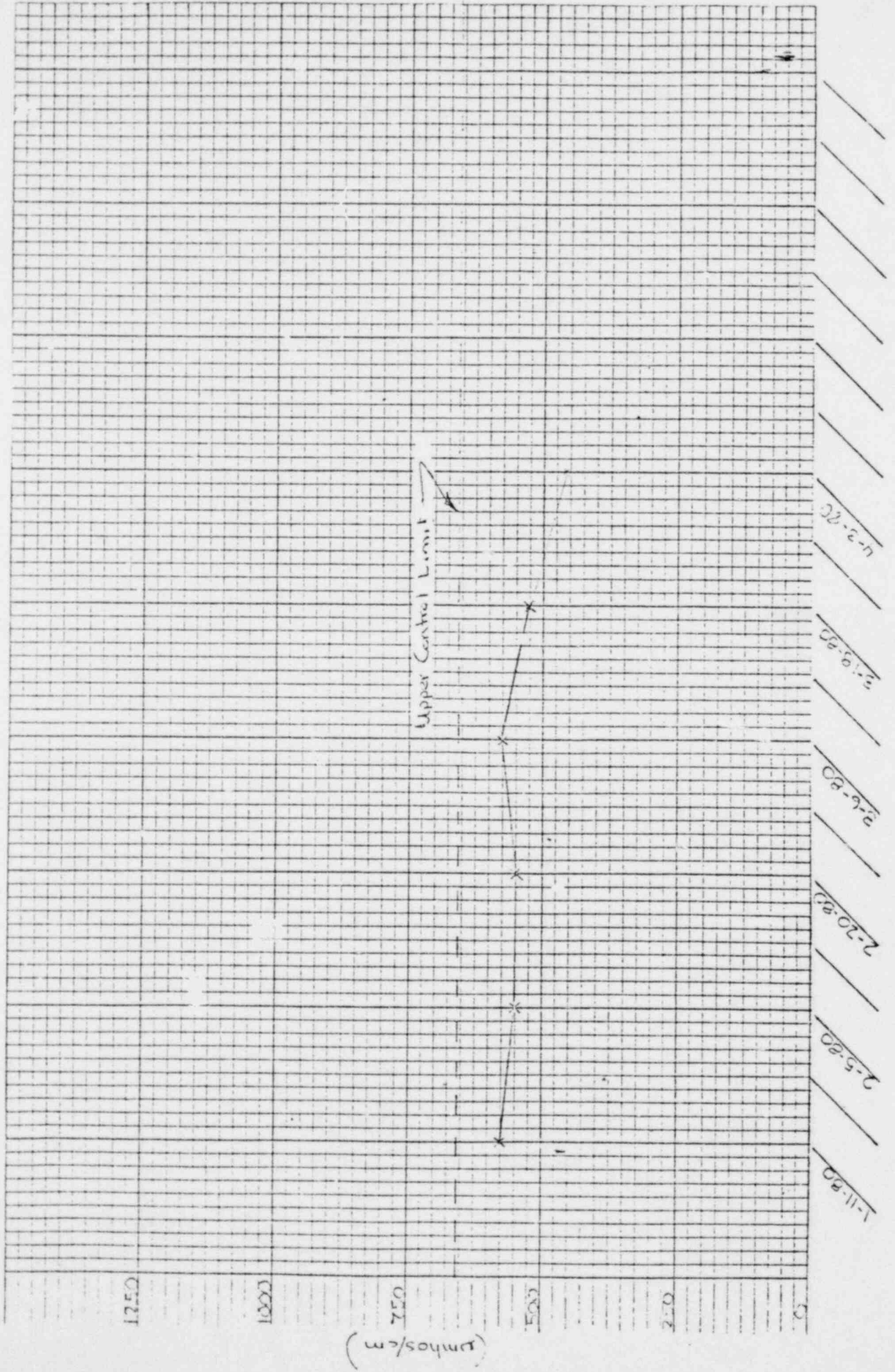
8 pH





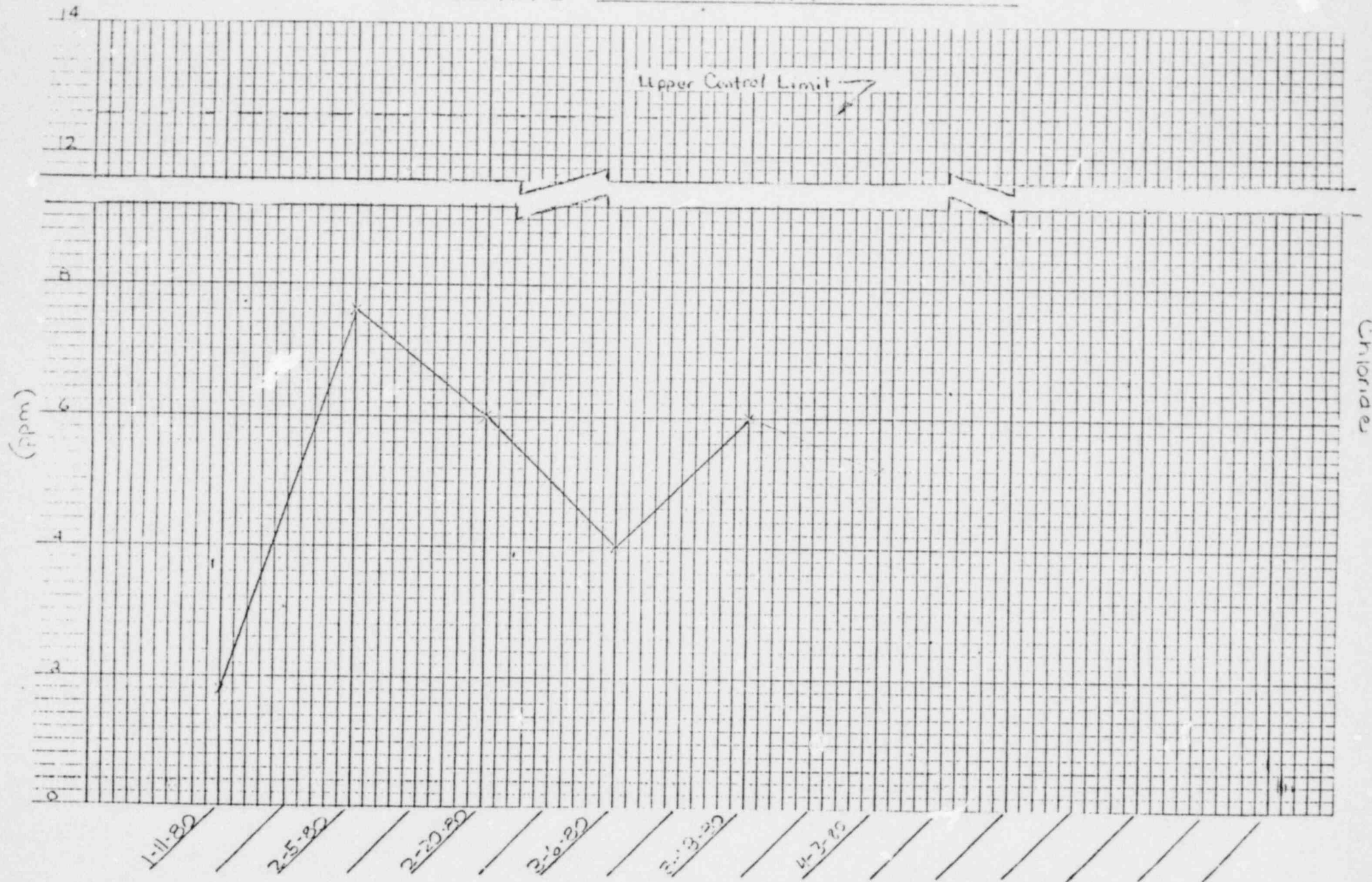
CONDUCTIVITY

WELL NAME: 10-10-1



SAMPLE COLLECTION DATE

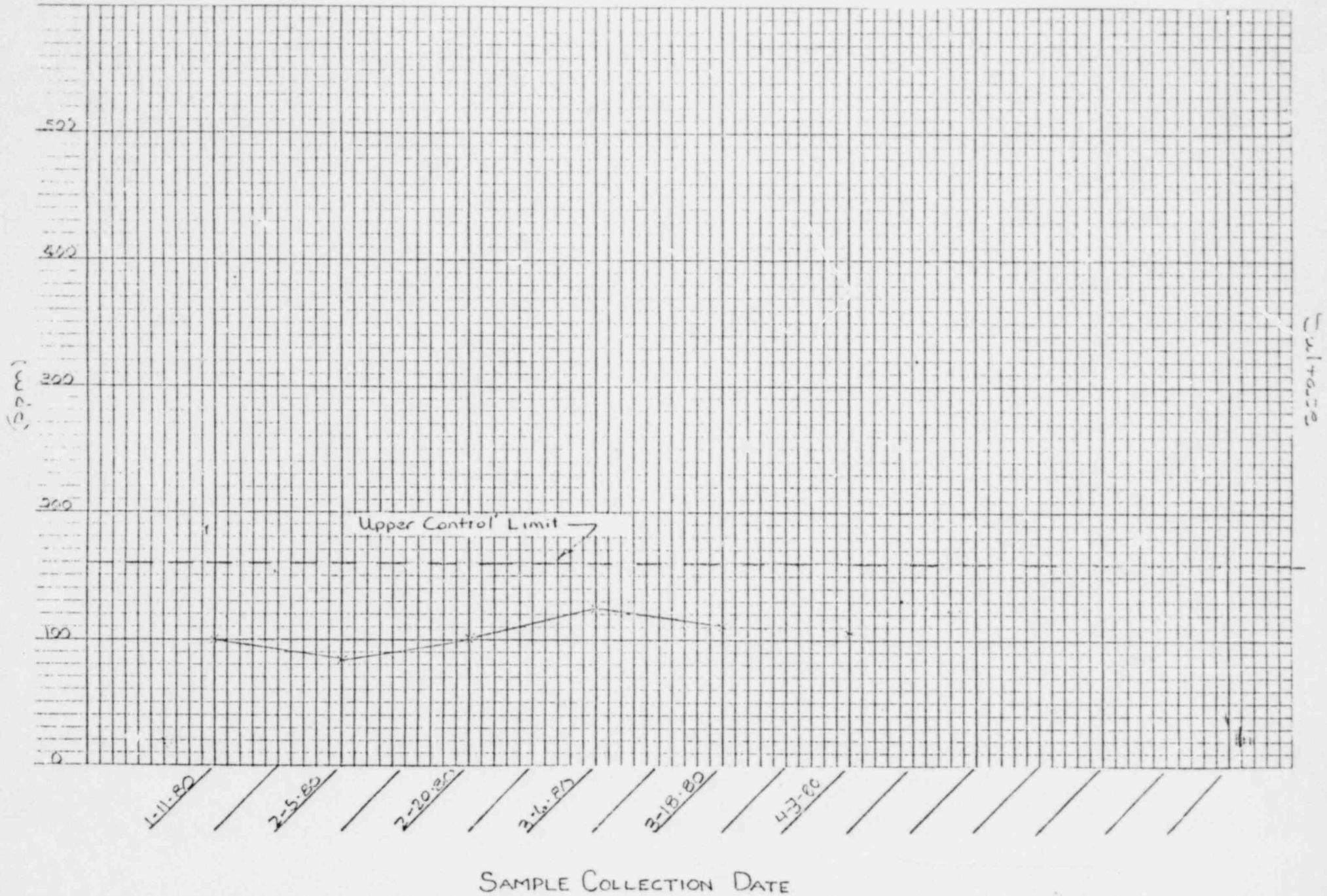
WELL NAME : mm-1



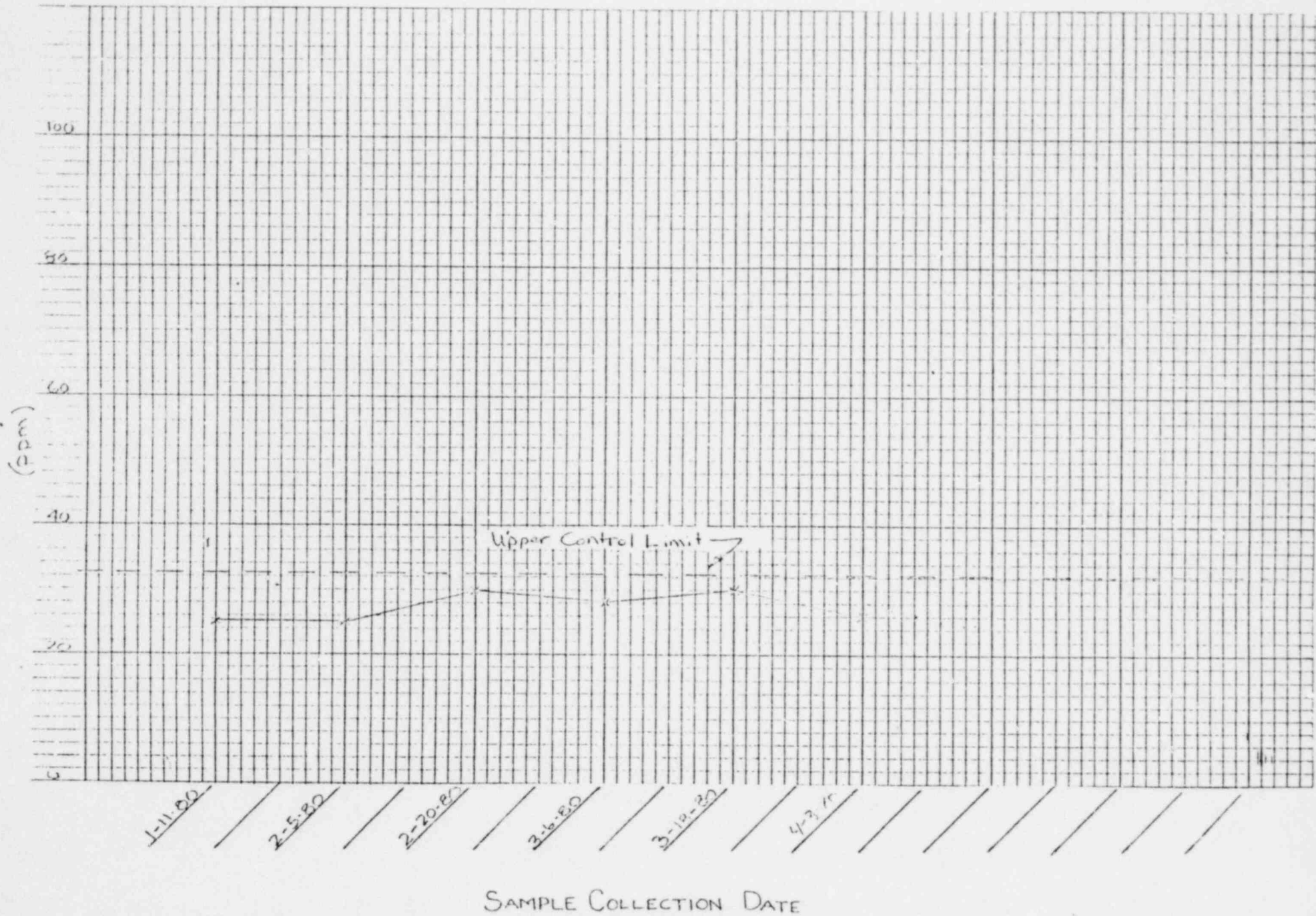
Chloride

SAMPLE COLLECTION DATE

WELL NAME : m m-1

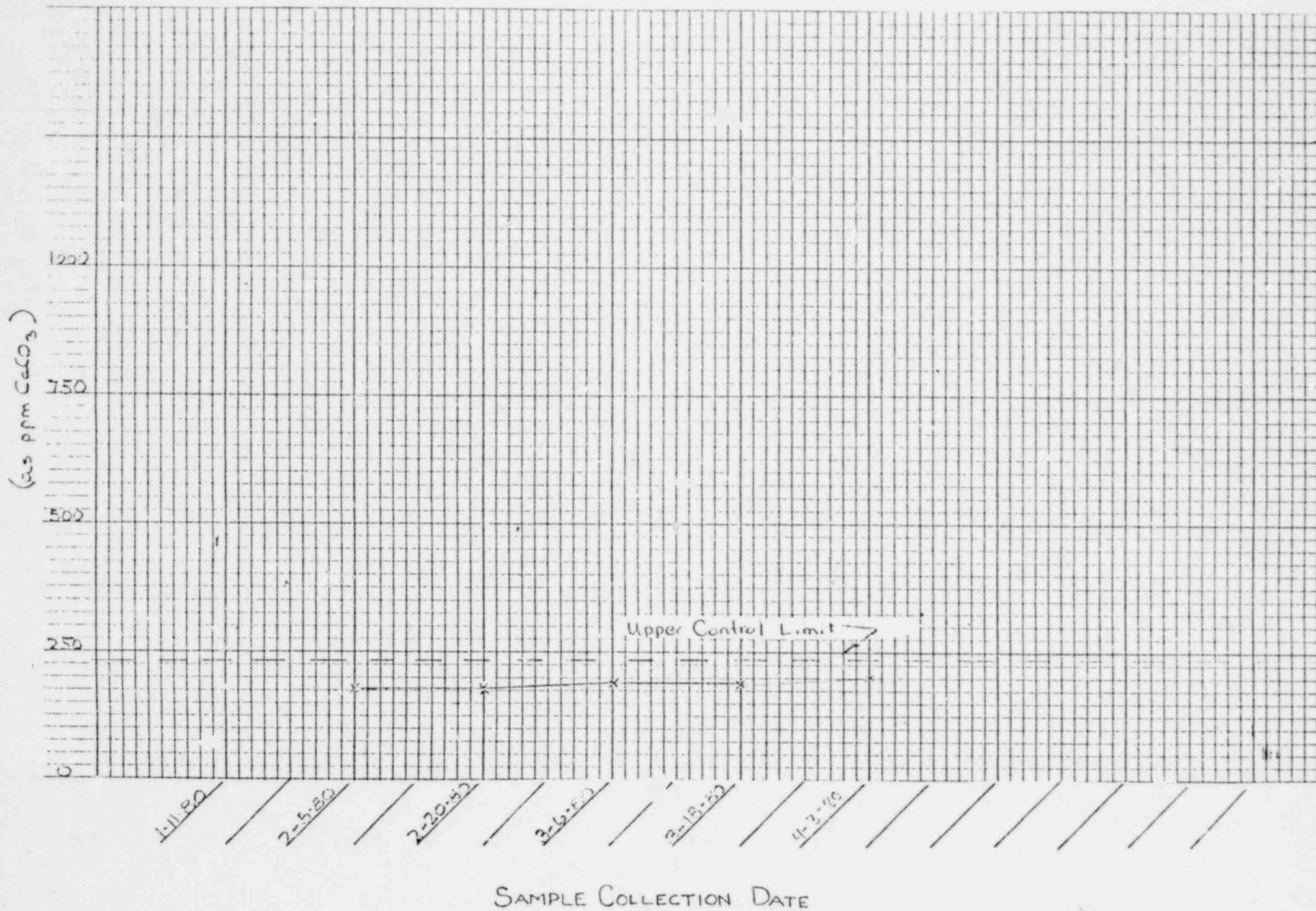


WELL NAME : 11 11 1



Sodium

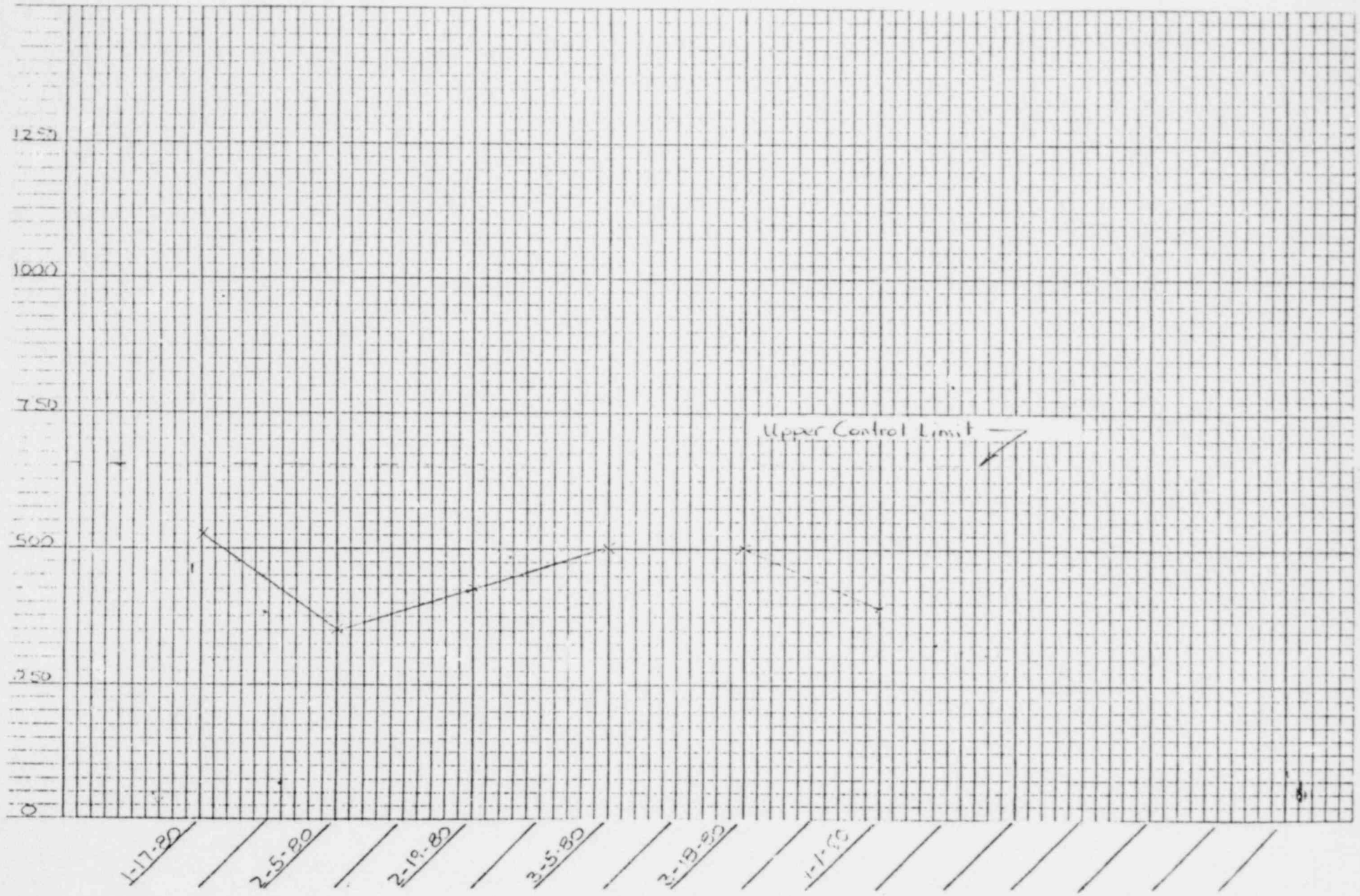
WELL NAME : m m-1



ALUMINUM



WELL NAME : M 10-2

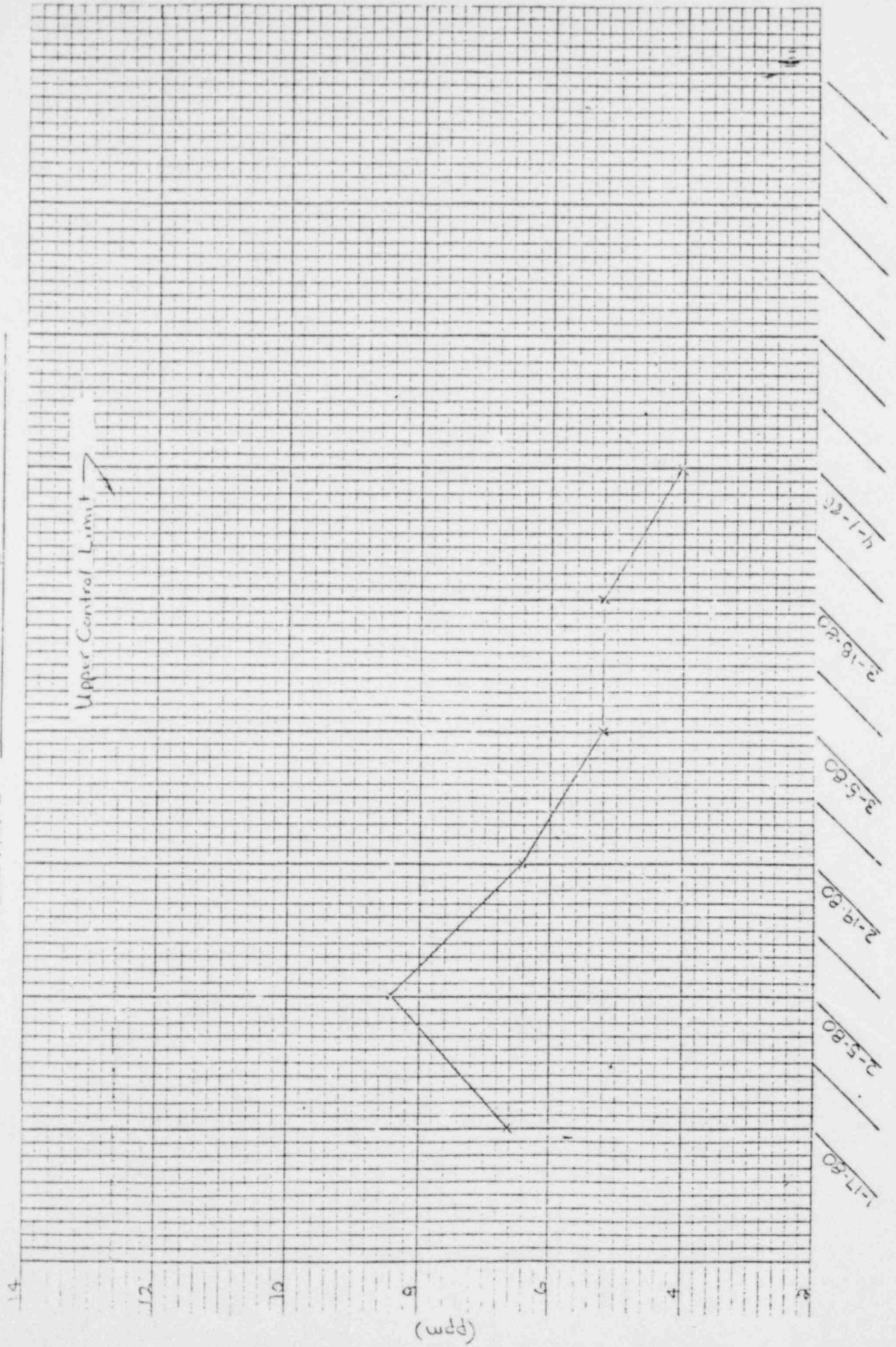


SAMPLE COLLECTION DATE

CONCENTRATION



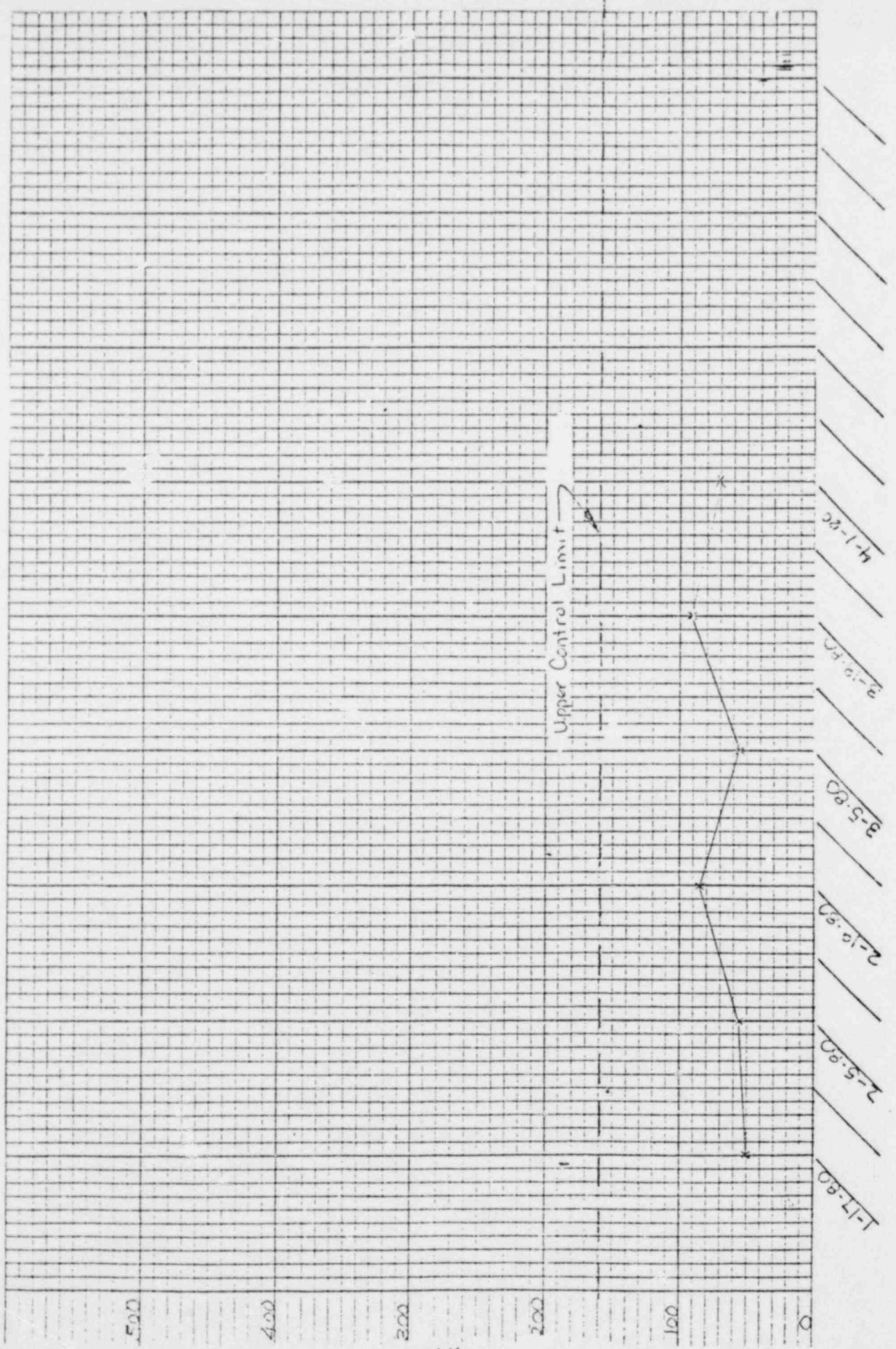
WELL NAME: (1) (1) (1)



