



PDR

40-8693

OGLE PETROLEUM INC.

TELEPHONE (805) 969-5941
TELECOPIER (805) 969-3278
TELEX No. 658-430

P.O. Box 5549
359 SAN YSIDRO ROAD
SANTA BARBARA, CALIFORNIA 93108

December 4, 1980

PLEASE DIRECT REPLY TO:

150 North Nichols Avenue
Casper, Wyoming 82601
(307) 266-6456

Land Quality Division
Department of Environmental Quality
401 West Nineteenth Street
Cheyenne, Wyoming 82001

and

Uranium Recovery Licensing Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

RE: Permit to Mine No. 504

and

Source Material License No.
SUA-1336, Docket No. 40-8693

SUBJECT: Quarterly Report

Gentlemen:

In accordance with the referenced licenses, Ogle Petroleum Inc. (OPI) herewith submits the Quarterly Report for its pilot (R & D) in-situ uranium solution mining operation in the Bison Basin area of Wyoming. The period covered by this report is August 1, 1980 through October 31, 1980.

1. OPERATIONAL SUMMARY

During this reporting period, mining has continued in the one-acre test area using a sodium carbonate/bicarbonate based lixiviant with oxygen being used as the primary oxidant. An additional five wells have been drilled (see Figure 1) for continued research in the one-acre test area.

During the period covered by this report, the wellfield has been operating at an average flow rate of 83.9 gallons per minute (gpm). The total product recovered for the calendar year as of October 31, 1980, based on metallurgical calculations, is approximately 4,876 pounds of uranium (as U_3O_8). The average grade of uranium in the pregnant leach solution during this operating period was 50.2 ppm.

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POOR QUALITY PAGES

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2. AVERAGE FLOW RATES TO THE PROCESSING PLANT

The average flow rates to the processing plant during the reporting period, by month, are as follows:

August, 1980	89.2 gpm
September, 1980	82.5 gpm
October, 1980	78.6 gpm

3. AVERAGE FLOW RATES TO THE POND

The average flow rates to the evaporation pond during the reporting period, by month, are as follows:

August, 1980	0.49 gpm
September, 1980	0.42 gpm
October, 1980	0.40 gpm

4. TOTAL NUMBER OF GALLONS INJECTED AND RECOVERED

The total number of gallons injected and recovered during the reporting period are as follows:

Injected	10,343,416 gallons
Recovered	10,396,893 gallons

5. WASTE VOLUMES GENERATED

The total volume of liquid waste effluent discharged to the evaporation pond during this reporting period was 53,477 gallons. The quality of the effluent is reflected in the analytical results of the monthly plant bleed samples presented in Table 1.

6. MONITOR WELL ANALYTICAL RESULTS

The analytical results of the required monitor well sampling program are presented in tabular form in Tables 2 through 8 and in graphical form on Figures 7 through 49. The locations of the monitor wells are shown on Figure 1.

7. MONITOR WELL WATER LEVELS

As required by the referenced licenses, OPI measured the depth to the water surface in each monitor well each time the well was sampled. These measurements

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were taken prior to pumping the well for the water quality sample collection. The results of these water surface measurements are presented graphically on Figures 50 through 55. The sudden drop of the water level for monitor well 303-6-M 3, shown on Figure 52, is due to increased pumping of OPI's industrial water well.

8. ENVIRONMENTAL MONITORING

During this reporting period, three 48-hour air samples for radon-222 were collected. The data from these samples are shown in Table 9. Also collected were three 24-hour air particulate samples for thorium-230, radium-226, and uranium. The data from these samples are presented in Table 10. These samples were collected at TLD Stations 1, 2, and 3 which are shown on the TLD Station Location Map (Figure 56). Quarterly results from the 22 environmental TLDs are shown in Table 11 with the locations shown on Figure 56.

Please contact our Casper office if additional information concerning OPI's 100 gpm R & D operation is desired.

Sincerely,

OGLE PETROLEUM INC.

Gary A. Saunders
Environmental Engineer

Glenn J. Catchpole, Vice President
and Uranium Project Manager

GAS:jm

Enclosures

CC: Region IV, NRC, w/Enclosures
Dr. Minton Kelly, ORNL, w/Enclosures
Document Management Branch w/Enclosures

OGLE PETROLEUM INC.

