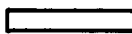


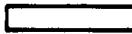


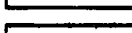




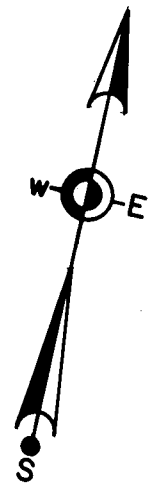
APPENDIX B

	Page
Location Map	B1
Sampling Point Data	B2
Graphs of Data	B15



LEGEND

- PROJECT BOUNDARES**
 Quick Start 
 Total Project 
- SAMPLING POINTS**
 Sampling Point 
- STRIP MINE**
 Mined Area 
- DEEP MINE**
 Lower Kittanning Seam 
 Middle Kittanning Seam 
 Presumed Mine Location 
 Mine Floor Contours 
- LIMESTONE**
 Lower Freeport Limestone 



TOBY CREEK WATERSHED	
ELK COUNTY, PENNSYLVANIA	
Date Oct., 1971	COMMONWEALTH OF PENNSYLVANIA
Scale 1" = 2000'	DEPARTMENT OF MINES and MINERAL INDUSTRIES
Drawn by cmk	Mine Drainage Project SL-132
Dwg. No. B1	
Yost Associates, Inc Engineers DuBois, Pa.	SAMPLING POINTS



APPENDIX B - SAMPLING DATA
 OPERATION SCARLIFT
 TOBY CREEK SL-132

SUMMARY OF SAMPLING DATA

<u>Sampling Point</u>	<u>Flow</u>	<u>pH</u>	<u>PPM Acidity*</u>	<u>PPM Fe</u>	<u>PPM Mn</u>	<u>PPM SO₄</u>	
1)	Max.	0.582	5.7	417	100.8	33.75	1800
	Avg.	0.397	4.796	227	46.2	12.82	1202
	Min.	0.275	4.5	- 5	12.2	7.0	50
2)	Max.	0.105	6.60	660	100.1	28.0	2500
	Avg.	0.65	4.536	364	47.2	10.82	1456
	Min.	0.05	3.80	- 5	4.5	5.0	15
3	Max.	0.022	6.40	954	62.2	16.25	2000
	Avg.	0.022	5.40	302	37.2	7.42	811
	Min.	0.022	4.40	- 48	12.6	5.60	500
4	Max.	--	6.4	144	42.5	10.00	875
	Avg.	--	4.63	72	18.3	4.18	397
	Min.	--	4.1	- 10	2.3	0.63	45
5	Max.	0.0028	5.8	2140	131.3	90.00	8300
	Avg.	0.0022	4.15	1090	81.0	34.11	2857
	Min.	0.0010	3.9	70	46.5	0	0
6	Max.	0.113	7.5	126	1.9	8.0	750
	Avg.	0.1125	6.68	- 4.7	0.468	3.30	338
	Min.	0.112	5.0	- 45	0.1	0.25	85
7	Max.	--	7.5	20	2.5	20.0	1750
	Avg.	--	6.87	- 10.96	0.579	10.29	1126
	Min.	--	6.6	- 60	0.05	0	250
8	Max.	0.001	5.0	562	15.0	13.75	1750
	Avg.	0.001	4.36	150	7.4	6.63	1004
	Min.	0.001	4.1	10	7.4	2.0	1000
9	Max.	--	5.1	336	129.5	24.0	2300
	Avg.	--	4.39	228	65.0	9.98	1373
	Min.	--	3.0	26	7.2	0	125
10	Max.	--	5.08	284	104.3	27.5	1600
	Avg.	--	4.33	221	57.9	9.36	1042
	Min.	--	3.0	100	16.1	3.55	475
11	Max.	--	7.2	1.20	1.21	13.75	1250
	Avg.	--	6.40	- 2.22	0.37	4.29	754
	Min.	--	4.0	- 45	0.10	0	250

* Negative sign indicates net positive alkalinity.



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SUMMARY OF SAMPLING DATA

Sampling Point	Flow	pH	PPM Acidity*	PPM Fe	PPM Mn	PPM SO ₄
12	Max. --	4.8	140	3.5	4.51	450
	Avg. --	4.44	90	1.88	3.78	354
	Min. --	4.0	40	0.9	3.0	300
Elk	Max. --	6.8	120	50.2	25.5	1000
	Avg. --	6.22	- 46	24.1	6.48	725
	Min. --	5.55	-188	4.5	0	450

* Negative sign indicates net positive alkalinity



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SUMMARY OF SAMPLING DATA LISTING WEIGHTS OF POLLUTANTS FOR STATIONS WHERE
FLOW DATA WAS COLLECTED

Sampling Point	Flow	pH	lb/day Acidity	lb/day Fe	lb/day Mn	lb/day SO ₄	
1	Max.	0.582	5.7	2025	489.9	163.92	8743
	Avg.	0.397	4.796	752	158.9	42.47	3982
	Min.	0.275	-4.5	- 11.48	27.9	16.07	115
2	Max.	0.105	6.60	581	88.1	24.64	2200
	Avg.	0.065	4.536	196.6	25.5	5.84	786
	Min.	0.05	-3.8	- 2.1	1.9	2.1	6.3
3	Max.	0.022	6.4	175.54	11.2	2.99	368
	Avg.	0.022	5.4	55.57	0.67	1.37	149
	Min.	0.022	4.4	- 8.8	0.23	1.03	92
5	Max.	0.0028	5.8	49.2	30.2	2.07	191
	Avg.	0.0022	4.15	20.1	1.46	0.63	53
	Min.	0.0010	3.9	0.56	0.4	---	---
6	Max.	0.113	7.5	118.4	1.8	7.52	705
	Avg.	0.1125	6.68	- 4.42	0.44	3.1	318
	Min.	0.112	5.0	- 42.3	0.09	0.24	80
8	Max.	0.001	5.0	4.5	0.12	0.11	14
	Avg.	0.001	4.36	1.2	0.02	0.05	8.03
	Min.	0.001	4.1	0.08	0.005	0.02	8.0

SAMPLING POINT NUMBER 1

<u>Date</u>	<u>Flow</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
3-4-69		4.75	300	70.3	--	1250
3-11-69		5.70	-5	12.2	--	50
3-17-69		4.90	417	30.1	--	350
4-8-69		4.90	206	50.4	10.0	650
4-18-69		4.90	210	30.6	10.0	750
4-24-69		4.90	156	16.7	11.0	700
4-30-69		4.75	154	37.8	33.75	950
5-8-69		4.72	190	50.3	10.0	1500
5-15-69		4.90	215	51.1	16.25	950
7-8-69	0.453	4.80	188	60.2	15.0	1550
7-16-69		4.80	218	42.6	25.0	1250
7-23-69	0.502	4.70	210	84.8	24.5	1150
7-29-69	0.485	4.80	258	70.7	17.5	1500
8-8-69	0.421	4.70	298	62.3	11.25	1500
8-14-69	0.421	4.70	210	80.3	7.0	1750
8-20-69	0.502	5.40	235	100.8	12.5	1250
10-2-69	0.479	4.00	240	17.3	6.5	1350
10-11-69	0.329	4.65	240	55.7	3.75	1500
10-21-69	0.310	4.60	230	30.6	12.25	1500
10-28-69	0.301	4.60	220	24.1	10.0	1500
11-4-69	0.275	5.00	240	40.2	5.0	1625
11-28-69	0.275	4.90	348	34.4	19.5	1750
12-4-69	0.275	4.70	286	14.9	16.25	1625
12-11-69	0.340	4.85	170	30.5	8.75	1800
12-18-69	0.582	4.50	225	56.8	9.0	1500



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 2

<u>Date</u>	<u>Flow</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
3-4-69		4.00	314	52.4	--	900
3-11-69		6.60	- 5	4.5	--	15
3-17-69		4.60	246	34.1	--	1000
4-8-69		4.70	240	48.4	10	850
4-18-69		4.50	264	25.2	10	750
4-24-69		4.70	240	18.8	7.5	650
4-30-69		4.80	292	32.3	7.5	900
5-8-69		4.86	238	57.2	10	1250
5-15-69		4.87	200	41.6	5	550
7-8-69	0.105	4.30	376	92.3	14.50	1750
7-16-69		4.30	360	74.7	28.00	1500
7-23-69	0.075	4.50	360	78.4	27.0	1300
7-29-69	0.075	4.65	464	100.1	8.75	1850
8-8-69	0.05	4.60	436	60.4	11.25	2125
8-14-69	*	4.68	440	88.3	--	1875
8-20-69		4.65	448	71.6	10.0	2000
10-2-69		4.15	480	20.4	10.0	1625
10-11-69		4.10	480	31.6	7.5	1750
10-21-69		4.62	220	34.1	13.0	1850
10-28-69		4.30	560	33.9	15.0	1800
11-4-69		3.80	440	24.8	8.0	1780
11-12-69		3.80	440	23.6	8.0	1780
11-28-69		4.10	568	41.5	19.0	1800
12-4-69		4.50	576	30.6	17.5	1800
12-11-69		4.60	360	34.7	9.5	1500
12-18-69		4.61	480	58.8	13.75	1850
2-23-70		4.60	660	60.1	21.5	2500