SAMPLE COLLECTION DATE

Sulfate

WELL NAME: 10-10-2

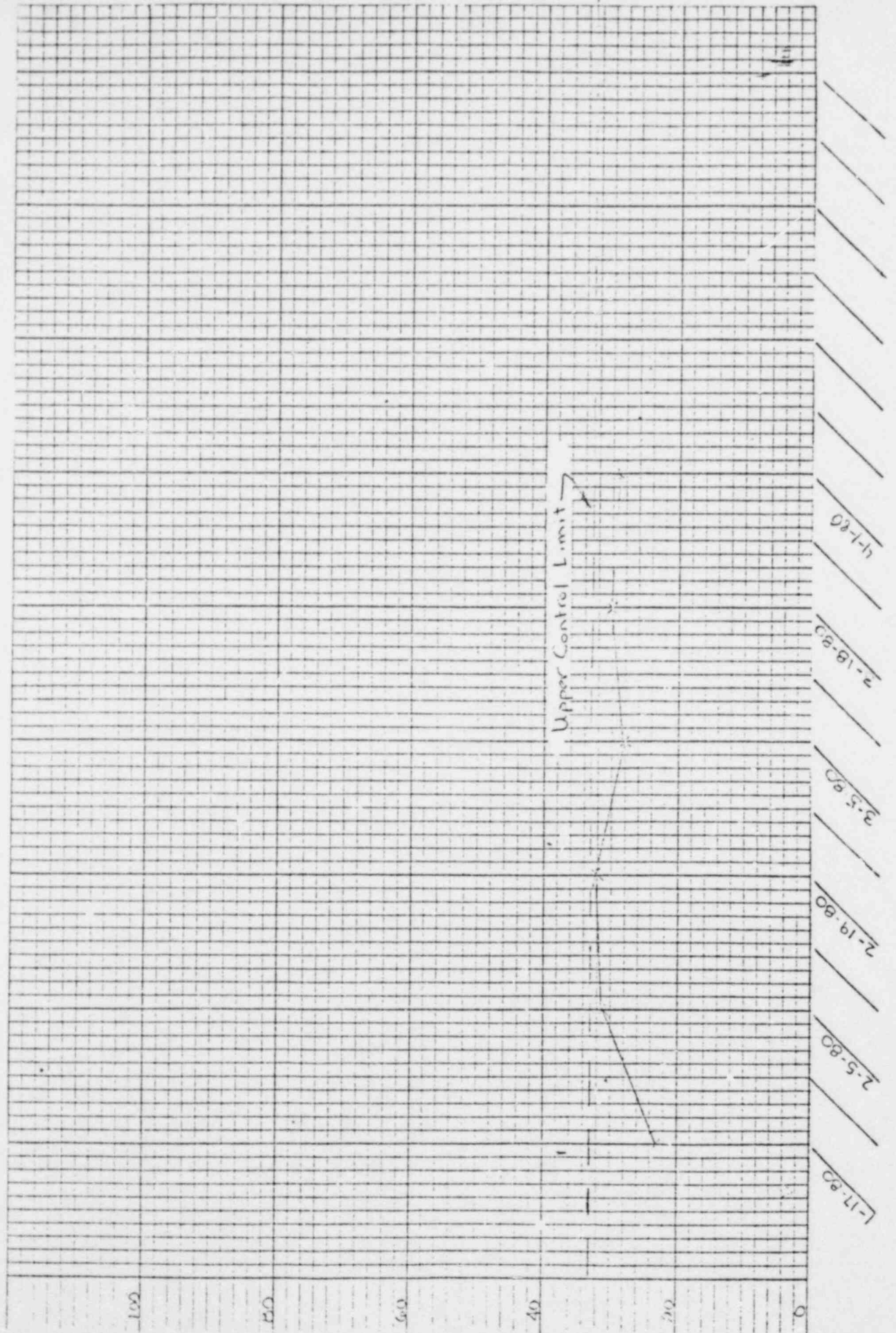


SAMPLE COLLECTION DATE

(mg/l)

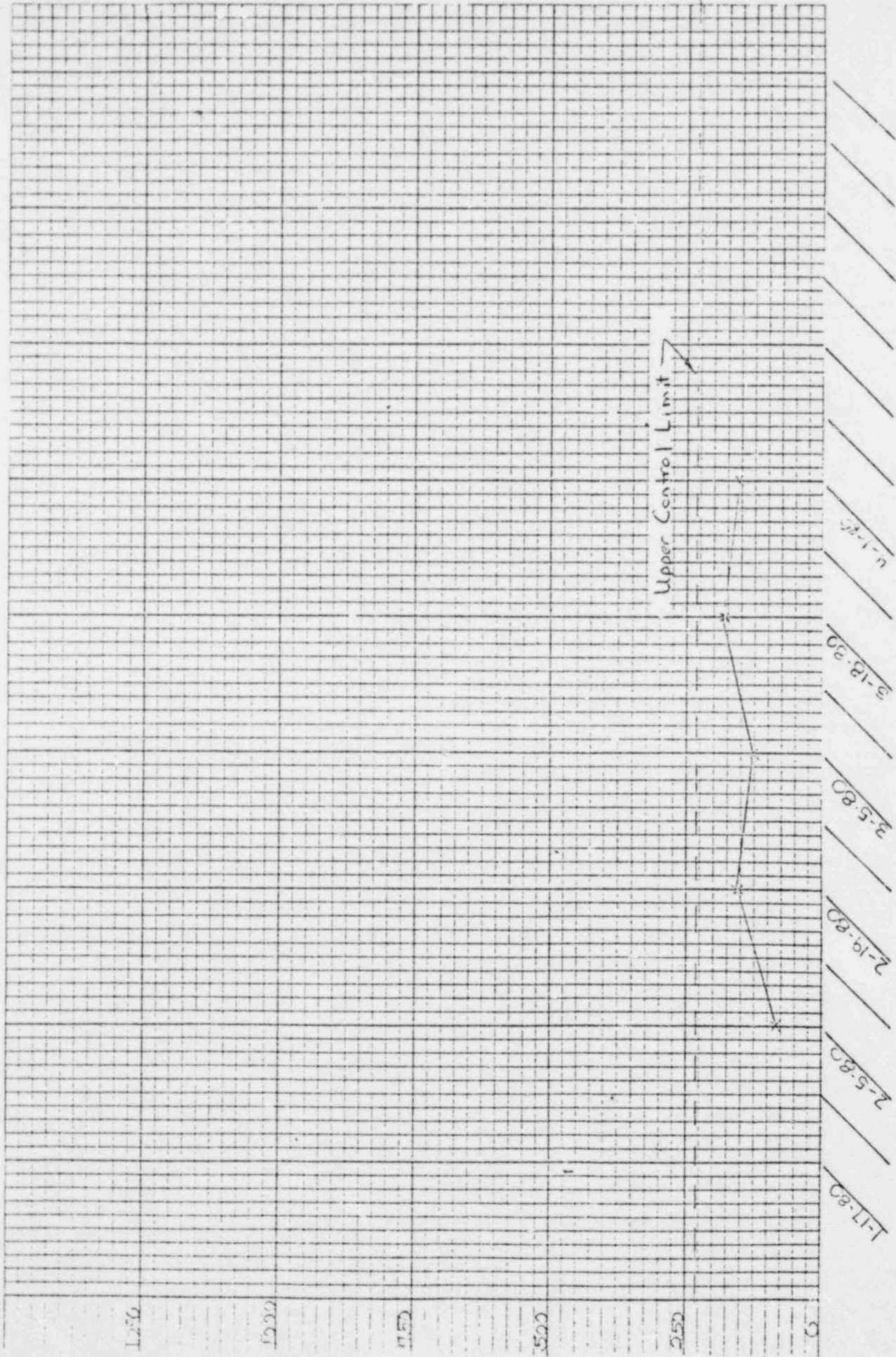
Sodium

WELL NAME: M 1A 7



SAMPLE COLLECTION DATE

WELL NAME: 10-10-2



SAMPLE COLLECTION DATE

APPENDIX D  
TETON-NEDCO MONITOR WELLS  
WEEKLY WATER LEVELS

WELL 314

Elev. of MP 5201.2

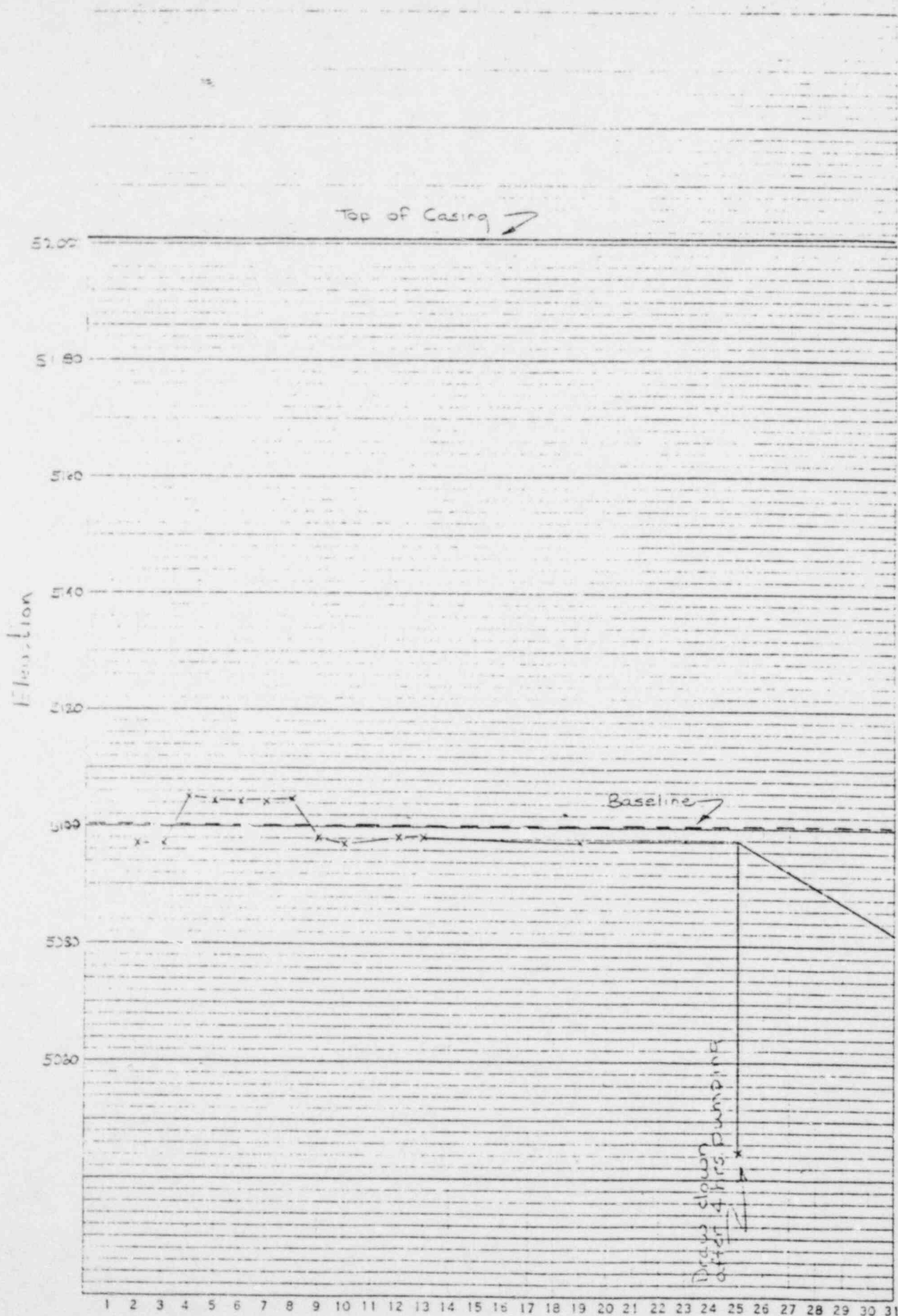
Aquifer Represented Basil

Baseline 5100.45

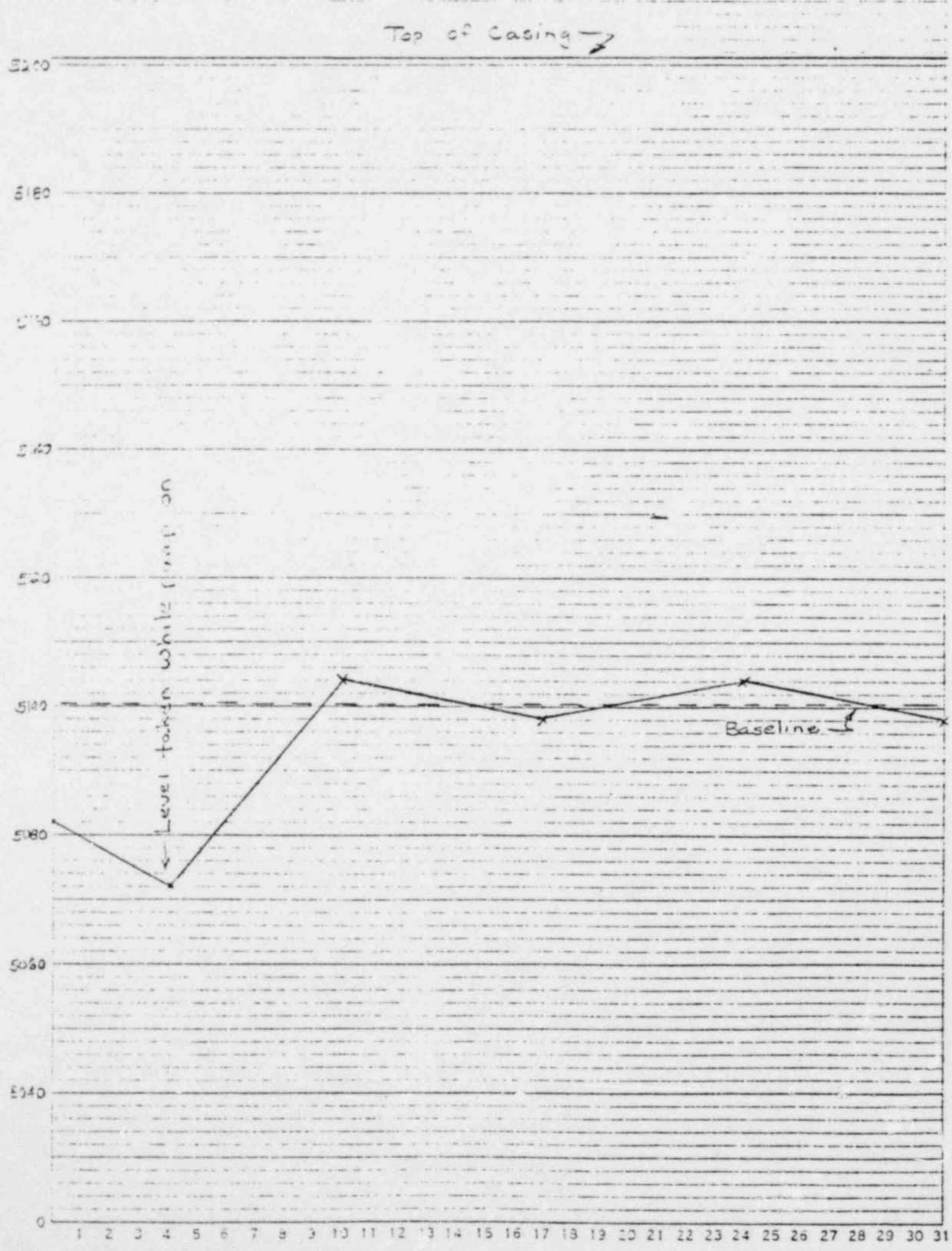
TIME		SWL	
Date	Hour	Depth	Elev.
2-2-80	12:20 PM	103.81	5097.39
2-3-80	11:00 AM	103.66	5097.54
2-4-80	1:00 P.M.	96.17	5105.03
2-5-80	11:50 AM	96.75	5104.45
2-6-80	3:00 PM	96.73	5104.47
2-7-80	1:00 PM	96.78	5104.42
2-8-80		96.55	5104.65
2-9-80		103.00	5098.20
2-10-80		103.80	5097.40
2-12-80	3:00 PM	102.91	5098.29
2-13-80	9:00 AM	102.83	5098.37
2-19-80	11:00 AM	103.65	5097.55
2-25-80	1:00 PM	156.95 <sup>(a)</sup>	5044.25
3-4-80	.	129.43 <sup>(b)</sup>	5071.9
3-10-80	1:00 PM.	97.10	5104.10
3-17-80	1:00 PM.	103.25	5097.95
3-24-80	3:00 PM.	97.25	5103.95
3-31-80	2:00 PM	102.75	5099.45

TIME		SWL	
Date	Hour	Depth	Elev.

Remarks: (a) After pumping for 4 hours.  
 (b) pumping while level was being taken



MONTH OF FEB 19 30



MONTH OF Mar 19 82



WELL PN 5-L-570Elev. of MP 5207.0Aquifer Represented T O 340

Baseline 5173.80

TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		33.2	5173.80
9-18-79		33.5	5173.50
10-15-79		33.52	5173.48
12-7-79	11:00 AM	36.97	5170.13
12-7-79	2:50 PM	36.93	5170.17
12-7-79	3:00 PM	36.91	5170.09
12-12-79	4:20 PM	36.99	5170.01
12-13-79	9:00 AM	36.90	5170.10
12-13-79	10:25 AM	36.90	5170.10
12-13-79	3:50 PM	36.93	5170.07
12-14-79		36.60	5170.40
12-14-79	2:35 AM	36.82	5170.15
12-14-79	10:30 AM	36.71	5170.
12-14-79	13:30 PM	36.67	5170.33
12-14-79	11:30 PM	36.60	5170.40
12-15-79	9:45 AM	36.69	5170.31
12-17-79		36.67	5170.33
12-22-79	11:45 AM	36.49	5170.51
12-20-79	2:15 PM	36.55	5170.45
12-20-79	3:45 PM	36.65	5170.35

TIME		SWL	
Date	Hour	Depth	Elev.
1-4-80	11:30 AM	36.57	5170.43
1-4-80	2:00 PM	36.57	5170.43
1-4-80	3:50 PM	36.58	5170.42
1-9-80	2:55 AM	36.51	5170.49
1-9-80	11:45 AM	36.43	5170.57
1-10-80	2:05 PM	36.17	5170.83
1-10-80		36.38	5170.62
1-10-80	2:20 PM	36.56	5170.44
1-14-80		36.81	5170.19
1-15-80		36.47	5170.53
1-15-80		36.47	5170.53
1-15-80	10:15 AM	45.13	5161.87
1-15-80	10:30 AM	45.10	5161.90
1-16-80		36.64	5170.36
1-16-80	3:11	45.5	5161.50
	D	45.6	5161.40
	E	45.6	5161.40
1-17-80		36.64	5170.36
1-18-80		39.92	5167.08
1-20-80		36.73	5170.27

Remarks:

WELL PN5-2570

Elev. of MP 5207.0

Aquifer Represented T0410

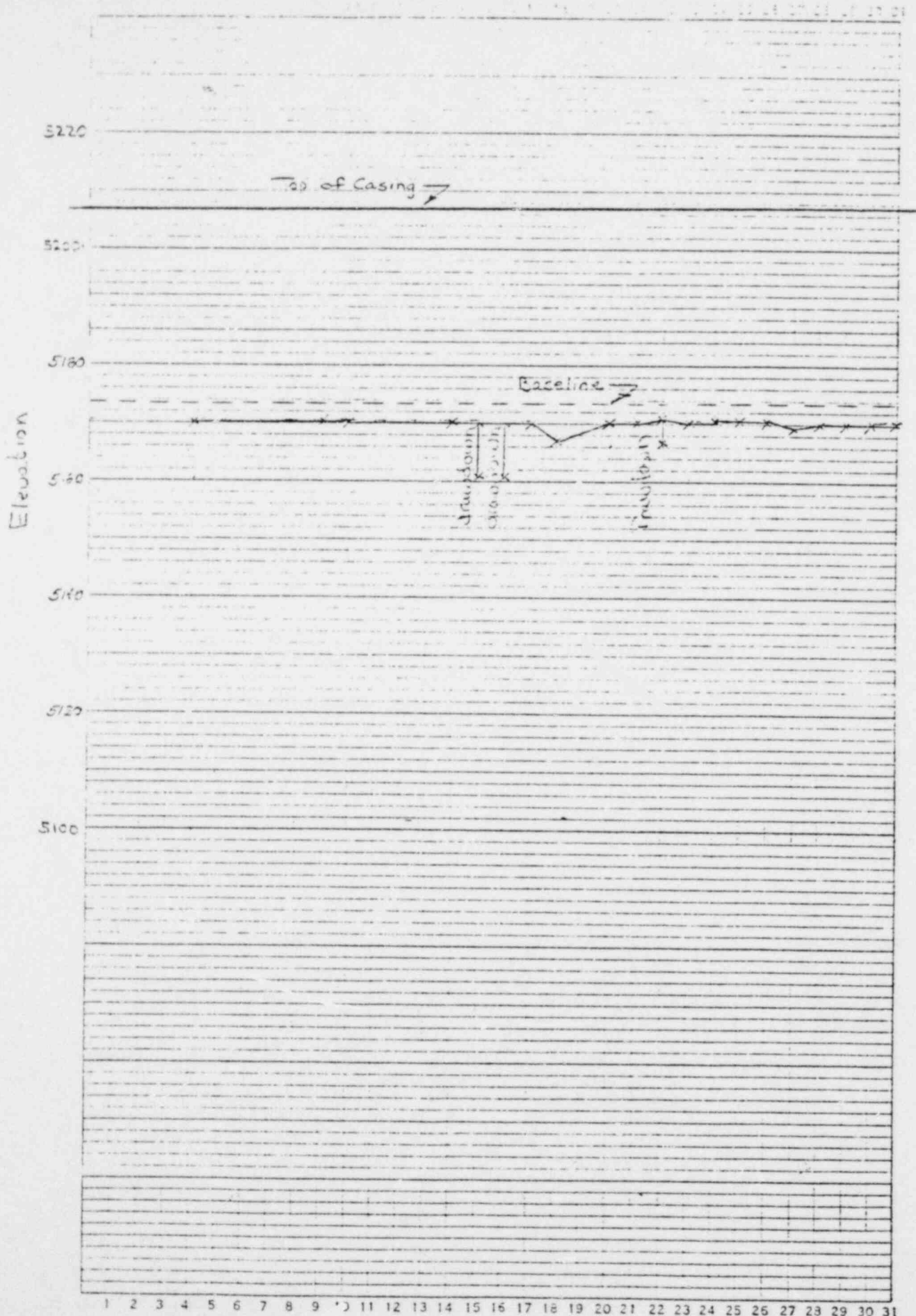
Baseline 5173.80

TIME		SWL	
Date	Hour	Depth	Elev.
1-21-80		36.26	5170.74
1-22-80	9:00AM	36.04	5170.96
1-22-80	3:00PM	40.34	5166.66
1-23-80	9:00AM	36.54	5170.46
1-23-80	3:00PM	36.55	5170.45
1-24-80	9:00AM	36.97	5170.03
1-24-80	12:00AM	36.01	5170.99
1-24-80	1:00PM	35.73	5171.27
1-24-80	3:00PM	36.68	5170.32
1-25-80		36.72	5170.28
1-26-80	10:00AM	36.71	5170.29
1-27-80	1:00PM	37.57	5169.43
1-28-80	2:00PM	36.71	5170.29
1-29-80	9:00AM	36.82	5170.18
1-30-80	1:00PM	37.05	5169.95
1-31-80	1:00PM	36.78	5170.22
2-1-80	2:00PM	37.95	5169.05
2-2-80	11:00AM	36.97	5170.03
2-3-80	11:00AM	36.54	5170.16
2-4-80	1:00PM	36.98	5170.02