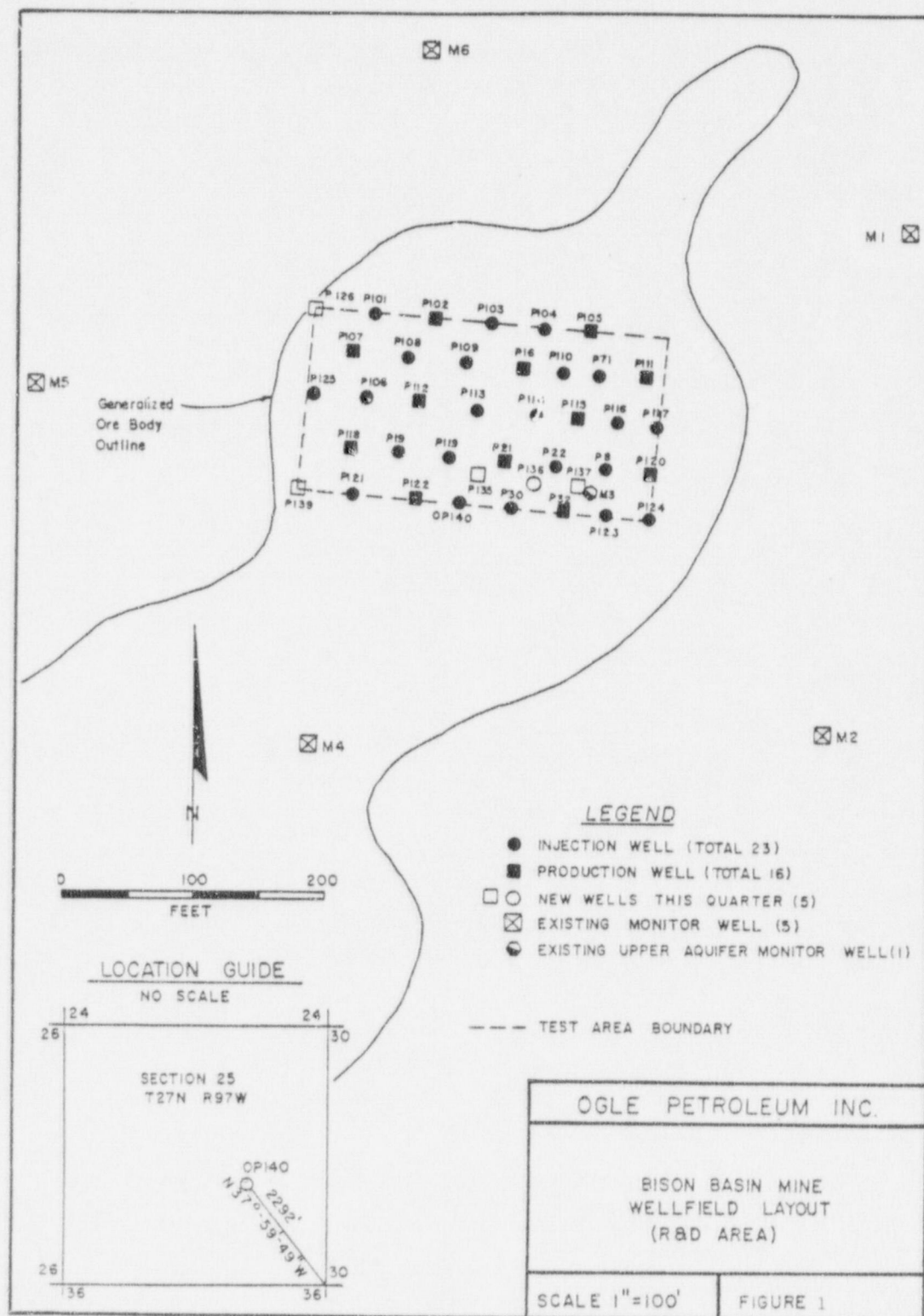


FIGURE 2

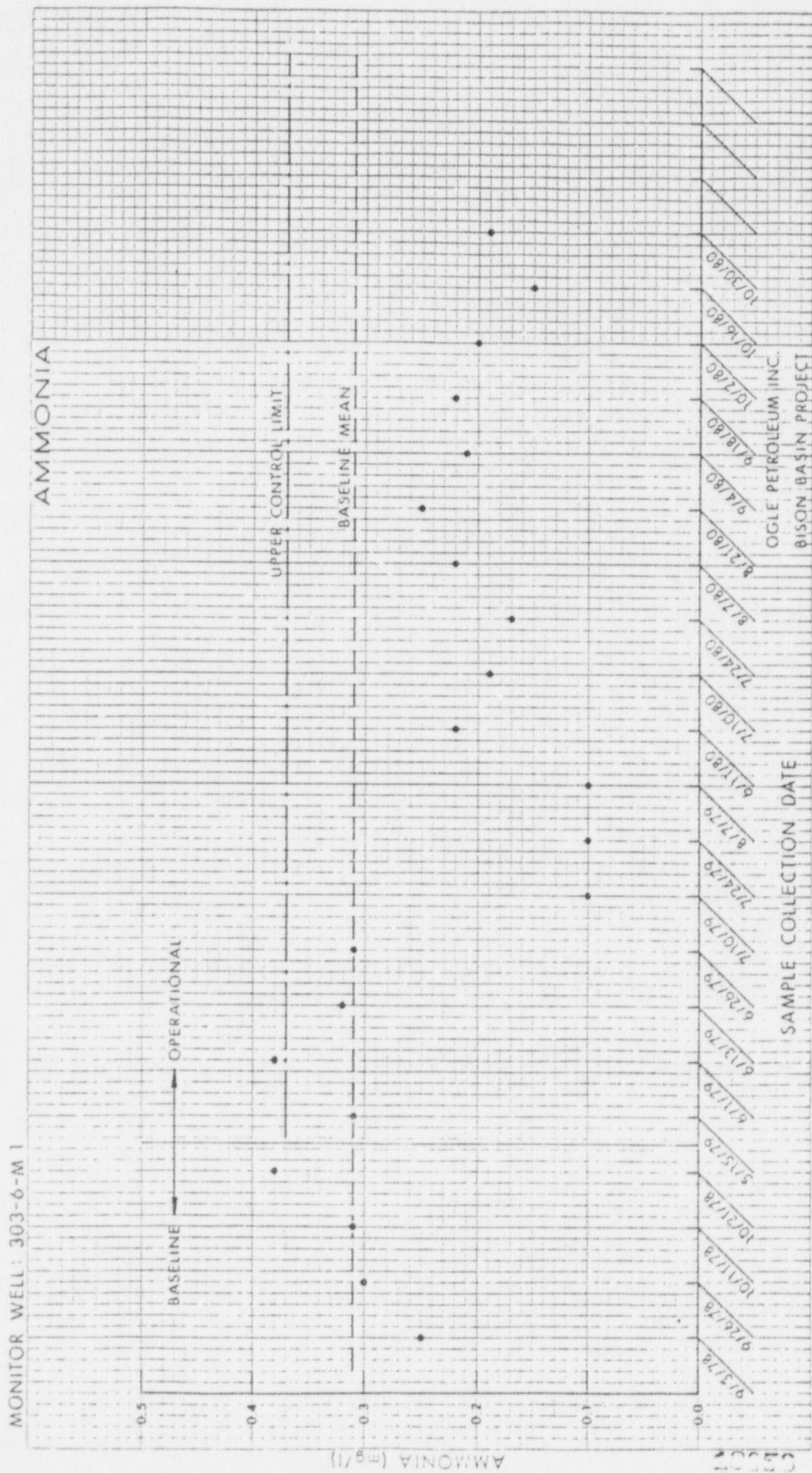


FIGURE 3



FIGURE 4

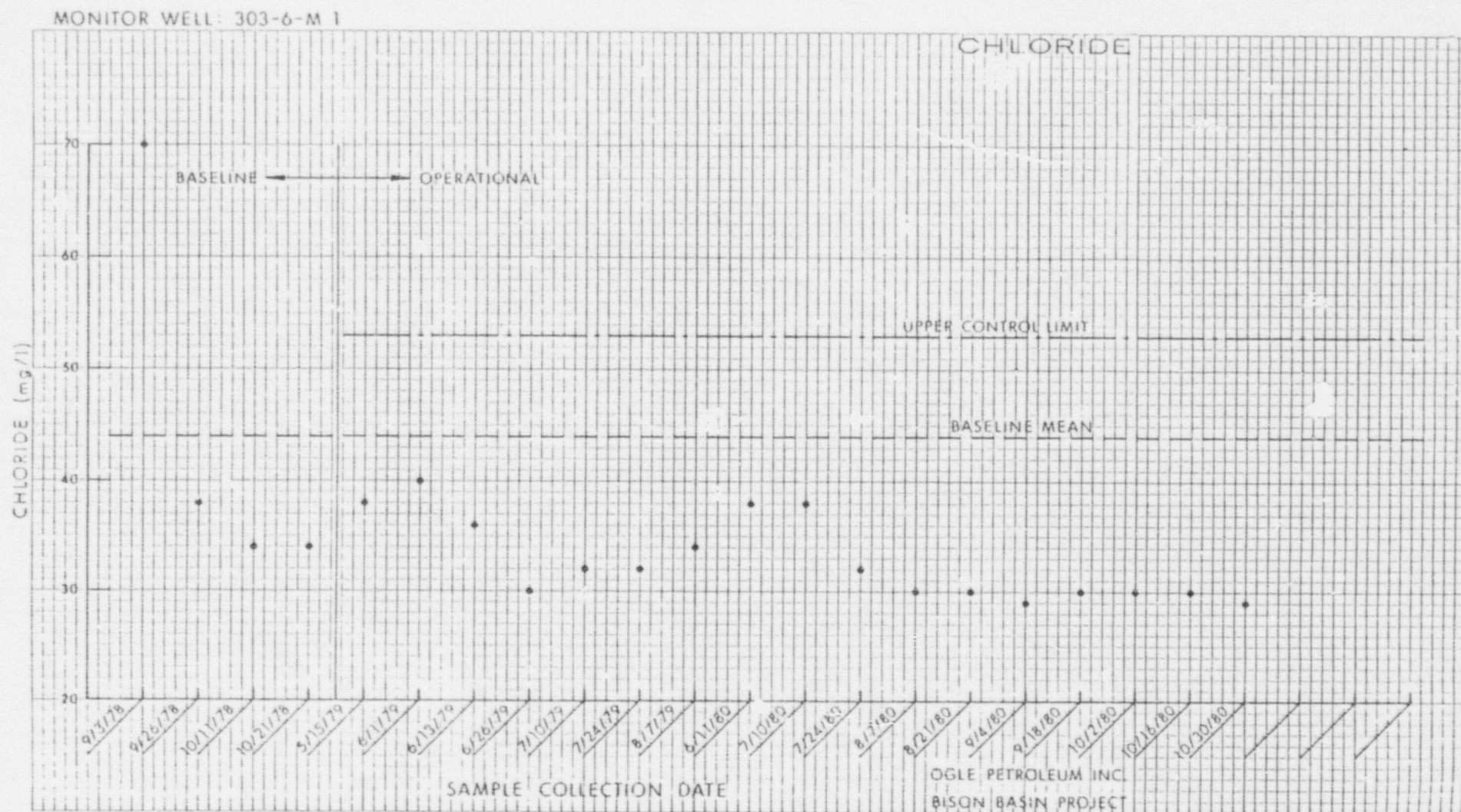


FIGURE 5

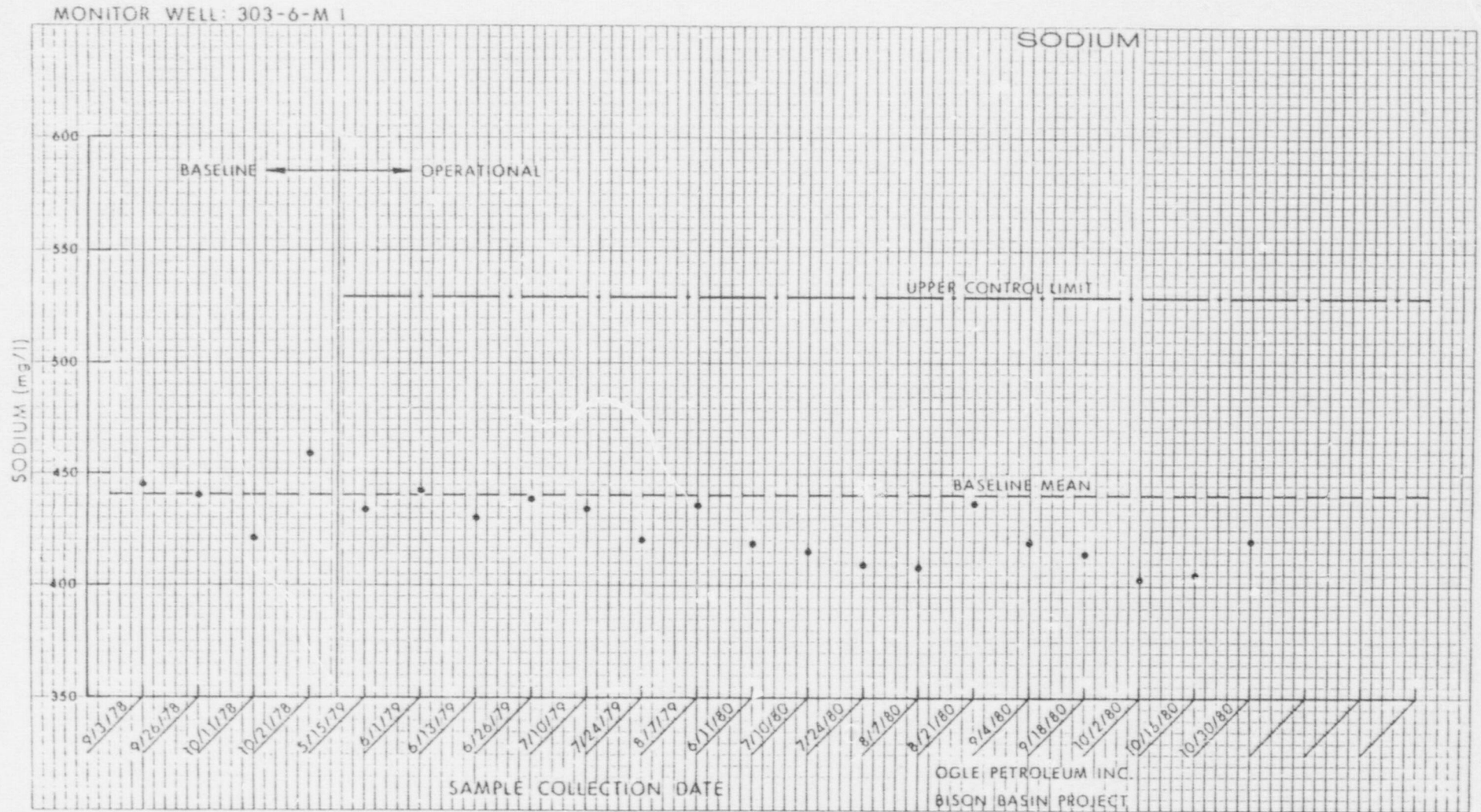


FIGURE 6

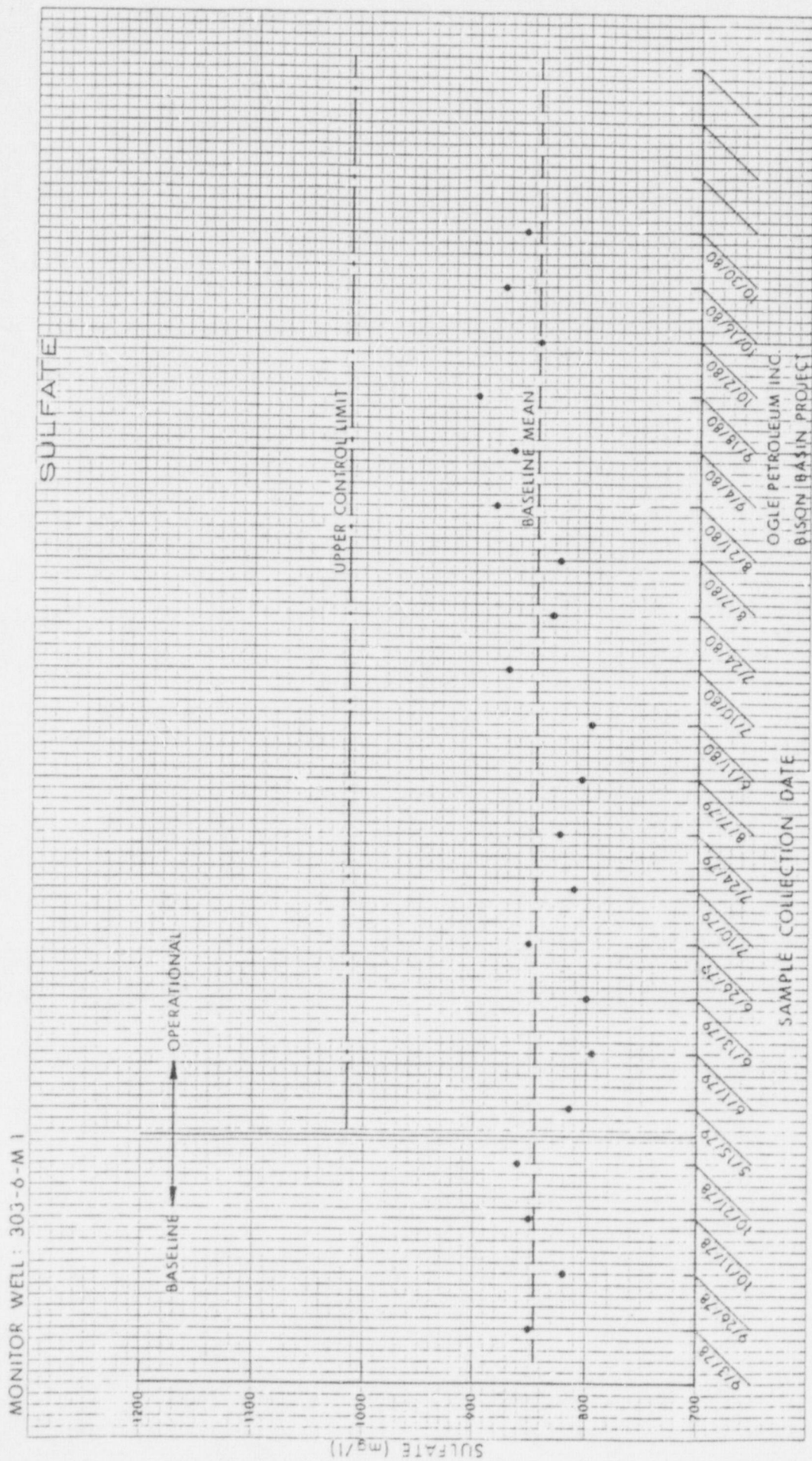


FIGURE 7

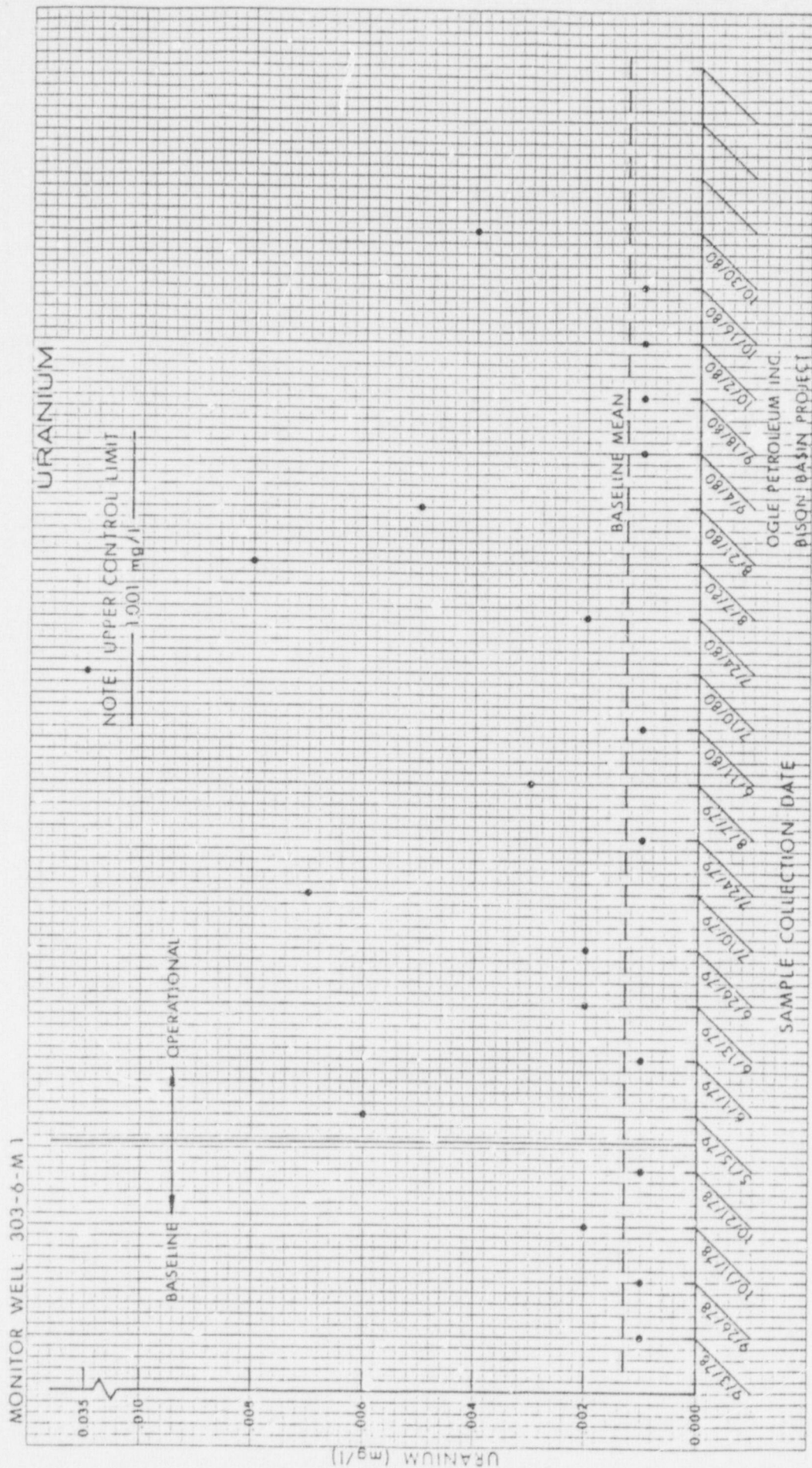


FIGURE 8



FIGURE 9

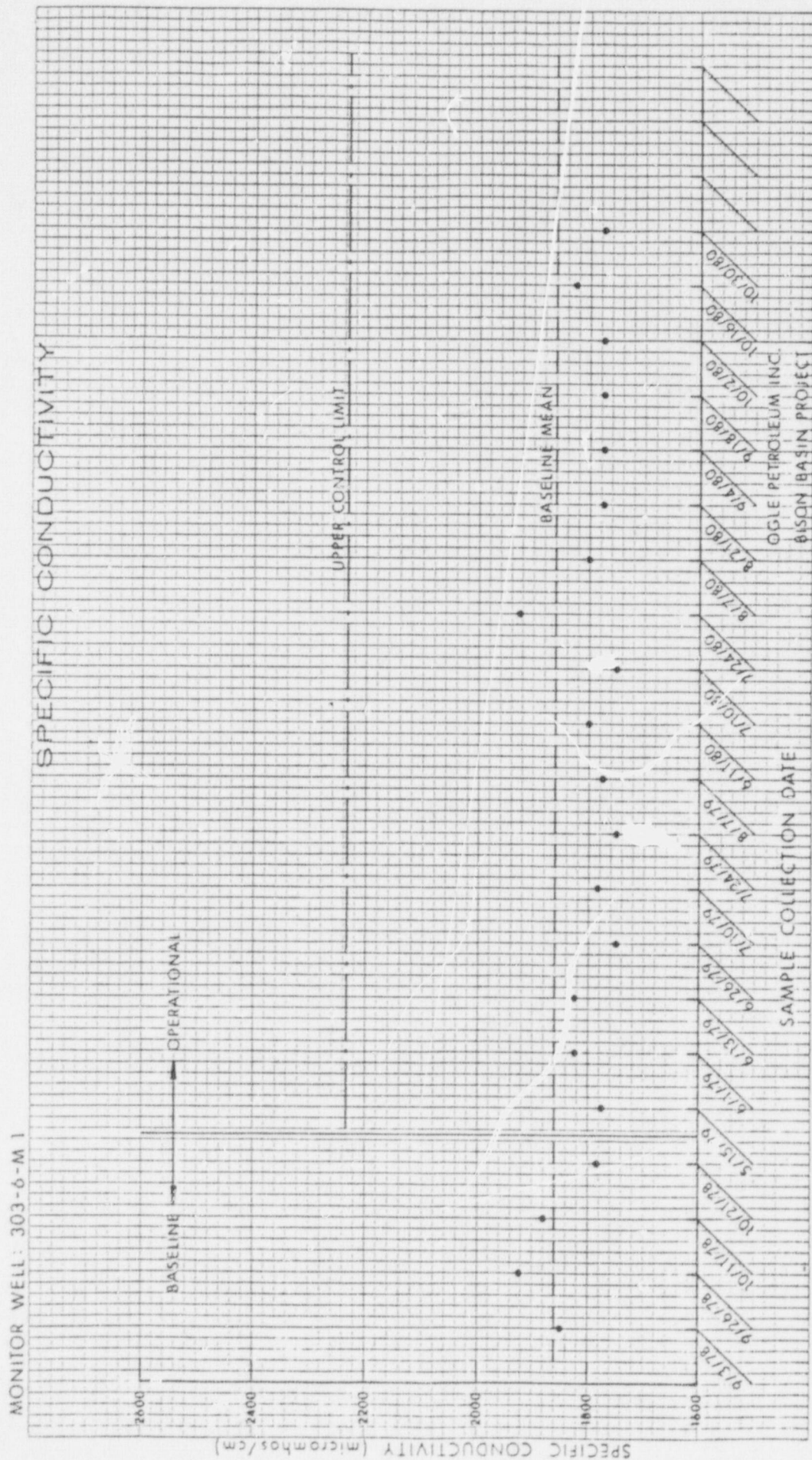


FIGURE 10

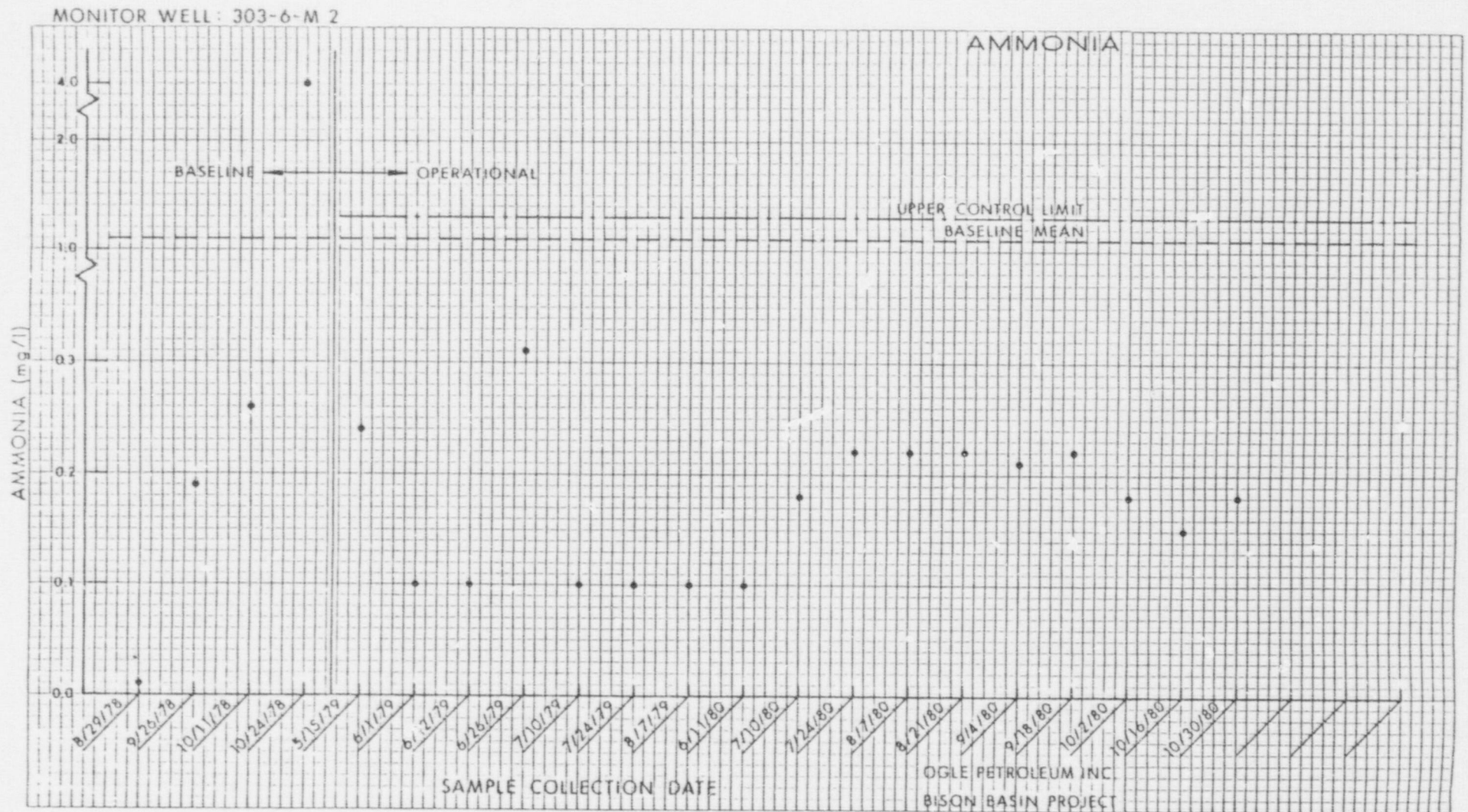


FIGURE 11

MONITOR WELL: 303-6-M 2

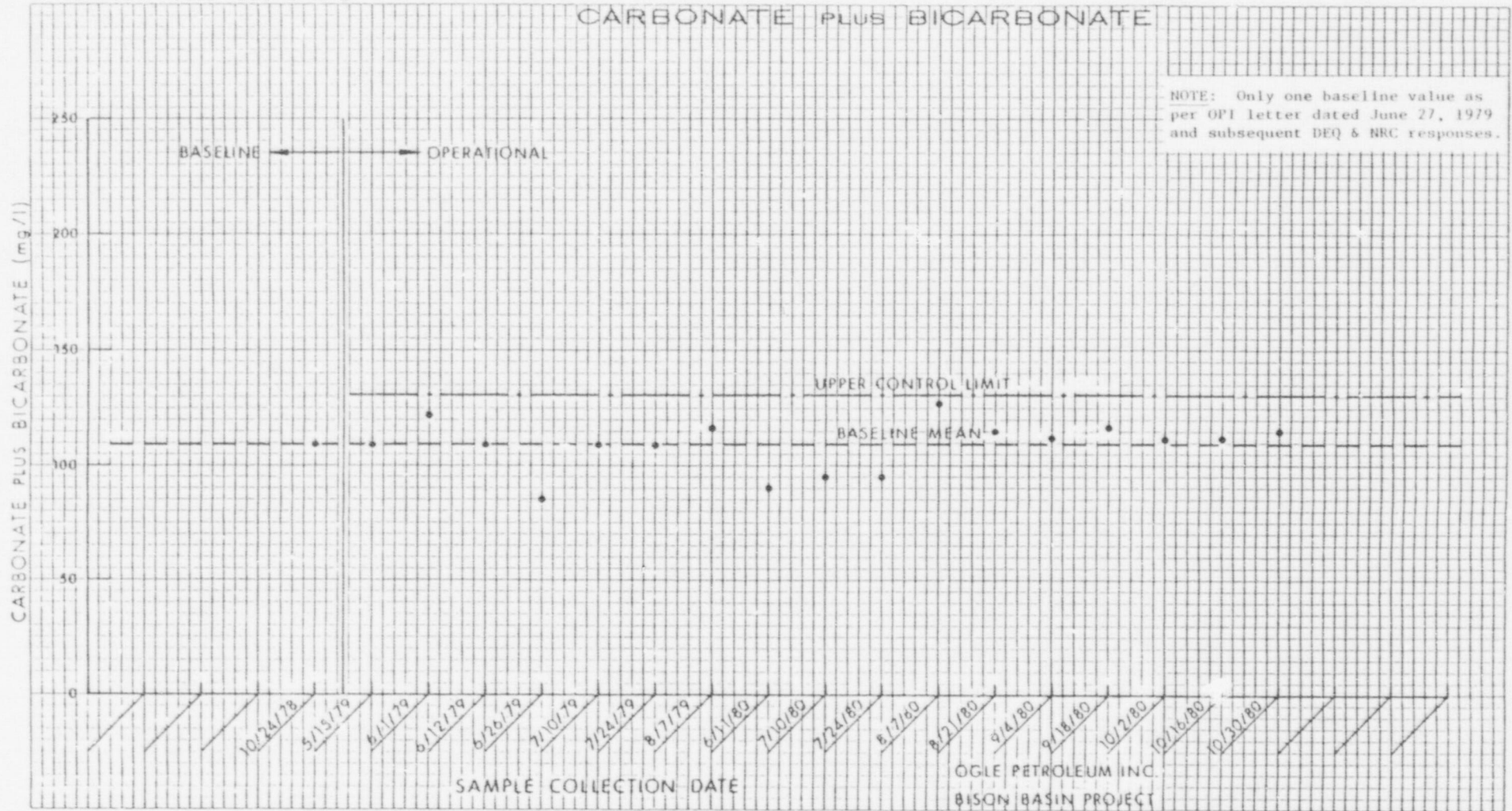


FIGURE 12

MONITOR WELL: 303-6-M 2

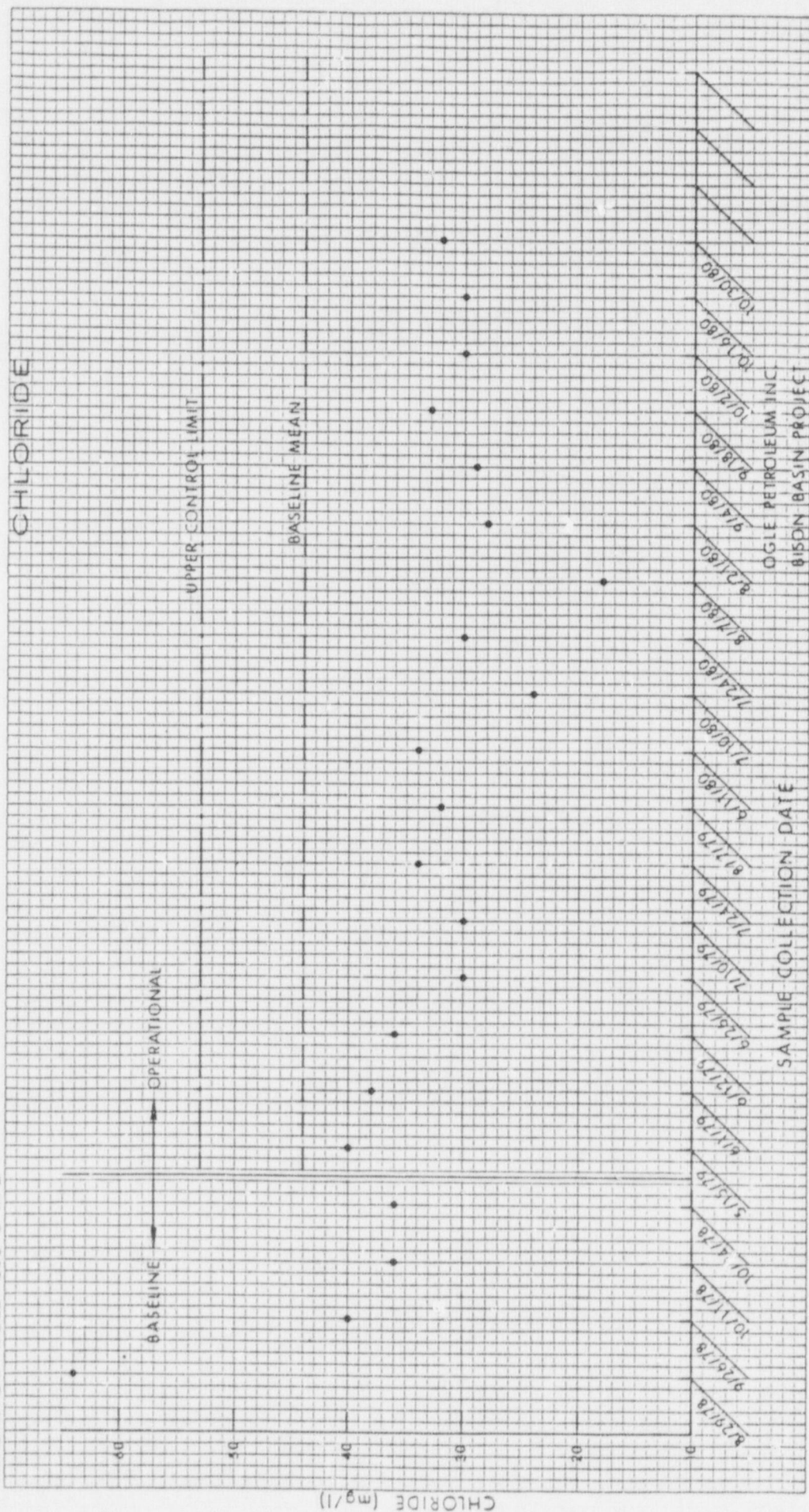


FIGURE 13

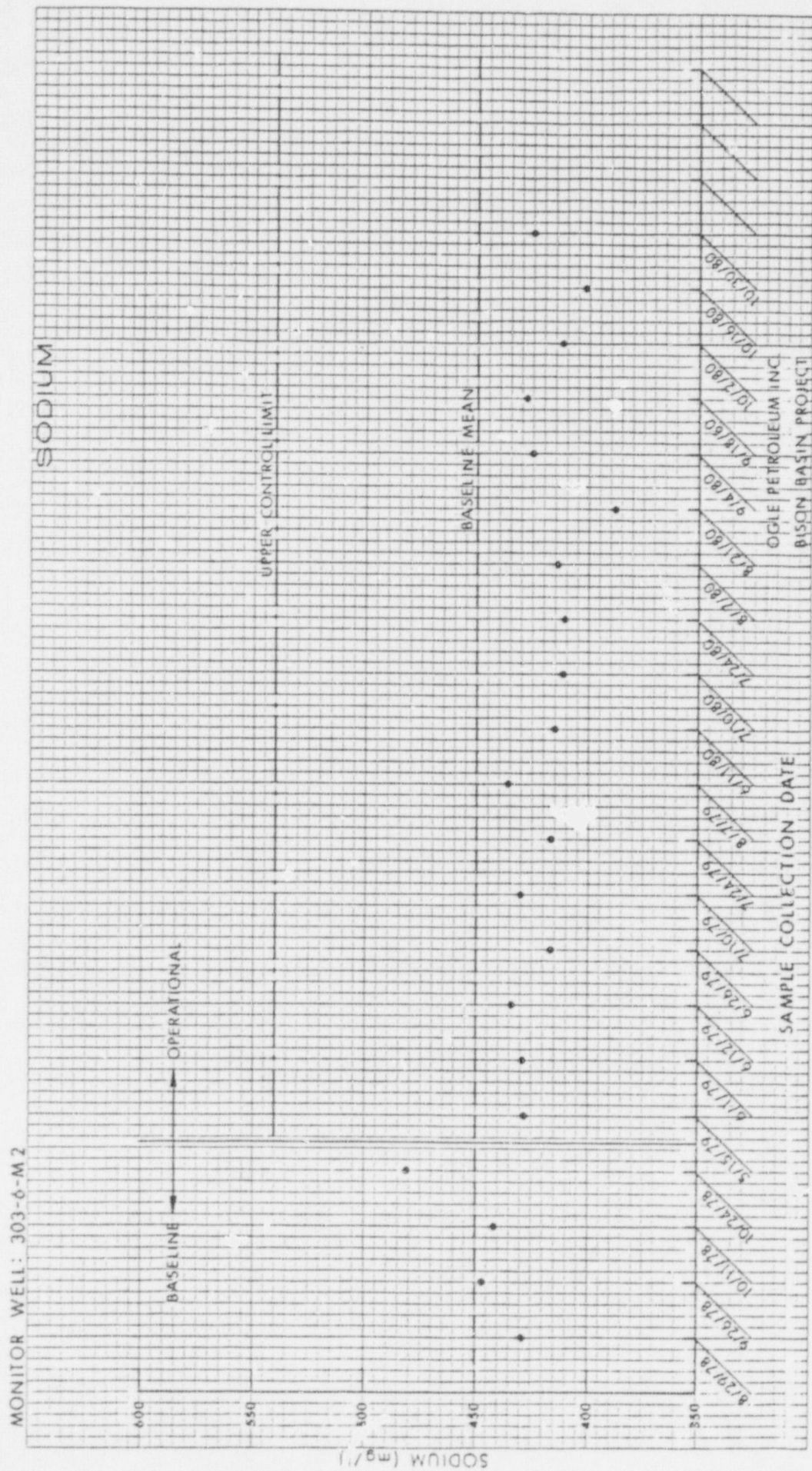


FIGURE 14

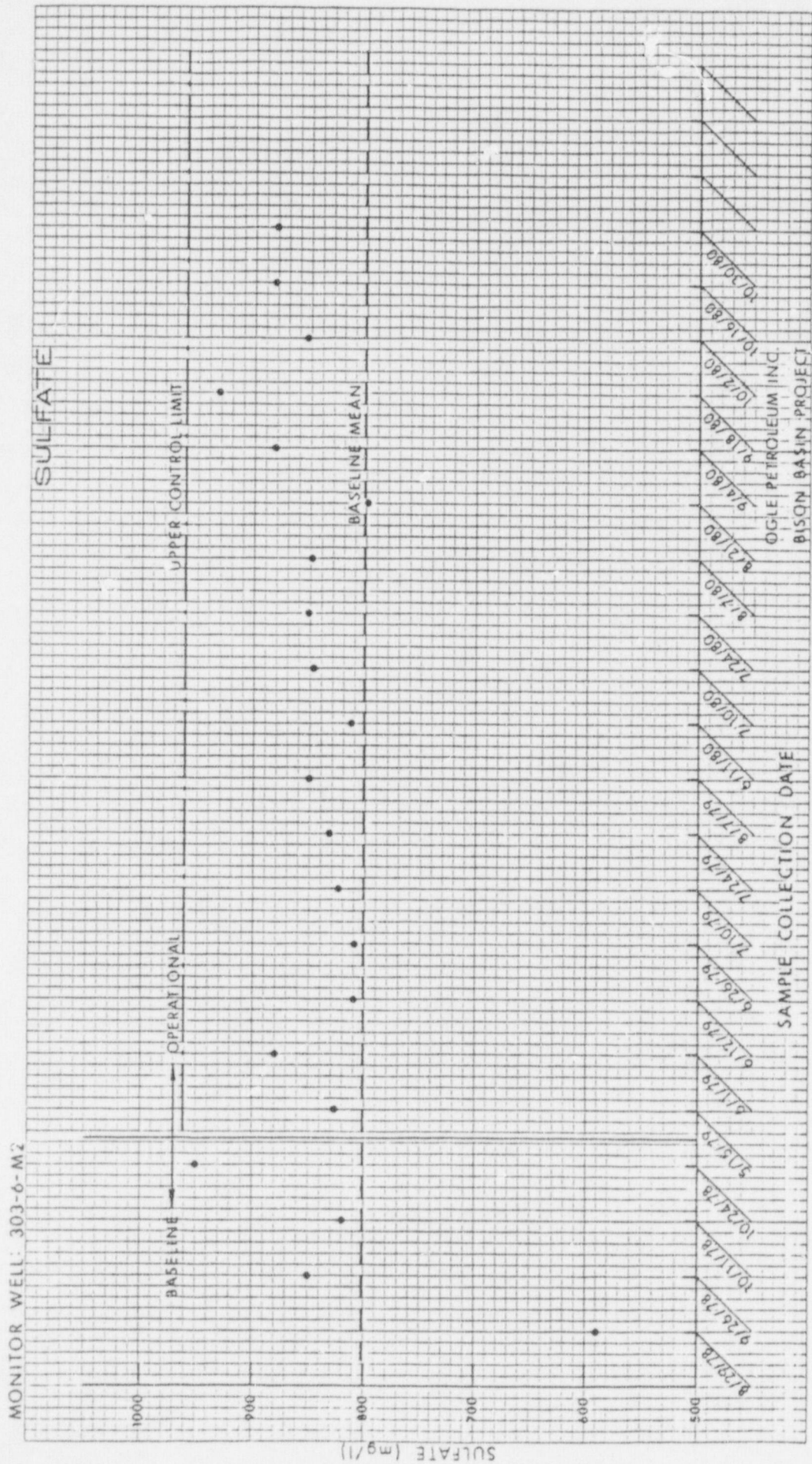


FIGURE 15



FIGURE 16



FIGURE 17

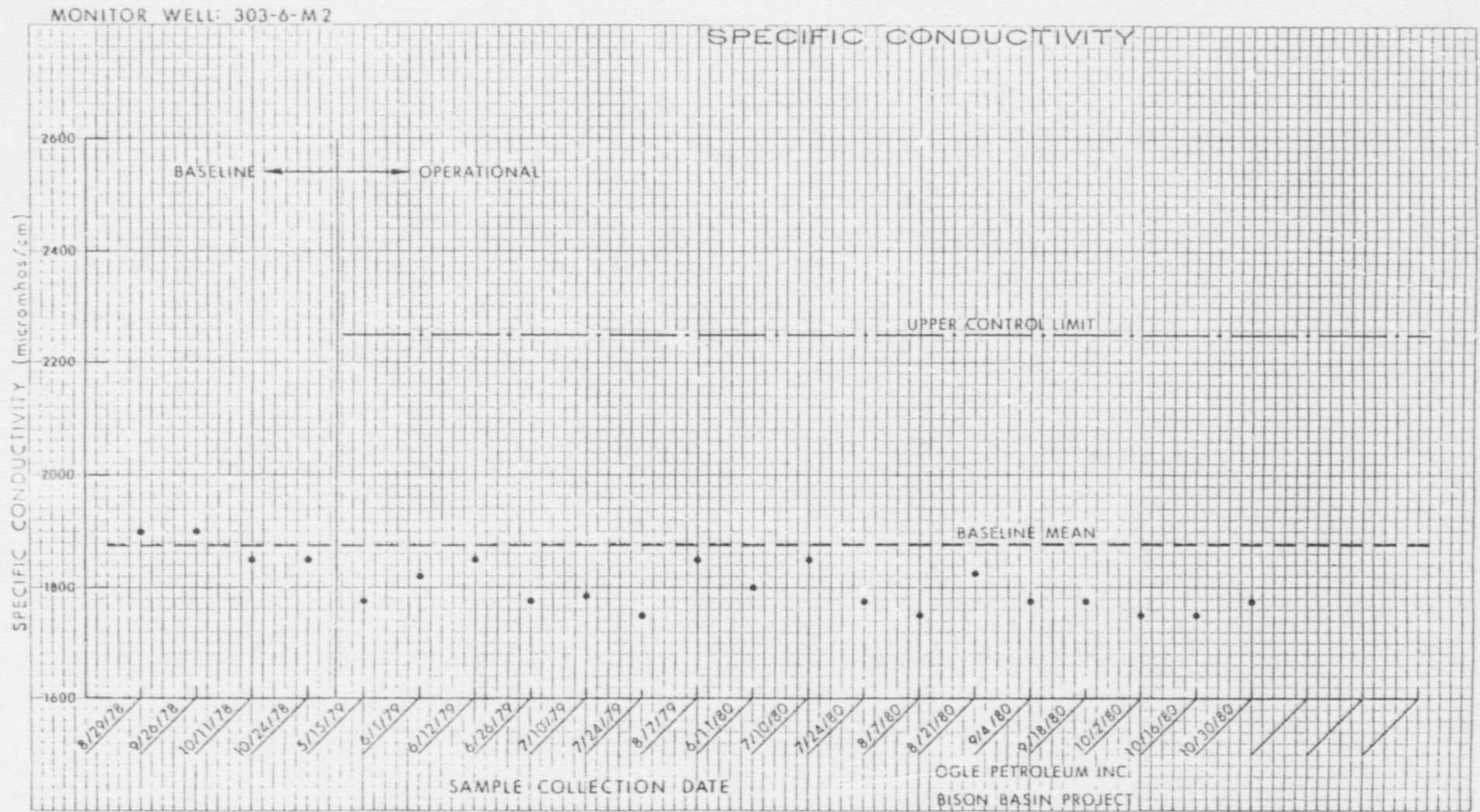


FIGURE 18

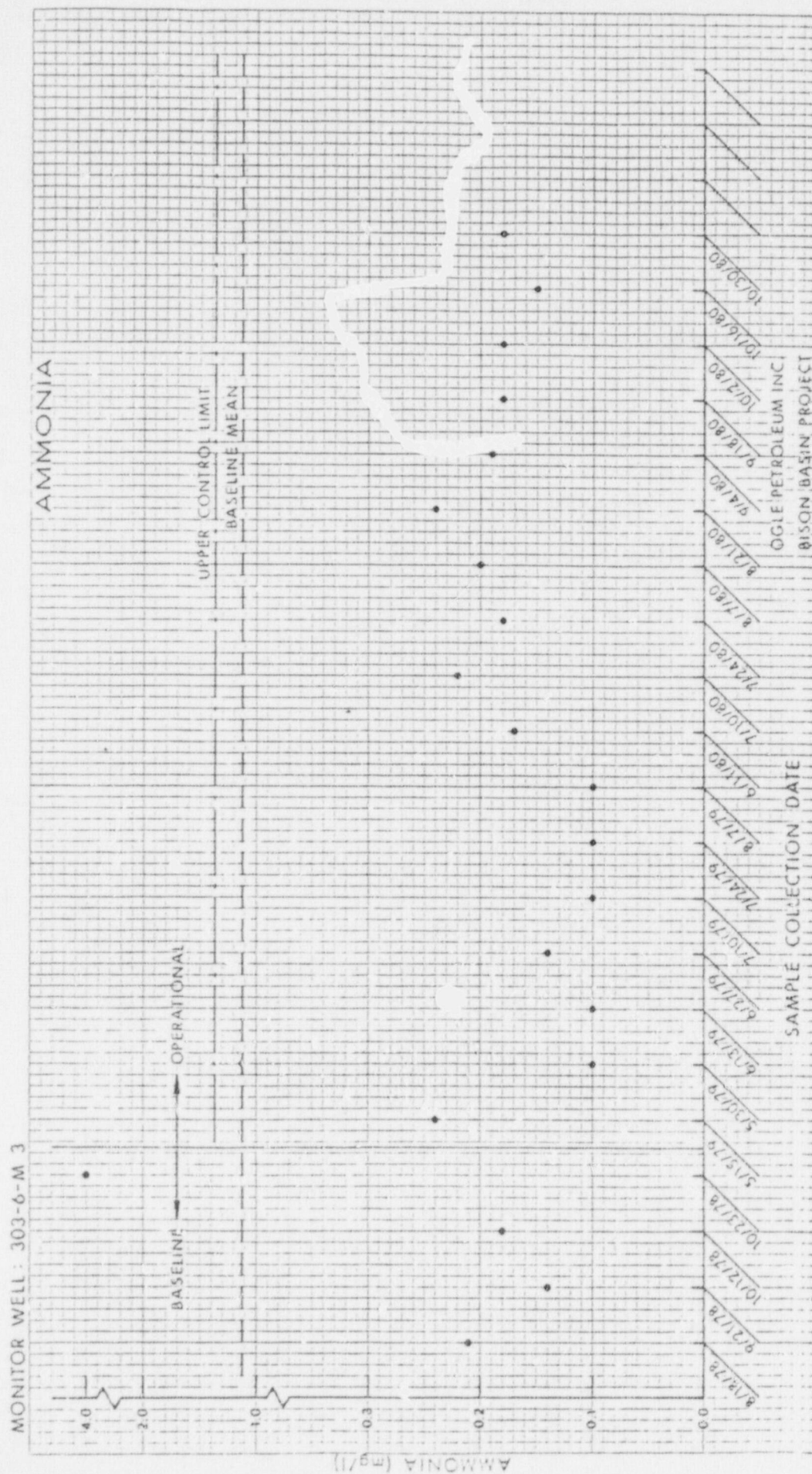


FIGURE 19

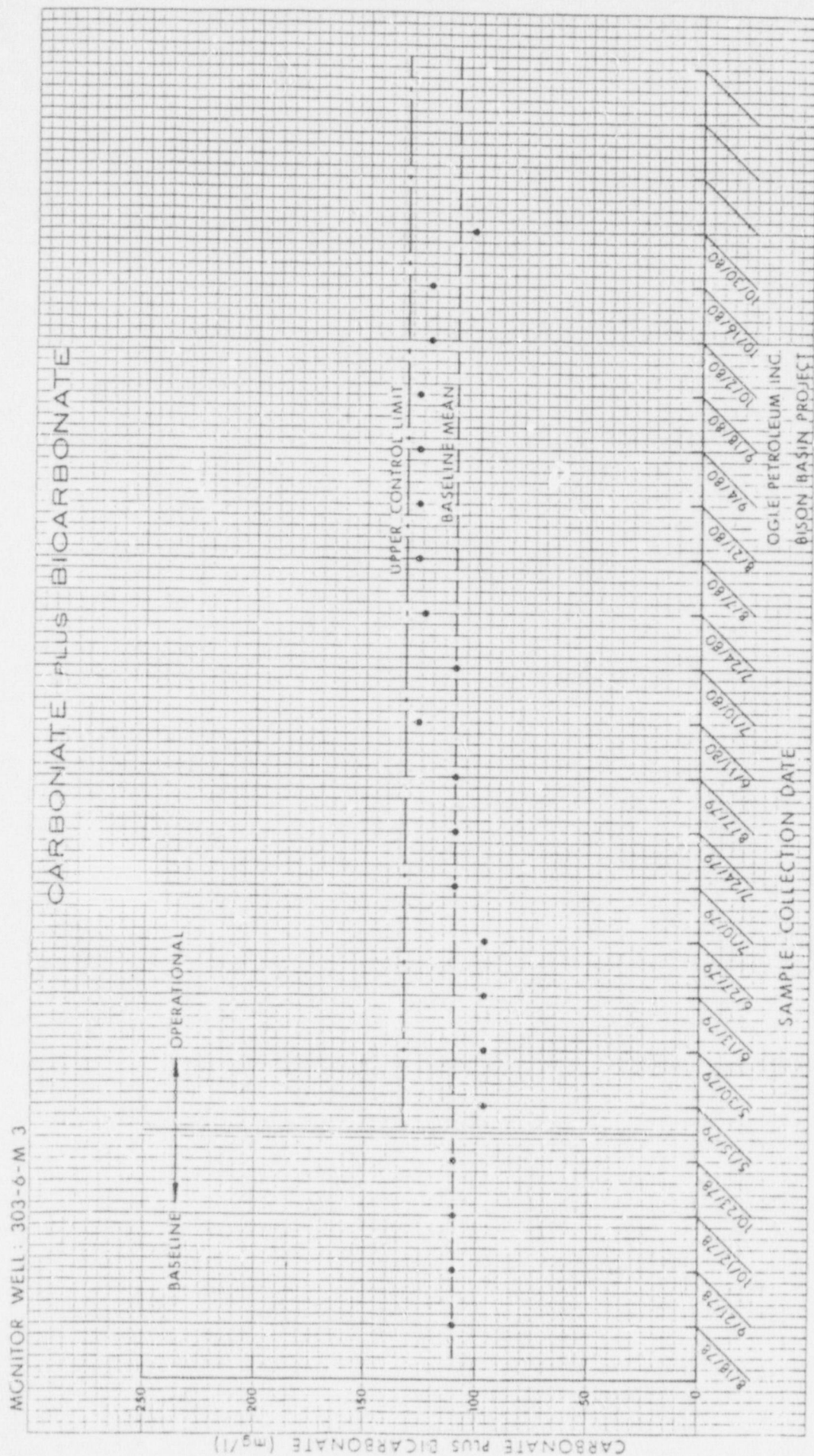


FIGURE 20

MONITOR WELL: 303-6-M 3

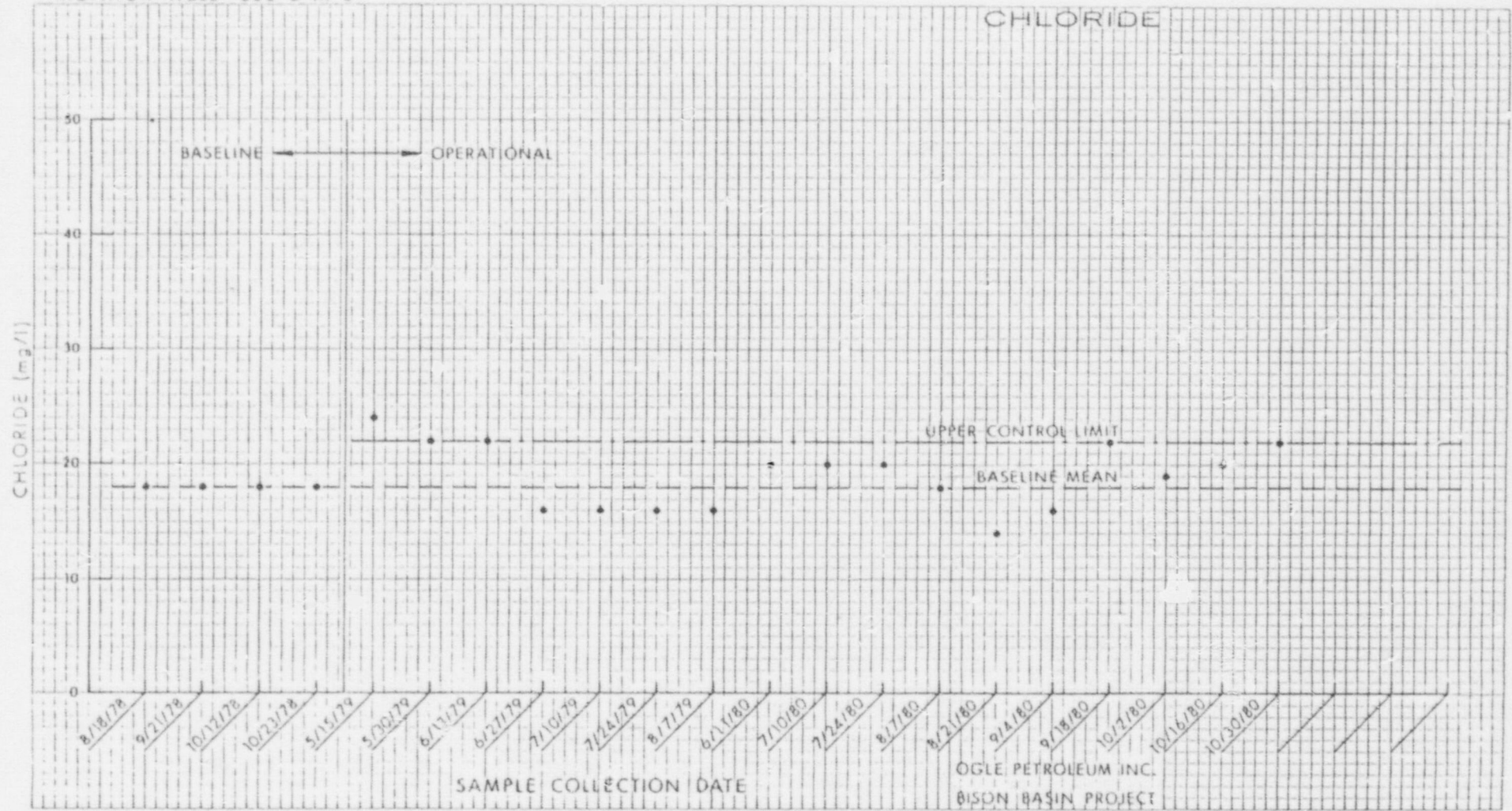


FIGURE 21

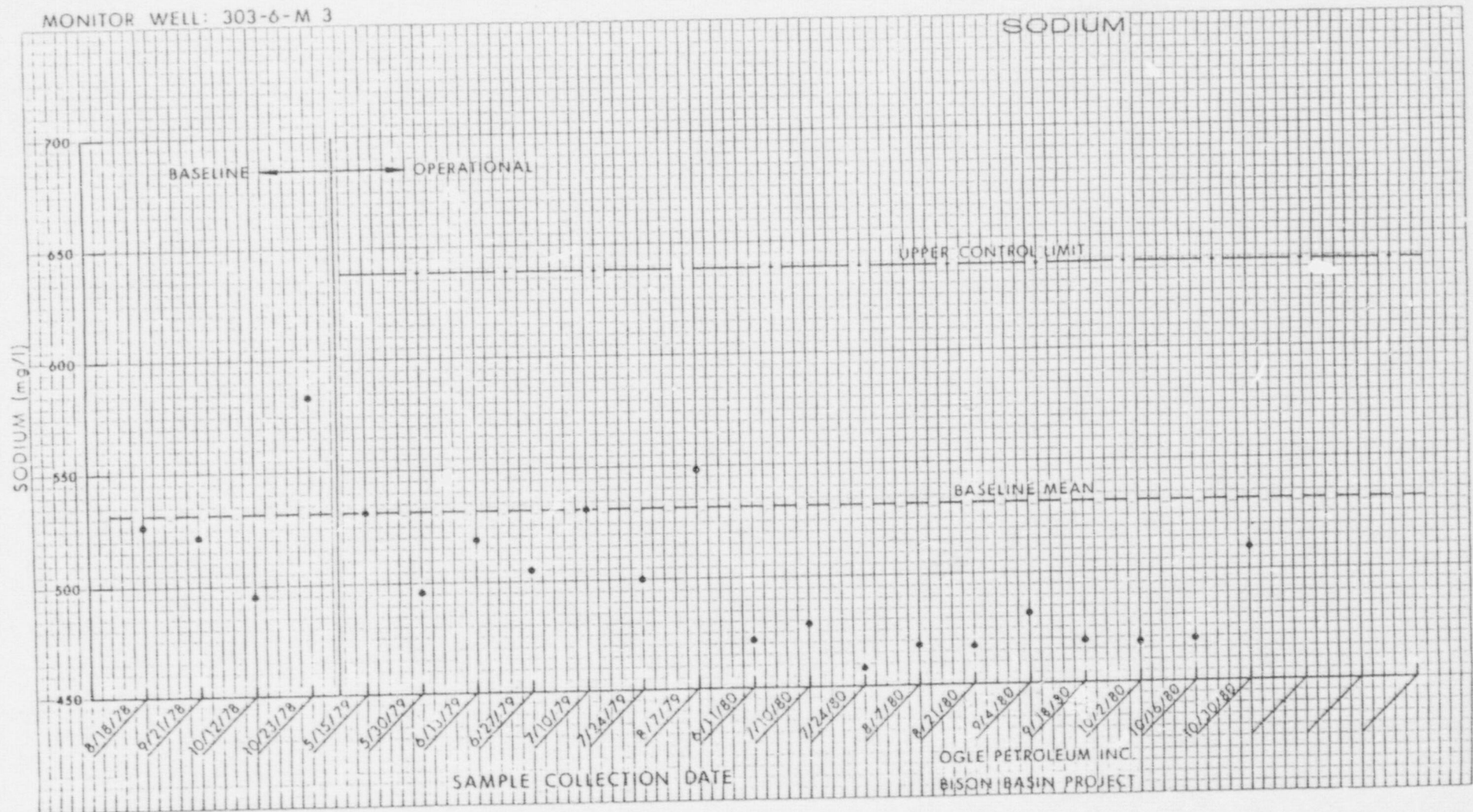


FIGURE 22

MONITOR WELL: 303-6-M 3

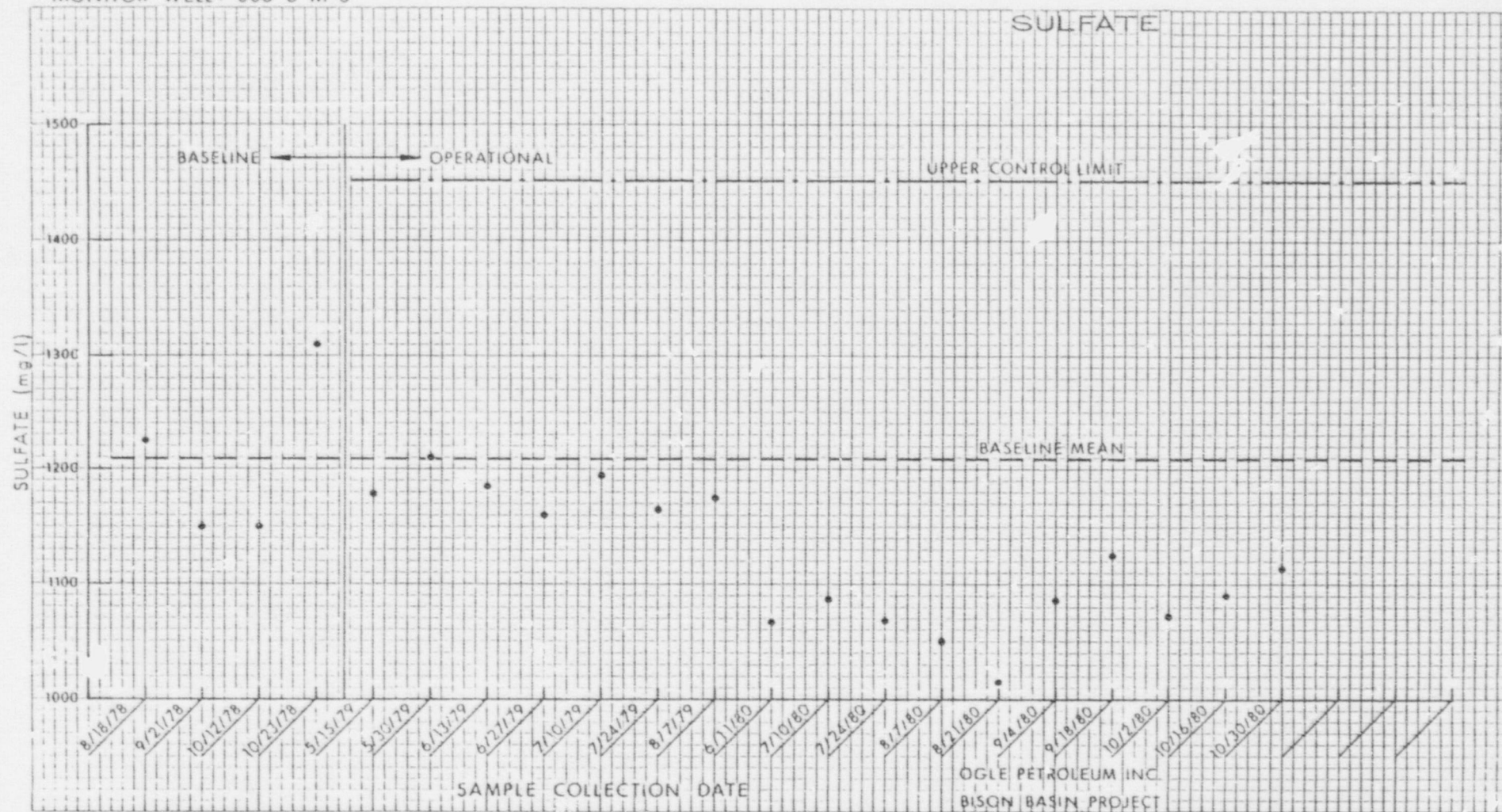


FIGURE 23

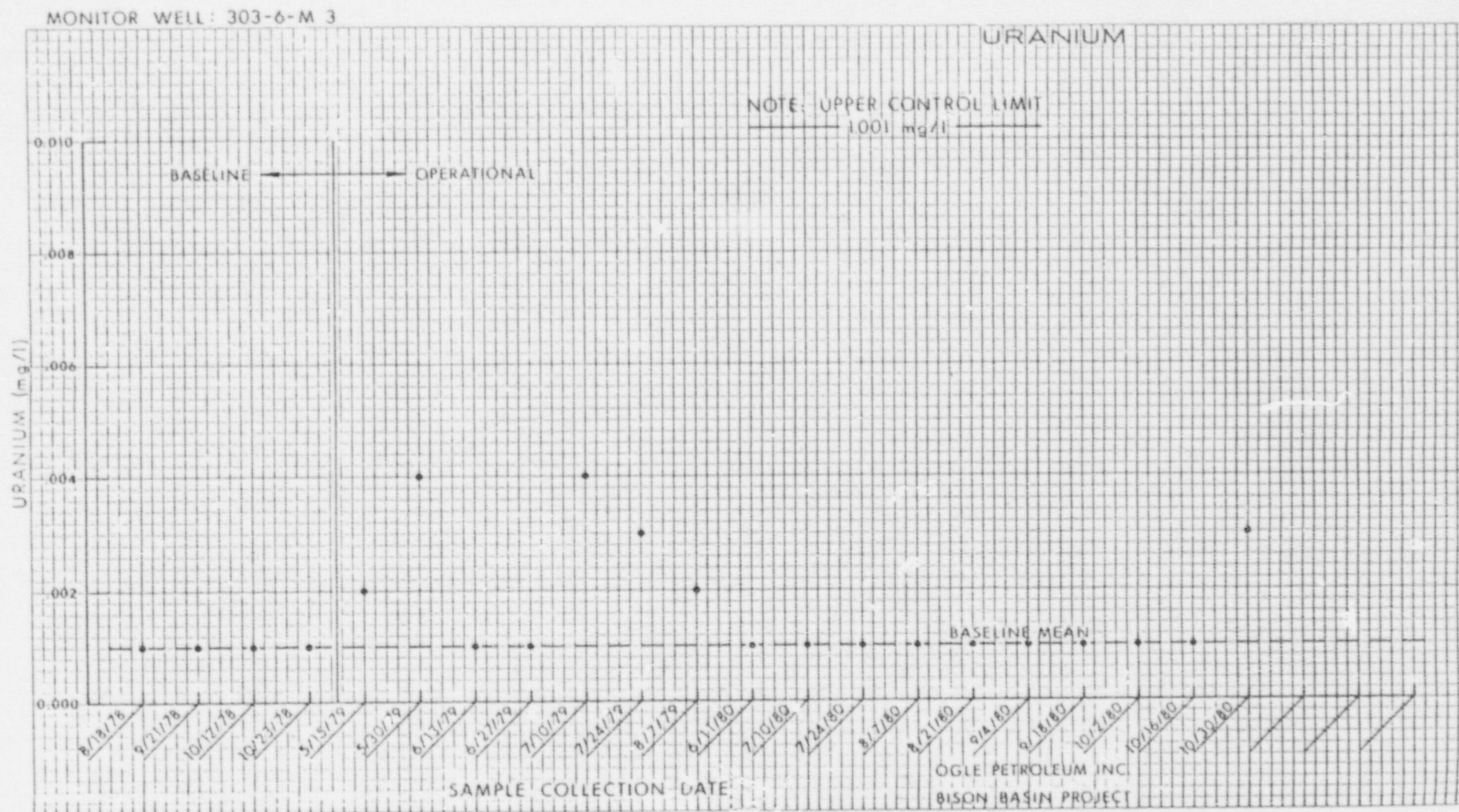


FIGURE 24

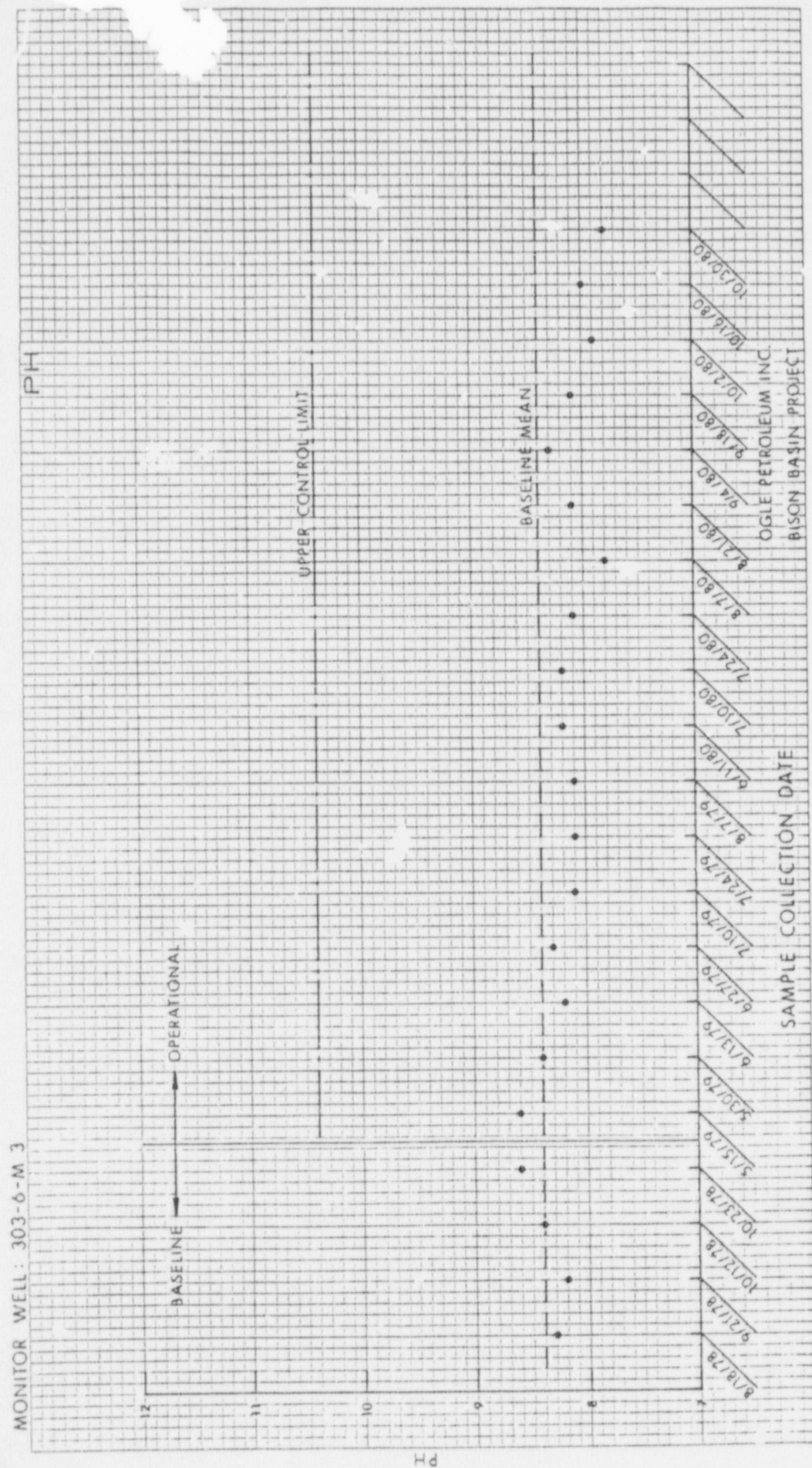


FIGURE 25

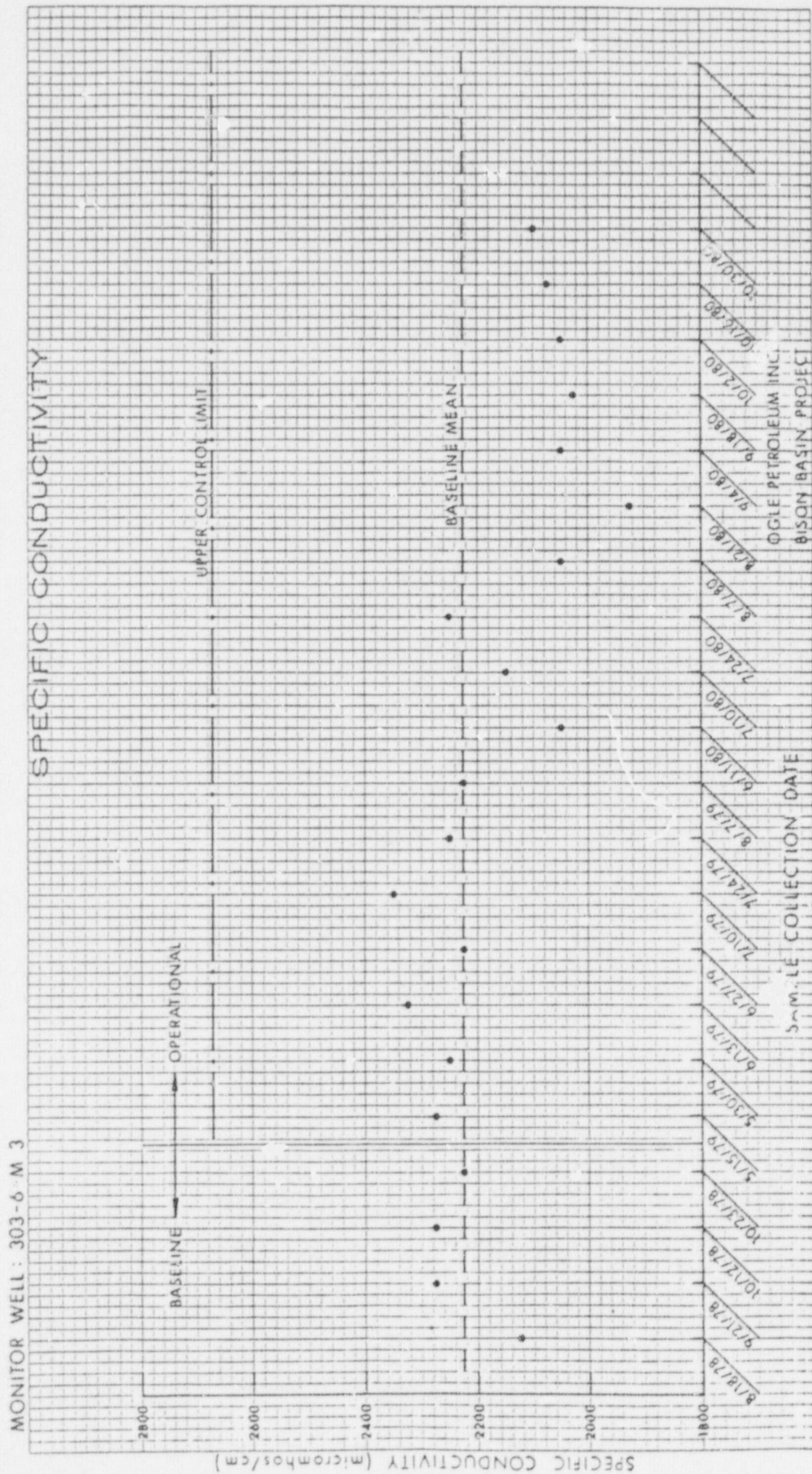


FIGURE 26

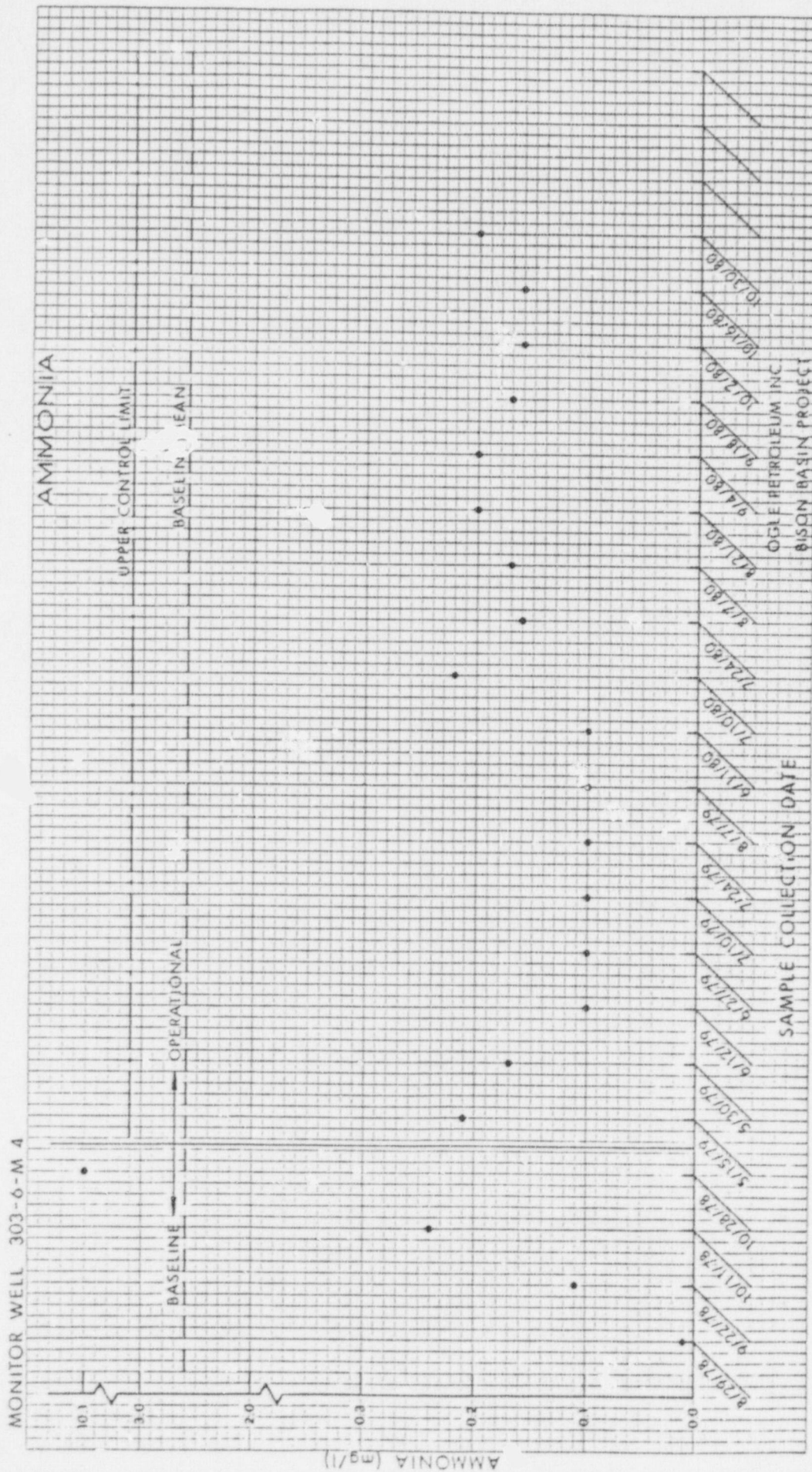


FIGURE 27



FIGURE 28

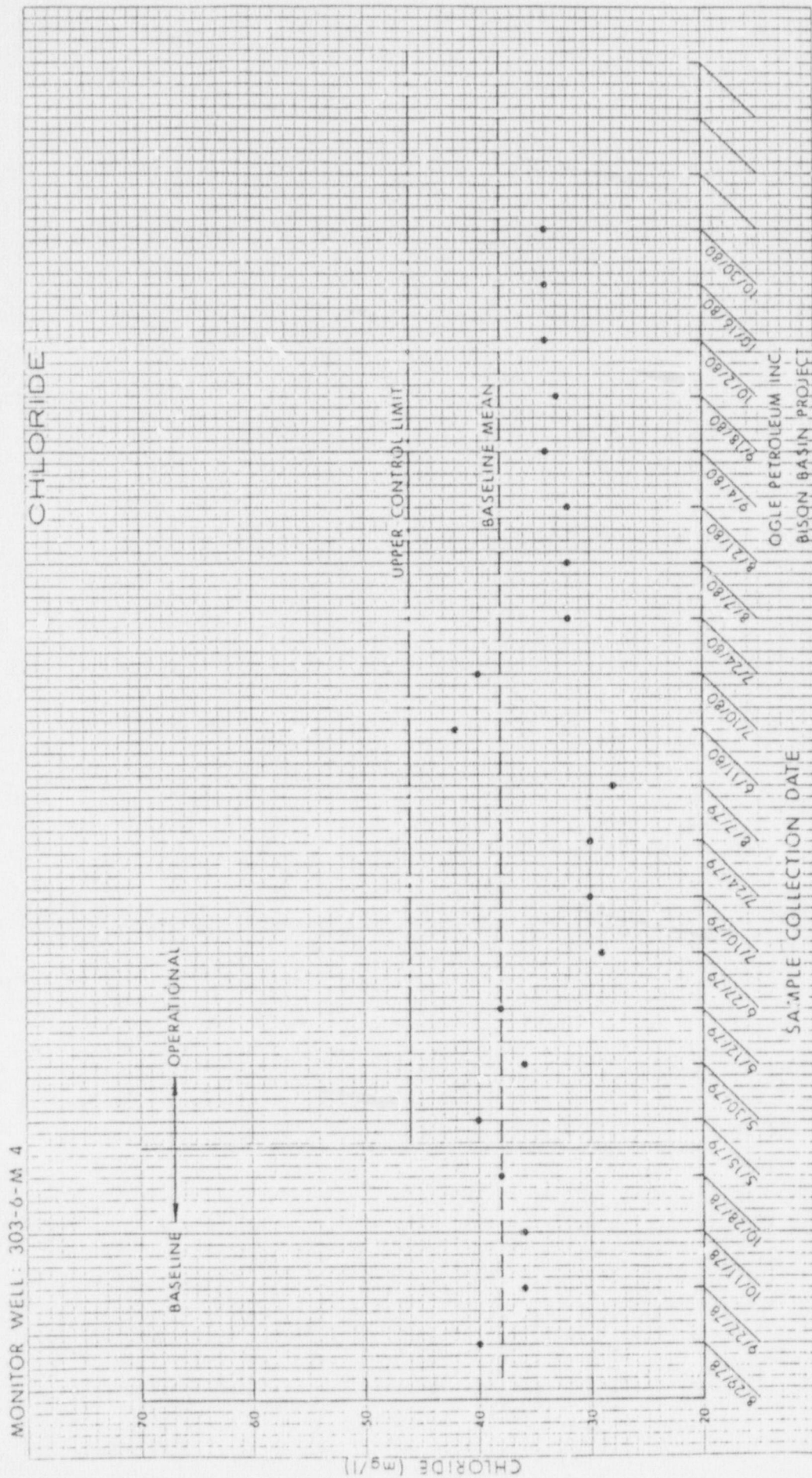


FIGURE 79



MONITOR WELL: 003-G-M-4

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UPPER CONTROL LIMIT