* Measuring Weir vandalized



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 3

Date	Flow	pH	Acidity	Fe	Mn	SO ₄
3-11-69		4.60	300	62.2	--	700
4-8-69		6.40	-48	32.8	10	510
4-18-69		4.65	182	17.1	2.76	500
4-24-69		4.70	260	12.6	16.25	550
4-30-69		4.80	288	24.8	6.25	575
5-8-69		4.65	280	58.5	10	1125
5-15-69		4.50	200	59.9	5.60	525
7-8-69	0.022	4.40	954	32.4	8.5	2000

Note: Personnel ordered off property July 1969

SAMPLING POINT NUMBER 4

4-8-69		6.4	-10	2.3	1.25	45
4-18-69		4.5	40	10.5	2.53	225
4-24-69		5.1	40	23.3	1.25	140
4-30-69		4.8	44	7.4	0.63	165
5-8-69		4.72	30	24.1	2.75	175
5-15-69		4.3	40	18.1	2.5	190
7-18-69		4.4	102	22.5	5.0	625
7-16-69		4.5	144	15.4	5.73	750
7-23-69		4.2	100	30.2	1.15	250
7-29-69		4.4	96	20.5	5.5	500
8-8-69		4.1	116	35.6	10.0	875
8-14-69		4.1	100	42.5	7.25	750
8-20-69		4.5	140	31.2	3.75	750
10-2-69		5.55	60	9.3	6.5	750
10-11-69		4.2	80	15.5	5.5	875
10-21-69		4.6	42	5.5	3.75	240
10-28-69		4.15	100	13.3	8.0	500
11-4-69		4.1	105	10.7	2.5	350
11-12-69		4.1	105	9.8	2.5	350
11-28-69		4.85	20	8.2	5.5	200
12-4-69		4.73	75	12.5	5.5	340
12-11-69		5.05	75	17.8	3.75	75
12-18-69		5.2	10	21.5	3.75	275
2-23-70		4.6	75	30.8	3.75	150



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 5

Date	Flow	pH	Acidity	Fe	Mn	SO ₄
4-8-69		4.4	70	75.2	5.5	475
4-18-69		4.4	690	46.5	10.0	1440
4-24-69		4.8	560	67.9	2.9	1400
4-30-69		4.75	760	61.6	40.0	2400
5-8-69		5.8	590	74.4	10.0	1500
5-15-69		4.5	840	79.3	5.1	2000
7-8-69	0.0020	4.4	1158	97.8	90.0	3120
7-16-69	0.0010	4.5	1398	101.1	55.0	6000
7-23-69	0.0028	4.65	1380	86.2	78.0	6000
7-29-69	0.0028	4.4	1920	97.3	72.0	6125
8-8-69	0.0028	4.4	1886	87.6	72.5	8300
8-14-69		4.55	1450	123.5	12.5	6100
8-20-69	0.0016	4.55	1560	81.4	21.0	1990
10-2-69		4.1	1475	65.6	10.0	----
10-11-69		4.3	720	121.2	5.1	6200
10-21-69		4.7	1500	110.1	60.0	4000
10-28-69		4.6	2140	131.3	50.0	5000
11-4-69	1	4.1	1280	58.6	51.0	----
11-12-69		4.1	1280	56.8	50.0	----
11-28-69		3.9	972	63.7	50.0	3500
12-4-69		4.2	1340	57.3	----	3000
12-11-69		4.5	1875	78.9	18.75	3500
12-18-69		4.55	960	76.4	55.0	3000
2-19-70		4.25	800	85.7	46.5	----
2-23-70		4.77	838	91.6	50.0	2100



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 6

Date	Flow	pH	Acidity	Fe	Mn	SO ₄
4-8-69		5.0	126	1.1	10	450
4-18-69		6.4	- 10	0.2	1.82	175
4-24-69		6.8	0	1.9	2.45	105
4-30-69		7.25	- 16	0.25	1.25	85
5-8-69		6.9	40	0.15	1.25	125
5-15-69		6.8	0	0.3	3.75	125
7-8-69		6.0	10	1.8	8.0	450
7-16-69		7.5	- 20	0.38	7.5	300
7-23-69	0.113	6.7	- 15	0.28	2.5	210
7-29-69		7.4	- 40	0.30	2.25	310
8-8-69	0.112	6.95	- 45	0.32	3.75	300
8-14-69		6.7	- 35	0.22	1.35	285
8-20-69		6.7	- 10	0.1	0.6	385
10-2-69		6.45	0	0.3	1.0	375
10-11-69		6.5	0	0.2	1.5	670
10-21-69		6.7	- 30	0.15	3.0	750
10-28-69		6.8	- 30	0.28	7.25	500
11-12-69		6.6	- 10	0.2	0.25	475

SAMPLING POINT NUMBER 7

4-8-69		7.0	2	2.5	3.5	250
4-18-69		6.8	0	0.55	2.86	550
4-24-69		6.6	0	0.21	4.5	425
4-30-69		7.4	- 16	0.15	5.0	425
5-8-69		6.8	70	0.25	6.25	1000
5-15-69		6.7	0	0.25	8.75	450
7-8-69		6.8	17	0.63	16.25	1450
7-16-69		6.8	- 33	0.32	12.5	1500
7-23-69		7.0	- 30	0.2	11.25	1050
7-29-69		6.75	- 30	0.65	15	1620
8-8-69		6.75	- 60	0.55	7.25	1600
8-14-69		6.7	0	0.45	9.0	1600
8-20-69		6.82	- 25	0.15	10.0	1625
10-2-69		7.5	- 60	0.05	0.0	1750
10-11-69		6.8	- 10	0.05	12.5	1625
10-21-69		6.8	0	1.5	17.5	1375
10-28-69		6.7	- 20	0.21	17.5	1625
11-4-69		7.25	- 10	0.62	11.25	1375
11-12-69		7.25	- 10	0.62	11.25	1375
11-28-69		6.9	20	0.50	15.0	1350
12-4-69		6.85	- 30	0.7	13.0	1000
12-11-69		6.6	25	0.28	6.25	400
12-18-69		6.85	- 25	1.25	6.25	725
1-2-70		6.85	- 30	1.1	11.25	1125
2-19-70		6.8	0	0.7	20.0	1000
2-23-70		6.6	- 30	0.62	13.75	1000



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 8

<u>Date</u>	<u>Flow</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
4-8-69		4.75	562	5.1	10.0	1250
4-18-69		4.5	80	3.4	4.54	410
4-24-69		5.0	60	3.8	2.25	325
4-30-69		4.1	36	6.9	2.0	460
5-8-69		4.1	100	5.4	2.5	750
5-15-69		4.4	140	10.5	5.5	326
7-8-69	0.001	4.1	88	12.0	13.75	1500
7-16-69	0.001	4.1	252	15.0	11.25	1750
7-23-69		4.7	186	3.4	6.0	1050
7-29-69	0.001	4.2	192	9.0	13.0	1500
8-8-69	0.001	4.7	220	10.5	6.25	1650
8-14-69		4.4	190	15.0	7.25	1620
8-20-69	0.001	4.3	210	3.8	5.6	1625
10-2-69		4.0	190	6.0	7.5	1625
10-11-69		4.6	80	3.6	8.0	1320
10-21-69		4.6	148	4.5	3.0	1175
10-28-69		4.45	150	3.9	7.5	1375
11-4-69		4.25	220	3.8	5.5	1075
11-12-69		4.25	220	3.8	5.5	1075
11-28-69		4.5	68	3.9	6.25	550
12-4-69		4.2	112	3.3	8.75	1000
12-11-69		4.5	40	1.8	3.0	100
12-18-69	0.001	4.15	10	12.0	3.75	500
2-19-70		4.0	120	13.5	8.0	550
2-23-70		4.2	86	9.0	9.0	550



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 9

<u>Date</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
4-8-69	5.1	26	10	1.0	125
4-18-69	4.9	240	59.2	10.0	850
4-24-69	4.9	140	75.3	10.0	500
4-30-69	4.7	212	59.6	6.25	800
5-8-69	5.0	104	11.0	0	1125
5-15-69	4.6	120	61.4	11.25	650
7-8-69	4.65	217	102.1	20.0	1975
7-16-69	4.0	256	104.2	13.0	2000
7-23-69	4.5	252	63.2	11.25	1450
7-29-69	4.6	226	100.7	15.0	2250
8-8-69	4.7	284	96.0	8.0	1600
8-14-69	4.3	310	129.5	7.5	1500
8-20-69	4.95	320	123.7	6.25	2000
10-2-69	3.7	310	33.7	13.0	1825
10-11-69	4.3	320	67.8	12.5	1750
10-21-69	3.0	336	57.8	10.0	1750
10-28-69	4.62	300	54.8	9.0	1750
11-4-69	4.1	315	51.0	9.0	1750
11-12-69	4.1	315	50.6	9.0	1750
11-28-69	3.9	230	54.7	12.5	1625
12-4-69	4.5	30	57.8	24.0	2300
12-11-69	4.3	90	7.2	6.25	500
12-18-69	4.0	240	95.0	7.5	1500
1-2-70	4.4	300	65.3	15.0	1750
2-19-70	4.2	265	94.8	15.0	1375