TIME		SWL	
Date	Hour	Depth	Elev.
2-5-80	11:00AM	36.83	5170.17
2-6-80	3:00PM	36.65	5170.35
2-7-80	10:00AM	36.71	5170.29
2-7-80	1:15PM	42.43	5164.57
2-8-80		36.75	5170.25
2-9-80		36.67	5170.33
2-10-80		32.96	5180.04
2-12-80	3:00PM	36.86	5170.14
2-13-80	9:00AM	36.75	5170.25
2-19-80	11:00AM	36.85	5170.15
2-25-80	1:00PM	36.81	5170.19
2-4-80		36.86	5170.14
3-10-80	1:00PM	36.16	5171.84
3-17-80	1:00PM	36.40	5170.60
3-24-80	1:00PM	36.60	5170.40
3-31-80	2:00PM	36.39	5170.61

Remarks: 1-31-80 injection wells were shut off approx. 15 min. in each field.  
2-7-80 level taken after well had pumped for 27 minutes

(Idaho)

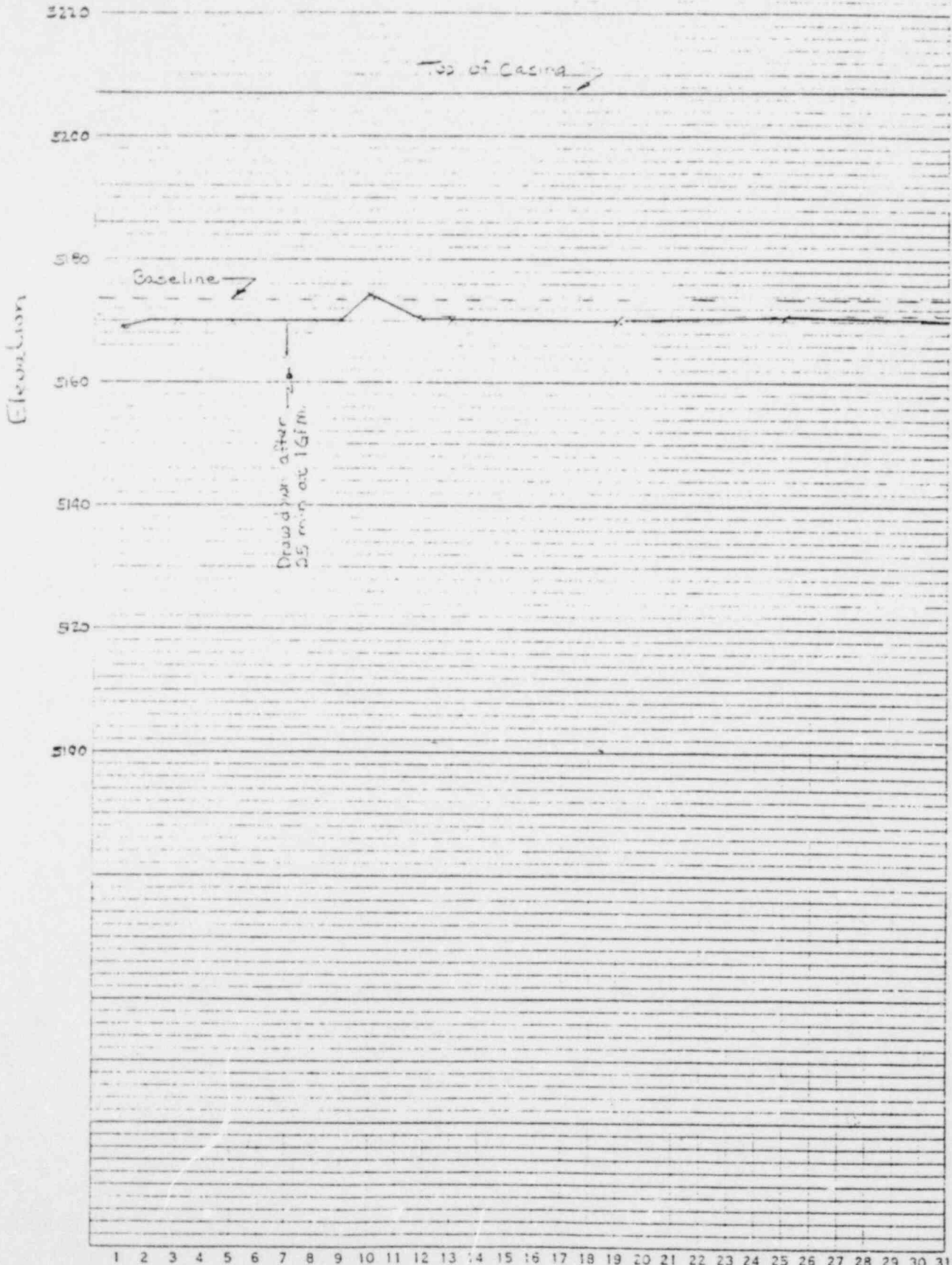


MONTH OF Jan 19 80

40-180X

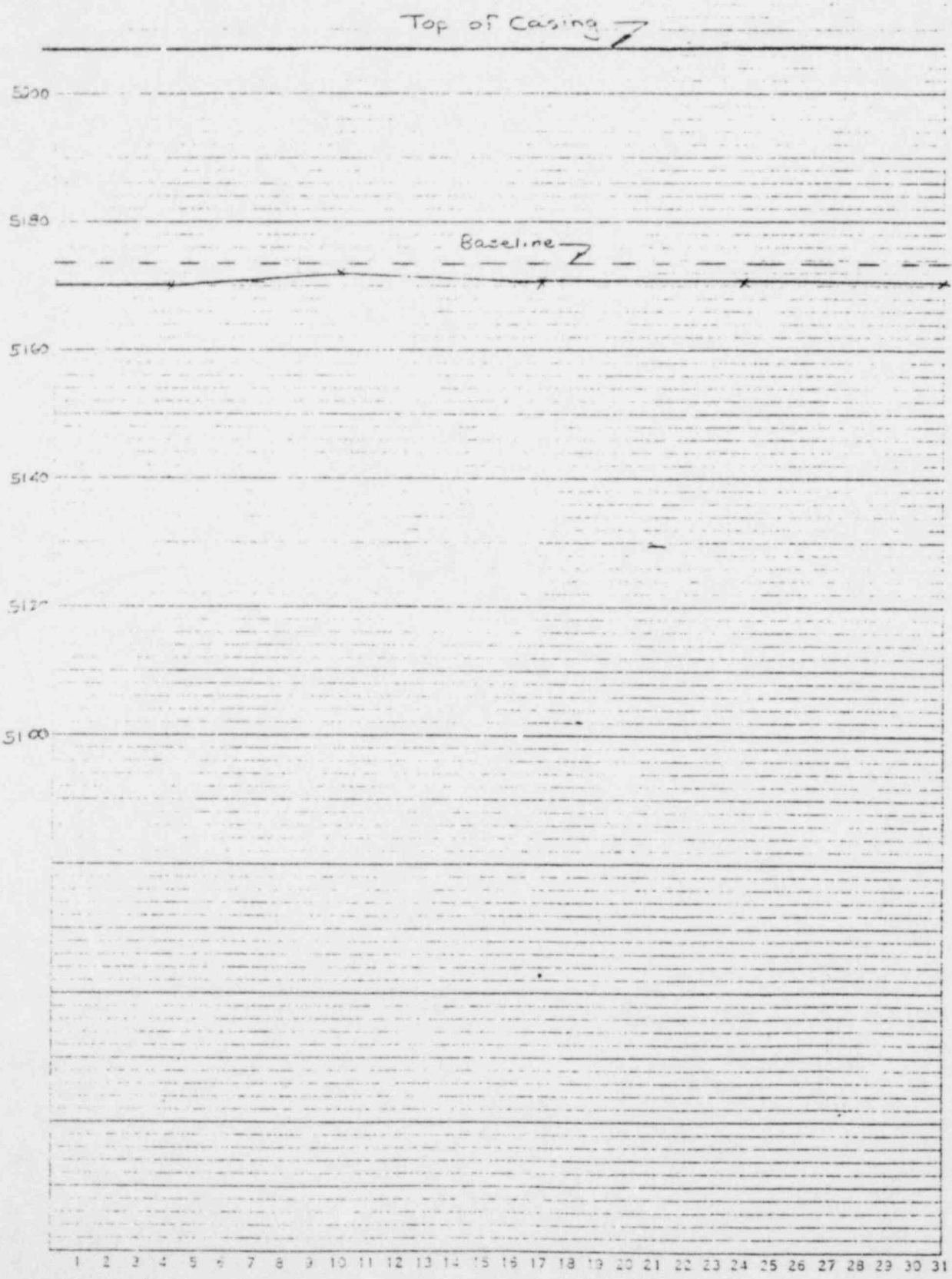
ON STAINLESS STEEL

570  
(Idaho)



MONTH OF FEB 19 50

Elevation



MONTH OF Mar 19 30

WELL PN5-L304

Elev. of MP 5201.0

Aquifer Represented IDAHO

Baseline 5170.78

TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		30.2	5170.80
9-18-79		30.4	5170.60
10-15-79		33.66	5167.34
1-14-80		29.44	5171.56
1-15-80		67.76	5133.24
1-15-80	9:30	29.82	5171.18
	11:20	58.09	5142.92
	11:35	52.46	5148.54
1-16-80		30.13	5170.87
1-17-80		30.02	5170.98
1-18-80		32.62	5168.38
1-20-80		29.57	5171.43
1-21-80		29.89	5171.11
1-22-80	9:00 AM	29.79	5171.21
1-22-80	3:00 PM	30.04	5170.96
1-23-80	9:00 AM	30.18	5170.82
1-23-80	3:00 PM	30.31	5170.69
1-24-80	9:00 AM	30.46	5170.54
1-24-80	12:00 AM	30.35	5170.65
1-24-80	1:00 PM	30.13	5170.87

TIME		SWL	
Date	Hour	Depth	Elev.
1-24-80	3:00 PM	29.98	5171.02
1-25-80		30.71	5170.29
1-26-80	10:00 AM	30.60	5170.40
1-27-80	1:00 PM	30.11	5170.89
1-28-80	2:00 PM	30.67	5170.33
1-29-80	9:00 AM	30.63	5170.37
1-30-80	1:00 PM	30.75	5170.25
1-31-80	1:00 PM	30.33	5170.65
2-1-80	2:00 PM	30.44	5170.56
2-2-80	11:00 AM	30.74	5170.26
2-3-80	11:00 AM	29.80	5171.20
2-4-80	1:00 PM	30.55	5170.45
2-5-80	11:40 AM	30.37	5170.63
2-5-80	12:06 PM	58.49	5142.51
2-6-80	3:00 PM	30.39	5170.61
2-7-80	1:00 PM	30.62	5170.38
2-8-80	2:00 PM	30.50	5170.50
2-9-80	11:00 AM	30.37	5170.63
2-10-80	11:00 AM	29.63	5171.37
2-12-80	3:00 PM	30.26	5170.74

Remarks: <sup>1</sup> 1-15-80 levels taken while pumping for sample collection

<sup>2</sup> 1-31-80 injection wells were turned off 15 min. in each field.  
<sup>3</sup> 2-5-80 level was taken after well was pumped for 25 minutes

WELL PN5 - L 304

Elev. of MP 5201.0

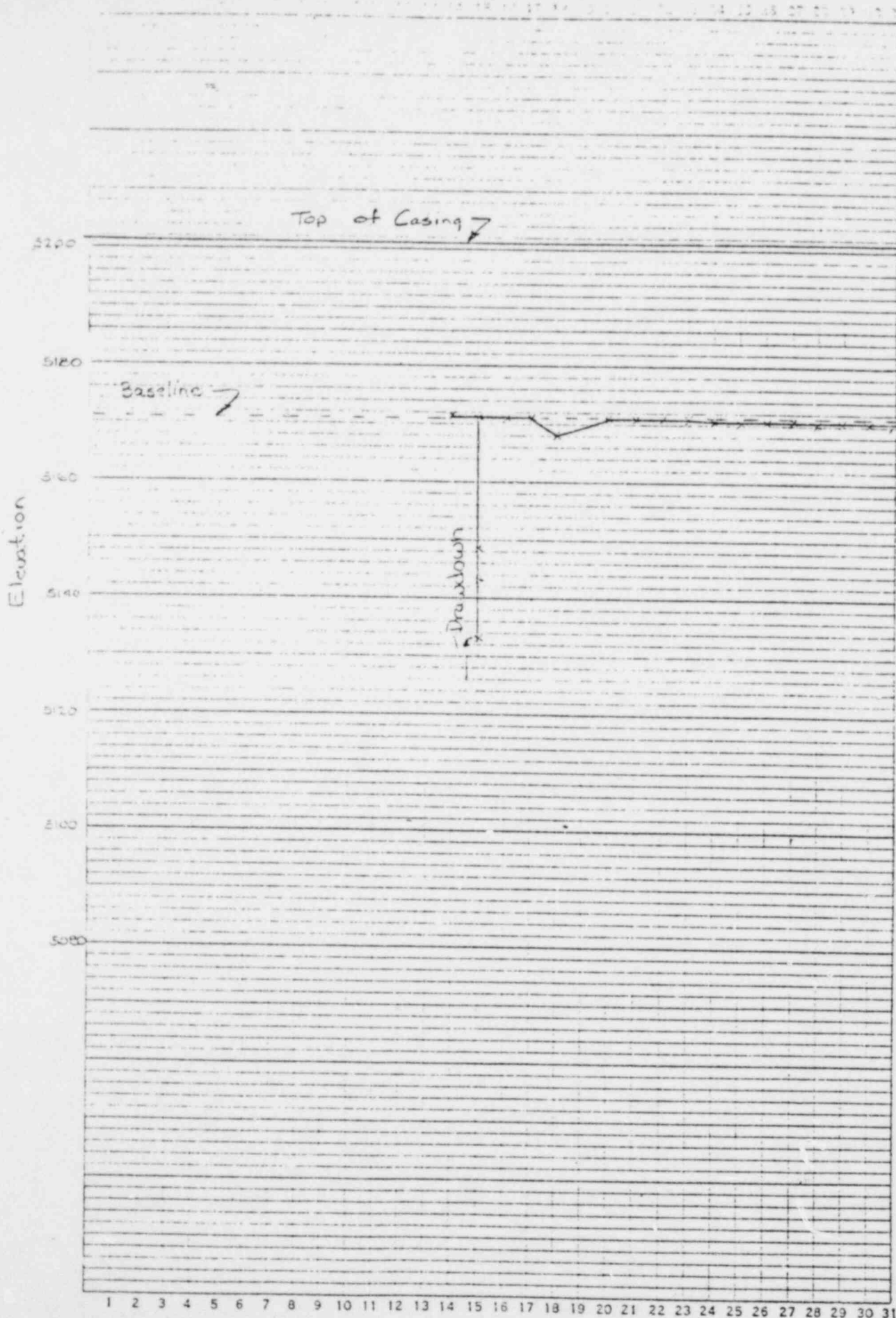
Aquifer Represented IDAHO

*Baseline* 5170.78

TIME		SWL	
Date	Hour	Depth	Elev.
2-13-80	9:00AM	30.67	5170.33
2-19-80	11:00AM	30.15	5170.85
2-25-80	1:00PM	30.09	5170.91
3-4-80	1:00PM	29.17	5171.83
3-6-80	10:00AM	30.24	5170.76
3-6-80	③	55.66	5145.34
3-21-80		31.08	5169.92
2-21-80	③	59.31	5141.69
3-10-80	1:00PM	29.80	5171.20
3-17-80	1:00PM	29.25	5171.05
3-24-80	2:00PM	30.00	5171.02
3-31-80	2:00PM	30.17	5170.83

TIME		SWL	
Date	Hour	Depth	Elev.

Remarks: ③ After 30 minutes of pumping

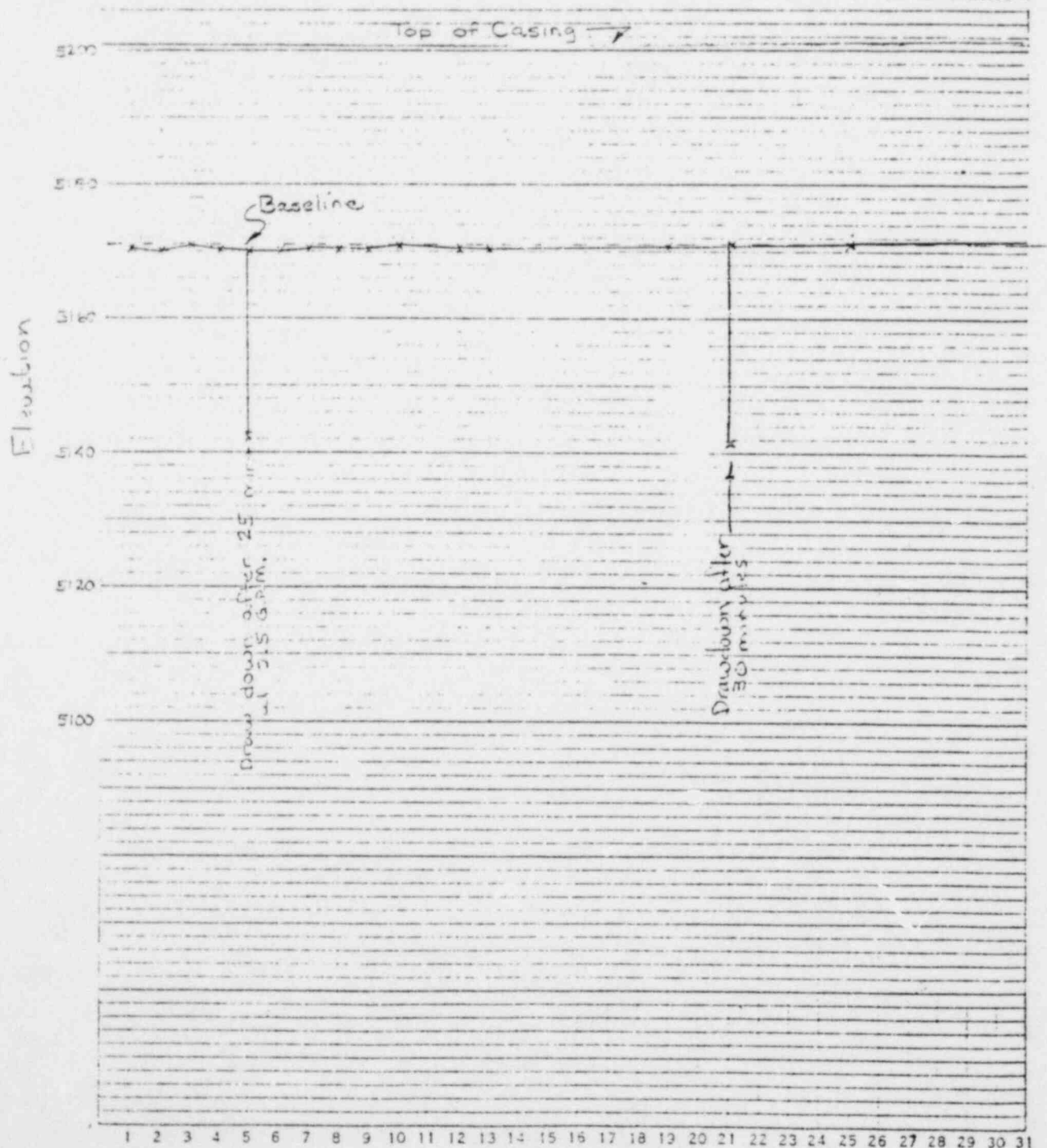


40-1802  
 ON FRONT SIDE  
 LONG SIDE

MONTH OF Jan 1950

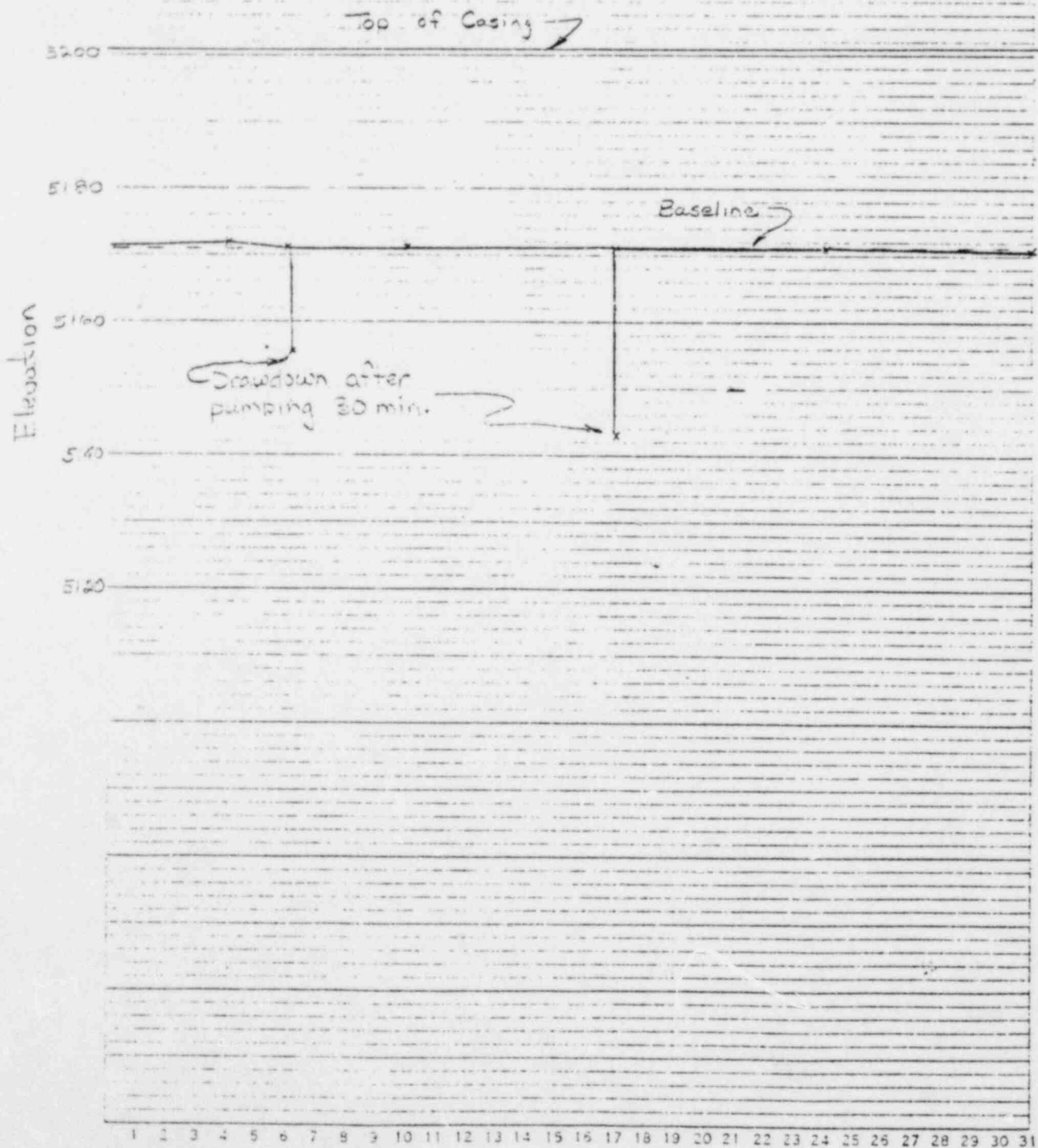


204  
(Idaho Zone)



MONTH OF FEB 1930

304  
(Idaho Zone)



MONTH OF March 19 80

WELL PN 5- L 319Elev. of MP 5212.2Aquifer Represented NBaseline 5135.15

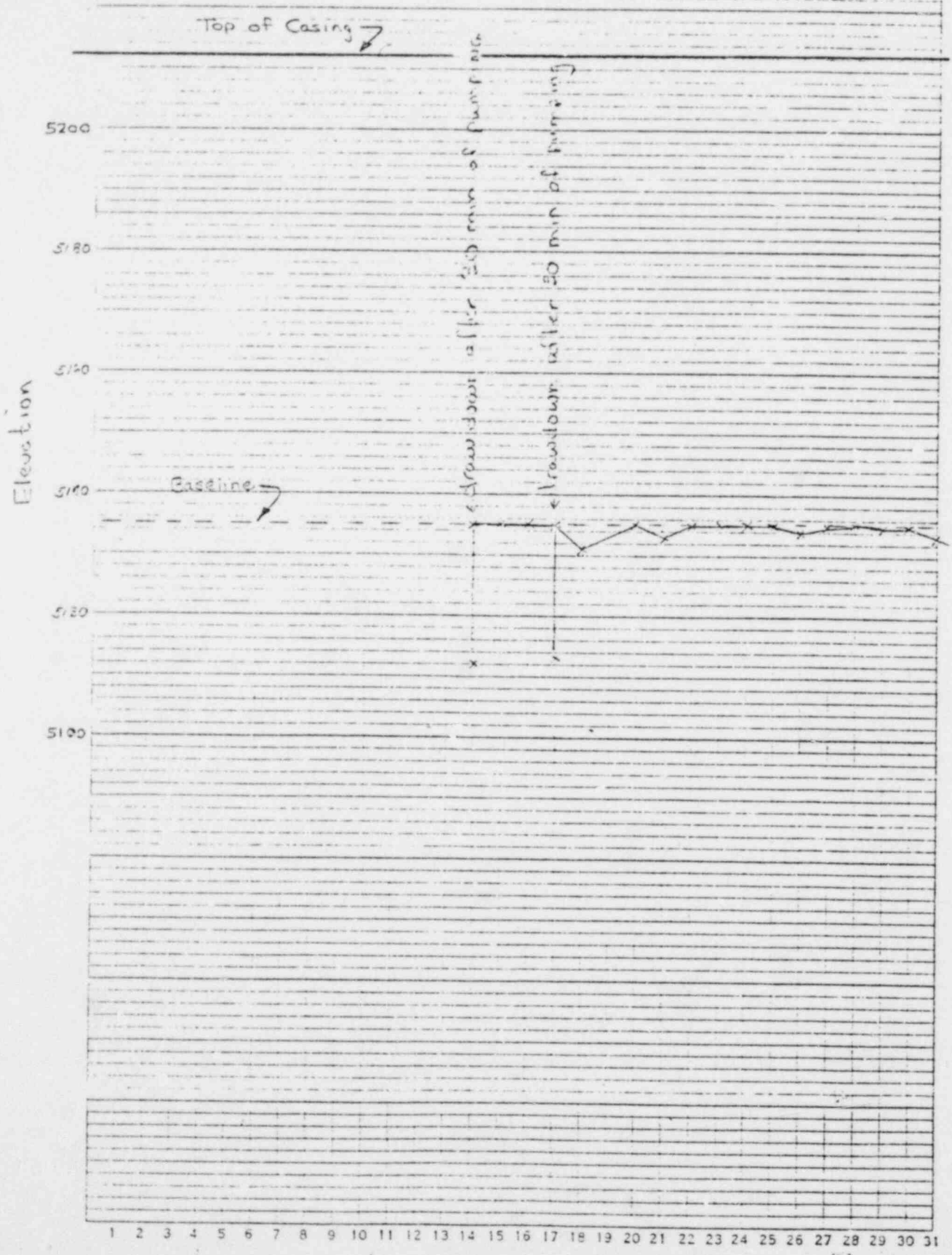
TIME		SWL	
Date	Hour	Depth	Elev.
1-25-79		77.0	5135.20
9-19-79		74.7	5137.50
10-15-79		79.76	5132.44
1-14-80		77.32	5134.88
1-15-80		77.46	5134.74
1-16-80		77.18	5135.02
1-17-80		77.24	5134.96
1-19-80		80.7	5131.30
1-20-80		76.71	5135.49
1-21-80		79.32	5132.83
1-22-80	9:00	76.04	5136.16
1-22-80	3:00	78.06	5134.14
1-23-80	9:00	76.81	5135.39
1-23-80	3:00	76.51	5135.69
1-24-80	9:00	76.49	5135.71
1-24-80	12:00	77.41	5134.79
1-24-80	1:00	76.14	5136.06
1-24-80	3:00	77.37	5134.83
1-25-80		76.80	5135.40
1-26-80	10:00	77.36	5134.84

TIME		SWL	
Date	Hour	Depth	Elev.
1-27-80	1:00	77.20	5135.00
1-28-80	2:00	76.45	5135.75
1-29-80	9:00	77.47	5134.73
1-30-80	1:00PM	77.08	5135.12
1-31-80	1:00PM	78.89	5133.31
2-1-80	2:00PM	76.50	5135.70
2-2-80	11:00AM	76.83	5135.37
2-3-80	11:00AM	75.70	5136.50
2-4-80	1:00PM	74.92	5137.28
2-5-80	10:00AM	82.72	5129.48
2-6-80	3:00PM	76.85	5135.35
2-7-80	9:50AM	76.56	5135.64
2-7-80	10:24 <sup>E</sup> AM	94.73	5117.47
2-8-80		76.01	5136.19
2-9-80		75.41	5136.79
2-10-80		75.25	5136.95
2-12-80	3:00PM	74.33	5137.87
2-13-80	9:00AM	75.14	5137.06
2-19-80	2:00PM	79.28	5122.92
2-25-80	1:30PM	78.46	5133.72

Remarks: 1-31-80 injection wells were shut off approx. 15 min. in each field.  
 2-3-80 3:30 PM. on 2-4-80 to 1:45 PM. on 2-5-80 N-1-4 redeveloped at approx. 10-15 GPM and 50 GPM for 5-10 min. every hour.  
 2-7-80 level taken after 29 minutes of well being pumped.