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SAMPLE COLLECTION DATE

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BISON BASIN PROJECT

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1/1/08 1/15/08 1/29/08 2/12/08 2/26/08 3/11/08 3/25/08 4/8/08 4/22/08 5/6/08 5/20/08 6/3/08 6/17/08 6/30/08 7/14/08 7/28/08 8/11/08 8/25/08 9/8/08 9/22/08 10/6/08 10/20/08 11/3/08 11/17/08 11/30/08 12/14/08 12/28/08 1/11/09 1/25/09 2/8/09 2/22/09 3/7/09 3/21/09 4/4/09 4/18/09 5/2/09 5/16/09 5/30/09 6/13/09 6/27/09 7/11/09 7/25/09 8/8/09 8/22/09 8/31/09 9/14/09 9/28/09 10/12/09 10/26/09 11/9/09 11/23/09 12/7/09 12/21/09 1/4/10 1/18/10 2/1/10 2/15/10 2/28/10 3/13/10 3/27/10 4/10/10 4/24/10 5/8/10 5/22/10 6/5/10 6/19/10 7/3/10 7/17/10 7/31/10 8/14/10 8/28/10 9/11/10 9/25/10 10/9/10 10/23/10 11/6/10 11/20/10 12/4/10 12/18/10 1/1/11 1/15/11 1/29/11 2/12/11 2/26/11 3/11/11 3/25/11 4/8/11 4/22/11 5/6/11 5/20/11 6/3/11 6/17/11 6/30/11 7/14/11 7/28/11 8/11/11 8/25/11 9/8/11 9/22/11 10/6/11 10/20/11 11/3/11 11/17/11 11/30/11 12/14/11 12/28/11 1/11/12 1/25/12 2/8/12 2/22/12 3/7/12 3/21/12 4/4/12 4/18/12 5/2/12 5/16/12 5/30/12 6/13/12 6/27/12 7/11/12 7/25/12 8/8/12 8/22/12 8/31/12 9/14/12 9/28/12 10/12/12 10/26/12 11/9/12 11/23/12 12/7/12 12/21/12 1/4/13 1/18/13 2/1/13 2/15/13 2/28/13 3/13/13 3/27/13 4/10/13 4/24/13 5/8/13 5/22/13 6/5/13 6/19/13 7/3/13 7/17/13 7/31/13 8/14/13 8/28/13 9/11/13 9/25/13 10/9/13 10/23/13 11/6/13 11/20/13 12/4/13 12/18/13 1/1/14 1/15/14 1/29/14 2/12/14 2/26/14 3/11/14 3/25/14 4/8/14 4/22/14 5/6/14 5/20/14 6/3/14 6/17/14 6/30/14 