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 10

<u>Date</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
4-18-69	4.65	160	24.1	3.55	500
4-24-69	4.6	180	31.2	6.25	475
4-30-69	4.6	190	18.4	5.0	550
5-8-69	4.6	162	30.6	7.5	750
5-15-69	4.0	180	12.7	8.75	525
7-8-69	4.6	256	32.5	11.25	1450
7-16-69	4.4	284	30.2	10.0	1050
7-23-69	4.5	244	16.1	7.5	1000
7-29-69	4.65	246	98.6	14.5	1300
8-8-69	4.72	240	104.7	11.25	1450
8-14-69	3.00	220	102.1	12.5	1250
8-20-69	5.08	250	104.3	27.5	1125
10-2-69	4.6	240	38.5	12.5	1700
10-11-69	4.5	240	70.3	8.0	1600
10-21-69	4.5	200	32.0	6.0	1250
10-28-69	3.7	200	31.3	5.0	1250
11-4-69	3.75	280	58.1	7.5	1000
11-12-69	3.75	280	53.5	7.5	1000
11-28-69	4.0	280	54.1	11.25	1000
12-4-69	4.0	240	70.0	12.5	1300
12-11-69	4.25	100	94.3	5.0	500
12-18-69	4.1	200	82.3	8.5	1125
1-2-70	4.3	240	78.5	6.25	1125
2-19-70	4.6	200	102.0	8.75	900
2-23-70	4.7	240	88.5	9.75	875



APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

SAMPLING POINT NUMBER 11

<u>Date</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
4-18-69	6.4	0	0.15	1.53	275
4-24-69	6.3	5	1.21	1.5	275
4-30-69	6.7	- 35	0.15	0	250
5-8-69	6.1	- 14	0.2	0.5	400
5-15-69	4.65	30	0.25	5.0	250
7-8-69	6.7	- 20	0.6	6.0	950
7-16-69	6.8	- 12	0.3	0.15	1250
7-23-69	6.9	- 44	0.38	0.75	700
7-29-69	6.7	10	0.58	10.5	1000
8-8-69	7.2	20	0.35	0.15	1000
8-20-69	6.5	- 32	0.1	13.75	875
10-2-69	4.0	120	1.0	10.0	1000
10-21-69	6.95	- 22	0.15	4.0	950
10-28-69	6.85	- 45	0.25	1.5	800
11-4-69	6.8	- 5	0.43	1.0	850
11-12-69	6.8	- 5	0.43	1.0	850
11-28-69	6.6	- 20	0.15	8.5	950
12-4-69	6.75	- 5	0.35	1.5	1200
12-11-69	5.4	10	0.35	4.0	450
12-18-69	6.55	0	0.45	5.0	625
1-2-70	6.5	- 20	0.4	5.0	875
2-19-70	6.45	30	0.25	6.25	700
2-23-70	6.6	0	0.11	11.0	875

SAMPLING POINT NUMBER 12

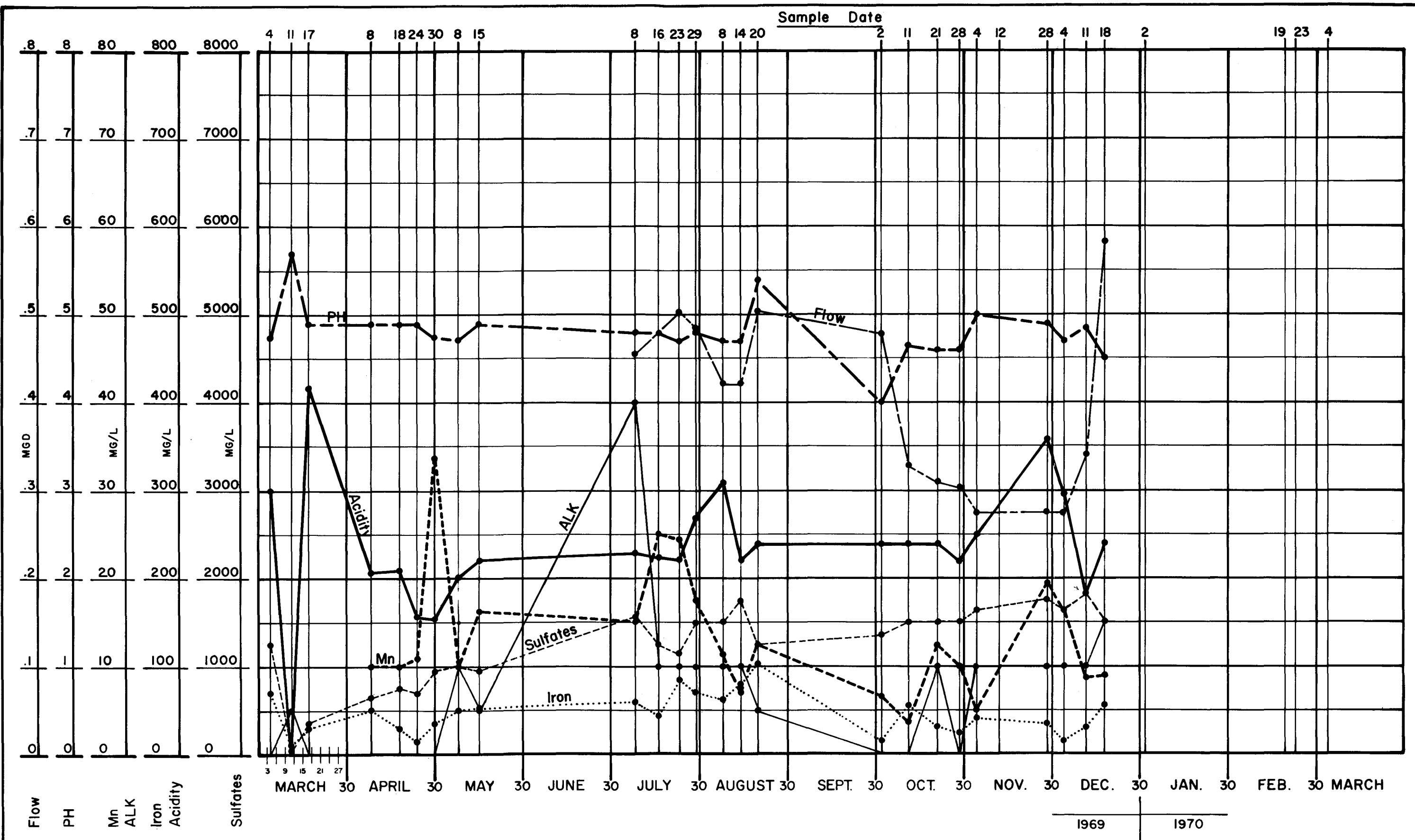
4-18-69	4.5	140	1.4	4.51	350
4-24-69	4.4	40	2.3	3.9	300
4-30-69	4.5	88	1.3	3.0	320
5-8-69	4.8	82	0.9	3.75	450
5-15-69	4.0	100	3.5	3.75	350