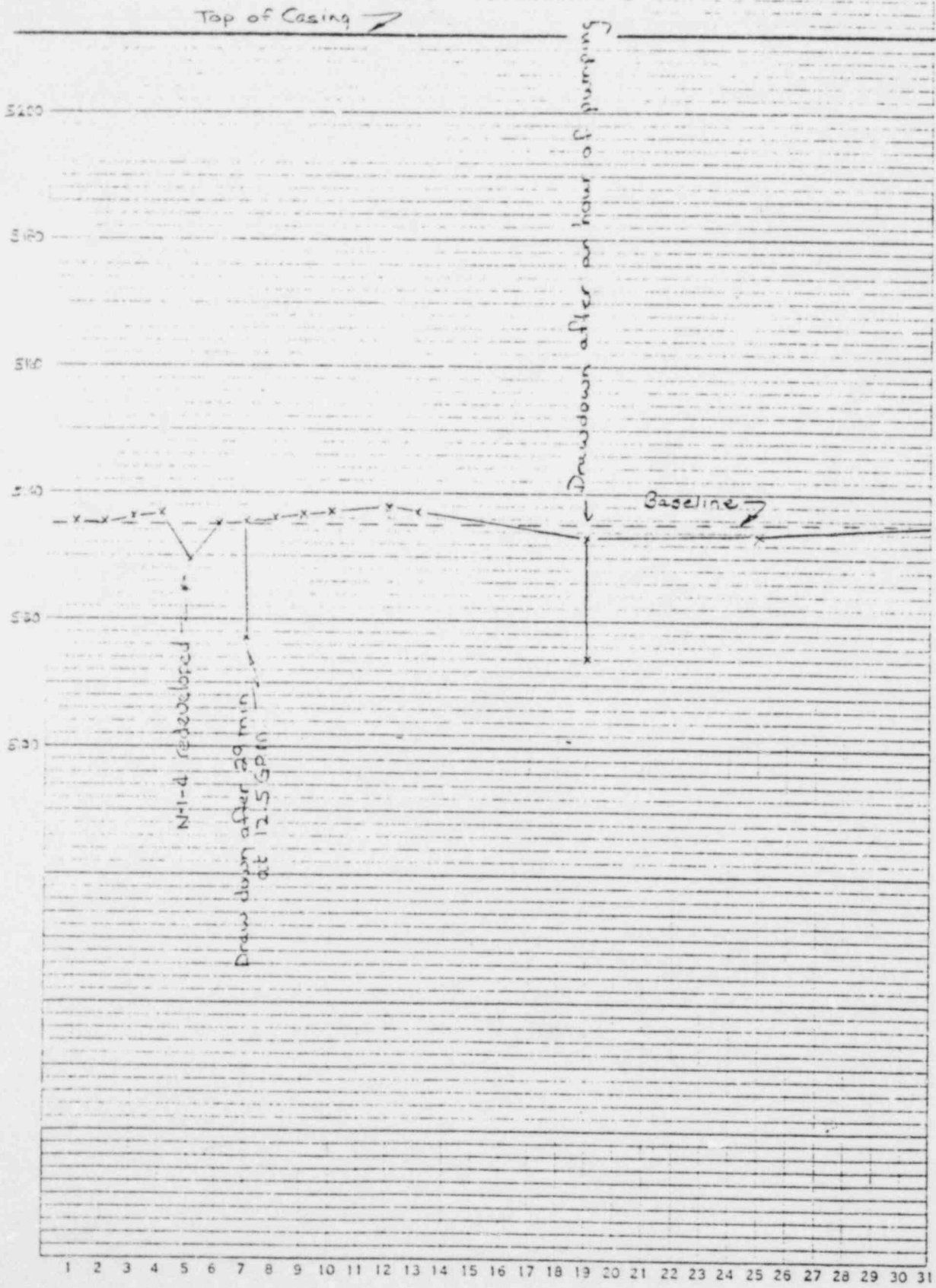


(N Zone)

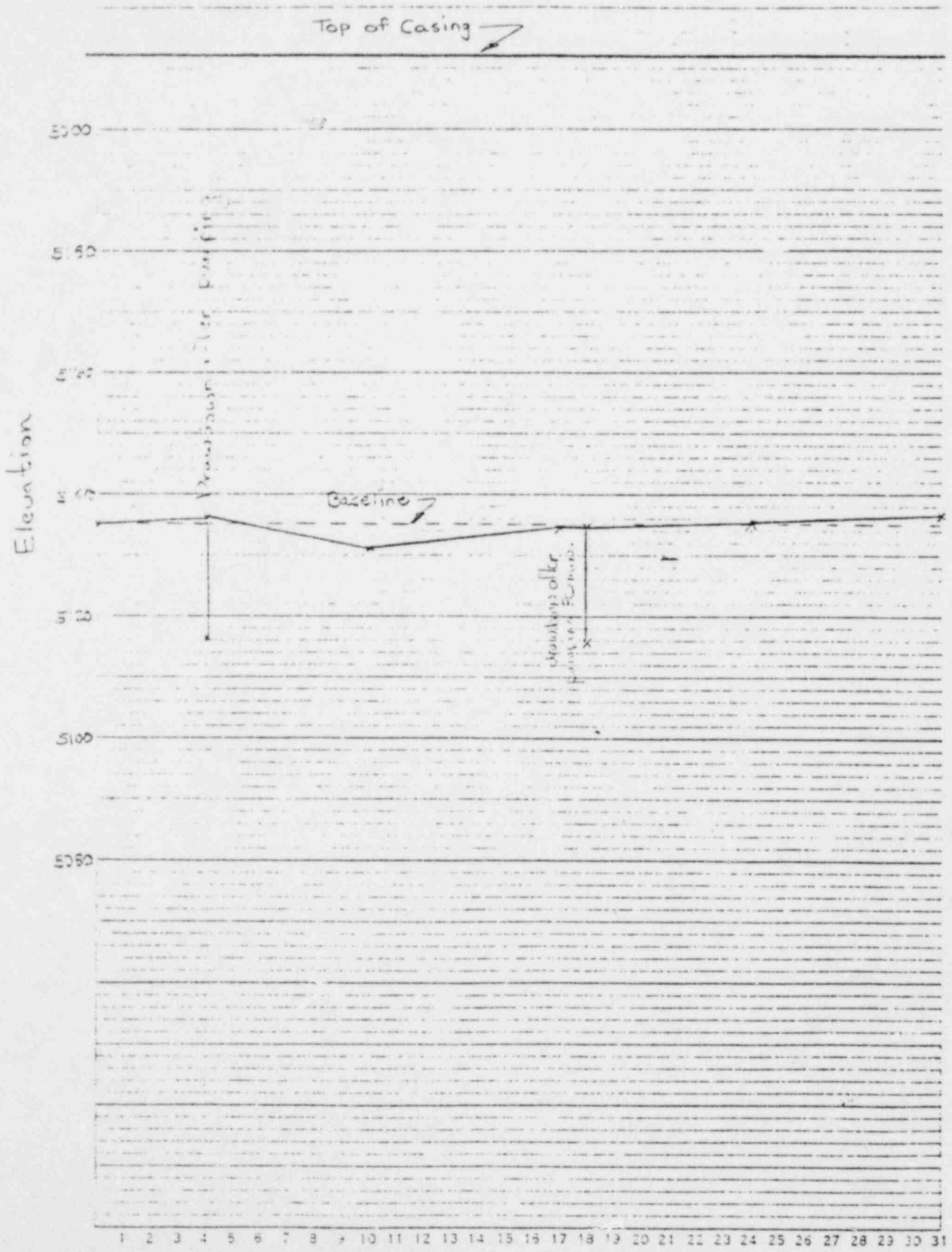


MONTH OF Jan 19 50

Elevation



MONTH OF FEB 1930



MONTH OF Mar 19 80

WELL PN5-L309

Elev. of MP 5202.2 (After 1-20-80 EL = 5200.96)

Aquifer Represented N

Baseline 5149.88

TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		52.3	5149.90
9-2-79		38.1	5164.10
10-15-79		41.82	5160.38
1-14-80		67.32	5139.88
1-15-80		62.51	5139.64
1-16-80		66.62	5135.58
1-17-80		66.90	5135.40
1-18-80		68.63	5133.57
1-20-80		68.07	5132.85
1-21-80		67.32	5133.64
1-22-80	9:00	67.49	5133.47
1-23-80	9:00	64.88	5136.08
1-23-80	3:00	64.92	5136.04
1-24-80	9:00	65.31	5135.65
	12:00	64.91	5136.05
	1:00	65.00	5135.96
	3:00	65.41	5135.55
1-25-80		65.15	5135.81
1-26-80	10:00	65.72	5135.24
1-27-80	1:00	65.17	5135.79

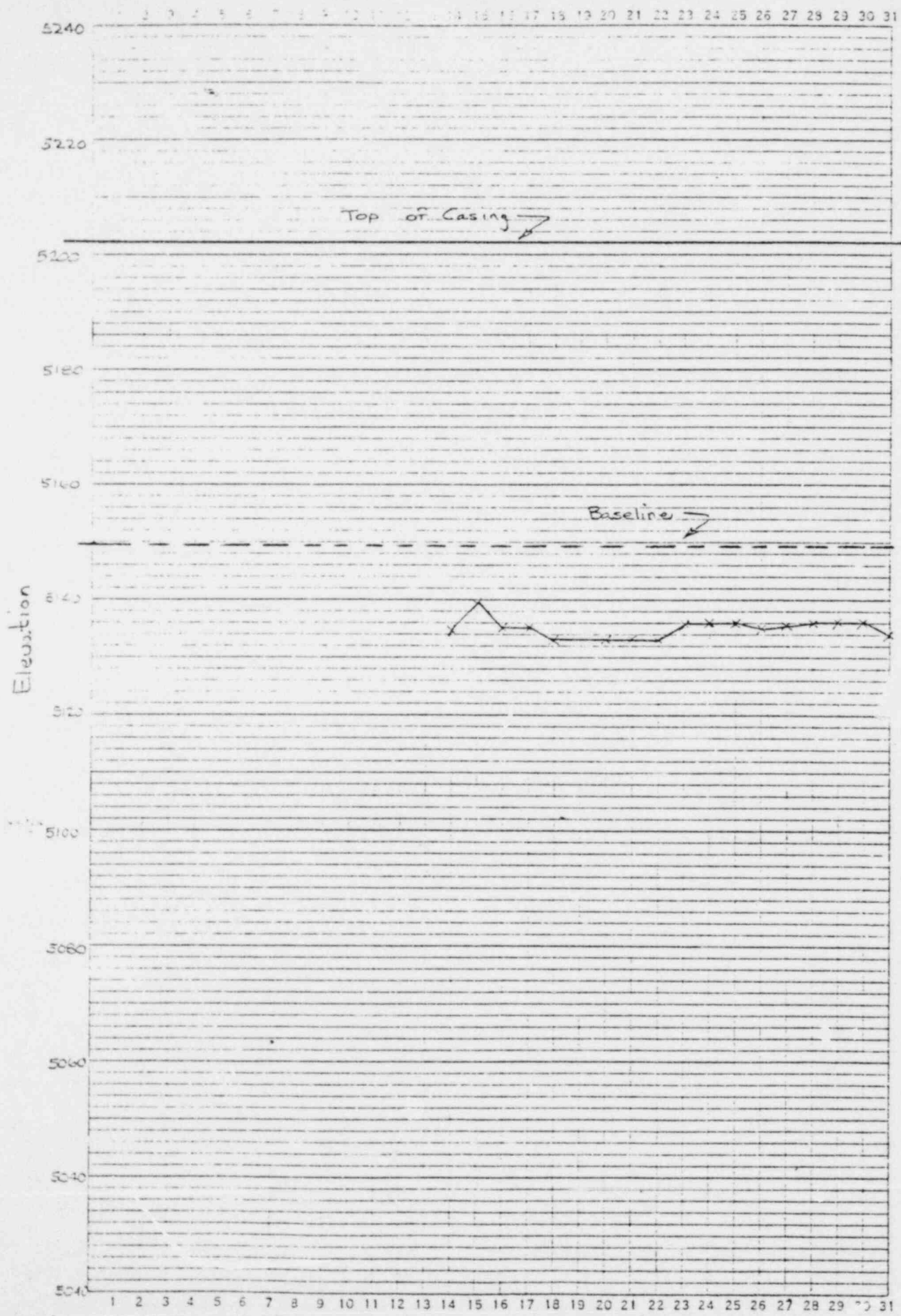
TIME		SWL	
Date	Hour	Depth	Elev.
1-28-80	2:00	64.74	5136.22
1-29-80	9:00	64.61	5136.35
1-30-80	1:00 PM	64.46	5136.50
1-31-80	1:00 PM	66.82	5134.14
2-1-80	2:00 PM	64.75	5136.21
2-2-80	11:00 AM	64.39	5136.57
2-3-80	11:00 AM	64.77	5136.19
2-4-80	1:00 PM	62.09	5139.87
2-5-80	12:00 PM	66.70	5134.26
2-6-80	3:00 PM	69.54	5131.42
2-7-80	11:00 AM	69.02	5132.13
2-8-80	2:00 PM	68.43	5132.53
2-9-80	11:00 AM	68.25	5132.71
2-10-80	11:00 AM	68.06	5132.90
2-12-80	3:00 PM	68.08	5132.88
2-13-80	9:00 AM	67.92	5133.04
2-19-80	11:00 AM	71.54	5130.66
2-25-80	1:00 PM	67.74	5133.22
3-4-80	1:00 PM	67.96	5133.00
3-6-80	10:00 AM	67.70	5133.26

Remarks: pipe cut 1.24' on 1-20-80  
 1-22-80 air lifted for 3 hours 10 min in afternoon  
 1-31-80 injection wells were shut off approx. 15 min in each field  
 at 3:30 PM. on 2-4-80 to 1:45 PM. on 2-5-80 N-1-4 redeveloped at  
 approx. 10-15 GPM and 50 GPM for 5-10 min. every hour.





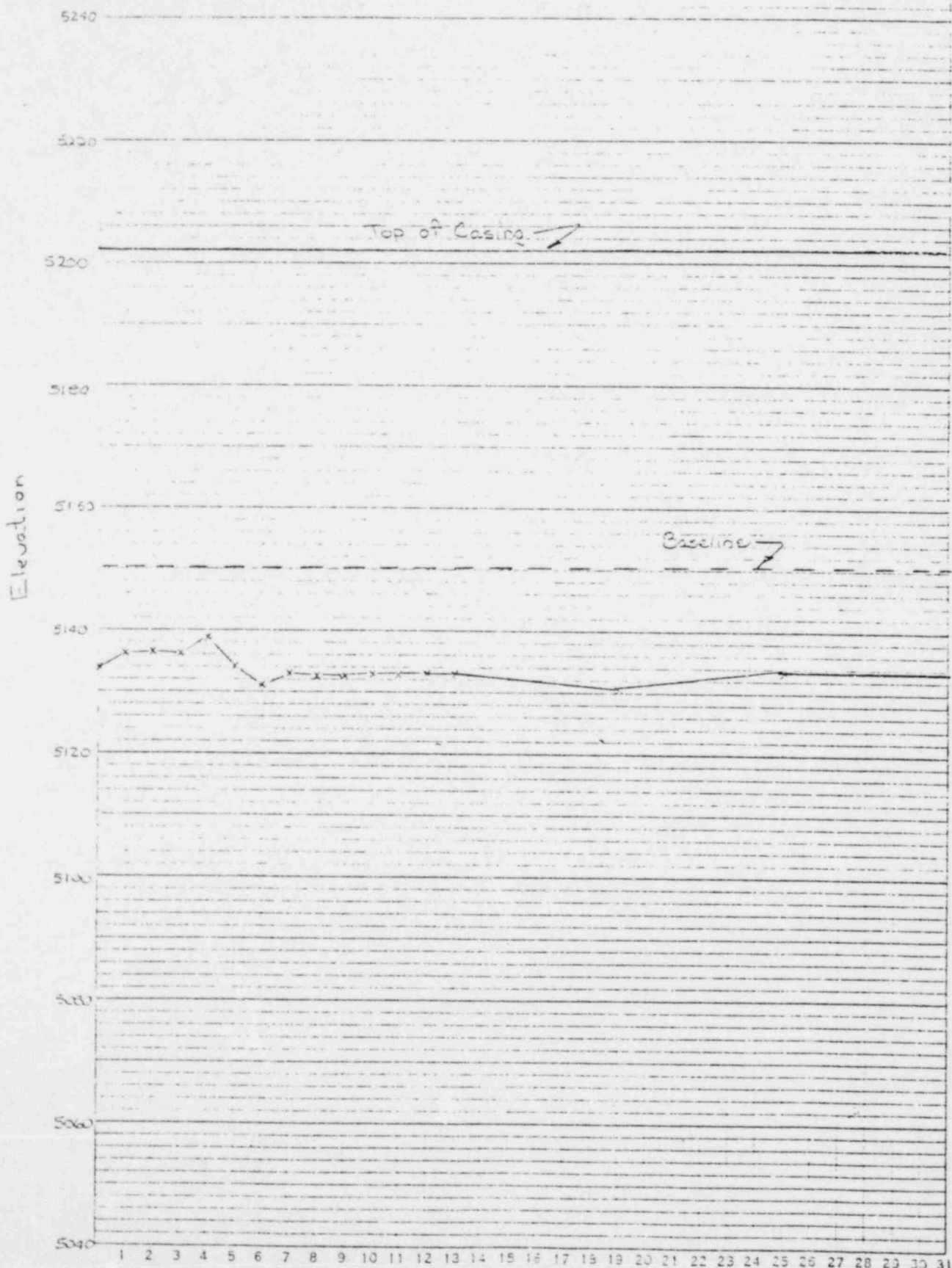
201  
(N-Zone)



40-1802  
ONE HUNDRED EIGHTY TWO  
SEE INSTRUCTIONS ON LONG 1102

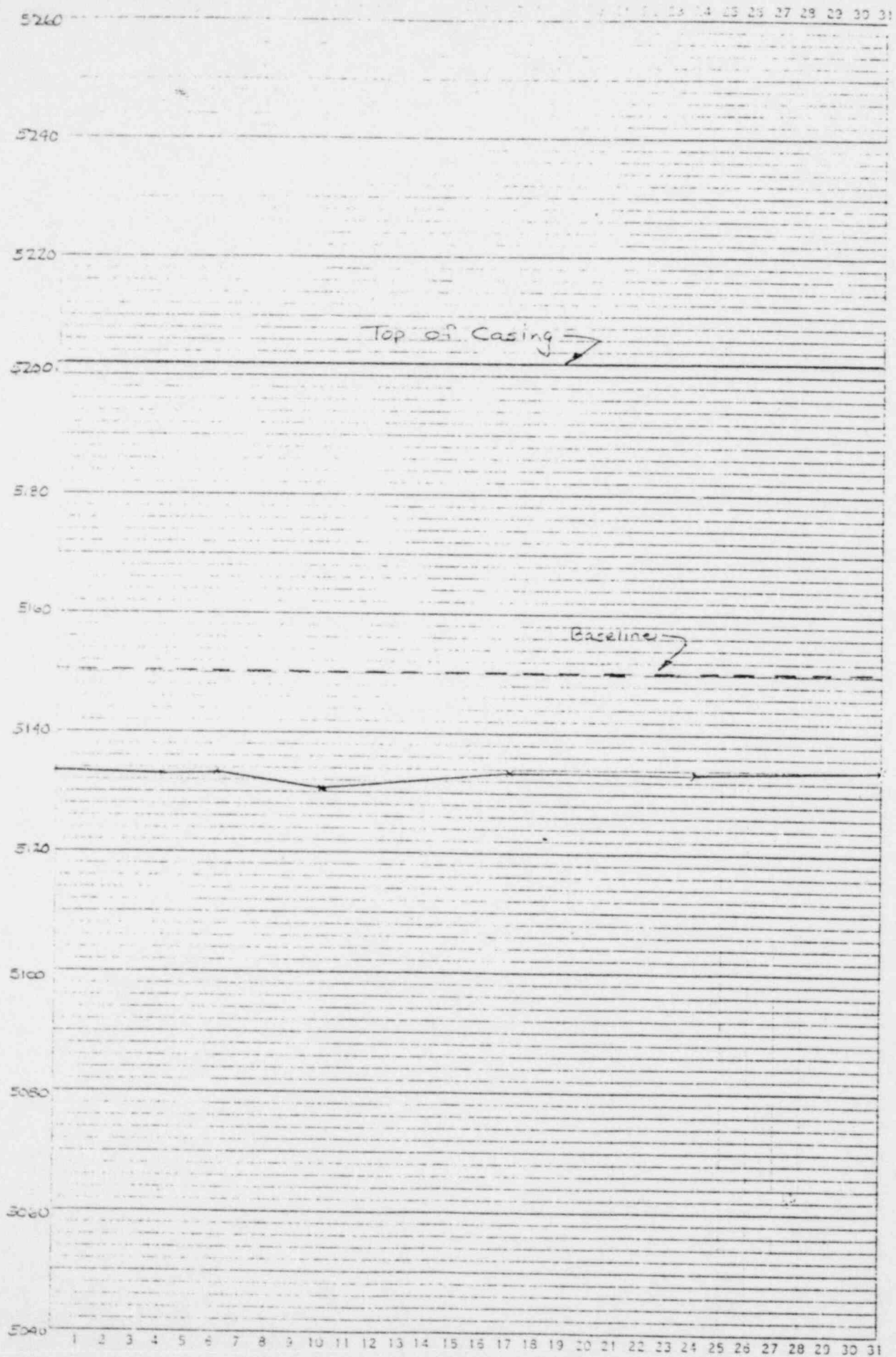
MONTH OF Jan 19 80

201  
(N Zone)



MONTH OF Fe in 30

507  
(N Zone)



MONTH OF March 1980

WELL PWS-7313

Elev. of MP 5207.5

Aquifer Represented N

Baseline 5135.70

TIME		SWL	
Date	Hour	Depth	Elev.
1-25-80		71.8	5135.70
9-18-79		63.25	5144.25
10-15-79		74.86	5132.64
1-11-80		72.93	5134.67
1-15-80		73.04	5134.46
1-16-80	2	72.23	5135.27
1-17-80	9:00	73.69	5134.81
1-19-80	8:30	74.92	5132.68
1-20-80		73.17	5135.33
1-19-80	11:27	96.08	5111.43
1-17-80	11:50	93.80	5113.70
1-18-80	0	95.28	5112.22
1-18-80	E	96.47	5111.03
1-21-80		71	
1-22-80	9:00	71.09	5136.41
1-22-80	3:00	73.22	5134.28
1-23-80	9:00	72.07	5135.43
1-23-80	3:00	72.19	5135.31
1-24-80	9:00	72.15	5135.35
1-24-80	3:00	73.04	5134.46