7/14/14 7/28/14 8/11/14 8/25/14 9/8/14 9/22/14 10/6/14 10/20/14 11/3/14 11/17/14 11/30/14 12/14/14 12/28/14 1/11/15 1/25/15 2/8/15 2/22/15 3/7/15 3/21/15 4/4/15 4/18/15 5/2/15 5/16/15 5/30/15 6/13/15 6/27/15 7/11/15 7/25/15 8/8/15 8/22/15 8/31/15 9/14/15 9/28/15 10/12/15 10/26/15 11/9/15 11/23/15 12/7/15 12/21/15 1/4/16 1/18/16 2/1/16 2/15/16 2/28/16 3/13/16 3/27/16 4/10/16 4/24/16 5/8/16 5/22/16 6/5/16 6/19/16 7/3/16 7/17/16 7/31/16 8/14/16 8/28/16 9/11/16 9/25/16 10/9/16 10/23/16 11/6/16 11/20/16 12/4/16 12/18/16 1/1/17 1/15/17 1/29/17 2/12/17 2/26/17 3/11/17 3/25/17 4/8/17 4/22/17 5/6/17 5/20/17 6/3/17 6/17/17 6/30/17 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4/10/22 4/24/22 5/8/22 5/22/22 6/5/22 6/19/22 7/3/22 7/17/22 7/31/22 8/14/22 8/28/22 9/11/22 9/25/22 10/9/22 10/23/22 11/6/22 11/20/22 12/4/22 12/18/22 1/1/23 1/15/23 1/29/23 2/12/23 2/26/23 3/11/23 3/25/23 4/8/23 4/22/23 5/6/23 5/20/23 6/3/23 6/17/23 6/30/23 7/14/23 7/28/23 8/11/23 8/25/23 9/8/23 9/22/23 10/6/23 10/20/23 11/3/23 11/17/23 11/30/23 12/14/23 12/28/23 1/11/24 1/25/24 2/8/24 2/22/24 3/7/24 3/21/24 4/4/24 4/18/24 5/2/24 5/16/24 5/30/24 6/13/24 6/27/24 7/11/24 7/25/24 8/8/24 8/22/24 8/31/24 9/14/24 9/28/24 10/12/24 10/26/24 11/9/24 11/23/24 12/7/24 12/21/24 1/4/25 1/18/25 2/1/25 2/15/25 2/28/25 3/13/25 3/27/25 4/10/25 4/24/25 5/8/25 5/22/25 6/5/25 6/19/25 7/3/25 7/17/25 7/31/25 8/14/25 8/28/25 9/11/25 9/25/25 10/9/25 10/23/25 11/6/25 11/20/25 12/4/25 12/18/25 1/1/26 1/15/26 1/29/26 2/12/26 2/26/26 3/11/26 3/25/26 4/8/26 4/22/26 