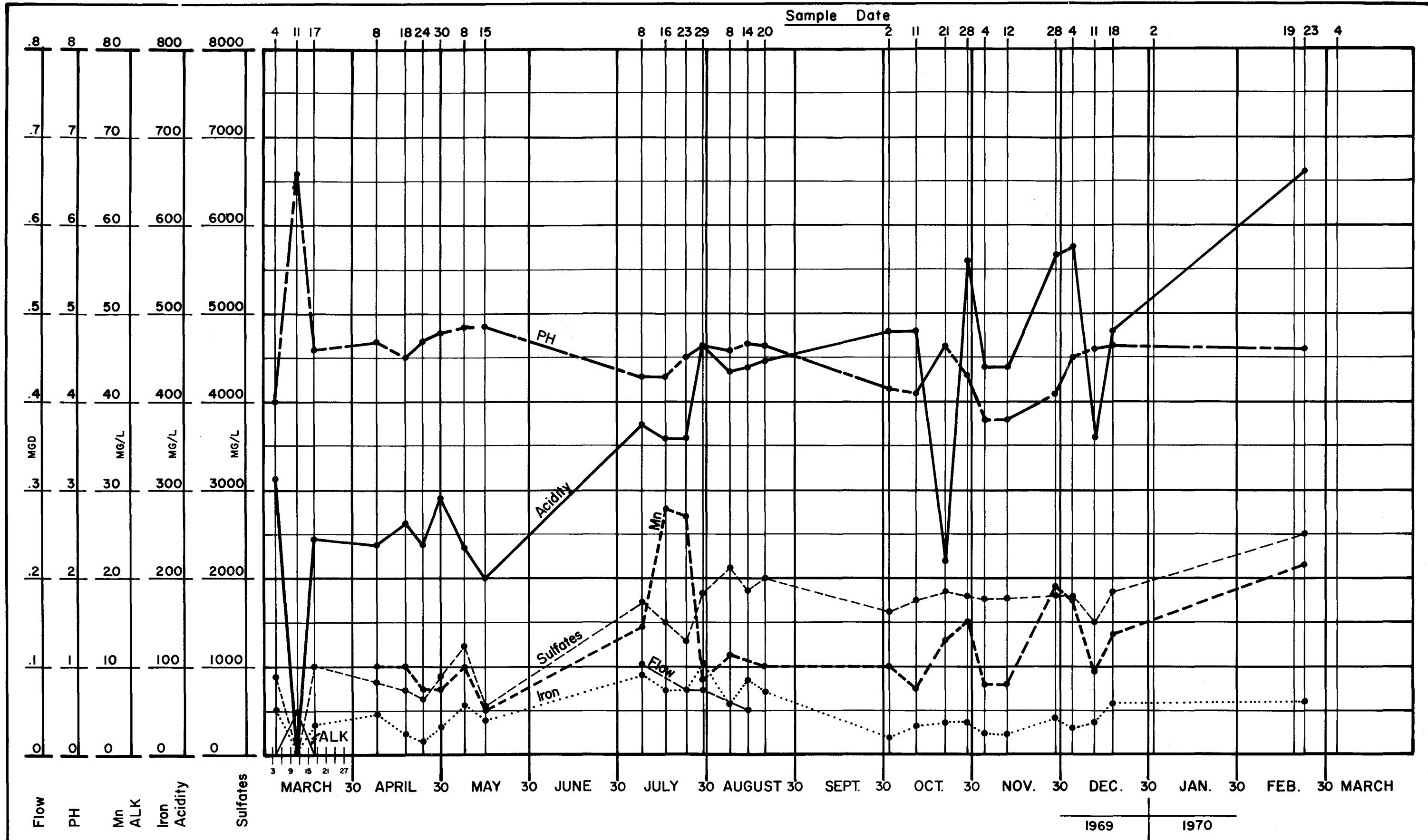
APPENDIX B - SAMPLING DATA
OPERATION SCARLIFT
TOBY CREEK SL-132

ELK MINE

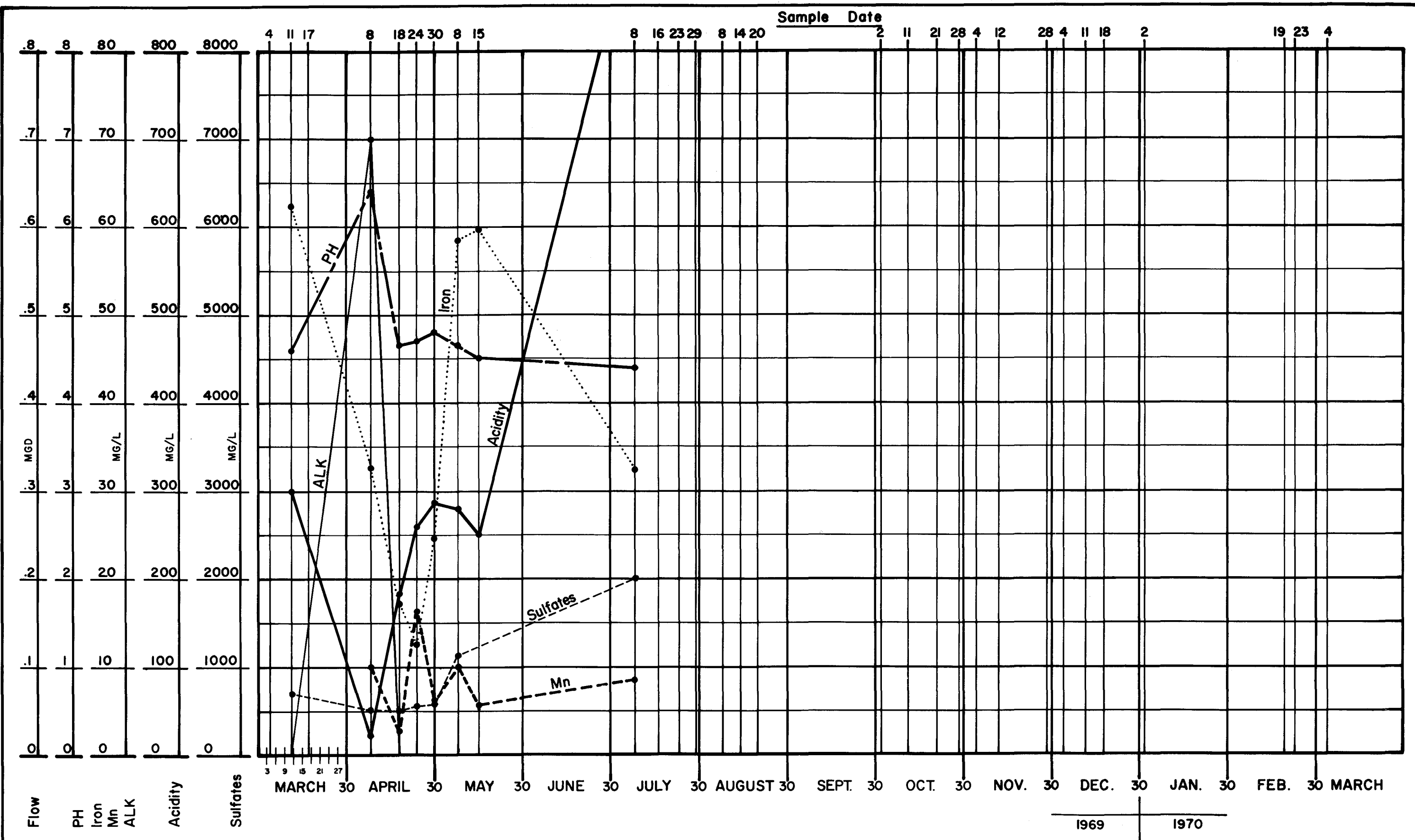
<u>Date</u>	<u>pH</u>	<u>Acidity</u>	<u>Fe</u>	<u>Mn</u>	<u>SO₄</u>
3-4-69	6.05	- 50	25.4	0	450
3-17-69	6.3	-180	9.7	0	450
4-18-69	6.0	- 80	11.5	0	550
4-24-69	5.8	40	27.5	10.0	462
4-30-69	6.05	- 90	10.3	2.5	500
5-8-69	6.0	-126	12.6	1.25	700
5-15-69	6.45	- 50	28.2	21.25	500
7-8-69	6.5	- 52	30.5	6.25	800
7-16-69	6.1	- 70	35.1	5.0	700
7-23-69	6.2	- 75	25.7	2.5	700
7-29-69	6.3	- 88	22.3	25.5	750
8-8-69	6.1	- 56	40.0	9.0	1000
8-14-69	6.2	20	50.2	5.0	720
8-20-69	6.0	- 12	7.1	7.5	875
10-2-69	6.2	- 60	40.2	9.1	1000
10-11-69	5.8	- 10	5.5	1.75	775
10-21-69	5.55	- 70	15.3	3.0	750
11-4-69	6.5	- 10	4.5	4.0	725
11-28-69	6.65	- 35	14.5	7.5	750
12-18-69	6.3	- 30	35.1	8.0	800
1-2-70	6.8	120	40.3	6.25	1000
2-19-70	6.6	- 70	30.2	7.5	850
2-23-70	6.5	- 15	30.6	6.25	875



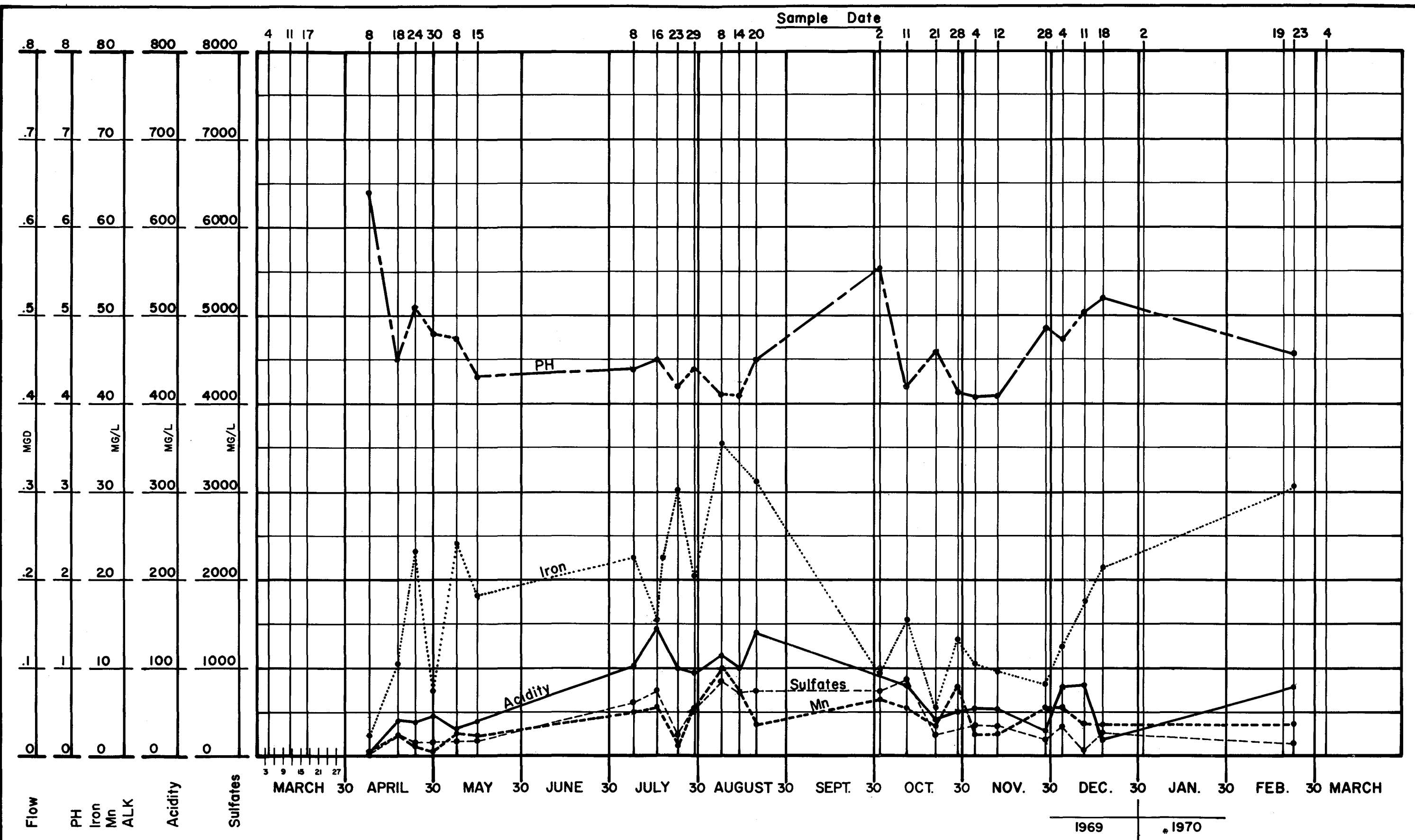
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 1
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B15