TIME		SWL	
Date	Hour	Depth	Elev.
1-25-80		72.30	5135.20
1-26-80	10:00	72.99	5134.51
1-27-80	1:00	72.32	5135.18
1-28-80	2:00	71.88	5135.62
1-29-80	9:00	72.32	5135.18
1-30-80	1:00 PM	72.49	5135.01
1-31-80	1:00 PM	74.91	5132.59
2-1-80	2:00 PM	72.59	5134.91
2-2-80	11:00 AM	72.21	5135.29
2-3-80	11:00 AM	72.10	5135.40
2-4-80	1:00 PM	71.63	5135.87
2-5-80	10:00 AM	77.12	5130.38
2-5-80	10:46 AM	94.85	5112.65
2-6-80	3:00 PM	73.64	5133.86
2-7-80	11:00 AM	74.54	5132.96
2-8-80	2:00 PM	73.22	5134.28
2-9-80	11:00 AM	72.82	5134.66
2-10-80	11:00 AM	72.83	5134.67
2-12-80	3:00 PM	73.29	5134.21
2-13-80	9:00 AM	73.22	5134.28

Remarks: 1/17/80 Levels taken while pumping for sample collection

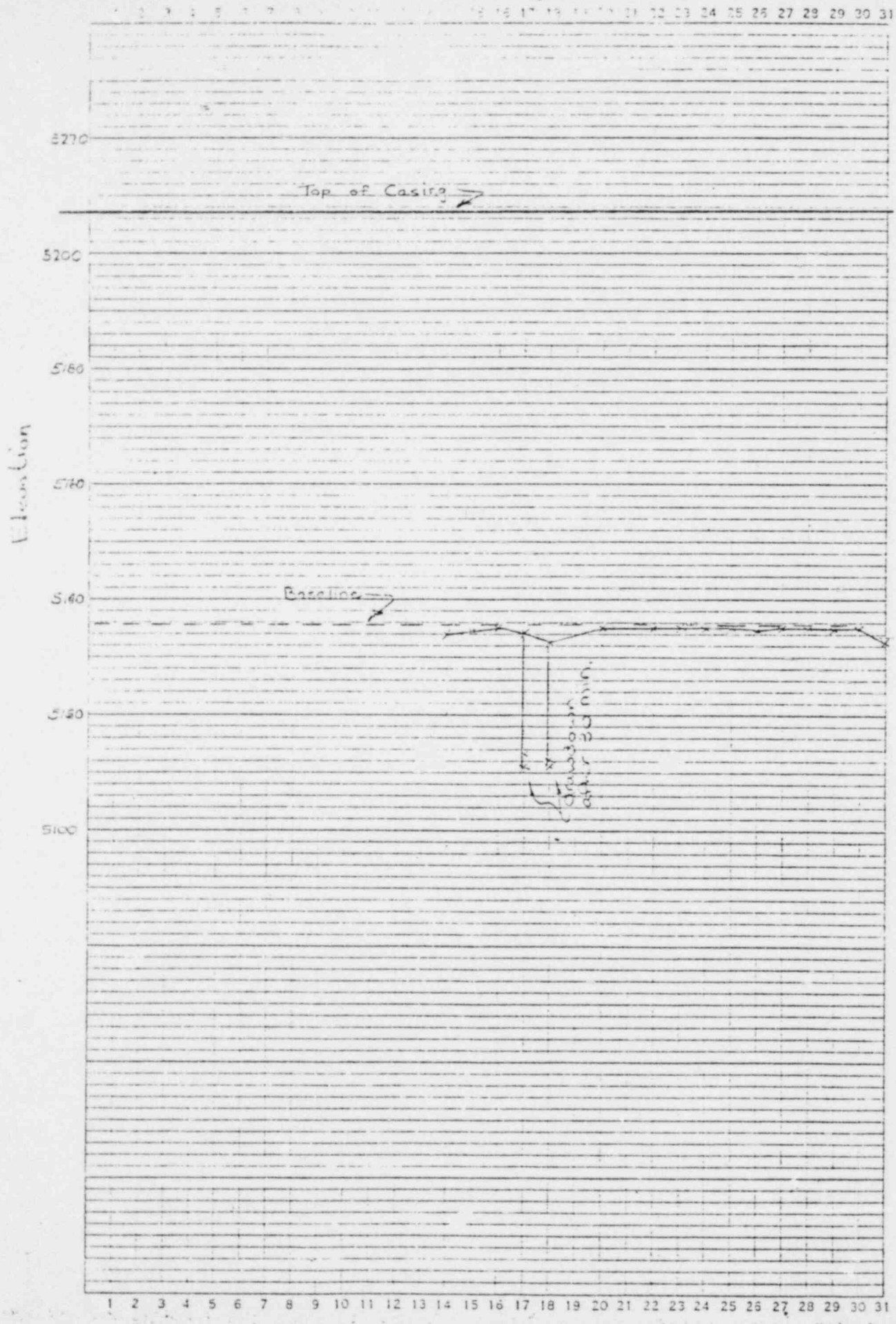
1/18/80 Levels taken while pumping for sample collection

3:30 PM on 2-4-80 to 1:45 PM on 2-5-80 N-1-4 redeveloped at approx. 10-15 GPM and 50 GPM for 5 to 10 min every hour.

2-5-80 level taken after well was pumped for 28 minutes



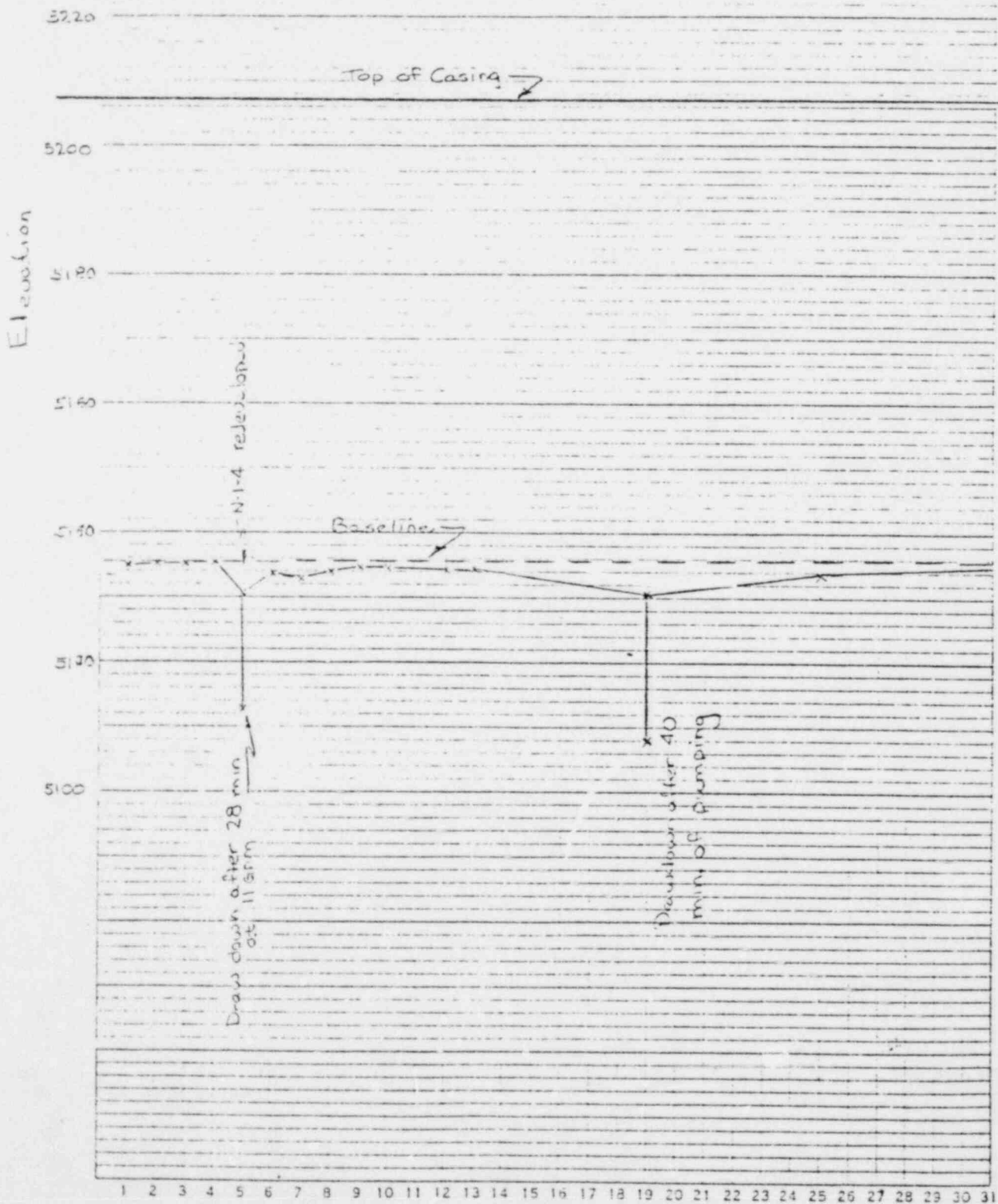
(N-Zone)



MONTH OF Jan 1990

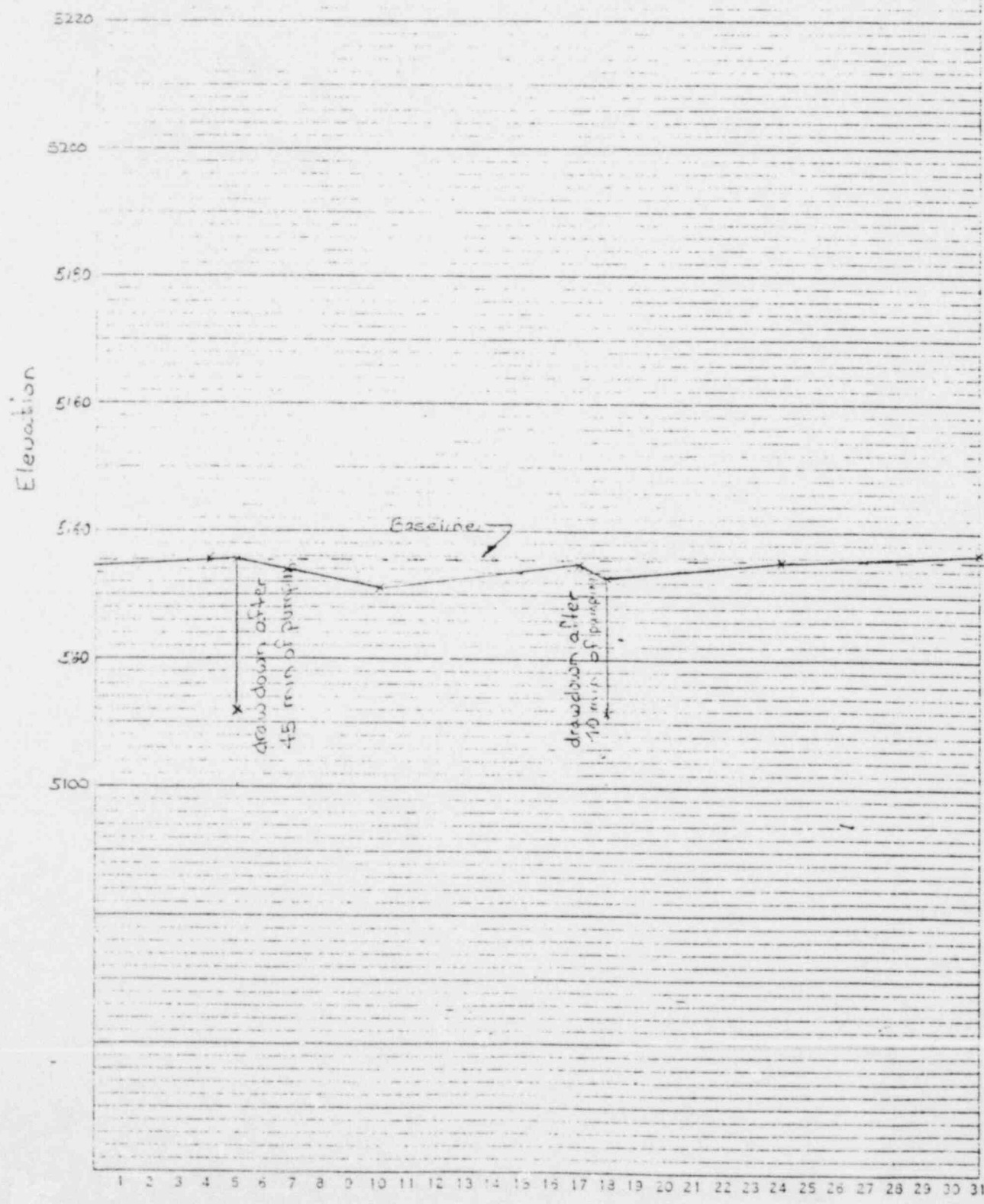
40-1802  
 EDGE MARKER OF PLY. MIN. SPACING 2000  
 THE DISTANCE OF THE LONG SIDE

313  
(N Zone)



MONTH OF Feb 19 80





MONTH OF Mar 19 80

4-1004  
 U.S. GEOLOGICAL SURVEY  
 WATER RESOURCES DIVISION  
 255 RIVERSIDE AVENUE  
 PITTSBURGH, PA 15201

WELL PN5-L 320Elev. of MP 5198.3Aquifer Represented NBaseline 5135.45

TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		62.9	5135.40
9-28-79		60.4	5137.90
10-15-79		65.64	5132.66
12-20-79	11:45 AM	75.30	5123.00
12-20-79	2:15 PM	77.72	5120.58
12-20-79	3:45 PM	79.59	5118.71
1-9-80	1:30 PM	68.3	5130.00
1-9-80	2:00 PM	84.54	5113.75
1-9-80	3:00 PM	85.54	5112.76
1-9-80	4:00 PM	86.50	5111.80
1-14-80		64.83	5134.27
1-15-80		63.60	5134.70
1-15-80	9:30	63.60	5134.70
1-15-80	2:00	80.20	5118.10
1-15-80	2:15	81.61	5116.69
1-16-80		63.32	5134.98
1-17-80		51.66	5141.64
1-18-80		63.62	5134.68
1-20-80		67.72	5130.58
1-21-80		62.47	5135.83

TIME		SWL	
Date	Hour	Depth	Elev.
1-22-80	9:00	63.45	5134.85
1-22-80	3:00	63.98	5134.32
1-23-80	9:00	62.49	5135.81
1-23-80	3:00	61.72	5136.58
1-24-80	9:00	62.53	5135.77
1-24-80	12:00	62.74	5135.56
1-24-80	1:00	62.67	5135.63
1-24-80	3:00	62.83	5135.47
1-25-80		62.55	5135.75
1-26-80	10:00	62.95	5135.35
1-27-80	1:00	62.78	5135.52
1-28-80	2:00	62.15	5136.15
1-29-80	9:00	63.24	5135.06
1-30-80	1:00 PM	62.82	5135.48
1-31-80	1:00 PM	65.97	5132.33
2-1-80	2:00 PM	63.09	5135.21
2-2-80	11:00 AM	62.32	5135.98
2-3-80	11:00 AM	62.68	5135.62
2-4-80	1:00 PM	62.27	5136.03
2-5-80	10:00 AM	66.63	5131.67

Remarks: 1/15/80 levels taken while pumping for sample collections  
 1-31-80 injection wells were shut off approx. 15 min. in each field.  
 2-3-80 3:30 PM. on 2-4-80 to 1:45 PM. on 2-5-80 N-1-4 redeveloped at approx. 10-15 GPM and 50 GPM for 5-10 min. every hour.



WELL N-11-1Elev. of MP 5224.4

Aquifer Represented \_\_\_\_\_

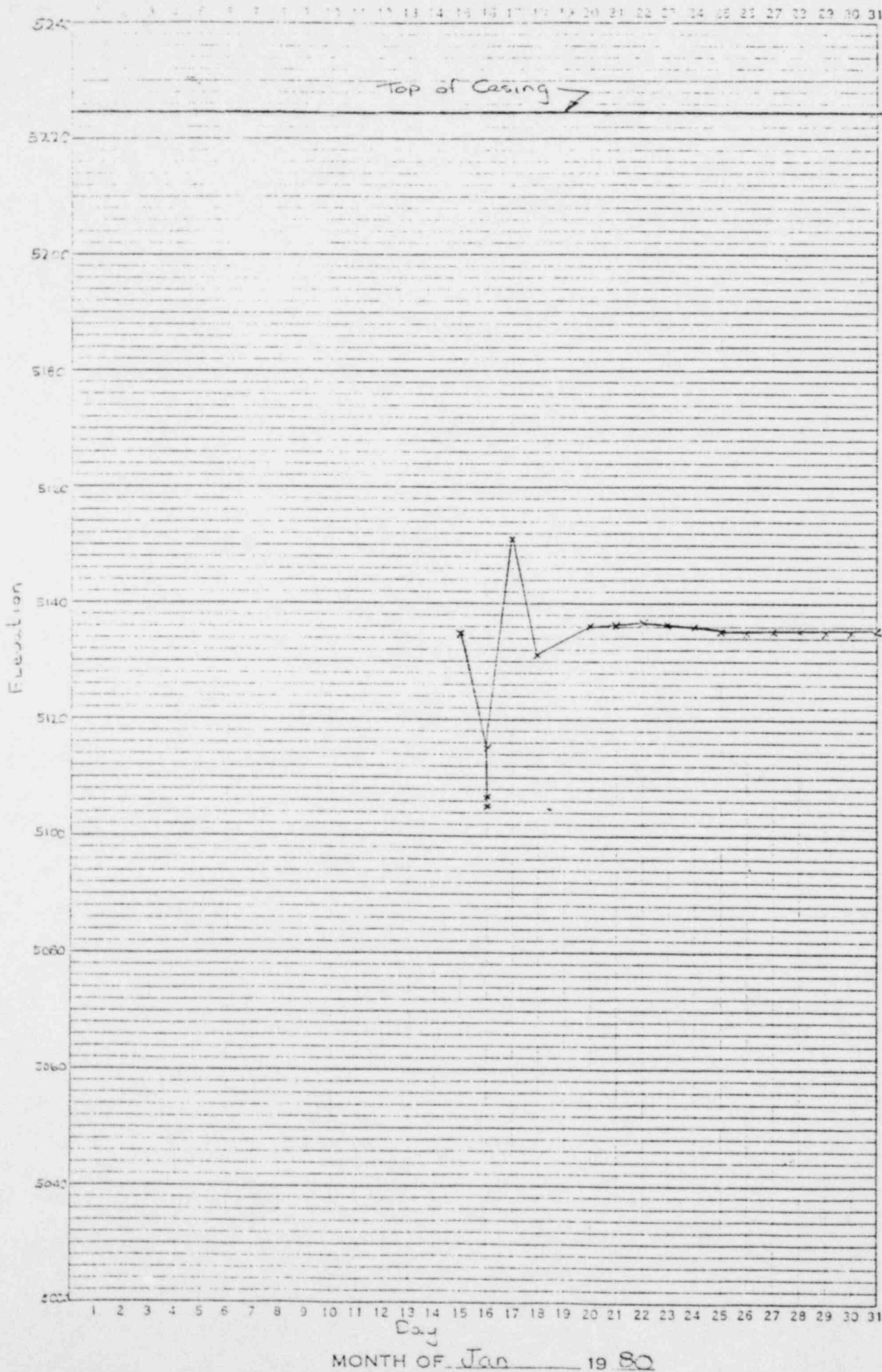
TIME		SWL	
Date	Hour	Depth	Elev.
12-20-79	11:45 AM	90.28	5134.12
12-21-79	2:15 PM	91.61	5132.79
12-31-79	3:45 PM	92.51	5131.89
1-15-80		89.45	5134.95
1-16-80	6 2:35	109.8	5114.20
1-16-80	D	117.8	5106.00
1-16-80	E	119.3	5105.10
1-17-80		72.69	5151.71
1-18-80		92.67	5131.73
1-20-80		88.50	5135.90
1-21-80		87.95	5136.45
1-22-80	9:00	87.79	5136.61
1-22-80	3:00	89.52	5134.88
1-23-80	9:00	88.49	5135.91
1-23-80	3:00	88.95	5135.45
1-24-80	9:00	89.32	5135.09
1-24-80	3:00	89.52	5134.88
1-25-80		89.04	5135.36
1-26-80	10:00	89.07	5135.33
1-27-80	1:00	89.08	5135.32

TIME		SWL	
Date	Hour	Depth	Elev.
1-28-80	2:00	89.00	5135.40
1-29-80	9:00	89.59	5134.81
1-30-80	1:00 PM	89.17	5135.23
1-31-80	1:00 PM	89.69	5134.71
2-1-80	2:00 PM	89.33	5135.07
2-2-80	11:00 AM	89.12	5135.28
2-3-80	11:00 AM	89.40	5135.00
2-4-80	1:00 PM	88.97	5135.43
2-5-80	10:00 AM	93.90	5130.50
2-5-80	4:18 PM	112.99	5111.41
2-6-80	3:00 PM	92.56	5131.84
2-7-80	11:00 AM	93.67	5130.73
2-8-80		87.13	5137.27
2-9-80		89.55	5134.85
2-10-80		89.69	5134.71
2-12-80	3:00 PM	89.61	5134.79
2-13-80	9:00 AM	89.62	5134.78
2-19-80	11:00 AM	93.42	5130.98
2-25-80	1:00 PM	90.86	5133.54
3-4-80		89.71	5134.69

Remarks: 1-16-80 levels taken before, during and after being pumped  
 1-31-80 injection wells were shut off approx. 15 min. in each field  
 3:30 PM, on 2-4-80 to 1:45 PM, on 2-5-80 N-1-4 redeveloped at  
 approx. 10-15 GPM and 50 GPM for 5-10 min. every hour  
 2-5-80 level was taken after 28 minutes of pumping.



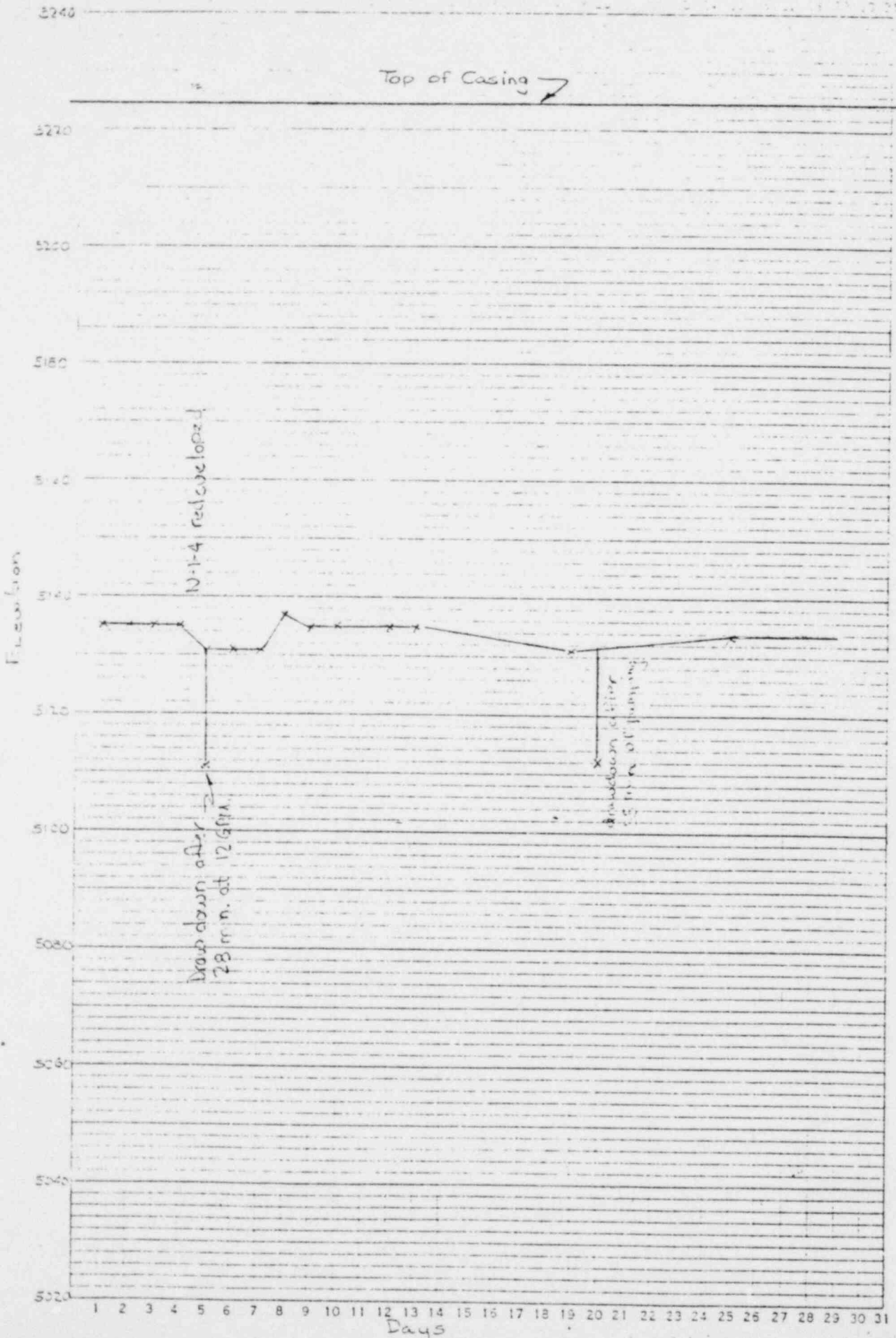
N-M-1



E. J. MIDWAY COMPANY, INC.  
P.O. BOX 100, S.E.  
CANTON, MISSISSIPPI

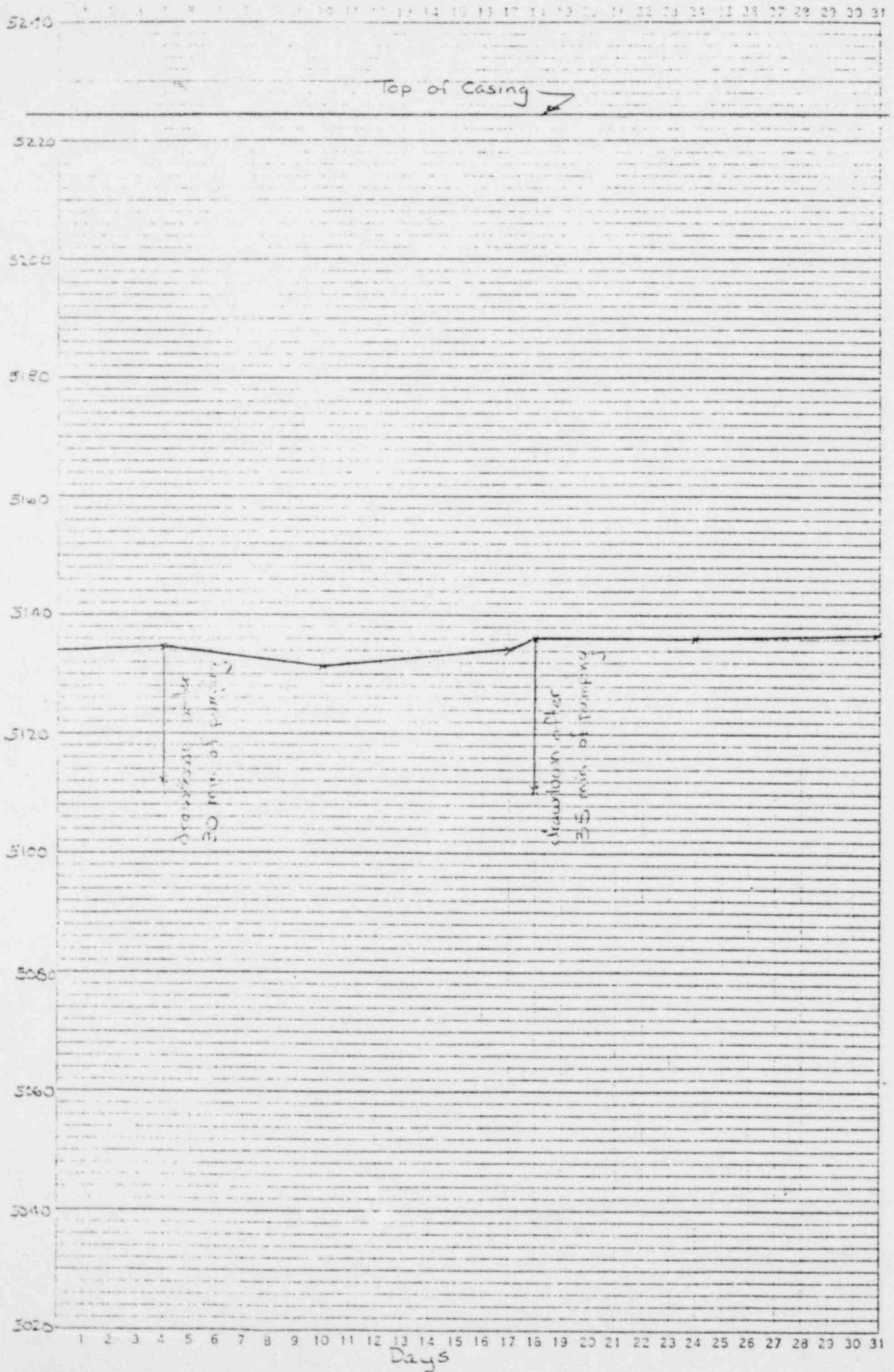
40 1802  
ONE NUMBER AT BASE ON EIGHT DIAL  
110 THROUGH 119 LOWAL DIAL