5/6/26 5/20/26 6/3/26 6/17/26 6/30/26 7/14/26 7/28/26 8/11/26 8/25/26 9/8/26 9/22/26 10/6/26 10/20/26 11/3/26 11/17/26 11/30/26 12/14/26 12/28/26 1/11/27 1/25/27 2/8/27 2/22/27 3/7/27 3/21/27 4/4/27 4/18/27 5/2/27 5/16/27 5/30/27 6/13/27 6/27/27 7/11/27 7/25/27 8/8/27 8/22/27 8/31/27 9/14/27 9/28/27 10/12/27 10/26/27 11/9/27 11/23/27 12/7/27 12/21/27 1/4/28 1/18/28 2/1/28 2/15/28 2/28/28 3/13/28 3/27/28 4/10/28 4/24/28 5/8/28 5/22/28 6/5/28 6/19/28 7/3/28 7/17/28 7/31/28 8/14/28 8/28/28 9/11/28 9/25/28 10/9/28 10/23/28 11/6/28 11/20/28 12/4/28 12/18/28 1/1/29 1/15/29 1/29/29 2/12/29 2/26/29 3/11/29 3/25/29 4/8/29 4/22/29 5/6/29 5/20/29 6/3/29 6/17/29 6/30/29 7/14/29 7/28/29 8/11/29 8/25/29 9/8/29 9/22/29 10/6/29 10/20/29 11/3/29 11/17/29 11/30/29 12/14/29 12/28/29 1/11/30 1/25/30 2/8/30 2/22/30 3/7/30 3/21/30 4/4/30 4/18/30 5/2/30 5/16/30 5/30/30 6/13/30 6/27/30 7/11/30 7/25/30 8/8/30 8/22/30 8/31/30 9/14/30 9/28/30 10/12/30 10/26/30 11/9/30 11/23/30 12/7/30 12/21/30 1/4/31 1/18/31 2/1/31 2/15/31 2/28/31 3/13/31 3/27/31 4/10/31 4/24/31 5/8/31 5/22/31 6/5/31 6/19/31 7/3/31 7/17/31 7/31/31 8/14/31 8/28/31 9/11/31 9/25/31 10/9/31 10/23/31 11

FIGURE 31



MONITOR WELL: 503-6-M-4

FIGURE 3.1

MONITOR WELL 303-6-M 4



FIGURE 34



FIGURE 15



FIGURE 36

MONITOR WELL 505-6-M, 3



FIGURE 37

MONITOR WELL 303-G-M-3



FIGURE 38

MONITOR WELL: 305-6-M-5



FIGURE 40

MONITOR WELL: 303-S-M 3



FIGURE 4.2

MONITOR WELL: 303-6-M-6



FIGURE 43

MONITOR WELL 303-6-M 6

CARBONATE PLUS BICARBONATE



OGLE PETROLEUM INC.