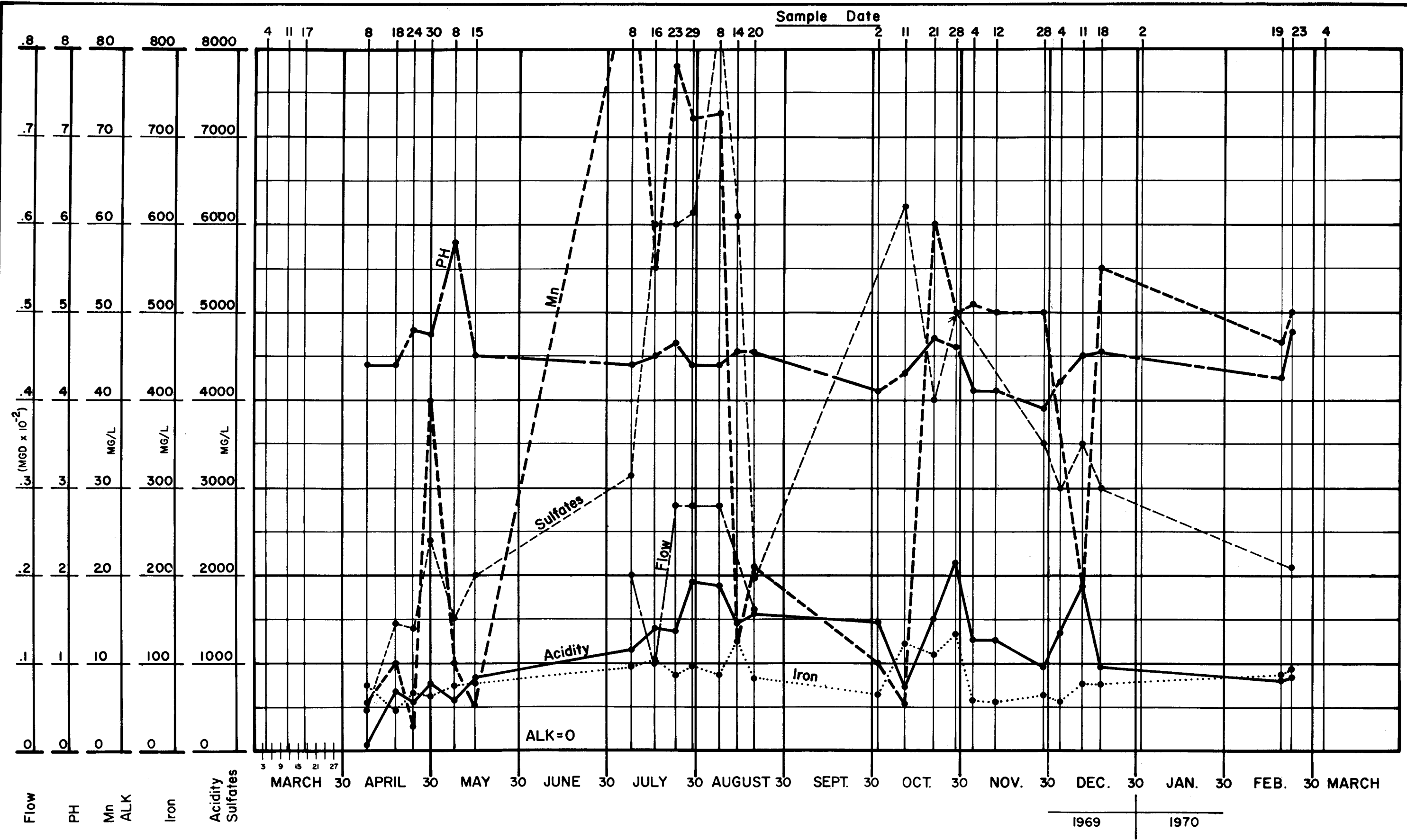
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 2
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. BI6



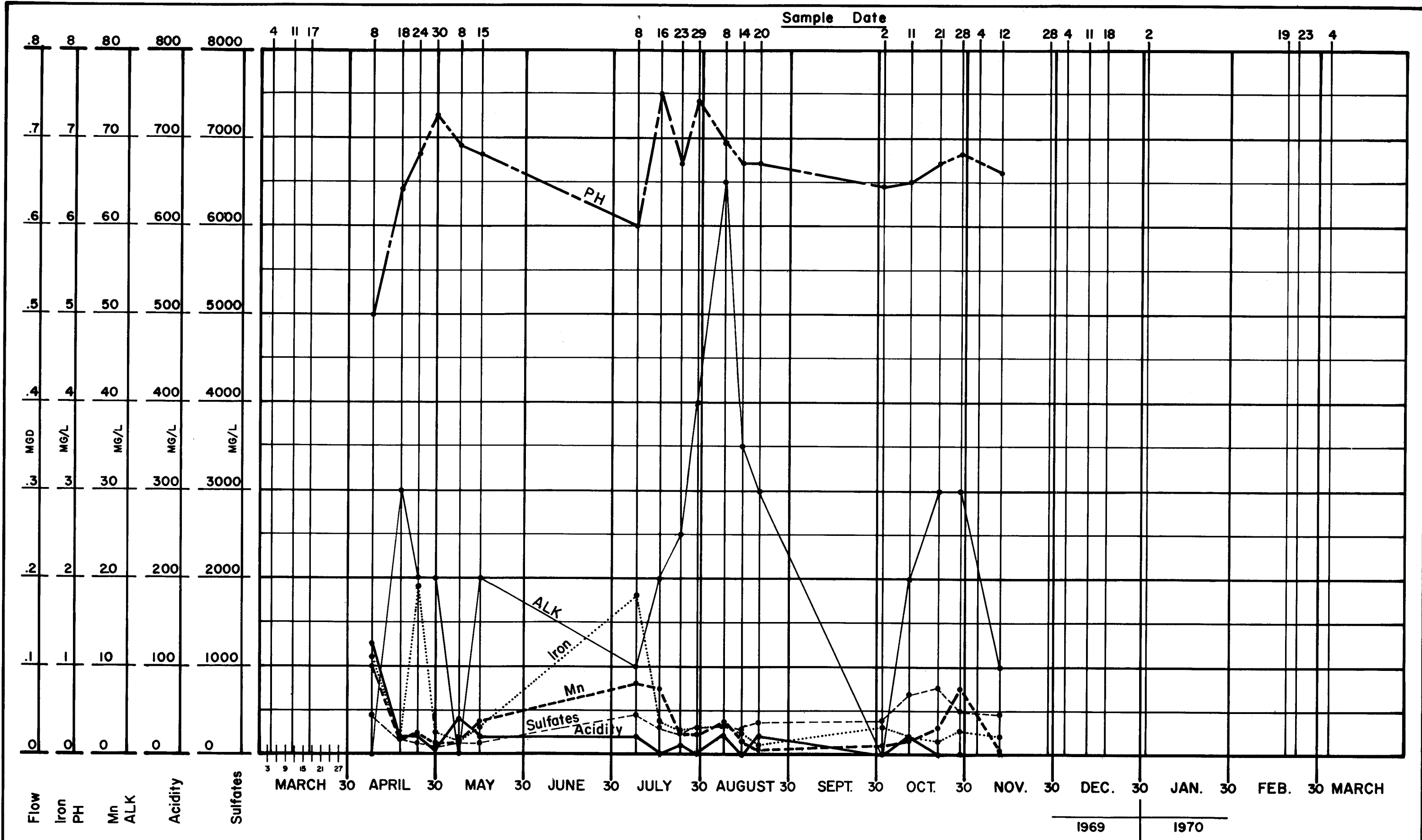
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 3
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B17