MONTH OF Jan 19 80



MONTH OF Feb 19 92

N-11-1

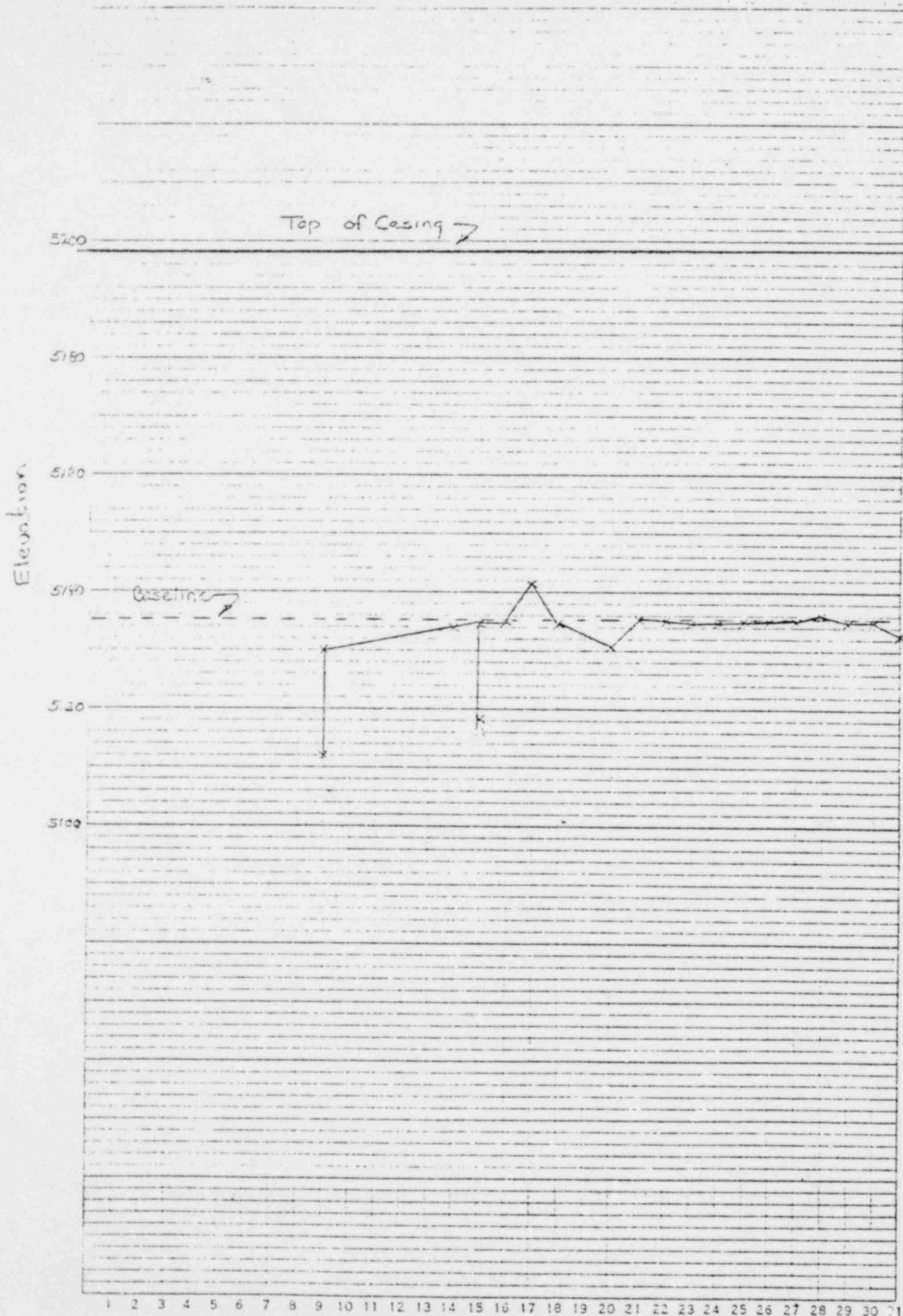


MONTH OF Mar 19 80

40 8402  
 4011 AUGUST 1971 11:11 07N 070W 5001  
 110 DEPRESSION 070 LOGS 4778

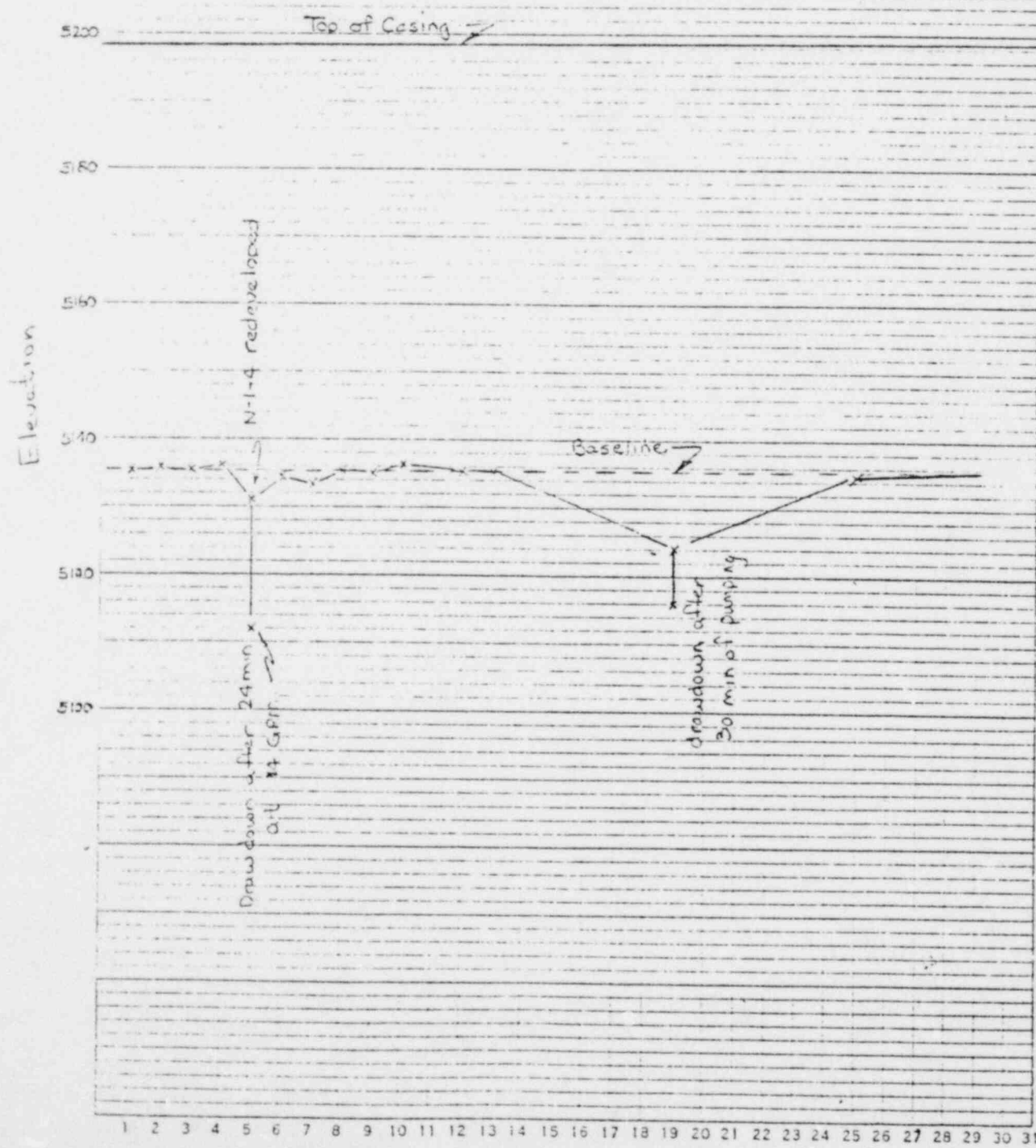


(N Zone)

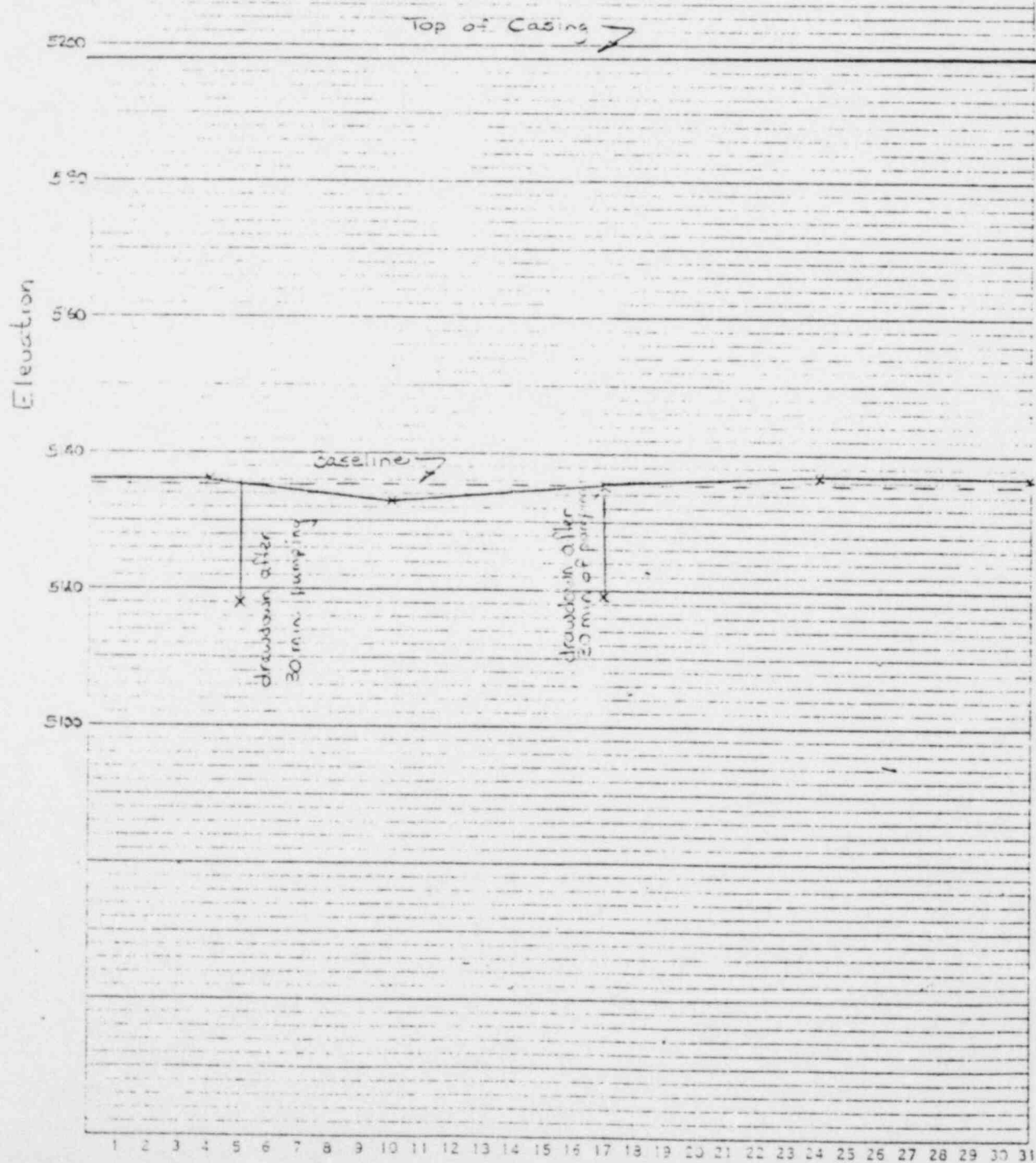


MONTH OF Jan 19 50

520  
(N-Zone)



MONTH OF Feb 19 80



MONTH OF Mar 19 80

WELL PA15-L305

Elev. of MP 5218.9

Aquifer Represented M

Baseline 5157.25

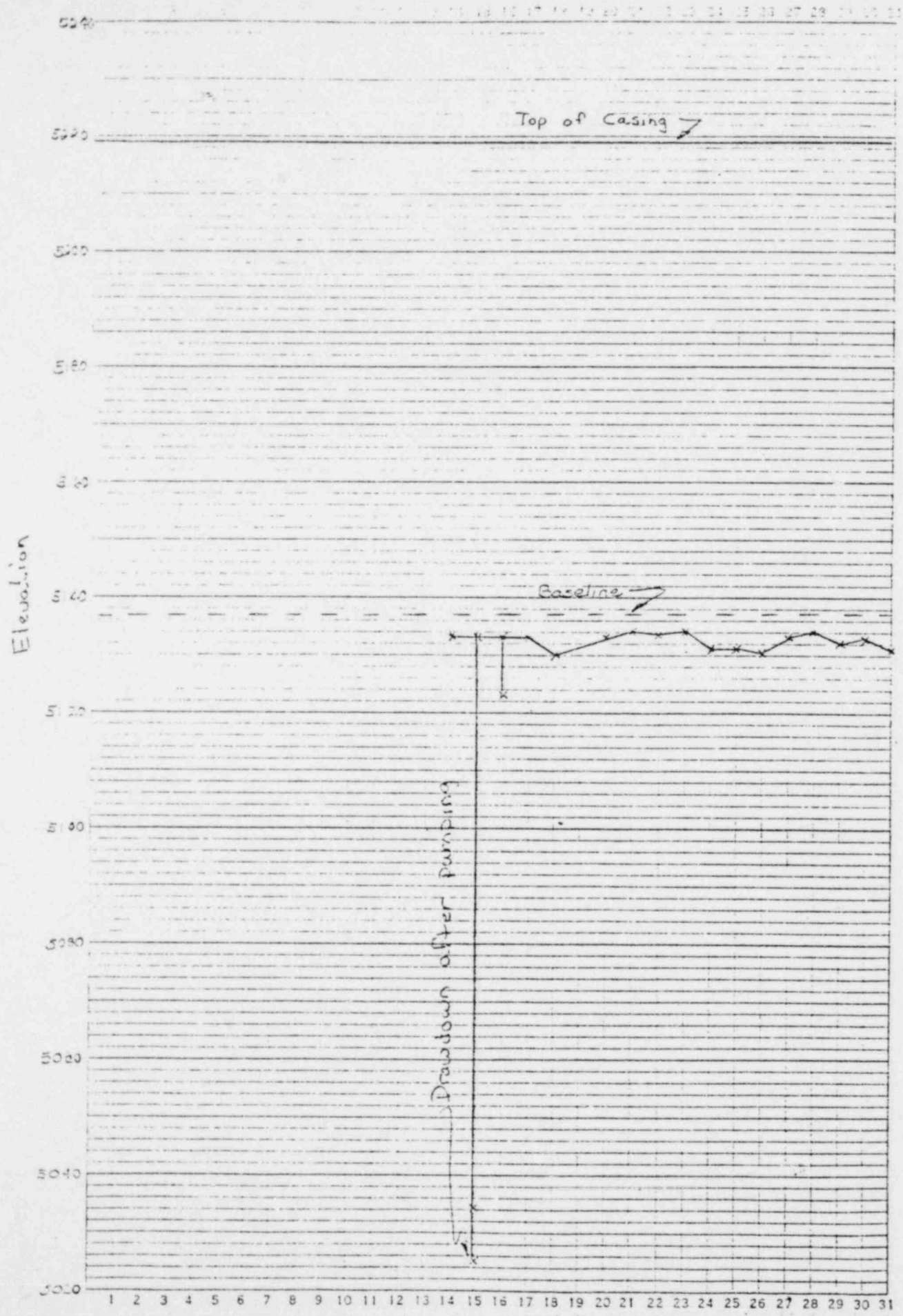
TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		61.7	5157.30
7-18-79		77.1	5139.80
10-15-79		80.59	5138.31
1-14-80		85.85	5133.65
1-15-80		85.65	5133.25
1-16-80		85.46	5133.44
1-16-80	B 1:55	95.7	5123.20
	O	174.7	5034.20
	E	193.4	5025.50
1-17-80		85.57	5133.33
1-18-80		88.9	5130.00
1-20-80		85.42	5133.48
1-21-80		84.84	5134.06
1-22-80		85.20	5133.70
1-23-80	9:00	84.65	5134.25
1-23-80	3:00	84.99	5133.91
1-24-80	9:00	87.38	5131.52
1-24-80	3:00	87.93	5130.97
1-25-80		87.52	5131.38
1-26-80	10:00	88.26	5130.64

TIME		SWL	
Date	Hour	Depth	Elev.
1-27-80	1:00	85.89	5133.01
1-28-80	2:00	84.45	5134.45
1-29-80	9:00	86.78	5132.12
1-30-80	1:00 PM	86.12	5132.78
1-31-80	1:00 PM	87.95	5130.95
2-1-80	2:00 PM	87.63	5131.27
2-2-80	11:00 AM	86.52	5132.38
2-3-80	11:00 AM	87.09	5131.81
2-4-80	1:00 PM	86.10	5132.80
2-5-80	12:00 PM	85.97	5132.93
2-5-80	1:29 PM	173.67	5045.23
2-6-80	3:00 PM	85.26	5133.64
2-7-80	11:00 AM	85.32	5133.58
2-8-80	2:06 PM	85.21	5133.69
2-9-80	11:00 PM	84.73	5134.17
2-10-80	11:00 AM	84.70	5134.20
2-12-80	3:00 PM	95.64	5123.26
2-13-80	9:00 AM	71.77	5147.13
2-19-80	2:00 PM	89.20	5129.70
2-20-80	9:30 AM	182.41	5036.49
2-25-80	1:00 PM	93.59	5125.21

Remarks: 1-31-80 injection wells were shut off approx. 15 min. in each field.  
 2-5-80 level was taken after 32 min of pumping.  
 3:50 PM on 2-11-80 to 2:00 PM on 2-12-80 7M-1-4  
 redeveloped at approx. 10-15 GPM and 50 GPM for 5-10 min. every hour.  
 2-20-80 2:00 PM 182.41 5036.49

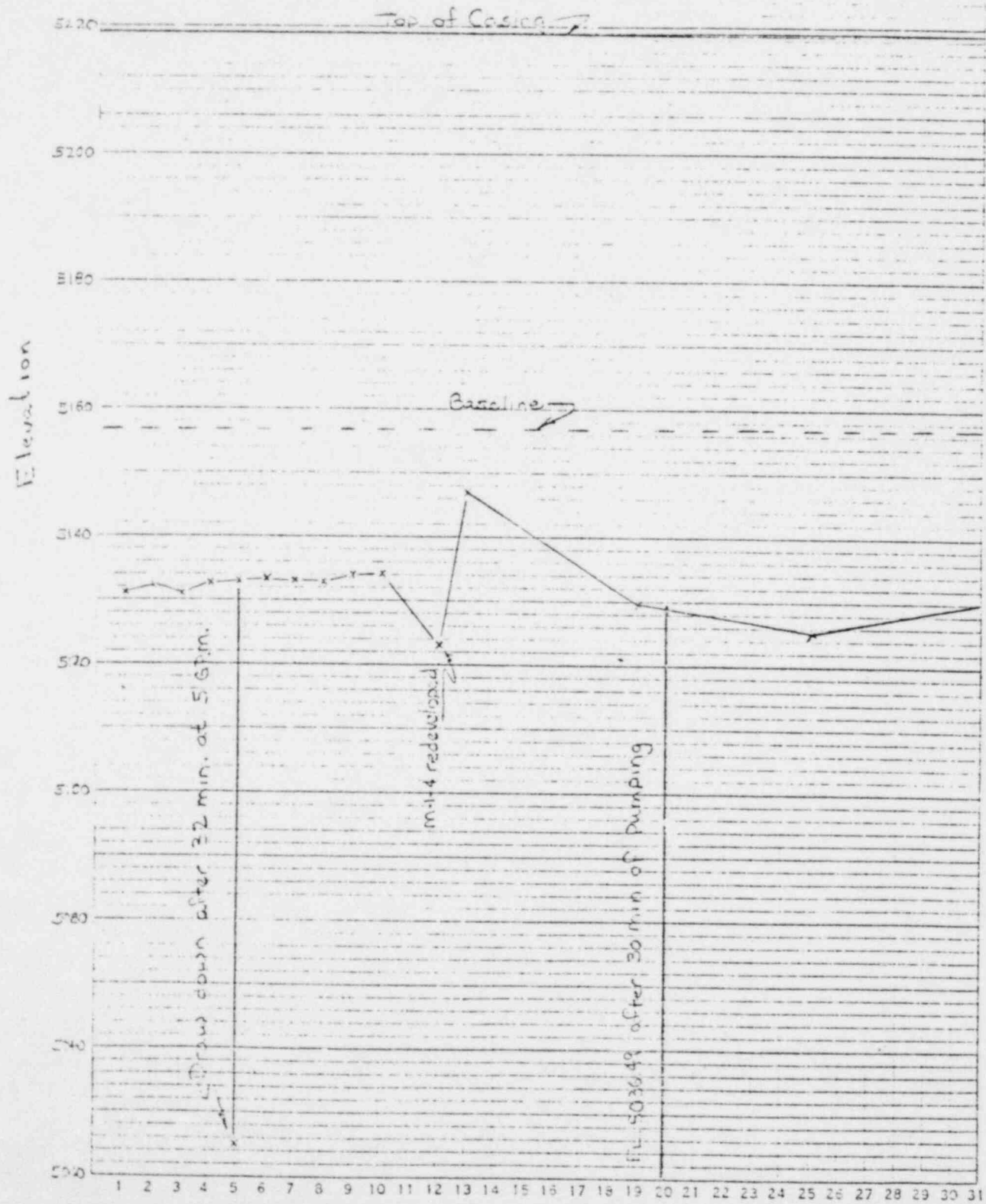


(M Zone)



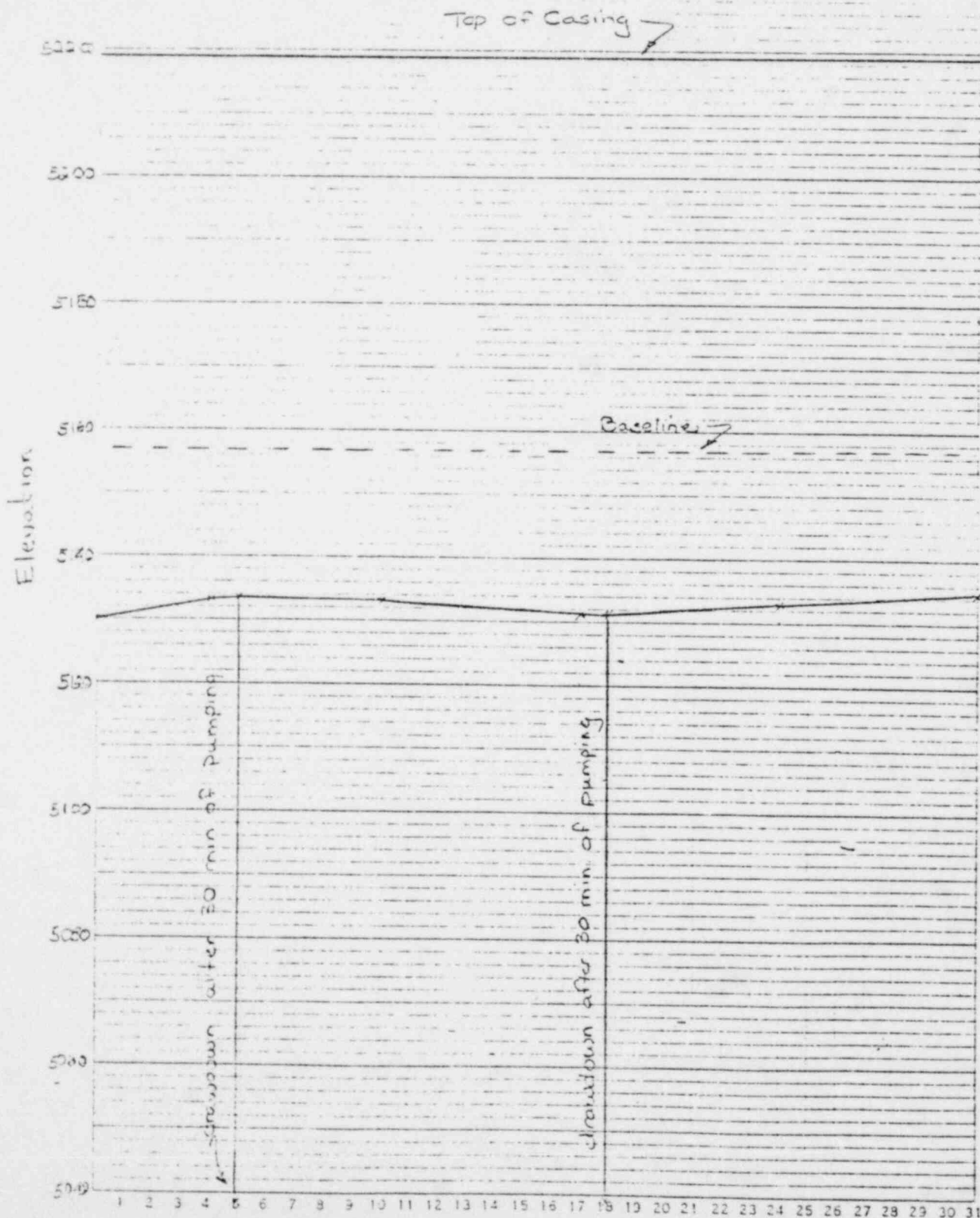
MONTH OF Jan 19 50

300  
(M Zone)