BISON BASIN PROJECT

FIGURE 4A



FIGURE 45

MONITOR WELL: 303-6-M-6

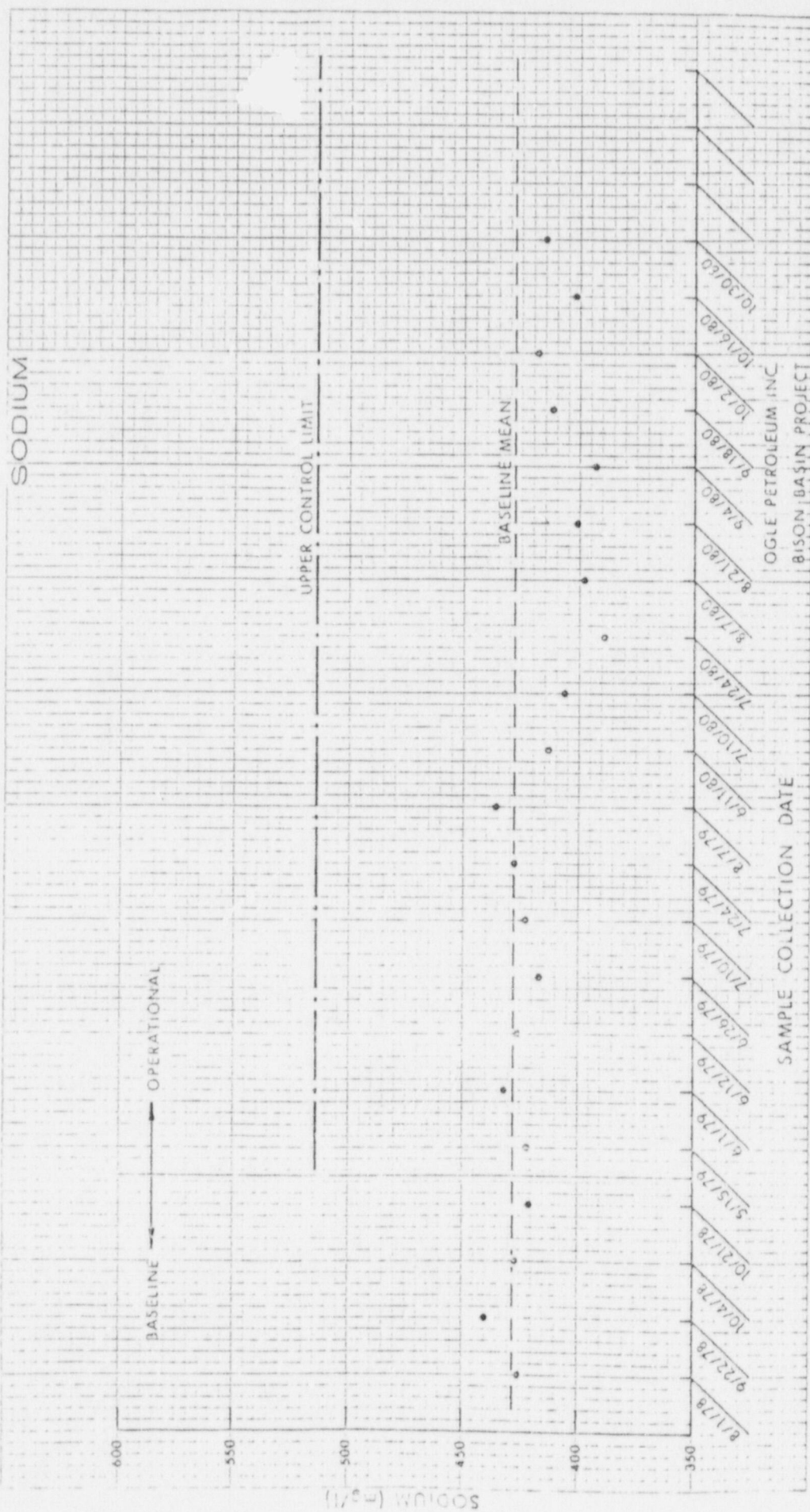


FIGURE 46



FIGURE 5.7

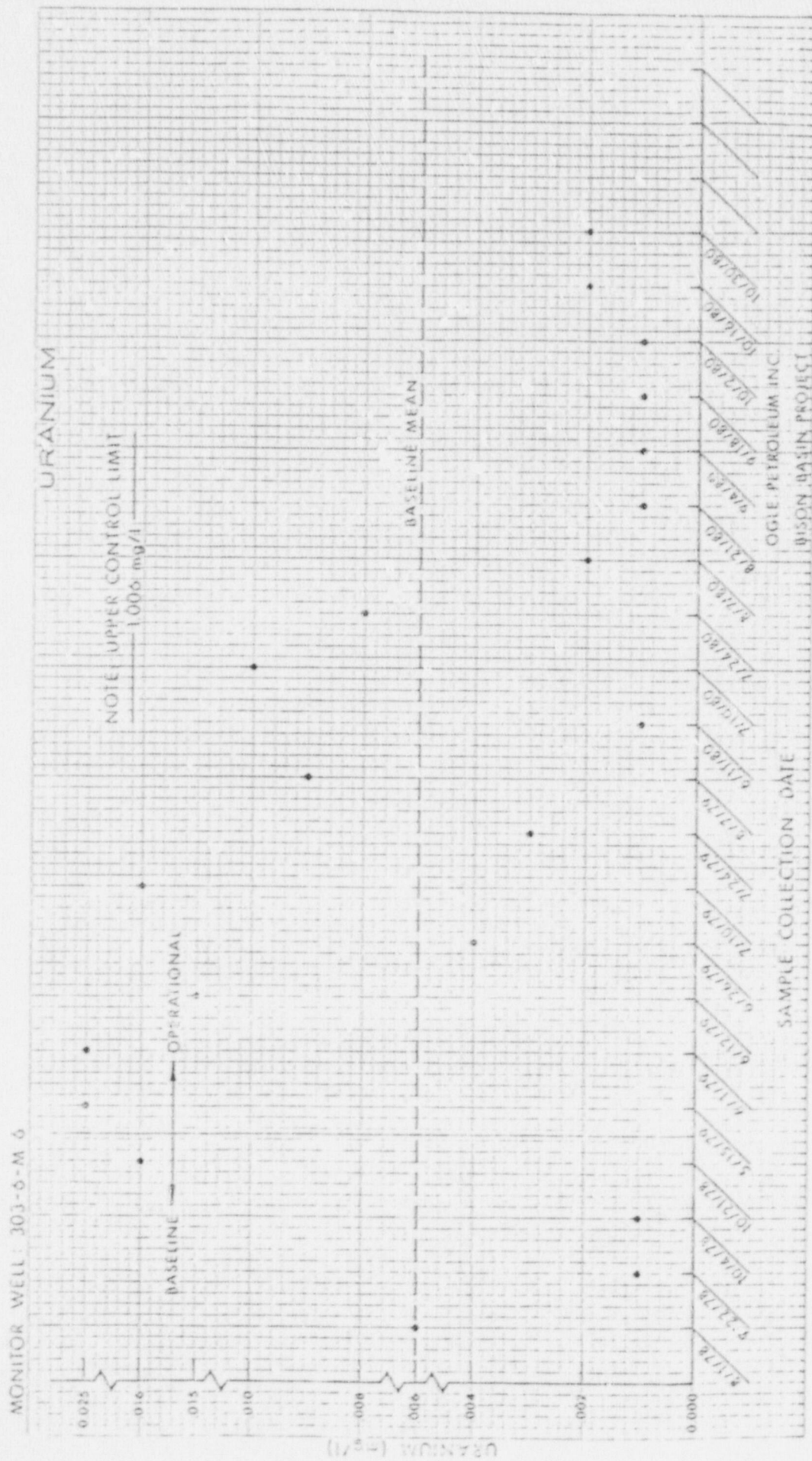


FIGURE 4B

MONITOR WELL: 303-6-M δ



FIGURE 49

MONITOR WELL: 303-6-M 6

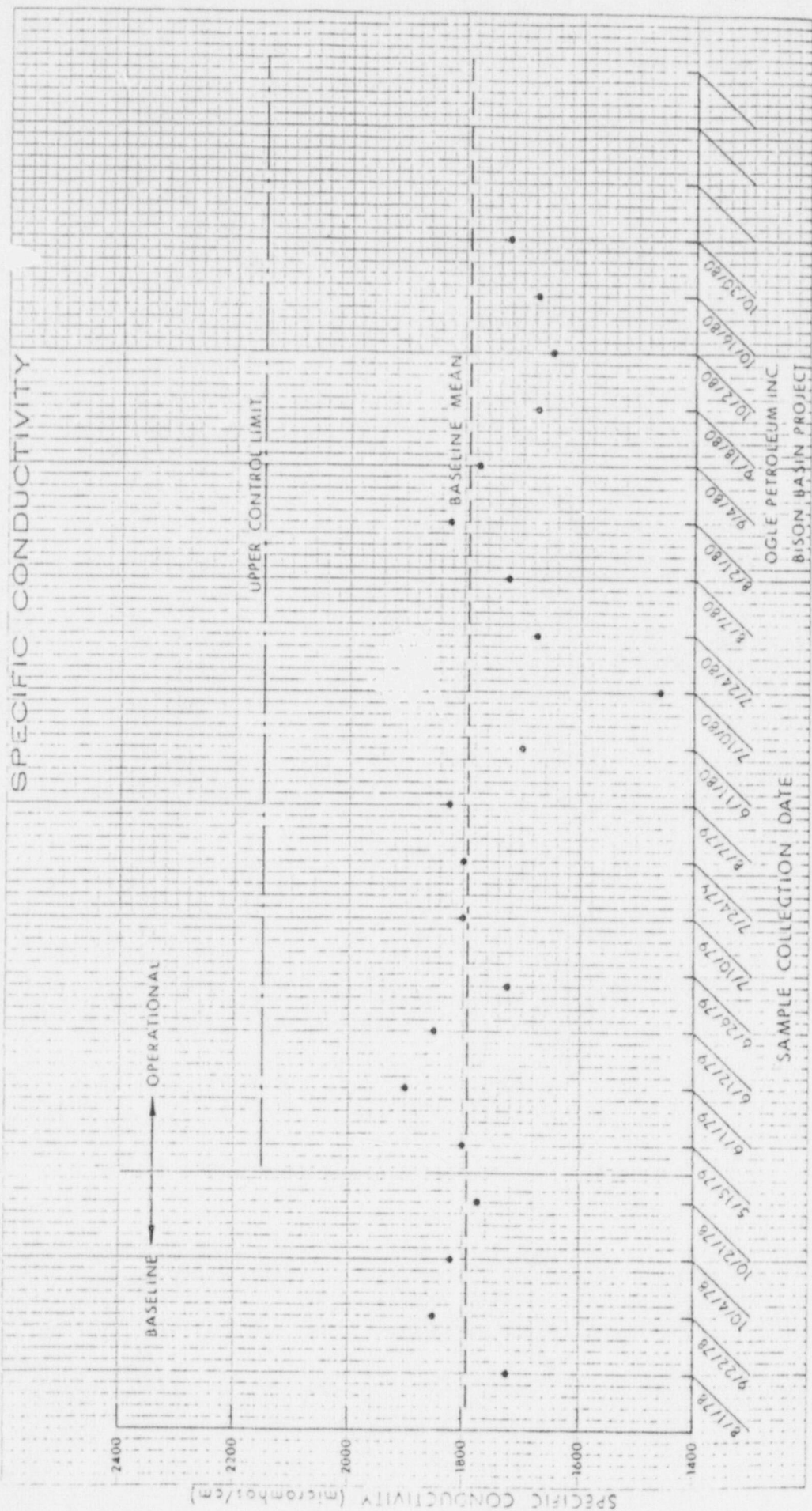


FIGURE 50

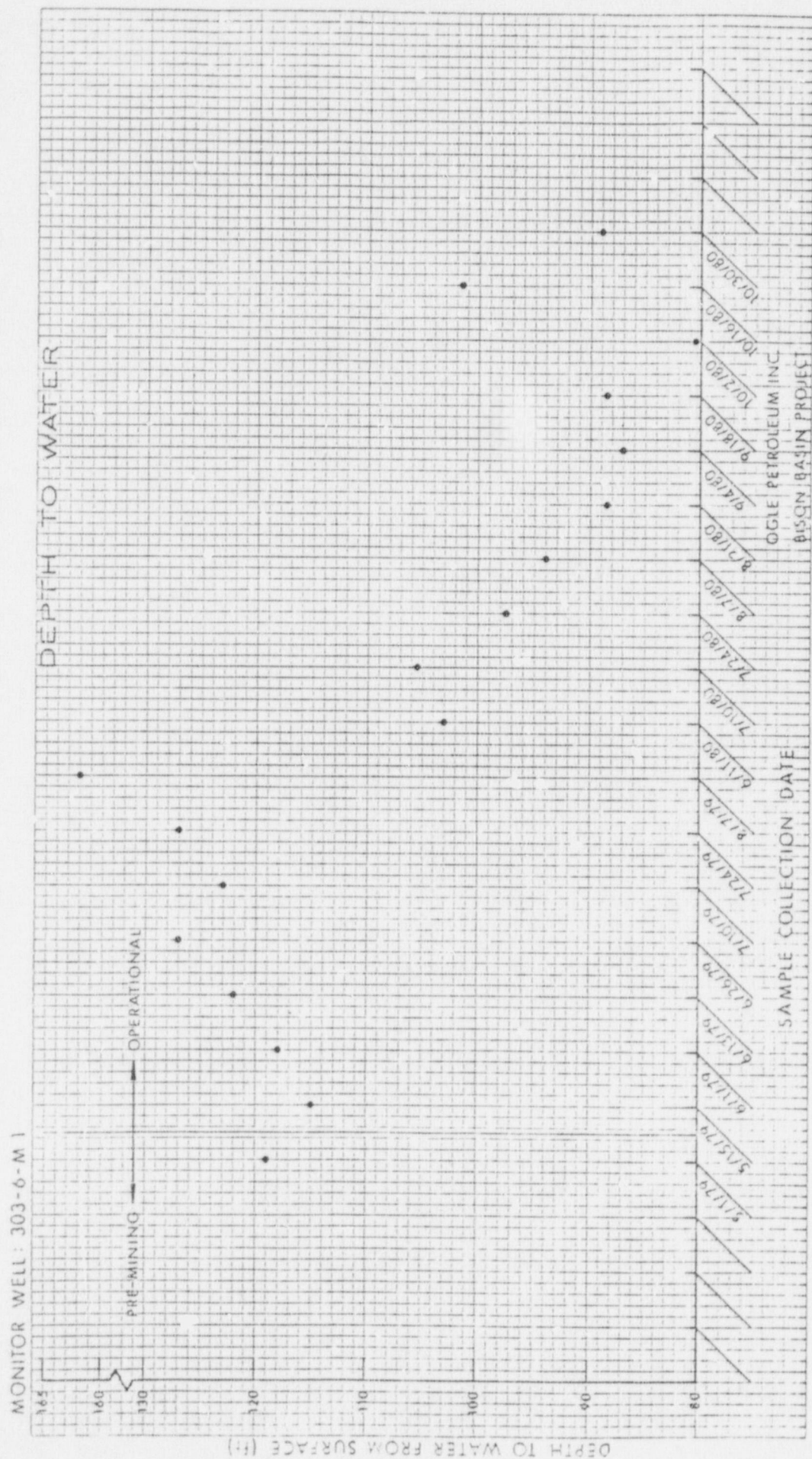


FIGURE 51

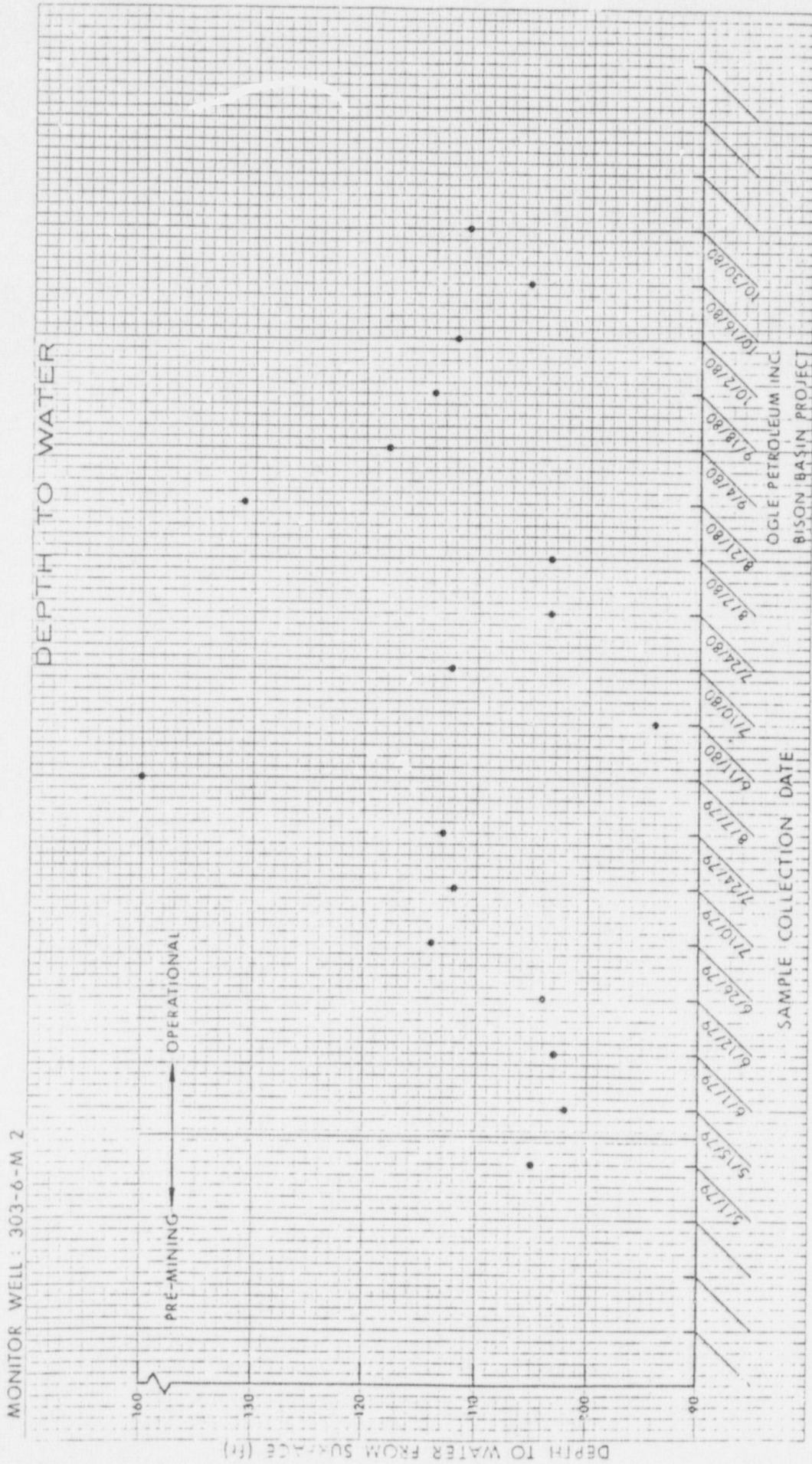


FIGURE 52

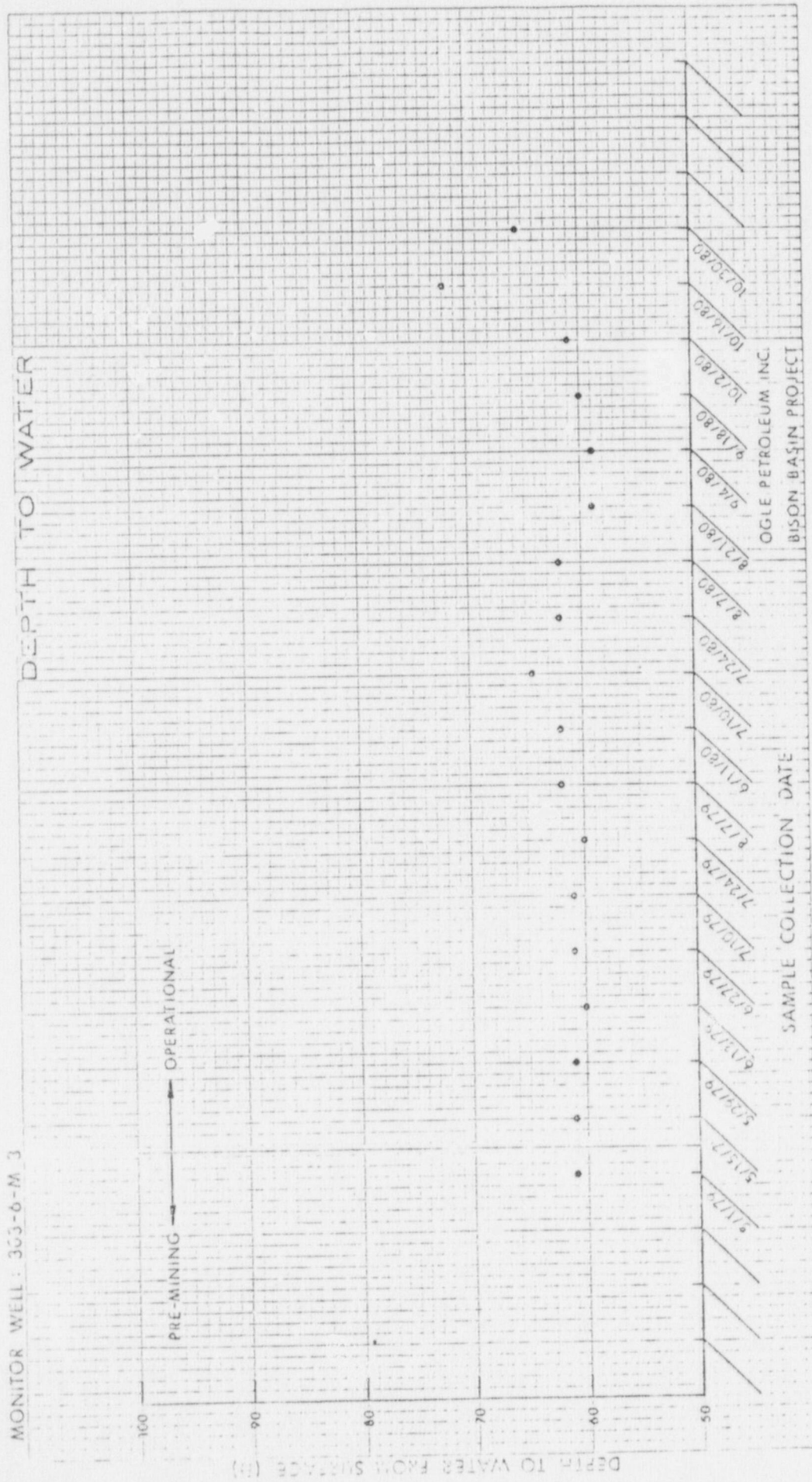


FIGURE 53

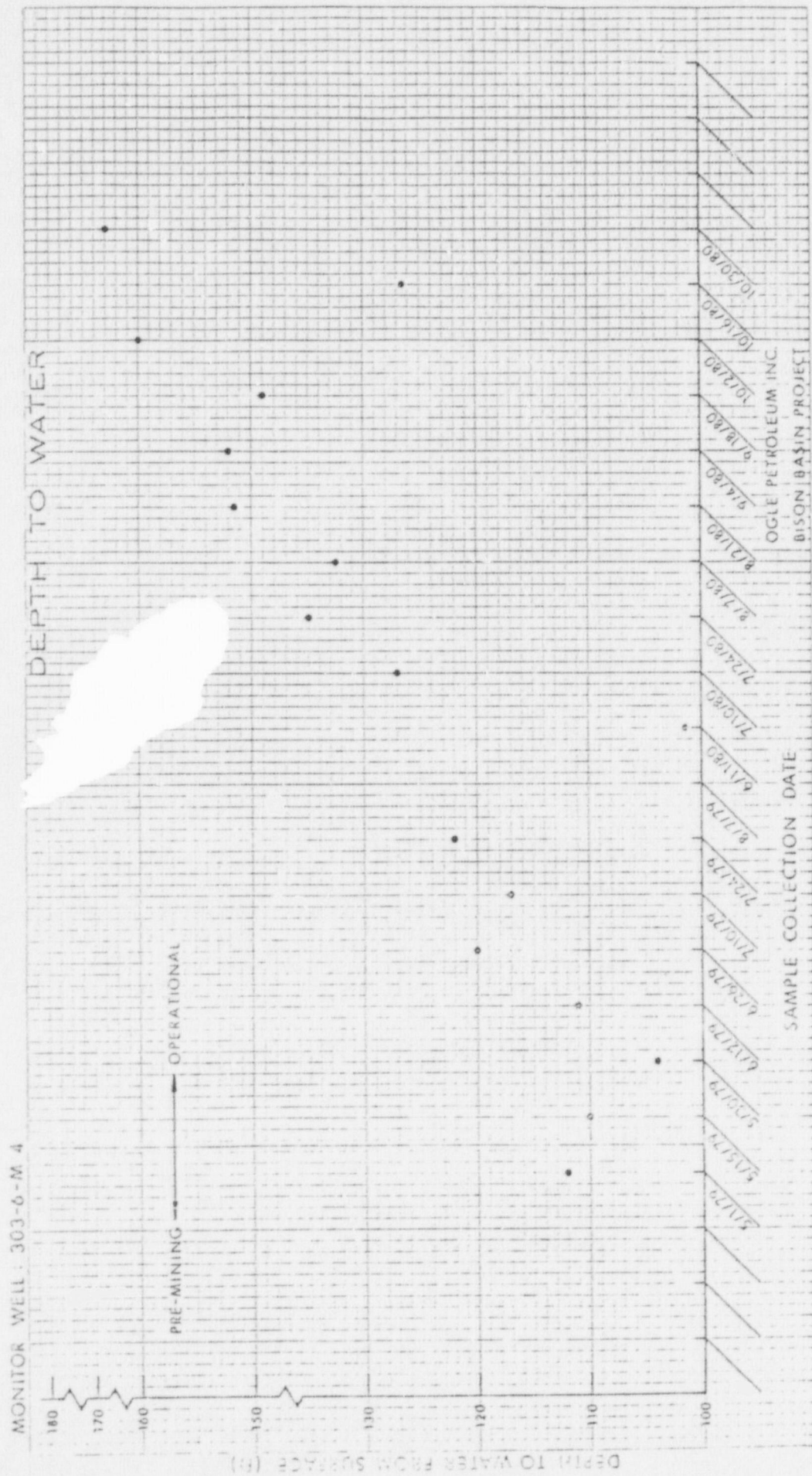


FIGURE 54

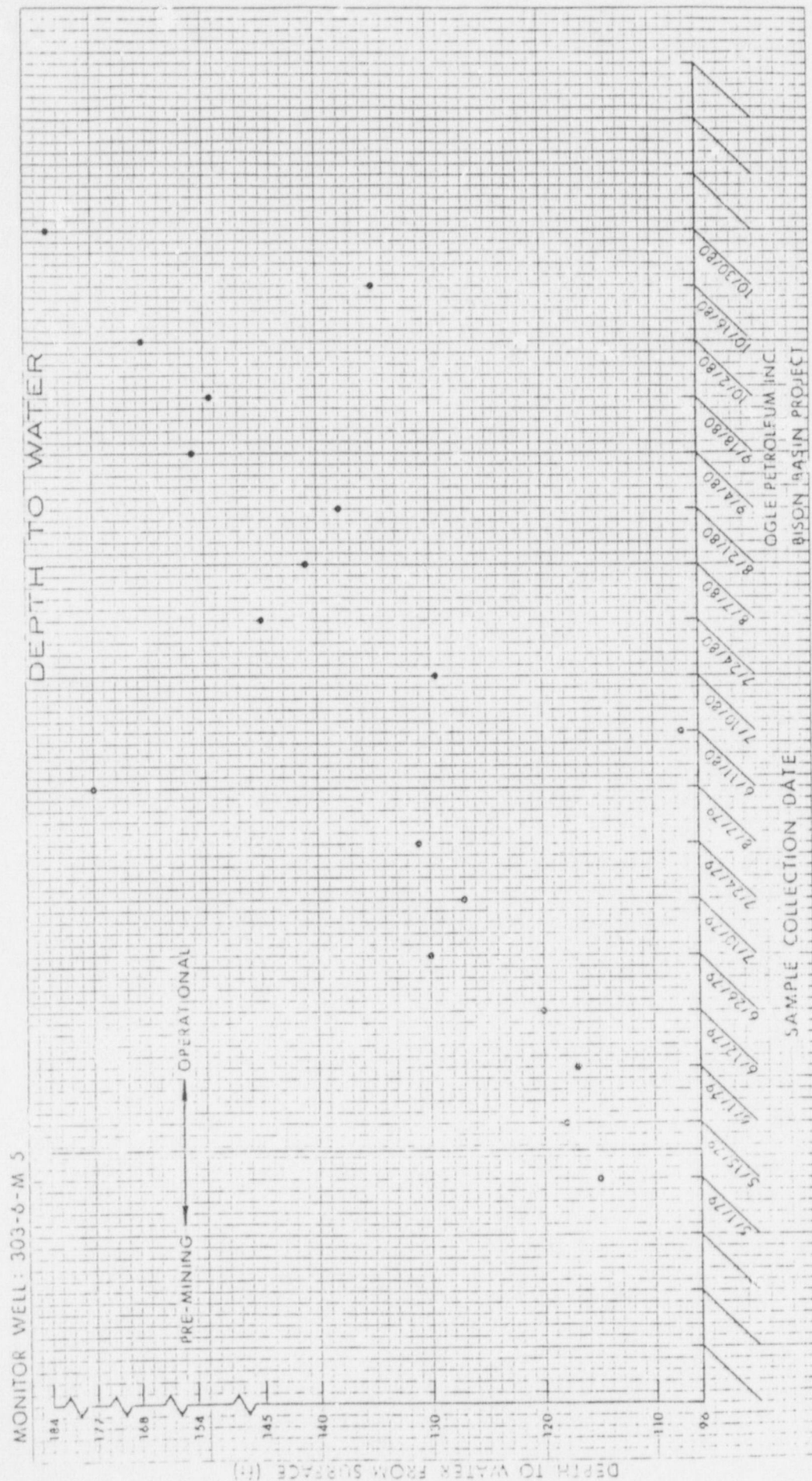
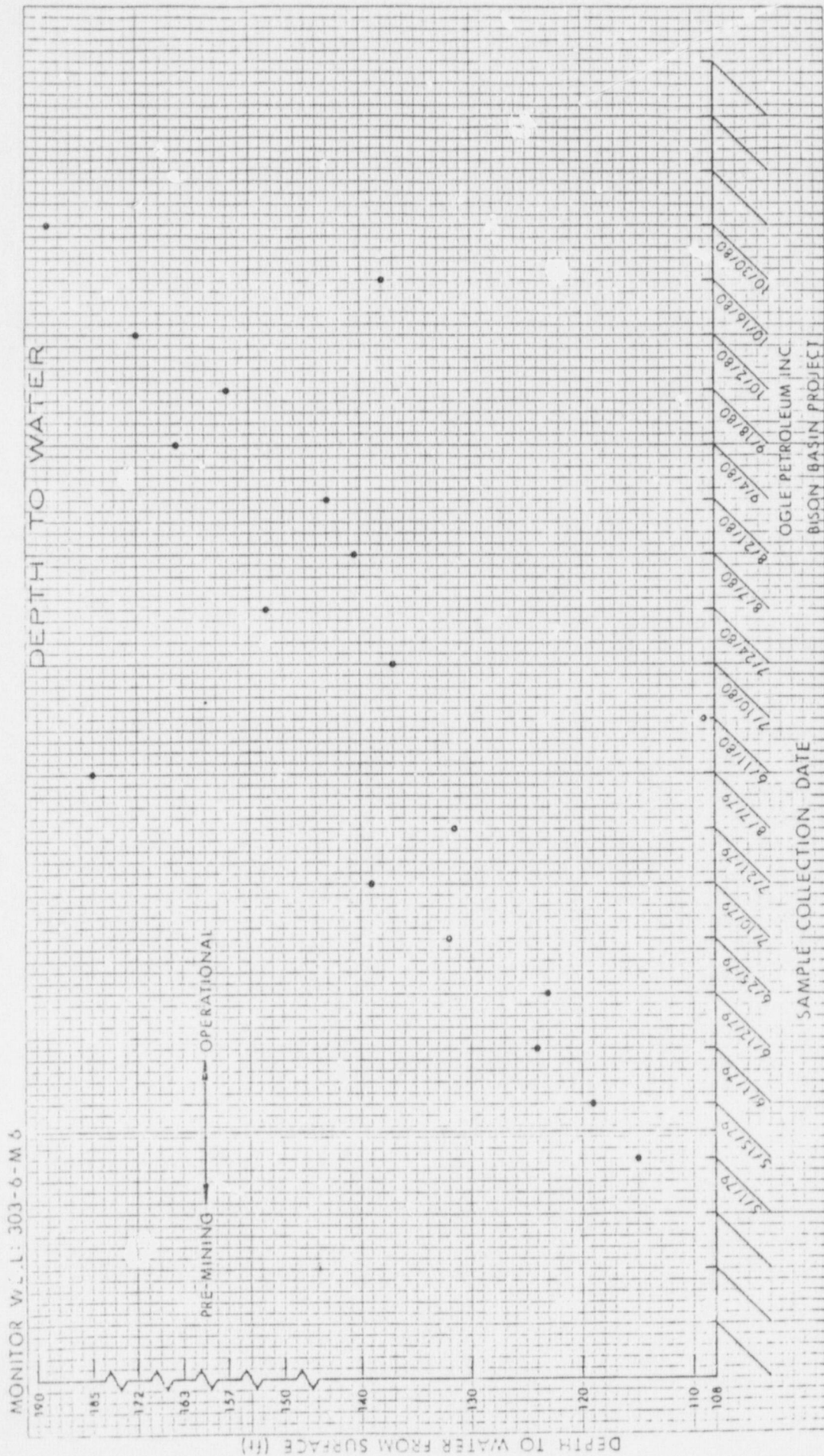
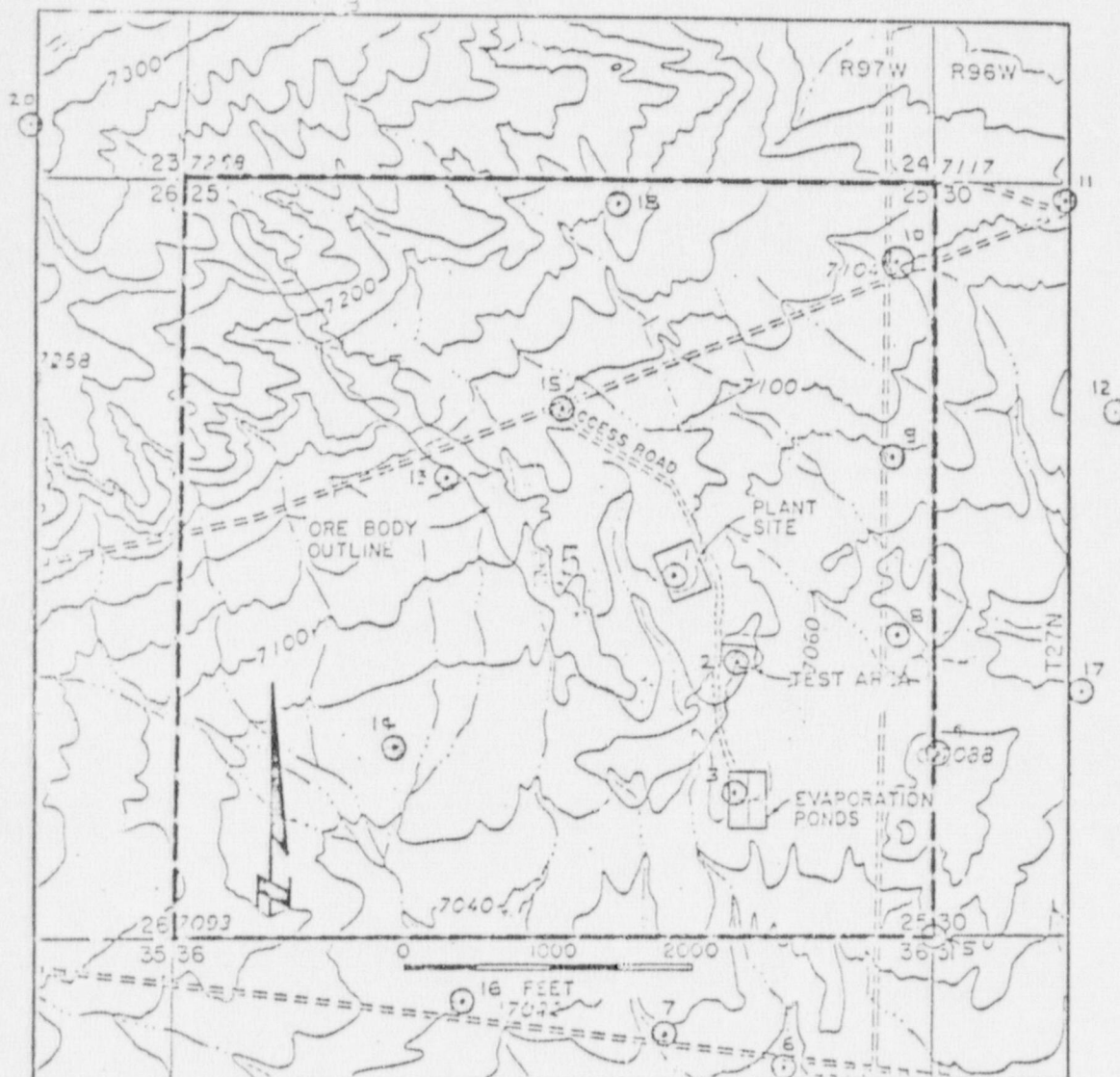


FIGURE 55





EXPLANATION

--- PROJECT AREA BOUNDARY
 7 TLD STATION

STATION 21- INTERSECTION BISON BASIN OIL
 FIELD ROAD AND BISON BASIN MINE ROAD.
 STATION 22- INTERSECTION US 287 AND
 BISON BASIN OIL FIELD ROAD

OGLE PETROLEUM INC.