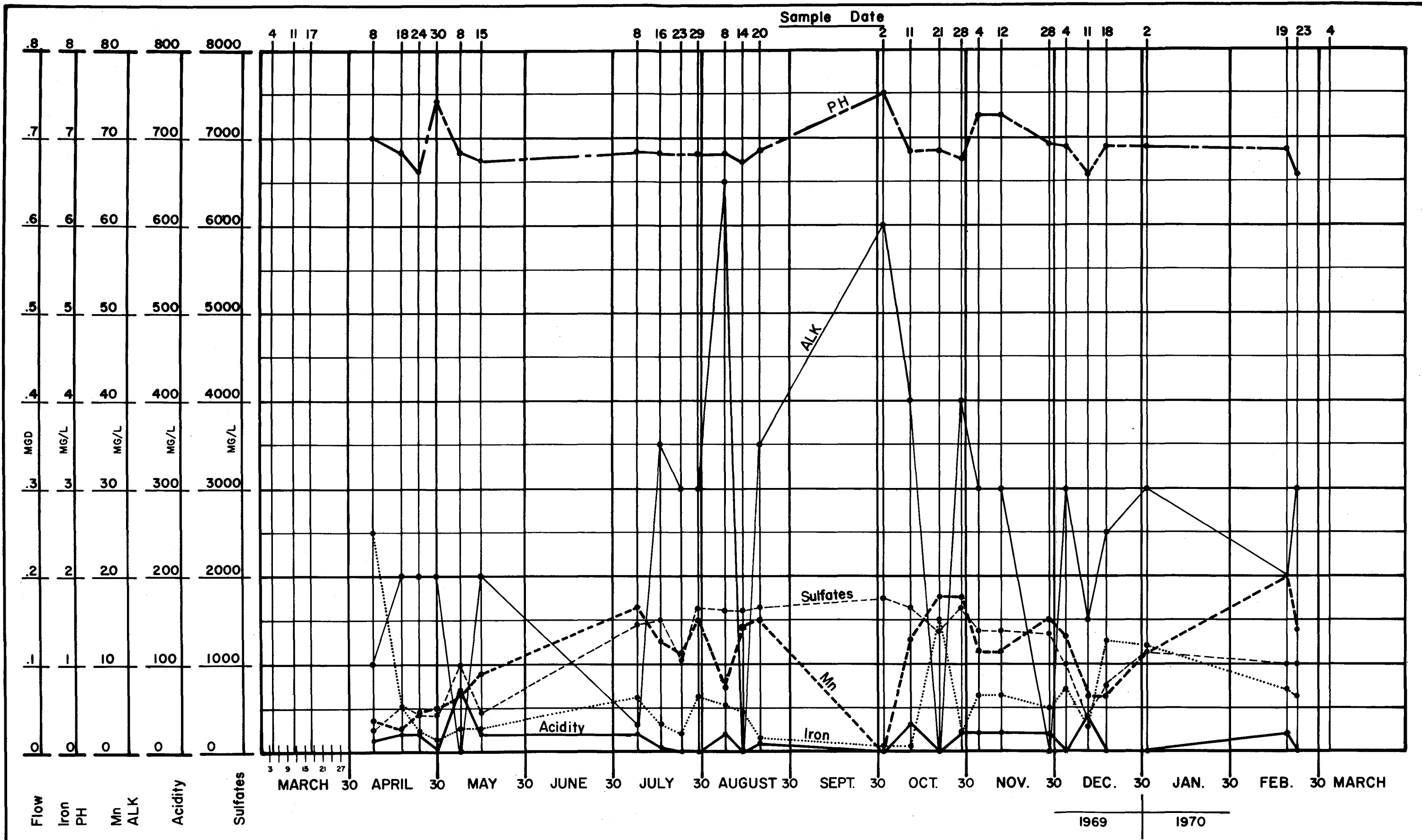
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 4
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B18



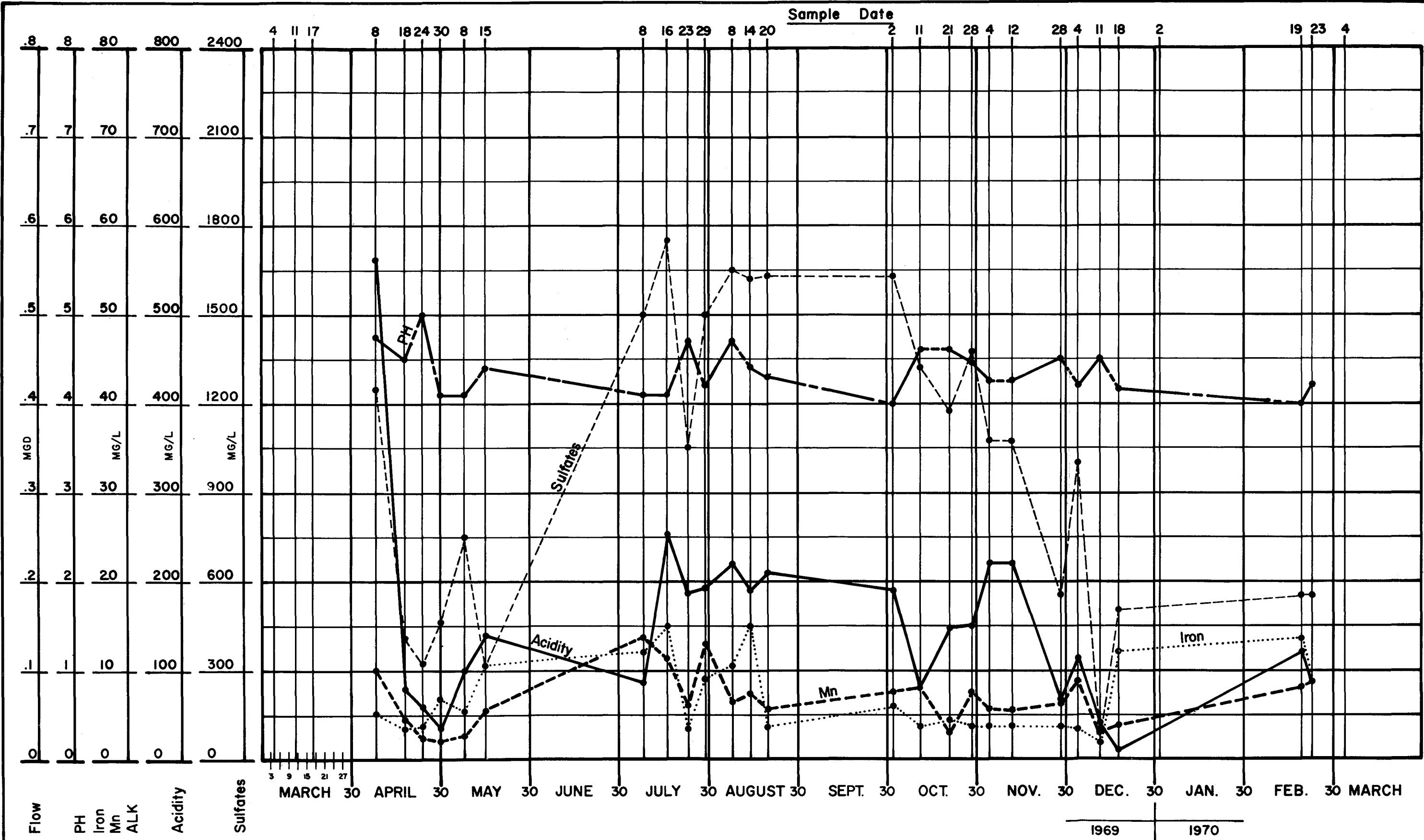
Date: October, 1971	TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	Sampling Point Number 5
Scale: as shown		
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B19