MONTH OF Feb. 1900

300  
(m Zone)



MONTH OF March 19 80



WELL M-M-1Elev. of MP 52010Aquifer Represented 7m

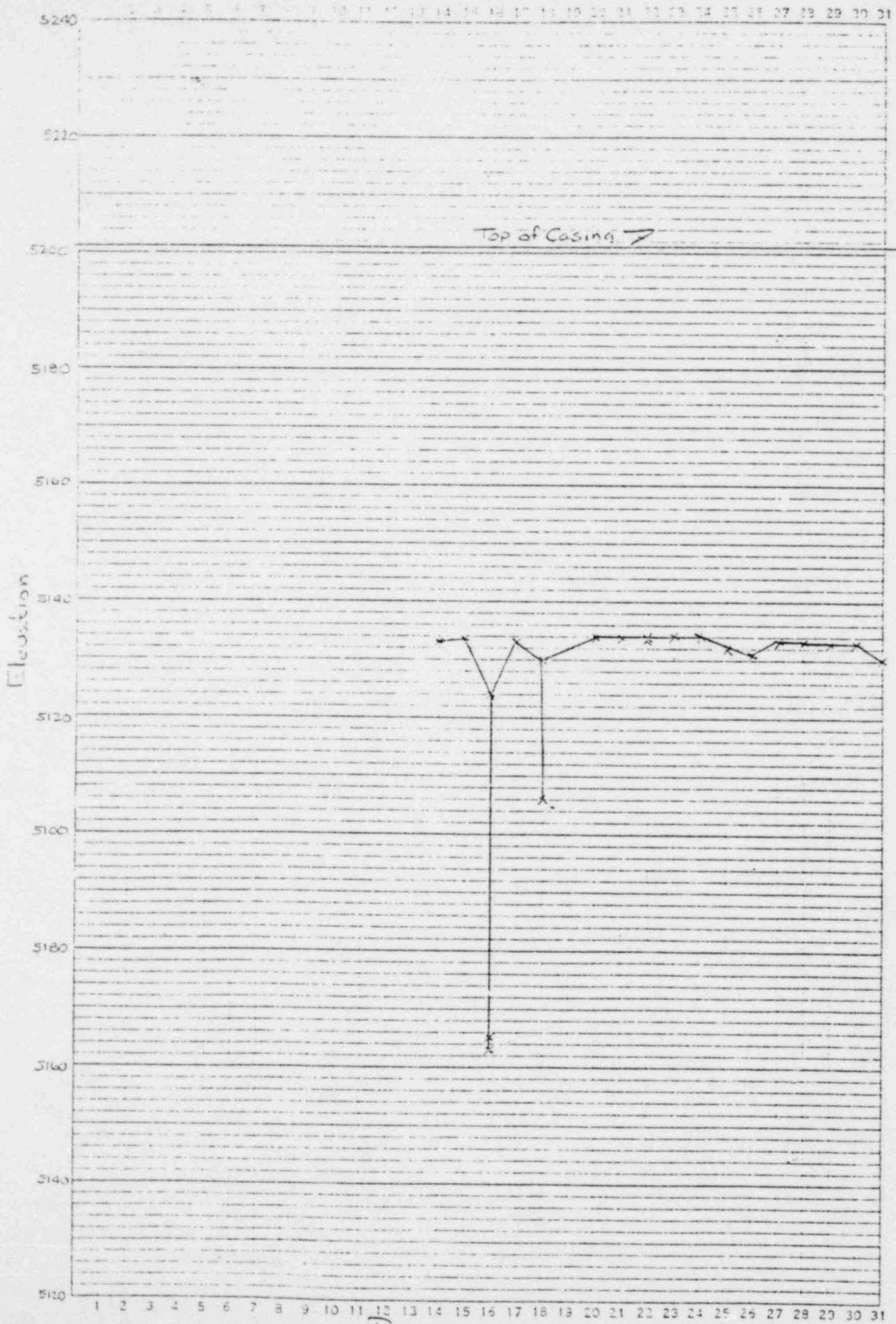
TIME		SWL	
Date	Hour	Depth	Elev.
1-14-80		67.56	5123.44
1-15-80		67.37	5133.62
1-16-80	8:17	76.6	5124.40
1-16-80	n	136	5065.00
1-16-80	E	138.1	5062.90
1-17-80		67.95	5133.15
1-18-80	9:30	71.17	5129.83
1-21-80		66.98	5134.02
1-18-80	11:35	94.28	5106.70
1-21-80		66.76	5134.24
1-22-80	9:00	67.01	5133.99
1-22-80	3:00	67.23	5133.77
1-23-80	9:00	67.23	5133.77
1-23-80	3:00	67.67	5133.33
1-24-80	9:00	68.38	5132.62
1-24-80	3:00	69.03	5131.97
1-25-80		70.12	5130.88
1-26-80	10:00	69.09	5131.91
1-27-80	1:00	67.73	5133.27
1-28-80	2:00	68.25	5132.75

TIME		SWL	
Date	Hour	Depth	Elev.
1-29-80	9:00	68.23	5132.77
1-30-80	1:00 PM	68.30	5132.70
1-31-80	1:00 PM	70.74	5130.26
2-1-80	2:00 PM	68.63	5132.37
2-2-80	11:00 AM	68.54	5132.46
2-3-80	11:00 AM	68.34	5132.44
2-4-80	1:00 PM	67.54	5133.46
2-5-80	11:50 AM	67.61	5133.39
2-5-80	2:09 PM	128.22	5052.78
2-6-80	3:00 PM	66.09	5134.91
2-7-80	11:00 AM	66.69	5134.31
2-8-80		66.87	5134.13
2-9-80		66.98	5134.02
2-10-80		66.80	5134.20
2-12-80	3:00 PM	77.90	5123.30
2-13-80	9:00 AM	89.60	5111.40
2-19-80	2:00 PM	67.65	5133.35
2-25-80	1:00 PM	66.62	5134.38
3-4-80		67.57	5133.43
3-10-80	1:00 PM	67.30	5133.70

Remarks: <sup>1-16-80</sup> 1-18-80 levels taken while pumping for sample collection.  
 1-31-80 injection wells were shut off approx 15 min in each field.  
 2-5-80 level was taken after 24 min of the well being pumped.  
 (3:50 PM) on 2-11-80 to 2:00 PM on 2-12-80 m-1-4 redeveloped.  
 at approx. 10-15 GPM and 50 GPM for 5-10 min every hour.



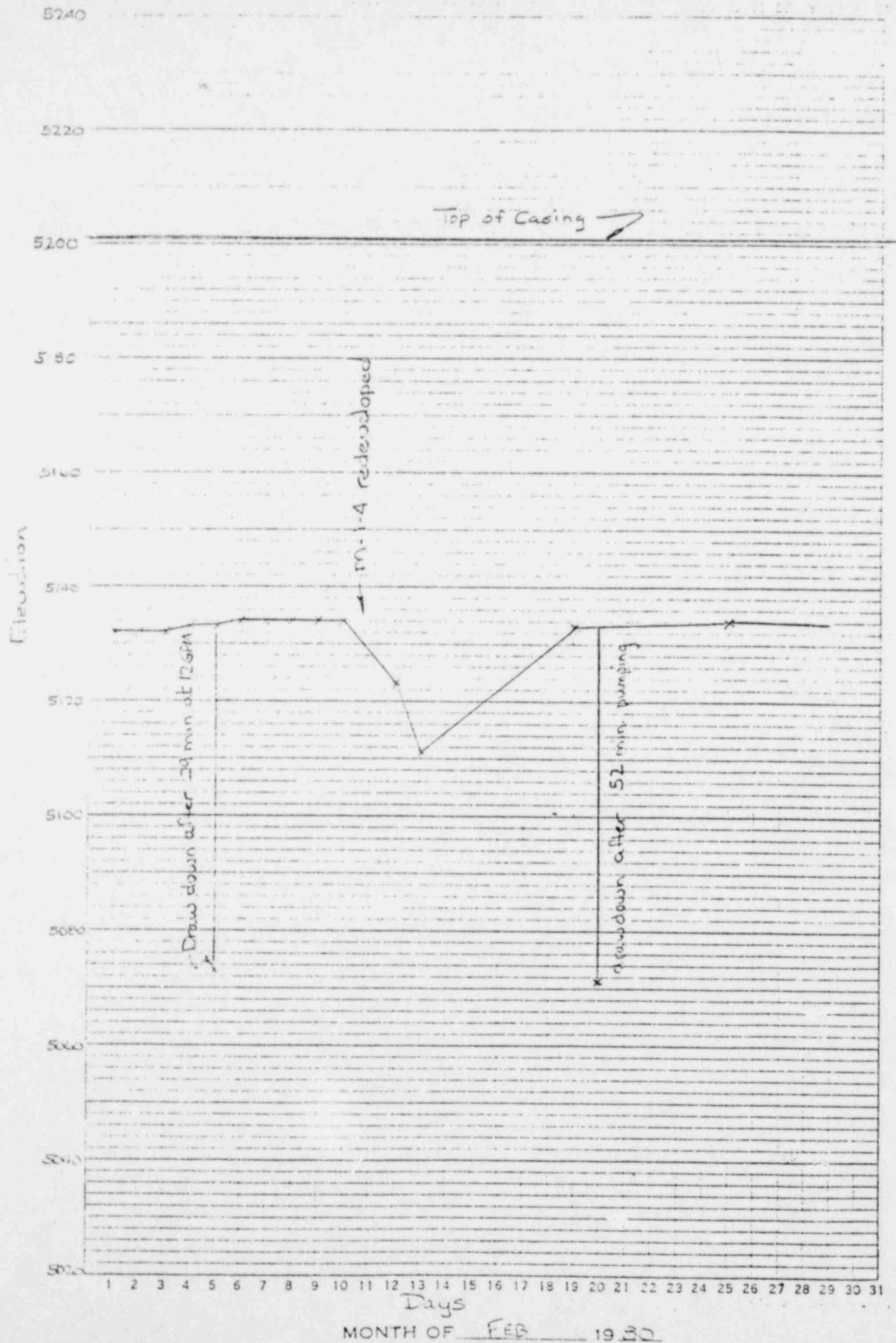
m-m-1



Day  
MONTH OF Jan. 19 80

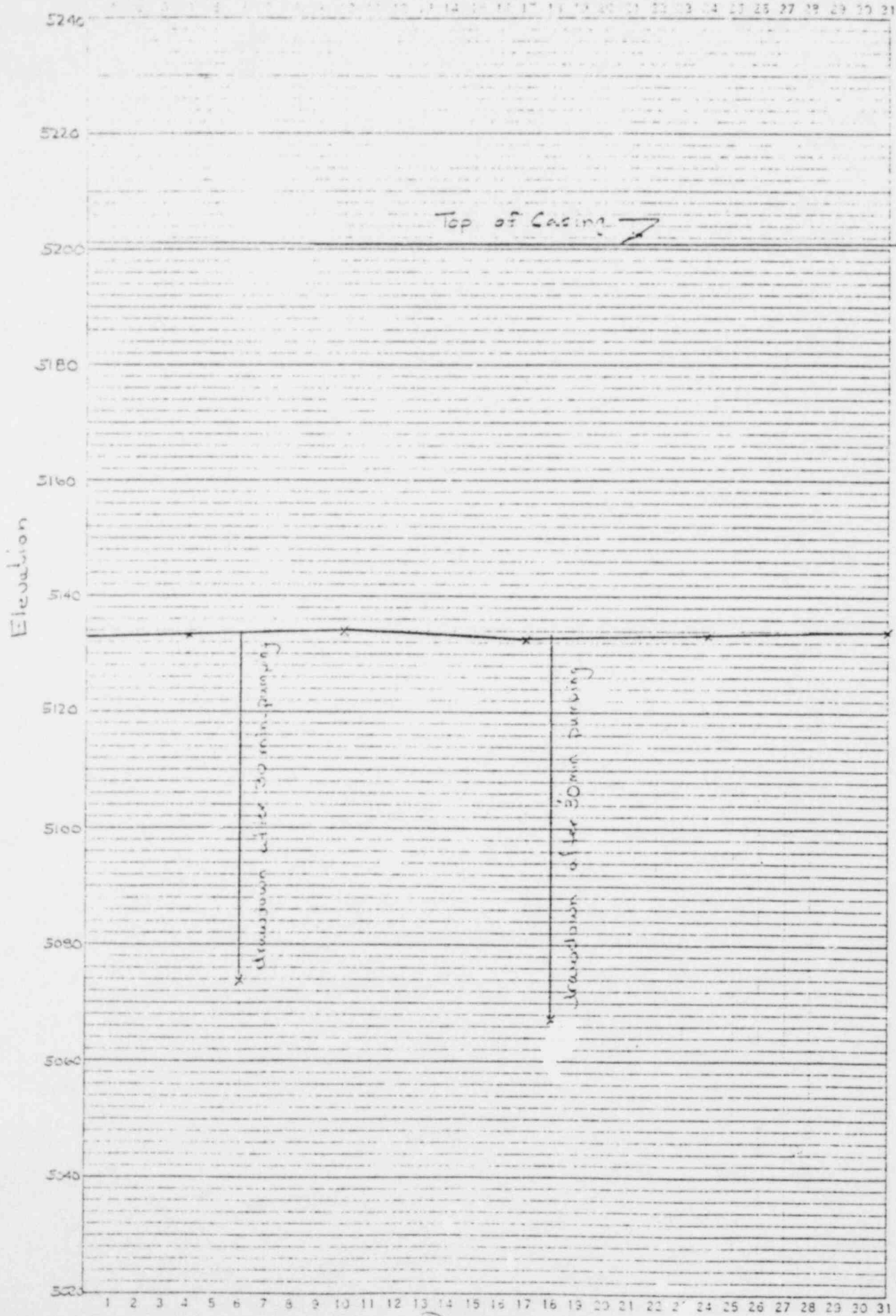
40-1101  
S. P. HUBBARD COMPANY, INC.  
MONTICELLO, V.

40-1101  
GILL MAN & CO. INC., UN. CREDIT BLDG.  
110 DIVISIONS CON. BLDG. S.B.D.



MONTH OF FEB 1930

m-m-1



MONTH OF Mar 19 80

F. C. HIGGINS COMPANY, INC.

40-1802  
SHEETS MADE BY THIS OFFICE FROM DATA  
AND INFORMATION OF OTHER SOURCES

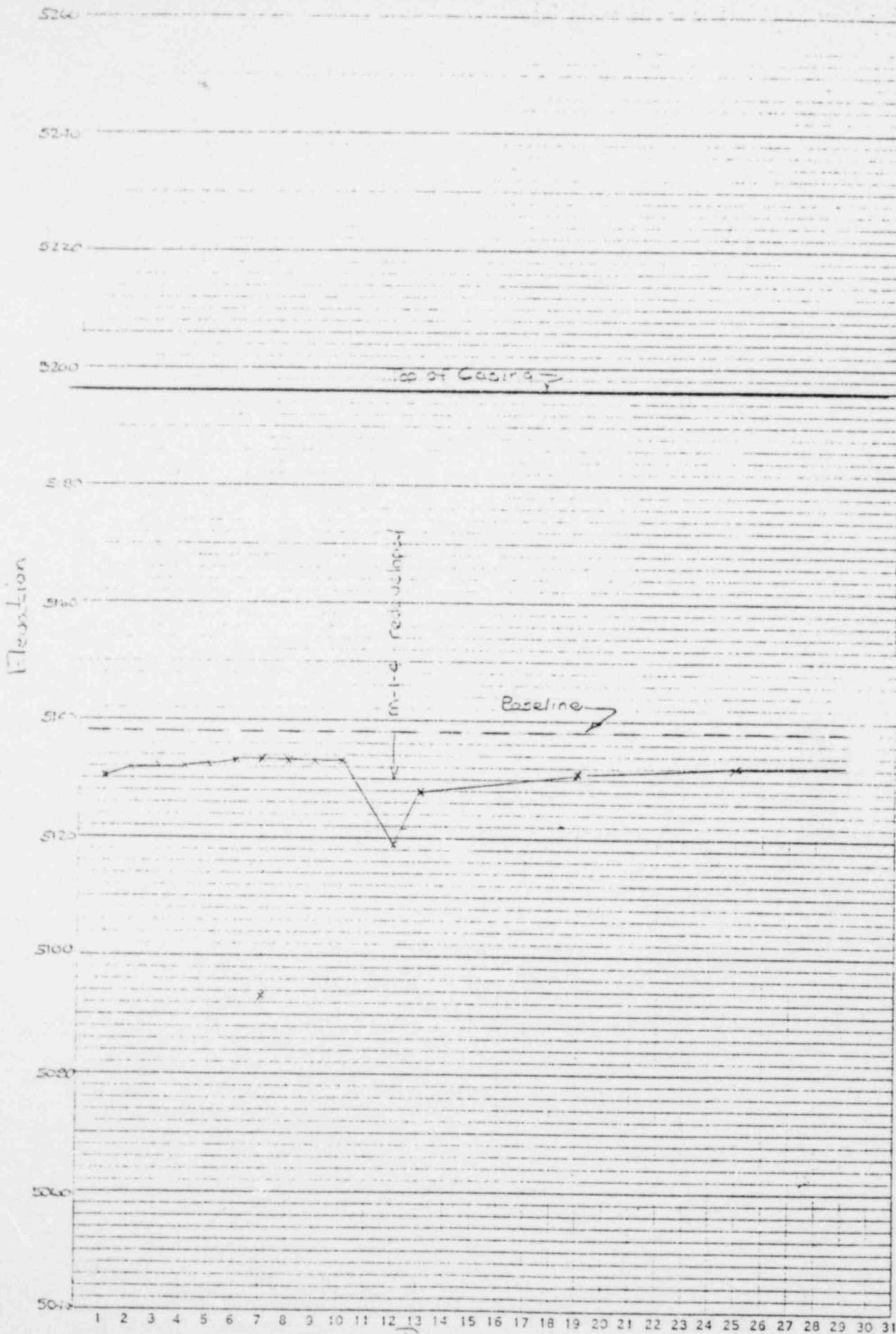
WELL PA5-L576Elev. of MP 5196.3Aquifer Represented MBaseline 5137.93

TIME		SWL	
Date	Hour	Depth	Elev.
1-25-79		52.4	5137.90
9-19-79		56.3	5140.00
10-15-79		57.67	5133.63
1-14-80		62.73	5133.57
1-15-80		62.56	5133.74
1-15-80	9:30	62.56	5133.74
1-15-80	3:15	99.73	5096.57
1-15-80	3:30	103.23	5093.07
1-16-80	.	62.40	5133.90
1-17-80		62.82	5133.48
1-18-80		64.92	5131.38
1-20-80		62.32	5133.98
1-21-80		62.12	5134.18
1-22-80	9:00	61.49	5134.81
1-22-80	3:00	62.68	5133.62
1-23-80	9:00	63.20	5133.10
1-23-80	3:00	63.23	5133.07
1-24-80	9:00	64.03	5132.27
1-24-80	3:00	64.46	5131.84
1-25-80		65.32	5130.98

TIME		SWL	
Date	Hour	Depth	Elev.
1-26-80	10:00	64.64	5131.66
1-27-80	1:00	63.81	5132.49
1-28-80	2:00	63.88	5132.42
1-29-80	9:00	64.28	5132.02
1-30-80	1:00PM	65.02	5131.28
1-31-80	1:00PM	66.28	5130.02
2-1-80	2:00PM	65.48	5130.82
2-2-80	11:00AM	64.38	5131.92
2-3-80	11:00AM	64.06	5132.24
2-4-80	1:00PM	63.80	5132.50
2-5-80	10:00AM	63.85	5132.65
2-6-80	3:00PM	62.75	5133.55
2-7-80	10:35AM	62.78	5133.52
2-7-80	11:04AM	102.87	5093.43
2-8-80		63.01	5133.29
2-9-80		62.84	5133.46
2-10-80		62.87	5133.43
2-12-80	3:00PM	76.94	5119.36
2-13-80	9:00AM	68.11	5128.19
2-19-80	2:00PM	64.94	5131.36

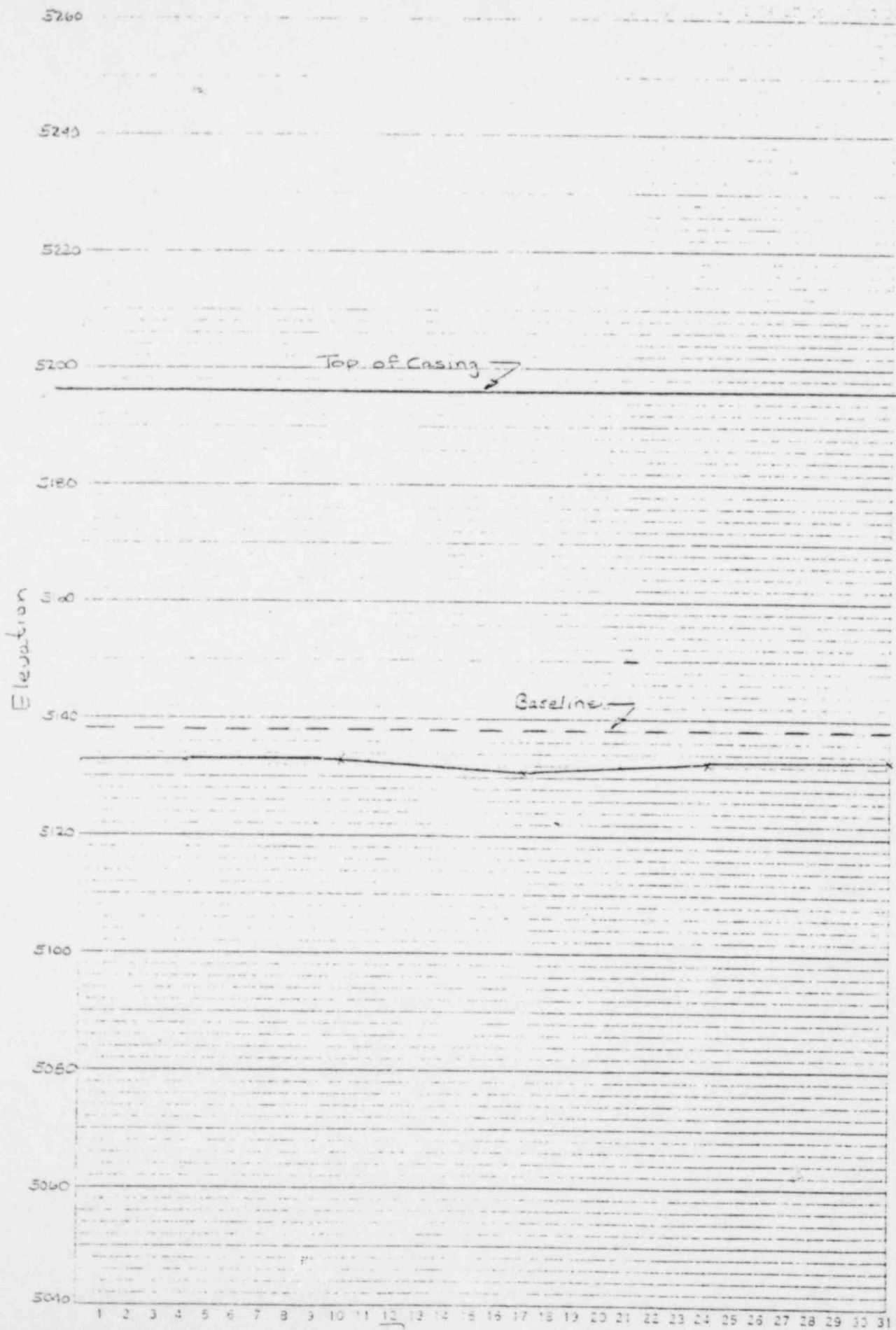
Remarks: 1-15-80 levels taken while pumping for sample collection.  
 1-31-80 injection wells were shut off approx 15 min. in each field.  
 2-7-80 level taken after 26 minutes of well being pumped.  
 2:50 PM. on 2-11-80 to 2:00 PM. on 2-12-80 in 1-4 redeveloped  
 at approx. 16-15 GPM and 55 GPM for 5-10 min every hour.