BISON BASIN PROJECT
 BISON BASIN MINE

TLD STATION LOCATION MAP

FIGURE 56

TABLE 1

PLANT BLEED WATER QUALITY

PARAMETER	SAMPLE ROUND NUMBER 1 Collected 06-01-79	SAMPLE ROUND NUMBER 2 Collected 07-06-79	SAMPLE ROUND NUMBER 3 Collected 08-03-79	SAMPLE ROUND NUMBER 4 Collected 07-24-80	SAMPLE ROUND NUMBER 5 Collected 08-21-80	SAMPLE ROUND NUMBER 6 Collected 09-18-80	SAMPLE ROUND NUMBER 7 Collected 10-30-80	SAMPLE ROUND NUMBER 8 Collected
Total Dissolved Solids	5278	4966	4084	3106	17008	33041	45312	
Specific Conductance (micro/cm)	7150	7400	5525	3850	21700	40000	53800	
Uranium	32.0	21.0	6.40	0.35	28.0	44.5	24.5	
Radium 226 (pCi/l)	75.6±3.22	240±4.97	492±8	3.8±1.1	48.5±2.9	526.8±6.4		
Selenium	-0.01	-0.01	-0.01	-0.01	1.15	5.5	6.85	
Arsenic	0.09	0.02	-0.01	0.09	0.03	0.04	- 0.01	
Sulfate	1850	470	925	850	1785	3600	8071	

NOTES: All values in mg/l unless otherwise noted.

- means not detected at level indicated.

Blank space means data not yet available from commercial laboratory.

TABLE 2

MONITOR WELL 303-6-N 1
OPERATIONAL WATER QUALITY DATA

Page 1 of 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 1 Collected 05-15-79	SAMPLE ROUND 2 Collected 06-01-79	SAMPLE ROUND 3 Collected 06-13-79	SAMPLE ROUND 4 Collected 06-26-79	SAMPLE ROUND 5 Collected 07-10-79	SAMPLE ROUND 6 Collected 07-26-79	SAMPLE ROUND 7 Collected 08-07-79	SAMPLE ROUND 8 Collected 06-11-80	SAMPLE ROUND 9 Collected 07-10-80	SAMPLE ROUND 10 Collected 07-24-80
pH (pH units)	9.6	11.6	10.3	9.5	8.0	8.5	9.5	9.2	8.8	9.7	8.9	8.6
Total Dissolved Solids				1680		1330		1316				1386
Specific Conductance												
(micro/cm)												
Ammonia (as N)	1860	2232	1775	1825	1625	1750	1785	1750	1775	1800	1750	1925
Nitrate (as N)	0.31	0.37	0.31	0.38	0.32	0.31	0.1	-0.1	-0.1	0.22	0.19	0.17
Nitrite (as N)				1.5		4.0		0.03				-0.01
Carbonate	32	38	48	-0.01		-0.01		-0.01				-0.01
Bicarbonate	67	80	1	36	24	24		24	19	19	14	12
Carbonate/Bicarbonate	99	118		37	49	37		24	46	54	68	98
Calcium				73	73	61	73	48	65	73	82	110
Chloride	44	53	38	12	14	14		17				25
Boron				36	36	30	32	32	34	38	38	32
Fluoride				-1.0	-1.0	-1.0	-1.0	-1.0				-1.0
Magnesium				1.1	1.2	1.2		0.064				1.23
Potassium				4	6	6		9				9
Sodium				9	9	9		9				9
Sulfate	441	529	434	443	430	438	434	420	436	419	415	409
Aluminum	845	1014	815	795	800	851	812	825	805	798	835	831
Arsenic				0.10		-0.05		-0.05				-0.01
Barium				-0.01		-0.01		-0.01				-0.01
Cadmium				-0.05		-0.05		-0.05				-0.05
Chromium				-0.002		-0.002		-0.002				-0.01
Copper				-0.01		-0.01		-0.01				-0.05
Iron				-0.01		-0.01		-0.01				-0.02
Lead				0.01		0.01		-0.01				-0.03
Manganese				-0.05		-0.05		-0.05				-0.05
Mercury				-0.01		-0.01		-0.01				-0.01
Nickel				-0.001		-0.001		-0.001				-0.001
Selenium				-0.04		-0.04		-0.04				-0.04
Zinc				-0.01		-0.01		-0.01				-0.01
Vanadium				-0.01		0.02		-0.01				-0.01
Vanadium				-0.05		-0.05		-0.05				-0.1
Vanadium				0.05		0.05		-0.05				-0.05
Vanadium				0.001		0.002		0.001				0.002
Vanadium				0.001		0.002		0.001				0.002
Vanadium				0.006		0.006		0.006				0.006
Vanadium				1.004		1.004		1.004				1.004
Vanadium				1.13		1.13		1.13				1.13
Vanadium				2.0		2.0		2.0				2.0

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected	SAMPLE ROUND 12 Collected	SAMPLE ROUND 13 Collected	SAMPLE ROUND 14 Collected	SAMPLE ROUND 15 Collected	SAMPLE ROUND 16 Collected	SAMPLE ROUND 17 Collected	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	9.6	11.6	8.4	8.2	8.5	8.5	7.7	8.3	8.3			
Total Dissolved Solids				1366	1386			1404				
*Specific Conductance (micro/cm)												
*Ammonia (as N)	1860	2232	1800	1755	1755	1755	1755	1825	1775			
Nitrate (as N)	0.31	0.37	0.22	0.25	0.21	0.21	0.20	0.15	0.19			
Nitrite (as N)				0.31				-0.01				
Carbonate	3.2	38	0	-0.01	7	7	0	-0.01	10			
Bicarbonate	67	80	124	17	107	107	107	0	107			
*Carbonate/Bicarbonate	99	118	124	115	114	112	107	117	117			
Calcium				27	33	33	30	30	30			
*Chloride	64	53	30	30	29	29	30	30	29			
Barium				-1.0	-1.0	-1.0		-1.0				
Fluoride				1.08	1.06	1.06		1.07				
Magnesium				10	9	10		10				
Potassium				8	11	11		7				
Sodium	441	529	408	450	419	414	403	405	420			
*Sulfate	865	1014	825	882	866	899	843	875	856			
Aluminum				-0.01				-0.10				
Arsenic				-0.01				-0.01				
Barium				-0.05				-0.05				
Cadmium				-0.01				-0.01				
Chromium				-0.05				-0.01				
Copper				-0.02				-0.02				
Iron				0.11				-0.03				
Lead				-0.05				-0.05				
Manganese				-0.01				-0.01				
Mercury				-0.001				-0.001				
Nickel				-0.04				-0.04				
Selenium				0.01				-0.01				
Zinc				-0.01				-0.01				
Soluble Zinc				-0.10				-0.10				
Soluble Zinc				-0.05				-0.05				
Vanadium				0.005				-0.001				
*Uranium	0.004	1.004	0.008	0.005	-0.001	-0.001	-0.001	-0.001	0.004			
Radium 226 (pCi/l)	1.13			2.9/0.6				N/A				
Thorium 230 (pCi/l)	2.50			3.2/2.4				N/A				

NOTE: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

MONITOR WELL 303-6-M 2
 OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	DETERMINATION LIMIT	SAMPLE ROUND 1 Collected 05-15-79	SAMPLE ROUND 2 Collected 06-01-79	SAMPLE ROUND 3 Collected 06-12-79	SAMPLE ROUND 4 Collected 06-26-79	SAMPLE ROUND 5 Collected 07-10-79	SAMPLE ROUND 6 Collected 07-24-79	SAMPLE ROUND 7 Collected 08-07-79	SAMPLE ROUND 8 Collected 06-11-80	SAMPLE ROUND 9 Collected 07-10-80	SAMPLE ROUND 10 Collected 07-24-80
pH (pH unit)	10.3	12.3	9.1	8.5	8.4	8.8	8.8	8.8	8.7	9.0	8.3	8.5
Total Dissolved Solids												406
*Specific Conductance (micro/cm)	1875	2250	1775	1820	1775	1785	1785	1750	1850	1800	1850	1775
*Ammonia (as N)	1.1	1.3	0.24	-0.1	0.12	0.1	0.1	-0.01	-0.1	-0.10	0.18	0.22
Nitrate (as N)				1.5	5.6			0.03				-0.01
Nitrite (as N)				-0.01	-0.01			-0.01				-0.01
Carbonate	44	53	24	32	24			24	22	7	12	7
Bicarbonate	15	18	85	110	61			85	95	83	83	88
*Carbonate+Bicarbonate	109	131	109	122	85	109	109	109	117	90	95	95
Calcium			32	27	27			21				23
Chloride	44	53	40	38	36	30	30	34	32	34	24	30
Barium				-1.0		-1.0		-1.0				-1.0
Fluoride				3.0		1.3		0.66				1.06
Phosphorus				7	7	9		6				10
Potassium				8	8	6		8				9
Sodium	450	540	428	429	434	430	430	417	436	415	412	411
Sulfate	802	962	827	380	809	823	823	833	850	812	848	851
Aluminum				0.09	-0.05			-0.05				-0.1
Arsenic				-0.01	-0.01			-0.01				-0.01
Barium				-0.05	-0.05			-0.05				-0.05
Cadmium				-0.002	-0.002			-0.002				-0.01
Chromium				-0.01	-0.01			-0.01				-0.05
Copper				-0.01	-0.01			-0.01				-0.02
Iron				0.01	0.01			-0.01				-0.03
Lead				-0.05	-0.05			-0.05				-0.05
Manganese				-0.01	-0.01			-0.01				-0.01
Nickel				-0.001	-0.001			-0.001				-0.001
Selenium				-0.04	-0.04			-0.04				-0.04
Silver				-0.01	-0.01			-0.01				-0.01
Zinc				-0.01	0.02			-0.01				-0.01
Molybdenum				-0.05	-0.05			-0.05				-0.05
Vanadium				-0.05	-0.05			-0.05				-0.05
Antimony				-0.001	-0.001			-0.001				-0.001
Fluorine				5.58±0.51	2.54±0.42			2.36±0.29				0.91±0.29
Thorium 226 (pCi/l)	0.001	1.001	0.007	0.002	0.001	0.002	0.002	0.001	0.003	-0.001	-0.001	0.10±0.29
Thorium 230 (pCi/l)	2.75			9.01±5.25	1.80±2.49			0.43±0.99				0.10±3.2

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 3

BENTON WELLS 303-6-M-2

OPERATIONAL WATER QUALITY DATA

Page 2 of 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected 08-07-80	SAMPLE ROUND 12 Collected 08-21-80	SAMPLE ROUND 13 Collected 09-04-80	SAMPLE ROUND 14 Collected 09-18-80	SAMPLE ROUND 15 Collected 10-02-80	SAMPLE ROUND 16 Collected 10-16-80	SAMPLE ROUND 17 Collected 10-30-80	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	10.3	12.3	8.1	8.1	8.3	8.3	8.1	8.0	8.2			
Total Dissolved Solids								1420				
Specific Conductance (micro/cm)												
Ammonia (as N)	1875	2250	1750	1825	1775	1775	1750	1750	1775			
Nitrate (as N)	1.1	1.3	0.22	0.22	0.21	0.22	0.18	0.15	0.18			
Nitrite (as N)				0.45		-0.01		-0.01				
Carbonate	44	53	0	0	5	0	0	0	0			
Bicarbonate	15	18	127	115	107	117	112	112	115			
Carbonate+Bicarbonate	109	131	127	115	112	117	112	112	115			
Calcium				28		35		32				
Chloride	44	53	18	28	29	33	30	30	32			
Boron				-1.0		-1.0		-1.0				
Fluoride				1.03		1.03		1.03				
Magnesium				10		9		9				
Potassium				8		11		8				
Sodium	450	540	414	425	425	423	412	402	425			
Sulfate	802	962	869	799	882	932	853	882	881			
Aluminum				-0.01		-0.10		-0.10				
Arsenic				-0.01		-0.01		-0.01				
Barium				-0.05		-0.05		-0.05				
Cadmium				-0.01		-0.01		-0.01				
Chromium				-0.05		-0.04		-0.04				
Copper				-0.02		-0.02		-0.02				
Iron				0.07		-0.03		-0.03				
Lead				-0.05		-0.05		-0.05				
Manganese				-0.01		-0.01		-0.01				
Mercury				-0.001		-0.001		-0.001				
Nickel				-0.04		-0.04		-0.04				
Selenium				0.01		0.01		-0.01				
Zinc				0.03		-0.01		-0.01				
Soluble				-0.10		-0.10		-0.10				
Vanadium				-0.05		-0.05		-0.05				
Uranium				0.001		-0.001		0.002				
Radium 226 (pCi/l)	-0.001	1.001	0.004	0.001	-0.001	-0.001	0.002	0.002	-0.001			
Thorium 230 (pCi/l)	2.75			1.6+0.8	1.6+0.19	1.6+0.19		N/A				
	6.19			0.6+1.6	3.1+5.6	3.1+5.6		N/A				

NOTE: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 1 Collected 05-15-79	SAMPLE ROUND 2 Collected 05-30-79	SAMPLE ROUND 3 Collected 06-13-79	SAMPLE ROUND 4 Collected 06-27-79	SAMPLE ROUND 5 Collected 07-10-79	SAMPLE ROUND 6 Collected 07-24-79	SAMPLE ROUND 7 Collected 08-07-79	SAMPLE ROUND 8 Collected 06-11-80	SAMPLE ROUND 9 Collected 07-10-80	SAMPLE ROUND 10 Collected 07-24-80
pH (oil units)	8.4	10.4	8.6	8.4	8.2	8.3	8.1	8.1	8.1	8.2	8.2	8.1
Total Dissolved Solids	1866			1946		1818		1804				1730
Aspartic Conductance												
Ammonia (as N)	2225	2670	2275	2250	2225	2225	2350	2250	2225	2050	2150	2250
Nitrate (as N)	1.13	1.37	0.24	-0.1	-0.1	0.14	0.1	-0.1	-0.1	0.17	0.22	0.18
Nitrite (as N)				1.9		3.6		0.03				-0.01
Carbonate	12	14	12	-0.01		-0.01		-0.01				-0.01
Bicarbonate	98	118	85	24	12	12		0	0	0	5	0
Carbonate/Bicarbonate	110	132	97	73	85	85		110	110	127	105	124
Calcium			59	55	56	56	110	61	110	127	110	124
Chloride	18	22	24	22	22	16	16	16	16	20	20	48
Iron				-1.0		-1.0		-1.0				-1.0
Fluoride				1.2		1.2		0.70				1.08
Sulfate				18		18		17				17
Potassium								11				11
Sodium	532	638	532	496	513	505	532	500	548	472	479	458
Magnesium	1209	1451	1179	1210	1185	1160	1194	1165	1175	1068	1087	1068
Aluminum				0.11		-0.05		-0.05				-0.1
Arsenic				-0.01		-0.01		-0.01				-0.01
Barium				-0.05		-0.05		-0.05				-0.05
Cadmium				-0.002		-0.002		-0.002				-0.01
Chromium				-0.01		-0.01		-0.01				-0.01
Copper				-0.01		-0.01		-0.01				-0.01
Iron				0.02		0.03		0.09				-0.01
Lead				-0.05		-0.05		-0.05				-0.05
Manganese				-0.01		-0.01		-0.01				-0.01
Mercury				-0.001		-0.001		-0.01				-0.001
Nickel				-0.04		-0.04		-0.04				-0.04
Selenium				-0.01		-0.01		-0.01				-0.01
Zinc				-0.01		-0.01		-0.01				-0.01
Polybromine				-0.05		-0.05		-0.05				-0.01
Vanadium				-0.05		-0.05		-0.05				-0.1
Antimony				-0.05		-0.05		-0.05				-0.05
Barium				0.004		-0.001		0.003				-0.001
Lead				1.39±0.27		0.75±0.29		5.47±0.46				0.64±0.26
Chromium 226 (ppb)				72.1±22.9		11.26±8.49		8.26±3.95				0.24±2.2
Thorium 230 (ppb)												

NOTE: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected	SAMPLE ROUND 12 Collected	SAMPLE ROUND 13 Collected	SAMPLE ROUND 14 Collected	SAMPLE ROUND 15 Collected	SAMPLE ROUND 16 Collected	SAMPLE ROUND 17 Collected	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	8.4	10.4	7.8	8.1	8.3	8.1	7.9	8.0	7.8			
Total Dissolved Solids	1866							1730				
*Specific Conductance (micro/cm)												
Ammonia (as N)	2275	2670	2050	1925	2050	2025	2050	2075	2100			
Nitrate (as N)	1.13	1.37	0.18	0.24	0.19	0.18	0.18	0.15	0.18			
Nitrite (as N)				0.11		0.01		-0.01	0.18			
Carbonate	12	14	0	-0.05	-0.01	-0.01		-0.01	-0.01			
Bicarbonate	98	118	127	0	7	0	0	0	0			
*Carbonate+Bicarbonate	110	132	127	127	120	127	122	122	103			
Calcium				46	127	51		54	103			
Chloride	18	22	18	18	16	22	19	20	22			
Boric				-1.0	-1.0	-1.0		-1.0				
Fluoride				1.02	1.05	1.05		1.03				
Magnesium				17	17	17		16				
Potassium				10	15	15		9				
Sodium				450	462	469	668	469	510			
*Sulfate	512	638	458	1015	1086	1125	1072	1090	1114			
Aluminum	1209	1451	1068	-0.10		-0.10		-0.10				
Arsenic				-0.01		-0.01		-0.01				
Barium				-0.05		-0.05		-0.05				
Cadmium				-0.01		-0.01		-0.01				
Chromium				-0.05		-0.05		-0.01				
Copper				-0.02		-0.02		-0.02				
Iron				0.06		0.06		-0.03				
Lead				-0.05		-0.05		-0.05				
Manganese				-0.01		-0.01		-0.01				
Mercury				-0.001		-0.001		-0.001				
Nickel				-0.06		-0.06		-0.06				
Selenium				0.01		0.01		0.01				
Zinc				0.03		0.03		0.01				
Niobium				-0.10		-0.10		-0.10				
Vanadium				-0.05		-0.05		-0.05				
Antimony				-0.001		-0.001		-0.001				
Radium 226 (pCi/l)	-0.001	1.001	0.001	0.75±0.70	-0.001	-0.001	-0.001	-0.001	0.003			
Thorium 230 (pCi/l)	1.64			2.2±2.1	7.1±0.7	3.2±1.8		N/A				
	5.78							N/A				