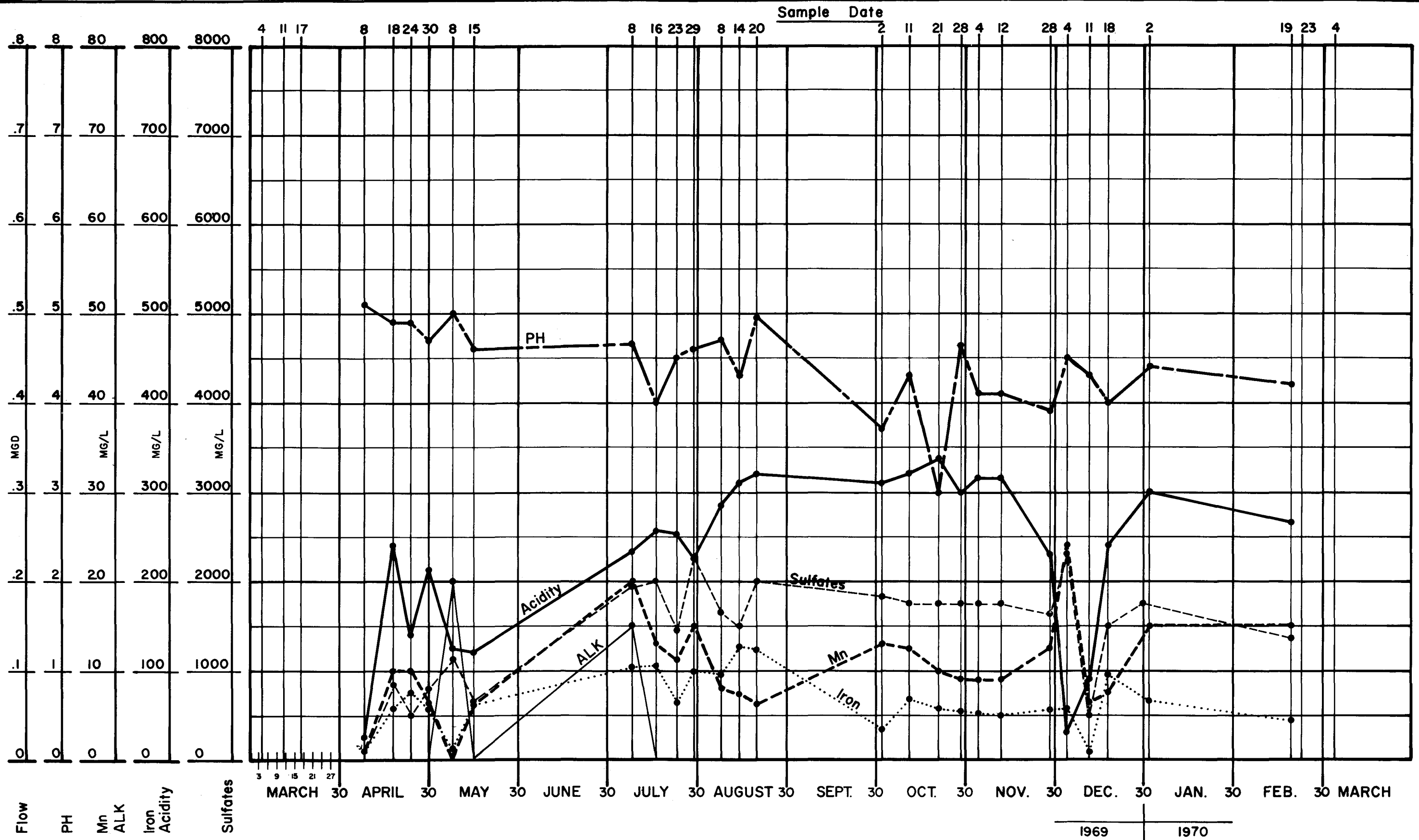
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 6
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B20



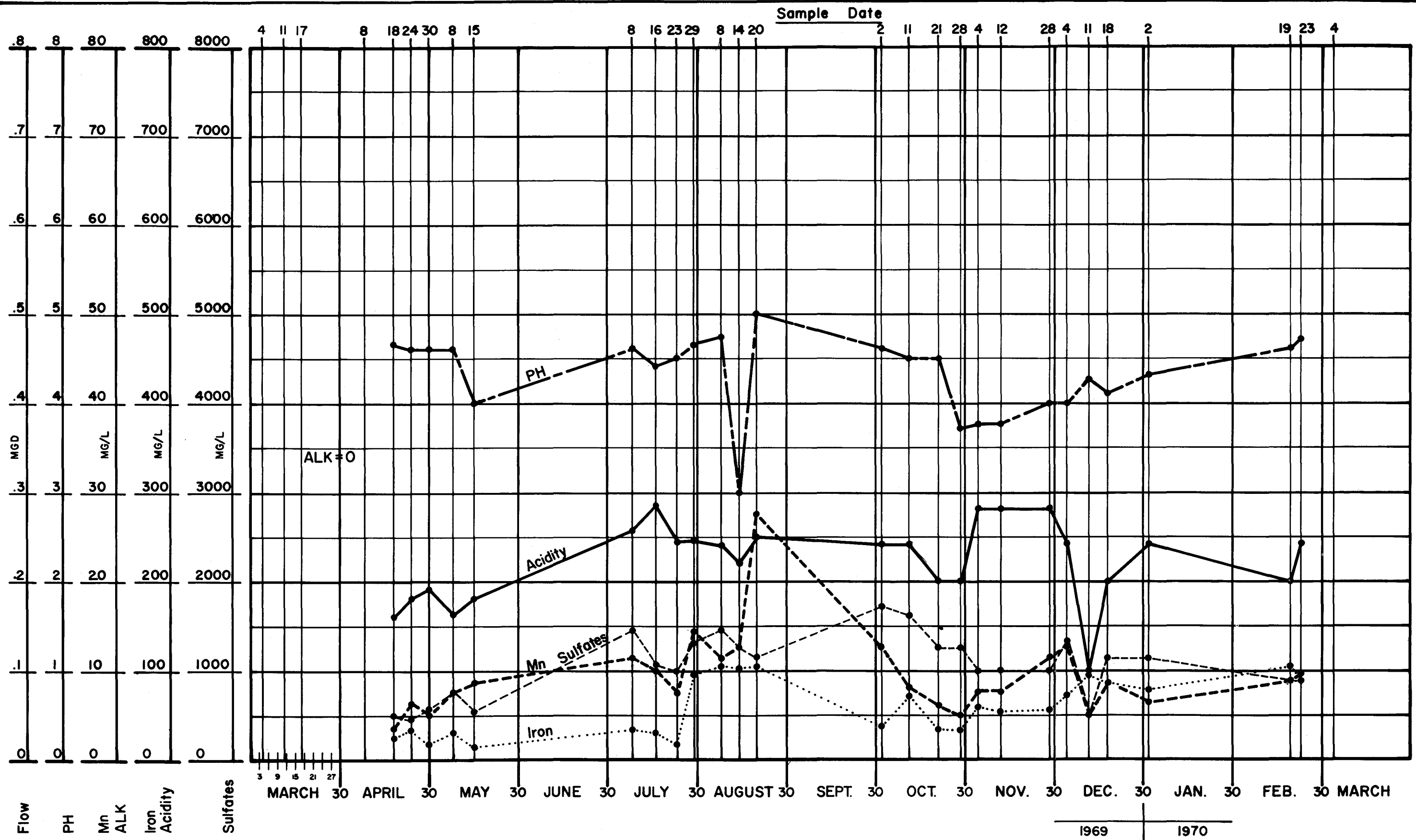
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 7
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B21



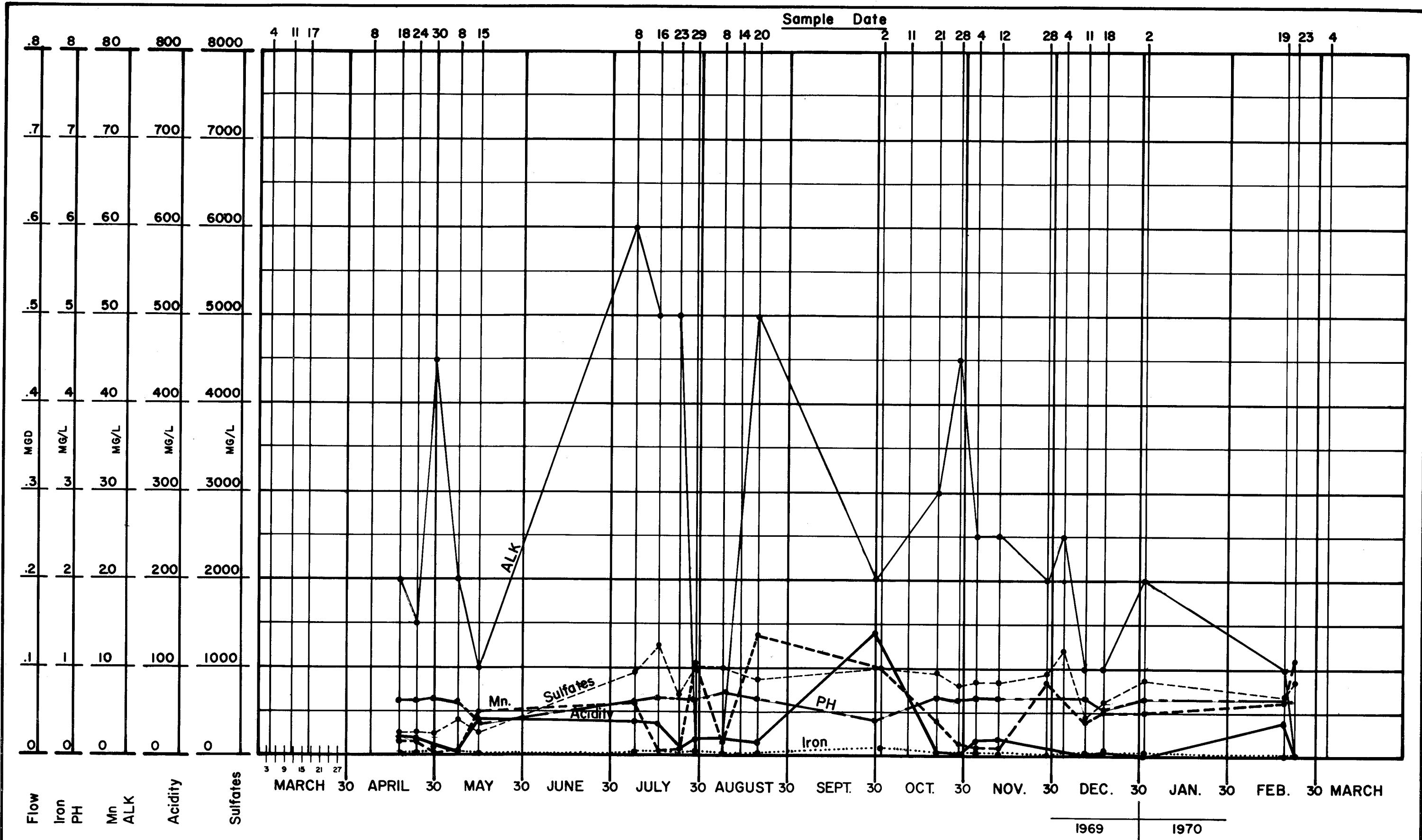
Date: October, 1971	TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	Sampling Point
Scale: as shown		Number 8
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries	Drawn by: cmk
	PROJECT SL-132	Dwg. No. B22