Day  
MONTH OF FEB 19 80





MONTH OF March 19 80

WELL M-M-2

Elev. of MP 5212.2

Aquifer Represented \_\_\_\_\_

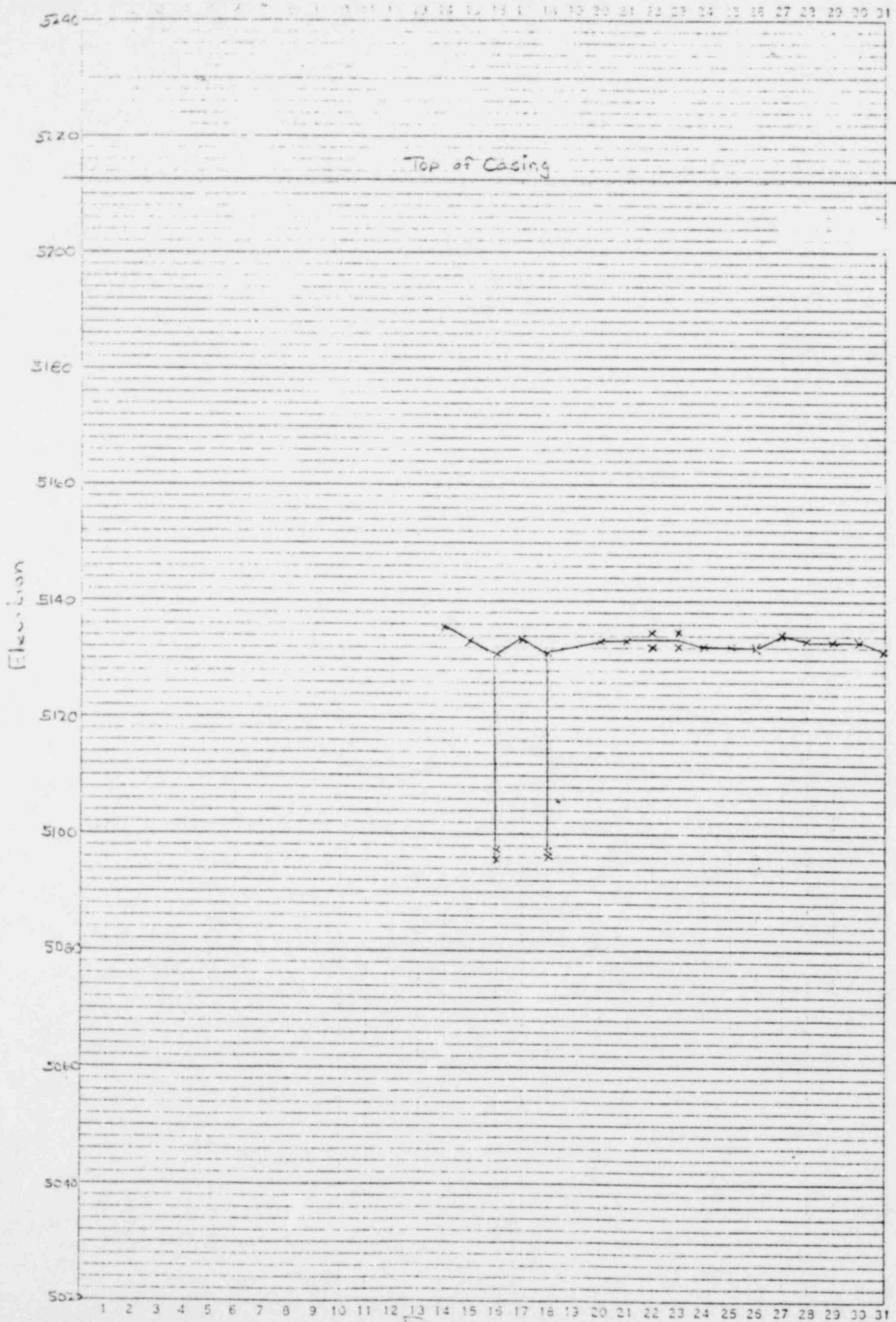
TIME		SWL	
Date	Hour	Depth	Elev.
1-14-80		76.66	5135.24
1-15-80		78.94	5133.36
1-16-80	B 11:19	81.5	5130.70
1-16-80	D	116.1	5075.60
1-16-80	E	114.1	5077.60
1-17-80		78.82	5133.32
1-17-80	B	81.23	5130.97
1-20-80		79.27	5132.93
1-18-80	D	115.01	5077.19
1-18-80	E	115.95	5076.25
1-21-80		78.37	5133.33
1-22-80	9:00	77.91	5134.29
	3:00	79.82	5132.30
1-23-80	9:00	77.60	5134.60
	3:00	80.29	5131.71
1-24-80	9:00	80.09	5132.11
	3:00	80.32	5131.88
1-25-80		80.06	5132.14
1-26-80	10:00	80.17	5132.03
1-27-80	1:00	78.74	5133.46

TIME		SWL	
Date	Hour	Depth	Elev.
1-28-80	2:00	78.73	5133.47
1-29-80	9:00	79.18	5133.02
1-30-80	1:00 PM	79.28	5132.92
1-31-80	1:00 PM	80.73	5131.47
2-1-80	2:00 PM	79.55	5132.65
2-2-80	11:00 AM	78.89	5133.31
2-3-80	11:00 AM	77.50	5134.70
2-4-80	1:00 PM	78.23	5133.97
2-5-80	10:00 AM	78.30	5133.90
2-5-80	10:05 AM	below 130.00	
2-6-80	3:00 PM	76.53	5135.67
2-7-80	11:00 AM	78.00	5134.20
2-8-80		77.55	5134.65
2-9-80		77.21	5134.99
2-10-80		77.07	5135.13
2-12-80		79.64	5132.56
2-13-80		82.23	5129.97
2-19-80		79.01	5133.19
2-25-80	1:00 PM	78.98	5133.22
3-4-80		77.76	5134.44

Remarks: B before pumping well for water sample  
 A during pumping well for water sample  
 E water level just prior to turning off pump.  
 1-16-80 & 1-18-80 levels taken while pumping for sample collection  
 1-31-80 injection wells were shut off approx. 15 min. in each field.  
 2-5-80 level taken after well had been pumped for 32 minutes.  
 3:50 PM on 2-11-80 to 2:00 PM on 2-12-80 M-1-4 redeveloped  
 at approx 10-15 GPM and 50 GPM for 5-10 min every hour.



m-m-2

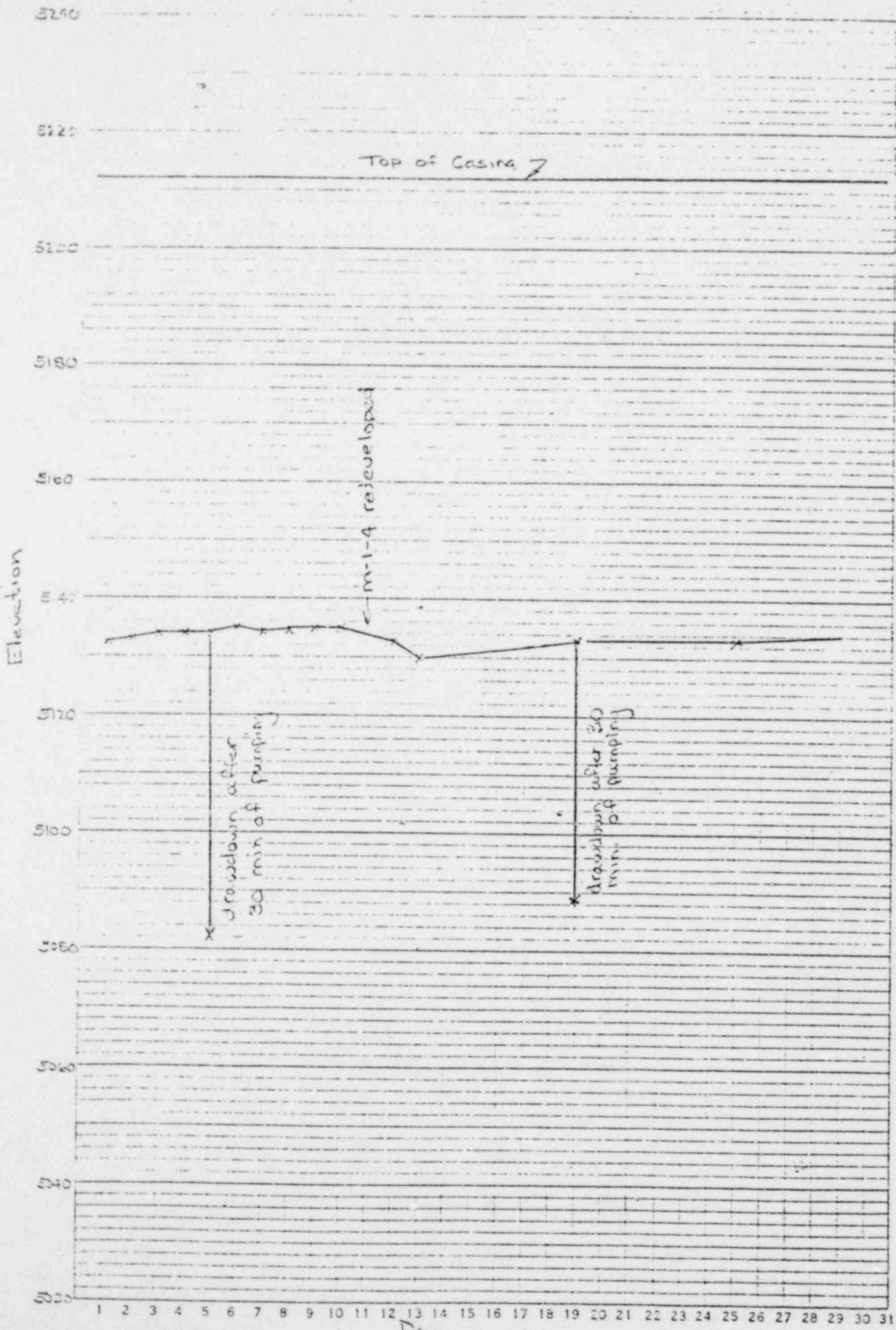


MONTH OF Jan 19 80

40-1872  
 SHEET NUMBER AND DATE ON STREET SIDE  
 THE DIVISION OF LOCAL GOV.

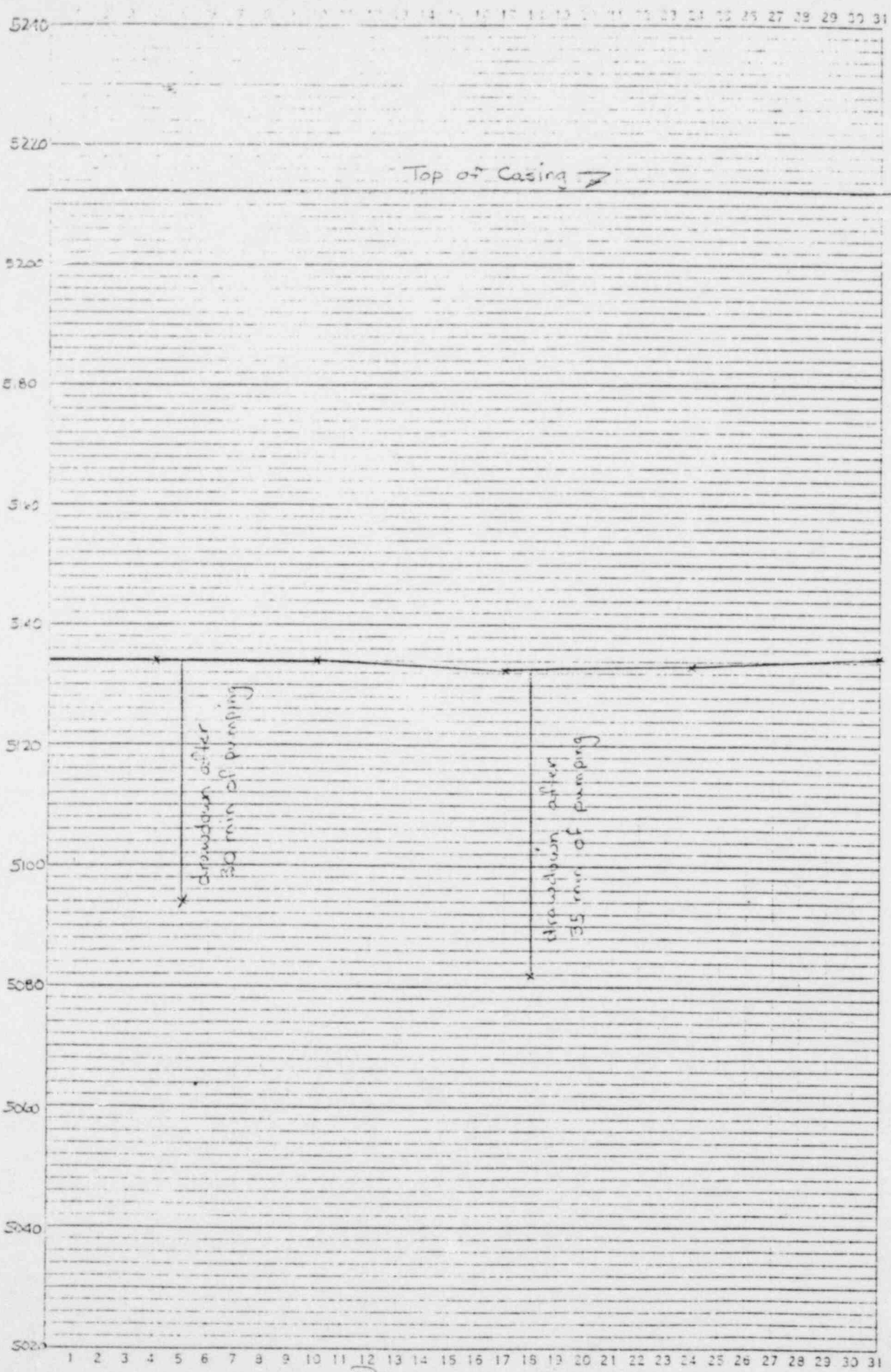


E. J. FISHBACH COMPANY, INC.  
 FISHBACH BLDG.



Day  
MONTH OF FEB 19 80

m - m - 2



Day  
MONTH OF Mar. 19 50

401802  
CIVIL ENGINEER OF DATA ON SHORT GUY  
110 BROADWAY, N.Y. 10004, N.Y.



WELL PN 5-75

Elev. of MP 5213.2

Aquifer represented M

Position 5137.5

TIME		SWL	
Date	Hour	Depth	Elev.
6-25-79		75.6	5137.6
9-19-79	10:00	75.0	5138.20
10-15-79	1:00	74.65	5138.55
1-14-80	2:00	79.86	5133.34
1-15-80	9:00	79.71	5133.49
1-16-80	1:00 PM	79.66	5133.54
1-16-80	8:13 AM	78.4	5104.80
		117.3	5095.90
		129.5	5083.70
1-17-80	11:00 AM	80.16	5133.04
1-18-80	1:00 PM	85.05	5130.15
1-21-80	10:00 AM	79.09	5134.11
1-22-80	9:00	79.19	5134.01
1-22-80	3:00	79.13	5134.07
1-23-80	9:00	76.94	5126.74
1-23-80	3:00	77.69	5135.51
1-24-80	9:00	79.48	5133.72
		79.76	5133.44
		80.19	5133.01
		80.08	5132.12

TIME		SWL	
Date	Hour	Depth	Elev.
1-25-80		80.08	5133.12
1-26-80	10:00	79.61	5133.59
1-27-80	1:00	78.82	5133.39
1-28-80	2:00	78.71	5134.49
1-29-80	9:00	78.58	5134.62
1-30-80	1:00 PM	79.15	5134.05
1-31-80	1:00 PM	80.86	5132.34
2-1-80	2:00 PM	79.93	5133.37
2-2-80	11:00 AM	79.22	5133.98
2-3-80	11:00 AM	79.17	5134.03
2-4-80	1:00 PM	78.63	5134.57
2-5-80	10:00 AM	78.18	5135.02
2-5-80	11:28 AM	116.33	5096.87
2-6-80	3:00 PM		
2-7-80	11:00 AM	77.70	5135.50
2-8-80		76.74	5135.45
2-9-80		77.44	5135.76
2-10-80		77.06	5136.14
2-12-80	3:00 PM	91.53	5121.67
2-13-80	9:00 AM	82.04	5131.16

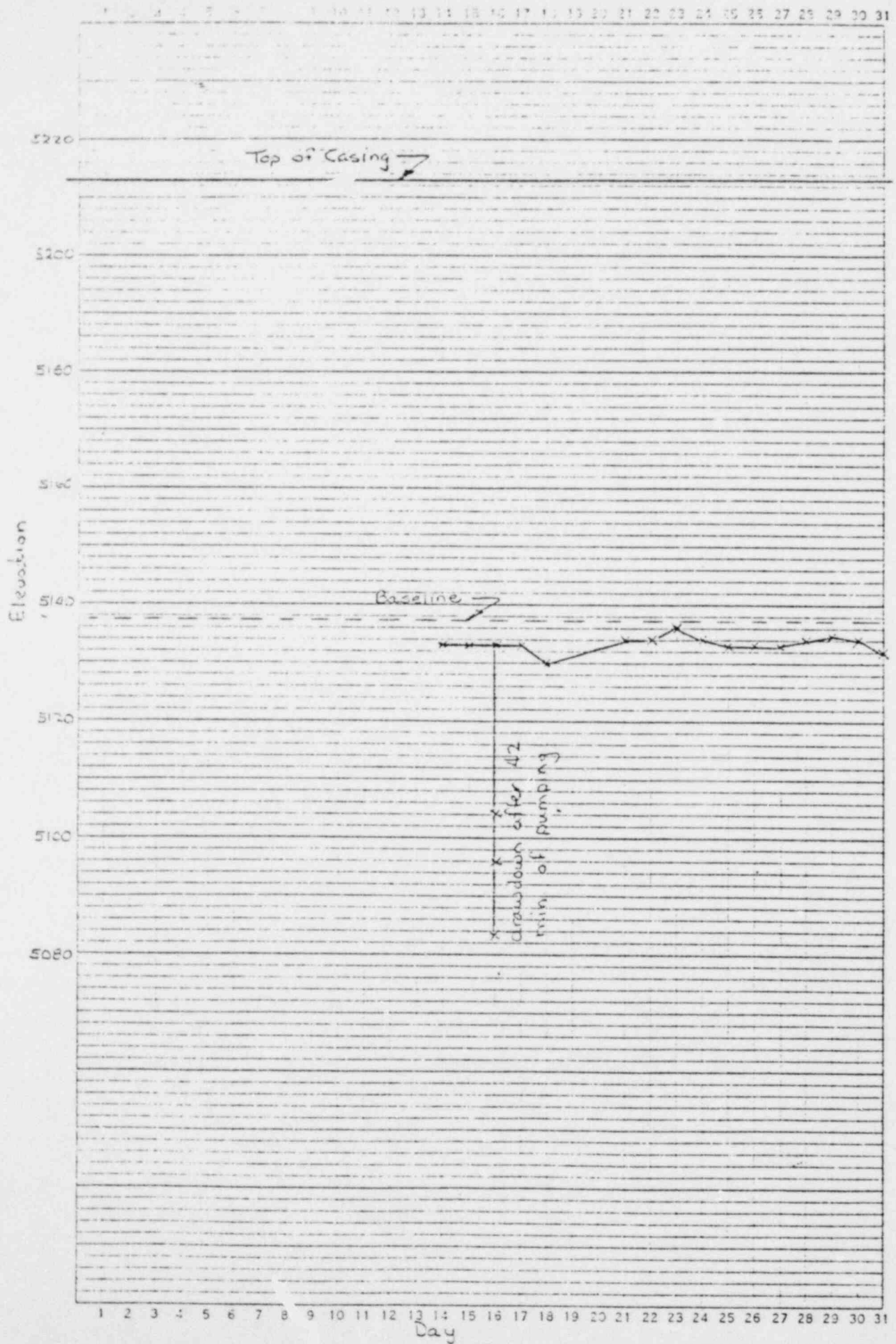
Remarks: 1-16-80 levels taken while pumping for sample collection

1-31-80 injection wells were shut off approx. 15 min in each field.  
 2-5-80 level taken after well had pumped for 31 minutes.  
 2-5-80 level taken at approx. 2:00 PM on 2-12-80 M-1-4 redeveloped at approx. 10-15 GPM and 50 GPM for 5-10 min every hour.





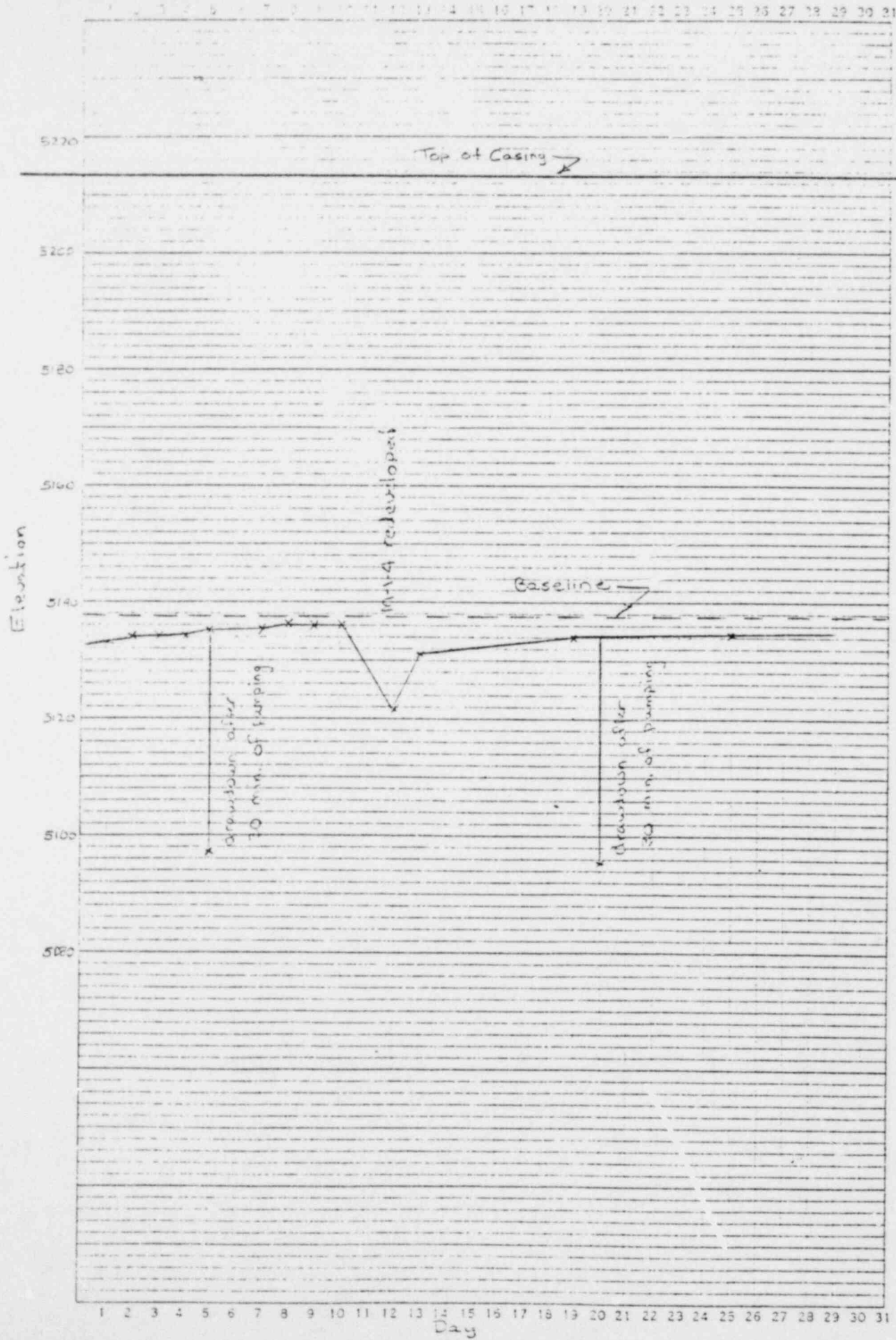
575



L. S. HIGHWAY COMPANY, INC.  
MEMPHIS, TENN.

40-1802  
LINE MARK AT DAY ON SHORT SITE  
100 IN LONG FOR LONG MARK

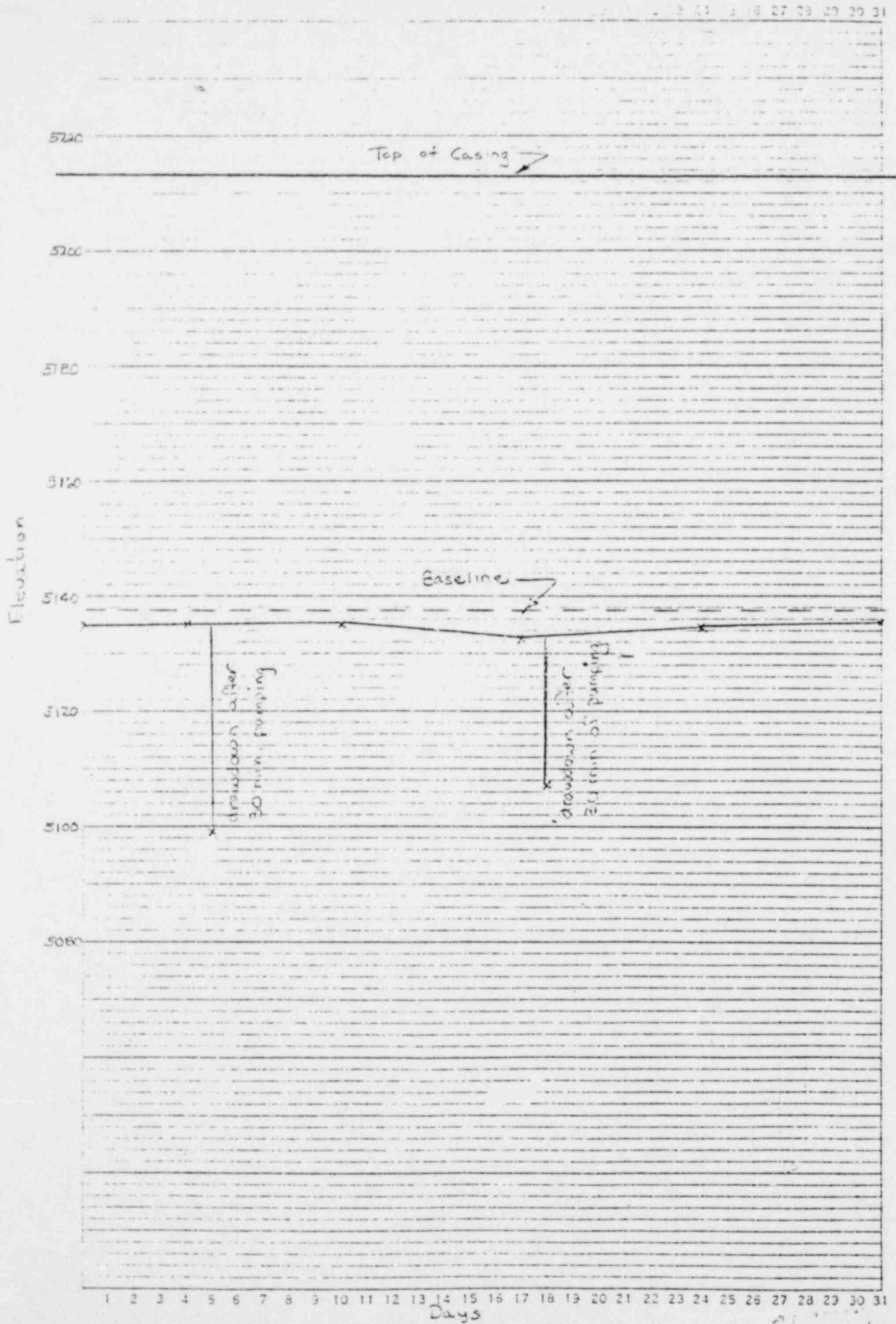
MONTH OF Jan 1980



MONTH OF Feb 19 80

U.S. GEOLOGICAL SURVEY  
WATER RESOURCES DIVISION

40-1404  
WELL LOG FOR M-114 UN  
100 FEET DEEP, BY L.D.M. 1980



MONTH OF Mar 19 80