NOTES: All values in µg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 5

MONITOR WELL, 103-6-M 4

OPERATIONAL WATER QUALITY DATA

Page 1 of 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 1 Collected	SAMPLE ROUND 2 Collected	SAMPLE ROUND 3 Collected	SAMPLE ROUND 4 Collected	SAMPLE ROUND 5 Collected	SAMPLE ROUND 6 Collected	SAMPLE ROUND 7 Collected	SAMPLE ROUND 8 Collected	SAMPLE ROUND 9 Collected	SAMPLE ROUND 10 Collected
pH (pH units)	9.4	11.4	9.5	9.1	8.8	8.7	8.8	8.7	8.5	9.3	8.3	8.7
Total Dissolved Solids				1690		1332		1347				1298
*Specific Conductance												
(micro/cm)												
*Ammonia (as N)	1712	2054	1800	1785	1800	1750	1785	1825	1850	1700	1700	1800
Nitrate (as N)	2.6	3.1	0.21	0.17	-0.1	-0.1	0.1	-0.1	-0.1	-0.10	0.22	0.16
Nitrite (as N)				1.7		3.5		0.03				-0.01
*Carbonate/Bicarbonate				-0.01		-0.01		-0.01				-0.01
Calcium	28	34	36	25	36	24		24	19	26	12	12
*Chloride	81	97	61	85	73	73		85	95	61	100	85
Boron	109	131	97	110	109	97	134	109	114	87	112	97
Fluoride	38	46	24	20	18	21		26	28	42	40	32
Magnesium			40	36	38	29	30	30				-1.0
Potassium				-1.0		-1.0		-1.0				1.12
*Sodium				1.3		1.3		0.62				9
*Sulfate				6		8		7				8
Aluminum	425	510	429	432	415	417	427	418	436	407	407	391
Arsenic	778	934	816	890	810	818	789	807	805	803	797	799
Barium				0.05		-0.05		-0.05				-0.1
Cadmium				-0.01		-0.01		-0.01				-0.01
Chromium				0.05		-0.05		-0.05				-0.05
Copper				-0.002		-0.002		-0.002				-0.01
Iron				-0.01		-0.01		-0.01				-0.05
Lead				-0.01		-0.01		-0.01				-0.02
Manganese				0.013		0.05		0.05				-0.03
Mercury				-0.05		-0.05		-0.05				-0.05
Nickel				-0.01		-0.01		-0.01				-0.01
Selenium				-0.001		-0.001		-0.001				-0.001
Zinc				-0.04		-0.04		-0.04				-0.04
Vanadium				-0.01		-0.01		-0.01				-0.01
Thorium				-0.01		-0.01		-0.01				-0.01
Uranium				-0.05		-0.05		-0.05				-0.1
Radium 226 (pCi/l)	0.002	1.002	0.009	0.014	0.008	-0.001	0.010	-0.05	0.008	-0.001	0.008	-0.05
Thorium 230 (pCi/l)	79.43				39.7±1.72	83.75±3.01		67.6±2.83				55.1±2.57
	7.58				99.1±43.1	2.12±2.62		7.56±3.25				0.10±4.0

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 5
MONITOR WELL 303-6-M 4
OPERATIONAL WATER QUALITY DATA

Page 2 of 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected 08-07-80	SAMPLE ROUND 12 Collected 08-21-80	SAMPLE ROUND 13 Collected 09-04-80	SAMPLE ROUND 14 Collected 09-18-80	SAMPLE ROUND 15 Collected 10-02-80	SAMPLE ROUND 16 Collected 10-16-80	SAMPLE ROUND 17 Collected 10-30-80	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	9.4	11.4	8.5	8.2	8.9	8.5	8.2	8.2	8.6			
Total Dissolved Solids				1286		1310		1366				
*Specific Conductance (mhos/cm)	1712	2054	1725	1600	1725	1650	1650	1675	1725			
*Ammonia (as N)	2.6	3.1	0.17	0.20	0.20	0.17	0.16	0.16	0.20			
Nitrate (as N)				-0.01		-0.01		-0.01				
Nitrite (as N)				-0.01		-0.01		-0.01				
Carbonate	28	34	12	0	14	17	0	0	8			
Bicarbonate	81	97	85	127	110	90	127	127	104			
*Carbonate+Bicarbonate	109	131	97	127	124	107	127	127	112			
Calcium				23		27		28				
*Chloride	38	46	32	32	34	33	34	34	34			
Boron				- 1.0		- 1.0		- 1.0				
Fluoride				1.06		1.08		1.10				
Magnesium				9		8		7				
Potassium				8		11		7				
*Sodium	425	510	408	400	403	403	398	403	418			
*Sulfate	778	934	816	732	793	882	802	835	798			
Aluminum				-0.01		-0.10		-0.10				
Arsenic				-0.01		-0.01		-0.01				
Barium				-0.05		-0.05		-0.05				
Cadmium				-0.01		-0.01		-0.01				
Chromium				-0.05		-0.05		-0.01				
Copper				-0.02		-0.02		-0.02				
Iron				0.06		-0.03		-0.03				
Lead				-0.05		-0.05		-0.05				
Manganese				-0.01		-0.01		-0.01				
Mercury				-0.001		-0.001		-0.001				
Nickel				-0.04		-0.04		-0.04				
Selenium				0.01		-0.01		-0.01				
Zinc				-0.01		-0.01		-0.01				
Molybdenum				-0.10		-0.10		-0.10				
Vanadium				-0.05		-0.05		-0.05				
*Uranium	0.002	1.002	0.005	0.001	-0.001	-0.001	0.002	-0.001	0.005			
Radium 226 (pCi/l)	79.43			62.7±3.3		82.2±2.6		N/A				
Thorium 230 (pCi/l)	7.58			0.8±1.3		9.1±3.4		N/A				

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 6
MONITOR WELL 303-6-M 5
OPERATIONAL WATER QUALITY DATA

Page 1 of 2

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 1 Collected 05-15-79	SAMPLE ROUND 2 Collected 06-01-79	SAMPLE ROUND 3 Collected 06-12-79	SAMPLE ROUND 4 Collected 06-26-79	SAMPLE ROUND 5 Collected 07-10-79	SAMPLE ROUND 6 Collected 07-24-79	SAMPLE ROUND 7 Collected 08-07-79	SAMPLE ROUND 8 Collected 06-11-80	SAMPLE ROUND 9 Collected 07-10-80	SAMPLE ROUND 10 Collected 07-24-80
pH (pH units)	8.8	10.8	9.0	8.6	8.6	8.4	8.6	8.3	8.2	8.7	8.6	8.3
Total Dissolved Solids				1390		1334		1322				1326
*Specific Conductance (mhos/cm)	1760	2112	1800	1825	1800	1750	1785	1775	1850	1700	1750	1775
*Ammonia (as N)	0.19	0.23	0.20	- 0.1	0.12	- 0.1	0.1	- 0.1	- 0.1	-0.10	0.20	0.13
Nitrate (as N)				1.8		4.2		0.02				-0.01
Nitrite (as N)				-0.01		-0.01		-0.01				-0.01
Carbonate	18	22	12	36	12	12		12	0	19	12	7
Bicarbonate	116	139	110	73	110	98		122	122	81	90	107
*Carbonate+Bicarbonate	134	161	122	109	122	110	122	134	122	100	102	114
Calcium			19	25	25	25		47				20
*Chloride	32	38	34	36	34	28	28	32	28	36	32	32
Boron				- 1.0		- 1.0		- 1.0				- 1.0
Fluoride				1.6		1.3		0.70				1.11
Magnesium				6		7		3				9
Potassium				9		9		8				9
*Sodium	440	528	438	432	436	417	425	416	425	409	407	389
*Sulfate	802	962	830	810	920	814	832	814	850	785	810	756
Aluminum				0.08		-0.05		-0.05				- 0.1
Arsenic				-0.01		-0.01		-0.01				-0.01
Barium				-0.05		-0.05		-0.05				-0.05
Cadmium				-0.002		-0.002		-0.002				-0.01
Chromium				-0.01		-0.01		-0.01				-0.05
Copper				-0.01		-0.01		-0.01				-0.02
Iron				0.01		0.05		0.02				-0.03
Lead				-0.05		-0.05		-0.05				-0.05
Manganese				-0.01		-0.01		-0.01				-0.01
Mercury				-0.001		-0.001		-0.001				-0.001
Nickel				-0.04		-0.04		-0.04				-0.04
Selenium				-0.01		-0.01		-0.01				-0.01
Zinc				-0.01		0.02		-0.01				-0.01
Molybdenum				-0.05		-0.05		-0.05				- 0.1
Vanadium				-0.05		-0.05		-0.05				-0.05
*Uranium		1.002	-0.001	0.003	0.002	0.002	0.006	-0.001	0.010	-0.001	0.007	-0.001
Radium 226 (pCi/l)	7.05				2.59±0.55	4.48±0.61		4.17±0.39				2.7±0.45
Thorium 230 (pCi/l)	5.33				27.3±13.2	17.89±3.39		1.09±1.20				0.0±3.2

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 6

MONITOR WELL 303-6-H 5

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OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected 08-07-80	SAMPLE ROUND 12 Collected 08-21-80	SAMPLE ROUND 13 Collected 09-04-80	SAMPLE ROUND 14 Collected 09-18-80	SAMPLE ROUND 15 Collected 10-02-80	SAMPLE ROUND 16 Collected 10-16-80	SAMPLE ROUND 17 Collected 10-30-80	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	8.8	10.8	8.3	8.2	8.3	8.3	8.2	8.1	8.3			
Total Dissolved Solids				1276		1328		1388				
*Specific Conductance ($\mu\text{hos}/\text{cm}$)												
*Ammonia (as N)	1760	2112	1725	1650	1725	1775	1675	1675	1725			
Nitrate (as N)	0.19	0.23	0.16	0.21	0.15	0.16	0.15	0.16	0.18			
Nitrite (as N)				-0.01		-0.02		-0.01				
Carbonate	18	22	0	0	7	0	0	0	5			
Bicarbonate	116	139	122	124	107	137	129	132	112			
*Carbonate+Bicarbonate	134	161	122	124	114	137	129	132	117			
Calcium				23	30	30	28	28	23			
*Chloride	32	38	32	32	30	33	28	37	23			
Boron				-1.0		-1.0		-1.0				
Fluoride				1.06		1.06		1.08				
Magnesium				16		8		8				
Potassium				8		11		7				
*Sodium	440	528	433	400	394	401	409	398	407			
*Sulfate	802	962	865	799	799	900	812	790	807			
Aluminum				-0.10		-0.10		-0.10				
Arsenic				-0.01		-0.01		-0.01				
Barium				-0.05		-0.05		-0.05				
Calcium				-0.01		-0.01		-0.01				
Chlorine				-0.05		-0.05		-0.01				
Copper				-0.02		-0.02		-0.02				
Iron				0.05		0.03		-0.03				
Lead				-0.05		-0.05		-0.05				
Manganese				-0.01		-0.01		-0.01				
Mercury				-0.001		-0.001		-0.001				
Nickel				-0.04		-0.04		-0.04				
Selenium				-0.01		-0.01		-0.01				
Zinc				0.10		-0.01		-0.01				
Niobium				-0.10		-0.10		-0.10				
Vanadium				-0.05		-0.05		-0.05				
*Uranium	0.002	1.002	0.003	0.001	-0.001	-0.001	-0.001	-0.001	0.001			
Radium 226 (pCi/l)	7.05			3.5 $\pm$ 1.2		4.9 $\pm$ 0.6		N/A				
Thorium 230 (pCi/l)	5.33			3.7 $\pm$ 3.6		5.0 $\pm$ 2.9		N/A				

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 7
MONITOR WELL 303-6-N 6
OPERATIONAL WATER-QUALITY DATA

Page 1 of 2

PARAMETER	BASILINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 1 Collected	SAMPLE ROUND 2 Collected	SAMPLE ROUND 3 Collected	SAMPLE ROUND 4 Collected	SAMPLE ROUND 5 Collected	SAMPLE ROUND 6 Collected	SAMPLE ROUND 7 Collected	SAMPLE ROUND 8 Collected	SAMPLE ROUND 9 Collected	SAMPLE ROUND 10 Collected
pH (pH units)	8.7	10.7	8.7	8.6	8.5	8.4	8.6	8.5	8.3	9.2	8.8	8.8
Total Dissolved Solids				1448		1342		1342				1290
Specific Conductance												
(micro/cm)												
Ammonia (as N)	1792	2150	1800	1900	1850	1725	1800	1800	1825	1700	1460	1675
Nitrate (as N)	0.16	0.19	0.22	-0.1	0.12	-0.1	0.1	-0.01	-0.1	-0.10	0.30	0.24
Nitrite (as N)				1.4		4.0		0.02				-0.01
Carbonate	21	25	12	-0.01		-0.01		-0.01				-0.01
Bicarbonate	119	143	122	24	12	48		12	24	36	5	12
Carbonate+Bicarbonate	140	168	134	85	122	37	122	122	98	51	81	51
Calcium			28	109	134	85		134	122	87	86	63
Chloride	33	40	34	28	29	26	28	42	30	34	38	16
Baron				34	32	30		30				32
Fluoride				-1.0		-1.0		-1.0				-1.0
Magnesium				1.5		0.80		0.70				1.14
Potassium				9		9		6				6
Sodium				8		8		9				9
Sulfate	428	514	422	432	426	417	423	428	436	414	407	389
Aluminum	810	972	832	855	900	820	832	811	810	803	801	766
Arsenic				-0.05		-0.05		-0.05				-0.1
Barium				-0.01		-0.01		-0.01				-0.01
Cadmium				-0.05		-0.05		-0.05				-0.05
Chromium				-0.002		-0.002		-0.002				-0.01
Copper				-0.01		-0.01		-0.01				-0.05
Iron				-0.01		-0.01		-0.01				-0.02
Lead				0.01		0.02		0.01				0.17
Manganese				-0.05		-0.05		-0.05				-0.05
Mercury				-0.01		-0.01		-0.01				-0.01
Nickel				-0.001		-0.001		-0.001				-0.001
Selenium				-0.04		-0.04		-0.04				-0.04
Zinc				-0.01		-0.01		-0.01				-0.01
Vanadium				-0.01		-0.01		-0.01				-0.01
Vanadium				-0.05		-0.05		-0.05				-0.1
Vanadium				-0.05		-0.05		-0.05				-0.05
Vanadium				0.025		0.004		0.003				0.098
Vanadium				3.06±0.67		5.48±0.66		5.66±0.43				4.7±0.54
Vanadium				2.65±1.06		5.01±5.50 ¹		0±3.99				4.3±2.6
Vanadium				0.025		0.025		0.016				0.010
Vanadium				1.006		0.025		0.016				0.010
Vanadium				0.006		0.025		0.016				0.010
Vanadium				22.03		0.025		0.016				0.010
Vanadium				4.73		0.025		0.016				0.010

NOTES: All values in mg/l except as otherwise noted. - Means not detected at levels indicated. *Excursion parameters. 1) Corrected

TABLE 7

MONITOR WELL 303-6-N 6

Page 2 of 2

OPERATIONAL WATER QUALITY DATA

PARAMETER	BASELINE MEAN	UPPER CONTROL LIMIT	SAMPLE ROUND 11 Collected	SAMPLE ROUND 12 Collected	SAMPLE ROUND 13 Collected	SAMPLE ROUND 14 Collected	SAMPLE ROUND 15 Collected	SAMPLE ROUND 16 Collected	SAMPLE ROUND 17 Collected	SAMPLE ROUND 18 Collected	SAMPLE ROUND 19 Collected	SAMPLE ROUND 20 Collected
pH (pH units)	8.7	10.7	8.7	8.8	8.8	9.0	9.0	8.5	8.7			
Total Dissolved Solids				1308		1408		1364				
Specific Conductance (micro/cm)												
Ammonia (as N)	1792	2150	1725	1825	1775	1675	1650	1675	1725			
Nitrate (as N)	0.16	0.19	0.22	0.06	0.16	0.01	0.16	0.15	0.17			
Nitrite (as N)				-0.01		-0.01		-0.01				
Carbonate	21	25	24	17	14	26	14	19	13			
Bicarbonate	119	143	44	73	73	63	93	88	93			
Carbonate+Bicarbonate	140	168	68	90	87	89	107	127	106			
Calcium				14	23	23		25				
Chloride	33	40	32	32	30	31	34	31	36			
Boron				-1.0		-1.0		-1.0				
Fluoride				1.08		1.01		1.03				
Magnesium				8		7		8				
Potassium				8		12		8				
Sodium	428	514	398	400	393	412	418	402	415			
Sulfate	810	972	792	786	783	906	819	852	816			
Aluminum				-0.10		-0.10		-0.10				
Arsenic				-0.01		-0.01		-0.01				
Barium				-0.05		-0.05		-0.05				
Cadmium				-0.01		-0.01		-0.01				
Chromium				-0.05		-0.05		-0.05				
Copper				-0.02		-0.02		-0.02				
Iron				0.03		-0.03		-0.03				
Lead				-0.05		-0.05		-0.05				
Manganese				-0.01		-0.01		-0.01				
Mercury				-0.001		-0.001		-0.001				
Nickel				-0.04		-0.04		-0.04				
Selenium				0.01		-0.01		-0.01				
Zinc				-0.01		-0.01		-0.01				
Polybdenum				-0.10		-0.10		-0.10				
Vanadium				-0.05		-0.05		-0.05				
Strontium				-0.001		-0.001		-0.001				
Thorium 226 (pCi/l)	0.006	1.006	0.002	2.4±0.7	-0.001	-0.001	-0.001	-0.001	0.002			
Thorium 230 (pCi/l)	22.03			2.2±2.5		3.5±0.61		N/A				
	4.72					1.9±1.2		N/A				

NOTES: All values in mg/l except as otherwise noted.

- Means not detected at levels indicated.

*Excursion parameters.

TABLE 3

EVAPORATION POND LEAK DETECTION MONITOR WELL

WELL 303-M 7

(Units: mg/l unless otherwise indicated)

[illegible]

TABLE B (cont.)
 WELL 303-W 7

PARAMETER	BASELINE VALUES		OPERATIONAL VALUES									
	Sample Round Number 1 10-21-78	Sample Round Number 2 10-28-78	Sample Round Number 1 07-24-79	Sample Round Number 2 11-05-79	Sample Round Number 3 02-05-80	Sample Round Number 4 05-06-80	Sample Round Number 5 08-07-80	Sample Round Number 6	Sample Round Number 7	Sample Round Number 8	Sample Round Number 9	Sample Round Number 10
Barium	-0.05	-0.05										
Cadmium	-0.002	-0.002										
Chromium	-0.01	-0.01										
Copper	-0.01	-0.01										
Iron	0.18	-0.01		0.56	0.23	0.1	0.04					
Lead	-0.05	-0.05	-0.05	0.11	-0.05	-0.65	-0.05					
Manganese	-0.01	-0.01										
Mercury	-0.001	-0.001										
Nickel	-0.04	-0.04										
Selenium	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01					
Zinc	0.12	0.06	0.12	0.1	0.03	0.32	0.1					
Molybdenum	-0.05	-0.05										
Vanadium	-0.05	-0.05										
Titanium	0.006	-0.001	0.031	0.04	0.041	0.019	0.018					
Radium-226 (pCi/l)	1.2±0.4	0.67±0.32	9.8±1.2	29.8±6.9	1.60±1.10	3.52±0.52	1.76±0.38					
Thorium-230 (pCi/l)	14.7±3.0	1.0±0.7										

NOTES: Blank space indicates analysis of parameter not required.

- means not detected at level indicated.

TABLE 9

ATMOSPHERIC RADON 222 DATA (pCi/l)

48-Hour Sample Collection Date	SAMPLE LOCATION		
	TLD Station 1 Plant Site	TLD Station 2 R & D Wellfield Site	TLD Station 3 Evaporation Pond Site
04/03/78-04/05/78	5.9±0.4	4.8±0.4	3.6±0.4
07/05/78-07/07/78	0.20	0.27±0.15	1.2±0.4 ¹
10/28/78-10/29/78	0.16±0.08	0.14±0.05	0.22±0.09
03/17/79-03/19/79	0.11±0.04	0.06±0.03	0.12±0.02
09/10/80-09/12/80	0.4±0.20		
09/12/80-09/14/80			0.30±0.15
09/17/80-09/19/80		0.07±0.08	

1) Sample collected on 07/05/78-07/07/78 at TLD Station 3 could not be analyzed because of leaky container. Value given is for sample collected on 07/25/78-07/28/78.

24-HOUR AIR PARTICULATE SAMPLES

[illegible]

TABLE 11

ENVIRONMENTAL POSITIVITY DATA
(HIGH/Week)

TLD STATION NO.	REPORTING PERIODS											
	01/20/78- 04/05/78	04/01/78- 07/18/78	07/01/78- 10/27/78	10/01/78- 02/08/79	01/01/79- 06/02/79	04/01/79- 07/27/79	07/01/79- 11/01/79	10/01/79- 03/03/80	01/01/80- 05/16/80	04/01/80- 07/08/80	07/01/80- 10/01/80	10/01/80-
Control												
0001	2.13	1.93	1.88	3.28	2.01	2.59	2.63	2.63	2.42	2.81	3.06	
0002	2.73	2.69	2.98	4.23	1.98	2.58	3.31	---	2.53	2.94	3.13	
0003	2.95	---	3.74	4.34	2.22	2.73	2.96	4.15	2.56	3.21	3.68	
0004	2.20	2.82	3.02	4.97	2.31	2.98	2.81	3.54	2.71	2.95	2.74	
0005	---	---	2.68	6.29	2.65	2.64	2.81	4.06	3.46	3.36	3.01	
0006	---	---	3.64	4.57	2.46	2.55	2.93	4.11	2.96	3.15	3.28	
0007	---	2.81	3.12	4.36	1.90	2.75	2.83	3.15	2.52	2.91	2.93	
0008	---	2.55	2.96	3.57	1.90	2.69	2.78	3.23	2.63	2.80	3.31	
0009	3.04	3.02	3.76	3.92	2.25	2.84	3.07	3.27	2.72	2.84	3.33	
0010	2.91	3.05	3.00	3.88	2.06	2.50	3.18	3.43	2.61	2.89	3.11	
0011	2.99	2.86	3.06	3.51	1.68	2.50	3.36	2.86	2.45	3.00	2.89	
0012	2.95	3.42	2.90	4.79	2.28	2.77	2.97	3.41	2.81	2.74	2.96	
0013	3.06	2.92	3.28	5.66	2.72	2.80	3.16	3.95	3.10	2.90	3.45	
0014	3.04	3.10	3.01	4.69	2.43	2.65	2.85	3.22	2.94	2.90	3.26	
0015	2.80	2.94	3.14	4.55	2.16	2.75	3.08	3.13	2.77	2.99	3.19	
0016	3.08	3.06	2.72	4.79	2.12	2.84	2.88	3.53	2.37	2.83	2.81	
0017	---	2.88	2.79	4.85	2.51	2.76	3.01	3.63	2.89	2.55	2.91	
0018	---	---	3.17	4.84	2.65	2.70	3.13	3.52	2.93	3.01	0.00	
0019	---	---	3.11	4.62	2.54	2.78	3.07	3.94	3.10	2.90	3.01	
0020	---	---	2.98	5.32	2.83	2.80	3.05	3.69	3.39	2.95	2.11	
0021	---	2.97	2.76	4.91	2.73	2.56	2.90	3.39	3.01	2.80	2.93	
0022	3.45	3.02	3.20	4.33	2.55	2.79	3.23	3.32	2.77	2.59	6.69	
0022	2.82	2.68	2.96	3.55	2.14	2.59	2.76	3.34	2.85	2.48	2.55	

NOTE: -- indicates data not collected.

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