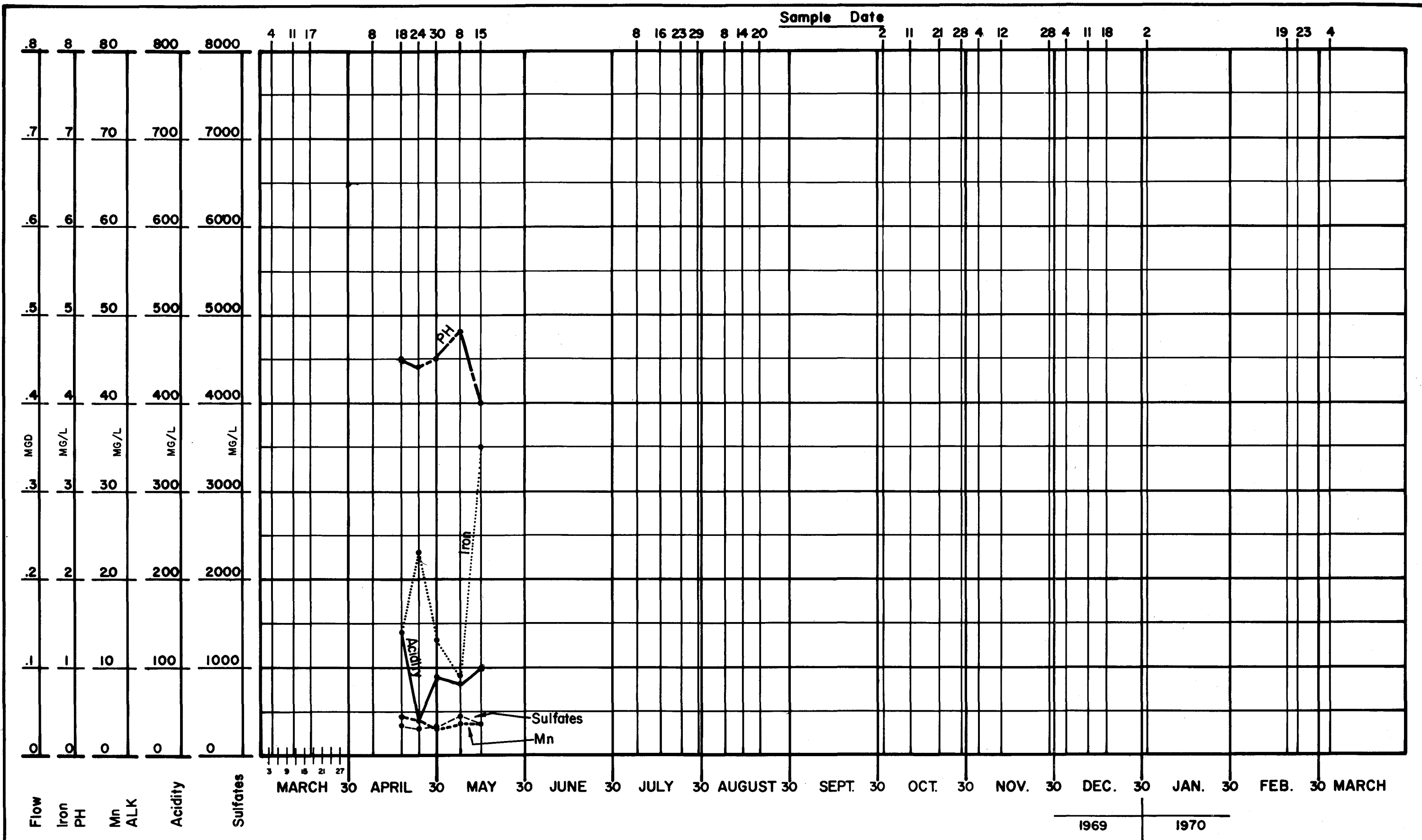
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 9
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B23



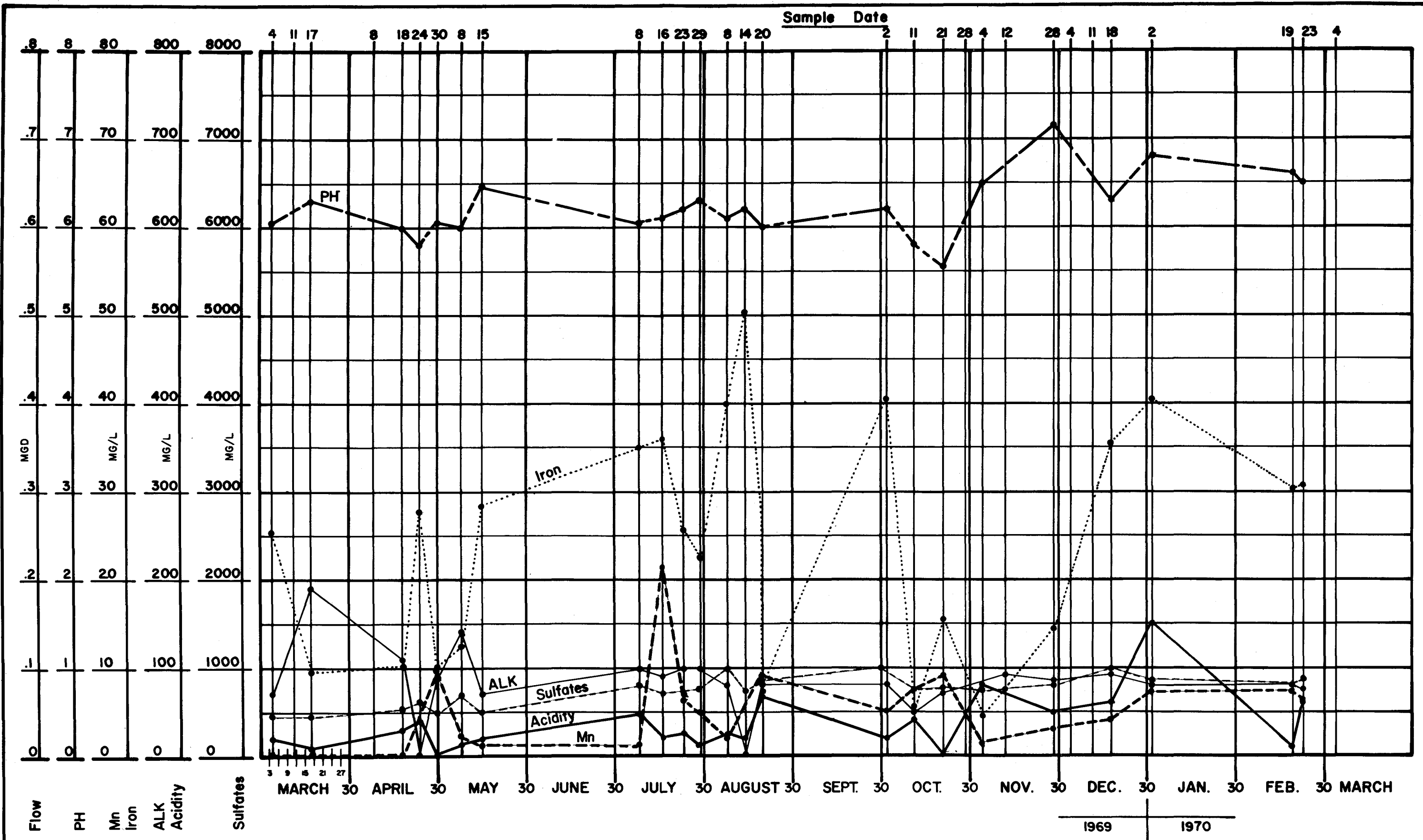
Date: October, 1971	TOBY CREEK WATERSHED	Sampling Point
Scale: as shown	ELK COUNTY, PENNSYLVANIA	Number 10
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B24



Date: October, 1971	TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	Sampling Point
Scale: as shown		Number 11
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B 25



Date: October, 1971	TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	Sampling Point Number 12
Scale: as shown		
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Drawn by: cmk Dwg. No. B 26



Date: October, 1971	TOBY CREEK WATERSHED ELK COUNTY, PENNSYLVANIA	Sampling Point Number Elk Mine
Scale: as shown		Drawn by: cmk
Yost Associates, Inc. DuBois, Pa.	Department of Mines and Mineral Industries PROJECT SL-132	Dwg. No. B 27